

RECLAMATION
DISTRICT

108

RECLAMATION DISTRICT NO. 108

GRIMES, CALIFORNIA

Contract Documents
and Specifications

For

Operations Building

May 1, 2026

INVITATION TO BID AND NOTICE TO CONTRACTORS

Notice is hereby given that the Board of Directors of Reclamation District No. 108 will receive sealed bid proposals for furnishing all labor, materials and services for the following project.

Operations Building
Reclamation District #108
975 Wilson Bend Road
Grimes, California 95950

The project consists of completely designing, permitting, and constructing a new Operations Building. Design, permitting, and construction activities include: piping and plumbing work for future connections, concrete footings and flooring, steel building shell, doors and windows, and exterior decorative veneer.

Bids are to be submitted as sealed proposals to the Reclamation District 108 General Manager, and received at the Reclamation District #108 office, 975 Wilson Bend Road, Grimes, CA 95950, no later than 3:00 p.m. Tuesday, May 26, 2026, at which time the bids will be publicly opened and read. **Please note that the U.S. Postal Service does not deliver to this address, so do not mail bids.**

All bids shall be made on the Bid Forms furnished by the District's Manager. Faxed or emailed bids will not be considered or accepted and will be grounds for rejection. The Bid Forms submitted shall contain all the information requested therein.

Reclamation District 108 reserves the right to reject any and all bid proposals, to waive any informality in a bid proposal, and to make awards as it deems appropriate in its sole discretion.

There will be a mandatory site visit and walkthrough at 1:00 PM, on Monday May 18, 2026. Attendance is a prerequisite to bid submission.

All proposals or bids shall be accompanied by a certified or cashier's check payable to: Reclamation District 108 for not less than 10 percent (10%) of the bid; or by a corporate Surety Company Bid Bond for not less than 10 percent (10%) of the bid.

Companies supplying sureties or bonds shall be admitted to supply such instruments within the State of California, shall be listed by the Office of the Insurance Commissioner, and shall have a minimum **A.M. Best rating of A** and have a demonstrated ability to meet their ongoing obligations to policyholders.

Bids submitted after the fixed time deadline will not be accepted. Submitted bids may not be withdrawn after the bid opening time, regardless of whether or not bids are opened exactly at the time fixed for opening bids.

All bids are to be compared on the basis of the District Representative's estimate of the quantities of work to be done. The determination of the lowest Bidder shall be based on the bid with the lowest sum of all Schedules.

Bid proposals in which the unit prices, lump sum price, or the total prices of the item are grossly "front-end" loaded or unbalanced with respect to costs, may be rejected.

Bids submitted to the District by Contractors who are not licensed in accordance with the provisions of Chapter 9, Division III of the Business and Professions Code, State of California, shall be considered non-responsive and shall be rejected by the District. Prospective Bidders shall be skilled, regularly engaged and licensed in the general class or type of work specified and **possess a valid California Class "B" Contractor's License.**

The Bidder whose proposal is accepted must furnish Performance and Payment Bonds equal to one hundred percent (100%) of the Contract price for each bond in accordance with the provisions set forth in the Project Specifications.

The Bidder shall carefully examine the work site, the plans and specifications, the proposal, and contract forms. Therefore, the submission of a bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quantity, and scope of the work to be performed, the quantities of materials to be furnished, and as to the requirements of the proposal, plans, specifications, and the contract.

Prime Contractors planning to subcontract any portion of the work or improvement contained in the plans and specifications, in an amount in excess of one-half of one percent ($\frac{1}{2}$ of 1%) of the Prime Contractor's total bid, or ten thousand dollars (\$10,000), whichever is greater, shall list the Subcontractor for the portion of work which will be done in accordance with California Public Contract Code, Section 4100, et seq. **Each Subcontractor is required to possess a valid California Contractor's License.**

Bidders on this work must comply with all applicable Federal, State, County and local agency requirements.

In accordance with the provisions of Sections 1770 to 1781 of the Labor Code, the Director of the Department of Industrial Relations has ascertained the general prevailing rate of wages applicable to the work to be done. For more particular details, and a schedule of the applicable prevailing rate of wages, contact the office of the State's Division of Labor Statistics and Research or the nearest Bureau of Field Enforcement or the State Division of Labor Standards Enforcement.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. All contractors and subcontractors who bid or work on a public works project must register and pay an annual fee to DIR. **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.**

Any bid protest must be submitted in writing to the District's Manager before 5:00 p.m. of the 5th business day following bid opening. The initial bid protest document shall contain a complete statement of the basis for the protest.

The protest shall refer to the specific portion of the document which forms the basis for the protest. The protest shall include the name, address and telephone number of the person representing the protesting party.

The party filing the protest shall concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

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

Electronic copies of the plans, specifications, and bid forms may be downloaded from the District's website, <https://www.rd108.org/contract-opportunities>

Project inquiries and questions should be directed to Chad Navorrot at cnavarrot@rd108.org or (530) 870-1213.

Estimated cost of project construction is \$300,000.

CHAD NAVORROT
MAINTENANCE SUPERVISOR
RECLAMATION DISTRICT NO. 108
TELEPHONE NUMBER: (530) 870-1213
E-MAIL: cnavorrot@rd108.org

DOCUMENT 00 21 13

INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.1 CONTENTS OF BID FORMS

- A. Prospective Bidders will be furnished with bids forms, which will include a schedule of items for which prices are asked, showing the approximate estimate of the various quantities and kinds of work to be performed or materials to be furnished.

1.2 APPROXIMATE ESTIMATE OF QUANTITIES

- A. The quantities given in the bids and contract are approximate only, being given as a basis for the comparison of bids. The District does not, expressly or by implication, agree that the actual amount of work will correspond therewith, and reserves the right to increase or decrease the amount of any class or portion of work, or to omit portions of the work, as may be deemed necessary or advisable by the District's Representative.

1.3 EXAMINATION OF PLANS, SPECIFICATIONS AND SITE OF WORK

- A. The Bidder shall examine carefully the site of the work contemplated, the plans and specifications, the bids and contract forms therefore. The submission of a bids shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scopes of work to be performed and the quantities of materials to be furnished, and as to the requirements of the bids, plans, specifications, addenda, and the contract.
- B. Should the Bidder find discrepancies in, or omissions from the drawings or other contract documents, or should he be in doubt as to they're meaning, he shall at once notify the District's Representative who shall answer such questions.
- C. There will be a mandatory site visit/walk through at 1:00 PM, on Monday May 18, 2026. The Contractor must attend the site visit in order to submit a bid.

1.4 ADDENDA

- A. All questions about the meaning or intent of the Bidding Documents are to be directed to District's Representative at (530) 870-1213. Interpretations or clarifications considered necessary by District's Representative in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by District's Representative as having received the Bidding Documents. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- B. The District may also issue addenda to modify the Bidding Documents as deemed advisable.

1.4 BID FORMS

- A. Bidders shall submit their bids on bid forms. The District reserves the right to reject bids not presented on the forms. Additional copies of bid forms may be obtained from the District's Representative.

- B. The bids shall set forth the item prices, in clearly legible figures, in the respective spaces provided, and shall be signed by the Bidder, who shall fill out all blanks in the bid form as therein required. The total price of unit price items will be the product of the unit price and the estimated quantity of the item. In case of discrepancy between the unit price and total price of an item, the unit price shall govern, provided, that if the unit price is ambiguous, unintelligible, or uncertain for any cause, or is omitted, it shall be the amount obtained by dividing the amount set forth as the total price by the estimated quantity of the item. Bids shall include for each item, a unit price and total price, and for each lump sum price item, a total price.
- C. All Bidders submitting bids must sign the bid form, fill out all blanks in the bid form, and submit it along with all of the information and statements required herein. Any bids not containing all the information and the "Noncollusion Declaration" requested may be considered non-responsive and may be rejected.
- D. If an individual makes the bid, his name and mailing address must be shown. If made by a firm or partnership, the name and mailing address of the firm or partnership must be shown. If made by a corporation, the bids must show the name and mailing address of the corporation.
- E. The bids shall be submitted as directed in the "Invitation to Bid."

1.5 CONTRACTOR'S LICENSING LAWS

- A. All Contractors and Bidders submitting bids shall be properly licensed in accordance with the laws of this state and the provisions of Chapter 9 of Division 3 of the Business and Professions Code § 7028.15. Any Bidder or Contractor not so properly licensed shall be subject to the penalties imposed by such laws.
- B. All Subcontractors listed in the Bidders bid form shall be licensed in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code and any the submission of any bids with Subcontractors not so licensed will be subject rejection.

1.6 REQUIRED LISTING OF PROPOSED SUBCONTRACTORS & SUPPLIERS

- A. Each bid shall have listed therein the name and location of the place of business of each Subcontractor who will perform work or labor or render services to the Contractor in or about the construction of the work, or a Subcontractor licensed by the State of California who, under subcontract to the Contractor, specially fabricates and installs portions of the work according to the drawings and specifications, in an amount in excess of one-half of one percent ($\frac{1}{2}$ of 1%) of the Contractors bids or \$10,000 whichever is greater.
- B. Listing of Subcontractors and suppliers shall be on sheets contained in the bids.
- C. Under California Public Contract Code, Section 6109, "Ineligible and Debarred Subcontractors", the Contractor is prohibited from performing work on a public works project with a Subcontractor who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the California Labor Code.

1.7 WITHDRAWAL OF BIDS

- A. Any bid may be withdrawn at any time prior to the time fixed in the public notice for the opening of the bids only by written request for the withdrawal of the bids filed with the District's Representative. The Bidder or his duly authorized representative shall execute the

request. The withdrawal of a bid does not preclude the right of the Bidder to file a new bid prior to the time fixed for receipt of bids.

1.8 RELIEF OF BIDDER

- A. If the Bidder claims a mistake was made in his bid, he shall give the District's Representative written notice within five (5) working days, excluding Saturdays, Sundays, and holidays, after the opening of bids of the alleged mistake specifying in the notice in detail how the mistake occurred in accordance with Public Contract Code § 5100 et seq.

1.9 DISQUALIFICATION OF BIDDERS

- A. More than one (1) bid from an individual, firm, or partnership, corporation, or combination thereof under the same or different names will not be considered. Reasonable grounds for believing that any individual, firm partnership, corporation or combination thereof is interested in more than one bid for the work contemplated may cause the rejection of all bids in which that individual, firm partnership, corporation or combination thereof is interested. If there is reason for believing that collusion exists among the Bidders any or all bids may be rejected. Bids in which the prices are obviously unbalanced may be rejected

1.10 RESPONSIBLE BIDDER

- A. Public Contract Code, Section 1103, defines "Responsible Bidder" as one "who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform the public works contract." A bidder must be a responsible bidder in order to qualify for contract award.

END OF SECTION

DOCUMENT 00 22 13

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

PART 1 GENERAL

1.1 EXPERIENCE REQUIREMENTS

- A. All bidders shall satisfy the following experience requirements.
1. All bidders shall have constructed at least two different projects, as a prime contractor, that all satisfy the following criteria:
 - Completed within the previous three years;
 - Was a metal shop building or warehouse;
 - Had a total project cost which exceeded \$300,000;
 - Was completed timely and within budget.
 2. Additionally, at least one of the two qualifying projects shall be projects that were public works projects performed within the State of California (Federal projects within the State of California qualify).
- B. All bidders shall complete Bid Form 00 41 05 relating to the experience requirements and submit the completed form at the time of bid submission.

END OF SECTION

BID FORM

00 41 00

TO THE BOARD OF RECLAMATION DISTRICT NO. 108:

The undersigned declares he has carefully examined the location of the proposed work, that he has examined the plans and specifications, and read the accompanying instructions to Bidders, and hereby proposes to furnish all materials and do all work required to complete the said work in accordance with the said plans and specifications for the unit price set forth in the following schedule:

CONTRACTOR: _____

ADDRESS: _____

CITY/STATE/ZIP CODE: _____

TELEPHONE NUMBER: _____

OPERATIONS BUILDING
RECLAMATION DISTRICT NO. 108
975 WILSON BEND ROAD
GRIMES, CALIFORNIA 95950

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>ESTIMATED QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL</u>
1.	Mobilization/Demobilization	1 Job	Lump Sum	\$ _____
2.	Complete Project Design	1 Job	Lump Sum	\$ _____
3.	Piping and Plumbing Work	1 Job	Lump Sum	\$ _____
4.	Site Foundations and Slabs (excavation, footings, forms, concrete, reinforcement and finishing,)	1 Job	Lump Sum	\$ _____
6.	Metal Building Shell	1 Job	Lump Sum	\$ _____
7.	Doors and Windows (Furnish and install doors and windows including roll up garage door)	1 Job	Lump Sum	\$ _____
8.	Exterior Rock Veneer	1 Job	Lump Sum	\$ _____
			TOTAL BID:	
			\$	_____

DATED: _____

AUTHORIZED CONTRACTOR'S SIGNATURE: _____

BID FORM

00 41 01

AWARD OF PROPOSED WORK

The District Board reserves the right to reject any and all bids. Bid award will be on the basis of a single schedule or a combination of schedules and/or alternatives. The award will be made to the lowest single responsive and responsible Bidder as submitted.

CONTRACTOR'S LICENSE STATEMENT

CALIFORNIA CONTRACTOR'S LICENSE NUMBER:

LICENSE EXPIRATION DATE:

All contractors and subcontractors who bid or work on a public works project must be registered with the Department of Industrial Relations (DIR) and pay an annual fee after July 1, 2014. No contractor or subcontractor may be listed on a bid proposal for a public works project after March 1, 2015, unless registered with DIR. No contractor or subcontractor may be awarded a public works contract after April 1, 2015 unless registered with DIR. (Labor Code § 1771.1.)

This Statement constitutes a part of the Bid Form, and the signature portion of the Bid Form shall constitute execution and verification of this Statement.

ACKNOWLEDGMENT OF ADDENDA

Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

ADDENDUM NO.: _____

CONTRACTOR'S INITIALS: _____

BID FORM

00 41 02

LIST OF PROPOSED SUBCONTRACTORS

Listed hereinafter are the names, addresses and California Contractors License numbers of all Subcontractors who will be employed, and the kind of work which each will perform if the contract is awarded to the undersigned. I understand that under Public Contract Code § 4100 et seq. (§4104), I must clearly set forth:

- (a) The name and the location of the place of business of each Subcontractor who will perform work or labor or render service to the Prime Contractor in or about the construction of the work or improvement, or a Subcontractor licensed and number by the State of California who, under subcontract to the Prime Contractor, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent (½ of 1%) of the Prime Contractor’s total bid or, in the case of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent (½ of 1%) of the Prime Contractor’s total bid or ten thousand dollars (\$10,000), whichever is greater.
- (b) The portion of the work, which will be done by each Subcontractor under this act. The Prime Contractor shall list only one (1) Subcontractor for each portion as is defined by the Prime Contractor in his or her bid.
- (c) Violations of this Act, the Prime Contractor shall be subject to penalties set forth in Public Contract Code §4110 and §4111.

Kind of Work

Name and Address

License No.

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

BID FORM

00 41 03

THE BIDDER SHALL COMPLETE THE FOLLOWING QUESTIONNAIRE

QUESTIONNAIRE

Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has a proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a Federal, State, or Local government project because of a violation of law or a safety regulation.

YES _____

NO _____

If the answer is "yes", explain the circumstances in the following space:

NOTE: This questionnaire constitutes a part of the Bid Form, and signature on the signature portion of the Bid Form shall constitute execution of this questionnaire.

FAIR EMPLOYMENT PRACTICES CERTIFICATE

The Bidder, in submitting a bid for performing the following work by contract, hereby certifies that he has or will meet the standards of affirmative compliance with the Fair Employment Practices Act relating to the work herein.

This certificate constitutes a part of the Bid Form, and signature on the signature portion of the Bid Form shall constitute execution of this certification.

WORKERS' COMPENSATION CERTIFICATE

The Bidder, in submitting a bid for performing Drainage District work, hereby certifies that he shall secure the payment of worker's compensation in accordance with Section 3700 of the State Labor Code.

This certificate constitutes a part of the Bid Form, and signature on the signature portion of the Bid Form shall constitute execution of this certification.

BID FORM

00 41 04

**“NONCOLLUSION DECLARATION” TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID**

The undersigned declares: I am the _____ the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation.

The bid is genuine and not collusive or sham.

The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid.

The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding.

The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder.

All statements contained in the bid are true.

The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

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

I declare under perjury under the laws of the State of California the foregoing is true and correct and that this declaration is executed on

_____2026, at City of _____, State

of _____.

_____ (signature)

_____ (print name of person signing)

BID FORM

00 41 05

THE BIDDER SHALL COMPLETE THE FOLLOWING FORM

BIDDER EXPERIENCE REQUIREMENTS

The Bidder shall identify at least two different projects that it constructed as the prime contractor, that all satisfy the following criteria:

- Completed within the previous three years;
- Was an warehouse building or commercial shop building;
- Was completed timely and within budget.

Additionally, at least one of the two qualifying projects shall be projects that were public works projects performed within the State of California (Federal projects within the State of California qualify)

Name of Project	Name of Owner	Completion Date	Total Cost	Type of Project
1.				
2.				

**Bidder shall provide additional pages if necessary

The District reserves the right to require bidders to provide documentation substantiating its satisfaction of the aforementioned requirements after bids are submitted.

NOTE: This form constitutes a part of the Bid Form, and signature on the signature portion of the Bid Form shall constitute execution of this questionnaire.

DOCUMENT 00 72 00

GENERAL CONDITIONS

PART 1 GENERAL

1.1 GENERAL

- A. Unless the context otherwise requires, whenever in the specifications and other contract documents the following terms are used, the intent and meaning shall be interpreted as provided herein.
- B. Working titles having a masculine gender, and the pronoun "he" are utilized in the specifications for sake of brevity, and are intended to refer to persons of either sex.

1.2 DEFINITIONS

- A. Acceptance - The formal written acceptance by the District of an entire contract, which has been completed in all respects in accordance with the plans and specifications and any modifications thereof, see Notice of Completion.
- B. Acts of God – “Acts of God” as defined in Public Contract Code § 7105.
- C. Bid - The offer of the Bidder setting forth the prices for the work, when filled out and submitted on the prescribed proposal form, properly signed and guaranteed.
- D. Bidder - An individual, firm, partnership, corporation or combination thereof submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.
- E. Bid Form - The form up on which the District requires formal bids to be prepared and submitted for the work.
- F. Bidder’s Security - The cashier's check, certified check, or Bidders bond accompanying the proposal submitted by the Bidder, as a guaranty that the Bidder will enter into a contract with the District for the performance of the work awarded to him.
- G. Bond - A Bidder’s bond, performance bond, payment bond, or other instrument of security.
- H. Change Order – A document recommended by District’s Representative, which is signed by Contractor and District and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
- I. Claim – A demand or assertion by District or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third (3rd) party is not a Claim.
- J. Contract - The written agreement covering the performance of the work and the furnishing of labor, materials, tools, and equipment in the construction of the work. The contract shall include the Invitation to Bid, Instructions to Bidders, Supplemental Instructions, Bid Forms,

these General Conditions, , plans, specifications, addenda, required insurance policies and endorsements, and contract bonds; also any and all supplemental agreements amending or extending the work contemplated and which may be required to complete the work in a substantial and acceptable manner. Supplemental agreements are written agreements covering alterations, amendments, or extensions to the contract and include contract change orders.

- K. Contract Documents - The contract documents shall include the Agreement, these General Conditions, Invitation to Bid, Instructions to Bidders, Supplemental Instructions, Bid Forms, notice to contractors, bid proposal, plans, specifications, addenda (if any), required insurance policies and endorsements, contract bonds, and all modifications issued after execution of the Contract.
- L. Contract Price – The total, fixed price payable by District to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement.
- M. Contract Times – The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by District’s Representative’s written recommendation of final payment.
- N. Contractor - The person or persons, firm, partnership, corporation, or combination thereof, private or municipal who have entered into a contract with the District as party or parties of the second part, or his or their legal representatives.
- O. County - Whenever the word "County" is used it shall be understood to mean and refer to the County government agency under which jurisdiction of the project falls, acting by or through its duly elected or appointed officers or officials or their authorized assistants.
- P. Days - Unless otherwise designated, days as used in the contract documents shall mean consecutive calendar days.
- Q. District – Reclamation District No. 108.
- R. District’s Representative – Primary Representative of the District whether District General Manager, District’s Deputy Manager or another designated Employee of the District or hired Consultant.
- S. Final Completion. The Contractor shall achieve Final Completion when the following is achieved:
 - 1. Substantial Completion.
 - 2. All punch-list items identified during the substantial completion process are cleared and signed-off by District.
 - 3. All final “As Built” drawings and documentation have been submitted and accepted by District.
 - 4. All warranties relating to any equipment or materials have been issued by the manufacturers and assigned to District.
 - 5. The Contractor has removed all remaining personnel, equipment and waste materials from site.
 - 6. Contractor has submitted its final Application for Payment together with a statutory conditional upon final waiver and release form.

- T. Notice of Completion - A written Notice of Completion signed and verified by the District or representative shall be recorded with the County Recorder of the County in which the work was performed. The date of completion and acceptance of the work by the District or representative recited in the Notice of Completion shall be deemed to be the date of Completion.
- U. Notice to Proceed - A written notice given by the District's Representative to the Contractor fixing the date on which the Contract time will start.
- V. Plans - The official project plans, profiles, typical cross-sections, general cross-sections, working plans, or reproductions thereof, approved by the District's Representative, which show the locations, character, dimensions, and details of the work to be performed. All such documents are to be considered as part of the plans.
- W. Project – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.
- X. Shop Drawings – All drawings, diagrams, illustrations, schedules, and other data or information, which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
- Y. Specifications - The directions, provisions and requirements contained in these specifications, technical specifications, and addenda.
- Z. Substantial Completion - Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the District can occupy or utilize the Work for its intended use, provided, however, that as a condition precedent to Substantial Completion, the District has received all certificates of occupancy and other permits, approvals, licenses, and other documents from any governmental authority that are necessary for the beneficial occupancy of the Project. Additionally, the following tasks must also be completed:
 1. Contractor has completed all cleanup and restoration of the Project Site.
 2. All punch list items have been identified and mutually agreed with District and the list submitted to District.
District has received all conditional waivers and releases for all Work billed to date and unconditional waivers and releases for all Work paid to date.
 3. District has recorded a Notice of Completion.
- AA. Work - All the work specified, indicated, shown or contemplated in the contract to construct the improvements, including all alterations, amendments or extensions thereto made by contract change order or written orders of the District's Representative.

PART 2 AWARD AND EXECUTION OF CONTRACT

2.1 AWARD OF CONTRACT

- A. Reclamation District 108 reserves the right to reject any and all bid proposals, to waive any informality in a bid proposal, and to make awards as it deems appropriate in its sole discretion.
- B. The award of the contract, if it were awarded, will be to the lowest responsive and responsible Bidder whose proposal complies with all the requirements prescribed. Such award, if made,

will be made within thirty (30) days after the opening of the bids. If the lowest responsible Bidder refuses or fails to execute the contract, the District may award the contract to the second lowest responsive and responsible Bidder. Such award, if made, will be made within sixty (60) days after the opening of the bids. If the second lowest responsive and responsible refuses to execute the contract, the District may award the contract to the third lowest responsive and responsible Bidder. Bidder's proposal shall remain valid for at least ninety (90) days. The periods of time specified above within which the award of contract may be made shall be subject to extension for such further period as may be agreed upon in writing between the District, the Bidder and the Bidder's surety concerned.

- C. All bids will be compared on the basis of the District's Representative's estimate of quantities of work to be done.

2.2 PAYMENT AND PERFORMANCE BONDS

- A. Prior to commencement of the Work, but in no event later than 10 days after the Bidder has received notice that the contract has been awarded, the Bidder shall furnish the District with payment and performance bonds, as set forth below.
 - 1. "Payment" bond shall secure the payment of claims of laborers, mechanics, or material suppliers employed on the work under the contract.
 - 2. "Performance" bond shall guarantee faithful performance of all work, within the time prescribed, in a manner satisfactory to the District, and that all materials and workmanship will be free from original or developed defects. The performance bond shall remain in effect until the end of all warranty periods set forth in the Contract documents.
- B. The form of bonds shall be surety forms conforming to California standards and legal requirements or as otherwise stipulated in the. Each contract bond shall be in the amount of one hundred percent (100%) of the Contract amount unless otherwise stipulated in the. Additionally, the bonds shall remain in full force and effect for one year after the District records a Notice of Completion.
- C. All alternates, extensions of time, extra and additional work, and other changes authorized by these specifications or any part of the contract may be made without securing the consent of the surety or sureties on the contract bonds. Changes, alterations, or extensions in the terms of the Contract shall not release the Contractor or their surety from its obligations.
- D. Whenever any surety or sureties on any such bonds, or on any bonds required by law for the protection of the claims of laborers and material suppliers, become insufficient, or the District has cause to believe that such surety or sureties have become insufficient, a demand in writing may be made of the Contractor for such further bond or bonds or additional surety, not exceeding that originally required, as is considered necessary, considering the extent of the work remaining to be done. Thereafter no payment shall be made upon such contract to the Contractor or any assignee of the Contractor until such further bond or bonds or additional surety has been furnished.
- E. Companies supplying sureties or bonds shall be licensed to supply such instruments within the State of California, shall be listed by the Office of the Insurance Commissioner, and shall have a minimum A.M. Best rating of A and have a demonstrated ability to meet their ongoing obligations to policyholders.

- F. Each bond shall incorporate, by reference, the Contract and shall be signed by both the Bidder and the Surety, and the signature of the authorized agent of the Surety shall be notarized. The Bidder shall pay all bond premiums, costs, and incidentals.

2.3 EXECUTION OF CONTRACT

- A. The contract shall be signed by the successful Bidder and returned, together with the payment and performance bonds and all required insurance certificates and endorsements within ten (10) days after the Bidder has received notice that the contract has been awarded unless stipulated otherwise in the.

2.4 FAILURE TO EXECUTE CONTRACT

- A. Failure of the lowest responsive and responsible Bidder, or the second lowest responsive and responsible Bidder or the third lowest Bidder to execute the contract and provide acceptable payment and performance bonds as provided herein within ten (10) days after the Bidder has received notice that the contract has been awarded shall be just cause for the annulment of the award and the forfeiture of the proposal guaranty.

2.5 RETURN OF BIDDER'S SECURITY

- A. The Bidder's Security accompanying the bids of the first, second, and third lowest responsive and responsible Bidders will be retained until the contract has been executed by both parties to the contract and all required bonds and insurance forms have been provided to the District, after which all such proposal guarantees, except Bidders' bonds and any guaranties which have been forfeited, will be returned to the respective Bidders whose bids they accompany. The Bidder's Security submitted by all other unsuccessful Bidders will be returned upon determination, by the District's Representative, of the first, second, and third lowest responsible Bidders.

PART 3 SCOPE OF WORK

3.1 INTENT OF PLANS AND SPECIFICATIONS

- A. The intent of the plans and specifications is to prescribe the scope for the construction and completion of the work, which the Contractor undertakes to perform in accordance with the terms of the contract. The contractor shall complete the design documents and obtain Colusa County Building official approval. Where the plans or specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used.

3.2 WORK TO BE DONE

- A. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, implements, equipment, machinery, methods, processes, and incidentals, and do all the work involved in executing the work in a satisfactory and workmanlike manner.

3.3 CHANGES

- A. The District reserves the right to make such alterations, deviations, additions to or deletions from the plans and specifications including the right to increase or decrease the quantity of any item or portion of the work, or to delete any item or portion of the work, as may be deemed by the District's Representative to be necessary or advisable and to require such extra work as deemed by the District's Representative to be required for the proper completion or construction of the whole work contemplated.
- B. Any such changes will be set forth in a contract change order which will specify, in addition to the work to be done in connection with the change made, adjustment of contract time, if any, and the basis for compensation for such work. A contract change order will not become effective until approved by the District.

3.4 INCREASED OR DECREASED QUANTITIES

- A. Increases or decreases in the quantity of a contract item of work will be determined by comparing the total pay quantity of such item of work with the District's Representative's Estimate thereof. If the total pay quantity of any item of work required under the contract varies from the quantities indicated in the proposal by twenty-five percent (25%) or less, payment will be at contract unit prices.
- B. If the total pay quantity of any item of work required under the contract varies from the quantities indicated in the proposal by more than twenty-five percent (25%), in the absence of an executed contract change order specifying the compensation to be paid, payment will be at contract prices. Written requests by the Contractor shall be accompanied by adequate data to support the costs of the item.

3.5 FINAL CLEANING UP

- A. Before final inspection of the work, and as a condition of the acceptance and final payment, the Contractor shall clean the project site, borrow pits, and all ground occupied by him in connection with the work, of all rubbish, excess materials, temporary structures, and equipment. All parts of the work shall be left in a neat and presentable condition.

PART 4 CONTROL OF WORK

4.1 AUTHORITY OF DISTRICT'S REPRESENTATIVE

- A. The District's Representative shall decide all questions which may arise as to the quality or acceptability of materials furnished and work performed, and as to the manner of performance and rate of progress of the work; all questions which may arise as to the interpretation of the plans and specifications; all questions as to the acceptable fulfillment of the contract on the part of the Contractor; and all questions as to claims and compensation. The District's Representative's decision shall be final and he shall have executive authority to enforce and make effective such decisions and orders which the Contractor fails to carry out promptly.

4.2 PLANS

- A. The contract plans furnished consist of general plans and show such details as are necessary to give a comprehensive idea of the construction contemplated. Contractor shall amend plans as needed to complete the project. All authorized alterations affecting the requirements and information given on the approved plans shall be in writing.

- B. The contract plans shall be supplemented by such working drawings prepared by the Contractor as are necessary to adequately control the work. The Contractor shall make no change to any working drawing after the District's Representative has approved it, except by direction of the District's Representative.
- C. The Contractor's working drawings for any part of the permanent work shall include, but not be limited to, stress sheets, anchor bolt layouts, shop details, erection plans, equipment lists and any other information specifically required elsewhere in the specifications.
- D. Working drawings for any structures and for other temporary work and methods of construction the Contractor proposes to use shall be submitted when required by the specification or ordered by the District's Representative. Such drawings shall be subject to approval insofar as the details affecting the character of the finished work and for compliance with design requirements applicable to the construction when specified or called for, but details of design will be left to the Contractor who shall be responsible for the successful construction of the work.
- E. The District's Representative shall approve working drawings before any work involving such drawings is performed. It is expressly understood that approval of the Contractor's working drawings shall not relieve the Contractor from his responsibility under the contract for the successful completion of the work in conformity with the requirements of the plans and specifications. Such approval shall not waive any of the requirements of the plans and specifications or relieve the Contractor of any obligation there under, and defective work, materials, and equipment may be rejected notwithstanding such approval.

4.3 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATION

- A. Work and materials shall conform to the lines, grades, typical cross sections, dimensions and material requirements, including tolerances, shown on the plans or indicated in the specifications. Although measurement, sampling and testing may be considered evidence as to such conformity, the District's Representative shall be the sole judge as to whether the materials or work deviate from the plans and specifications, and his decision as to any allowable deviations there from shall be final.
- B. Deviations from the approved plans, as may be required by the exigencies of construction, will be determined in all cases by the District's Representative and authorized in writing.

4.4 COORDINATION AND INTERPRETATION OF PLANS & SPECIFICATIONS

- A. The specifications, addenda, contract change orders, the plans, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary, to describe, and to provide for a complete work.
- B. In the event of conflicts between the contract documents the order or precedence shall be as follows:
 - 1. Modifications or changes last in time are first in precedence.
 - 2. Addenda.
 - 3. Invitation to Bid.

4. Instructions to bidders.
5. Supplemental Instructions.
6. Bid forms.
7. General Conditions except for specific modifications thereto stated in Division 01 Specifications.
8. Specifications.
9. Plans; as between figures given on plans and the scaled measurements, the figures shall govern; as between large-scale plans and small-scale plans, the larger scale shall govern.
10. As between detailed plans and standard plates bound within the specifications, the detailed plans govern.
11. In the event where provisions of codes, safety orders, contract documents, manufacturer's specifications, or industry standards are in conflict, the more restrictive shall govern.

4.5 REQUESTS FOR INFORMATION

- A. Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained in the plans, specifications, or the Contractor shall submit a request for information to the District's Representative for such further explanations as may be necessary, on forms provided by the District's Representative. The Contractor shall comply with the District's Representative's response as part of the Contract. In the event of any doubt or question arising respecting the true meaning of the plans or specifications reference shall be made to the District's Representative, whose decision thereon shall be final.

4.6 DIFFERING SITE CONDITIONS

- A. The Contractor shall promptly, no more than one (1) day, and before conditions are disturbed, give written notice to the District's Representative as to subsurface or latent physical conditions at the site which differ materially from those indicated in the contract, or unknown physical conditions at the site of an unusual nature which differ materially from those normally encountered and generally recognized as inherent in the work of the character provided for in the contract.
- B. No request by the Contractor for additional compensation shall be allowed unless the Contractor has given the written notice as required herein.

4.7 SUPERINTENDENCE

- A. The Contractor shall designate in writing before starting work an authorized representative who shall have the authority to represent and act for the Contractor. Said authorized representative shall be present at the site of the work at all times while work is actually in progress on the Contract. When work is not in progress and during periods when work is suspended, arrangements acceptable to the District's Representative shall be made for any emergency work that may be required.
- B. Whenever the Contractor, or his authorized representative, is not present on any particular part of the work where it may be desired to give direction, Contractor shall assign one (1) and have on the work site a competent Superintendent who is satisfactory to the District's Representative and has authority to act for the Contractor.

4.8 INSPECTION

- A. The District's Representative shall at all times have safe access to the work during construction, and shall be furnished with every reasonable facility for ascertaining that the materials and workmanship are in accordance with the requirements and intentions of the specifications, and the plans. All work done and all materials furnished shall be subject to inspection.
- B. Whenever the Contractor varies the period which work is carried out on each day, notice shall be given the District's Representative, so that inspection may be provided. Any work done in the absence of the District's Representative, may be subject to rejection.
- C. The inspection of the work or material shall not relieve the Contractor of any of his obligation to fulfill the contract as prescribed. Work or materials not meeting such requirements shall be made good, and unsuitable materials may be rejected, notwithstanding the fact that such work or materials have been previously inspected by the District's Representative or the payment therefore has been included in a progress estimate.
- D. Projects financed in whole or in part with City, County, District, State and/or Federal funds shall be subject to inspection at all times by the agencies involved.

4.9 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

- A. All work, which has been rejected, shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation, will be allowed for such removal, replacement, or remedial work.
- B. Any work done beyond the lines and grades shown on the plans or established by the District's Representative, or any extra work done without written authority, will be considered as unauthorized and will not be paid for. Upon order of the District's Representative unauthorized work shall be remedied, removed, or replaced at the Contractor's expense.
- C. Upon failure on the part of the Contractor to comply forthwith with any order of the District's Representative made under provisions of this section, the District's Representative shall have authority to cause defective work to be remedied, or removed and replaced, and unauthorized work to be removed, and to deduct the costs thereof from any moneys due or to become due the Contractor.

4.10 CHARACTER OF WORKERS

- A. If any Subcontractor or person employed by the Contractor shall appear to the District's Representative to be incompetent or to act in a disorderly or improper manner, such Subcontractor or person shall be discharged immediately on request of the District's Representative, and such person shall not again be employed on the work.

4.11 FINAL INSPECTION

- A. Whenever the work covered by the contract has been satisfactorily completed in accordance with the Contract Documents, and the final cleanup performed, the District's Representative will make the final inspection.

4.12 WARRANTY

- A. The Contractor warrants to the District, that the Work will be performed and completed in a good and workmanlike manner, free from any defects, and in a matter that conforms to the Contract Documents. Contractor further warrants that all materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects. Work, materials, or equipment not conforming to these requirements shall be considered defective. If required by District, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

The Contractor hereby assigns to the District, upon Substantial Completion of the Work, any and all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties. To the extent that any written assignment of any and all manufacturer's warranties relating to materials and labor used in the Work is required, Contractor shall provide such assignments to District no later than one week after the date of Final Completion.

- B. In addition to the Contractor's aforementioned general warranty obligations, as well as in addition to all of its other obligations herein and under the law, if, within one year after the date of the recordation of the Notice of Completion, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the District to do so. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the District, the District may correct it and Contractor shall immediately reimburse District for the full cost of such correction.
- C. Nothing contained in this provision shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of this additional one-year period for correction of Work relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the aforementioned general warranty is applicable or the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

PART 5 CONTROL OF MATERIALS

5.1 GENERAL

- A. The Contractor shall furnish all materials or equipment required to complete the work, except materials that are designated in the specifications to be furnished by the District. Only materials and equipment conforming to the requirements of the specifications shall be incorporated into the work.
- B. All materials and equipment furnished by the Contractor shall be new, free from defects. Where the quality of materials or equipment is not specifically called out they shall be of the highest quality normally used.

5.2 CONTRACTOR'S SUBMITTALS

- A. The Contractor shall submit to the District's Representative for his approval, catalog and descriptive literature on materials or equipment that will be used in the work. Said submittal shall be made prior to commencement of work in accordance with Division 01 and 02 Specifications.

5.3 SAMPLES AND TESTS

- A. At the option of the District's Representative, the District's Representative shall approve the source of supply of each of the materials or equipment before delivery is started and before such materials or equipment is used in the work. Samples of such materials or equipment shall be furnished to the District's Representative as requested and without charge. No material or equipment shall be used until the District's Representative has approved it. Samples will be secured and tested whenever necessary to determine the quality of material or equipment.
- B. All tests of materials or equipment furnished by the Contractor shall be made in accordance with commonly recognized standards of national testing organizations, and such special methods and tests as are prescribed in these specifications.

5.4 STORAGE OF MATERIALS

- A. Articles or materials to be incorporated in the work shall be stored in such a manner as to insure the preservation of their quality and fitness for the work, and to facilitate their inspection.

5.5 DEFECTIVE MATERIALS

- A. All materials or equipment which does not conform to the requirements of the plans and specifications shall be considered as defective and all such materials or equipment, whether in place or not, shall be rejected. They shall be removed immediately from the site of the work, unless otherwise permitted by the District's Representative. No rejected material or equipment, the defects of which have been subsequently corrected, shall be used unless approved in writing by the District's Representative.
- B. Upon failure on the part of the Contractor to comply promptly with any order of the District's Representative made under the provisions of this section, the District's Representative shall have authority to cause the removal and replacement of defective material or equipment and to deduct the cost thereof from any moneys due, or to become due to the Contractor.

5.6 MANUFACTURED EQUIPMENT

- A. Manufactured equipment shall be all new, first line, current production models of manufacturers regularly engaged in production of such equipment for at least five (5) years.

5.7 TRADE NAMES AND ALTERNATIVES

- A. For convenience in designation on the plans or in the specifications, certain articles, materials or equipment to be incorporated in the work may be designated under a trade name or the name of a manufacturer and his catalog information. The use of an alternative article or material which is of equal quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements:
 - 1. The burden of proof as to the quality and suitability of alternatives shall be upon the Contractor and he shall furnish all information necessary as required by the District's

Representative. The District's Representative shall be the sole judge as to the quality and suitability of alternative articles or materials and his decision shall be final.

2. Whenever the specifications permit the substitution of a similar or equivalent material or article, no tests or action relating to the approval of such substitute material will be made until the request for substitution is made in writing by the Contractor accompanied by complete data as to the equality of the material or article proposed. Such request shall be made in ample time to permit approval without delaying the work.
- B. Any additional costs incurred to allow the use of alternate material or equipment shall be borne by the Contractor, and shall not be the basis for any claim or claims for extra compensation. Any savings resulting from the use of alternate material or equipment shall be deducted from any moneys due, or that may become due the Contractor under the Contract.

5.8 CERTIFICATES OF COMPLIANCE

- A. Certificate of Compliance shall be furnished prior to the use of any materials for which the specifications require that such certificate be furnished.
- B. The District's Representative may waive materials testing requirements of the Specifications and accept the manufacturers' written certification that the materials to be supplied meet those requirements. Materials test data may be required as part of the certification.

PART 6 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

6.1 LAWS TO BE OBSERVED

- A. The Contractor shall keep itself fully informed of all existing and future State and Federal laws and all County, Municipal, Local and Special District laws, ordinances and regulations which in any manner affect those engaged or employed in the Work, or the materials used in the Work, or which in any way affect the conduct of the Work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. The Contractor shall at all times observe and comply with, and shall cause all his agents and employees to observe and comply with all such existing and future laws, ordinances, regulations, orders and decrees of bodies or tribunals having any jurisdiction or authority over the work and shall indemnify, defend, and hold harmless the District, and all trustees, officers, employees, or agents thereof connected with the Work ("INDEMNIFIED PARTIES,") against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or his employees. If any discrepancy or inconsistency is discovered in the plans, specifications, or contract for the work in relation to any such law, ordinance, regulation, order, or decree the Contractor shall forthwith report the same to the District's Representative in writing.

6.2 CONTRACTORS LICENSING LAWS

- A. All Bidders, Contractors, and Subcontractors performing work under this contract must be licensed by the California Contractors State License Board in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code and any Bidder, Contractor, or Subcontractor not so licensed shall be subject to the penalties imposed by such laws (Bus & Prof Code § 7028.15).

- B. Joint Venture Bidders must obtain a joint venture license before contract award (Bus & Prof Code § 7029.1).

6.3 ASSIGNMENT OF ANTITRUST ACTIONS

- A. Sections 4551 through 4554 of the Public Contract Code pertaining to the assignment of antitrust claims are incorporated herein in full by this reference.

6.4 PAYMENT OF TAXES

- A. The contract prices paid for the work shall include full compensation for all taxes which the Contractor is required to pay, whether imposed by Federal, State, County, or Local government, including, without being limited to, Federal excise tax. The District will furnish no tax exemption certificate or any document designed to exempt the Contractor from payment of any tax to the Contractor.

6.5 PERMITS AND LICENSES

- A. The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

6.6 PATENTS

- B. The Contractor shall assume all responsibilities arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the work and agrees to indemnify defend, and save harmless INDEMNIFIED PARTIES, from all suits at law, or actions of every nature for or on account of the use of any patented materials, equipment, or processes.

6.7 LABOR CODE REQUIREMENTS

A. HOURS OF LABOR

1. Eight (8) hours labor constitutes a legal day's work. The Contractor shall forfeit, as penalty to the District, twenty-five dollars (\$25) for each worker employed in the execution of the Contract by the Contractor or by any Subcontractor under him for each calendar day during which such worker is required or permitted to labor more than eight (8) hours in any one (1) calendar day and forty (40) hours in one (1) calendar week in violation of the provisions of the Labor Code, and in particular, Section 1810 to Section 1815 thereof, inclusive, except that work performed by employees of Contractor in excess of eight (8) hours per day, and forty (40) hours during any one week, shall be permitted upon compensation for all hours in excess of eight (8) hours per day at not less than one and one half (1½) times the basic rate of pay, as provided in said Section 1815.

B. PREVAILING WAGE

1. The Contractor shall comply with Labor Code Sections 1774 to 1775. Pursuant to said Section 1775 the Contractor shall forfeit to the District a penalty of not more than fifty dollars (\$50) for each calendar day or portion thereof, for each worker paid less than the general prevailing rate of wages as determined by the Department of Industrial Relations of the State of California for any work done under the Contract, by him or her, or by any Subcontractor under him or her, in violation of the provisions of the Labor Code, and in particular, Sections 1770 to 1780 thereof, inclusive.

2. The scale of prevailing wages is available at the principal office of the State's Department of Industrial Relations, Division of Labor Standards Enforcement, Bureau of Field Enforcement Office or the State's nearest Local office for the County where the work is being performed. The Contractor is required to post a copy of said wage scale at the job site prior to commencement of work.

C. TRAVEL AND SUBSISTENCE PAYMENTS

1. Attention is directed to the requirements of Section 1773.8 of the Labor Code. The Contractor shall make travel and subsistence payments to each worker, needed to execute the work, in accordance with said Section 1773.8.

D. PAYROLL RECORDS

1. The Contractor's attention is directed to the provisions of Labor Code Section 1776. The Contractor shall be responsible compliance by his Subcontractors with said provisions.
2. The Contractor and Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each worker, or other employee employed by him in connection with the execution of the work.
3. The payroll records shall be certified and shall be made available for inspection at all reasonable hours at the principal office of the Contractor or Subcontractor or shall be furnished to any employee, or his/her authorized representative on request, according to Labor Code Section 1776. The District, State Department of Industrial Relations, and any State or Federal agency involved in the financing of the work, or any of their authorized representatives shall have access to such books, records, documents, and other evidence for the purpose of inspection, audit and copying. The Contractor will provide facilities for such access and inspection.
4. Each Contractor and Subcontractors pursuant to Labor Code Section 1771.7f, project Contractors and Subcontractors shall maintain and furnish the Compliance Monitoring Unit a certified copy of each weekly payroll electronically with a statement of compliance signed under penalty of perjury. The fringe benefit statement and other required documentation such as training contributions, apprenticeship requirements shall be supplied to the District or their Labor Compliance Consultant. If there was no work performed during the week, the certified payroll may be annotated "no work" for that week.
5. The Contractor shall maintain books, records, documents and other evidence directly pertinent to performance on work under this contract in accordance with generally accepted accounting principles and the financial information and data used by the Contractor in preparation or support of the cost submission for any negotiated contract or change order and a copy of the cost summary submitted to the District.
6. Records shall be maintained and made available during the performance of work under this contract and until ten (10) years from the date of final payment for the project. In addition, those records which relate to any dispute appeal under this contract, to litigation, to the settlement of claims arising out of such performance, or costs or items to which an audit exception has been taken shall be maintained and made available until three (3) years after the date of resolution of such appeal, litigation, claim, or exception.

E. LABOR DISCRIMINATION

1. Attention is directed to Section 1735 of the California Labor Code.
2. No discrimination shall be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, or sex of such persons, except as provided in Section 12940 of the Government Code, and every Contractor for public works violating this section is subject to all the penalties imposed for a violation of Chapter 1 of Part VII, in accordance with the provisions of Section 1735 of the Labor Code.

F. APPRENTICES

1. Attention is directed to the provisions in Sections 1777.5, 1777.6, and 1777.7 of the California Labor Code and Title 8, California Code of Regulations Section 200 et seq. concerning the employment of apprentices by the Contractor or any Subcontractor under him.
2. The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if he employs registered apprentices or journeymen in any apprentice able trade on such contracts and if other contractors on the public works site are making such contributions.

G. WORKERS COMPENSATION

1. Pursuant to the requirements of Section 1860 of the Labor Code, the Contractor will be required to secure the payment of worker's compensation to his employees in accordance with the provisions of Section 3700 of the Labor Code.
2. Prior to the commencement of work, the Contractor shall sign and file with the District's Representative the Certificate of Worker's Compensation contained in the proposal.

6.8 TRAFFIC CONTROL

- A. Contractor is responsible and shall comply with all applicable Federal, State, County and Local requirements as required for traffic control and public safety during project construction. Coordination with the proper agencies and the placement and maintenance of warning signs, lights and other traffic control devices, as may be required, shall be the responsibility of the Contractor.
- B. Where the work involves the use of marine vessels, the Contractor shall comply with all applicable Federal, State, and County, Local, and Coast Guard requirements.

6.9 TRENCH EXCAVATION AND DISCOVERY OF HAZAROUS WASTE

- A. Public Contract Code §7104 Contracts for digging trenches or excavations; notice of discovery of hazard waste or other unusual conditions; investigations; change orders; effect on contract.

- B. Any public works contract of a Local public entity, which involves digging trenches or other excavations that extend deeper than four (4) feet below the surface, shall contain a clause, which provides the following:
1. Contractor shall promptly, and before the following conditions are disturbed, notify the District's Representative, in writing, of any:
 - a. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
 - b. Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to Bidders prior to the deadline for submitting bids.
 - c. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.
 2. The District shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order under the procedures described in the contract.
 3. In the event that a dispute arises between the District and Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law, which pertain to the resolution of disputes and protests between the contracting parties.
- C. Attention is also directed to the provisions of Section 6705 of the Labor Code concerning trench excavation safety plans.
- D. Prior to excavation for trenches four (4) feet or more in depth, the Contractor shall prepare 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 the plans vary from shoring system standards established by the California Division of Industrial Safety, a civil or structural District's Representative currently registered in California shall prepare the plans. Nothing herein shall be deemed to allow use of shoring, sloping, or protective systems less than those required by the State standards.

6.10 AIR POLLUTION CONTROL

- A. The Contractor shall comply with all pollution control rules, regulations, ordinances, and statutes which apply to the work performed under the contract including any air pollution rules, regulation and ordinances and statutes, specified in Section 11017 of the Government Code.
- B. Unless otherwise provided the material to be disposed of shall not burn.

6.11 WATER POLLUTION CONTROL

- A. The Contractor shall exercise every reasonable precaution to protect streams, lakes, reservoirs, bays, waterways, coastal waters, and other bodies of water from pollution with fuels, oils, bitumen's, calcium chloride, and other harmful materials and shall conduct and schedule his operations so as to avoid or minimize muddying and silting of said streams, lakes, reservoirs, bays, waterways, and coastal waters. Care shall be exercised to preserve vegetation beyond the limits of construction.
- B. Water pollution control work is intended to provide prevention, control and abatement of water pollution to streams, waterways, and other bodies of water.
- C. Nothing in the terms of the Contract shall relieve the Contractor of the responsibility for compliance with Sections 5650 and 12015 of the Fish and Game Code, or other applicable statutes relating to prevention or abatement of water pollution.

6.12 USE OF PESTICIDE

- A. The Contractor shall comply with all rules and regulations of the Department of Food and Agriculture, the Department of Health, the Department of Industrial Relations, and all other agencies, which govern the use of pesticides required in the performance of the work on the Contract.
- B. Pesticides shall include, but shall not be limited to, herbicides, insecticides, fungicides, rodenticides, germicides, nematocides, bactericides, inhibitors, fumigants, defoliant, desiccants, soil sterilants, and repellents.
- C. Any substance or mixture or substances intended for preventing repelling, mitigating, or destroying weeds, insects, diseases, rodents, or nematodes, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, shall be considered a pesticide.

6.13 ASBESTOS RELATED WORK

- A. All work involving asbestos containing material shall be performed in accordance with Sections 6501.5 through 6511, inclusive, of the California Labor Code and Section 5208 of Title 8 of the California Administrative Code and all other pertinent regulations.

6.14 SAFETY AND HEALTH PROVISIONS

- A. The Contractor shall conform to all applicable occupational safety and health standards, rules, regulations, and orders established by the California Division of Industrial Safety.

6.15 PUBLIC CONVENIENCE AND SAFETY

- A. The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public and he shall have under construction no greater amount of work than he can prosecute properly with due regard to the rights of the public.
- B. Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property Districts.

- C. Whenever the Contractor's operations create a condition hazardous to traffic or the public, he shall furnish, erect, and maintain at his expense and without cost to the District, such fences, barricades, lights, signs and other devices as are necessary to prevent accidents or damage or injury to the public.
- D. Should the Contractor appear to be neglectful or negligent in furnishing warning and protective measures as above provided, the District's Representative may direct attention to the existence of a hazard and the necessary warning and protective measures shall be furnished and installed by the Contractor at his expense. Should the District's Representative point out the inadequacy of warning and protective measures, such action on the part of the District's Representative shall not relieve the Contractor from responsibility for public safety or abrogate his obligation to furnish and pay for these devices.

6.16 PRESERVATION OF PROPERTY

- A. Trees, shrubs, and other plants that are not to be removed, and pole lines, fences, signs, markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and waterlines, all street and highway facilities, and any other improvements or facilities within or adjacent to the site of work shall be protected from injury or damage, and if ordered by the District's Representative, the Contractor shall provide and install suitable safeguards, approved by the District's Representative, to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operations, they shall be replaced or restored at the Contractor's expense. The facilities shall be replaced and restored to a condition as good as when the Contractor entered upon the work.
- B. The fact that any underground facility is not shown upon the plans shall not relieve the Contractor of his responsibility under this Section. It shall be the Contractor's responsibility to ascertain the existence of any underground improvements or facilities, which may be subject to damage by reason of his operations.
- C. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in protecting or repairing property as specified in the Section shall be considered as included in the prices paid for the various Contract items of work and no additional compensation will be allowed therefore.

6.17 RESPONSIBILITY FOR DAMAGE

- A. The District or the District's Representative shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof; or for any material or equipment used in performing the work; or for injury or death of any person or persons, either workers or the public; or for damage to property from any cause whatsoever.
- B. The Contractor shall be responsible for any liability imposed by law and injuries to or death of any person including but not limited to workers and the public, or damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before final acceptance.
- C. The Contractor shall indemnify, defend, and save harmless INDEMNIFIED PARTIES from any suits, claims, or actions of every name, kind, and description, brought forth, or on account of any injuries to or death of any person including but not limited to workers and the public, or damage to property resulting from the performance of the contract.

- D. The District may retain so much of the money due the Contractor as shall be considered necessary, until disposition has been made of such suits or claims for damages as aforesaid.

6.18 CONTRACTOR'S RESPONSIBILITY FOR WORK

- A. Until the formal acceptance by the District, the Contractor shall have the charge and care of the work and materials to be used therein, including work and materials for which he has received partial payment and shall bear the risk of injury, loss, or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any cause before its completion and acceptance and shall bear the expense thereof.

6.19 RESONSIBILITY OF DISTRICT

- A. The District shall not be held responsible for the care or protection of any materials or parts of the work prior to final acceptance, except as expressly provided in the Contract Documents.

6.20 INDEMNIFICATION

- A. To the fullest extent permitted by law, Contractor shall indemnify, defend, and hold harmless INDEMNIFIED PARTIES from and against all liability, claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' and expert fees, arising out of or resulting from or in connection with the performance of the Work, both on and off the Project Site, including, but not limited to, the failure, neglect, or refusal of Contractor to faithfully perform the Work and all of Contractor's obligations under the Contract Documents, as well as personal injury, bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use, excepting only such claims, damages, losses, expenses, liability and other costs as may be caused by the sole negligence, willful misconduct, or active negligence of INDEMNIFIED PARTIES.

Contractor's indemnity obligation in this regard includes, but is not limited to, defending and indemnifying the INDEMNIFIED PARTIES from any of the aforementioned liability, claims, damages, losses, expenses, and other costs regardless of whether it is the result of Contractor's acts or omissions (including any person or entity working at the direction of Contractor or its subcontractors), INDEMNIFIED PARTIES' acts or omissions (excepting sole negligence, willful misconduct, or active negligence of INDEMNIFIED PARTIES), or the acts or omissions of any third parties.

PART 7 PROSECUTION AND PROGRESS

7.1 SUBLETTING AND ASSIGNMENT

- A. The Contractor shall give his personal attention to the fulfillment of the Contract and shall keep the work under his control.
- B. No Subcontractors will be recognized as such, and all persons engaged in the work of construction will be considered as employees of the Contractor, and he will be responsible for their work, which shall be subject to the provisions of the Contract and Specifications.
- C. The Contractor shall perform with his own organization contract work amounting to not less than twenty percent (20%) of the original total contract price.

- D. Subcontracts shall include provisions that the contract between the District and the Contractor is part of the subcontract, and that the terms and provisions of said contract are incorporated into the subcontract. Subcontracts shall also contain certification by the Subcontractor that said Subcontractor is experienced in and qualified to do, and knowledgeable about, the subcontract work. Copies of subcontracts shall be available for review by the District's Representative
- E. When any portion of the work, which has been subcontracted by the Contractor, is not being prosecuted in a manner satisfactory to the District's Representative, the Subcontractor shall be removed immediately on the request of the District's Representative and shall not again be employed on the work.

7.2 ASSIGNMENT

- A. The performance of the contract may not be assigned, except upon written consent of the District's Representative. Consent will not be given to any proposed assignment, which would relieve the original, Contractor or his surety of their responsibilities under the contract.

7.3 PROGRESS OF THE WORK

- A. The Contractor shall commence work within fifteen (15) days after the date of the written notice to proceed from the District's Representative, unless otherwise set forth in the. The Contractor shall diligently prosecute the work to completion within the time limit set forth in the Contract Documents.
- B. The Contractor shall provide the District's Representative with a work plan in accordance with the Specifications. The Contractor shall promptly notify the District's Representative of any changes or delays in the prosecution and progress of the work.
- C. The time in which the various portions and the whole of the Contract are to be performed and the work is to be completed is the essence of the Contract. Therefore, the Contractor shall at all times employ work forces, materials, equipment, and tools sufficient to prosecute the work at not less than the rates fixed under the terms of the Contract and to complete the work or any separable portion thereof within the time limits therein fixed. If the Contractor fails to do so, it may, after such failure, be required to increase its progress at any point or points to modify its plans and procedure in such manner and to such extent as the District Representative may direct. In case of an adjustment by the District Representative of the time for the completion of the Contract, as hereinafter provided, a revised schedule of progress may be prescribed in accordance with such adjustment of time.

7.4 TEMPORARY SUSPENSION OF WORK

- A. At any time and without cause, the District may temporarily suspend the Work or any portion thereof by notice in writing to Contractor and District will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Alternatively, if no such date is affixed, Contractor shall resume Work on the date set forth by District in a subsequent writing. Contractor shall be allowed an adjustment in the contract price or an extension of the contract time, or both (as appropriate) directly attributable to any such suspension provided that the suspension was not ordered because the Contractor failed to follow orders or perform and provided that the Contractor makes a claim therefor as provided in the contract documents. If a temporary suspension is issued due to Contractor's fault, Contractor shall not be entitled to extra time or an adjustment in the contract price.

7.5 TIME OF COMPLETION

- A. The Contractor shall achieve Substantial Completion of the Work within 90 days from the commencement date stated in the Notice to Proceed.
- B. The Contractor shall achieve Final Completion of the Work within 120 days from the commencement date stated in the Notice to Proceed.
- C. Should the Contractor prepare to begin work at the regular starting time of any day on which “abnormally severe” inclement weather, or conditions resulting there from, or the conditions of the work, prevents the work from beginning at the usual starting time and the crew is dismissed as a result thereof and the Contractor does not proceed with at least seventy-five percent (75%) of the normal labor and equipment force in the current controlling operation(s) for at least sixty percent (60%) of the total daily time being spent on the controlling operation(s), the Contractor will not be charged for a working day whether or not the conditions should change thereafter during said day.
- D. The current controlling operation(s) is to be construed to include any feature of the work, operation, or activity considered at the time by the District’s Representative and the Contractor, which, if delayed or prolonged, will delay the time of completion of the contract.
- E. Determination that a day is a non-working day by reason of inclement weather or conditions resulting there from, shall be made by the District’s Representative, provided that the Contractor shall notify the District’s Representative in writing of the causes of delay within seven (7) days from the beginning of any such delay.

7.6 LIQUIDATED DAMAGES

- A. It is agreed by the parties to the Contract that is the event that all the work called for under the Contract in all parts and requirements is not finished or completed within the number of days set forth herein, or as may be adjusted by the District’s Representative, damage will be sustained by the District, and that it is and will be impracticable and extremely difficult to ascertain and determine the actual damage which the District will sustain in the event of and by reason of such delay. It is therefore agreed that the Contractor will pay to the District \$700 for each and every calendar day that achievement of Substantial Completion of the Work is delayed. It is also agreed that the Contractor will pay to the District \$700 for each and every calendar day that achievement of Final Completion of the Work is delayed. In the event that the delay of Substantial Completion runs into and past the Final Completion deadline, Contractor shall pay the District the combined amount of liquidated damages for both until the deadlines are respectively met. The Contractor agrees to pay said liquidated damages as herein provided for, and further agrees that the District may deduct the amount thereof from any moneys due or that may become due the Contractor under the Contract.
- B. It is further agreed that in case the work called for under the Contract is not finished and completed in all parts and requirements within the number of days specified, the District’s Representative shall have the right to increase the number of days, or not, as he may deem best to serve the interest of the District, and if he decides to increase the number of days, he shall further have the right to charge the Contractor, his heirs, assigns, or sureties, and to deduct from the final payment for the work all or part, as it may deem proper, of the actual cost of District’s Representative, inspection, superintendence, and other overhead expenses which are directly

chargeable to the Contract, and which accrue during the period of such extension, except that the cost of final surveys and preparation of final estimate shall not be included in such charges.

- C. The Contractor will be granted an extension of the time and will not be assessed with liquidated damages or the cost of District's Representative and inspection for any portion of delay in the completion of the Work beyond the time stated herein because of acts of God, or of the public enemy, acts of the District, fire, floods, tidal waves, earthquakes, epidemics, or quarantine restrictions, provided that the Contractor shall notify the District's Representative in writing of the causes of delay within ten (10) days from the beginning of any such delay. The District's Representative shall ascertain the facts and the extent of delay, and his findings thereon shall be final and conclusive.

7.7 TERMINATION

- A. **Termination of the Contractor for Cause.** The District may terminate the Contractor for cause if the Contractor:

1. fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to make sufficient progress to timely complete the Project); or
2. disregards laws or regulations of any public body having jurisdiction;
3. substantially violates, in any way, any provisions of the Contract Documents; or
4. fails to make payment to subcontractors or material suppliers in accordance with the respective agreements between Contractor and the subcontractors.

When any of the above reasons exist, District or District's Representative may, after giving Contractor seven days written notice, without prejudice to any of the District's rights under the Contract Documents, terminate the services of Contractor and may:

- a. exclude the Contractor from the Project site and take possession of all material, tools, equipment, tools and construction equipment and machinery thereon owned by Contractor (without liability to Contractor for trespass or conversion) and use the same for completing the Project;
- b. finish the Work by whatever means that the District deems expedient in light of the circumstances.

When the District terminates the Contract for cause, Contractor shall not be entitled to any further payment until the Work is completed. If the cost of completing the Project exceeds the contract price, Contractor and its sureties shall be liable for all additional costs. To the extent that the cost of completing the Project is less than the amount owing to Contractor prior to termination, District shall credit Contractor with any such surplus but only after all costs of completion have been paid.

- B. **Termination of the Contractor for Convenience.** The District may, at any time and for any reason, terminate the Contract in whole or in part for the District's convenience and without cause. Termination by the District under this paragraph shall be by a written notice of

termination delivered to the Contractor specifying the extent of termination and the effective date.

Upon receipt of notice of termination for convenience, the Contractor shall immediately, in accordance with instructions from the District, proceed with performance of the following duties:

1. Cease operations as specified in the notice;
2. Place no further orders and enter into no further subcontracts for materials, labor, services, or facilities except as necessary to complete continued portions of the Contract;
3. Terminate all subcontracts and orders to the extent they relate to the Work terminated;
4. Proceed to complete the performance of Work not terminated; and
5. Take actions that may be necessary, or that the District may direct, for the protection and preservation of the terminated Work.

Upon such termination, the Contractor shall recover, as its sole remedy, payment for unpaid Work that Contractor has completed in a satisfactory manner. Contractor shall not be entitled to any payment (costs, overhead, profit, or any other component of payment) for any Work not completed at the time of the termination for convenience. The Contractor waives and forfeits all other claims for payment and damages, including, without limitation, anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

PART 8 MEASUREMENT AND PAYMENT

8.1 MEASUREMENT OF QUANTITIES

- A. All work to be paid for at a contract price per unit of measurement shall be measured in accordance with the methods stipulated in the specifications.
- B. Items for which quantities are indicated "Lump Sum" shall be paid for at the price indicated in the Bid. Such payment shall be full compensation for the items of work and all work appurtenant thereto.

8.2 EXTRA WORK

- A. New and unforeseen work will be classed as extra work when determined by the District's Representative that such work is not covered by any of the various items for which there is a bid price or by combinations of such items.
- B. The Contractor shall do such extra work and furnish labor, materials, and equipment therefore upon receipt of an approved Contract Change Order or other written order of the District's Representative and in the absence of such approved Contract Change Order or other written order of the District's Representative, the Contractor shall not be entitled to payment for such extra work.

- C. When extra work is to be paid for on a lump sum basis, the amount of said payment shall be agreed upon in writing prior to execution of the work. Lump sum payments shall be considered as full compensation for the items of work and all appurtenances thereto.

8.3 CHANGE ORDERS

- A. The plans, specifications and the contract documents contain the requirements for the construction of the project. No information obtained from any officer, agent, or employee of the District on any such matters shall in any way affect the risk or obligations assumed by the Contractor or relieve him from fulfilling any of the conditions of the contract.
- B. The District may order changes, including revisions, to plans and specifications, performance of extra work, increases or decreases in contracted items of work, and the elimination of work. Such orders will be in writing. Neither the contract price nor the contract time can be modified without a written change order executed by both District and Contractor. Changes shall not affect the obligations of the sureties on the contract bonds nor require their consent. The Contractor shall promptly notify the District's Representative whenever it appears that a change is necessary, and when so directed, shall stop work in the areas that may be affected. Contract time and compensation will be adjusted for changes, which materially increase or decrease the time for performance or cost.
- C. When so directed, the Contractor shall proceed with changes before agreement is reached on contract adjustments to compensation or time of performance, and shall furnish to the District's Representative at the end of each day, signed detailed hourly records for that day of labor, construction equipment and itemized records of materials, equipment and services used in performance of the changes. If the Contractor fails to provide such records, the District's Representative's records will be used for the purpose of adjusting compensation or time of performance.
- D. When applicable, changes in contract price resulting from extra work may be determined by a mutually agreed upon lump sum price. The Contractor's proposal for such changes shall include a detailed breakdown of labor and materials to be performed by his forces or the forces of his Subcontractor or material supplier. The breakdown shall include labor surcharge and sales tax cost. Whenever the District requests that the Contractor prepare a lump sum price in connection with the change order, the Contractor shall be entitled to the costs incurred in the preparation of that price. Such costs will be incorporated into the lump sum amount regardless of whether or not the lump sum amount is finally accepted by the District.
- E. The District's Representative shall receive the Contractor's proposal for lump sum change orders within ten (10) days following the issuance of the change order price request.

8.4 OMITTED WORK

- A. The District may, by written order to the Contractor, omit work, equipment, and material to be provided under the Contract, and the value of the omitted work, equipment, and material will be deducted from the contract price. The deducted value will be a lump sum or unit price agreed upon in writing by the Contractor and the District based on breakdown and cost information submitted by the Contractor.

8.5 STOP PAYMENT NOTICES

- A. The District, through the District's Representative or other appropriate District's representatives may at its option and at any time, retain out of any amounts due the Contractor, sums sufficient to cover stop notice claims.

8.6 PROPOSAL ITEMS

- A. Proposal items shall be for the complete work as indicated on the plans and described in the specifications, and shall include all labor, materials, tools, transportation, supplies, equipment, appurtenances, fuel, and power, taxes, profit, and anything else necessary or required, unless specifically excepted, for the construction and adjustments of appurtenant facilities in a workmanlike manner.
- B. Payments will be made on the basis of the items listed on the proposal and no additional claims for compensation will be allowed therefore.

8.7 PROGRESS PAYMENTS

- A. Once each month, Contractor shall submit to District's Representative for review an application for payment filled out and signed by Contractor covering the work completed as of the date indicated on the application. In addition to other required items, each application for payment shall be accompanied by the following, all in form and substance satisfactory to District's Representative:
 - 1. Duly executed statutory conditional waiver and release forms from Contractor as well as all Subcontractors, material suppliers, and lower tier subcontractors that are included in the current application for payment;
 - 2. Duly executed statutory unconditional waiver and release forms from Contractor as well as all Subcontractors, material suppliers, and lower tier subcontractors that were included in prior applications for payment.
 - 3. Any other information, documentation, or materials that District may require to substantiate costs and payments issued.
- B. The District's Representative for partial payment purposes shall determine the value of the work completed. The District's Representative may require the Contractor to submit a monthly statement indicating the status of completion of each item of work and accompanied by such documentation as be required to substantiate the completion of work.
- C. The District will retain five percent (5%) from such estimated value of work done and materials furnished as retention earnings as retention earnings, and the remainder, less the amount of all previous payments, will be paid to the Contractor. Within 35 days after final completion and acceptance of the work done under this Contract, if unencumbered, the District shall release and pay the remaining five percent (5%) retained under the provisions of the Section entitled "Final Payment". The District has the option and may release fifty percent (50%) of the retention withheld, if unencumbered, on the last Progress Payment Estimate of the work satisfactorily completed and accepted.
- D. No progress payment made to the Contractor or its sureties will constitute a waiver of the liquidated damages.

- E. As provided for in Section 4590 of the California Public Contract Code and Section 10263 of the California Public Contract Code, the Contractor may substitute securities for any monies withheld by the District to ensure performance under the contract.
- F. Public Contract Code Section §20104.50 is applicable to this contract and provides as follows:
1. §20104.50 timely progress payments, legislative intent; interest; payment requests
 - a. It is the intent of the Legislature in enacting this section to require all Local governments to pay their contractors on time so that these Contractors can meet their own obligations. In requiring prompt payment by all Local governments, the Legislature hereby finds and declares that the prompt payment of outstanding receipts is not merely a municipal affair, but is instead, a matter of statewide concern.
 - b. It is the intent of the legislature in enacting this article to fully occupy the field of public policy relating to the prompt payment of Local governments' outstanding receipts. The Legislature finds and declares that all government officials, including those in Local government, must set a standard of prompt payment that any business in the private sector, which may contract for services, should look towards for guidance.
 2. Any Local agency which fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted payment request from a Contractor on a construction contract shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.
 3. Upon receipt of a payment request, each Local agency shall act in accordance with both of the following:
 - a. Each payment request shall be reviewed by the Local agency as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.
 - b. Any payment request determined not to be a proper payment request suitable for payment shall be returned to the Contractor as soon as practicable, but not later than seven (7) days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
 4. The number of days available to a Local agency to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which a Local agency exceeds the seven (7) day return requirement set forth in paragraph (2) of subdivision (c).
 5. For purposes of this article:
 - a. A "Local agency" includes, but is not limited to, a city, including a charter city, a county, and a city and county, and is any public entity subject to this part.
 - b. A "progress payment" includes all payments due Contractors, except that portion of the final payment designated by the contract as retention earnings.

- c. A payment request shall be considered properly executed if funds are available for payment of the payment request, and the financial officer of the Local agency does not delay payment due to an audit inquiry.

8.8 FINAL PAYMENT

- A. After the completion and acceptance of the work by the District, the District's Representative will make a final estimate of the amount of work done there under, and the value of such work, and the District shall pay the entire sum so found to be due after deducting there from all previous payments and all amounts to be kept and all amounts to be retained under the provisions of the Contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.
- B. Within sixty (60) days after the date of completion of the work of improvement, the retention withheld by the public entity shall be released. In the event of a dispute between the public entities may withhold from the final payment an amount not to exceed one hundred fifty percent (150%) of the disputed amount. For purposes of this subdivision, "completion" means any of the following:
 - 1. The occupation, beneficial use, and enjoyment of a work of improvement, excluding any operation only for testing, startup, or commissioning, by the public agency, or its agent, accompanied by cessation of labor on the work of improvement.
 - 2. The acceptance by the public agency, or its agent, of the work of improvement.
 - 3. After the commencement of work of improvement, a cessation of labor on the work of improvement of continuous period of one hundred (100) days or more, due to factors beyond the control of the Contractor.
 - 4. After the commencement of work of improvement, a cessation of labor on the work of improvement for a continuous period of thirty (30) days or more, if the public agency files for record a notice of cessation or a Notice of Completion.
- C. Work will not be considered complete in areas where a certificate of approval from the County, State or other regulatory agency is required until said certificate is received by the District.
- D. It is mutually agreed between the parties to the Contract that no certificates given or payments made under the Contract, except the final certificate or final payment, shall be conclusive evidence of the performance of the Contract, either wholly or in part, against any claim of the party of the first part, and no payment shall be construed to be an acceptance of any defective work or improper materials.
- E. The Contractor further agrees that the payment of the final amount due under the contract, and the adjustment and payment for any work done in accordance with any alterations of the same, shall release the District and the District's Representative from any and all claims or liability on account of work performed under the contract or any alteration thereof.

8.9 RESOLUTION OF CONTRACT CLAIMS

- A. Provisions of Section 20104 (b) (2) State that a "claim" means a separate demand by the Contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the contract for a public work and payment of

which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the Local agency.

B. Applicability of Section 20104(01)(1) of Public Contract Code applies to all public works claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a Contractor and a Local agency.

C. For any claim subject to this article, the following requirements apply:

1. The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

a. For claims of less than fifty thousand dollars (\$50,000), the Local agency shall respond in writing to any written claim within forty-five (45) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the Local agency may have against the claimant.

1) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the Local agency and the claimant.

2) The Local agency's written response to the claim, as further documented, shall be submitted to the claimant within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

2. For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the Local agency shall respond in writing to all written claims within sixty (60) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the Local agency may have against the claimant.

a. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the Local agency and the claimant.

b. The Local agency's written response to the claim, as further documented, shall be submitted to the claimant within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

8.10 Resolution of Claims – PCC § 9204. This Contract is subject to the claims resolution procedures set forth in Public Contract Code § 9204. A “Claim,” as it relates to this provision, means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

1. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by the District.
2. Payment by the District of money or damages arising from work done by, or on behalf of, the Contractor pursuant to the Contract and payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled.
3. Payment of an amount that is disputed by the District.

Upon receipt of a Claim, District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide Contractor with a written statement identifying what portion of the Claim is disputed and what portion is undisputed.

The Contractor shall furnish reasonable documentation to support the Claim. If District needs approval from its governing body to provide Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a Claim sent by registered mail or certified mail, the District shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.

Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement.

If the Contractor disputes the District's written response, or if the District fails to respond to a Claim within the time prescribed, the Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute.

Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the District shall provide the Contractor with a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the District and the Contractor sharing the associated costs equally. The District and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the Claim remaining in dispute shall be subject to the dispute resolution process provided for in this Contract.

The mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code section 20104.4 (or any related provision in this Contract) to mediate after litigation has been commenced.

If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against District because privity of contract does not exist, the Contractor may present to the District a

claim on behalf of a subcontractor or lower tier subcontractor. Within 45 days of receipt of this written request, the Contractor shall notify the subcontractor in writing as to whether the Contractor presented the claim to the District and, if the Contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

Any Claim that remains unresolved after mediation shall be litigated in California State Superior Court, and shall be venued in California State Superior Court in the County where the Project is located.

To the extent that any Claim deadlines stated herein are inconsistent, the shorter timeframe shall apply.

PART 9 INSURANCE

9.1 GENERAL REQUIREMENTS

- A. Contractor shall not commence or continue to perform any Work unless it, at its own expense, has in full force and effect all required insurance. In the event that Contractor employs Subcontractors, sub-tier contractors, or any person or entity involved by, for, with, or on behalf of Contractor in the performance of this Project, Contractor shall require and confirm that each meets the minimum insurance requirements specified below and shall not permit any of them to perform Work until they have complied with the same insurance requirements. All of the insurance shall be provided on policy forms satisfactory to District.
- B. The types of insurance Contractor shall obtain and maintain for the full period of the agreement and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work, are:
 - 1. Worker's Compensation and Employer's Liability Insurance
 - 2. Commercial General Liability Insurance
 - 3. Commercial Automobile Liability Insurance
 - 4. Excess Liability/Umbrella Insurance
 - 5. Property "Builder's Risk" Insurance
 - 6. Pollution Liability Insurance
- C. All insurance policies shall be issued by an insurance company admitted and licensed to transact the business of insurance in the State of California, with an assigned policyholders' Rating of A and Financial Size Category Class VII in accordance with the latest edition of Best Key Rating Guide, unless otherwise approved by District.
- D. Within ten (10) days of the date that the Bidder has received notice that the contract has been awarded, Contractor shall furnish District with endorsements to the required policies of insurance, excepting workers' compensation and employer's liability, in such forms reasonably acceptable to District confirming that District is named as an additional insured for all liability risks on all such policies. Additional insured status must extend to both ongoing and completed operations. Contractor shall require its subcontractors to name the District as an additional insured, under these terms and conditions, in the subcontractors' liability policies. The additional insured endorsements shall cover but not be limited to liability arising out of any and all activities performed by or on

behalf of Contractor and shall include coverage for premises operations and completed products hazards. Moreover, upon request of District, Contractor shall provide a certified duplicate original of any of the herein described policies of insurance.

- E. Contractor also shall furnish District, prior to exercising any right or commencing any Work on this Project, with certificates of insurance countersigned by an authorized agent or representative of the insurance companies stating that the insurance policies will not be canceled, altered, or reduced without thirty (30) days' prior written notice to District (ten (10) days for nonpayment of premium).
- F. Any deductible or self-insured retention must be declared to and approved by District. At the option of District and except as is provided for below, the insurer shall either reduce or eliminate such deductibles or self-insured retentions.
- G. If any of the required coverages expire during the term of this Agreement, the Contractor shall deliver the renewal certificate(s) including the required policy additional insured endorsement(s) to District at least ten (10) days prior to the expiration date. In the event of cancellation for non-payment of premium, District may pay premiums due by Contractor and deduct the paid payment from amounts then or subsequently owing to the Contractor under this agreement.
- H. Insurance limits called for herein shall be considered to be minimum and District shall have the absolute discretion to require higher limits should the nature of the Work and risks involved call for higher limits. Additionally, District shall have the unilateral right to require the Contractor to obtain additional insurance policies if it deems that requiring additional policies is in its best interest. A requirement of higher limits or additional policies may necessitate an adjustment in Contractor's compensation. Contractor shall give District prompt notice of a claim made or a suit instituted arising out of Contractor's operations under this Agreement.
- I. Contractor hereby grants to District, on behalf of any insurer providing insurance to Contractor with respect to the Work of Contractor under this Agreement, a waiver of any right of subrogation which any such insurer of said Contractor may acquire against District by virtue of the payment of any loss under such insurance. Contractor shall provide all applicable endorsements reflecting waiver of the right to subrogation.

9.2 REQUIRED PROVISIONS

- A. All of the below insurance policies are to contain, or be endorsed to contain, the following provisions:
 - 1. For any claim related to this Project, the Contractor's insurance shall be primary insurance with respect to District. Any insurance, self-insurance or other coverage maintained by District shall not contribute to it.
 - 2. Any failure of Contractor to comply with the reporting or other provisions of the policies including breaches and warranties shall not affect coverage provided to District.
 - 3. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

9.3 WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

- A. Before commencement of the Work, Contractor shall provide a certificate of insurance and an endorsement evidencing that it has obtained for the period of the agreement, full worker's compensation insurance coverage as required by law for not less than the statutory limits and employer's liability insurance in the sum of not less than \$1,000,000 per accident for bodily injury and disease for all persons whom they employ or may employ in carrying out the Work. By Contractor's signature herein, Contractor certifies that Contractor is aware of the provisions of Section 3700 of the California Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and the Contractor shall comply with such provisions before commencing the performance of the Work under this agreement.

9.4 COMMERCIAL GENERAL LIABILITY INSURANCE

- A. Contractor agrees to carry commercial general liability insurance which shall be on an occurrence basis and which shall include coverage for third party liability risks including, without limitation, bodily injury including coverage for injury, sickness or disease, emotional distress, and death, personal injury/advertising injury, property damage from injury to or destruction of property of others, contractual liability coverage sufficiently broad to insure as described in the section of this agreement entitled "INDEMNIFICATION", premises/operations and products/completed operations, underground excavation and removal of lateral support, explosion and collapse hazard, personal injury liability, and independent contractors. The insurance shall provide coverage for completed operations which shall be maintained for at least two years after Final Completion of the Project. Coverage shall have limits of liability of not less than the following:

- 1. Bodily Injury/Property Damage \$ 1,000,000 each occurrence \$2,000,000 aggregate
- 2. Personal Injury/Advertising Injury \$ 1,000,000 each occurrence \$2,000,000 aggregate

9.5 COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

- A. Contractor shall maintain a commercial automobile liability insurance policy which shall cover at least symbol 1 (any auto) for all vehicles, automobiles, trucks, and equipment, including coverage for owned, hired, and non-owned automobiles and shall provide for contractual liability and owned and non-owned mobile equipment to the extent it may be excluded from the commercial general liability policy. Coverage shall have limits of liability of not less than the following:

- 1. Combined Single Limit \$ 1,000,000

9.6 EXCESS LIABILITY/UMBRELLA INSURANCE

- A. Contractor shall provide excess liability or umbrella insurance providing protection for at least the hazards insured under its Commercial General Liability, Commercial Auto Liability, and Pollution Liability policies. The minimum limit of Contractor's excess liability/umbrella policy shall be:

- 1. General Aggregate: \$2,000,000.
- 2. Each Occurrence: \$2,000,000.

9.7 BUILDER'S RISK ("ALL RISK") INSURANCE

- A. Before commencement of the Work, Contractor shall provide a certificate of insurance and an endorsement evidencing that it has obtained for the period of the agreement builder's risk ("All Risk") completed value insurance coverage (including fire, flood, landslide and mudslide, but excluding earthquake and tidal wave) for the Work to be completed under this agreement and including completed Work and Work in progress.
- B. Such insurance shall be written on a policy form that shall at least include insurance for physical loss and damage to the Work under this agreement, temporary buildings, false Work, and materials and equipment in transit and shall insure against the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, collapse, debris removal, demolition occasioned by enforcement of law and regulation, water damage and such other perils or causes of loss as may be specifically required by the Contract Documents.
- C. In addition to the above listed perils, the insurance shall include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of attorneys, District's Representatives, and architects); cover materials and equipment stored at the Project Site or at another location that was agreed to in writing by District prior to being incorporated in the Work; and include testing and startup costs.
- D. Such insurance may have a deductible clause but not to exceed the smaller of (a) five (5) percent of the total amount of the Agreement, or (b) \$10,000 for all risks, except flood. The deductible for flood shall not exceed five (5) percent of the contract price. The risk of loss within such identified deductible shall be borne by Contractor, Subcontractors or others suffering such loss, and shall not be the responsibility of District.

9.8 POLLUTION LIABILITY INSURANCE

- A. Contractor shall procure pollution liability coverage or other insurance covering claims for bodily injury and property damage arising out of the abatement, removal, storage, transportation, or other exposure to hazardous materials or pollutants, including, but not limited to mold. The minimum limit of Contractor's pollution liability policy shall be:
 - 1. General Aggregate: \$2,000,000.
 - 2. Each Occurrence: \$1,000,000.

9.9 CONTRACTOR'S RESPONSIBILITY NOT LIMITED BY INSURANCE

- A. Nothing contained in these insurance requirements or this agreement is to be construed as limiting the extent of the liability of the Contractor or Contractor's insurers or sureties.

9.10 MAINTAINING INSURANCE

- A. The maintenance of proper insurance in conformity with the Contract Documents is a material element of this agreement. If at any time during the life of the agreement, including the guarantee period, or any extension, Contractor fails to maintain the required insurance in full force and effect, the Work shall be discontinued immediately and all payments due or that become due to Contractor shall be withheld until notice is received by District that the required insurance has been restored to full force and effect and that the premiums have been paid for a

period satisfactory to District. Failure to maintain or renew coverage or to provide evidence of renewal upon request of District may be treated by District as a material breach of contract.

9.11 NO LIMITATION ON INDEMNITY

- A. Contractor's indemnity and other obligations shall not be limited by these insurance provisions and shall survive the expiration of the Agreement. Moreover, the insurance provisions of this Agreement shall likewise not be limited by the indemnity provisions of this Agreement.

END OF SECTION

SECTION 01 11 00

SUMMARY OF WORK

1. WORK REQUIRED BY CONTRACT DOCUMENTS

1.1 Construction of the District Operations Building including, but not limited to:

- Complete Design of Project
- Piping and Plumbing Work
- Site Foundations and Slabs Construction
- Metal Building Shell Construction
- Door and Window Installation
- Exterior Rock Veneer Installation

2. SURROUNDING SITE CONDITION SURVEY

2.1 Prior to commencing the Work, Contractor, District, and District's Representative shall tour the Project site together to examine and record damage to existing adjacent buildings and improvements. This record shall serve as a basis for determination of subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to the adjacent buildings and improvements not noted in the original survey, but subsequently discovered, shall be reported to District's Representative.

3. CONTRACTOR'S USE OF PROJECT SITE

3.1 Contractor's use of the Project site for the Work and storage shall be restricted to the designated area within the District's Property which will be determined during the pre-project tour described in section 2.1. above.

4. PROTECTION OF EXISTING STRUCTURES AND UTILITIES

4.1 Locate all known existing installations before proceeding with construction operations which may cause damage to such installations. The existing installations shall be kept in service where possible and damage to them shall be repaired with no adjustment of Contract Sum.

4.2 If any other structures or utilities are encountered, request District's Representative to provide direction on how to proceed with the Work.

4.3 If any structure or utility is damaged, take appropriate action to ensure the safety of persons and property.

SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Definitions.
 - 2. Substitution Submittal Procedures.
 - 3. Substitution Construction Procedures.
 - 4. Notice of Request for Substitution.

- B. Related Sections:
 - 1. Section 00 72 00 – General Conditions
 - 2. Section 01 11 00 – Summary of Work.
 - 3. Section 01 33 00 – Submittal Procedures.

- C. SUBSTITUTION SUBMITTALS: Submit in writing, in accordance with requirements set forth in General Conditions, Section 00 72 00, on form provided as 01 25 00 - Attachment A, Notice of Request for Substitution. Notice of Request for Substitution must include complete data substantiating compliance of proposed substitution with Contract.

- D. Notice requesting substitution, along with supporting documentation, must be submitted no later than specified in General Conditions, Section 00 72 00.

- E. Substitution requires written concurrence by the District Representative prior to use in the Project.

- F. A Substitution request constitutes a representation that the Contractor:
 - 1. Has investigated proposed substitution and determined that it meets or exceeds the quality level required to achieve operating efficiency and effectiveness of the specified material, product, thing, or service, and is otherwise equal or superior in all respects, including aesthetics, to that specified or otherwise indicated in Contract Documents.
 - 2. Will provide the same warranty for the substitution as for the specified material, product, thing, or service.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be compatible with substrates and adjacent materials, and complete in all respects with no additional cost to the District.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.

- G. Substitution requests must include a statement indicating the substitution's effect on the Construction Schedule. Indicate the effect of the proposed substitution on overall Contract Time and, as applicable, on completion of portions of the Work for use by the District or for work under separate contracts by the District.

- H. Substitution Submittal Procedure:
 - 1. Limit each request to one proposed substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed equivalence.

3. The District Representative will notify Contractor, in writing, of decision to approve or reject request.
- I. If Notice of Request for Substitution is approved, submit required submittals under provisions of Sections 01 33 00.
- J. If Notice of Request for Substitution is rejected or not approved, use item specified or otherwise indicated in Contract Documents. Submit required submittals under provisions of Sections 01 33 00.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 INSTALLATION PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitution at no additional cost to the District.

END OF SECTION

SECTION 01 25 00 - ATTACHMENT A

NOTICE OF REQUEST FOR SUBSTITUTION

Substitution Request No.: _____

In accordance with the Conditions of the Contract and the provisions of Section 01 25 00, we hereby submit for consideration, this Notice of Request for Substitution for the following material, product, thing, or service:

Section	Paragraph	Specified Item
Proposed Substitution: _____		

The following supporting information is attached:

- Product Data including model numbers and descriptions.
- Certified test results attesting to equivalence.
- Product/material samples.
- Other: _____

Reason for proposed substitution:

- Specified or indicated item is unavailable.
- Significant cost reduction. Actual dollar savings to the District if substitution is accepted: \$ _____
- Significant quality difference without cost change.
- Other: _____

Submitted and Certified By:

CONTRACTOR:

_____ Signature	_____ Date
_____ Name (Print)	_____ Title
_____ Firm Name	
_____ Address	_____ Phone
_____ City, State, Zip	_____ FAX

Received: _____
 Date District Representative

Recommended: _____
 Rejected: Date Architect of Record

Approved: _____
 Rejected: Date District Project Director

END OF SECTION 01 25 00 - ATTACHMENT A

SECTION 01 31 00

PROJECT COORDINATION

1. GENERAL

- 1.1 Coordinate the Work and do not delegate responsibility for coordination to any Subcontractor.
- 1.2 Anticipate the interrelationship of all Subcontractors and their relationship with the Work.
- 1.3 Resolve differences or disputes between Subcontractors concerning coordination, interference, or extent of the Work between sections of the Work.
- 1.4 Coordinate the Work of Subcontractors so that portions of the Work are performed in a manner that minimizes interference with the progress of the Work.
- 1.5 Do not obstruct spaces and installations that are required to be clear by Applicable Code Requirements.
- 1.6 Do not cover any piping, wiring, ducts, or other installations until they have been inspected and approved and required certificates of inspection issued.
- 1.7 Remove and replace all Work which does not comply with the Contract Documents. Repair or replace any other Work or property damaged by these operations with no adjustment of Contract Sum.
- 1.8 Coordinate all portions of the Work requiring careful coordination in order to fit in space available. Before commencing such portions of the Work, prepare supplementary Drawings for review by District's Representative.

SECTION 01 31 19

PROJECT MEETINGS

PART 1 GENERAL

1.1 PRECONSTRUCTION CONFERENCE

- A. Prior to commencement of Work, a preconstruction conference will be conducted by District's Representative to discuss procedures which are to be followed during performance of the Work.
- B. LOCATION: AT THE PROJECT SITE.
- C. ATTENDING SHALL BE:
 - 1. District's Representative.
 - 2. Contractor.
 - 3. Superintendent.
 - 4. Subcontractors, as appropriate.
 - 5. Others, as appropriate.

1.2 BILLING MEETING

- A. A billing meeting shall be conducted by District's Representative each month prior to submittal of the Application For Payment and will also serve to update the District regarding progress and to discuss and resolve field problems.
- B. Location: At project site.
- C. Attending shall be:
 - 1. District's Representative.
 - 2. Contractor.
 - 3. Superintendent.
 - 4. Subcontractors, as appropriate.
 - 5. Others, as appropriate.

1.3 GUARANTEES, BONDS, AND SERVICE AND MAINTENANCE CONTRACTS REVIEW MEETING

- A. Within two months following the date of Substantial Completion, a meeting shall be conducted by District for the purpose of reviewing the guarantees, bonds, and service and maintenance contracts for materials and equipment.
- B. Attending shall be:
 - 1. District.
 - 2. District's Consultants, as appropriate.
 - 3. Contractor.
 - 4. Subcontractors, as appropriate.
 - 5. Others, as appropriate.

END OF SECTION

SECTION 01 32 16

CONTRACT SCHEDULES

1. CONTRACT SCHEDULE

1.1 Submission

The Contractor shall submit the Contract Schedule to District's Representative within 7 days after receipt of Notice of Selection as Apparent Lowest Responsible Bidder.

Within 7 days after receipt of the Contract Schedule, District's Representative will notify Contractor of its acceptance of, or its review comments about, the schedule so that appropriate adjustments may be made by Contractor in the development of the Contract Schedule.

1.1 FORM

- A. Prepare the Contract Schedule as a bar chart, using Primavera P6 or Microsoft Project, showing continuous flow from left to right. Specific calendar dates shall be clearly and legibly shown for the start and finish of each Work activity.
- B. Prepare the Contract Schedule in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time.

Identify the following milestone events on the Contract Schedule:

- 1. Plumbing
 - 2. Concrete Footing Foundation
 - 1. Broom Finish and Smooth Finish Concrete Floor
 - 2. Steel Building Shell
 - 3. Doors and Windows
 - 4. Exterior Finishes
 - 5. On-Site Punchlist
- C. Identify all holidays and non-working days on the Preliminary Contract Schedule.

1.2 ACTIVITIES

- A. Identify all Work activities which constitute the critical path.

2. UPDATING

- 2.1 REVIEW THE CONTRACT SCHEDULE WITH DISTRICT'S REPRESENTATIVE ONCE EACH WEEK TO INCORPORATE IN THE CONTRACT SCHEDULE ALL CHANGES IN THE PROGRESS, SEQUENCES, AND SCOPE OF WORK ACTIVITIES.
- 2.2 PREPARE AND SUBMIT TO DISTRICT'S REPRESENTATIVE AN UPDATED CONTRACT SCHEDULE ONCE EACH MONTH, OR AS MUTUALLY AGREED.

- A. The updated Contract Schedule shall accurately represent the as-built condition of all completed and in-progress Work activities as of the date of the updated Contract Schedule.
 - B. The updated Contract Schedule shall incorporate all changes mutually agreed upon by Contractor and District during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.
 - C. Contractor shall perform the Work in accordance with the updated Contract Schedule. Contractor may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by District.
- 2.3 CONTRACTOR SHALL SUBMIT THE UPDATED CONTRACT SCHEDULE, IN THE FORM ACCEPTABLE TO DISTRICT'S REPRESENTATIVE, AT LEAST 7 DAYS PRIOR TO SUBMITTING THE APPLICATION FOR PAYMENT.
- 2.4 DISTRICT'S REPRESENTATIVE WILL DETERMINE ACCEPTABILITY OF THE UPDATED CONTRACT SCHEDULE WITHIN 7 DAYS AFTER ITS RECEIPT.
- 2.5 NO APPLICATIONS FOR PAYMENT WILL BE PROCESSED NOR SHALL ANY PROGRESS PAYMENTS BECOME DUE UNTIL UPDATED CONTRACT SCHEDULES ARE ACCEPTED BY DISTRICT'S REPRESENTATIVE.
- 2.6 THE ACCEPTED, UPDATED CONTRACT SCHEDULE SHALL BE THE CONTRACT SCHEDULE OF RECORD FOR THE PERIOD IT IS CURRENT AND SHALL BE THE BASIS FOR PAYMENT DURING THAT PERIOD.

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Submittal Log.
 - 2. Submittal Procedures.
 - 3. Submittal Contents.
 - 4. Submittal Quantities and Format.
 - 5. Manufacturer's Instructions.
- B. Related Sections and Documents
 - 1. Section 01 31 19 - Project Meetings.
 - 2. Section 01 41 00 - Regulatory Requirements.

1.2 SUBMITTAL LOG

- A. Within 45 days after Notice to Proceed, Contractor must furnish to District Representative, an electronic version and four printed copies of the Submittal Log. The District Representative will review and approve the Submittal Log or return it with comments for correction or revision.
- B. Submittal Log must include all submittals required by the Contract Documents and include the following information for each of the Contractor's submittal packages:
 - 1. Specification Section number and title.
 - 2. Submittal Title / description of the Work covered.
 - 3. Name of responsible entity (CONTRACTOR, District, Subcontractor... etc).
 - 4. Submittal category (action or informational).
 - 5. Provide written signatures of subcontractors indicating their review and approval of Submittal Log dates and information for their submittals.
 - 6. Identify deferred submittals which must be reviewed by state departments other than the District and/or local regulatory agencies.
 - 7. Identify critical and near critical submittals .
 - 8. If Submittal is included in Contract Schedule, the following additional information must also be included in Submittal Log:
 - a. Corresponding Contract Schedule Activity ID/number.
 - b. Contractor's scheduled date for submission of initial submittal package to District Representative.
 - c. Contractor's scheduled dates required for review, re-submittals and review of re-submittals (when applicable).
 - d. Identify procurement time in days, to procure items.
 - e. Corresponding Contract Schedule activity(s) dependent on the submittal approval.
- C. The approved Submittal Log must be updated on a weekly basis by the Contractor to reflect the current status of the submittals.

1. Contractor must provide a minimum of four copies of the updated Submittal Log to the District Representative at Weekly Contractor meetings.
2. Contractor and District Representative must jointly revise submittal log information to reflect actual submittals and correct dates which are not accurate.

1.3 SUBMITTAL PROCEDURES

- A. Provide submittals as required in the individual Section.
- B. Electronic submittals may be utilized by Contractor subject to the approval of the District Representative. Contractor must assume responsibility for:
 1. Confirming Electronic format compatibility with all required reviewers.
 2. Providing all software; security; access and instructions/training/support required for use of any proprietary applications.
 3. Compliance with all other applicable requirements of this Section.
- C. Submittals not required will not be reviewed.
- D. Submittals must be in the English language and numerical data must be in the system of units used as shown and specified.
- E. Neither the review nor lack of review of any submittal will waive any of the requirements of the Contract, or relieve the Contractor of any obligations hereunder.
- F. Make submittals promptly in accordance with the approved submittal log, and in such sequence as to cause no delay in the Work or in the work of any other contractor.
- G. Number submittals sequentially, using alphabetic suffixes on resubmittals.
- H. Each submittal must contain data representing only one specification Section.
- I. District Representative will review and return submittals within 20 days after receipt thereof, or within 20 days after receipt of all information necessary for such review, whichever is later.
 1. Review status will be marked “No Exception Taken”, “Make Corrections Noted”, “Revise and Resubmit”, “Rejected”, or “Not Reviewed”.
 2. Revise and resubmit within 15 days of return submittals marked “Revise and Resubmit” or “Rejected”.
- J. Regulatory Agency Submittals: Contractor must allow additional time for required regulatory agency submittal reviews and processing as follows:
 1. Office of State Fire Marshal: six (6) weeks.
 2. County/Regional Air Quality Management District: six (6) months for review of Authority to Construct.
- K. Distribute copies of the reviewed submittals to concerned parties. Instruct parties to promptly report inability to comply with provisions. Notify District Representative of every such report.
- L. Do not begin Work covered by a submittal designated “Revise and Resubmit” or “Rejected”. Contractor may begin Work covered by submittals marked “No Exceptions Taken” or “Make Corrections Noted” in accordance with review notes and comments or as otherwise approved by a regulatory agency.

1.4 SUBMITTAL CONTENTS

- A. Submittals Must Contain:
1. Date of submission and dates of any previous submissions.
 2. Project title and number.
 3. Contract Identification.
 4. Names of Contractor, supplier, and manufacturer.
 5. Identification of the product, with the Specification Section number and the applicable detail number(s) on the approved Project Drawings.
 6. Dimensions and values in units to match those indicated.
 7. Field dimensions, clearly identified as such.
 8. Relation to adjacent or critical features of the work or materials.
 9. Applicable standards, such as ASTM or Federal Specification numbers.
 10. Identification of revisions on resubmittals.
 11. An 8 x 3-inch space for review stamps in the lower right-hand corner of each page.
 12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and of the Contract.

1.5 SUBMITTAL QUANTITIES AND FORMAT

- A. Format:
1. Submit an electronic PDF format file to the District.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. Where any item of Work is required by the Contract to be delivered, stored, assembled, installed, started-up, adjusted, or finished in accordance with the Manufacturer's instructions, submit manufacturer's printed instructions.
- B. Identify conflicts between manufacturer's instructions and the Contract. Report conflicts to District Representative.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 33 02

INFORMATION & PROCEDURES INSTRUCTIONS (RFI)

DESCRIPTION

- 1.1 THIS SECTION CONTAINS THE PROCEDURES TO BE FOLLOWED BY CONTRACTOR UPON DISCOVERY OF ANY APPARENT CONFLICTS, OMISSIONS, OR ERRORS IN THE CONTRACT DOCUMENTS OR UPON HAVING ANY QUESTION CONCERNING INTERPRETATION.

PART 2 PROCEDURES

- 2.1 NOTIFICATION BY CONTRACTOR:
 - A. Submit all requests for clarification or additional information in writing to District's Representative using the Request for Information (RFI) form provided by District's Representative or a similar form approved by District's Representative.
 - B. Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI would be "001." The second RFI would be "002." The first resubmittal of RFI "002" would be "002a."
 - C. Limit each RFI to one subject.
 - D. Submit a RFI if one of the following conditions occur:
 1. Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
 2. Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.
 3. Contractor discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.
 - E. Contractor shall not:
 1. Submit an RFI as a request for substitution.
 2. Submit an RFI as a submittal.
 3. Submit an RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Documents.
 4. Submit an RFI in a manner that suggests that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.
 5. Submit an RFI in an untimely manner without proper coordination and scheduling of Work of related trades.
 - F. If Contractor submits an RFI contrary to the above, Contractor shall pay the cost of any review, which cost shall be deducted from the Contract Sum.

- G. Contractor shall submit request for information or clarification immediately upon discovery. Contractor shall submit RFIs within a time frame so as not to delay the Contract Schedule while allowing the full response time described below.

2.2 RESPONSE TIME:

- A. District's Representative, whose decision will be final and conclusive, shall resolve such questions and issue instructions to Contractor within a reasonable time frame. In most cases, RFIs will receive a response within 7 days. If in the opinion of District's Representative more than 7 days is required to prepare a response to an RFI, Contractor will be notified in writing.
- B. Should Contractor proceed with the Work affected before receipt of a response from District's Representative, within the response time described above, any portion of the Work which is not done in accordance with District's Representative's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and Contractor shall be responsible for all resultant losses.
- C. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions.

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 GENERAL

- 1.1 THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND APPLICABLE REQUIREMENTS OF ALL OTHER REGULATORY AGENCIES, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
- A. California Code of Regulations, Title 8, Industrial Safety.
 - B. California Code of Regulations, Title 13, Hazardous Materials Transportation.
 - C. California Code of Regulations, Title 17, Radiation Safety.
 - D. California Code of Regulations, Title 19, Public Safety.
 - E. California Code of Regulations, Title 20, Public Utilities and Energy.
 - F. California Code of Regulations, Title 21, Public Works.
 - G. California Code of Regulations, Title 24
 - 1. Part 1, Administrative Regulations.
 - 2. Part 2, California Building Code.
 - 3. Part 3, the California Electrical Code.
 - 4. Part 4, the California Mechanical Code.
 - 5. Part 5, the California Plumbing Code.
 - 6. Part 6, the California Energy Code.
 - 7. Part 9, the California Fire Code.
 - 8. Part 12, State Referenced Standards Code.
 - H. California Code of Regulations, Title 26, Toxics.
- 1.2 UNLESS OTHERWISE SPECIFIED, SPECIFIC REFERENCES TO CODES, REGULATIONS, STANDARDS, MANUFACTURERS' INSTRUCTIONS, OR REQUIREMENTS OF REGULATORY AGENCIES, WHEN USED TO SPECIFY REQUIREMENTS FOR MATERIALS OR DESIGN ELEMENTS, SHALL MEAN THE LATEST EDITION OF EACH IN EFFECT AT THE DATE OF SUBMISSION OF BIDS, OR THE DATE OF THE CHANGE ORDER OR FIELD ORDER, AS APPLICABLE.

PART 2 CONFLICTS

- 2.1 IF A CONFLICT EXISTS BETWEEN REFERENCED REGULATORY REQUIREMENTS OR BETWEEN REFERENCED REGULATORY REQUIREMENTS AND THE CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY DISTRICT'S REPRESENTATIVE AND REQUEST THAT THE CONFLICT BE RESOLVED.

END OF SECTION

SECTION 01 51 00

TEMPORARY UTILITIES

PART 1 GENERAL

1.1 DESCRIPTION

- A. Provide and maintain temporary utilities for construction operations and related necessary Temporary structures. Remove them when they are no longer needed.
- B. Pay for connections for water and electricity to Project site sources.
- C. District does not guarantee amounts of water and electricity available from existing District's sources, nor will District be responsible for interruptions in service.

1.2 REQUIREMENTS OF REGULATORY AGENCIES

- A. Install and use temporary utilities in accordance with the following:
 - B. National Electric Code.
 - C. Federal, state, and local codes and regulations.
 - D. Utility company requirements.

PART 2 MATERIALS

2.1 MATERIALS MAY BE NEW OR USED, BUT SHALL BE ADEQUATE FOR THE REQUIRED PURPOSES. THEIR USE AND METHODS OF INSTALLATION SHALL NOT CREATE UNSAFE CONDITIONS OR VIOLATE REQUIREMENTS OF APPLICABLE CODE REQUIREMENTS.

2.2 TEMPORARY WATER AND ELECTRICITY

- A. Water or electricity may be taken from District's systems in such quantities and at such times as they are available. If this is done, provide all equipment, including metering, connections, transformers, and other materials necessary for extending the utility lines to where they will be used. Coordinate the installation with District's Representative. Pay for connections and removal of connections to the local water and power mains.
- B. Pay for water and electricity used at District's rate for the type of service required.

2.3 TEMPORARY HEAT AND VENTILATION

- A. Provide temporary heat and ventilation as required to maintain adequate environmental conditions to meet specified minimum conditions for installation of materials; and to protect equipment, materials, and finishes from damage due to temperature or humidity.

- B. Provide adequate forced ventilation of enclosed areas to cure installed materials, to prevent excessive humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.

2.4 TELEPHONE SERVICE

- A. Ensure existing direct line telephone service at the Project site for the use of personnel and employees is maintained with only minimal interruption.

2.5 TEMPORARY WATER

- A. Provide water for human consumption in accordance with regulatory requirements for potable water, if existing service is interrupted.

2.6 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain portable chemical toilets at locations approved by District if existing sanitation service is interrupted.

2.7 TEMPORARY FIRE PROTECTION

- A. Provide and maintain fire protection equipment including extinguishers, fire hoses, and other equipment as necessary for proper fire protection during the course of the Work.
- B. Use fire protection equipment only for fighting fires.
- C. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings, and throughout the Project site.
- D. Assign a qualified person with authority to maintain fire protection equipment, institute fire prevention measures, and direct the prompt removal of combustible and waste material.

PART 3 EXECUTION

3.1 GENERAL

- A. Comply with all applicable Laws, Regulations and Standards.
- B. Maintain and operate systems to provide continuous service.
- C. Modify and extend systems as required.

3.1 Removal and Reconditioning

- A. Remove all temporary services installed as a requirement of the Contract Documents. Restore utilities to their original condition at the completion of the Work.
- B. Legally and properly dispose of all debris resulting from removal and reconditioning operations.

SECTION 01 52 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 PROTECTION

1.1 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities which are known to District.
- B. Locate all known existing installations before proceeding with construction operations which may cause damage to such installations. Existing installations shall be kept in service where possible and damage to them shall be repaired with no adjustment of Contract Sum.
- C. If any other structures or utilities are encountered, request the District's Representative to provide direction on how to proceed with the Work.
- D. If any structure or utility is damaged, take appropriate action to ensure the safety of persons and property.

PART 2 STAGING

2.1 STAGING AREA

- A. The Contractor shall place construction fencing around the worksite and the staging area. The cost for this work is included in the overall project costs.
- B. The Contractor's employees and any sub-contractor's employees shall park personal vehicles in only the designated area which will be shown during the mandatory Site Visit/Walkthrough.
- C. The Staging Area shall be designated during the Site Visit/Walkthrough.

SECTION 01 56 00

ENVIRONMENTAL MITIGATION

PART 1 GENERAL

- 1.1 ENVIRONMENTAL MITIGATION MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, PROCEDURES AND STANDARDS TO CONTROL:
 1. Dust
 2. Noise
 3. Fumes
 4. Timing of work activities
 5. Erosion
 6. Archaeological resources found during excavation
 7. Preservation of trees
 8. Demolition process and materials.

- 1.2 THE CONTRACTOR WILL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY REGULATIONS REGARDING THE POTENTIAL ISSUES LISTED IN SECTION 1.1, ABOVE.

SECTION 01 62 00

PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 GENERAL

- 1.1 GENERAL PROVISIONS REGARDING SPECIFICATION OF PRODUCTS, MATERIAL OR EQUIPMENT BY BRAND OR TRADE NAME.
- A. Products, material or equipment specified by both brand or trade name and model number are approved for use, provided that Contractor complies with all Contract requirements. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment can be used without modification, to meet the requirements of the plans and specifications; Contractor shall, at its sole cost, modify such products, material, or equipment so that they comply with all requirements of the plans and specifications.
 - B. The first-named product, material or equipment specified by brand or trade name and model number is the basis for the Project design and the use of any item other than the first-named one may require modifications of that design. If Contractor uses any product, material or equipment other than the first-named one, Contractor shall, at its sole cost:
 - 1. Make all revisions and modifications to the design and construction of the Work necessitated by the use the product, material or equipment.
 - 2. Be responsible for all costs of any changes resulting from the use of the product, material or equipment including without limitation, costs or changes which affect other parts of the Work, the work of Separate Contractors, or any other property or operations of the District.
 - C. When a product, material or equipment specified by brand or trade name is followed by the words "or equal," a substitution may be permitted if the substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and if the substitution complies with all other requirements of the plans and specifications.
 - D. A product, material or equipment specified by brand or trade name followed by the words "or equal, no known equal," signifies that District does not have sufficient knowledge to specify a product, material or equipment, other than the one specified by brand or trade name, that is suitable for use on the Project. The use of the words "no known equal" is not intended to discourage substitution requests in accordance with the requirements specified herein.
 - E. When catalog numbers and specific brands or trade names not followed by the designation "or equal" are used in conjunction with a product, material or equipment required by the specifications, substitutions will not be allowed and the named product, material or equipment must be used.
 - F. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment is available; Contractor should confirm, prior to submitting its Bid, the availability of any product, material or equipment specified by brand or trade name and model number.

1.2 SPECIAL REQUIREMENTS FOR PRODUCTS, MATERIAL OR EQUIPMENT, OTHER THAN THE FIRST-NAMED PRODUCT, MATERIAL OR EQUIPMENT, SPECIFIED BY BOTH BRAND OR TRADE NAME AND MODEL NUMBER.

- A. In addition to complying with all other submittal requirements of the Contract, submit within 21 days after the date of commencement specified in the Notice to Proceed, for review and approval by the District's Representative, Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriate licensed professional depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the product, material or equipment. If no revisions or modifications are necessary, submit within 70 days after the date of commencement specified in the Notice to Proceed, a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. Contractor shall utilize the first-named product, material or equipment if Contractor fails to make the appropriate required submittal pursuant to this paragraph within the 21-day period.
- B. A product, material or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number may be used if no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. If such revisions or modifications are necessary, the product, material or equipment may be used only if the revisions or modifications are approved in writing by the District's Representative. Contractor has the burden of demonstrating, through the procedures specified herein, that any such revisions or modifications will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project. The District's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the District's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility or appearance of the Project or any portion of the Project.

1.3 SPECIAL REQUIREMENTS FOR SUBSTITUTIONS.

- A. In addition to complying with all other submittal requirements of the Contract, submit written data demonstrating that the proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and otherwise complies with all requirements of the plans and specifications, including:
 - 1. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution.
 - 2. Statement by Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.
 - 3. List of Subcontractors, if any, that may be affected by the substitution.
 - 4. Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriately licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the substitution. If no revisions or modifications are necessary, submit a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment.
- B. At the request of and within the timeframes specified by the District's Representative:
 - 1. Submit samples as deemed necessary by the District's Representative to evaluate the proposed substitution.

2. Submit proposed substitution to tests deemed necessary by the District's Representative to evaluate the proposed substitution. Such tests shall be made by an independent Testing Laboratory and at the sole expense of Contractor, after review and approval of the test procedures by District's Representative. If re-testing is deemed necessary by the District's Representative to evaluate the proposed substitution, such re-testing shall be made by an independent Testing Laboratory at the sole expense of the Contractor.
 3. Provide any additional information deemed necessary by the District's Representative to evaluate the proposed substitution.
- C. If District's Representative, in reviewing a proposed substitution, requires revisions or corrections to be made to previously accepted shop drawings and supplemental supporting data to be resubmitted, Contractor shall do so within the time period specified by the District's Representative. A proposed substitution may be rejected if Contractor fails to submit such revisions, corrections, or supplemental supporting data within the specified time period.
- D. Except for products, material or equipment designated in the Bidding Documents for evaluation of substitutions prior to award, requests for substitution, including the data required by Paragraph 1.3.1, must be submitted to the District's Representative not later than 21 days after the date of commencement specified in the Notice to Proceed. No requests for substitutions of products, material or equipment subject to the 21-day deadline shall be considered unless the request and supporting data is submitted on or before the deadline, except those deemed, in District's Representative's sole opinion, to be necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of District initiated change orders, or (iii) it is in the best interest of District to accept such substitution.
- E. If a product, material or equipment is designated in the Bidding Documents for evaluation of substitutions prior to award, then a request for substitution of the product, material or equipment, including the data required by Paragraph 1.3.1, must be submitted by the deadline specified in the Bidding Documents. Because of time constraints, only one submittal will be allowed for each such substitution request. Requests for substitutions of products, material or equipment designated for evaluation prior to award may not be made after the deadline specified in the Bidding Documents, and such requests shall not be considered unless the request and supporting data is submitted on or before the deadline specified in the Bidding Documents. Notwithstanding the foregoing, the District may consider, after award of the Contract, requests for substitution of a product, material or equipment designated for evaluation prior to award where, in District's Representative's sole opinion, a substitution is necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of District initiated change orders, or (iii) it is in the best interest of District to accept such substitution.
- F. In reviewing the supporting data submitted for substitutions, District's Representative will use, for purposes of comparison, all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Specifications. If more than 2 submissions of supporting data are required, the cost of reviewing the additional supporting data shall be at Contractor's expense.
- G. Contractor has the burden of demonstrating, through the procedures specified herein, that its proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and complies with all other requirements of the plans and

specifications. If revisions or modifications to the design or construction of the work are necessitated by the use of the substitution, Contractor also has the burden of demonstrating, through the procedures specified herein, that the use of the substitution will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project.

- H. The District's Representative may refuse to approve any requested substitution where, in the reasonable opinion of the District's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the proposed substitution is equal to, or superior to, the first-named product, material or equipment, in quality, utility and appearance and that the proposed substitution complies with all other requirements of the plans and specifications.
- I. District's Representative may reject any substitution not proposed in the manner and within the time limits prescribed herein.
- J. Substitutions are not allowed unless approved in writing by the District's Representative. Any such approval shall not relieve Contractor from the requirements of the Contract Documents.
- K. The 21-day submittal periods do not excuse Contractor from completing the Work within the Contract Time or excuse Contractor from paying liquidated damages if Final Completion is delayed.
- L. If revisions or modifications to the design or construction of the Work are necessitated by the use of a substitution, the substitution may be used only if the revisions and modifications are approved in writing by the District's Representative. The District's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the District's Representative, Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility and appearance of the Project or any portion of the Project.
- M. If a substitution request is finally rejected by the District Representative, Contractor shall furnish and install:
 - 1. The first-named product, material, or equipment; or
 - 2. A product, material, or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number, provided Contractor complies with the submittal requirements (including deadlines) of specification section 01630-1.2

SECTION 01 66 00

MATERIAL AND EQUIPMENT

PART 1 GENERAL

- 1.1 ALL MATERIAL AND EQUIPMENT INCORPORATED IN THE WORK SHALL BE:
 - A. New.
 - B. In condition acceptable to District's Representative.
 - C. Suitable for intended use.
- 1.2 KEEP MATERIALS CLEAN, DRY, AND UNDAMAGED.

PART 2 TRANSPORTATION AND HANDLING

- A. Deliver manufactured products in their original unbroken containers or bundles, clearly labeled with manufacturer's name, brand, and grade seal or model number.
- B. Handle materials and equipment in a manner to avoid damage to products and their finishes.
- C. Promptly remove damaged or defective products from the Project site and replace with no adjustment of Contract Sum.

PART 3 STORAGE AND PROTECTION

- 3.1 STORE MANUFACTURED PRODUCTS IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS AND WITH SEALS AND LABELS INTACT AND LEGIBLE.
 - A. Store products subject to damage by the elements in weathertight enclosures.
 - B. Maintain temperature and humidity in accordance with manufacturers' recommendations.
- 3.2 EXTERIOR STORAGE:
 - A. Store materials and equipment above ground on blocking or skids to prevent soiling, staining, and damage.
 - B. Cover products which are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.
 - C. Store sand, rock, or aggregate material in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- 3.3 ARRANGE STORAGE TO ALLOW ADEQUATE INSPECTION.
- 3.4 PERIODICALLY INSPECT STORED PRODUCTS TO ASSURE THAT PRODUCTS ARE MAINTAINED UNDER SPECIFIED CONDITIONS AND ARE FREE FROM DAMAGE AND DETERIORATION.

3.5 PROTECTION AFTER INSTALLATION:

- A. Prevent damage to materials and equipment.
- B. Use whatever protective materials or methods are necessary to prevent damage to installed products from traffic, construction operations, and weather. Remove protection when no longer required.
- C. Maintain temperature and humidity conditions in interior spaces for the Work in accordance with manufacturers' instructions for the materials and equipment being protected.

PART 4 UL LABEL

- 4.1 MATERIALS AND EQUIPMENT, FOR WHICH UNDERWRITERS' LABORATORIES, INC. STANDARDS HAVE BEEN ESTABLISHED AND THEIR LABEL SERVICE IS AVAILABLE, SHALL BEAR THE APPROPRIATE UL LABEL.

PART 5 MANUFACTURERS' TRADE MARKS AND NAMES

- 5.1 DISTRICT'S REPRESENTATIVE RESERVES THE RIGHT TO REVIEW AND REQUEST THE REMOVAL OR REDESIGN OF MANUFACTURERS' TRADE MARKS AND NAMES ON ITEMS OF MATERIALS AND EQUIPMENT WHICH WILL BE EXPOSED TO VIEW IN THE COMPLETED WORK. SUCH REMOVAL OR REDESIGN SHALL BE WITH NO ADJUSTMENT OF CONTRACT SUM.

SECTION 01 71 16

CONTRACTOR'S AS-BUILT DOCUMENTS

PART 1 GENERAL REQUIREMENTS

1.1 SCOPE OF WORK

- A. The work to be performed under this Section shall consist of providing As-Built drawings to the District within 30 days of Substantial Completion of the project.

1.2 DETAILED REQUIREMENTS

- A. As-Built Drawings shall be based on the original contract drawings and shall contain any deviations, variances, eliminations or additions to the original contract design.

1.3 COMPLETION

- A. Failure to submit acceptable As-Built drawings shall result in an order to suspend final payment until the condition is corrected.

1.4 MEASUREMENT AND PAYMENT

- A. Full compensation for all costs incurred and the work covered in this Section shall be considered as included in the unit prices paid for the various items as set forth in the Contractor's Bid, and no additional or separate compensation will be made therefor.

SECTION 02 81 00

HAZARDOUS MATERIALS PROCEDURES

PART 1 GENERAL

1.1 HAZARDOUS MATERIALS PROCEDURES

- A. Except as otherwise specified, in the event Contractor encounters on the Project site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or other hazardous materials which have not been rendered harmless, Contractor shall immediately stop Work in the area affected and report the condition to the District and District's Representative in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the District and Contractor if in fact the material is asbestos, PCB, or other hazardous materials and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos, PCB, or other hazardous materials, or when such materials have been rendered harmless.

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Structural concrete for building and structural elements, concrete floors (supported and unsupported), and exterior concrete flatwork.
2. Expansion and contraction joint devices associated with concrete Work.
3. Equipment pads, light pole bases, flagpole bases, and thrust blocks.

B. Related Sections:

1. Section 01 45 23 – Testing and Inspection Services.
2. Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

A. American Concrete Institute (ACI):

1. ACI 117 – Specification for Tolerances for Concrete Construction and Materials.
2. ACI 211.1 – Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
3. ACI 301 – Specifications for Structural Concrete.
4. ACI 302.1R – Guide to Concrete Floor and Slab Construction.
5. ACI 304R – Guide for Measuring, Mixing, Transporting, and Placing Concrete.
6. ACI 305R – Guide to Hot Weather Concreting.
7. ACI 305.1 – Specification for Hot Weather Concreting.
8. ACI 306R – Guide to Cold Weather Concreting.
9. ACI 306.1 – Specification for Cold Weather Concreting.
10. ACI 308.1 – Specification for Curing Concrete.
11. ACI 318 – Building Code Requirements for Structural Concrete and Commentary.
12. ACI 350 – Code Requirements for Environmental Engineering Concrete Structures.
13. ACI SP-66 – ACI Detailing Manual.

B. American Institute of Steel Construction (AISC):

1. AISC Manual of Steel Construction.
2. AISC 303 – Code of Standard Practice for Steel Buildings and Bridges.

C. ASTM International (formerly American Society of Testing and Materials) (ASTM):

1. ASTM C33 – Standard Specification for Concrete Aggregates.
2. ASTM C39 – Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
3. ASTM C94 – Standard Specification for Ready-Mixed Concrete.
4. ASTM C150 – Standard Specification for Portland Cement.
5. ASTM C171 – Standard Specification for Sheet Materials for Curing Concrete.
6. ASTM C192 – Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory.
7. ASTM C260 – Standard Specification for Air-Entraining Admixtures for Concrete.

8. ASTM C309 – Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
9. ASTM C330 – Standard Specification for Lightweight Aggregates for Structural Concrete.
10. ASTM C494 – Standard Specification for Chemical Admixtures for Concrete.
11. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
12. ASTM C685 – Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing.
13. ASTM C1107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
14. ASTM D994 – Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
15. ASTM D1751 – Standard Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
16. ASTM D1752 – Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
17. ASTM D6690 – Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
18. ASTM E1155 – Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers.

1.3 SUBMITTALS

- A. Submit in accordance with Sections 01 33 00.
- B. Shop Drawings: Indicate locations and details of proposed construction and control joints.
- C. Product Data:
 1. Product data for products and materials indicated.
 2. Manufacturer’s technical bulletins and installation/application instructions.
 3. Accelerator admixture test results in accordance with 2.2.E.2.
- D. Samples:
 1. Submit two, 6-inch long samples of materials used for expansion/contraction joints and control joints.
- E. Certificates:
 1. Manufacturer’s Certificate: Certify that products meet or exceed specified requirements.
- F. Mix Designs:
 1. Submit separate mix design for each type of concrete specified.
 2. Submit certified mix designs with and without fly ash for comparison.
 - a. For further Mix Design criteria, refer to Part 2, “Mix Designs” article.
 3. Submit test results on three cylinders for each mix design.
 - a. Prepare, age, and cure in accordance with ASTM C192.
 - b. Test at seven and 28 days in accordance with ASTM C39.
 - c. The test cylinders must have been prepared from a batch of the proposed mix design with fly ash.
 - d. Where the 28-day tests do not meet specified strength requirements, the mix design will not be acceptable.

- G. Concrete Placement Checklist: When required by the District Representative, provide checklist in a form approved by the District Representative. Checklist to indicate items of Work that must be signed by the Contractor and the District Representative prior to placement of concrete.

1.4 COORDINATION

- A. Coordinate the installation of items to be embedded in concrete and provide openings in the concrete necessary for performance of Work of other Sections.
- B. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.
- C. Request schedules of items specified under other Sections, but installed under this Section, in addition to templates, template dimensions, and shop drawings required for the installation of those items.
- D. Coordinate finish characteristics required by Work of other Sections with curing methods and finishing of concrete surfaces.
- E. Concrete which is to receive application of other Work must be water-cured only, and maintained free from other formwork and curing materials, unless otherwise accepted by the District Representative.

1.5 PRE-INSTALLATION CONFERENCE

- A. Hold a pre-installation conference before submitting mix designs and a minimum of two weeks prior to commencing work of this Section.
- B. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
 - 1. District Representative.
 - 2. Contractor's superintendent.
 - 3. Independent testing agency responsible for concrete design mixtures.
 - 4. Ready-mix concrete manufacturer.
 - 5. Concrete Subcontractor.
 - 6. Special concrete finish Subcontractor.
 - 7. Subcontractor and installer of concrete flooring treatment.
 - 8. Subcontractor(s) and installer(s) of flooring applied to concrete.
- C. Review concrete design mixture(s) and examine procedures for ensuring quality of concrete materials and installation.
- D. Review concrete design mixture(s) and procedures for ensuring quality of concrete materials, installation and finished work, including submittals, schedules, installation procedures, concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction contraction and isolation joints, and joint-filler strips, special inspection and testing and inspecting agency procedures for field quality control, semirigid joint fillers, forms and form removal limitations, vapor-retarder installation, anchor rod and anchorage device installation tolerances, steel reinforcement installation, methods for achieving specified floor and slab flatness and levelness, floor and slab flatness and levelness measurement, concrete flooring treatments, concrete slab depressions for walk-in coolers, athletic flooring, or similar construction, or for tile, stone or similar flooring, acceptable

moisture and other slab requirements for flooring installations, warranty requirements of flooring applied to concrete] concrete repair procedures, concrete protection, and all related work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle packaged materials in the manufacturer's original, sealed containers, each clearly identified with the manufacturer's name, and name and type of product.
- B. Store materials subject to damage by dirt and moisture in a clean, dry location, off the ground, and suitably protected.
- C. Store coarse and fine aggregates in separate, covered bins.
- D. Store bulk cement in covered bins.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Concrete: Ready-mixed, ASTM C94.
- B. Cement: ASTM C150.
- C. Fly Ash: ASTM C618.
- D. Aggregate: ASTM C33.
 - 1. Aggregate size for footings, grade beams and pile caps, and filling of steel piles must be 1 inches maximum.
 - 2. Aggregate for walls, support slabs, beams, pilasters, columns, and slabs on grade must be 1-inch maximum, and be mixed with pea gravel (minimum of 10 percent by weight, maximum of 15 percent by weight).
 - 3. All aggregate must be of a type producing low shrinkage.
 - a. Coarse Aggregate: Granite, limestone, or Clayton blue rock.
 - b. Fines: Clean and well graded sands.
- E. Acquire cement, fly ash, and aggregate from same source for all Work.
- F. Water: Potable, clean, not detrimental to concrete, containing less than 500 ppm of chlorides.

2.2 ADMIXTURES

- A. Water-Reducing Admixture: ASTM C494.
 - 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Eucon WR.
 - b. Master Builders/BASF; Pozzolith 200N.
 - c. Sika Corporation; Plastocrete 161.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- B. Water-Reducing and Retarding Admixture: ASTM C494.

1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Eucon Retarder-75.
 - b. Master Builders/BASF; Pozzolith 80N.
 - c. Sika Corporation; Plastiment.
 - d. GCP Applied Technologies; #WRDA-64.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- C. High Range Water-Reducing Admixture (Superplasticizer): ASTM C494.
 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Eucon 37.
 - b. Master Builders/BASF; MasterGlenium 3030 Superplasticizer.
 - c. GCP Applied Technologies; # ADVA 390.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- D. Air-Entraining Admixture: ASTM C260.
 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Eucon Air Mix 200.
 - b. GCP Applied Technologies; Daravair AT60.
 - c. Sika Corporation; Sika Air.
 - d. Master Builders/BASF; MasterAir AE 90.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- E. Accelerator: ASTM C494, Type C or E; Noncorrosive, nonchloride.
 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Accelguard 80.
 - b. Master Builders/BASF; MasterSet FP 20.
 - c. GCP Applied Technologies; Polarset.
 - d. Sika Corporation; Sika Rapid.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
 2. Submit test report from independent testing laboratory of results of an acceptable accelerated corrosion test method such as that using electrical potential measures, of minimum one year duration, demonstrating noncorrosive nature of product.

- F. Bonding Admixture: Acrylic latex, non-rewettable type.
 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Flex-Con.
 - b. Dayton Superior; Acrylic Bonding Agent J40.
 - c. Master Builders/BASF; MasterEmaco A 660.
 - d. GCP Applied Technologies; Daraweld C.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- G. Mineral Admixture: Fly Ash Pozzolan; ASTM C618, Class F supplementary optional chemical and physical requirements of Tables 1A and 2A, except that the maximum sulfur trioxide must be 4 percent and the maximum loss on ignition must be 1.5 percent.
 - 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Boral Resources; Class F Fly Ash.
 - b. SEFA; Star Refined Pozzolan, Class F Fly Ash.
 - c. Diversified minerals, Inc.; DMI Class F Fly Ash.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- H. Corrosion Inhibitor: ASTM C494 Type C, All reinforced (including clips and ties) concrete in contact with soil must have a corrosion inhibitor added. The dosage rate for the corrosion inhibiting admixture must protect the reinforcing bars in concrete from chloride concentrations as high as 7,000 ppm.
 - 1. If a calcium nitrite inhibitor is used, the dosage rate must not be less than two gallons per cubic yard of concrete. The calcium nitrite inhibitor solution must contain a minimum of 30 percent calcium nitrite.
 - 2. A corrosion inhibitor is not necessary in any concrete placed without embedded steel.
 - 3. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. GCP Applied Technologies; DCI.
 - b. Sika Corporation; CNI.
 - c. Euclid Chemical Company; Eucon CIA.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- I. Concrete Encasement Coloring Agent: Mix into concrete as required at the rate of 10 pounds of agent per cubic yard of concrete.

2.3 ACCESSORIES

- A. Curing and Sealing Compounds:
 - 1. For Typical Exterior Flatwork (such as walks and driveways): Dissipating, film-forming, non-yellowing, water-based resin liquid curing membrane, with not less than 15 percent solids, clear with fugitive dye; ASTM C309, Type 1D, Class B; conforming to volatile organic compound (VOC) limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings.
 - a. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - 1) W.R. Meadows; SealTight 1100.
 - 2) Dayton Superior; Clear Resin Cure J11W.
 - 3) For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- B. Sheet Curing Material: ASTM C171.

- C. Bonding Agent: Polyvinyl acetate, rewettable type, with visible tinted pigment to verify coverage.
 - 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Euco-Weld.

- b. Larsen Products Corp.; Weld-Crete.
 - c. Dayton-Superior; PVA Concrete Bonder J41.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- D. Bond Breaker: Nonstaining type, providing positive bond prevention.
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Nox-Crete; Silcoseal 2000F.
 - b. Dayton Superior; Sure Lift J6WB.
 - c. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- E. Structural Epoxy Bonding Adhesive: Two component, 100 percent solids compound suitable for use on dry or damp surfaces.
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Eucopoly LPL, MV or Euco#452 Epoxy System, MV.
 - b. Sika Corporation; Sikadur 32 Hi-Mod.
 - c. Dayton Superior; Pro-Poxy 200.
 - d. Dayton-Superior; Sure Bond J58.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- F. Nonshrink Grout: ASTM C1107; nonmetallic; capable of achieving a 95 percent bearing under a 4-foot by 4-foot baseplate when grout is placed at a fluid consistency.
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Euco N-S Grout, or Hi-Flow Grout.
 - b. Master Builders/BASF; Masterflow 713, Masterflow 928.
 - c. W.R. Meadows; "Sealtight 588" Precision Grout.
 - d. Dayton-Superior; Sure-Grip High Performance Grout.
 - e. Sika Corporation; SikaGrout 212.
 - f. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- G. Injection Grout for Splice Sleeves:
- 1. Early Strength: 3,000 psi or greater in 24 hours.
 - 2. Ultimate Strength: 9,500 psi or greater in 28 days.
 - 3. Nonshrink; capable of completely filling voids within sleeves.
 - 4. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. nVent Lenton Interlock; Erico; HY10L Grout.
 - b. Splice Sleeve North America, Inc.; SS Mortar.
 - c. Dayton Superior, Richmond DB Grout Sleeve Splice System; DBGS Splice Grout.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- H. Patching Mortar: Epoxy type, 100 percent solids, suitable for use on damp or dry surfaces.
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:

- a. Euclid Chemical Company; Euco 456 Mortar.
 - b. Sika Corporation; Sikadur 43 Patch-Pak.
 - c. Dayton Superior; Sure Patch.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- I. Patching Compound for Vertical or Overhead Applications: Free flowing, polymer modified, cementitious topping.
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Verticoat.
 - b. Dayton-Superior; Polyfast FS.
 - c. ARDEX Engineered Cement; ARDEX B 20.
 - d. Sika Corporation; Sikatop 121 Plus.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- J. Abrasive Aggregate for Nonslip Finish:
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Non-Slip Aggregate.
 - b. Lambert Corp; Emag 20.
 - c. Master Builders/BASF; MasterTop 120 SR.
 - d. Dayton-Superior; Emery Non-slip.
 - e. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.
- K. Evaporation Retardant:
- 1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Eucobar.
 - b. Master Builders/BASF; MasterCure ER 50.
 - c. W.R. Meadows Inc.; Evapre.
 - d. Dayton-Superior; AquaFilm Concentrate J-74.
 - e. Creteseal, CS2000.
 - f. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

2.4 JOINT DEVICES AND FILLER MATERIALS

- A. Joint Filler Type A: ASTM D1751; Asphalt impregnated fiberboard or felt, 1/4 inch thick; tongue and groove profile.
- B. Joint Filler Type B: ASTM D1752; Closed cell polyvinyl chloride foam, resiliency recovery of 90 percent if not compressed more than 50 percent of original thickness.
- C. Joint Filler Type C: ASTM D1752; Premolded sponge rubber, fully compressible with recovery rate of minimum 95 percent.
- D. Epoxy Joint Filler: Two component, 100 percent solids compound; minimum 50 Shore D Hardness.

1. Acceptable Manufacturers/Products, as listed below and meeting the criteria and requirements specified herein, will be acceptable:
 - a. Euclid Chemical Company; Euco 700.
 - b. Metzger/McGuire Co.; MM-80.
 - c. Dayton Superior; Sure Fil J52.
 - d. For manufacturers/products not listed, comply with substitution requirements in Section 01 25 00.

- E. Construction Joint Devices: Integral galvanized steel formed to tongue and groove profile, with removable top strip exposing sealant trough where indicated.

2.5 MIX DESIGNS

A. Cast-In-Place Concrete:

1. Mix Designs must be in accordance with ACI 318, Chapter 19 and Section 26.4.3, ACI 301, and California Building Code (CBC).
2. Concrete mixes must be designed to meet strengths specified and be of uniform density without segregation when placed.
3. Water-cement ratio which must control the amount of total water added to concrete for the following conditions:

Concrete Aggregate Size	With Superplasticizer W/C Ratio	Without Superplasticizer W/C Ratio
1 inch	0.385	0.45
3/4 inch	0.375	0.44

4. Air Content:
 - a. 4 to 6 percent for severe exposure such as concrete in exterior or freezing conditions.
 - b. 1.5 to 3.5 percent for mild exposure of interior condition.
5. Fly Ash:
 - a. Fly ash must be used only in mix designs with Portland cement Type II and IIA and must not be used with high early strength Portland cement Type III.
 - b. Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:
 - 1) Fly Ash: 15 percent maximum.
 - 2) Combined Fly Ash and Pozzolan: 15 percent maximum.
6. Water Reducers:
 - a. Use water-reducing admixtures in all concrete without superplasticizers.
 - b. Use water-reducing admixtures in all concrete with superplasticizers to allow proper mixing prior to adding superplasticizer.
7. Superplasticizers:
 - a. Use type as recommended by manufacturer in the applicable temperature ranges allowed in all hydraulic structures and headworks.
 - b. Use superplasticizer in all concrete for pond structures.
 - c. Accomplish variations in slump, working time, and air content for flowable mixes by increasing or reducing superplasticizer dose or air-entraining admixture dose at the ready-mix plant only.
 - 1) Adjust the slump or air content at the jobsite by adding admixtures for a particular load when approved by the District Representative, then the plant dose must be adjusted to meet the specifications for the rest of the placement.

- 2) This additional dosage at the jobsite must be through an approved dispenser, supplied by the admixture manufacturer and otherwise at the Contractor's option.
 - d. Effect on Slump: Maintain required slump throughout time of concrete placement and consolidation. Discontinue use of superplasticizer if it fails to maintain slump in required range.
 - e. Meet design strengths, slumps, water-cement ratio, and other requirements as specified at slump required for placement.
 - f. Use water reducers in combination with superplasticizers as required for mixing.
 - 8. Specifically Prohibited Admixtures:
 - a. Admixtures containing hydrogen chloride, calcium chloride, or thiocyanates.
 - b. Admixtures containing more than 0.05 percent chloride ions.
 - 9. Unspecified admixtures will not be permitted, unless accepted by the District Representative, and under condition that the Independent Testing Agency modifies mix design as necessary, and each such modification is approved by the Structural Engineer.
 - 10. Concrete may be designed for either pump or conventional placement. If pumping will be used, the mix must be specifically designed for pumping and must be so designated.
 - 11. Mix designs are subject to review. Final acceptance of materials will depend upon strength testing after placement.
- B. Nonshrink Grout: Mix in accordance with the manufacturer's printed instructions, using potable water from a domestic source.
- C. Dry Pack: Mix in proportions, by volume, one part cement to two and one half parts fine aggregate, screening out materials retained on a No. 4 sieve. Mix with water to a consistency such that, when a ball of mixture is compressed in the hand, it will maintain its shape, showing finger marks, but not showing any surface water.
- D. Patching Mortar: Mix in proportions, by volume, one part cement to two parts fine aggregate.
- 1. Design Requirements: As indicated in Part 3.

2.6 MIXING

- A. Batch Plant Conditions:
- 1. Equipment and plant must be capable of weighing, proper segregation and efficient handling, and must be subject to approval. Equipment and plant processes not approved must not be used in Work.
 - 2. Use approved automatic metering capable of determining moisture content of sand.
- B. General Requirements:
- 1. Concrete mixing must comply with ACI 318 Section 26.5, ASTM C94 or ASTM C685, and California Building Code (CBC).
 - 2. Mix cement, fine and coarse aggregates, admixtures, and water to exact proportions of mix designs.
 - 3. Measure fine and coarse aggregates separately in accordance with approved method which provides accurate control and easy checking.
 - 4. Adjust grading to improve workability; do not add water, unless otherwise recommended by the District Representative.
 - 5. Maintain proportions, values, and factors of approved mixes throughout Work.
- C. Admixtures: Use automatic metering dispenser to introduce admixture into mix.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive the Work. Notify the District Representative, in writing, of any conditions requiring corrective action.
- B. Verify requirements for concrete cover over reinforcement.
- C. Verify that anchors, seats, plates, embeds, reinforcement, and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.
- D. Verify all controlling dimensions, for the Work of this Section and related Work, by field measurement prior to start of construction.
- E. If unsatisfactory conditions exist, do not commence the installation until such conditions have been corrected. Beginning installation means acceptance of existing conditions.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's written instructions.
- B. In locations where new concrete is dowelled to existing work, install dowels as indicated on Contract Documents.
- C. Remove loose dirt and foreign matter from excavations and forms; remove standing water and saturated soil from excavations and from cavities. Placing concrete in standing water must not be permitted. Hardened concrete and foreign materials must be removed from the inner surfaces of conveying equipment.
- D. Thoroughly clean reinforcement and other embedded items free from loose rust and other objectionable matter.
- E. Thoroughly wet wood forms, except coated plywood, and adjacent concrete at least one hour in advance of placing concrete; securely close cleanout and inspection ports; repeat wetting as necessary to keep forms damp.
- F. Moisten subgrade or sand associated with under-slab vapor barrier system one day prior to placing concrete; maintain moisture until concrete placement.
- G. Maintain equipment clean and of sufficient quantity and capacity to efficiently execute the Work.
- H. Verify subgrade and forms have been checked for line and grade, and the Work areas have been observed and approved by the District Representative.
- I. Before depositing new concrete on or against hardened concrete, retighten forms and prepare surface of hardened concrete as follows:
 - 1. Concrete which has been placed longer than 6-1/2 hours: Sandblast to roughen surfaces. Thoroughly clean of foreign matter and laitance, and moisten with water.

2. Concrete which has been placed longer than 3-1/2 hours but less than 6-1/2 hours: Remove all laitance from concrete by wire brushing.
3. Apply bonding agent as required in accordance with manufacturer's instructions.

3.3 CONCRETE PLACEMENT

A. Transporting:

1. Concrete must be handled from the mixer to the place of final deposit as rapidly as practicable by methods which prevent the separation or loss of the ingredients, in accordance with ASTM C94.
2. Concrete must not be dropped freely where reinforcing bars will cause segregation, nor must it be dropped more than 4 feet.
3. Spouts, elephant trunks, or other approved means must be used to prevent segregation.
4. Concrete may be pumped from the transit mixer to places of deposit, provided that information on mix design adjustments, equipment data, procedures, and the entire operation are submitted for the District Representative's prior review.
 - a. Pumps must be suitable for the mix, aggregate size, and slump required.
 - b. Pump operators must be experienced in the operation of the equipment to be used.
5. Use of aluminum equipment to transport concrete is not permitted.

B. Depositing:

1. Place concrete in accordance with ACI 318 Section 26.5.2.
2. Maintain during placement or until the completion of the section, a plastic surface approximately horizontal.
3. Prevent displacement of reinforcement, anchor bolts, welding plates, and other items required to be embedded in concrete.
4. Before concrete sets, completely remove concrete spilled on forms or reinforcing steel in portions of structure not to be immediately concreted.
5. Place concrete continuously between predetermined expansion, control, and construction joints.
 - a. An interruption in placing of more than 60 minutes will be cause for shutting down concrete placement operations and the wasting of remaining mixed concrete, concrete in hoppers, and concrete in mixers.
 - b. In case such interruption occurs, provide construction joints where and as directed, and cut concrete back to such line, cleaning forms and reinforcing as specified herein.
6. Keep a record of the time and data of placing the concrete in each portion of the structure. Keep reports until the completion of the structure, and keep reports open to the review of the District Representative.

C. Consolidation:

1. Thoroughly consolidate concrete by puddling with suitable tools during placement and thoroughly working around reinforcement, embedded fixtures, and into the corners of forms.
2. In addition to manual spading and tamping, internally vibrate concrete with high-speed mechanical vibrators of sufficient amplitude for adequate consolidation.
3. Vertically insert and remove hand-held vibrators at points 18 to 30 inches apart.
4. Do not use vibrators to transport concrete in forms.
5. Vibrate concrete minimum amount required for consolidation.
6. Do not vibrate concrete placed for slab on grade except at slab edges adjacent to edge forms and at items embedded in the slab.

D. Construction Joints:

1. Verify location and conformance with typical details and approved shop drawings. Provide joints only where designated or accepted by the District Representative.
2. Construction joints must be in accordance with CBC and ACI 318 Section 26.5.6.
3. Construction joints located on pedestrian walking surfaces must comply with access code requirements.
4. Contact surface of construction joints must be cleaned and roughened by removing the entire surface and exposing clean aggregate solidly embedded in mortar matrix in accordance with the following procedures:
 - a. Thoroughly clean surface by sandblasting or chipping the entire surface not earlier than five days after the initial placement.
 - b. Thoroughly hose wash surface not less than two or more than four hours after concrete is placed. Wash water and chalk-like material to be removed entirely from the contact surface.
 - c. Contact surfaces of vertical construction joints in suspended slabs must be sandblasted.
5. Prevent formation of shoulders and ledges.
6. Provide keys across vertical joints as indicated; in addition, place dowels across the joints.
7. Construction joints are required as follows:
 - a. Slabs on grade.
 - b. Construct in checkerboard fashion or in alternate strips with keyed joints.
 - c. Cast in areas small enough to prevent uncontrolled shrinkage cracking.
 - d. Slab must be without re-entrant corners.
 - e. Sections must have length to width ratios not exceeding 1.5 to 1.
 - f. Locate construction joints under partitions whenever possible.
 - g. Foundations, beams, walls, and framed slabs must be placed with maximum continuous length not to exceed 60 feet.
8. Control joints must be located between construction joints.
9. Cut control joints after concrete finishing, using Soff-Cut Systems or approved equivalent. Take necessary measures to prevent cracking.

3.4 FINISHES

A. Formed Surfaces:

1. Smooth Finish: Obtain by the use of plywood, sheet metal, or lined wood forms; no fins, pockmarks, and other irregularities must be present in the exposed surfaces of concrete.
2. Scored Finish: Roughen surface in an approved manner, or etch with sharp-pointed steel tools to key or otherwise improve the mechanical bond of the surface. Such scoring or roughening must disturb or otherwise roughen at least 10 percent of the area so scored.
3. Grout-Cleaned Finish:
 - a. Prepare grout of two parts normal Portland cement, one part white cement, and 4 1/2 parts fine aggregate mixed with water to consistency of thick paint.
 - b. Wet surfaces and rub grout on surfaces using rubber or cork float so that small voids and imperfections are filled.
 - c. Allow surfaces to dry for approximately one hour, scrape off excess grout with trowel, and then rub surfaces with burlap sacks.
 - d. Keep surfaces continuously damp for 24 hours.
 - e. Provide on exposed wall surfaces, vertical surfaces of equipment foundations, and other vertical surfaces for unless otherwise indicated or specified.

- B. Unformed Surfaces:
 - 1. Floating:
 - a. Provide as first stage for flatwork finishes, unless otherwise specified.
 - b. Thoroughly consolidate areas, strike off to screeds tamp to recess large aggregate below surface level.
 - c. Fill voids, reconsolidate, and re-level surfaces as necessary.
 - d. Do not proceed with subsequent finishes until surface water has absorbed or dried off and surface sheen has become dull.
 - 2. Broom Finish:
 - a. Draw a soft-bristled push broom over an initially trowel-finished surface.
 - b. When coarser surfaces are desired, use a stiffer-bristled broom.
 - c. Broom finish must provide a nonslip surface, even if exposed to rain.
 - d. Provide for exterior flatwork and as indicated or specified.

3.5 CURING

- A. Curing must immediately follow finishing and must be accomplished for each portion of the Work.
- B. Flatwork Surfaces:
 - 1. Water cure all concrete work, unless noted otherwise for a minimum of seven days.
 - 2. Membrane cure exterior pavement and slab surfaces for a minimum of seven days.
 - 3. Where hardener/densifier is to be used, cure in accordance with hardener manufacturer's printed instructions.
 - 4. Do not use liquid membrane curing compounds on interior surfaces or surfaces to receive other finishes.
- C. Concrete Curing Compounds and Sealers:
 - 1. Apply in accordance with manufacturer's printed instructions.
 - 2. Apply at rate consistent with manufacturer's definition of normal traffic areas.
- D. Maintain concrete temperature above 50 degrees F during curing.
- E. Protect concrete from damage during the curing period.

3.6 TOLERANCES

- A. Tolerances must be in accordance with ACI 117.
- B. Building Slabs-on-Grade:
 - 1. Comply with Random Traffic Floor Surface Finish Tolerances for Flat surfaces.
 - 2. Utilize the 10-foot Straightedge Method to establish compliance.
 - 3. Tolerance measurements will be made by the District Representative, or his assignee, within 72 hours of concrete placement.
- C. Anchor Bolts: Setting Tolerances must be in accordance with AISC 303 Code of Standard Practice, Section 7.5.

3.7 FIELD QUALITY CONTROL

- A. Place concrete during hot weather in accordance with ACI 305R and ACI 305.1.

- B. Place concrete during cold weather in accordance with ACI 306R and ACI 306.1.
- C. Do not place concrete during precipitation, unless adequate protection is provided.

3.8 TESTING AND INSPECTIONS

- A. The District Representative, or his assignee, will provide the required testing and inspection.
- B. Testing and inspection will be in accordance with the Verification and Inspection Schedules provided in Section 01 45 23.
- C. Provide notification to District Representative when concrete testing or inspections are required in accordance with Section 01 45 23.
- D. Do not place concrete until reinforcing and embeds have been inspected and approved by the District Representative.

3.9 REPAIR AND ADJUSTMENT

- A. Immediately after removing formwork, concrete surfaces must be examined by the District Representative, and pour joints, voids, rock pockets, tie holes, and similar defects must be patched at once as directed by the District Representative.
- B. Submit information on patching mixture and method proposed for use to the District Representative for review prior to commencing repair work.
- C. Patch honeycomb, aggregate pockets, voids, and holes as follows, unless otherwise directed by the District Representative:
 - 1. Chip out until sound concrete is exposed to minimum depth of one inch.
 - 2. Prepare patching mortar with approximately two parts normal Portland cement, one part white cement, and nine parts fine aggregate; vary proportions of cement as necessary to match color of adjacent concrete.
 - 3. Saturate surfaces with water and fill cavities with patching mortar.
 - 4. Cure patches as specified for concrete.
- D. Patching Tie Holes:
 - 1. Cut nails and tie wires for form ties flush with the face of the concrete, and leave surfaces smooth and clean.
 - 2. Remove metal spreader ties on exposed concrete Work, or snap off inside the wall surface.
 - 3. Patch resulting cone pockets on exposed surfaces as described above.

3.10 DEFECTIVE CONCRETE

- A. Concrete not conforming to required lines, details, dimensions, tolerances, finishes, strength, or other specified requirements must be considered defective. Concrete with excessive honeycomb or embedded debris must be considered defective. Notify the District Representative upon discovery of these conditions.
- B. With the prior acceptance of the District Representative, some minor defective Work may be repaired by use of cement mortar; however, if the defects are serious or affect the strength of the structure or its appearance, the District Representative may require the removal and replacement of that portion of the structure affected.

- C. Required repair or replacement of defective concrete will be determined by the District Representative.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of the District Representative for each individual area.
- E. Defective concrete must be repaired or replaced as recommended by the District Representative at no additional expense to the District.

3.11 PROTECTION

- A. Provide protection in accordance with manufacturer’s written instructions.
- B. Protect concrete from elements including sun and rain.
- C. Do not subject concrete to any loads until it is completely cured and has attained its minimum 28-day strength.
- D. Protect concrete during and after curing from damage from subsequent construction operations.
- E. Cover traffic areas with plywood sheets; maintain paper and plywood in place and in good repair for as long as necessary to protect against damage from construction operations.
- F. Keep finished areas free from traffic for a minimum of four days or as necessary until surfaces have set sufficiently to prevent damage.

3.12 SCHEDULE

- A. Unless otherwise indicated on Drawings or in other Sections, provide concrete in accordance with the following Table.

CLASS	28-DAY COMPRESSIVE STRENGTH	MAXIMUM SLUMP (1)	MAXIMUM AGGREGATE SIZE (2)	MINIMUM CEMENT POUNDS PER C.Y. (3)	CEMENT TYPE (4)
Building foundations	4000	4 Inches	1 Inches	550	II,V
Slabs on Grade (Interior floor)	4000	4 Inches	1 Inch	550	II,V
Slabs on Grade (subfloor)	4000	4 Inches	1-1/2 Inches	550	I,II
Concrete Topping	4000	4 Inches	3/4 Inch	550	II
Precast Columns	4000	4 Inches	3/4 Inch	550	I,II
Flatwork	4000	4 Inches	1 Inch	550	II
Items not otherwise indicated	3000	4 Inches	1 Inch	470	II

Air Dry Weight must not exceed 150 pcf for normal weight concrete or 110 pcf for lightweight concrete.

CLASS	28-DAY COMPRESSIVE STRENGTH	MAXIMUM SLUMP (1)	MAXIMUM AGGREGATE SIZE (2)	MINIMUM CEMENT POUNDS PER C.Y. (3)	CEMENT TYPE (4)
<p>(1) Concrete with superplasticizer designed into the mix (when permitted) must arrive at the site without the superplasticizer at slump of 2 to 3 inches, be verified, then have superplasticizer added at the site to attain specified slump.</p> <p>(2) Maximum aggregate size not more than 1/3 thickness of concrete component.</p> <p>(3) Refer to Section 2.5 MIX DESIGNS for W/C requirements.</p> <p>(4) Any of the cement types listed for that concrete class may be utilized.</p>					

END OF SECTION

SECTION 03 60 00

GROUT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Grout for uses other than masonry construction, including:
 - 1. Nonshrink grout, non-metallic
 - 2. Nonshrink grout, metallic
 - 3. Pressure grout
 - 4. Epoxy grout
 - 5. Polymer concrete

1.2 REFERENCED SECTIONS

- A. The following Sections are referenced in this Section
 - 1. Section 01 33 00 – Submittals
 - 2. Section 03 30 00 – Cast-in-Place Concrete

1.3 SUBMITTALS

- A. Conform to Section 01 33 00.
- B. Product Data
 - 1. Manufacturer's product data of all materials proposed for use in the Work.
 - 2. Manufacturer's literature containing instructions and recommendations on the mixing, handling, placement and appropriate uses for each type of grout used in the Work
- C. Laboratory Test Reports
 - 3. Test reports on previously tested materials shall be accompanied by the manufacturer's statement that the previously tested material is the same type, quality, manufacture, and make as that proposed for use in this project.
 - 4. Test reports are required for the following:
 - a. Cement
 - b. Aggregates
 - c. Bonding compounds
 - d. Admixtures
- D. Certifications that all grout used on the project are free of chlorides or other chemicals that may cause corrosion.

1.4 QUALITY ASSURANCE

- A. Field tests
 - 1. Compression test specimens will be taken during construction from the first placement of each type of grout and at intervals thereafter as selected by the Owner to insure compliance with the Contract Documents.
 - 2. The test specimens will be obtained, tested, and paid for by the Owner except the Contractor will be charged the cost of any additional tests on work which does not meet the Specifications.
 - 3. Compression tests for grout and non-shrink grout:

- a. Per ASTM C109.
 - b. Obtain three samples.
 - c. At a minimum test at 7 and 28 days.
- E. Compression test for epoxy grout:
- a. Per ASTM C 579 Method B.
 - b. Obtain three samples.
 - c. At a minimum test at 7 days.
- F. Remove and replace all grout that does not meet the Specification requirements at no additional cost to the Owner.

PART 2 PRODUCTS

2.1 GENERAL

- A. Use grouts indicated in the grout schedule whether called for on Drawings or not.

2.2 PREPACKAGED GROUT

A. Non-shrink Grout

- 1. Cementitious non-shrink, non-metallic grout
- 2. Conform to ASTM C 1107, Grades B and C.
- 3. Manufactured by:
 - a. Sika Corporation, SikaGrout 212
 - b. Five Star Products, Inc. Five Star Grout
 - c. Chemrex Inc. Masterflow 928
 - d. Euclid Chemical Co. High-Flow Grout
 - e. Or equal.

B. Epoxy grout bonding/grouting adhesive

- 1. Multi-purpose, two-component, 100% solids, moisture-tolerant, structural adhesive.
- 2. Conform to ASTM C881, Types I, II and V, Grade-2.
- 3. Manufactured by:
 - a. Sika Corporation, Sikadur 32, Hi-Mod
 - b. Chemrex Inc. Masterflow 648 CP
 - c. Or equal.

C. Epoxy grout paste adhesive

- 1. High modulus, two-component, moisture insensitive, 100 percent solids, thermo-setting modified polyamid epoxy compound.
- 2. Paste form consistency capable of not sagging in horizontal or overhead anchoring configurations.
- 3. Conform to ASTM C881 Type 1, Grade 3
- 4. Heat deflection temperature: In excess of 130 degrees F.
- 5. Manufactured by:
 - a. Chemrex Inc. Concesive Paste LPL
 - b. Sika Corporation Sikadur Hi-Mod Series
 - c. Adhesive Technology Corporation Ultrabond 1350
 - d. Or equal,

D. Epoxy grout for pressure grouting

1. Two-component, 100% solids, moisture-tolerant, epoxy adhesive. Low-viscosity, high-strength adhesive formulated specifically for injection grouting.
 2. Consistency as necessary to achieve complete penetration in hairline cracks and larger.
 3. Conform to ASTM C881 Type 1 and 2, Grade 1.
 4. Manufactured by:
 - a. Sika Corporation Sikadur 52
 - b. Chemrex Inc. Coneresive LV1
 - c. Adhesive Technology Corporation SLV 300 series
 - d. Or equal.
- E. Polymer concrete grout
1. Liquid binder and dry aggregate mixed together to make a mortar or grout of a consistency as necessary for the application.
 2. Liquid binder: Chemical and oil resistant, stress relieved, low modulus, moisture insensitive, two-component epoxy-resin compound.
 3. Consistency similar to lightweight oil for proper mixing with aggregate.
 4. Conform to ASTM C881 Type 3 Grade 1,
 5. Aggregate:
 - a. Size and consistency compatible with recommendations of manufacturer of liquid binder for intended application.
 - b. Keep aggregate oven dry in sealed packages until time of mixing.
 6. Manufactured by:
 - c. Sika Corporation Sikadur Lo-Mod series
 - d. Adhesive Engineering Coneresive 1470
 - e. Adhesive Technology Corporation 400 series
 - f. Or equal.

2.3 PRESSURE GROUTING EQUIPMENT

- A. Mixer and holdover agitator tanks
- B. Designed to place grout at pressures up to 50 psi.
- C. Provide gages to indicate pressure grout pressure during application.
- D. Provide mixer with a meter capable of indicating to one-tenth of a cubic foot the volume of grout used.

PART 3 EXECUTION

3.1 GENERAL

- A. Conduct mixing, surface preparation, handling, placing, consolidation, and curing for prepackaged grouts according to the instructions and recommendations of the grout manufacturer.
- B. Mix gouts in a mortar mixer.
- C. Bonding compound for use with grout is specified in Section 03 30 00.
- D. Provide primer if required for polymer concrete, per manufacturer's recommendation.

3.2 NONSHRINK GROUT

- A. Place in accordance with manufacturer's instructions.

3.3 EPOXY GROUT

- A. Prime surface to be grouted in accordance with the grout manufacturer's instructions.

3.4 PRESSURE GROUTING

- A. Prior to grouting, Wash clean surfaces and holes to be grouted, prior to grouting.
- B. Washing is not required for grouting soil voids outside pipe cylinders or casing pipes.
- C. Once commenced, continue grouting to completion without stoppage.
- D. In case of breakdown of equipment, wash out the grouting system sufficiently to ensure fresh grout and adequate bond and penetration will occur upon restarting the grouting operation.
- E. Maintain grout pressure until grout has set.

3.5 GROUT SCHEDULE

- A. Use grout type indicated in the table below unless otherwise indicated.

Grout	Application
Non-shrink Grout	Bearing surfaces of machinery and equipment bases, column base plates, and bearing plates, and setting handrail, guardrail, or fence posts in pipe sleeves.
Epoxy Grout	Reinforcing steel set in grout, repairing cracks in concrete, concrete repair.
Pressure Grout	Repairing cracks in concrete.
Polymer Cement Grout	Repair of concrete floors, patching.

END OF SECTION 03 60 00

SECTION 07 92 00

JOINT SEALANTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes joint sealants for the applications indicated in the Joint-Sealant Schedule at the end of Part 3.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Qualification Data: For Installer.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- C. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Ten years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
 - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
 - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Product: The design is based upon Dow Corning products or comparable manufacturer and product.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

2.4 ACOUSTICAL JOINT SEALANTS

- A. Acoustical Sealant for Concealed Joints: Manufacturer's standard, nondrying, nonhardening, non-skinning, non-staining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission.
 - 1. Products:

- a. Pecora Corporation; BA-98.
- b. Tremco; Tremco Acoustical Sealant.

2.5 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type B (bicellular material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

2.6 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

- a. Concrete.
 - b. Unglazed surfaces of ceramic tile.
- 2. Remove laitance and form-release agents from concrete.
- 3. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Prefinished architectural panels,
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.
- D. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.

2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

- A Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

- A Joint-Sealant Application JS-#1: Exterior vertical and horizontal nontraffic construction joints in cast-in-place concrete.
 1. Joint Sealant: Dow Corning, #756
 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- B Joint-Sealant Application JS-2#: Exterior butt joints between metal panels.
 1. Joint Sealant: Dow Corning, #791 or 795.
 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- C Joint-Sealant Application JS-3#: Exterior vertical joints between different materials.
 1. Joint Sealant: Dow Corning, #756 or 790.
 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- D Joint-Sealant Application JS-4#: Exterior perimeter joints between adjacent walls and frames of doors windows and louvers.
 1. Joint Sealant: Dow Corning, #756.
 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- E Joint-Sealant Application JS-#5: Interior perimeter joints of exterior openings.
 1. Joint Sealant: Latex sealant.
 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- F Joint-Sealant Application JS-#6: Interior joints between plumbing fixtures and adjoining walls, floors, and counters.
 1. Joint Sealant: Latex sealant.
 2. Joint-Sealant Color: White.
- G Joint-Sealant Application JS-#7: Perimeter joints between interior wall surfaces and frames of interior doors windows and elevator entrances.
 1. Joint Sealant: Dow Corning, #786.
 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION

SECTION 08 33 23

OVERHEAD COILING DOORS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Overhead coiling doors with operating hardware.
- B. Related Sections:
 - 1. Section 07 90 00 - Joint Protection.
 - 2. Section 13 34 19 - Metal Building Systems.

1.2 REFERENCES

- A. ASTM A568 - Steel Sheet, Carbon and High Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.
- B. ASTM **A653/A653M** - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- C. ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.
- D. ASTM E162 - Test method for Surface Flammability of Materials Using a Radiant Heat Energy Source.
- E. NFPA 80 - Standard for Fire Doors and Other Protective Openings.
- F. UL - Underwriters' Laboratories, Inc.: Fire Hazard Classifications.

1.3 SYSTEM DESCRIPTION

- A. Manual hand chain lift units with overhead counter balance device.
- B. Electric motor operated units with manual override in case of power failure.
- C. Surface mounted.

1.4 DESIGN REQUIREMENTS

- A. Design door assembly to withstand wind/suction load of 20 psf, without undue deflection or damage to door or assembly components.
- B. Fire rated doors and assemblies must meet ratings scheduled and must be labeled accordingly by UL or accepted labeling authority.
- C. Insulation Value: R 6.33.

1.5 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
 - B. Shop Drawings: Indicate gauges and finish of metals, methods of joining members, location and reinforcement for hardware, bracing and anchorage, jamb side and head clearances required, pertinent dimensions, and installation details including bracing details.
 - C. Product Data: Provide general construction, component connections and details; include information on materials and finishes.
 - D. Samples: Submit two door slats, 12 inch in size illustrating shape, color and finish texture.
 - E. Manufacturer's Installation Instructions: Indicate installation sequence and procedures, adjustment and alignment procedures.
- 1.6 MAINTENANCE DATA
- A. Submit in accordance with Section 01 78 23.
 - B. Maintenance Data: Indicate lubrication requirements and frequency, periodic adjustments required.
- 1.7 FIELD MEASUREMENTS
- A. Verify that field measurements are as indicated on shop drawings.
- 1.8 COORDINATION
- A. Coordinate the Work with installation of support framing.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Curtain
 - 1. Slats: Interlocking, flat face, galvanized to minimum 0.90 oz/sq ft coating in accordance with ASTM A653; single thickness slat for non-insulated doors; sandwich slat construction with insulated core of expanded polyurethane type insulation.
 - 2. Slat Ends: Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
 - 3. Curtain Bottom: Fitted with angles to provide reinforcement and positive contact with floor in closed position.
- B. Guides: Steel angles, continuous, vertical mounted.
- C. Mounting Brackets: Galvanized steel; minimum 1/4-inch thick.
- D. Roller Shaft Counterbalance: Steel pipe and helical steel spring system, capable of producing torque sufficient to assure smooth operation of curtain from any position; with adjustable spring tension.
- E. Gears: Cast iron; gear ratio designed for 30-pound manual effort.

- F. Hood Enclosure: 24-gauge galvanized steel internally reinforced to maintain rigidity and shape.
- G. Hardware: Manufacturer's standard chain lock.
- H. Weather-stripping: Moisture, rodent, and rot proof; resilient type; located at door bottom, jamb edges, and where curtain enters hood enclosure.

2.2 MANUFACTURERS

- A. Kinnear/ Wayne-Dalton Corp.
- B. The Cookson Company.
- C. Cornell Iron Works, Inc.
- D. Alumatek Pacific

2.3 ELECTRIC OPERATORS

- A. Electric Operator: UL approved; side mounted; 120V, 1-phase, 60-Hz supply to 1-1/2-hp electric motor; adjustable friction clutch; brake system actuated by independent full line voltage solenoid controlled by motor starter; fully enclosed positive gear driven limit switch; fully enclosed magnetic crossline voltage starter.
- B. Control Station: Standard three button (open-close-stop) control for each operator; 24-volt circuit; surface mounted.
- C. Safety Device: Located at bottom of doors, full width; pneumatic electro-mechanical type; wired to stop and reverse door upon striking object; neoprene, rubber covered to provide weather seal.

2.4 FABRICATION

- A. Roll-up Doors: Standard assemblies, factory fabricated for opening sizes, conditions, and other requirements indicated and specified.
- B. Barrel: Sized to limit deflection to 0.03 inch per foot maximum deflection.

2.5 FINISHES

- A. Factory prime components using manufacturer's standard primer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify conditions are satisfactory for the installation of the Work of this Section.
- B. Verify that opening sizes, tolerances and conditions are acceptable.
- C. If unsatisfactory conditions exist, do not begin installation until such conditions have been corrected. Beginning installation means acceptance of existing conditions.

3.2 INSTALLATION

- A. Install door unit assembly with electric operators and controls in accordance with manufacturer's instructions and approved shop drawings. Coordinate installation with electric service.
- B. Fasten (without distortion or stress).assembly to wall construction and building framing with anchors and/or other fasteners in accordance with approved shop drawings
- C. Brace components suspended from structure in accordance with approved shop drawings. Secure guides to structural members only.
- D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.
- E. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07 92 00.
- F. Install perimeter trim and closures in accordance with approved shop drawings.

3.3 ERECTION TOLERANCES

- A. Maintain dimensional tolerances and alignment with adjacent work.
- B. Maximum variations: Do not exceed manufacturer's standards.

3.4 MANUFACTURER'S FIELD SERVICE

- A. Manufacturers furnish maintenance and call-back service for the duration of Contractor's warranty period.
- B. Perform service by manufacturer's trained employees during regular working hours. Provide emergency service when requested.
- C. Service
 1. Include examination of equipment, adjustments, supplies, lubrication and parts necessary to keep equipment in proper operation.
 2. The cost of adjustments, parts, and repairs made necessary by abuse, misuse, and other cause beyond manufacturer's control will be paid by the District at manufacturer's standard hourly rate.
 3. The District will pay for emergency service, except where attributable to faulty materials or equipment.

3.5 ADJUSTMENTS

- A. Test each assembly for proper operation.
- B. Adjust and lubricate door, hardware and operating assemblies for smooth, quiet operation, free from binding.

3.6 CLEANING

- A. Clean door and components.

- B. Exposed surfaces must be free from scratches, dents, tool marks, stains, discoloration, other defects and damage.
- C. Remove labels and visible markings.

END OF SECTION

SECTION 13 34 19

METAL BUILDING SYSTEMS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Designed, pre-engineered and shop fabricated structural steel building frame.
2. Metal wall and sloped roof system including soffits, gutters and downspouts.
3. Exterior doors, windows, skylights, overhead doors, louvers.

B. Related Sections:

1. Section 03 30 00 - Cast-In-Place Concrete.
2. Section 03 60 00 - Grout.
3. Section 07 92 00 - Joint Sealants.
4. Section 08 33 23 - Overhead Coiling Doors.

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):

B. AAMA 101 - Specification for Aluminum Poly (Vinyl Chloride) (PVC) and Wood Windows and Glass Doors.

C. AAMA 2603 - Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.

D. American Institute of Steel Construction (AISC):

E. ANSI/AISC 360 - Specification for Structural Steel Buildings.

F. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges.

G. American Iron and Steel Institute (AISI):

H. AISI SG-671/2 - Specification for the Design of Cold-Formed Steel Structural Members.

I. ASTM International (formerly American Society of Testing and Materials) (ASTM):

J. ASTM A36/A36M - Carbon Structural Steel.

K. ASTM A123/A123M - Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.

L. ASTM A153/A153M - Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

M. ASTM A307 - Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.

N. ASTM A325 - Structural Bolts, Heat Treated, 120/105 ksi Minimum Tensile Strength.

O. ASTM A490 - Structural Bolts Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength.

- P. ASTM A500 - Normalized High-Strength Low-Alloy Structural Steel Plates.
- Q. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
- R. ASTM A529/A529M - High-Strength Carbon-Manganese Steel of Structural Quality.
- S. ASTM A572/572M - High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
- T. ASTM A653/A653M - Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- U. ASTM A792/A792M - Steel Sheet, 55 Percent Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- V. ASTM A992/A992M - Standard Specification for Structural Steel Shapes.
- W. ASTM A1011/A1011M - Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.
- X. ASTM C553 - Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications.
- Y. ASTM C612 - Mineral Fiber Block and Board Thermal Insulation.
- Z. ASTM C665 - Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- AA. American Welding Society (AWS):
- BB. AWS A2.4 - Standard Symbols for Welding, Brazing and Nondestructive Examination.
- CC. AWS D1.1 - Structural Welding Code - Steel.
- DD. IR 16-7: Wind Load Determination - Alternative Method. California Department of General Services - Division of the State Architect, Interpretation of Regulations Document.

1.3 SYSTEM DESCRIPTION

- A. Clear span rigid frame type and modular rigid frame type supported with intermediate columns as indicated.
- B. Primary Framing: Rigid frame of rafter beams and columns, canopy beams, intermediate columns, end wall columns, and wind bracing.
- C. Secondary Framing: Purlins, girts, eave struts, flange bracing, sill supports, clips, and other items detailed.
- D. Wall and Roof System: Preformed metal panels of indicated profile, with sub-girt framing/anchorage assembly, sag rods, insulation, and accessory components.
- E. Roof Slope: 3 inch in 12 inches, unless otherwise indicated.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 00.
- B. Shop Drawings:
 - 1. Signed and sealed by a Professional Structural Engineer licensed in the State of California.
 - 2. Indicate markings, quantities, materials, and shapes.
 - 3. Indicate profiles, cambers, dimensions, spacing, and locations.
 - 4. Indicate openings, cuts, and holes.
 - 5. Indicate attachments, connections, threaded fasteners, rivets, and welds, including methods of connecting, anchoring, fastening, bracing, and attachment to the Work of other Sections.
 - 6. Indicate shop and erection details.
 - 7. Indicate cambers and loads.
 - 8. Indicate wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage and installation.
 - 9. Indicate framing anchor bolt settings, sizes, and locations from datum, and foundation loads.
 - 10. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths.
 - 11. Indicate primers, finishes, and other information required for fabrication and erection.
 - 12. Indicate door and window clear opening sizes and operating requirements.
- C. Calculations:
 - 1. Signed and sealed by a Professional Structural Engineer licensed in the State of California.
 - 2. Three copies of complete structural design calculations to be submitted with shop drawings.
 - 3. Include vertical loads, seismic loads, and wind loads.
 - 4. Calculations must be complete and must include roof decks, wall panels, structural members, column anchorage, equipment supports, framing around openings, braces, connections, lateral bracing of equipment, bracing of interior and exterior walls, suspended ceilings, and suspended equipment.
 - 5. When structural calculations are electronically prepared, submit diagrammatic models of each element, clearly cross referenced to calculations.
- D. Written Welding Procedures.
- E. Product Data:
 - 1. Product data for products and materials indicated.
 - 2. Manufacturer's technical bulletins and installation/application instructions.
 - 3. Provide data on profiles, component dimensions, fasteners, and manufacturer's specifications.
- F. Certificates:
 - 1. Manufacturer's Mill Certificate: Submit certificate that products meet or exceed specified requirements.
 - 2. Mill Test Reports: Submit manufacturer's certificates, indicating structural strength, destructive and nondestructive test analysis.
 - 3. Welder's Certificates: Submit certificates for welders employed on the Work, verifying AWS qualifications within the previous 12 months.

4. Certificates that all bolts supplied and installed are of United States manufacture and meet the requirements of these specifications.
- G. Qualification Data:
1. For manufacturer.
 2. For installer.
- H. Schedules:
1. Submit location and schedule of off-site fabrication.
 2. Submit schedule for delivery.
- I. Warranties: Sample of special warranties.

1.5 DESIGN REQUIREMENTS

A. General:

1. Design must be performed under the direct supervision of and sealed by a Professional Structural Engineer licensed in the State of California and experienced in the design of this Work.
2. Structural Steel Sections: Calculate design capacities in accordance with AISC.
3. Cold Formed Sections: Calculate design capacities in accordance with AISI Specification of the Design of Cold Formed Steel Structural Members.
4. Design and fabricate assembly to permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of 120 degrees F.
5. Design and fabricate wall and roof systems free of distortion or defects detrimental to appearance or performance.
6. Rigid Frame Buildings: Use bay size as indicated on the Drawings.
7. Roof system must allow the roof covering to move independently of differential thermal movement of the structural framing system.
8. Roof-mounted HVAC units are not permitted.

B. Design Vertical Loads:

1. Design for in-place loads generated by the materials used, equipment supported on roofs or walls, equipment suspended from roofs or walls, suspended finishes, and other items indicated to be supported.
2. Design for the actual dead load for mechanical piping and ceiling loads which must in no case be less than 6 psf. These dead loads must be in addition to the metal building dead load in buildings not otherwise indicated.
3. Where operating equipment is located on, or suspended from the structure, the design weight of the equipment must be increased 20 percent for impact.
4. In addition to the loads specified above, design structure to support the following minimum live loads, unless greater loads are indicated:
 - a. Uniform live load on roofs and canopies: 20 psf.
 - b. Concentrated load anywhere on the roof deck and canopy deck: 275 pounds.

Allowable Deflections Under Dead and Live Loads:

- c. Structural Members: $L/240$ of the clear span.
- d. Roof and Canopy Decks: $L/240$ of the center to center span.

Allowable Deflections under Live Loads:

- e. Structural members $L/360$ of center to center span.

C. Design Wind Loads:

1. Design structure to resist wind loads in accordance with applicable building codes.
 2. Design and detail skin, roof decks, walls, and roof supporting members for pressure and suction acting perpendicular to the surface.
 3. Deflection of skin, roof decks, walls, and roof supporting members for pressure and suction acting perpendicular to the surface must not exceed $L/240$ of the center to center span.
 4. Limit drift due to wind forces, computed at the eave, to 0.005 times the eave height.
- D. Design Seismic Loads:
1. Design structure to resist seismic forces in accordance with applicable building codes.
 2. Design structure to carry equipment loads including, but not limited to, mechanical equipment, plumbing, electrical, suspended ceilings, interior and exterior partitions, masonry walls, and storage contents of mezzanines.
 3. Design anchorage, support, and seismic bracing of mechanical units, piping, and equipment to resist seismic forces.
- E. Lateral Bracing System:
1. Design bracing and connections capable of transferring loads from structure to foundations in a direct manner. Eccentricities must be avoided, and must be accounted for where they occur. Wall bracing must clear all openings and not penetrate rated walls. See Drawings for locations for wall bracing.
 2. Design a complete and continuous “collector” and “chord” system capable of delivering the code specified lateral forces to the bracing systems. Collector and chord members must be designed to resist axial tension and compression forces in combination with any other loads delivered simultaneously to these members.
 3. Design adequate anchorage for overturning forces to the foundations. Coordinate column base details with details indicated on Structural Drawings.
 4. Lateral Bracing System must consist of concentric diagonal braced frames on member center lines or moment resisting frames. Braces must be steel angle sections.
 5. Where moment frames are used in conjunction with braced frames, moment frames must have compatible (equivalent) stiffness to the braced frames, and the “R” value for the most stringent system must be used for computing loads on the entire structure.
 6. Roof Diaphragm:
 - a. Where tension only braces are used, design braces for the code-specified forces for diaphragms.
 - b. Where roof panels are to be used as structural diaphragms to resist wind or seismic forces, roof decks must have an ICC approval and be installed in conformance with ICC requirements. Shear values must not exceed ICC approved values.
 7. Slip Critical Bolted Connections: Must be used on all connections subject to seismic load reversals. These connections include, but are not limited to chords, collectors, braced and moment frames.
- F. Where applicable to building length, separation for expansion and sliding joints may be provided to allow seismic and thermal movements of framing members in the longitudinal axis of the building.
1. Double columns are allowed at the separation.
 2. Coordinate locations with Drawings.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum three years' experience.
 - 1. Certified under the AISC Quality Certification Program.
 - 2. ICC Approved.
 - 3. Preparation of comprehensive engineering analysis and Shop Drawings by profession engineer who is legally qualified to practice in jurisdiction where Project located.
- B. Installer: Company experienced in the installation of metal building systems of similar size; approved by manufacturer.

1.7 COORDINATION

- A. Coordinate the design, construction, and installation of metal building structure with the requirements of the Work of other Sections.
- B. Provide templates required for accurately locating anchor bolts. Supply the templates in a timely fashion so as not to delay the Work of other Sections. Coordinate placement to verify accurate locations and correct installation.
- C. Ensure proper sequencing and fitting of construction. Design Work under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of California.

1.8 PREINSTALLATION CONFERENCE

- A. Convene one week prior to commencing the Work of this Section in accordance with Section 01 31 19.

1.9 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication and installation.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Provide factory wrapping, packaging, and other means necessary to prevent damage or deterioration during shipping, handling, and storage.
- B. Do not remove wrappings or protective coatings on prefinished components until the component is ready for installation.
- C. Ship, handle, and store components in accordance with manufacturer's instructions.
- D. Store products subject to damage by dirt and moisture in a clean, dry location, off the ground, and suitably protected.

1.11 WARRANTY

- A. Special Weathertightness Warranty for Standing-Seam Metal Roof Panels: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that leak or otherwise fail to remain weathertight within specified warranty period.
 - Warranty Period: 20 years from date of Project Completion.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Structural Steel Members: ASTM A36, A572 OR A992, Grade 50.
- B. Structural Tubing: ASTM A500, Grade B.
- C. Plate or Bar Stock: ASTM A572, Grade 50.
- D. Sheet Steel Stock: ASTM A653 Grade A; ASTM A792 zinc-aluminum coating on roof; galvanized to ASTM A653 G90 designation where indicated to receive paint finish.

2.2 BUILDING SYSTEM COMPONENTS

- A. Girts:
 - 1. Manufacturer's standard rolled formed structural shape meeting specified requirements.
 - 2. Provide minimum one sag rod between spans.
 - 3. Depth: Eight inches.
- B. Purlins:
 - 1. Rolled formed structural shape.
 - 2. Configuration, Thickness, Spacing: Manufacturer's standard.
 - 3. Depth: Eight inches.
 - 4. Bracing System: Conform to requirements of Metal Building Manufacturers Association.
- C. Internal and External Corners: Same material thickness and finish as adjacent material, profile brake formed to required angles.
- D. Blocking and Bracing:
 - 1. Provide purlin (or channel or equal gauge and depth) for closure and support between top of full-height interior partitions and the underside of the roof.
 - 2. Provide blocking behind wall supported equipment and fixtures which occur at the exterior walls.
 - 3. Diagonal Bracing: In accordance with applicable building codes.
- E. Flashings, Closure Pieces, Fascia, Infills, Caps, and Trim: Same material and finish as adjacent material, profile to suit system. Provide at rake, corners, and eaves; at framed openings and wherever necessary to provide weather tightness and a finished appearance.
- F. EPDM Rubber Boots: Flashing devices around pipe penetrations must be flexible, one-piece devices molded from EPDM rubber. Rubber boot material must be approved by the metal building manufacturer, as compatible with the system. Boots must have base rings fabricated of minimum 0.07-inch thick aluminum conforming to the contours of the roof panel, to form a weather tight seal.
- G. Roof Openings:
- H. Openings Larger Than Eight Inches Round or Square: Framed with a welded base fabricated from minimum 0.07-inch thick aluminum.
 - 1. Support base with roof purlins and header framing.

2. Base must project minimum 12 inches above the roof weather surface; the configuration of the base flanges must match the roof panel.
 3. Fasten base flange to provide complete support and weather tightness.
- I. Roof Curbs: Minimum 12-inch height; top of curb level; conform to NRCA standards.
 - J. Ventilators and Ridge Vents: Metal building manufacturer's standard; finish to match building.
 - K. Wall Louvers: Metal building manufacturer's standard type and finish; minimum 12 gauge galvanized steel; self-framing, self-flashing, with integral head gutter; insect or bird screens as indicated with steel mesh screen and frame.
 - L. Siding:
Provide in accordance with Section 07 42 13
 - M. Roofing:
Provide in accordance with Section 07 41 00
 - N. Overhead Doors:
 1. Provide in accordance with Section 08 33 23.
 2. Overhead door frame must be steel sections braced to building frame in accordance with applicable.
 - O. Exterior Windows:
 1. Type: Metal building manufacturer's standard with head, sill, and jamb fins of a configuration required for a self-framing, self-flashing installation in the metal building wall covering system.
 2. Windows, louvers, and Vents: Manufacturer's standard and in accordance with the Hardware Schedules on the Drawings, unless otherwise indicated.
 3. Material: Extruded aluminum.
 4. Construction: Heavy duty commercial type; AAMA 101.
 5. Finish: Metal building manufacturer's standard pigmented organic coating, conforming to AAMA 2603; color as selected by the District Representative.
 6. Accessories: Provide hardware, framing, fasteners, and other items required for complete window installation.
 7. Glazing: Manufacturer's standard.

2.3 FASTENERS

- A. Anchor Bolts: ASTM A307, unprimed and galvanized to ASTM A153, Class B, as indicated.
- B. Bolts, Nuts, and Washers: ASTM A325 or A307, galvanized to ASTM A153, as indicated.
- C. Washers: Cast iron or similar brittle material must not be used for washers.
- D. Welding Materials: AWS D1.1; type required for materials being welded.
- E. Wall and Roof Systems:
 1. General:
 - a. Fasteners as indicated to maintain load requirements, and weathertight installation, same finish as cladding, non-corrosive type.

- b. Manufacturer's standard type, galvanized to ASTM A153 2.0 oz/sq ft, finish to match adjacent surfaces when exterior exposed.
- 2. Siding:
 - a. Manufacturer's standard screws or bolts.
- 3. Roofing:
 - a. Stainless steel screws, bolts, or rivets with weatherseal washers, or carbon steel shank fasteners with vinyl or stainless steel capped heads.

2.4 ACCESSORIES

- A. Nonshrink Grout: In accordance with Section 03 60 00.
- B. Joint Seal Gaskets: Manufacturer's standard.
- C. Sealant: As specified in Section 07 92 00, non-staining, elastomeric, skinning.
- D. Primer: F9-TT, P636 Red Oxide Primer.
- E. Bituminous Paint: Asphaltic type.

2.5 SHOP FABRICATION

- A. Fabricate structural steel members in accordance with AISC - Specification for Structural Steel Buildings and as indicated.
- B. Form exposed Work true to line and level, with accurate angles and surfaces, and straight, sharp edges.
- C. Ease exposed edges unless otherwise indicated.
- D. Form bent metal corners to smallest radius possible without causing grain separation or other damage to work.
- E. Form joints exposed to weather to exclude water.
- F. Provide framing for openings. Provide sealant between framing members and wall panel closure panels.
- G. Connections:
 - 1. Make permanent connections in ferrous metal surfaces using welds wherever possible; do not use bolts or screws where they can be avoided. Conceal fastenings where practical.
 - 2. Shop Welding:
 - a. Provide welded connections in shop where possible, unless otherwise indicated, in accordance with AWS D1.1.
 - b. Welding must be performed by welders certified to perform the Work.
 - c. Weld by shielded-arc method, submerged-arc method, flux-coated arc method, or other method approved by AWS. Perform welding in accordance with AWS D1.1.
 - d. Welds exposed to weather or damp conditions in the finished Work must be continuous and watertight and must be treated by hot or cold (field) galvanization.
 - 3. Bolted Connections:
 - a. Bolted connections must have not less than two bolts.
 - b. Punch, drill, or ream holes 1/16 inch larger than bolt diameter.

4. Anchor Bolts: Formed with bent shank, assembled with template for casting into concrete. Do not galvanize anchor bolts embedded in concrete.
- H. Gutters and Downspouts:
1. Fabricate of same material and finish as roofing metal; minimum 26 gauge unless otherwise indicated.
 2. Form gutters and downspouts to profile and size indicated to collect and remove water. Fabricate with connection pieces.
 3. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion at joints.
 4. Fabricate support straps of same material and finish as roofing metal, color as selected.

2.6 SHOP ASSEMBLY

- A. Preassemble items in the shop to greatest extent possible to minimize field splicing and assembly.
- B. Disassemble units only as necessary for shipping and handling limitations.
- C. Clearly mark units for reassembly and installation coordination.

2.7 SHOP FINISHING

- A. Framing Members: Clean, prepare, and shop prime. Do not prime surfaces to be field welded.
- B. Roof Panels: ASTM A792; zinc-aluminum coating over steel substrate; Galvalume and factory applied thermostat siliconized polyester finish coating system: color selected from manufacturers standard range.
- C. Wall Panels: Factory applied thermoset siliconized polyester finish coating system; color selected from manufacturer's standard range.

2.8 TOLERANCES

- A. Tolerances must be in accordance with AISC Code.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive the Work. Notify the District Representative, in writing, of any conditions requiring corrective action.
- B. Verify that foundation, floor slab, mechanical and electrical utilities are in correct position.
- C. If unsatisfactory conditions exist, do not commence the installation until such conditions have been corrected. Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

- A. Verify that field measurements are as indicated on Drawings and reviewed shop drawings. Report discrepancies to the District Representative for clarification or resolution prior to starting erection.
 - B. Anchor Bolts:
 - 1. Upon completion of concrete placement, anchor bolts must be rechecked for correct location and elevations; make necessary corrections.
 - 2. Projecting portion of anchor bolts must be wire brushed, the washers and nuts replaced, and the bolt protected from dust and other foreign materials by a wrapping of a waterproof material.
 - C. Protect adjacent, existing, and newly placed construction as necessary to prevent damage during installation of the work of this Section.
 - D. Provide bitumastic paint, minimum 15-mil thick, between dissimilar materials to prevent corrosion due to electrolytic action.
- 3.3 ERECTION - FRAMING
- A. Erect framing in accordance with AISC Specification.
 - B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated.
 - C. Column base plates must be set on a steel shims or otherwise supported and the structure aligned and plumbed prior to grouting under the base plates.
 - D. Welding:
 - 1. Welding will be permitted only as indicated on the approved shop drawings.
 - 2. Welding must be performed by welders certified to perform the Work.
 - 3. Weld by shielded-arc method, submerged-arc method, flux-coated arc method, or other method approved by AWS. Perform welding in accordance with AWS D1.1.
 - 4. Welds exposed to weather or damp conditions in the finished Work must be continuous and watertight and must be treated by hot or cold (field) galvanization.
 - E. Bolted Connections:
 - 1. Bolted connections must have not less than two bolts.
 - 2. Ream unfair holes, but only up to next larger bolt size.
 - 3. As erection progresses, bolt up the Work to assume dead loads, lateral forces, and erection stresses.
 - F. Assembly Using Standard Threaded Fasteners:
 - 1. Beveled Washers: Provide under bolt heads or nuts riding on surfaces exceeding 5 percent slope with respect to head or nut.
 - 2. Tighten bolts for full bearing under heads and nuts and to snug tight condition.
 - G. After steel is aligned, grout under column base plates and elsewhere indicated to full plate bearing with non-shrink grout in accordance with Section 03 60 00.
- 3.4 ERECTION - WALL AND ROOFING SYSTEMS

- A. Install in accordance with manufacturer's instructions.
- B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.
- C. Fasten cladding system to structural supports, aligned level and plumb.
- D. Locate end laps over supports. End laps minimum 2 inches. Place sidelaps over bearing.
- E. Provide expansion joints where indicated.
- F. Use exposed fasteners.
- G. Provide insulation where indicated.
 - 1. Place roof insulation over roof purlins. Allow insulation to attain full thickness between purlins.
 - 2. Place insulation with vapor barrier to building interior.
 - 3. Fold and staple membrane joints in accordance with manufacturer's instructions.
 - 4. Provide manufacturer's standard netting or other accepted method to hold roof insulation in place.
- H. In buildings where wall insulation is exposed, provide 10-foot high wainscot of 3/4-inch thick CD Structural, Exposure 1, T&G plywood fastened directly to metal building girts.
- I. Roofing:
 - 1. Seams must be continuously locked or crimped together by mechanical means as indicated.
 - 2. Provide resilient gaskets as necessary for complete weather seal.
 - 3. Panels must be fastened to the purlins or secondary support members with a concealed clip or backing device of steel having a protective metallic coating as indicated.
 - 4. Through penetration of the roof surface by exposed fasteners must occur only at terminal locations of roof panels.
 - 5. Except at the concealed fastener, there must be no thermal contact of the roof panels with the supporting purlins.
 - 6. Where roof panels are to be used as structural diaphragms to resist wind or seismic forces, roof decks must be installed in accordance with ICC requirements.
- J. Install sealant and gaskets to prevent weather penetration. Seal wall and roof accessories watertight and weather tight with sealant in accordance with Section 07 92 00.
- K. The completed structure must be free of rattles, noise due to thermal movement and wind whistles.

3.5 ERECTION - GUTTER AND DOWNSPOUT

- A. Rigidly support and secure components. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts.
- B. Apply bituminous paint on surfaces in contact with cementitious materials.
- C. Provide positive slope in gutters to downspouts.

D. Install splash blocks.

3.6 FINISHES

- A. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized including portions of anchor bolt assemblies not embedded in concrete. Do not treat surfaces to be in contact with concrete and surfaces to receive spray-on fireproofing or insulation.
- B. Field paint unpainted field connections, bolts, and similar parts with primer.

3.7 ERECTION TOLERANCES

- A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.
- B. Siding and Roofing: 1/8 inch from true position.

3.8 MANUFACTURER'S FIELD SERVICE

- A. Manufacturer's representative must provide inspection services during the Work of this Section.
- B. Manufacturer's representative must certify to the District Representative that Work has been installed in accordance with manufacturer's instructions.

3.9 CLEANING

- A. Remove coverings from the face of siding and refinish surfaces as necessary to prevent rusting and discoloration of finished surfaces.
- B. Clean exposed surfaces of the prefinished Work promptly after completion of installation. Comply with coating manufacturer's instructions.
- C. After erection, thoroughly clean surfaces of foreign a deleterious matter such as dirt, mud, oil, and grease that could impair bonding of finishes, concrete, or fireproofing.

3.10 REPAIR AND ADJUSTMENTS

- A. Field cutting, altering, or burning of openings or framing will not be permitted.
- B. Touch-up shop applied primer using same material.
- C. Touch-up minor damage on painted finishes.
 - 1. Use touch-up paint of type recommended by finish manufacturer.
 - 2. Minimize overlap to undamaged areas.
 - 3. Match color, gloss, and appearance of surrounding area.

3.11 DEFECTIVE WORK

- A. Building components not conforming to required lines, details, dimensions, tolerances, finishes, strength, or other specified requirements must be considered defective. Notify the District Representative upon discovery of these conditions.

- B. Required repair or replacement of defective steel will be determined by the District Representative.
- C. Do not patch, fill, touch-up, repair, or replace components except upon express direction of the District Representative for each individual area.
- D. Defective building components must be repaired or replaced as recommended by the District Representative at no additional expense to the District.

3.12 PROTECTION

- A. Protect completed structure and building components from damage from subsequent construction operations.

END OF SECTION

APPLICANT:

Reclamation District 108
975 Wilson Bend Road
Grimes, CA 95950
(530) 437-2221

STRUCTURAL ENGINEER:

James Oki
542 Messick Road
Yuba City, CA 95991
(530) 674-7755

ARCHITECTURAL DESIGN:

Valerie Ehrke Design
P.O. Box 1444
Arbuckle, CA 95912
(530) 681-1218

ZONING:

Commercial

NOTES

OCCUPANCY GROUP U
TYPE OF CONSTRUCTION V-B
STORIES ONE
BUILDING FOOTPRINT (60 X 100) 6000 SQ. FT.

A.P.N. NO.: 022-130-058-000

OCCUPANT LOAD PER 1004.1.2:

6000 ÷ 300 = 20 (UTILITY (SHOP))

TOTAL OL = 20

EXITING WIDTH REQUIRED:

.2 X 20 = 4 INCHES

SCOPE OF WORK:

NEW 60' X 100' STEEL BUILDING SHELL

THE 2026 CBC, CMC, CPC AND CEC AS AMENDED BY THE STATE OF CALIFORNIA AND THE COUNTY OF COLUSA ARE APPLICABLE TO THIS PROJECT

1.01 WRITTEN DIMENSIONS SUPERCEDE SCALED DIMENSIONS

DRAWING INDEX	
A-1.0	COVER SHEET
A-1.1	SITE PLAN
A-2.1	FLOOR PLAN
A-2.2	INTERIOR FOOTING PLAN
A-2.3	EXTERIOR ELEVATIONS
A-2.4	-
A-2.5	-
A-2.6	-
A-2.7	DETAILS STEEL BUILDING PACKAGE ATTACHED
S-1	GENERAL NOTES

Valerie Ehrke Design
vehrke69@gmail.com
P.O. Box 1444
Arbuckle, CA 95912
(530) 681-1218

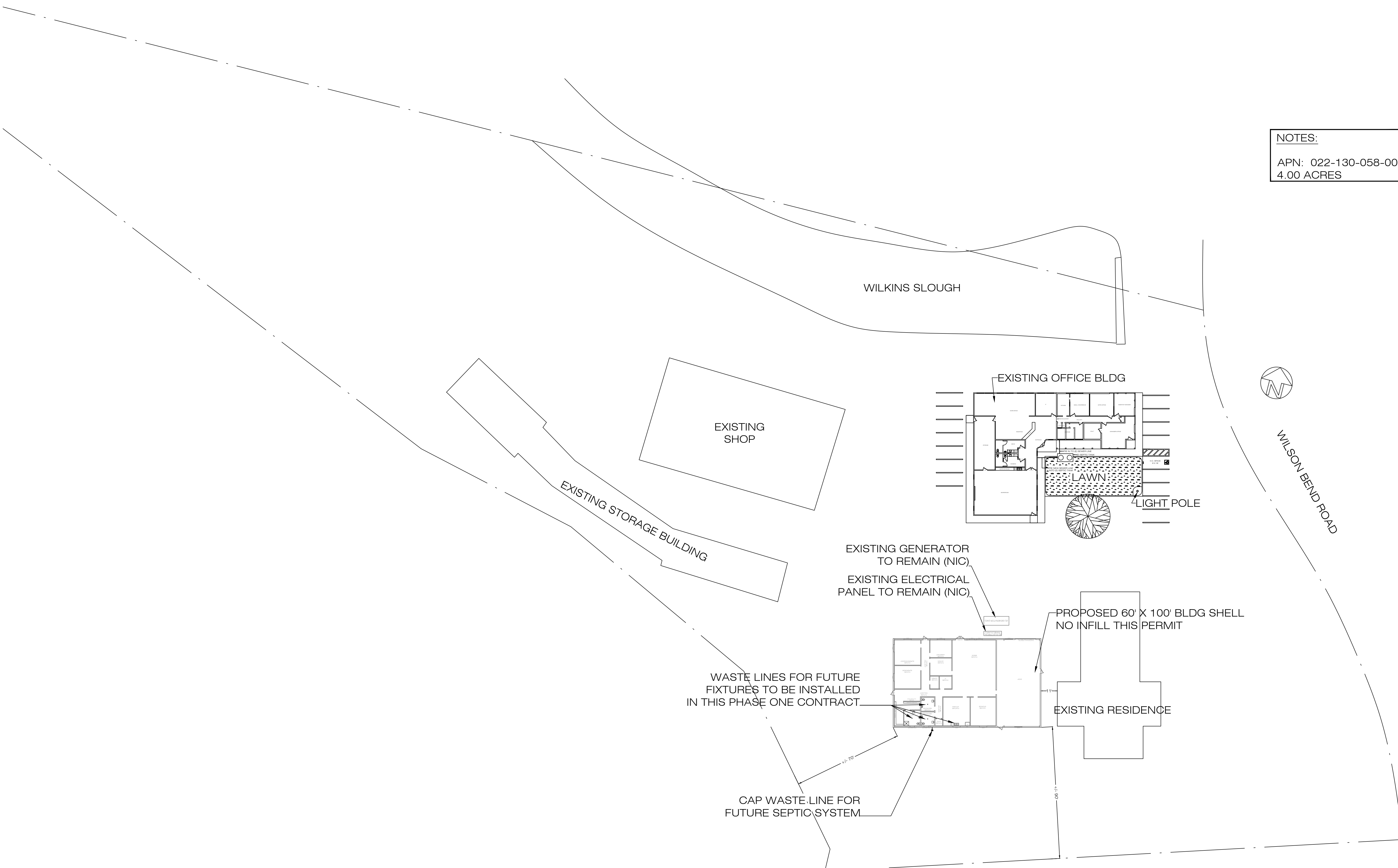
Reclamation District 108 - Operations Building - Phase 1 Bldg Shell
975 Wilson Bend Road
Grimes, CA 95950

DATE	DESCRIPTION	DATE	DESCRIPTION

DRAWN BY: VEE
DATE: 4-14-2026
PROJECT NO.
SCALE:
△



SHEET NO.
A-1.0



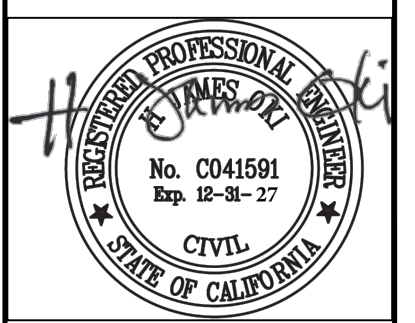
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APN: 022-130-058-000
4.00 ACRES

Valerie Ehrke Design
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P.O. Box 1444
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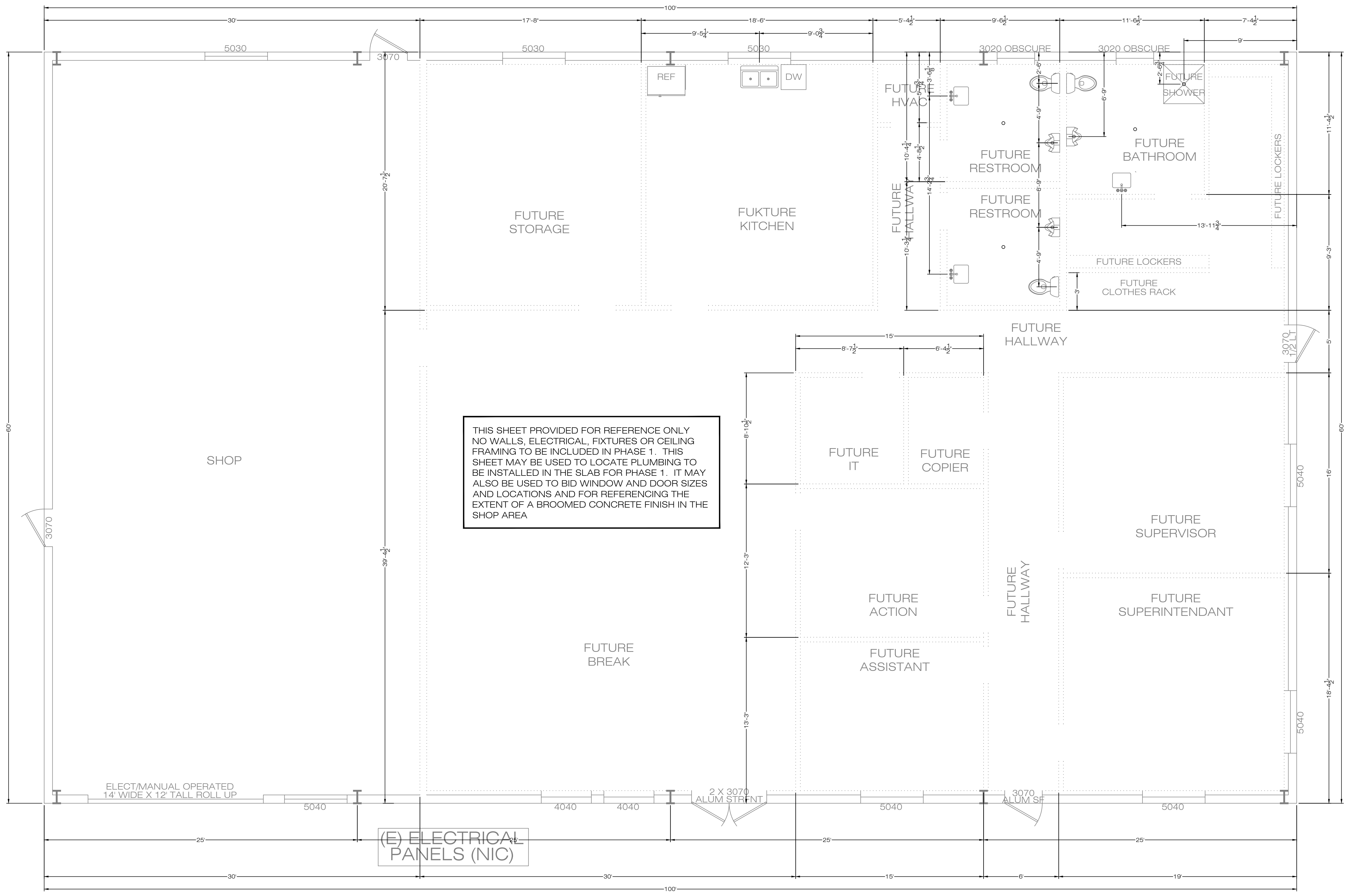
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DATE: 4-14-2026
PROJECT NO.
SCALE: SCALE: 1" = 30'-0"



DRAWING INDEX

A-1.0	COVER SHEET
A-1.1	SITE PLAN
A-2.1	FLOOR PLAN
A-2.2	INTERIOR FOOTING PLAN
A-2.3	EXTERIOR ELEVATIONS
A-2.4	
A-2.5	
A-2.6	
A-2.7	DETAILS
-	STEEL BUILDING PACKAGE ATTACHED
S-1	GENERAL NOTES

SHEET NO. A-1.1



NOTES:
 15' 16" MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS SHALL COMPLY WITH 2013 CBC, 11B-404.2.4.1

(E) GENERATOR (NIC)

(E) ELECTRICAL PANELS (NIC)

DRAWING INDEX

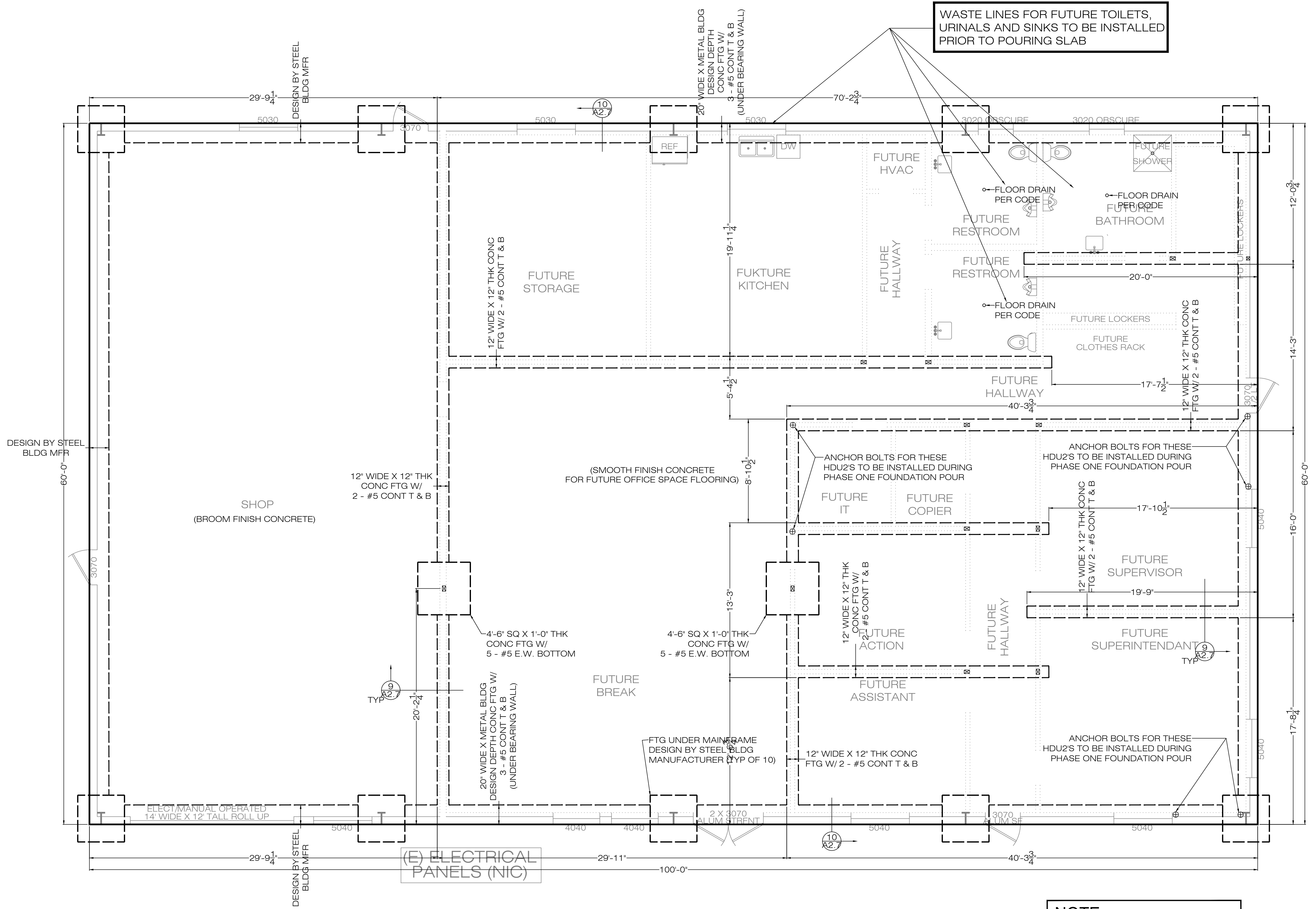
A-1.0	COVER SHEET
A-1.1	SITE PLAN
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A-2.4	
A-2.5	
A-2.6	
A-2.7	DETAILS
S-1	STEEL BUILDING PACKAGE ATTACHED GENERAL NOTES

DATE	DESCRIPTION	DATE	DESCRIPTION

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 DATE: 4-14-2026
 PROJECT NO.
 SCALE: 1/4" = 1'-0"
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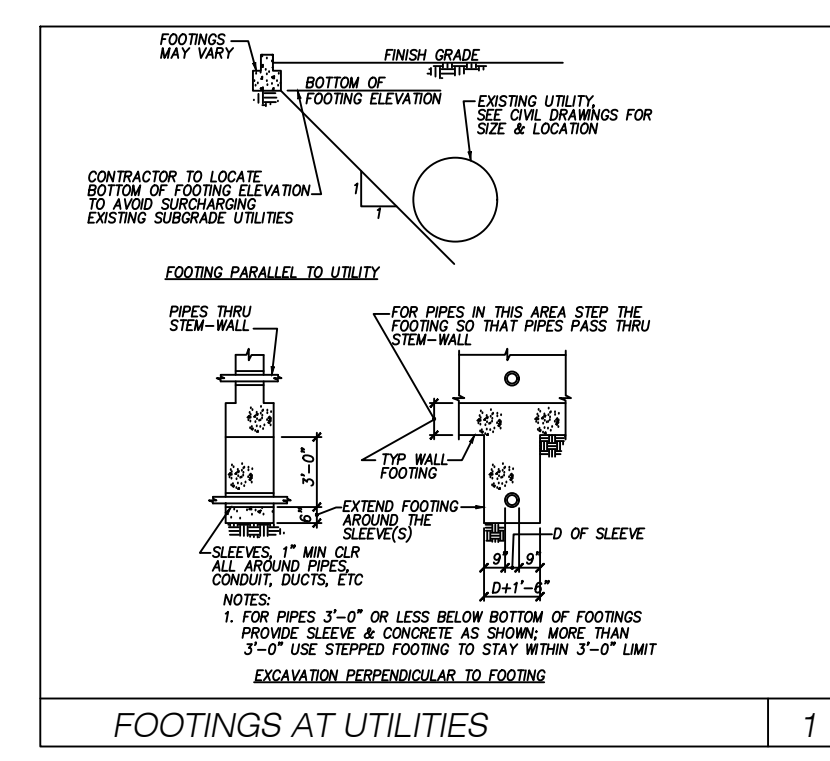
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A-2.1



WASTE LINES FOR FUTURE TOILETS, URINALS AND SINKS TO BE INSTALLED PRIOR TO POURING SLAB

(E) ELECTRICAL PANELS (NIC)

(E) GENERATOR (NIC)



NOTE:

1. ALL WORK TO BE IN ACCORDANCE WITH THE ENGINEERS DRAWINGS & SPECIFICATIONS.
2. ALL FOUNDATIONS TO BE BEAR A MINIMUM OF 12" BELOW UNDISTURBED SOIL.
3. CONCRETE $f_c = 3000\text{psi}$
4. REINFORCEMENT $f_y = 60\text{ksi}$
5. ALL TIMBER TO BE DRY DF#2 OR BETTER & TO BE A MINIMUM OF 8" ABOVE FINISHED GRADE.
6. REFER TO FLOOR PLAN FOR SETTING OUT.
7. ALLOWABLE SOIL BEARING PRESSURE = 1500psf.
8. ALL ANCHOR BOLTS, HOLD-DOWNS & REINFORCEMENT SHALL BE IN PLACE & TEMPLATED AT FOUNDATION INSPECTION. NO WET SETTING IS PERMITTED.
9. REFER TO DETAIL SHEETS FOR TYPICAL FOUNDATION & FRAMING DETAILS.

DRAWING INDEX

A-1.0	COVER SHEET
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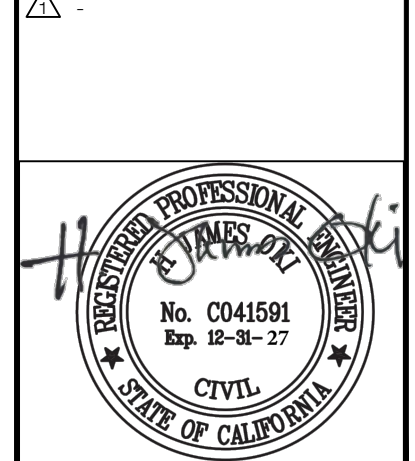
Valerie Ehrke Design
 vehrke69@gmail.com
 P.O. Box 1444
 Arbutle, CA 95912
 (530) 681-1218

Reclamation District 108 – Operations Building – Phase 1 Bldg Shell
 975 Wilson Bend Road
 Grimes, CA 95950

DATE	DESCRIPTION	DATE	DESCRIPTION

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 DATE: 4-14-2026
 PROJECT NO.:

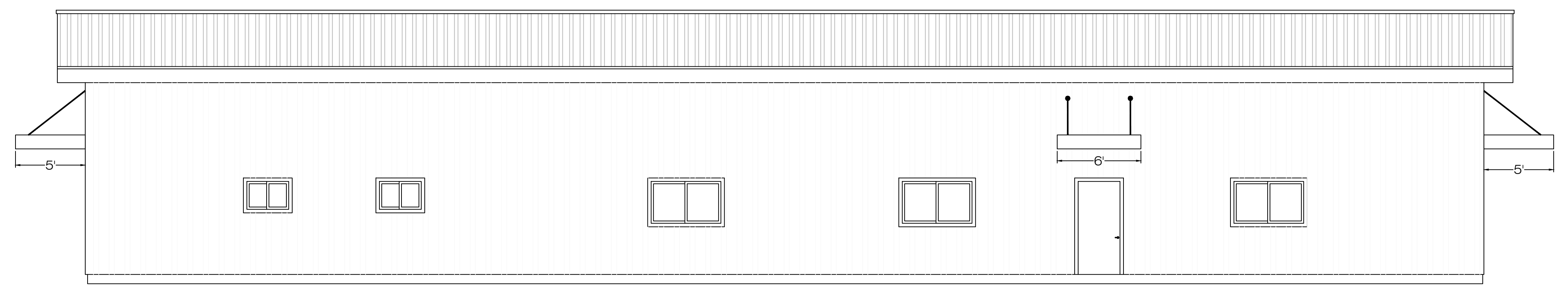
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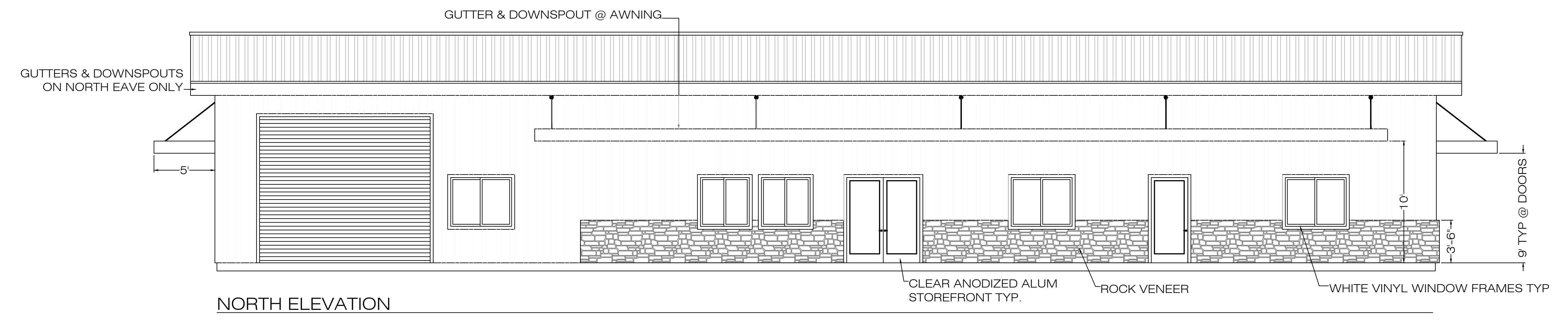
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Valerie Ehrke Design
 vehrke69@gmail.com
 P.O. Box 1444
 Arbutle, CA 95912
 (530) 681-1218

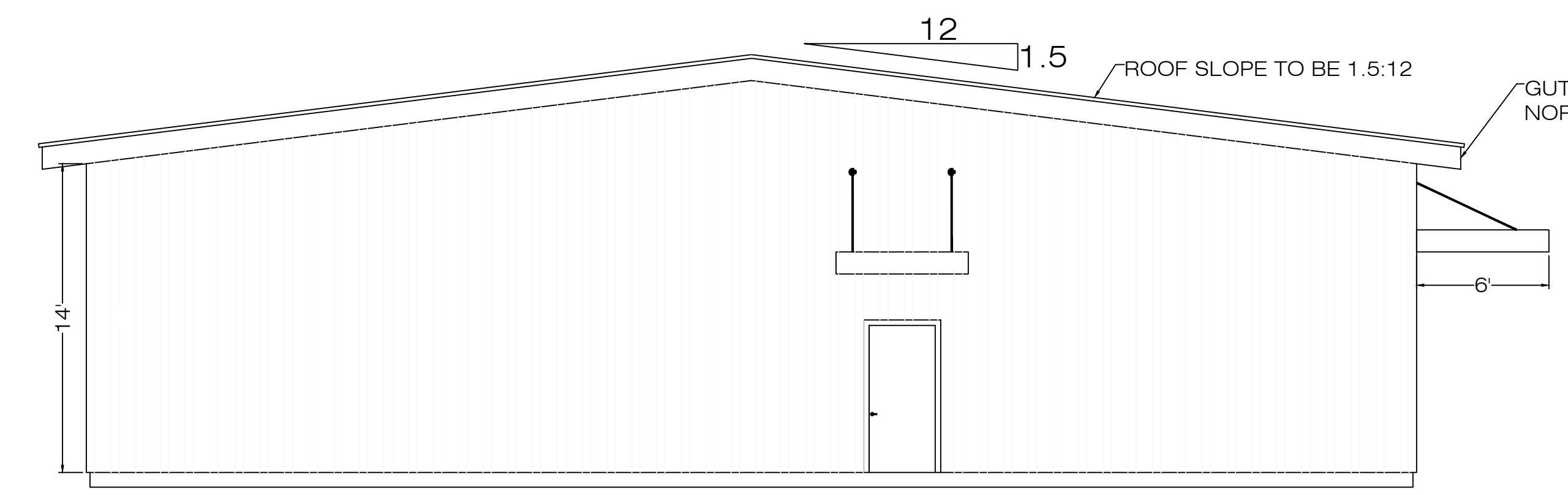
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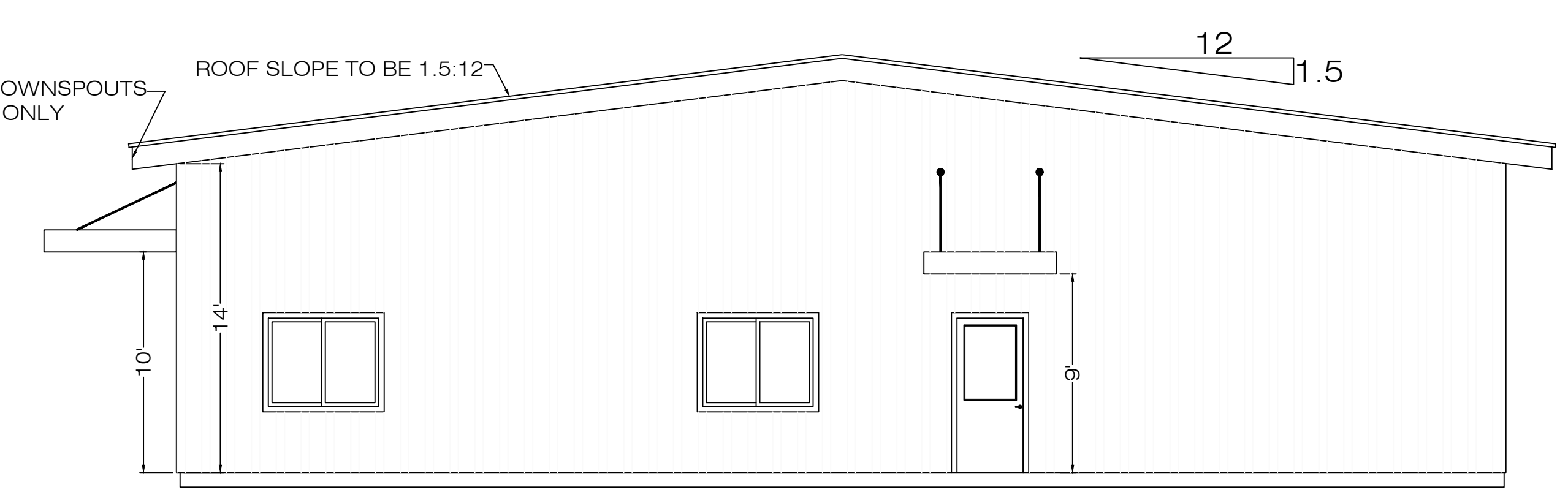
SOUTH ELEVATION



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION

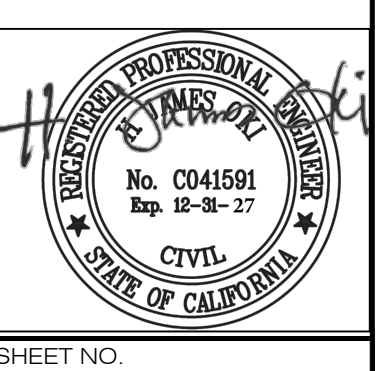
EXTERIOR DOORS & WINDOWS TO BE INCLUDED IN THIS PHASE ONE CONTRACT

MINIMUM VALUES FOR DOORS/WINDOWS		
	OPERABLE WINDOWS	DOORS
U FACTOR	.46 OR LESS	.41 OR LESS
RSHGC	.22 OR LESS	.26 OR LESS
VT	.32 OR MORE	.46 OR MORE

DRAWING INDEX	
A-1.0	COVER SHEET
A-1.1	SITE PLAN
A-2.1	FLOOR PLAN
A-2.2	INTERIOR FOOTING PLAN
A-2.3	EXTERIOR ELEVATIONS
A-2.4	
A-2.5	
A-2.6	
A-2.7	DETAILS
S-1	STEEL BUILDING PACKAGE ATTACHED GENERAL NOTES

DATE	DESCRIPTION	DATE	DESCRIPTION

DRAWN BY: VEE
 DATE: 4-14-2026
 PROJECT NO.
 SCALE: 3/16" = 1'-0"



SHEET NO. A-2.3

DETAIL	1	DETAIL	2	DETAIL	3	DETAIL	4	DETAIL	5
DETAIL	6	DETAIL	7	DETAIL	8		9		10
DETAIL	11	DETAIL	12	DETAIL	13	DETAIL	14		15
DETAIL	16	DETAIL	17	DETAIL	18	DETAIL	19	DETAIL	20

DRAWING INDEX

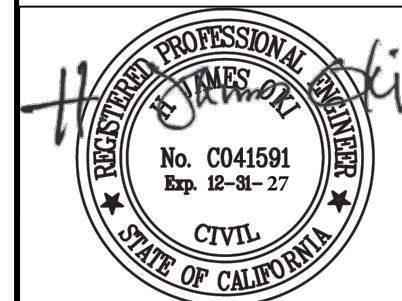
A-1.0	COVER SHEET
A-1.1	SITE PLAN
A-2.1	FLOOR PLAN
A-2.2	INTERIOR FOOTING PLAN
A-2.3	EXTERIOR ELEVATIONS
A-2.4	
A-2.5	
A-2.6	
A-2.7	DETAILS
S-1	STEEL BUILDING PACKAGE ATTACHED
	GENERAL NOTES

Valerie Ehrke Design
vehrke69@gmail.com
P.O. Box 1444
Arbuckle, CA 95912
(530) 681-1218

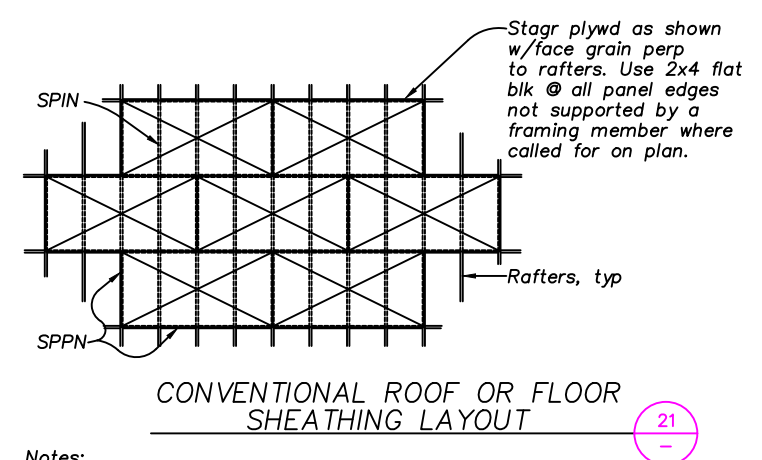
Reclamation District 108 - Operations Building - Phase 1 Bldg Shell
975 Wilson Bend Road
Grimes, CA 95950

DATE	DESCRIPTION	DATE	DESCRIPTION

DRAWN BY: VEE
DATE: 4-14-2026
PROJECT NO.
SCALE: 1" = 1'-0"
△

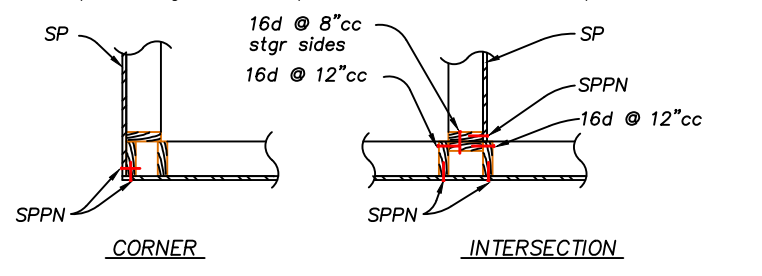


SHEET NO.
A-2.7



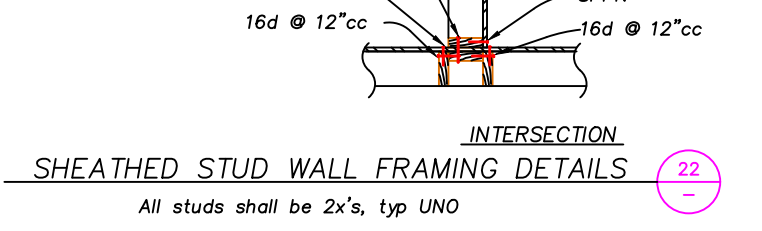
CONVENTIONAL ROOF OR FLOOR SHEATHING LAYOUT

Notes:
 1. All roof sheathing to be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.
 2. Use SPN of 8d @ 6"cc @ Roof & 10d @ 6"cc @ Floor or as otherwise indicated on plans @ all panel edges, shear walls, ties & bays. SPN to all interior bearings w/ 8d @ 12"cc @ Roof & 10d @ 12"cc @ Floor. Do not break any face ply w/ nail heads. The min edge distance for nails shall be 3/8" in the plywd & in the receiving member.
 3. ICBO accepted & APA rated PERFORMANCE RATED SHEATHING panels may be substituted for plywd. Panel thickness & span rating shall be equal to that noted on these plans.



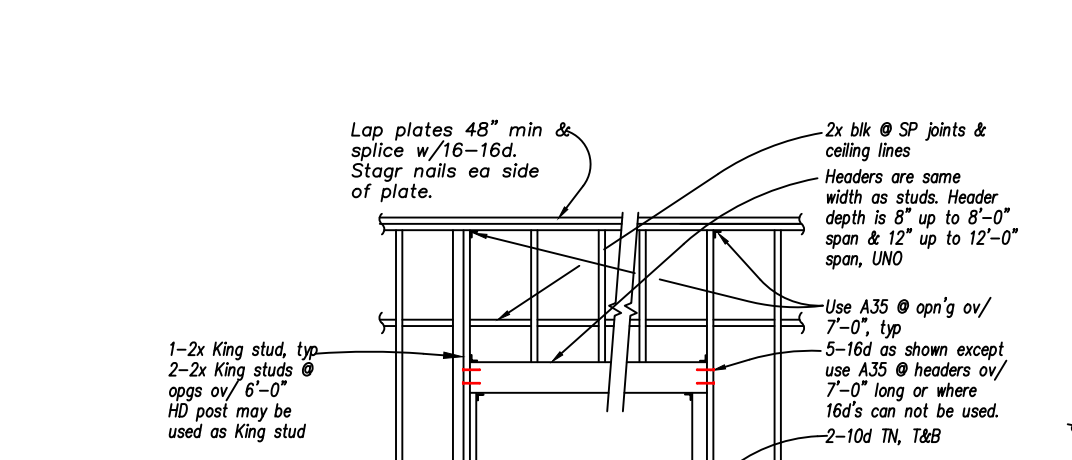
FRAMED WALL OPENINGS

Notes:
 1. All holdown studs shall be 2x4 or 2x6, spaced @ 24" max on center.
 2. All joists shall be 2x8 or 2x10, spaced @ 24" max on center.
 3. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



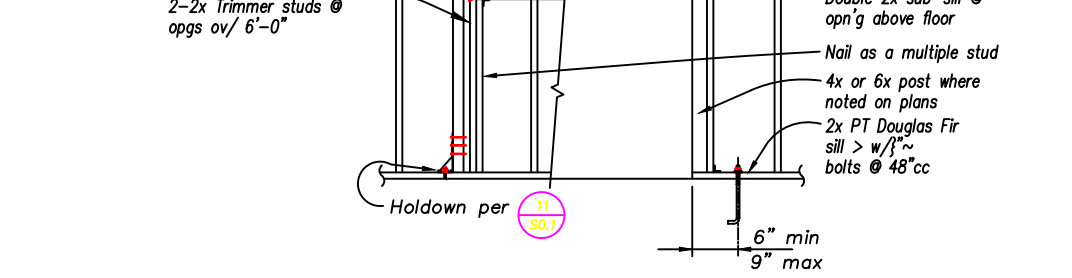
SHEATHED STUD WALL FRAMING DETAILS

Notes:
 1. All studs shall be 2x4, typ UNO.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



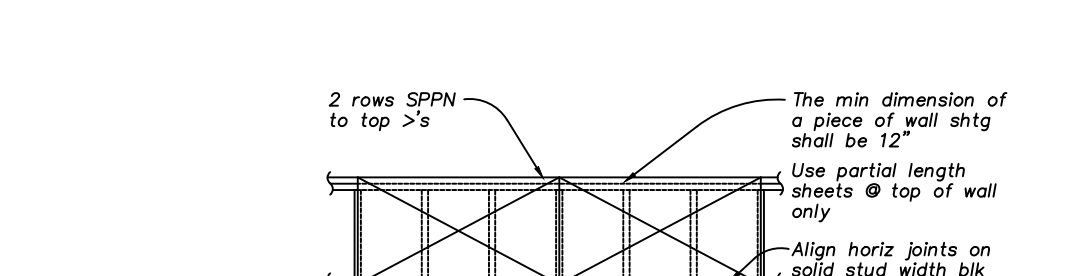
VENTED BLOCKING

Notes:
 1. All blocking shall be 2x4 or 2x6, spaced @ 24" max on center.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



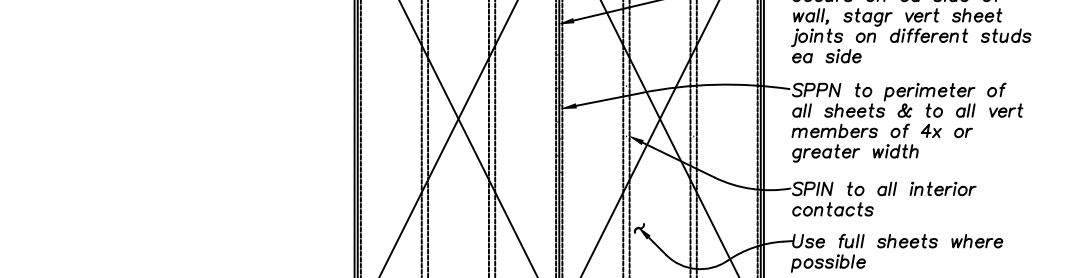
JOIST FRAMING

Notes:
 1. All joists shall be 2x8 or 2x10, spaced @ 24" max on center.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



BORING & NOTCHING DETAILS

Notes:
 1. Notching & boring of main struct members shall be only that shown on plans or approved by the Structural Engineer.
 2. See Carpentry note #3 for boring & notching at wall plates.



PLYWOOD NAILING

Notes:
 1. All nailing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



BEAM OR HEADER TO WALL

Notes:
 1. All beams and headers shall be 2x8 or 2x10, spaced @ 24" max on center.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



BEAM OR HEADER AT CORNER

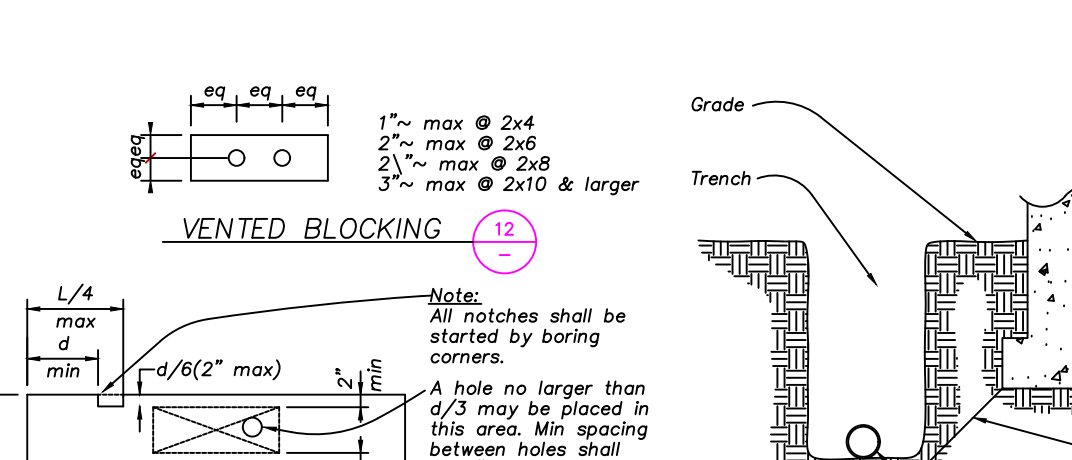
Notes:
 1. All beams and headers shall be 2x8 or 2x10, spaced @ 24" max on center.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.

CEILING JOIST SCHEDULE		
SPAN	DEPTH & SPACING	
up to 8'	2x4 @ 16"cc	180° HOOK
8' to 12'	2x6 @ 16"cc	
12' to 18'	2x8 @ 16"cc	
up to 6'	2x4 @ 24"cc	90° HOOK
6' to 10'	2x6 @ 24"cc	
10' to 14'	2x8 @ 24"cc	
14' to 18'	2x10 @ 24"cc	
18' to 20'	2x12 @ 24"cc	



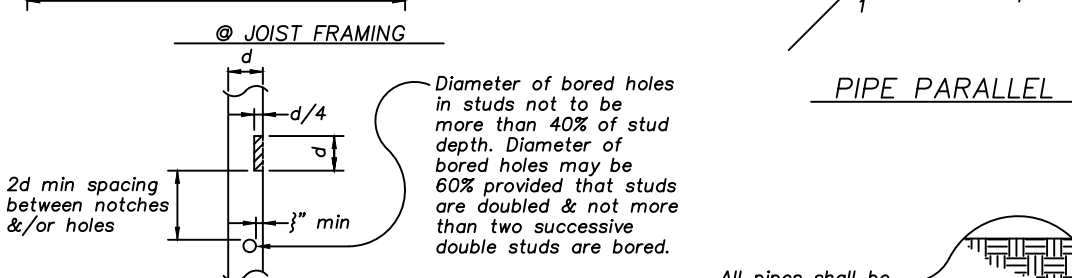
TYPICAL WALL TO WOOD FRAMING

Notes:
 1. All studs shall be 2x4, typ UNO.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



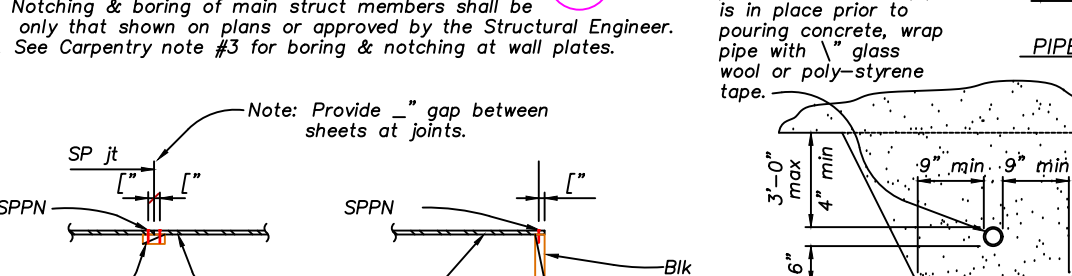
PIPE PARALLEL TO FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



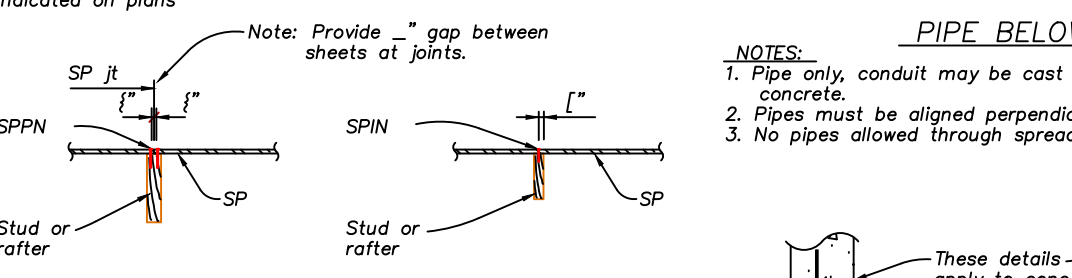
PIPE THRU FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



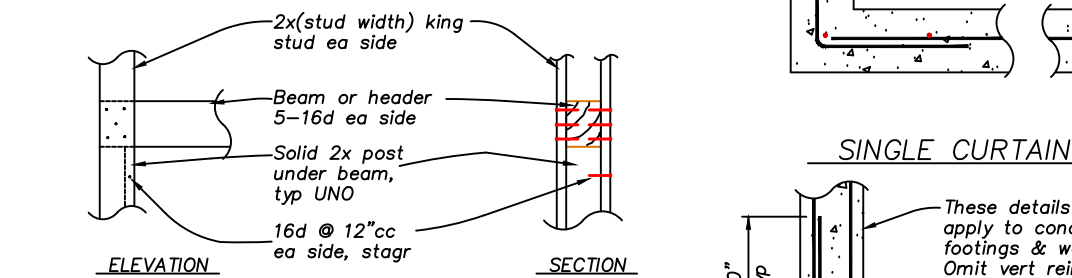
PIPE BELOW FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



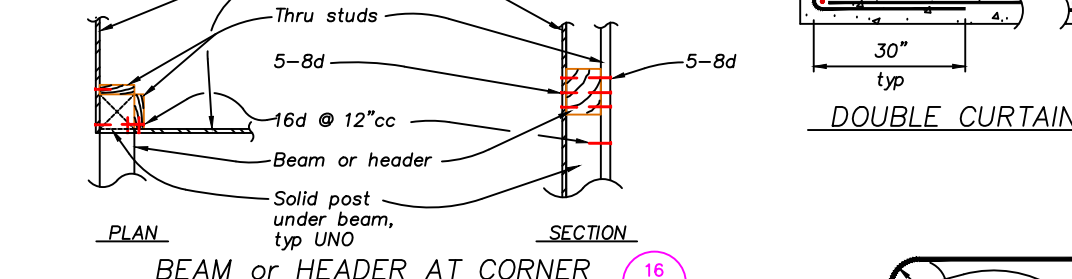
SINGLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



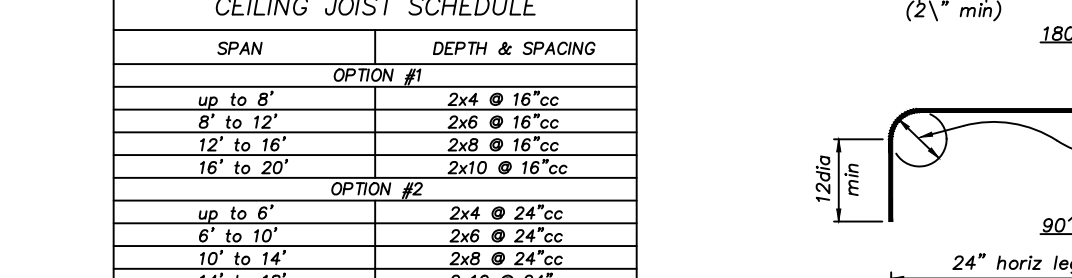
DOUBLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



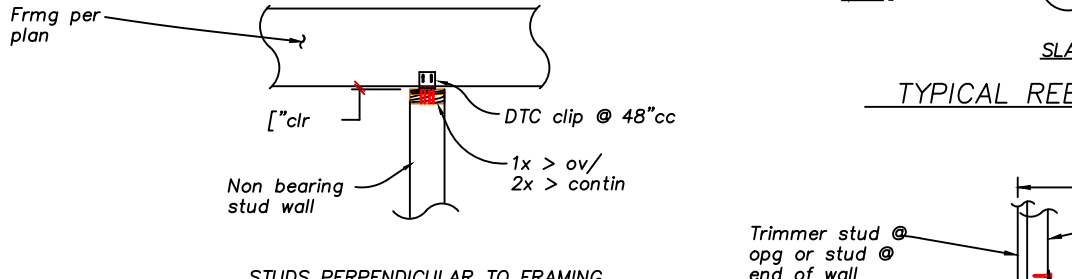
STEPPED FOOTING DETAIL

Notes:
 1. All footings shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



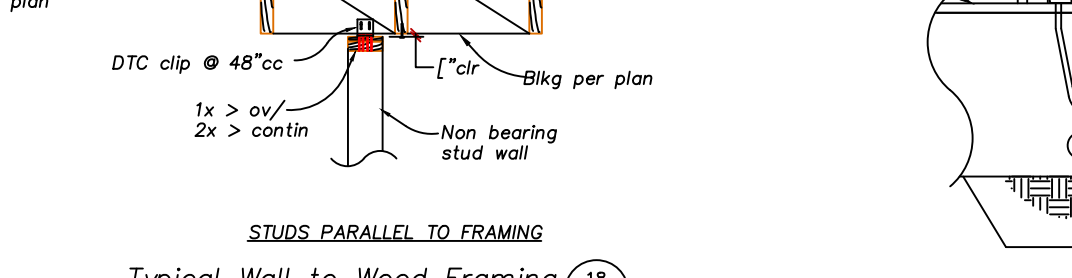
SLAB DOWEL

Notes:
 1. All slab dowels shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



TYPICAL REBAR BENDS

Notes:
 1. All rebar bends shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



SLAB ON GRADE JOINT

Notes:
 1. All slab on grade joints shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



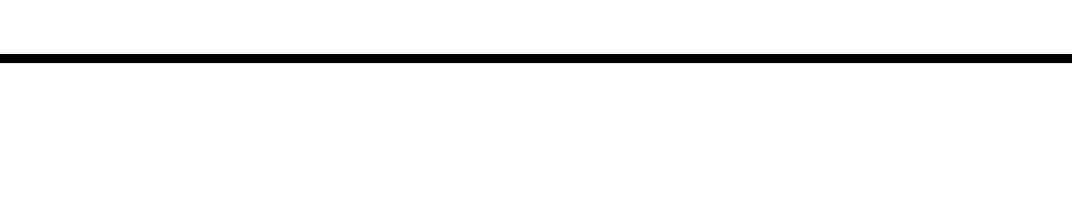
STEPPED FOOTING TYPE "A"

Notes:
 1. All stepped footing type 'A' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



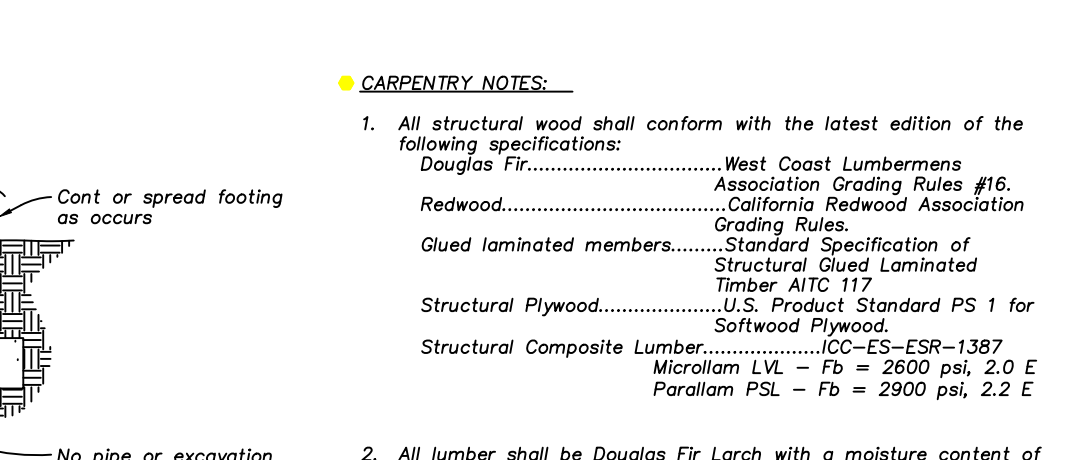
STEPPED FOOTING TYPE "B"

Notes:
 1. All stepped footing type 'B' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



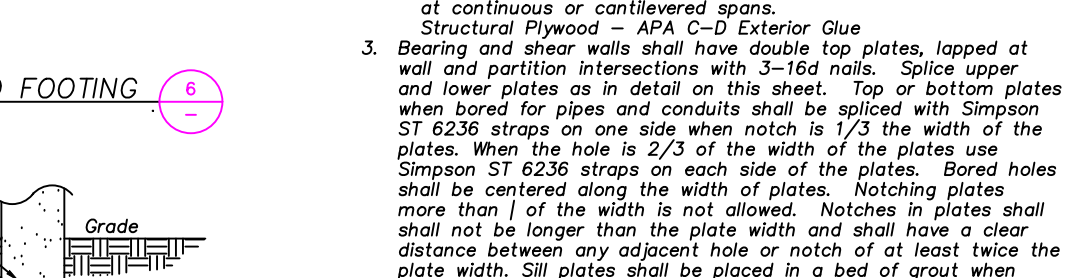
DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



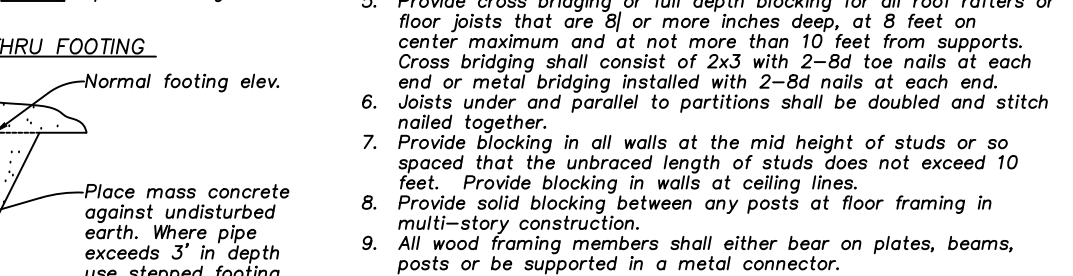
PIPE THRU FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



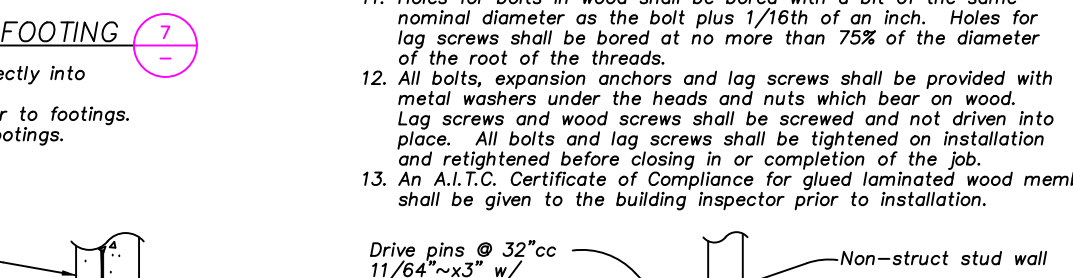
PIPE BELOW FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



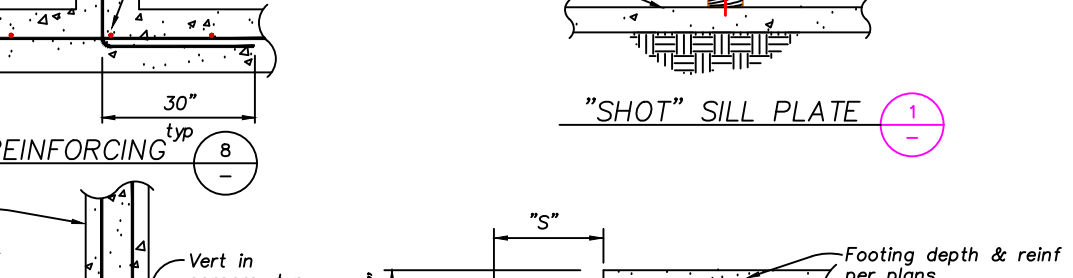
SINGLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



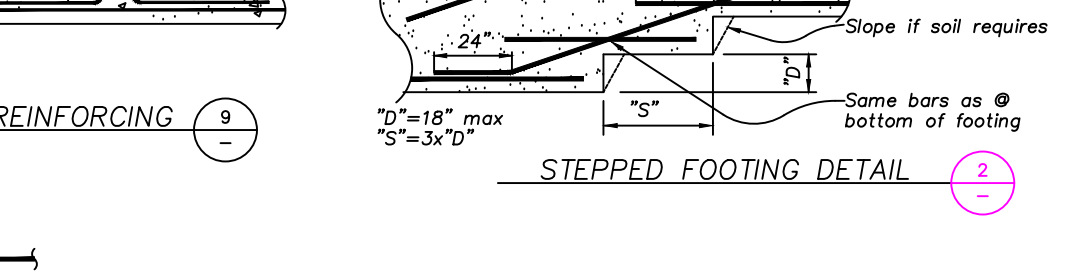
DOUBLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



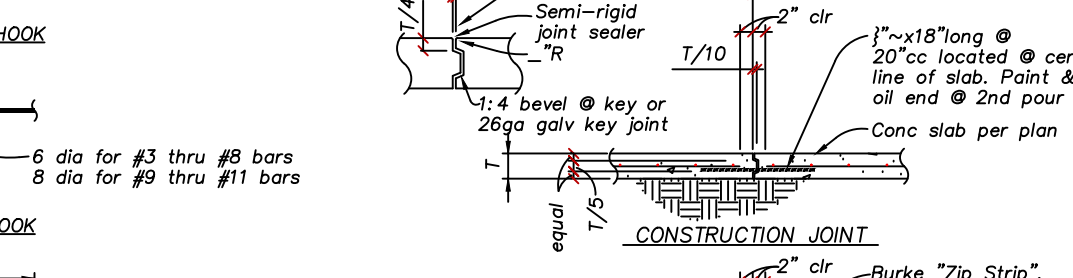
STEPPED FOOTING DETAIL

Notes:
 1. All footings shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



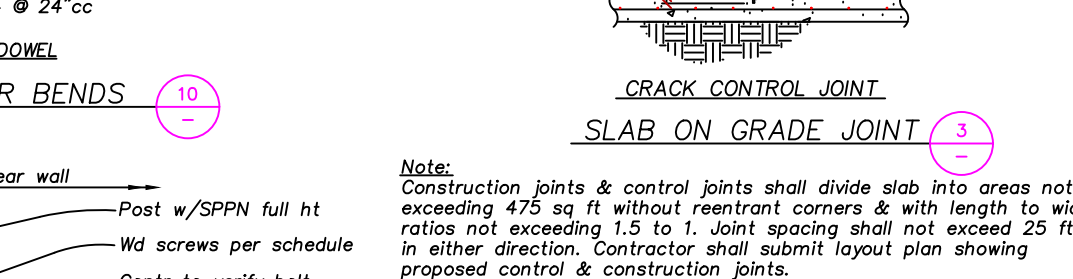
SLAB DOWEL

Notes:
 1. All slab dowels shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



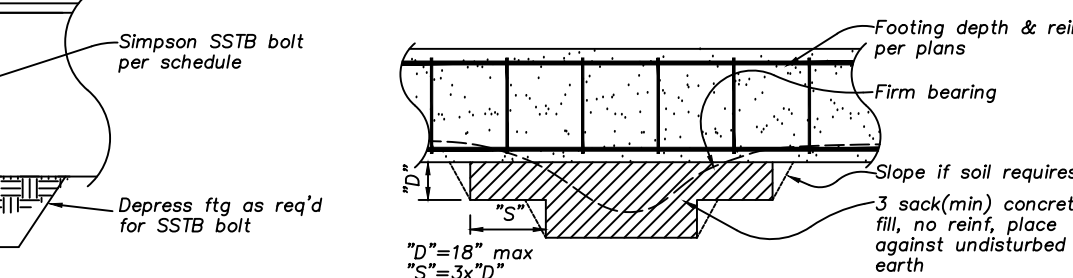
TYPICAL REBAR BENDS

Notes:
 1. All rebar bends shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



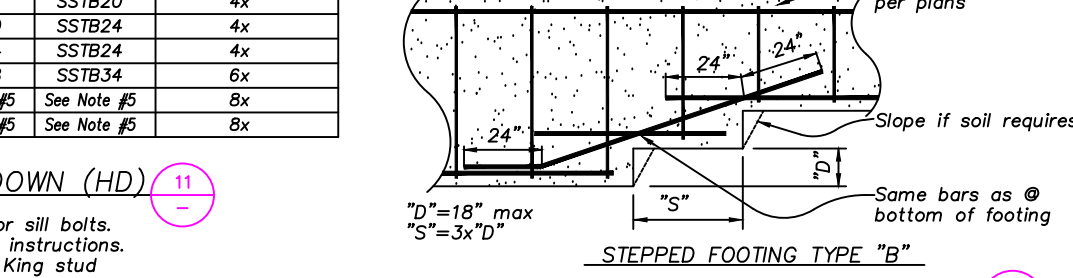
SLAB ON GRADE JOINT

Notes:
 1. All slab on grade joints shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



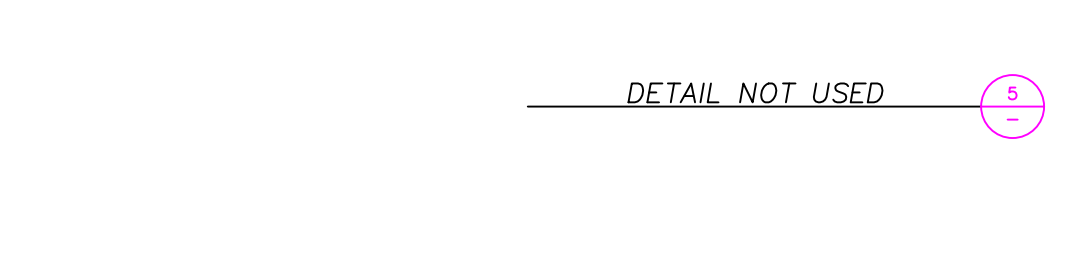
STEPPED FOOTING TYPE "A"

Notes:
 1. All stepped footing type 'A' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



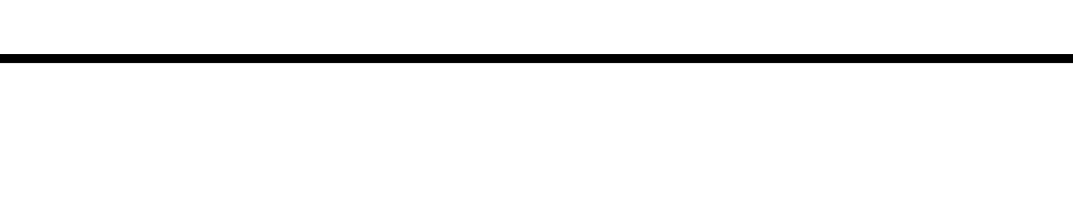
STEPPED FOOTING TYPE "B"

Notes:
 1. All stepped footing type 'B' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



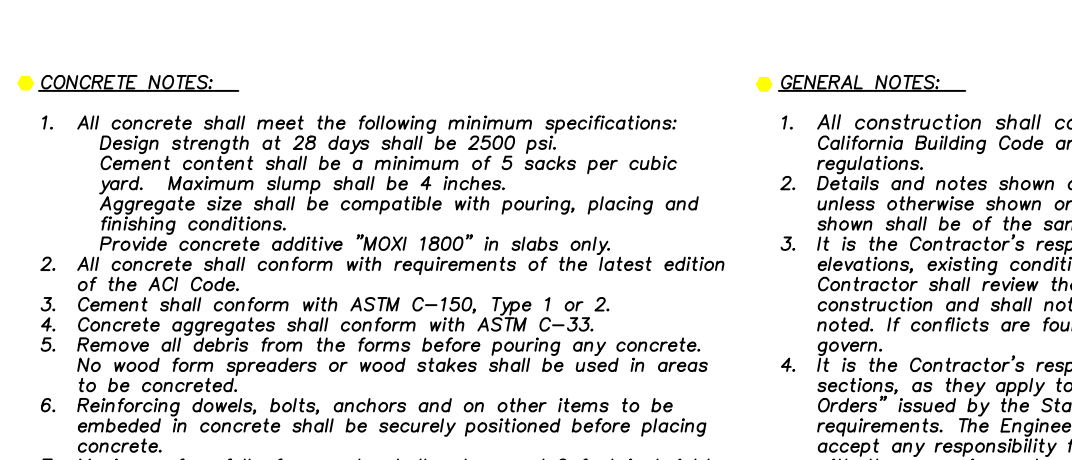
DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



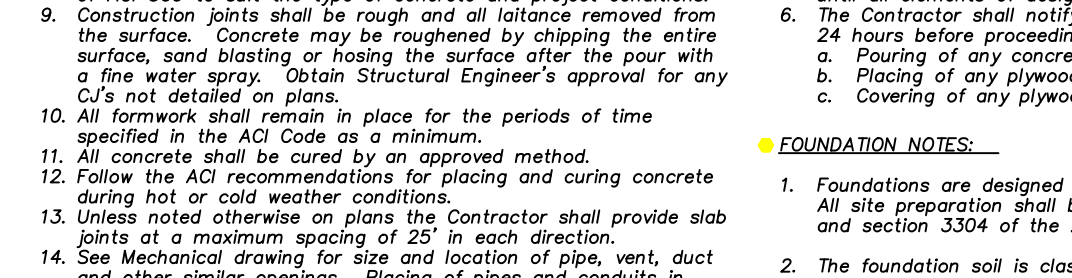
DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



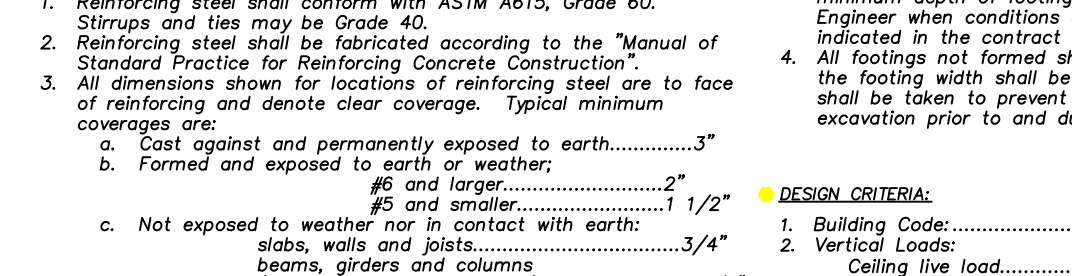
PIPE THRU FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



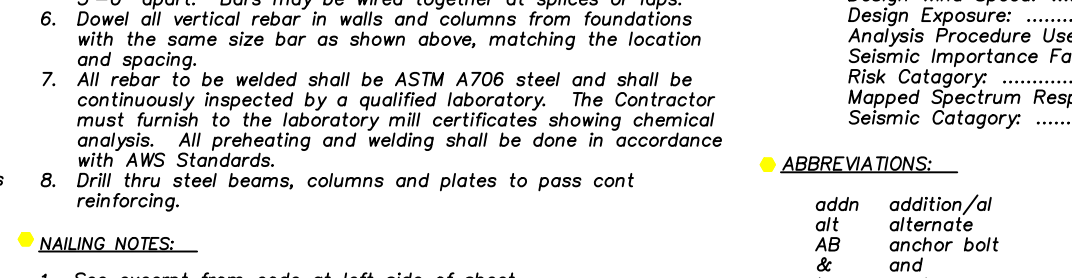
PIPE BELOW FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



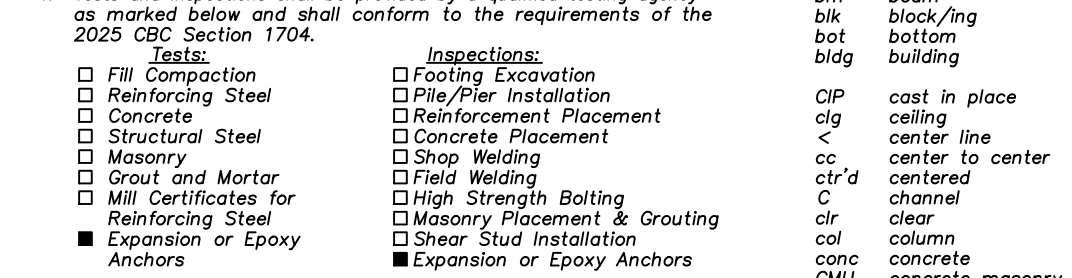
SINGLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



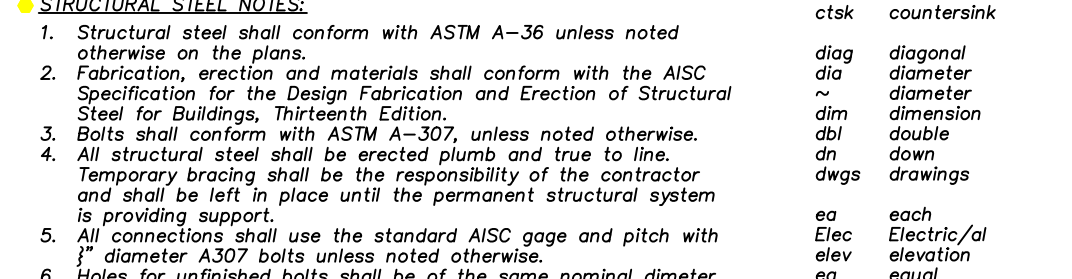
DOUBLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



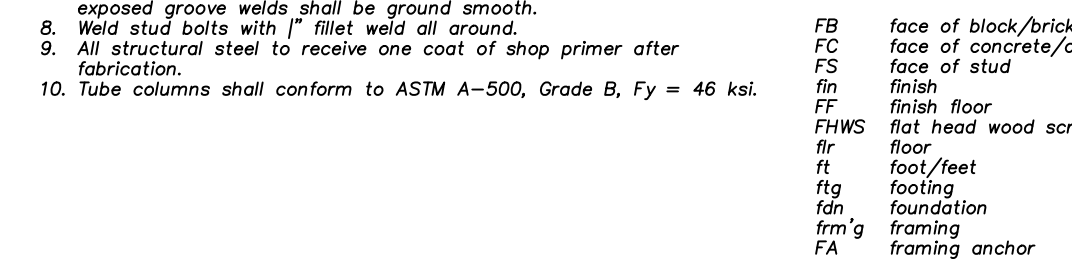
STEPPED FOOTING DETAIL

Notes:
 1. All footings shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



SLAB DOWEL

Notes:
 1. All slab dowels shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



TYPICAL REBAR BENDS

Notes:
 1. All rebar bends shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



SLAB ON GRADE JOINT

Notes:
 1. All slab on grade joints shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



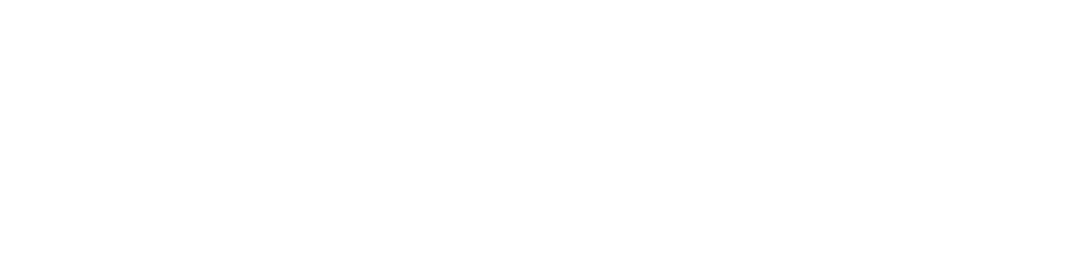
STEPPED FOOTING TYPE "A"

Notes:
 1. All stepped footing type 'A' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



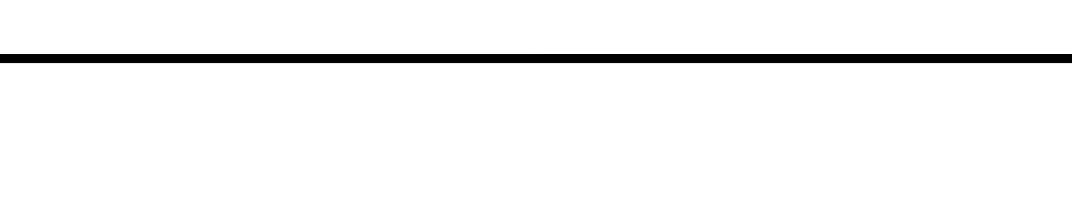
STEPPED FOOTING TYPE "B"

Notes:
 1. All stepped footing type 'B' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



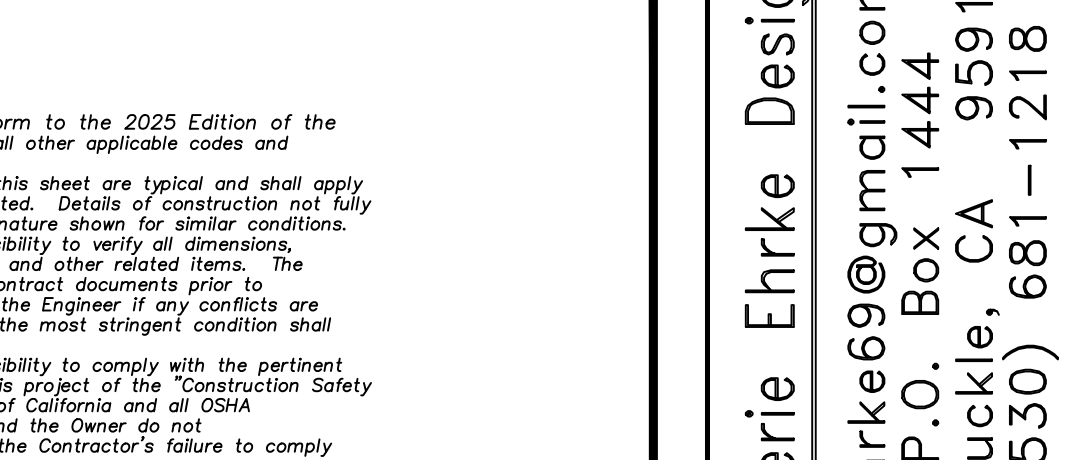
DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



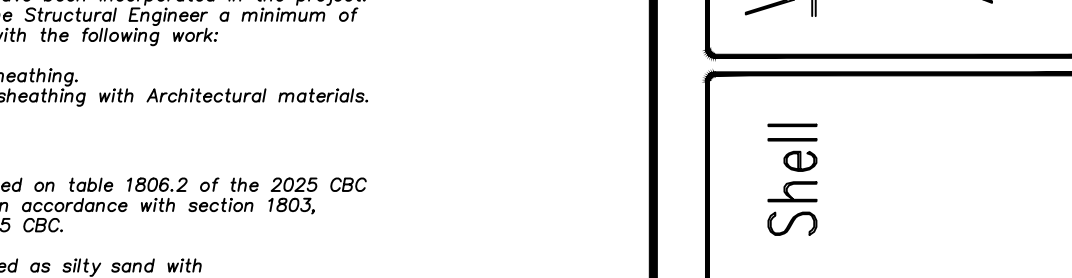
DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



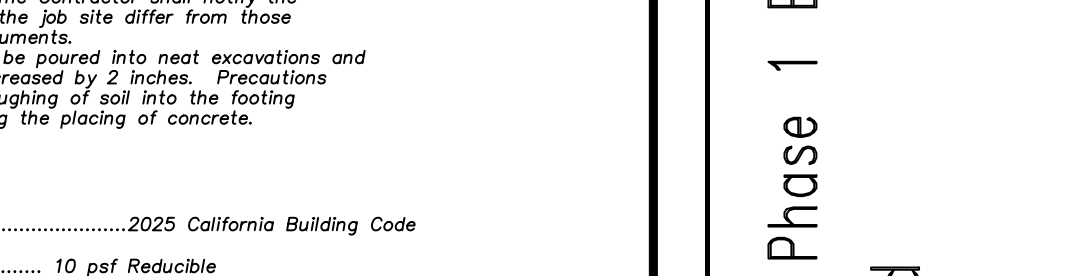
PIPE THRU FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



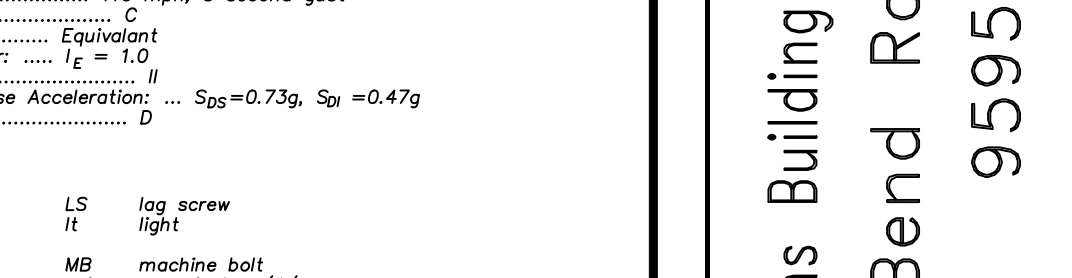
PIPE BELOW FOOTING

Notes:
 1. All pipes shall be 4" or larger.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



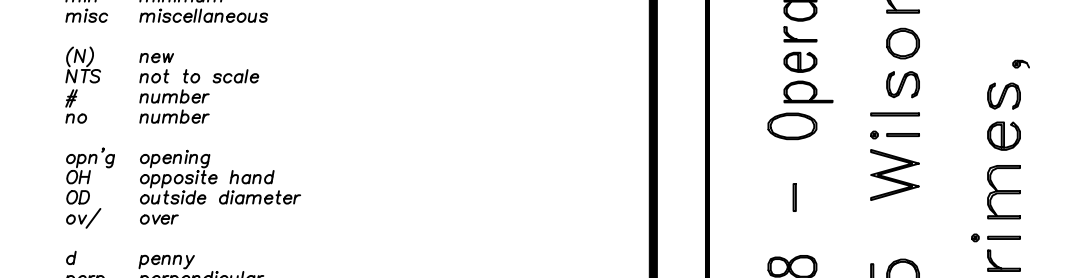
SINGLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



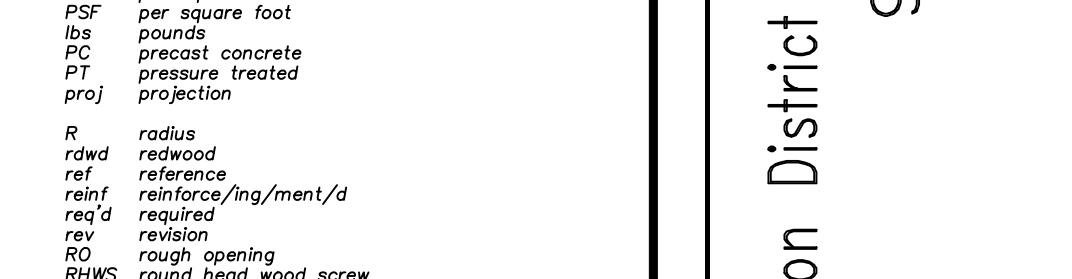
DOUBLE CURTAIN REINFORCING

Notes:
 1. All reinforcing shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



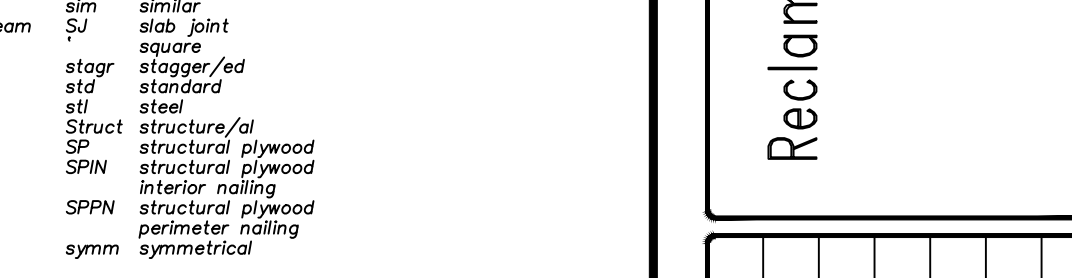
STEPPED FOOTING DETAIL

Notes:
 1. All footings shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



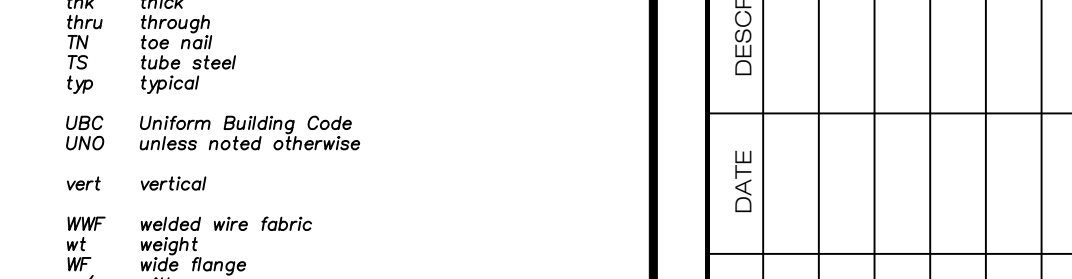
SLAB DOWEL

Notes:
 1. All slab dowels shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



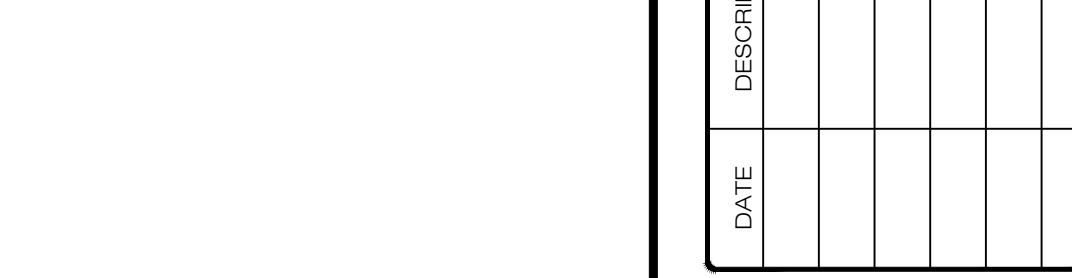
TYPICAL REBAR BENDS

Notes:
 1. All rebar bends shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



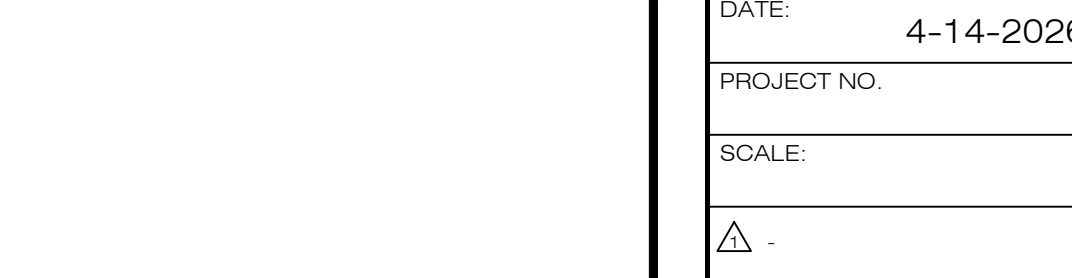
SLAB ON GRADE JOINT

Notes:
 1. All slab on grade joints shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



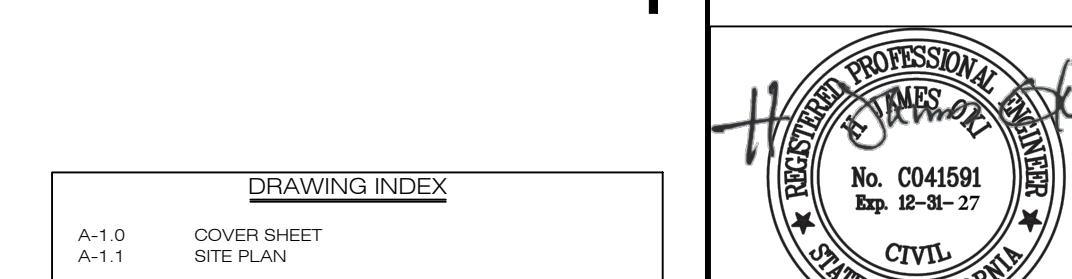
STEPPED FOOTING TYPE "A"

Notes:
 1. All stepped footing type 'A' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



STEPPED FOOTING TYPE "B"

Notes:
 1. All stepped footing type 'B' shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.



DETAIL NOT USED

Notes:
 1. All details not used shall be as shown on plans.
 2. All sheathing shall be CDX, 5 ply min. Panel Index 32/16 @ Roof & Floor.

CARPENTRY NOTES:

- All structural wood shall conform with the latest edition of the following specifications:
 West Coast Lumbermen Association Grading Rules #16, Redwood, California Redwood Association Grading Rules, Standard Specification of Douglas Fir Larch, Southern Pine, and Softwood Plywood, Standard Specification of Structural Lumber - ANSI/APA PRG-137, Structural Composite Lumber - ANSI/APA PRG-137, Parallam LVL - Fb = 2800 psi, 2.0 E, Parallam PSL - Fb = 2800 psi, 2.2 E
- All lumber shall be Douglas Fir Larch with a moisture content of 19% or less at the time of installation. Minimum grade shall be Douglas Fir No. 1 except 2x4 & 2x6 wall studs, plates & joists may be Douglas Fir No. 2. Glued Laminated Members - Combination #24F-V4 or 24F-V8 at continuous or discontinuous spans.
- Structural Plywood - APA C-D Exterior Grade Plywood Rules
- Bearing and shear walls shall show double top plates, lapped at wall and partition intersections with 3-1/2" nails. Splice upper and lower plates as in detail on this sheet. Top or bottom plates when bored for pipes and conduits shall be spaced with Simpson ST 6236 straps on one side and consults shall be spaced with Simpson ST 6236 straps on each side of the plates. Bored holes shall be centered along the width of plates. Notching plates more than 1/3 of the width is not allowed. Notches in plates shall not be longer than the plate width and shall have a clear distance between any adjacent hole or notch of at least twice the plate width. Sill plates shall be placed in a bed of gravel when required for full bearing on foundation.
- Provide solid blocking between joists or rafters at all supports, and at supports parallel to the framing provide blocking over support of the same spacing as the framing.
- Provide cross bracing or full depth blocking for all roof rafters or floor joists, at 8 feet on center maximum and at not more than 10 feet from supports. Cross bracing shall consist of 2x4 with 2-8d toe nails at each end or metal bridging installed with 2-8d nails at each end.
- Joists and rafters to partitions shall be doubled and stich nailed together.
- Provide blocking in all walls at the mid height of studs or as spaced that the unbraced length of studs does not exceed 10 feet. Provide blocking in walls at ceiling lines.
- Provide solid blocking between any posts of floor framing in multi-story construction.
- All wood framing members shall either bear on plates, beams, posts or be supported in a metal connector.
- All wood framing members shall be Simpson Strong-Tie products as specified in their latest catalog or as approved equal. Install all connectors per manufacturers requirements, UNO.
- Holes for bolts in wood shall be bored with bit of the same nominal diameter as the bolt plus 1/16th of an inch. Holes for lag screws shall be bored at no more than 75% of the diameter at the root of the threads.
- All bolts, expansion anchors and lag screws shall be provided with metal washers under the heads and nuts which bear on wood. Lag screws and wood screws shall be screwed and not driven into place. Bolts and lag screws shall be tightened on installation and retightened before closing in or completion of the job.
- An A.I.T.C. Certificate of Compliance for glued laminated wood members shall be given to the building inspector prior to installation.

CONCRETE NOTES:

- All concrete shall meet the following minimum specifications:
 Design strength at 28 days shall be 2500 psi.
 Cement content shall be a minimum of 5 sacks per cubic yard.
 Maximum slump shall be 4 inches.
 Aggregate size shall be compatible with pouring, placing and consolidation conditions.
- Use concrete additive "MOM 1800" in slabs only.
- All concrete shall conform with requirements of the latest edition of the ACI Code.
- Concrete shall conform with ASTM C-150, Type 1 or 2.
- Concrete aggregates shall conform with ASTM C-33.
- Reinforcing steel shall be furnished before pouring any concrete. No wood form spreaders or wood stakes shall be used in areas to be concreted.
- Reinforcing steel, bolts, anchors and other items to be embedded in concrete shall be securely positioned before placing concrete. Concrete may be roughened by chipping the entire surface, sand blasting or hosing the surface after the pour with a fine water spray. Obtain Structural Engineer's approval for any C.F.'s not detailed on plans.
- All formwork shall remain in place for the periods of time specified in the ACI Code as a minimum.
- All concrete shall be cured by an approved method.
- Follow the ACI recommendations for placing and curing concrete during hot or cold weather conditions.
- Consolidate concrete by mechanical vibration supplemented by hand rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with the recommendations of ACI 309 to suit the type of concrete and project conditions.
- Construction joints shall be rough and all surface removed from the surface. Concrete may be roughened by chipping the entire surface, sand blasting or hosing the surface after the pour with a fine water spray. Obtain Structural Engineer's approval for any C.F.'s not detailed on plans.
- Reinforcing steel shall remain in place for the periods of time specified in the ACI Code as a minimum.
- All concrete shall be cured by an approved method.
- Follow the ACI recommendations for placing and curing concrete during hot or cold weather conditions.
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- Construction joints shall be rough and all surface removed from the surface. Concrete may be roughened by chipping the entire surface, sand blasting or hosing the surface after the pour with a fine water spray. Obtain Structural Engineer's approval for any

TITLE 24 CERTIFICATE SUMMARY

DISTRICT 108 OPERATIONS BUILDING @ 975 Wilson Bend Rd

CERTIFICATE OF COMPLIANCE – NRCC-ENV-E: NON-RESIDENTIAL NEW CONSTRUCTION

- **ANALYSIS SCOPE:** Prescriptive Requirements for Conditioned Metal Building Shell in Climate Zone 11.
- **FUEL SOURCES:** TBD @ Later Date
- **CONDITIONED FLOOR AREA:** Occupancy B, Office Use: 4200
- **UNCONDITIONED FLOOR AREA:** Shop: 1800
- **PV-SYSTEM:** TBD @ Later Date
- **MECHANICAL, ELECTRICAL & PLUMBING SYSTEMS:** TBD @ Later Date

SURFACE CONSTRUCTIONS:

- **METAL BUILDING ROOF: Refer to Section F, Page 3**
 - Option A: Insulated Metal Roof: Screw Down without Thermal Blocks
 - R13 Cavity insulation in between purlins
 - R22 Continuous insulation above purlins
 - Metal Roof Surface: Reflectance: 0.63 // Emittance 0.75
 - Option B: Insulated Metal Roof: Single Layer Draped & Thermal Blocks
 - R13 Cavity insulation in between purlins
 - R19 Continuous insulation above purlins
 - Metal Roof Surface: Reflectance: 0.46 (Trade-off allowed for better insulation system)
- **INTERIOR DEMISING WALLS: Refer to Section H, Page 5**
 - R13 in 2x4 metal or wood framing to unconditioned spaces (offices to shop)
- **EXTERIOR WALLS: Refer to Section H, Page 6**
 - Metal framed walls 3.5" depth or greater
 - R13 Cavity insulation in between purlins
 - R10 Continuous insulation over purlins
 - Any exterior finish allowed. Assumed metal building assembly with metal panels

- **INTERIOR DEMISING WALLS: Refer to Section H, Page 5**
 - R13 in 2x4 metal or wood framing to unconditioned spaces (offices to shop)
- **FLOORS:** Slab on grade. No insulation requirements in this Climate Zone.
- **WINDOWS & GLAZED DOORS: Refer to Section K, Page 9**
 - Exterior Operable Windows
 - U-factor 0.46 or less
 - (R)SHGC 0.22 or less
 - VT (min) 0.32 or more
 - Exterior Glazed Doors
 - U-factor 0.41 or less
 - (R)SHGC 0.26 or less
 - VT (min) 0.46 or more
- **SKYLIGHTS:** None.
- **OPAQUE EXTERIOR DOORS:** None included in conditioned spaces
- **PROJECT NOTES:** TBD – Metal Building Package. Consider Options A & B for Roof Assembly

Incorporate these details into the plans

Share this summary with the project team