

VENTURA PORT DISTRICT

VENTURA, CALIFORNIA

SPECIFICATIONS

FOR

VENTURA HARBOR VILLAGE

**ADA COMPLIANT RESTROOM REMODEL/TRASH
ENCLOSURE IMPROVEMENTS**

1591 SPINNAKER

February 2019

VENTURA PORT DISTRICT
VENTURA HARBOR VILLAGE

ADA COMPLIANT RESTROOM REMODEL/TRASH ENCLOSURE IMPROVEMENTS

1591 SPINNAKER

DIVISION - 0 - CONTRACT DOCUMENTS

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**VENTURA PORT DISTRICT
VENTURA, CALIFORNIA**

NOTICE INVITING BIDS

**VENTURA HARBOR VILLAGE
ADA COMPLIANT RESTROOM REMODEL/TRASH ENCLOSURE IMPROVEMENTS
1591 SPINNAKER**

1 NOTICE IS HEREBY GIVEN that sealed bids will be received by the Ventura Port District, Ventura, California for furnishing all plant, labor, services, materials, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefore, as provided in Contract Documents described in Section 8 below, for Ventura Harbor Village ADA Compliant Restroom Remodel/Trash Enclosure Improvements in the Ventura Harbor Village, with all appurtenances thereto, in strict accordance with the specifications on file at the Office of the General Manager, Ventura Port District, 1603 Anchors Way Drive, Ventura, Ventura County, California.

2 DATE OF OPENING BIDS - Bids must be filed with the Ventura Port District at the office of the Ventura Port District, 1603 Anchors Way, Ventura, California, 93001 no later than Thursday, March 14, 11:00AM., at which time and place the bids will be publicly opened and read aloud. Bids shall be submitted in sealed envelopes marked on the outside, "**Ventura Harbor Village ADA Compliant Restroom Remodel/Trash Enclosure Improvements**"

3 LOCATION OF THE WORK - The work to be constructed hereunder is located at the Ventura Harbor Village, at 1591 Spinnaker Drive, approximately one-half mile north of the Santa Clara River and westerly of Harbor Boulevard in the City of San Buenaventura.

4 DESCRIPTION OF WORK - The work consists of:

1. The upgrade of the men's and women's public restrooms to provide for handicap accessibility consistent with the current Building Code.
2. Modification to the existing trash enclosure to enhance the handicap accessibility and to provide a weather resistant roof covering consistent with current environmental requirements.

5 MANDATORY PRE-BID CONFERENCE. A mandatory pre-bid conference will be conducted at the site at 10:00AM on Wednesday, February 27, 2019. The meeting location will be in the parking lot between 1591 and 1691 Spinnaker. At this time bidders may tour the facilities. None of the information transmitted in this meeting will be construed in any way to modify the plans and specifications. Any modification will be forwarded to all plan holders as an addendum.

6 AWARD OF CONTRACT. Bidder understands, acknowledges, and agrees that bids for the work described herein are for one (1), or two (2), or all three (3) of the buildings identified in Section 4, above, as the Owner determines in its sole and absolute discretion. Bidder further understands, acknowledges, and agrees that it must submit bids on all seven (7) bid items listed on the Bid Sheet attached to the Bid in order to qualify. Bidder understands that

Owner will award only one (1) of the seven (7) bid items, and such bid item shall be awarded to only one (1) lowest responsible bidder as selected by the Owner in its sole and absolute discretion. The Owner reserves the right, after opening bids, to reject any or all bids, or to make award to one (1) lowest responsible bidder on any of the bid items set forth on the Bid Sheet attached to the Bid and reject all other bids on any of said bid items, in the manner set forth under the California Uniform Public Construction Cost Accounting Act pursuant to Public Contract Code Section 22000 et seq. Bids will be compared on the basis of the District's Engineer's estimate of the quantities of the several items of work as shown on the Bid Sheet(s). A good faith determination by the Owner as to whether a bid is responsive or whether a bidder is responsible shall be final, conclusive and binding, and shall not be the basis of a claim for lost profits or damages of any kind whatsoever by a bidder to whom the contract is not awarded. The Owner will award a contract or reject all bids within 90 days of the bid opening and no bid may be withdrawn during that period. The Owner reserves the right to waive or seek correction of immaterial errors in a bid, in Owner's sole discretion. The Owner's determination that an error is immaterial shall be final, conclusive and binding on all bidders.

7 CERTIFIED CHECK AND BONDS. Each bid shall be accompanied by cash, a certified cashier's check, or by a corporate surety bond on the form furnished by the District, as a guaranty that the bidder will, if an award is made to bidder in accordance with the terms of bidder's bid, promptly secure worker's compensation insurance and liability insurance, execute a contract in the required form, and furnish satisfactory bonds for the faithful performance of the contract and for the payment of claims of materialmen and laborers thereunder. Said cash, check, or surety bond shall be in an amount not less than 10 percent of the total highest amount of any bid item set forth on the Bid Sheet (see illustrations provided on page B-1 of Bid). Faithful Performance Bonds and Payment Bonds shall each be for not less than 100 percent of the amount set forth by the Contractor on Contractor's Bid Sheet. The Owner reserves the right to reject any bond if, in the opinion of the Owner's Legal Representative, the Surety's acknowledgement is not in the form included in the contract documents or in another substantially equivalent form as prescribed by law. The bid security of unsuccessful bidders shall be returned to such bidders within sixty (60) days of the time the award of contract is made.

8 PREVAILING RATES OF WAGES. In accordance with the provisions of the California Labor Code, the Director of the Department of Industrial Relations of the State of California has ascertained and determined the general prevailing rates of wages for general, holiday and overtime work in the locality in which the work is to be performed. These wages are published and available for inspection at the District's office. It shall be mandatory upon the contractor to whom the contract is awarded and upon any subcontractor under the contractor to pay not less than the prevailing specified rates to all workers employed by them in the execution of the contract. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Job site notices required by Labor Code Section 1771.4 shall be posted. Contractors and subcontractors failing to comply with the prevailing wage requirement are subject to debarment by the Labor Commissioner, as provided in Labor Code Section 1771.1. Debarred contractors are declared ineligible to perform work on any public works project, either as the prime contractor or a subcontractor.

9 CONTRACT DOCUMENTS. The contract documents shall consist of this Notice Inviting Bids, the Instructions to Bidders, the accepted Bid, the Bid Sheet, the Contractor's Licensing Statement, the List of Subcontractors, the Bid Security Form or Bid Bond, the Agreement, the Faithful Performance Bond, the Payment Bond, the Non-Collusion Affidavit, the General Conditions of the Contract, the Special Conditions of the Contract, and the Detail Specifications and Drawings, all of which are on file in the office of the General Manager, Ventura Port District, Ventura, California.

Copies of the drawings, specifications and bidding documents may be obtained for purchase on or about February 21, 2019 from the CyberCopy Public Plan Room Access internet site at <https://www.cybercopyplanroom.com/jobs/public>. Bidders shall be solely responsible for making any and all arrangements necessary directly with CyberCopy, 3020 Sherwin Ave., Ventura, CA 93003, to order, purchase, and have delivered any and all paper and/or digital copies of the drawings, specifications, and bidding documents. Questions about how to obtain and procure the documents may be directed to Jim McAfee of CyberCopyUSA at (805) 642-3292 or dfs@cybercopyusa.com. Collect calls will not be accepted.

10 SECURITY FOR PERFORMANCE. Pursuant to California Public Contract Code Section 22300, securities may be substituted for any moneys withheld by the Owner to ensure performance under the contract. If such securities are desired to be utilized by any bidder, they shall be utilized in accordance with the provisions of Public Contract Code Section 22300 and, as required by those provisions, the bidder shall bear any expenses incurred due to the use of such securities.

11 BIDDER OBLIGATIONS. Each bidder shall carefully examine the drawings, read the specifications and the forms of the contract documents, and shall visit the site of the proposed work to fully inform bidder as to all existing conditions and limitations that may affect the execution of work under the contract, and shall include in the prices bid the cost of all incidentals and appurtenances. The failure or omission of any bidder to receive or examine any form, instrument, addendum, or other document, or bidder's failure to visit and become acquainted with the conditions at the construction site, shall in no respect relieve bidder from any obligation imposed by bidder's bid or by the contract. The submittal of a bid shall be taken as prima facie evidence of compliance with all instructions contained herein.

12 CLASSIFICATION OF CONTRACTORS' LICENSES; REGISTRATION WITH DEPARTMENT OF INDUSTRIAL RELATIONS. Contractors submitting a proposal shall possess, at the time the contract is awarded, the following class of contractor's license(s) issued pursuant to Division 3, Chapter 9, of the Business and Professions Code of the State of California Classification B – General Building Contractor. The Contractor shall certify that the license(s) specified are the classification(s) required to perform the Work contemplated under the Contract Documents. Contractor shall provide Owner with their Contractor's license number and expiration date as provided in the Proposal, and shall present satisfactory evidence that they are licensed in good standing. Contractors submitting proposals shall be registered with the Department of Industrial Relations, as provided in Labor Code Section 1725.5, and shall include evidence that they are so registered with their proposal.

INSTRUCTIONS TO BIDDERS

1. **FORM OF BID AND SIGNATURE.** The Bid shall be submitted on the form attached hereto and shall be enclosed in a sealed envelope marked and addressed as hereinafter directed.

(a) The bidder shall state the unit prices or the specific sums, as the case may be, for which bidder proposes to supply the labor, materials, supplies, or equipment, and perform the work required by the specifications. If the unit price and the total amount named by a bidder for any item are not in agreement, the unit price alone will be considered as representing the bidder's intention and the totals will be corrected to conform.

(b) If the bid is made by an individual, it shall be signed and his or her full name and address shall be given; if it is made by a firm, it shall be signed with the partnership name by a member of the firm, who shall also sign his or her own name, and the name and address of each member shall be given; and if it is made by a corporation, the name of the corporation shall be signed by its duly authorized officer or officers attested by the corporate seal, and the names and titles of all officers of the corporation shall be given.

(c) A bid may be modified by electronic communication (via facsimile or e-mail) at any time prior to the scheduled closing time for receipt of bids provided that such electronic communication is received by the Owner prior to said closing time; and provided further that the Owner receives a full written confirmation of the electronic communication by regular mail, such confirmation having been mailed prior to said closing time. A bid may also be modified by written document received by the Owner prior to the closing time of the bids, provided, it is the responsibility of the bidder to ensure receipt of such document by the Owner prior to said closing time. Any electronic or written modification so received will be read aloud at the time and place fixed for opening and reading of bids.

2. **INTERPRETATION OF DRAWINGS AND SPECIFICATIONS.** If any person contemplating the submittal of a bid for the proposed contract is in doubt as to the true meaning of any requirement of drawings or specifications or finds any discrepancies in, or omissions from, the drawings or specifications, he or she may submit to the Architect at the address given in the Special Conditions of the Contract, a written request for an interpretation or correction thereof. The written request must be received at least five (5) calendar days prior to the date fixed for opening of bids. The person making the request will be responsible for its prompt delivery. Interpretations or corrections will be made only by addenda to specifications or by dated revisions of drawings with a copy of each addition or change.

Questions concerning the contract form, bonding requirements, or similar documents shall be directed to the Owner's Legal Representative, as defined and identified in the General Conditions.

3. **PRODUCT / SYSTEM SUBSTITUTIONS**

(a) Where the Bid Documents stipulate a particular Product, substitutions will be considered by the Architect if submitted and received for consideration not less than 10 business days prior to the scheduled date for receipt of Bids.

(b) The submission of the request for substitution shall provide sufficient information to determine acceptability of such products.

(c) When a request to substitute a Product is made, the Architect may or may not approve the requested substitution. If approved, the Architect will issue an Addendum to General Contractor Bidders.

(d) In submission of substitutions for products specified, Bidders shall include in their Bid, any changes required in the Work and changes to Contract Time and Contract Sum to accommodate such substitutions. A later claim by the Bidder for an addition to the Contract Time or Contract Sum because of changes in Work necessitated by use of substitutions shall not be considered.

4. PREPARATION OF THE BID. The following guidelines shall govern the preparation of Bids:

(a) Blank spaces in the Bid shall be properly filled. The wording of the proposal must not be changed and no additions shall be made to the items mentioned therein. Unauthorized conditions, limitations, or provisos attached to a proposal will render it informal and may cause its rejection. Alterations by erasure or interlineation must be noted and initiated by the bidder. Alternative Bids will not be considered unless specifically provided for in the Bidding Sheet(s).

(b) A bid may be withdrawn before the hour fixed for opening bids by submitting a written request to the Owner, and such bid will be returned or mailed to bidder unopened. No proposal may be withdrawn after the hour fixed for opening bids without rendering the accompanying certified or cashier's check or bidder's bond subject to retention by Owner as liquidated damages, and not as a penalty. Unless otherwise stated, all bids shall be valid for a period of Ninety (90) days after the opening date, notwithstanding any award of contract to another bidder.

(c) No bid received after the time named or at any place other than the place stated in the Notice Inviting Bids will be considered. All bids will be opened and declared publicly. Bidders, their representatives, and others interested are invited to be present at the opening. The Owner reserves the right to waive any informality in any bid, to reject any or all bids, to reject one part of a bid and accept the other, except to the extent that bids are qualified by specific limitations, and to make award to the lowest responsible bidder as the interest of the Owner may require. Where bonds are required, the bid shall name the surety or sureties which have agreed to furnish said bonds.

5. REGISTRATION OF CONTRACTORS. Before submitting bids, Contractors shall be licensed in accordance with the provisions of Division 3, Chapter 9, of the Business and Professions Code of the State of California, and shall provide proof of current licensing status as required by the Bid documents. The Contractor shall maintain the required license in good standing throughout the course of the Work. Contractors shall also be registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

6. LIST OF SUB-CONTRACTORS FILED WITH BID. In accordance with the provisions of Sections 4100 through 4114, inclusive of the Public Contract Code of the State of California, each bid submitted must state the name and location of place of business of each proposed subcontractor who will perform work or labor, or render service to the principal Contractor in an amount greater than one-half of one percent (0.5%) of the principal Contractor's bid, and shall

state the portion of the work which will be done by each such subcontractor. Each subcontractor shall be registered pursuant to Labor Code Section 1725.5, and shall provide satisfactory evidence that they are currently registered and qualified to perform public work. Any additional information required by the Owner regarding listed subcontractors may be provided by the bidder up to 24 hours after the hour set for opening bids. The Contractor shall not enter into any subcontract with a subcontractor which has been debarred by the Labor Commissioner pursuant to sections 1777.1 and 1777.7 of the Labor Code.

7. BIDDERS INTERESTED IN MORE THAN ONE BID. No person, firm, or corporation shall make, file, or be interested in more than one bid for the same work unless alternative bids are specifically requested or multiple bid items are contained in the same bid. A person, firm, or corporation who has submitted a subproposal to a bidder, or who has quoted prices of materials to a bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other bidders.

8. LOWEST RESPONSIBLE BIDDER. In selecting the lowest responsible bidder, consideration will be given to the general competency of the bidder for the performance of the work covered by the bid. To receive favorable consideration, a bidder may be required to present evidence that bidder has successfully performed similar work of comparable magnitude or submit other evidence satisfactory to the Owner that bidder or bidder's associates are personally competent to manage the proposed undertaking and to carry it forward to a successful conclusion. Professional integrity and honesty shall be essential requirements. The Owner shall have absolute discretion as to the evaluation of past work performance of any bidder, and its decision in regards thereto shall be deemed correct and shall be conclusive and binding.

9. BID SECURITY. Each bid submitted shall include with it, cash, an unconditional certified or cashier's check, or a bidder's bond with a responsible corporate surety, on the form attached to the Bid proposal, subject to the provisions of Section 12(c), below. Unless otherwise stated in the Special Conditions, said bid security or bidder's bond shall be in a sum not less than 10 percent of the highest amount of any bid item submitted by bidder (see illustrations provided on page B-1 of Bid), and shall be made payable to the Owner as a guaranty that the bidder will, if an award is made to bidder in accordance with the terms of bidder's bid, promptly execute a contract in the required form, secure payment of worker's compensation, if required, and furnish satisfactory Performance and Payment Bonds and proof of insurance coverage.

10. LIQUIDATED DAMAGES. The parties acknowledge and agree that the Owner would be damaged by the resulting delay should a bidder to whom an award is made fail or refuse to execute the contract, secure the payment of workers compensation, if required, or furnish the required bonds, all within the time stated in paragraph 11, below, or should said bidder otherwise fail to conform with any of the stipulated requirements in connection with the contract. The amount of such damages are difficult or impracticable to ascertain with certainty. The parties therefore agree that, in the event of said bidder's failure to meet the time requirements specified in these Instructions to Bidders, the money represented by the bid bond or check shall become and remain the property of the Owner, not as a penalty, but as liquidated damages.

11. LOCAL CONDITIONS. Bidders shall make personal observations and examinations of the conditions of Work, and abide by the following:

(a) Bidders shall read the specifications, examine the drawings, and make their own estimates of the existing facilities and the difficulties which will attend the execution of the work

called for by the proposed contract, including local conditions, uncertainty of weather, and all other contingencies. Bidders shall make such investigation and review such records and drawings as they deem necessary to satisfy themselves that they are familiar with the condition and location of existing underground facilities and other potential sources of interference with the work contemplated under the Contract Documents. By providing access to drawings or other records in its possession, the Owner makes no representations or guarantees as to the accuracy of such drawings or records.

(b) Bidders shall satisfy themselves by personal examination of the location of the proposed work, and by such other means as they may choose as to actual conditions and requirements and as to the accuracy of the quantities stated in the Bidding Sheet(s). Information derived from the maps, plans, specifications, profiles, or drawings, or from the Owner's Engineer, or the Engineer's assistants, shall not relieve the bidder of this responsibility, and the interpretation of the data or other preliminary investigations is not guaranteed by the Owner.

(c) The quantities of work or material stated in the unit price items of the Bidding Sheet(s) are supplied only to give an indication of the general scope of the work; the Owner does not expressly or by implication agree that the actual amount of work or material will correspond therewith, but reserves the right to increase or decrease the amount of any unit-price item of the work by an amount up to and including 25 percent of any bid item(s), or to omit portions of such work as may be deemed necessary or expedient by the Engineer without a change in the unit price.

(d) Bidders shall not at any time after the submission of a bid make or have any claim for damages or anticipated profits or loss of profit or otherwise because of any difference between the quantities of work actually done and material furnished and those stated in said unit-price items of the Bidding Sheet(s).

12. EXECUTION OF CONTRACT. A bidder to whom award is made shall execute the form of Agreement provided in the Contract Documents, secure the payment of workmen's compensation, and furnish bonds as required herein, provide evidence of insurance, and provide a financial statement or other information requested by Owner pursuant to the Contract Documents, within ten (10) business days , or such additional time as may be allowed by the Owner, from the date the Owner mails notice to the bidder that their proposal has been accepted. Upon bidder's failure to meet this time requirement, in any respect, liquidated damages shall be payable as provided above, the award will be revoked, and, at the Owner's discretion, an award may be made to the bidder whose proposal is next most acceptable to the Owner.

A corporation to which an award is made may be required, before the contract is finally executed, to furnish evidence of its corporate existence, of its right to do business in California, and of the authority of the officer signing the contract and bonds for the corporation.

13. BONDS. Bidders shall abide by the following bonds provisions:

(a) Except as otherwise provided in the Notice Inviting Bids, a bidder to whom the contract is awarded shall, within the time mentioned in the preceding paragraph, furnish a bond with a responsible corporate surety or corporate sureties conditioned upon the faithful performance of the said bidder of all covenants and stipulations in the Contract Documents. Said bond, hereinafter referred to as the Faithful Performance Bond, shall be on the mandatory

form included as a part of these Contract Documents, and shall be in an amount that is not less than one hundred percent (100%) of the total amount payable under the Contract Documents.

(b) Within the time mentioned in paragraph 11, the bidder to whom the contract is awarded shall also furnish a Payment Bond, approved by the Owner, in accordance with the provisions of Civil Code Sections 8152-8154, inclusive, 8614, and Sections 9550-9566, inclusive. Said Payment Bond shall be in a sum not less than one hundred percent (100%) of the total amount payable under the Contract Documents. The form of Payment Bond set forth in these Contract Documents is a mandatory form.

(c) The surety or sureties on all bonds furnished must be satisfactory to the Owner. If during the continuance of the contract, any of the sureties in the sole discretion of the Owner are or become insufficient, the Owner may require additional sufficient sureties which the Contractor shall furnish to the satisfaction of the Owner within fifteen (15) days after written notice, and in default thereof the contract may be suspended and the work completed as provided in the General Conditions.

Bidders shall furnish such bonds at bidder's own cost and expense. The Owner reserves the right to reject any bond if, in the opinion of the Owner's Legal Representative, the surety's acknowledgment is not in the form included in the Contract Documents or in another form substantially as prescribed by law.

14. INSURANCE POLICIES AND BONDS. Attention is invited to the provisions of the Insurance Code of the State of California with reference to the writing of insurance policies and bonds covering risks located in this state, and the premiums and commissions thereon. A bidder to whom the contract is awarded shall furnish, at the time bidder's bond or bonds are submitted for approval, satisfactory evidence that the requirements of the Insurance Code have been observed.

15. LIABILITY INSURANCE. Bidder shall provide liability insurance as follows:

(a) A bidder to whom the Contract has been awarded shall furnish to the Owner a policy or certificate of protective liability insurance in which the Owner, the District, and the Engineer shall be named as additional insureds with the bidder. The policy shall insure: (i) the Owner, the District, the Engineer, and each of their directors, commissioners, officers, employees, representatives, agents, volunteers, and successors and assigns as additional named insureds; and (ii) the bidder, its employees and its subcontractors and each of their employees, and their heirs, agents, and employees while acting within the scope of their duties against all claims arising out of or in connection with the Work to be performed. The policy shall remain in full force and effect until the Work is accepted by the Owner. The bidder shall also provide such additional named insured endorsements [Insurance Services Office (ISO) Form Number CG 2010 or equivalent] as may be required by the Owner, in the Owner's sole discretion.

The Owner, the District, and the Engineer, and each of their directors, commissioners, officers, employees, representatives, agents, volunteers, and successors and assigns, are to be covered as insureds with respect to: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, occupied or used by the Contractor; and automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded the additional insureds.

(b) The above-referenced insurance policy (or policies) shall be furnished at the bidder's expense, in a form and with insurance companies authorized to do business and have an agent for service of process in California and have a "A-" policyholder's rating and a financial rating of at least Class VIII in accordance with the most recent A.M. Best's Insurance Guide or other comparable rating service, or as otherwise approved by the Owner. Such insurance, in addition to the multiple additional named insured endorsements set forth above, shall be commercial general liability insurance in the amounts set forth below, and shall contain additional endorsements as follows: (i) Providing blanket contractual liability coverage for the bidder's indemnification obligations to the Owner and others pursuant to the Contract Documents; (ii) Providing coverage for explosion, collapse, underground excavation and removal of lateral support; (iii) Providing that the insurance may not be canceled or reduced until thirty (30) days after the Owner and Owner's Engineer have actually received written notice of such cancellation or reduction; (iv) Providing that coverage 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; (v) Providing that any other insurance maintained by the Owner, the Engineer or any other named insured is excess insurance, and not contributing insurance with the insurance required herein; and (vi) Providing that the coverage afforded the additional insureds shall not be affected by any failure of the Contractor or any subcontractor to comply with reporting or other provisions of the policy or policies, including breaches of warranties. The amount of coverage shall be no less than the following:

(1) General bodily injury and property damage -- \$1,000,000 per occurrence, \$2,000,000 aggregate.

(2) Automobile bodily injury and property damage -- \$1,000,000 per occurrence, including owned, non-owned and hired autos, and providing coverage for loading and unloading.

The bidder shall, within the time specified in Paragraph 11 above, file with the Owner evidence of insurance from an insurer or insurers certifying to the coverage of all required insurance. Such evidence shall include original copies of the ISO CG 2010 (or insurer's equivalent) signed by the insurer's representative and certificate(s) of insurance (Accord Form 25 or equivalent) reflecting the existence of the required insurance. If required by the Owner, the bidder shall furnish a complete copy of the policy or policies, and all endorsements thereto. Commercial general liability insurance must include the Owner's and Contractor's Protective Coverage, Products - Completed Operations Coverage, Premises - Operations Coverage, and must provide for coverage of the Owner's facilities during the course of the Work. Notwithstanding the foregoing, bidder is not hereby required to provide insurance with respect to liability for damages resulting solely from error or omission in design which is not due to or contributed to by negligence or fault of the contractor, its subcontractors, agents, employees or officers.

16. ASSIGNMENT OF CONTRACT. No assignment by the Contractor of any contract to be entered into in accordance with the Notice Inviting Bids and these Instructions to Bidders, or any part thereof, or of funds to be received thereunder, will be recognized by the awarding authority unless such assignment has had the prior approval of the awarding authority and the Surety has had notice of such assignment in writing and has given written consent thereto.

17. NON-COLLUSION AFFIDAVIT. In accordance with the provisions of Public Contract Code Section 7106, each bidder shall, execute and submit with their bid a Non-Collusion Affidavit in the form included in the Bid documents. Additionally, the principal contractor shall

secure from each proposed subcontractor a Non-Collusion Affidavit in the form included with the Agreement section of the Contract Documents.

18. ADDRESS AND MARKING OF PROPOSAL. The envelope enclosing the proposal shall be sealed and addressed to: General Manager, Ventura Port District, and delivered to: Ventura Port District, c/o Rasmussen & Associates, 248 S. Mills Road, Ventura, California 93003. The envelope shall be plainly marked in the upper left-hand corner with the name and address of the bidder and shall bear the words "Bid for", followed by the title of the specification for the work and the date and hour of opening of bids. The certified or cashier's check or bidder's bond shall be enclosed in the same envelope with the bid.

19. COMPETENCY OF BIDDERS. Before a contract is awarded, the bidder shall furnish, if requested by the Owner, a complete statement of bidder's financial ability and experience in constructing public works facilities.

20. HEALTH AND SAFETY REGULATIONS. These construction documents and the construction activities are to be governed, at all times, by applicable provisions of Federal and State laws, which are hereby made a part of the contract. The bidder shall obtain copies, carefully read and strictly comply with the requirements, of such laws, including without limitation the following as most recently amended:

- (a) Williams-Steiger Occupational Safety & Health Act of 1970, Public Law 91-596;
 - 1. Part 1910 - Occupational Safety & Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
 - 2. Part 1918 - Safety & Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.
- (b) The State of California Industrial Safety Orders which include the Construction Safety Orders issued by the State of California Department of Industrial Relations, Division of Industrial Safety.

21. LIST OF PROJECTS. Contractors shall submit, along with their bid proposal an all-inclusive list of projects performed by the Contractor within the past thirty-six (36) month period. This list shall include the size of the project in dollars, the agency or client for whom the work was performed, and the name and title of the agency or client contact person. The list must include at least six (6) jobs similar in size and scope to that contemplated herein. Failure to submit a complete list or to have that list include at least six (6) jobs similar in size and scope to that contemplated herein, will render a proposal informal and will be cause for its rejection.

22. FINANCIAL STATEMENT. In the course of evaluating the capacity and competence of a bidder to perform the Work, the Owner may require any bidder to furnish a recent statement of bidder's financial condition or such other evidence of bidder's qualifications as may be required by the Owner. If a bidder fails to promptly furnish the information requested, it shall be considered sufficient grounds for rejection of such bidder's bid.

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BID

Bidders:

The undersigned bidder proposes to perform all work for which a contract may be awarded and to furnish all plant, labor, services, material, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary as provided in the Contract Documents and to do everything required therein for the reroofing of 1431, 1591, and/or 1691 Spinnaker as specifically set forth in documents entitled: **"Ventura Harbor Village ADA Compliant Restroom Remodel/Trash Enclosure Improvements"** together with appurtenances thereto, as set forth in the drawings and in the specifications and other contract documents: and the bidder further proposes and agrees that if this Bid is accepted, bidder will contract in the form and manner stipulated to perform all the work called for by the drawings, specifications and other contract documents and to complete all such work in direct conformity therewith within the time limits set forth therein and that bidder will accept as full payment therefor the prices set forth in the Bid Sheet(s) forming a part hereof.

(Check one)

- Cash
- Cashier's Check
- Certified Check
- Bid Bond

properly made payable to the Ventura Port District, hereinafter designated as the "Owner", sum of _____

[WRITTEN WORDS]

dollars, (\$ _____), which amount is not less than 10 percent of the total highest amount of any bid item submitted by bidder, and is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds if awarded the contract, and, in case of failure to do so within the time provided in the Instructions to Bidders, the cash or proceeds of said check or bond shall be payable to the Owner as liquidated damages pursuant to paragraph 9 of the Instructions to Bidders, and the liability of any surety thereunder to the Owner in said face amount shall be deemed established. [For purposes of illustration only, and not by way of limitation, if bidder submits a bid for Bid Item 1 in the amount of \$200,000, and each bid for Bid Items 2 through 7 are each for an amount less than \$200,000, bidder should submit its Bid Security in an amount of at least \$20,000 at the time of bid submission. If, for example, bidder submits a bid for Bid Item 5 in the amount of \$100,000, and each bid for all of the other bid items are each for an amount less than \$100,000, bidder should submit its Bid Security in an amount of at least \$10,000 at the time of bid submission.]

It is understood and agreed that:

1. The undersigned has carefully examined all the contract documents which will form a part of the contract; namely, Notice Inviting Bids, Instructions to Bidders, the accepted Bid, the Bid Sheet(s), the Contractor's Licensing Statement, the List of Subcontractors, the Bid Security Form or Bid Bond, the Agreement, the Faithful Performance Bond, the Payment Bond, the Non-Collusion Affidavit, the General Conditions of the Contract, the Special Conditions of the Contract, the Detail Specifications, and the drawings and all additions, deletions,

modifications, and appendices, and all addenda as prepared prior to the date of bid opening setting forth any modifications or interpretations of any of said documents.

2. The undersigned, by investigation at the site of the work and otherwise, is satisfied as to the nature and location of the work and is fully informed as to all conditions and matters which can in any way affect the work or the cost thereof.

3. The undersigned fully understands the scope of the words and has carefully checked all words and figures inserted in this bid and further understands that the Owner will in no way be responsible for any errors or omissions in the preparation of this Bid.

4. The undersigned will execute the Agreement and furnish the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Sundays and holidays) after receiving notice of acceptance of bidder's bid by the Owner; and further, that this bid may not be withdrawn for a period of ninety (90) days after the date set for the opening thereof, unless otherwise required by law. The Contractor shall be liable under the provisions of the Bid Security, or the Contractor and Contractor's surety shall be liable under the Bid Bond, as the case may be, for any bid withdrawn during said period.

5. The undersigned hereby certifies that this proposal is genuine and not sham or collusive or made in the interest or on behalf of any person not herein named and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure an advantage over any other bidder.

6. In conformance with current statutory requirements of section 1860, et seq., of the Labor Code of the State of California, the undersigned confirms the following as his certification:

I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

NOW: In compliance with the Notice Inviting Bids and all the provisions hereinbefore stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the entire work for the prices set forth in the attached Bid Sheet(s) upon which award of contract is made.

The undersigned bidder declares that bidder's license was properly issued to bidder, is current and valid, and is in a classification appropriate to the work to be undertaken. The undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed at _____, California.

Dated: _____, 20__

Bidder _____

By _____

Title _____

Bidder's post-office address:

(CORPORATE SEAL)

Telephone No.: _____

Facsimile No.: _____

Corporation organized under the laws of the State
of _____

Names and addresses of all
members of the firm or names
and titles of all officers
of the corporation;

Contractor's License No. _____

Surety or sureties:

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT IS FILED WITHIN THREE YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.

BID SHEET

Bidder understands, acknowledges, and agrees that it must submit bids on all of the following seven (7) bid items to qualify, but understands only one (1) of the seven (7) bid items below will be awarded and such bid item will be awarded to only one (1) lowest responsible bidder as selected by the Owner in its sole and absolute discretion. The awarding or rejection of bids by the Owner shall be further subject to Section 5 of the Notice Inviting Bids.

BID ITEM NO. 1

Furnish all labor, equipment, materials and incidentals necessary for **the ADA compliant remodel of the restroom facilities** and any additional related equipment and services for the Ventura Harbor Village ADA Compliant Restroom Remodel/Trash Enclosure Improvements project in accordance with the drawings and specifications prepared by the Project Architect, Rasmussen and Associates, Ventura, CA. for the lump sum price of

\$ _____

_____ dollars.

(in words)

BID ITEM NO. 2

Furnish all labor, equipment, materials and incidentals necessary for **the remodel of the trash enclosure** and any additional related equipment and services for the Ventura Harbor Village ADA Compliant Restroom Remodel /Trash Enclosure Improvements project in accordance with the drawings and specifications prepared by the Project Architect, Rasmussen and Associates, Ventura, CA. for the lump sum price of

\$ _____

_____ dollars.

(in words)

Note:

1. The prices "in words" shall match the numeric representation of all prices. Bidder shall not change the preprinted dollar amounts in the Proposal and Bid after submission. Any additions or deletions by the bidder will render the bid non-responsive. If discrepancies between the "in words" and numeric representation of prices are discovered by the Owner after bid opening, the Contractor will be bound to the lower of the two numbers.

CONTRACTOR'S LICENSING STATEMENT

The undersigned is licensed in accordance with the laws of the State of California providing for the registration of Contractors.

Contractor's License Number _____

Name of Individual Contractor (Print or Type) _____

Signature of Owner _____

Business Address _____

or

Name of Firm _____

Business Address _____

Signature, title, and address of members signing on behalf of the partnership:

Name: _____ Title _____

Address _____

Name: _____ Title _____

Address _____

Name: _____ Title _____

Address _____

Name of Corporation _____

Business Address _____

Corporation organized under the laws of the State of _____

Signature of President of Corporation

Signature of Officer of Corporation

LIST OF SUBCONTRACTORS

The bidder is required to furnish the following information in accordance with the provisions of Sections 4100 to 4114, inclusive, of the Public Contract Code of the State of California, for subcontractors engaged to provide or perform work or render services to the prime contractor in excess of one-half (0.5) of one (1) percent of the prime contractor's total bid.

Name Under Which Subcontractor is Licensed	License No.	Address of Office, Mill or Shop	Specific Description of Subcontract
<hr/>	<hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
<hr/>	<hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
<hr/>	<hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
<hr/>	<hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
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<hr/>	<hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>

TO BE EXECUTED BY EACH BIDDER

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
)SS
COUNTY OF _____)

_____, being first duly sworn, declares that he/she is
[NAME]
_____ of _____
(SOLE OWNER, A PARTNER, PRESIDENT, SECRETARY, ETC.) [IDENTITY OF BIDDER]
the party submitting a bid for a contract covering _____
(DESCRIBE NATURE OF CONTRACT)

that such a bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, nor that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communications or conference with anyone to fix the bid price of said bidder or any other bidder, nor to fix any overhead, profit, or cost element of such bid price, nor of that of any other bidder, nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not, directly or indirectly, submitted their bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in their general business.

Dated: _____ Signed: _____

[TITLE]

Subscribed and sworn to before me this ____ day of _____, 20 _____, by
_____, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Notary Public

SEAL

[NOTE: THE FOLLOWING FORM SHALL BE USED IN CASE CHECK OR CASH ACCOMPANIES BID.]

BID SECURITY FORM

(Check or Cash to Accompany Bid)

Accompanying this Proposal is

(Check one)

- Cash
- Certified check payable to the order of the Ventura Port District ("Owner")
- Cashier's check payable to the order of the Ventura Port District ("Owner")

in the amount of \$_____, this amount being not less than ten percent (10%) of the total highest amount of any bid item submitted by bidder (hereinafter referred to as "Bid Security").

The Bid Security shall become the property of the Owner provided this Proposal is accepted by the Owner through action of its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Performance and Payment Bonds, proof of insurance coverage, and other information requested and set forth in the Instructions to Bidders within the time set forth in the Contract Documents; otherwise, the Bid Security shall be returned to the undersigned. The Bid Security shall also become the property of the Owner if the undersigned withdraws their bid within forty-five (45) days after the date set for bid opening, and notwithstanding the award of the contract to another bidder.

BIDDER

[NOTE: IF THE BIDDER DESIRES TO USE A BOND INSTEAD OF CHECK OR CASH, THE BID BOND FORM ON THE FOLLOWING PAGES SHALL BE EXECUTED -- THE SUM OF THIS BOND SHALL BE NOT LESS THAN 10 PERCENT OF THE TOTAL HIGHEST AMOUNT OF ANY BID ITEM SUBMITTED BY BIDDER (SEE ILLUSTRATIONS PROVIDED ON PAGE B-1).]

[NOTE: THE FOLLOWING FORM SHALL BE USED WHERE THE BIDDER DESIRES TO FURNISH A BOND INSTEAD OF CHECK OR CASH.]

BID SECURITY FORM

BID BOND

KNOW ALL BY THESE PRESENTS:

That we, _____ as Principal and _____ as Surety, are held and firmly bound unto Ventura Port District (hereinafter "Owner,") in the sum of \$ _____, to be paid to the Owner, its successors, and assigns, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the certain Bid of the above Principal for construction of *(Insert description)* _____

as specifically set forth in documents entitled _____

_____ , all in accordance with the Contract Documents, including specifications and drawings on file at the offices of the Owner, is not withdrawn within the period of ninety (90) days after the date set for the opening of bids or as otherwise provided in the Contract Documents, notwithstanding the award of the contract to another bidder, and that if said Bid is accepted by the Owner through action of its legally constituted contracting authorities and if the above bound Principal, its heirs, executors, administrators, successors and assigns, shall duly enter into and execute a contract for such construction and shall execute and deliver the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Sundays and holidays) after the date of notifications by and from said Owner, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we hereunto set our hands and seals this _____ day of _____, 2015.

(Principal) SEAL)

By _____

(Surety) SEAL)

By _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

On _____, 2016, before me, _____,
Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed
the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the
instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the
instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the
foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public in and for said State

NOTE:

- (1) This bid bond form is a mandatory form for bidders not furnishing a check or cash.
- (2) The bid bond form must specify an exact number of dollars which shall not be less than ten percent (10%) of the total highest amount of any bid item submitted by bidder (see illustrations provided on page B-1). **It is not acceptable to insert the figures "10%" (or something similar) in lieu of a specific number of dollars, and any such bond not specifying an exact number of dollars in figures renders the bidder's entire proposal informal, and subject to rejection at the discretion of the Owner.**
- (3) The bid bond form must be acknowledged before a notary public, and a legally sufficient power of attorney must be attached to the bid bond to verify the authority of the party signing on behalf of the surety.

INFORMATION REQUIRED OF BIDDER

EQUIPMENT/MATERIAL SOURCE INFORMATION

The bidder shall indicate opposite each item of equipment or material listed below, the name of the manufacturer or supplier of the equipment or material proposed to be furnished under the bid. Failure to comply with this requirement will render the proposal informal and may cause its rejection. Awarding of a contract under this bid will not imply approval by the Owner of the manufacturers or suppliers listed by the bidder. No substitution will be permitted after award of contract unless equipment or material of the listed manufacturer or supplier cannot meet the specifications.

Equipment/Material

Manufacturer/Supplier

INFORMATION REQUIRED OF BIDDER

SITE INSPECTION AND UNDERGROUND UTILITIES REVIEW -- Describe when, by whom, and in what manner the site for this proposed work was inspected on behalf of the bidder (NOTE: Failure to demonstrate diligent effort in ascertaining local conditions which may affect the Work will render this Proposal informal or non-responsive and may result in its rejection):

COMPARABLE PROJECT EXPERIENCE -- In accordance with Section 20 of the Instructions to Bidders, describe at least six (6) comparable projects completed by bidder within the past thirty-six (36) month period, including dates completed, location of work, size of project in dollars, names, addresses, and phone numbers of persons in charge of project construction, and the name and address of the public agency or firm for whom the project was constructed (NOTE: Failure to include at least six (6) jobs similar in size and scope to that contemplated under the Contract Documents will render this Proposal informal or non-responsive and may result in its rejection):

AGREEMENT

THIS AGREEMENT, made and entered into this ___day of _____ in the year 2014 by and between the Ventura Port District, a public corporation organized and existing under the laws of the State of California, hereinafter referred to as "Owner," and

hereinafter referred to as "Contractor."

The parties hereto mutually covenant and agree as follows:

1. The Contract Documents, as that term is defined in Paragraph 8 of the Notice Inviting Bids, are hereby incorporated in and made a part of this Agreement as though fully set forth herein.

2. In consideration of the payments and agreements to be made and performed by the Owner as set forth in said Contract Documents, the Contractor agrees with the Owner to provide **complete improvements as specifically set forth in said Contract Documents entitled "Ventura Harbor Village - Ventura Port District, Restroom/Site ADA Upgrades"** for which award of contract was made; to furnish at its own proper cost and expense all plant, labor, services, materials, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary as provided in the Contract Documents, and to do everything required therein. In accordance with the provisions of Section 3700 of the Labor Code, the Contractor will secure payment of compensation of its employees by acquisition of workers' compensation insurance or by qualification as a self-insurer.

3. The Contractor shall provide for payments on all required insurance policies, and shall obtain 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. The Contractor shall furnish and remove all transportation, labor, materials, supplies, permits, utilities, plant, temporary work or structures, tools, equipment, and all other items and facilities which are appurtenant or necessary to accomplish the Work contemplated in this Agreement and the Contract Documents, and shall be responsible for all loss and damage arising out of the nature of the Work during its progress and prior to Owner's acceptance, from the action of the elements and from any unforeseen difficulties which may arise or be encountered in the prosecution of the Work, and for all other risks of any description connected with the Work. The Contractor shall also be responsible for all expenses incurred by or in consequence of the suspension or discontinuance of Work, except where the Contract Documents expressly stipulate otherwise. In consideration of the foregoing, and for completing the Work within the time and in the manner set forth in the Contract Documents and in accordance with the requirements of the Engineer, the Owner shall pay, and the Contractor shall receive in full compensation therefor, the prices set forth in the accepted Bid. The total compensation to be paid shall be computed on the basis of the units of work actually performed in accordance with the requirements of the Contract

Documents and paid for at the prices stated by the Contractor in the Bid Sheet(s) for completion of the Work. All time limits stated in the Contract Documents are of the essence of this Agreement.

4. The Owner agrees to employ, and does hereby employ, Contractor to provide the materials and to do the Work according to the terms and conditions herein contained and referred to, for the price aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in the Contract Documents. Notwithstanding anything contained in this Agreement or the Contract Documents to the contrary, Contractor certifies that Contractor is not an employee of Owner, and is an independent contractor and will maintain complete control of and responsibility for Contractor's employees, subcontractors, agents, representatives, and volunteers. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such time and attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with this Agreement and the Contract Documents.

5. No work, services, material, or equipment shall be performed or furnished under this Agreement unless and until a Notice to Proceed has been given to the Contractor by the Owner. The Work under this Agreement shall be completed to the approval and entire satisfaction of the Owner and its Engineer.

6. To the fullest extent permitted by law, Contractor shall immediately defend and indemnify and hold harmless the Owner, and its Engineer and their respective Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and successors and assigns, and each of them from and against:

- a. Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind and nature whatsoever for, but not limited to, injury to or death of any person including the Owner, the District, the Engineer, and/or the Contractor, or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns, and damages to or destruction of property of any person, including but not limited to, the Owner, the District, the Engineer and/or the Contractor and any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns, arising out of or in any manner directly or indirectly connected with the Work to be performed under this Agreement, however caused, regardless of any negligence of the Owner, its Engineer or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns (including passive negligence), except the sole negligence or willful misconduct of the Owner, its Engineer, or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns. Upon tender by the Owner, Contractor shall immediately defend, at Contractor's own cost, expense and risk, any and all such claims, suits, actions or other legal proceedings of every kind that may be brought or instituted against Owner, its Board

members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns, notwithstanding whether Contractor's liability is or can be established.

- b. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or in equity, of every kind or nature whatsoever, arising out of, resulting from or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor.

Contractor shall defend, at the Contractor's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the Owner, its Engineer or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns.

Contractor's obligation to indemnify shall survive the termination or completion of the Work for the full period of time allowed by law and shall not be restricted by the insurance requirements of these Contract Documents or to insurance proceeds, if any, received by the Owner, or its Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns.

Contractor's defense and indemnity obligation herein includes, but is not limited to, damages, fines, penalties, attorney's fees and costs arising from claims under the American with Disabilities Act (ADA) or other federal or state disability access or discrimination laws arising from Contractor's work during the course of construction of the improvements or after the Work is complete, as the result of defects or negligence in Contractor's construction of the improvements.

Contractor shall pay and satisfy any judgment, award or decree that may be rendered against the Owner, its Engineer or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, or successors or assigns, in any such suit, action or other legal proceeding.

Contractor shall reimburse the Owner, its Engineer or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and/or successors or assigns, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided.

Contractor agrees to carry insurance for this purpose as set out in the specifications. See Paragraphs 14 of the Instructions to Bidders, entitled LIABILITY INSURANCE, and Article 7 of the General Conditions, entitled CONTRACTOR'S INSURANCE, for insurance specifications and coverage. Contractor's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the Owner, its Engineer, or any of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and/or successors or assigns.

7. If any provision of this Agreement is found by a court of competent jurisdiction to be invalid, void or unenforceable for any reason, the remaining provisions shall continue in full force and effect without being impaired or invalidated in any way.

8. In employing Contractor to perform the Work contemplated under the Contract Documents, the Owner has relied on the experience, expertise and integrity of the Contractor. The rights and obligations of the Contractor under this Agreement shall therefore not be assignable without the prior express written consent of the Owner.

9. This Agreement constitutes the entire Agreement of the parties, and no amendment or modification of its terms is binding except by written amendment approved by the parties.

10. This Agreement shall be governed by the laws of the State of California. Venue for all purposes shall be deemed to lie within Ventura County, California.

IN WITNESS WHEREOF: The parties hereto have caused this Agreement to be executed as of the day and year first above written.

"OWNER"

"CONTRACTOR"

By: _____

License No(s). _____

Its _____
[TITLE]

Expiration Date(s): _____

By: _____

By: _____

Its _____
[TITLE]

Its _____
[TITLE]

By: _____

Its _____
[TITLE]

NOTE: Contractor shall furnish, to the satisfaction of Owner's Legal Representative, verification that the persons signing this Agreement as Contractor or on behalf of the Contractor have authority and legal authorization to bind the Contractor.

FAITHFUL PERFORMANCE BOND

Bond No. _____

KNOW ALL BY THESE PRESENTS:

That we, _____, hereinafter referred to as "Contractor," as principal, and _____, as surety, are held and firmly bound unto Ventura Port District, hereinafter referred to as "Owner," in the sum of _____

[WRITTEN WORDS]
dollars, (\$ _____), lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and/or assigns, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into a contract with Owner for construction of _____

_____ as specifically set forth in documents entitled _____

_____ and is required under the terms of the Contract Documents to give this bond in connection with the execution of said contract:

NOW THEREFORE, if said Contractor shall well and truly do and perform all of the covenants and obligations of said contract on its part to be done and performed at the times and in the manner specified herein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect;

PROVIDED, that any alterations in the work to be done, or the material to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such alterations or extensions of the contract is hereby waived by the surety.

FURTHER PROVIDED, that, as provided in Section 6-18 of the General Conditions entitled "Termination for Breach" and upon termination in accordance with said Section 6-18, if the direct and indirect costs of completing the Work, including, but not limited to, all costs to Owner arising from professional services and attorneys' fees and all costs generated to insure or bond the work of substituted contractors or subcontractors utilized to complete the Work, exceed the balance due the Contractor, on failure of Contractor to pay, the Surety shall pay on demand by Owner. Any portion of such difference not paid by Surety within thirty (30) days following the mailing of a demand for such costs by Owner shall earn interest at the rate of ten percent (10%) per annum or the maximum rate authorized by California law, whichever is lower.

Mandatory Form

If any action is brought upon this bond by said Owner and judgment is recovered (or settlement is made which is favorable to Owner), whether monetary or otherwise, then said surety shall pay all costs incurred by Owner in such action, including reasonable attorneys' fees.

WITNESS our hands this _____ day of _____, 20 ____.

Contractor: _____

Surety: _____

By: _____

By: _____

Title: _____

Title: _____

By: _____

Home Office Address: _____

Title: _____

Phone: _____

Attorney-in-Fact: _____

Address: _____

Phone: _____

SEAL

NOTE: This bond must be acknowledged before a notary public, and a legally sufficient power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety.

PAYMENT BOND

KNOW ALL BY THESE PRESENTS:

That we, _____, hereinafter referred to as "Contractor," as principal, and _____, as surety, are held and firmly bound unto Ventura Port District, hereinafter referred to as "Owner," in the sum of sum of _____ dollars, (\$ _____), lawful money of the

[WRITTEN WORDS]

United States of America, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and/or assigns, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into a contract with Owner for construction of _____

_____ as specifically set forth in documents entitled _____

_____ and is required under the terms of the Contract Documents to give this bond in connection with the execution of said contract:

NOW, THEREFORE, if Contractor or any of its subcontractors, fails to pay for any materials, equipment, or other supplies, or for rental of same used in connection with the performance of work contracted to be done or for work or labor thereon of any kind, or fails to pay any of the persons named in Section 9100 of the California Civil Code, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant or for any amounts required to be deducted, withheld and paid to the Employment Development Department from the wages of employees of the Contractor and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor and all other applicable laws of the State of California and rules and regulations of its agencies, then said Surety will pay for the same in an amount not exceeding the sum specified above. This bond shall inure to the benefit of any persons named in Civil Code Section 9100, so as to give a right of action to them or their assigns in any suit brought upon this bond. This bond shall be subject to and include all of the provisions of Titles 1 and 3, applicable, of Part 6 of Division 4 of the Civil Code of the State of California relating to Payment Bond for Public Works, including but not limited to Civil Code Section 8152-8154, 8614, and 9550-9566, inclusive.

PROVIDED, that any alterations in the work to be done, or the material to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such alteration or extensions of the contract is hereby waived by the surety.

Mandatory Form

WITNESS our hands this _____ day of _____, 20 ____.

Contractor: _____

Surety: _____

By: _____

By: _____

Title: _____

Title: _____

By: _____

Home Office Address: _____

Title: _____

Phone: _____

Attorney-in-Fact: _____

Address: _____

Phone: _____

SEAL

NOTE: This bond must be acknowledged before a notary public, and a legally sufficient power of attorney must be attached to the bond to verify the authority of any party signing on behalf of a surety.

TO BE EXECUTED BY EACH AWARDEE OF A SUBCONTRACT

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
)SS
COUNTY OF _____)

_____, being first duly sworn,
[NAME]
deposes and says that he/she is _____ of
[SOLE OWNER, A PARTNER, PRESIDENT, SECRETARY, ETC.]
_____, the party submitting a bid for a
_____, the party submitting a bid for a
[IDENTITY OF SUBCONTRACTOR]
subcontract covering _____

— [DESCRIBE NATURE OF SUBCONTRACT]
that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, not that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communications or conference with anyone to fix the bid price of said bidder or any other bidder, nor to fix any overhead, profit, or cost element of such bid price, nor of that of any other bidder, nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his or her general business.

The provisions of this affidavit shall not be held as disqualifying a person, firm or corporation who has submitted a sub-proposal to one bidder from submitting separate sub-proposals or quoting prices for materials or work to other bidders.

Dated: _____

Signed:

[TITLE]

Subscribed and sworn to before me this ____ day of _____, 20 _____, by

_____, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

Notary Public

SEAL

NOTICE TO PROCEED

TO: _____

[CONTRACT AWARDEE]

FROM: Board of Port Commissioners
Ventura Port District

NOTICE IS HEREBY GIVEN that you are authorized and directed to proceed with the following project in accordance with the Contract Documents:

[IDENTIFICATION OF PROJECT]

The documents checked off below have been received and are on file with the General Manager of the Ventura Port District:

- Agreement, fully executed []
- Payment Bond []
- Faithful Performance Bond []
- Workers' Compensation Insurance Certificate []
- Liability Insurance Policy or Certificate, w/ Endorsements []
- Non-Collusion Affidavits []

Notice of this Award of Contract has been provided to the California Division of Apprenticeship Standards, Department of Industrial Relations.

Under the terms of the Contract Documents, work is to start within fifteen (15) calendar days after the date set forth below and is to be completed within the time set forth in the Special Conditions.

VENTURA PORT DISTRICT

Dated: _____

By: _____

Title: _____

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GENERAL CONDITIONS

ARTICLE 1

DEFINITIONS, TERMS, AND ABBREVIATIONS

1-1 DEFINITIONS

Whenever the following terms occur in the Contract Documents, the meaning shall be interpreted as follows:

ACCEPTANCE, FINAL ACCEPTANCE -- The formal action by the Owner accepting the work as being complete.

ACCEPTED BID -- The bid (proposal) accepted by the Owner.

ADDENDUM -- Written or graphic instrument issued prior to the opening of bids which clarifies, corrects, or changes the bidding or Contract Documents.

BID (PROPOSAL) -- The set of documents submitted by a bidder on the form provided as part of the Contract Documents, setting forth the amount for which the bidder is willing to perform the work contemplated under the Contract Documents, and including a price breakdown by contract item as shown on the Bid Schedule. The terms "Bid" or "Proposal" are used interchangeably throughout the Contract Documents, and each shall carry the same meaning.

BIDDER -- Any individual, partnership, corporation, joint venture, or other combination thereof submitting a proposal for the work contemplated, acting directly or through an authorized representative.

CLAIM -- 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 which is not otherwise expressly provided for or the Contractor is not otherwise entitled to; or (C) an amount the payment of which is disputed by the Owner.

CONTRACT -- The written agreement executed between the Owner and the Contractor covering the performance of the work.

CONTRACTOR -- The individual, partnership, corporation, joint venture, or other combination thereof who has entered into the contract with the Owner for the performance of the Work. The term "Contractor" means the Contractor or his authorized representative.

CONTRACT DOCUMENTS -- The Contract Documents set forth in Section 8 of the Notice Inviting Bids; also any and all supplemental agreements amending or extending the work contemplated, including contract change orders.

DAYS -- Unless otherwise specified, days shall mean consecutive calendar days.

ELECTRONIC TRANSMISSION -- Communication between the Bidder and the Owner by means of electronic mail (e-mail) or telephonic facsimile.

ENGINEER -- The Owner's engineer is the individual who develops and prepares the plans, maps, schedules, specifications, and other details for the public works project to be performed pursuant to the Contract Documents for the Owner. The term "Engineer" means the Engineer, any architect employed by the Owner, or the Engineer's authorized representative.

OWNER -- The Ventura Port District, sometimes also referred to as the "District." The term "Owner" means the Owner or its authorized representative.

OWNER'S REPRESENTATIVE -- The person or firm or employee of the Owner authorized by the Owner to represent it during the performance of the work by the Contractor. The Owner's Representative means the Owner's Representative or its assistants, and includes those identified as "Engineer" or "inspector."

OWNER'S LEGAL REPRESENTATIVE -- The Owner's attorney or attorneys. The Owner's Legal Representative is Lagerlof, Senecal, Gosney & Kruse, LLP, located at 301 N. Lake Ave., 10th Floor, Pasadena, California 91101.

PLANS, DRAWINGS -- The plans (drawings), or reproductions thereof, which show the location, character, dimensions, and details of the work to be performed.

SPECIAL CONDITIONS -- Additions, deletions, and changes to the Notice Inviting Bids, the Instructions to Bidders, and the General Conditions.

SPECIFICATIONS -- The directions, conditions, and requirements contained in the General Conditions and Special Conditions as supplemented by the Detailed Specifications and drawings.

SUBCONTRACTOR -- An individual, partnership, corporation, joint venture, or other combination thereof who has a contract with the Contractor to perform any of the work at the site. Subcontractor also means an individual, partnership, corporation, joint venture, or other combination thereof who has a contract with another subcontractor to perform any of the work at the site.

UTILITY -- Public or private fixed works for the transportation of fluids, gases, power, signals, or communications.

WORK -- Any and all obligations, duties, and responsibilities necessary to complete the construction assigned to, or undertaken by, the Contractor pursuant to the Contract Documents.

1-2 TERMS

Wherever the terms "required", "permitted", "ordered", "designated", "prescribed", or terms of like import are used, it shall be understood that the requirements, permission, order designation, or prescription of the Owner's Representative is intended. Similarly, the terms "acceptable", "satisfactory", "or equal", or terms of like import shall mean

acceptable to or satisfactory to the Owner's Representative, unless otherwise expressly stated. The word "provide" shall be understood to mean furnish and install.

1-3 ABBREVIATIONS

Wherever the following abbreviations are used, they shall have the meanings indicated:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron & Steel Institute
ANSI	American National Standards Institute (formerly USASI, USAS, ASA)
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ASA	American Standards Association (Now ANSI)
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
CRSI	Concrete Reinforcing Steel Institute
IEEE	Institute of Electrical and Electronics Engineers
NBFU	National Board of Fire Underwriters
NEMA	National Electrical Manufacturers Association
PCA	Portland Cement Association
State Specification	California Standard Specifications, State of California, Department of Transportation, Division of Highways
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code, Pacific Coast Building Officials Conference of the International Conference of Building Officials
U/L or UL	Underwriters' Laboratories, Inc.

1-4 CITATIONS

Whenever reference is made in the Contract Documents to specific statutes, regulations, orders, or other cited materials, such reference shall be read to incorporate any subsequent statutes, regulations, orders, amendments, or other cited materials which amend, modify or supersede such originally cited reference.

ARTICLE 2

PROPOSAL REQUIREMENTS AND CONDITIONS

2-1 CONTRACT DOCUMENTS

These Contract Documents, as defined above, are complementary, and what is called for in any document one shall be as binding as if called for in all. The intention of the documents is to require a complete and finished piece of work including all labor, materials, equipment, and transportation necessary for the proper execution of the work, with the exception of such items as are definitively stipulated in the specifications or the drawings to be furnished by the Owner. Anything shown in the drawings and not in the specifications, or in the specifications and not in the drawings, or neither in the specifications nor in the drawings but necessary to properly complete the structure in accordance with the law and governmental rules and regulations, shall be performed by the Contractor as though shown in both the drawings and the specifications. In the event of a conflict between one portion of the Contract Documents and another, the more particular shall prevail over the more general.

2-2 LICENSE

No bid will be accepted from a bidder who is not licensed to conduct business in the State of California and licensed to perform the class of work defined by the Contract Documents. In the event between the time of bid and the award of the contract the successful bidder is no longer licensed in good standing to perform the class of work defined by the Contract Documents, that bidder's Bid Security shall be forfeited to the Owner as liquidated damages and the Contract shall be awarded to the next lowest responsible bidder. Should the Contractor's license status change or its license expire after construction of the work has begun, the Contractor shall immediately terminate all activity on the work, except that necessary to ensure the safety of persons or property. In such event, the Agreement shall be deemed terminated and the provisions of Section 6-18, entitled TERMINATION FOR BREACH, shall Apply.

2-3 PROPOSALS

Bids shall be made upon the bid form furnished by the Owner and a part of the Contract Documents. All items in the bid form should be filled in; erasures, interlineations, or other corrections shall be authenticated with the initials of the person signing the bid. If the unit price and the total amount named by a bidder for any item are not in agreement, the unit price alone shall be considered as representing the bidder's intention, and the totals shall be corrected to conform thereto.

Bids shall not contain any recapitulation of the work to be done. Alternative proposals will not be considered, except as called for. No oral or telephonic proposals or modifications will be considered.

Bids shall be accompanied by a "Bid Security" in the form of cash, a cashier's or certified check, or bidder's bond, in an amount not less than 10% of the amount of bid, made payable to or for the benefit of the Owner. Said Bid Security shall be given as a guarantee that the bidder will enter into a contract and furnish the required bonds and

insurance certificates and endorsements if awarded the contract. The refusal or failure of the bidder to enter into the contract and furnish the required bonds, insurance certificates and endorsements, and any other information required under the instructions to bidders within ten (10) days (not including Sundays and holidays) after the date of notification of award by the Owner in writing will result in damages being sustained by the Owner, which damages are, and will continue to be, impracticable and extremely difficult to ascertain. In the event of such failure to enter into the contract and comply with the requirements thereof, the Bid Security shall be forfeited to the Owner, not as a penalty, but as liquidated damages. Forfeiture does not preclude the Owner from seeking all other remedies provided by law to recover losses sustained as a result of the Contractor's failure to enter into the contract or to furnish the required bonds, insurance certificates and endorsements, or other information required of bidder.

Bids shall be sealed in an envelope marked and addressed as set forth in the Notice Inviting Bids. Bids shall be delivered to the addressee at the location designated in the Notice Inviting Bids on or before the day and hour set for the opening of bids in the Notice Inviting Bids, and shall bear the name of the bidder. A bid will not be accepted after the date and time designated in the Notice Inviting Bids. It is the sole responsibility of the bidder to see that their bid is delivered and received in proper time. Any bid received after said designated date and time shall be returned to the bidder unopened.

2-4 ADDENDA

Addenda issued by the Owner before the time set for opening bids shall be included in the bid and shall be made a part of the contract. However, where any addendum to the Contract Documents includes a material change in, addition to or deletion from the bid specifications, as defined in Public Contract Code Section 4104.5, and that addendum is issued later than seventy-two (72) hours prior to the bid opening date, the bid opening date will be extended by at least seventy-two (72) hours. Notification of such extension of the bid opening date will be included in the addendum.

2-5 EXISTING CONDITIONS AND EXAMINATION OF CONTRACT DOCUMENTS

The bidder represents that they have carefully examined the Contract Documents and the site where the Work is to be performed and that bidder has familiarized himself or herself with all local conditions and any and all federal, state, and local laws, ordinances, rules, and regulations that may affect in any manner the performance of the Work. The bidder further represents that bidder has studied all surveys and investigation reports about subsurface and latent physical conditions pertaining to the area affected by the Work, including the location of underground facilities, that bidder has performed such additional surveys and investigations as bidder deems necessary to complete the Work at bidder's bid price, and that bidder has correlated the results of all such data with the requirements of the Contract Documents. The submittal of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, including locality, uncertainty of weather and all other contingencies, and as to the character, quality, quantities, and scope of the Work.

The plans and specifications for the Work show subsurface conditions or otherwise hidden conditions as they are supposed or believed by the Engineer to exist, but it is not

intended or to be inferred that the conditions as shown thereon constitute a representation that such conditions are actually existent. Except as otherwise specifically provided in the Contract Documents, the Owner, the Engineer, and their consultants shall not be liable for any loss sustained by the Contractor as a result of any variance of such conditions as shown on the plans and the actual conditions revealed during the progress of the Work or otherwise.

Where the Owner or the Engineer or their consultants have made investigations of subsurface conditions in areas where the Work is to be performed, such investigations were made only for the purpose of study and design. The conditions indicated by such investigations apply only at the specific location of each boring or excavation at the time the borings or excavations were made. Where such investigations have been made, bidders or Contractors may inspect the records as to such investigations subject to and upon the conditions hereinafter set forth. The inspection of the records shall be made at the office of the Engineer.

When a log of test borings showing a record of the data obtained by the investigation of subsurface conditions by the Owner, the Engineer, or their consultants is included with the plans or other documents, it is expressly understood and agreed that said log of test borings does not constitute a part of the contract, represents only the opinion of the Owner or the Engineer or their consultants as to the character of the materials encountered by them in the test borings, is included in the plans or other documents only for the convenience of bidders, and its use is subject to all of the conditions and limitations set forth in this article.

The records of such investigations are not a part of the contract and are shown solely for the convenience of the bidder or Contractor. It is expressly understood and agreed that the Owner, the Engineer, and their consultants assume no responsibility whatsoever in respect to the sufficiency or accuracy of the investigation, the records, or the interpretations set forth therein or made by the Owner's consultants, or the Engineer in the use thereof by the Engineer. There is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions, densities, or other characteristics different from, those indicated may not be encountered.

The availability or use of information described in this Section 2-5 is not to be construed in any way as a waiver of the provisions of the first paragraph in this Section and a bidder or Contractor is cautioned to make such independent investigations and examination as they deem necessary to satisfy themselves as to conditions to be encountered in the performance of the work.

No information derived from such inspection of records of investigations or compilation thereof made by the Owner, the Engineer, or their consultants will in any way relieve the bidder or Contractor from any risk or from properly fulfilling the terms of the contract nor entitle the Contractor to any additional compensation, except as otherwise provided in Section 3-5, entitled UTILITIES.

ARTICLE 3

SCOPE OF WORK

3-1 WORK TO BE DONE

The work to be done consists of furnishing all transportation, labor, materials, tools, equipment, services, permits, utilities, and all other items which are necessary or appurtenant to construct and complete the entire project and construct the project designated in the Contract Documents, in accordance with the plans and specifications and subject to the requirements of the Contract Documents, and to leave the grounds in a clean and presentable condition.

3-2 CHANGES IN THE WORK

The Owner may require changes in, additions to, or deductions from the Work, including complete termination thereof. Adjustment, if any, in the amounts to be paid to the Contractor by reason of any such change, addition, or deduction shall be determined as set forth in Article 8, below, entitled ESTIMATES AND PAYMENTS.

The Owner's Representative may order minor changes in the Work not involving an increase or decrease in the contract amount, not involving a change in the time for completion, and not inconsistent with the purposes for which the Work is being constructed. If the Contractor believes that any order for minor changes in the Work involves changes in the contract amount or time for completion, they shall not proceed with the minor changes so ordered and shall, within seven days of the receipt of such order, notify the Owner's Representative in writing of Contractor's estimate of the changes in the contract amount and time for completion believed to be appropriate.

No payment for changes in the Work will be made and no change in the time for completion by reason of changes in the Work will be made, unless the changes are covered by a written change order approved by the Owner in advance of the Contractor's proceeding with the changed Work. Changes in the Work shall not constitute the basis for a claim for damages or anticipated profits due to an increase or diminution in work done.

Any dispute between the Owner and the Contractor regarding payment for changes in the work or a change in the time for completion shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

3-3 EXTRA WORK

The Owner may determine, in the Owner's sole discretion, that it is necessary or desirable for the proper completion of the contract to order work done or materials or equipment furnished which in the opinion of the Owner are not susceptible of classification under the unit-price items named in the Bid Schedule, and are not included in any item for which a lump sum is bid. The Contractor shall do and perform such work and furnish such materials and equipment, and such labor, materials, and/or equipment will be classed as extra work and shall be ordered in writing before such work is started. No extra work shall be paid for by Owner unless ordered in writing. Extra work and

material will be paid for at a lump sum or unit price agreed on in writing by the Owner and the Contractor before the extra work shall be ordered.

Performance of any extra work or the furnishing of any extra materials which in the judgment of the Owner is of like character to and susceptible of classification under the unit-price items of the contract shall, if the Owner shall so provide, be paid for at the unit price named for such work in the Bid Schedule.

Whenever, in the Owner's sole discretion, such extra work or such extra material is not of like character to and susceptible of classification under the unit-price items of the contract as specified, and it is impracticable to fix the price before the extra work order shall be issued, such extra work and material, when furnished by the Contractor, shall be paid for at actual necessary cost of materials, supplies, labor, on a cost-plus basis, as provided in Section 8-1, below, entitled PAYMENT FOR CHANGES IN THE WORK.

Any extra work performed hereunder shall be subject to all of the provisions of the contract and the Contractor's sureties shall be bound with reference thereto as under the original contract.

Any dispute regarding payment for extra work shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

3-4 OBSTRUCTIONS

The Contractor shall remove and dispose of all structures, debris, or other obstructions of any character necessary to accommodate the Work. Where such obstructions consist of improvements required by law, they shall be removed, maintained and permanently replaced by the Contractor at the Contractor's expense except as otherwise specifically provided in the Contract Documents.

3-5 UTILITIES

Prior to excavation, the Contractor shall contact the appropriate regional notification center, such as Underground Service Alert, as provided in Government Code Sections 4216 et. seq.

In case it should be necessary to remove, relocate, protect, or temporarily maintain a utility because of interference with the Work, the work on such utility shall be performed and paid for as follows:

(a) When it is necessary to remove, relocate, protect, or temporarily maintain an existing main or trunkline utility facility not indicated in the plans and specifications with reasonable accuracy, the Owner will compensate the Contractor for the costs of locating, for the costs of repairing damage not due to the failure of the Contractor to exercise reasonable care, for the costs of removing, relocating, protecting, or temporarily maintaining such utility facilities, and for the costs for equipment on the project necessarily idled during such work. These costs, the work to be done by the Contractor in locating, removing, relocating, protecting, or temporarily maintaining such utility facilities shall be covered by a written change order conforming to the provisions herein pertaining to changes in the Work. The Owner may make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, protect, or

temporarily maintain such utility facilities or to reduce the costs of the work involved in removing, relocating, protecting, or temporarily maintaining such utility facilities. Changes in alignment and grade will be ordered in accordance with the provisions herein pertaining to changes in the Work.

(b) When it is necessary to remove, relocate, protect, or temporarily maintain a utility (other than [1] existing main or trunkline utility facilities not indicated in the plans and specifications with reasonable accuracy, or [2] existing service laterals or appurtenances when their presence cannot be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of the Work) the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the utility or damage thereto. The work on the utility shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with its own forces, or permitting the work to be done by the Contractor. No representations are made that the obligations to remove, relocate, protect, or temporarily maintain any utility and to pay the cost thereof is or is not required to be borne by the owner of such utility, and it shall be the responsibility of the Contractor to investigate to find out whether or not said cost is required to be borne by the owner of the utility.

The Contractor shall not be assessed liquidated damages for delay in completion of the Work, when such delay was caused by the failure of the Owner, the Engineer, or the owner of the utility to provide for removal or relocation of utility facilities. The right is reserved to governmental agencies and to owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes to their property made necessary by the Work and the purpose of maintaining and making repairs to their property.

3-6 PLANS AND SPECIFICATIONS FURNISHED BY THE OWNER

The Owner will furnish to the Contractor, free of charge, all copies of plans and specifications reasonably necessary for the execution of the Work. The Contractor shall keep one set of plans and specifications in good order available to the Owner's Representative at the site of the Work.

3-7 FINAL CLEANUP

Upon completion and before making application for acceptance of the Work, the Contractor shall clean all rights-of-way, streets, borrow pits, and all other grounds occupied in connection with the Work of all rubbish, excess materials, temporary structures, and equipment, and all parts of the Work and grounds occupied shall be left in a neat and presentable condition. In the event the Contractor fails to clean up as specified herein, clean up may be performed by the Owner at the Contractor's expense.

3-8 PROTESTS

If the Contractor considers any work required by the Owner to be outside the requirements of the Contract Documents, or if the Contractor considers any record or ruling of the Owner, the Owner's Representative, or any governmental inspector to be unfair, the Contractor shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or decision, and within ten (10) days

after receipt thereof file a written protest with the Owner, setting forth each objection and the reasons therefor. The Contractor shall, whether or not a written protest will be filed, immediately upon receipt of written instructions or decision proceed without delay to perform the work or conform to the record or ruling. The Contractor hereby agrees that, unless a specific objection or protest has been made as provided herein, the Contractor waives all grounds for protests or objections to the records, rulings, instructions, or decisions of the Owner or the Owner's Representative, and further agrees that as to all matters not included in such objections or protests, the records, instructions and decisions of the Owner or Owner's Representative shall be final and conclusive. Such protests shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

3-9 CLAIMS

As provided in Public Contract Code Sections 20104, et seq., claims by the Contractor shall be in writing and include the documents necessary to substantiate the claim. Prior to submitting a claim under this Section 3-9, the Contractor shall comply with all applicable notification requirements under the Contract Documents. All claims must be filed with the Owner on or before the date of final payment.

For claims of less than fifty thousand dollars (\$50,000.00), the Owner 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 claims the Owner may have against the Contractor. The Owner's written response to the claim shall be submitted to the Contractor within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

For Claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the Owner 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 Owner may have against the Contractor. The Owner's written response to the claim shall be submitted to the Contractor 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.

If the Contractor disputes the Owner's written response, or the Owner fails to respond within the time prescribed, the Contractor may so notify the Owner, in writing, either within fifteen (15) days of receipt of the Owner's response or within fifteen (15) days of the Owner's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the Owner shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute. Except as provided in Section 8-3 entitled PROGRESS PAYMENTS, Section 8-4 entitled FINAL ESTIMATE AND PAYMENT, and Section 8-5 entitled OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF, the Owner shall pay that portion of the claim which it has determined to be undisputed.

If following the meet and confer conference the claim or any portion remains in dispute, the Contractor may file a claim pursuant to Government Code Sections 900 et seq. and a lawsuit on the claim may thereafter be filed in the appropriate state court. The court is to order non-binding mediation, unless waived by both parties within sixty (60) days following the filing of responsive pleadings. The parties are to select a mediator and the mediation must be commenced within thirty (30) days of the submittal. These time requirements may be extended upon a showing of good cause to the Court, or by stipulation of the parties.

If the matter remains in dispute, the parties may agree to submit the matter to binding arbitration, on such terms as may be established by stipulation. Otherwise, the case shall be submitted to judicial (non-binding) arbitration pursuant to Code of Civil Procedure Section 1141.10 et seq. Fees and expenses shall be paid equally by the parties, unless the arbitrator finds good cause for a different division of fees and expenses. If either party objects to the arbitrator's award, the matter can then go to trial de novo in the trial court, subject to the usual rules of litigation.

Should the party requesting trial de novo fail to obtain a more favorable result, in addition to the payment of costs and fees under the arbitration provision of the Code of Civil Procedure, such party shall pay to the other party the attorneys' fees of the other party arising out of trial de novo.

ARTICLE 4

QUALITY OF THE WORK

4-1 AUTHORITY OF THE OWNER'S REPRESENTATIVE

The Owner's Representative shall decide any and all questions which may arise as to the interpretation of the plans and specifications and shall have authority to disapprove or reject materials and equipment furnished and work performed which, in the Owner's Representative's opinion, is not in accordance with the Contract Documents, and such decision shall be binding and conclusive.

4-2 SUPPLEMENTAL DRAWINGS

The plans may be supplemented by such drawings as necessary to define the Work adequately. All drawings provided by the Owner constitute written instructions to the Contractor. If the Contractor believes that any supplemental drawings call for changes in the Work for which the contract amount or time for completion should be changed, the Contractor shall not proceed with the changes and shall within seven (7) days of the receipt of the supplemental drawings notify the Owner's Representative in writing of their estimate of the changes in the contract amount and time for completion they believe to be appropriate.

4-3 CONFORMITY WITH THE CONTRACT DOCUMENTS AND ALLOWABLE DEVIATIONS

The Work shall conform to the lines, grades, dimensions, tolerances, and material and equipment requirements shown on the plans or set forth in the specifications. Although measurement, sampling, and testing may be considered evidence as to such conformity, the Owner's Representative shall be the sole judge as to whether the work or materials deviate from the plans and specifications, and any decision of the Owner's Representative as to any allowable deviations therefrom shall be final.

If specific lines, grades, and dimensions are not shown on plans, those furnished by the Owner's Representative shall govern.

4-4 MANUFACTURER'S INSTRUCTIONS

All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, supplier or distributor, except as otherwise specifically provided in the Contract Documents.

4-5 INTERPRETATION OF PLANS AND SPECIFICATIONS

Figured dimensions on drawings shall govern, but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large scale details shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials and workmanship. Drawings and specifications are intended to be fully complementary and to agree. The specification calling for the higher quality material or workmanship shall prevail. Materials or work described in words which so applied have a well known technical or trade meaning shall be deemed to refer to such recognized standards. In the event of any discrepancy between any drawings and the figures thereon, the figures shall be taken as correct. In the event of any doubt or question arising with regards to the true meaning of the plans or specifications, the Contractor shall, within five (5) days of discovering such doubt or question, request clarification of the matter from the Owner's Representative, who shall respond within two (2) working days (Saturdays, Sundays and holidays excluded) after receipt of the request. The decision of the Owner's Representative shall be final.

4-6 ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR

It is the duty of the Contractor to promptly notify the Owner's Representative in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified method and fails to notify the Owner's Representative in writing of this belief within three (3) days of discovering the defect or insufficiency, the Contractor waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the Owner, or in any subsequent arbitration or settlement conference between the Owner and the Contractor. The Owner's Representative, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the

Contractor. Until such instructions are given, any work done by the Contractor after they come to the belief that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and Contractor shall bear any and all costs arising therefrom.

If the Contractor, either before commencing work or in the course of the Work, finds any discrepancy between the specifications and the plans or between either of them and physical conditions at the site of the Work or finds any error or omission in any of the plans or in any survey, the Contractor shall promptly notify the Owner's Representative of such discrepancy, error, or omission. If the Contractor observes that any plans or specifications are at variance with any applicable law, ordinance regulation, order, or decree, they shall promptly notify the Owner's Representative in writing of such conflict. The Owner's Representative, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after their discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, or conflict will be at the Contractor's own risk and Contractor shall bear any and all costs arising therefrom.

4-7 SUPERVISION AND SUPERINTENDENCE

The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention and applying such skills and expertise as necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but the Contractor shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents except as otherwise provided in Section 4-6, entitled ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR.

The Contractor shall be responsible to see that the completed Work complies with the Contract Documents.

The Contractor shall designate and keep on the Work at all times during its progress a competent superintendent, who shall not be replaced without written notice to the Owner's Representative. The superintendent will be the Contractor's representative at the site and shall have authority to act on behalf of the Contractor. All communications given to the superintendent shall be binding as if given to the Contractor. During periods when the Work is suspended, the Contractor shall make appropriate arrangements for any emergency work which may be required.

Whenever the superintendent is not present on any particular part of the Work where the Owner's Representative may desire to inform the Contractor relative to interpretation of the plans and specifications or to disapproval or rejection of materials or work performed, the Owner's Representative may instead inform the foreman or other worker in charge of the particular part of the Work. Information so given shall be as binding as if given to the superintendent.

4-8 SHOP DRAWINGS

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

The Contractor shall review, mark as approved, and submit for review by the Owner's Representative, shop drawings as called for in the Special Conditions and Standard Specifications or requested by the Owner's Representative. Drawings shall be submitted in sextuplet to the Owner's Representative with a list of the drawings submitted. Drawings shall show the name of the project, the name of the Contractor, and, if any, the names of suppliers, manufacturers, and subcontractors. Shop drawings shall be submitted with promptness and in orderly sequence so as to cause no delay in prosecution of the Work.

Shop drawings shall be complete in all respects. If the shop drawings show any deviations from the requirements of the plans and specifications because of standard shop practices or other reasons, the deviations and the reasons therefor shall be separately set forth.

Within 30 days after receipt of said drawings, the Owner's Representative will return two of the copies of the drawings to the Contractor with any comments noted thereon. If so noted by the Owner's Representative, the Contractor shall correct the drawings and resubmit them in the same manner as specified for the original submittal. The Contractor shall identify any revisions other than the corrections requested by the Owner's Representative on previous submittals.

The review by the Owner's Representative is for the limited purpose of ensuring general conformity with the design concept of the project, and general compliance with the plans and specifications only.

No portion of the Work requiring a shop drawing submittal shall be commenced until the submittal has been reviewed by the Owner's Representative and returned to the Contractor with a notation indicating that resubmittal is not required.

If the Contractor believes that any shop drawing or communication relative thereto calls for changes in the Work for which the contract amount or time for completion should be changed, they shall not proceed with the changes in the Work so called for and shall promptly submit to the Owner's Representative a written estimate of the changes in the contract amount and time for completion the Contractor believes to be appropriate.

4-9 QUALITY AND SAFETY OF MATERIALS AND EQUIPMENT

All equipment, materials, and supplies to be incorporated in the Work shall be new, unless otherwise specified. All equipment, materials, and supplies shall be produced in a good and workmanlike manner. When the quality of a material, process, or article is not specifically set forth in the plans and specifications, the best available quality of the material, process, or article shall be provided.

Whenever any material, process, or article is indicated or specified by grade, patent or proprietary name, or by name of manufacturer, such specification is for the purpose of

facilitating description of the materials, process, or articles desired and the Contractor may offer any material, process, or article which shall be substantially equal or better in every respect to that indicated or specified; provided, however, that if the material, process, or article offered by the Contractor is not, in the sole discretion of the Owner's Representative, equal or better in every respect to that specified, then the Contractor must furnish the material, process, or article specified or one that in the sole discretion of the Owner's Representative is the substantial equal or better in every respect. In the event that the Contractor-furnished material, process, or article is more expensive than that specified, or involves additional labor or other cost, such difference in cost shall be borne by the Contractor.

In accordance with Section 3400 of the Public Contract Code, the Contractor shall submit data substantiating requests for substitution of "equal" items within thirty-five (35) days after award of the contract. This 35-day period of time is included in the number of days allowed for the completion of the Work.

All materials, equipment, and supplies provided shall, without additional charge to Owner, fully conform with all applicable state and federal safety laws, rules, regulations, and orders, and it shall be Contractor's responsibility to provide such materials, equipment, and supplies notwithstanding any omission in the Contract Documents therefor or regardless of whether a particular material, equipment, or supply was specified by the Contract Documents.

4-10 STANDARDS, CODES, SAMPLES, AND TESTS

Wherever reference is made to a standard, code, specification, or test and the designation representing the date of adoption or latest revision thereof is omitted, it shall mean the latest revision of such standard, code, specification, or test in effect on the day the Notice Inviting Bids is dated.

Tests shall be made in accordance with commonly recognized procedures of technical organizations and such special procedures as may be prescribed elsewhere in the plans and specifications. The Contractor shall furnish without charge such samples for testing as may be required by the Owner's Representative.

4-11 OBSERVATION OF WORK BY OWNER'S REPRESENTATIVE

The Owner's Representative shall at all times have access to the Work and shall be furnished with every reasonable facility for ascertaining full knowledge respecting the progress, workmanship, and character of materials and equipment used and employed in the Work.

Whenever the Contractor varies the normal period during which work or any portion of it is carried on each day, as provided in the construction progress schedule submitted by the Contractor pursuant to Section 5-2 entitled CONTRACTOR'S CONSTRUCTION SCHEDULE AND COST BREAKDOWN, Contractor shall give timely notice to the Owner's Representative so that the Owner's Representative may, if desired, be present to observe the work in progress. If the Contractor fails to obtain prior authorization, any work done in the absence of the Owner's Representative will be subject to rejection. Where the Contractor performs any part of the Work on a Saturday, Sunday, or holiday designated by the Owner, or for more than eight (8) hours in a workday, the Contractor

shall, upon demand by the Owner, reimburse the Owner for the cost of employing inspectors or otherwise providing inspection of the Work. The Owner shall be entitled to withhold such costs from payments due the Contractor.

The Contractor shall give timely notice to the Owner's Representative in advance of backfilling or otherwise covering any part of the Work so that the Owner's Representative may, if desired, observe such part of the Work before it is concealed.

The observation, if any, by the Owner's Representative of the Work shall not relieve the Contractor of any of their obligations to fulfill the contract as prescribed. Defective work shall be made good, and materials and equipment furnished and work performed which is not in accordance with the Contract Documents may be rejected notwithstanding the fact that such materials, equipment, and work have been previously observed by the Owner's Representative or that payment therefor has been included in an estimate for payment.

4-12 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

Any work which does not conform to the requirements of the Contract Documents shall be remedied or removed and replaced by the Contractor, together with any other work which may be displaced in so doing, and no compensation will be allowed for such removal, replacement, or remedial work. All nonconforming materials shall be immediately removed from the site.

Any work done beyond the lines and grades shown on the plans or established by the Owner's Representative or any changes in, additions to, or deductions from the work done without written authority will be considered as unauthorized and will not be paid for. Work so done may be ordered remedied, removed, or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply promptly with any order of the Owner's Representative made under the provisions of this article, the Owner's Representative shall have authority to cause nonconforming materials, rejected work, or unauthorized work to be remedied, removed, or replaced at the Contractor's expense and to deduct the costs from any monies due or to become due the Contractor.

4-13 ONE-YEAR GUARANTEE

In addition to guarantees otherwise required, the Contractor shall and hereby does guarantee the Work against defects in workmanship or materials for a period of one year after the Owner's acceptance of the Work, except for any portion of the Work that is utilized or placed into service by the Owner in accordance with the provisions of Section 5-6, entitled USE OF COMPLETED PORTIONS. The guarantee period for portions of the Work so utilized or placed into service shall be one year from the date of written notification to the Contractor described in said Section 5-6. The Contractor shall repair or remove and replace any and all such work, together with any other work which may be displaced in so doing, that is found to be defective in workmanship and/or materials within said one year period, without expense whatsoever to the Owner, ordinary wear and tear and unusual abuse or neglect excepted. In the event of a failure to comply with the above-mentioned conditions within seven (7) days after being notified in writing, the Owner is hereby authorized to proceed to have the defects remedied and made good at

the Contractor's expense. The Contractor agrees to pay all such expenses immediately on demand therefor by the Owner. Such action by the Owner will not relieve the Contractor of the guarantees required by this article or elsewhere in the Contract Documents.

The performance bond and the payment bond shall continue in full force and effect for the guarantee period.

If, in the opinion of the Owner, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the Owner or to prevent interruption of its operations, the Owner will attempt to give the notice required by this article. If the Contractor cannot be contacted or does not comply with the Owner's request for correction within a reasonable time as determined by the Owner, the Owner may, notwithstanding the provisions of this article, proceed to make such correction or provide such attention, and the costs of such correction or attention shall be charged against the Contractor and shall be paid immediately upon demand by the Owner. Such action by the Owner will not relieve the Contractor of the guarantees required by this article or elsewhere in the Contract Documents.

This article does not in any way limit the guarantee on any items for which a longer guarantee is specified or on any items for which a manufacturer or supplier gives a guarantee for a longer period. The Contractor agrees to act as a co-guarantor with such manufacturer or supplier and shall furnish the Owner all appropriate guarantee or warranty certificates upon completion of the project. No guarantee period, whether provided for in this article or elsewhere, shall in any way limit the liability of Contractor or Contractor's sureties or insurers under the indemnity or insurance provisions of the Contract Documents.

ARTICLE 5

PROSECUTION AND PROGRESS

5-1 SUBCONTRACTING

Subcontracts may be permitted to such extent as shall be shown to be necessary or definitely advantageous to the Contractor in the prosecution of the Work, in the sole discretion of the Owner. The Contractor shall not enter into any subcontract with a subcontractor which has been debarred by the Labor Commissioner pursuant to Sections 1777.1 and 1777.7 of the Labor Code, or which has not registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5. In the event the Contractor subcontracts any part of this contract, the Contractor shall be as fully responsible to the Owner for the acts and omissions of each subcontractor and anyone either directly or indirectly employed by them as the Contractor is responsible to the Owner for the acts and omissions of Contractor's employees. Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the Owner. The Contractor shall include in every subcontract a provision incorporating the terms and conditions of the Contract Documents into the subcontract. All subcontracts must be in writing.

5-2 CONTRACTOR'S CONSTRUCTION SCHEDULE AND COST BREAKDOWN

Within ten days after execution of the contract, the Contractor shall deliver to the Owner's Representative a construction progress schedule and cost breakdown in bar chart form showing the proposed dates of commencement and completion and cost of each of the various parts of the Work and the anticipated amount of each monthly payment that will become due the Contractor in accordance therewith. The construction progress schedule shall specify the normal period during which work will be carried on each day, and whether any overtime, weekend or holiday work is anticipated.

5-3 TIME FOR COMPLETION AND FORFEITURE DUE TO DELAY

The Contractor shall begin and complete all or any designated portion of the Work called for under the contract within the time set forth in the Special Conditions. Time is of the essence in this contract.

Failure of the Contractor to perform any covenant or condition contained in the Contract Documents within the time period specified shall constitute a material breach of this contract entitling the Owner to terminate the contract unless the Contractor applies for, and receives, an extension of time in accordance with the procedures set forth in this article and Section 5-5 entitled EXTENSION OF TIME.

Failure of the Owner to insist upon the performance of any covenant or condition within the time period specified in the Contract Documents shall not constitute a waiver of the Contractor's duty to complete performance within the designated periods.

The Owner's agreement to waive a specific time provision or to extend the time for performance shall not constitute a waiver of any other time provisions contained in the Contract Documents. Failure of the Contractor to complete performance promptly within the additional time authorized in the waiver or extension of time agreement shall constitute a material breach of this contract entitling the Owner to terminate the contract.

In accordance with Government Code 53069.85, Contractor agrees to forfeit and pay Owner the amount per day set forth in the Special Conditions for each and every day of delay which shall be deducted from any payments due or to become due the Contractor.

The Contractor shall not be deemed in breach of this contract and no forfeiture due to delay shall be made because of any delays in the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor provided the Contractor requests an extension of time in accordance with the procedures set forth in this article and in Section 5-5 entitled EXTENSION OF TIME. Unforeseen causes of delay beyond the Contractor's control shall include acts of God, acts of a public enemy, acts of the government, acts of the Owner, or acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather, or delays of subcontractors due to such causes, or delays caused by failure of the owner of a utility to provide for removal or relocation of existing utility facilities. Delays caused by actions or neglect of Contractor or Contractor's agents, servants, employees, officers, subcontractors, directors, or of any party contracting to perform part or all of the Work or to supply any equipment or materials shall not be excusable delays. Excusable delays

(those beyond Contractor's control) shall not entitle the Contractor to any additional compensation. The Contractor's sole remedy is a request for an extension of time.

5-4 SUSPENSION OF WORK

The Work may be suspended in whole or in part when determined by the Owner's Representative that the suspension is necessary in the interests of the Owner. The Contractor shall comply immediately with any written order of the Owner, the Owner's Representative, or the Engineer to suspend the Work. The Contractor shall be responsible for taking reasonable steps to protect the Work in progress, any materials and equipment on the site of the Work, and any materials delivered to the Contractor which are to be incorporated into the Work during the period of the suspension. Such suspension shall not form the basis of any claim by the Contractor against the Owner, except as provided in Section 5-5 entitled EXTENSION OF TIME.

5-5 EXTENSION OF TIME

The time specified for completion of all or any part of the Work may be extended only by a written change order executed by or on behalf of the Owner.

Requests for an extension of time must be delivered to the Owner's Representative within ten (10) days of the occurrence which caused the delay. The request must be in writing and must state the cause of the delay, the date of the occurrence causing the delay, and the amount of additional time requested. Requests for extensions of time shall be supported by all evidence reasonably available or known to the Contractor. Requests for extensions of time which fail to include the specified information or which are untimely may be rejected by Owner.

Requests for a time extension due to weather or other conditions beyond the Contractor's control shall include daily written reports describing such weather or conditions and specifying the work which, but for such weather or conditions, the Contractor would otherwise have performed.

When the Contractor has submitted a request for an extension of time, the Owner will ascertain the facts and extent of the delay and extend the time for completing the Work if, in Owner's judgment, the circumstances justify such an extension. Should the Contractor disagree with the Owner's decision, the Contractor may appeal that decision to the governing body of the Owner, which shall review the basis for the decision of its staff and make appropriate findings regarding the Contractor's request for an extension of time. The findings of facts by the governing body of the Owner shall be final and conclusive.

Any extension of time shall not release the sureties upon any bond required under the contract.

Any further dispute regarding an extension of time shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS, provided, however, that the Contractor has first exhausted the remedies pursuant to the procedure set forth in this Section 5-5.

5-6 USE OF COMPLETED PORTIONS

When the Work or any portion of it is sufficiently complete to be utilized or placed into service, the Owner shall have the right, upon written notification to the Contractor, to utilize such portions of the Work and to place the operable portions into service and to operate same.

Once the Owner has given notice and commenced utilization or operation of any part of the Work, the Contractor shall be relieved of the duty of maintaining the portions so utilized or placed into operation. However, nothing in this article shall be construed as relieving the Contractor of the full responsibility for completing the Work in its entirety, for making good defective work and materials, for protecting the Work from damage, and for being responsible for damage and for the Work as set forth in the General Conditions and other Contract Documents. Such action by the Owner shall also not be deemed final acceptance nor shall it relieve the Contractor, the Contractor's sureties, or insurers of the provisions of Article 7, entitled CONTRACTOR'S INSURANCE, and Section 6-10, entitled INDEMNITY.

5-7 CHARACTER OF WORKERS

Only skilled workers shall be employed by Contractor where the Work requires special qualifications. When required in writing by the Owner, the Contractor or any subcontractor shall discharge any person who is, in the sole discretion of the Owner, incompetent, unfaithful, disorderly, or otherwise unsatisfactory, and shall not again employ such discharged person on the Work except with the prior written consent of the Owner.

5-8 ENFORCEMENT OF ORDER

The Contractor shall be responsible for maintaining good order at all locations where work is performed under this contract and to that end shall employ such watchmen or other persons as may be required. Unauthorized persons shall be excluded from any of the sites affected by the Work.

5-9 USE OF OWNER'S PROPERTY DURING CONSTRUCTION

Where necessary for the prosecution of the Work, and upon approval by the Owner, the Contractor may use property or facilities of the Owner for storage of equipment or materials, to fabricate materials to be incorporated into the Work, or for any other reason related to the prosecution of the Work.

In the event the Contractor is afforded the use of the Owner's property as provided herein, the Contractor shall be responsible for ensuring that any materials or equipment stored thereon are kept safe from theft, vandalism, or damage due to any cause, and shall erect such temporary structures as are necessary to protect the material or equipment from damage, at the expense of the Contractor. The Contractor shall ensure that the insurance required under the Contract Documents includes coverage for the Contractor's use of the Owner's property in accordance with this Section 5-9.

ARTICLE 6

LEGAL RELATIONS AND RESPONSIBILITIES

6-1 OBSERVING LAWS AND ORDINANCES

The Contractor shall keep fully informed of all existing and future 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 Work. 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 promptly report the same to the Owner's Representative in writing and cease operations on the affected portion of the Work until the Owner's Representative has given appropriate instructions as provided for in Section 4-6, entitled ERRORS OR DISCREPANCIES NOTED BY CONTRACTOR. No payment for changes in the Work will be made and no change in the time for completion by reason of such discrepancy or inconsistency will be made, unless the changes are covered by a written change order approved by the Owner in advance of the Contractor's proceeding with the changed Work.

The Contractor shall at all times observe and comply with and shall cause their agents, employees, subcontractors, and suppliers to observe and comply with all such existing and future laws, ordinances, regulations, orders, and decrees, and shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, agents and volunteers against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, by the Contractor, their employees, agents, subcontractors, or suppliers.

In the event the Contractor, after 72-hours written notice to comply, fails to comply with any law, ordinance, regulation, order or decree which in any way affects the conduct or prosecution of the Work, and the Owner takes reasonable steps to ensure compliance with such law, ordinance, regulation, order or decree, the costs and expenses incurred in effecting such compliance shall be paid by the Contractor. Should the Contractor fail to pay such costs and expenses, the Owner may deduct them from any amounts then due or that may become due to the Contractor. In the event such costs and expenses exceed the amounts deducted by the Owner, the Contractor shall pay the balance thereof immediately upon demand by the Owner.

6-2 PERMITS AND LICENSES

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.

6-3 INVENTIONS, PATENTS, AND COPYRIGHTS

The Contractor shall pay all royalties and assume all costs arising from the use of any invention, design, process, materials, equipment, product, or device which is the subject of patent rights or copyrights.

The Contractor shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and successors and assigns, from and against all claims, damages, losses, expenses, and other costs, including costs of defense and attorneys' fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, materials, equipment, product or device, and shall defend all such claims in connection with any alleged infringement of such rights.

6-4 SAFETY AND PUBLIC CONVENIENCE

The Contractor shall conduct their operations so as to avoid injury or damage to any person or property, and to minimize any obstruction and inconvenience to the public. The Contractor shall comply with the requirements of the Contract Documents relating to safety measures applicable in particular operations or kinds of work. The Contractor shall have under construction no greater amount of Work than can be prosecuted properly with due regard to the rights and safety of the public and the workers.

Convenient access to driveways, houses, and buildings along the line of Work shall be maintained and temporary crossings shall be provided and maintained in good condition. Not more than one crossing or intersecting street or road shall be closed at any one time.

The Contractor shall provide and maintain such fences, barriers, directional signs, lights, and flagmen as are necessary to give adequate warning to the public at all times of any dangerous conditions to be encountered as a result of the construction work and give necessary directions to the public.

In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the Work, and the Contractor shall fully comply with all state, federal and other laws, rules, regulations, and orders relating to safety of the public and workers, including State of California, Division of Industrial Safety (Cal/OSHA) regulations. Safety precautions as applicable shall include, but not be limited to, adequate life protection and life saving equipment; adequate illumination for underground and night operations; instructions in accident prevention for all employees such as machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accident or injuries; and adequate facilities for the proper inspection and maintenance of all safety measures.

The names and telephone numbers of at least two medical doctors practicing in the vicinity and the telephone number of the local ambulance service shall be prominently displayed adjacent to telephones.

The right of the Engineer or the Owner's Representative to conduct construction review or observation of the Contractor's performance will not include review or observation of the adequacy of the Contractor's safety measures in, on, or near the site of the Work.

However, in the event that the Owner determines that the Contractor has failed to ensure the safety of the public and the workers, or has failed to take reasonable steps to protect the workers and the public, the Owner may give the Contractor 72-hours written notice to take appropriate action to ensure their safety. In the event the Contractor fails to comply, and the Owner takes such steps as are reasonably necessary to ensure the safety and protection of the public and the workers, the Contractor shall pay the cost and expenses incurred in taking such action. Should the Contractor fail to pay, the Owner may deduct the costs and expenses incurred in taking such action from any amounts then due or that may become due to the Contractor. In the event such costs and expenses exceed the amounts deducted by the Owner, the Contractor shall pay the balance thereof immediately upon demand by the Owner.

6-5 RESPONSIBILITY FOR LOSS, DAMAGE, OR INJURIES

The Contractor shall be responsible for all claims, demands, or liability from any cause arising out of or resulting from or in connection with the performance of the Work, excepting only those as may be caused solely and exclusively by the fault or negligence of the Owner, the Engineer, the Owner's Representative, or their consultants, or their directors, officers, employees, and agents. Such responsibility shall extend to claims, demands, or liability for loss, damage, or injuries occurring during the progress of the Work as well as after completion of the Work.

6-6 CONTRACTOR'S RESPONSIBILITY FOR THE WORK

Until the acceptance of the Work, the Contractor shall have the responsible charge and care of the Work and of the materials to be used therein (including materials for which partial payment has been made or materials which have been furnished by the Owner) 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, losses, or damages to any portion of the Work or the materials due to any cause before its completion and acceptance and shall bear the expense thereof. Where necessary to protect the Work or materials from damage, the Contractor shall, at Contractor's expense, provide suitable drainage and erect such temporary structures as are necessary to protect the Work or materials from damage. The suspension of the Work or the granting of an extension of time shall not relieve the Contractor of the responsibility for the Work and materials as herein specified.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorizations, is authorized to act at Contractor's discretion to prevent such threatened loss or injury.

6-7 PRESERVATION OF PROPERTY

The Contractor shall exercise due care to avoid injury or damage to existing improvements or facilities, utility facilities, adjacent property, and trees and shrubbery that are not to be removed.

All trees, shrubbery, and landscaping that are not to be removed, and pole lines, fences, signs, survey markers and monuments, buildings and structures, conduits, pipelines under or above ground, sewer and water lines, all highway or street facilities, and any other improvements or facilities within or adjacent to the Work shall be protected from injury or damage, and the Contractor shall provide and install suitable safeguards to protect such objects from injury or damage. If such objects are injured or damaged by reason of the Contractor's operation, they shall be replaced or restored at the Contractor's expense to a condition as good as when the Contractor entered upon the Work or as good as required by the plans and specifications if any such objects are a part of the work being performed.

The fact that any such pipe or other underground facility is not shown on the plans shall not relieve the Contractor of responsibility under this article.

In addition to any requirements imposed by law, the Contractor shall shore up, brace, underpin, and protect as may be necessary, all foundations and other parts of all existing structures adjacent to and adjoining the site of the Work which are in any way affected by the excavations or other operations connected with the performance of the Work. Whenever any notice is required to be given by the Owner or the Contractor to any adjacent or adjoining landowner or other party before commencement of any work, such notice shall be given by the Contractor.

**6-8 EXCAVATION PLANS FOR WORKER PROTECTION REQUIRED
BY LABOR CODE SECTION 6705**

If the total amount of the contract is in excess of \$25,000 and involves excavation of any trench five (5) feet or more in depth, the Contractor shall submit to the Owner for acceptance, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches. The plan shall be prepared by a registered civil or structural engineer who shall certify that the plan complies with all governmental regulations and orders, or that the registered civil or structural engineer certifies that the plan is not less effective than the shoring, bracing, sloping, or other provisions of the General Industry Safety Orders promulgated by the Department of Industrial Relations, Division of Industrial Safety, or by such other agency with responsibility therefor.

The Owner or the Engineer or their consultants may have made investigations of subsurface conditions in areas where the Work is to be performed. If so, these investigations are identified in the Special Conditions and the records of such investigations are available for inspection at the office of the Engineer. The detailed plan showing the design of shoring, etc., which the Contractor is required to submit to the Owner for acceptance in advance of excavation will not be accepted by the Owner if the plan is based on subsurface conditions which are more favorable than those revealed by the investigations made by the Owner or the Engineer or their consultants, nor will the plan be accepted if it is based on soils-related design criteria which is less restrictive than the criteria set forth in the report on the aforesaid investigations of subsurface conditions.

The detailed plan showing the design of shoring, etc., shall include surcharge loads for nearby embankments and structures, for spoil banks, and for construction equipment

and other construction loadings. The plan shall indicate for all trench conditions the minimum horizontal distances from the side of the trench at its top to the near side of the surcharge loads.

Nothing contained in this article shall be construed as relieving the Contractor of the full responsibility for providing shoring, bracing, sloping, or other provisions which are adequate for worker protection.

6-9 PERSONAL LIABILITY

No Board member, officer, director, commissioner, employee, representative, servant, agent, volunteer, or successor or assign of the Owner, the Engineer, the Owner's Representative, or their consultants shall be personally responsible for any liability arising under or by virtue of the contract.

6-10 INDEMNITY

As provided in the Agreement, the provisions of which are incorporated herein, the Contractor shall indemnify and hold harmless the Owner, the Engineer, the Owner's Representative, their consultants, and each of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and successors and assigns, from and against all claims, damages, losses, expenses, and other costs, including, but not limited to, costs of defense and attorneys' fees, arising out of or resulting from or in connection with the performance of the Work

In any and all claims against the indemnified parties by any employee of the Contractor, any subcontractor, any supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under the first and fourth paragraphs of this Section 6-10 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor, or any subcontractor, or any supplier or other person under workers' compensation acts, disability benefit acts, or other employee acts.

The obligations of the Contractor under the first and fourth paragraphs of this Section 6-10 shall not extend to the liability of the Engineer, the Owner's Representative, and their consultants, and each of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and successors and assigns, arising out of or resulting from or in connection with the preparation or approval of maps, drawings, opinions, reports, surveys, designs or specifications, providing that the foregoing was the sole and exclusive cause of the loss, damage, or injury.

The Contractor shall also indemnify and hold harmless the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their Board members, officers, directors, commissioners, employees, representatives, servants, agents, volunteers, and successors and assigns, from and against all losses, expenses, damages (including damages to the Work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the work and all of the Contractor's obligations under the contract. Such costs, expenses, and damages shall include all

costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

6-11 HOURS OF LABOR

The Contractor shall forfeit as a penalty to the Owner the maximum amount provided by statute for each worker employed in the execution of the contract by the Contractor or any of their subcontractors for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one 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 Contractors in excess of eight (8) hours per day and forty (40) hours during any one week shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay as provided in said Section 1815.

6-12 PREVAILING RATES OF PER DIEM WAGES

The Contractor shall comply with Labor Code Section 1775. In accordance with said Section 1775, the Contractor shall forfeit as a penalty to the Owner, a penalty in such amount as the Labor Commissioner shall determine for each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates of per diem wages, which include payments for travel and subsistence, among other employer payments, as defined by Labor Code Section 1773.1, for such work or craft in which such worker is employed for any work done under the contract by them or by any subcontractor under them in violation of the provisions of the Labor Code and, in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to said Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor. Moreover, failure to pay the prevailing wage may subject the Contractor to debarment, as provided in Labor Code Section 1777.1.

6-13 APPRENTICES

The Contractor and any subcontractor under them shall comply with the requirements of Sections 1777.5 and 1777.6 of the Labor Code in the employment of apprentices.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices. In accordance with Section 1773.3 of the Labor Code, within five (5) days of awarding the Contract hereunder the Owner shall send a copy of this Contract to the Division of Apprenticeship Standards.

Willful violations of Section 1777.5 will result in a forfeiture of the maximum statutory amount for each calendar day of non-compliance which shall be withheld from progress payments by Owner upon notice from the Department of Industrial Relations pursuant to Labor Code Section 1777.7. Willful violations of Section 1777.5 shall also result in the suspension of the Contractor's right to bid on or receive the award of any public works construction contract, as provided in Section 1777.7.

6-14 WARRANTY OF TITLE

The Contractor warrants clear and good title to all materials, supplies, and equipment installed and incorporated in the Work and agrees upon completion of all work to deliver the premises together with all improvements and appurtenances constructed or placed thereon to the Owner free from any claims, liens, encumbrances, or charges. Nothing contained in this article, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the Contractor for their protection, or any right under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this article shall be inserted in all subcontracts and material contracts, and notices of its provision shall be given to all persons furnishing materials for the Work when no formal contract is entered into for such materials.

6-15 PROPERTY RIGHTS IN MATERIALS

Nothing in the contract shall be construed as vesting in the Contractor any right of property in the materials used after they have been attached or affixed to the Work or the soil, or after payment has been made for materials delivered to the site of the Work, or stored subject to or under the control of the Owner. All such materials shall become the property of the Owner upon being so attached or affixed or upon payment for materials delivered to the site of the Work or stored subject to or under the control of the Owner.

Soil, stone, gravel, and other materials found at the site of the Work and which conform to the plans and specifications for incorporation into the Work may be used in the Work. No other use shall be made of such materials except as may be otherwise described in the plans and specifications.

6-16 TITLE TO MATERIALS FOUND ON THE WORK

The title to all water and to the right to use of all water, to all soil, stone, gravel, sand, minerals, and all other materials developed or obtained in the excavation or other operations by the Contractor or any subcontractor or any of their employees, and the right to use or dispose of the same, are hereby expressly reserved in the Owner and neither the Contractor, nor any subcontractor, nor any of their employees shall have any right, title, or interest in or to any part thereof, nor shall they or any of them assert or make any claim thereto. The Contractor may be permitted to use in the Work without charge any such materials which meet the requirements of these specifications.

6-17 MUTUAL RESPONSIBILITY OF CONTRACTORS

Nothing in the contract shall be interpreted as granting to the Contractor exclusive occupancy of the site of the Work. The Contractor must ascertain to Contractor's own satisfaction the scope of the project and the nature of any other contracts that have been or may be awarded by the Owner in the construction of the project, so that Contractor may perform this contract in the light of such other contracts, if any.

The Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the project. If the performance of any contract for the project is

likely to be interfered with by the simultaneous performance of some other contract or contracts, the Owner's Representative shall decide which contractor shall cease work temporarily and which contractor shall continue or whether the work under the contracts can be coordinated so that the contractors may proceed simultaneously. On all questions concerning conflicting interests of contractors performing related work, the decision of the Owner's Representative shall be binding upon all contractors concerned and the Owner, the Engineer, the Owner's Representative, and their consultants shall not be responsible for any damages suffered or extra costs incurred by the Contractor resulting directly or indirectly from the award or performance or attempted performance of any other contract or contracts on the project or caused by a decision or omission of the Owner's Representative respecting the order of precedence in the performance of the contracts.

If through acts of neglect on the part of the Contractor, any other contractor or any subcontractor shall suffer loss or damage on the Work, the Contractor may agree to settle with such other contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor will so settle. If such other contractor or subcontractor shall assert any claim against the Owner, the Engineer, the Owner's Representative, or their consultants on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor who shall hold harmless, indemnify, and defend the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents against any such claim, including all attorneys' fees and any other costs incurred by the indemnified parties relative to any such claim.

6-18 TERMINATION FOR BREACH

If the Contractor refuses or fails to execute all or any part of the Work with such diligence as will ensure its completion within the time specified, or any extension thereof, or fails to complete such work within such time, or if the Contractor is adjudged a bankrupt, or makes a general assignment for the benefit of their creditors, or if a receiver is appointed on account of their insolvency, or if they file a petition to take advantage of any debtor's Act, or if the Contractor or any of Contractor's subcontractors violate any of the provisions of the contract, or refuse or fail to supply enough properly skilled workers or proper materials to complete the Work in the time specified, as adjusted by any time extensions granted, or they fail to make prompt payment to subcontractors or for material or labor, or if the Contractor disregards any laws or ordinances, or instructions given by the Owner or Owner's Representative, the Owner may, without prejudice to any other right or remedy, serve written notice upon the Contractor and their surety of its intention to terminate the contract. Such notice by the Owner shall set forth the reasons for the intended termination of the contract, and unless within ten (10) days after the service of such notice such violations shall cease and satisfactory arrangements for the corrections thereof be made, the contract shall upon the expiration of said ten (10) days cease and terminate. In such case, the Contractor shall not be entitled to receive any further payment until the Work is finished.

Upon termination as provided above, the Owner shall immediately give written notice to the surety and the Contractor, and the surety shall have the right to take over and perform the contract; provided, however, that if the surety within fifteen (15) days after receipt of a notice of termination does not notify the Owner in writing of its intention to take over and perform the contract, or does not commence performance of the contract

within thirty (30) days from the date of serving said notice, the Owner may take over the Work and execute the same to completion by contract or by any other method it may deem advisable for the account and at the expense of the Contractor, and Contractor's surety shall be liable to the Owner for any excess cost or other damage occasioned the Owner thereby, and in such event the Owner may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plants, and other property belonging to the Contractor that may be on the site of the Work or on any other property of the Owner necessary for the Work. For any portion of such work that the Owner elects to complete by furnishing its own employees, materials, tools, and equipment, the Owner shall be compensated for such in accordance with the schedule of compensation for cost-plus work in Section 8-1 entitled PAYMENT FOR CHANGES IN THE WORK.

If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the Work, including, but not limited to, all costs to Owner arising from professional services and attorneys' fees and all costs generated to insure or bond the work of substituted contractors or subcontractors utilized to complete the Work, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner promptly upon demand. On failure of Contractor to pay such difference, the Surety shall pay on demand by Owner. Any portion of such difference not paid by Contractor or surety within thirty (30) days following the mailing of a demand for such costs by Owner shall earn interest at the rate of eleven percent (11%) per annum or the maximum rate authorized by California law, whichever is lower.

The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the Owner.

6-19 NOTICE AND SERVICE THEREOF

Any notice required or given under the contract shall be in writing, be dated, and signed by the party giving such notice or that party's duly authorized representative, and be served as follows:

To Owner: personal delivery or by deposit in the United States mail.

To Contractor: personal delivery to the Contractor or to Contractor's authorized representative at the site of the project, or by deposit in the United States mail.

To the Surety or any other person: personal delivery to said Surety or other person, or by deposit in the United States mail.

All mailed notices shall be in sealed envelopes and be sent by certified mail with postage prepaid, and shall be addressed to the addresses in the Contract Documents or such substitute addresses which a party designates in writing and serves as set forth herein.

Any notice served in accordance with this Section 6-19 shall be deemed received by the addressee seventy-two (72) hours after deposited, postage prepaid, in the United States mail.

6-20 ATTORNEYS' FEES

In any action, at law or in equity, including an action for declaratory relief, seeking to interpret or enforce the terms of the Contract, the prevailing party shall be entitled to recover a reasonable amount as attorneys' fees and costs incurred in prosecuting or defending such action, including a dispute submitted to arbitration, in addition to any other relief to which such party is entitled. The term prevailing party shall mean the party granted the greater degree or amount of relief sought, whether monetary or otherwise.

6-21 LANDS AND RIGHTS-OF-WAY

The lands and rights-of-way for the facility to be constructed will be provided by the Owner. Except to the extent the Contractor is authorized to use other property of the Owner as provided in Section 5-9 entitled USE OF OWNER'S PROPERTY DURING CONSTRUCTION, the Contractor shall make arrangements and pay all expenses for additional area required by Contractor outside the limits of the Owner's lands and rights-of-way.

Work in public right-of-ways shall be done in accordance with the requirements of the permit issued by the public agency in whose right-of-way the Work is located, and will also conform with the plans and specifications. If a permit is not required, the Work shall conform to the standards of the public agency in whose right-of-way the Work is located, in addition to conforming to the plans and specifications.

6-22 WAIVER OF RIGHTS

Except as otherwise specifically provided in the Contract Documents, no action or failure to act by the Owner, Engineer, Owner's Representative, or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract Documents, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder.

6-23 TAXES

The Contractor shall pay all sales, consumer, use, and other applicable taxes.

6-24 ASSIGNMENTS OF ANTITRUST ACTIONS

In entering into this Contract or any subcontract to supply goods, services, or materials to the Contractor pursuant to this Contract, the Contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action any of them may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to this contract or any subcontract hereunder. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgement by the parties.

6-25 PAYROLL RECORDS

It shall be the responsibility of the Contractor to maintain 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 employee in accordance with Labor Code Section 1776, and to ensure that each subcontractor also complies with all provisions of Labor Code Section 1776 and this contract provision.

All payroll records shall be certified as accurate by the Contractor or subcontractor or their agent having authority over such matters.

The Contractor shall ensure that all payroll records are available for inspection at the Contractor's principal office during normal business hours and shall notify the Owner, in writing, of the place where all payroll records are located from time to time.

The Contractor shall furnish a copy of all payroll records, upon request, to employees or their authorized agents, to the Owner, to the Division of Labor Standards Enforcement, and to the Division of Apprenticeship Standards of the Department of Industrial Relations. The Contractor shall also furnish a copy of payroll records to the general public upon request provided the public request is made through the Owner, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement of the Department of Industrial Relations.

Records made available to the general public in accordance with the prior paragraph shall be marked or obliterated in such a manner that the name and address of the Contractor and/or subcontractor and the name, address, and telephone number of all employees do not appear on the modified record.

The Contractor shall file a certified copy of any requested payroll records with the entity that requested such records within ten (10) days of the date a written request for payroll records has been received. Should any request for payroll records be submitted to the Owner, the sole obligation of the Owner shall be to transmit that request to the Contractor and advise the Contractor of Contractor's obligations under the Labor Code and of the penalties for failure to comply.

Failure of the Contractor to comply with any provision of this article or Labor Code Section 1776 within ten (10) days of the date a written request for compliance is received shall result in a forfeiture of the maximum statutory amount per calendar day or portion thereof, for each worker, until strict compliance is obtained. Upon notification by the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the Department of Industrial Relations, the Owner shall withhold penalties under this article or Labor Code Section 1776 from the Contractor's payments then due.

6-26 NOTICE OF LATENT OR HAZARDOUS CONDITIONS

In accordance with Section 7104 of the Public Contract Code,, where the contract specifications require digging trenches or excavating deeper than four (4) feet below the surface, the Contractor shall promptly, and before the following conditions are disturbed, notify the Owner, in writing, of any:

(a) Material that the Contractor may believe 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 exiting law;

(b) Subsurface or latent physical conditions differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids;

(c) Unknown physical conditions of any unusual nature, materially different from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract specifications.

Upon receipt of written notice by the Contractor of such conditions, the Owner shall promptly investigate. If the Owner finds such conditions to exist and determines that an increase or decrease in the Contractor's cost of or time required for performance of the Work will result from the change in conditions, the Owner will issue a change order.

In the event a dispute arises between the Owner and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause decrease or increase in the cost of or time required for performance of any part of the Work, the Contractor shall not be excused from the scheduled completion of the Work, and shall retain any and all rights which he may have pertaining to the resolution of disputes between the Owner and the Contractor, as provided in Section 3-9 entitled CLAIMS.

6-27 CONTRACTOR'S OBLIGATIONS CONCERNING PAYMENT OF WORKERS' COMPENSATION AND UNEMPLOYMENT INSURANCE

The Contractor shall be responsible for complying with the provisions of Division 4 of the Labor Code, relating to the Unemployment Insurance Code and securing payment of Workers' Compensation.

ARTICLE 7

CONTRACTOR'S INSURANCE

7-1 GENERAL

The Contractor shall not commence or continue to perform any work unless the Contractor, at Contractor's own expense, has in full force and effect, all required insurance. The Contractor shall not permit any subcontractor to perform work on the project unless the Workers' Compensation Insurance requirements have been complied with by such subcontractor.

The types of insurance the Contractor shall obtain and maintain are Workers' Compensation Insurance, Liability Insurance, and Builders' Risk Insurance.

Worker's Compensation Insurance and Liability Insurance shall be maintained in effect for the full guarantee period.

Insurers must be authorized to do business and have an agent for service of process in California and have an "A-" policyholder's rating and a financial rating of at least Class X in accordance with the most current A.M. Best's Rating.

As evidence of specified insurance coverage, the Contractor shall provide certificates of insurance and endorsements on forms approved by the Owner.

Any deductible or self-insured retention must be declared to and approved by the Owner. At the option of the Owner, either the insurer shall reduce or eliminate such deductibles or self-insured retentions with respect to the Owner, the Engineer, the Owner's Representative and each of their directors, officers, employees, agents, and volunteers, or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

Upon demand by the Owner, the Contractor shall deliver all policies of insurance and the receipts for payment of premiums thereof. Should the Contractor neglect to maintain in force insurance required under the Contract Documents, then it shall be lawful for the Owner to obtain and maintain such insurance, and the Contractor hereby appoints the Owner as its true and lawful attorney-in-fact to do all things necessary for this purpose. Should the Owner make such payments on behalf of the Contractor, any monies so paid shall be charged to the Contractor and shall be deducted from any payments due the Contractor under the Contract Documents.

7-2 WORKERS' COMPENSATION INSURANCE

The Contractor and all subcontractors shall cover or insure under the applicable laws relating to workers' compensation insurance, all of their employees working on or about the area affected by the Work, regardless of whether such coverage or insurance is mandatory or merely elective under the law.

Upon execution of the Agreement, the Contractor shall provide a certificate(s) of insurance certifying that Contractor has obtained for the period of the contract full Workers' Compensation Insurance coverage for all persons employed directly by the Contractor or through subcontractors in carrying out the Work under the contract. At the same time, the Contractor shall provide the insurance endorsement(s) on the forms provided as part of the Contract Documents. This insurance shall be in strict accordance with the requirements of the most current and applicable state Workers' Compensation Insurance laws. The Contractor shall defend, protect and save harmless the Owner, the Engineer, and the Owner's Representative and each of their directors, officers, employees, agents and volunteers from and against all claims, suits and actions arising from any failure of the Contractor or any subcontractor to maintain such coverage or insurance.

7-3 LIABILITY INSURANCE

The Contractor shall, at the time of execution of this Contract, file with the Owner a Certificate of Insurance, satisfactory to the Owner and evidencing liability insurance as required under the Contract Documents. The provisions required shall either be affirmatively shown on the certificate or evidenced by separate endorsement. The certificate shall provide that coverage may not be cancelled, reduced, or changed

without giving the Owner and the Engineer at least thirty (30) days prior written notice, which notice shall be effective only after being actually and physically received by the Owner and the Engineer. Notwithstanding the foregoing, Owner's initial receipt or "acceptance" of certificates of insurance, or of policies of insurance, shall not obligate the Owner to review such certificates or policies for compliance with the Owner's insurance requirements in this article. Any failure of any Contractor-provided insurance to at least match the insurance requirements of this article, whether such failure is discovered before or after issuance of the Notice to Proceed, shall not be the basis on any legal theory whatsoever for any lessening whatsoever of Contractor's financial responsibilities under this Contract for risks described in this article.

Nothing contained in the insurance requirements shall be construed as limiting the extent of the Contractor's responsibility for payment of greater damages resulting from the Contractor's operations under this Contract.

Included in such insurance shall be contractual coverage sufficiently broad to insure the matters set forth in Section 6-10, entitled INDEMNITY, above, and in Paragraph 6 of the Agreement.

7-4 BUILDER'S RISK INSURANCE

Where appropriate given the nature of the Work to be performed, the Contractor shall provide and maintain Builder's Risk Insurance covering all risks of direct physical loss, damage or destruction to the Work in the minimum amount of the dollar value of the Work contemplated under the Contract Documents, subject to adjustment by change order duly issued by the Owner, to insure against such losses until final acceptance of the Work by the Owner. Such insurance shall include explosion, collapse, underground excavation and removal of lateral support. The Owner shall be named as an additional insured on any such policy. The making of progress payments to the Contractor shall not in any way be construed as creating an insurable interest by or for the Owner or be construed as relieving the Contractor or its subcontractors of responsibility for loss from any direct physical loss, damage, or destruction occurring prior to the final acceptance of the Work by the Owner.

The insurer shall waive all rights of subrogation against the Owner. The Contractor shall provide the Owner with a certificate of insurance for Builder's Risk Insurance coverage and evidence of waiver of rights of subrogation against the Owner.

7-5 CONTRACTOR'S LIABILITY NOT LIMITED BY INSURANCE

Nothing contained in these insurance requirements is to be construed as limiting and the liability of the Contractor or the Contractor's sureties.

ARTICLE 8

ESTIMATES AND PAYMENTS

8-1 PAYMENT FOR CHANGES IN THE WORK

Changes in, additions to, or deductions from the Work, including increases or decreases in the quantity of any item or portion of the Work, shall be set forth in a written change order executed by the Owner which shall specify:

- 1) The changes, additions, and deductions to be made;
- 2) The increase or decrease in compensation due the Contractor, if any;
- 3) Adjustment in the time of completion, if any.

Adjustment in the compensation due Contractor shall be determined by one or more of the following methods in the order of precedence listed below:

- 1) Unit prices contained in the contract.
- 2) Mutually agreeable lump-sum or unit prices. If requested by the Owner's Representative, the Contractor shall furnish an itemized breakdown of the quantities and prices used in computing proposed lump-sum and unit prices.
- 3) Where an adjustment in compensation due the Contractor has not been determined, but a written change order has been issued by the Owner, the Contractor shall promptly proceed with the work involved. In such case, the Contractor shall be compensated for furnishing labor, materials, tools, and equipment on a cost-plus basis, as follows:
 - a) Cost of labor plus fifteen percent (15%) for workers directly engaged in the performance of the work. Cost of labor shall include actual wages paid including employer payments to or on behalf of the workers for health and welfare, pension, vacation, travel, subsistence, and similar purposes plus payments imposed on payroll amounts by state and federal laws.
 - b) Cost of material plus fifteen percent (15%). Cost of material shall include sales tax, freight, and delivery charges. The Owner reserves the right to furnish such materials as it deems advisable and the Contractor shall not be paid the fifteen percent (15%) markup on such materials.
 - c) For tools and equipment actually engaged in the

performance of the work, rental rates plus fifteen percent (15%). The rental rates shall be those prevailing in the area where the Work is performed. No rental charge shall be made for the use of tools or equipment having a replacement value of \$500.00 or less.

- d) Subcontractor invoices to the Contractor plus five percent (5%). Subcontractor invoices shall be based on the above-described cost of labor plus fifteen percent (15%), cost of material plus fifteen percent (15%), and tool and equipment rental rates plus fifteen percent (15%).

No payment shall be made for any item not set forth above, including, without limitation, Contractor's overhead, general administrative expenses, supervision, or damages claimed for delay in executing the remainder of the Work.

For cost-plus work, the Contractor shall submit to the Owner's Representative for verification daily work sheets showing an itemized breakdown of labor, materials, tools, and equipment used in performing the work, including the name and number of each worker employed, the number of hours employed thereon, the character of work each worker is doing, and the wages paid or to be paid each worker. In the case of tool and equipment rentals, the Contractor shall be compensated at the rate applicable to that type or article of tool or equipment reasonably necessary to perform the work contemplated by the change order, as determined by and in the sole discretion of the Owner's Representative. Receipt of the Contractor's daily work sheets by the Owner's Representative shall not be deemed an admission of the Contractor's right to be compensated for the labor, materials, tools and equipment set forth therein, but is merely an acknowledgement that the workers, materials, tools and equipment specified in the report were in fact employed or used in the prosecution of the Work by the Contractor on the date indicated in the report.

If requested by the Owner, the Contractor shall produce any books, vouchers, memoranda, or other records which will enable the Owner to determine the true, necessary cost of work and materials to be paid for. In no case of cost-plus work ordered by Owner shall additional payment be made to the Contractor due to overtime or holiday wages paid by them in connection with such cost-plus work unless specifically ordered and agreed to in writing by the Owner, and then only to the extent extra payment is regularly being made up by the Contractor for overtime or holiday work of a similar nature in the same locality. No payment will be made for work not verified by the Owner's Representative.

Any disputes regarding payment for changes in the Work or for extra work, or regarding extensions of time, shall proceed in accordance with the procedures set forth in Section 3-9 entitled CLAIMS.

8-2 NO PAYMENT FOR TEMPORARY WORK

No direct payment will be made to the Contractor for providing transportation, light, power, tools, and equipment or for furnishing, building, and maintaining camps, construction plants, access roads, sanitary conveniences, disposal work, water supply, fire protection, guards, trestles, telephone system, and other temporary works, or for the

removal of all temporary structures, plant and materials, or for medical attendance or health protection, or for watchmen, magazine keepers or guards, or for any other service, thing, or material, unless payment therefor has been provided in the Contract Documents or expressly authorized by the Owner. Compensation for all such services, facilities, things or materials necessary or required to execute the Work in accordance with the provisions of the contract shall be considered as having been included in the prices stipulated for the appropriate items.

8-3 PROGRESS PAYMENTS

The Contractor shall, on or before the tenth (10th) day of each calendar month after actual construction work is started, submit to the Owner's Representative a payment request in the form of a written estimate of the value of the work completed by the Contractor and of materials delivered on the ground at the site of the Work or stored subject to or under the control of the Owner prior to the first of the month in which the estimate is made. In reviewing such payment requests, the Owner's Representative may take into consideration, along with other facts and conditions deemed by them to be proper, the ratio of the difficulty or cost of the work done to the probable difficulty or cost of the work remaining to be done. The Owner shall retain ten percent (10%) of such estimated value as part security for the fulfillment of the contract by the Contractor and shall within thirty (30) days of the date which the estimate is received pay to the Contractor the balance of such estimated value after deducting therefrom all previous payments and all sums to be kept or retained under the terms of the contract. All amounts so retained are withheld subject to the provisions of Public Contract Code Section 7107.

Pursuant to Section 20104.50 of the Public Contract Code, should the Owner fail to make a progress payment within thirty days after receipt of the undisputed and properly submitted pay estimate from the Contractor, the Contractor is entitled to interest from the Owner at the then-prevailing legal rate.

The payment request shall be reviewed by the Owner as soon as practicable after receipt for the purpose of determining that the payment request is proper. Any payment request determined not to be proper shall be returned to the Contractor not later than seven (7) days after receipt by the Owner's Representative. Such returned requests shall be accompanied by a written explanation of the reasons why the payment request is not proper.

In the event a payment request is rejected, all or in part, beyond the seven-day period after receipt, the number of days available to the Owner to make payment without incurring interest shall be reduced by the number of days by which the Owner exceeds the seven-day return requirement set forth above.

8-4 FINAL ESTIMATE AND PAYMENT

When the Work has been completed, the Owner's Representative will make a final estimate of the total amount of work done and the amount to be paid under the terms of the contract. If the Owner finds the Work has been completed according to the contract, it shall accept the Work, file a notice of completion, and pay the entire sum found to be due after deducting all previous payments and all amounts to be retained under the provisions of the contract, including any right of offset the Owner may have against the

Contractor under the terms of this or any other contract between the Owner and the Contractor. All prior progress estimates and payments shall be subject to correction in the final estimate and payment. The final payment, including all amounts retained from any progress payments, shall not be due and payable until the expiration of thirty-five (35) days after the date of filing a notice of completion of the Work by the Owner, but in all events shall be paid within sixty (60) days of completion of the Work, as defined in Section 7107 of the Public Contract Code.

In the event of a dispute between the Owner and the Contractor over the amount due, the Owner may withhold from the final payment an amount not to exceed one hundred fifty percent (150%) of the disputed amount. In the event that retained funds are not paid within the time specified herein or are wrongfully withheld, as provided in Section 7107, the Owner shall be subject to a charge of two percent (2%) per month on the improperly withheld amount, in lieu of any interest otherwise due. In any action for collection of funds allegedly wrongfully withheld, the prevailing party shall be entitled to recover its attorneys' fees and costs incurred in such action.

It is mutually agreed between the parties to the contract that no certificate given or payment made under the contract shall be conclusive evidence of performance of the contract and no payment shall be construed to be an acceptance of any defective work or improper materials.

The Contractor further agrees that the payment of the final amount due under the contract shall release the Owner, the Engineer, the Owner's Representative, and their consultants, and each of their directors, officers, employees, and agents from any and all claims or liability arising out of the contract.

8-5 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

In addition to the amount which the Owner may retain under Section 8-3 entitled PROGRESS PAYMENTS, or under Section 8-4 entitled FINAL ESTIMATE AND PAYMENT, the Owner may withhold a sufficient amount or amounts from any payment otherwise due to the Contractor which in Owner's judgment may be necessary to cover:

- 1) Payments which may be past due and payable for properly filed claims against the Contractor or any subcontractors for labor or materials furnished in or about the performance of the Work on the project under this contract;
- 2) Estimated or actual costs for correcting defective work not remedied;
- 3) Estimated or actual costs for performing any work required of the Contractor pursuant to Section 3-7 entitled FINAL CLEANUP;
- 4) Estimated or actual costs of extraordinary or overtime inspection services provided by the Owner;

- 5) Costs incurred by the Owner for relocation of underground facilities which should have been borne by the Contractor under the Contract Documents;
- 6) Amounts claimed by the Owner as forfeiture due to delay or other offsets;
- 7) Any other amounts owing by Contractor to Owner;
- 8) Unpaid premiums for insurance required under the contract.

The Owner may apply such withheld amount or amounts to the payment of such claims as the Owner deems necessary or advisable in Owner's sole discretion. In so doing, the Owner shall be deemed the agent of the Contractor and any payments so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor, and the Owner shall not be liable to the Contractor for such payment made in good faith. Such payments may be made without prior judicial determination of the claim or claims. The Owner will render to the Contractor a proper account of such funds disbursed on behalf of the Contractor.

8-6 COST STATEMENT

The Contractor shall furnish the Owner promptly, upon completion of the Work, all information necessary to determine the cost of the Work, including an itemized statement in a form satisfactory to the Owner of the actual cost of all labor, materials, rentals, repairs, compensation and other insurance, transportation of labor, equipment and materials, engineering or other special services, supervision, overhead, depreciation, and taxes properly chargeable against the Work, and any and all costs entering into the work performed. The Contractor shall permit the Owner to have access to original payrolls, vouchers, and other records to the extent required to verify the figures given in said statement, and the Contractor shall not be entitled to receive payment on account of the final estimate as hereinabove provided, unless and until the Contractor furnishes the Owner a satisfactory statement of the cost of the entire Work.

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SPECIAL CONDITIONS

SC-1 BEGINNING AND COMPLETION OF WORK

The Contractor shall begin work within ten (10) days after the date set forth in the Notice to Proceed and shall complete all work under the contract within seventy-five (75) days after the date for commencement set forth in the Notice to Proceed.

SC-2 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

If any person contemplating the submittal of a bid for the proposed contract is in doubt as to the true meaning of any requirement of drawings or specifications or finds any discrepancies in, or omissions from, the drawings or specifications, he or she may submit to the Architect via email at the address given below, a written request for an interpretation or correction thereof. The written request must be received at least five (5) calendar days prior to the date fixed for opening of bids. The person making the request will be responsible for its prompt delivery. Interpretations or corrections will be made only by addenda to specifications or by dated revisions of drawings with a copy of each addition or change.

Email address: jlomagno@ra-arch.com

Please reference Ventura Harbor Village ADA Compliant Restroom Remodel/Trash Enclosure Improvements in the subject line of the email.

Telephone questions will not be accepted.

SC-2 LIQUIDATED DAMAGES FOR DELAYS

It will be impractical or extremely difficult to fix the actual damages that may result from any delays in completion of the work beyond the date agreed upon. It is therefore stipulated and agreed that if all the work included in the contract is not completed on or before the date of completion as provided in Section SC-1 entitled BEGINNING AND COMPLETION OF WORK, or within such extensions of time as may be granted, the Contractor shall pay to the Owner in accordance with the provisions of Section 5-3 of the General Conditions, as agreed, fixed and liquidated damages of \$500.00 for each calendar days delay until said work is satisfactorily completed or until the Owner may reasonably procure the completion thereof by another contract, or complete the same itself..

SC-3 BREAKDOWN OF CONTRACT PRICE

For use in preparing estimates of completed work on which to base claims for partial payments, the Contractor shall prepare an itemized breakdown of the contract price indicating quantities and unit prices for the various elements of the work.

The breakdown shall be a true representation of the contract price for work covered by the specifications and drawings and shall be subject to approval by the Owner. An unbalanced breakdown will not be acceptable.

Values assigned to the price breakdown will be used only as a basis for partial payment and not as a basis for additions to or deductions from the contract price.

SC-4 CONTRACT DRAWINGS

The location of the Work and existing and new facilities and appurtenant works are shown on the drawings which are made a part of these specifications as listed herein.

When deemed necessary by the Engineer, additional detailed drawings will be furnished to the Contractor during the progress of the Work. The Contractor will be furnished such number of copies of the drawings and specifications as may be required for carrying out the Work. Contact prints of the original drawings will be furnished to the Contractor for construction purposes upon request.

LIST OF DRAWINGS

Sheet No.	Title
T	Title Sheet
A-1.1	Master Site Plan
A-1.2	Trash Enclosure Plan and Details
A-2.1	Demolition, Proposed Floor Plans, Interior Elevations
A-2.2	Reflected Ceiling Plan, Schedules, General Notes
A-2.3	Details
MP0.1	Mechanical/Plumbing cover Sheet
M1.01	HVAC Demo and New Floor Plan
P1.01	Plumbing Demo and New Floor Plan
P2.01	Plumbing Schedules and Details
E1	General Notes, Abbreviations, and Symbols, Etc.
E2	General Electrical Specifications Sheet
E3	Electrical Power and Lighting Plan - Demolition
E4	Electrical Power and Lighting Plan - Proposed
E5	Electrical Fixture Schedule, Details
E6	Electrical Title 24 Documentation
E7	Electrical Title 24 Documentation

SC-5 DRAWINGS AND DATE REQUIRED TO BE SUBMITTED BY CONTRACTOR

A. General. The Engineer's review and approval of drawings and of data required to be submitted herein shall not relieve the Contractor from the full responsibility for the correctness of details and dimensions, and for compliance with the specifications. The Contractor shall assume all responsibility and risk for misfits due to any errors on the drawings.

B. Fabricated Materials.

(1) At a time sufficiently early to allow review as hereinafter specified and to accommodate the rate of construction progress required under the contract, the Contractor shall submit to the Engineer for review, complete shop, assembly, and layout drawings of the fabricated materials to be furnished and installed under the contract.

(2) Said drawings shall indicate type of material proposed to be used and six copies shall be submitted prior to manufacture or fabrication of the respective articles.

(3) The Engineer will, within ten (10) days, return two copies of each drawing to the Contractor with corrections indicated, which drawings shall be considered as the only drawings or prints used for fabrication. If in the opinion of the Engineer, a general revision of drawings is required to prove compliance with the specifications, the Contractor shall revise said drawings and resubmit them for review.

C. Equipment.

(1) Within ten (10) days after executing the contract, the Contractor shall submit to the Engineer for review six complete sets of shop drawings and catalogue data on equipment to be furnished under the contract. The required drawings shall include complete outline and assembly drawings of the equipment, details of electrical connections, schematic control diagrams, foundation requirements and the location, size and length of any required anchor bolts, and shall clearly indicate clearance, casting and machining dimensional tolerances and quality of surface finishes.

(2) The drawings submitted for review by the Contractor shall also disclose the details of construction including dimensions, the properties of all materials used, applicable ASTM, ANSI, AWWA, or other recognized Standard Specifications, and the manufacturer's catalogue, serial or other reference numbers for all equipment to be furnished.

(3) If the Engineer finds that the drawings submitted by the Contractor are in accord with acceptable practice and that they appear to meet the requirements of the specifications, the Engineer will return two sets of said drawings so noted within thirty (30) days after their receipt. Otherwise, two sets of drawings will be returned to the Contractor within said thirty (30) day period with a statement of the points wherein they have been found unsatisfactory, and the Contractor shall proceed at once to revise said drawings until they are found to be satisfactory by the Engineer.

D. Revisions.

(1) Revisions shown on said shop assembly or layout drawings, equipment drawings, or catalogue data necessary to meet the requirements of the specifications shall not be the basis of claims for extra charges or an extension of time. The Contractor shall accept such revisions or submit others for the Engineer to review.

(2) When delay is caused by the resubmission of details, the Contractor shall not be entitled to any damages or extensions of time on account of such delay. The required corrections noted by the Engineer shall be made on the tracings as soon as practicable and new prints submitted. As soon as practicable after acceptance by the engineer of any shop, assembly, or layout drawing, one clear legible transparent print on vellum of the tracing of said drawing shall be forwarded to the Engineer.

(3) No fabrication or other work shall be performed in advance of the receipt of the final accepted drawings. The Contractor shall not deviate in any way from the design, details, or dimensions shown on said final drawings, without written consent of the Engineer.

E. Instruction Manuals.

(1) General. Prior to delivery of mechanical and electrical equipment, the Contractor shall furnish to the Engineer at least five complete sets of installation, maintenance, and operation data for all electrical and mechanical equipment furnished under this contract.

(2) Extent of Data. Each set of data shall include, but shall not necessarily be limited to, descriptive brochures, installation, operation and maintenance manuals, standard operation manuals, special instructions, and parts lists. Each manual, brochure, etc., shall relate directly and specifically to the applicable equipment and shall not be presentations of a general nature that will make it difficult to ascertain applicability of the data presented.

(3) Equipment Covered. Mechanical and electrical equipment for which such data is to be furnished shall include, but is not necessarily limited to: Valves, air compressor, electrical switchboard and controls.

SC-6 MATERIALS

All materials and articles used for permanent installation in the Work shall be new and shall conform to the respective specifications or brands designated hereinafter or elsewhere in the contract, and the materials or articles shall conform to the best standard construction practice, as determined by the Engineer.

All material and articles furnished shall be subject to rigid inspection and no materials or articles shall be used in the work until it has been inspected by the Engineer.

SC-7 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only:
Any Product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

SC-8 SUBSTITUTIONS

(1) The Instructions to Bidders specify time and conditions for submitting request for Substitutions during the bidding period.

(2) After the start date established by the Notice to Proceed, substitution will be considered only when a product becomes unavailable through no fault of the Contractor.

(3) Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents. Limit each request to one proposed Substitution.

SC-9 INSPECTION AND TESTS OF MATERIALS

A. Readiness for Inspection. The Contractor shall furnish the Owner full information as to the progress of the Work in its various parts and shall give the Owner timely notice of the Contractor's readiness for inspection. When practicable, inspection will be made

during the manufacture of articles. The Contractor shall furnish, without additional charge, all reasonable facilities and assistance for the safe and convenient inspection and tests required by the Owner.

B. Final Inspection and Acceptance. Final inspections and acceptance of the articles or materials may be made after delivery at the work site at the Owner's expense. In the event that any material at the work site is rejected on account of failure to pass the inspection or test, the Contractor shall replace such rejected material promptly. Final inspection will be made as promptly as practicable but may not in all cases be made prior to erection or final assembly.

C. Right to Reject Articles and/or Materials.

(1) The Owner shall have the right at all times and places to reject articles and/or materials to be furnished hereunder which in any respect fail to meet the requirements of the specifications, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site.

(2) If the inspector, through an oversight or otherwise, has accepted material or work which is defective or which is contrary to the specifications, such materials, no matter in what state or condition of manufacture, delivery or erection, may be rejected by the Owner.

(3) Compliance with the specifications is distinctly a duty of the Contractor, and shall not be avoided by act or omission on the part of the Owner's inspector.

SC-10 SANITATION

All parts of the Work shall be maintained in a neat, clean, and sanitary condition. All wastes and refuse from sanitary facilities provided by the Contractor or from any other source related to the Contractor's operations shall be taken care of in a sanitary manner, satisfactory to the Owner and in accordance with laws and regulations pertaining thereto. Fixed and portable toilets, which are to be made inaccessible to flies, shall be provided for use by employees.

The Contractor shall furnish all the facilities and means for the proper sanitation of the Work and shall protect and hold harmless the Owner, the Engineer, officers, and employees from any liability resulting from improper or insufficient sanitation measures.

SC-11 AS-BUILT DRAWINGS

Within thirty (30) days after acceptance of the Work by the Owner, the Contractor shall furnish a marked-up set of drawings indicating "As-Built" conditions, which shall reflect all changes made during construction.

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SECTION 02070

DEMOLITION AND CLEARING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Demolition of designated structures and removal of materials from site.
- B. Demolition and removal of foundations and slabs-on-grade.
- C. Disconnecting and removal of identified utilities.
- D. Removal/protection of items as indicated.
- E. Removal of surface debris.
- F. Removal of designated paving and curbs.
- G. Clearing of designated plant life and grass.
- H. Legal disposal of removed materials at an approved off-site facility.

1.02 SUBMITTALS

- A. Removal Schedule: Indicate demolition and removal sequence and location and construction of barricades, fences and temporary work.

1.03 PROJECT RECORD DOCUMENTS

- A. Accurately record actual locations of any capped utilities, subsurface obstructions, and any relocated underground utility lines.

1.04 REGULATORY REQUIREMENTS

- A. Conform to applicable portions of the 2016 California Building Code for demolition of structures, safety of adjacent structures, dust control, runoff control, and legal disposal of removed materials.
- B. Conform as applicable to: Safety requirements of the California Administrative Code, Title 19; the latest Construction Safety Orders of the Division of Industrial Safety, State of California; and the Associated General Contractor's Manual of Accident Prevention in Construction, latest addition.
- C. Conform to all federal, state, and local ordinances relating to the protection of the public and Contractor's personnel and the flow of traffic. Provide all required protection for persons and property throughout the progress of the work.
- D. Obtain required permits from governing authorities.
- E. Coordinate demolition and clearing work with utility companies. Notify affected

utility companies before starting work and comply with their requirements.

- F. Do not close or obstruct roadways, sidewalks, or hydrants without permits.
- G. Do not close or obstruct width of egress or exits indicated to remain.
- H. Conduct operations with minimum interference to public or private access. Conduct site clearing operations and removal of debris to ensure minimum interference with roads, driveways, walkways, and other adjacent occupied or used facilities.
- I. Conform to procedures of the County of Santa Barbara authority upon discovery of hazardous or contaminated materials.
- J. Control air pollution caused by dust and dirt; comply with all governing regulations. Provide adequate water sprinkling of all areas during site clearing operation as required to reduce dust to a minimum.

PART 2 - PRODUCTS

2.01 FILL MATERIAL

- A. Fill Material: As specified in Section 02200.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Demolition and Clearing Conference. As soon as possible after award of contract, meet with Architect. Review requirements (contact documents) submittals, status of coordinating work, and establish demolition schedule. Review requirements for shut-off, capping, and continuation of utility services, and protection of on-site operations and facilities.
- B. Provide, erect, and maintain temporary barriers and security devices [as required by 2016 California Building Code.
- C. Protect existing structures which are shown to remain.
- D. Prevent movement or settlement of adjacent structures. Provide bracing and shoring.
- E. Mark location of utilities.

3.02 DEMOLITION AND CLEARING REQUIREMENTS

- A. Conduct demolition to minimize interference with adjacent structures and occupancies.
- B. Cease operations immediately if adjacent structures appear to be in danger. Notify Architect. Do not resume operations until directed.
- C. Conduct demolition operations and removal of debris to ensure minimum interference with roads, driveways, walkways, and other adjacent occupied or used facilities. Do

not close or obstruct access to other occupied or used facilities without approval by the Architect.

- D. Maintain pedestrian and vehicle egress and access routes to other occupied or used facilities. Do not close or obstruct walkways or sidewalks without written approval of Architect. Ensure safe passage of pedestrians around area of demolition; erect temporary on-site fenced, railed or covered pedestrian passageways in conformance with Table 3306.1 of the 2016 California Building Code.
- E. Temporary fences, barricades, coverings, or other such devices shall be provided to protect persons and property and to preserve existing items indicated to remain; apply protection to adjacent properties as required. Demolition and clearing work shall not be commenced until all temporary protection work and any required warning lights and apparatus are installed.
- F. Interruption of Existing Services. Contractor's attention is called to the requirements to maintain occupancy and use of existing adjacent buildings and the need to protect existing conduit, piping, and other such items.
- G. Maintain existing utilities indicated to remain; keep in service and protect against damage during demolition operations. Do not interrupt existing utilities serving adjacent occupied facilities, except when authorized in writing by the Owner. Provide temporary utility services during interruptions to existing facilities, as acceptable to the Owner.
- H. Control air pollution caused by dust and dirt; comply with all Air Pollution Control District regulations. Provide adequate water sprinkling of exterior areas during demolition operation as required to reduce dust to a minimum. Cease dust-producing demolition and clearing operations when wind speeds exceed 20 mph average over one hour.
- I. Trucks transporting demolition and clearing materials off site shall maintain a minimum 2 feet freeboard and shall be tarped. Roadways in the vicinity of site clearing egress points shall be swept as necessary to prevent accumulation of silt, minimum once each day.
- J. Diesel powered equipment shall be turned off when not in use for more than 20 minutes and gasoline powered equipment shall be turned off when not in use of more than 5 minutes.
- K. The Contractor shall be responsible for damage to existing work which is to remain. Existing work that is subject to damage, because of operations being carried on adjacent thereto, shall be covered, boarded up, or substantially enclosed or protected.
- L. Upon completion of demolition and site clearing and prior to proceeding with earthwork, exposed subsurfaces shall be inspected by the Soils Engineer. Remove any unsuitable material as directed.

3.03 DEMOLITION

- A. Disconnect, remove and cap designated utilities within demolition areas.

- B. Remove designated foundation walls and footings to a minimum of two feet below finished grade throughout entire site.
- C. Remove concrete slabs on grade.
- D. Backfill areas excavated caused as a result of demolition operations. Use approved soil materials, placed in horizontal layers with each layer compacted as specified under Section 02200.
- E. Rough grade and compact areas affected by demolition to maintain adjacent site grades and contours. Compact affected soils as specified under Section 02200.
- F. Remove demolished materials from site and dispose in a legal manner.
- G. Do not burn or bury materials on site. Leave site in clean, evenly graded condition to meet and join adjacent grades.
- H. Remove temporary work.

3.04 CLEARING

- A. Conduct site clearing to minimize interference with adjacent buildings.
- B. Cease operations immediately if hazardous materials are discovered. Notify Architect. Do not resume operations until directed.
- C. Clear areas required for access to site and execution of work. Remove designated trees, shrubs, grass, weeds, stumps, and other vegetation, improvements, or obstructions as shown or which interfere with new construction.
- D. Remove existing designated improvements, both above grade and below grade, to the extent indicated or as required, including utility or accessory structures, fences, pavements, walks, curbs, gutters, catch basins, manholes, foundations, walls, and other such items as applicable.
- E. Perform all stripping and grubbing as necessary to remove all objectionable material from the building site. Remove a minimum of 4 inches of topsoil and whatever additional topsoil is deemed necessary to remove all vegetation, organic matter, or other objectionable material from areas of the site to received the new building and paving. Contractor shall be responsible for removal to a greater depth when necessary, to remove all vegetation and deleterious material encountered.
- F. Remove trees and shrubs within areas indicated. Remove stumps, main root ball, root system to a depth of 24 inches and surface rock.

3.05 FILL/BACK FILL

- A. Fill below-grade areas and voids resulting from demolition and clearing operations. Use approved soil material, placed in horizontal layers with each layer compacted as specified in Section 02200.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 02200

TRENCHING AND BACKFILL

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section describes the materials, installation and testing of utility trench excavation, backfilling and compaction. The trenching encompasses potable water, sewer, power and communications systems.

1.02 SUBMITTALS

- A. Submit information on the sand bedding and backfill material to be employed on the project. Submit a report from a testing laboratory verifying that the material contains less than 1% asbestos by volume or weight and conforms to the gradations specified.

1.03 TRENCH DEFINITIONS

- A. "Pipe Zone" shall refer to the area below the proposed utility elevation to a point one foot above the utility top of pipe.
- B. "Trench Zone" shall refer to the area between the pipe zone and the street zone. This typically is reserved for utilities that are buried deeper than 36 inches to the top of pipe. If no pavement is present, the trench zone shall extend to the top of the trench.
- C. "Street Zone" shall refer to the area 24 inches below the pavement zone.
- D. "Pavement Zone" shall refer to the asphalt pavement and aggregate base structure of the roadway.

PART 2 - PRODUCTS

2.01 IMPORTED SAND

- A. Imported sand for this project shall comply with the gradations in the following table. Sand shall have a minimum sand equivalent of 30, shall not exceed 10 percent passing No. 200 sieve and the fines shall be non-plastic.

Sieve Size	Percent Passing by Weight
3/8 inch	100

No. 4	75 – 100
No. 30	12 – 50
No. 100	5 – 20
No. 200	0 – 10

2.02 OVEREXCAVATION AND FILL MATERIALS

- A. The site overexcavation requirements are as stated in the Project geotechnical report. As stated in the report, native material may be used in the overexcavation areas as long as it meets the requirements of the geotechnical report.
- B. Native earth material for this project that is free from roots, debris, rocks larger than 3-inches in diameter where 50% of the material passes a No. 200 sieve can be used as backfill in the trench zone. At least 40 percent shall pass a No. 4 sieve.

2.03 ROCK FILL AND STABILIZATION

- A. If needed for subgrade stabilization, use a geotextile fabric that is non-biodegradable and non-woven. Rock fill for stabilization shall meet this specification and meet the following gradation:

Sieve Size	Percent Passing by Weight
3 inches	100
1.5 inches	70-100
0.75 inches	60-100
No. 4	25-55
No. 30	10-30
No. 200	1-10

2.04 AGGREGATE BASE AND CRUSHED STONE

- A. Aggregate base course and aggregate surface course shall comply with Standard Specifications for Public Works Construction (SSPWC) Section 200-2.4 Crushed Miscellaneous Base. Crushed miscellaneous base shall be crushed rock or gravel, durable and free from slaking or decomposition under the action of alternate wetting or drying. The material shall be uniformly graded and shall meet the following gradation requirements:

Sieve Size	Percentage Passing
1-inch	100
3/4-inch	90 - 100
3/8-inch	50 - 80
No. 4	35 - 55
No. 30	10 - 30
No. 200	2 - 9

- B. The rock shall have a sand equivalent value not less than 35.

2.05 WARNING TAPE

- A. Furnish and install a 6-inch wide, polyethylene, red underground warning tape 12 inches above full length of concrete electrical encasement reading, "CAUTION ELECTRIC LINE BURIED BELOW". Other utilities located in the utility trenches shall have applicable wording on the warning tape identifying what specific utility lies underneath the warning tape.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Request underground utilities to be located and marked within and surrounding construction areas prior to commencing excavation and in accordance with District Standards and project Drawings.
- B. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- C. Maintain and protect above and below grade utilities indicated to remain.

3.02 TRENCHING

- A. Excavate the utility trench to the lines and grades shown on the Plans with allowance for pipe material thickness, sheeting and shoring if used, and for utility bedding. The tank site where the excavation is to occur is composed of bedrock conditions. Bedrock excavation shall be anticipated and included in the bid price for the utility trench. If the trench is overexcavated, refill the trench to the correct elevation with additional compacted sand or rock refill. Place the material in the trench in lifts not exceeding 8-inches in thickness.

- B. Length of open trench shall be limited to the amount of work that can be completed in one work day or 100 feet ahead of the previous day work heading. Complete backfilling and compaction a maximum of 50 feet behind the pipe laying.
- C. District reserves the right to make changes in lines, grades, and depths of the utility when changes are required for Project conditions.
- D. Establish line and grade with laser-beam instrument and a qualified operator to establish lines and grades based on temporary survey information provided by District.
- E. Maintain grade alignment of utility using string line parallel with grade line and vertically above centerline of utility.
- F. Determine elevation and position of string line from elevation and position of offset points or stakes located along utility route.
- G. Grade the bottom of the trench to the line and grade to which the utility is to be laid. Remove hard spots that will prevent a uniform thickness of utility bedding. Place the specified thickness of utility bedding. Compact the bedding to the specified compaction. Excavate the bedding at the pipe bell locations to prevent stressing the utility or insufficient bedding under the utility springline.

3.03 DISPOSAL OF EXCESS AND UNSUITABLE EXCAVATED MATERIAL

- A. Remove and legally dispose of all grubbed and excavated material. The Owner reserves the right to take samples of unsuitable/excess material.
- B. Unsuitable material shall be defined as material containing excessive amounts of organic matter, peat, blue clay, trash or debris; or as designated by the Owner's Materials Inspector; or debris produced by clearing, grubbing, and demolition of existing structures, pavement, or utilities; or soil classified by test method ASTM D2487 as groups OL, CH, MH, OH or PT; or not meeting the grading or classification specified for the Work.

3.04 BACKFILLING

- A. Once the utility has been installed and assembled in the trench, backfill trenches to contours and elevations with specified fill materials. Place the pipe zone backfill in maximum 8-inch lifts keeping the backfill level even on both sides of the utility to prevent shifting from the line or grade established. Place the material around the utility so that the pipe barrel is completely supported on both sides and no voids are present.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces. Compact each lift to the relative compaction specified in this Section.

- C. Place fill material in continuous layers and compact. Do not allow the backfill material to free fall into the trench until at least 2 feet of backfill has been placed over the utility. Do not drop objects or sharp, heavy pieces of equipment directly onto the utility or the material surrounding the utility. Do not operate heavy equipment over the utility until 3 feet of compacted material has been placed over the top of pipe.
- D. Do not leave more than 50 feet of trench open at end of working day. Any open excavations shall be covered with steel plates.
- E. Remove and dispose of all nuisance water entering the trench and use as dust control or irrigation. Do not discharge to a storm drainage system.
- F. Backfill the trench to the surrounding grades or as shown on the Plans.
- G. Native soil can be used as backfill against structures as long as particles larger than 4 inches in maximum dimension are removed. Native soil can be used around the Site to establish the necessary grades or exported offsite and disposed of legally. If the subgrade is dried and desiccated, the exposed surface shall be scarified to a depth of 8 inches, moisture conditioned to at least 2 percent over optimum moisture, and compacted to at least 90 percent of the maximum dry density determined from ASTM D1557. Crushed miscellaneous base shall be used underneath the structure for stabilization to the limits shown on the Drawings or to achieve grade.
- H. Onsite backfill materials and imported backfill materials shall be evenly placed in uniform horizontal loose lifts not exceeding 8 inches in thickness, and compacted by mechanical means to a relative compaction value as required in these specifications and determined by ASTM Test Method D1557. Each layer of fill material shall cover the length and width of the area to be filled before the next layer of material is placed. The moisture content of the material shall be controlled and water shall be applied as necessary to achieve the specified compaction at optimum moisture content and for the prevention of dust nuisance. No fill material shall be placed on standing water in any excavation.
- I. In general, starting at subgrade level, excavations shall always be at or within 2 percent of optimum moisture content.

3.05 COMPACTION REQUIREMENTS

- A. Cover utility in the pipe zone and bedding with imported sand. Mechanically compact uniformly to minimum 90 percent relative compaction. All backfill materials shall be mechanically compacted to the specified percentage of maximum dry density at optimum moisture content as determined by ASTM D 1557. Backfill placed within 5 feet of structures shall be compacted using lightweight, hand operated compaction equipment.
- B. Trench zone and street zone compaction shall be 95 percent relative compaction.
- C. Compact all fill to 95 percent relative compaction.

- D. Compaction shall be performed using mechanical equipment, such as rollers, hand tampers, etc. Do not use high impact hammer type equipment. Any damage or displacement to utilities or structures as a result of the Contractor's operation shall be repaired or replaced at the Contractor's expense. Accommodate District compaction testing. This might require that the Contractor stop compaction work in areas to be tested, and dig shallow holes for testing equipment. Should compaction failures occur, testing frequencies shall be per the Owner. Any required re-testing will be at the Contractor's expense.

- E. Each layer of fill shall be mechanically compacted to the specified percentage of maximum dry density at optimum moisture content as determined by ASTM D1557. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content. Backfill placed within 5 feet of structures shall be compacted using lightweight, hand operated compaction equipment.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 02831

CHAIN LINK FENCES

PART 1 - PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fence framework, fabric, privacy screening and accessories.
- B. Excavation for post bases; concrete foundation for posts.
- C. Shop drawings, site plan and product literature submittals.

1.02 REFERENCES

- A. ANSI/ASTM A123 - Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products.
- B. ANSI/ASTM F567 - Installation of Chain-Link Fence.
- C. ASTM A116 - Zinc-Coated "Galvanized" Steel Woven Wire Fence Fabric.
- D. ASTM A120 - Pipe, Steel, Black and Hot-Dipped Zinc Coated "Galvanized" Welded and Seamless, for Ordinary Uses.
- E. ASTM A121 - Zinc-Coated "Galvanized Steel Barbed Wire.
- F. ASTM A153 - Zinc-Coated (Hot-Dip) Iron and Steel Hardware.
- G. ASTM A392 - Zinc-Coated Steel Chain-Link Fence Fabric.
- H. ASTM C94 - Ready-mixed Concrete.
- I. ASTM F668 - Poly (Vinyl Chloride) (PVC) Coated Steel Chain Link Fence Fabric.
- J. Standard specifications for Public works Construction - SSPWC "Greenbook".
- K. ASTM F1181 - Industrial and Commercial Horizontal Slide Gates.

1.03 SYSTEM DESCRIPTION

- A. Fence Height: as indicated on Drawings.
- B. Line Post Spacing: At intervals not exceeding [6] six feet.

1.04 SUBMITTALS

- A. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, [privacy screening and schedule of components.
- B. Product Data: Provide data on fence fabric, posts, accessories, wind screen fittings and hardware.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with ANSI/ASTM F567.

1.06 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum ten years documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum five years documented experience and approved by material manufacturer. A California Contractor's State License Board Class C-13 license is required.

1.07 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on drawings.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Anchor Fence Inc.
- B. Builders Fence Company, Inc.
- C. Fence Factory.

2.02 MATERIALS

- A. Framing (Steel): ASTM A120; Schedule 40 steel pipe, standard weight, one piece without joints.
- B. Fabric Wire (Steel): ASTM F668 PVC coated.] The fence fabric with pre-inserted slats shall be manufactured by *PrivacyLink*®, LLC, P.O. Box 295, Hyde Park, Utah 84318, or approved equivalent. The manufacturer may be contacted at 800-574-1076, 435-563-1058 or via fax at 435-563-1062. The manufacturer's web site is located at www.eprivacylink.com and E-Mail may be sent to info@eprivacylink.com.
- C. Concrete: ASTM C94: Normal Portland Cement, 2,500 psi strength at 28 days, 3 inch slump; 1/2 inch nominal sized coarse aggregate.

2.03 COMPONENTS

- A. Line Posts: 1.9 inch diameter O.D.
- B. Corner and Terminal Posts: 2.38 inch diameter O.D.
- C. Top and Brace Rail: 1.66 inch diameter O.D., plain end, sleeve coupled. Top rails typical for all fencing.
- D. Fabric: 2 inch diamond mesh interwoven wire, 9]gage, knuckled both selvages.
- E. Tension Wire: 6 gage galvanized coil spring steel, single strand.

- F. Tension Band: 1/8 X 1 inch galvanized steel.
- G. Tension Bar: 3/16 X 3/4 inch galvanized steel.
- H. Truss or Tension Rod: 3/8 inch diameter galvanized steel.
- I. Tie Wire: 11 gage galvanized steel wire.

2.04 ACCESSORIES

- A. Caps: Malleable iron galvanized; sized to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, fasteners and fittings: galvanized steel.
- C. Privacy Slats: HPDE strips, sized to fit fabric weave. The fence fabric with pre-inserted slats shall be manufactured by *PrivacyLink*®, LLC, P.O. Box 295, Hyde Park, Utah 84318. The manufacturer may be contacted at 800-574-1076, 435-563-1058 or via fax at 435-563-1062. The manufacturer's web site is located at www.eprivacylink.com and E-Mail may be sent to info@eprivacylink.com.

2.05 FINISHES

- A. Components, Hardware, Accessories and Fabric: Vinyl coating black color over coating of 1.8 oz/sq ft galvanizing, in conformance with ASTM F-668, class 2b, thermally fused and in conformance with "Greenbook" Section 206-6.3.2.
- B. The privacy slats for *PrivacyMaster*®, which are pre- inserted at the time of manufacturing, shall be double wall, self locking, 1.5" (approx.) wide to provide a tight fit in the fence fabric and provide 90% (approx.) privacy. The slats shall be manufactured from virgin, high- density polyethylene (HDPE) and shall be black.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Set intermediate, terminal and gate posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
- B. Line Post Footing Depth Below Finish Grade: ANSI/ASTM F567.
- C. Corner, Gate and Terminal Post Footing Depth Below Finish Grade: ANSI/ASTM F567.
- D. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail, one bay from end and gate posts.
- E. Provide top rail through line post tops and splice with 6 inch long rail sleeves.
- F. Install center and bottom brace rail on corner gate leaves.
- G. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
- H. Position bottom of fabric 2 inches above finished grade or paving.

- I. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
- J. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- K. Install bottom tension wire stretched taut between terminal posts

3.02 ERECTION TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From True Position: 1 inch.
- C. Components shall not infringe upon adjacent property lines.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 03000

GENERAL CONCRETE CONSTRUCTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials, installation, and testing of formwork, reinforcing steel, joints, concrete, and finishing and curing for general concrete construction. Structural concrete for the building structures shall be per the structural plan sheets.

1.02 SUBMITTALS

- A. Prepare mix designs in accordance with ACI 318, Chapters 4 and 5, except as modified herein.
- B. Submit mill test certificates identifying chemical and physical analyses of each load of reinforcing steel delivered. If mill test reports are unavailable and the quantity of steel for a structure exceeds 5 tons, provide a laboratory test to prove conformance with the specified ASTM standard.
- C. Submit reinforcing bending lists and placing drawings for all reinforcing. Placing drawings shall indicate all openings including additional reinforcing at openings and corner bar arrangements at beams, walls, and footings indicated in the typical detail and structural drawings. Placing drawings shall be coordinated with the concrete placing schedule. Each bending list and placing drawing submitted shall be complete for each major element of a structure (grade slabs, footings, walls, deck, floor, or roof slabs) including dowels and corner bars. Furnishing such lists shall not be construed that the lists will be reviewed for accuracy. Be responsible for the accuracy of the lists and for furnishing and placing reinforcing steel in accordance with the details shown in the Drawings and as specified. Placing drawings shall not incorporate photocopies of the Contract Drawings.
- D. Submit six copies of a report from a testing laboratory verifying that aggregate material contains less than 1% asbestos by weight or volume and conforms to the specified gradations or characteristics.
- E. Show dimensions and thicknesses of top slabs. Show reinforcing wire and steel. Show materials of construction by ASTM reference and grade.
- F. Submit concrete tickets to the District's Representative at the time of delivery.

- G. Submit manufacturer's catalog data on precast concrete items. Show dimensions of vaults and thicknesses of walls, floors and top slabs. Show reinforcing wire and steel. Provide information on the internal vault equipment lifting hooks. Show materials of construction by ASTM reference and grade.
- H. Submit manufacturer's design calculations and certification signed and sealed by a professional engineer registered in the State of California that precast waste holding tank design and construction comply with the specified design load conditions and the referenced ASTM specifications.

1.03 QUALITY ASSURANCE

- A. The manufacturer is responsible for the performance of all inspection requirements in manufacturing the precast concrete tank. In addition, the precast concrete tank to be installed under this Contract may be inspected by the District's Materials Inspector. Manufacturer shall notify District in writing at least 10 Working Days in advance prior to beginning manufacture or fabrication of the precast tank, requesting inspections or performing tests. The inspector shall have free access to those parts of a manufacturer's plant that are necessary to ensure that products comply with all requirements.
- B. If the Contractor provides notification that manufacturing will begin, but manufacturing does not occur on that date, the Contractor will reimburse District for the standby cost of the District's Materials Inspector from the date the District was told the manufacturing would begin until manufacturing actually does begin.

PART 2 - MATERIALS

2.01 FORMWORK

- A. Design forms according to ACI 347.
- B. Class II Forms: Use plywood in good condition, metal, or smooth-planed boards free from large or loose knots with tongue and groove or ship lap joints.
- C. Class II forms may be used for all concrete surfaces regardless of location.
- D. Coat forms with form release agent.

2.02 FORM RELEASE AGENT

- A. Form release agent shall effectively prevent absorption of moisture and prevent bond with the concrete. Agent shall be nonstaining and nontoxic after 30 Calendar Days.
- B. For steel forms, release agent shall prevent discoloration of the concrete due to rust.

2.03 REINFORCING STEEL

- A. Reinforcement shall conform to ASTM A615 or A706, Grade 60.
- B. Fabricate reinforcing in accordance with the current edition of the Manual of Standard Practice, published by the Concrete Reinforcing Steel Institute. Bend reinforcing steel cold. No field bending is permitted.
- C. Deliver reinforcing steel to the site bundled and with identifying tags.

2.04 WELDED WIRE REINFORCEMENT

- A. Welded wire reinforcement shall conform to ASTM A185.

2.05 TIE WIRE

- A. Tie wire shall be 16 gauge minimum, black, soft annealed.

2.06 BAR SUPPORTS

- A. Use concrete supports for reinforcing in concrete placed on grade.

2.07 BAR COUPLERS

- A. Reinforcing steel bar splicing couplers shall be a mechanical type as manufactured by Barsplice Products Inc., Dayton Superior, or equal. Use couplers that do not reduce tensile or ultimate strength of bars.

2.08 PREMOLDED JOINT FILLER

- A. Joint filler shall be preformed, nonextruded type constructed of closed-cell neoprene conforming to ASTM D1752, Type I, as manufactured by W. R. Grace Company of Cambridge, Massachusetts; W. R. Meadows, Inc., Elgin, Illinois; or equal.

2.09 CEMENT

- A. Use domestic Portland cement that conforms to ASTM C150.
- B. Use only one brand of cement in any individual structure. Use no cement that has become damaged, partially set, lumpy, or caked. Reject the entire contents of the sack or container that contains such cement. Use no salvaged or reclaimed cement.
- C. Maximum tricalcium aluminate shall not exceed 8%. The maximum percent alkalis

shall not exceed 0.6%.

2.10 AGGREGATES

- A. Aggregates shall be natural rock, sand, or crushed natural rock and shall comply with ASTM C33, and shall contain less than 1% asbestos by weight or volume. Aggregates shall be free from any substances that will react with the cement alkalies and be demonstrated through current laboratory testing as innocuous, as determined by Appendix X-1 of ASTM C33.

2.11 WATER AND ICE

- A. Use water and ice that is clean and free from objectionable quantities of organic matter, alkali, salts, and other impurities that might reduce the strength, durability, or otherwise adversely affect the quality of the concrete. Water shall not contain more than 500 mg/L of chlorides or more than 500 mg/L of sulfate.

2.12 CONCRETE ADMIXTURES

- A. Use of admixtures shall conform to the Standard Specifications for Public Works Construction Section 201-1.2.4 and shall be approved by the District.
- B. Do not use any admixture that contains chlorides or other corrosive elements in any concrete. Admixtures shall be nontoxic after 30 Calendar Days.

2.13 CONCRETE MIX DESIGN

- A. Conform to ASTM C94, except as modified by these specifications.
- B. Maximum water-cement ratio for Class A concrete = 0.45 by weight.
- C. Measure slump in accordance with ASTM C143. Slump shall be as indicated on the drawings.
- D. Proportion and produce the concrete to have a maximum slump as shown. A tolerance of up to 1 inch above the indicated maximum shall be allowed for individual batches provided the average for all batches or the most recent 10 batches tested, whichever is fewer, does not exceed the maximum limit. Concrete of lower than usual slump may be used provided it is properly placed and consolidated.
- E. Aggregate size shall be 3/4 inch maximum for slabs and sections 8 inches thick and less. Aggregate size shall be 1 inch maximum for slabs and sections greater than 8 inches and less than 17 inches. Aggregate size shall be 1-1/2 inches maximum for all

larger slabs and sections. Aggregate size for floor grout shall be maximum 3/8 inch.

- F. Mix design for pumped concrete shall produce a plastic and workable mix. The percentage of sand in the mix shall be based on the void content of the coarse aggregate.
- G. Electrical duct work shall be encased in concrete dyed in red. Refer to electrical specifications for details.

PART 3 - EXECUTION

3.01 FORMED OPENINGS

- A. Openings shall be of sufficient size to permit final alignment of pipes or other items without deflection or offsets of any kind. Allow space for packing where items pass through the wall or slabs to ensure water tightness. Provide openings with continuous keyways and water stops. Provide a slight flare to facilitate grouting and the escape of entrained air during grouting. Provide formed openings with reinforcement as indicated in the typical structural details. Reinforcing shall be at least 2 inches clear from the opening surfaces and encased items unless shown otherwise on the Drawings.

3.02 EMBEDDED ITEMS

- A. Set anchor bolts and other embedded items accurately and hold securely in position until the concrete is placed and set. Check all special castings, channels, or other metal parts that are to be embedded in the concrete prior to and again after concreting. Check nailing blocks, plugs, and strips necessary for the attachment of trim, finish, and similar work prior to concreting.

3.03 INSTALLATION OF PREMOLDED JOINT FILLER

- A. Install in joint accurately as shown, if applicable.

3.04 PLACING REINFORCEMENT

- A. Place reinforcing steel in accordance with the current edition of Recommended Practice for Placing Reinforcing Bars, published by the Concrete Reinforcing Steel Institute.
- B. Place reinforcing in accordance with the following, unless otherwise indicated:
- C. Reinforcement indicated in the Drawings is continuous through the structure to the

farthest extent possible. Terminate bars and hooks 2 inches clear from faces of concrete.

- D. Reinforcing steel, before being positioned and just prior to placing concrete, shall be free from loose mill and rust scale and from any coatings that may destroy or reduce the bond. Clean reinforcing steel by sandblasting or wire brushing and remove mortar, oil, or dirt to remove materials that may reduce the bond.

3.05 READY-MIXED CONCRETE

- A. Conform to ASTM C94.

3.06 PLACING CONCRETE

- A. Conform to ACI 304.

3.07 FINISHING

- A. S-4 Slabs and floors of structures or buildings exposed to view. Steel trowel finish without local depressions or high points and apply a light hair-broom finish. Do not use stiff brittle brooms or brushes. Leave hair-broom lines parallel to the direction of slab drainage.
- B. E-1 Slabs and floors of structures or buildings exposed to view. Provide chamfer or beveled edges.

3.08 CONCRETE TESTS

- A. At the District's discretion, concrete quality testing will be performed on the concrete by District as follows:
 - 1. Frequency of Sampling: Cast four concrete test cylinders from each 50 cubic yards, or fraction thereof, of each class of concrete placed in any one day. Sampling and curing of cylinders shall conform to ASTM C31.
 - 2. Strength Testing: Test cylinders in accordance with ASTM C39. Test one cylinder at 7 Calendar Days for information; test two cylinders at 28 Calendar Days for acceptance; and hold one cylinder for verification. Strength acceptance will be based on the average of the strengths of the two cylinders tested at 28 Calendar Days. If one cylinder of a 28 Calendar Day test manifests evidence of improper sampling, molding, or testing, other than low strength, discard it and use the fourth cylinder for the test result.
 - 3. Determine concrete slump by ASTM C143 with each strength test sampling

and as required to establish consistency.

4. Determine air content of the concrete using ASTM C231 to verify the percentage of air in the concrete immediately prior to depositing in forms.
 5. Concrete acceptance shall be based on the requirements of ACI 318.
 6. To facilitate concrete sampling and testing, the Contractor shall:
 - a. Furnish labor to assist the District in obtaining and handling samples at the Site.
 - b. Advise the District in advance of concrete placing operations to allow for scheduling and completion of quality testing.
- B. Provide and maintain facilities for safe storage and proper curing of concrete test specimens on the Site, as required by ASTM C31.

END OF SECTION

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TECHNICAL PROVISIONS

SECTION 04820

REINFORCED CONCRETE MASONRY UNITS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials and installation of hollow block concrete unit masonry.

1.02 SUBMITTALS

- A. Submit manufacturer's catalog data of each type including special shapes required to show range of colors, texture, finishes, and dimensions. If colored, state source of color for coordination with mortar mix.
- B. Submit manufacturer's certificate and test results to show that masonry units comply with the cited ASTM specification.
- C. Provide ASTM test and gradations statement from concrete products supplier.
- D. Furnish grout mix design including admixture with laboratory 7- and 28-day compressive tests prior to placing plant mixed grout on the Project.
- E. Submit a report from a testing laboratory verifying that aggregate material conforms to the specified gradations or characteristics.
- F. Submit reinforcing bending lists and placing drawings for all reinforcing. Placing drawings shall indicate all openings including additional reinforcing at openings and corner bar arrangements at intersecting walls indicated in the typical detail and structural drawings. Placing drawings shall be prepared by the Contractor and not include photocopies of the Contract Documents.

PART 2 - MATERIALS

2.01 CONCRETE MASONRY UNITS

- A. Provide ASTM C90, standard, hollow load-bearing concrete masonry units, split face, medium weight, grade "N", solid grouted. Average compressive strength over net area: 1,900 psi. Nominal face dimension shall be 8 inches by 8 inches by 16 inches long. Masonry unit color and style will be selected by the District. Block to be manufactured by Angelus Block, Inc., Desert Block, Inc., or equal.

- B. Units shall be modular and shall include all special shapes and sizes to complete the Work as shown. Units shall be sound and free from cracks, chipped edges, or other defects that would interfere with their proper setting or impair the strength of durability of the construction. Where used as the finished surface of exposed masonry walls, units shall be free from surface defects that would be noticeable and objectionable at a distance of 10 feet from the finished wall. Provide special units for bond beams, sills, columns and half blocks to hold cutting to a minimum.

2.02 MORTAR AND GROUT

- A. Cement shall be Portland Type II in accordance with ASTM C150. For mortar, use the same cement coloring agent as concrete masonry units.
- B. Sand shall be a natural, fine granular aggregate and passing the No. 4 sieve with 10% to 35% passing the No. 50 and 2% to 15% passing the No. 100 or manufactured sand in ASTM C144.
- C. Lime shall be hydrated in accordance with ASTM C207, Type S, lime putty, slaked quicklime per ASTM C5.
- D. Grout shall be a ready mixed product with a minimum 28 day strength of 2,000 psi and shall conform to TMS 602/ACI 530/ASCE 6 article 2.2 and ASTM C476.
- E. Mortar shall be Type "S" per TMS 602/ ACI 520/ ASCE 6 articles 2.1 and 2.6A.
- F. Admixture for grout shall be approved by the District.

2.03 REINFORCEMENT

- A. Refer to Section 03000.
- B. Wall ties shall be corrugated metal strips, 22 gauge by minimum 7/8 inch wide, galvanized.

PART 3 - EXECUTION

3.01 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Store masonry units above ground on level platforms which allow air circulation under stacked units. Cover and protect against wetting prior to use. Deliver units on pallets or flat bed barrows. Do not permit free discharge from conveyor or mortar trays.

3.02 MIXING AND HANDLING OF MORTAR

- A. Mechanically mix mortar for at least five minutes with the amount of water required to produce the desired workability. Retemper on mortar boards by adding water within a basin formed in the mortar and rework the mortar into the water. Do not dash or pour water over the mortar. Do not retemper harsh, non-plastic mortar. Remove from the Work mortar which is unused after one hour of the initial mixing.

3.03 MIXING AND HANDLING GROUT

- A. Provide ready mixed grout. Add grout admixture in accordance with the manufacturer's recommendations. Remove from the Work grout which is not used after one hour from initial mixing.

3.04 QUALITY CONTROL OF MORTAR AND GROUT

- A. Mortar and grout testing is required.

3.05 PLACEMENT OF REINFORCEMENT

- A. Install vertical reinforcement such that bars are continuous without splices. Ensure that the cells to be grouted are free from debris and that the vertical reinforcing bars contact the concrete footing or slab. Provide cleanouts if necessary.
- B. Fill all cells solid with grout from footings to top of wall.
- C. Reinforcing shall be positioned as indicated on the plans with dowels from footing being placed with 2-3/4" clearance from the face of the masonry in all directions.

3.06 LAYING MASONRY UNITS

- A. All masonry work shall conform to chapter 21 of the CBC.
- B. Do not lay block on concrete footings until concrete has reached a compressive strength of 2,000 psi when tested.
- C. Lay dry block units starting on a full mortar bed over a clean foundation. If the air temperature is below 40 degrees F, heaters are required for curing. If the air temperature is over 95 degrees F, provide shade over the mortar construction.
- D. Lay masonry true to dimension, plumb, and square in running bond. All courses shall be level with joints of uniform width.
- E. Adjust masonry unit to final position while mortar is soft and plastic. If units are displaced after mortar has stiffened, removed, clean joints and units of mortar, and relay with fresh mortar. When joining fresh masonry to set or partially set masonry

construction, clean exposed surfaces of set masonry and remove loose mortar prior to laying new masonry.

- F. Lay with full mortar coverage on horizontal and vertical faces. Cover webs in all courses of piers, columns and pilasters, and where adjacent cells or cavities are not to be filled with grout.
- G. Set anchor bolts to line and grade with proper projection prior to grouting.
- H. Securely hold vertical reinforcement grouting at top and bottom and at 192 bar diameters.
- I. As masonry Work progresses, install angles, metal items, flashings, anchors, wall plugs and other accessories. Spaces around built in Work shall be complete and solidly filled in with masonry.

3.07 PROTECTION OF WORK

- A. Protect previously installed improvements from mortar drippings and other damage during construction. Protect face materials against staining by removing misplaced mortar or grout immediately and by brushing the masonry surface at the end of each day's work.

3.08 JOINTS

- A. Finish of horizontal and vertical face joints shall be 3/8-inch thick and uniform.
- B. Vertical joints shall be tight. Tool joints in surfaces to remain exposed with a round jointer as soon as they are thumbprint hard. Joints to receive caulking shall be raked out 3/4-inches and left ready for caulking. Strike flush unexposed joints.
- C. Use running bond with vertical joints located at center of masonry units in alternate course below except where stacked bond is noted. Bond intersecting masonry walls.
- D. Fill horizontal joints with mortar between top of masonry partitions and underside of concrete slabs or beams.
- E. Install control joints where indicated on the Plans. Unless other spacing is indicated, provide 3/8-inch wide control joints in concrete masonry walls, spaced a maximum of 20 feet. Form control joints with square end masonry units having sash groove and filled with synthetic rubber filler. Omit mortar from joint.
- F. Interior joints shall be struck flush and stacked.

3.09 POINTING AND CLEANING

- A. At final completion of unit masonry work, fill any remaining holes in joints and tool.
- B. Do not fill weep holes. Cut out and repoint defective joints. Dry brush masonry surface after mortar has set, at end of each day's work, and after final pointing. Leave work and surrounding surfaces clean and free of mortar spots and droppings.
- C. Do not saturate a masonry wall with water for curing, but where the atmosphere is dry, dampen the surfaces with a very light fog spray during a curing period for the mortar of three days.
- D. Brace the wall against wind and seismic forces during construction.

3.10 GROUT PLACEMENT

- A. Before grouting, allow masonry joints to cure at least 18 hours for low lift grouting and 72 hours for high lift grouting.
- B. After inspection of walls for grouting, place forms over any cleanout and inspection holes and fill cells requiring grout to not over 4 feet in height for low lift grout placement. Limit high lift grout placement to lifts of 4 feet maximum. Minimum time period between grout lifts shall be one hour.
- C. Fill all cells. Consolidate the grout by vibrating.
- D. Fill all spaces around built in items.
- E. Immediately wash spilled grout from surfaces of masonry units.
- F. Grout shall be properly consolidated by mechanical vibration. All embedded items and reinforcing steel shall be properly secured in position prior to grouting.

END OF SECTION

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TECHNICAL PROVISIONS

SECTION 05120

STRUCTURAL STEEL FRAMING

PART 1 - PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
- B. Structural steel.
- C. Grout.

1.02 DEFINITIONS

- A. Structural Steel: Elements of the structural frame indicated on Drawings and as described in AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show fabrication of structural-steel components.

1.04 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, fabricator, testing agency.
- B. Welding certificates.
- C. Mill test reports for structural steel, including chemical and physical properties.
- D. Source quality-control reports.
- E. Field quality-control and special inspection reports.

1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD or is accredited by the IAS Fabricator Inspection Program for Structural Steel (AC 172).
- B. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector, Category CSE.

- C. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- D. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.
 - 2. AISC 360.
 - 3. RCSC's "Specification for Structural Joints Using ASTM F 3125 Bolts."

PART 2 - PRODUCTS

2.01 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes: ASTM A 572, Grade 50.
- B. Channels, Angle S-Shapes: ASTM A 36.
- C. Plate and Bar: ASTM A 36.
- D. Steel Pipe: ASTM A 53, Type E or Type S, Grade B.
- E. Welding Electrodes: Comply with AWS requirements.

2.02 BOLTS, CONNECTORS, AND ANCHORS

- A. Unheaded Anchor Rods: ASTM F 1554, Grade 36 or ASTM F 1554, Grade 55, weldable.
 - 1. Configuration: Hooked.
 - 2. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.
- B. Headed Anchor Rods: ASTM F 1554, Grade 36, weldable, straight.
 - 1. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.
- C. Threaded Rods: ASTM A 36 or ASTM A 193, Grade B7.
 - 1. Finish: Mechanically deposited zinc coating, ASTM B 695, Class 50.

2.03 PRIMER

- A. Primer: Comply with Section 09 90 00 "Painting and Coating."
- B. Primer: SSPC-Paint 25, Type II, zinc oxide, alkyd, linseed oil primer.
- C. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.

2.04 GROUT

- A. Metallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-

minute working time.

- B. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive and nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

2.05 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303, "Code of Standard Practice for Steel Buildings and Bridges," and to AISC 360.
- B. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1 and manufacturer's written instructions.

2.06 SHOP CONNECTIONS

- A. Weld Connections: Comply with AWS D1.1 and AWS D1.8 for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

2.07 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
 - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of 2 inches.
 - 2. Surfaces to be field welded.
 - 3. Surfaces of high-strength bolted, slip-critical connections.
 - 4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
 - 5. Galvanized surfaces.
 - 6. Surfaces enclosed in interior construction.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
 - 1. SSPC-SP 2, "Hand Tool Cleaning."
 - 2. SSPC-SP 3, "Power Tool Cleaning."
 - 3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a minimum dry film thickness of 1.5 mils. Use priming methods that result in full

coverage of joints, corners, edges, and exposed surfaces.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify, with certified steel erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Baseplates Bearing Plates and Leveling Plates: Clean concrete- and masonry- bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Pretension anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

END OF SECTION

TECHNICAL PROVISIONS

SECTION 05400

COLD FORMED METAL FRAMING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Furnish and install cold-formed, light gage structural metal (steel) wall framing where and as shown.
- B. Make all required connections by welding (16 gage and heavier) and screw fastening (18 gage and lighter).
- C. Bridging, blocking, bracing and backup framing members as shown or required.

1.02 RELATED SECTIONS

- A. Structural Steel - Section 05120
- B. Metal Decking – Section 05300
- C. Metal Fabrications - Section 05500

1.03 QUALITY ASSURANCE

- A. Governing Codes: California Building Code (CBC) 2010.
- B. References: Latest official year of revision.
 - 1. American Iron and Steel Institute (AISI) Cold-Formed Steel Design Manual.
 - 2. American Welding Society (AWS) D1.3, Structural Welding Code For Sheet Steel.
 - 3. American Society for Testing and Materials (ASTM):
 - 4. ASTM A 446 Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Structural (Physical Quality).
 - 5. ASTM A 525 General Requirements for Sheet Steel, Zinc-Coated (Galvanized) by the Hot-Dip Process.
 - 6. ASTM A 570 Hot-Rolled Carbon Steel Sheet and Strip, Structural Quality.
 - 7. Steel Stud Manufactures Association.

1.04 SUBMITTALS

- A. Submit manufacturer's data for framing components.

1.05 TESTS AND INSPECTIONS

- A. All cold-formed metal framing shall be identified and certified to conform with the specifications. Certifications of conformance to these specifications shall be provided by the manufacturer of the materials.
- B. Connections of framing members that are by structural welding shall require inspections.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Framing Members: Shall consist of Standard structural C configuration studs of sizes and gages shown on the drawings with screw-prepared knurled flanges, and accessory sections such as runners, cap plates, blocking, bridging and lintel members as required to provide complete competently framed walls. Members shall be designed according to the AISI Cold-Formed Steel Design Manual, and shall be the products of Angeles Metal Systems, DALE/Incor Industries, or other equivalent producer acceptable to the Architect.
- B. Metal Specifications:
 - 1. For wall sections on exterior exposures, materials shall be G60 galvanized, conforming to ASTM A 446, Grade D for 16 gage and heavier; Grade A for 18 gage and lighter.
 - 2. For wall sections on interior exposures, materials shall be as-rolled uncoated strip, factory prime-coated, conforming to ASTM A 570, Grade 50 for 16 gage and heavier; Grade 33 for 18 gage and lighter.
- C. Accessories: Fasteners shall be self-drilling, self-tapping screw of adequate suitable sizes, cadmium plated hardened steel, used in accordance with manufacturer's instructions and with approved compatible tools. Reference Manufacturers: Hilti, and TEKS as manufactured by ITW. Minimum size, 10 x 24, #3 Point, Type AA, unless noted otherwise.
- D. Welding Electrodes: Conform to AWS Code D1.3, SMAW Electrode Classification E70XX.

PART 3 - EXECUTION

3.01 GENERAL

- A. Contractor shall inspect the sites of the work as prepared to receive cold-formed metal fabrications and report promptly to the Engineer any existing conditions which may be unsuitable to receive the work of this Section, and shall not proceed until indicated corrections have been made. He shall field verify all conditions and dimensions affecting his work.

3.02 FABRICATION

- A. Wall materials may be prefabricated components assembled into assemblies of suitable size for transport to the site and erected, or materials may be fabricated and erected entirely at the site. Prefabricated panels, if used, shall be squared and braced during transport, handling and erection to assure their dimensional correctness.
- B. Framing components shall be accurately cut square to bearings and connection interfaces, or as required for fitting angular connections. Members shall be secured in place until final connections have been made.
- C. Studs shall fit squarely into top and bottom track members, for full bearing against the webs of the track members. Employ suitable slip-fit connections for conditions where deflections from overhead construction must be accommodated in a manner acceptable to the Engineer.
- D. Structural Connections of similar materials shall be made by welding. Connections to dissimilar materials shall be made with stainless steel screws, clips or bolts as suitable. Connections made with screws shall have at least two screws at each connection. Isolate interfaces of dissimilar metals with preformed neoprene washers or pads, or a heavy coating of a suitable material having dielectric properties such as coal-tar enamel, epoxy resin or similar materials.

3.03 ERECTING VERTICAL FRAMING

- A. Tracks shall be of the same gage as the framing members into which they are framed.
- B. Bottom tracks shall be accurately and securely fastened to the supporting construction. If variations in the receiving surfaces occur, tracks shall be supported by full-size shims or by setting in a high strength grout bed to provide level, full bearing.
- C. Structural connections of structural framing shall be made by welding in accordance with AWS D1.3, "Structural Welding Code for Sheet Steel." Minimum length of a weld segment shall be 1".
- D. At intersecting or abutting track joints, abutting ends of tracks shall be securely anchored to a common structural element, or they shall be securely mechanically spliced.
- E. All studs shall be full, single length members. No splices are permitted. Provide horizontal bridging for every 8 feet of wall height (unless shown closer on drawings).
- F. Bracing shall be installed at locations where indicated on drawings for resistance to shear forces for frame stability and to resist lateral loads. Bracing shall be as shown on the drawings and securely connected at ends and at each intersecting member.
- G. At welded connections, remove any temporary erection screws used.
- H. At full height walls, provide connections at metal top tracks which allow a vertical deflection of 1/2" up or down, as detailed on the drawings.

3.04 TOLERANCES:

- A. Maximum allowable, 1/8" in 5'-0" for plumb, level and line, non-cumulative.

3.05 FIELD TOUCH-UP:

- A. Touch up all abrasions, burned areas and damaged areas in shop-primed coatings or galvanized coatings, using a similar primer as used in manufacture, and a zinc duct-zinc oxide primer for galvanized metal.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 06100

ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Structural floor, wall, and roof framing; built-up structural members; wall and roof sheathing; panelized roof system; subfloor sheathing; preservative treatment.
- B. Roof curbs; blocking in wall and roof openings; wood furring and grounds; concealed wood blocking; concealed wood blocking for attachment of accessories, fixtures, cabinets, partitions, hardware and equipment.

1.02 QUALITY ASSURANCE

- A. Perform Work in accordance with the following agencies:
 - 1. Lumber Grading Agency: Certified by West Coast Lumber Inspection Bureau (WCLIB).
 - 2. Plywood Grading Agency: Certified by American Plywood Association (APA).
- B. Each piece of framing and board lumber shall be identified by grademark. All lumber shall be new, clean and surfaced four sides. Sizes of framing lumber are given by normal sizes.
- C. Plywood shall be APA grademark stamped. The mark shall identify the plywood by species group, plywood type, grade, and identification index.

PART 2 - PRODUCTS

2.01 LUMBER MATERIALS

- A. Lumber Grading Rules: WCLIB Grading Rules Number 17, latest edition.
- B. Framing lumber to which gypsum board is to be directly attached shall have 15 percent maximum moisture content at time of installation of lumber.
- C. Rafter Framing: Douglas Fir species, Number 1 and better grade, 19 percent maximum moisture content at time of installation of lumber.
- D. Non-structural Light Framing: Douglas Fir species, Number 2 grade, 19 percent maximum moisture content at time of installation of lumber.
- E. Studding: Douglas Fir species, Number 2 grade, 19 percent maximum moisture content at time of installation of lumber.

2.02 SHEATHING MATERIALS

- A. Plywood Roof Sheathing: APA Rated Sheathing, Structural I, Span Rating as indicated; Exposure Durability 1; unsanded.
- B. Plywood Wall Sheathing: APA Rated Sheathing, Structural I , Span Rating as indicated; Exposure Durability 1; unsanded.

2.03 UNDERLAYMENT MATERIALS

- A. Plywood Underlayment: APA Underlayment Plywood, Group 1, Exposure Durability 1; sanded.

2.04 ACCESSORIES

- A. Fasteners: Galvanized steel for exterior, high humidity, and treated wood locations; plain finish elsewhere.
- B. Joist Hangers: Galvanized steel, sized to suit framing conditions, ICBO approved. Hangers shall be of sufficient strength to develop the full strength of the supported member and shall be furnished complete with special nails required.

PART 3 - EXECUTION

3.01 FRAMING

- A. Erect wood framing members in accordance with applicable requirements of the 2016 California Building Code. Place members level and plumb. Place horizontal members crown side up.

3.02 SHEATHING

- A. Install sheathing perpendicular to framing with end joints staggered. Secure sheet edges over firm bearing. The minimum plywood sheathing dimension shall be 24" x 24".
- B. Secure wall sheathing with ends staggered, over firm bearing.
- C. Wood crickets and saddles shall be a minimum 1/2" thick plywood with waterproof glue.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 06114

WOOD BLOCKING AND CURBING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Blocking in wall and roof openings.
- B. Wood furring and grounds.
- C. Concealed wood blocking for support of accessories and hardware.
- D. Plywood backing.
- E. Wood shims for glazed window wall system and storefront system.
- F. Wood treatment.

1.02 REFERENCES

- A. ALSC - American Lumber Standards Committee: Softwood Lumber Standard
- B. APA - American Plywood Association: Grades and Standards
- C. WPA - American Wood Preservers' Association Standards
- D. NFPA - National Forest Products Association
- E. WCLIB - West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber
- F. WWPA - Western Wood Products Association

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with the following agencies:
 - 1. Lumber Grading Agency: Certified by West Coast Lumber Inspection Bureau (WCLIB).
 - 2. Plywood Grading Agency: Certified by American Plywood Association (APA).
- B. Each piece of framing and board lumber shall be identified by grademark. All lumber shall be new, clean and surfaced four sides. Sizes of framing lumber are given by normal sizes.
- C. Plywood shall be APA grademark stamped. The mark shall identify the plywood by species group, plywood type, grade, and identification index.

1.04 SUBMITTALS

- A. Submit product data.
- B. Provide technical data on wood preservative and fire-retardant-treatment materials and application instructions.
- C. Materials list for all wood and fasteners products.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Lumber Grading Rules: WCLIB .
- B. Softwood Lumber: Douglas Fir-Larch, Hem-Fir, Mountain Hemlock, Sitka Spruce, Western Cedars, Western Hemlock species; Standard Light Framing or No. 3 Structural Light Framing, 19 percent maximum moisture content at time of installation, Fire-retardant-treated.
- C. Plywood: APA Grade C-D, with waterproof glue, unsanded, Fire-retardant-treated.
- D. Fasteners - lumber to lumber: Cement coated or annular threaded nails of sufficient length to penetrate 1.25 inches into adjoining members, except as otherwise indicated.
- E. Fasteners - plywood to lumber: Ring shank or annular thread nails- 10d for 1/2" and 3/4" plywood.
- F. Fasteners - plywood or lumber to concrete masonry: Specially threaded anchors of sufficient length to penetrate concrete or masonry to depth required by ICBO approval for the imposed load, manufactured by Wej-it or Ramset. Countersink anchors or use flat head type.
- G. Fasteners - plywood or lumber to steel: Minimum #10 sheet metal screw through 5/8 inch diameter steel washers.
- H. Coating for fasteners and accessories shall be hot dip zinc, ASTM 153.

2.02 WOOD TREATMENT

- A. All lumber shall be fire-retardant-treated wood as required by the 2016 California Building Code, Section 603. Lumber conform to the requirements of "Fire-Retardant-Treated Wood," Section 2302.2 of the 2016 California Building Code.
- B. Fire-Retardant-Treated Plywood: All plywood shall be pressure-treated in accordance with American Wood Preservers Association Standard AWPA C27, and each piece shall bear and Underwriters Laboratories, Inc. label. Plywood shall be APA RATED SHEATHING EXP 1 or better, marked PS 1. After treatment, plywood shall be dried to an average moisture content of 15 percent. Maximum flame spread/smoke developed rating of 25.

PART 3 - EXECUTION

3.01 PREPARATION OF SURFACES

- A. Surfaces to receive new wood members shall be free of all dirt, debris, and loose materials. Exposed surfaces to be mechanically scraped, if necessary, to remove projection.
- B. Surfaces are to have no free water present in any form (rain, dew, frost).
- C. Inspect all exposed surfaces to see that conditions are satisfactory for installation of new work. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 GENERAL INSTALLATION

- A. All blocking and nailers are to be in straight lines and level planes and at proper elevation for installation of specified roof system, accessory or hardware.
- B. Warped wood members are not to be used.
- C. Lumber or plywood to lumber:
 - 1. Nail spacing to be maximum of 12 inches on-center and staggered across face of piece. Fastener also to be located within three inches of each end of piece. Maximum spacing of six inches on-center.
 - 2. Nail heads to be flush with wood surface and nail shall penetrate adjoining piece minimum 1.25 inches.
 - 3. The installed withdrawal resistance shall be a minimum of 100 pounds per nail.
- D. Lumber or plywood to concrete or masonry:
 - 1. Anchor to be spaced maximum three feet on center and staggered if lumber is more than five inches wide.
 - 2. Head of anchor to be flat or countersunk flush with surface but no more than 1/3 the thickness of the fastened piece.
 - 3. Withdrawal resistance shall be a minimum of 400 pounds per anchor or number of fasteners increased accordingly from that specified. Minimum penetration of sufficient length to penetrate concrete or masonry to depth required by ICBO approval for the imposed load.
- E. Lumber of plywood to steel:
 - 1. Anchor to be spaced maximum two feet on center and staggered if lumber is more than five inches wide.
 - 2. Head of anchor to be flat or countersunk flush with surface but no more than 1/3 the thickness of the fastened piece.
 - 3. Withdrawal resistance to be minimum of 400 pounds per anchor or number of fasteners increased accordingly from that specified. Minimum penetration of 1/4 inch through the steel.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 07101

UNDERSLAB VAPOR BARRIER

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Vapor barrier (interior slabs on grade where tile, resilient flooring or carpet floor finish is scheduled).

1.02 SYSTEM DESCRIPTION

- A. Vapor Barrier System: Capable of resisting and preventing moisture migration to interior.

1.03 SUBMITTALS

- A. Manufacturer's Product Data and Installation Instructions: Indicate special procedures for corners, intersections, penetration and perimeter conditions requiring special attention.

1.04 QUALITY ASSURANCE

- A. Inspection of substrate surfaces and placement of vapor barrier materials is required. Provide Architect with 48 hour notice prior to start of vapor barrier installation

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum ten years documented experience.
- B. Applicator: Company specializing in performing the work of this section with minimum five years documented experience and approved by the material manufacturer.

1.06 WARRANTY

- A. Provide two year warranty.
- B. Warranty: Include coverage for vapor barrier failing to resist penetration of moisture, except where such failures are the result of structural failures of building. Hairline cracking of concrete due to temperature change or shrinkage is not considered a structural failure.
- C. For warranty repair work, be responsible for removing and replacing materials concealing waterproofing.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- | | | | |
|----|---|----------|--|
| A. | Stego Industries
San Juan Capistrano, CA | Product: | Stego Wrap (15 mil)
Vapor Barrier and Accessories |
| B. | Raven Industries
Sioux Falls, S.D. | Product: | VaporBlock Underslab
Vapor Retarder and Accessories |
| C. | Reef Industries
Houston, TX | Product: | "Griffolyn" Type 65G
Vapor Retarder and Accessories |
| D. | Substitutions: Under provisions of Section 01001. | | |

2.02 MATERIALS - VAPOR BARRIER

- A. Vapor Barrier: ASTM E 1745, Class B, 15 mil "Stego Wrap" vapor barrier, "Griffolyn Type 65G" vapor retarder or "VaporBlock 15" vapor retarder.
- B. Screed Pads and Posts: Concrete Tie No. 0725 and 0701 or Burke No. (202) 23-105 and (203) 24-200.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify substrate surfaces are durable; free of matter detrimental to the proper application of vapor barrier system.
- B. Verify items which penetrate surfaces to receive vapor barrier are securely installed and have been inspected and approved.
- C. The applicator shall examine all substrates and other conditions under which this work is to be performed and notify the Architect, in writing, of circumstances detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected.

3.02 APPLICATION - VAPOR BARRIER

- A. Install vapor barrier under all interior slabs-on-grade where a porcelain tile, resilient flooring or carpet floor finish is scheduled.
- B. Place vapor barrier over a uniform 2 inch layer of washed course sand. Cover vapor barrier with another uniform 2 inch layer of course washed sand.
- C. Lap joints minimum 6 inches and seal watertight. Repair damaged vapor barrier with vapor barrier material; lap over damaged areas minimum 6 inches and seal watertight.
- D. Seal all penetrations of the vapor barrier. Seal all pipe, conduit, duct or other such penetrations with "Stego Wrap" and/or "Stego Tape". At pipe or conduit penetrations, fabricate and install a "pipe boot" overlay seal as shown in the Stego Wrap Installation

instructions.

- E. Where vapor barrier intersects perimeter or interior walls, turn vapor barrier up wall to top of slab "between slab and wall) and seal with sealant (Pecora AC-20+ Silicone or equal) flush with finish floor line.
- F. Provide aluminum screed pads to support screed posts. Do not puncture vapor barrier with screed posts.

3.03 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed.

3.04 PROTECTION OF FINISHED WORK

- A. Protect finished Work.

END OF SECTION

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TECHNICAL PROVISIONS

SECTION 07210

BUILDING INSULATION

PART 1 - PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Batt thermal insulation in exterior wall construction.

1.02 SYSTEM DESCRIPTION

- A. System performance to provide continuity of thermal barrier at building enclosure elements.
- B. Conform to applicable portions of the 2016 California Building Code for fire rated assembly and combustibility requirements for materials.
- C. Provide insulation with a flame spread rating of 25 or less and a smoke density of 450 or less, when tested in accordance with U.B.C. Standard 8-1 in spaces where insulation is not covered (direct contact) with a wall or ceiling material.

1.03 SUBMITTALS

- A. Product Data: Provide data on product characteristics, performance criteria and limitations.
- B. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.04 QUALIFICATIONS

- A. Manufacturer: Company specializing in the manufacture of products specified in this Section with minimum five year documented experience.
- B. Applicator: Company specializing in performing the work of the Section with minimum five years documented experience and approved by material manufacturer. A California Contractor's State License Board Class C-2 license is required.

PART 2 - PRODUCTS

2.01 INSULATION MATERIALS

- A. Unfaced Thermal Insulation: ASTM C665 Type I; preformed glass fiber batt, friction fit; manufactured by Johns Manville Commercial Building Insulation Division or Owens-Corning Fiberglass, conforming to the following:

1. Thermal Resistance: R13, R19 or R30 as shown.
2. Batt Size: 16x48x3-1/2 inch, 16x48x6-1/2 inch, 16x48x10 inch, 24x48x3-1/2 inch or 24x48x6-1/2 inch or 24x48x10 inch as indicated.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, and adjacent materials, are dry and ready to receive insulation.
- B. Verify that mechanical and electrical services within walls, ceilings or roof have been installed, tested and approved.
- C. Beginning of installation signifies acceptance of existing conditions.

3.02 BATT INSULATION

- A. Install insulation in accordance with insulation manufacturer's published instructions.
- B. Extend insulation full thickness as shown over entire surface to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation. Install a single layer, unless shown otherwise.
- C. Where door and window frames occur in framing, cut additional strips of insulation and hand-pack as required to fill voids in and around such frames.
- D. Install in exterior walls where indicated without gaps or voids. Do not compress insulation.
- E. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- F. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical devices within the plane of insulation.
- G. Install friction fit insulation tight to framing members, completely filling prepared spaces.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 07620

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Coping, parapet, cap, roof, sill flashings.
- B. Fascias, gravel stops .
- C. Reglet and counterflashing, roof penetration flashing, roof mounted equipment flashing.
- D. Roof valley flashing, roof ridge and hip flashing.
- E. Raised roof platform flashing.
- F. Plumbing vent flashing (sheet lead).

1.02 SUBMITTALS

- A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- B. Submit a schedule for the delivery time/location for sheet metal which is to be primed/back primed as part of the work of Section 09900 - Painting. Schedule must be coordinated with the work specified in Section 09900 - Painting, prior to submittal.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
 - 1. NRCA (National Roofing Contractors Association) - Roofing Manual.
 - 2. Sheet Metal and Air Conditioning Contractors National Association (SMACNA) - Architectural Sheet Metal Manual, and HVAC Duct Construction Standards.

1.04 QUALIFICATIONS

- A. Applicator: Company specializing in performing the work of this section with minimum five years documented experience. A California Contractor's State License Board Class C-43 license is required.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Stack preformed and prefinished material to prevent twisting, bending, or abrasion,

and to provide ventilation. Slope metal sheets to ensure drainage.

- B. Prevent contact with materials which may cause discoloration or staining.

PART 2 - PRODUCTS

2.01 SHEET MATERIALS

- A. The type and locations of the various kinds, gauges, thickness, and finish of sheet metal to be used shall be as indicated on the drawings. All sheet metal shall be minimum 24 gauge galvanized, as indicated on the drawings.
- B. Galvanized Steel: ASTM A 653, G90; minimum 24 gage core steel.

2.02 ACCESSORIES

- A. Fasteners Same material and finish as flashing metal, with soft neoprene washers.
- B. Slip Sheet: Rosin sized building paper.
- C. Sealant: Dow Corning 790, General Electric "Silpruf", or approved equivalent.
- D. Bedding Compound: Rubber-asphalt type.
- E. Plastic Cement: Asphaltic base cement.

2.03 COMPONENTS

- A. Formed gravel stop-fascias shall be per SMACNA Figure 2-1A or 2-1B with continuous cleat and joints per SMACNA Figure 2-5C (butt joint with back-up plate)
- B. Formed copings shall be per SMACNA Figure 3-4B and Figure 3-7A with joints similar to Figure 2-5C (butt joint with back-up plate). Gage of material shall be per SMACNA Table 3-1.]
- C. Thru-wall overflow scuppers shall be per SMACNA Figure 1-30A (with alternate outside flange) and Figure 1-30B.]
- D. Roof valley flashing (shingles) shall be per SMACNA [Figure [4-9] [4-10], minimum 24 inches wide.]
- E. Plumbing vent flashing (sheet lead). Plumbing vent flashing installation shall be in accordance with Detail MB-21 in the National Roofing Contractor's Association "Roofing and Waterproofing Manual" (Fourth Edition), using 4 pound lead (in lieu of 2-1/2 pound).
- F. Sheet lead flashing shall be preformed and meet or exceed ASTM B 749; 4 pounds per square foot minimum, with preformed seamless 4 pound lead counter flashing at top; as manufactured by Santa Rosa Lead Products, Haroldsburg, CA 95448, (707) 431-7757.

2.04 FABRICATION

- A. Sheet metal work shall be accurately formed to dimensions and shapes referenced and

as detailed and shown on the drawings, using the best shop practice methods. Molded and broken shapes shall finish with true, straight, sharp lines and angles, and, where intersecting each other, shall be coped to a precise fit and securely jointed. All sheet metal work shall be formed and installed to provide for expansion and contraction without causing undue stresses in any part of the work and shall be water and weather tight throughout.

- B. Form components true to shape, accurate in size, square, and free from distortion or defects. Form pieces in longest practical lengths.
- C. Fabricate cleats and starter strips of same material as sheet, continuous, interlockable with sheet.]
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- E. Form material with butt joint with 8 inch back-up plate.
- F. Fabricate corners in one piece, 6 inch long legs; seam for rigidity, seal with sealant.

2.05 FINISH

- A. All exposed sheet metal (except copper) is to be painted with a metal primer on both sides, after fabrication and prior to installation, as specified in Section 09900 - Painting.
- B. Concealed metal surfaces are to be back primed with protective backing paint after fabrication and prior to installation as specified in Section 09900 - Painting.
- C. Coordinate the timely delivery of sheet metal items to be primed/back primed to the job site (or other mutually acceptable location) with related work specified in Section 09900 - Painting.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
- B. Verify membrane termination and base flashings are in place, sealed, and secure.

3.02 INSTALLATION

- A. Conform to drawing details and SMACNA and NRCA Manual.
- B. Surfaces to which sheet metal is to be applied shall be solid and well braced, even, smooth, sound, thoroughly clean and dry, and free from all defects that might affect the application. Do not proceed with installation until all deficiencies are corrected.
- C. All accessories or other items essential to the completeness of the sheet metal installation, though not specifically shown or specified, shall be provided. All such items shall be of the same kind of material as the item to which applied. Nails, screws,

rivets, and bolts shall be of the type best suited for the condition indicated and shall be of a composition that is compatible with the metal which it contacts.

- D. Where sheet metal abuts or members into adjacent dissimilar materials, the juncture shall be executed in a manner that will prevent electrolysis between the two materials.
- E. Workmanship, method of forming joints, anchoring, cleating and provisions for expansion, shall conform to the standard details and recommendations of the SMACNA Architectural Sheet Metal Manual.
- F. Where metal gravel stops, fascias, wall copings, or other such exposed sheet metal work are shown on the drawings, installation of joints shall be laid out symmetrically about the centerline of each length of wall or roof edge using, where possible, only full length sheet metal sections. Where it is necessary to cut sheet metal sections, the minimum length shall be one-half section and no more than two half-sections will be allowed along each wall or roof edge. Roof edges or walls less than eight feet in length shall have full length sheet metal sections without joints. Sheet metal shall be formed in eight- or ten- foot sections with end joints as specified or as shown on the drawings. Where the end joint method is not shown, joints shall be lapped 4" minimum and sealed with plastic cement.
- G. Secure flashings, gutters and downspouts in place using concealed fasteners where possible.
- H. Apply plastic cement compound between metal work and felt flashings.
- I. Fit components tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- J. Seal metal joints watertight.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 07900

JOINT SEALERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Preparing sealant substrate surfaces.
- B. Sealant and joint backing.

1.02 SYSTEM DESCRIPTION

- A. System performance to achieve moisture tight joint seals.
- B. The extent of sealing work is not necessarily fully or individually described here. Sealant shall be provided wherever required to prevent light leakage as well as moisture leakage. Refer to drawings for conditions and related parts of the work. Sealant will be required between two dissimilar materials where a tight, neat waterproof joint is not provided.

1.03 SUBMITTALS

- A. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, color available, shelf life and recommended cleaning solvents.
- B. Manufacturers Installation Instructions: Indicate special procedures, surface preparation, perimeter conditions requiring special attention, and recommended joint design and backing.

1.04 QUALITY ASSURANCE

- A. Perform in accordance with sealant manufacturers written requirements for preparation of surfaces and material installation instructions.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum five years documented experience.
- B. Applicator: Company specializing in performing the work of this section with minimum five years documented experience and approved by material manufacturer. A California Contractor's State License Board Class D-51 license is required.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

PART 2 - PRODUCTS

2.01 INTERIOR SEALANT

- A. One part, non-sag, acrylic latex caulking compound, Pecora Corp., "AC-20+ Silicone," Tremco "Acrylic Latex 834," or approved equivalent. Color of caulking and sealants shall match color of adjacent work.
 - 1. Small voids between walls or partitions and adjacent casework, shelving, door frames, built-in or surface-mounted equipment and fixtures, and similar items.
 - 2. Perimeter of frames at doors, windows, and access panels which adjoin exposed interior concrete and masonry surfaces.
 - 3. Interior locations, not otherwise indicated or specified, where small voids exist between materials specified to be painted.

2.02 EXTERIOR SEALANT

- A. One or two component polysulfide liquid polymer base rubber compound normal temperature curing to a flexible firm rubber, tack free, paintable surface gun grade consistency. Pacific Polymers "Elasto-Seal 230" or Elasto-Thane 227", Sika Corp. "Silkaflex 1a," or approved equivalent
- B. For joints in vertical surfaces, provide ASTM C 920, Type S or M, Grade NS, Class 25, Use NT. For joints in horizontal surfaces, provide ASTM C 920, Type S or M, Grade P, Class 25, Use T. Location of sealant shall be as follows:
 - 1. Joints and recesses formed where frames and subsills of windows, doors, louvers, and vents adjoin masonry, concrete, or metal frames. Use sealant at both exterior and interior surfaces of exterior wall penetrations.
 - 2. Expansion and control joints.
 - 3. Voids where items pass through exterior walls.
 - 4. Metal-to-metal joints where sealant is indicated or specified.
 - 5. Joints between ends of gravel stops, fascias, copings, and adjacent walls.

2.03 FLOOR JOINT SEALANT

- A. ASTM C 920, Type S or M. Grade P, Class 25, Use T. Location of sealant shall be as follows:
 - 1. Seats of metal thresholds for exterior doors.
 - 2. Control and expansion joints in floors, slabs, ceramic tile, and walkways.

2.04 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suite application.
- D. Joint Backing: Compressible type; material, construction and size recommended by sealant manufacturer to suit application.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify that substrate surfaces and joint openings are ready to receive work.
- B. Remove loose materials and foreign matter which might impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.

3.02 INSTALLATION

- A. Clean and prime seal joints in accordance with manufacturer's instructions.
- B. Install sealant in accordance with manufacturer's instructions.
- C. Measure joint dimensions and size materials to achieve recommended width/depth rations.
- D. Install joint backing to achieve a neck dimension no greater than 1/4 of the joint width.
- E. Install bond breaker where joint backing is not used.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Install sealant around all openings in exterior walls, and as shown or required for waterproofing buildings. Provide back-up behind all sealant joints.
- H. Concrete, masonry, and other surfaces recommended by manufacturer shall be primed before applying caulking and sealants. Primer shall be applied with a brush that will reach all parts of joints to be filled with sealant compound.
- I. Materials shall be applied with guns having proper size nozzles. Sufficient pressure shall be used to fill all voids and joints solid. Install sealant all around entire perimeter of each opening, unless shown or specified otherwise. Where the use of the gun is impracticable, suitable hand tools shall be used.
- J. Tool joints as detailed.
- K. Joints shall be neatly pointed on flush surfaces with beading tool, and internal corners with eaving tool. Excess material shall be cleanly removed. Caulking and sealants, where exposed, shall be free of wrinkles and uniformly smooth. Caulking and sealing shall be complete before final coats of paint are applied.

- L. Clean surfaces of all materials adjoining caulked and sealed joints of any smears of compound or other soiling due to caulking and sealant application.

3.03 PROTECTION OF FINISHED WORK

- A. Protect finished installation.
- B. Protect sealants until cured.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 08111

STEEL DOORS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Non-rated and rated steel doors.

1.02 REFERENCES

- A. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.
- B. ANSI/SDI-100 - Standard Steel Doors and Frames.
- C. ASTM A525 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
- D. Door Hardware Institute (DHI) - The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
- E. SDI-100 - Recommended Specifications, Standard Steel Doors & Frames.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate door elevations, internal reinforcement, closure method and finish.
- B. Product Data: Indicate door configurations, location of cut-outs for hardware reinforcement.
- C. Manufacturer's Installation Instructions: Indicate special installation instructions.

1.04 QUALITY ASSURANCE

- A. Conform to requirements of ANSI/SDI-100 and ANSI A117.1.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum five years documented experience and approved by door manufacturer. A California Contractor's State License Board Class D-24 license is required.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect doors with resilient packaging sealed with heat shrunk plastic.

- B. Break seal on-site to permit ventilation.

1.07 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on approved shop drawings.

1.08 COORDINATION

- A. Coordinate the work with door opening construction, door frame and door hardware installation.

PART 2 - PRODUCTS

2.01 DOOR MANUFACTURERS

- A. Ceco Door Products.
- B. Curries/Essex Industries.
- C. Steelcraft.
- D. All products offered as equivalent to the specified manufacturer's products listed herein shall be equivalent to all the properties, specifications, appearance, conformance to standards, finish and functions of the specified manufacturer's product.

2.02 DOORS

- A. Exterior Doors: SDI-100 Grade III, Model 3 (seamless, 16 gage face sheets, 22 gage vertical stiffeners, non-visible seams at vertical door edge only).

2.03 DOOR CONSTRUCTION

- A. Face: Steel sheet in accordance with ANSI/SDI-100.
- B. Core: Vertical steel stiffeners.

2.04 FABRICATION

- A. Fabricate doors with hardware reinforcement welded in place.

2.05 FINISH

- A. Steel Sheet: Galvanized to ASTM A525 G60.
- B. After fabrication, all tool marks and surface imperfections shall be dressed, filled and sanded as required to make all faces and vertical edges smooth, level and free of all irregularities. Doors shall then be chemical treated to insure maximum paint adhesion and shall be coated, on all exposed surfaces, with a rust-inhibitive primer.
- C. Primer: Baked.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that opening sizes and tolerances are acceptable.

3.02 INSTALLATION

- A. Install doors in accordance with ANSI/SDI-100 and DHI and NFPA 80.
- B. Coordinate installation of doors with installation of frames specified in Section 08112 - Steel Door Frames and hardware specified in Section 08710 - Finish Hardware.
- C. Coordinate installation of glass and glazing.

3.03 ERECTION TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.04 ADJUSTING

- A. Adjust door for smooth and balanced door movement.

END OF SECTION

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TECHNICAL PROVISIONS

SECTION 08112

STEEL DOOR FRAMES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Non-rated and fire-rated steel door frames.

1.02 REFERENCES

- A. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People
- B. ANSI A224.1 - Steel Surfaces for Steel Doors and Frames, Test Procedure and Acceptance Criteria for Prime Painted
- C. ANSI/SDI-100 - Standard Steel Doors and Frames
- D. ASTM A525 - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process
- E. DHI - Door Hardware Institute: The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware
- F. NFPA 80 - Fire Doors and Windows
- G. UBC Standard 7-2, Part III - Fire Tests of Door Assemblies

1.03 SUBMITTALS

- A. Shop Drawings: Indicate frame elevations, reinforcement, and finish.
- B. Product Data: Indicate frame configuration, anchor types and spacing, location of cut-outs for hardware, reinforcement.
- C. Manufacturer's Installation Instructions: Indicate special installation instructions.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.04 QUALITY ASSURANCE

- A. Conform to requirements of ANSI/SDI-100 and ANSI A117.1.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this Section with minimum five years documented experience.
- B. Installer: Company specializing in performing this type of work with a minimum five

years documented experience and approved by door manufacturer. A California Contractor's State License Board Class D-24 license is required.

1.06 REGULATORY REQUIREMENTS

- A. Fire-Rated Frame Construction: Conform to UBC Standard 7-2, Part III.
- B. Installed Frame Assembly: Conform to NFPA 80 for fire-rated class same as fire door.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products at site as specified in Section 01610.
- B. Accept frames on site in manufacturer's packaging. Inspect for damage.
- C. Provide temporary steel spreaders fastened across bottom of frames for shipment. In place of spreaders, frames may be strapped together in pairs with heads inverted for bracing during shipment. Before shipping, label each frame with metal or plastic tags to show their locations, size, door swing, and other pertinent information.

1.08 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on shop drawings.

1.09 COORDINATION

- A. Coordinate the work with frame opening construction, door and hardware installation.

PART 2 - PRODUCTS

2.01 FRAME MANUFACTURERS

- A. Ceco Door Products
- B. Curries/Essex Industries
- C. Fenestra Corporation

2.02 FRAMES

- A. Exterior Frames: 16 gage thick material, base metal thickness.
- B. Interior Frames: 16 gage thick material, base metal thickness.

2.03 ACCESSORIES

- A. Silencers: Resilient rubber, fitted into drilled hole.
- B. Bituminous Coating: Fibered asphalt emulsion.
- C. Primer: Zinc-chromate type.

2.04 FABRICATION

- A. Fabricate frames as welded unit.
- B. Joints shall be mitered or butted and continuously arc welded for full depth and width of frame and trim. All contact edges shall be closed tight and all welds on exposed surfaces dressed smooth and flush.
- C. Fabricate frames with concealed hardware reinforcement plates welded in place. Provide mortar guard boxes.
- D. Reinforce frames wider than 48 inches with roll formed steel channels fitted tightly into frame head, flush with top.
- E. Prepare frame for silencers. Provide three single silencers for single doors on strike side. Provide two single silencers on frame head at double doors without mullions. Lock strike shall be set out and adjusted to provide clearance for silencers.
- F. Where interior frames are shown to be set in masonry, metal frames shall be constructed to allow sufficient space between back of trim and masonry to receive caulking.

2.05 FINISH

- A. Steel Sheet: Galvanized to ASTM A525 G60 or lower. prime painted to ANSI A 224.1 as indicated.
 - 1. Galvanize finish all exterior frames.
 - 2. Galvanize finish all other frames as shown on the drawings.
 - 3. Prime paint finish all other frames.
- B. Primer: Air dried or baked.
- C. Coat inside of frame profile with bituminous coating to a thickness of 1/16 inch.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that opening sizes and tolerances are acceptable.

3.02 INSTALLATION

- A. Install frames in accordance with final shop drawings and manufacturer's literature and ANSI/SDI-100 and DHI.
- B. Coordinate with adjacent wall construction for anchor placement. Provide metal anchors of shapes and sizes required for the adjoining type of wall construction. Fabricate jamb anchors of steel, not lighter than the gauge used for the frame. Locate anchors on jambs near the top and bottom of each frame and at intermediate points not over 24 inches apart.

- C. Coordinate installation of glass and glazing.
- D. Coordinate installation of frames with installation of hardware specified in Section 08710 and doors in Sections 08111 and 08210.
- E. Set frames, in position, plumb, aligned and braced securely until permanent anchors are set. Where frames require ceiling struts or other structural overhead bracing, they shall be temporarily anchored securely to ceilings, or other structural framing above. After wall construction is complete, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
- F. Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.
- G. Protect frames from damage during subsequent construction activity. Upon completion, metal surfaces of frames shall be thoroughly cleaned and touched up.

3.03 ERECTION TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edges, crossed corner to corner.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 08310

ACCESS DOORS AND FRAMES

PART 1 - PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Wall access doors and frames.
 - 2. Fire-rated wall access doors and frames.
 - 3. Ceiling access doors and frames.
 - 4. Fire-rated ceiling access doors and frames.

1.02 SUBMITTALS

- A. Product Data: For each type of door and frame indicated. Include construction details relative to materials, individual components and profiles, finishes, and fire ratings (if required) for access doors and frames.
- B. Shop Drawings: Show fabrication and installation details of customized doors and frames. Include plans, elevations, sections, details, and attachments to other Work.
 - 1. Provide floor plans or reflected ceiling plans to show proposed location of access doors.
- C. Schedule: Provide complete door and frame schedule, including types, general locations, sizes, construction details, finishes, latching or locking provisions, and other data pertinent to installation.
- D. Coordination Drawings: Reflected ceiling plans drawn to scale and coordinating penetrations and ceiling-mounted items with concealed framing, suspension systems, piping, ductwork, and other construction. Show the following:
 - 1. Method of attaching door frames to surrounding construction.
 - 2. Ceiling-mounted items including access doors and frames, lighting fixtures, diffusers, grilles, speakers, sprinklers, and special trim.
- E. Location/Coordination Drawings: Submit drawings showing proposed locations for access doors. Obtain Agency's Representative's written approval of each location.

1.03 QUALITY ASSURANCE

- A. Source Limitations: Obtain doors and frames through one source from a single manufacturer.

- B. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics per the following test method and that are labeled and listed by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. NFPA 252 or UL 10B for vertical access doors.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 zinc (galvanized) or A60 zinc-iron-alloy (galvannealed) coating designation.
- D. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type 304; with minimum sheet thickness indicated representing specified thickness according to ASTM A 480/A 480M.
- E. Drywall Beads: Edge trim formed from 0.0299-inch zinc-coated steel sheet formed to receive joint compound and in size to suit thickness of gypsum board.

2.02 PAINT

- A. Shop Primers: Provide primers that comply with Section 09900, "Painting."

2.03 ACCESS DOORS AND FRAMES

- A. Flush Access Doors and Frames with Exposed Trim: Fabricated from steel sheet.
 - 1. Locations: Masonry.
 - 2. Door: Minimum 0.060-inch- thick sheet metal, set flush with exposed face flange of frame.
 - 3. Frame: Minimum 0.060-inch- thick sheet metal with 1-1/4-inch- wide, surface- mounted trim.
 - 4. Hinges: Spring-loaded concealed pin type.
 - 5. Lock: Key-operated cylinder lock.

2.04 FABRICATION

- A. General: Provide access door assemblies manufactured as integral units ready for installation.

- B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.
- C. Steel Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of supports indicated.
 - 1. Exposed Flanges: As indicated.
 - 2. For trim-less frames with drywall bead for installation in gypsum board assembly, provide edge trim for gypsum board securely attached to perimeter of frames.
 - 3. Provide mounting holes in frames to attach frames to metal or wood framing in plaster and drywall construction and to attach masonry anchors in masonry construction.
- D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed.
 - 1. For cylinder lock, furnish two keys per lock and key all locks alike.

2.05 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.

2.06 STEEL FINISHES

- A. Surface Preparation: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface-preparation specifications and environmental exposure conditions of installed metal fabrications:
 - 1. Exteriors (SSPC Zone 1B): SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
 - 2. Interiors (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning."
- B. Apply shop primer to uncoated surfaces of metal fabrications. Comply with SSPC-PA 1, "Paint Application Specification No. 1," for shop painting.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Advise installers of other work about specific requirements relating to access door and floor door installation, including sizes of openings to receive access door and frame, as well as locations of supports, inserts, and anchoring devices.

3.02 INSTALLATION

- A. Comply with manufacturer's written instructions for installing access doors and frames.
- B. Set frames accurately in position and attach securely to supports with plane of face panels aligned with adjacent finish surfaces.
- C. Install access doors with trim-less frames flush with adjacent finish.

3.03 ADJUSTING AND CLEANING

- A. Adjust doors and hardware after installation for proper operation.
- B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 08710

DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Door Hardware, including electric hardware.
 - 2. Storefront and entrance door hardware.
 - 3. Power supplies for electric hardware.
 - 4. Key cabinets.
- B. Related Sections:
 - 1. Section 06200 - Finish Carpentry: Finish Hardware Installation
 - 2. Section 07900 - Joint Sealers – exterior thresholds
 - 3. Section 08100 - Metal Doors and Frames
- C. Specific Omissions: Hardware for the following is specified or indicated elsewhere.
 - 1. Rough hardware.
 - 2. Conduit, junction boxes & wiring.

1.02 REFERENCES:

- A. Use date of standard in effect as of Bid date.
- B. American National Standards Institute – ANSI 156.18 – Materials and Finishes.
- C. BHMA – Builders Hardware Manufacturers Association
- D. DHI – Door and Hardware Institute
- E. NFPA – National Fire Protection Association
 - 1. NFPA 80 – Fire Doors and Windows
 - 2. NFPA 105 – Smoke and Draft Control Door Assemblies
 - 3. NFPA 252 – Fire Tests of Door Assemblies
- F. UL – Underwriters Laboratories
 - 1. UL10C – Positive Pressure Fire Tests of Door Assemblies.
 - 2. UL 305 – Panic Hardware
- G. WHI – Warnock Hersey Incorporated

- H. 2010 State of California Building Code
- I. Local applicable codes
- J. SDI – Steel Door Institute
- K. WI – Woodwork Institute
- L. AWI – Architectural Woodwork Institute
- M. NAAMM – National Association of Architectural Metal Manufacturers

1.03 SUBMITTALS & SUBSTITUTIONS

- A. **SUBMITTALS:** Submit six copies of schedule. Only submittals printed one sided will be accepted and reviewed. Organize vertically formatted schedule into “Hardware Sets” with index of doors and headings, indicating complete designations of every item required for each door or opening. Include following information:
 - 1. Type, style, function, size, quantity and finish of hardware items.
 - 2. Use BHMA Finish codes per ANSI A156.18.
 - 3. Name, part number and manufacturer of each item.
 - 4. Fastenings and other pertinent information.
 - 5. Description of door location using space names and numbers as published in the drawings.
 - 6. Explanation of abbreviations, symbols, and codes contained in schedule.
 - 7. Mounting locations for hardware.
 - 8. Door and frame sizes, handing, materials, fire-rating and degrees of swing.
 - 9. List of manufacturers used and their nearest representative with address and phone number.
 - 10. Catalog cuts.
 - 11. Wiring Diagrams.
 - 12. Manufacturer’s technical data and installation instructions for electronic hardware.
 - 13. Date of jobsite visit.
- B. Bid and submit manufacturer’s updated/improved item if scheduled item is discontinued.
- C. **Deviations:** Highlight, encircle or otherwise identify deviations from “Schedule of Finish Hardware” on submittal with notations clearly designating those portions as deviating from this section.
- D. If discrepancy between drawings and scheduled material in this section, bid the more expensive of the two choices, note the discrepancy in the submittal and request direction from Architect for resolution.

- E. Substitutions: Include product data and indicate benefit to the Project. Furnish operating samples on request.
- F. Furnish as-built/as-installed schedule with closeout documents, including keying schedule, wiring diagrams, manufacturers' installation, adjustment and maintenance information, and supplier's final inspection report.

1.04 QUALITY ASSURANCE:

- A. Qualifications:
 - 1. Hardware supplier: direct factory contract supplier who employs a certified architectural hardware consultant (AHC), available at reasonable times during course of work for project hardware consultation to District, Architect and Contractor.
 - a. Responsible for detailing, scheduling and ordering of finish hardware. Detailing implies that the submitted schedule of hardware is correct and complete for the intended function and performance of the openings.
 - B. Hardware: Free of defects, blemishes and excessive play. Obtain each kind of hardware (latch and locksets, exit devices, hinges and closers) from one manufacturer.
 - C. Exit Doors: Operable from inside with single motion without the use of a key or special knowledge or effort.
 - D. Fire-Rated Openings: NFPA 80 compliant. Hardware UL10C / California State Fire Marshal Standard 12-7-4 (positive pressure) compliant for given type/size opening and degree of label. Provide proper latching hardware, non-flaming door closers, approved-bearing hinges, and resilient seals. Coordinate with wood door section for required intumescent seals. Furnish openings complete.
 - 1. Note: scheduled resilient seals may exceed selected door manufacturer's requirements.
 - 2. See 2.6.E for added information regarding resilient and intumescent seals.
 - E. Furnish hardware items required to complete the work in accordance with specified performance level and design intent, complying with manufacturers' instructions.
 - F. Pre-Installation Meetings: Initiate and conduct with supplier, installer and related trades, coordinate materials and techniques, and sequence complex hardware items and systems installation. Include manufacturers' representatives of locks, panic hardware and door closers in the meetings. Convene prior to commencement of related work.

1.05 DELIVERY, STORAGE AND HANDLING:

- A. Delivery: coordinate delivery to appropriate locations (shop or field).
 - 1. Permanent keys and cores: secured delivery direct to District's representative.

- B. Acceptance at Site: Items individually packaged in manufacturers' original containers, complete with proper fasteners and related pieces. Clearly mark packages to indicate contents, locations in hardware schedule and door numbers.
- C. Storage: Provide securely locked storage area for hardware, protect from moisture, sunlight, paint, chemicals, dust, excessive heat and cold, etc.

1.06 PROJECT CONDITIONS AND COORDINATION:

- A. Where exact types of hardware specified are not adaptable to finished shape or size of members requiring hardware, provide suitable types having as nearly as practical the same operation and quality as type specified, subject to Architect's approval.
- B. Coordination: Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents. Furnish related trades with the following information:
 - 1. Location of embedded and attached items to concrete.
 - 2. Location of wall-mounted hardware, including wall stops.
 - 3. Location of finish floor materials and floor-mounted hardware.
 - 4. Locations for conduit and raceways as needed for electrical, electronic and electro-pneumatic hardware items. Fire/life-safety system interfacing. Point-to-point wiring diagrams plus riser diagrams to related trades.
 - 5. Manufacturer templates to door and frame fabricators.
- C. Check Shop Drawings for doors and entrances to confirm that adequate provisions will be made for proper hardware installation. Do not order hardware until the submittal has been reviewed by the frame and door suppliers for compatibility with their products.
- D. Prior to submittal, carefully inspect existing conditions at each opening to verify finish hardware required to complete Work, including sizes, quantities, existing hardware scheduled for re-use, and sill condition material. If conflict or incompatibility between the specified/scheduled hardware and existing conditions, submit request for direction from Architect. Include date of jobsite visit in the submittal.
 - 1. Submittals prepared without thorough jobsite visit by qualified hardware expert will be rejected as non-compliant.

1.07 WARRANTY:

- A. A. Part of respective manufacturers' regular terms of sale. Provide manufacturers' written warranties:

- | | | |
|----|------------------------------------|---|
| 1. | Locksets: | Three years |
| 2. | Extra Heavy Duty Cylindrical Lock: | Seven Years |
| 3. | Exit Devices: | Three years mechanical
One year electrical |
| 4. | Closers: | Ten years mechanical
Two years electrical |
| 5. | Hinges: | One year |
| 6. | Other Hardware | Two years |

1.08 COMMISSIONING:

- A. Conduct these tests prior to request for certificate of substantial completion:
1. With installer present, test door hardware operation with climate control system and stairwell pressurization system both at rest and while in full operation.
 2. With installer, access control contractor and electrical contractor present, test electrical, electronic and electro-pneumatic hardware systems for satisfactory operation.
 3. With installer and electrical contractor present, test hardware interfaced with fire/life-safety system for proper operation and release.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Listed acceptable alternate manufacturers: submit for review products with equivalent function and features of scheduled products.

ITEM:	MANUFACTURER:	ACCEPTABLE SUB:
Hinges	(IVE) Ives	Bommer
Continuous Hinges	(IVE) Ives	Zero
Key System	(SCH) Schlage	
Locks	(SCH) Schlage	
Exit Devices	(VON) Von Duprin	
Closers	(LCN) LCN	
Auto Flush Bolts	(IVE) Ives	DCI
Coordinators	(IVE) Ives	DCI
Silencers	(IVE) Ives	Hiawatha
Push & Pull Plates	(IVE) Ives	Hiawatha
Kickplates	(IVE) Ives	Hiawatha
Stops & Holders	(IVE) Ives	Hiawatha
Overhead Stops	(GLY) Glynn-Johnson	None available
Thresholds	(NGP) NGP	Zero
Seals & Bottoms	(NGP) NGP	Zero

2.02 HINGING METHODS:

- A. Drawings typically depict doors at 90 degrees, doors will actually swing to maximum allowable. Use wide-throw conventional or continuous hinges as needed up to 8 inches in width to allow door to stand parallel to wall for true 180-degree opening. Advise architect if 8-inch width is insufficient.
- B. Conform to manufacturer's published hinge selection standard for door dimensions, weight and frequency, and to hinge selection as scheduled. Where manufacturer's standard exceeds the scheduled product, furnish the heavier of the two choices, notify Architect of deviation from scheduled hardware.
- C. Conventional Hinges: Steel or stainless steel pins and concealed bearings. Hinge open widths minimum, but of sufficient throw to permit maximum door swing.
 - 1. Outswinging exterior doors: non-ferrous with non-removable (NRP) pins and security studs.
 - 2. Non-ferrous material exteriors and at doors subject to corrosive atmospheric conditions.
- D. Continuous Hinges:
 - 1. Geared-type aluminum.
 - a. Use wide-throw units where needed for maximum degree of swing, advise architect if commonly available hinges are insufficient.
 - 2. Pinned steel/stainless steel type: continuous stainless steel, 0.25-inch diameter stainless-steel hinge pin.
 - a. Use engineered application-specific wide-throw units as needed to provide maximum swing degree of swing, advise architect if required width exceeds 8 inches.

2.03 LOCKSETS, LATCHSETS, DEADBOLTS:

- A. Mortise Locksets and Latchsets: as scheduled.
 - 1. Chassis: cold-rolled steel, handing field-changeable without disassembly.
 - 2. Latchbolts: 3/4 inch throw stainless steel anti-friction type.
 - 3. Lever Trim: through-bolted, accessible design, cast lever or solid extruded bar type levers as scheduled. Filled hollow tube design unacceptable.
 - a. Spindles: security design independent breakaway. Breakage of outside lever does not allow access to inside lever's hubworks to gain wrongful entry.

4. Furnish solid cylinder collars with wave springs. Wall of collar to cover rim of mortise cylinder.
 5. Thumbturns: accessible design not requiring pinching or twisting motions to operate.
 6. Deadbolts: stainless steel 1-inch throw.
 7. Electric operation: Manufacturer-installed continuous duty solenoid.
 8. Strikes: 16 gage curved steel, bronze or brass with 1 inch deep box construction, lips of sufficient length to clear trim and protect clothing.
 9. Scheduled Lock Series and Design: Schlage L series, 17A design.
 10. Certifications:
 - a. ANSI A156.13, Grade 1 Operational, Grade 1 Security.
 - b. ANSI/ASTM F476-14 Grade 31 UL Listed.
- B. Extra Heavy Duty Cylindrical Locks and Latches: as scheduled.
1. Chassis: cylindrical design, corrosion-resistant plated cold-rolled steel, through-bolted.
 2. Locking Spindle: stainless steel, integrated spring and spindle design.
 3. Latch Retractors: forged steel. Balance of inner parts: corrosion-resistant plated steel, or stainless steel.
 4. Latchbolt: solid steel.
 5. Backset: 2-3/4" typically, more or less as needed to accommodate frame, door or other hardware.
 6. Lever Trim: accessible design, independent operation, spring-cage supported, minimum 2" clearance from lever mid-point to door face.
 7. Electric operation: Manufacturer-installed continuous duty solenoid.
 8. Strikes: 16 gage curved steel, bronze or brass with 1" deep box construction, lips of sufficient length to clear trim and protect clothing.
 9. Lock Series and Design: Schlage ND series, "Sparta" design.
 10. Certifications:
 - a. ANSI A156.2, 1994, Series 4000, Grade 1.
 - b. UL listed for A label and lesser class single doors up to 4ft x 8ft.

2.04 CLOSERS

- A. Surface Closers:
1. Full rack-and-pinion type cylinder with removable non-ferrous cover and cast iron body. Double heat-treated pinion shaft, single piece forged piston, chrome-silicon steel spring.

2. ISO 2000 certified. Units stamped with date-of-manufacture code.
3. Independent lab-tested 10,000,000 cycles.
4. Non-sized, non-handed, and adjustable. Place closer inside building, stairs, and rooms.
5. Plates, brackets and special templating when needed for interface with particular header, door and wall conditions and neighboring hardware.
6. Adjustable to open with not more than 5.0lbs pressure to open at exterior doors and 5.0lbs at interior doors. As allowed per California Building Code, Section 1133B.2.5, local authority may increase the allowable pressure for fire doors to achieve positive latching, but not to exceed 15lbs.
7. Separate adjusting valves for closing speed, latching speed and backcheck, fourth valve for delayed action where scheduled.
8. Extra-duty arms (EDA) at exterior doors scheduled with parallel arm units.
9. Exterior door closers: tested to 100 hours of ASTM B117 salt spray test, furnish data on request.
10. Exterior doors: seasonal adjustments not required for temperatures from 120 degrees F to -30 degrees F, furnish checking fluid data on request.
11. Non-flaming fluid, will not fuel door or floor covering fires.
12. Pressure Relief Valves (PRV) not permitted.

2.05 OTHER HARDWARE

- A. Automatic Flush Bolts: Low operating force design.
- B. Overhead Stops: Non-plastic mechanisms and finished metal end caps. Field-changeable hold-open, friction and stop-only functions.
- C. Kick Plates: Four beveled edges, .050 inches minimum thickness, height and width as scheduled. Sheet-metal screws of bronze or stainless steel to match other hardware.
- D. Door Stops: Provide stops to protect walls, casework or other hardware.
 1. Unless otherwise noted in Hardware Sets, provide floor type with appropriate fasteners. Where floor type cannot be used, provide wall type. If neither can be used, provide overhead type.
 2. Locate overhead stops for maximum possible opening. Consult with District for furniture locations. Minimum: 90deg stop / 95deg deadstop. Note degree of opening in submittal.
- E. Seals: Finished to match adjacent frame color. Resilient seal material: polyurethane, polypropylene, nylon brush, silicone rubber or solid high-grade neoprene as scheduled. Do not furnish vinyl seal material. UL label applied to seals on rated doors. Substitute products: certify that the products equal or exceed specified material's thickness and durability.

1. Proposed substitutions: submit for approval.
 2. Solid neoprene: MIL-R6855-CL II, Grade 40.
 3. Non-corroding fasteners at in-swinging exterior doors.
 4. Sound control openings: Use components tested as a system using nationally accepted standards by independent laboratories. Ensure that the door leafs have the necessary sealed-in-place STC ratings. Fasten applied seals over bead of sealant.
 5. Fire-rated Doors, Resilient Seals: UL10C / UBC Standard 7-2 compliant. Coordinate with selected door manufacturers' and selected frame manufacturers' requirements. Where rigid housed resilient seals are scheduled in this section and the selected door manufacturer only requires an adhesive-mounted resilient seal, furnish rigid housed seal at minimum, or both the rigid housed seal plus the adhesive applied seal. Adhesive applied seals alone are deemed insufficient for this project where rigid housed seals are scheduled.
 6. Fire-rated Doors, Intumescent Seals: Furnished by selected door manufacturer. Furnish fire-labeled opening assembly complete and in full compliance with UL10C / UBC Standard 7-2. Where required, intumescent seals vary in requirement by door type and door manufacture -- careful coordination required
- F. Automatic door bottoms: low operating force units. Doors with automatic door bottoms plus head and jamb seals cannot require more than two pounds operating force to open when closer is disconnected.
- G. Thresholds: As scheduled and per details. Comply with CBC Section 1133B.2.4.1. Substitute products: certify that the products equal or exceed specified material's thickness. Proposed substitutions: submit for approval.
1. Exteriors: Seal perimeter to exclude water and vermin. Use sealant complying with requirements in Division 7 "Thermal and Moisture Protection". Non-ferrous 1/4inch fasteners and lead expansion shield anchors, or Red-Head #SFS-1420 (or approved equivalent) Flat Head Sleeve Anchors (SS/FHSL).
 2. Fire-rated openings, 90min or less duration: use thresholds to interrupt floor covering material under the door where that material has a critical radiant flux value less than 0.22 watts per square centimeter, per NFPA 253. Use threshold unit as scheduled. If none scheduled, request direction from Architect.
 3. Fire-rated openings, 3hour duration: Thresholds, where scheduled, to extend full jamb depth.
 4. Acoustic openings: Set units in full bed of Division-7-compliant, leave no air space between threshold and substrate.
 5. Plastic plugs with wood or sheet metal screws are not an acceptable substitute for specified fastening methods.
 6. Fasteners: Generally, exposed screws to be Phillips or Robertson drive.

Pinned TORX drive at high security areas. Flat head sleeve anchors (FHSL) may be slotted drive. Sheet metal and wood screws: full-thread. Sleeve nuts: full length to prevent door compression.

- H. Exposed Through-Bolts: Do not use SNB, grommet nuts, sleeve nuts or other such clamping type fasteners, intent is for minimal exposed hardware. Coordinate with wood doors; ensure provision of proper blocking to support wood screws for mounting panic hardware and door closers. Coordinate with metal doors and frames; ensure provision of proper reinforcement to support machine screws for mounting panic hardware and door closers.
- I. Silencers: Interior hollow metal frames, 3 for single doors, 4 for pairs of doors. Omit where adhesive mounted seal occurs. Leave no unfilled/uncovered pre-punched silencer holes.

2.06 FINISH:

- A. Generally BHMA 626 Satin Chromium.
 - 1. Areas using BHMA 626 to have push-plates, pulls and protection plates of BHMA 630, Satin Stainless Steel, unless otherwise noted.
- B. Door closers: factory powder coated to match other hardware, unless otherwise noted.
- C. Aluminum items: match predominant adjacent material. Seals to coordinate with frame color.

2.07 KEYING REQUIREMENTS:

- A. Key System: Schlage Everest Primus 29XP high-security utility-patented keyway, interchangeable core throughout. Utility patent protection to extend at least until 2029. Key blanks available only from factory-direct sources, not available from after-market keyblank manufacturers. For estimate use factory GMK charge. Initiate and conduct meeting(s) with District to determine system keyway(s), keybow styles, structure, degree of physical security and degree of geographic exclusivity. Furnish District's written approval of the system.
 - 1. New factory-registered master key system.
 - 2. Primus Level 29XP
 - 3. Construction keying: furnish temporary keyed-alike cores. At substantial completion District to remove cores and install permanent cylinders/cores.
 - 4. Temporary cylinders/cores remain supplier's property.
 - 5. Furnish 10 construction keys.
 - 6. Furnish 2 construction control keys.
 - 7. Key Cylinders: furnish 6-pin solid brass construction.
- B. Cylinders/cores: keyed at factory of lock manufacturer where permanent records are maintained. Locksets and cylinders same manufacturer.

- C. Permanent keys: use secured shipment direct from point of origination to District.
 - 1. For estimate: 3 keys per change combination, 5 master keys per group, 5 grand-master keys, 3 control keys.
 - 2. For estimate: VKC stamping plus "Do Not Duplicate".
- D. Bitting List: use secured shipment direct from point of origination to District at completion.
- E. Key Control software: Include one Sitemaster 200 key control system with new key system.

PART 3 - EXECUTION

3.01 ACCEPTABLE INSTALLERS:

- A. Can read and understand manufacturers' templates, suppliers' hardware schedules and printed installation instructions. Can readily distinguish drywall screws from manufacturers' furnished fasteners. Available to meet with manufacturers' representatives and related trades to discuss installation of hardware.

3.02 PREPARATION:

- A. Ensure that walls and frames are square and plumb before hardware installation. Make corrections before commencing hardware installation.
- B. Locate hardware per SDI-100 and applicable building, fire, life-safety, accessibility, and security codes.
 - 1. Notify Architect of code conflicts before ordering material.
 - 2. Locate levers, key cylinders, t-turn pieces, touchbars and other operable portions of latching hardware between 30 inches to 44 inches above the finished floor, per CBC Section 1133B.2.5.1.
 - 3. Where new hardware is to be installed near existing doors/hardware scheduled to remain, match locations of existing hardware.
- C. Overhead stops: before installing, determine proposed locations of furniture items, fixtures, and other items to be protected by the overhead stop's action.
- D. Existing frames and doors to be retrofitted with new hardware:
 - 1. Field-verify conditions and dimensions prior to ordering hardware. Fill existing hardware cut outs not being reused by the new hardware. Remove existing hardware not being reused, return to District unless directed otherwise.
 - 2. Remove existing floor closers not scheduled for reuse, fill cavities with concrete and finish smooth
 - 3. Cut and weld existing steel frames currently prepared with 2-3/4" height strikes. Cut an approx. 8" section from the strike jamb and weld in a reinforced section to accommodate specified hardware's strike.

4. Patch and weld flush filler pieces into existing door hardware preparations in steel doors and frames, leave surfaces smooth.
5. Glue in solid wood block fillers to fill cut outs in existing wood doors, sand surfaces smooth. Alternatively, use an approved epoxy-based wood filler product, submit product data for approval.

3.03 INSTALLATION

- A. Install hardware per manufacturer's instructions and recommendations. Do not install surface-mounted items until finishes have been completed on substrate. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate for proper installation and operation. Remove and reinstall or replace work deemed defective by Architect.
 1. Gaskets: install jamb-applied gaskets before closers, overhead stops, rim strikes, etc; fasten hardware over and through these seals. Install sweeps across bottoms of doors before astragals, cope sweeps around bottom pivots, trim astragals to tops of sweeps.
 2. When hardware is to be attached to existing metal surface and insufficient reinforcement exists, use RivNuts, NutSerts or similar anchoring device for screws.
 3. Use manufacturers' fasteners furnished with hardware items, or submit Request for Substitution with Architect.
 4. Replace fasteners damaged by power-driven tools.
- B. Locate floor stops no more that 4 inches from walls and not within paths of travel. See paragraph 2.2 regarding hinge widths, door should be well clear of point of wall reveal. Point of door contact no closer to the hinge edge than half the door width. Where situation is questionable or difficult, contact Architect for direction.
- C. Core concrete for exterior door stop anchors. Set anchors in approved non-shrink grout.
- D. Locate overhead stops for minimum 90 degrees and maximum allowable degree of swing.
- E. Drill pilot holes for fasteners in wood doors and/or frames. Centerpunch hole locations before using self-drilling type screws to prevent skating. Replace screws that are not centered in their holes.
- F. Lubricate and adjust existing hardware scheduled to remain. Carefully remove and give to District items not scheduled for reuse.
- G. Field verify existing conditions and measurements prior to ordering hardware. Fill existing hardware cut outs not being used by the new hardware. Remove existing hardware not being reused.
- H. Disable or remove existing floor closers where they exist. If disabled cut or remove spindle.

- I. Where existing wall conditions will not allow door to swing using the scheduled hinges, provide wide-throw hinges and if needed extended arms on closers.
- J. Provide proper brackets to accommodate the mounting of closers on doors with flush transoms.

3.04 ADJUSTING

- A. Adjust and check for proper operation and function. Replace units, which cannot be adjusted to operate freely and smoothly.
 - 1. Hardware damaged by improper installation or adjustment methods: repair or replace to District's satisfaction.
 - 2. Adjust doors to fully latch with no more than 1 pound of pressure.
 - 3. Adjust delayed-action closers on fire-rated doors to fully close from fully-opened position in no more than 10 seconds.
 - 4. Adjust door closers per 1.08, this section.
- B. Inspection: Use hardware supplier's consultant or consultant's agent. Include supplier's report with closeout documents.
- C. Final inspection: Installer to provide letter to District that upon completion installer has visited the Project and has accomplished the following:
 - 1. Re-adjust hardware.
 - 2. Evaluate maintenance procedures and recommend changes or additions, and instruct District's personnel.
 - 3. Identify items that have deteriorated or failed.
 - 4. Submit written report identifying problems

3.05 DEMONSTRATION:

- A. Demonstrate mechanical hardware and electrical, electronic and pneumatic hardware systems, including adjustment and maintenance procedures.

3.06 PROTECTION/CLEANING:

- A. Cover installed hardware, protect from paint, cleaning agents, weathering, carts/barrows, etc. Remove covering materials and clean hardware just prior to substantial completion.
- B. Clean adjacent wall, frame and door surfaces soiled from installation/reinstallation process.

3.07 SCHEDULE OF FINISH HARDWARE

- A. See door schedule in drawings for hardware set assignments.
- B. No hardware shall be ordered until Finished Hardware has been reviewed and

approved by Architect's hardware consultant.

C. Provide Factory order numbers for all products supplied on this project as part of close out documents for District's warranty records.

D. Miscellaneous Material:

Hardware Group No. 01

For use on mark/door #(s):

001

002

3	EA	HINGE	3CB1 4.5 X 4.5	652	IVE
2	EA	PULL PLATE	8302 4 x 16	626	IVE
1	EA	DEADLOCK	B560P	626	SCH
1	EA	PRIMUS CORE	20-740-XP	626	SCH
1	EA	OH STOP	450S	630	GLY
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	SET	SEALS	5050B	BRN	NGP
1	EA	DOOR BOTTOM	320N	AL	NGP
2	EA	KICK PLATE	8400 12" X 34"	626	IVE
1	EA	THRESHOLD	411 MS/LA	AL	NGP

END OF SECTION

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TECHNICAL PROVISIONS

SECTION 09250

GYP SUM BOARD

PART 1 - PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Gypsum board.
- B. Taped and sanded joint treatment.
- C. Skim coat finish (ASTM C840 Level 5).
- D. Prime coat walls and ceilings.

1.02 REFERENCES

- A. ASTM C36 - Gypsum Wallboard.
- B. ASTM C475 - Joint Treatment Materials for Gypsum Wallboard Construction.
- C. ASTM C840 - Application and Finishing of Gypsum Board (Level 5).
- D. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board.
- E. GA-201 - Gypsum Board for Walls and Ceilings.
- F. GA-216 - Recommended Specifications for the Application and Finishing of Gypsum Board.
- G. GA-600 - Fire Resistance Design Manual.

1.03 SUBMITTALS

- A. Product Data: Provide data on gypsum board, joint compound, tape and prime coat.

1.04 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM C840 (Level 5), GA-201, GA-216 and GA-600.

1.05 QUALIFICATIONS

- A. Applicator Qualifications: A firm specializing in and regularly engaged in the installation and finishing gypsum board systems of equivalent type, size and complexity shown on the drawings and specified herein. Installer shall be specifically approved by the Owner and Architect prior to start of construction.
- B. Submit a minimum of 3 local examples of previously constructed gypsum board systems of equivalent type, size and complexity shown on the drawings and specified

herein for verification of qualifications by the Owner and Architect.

- C. A California Contractor's State License Board Class C-9 license is required.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable portions of the 2016 California Building Code.

1.07 FIELD SAMPLES

- A. Construct a gypsum board sample panel, 10 feet long by full wall height, with joint treatment, prime coat and skim coat finish indicated.
- B. Locate where directed. Sample will be examined to ascertain quality and conformity to specified standards and will establish a minimum standard of quality for this work.
- C. Accepted sample may remain as part of the Work.

PART 2 - PRODUCTS

2.01 MANUFACTURERS - GYPSUM BOARD AND ACCESSORIES

- A. United States Gypsum Company. Product: Gypsum Board.
- B. Other acceptable manufacturers offering equivalent products.
 - 1. Georgia Pacific Corporation.
 - 2. Gold Bond Building Products.
- C. Angeles Metal Systems. Products: Resilient Sound Channels.
- D. Other acceptable manufacturers offering equivalent products.
 - 1. United States Gypsum Company.
 - 2. Western Metal Lath Company.
- E. Substitutions: Under provisions of Section 01001.

2.02 ACCESSORY MATERIALS

- A. Resilient Channels: ClarkDietrich RC-1 Pro or U.S. Gypsum Co. RC-1, galvanized.

2.03 GYPSUM BOARD MATERIALS

- A. Standard Gypsum Board: ASTM C36 5/8 inch thick, maximum permissible length; ends square cut, tapered edges.
- B. Fire Rated Gypsum Board: ASTM C36; fire resistive type, UL rated; 5/8 inch thick, maximum permissible length; ends square cut, tapered edges.

2.04 ACCESSORIES

- A. Acoustical Sealant: Non-hardening, non-skinning, for use in conjunction with

gypsum board; No. 3131 - manufactured by W.W. Henry.

- B. Corner Beads: Metal, ASTM C 1047 and C 840, Type CB, hot dip galvanized.
- C. Edge Trim: ASTM C 1047 and C 840, Type LC bead, hot dip galvanized.
- D. Joint Materials: ASTM C475; reinforcing tape, joint compound, adhesive, and water.
- E. Prime Coat: U.S. Gypsum "Sheetrock First Coat", Hamilton "Prep Coat" or Frazee "Prep Step."
- F. Fasteners: ASTM C1002, Type W.
- G. Resilient Channels: Metal, single mounting flange type; hot dip galvanized.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify site conditions under provisions of Section 01001.
- B. Verify that site conditions are ready to receive work and opening dimensions are as indicated on drawings.

3.02 FURRING FOR FIRE RATINGS

- A. Install furring as required for fire resistance ratings indicated and to GA-600 requirements.

3.03 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with ASTM C 840 (Level 5 finish), GA-201, GA-216, GA-600, and manufacturer's instructions.
- B. Erect single layer standard gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Erect single layer fire rated gypsum board with edges and ends occurring over firm bearing.
- D. Use screws when fastening gypsum board to furring or framing.
- E. Double Layer Applications: Use gypsum backing board for first layer, placed perpendicular to framing or furring members. Use fire rated gypsum backing board for fire rated partitions. Place second layer perpendicular to first layer. Offset joints of second layer from joints of first layer.
- F. Fit gypsum board closely and neatly around plumbing and electrical outlets, pipes, and fittings so that cover plates and escutcheons will completely and properly overlap gypsum board.
- G. Extend outer layer of gypsum board to within not more than 1/4 inch of structural floor, typical.
- H. Place corner beads at external corners. Use longest practical length. Place edge trim

at exposed edges and where gypsum board abuts dissimilar materials.

3.04 JOINT TREATMENT

- A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
- B. All joints, including internal and external corners, shall be filled and taped and 3-coat finished.
- C. All fastener heads and metal trim shall be 3-coat finished.
- D. All joints, fasteners, and trim shall have each coat of finish feathered beyond the preceding. Sand lightly after thoroughly dry as required to obtain finish, flush and in alignment with adjacent gypsum board surfaces.
- E. Gypsum board shall have a Level 4 finish as described in ASTM C 840.

3.05 PRIME COAT

- A. Thoroughly remove all dust with a large damp sponge.
- B. Install one 36 inch wide layer of rosin paper on floor next to all walls which are to receive prime coat to prevent dust accumulating on walls.
- C. Roller or airless spray apply prime coat in accordance with prime coat manufacturer's published application recommendations for full and complete coverage. Apply 2 coats of prime coat.

3.06 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction; no measurable variation in any 2 foot direction.

END OF SECTION

SECTION 09300

TILE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Ceramic tile, floor, base, and wall finish and accents using the thinset and mortar set application methods.
- B. Stone thresholds at door openings.

1.02 SUBMITTALS

- A. Product Data: Provide material specifications, characteristics, and instructions for using adhesives and grouts.
- B. Samples: Submit two samples for each type of tile or stone.
- C. Maintenance Instructions: Include recommended cleaning methods, cleaning materials, stain removal methods and polishes and waxes.
- D. Submit manufacturers published slip resistance and coefficient of friction test results conducted by an independent testing laboratory.
- E. Manufacturers Certificate: Certify that Products meet or exceed specified requirements.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with the Tile Council of America (TCA) Handbook for Ceramic Tile Installation, latest edition.

1.04 QUALIFICATIONS

- A. Manufacturer: Company specializing in the manufacture of products specified in this Section with minimum five years documented experience.
- B. Applicator: Company specializing in performing the work of this section with minimum five years documented experience and approved by material manufacturer. A California Contractor's State License Board Class C-54 license is required.

1.05 REGULATORY REQUIREMENTS

- A. Conform to applicable portions of the 2016 California building Code.
- B. Conform to applicable requirements of the Americans With Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (and Appendix) for slip resistance and static coefficient of friction for walking surfaces.

1.06 SLIP RESISTANCE

- A. The installed dry surface static coefficient of friction for finish surface materials shall be not less than 0.60 for level walking surfaces when tested in accordance with procedures outlined in ASTM Test Method C-1028-89.

1.07 MOCK-UP

- A. Provide mock-ups of one of each glazed wall tile, unglazed floor tile, and stone threshold. Type and color of each mock-up to be as directed by Engineer.
- B. Construct mock-ups, each approximately 100 square feet in area, illustrating surface finish and accessories installation. Approved mock-ups will establish a minimum standard of quality for this work.
- C. Locate where directed by the Engineer.
- D. Mock-up, when approved, may remain as part of the work.

PART 2 - PRODUCTS

2.01 TILE MATERIALS

- A. All required tile is to match the existing installation.

2.02 SETTING MATERIALS

- A. Portland cement: Conform to ASTM C-150, type II.
- B. Sand: Clean, graded, and conform to ASTM C-144.
- C. Water: Clean and potable.
- D. Dry-set mortar: Conform to ANSI A118.1. Mortar bed minimum thickness 3/32".
- E. Latex-portland cement mortar: Conform to ANSI A118.4. Mortar bed minimum thickness 3/32".
- F. Bond coat shall be portland cement paste on a plastic bed, or dry-set mortar or latex-portland cement mortar on a cured bed.
- G. Cement mortar: One part portland cement to four to five parts damp sand by volume.

2.03 GROUT MATERIALS

- A. Grout: ANSI A118.6, latex-portland cement ceramic tile grout or ANSI A118.3, epoxy grout (at quarry tile).
- B. Color Admixture: As shown on the Color and Materials (CM) drawings.

2.04 ACCESSORIES

- A. Stone Thresholds: Standard stone or custom stone slab type as indicated, color and finish as shown on Color and Material (CM) drawings, full depth and width of frame

opening, beveled both sides where indicated and/or appropriate, radiused edges. Installation in accordance with TCA Handbook for Ceramic Tile Installation - Method TR611.

- B. Sealant: Mildew resistant type, Dow Corning 786, General Electric 1700, or approved equivalent.

2.05 MORTAR AND GROUT MIX

- A. Mix and proportion mortar and grout materials in accordance with TCA Handbook.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation signifies installer accepts condition of substrate.
- C. Protect surrounding work from damage or disfiguration.
- D. Vacuum clean substrate and damp clean.
- E. Seal substrate surface cracks with filler.

3.02 INSTALLATION - GENERAL

- A. Installation of tile shall be in accordance with The Tile Council of America (TCA) Handbook for Ceramic Tile Installation, latest edition.
- B. Mixing of all mortar shall be by batch machine mixer. All ingredients shall be proportioned and measured by calibrated boxes or containers.
- C. Lay out tile work so that, as far as possible, no tile less than a half-full size tile unit occurs. For heights stated in feet and inches on the drawings, maintain full courses to produce the nearest obtainable height using standard bases and trim. Lay floors out from center-lines of rooms so that all major adjustments are made at walls. Lay out tiles on walls so that fields and patterns center exactly on individual wall areas.
- D. Extend tile work and base into toe spaces, closets, alcoves, storage rooms, and similar recesses and under and behind equipment and fixtures, unless shown otherwise.
- E. Fit tile work closely and neatly around fixtures, outlets, pipes, and fittings, so that cover plates and escutcheons will properly overlap tile.
- F. Terminate tile work neatly at obstructions, edges, and corners without disruption of pattern or joint alignments. Align floor, base and wall joints. Saw cut miter joint typical at inside and outside coved base corners. Do not interrupt tile pattern through openings.
- G. Metal edge strips shall be provided where exposed edge of floor tile abuts and is flush with other types of floor finishes, except when shown otherwise.
- H. Trim units shall be provided at the termination of all wall tile, except where tile is

shown flush with an adjacent surface or meets a projecting or intersecting surface. Provide bullnose units at all exposed tops, edges, and external corners. Provide coved units at the intersection of floor and wall tile and coved bullnose base units where floor tile occurs without a tile wainscot or wall adjacent.

- I. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- J. Sound tile after setting. Replace hollow-sounding units.
- K. Keep expansion and control joints free of adhesive or grout. Apply sealant to joints.
- L. Allow tile to set for a minimum of 48 hours prior to grouting.
- M. Grout tile joints. Make joints watertight, without voids, cracks, excess mortar or excess grout.
- N. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.03 INSTALLATION - WALLS

- A. Wall tile installation shall be in accordance with TCA Handbook for Ceramic Tile Installation, Method W243 (over water resistant gypsum board backer board and metal studs) as indicted on drawings.
- B. Provide wall tile grout color to match existing.
- C. Where wall tile thickness varies (accent tile or other such features) the finish surface of all tile shall be installed flush with adjacent tile surfaces.

3.04 INSTALLATION - FLOORS

- A. Interior floor tile installation shall be in accordance with TCA Handbook for Ceramic Tile Installation, Method F113 (dry set mortar over concrete subfloor) or Method F121 (cement mortar bed over concrete subfloor) as indicated on drawings.
- B. Provide floor tile grout color to match existing.

3.05 CLEANING

- A. Clean tile surfaces.

3.06 PROTECTION

- A. Protect finished installation as specified in Division 1 - General Provisions.
- B. Do not permit traffic over finished tile floor surface.

END OF SECTION

TECHNICAL PROVISIONS

SECTION 09900

PAINTING AND COATING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation and field application of paints and coatings.
- B. The major items of architectural work are: All exposed exterior woodwork, sheet metal and metal, including soffits, doors, mullions, and trim; all exposed exterior and interior wall surfaces and soffits; all exposed interior woodwork, walls, ceilings, metal and sheet metal, including soffits, doors, mullions and trim; (except aluminum) all surfaces inside and outside, shall be painted, unless specifically indicated as unfinished, including, where shown, door grilles, return air grilles, visible interiors of the ductwork, parking lot light standards, parking lot and site guard posts, bicycle racks, and all exposed piping, trash enclosure gates, cover and supports and hardware.
- C. Section includes surface preparation and shop and field application of paints and other coatings on exposed, submerged, and buried metallic pipeline surfaces and appurtenances.
- D. Prime and back prime painting of sheet metal items furnished under Section 07620 - Sheet Metal Flashing and Trim.
- E. Warranty.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Comply with the current provisions of the following codes and standards:
 - 1. ASTM D16 Standard Terminology for Paint, Related Coatings, Materials, and Applications.
 - 2. ASTM D1002 Standard Test Method for Apparent Shear Strength of Single Lap Joint Adhesively Bonded Metal Specimens by Tension Loading.
 - 3. ASTM D2370 Standard Test Method for Tensile Properties of Organic Coatings.
 - 4. ASTM D2583 Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
 - 5. ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test, Test Method A.
 - 6. ASTM D4138 Standard Method of Measurement of Dry Film Thickness of Protective Coating Systems by Destructive Means.
 - 7. ASTM D4285 Standard Test Method for Indicating Oil or Water in

Compressed Air.

8. ASTM D4414 Standard Practice for Measurement of Wet Film Thickness by Notch Gauges.
9. ASTM D4545 Standard Method for Pull-Off Strength of Coatings using Portable Adhesion Testers.
10. ASTM G17 Standard Test Method for Penetration Resistance of Pipeline Coatings.
11. AWWA C210 Liquid-Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines
12. AWWA C213 Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines
13. AWWA C222 Polyurethane Coatings for the Interior and Exterior of Steel Water Pipe and Fittings
14. California Department of Public Health - CDPH/EHLB Standard Method v1.1 (2010) - Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers.
15. The Society for Protective Coatings (SSPC), Surface Preparation.
 - a. SPC-PA, COM Commentary of Paint Application
 - b. SSPC-PA1 Shop, Field, and Maintenance Paint Application Guide
 - c. SSPC-PA2 Measurement of Dry Paint Thickness with Magnetic Gauges
 - d. SSPC-PA, Guide 3 A Guide to Safety in Paint Application
 - e. SSPC-SP1 Solvent Cleaning
 - f. SSPC-SP2 Hand Tool Cleaning
 - g. SSPC-SP3 Power Tool Cleaning
 - h. SSPC-SP5 White Metal Blast Cleaning
 - i. SSPC-SP6 Commercial Blast Cleaning
 - j. SSPC-SP7 Brush-Off Blast Cleaning
 - k. SSPC-SP10 Near White Metal Blast Cleaning
 - l. SSPC-SP12 Surface Preparation and Cleaning of Steel and Other Hard Material by High and Ultra-High Pressure Water Jetting Prior to Recoating
 - m. SSPC-SPVIS-1-89 Visual Standard for Abrasive Blast Cleaned Steel Surfaces
16. NACE International (NACE)
 - a. NACE, RPO287-87, Field Measurement of Surface Abrasive Blast Cleaned Surfaces using a Replica Tape.
 - b. NACE, T-6Q-30, Quality Control Application of Protective Coating Materials.
 - c. NACE, SP0188-2006, Discontinuity (Holiday) Testing Protective

Coatings

1.03 BUILDING CODE REQUIREMENTS

- A. Finish Materials: Conform to applicable 2016 California Building Code for flame/smoke rating requirements.

1.04 SUBMITTALS

- A. Product Data: Provide data on all finishing products.
- B. Samples: Submit three brush-out samples, 8 1/2 X 11 inch in size illustrating range of colors and textures available for each surface finishing product scheduled.
- C. All submitted products shall comply with all local, state and federal air quality mandates.
- D. Submit manufacturer's data pertaining to coatings showing the percent solids by volume and maximum and minimum allowable dry film thickness (DFT) for the prime, intermediate (if applicable), and finish coats. In addition, provide information on the required surface preparation, any product mixing requirements, thinners, etc.
- E. Submit application instructions, including recommended equipment, temperature, and curing systems.
- F. Submit Material Safety Data Sheets (MSDS) for each lining and coating product.
- G. Submit a statement certifying that the multiple application lining or coating systems are compatible (i.e., the prime product is compatible with the intermediate or finish coat).
- H. Submit manufacturer's standard color charts. Final color selection will be by the District.

1.05 FIELD SAMPLES

- A. Provide one interior and one exterior field sample wall panel, full height of wall or building. Sample panel shall show all trim colors, frame colors, and other such features, that pass through or occur in the panel.
- B. Provide field sample of stained wood door and frame.
- C. Provide field sample of painted wood or metal door and frame as applicable.
- D. Field samples shall be approved by the Architect in writing prior to ordering paint in quantity. Colors shall be subject to modification following Architect's inspection of the field samples.
- E. Locate samples where directed by Architect.
- F. Accepted samples may remain as part of the work.

1.06 MOISTURE/ALKALINITY TEST

- A. Provide a written moisture and alkalinity test report for each area or room shown to receive paint finish.
- B. Moisture test shall be by use of a commercial moisture meter, and shall be performed and reported by the paint manufacturer's representative.
- C. Alkalinity test shall be by use of pH indicator paper, and shall be performed and reported by the paint manufacturer's representative.
- D. Alkalinity test results shall have a pH reading below 10 before applying any coating system.
- E. Test results must be either approved in writing by the paint manufacturer or must be within the paint manufacturer's published acceptable range of values. Submit documentation of manufacturer's acceptance and obtain Architects approval of documents prior to application of paint.

1.07 QUALIFICATIONS

- A. Manufacturer: Company specializing in the manufacture of products specified in this Section with minimum ten years documented experience.
- B. Installer: Company specializing in performing the work of this section with minimum five years documented experience and approved by material manufacturer. A California Contractor's State License Board Class C-33 license is required.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Store and apply materials in environmental conditions required by Manufacturer's instructions.
- B. Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this specification, comply with the more stringent provisions.
- C. Regulatory changes may affect the formulation, availability, or use of specified coatings. Confirm availability of coatings to be used prior to job going out to bid and before start of painting project.
 - 1. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).

1.09 WARRANTY

- A. Provide a one year warranty for all painting. Include labor and material.

PART 2 - PRODUCTS

2.01 MANUFACTURERS FOR ARCHITECTURAL PAINTING SYSTEMS

- A. Approved Manufacturers:

1. Dunn Edwards
 2. ICI Paints
 3. Frazee
 4. Vista Paint Corporation
 5. Pittsburgh Paints
- B. Coatings: Ready mixed, except field catalyzed coatings, of good flow and brushing properties, capable of drying or curing free of streaks or sags.
- C. Accessory Materials: Thinners and other materials required to achieve the finishes specified.
- D. All materials shall be manufacturer's first quality and best grade and shall be delivered in original, unopened containers. Materials shall not be diluted by addition of thinners except as recommended by manufacturer's label instructions.
- E. Where names of specific products are designated in this section of the specifications or on the drawings, the intent is to state the type and quality of product desired without ruling out use of other materials of equal type and quality approved by the Architect prior to delivery.
- F. All colors shall be as selected by the Architect and will be made from the color systems of the manufacturers specified. Where substitute manufacturers are submitted and approved, it shall be the Contractor's responsibility to submit substitute color cards for each selected color for comparison and approval.

2.02 SUBSTITUTIONS

- A. All products offered as equivalent to the specified manufacturer's products listed herein shall be equivalent to all the properties, specifications, appearance, conformance to standards, finish and functions of the specified manufacturer's product.

2.03 ARCHITECTURAL FINISHES

- A. Refer to schedule in Sections 3.13 and 3.14 at end of section for paint processes.

2.04 PAINTS AND COATINGS

- A. Exposed Metallic Surfaces, Atmospheric Weathering/Vault Environment
1. Exposed metallic surfaces shall be coated with Surface preparation for the components to be coated/lined shall be SSPC SP-6. The prime coat shall be a moisture curing urethane zinc rich primer. The minimum thickness shall be 4 mils. Products include: Sherwin Williams Corothane I Galvapac, or equal.
 2. The finish coat shall be high solids, high build, fast drying polyamide epoxy. Apply in accordance with the manufacturer's recommendations to a minimum of 10 mils. Color to be selected by District. Products include: Sherwin

Williams Macropoxy 646, or equal.

B. Metallic Surfaces, Raw Wastewater Immersion Service

1. Metallic internal surfaces exposed to raw wastewater service shall be coated with a flake filled epoxy novolac phenolic with an abrasion resistance feature prime and finish coat (two coats). Surface preparation for the items to be lined shall be SSPC-SP10. Product includes Sherwin Williams Phenicon HS FF. The product shall be VOC compliant

C. Aluminum Material in Contact with Concrete

1. Aluminum surfaces in contact with cementitious products shall be coated with a high solids epoxy or phenolic epoxy paint having a minimum solids of 80%. Coating shall be ICI Devoe Bar-Rust 233H LV, Ameron 400, Tnemec Series 135, or equal. Apply coating only in areas to be in contact to a minimum of 12 mil thickness.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify that substrate conditions are ready to receive work.
- B. Measure moisture content of porous surfaces using an electronic moisture meter. Do not apply finishes unless moisture content is less than 12 percent.
- C. Correct minor defects and clean surfaces which affect work of this Section. Protect adjacent surfaces against damage and stains.
- D. Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- E. Gypsum Board Surfaces: Fill minor defects with latex compounds. Spot prime defects after repair. The first coat shall be roller applied and include such repeated touching up of suction spots of overall application of sealer as necessary to produce a uniform color and gloss.
- F. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- G. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove foreign matter. Remove oil and grease with a solution of tri-sodium phosphate, rinse well and allow to dry.
- H. Uncoated Ferrous Surfaces: Remove scale by wire brushing, sandblasting, clean by washing with solvent. Apply treatment of phosphoric acid solution. Prime paint after repairs.
- I. Exposed metal work, both interior and exterior, including unplated plumbing fixtures, piping, and trim, shall be thoroughly cleaned before application of paint. Remove rust, scale, grease and pickling solution. Wash with solvent if necessary.
- J. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust, clean

surfaces with solvent. Prime bare steel surfaces.

- K. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.
- L. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.
- M. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat has been applied.
- N. Exterior Wood Scheduled to Receive Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted exterior caulking compound after sealer has been applied.
- O. Remove mildew occurring on any surface shown to be painted. Such surfaces shall be treated with a fungicide and allowed to dry thoroughly prior to start of painting.

3.02 PREPARATION OF EXTERIOR SURFACES

- A. Clean all exterior walls and surfaces of loose and scaly paint, dirt, dust, chalk, and other foreign matter.
- B. Cracks and joints wider than 1/16 inch: Rout out to 1/4 inch width, flush thoroughly with water and allow to dry. Prime areas to be caulked with Frazee 168 Prime Plus or approved equivalent. Fill joints completely with a knife grade elastomeric sealant, VIP No. 5500 or approved equivalent.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Rate of application shall not exceed average rate of coverage recommended by the paint manufacturer for the substrate indicated. Minimum drying time and film thickness per coat shall not be less than the time and thickness recommended by the paint manufacturer. All edges of paint adjoining other materials or colors shall be sharp, straight, and clean, and without overlapping.
- C. Materials shall be applied carefully with good, clean brushes, or approved rollers. The work shall be so conducted as to avoid damaging other surfaces, and public and private property in the area. Sanding and dusting, as necessary to produce finishes free of visible defects when viewed from a distance of 5 feet, shall be performed.
- D. Exposed ducts, piping, conduits, ferrous or galvanized metal work, and other such features for which a paint process is not specifically designated, are to be finished to match adjacent painted walls or ceilings if the area or space in which they occur is scheduled to be painted.
- E. All closets alcoves, recesses and other such accessory spaces shall be finished the

same as adjoining rooms, unless shown otherwise on the drawings.

- F. Finished surfaces shall be free from runs, drops, ridges, sags, waves, laps, brush marks, and variations in colors. Each coat of paint shall be of sufficient thickness to cover completely the previous coat or surface.

3.04 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Paint shop primed equipment.
- B. Remove unfinished louvers, grilles, covers, and access panels and paint separately. Paint dampers exposed behind louvers and grilles to match face panels.
- C. Prime and paint insulated and exposed pipes, insulated and exposed ducts, hangers, brackets, collars and support, except where items are prefinished.
- D. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint, to limit of sight line.
- E. Paint exposed conduit and electrical equipment occurring in finished areas except prefinished surfaces.
- F. Paint both sides and edges of plywood backboards.
- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.05 SHEET METAL FLASHING AND TRIM PRIME AND BACK PRIME COORDINATION

- A. Coordinate and cooperate with the timely delivery, prime and back prime painting and installation of sheet metal items specified in Section 07620 - Sheet Metal Flashing and Trim.
- B. All sheet metal items shall be cleaned of any surface contamination and oils and washed with solvent as necessary.
- C. Sheet metal items furnished under Section 07620 - Sheet Metal Flashing and Trim shall be pretreated, primed and backprimed in accordance with the appropriate paint process specified in the Paint Process Schedule at the end of this section.

3.06 CLEANING

- A. As work proceeds, promptly remove finishes where spilled, splashed, or spattered.

3.07 SCHEDULE – ARCHITECTURAL INTERIOR PAINT PROCESSES

- A. All paint numbers are Dunn-Edwards, ICI Paints, and Frazee unless noted otherwise.

Dunn-Edwards

ICI Paints

Frazee

CONCRETE, BRICK,
PLASTER (INCLUDING
INTEGRAL COLOR)

Process S
(Semi-gloss):

1 coat primer	ULTRA-GRIP (UGSL00) or EFF-STOP (ESSL00)	ICI 3210 Gripper	065 *AcryPrime
1 coat undercoat	SPARTAZERO (SZRO10)	ICI 1406 Dulux Perf.	124 MirroGlide
1 coat semi-gloss	SPARTAZERO (SZRO10)	ICI 1406 Dulux Perf. (*at plaster use 367 Fraflo)	124 MirroGlide

CONCRETE BLOCK MASONRY

Process S
(semi-gloss):

1 coat filler, medium or smooth:			
Medium	BLOCFIL (SBSL00)	ICI 3010 Ultra Hide	262 Filler
Smooth	BLOCFIL (SBSL00)	ICI 3010 Ultra Hide	262 Filler
1 coat undercoat	SPARTAZERO (SZRO50)	ICI 1406 Dulux Perf.	124 MirroGlide
1 coat semi-gloss	SPARTAZERO (SZRO50)	ICI 1406 Dulux Perf.	124 MirroGlide

METAL-ALUMINUM
OR GALVANIZED:

Process S
(semi-gloss):

Pretreat	KRUD KUTTER (SC-ME01-1)		
1 coat primer	GALV-ALUM (GAPR00)	ICI 3210 Gripper	661 MetalPrime
1 coat undercoat	SPARTAZERO (SZRO50)	ICI 1406 Dulux Perf.	367 Fraflo
1 coat semi-gloss	SPARTAZERO (SZRO50)	ICI 1406 Dulux Perf.	124 Mirro Glide

METAL-FERROUS

Process S
(semi-gloss):

1 coat primer	BLOC-RUST (BRPR00)		561 Primer
1 coat undercoat	SPARTAZERO (SZRO50)		367 Fraflo
1 coat semi-gloss	SPARTAZERO (SZRO50)		124 Mirro Glide

Process EMH
(handrails, railings):

1 coat:	CARBOLINE CARBOGUARD 890 VOC	ICI Devoe 233 H Bar Rust	Ameron
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(1 or more coats,
4-8 min. DFT)

Amerlock 400

1 coat: CABROLINE-133 CARBOTHANE MC ICI Devoe 378 Devthane Ameron
Amershield

3.08 SCHEDULE-ARCHITECTURAL EXTERIOR PAINT PROCESSES

A. All paint numbers are Dunn-Edwards, ICI and Frazee, unless noted otherwise.

Dunn-Edwards

ICI Paints

Frazee

CONCRETE, PLASTER (INCL. INTEGRAL COLOR)

Process EF
(flat):

1 coat primer	EFF-STOP (ESSL00)	ICI Sinclair 36 Uni-Poxy	379 Epokote
2 coats emulsion	EVERSHIELD (EVSH10)	ICI 2220 Dulux Perf.202	Duratec

WOOD

Process EWF
(flat):

1 coat ext. primer	ULTRA-GRIP (UGPR00)	ICI 3210 Gripper	372 Undercoat
2 coats emulsion	EVERSHIELD (EVSH10)	ICI 2200 Decra-Shield	202 Duratec

Process EWS
(semi-gloss):

1 coat ext.primer	ULTRA-GRIP (UGPR00)	ICI 3210 Gripper	372 Undercoat
2 coats semi-gloss	EVERSHIELD (EVSH50)	ICI 2406 Decra-Shield	221 AcriLite

METAL-GALVANIZED

Process EMG
(gloss):

Pretreatment	KRUD KUTTER (SC-ME01-1)	ICI Sinclair 7113	Jasco Prep	N'Prime
1 coat primer	ULTRA-GRIP (UGPR00)	ICI 3210 Gripper	561 Primer	
1 coat undercoat	EVERSHIELD (EVSH60)	ICI 2406 Decra-Shield	561 Primer	
1 coat semi-gloss	EVERSHIELD (EVSH60)	ICI 2406 Decra-Shield	221 Acri-Lite	

METAL FERROUS

Process EMG
(gloss):

1 coat primer	BLOC-RUST (BRPR00)	ICI Devoe 4020 Devflex	664 RustStop
1 coat undercoat	EVERSHIELD (EVSH60)	ICI Devoe 4208 Devflex	143 Mirro Glide
1 coat gloss	EVERSHIELD (EVSH60)	ICI Devoe 4208 Devflex	143 MirroGlide

Process EMH
(railing, handrails):

Pretreatment (Galv. or Alum. surface only)	KRUD KUTTER (SC-ME01-1)	ICI Devoe Devprep 88	Jasco Prep N Prime
1 coat	CARBOLINE CARBOGUARD 890 VOC (1 or more coats, 4-8 min. DFT)	ICI Devoe Bar Rust 235 @ 5.0 D.F.T.	Ameron Amerlock 400 @ 5.0 D.F.T.
1 coat	CARBOLINE 133 CARBOTHANE MC URETHANE	ICI Devoe Devthane 379 @ 5.0 D.F.T.	Ameron Amershield @ 5.0 D.F.T.

END OF SECTION

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SECTION 10155

METAL TOILET COMPARTMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Metal toilet compartments.
- B. Partition Type: Floor supported.

1.02 REGULATORY REQUIREMENTS

- A. Conform to applicable portions of the 2016 California Building Code, the Americans With Disabilities Act (ADA) and ANSI A117.1.

1.03 SUBMITTALS

- A. Submit as specified in Section 01001 - Submittals.
- B. Shop Drawings: Indicate partition plan and elevation views, dimensions, details of supports and recommended backing, and door swings.
- C. Color Chart: Submit manufacturer's standard color chart for color selection.
- D. Product Data: Provide data on panel construction, hardware, and accessories.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Manufacturers:
 - 1. General Partitions Mfg. Corp, 30 Series floor supported toilet partitions.
 - 2. Global Steel Products Corp., floor anchored metal toilet partitions.
 - 3.
- B. Provide products of the same manufacturer throughout for units exposed in the same areas.
- C. Stamped names or labels on exposed faces of units will not be permitted.

- D. Panel Construction: Stainless steel.
- E. Attachments and Bolts: Steel, with heavy duty aluminum brackets.

2.02 ACCESSORIES

- A. Pilaster Shoe: Formed type 304 stainless steel with No. 4 finish, with adjustable screw jack.
- B. Attachments, Screws, and Bolts: Stainless steel; tamper proof type, heavy duty extruded aluminum brackets.
- C. Hardware: Chrome plated non-ferrous cast metal:
 - 1. Pivot hinges, gravity type, adjustable for door close positioning.
 - 2. Thumb turn door latch with exterior emergency access feature.
 - 3. Door strike and keeper with rubber bumper.
 - 4. Coat hook with rubber bumper.
 - 5. Door pull for outweighing doors.

2.03 FABRICATION

- A. Fabricate components of Stainless steel sheet as follows:
 - 1. Panel and Door Faces: 22 gage.
 - 2. Pilaster Faces: 20 gage.
- B. Doors and Panels:
 - 1. Thickness: 1 inch.
 - 2. Door Width: 24 inch.
 - 3. Door Width for Handicapped Use: 36 inch.
 - 4. Height: 58 inch.
- C. Pilasters: 1-1/4 inch thick, of sizes required to suit cubicle width and spacing,
- D. Door, Panel, and Pilaster Construction: Sheet steel face, pressure bonded to sound deadening core, form and close edges, miter and weld corners, grind smooth.
- E. Internal Reinforcement: Provide in areas of attached hardware and fittings. Mark locations of reinforcement for partition mounted toilet accessories.

- F. Factory Cutouts: Provide factory cutouts and any required additional reinforcement for partition mounted toilet accessories specified in Section 10800.
- G. Equip each door with two hinges, one door latch, one coat hook and bumper; pull at outswinging door.
- H. Install door strike and keeper with door bumper on each pilaster in alignment with door latch.

2.04 FINISHES

- A. Clean, degrease, and neutralize panels.
- B. Follow immediately with a phosphatizing treatment, prime coat and finish coat powder coated.
- C. Stainless Steel Surfaces: No. 4 finish.
- D. Exposed Steel Surfaces: Satin chrome plated.
- E. Non-Ferrous Surfaces: Satin chrome plated.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify that site conditions are ready to receive work and dimensions are as indicated on drawings and as instructed by the Manufacturer's published literature.
- B. Verify that opening dimensions and plumbing fixture and rough-in locations are as indicated on drawings.

3.02 INSTALLATION

- A. Install partitions in accordance with the requirements of the California Building Code, the Americans With Disabilities Act (ADA) and ANSI A117.1.
- B. Wheelchair compartments shall be not less than 60 inches wide and 78 inches deep, and shall have outswinging doors with a clear, unobstructed entry width of not less than 34 inches when located in the side of the compartment and 32 inches when located in the end of the compartment. Clear, unobstructed access to the compartment shall be not less than 44 inches.
- C. Install partition components secure, plumb, and level and in accordance with manufacturer's published instructions.
- D. Attach panel brackets securely using anchor devices.

- E. Provide adjustment for pilaster height variations with threaded rods through steel saddles. Conceal fastenings with pilaster shoes.
- F. Equip each door with two hinges, one door latch, and one coat hook and bumper.
- G. Attach panels and pilasters to brackets with tamper proof through bolts and nuts.
- H. Provide for pilaster adjustment for floor variations with screw jack through steel saddles integral with pilaster. Conceal floor fastenings with pilaster shoes.
- I. Perform final adjustments to pilaster leveling devices, door hardware, and other operating parts just prior to final inspection. Clean exposed surfaces and touch up minor scratches and other finish imperfections using materials and methods recommended by partition manufacturer.

END OF SECTION

SECTION 10800

TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Toilet and washroom accessories.
- B. Grab bars.
- C. Toilet, washroom and healthcare accessories, as noted, throughout the building.

1.02 SYSTEM DESCRIPTION

- A. Conform to applicable portions of the 2010 California Building Code, The Americans with Disabilities Act (ADA) and ANSI A117.1.

1.03 SUBMITTALS

- A. Submit as specified in Section 01340 - Submittals.
- B. Product Data: Provide data on accessories describing size, finish, details of function and attachment methods.
- C. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- D. Manufacturer's Certificate: Certify that Products meet or exceed specified requirements.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Manufacturers - Washroom Accessories:
 - 1. Bobrick Washroom Equipment, Inc.
 - 2. American Specialties Inc. (ASI)
- B. Substitutions: As specified in Section 01640 - Substitutions.
- C. Fasteners, Screws, and Bolts: Hot dip galvanized steel, tamper-proof type.

2.02 FABRICATION

- A. Form surfaces flat without distortion. Weld and grind joints smooth.
- B. Shop assemble components and package with anchors and fittings.
- C. Back paint components to prevent electrolysis.
- D. Provide steel anchor plates, adapters, and anchor components for installation.

- E. Hot dip galvanize exposed and painted ferrous metal and fastening devices.
- F. Locks shall be keyed alike for each type of accessory. 2 keys shall be furnished for each lock or each group of accessories keyed alike. Locks shall be the manufacturer's standard locks.

2.03 FINISHES

- A. Concealed anchors: Galvanize to 1.25 oz/sq yd. Exposed anchors: To match accessories finish.
- B. Ferrous Metals - Shop Primed: Pretreat and clean, spray apply one coat primer and bake.
- C. Enamel: Pretreat, one coat primer and two coats baked enamel.
- D. Chrome/Nickel Plating: ASTM B456, Type SC2; satin finish.
- E. Stainless Steel: No. 4 satin luster finish.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Verify exact location of accessories for installation.
- B. Verify that site conditions are ready to receive work and dimensions are as indicated on shop drawings and as instructed by the manufacturer. Defer installation until any deficiencies are satisfactorily remedied.
- C. Deliver inserts and rough-in frames to site. Provide templates, setting drawings, instructions and rough-in measurements as required. Coordinate delivery with the work and schedule of other sections.

3.02 INSTALLATION

- A. Install accessories in accordance with manufacturer's published instructions, and the 2001 California Building Code, the Americans With Disabilities Act (ADA) and ANSI A117.1
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Recessed accessories shall be fastened to studs or solid blocking or back-up plates in framed construction, or to a rough frame blocking or with screws into expansion anchors in masonry or concrete construction.
- D. Surface mounted accessories shall be installed with screws into solid blocking or back-up plate in framed construction, or with screws into expansion anchors in masonry or concrete construction.
- E. Where a toilet and bath accessory is required to be installed with the unit partially above and partially below (straddling) a wainscot, a continuous stainless steel

filler/spacer shall be installed along all exposed edges above the wainscot. Provide mitered corners, cope to match top of wainscot profile.

3.03 SCHEDULE

- A. Paper Towel Dispenser / Receptacle:
 - 1. Recessed mounted Bobrick B-3944
 - 2. ASI 20469
- B. Paper Towel Dispenser
 - 1. Recessed Bobrick B-35903
 - 2. ASI 6457
- C. Framed Mirror:
 - 1. Mirror (above lavatory) Bobrick B-290 1836
 - 2. ASI 0600 1836-A
- D. Toilet Seat Cover / Toilet Tissue Dispenser:
 - 1. Recessed Bobrick B-3474
 - 2. ASI 0485
- E. Grab Bars:
 - 1. Back of toilet Bobrick B-6806-36"
 - 2. ASI 3201-36
 - 3. Side of toilet Bobrick B-6806-42"
 - 4. ASI 3201-42
- F. Soap Dispenser:
 - 1. Surface mounted/wall Bobrick B-2112
 - 2. ASI 9343
- G. Utility Hook: (Housekeeping)
 - 1. 3 hook (nominal 24") Bobrick B-232 x 24
 - 2. ASI 1307-3

END OF SECTION

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