



CITY OF ALAMEDA
CALIFORNIA

PROJECT MANUAL
(BIDDING REQUIREMENTS, CONTRACTING REQUIREMENTS, AND
TECHNICAL SPECIFICATIONS)

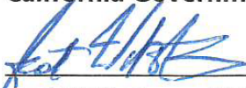
FOR
ENCINAL BOAT LAUNCH FACILITY
ALAMEDA, CA 94501

No. P.W. 04-19-19, CIP#: 91310, Permit: CB 18-0806


MANDATORY PRE-BID MEETING	MAY 28, 2019 (Tuesday) at 10:30 am
LOCATION:	City Hall West 950 W. Mall Square – Conference Room 156 Alameda, CA 94501
NON-MANDATORY SITE WALK	No Site Walk is scheduled. Site is open for all bidders to visit if and as they wish.
LOCATION:	Site is southwest of, and adjacent to, Encinal High School (210 Central Ave.), at the end of un-named access road running south to the San Francisco Bay, Alameda, CA 94501
BIDDING BEGINS:	MAY 20, 2019 (Monday), by 8:00 am
BID DUE DATE:	JUNE 17, 2019 (Monday), by 2 p.m.
BID OPENING:	JUNE 17, 2019 (Monday), 2:01 p.m. at:
LOCATION:	City Hall West Public Works Department 950 W. Mall Square, Alameda, CA 94501
BIDS TO BE DELIVERED TO ROOM 110, CITY HALL WEST. BIDS TO BE OPENED IN CONFERENCE ROOM 156.	

PROJECT AUTHORIZATION

This Project Manual contained herein, for the ENCINAL BOAT LAUNCH FACILITY Project, has been approved by the City Engineer in accordance with City of Alameda Ordinance No. 3154 and California Government code 830.6.



Scott Wikstrom, PE (RCE#56266)
City Engineer, City of Alameda, CA



Date

ENCINAL BOAT LAUNCH FACILITY

DOCUMENT 00 00 10

TABLE OF CONTENTS

PROJECT MANUAL

Document	00 00 01	Project Title Page
" "	00 00 10	Table of Contents

BIDDING REQUIREMENTS

- NOTICE INVITING BIDS
- INFORMATION FOR BIDDERS (w/ reference to PROJECT STABILIZATION AGREEMENT)
- BASE BID SCHEDULE (not used)
- BIDDER'S PROPOSAL FORMS
- AGREEMENT TO BE BOUND TO PSA (PROJECT STABILIZATION AGREEMENT)
- BIDDER'S BOND FORM
- ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

CONTRACTING REQUIREMENTS

- ATTACHMENT A CONTRACTOR AGREEMENT
- ATTACHMENT B PAYMENT BOND FORM
- ATTACHMENT C PERFORMANCE BOND FORM

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

Section	1	General
" "	2	Bidding
" "	3	Contract Award and Commencement of the Work
" "	4	Bonds and Insurance
" "	5	Drawings and Specifications
" "	6	Construction by City or By Separate Contractors
" "	7	City and Payment
" "	8	Control of the Work
" "	9	Warranties, Guaranty and Inspection of Work
" "	10	Contractor's Organization and Equipment
" "	11	Prosecution and Progress of the Work
" "	12	Claims by Contractor
" "	13	Legal and Miscellaneous
" "	14	Modifications of Contract Documents
" "	15	Time Allowances
" "	16	Working Conditions and Prevailing Wages

SUPPLEMENTARY CONDITIONS (REGIONAL PERMITS)

- **ATTACHMENT D U.S. ARMY CORPS OF ENGINEERS – AUTHORIZATION** (May 29, 2018)
- **ATTACHMENT E SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD – WATER QUALITY CERTIFICATION** (Sep. 10, 2018)
- **ATTACHMENT F SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION – PERMIT AMENDMENT NO. TWO APPROVAL** (Jan. 3, 2019)

SPECIFICATIONS

DIVISION 01 GENERAL REQUIREMENTS

Section	01 10 00	Summary
" "	01 11 04	Contract Documents
" "	01 21 00	Allowances
" "	01 21 50	Mobilization
" "	01 22 00	Unit Prices
" "	01 23 00	Alternates
" "	01 25 00	Substitution Procedures
" "	01 25 00A	Attachment A (Substitution Request Form)
" "	01 26 00	Contract Modification Procedures
" "	01 26 00A	Attachment A (Proposal Request Form)
" "	01 26 00B	Attachment B (Change Order Form)
" "	01 29 00	Payment Procedures
" "	01 29 00A	Attachment A (Application for Payment Form)
" "	01 31 00	Project Management and Coordination
" "	01 31 00A	Attachment A (Request For Information Form)
" "	01 32 00	Construction Progress Documentation
" "	01 33 00	Submittal Procedures
" "	01 40 00	Quality Requirements
" "	01 42 00	Reference Standards
" "	01 45 00	Testing and Inspections
" "	01 50 00	Temporary Facilities and Controls
" "	01 60 00	Product Requirements
" "	01 73 00	Execution
" "	01 74 00	Construction Waste Management
" "	01 77 00	Closeout Procedures
" "	01 78 23	Operation and Maintenance Data
" "	01 78 39	Project Record Documents
" "	01 79 00	Demonstration and Training
" "	01 80 00	Permits and Licenses
" "	01 81 00	Public Convenience and Safety (edited/updated)
" "	01 82 00	Utilities
" "	01 83 00	Sound Control Requirement
" "	01 84 00	Construction Site Controls (edited/updated)
" "	01 85 00	Recycling of Concrete and Asphalt Materials

CONSULTANTS' TECHNICAL SPECIFICATIONS

DIVISION 01 – GENERAL

Section 01000	Summary of Work
“ “ 01100	Definition of Bid Items
“ “ 01250	Measurement and Payment
“ “ 01330	Submittals
“ “ 01410	Regulatory Requirements

DIVISION 02 – SITE WORK

Section 02100	Construction Staking
“ “ 02200	Demolition
“ “ 02300	Earthwork
“ “ 02325	Trenching and Backfilling for Utilities
“ “ 02350	Prestressed Concrete Guide Piles
“ “ 02370	Geotextile Fabric
“ “ 02480	Floating Docks
“ “ 02500	Asphalt Concrete
“ “ 02660	Water System
“ “ 02700	Rock and Rockwork
“ “ 02730	Sanitary Sewer
“ “ 02750	Pavement Striping & Markings
“ “ 02820	Fish Cleaning Station
“ “ 02870	Site Furnishings

DIVISION 03 TO DIVISION 16

Section 03300	Concrete
“ “ 05600	Aluminum Gangway
“ “ 16100	Site Electrical
“ “ 16520	Exterior Lighting

APPENDICES

- **APPENDIX A: GEOTECHNICAL INVESTIGATION** (Hultgren – Tillis Engineers, February 3, 2016)
- **APPENDIX B: PROJECT STABILIZATION AGREEMENT**
- ~~APPENDIX C: ASBESTOS SURVEY and LEAD TESTING REPORT (August 16, 2012)~~
- **APPENDIX C: AGREEMENT CONCERNING PROVIDING ELECTRICAL POWER TO CITY PROJECT** (April 18, 2019)

END OF TABLE OF CONTENTS

NOTICE INVITING BIDS

NOTICE IS HEREBY GIVEN that the City of Alameda will receive sealed bids until 2:00 p.m. on Monday, June 17, 2019 for the **ENCINAL BOAT LAUNCH FACILITY, No. P.W. 04-19-19, CIP#: 91310, Permit: CB 18-0806**. Bids must be presented to Jack Dybas, Project Manager II, City of Alameda Public Works Department, 950 W. Mall Square, Room 110, Alameda, CA 94501, under sealed cover, plainly marked on the outside as follows: **“CITY OF ALAMEDA - SEALED BID FOR ENCINAL BOAT LAUNCH FACILITY, NO. P.W. 04-19-19.”** (Bids will be received and stamped in Room 110, and opened in Room 156.)

Any bids received after the scheduled closing time for receipt of bids shall be returned unopened.

The Work for the **ENCINAL BOAT LAUNCH FACILITY** Project includes the following:

Furnishing all labor, materials, equipment, services, testing, permits, temporary controls and construction facilities, and all General Conditions, General Requirements and incidentals required to complete the **ENCINAL BOAT LAUNCH FACILITY** Project as generally described below:

1. RENOVATION OF A PUBLIC BOAT LAUNCH FACILITY

Scope of Work includes, but is not limited to, removing and replacing existing boat ramp, board float and piers, providing, furnishing, and installing a craft boarding float, gangway, guide piers, ADA compliant access/parking, new prefab. restroom (and shower) facility, vehicle safety signage, a fish cleaning station, kayak staging pad, site lighting, a re-surfaced parking lot, and misc. conc. and AC drive repairs, removals and replacements, with new walkways, ramps and miscellaneous site abutments and improvements.

(Project site is located at end of service road (un-named) off of Central Avenue, just to the west of Encinal High School.)

2. BID ALTERNATE No. 1:

(No Bid Alternates identified.)

Note: The Permit Application and Statement of Special Inspections will be submitted in a coordinated fashion by the awarded Contractor and the City of Alameda – to the City of Alameda Community Development Department - and will be paid for by the City of Alameda.

Contract time:

The Contract Time will be approx. nineteen (19) weeks; ninety-three (93) consecutive working days from the date the work is to commence pursuant to the Notice to Proceed.

VIEW / DOWNLOAD THE CONTRACT DOCUMENTS

Plans and specifications can be obtained from BPXpress Reprographics located at 4903 Central Avenue, Richmond, CA 94804 for a non-refundable cost of \$100.00 per set. Shipping and handling are extra, depending on the delivery method. Electronic copies of the documents are also available for a non-refundable cost of \$50 per set. Copies of the documents can be viewed and ordered at www.blueprintexpress.com/alameda. They can also be ordered by contacting BPXpress Reprographics by phone at (510) 559-8299 or by email at Richmond@blueprintexpress.com. For any questions about ordering or downloading process, please contact BPXpress. It is the responsibility of each prospective bidder to confirm his/her firm is on the plan holders list held at BPXpress to ensure receipt of any subsequent communications, such as Addenda.

Any Addenda issued before the time in which to submit Bids expires shall form a part of the Contract Documents and shall be included in and attached to the Bid (cover sheets only, not necessarily all exhibits). Bidders shall acknowledge and confirm receipt of any and all addenda in their Bid proposals.

DEPARTMENT OF INDUSTRIAL RELATIONS COMPLIANCE AND PREVAILING WAGE REQUIREMENTS ON PUBLIC WORKS PROJECTS:

- a. Effective January 1, 2015, **No Contractor or Subcontractor** may be listed on a bid proposal for a public works project (submitted after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 (with the limited exceptions from this requirement for bid purposed only under Labor code Section 1771.1(a)). Register at <https://efiling.dir.ca.gov/PWCR>
- b. **No Contractor or Subcontractor** may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.
- c. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- d. The Prime Contractor is required to post job site notices prescribed by regulation See 8 Calif. Code Regulation §16451(d).
- e. **Effective April 1, 2015, All Contractors and Subcontractors** must furnish electronic certified payroll records directly to the Labor Commissioner. <https://apps.dir.ca.gov/ecpr/das/altlogin>

PREVAILING WAGES. This project is subject to the requirements of California Labor Code Section 1770 et seq. and Section 2-67 of the Alameda Municipal Code requiring the payment of prevailing wages, the training of apprentices and compliance with other applicable requirements. Contractor and all subcontractors shall pay not less than the prevailing rate of wages to all workers on the Project. If federal funding is included in the project, the higher of the State or Federal wage rates shall be paid.

The State wage rates are available online at the State Department of Industrial Relations; <http://www.dir.ca.gov/dlsr>.

BID SECURITY. Each Bid must be accompanied by Bid Security in the form of cash, a certified check, a cashier's check, or a Bid Bond, in the amount of ten percent (10%) of the total of the Bid. Checks shall be made payable to the City of Alameda. Bid Bonds shall be on the form provided in the Bid Forms.

BONDS. The successful Bidder shall furnish a Performance Bond in the sum of one hundred percent (100%) of the Contract Bid to guarantee the performance of the Contract, and a Payment Bond in the sum of one hundred percent (100%) of the Contract Price.

PROJECT ADMINISTRATION. All questions related to this project, prior to opening bids, shall be prepared in writing and transmitted, by email only, to the attention of:

Jack Dybas, Project Manager, Public Works Department (jdybas@alamedaca.gov),
and copied to:
Amy Wooldridge, Director ARPD, (awooldridge@alamedaca.gov).

No inquiries will be accepted three (3) business days prior to bid opening date. Phone inquiries will not be accepted.

Prospective bidders may visit the Site on their own recognizance as offered below by the SITE WALK invitation.

The City reserves the right to reject any or all bids; to make any awards or any rejections in what it alone considers to be in the best interest of the City, and waive any informalities or irregularities in the bids. The contract will be awarded, if at all, to the responsible bidder that submits the lowest responsive Base Bid.

The City has determined that the Contractor shall possess a valid **Class A or B** License issued by the California Contractors State License Board at the time it submits its bid.

Pursuant to Public Contract code Section 22300, for monies earned by the Contractor and withheld by the City of Alameda to ensure the performance of the contract, the contractor may, at its option, choose to substitute securities meeting the requirements of Public Contract Code Section 22300.

AWARD OF CONTRACT. The award of contract, if it is awarded, will be to the responsible bidder who submits the lowest and best Base Bid and whose proposal complies with all requirements described herein. The lowest bid will be determined on the basis of a lump sum Base Bid. The award, if made, will be made within sixty (60) days after the opening of the bids. All bids will be compared on the basis of the Engineer's estimate of quantities of work to be done. In the event of a delay in funding, the City reserves the right to hold the Bidder to its bid for 90 days from the date the bids are opened.

The **Engineer's Estimate** for the Base Bid for this project is **\$875,458**.

No proposal shall be considered binding upon the City until the execution of the contract. Failure to execute a contract and file acceptable bonds as provided herein within five (5) business days after the Bidder has received notice that the contract has been awarded shall be just cause for the annulment of the award and the forfeiture of the Bidder's guaranty.

PRE-BID MEETING. A ~~non-mandatory~~ (optional) Pre-Bid Meeting is scheduled on **Tuesday, May 28, 2019** at 10:30 a.m. at the City Hall West, Public Works Department, 950 W. Mall Square, Conference Room 156, Alameda, CA 94501.

SITE WALK. No Site Walk is scheduled. Site is open for all bidders to visit if and as they wish.

By: Amy Wooldridge, Director, City of Alameda Recreation & Parks Department
and
Jack Dybas, Project Manager II, City of Alameda Public Works Department

END OF NOTICE INVITING BIDS

INFORMATION FOR BIDDERS

1. AVAILABILITY OF CONTRACT DOCUMENTS

Bids must be submitted to City on the Bid Forms which are a part of the Bid Package for the Project. Contract Documents may be obtained at the location(s) and at the time(s) indicated in the Notice Inviting Bids. Any applicable charges for the Contract Documents are stated in the Notice Inviting Bids.

Contract documents are available electronically, at (See NOTICE INVITING BIDS, **Page 2** ("VIEW/DOWNLOAD THE CONTRACT DOCUMENTS").

2. EXAMINATION OF CONTRACT DOCUMENTS

City has made copies of the Contract Documents available as indicated above. Bidders shall be solely responsible for examining the Project Site and the Contract Documents, including any Addenda issued during the bidding period, and for informing itself with respect to local labor availability, means of transportation, necessity for security, laws and codes, local permit requirements, wage scales, local tax structure, contractors' licensing requirements, availability of required insurance, and other factors that could affect the work. Bidders are responsible for consulting the standards referenced in the Contract Documents. Failure of Bidder to investigate and inform itself shall be at its sole risk, and no relief for error or omission will be given except as required under State law.

3. INTERPRETATION OF CONTRACT DOCUMENTS

Discrepancies in, and/or omissions from the Plans, Specifications or other Contract Documents or questions as to their meaning shall be immediately brought to the attention of City and Architect by submission of a written request for an interpretation or correction to City. Such submission, if any must be sent to the City's Project Manager and Architect not later than ten business days before the bid date.

Any interpretation of the Contract Documents will be made only by written addenda duly issued and mailed or delivered to each person or firm who has a set of Contract Documents. City will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the Contract Documents to any bidder, and no bidder should rely on any such oral interpretation.

Bids shall include full compensation for the work.

4. INSPECTION OF SITE

Each prospective bidder is responsible for fully acquainting itself with the conditions of the project Site, as well as those relating to the construction and labor of the Project, to fully understand the facilities, difficulties and restrictions which may impact the cost or effort required to complete the Project. A ~~non-mandatory~~ (optional) Pre-Bid Meeting is offered for this project – as noted in the NOTICE INVITING BIDS.

By submitting a Bid, each bidder acknowledges that it has visited the Project Site, has prepared its Bid accordingly, and assumes any and all risk and liabilities arising therefrom.

5. ADDENDA

City reserves the right to revise the Contract Documents prior to the bid opening date. Revisions, if any, shall be made by written (electronic) Addenda. All Addenda issued by City shall be included in the bid and made part of the Contract Documents. Pursuant to Public Contract Code Section 4104.5, if City issues an Addendum which makes material changes to the Project less than 72 hours prior to the deadline for submission of bids, City will extend the deadline for submission of bids. City may determine, in its sole discretion, whether an Addendum warrants postponement of the bid submission date. Each prospective bidder shall provide City a name, address and email address to which Addenda may be sent, as well as a telephone number by which City can contact the bidder. Copies of Addenda may be sent, as well as a telephone number by which City can contact the bidder. Copies of Addenda will be furnished by facsimile, first class mail, express mail or other proper means of delivery without charge to all parties who have obtained a copy of the Contract Documents and provided such current information. Please Note: Bidders are responsible for ensuring that they have received any and all addenda. To this end, each bidder should contact the Public Works Department to verify that bidder has received all addenda issued, if any, prior to the bid opening.

6. ALTERNATE BID ITEMS

If and when Alternate bid items are called for in the Contract Documents, the lowest responsive bid will be determined on the basis of a total lump sum, equal to the sum of the Base Bid work only, unless otherwise provided in the Notice Inviting Bids. **(Note: Bid Alternates will NOT be part of the determination of lowest responsive Base Bid.)**

City may elect to include one or more of the Alternate bid items in the Project scope of work. Accordingly, the City reserves the right to hold the Awarded Contractor to its Bid Alternate bids for no less than 90 days from the award of Contract, and each bidder must ensure that each bid item (Base Bid or Alternate) is balanced and contains a proportionate share of profit, overhead and other costs or expenses which will be incurred by the Bidder.

The time required for completion of the Alternate bid items has been factored into the Contract Time and no additional time will be allowed for performing any of the alternate bid items.

7. COMPLETION OF BID FORMS

Bids shall be prepared using copies of the Bid Forms which are included in the Contract Documents. The use of substitute bid forms other than clear and correct photocopies of those provided by City will not be permitted. Bids shall be executed by an authorized signatory as described in these Instructions to Bidders. In addition, Bidders shall fill in all blank spaces (including inserting "N/A" where applicable) and initial all interlineations, alterations, or erasures to the Bid Forms. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms nor make substitutions thereon. Deviations in the bid form may result in the bid being deemed non-responsive.

8. MODIFICATION OF BIDS

Each Bidder shall submit its Bid in strict conformity with the requirements of the Contract Documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provision attached to a Bid may render it non-responsive and may cause its rejections. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms, nor make substitutions thereon. Oral, telephonic and electronic modifications will not be considered.

9. DESIGNATION OF SUBCONTRACTORS

Pursuant to State law, the Bidders must identify the name, address of business, contractor's license number, and Department of Industrial Relations (DIR) number of each subcontractor who will perform work or render services for the Bidder in an amount that exceeds one half of one percent (1/2%) of the Bidder's Total Bid Price, as well as the portion of work each such subcontractor will perform on the form provided herein by City. No additional time will be provided to bidders to submit any of the requested information in the Designation of Subcontractor form.

10. LICENSING REQUIREMENTS

Pursuant to Section 7028.15 of the Business and Professions Code and Section 3300 of the Public Contract code, all bidders must possess proper licenses for performance of this Contract. Subcontractors must possess the appropriate licenses for each specialty subcontracted. Pursuant to Section 7028.15 of the Business and Professions Code, any bid submitted by a contractor not currently licensed in accordance with state law to be non-responsive, and City shall reject the Bid. City may request, and Bidders shall provide within five (5) calendar days, evidence satisfactory to City of all valid license(s) currently held by that Bidder and each of the Bidder's subcontractors, before awarding the Contract.

11. SIGNING OF BIDS

All Bids submitted shall be executed by the Bidder or its authorized representative. Bidders may be asked to provide evidence in the form of an authenticated resolution of the Board of Directors or a Power of Attorney evidencing the capacity of the person signing the Bid to bind the Bidder to each Bid and to any Contract arising therefrom.

If a Bidder is a joint venture or partnership, it may be asked to submit an authenticated Power of Attorney executed by each joint venturer or partner appointing and designating one of the joint venturers or partners as a management sponsor to execute the Bid on behalf of Bidder. Only that joint venturer or partner shall execute the Bid. The Power of Attorney shall also: (1) authorize that particular joint venturer or partner to act for and bind Bidder in all matters relating to the Bid; and (2) provide that each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of Bidder assumed under the Bid and under any Contract arising therefrom. The Bid shall be executed by the designated joint ventures or partner on behalf of the joint venture or partnership in its legal name.

12. BID GUARANTEE

Each bid shall be accompanied by: (a) a certified check made payable to City; (b) a cashier's check made payable to City; or (c) a bid bond payable to City executed by the bidder as principal and surety as obligor in an amount not less than 10% of the maximum amount of the bid. The surety insurer shall be California admitted surety insurer, as defined in code of Civil Procedure Section 995.120. Personal sureties and unregistered sureties companies are unacceptable. The cash, check or bid bond shall be given as a guarantee that the bidder shall execute the Contract if it be awarded to the bidder, and bidder shall provide insurance certificates and endorsements before the City Council meeting at which the contract is to be awarded, and furnish the required payment and performance bonds within ten (10) calendar days after notification of the award of the Contract to the bidder. Failure to provide the required documents may result in forfeiture of the bidder's bid security to City and City may award the Contract to the next lowest responsible bidder, or may call for new bids.

13. PROJECT STABILIZATION AGREEMENT ~~(Not Applicable)~~

This project is subject to and shall be performed under the Project Stabilization Agreement (aka PSA) between the City of Alameda and the Building and Construction Trades Council of Alameda County and its affiliated local unions. Contractors submitting bids must provide evidence of acceptance of the terms and conditions of the PSA at the time of bid. Specifically, contractors must submit the completed and signed "Agreement to be Bound" found in the Bid Form. Additionally, all contractors and subcontractors of any tier on this project will be required to execute the Agreement to be Bound and be subject to the PSA prior to contract award.

14. SUBMISSION OF SEALED BIDS

Bid documents shall be submitted in a sealed, addressed envelope and delivered or mailed, postage prepaid to City, at the place and to the attention of the person indicated in the Notice Inviting Bids. No oral or telephonic bids will be considered. No forms transmitted via the Internet, e-mail, facsimile, or any other electronic means will be considered unless specifically authorized by City.

15. DELIVERY AND OPENING OF BIDS

Bids will be received by City at the address shown in the Notice Inviting Bids up to the date and time shown therein. City will leave unopened any Bid received after the specified date and time, and any such unopened Bid will be returned to the Bidder. It is the Bidder's sole responsibility to ensure that its Bid is received as specified. Bids may be submitted earlier than the dates(s) and time(s) indicated.

Bids will be opened at the date and time stated in the Notice Inviting Bids, and the amount of each Bid will be read aloud and recorded. All Bidders may, if they desire, attend the opening of Bids. City may in its sole discretion, elect to postpone the opening of the submitted Bids. City reserves the right to reject any or all Bids and to waive any informality or irregularity in any Bid. In the event of a discrepancy between the written amount of the Bid Price and the numerical amount of the Bid Price, the written amount shall govern.

16. WITHDRAWAL OF BID

Prior to bid opening, a Bid may be withdrawn by the Bidder only by means of a written request signed by the Bidder or its properly authorized representative.

17. BASIS OF AWARD; BALANCED BIDS

The quantities (if any) given in the proposal and contract forms (i.e.; Base Bid Schedule, if used) are approximate only, and are being given as a basis for a) the comparison of bids submitted (pre-award), AND b) for the development, review, approval or rejection of Change Orders, Change Order Requests and/or any modifications to the Contract scope, quantities or unit costs (post-award). The City does not, expressly or by implication, agree that the actual amount of work, or quantities listed, will correspond therewith, but reserves the right to increase or decrease the amounts of any portion of the Work, or to omit portions of the Work, as may be deemed necessary or advisable by the Project Manager.

City shall award the Contract to the lowest responsible Bidder submitting a responsive Base Bid. (Note: The lowest responsive bidder will be determined based upon a lump sum Base Bid proposal supported by the completed, itemized, tallied, and Bidder-submitted Base Bid Schedule

template included in BIDDER'S PROPOSAL FORMS.) City may reject any Bid that in its opinion when compared to other bids received or to City's internal estimates, does not accurately reflect the cost to perform the work. City may reject as non-responsive any bid which unevenly weighs or allocates costs, including but not limited to overhead and profit, to one or more particular bid items.

18. DISQUALIFICATION OF BIDDERS; INTEREST IN MORE THAN ONE BID

No bidder shall be allowed to make, submit or be interested in more than one bid. However, a person, firm, corporation or other entity that has submitted a sub bid to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a sub bid or quoting prices to other bidders submitting a bid to City. No person, firm, corporation, or other entity may submit sub proposal to a bidder, or quote prices of materials to a bidder, when also submitting a prime bid on the same Project.

19. INSURANCE REQUIREMENTS

The successful bidder shall procure the insurance in the form and in the amount specified in the Contract Documents.

20. AWARD PROCESS

Once all Bids are opened and reviewed to determine the lowest responsive and responsible Bidder, City Council may award the contract. The apparent successful Bidder should begin to prepare the following documents: (1) the Performance Bond; (2) the Payment Bond; and (3) the required insurance certificates and endorsements. At least 25 Calendar Days before the date the City Council considers the award of the contract, bidder shall furnish City with certificates showing the type, amount, class of operations covered, effective dates and dates of expiration of insurance coverage, and bonds in compliance with the contract requirements. Once City notifies the Bidder of the award, the Bidder will have ten (10) consecutive calendar days from the date of this notification to execute the Contract and supply City with all the required documents and certifications. Regardless whether the Bidder supplies the required documents and certifications in a timely manner, the contract Time will begin to run ten (10) calendar days from the date of the date the City gives notice of the award. Once City receives all of the properly drafted and executed documents and certifications from the Bidder, City shall issue a Notice to Proceed to that Bidder.

21. BID PROTESTS

Any bid protest relating to the form or content of the bidding or Contract Documents must be submitted in writing to the City's Project Manager at least five (5) business days before the original date set for the bid opening. Any bidder who submits a bid without making a protest shall be deemed to have waived any objection to the form or content of the bidding or Contract Documents not previously stated in writing.

Any bid protest relating to a bid received by the City or any City procedure or action related to the bid opening or proposed contract award must be submitted in writing to the City's Project Manager before 2:00 p.m. on the fifth (5th) working day following Bid opening.

- A. The initial protest document must contain a complete statement of the basis for the protest, and all supporting documentation.

- B. The party filing the protest must have actually submitted a Bid for the Work. A subcontractor of a party submitting a Bid for the Work may not submit a Bid protest. A party may not rely on the Bid protest submitted by another Bidder, but must timely pursue its own protest.
- C. The protest must refer to the specific portion of the Bid Document which forms the basis for the protest.
- D. The protest must include the name, address and telephone number of the person representing the protesting party.
- E. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
- F. The City will give the protested Bidder five (5) working days after the receipt of the protest to submit a written response. The responding Bidder shall transmit the response to the protesting Bidder concurrent with delivery to the City.
- G. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder's sole and exclusive remedy in the event of Bid protest. The Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings
- H. If the City determines that a protest is frivolous, the protesting Bidder may be determined to be non-responsible and that Bidder may be determined to be ineligible for future contract awards.

22. CERTIFICATE REGARDING WORKERS COMPENSATION

Each bidder shall submit the Contractor's Certificate regarding Workers Compensation Insurance form with its bid.

23. SUBSTITUTION OF SECURITY

The Contract Documents call for monthly progress payments based upon the amount of work completed. The City will retain five percent (5%) of each progress payment unless otherwise provided by the Contract Documents. At the Contractor's request and expense, the Contractor may substitute securities for the amount so retained in accordance with Public Contract Code Section 22300.

24. PREVAILING WAGES

The Director of the Department of Industrial Relations defines the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute the Contract. These rates may be obtained online at <http://www.dir.ca.gov/dlsr>. Bidders are advised that a copy of these rates must be posted at the job site(s).

25. DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.7 of the Labor Code. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

26. PERFORMANCE BOND AND PAYMENT BOND REQUIREMENTS

Within the time specified in the Contract Documents, the Bidder to whom a Contract is awarded shall deliver to City two identical counterparts of the Performance Bond and Payment Bond in the form supplied by City and included in the Contract Documents. Failure to do so may, in the sole discretion of City, result in the forfeiture of the Bid Guarantee. The surety supplying the bond must be an admitted surety insurer, as defined in Code of Civil Procedure Section 995.120, authorized to do business as such in the State of California and satisfactory to City. The Performance Bond and the Payment Bond shall each be for one hundred percent (100%) of the Contract Price.

27. REQUEST FOR SUBSTITUTION

The successful bidder shall comply with the substitution request provisions set forth in Division I of the specification, including any deadlines for substitution requests up to 35-days after the construction contract has been awarded.

28. SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES

Contractor and its subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay for permits, licenses, and fees required by the agencies with authority in the jurisdiction in which the work will be located, unless otherwise expressly provided by the Contract Documents.

29. EXECUTION OF CONTRACT

As required herein the Bidder to whom an award is made shall execute the Contract in the amount determined by the Contract Documents. City may require appropriate evidence that the persons executing the Contract are duly empowered to do so.

The contract shall be executed by the successful bidder and shall be returned, together with the contract bonds, to the City so that it is received within ten (10) days, not including Saturdays, Sundays and legal holidays, after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty.

Upon execution of the contract by the Contractor and the City, the Contractor shall furnish the City (1) a Certificate of Consent to self-insure issued by the Director of Industrial Relations, or (2) a Certificate of Workers' Compensation Insurance issued by an admitted insurer, or (3) an exact copy or duplicate thereof certified by the Director or the insurer.

30. DEPARTMENT OF INDUSTRIAL RELATIONS COMPLIANCE AND PREVAILING WAGE REQUIREMENTS ON PUBLIC WORKS PROJECTS

Effective January 1, 2015, No Contractor or Subcontractor may be listed on a bid proposal for a public works project (submitted after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 (with the limited exceptions from this requirement for bid purposed only under Labor code Section 1771.1(a)). Register at <https://efiling.dir.ca.gov/PWCR>

No Contractor or Subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The Prime Contractor is required to post job site notices prescribed by regulation. See 8 Calif. Code Regulation §16451(d).

Effective April 1, 2015, All Contractors and Subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner. <https://apps.dir.ca.gov/ecpr/das/altlogin>

END OF INFORMATION FOR BIDDERS

BIDDER'S PROPOSAL FORMS

Encinal Boat Launch Facility

BASE BID PROPOSAL:

TOTAL BASE BID (numbers):	
TOTAL BASE BID (in words):	

AWARD OF CONTRACT. The award of contract, if/when awarded, will be to the responsible bidder who submits the lowest and best lump sum BASE BID PROPOSAL and who's PROPOSAL complies with all requirements described herein. The award, if/when made, will be made within sixty (60) days after the opening of the bids. All bids will be compared on the basis of the Engineer's estimate of cost of work to be done. In the event of a delay in funding, the City reserves the right to hold the Bidder to its bid for 90 days from the date the bids are opened.

BID ALTERNATES PROPOSAL: (No Bid Alternates identified at this time.)

1	
---	--

Bid Alternate No. 1 Total (numbers):	
Bid Alternate No. 1 Total (in words):	

The City reserves the right to hold the Awarded Contractor to its BID ALTERNATES PROPOSAL for no less than 90 days from the award of Contract. If applicable, bidders must ensure that each bid item (Base Bid or Alternate) is balanced and contains a proportionate share of profit, overhead and other costs or expenses which will be incurred by the Bidder.

Name of Bidder_____

Business Address_____

Place of Residence_____

TO THE DIRECTOR OF PUBLIC WORKS OF ALAMEDA:

The undersigned, as bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any other person, firm or corporations; that bidder has carefully examined the location of the proposed work, plans and specifications; and bidder proposes and agrees, if this proposal is accepted, that bidder will contract with the City of Alameda to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in this contract in the manner and time prescribed, and according to the requirements of the Engineer as therein set forth; and that bidder will take in full payment therefor an amount based on the bids specified herein above for the various items of work.

BIDDER'S PROPOSAL FORM

Base Bid Schedule

BID ITEM	DESCRIPTION	SPEC. REF.	UNIT COST	QTY	UNIT	AMOUNT
1	MOBILIZATION & DEMOBILIZATION	01250		1	LS	\$
2	DEMOLITION	02200		1	LS	\$
3	REMOVE SEDIMENT	02300		100	CY	\$
4	CONCRETE CURB	03300		180	LF	\$
5	CONCRETE WALK	03300		2,420	SF	\$
6	CONCRETE APRON	03300		928	SF	\$
7	CONCRETE ABUTMENT	03300		2	EA	\$
8	CONCRETE LAYDOWN AREA FOR HANDLAUNCH CRAFT	03300		400	SF	\$
9	PRECAST CONCRETE PANELS	03300		2,440	SF	\$
10	GUIDE PILES	02350		4	EA	\$
11	BOARDING FLOATS	02480		960	SF	\$
12	ALUMINUM GANGWAY	05600		1	EA	\$
13	ARMOR ROCK	02700		33	TN	\$
14	ELECTRICAL SYSTEM	16100 16520		1	LS	\$
15	WATER SUPPLY	02660		1	LS	\$
16	SEWER SYSTEM	02730		1	LS	\$
17	SEWAGE EJECTOR	02730		1	LS	\$
18	INSTALL CITY-FURNISHED RESTROOM	02870		1	LS	\$
19	INSTALL CITY-FURNISHED FISH CLEANING STATION	02870		1	LS	\$
20	INSTALL CITY-FURNISHED PROJECT SIGN	02870		1	LS	\$
21	ASPHALT CONCRETE PAVEMENT	02500		5,082	SF	\$
22	FULL-DEPTH ASPHALT CONCRETE	02500		88	SF	\$
23	PAVEMENT STRIPING	02750		1	LS	\$
24	SEAL COAT (PARKING LOT)	02500		4,800	SY	
25	SWPPP	01000		1	LS	\$
	TOTAL BASE BID:					\$

TOTAL BASE BID, Items 1 through 23 inclusive (IN WORDS):

\$ _____.

Amount entered as the "TOTAL BASE BID" should be identical to the Base Bid amounts entered in all BIDDER'S PROPOSAL FORMS.

Bid Alternate Schedule (not used)

1						
2						

TOTAL BID ALTERNATE BID, (IN WORDS):

\$ _____.

This Base Bid Schedule must be completed in ink and must be included with the sealed Bid Proposal. **The unit cost for each item must be inclusive of all costs, whether direct or indirect, including profit and overhead.** The sum of all amounts entered in the "AMOUNT" column must be identical to the TOTAL BASE BID price entered in all BIDDER'S PROPOSAL FORMS.

Amount of Time Required to Commence Work After Receipt of NOTICE TO PROCEED: ____ Days.

BID FORM

This form is to be submitted as a part of the bid by the time and date specified in the first paragraph of the Notice Inviting Bids.

CITY OF ALAMEDA

THIS BID IS SUBMITTED BY:

(Firm/Company Name)

Re: ENCINAL BOAT LAUNCH FACILITY.

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the CITY OF ALAMEDA ("City") in the form included in the Contract Documents, to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Contract Documents, including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) Days after the day of Bid opening. **Contractor agrees to be bound by its bid for a period of ninety (90) days commencing the day of the bid opening.**
3. In submitting this Bid, Bidder represents:
 - (a) Bidder has examined all of the Contract Documents and the following Addenda (receipt of all of which is hereby acknowledged).

Addendum No.	Addendum Date	Signature of Bidder

- (b) Bidder has visited the Site and performed tasks, reviews, examinations, and analysis and given notices, regarding the Project and the Site.
- (c) Bidder has given District prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and

actual conditions and the written resolution thereof through Addenda issued by City is acceptable to Contractor.

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items must be filled in completely. The Summary of Work describes the scope of work to be performed under this contract, as listed and itemized in the Base Bid Schedule.

Total Base Bid Price (in words):

Total Bid Alternate 1 Bid Price (in words): _____

5. Subcontractors for work included in all Bid items are listed on the attached Document.
6. The undersigned Bidder understands that the CITY reserves the right to reject this Bid.
7. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in the Contract Documents or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by the Instructions to Bidders within the times specified therein.
8. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.
9. The undersigned Bidder herewith encloses a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Instructions to Bidders, in the amount of ten percent (10%) of the total bid and made payable to "City of Alameda".
10. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in the General Conditions and to complete all work within the time specified in the Agreement. The undersigned Bidder acknowledges that the CITY has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges City has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.
11. The undersigned Bidder agrees that, in accordance with the General Conditions liquidated damages for failure to complete all Work in the Contract within the time specified shall be as set forth in the Agreement.
12. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).

NAME OF BIDDER: _____
licensed in accordance with the act for the registration of Contractors, and with

License Number: _____

Expiration: _____

Department of Industrial Relations (DIR) No.: _____

Where incorporated, if applicable

Principals

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

Signature of Bidder

The undersigned agrees to execute the contract required in said Specifications, to the satisfaction of the Council of the City of Alameda, with the necessary bonds, if any be required, within ten days, not including Sundays or legal holidays, after receiving notice that the contract has been awarded and is ready for signature; and further agrees that, in case of his default in any of the foregoing provisions, the proceeds of any check which may accompany his bid in lieu of a bid bond shall become the property of the City of Alameda as agreed and liquidated damages.

Firm Name (Please Print) _____

Signature of Person on Behalf of Firm _____

Business Address _____

Dated: _____

Zip Code _____

<u>Name</u>	<u>Title</u>	<u>Address</u>
(Of Officers or Partners)		

Incorporated under the laws of the State of _____

Contractor's License No. _____ Expiration Date: _____

Department of Industrial Relations (DIR) No.: _____

(The signature above certifies that the foregoing information given on this document is true and correct under penalty of perjury. (Section 7028.15 California Business and Professionals Code.)

PROPOSED SUBCONTRACTOR FORM

The Bidder shall list the name, address, license number and Department of Industrial Relations number of each subcontractor to whom the Bidder proposes to subcontract portions of the work, as required by the provisions in Section 2-1.054, "Required Listing of Proposed Subcontractors," of the Standard Specifications and Section 2-1.01, "General," for the special provisions.

NAME & LICENSE NO.	BUSINESS ADDRESS	PORTION OF WORK	% OF WORK	*STATUS	DIR NO.

(This form may be duplicated if necessary to list additional subcontractors)

***STATUS** M = Minority Owned Business Enterprise
W = Women Owned Business Enterprise
DV = Disabled Veteran (Required for federally funded projects only)

(The bidder's execution on the signature portion of this proposal shall also constitute an endorsement and execution of those certifications which are a part of this proposal)

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder _____, proposed subcontractor, hereby certified that he has ___, has not ___, participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all report due under the applicable filing requirements.

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

SECURITY FOR COMPENSATION CERTIFICATE

(Required by Paragraph 1861, California Labor Code)

To: _____

I am aware of the provisions of Section 3700 of the Labor Code of the State of California 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.

(Signature of Bidder)

Business Address

IMPORTANT INSTRUCTIONS

1. Any erasure or interlineation may invalidate bid.
2. If corporation is bidder, affix seal of corporation.
3. If bidder is:
 - (a) An individual doing business under his/her own name, sign his/her own name only.
 - (b) An individual using a firm name, sign: Example, "John Doe, an individual doing business as Blank Company."
 - (c) A co-partnership, sign: Example, "Blank Company, by John Doe, President" (or other title).
4. If a firm or co-partnership, give the names of all individual co-partners composing the firm. If a corporation, state legal name of corporation; also name of president, secretary and treasurer thereof.
5. If a bid is sent by mail, write the word "**PROPOSAL**" plainly on the envelope.

EXHIBIT A

City of Alameda Contractor Verification Form Implementation of City of Alameda Integrated Pest Management Policy

The City of Alameda (City) is mandated to:

- (a) Minimize its reliance on pesticides that threaten water quality, and
- (b) Require the effective use of Integrated Pest Management (IPM) in all municipal operations and on all municipal property.

To ensure compliance with this mandate, all City operations need to verifiably implement the practices and policies described in the City's IPM Policy adopted June 15, 2010. A copy of this IPM Policy is included with this form. The implementation of the IPM Policy is applicable to all municipal contractors that provide landscaping, structural pest control, or other pest management services in support of City operations and/or on municipal property.

The undersigning parties acknowledge that all elements of the City's IPM Policy will be implemented throughout the period of contractual services provided to City operations and on municipal property. Specific actions to document this performance shall include:

- ☐ Pest Management Contractor shall provide to City project manager for pre-approval the Pest Management Considerations Checklist.
- ☐ Pest Management Contractor shall avoid the use of the following pesticides that threaten water quality, human health and the environment:
 - Acute Toxicity Category I chemicals as identified by the Environmental Protection Agency (EPA)
 - Organophosphate pesticides (e.g., those containing Diazinon, chlorpyrifos or malathion)
 - Pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin), carbamates (e.g., carbaryl), and fipronil
 - Copper-based pesticides unless their use is judicious, other approaches and techniques have been considered and the threat of impact to water quality is prevented.
- ☐ Pest Management Contractor shall provide to the City's project manager an annual Report of all pesticide usage in support of City operations including product name and manufacturer, active ingredient(s), target pest(s), the total amounts used and reasons for any increase in use of any pesticide.
- ☐ If the Contractor's on-site personnel are currently IPM certified through either the EcoWise or GreenPro programs, or through another program, the contractor shall provide written evidence of any certifications to the City's project manager.

City Departmental Representative

Contractor Representative

Print Name

Print Name

Date

Date

EXHIBIT B

City of Alameda Pest Management Contractor Checklist: Pest Management Options Considerations

Contractor will consider the City IPM Policy's hierarchy of options or alternatives listed below, in the following order before recommending the use of or applying any pesticide on City property. Please provide a written explanation in each section below of why the specific pest management option is not appropriate:

(1) No controls (e.g. tolerating the pest infestation, use of resistant plant varieties or allowing normal life cycle of weeds)

Comment: _____

(2) Physical or mechanical controls (e.g. hand labor, mowing, exclusion)

Comment: _____

(3) Cultural controls (e.g. mulching, disking, alternative vegetation), good housekeeping (e.g. cleaning desk area)

Comment: _____

(4) Biological controls (e.g., natural enemies or predators)

Comment: _____

(5) Reduced-risk chemical controls (e.g., soaps or oils)

Comment: _____

(6) Other chemical controls

Comment: _____

Contractor Representative

Print Name

Date

City Contractor

AGREEMENT TO BE BOUND TO PSA

(NOT APPLICABLE)

PROJECT STABILIZATION AGREEMENT FOR THE CITY OF ALAMEDA AGREEMENT TO BE BOUND

The undersigned party confirms that it agrees and assents to comply with and to be bound by the City of Alameda Project Stabilization Agreement as such Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms. A copy of the Agreement is included as Attachment K.

By executing this Agreement To Be Bound, the undersigned party subscribes to, adopts and agrees to be bound by the written terms of the legally established trust agreements, as set forth in section 17, specifying the detailed basis upon which contributions are to be made into, and benefits made out of, such Trust Fund(s) and ratifies and accepts the trustees appointed by the parties to such Trust Fund(s) and agrees to execute a separate Subscription Agreement(s) for Trust Funds when such Trust Fund(s) require(s) such document(s).

Such assent and obligation to comply with and to be bound by this Agreement shall extend to all work covered by said Agreement undertaken by the undersigned party. The undersigned party shall require all of its subcontractors, of whatever tier, to become similarly bound for all their work within the scope of this Agreement by signing an identical Agreement To Be Bound.

This letter shall constitute a subscription agreement, to the extent of the terms of the letter.

Dated: _____

Project: **Encinal Boat Launch Facility**

Signature of Authorized Officer

Authorized Officer & Title

Name of Contractor/Employer(s)

Contractor/Employer(s) Address

CSLB #

Area Code Phone

E-mail and/or Fax

Motor Carrier (CA) Permit Number

DIR Prevailing Wage Registration #

BIDDER'S BOND FORM

We, _____
as Principal, and as Surety are bound unto the _____, hereafter
referred to as "obligee", in the penal sum of ten percent (10%) of the total amount of the bid of the
Principal submitted to the Obligee for the work described below, for the payment of which sum we bind
ourselves, jointly, and severally,

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT: WHEREAS, the Principal is submitted to
the Obligee, for _____
(Copy here the exact description of work, including locations as it appears on
the proposal)

for which bids are to be opened per Section 1 Proposal and Contract Requirements, Paragraph E,
Presenting and Marking of Bid.

NOW, THEREFORE, if the Principal is awarded the contract and, within the time and manner
required under the specifications, after the prescribed forms are presented to Contractor for signature,
enters into a written contract, in the prescribed form, in accordance with the bid, and files two bonds with
Obligee, one to guarantee faithful performance of the contract and the other to guarantee payment for labor
and materials as provided by law, then this obligation shall be null and void; otherwise, it shall remain in
full force.

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

The surety; for value received, hereby stipulates and agrees that the obligations of said Surety and
its Bond shall be in no way impaired or affected by any extension of the time within which the OWNER
may accept such BID; and said Surety does hereby waive notice of any such extension.

Dated: _____, 2019.

Principal

Surety

By: _____

CERTIFICATE OF ACKNOWLEDGMENT

State of California
County of Alameda

On this _____ day of _ in the year **2019** before me _____, a Notary Public,
personally appeared _____

Attorney-in-fact

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.

Signature _____ (Seal)
Notary Public

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between CITY OF ALAMEDA, whose address is 950 W. MALL SQUARE, ROOM 110, ALAMEDA, CALIFORNIA, 94501, hereinafter called "Owner," **CONTRACTOR**, whose address is **ADDRESS, CITY, STATE, ZIP**, hereinafter called "Contractor" and **BANK NAME**, whose address is **ADDRESS, CITY, STATE, ZIP**, hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the Owner, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Owner pursuant to the Construction Contract entered into between the Owner and Contractor for the project known as **Encinal Boat Launch Facility** in the amount of **MONEY** dated **CONTRACT DATE**, (hereinafter referred to as the "Contract"). Alternatively, on written request of the Contractor, the Owner shall make payments of the retention earnings directly to the Escrow Agent. When the Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Owner and Contractor. Securities shall be held in the name of City of Alameda and shall designate the Contractor as the beneficial Owner.

(2) The Owner shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the Owner makes payments of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time that the escrow created under this Agreement is terminated. The Contractor may direct the investment of the payments into securities. All terms and conditions of this Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner pays the Escrow Agent directly.

(4) Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner. These expenses and payment terms shall be determined by the Owner, Contractor and Escrow Agent. The City of Alameda set-up expenses for a standard escrow are \$200.00 which includes costs to process the original application and to process the closure documents. Thereafter, there is a monthly charge of \$50.00 to reconcile the account balances and a per pay estimate charge of \$25.00 to accommodate the additional financial processing and documentation. These charges will be invoiced to the Contractor at close of escrow and must be paid by the Contractor from the escrow or outside of escrow prior to the City authorizing release of funds.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner.

(6) Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The Owner shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days written notice to the Escrow Agent from the Owner of the default, the Escrow Agent

shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

(8) Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant to Sections (5) to (8), inclusive, of this Agreement and the Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The Escrow Agent will send a monthly statement of the escrow account to the City of Alameda, Finance Department, 2263 Santa Clara Avenue, Alameda, California, 94501, Attention Amy Ho.

(11) Contractor is required to meet the requirements of Per Public Contract Code Section 22300(d) which states: Any Contractor who elects to receive interest on moneys withheld in retention by a public agency shall, at the request of any Subcontractor, make that option available to the Subcontractor regarding any moneys withheld in retention by the Contractor from the Subcontractor.

(12) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Owner and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner:

Liam Garland
Public Works Director
950 W. Mall Square, Room 110
Alameda, CA 94501

Title

On behalf of Contractor:

Name

Signature

On behalf of Escrow Agent:

Address

Title

Name

Signature

Address

At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their officers on the date first set forth above.

Owner:

City Manager
Title

Eric J. Levitt
Name

Signature

Escrow Agent:

Title

Name

Signature

Recommended for Approval:

Liam Garland
Public Works Director

Approved As To Form

Mr. Yibin Shen, City Attorney

Contractor:

Title

Name

Signature

ATTACHMENT A

CONTRACTOR AGREEMENT

CONTRACTOR AGREEMENT

THIS AGREEMENT, entered into this ____ day of _____, **2019**, by and between CITY OF ALAMEDA, a municipal corporation (hereinafter referred to as "City"), and **COMPANY NAME**, a (California corporation, partnership, sole proprietor, individual) whose address is ADDRESS, (hereinafter referred to as "Contractor"), in reference to the following:

RECITALS:

- A. City is a municipal corporation duly organized and validly existing under the laws of the State of California with the power to carry on its business as it is now being conducted under the statutes of the State of California and the Charter of the City.
- B. City and Contractor desire to enter into an agreement for construction of **Encinal Boat Launch Facility**, a City of Alameda Park Facility, located just west of Encinal High School at end of un-named access road, in accordance with Plans and Specifications adopted therefor, P.W. No. **04-19-19**, filed in the Office of the City Clerk on _____, **2019**.
- C. Contractor possesses the skill, experience, ability, background, certification and knowledge to provide the services described in this Agreement on the terms and conditions described herein.
- D. City and Contractor desire to enter into an agreement for **Encinal Boat Launch Facility**, upon the terms and conditions herein. (See Exhibit A, BIDDERS PROPOSAL FORM), for reference.)

NOW, THEREFORE, it is mutually agreed by and between the undersigned parties as follows:

1. TERM:

The Contractor shall have **ninety-three (93)** consecutive **working** days from the date the work is to commence pursuant to the Notice to Proceed to diligently prosecute the work to completion.

2. SERVICES TO BE PERFORMED:

Contractor agrees, at its own cost and expense, to furnish all labor, tools, equipment, materials, except as otherwise specified, and to do all work strictly in accordance with Specifications, Special Provisions and Plans, which Specifications, Special Provisions and Plans are hereby referred to and expressly made a part hereof with the same force and effect as if the same were fully incorporated herein. The Contractor acknowledges that the work plan included in Exhibit "A" (BIDDERS PROPOSAL FORM) is tentative and does not commit the City to request Contractor to perform all tasks included therein.

3. COMPENSATION TO CONTRACTOR:

Contractor shall be compensated for services performed pursuant to this Agreement in the amount and manner set forth in Contractor's bid, which is attached hereto as Exhibit "A" (BIDDERS PROPOSAL FORM) and incorporated herein by this reference. Payment will be made in the same manner that claims of a like character are paid by the City, with checks drawn on the treasury of said City, to be taken from fund CIP#: **91310**.

Payment will be made by the City in the following manner: On the first day of each month, Contractor shall submit a written estimate of the total amount of work done the previous month. However, the City reserves the right to adjust budget within and between tasks. Pricing and accounting of charges are to be according to the bid packet pricing, unless mutually agreed to in writing.

Payment shall be made for 95% of the value of the work completed as determined by the City. The City shall retain 5% of the value of the work as partial security for the completion of the work by Contractor. Retained amounts shall be paid to Contractor within sixty days of acceptance by the City of the project. Payment shall not be construed as acceptance of defective work. No interest will be paid to Contractor on retained funds.

Total compensation for work is \$_____, with a ten percent contingency in the amount of \$_____ for a total not to exceed of \$_____. Use of contingency shall be **at the City's sole discretion** for items of work outside the original scope and requires prior written authorization by the City.

Prompt Payment Of Withheld Funds To Subcontractors: The City shall hold retainage from the prime contractor and shall make prompt and regular incremental acceptances of portions, as determined by the City of the contract work and pay retainage to the prime contractor based on these acceptances. The prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the City. Any delay or postponement of payment may take place only for good cause and with the City's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise, available to the prime contractor or subcontractor in the event of a dispute involving late payment, or nonpayment by the contractor, or deficient subcontractor's performance, or noncompliance by a subcontractor. This clause applies to both DBE and non-DBE subcontractors.

4. TIME IS OF THE ESSENCE:

Contractor and City agree that time is of the essence regarding the performance of this Agreement.

It is agreed by the parties to the Agreement that in case all the work called for under the Agreement is not completed before or upon the expiration of the time limit as set forth in paragraph 1 above, damage will be sustained by the City, and that it is and will be impracticable to determine the actual damage which the City will sustain in the event of and by reason of such delay. It is therefore agreed that the Contractor will pay to the City the sum of **FIVE HUNDRED DOLLARS (\$500)** per day for each and every day's delay beyond the time prescribed to complete the work; and the Contractor agrees to pay such liquidated damages as herein provided, and in case the same are not paid, agrees that the City may deduct the amount thereof from any money due or that may become due the Contractor under the Agreement.

It is further agreed that in case the work called for under the Agreement is not finished and completed in all parts and requirements within the time specified, the City shall have the right to extend the time for completion or not, as may seem best to serve the interest of the City; and if City decides to extend the time limit for the completion of the Agreement, it shall further have the right to charge the Contractor, his or her heirs, assigns, or sureties, and to deduct from the final payment for the work, all or any part, as it may deem proper, of the actual costs and overhead expenses which are directly chargeable to the Agreement, and which accrue during the period of such extensions.

The Contractor shall not be assessed with liquidated damages during any delay in the completion of the work caused by an act of God or of the public enemy, acts of the City, fire, flood, epidemic, quarantine restriction, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes; provided that the Contractor shall, within one (1) day from the

beginning of such delay, notify the City in writing of the causes of delay. The City shall ascertain the facts and the extent of the delay, and its findings of the facts thereon shall be final and conclusive.

5. STANDARD OF CARE:

Contractor agrees to perform the Work in a manner commensurate with the prevailing standards of like professionals in the San Francisco Bay Area and agrees that all services shall be performed by qualified and experienced personnel who are not employed by the City nor have any contractual relationship with City.

6. INDEPENDENT PARTIES:

Contractor hereby declares that it is engaged as an independent business and it agrees to perform its services as an independent contractor. The manner and means of conducting the work are under the control of Contractor, except to the extent they are limited by statute, rule or regulation and the express terms of this Agreement. No civil service status or other right of employment will be acquired by virtue of Contractor's services. None of the benefits provided by City to its employees, including but not limited to unemployment insurance, workers' compensation plans, vacation and sick leave are available from City to Contractor, its employees or agents. Deductions shall not be made for any state or federal taxes, FICA payments, PERS payments, or other purposes normally associated with an employer-employee relationship from any fees due Contractor. Payments of the above items, if required, are the responsibility of Contractor.

7. IMMIGRATION REFORM AND CONTROL ACT (IRCA):

Contractor assumes any and all responsibility for verifying the identity and employment authorization of all of its employees performing work hereunder, pursuant to all applicable IRCA or other federal, or state rules and regulations. Contractor shall indemnify, defend, and hold City harmless from and against any loss, damage, liability, costs or expenses arising from any noncompliance of this provision by Contractor.

8. NON-DISCRIMINATION:

Consistent with City's policy that harassment and discrimination are unacceptable employer/employee conduct, Contractor agrees that harassment or discrimination directed toward a job applicant, a City employee, or a citizen by Contractor or Contractor's employee on the basis of race, religious creed, color, national origin, ancestry, handicap, disability, marital status, pregnancy, sex, age, or sexual orientation will not be tolerated. Contractor agrees that any and all violations of this provision shall constitute a material breach of this Agreement.

Contractor certifies and agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, sex, age, or condition or physical or mental handicap (as defined in 41 C.F.R. Section 60-741, et. seq.), in accordance with requirement of state or federal law. Contractor shall take affirmative action to ensure that qualified applicants are employed and that employees are treated during employment without regard to race, color, religion, national origin, ancestry, sex, age, or condition of physical or mental handicap in accordance with requirements of state and federal law. Such shall include, but not be limited to, the following:

A. Employment upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation.

B. Selection for training, including interns and apprentices.

Contractor agrees to post in conspicuous places in each of Contractor's facilities providing services hereunder, available and open to employees and applicants for employment, notices setting forth

the provisions of this nondiscrimination clause.

Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, sex, age, or condition of physical or mental handicap, in accordance with requirements of state and federal law.

Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' representative of Contractor's commitments under this paragraph.

Contractor certifies and agrees that it will deal with its subcontractors, bidders, or vendors without regard to race, color, religion, national origin, ancestry, sex, age, or condition of physical or mental handicap, in accordance with requirement of state and federal law.

In accordance with applicable state and federal law, Contractor shall allow duly authorized county, state and federal representatives access to its employment records during regular business hours in order to verify compliance with the anti-discrimination provisions of this paragraph. Contractor shall provide such other information and records as such representatives may require in order to verify compliance with the anti-discrimination provisions of this paragraph.

If the City finds that any of the provisions of this paragraph have been violated, the same shall constitute a material breach of Agreement upon which City may determine to cancel, terminate, or suspend this Agreement. City reserves the right to determine independently that the anti-discrimination provisions of this Agreement have been violated. In addition, a determination by the California Fair Employment Practices Commission or the Federal Equal Employment Opportunity Commission that Contractor has violated state and federal anti-discrimination laws shall constitute a finding by City that Contractor has violated the anti-discrimination provisions of Agreement.

The parties agree that in the event Contractor violates any of the anti-discrimination provisions of this paragraph, City shall be entitled, at its option, to the sum of \$500.00 pursuant to California Civil Code Section 1671 as liquidated damages in lieu of canceling, terminating, or suspending this Agreement.

Contractor hereby agrees that it will comply with Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. Section 794), all requirements imposed by the applicable regulations (45 C.F.R.), and all guidelines and interpretations issued pursuant thereto, to the end that no qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity of Contractor receiving Federal Financial Assistance. In addition, Contractor shall comply with the Uniform Federal Accessibility Standards, and Contractor, Engineer, or Architect responsible for any design, construction or alteration shall certify compliance with those Standards.

Contractor's attention is directed to laws, including but not limited to:

A. CIVIL RIGHTS/EQUAL OPPORTUNITY

(1) Civil Rights Act of 1964. Under Title VII of the Civil Rights Act of 1964, no person shall, on the grounds of race, sex, religion, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

(2) Section 109 of the Housing and Community Development Act of 1974. No person in the United States shall, on the grounds of race, color, national origin, or sex, be excluded from

participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

Section 109 of the Act further provides that any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.) or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) shall also apply to any program or activity funded in whole or in part with funds made available pursuant to the Act.

B. PROGRAM ACCESSIBILITY FOR INDIVIDUALS WITH DISABILITIES

This Agreement is subject to laws and regulations concerning the rights of otherwise qualified individuals with handicaps for equal participation in, and benefit from federally assisted programs and activities, including but not limited to:

(1) Americans with Disabilities Act of 1990 (ADA) (28 C.F.R. 35). Title II, Subpart A of the Americans with Disabilities Act of 1990 applies to all publicly funded activities and programs. Contractor shall also comply with the public accommodations requirements of Title III of the ADA, as applicable.

(2) Nondiscrimination on the Basis of Handicap (24 CFR 8). These regulations, which implement Section 504 of the Rehabilitation Act of 1973, as amended, and as cited in Section 109 of the Housing and Community Development Act, apply to all federally assisted activities and programs and are implemented through the regulations at 24 C.F.R. 8.

(3) Architectural Barrier Act of 1968. Any building or facility, excluding privately owned residential structures, designed, constructed, or altered with federal funds, shall comply with the Uniform Federal Accessibility Standards, 1984 (41 C.F.R. 3) and the Handicapped Accessibility Requirements of the State of California Title 24. The Consultant, Engineer or Architect responsible for such design, construction or alteration shall certify compliance with the above standards.

(4) In resolving any conflict between the accessibility standards cited in paragraphs (1), (2) and (3) above, the more stringent standard shall apply.

9. HOLD HARMLESS:

Contractor shall indemnify, defend, and hold harmless City of Alameda, its City Council, boards, commissions, officials, employees, and volunteers, as well as the Department of Recreation and Parks, and the Division of Boating and Waterways, its officers, agents and employees ("Indemnitees") from and against any and all loss, damages, liability, claims, suits, costs and expenses whatsoever, including reasonable attorneys' fees ("Claims"), arising from or in any manner connected to Contractor's negligent act or omission, whether alleged or actual, regarding performance of services or work conducted or performed pursuant to this Agreement. If Claims are filed against Indemnitees which allege negligence on behalf of the Contractor, Contractor shall have no right of reimbursement against Indemnitees for the costs of defense even if negligence is not found on the part of Contractor. However, Contractor shall not be obligated to indemnify Indemnitees from Claims arising from the sole negligence or willful misconduct of Indemnitees.

10. INSURANCE:

On or before the commencement of the terms of this Agreement, Contractor shall furnish the City's Risk Manager with certificates showing the type, amount, class of operations covered, effective dates and dates of expiration of insurance coverage in compliance with paragraphs 10A, B, C and D. Such certificates, which do not limit Contractor's indemnification, shall also contain substantially the following statement: "Should any of the above insurance covered by this certificate be canceled or coverage reduced before the expiration date thereof, the insurer affording coverage shall provide fourteen (14) days' advance written notice to the City of Alameda, "Attention: Risk Manager."

It is agreed that Contractor shall maintain in force at all times during the performance of this Agreement all appropriate coverage of insurance required by this Agreement with an insurance company that is acceptable to the City Risk Manager and licensed to do insurance business in the State of California. Endorsements naming the City, its City Council, boards, commissions, officials, employees, and volunteers as additional insured shall be submitted with the insurance certificates.

A. COVERAGE:

Contractor shall maintain the following insurance coverage:

(1) Workers' Compensation:

Statutory coverage as required by the State of California.

(2) Liability:

Commercial general liability coverage in the following minimum limits:

Bodily Injury: \$2,000,000 each occurrence
 \$3,000,000 aggregate - all other

Property Damage: \$1,000,000 each occurrence
 \$2,000,000 aggregate

If submitted, combined single limit policy with aggregate limits in the amounts of \$2,000,000 will be considered equivalent to the required minimum limits shown above.

(3) Automotive:

Comprehensive automobile liability coverage (any auto) in the following minimum limits:

Bodily injury: \$1,000,000 each occurrence
Property Damage: \$1,000,000 each occurrence

or

Combined Single Limit: \$2,000,000 each occurrence

(4) Pollution Prevention:

Legal liability required for hazardous materials excavation in the amount of ` \$2,000,000 each occurrence.

(5) Builders Risk:

In the amount of \$1,000,000.

B. SUBROGATION WAIVER:

Contractor agrees that in the event of loss due to any of the perils for which it has agreed to provide comprehensive general and automotive liability insurance, Contractor shall look solely to its insurance for recovery. Contractor hereby grants to City, on behalf of any insurer providing comprehensive general and automotive liability insurance to either Contractor or City with respect to the services of Contractor herein, a waiver of any right to subrogation which any such insurer of said Contractor may acquire against City by virtue of the payment of any loss under such insurance.

C. FAILURE TO SECURE:

If Contractor at any time during the term hereof should fail to secure or maintain the foregoing insurance, City shall be permitted to obtain such insurance in the Contractor's name or as an

agent of the Contractor and shall be compensated by the Contractor for the costs of the insurance premiums at the maximum rate permitted by law and computed from the date written notice is received that the premiums have not been paid.

D. ADDITIONAL INSURED:

City of Alameda, its City Council, boards, commissions, officials, employees, and volunteers – and the Department of Recreation and Parks, and the Division of Boating and Waterways, its officers, agents, and employees - shall be named as an additional insured under all insurance coverages, except worker's compensation insurance. The naming of an additional insured shall not affect any recovery to which such additional insured would be entitled under this policy if not named as such additional insured. An additional insured named herein shall not be held liable for any premium, deductible portion of any loss, or expense of any nature on this policy or any extension thereof. Any other insurance held by an additional insured shall not be required to contribute anything toward any loss or expense covered by the insurance provided by this policy.

E. SUFFICIENCY OF INSURANCE:

Contractor shall furnish the following bonds from a bonding company acceptable to the City Risk Manager. Faithful Performance Bond and Labor and Material Bond are only required for work over \$25,000. Therefore, those estimates that are under \$25,000 will not need to budget for the bond premiums and those estimates over \$25,000 will need to be sure to budget for the bond premiums.

The insurance limits required by City are not represented as being sufficient to protect Contractor. Contractor is advised to consult Contractor's insurance broker to determine adequate coverage for Contractor.

11. BONDS:

Contractor shall furnish the following bonds from a bonding company acceptable to the City Attorney:

A. Faithful Performance:

A bond in the amount of 100% of the total contract price guaranteeing the faithful performance of this contract, and

B. Labor and Materials:

A bond for labor and materials in the amount of 100% of the total contract price.

12. PROHIBITION AGAINST TRANSFERS:

Contractor shall not assign, sublease, hypothecate, or transfer this Agreement, or any interest therein, directly or indirectly, by operation of law or otherwise, without prior written consent of City. Any attempt to do so without said consent shall be null and void, and any assignee, sublessee, hypothecate or transferee shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer. However, claims for money by Contractor from City under this Agreement may be assigned to a bank, trust company or other financial institution without prior written consent. Written notice of such assignment shall be promptly furnished to City by Contractor.

The sale, assignment, transfer or other disposition of any of the issued and outstanding capital stock of Contractor, or of the interest of any general partner or joint venturer or syndicate member or cotenant, if Contractor is a partnership or joint venture or syndicate or cotenancy, which shall result in changing the control of Contractor, shall be construed as an assignment of this Agreement. Control means fifty percent (50%) or more of the voting power of the corporation.

13. SUBCONTRACTOR APPROVAL:

Unless prior written consent from City is obtained, only those people and subcontractors whose names are listed in Contractor's bid shall be used in the performance of this Agreement.

Requests for additional subcontracting shall be submitted in writing, describing the scope of work to be subcontracted and the name of the proposed subcontractor. Such request shall set forth the total price or hourly rates used in preparing estimated costs for the subcontractor's services. Approval of the subcontractor may, at the option of City, be issued in the form of a Work Order.

In the event that Contractor employs subcontractors, such subcontractors shall be required to furnish proof of workers' compensation insurance and shall also be required to carry general and automobile liability insurance in reasonable conformity to the insurance carried by Contractor. In addition, any work or services subcontracted hereunder shall be subject to each provision of this Agreement.

14. PERMITS AND LICENSES:

Contractor, at its sole expense, shall obtain and maintain during the term of this Agreement, all appropriate permits, certificates and licenses, including a City Business License that may be required in connection with the performance of services hereunder.

15. REPORTS:

Each and every report, draft, work product, map, record and other document reproduced, prepared or caused to be prepared by Contractor pursuant to or in connection with this Agreement shall be the exclusive property of City.

No report, information nor other data given to or prepared or assembled by Contractor pursuant to this Agreement shall be made available to any individual or organization by Contractor without prior approval by City.

Contractor shall, at such time and in such form as City may require, furnish reports concerning the status of services required under this Agreement.

16. RECORDS:

Contractor shall maintain complete and accurate records with respect to sales, costs, expenses, receipts and other such information required by City that relate to the performance of services under this Agreement.

Contractor shall maintain adequate records of services provided in sufficient detail to permit an evaluation of services. All such records shall be maintained in accordance with generally accepted accounting principles and shall be clearly identified and readily accessible. Contractor shall provide free access to such books and records to the representatives of City or its designees at all proper times, and gives City the right to examine and audit same, and to make transcripts therefrom as necessary, and to allow inspection of all work, data, documents, proceedings and activities related to this Agreement. Such records, together with supporting documents, shall be kept separate from other documents and records and shall be maintained for a period of three (3) years after receipt of final payment.

If supplemental examination or audit of the records is necessary due to concerns raised by City's preliminary examination or audit of records, and the City's supplemental examination or audit of the records discloses a failure to adhere to appropriate internal financial controls, or other breach of contract or failure to act in good faith, then Contractor shall reimburse City for all reasonable costs and expenses associated with the supplemental examination or audit.

17. NOTICES:

All notices, demands, requests or approvals to be given under this Agreement shall be given in writing and conclusively shall be deemed served when delivered personally or on the second business day after the deposit thereof in the United States Mail, postage prepaid, registered or certified, addressed as hereinafter provided.

All notices, demands, requests, or approvals from Contractor to City shall be addressed to City at:

City of Alameda
Recreation & Parks Department
2263 Santa Clara Avenue
Alameda, CA 94501-4417
ATTENTION: Amy Wooldridge, Director
Ph: (510) 747-7570 email: awooldridge@alamedaca.gov

With a copy to:

City of Alameda, Public Works Department
950 West Mall Square
Alameda, CA 94501-7575
ATTENTION: Jack Dybas, Project Manager II, Public Works Department
Ph.: (510) 747-7948 email: jdybas@alamedaca.gov

All notices, demands, requests, or approvals from City to Contractor shall be addressed to Contractor at:

[Contractor Name]
[Department]
[Address]
Alameda, CA 94501
ATTENTION; [Title]
Ph: (510) xxx-xxxx / Fax: (510) xxx-xxxx

18. UTILITIES

Contractor shall pay all charges for fuel, gas, water, electricity, telephone services and any other utilities necessary to carry on the operations of Contractor.

19. NUISANCE

Contractor shall not maintain, commit, or permit the maintenance or commission of any nuisance in connection with the performance of services under this Agreement.

20. SAFETY REQUIREMENT

The Contractor will be solely and completely responsible for conditions of all vehicles owned or operated by Contractor, including the safety of all persons and property during performance of the services and tasks under this Agreement. This requirement will apply continuously and not be limited to normal working hours. In addition, Contractor will comply with all safety provisions in conformance with U.S. Department of Labor Occupational Safety and Health Act, any equivalent state law, and all other applicable federal, state, county and local laws, ordinances, codes, and any regulations that may be detailed in other parts of the Agreement. Where any of these are in conflict, the more stringent requirements will be followed. The Contractor's failure to thoroughly familiarize itself with the aforementioned safety provisions will not relieve it from compliance with the obligations and penalties set forth herein.

The Contractor will immediately notify the City's Risk Manager within 24 hours of any incident of death, serious personal injury or substantial property damage that occurs in connection with the performance of this Agreement. The Contractor will promptly submit to the City a written report of all incidents that occur in connection with this Agreement. This report must include the following information: (i) name and address of injured or deceased person(s); (ii) name and address of Contractor's employee(s) involved in the incident; (iii) name and address of Contractor's liability insurance carrier; (iv) a detailed description of the incident; and (v) a police report.

21. HOURS OF OPERATION

Contractor shall be allowed to operate only for the hours of 8:00 a.m. to 5:00 p.m., Monday - Friday unless prior written approval has been secured from City to do otherwise.

22. LAWS TO BE OBSERVED:

Contractor shall comply with all applicable laws, state, federal, and all ordinances, rules and regulations enacted or issued by City. In addition, the Contractor shall keep themselves fully informed of all existing and future state and federal laws and all municipal ordinances and regulations of the City of Alameda which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

23. DEPARTMENT OF INDUSTRIAL RELATIONS COMPLIANCE AND PREVAILING WAGE REQUIREMENTS ON PUBLIC WORKS PROJECTS:

Effective January 1, 2015, no Contractor or Subcontractor may be listed on a bid proposal for a public works project (submitted after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 (with the limited exceptions from this requirement for bid purposed only under Labor code Section 1771.1(a)). Register at <https://efiling.dir.ca.gov/PWCR>

No Contractor or Subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The Prime Contractor is required to post job site notices prescribed by regulations. See 8 Calif. Code Regulation §16451(d).

Effective April 1, 2015, All Contractors and Subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner at: <https://apps.dir.ca.gov/ecpr/das/altlogin>

24. HOURS OF LABOR:

As provided in Article 3 (commencing at § 1810), Chapter 1, Part 7, Division 2 of the Labor Code, eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the Contractor or by any Subcontractor on any subcontract under this Contract, upon the work or upon any part of the work contemplated by this Contract, is limited and restricted to eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except as hereinafter provided. Notwithstanding the provision hereinabove set forth, work performed by employees of Contractor in excess of eight (8) hours per day and forty (40) hours during any one week shall be permitted upon this public work provided that the employees' compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay.

The Contractor shall pay to the City a penalty of Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by the Contractor, or by any Subcontractor, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in any one (1) calendar week, in violation of the provisions of Article 3 (commencing at § 1810), Chapter 1, Part 7, Division 2 of the Labor Code, unless compensation for the workers so employed by Contractor is not less than one and one-half (1-1/2) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half (1½) times the above specified rate of *per diem* wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Contract applicable to each particular craft, classification, or type of worker employed.

25. CERTIFIED PAYROLL:

Contractor to strictly abide by the State Dept. of Industrial Relation's Certified Payroll Reporting protocol/requirements.

26. APPRENTICES:

Attention is directed to the provisions in sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under him on contracts greater than \$30,000 or 20 working days. The Contractor and any subcontractor under him shall comply with the requirements of Sections 1777.5 and 1777.6 in the employment of apprentices.

Section 1777.5 requires the Contractor or subcontractor employing workers in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of the public works project, and which administers the apprenticeship program in that trade, for a certificate of approval, if they have not previously applied and are covered by the local apprenticeship standards.

The Contractor is required to make contributions to funds established for the administration of apprenticeship programs if: (1) the Contractor employs registered apprentices or journeymen in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions; or (2) if the Contractor is not a signatory to an apprenticeship fund and if the funds administrator is unable to accept Contractor's required contribution. The Contractor or subcontractor shall pay a like amount to the California Apprenticeship Council.

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.

27. LABOR DISCRIMINATION:

No discrimination shall be made in the employment of persons upon public works because of the race, color, sex, religion, age, national origin, sexual orientation, or physical disability of such persons and every Contractor for public works violating this section is subject to all the penalties imposed for a violation of the provisions of the Labor Code, and, in particular, Section 1735.

28. REGISTRATION OF CONTRACTORS:

Before submitting bids, contractors shall be licensed in accordance with the provisions of Chapter 9, Division 3, of the Business and Professional Code of the State of California.

29. URBAN RUNOFF MANAGEMENT:

The Contractor shall avoid creating excess dust when breaking asphalt or concrete and during excavation and grading. If water is used for dust control, contractor shall use as little as necessary. Contractor shall take all steps necessary to keep wash water out of the streets, gutters and storm drains.

The Contractor shall develop and implement erosion and sediment control to prevent pollution of storm drains. In addition to the practices identified in a) the Construction Documents, Pollution Prevention sheet, and b) Spec. Section 01 84 00, Construction Site Controls, such controls include but are not limited to:

- a. Use storm drain inlet protection devices such as sand bag barriers, filter fabric fences, block and gravel filters. (Block storm drain inlets prior to the start of the rainy season (October 15), on site de-watering activities and saw-cutting activities; shovel or vacuum saw-cut slurry and remove from the site).
- b. Cover exposed piles of soil or construction material with appropriately anchored and secured plastic sheeting. All construction materials must be stored in containers.
- c. Sweep and remove all materials from paved surfaces that drain to streets, gutters and storm drains prior to rain as well as at the end of the each work day. At the completion of the project, the street shall be washed and the wash water shall be collected and disposed of offsite in an appropriate location.
- d. After breaking old pavement, Contractor shall remove all debris to avoid contact with rainfall or runoff.
- e. Contractor shall maintain a clean work area by removing trash, litter, and debris at the end of each workday. Contractor shall also clean up any leaks, drips, and other spills as they occur.

The objective is to ensure that the City and County of Alameda County-Wide Clean Water Program is adequately enforced. These controls should be implemented prior to the start of construction, up-graded as required, maintained during construction phases to provide adequate protection, and removed at the end of construction.

These recommendations are intended to be used in conjunction with the State's Best Management Practices Municipal and Construction Handbooks, local program guidance materials from municipalities, Section 7.1.01 of the Standard Specifications and any other appropriate documents on storm water quality controls for construction.

Failure to comply with this program will result in the issuance of noncompliance notices, citations, project stop orders or fines. The fine for noncompliance of the above program is two hundred and fifty dollars (\$250.00) per occurrence per day. The State under the Federal Clean Water Act can also impose a fine on the contractor, pursuant to Cal. Water Code §13385.

30. COMPLIANCE WITH MARSH CRUST ORDINANCE:

Contractor shall perform all excavation work in compliance with the City's Marsh Crust Ordinance as set forth at Section 13-56 of the Municipal Code. Prior to performing any excavation work, Contractor shall verify with the Building Official whether the excavation work is subject to the Marsh Crust Ordinance. Contractor shall apply for and obtain permits from Building Services on projects deemed to be subject to the Marsh Crust Ordinance.

31. COMPLIANCE WITH THE CITY'S INTEGRATED PEST MANAGEMENT POLICY:

The Contractor shall follow the requirements of the City's Integrated Pest Management (IPM) Policy to ensure the City is in compliance with its Municipal Regional Stormwater NPDES Permit, Order No. R2-2009-0074, issued by the San Francisco Bay Regional Water Quality Control Board.

- ☐ Contractor shall use the most current IPM technologies available to ensure the long-term prevention or suppression of pest problems and to minimize negative impacts on the environment, non-target organisms, and human health for the control or management of pests in and around City buildings and facilities, parks and golf courses, urban landscape areas, rights-of-way, and other City properties.
- ☐ Contractor will consider the City IPM Policy's hierarchy of options or alternatives listed below, in the following order before recommending the use of or applying any pesticide on City property: (1)
 - a. No controls (e.g. tolerating the pest infestation, use of resistant plant varieties or allowing normal life cycle of weeds);
 - b. Physical or mechanical controls (e.g. hand labor, mowing, exclusion);
 - c. Cultural controls (e.g. mulching, disking, alternative vegetation) and good housekeeping (e.g. cleaning desk area);
 - d. Biological controls (e.g., natural enemies or predators);
 - e. Reduced-risk chemical controls (e.g., soaps or oils);
 - f. Other chemical controls.
- ☐ Prior to applying chemical controls the contractor shall complete a checklist for the City's pre-approval that explains why a chemical control is necessary. For annual contracts that require regular application of chemical controls the contractor shall submit one checklist prior to the initiation of the project demonstrating that the hierarchy has been reviewed and no other options exist. (Attached as Exhibit C). Additionally, the contractor shall provide documentation to the City's project manager of the implementation of the IPM techniques hierarchy described in the City's IPM Policy.
- ☐ Contractor shall avoid the use of the following pesticides that threaten water quality, human health and the environment:
 - a. Acute Toxicity Category I chemicals as identified by the Environmental Protection Agency (EPA)
 - b. Organophosphate pesticides (e.g., those containing Diazinon, chlorpyrifos or malathion)
 - c. Pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin), carbamates (e.g., carbaryl), and fipronil
 - d. Copper-based pesticides unless their use is judicious, other approaches and techniques have been considered, and the threat of impact to water quality is prevented.
- ☐ Contractor shall sign the Contractor Verification Form (Attached as Exhibit B) indicating the intent to implement the City's IPM Policy, and return a signed copy to the City's project manager.
- ☐ Contractor shall provide to the City's project manager an annual Report of all pesticide usage in support of City operations including pesticide name, active ingredient(s), target pest(s), the total amounts used and the reasons for any increase in use of any pesticide.

- ☐ Contractor shall provide a copy of any current IPM certifications(s) to the City's project manager prior to initiation of the service work.

A copy of the City's IPM Policy may be obtained from the City's project manager and is also on file with the City Clerk. *If this agreement pertains to the use of any items listed above, the Contractor will need to fill out and send in the Contractor Verification Form and Contractor Check List.*

32. PURCHASES OF MINED MATERIALS REQUIREMENT:

Contractor shall ensure that all purchases of mined materials such as construction aggregate, sand and gravel, crushed stone, road base, fill materials, and any other mineral materials must originate from a surface mining operation identified on the AB3098 List per the Surface Mining and Reclamation Act of 1975 (SMARA).

Within five days of award of contract, Contractor shall submit a report to City which lists the intended suppliers for the above materials and demonstrates that the suppliers are in compliance with the SMARA requirements. The AB3098 List is maintained by the Department of Conservation's Office of Mine Reclamation (OMR) and can be viewed at: www.conservation.ca.gov/OMR/ab_3098_list/index.htm. Note that the list changes periodically and should be reviewed accordingly.

33. TERMINATION:

In the event Contractor fails or refuses to perform any of the provisions hereof at the time and in the manner required hereunder, Contractor shall be deemed in default in the performance of this Agreement and the City may terminate for cause pursuant to the provisions of Section 13 G of the General Conditions, attached hereto as General Conditions Of The Contract For Construction.

In addition to the foregoing, City shall have the option, at its sole discretion and without cause, of terminating this Agreement for convenience pursuant to the provisions of section 13 H of the General Conditions, attached hereto as General Conditions Of The Contract For Construction. Upon termination of this Agreement, each party shall pay to the other party that portion of compensation specified in this Agreement that is earned and unpaid prior to the effective date of termination.

34. ATTORNEY'S FEES:

In the event of the bringing of any action or suit by a party hereto against the other party by reason of any breach of any covenants, conditions, obligation or provision arising out of this Agreement, the prevailing party shall be entitled to recover from the non-prevailing party all of its costs and expenses of the action or suit, including reasonable attorneys' fees, experts' fees, all court costs and other costs of action incurred by the prevailing party in connection with the prosecution or defense of such action and enforcing or establishing its rights hereunder (whether or not such action is prosecuted to a judgment). For the purposes of this Agreement, reasonable fees of attorneys of the Alameda City Attorney shall be based on the fees regularly charged by private attorneys with the equivalent number of years of experience in the subject matter area of the law for which the Alameda City Attorney's services were rendered who practice in Alameda County in law firms with approximately the same number of attorneys as employed by the Alameda City Attorney's Office.

35. CLAIMS (PCC Section 9204 Summary - Claims Submitted Between 01-01-2017 and 01-01-2020.):

Notwithstanding anything else to the contrary stated in the Information For Bidders (IFB) or the Contract Documents, all claims, regardless of dollar amount, submitted between January 1, 2017 and January 1, 2020 shall be governed by PCC Section 9204 and this section.

The following provisions and procedures shall apply:

A. For the purposes of this section, the term “Claim”, “Contractor”, “mediation”, “Public Entity” “Public works project” and “Subcontractor” shall have the meaning provided for in PCC Section 9204.

B. Contractor shall submit each Claim (whether for a time extension, payment for money or damages) in writing and in compliance with PCC Section 9204. Contractor must include reasonable documentation to support each claim.

C. Upon receipt of a Claim, the City shall conduct a reasonable review and respond in writing within 45 days of receipt and shall identify in a written statement what portions of the claim are disputed and undisputed. Undisputed portions of the Claim shall be process and paid within 60 days of the written statement. Undisputed amounts not paid in a timely manner shall bear interest at 7% per annum. The City and Contractor may mutually agree to extend the 45 day response time.

D. If the City needs approval from the City Council to provide a written statement, the 45 days may be extended to 3 days following the next duly noticed public meeting pursuant to PCC Section 9204(d)(1)(C).

E. If the City fails to timely respond to a Claim or if Contractor disputes the City’s response, Contractor may submit a written demand for an informal meet and confer conference with the City to settle the issues in dispute. The demand must be sent via registered or certified mail, return receipt requested. Upon receipt, the City shall schedule the conference within 30 days.

F. Within 10 business days following the informal meet and confer conference, the City shall submit to Contractor a written statement describing any issues remaining in dispute and that portion which is undisputed. Undisputed portions of the Claim shall be process and paid within 60 days of the written statement. Undisputed amounts not paid in a timely manner shall bear interest at 7% per annum. The issues remaining in dispute shall be submitted to non-binding mediation. If the City and Contractor mutually agree on a mediator, each party shall pay equal portions of all associated costs. If within 10 business days, the City and Contractor cannot agree on a mediator, each party shall select a mediator (paying all costs associated with their selected mediator), and those mediators shall select a qualified neutral third party to mediate the disputed issues. The City and Contractor shall pay equal portions of all associated costs of such third party mediator.

G. Unless otherwise agreed by the City and Contractor, any mediation conducted hereunder shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has commenced.

H. The City reserves all rights and remedies that it has pursuant to the Construction Contract, plans and specification, at law or in equity which are not in conflict with PCC 9204.

I. This Section shall be automatically extended if legislation is lawfully passed which extends the terms of Public Contract Code Section 9204 beyond January 1, 2020.

36. CONFLICT OF LAW:

This Agreement shall be interpreted under, and enforced by the laws of the State of California excepting any choice of law rules which may direct the application of laws of another jurisdiction. The Agreement and obligations of the parties are subject to all valid laws, orders, rules, and regulations of the authorities having jurisdiction over this Agreement (or the successors of those authorities.) Any suits brought pursuant to this Agreement shall be filed with the courts of the County of Alameda, State of California.

37. ADVERTISEMENT:

Contractor shall not post, exhibit, display or allow to be posted, exhibited, displayed any signs, advertising, show bills, lithographs, posters or cards of any kind pertaining to the services performed under this Agreement unless prior written approval has been secured from City to do otherwise.

38. WAIVER:

A waiver by City of any breach of any term, covenant, or condition contained herein, shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant, or condition contained herein, whether of the same or a different character.

39. INTEGRATED CONTRACT:

This Agreement represents the full and complete understanding of every kind or nature whatsoever between the parties hereto, and all preliminary negotiations and agreements of whatsoever kind or nature are merged herein. No verbal agreement or implied covenant shall be held to vary the provisions hereof. Any modification of this Agreement will be effective only by written execution signed by both City and Contractor.

40. INSERTED PROVISIONS:

Each provision and clause required by law to be inserted into the Agreement shall be deemed to be enacted herein, and the Agreement shall be read and enforced as though each were included herein. If through mistake or otherwise, any such provision is not inserted or is not correctly inserted, the Agreement shall be amended to make such insertion on application by either party.

41. CAPTIONS:

The captions in this Agreement are for convenience only, are not a part of the Agreement and in no way affect, limit or amplify the terms or provisions of this Agreement.

Signatures on next page

IN WITNESS WHEREOF, the parties have caused the Agreement to be executed on the day and year first above written.

COMPANY NAME:
(A California Corporation, partnership,
sole proprietor, individual)

CITY OF ALAMEDA:
A Municipal Corporation

(Name)
(Title)

Eric J. Levitt
City Manager

RECOMMENDED FOR APPROVAL:

(Name)
(Title)

Liam Garland
Public Works Director

APPROVED AS TO FORM:
City Attorney

Mr. Yibin Shen
City Attorney

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED - OWNERS, LESSEES or CONTRACTORS FORM B

This endorsement modifies insurance provided under the following:
COMMERCIAL GENERAL LIABILITY COVERAGE PART
SCHEDULE

Name of Person or Organization:

City of Alameda
Public Works Department
950 West Mall Square, Room 110
Alameda, CA 94501-7558

SAMPLE

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

REF: _____

The City of Alameda, its City Council, boards and commissions, officers & employees, as well as the Department of Recreation and Parks, and the Division of Boating and Waterways, their officers, agents, and employees, are additional insured for work done on their behalf by the named insured.

PRIMARY INSURANCE:

IT IS UNDERSTOOD AND AGREED THAT THIS INSURANCE IS PRIMARY AND ANY OTHER INSURANCE MAINTAINED BY THE ADDITIONAL INSURED SHALL BE EXCESS ONLY AND NOT CONTRIBUTING WITH THIS INSURANCE.

SEVERABILITY OF INTEREST:

IT IS AGREED THAT EXCEPT WITH RESPECT TO THE LIMIT OF INSURANCE, THIS COVERAGE SHALL APPLY AS IF EACH ADDITIONAL INSURED WERE THE ONLY INSURED AND SEPARATELY TO EACH INSURED AGAINST WHOM CLAIM IS MADE OR SUIT IS BROUGHT.

WAIVER OF SUBROGATION:

IT IS UNDERSTOOD AND AGREED THAT THE COMPANY WAIVES THE RIGHT OF SUBROGATION AGAINST THE ABOVE ADDITIONAL INSURED (S), BUT ONLY AS RESPECTS THE JOB OR PREMISES DESCRIBED IN THE CERTIFICATE ATTACHED HERETO.

NOTICE OF CANCELLATION:

IT IS UNDERSTOOD AND AGREED THAT IN THE EVENT OF CANCELLATION OF THE POLICY FOR ANY REASON OTHER THAN NON-PAYMENT OF PREMIUM, 30 DAYS WRITTEN NOTICE WILL BE SENT TO THE CERTIFICATE HOLDER BY MAIL. IN THE EVENT THE POLICY IS CANCELED FOR NON-PAYMENT OF PREMIUM, 10 DAYS WRITTEN NOTICE WILL BE SENT TO THE ABOVE.

POLICY NUMBER:

COMMERCIAL AUTO

CG 20 48 02 99

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

SAMPLE

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement. This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provisions of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective:	Countersigned By:
Named Insured:	(Authorized Representative)

SCHEDULE

City of Alameda
Public Works Department
950 West Mall Square, Room 110
Alameda, CA 94501-7558

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

REF: _____
The City of Alameda, its City Council, boards and commissions, officers & employees, as well as the Department of Recreation and Parks, and the Division of Boating and Waterways, their officers, agents, and employees, are additional insured for work done on their behalf by the named insured.

NOTICE OF CANCELLATION:

IT IS UNDERSTOOD AND AGREED THAT IN THE EVENT OF CANCELLATION OF THE POLICY FOR ANY REASON OTHER THAN NON-PAYMENT OF PREMIUM, 30 DAYS WRITTEN NOTICE WILL BE SENT TO THE CERTIFICATE HOLDER BY MAIL. IN THE EVENT THE POLICY IS CANCELED FOR NON-PAYMENT OF PREMIUM, 10 DAYS WRITTEN NOTICE WILL BE SENT TO THE ABOVE.

CA 20 48 02 99

Page 1 of 1

ATTACHMENT B

PAYMENT BOND FORM

PAYMENT BOND FORM

KNOW ALL MEN BY THESE PRESENTS: that

a _____, hereinafter called Principal, and

hereinafter called Surety, are held and firmly bound unto _____

hereinafter called OWNER, in the penal sum of _____ Dollars. (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, **2019**, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PAYMENT BOND FORM

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed on _____ counterparts, each
(Number)
one of which shall be deemed an original, this the _____ day of _____, **2019**.

ATTEST:

_____ Principal Secretary (SEAL)	By: _____ Principal
_____ (Witness as to Principal)	_____ (Address)
_____ (Address)	_____ (Surety)

ATTEST:

_____ Surety Secretary (SEAL)	By: _____ Attorney-in-fact
_____ (Witness as to Surety)	_____ (Address)
_____ (Address)	_____

NOTE: Date of BOND must not be prior to date of Contract.

If the CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

ATTACHMENT C

PERFORMANCE BOND FORM

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

(Name of Owner)

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars. (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____ **2019**, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PERFORMANCE BOND FORM

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed on _____ counterparts, each one
(Number)
of which shall be deemed an original, this the _____ day of _____, **2019**.

ATTEST:

_____	By: _____
Principal Secretary	Principal
(SEAL)	
_____	_____
(Witness as to Principal)	(Address)
_____	_____
(Address)	
_____	_____
	(Surety)

ATTEST:

_____	By: _____
Surety Secretary	Attorney-in-fact
(SEAL)	
_____	_____
(Witness as to Surety)	(Address)
_____	_____
(Address)	
_____	_____

NOTE: Date of BOND must not be prior to date of Contract.

If the CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

The City of Alameda

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

1. GENERAL

A. DOCUMENTS

All contract documents complement each other. Requirements called for in one are as binding as if called for by all. Contract Documents shall not be construed to create a contractual relationship of any kind between (1) Architect/Engineer and Contractor; (2) CITY and/or its representatives and a subcontractor, sub-sub-contractor or supplier of any Project labor, materials or equipment; or (3) between any persons or entities other than CITY and Contractor. CITY shall be deemed to be an intended third-party beneficiary of each agreement referenced in clause (2) above, and each such agreement shall so provide. (See Division 1 GENERAL REQUIREMENTS, Section 01 11 04 – CONTRACT DOCUMENTS for definition of Contract Documents.)

B. EXERCISE OF CONTRACT RESPONSIBILITIES

In exercising its responsibilities and authorities under Contract Documents, CITY does not assume any duties or responsibilities to any subcontractor or supplier and does not assume any duty of care to Contractor, Contractor's subcontractors or suppliers. Contractor is fully responsible for Contractor's own acts and omissions. Contractor is responsible for all acts and omissions of its subcontractors, suppliers and other persons and organizations performing or furnishing any of the Work, labor, materials or equipment under a direct or indirect contract with Contractor. Except as expressly set forth in Contract Documents, in exercising its responsibilities and authorities under Contract Documents, Architect/Engineer does not assume any duties or responsibilities to any subcontractor or supplier and does not assume any duty of care to Contractor, Contractor's subcontractors or suppliers.

2. BIDDING

A. INVESTIGATION PRIOR TO BIDDING

1. Prior to bidding, Bidders must perform the Work, investigations, research and analysis that a reasonable bidder in his field would ascertain from having performed the investigations, research and analysis. Bid prices must include entire cost of all Work "incidental" to completion of the Work.

2. Conditions Shown on Contract Documents: Information as to underground conditions, as-built conditions, or other conditions or obstructions indicated in Contract Documents, *e.g.*, on Drawings or in Specifications, has been obtained with reasonable care, and has been recorded in good faith. CITY warrants, and Contractor may rely on, the accuracy of only limited types of information.
 - a. Above ground and as-built conditions: There is no express or implied warranty and no express or implied representation that any information as to above ground conditions or as-built conditions indicated in Contract Documents is correctly shown, or indicated, or complete. As a condition to bidding, Contractor shall verify by independent investigation information all above ground and as-built conditions. In submitting its Bid, Contractor shall rely on the results of its own independent investigation and shall not rely on CITY-supplied information regarding above ground conditions and as-built conditions.
 - b. Subsurface conditions: Contractor may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated in Contract Documents. CITY shall not be responsible for (1) the completeness of any subsurface condition information for bidding or construction; (2) Contractor's conclusions or opinions drawn from any subsurface condition information; or (3) subsurface conditions that are not specifically shown. (For example, CITY is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown.)
3. Conditions Shown in Reports and Drawings (if any) supplied For Informational Purposes: These materials are not Contract Documents and, except for any "technical data" regarding subsurface conditions, Contractor may not in any manner rely on the information in these materials. Subject to the foregoing, Contractor must make its own independent investigation of all conditions affecting the Work and must not rely on information provided by CITY.

B. SUBCONTRACTORS

Consistent with Public Contract Code Sections 4101 *et seq.*, Contractor shall not substitute any other person or firm in place of any subcontractor listed in the Bid. Subcontractors shall not assign or transfer their subcontracts or permit them to be performed by any other contractor without CITY's express written approval. At CITY's request, Contractor shall provide CITY with a complete copy of all executed subcontracts or final commercial agreements with subcontractors and/or suppliers.

Subcontract agreements must preserve and protect the rights of CITY under Contract Documents so that subcontracting will not prejudice such rights. To the extent of the Work to be performed by a subcontractor, Contractor must require the subcontractor's written agreement (1) to be bound to the terms of Contract Documents and (2) to assume vis-à-vis Contractor all the obligations and responsibilities that Contractor assumes toward CITY under Contract Documents.

Contractor must provide for the assignment of all rights any subcontractor may have against any manufacturer, supplier, or distributor for breach of warranties and guarantees relating to the Work performed by the subcontractor under Contract Documents to CITY.

3. CONTRACT AWARD AND COMMENCEMENT OF THE WORK

A. AWARD OF CONTRACT

CITY will make the Award of Contract by issuing a Notice of Award. Upon receipt, Contractor shall deliver to CITY all of the documents required by Contract Documents in the required quantities and within the required times, including but not limited to bonds and evidence of insurance.

B. COMMENCEMENT OF WORK

The Contract Time will commence to run on the day indicated in the Notice to Proceed. See also paragraph 15.A.2 of these General Conditions. CITY may give a Notice to Proceed at any time within thirty (30) days after the Notice of Award. Contractor shall not perform any Work at the Project Site prior to the date on which the Contract Time commence to run.

C. Contractor shall be allowed to operate Monday through Friday only for the hours of 8:00 a.m. to 5:00 p.m. unless prior written approval has been secured from CITY to do otherwise.

D. Contractor shall not work during City holidays, **2019 holidays include:**

New Year's Day	Tuesday, January 1, 2019
Martin Luther King, Jr.	Monday, January 21, 2019
President's Day	Monday, February 18, 2019
Memorial Day	Monday, May 27, 2019
Independence Day	Thursday, July 4, 2019
Labor Day	Monday, September 2, 2019
Veteran's Day	Monday, November 11, 2019
Thanksgiving Day	Thursday, November 28, 2019
Day after Thanksgiving Day	Friday, November 29, 2019
Christmas Day	Wednesday, December 25, 2019

The following City events are planned for Calendar Year **2019**:

<u>Event</u>	<u>Date</u>
Spring Festival (Park Street)	May 11 and 12, 2019
July 4th Parade	July 4, 2019
Art and Wine Faire (Park Street)	July 27 and 28, 2019
Webster Street Jam	TBD
Classic Car Show (Park Street)	October 12, 2019
Trick or Treat at Webster Street	TBD
Santa on Webster Street	TBD

Farmer's Market (Webster Street at Haight Avenue)
Every Tuesday and Saturday (year-round) from 9 a.m. to 1 p.m.

4. BONDS AND INSURANCE

A. BONDS

1. At or before 5:00 p.m. of the fourteenth (14th) calendar day following Notice of Award of Contract, Contractor must file with CITY the following bonds:
 - a. Construction Performance Bond, in the sum equal to 100% of the Contract Price, to guarantee faithful performance of Contract Documents; and
 - b. Construction Labor and Material Payment Bond, in sum equal to 100% of the Contract Price to guarantee payment of wages for services engaged and of bills contracted for materials, supplies, and equipment used in performance of the Work.
2. All corporate sureties must be acceptable and satisfactory to CITY. Corporate sureties on all bonds required under this Contract must be duly licensed to do business in the State of California and must have an A.M. Best Company financial rating of **A-VII** or better.

B. INSURANCE

Contractor shall fully comply with the requirements of the Contractor Agreement, Paragraph 10, Insurance.

5. DRAWINGS AND SPECIFICATIONS

A. INTENT

Drawings and Specifications are intended to describe a functionally complete and operable Project (and all parts thereof) to be constructed in accordance with the requirements of Contract Documents. Contractor shall perform any Work, and furnish any materials or equipment, that may reasonably be inferred from the requirements of Contract Documents or from prevailing custom or trade usage as being required to produce this intended result. Contractor shall interpret words or phrases used to describe Work, materials or equipment, which have well-known technical or construction industry or trade meaning in accordance with that current meaning. Drawings' intent specifically includes the intent to depict construction that complies with all applicable laws, codes and standards.

As part of the "Work," Contractor shall provide all labor, materials, equipment, machinery, tools, facilities, services, employee training and testing, hoisting facilities, shop drawings, storage, testing, security, transportation, disposal, the securing of all necessary or required field dimensions, the cutting or patching of existing materials, notices, permits, documents, reports, agreements and any other items required or necessary to timely and fully complete Work described and the results intended by Contract Documents and,

in particular, Drawings and Specifications. Divisions and Sections of Specifications and the identification on any Drawings shall not control Contractor in dividing Work among Subcontractors or suppliers or delineating the Work to be performed by any specific trade.

Contractor shall perform reasonably implied parts of Work as “incidental Work” although absent from Drawings and Specifications. Incidental Work includes any Work not shown on Drawings or described in Specifications that is necessary or normally or customarily required as a part of the Work shown on Drawings or described in Specifications. Incidental Work includes any Work necessary or required to begin commencement of Work to make each installation satisfactory, legally operable, fully functional for the use intended, and consistent with the intent of Drawings and Specifications. Contractor shall perform incidental Work without extra cost to CITY. Incidental Work shall be treated as if fully described in Specifications and shown on Drawings, and the expense of incidental Work shall be included in price bid and Contract Sum.

B. DRAWING DETAILS

A typical or representative detail on drawings shall constitute the standard for Workmanship and material throughout corresponding parts of Work. Where necessary, and where reasonably inferable from drawings, Contractor shall adapt such representative detail for application to all corresponding parts of Work. The details of such adaptation shall be subject to prior approval by Architect/Engineer. Repetitive features shown in outline on drawings shall be in exact accordance with corresponding features completely shown.

C. INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

Should any discrepancy appear or any misunderstanding arise as to the import of anything contained in Drawings and Specifications, Contractor shall refer the matter to the Architect and CITY’s authorized representative, in writing. CITY will issue with reasonable promptness written clarifications or interpretations in the form of Drawings and Specifications or otherwise as CITY may determine necessary, which shall be consistent with the intent of and reasonably inferable from Contract Documents. Such written clarifications or interpretations will be binding upon Contractor. Contractor shall not carry on Work except with the knowledge of CITY. If Contractor believes that a written clarification or interpretation justifies an adjustment in the Contract Sum or Contract Time and the parties are unable to agree to the amount or extent of the adjustment, if any, then Contractor shall perform the Work subject to the CITY’s clarification or interpretation and may make a written claim for the adjustment as provided in Paragraph 12 of these General Conditions. Contractor shall perform the Work as directed by Architects and CITY’s authorized representative.

D. CHECKING OF DRAWINGS

Before undertaking each part of Work, Contractor shall carefully study and compare Contract Documents and check and verify pertinent figures shown in Contract Documents and all applicable field measurements. Contractor shall be responsible for any errors that might have been avoided by such comparison. Figures shown on Drawings shall be followed; Contractor shall not scale drawings for measurements. Contractor shall promptly report to the Architect and the CITY’s authorized representative, in writing, any

conflict, error, ambiguity or discrepancy that Contractor may discover. Contractor shall obtain a written interpretation or clarification from the Architect and the CITY's authorized representative before proceeding with any Work affected thereby.

E. STANDARDS TO APPLY WHERE SPECIFICATIONS ARE NOT FURNISHED

The following general specifications shall apply wherever in the Specifications, or in any directions given by CITY in accordance with or supplementing Specifications, it is provided that Contractor shall furnish materials or manufactured articles or shall do Work for which no detailed specifications are shown. Materials or manufactured articles shall be of the best grade, in quality and workmanship, obtainable in the market from firms of established good reputation. If not ordinarily carried in stock, the materials or manufactured articles shall conform to industry standards for first-class materials or articles of the kind required, with due consideration of the use to which they are to be used. Work shall conform to the usual standards or codes, for first-class work of the kind required. Contractor shall specify in writing to the Architect and the CITY's authorized representative the materials to be used or Work to be performed under this Paragraph 5.E ten (10) business days prior to furnishing such materials or performing such work.

F. DEVIATION FROM SPECIFICATIONS AND DRAWINGS

1. Contractor must perform Work in accord with Drawings and Specifications. Contractor may deviate from Drawings or the dimensions given in the Drawings, and may deviate from the Specifications, only upon CITY's written approval of the proposed deviation.
2. CITY may order that locations, lines and grades for Work vary from those shown on Drawings. Changes may be made in locations, lines or grades for Work under any item of Contract Documents. No payment in addition to unit price fixed in Contract Documents for Work under respective items will be allowed on account of variations from Drawings in unit price items. In lump sum contracts, or where there are no unit price items covering work affected by variations of locations, lines or grades, all changes in Contract Documents will be made as set forth in Paragraph 14 of these General Conditions.

G. PRECEDENCE OF DOCUMENTS

1. In the case of discrepancy or ambiguity in Contract Documents, the following order of precedence shall prevail: (1) Change Orders in inverse chronological order, and in the same order as specific portions they are modifying; (2) Contractor Agreement, and terms and conditions referenced therein; (3) Supplemental Conditions (if any); (4) General Conditions; (5) Division 1 Specifications; (6) Division 2 through 33 Specifications; (7) Drawings; (8) written numbers over figures, unless obviously incorrect; (9) figured dimensions over scaled dimensions; (10) large- scale Drawings over small-scale drawings.
2. In the case of any conflict between a bill or list of materials shown in Contract Documents and the actual quantities required to complete Work required by Contract Documents, then the actual quantities required shall take

precedence.

3. In the event the technical specifications include divisions above Division 33 (e.g., Division 34 and above), then such divisions shall be included within Contract Documents unless identified otherwise.

H. OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND CONTRACT DOCUMENTS

Drawings, Specifications and other Contract Documents were prepared for use for this Project only. No part of the Contract Documents shall be used for any other construction or for any other purpose except with the written consent of CITY. Any unauthorized use of Contract Documents is prohibited and at the sole liability of the user.

6. CONSTRUCTION BY CITY OR BY SEPARATE CONTRACTORS

A. CITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

CITY may perform, with its own forces, construction or operations related to the Project. CITY may also award separate contracts in connection with other portions of the Project or other construction or operations, on the Project Site or areas contiguous to the Project Site, under conditions similar to these Contract Documents, or may have utility owners perform other Work. When separate contracts are awarded for different portions of the Project or other construction or operations on the Project Site, the term "Contractor" in Contract Documents shall mean Contractor that executes its separate CITY/Contractor agreement.

B. MUTUAL RESPONSIBILITY

1. Contractor shall afford all other contractors, utility owners and CITY (if CITY is performing Work with its own forces), proper, timely and safe access to the Project Site, and reasonable opportunity for the installation and storage of their materials. Contractor shall ensure that the execution of its Work properly connects and coordinates with others' Work, and shall cooperate with them to facilitate the progress of the Work.
2. Contractor shall appropriately coordinate its Work with the Work of other separate contractors, CITY, and utility owners. Contractor shall hold coordination meetings with other contractors, CITY and its representatives, and utility owners.
3. Unless otherwise provided in Contract Documents, Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of other separate contractors, CITY or utility owners by cutting, excavating or otherwise altering their Work and will only cut or alter their work with the written consent of CITY and the others whose work will be affected.
4. Contractor's duties and responsibilities under Paragraphs 6.B.1, 6.B.2

and 6.B.3 above are for the benefit of CITY and also for the benefit of such other contractors and utility owners working at the Project Site to the extent that there are comparable provisions for the benefit of Contractor in the direct contracts between CITY and such other contractors and utility owners.

5. To the extent that any part of Contractor's Work is to interface with Work performed or installed by other contractors or utility owners, Contractor shall inspect and measure the in-place Work. Contractor shall promptly report to CITY, in writing, within (10) ten business days, any defect in in-place Work that will impede or increase the cost of Contractor's interface unless corrected. CITY will require Contractor responsible for the defective Work to make corrections so as to conform to its contract requirements, or, if the defect is the result of an error or omission in Contract Documents, issue a Change Order. If Contractor fails to measure, inspect and/or report to CITY in writing, within (10) ten business days, defects that are reasonably discoverable, Contractor shall bear all costs of accomplishing the interface acceptable to CITY. This provision shall be included in any and all other contracts or subcontracts for Work to be performed where such a conflict could exist.

C. CITY AUTHORITY OVER COORDINATION

1. CITY shall have authority over coordination of the activities of multiple contractors in cases where CITY performs Work with its own forces or contracts with others for the performance of other Work on the Project, or utilities perform Work on the Project Site. CITY may at any time and in its sole discretion, designate a person or entity other than CITY to have authority over the coordination of the activities among the various contractors. CITY's authority with respect to coordination of the activities of multiple contractors and utility owners shall not relieve Contractor of its obligation to other contractors and utility owners to coordinate its Work with other contractors and utility owners as specified above. Contractor shall promptly notify CITY in writing when another contractor on the Project fails to coordinate its Work with the Work of Contract Documents.
2. Contractor shall suspend any part of the Work or carry on the same in such manner if directed by CITY when such suspension or prosecution is necessary to facilitate the Work of other contractors or Workers. No damages or claims by Contractor will be allowed if the suspension or Work change is due in whole or in part to Contractor's failure to perform its obligation to coordinate its Work with other contractors and utility owners. Damages or claims will be allowed only to the extent of fault by CITY if the suspension or Work change is due in whole or in part to another contractor's failure to coordinate its Work with Contractor, other contractors and utility owners. CITY reserves the right to back charge Contractor for any damages or claims incurred by other contractors as a result of Contractor's failure to perform its obligations to coordinate with other contractors and utility owners. CITY may deposit the funds retained with a Court of competent jurisdiction pursuant to applicable interpleader procedures, and Contractor releases CITY of further liability for such funds.

7. CITY AND PAYMENT

A. CITY'S REPRESENTATIVES

CITY's Representative, as well as any other authorized representatives will have limited authority to act on behalf of CITY. Except as otherwise provided in these Contract Documents, CITY shall issue all communications to Contractor through its designated Representative and Architect or Construction Manager concurrently, and Contractor shall issue all communications to CITY through the City's designated Representative and Architect or Construction Manager concurrently in a written document delivered to the attention of Amy Wooldridge, Director, Alameda Recreation and Parks Department, 2226 Santa Clara Avenue, Alameda, CA 94501 (awooldridge@alamedaca.gov), and to Jack Dybas, Project Manager, Public Works, 950 West Mall Square, Alameda, CA 94501 (jdybas@alamedaca.gov). Communications between Contractor and Architect/Engineer do not affect the contract terms unless confirmed in a written document issued by the City.

B. MEANS AND METHODS OF CONSTRUCTION

Subject to those rights specifically reserved in Contract Documents, CITY shall not supervise, or direct, or have control over, or be responsible for, Contractor's means, management practices, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or Contractor's failure to comply with laws and regulations applicable to the furnishing or performance of Work. CITY shall not be responsible for Contractor's failure to perform or furnish the Work in accordance with Contract Documents.

C. RECEIPT AND PROCESSING OF APPLICATIONS FOR PAYMENT

As required by Paragraph 3 of the Contractor Agreement: Compensation to Contractor, and as detailed in the Division 1, Section 01 29 00 Payment Procedures, Contractor shall prepare the schedules, submit applications for progress payments or final payments and warrant title to all Work covered by each application for payment. CITY shall review Contractor's applications for payment and make payment thereon, and Contractor shall make payments to Subcontractors, suppliers and others.

8. CONTROL OF THE WORK

A. SUPERVISION OF WORK BY CONTRACTOR

1. Contractor shall supervise, inspect and direct Work competently and efficiently, devoting the attention and applying such personal skills and expertise as may be required and necessary to perform Work in accordance with Contract Documents. Contractor shall be solely responsible for and have control and charge of construction means, methods, techniques, management practices, sequences and procedures, safety precautions and programs in connection with the Work. Contractor shall be responsible to see that the completed Work complies accurately with Contract Documents.

B. OBSERVATION OF WORK BY CITY AND ARCHITECT/ENGINEER

1. Work shall be performed under CITY's general observation and administration. Contractor shall comply with CITY's directions and instructions in accordance with the terms of Contract Documents, but nothing contained in these General Conditions shall be taken to relieve Contractor of any obligations or liabilities under Contract Documents. CITY's or Architect/Engineer's failure to review or, upon review, failure to object to any aspect of Work reviewed, shall not be deemed a waiver or approval of any non-conforming aspect of Work.
2. Architect/Engineer will advise and consult with CITY, but will have authority to act on behalf of CITY only to extent provided in Contract Documents. Architect/Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with Work. Architect/Engineer will not be responsible for or have control over the acts or omissions of Contractor, Subcontractors or their agents or employees, or any other persons performing Work.
3. Architect/Engineer will review Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with design concept of Work and with information given in Contract Documents.
4. Architect/Engineer may visit the Project Site at intervals appropriate to stage of construction to become familiar generally with the progress and quality of Work and to determine in general if Work is proceeding in accordance with Contract Documents. Based on its observations, Architect/Engineer may recommend to CITY that it disapprove or reject Work that Architect/Engineer believes to be defective or will not produce a complete Project that conforms to Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by Contract Documents. CITY will also have authority to require special inspection or testing of Work, whether or not the Work is fabricated, installed or completed.
5. Architect/Engineer may conduct inspections to recommend to CITY the dates that Contractor has achieved Substantial Completion and Final Acceptance, and will receive and forward to CITY for review written warranties and related documents required by Contract Documents.

C. ACCESS TO WORK

During performance of Work, CITY – the Department of Recreation and Parks, and the Division of Boating and Waterways - and their agents, consultants, and employees may, at any time, enter upon Work, shops where any part of the Work may be in preparation, or factories where any materials for use in Work are being or are to be manufactured, and Contractor shall provide proper and safe facilities for this purpose, and shall make prompt and appropriate arrangements with manufacturers to facilitate inspection of their processes and products to such extent as CITY's interests may require. Other contractors performing Work for CITY may also enter upon Work for all purposes required by their respective contracts. Subject to the rights reserved in Contract Documents, Contractor shall have sole care, custody and control of the Project Site and its Work areas.

D. EXISTING UTILITIES

1. Drawings indicate above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water and other similar items and utilities that are known to CITY. Contractor shall locate these known existing installations before proceeding with trenching, or any other operations that may cause damage, shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum. Additional utilities whose locations are unknown to CITY are suspected to exist. Contractor shall be alert to their existence; if they are encountered, Contractor shall immediately report to CITY for disposition of the same. In addition to reporting if any utility is damaged, Contractor shall take appropriate action as provided in these General Conditions. Additional compensation or extension of time on account of utilities not shown or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in these General Conditions.
2. At no additional cost to CITY, Contractor must incorporate into the Work main or trunkline utilities identified in Contract Documents and other utilities or underground structures known or reasonably discernible and that will remain in service, including minor adjustments to design location or minor relocations of the existing installations. Contractor must take immediate action to restore any in service installations damaged by Contractor's operations. Should CITY determine that Contractor has not responded in a timely manner or not diligently pursued completion of the Work, CITY may restore service and deduct the costs of such action by CITY from the amounts due under the Contract.
3. Consistent with Government Code Section 4215, as between CITY and Contractor, CITY shall be responsible for the timely removal, relocation or protection of existing main or trunk line utility facilities located on the Project Site only if such utilities are not identified in the Drawings and Specifications made a part of the invitation for bids. CITY shall compensate for the cost of locating and repairing damage not due to Contractor's failure to exercise reasonable care, removing and relocating such main or trunk line utility facilities not indicated on the Drawings and Specifications with reasonable accuracy, and equipment on the Project necessarily idled during such Work. The compensation shall be determined in accordance with the provisions of these General Conditions.
4. Prior to performing Work at the Project Site, Contractor must lay out the locations of known underground utilities that are to remain in service and other significant known underground installations. At no additional cost to CITY, prior to commencing other Work in proximity to such known underground utilities or installations that can be readily inferred from adjacent surface improvements, Contractor must further locate by carefully excavating with small equipment and principally by hand, such utilities or installations that are to remain and that are subject to damage. This obligation applies to all utilities (including, but not limited to, those referenced above).

5. Nothing in these General Conditions shall be deemed to require CITY to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Project Site can be inferred from the presence of other visible facilities, such as buildings, new asphalt, meters and junction boxes, on or adjacent to the Project Site of the construction. Contractor shall immediately secure all available information and notify CITY and utility, in writing, of its discovery while performing the Work under the Contract Document of any utility facilities not identified in the Drawings and Specifications.

9. WARRANTIES, GUARANTY AND INSPECTION OF WORK

A. WARRANTY AND GUARANTY

1. General Representations and Warranties: Contractor represents and warrants that it is and will be at all times fully qualified and capable of performing every phase of Work and to complete Work in accordance with the terms of Contract Documents. Contractor warrants that all construction Work and construction services shall be performed in accordance with generally accepted professional standards of good and sound construction and management practices and all requirements of Contract Documents. Contractor warrants that Work, including but not limited to each item of materials and equipment incorporated therein, shall be new, of suitable grade of its respective kind for its intended use; and free from defects in design, engineering, materials, construction and Workmanship. Contractor warrants that Work shall conform in all respects with all applicable requirements of federal, state and local laws, applicable construction codes and standards, licenses, permits, Drawings and Specifications and all descriptions set forth therein, and all other requirements of Contract Documents. Contractor shall not be responsible, however, for the negligence of others in the specification of specific equipment, materials, and design parameters where specifically shown and expressly required by Contract Documents.
2. Extended Guarantees: Any guaranty exceeding one year provided by the supplier or manufacturer of any equipment or materials used in the Project shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials and shall supply CITY with all warranty and guarantee documents relative to equipment and materials incorporated in the Project and guaranteed by their suppliers or manufacturers.
3. Environmental and Toxics Warranty: The covenants, warranties and representations contained in this Paragraph 9.A.3 are effective continuously during Contractor's Work on the Project and following cessation of labor for any reason, including but not limited to, Project completion. Contractor covenants, warrants and represents to CITY that:
 - a. To Contractor's knowledge after due inquiry, no lead or asbestos-containing materials were installed or discovered in the Project at any time during Contractor's construction thereof. If any lead or asbestos-containing materials were discovered, Contractor made immediate written disclosure to CITY.

- b. To Contractor's knowledge after due inquiry, no electrical transformers, light fixtures with ballasts or other equipment containing PCB's are or were located on the Project at any time during Contractor's construction thereof. If any such materials were discovered Contractor made immediate written disclosure to City.
- c. To Contractor's knowledge after due inquiry, no storage tanks for gasoline, petroleum or any other toxic substance are or were located on the Project at any time during Contractor's construction thereof. If any such materials were discovered, Contractor made immediate written disclosure to CITY.
- d. Contractor's operations concerning the Project are and were not in violation of any applicable environmental federal, state, or local statute, law or regulation dealing with hazardous materials substances or toxic substances and no notice from any governmental body has been served upon Contractor claiming any violation of any such law, ordinance, code or regulation, or requiring or calling attention to the need for, any Work, repairs, construction, alteration, or installation on or in connection with the Project in order to comply with any such laws, ordinances, codes or regulations, with which Contractor has not complied. If there are any such notices with which Contractor has complied, Contractor shall provide CITY with copies thereof.

B. INSPECTION OF WORK

- 1. All materials, equipment and Workmanship used in Work shall be subject to inspection and testing at all times during construction and/or manufacture in accordance with the terms of Contract Documents. Work and materials, and manufacture and preparation of materials, from beginning of construction until final completion and acceptance of Work, shall be subject to inspection and rejection by CITY, its agents, or independent contractors retained by CITY to perform inspection services, or governmental agencies with jurisdictional interests. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Project Site safety procedures and program so that they may comply therewith as applicable. Upon request or where specified, CITY shall be afforded prompt access for inspection at the source of supply, manufacture or assembly of any item of material or equipment, with reasonable accommodations supplied for making such inspections.
- 2. Contractor shall give CITY timely notice of readiness of Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- 3. If applicable laws or regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for promptly arranging and obtaining such inspections, tests or approvals, and furnish CITY with the required certificates of inspection, or approval. CITY shall pay the cost of initial testing and Contractor shall pay all costs in connection with any follow up or additional testing. Contractor shall also be responsible for arranging

and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for the acceptance of materials or equipment to be incorporated in the Work, or of materials, mixed designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

4. If Contractor covers or displaces any Work, or the Work of others, prior to any required inspection, test or approval without written approval of CITY, Contractor must uncover or replace the Work at CITY's request. Contractor shall bear the expense of uncovering Work and/or replacing Work.
5. In any case where Contractor covers Work contrary to CITY's request, Contractor must uncover Work for CITY's observation or inspection at CITY's request. Contractor shall bear the cost of uncovering Work.
6. Whenever required by CITY, Contractor shall furnish tools, labor and materials necessary to make examination of Work that may be completed or in progress, even to extent of uncovering or taking down portions of finished Work. Should Work be found unsatisfactory, cost of making examination and of reconstruction shall be borne by Contractor. If Work is found to be satisfactory, CITY in manner herein prescribed for paying for alterations, modifications and extra Work, except as otherwise herein specified will pay for examination.
7. Inspection of the Work by or on behalf of CITY, or its failure to do so, shall not be deemed a waiver or approval of any non-conforming aspect of the Work.

C. CORRECTION OF DEFECTIVE WORK

1. If Contractor fails to supply sufficient skilled Workers, suitable materials or equipment, or to furnish or perform the Work in such a way that the completed Work will conform to Contract Documents, CITY may order Contractor to replace any defective Work, or stop any portion of Work to permit CITY (at Contractor's sole expense) to replace such defective Work. These CITY rights are entirely discretionary on the part of the CITY, and shall not give rise to any duty on the part of CITY to exercise the rights for the benefit of Contractor or any other party.
2. CITY may direct Contractor to correct any defective Work or remove it from the Project Site and replace it with Work that is not defective and satisfactorily correct or remove and replace any damage to other Work or the Work of others resulting from the correction or removal. Contractor shall be responsible for any and all claims, costs, losses and damages caused by or resulting from such correction or removal. A Change Order will be issued incorporating the necessary revisions in Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, CITY may deduct from monies due Contractor, all claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with City's calculations, it may make a claim as provided in Paragraph 12 of these General Conditions. City's rights under this paragraph 9.C.2. shall be in addition to any other rights it may have under Contract Documents. Where

Contractor fails to correct defective Work CITY shall have all rights and remedies granted by law or in equity.

3. Correction Period: If within one year after the date of Final Acceptance, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to CITY and in accordance with City's written instructions, correct such defective Work. Contractor shall remove any defective Work rejected by CITY and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the Work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, CITY may have the defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal, replacement and inspection. Where Contractor fails to correct defective Work, or defects are discovered outside the correction period, CITY shall have all rights and remedies granted by law or in equity.
4. In special circumstances where a part of the Work is occupied or a particular item of equipment is placed in continuous service before Final Acceptance of all the Work, the correction period for that part of Work or that item may start to run from an earlier date if so provided by Change Order.
5. Where defective or rejected Work (and damage to other Work resulting therefrom) has been inspected, corrected, removed or replaced under this provision after the commencement of the correction period, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. ACCEPTANCE AND CORRECTION OF DEFECTIVE WORK BY CITY

1. CITY may at its sole discretion accept defective or nonconforming Work. Contractor shall pay all claims, costs, losses and damages attributable to CITY's evaluation of and determination to accept such defective Work. If CITY accepts any defective Work prior to final payment, a Change Order will be issued incorporating the necessary revisions in Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, CITY may deduct from monies due Contractor, all claims, costs, losses, damages, expenses and liabilities attributable to the defective Work. If Contractor disagrees with CITY's calculations, it may make a claim as provided in Paragraph 12 of these General Conditions. If CITY accepts any defective Work after final payment, Contractor shall pay to CITY, an appropriate amount as determined by CITY.
2. CITY may correct and remedy deficiency if, after seven (7) days written notice to Contractor, Contractor fails to correct defective Work or to remove and replace rejected Work in accordance with Paragraph 9.C.2 of these General Conditions; or provide a plan for correction of defective Work acceptable to CITY; or perform Work in accordance with Contract

Documents. In connection with such corrective and remedial action, CITY may exclude Contractor from all or part of the Project Site, take possession of all or part of Work and suspend Contractor's Work related thereto, take possession of all or part of Contractor's tools, appliances, construction equipment and machinery at the Project Site, and incorporate in Work any materials and equipment stored at the Project Site or for which CITY has paid and holds title but which Contractor has stored elsewhere. Contractor shall allow CITY, its representatives, agents, employees, and other contractors and Architect/Engineer's consultants prompt access to the Project Site and to all stored material to enable CITY to exercise the rights and remedies under this Paragraph 9.D.2. Contractor shall be responsible for all claims, costs, losses, damages, expenses and liabilities incurred or sustained by CITY in exercising such rights and remedies. A Change Order will be issued incorporating the necessary revisions in Contract Documents with respect to Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, CITY may deduct from monies due Contractor, all claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with CITY's calculations, it may make a claim as provided in Paragraph 12 of these General Conditions.

E. RIGHTS UPON INSPECTION OR CORRECTION

1. Contractor shall not be allowed an extension of scheduled Contract Time because of any delay in the performance of Work attributable to the exercise by CITY of its rights and remedies under this Paragraph 9 of these General Conditions. Where CITY exercises its rights under this Paragraph 9, it retains all other rights it has by law, in equity or under Contract Documents, including but not limited to, the right to terminate Contractor's right to proceed with the Work under the Contract Documents and/or make a claim or back charge where a Change Order cannot be agreed upon.
2. Inspection shall not relieve Contractor of its obligation to have furnished material and Workmanship in accordance with Contract Documents. Payment for Work completed through periodic progress payments or otherwise shall not operate to waive CITY's right to require full compliance with Contract Documents and shall in no way be deemed as acceptance of the Work paid therefore. Contractor's obligation to complete the Work in accordance with Contract Documents shall be absolute, unless CITY agrees otherwise in writing.

F. SAMPLES AND TESTS OF MATERIALS AND WORK

Contractor shall furnish in such quantities and sizes as may be required for proper examination and tests, samples or test specimens of all materials to be used or offered for use in connection with Work. Contractor shall prepare samples or test specimens at its expense and furnish them to CITY. Contractor shall submit all samples in ample time to enable CITY and Architect/Engineer to make any necessary tests, examinations or analyses before the time it is desired to incorporate the material into the Work.

G. PROOF OF COMPLIANCE OF CONTRACT PROVISIONS

In order that CITY may determine whether Contractor has complied or is complying

with requirements of Contract Documents not readily enforceable through inspection and tests of Work and materials, Contractor shall at any time, upon request by CITY, submit to CITY properly authenticated documents or other satisfactory proofs of compliance with all applicable requirements.

H. ACCEPTANCE

Inspection by CITY or its authorized agents or representatives, any order or certificate for the payment of money, any payment, acceptance of the whole or any part of Work by CITY, any extension of time, any verbal statements on behalf of CITY or its authorized agents or representatives shall not operate as a waiver or modification of any provisions of Contract Documents, or of any power reserved to CITY herein or therein or any right to damages provided in Contract Documents. Any waiver of any breach of Contract Documents shall not be held to be a waiver of any other subsequent breach.

10. CONTRACTOR'S ORGANIZATION AND EQUIPMENT

A. CONTRACTOR'S ADDRESS FOR NOTICES

Street address, facsimile number and email address given in Contractor's Bid are hereby designated as Contractor's legal address for purposes of giving any notice under this Agreement. Contractor may change its address by notice in writing, delivered to CITY, which in conspicuous language advises CITY of a change in address. Notices shall be deemed to be received upon personal delivery to the street address; if sent by email, upon delivery; if sent by overnight delivery, upon delivery as shown by delivery service records; if sent by facsimile, upon receipt as confirmed by the sending facsimile equipment; if by United States Postal Service, on the second business day after deposit in the mail.

B. CONTRACTOR'S SUPERINTENDENTS OR FOREPERSONS

Contractor shall at all times be represented on Project Site by one or more superintendents or forepersons authorized and competent to receive and carry out any instructions that CITY may give, and shall be liable for faithful observance of instructions delivered to Contractor or to authorized representative or representatives on Project Site.

C. PROFICIENCY IN ENGLISH

Contractors, supervisors, forepersons, subcontractors' supervisors and forepersons, security guards, safety personnel and employees who have unescorted access to the Project Site must possess proficiency in the English language in order to read drawings and specifications and to understand, receive and carry out oral and written communications or instructions relating to their job functions, including safety and security requirements.

D. CONTRACTOR'S AND SUBCONTRACTORS' EMPLOYEES

Contractor shall employ, and shall permit its Subcontractors to employ, only competent and skillful personnel to do Work. If CITY notifies the Contractor that any of its employees, or any of its Subcontractors' employees on Work are incompetent, unfaithful or

disorderly, or fails to observe customary standards of conduct, or refuses to carry out provisions of the Contract Documents, or uses threatening or abusive language to any person on Work, places graffiti, smokes, harassment of any kind, or violates sanitary rules, engages in any criminal activity, or is otherwise unsatisfactory, and if CITY requests that such person be discharged from the Work, then Contractor or its Subcontractor shall immediately discharge such person from the Work and the discharged person shall not be re-employed on the Work except with consent of CITY.

E. CONTRACTOR TO SUPPLY SUFFICIENT WORKERS AND MATERIALS

Unless otherwise required by CITY under the terms of Contract Documents, Contractor shall at all times keep on the Project Site materials and employ qualified workers sufficient to prosecute Work at a rate and in a sequence and manner necessary to complete Work within the Contract Time. This obligation shall remain in full force and effect notwithstanding disputes or claims of any type.

F. CONTRACTOR TO LIST TRADES WORKING

Contractor shall list the trades working on the Project Site and their scheduled activities on a daily basis, and provide a copy of that list to CITY.

G. CONTRACTOR'S USE OF THE PROJECT SITE

Contractor shall not make any arrangements with any person to permit occupancy or use of any land, structure or building within the limits of the Work, for any purpose whatsoever, either with or without compensation, in conflict with any agreement between CITY and any owner, former owner or tenant of such land, structure or buildings. Contractor may not occupy CITY-owned property outside the limit of the Work as shown on Drawings unless it obtains prior approval from CITY. All signage posted on the Project Site for any purpose requires prior CITY approval before it is installed. Signage posted without CITY approval may be removed at the discretion of the CITY at the Contractors cost.

11. PROSECUTION AND PROGRESS OF THE WORK

A. LINES AND GRADES, MEASUREMENTS

1. Contractor shall be responsible for the accuracy of the building lines and levels. Contractor shall employ a licensed civil engineer or surveyor to establish and maintain all lines and levels necessary for the location and construction of the Work. Contractor shall verify the levels shown on Drawings with existing levels and notify CITY of any discrepancies before proceeding with the Work. Unless directed otherwise by CITY, Contractor shall do Work to lines and grades established by Contractor at Contractor's expense. Contractor shall, at its sole cost, repair or replace any monument, stake, or mark destroyed or damaged by Contractor by reason of its operations or, at CITY's election, CITY may charge Contractor with the cost of repairing or replacing any destroyed or damaged monument, stake, or mark. Before performance of the Work, Contractor must take field measurements and verify field conditions consistent with prudent construction industry standards and must carefully compare the field measurements and conditions and other information known to Contractor

with Contractor Documents and notify CITY of any discrepancies.

2. No direct payment will be made for Contractor's cost of any Work or delay occasioned by establishing or checking lines and grades or making other measurements, or by inspection, and no extension of time will be allowed for such delays.

B. COST DATA

1. Contractor shall maintain full and correct information as to the number of Workers employed in connection with each subdivision of Work, the classification and rate of pay of each Worker in form of certified payrolls, the cost to Contractor of each class of materials, tools and appliances used by Contractor in Work, and the amount of each class of materials used in each subdivision of Work. Contractor shall provide CITY with monthly summaries of this information. If Contractor maintains summaries or reports comparing actual project costs with bid estimates or budgets, it shall provide CITY with a copy of such report whenever it is generated.
2. Contractor shall maintain daily job reports recording all significant activity on the job, including the number of workers on Project Site, Work activities, problems encountered and delays. Contractor shall provide CITY with copies each day. Contractor shall take monthly progress photographs of all areas of the Work, problems encountered, and delays. Contractor shall maintain copies of all correspondence with subcontractors and records of meetings with subcontractors.
3. CITY shall have the right to audit and copy Contractor's books and records of any type, nature or description relating to the Project (including but not limited to financial records), and to inspect the Project Site, including Contractor's trailer, or other job Project Site office, and this requirement shall be contained in the subcontracts of subcontractors working on Project Site. By way of example, CITY shall have the right to inspect and obtain copies of all Contract Documents, planning and design documents, Bid proposal and negotiation documents, cost records and job cost variance reports, design modification proposals, value engineering or other cost reduction proposals, revisions made to the original design, job progress reports, photographs, and as-built drawings maintained by Contractor. CITY, State Auditor General and any other applicable governmental entity shall have the right to inspect all information and documents maintained under this Paragraph at any time during the Project and for a period of three (3) years following issuance and Contractor's receipt of final payment. This right of inspection shall not relieve Contractor of its duties and obligations under Contract Documents. This right of inspection shall be specifically enforceable in a court of law, either independently or in conjunction with enforcement of any other rights in Contract Documents.
4. Contractor shall maintain in a safe place at the Project Site one record copy of all Drawings, Specifications, Submittals and Addenda, Change Orders, Work Directives, Force Account orders, and written interpretations and clarifications in good order and annotated to show all changes made during construction. These record documents, together with all approved samples and a counterpart

of all approved shop drawings, shall be maintained and available to CITY for reference. Upon completion of the Work, Contractor shall deliver to CITY, the Record Drawings / Documents, samples and shop drawings and as-built drawings as described in Sections 01 78 23, and 01 73 39 of the General Requirements. (Note: See General Requirements, Section 01 78 39 regarding content of "Record Drawings / Documents".)

12. CLAIMS BY CONTRACTOR

A. GENERAL

1. Contract Interpretation Disputes: Should it appear to Contractor that Work to be performed or any of the matters relative to Contract Documents are not satisfactorily detailed or explained therein, or should any questions arise as to the meaning or intent of Contract Documents, Contractor shall give written notice to CITY. Contractor shall bear all costs incurred in giving notice. CITY shall render a determination regarding the issue, which shall be final. CITY shall have the right but not the obligation to affirm or disaffirm the Architect/Engineer's interpretation of Drawings or Specifications and CITY's decision to affirm or disaffirm shall be final. If Contractor disagrees with CITY's decision, Contractor's sole and exclusive remedy is to file a claim in accordance with this Paragraph 12 of these General Conditions. Contractor shall diligently prosecute the Disputed Work (as defined below) to Final Completion pending resolution of any claim.
2. Work Disputes: Contractor shall give written notice to CITY of any dispute arising under Contract Documents respecting the true value of any Work performed, the implementation of Work required by Contract Documents, any Work omitted, any extra Work that Contractor may be required to perform or time extensions, respecting the size of any payment to Contractor during the performance of Contract Documents, or of compliance with Contract Documents procedures. CITY shall render a determination regarding the issue, which shall be final. If Contractor disagrees with CITY's decision, Contractor's sole and exclusive remedy is to file a claim in accordance with this Paragraph 12 of these General Conditions. Pending the resolution of any claim, Contractor shall diligently prosecute the Disputed Work to Final Completion.
3. The claim notice and documentation procedure described in this Paragraph 12 applies to all claims and disputes arising under Contract Documents, including without limitation any claim or dispute by any subcontractor or material supplier. All subcontractor and supplier claims of any type shall be brought only through Contractor as provided in Paragraph 12 of these General Conditions. Under no circumstances shall any subcontractor or supplier make any direct claim against CITY.
4. "Claim" means a written demand or written assertion by Contractor seeking, as a matter of right, the payment of money, the adjustment or interpretation of Contract Documents terms, time, or other relief arising under or relating to Contract Documents. In order to qualify as a "claim," the written demand must state that it is a claim submitted under Paragraph 12 of these General Conditions.
5. A voucher, invoice, proposed change, payment application, cost proposal,

RFI, change order request, or other routine or authorized form of request for payment is not a claim under Contract Documents. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a claim under Contract Documents by submitting a separate claim in compliance with claim submission requirements.

6. The provisions of this Paragraph 12 of these General Conditions survive termination or completion of Contract Documents. Contractor shall bear all costs incurred in the preparation and submission of a claim.

B. PROCEDURE

1. Should any clarification, determination, action or inaction by CITY or Architect/Engineer, Work, or any other event, in the opinion of Contractor, exceed the requirements of or not comply with Contract Documents, or otherwise result in Contractor seeking additional compensation in time or money or damages for any reason (collectively "Disputed Work"), then Contractor and CITY shall make good faith attempts to resolve informally any and all such issues, claims and/or disputes. Before commencing the Disputed Work, or within seven (7) calendar days after Contractor's first knowledge of the Disputed Work, whichever is earlier, Contractor must file a written notice and cost proposal for the Disputed Work with CITY stating clearly and in detail its objection and reasons for contending the Work or interpretation is outside the requirements of Contract Documents. If a written notice and cost proposal for Disputed Work is not issued within this time period, or if Contractor proceeds with the Disputed Work without first having given the notice required by this Paragraph 12.B.1, Contractor shall waive its rights to further claim on the specific issue.
2. CITY will review Contractor's timely notice and cost proposal for Disputed Work and provide a decision. If, after receiving the decision, Contractor disagrees with it or still considers the Work required of it to be outside of the requirements of Contract Documents, it shall so notify CITY, in writing, within seven (7) calendar days after receiving the decision, by submitting a notice of potential claim, stating that a formal claim will be issued. Within thirty (30) calendar days of receiving the City's decision (on the notice of potential claim), Contractor shall submit its claim in the form specified herein and all arguments, justification, cost or estimates, schedule analysis, and detailed documentation supporting its position. Contractor's failure to furnish notification within seven (7) calendar days and all justifying documentation within thirty (30) calendar days of the City's decision (on the notice of potential claim) will result in Contractor waiving its right to the subject claim. If Disputed Work persists longer than thirty (30) days, then Contractor shall, every thirty (30) days until the Disputed Work ceases, submit to CITY a document titled "Claim Update" which shall update and quantify all elements of the claim as completely as possible. Contractor's failure to submit a Claim Update or to quantify costs every thirty (30) days shall result in waiver of the claim for that thirty (30) day period. Claims or Claim Updates stating that damages, total damages (direct and indirect) and/or any time extension will be determined at a later date shall not comply with this Paragraph and shall result in Contractor waiving its claim(s).

3. Upon receipt of Contractor's formal claim including all arguments, justifications, cost or estimates, schedule analysis, and documentation supporting its position as previously stipulated, CITY or its designee will review the issue and render a final determination. If Contractor's claims submitted in accordance with this Paragraph 12 at Project completion total less than \$375,000, then claims resolution shall proceed in the manner prescribed by Article 1.5 of Division 2 of the California Public Contract Code. If Contractor's claims (submitted in accordance with above) totals \$375,000, or more, then claims resolution shall proceed in the manner prescribed by Article 7.1 of division 2 of the California Public Contract Code.
4. Claims shall be calculated in the same manner as Change Orders. EXCEPT WHERE PROVIDED BY LAW, OR ELSEWHERE IN THESE CONTRACT DOCUMENTS (IF APPLICABLE), CITY SHALL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES, AND CONTRACTOR SHALL NOT INCLUDE THEM IN ITS CLAIMS. CONTRACTOR SHALL BE LIMITED IN ITS RECOVERY ON CLAIMS TO THE CHANGE ORDER.

C. CLAIM FORMAT

Contractor shall submit the claim justification to CITY in the following format: (a) Cover letter and certification of claim in accordance with appropriate Government Code Section, (b) summary of claim, including underlying facts, entitlement, quantum calculations, contract provisions supporting relief, (c) list of documents relating to claim including specifications, drawings, clarifications/requests for information, schedules, other (d) chronology of events and correspondence, (e) analysis of claim merit, (f) analysis of claim cost, (g) attach supporting documents referenced in (c).

D. EXCLUSIVE REMEDY

Contractor's performance of its duties and obligations specified in Paragraph 12 of these General Conditions and submission of a claim as provided in Paragraph 12 is Contractor's sole and exclusive remedy for the payment of money, extension of time, the adjustment or interpretation of Contract Documents terms or other contractual or tort relief arising from Contract Documents. This exclusive remedy and the limitation of liability (expressed herein and elsewhere throughout Contract Documents) apply notwithstanding the completion, termination, suspension, cancellation, breach or rescission of the Work or Contract Documents, negligence or strict liability by CITY, its representatives, consultants or agents, or the transfer of Work or the Project to CITY for any reason whatsoever. Contractor waives all claims of waiver, estoppel, release, bar, or any other type of excuse for non-compliance with the claim submission requirements. Compliance with the notice and claim submission procedures described in Paragraph 12 is a condition precedent to the right to commence litigation, file a Government Code Claim, or commence any other legal action. No claim or issues not raised in a timely protest and timely claim submitted under this Paragraph 12 may be asserted in any Government Code Claim, subsequent litigation, or legal action. CITY shall not have deemed to waive any provision under Paragraph 12, if at CITY's sole discretion, a claim is accepted in a manner not in accord with Paragraph 12.

E. MEDIATION

All claims – less than \$375,000 (per Article 1.5 Division 2 of the California Public Contract Code) - shall, as a condition precedent to litigation thereon, first be

mediated. Mediation shall be non-binding and utilize the services of a mediator mutually acceptable to the parties. If the parties cannot agree on a mediator, the court shall appoint a mediator trained in construction industry mediation. All statutes of limitation shall be tolled from the date of the demand for mediation until a date two weeks following the mediation's conclusion. All unresolved claims shall be submitted to the same mediator. The cost of mediation shall be equally shared. (Note: See Article 7.1 of Division 2 of the California Public Contract Code for claims equal to or over \$375,000.)

F. PUBLIC CONTRACT CODE (PCC) SECTION 9204 SUMMARY (Claims submitted between 01-01-2017 and 01-01-2020.)

Notwithstanding anything else to the contrary stated in the Information For Bidders (IFB) or the Contract Documents, all claims, regardless of dollar amount, submitted between January 1, 2017 and January 1, 2020 shall be governed by PCC Section 9204 and this section. The following provisions and procedures shall apply:

1. For the purposes of this section, the term "Claim", "Contractor", "mediation", "Public Entity" "Public works project" and "Subcontractor" shall have the meaning provided for in PCC Section 9204.
2. Contractor shall submit each Claim (whether for a time extension, payment for money or damages) in writing and in compliance with PCC Section 9204. Contractor must include reasonable documentation to support each claim.
3. Upon receipt of a Claim, the City shall conduct a reasonable review and respond in writing within 45 days of receipt and shall identify in a written statement what portions of the claim are disputed and undisputed. Undisputed portions of the Claim shall be process and paid within 60 days of the written statement. Undisputed amounts not paid in a timely manner shall bear interest at 7% per annum. The City and Contractor may mutually agree to extend the 45 day response time.
4. If the City needs approval from the City Council to provide a written statement, the 45 days may be extended to 3 days following the next duly noticed public meeting pursuant to PCC Section 9204(d)(1)(C).
5. If the City fails to timely respond to a Claim or if Contractor disputes the City's response, Contractor may submit a written demand for an informal meet and confer conference with the City to settle the issues in dispute. The demand must be sent via registered or certified mail, return receipt requested. Upon receipt, the City shall schedule the conference within 30 days.
6. Within 10 business days following the informal meet and confer conference, the City shall submit to Contractor a written statement describing any issues remaining in dispute and that portion which is undisputed. Undisputed portions of the Claim shall be process and paid within 60 days of the written statement. Undisputed amounts not paid in a timely manner shall bear interest at 7% per annum. The issues remaining in dispute shall be submitted to non-binding mediation. If the City and Contractor mutually agree on a mediator, each party shall pay equal portions of all associated costs. If within 10 business days, the City and Contractor cannot agree on a mediator, each party shall select a mediator

(paying all costs associated with their selected mediator), and those mediators shall select a qualified neutral third party to mediate the disputed issues. The City and Contractor shall pay equal portions of all associated costs of such third party mediator.

7. Unless otherwise agreed by the City and Contractor, any mediation conducted hereunder shall excuse any further obligation under Public Contract Code Section 20104.4 to mediate after litigation has commenced.
8. The City reserves all rights and remedies that it has pursuant to the Construction Contract, plans and specification, at law or in equity which are not in conflict with PCC 9204.
9. This Section shall be automatically extended if legislation is lawfully passed which extends the terms of Public Contract Code Section 9204 beyond January 1, 2020.

13. LEGAL AND MISCELLANEOUS

A. LAWS AND REGULATIONS

1. Contractor shall keep fully informed of and shall comply with all laws, ordinances, regulations and orders of any properly constituted authority affecting Contract Documents, the Work and persons connected with the Work, and shall protect and indemnify CITY, its City Council, boards and commissions, officers, employees, volunteers, consultants and agents against any claim or liability, including attorney's fees, arising from or based on violation of law, ordinance, regulation or order, whether by Contractor or by Subcontractors, employees or agents. Authorized persons may at any time enter upon any part of the Work to ascertain compliance of all applicable laws, ordinances, regulations and orders.
2. Whenever Drawings and Specifications require large sizes or higher standards than are required by any applicable law, ordinance, regulation or order, Drawings and Specifications shall govern. Whenever Drawings and Specifications require something, which will violate such laws, ordinances, regulations or orders, then such laws, ordinances, regulations or orders shall govern.

B. PERMITS AND TAXES

Contractor shall procure all permits and licenses, pay all charges and fees, including fees for street opening permits, and give all notices necessary and incident to due and lawful prosecution of Work, unless otherwise provided herein. CITY will pay applicable building permits, school, sanitation and water fees, except as otherwise provided in Contract Documents. Contractor shall pay all sales and/or use taxes levied on materials, supplies, or equipment purchased and used on or incorporated into Work, and all other taxes properly assessed against equipment or other property used in connection with Work, without any increase in the Contract Price. Contractor shall make necessary arrangements with proper authorities having jurisdiction over roads, streets, pipelines, navigable waterways, railroads and other works in advance of

operations, even where CITY may have already obtained permits for the Work.

C. RESPONSIBILITY OF CONTRACTOR AND INDEMNIFICATION

1. CITY and each of its officers, employees, volunteers, consultants and agents including, but not limited to the boards and commissions, officers, officials, employees and volunteers, and each CITY representative shall not be reasonably liable or accountable in any manner for loss or damage that may happen to any part of the Work; loss or damage to materials or other things used or employed in performing the Work; injury, sickness, disease, or death of any person; or damage to property resulting from any cause whatsoever except their sole negligence, willful misconduct or active negligence, attributable to performance or character of the Work, and Contractor releases all of the foregoing persons and entities from any and all such claims.
2. To the furthest extent permitted by law (including without limitation California Civil Code Section 2782), Contractor shall assume defense of, and indemnify, and hold harmless the CITY, its City Council, Boards and Commissions, officers, employees, volunteers, consultants, and each CITY representative, from claims, suits, actions, losses and liability of every kind, nature and description, including but not limited to attorney's fees and consultant's fees, directly or indirectly arising out of, connected with or resulting from performance of the Work, failure to perform the Work, or condition of the Work which is caused in whole or part by any act or omission of Contractor, Subcontractors, any one directly or indirectly employed by any of them or any one for whose acts any of them may be liable, regardless of whether it is caused in part by the negligence of CITY or by any person or entity required to be indemnified hereunder.
3. With respect to third party claims against Contractor, Contractor waives any and all rights to any type of express or implied indemnity against CITY, its City Council, Boards and Commissions, officers, employees, volunteers, consultants and agents, including, but not limited to, the Board of Commissioners, officers, officials, employees and volunteers.
4. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its Subcontractors of any tier, or the officers or agents of any of them.
5. To the furthest extent permitted by law (including, without limitation, Civil Code Section 2782), the indemnities, releases of liability and limitations of liability, and limitations of remedy expressed throughout Contract Documents shall apply even in the event of breach of contract, negligence (active or passive), fault or strict liability of the party[s] indemnified, released, or limited in liability, and shall survive the termination, rescission, breach, or completion of Contract Documents. If Contractor fails to perform any of these defense or indemnity obligations, CITY may in its discretion backcharge Contractor for its costs and damages resulting therefrom and withhold such sums from progress payments or other contract monies which may become due.
6. The indemnities in Contract Documents shall not apply to any indemnified party to the extent of its sole negligence or willful misconduct; nor shall they apply

to CITY to the extent of its active negligence or willful misconduct.

7. To the extent there is any conflict between the Contractor's duty to indemnify, defend and hold harmless the City and its indemnities as stated in this Paragraph 8.C of these General Conditions and in Paragraph 9 of the Contractor Agreement then the provision providing the City, and/or its indemnities with the greatest protection shall prevail.

D. NOTICE OF CONCEALED OR UNKNOWN CONDITIONS

1. Before commencing Work of digging trenches or excavation, Contractor shall review all information available regarding subsurface conditions. Contractor shall also comply with Government Code Sections 4216 to 4216.9, and in particular Section 4216.2 which provides, in part:

“Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center at least two Working days, but no more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator, and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated. The regional notification center shall provide an inquiry identification number to the person who contacts the center and shall notify any member, if known, who has a subsurface installation in the area of the proposed excavation.”

Contractor shall contact the regional notification center, “Underground Service Alert” (“USA”), and schedule the Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Contractor is charged with knowledge of all subsurface conditions reflected in USA records. Prior to commencing excavation or trenching Work, Contractor shall provide CITY with copies of all USA records secured by Contractor. Contractor shall advise CITY of any conflict between information provided and that provided by USA records.

2. If any of the following conditions is encountered at Project Site, Contractor shall give written notice to CITY promptly before conditions are disturbed (except in an emergency as required by Paragraph 16.D of these General Conditions), and in no event later than three (3) days after first observance of:
 - a. Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II, or Class III disposal Project Site in accordance with provisions of existing law.
 - b. Subsurface or latent physical conditions at the Project Site differing from those indicated by information made available to bidders prior to the deadline for submitting bids.
 - c. Unknown physical conditions at the Project Site of any unusual nature,

different materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

In response to Contractor's notice, the City shall promptly investigate the conditions, and if it finds that the conditions do so materially differ, or do involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a change order under the procedures described in the Contract Documents.

In the event that a dispute arises between the City and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the parties.

3. If CITY determines that physical conditions at the Project Site are not latent or are not materially different from those indicated in Contract Documents or that no change in terms of Contract Documents is justified, CITY shall so notify Contractor in writing, stating reasons. If CITY and Contractor do not agree on an adjustment in Contract Sum or Contract Time, Contractor shall proceed with the Work as directed by CITY and may file a claim as provided in Paragraph 12 of these General Conditions.
4. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed latent or materially different Project Site conditions if (a) Contractor knew of the existence of such conditions at the time Contractor submitted its Bid; or (b) Contractor should have known of the existence of such conditions as a result of having complied with the requirements of Contract Documents, including without limitation Paragraph 13.D.2 of these General Conditions; or (c) the information or conditions claimed by Contractor to be latent or materially different consist of information, conclusions, opinions or deductions of the kind that Paragraph 13.D.2 precludes reliance upon; or (4) Contractor was required to give written notice under Paragraph 13.D.2 and failed to do so within the time required.
5. If CITY and Contractor are unable to agree on entitlement to or as to the amount or length of any adjustment in the Contract Sum or Contract Time required under this Paragraph, Contractor shall proceed with the Work as directed by CITY and may make a claim as provided in Paragraph 12 of these General Conditions.
6. In the event the CITY Exercises its rights to decide disputed issues pertaining to changed Work, as set forth above, then the resulting Change Order shall be effective when signed by the CITY and notwithstanding the fact that the Contractor has not signed it.
7. The cost of all of the following will be included in the Contract Sum and Contractor shall have full responsibility for (a) reviewing and checking all available information and data, including but not limited to information on file at

USA; (b) locating all underground facilities (i.e.; Underground storage Tank (UST)) shown or indicated in Contract Documents, available information, or indicated by visual observation, including but not limited to, and by way of example only, engaging qualified locating services and all necessary backhoeing and potholing; (c) coordination of the Work with the owners of such underground facilities during construction; and (d) the safety and protection of all such underground facilities and repairing any damage thereto resulting from the Work.

8. If an underground facility (i.e.; Underground Storage Tank, (UST)) is uncovered or revealed at or contiguous to the Project Site which was not shown or indicated in the materials supplied by CITY or in information on file at USA, or is otherwise reasonably available to Contractor, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby (and in no event later than three (3) calendar days), and prior to performing any Work in connection therewith (except in an emergency as required by Paragraph 16 of these General Conditions), identify the owner of such underground facility and give written notice to that owner and to CITY. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
9. Contractor shall be allowed an increase in the Contract Sum or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any underground facility that is owned and was built by CITY only where the underground facility was not shown or indicated in Contract Documents or in information on file at USA; and (b) Contractor did not know of it; and (c) Contractor could not reasonably have been expected to be aware of it or to have anticipated it from the information available. (For example, if surface conditions such as pavement repairs, valve covers, or other markings, indicate the presence of an underground facility, then an increase in the Contract Price or an extension of the Contract Time will not be due, even if the underground facility was not indicated in Contract Documents, in information on file at USA, or otherwise reasonably available to Contractor.)
10. Contractor shall bear the risk that underground facilities not owned or built by CITY may differ in nature or locations shown in information on file at USA, or otherwise reasonably available to Contractor. Underground facilities are inherent in construction involving digging of trenches or other excavations and Contractor is to apply its skill and expertise to verify the information available.

E. NOTICE OF HAZARDOUS WASTE OR MATERIALS CONDITIONS

1. Notice by Contractor shall be given in writing to CITY promptly, before any of the following conditions are disturbed (except in an emergency as required by Paragraph 16.D below), and in no event later than 24 hours after first observance, of any (a) material that Contractor believes may be material that is hazardous waste or hazardous material, as defined in Section 25117 of the Health and Safety Code (including, without limitation, asbestos, lead, PCBs, petroleum and related hydrocarbons, and radioactive material) that is required to be removed to a Class I, Class II, or Class III disposal Project Site in accordance with provisions of existing law; (b) other material which may present a substantial danger to persons or property exposed thereto in connection with Work at the Project Site.
2. Except as otherwise provided in Contract Documents or as provided by applicable law, Contractor shall not be required to give any notice for the disturbance or observation of any such hazardous waste or hazardous material where such matter is disturbed or observed as part of the scope of Work under Contract Documents (such as hazardous waste or hazardous material investigation, remediation or disposal activities which are identified as the subject of Work under Contract Documents), where Contractor complies with all requirements in Contract Documents and applicable law respecting such materials.
3. Contractor's written notice under Paragraphs 13.D.2, 13.D.8, and 13.E.1 above shall indicate whether the hazardous waste or material was shown or indicated in Contract Documents to be within the scope of Work, and whether the hazardous waste or material was brought to the Project Site by Contractor, its Subcontractors, suppliers, or anyone else for whom Contractor is responsible. As used in this paragraph, "hazardous materials" shall include (but not be limited to) asbestos, lead, PCBs, petroleum and related hydrocarbons, and radioactive material.
4. Contractor shall not be entitled to any adjustment in the Contract Sum or Time regarding claimed hazardous waste or materials if (1) Contractor knew of the existence of such hazardous material or hazardous waste at the time Contractor submitted its bid; or (2) Contractor should have known of the existence of such hazardous material or hazardous waste as a result of its having the responsibility to obtain additional or supplementary examinations, investigation, explorations, tests, studies and data concerning the conditions at or contiguous to the Project Site prior to submitting its Bid; or (3) Contractor failed to give the written notice within the time required by Paragraphs 13.D.2, 13.D.8 and 13.E.1 of these General Conditions.

5. If CITY determines that conditions do not involve hazardous waste or hazardous materials or that no change in Contract Document terms is justified, CITY shall notify Contractor in writing, stating the reasons for its determination. If CITY and Contractor cannot agree on an adjustment in Contract Sum or Contract Time, Contractor shall proceed with the Work and as directed by CITY and may file a claim as provided in Paragraph 12 of these General Conditions.
6. If Contractor does not agree to resume Work based on a reasonable belief that it is unsafe, or does not agree to resume Work under special conditions, CITY may order the disputed portion of Work deleted from the Work, or performed by others, or CITY may invoke its right to terminate Contractor's right to proceed under Contract Documents in whole or in part. If Contractor does not agree with CITY's determination of any adjustment in the Contract Sum or Times as a result, Contractor may make a claim as provided in Paragraph 12 of these General Conditions.

F. SUSPENSION OF WORK

CITY may, without cause, order Contractor in writing to suspend, delay or interrupt Work in whole or in part for such period of time as CITY may determine. An adjustment shall be made for increases in cost of performance of Contract Documents caused by any such suspension, delay or interruption. No adjustment shall be made to extent: (a) that performance is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor is responsible; or (b) that an equitable adjustment is made or denied under another provision of Contract Documents; or (c) that the suspension of Work was the direct or indirect result of Contractor's failure to perform any of its obligations hereunder. Adjustments made in cost of performance may have a mutually agreed fixed or percentage fee; if the parties cannot agree, Contractor may file a claim under Paragraph 12 herein.

G. TERMINATION OF CONTRACT FOR CAUSE

1. Contractor shall be in default of Contract Documents and CITY may terminate Contractor's right to proceed under Contract Documents, for cause:
 - a. Should Contractor make an assignment for the benefit of creditors, admit in writing its inability to pay its debts as they become due, file a voluntary petition in bankruptcy, be adjudged a bankrupt or insolvent, be the subject of an involuntary petition in bankruptcy which is not dismissed within 60 days; file a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any present or future statute, law, or regulation, filing any answer admitting or not contesting the material allegations of a petition filed against Contractor in any such proceeding, or seek, consent to, or acquiesce in, the appointment of any trustee, receiver, custodian or liquidator of Contractor or of all or any substantial part of its properties or if Contractor, its directors or shareholders, take action to dissolve or liquidate Contractor; or

- b. Should Contractor commit a material breach of Contract Documents and not cure such breach within ten (10) calendar days of the date of notice from CITY to Contractor demanding such cure; or, if such breach is curable but not curable within such ten (10) day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of 10 calendar days, Contractor must provide CITY within the 10 day period with a written plan acceptable to CITY to cure said breach, and then diligently commence and continue such cure according to the written plan); or
 - c. Should Contractor violate or allow (by a Subcontractor or other person or entity for which Contractor is responsible) a violation of any valid law, statute, regulation, rule, ordinance, permit, license or order of any governmental agency applicable to the Project or Work and does not cure (or cause to be cured) such violation within ten (10) days of the date of the notice from CITY to Contractor demanding such cure; or, if such violation is curable but not curable within such ten (10) day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of 10 calendar days, Contractor must provide CITY within the 10 day period with a written plan to cure said violation acceptable to CITY, and then diligently commence and continue performance of such cure according to the written plan.); or
 - d. Should any material representation, warranty, declaration, certification or other statement (together, "representations") made by Contractor in any Bidding Document or otherwise to CITY in connection with Contractor's obtaining or performing this Contract prove to be materially incorrect when made, or should Contractor materially breach any material agreement made in any Bidding Document.
- 2. If CITY at any time reasonably believes that Contractor is or may be in default under Contract Documents, as defined above, CITY may in its sole discretion notify Contractor of this fact and request written assurances from Contractor of performance of Contract Documents and a written plan from Contractor to remedy any default under the terms of Contract Documents which CITY may advise Contractor of in writing. Failure of Contractor to provide such written assurances of performance and the required written plan, within ten (10) calendar days of demand, will constitute a material breach of Contract Documents sufficient to justify termination for cause.
- 3. In event of termination for cause, CITY shall immediately serve written notice thereof upon Surety and Contractor. Surety shall have the rights and obligations set forth in the Construction Performance Bond. Subject to the Surety's rights under the Performance Bond (which rights are waived upon a default there under), CITY may take over the Work and prosecute it to completion by contract or by any other methods it may deem advisable.
- 4. In the event of termination by CITY as provided in Paragraph 13.G.1 above for cause;

- a. CITY shall compensate Contractor for the value of the Work delivered to CITY upon termination as determined in accordance with Contract Documents, subject to all rights of offset and backcharges, and provided that Contractor provides CITY with updated as-builts and Project record documents showing the Work performed up to the date of termination. However, CITY shall not compensate Contractor for any of its costs incurred in terminating the Work or any cancellation charges owed to third parties.
 - b. Contractor shall deliver to CITY possession of the Work in its then condition, including but not limited to, all designs, engineering, Project records, cost data of all types, drawings and specifications and contracts with vendors and subcontractors, all other documentation associated with the Project, and all construction supplies and aids dedicated solely to performing the Work which, in the normal course of construction, would be consumed or only have salvage value at the end of the construction period. Contractor shall remain fully liable for the failure of any Work completed and materials and equipment provided through the date of such termination to comply with the provisions of Contract Documents. The provisions of this Paragraph shall not be interpreted to diminish any right which CITY may have to claim and recover damages for any breach of Contract Documents or otherwise, but rather, Contractor shall compensate CITY for all loss, cost, damage, expense, and/or liability suffered by CITY as a result of such termination and failure to comply with Contract Documents.
 - c. CITY shall, to the extent applicable, have all other rights and remedies set forth in any Bidding Document.
5. In the event a termination for cause is later determined to have been made wrongfully or without cause, then the termination shall be treated as a termination for convenience, and Contractor shall have only the recovery rights specified in Paragraph 13.H of these General Conditions General Conditions. Any Contractor claim arising out of a termination for cause, however, shall be made in accordance with Paragraph 12 of these General Conditions. No other loss, cost, damage, expense or liability may be claimed, requested or recovered by Contractor. Under no condition will Contractor recover lost profits or similar damages.

H. TERMINATION OF CONTRACT FOR CONVENIENCE

1. CITY may terminate performance of the Work under Contract Documents in accordance with this clause in whole, or from time to time in part, whenever CITY shall determine that termination is in CITY's best interest. Termination shall be effected by CITY delivering to Contractor notice of termination specifying the extent to which performance of the Work under Contract Documents is terminated, and the effective date of the termination.
2. After receiving a notice of termination under Paragraph 13.H.1 above, and except as otherwise directed by CITY, Contractor shall:

- a. Stop Work under Contract Documents on date and to extent specified in notice of termination;
 - b. Place no further orders or subcontracts for materials, services, or facilities except as necessary to complete portion of Work under Contract Documents which is not terminated;
 - c. Terminate all orders and subcontracts to extent that they relate to performance of Work terminated by the notice of termination;
 - d. Assign to CITY in manner, at times, and to extent directed by CITY, all right, title, and interest of Contractor under orders and subcontracts so terminated. CITY shall have the right, in its sole discretion, to settle or pay any or all claims arising out of termination of orders and subcontracts;
 - e. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with approval or ratification of CITY to extent CITY may require. CITY's approval or ratification shall be final for purposes of this Paragraph;
 - f. Transfer title to CITY, and deliver in the manner, at the times, and to the extent, if any, directed by CITY, all fabricated or un-fabricated parts, Work in process, completed Work, supplies, and all other material produced as part of, or acquired in connection with performance of, Work terminated by the notice of termination, and completed or partially completed drawings, drawings, specifications, information, and other property which, if the Project had been completed, would have been required to be furnished to CITY;
 - g. Use its best efforts to sell, in manner, at times, to extent, and at price or prices that CITY directs or authorizes, any property of types referred to in Paragraph 13.H.2.f. above, but Contractor shall not be required to extend credit to any purchaser, and may acquire any such property under conditions prescribed and at price or prices approved by CITY. Proceeds of transfer or disposition shall be applied to reduce payments to be made by CITY to Contractor under Contract Documents or shall otherwise be credited to the price or cost of Work covered by Contract Documents or paid in such other manner as CITY may direct;
 - h. Complete performance of the part of the Work which was not terminated by the notice of termination; and
 - i. Take such action as may be necessary, or as CITY may direct, to protect and preserve all property related to Contract Documents which is in Contractor's possession and in which CITY has or may acquire interest.
3. After receipt of a notice of termination, Contractor shall submit to CITY its termination claim, in form and with all certifications required by Paragraph 12 herein. Contractor's termination claim shall be submitted promptly, but in no event later than 6 months from effective date of the termination. Contractor and CITY may agree upon the whole or part of the amount or

amounts to be paid to Contractor because of a total or partial termination of Work under this Paragraph 13.H. If Contractor and CITY fail to agree on the whole amount to be paid to Contractor because of the termination of the Work under this Paragraph 13.H, CITY shall determine, based on information available to it, the amount, if any, due to Contractor by reason of the termination and shall pay to Contractor for Work specified in Contract Documents which is performed before the effective date of the termination, the total (without duplication of any items) of:

- a. The reasonable cost to Contractor, without profit, for all Work performed prior to the effective date of the termination, including Work done to secure the Project for termination. In determining reasonable cost, deductions will be made for cost of materials to be retained by Contractor, cost of Work defectively performed, amounts realized by sale of materials, and for other appropriate credits against cost of Work. Reasonable cost will include reasonable allowance for Project overhead and general administrative overhead not to exceed a total of 10 percent of direct costs of such Work.
- b. When, in CITY's opinion, the cost of any item of Work is excessively high due to costs incurred to remedy or replace defective or rejected Work, commercially reasonable cost to be allowed will be the estimated reasonable cost of performing the Work in compliance with requirements of Contract Documents and excessive actual cost shall be disallowed.
- c. A commercially reasonable allowance for profit on cost of Work performed as determined under Paragraph 13.H.3.a, provided that Contractor establishes to CITY's satisfaction that Contractor would have made a profit had the Project been completed, and provided further that the profit allowed shall not exceed 5 percent of cost.
- d. Commercially reasonable costs to Contractor of handling material returned to vendors, delivered to CITY or otherwise disposed of as directed by CITY.
- e. A commercially reasonable allowance for Contractor's internal administrative costs in preparing termination claim.
- f. CITY shall have no obligation to pay Contractor under this Paragraph 13.H unless and until Contractor provides CITY with updated and acceptable as-builts and Project record documents for Work completed prior to termination.

Except as provided above, CITY shall not be liable for costs incurred by Contractor or subcontractors after receipt of a notice of termination. Such non-recoverable costs include, but are not limited to, anticipated profits on Work not performed as of the date of termination, post-termination employee salaries, post-termination general administrative expenses, post-termination overhead or unabsorbed overhead, costs of preparing and submitting Contractor's Bid, attorney's fees of any type, and all other costs relating to prosecution of claim or lawsuit.

4. In arriving at the amount due Contractor under this clause there shall be deducted in whole (or in the appropriate part[s] if the termination is partial): (a) All unliquidated advances or other payments on account previously made to Contractor, including without limitation all payments applicable to the terminated portion of Contract Documents; (b) any claim which CITY may have against Contractor in connection with Contract Documents; and (c) the agreed price for, or proceeds of sale of, any materials, supplies, or other things kept by Contractor or sold under provisions of Paragraph 13.H, and not otherwise recovered by or credited to CITY.

I. CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Contractor hereby assigns to CITY each Subcontract for a portion of the Work, provided that:

1. The assignment is effective only after CITY's termination of Contractor's right to proceed under Contract Documents (or portion thereof relating to that Subcontract) pursuant to Paragraphs 13.G or 13.H above.
2. The Assignment is effective only for the Subcontracts which CITY expressly accepts by notifying the Subcontractor in writing;
3. The assignment is subject to the prior rights, if any, of the Surety, obligated by the Performance and/or Payment Bond provided under Contract Documents, where the Surety exercises its rights to complete the Contract;
4. After the effectiveness of an assignment, Contractor shall, at its sole cost and expense (except as otherwise provided in Paragraphs 13.G or 13.H above), sign all instruments and take all actions reasonably requested by CITY to evidence and confirm the effectiveness of the assignment in CITY; and
5. Nothing in this Paragraph 13.I shall modify or limit any of Contractor's obligations to CITY arising from acts or omissions occurring before the effectiveness of any Subcontract assignment, including but not limited to all defense, indemnity and hold harmless obligations arising from or related to the assigned Subcontract.

J. REMEDIES

Subject to Contract Documents provisions regarding Contractor claims, claim review, and claim resolution, and subject to the limitations therein, the exclusive jurisdiction and venue for resolving all claims, counterclaims, disputes and other matters in question between CITY and Contractor arising out of or relating to Contract Documents, any breach thereof or the Project shall be the applicable court of competent jurisdiction located in the State of California, County of Alameda. All CITY remedies provided in Contract Documents shall be taken and construed as cumulative and not exclusive; that is, in addition to each and every other remedy herein provided; and in all instances CITY shall have any and all other equitable and legal rights and remedies which it would have according to law.

K. PATENTS

Fees or claims for any patented invention, article or arrangement that may be used upon or in any manner connected with performance of the Work or any part thereof shall be included in the Bid price for doing the Work. Contractor shall defend, indemnify and hold harmless CITY, its City Council, boards and commissions, and each of its officers, employees, volunteers, consultants and agents, including, but not limited to, the Mayor, City Council, Boards and Commissioners, and each city employee, from all damages, claims for damages, costs or expenses in law or equity, including attorney's fees, arising from or relating to any claim that any article supplied or to be supplied under Contract Documents infringes on the patent rights, copyright, trade name, trademark, service mark, trade dress, trade secret or other intellectual property right of any person or persons or that the person or entity supplying the article does not have a lawful right to sell the same. Such costs or expenses for which Contractor agrees to indemnify and hold harmless the above indemnities include but are not limited to any and all license fees, whether such fees are agreed by any indemnitee or ordered by a court or administrative body of any competent jurisdiction.

L. SUBSTITUTION FOR PATENTED AND SPECIFIED ARTICLES

Except as noted specifically in Specifications, whenever in Specifications, material or process is designated by patent or proprietary name or by name of manufacturer, such designation shall be deemed to be used for purpose of facilitating description of material and process desired, and shall be deemed to be followed by the words "or equal" and Contractor may offer any substitute material or process that Contractor considers equal in every respect to that so designated and if material or process offered by Contractor is, in opinion of CITY, equal in every respect to that so designated, its use will be approved. However, Contractor may utilize this right only by timely submitting Substitution Request Form as provided in Instructions to Bidders.

M. INTEREST OF PUBLIC OFFICERS

No representative, city employee, member of the governing body of the locality in which the Project is situated, no member of the locality in which CITY was activated, and other public official of such locality or localities who exercises any functions or responsibilities with respect to the Project, during the tenure of the official or for one year thereafter, shall, as principal, agent, attorney or otherwise, be directly or indirectly interested, in Contract Documents or the proceeds thereof.

N. LIMIT OF LIABILITY

CITY AND EACH OF ITS OFFICERS, MAYOR, COUNCIL MEMBERS, BOARDS AND COMMISSIONS. OFFICERS, EMPLOYEES, VOLUNTEERS, CONSULTANTS AND AGENTS INCLUDING, BUT NOT LIMITED TO, EACH CITY REPRESENTATIVE SHALL HAVE NO LIABILITY TO CONTRACTOR FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES, EXCEPT TO THE LIMITED EXTENT THAT THESE CONTRACT DOCUMENTS OR APPLICABLE PUBLIC CONTRACTING STATUTES MAY SPECIFY THEIR RECOVERY.

O. SEVERABILITY

Any provisions or portions thereof of Contract Documents which are prohibited by, unlawful, or unenforceable under any applicable law of any jurisdiction shall as to such jurisdiction be ineffective without affecting other provisions or portions thereof in Contract Documents.

P. DEPARTMENT OF INDUSTRIAL RELATIONS COMPLIANCE AND PREVAILING WAGE REQUIREMENTS ON PUBLIC WORKS PROJECTS

Effective January 1, 2015, No Contractor or Subcontractor may be listed on a bid proposal for a public Works project (submitted after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 (with the limited exceptions from this requirement for bid purposed only under Labor code Section 1771.1(a)). Register at <https://efiling.dir.ca.gov/PWCR>

No Contractor or Subcontractor may be awarded a contract for public Work on a public Works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The Prime Contractor is required to post job Project Site notices prescribed by regulation. See 8 Calif. Code Regulation §16451(d).

Effective April 1, 2015, All Contractors and Subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner. <https://apps.dir.ca.gov/ecpr/das/altlogin>

14. MODIFICATIONS OF CONTRACT DOCUMENTS

A. ALTERATIONS, MODIFICATIONS AND FORCE ACCOUNT WORK

1. No modification or deviation from the Drawings and Specifications will be permitted except by written Change Order.
2. CITY may, without notice to the sureties, make alterations, deviations, additions to, or deletions from Contract Documents; increase or decrease the quantity of any item or portion of the Work; change the Contract Time; delete any item or portion of the Work; and require extra Work. Contractor shall perform such Work under applicable provisions of Contract Documents, unless specifically provided otherwise at the time the change is ordered. In the case of any ordered extra Work, CITY reserves the right to furnish all or portions of associated labor, material, and equipment, which Contractor shall accept and use without payment for costs, markup, profit, or otherwise for such CITY-furnished labor, materials, and equipment.
3. Changes affecting time or price of the Work shall be set forth in a written Change Order that shall specify: (1) the Work performed in connection with the change to be made; (2) the amount of the adjustment of the Contract price, if any, and the basis for compensation for the Work ordered; and (3) the extent of the adjustment in the Contract time, if any. A Change Order

will fully accommodate the “**Work by ...**” paragraphs below and will not become effective until signed by CITY.

Work by Contractor:

The following percentages may be added to the Contractor’s costs and shall constitute the maximum allowable markup for all overhead, increase in Contractor’s bond or insurance, administrative expenses and/or profit on work performed by the Contractor:

a) Labor	15%
b) Materials	15%
c) Equipment Rental	15%
d) Other Items and Expenditures	15%

Work by Subcontractor:

When any part of the extra work is performed by a Subcontractor, of any tier, the markup established above (in **Work by Contractor**) shall be applied, and limited, to the Subcontractor’s actual cost of such work. Contractor markup on Subcontractor work shall be limited to five (5%) percent.

No payment shall be made for any item not set forth above (in **Work by Contractor** or in **Work by Subcontractor**), including without limitation, Contractor’s overhead, general administrative expense, supervision or damages claimed for delay in prosecuting the remainder of the Work.

This provision shall not be construed to preclude the recovery of damages by the Contractor stemming from delay for which the Owner/CITY is responsible, which is unreasonable under the circumstances involved, and which was not within the contemplation of the Owner/CITY and the Contractor.

4. Changes not affecting the time or price of the Work, in CITY’s discretion, may be set forth in a written Request for Information (RFI) executed by CITY or other written form approved by the CITY. Execution of such an RFI constitutes Contractor’s agreement to make the specified change without change to the Contract Price or the Contract Time.
5. No changes or deviations from Contract Documents affecting time or price of the Work will be made without the authority of an approved Change Order or Construction Change Directive, except in cases of emergency discussed herein.
6. Contractor in accordance with Contract Documents shall diligently carry out all Change Orders. If changes ordered in design, Workmanship or materials are of such a nature as to increase or decrease the cost of any part of the Work, the price fixed in Contract Documents shall be increased or decreased by the amount that Contractor and CITY may agree upon as a reasonable and proper allowance for the cost increase or decrease. If an agreement cannot be reached, then CITY shall reach a determination, which shall be final, subject to Contractor’s rights under Paragraph 12 of these General Conditions. In all cases Contractor shall perform the changed Work as directed by CITY subject to Contractor’s rights under Paragraph 12 of these General Conditions. In the event the CITY exercises its rights to decide disputed issues pertaining to changed Work, as set forth above, then the resulting Change Order shall be effective when signed by the CITY and notwithstanding the fact

that the Contractor has not signed it.

7. Contractor shall, upon CITY's request, permit inspection of the original unaltered Project Bid estimate, subcontract agreements, purchase orders relating to the change, and documents substantiating all costs associated with the cost proposal.
8. Changes in the Work made pursuant to this Paragraph and extensions of Contract Time necessary by reason thereof shall not in any way release the guarantees/warranties given by Contractor pursuant to provisions of Contract Documents, nor shall such changes in the Work relieve or release the Sureties of bonds executed pursuant to said provisions. The Sureties, in executing such bonds, shall be deemed to have expressly agreed to any such change in the Work and to any extension of time made by reason thereof.
9. Regarding delay and impact costs of any nature, Contractor may not seek delay compensation for on-Project Site or off-Project Site costs based on formulas, e.g., "Eichleay" or other formula. Rather, Contractor must prove actual costs resulting from such delays. If Contractor requests compensation for delay to the construction, then Contractor must prove and document actual costs plus markup in order to request, claim or prove compensation for delay.
10. A performance bond rider covering the changed Work must be executed and delivered to CITY before proceeding with the Work. Contractor is charged with knowledge of CITY's approved change order limits and procedures in effect at the applicable time.

B. ENTIRE AGREEMENT

Contract Documents and any approved and authorized Change Orders shall represent the entire and integrated agreement between CITY and Contractor regarding the subject matters hereof and thereof and shall constitute the exclusive statement of the terms of the parties' agreement. Contract Documents and any Change Orders shall supersede any and all prior negotiations, representations or agreements, written or oral, express or implied that relate in any way to the subject matter of Contract Documents or written modifications. CITY and Contractor represent and agree that, except as otherwise expressly provided in Contract Documents, they are entering into Contract Documents and any subsequent written modification in sole reliance upon the information set forth or referenced in Contract Documents or Change Orders and the parties are not and will not rely on any other information.

C. EFFECT OF WAIVERS

Either party's waiver of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of Contract Documents at any time shall not in any way affect, limit, modify or waive that party's right thereafter to enforce or compel strict compliance with every term, covenant, condition or other provision hereof, any course of dealing or custom of the trade or oral representations notwithstanding.

15. TIME ALLOWANCES

A. TIME ALLOWANCES FOR PERFORMANCE OF CONTRACT DOCUMENTS

1. When Contractor and CITY have signed the Contract Documents, CITY will serve a Notice to Proceed upon Contractor to that effect, either by depositing notice in a post office or post office box regularly maintained by United States Postal Service in a pre-paid wrapper directed to Contractor at legal address or (at CITY's option) by delivery by other means at legal address.
2. The start date for Contract Time shall be as provided in paragraph 3.B of these General Conditions. The total number of Work days for completion of the Work under Contract Documents shall be as provided in Paragraph 1 of the Contractor Agreement.

B. CHANGE OF CONTRACT TIME

1. The Contract Time may only be changed by Change Order, and all time limits stated in Contract Documents are of the essence of Contract Documents. The Contract Time will be adjusted in an amount equal to the time lost due to (a) changes in the Work ordered by CITY; (b) acts or neglect by CITY, any CITY representative, utility owners or other contractors performing other Work, provided that Contractor has fully and completely performed its responsibilities under Contract Documents; (c) fires, floods, epidemics, abnormal weather conditions, earthquakes, civil or labor disturbances, strikes or acts of God, provided damages resulting therefrom is not the result of Contractor's failure to protect the Work as required by Contract Documents. The Contract Time shall not be extended for such causes, however, unless Contractor can actually document with proof that it has been prevented from completing any part of the Work within the Contract Time due to delay that is (i.) beyond Contractor's control and due to reasons for which Contractor is not responsible; (ii.) a claim for delay is made as provided herein; and (iii.) Contractor submits a Time Impact Analysis that demonstrates actual delay to Work activities that actually delay the progress of the Work in the amount of time requested. Delays attributable to and within the control of a subcontractor, or its subcontractors, or supplier shall be deemed to be delays within the control of Contractor.
2. Where Contractor is prevented from completing any part of the Work within the Contract Time due to delay beyond the control of both CITY and Contractor (including, but not limited to, abnormal or adverse weather of all types within or beyond the parameters referenced below and acts of other contractors or utilities), an extension of Contract Time, in an amount equal to the time lost due to such delay (without compensation), shall be Contractor's sole and exclusive remedy for such delay.
3. Contractor must present as its claims, all subcontractor and supplier claims of any type, and prove them under the terms of the Contract Documents. CITY shall not be directly liable to any Subcontractor, any supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages or extra costs of any type arising out of or resulting from the Project, including without limitation (a) delays caused by or within the control of Contractor, (b) changes in the Work ordered by CITY or any CITY representative, (c) acts or neglect by CITY, utility owners or other contractors

performing other Work, (d) fires, floods, abnormal weather conditions, earthquakes, civil or labor disturbances, strikes or acts of God, (e) other contractors performing other Work as contemplated by Paragraph 6, or (f) claimed deficiencies in Project design.

4. Delays due to abnormal or adverse weather conditions shall not be allowed for weather conditions which fall within the parameters listed herein. Adverse weather delays may be allowed only if the number of Workdays of adverse weather exceeds these parameters on a monthly basis and Contractor proves that adverse weather actually delayed Work on the critical path of the project. Contractor shall provide written notice of intent to claim an adverse weather day within one day of the adverse weather day occurring. Rain parameters are as follows, pro-rated in the individual month Contractor starts and finishes Work:

Rain Workdays: January, [6]; February, [6]; March, [5]; April, [3]; May, [1]; June, [0]; July, [0]; August, [0]; September, [0]; October, [2]; November, [4]; December, [6]. The Contractor shall anticipate a total of **33** Workdays for each complete year and include said Workdays in accordance with these general conditions.

In order to qualify as a rain day with respect to the foregoing parameters, daily rainfall must exceed .10 of an inch or more at the Metro Oakland International Airport, Oakland, California, weather station, as measured by the National Oceanic & Atmospheric Administration, and Contractor must prove that the rain actually caused critical project delay as set forth above and below.

5. Delays due to abnormal or adverse weather conditions shall not be a prima facie reason for an extension of Contract Time. Contractor shall make every effort to continue Work under prevailing conditions. Delays due to abnormal or adverse weather conditions will be allowed provided Contractor can prove abnormal or adverse weather conditions at the Project Site prevented the Contractor from proceeding with seventy-five percent (75%) of the scheduled crew labor and equipment resources engaged on critical path activities identified on the accepted and most current CPM progress schedule update at the time of the abnormal or adverse weather condition, and 75% of the crew did not Work more than three (3) hours. Abnormal or adverse weather delays meeting the criteria in this paragraph are deemed beyond the control of both CITY and Contractor, and an extension of Contract Time (or milestones) due to such a delay shall be the Contractor's sole and exclusive remedy for such a delay.
6. Rain delay shall be recognized for the actual period of time Contractor proves it was delayed by rain in accordance with the above parameters and requirements. For example, and not by way of limitation, if rain exceeding the specified parameters does not in fact delay Contractor's progress on the critical path, then no time extension shall be recognized; and conversely, if Contractor proves that rain exceeding the specified parameters causes delay to Contractor for a period longer than one day, then Contractor shall be entitled to a time extension equal to the actual period of such delay.
7. Contractor shall take reasonable steps to mitigate potential weather delays, such as dewatering the Project Site, providing access roads un-impacted by

abnormal or adverse weather and covering Work and material that could be affected adversely by weather. Failure to do so shall be cause for CITY to not grant a time extension due to abnormal or adverse weather, where Contractor could have avoided or mitigated the potential delay by exercising reasonable care.

C. NOTICE OF DELAY

Within seven (7) calendar days of the beginning of any delay Contractor shall notify CITY in writing, by submitting a notice of potential claim, of all anticipated delays resulting from the delay event in question. Any request for extension of time shall be accompanied by Contractor's written statement that the adjustment claimed is the entire adjustment to which the claimant is entitled as a result of the occurrence of said event. CITY shall determine all claims and adjustments in the Contract Time. No claim for an adjustment in the Contract Time will be valid and such claim will be waived if not submitted in accordance with the requirements of this paragraph.

D. NO DAMAGES FOR CONTRACTOR CAUSED DELAY

Contractor shall not be entitled to any time extension or compensation, including but not limited to extended field or home office overhead, field supervision, costs of capital, interest, escalation charges, acceleration costs or other impacts for any delays caused in whole or in part by Contractor's failure to perform its obligations under Contract Documents, or during periods of delay concurrently caused by Contractor and either CITY or others. Contractor may receive time extension and be compensated for delays caused directly and solely by CITY except that Contractor shall not be entitled to damages for delay to the Work caused by the following reasons:

1. CITY's right to sequence the Work in a manner which would avoid disruption to CITY's tenants, including noticing requirements thereto and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities required by Contract Documents, CITY's enforcement of any government act or regulation, or the provisions of Contract Documents.
2. For changed Project Site conditions that are beyond the parties' contemplation, except that CITY may approve direct costs associated with unknown conditions (but not costs or damages which result from such delays); and
3. Extensive requests for clarifications to Contract Documents or modifications thereto, provided such clarifications or modifications are processed by CITY or its consultants in a reasonable time commensurate with Contract Documents requirements.

E. LIQUIDATED DAMAGES

1. Time is of the essence. Execution of Contract Documents by Contractor shall constitute acknowledgement by Contractor that Contractor understands, has ascertained and agrees that CITY will actually sustain damages in the amount fixed in Contract Documents for each and every Work day during which completion of Work required is delayed beyond expiration of time fixed for completion or extensions of time allowed pursuant to provisions hereof.

Contractor and CITY agree that specified measures of liquidated damages shall be presumed to be the damages actually sustained by CITY as defined below, and that because of the nature of the Project, it would be impracticable or extremely difficult to fix the actual damages.

2. Liquidated damages shall be considered not as a penalty but as agreed monetary damage sustained by CITY for increased project administration expenses, including extra inspection, construction management and Architectural and engineering expenses and interest expenses related to the Project and Contract Documents because Contractor failed to perform and complete Work within time fixed for completion or extensions of time allowed pursuant to provisions hereof. Liquidated damages shall not be deemed to include within their scope additional damages arising from defective Work, lost revenues, cost of completion of the Work, cost of substitute facilities, or damages suffered by others or other forms of liability claimed against CITY as a result of delay (e.g., delay or delay related claims of other contractors, subcontractors or tenants), and defense costs thereof; Contractor shall be fully responsible for the actual amount of any such damages it causes, in addition to the liquidated damages otherwise due CITY.
3. There shall be deducted from any money due or to become due to Contractor subsequent to time for completion of entire Work and extensions of time allowed pursuant to provisions hereof, a sum representing then accrued liquidated damages. Should Contractor fall behind the approved Progress Schedule, CITY reserves the right to deduct liquidated damages based on its estimated period of late completion. CITY need not wait until Final Completion to withhold liquidated damages from Contractor's progress payments. Should money due or to become due to Contractor be insufficient to cover aggregate liquidated damages due, then Contractor forthwith shall pay the remainder of the assessed liquidated damages to CITY.

16. WORKING CONDITIONS AND PREVAILING WAGES

A. USE OF PROJECT SITE/SANITARY RULES

1. All portions of the Work shall be maintained at all times in neat, clean and sanitary condition. Contractor shall furnish toilets and adequate sanitary supplies for use of Contractor's and Subcontractors' employees on the Project Site where needed, and their use shall be strictly enforced. All toilets shall be properly secluded from public observation, and shall be located, constructed and maintained subject to CITY's approval. Contractor is responsible for removing graffiti or replacing portable toilets that include graffiti on the interior or exterior of the toilets.
2. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of Workers to the Project Site and land areas identified in and permitted by Contract Documents and other land and areas permitted by applicable laws and regulations, rights of way, permits and easements or as designated by CITY, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, any improvement located thereon, or to the owner or occupant thereof

resulting from the performance of Work.

3. During the progress of the Work, Contractor shall keep the Project Site **free from dirt** and other debris resulting from the Work. Contractor also shall protect equipment and materials from damage by weather. Contractor shall comply with Section 01 74 00 of the General Requirements for the off-haul / recycling / disposal of all waste materials, rubbish and debris from and about the Project Site as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the premises clean and ready for occupancy by CITY at Substantial Completion of Work. Contractor shall restore to original condition all property not designated for alteration by Contract Documents.
4. Contractor shall not load nor permit any part of any structure or pavement to be loaded in any manner that will endanger the structure or pavement, nor shall Contractor subject any part of Work or adjacent property to stresses or pressures that will endanger it. Contractor shall conduct all necessary existing conditions investigation regarding structural, mechanical, electrical or any other system existing, shall perform its Work consistent with such existing conditions, and shall have full responsibility for insufficiencies or damage resulting from insufficiencies of existing systems, equipment or structures to accommodate performing the Work.

B. PROTECTION OF WORK, PERSONS AND PROPERTY

Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with Work. Contractor shall comply with all safety requirements specified in any safety program established by CITY, or required by state, federal or local laws and ordinances. Contractor shall be responsible for all damage to Work, property or structures, and all injuries to persons, arising from the performance of Contract Documents.

1. Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.
2. Contractor shall remedy all damage, injury or loss to any property referred to in Paragraph 16.B, caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, supplier, or any other person or organization directly or indirectly employed by any of them to perform or furnish any Work or anyone for whose acts any of them may be liable. Contractor's duties and responsibility for safety and for protection of Work shall continue until such time as all the Work is completed and Final Acceptance of the Work. CITY and of its agents do not assume any responsibility for collecting any indemnity from any person or persons causing damage to Contractor's Work.
3. Contractor shall designate a qualified and experienced safety representative at the Project Site whose duties and responsibilities shall be the prevention of

accidents and the maintaining and supervising of safety precautions and programs.

4. CITY may, at its option, retain such moneys due under Contract Documents as CITY deems necessary until any and all suits or claims against Contractor for injury to persons or property shall be settled and CITY receives satisfactory evidence to that effect.

C. RESPONSIBILITY FOR SAFETY AND HEALTH

1. Contractor shall ensure that its and each tier of subcontractors' employees, agents and invitees comply with applicable health and safety laws while at the Project Site. These laws include the Occupational Safety and Health Act of 1970 and rules and regulations issued pursuant thereto, and CITY's safety regulations as amended from time to time. Contractor shall comply with all CITY directions regarding protective clothing and gear.
2. Contractor shall be fully responsible for the safety of its and its subcontractors' employees, agents and invitees on the Project Site, including all CITY and City employees, City Council acting as Board of Commissioners, officials, officers, volunteers and representatives. Contractor shall notify CITY in writing, of the existence of hazardous conditions, property or equipment at the Project Site that are not under Contractor's control. Contractor shall be responsible for taking all the necessary precautions against injury to persons or damage to the property of Contractor, subcontractors or persons from recognized hazards until the responsible party corrects the hazard.
3. Contractor shall confine all persons acting on its or its subcontractors' behalf to that portion of the Project Site where Work under Contract Documents is to be performed: CITY designated routes for ingress and egress thereto; and any other CITY designated area. Except those routes for ingress and egress over which Contractor has no right of control, within such areas, Contractor shall provide safe means of access to all places at which persons may at any time have occasion to be present.

D. EMERGENCIES

In emergencies affecting the safety or protection of persons or Work or property at the Project Site or adjacent thereto, Contractor, without special instruction or authorization from CITY, is obligated to act, with best efforts, to prevent threat and damage, injury or loss, until directed otherwise by CITY. Contractor shall give CITY prompt written notice if Contractor believes that any significant changes in Work or variations from Contract Documents have been caused thereby. If CITY determines that a change in Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Change Order or Construction Change Directive will be issued to document the consequences of such action.

E. USE OF ROADWAYS, **WATERWAYS** AND WALKWAYS

Contractor shall not unnecessarily interfere with use of any roadway, **waterway**, walkway or other facility for vehicular or pedestrian traffic. Before beginning interference and with CITY's prior concurrence, Contractor may provide detour or

temporary bridge for traffic to pass around or over the interference, which Contractor shall maintain in satisfactory condition as long as interference continues per Caltrans standards. Unless otherwise provided in Contract Documents, Contractor shall bear the cost of these temporary facilities.

F. NONDISCRIMINATION

No person or entity shall discriminate in the employment of persons upon public Works because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sexual preference, or gender of such persons, except as provided in Section 12940 of the Government Code. Every contractor for public Works violating the provisions of Section 1735 of the Labor Code is subject to all the penalties imposed for a violation of Chapter 1, Part 7, Division 2 of the Labor Code.

G. PREVAILING WAGES

1. Contractor shall pay to persons performing labor in and about Work provided for in Contract Documents an amount not less than the general prevailing rate of per diem wages for (1) Work of a similar character in the locality in which the Work is performed and (2) legal holiday and overtime Work in said locality. The per diem wages shall be an amount equal to or more than the stipulated rates contained in a schedule that has been ascertained and determined by the Director of the State Department of Industrial Relations to be the general prevailing rate of per diem wages for each craft or type of Worker or mechanic needed to execute this contract.
2. Contractor shall forfeit, as a penalty to CITY, Fifty Dollars (\$50.00) for each laborer, Worker, or mechanic employed in performing labor in and about the Work provided for in Contract Documents for each calendar day, or portion thereof, that such laborer, Worker or mechanic is paid less than the said stipulated rates for any Work done under Contract Documents by him or her or by any subcontractor under him or her, in violation of Articles 1 and 2 of Chapter 1 of Part 7 of Division II of the California Labor Code. The sums and amounts which shall be forfeited pursuant to this Paragraph 16.G.2 and the terms of the Labor Code shall be withheld and retained from payments due to Contractor under Contract Documents, pursuant to these General Conditions and the Labor Code, but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the State Department of Industrial Relations or by CITY. The Labor Commissioner pursuant to Labor Code section 1775 shall determine the final amount of forfeiture.
3. Contractor shall insert in every subcontract or other arrangement which Contractor may make for performance of Work or labor on Work provided for in the Contract, provision that subcontractor shall pay persons performing labor or rendering service under subcontract or other arrangement not less than the general prevailing rate of per diem wages for Work for Work of a similar character in the locality in which the Work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime Work fixed in the Labor Code. Contractor stipulates that it shall comply with all applicable wages and hour laws, including without limitation Labor Code

H. ENVIRONMENTAL CONTROLS

Contractor shall comply with all rules, regulations, ordinances and statutes that apply to any Work performed under Contract Documents including, without limitation, any toxic, water and soil pollution controls and air pollution controls specified in Government Code, Section 11017. Contractor shall be responsible for insuring that Contractor's employees, subcontractors and the public are protected from exposure to airborne hazards or contaminated water, soil or other toxic materials used during or generated by activities on the Project Site or associated with the Project.

I. TRENCH SAFETY PLAN

1. At least five (5) calendar days in advance of excavating any trench five feet or more in depth, Contractor shall submit to CITY a detailed plan showing the shoring, bracing and sloping design and other provisions to be made for Worker protection from the hazard of caving ground during the excavation, as required by Labor Code Section 6705. A civil or structural engineer registered in California shall prepare and sign any plan that varies from the shoring system standards established by the State Construction Safety Orders.
2. During the course of Work, Contractor shall be responsible for determining where sloping, shoring and/or bracing is necessary and the adequacy of the design, installation, and maintenance of all shoring and bracing for all excavation, including any excavation less than five (5) feet in depth. Contractor will be solely responsible for any damage or injuries that may result from excavating or trenching. CITY's acceptance of any drawings showing the shoring or bracing design or Work schedule shall not relieve Contractor of its responsibilities under this Paragraph.

J. PURCHASES OF MINED MATERIALS REQUIREMENT

1. Contractor shall ensure that all purchases of mined materials such as construction aggregate, sand and gravel, crushed stone, road base, fill materials, and any other mineral materials must originate from a surface mining operation identified on the AB3098 List per the Surface Mining and Reclamation Act of 1975 (SMARA).
2. Within five days of award of contract, Contractor shall submit a report to City which lists the intended suppliers for the above materials and demonstrates that the suppliers are in compliance with the SMARA requirements. The AB3098 List is maintained by the Department of Conservation's Office of Mine Reclamation (OMR) and can be viewed at: www.conservation.ca.gov/OMR/ab_3098_list/index.htm. Note that the list – and access to it - changes periodically and should be reviewed accordingly.

END OF DOCUMENT

SUPPLEMENTARY CONDITIONS

(Regional Permits)

The City of Alameda

SUPPLEMENTARY CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

1. GENERAL

A. DOCUMENTS

All contract documents complement each other. Requirements called for in one are as binding as if called for by all. Contract Documents shall not be construed to create a contractual relationship of any kind between (1) Architect/Engineer and Contractor; (2) CITY and/or its representatives and a subcontractor, sub-sub-contractor or supplier of any Project labor, materials or equipment; or (3) between any persons or entities other than CITY and Contractor. CITY shall be deemed to be an intended third-party beneficiary of each agreement referenced in clause (2) above, and each such agreement shall so provide. (See Division 1 GENERAL REQUIREMENTS, Section 01 11 04 – CONTRACT DOCUMENTS for definition of Contract Documents.)

B. EXERCISE OF CONTRACT RESPONSIBILITIES

In exercising its responsibilities and authorities under Contract Documents, CITY does not assume any duties or responsibilities to any subcontractor or supplier and does not assume any duty of care to Contractor, Contractor's subcontractors or suppliers. Contractor is fully responsible for Contractor's own acts and omissions. Contractor is responsible for all acts and omissions of its subcontractors, suppliers and other persons and organizations performing or furnishing any of the Work, labor, materials or equipment under a direct or indirect contract with Contractor. Except as expressly set forth in Contract Documents, in exercising its responsibilities and authorities under Contract Documents, Architect/Engineer does not assume any duties or responsibilities to any subcontractor or supplier and does not assume any duty of care to Contractor, Contractor's subcontractors or suppliers.

2. REGIONAL PERMITS

A. DOCUMENTS

The following 'REGIONAL PERMITS' attachments are an inherent part of the Contract Documents and complement the General Conditions of the Contract for Construction. These documents represent official authorization between the City and the authoring parties to permit and to construct the Encinal Boat Launch Facility. As such they also introduce constraints, limitations, requirements, and/or additional direction to the awarded Contractor in performance of the Work. Stipulated requirements range from – but are not limited to - directing where staging areas are permitted, regulating the discharge of dredged or fill material, minimizing project related impacts to Essential Fish Habitat, to implementing standard Best Management Practices to prevent the movement of sediment downstream. Contractor is required to review, to become familiar with these documents to understand and to incorporate the full scope of the Project.

ATTACHMENT D:

U.S. ARMY CORPS OF ENGINEERS AUTHORIZATION



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET, 16TH FLOOR
SAN FRANCISCO, CALIFORNIA 94103-1398

MAY 29 2018

Regulatory Division

Subject: File Number 2017-00485S

Mr. Patrick Russi
City of Alameda
2263 Santa Clara Avenue
Recreation and Parks Department
Alameda, California 94605

Dear Mr. Russi:

This correspondence is in reference to your submittal of October 14, 2017, concerning Department of the Army (DA) authorization for the Encinal Boat Launch Project to rehabilitate a boat ramp and repair shoreline bank at an approximate 0.26-acre site at Encinal Beach. The project is located on the southern shore of the City of Alameda, Alameda County, California (Lat: 37°46' 11.54" N/ Long: -122°17'27.27" W).

Work within U.S. Army Corps of Engineers' (Corps) jurisdiction will include repair and stabilization of the concrete and riprap shoreline to the east of the existing boat launch ramp and rehabilitation of the existing boat ramp, associated floats, and dock. To mitigate temporary impacts from construction, the contractor will deploy a silt curtain around the work area prior to any in-water work. Operators will use equipment from the top of bank with only the buckets of excavators entering the active waters to remove bay sediment (roughly 120 cubic yards) from the surface of the existing ramp in preparation for laying down the pre-cast ramp sections. The excavated Bay sediment will be used as on-site fill outside of the sensitive aquatic areas or be disposed of off-site at an appropriate facility. The existing dock will be demolished, along with three existing piles. At the western side of the boat ramp, 80 feet of low-freeboard boarding floats will be installed. The existing concrete and riprap shoreline to the east of the existing boat launch ramp will be repaired to ensure the stability of the bank adjacent to the boat launch ramp. The contractor will remove approximately 900 square feet of existing riprap and reinstall around the edges of the launch ramp. The refurbished launch ramp, floats, dock, and protective riprap total approximately 4,000 square feet below high tide line. All equipment, construction vehicles, and work crew vehicles will be staged on the existing parking lot in the project area. All equipment will access the site via a restricted access road. Construction will occur during the June 1 through October 31 work window. All work shall be completed in accordance with the plans and drawings titled "USACE File # 2017-00487S, Encinal Boat Launch Project, May 22, 2018, Sheets 1 to 6," provided as enclosure 1.

Section 404 of the Clean Water Act (CWA) generally regulates the discharge of dredged or fill material below the plane of ordinary high water in non-tidal waters of the United States, below the high tide line in tidal waters of the United States, and within the lateral extent of

wetlands adjacent to these waters. Section 10 of the Rivers and Harbors Act (RHA) generally regulates construction of structures and work, including excavation, dredging, and discharges of dredged or fill material occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States. Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

Based on a review of the information in your submittal, the project qualifies for authorization under Department of the Army Nationwide Permit (NWP) 3 for Maintenance (82 Fed. Reg. 1860, January 6, 2017), pursuant to Section 404 of the CWA of 1972, as amended (33 U.S.C. § 1344 *et seq.*), and Section 10 of the Rivers and Harbors Act (RHA) of 1899, as amended (33 U.S.C. § 403 *et seq.*). The project must be in compliance with the terms of the NWP cited on our website (www.spn.usace.army.mil/Portals/68/docs/regulatory/NWP/NWP17_3.pdf), the general conditions of the Nationwide Permit Program (www.spn.usace.army.mil/Portals/68/docs/regulatory/NWP/NWP17_GC.pdf), and the San Francisco District regional conditions (www.spn.usace.army.mil/Portals/68/docs/regulatory/NWP/NWP17_RC.pdf). You must also be in compliance with any special conditions specified in this letter for the NWP authorization to remain valid. Non-compliance with any term or condition could result in the revocation of the NWP authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This NWP authorization does not obviate the need to obtain other State or local approvals required by law.

This verification will remain valid until March 18, 2022, unless the NWP authorization is modified, suspended, or revoked. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon a NWP will remain authorized provided the activity is completed within 12 months of the date of a NWP's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 C.F.R. § 330.4(e) and 33 C.F.R. § 330.5 (c) or (d). This verification will remain valid if, during the time period between now and March 18, 2022, the activity complies with any subsequent modification of the NWP authorization. The Chief of Engineers will periodically review NWPs and their conditions and will decide to modify, reissue, or revoke the permits. If a NWP is not modified or reissued within five years of its effective date, it automatically expires and becomes null and void. It is incumbent upon you to remain informed of any changes to the NWPs. Changes to the NWPs would be announced by Public Notice posted on our website (www.spn.usace.army.mil/Missions/Regulatory/Public-Notices.aspx). Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of

Compliance, enclosure 2, verifying that you have complied with the terms and conditions of the permit.

This authorization will not be effective until you have obtained a Section 401 water quality certification from the San Francisco Bay Regional Water Quality Control Board (RWQCB). If the RWQCB fails to act on a valid request for certification within 60 days after receipt of a complete application, the Corps will presume a waiver of water quality certification has been obtained. You shall submit a copy of the certification to the Corps prior to the commencement of work.

This authorization will not be effective until you have obtained a concurrence from the San Francisco Bay Conservation and Development Commission that your project will comply with California's Coastal Zone Management Act. If the Commission fails to act on a valid request for concurrence with your certification within six months after receipt, the Corps will presume a concurrence has been obtained. You shall submit a copy of the concurrence to the Corps prior to the commencement of work.

General Condition 18 stipulates that project authorization under a NWP does not allow for the incidental take of any federally-listed species in the absence of a biological opinion with incidental take provisions. As the principal federal lead agency for this project, the Corps initiated consultation with the National Marine Fisheries Service (NMFS) to address project related impacts to listed species, pursuant to Section 7(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*). By letter of December 19, 2017, cited in enclosure 3, NMFS concurred with the determination that the project was not likely to adversely affect Central California Coast steelhead DPS (*Oncorhynchus mykiss*) and North American green sturgeon southern DPS (*Acipenser medirostris*) and designated critical habitat for these species.

As the principal federal lead agency for this project, the Corps also initiated consultation with the NMFS to address project related impacts to Essential Fish Habitat (EFH) for various life stages of fish species managed with the Pacific Groundfish Fishery Management Plan, the Coastal Pelagics Fishery Management Plan, and the Pacific Coast Salmon Fishery Management Plan, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act of 1996, as amended (16 U.S.C. § 1801 *et seq.*). By letter of December 19, 2017, cited in enclosure 3, the NMFS did not issue conservation recommendations.

In order to ensure compliance with this NWP authorization, the following special conditions shall be implemented:

1. The NMFS concurred with the determination that the project was not likely to adversely affect Central California Coast steelhead DPS (*Oncorhynchus mykiss*) and North American green sturgeon southern DPS (*Acipenser medirostris*) and designated

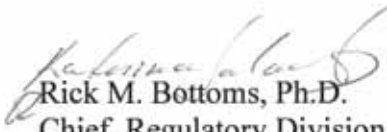
critical habitat for this species. This concurrence was premised, in part, on project work restrictions outlined in enclosure 2. These work restrictions are incorporated as special conditions to the NWP authorization for your project to ensure unauthorized incidental take of species and loss of critical habitat does not occur.

2. Incidents where any individuals of Central California Coast steelhead DPS and North American green sturgeon southern DPS listed by NOAA Fisheries under the Endangered Species Act appear to be injured or killed as a result of discharges of dredged or fill material into waters of the United States or structures or work in navigable waters of the United States authorized by this NWP shall be reported to NOAA Fisheries, Office of Protected Resources at (301) 713-1401 and the Regulatory Office of the San Francisco District of the U.S. Army Corps of Engineers at (415) 503-6795. The finder should leave the plant or animal alone, make note of any circumstances likely causing the death or injury, note the location and number of individuals involved and, if possible, take photographs. Adult animals should not be disturbed unless circumstances arise where they are obviously injured or killed by discharge exposure, or some unnatural cause. The finder may be asked to carry out instructions provided by NOAA Fisheries, Office of Protected Resources, to collect specimens or take other measures to ensure that evidence intrinsic to the specimen is preserved.
3. All standard Best Management Practices shall be implemented to prevent the movement of sediment downstream. No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products, or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the waterways.

You may refer any questions on this matter to Myla Ablog of my Regulatory staff by telephone at (415) 503-6732 or by e-mail at Myla.A.Ablog@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: <http://www.spn.usace.army.mil/Missions/Regulatory.aspx>

Sincerely,



Rick M. Bottoms, Ph.D.
Chief, Regulatory Division

Enclosures

Copy Furnished (w/out encls):

WRA, Inc., San Rafael, CA (Attn: Sean Avent)

Copy Furnished (w/ encl 1 only):

CA RWQCB, Oakland, CA

Enclosure 2

Permittee: City of Alameda

File Number: SPN-2017-00485S, Encinal Boat Launch Project

**Certification of Compliance
for
Nationwide Permit**

"I hereby certify that the work authorized by the above referenced File Number and all required mitigation have been completed in accordance with the terms and conditions of this Nationwide Permit authorization."

(Permittee)

(Date)

Return to:

U.S. Army, Attn: Myla Ablog Corps of Engineers
San Francisco District
Regulatory Division, CESP-N-R-S
1455 Market Street 16th Floor
San Francisco, CA 94103-1398



Enclosure 2

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

December 19, 2017

Refer to NMFS No: WCR-2017-8309

Rick M. Bottoms, Ph.D.
Regulatory Branch Chief
U.S. Department of the Army
San Francisco District, Corps of Engineers
1455 Market Street
San Francisco, California 94103-1398

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Encinal Boat Launch and Shoreline Restoration Project (Corps File No. 2016-00285S)

Dear Dr. Bottoms:

On October 30, 2017, NOAA's National Marine Fisheries Service (NMFS) received your request for written concurrence that the U.S. Army Corps of Engineers' (Corps) proposed authorization of the Encinal Boat Ramp and Shoreline Restoration project in the City of Alameda, Alameda County, California under the Section 404 of the Clean Water Act of 1973 (33 U.S.C. Section 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403) is not likely to adversely affect species listed as threatened or endangered or critical habitats designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparations of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' Public Consultation Tracking System (<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>).¹ A complete record of this consultation is on file at NMFS North Central Coast Office, Santa Rosa, California.

¹ Once on the PCTS homepage, use the following PCTS tracking number within the Quick Search column: WCR-2017-8309



- Central California Coast steelhead DPS** (*Oncorhynchus mykiss*)
 threatened (71 FR 834; January 5, 2006)
 critical habitat (70 FR 52488; September 2, 2005); and
North American green sturgeon southern DPS (*Acipenser medirostris*)
 threatened (71 FR 17757; April 7, 2006)
 critical habitat (74 FR 52300; October 9, 2009).

The life history of steelhead is summarized in Busby *et al.* (1996). Central California Coast (CCC) steelhead use San Francisco Bay adjacent to the project area as a migration corridor. The life histories of juvenile steelhead vary widely as juveniles may reside in freshwater anywhere from one to three years before emigrating as smolts (Shapovalov and Taft 1954). CCC steelhead pass through the greater San Francisco Bay on their way to the ocean to rear as juveniles or to upstream areas to spawn as adults. Steelhead migrate to the ocean as smolts from January through May and migrate from the ocean upstream as adults to spawn from December through April (Fukushima and Lesh 1998).

The life history of threatened green sturgeon in California is summarized in Adams *et al.* (2002) and NMFS (2005). The southern DPS of North American green sturgeon are anadromous, and spawn in the deep turbulent sections of the upper reaches of the Sacramento River. As juvenile green sturgeon age, they migrate downstream and live in the lower delta and bays, spending from three to four years there, foraging in the relatively warm estuary waters, before entering the ocean (Moser and Lindley 2007). Green sturgeon forage on benthic prey items throughout the estuary, notably shallow tidal flats dominated by burrowing shrimp and other benthic prey items (Dumbauld *et al.* 2008). Green sturgeon juveniles, sub-adults, and adults (pre-and post-spawning) are present in San Francisco Bay at various times throughout the entire year.

Regarding EFH, the Corps has determined that the proposed action may result in minimal adverse effects to EFH. This determination is based on the project's temporary disturbance and that fish will be able to return to the area immediately after project activities cease. The project site is located within an area identified as EFH for various life stages of fish species managed with the Pacific Coast Salmon Fishery Management Plans (FMP) and the Pacific Groundfish FMP. The project area is also within an area designated as Habitat Areas of Particular Concern (HAPC) for various federally-managed fish species within the Pacific Groundfish FMP. HAPC are described in the regulations as subsets of EFH that are "rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area" (50 CFR 600.815). Designated HAPC are not afforded any additional regulatory protection under MSA; however, federal projects with potential adverse impacts to HAPC are more carefully scrutinized during the consultation process. As defined in the Pacific Groundfish FMP, San Francisco Bay, including the project area, is identified as estuary HAPC.

Consultation History

The Corps initiated informal consultation with NMFS by letter dated October 27, 2017, and provided a Biological Resources Assessment prepared by WRA Environmental Consultants, dated

area is mostly dewatered and after silt curtains have been installed; thus, no fish are expected to be present in the work area during these activities. Therefore, the potential for striking an individual green sturgeon with rock is expected to be discountable.

Elevated sound pressure levels in the action area are expected to occur with installation of the four 16-inch diameter concrete piles. Green sturgeon may be affected by exposure to high underwater sound pressure levels (SPLs) produced by pile driving with an impact hammer. Fish could be injured or killed when exposed to impulsive sound sources such as pile driving with impact hammers. Pathologies of fish associated with very high sound level exposure and drastic, near instantaneous changes in pressure are collectively known as *barotraumas*. These include hemorrhage and rupture of blood vessels and internal organs, including the swim bladder and kidneys. Death can be instantaneous, occur within minutes after exposure, or occur several days later. Fish can also die when exposed to lower, continuous sound pressure levels if exposed for longer periods of time (Hastings 1995). However, SPLs and cumulative SPLs associated with concrete piles are much lower than comparably sized steel piles (Hastings 2005). Also, a minimum depth of approximately 2 meters of water is necessary for sound pressure waves to propagate through water (Hastings 1995). A study contained in the CalTrans Pile Driving Compendium (Buchler 2015) recorded the driving of 16-inch diameter piles at the Concord Naval Air Station and concluded both peak and root mean square (RMS) pressure levels remained below the thresholds for causing barotrauma. Thus, the potential for barotrauma injuries resulting from this project's pile driving activities on green sturgeon is considered to be discountable. Pile driving activities could result in noise that may startle green sturgeon and result in temporary dispersion from the action area. If green sturgeon were to react behaviorally to the sound produced by construction activities, adequate water depths and area within the adjacent open waters of Central San Francisco Bay would be expected to provide fish sufficient area to disperse.

The action area is located within designated critical habitat for CCC steelhead and the southern DPS of green sturgeon. The designations of critical habitat for CCC steelhead and green sturgeon uses the term primary constituent element (PCE) or essential features. The new critical habitat regulations (81 FR 7214) replace this term with physical or biological features (PBFs). Regardless of whether the original designation identified primary constituent elements, physical or biological features, or essential features, the shift in terminology does not change the approach used in conducting our analysis. In this letter of concurrence, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

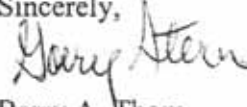
The PBFs of designated critical habitat for CCC steelhead include estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation. For the southern DPS of green sturgeon, the PBFs of designated critical habitat in estuarine areas include food resources, water flow, water quality, migratory corridor, water depth, and sediment quality.

During construction, critical habitat will be temporarily affected by localized increases in turbidity subsequent to work activities and when the tide returns after silt curtains have been removed. As

The Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH (50 CFR 600. 920(l)). This concludes the MSA portion of this consultation.

Please direct questions regarding this letter to Gary Stern, North Central Coast Office in Santa Rosa, California at (707) 575-6060, or via e-mail at gary.stern@noaa.gov.

Sincerely,


for Barry A. Thom
Regional Administrator

cc: Myla Ablog, USACE, San Francisco, California
Copy to ARN File # 151422WCR2017SR00281
Copy to Chron File

Literature Cited

- Adams, P.B., C.B. Grimes, J.E. Hightower, S.T. Lindley, and M.L. Moser. 2002. Status Review for North American Green Sturgeon, *Acipenser medirostris*. National Marine Fisheries Service, Southwest Fisheries Science Center. 49 pages. [Document available at: <http://www.nwr.noaa.gov/Other-Marine-Species/upload/grn-sturgeon-status.pdf>].
- Benfield, M. C., & T. J. Minello. 1996. Relative effects of turbidity and light intensity on reactive distance and feeding of an estuarine fish. *Environmental Biology of Fish*, 46: 211-216.
- Buehler, D., R. Oestman, J. Reyff, K. Pommerenck, and B. Mitchell. 2015 Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Prepared for California Department of Transportation, 1120 N Street, Sacramento, California 95814. November 2015.
- Busby, P.J., T.C. Wainwright, G.J. Bryant, L. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of West Coast steelhead from Washington, Idaho, Oregon and California. United States Department of Commerce, National Oceanic and Atmospheric Administration Technical Memorandum NMFS-NWFSC-27. 261 pages. [Document available at: http://www.nwfsc.noaa.gov/assets/25/4245_06172004_122523_steelhead.pdf]
- Cloern, J.E. 1987. Turbidity as a control on phytoplankton biomass and productivity in estuaries. *Continental Shelf Research* 7(11/12):1367-1381.
- Dumbauld, B. R., D. L. Holden, and O. P. Langness. 2008. Do sturgeon limit burrowing shrimp populations in Pacific Northwest estuaries. *Environmental Biology of Fishes* 83:283-296.

ATTACHMENT E:

**SAN FRANCISCO BAY REGIONAL WATER QUALITY
CONTROL BOARD
WATER QUALITY CERTIFICATION**

San Francisco Bay Regional Water Quality Control Board

Sent via electronic mail: No hard copy to follow

September 10, 2018
CIWQS Place No. 840802 (bkw)
CIWQS Reg. Meas. No. 416696
Corps File No. 2017-00485S

City Of Alameda
Recreation And Parks Department
2263 Santa Clara Ave.
Alameda, CA 94501

Attn: Patrick Russi (Prussi@Alamedaca.Gov)

Subject: Water Quality Certification for the Encinal Boat Launch Ramp Rehabilitation Project in the City of Alameda, Alameda County

Dear Mr. Russi:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff has reviewed the application materials that were submitted by WRA, Inc. (the Applicant's authorized agent) on behalf of the City of Alameda, Recreation and Parks Department (the Applicant) for the subject project (Project). On May 29, 2018, the Applicant was informed by the U.S. Army Corps of Engineers (Corps) that the Project was authorized under Nationwide Permit (NWP) 3 (*Maintenance*), pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899 (Corps File No. 2017-00485S). You applied to this office under CWA Section 401 for water quality certification (Certification) verifying that the Project does not violate State water quality standards.

Project Description: The following Project description was derived from application materials received on October 11, 2017.

Project Purpose. The Project purpose is to refurbish the existing boat ramp, associated docks, and shoreline facilities to continue to provide access to San Francisco Bay for motorized and non-motorized watercraft.

Project Location: The Encinal Boat Launch Facility occupies 4.41 acres (APN 74-890-4 and APN 74-1369-5-1) on the western side of the City of Alameda (Figure 1 and Sheet T-1 in Attachment A). The Project site is located at latitude 37°46' 11.54" N, longitude 122°17'27.27" W. Access to the Project site is provide by an access road off of Central Avenue that dead ends at the facility's parking lot.

The Project site encompasses the public facilities area, the boat ramp, and rock rip-rap armored areas along the shoreline adjacent to the boat ramp. The Project area is a recreation area used by

the general public, including fishers, boaters, and non-profit outrigger and sailing clubs. Biological communities mapped in the Project site are shown in Att. A, Figure 2.

The Mean High Water (MHW) and High Tide Line (HTL) elevations in the Project site are 5.8 feet NAVD88 and 8.1 feet NAVD88, respectively, as reported by the National Oceanic and Atmospheric Administration (NOAA) for the Alameda Station (Station ID # 9414750). Waters of the U.S. and Waters of the State at the Project site are shown on Att. A, Figure 3.

Project Work. The Project includes the following elements within waters of the State: (1) repair and stabilization of the concrete and rip-rap shoreline armoring to the east of the existing boat launch ramp, and (2) rehabilitation of the existing boat ramp and associated floats and dock. Site plans for the Project are provided in Att. A, Sheets T-1 through C-20. Activities impacting waters of the State are those activities below the HTL elevation. The refurbished launch ramp, floats, dock, and replaced rip-rap have a total area of about 4,000 square feet below the HTL.

Prior to in-water construction, a silt curtain will be deployed around the work area. About 120 cubic yards of sediment will be removed from the surface of the existing ramp in preparation for laying down the new pre-cast concrete ramp sections. The sediment will be removed by land-based equipment with only the buckets of excavators entering the active waters. Equipment will only encroach below the HTL at low tide when those areas are not inundated. Excavated Bay sediment will be used as on-site fill outside of jurisdictional waters or will be disposed of off-site at an appropriate facility.

The existing concrete and rip-rap shoreline to the east of the existing boat launch ramp will be repaired to stabilize the bank adjacent to the boat launch ramp. About 900 square feet of existing riprap and concrete will be removed and replaced with rock rip-rap to a stable slope.

The existing 36-foot by 24-foot upper concrete section of the boat ramp will be removed and replaced with a new 30-foot by 22-foot two-lane launch ramp with 8-foot-wide by 20-foot-long abutments on each side. The upper 5-feet of the new ramp and abutments will be above HTL. The lower portion of the existing boat ramp will remain in place and be covered by 38-foot by 60-foot precast V-grooved concrete panels. An additional pre-cast concrete pad, 20 feet by 8 feet, will be installed at the south-eastern corner of the new ramp to act as a landing pad for the eastern boarding float. A land-based crane will set pre-cast concrete panels in place, with workers guiding them into place from the Bay. All portions of the new concrete panels that will be submerged in Bay water will be fully cured before placement.

The existing dock will be demolished, along with three existing piles. At the western side of the boat ramp, 80 feet of low-freeboard boarding floats will be installed. These floats will consist of four linked eight-foot by 20-foot floating docks held in place by two 16-inch in diameter concrete guide piles. The floating docks will provide access for watercraft. At the eastern side of the boat ramp, a 50-foot-long gangway will be constructed with a toe plate capping its southern end. An 8-foot by 20-foot boarding float will be connected to the end of the gangway. The pier and gangway will be kept in place by two 16-inch in diameter concrete guide piles. The floats will be constructed of metal frames, with decking supported on the water by polyethylene floatation tubes. The existing piles and boarding float will be removed and disposed of at an appropriate off-site facility.

Project Impacts: The *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State. The Project will impact San Francisco Bay Lower. The beneficial uses of San Francisco Bay Lower listed in the Basin Plan are industrial service supply, commercial and sport fishing, shellfish harvesting, estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact recreation, noncontact water recreation, and navigation.

About 4,000 square feet (0.09 acres) of fill will be replaced within waters of the State by the Project. No loss of jurisdictional area will result from the project because the fill will be placed within the footprint of the existing concrete ramp and associated riprap and rubble. Impacts to Waters of the State are shown in Figure 3 and the Project design sheets in Att. A. With the implementation of Best Management Practices (BMPs) and avoidance and minimization measures discussed below, these impacts are not anticipated to adversely affect jurisdictional waters of the Bay or special-status species with potential to occur in the Project site.

The project will occur within the Bay, which contains designated critical habitat for six state and federal listed endangered and threatened species:

- Green sturgeon (Federal Threatened, Critical Habitat Present)
- Central California Coast steelhead DPS (Distinct Population Segment) (Federal Threatened, Critical Habitat Present)
- Steelhead - Central Valley DPS (Federal Threatened, Critical Habitat Present)
- Sacramento River winter run (SRWR) Chinook salmon (Federal Endangered, State Endangered, Critical Habitat Present)
- Central Valley spring run (CVSR) Chinook salmon ESU (Federal Threatened, State Threatened)
- Longfin smelt (State Threatened)

In addition, the Bay contains habitat designated as Essential Fish Habitat (EFH) by the Coastal Pelagic and West Coast Groundfish Fisheries Management Plans (FMPs). Small areas of eelgrass have been previously mapped by eelgrass surveys about 375 feet offshore of the project site, but eelgrass has not been mapped closer to the Project site. Due to the location of eelgrass previously mapped within the vicinity of the project site and the minor nature of project construction, direct or indirect impacts to eelgrass are not anticipated.

The site does not support areas that are vital as breeding, feeding, or foraging habitat for any of the threatened and endangered species with the potential to be present in the vicinity. Occurrences of these species are considered unlikely and incidental. The Project site does not provide spawning habitat nor is it part of a migratory corridor for the species. Furthermore, the Project will not adversely affect or modify Critical Habitat, impact or change any of the Primary Constituent Elements' (PCEs) physical or biological features. The Project will incorporate protective measures including a seasonal work window, performing work during low tide, and other standard BMPs. Furthermore, the Project will not adversely affect or modify Critical Habitat, or impact or change any of the PCEs physical or biological features.

On December 19, 2017, the National Marine Fisheries Service (NMFS) issued an *Endangered Species Act Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Encinal Boat Launch and Shoreline Restoration Project* (Corps File No. 2016-00285S) (NMFS Reference No: WCR-2017-8309). Based on information provided by the Corps and the Applicant, NMFS concluded that, although the Project may result in localized temporary degradation of water quality and disturbance of habitat, adverse effects would be minimal and of short duration. NMFS also concluded that the Project would adversely affect EFH designated under the Pacific Groundfish FMP; however, adverse effects would be minimal in nature. Based on these conclusions, NMFS did not provide EFH Conservation Recommendations to reduce the magnitude of Project effects on EFH.

Project Mitigation: The Project will result in temporary impacts to open waters of the Bay within the footprint of the existing boat launch and associated rock rip-rap. With the implementation of appropriate avoidance and minimization measures, the Project is not anticipated to have significant impacts to beneficial uses of waters of the State, special-status species, or their habitat. The avoidance and minimization measures listed in Condition 5 will be implemented as part of the Project. Compensatory mitigation is not necessary for the Project's temporary impacts to waters of the State.

CEQA: Acting as the California Environmental Quality Act (CEQA) lead agency, the City of Alameda determined that the Project is Categorically Exempt from review under CEQA pursuant to California Code of Regulations, Title 14 (14 CCR), Section 15301, since the Project consists of repair, maintenance, or minor alteration of an existing facility. The City filed a Notice of Exemption (NOE) with the Alameda County Clerk on March 14, 2013. The Water Board, as a responsible agency under CEQA, concurs with the NOE.

Certification: I hereby issue an order certifying that any discharge from the referenced Project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this Water Quality Certification. The following conditions are associated with this certification:

1. The Project shall be implemented in conformance with the Project description in the body of this Certification and the design sheets in Attachment A. Any changes to the activities described in the body of this Certification, including changes to the avoidance and minimization measures presented above in the discussion of mitigation, must be submitted to the Executive Officer for review and approval before they are implemented;
2. No debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete, or washings thereof, or other construction related materials or wastes, oil or petroleum products or other organic or earthen material shall be allowed to enter into, or be placed where they may be washed by rainfall or runoff into waters of the State. Any of these

materials placed within or where they may enter waters of the State by the Applicant or any party working under contract, or with the permission of the Applicant shall be removed immediately. When operations are completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into waters of the State. During construction, the contractor shall not dump any litter or construction debris within or immediately adjacent to the Bay. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site;

3. The Applicant shall adhere to the terms of the NWP 3 (*Maintenance*) issued by the Corps (Corps File No. 2017-000485S);
4. All work performed within waters of the State shall be completed in a manner that minimizes impacts to beneficial uses of waters of the State and aquatic habitat quality;
5. To protect wildlife within the Project site, the following avoidance and minimization measures shall be implemented:
 - All in-water work shall be completed during the NMFS-approved June 1 to November 30 work window for sensitive species.
 - A silt curtain will be installed prior to the in-water construction phase to ensure no special- status species are within the work area and siltation from the project does not impact adjacent Bay habitats, including any eelgrass beds, should they be present.
 - All Bay sediment removed will be used for on-site fill or disposed of in an appropriate off-site location.
 - All construction personnel and equipment will be confined to designated work areas and access corridors.
 - Only land-based cranes and land-based equipment will be used to place concrete slabs onto the lower portion of the boat launch and perform other work will minimize impacts to open water.
 - No dredging of silt outside the launch ramp area footprint will occur.
 - No mechanized equipment will enter the water to install precast concrete sections; wading workers will guide materials into place.
 - A spill prevention and control plan will be developed to minimize the chance of toxic spills. Spill kits should be present for any work adjacent to open waters.
 - If construction is initiated within the breeding bird season (February 1 – August 31), preconstruction breeding bird surveys will be completed by a qualified biologist. If active bird nests established by species protected by the Migratory Bird Treaty Act and California Fish and Game Code are observed in the vicinity of the project area, the biologist will establish buffer distances for construction activities which will remain in place until after the completion of construction. Buffer distances will be established based on the bird species observed, tolerance of the species to construction disturbance, and the location of the nest.
6. Crews shall maintain a clean work area, including properly containing trash in covered

garbage cans and removing all food trash from the Project site daily, to prevent attracting wildlife to the site;

7. Within 30 days of the first Project-related disturbance of waters of the State, the Applicant shall provide the Executive Officer with written notification that the Project has disturbed waters of the State;
8. Within 30 days of completing all Project elements with impacts to waters of the State that are authorized by this Certification, the Applicant shall provide the Executive Officer with a Final Project Completion Report that includes: (a) the Project name; (b) the CIWQS Place ID listed at the top of this Certification; and (c) the date Project impacts to waters of the State at the Project site were completed;
9. To document Project completion, the Applicant shall establish a minimum of 2 photo-documentation points at the Project site. These photo-documentation sites shall be selected to document the condition of bank armoring adjacent to the boat launch ramp and boat launch ramp before and after Project implementation. The Applicant shall prepare a site map with the photo-documentation points clearly marked. Following Project implementation, the Applicant shall photographically document the immediate post-implementation condition of the site. Pre- implementation photographs, post-implementation photographs, and maps with the locations of the photo-documentation points shall be included in the Project's as-built report (See Condition 10);
10. The Applicant shall submit an as-built report to the Water Board within 3 months of completing Project implementation. The report shall include the following information:
 - The as-built report shall document any significant deviations between the actual extent of impacts to waters of the State and the impacts authorized by this Certification and shall document the need for any such deviations. The as-built report shall include a brief description of implementation activities;
 - Pre- and post- implementation photographs taken from established photo-documentation stations (Condition 9); and
 - A description of whether any special-status species or other sensitive resources were encountered during Project implementation and, if so, what impact avoidance steps were taken in response;
11. In accordance with California Water Code (CWC) Section 13260, the Applicant shall file with the Water Board a report of any material change or proposed change in the ownership, character, location, or quantity of this waste discharge. Any proposed material change in operation shall be reported to the Water Board's Executive Officer at least 60 days in advance of the proposed implementation of any change. This shall include, but not be limited to, all significant new soil disturbances, all proposed expansions of development, or any change in drainage characteristics at the Project site. For the purpose of this Order, this includes any proposed change in the boundaries of the area of wetland/waters of the State to be filled;
12. The Applicant shall provide a copy of this Certification and all conditions to all contractors and all subcontractors conducting Project work, and require that a copy of this Certification remain in their possession at the work site. The Applicant shall be responsible for work conducted by its contractors and subcontractors at the Project site;

13. The Applicant shall provide Water Board staff access to the Project site to document compliance with this Certification;
14. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to CWC Section 13330 and 23 CCR Section 3867;
15. This certification action does not apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license, unless the pertinent certification application was filed pursuant to 23 CCR Subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought; and
16. Certification is conditioned upon total payment of the full fee required in State regulations (23 CCR Section 3833). The total application fee for a project with 0.09 acres of temporary impacts at the time the application was deemed complete was \$1,500. The Water Board received payment in full for the application fee on September 5, 2018. An annual fee shall be paid to the Water Board if the work is not completed within the same year that this Certification is issued (work is considered completed when the notification required by Condition 8 is received) (Note: The Annual Fee may be changed by the State Board; at the time of Certification it was \$1,500 per year).

This certification applies to the Project as proposed in the application materials and designs referenced above in the conditions of certification. Be advised that failure to implement the Project in conformance with this certification is a violation of this water quality certification. Also, any violation of water quality certification conditions is a violation of State law and subject to administrative civil liability pursuant to CWC Section 13350. Failure to meet any condition of a certification may subject the Applicant to civil liability imposed by the Water Board to a maximum of \$10,000 per day of violation or \$10 for each gallon of waste discharged in violation of this action. Any requirement for a report made as a condition to this action (e.g., Conditions 7, 8, 10, and 11) is a formal requirement pursuant to CWC Section 13267, and failure or refusal to provide, or falsification of such required report, is subject to civil liability as described in CWC Section 13268. The burden, including costs, of these reports, bears a reasonable relationship to the need for the reports and the benefits to be obtained. Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements.

Please contact Brian Wines of my staff at (510) 622-5680 or brian.wines@waterboards.ca.gov if you have any questions. All future correspondence regarding this Project should reference the Site Number indicated at the top of this letter.

Sincerely,



Digitally signed by
Keith H. Lichten,
Division Chief
Date: 2018.09.10
15:50:26 -07'00'

for Bruce H. Wolfe
Executive Officer

Attachment A: Location Maps, Site Figures, and Design Sheets

Cc: SWRCB, DWQ (Stateboard401@waterboards.ca.gov)
U.S. EPA, WTR-8, Sam Ziegler (Ziegler.Sam@epa.gov)
Corps, Katerina Galacatos (katerina.galacatos@usace.army.mil)
Corps, Myla Ablog (myla.a.ablog@usace.army.mil)
WRA, Inc., Sean Avent (avent@wra-ca.com)

ATTACHMENT A

Water Quality Certification for the Encinal Boat Launch Ramp Rehabilitation Project City of Alameda Alameda County

Location Maps, Site Figures, and Design Sheets

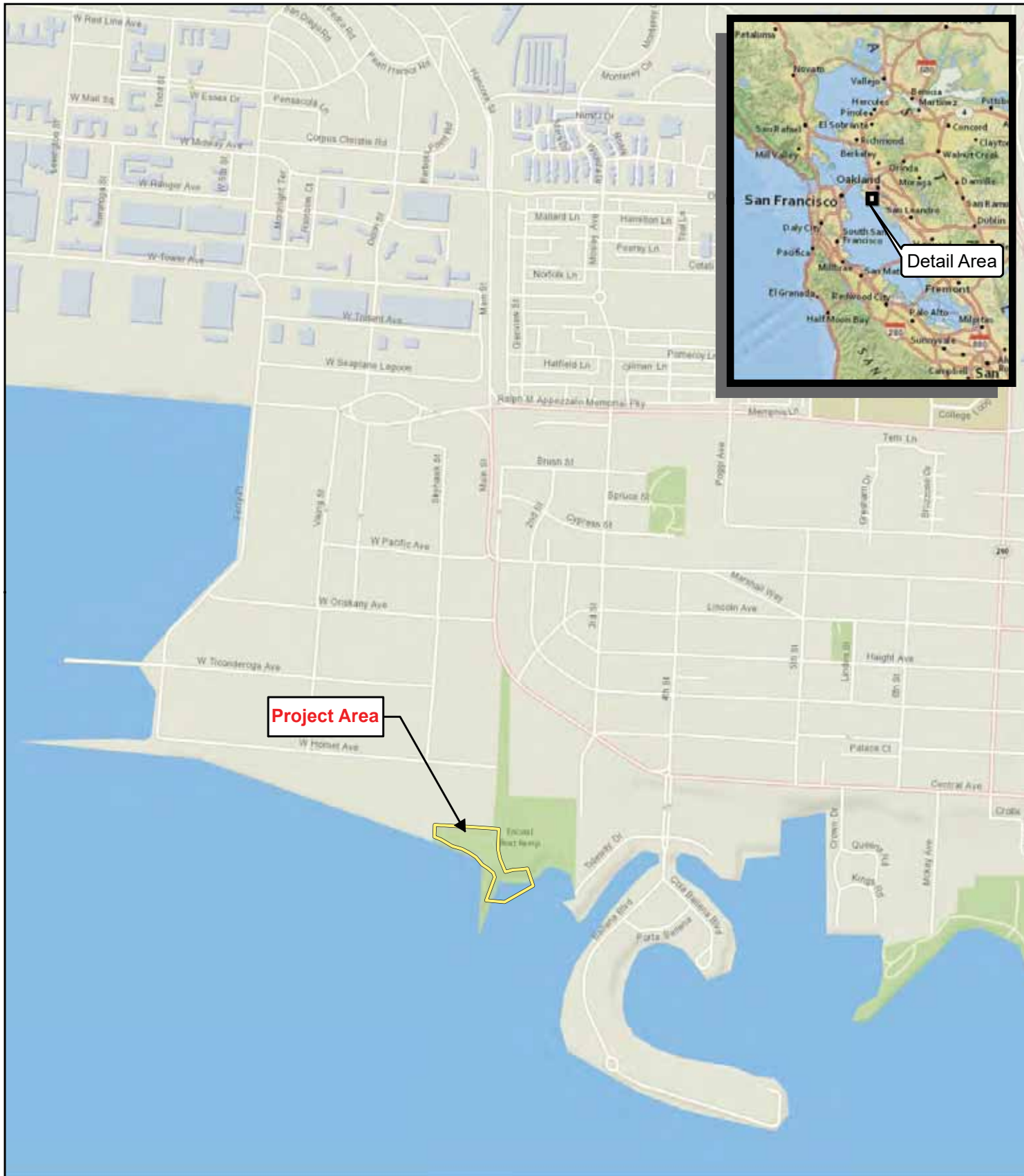
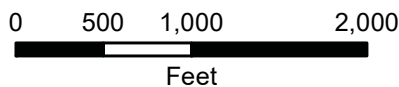


Figure 1. Project Area Location Map

Encinal Boat Launch
City and County of Alameda, California



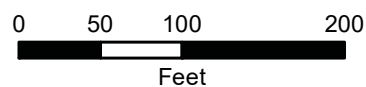
Map Prepared Date: 10/6/2017
Map Prepared By: smortensen
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA



Figure 2. Biological Communities within Study Area



Encinal Boat Launch
City and County of Alameda, California



Map Prepared Date: 10/6/2017
 Map Prepared By: smortensen
 Base Source: National Geographic
 Data Source(s): CNDDDB January 2017



Figure 3. Potential Jurisdictional Areas

Encinal Boat Launch
City and County of Alameda, California



0 12.5 25 50
Feet



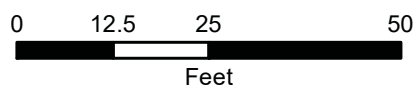
Map Prepared Date: 10/6/2017
Map Prepared By: smortensen
Base Source: National Geographic
Data Source(s): CNDDDB January 2017



Figure 4. Placement of Fill



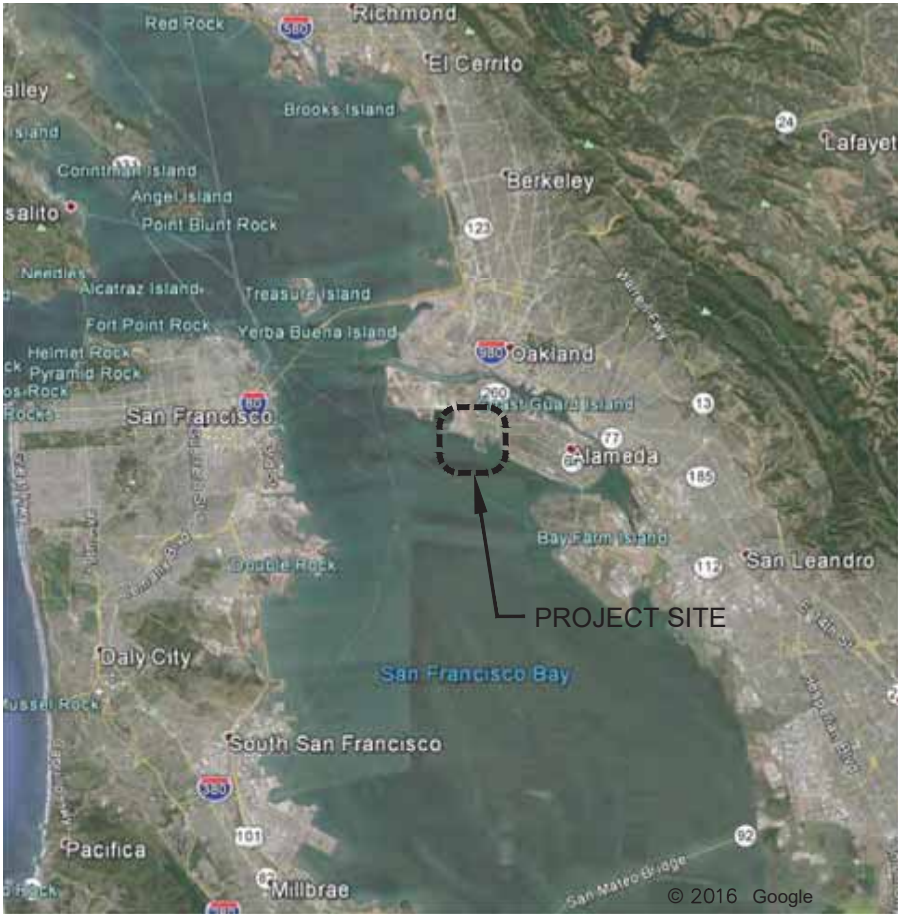
Encinal Boat Launch
City and County of Alameda, California



Map Prepared Date: 10/6/2017
 Map Prepared By: smortensen
 Base Source: National Geographic
 Data Source(s): CNDDDB January 2017

ENCINAL BOAT LAUNCH RAMP REFURBISHMENT

ALAMEDA, CALIFORNIA



VICINITY MAP



LOCATION MAP

INDEX OF DRAWINGS		
SHEET NO.	SHEET	DRAWING TITLE
1	T-1	TITLE SHEET
2	G-1	EXISTING RAMP SITE & DEMOLITION PLAN
3	C-1	OVERALL SITE PLAN
4	C-2	DETAILED SITE PLAN
5	C-3	PARKING LOT PLAN
6	C-4	RAMP APPROACH PLAN
7	C-5	RESTROOM & LOT PLAN
8	C-6	SITE UTILITIES
9	C-7	LAUNCH RAMP PLAN AND PROFILE
10	C-8	LAUNCH RAMP SECTIONS AND DETAILS
11	C-9	RAMP PRECAST PANELS
12	C-10	DOCK PLAN AND PROFILE
13	C-11	DOCK DETAILS
14	C-12	DOCK FLOAT DETAILS
15	C-20	RESTROOM

LEGEND:

---	PROPERTY LINE
-o-o-o-o-o-	CHAIN LINK FENCE
-□-□-□-□-	TIMBER RAIL FENCE
---SS---SS---SS---SS---	SANITARY SEWER
---E---E---E---E---	ELECTRIC
---U---U---U---U---	UTILITY TRENCH
□ OR ○	PILE
▨	DEMOLITION

100% DESIGN

ABBREVIATIONS:

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
BSW	BACK OF SIDEWALK
CONC	CONCRETE
(E), EXIST	EXISTING
E	EASTING
EF	EACH FACE
EL	ELEVATION
EW	EACH WAY
FG	FINISH GRADE
FL	FLOWLINE
N	NORTHING
O.C.	ON CENTER
OG	ORIGINAL GROUND
SW	SIDEWALK
TBD	TO BE DETERMINED
TC	TOP OF CURB
TYP	TYPICAL
VERT	VERTICAL
WP	WORK POINT

ELEVATIONS (FT)



ALAMEDA DATUM	MLLW
3.31	9.65 HIGHEST OBSERVED
0	6.6 MHHW
-0.59	6.34 ACD
-2.78	5.75 MHW
	3.56 MSL
-6.34	0 MLLW
-8.91	-2.57 LOWEST OBSERVED

NOTE:

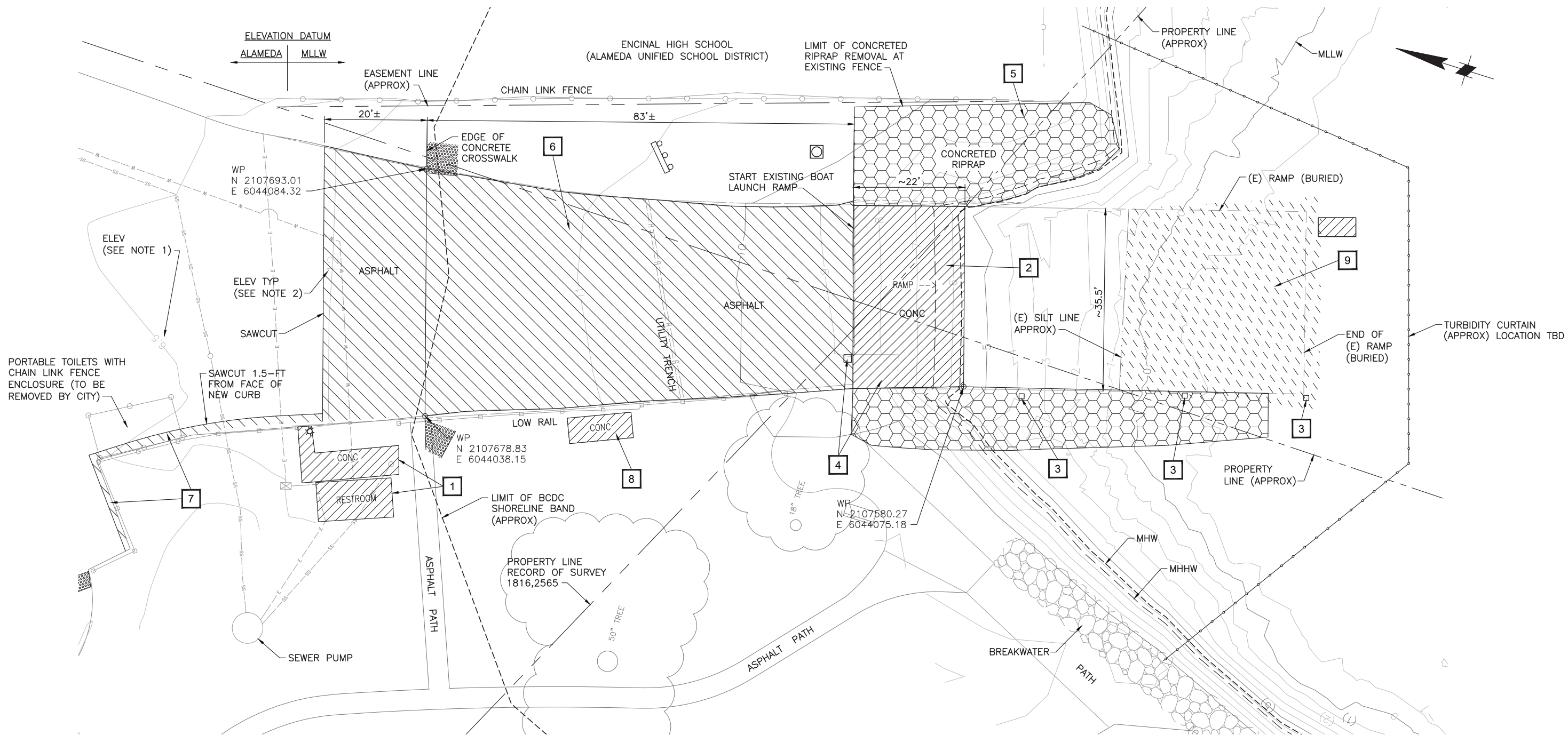
BACKGROUND AERIAL PHOTO SHOWN FOR LOCATION MAP IS FROM GOOGLE EARTH 2014

GENERAL NOTES:

- SCOPE OF WORK: CONSTRUCT BOAT LAUNCH RAMP WITH SCOUR PROTECTION, BOARDING FLOATS WITH GUIDE PILES AND LOW FREEBOARD DOCK, PARKING LOT IMPROVEMENTS (OVERLAY, RESTRIPING, SIGNAGE), ACCESSIBLE PARKING IMPROVEMENTS AND ACCESS, FISH CLEANING STATION IMPROVEMENTS, LIGHT FIXTURES, RESTROOM, AND OUTDOOR SHOWER.
- WORK ITEMS DESIGNATED AS "NIC" ARE NOT IN CONTRACT.
- WORK SHALL CONFORM TO CALIFORNIA DEPARTMENT OF PARKS AND RECREATION, DIVISION OF BOATING AND WATERWAYS (DBW) "LAYOUT, DESIGN AND CONSTRUCTION HANDBOOK FOR SMALL CRAFT BOAT LAUNCHING FACILITIES."
- REPRESENTATIVES OF THE DBW SHALL BE ALLOWED ACCESS TO ALL PARTS OF THE CONSTRUCTION WORK.

					 <div>2185 N. CALIFORNIA BLVD, STE 500 WALNUT CREEK, CA 94596 925-944-5411</div>	ENCINAL BOAT LAUNCH RAMP REFURBISHMENT	DATE 04-10-2018
							SHEET 1 OF 15
							T-1
REVISION	DESCRIPTION	BY	DATE			TITLE SHEET	

Q:\WC\9020 Encinal BLF\4_CADD\9020_G-1.dwg 4/9/2018 1:22 PM



PLAN VIEW

NOTES:

1. PARKING LOT ELEVATIONS ARE IN CITY OF ALAMEDA DATUM (SEE DWG T-1).
2. RAMP ELEVATIONS ARE MLLW (SEE DWG T-1).
3. DRAWING IS BASED UPON SURVEY BY PLS SURVEYS INC, DECEMBER 4, 2015.
4. BOTTOM CONTOURS BASED UPON BATHYMETRIC SURVEY PROVIDED BY ANDREGG GEOMATICS FOR THE CALIFORNIA PARKS, DIVISION OF BOATING AND WATERWAYS, FEB 4, 2013.
5. AFTER REMOVAL OF CONCRETED RIPRAP, REPLACE-IN-KIND TO ORIGINAL LINES AND GRADES. EXISTING RIPRAP ROCK MAY BE REUSED AFTER REMOVAL OF CONCRETE.
6. IN AREA TO RECEIVE ASPHALT CONCRETE SURFACING. REMOVE ASPHALT CONCRETE SURFACING AND MINIMUM OF 4-INCHES OF BASE (6" TOTAL DEPTH). IN AREA TO RECEIVE CONCRETE WALK, REMOVE ASPHALT CONCRETE SURFACING AND MINIMUM 8-INCHES OF BASE (10" TOTAL DEPTH)
7. REMOVE ASPHALT CONCRETE AND BASE TO MINIMUM DEPTH OF 16 INCHES.

KEY NOTES

- | | | | |
|---|--|---|---|
| 1 | DEMOLISH RESTROOM AND CONCRETE SLAB | 6 | DEMOLISH ASPHALT CONCRETE PAVEMENT (SEE NOTE 6) |
| 2 | DEMOLISH PORTIONS OF CONCRETE RAMP | 7 | DEMOLISH ASPHALT CONCRETE PAVEMENT (SEE NOTE 7) |
| 3 | DEMOLISH PILES | 8 | DEMOLISH CONCRETE SLAB |
| 4 | DEMOLISH CONCRETE ABUTMENT | 9 | REMOVE SEDIMENT FROM EXISTING RAMP SURFACE (CROSS-HATCHED AREA) |
| 5 | DEMOLISH CONCRETED RIPRAP (SEE NOTE 5) | | |

LEGEND

- | | |
|--|---|
| | DEMOLISH CONCRETE |
| | DEMOLISH AC PAVEMENT |
| | DEMOLISH CONCRETED RIPRAP, REMOVE TOP OF RIPRAP REVETMENT |
| | REMOVE SEDIMENT |

10' 0' 10' 20'
SCALE: 1"=10'

REVISION	DESCRIPTION	BY	DATE



			2185 N. CALIFORNIA BLVD, STE 500 WALNUT CREEK, CA 94596 925-944-5411		
DSGN	BP	DR	TE	CHK	
JOB NO.	9020	SUBMITTED BY		TITLE	

ENCINAL BOAT LAUNCH RAMP
REFURBISHMENT
EXISTING RAMP SITE & DEMOLITION PLAN

DATE 04-10-2018

SHEET 2 OF 15

G-1

Q:\WC\9020 Encinal BLF\4_CADD\9020_C-1 OVERALL SITE PLAN.dwg 4/9/2018 1:22 PM

KEY NOTES

- 1

REMOVE EXISTING PLANTER ISLANDS [NIC]
- 2

ASPHALT CONCRETE OVERLAY
(2" AC) [NIC]
- 3

ASPHALT CONCRETE PAVEMENT
(2" AC OVER 4" AB) [NIC]
- 4

REMOVE PORTION OF EXISTING CONCRETE
BOAT RAMP
- 5

TWO LANE BOAT LAUNCH RAMP
- 6

ADA CAR/TRAILER STALLS [NIC]
- 7

LIGHT POLE
- 8

REMOVE EXISTING RESTROOM; FURNISH &
INSTALL NEW RESTROOM WITH 2 STALLS
- 9

INSTALL CITY-FURNISHED FISH CLEANING
STATION
- 10

CONCRETE ACCESSIBLE PATH
- 11

REMOVE EXISTING GUIDE PILES
- 12

GUIDE PILES & BOARDING DOCK
- 13

GUIDE PILES AND LOW-FREEBOARD DOCK
- 14

OUTDOOR SHOWER WITH DRAIN
- 15

LAYDOWN AREA FOR HAND-LAUNCH CRAFT
- 16

PARKING LOT CAR/TRAILER STRIPING
(37 PULL-THROUGH STALLS) [NIC]
- 17

DBW CREDIT FACILITY CONCRETE SIGN, SEE

1
C-8
- 18

DIRECTION ARROWS
(CALTRANS A24A, TYPE I 10') [NIC]
- 19

CAR ACCESSIBLE STALL
- 20

CONCRETE APRON
- 21

CONCRETE CURB
- 22

GANGWAY
- 23

CONCRETE ABUTMENT
- 24

ASPHALT CONCRETE PAVEMENT
(2" AC OVER 6" AB)
- 25

REMOVE AC PAVEMENT AND BASE (4")
- 26

ASPHALT CONCRETE
(2" AC OVER 4" AB)

LEGEND

- 1

PHOTO LOCATION

NOTES:

1. WORK DESCRIBED IN KEY NOTES DENOTE NEW
CONSTRUCTION UNLESS OTHERWISE NOTED OR INDICATED.
2. AERIAL BACKGROUND IS FOR GENERAL REFERENCE ONLY
AND IS NOT ORTHO-RECTIFIED AND DOES NOT SCALE
PRECISE WITH SURVEYED LINES WHICH ARE ACCURATE.
3. ELEVATIONS CONTOURS IN PARKING LOT ARE ALAMEDA
DATUM, CONTOURS ON RAMP ARE MLLW.



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4



1 OVERALL SITE PLAN
C-1 SCALE: 1" = 30'

30' 0' 30' 60'
SCALE: 1"=30'

REVISION	DESCRIPTION	BY	DATE



<div><div>mo</div><div>ffatt & nichol</div></div>			2185 N. CALIFORNIA BLVD, STE 500 WALNUT CREEK, CA 94596 925-944-5411		
DSGN	BP	DR	TE	CHK	
JOB NO.	9020	SUBMITTED BY		TITLE	

ENCINAL BOAT LAUNCH RAMP
REFURBISHMENT
OVERALL SITE PLAN

DATE 04-10-2018

SHEET 3 OF 15

C-1

KEY NOTES

- 4

REMOVE PORTION OF EXISTING CONCRETE BOAT RAMP
- 5

TWO LANE BOAT LAUNCH RAMP
- 7

LIGHT POLE
- 8

REMOVE EXISTING RESTROOM; FURNISH & INSTALL NEW RESTROOM WITH 2 STALLS
- 9

INSTALL CITY-FURNISHED FISH CLEANING STATION
- 10

CONCRETE ACCESSIBLE PATH
- 11

REMOVE EXISTING GUIDE PILES

12

GUIDE PILES & BOARDING DOCK

13

GUIDE PILES AND LOW-FREEBOARD DOCK

14

OUTDOOR SHOWER WITH DRAIN

15

LAYDOWN AREA FOR HAND-LAUNCH CRAFT

17

DBW CREDIT FACILITY CONCRETE SIGN, SEE

1

C-8

19

CAR ACCESSIBLE STALL

20

CONCRETE APRON

NOTES:

1. WORK DESCRIBED IN KEY NOTES DENOTE NEW CONSTRUCTION UNLESS OTHERWISE NOTED OR INDICATED.
2. AERIAL BACKGROUND IS FOR GENERAL REFERENCE ONLY AND IS NOT ORTHO-RECTIFIED AND DOES NOT SCALE PRECISE WITH SURVEYED LINES WHICH ARE ACCURATE.
3. ELEVATIONS CONTOURS IN PARKING LOT ARE ALAMEDA DATUM, CONTOURS ON RAMP ARE MLLW.
4. SEE SHEET C-4 FOR RAMP APPROACH PLAN.

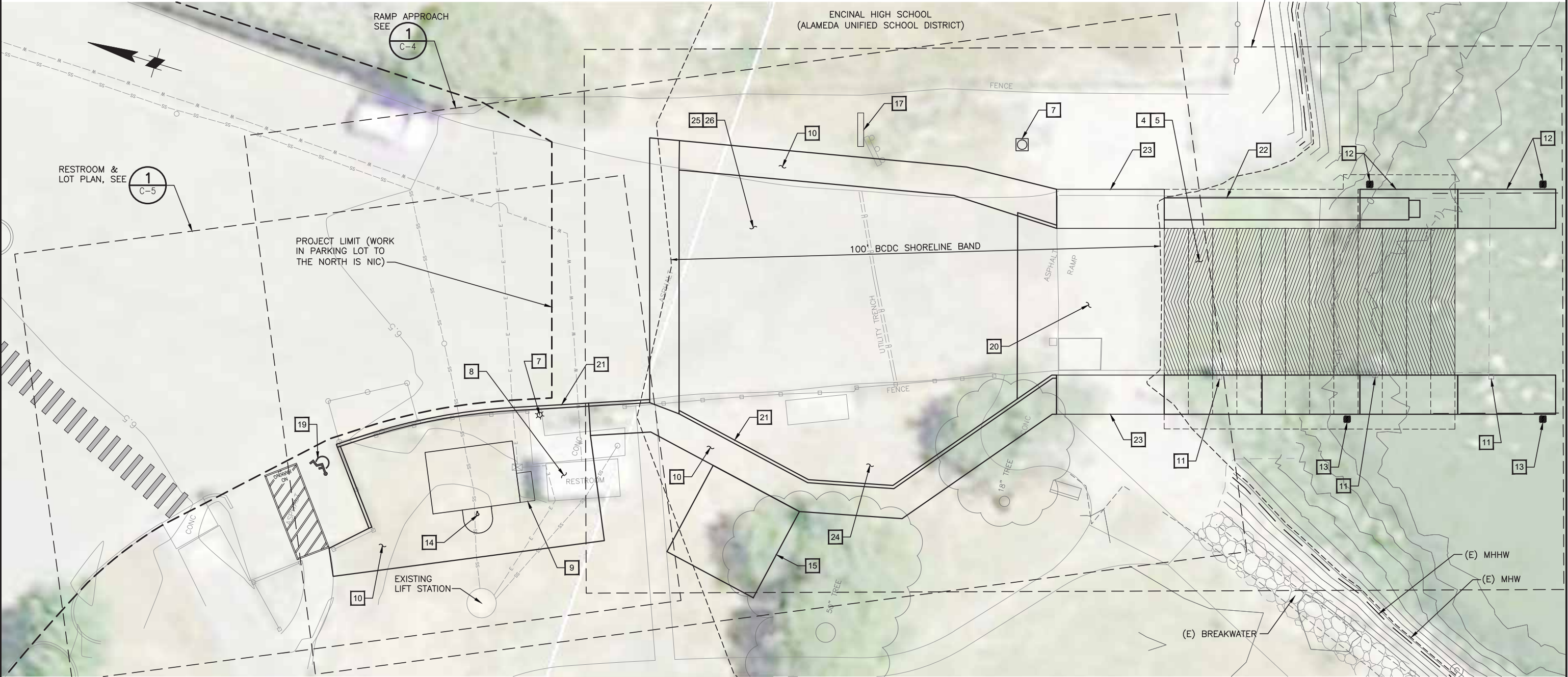
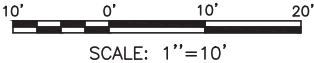


IMAGE SOURCE: CAL ATLAS AUG 2011

1 DETAILED SITE PLAN
C-1 SCALE: 1" = 10'



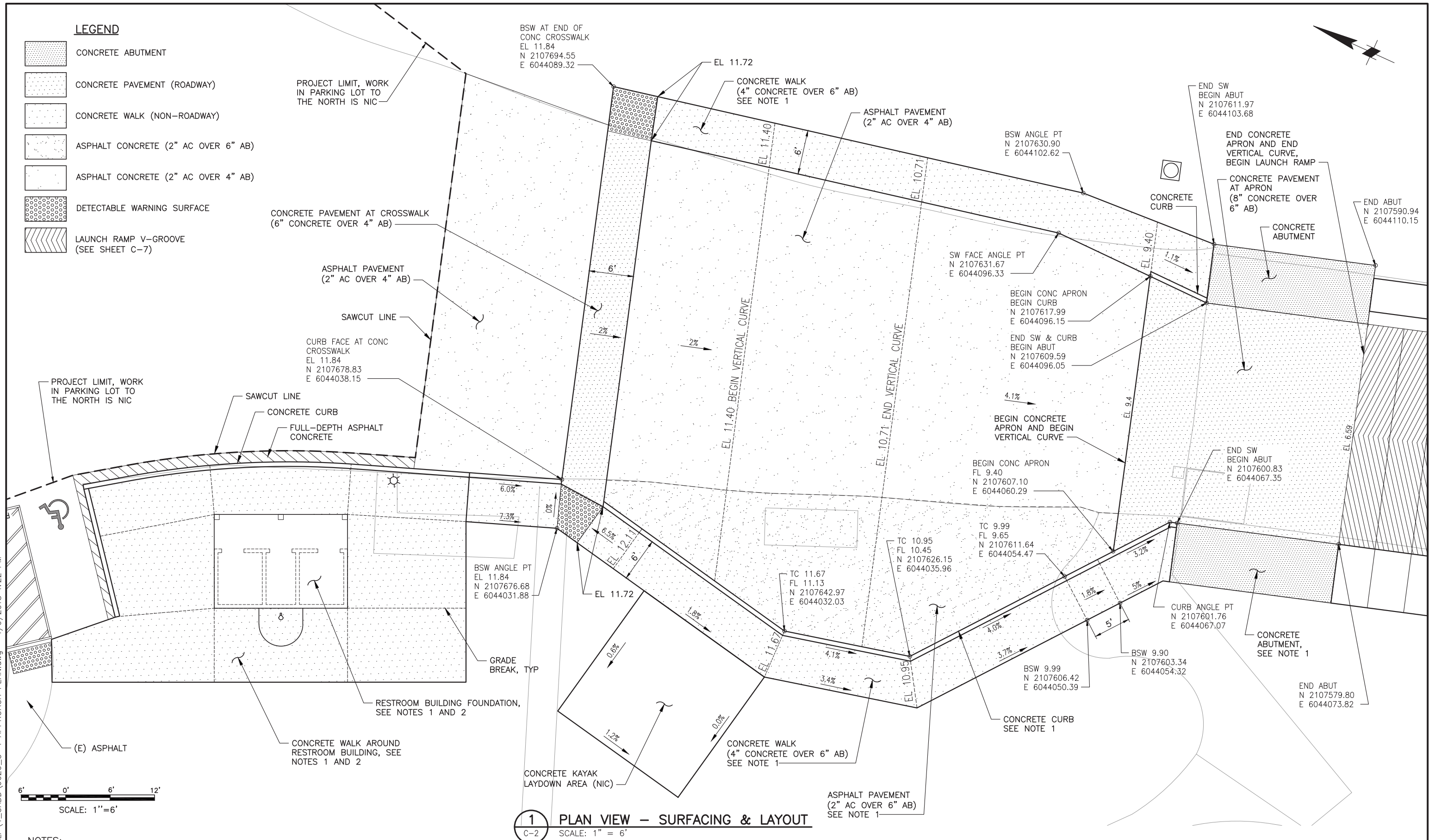
REVISION	DESCRIPTION	BY	DATE



<div><div>mo</div><div>ffatt & nichol</div></div> <div>2185 N. CALIFORNIA BLVD, STE 500 WALNUT CREEK, CA 94596 925-944-5411</div>		
DSGN	BP	DR
JOB NO.	9020	TE
		CHK
		SUBMITTED BY
		TITLE

ENCINAL BOAT LAUNCH RAMP REFURBISHMENT DETAILED SITE PLAN	DATE 04-10-2018
	SHEET 4 OF 15
	C-2

					 2185 N. CALIFORNIA BLVD, STE 500 WALNUT CREEK, CA 94596 925-944-5411	ENCINAL BOAT LAUNCH RAMP REFURBISHMENT PARKING LOT PLAN	DATE 04-10-2018
							SHEET 5 OF 15
REVISION	DESCRIPTION	BY	DATE				C-3



NOTES:

1. EXISTING UNPAVED AREAS TO RECEIVE NEW CONCRETE OR ASPHALT CONCRETE SHALL BE CLEARED AND GRUBBED TO A DEPTH OF 6 INCHES BELOW EXISTING GROUND SURFACE. SCARIFY TO MINIMUM DEPTH OF 6 INCHES AND COMPACT SUBGRADE TO 90% (MINIMUM) RELATIVE COMPACTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
2. FOR RESTROOM AND CONCRETE WALK LAYOUT AND DETAILS, SEE 1

2. FOR RESTROOM AND CONCRETE WALK LAYOUT AND DETAILS, SEE

1
C-5

	REVISION	DESCRIPTION	BY	DATE



2185 N. CALIFORNIA BLVD, STE 500
WALNUT CREEK, CA 94596
925-944-5411

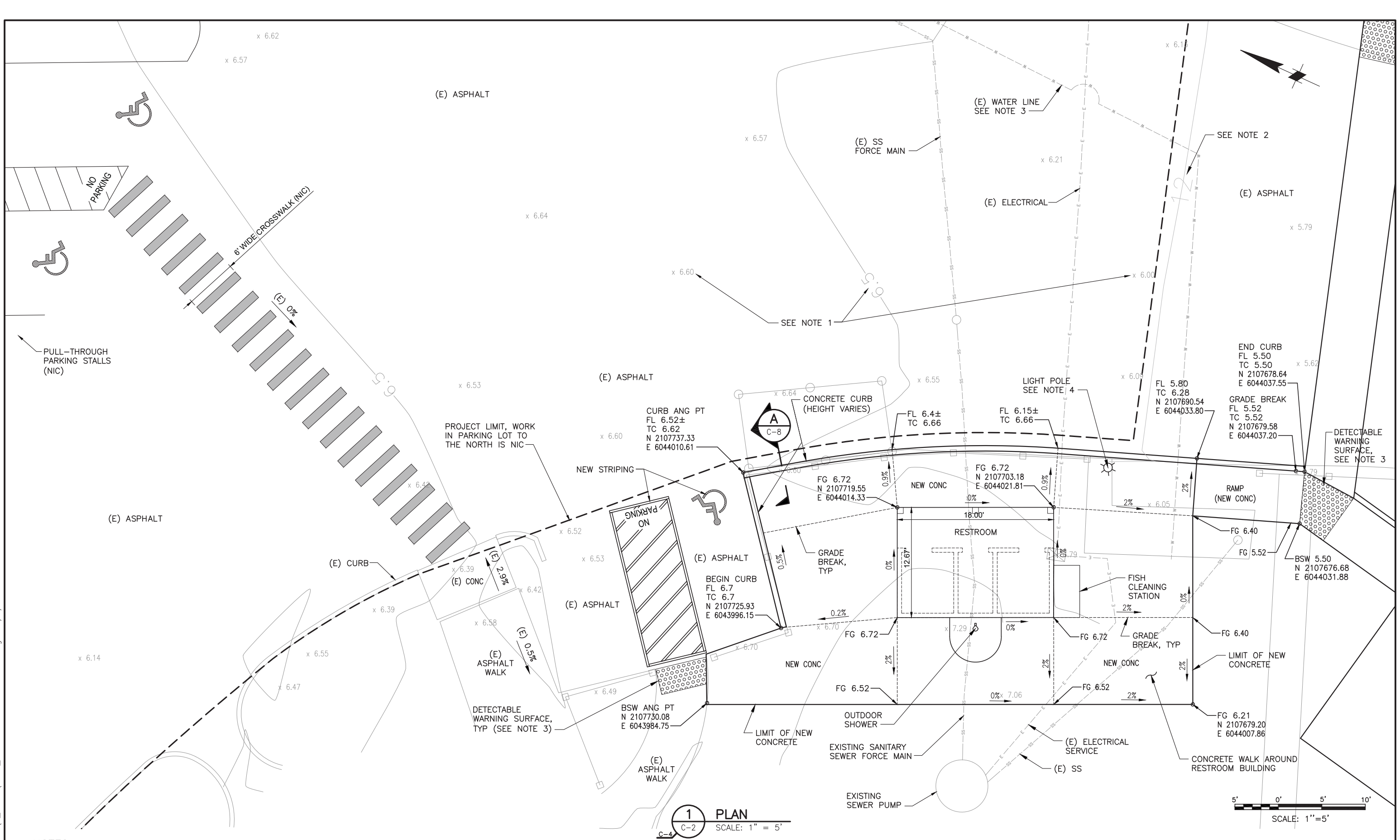
DSGN BP	DR TE	CHK
JOB NO. 9020	SUBMITTED BY	TITLE

ENCINAL BOAT LAUNCH RAMP REFURBISHMENT RAMP APPROACH PLAN

DATE 04-10-2018

SHEET 6 OF 15

C-4



NOTES:

1. ELEVATIONS ARE IN CITY OF ALAMEDA DATUM (SEE DWG T-1).
2. RAMP ELEVATIONS ARE MLLW (SEE DWG T-1).
3. DETECTABLE WARNING SURFACE PER CITY OF ALAMEDA STANDARDS.
4. FOR PROPOSED UTILITIES, SEE SHEET C-6.

	REVISION	DESCRIPTION	BY	DATE



2185 N. CALIFORNIA BLVD, STE 500
WALNUT CREEK, CA 94596
925-944-5411

DSGN BP	DR TE	CHK
JOB NO. 9020	SUBMITTED BY	TITLE

ENCINAL BOAT LAUNCH RAMP REFURBISHMENT

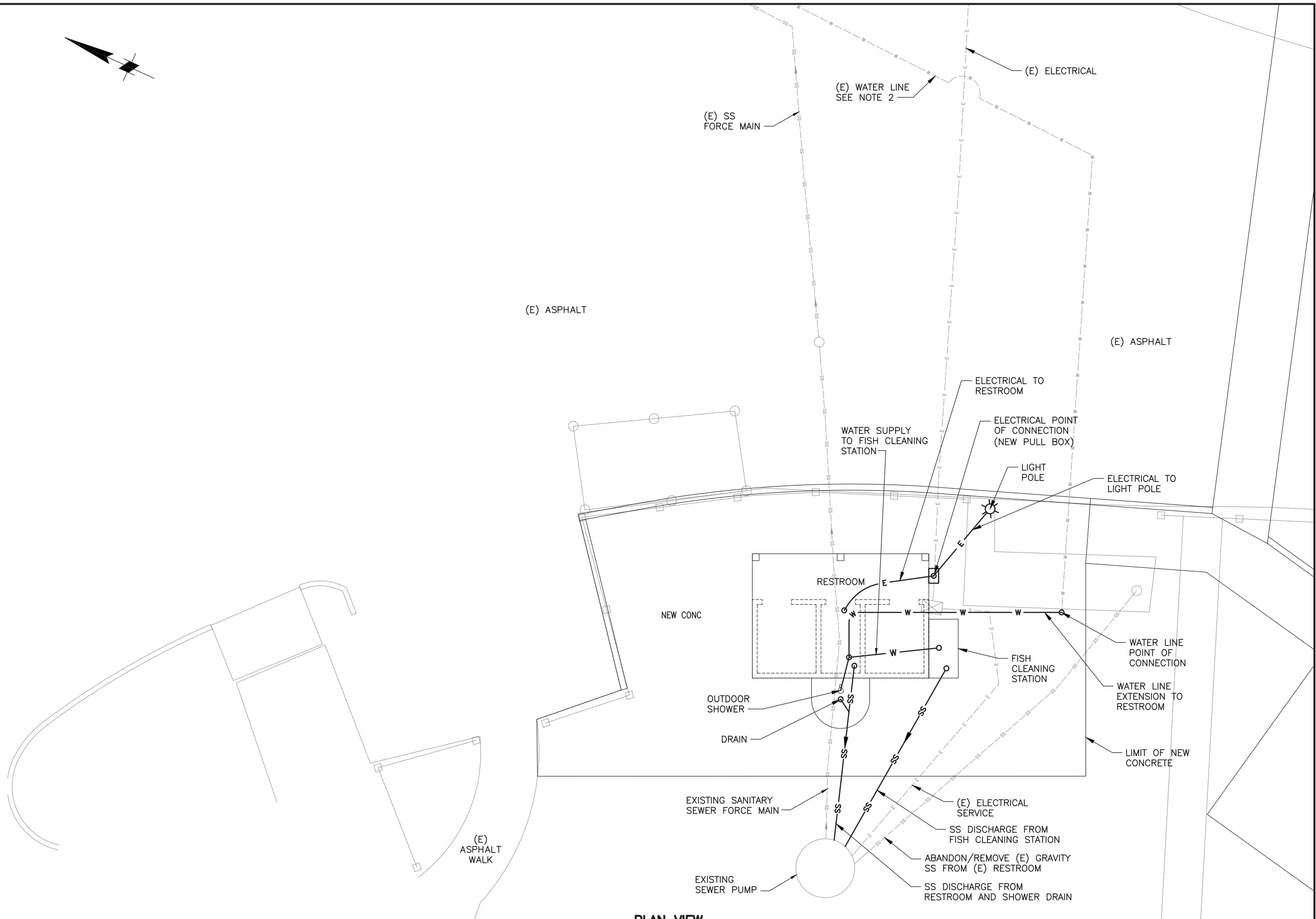
RESTROOM & LOT PLAN

DATE 04-10-2018

SHEET 7 OF 15

C-5

Q:\WC\9020 Encinal BLF\4_CADD\9020_C-6 SITE UTILITIES.dwg 4/9/2018 1:22 PM



PLAN VIEW

NOTES:

1. ALIGNMENT OF PROPOSED UTILITIES IS SCHEMATIC. FINAL LOCATION AND ALIGNMENT OF PROPOSED UTILITIES WILL BE DETERMINED IN THE FIELD.
2. EXISTING WATER LINE LOCATION TO BE CONFIRMED FROM ALAMEDA PUBLIC WORKS.

5' 0' 5' 10'
SCALE: 1"=5'

REVISION	DESCRIPTION	BY	DATE



2185 N. CALIFORNIA BLVD, STE 500
WALNUT CREEK, CA 94596
925-944-5411

DSGN	BP	DR	TE	CHK
JOB NO.	9020	SUBMITTED BY	TITLE	

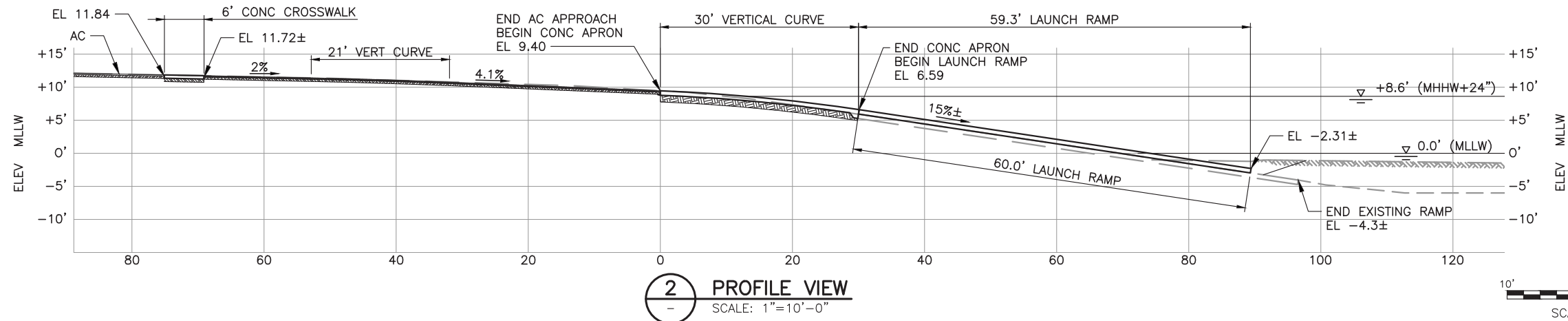
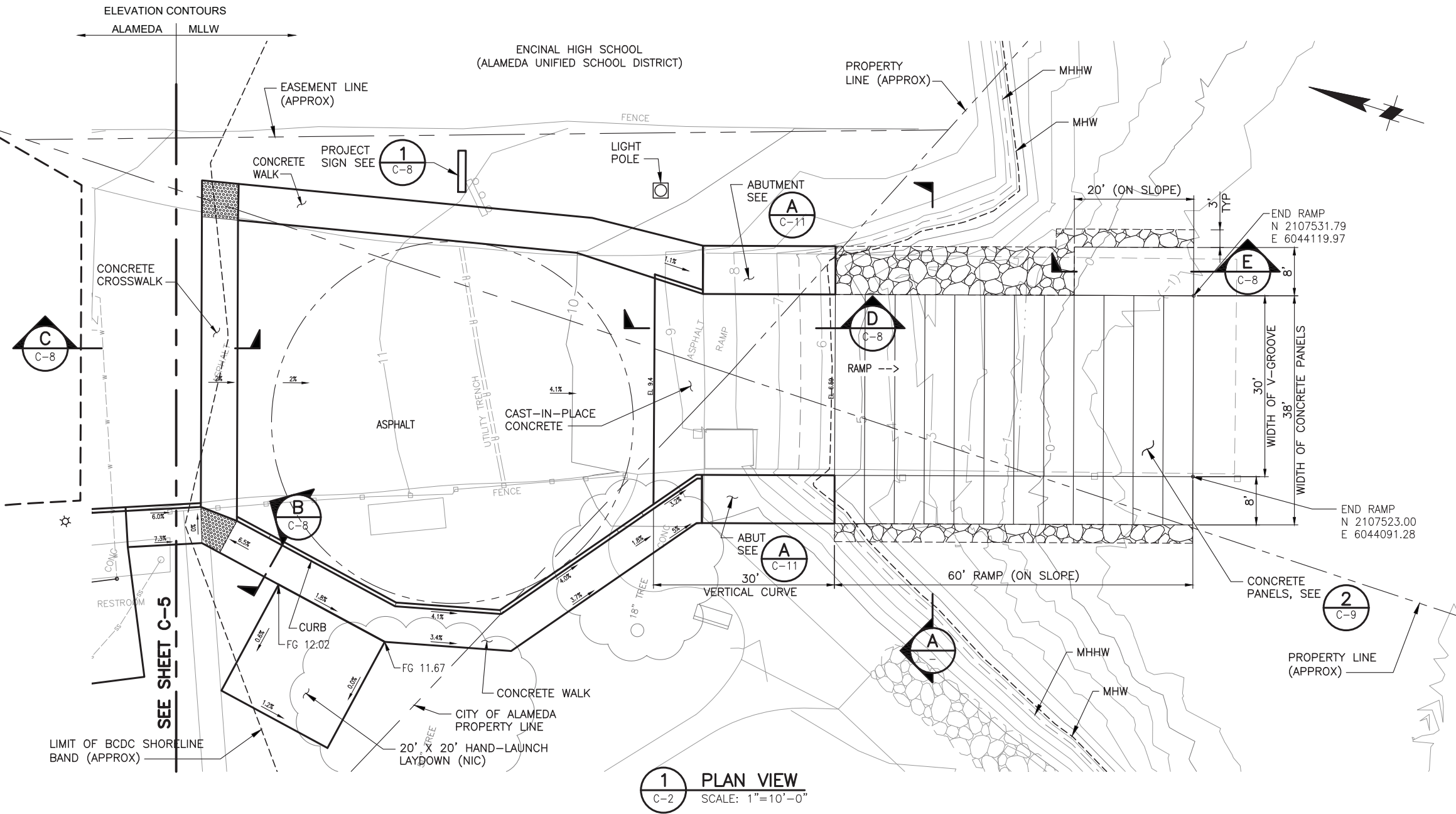
ENCINAL BOAT LAUNCH RAMP
REFURBISHMENT
SITE UTILITIES

DATE 04-10-2018

SHEET 8 OF 15

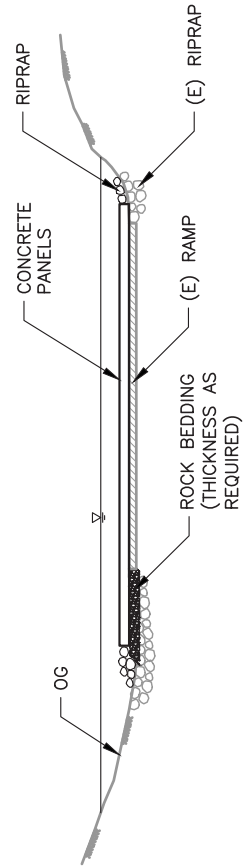
C-6

Q:\WC\9020 Encinal BLF\4_CADD\9020_C-7 RAMP PLAN AND PROFILE.dwg 4/9/2018 1:22 PM



NOTES:

1. ELEVATIONS SHOWN ON THIS SHEET ARE REFERENCED TO MLLW (SEE DWG T-1).



REVISION	DESCRIPTION	BY	DATE



2185 N. CALIFORNIA BLVD, STE 500
WALNUT CREEK, CA 94596
925-944-5411

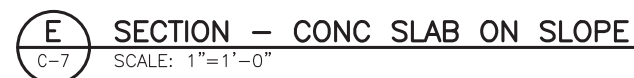
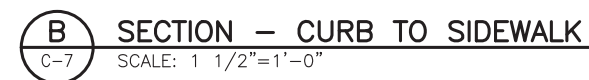
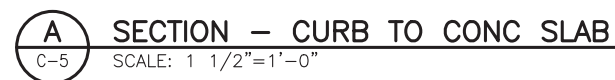
DSGN	BP	DR	TE	CHK
JOB NO.	9020	SUBMITTED BY	TITLE	

ENCINAL BOAT LAUNCH RAMP
REFURBISHMENT
LAUNCH RAMP PLAN AND PROFILE

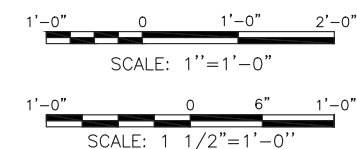
DATE 04-10-2018

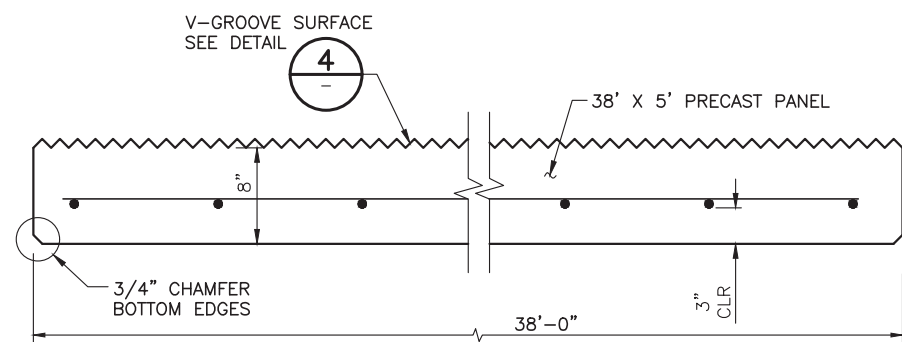
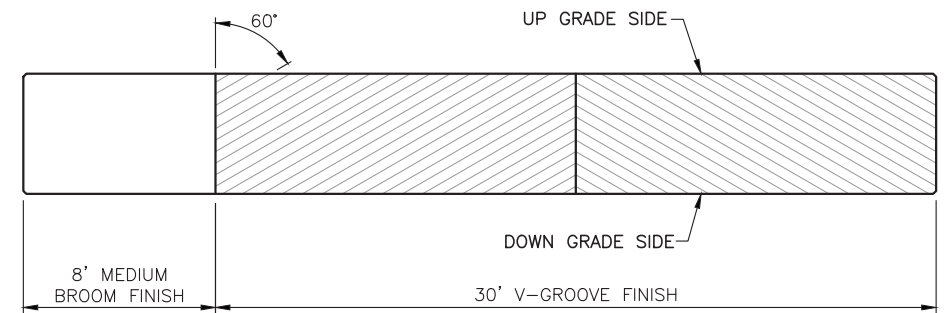
SHEET 9 OF 15

C-7

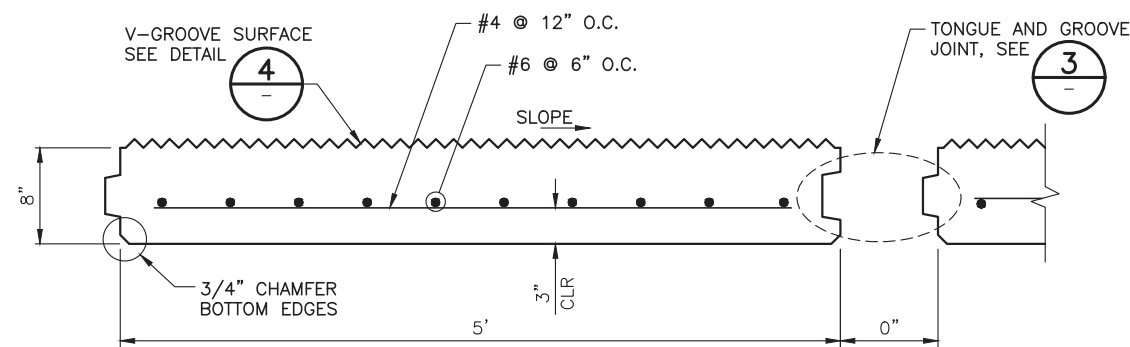


1. SHEAR PIN SHALL BE 5/8-INCH X 14-INCH LONG 316 STAINLESS STEEL DEFORMED BAR. DRILL AND EMBED 6-INCHES INTO EXISTING CONCRETE RAMP PANEL AND GROUT WITH EPOXY.
2. ACCEPTABLE PRECAST CONCRETE PROJECT SIGN:
 - A. MODEL 712 BY OUTDOOR CREATIONS, INC; MODEL DBW72S BY UNIVERSAL PRECAST; OR
 - B. APPROVED EQUAL MEETING CALIFORNIA STATE PARK REQUIREMENTS AND STANDARDS.

[illegible]

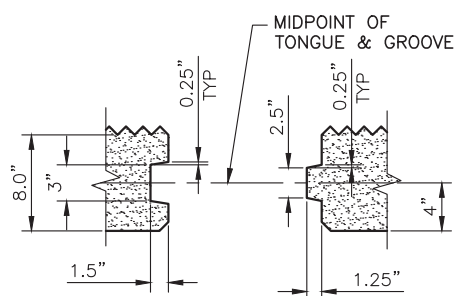


A PANEL SECTION – LONGITUDINAL
SCALE: 1 1/2"=1'-0"

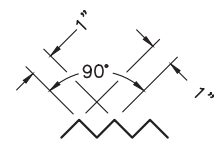


B PANEL SECTION – TRANSVERSE
SCALE: 1 1/2"=1'-0"

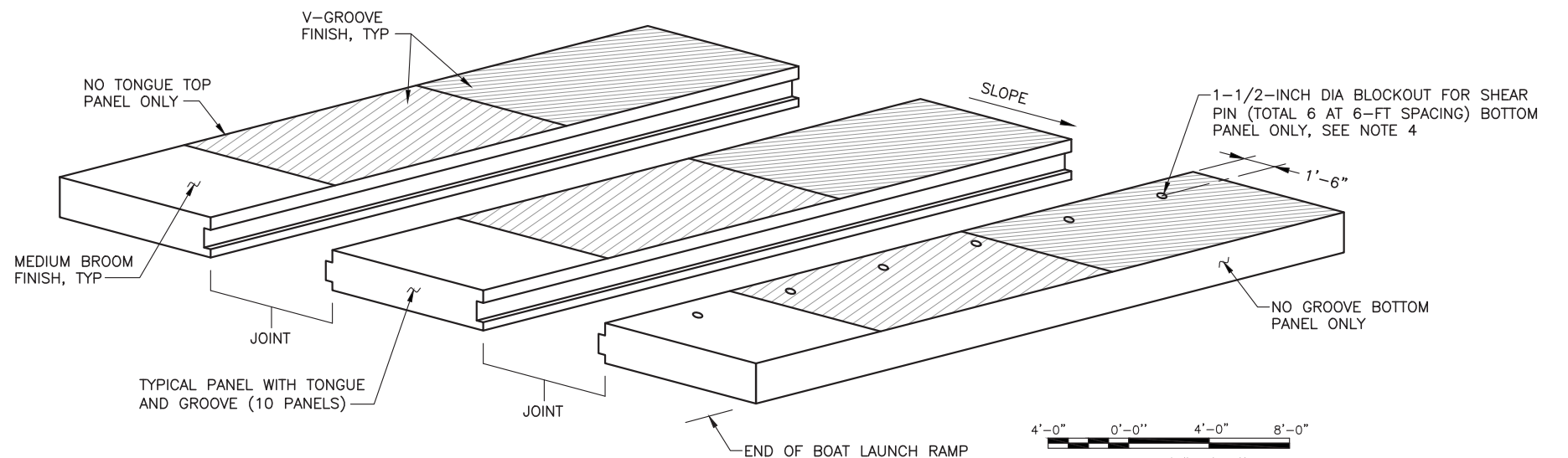
1. PANELS SHALL BE PLANT-MANUFACTURED SO THAT PANEL IS FLAT AND SQUARE. PANEL DIMENSIONS SHALL NOT EXCEED TOLERANCE SPECIFIED.
2. CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR LIFTING AND TRANSPORT OF PANELS FOR APPROVAL BY THE COUNTY PRIOR TO CASTING. LIFTING POINTS ARE SHOWN SCHEMATICALLY ONLY. LOCATION AND SIZE OF LIFTING POINT INSERTS SHALL BE DESIGNED BY THE PRECAST CONCRETE MANUFACTURER. LIFTING INSERTS SHALL BE STAINLESS STEEL.
3. PANELS SHALL BE INSTALLED PRIOR TO ARMOR ROCK PLACEMENT AND PRIOR TO CAST-IN-PLACE CONCRETE APRON CONSTRUCTION.
4. SHEAR PIN SHALL BE 5/8-INCH X 14-INCH LONG 316 STAINLESS STEEL DEFORMED BAR. DRILL AND EMBED 6-INCHES INTO EXISTING CONCRETE RAMP PANEL AND GROUT WITH EPOXY.



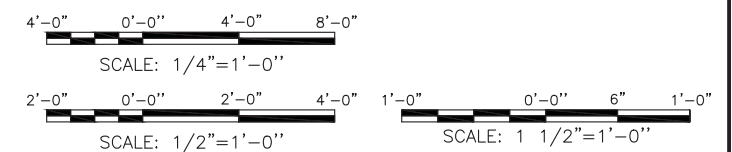
3 DETAIL — TONGUE & GROOVE
— SCALE: 1 1/2"=1'-0"



4 DETAIL — V-GROOVE
— SCALE: HALF SCALE

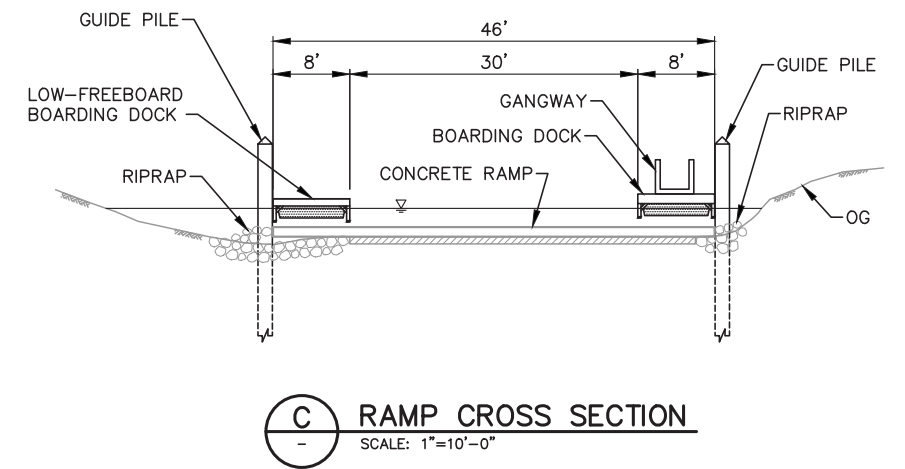
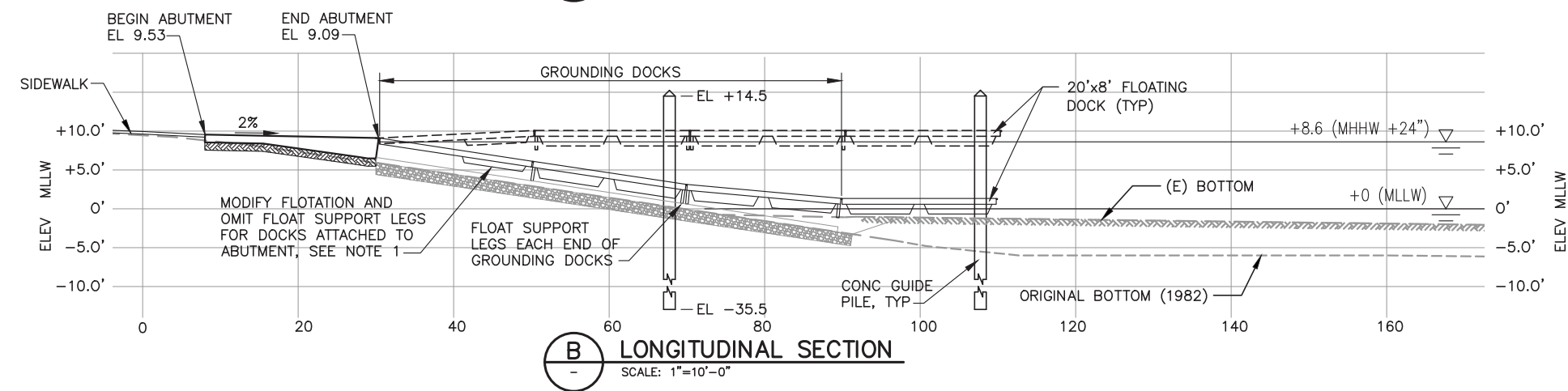
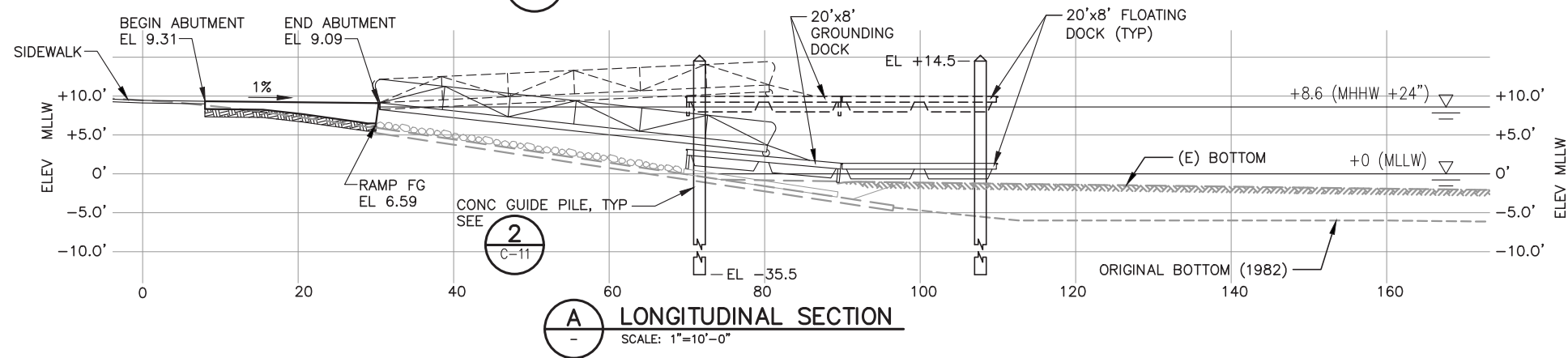
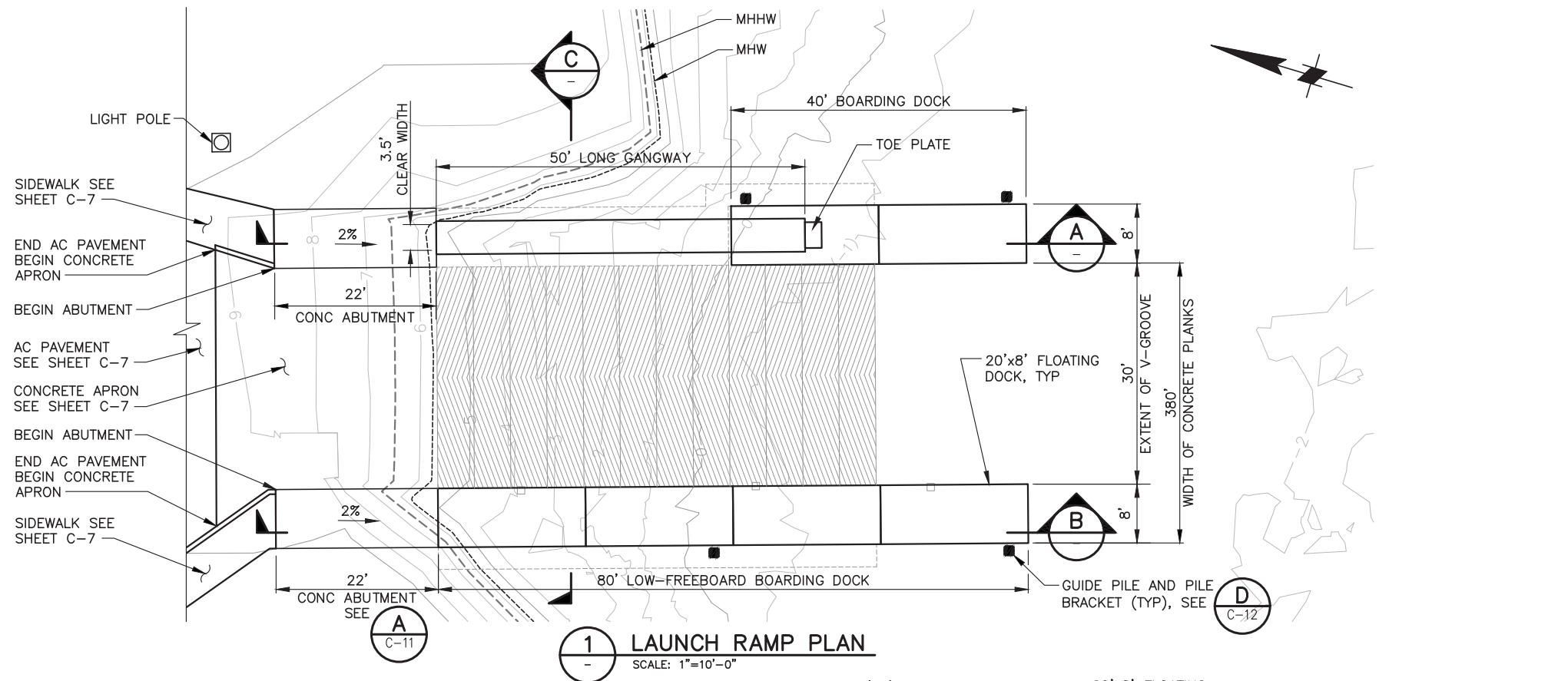


5 PANEL INSTALLATION ISOMETRIC
SCALE: NTS



					 2185 N. CALIFORNIA BLVD., STE 500 WALNUT CREEK, CA 94596 925-944-5411	ENCINAL BOAT LAUNCH RAMP REFURBISHMENT RAMP PRECAST PANELS		DATE 04--10--1988
								SHEET 11 OF 15
REVISION	DESCRIPTION	BY	DATE					C-9

Q:\WC\9020 Encinal BLF\4_CADD\9020_C-10 DOCK PLAN AND SECTIONS.dwg 4/9/2018 1:22 PM



10' 0' 10' 20'
SCALE: 1" = 10'-0"

REVISION	DESCRIPTION	BY	DATE



2185 N. CALIFORNIA BLVD, STE 500
WALNUT CREEK, CA 94596
925-944-5411

DSGN	BP	DR	TE	CHK
JOB NO.	9020	SUBMITTED BY		TITLE

ENCINAL BOAT LAUNCH RAMP
REFURBISHMENT
DOCK PLAN AND PROFILE

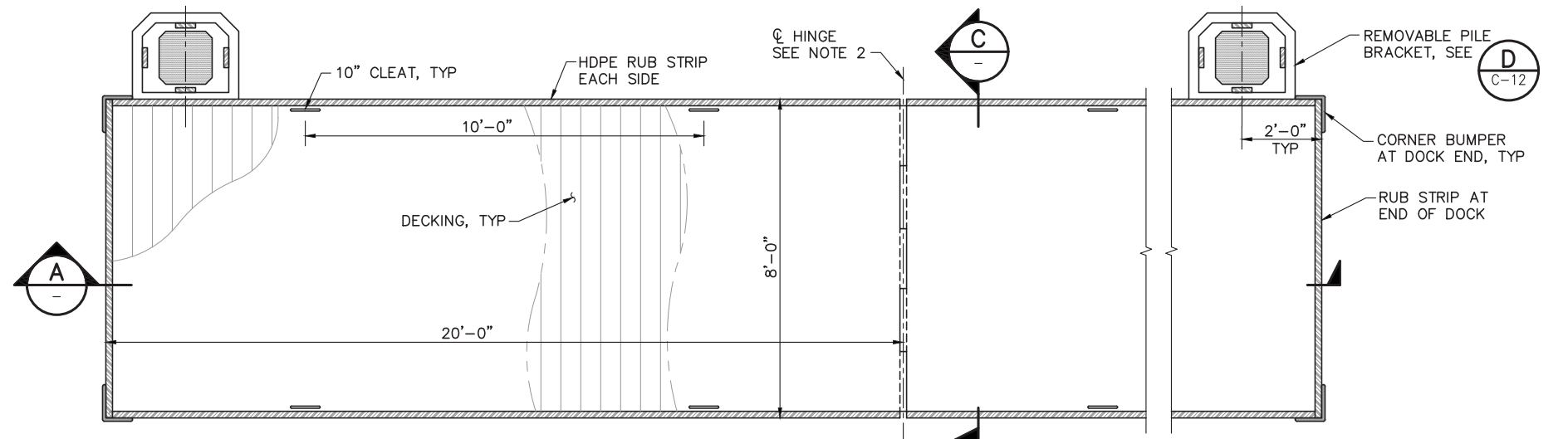
DATE 04-10-2018

SHEET 12 OF 15

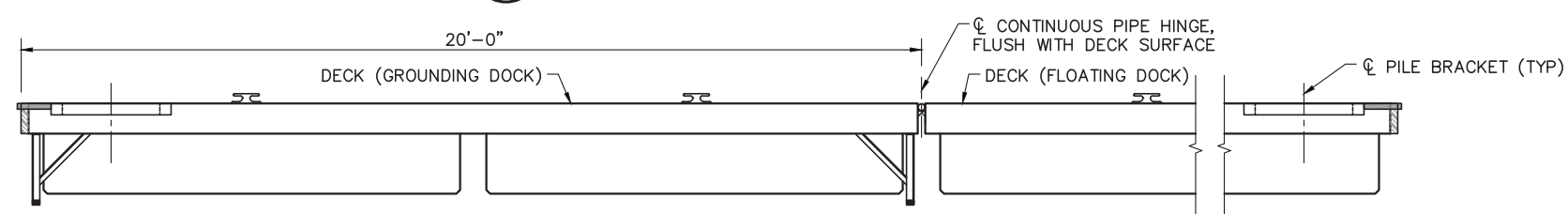
C-10

C-11

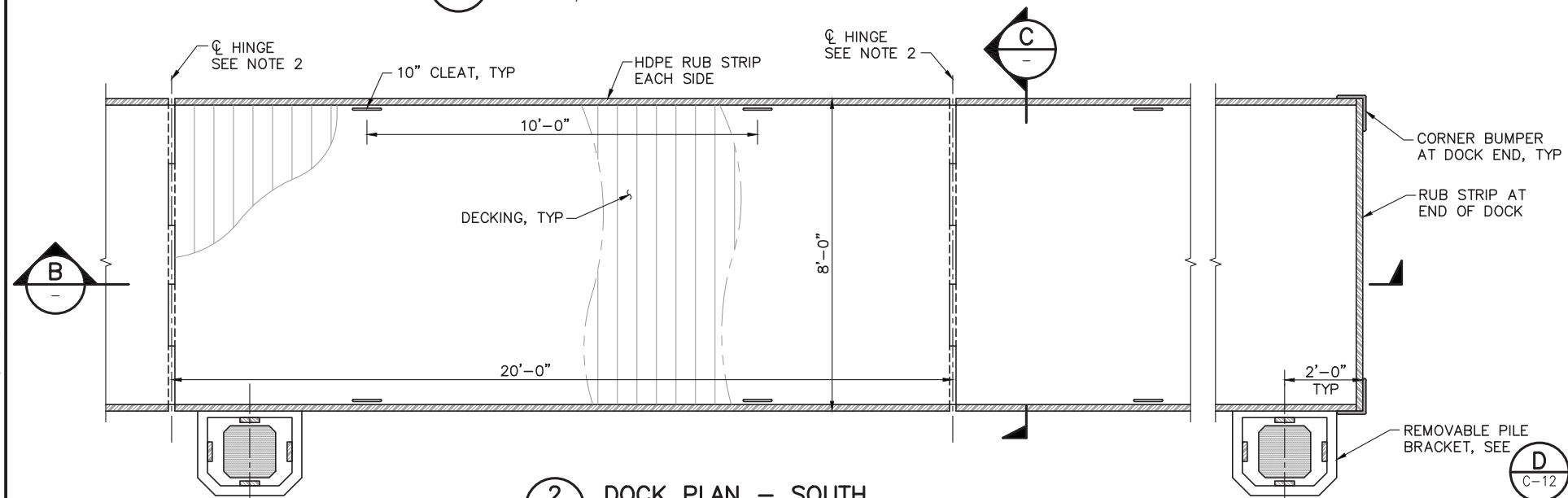
Q:\WC\9020 Encinal BLF\4_CADD\9020_C-12 DOCK FLOAT DETAILS.dwg 4/9/2018 1:22 PM



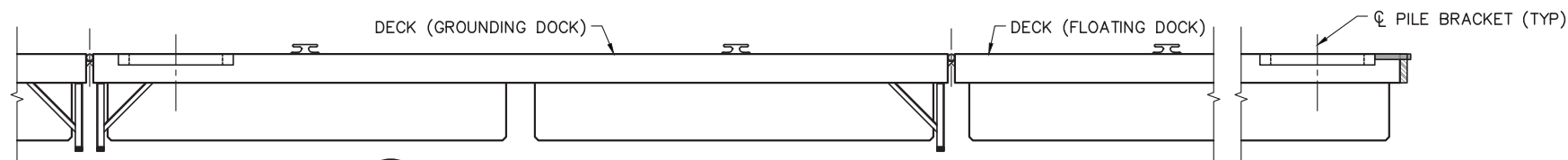
1 DOCK PLAN - NORTH
SCALE: 1/2"=1'-0"



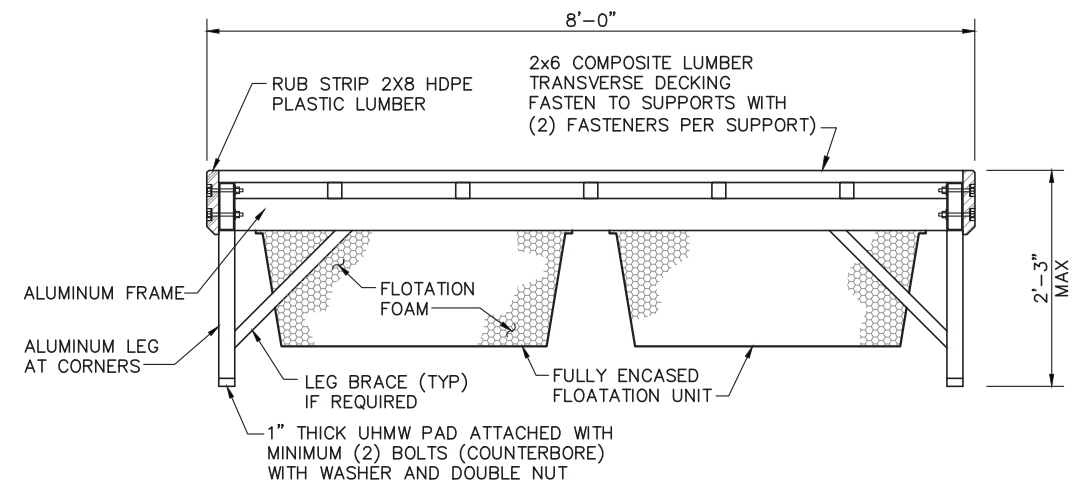
A DOCK LONGITUDINAL SECTION - NORTH
SCALE: 1/2"=1'-0"



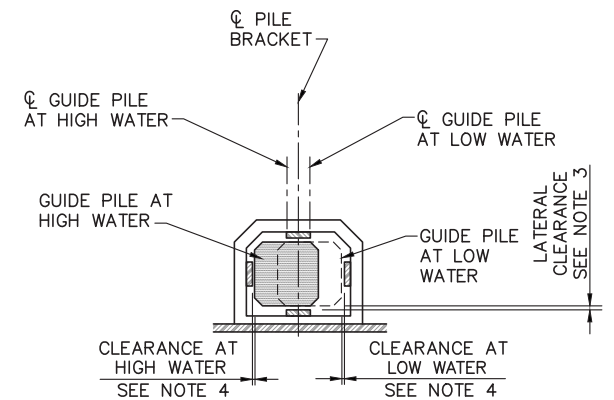
2 DOCK PLAN - SOUTH
SCALE: 1/2"=1'-0"



B DOCK LONGITUDINAL SECTION - SOUTH
SCALE: 1/2"=1'-0"



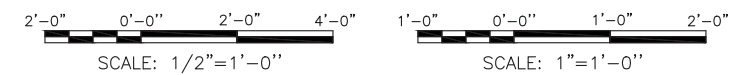
C DOCK CROSS SECTION
SCALE: 1"=1'-0"



D TYPICAL PILE BRACKET
SCALE: 1/2"=1'-0"

NOTES:

- CONTRACTOR SHALL DESIGN THE DOCKS TO PROVIDE THE REQUIRED FREEBOARD IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. SEE SPECIFICATIONS.
- HINGE LAYOUT IS SCHEMATIC ONLY.
- LATERAL CLEARANCE FOR GUIDE PILE RUB STRIP IS 1/2-INCH MINIMUM AND 1-INCH MAXIMUM.
- GUIDE PILE RUB STRIP CLEARANCE AT DESIGN HIGH WATER AND DESIGN LOW WATER IS 1/2-INCH MINIMUM AND 1-INCH MAXIMUM ACCORDING TO THE RELATIVE LOCATION OF THE GUIDE PILE AT EACH WATER SURFACE ELEVATION.
- UHMW GUIDE PILE RUB STRIP SHALL HAVE A MINIMUM THICKNESS OF 1-INCH AND PROVIDE A MINIMUM OF 6-INCHES CONTACT WITH THE GUIDE PILE AT HIGH AND LOW WATER ELEVATIONS.



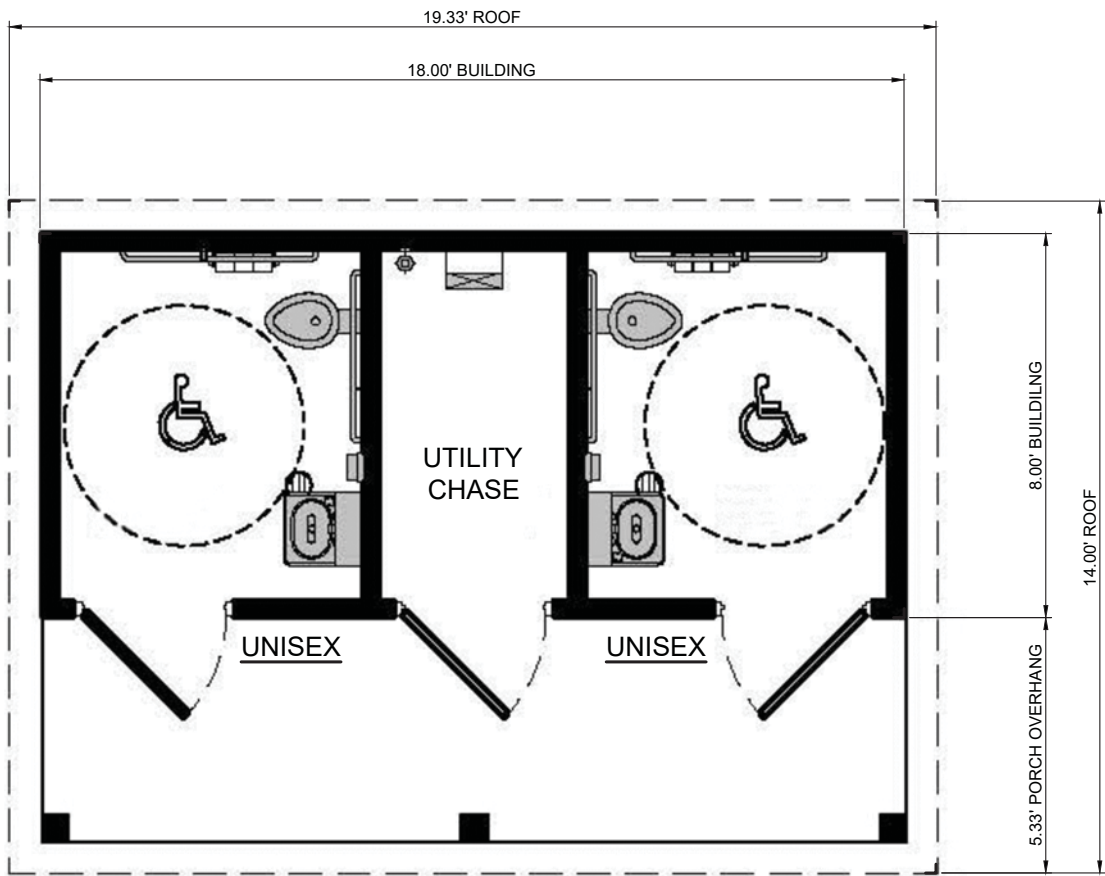
					 2185 N. CALIFORNIA BLVD, STE 500 WALNUT CREEK, CA 94596 925-944-5411	ENCINAL BOAT LAUNCH RAMP REFURBISHMENT DOCK FLOAT DETAILS		DATE 04-10-2018
REVISION	DESCRIPTION	BY	DATE					SHEET 14 OF 15
					DSGN BP	DR TE	CHK	
					JOB NO. 9020	SUBMITTED BY	TITLE	

C-12

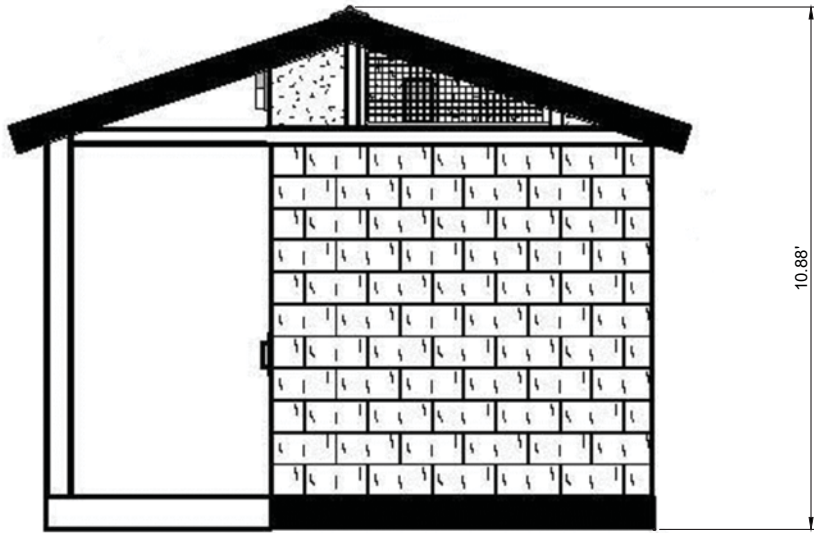
Q:\WC\9020 Encinal BLF\4_CADD\9020_C-20 RESTROOM.dwg 4/9/2018 1:22 PM

NOTES:

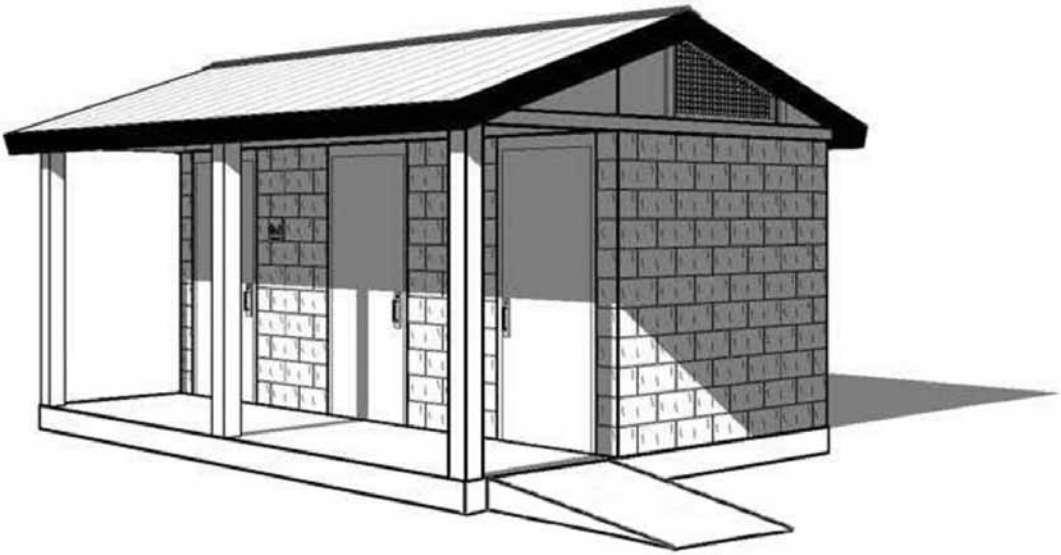
1. RESTROOM IS MODULAR UNIT; SHOWN IS MODEL PS-022 CE, BY PUBLIC RESTROOM COMPANY.



A FLOOR PLAN
SCALE: 1/4"=1'-0"



B SIDE ELEVATION
SCALE: 1/4"=1'-0"



1 PERSPECTIVE
SCALE: NTS

REVISION	DESCRIPTION	BY	DATE



2185 N. CALIFORNIA BLVD, STE 500
WALNUT CREEK, CA 94596
925-944-5411

DSGN	BP	DR	TE	CHK
JOB NO.	9020	SUBMITTED BY	TITLE	

ENCINAL BOAT LAUNCH RAMP
REFURBISHMENT
RESTROOM

DATE 04-10-2018

SHEET 15 OF 15

C-20

ATTACHMENT F:

**SAN FRANCISCO BAY CONSERVATION AND
DEVELOPMENT COMMISSION
PERMIT APPROVAL**

San Francisco Bay Conservation and Development Commission

455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

Permittee's Copy

PERMIT NO. 1979.032.02

(Originally Issued on September 22, 1980, As Amended Through January 3, 2019)

AMENDMENT NO. TWO

City of Alameda
2263 Santa Clara Avenue
Alameda, California 94501

On September 18, 1980, the San Francisco Bay Conservation and Development Commission, by a vote of 20 affirmative, 0 negative, and 0 abstention, approved the resolution pursuant to which the permit was issued. Moreover, on January 20, 1981 and January 3, 2019, pursuant to Regulation Section ~~10722~~ 10822, the Executive Director approved Amendment Nos. One and Two, respectively, to which this amended permit is hereby issued:

I. Authorization

A. **Authorized Project.** Subject to the conditions stated below, the permittee is granted permission to do the following in the Bay and within the 100-foot shoreline band at the southeastern corner of the former United States Naval Air Station (now Alameda Point), immediately adjacent to Encinal High School, in the City ~~and County~~ of Alameda, Alameda County (see Exhibit A):

1. In the Bay:

- a. ~~Construct~~ Reconstruct, use, and maintain in-kind a 2,320-square-foot portion of a two-lane public boat launching ramp, including removing three 12-inch-square concrete piles, removing 120 cubic yards of sediment accumulated on top of the existing boat ramp, installing two 16-inch-diameter concrete piles, installing approximately 1,810 square feet of concrete panels to cover the existing ramp, and installing an approximately 32-square-foot portion of two concrete abutments (the remainder of which is located within the 100-foot shoreline band) (Amendment No. Two);
- b. ~~Construct~~ Remove a 240-square-foot floating dock immediately adjacent to the launch ramp to facilitate boat launching, and install, use, and maintain in-kind an approximately 80-foot-long floating dock consisting of four approximately 8-foot by 20-foot interconnected floating docks (640 square feet in total) and two 16-inch-diameter concrete guide piles, all located within the footprint of the boat ramp (Amendment No. Two);

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 2

- c. Relocate a storm sewer outfall to a location immediately east of the launching ramp;
 - d. Construct approximately 1,500 linear feet of vinyl clad chain link fence between the shoreside landscaping and the edge of the Bay, as well as along the western edge of that portion of the breakwater open to public access;
 - e. Dredge approximately 12,000 cubic yards from one acre of tidelands so that boats may be launched at all stages of the tide with disposal at the federally approved Alcatraz disposal site;
 - f. Fill holes in the boulder breakwater covering approximately 1,000 square feet of Bay to provide safe public access on the breakwater; ~~and~~
 - g. Place two channel buoys at the approach to the launching ramp;
 - h. Construct, use, and maintain in-kind an approximately 225-square-foot (50-foot-long by 4.5-foot-wide) gangway, an approximately 320-square-foot (40-foot-long by 8-foot-wide) boarding float and approximately 160-square-foot concrete landing pad, and two 16-inch-diameter concrete guide piles, all located within the footprint of the boat ramp (Amendment No. Two); and
 - i. Replace, use, and maintain in-kind approximately 890 square feet of riprap (Amendment No. Two).
2. **Within the 100-foot Shoreline Band:**
- a. ~~Construct Remove the existing 864-square-foot concrete apron the remaining 2,000 square foot portion of the two-lane boat launch ramp,~~ and construct, use, and maintain in-kind an approximately 900-square-foot concrete apron with approximately 8-foot-wide by 20-foot-long abutments on either side (approximately 320 square feet, with the remainder in the Bay) (Amendment No. Two);
 - b. ~~Remove existing Place two chemical~~ toilets near the launch ramp (Amendment No. Two);
 - c. Construct a portion of a parking lot capable of serving 24 cars and 47 cars with boat trailers;
 - d. Landscape approximately 28,000 square feet of area along 450 feet of shoreline; ~~and~~
 - e. Install picnic tables, trash cans, lighting, signage, and related facilities;

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 3

- f. Repave, use, and maintain in-kind an approximately 2,760-square-foot area and construct a 6-foot-wide accessible path adjacent to the boat ramp concrete apron (Amendment No. Two);
- g. Construct, use, and maintain in-kind an approximately 400-square-foot paved area for hand-launch craft laydown (Amendment No. Two); and
- h. Replace, use, and maintain in-kind approximately 900 square feet of riprap and install associated geotextile fabric (Amendment No. Two).

B. **Based on Applications Dated.** This amended authority is generally pursuant to and limited by the original application dated May 22, 1980, your letter dated January 7, 1981, requesting Amendment No. One, and Exhibit A of this amended permit, and your letter dated October 10, 2017 requesting Amendment No. Two, including all associated correspondence and accompanying exhibits, but subject to the modifications required by conditions hereto.

~~DC.~~ **Deadlines for Commencing and Completing Authorized Work.** Work authorized ~~herein must in the original permit through Amendment No. One was to commence prior to June 1, 1981, or this the amended permit will was to lapse and become null and void.~~ Such work ~~must was~~ also to be diligently ~~prosecuted~~ pursued to completion, and ~~must~~ be completed by June 1, 1982, unless an extension of time is was granted by a further amendment of the permit.

The project authorized in Amendment No. Two must commence by December 31, 2020, and must be diligently pursued to completion within two years of commencement, no later than December 31, 2022, unless an extension of time is granted by a further amendment of this amended permit.

~~ED.~~ **Project Summary.** This project will result in approximately 3,500 square feet of fill to provide a boat launch ramp, associated dock and channel buoys, and to make a portion of the existing breakwater accessible for fishing, all water-related uses. In addition, this project will provide public access improvements, such as picnic tables and landscaping along approximately 450 linear feet of shoreline.

II. Special Conditions

The amended authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. **Specific Plans and Plan Review**

- 1. **Specific Plan Approval.** No work whatsoever shall be performed at any location within the Commission's jurisdiction until final precise site, grading, and landscaping plans for that portion of the work have been submitted to,

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As

Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 4

reviewed, and approved by or on behalf of the Commission. In each instance, plan review shall be completed within 45 days after receipt of the plans to be reviewed. Approval or disapproval shall be based upon conformity with this amended authorization and upon a determination by or on behalf of the Commission that the proposed construction will be: (a) in accordance with the information presented to and recommendations of or on behalf of the Design Review Board for design plans; and (b) all terms and conditions of this amended permit.

2. **Changes to Approved Plans.** After final plans have been approved pursuant to Special Condition II-A-1, no changes shall be made to such approved plans without first obtaining written approval of the proposed changes by or on behalf of the Commission. Approval or disapproval shall be made within 45 days after the proposed changes in plans have been submitted for approval and shall be based on a finding that the changes are authorized by this amended permit and would not detrimentally affect open space, open water, or other public benefits.
3. **Conformity with Approved Plans.** All contract specifications, structures, and improvements at the project site shall conform to the final plans approved pursuant to Special Conditions II-A-1 and II-A-2. No structures shall be placed nor any improvements undertaken that are not clearly shown on the approved final plans. After construction, no changes to the exterior of any structure shall be made, no additional structures shall be built, and no open space, marsh, or open water areas shall be altered without prior written approval by or on behalf of the of Commission pursuant to Special Condition II-A-2.
4. **Construction Document(s).** The development authorized herein shall be built generally in conformance with the following documents:
 - a. **Amendment No. Two:** The plan set titled "Encinal Boat Launch Refurbishment," prepared by Moffatt & Nichol and dated April 10, 2018.

B. Public Access

1. **Area.** Until this amended authorization is further amended, revoked, or otherwise modified by or on behalf of the Commission, the permittee shall hold and maintain the entire project area open to the public for boating, fishing, walking, viewing, picnicking, sitting and related purposes. Certain restrictions, such as limiting the hours that the facility is open to the public, may be permitted, but only after such proposed restrictions have been submitted to,

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 5

reviewed, and approved in writing by or on behalf of the Commission. Such review shall be completed by or on behalf of the Commission within 45 days after receipt of the letter requesting such restrictions.

2. **Improvements.** The public access improvements shall include, in addition to the fishing access on the breakwater, the boat launching ramp and associated parking, the following: (a) a 28,000-square-foot landscaped area along the shoreline, as shown on the attached Exhibit A; (b) six picnic tables; (c) ~~two chemical toilets;~~ a public restroom, outdoor shower, and fish cleaning station; (d) trash containers; (e) a 6-foot-wide all-weather pathway along the 450-foot shoreline; and (f) one public access sign at the entrance of the road leading to the boat launch facility.
3. **Maintenance.** The areas required by Special Condition II-B shall be permanently maintained by, and at the expense of, the permittee. Such maintenance shall include but is not limited to, repairs to all boardwalk and path surfaces, replacement of any plant material that dies or becomes unkempt, periodic clean-up of litter and other materials deposited within the access or open space areas, removal of any encroachments into the access or open space areas and assuring that the public access sign remains in place and visible. Within 30 days after notification, the permittee shall correct any maintenance deficiency noted in a staff inspection of the site.

C. Water Quality. All construction operations shall be performed to minimize roiling of the water and to prevent timbers, floats, or other construction materials and debris from drifting and presenting either a pollution or navigation hazard.

~~D. Debris.~~ All debris shall be removed to a location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee shall remove such material at its expense within 10 days after it has been notified by the Executive Director of such placement.

~~E.~~ **D. Commission Jurisdiction Over Fill Area.** Notice is hereby given that, under the McAteer-Petris Act, the area of the approved project that is within the Commission's jurisdiction under Section 66610(a) remains within that jurisdiction even after fill or substantial change in use, authorized by the Commission, may have changed the character of the area, so that the permittee or the permittee's successors in interest will require further permit action by or on behalf of the Commission prior to any future changes of use or work within areas filled pursuant to this amended authorization.

~~F. **Abandonment.** If, at any time, the Commission determines that the improvements authorized herein have been abandoned for a period of two years or more, or have deteriorated to the point that public health, safety, or welfare is adversely affected, the Commission may require that the improvements be removed by the permittee, its assigns or successors in interest, or by the owner of the improvements, within 60 days of notice or such other reasonable time as the Commission may direct.~~

E. Minimizing Impacts on Aquatic Species and Water Quality During Construction (Amendment No. Two). The permittee shall reduce impacts to fish, wildlife, other aquatic organisms and water quality at the site by implementing the following measures during construction of work authorized under Amendment No. Two. Minor modifications to the below requirements may be approved by the Executive Director upon a finding that any such modifications are no less protective of Bay resources.

- a. **Pile Driving Work Window.** Pile driving shall only occur between June 15 through October 31.
- b. **Silt Curtain.** A silt curtain shall be installed prior to in-water construction.
- c. **Water Quality Protection.** The permittee shall ensure that project construction and operations are in compliance with the RWQCB Water Quality Certification issued September 10, 2018.

F. Shoreline Protection Material, Placement, and Maintenance. Riprap material shall be either quarry rock or specially cast or carefully selected concrete pieces free of reinforcing steel and other extraneous material and conforming to quality requirements for specific gravity, absorption, and durability specified by the California Department of Transportation or the U. S. Army Corps of Engineers. The material shall be generally spheroid-shaped. The overall thickness of the slope protection shall be no more than three feet measured perpendicular to the slope. Use of dirt, small concrete rubble, concrete pieces with exposed rebar, large and odd shaped pieces of concrete, and asphalt concrete as riprap is prohibited. Riprap material shall be placed so that a permanent shoreline with a minimum amount of fill is established by means of an engineered slope not steeper than two (horizontal) to one (vertical) unless slope is keyed at the toe. The slope shall be created by the placement of a filter layer protected by riprap material of sufficient size to withstand wind and wave generated forces at the site.

The shoreline protection improvements authorized herein shall be regularly maintained by and, at the expense of, the permittee(s), lessee, assignee or other successor in interest to the project. Maintenance shall include the collection of riprap material that becomes dislodged, the in-kind replacement of damaged or missing riprap material and

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 7

associated filter fabric or other material, and the removal of debris on riprap. Within 30 days of notification by or on behalf of the Commission, the permittee(s) or any successor in interest shall correct any identified maintenance deficiency.

III. Findings and Declarations

This amended authorization is based upon the Commission's findings and declarations that the work authorized is consistent with the McAteer-Petris Act, the San Francisco Bay Plan, the Commission's Regulations, the California Environmental Quality Act, and the Commission's Management Program for San Francisco Bay for the following reasons:

A. **Use.** Bay Plan Map No. 4 notes the existence of the Alameda naval Air station at the proposed site and contains a policy statement recommending that the area be reserved for port and related industrial uses if and when the site is not needed by the navy. However, the Bay Plan also states that public access areas are permissible uses within port areas; thus the proposed use is consistent with the Bay Plan.

B. **Fill.** The project proposes approximately 3,500 square feet of fill for water-related recreational uses and improved public access. The fill is consistent with the Bay Plan and the McAteer-Petris Act for the following reasons:

1. **Fill for Water-Related Recreational Use.** The Commission finds that the approximately 2,300 square feet of fill for a boat launch ramp, the approximately 240 square feet of floating fill for a dock to assist in boat launching, the approximately four square feet of fill for two channel buoys, and the approximately 1,000 square feet of fill placed among the boulders of the existing breakwater to provide safe access for fishermen constitute fill for a water-related recreation use as defined in Section 66605 of the Government Code and in Policy No. 1 on page 36 of the Bay Plan
2. **No Alternative Upland Location.** The primary purpose of the project is to increase public recreational use of the San Francisco Bay shoreline. Some fill is necessary to improve public access and waterfront recreation to allow the safe and efficient use of the area for fishing and boat launching. Therefore, no upland location for the project is available for the fill within the meaning of Government Code Section 66605(b).
3. **Minimum Necessary.** The purpose of the project is to improve public access by providing a public recreation area along and in the Bay. As the amount of fill proposed is relatively small (approximately 3,500 square feet), and consists almost entirely of fill for a boat launch ramp and safety improvements along the existing breakwater, the amount of fill is the minimum necessary as required by Government Code Section 66605(c).

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As

Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 8

4. **Minimum Harmful Effects.** Because the proposed fill is small and will be placed either on the bottom of the Bay or along an existing breakwater, the fill will have minimum effect on the volume, surface area, and circulation of the waters of the Bay.
5. **Safety.** Special Condition II-A will assure that all fill will be placed in accordance with sound safety standards which will afford reasonable protection to persons and property in accordance with Government Code Section 66605(e).
6. **Title.** The City of Alameda, the permittee, has sufficient legal interest in the area where fill will occur, that it may fill the property in the manner and for the uses approved herein, in accordance with Government Code Section 66605(g).

C. Amendments

1. **Amendment No. Two.** Amendment No. Two authorizes the replacement and rehabilitation of an existing public boat ramp and related public access features. In the Bay, the project will reconstruct an approximately 2,320-square-foot portion of a boat ramp including removing accumulated sediment and existing piles, installing concrete panels to cover the existing ramp, and installing a portion of two concrete abutments. A 240-square-foot existing floating dock will be removed and replaced with an interconnected floating dock (640 square feet) and two guide piles. This floating dock is above and therefore within the footprint of the boat ramp, and thus does not result in an increase in total area of Bay fill. Approximately 890 square feet of riprap will also be replaced around the boat ramp, within the footprint of existing riprap. The boat ramp, dock, and riprap replacements involve routine repairs, reconstruction, replacement, removal, and maintenance that do not involve any substantial enlargement or change in use, as defined in Regulation Section 10601(a)(6).

Amendment No. Two also authorizes the placement of an approximately 225-square-foot gangway, a 320-square-foot boarding float, a 160-square-foot landing pad, and two guide piles, which will also be above and therefore within the footprint of the boat ramp, and thus does not result in an increase in total area of Bay fill. The gangway, boarding float, landing pad, and piles collectively involve activities similar to the construction of a new single boat dock no larger than 1,000 square feet as defined in Regulations Section 10601(a)(1) and 10601(e)(3).

Pile driving, riprap replacement, and other in-water construction work has the potential for adverse impacts on fish, other aquatic organisms, and wildlife, including through noise and localized turbidity impacts. Therefore, Special

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 9

Condition II.E is necessary to ensure that these activities are conducted using best management practices and minimize impacts to fish and wildlife. Special Condition II.E also requires that the work be conducted consistent with the Regional Water Quality Control Board Water Quality Certification, consistent with the Bay Plan Policies on Water Quality. Special Condition II.F imposes requirements on the design for the riprap, consistent with the Bay Plan policies on shoreline protection.

Within the 100-foot shoreline band, Amendment No. Two authorizes the removal of the existing 890-square-foot boat ramp concrete apron and replacement with an approximately 900-square-foot apron and adjacent abutments. Approximately 900 square feet of riprap will also be replaced and associated geotextile fabric will be installed to prevent erosion of an existing bank, within the footprint of existing riprap. The area immediately adjacent to the boat ramp will be repaved and an ADA-accessible path constructed. A 400-square-foot paved area will be constructed to provide hand-launch craft laydown space for the public. Additional lighting and signage will be installed adjacent to the boat ramp. The work within the 100-foot shoreline band involves the placement of small amounts of inert inorganic fill and the extraction of small amounts of materials as defined in Regulation Section 10601(b)(1) and routine repairs, reconstruction, replacement, removal, and maintenance that do not involve any substantial enlargement or change in use, as defined in Regulation Section 10601(b)(5).

The original permit authorized and required the construction of two chemical toilets near the launch ramp. Amendment No. Two authorizes the removal of the existing toilets, as a new public, ADA-accessible restroom will be constructed to replace the existing toilets, near the boat ramp but outside of the Commission's jurisdiction. A fish cleaning station and outdoor shower will also be attached to the new restroom facility. Special Condition II.B.2 has been modified to require the new restroom facility with attached amenities as a public access amenity in lieu of the previous restroom requirement.

In sum, as conditioned, the project authorized under Amendment No. Two is consistent with the McAteer-Petris Act and with the San Francisco Bay Plan in that it will not adversely affect the Bay or public access to and enjoyment of the Bay.

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 10

GD. Dredging. The dredging of approximately 12,000 cubic yards of material is the minimum necessary to provide water of sufficient depth for boats to be launched at all stages of the tide. The disposal of the dredge spoils is in accord with Bay Plan Policies on Dredging because the disposal will take place at a federally-approved disposal site.

DE. Public Access. The proposed project will provide maximum feasible public access to the Bay by opening for public recreation approximately 5 acres of Naval property previously restricted for Navy uses. The various public access improvements, such as landscaping, trash containers, and pathway, etc., are necessary to improve shoreline appearance and to provide a variety of recreational opportunities to the public.

EF. Fence. The Commission finds that the fence required by the Alameda naval Air Station Command is a highly undesirable intrusion into the proposed public access area. Its location immediately adjacent to the fishing area makes the latter significantly less inviting, and the Commission, based on the evidence presented to date, is not persuaded that other, less intrusive measures would not meet the Navy's security needs. It is also clear, however, that the Navy at this time is not willing to provide public access on the breakwater without the fence in the proposed location. Therefore, denial of the amended permit would simply result in no public access, instead of improved access in a revised application. Therefore, the Commission is granting the application as submitted, but strongly urges both the City and the Navy to discuss this matter further, in the hope that a more desirable solution can be found.

FG. Water Quality. Special Condition II-C stated herein, will assure that the project authorized will not have an adverse effect on the quality of Bay water.

GH. Environmental Document. The City of Alameda, the lead agency and permittee, issued an amended Negative Declaration for the project on October 20, 1976. Moreover, pursuant to Regulation Section 10910, Amendment No. 1 is categorically exempt from the requirement to prepare an environmental impact report. On March 14, 2013, the City of Alameda, lead agency for the project authorized under Amendment No. Two, determined that the project was exempt from environmental review under State CEQA Guidelines Section 15301.

HI. Public Trust. By this amended permit, the Commission determines that the proposed project is consistent with the public trust.

IJ. Conclusion. For all of the above reasons, the public benefits from the project clearly exceed any public detriment and maximum feasible public access consistent with the project will be provided. The Commission further finds, declares, and certifies that the activity or activities authorized herein are consistent with the Commission's Amended Management Program for San Francisco Bay, as approved by the Department of Commerce under the Federal Coastal Zone Management Act of 1972, as amended.

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 11

IV. Standard Conditions

~~A. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U.S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city and/or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.~~

~~B. The attached Notice of Completion shall be returned to the Commission within thirty (30) days following completion of the work.~~

~~C. Work must be performed in the precise manner and at the precise locations indicated in your original application and amendment request dated January 7, 1981.~~

~~D. Work must be performed in a manner so as to minimize muddying of waters, and if diking is involved, dikes shall be waterproof. If any seepage returns to the Bay, the permittee will be subject to the regulations of the Regional Water Quality Control Board in that region.~~

~~E. Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.~~

~~F. Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.~~

~~G. Unless otherwise provided in this amended permit, any work authorized herein shall be completed within the time limits specified in this amended permit, or if no time limits are specified in the amended permit, within three years. If the work is not completed by the date specified in the amended permit, or if no date is specified, within three years from the date of the amended permit, the amended permit shall become null and void. If this amended permit becomes null and void for a failure to comply with these time limitations, any fill placed in reliance on this amended permit shall be removed by the permittee or its assignee upon receiving written notification by or on behalf of the Commission to remove the fill.~~

~~H. Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any permit, or amended permit, for such violation after a public hearing held on reasonable notice to the permittee. If the permit, or amended permit, is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee.~~

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 12

~~I. This amended permit shall not take effect unless the permittee executes the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.~~

~~J. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the permit, or amended permit, is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementations of any substantial change in use authorized by this amended permit.~~

~~K. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction up to the line of highest tidal action.~~

~~L. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, of special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittee to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.~~

A. **Permit Execution.** This amended permit shall not take effect unless the permittee(s) execute the original of this amended permit and return it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

B. **Notice of Completion.** The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.

C. **Permit Assignment.** The rights, duties, and obligations contained in this amended permit are assignable. When the permittee(s) transfer any interest in any property either on which the activity is authorized to occur or which is necessary to achieve full compliance of one or more conditions to this amended permit, the permittee(s)/transferors and the transferees shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignees execute and the Executive Director receives an acknowledgment that the assignees have read and understand

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 13

the amended permit and agree to be bound by the terms and conditions of the amended permit, and the assignees are accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit.

D. Permit Runs With the Land. Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

E. Other Government Approvals. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee(s) of any obligations imposed by State or Federal law, either statutory or otherwise.

F. Built Project Must Be Consistent with Application. Work must be performed in the precise manner and at the precise locations indicated in your application, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.

G. Life of Authorization. Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.

H. Commission Jurisdiction. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the amended permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.

I. Changes to the Commission's Jurisdiction as a Result of Natural Processes. This amended permit reflects the location of the shoreline of San Francisco Bay when the amended permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this amended permit does not guarantee that the Commission's jurisdiction will not change in the future.

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 14

J. Violation of Permit May Lead to Permit Revocation. Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee(s) or their assignees if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee(s) or their assignees if the amended permit has been assigned.

K. Should Permit Conditions Be Found to be Illegal or Unenforceable. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the amended permittee(s) or their assignees if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

L. Permission to Conduct Site Visit. The permittee(s) shall grant permission to any member of the Commission's staff to conduct a site visit at the subject property during and after construction to verify that the project is being and has been constructed in compliance with the authorization and conditions contained herein. Site visits may occur during business hours without prior notice and after business hours with 24-hour notice.

M. Abandonment. If, at any time, the Commission determines that the improvements in the Bay authorized herein have been abandoned for a period of two years or more, or have deteriorated to the point that public health, safety or welfare is adversely affected, the Commission may require that the improvements be removed by the permittee(s), its assignees or successors in interest, or by the owner of the improvements, within 60 days or such other reasonable time as the Commission may direct.

N. Best Management Practices

- 1. Debris Removal.** All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee(s), its assignees, or successors in interest, or the owner of the improvements, shall remove such material, at their expense, within ten days after they have been notified by the Executive Director of such placement.

PERMIT NO. 1979.032.02

City of Alameda

(Originally Issued on September 22, 1980, As
Amended Through January 3, 2019)

AMENDMENT NO. TWO

Page 15

2. Construction Operations. All construction operations shall be performed to prevent construction materials from falling, washing or blowing into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittee(s) shall immediately retrieve and remove such material at its expense.

O. In-Kind Repairs and Maintenance. Any in-kind repair and maintenance work authorized herein shall not result in an enlargement of the authorized structural footprint and shall only involve construction materials approved for use in San Francisco Bay. Work shall occur during periods designated to avoid impacts to fish and wildlife. The permittee(s) shall contact Commission staff to confirm current restricted periods for construction.

Executed at San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

LAWRENCE J. GOLDZBAND

Executive Director

San Francisco Bay Conservation and
Development Commission

By: _____

BRAD McCREA

Regulatory Program Director

BM/RCM/ra

cc: U. S. Army Corps of Engineers, Attn.: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn.: Certification Section
Environmental Protection Agency, Attn.: WTR-8

* * * * *

Receipt acknowledged, contents understood and agreed to:

Executed at 2226 Santa Clara Ave., Alameda _____
City of Alameda
Permittee

On 1/11/19 _____ By: _____

Amy Worland
Print Name and Title
Director

SPECIFICATIONS

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 10 00 – SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions (as applicable) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Specification and drawing conventions.
- B. Related Requirements:
 - 1. Division 0 - General Condition Section - Temporary Facilities and Controls for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification:
 - 1. Project: City of Alameda, **Encinal Boat Launch Facility**
 - a. Permit No. **CB18-0806**.
 - b. Project Location: End of service road (un-named off Central Avenue, adjacent to and west of Encinal High School, Alameda, CA 94501
- B. Owner: City of Alameda.
 - 1. Owner's Representative: Amy Wooldridge, Director, Alameda Recreation and Parks Dept., 510-747-7570.
- C. Architect/Engineer (Prime Consultant): Moffat & Nichol, Phone: (925) 944-5411 main;
 - 1. Brad Porter, (925) 956-4939, bporter@moffatnichol.com, ext. 13139,
 - 2. Neil Nichols, (925) 956-4934, nnichols@moffatnichol.com, ext. 13134.
- D. Architect's/Engineer's Consultants: The Architect/Engineer has retained the following design professionals who have prepared designated portions of the Contract Documents:
 - 1. Geotechnical Engineer,
 - 2. Land Surveyor, PLS Survey, Inc..

- E. Other Owner Consultants: The Owner has retained the following design professionals who have prepared designated portions of the Contract Documents:
1. (none)

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work for this Project (**Encinal Boat Launch Facility**) is defined by the Contract Documents and consists of, but is not limited to, the following:
1. **Base Bid Project: Renovation of a Public Boat Launch Facility**
Scope of Work includes, but is not limited to, removing and replacing existing boat ramp, board float and piers, providing, furnishing, and installing a craft boarding float, gangway, guide piers, ADA compliant access/parking, new prefab. restroom (and shower) facility, vehicle safety signage, a fish cleaning station, kayak staging pad, site lighting, a re-surfaced parking lot, and misc. conc. and AC drive, walkways, ramp and abutment site improvements.
 2. Bid Alternate No. 1: (none identified)
- B. Type of Contract:
1. Project will be constructed under a single 'Lump Sum' prime contract, aligned with the Contractor-submitted itemized Base Bid Schedule, to be used for Payment Applications and Contract Change Order reviews.

1.5 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall", "shall be," or "shall comply with", depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 10 00

SECTION 01 11 04 - CONTRACT DOCUMENTS

PART 1 - GENERAL

1.1 GENERAL

- A. The generally described contract Specifications/Statement of Work (SCOPE OF WORK) can be found on the SUMMARY, Section 01 10 00.
- B. The Contract Documents consist of the Project Manual, Specifications and the Drawings and items included, or attached and incorporated by reference – including but not limited to all Attachments, Exhibits and APPENDICES noted in the Table of Contents and included in the Project Manual or Construction Documents.

1.2 DRAWING LIST

- A. Project: **Encinal Boat Launch Facility**

Sheet No.	Sheet No.	Sheet Title	Description
1	T-1	TITLE SHEET	
2	G-1	EXISTING LAUNCH RAMP SITE & DEMOLITION PLAN	
3	C-1	OVERALL SITE PLAN	
4	C-2	DETAILED SITE PLAN – LAUNCH RAMP	
5	C-3	PARKING LOT PLAN	
6	C-4	LAUNCH RAMP APPROACH PLAN	
7	C-5	RESTROOM & LOT PLAN	
8	C-6	LAUNCH RAMP PLAN AND PROFILE	
9	C-7	LAUNCH RAMP SECTIONS AND DETAILS	
10	C-8	LAUNCH RAMP PRECAST PANELS	
11	C-9	DOCK PLAN AND PROFILE	
12	C-10	DOCK DETAILS	
13	C-11	DOCK FLOAT DETAILS	
14	C-20	RESTROOM	
15	C-21	FISH CLEANING STATION	
16	C-22	POLLUTION PREVENTION	
17	U-1	SITE UTILITIES	
18	U-2	ELECTRICAL SINGLE LINE DIAGRAM AND SCHEDULES	

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 11 04

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including, but not limited to, the General Conditions of the Contract for Construction, and General Requirements apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
 - 1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
 - 2. Unit-cost allowances.
 - 3. Quantity allowances.
 - 4. Contingency allowances.
 - 5. Testing and inspecting allowances.
- C. Related Requirements:
 - 1. Division 01 Section - Unit Prices for procedures for using unit prices.
 - 2. Division 01 Section - Quality Requirements for procedures governing the use of allowances for testing and inspecting.
 - 3. Divisions 02 through 33 for items of Work covered by allowances.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.4 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

1.5 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 COORDINATION

- A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.7 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
 - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver – at Contractor's cost - unused material to Owner's storage space as directed.

1.8 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.9 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the Contract Sum.
- C. Costs of services not required by the Contract Documents are not included in the allowance.
- D. At Project closeout, credit unused amounts remaining in the testing and inspecting allowance to Owner by Change Order.

1.10 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 - 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit – of same.
 - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement (or refund).

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: **[Lump-Sum] [Unit-Cost]** Allowance: Include the sum of _____ . Include _____ as specified in Division _____ Section - _____ and as shown on Drawings.
 - 1. This allowance includes material cost, receiving, handling, and installation and Contractor overhead and profit.
 - 2. Coordinate quantity allowance adjustment with corresponding unit-price requirements in Division 01 Section - Unit Prices.

END OF SECTION 01 21 00

SECTION 01 21 50 – MOBILIZATION

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. The work under this Bid Item consists of construction start-up and preparatory work including, but not limited to, work necessary for the mobilizing and furnishing at the site, equipment, materials, supplies and incidentals; for the establishment of all offices, buildings and other temporary facilities and infrastructure necessary for work on the project; cost for pre-paid bonds and insurances; and for all other work and operations which must be performed or costs incurred to begin work on the various Base Bid Schedule (if used) Items at the project site as required for the proper performance and completion of the work. Compensation for mobilization includes, but is not limited to, the following principal items:
1. Moving onto the site of all Contractors' equipment required for operations.
 2. Installing temporary construction power and wiring.
 3. Developing and installing construction water supply.
 4. Providing field offices for the Contractor complete with all furnishings
 5. Providing all on-site communication facilities, including telephones.
 6. Providing on-site sanitary facilities and potable water facilities.
 7. Arranging for and erection of Contractor's work and storage yard(s), and installation of temporary construction fence.
 8. Posting all OSHA-required notices and establishing safety programs.
 9. Submitting preconstruction submittals, including Construction Schedule.
 10. Fabrication and erection of Project Signs.
 11. Preparation of Site-Specific Health and Safety Plan if/as required by Specification and/or Construction Documents
 12. **Submitting a Schedule of Values (i.e.; Base Bid Schedule) in accordance with Section 012900 – Payment Procedures.**
 13. Construction Progress Documentation required by Section 013200 – Construction Progress Documentation.
- A. Demobilization work shall include, but not be limited to, the following principal items:
1. Demobilizing and removal of the Contractor's facilities and equipment.
 2. Removing all project signs from project site, and removing all construction area signs, traffic handling and detour signs, and temporary traffic control devices from project vicinity.
 3. Removing all temporary construction facilities including Contractor's field office and other equipment and utilities from the site as Contractor's property within fourteen (14) calendar days after Final Completion. Cleanup of all debris and restoring the site as specified.
 4. Furnishing all required equipment installation certification forms, warranty documents and Operations and Maintenance (O&M) data and manuals and spare parts, special tools and keys.
 5. Performing and submitting all manufacturer installation checkouts.

6. Furnishing the Contractor's Final Updated Construction Drawings (Record Drawings).
7. Finishing all punch list work within the time requirements.
8. Performing final site cleanup and restoration as required.
9. Completing all specified close-out requirements.
10. Requesting final payment.

1.1 RELATED SECTIONS

- A. Section 013300 – Submittal Procedures

1.2 SUBMITTALS

- A. Contractor shall submit drawings to scale indicating materials, details, and calculations for all permits in a format as required by the Department of Building Inspection.

1.3 PAYMENT PROCEDURES

- A. **Bid Item "Mobilization" shall be included in the Contractor's Schedule of Values** and will be paid as a lump sum payment over the course of the project based on a percentage of completion.

<u>Percentage Bid Item Mobilization</u>	<u>Percentage Project Completion</u>
25%	2%
50%	5%
75%	10%
100%	20%

- B. The retention of funds provisions in Paragraph 9.06 – Withholding Payment of the General Conditions apply to the sum of all the contract work done, including that under the Schedule of Values Bid Item "Mobilization."
- C. Any extension of the contract time that may be granted will not of itself constitute grounds for a claim for additional payment.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

PART 4 – BASE BID SCHEDULE (not used)

The value for ITEM #1 MOBILIZATION (& DEMOBILIZATION) in the BASE BID SCHEDULE shall include the following:

- Mobilization and Demobilization

The scope included in the BASE BID SCHEDULE for the mobilization items above shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in mobilizing, re-mobilizing, demobilizing, as shown on the Plans, as specified in Section 9-1.16D, "Mobilization," in the Standard Specifications, the City General Conditions, these special provisions, and as directed by the City Representative. The unit price paid for Mobilization is limited to 2.5% of bid items 2 through 25.

END OF SECTION 01 21 50

END OF SECTION 01 21 50

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General Conditions, BIDDING REQUIREMENTS, SCHEDULE OF VALUES (Provided by Awarded Contractor) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Division 01 Section 01 26 00 Contract Modification Procedures for procedures for submitting and handling Change Orders.
 - 2. Division 01 Section 01 40 00 Quality Requirements for general testing and inspecting requirements.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A BASE BID SCHEDULE ~~(not used)~~ for unit prices is included in the PROJECT MANUAL, BIDDING REQUIREMENTS. Specification Sections (which may be) referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.2 SCHEDULE OF UNIT PRICES (see BASE BID SCHEDULE ~~(not used)~~ in BIDDING REQUIREMENTS, PROJECT MANUAL)

- A. Unit Price No. <(see SCHEDULE OF VALUES)>:
1. Description: <(see SCHEDULE OF VALUES)> according to Division Section "<(see SCHEDULE OF VALUES)>."
 2. Unit of Measurement: <(see SCHEDULE OF VALUES)>.
 3. Quantity Allowance: Coordinate unit price with allowance adjustment requirements (if any) in Division 01 Section 01 21 00 "Allowances."

END OF SECTION 01 22 00

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.
 - 3. Alternate Bids shall include all overhead and profit applicable to that portion of the Work.
 - 4. The description below for each Alternate Bid is recognized to be incomplete and abbreviated, but implies that each change must be complete for the scope of Work affected. The descriptions are primarily scope definitions, and do not necessarily detail the full range of materials and processes needed to complete the Work as required. Refer to applicable Specification Sections, and to applicable drawings, for the specific requirements of the Work, regardless of whether references are so noted in the description of each Alternate. Coordinate related Work and modify surrounding Work as required to properly integrate with the Work of each Alternate. Any change of details, construction, etc., as required to accommodate the Alternate shall be the responsibility of the Contractor and shall be included in his Alternate Bid Price.
 - 5. Where methods of construction, materials, finishes, or details of installation, required by the various Alternate Bids, differ from the requirements shown on drawings or specified for corresponding items, the Alternate construction, materials, etc., will be subject to approval by the Architect.

6. Approval of the Alternate makes all requirements of scope, performance, submissions, service and guarantee binding as any other material name appearing in the Specifications for the Base Bid. All necessary changes in building design or construction to accommodate the alternate materials shall be the sole responsibility of the Contractor without extra cost to the Owner.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent Work as necessary to completely integrate work of the alternate into Project.
 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
 2. Prior to installation of the Alternate items, verify that all surfaces have been modified as necessary to accept the installation and that the item or items may be installed in complete accordance with their manufacturer's current recommendations. Notify the Architect of any discrepancies before proceeding.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other Work of the Contract.
- D. Schedule: A schedule of alternates (if used) is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the Work described under each alternate.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. (not applicable)

END OF SECTION 01 23 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
 - 1. Division 01 Section - Allowances for products selected under an allowance.
 - 2. Division 01 Section - Alternates for products selected under an alternate.
 - 3. Division 01 Section - Product Requirements for requirements for submitting comparable product submittals for products by listed manufacturers.
 - 4. Divisions 02 through 33 for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use Substitution Request form, as included in Section 01 25 00A.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including, but not limited to, a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate

- proposed substitution.
- c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including, but not limited to, drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including, but not limited to, effect on the overall Contract Time (i.e.; TERM). If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including, but not limited to, a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate Work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - i. SUBSTITUTION REQUEST form (CSI), attached to this Section, is used.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 30 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Architect. (See DEFINITIONS, this Section, paragraph 1.3 A.2.)
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.

- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- k. SUBSTITUTION REQUEST FORM (CSI), attached to this Section, is used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 25 00



SUBSTITUTION REQUEST (After the Bidding Phase)

Project: _____ Substitution Request Number: _____

 To: _____ From: _____
 _____ Date: _____
 _____ A/E Project Number: _____
 Re: _____ Contract For: _____

Specification Title: _____ Description: _____
 Section: _____ Page: _____ Article/Paragraph: _____

Proposed _____ Substitution: _____
 _____ Manufacturer: _____
 _____ Address: _____ Phone: _____
 Trade Name: _____ Model No.: _____
 Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

☐ Point-by-point comparative data attached - REQUIRED BY A/E

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Architect: _____
 Address: _____ Owner: _____
 _____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitution: _____ (\$ _____).

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST (Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including, but not limited to, A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments: _____

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01330.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: _____

Date: _____

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Division 01 Section 01 22 00 - Unit Prices for administrative requirements for using unit prices.
 - 2. Division 01 Section 01 25 00 - Substitution Procedures for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request or 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

- b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to,, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use AIA Document G709 – or similar - for Proposal Requests.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to,, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Division 01 Section 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use AIA Document G709 – or similar - for Proposal Requests.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Division 01 Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Division 01 Section 01 22 00 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701 form – or similar - included in Project Manual.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 – or similar. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Division 01 Section 01 21 00 - Allowances for procedural requirements governing the handling and processing of allowances.
 - 2. Division 01 Section 01 22 00 - Unit Prices for administrative requirements governing the use of unit prices.
 - 3. Division 01 Section 01 26 00 - Contract Modification Procedures for administrative procedures for handling changes to the Contract.
 - 4. Division 01 Section 01 32 00 - Construction Progress Documentation for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

- A. **Schedule of Values: An itemized statement furnished by Contractor allocating all portions of the Contract Sum to various portions (i.e.; Base Bid Schedule) of the Work and used as the basis for reviewing Contractor's Applications for Payment and/or Change Order Requests (CORs).**

1.4 SCHEDULE OF VALUES

- A. **Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's construction schedule.**
 - 1. Coordinate line items in the Schedule of Values with other required administrative forms and schedules, including, but not limited to, the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.

2. **Submit the Schedule of Values to Owner at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.** Schedule of Values, submitted by awarded Contractor, will be a much more detailed document than the Base Bid Schedule (if provided), as further described herein and in the Contract Documents.
3. Subschedules for Each Project: Where the Work is separated into phases requiring separately phased payments. Provide subschedules showing values coordinated with the Project as defined in Section 01 10 00 - Summary.
4. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.

B. Format and Content: Use Project Manual's ~~table of contents (or Contractor submitted Base Bid Schedule as a guide)~~ to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Arrange Schedule of Values consistent with format of AIA Document G703.
3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Subcontractor License # AND DIR #.
 - e. Name of manufacturer or fabricator.
 - f. Name of supplier.
 - g. Change Orders (numbers) that affect value.
 - h. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five (5) percent of the Contract Sum.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. **Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.**
7. **Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.**
8. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit

- cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
9. Purchase Contracts: Provide a separate line item in the Schedule of Values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
 10. **Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.**
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
 11. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as submitted to the Owner and as certified by Architect.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Owner by the first day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month ~~<last day of the month>~~.
 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect, City, and Project Manager or Construction Manager.
- D. Application for Payment Forms: Use most appropriate and applicable application forms standard for the industry. Submit draft to City for review and approval min. one week prior to first Payment Application. ~~provided in Project Manual for Applications for Payment. Sample copies are included in Project Manual.~~
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 1. Entries shall match data on the Schedule of Values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for Work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for Work being carried out under Owner-requested

project acceleration.

- F. **Stored Materials:** Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- G. **Transmittal:** Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. **Waivers of Mechanic's Lien:** With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. **Waiver Forms:** Submit executed waivers of lien on forms acceptable to Owner.
- I. **Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:**
1. List of subcontractors (including, but not limited to, License #s and DIR #s).
 2. **Schedule of Values (i.e.; Base Bid Schedule).**
 3. Contractor's construction schedule (preliminary if not final).
 4. Products list (preliminary if not final).
 5. Submittal schedule (preliminary if not final).
- J. **Application for Payment at Substantial Completion:** After Owner issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited to, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 29 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Conservation.
 - 3. Correlation of Documents.
 - 4. Coordination drawings.
 - 5. Requests for Information (RFIs).
 - 6. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
 - 1. Division 01 Section 01 10 00 - Contract Summary for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
 - 2. Division 01 Section 01 32 00 - Construction Progress Documentation for preparing and submitting Contractor's construction schedule.
 - 3. Division 01 Section 01 73 00 - Execution for procedures for coordinating general installation and field-engineering services, including, but not limited to, establishment of benchmarks and control points.
 - 4. Division 01 Section 01 77 00 - Closeout Procedures for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including, but not limited to, those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
- B. Key Personnel Names: Within fifteen (15) days of receipt of Notice to Proceed (and starting construction operations), submit a list of key personnel assignments, including, but not limited to, superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including, but not limited to, home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
 - 1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. **Preparation of the Schedule of Values (i.e.; Base Bid Schedule).**

3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Specifications Sections (including, but not limited to, but not limited to Sections 01 74 00 Construction Waste Management, 01 85 00 Recycling of Concrete and Asphalt Materials) for disposition of salvaged and recycled materials that are, or may be, designated as Owner's property.

1.6 CORRELATION OF DOCUMENTS

- A. Any discrepancy in the documents shall be interpreted to default to the most restrictive or beneficial (to the Owner) solution. In case of discrepancy either in figures or Drawings or Specifications, the matter must be promptly submitted by the Contractor to the Architect, who will promptly make a determination in writing. Any adjustment by the Contractor without such a determination by the Architect will be at the Contractor's own risk and expense. The Architect will furnish, as necessary, additional detailed Drawings and information for clarification.
- B. If a document discrepancy is identified prior to bidding, the Architect is to be notified so a written clarification may be issued.
- C. Any survey drawing documents included herein are for convenience of the Contractor and Owner. The Architect assumes no responsibility as to their completeness or accuracy.
- D. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, is of like effect as if shown or mentioned in both.
- E. On any of the Drawings in which a portion of the Work is detailed or drawn out and the remainder is shown in outline, the parts detailed or drawn out will apply also to all other like portions of the Work.
- F. When the word "similar" appears on Drawings, it has a general meaning and must not be interpreted as meaning identical. All details must be worked out in relation to their location and connection with other parts of the Work.
- G. Refer to Architectural Drawings for verification of locations, sizes and dimensions.

1.7 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or

installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
 - f. Indicate required installation sequences.
 - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Refer to Division 26 Section - Basic (Electrical) Materials and Methods for specific Coordination Drawing requirements for mechanical and electrical installations.
7. Mechanical and Plumbing Work: Work to be shown shall include, but not be limited to the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including, but not limited to, insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers,

- access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
- 8. Electrical Work: Work to be shown shall include, but not be limited to the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
 - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
- 9. Fire-Protection System: Work to be shown shall include, but not be limited to the following:
 - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
- 10. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.
- 11. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Division 01 Section 01 33 00 - Submittal Procedures.
- C. Coordination of Digital Data Files: Prepare coordination digital data files according to the following requirements:
 - 1. Architect may consent to furnish Contractor with one set of digital data files of certain drawings for use in preparing coordination digital data files.
 - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
 - b. Digital Data Software Program: Drawings are available in AutoCAD 2013.
 - c. Contractor shall sign a data licensing agreement form in a format acceptable to Architect.

1.8 REQUESTS FOR INFORMATION (RFI'S)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified – or similar.
 - 1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name.
 - 2. Project number.
 - 3. Date issued.

4. Name of Contractor.
 5. Date requested of Response.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. RFI Cost Impact (if any),
 9. Specification Section number and title and related paragraphs, as appropriate.
 10. Drawing number and detail references, as appropriate.
 11. Field dimensions and conditions, as appropriate.
 12. **Contractor's best recommendation for resolution.** If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 13. Contractor's signature.
 14. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: AIA Document G716 – or similar.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven (7) working days for Architect's response for each RFI.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section 01 26 00 - Contract Modification Procedures.
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within three (3) days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including, but not limited to, RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.

- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven (7) days if Contractor disagrees with response.
1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.9 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date, location and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees at least five (5) days prior to meeting.
 3. Minutes: Entity responsible for conducting meeting (Contractor) will record and document significant discussions, agreements and disagreements achieved. Distribute the meeting minutes to everyone concerned, including, but not limited to, Owner and Architect, within three (3) days of the meeting.
- B. Preconstruction Conference: **Architect/City will schedule and conduct a preconstruction conference** before starting construction, at a time convenient to Owner and Architect, but no later than fifteen (15) days after execution of the Agreement.
1. Conduct the conference to review responsibilities and personnel assignments.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect progress, including, but not limited to, the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Preparation of record documents.
 - m. Use of the premises.
 - n. Work restrictions.
 - o. Working hours.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.

- r. Procedures for moisture and mold control.
 - s. Procedures for disruptions and shutdowns.
 - t. Construction waste management and recycling.
 - u. Parking availability.
 - v. Office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. First aid.
 - y. Security.
 - z. Progress cleaning.
4. Minutes: Entity responsible for conducting meeting (Contractor) will record and distribute meeting minutes.
- C. Preinstallation and Coordination Conferences: Conduct a preinstallation and coordination conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect, and Owner or Owner's Authorized representative of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including, but not limited to, requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
 - 3. Record significant conference discussions, agreements, and disagreements, including, but not limited to, required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than thirty (30) days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including, but not limited to, the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - i. Submittal procedures.
 - j. Coordination of separate contracts.
 - k. Owner's partial occupancy requirements.
 - l. Installation of Owner's furniture, fixtures, and equipment.
 - m. Responsibility for removing temporary facilities and controls.
 - n. Final clean up and removal of construction materials and debris.
 4. Minutes: Entity conducting meeting (Contractor) will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at weekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
 2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- 1) Review schedule for next period.
- b. Review present and future needs of each entity present, including, but not limited to, the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Safety
 - 14) Work hours
 - 15) Status of RFIs.
 - 16) Status of proposal requests.
 - 17) Pending Changes
 - 18) Status of Change Orders
 - 19) Pending claims and disputes
 - 20) Documentation of information for payment request.
4. Minutes: Entity responsible for conducting the meeting (Contractor) will distribute the meeting minutes to each party present and to parties requiring information.
5. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 31 00

SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including, but not limited to, the following:
 - 1. Startup construction schedule.
 - 2. Contractor's construction schedule.
 - 3. Submittals schedule
 - 4. Construction schedule updating reports.
 - 5. Daily construction reports.
 - 6. Material location reports.
 - 7. Site condition reports.
 - 8. Special reports.
- B. Related Requirements:
 - 1. Division 01 Section 01 29 00 - Payment Procedures for submitting the Schedule of Values.
 - 2. Division 01 Section 01 31 00- Project Management and Coordination for submitting and distributing meeting and conference minutes.
 - 3. Division 01 Section 01 33 00 - Submittal Procedures for submitting schedules and reports.
 - 4. Division 01 Section 01 40 00 - Quality Requirements for submitting a schedule of tests and inspections.
 - 5. Division 01 Section 01 77 00 - Closeout Procedures for submitting photographic negatives as Project Record Documents at Project closeout.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. **Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total**

Contract Sum unless otherwise approved by Architect or Owner.

- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time belongs to Owner.
 - 2. Free Float is the amount of time an activity can be delayed without adversely affecting the early start of the Successor Activity.
 - 3. Total Float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file, where indicated.
 - 2. PDF electronic file.
 - 3. Two (2) paper copies.
- B. Startup construction schedule.
 - 1. Approval of cost-loaded, startup construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (Initial or updated) and date on label.
- E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
 - 1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
 - 2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.

3. Total Float Report: List of all activities sorted in ascending order of Total Float.
 4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.
- F. Construction Schedule Updating Reports: Submit with Applications for Payment.
- G. Construction Photographs: Submit two prints of each photographic view with Application for Payment.
1. Format: 4 x 6 smooth-surface prints on single-weight commercial-grade paper, enclosed in clear plastic sleeves that are punched for standard 3-ring binder.
 2. Identification: On back of each print, provide an applied label or rubber-stamped impression with the following information:
 - a. Name of Project.
 - b. Name and address of photographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date photograph was taken.
 - f. Brief description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
- H. **In lieu of above noted Construction Photographs Contractor may elect to submit a complete digital set of weekly progress photographs on a Compact Disc (CD) as a Project Record Document.**
- I. Qualification Data: For firms and persons specified in "Quality Assurance" specification articles to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- J. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Architect's final release or approval.
- K. Daily Construction Reports: Submit at weekly intervals.
- L. Site Condition Reports: Submit at time of discovery of differing conditions.
- M. Special Reports: Submit at time of unusual event.

1.5 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request.

1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's construction schedule with the S schedule of V values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for Notice of Award to the Notice to Proceed to date of **Substantial Completion** to final completion of the Project.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each section or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 - 1. Activity Duration: Define activities so no activity is longer than 20 twenty days, unless specifically allowed by Architect.
 - 2. Procurement Activities: Include procurement process activities for any long lead items and major items (including but not limited to items below), requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - a. ~~Synthetic Turf.~~
 - b. Site Furnishings, Light Fixtures, if/as applicable.
 - c. ~~Sports Field Lighting.~~
 - d. Transformers, Service Meter Pedestals,
 - e. Fish Cleaning Station,
 - f. Guide Piles, Boarding Floats,
 - g. Prefabricated Modular or Pre-Engineered Structures, including Restroom / Storage Buildings, if/as applicable.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section 01 33 00 - Submittal Procedures in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 - 4. Startup and Testing Time: Include no fewer than (15) fifteen days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's and Construction Manager's administrative procedures necessary for certification of Substantial Completion.
 - 6. Punch List and Final Completion: Include not more than (30) thirty days for completion of punch list items and final completion.

- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work under More Than One Contract: Include a separate activity for each contract.
 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section – 01 10 00 Summary. Delivery dates indicated stipulate the earliest possible delivery date.
 5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 01 Section – 01 10 00 Summary. Delivery dates indicated stipulate the earliest possible delivery date.
 6. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
 7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Temporary enclosure and space conditioning.
 - c. Permanent space enclosure.
 - d. Completion of mechanical installation.
 - e. Completion of electrical installation.
 - f. Substantial Completion.
- D. Milestones: Include milestones indicated or implied in the Contract Documents in the schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, **and the following interim milestones:**
1. On-site arrival of prefabricated structure.

2. Utilities connection of prefabricated structures
 3. Excavation, Backfilling and Compacting.
- E. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
1. See Division 01 Section – 01 29 00 Payment Procedures for cost reporting and payment procedures.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
 2. Unanswered Requests for Information.
 3. Rejected or unreturned submittals.
 4. Notations on returned submittals.
 5. Pending modifications affecting the Work and Contract Time.
- G. Recovery Schedule: When periodic update indicates the Work is **(14)** fourteen or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- H. Computer Scheduling Software: Prepare schedules using Owner approved current version of a program that has been developed specifically to manage construction schedules, such as Microsoft Project, or Primavera, or a scheduling component of Project Web site software specified in Division 01 Section 01 31 00 - Project Management and Coordination. Provide choice, type, and name of specific software selected, for Windows XP or Windows Vista or selected current Windows operating system.

2.2 STARTUP CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit startup, horizontal, bar-chart-type construction schedule within (10) ten days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 ninety days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt- chart-type, Contractor's construction schedule within (30) thirty days of date established for the Notice to Proceed. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
1. For construction activities that require three months or longer to complete, indicate

an estimated completion percentage in (10) ten percent increments within time bar.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within (14) fourteen days of date established for the Notice to Proceed. Outline significant construction activities for the first (90) ninety days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's construction schedule using a time-scaled CPM network analysis diagram for the Work.
 - 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than (30) thirty days after date established for the Notice to Proceed.
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.
 - 2. Conduct educational workshops to train and inform key Project personnel, including, but not limited to, subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 - 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 - 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to coordinate with the Contract Time. (Note: Unless unavoidable, critical activities shall be scheduled to avoid Fridays, esp. if Public Works or City Hall participation is required as both departments are closed on Fridays.)
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
 - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by Contractor's activities.
 - i. Testing.
 - j. Punch list and final completion.
 - k. Activities occurring following final completion.
 - 2. Critical Path Activities: Identify Critical Path activities, including, but not limited to, those for interim completion dates. Scheduled start and completion dates shall

- be consistent with Contract milestone dates.
3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 4. Format: Mark the Critical Path. Locate the Critical Path near center of network; locate paths with most float near the edges.
 - a. Subnetworks on separate sheets are permissible for activities clearly off the Critical Path.
 5. Cost- and Resource-Loading of CPM Schedule: Assign cost to construction activities on the CPM schedule. Do not assign costs to submittal activities. Obtain Architect's approval prior to assigning costs to fabrication and delivery activities. Assign costs under main subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project record documents and demonstration and training (if applicable), in the amount of **[5%] five percent** of the Contract Sum.
 - a. Each activity cost shall reflect an appropriate value subject to approval by Architect.
 - b. Total cost assigned to activities shall equal the total Contract Sum.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-Total Float." Identify critical activities. Prepare tabulated reports showing the following:
1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Main events of activity.
 4. Immediate preceding and succeeding activities.
 5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.
 8. Total Float or slack time.
 9. Average size of workforce.
 10. Dollar value of activity (coordinated with the schedule of values).
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
1. Identification of activities that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the Critical Path.
 6. Changes in Total Float or slack time.
 7. Changes in the Contract Time.
- H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.
1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
 2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.

3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.
 - a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
Submit value summary printouts one week before each regularly scheduled progress meeting.

2.5 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including, but not limited to, presence of rain or snow.
 7. Accidents.
 8. Meetings and significant decisions.
 9. Unusual events (see special reports).
 10. Stoppages, delays, shortages, and losses.
 11. Meter readings and similar recordings.
 12. Emergency procedures.
 13. Orders and requests of authorities having jurisdiction.
 14. Change Orders received and implemented.
 15. Work Change Directives received and implemented.
 16. Services connected and disconnected.
 17. Equipment or system tests and startups.
 18. Partial completions and occupancies.
 19. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
 1. Material stored prior to previous report and remaining in storage.
 2. Material stored prior to previous report and since removed from storage and installed.
 3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.6 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within one (1) day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, and response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.
 - 1. In-House Option: At Owner's sole discretion, Owner may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
 - 2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.
- B. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final completion percentage for each activity.
- C. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 32 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Division 01 Section 01 29 00 - Payment Procedures for submitting Applications for Payment and the schedule of values.
 - 2. Division 01 Section 01 31 00 - Project Management and Coordination for submitting Coordination Drawings.
 - 3. Division 01 Section 01 32 00 - Construction Progress Documentation for submitting schedules and reports, including, but not limited to, Contractor's construction schedule.
 - 4. Division 01 Section 01 78 23 - Operation and Maintenance Data for submitting operation and maintenance manuals.
 - 5. Division 01 Section 01 78 39 - Project Record Documents for submitting Record Drawings / Documents, record Specifications, and record Product Data.
 - 6. Division 01 Section 01 77 00 - Closeout Procedures for submitting warranties Project Record Documents and operation and maintenance manuals.
 - 7. Division 01 Section 01 79 00 - Demonstration and Training for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-

independent fixed-layout document format.

1.4 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
 - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 - 2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - 3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 - 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled date of fabrication.
 - h. Scheduled dates for purchasing.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
 - 1. Architect may furnish Contractor specifically requested digital data drawing files of the Contract Drawings for use in preparing Shop Drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital Drawing Software Program: The Contract Drawings are available in AutoCAD.
 - c. Contractor shall execute a data licensing agreement in the form of an Agreement acceptable to Architect, as a pre-requisite for Architect providing electronic files. Architect's consultants may require additional agreements as condition for release of their electronic files.
 - 1) Contractor shall bind all parties receiving or using these files to the same agreements.
- B. Coordination: Coordinate preparation and processing of submittals with performance of

construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit Action Submittals and Informational Submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow sufficient time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 5 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 5 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 7 days for initial review of each submittal.
 5. Concurrent Review of Submittals: Where two or more submittals require concurrent review, Architect retains the right to hold submittals until all submittals required for concurrent review are received. Architect will notify Contractor of necessity for concurrent submittals after a submittal is received in absence of other related submittals required for concurrent review. The date of receipt of the last submittal required for concurrent review will be considered the date for the start of Architect's review time.
 - a. Examples of submittals for concurrent review include, but are not limited to: Exterior Lighting, Transformers, roofing or related flashing, accessories, and waterproofing installed by roofer; doors, door frames, and hardware submittals; and window or glazing systems and glass.
- D. Transmittals for Paper and Electronic Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return without review or discard any submittals received from sources other than the Contractor. Provide transmittal form including, but not limited to, the following information:
1. Submittal number unique identifier, including, but not limited to, revision identifier, and with identification of submittal contents as follows:
 - a. Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals

- shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A), or next sequential letter.
- b. Name of Specification Section, with brief description of submittal contents for sections requiring multiple submittals.
 - c. Include a list of number(s) of associated Specification Section(s) that are included in the submittal.
2. Overall sequence number each submittal starting with number 1 for the first submittal transmitted to the Architect, 2 for the second and so forth, indicating the chronological submission of each submittal.
 3. Provide means for insertion to permanently record Contractor's review and approval markings. Indicate Contractor's completed review prior to submitting to Architect.
 4. Include the following information for processing and recording:
 - a. Project name.
 - b. Date of submission to Architect.
 - c. Name of Contractor.
 - d. Additionally, indicate names of the following, as applicable, including, but not limited to, indication of the entity that prepared each submittal:
 - 1) Name of subcontractor.
 - 2) Name of supplier / vendor.
 - 3) Name of manufacturer.
 - e. Drawing number and detail references, as appropriate.
 - f. Location(s) where product is to be installed, as appropriate.
 - g. Remarks and other necessary identification.
 - h. Signature of transmitter.
- E. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
1. Number of Copies: Provide paper submittals with a minimum of 2 copies for submittals for Architect's review, with an additional copy for each of Architect's consultants that will also review each submittal. Architect, and each of Architect's consultants involved in review, will retain one copy each for their records, and return additional copies with annotations.
 - a. Submit additional copies if Contractor requires more than one paper copy returned for Contractor's use. When Shop Drawings are required to be annotated by Contractor for as-built conditions and submitted as Record Drawings / Documents, include a copy dedicated for this purpose.
 - b. Submit additional copies as required by each other concurrent reviewer, as applicable, in addition to specified number of copies to Architect.
 2. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- F. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed .pdf format file, or .pdf files within a .zip file where multiple files cannot be avoided, incorporating submittal requirements of a single Specification Section and transmittal form. Name file according to Submittal number and contents identification.
 2. Architect, and Architect's consultants as applicable, will return electronic submittal with annotations containing their comments as applicable.

3. Architect retains right to require a paper submittal for Shop Drawings or other complex submittals that may require substantial notation to be marked on submittal sheets or drawings, at Architect's discretion.
- G. Options: Circle or highlight options to be provided on Product Data and specification sheets. Identify options requiring selection by Architect with red colored boxes or text.
- H. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, and installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. Organization: All required submittals for a specification section must be transmitted together complete as one submittal transmittal. Partial transmittals will not be accepted for review.
- B. Contractor's responsibilities:
 1. Contractor shall thoroughly check Shop Drawings, project data and samples for compliance with Contract Documents and list variances prior to submission.
 2. Contractor represents by approving and submitting Shop Drawings, Product Data and/or Samples that Contractor has or will coordinate and verify dimensions, all materials, field measurements, field construction criteria, catalog numbers and similar data with requirements of work and of Contract Documents prior to submitting.
 3. Submittals shall bear Contractor's stamp and initials certifying that they have been checked. Submittals without stamp & initials shall be returned un-reviewed.
 4. Contractor's responsibility for deviations or errors and omissions in submittals is not relieved by Architect/ Engineer review of submittals, unless Architect/ Engineer gives specific written acceptance of specific deviations.
 5. Do not proceed with purchasing, fabrication or delivery of Work which

requires submittals until return of submittals with Architect/Engineer stamp and initials or signature evidencing final review and approval of submittals.

6. Contractor is responsible for dimensions at job site, quantities, coordinating component parts and trades to effect unified construction and implement construction techniques, safety of incremental units, and Satisfactory performance of Work in accordance with Contract Documents.
7. Delays caused by failure of Contractor to fully coordinate, review, and check Shop Drawings and to stamp with its approval shall be Contractor's responsibility.
8. Coordinate preparation and processing of submittals with performance of work to avoid delays.
9. No extension of time shall be allowed because of failure to properly coordinate and sequence submittals.

C. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. If other than Action or Informational, submit electronic submittals via email or FTP as PDF format electronic files.
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
2. Action Submittals: Submit electronic and (2) two paper copies of each submittal unless otherwise indicated. Architect and his consultants involved in review of each submittal will retain one copy each; and will annotate and return additional copies to Contractor.
3. Informational Submittals: Submit electronic and two paper copies of each submittal unless otherwise indicated. Architect will not return copies.
4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

D. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.

- g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 - 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 - 5. Submit Product Data before or concurrent with Samples.
- E. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
- 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 x 11 inches, but no larger than 30 x 42 inches.
 - 3. Submit Shop Drawings in the following formats:
 - a. PDF electronic file.
 - b. Opaque paper copies of each submittal. Architect and his consultants involved in review will retain one copy each; remainder will be returned.
- F. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
- 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 - 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 - 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in

- individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
- b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
- a. Number of Samples: Unless otherwise indicated, submit one (1) full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 - b. Selector sheets printed by Contractor, and website information, are not acceptable samples for selection. Submit Manufacturer's selector sheets and samples with accurate color and texture representation as applicable.
6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
- a. Number of Samples: Unless otherwise indicated, submit three (3) sets of samples. Architect will retain one (1) Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least **three (3)** sets of paired units that show approximate limits of variations.

2.2 INFORMATION SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
 - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - 3. Test and Inspection Reports: Comply with requirements in Division 1 Section 01 40 00 - Quality Requirements.
- B. Coordination Drawing Submittals: Comply with requirements specified in Division 01 Section – 01 31 00 Project Management and Coordination.
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 01

Section 01 32 00 - Construction Progress Documentation.

- D. Application for Payment and Schedule of Values: Comply with requirements specified in Division 01 Section 01 29 00 - Payment Procedures.
- E. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 01 Section 01 40 00 - Quality Requirements.
- F. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section 01 77 00 - Closeout Procedures.
- G. Maintenance Data: Comply with requirements specified in Division 01 Section - 01 78 00 Operation and Maintenance Data.
- H. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- I. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- J. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- K. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- L. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- M. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- N. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- O. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- P. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.

3. Time period when report is in effect.
 4. Product and manufacturers' names.
 5. Description of product.
 6. Test procedures and results.
 7. Limitations of use.
- Q. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- R. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- S. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- T. Design Data: Prepare and submit written and graphic information, including, but not limited to,, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

2.3 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three (3) paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to

Architect.

- B. Project Closeout and Maintenance Material Submittals: See requirements in Division 01 Section 01 77 00 - Closeout Procedures.
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. Action Submittals:
 - 1. Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
 - a. No exceptions taken.
 - b. Make corrections as noted.
 - c. Revise and resubmit.
 - d. Rejected.
 - e. Other.
 - 2. Submittals or items stamped "No exceptions taken" indicates that Architect does not require resubmittal, and may include comments such as Architect's selection of options.
 - 3. Submittals or items stamped "Make corrections as noted" indicates that Architect does not require resubmittal if the annotated corrections are made. However, items or submittals with this action noted may require resubmittal if:
 - a. Contractor believes indicated corrections are not correct responses, and requires subsequent review. Resubmittal should indicate Contractor's reasons for concern and additional supporting information as applicable.
 - b. Contractor believes a resubmittal is required to address or confirm additional questions through subsequent review, related to items not considered by the original submittal or that were brought to light by Architect's previous review comments.
 - 4. Revise and resubmit items or submittals stamped "revise and resubmit" and "rejected", to address all comments requiring resubmittal and the reasons for rejection.
 - 5. When "Other" action is indicated, Architect will provide additional comment describing the subsequent action required.
 - 6. Submittals may be stamped with more than one action regarding portions of the submittal, and may note that only portions of the original submittal are required to be resubmitted.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 01 33 00

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions (as applicable) and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's Quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 1 Section 01 32 00 - Construction Progress Documentation for developing a schedule of required tests and inspections.
 - 2. Division 2 SITEWORK Sections for additional specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.

- C. Mockups: Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Mockups establish the standard by which the Work will be judged.
- D. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- E. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.5 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 REGULATORY REQUIREMENTS

- A. Copies of Regulations: Obtain copies of the following regulations and retain at Project site to be available for reference by parties who have a reasonable need:
 - 1. 2013 California Building Code, Volumes 1 & 2

1.7 SUBMITTALS

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

- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.
- D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
1. Specification Section number and title.
 2. Description of test and inspection.
 3. Identification of applicable standards.
 4. Identification of test and inspection methods.
 5. Number of tests and inspections required.
 6. Time schedule or time span for tests and inspections.
 7. Entity responsible for performing tests and inspections.
 8. Requirements for obtaining samples.
 9. Unique characteristics of each quality-control service.
- E. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Ambient conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- F. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.8 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in- service performance.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in- service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.
- G. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
 - 1. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

- H. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: The Owner will hire and pay for tests and inspections, unless explicitly assigned to Contractor. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
1. Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 2. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged by Owner and a description of the types of testing and inspecting they are engaged to perform.
 3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
1. Contractor shall engage and pay for Mechanical HVAC systems testing adjusting and balancing services. Refer to Division 23 for Testing, Adjusting and Balancing specifications.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies, Engineer & Architect at least 72 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.

- D. Retesting/Reinspections: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspections, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field-curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Contractor to assist Owner in the scheduling of times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore primary and adjacent substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas (primary and adjacent) and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
- B. Protect construction exposed by or for testing, inspecting, and/or quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 42 00 - REFERENCE STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including, but not limited to, "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including, but not limited to, "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including, but not limited to, unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built. (Refer to PROJECT MANUAL, CONTRACTING REQUIREMENTS documents for applicable work restrictions, if any.)

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.
 - 1. Where abbreviations and acronyms used in Specifications or other Contract Documents are not listed, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

AABC	Associated Air Balance Council	(202) 737-0202
	www.aabc.com	
AAMA	American Architectural Manufacturers Association	(847) 303-5664
	www.aamanet.org	

AASHTO	American Association of State Highway and Transportation Officials	(202) 624-5800
AATCC	www.transportation.org American Association of Textile Chemists and Colorists	(919) 549-8141
ABMA	www.aatcc.org American Bearing Manufacturers Association	(202) 367-1155
ACI	www.americanbearings.org American Concrete Institute	(248) 848-3700
	(Formerly: ACI International) www.concrete.org	
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The)	(205) 257-2530
AF&PA	www.aeic.org American Forest & Paper Association	(800) 878-8878
	www.afandpa.org	(202) 463-2700
AGA	American Gas Association	(202) 824-7000
AHAM	www.aga.org Association of Home Appliance Manufacturers	(202) 872-5955
AHRI	www.aham.org Air-Conditioning, Heating, and Refrigeration Institute	(703) 524-8800
	(The) www.ahrinet.org	
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
AMCA	Air Movement and Control Association International, Inc.	(847) 394-0150
ANSI	www.amca.org American National Standards Institute	(202) 293-8020
AOSA	www.ansi.org Association of Official Seed Analysts, Inc.	(607) 256-3313
APA	www.aosaseed.com APA - The Engineered Wood Association	(253) 565-6600
APA	www.apawood.org Architectural Precast Association	(239) 454-6989
API	www.archprecast.org American Petroleum Institute	(202) 682-8000
	www.api.org	

ARI	Air-Conditioning & Refrigeration Institute (See AHRI)	
ARI	American Refrigeration Institute (See AHRI)	
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air- Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (American Society of Mechanical Engineers) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Safety Engineers (The) www.asse.org	(847) 699-2929
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9500
ATIS	Alliance for Telecommunications Industry Solutions www.atis.org	(202) 628-6380
AWEA	American Wind Energy Association www.awea.org	(202) 383-2500
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWMAC	Architectural Woodwork Manufacturers Association of Canada www.awmac.com	(403) 453-7387
AWPA	American Wood Protection Association (Formerly: American Wood-Preservers' Association) www.awpa.com	(205) 733-4077
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.gobrick.com	(703) 620-0010
BICSI	BICSI, Inc. www.bicsi.org	(800) 242-7405 (813) 979-1991

BIFMA International (616) 285-3963
(Business and Institutional Furniture Manufacturer's Association)

BISSC	www.bifma.com Baking Industry Sanitation Standards Committee	(866) 342-4772
	www.bissc.org	
BWF	Badminton World Federation (Formerly: International Badminton Federation)	60 3 9283 7155
CDA	www.bwfbadminton.org Copper Development Association	(800) 232-3282
	www.copper.org	(212) 251-7200
CEA	Consumer Electronics Association	(866) 858-1555
	www.ce.org	(703) 907-7600
CFFA	Chemical Fabrics & Film Association, Inc.	(216) 241-7333
CFSEI	www.chemicalfabricsandfilm.com Cold-Formed Steel Engineers Institute	(866) 465-4732
	www.cfsei.org	(202) 263-4488
CGA	Compressed Gas Association	(703) 788-2700
	www.cganet.com	
CIMA	Cellulose Insulation Manufacturers Association	(888) 881-2462
	www.cellulose.org	(937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association	(630) 584-1919
	www.cisca.org	
CISPI	Cast Iron Soil Pipe Institute	(404) 622-0073
	www.cispi.org	
CLFMI	Chain Link Fence Manufacturers Institute	(301) 596-2583
	www.chainlinkinfo.org	
CPA	Composite Panel Association	(703) 724-1128
	www.pbmdf.com	
CRI	Carpet and Rug Institute (The)	(706) 278-3176
	www.carpet-rug.org	
CRRC	Cool Roof Rating Council	(866) 465-2523
	www.coolroofs.org	(510) 485-7175
CRSI	Concrete Reinforcing Steel Institute	(800) 328-6306
	www.crsi.org	(847) 517-1200
CSA	CSA International	(866) 797-4272
	(Formerly: IAS - International Approval Services)	(416) 747-4000
	www.csa-international.org	
CSI	Construction Specifications Institute (The)	(800) 689-2900
	www.csinet.org	(703) 684-0300
CSSB	Cedar Shake & Shingle Bureau	(604) 820-7700
	www.cedarbureau.org	
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)	(281) 583-4087
	www.cti.org	
CWC	Composite Wood Council	
	(See CPA)	

DASMA	Door and Access Systems Manufacturers Association www.dasma.com	(216) 241-7333
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
ECA	Electronic Components Association www.ec-central.org	(703) 907-8024
ECAMA	Electronic Components Assemblies & Materials Association	
EIA	(See ECA) Electronic Industries Alliance	
EIMA	(See TIA) EIFS Industry Members Association www.eima.com	(800) 294-3462 (703) 538-1616
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040
ESD	ESD Association (Electrostatic Discharge Association) www.esda.org	(315) 339-6937
ESTA	Entertainment Services and Technology Association (See PLASA)	
EVO	Efficiency Valuation Organization www.evo-world.org	(415) 367-3643 44 20 88 167 857
FM Approvals	FM Approvals LLC www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridarroof.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council U.S. www.fscus.org	(612) 353-4511
GA	Gypsum Association www.gypsum.org	(301) 277-8686
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GS	Green Seal www.greenseal.org	(202) 872-6400
HI	Hydraulic Institute www.pumps.org	(973) 267-9700
HI/GAMA	Hydronics Institute/Gas Appliance Manufacturers Association (See AHRI)	
HMMA	Hollow Metal Manufacturers Association (See NAAMM)	

HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAPSC	International Association of Professional Security Consultants www.iapsc.org	(415) 536-0288
IAS	International Approval Services	
ICBO	(See CSA) International Conference of Building Officials	
ICC	(See ICC) International Code Council www.iccsafe.org	(888) 422-7233 (202) 370-1800
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICPA	International Cast Polymer Alliance www.icpa-hq.org	(703) 525-0511
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IES	Illuminating Engineering Society (Formerly: Illuminating Engineering Society of North America) www.ies.org	(212) 248-5000
IESNA	Illuminating Engineering Society of North America (See IES)	
IEST	Institute of Environmental Sciences and Technology www.iest.org	(847) 981-0100
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
IGSHPA	International Ground Source Heat Pump Association www.igshpa.okstate.edu	(405) 744-5175
Intertek	Intertek Group (Formerly: ETL SEMCO; Intertek Testing Service NA) www.intertek.com	(800) 967-5352
ISA	International Society of Automation (The) (Formerly: Instrumentation, Systems, and Automation Society) www.isa.org	(919) 549-8411
ISAS	Instrumentation, Systems, and Automation Society (The) (See ISA)	

ISFA	International Surface Fabricators Association	(877) 464-7732
	(Formerly: International Solid Surface Fabricators Association)	(801) 341-7360
	www.isfanow.org	
ISO	International Organization for Standardization	41 22 749 01 11
	www.iso.org	
ISSFA	International Solid Surface Fabricators Association (See ISFA)	
ITU	International Telecommunication Union	41 22 730 51 11
	www.itu.int/home	
KCMA	Kitchen Cabinet Manufacturers Association	(703) 264-1690
	www.kcma.org	
LMA	Laminating Materials Association (See CPA)	
LPI	Lightning Protection Institute	(800) 488-6864
	www.lightning.org	
MBMA	Metal Building Manufacturers Association	(216) 241-7333
	www.mbma.com	
MCA	Metal Construction Association	(847) 375-4718
	www.metalconstruction.org	
MFMA	Maple Flooring Manufacturers Association, Inc.	(888) 480-9138
	www.maplefloor.org	
MFMA	Metal Framing Manufacturers Association, Inc.	(312) 644-6610
	www.metalframingmfg.org	
MHIA	Material Handling Industry of America	(800) 345-1815
	www.mhia.org	(704) 676-1190
MIA	Marble Institute of America	(440) 250-9222
	www.marble-institute.com	
MMPA	Moulding & Millwork Producers Association	(800) 550-7889
	(Formerly: Wood Moulding & Millwork Producers Association)	(530) 661-9591
	www.wmmpa.com	
MPI	Master Painters Institute	(888) 674-8937
	www.paintinfo.com	(604) 298-7578
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.	(703) 281-6613
	www.mss-hq.org	
NAAMM	National Association of Architectural Metal Manufacturers	(630) 942-6591

NACE	www.naamm.org NACE International	(800) 797-6223
	(National Association of Corrosion Engineers International) www.nace.org	(281) 228-6200
NADCA	National Air Duct Cleaners Association www.nadca.com	(202) 737-2926
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) www.ncaa.org	(317) 917-6222
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	International Electrical Testing Association www.netaworld.org	(888) 300-6382 (269) 488-6382
NFHS	National Federation of State High School Associations www.nfhs.org	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NHLA	National Hardwood Lumber Association www.nhla.com	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	National Oak Flooring Manufacturers Association (See NWFA)	
NOMMA	National Ornamental & Miscellaneous Metals Association www.nomma.org	(888) 516-8585
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
NSF	NSF International (National Sanitation Foundation International)	(800) 673-6275 (734) 769-8010

NSPE	www.nsf.org National Society of Professional Engineers	(703) 684-2800
NSSGA	www.nspe.org National Stone, Sand & Gravel Association	(800) 342-1415
	www.nssga.org	(703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The)	(800) 323-9736
NWFA	www.ntma.com National Wood Flooring Association	(800) 422-4556
	www.nwfa.org	(636) 519-9663
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PLASA	PLASA (Formerly: ESTA - Entertainment Services and Technology Association) www.plasa.org	(212) 244-1505
RCSC	Research Council on Structural Connections www.boltcouncil.org	
RFCI	Resilient Floor Covering Institute www.rfci.com	(706) 882-3833
RIS	Redwood Inspection Service www.redwoodinspection.com	(925) 935-1499
SAE	SAE International (Society of Automotive Engineers)	(877) 606-7323 (724) 776-4841
SBCCI	www.sae.org Southern Building Code Congress International, Inc. (See ICC)	
SCTE	Society of Cable Telecommunications Engineers www.scte.org	(800) 542-5040 (610) 363-6888
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(877) 294-5424 (516) 294-5424
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)	
SIA	Security Industry Association www.siaonline.org	(866) 817-8888 (703) 683-2075
SJI	Steel Joist Institute www.steeljoist.org	(843) 293-1995
SMA	Screen Manufacturers Association www.smainfo.org	(773) 636-0672
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association	(703) 803-2980

SMPTE	www.smacna.org Society of Motion Picture and Television Engineers	(914) 761-1100
SPFA	www.smpite.org Spray Polyurethane Foam Alliance	(800) 523-6154
SPIB	www.sprayfoam.org Southern Pine Inspection Bureau	(850) 434-2611
SPRI	www.spib.org Single Ply Roofing Industry	(781) 647-7026
	www.spri.org	
SRCC	Solar Rating and Certification Corporation www.solar-rating.org	(321) 638-1537
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWPA	Submersible Wastewater Pump Association www.swpa.org	(847) 681-1868
TCA	Tilt-Up Concrete Association www.tilt-up.org	(319) 895-6911
TCA TCNA	Tile Council of America (See TCNA) Tile Council of North America, Inc. (Formerly: Tile Council of America) www.tileusa.com	(864) 646-8453
TEMA	Tubular Exchanger Manufacturers Association, Inc. www.tema.org	(914) 332-0040
TIA	Telecommunications Industry Association (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance) www.tiaonline.org	(703) 907-7700
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance	
TMS	(See TIA) The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute www.tpinst.org	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrassod.org	(800) 405-8873 (847) 649-5555
TRI	Tile Roofing Institute www.tilerroofing.org	(312) 670-4177
UBC	Uniform Building Code	
UL	(See ICC) Underwriters Laboratories Inc.	(877) 854-3577

UNI	www.ul.com Uni-Bell PVC Pipe Association	(972) 243-3902
USAV	www.uni-bell.org USA Volleyball	(888) 786-5539
	www.usavolleyball.org	(719) 228-6800
USGBC	U.S. Green Building Council	(800) 795-1747
USITT	www.usgbc.org United States Institute for Theatre Technology, Inc.	(800) 938-7488
	www.usitt.org	(315) 463-6463
WASTEC	Waste Equipment Technology Association	(800) 424-2869
	www.wastec.org	(202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau	(800) 283-1486
	www.wclib.org	(503) 639-0651
WCMA	Window Covering Manufacturers Association	(212) 297-2122
	www.wcmanet.org	
WDMA	Window & Door Manufacturers Association	(800) 223-2301
	www.wdma.com	(312) 321-6802
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California)	(916) 372-9943
	www.wicnet.org	
WMMPA	Wood Moulding & Millwork Producers Association (See MMPA)	
WSRCA	Western States Roofing Contractors Association	(800) 725-0333
	www.wsrca.com	(650) 938-5441
WWPA	Western Wood Products Association	(503) 224-3930
	www.wwpa.org	

- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

DIN	Deutsches Institut für Normung e.V. www.din.de	49 30 2601-0
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICC	International Code Council www.iccsafe.org	(888) 422-7233
ICC-ES	ICC Evaluation Service, LLC www.icc-es.org	(800) 423-6587 (562) 699-0543

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

COE	Army Corps of Engineers www.usace.army.mil	(202) 761-0011
CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-7923
DOC	Department of Commerce National Institute of Standards and Technology www.nist.gov	(301) 975-4040

DOD	Department of Defense http://dodssp.daps.dla.mil	(215) 697-2664
DOE	Department of Energy www.energy.gov	(202) 586-9220
EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
FAA	Federal Aviation Administration www.faa.gov	(866) 835-5322
FG	Federal Government Publications www.gpo.gov	(202) 512-1800
GSA	General Services Administration www.gsa.gov	(800) 488-3111 (202) 619-8925
HUD	Department of Housing and Urban Development www.hud.gov	(202) 708-1112
LBL	Lawrence Berkeley National Laboratory Environmental Energy Technologies Division http://eetd.lbl.gov	(510) 486-4000
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742
TRB	Transportation Research Board National Cooperative Highway Research Program www.trb.org	(202) 334-2934
USDA	Department of Agriculture Rural Utilities Service www.usda.gov	(202) 720-2791
USDJ	Department of Justice Office of Justice Programs National Institute of Justice www.ojp.usdoj.gov	(202) 307-0703
USP	U.S. Pharmacopeia www.usp.org	(800) 227-8772 (301) 881-0666
USPS	United States Postal Service www.usps.com	(202) 268-2000

- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ABA / ADA /	Architectural Barriers Act Americans with Disabilities Act	(800) 872-2253
----------------	---	----------------

ADAAG	Americans with Disabilities Act Accessibility Guidelines	
	<i>Administered by the United States Access Board</i> http://www.access-board.gov/	
CFR	Code of Federal Regulations	(866) 512-1800
	Available from Government Printing Office	(202) 512-1800
	www.gpo.gov/fdsys	

DOD	Department of Defense Military Specifications and Standards	(215) 697-2664
	Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	
FED-STD	Federal Standard (See FS)	
FS	Federal Specification Available from Department of Defense Single Stock Point	(215) 697-2664
	http://dodssp.daps.dla.mil Available from Defense Standardization Program	
	www.dsp.dla.mil Available from General Services Administration	(800) 488-3111
	www.gsa.gov	(202) 619-8925
	Available from National Institute of Building Sciences/Whole Building Design Guide www.wbdg.org/ccb	(202) 289-7800
MILSPEC	Military Specification and Standards (See DOD)	
UFAS	Uniform Federal Accessibility Standards <i>Administered by the United States Access Board</i> http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-aba-standards/ufas	(800) 872-2253
USAB	United States Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080
USATBCB	U.S. Architectural & Transportation Barriers Compliance Board (See USAB)	

- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CBHF	State of California Department of Consumer Affairs Bureau of Electronic Appliance and Repair, Home Furnishings and Thermal Insulation www.bearhfti.ca.gov	(800) 952-5210 (916) 574-2041
CCR	California Code of Regulations Office of Administrative Law	(916) 323-6225
	California Title 24 Energy Code www.calregs.com	
CDHS	California Department of Health Care Services	

	(Formerly: California Department of Health Services) (See CCR)	
CDPH	California Department of Public Health	

	Indoor Air Quality Program www.cal-iaq.org	
CPUC	California Public Utilities Commission	(800) 848-5580
	www.cpuc.ca.gov	(415) 703-2782
SCAQMD	South Coast Air Quality Management District www.aqmd.gov	(909) 396-2000

PART 2 - PRODUCTS (Not Used) PART 3

- EXECUTION (Not Used) END OF

SECTION 01 42 00

SECTION 01 45 00 – TESTING AND INSPECTION

PART 1 - GENERAL

1.1 CONDITIONS AND REQUIREMENTS

Refer to the Special Provisions and Additional Provisions of the Specifications.

1.2 DESCRIPTION

- A. Work included:
 - 1. Owner-provided testing laboratory services.
 - 2. Contractor-provided testing and inspection services.
- B. Related Work Described Elsewhere:
 - 1. Soil Investigation Data
 - 2. General Conditions: Inspections, testing, and approvals required by public authorities.
 - 3. Section 017700: Closeout Procedures: Record documents.
 - 4. Individual Specification Sections: Inspection and tests required, and standards for testing.

1.3 REFERENCES

- A. ANSI/ASTM D3740: "Practice for evaluation of agencies engaged in testing and/or inspection of soil and rock as used in engineering design and construction."
- B. ANSI/ASTM E329: "Standard recommended practice for inspection and testing agencies for concrete, steel, and bituminous materials as used in construction."

1.4 SELECTION AND PAYMENT

- A. Contractor will employ and pay for services to perform initial specified inspection and testing.
- B. Retesting: When initial tests indicate non-compliance with the contract documents, all subsequent retesting occasioned by the non-compliance shall be performed by the testing agency and the costs thereof will be deductible by the City from the contract sum.
- C. Inspecting and testing performed exclusively for the contractor's convenience shall be the sole responsibility of the contractor.
- D. Employment of testing laboratory shall in no way relieve contractor of obligation to perform work in accordance with requirements of contract documents.

1.5 LIMITS ON TESTING PERSONNEL AUTHORITY

- A. Testing personnel may not release, revoke, alter or enlarge on requirements of contract documents.

- B. Testing personnel may not approve or accept any portion of the work.
- C. Testing personnel may not assume any duties of the contractor.
- D. Testing personnel have no authority to stop or to direct the work.

1.6 CONTRACTOR RESPONSIBILITIES

- A. Deliver to laboratory at designated location adequate samples of materials proposed to be used which require testing, together with proposed mix designs.
- B. Cooperate with testing personnel, and provide access to the work and manufacturer's facilities.
- C. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate test and inspections, and for storage and curing of test samples.
- D. Notify the City and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.

1.7 SCHEDULE OF INSPECTIONS AND TESTS

- A. Testing Costs Borne by Contractor.
 - 1. Certifications of materials, welders, etc.
 - 2. Tests to establish equivalence of substitutions or material not properly identified.
 - 3. Testing required to expedite contractor's operations or to correct errors and deficiencies (e.g., materials not meeting specified requirements). Testing relating to repair of work which fails to meet specifications.
 - 4. Testing and inspection required to correct damage to members in shipping and erection.
 - 5. Concrete: Design concrete mixes.
 - 6. Soil and Groundwater Testing for disposal if necessary.
- B. Testing Costs Borne by the City.
 - 1. Section 312300 Excavation and Fill. Grading observations and tests.
 - 2. Section 334000 Storm Drainage. Backfilling observations and tests.
 - 3. Section 333000 Sanitary Sewerage. Backfilling.
 - 4. Section 033000 Cast-in-Place Concrete.
 - a. Check certifications on cement and aggregates (waive testing).
 - b. Cast test cylinders.
 - c. Test cylinders at 7 and 28 days.
 - d. Hold third cylinder for possible later test.
 - e. Slump tests.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

PART 4 - BASE BID SCHEDULE (not used)

END OF SECTION 01 45 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

- B. Temporary utilities include, but are not limited to, the following:

1.	Sanitary Sewers, Storm Drainage, or Pollution Control.
2.	Domestic or Irrigation or Grey water service and distribution.
3.	Sanitary facilities, toilets, wash facilities, and drinking-water facilities.
4.	Heating and cooling facilities.
5.	Ventilation.
6.	Electric power service.
7.	Lighting.
8.	Telephone (internet or low voltage) service/systems.

- C. Support facilities include, but are not limited to, the following:

1. Temporary roads and paving.
2. Dewatering facilities and drains.
3. Project identification and temporary signs.
4. Waste disposal facilities.
5. Field offices.
6. Storage and fabrication sheds.
7. Lifts and hoists.
8. Temporary elevator usage.
9. Temporary stairs.
10. Construction aids and miscellaneous services and facilities.

- D. Security and protection facilities include, but are not limited to, the following:

1. Environmental protection.
2. Stormwater control.
3. Tree and plant protection.
4. Pest control.
5. Site enclosure fence.
6. Security enclosure and lockup.

7. Barricades, warning signs, and lights.
 8. Covered walkways.
 9. Temporary enclosures.
 10. Temporary partitions.
 11. Fire protection.
- E. Related Sections include the following:
1. Division 1 Section 01 33 00 - Submittal Procedures for procedures for submitting copies of implementation and termination schedule and utility reports.
 2. Division 1 Section 01 73 00 - Execution for progress cleaning requirements.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
1. Owner's Authorized Representative and maintenance personnel.
 2. Occupants of Project.
 3. Architect.
 4. Testing and Inspection agencies.
 5. Personnel of authorities having jurisdiction.
- B. Sewer Service: Pay sewer service use charges for sewer usage, by all parties engaged in construction, at Project Site.
- C. Water Service: Pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

1.5 SUBMITTALS

- A. Temporary Utility Reports: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

1.6 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.
 - 1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
 - 2. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.7 PROJECT CONDITIONS

- A. Temporary Utilities: At earliest feasible time, after Substantial Completion, AND when acceptable to Owner, change over from use of temporary service to use of permanent service – except for temporary security and protection facilities, per this Section, paragraph 3.6 D. "Temporary Facility Changeover".
 - 1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.
- B. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.
- B. Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain- link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8- inch- OD top rails.
- C. Wood Enclosure Fence: Plywood, 6 feet high, framed with four 2-by-4- inch rails, with preservative-treated wood posts spaced not more than 8 feet apart.

- D. Portable Chain-Link Fencing: Minimum 2-inch 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2- 3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide concrete or galvanized steel bases for supporting posts.
- E. Lumber and Plywood: Comply with ASTM and Industry standards as applicable AND with requirements in Division 6 Section – Rough Carpentry.
- F. Gypsum Board: Minimum 1/2 inch thick by 48 inches wide by maximum available lengths; regular-type panels with tapered edges. Comply with ASTM C 36.
- G. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indices of 25 and 50, respectively.
- H. Paint: Comply with ASTM and Industry standards as applicable AND with requirements in Division 9 Section - Painting.
- I. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- J. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- K. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches
- L. Water: Potable.

2.2 EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Field Offices: Prefabricated Mobile units with lockable entrances, operable windows, and serviceable finishes; heated and air conditioned; on foundations adequate for normal loading.
- C. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Owner's Construction Manager, Owner's Authorized Representative, Architect and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site documents including, but not limited to, file cabinets, plan tables, chairs, plan racks, and bookcases.
 - 2. Conference room of sufficient size to accommodate meetings of at least 10 individuals. Provide electrical power service Wi-Fi internet access and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and tack & marker boards.
 - 3. Drinking water.
 - 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 - 5. Lighting fixtures capable of maintaining average illumination of 20 fc.
- D. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations. Store combustible

materials apart from building.

- E. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA- recommended classes for exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- F. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber- reinforced polyester shell or similar nonabsorbent material.
- G. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water drinking- water units, including, but not limited to, paper cup supply.
- H. Heating Equipment: Unless Owner authorizes use of permanent heating system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander- type heating units is prohibited.
 - 2. Heating Units: Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use for type of fuel being consumed.
 - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of [8] at each return-air grille in system and remove at end of construction and clean HVAC system as required in Division 01 Section - Closeout Procedures.
- I. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120-V plugs into higher-voltage outlets; equipped with ground- fault circuit interrupters, reset button, and pilot light.
- J. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125-V ac, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility

company recommendations.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
 2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked-in services.
 3. Obtain easements to bring temporary utilities to Project site where Owner's easements cannot be used for that purpose.
- B. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed.
1. Maintain a minimum temperature of 50 deg F in permanently enclosed portions of building for normal construction activities, and 65 deg F for finishing activities and areas where finished Work has been installed.
- C. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- D. Electric Distribution: Provide temporary electric power service as required for construction, including, but not limited to, receptacle outlets adequate for connection of power tools and equipment.
1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
 2. Provide warning signs at power outlets other than 110 to 120 V.
 3. Provide metal conduit, tubing, or metallic cable for wiring exposed to possible damage. Provide rigid steel conduits for wiring exposed on grades, floors, decks, or other traffic areas.
 4. Provide metal conduit enclosures or boxes for wiring devices.
 5. Provide 4-gang outlets, spaced so 100-foot extension cord can reach each area for power hand tools and task lighting. Provide a separate 125-V ac, 20-A circuit for each outlet.
- E. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.
1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 2. Provide one 100-W incandescent lamp per 500 sq. ft., uniformly distributed, for general lighting, or equivalent illumination.
 3. Provide one 100-W incandescent lamp every 50 feet in traffic areas.
 4. Provide one 100-W incandescent lamp per story in stairways and ladder runs, located to illuminate each landing and flight.
 5. Install exterior-yard site lighting that will provide adequate illumination for construction operations, traffic conditions, and signage visibility when the Work

is being performed.

6. Install lighting for Project identification sign.

- F. Telephone Service: Provide temporary telephone service throughout construction period for common-use facilities used by all personnel engaged in construction activities. Install separate telephone line for each field office and first-aid station.
1. Provide additional telephone lines for the following:
 - a. In field office with more than two occupants, install a telephone for each additional occupant or pair of occupants.
 - b. Provide a dedicated telephone line for each facsimile machine and computer with Internet connection in the field office.
 2. At each telephone, post a list of important telephone numbers.
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect's office.
 - e. Engineers' offices.
 - f. Owner's office.
 - g. Principal subcontractors' field and home offices.
 3. Provide an answering machine, voice-mail service, or messaging service on superintendent's telephone.
 4. Furnish superintendent with a portable cellular telephone for use in making and receiving telephone calls when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
- C. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations.
1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.
- D. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 2. Prepare subgrade and install sub-base and base for temporary roads and paved

- areas according to Divisions 1 General, and 2 Site Work.
3. Recondition base after temporary use, including removing contaminated material, re-grading, proof-rolling, compacting, and testing.
 4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Division 2 – Site Work, (Section 02510 - Asphalt Concrete Paving).
- E. Dewatering Facilities and Drains: Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
 2. Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar waterproof deck construction is completed.
- F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 1 Section 01 73 00- Execution for progress cleaning requirements. Comply with requirements specified in Division 1 Section - 01 74 00 Construction Waste Management.
1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
 2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.
- G. Lifts and Hoists: Provide facilities for hoisting materials and personnel. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- H. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project Site.
- B. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Division 2 - SITE WORK, Section 02100 Site

Clearing and Demolition.

- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings or requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project Site during the course of Project.
 - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from construction damage. Protect tree root systems from damage, flooding, and erosion. Comply with requirements specified in Division 2 – SITE CONSTRUCTION, including, but not limited to, Section 02 10 00 Clearing, Grubbing & Stripping.
- F. Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest-control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Engage this pest- control service to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.
- G. Site Enclosure Fence: Before construction operations begin, install chain-link enclosure fence with lockable entrance gates. Locate where indicated, or enclose entire Project Site or portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering site except by entrance gates.
 - 1. Set fence posts in concrete bases.
 - 2. Provide gates in sizes and at locations necessary to accommodate delivery vehicles and other construction operations.
 - 3. Option in subparagraph below is only for projects connected to existing construction.
 - 4. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Provide Owner with one set of keys.
- H. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each day.
- I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

- J. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including, but not limited to, flashing red or amber lights.
1. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8- inch thick exterior plywood.
- K. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior – as applicable.
1. Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 2. Vertical Openings: Close openings of 25 sq. ft. or less with plywood or similar materials.
 3. Horizontal Openings: Close openings in floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 4. Install tarpaulins securely using fire-retardant-treated wood framing and other materials.
 5. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use fire-retardant-treated material for framing and main sheathing.
- L. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 and NFPA 241.
1. Provide fire extinguishers, installed on walls on mounting brackets, visible and accessible from space being served, with sign mounted above.
 - a. Field Offices: Class A stored-pressure water-type extinguishers or a combination of extinguishers of NFPA-recommended classes for exposures.
 - b. Other Locations: Class ABC dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for exposures.
 - c. Locate fire extinguishers where convenient and effective for their intended purpose; provide not less than one extinguisher on each floor at or near each usable stairwell.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for firefighting. Provide temporary key boxes and Knox padlocks for gates and secured areas throughout construction as required by authorities having jurisdiction.
 4. Prohibit smoking on Project Site.
 5. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
 6. Permanent Fire Protection: At earliest feasible date in each area of Project, complete installation of permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
 7. Develop and supervise an overall fire-prevention and first-aid fire-protection

- program for personnel at Project S site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
8. Provide hoses for fire protection of sufficient length to reach construction areas. Hang hoses with a warning sign stating that hoses are for fire- protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.
9. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace, or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits:
 - a. Hygroscopic materials that may support mold growth, including, but not limited to, wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.

- b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
- c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Operate Project-identification-sign lighting daily from dusk until 12:00 midnight.
- D. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- E. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are the property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 - 3. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section 01 77 00 - Closeout Procedures.

END OF SECTION 01 50 00

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions (as applicable) and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 21 00 - Allowances for products selected under an allowance.
 - 2. Division 1 Section 01 23 00 - Alternates for products selected as an alternate.
 - 3. Division 1 Section 01 25 00- Substitution Procedures for products selected as a substitute.
 - 4. Division 1 Section 01 42 00 - Reference Standards for applicable industry standards for products specified.
 - 5. Division 1 Section 01 77 00 - Closeout Procedures for submitting warranties for contract closeout.
 - 6. Divisions 2 through 33 for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.

3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including, but not limited to, make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.
- D. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- E. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 3. Initial Submittal: Within 30 days after date of Notice to Proceed, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.

- a. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 4. Completed List: Within 60 days after date of Notice to Proceed, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 5. Architect's Action: Architect will respond in writing to Contractor within 15 working days of receipt of completed product list - whether there are or there are not objections to the list. Architect's response will include a list of unacceptable product selections (as applicable) and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement that products comply with the Contract Documents.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section 01 33 00 Submittal Procedures. Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including, but not limited to, theft. Comply with manufacturer's written instructions.
1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project Site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 5. Store products to allow for inspection and measurement of quantity or counting of units.
 6. Store materials in a manner that will not endanger Project structure.
 7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

8. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
9. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
10. Protect stored products from damage and liquids from freezing.
11. Provide a secure location and enclosure at Project Site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Contractor to prepare a written document that contains appropriate terms and identification, ready for execution by Owner. Submit a draft to Owner for approval before final execution.
 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Refer to Divisions 2 through 33 for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 1 Section 01 77 00 Closeout Procedures.

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 6. Descriptive, performance, and reference standard requirements in the

Specifications establish "salient characteristics" of products.

7. Or Equal: Where products are specified by name and accompanied by the term "or equal", "or approved equal", "or approved," or "acceptable substitution", comply with provisions in Article 2.2 "Comparable Products" to obtain approval for use of an unnamed product.

B. Product Selection Procedures: Procedures for product selection include the following:

1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
 - a. Substitutions may be considered, unless otherwise indicated.
2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
4. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 - a. Substitutions may be considered, unless otherwise indicated.
5. Available Products: Where Specification paragraphs or subparagraphs titled "Available Products" introduce a list of names of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in Article 2.2 "Comparable Products" to obtain approval for use of an unnamed product.
6. Available Manufacturers: Where Specification paragraphs or subparagraphs titled "Available Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in Article 2.2 "Comparable Products" to obtain approval for use of an unnamed product.
7. Product Options: Where Specification paragraphs titled "Product Options" indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer. Comply with provisions in Section 01 25 00 Substitution Procedures and in Article 2.2 "Comparable Products".
8. Basis-of-Design Products: Where Specification paragraphs or subparagraphs titled "Basis-of-Design Products" are included and also introduce or refer to a list of manufacturers' names, provide either the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Article 2.2 "Comparable Products" to obtain approval for use of an unnamed product.
 - a. Substitutions may be considered, unless otherwise indicated.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches satisfactorily.
 - a. If no product available within specified category matches satisfactorily and

- complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.
10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, and textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.
 11. Allowances: Refer to individual Specification Sections and "Allowance" provisions in Division 1 for allowances that control product selection and for procedures required for processing such selections.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, which it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 60 00

SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions (as applicable) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Coordination of Owner-installed products.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.
- B. Related Requirements:
 - 1. Division 01 Section 01 10 00 - Summary for limits on use of Project site.
 - 2. Division 01 Section 01 33 00 - Submittal Procedures for submitting surveys.
 - 3. Division 01 Section 01 77 00 - Closeout Procedures for submitting final property survey with Project Record Documents, recording of Owner- accepted deviations from indicated lines and levels, and final cleaning.

1.3 DEFINITIONS

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

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For professional engineer.
- B. Certificates: Submit certificate signed by professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

- D. Certified Surveys: Submit **two (2)** copies signed by **professional engineer**.

1.5 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with applicable California Green Building Standards Code, CALGreen Code, USGBC, and U.S. Green Building Council design requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project Site.
 3. In the event of any inconsistency or conflict, between existing conditions and the bidding documents, immediate notice of such inconsistency or conflict shall be given to the Architect. Do not undertake any phase of the Work affected by such inconsistency or conflict, pending the issuance of instructions by the Architect.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 3. Verify compatibility with and suitability of substrates, including, but not limited to, compatibility

with existing finishes or primers.

- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - 1. Description of the Work.
 - 2. List of detrimental conditions, including, but not limited to, substrates.
 - 3. List of unacceptable installation tolerances.
 - 4. Recommended corrections.
- D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information promptly to Alameda Municipal Power (AMP), Pacific Gas & Electric (PG&E), the City of Alameda Public Works – including, but not limited to AT&T, Verizon, Comcast - that it is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Owner and other affected parties, not less than five days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's written permission.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Division 01 Section - Project Management and Coordination.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 2. Establish limits on use of Project Site.
 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 4. Inform installers of lines and levels to which they must comply.
 5. Check the location, level and plumb, of every major element as the Work progresses.
 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including, but not limited to, pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Elevations of existing grades, floors, tops of walls, parapets, beams and locations of existing columns, walls and the like are based on survey documents or on drawings of the existing building furnished by the Owner. The Architect assumes no responsibility for the accuracy of the information on existing drawings. It is the intent of the Contract Drawings to integrate new work with existing improvements and for the Contractor to verify actual conditions.
- E. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including, but not limited to, those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- F. Subcontractors shall verify with the General Contractor the exact field location of all rough-in dimensions, taking into account location of walls, partitions and equipment. Special attention should be paid to clearances as required for compliance with California Building Code Accessibility (Chapter 11B) Requirements, including, but not limited to, any applicable revisions. Any cost in relocation of items due to that subcontractor's error, will be borne by him at no additional cost to the Owner.
- G. Where equipment involving more than one subcontractor is installed at a common location and no specific location has been determined, it is the Contractor's responsibility to check with the Architect for the actual rough-in dimensions for such equipment. If for some reason the rough-in has not been checked and a subcontractor has installed his equipment, remaining subcontractors shall align their equipment as closely as possible to the installed equipment. Alignment shall mean centered vertically, equally space and centered horizontally. This alignment applies to bells, alarms, thermostats, switches, handles, access panels, etc. Any items not installed in alignment shall be relocated by the Contractor at his own expense with damaged surfaces properly repaired.
- H. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two (2) permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 - 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Record Drawings and/or As-Built documents: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare Record Drawings and/or As-Built documents showing dimensions, locations, angles, and elevations of construction and site work.
- ~~E. Final Property Survey: Engage a land surveyor or professional engineer to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor or professional engineer, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.~~
 - ~~1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties, acreage, grade contours, and the distance and bearing from a site corner to a legal point. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."~~

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 4. Maintain minimum headroom clearance of 96 inch in occupied spaces and 90 inch in unoccupied spaces.

- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including, but not limited to, thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including, but not limited to, sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project Site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project Site for Owner's construction personnel.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction

personnel if portions of the Work depend on Owner's construction.

3.7 PROGRESS CLEANING

- A. General: Clean Project Site and work areas daily, including, but not limited to, common areas.
Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.
 - 4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project Site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration through to Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section 01 50 00 Temporary Facilities and Controls and Division 01 Section 01 74 00 Construction Waste Management.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or

otherwise deleterious exposure during the construction period.

3.8 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Division 01 Sections 01 78 23 Operation and Maintenance Data and 01 79 00 Demonstration and Training.
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section 01 40 00 Quality Requirements.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

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

END OF SECTION 01 73 00

SECTION 01 74 00 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including, but not limited to, General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous construction waste.
 - 2. Recycling nonhazardous construction waste.
 - 3. Disposing of nonhazardous construction waste.
- B. Related Sections include the following:
 - 1. Division 1 Section 01 10 00 - Summary of Contracts for coordination of responsibilities for waste management.
 - 2. Division 1 Section 01 50 00 - Temporary Facilities and Controls for environmental-protection measures during construction.
 - 3. Division 1 Section 01 85 00 – Recycling of Concrete and Asphalt Materials

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 PERFORMANCE GOALS

- A. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of 75 percent by weight of total waste generated by the Work.
- B. Salvage/Recycle Requirements: Owner's goal is to salvage and recycle as much nonhazardous construction waste as possible including, but not limited to, the following materials:
- C. Salvage/Recycle Goals: Owner's goal is to salvage and recycle as much nonhazardous construction waste as possible. Owner has established minimum goals for the following materials:
 - 1. Construction Waste:
 - a. Site-clearing waste.
 - b. Masonry and CMU.
 - c. Lumber.
 - d. Wood sheet materials.
 - e. Wood trim.
 - f. Metals.
 - g. Roofing.
 - h. Insulation.
 - i. Carpet and pad.
 - j. Gypsum board.
 - k. Piping.
 - l. Electrical conduit.
 - m. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.
 - 4) Plastic sheet and film.
 - 5) Polystyrene packaging.
 - 6) Wood crates.
 - 7) Plastic pails.

1.5 SUBMITTALS

- A. Waste Reduction & Recycling Plan: Submit three (3) copies of plan within seven (7) days of date established for the Notice to Proceed.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit three (3) copies of report. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste salvaged, both estimated and actual in tons.
 - 5. Quantity of waste recycled, both estimated and actual in tons.
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total

waste.

- C. Waste Reduction Calculations: Before request for Substantial Completion, submit three (3) copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.6 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: LEED Accredited Professional by U.S. Green Building Council.
- B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- C. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

1.7 WASTE MANAGEMENT PLAN (a.k.a. Waste Reduction & Recycling Plan)

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Include separate sections in plan for demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 3. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including, but not limited to, sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- D. Forms: Prepare Waste Reduction & Recycling Plan using “Alameda.Wastetracking.com” (for forms or processing protocol). See also Section 01 85 00, Exhibit C, attached.

PART 2 - PRODUCTS (Not Used) PART 3

- EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement Waste Reduction & Recycling Plan as approved by Owner. Provide handling, containers, storage, signage, transportation, and other items as required to implement Waste Reduction & Recycling Plan during the entire duration of the Contract.
 1. Comply with Division 1 Section 01 50 00 Temporary Facilities and Controls for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of Waste Reduction & Recycling Plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project Site.
 1. Distribute Waste Reduction & Recycling Plan to everyone concerned within three (3) days of submittal return.
 2. Distribute Waste Reduction & Recycling Plan to entities when they first begin work on-site. Review Plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project Site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 2. Comply with Division 1 Section 01 50 00 - Temporary Facilities and Controls for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING CONSTRUCTION WASTE, GENERAL

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

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

3.3 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project Site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees on-site.
- C. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.4 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be

disposed of accumulate on-site.

2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn any waste materials.

C. Disposal: Transport waste materials off Owner's property– via a permitted hauler - and legally dispose of them.

3.5 ATTACHMENTS (See “Alameda.Wastetracking.com” for information, directions on using online forms and instructions for ‘processing’.)

END OF SECTION 01 74 00

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions (as applicable) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
 - 5. Repair of the Work.
- B. Related Requirements:
 - 1. Division 01 Section 01 73 00 - Execution Requirements for progress cleaning of Project site.
 - 2. Division 01 Section 01 78 23 - Operation and Maintenance Data for operation and maintenance manual requirements.
 - 3. Division 01 Section 01 78 39 - Project Record Documents for submitting Record Drawings / Documents, record Specifications, and record Product Data.
 - 4. Division 01 Section 01 79 00 - Demonstration and Training for requirements for instructing Owner's personnel.
 - 5. Divisions 02 through 33 for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents: At Substantial Completion submit list of all cleaning agents used at/by Substantial Completion.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.

- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including, but not limited to, project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Divisions 02 through 33 Sections, including, but not limited to, specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Divisions 02 through 33, including, but not limited to, tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including, but not limited to, name and quantity of each item and name and number of related Specification Section. Obtain Architect's signature for receipt of submittals.
 - 5. Submit test/adjust/balance records.
 - 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of ten (10) days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 3. Complete startup and testing of systems and equipment.
 - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 - 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video

- recordings specified in Division 01 Section - Demonstration and Training.
 - 6. Advise Owner of changeover in heat and other utilities.
 - 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 - 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 9. Complete final cleaning requirements, including, but not limited to, touchup painting.
 - 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of ten (10) days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
- 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
- 1. Submit a final Application for Payment according to Division 01 Section 01 29 00 Payment Procedures.
 - 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 - 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 4. Submit pest-control final inspection report.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
- 1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, but not

limited to,, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including, but not limited to, categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
4. Submit list of incomplete items in the following format:
 - a. PDF electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within fifteen (15) days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize entire collection of approved warranty documents into an orderly sequence based on the table of contents of Project Manual, with tabs between CSI division sections; i.e.; group all Division-2 site work components under one tab, group all Division-13 Special Construction components under another tab, etc.. Utilize CSI specification Divisions 2 through 33 for each division tab. Provide **three** copies of each Final Warranty binder.
 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide title page, Contractor's general One-Year Warranty (corrective period) with agreed upon date and signature of authorized representative, table of contents, and subcontractor list at the beginning of each binder. Provide same for Eight (8) Year Warranty for Synthetic Turf Playing Field, per Specifications Division 2 Section 02540.
 3. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including, but not limited to, the name of the product and the name, address, and telephone number of Installer.
 4. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 5. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of

contents at beginning of document.

- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project Site, yard, and grounds, in areas disturbed by construction activities, including, but not limited to, landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited access spaces, including, but not limited to, roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

- h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - j. Clean transparent materials, including, but not limited to, mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Wipe surfaces of mechanical and electrical equipment elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Clean plumbing fixtures to a sanitary condition, free of stains, including, but not limited to, stains resulting from water exposure.
 - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - 1) Clean HVAC system in compliance with NADCA Standard 1992-1. Provide written report on completion of cleaning.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - q. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements stipulated in Division 01 Section 01 50 00 Temporary Facilities and Controls and in the CONTRACTOR AGREEMENT Pest Management Policy and Checklist EXHIBITS. Prepare written reports as required.
- D. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section 01 50 00 Temporary Facilities and Controls and Division 01 Section 01 74 00 Construction Waste Management.

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.

- a. Do not paint over "UL" and other required labels and identification, including, but not limited to, mechanical and electrical nameplates. Remove paint applied to required labels and identification.
3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 01 77 00

PART 1 - GENERAL**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions (as applicable) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including, but not limited to, the following:
 - 1. Operation and maintenance documentation directory.
 - 2. Emergency manuals.
 - 3. Operation manuals for systems, subsystems, and equipment.
 - 4. Product maintenance manuals.
 - 5. Systems and equipment maintenance manuals.
- B. Related Requirements:
 - 1. Division 01 Section 01 10 00 - Summary for coordinating operation and maintenance manuals covering the Work of multiple contracts.
 - 2. Division 01 Section 01 33 00 - Submittal Procedures for submitting copies of submittals for operation and maintenance manuals.
 - 3. Divisions 02 through 33 for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

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

1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
 - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 - 1. PDF electronic file. Assemble each manual into a composite electronically

indexed file. Submit on digital media acceptable to Architect.

- a. Name each indexed document file in composite electronic index with applicable item name. Include complete electronically linked operation and maintenance directory.
 - b. Enable inserted reviewer comments on draft submittals.
2. Three (3) paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two (2) copies.
- C. Initial Manual Submittal: Submit draft copy of each manual at least thirty (30) days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least fifteen (15) days before commencing demonstration and training. Architect will return copy with comments.
 1. Correct or revise each manual to comply with Architect's comments. Submit three Final copies of each corrected manual within fifteen (15) days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
 1. List of documents.
 2. List of systems.
 3. List of equipment.
 4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
1. Title page.
 2. Table of contents.
 3. Subcontractor list
 4. Manual contents.
- B. Title Page: Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name and contact information for Contractor.
 6. Name and contact information for Construction Manager.
 7. Name and contact information for Architect.
 8. ~~Name and contact information for Commissioning Authority.~~
 9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
 10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Subcontractor List: Organize subcontractor list by CSI specification section, as listed in the Project Manual table of contents. Provide contact name, street address (no P.O. Box numbers) and contact phone and fax number. If changes were made during the course of the Project, utilize final contract company for each component of the work. List all contractors used on Project, even if subcontracted to a different subcontractor, i.e.; if earthwork subcontractor is contracted by the paving subcontractor, list both subcontractors.
- E. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- F. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

- G. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
 4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
1. Type of emergency.
 2. Emergency instructions.
 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
1. Fire.
 2. Flood.
 3. Gas leak.
 4. Water leak.
 5. Power failure.
 6. Water outage.
 7. System, subsystem, or equipment failure.
 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error

messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

- D. Emergency Procedures: Include the following, as applicable:
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits.
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
 - 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 - 2. Performance and design criteria if Contractor has delegated design responsibility.
 - 3. Operating standards.
 - 4. Operating procedures.
 - 5. Operating logs.
 - 6. Wiring diagrams.
 - 7. Control diagrams.
 - 8. Piped system diagrams.
 - 9. Precautions against improper use.
 - 10. License requirements including, but not limited to, inspection and renewal dates.
- B. Descriptions: Include the following:
 - 1. Product name and model number. Use designations for products indicated on Contract Documents.
 - 2. Manufacturer's name.
 - 3. Equipment identification with serial number of each component.
 - 4. Equipment function.
 - 5. Operating characteristics.
 - 6. Limiting conditions.
 - 7. Performance curves.
 - 8. Engineering data and tests.
 - 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
 - 1. Startup procedures.
 - 2. Equipment or system break-in procedures.
 - 3. Routine and normal operating instructions.
 - 4. Regulation and control procedures.
 - 5. Instructions on stopping.
 - 6. Normal shutdown instructions.
 - 7. Seasonal and weekend operating instructions.
 - 8. Required sequences for electric or electronic systems.
 - 9. Special operating instructions and procedures.

- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern, and texture.
 - 4. Material and chemical composition.
 - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
 - 1. Inspection procedures.
 - 2. Types of cleaning agents to be used and methods of cleaning.
 - 3. List of cleaning agents and methods of cleaning detrimental to product.
 - 4. Schedule for routine cleaning and maintenance.
 - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and

maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

- C. **Manufacturers' Maintenance Documentation:** Manufacturers' maintenance documentation including, but not limited to, the following information for each component part or piece of equipment:
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including, but not limited to, disassembly and component removal, replacement, and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- D. **Maintenance Procedures:** Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.
 - 2. Troubleshooting guide.
 - 3. Precautions against improper maintenance.
 - 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - 5. Aligning, adjusting, and checking instructions.
 - 6. Demonstration and training video recording, if available.
- E. **Maintenance and Service Schedules:** Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 - 1. **Scheduled Maintenance and Service:** Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 - 2. **Maintenance and Service Record:** Include manufacturers' forms for recording maintenance.
- F. **Spare Parts List and Source Information:** Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. **Maintenance Service Contracts:** Include copies of maintenance agreements with name and telephone number of service agent.
- H. **Warranties and Bonds:** Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
 - 1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. **Operation and Maintenance Documentation Directory:** Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. **Emergency Manual:** Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types

of emergencies indicated.

- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings / Documents to ensure correct illustration of completed installation.
 - 1. Do not use original project record documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared Record Drawings / Documents in Division 01 Section 01 78 39 Project Record Documents.
- G. Comply with Division 01 Section 01 77 00 Closeout Procedures for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions (as applicable) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including, but not limited to, the following:
 - 1. Record Drawings / Documents.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous record submittals.
- B. Related Requirements:
 - 1. Division 01 Section 01 10 00 - Summary for coordinating project record documents covering the Work of multiple contracts.
 - 2. Division 01 Section 01 77 00 - Closeout Procedures for general closeout procedures.
 - 3. Division 01 Section 01 78 23 - Operation and Maintenance Data for operation and maintenance manual requirements.
 - 4. Divisions 02 through 33 for specific requirements for project record documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings / Documents: Comply with the following:
 - 1. Number of Copies: Submit one set of marked-up record prints.
 - 2. Number of Copies: Submit copies of Record Drawings / Documents as follows:
 - a. Initial Submittal:
 - 1) Submit one paper-copy set(s) of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and one of file prints.
 - 3) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit three (3) paper-copy sets of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and three (3) sets of prints.
 - 3) Print each drawing, whether or not changes and additional information were recorded.
 - c. Final Submittal:

- 1) Submit one (1) paper-copy set of marked-up record prints.
 - 2) Submit record digital data files and three (3) sets of record digital data file plots.
 - 3) Plot each drawing file, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit one (1) paper copy and annotated PDF electronic files of Project's Specifications, including, but not limited to, addenda and contract modifications.
- C. Record Product Data: Submit one (1) paper copy and annotated PDF electronic files and directories of each submittal.
1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one (1) paper copy and annotated PDF electronic files and directories of each submittal.
- E. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including, but not limited to, revisions, concealed conditions, field changes, product selections, and other notations incorporated.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS / DOCUMENTS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding archive photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.

- f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or Construction Work Change Directive.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Newly Prepared Record Drawings / Documents: Prepare new Drawings instead of preparing Record Drawings / Documents where Architect determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
 2. Consult Architect for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared Record Drawings / Documents into record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.
- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints and newly prepared Record Drawings / Documents into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Format: Annotated PDF electronic file - with comment function enabled.
 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS / DOCUMENTS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including, but not limited to, substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 - 5. Note related Change Orders, record Product Data, and Record Drawings / Documents where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file, paper copy, and scanned PDF electronic files of marked-up paper copy of Specifications.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project Site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as annotated PDF electronic file, paper copy, and scanned PDF electronic files of marked-up paper copy of Product Data.
 - 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
- B. Format: Submit miscellaneous record submittals as PDF electronic file, paper copy, and scanned PDF electronic files of marked-up miscellaneous record submittals.
 - 1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Architect's reference during normal working hours.

END OF SECTION 01 78 39

SECTION 01 79 00 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions (as applicable) and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including, but not limited to, the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training video recordings.
- B. Related Requirements:
 - 1. Divisions 02 through 33 for specific requirements for demonstration and training for products in those Sections.

1.3 INFORMATIONAL SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including, but not limited to, a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Qualification Data: For facilitator and instructor.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.4 CLOSEOUT SUBMITTALS

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
 - 1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name of Contractor.

- c. Date of video recording.
2. Transcript: Prepared and bound in format matching operation and maintenance manuals. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of Project and date of video recording on each page.
3. Transcript: Prepared in PDF electronic format. Include a cover sheet with same label information as the corresponding video recording and a table of contents with links to corresponding training components. Include name of Project and date of video recording on each page.
4. At completion of training, submit complete training manual(s) for Owner's use in PDF electronic file format on compact disc.

1.5 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 01 Section 01 40 00 Quality Requirements, experienced in operation and maintenance procedures and training.

1.6 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:

- a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.

- c. List of cleaning agents and methods of cleaning detrimental to product.
- d. Procedures for routine cleaning
- e. Procedures for preventive maintenance.
- f. Procedures for routine maintenance.
- g. Instruction on use of special tools.
- 8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Division 01 Section 01 78 23 "Operation and Maintenance Data."
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
 - 2. Owner will furnish an instructor to describe Owner's operational philosophy.
 - 3. Owner will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner with at least seven (7) days' advance notice.
- D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- E. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.
- F. Cleanup: Collect used and leftover educational materials and remove from Project site.

Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

END OF SECTION 01 79 00

SECTION 01 80 00 – PERMITS AND LICENSES

1.1 PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, including, but not limited to, City of Alameda business licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the Work. However, the Contractor will be reimbursed for construction permit fees. The estimated cost shown as an allowance in the bid proposal, if provided, is only for bidding purposes. Payment shall be made for the actual cost of the permit. The cost for a City of Alameda business license is not reimbursable. Each Subcontractor shall have a current City of Alameda business license.

The following permit(s) and/or license(s) are required for this project:

1. **A City of Alameda Business License from the City of Alameda, 2263 Santa Clara Avenue, Finance Department, Room 220, Alameda.**
2. **“No Parking, Tow Away” signs and Excavation Permit from City Hall, 2263 Santa Clara Avenue, Planning and Building Services, Room 190, Alameda.**
3. Any, all permits or fees or licenses required for Construction – including but not limited to; Building Permit, Demolition Permit, Marsh Crust Permit, Encroachment Permit, and Abatement Permit. ~~transport, delivery and/or installation of the modular Pre-engineered Premanufactured recreational building, from source to site.~~
4. **Regional Permits** as indicated in Supplementary Conditions:
 - a) **ATTACHMENT D; U.S. ARMY CORPS OF ENGINEERS – AUTHORIZATION** (May 29, 2018)
 - b) **ATTACHMENT E; SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD – WATER QUALITY CERTIFICATION** (Sep. 10, 2018)
 - c) **ATTACHMENT F; SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION – PERMIT AMENDMENT NO. TWO APPROVAL** (Jan. 3, 2019)

END OF SECTION 01 80 00

SECTION 01 81 00 – PUBLIC CONVENIENCE AND SAFETY

1.01 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall so conduct operations as to cause the least possible obstruction and inconvenience to public traffic. The Contractor shall furnish, erect and maintain such fences, barriers, lights and signs as are necessary or as required by the Engineer to give adequate warning to the public at all times that the Work is in progress and of any dangerous conditions to be encountered as a result of the Work or of the presence of the Contractor's equipment or machinery.

The use of Flex-o-Lite Model No. 501, or approved equal, will be permitted only in specifically approved locations and only to the extent of 50 percent of the total amount of necessary lighting. Other models of lesser candle power may be permitted in some approved locations at a lesser percentage.

If the work involves the construction of a street or highway, the following additional provisions shall apply:

All traffic shall be permitted to pass through the Work, unless other existing streets are stipulated as detours in the special provisions. Residents and businesses along the affected street or highway shall be provided passage as far as practicable; convenient access to driveways, houses and public buildings along the street or highway shall be maintained and temporary crossings shall be provided and maintained in good condition. No more than one cross or intersecting street or highway shall be closed at any time without the approval of the Engineer.

Contractor shall submit to the Engineer at or before the pre-construction meeting a Traffic Control Plan for any work that will impact vehicular traffic in the area. The Contractor must have an approved plan prior to commencing of Work. All Traffic Control Plans must be in conformance with Caltrans regulations and guidelines.

The Traffic Control Plan shall also conform to the following requirements for any construction, temporary or permanent, in the public right-of-way:

1. The traffic control plan shall follow the standards and guidelines provided by the most recent version of the CA MUTCD and Caltrans Standard Plans.
2. If a lane is to remain open, the lane width shall be at least 10 feet wide.
3. Base the taper lengths, delineator spacing, and sign spacing on a traffic speed equal to the posted speed limit plus 5 MPH.
4. Pedestrians shall be properly detoured at appropriate crossing locations whenever a sidewalk/crosswalk is closed. See the California MUTCD for guidance. (Consideration and accommodation for disable pedestrians to be implemented.) Only one crossing at an intersection shall be closed at any time.
5. Applicant (Contractor) shall conform to and be compliant with all ADA standards.
6. If flaggers are used in the detour plan, they shall be shown in the drawings.
7. The applicant (Contractor) must obtain approval from the property owner of any driveways being blocked.
8. If the work is encroaching onto private properties, the applicant (Contractor) shall request / receive approval from the appropriate property owners before proceeding with the work.
9. Applicant (Contractor) shall not park their vehicles on the street or on/over curbs or sidewalk or paths.

“No Parking” Signs: The posting of “No-Parking” signs, as applicable, is required 48 hours in advance of the work. “No-Parking” signs are available at the Planning and Building Department, Room 190, City Hall. A fee will be charged for the signs. Only City of Alameda issued “No-Parking” signs are permitted for use within the public right-of-way.

The Contractor shall furnish, install and maintain such facilities as barricades, traffic signs, and flagmen, as may be necessary to advise the public of construction hazards and to control traffic.

The Traffic Control Plan shall cover, at minimum, all phases of Work scheduled to occur in the first twenty (20) working days that will impact vehicular, pedestrian and bicycle traffic in the area. The Traffic Control Plan shall allow residents on the streets impacted ample “on street” parking within one (1) block of their homes. The Contractor shall have an approved Traffic Control Plan prior to commencing of work in the field. Contractor shall submit subsequent additions to the Traffic Control Plan in a timely manner to allow for the Engineer’s review and shall be in conformance with Caltrans regulations and guidelines.

At least 72 hours prior to beginning work on a section of street, curb or sidewalk that will affect use of the parking lane, the Contractor shall notify, by approved "No Parking - Tow Away" signs on barricades, all affected property owners, residents, businesses and agencies adjacent to that section of street. The “No-Parking” signs shall state the days, dates, and hours of parking lane closure, and shall be placed along the street on each side at no more than 50 feet spacing. The Contractor shall notify the Engineer at least one (1) working day in advance of the intent to post No-Parking signs, so that the timely posting can be verified by the Inspector. The Contractor is permitted to list up to one (1) working day before and one (1) working day after the scheduled days of work, as shown in the latest approved schedule on signs, in order to bracket the approved scheduled date of work. The Contractor shall remove the “No Parking” signs as soon as the parking lane is re-opened to parking.

If the Contractor is unable to meet the scheduled and noticed time for the work, the Contractor shall immediately notify the Engineer and remove the posted "No-Parking" signs. The Contractor shall submit a new scheduling request in writing to the Engineer. Upon written approval of the Engineer, the Contractor shall post signs at least 72 hours prior to beginning work per the revised schedule.

Work hours are limited between 8:00 A.M. and 5:00 P.M.

END OF SECTION 01 81 00

SECTION 01 82 00 – UTILITIES

1.01 UTILITIES

The location of railroad tracks, utility facilities and other structures shall be the responsibility of the Contractor. The Contractor shall contact the owners of those tracks, facilities and structures for any information that may be required. The Contractor shall contact Underground Services Alert (USA) at 800-642-2444 forty-eight (48) hours prior to commencement of Work.

Where existing sewers and storm drains cross or interfere in any way with construction under this Contract, they shall be left in place and the Contractor shall work around them, OR where feasible and practical, the Contractor may, with the permission of the City Engineer, remove and replace them at his/her own expense. Precautions shall be exercised to provide suitable support and bearing under and for existing sewer lines encountered to preclude settlement during or after the term of the Contract. In the event that some of these sewers are abandoned, they may, with the permission of the City Engineer, be removed and not replaced. The Contractor shall provide submittals for the Engineer's review and approval for supporting utilities.

Per Article 3.2, Section 01 73 00 Contractor to furnish information promptly to Alameda Municipal Power (AMP), Pacific Gas & Electric (PG&E), the City of Alameda Public Works – including, but not limited to AT&T, Verizon, Comcast - that it is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. The owners of pipes, wires, conduits, vaults and other utilities (other than sewers) located in the City streets which could conflict with the proposed Work will be notified by the City Engineer to remove or adjust the same, without cost to the Contractor, to such extent as will allow the prosecution of the work described herein according to the necessities thereof and in accordance with these specifications. Wherever and whenever the Contractor anticipates working in an area from which utilities must be removed at the expense of others, he/she shall notify the City Engineer sufficiently in advance (a minimum of ten (10) working days) to permit the owners thereof to rearrange or abandon such utilities, and he/she shall cooperate with the owners thereof in the performance of the work under this contract.

The Work will be so prosecuted that a minimum of damage will result to utility services. In the event that utility services are damaged or interrupted, the Contractor shall immediately, at his/her own expense, restore such services in a manner satisfactory to the City Engineer. In the event that an interruption of utility services is sustained for a period of longer than one-half hour, it shall be the responsibility of the Contractor to notify the occupants of the premises to which said services are connected, so that no damage will accrue on or to said premises.

The Contractor shall perform all work in such manner as to prevent damage to utilities lying outside of or below a required excavation of trench area.

END OF SECTION 01 82 00

SECTION 01 83 00 – SOUND CONTROL REQUIREMENTS

1.01 SOUND CONTROL REQUIREMENTS

Sound control shall conform to ARTICLE II. NOISE REGULATIONS, Section 4-10 NOISE CONTROL, of the Alameda Municipal Code, which – among other things - prohibits weekday construction activities between 7:00 pm and 7:00 am.

END OF SECTION 01 83 00

SECTION 01 84 00 – CONSTRUCTION SITE CONTROLS / POLLUTION PREVENTION

1.1 CONSTRUCTION SITE CONTROLS / POLLUTION PREVENTION

No less than five days prior to the date the work is to commence, pursuant to the NTP, the Contractor shall re-familiarize themselves with a) this Spec Section 01 84 00, b) the City of Alameda's erosion, sediment and discharge-control standards, c) the Best Management Practices ("BMPs") contained within the spec section, and d) the POLLUTION PREVENTION plan sheet (incorporated into the Construction Documents) and forward any questions, comments or concerns to the City's representatives to be resolved before any/all construction site erosion and sediment control measures are installed.

Per the POLLUTION PREVENTION sheet and the Best Management Practices noted in this Spec Section, all construction activities shall incorporate appropriate erosion and sediment control measures to effectively prevent the entry of soil, dirt, debris and other pollutants to storm water runoff, the storm drain system, lagoons and the bay/estuary during construction. No work in the field under this Contract may begin until the Contractor has these erosion and sediment controls in place to fully accommodate the Best Management Practices iterated in this Spec Section.

Contractor's erosion and sediment controls shall include maintenance schedules for the installation and upkeep of the erosion control mechanisms being implemented. These mechanisms shall include, but not be limited to perimeter protection(s), any silt fencing and fiber rolls to be used, storm drain inlet protections, stabilized construction entrance(s) and exits, site and excavation dewatering activities, vehicle tire wash area(s), vehicle and equipment servicing area(s), and the materials handling and storage area(s). These mechanisms and practices shall meet the same level of erosion and sediment control effectiveness established by practices identified in the San Francisco Bay Regional Water Quality Control Board's Erosion and Sediment Control Field Manual (510-622-2465), the Association of Bay Area Government's Manual of Standards for Erosion and Sediment Control (510-464-7900) and/or the California Stormwater Quality Association's Stormwater Best Management Practice Handbook – Construction (2003) (www.cabmphandbooks.com). Contact City Public Works Department Clean Water Program Specialist Jim Barse (510-747-7930) for additional assistance in obtaining copies of these reference documents.

The Contractor is responsible for ensuring that all of his/her workers and subcontractors are aware of and implement the stormwater quality control measures and erosion and sediment controls iterated herein. The Contractor(s) shall avoid creating excess dust when breaking asphalt/concrete and during excavation and grading. If water is to be used as a measure for dust control, use as little as possible. All wash water shall be kept out of streets, gutters and storm drains. Controls shall be implemented before construction begins and maintained until the end of construction at which time they shall be removed.

Failure to comply with the following approved construction **Best Management Practices** ("BMPs") shall result in the issuance of correction notices, citations and/or a Project stop order:

- A. Gather all construction debris on a regular basis and place it in a dumpster or other container which is emptied or removed on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution. After breaking old pavement, remove all pieces to avoid contact with rainfall or runoff.

- B. Remove on-site piles from the site on a regular basis. Only temporary storage is allowed. All temporary soil or other stockpiles on site shall be securely covered with a tarp, plastic sheeting or similar material.
- C. Remove all dirt/mud, gravel, rubbish, refuse and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site daily and prior to rain. Clean up leaks, drips and spills immediately. Avoid unnecessary driving on unpaved areas during wet weather.
- D. Install and maintain stabilized construction entrances to minimize the tracking of dirt, mud, dust and debris onto the public right-of-way.
- E. Broom-sweep the sidewalk and public street pavement adjoining the project site daily and prior to rain. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the completion of work the street shall be washed and the wash water collected and disposed offsite.
- F. Install filter materials (such as block and gravel bags, sandbags, filter fabric) at the storm drain inlets surrounding the project site. Such inlet protections shall be installed before: the start of the rainy season (October 1st), site de-watering activities, saw-cutting activities, or any other activity that may result in the discharge of material to the storm drain. Filter materials shall be maintained and/or replaced as necessary to minimize short-cutting and to remove sediment deposits and buildup. Accumulated sediment/debris shall be disposed of properly.
- G. Vacuum saw-cutting slurry and remove from site. Do not allow saw-cut slurry to enter the storm water conveyance system.
- H. Create a contained and covered area on the site for the storage of cement bags, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by wind, exposure to rainfall or in the event of a material spill.
- I. Never clean machinery, tools, brushes, etc. or rinse containers into a street, gutter, storm drain or stream. See the *Building Maintenance and Remodeling* BMP flyer and ACCWP BMP brochures for more information. Contact the Public Works Department at 747-7930 for assistance with obtaining these documents.
- J. Ensure that concrete/gunite supply trucks or concrete/plaster finishing operations do not discharge wash water into street gutters or drains. Concrete trucks shall have a self-contained washout system or discharge to a dedicated, secure site washout in order to avoid the possibility of debris on city streets or discharge of wash water to the storm water conveyance system.
- K. Minimize removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Re-plant the area, and stabilize all cut and fill slopes as soon as possible after grading is completed. At a minimum, 4,000 pounds/acre of straw with tackifier should be placed on all exposed soils including, but not limited to, those within active work areas and flat lots. **No site grading shall occur between October 1 and May 31 unless approved erosion and sedimentation control measures are in place.**
- L. Provide erosion “prevention” and perimeter protection measures (soil stabilization) such as fiber rolls, silt fence, and/or sediment traps or basins. Ensure control measures are adequately maintained and in operable condition. Sediment controls, including, but not limited to, inlet protection, are necessary but should be a secondary defense behind good erosion control and site perimeter measures.
- M. Design site de-watering operations to prevent the discharge of any sediment, debris or other pollutants to the municipal storm water conveyance system.
- N. Maintain and if necessary, repair, all erosion prevention and sediment control measures throughout the contract term. Replacement supplies should be kept on site. Site

inspections shall be conducted before and after each storm event, and every 24 hours for extended storm events, to identify areas that contribute to erosion and sediment problems or any other pollutant discharges. If additional measures are needed, inform the City Engineer immediately and document all inspection findings and actions taken.

- O.** Conduct visual observations before, during, and after storm events. Any breach, malfunction, leakage, or spill observed that could result in the discharge of pollutants to surface waters that might not be visually detectable in stormwater shall trigger the collection of a sample of discharge. The following procedures shall be followed during sampling:

Sampling Procedures:

- ~~• For all construction activity, identify a sampling and analysis strategy and sampling schedule for potential discharges discovered through visual monitoring.~~
- ~~• Any breach, malfunction, leakage, or spill observed during visual monitoring which could result in the discharge of pollutants to surface waters that would not be visually detectable in stormwater shall trigger the collection of a sample of discharge.~~
- ~~• Samples shall be collected at all discharge locations which drain the areas identified by the visual observations and which can be safely accessed.~~
- ~~• Personnel trained in water quality sampling procedures shall collect stormwater samples.~~
- ~~• An uncontaminated sample shall be collected for comparison with the discharge sample.~~

- ~~• Sampling shall be conducted during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.~~
- ~~• The uncontaminated sample shall be compared to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and TDS~~
- ~~• All field and/or analytical data shall be kept in the SWPPP document, which is to remain at the construction site at all times.~~

- P.** Contact the City of Alameda Public Works Department at 510- 747-7930 in the event of any slope failure, sediment pond overflow, or any other malfunction resulting in sediment-laden runoff. The City shall, in turn, report such incidents to the Regional Water Quality Control Board.
- Q.** Clearly mark with the words, “No Dumping! Drains to Bay” or the equivalent, using methods approved by the City of Alameda, onto the on-site storm drain inlets. All on-site storm drains must be inspected and, if necessary, cleaned, at least once a year immediately prior to the rainy season. Additional cleaning may be required by the City of Alameda.
- R.** Require all concrete trucks used in the performance of the work to have a self- contained washout system, rather than do washout on the site. The idea is to avoid:
- a.** An undesirable pile of concrete on the jobsite, and
 - b.** The possibility of debris on city streets.

The objective of these Standard Conditions is to ensure that the City’s municipal storm water Permit, the National Pollutant Discharge Elimination System (NPDES) Permit provisions and additional Regional Water Quality Control Board requirements are adequately enforced.

These recommendations are intended to be used in conjunction with the State's Best Management Practices Municipal and Construction Handbooks, local program guidance materials from municipalities, Section 7.1.01, of the Standard Specifications and any other appropriate documents on storm water quality controls for construction. If you need assistance in checking these documents, contact Clean Water Program Specialist at 510-747-7930.

Failure to comply with the above program will result in issuance of noncompliance notices, citations, project stop orders or fines. The fine for noncompliance of the above program is two hundred and fifty dollars (\$250.00) per occurrence per day. The State Regional Water Quality Control Board, under the Federal Clean Water Act, can also impose a fine on the Contractor.

END OF SECTION 01 84 00

SECTION 01 85 00 – RECYCLING OF CONCRETE AND ASPHALT MATERIALS

1.01 RECYCLING OF CONCRETE AND ASPHALT MATERIALS

The Contractor shall dispose of at least 80% of the removed concrete, rock, brick, asphalt or other similar materials to an approved materials recycling location other than a landfill. The 80% shall be determined by weight of materials. All disposal and recycling weight/receipt tags shall be submitted to the Engineer. Attached is a suggested list of facilities that will accept construction and demolition waste materials (Exhibit A). The Contractor shall submit a request, along with proof in writing, to the City Engineer of the Contractor's inability to comply with this requirement.

The City of Alameda Administrative Instruction 36 requires that contractors doing business with the City of Alameda shall comply with the guidelines for use of recycled materials (Exhibit B). **The Contractor shall submit a Waste Reduction and Recycling Plan (WRRP, Exhibit C) prior to construction.** The WRRP must be submitted for review and approved by the Public Works Staff before demolition. **A Waste Reduction and Recycling Plan Final Summary Report (Exhibit D) must be filled out and signed by the Contractor at the project completion. The Contractor shall also submit a Waste Management Report (Exhibit E).**

END OF SECTION 01 85 00

LIST OF PROCESSORS BY MATERIAL

This guide is a listing of facilities/processors that accept construction and demolition waste materials. This is not a complete and comprehensive list; it is intended to be a quick reference guide to assist contractors and the general public recycle their construction and demolition debris.

Please call each facility for accepted materials, hours of operation, and the terms and conditions prior to delivering your materials.

ASPHALT & CONCRETE

AMAN ENVIRONMENTAL CONSTRUCTION (510) 553-0110

8300 Baldwin Street, Oakland

- . Clean asphalt
- . Clean concrete

CALMAT (925) 485-1279

501 El Charo Road, Pleasanton

- . Clean asphalt
- . Clean concrete

COUNTY QUARRY PRODUCTS, INC. (510) 682-0707

5501 Imhoff Drive, Martinez

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

CURTNER QUARRY (510) 793-8861

2000 Scott Creek Road, Milpitas

- . Clean concrete
- . Clean asphalt (broken or grindings)
- . Concrete roofing
- . Tiles, gravel, porcelain

DAVIS STREET TRANSFER STATION (510) 638-2303

2615 Davis Street, San Leandro

DORN RECYCLERS (925) 449-9328

Livermore

(May pickup: large quantities)

DUTRA MATERIALS (510) 887-8070

4001 West Winton Avenue, Hayward

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing

- . Tiles, gravel, porcelain

LA VISTA QUARRY

(510) 538-5085

28814 Mission Boulevard, Hayward

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

RAISCH PRODUCTS

(408) 227-9222

2122 Old Calaveras Road, Milpitas

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

RAISCH PRODUCTS

(408) 734-4245

1444 Borregas Avenue

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

RAISCH PRODUCTS

(510) 623-5870

7010 Auto Mall Parkway, Fremont

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

RAISCH PRODUCTS

(408) 227-9222

55 Hillsdale Avenue, San Jose

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

**RECYCLED BUILDING MATERIALS- WHOLE
HOUSE SALVAGE**

(650) 856-0634

- . Cinder blocks
- . Roofing tiles

SPECIALTY CRUSHING

(510) 986-0964

Oakland

- . Clean asphalt
- . Clean concrete
- . Cinder blocks

SRDC, Inc.

(415) 367-7324

195 Seaport Boulevard, Redwood City

- . Clean asphalt
- . Clean concrete

SYAR INDUSTRIES, INC.

(510) 215-1114

Foot of Parr Boulevard, Richmond

- . Clean asphalt
- . Clean concrete

THE REUSE PEOPLE

(510) 567-8525

2615 Davis Street, San Leandro

- . Reuse/free drop-off;
- . Useable, whole cinder blocks
- . Roofing tile

**VASCO ROAD LANDFILL &
RECYCLING DROPOFF**

(925) 447-0491

4001 North Vasco Road, Livermore

- . Clean asphalt
- . Clean concrete

WRT WASTE MANAGEMENT

(415) 822-2175

895 Egbert Avenue, San Francisco

- . May pickup; asphalt, concrete

ZANKER RESOURCE MANAGEMENT

(408) 263-2383

705 Los Esteros Way, San Jose

- . Clean asphalt
- . Clean concrete
- . Concrete with rebar
- . Concrete roofing
- . Tiles, gravel, porcelain

Recycled materials, if deemed acceptable, by the Engineer, for the requirements of these specifications will be considered for building materials. Contractor shall submit a request in writing for the Engineer's use. The written request shall include all specification information required by the Engineer that provides him/her assurance that the proposed materials are an equal or better to those specified herein.

For further information regarding materials and vendors, Contractor may call Waste Management at (510) 747-7960.

EXHIBIT “B”**RECYCLED CONTENT STANDARDS**

ITEM	MINIMUM % OF RECOVERED MATERIAL	MINIMUM % OF POSTCONSUMER MATERIAL
BINDERS		
Press board cover	up to 100%	20%
Paperboard in plastic covering	up to 100%	75%
Solid plastic cover	up to 100%	25%
Plastic covering	25%	not set
COPIER PAPER	up to 100%	20%
FIBERGLASS INSULATION	30% cullet	not set
FILE STORAGE BOXES	up to 100%	50%
FLEXIBLE DELINEATOR POSTS	up to 100%	25%
INTEROFFICE ENVELOPES	up to 100%	20%
PAPER TOWELS	up to 100%	40%
PLAYGROUND SURFACES	90%	90%
PLASTIC FOOD SERVICE TRAYS		
Durable plastic	up to 100%	25%
Disposable polystyrene	up to 100%	25%
Disposal paper	80%	not set
PLASTIC LUMBER BENCHES	up to 100%	50%
RE-FINED MOTOR OIL	up to 100%	70%
SOIL AMENDMENT - COMPOST	80%	not set
TRASH CANS/ROLLING CARTS		
Plastic	up to 100%	20%
Paper	up to 100%	50%
Plastic rolling cart	up to 100%	10% body, 50% lid
TRASH CANS LINERS	up to 100%	30%
UNBOUND AGGREGATES	up to 100%	not set

CITY OF ALAMEDA

Waste Reduction & Recycling Plan (Form)

Submit to: City of Alameda
Public Works Department
Environmental Services Division
950 West Mall Square, #110
Alameda, CA 94501-7752

Permit No. _____
Project Name _____
Approved
Not Approved
Staff Initials _____
Staff Phone # _____
for City's use only

Project	Name	of	Address:	Project
Manager:	_____			
Phone Number:	_____			
Cellular	Phone	Number: _____		

_____ Fax Number:

Please provide the following information:

(a) What type is this project? Please check all that apply.

- | | | |
|---------------------|---------------|---------------|
| 1. New Construction | 2. Repair | 3. Addition |
| 4. Move | 5. Alteration | 6. Demolition |

(b) What is the size of this project? _____ sq. ft.

(c) What is the permit valuation of this project? \$ _____

2. Briefly state how materials will be sorted for recycling, reuse or salvage on the job site.

3. Briefly state how you plan to inform and ensure participation by your workers and any sub-contractors of your Waste Reduction and recycling Plan.

4. Complete page 2 of this Form.

WASTE REDUCTION AND RECYCLING PLAN

For this project identify the materials and quantities that you estimate can be recycled, reused or salvaged. Estimate the amount of solid waste that will be generated and disposed in landfills.

Goal: Reduce materials going to the landfills by 50%

Material Type	Est. Amount (tons/yards)	Proposed Processing Methods (Check all that apply)			
		B Recycle	C Reuse	D Salvage	Landfill
Asphalt & Concrete					
Brick/Tile					
Building Fixtures					
(Doors, Windows, Fixtures, etc.)					
Corrugated Cardboard					
Dirt/Clean Fill					
Drywall					
Padding- Carpet/Foam					
Scrap Metal					
Unpainted Wood & Pallets					
Yard Trimmings (Brush, Trees,					
Other (list)					
Garbage-Solid Waste Trash, and Rubbish					
Total					

Do columns (B+C+D) = 50% of column A?

YES NO If NO, please explain why.

General Contractor's Signature

Date

CITY OF ALAMEDA

Waste Reduction & Recycling Plan FINAL SUMMARY REPORT (Form)

At project completion submit to:
City of Alameda, Public Works Department
Environmental Services Division
950 West Mall Square, Room #110
Alameda, CA 94501-7552

Permit No. _____
Project Name: _____
Address: _____
Review results: 50% diversion attained Good faith effort Non-attained
Staff Initials: _____

- (1) List the estimated amounts from your WRRP form for this project.
- (2) Indicate actual quantities of materials that were recycled, reused or salvaged from this project.
- (3) Describe the handling procedure and destination of each material.
- (4) Indicate the **actual** amount of solid waste produced and disposed in a landfill.

Goal: Materials going to the landfills are reduced by 50%

Material Type	Est. Amount From WRRP (tons/yards)	Actual Quantities				Handling Procedure/Destination
		B Recycled	C Reused	D Salvaged	Landfilled	
Asphalt & Concrete (Example)	70 tons		65 tons		5 tons	ground on-site and resized as fill
Brick/Tile						
Building Fixtures (Doors, Windows, Fixtures, etc.)						
Corrugated Cardboard						
Dirt/Clean Fill						
Drywall						
Padding-Carpet Foam						

Material Type	Est. Amount From WRRP (tons/yards)	Actual Quantities				Handling Procedure/Destination
		B Recycled	C Reused	D Salvaged	Landfilled	
Scrap Metal						
Unpainted Wood & Pallets						
Yard Trimmings (Brush, trees, stumps, etc.)						
Other (list)						
Garbage, Solid Waste Trash, Rubbish,						
Total						

- (1) Do Columns (B+C+D) = 50% of column A? YES NO
- (2) If estimated amounts from the WRRP were not recycled, reused, or salvaged, please provide a justification.

- (3) Please list any recommendation that would help further construction and demolition recycling in Alameda.

Contractor Signature

Date

EXHIBIT "E"

**WASTE MANAGEMENT REPORT FOR
CONTRACTORS**

The City of Alameda is requesting that all contractors document materials generated (reused, recycled or landfilled).

Please complete this form each time materials are removed from the site or reused on-site.

JOB SITE LOCATION: _____ DATE: _____

COMPANY: _____

MATERIAL: _____

WAS THE MATERIAL RECYCLED? YES NO

VOLUME/WEIGHT: _____ HAULER: _____

RECYCLING COMPANY OR DISPOSAL SITE: _____

SUBMITTED BY: _____

PHONE NUMBER: _____

CONSULTANTS' TECHNICAL SPECIFICATIONS:

TABLE OF CONTENTS

TECHNICAL PROVISIONS

DIVISION 01 – GENERAL

01000	Summary of Work
01100	Definition of Bid Items
01250	Measurement and Payment
01330	Submittals
01410	Regulatory Requirements

DIVISION 02 – SITE WORK

02100	Construction Staking
02200	Demolition
02300	Earthwork
02325	Trenching and Backfilling for Utilities
02350	Prestressed Concrete Guide Piles
02370	Geotextile Fabric
02480	Floating Docks
02500	Asphalt Concrete
02660	Water System
02700	Rock and Rockwork
02730	Sanitary Sewer
02750	Pavement Striping & Markings
02870	Site Furnishings

DIVISION 03 TO DIVISION 16

03300	Concrete
05600	Aluminum Gangway
16100	Site Electrical
16520	Exterior Lighting

SECTION 01000

SUMMARY OF WORK

PART 1 – GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work comprises refurbishment of the Encinal Park Boat Launch Facility located at Alameda, California, including boat launch ramp improvements, sediment removal, boarding floats with guide piles, riprap, accessibility improvements, utilities, installation of City-furnished prefabricated restroom, installation of City-furnished fish cleaning station, and installation of City-furnished project sign.
- B. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work.
- C. Adhering to all project permits.
- D. Quality Assurance Testing: The Contractor shall perform all quality assurance sampling and testing as specified. Testing shall be performed by an Independent Testing Laboratory (ITL) selected by the Contractor and approved by the City. Submit company contact information, names of personnel to perform quality assurance testing, and proof of State Certification for the quality assurance tests to be performed.

1.2 BID ITEMS

- A. Descriptions of Bid Items as described in Section 01100 Definition of Bid Items.

1.3 HOURS OF WORK AND NOTIFICATION OF ADJACENT RESIDENTS

- A. Prior to starting construction, the City will notify adjacent residents of the proposed construction schedule if deemed necessary.
- B. Outdoor construction activity, except for emergency situations, will be confined to the hours 7:00 a.m. through 7:00 p.m. on Monday through Friday. Contractor may request with at least forty-eight (48) hours prior notification to and approval from City's Project Manager, an alternate schedule. Construction will not be allowed on Sundays or holidays.

1.4 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. Contractor shall allow City to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.
- B. Possession, use of Work, and placement and installation of equipment by City shall not in any way evidence the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from City occupancy.
- D. Use and occupancy by City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.
 - 1) Responsibility for operation and maintenance of said equipment shall remain with Contractor.

- 2) Make, and City shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
- 3) Itemized list noted above shall be basis for commencement of warranty period for equipment.
- 4) City shall pay for utility cost arising out of occupancy by City during construction.
- E. Use and occupancy by City prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by City.
- F. Prior to date of Final Acceptance of the Work by City, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to Defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required under the General Conditions.
- G. Use by City of Work or part thereof as contemplated by this Section 01000 shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by City of any of the conditions thereof.

1.5 PERMITS AND ENVIRONMENTAL PROTECTION

- A. Regulatory permits obtained by the City for the project are listed below:
 - 1) U.S. Army Corps of Engineers – Nationwide Permit; File Number: SPN-2017-00485S
 - 2) San Francisco Regional Water Quality Control Board – Water Quality Certification
 - 2) San Francisco Bay Conservation and Development Commission – Permit No. 1979.032.02
- B. The specification of specific permits applying to the Work shall not limit or restrict the obligation of the Contractor in the performance of the Work to comply with any and all other laws, regulations or permits which are described in the Contract Documents or which apply to the performance of the Work.
- C. Changes in Permit Conditions: Contractor acknowledges that the Work includes services not provided under specific Bid Items that are reasonably necessary to comply with permit conditions. In the event that an additional permit necessary for the performance of the Work is issued, or an existing permit is modified, after the Bid Submission date, the Contractor recognizes the terms, conditions and requirements of such permit or modification may require the Contractor to perform services or to provide services or to provide materials which are different from the Work contained in the Contract Documents. In such event, the Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Terms unless such change in the Work materially differs from the Work in the Contract Documents and such change could not be reasonably expected by the Contractor given the ordinarily encountered and generally recognized implementation of similar permits. Contractor shall be responsible for its cost of evaluating the implications for the Work of the terms, conditions and restrictions of the permits, and of responding to any Requests for Proposals or Field Changes of the Contracting Officer which are issued in connection with the issuance of the permit(s).

1.6 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

- A. A SWPPP shall be prepared by the Contractor describing Best Management Practices (BMPs) that will be used during construction to prevent storm water pollution into the storm drain system and into San Francisco Bay. The BMPs shall address stormwater, wind, and other potential sources of erosion, and shall meet the requirements of regulatory agency, City, and County permits.

1.7 PRECEDENCE

- A. Where Drawings or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, Drawings and Specifications shall take precedence so long as such increase is legal.
- B. Where no requirements are identified on Drawings or in Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.
- C. Conflicts between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.
- D. Conflicts between referenced regulatory requirements and Contract Documents: Comply with the one establishing the more stringent requirement.

PART 2 – PRODUCTS

2.1 CITY-FURNISHED PRODUCTS

- A. The City shall furnish one (1) prefabricated restroom building for the Contractor to install.
- B. The City shall furnish one (1) prefabricated fish cleaning station for the Contractor to install .
- C. The City shall furnish one (1) concrete project sign for the Contractor to install.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01100

DEFINITION OF BID ITEMS

PART 1 – GENERAL

The intent of this section is to explain, in general, what is and what is not included in a bid item, and the limits or cut-off points where one bid item ends and another begins. If no bid item exists for a portion of the work, include the costs in a related bid item. Measurement and Payment for all items of work shall be done in accordance with Section 01250 "Measurement and Payment." The lump sum or unit price for each item shall be full compensation for all labor, materials, equipment, tools, and incidentals to complete each bid item.

1.1 BID ITEM NO. 1 – MOBILIZATION, DEMOBILIZATION, BONDS & INSURANCE

- A. This bid item consists of mobilization and demobilization in accordance with the State Standard Specifications. This bid item includes mobilization of equipment, materials and personnel; temporary facilities; temporary fencing; preparation of submittals; and demobilization.
- B. Unit of Payment: Lump Sum (LS)

1.2 BID ITEM NO. 2 – DEMOLITION

- A. This bid item consists of removal and disposal of items designated for demolition, in accordance with Specification Section 02200 "Demolition."
- B. Unit of Payment: Lump Sum (LS)

1.3 BID ITEM NO. 3 – REMOVE SEDIMENT

- A. This bid item consists of removal and disposal of accumulated sediment from the existing boat launch ramp, in accordance with Specification Section 02300 "Earthwork."
- B. Unit of Payment: Cubic Yard (CY)

1.4 BID ITEM NO. 4 – CONCRETE CURB

- A. This bid item consists of construction of concrete curb to the dimensions, lines and grades shown on the Drawings and in accordance with Specification Section 03300 "Concrete." This bid item includes excavation, disposal of excavated material, subgrade preparation, aggregate base course, reinforcing steel, joints, and all work required to construct the curb complete in place.
- B. Unit of Payment: Linear Foot (LF)

1.5 BID ITEM NO. 5 – CONCRETE WALK

- A. This bid item consists of constructing concrete walk and accessible ramps as shown on the Drawings and in accordance with Specification Section 03300 "Concrete." This bid item includes excavation, disposal of excavated material, subgrade preparation, aggregate base course, reinforcing steel, joints, and all work required to construct the walks and accessible ramps complete in place. This item includes detectable warning surface at accessible ramps.
- B. Unit of Payment: Square Foot (SF)

1.6 BID ITEM NO. 6 – CONCRETE APRON

- A. This bid item consists of all work related to constructing the concrete apron shown on the Drawings and in accordance with Specification Section 03300 "Concrete." This bid item includes excavation, subgrade preparation, aggregate base, formwork, reinforcing steel and dowels, placing concrete, finishing and curing concrete, and all work required to construct the cast-in-place concrete apron complete in place.
- B. Unit of Payment: Square Foot (SF)

1.7 BID ITEM NO. 7 – CONCRETE ABUTMENT

- A. This bid item consists of all work related to constructing the concrete abutments shown on the Drawings and in accordance with Specification Section 03300 "Concrete." This bid item includes excavation, subgrade preparation, aggregate base, formwork, reinforcing steel, embedments, placing concrete, finishing and curing concrete, and all work required to construct the cast-in-place concrete abutments complete in place.
- B. Unit of Payment: Each (EA)

1.8 BID ITEM NO. 8 – CONCRETE LAYDOWN AREA FOR HAND-LAUNCH CRAFT

- A. This bid item consists of all work related to constructing the concrete laydown area for hand-launch craft shown on the Drawings and in accordance with Specification Section 03300 "Concrete." This bid item includes excavation, subgrade preparation, aggregate base, formwork, reinforcing steel, placing concrete, finishing and curing concrete, and all work required to construct the cast-in-place concrete laydown area complete in place.
- B. Unit of Payment: Square Foot (SF)

1.9 BID ITEM NO. 9 – PRECAST CONCRETE PANELS

- A. This bid item consists of all work related to constructing the precast concrete boat ramp panels shown on the Drawings and in accordance with Specification Section 03300 "Concrete." This bid item includes subgrade preparation, geotextile fabric, gravel fill, furnishing and installing precast concrete boat ramp panels, and all work required to construct the precast concrete boat ramp panels complete in place.
- B. Unit of Payment: Square Foot (SF)

1.10 BID ITEM NO. 10 – GUIDE PILES

- A. This bid item consists of furnishing and installing guide piles with pile caps complete in place as shown on the Drawings, and in accordance with specification Section 02350 "Prestressed Concrete Guide Piles."
- B. Unit of Payment: Each (EA)

1.11 BID ITEM NO. 11 – BOARDING FLOATS

- A. This bid item consists of furnishing and installing boarding float dock systems complete in place as shown on the Drawings, and in accordance with Specification Section 02480 "Floating Docks." This bid item includes boarding floats, pile brackets, hardware, and all work required to construct the boarding float dock systems complete and in place.
- B. Unit of Payment: Square Foot (SF)

1.12 BID ITEM NO. 12 – ALUMINUM GANGWAY

- A. This bid item consists of furnishing and installing an aluminum gangway complete in place as shown on the Drawings, and in accordance with Specification Section 05600 "Aluminum Gangway." This bid item includes the gangway, toe plate, hardware, and all work required to construct the gangway complete and in place.
- B. Unit of Payment: Each (EA)

1.13 BID ITEM NO. 13 – ARMOR ROCK

- A. This bid item consists of constructing the riprap apron adjacent to the boat launch ramp as shown on the Drawings and in accordance with Specification Section 02700 "Rock and Rock Work." This bid item includes excavation, subgrade preparation, furnishing and installing armor rock, and all work required to construct the armor rock complete in place.
- B. Unit of Payment: Ton (TN)

1.14 BID ITEM NO. 14 – ELECTRICAL SYSTEM

- A. This bid item consists of electrical utility work related to the project, in accordance with Section 02325 "Trenching and Backfilling for Utilities," Section 02870 "Site Furnishings," Section 16100 "Site Electrical," and Section 16520 "Exterior Lighting." This bid item includes trenching and backfilling, conduit, conductors, pull boxes, light poles on raised concrete footings, floodlights with sensor and control devices, connections to existing electrical system and sewer ejector, and all electrical system work related to the project.
- B. Unit of Payment: Lump Sum (LS)

1.15 BID ITEM NO. 15 – WATER SUPPLY

- A. This bid item consists of potable water supply work related to the project, in accordance with Section 02325 "Trenching and Backfilling for Utilities," Section 02660 "Water System," Section 02870 "Site Furnishings." This bid item includes trenching and backfilling, pipe and fittings, valves, connections to existing water supply, and all water supply utility work related to the project.
- B. Unit of Payment: Lump Sum (LS)

1.16 BID ITEM NO. 16 – SEWER SYSTEM

- A. This bid item consists of sanitary sewer utility work related to the project, in accordance with Section 02325 "Trenching and Backfilling for Utilities," Section 02730 "Sanitary Sewer System," Section 02870 "Site Furnishings." This bid item includes trenching and backfilling, pipe and fittings, valves, cleanouts, connections to existing sewer system (sewer ejector), outdoor shower drainage, fish cleaning station, and all sanitary sewer work related to the project.
- B. Unit of Payment: Lump Sum (LS)

1.17 BID ITEM NO. 17 – SEWER EJECTOR

- A. This bid item consists of installation of a new sewer ejector pump as shown on the Drawings and in accordance with Specification Section 02730 "Sanitary Sewer System." This bid item includes all work for the existing sewer ejector pump well, including new pump, alarm system, controls, piping, top rail, and connections to utilities as needed to complete the sewer ejector complete in place.

- B. Unit of Payment: Lump Sum (LS).

1.18 BID ITEM NO. 18 – INSTALL CITY-FURNISHED RESTROOM

- A. This bid item consists of installing a City-furnished prefabricated restroom building in accordance with Specification Section 02870 "Site Furnishings." This item includes foundation construction, permits, final interior utility connections, and all labor, materials and equipment needed to construct the restroom complete in place. This item includes the installation of the City-furnished prefabricated outdoor shower unit, and the railing along the outdoor shower area. In-ground utilities are included in other bid items and are not included in this bid item. Above-ground utility work and connections to water, sewer, and power are included in this bid item.

- B. Unit of Payment: Lump Sum (LS)

1.19 BID ITEM NO. 19 – INSTALL CITY-FURNISHED FISH CLEANING STATION

- A. This bid item consists of installation of a City-furnished commercially manufactured fish cleaning station as shown on the Drawings and in accordance with Specification Section 02870 "Site Furnishings." In-ground utilities are included in other bid items and are not included in this bid item. Above-ground utility work and connections to water, sewer, and power are included in this bid item.

- B. Unit of Payment: Lump Sum (LS).

1.20 BID ITEM NO. 20 – INSTALL CITY-FURNISHED PROJECT SIGN

- A. This bid item consists of installation of the City-furnished Project Sign in accordance with Specification Section 02870 "Site Furnishings." Project Sign installation includes excavation, foundation construction, installation of Project Sign per manufacturer requirements, and all incidental materials and work required to install the Project Sign complete in place.

- B. Unit of Payment: Lump Sum (LS)

1.21 BID ITEM NO. 21 – ASPHALT CONCRETE PAVEMENT

- A. This bid item consists of asphalt concrete pavement and aggregate base layer, to the dimensions, lines and grades shown on the Drawings and in accordance with Specification Section 02500 "Asphalt Concrete Pavement." This bid item includes excavation, disposal of excavated material, subgrade preparation, aggregate base, paint binder and tack coat, asphalt concrete, and all work to construct the new asphalt concrete pavement.

- B. Unit of Payment: Square Foot (SF)

1.22 BID ITEM NO. 22 – FULL-DEPTH ASPHALT CONCRETE

- A. This bid item consists of full-depth asphalt concrete pavement to the dimensions, lines and grades shown on the Drawings and in accordance with Specification Section 02500 "Asphalt Concrete Pavement." This bid item includes subgrade preparation, paint binder and tack coat, placement of asphalt concrete, and all work to construct the new asphalt concrete pavement.

- B. Unit of Payment: Square Foot (SF)

1.23 BID ITEM NO. 23 – PAVEMENT STRIPING

- A. This bid item consists of preparation of pavement and new pavement striping and pavement markings as shown on the Drawings and in accordance with Specification Section 02750 "Pavement Striping & Markings."
- B. Unit of Payment: Lump Sum (LS)

1.24 BID ITEM NO. 24 – SEAL COAT (PARKING LOT)

- A. This bid item consists of preparation of pavement and seal coat of the existing parking lot as shown on the Drawings and in accordance with Specification Section 02500 "Asphalt Concrete Pavement."
- B. Unit of Payment: Square Yard (SY)

1.25 BID ITEM NO. 25 – STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

- A. This bid item consists of preparing, submitting, and complying with a SWPPP in accordance with Specification Section 01000 "Summary of Work" and Regulatory Agency permit requirements.
- B. Unit of Payment: Lump Sum (LS)

PART 2 – PRODUCT (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01250
MEASUREMENT AND PAYMENT

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section describes requirements and procedures for determining amount of work performed and for obtaining payment for work performed. This Contract included Work covered by both lump sum and unit prices.

1.2 DETERMINATION OF QUANTITIES

- A. Quantity of the work to be paid for under any item for which a unit price is fixed in the Contract Documents shall be the number, as determined by the City, of units of work satisfactorily completed in accordance with Contract Documents or as directed by City. Unless otherwise provided, determination of number of units of work so completed will be based, so far as practicable, on actual measurement or count within prescribed or ordered limits, and no payment will be made for work done outside of limits. Measurements and computations will be made by methods as the City may consider appropriate for class of work measured. Contractor shall immediately inform City of any disputes regarding quantity measurements, and shall immediately supply City with any documentation supporting such disputed measurements.
- B. For material specified to be paid for by the linear foot, the unit shall be measured on a horizontal plane.
- C. For material specified to be paid for by the square foot or square yard, the unit shall be measured on the surface area.
- D. For material specified to be paid for by each, the unit shall be measured by number of individual units.
- E. For material specified to be paid for by the ton, the unit shall be measured by the actual weight in tons of the material, based on truck weight certificates. For materials not weighed in trucks, the City will estimate the volume of material to be placed prior to placement.
- F. For material specified to be measured and paid for by volume will be inspected, estimated and recorded by the Engineer for comparison with quantities submitted with requests for payment.

1.3 SCOPE OF PAYMENT

- A. Payment to the Contractor at the unit price or other price fixed in the Contract for performing the Work required under any item, or at the lump sum price fixed in the Contract for performing all work required under the Contract Documents, and as either may be adjusted pursuant to any approved Change Order, shall be full compensation for completing, in accordance with the Contract Documents, all Work required under the item or under the Contract Documents, and for all expense incurred by the Contractor for any purpose in connection with the performance and completion of said Work, including all incidental work necessary for completion of the Work.
- B. The Contract Sum, which includes both lump sum and unit price, shall be deemed to include all costs necessary to complete the required Work, individual Work item or unit price item, and

shall also include any costs for loss or damage arising from nature of Work or, prosecution of the Work, or from action of elements. Unless the Contract Documents expressly provide otherwise, the Contract Sum and each individual bid item and unit price item, respectively, shall be deemed to include:

1. Any and all costs which may arise from any unforeseen difficulties encountered during, and all risks of any description connected with, prosecution of work, bid item or unit price item, respectively, until acceptance by the City;
 2. All expenses which may be incurred due to suspension, or discontinuance of Work, bid item or unit price item, respectively, as provided in the Contract Documents;
 3. Escalation to allow for cost increases between time of Contract Award and completion of Work, bid item or unit price item, respectively.
- C. Whenever it is specified herein that the Contractor is to do work or furnish materials of any class for which no price is fixed in the Contract Documents, it shall be understood that the Contractor is to do such work or furnish such materials without extra charge or allowance or direct payment of any sort, and that cost of doing work or furnishing materials is to be included in price bid, unless it is expressly specified herein, in particular cases, that work or material is to be paid for as extra work.
- D. No payment shall be made for materials or equipment not yet incorporated into the Work.
- E. For the materials and equipment referenced as subject to payment prior to incorporation into the Work, where the Contractor requests payment on the basis of such materials and equipment not incorporated in the Work, the Contractor must satisfy the following conditions:
1. The materials and/or equipment shall be delivered and suitably stored at the site or at another local location agreed to in writing, for example, a mutually acceptable warehouse;
 2. Full title to the materials and/or equipment shall vest in the City at the time of delivery to the site, warehouse or other storage location;
 3. Stockpiled materials and/or equipment shall be available for the City's inspection, but the City shall have no obligation to inspect them and its inspection or failure to inspect shall not relieve the Contractor of any obligations under the Contract Documents. Materials and/or equipment shall be segregated and labeled or tagged to specifically identify this specific Contract Documents;
 4. After delivery of materials and/or equipment, if any inherent or acquired defects are discovered, defective materials and/or equipment shall be removed and replaced with suitable materials and/or equipment at the Contractor's expense;
 5. At its expense, the Contractor shall insure the materials and/or equipment against theft, fire, vandalism, and malicious mischief, as well as any other coverage's required under the Contract Documents;
 6. The Contractor's application for payment shall be accompanied by a bill of sale, invoice or other documentation warranting that the City has received the materials and equipment free and clear of all liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the City's interest

therein, all of which must be satisfactory to the City. This documentation shall include, but not be limited to, conditional releases of mechanics' liens and stop notices from all those providing materials and equipment as to which the application for payment relates, as well as unconditional releases of the same from the same as to the previous applications for payment for which they have not already been provided.

1.4 BASIS OF PAYMENT

- A. Unit Pay Quantities: When estimated quantity for specific portions of Work is listed in Bid Form, Quantity of work to be paid for shall be actual number of units satisfactorily completed in accordance with Contract Documents.
- B. Lump Sum: When estimated quantity for specific portion of Work is not indicated and unit is designated as Lump Sum, payment will be on a Lump sum basis for Work satisfactorily completed in accordance with Contract Documents.
- C. The City does not expressly, or by implication, agree, warrant, or represent in any manner, that actual amount of Work will correspond with amount shown or estimated and reserves right to increase or decrease amount of any class or portion of Work, to leave out entire Bid Item or Items, or to add Work not included in Bid, when in its judgment such change is in best interest of the City. No change in work shall be considered waiver of any other condition of the Contract Documents. No claim shall be made for anticipated profit, for loss of profit, for damages, or for extra payment whatever, except as otherwise expressly provided for in the Contract Documents, because of any differences between amount of Work actually done and estimated amount as set forth herein, or for elimination of extra Bid Items.
- D. Notwithstanding the above provisions, the unit prices set forth in the Bid Form shall be utilized where they are applicable. If the Contract Change Order increases or decreases the quantity of an item of work by more than twenty-five percent (25%), such that the application of unit prices in the Bid will cause substantial inequity of the City or Contractor, unit prices will be adjusted as follows:
 - 1. Increases of More Than 25 Percent. If the total pay quantity of work required under the Contract exceeds the estimated quantity set forth in the Bid therefore by more than 25 percent, no adjustment in unit price will be made unless the Engineer or the Contractor so requests in writing not later than fifteen (15) days after substantial completion of the subject item of work. Such adjustment of the unit price will be the difference between the contract unit price and the actual unit cost of the total pay quantity of the item. If the costs applicable to such item of work include fixed costs, such fixed costs will be deemed to have been recovered by the Contractor by the payments made for 125 percent of the estimated quantity set forth in the Bid for such item, and in computing the actual unit cost, such fixed costs will be excluded.
 - 2. Decreases of More Than 25 Percent. If the total pay quantity of any item of work required under the Contract is less than 75 percent of the estimated quantity set forth in the Bid therefore, but the item of work is not entirely eliminated, an adjustment in unit price pursuant to this paragraph will not be made unless the Contractor so requests in writing not later than fifteen (15) days after substantial completion of the subject item of work. Such adjustment of the contract unit price will be the difference between the contract unit

price and the actual unit cost. The payment for the total pay quantity of such item of work shall in no case exceed the payment which would be made for the performance of 75 percent of the estimated quantity set forth in the Bid for such item at the contract unit price.

1.5 PROGRESS PAYMENTS

A. If requested by the Contractor, progress payments will be made monthly.

B. Payment Requests

1. Unless otherwise agreed, Contractor shall submit to the City, on or before the first (1st) day of each month, five (5) copies of a request for payment for the cost of the Work put in place during the period from the 1st day of the previous month to the 30th day of the previous month. If the Contractor is late submitting its payment request, that payment request may be processed at any time during the succeeding one-month period, resulting in processing of the Contractor's payment request being delayed for more than a day-for-day basis.
2. Payment requests may include, but are not necessarily limited to the following:
 - a. Material, equipment and labor incorporated into the Work, less any previous payments for the same;
 - b. Up to seventy-five percent (75%) of the actual cost (not bid cost) of major equipment identified in Paragraph 1.3.D above, if purchased and delivered to the site or stored off site, as may be approved by the City.
 - c. Up to fifty percent (50%) of the actual cost (not bid cost) of materials identified in Paragraph 1.3.D above specifically fabricated for the Project that are not yet incorporated into the Work, provided such materials are located on the Site.
3. The Contractor shall, at the time any payment request is submitted, certify in writing the accuracy of the payment request.
4. No progress payment will be processed prior to the City receiving all requested, acceptable schedule update information. No progress payment will be made unless Project Record Documents are being kept up to date.
5. Each payment request shall list each Change Order executed prior to date of submission, including the Change Order Number, and a description of the Work activities, consistent with the descriptions of original Work activities. The Contractor shall submit a monthly Change Order status log to the City.
6. If the City requires substantiating data, the Contractor shall submit information requested by the City, with cover letter identifying Project, payment request number and date, and detailed list of enclosures. The Contractor shall submit one copy of substantiating data and cover letter for each copy payment request submitted.
7. The Contractor shall promptly pay each Subcontractor or Subconsultant the amount to which such Subcontractor or Subconsultant is entitled, and shall, by an appropriate agreement with each Subcontractor or Subconsultant, require each Subcontractor or Subconsultant to make payments to its Sub-subcontractors or Sub-subconsultants in a similar manner. The Contractor shall submit on its behalf and on behalf of each

Subcontractor or Consultant for which payment is being requested a conditional release of mechanics' lien in statutory form for the Work which is the subject of each progress payment request and an unconditional release of mechanics' lien in statutory form for the immediately preceding progress payment as to the Work of each.

A. Progress Payments

1. Upon receiving the Contractor's payment request, the City will review the payment request and make necessary adjustments to percent of completion of each activity. One copy will be returned to the Contractor with description of adjustments made. All parties will update percentage of completion values in the same manner, i.e., express value of an accumulated percentage of completion to date.
2. The payment request may be reviewed by the Engineer and/or inspectors, for the purpose of determining that the payment request is a proper payment request, and shall be rejected, revised or approved by the City pursuant to the cost breakdown prepared in accordance with this Section.
3. If it is determined that the payment request is not a proper payment request suitable for payment, the City shall return it to the Contractor as soon as practicable, but no later than five (5) days after receipt, together with a document setting forth in writing the reasons why the payment request is not proper. If the City determines that portions of the payment request is not proper or not due under the Contract Documents, then the City may approve the other portions of the payment request, and in the case of disputed item or defective work not remedied, may withhold up to 150% of the disputed amount from the progress payment.
4. As soon as practicable after approval of each request for progress payment, the City will pay to the Contractor in manner provided by law, an amount equal to ninety percent (90%) of the City's estimate, or a lesser amount if so provided in Contract Documents, provided that payments may at any time be withheld if, in judgment of the City, Work is not proceeding in accordance with the Contract Documents, or the Contractor is not complying with requirements of the Contract Documents, or to comply with stop notices or to offset liquidated damages accruing or expected.
5. Retention will not be reduced if the Contractor, in opinion of the City is behind schedule.
6. Before any progress payment or final payment is made, the Contractor may be required to submit satisfactory evidence that the Contractor is not delinquent in payments to employees, subcontractors, suppliers, or creditors for labor and materials incorporated into Work.
7. Progress payment for the mobilization and demobilization of the Contractor under Bid Item for mobilization and demobilization will be paid, subject to the other requirements of this Section 01250, as follows:
 - a. Work completed is defined as the total amount of the material furnished and delivered and of the Work done by the Contractor, but not including cost for mobilization and demobilization bid item.

- b. When the City's estimate of work completed is five percent (5%) or more of the Total Bid Price under that schedule; then the total amount earned for mobilization, to date, will be fifty percent (50%) of the bid item price for mobilization or five percent (5.0%) of the Total Bid Price under that schedule, whichever is lesser.
- c. When the City's Estimate of work completed is ten percent (10%) or more of the Total Bid Price for that schedule, the total amount earned for mobilization, to date, will be seventy five percent (75%) of the total bid item price for mobilization or seven and one-half percent (7.5%) of the Total Bid Price under that schedule, whichever is lesser.
- d. When the City's Estimate of work completed is twenty percent (20%) or more of the Total Bid Price for that schedule, the total amount earned for mobilization, to date, will be ninety percent (90%) of the total bid item price for mobilization or nine percent (9.0%) of the Total Bid Price under that schedule, whichever is lesser.
- e. When the City's Estimate of work completed is fifty percent (50%) or more of the Total Bid Price for that schedule, the total amount earned for mobilization, to date, will be one hundred percent (100%) of the amount bid for mobilization, or 10 percent (10%) of the Total Bid Price under that schedule, whichever is lesser.
- f. Upon completion of all work on the project, payment of any amount bid for mobilization and demobilization in excess of 10% of the total bid item price for mobilization and demobilization under that schedule may be paid to Contractor.
- g. Contractor shall provide the City with a detailed breakdown of the costs included in each of the mobilization and demobilization bid items to facilitate and clarify future progress payments to Contractor.

1.6 FINAL PAYMENT

- A. As soon as practicable after all required Work is completed in accordance with the Contract Documents, including the Contractor's maintenance after Final Acceptance, the City will pay to the Contractor, in manner provided by law, unpaid balance of contract price of Work, or whole contract price of Work if no progress payment has been made, determined in accordance with terms of the Contract Documents, less sums as may be lawfully retained under any provisions of the Contract Documents or by law.
- B. Prior progress payments shall be subjected to correction in the final payment. The City's determination of amount due as final payment shall be final and conclusive evidence of amount of Work performed by the Contractor under the Contract Documents, and shall be full measure of compensation to be received by the Contractor.
- C. The Contractor and each assignee under an assignment in effect at time of final payment shall execute and deliver at time of final payment and as a condition precedent to final payment, Agreement and Release of Any and All Claims, discharging the City, its officers, agents, employees and consultants of and from liabilities, obligations, and claims arising under the Contract Documents.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01330
SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section Includes:
 - 1. Definitions.
 - 2. Procedures.
 - 3. Schedule of Submittals.
 - 4. Shop Drawings, Product Data and Samples.
 - 5. Contract Closeout Submittals.

1.2 DEFINITIONS

- A. "Fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements.
- B. "Field sample" is a sample at the project site to demonstrate the final technique, finish, and construction quality by which the Work will be judged.
- C. "Manufactured" applies to standard units usually mass-produced.
- D. "Manufacturer's Instructions" shall mean the manufacturer's written instructions on the use or application of the product under conditions similar to those at the job site.
- E. "Samples" are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- F. "Shop drawings" are drawings, diagrams, schedules and other data specially prepared for the Work by Contractor or a subcontractor, sub-subcontractor, manufacturer, supplier or distributor to illustrate some Portion of the Work.
- G. "Product data" are illustrations, specifications, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate materials or equipment for some Portion of the Work.
- H. "Work description" is a detailed description of the means, methods, tools, equipment, materials, sequence, and any other pertinent information about performance of work.

1.3 PROCEDURES

- A. Deliver submittals to the City.
- B. Transmit each item under the following format:
 - 1. Identify Project, Contractor, Subcontractor, Major Supplier.
 - 2. Identify pertinent Drawing sheet and detail number and Specification Section number, as appropriate.
 - 3. Identify deviations from Contract Documents. Note on transmittal any deviation from Contract Documents.

4. Provide space for Contractor and Engineer review stamps.
5. Use "Submittal Record" form which will be provided by the City free of charge.
- C. Submit initial progress schedules and schedule of values in duplicate within 15 days after award of Contract.
- D. The City will review Contractor's submittals only for general conformance with the design concept of the Project and general compliance with the requirements of the Contract Documents. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Contractor as required by the Contract Documents.
- E. The City's review of Contractor's submittals shall not relieve Contractor of the obligations to comply with the requirements of the Contract Documents. The City's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. The City's acceptance of a specific item shall not indicate acceptance of an assembly of which the item is a component.
- F. After City's review of submittals, revise and resubmit as required identifying changes made since previous submittal.
- G. Distribute required number of copies of reviewed submittals to designated and concerned persons. Instruct recipients to promptly report any inability to comply with provisions.
- H. Partial submittals will not be reviewed or returned. Make submittals in groups containing all associated items as complete packages of information for review. The City will reject partial submittals.
 1. Provide submittal package in a three-ring binder, with table of contents and tab sheet for each system. Tab sheet shall include a list of material and equipment furnished and shall provide ample space for City's review stamp and comments.
 2. The City reserves the right to withhold action on submittals requiring coordination with other submittals until related submittals are furnished.
- I. No Portion of the Work requiring submission of a shop drawing, product data, or sample shall commence until the submittal has been reviewed and accepted by the City. All such Portions of the Work shall be executed in accordance with accepted submittals.
 1. No Portion of the Work requiring submission of work description, transporter qualification or field sample shall be deemed complete until the submittal has been reviewed and accepted by the City. All such Portions of the Work shall be executed in accordance with accepted submittals.
- J. If the submittal shows any variation from the Contract requirements because of standard shop practice or other reasons, Contractor shall make specific mention of each variation in its submittal.
- K. Submit adequate quantities required for review. No submittal will be processed unless the specified quantities are furnished.
- L. No change shall be made by Contractor in any submittal after it has been accepted by the City.

1.4 SCHEDULE OF SUBMITTALS

- A. Within ten (10) days after award of contract, Contractor shall prepare and submit a schedule of submittals (including those to be furnished by City) which is coordinated with the Contractor's construction schedule. Such schedule shall advise the City as to the latest date the submittal should be returned to the Contractor in order to avoid delay to the work. City shall have a reasonable length of time to review shop drawings and submittals as deemed necessary by the City's professional judgment, not to exceed fifteen (15) working day (21 calendar days).

1.5 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

A. General:

1. Make all submittals ten (10) days prior to usage of drawing, product data and samples.
2. Commence no Portion of the Work requiring these submittals until the City has reviewed the submittals. All such Portions of the Work shall be in accordance with reviewed submittals.
3. Submittals are not Contract Documents, but are only instruments of convenience to further the progress of the work.
4. Contractor:
 - a. Solely responsible for all quantities of materials or equipment required to properly complete the work according to the Contract Documents, notwithstanding any information contained in the submittals.
 - b. Submittal represents that all materials, field measurements and related field construction criteria have been reviewed and verified and that information contained within the submittals meet the requirements of the Work and Contract Documents. Underline in red any changes or deviations from the Contract Documents.
5. City's review: Does not relieve Contractor from responsibility for errors or omissions in the submittals.

B. Submittal Requirements:

1. Shop Drawings: For each drawing, submit one (1) reproducible transparency and five (5) prints. City will mark up transparency and return marked transparency to Contractor.
2. Product Data: Typically submit seven (7) copies unless the specific specification section requires more. City will mark up and return three marked copies to Contractor.
3. Samples: Submit the number of samples specified in each of the Specification Sections. Where specific requirements are not given, submit samples in duplicate.
4. Bind shop drawings and product data in sets.
5. Submittals shall include:
 - a. Date and revision dates.
 - b. Project title and number.
 - c. The names of:
 - 1) City
 - 2) Architect/Engineer.
 - 3) Contractor

- 4) Subcontractor
 - 5) Supplier
 - 6) Manufacturer
 - 7) Detailer or engineer when pertinent
 - 8) Identification of product material
 - 9) Relation to adjacent structure or material
 - 10) Field dimension, clearly identified as such
 - 11) Specification Section number
 - 12) Applicable standards, such as ASTM number
 - d. A blank 4" x 5" space for the Engineer's stamp.
 - e. Identification of deviations from the Contract Documents.
 - f. Contractor's stamp, signed, verifying review of submittal, field measurements where applicable, and compliance with Contract Documents.
- C. Shop Drawings:
1. Drawings, diagrams, schedules and other data prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor shall illustrate the Work.
 2. Identify details on shop drawings by reference to sheet and detail numbers of Contract Drawings and/or specific reference to Sections and Paragraphs of the Specifications.
 3. Shop drawings shall establish the actual detail of manufactured or fabricated items, indicate proper relation to adjoining Work, and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.
- D. Product Data: Submitted information to include the following:
1. Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some Portion of the Work.
 2. Modify standard schematic drawings to delete information that is not applicable and supplement to provide additional information where required, or as requested by City.
 3. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data shall:
 - a. Have each copy marked to identify pertinent materials, products, models, finishes, etc.
 - b. Show clearly all standard options included.
 - c. Show dimensions and clearances required.
 - d. Show performance characteristics and capabilities.
 - e. Show wiring diagrams and controls and necessary rough-in requirements for utility services and connections (where applicable).
- E. Samples:

1. Submit samples reports to illustrate functional characteristics of the fill. Specific format and content of sample reports will be provided the contractor at the pre-construction meeting.
2. Include identification on each sample giving full information.
3. Submit a minimum of two (2) reports unless otherwise specified in respective Specification Section; one will be retained by City. Reviewed samples that may be used in the work are indicated in the Specification Section.

1.6 PROGRESS REPORTS

- A. Submitted by Contractor concurrently with requests for progress payments.

1.7 CONTRACT CLOSEOUT SUBMITTALS

- B. Submit the following at end of job:
 1. Certificate of Occupancy and/or Inspection.
 2. Project Record Documents.
 3. Warranties and Bonds.
 4. Evidence of Payment and Release of Liens.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 02100

CONSTRUCTION STAKING

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. The Contractor shall be responsible for providing all the construction staking services including establishment of all lines, grades, elevations, etc. in the field as necessary to construct the improvements shown on the plans.
- B. The Contractor shall employ the services of a Land Surveyor licensed in California to lay out the work.
- C. The Contractor shall submit surveyor qualifications to the City for approval prior to start of work.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 02200

DEMOLITION

PART 1 – GENERAL

1.1 WORK INCLUDED

- A. Removal, disposal, and salvage of existing features as shown on the Drawings and as specified herein.
- B. Disposal of demolished materials shall be the Contractor's responsibility. Demolished materials shall be disposed of off-site in accordance with the approved Work Plan.
- C. Protection of existing features and facilities to remain.

1.2 SUBMITTALS

- A. As part of the Contractor's Work Plan, submit proposed demolition methods, operations, schedule, and disposal site information for review prior to the start of work.

1.3 JOB CONDITIONS

- A. Protection: Conduct operations to prevent damage or injury to existing buildings, structures, improvements, other facilities, and persons.
- B. Perform all operations to avoid breakage, marring, bending or other damage to existing structures or utilities, which are to remain.
- C. Below-Grade Construction: Demolish any man-made structures and other below-grade construction that are in the way of Work.
- D. Storm Water and Groundwater Removal: Provide and operate all necessary equipment for water removal to maintain excavations and construction areas free of groundwater and storm water.
- E. Refer to General Conditions for related paragraphs concerning safety precautions and operations for construction.
- F. Explosives: The use of explosives is prohibited.
- G. Promptly repair damage to any adjacent facilities caused by demolition operations at no cost to the Owner.
- H. Utility Services:
 - 1. Contractor shall arrange with the utility provider to shut off utilities when necessary.
 - 2. Cut off pipe or conduit for utilities to be abandoned or discontinued a minimum of 24 inches below finished grade. Cap, valve, or plug and seal remaining portion of pipe or conduit.
 - 3. Do not interrupt existing utilities serving occupied or active facilities, except when authorized in writing by the Owner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PREPARATION

- A. Obtain all necessary permits for the demolition and site preparation work.
- B. Examine area affected by work to verify the following:
 - 1. Required access and utility disconnection procedure if required.
 - 2. Existing conditions are as generally represented by the contract documents.
 - 3. Work site has been vacated and readied for work.
 - 4. Planned sequence of work fits actual field conditions.
- C. Lay out work at job site and coordinate with related and interfacing work.

3.2 DEMOLITION

- A. Remove/demolish and dispose of or salvage the following to the dimensions and limits shown on the Drawings:
 - 1. Asphalt concrete pavement (sawcut and remove);
 - 2. Concrete Apron;
 - 3. Concrete Abutments;
 - 4. Concrete Guide Piles;
 - 5. Concrete Walk;
 - 7. Restroom;
 - 8. Concreted Riprap;
 - 9. Utilities;
 - 10. Signage;
 - 11. Concrete curb islands (parking lot)
 - 12. Other materials resulting from demolition.
- B. Disposal: Demolished materials become the property of the Contractor and shall be disposed of in accordance with applicable federal, state, and local laws and regulations.
- D. Bring to the Owner's attention obstructions which are not noted or shown on the plans or described herein. Protect such facilities until further direction is received from the Owner. Additional work required due to unforeseen conditions shall be performed as directed by the Owner and will be paid for as extra work in accordance with the General Conditions.

- E. Maintain erosion and pollution controls. Discharge of water into the existing drainage systems shall be in accordance with the approved Storm Water Pollution Protection Plan (SWPPP).
- F. Cleaning:
 - 1. Promptly remove from the property and legally dispose of all demolished materials. Remove all equipment, debris, and rubbish from the property.
 - 2. During progress of this Work, maintain the site in a presentable condition. Clean up spillage and debris at the site and on haul routes and public roads.
 - 3. Promptly repair any items damaged during the progress of this work, including any damage to pavement, sidewalks, haul routes, public roads, or adjacent ground caused by transporting materials or equipment.
 - 4. All demolished material and debris resulting from work that is not intended for salvage shall become property of the Contractor unless noted otherwise.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1 – GENERAL

1.1 DESCRIPTION

The work of this section consists of sediment removal, excavation, fill, and fine grading and backfill, including furnishing and placing fill materials on a prepared subgrade.

1.2 SUBSURFACE SOIL CONDITIONS

A Geotechnical Investigation has been prepared for the project by Hultgren-Tillis Engineers dated February 2016 and is included as part of the Contract Documents. Such information is made available for general information only and the Contractor shall make their own interpretation to the findings and recommendations of the study in planning and executing the work.

1.3 DEFINITIONS

- A. Sediment: soil materials that have settled on the launch ramp surface.
- B. Fill: All soil or rock-soil materials placed to raise the grade of the site or to backfill excavations.
- C. Imported Material: Soil or granular material which is brought to the site from off-site areas.
- D. Degree of Compaction or Relative Compaction: The ratio, expressed as a percentage, of the in-place dry density of the fill and backfill material as compacted in the field to the maximum dry density of the same material as determined by ASTM D 1557 (latest revision) compaction test method.
- E. Optimum Moisture: Water content, percentage by dry weight, corresponding to the maximum dry density as determined by ASTM D 1557 (latest revision).

1.4 OBSERVATION AND TESTING

- A. All site preparation, cutting and shaping, excavating, filling and backfilling shall be carried out under the observation of the City or the City's representative.
- B. Contractor shall perform appropriate field and laboratory tests to evaluate the suitability of fill material, the proper moisture content for compaction, and the degree of compaction achieved. Any fill that does not meet the specification requirements shall be removed and/or recompacted until the requirements are satisfied.
- C. Tests for compaction will be made in accordance with test procedures outlined in ASTM D 1557, as applicable. Field testing of soils or compacted fill in place shall conform to the applicable requirements of ASTM D 2922 (latest revision).

1.5 SITE CONDITIONS

- A. Excavation, filling, backfilling and grading work shall not be performed during unfavorable weather conditions. When the work is interrupted by rain, excavating, filling, backfilling and grading work shall not be resumed until the site and soil conditions are suitable in the opinion of the City.
- B. Contractor shall take the necessary measures described in the Storm Water Pollution Prevention Plan (SWPPP) to prevent erosion of freshly filled, backfilled and graded areas until such time as permanent drainage and erosion control measures have been installed.

1.6 SUBMITTALS

- A. Two copies of certified weight tickets for each load of fill material or aggregate delivered to project site.
- B. If materials are obtained from a commercial source, submit certification from the supplier stating that aggregate base material meets the requirements of this section.
- C. Provide the City at least 48 hours prior to the start of filling operations with samples of the material intended to be used for fill. All materials to be used for filling require the approval of the City.
- D. Submit description of equipment to be used for compaction of aggregate base supporting structures, concrete (walk, apron, abutment), and asphalt concrete pavement.
- E. Submit description of equipment to be used for sediment removal, including turbidity curtain information and layout/installation details.
- F. Submit disposal site information for disposal of sediment removed from the launch ramp.

PART 2 – PRODUCTS

2.1 AGGREGATE BASE

Aggregate base shall be Class 2, 3/4-inch maximum and conform to the provisions in Section 26-1.02B, "Class 2 Aggregate Base", of the State Standard Specifications (2010).

2.2 WATER

Use Potable water.

PART 3 – EXECUTION

3.1 STAKING AND GRADES

Contractor shall lay out all work, establish all necessary markers, benchmarks, grading stakes, and other stakes as required to achieve design grades, and as specified in Section 02100 "Construction Staking."

3.2 EXISTING UTILITIES

- A. Contractor shall verify on-site the locations and depth (elevation) of all existing utilities and services before performing any excavation work.

- B. Abandoned sewers, piping, and other utilities encountered in the progress of the excavation shall be removed and the resulting excavations shall be backfilled with sand or pea gravel unless other methods of filling are authorized by the City.
- C. Any active utility lines encountered shall be reported immediately to the City and utility providers involved. The City and proper utility provider shall be permitted free access to take the measures deemed necessary to repair, relocate, or remove the obstruction as determined by the City.

3.3 EXCAVATION

- A. Perform excavation and provide shoring, bracing, underpinning, cribbing, pumping, and planking as required. The bottoms of excavations shall be level, firm, undisturbed earth, clean and free from loose material, debris and foreign matter.
- B. Excavations shall be kept free from water at all times. Adequate dewatering equipment shall be maintained at the site to handle emergency situations until any structure or backfill is placed.
- C. Unauthorized excavations shall be backfilled with sand or aggregate base to required elevations, unless other methods of filling are authorized by the City.
- D. Excavated earth material which is suitable for select materials may be conditioned for reuse and properly stockpiled for later filling operations.

3.4 SEDIMENT REMOVAL

- A. Sediment that has accumulated on the existing boat ramp shall be removed and disposed of off-site in accordance with applicable laws and regulations.
- B. Work to remove sediment shall be done at low tide and within a turbidity curtain to minimize potential for increased turbidity. Turbidity curtain shall be removed after sediment removal is complete.

3.5 SUBGRADE PREPARATION

- A. Any existing structures, foundations, underground features, or debris must be removed from the site prior to any grading or fill operations. The resulting depressions shall be properly prepared and filled to the satisfaction of the City.
- B. Vegetation and organic topsoil shall be removed from the site upon which the fill is to be placed. The surface shall then be scarified to a depth of at least 8 inches until the surface is free from ruts, hummocks, or other uneven features which would tend to prevent uniform compaction by the equipment to be used.
- C. After the foundation for the fill has been cleared and scarified, it shall be made uniform and free from large clods. The proper moisture content must be obtained by adding water or aerating. The foundation for the fill shall be compacted at the proper moisture content to a relative compaction as specified herein and bonded with the initial lift of fill. Compaction shall be performed using vibratory equipment.

- D. The upper 12 inches of subgrade in areas to receive asphalt concrete pavement or portland cement concrete shall be compacted to at least 95 percent relative compaction. All other areas shall be compacted to at least 90 percent relative compaction.
- E. Final Prepared Subgrade: Finish blading and smoothing shall be performed as required to produce the required density and a uniform surface smooth and true to grade.

3.6 AGGREGATE BASE PLACEMENT

- A. PLACING: If the required compacted thickness of the base or subbase course exceeds 6 inches, place course in two or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed 6 inches.
- B. ADDING WATER: At the time base or subbase is spread, it shall have a moisture content sufficient to obtain the required compaction. Such moisture shall be uniformly distributed throughout the material.
- C. COMPACTION: Compact each layer to a density of not less than 95 percent relative compaction. Random tests for compacted depth will be made during the progress of the work. Any fill that does not meet the specification requirements shall be removed and/or recompact until the requirements are satisfied. Compaction shall be performed using vibratory equipment.
- D. SURFACE FINISHING: Use a smooth steel wheel roller for the final rolling of top surface base course. Water surface and evenly spread loose stones before final rolling. Make minimum of two complete passes over area to embed stones. Correct soft spots developed during rolling. Compacted base course surface shall be smooth and free from waves and other irregularities. Unsatisfactory portions of base course shall be torn up, reworked, relaid, and rerolled, at no additional expense to the City.

3.7 TOLERANCES:

A. Aggregate Base

- 1) Surface: The Contractor shall test finished surface of the base course with a 10-foot straightedge or other device. The variation between any two contacts with the surface shall not exceed 1/2-inch. Any areas not complying with these tolerances shall be reworked to obtain conformity.
- 2) Thickness: Plan dimension, plus or minus 1/2-inch.

3.8 MAINTENANCE:

Maintain base and subbase courses in a satisfactory condition until final surface material is placed or until final acceptance.

3.9 DISPOSAL OF WASTE MATERIALS

Excess earth materials and debris shall be removed from the site and disposed of in a legal manner.

END OF SECTION

SECTION 02325

TRENCHING AND BACKFILLING FOR UTILITIES

PART 1 – GENERAL

1.1 SUMMARY

- A. This section covers trenching and backfill requirements for buried utility systems specified in the following sections:

02660 "Water System"

02730 "Sanitary Sewer System"

02870 "Site Furnishings"

16100 "Site Electrical"

16520 "Exterior Lighting"

- B. This section also covers dewatering of trenches and dust control.

1.2 SUBMITTALS

- A. Product Data and Samples:

1. Bedding material:

- a. Certified test reports for permeable material tested in accordance with ASTM C136.
- b. Submit 1-gallon sample of permeable material for approval.

2. Controlled Low-Strength Material (if used) mix design.

- B. Trench Plan: Submit a plan indicating the layout of trenches to be excavated, including:

1. Dimensions to existing features.
2. Cross-sections of trenches, including proposed backfill materials and dimensions.

1.3 QUALITY ASSURANCE

- A. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted backfill material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557. For field density tests, ASTM D6938 may be used.

- B. D-load or class of pipe requirements shown or called for on the plans shall be the minimum acceptable.

1.4 JOB CONDITIONS, PROTECTION, AND SHORING

- A. Existing Utilities:

1. Unless shown to be removed, protect active utility lines shown on the Plans or otherwise made known to the Contractor prior to excavating. If damaged, repair or replace at the Contractor's expense. Pothole as required to verify utility location. Contractor shall be responsible for contacting

all utility companies and coordinating any work which requires relocation or abandonment of existing utilities.

2. If active utility lines are encountered and are not shown on the Plans or otherwise made known to the Contractor, promptly take necessary steps to assure that service is not interrupted.
3. If a known service is interrupted as a result of work under this section, immediately restore service by repairing the damaged utility at Contractor's expense.
4. If foreseen or unforeseen existing utilities are newly found to interfere with the permanent facilities being constructed under this Contract, immediately notify the City for directions.
5. Do not proceed with permanent repair or relocation of utilities until written instructions are received from the City.
6. No construction water shall be disposed of in the City's storm drain system.

B. Protection of Persons & Property:

1. Install all necessary underpinning, shoring, lagging, cribbing, and bracing of ample strength to support adjoining soils, paving and structures. All such items shall be so constructed that they will not interfere with the building of any structural elements, and shall be removed upon completion of the shoring operation.
2. Barricade open depressions and holes occurring as part of this work, and post warning lights on property adjacent to or with public access.
3. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
4. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by operations of Contractor.
5. No trenches shall be left open during non-working hours.
6. Install fences and barricades to secure the area from the public.
7. Provide traffic control as specified in the approved Traffic Plan and section 01550 "Traffic Control."

C. Dust Control:

1. Use means necessary to control dust on and near the work, and on and near off-site areas, if such dust is caused by the Contractor's operations during performance of the Work, or if resulting from the condition in which the Contractor leaves the site.
2. Thoroughly moisten surfaces as required to prevent dust being a nuisance to the public, neighbors, and personnel performing other work on the site.
3. Use dust palliatives or reclaimed water (not potable water).

D. Access: Maintain access to adjacent areas at all times.

E. Maintain and/or replace all bench marks, monuments, construction stakes and other reference points.

F. Repair or restore damage to any portion of the work resulting from movement of the sides or bottom of trenches or other excavation which is attributable to the Contractor's acts or omissions, whether sides are braced or not.

PART 2 – PRODUCTS

2.1 GENERAL SOIL MATERIALS

- A. In general, soils used for backfill shall be select material free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, frozen, deleterious, or objectionable materials, satisfactory to the City, free of stones or lumps exceeding 3 inches in greatest dimension.

2.2 PIPE BEDDING AND INITIAL BACKFILL MATERIAL

- A. Pipe bedding and initial backfill up to six inches above the top of the pipe shall be Class 1, Type A permeable material, conforming to Section 68-1.25 of the Standard Specifications, except that the gradation for the #4 sieve shall be 30 - 55% passing, and gradation for the #8 sieve shall be 5 -10% passing
- B. Material shall contain at least 75% of the particles having one or more fractured faces.
- C. Bedding and backfill material shall be subject to the approval of the City.

2.3 SELECT BACKFILL ABOVE INITIAL BACKFILL OR BEDDING

- A. In non-paved areas unless otherwise shown on plans, select backfill shall conform to the requirements for soil materials above, and shall be classified as (GW), (GP), (GM), (SW), (SP) or (SM) by ASTM D2487 and meet the following:
 - 1. Sand equivalent shall not be less than 25 when tested in accordance with ASTM D2419, plasticity index shall not exceed 15 when tested in accordance with ASTM D4318 and not more than 25% by weight shall be finer than the No. 200 sieve.
 - 2. On-site native material may be used as backfill if it conforms to 2.3A.1 above.
- B. In paved areas, select backfill shall be Class 2 aggregate base, 3/4" maximum size gradation conforming to Section 26 of the Standard Specifications.

2.4 CONTROLLED LOW-STRENGTH MATERIAL (CLSM)

- A. CLSM will be accepted as trench backfill in lieu of Class 2 Aggregate Base or select backfill.
- B. CLSM shall be mandatory in trenches eight (8) inches wide or less where the prevention of subsequent settlement after placement of backfill is required; no bedding or initial backfill is required in such cases.
- C. CLSM shall conform to the requirements of Section 19-3.02G "Controlled Low-Strength Material" of the Caltrans Standard Specifications.

PART 3 – EXECUTION

3.1 GENERAL TRENCHING AND EXCAVATING

- A. Trenches may be excavated either by hand, or by machine. Trenches shall be cut with vertical sides, and shall be of sufficient width to provide adequate space for working therein; such space shall be a minimum clear distance of six (6) inches of shoring and a maximum of nine (9) inches clear of shoring on each side of the pipe barrel when the pipe is properly placed and aligned in conformity with the plans. Glory hole excavation or vee trenches will not be allowed. Trench sides shall be parallel to and at equal distance from the center-line of the pipe, when aligned in conformity with the plans.

- B. Excavated material shall be loaded into trucks immediately upon removal from the trench to prevent stockpiling on roadways or walkways.
- C. Where the excavated trench exceeds the widths specified above, furnish higher strength pipe, or other methods of construction as approved by the City, to adequately provide for the increased loading, which the trench widening will cause. Stepped trenches shall meet the approval of the City.
- D. Pipe trenches shall be excavated to a depth below the bottom of the pipe sufficient to provide for pipe bedding materials as required by Section 3.2.
- E. Where a trench has been excavated below the designed grade, the bottom of the trench shall be refilled to proper subgrade with approved material well compacted in place, in an approved manner.
- F. The City shall have the right to limit the amount of trench which is opened or partially opened at any one time; and also to limit the amount of trench left without backfill, at any one time.
- G. No trench or holes shall be left open overnight. Use steel plating to protect open trenches overnight.
- H. Provide for dewatering trenches and excavations and subsequent control of ground water, utilizing such pumps or other equipment as may be necessary to control ground water and seepage until backfilling is completed.

3.2 GENERAL BEDDING

- A. Utilities shall be laid on a firm layer of firm bedding material not less than four (4) inches in depth as shown or as noted on the plans and detail drawings, except that bedding shall not be required for utilities two (2) inches or less in nominal diameter. Compact as specified herein.
- B. Upon completion of bedding operations and, prior to the installation of pipe or appurtenances, notify the City who will then inspect the bedding layer. Pipe laying shall not commence until the bedding has been approved.

3.3 GENERAL BACKFILLING

- A. Backfill shall be as shown on the plans. Place in 6-inch maximum loose lifts to one foot above pipe unless otherwise specified. Bring up evenly on each side, and for the full length of the structure. Ensure that no damage is done to structures or protective coatings thereon. Place the remainder of the backfill in 8-inch maximum loose lifts unless otherwise specified. Compact each loose lift as specified in Paragraph "General Compaction" before placing the next lift. Where unacceptable settlements occur in trenches and pits due to improper compaction, excavate to the depth necessary to rectify the problem, then backfill and compact the excavation as specified herein and restore the surface to the required elevation.
- B. No backfill shall be placed until the line has been inspected and approved for backfilling.

3.4 GENERAL COMPACTION

- A. Use hand-operated plate type vibratory or other suitable hand tampers in areas not accessible to larger rollers or compactors. Be careful to avoid damaging pipes and protective pipe coatings. Compaction shall be in accordance with the following unless otherwise specified. If necessary, the Contractor's selected equipment and construction procedure shall be altered, changed or modified in order to meet the specified compaction requirements.
- B. Initial backfill and bedding shall be carefully packed under the haunches of the pipe and brought up simultaneously on both sides so as to obviate any displacement of the pipe from its true alignment.

Bedding shall be compacted in layers not more than eight (8) inches in thickness in a manner that will preclude moving the pipe, to not less than 95% of maximum dry density as determined by the procedure set forth in ASTM D1557. Jetting of backfill material will not be permitted.

- C. Select backfill above the initial backfill shall be placed in loose lifts not exceeding eight (8) inches in thickness before compaction, and compacted by the use of pneumatic tampers or other mechanical means approved. Water or dry, as required, to bring the soils as close as practicable to the optimum moisture content for proper compaction. Compaction equipment or methods that produce horizontal or vertical earth pressures which may cause excessive displacement or may damage the pipeline will not be permitted. Lifts of backfill shall be compacted to not less than 95% of maximum dry density as determined by the procedure set forth in ASTM D1557. Jetting of backfill material will not be permitted.
- D. For CLSM, compaction is not necessary for placement. Trench sections may be filled in one lift above the initial backfill material.
- E. Backfill will be inspected and tested by the City during placement. Contractor shall cooperate with the City and shall provide working space for such tests in his operations. Backfill not compacted in accordance with these specifications shall be recompacted, or removed as necessary and replaced to meet specified requirements prior to proceeding with the work.

3.5 SPECIAL REQUIREMENTS FOR CONTROLLED LOW-STRENGTH MATERIAL (CLSM)

- A. Applications of CLSM include, but are not limited to: backfills, structural fills, road base, slab base, and trench bedding.
- B. CLSM shall be discharged from the mixer by any reasonable means into the area to be filled. CLSM shall be brought uniformly to the elevation as shown on the plans. Trench sections to be filled with CLSM shall be contained at either end by bulkheads of earth fill.
- C. Permanent pavement may be placed directly upon the CLSM as soon as it has sufficiently self-consolidated so that the surface will withstand the process of paving without displacement or disruption. If the placement of the CLSM is not completed early enough to allow for permanent paving to be completed the same day, the contractor shall provide steel plates to span the trench and prevent traffic contact with the CLSM overnight or until permanent paving can be placed.
- D. Compaction is not required when placing CLSM.

3.6 WATER AND SEWER PIPING

- A. Trenches for water service piping and for sewer laterals shall conform to the applicable requirements of the California Plumbing Code.

3.7 FIELD QUALITY CONTROL

- A. The City will inspect, test and approve trench backfill layers before further construction is permitted thereon. Number of tests required will be determined by the City.
- B. If backfill has been placed, that is below the specified density, provide additional compaction with subsequent retesting until successful compaction is achieved.

3.8 DUST ALLEVIATION AND CONTROL

- A. Contractor shall be responsible for and shall provide pollution and dust abatement and control measures satisfactorily during the course of the work.

3.9 FINISH OPERATIONS

- A. Pipes shall be laid with respect to finished grades indicated on the plans.
- B. Dispose of all surplus material or material unsuitable for filling or grading off the site in a legal manner.
- C. Satisfactorily restore any existing improvements, paving, landscaping, and other utilities disturbed during the course of constructing the improvements.
- D. Existing traffic markings and control devices damaged or disturbed during construction shall be replaced or repaired to the satisfaction of the City.

END OF SECTION

SECTION 02350

PRESTRESSED CONCRETE GUIDE PILES

PART 1 GENERAL

1.1 SCOPE

The work in this section consists of furnishing all labor, material, tools, equipment and incidentals and doing all the work required to furnish and install prestressed concrete guide piles complete in place.

1.2 RELATED WORK

Section 02480 – Floating Docks

1.3 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition for these publications shall apply.

American Concrete Institute (ACI)

ACI 211.1	Selecting Proportions for Normal, Heavyweight and Mass Concrete
ACI 214	Evaluation of Strength Test Results of Concrete
ACI 315	Details and Detailing of Concrete Reinforcement
ACI 318	Building Code Requirements for Reinforced Concrete

American Society for Testing and Materials (ASTM)

ASTM A 82	Steel Wire, Plain, for Concrete Reinforcement
ASTM A 416	Steel Strand, Uncoated Seven-Wire for Prestressed Concrete
ASTM A 706/ A 706M	Low Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A 615/A 615M	Deformed and Plain Billet-Steel Bars for Concrete Reinforcements
ASTM C 31	Making and Curing Concrete Test Specimens in the Field
ASTM C 33	Concrete Aggregates
ASTM C 39	Compressive Strength of Cylindrical Concrete Specimens
ASTM C 136	Sieve Analysis of Fine and Coarse Aggregates
ASTM C 143	Slump of Hydraulic Cement Concrete
ASTM C 150	Portland Cement

ASTM C 172	Sampling Freshly Mixed Concrete
ASTM C 260	Air Entraining Admixtures for Concrete
ASTM C 494	Chemical Admixtures for Concrete
ASTM C 618	Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete

Precast/Prestressed Concrete Institute (PCI)

PCI MNL-116	Quality Control for Plants and Production of Precast Prestressed Concrete Products
PCI STD-112	Standard Prestressed Concrete Piles

1.4 Geotechnical Investigation

A Geotechnical Investigation has been prepared for the project by Hultgren-Tillis Engineers dated February 2016 and is included as part of the Contract Documents. Neither the Design Consultant, the City, nor the geotechnical consultant guarantee adequacy or accuracy of the data nor that data are representative of conditions to be encountered in areas other than the specific boring locations. Such information is made available for general information only and shall not relieve the bidders of the responsibility for making their own interpretation and investigations.

1.5 Submittals

Submit the following in accordance with Section 01330, "Submittal Procedures."

A. Drawings:

Prepare shop drawings in accordance with ACI 315. Indicate placement of reinforcement including tendons. Indicate location of embedded or attached lifting devices, employment of pick-up points, support points other than pick-up points, and any other methods of pick-up. Shop drawings shall bear the seal of a professional engineer with a current registration in the State of California attesting that the piles conform to all design requirements.

B. Pile Driving Plan:

1. Show locations of all the guide piles, and identify each pile with a unique identification number. Provide a plan indicating where the numbered piles are to be installed. Use the identification number on all pile records. Indicate the driving sequence and record the date of driving as work progresses. This plan will be a record document.
2. Provide installation procedures for the pile driving plan. The installation instruction shall contain a schedule of pile installation and proposed barge or crane locations to drive the piles. Indicate how the required tolerances will be met. Jetting of piles will not be allowed.
3. Provide make and model of pile-driving equipment proposed for the work and capacity of each type of equipment proposed for use in the work. Show details of driving helmets, capblocks, and pile cushions.
4. Submit the initial pile installation plan at least 3 weeks prior to the start of pile driving and an updated record plan with each request for payment.

C. Design Data:

Submit a concrete mix design for the piles. Submit at least 3 weeks before concrete is placed.
Include the following:

1. Strength.
2. Slump.
3. Unit weight of concrete.
4. Quantities of all ingredients.
5. Type of Portland cement.
6. Quantity of air entrained.
7. Source of fine and coarse aggregate, including reactivity of aggregate based on previous tests or past service.
8. Sieve analysis for aggregates, including fineness modulus.
9. Admixtures.
10. Name and address of proposed concrete supplier.

D. Quality Control Procedures.

Submit precasting manufacturer's quality control procedures.

E. Factory Test Reports:

Prior to pile fabrication, submit certified test reports for the following tests specified in ASTM C 33 for all aggregates:

1. Grading.
2. Amount of Material Finer than No. 200 Sieve.
3. Organic Impurities.
4. Soundness.
5. Clay Lumps and Friable Particles.
6. Coal and Lignite.
7. Weight of Slag.
8. Fineness Modulus.
9. Reactive Aggregates.

F. Field Test Reports: Submit concrete cylinder compressive strength test results.

G. Certificates:

1. Prestressing Steel.

Certification from suppliers attesting to the ultimate strength of the strands.

2. Reinforcing Steel.

Certification from suppliers shall attest to the yield strength of the reinforcing steel.

3. Concrete Mix Design.

Certify, using a City approved independent commercial testing laboratory, that proportioning of mix is in accordance with ACI 211.1 or ACI 318 for specified strength and is based on aggregate data which has been determined by laboratory tests during last twelve months.

4. Corrosion Inhibiting Additive.

Certification from manufacturer attesting that the proposed product has been in use for five years in waterfront concrete construction without harmful reactivity with cement, aggregate or reinforcing.

- H. Records: Contractor shall submit pile driving records within 48 hours of completion of pile driving operations.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Cement: ASTM C 150, Type II, low alkali.
- B. Water: Use potable water.
- C. Aggregates: ASTM C 33, except as modified herein. Provide aggregate free from any substance which may be deleteriously reactive with alkalis in cement in an amount sufficient to cause excessive expansion of concrete.
- D. Admixtures:
 - 1. All concrete shall use an air entraining admixture that conforms to the requirements in ASTM C 260 to obtain air entrainment of 5 percent, plus or minus 1 percent.
 - 2. All concrete shall contain a calcium nitrite corrosion inhibiting solution that conforms to the requirements in ASTM C 494, Type C, as follows:
 - a. The calcium nitrite admixture shall be as manufactured by W.R. Grace, "DCI", or approved equal.
 - b. The calcium nitrite admixture shall be added to the concrete at the rate of 2.5 gallons per cubic yard.
 - c. The water in the corrosion inhibiting solution shall be considered as part of the mixing water.
 - 3. Do not use admixtures containing chlorides.
 - 4. Flyash shall conform to ASTM C 618, Class F.
 - 5. Use High-Range Water Reducing Agent, ASTM C 494, Type C as manufactured by W.R. Grace, or approved equal.

- E. Prestressing Steel: Use seven-wire low relaxation strand conforming to ASTM A 416, Grade 270. Use prestressing steel free of grease, oil, wax, paint, soil, dirt, and loose rust. Do not use prestressing strands or wire having kinks, bends, or other defects.
- F. Reinforcing Steel: All reinforcing steel including dowels shall conform to ASTM A 706/ A 706M.
- G. Ties and Spirals: Steel, ASTM A 82 for spirals and ASTM A 615/A 615M for ties.
- H. Pile Caps: Caps for guide piles shall be white square fiberglass pile caps as manufactured by Henderson Marine, Richmond, CA, installed with epoxy adhesive, or approved equal.

2.2 CONCRETE MIX DESIGN

ACI 211.1 or ACI 318. The concrete to be used for the piles shall have a minimum compressive strength of 6,000 psi at 28 days, a maximum size aggregate of $\frac{3}{4}$ inch, and a maximum water/cement ratio = 0.40.

2.3 FABRICATION OF PILES

A. Formwork:

1. Provide forms of metal, braced and stiffened against deformation, accurately constructed, watertight, and supported on unyielding casting beds. Forms shall produce a smooth, dense surface. Chamfer edges and ends 1 inch, unless otherwise indicated.
2. Forms shall permit movement of pile without damage during release of prestressing force. Make piles to dimensional tolerances in accordance with PCI MNL-116.

B. Pretensioning:

Measure tension to which steel is to be pretensioned by jack pressure read on a calibrated gage and verify by elongation of steel. Use gauge calibrated within last 6 months by a laboratory approved by the California Department of Transportation (CALTRANS). Provide means for measuring elongation of steel to nearest $\frac{1}{8}$ inch. When difference between results of measurement and gage reading is more than 5 percent, determine cause of discrepancy and correct. Give tensioning steel a uniform prestress prior to being brought to design prestress. Induce same initial prestress in each unit when several units of prestressing steel in a pile are stretched simultaneously.

C. Casting:

1. Conveying: Clean conveying equipment thoroughly before each run. Convey concrete from mixer to forms as rapidly as practicable by methods which will not cause segregation or loss of ingredients. Deposit concrete as nearly as practicable to its final position. During placing, make any free vertical drop of the concrete less than 3 feet. Remove concrete which has segregated in conveying or placing.
2. Placing and Finishing: Perform concrete casting within 3 days after pretensioning steel; however, do not deposit concrete in forms until placement of reinforcement and anchorages has been inspected and approved by pile manufacturer's quality control representative. Produce each pile of dense concrete with reinforcement retained in its proper position during fabrication. Use vibrator with heads smaller than the minimum distance between steel for pretensioning. Finish exposed top surface of square pile to obtain a face that is as smooth and true to line as the formed surfaces of the pile. Make surface of pile ends perpendicular to axis of pile.

D. Curing of Piles:

1. Moist Curing: Moist cure using moist burlap coverings, plastic sheeting, or membrane curing compound until minimum strength to detension is achieved.
2. Accelerated Curing: After placement of concrete, moist cure for a period of 4 hours. Accelerated cure until concrete has reached specified release strength. Enclose casting bed for accelerated curing with a suitable enclosure. During application of steam or heat, increase the air temperature at a rate not to exceed 60 degrees F per hour. Cure at a maximum temperature of 160 degrees F until concrete has reached specified release strength. Reduce temperature at a rate not to exceed 60 degrees F per hour until a temperature of 20 degrees F above ambient air temperature is reached. After accelerated curing, moist cure using either water or membrane curing until a total accelerated and moist curing time of 72 hours is achieved.
3. Concrete piles must cure a minimum of 30 days prior to installation.

- E. Detensioning: Perform releasing of prestressed steel in pretensioned piles in such an order that eccentricity of prestress will be minimized. Gradually release tension in strands from anchorage. Detension after approval by pile manufacturer's quality control representative. Perform transfer of prestressing force when concrete has reached a minimum compressive strength of 4,500 psi.
- F. Pile Marking: Mark piling with lines of high visibility, non-permanent paint at one-foot intervals from bottom to top. Number every five feet. Markings shall be clearly visible and legible to the naked eye at a distance of 75 feet. Piles not properly marked will be rejected. Mark pickup points. Maintain a record of pile casting activity which includes concrete test results, casting date, shipping data and other pertinent data to correlate the manufacturing and the driving records.

2.4 PRODUCT QUALITY CONTROL

Where piling is manufactured in a plant with an established quality control program as attested to by a current certification in the PCI "Certification Program for Quality Control" perform product quality control in accordance with PCI MNL-116. Where piling is manufactured in plants not currently enrolled in the PCI "Certification Program for Quality Control," set-up a product quality control system in accordance with PCI MNL-116 and perform concrete and aggregate quality control testing using an independent commercial testing laboratory approved by the City in accordance with the following.

- A. Aggregate Tests: Take samples of fine and coarse aggregate at concrete batch plant and test. Perform mechanical analysis (one test for each aggregate size) in accordance with ASTM C 136. Tabulate results of tests in accordance with ASTM C 33.
- B. Strength Tests: Sample concrete in accordance with ASTM C 172 at time concrete is deposited for each production line. Perform slump tests in accordance with ASTM C 143. Mold cylinders in accordance with ASTM C 31. Mold at least six cylinders per day or one for every 20 cubic yards of concrete placed, whichever is greater. Cure cylinders in same manner as piles and for accelerated curing, place at coolest point in casting bed. Perform strength tests in accordance with ASTM C 39. Test two cylinders of each set at 7 days or 14 days, or at a time for establishing transfer of prestressing force (release strength) and removal of pile from forms. Test remaining cylinders of each set 28 days after molding.
- C. Changes in Proportions: If, after evaluation of strength test results, compressive strength is less than specified compressive strength, make adjustments in proportions and water content and changes in

temperature, moisture, and curing procedures as necessary to secure specified strength. Submit changes in mix design to the City in writing.

- D. Compressive Strength Test Results: Evaluate compressive strength test results at 28 days in accordance with ACI 214 using a coefficient of variation of 10 percent. Evaluate strength of concrete by averaging test results of each set of standard cylinders tested at 28 days. Not more than 10 percent of individual cylinders tested shall have a compressive strength less than specified compressive strength.

2.5 PILE DRIVING EQUIPMENT

- A. The Contractor shall be responsible for selecting a hammer and driving system, which is capable of driving the piles to the design tip elevation without overstressing the piles in either tension or compression.
- B. Any special equipment and methods necessary to drive the piling to the required penetration and within specified tolerances shall be provided by the Contractor.
- C. The Contractor shall anticipate and allow for the presence of surface and subsurface debris. This allowance shall include provisions for the possibility of removing through excavation, debris that obstructs the installation of piling.

PART 3 EXECUTION

3.1 EQUIPMENT

- A. Pile Hammers:

Furnish a hammer capable of driving piles to indicated tip elevation considering hammer impact velocity; ram weight; stiffness of hammer and pile cushions; cross section, length, and total weight of pile; and character of subsurface material to be encountered.

- B. Driving Helmets and Cushion Blocks:

Hammer Cushion or Capblock: Use a steel driving helmet or cap including a pile cushion between top of pile and driving helmet or cap to prevent impact damage to pile. Use a driving helmet or cap and pile cushion combination capable of protecting pile head, minimizing energy absorption and dissipation, and transmitting hammer energy uniformly over top of pile. Use pile cushion of solid wood or of laminated construction using plywood, softwood or hardwood boards with grain parallel to end of pile. Provide pile cushion with thickness of 6 inches minimum and 12 inches maximum. Replace pile cushion for each new pile, and when it becomes highly compressed, charred or burned, or has become spongy or deteriorated in any manner.

3.2 DRIVING PILES

- A. Driving Piles: Drive piles to indicated tip elevation. If a pile fails to reach indicated tip elevation, notify the City and perform corrective measures as directed.
- B. Protection of Piles: Take care to avoid damage to piles during handling, placing pile in leads, and during pile driving operations. Support piles laterally during driving. Maintain axial alignment of pile hammer with that of the pile.

- C. Tolerances in Driving: The dock system itself may be used as pile location guide during stabbing and driving.
 - 1. Horizontal: within 1 inch of the required horizontal location shown on the plans.
 - 2. Vertical: within 1 inch of the required elevations shown on the plans.
 - 3. Plumbness: not more than 1.0 percent from plumb.
 - 4. Rotation: not more than 5° rotation deviation from Plan. Plans show pile axes to be parallel and perpendicular to the dock.
- D. Maintain and check axial alignment and rotational alignment of pile at all times. If subsurface conditions cause pile drifting or rotation beyond allowable alignment tolerance, notify the City and perform corrective measures. The City may direct the Contractor to remove the pile that is installed beyond the tolerances indicated and require the Contractor to reinstall the pile.

3.3 FIELD QUALITY CONTROL

Pile Records: For each pile, keep a record of the number of blows required for each foot of penetration and number of blows for the last 6 inches of penetration. Include in the record the beginning and ending times of each operation during driving of pile, type and size of hammer used, rate of operation, stroke or equivalent stroke for diesel hammer, type of driving helmet, and type and dimension of hammer cushion (capblock) and pile cushion used. Record retap data and unusual occurrences during pile driving. Notify the City two weeks prior to driving of piles.

No pile driving shall occur during the night on weekdays (7:00 p.m. to 7:00 a.m.) and no pile driving on weekends or federal holidays.

3.4 BROKEN AND DAMAGED PILES

- A. Piles broken or damaged during handling or driving shall, at the discretion of the City, be repaired in an acceptable manner or be replaced.
- B. The Contractor shall submit for the City's review his proposed method of repairing piles, which are damaged.
- C. Pile repair or replacement shall be at no cost to the City nor cause any delay in the construction schedule.

END OF SECTION

SECTION 02480

FLOATING DOCKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. Floating docks consists of design, fabrication and installation of an aluminum floating dock system, complete and ready to use, including floats, connection hardware, dock accessories (cleats, rub rail, pile guide frames), and all related appurtenances.
- B. The floating dock system shall be designed by the contractor to meet all requirements as shown and specified. All materials shall be compatible and suited for their intended use in the marine environment.

1.2 REFERENCES

- A. References shall be the latest edition available as of the date of the invitation to bid unless otherwise specified. The following standards are hereby incorporated in this Specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. Design Standards:
 - 1. Aluminum – Aluminum Association Design Guide for Aluminum Structures
 - 2. Floating Dock – California Division of Boating and Waterways (DBW) "Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities".
 - 3. Steel - American Institute of Steel Construction (AISC) "Steel Construction Manual – 13th Edition".
- C. American Society for Testing and Materials (ASTM)

ASTM A 36	Specification for Structural Steel
ASTM B 221	Specifications for Aluminum Alloy Extruded Bars, Rods, Wire Shapes and Lubes
ASTM C 272	Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions; 2001 (Re-approved 2007)
ASTM C 578	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2006
ASTM D 1248	Specification for Polyethylene Plastics Molding and Extrusion Materials
ASTM D 1505	Test Method for Density of Plastics by the Density-Gradient Technique
ASTM D 1621	Test Method for Compressive Properties of Rigid Cellular Plastics
ASTM D 1693	Test Method for Environmental Stress-Cracking of Ethylene Plastics
ASTM F 593	Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs

ASTM F 594 Specification for Stainless Steel Nuts

D. American Welding Society (AWS)

D 1.1 Structural Welding Code – Steel

D 1.2 Structural Welding Code – Aluminum

1.3 SYSTEM DESCRIPTION: DESIGN CRITERIA FOR FLOATING DOCKS

- A. Information presented herein is based upon the Engineer's best estimate of those factors which reasonably can be expected to affect the design, performance, and durability of the floating dock system. These criteria shall be considered as minimum requirements for the proposed floating dock system; however, mere conformance to the minimum sizes, strengths, and design parameters given herein will not automatically ensure approval of the proposed system. The proposed floating dock system shall be subject to thorough engineering analysis using all relevant criteria that could affect the stability, structural integrity and durability of the dock system.
- B. Final calculations shall demonstrate that the floating dock system structure and guide piles, using the criteria specified in this Section as a minimum standard, are designed to withstand the required loading, singularly or in combination, without damage to the dock system, throughout the systems expected design life of 50 years. The design load combinations and allowable stresses are described herein. The design loads shall be applied at the locations and areas also described herein.
- C. The Contractor shall provide a system that conforms to the layout and dimensions as shown, and conform to the provisions as specified.
- D. The dock system shall be aluminum frame with composite timber decking and polyethylene-encased polystyrene foam core pontoons.
- E. Modules shall be connected to form continuous sections of floating dock capable of transmitting all loads imposed upon individual dock modules, or combinations of dock modules, to the guide piles and abutment (where applicable).
- F. Manufacturers considered capable of furnishing a dock system conforming to these requirements are: Northwest Docks, Anacortes, WA; Gator Dock (CMI, Atlanta, GA); Topper Industries, Woodland, WA; California Custom Docks, Santa Rosa, CA; Bellingham Marine Industries, Bellingham, WA.
- G. Freeboard
 - 1. Boarding Float: Per DBW "Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities" Section 301.B.4.
 - 2. Low-Freeboard Dock: Freeboard under dead load only at the time of dock system acceptance shall be between ten (10) inches and fourteen (14) inches. Freeboard under combined dead load plus uniform live load, or live point load shall not be less than six (6) inches at any point. Freeboard under combined dead load plus uniform live load and live point load shall not be less than four (4) inches at any point.
- H. The floating dock system shall be designed to float level under dead load. The deck of the float modules shall be level and flush upon completion within the following tolerances.

1. Dead load deck surface slope:

Transverse Direction: Not more than 1/8 inch per foot.

Longitudinal Direction: Not more than 1 inch per 10 feet of length.

2. Assembly gap between adjoining float modules:

Maximum 1/4 inch

3. Vertical height difference between adjoining float modules, walers and deck: Maximum 1/4 inch

- I. Special float modules shall be designed to support the superimposed dead loads imposed by gangways, ramps, or other dock accessories. Float modules with special loading shall have the same freeboard as floats with no such loading, so that there will be no residual stresses or tilting when the floats are interconnected and to ensure that the dock system deck is level within the specified tolerance. Individual float module depth shall be designed to provide support at points of concentrated loads to ensure that the floating dock system maintains the specified freeboard within the required tolerance.
- J. The floating dock system shall be designed to be restrained by guide piles as shown on the Drawings.

1.4 DESIGN REQUIREMENTS - DESIGN LOADS

- A. Dead load shall consist of the weight of float modules, framing, wale system, attachment hardware, miscellaneous connection devices, and all other permanently attached accessories such as cleats, ramps, etc. Contractor shall exercise care to be sure that all dead loads are accurately determined and accounted for, including superimposed gangway loads, consideration of weight gain due to water absorption, and manufacturing tolerances that affect the final freeboard.
- B. Minimum Live Loads shall consist of:
1. Uniform Live Load (ULL) of 20 pounds per square foot of dock, including the area of landings and ramps supported by the dock. ULL is applied vertically.
 2. Live Point Load (LPL) of 650 pounds applied at any location on the floating dock greater than 12-inches from an edge. LPL is applied vertically.
 3. Wind Load (WL) on the projected area of a vessel/dock combination applied per DBW "Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities" Section 301.B.5.
 4. Vertical Wave Load (VWL) applied as discussed in the DBW "Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities" Section 301.B.5 and the following.
 - a. Wave height of 2 feet
 - b. Wave length equal to 50 feet
 - c. Wave direction (propagation) parallel to longitudinal axis of dock

5. Impact Load (IL) due to impact of a vessel applied as discussed in the DBW “Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities” Section 301.B.5 and the following:
 - a. Vessel docking weight of 4 tons:
 - b. Vessel approach at a speed of 3 fps and an angle of 10 degrees from the dock or finger
 - c. Impact loads applied at the midpoint between pile supports for docks and at pile support for piles.
- C. The Minimum Gangway Load (GL) Shall Consist of:
 1. Superimposed dead load of the Gangway structure tributary to dock.
 2. Transferred Uniform Live Load of 20 pound per square foot on Gangway area tributary to dock
- D. Combined loading cases for design:

Case 1 – Dead Load only, including superimposed Gangway Dead Load.

Case 2 – Dead Load + Uniform Live Load, including transferred Gangway Live Load.

Case 3 – Dead Load + Live Point Load

Consider wind load cases parallel and perpendicular to axis of dock:

Case 4a – Dead Load + Parallel Wind Load + Vertical Wave Load

Case 4b – Dead Load + Perpendicular Wind Load

Case 5 – Dead Load + Impact Load + $\frac{1}{2}$ Perpendicular Wind Load
- E. Design Calculations:
 1. Calculations for loads imposed by the handling and lifting methods to be employed shall be provided based on the structures strength expected at the time of lifting or moving of the float modules.
 2. The material strength properties, load factors and capacity reduction factors shall be as defined by the applicable code.
 3. The design calculations shall include but not be limited to the following:
 - a. Determination of extreme fiber stresses in structural members for all load cases.
 - b. Stresses in the dock system connections for all load cases.
 - c. Transfer of moored vessel forces to cleats and to the dock system.
 - d. Transfer of dock system loads to guide piles.
 - e. Transfer of forces at guide pile frames and connections.
 - f. Transfer of forces at dock modules and dock module connections.

- g. Freeboard calculations for all float modules.
- h. Transfer of guide pile loads to soil, including analysis of pile-soil interaction (required if Contractor elects to revise the guide pile design as shown).
- i. Design life based on wasting or fatigue of structural elements.

1.5 REQUIREMENTS FOR GUIDE PILE SYSTEM

- A. Guide piles shall consist of prestressed concrete piles as shown. Verify pile lateral load capacity for transfer of guide pile loads at MHHW.
- B. The pile guide frames shall be designed to permit removal of a floating dock module from the guide pile system by simple bolt removal for repair purposes.
- C. The guide pile frame shall be fit with an HDPE pile rub strip on 4 sides of the pile, or continuous, as shown on the Drawings.
- D. The nominal clearance between the pile rub strips and pile shall be as shown on the Drawings for the “no load” condition. The clearance between each rub strip and the pile shall be field-adjustable to meet the actual conditions in the field.

1.6 SUBMITTALS

- A. Prior to the fabrication of the dock system components, submit final design calculations signed and sealed by a Civil or Structural Engineer holding a valid Certificate of Registration in the State of California. The calculations shall demonstrate that the floating dock system, using the criteria specified herein as minimum requirements, is designed to withstand the specified loads without damage throughout the design life of the system.
- B. Prior to the fabrication of the dock system components, submit shop drawings signed and sealed by a Civil Engineer holding a valid Certificate of Registration in the State of California. The shop drawings shall indicate the proposed dock layout and size, float module dimensions, float module construction details, connection details, and location and methods for attaching accessories. Submit shop drawings for all specially fabricated items including pile guides, connections, railing, curbing, cleat installation and catalog sheets for all standard manufactured items that are to be incorporated into the floating dock system.
- C. Prior to the fabrication of dock system components, submit certified test reports:
 - 1. Aluminum
 - 2. Composite or Plastic Lumber
 - 3. Float Module Units or Materials
 - 4. Fasteners
 - 5. Foam Water Absorption
- D. Prior to the fabrication of float system components, submit catalog cut sheets:

1. Cleats
 2. Bumper strips and Corner Bumpers
 3. Signage
 4. Pile Guide Brackets and Pile Rub Strips
- E. Submit experience data verifying the dock system supplier's required years of experience in the manufacture and installation of floating docks including the project location, date of installation, and Owner (including the name, address, phone number of a person who can be contacted for verification). A previous installation of the proposed system for this project shall be included.
- F. Submit quality control plan to be used during the manufacture and installation of the floating dock system.
- G. Submit complete data, covering details of operation and maintenance procedures for all floating dock system components. The manual shall include instructions, recommended frequencies of maintenance and maintenance procedures and materials by brand name and specification. All data shall be on 8 1/2 by 11 inches (and 11 by 17 inches, folded to fit) sheets of paper bound together in a book with a protective cover. The binder external cover shall be identified as "Floating Dock System Operation and Maintenance Procedures".
- H. Submit a complete and accurate record of all float modules manufactured. The record shall include assigned float identification number and all quality assurance tests and inspection items performed on the float module.

1.7 CONTRACTOR'S QUALIFICATIONS

- A. The Contractor's proposed dock system shall be furnished and installed by a firm having a minimum of five (5) years of experience in the manufacture and installation of floating dock systems. The dock system design being proposed for this project shall have been successfully installed for a minimum of five (5) years at another location.

1.8 DELIVERY, HANDLING AND STORAGE

- A. Use all means necessary to protect materials before, during, and after delivery to the Work site, and to protect the installed work and materials of all other trades. Use extreme care in the off-loading of materials to prevent damage.
- B. Deliver the materials to the Work site and store, all in a safe area, out of the way of traffic, and shored up off the ground surface.
- C. Place identification numbers on all float modules (such they are not covered up after assembly) that conforms to the shop drawing numbering system. Also identify hardware and framing and store separately from each other. Protect all metal products with adequate weatherproof outer wrappings.
- D. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost.

1.9 WARRANTY

- A. The floating dock system, including all structural components, shall carry warranty against defects in materials and workmanship for ten (10) years from the date from the date of project acceptance.

PART 2 PRODUCTS

2.1 ALUMINUM FLOATING DOCK

- A. Aluminum: Aluminum Alloy Series 5000 or Series 6000 and shall be in accordance with AA Specification for Aluminum Structures, ASTM B 209, ASTM B 211, ASTM B 221, ASTM B 308, ASTM B 429, and ASTM B 574 for various metals used. All welds shall be in accordance with AWS D1.2.
- B. Metal Accessories: Provide Aluminum or Stainless Steel. Stainless Steel shall conform to ASTM A 276, Type 316 or 316L as applicable. Dissimilar metals shall be electrically isolated with non-metallic insulators.
- C. Fasteners: ASTM F 593 and ASTM F 594. All bolts, screws, and nuts shall be 316 or 316L Stainless Steel. Washers shall comply with the requirements of ANSI B18.22.1 and shall be 316 Stainless Steel.
- D. Flotation Units
 - 1. Foam core, as specified, shall be fully encapsulated in a polyethylene shell.
 - 2. Polyethylene Shell: All units shall be blow-molded. Flotation encapsulation material shall be manufactured from virgin polyethylene resin containing UV ray inhibitors and carbon black pigment. Nominal wall thickness shall be a minimum of 0.150 inch. Flotation units shall be designed to maintain the desired buoyancy and freeboard even if punctured or cracked. Flotation unit and frame shall act as one integral unit.
 - 3. Acceptable Product: Ace Versa-Float by Den Hartog Industries, or approved equal.
- E. Composite Timber Products: All timber items shall be fabricated from composite timber. Decking shall be installed perpendicular to the float long axis. Composite timber shall be manufactured with HPDE and wood flour, extruded into sizes and shapes indicated. Material shall contain UV inhibitor, be flame retardant, slip resistant and fungal resistant. Material shall have the following minimum properties:
 - 1. Specific Gravity (ASTM D-792): 1.2 g/cu. cm.
 - 2. Flexural Properties (ASTM D-6109):
 - 3. Modulus of Elasticity (MOE): 540,000 psi.- Ultimate
 - 4. Modulus of Rupture (MOR): 3,000 psi. - Ultimate
 - 5. Hardness (ASTM D-143): 225 lb.
 - 6. Water Absorption (ASTM D-1037):
 - a. %vol. <1.35%

- b. %mass <1.29%
- 7. Slip resistance (ASTM F-1679):
 - a. Dry: 0.54
 - b. Wet: 0.43
- 8. Fungus Resistance (Brown/White Rot Fungus) (ASTM D-1413): No decay.

2.2 FOAM CORE

- A. Foam core for floats shall be closed-cell expanded polystyrene. The polystyrene foam shall have a unit weight between 0.95 pounds per cubic foot and 1.20 pounds per cubic foot. Properties of the foam shall conform to ASTM C 578, with maximum water absorption less than 3.0 percent as determined by ASTM C 272, Method C. The foam core shall not have more than 10 percent reground material, and reground foam pieces shall not exceed 3/8 inch diameter.

2.3 HDPE RUB STRIP

- A. Rub Strips shall be yellow colored High-Density Polyethylene conforming to the properties below:

Density (lbs / cu. in.)	ASTM D6111	0.027 - 0.030
Modulus of rupture (ultimate)	ASTM D198	2900 psi
	ASTM D6109	2900 psi
Modulus of elasticity (chord modulus method)	ASTM D198	420,000 psi
	ASTM D6109	325,000 psi
Compression parallel to grain (ultimate)	ASTM 198	1740 psi
Compression perpendicular to grain (ultimate)	ASTM D	143 700 psi
Shear parallel to grain	ASTM D 143	730 psi
Tension parallel to grain (ultimate)	ASTM 198	1250 psi
Screw withdrawal (lbs/inch of depth)	ASTM D1761	380 lbs / in
Coeff. Thermal Expansion (in/in/°F)	ASTM D6341	0.000034
Coeff. of Friction	Tribometer (dry)	0.61
Flame Spread	ASTM E84	"Class C"

- B. Rub Strips shall be secured with Type 316 stainless steel fasteners. Fasteners shall be counterbored to allow for a minimum wear of 1/2 inch.

- C. Acceptable Manufacturer: American Plastic Lumber, Shingle Springs, CA, or approved equal.

2.4 GUIDE PILE RUB STRIPS

- A. Pile Rub Strips shall be black UHMW polyethylene. Blocks shall be secured with Type 316 stainless steel fasteners. Fasteners shall be counterbored to allow Pile Rub Strip to contact pile surface without damaging the pile. Counterbore shall allow for a minimum wear of 1 inch.
- B. Rub Strips shall be adjustable to accommodate Guide Pile installation tolerances.

2.5 DOCK CLEATS

- A. Dock cleats shall be cast aluminum, Standard Cleat Item 05-17 as supplied by Henderson Marine Supply, or approved equal. Cleat locations and sizes shall be as shown; attach cleats to the docks / walers in accordance with the dock manufacturers' recommendation.

2.6 DOCK BUMPERS

- A. Outside corners shall be protected with white, 10-inch x 10-inch x 4-inch Corner Bumpers. Acceptable product is Dock Pro™ Vinyl Dock Bumper, Item #46081 by Taylor Made Products, or approved equal.
- B. Install all bumpers per manufacturer's recommendations, using large headed non-staining aluminum or 316 series stainless steel fasteners.

2.7 HARDWARE

- A. Structural steel shall conform to ASTM A 36 and be a minimum 1/4 inch thick. Design, fabrication and erection of structural steel shall conform to AISC Steel Construction Manual. Hot dip galvanize after fabrication in accordance with ASTM A 123.
- B. Standard bolts and nuts shall conform to ASTM A 307. Washers shall be used with all nuts and bolts. Round plate washers shall be used for bearing on HDPE, Aluminum, and Fiberglass; cut washers shall be used for bearing on steel. Hot dip galvanize all steel fasteners in accordance with ASTM A 153.
- C. Stainless steel hardware shall be Type 316 unless otherwise noted. Bolts shall be ASTM F 593 Group 2. Nuts shall be ASTM F 594 Group 2.
- D. Fasteners for dock accessories shall be stainless steel unless otherwise noted.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Installation shall be in accordance with approved shop drawings with connections tightened as required after complete installation of each unit of the work in the water and before final inspection.
- B. All welding shall be performed by properly certified welders and shall conform to the current specifications of the American Welding Society.

- C. Fasteners, except for deck fasteners, shall be counterbored. Fasteners protruding above the surface of the deck shall have a low, rounded profile.
- D. Bolts shall be of the size required, with adequate thread length. Holes for all lag bolts and screws shall be pre-drilled and turned into place. Driving is not allowed.
- E. Decking shall be fabricated accurately to provide uniform gaps and butt joint connections. Splices in decking are prohibited.
- F. All walers, fascia, spacers, panels, or any other members, which are subject to foot traffic, shall be flush with the deck walking surface.

3.2 DOCK ACCESSORIES

- A. All dock accessories shall be installed in accordance with the Drawings, Specifications and the manufacturer's recommended method of installation.
- B. Schedule installation of dock accessories to avoid damage from other work.

3.3 DOCK SYSTEM TOLERANCES

- A. Install floating dock system to the following tolerances from the planned dimensions as shown on the drawings. All floats exceeding the specified tolerance shall be removed and replaced.
- B. Float Fabrication Tolerances (allowable variation of construction dimension from nominal dimension shown on the Drawings):

Float Width: +/- 1/2 inch from nominal float width.

Float Depth: As required to satisfy freeboard requirements.

END OF SECTION

SECTION 02500

ASPHALT CONCRETE PAVING

PART 1 GENERAL

1.1 SCOPE OF WORK

This work shall consist of furnishing mixed aggregate and asphalt binder at a central mixing plant and spreading and compacting the mixture to the thickness shown on the plans and specified below. This work includes, but is not limited to, the following: asphalt concrete paving of entry road, parking lot seal coat, and path, including sampling and testing asphalt concrete for quality control and quality assurance.

1.2 CODES AND STANDARDS

The Standard Specifications (2010) and Plans of the Department of Transportation, State of California, latest edition, hereinafter referred to as the "Standard Specifications." All work shall meet applicable requirements of the Caltrans Standard Specifications.

1.3 SUBMITTALS

- A. As specified in Section 01330.
- B. General: Prepare mix design, sample and test materials for compliance with the specifications.
- C. Sampling and Testing: The Contractor shall submit the name and contact information of an independent testing laboratory to perform sampling and testing for contract compliance. Sampling and testing methods shall be in accordance with standards and procedures described in Section 39 of the Caltrans Standard Specifications.
- D. Certificates: Submit manufacturer's certificate of compliance for the asphalts, liquid asphalts and asphaltic emulsions.
- E. Job-Mix Formula: Submit a job-mix formula for each type of asphaltic mixture prior to starting work. The formula shall indicate the optimum amount of asphalt, definite percentages for each sieve size of aggregate and temperature of the completed mixture when discharged from the mixer. The job-mix shall conform to the quality requirements of Section 39-2.02 of the State Standard Specifications for the type of asphalt concrete. All test data used to develop the job-mix formula shall also be submitted. Should a change in sources of material, aggregate or asphalt, be made a new job-mix formula shall be established and submitted before the new materials may be used.
- F. Conformance Tests: Perform the following conformance tests:

Sieve Analysis, Each Size - Test Method	CA 202
Percentage of Crushed Particles	CA 205
Sand Equivalent	CA 217

- G. Seal Coat: Per Section 37-2.01C(2) “Asphaltic Emulsion Seal Coat” and Section 37-2.01D(2) “Asphaltic Emulsion Seal Coat” of the Standard Specifications.

PART 2 MATERIALS

- 2.1 Asphalt concrete shall be dense grade plant-mixed surfacing, 1/2" HMA Type A, conforming to the general and specific requirements hereinafter specified and in accordance with Section 39 of the Standard Specifications.
- 2.2 Paving asphalt binder to be mixed with a general mineral aggregate and shall be steam refined asphalt having a viscosity Grade AR 4000 and shall be furnished and applied in accordance with applicable portions of Section 92 of the Standard Specifications. The percent of paving asphalt shall be between 4.8 and 5.5% with mix design by supplier approved prior to placement of asphalt concrete.
- 2.3 PRIME COAT
 - A. Prime Coat shall be Liquid Asphalt Grade MC-250, conforming to Section 93 of the Standard Specifications.
- 2.4 PAINT BINDER
 - A. Paint binder shall be Asphaltic Emulsion Grade MS2, conforming to Section 94 of the Standard Specifications.
- 2.5 SEAL COAT
 - A. Seal Coat shall consist of either Grade SS1h or CSS1h asphaltic emulsion. No screenings shall be used in the seal coat.

PART 3 EXECUTION

- 3.1 AIR TEMPERATURE
 - A. Paving operations will be allowed only when the atmospheric temperature is above 50 degrees Fahrenheit and rising.
- 3.2 PRIME COAT AND PAINT BINDER
 - A. Prime Coat: Prior to the application of the asphaltic concrete, apply a bituminous prime coat of liquid asphalt on the prepared compacted base at the rate of 0.25 gallons per square yard. Apply liquid asphalt by pressure distributors. Allow sufficient time before placing the asphalt concrete to permit the prime coat asphalt to penetrate the prepared compacted base.
 - B. Paint Binder: Apply asphaltic emulsion to the exposed edges and surfaces of existing pavement against which asphaltic concrete is to be placed.
- 3.3 ASPHALT CONCRETE
 - A. Base Course Approval: The primed base course must be examined and approved by the Owner prior to spreading asphalt concrete.

- B. Asphalt concrete paving shall be applied in accordance with spreading and compacting guidelines in Sections 39 of the Standard Specifications.
- C. During the entire construction period, the Contractor shall take care to protect existing pavement and sealed surfaces. Backhoes and trenchers must have street pads. Surfaces scarred by excavation or other equipment shall be repaired in a manner satisfactory to the Owner. Any and all damages caused by the Contractor's operations to existing roads or signs shall be repaired by the Contractor to at least the original condition and to the satisfaction of Owner, and at no additional cost to the Owner.
- D. Construction Joints: Longitudinal and transverse joints in asphalt concrete shall be staggered between lifts. The joint line of the lower lift shall be at least one foot from the joint line of the overlying lift. Insure a proper bond with the adjacent lift for the entire length of the joint. A paint binder shall be applied to such joints and the fresh mixture raked against the joint and thoroughly compacted. The exposed lift at a joint shall be trimmed vertical if the lift surface is not dense and uniform, degrading the quality of the completed joint, as determined by the Owner. Before placing the top layer adjacent to a cold transverse joint, such joints shall be trimmed to a vertical face and to a neat line.
- E. The completed surface of the top course shall be of uniform texture, smooth, uniform as to grade, and free from defects of all kinds. The completed surface shall not vary more than 1/8 inch from the lower edge of a 10 foot straight edge placed on the surface parallel to the designed slope. When deviations in excess of the above tolerances are found, the pavement surface shall be corrected by the addition of asphalt concrete mixture of an appropriate class to low places or the removal of material from high places by methods satisfactory to the Owner, or by removal and replacement of the course of asphalt concrete. Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances. All areas in which the surface of the completed pavement deviates more than twice the allowable tolerances described shall be removed and replaced to the satisfaction of the Owner. All costs in making the corrections of defects described above shall be borne by the Contractor, and no compensation will be made for this work.

3.4 Seal Coat

- A. Construct seal coat per Section 37-2.03 "Construction" of the Standard Specifications.

END OF SECTION

SECTION 02660
WATER SYSTEM

PART 1 - GENERAL

1.1 SCOPE

- A. See Section 02325 "Trenching and Backfill for Utilities" for trenching, groundwater control, pipe bedding, backfill and compaction of backfill, dust alleviation and control, and cleanup/restoration.
- B. Installation of domestic water lines and appurtenances.
- C. Disinfection and testing.
- D. Supplying all labor, materials, equipment and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and necessary to complete the work specified.

1.2 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text only by their general designation.
 - 1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS:
 - D 543 Evaluating the Resistance of Plastics to Chemical Reagents
 - D 2737 Polyethylene (PE) Plastic Tubing
 - 2. AMERICAN WATER WORKS ASSOCIATION (AWWA) PUBLICATIONS:
 - C 651 Disinfecting Water Mains
 - 3. California Code of Regulations (CCR), Title 24, Part 5
 - California Plumbing Code
 - 4. International Association of Plumbing and Mechanical Associates
 - Uniform Plumbing Code (UPC)

1.3 QUALITY ASSURANCE

- A. All Work shall be approved by the City and shall meet the requirements of the California Plumbing Code.
- B. Class of pipe requirements shown or called for on the plans shall be the minimum acceptable.
- C. Water mains, services and appurtenances shall be subject to hydrostatic and leakage tests.
- D. Water mains, services, and appurtenances shall be disinfected by the Contractor prior to connecting to existing systems.

1.4 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's data on the pipe material, fittings, restrained joints, valves, and appurtenances prior to beginning of any pipe installation.

2. Submit manufacturer's certificates showing conformance with this specification for any of the pipe materials, fittings, valves and appurtenances delivered to the job site.

B. Shop Drawings:

1. Submit a plan showing the locations of all pipe, fittings, valves, and appurtenances, including dimensions from existing features prior to beginning of any pipe installation. Coordinate shop drawings with trenching plans specified under Section 02325 "TRENCHING AND BACKFILL FOR UTILITIES" of these specifications.
 - a. Outdoor Shower: Submit detailed plan showing installation of City-furnished prefabricated shower unit on the exterior of the Restroom Building. Include dimensions and locations of pipe, valves, and shower heads. See Section 02870 "Site Furnishings" for description of work to be performed to install the City-furnished Restroom.
2. Allow 5 working days for City's review. Shop drawings shall be approved by the City prior to installation.

1.5 JOB CONDITIONS

- A. Contractor shall conduct operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians and to adjacent property owners or tenants.
- B. Contractor shall protect existing features that are not part of the work from damage. Damages shall be repaired at the Contractor's expense.

PART 2 – PRODUCTS

2.1 PIPE MATERIALS, VALVES, AND FITTINGS

- A. Pipe, valves, and fittings shall conform to the California Plumbing Code.
- B. Underground pipe shall be Polyethylene (PE) pipe or copper pipe as shown on the Drawings.

2.2 CITY-FURNISHED OUTDOOR SHOWER UNIT

- A. Prefabricated shower unit by Public Restroom Company.
- B. Model shall be Acorn 1741 as modified herein, or equal.
 1. Provide two fixed showerheads: one standard height and one accessible.
 2. Accessible valve height and accessible shower head height shall be per CBC 11B requirements.
 3. Stainless Steel, grade 316 or 304.

2.3 WATER SERVICES

- A. Service Saddles shall conform to California Plumbing Code.
- B. All new water meters will be provided by the City, and installed by the Contractor. Existing water meters shall be disposed of by the Contractor.
- C. Meter box and cover assembly shall be provided by the Contractor for each water meter as shown on the plans, and shall meet the requirements of the California Plumbing Code.
- D. Meter box cover shall have "WATER" logo showing on top and a hole with 1-3/4" diameter.

2.4 LOCATOR WIRE

- A. Locator wire for use with plastic pipe installations shall be stranded copper, eight (8) gauge type TW or THHN electrical wire with solid blue jacket.
- B. Connect locator wire to metallic fittings with brass wire split nuts. All exposed metallic wires and fittings shall be protected with Royston Handy Cap, or equal.

2.5 PIPE BEDDING AND BACKFILL MATERIAL

Conform to California Plumbing Code.

PART 3 – EXECUTION

3.1 TRENCHING, BACKFILLING AND SHORING

Conform to California Plumbing Code.

3.2 PIPE INSTALLATION

- A. Installation: Install pipe, valves, fittings and appurtenances in accordance with manufacturer's instructions, and in conformance with the applicable requirements of the AWWA Standards and California Plumbing Code.
- B. Handling: Handle pipe, valves, and fittings carefully during hauling, unloading, and placing operations, so as to avoid breakage or damage. Use strap-type slings for lifting and placing; no chains or hooks will be permitted. Broken or damaged pipe or appurtenances will be rejected by the City and shall thereupon be removed by the Contractor from the work and replaced. Repair damaged coating in accordance with coating manufacturer's recommendations.
- C. Alignment: All pipe shall be accurately laid in conformity with the approved shop drawings.
- D. Pipe Deflections: The laying of pipe on curved alignment will be permitted up to one-half the deflection as recommended by the respective pipe manufacturer. Pipe shall not be bent against the trench side wall.
- E. Cleaning: When pipe laying is not in progress, close all open pipe ends with watertight plugs in a satisfactory manner.
- F. Bearing: Provide continuous uniform bearing of pipe in the trench along its bottom, except at bell holes. Before lowering pipe into the trench, the Contractor shall remove all stakes, debris, loose rock and other hard material from the bottom of the trench.
- G. Positioning: After the final positioning, hold the pipe in place in the trench with compacted backfill material placed equally on both sides of the pipe at as many locations as are required to hold the pipe in place. After pipe installation is completed, redistribute the backfill material and compact as herein required.
- H. Closure: At the end of each day and when work is not in progress, close the open ends of pipe with watertight plugs or caps.
- I. Thrust Blocking: Concrete thrust blocks shall be provided as required by the UPC or as shown on the California Plumbing Code, whichever is more stringent.
- J. System Connections: Unless separately listed on the bid schedule, Contractor shall make all required

connections to existing facilities and improvements at no additional cost, and compensation for such work shall be deemed as included in the price bid for pipe installation.

3.3 OUTDOOR SHOWER

- A. Install shower unit according to the Contractor shop drawings.

3.4 CONNECTIONS TO EXISTING SYSTEMS

- A. Conform to California Plumbing Code.
- B. Do not make connections to existing systems until the new mains have been satisfactorily disinfected and have passed all tests specified herein.
- C. Perform connection of new water main to existing distribution system no later than 48 hours after Bacteriological Examination Results have been received and approved by the City. If the system connection is not performed within this period of time, repeat Disinfection and Bacteriological Examination processes.
- D. The Contractor shall set the pipe aboveground and perform disinfection and bacteriological test as outlined in paragraph 3.4 of this specification section. Between the time the satisfactory bacteriological results are receipt and the time that the connection piping is installed, the ends of the piping must be sealed with watertight plugs or caps.

3.5 DISINFECTION AND BACTERIOLOGICAL TEST

- A. Before being placed in service, all new water lines shall be chlorinated, flushed and tested by Contractor in accordance with the requirements of AWWA Standard C651, and as directed.
 - 1. Disinfection: The Contractor shall have the option of applying chlorine with tablet method, continuous-feed method or slug method to the entire water content of the line, including services and stubs, in sufficient quantity as stipulated in the above mentioned AWWA Standard.
 - a. If the Contractor elects to employ the use of the "Tablet" form of chlorination by mounting tablets into the pipe sections as they are installed, he shall determine the minimum number of tablets per AWWA C651 requirement. This method may be used only if the pipes and appurtenances are left clean and dry during construction. The tablets shall be attached to the ceiling of the pipe by a food-grade adhesive. In the event that adequate disinfection is not obtained using said minimum number of tablets, it shall be the Contractor's responsibility for re-chlorination until a satisfactory result is obtained.
 - b. The tablet method and the continuous feed method shall be applied at an average chlorine dose of 25 mg/L and provide a minimum residual of 10mg/L after 24 hours retention.
 - 2. Final Flushing: After chlorination has been satisfactorily completed thoroughly flush the lines until the chlorine content in all parts of the system has been proven by test to be comparable to the chlorine content of the City Water System.
 - a. Prior to flushing, the Contractor shall thoroughly neutralize the free and combined chlorine residuals. The chemical product used for dechlorination shall provide consistent elimination of residual chlorine without affecting water quality. Sulfur Dioxide gas or Liquid Sodium Metabisulfite systems shall not be allowed. The product used by Contractor for this purpose shall be Bio-Neutralizer, with 35% concentration Sodium Sulfite dechlorination tablets as

produced by NORWECO, or approved equal. The Contractor shall submit product information sheet for review and approval by the City before performing any flushing.

- b. Before discharge, the pH of the water shall be within the range of 6.5 to 8.5. Neutralized water may be discharged into the storm drainage system upon satisfactory testing.
3. Bacteriological Test: After flushing the chlorine from the water system and prior to placing line in service, the Contractor shall engage the services of an approved Commercial Testing Laboratory, approved by the State of California Department of Health Services, to gather an approved number of representative water samples, the location and number of which shall be determined by the City.
 - a. Samples shall be taken of water that has stood in the water line for at least 16 hours after Final Flushing.
 - b. No section of water systems will be allowed to be connected to the City's existing water system when any sample of water tests indicate coliform bacteria as tested by the 24 Hour Membrane Filtration Method. Should the laboratory report show that any sample taken was not acceptable (Heterotrophic plate count greater than 0), Contractor shall re-chlorinate and test the water again as herein before specified. This process shall be repeated by Contractor until a satisfactory disinfection has been accomplished.
 - c. Contractor shall direct the laboratory to send the original report of Bacteriological Examination to the City.

END OF SECTION

SECTION 02700
ROCK AND ROCKWORK

PART 1 GENERAL

1.1 SCOPE

The work under this section includes armor rock for riprap apron and rock bedding foundation for precast concrete ramp panels.

1.2 SUBMITTALS:

A. Rock: The Contractor shall submit certified laboratory test results of tests made by an independent testing laboratory for each off-site source of rock prior to shipment of the rock. The test shall include, at a minimum, the following:

1. Gradation
2. Specific Gravity, Soundness, and Abrasion Loss

1.1 REFERENCES

A. State of California, Department of Transportation:

1. Standard Specifications (2015)

PART 2 PRODUCTS

2.1 ARMOR ROCK

A. Armor rock for riprap scour apron shall be Facing Class and conform to the provisions in Section 72-2.02B, "Rock" of the State Standard Specifications, for Method B placement.

2.2 ROCK BEDDING

A. Rock bedding to provide a foundation for the precast boat ramp panels shall meet the requirements for "Rock Gradation for 4-inch Thick Layer" per Section 72-4 "Small-Rock Slope Protection" of the State Standard Specifications.

PART 3 EXECUTION

3.1 PREPARATION

- A. Remove existing debris within the area to receive new rock.
- B. Existing rock that is dislodged or unstable shall be adjusted to provide a firm revetment prior to placement of new rock.

3.2 PLACEMENT

A. Armor Rock

1. Place armor rock to the dimensions and locations indicated on the drawings.

2. Placement: Method B Placement per Section 72-2.03C "Placement Method B" of the State Standard Specifications and as specified herein. Placement shall start at the bottom of the slope and work upward. In order to achieve slope uniformity and solid seating of armor rock, nudge all high-riding rocks with a normal-to-slope strike of the placement bucket. Nudging shall be carefully controlled to prevent dislodgment of more distant rocks in the mound, with impact sufficient only to consolidate the immediate area around the rock being nudged so as to bring it within tolerance limits and lock it firmly in place. Placement methods are subject to approval by the City.
4. Tolerances: +/- 3-inches, measured perpendicular to the slope, of the nominal finished grade indicated. Continuous under-building or over-building shall not be permitted.
5. Prior to final acceptance of the project, if additional armor rock is required to conform to the sections on the drawings, the Contractor shall return to the points requiring such additional armor rock and place same, with no additional compensation.
6. Misplaced Materials: Any misplaced rock shall be removed by the Contractor at no additional compensation.

B. Rock Bedding

1. Place rock to the dimensions and locations indicated on the drawings. Placement shall start at the bottom of the slope and work upward.
2. Screed rock to provide the smooth and planar subgrade surface by using the rail supports as screed guides.
3. Fill depressions remaining after screeding with additional rock and re-screed.
4. Protect finished rock surface from damage prior to placement of concrete panels.
5. Place concrete panels in accordance with Section 03300 Concrete.

END OF SECTION

SECTION 02730
SANITARY SEWER

PART 1 – GENERAL

1.1 SCOPE

- A. Trenching, pipe bedding, and backfill.
- B. Installation of sanitary sewers and appurtenances, complete in place.
- C. Installation of sewage ejector pump, levels, pump controls and appurtenances.
- D. Infiltration and leakage testing.
- E. Cleanup and restoration of surface in improved areas.
- F. Supplying all labor, materials, equipment and apparatus not specifically mentioned herewith or noted on the plans, but which are incidental and necessary to complete the work specified.

1.2 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the general designation only.
- B. American Society for Testing and Materials (ASTM) Publications:
 - ASTM D 2774 Standard Practice for Underground Installation of Thermoplastic Pressure Piping
 - ASTM D 2657 Standard Practice for Heat-Joining Polyolefin Pipe and Fittings
 - ASTM D 3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
 - ASTM D 3261 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Butt Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
 - ASTM D 3350 Standard Specification for Polyethylene Plastics Pipe and Fitting Materials
 - ASTM F 714 Standard Specification for Polyethylene (PE) Pipe (SDR-PR) Based on Outside Diameter.
 - ASTM F 1668 Standard Guide for Construction Practices for Buried Plastic Pipe
 - ASTM F 2164 Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
 - ASTM F 2620 Standard Practice for Heat Fusion of Polyethylene Pipe and Fittings
- C. California Code of Regulations (CCR), Title 24, Part 5

California Plumbing Code, 2007

- D. International Association of Plumbing and Mechanical Associates
Uniform Plumbing Code (UPC), 2006

1.3 QUALITY ASSURANCE

- A. Sanitary sewer shall be subject to pressure leakage tests.
- B. Class of pipe requirements shown or called for on the plans shall be the minimum acceptable.
- C. Construction practices for HDPE pipe shall comply with ASTM standards listed above.

1.4 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's data on the pipe material, fittings, and appurtenances prior to beginning of any pipe installation.
 - 2. Submit manufacturer's certificates showing conformance with this specification for any of the pipe materials, fittings, and appurtenances delivered to the job site.
- B. Shop Drawings:
 - 1. Submit a plan showing the locations of all pipe, fittings, and appurtenances, including dimensions from existing features prior to beginning of any pipe installation.
 - 2. Allow 5 working days for City's review. Shop drawings shall be approved by the City prior to installation.

1.5 JOB CONDITIONS

- A. Note and conform to the conditions and requirements indicated and specified in the California Plumbing Code and these Specifications.
- B. Contractor shall conduct operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians and to adjacent property owners or tenants.

PART 2 – PRODUCTS

2.1 PIPE AND FITTINGS

- A. Pipe shall be high molecular weight, high-density polyethylene pipe (HDPE). The material shall be listed by the Plastic Pipe Institute (PPI) with a designation of PE4710 and have a minimum cell classification of 445474C as described in ASTM D3350.
- 2. HDPE pipe shall be IPS (iron pipe size), DR11 (160 psi)
- 3. The color of the pipe shall be black or black with purple stripes.
- 4. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe.
- 5. Pipe and fittings shall be of the same material and class and made in conformance with ASTM F714.

2.2 SANITARY SEWER CLEANOUTS

- A. Wye branches and risers for sanitary sewer cleanouts shall conform to the California Plumbing Code.
- B. Concrete boxes for cleanouts shall be Christy B-9 with B-9D lid, or equal; provide B9 -C traffic cover if located in vehicular areas.

2.3 PIPE BEDDING AND COVER MATERIAL

- A. Shall conform to California Plumbing Code.

2.4 SEWAGE EJECTOR

- A. Pump
 - 1. Submersible pump of same model or current equivalent as manufactured by Flygt.
 - 2. Performance: flow 105 gallons per minute at 12.5 ft of head.
 - 3. Voltage: 208 single phase, $\frac{3}{4}$ horsepower
- B. Floats
 - 1. Three floats for level control at: On, Off and Alarm
 - 2. Recommended by manufacturer as compatible with supplied pump.
- C. Pump Control and Alarm
 - 1. Recommended by manufacturer as compatible with supplied pump.
 - 2. To be installed within electric panel in restroom utility room.
 - 3. High water alarm indicator light
 - 4. Connect to water shut off solenoid valve.

2.5 SHOWER DRAIN

- A. Shower drain shall be commercially available precast concrete drain inlet with minimum 12" x 12" nominal grating. Grating shall be stainless steel, cast iron, or polymer and shall be removable. Depth of drain inlet shall be minimum 18-inches. Drain and grating shall be designed to support 2500-lb loading and shall have maximum openings of 1/4" per ADA accessibility standards.

PART 3 – EXECUTION

3.1 TRENCHING, BACKFILL AND SHORING

- A. Shall conform to California Plumbing Code.

3.2 PIPE INSTALLATION

- A. Installation: Pipe and appurtenances shall be installed in accordance with the best practice, and in conformance with the applicable requirements of the manufacturer's handbooks. Pipe laying shall start at the low end of each section and proceed up grade. All pipes shall be laid on a bed prepared by handwork, dug true to line and grade, to furnish a true and firm bearing for the pipe throughout its entire length. Adjustment of pipes to the line and grade shall be made by scraping away or filling in and tamping material under the body of the pipe throughout its entire length and not by blocking

or wedging. Unless otherwise indicated or directed by the City, pipe shall be laid continuously through manhole locations and any connections therein made by means of appropriate fittings to provide a smooth and continuous channel. Bell holes shall be provided at the ends of each pipe length of sufficient size to permit making up the particular type of joint being used. Each length of pipe shall be rotated so that the stenciled or taped words "SANITARY SEWER" will be located on the top of the pipe.

- B. Handling: Pipe shall be carefully handled during hauling, unloading, and placing operations, so as to avoid breakage or damage. Strap-type slings shall be used for lifting and placing; no chains or hooks will be permitted. Broken or damaged pipe or appurtenances will be rejected, and shall thereupon be removed from the work and replaced.
- C. Alignment: All pipe shall be accurately laid in conformity with the approved shop drawings. Each length shall be jointed to the preceding section as specified, and after said jointing has been completed, there shall be no movement of the pipe in subsequent operations.
- D. Cleaning: Before each new length of pipe is placed, the interior of the preceding pipe shall be carefully cleaned of all dirt and debris. When pipe laying is not in progress, all open pipe ends shall be satisfactorily closed with watertight plugs.
- E. Bearing: Pipe in the trench shall have continuous uniform bearing along its bottom. Before lowering pipe into the trench, the Contractor shall remove all stakes, debris, loose rock and other hard material from the bottom of the trench.
- F. Positioning: After the final positioning, pipe shall be held in place in the trench with backfill material placed equally on both sides of the pipe at as many locations as required to hold the pipe section in place. After joints are completed, the backfill material shall be redistributed and compacted as herein required.
- G. Closure: At the end of each day and when work is not in progress, all open ends of pipe installed in the line shall be satisfactorily closed with watertight plugs.

3.3 CONNECTIONS

- A. Unless separately listed on the bid schedule, Contractor shall make all required connections to existing facilities and improvements at no additional cost, and compensation for such work shall be deemed as included in the price bid for pipe installation.

3.4 TESTING SANITARY SEWERS

- A. Sanitary sewer systems including laterals shall be tested for tightness after completion of all backfilling and prior to request for final inspection. Contractor shall notify the City at least two (2) working days in advance of proposed testing dates.
 - 1. Tests of gravity sewers shall be made from end or manhole to manhole unless grades are flat enough to permit testing two or more sections at one time. Sections which fail to pass the tests shall be repaired or replaced, and the section retested until it falls within specified allowances.
 - 2. Tests of pressure sewers shall be per ASTM standards.
- B. All water for sanitary sewer testing shall be provided and the tests performed by the Contractor in conformance with the following requirements:

1. Water Leakage Test

- a. Preparation for Test: The sewer line to be tested shall be plugged at the downstream manhole. All openings in the upstream manhole shall be plugged except the downstream opening for the line to be tested. All branch sewers running from wye connections on the mains shall be plugged at their upper ends if the test head would cause them to overflow. The Test section shall then be filled with water and allowed to stand for at least thirty (30) minutes before test is started.
 - b. Test Procedure: The water level in the upstream manhole or test tee shall be brought to a height approximately 4 feet above the crown of the open sewer at the upper end of the test section. The hydrostatic head in the test section shall be maintained so that no point in the section is the head less than four (4) feet or greater than 18 feet. In the case of a submerged section of line, the said head limitation shall be the difference between internal and external water levels. The test shall consist of measuring the loss of water during a one (1) hour period.
 - c. Allowable Leakage: The allowable leakage in one (1) hour of time based on an average hydrostatic head of 4 feet for the entire test section, shall not exceed 0.4 gallons per inch of pipe diameter for each 500 feet of pipe.
4. Air Leakage Test -The Contractor, at his option, may substitute an air pressure test in lieu of the hydrostatic test specified above for gravity sewers.
- a. The procedure shall be as described in Uni-Bell B-6-90, "Recommended Practice for Low Pressure Air Testing of Installed Sewer Pipe."
 - b. The procedure shall be to securely plug all openings in the section of the line to be tested, and apply an air pressure of approximately four (4) psi.
 - c. The elapsed time observed for a pressure drop of one (1) psi shall not be less than shown on Table I of Uni-Bell B-6.

3.5 SHOWER DRAIN

- A. Install per manufacturer requirements and as shown on the Drawings.

3.6 CLEANUP

- A. Upon completion of sanitary sewer construction operations, all lines, manholes, and other structures shall be thoroughly cleaned of dirt, rubbish, debris and obstructions of any kind to the satisfaction of the City, and the entire work site shall be cleaned of all waste, rubbish, and construction debris of any nature.

END OF SECTION

SECTION 02750

PAVEMENT STRIPING & MARKINGS

PART 1 – GENERAL

1.1 DESCRIPTION

The work shall consist of providing traffic stripes and pavement markings. The performance of this work shall conform to Sections 84 “Markings” of the State Standard Specifications (2015), the project Drawings and these Specifications.

1.2 SUBMITTALS

- A. As specified in Section 01330.
- B. Submit manufacturer's catalog information and design data for approval.

PART 2 – PRODUCTS

2.1 GENERAL

Traffic stripes and pavement markings shall conform to Section 84 “Markings” of the State Standard Specifications (2015).

2.2 PAINTED STRIPING AND MARKINGS

- A. Pavement striping and pavement markings shall be high solids (minimum 60% solids content by volume) traffic-rated paint.
- B. Pavement stripes and pavement markings shall conform to Section 84 of the Standard Specifications except as otherwise specified herein.

PART 3 – EXECUTION

3.1 PLACEMENT:

- A. Traffic stripes and pavement markings shall be applied only on clean dry surfaces and only during periods of dry and favorable weather. Work shall not be performed when the atmospheric temperature is below 50 degrees F, or when freshly applied surfaces may become damaged by rain, fog or condensation.
- B. Completed traffic stripes shall have clean and well defined edges, shall be uniform, shall be straight on tangent alignment and shall be on a true arc on curve alignment. The widths of completed traffic stripes shall not deviate more than 1/4-inch on tangent nor more than 1/2-inch on curves from the widths shown on the plans.
- C. The completed pavement markings shall have clean and well-defined edges.

- D. Painted striping and markings:
 - 1. Paint thickness: Maximum wet thickness shall be 20 mils.
 - 2. Application Rate: as recommended by the paint manufacturer to obtain the specified thickness.
- E. Drips, overspray and improper markings tracked by traffic shall be immediately removed from the pavement surface by blast cleaning or other methods approved by the City. All such removal work shall be at the Contractor's expense.
- F. Newly applied traffic stripes and pavement markings shall be protected from damage by public traffic or other causes until they are thoroughly dry.
- G. The Contractor shall mark and obtain approval from the City for the permanent alignment of traffic stripes and pavement markers prior to actual installation.
- H. All work necessary to establish satisfactory alignment for traffic stripes and pavement markers, and all layout work required for pavement markings shall be performed by the Contractor for permanent pavement delineation. All lines and marks used to establish the alignment of the pavement delineation shall be removed.

END OF SECTION

SECTION 02870

SITE FURNISHINGS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Work in this Section includes installation of City-furnished site furnishings:

1. Restroom: Includes excavation, subgrade preparation, foundation, installation of prefabricated restroom building, installation of outdoor shower system, utility connections, testing, and all other related work for complete installation of the restroom.
2. Fish Cleaning Station: Includes installation, utility connections, and testing of the fish cleaning station, complete in place.
3. Project Sign: Includes excavation, subgrade preparation, placement and compaction of aggregate base layer, and installation of project sign and sign base footing.

B. Work in this Section includes installation of Contractor-furnished site furnishings:

1. Fish Cleaning Station Canopy: Includes furnishing and installation, complete in place.

1.2 QUALITY ASSURANCE

A. Provide at least one person who shall be present on site at all times during execution of this portion of the work who shall be thoroughly familiar with the materials being installed and the proper methods for their installation, and who shall direct all work performed under this Section.

1.3 STORAGE, HANDLING

A. Store units at project site to prevent exposure to weathering, vandalism, or damage from work of other trades

1.4 EXISTING CONDITIONS

A. Contractor shall become familiar with existing site conditions, verify dimensions, and obtain other information as may be necessary for a complete installation. Notify the City's Representative of unsatisfactory conditions prior to commencement of work.

1.5 UTILITIES

A. Provide power, water, and sewer connections from the new restroom to the City-furnished Restroom and Fish Cleaning Station.

1.6 SUBMITTALS

A. Material to be provided by the City: The City will provide product data and location of utility stub-ups for installation of the Restroom, Fish Cleaning Station, and Project Sign, for use in preparation of Contractor shop drawings.

B. Shop Drawings:

1. City-Furnished Items: The Contractor shall submit shop drawings to the City based on the City-provided information. Shop drawings shall include all utilities, piping, fittings, valves, fixtures, and appurtenances required to install the Restroom, Fish Cleaning Station, and Project Sign complete in place.
2. Contractor-Furnished Items: The Contractor shall submit shop drawings to the City. Shop drawings shall include all utilities, piping, fittings, valves, fixtures, and appurtenances required to install the Fish Cleaning Station Canopy complete in place.

PART 2 – PRODUCTS

2.1 RESTROOM

- A. Model: PS-022 CE, by Public Restroom Company; Minden, NV, or approved equal.
- B. Restroom will include an outdoor shower unit furnished and installed by Public Restroom Company.

2.2 FISH CLEANING STATION

- A. Motor: 2 hp.
- B. Power: 30A/208VAC, single phase.
- C. Water Supply: 1-inch; 50 -60 psi; 2 to 10 gpm.
- D. Spray Hoses: 4 (side mount).
- E. Enclosure: 316 Stainless Steel.
- F. Discharge: Adapter for 4" PVC.
- G. Acceptable Model:
 1. Barracuda I Model 6096, by Quality Machine & Manufacturing; Des Moines, Iowa.
 2. Approved Equal.

2.3 FISH CLEANING STATION CANOPY

- A. Steel prefabricated rectangular canopy structure supported by 2 steel columns.
- B. Roof: steel roof panels. Gable type or hip type of roof acceptable.
- C. Acceptable Product: Steelworx Two-Post Gable, by Coverworx Recreational Architecture, Warren, MI, or approved equal.

2.4 PROJECT SIGN

- A. Precast Concrete Project Sign and Base Footing (Furnished by City). Actual dimensions of sign and footing may vary based on actual product furnished by the City. Anticipated product to be furnished: Model DBW72S by Universal Precast; Model 712 by Outdoor Creations, Inc, or similar.
 1. Metal Bolts and Nuts: 316 stainless steel.
 2. Anchor Bolts: ASTM A307, grade A hot-dipped galvanized, unless otherwise specified.

3. Welding Materials: AWS D1.1; type required for materials being welded.
4. Concrete Footings: In accordance with manufacturer requirements and recommendations.
5. Aggregate Base: Class II Aggregate, 3/4-inch maximum diameter.
6. Provide all miscellaneous metal items required for completion of the Work.

PART 3 – EXECUTION

3.1 RESTROOM INSTALLATION

- A. Per manufacturer requirements, Contractor shop drawings, and as shown on the Plans.

3.2 FISH CLEANING STATION INSTALLATION

- A. Per manufacturer requirements as shown in the Contractor shop drawings.

3.3 FISH CLEANING STATION CANOPY INSTALLATION

- A. Per manufacturer requirements as shown in the Contractor shop drawings.

3.4 PROJECT SIGN INSTALLATION

- A. Install in compliance with manufacturer's specifications and recommendations, as shown on the Contractor shop drawings, and as specified herein.
 1. Precast Concrete Project Sign:
 - a. Excavation: Excavate to lines and dimensions necessary to accommodate the compacted aggregate base and precast sign base footing.
 - b. Foundation: Install City-furnished project sign base footing on a compacted aggregate base foundation per Section 02300 "Earthwork."
 - c. Sign Installation: Per manufacturer's instructions and recommendations. Provide grout, epoxy, pipe, and incidentals necessary for installation.

3.5 CLEAN UP

- A. Keep all areas of Work clean, neat and orderly at all times.
- B. Protective coverings and strippable films shall be removed at a time which will afford the greatest protection of the furniture. Surfaces shall be cleaned to remove excess glazing and sealant compounds, dirt, and other substances.
- C. Upon completion of Work, remove all rubbish, debris and other materials resulting from this Work.

END OF SECTION

SECTION 03300

CONCRETE

PART 1 GENERAL

1.1 DESCRIPTION

This section covers all cast-in-place concrete and precast concrete panel work.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. CALIFORNIA DIVISION OF BOATING AND WATERWAYS (DBW)

Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities (1991)
<http://www.dbw.ca.gov/PDF/LaunchFac/LRamps.pdf>

B. AMERICAN CONCRETE INSTITUTE (ACI)

ACI 301 Specifications for Structural Concrete for Buildings

C. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 615	Deformed and Plain Billet Steel Bars for Concrete Reinforcement
ASTM A 955	Deformed and Plain Stainless Steel Bars for Concrete Reinforcement
ASTM C 31	Making and Curing Concrete Test Specimens in the Field
ASTM C 33	Concrete Aggregates
ASTM C 39	Compressive Strengths of Cylindrical Concrete Specimens
ASTM C 94	Ready-Mix Concrete
ASTM C 143	Slump of Portland Cement Concrete
ASTM C 150	Portland Cement
ASTM C 171	Sheeting Materials for Curing Concrete
ASTM C 172	Sampling Fresh Concrete
ASTM C 231	Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 260	Air-Entraining Admixtures for Concrete
ASTM C 309	Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 494	Chemical Admixtures for Concrete
ASTM C 618	Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete

1.3 SUBMITTALS

- A. Concrete Mix Design: The proportions of the concrete materials in the mix shall be the responsibility of the Contractor. At least 21 days prior to placement of concrete, the Contractor shall submit to the

City for approval the mixture proportions that will produce concrete of the quality required. Mixture proportions shall include dry weights of cement, saturated surface-dry weights of fine and coarse aggregates, and quantities, type and name of admixtures (if any) and quantity of water per cubic yard of concrete. Satisfactory evidence shall be given that the materials to be used and the proportions selected will produce concrete of the quality specified. All materials included in the mixture proportions shall be of the same type and from the same source as will be used on the project. No admixture containing chloride may be used.

- B. Trial Batch Results: Test results for slump, air content, and strength of the proposed design mix shall be submitted to the City.
- C. Work Plans
 - 1. Precast Concrete Panel Work Plan: The Contractor shall submit a detailed work plan describing the methods and equipment to be employed to fabricate and install the precast concrete panels. Precast concrete panels are to be constructed offsite by a Precaster approved by the City
 - 2. Cast-in-Place Concrete: The Contractor shall submit a detailed work plan describing the methods and equipment to be employed to fabricate and install the cast-in-place concrete apron and cast-in-place concrete abutments.
 - 3. Contractor Options: The Contractor may propose alternate methods of construction from the methodology described in this specification. The method of construction proposed by the Contractor shall not result in a lesser quality work product. Contractor-proposed methods shall be approved by the City prior to purchase of any products and prior to start of construction.
- D. Precast Concrete Panel Manufacturer Qualifications:
 - 1. The panel manufacturer shall have a minimum of five (5) years of experience in the manufacture and installation of precast concrete panels. The precast panel design proposed for this project shall have been successfully installed for a minimum of five (5) years at another location within California and in accordance with DBW guidelines.
 - 2. Submit panel manufacturer qualifications verifying the precast concrete manufacturer's experience in the manufacture of precast concrete panels including the project location, date of installation, and City (including the name, address, phone number of a person who can be contacted for verification). A previous installation of the proposed precast concrete panels for this project or previously constructed test panels shall be provided.
- E. Independent Testing Laboratory (ITL): The Contractor shall submit the company contact information, names of personnel to perform quality assurance testing, and proof of State Certification for the quality assurance tests to be performed.

1.4 PRECAST CONCRETE TEST PANEL

- A. Precast Concrete Boat Ramp panels:
 - 1. The Contractor shall demonstrate proficiency in casting precast concrete panels using formliners by preparing a test panel measuring no less than 8 feet by 4 feet, with a thickness equal to the panel thickness shown on the drawings.
 - 2. Test panel production shall be performed in the presence of City and DBW representatives. Notify City and DBW a minimum of two weeks prior to test panel production.

3. The test panel shall cure a minimum of 7 days before being removed from the forms for inspection by City and DBW representatives. Notify the City and DBW representatives a minimum of 48 hours prior to removal of forms.
4. The City and DBW representative must accept the test panel before the contractor shall be allowed to precast additional concrete V-grooved panels.
5. The approved test panel may be included in the work if it meets all requirements of the plans and specifications and is accepted by the City.
6. Approved test panel shall be retained at the project site for comparison to the subsequent precast panels.

1.5 EVALUATION AND ACCEPTANCE

- A. Strength: The strength of the concrete will be considered satisfactory based on the average strength of each set. The average strength shall equal or exceed the required specified strength and no individual strength test falls below the specified strength by more than 500 pounds per square inch.
- B. Finishes: Concrete finishes shall be as specified herein and in accordance with the requirements of ACI 301, Chapter 11, except as specifically required to match the approved test panel.
 1. Concrete Sidewalk shall receive a medium broom finish.
 2. Concrete Abutment: Walking surface shall receive a medium broom finish.
- C. Tolerances:
 1. Precast Boat Ramp: The City will test finished surfaces of the concrete with a 12-foot straightedge or other device. The variation between any two contacts with the surface shall not exceed 1/4-inch. The float-finished bottom surface of the precast panel will be evaluated during the concrete curing period prior to removal from the forms. The v-grooved surface will be evaluated after removal from the forms; the peaks and troughs of the v-grooved surface shall not vary more than 1/4-inch over a 12-foot straightedge. V-grooves shall be uniform in appearance and shall not have depressions or air pockets exceeded 1/4-inch in any dimension. Precast panels not complying with these tolerances shall be replaced.
 2. Concrete Curb: Construct concrete surfaces within 1/8-inch of the indicated elevation, and deviating not more than 1/8 inch from a 12-foot straightedge placed anywhere on the surface.
 3. Concrete Walk and Sidewalk: Slab and sidewalk tolerances shall be Class B as specified in ACI 301, Chapter 11. No ponding of water shall occur.
 4. Concrete Apron and Abutment: The City will test finished surfaces of the concrete with a 12-foot straightedge or other device. The variation between any two contacts with the surface shall not exceed 1/4-inch. No ponding of water shall occur.
- D. Precast panels having voids, segregated, or porous concrete, honeycombed concrete, or fractures will be rejected. Rejected units shall become the property of the Contractor and shall be disposed of off City's property.
- E. Precast panels shall be approved by the City prior to installation.

1.6 QUALITY ASSURANCE

- A. Work and submittals shall conform to all requirements of ACI 301, except as modified by the requirements of these Contract Documents. Substitute the term “City” for the terms “Owner,” “Architect/Engineer,” and “Engineer/Architect” wherever used in ACI 301.
- B. In addition to field reference required by ACI 301, provide a copy of ASTM C 33. All references shall be available at the jobsite for use by the City before beginning concrete work.
- C. The Contractor shall be responsible for all concrete testing, including testing identified as being the responsibility of the “Owner” in ACI 301. Testing services specified in Article 1.6.4.2 are required.
- D. No concrete shall be placed without written approval of the City. Approval shall be given only after concrete forms and rebar has been inspected and approved by the City.
- E. Field Inspections and Tests by the Contractor: The Contractor shall furnish all equipment, instruments, qualified personnel, and facilities necessary to inspect all work and perform all tests required by this specification and by applicable codes. All inspections and tests performed and test results received each day shall be reported to the City.
- F. Concrete will be sampled in accordance with ASTM C 172. Slump and air content will be determined in accordance with ASTM C 143, and ASTM C 231 respectively. Compression test specimens will be made and cured in accordance with ASTM C 31 and will be tested in accordance with ASTM C 39. Samples for strength tests shall be taken not less than once a day, or not less than once for each 50 cubic yards of concrete. Three specimens will be made from each set, two will be tested at 28 days, and one will be tested at 7 days. The contractor may take additional test specimens in order to determine when forms can be removed.

PART 2 PRODUCTS

2.1 CONCRETE AND GROUT MATERIALS

- A. Cement: ASTM C 150, Type II, the pozzolan or fly ash content shall not exceed 15 percent by weight of the total cementitious material.
- B. Fly Ash and Pozzolan: ASTM C 618, Type N, F, or C, except that the maximum allowable loss of ignition shall be 6% for type N and F.
- C. Aggregates: Aggregates shall comply with ASTM C 33. Grading for fine aggregate shall conform to the specified grading. The coarse aggregate shall conform to grading No. 67.
- D. Admixtures: Admixtures to be used, when required or approved, shall comply with the appropriate specification listed below:
 - 1. Air-Entraining Admixture: ASTM C 260 (no chlorides)
 - 2. Chemical Admixtures: ASTM C 494
- E. All concrete shall contain a calcium nitrite corrosion inhibiting solution that conforms to the requirements in ASTM C 494, Type C, as follows:
 - 1. The calcium nitrite admixture shall be as manufactured by W.R. Grace, “DCI”, or approved equal.
 - 2. The corrosion inhibiting solution shall contain 30% plus or minus 2% of calcium nitrite, by weight.

3. The calcium nitrite admixture shall be added to the concrete at the rate of 2.5 gallons per cubic yard.
4. The water in the corrosion inhibiting solution shall be considered as part of the mixing water.
- F. Water: Water for mixing shall be potable.
- G. Concrete Quality: Provide concrete conforming to the following:
 1. Precast Concrete Boat Ramp Panels:
 - a. 28-day Compressive Strength: 5,000 psi
 - b. 7-day Compressive Strength: 4,000 psi
 - c. Slump: 3" min, 4" max
 - d. Air Content: 5.0% \pm 1.5%
 2. Cast in Place Concrete – Curb, Sidewalk, Crosswalk:
 - a. 28-day Compressive Strength: 4,000 psi
 - b. 7-day Compressive Strength: 2,500 psi
 - c. Slump: 4" min, 6" max
 - d. Air Content: 5.0% \pm 1.5%
- H. Water/Cement Ratio: The maximum water/cement ratio shall be 0.40.
- I. Grout for filling precast panel lifting holes shall be marine-grade epoxy grout suitable for underwater application. Cementitious grout shall not be allowed. Acceptable products include the following (or approved equal):
 1. SeaShield 550 Epoxy Grout, Denso North America
 2. FX-70®-6MP, Simpson Strong-Tie
 3. Pile Jacket Epoxy Grout LV, Five Star Marine, Inc.

2.2 REINFORCEMENT

- A. Reinforcing Bars and Dowels: ASTM A615, Grade 60, unless otherwise shown.
- B. Hooks and bends shall conform to the provisions of the Building Code Requirements for Reinforced Concrete of the American Concrete Institute. Where bar bends are shown but no length is called out, provide standard hooks as a minimum.

2.3 EXPANSION JOINT FOR CURB AND SIDEWALK

- A. Preformed bituminous type, ASTM D 1751, 1/2-inch thick.
- B. Preformed sponge rubber, ASTM D 1752, Type I, 1/2-inch thick. Store the sponge rubber filler at 80 degrees F or less. Do not store in the open, or in the direct rays of the sun.

2.4 CURING MATERIALS

- A. Impervious sheet materials ASTM C 171.
- B. Spray-applied membrane-forming curing compound ASTM C 309, Type 1-D (clear or translucent, with fugitive dye), Class B (Resin); minimum application rate of 200 square feet per gallon.

2.5 FORMLINER FOR PRECAST CONCRETE

- A. The V-groove finish for precast concrete boat ramp panels may be obtained by using one of the following formliner products, or approved equal:
 - 1. Reusable ABS formliners. Acceptable product: Pattern 1791 Boat Ramp Flute, by SpecFormliners, Inc. (888) 429-9550 or approved equal.
 - 2. Extruded foam, as manufactured by Universal Precast, Marysville, CA, or approved equal.
 - 3. Wood chamfer strip.
- B. V-groove pattern, layout, and dimensions shall be in accordance with DBW "Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities."

PART 3 EXECUTION

3.1 PREPARATION OF SUBGRADE

Excavate to required depth. Remove soft, yielding material and replace with select fill. Compact subgrade as specified in Section 02300 Earthwork. Concrete shall not be placed on subgrade without City inspection and approval.

3.2 MAINTENANCE OF SUBGRADE

Maintain subgrade in a compacted condition until concrete is placed.

3.3 PRODUCTION OF CONCRETE

Ready Mixed concrete shall conform to ASTM C 94 except as otherwise specified.

3.4 PREPARATION FOR PLACING CONCRETE

- A. Formwork shall be complete and mortar tight.
- B. Temporary access ramps and walkways, as necessary, shall be constructed to allow safe and expeditious access for concrete placement and workmen.
- C. Standing water, loose particles, debris and foreign matter shall be removed.
- D. Reinforcement shall be secured in place; joints, anchors and other embedded items shall be positioned. All reinforcing shall be free from rust, scale or any coating that may reduce the bond strength.
- E. All equipment needed to place and consolidate the concrete shall be at the placement site and in good operating condition. Spare vibrators shall be available.
- F. The entire preparation shall be approved by the City prior to concrete placement.

3.5 PLACING

- A. Weather Conditions: Place concrete only when temperature is above 35 degrees Fahrenheit. Concrete placement will not be permitted when weather conditions prevent proper placement and consolidation.
- B. Concrete shall be conveyed from the mixer to the forms as rapidly as practicable, by methods which prevent segregation or loss of ingredients. Concrete shall be in place within 15 minutes after discharge from the mixer. Concrete shall be deposited as close as possible to its final position in the

forms. The placement shall be carried on at such a rate that the formation of cold joints will be prevented.

- C. Each layer of concrete shall be consolidated by internal vibrating equipment. Vibration shall be systematically accomplished by inserting the vibrator through the fresh concrete into the layer below at a uniform spacing over the entire area of placement. The distance between insertions shall be approximately 1-1/2 times the radius of action of the vibrator and overlay the adjacent, just vibrated area by a few inches. The vibrator shall penetrate rapidly to the bottom of the layer and at least 6 inches into the layer below if such exists. It shall be held stationary until the concrete is consolidated (normally 4 to 6 seconds but some mixes may require more time) and then withdrawn slowly.

3.6 FINISHING

- A. General: No finishing or repairs will be done when either the concrete or the ambient temperature is below 50°F.
- B. Finishing Formed Surfaces: Beginning no more than 24 hours after form removal, all fins and loose materials shall be removed and surface defects including tie holes shall be filled. All honeycomb and other defects shall be repaired. All unsound concrete shall be removed from areas to be repaired. Surface defects greater than 1/2-inch in diameter and holes left by removal of tie rods in all surfaces not to receive additional concrete shall be reamed or chipped and filled with dry pack grout. Areas to be repaired shall be dampened, brush-coated with a neat cement grout and filled with grout or concrete. The cement used in grout or concrete for repairs to all surfaces permanently exposed to view shall be such that the final color when cured will be the same as adjacent concrete.
- C. Finishing Unformed Surfaces: All unformed surfaces that are not to be covered by additional concrete shall be float finished, unless otherwise shown. Unformed surfaces shall be finished to a tolerance of 1/4-inch for a float finish as determined by a 12-foot straightedge placed on surfaces shown on the plans to be level or having a constant slope. Finishing shall not be performed while there is excess moisture or bleeding water on the surface.
 - 1. Float Finish – surfaces shall be screeded and darbied or bullfloated to eliminate the ridges and fill in the voids left by the screed. In addition, the darby or bullfloat shall fill all surface voids and only slightly embed the coarse aggregate. When the water sheen disappears and the concrete will support a person, floating should be completed. Floating should embed large aggregates just beneath the surface, remove slight imperfections, humps and voids to produce a plan surface and compact the concrete and consolidate mortar at the surface.
 - 2. Medium Broom Finish: Sidewalk, apron, abutment, and precast panel bottom surfaces shall receive a medium broom finish after initial floating and finishing. Broom finish for sidewalk and abutment shall be perpendicular to the direction of travel. Broom finish for apron shall be perpendicular to the launch ramp direction of vehicle traffic. Broom finish for precast panels shall be along the long axis of the panel.
 - 3. V-Groove Finish (panel top surface):
 - a. V-groove finish for precast concrete panels shall be created by casting panels upside-down on a formliner. The formliner shall result in a V-groove finish in accordance with the dimensions and layout shown and in accordance with DBW guidelines for boat launch facilities.

- b. A detailed description of the V-groove finish is provided in Section 202.F of the “Layout, Design and Construction Handbook for Small Craft Boat Launching Facilities” by DBW, available online at <http://www.dbw.ca.gov/pdf/LaunchFac/LRamps.pdf>.

3.7 CURING AND PROTECTION:

- A. Beginning immediately after placement, and continuing for at least 7 days, all concrete shall be cured and protected from premature drying, extremes in temperature, rapid temperature change, freezing, mechanical damage and exposure to rain or flowing water. All materials and equipment needed for adequate curing and protection shall be available and at the site of the placement prior to start of concrete placement. Preservation of moisture for concrete surfaces not in contact with forms shall be accomplished by one of the following methods:
 - 1. Application of absorptive mats or fabrics kept continuously wet.
 - 2. Application of sheet materials as specified in ASTM C 171.
 - 3. Apply spray-applied membrane forming curing compound in accordance with manufacturer’s instructions.
- B. The preservation of moisture for concrete surfaces placed against wooden forms shall be accomplished by keeping the forms continuously wet for 7 days.

3.8 CURING AND PROTECTION OF PRECAST CONCRETE

- A. Precast Concrete shall be cured for 30 days before being installed.
- B. All precast concrete delivered to the project site shall be accompanied by certification of the date of casting and location. All precast concrete delivered prior to 30 days after casting shall be stored in a designated area with physical barriers (fencing) and shall be clearly marked or identified with the casting date.
- C. Method of curing and protection for precast concrete shall be as specified under paragraph 3.7 CURING AND PROTECTION.
- D. Protect panels from vibration during curing.

3.9 JOINTS IN CURB AND SIDEWALK

- A. Expansion Joints:
 - 1. Place expansion joints at the following locations:
 - a. Where shown on the Drawings;
 - b. At spacing not to exceed 20 feet;
 - c. At the beginning and ending of curb returns;
 - 2. Construct joints perpendicular to the longitudinal axis and surface of concrete.
- B. Weakened Plane Joint:
 - 1. Location:
 - a. Curb: Construct at changes in direction where expansion joint is not required.
 - b. Sidewalk: Construct at 5-ft maximum spacing between expansion joints.

2. Construction Method: After preliminary troweling, the concrete shall be parted to a depth of 2-inches with a straightedge to create a division in the coarse aggregate. The concrete shall be refloated to fill the parted joint with mortar. The locations of weakened planes shall be marked for final joint finishing, which shall be accomplished with a jointer tool having a depth of 1/2 inch and a radius of 1/8 inch. The finished joint opening shall not be wider than 1/8 inch.

3. Joints shall be perpendicular to the longitudinal axis and surface of concrete.

3.10 HANDLING, TRANSPORTING, AND STORAGE

- A. Precast units shall not be lifted or moved until the concrete has reached a minimum compressive strength of 5,000 psi and aged fourteen (14) days.
- B. Equipment and methods used for lifting, handling, and transporting to avoid damage to the units shall be designed by the Contractor and shall be submitted to the City for review. Lifting points shown on the Plans are schematic only.
- C. Store precast units at the plant and on the project site to avoid cracking, distortion, staining, or other physical damage. Damaged units shall be rejected by the City and not used on the project.

3.11 INSTALLATION OF PRECAST PANELS

- A. Preparation of Gravel Bedding and Rail Support
 1. Place gravel bedding to the lines and grades shown on the plans to allow installation of the rail support.
 2. Install rail support as shown on the plans.
 3. Install remainder of gravel between and around rail support. Top of gravel bedding shall be slightly above the top of rail to allow screeding of the gravel bedding to obtain a planar surface to receive the precast panels.
- B. Install boat launch ramp precast panels in accordance with lifting configuration shown in the approved shop drawings. Place precast panels square, and true in accordance with the slope shown on the drawings. Align panel ends square with gaps between adjacent panels as follows:
 1. Allowable Panel Gap: 1/4" maximum.
- C. Panels with Gaps exceeding the Allowable Panel Gap shall be removed and reinstalled to meet the specifications.

3.12 GROUTING FOR PANELS

- A. Holes used for inserts used in lifting and handling of precast panels and holes for shear pins shall be filled with epoxy grout after the units are in place.
 1. V-groove surfaces: Fill holes completely to the bottom of the v-grooves
 2. Broom Finish surfaces: Fill holes flush with concrete surface.

END OF SECTION

SECTION 05600
ALUMINUM GANGWAY

PART 1 – GENERAL

1.1 DESCRIPTION

This section describes the requirements to finalize the design, furnish and install an aluminum gangway as shown on the Plans.

1.2 SUBMITTALS

As specified in Section 01330.

- A. Submit Final Design Calculations attesting that the fabrications conform to all design requirements. Calculations shall be prepared under the supervision of, signed and sealed by a Professional Engineer holding a valid Civil or Structural Registration in the State of California.
- B. Submit Final Drawings for the gangway, and associated railings and transition plate, showing all materials, member shapes and sizes, dimensions, quantities, connecting details, and accessories. Drawings shall be prepared under the supervision of, signed and sealed by a Professional Engineer holding a valid Civil or Structural Registration in the State of California. Provide catalog sheets for all standard manufactured items.
- C. Submit certification from manufacturers, or suppliers attesting that the following materials conform to the contract requirements:
 - 1. Fixtures and fittings
 - 2. Aluminum
 - 3. Fasteners
 - 4. Steel hardware items
 - 5. Non-skid surface coefficient of friction
- D. Submit samples for the non-skid decking.
- E. Submit quality control plan to be used during:
 - 1. Fabrication.
 - 2. Installation of the gangway: The Fabrications Design Engineer to provide a detail and notes on how the Contractor is to lift the gangway to set in-place (location and number of picking points).

1.3 DESIGN REQUIREMENTS

- A. The criteria presented in this Specification are based upon the best estimate of those environmental and physical factors which reasonably can be expected to affect the design, performance, and durability of the gangway. Final calculations shall furnish proof that the gangway, using the criteria

specified herein as a minimum, is designed to withstand the loading and motions without damage for a minimum design life of 30 years. Final design calculations shall be submitted to and approved by the Owner before starting fabrication.

- B. The completed gangway shall have a manufacturer's label plate attached in a conspicuous location. This label plate shall be brass or stainless steel. The following information shall be stamped or etched into this plate in letters not less than 1/4-inch high filled with black enamel:
 - 1. Manufacturer's name
 - 2. Date of Manufacturer
 - 3. Overall length (not including transition plate)
 - 4. Overall weight (including transition plate)
- C. The following minimum criteria shall be considered.
 - 1. The design shall be completed in accordance with the following documents:
 - a. California Building Code, 2016 Edition
 - b. ADA Accessibility Guidelines for Buildings and Facilities (ADAAG)
 - 2. The length and width of the gangway shall be as shown on the Plans.
 - 3. The vertical design load shall be the combination of the dead weight of the structure, including any attached utilities, and either live load Case A or Case B, whichever governs.
 - a. Case A shall be a uniformly distributed load of 100 pounds per square foot of deck surface area;
 - b. Case B shall be a concentrated load of 400 pounds applied anywhere on the deck surface.
 - 4. The horizontal design load shall be a uniformly distributed wind load of 20 pounds per square foot of profile area. The horizontal design load shall be applied in combination with the dead weight.
 - 5. The maximum allowable deflection under the vertical design load shall equal the span divided by 240.
 - 6. The deck and structural components shall be designed with a minimum safety factor on working stress as specified in AA "Specifications for Aluminum Structures" for bridge type structures. For non-aluminum structural components, similar safety factors shall apply.
 - 7. The walking surface shall allow a minimum of 40% light transmittance and shall be provided with an aggressively non-skid surface.
 - 8. The gangway shall be fitted with a guardrail on each side of the walking surface with a handrail extending a minimum of 1 foot beyond the ends of the structure, with required return at the ends. The rails shall be fabricated of aluminum pipe or tubing. Openings in the guardrail shall

not permit passage of a 4-inch diameter sphere. Handrails and kick plates shall be provided, also of aluminum.

9. Design shall also consider stresses resulting from handling, installation, and motion. The gangway shall be designed to withstand dock motions including a vertical change in dock elevation due to water level fluctuation as shown (design high water and design low water) and horizontal drift due to wind loads without structure interference or overstress, including fatigue of gangway members and supports. Gangway wheels shall remain in contact with the tracks on the dock at all times. Provide strike plate or similar reinforcement to bottom chord of gangway structure at location of dock edge for contact at highest tides in wave conditions.
10. The transition plate shall make a smooth, gap-free transition between the gangway deck and the floating dock surface. The transition plate shall be a minimum ¼-inch material and shall be attached to the gangway by means of a continuous pipe hinge. The plate shall be the full width of the gangway and have a maximum slope not in excess of the maximum slope that occurs on the gangway itself. The lower edge shall be fitted with a continuous UHMW polyethylene wear block a minimum of ½-inch thick. The lower edge shall have a beveled edge conforming to code requirements for accessibility and safety.
11. Wheels shall be installed at the end of the gangway. The wheels shall have an allowable load rating greater than that required by the design loads. Wheels shall be aluminum with a molded polyurethane tread, minimum 10 inches diameter by 2½ inches wide, and sealed roller bearings. Axle shall be stainless steel. The gangway design shall allow the wheels to be supported by the wheel track at all times regardless of dock motions.
12. The wheels shall be kept on the track by wheel guides, a minimum of 2 inches high, for each wheel. The wheel guides shall be of such length to underlie the gangway wheels without contact to the gangway structure at any time and not present a tripping hazard.
13. The gangway shall be fabricated by a firm having a minimum of 10 years of experience in design and fabrication of bridge-type aluminum marine structures.
14. The upper landing hinge shall be designed to permit rotation of the gangway in the vertical plane as necessary to accommodate float motions for all tide level and wave conditions.
15. The gangway hinge shall make a smooth, gap-free transition between the gangway walking surface and the abutment. The hinge plate shall be a minimum 1/4-inch material and shall be the full width of the walking surface.
16. The gangway and ramp design shall be coordinated with the floating dock system. Provide additional flotation on the floating dock system to support superimposed gangway dead load as required to maintain freeboard.

PART 2 – PRODUCTS

2.1 ALUMINUM

All aluminum used in the fabrication shall be Alloy 6061-T6 or 6063-T6. All welding of aluminum shall comply with AA Specifications for Aluminum Structures.

2.2 FASTENERS

Any fasteners between aluminum components shall be 316 Series Stainless Steel.

2.3 WELDING FILLER WIRE

All welds shall be made with a filler metal alloy that will produce a weld that is compatible in corrosion resistance with the base metal.

2.4 STEEL ACCESSORIES

All mild steel components shall conform to ASTM A 36 and be galvanized after fabrication in accordance with ASTM A 123. All welding of steel shall comply with AWS D 1.1.

2.5 DECKING

A. Deck shall be fiberglass providing a minimum of 40% open area for light transmittance. Deck walking surface shall have an aggressive non-skid with a minimum static coefficient of friction of 0.8.

B. Acceptable Product: 1" Mini Mesh, grey color.

2.6 DISSIMILAR MATERIALS

Where dissimilar metals are in contact, or where aluminum is in contact with concrete, masonry, wet or pressure-treated wood, or absorptive materials subject to wetting, the surfaces shall be protected with a coat of bituminous paint to prevent galvanic action.

PART 3 – EXECUTION

3.1 WORKMANSHIP

All work shall conform to the approved Shop Drawings, project drawings and this specification. Construction details, finishing details and colors shall be consistent throughout. Work shall be accurately set to establish lines and elevations, and securely fastened in place. Cutting, drilling and punching shall produce clean true lines and surfaces. Exposed surfaces of work shall have a smooth finish.

3.2 WELDING

A. Parts to be welded shall be free of dirt, grease and other contaminants, and shall fit up properly for sound welding. Surfaces to be welded shall not be cut with oxygen. Sawing, shearing or machining may be used.

B. All welding shall be with an inert gas shielded arc process. Machine settings shall be developed by making test welds of the same material alloy and geometry as the work pieces and testing the sample welds destructively.

3.3 FINISHING

All exposed surfaces of the gangway, except handrails, shall be sandblasted in accordance with Commercial Sand Blast SSPC-SP 6-63, which produces a coarse matte finish. The handrails shall have a rubbed or light brush finish and provide a smooth gripping surface.

3.4 INSTALLATION

- A. Contractor shall furnish all materials and equipment required for gangway installation. The aluminum fabrications shall not be dragged or skidded into place.
- B. Contractor shall provide, install and remove when no longer required, all temporary supports used to secure the gangway and security gate in place during installation.
- C. With the gangway secured in correct position, mark the location of the wheel guides and fasten in place

END OF SECTION

SECTION 16100

SITE ELECTRICAL

PART 1 – GENERAL

1.1 Scope of work

A. General

1. Supplying all labor, materials, equipment and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and necessary to complete the work specified.

B. Site electrical work from the point of connection to the new Restroom Building, fish cleaning station, and light poles, including the following work items:

1. Conduit, circuits, pull boxes, and appurtenances.
2. Trenching and Backfill for conduits and appurtenances per Section 02325.

C. Protect existing electrical system and existing area lighting to remain.

D. Site Investigation: The Contractor shall visit the site prior to bidding to review and confirm the electrical service point.

1.2 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the general designation only.

1. The State of California, Department of Transportation:

Standard Specifications (2010)

Standard Plans

Manual on Uniform Traffic Control Devices (MUTCD)

2. NEC – The National Electric Code.

3. California Division of Industrial Safety Electrical Orders (Title 8).

4. NEMA – National Electrical Manufacturers Association Standards.

5. American Society for Testing and Materials (ASTM) Publications:

A 123 Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

A 307 Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.

B 3 Soft or Annealed Copper Wire.

B 8 Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft

D 1785 Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

1.3 SUBMITTALS

A. Contractor shall submit shop drawings on all equipment components, and catalogue cuts of conduits, conductors, pull boxes, and other equipment for approval prior to ordering material and equipment.

1.4 QUALITY ASSURANCE

- A. All work shall be done under the supervision of, and to the satisfaction of the City.
- B. Installation shall be in conformance with the NEC.
- C. Materials shall be new, packed in original containers, installed or turned over to the City free of rust, corrosion, or any other defects, except for existing materials to be relocated.
- D. To the extent possible, all equipment or materials for any one system shall be furnished by the same manufacturer. Such items as conduit, conduit fittings and appurtenances supplied for any one system shall be the same throughout the project.

1.5 JOB CONDITIONS

- A. Contractor shall conduct operations and schedule cleanup in a manner to cause the least possible obstruction and inconvenience to traffic, pedestrians and any adjacent property owners and tenants.
- B. Contractor shall protect open excavations and trenches with covers, railings and fences as required, together with signs, lights and other warning devices sufficient to protect and maintain safe pedestrian, bicycle, and vehicular traffic through the work area to the satisfaction of the City.
- C. Contractor shall conduct operations in such a manner that existing facilities and utilities which are to remain in place will not be damaged. Excavation, trenching, and other work under or adjacent to existing pipelines, conduit runs, or structures of any kind, shall be protected in such a manner as not to interfere with the safe operation and use of such facilities. Should any damage be incurred to existing facilities or structures during the operations, the Contractor shall immediately notify the proper City or authorities, and shall arrange for the immediate repair of the facilities at the Contractor's expense.
- D. The location of proposed light poles and light fixtures, pull boxes, conduits, cabinets, and other equipment shown on the plans is approximate only and the exact location of such shall be as established in the field by the City.
- E. Construction area shall be left in a clean, neat, and workmanlike condition. All construction waste, rubbish, and debris remaining upon completion of the work shall become the property of the Contractor unless otherwise specified herein or noted on the plans and shall be removed from the work-site by the Contractor and disposed of off-site in a lawful manner to the satisfaction of the City.
- F. Comply and conform to conditions and requirements indicated herein and specified under all other sections of these Specifications.

PART 2 – PRODUCTS

2.1 PORTLAND CEMENT CONCRETE

- A. Portland Cement Concrete for foundations and pads shall conform to Section 90-2, "Minor Concrete", of the Standard Specifications and shall contain not less than 564 pounds of cement per cubic yard.
- B. Hand mixing of concrete shall not be permitted.

2.2 PAINTING

- A. Painting shall conform to the provisions of Section 86-2.16 "Painting" of the Standard Specifications, and these provisions.

- B. All pedestals, posts, cabinets and enclosures shall be coated with two part recoatable epoxy primer and two coats of Hi-solids polyurethane paint, Sherman Williams color RWC 6687 or approved equal:

Epoxy primer: Part A: B67R5

Part B: B67V5

Hi-solids polyurethane: B65T304

Hardener: B60V30

- C. Contractor shall submit color chips for approval by City.
- D. Painting shall be considered to be included in the contract lump sum price for the work item involved and no additional compensation will be allowed therefore.
- E. Touch-up painting shall be provided where required by the City.

2.3 FOUNDATIONS

- A. Foundations and pads shall consist of Portland Cement Concrete conforming to the requirements of Section 2.1 of these specifications and be constructed to conform to the details shown or called for on the plans.
- B. Anchor bolts, nuts and washers shall be fabricated from steel conforming to the requirements of ASTM Designation A307. Size and shape of anchor bolts shall conform to the details shown on the plans. Bolts, nut and washers shall be galvanized after fabrication in conformance with the requirements of ASTM Designation A123. All bolts and threads shall be lightly greased prior to acceptance.
- C. Reinforcement for foundations and pads shall be deformed steel bars conforming to the requirements of Section 03300 of the Specifications. Size and shape for bar reinforcement shall conform to the details shown or called for on the plans.

2.4 PULL BOXES

- A. Pull boxes in roadway shall be traffic rated per Section 86 "Electrical Systems" of the Standard Specifications.
- B. Pull boxes shall be precast reinforced concrete of the size noted or called for on the plans and shall conform to the applicable provisions of Section 86-2.06 "Pull Boxes" of the Standard Specifications with the following exceptions:
1. Grout in the bottom of pull boxes will not be permitted, Contractor shall use drain rock at box sump.
 2. Covers of non-traffic rated pull boxes shall be Christy precast concrete secured by means of either stainless steel bolts and nuts, or studs and nuts conforming to the requirements of said Section 86-2.06A of the Standard Specifications.
 3. All ferrous metal parts shall be galvanized after fabrication in conformance with the requirements of Section 75-1.05 "Galvanizing" of the Standard Specifications.
 4. Covers for lighting pull boxes shall be marked "Street Lighting" in conformance with the requirements of Section 86-2.06B "Cover Marking" of the Standard Specifications.

2.5 CONDUIT

- A. Conduit shall conform to the provisions in Section 86-2.05 "Conduit" of the Standard Specifications.

- B. Conduit for underground electrical circuits shall be Poly Vinyl Chloride (PVC) type 1120, Schedule 40 with solvent weld joints, conforming to ASTM D1785 and the requirements in the UL Standard for Rigid Non-Metallic Conduit (Publication UL 651). Minimum size conduit shall be 1" diameter.
- C. Fittings and couplings for underground electrical conduit shall be Poly Vinyl Chloride (PVC), Schedule 40 specifically manufactured for the conduit used.
- D. Conduit joints shall be solvent weld made by means of "Weld-On" P-70 primer and "Weld-On" cement, or approved equal.
- E. All empty conduit or conduit for future circuits shall be installed with a 3/16 inch diameter nylon pull rope for future conductor extensions.
- F. Conduit shall have a minimum cover of 30 inches.
- H. Conduit risers and exposed conduit above finished grade shall be rigid galvanized steel.

2.6 CONDUCTORS

- A. Conductors shall conform to the provisions in Section 86-2.08 "Conductors" of the Standard Specifications and these provisions.
- B. Conductors shall be copper of the type and size shown or called for on the plans. Copper wire shall conform to the applicable provisions of ASTM Designations B3 and B8.
- C. Minimum conductor size is No. 8 AWG and shall be stranded. Wire size shall be based on American Wire Gage (AWG) and conductor diameter shall not be less than 98 percent of the specified AWG diameter.
- D. Conductors shall be UL listed and rated for 600 volt operation.
- E. Conductors shall be spliced by the use of "C" shaped compression connectors as shown on the Standard Plans.
- F. Insulation for conductors shall be one of the following:
 - 1. Type RHH or RHW cross-linked polyethylene.
 - 2. Type THW OR THWN Poly Vinyl chloride.
 - 3. At any point, the minimum thickness of any Type THWN insulation shall be 13 mils for conductor sizes No. 14 and No. 12, 18 mils for conductor size No. 10, 27 mils for conductor sizes No. 8 and No. 6, and 36 mils for conductor sizes No. 4 and No. 2. At any point, the minimum thickness of the nylon jacket shall be 4 mils for conductor sizes No. 14 to No. 10, inclusive, 5 mils for conductor sizes No. 8 and No. 6, and 6 mils for conductor sizes No. 4 and No. 2.

2.7 STANDARDS, STEEL PEDESTALS AND POSTS

- A. Standards for traffic signals and lighting, and steel pedestals for cabinets and other similar equipment shall conform to the provisions of Section 86-2.04 "Standards, Steel Pedestals, and Posts" of the Standard Specifications and these specifications.
- B. All anchor bolts shall be galvanized steel and lightly greased prior to installation of the pole.
- C. All required drilling of poles shall be done in the field after the pole is mounted.
- D. The contractor shall either install a 3/16 inch or larger brass bolt on each existing standard for bonding, or preferably to be provided by pole manufacturer on the side of pole adjacent to hand-hole. The bolt shall be installed on the outside of the shaft near the baseplate where it is to be covered by the bolt

cover. The shaft of the standard shall be drilled for no larger than a 1/4 inch hole near the baseplate to provide passage for the bonding conductor.

2.8 HEAT SHRINK TUBING

- A. Heat shrink tubing shall be dual wall, irradiated polyefin tubing containing an adhesive inner wall. When heated, the inner wall shall melt and fill all crevices and interstices of the object being covered while the outer wall shrinks. Each end of the heat shrink tube or the open end of the open end of the end clamp of heat shrink material shall, after contraction, overlap the conductor insulation at least 1-1/2 inches.
- B. All heat shrink tubing shall also meet the following requirements:
 - 1. Shrinkage Ratio: 33 percent, maximum, of supplied diameter when heated to 125°C and allowed to cool to 25°C.
 - 2. Dielectric Strength: 350 kilovolts per inch, minimum.
 - 3. Resistivity: 1014 ohms per centimeter, minimum.
 - 4. Tensile Strength: 2,500 lbs. per square inch, minimum.
 - 5. Operating Temperature: -5 °C. to 135°C.
 - 6. Water Absorption: 0.5 percent, maximum.

2.9 DUCT SEAL

- A. Sealant for duct seal shall consist of "Duct Seal Compound" as manufactured by Johns-Mansville Industries, Appleton Electric Company and Killark Products, or approved equal.

2.10 LUBRICATING COMPOUND

- A. Contractor shall apply high-pressure, high-temperature anti-seize and lubricating compound on all threaded nuts and bolts, including anchor bolts and components of signal mounting hardware assemblies.
- B. Contractor shall use "Threadease" or approved equal.

PART 3 – EXECUTION

3.1 TRENCHING, BACKFILL AND SHORING

- A. Trenching and backfilling shall conform to Section 02325 of these Specifications.
- B. Depth of trenches for conduit or conductors in areas to be covered by street paving shall be such as to provide a minimum of thirty (30) inches of cover for conduits or conductors. Trench depth under sidewalks shall be such as to provide eighteen (18) inches of cover over the conduit or conductor to the paving subgrade, or as indicated on the plans.

3.2 CONDUIT JACKING

- A. Placement of conduit beneath existing pavement and sidewalk by jacking methods may not be used.

3.3 FOUNDATIONS

- A. Concrete for foundations of standards and cabinets shall be installed in conformance with section 2.1, "Portland Cement Concrete," of these specifications.

- B. Top of foundations for street lighting shall be as shown on the Drawings.
- C. Excavation for exterior lighting foundations shall be done with an auger to the diameter called for on the plans and the top portion of the foundation above the surrounding subgrade shall be formed. Contact Underground Service Alert (USA) at 1-800-227-2600 two (2) working days prior to start of excavation. Excavated material shall be disposed of by the Contractor off-site or as directed by the City.
- D. Foundations for light poles adjacent to curbs shall be set to provide a minimum of twenty-four (24) inches clear from face of curb to center of light pole mast.
- E. The fifth paragraph in Section 86-2.03, "Foundations," of the Standard Specifications is amended to read:

Cast-in-drilled hole concrete pile foundations for traffic signal and lighting standards shall conform to the provisions in Section 49, "Piling," with the added requirements that standards shall not be erected until seven days have elapsed after placing the concrete, and except that material resulting from drilled holes shall be disposed as provided in Section 86-2.01, "Excavating and Backfilling," of the Standard Specifications.

3.4 CONDUIT

- A. Install conduits in the locations shown on the plans. Additional conduit not shown on the plans, but required to serve lighting system shown on plans, shall be installed as directed by the City.
- B. After conductors have been installed, the ends of conduits terminating in controller cabinets and pull boxes shall be sealed with an approved type of sealing compound.
- C. All empty conduits shall be installed with 3/16" diameter nylon pull rope for future use.

3.5 PULL BOXES

- A. Pull boxes of the size and type specified shall be installed at the locations shown on the plans. Additional pull boxes required for construction and not shown on the plans shall be installed by the Contractor at the direction of the City.
- B. Top of pull boxes shall be set flush with surrounding finish grade and in curbed areas shall be set flush with top of curb.
- C. Where the sump of an existing pull box is disturbed by the Contractor's operations, the sump shall be reconstructed.

3.6 CONDUCTORS

- A. Conductors shall be pulled through rigid non-metallic conduit by hand only using nylon or polypropylene pull rope with a minimum tensile strength of 500 pounds. Nylon or polypropylene pull rope shall be installed in all conduits which are to receive future conductors.
- B. All splices of conductors shall use Type "C" shaped compression connectors and shall be insulated by means of Method "B" as set forth in Section 86-2.09E "Splice Insulation" of the Standard Specifications.
- C. Splices shall be made in pull boxes, or terminal compartments only. All signal conductors may be spliced, in pull boxes, where circuits branch except where duplicate parallel conductors are shown in the conductor schedule.

- D. All splices for connection to street lighting shall have fused disconnect splice connectors installed in the pull box adjacent to the street light. Fused splice connectors shall be installed in conformance with the requirements of Section 86-2.095 "Fused Splice Connectors" of the Standard Specifications.
- E. Provide at least three (3) feet of slack within each pull box, unless otherwise noted on the Drawings.
- F. After conductors have been installed, the end of conduits terminating in service cabinets, standards, light poles, and pull boxes shall be sealed with Duct Seal Compound.
- G. Cables shall be permanently identified as to circuit or phase. Identification shall be placed on each cable in each pull box and near the end of terminated cable.
- H. When three or more conductors are to be enclosed within a single splice using heat shrink material, mastic shall be placed around each conductor prior to being placed inside the heat shrink material. The mastic shall be the type recommended by the manufacturer of the heat shrink material.

3.7 BONDING AND GROUNDING

- A. Bonding and grounding shall conform to the provisions in Section 86-2.10 "Bonding and Grounding" of the Standard Specifications, these special provisions, the latest issue of the National Electric Code, Section 250-91(c), and to Sections 2395.91(b) and (c)I of the State of California Low Voltage Electrical Safety Orders, Title 8.

3.8 RESTORATION OF EXISTING IMPROVEMENTS

- A. Existing pavement or other improvements removed or damaged due to the installation of work items shall be replaced in kind to the satisfaction of the City, at the Contractor's expense.
- B. Existing landscaping, irrigations, or plantings removed, damaged or disturbed due to the work items shall be replaced in kind to the satisfaction of the City, at the Contractor's expense.
- C. All construction areas shall be left in a clean, neat and workmanlike condition. All construction waste, rubbish and debris remaining upon completion of the work shall become the property of the contractor unless otherwise specified herein or noted on the plans and shall be removed from the worksite by contractor and disposed of off-site in a lawful manner to the satisfaction of the City.

3.9 REMOVING ELECTRICAL EQUIPMENT

- A. Removed electrical materials shall be hauled to an appropriate off-site disposal or recycling center in accordance with applicable laws and regulations.
- B. Full compensation for hauling and stockpiling electrical materials shall be considered as included in the contract price paid for the item requiring the material to be salvaged and no additional compensation will be allowed therefore.

3.10 ACCEPTANCE TEST AND TURN ON

- A. The work item will not be considered acceptable until it has been energized and visually inspected by the City. Prior to acceptance testing, all equipment as shown on the Plans shall be installed and operable.
- B. Contractor shall pay all energy costs until the electrical system has successfully passed the acceptance test and initial turn on.
- C. Contractor shall notify the City seven (7) days prior to intended date of initial turn on.

END OF SECTION

SECTION 16520
EXTERIOR LIGHTING

PART 1 – GENERAL

1.1 SUMMARY

This Section includes furnishing and installing new light poles with floodlights complete in place.

1.2 SUBMITTALS

Product Data: For each light pole and fixture, include data on features, accessories, finishes, and installation details.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with IEEE C2, "National Electrical Safety Code".
- C. Comply with NFP A 70.

PART 2 – PRODUCTS

2.1 LIGHT POLE

- A. Fixture Mounting Height: 25-ft above ground surface.
- B. Type: Round tapered aluminum, black finish color.
- C. Mounting Arms: twin aluminum, 6-ft long.
- D. Base: 4-bolt.
- E. Foundation: 2.5-ft high raised concrete footing.
- F. Acceptable Model: Hapco RTA – Double Mast, 4-Bolt Base, or approved equal.

2.2 LIGHTING FIXTURES

- A. Light fixtures shall be exterior LED Floodlights and comply with one or more of the following minimum requirements: IP65, UL 1598A, NEMA 4X. The fixture shall be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
- B. Light fixtures shall be dark sky friendly.
- C. All lighting fixtures shall have photocell sensors to operate in “dusk-to-dawn” mode, and motion sensor to reduce light output when there is no activity.
- D. LED Floodlight Requirements:
 - 1. Type: Cobra head
 - 2. Color: Black

3. 135W (nominal) LED
4. Correlated Color Temperature (CCT): 3000K
5. Minimum 14,000 lumens per fixture.
6. Minimum service life of floodlight: 75,000 hours.
7. Acceptable Model (or approved equal): Leotek GCM2 (H-Series), 135 watt, with 7-wire photocell and MSL7 motion sensor.

PART 3 – EXECUTION

3.1 LIGHT POLE INSTALLATION

- A. Install per Manufacturer requirements and applicable building codes.
- B. Install on concrete foundation as shown on the Contract Drawings.

3.2 FIXTURE INSTALLATION

- A. Install lamps in each fixture.
- B. Fasten fixture to indicated structural supports.
- C. Adjust fixture that require field adjustment or aiming.
- D. Install photocell and motion sensor in each fixture.

END OF SECTION

APPENDIX A:

GEOTECHNICAL INVESTIGATION



GEOTECHNICAL INVESTIGATION

**ENCINAL BOAT LAUNCH FACILITY
190 CENTRAL AVENUE
ALAMEDA, CALIFORNIA**

Project No. 838.01
February 3, 2016

Prepared by

Hultgren – Tillis Engineers

Hultgren-Tillis Engineers

February 3, 2016
Project No. 838.01

Moffatt & Nichol
2185 North California Boulevard, Suite 500
Walnut Creek, California 94596

Attention: Mr. Brad Porter

**Geotechnical Investigation
Encinal Boat Launch Facility
190 Central Avenue
Alameda, California**

Dear Mr. Porter:

We performed a geotechnical investigation for the Encinal Boat Launch Facility Renovation Project located at 190 Central Avenue in Alameda, California. Our services were performed in accordance with the Moffatt & Nichol Subconsultant Agreement dated November 4, 2015 and our proposal dated November 12, 2015. The results of the investigation are presented in the attached report.

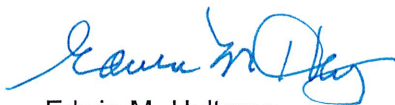
It was a pleasure working with you on this project, and we look forward to working with you during construction. If you have any questions, please call.

Sincerely,

Hultgren – Tillis Engineers



Gregory R. Olsen
Civil Engineer



Edwin M. Hultgren
Geotechnical Engineer



GRO:EMH:lm:la

4 copies submitted

File Name. 83801R01.doc

TABLE OF CONTENTS

	Page
I. INTRODUCTION.....	1
II. FIELD EXPLORATION AND LABORATORY TESTING	2
III. SITE CONDITIONS.....	3
A. Surface Conditions	3
B. Subsurface Conditions.....	3
IV. DISCUSSION AND CONCLUSIONS	5
A. General.....	5
B. Seismic Hazards.....	5
C. Pile Driveability	6
V. RECOMMENDATIONS.....	7
A. Earthwork	7
B. Mat Foundations	9
C. Guide Piles	9
D. Surface Drainage.....	10
E. Geotechnical Services During Construction	10

PLATES

Plate	1	Vicinity Map
Plate	2	Site Plan
Plate	3	Log of Vibracore
Plates and	4 5	Log of Cone Penetration Test
Plate	6	Soil Classification Chart
Plate	7	Cone Penetration Soil Behavior Type Legend

I. INTRODUCTION

This report presents the results of our geotechnical investigation for the Encinal Boat Launch Facility Renovation Project at 190 Central Avenue in Alameda, California. A vicinity map showing the approximate location of the site is presented on Plate 1. The existing topography and exploration locations are shown on the Site Plan, Plate 2. The project consists of replacing the existing dock float and adding a second dock, renovating and extending the boat ramp so that it is usable at extreme low tide, repaving the parking lot, replacing the restrooms, creating Americans with Disabilities Act (ADA) compliant access between the parking lot, restrooms and boat ramp, adding a fish cleaning station, and creating new lighting and signage.

Our scope of services was outlined in our proposal dated November 12, 2015. Our scope of services consisted of conducting a geotechnical investigation that included taking a vibracore sample beyond the toe of the existing ramp, performing a Cone Penetration Test (CPT) above the existing ramp, and developing conclusions and recommendations regarding geotechnical aspects of the project. The results of our geotechnical investigation are presented in this report.

II. FIELD EXPLORATION AND LABORATORY TESTING

We explored subsurface conditions on December 21, 2015 by taking one vibracore sample beyond the ramp to a depth of approximately 8 feet below the mudline and by pushing one CPT to a depth of approximately 60 feet below the ground surface. The approximate exploration locations are shown on the Site Plan, Plate 2. The vibracore was completed by Dixon Marine Services using a boat-mounted sampler. The CPT was completed by Gregg Drilling & Testing with a 30-ton truck-mounted CPT rig. Prior to pushing the CPT, the upper 5 feet of soil was hand augered to reduce the risk of damage to underground utilities. After pushing the CPT, the hole was backfilled with grout. We attempted to push another CPT near the top of the existing boat ramp, but were unable to hand auger the upper 5 feet of soil due to encountering obstructions. After attempting to hand auger in several locations and hitting obstructions in the upper 2 to 4 feet, we concluded that we could not push a CPT at the top of the existing boat ramp without significant risk of damaging the CPT probe.

Our engineers transported the vibracore sample to our laboratory and logged the materials. Although vibracoring partially remolds the sampled material, we used a torvane to evaluate the soil shear strength at various locations along the core. We selected samples from the core at varying depths for moisture content testing.

Soil descriptions and the moisture content data for the vibracore are shown on the Log of Vibracore, Plate 3. Our log of the soil encountered during the hand auger clearance of the upper 5 feet of the CPT is presented on Plate 4. The soil descriptions are presented in general accordance with the Soil Classification System presented on Plate 6. Laboratory test results are presented in the manner described by the Key to Test Data. The CPT data is shown on Plate 5. The CPT soil descriptions are in general accordance with the CPT Soil Behavior Type Legend, shown on Plate 7.

III. SITE CONDITIONS

A. Surface Conditions

The project site is located approximately ¼-mile south of Central Avenue at the end of a paved access road. A chain-link fence separates the eastern boundary of the boat launch site from the Encinal High School track and football field. An asphalt parking lot for the boat ramp is located north of the ramp. An approximately 1.5 mile-long breakwater is located southwest of the ramp. An unpaved area with trees is located northwest of the ramp. Along the west side of the ramp, three concrete guide piles spaced approximately 25 to 30 feet apart hold a floating dock in place. The floating dock is removed in the winter to prevent damage from southerly winds. A restroom is located approximately 100 feet north of the ramp. The shoreline adjacent to the ramp is faced with riprap.

The ramp itself is paved with concrete and slopes into San Francisco Bay at an inclination of approximately 15 percent. Design drawings for the ramp from 1981 show that it is approximately 93 feet long in horizontal distance. The top of the ramp is approximately Elevation 8.7 feet above the North American Vertical Datum of 1988 (NAVD 88). Unless noted otherwise, elevations in this report are based on NAVD 88. The bottom of the ramp in the design drawing is at approximately Elevation -5.3 feet. A bathymetric survey from 2013 shows that the ground surface at the bottom of the ramp is between Elevation -1 feet and -2 feet. The difference in elevation between the design drawings in 1981 and the bathymetric survey is likely due to sediment accumulating at the base of the ramp since the time of its construction. The 1981 design drawings show a 5-foot thick 8-foot long riprap revetment abutting the toe of the ramp.

North of the ramp, the ground slopes up at an approximately 7.5 percent slope for about 30 feet and then gradually matches the grade of the restroom and parking lot at approximately Elevation 12 feet.

B. Subsurface Conditions

The soil conditions at the CPT location consist of approximately 12 feet of loose sand fill underlain by about 3 feet of soft to medium stiff clay. The fill was most likely hydraulically placed. We conclude that the soft to medium stiff clay is Bay Mud. The Bay Mud is underlain by approximately 5 feet of loose to medium dense material that is inferred to be

sand, silty sand, sandy silt, and possibly some clayey silt. Beneath the 5 feet of loose to medium dense layer, beginning approximately 20 feet below existing grade, the CPT data indicates 18 feet of medium dense to dense sand, silty sand, and sandy silt. Below 38 feet, the CPT indicates predominantly dense to very dense sand to the bottom of the CPT, 60 feet below grade.

During the attempts to hand auger near the top of the existing launch ramp, we encountered poorly-graded sand and silty sand in the upper 4 feet with varying amounts of gravel and concrete chunks. Several hand auger holes were attempted near the top of the ramp, and each one encountered rocks or other obstructions at depths of 2 to 4 feet. These obstructions may be remnants of former shoreline protection or a dike used to contain the hydraulic fill during placement.

The soil conditions at the vibracore location consisted of approximately 7.5 feet of very soft and/or loose sediments including interbedded layers of high plasticity fat clay or elastic silt and silty sands. A fragment from an aluminum beer can was found in the vibracore approximately 5 feet below the top of the core and wood chips were encountered between about 5 to 6 feet below the top of the core. The soil encountered in the bottom 0.5 feet of the vibracore was medium dense silty sand. We interpret the medium dense sand at 7.5 feet deep as the base of the Bay Mud. The vibracore met refusal approximately 8 feet below the mudline. We judge that the upper 5.8 to 6.6 feet is recent sediment that accumulated since the ramp was initially constructed. The beer can fragment and wood chips are clear indications of recent origin. The wood chips may be remnants of the contractor's means and methods when constructing the existing ramp. The 0.7 feet of elastic silt and silty sand beneath the wood chips may be recent sediment, contractor-placed fill, or original subgrade that was disturbed during construction. We believe that the fat clay from 6.6 to 7.8 feet is Bay Mud that predated the existing ramp construction. The measured torvane readings on the disturbed vibracore sample indicated shear strengths in the fine grained soils ranging from 50 to 200 pounds per square foot (psf) with an average of approximately 100 psf.

IV. DISCUSSION AND CONCLUSIONS

A. General

Our project scope focused on the design criteria for the boarding dock guide piles and the foundation for the restroom. Our scope did not include addressing the existing conditions of the launch ramp, guide piles, or parking lot pavement. The primary concerns for the project are the likely liquefaction of the sand fills during a design-level earthquake and the driveability of the guide piles. These concerns and other considerations for design and construction of the project are discussed below.

B. Seismic Hazards

Soil liquefaction is a phenomenon in which loose- to medium-dense saturated granular soil undergoes reduction of internal strength as a result of increased pore water pressure generated by shear strains within the soil mass. This behavior is most commonly induced by strong groundshaking associated with earthquakes. The site has a high likelihood of undergoing liquefaction in a design-level earthquake. The liquefaction could cause several inches of settlement and could lead to ground failure. The foundation for the restrooms should be designed as a mat capable of spanning a lack of foundation support that extends from one end of the restroom to the other. The site could also undergo lateral spreading due to liquefaction, whereby a large-scale portion of the site would move laterally towards the bay. Lateral spreading would lead to complete failure of the ramp and improvements on site. We believe that it is not practical nor warranted to design the ramp or improvements for global ground failure due to lateral spreading.

An additional seismic hazard for this site is strong groundshaking. The structures should be designed to accommodate such groundshaking in accordance with existing codes. No known active faults pass through the site and we conclude that the risk of fault rupture is low.

The 2013 California Building Code (CBC) indicates that due to the liquefaction potential of the soils on-site, the site could be classified as Site Class F, requiring site-specific seismic design criteria. The code provides an exception to the requirement for site-specific response analysis for structures having fundamental periods of vibration equal to or less than 0.5 seconds and founded on liquefiable soils. We believe that the fundamental period of the

restroom structure is less than 0.5 seconds and thus a site-specific response analysis is unwarranted and inappropriate for this site. The proposed structures should be designed for accelerations based on Site Class D, a stiff soil profile.

The following seismic design criteria based on the 2013 CBC can be used for the project. The site coordinates from USGS maps are estimated to be: Latitude 37.7697 and Longitude -122.2910. From the USGS website calculator, the mapped acceleration parameters S_s and S_1 are 1.5 and 0.6, respectively.

C. Pile Driveability

We understand that additional or replacement guide piles may be installed as part of this project. The soil conditions consist of Bay Mud over silts and sands that generally increase in stiffness / density with depth. As the pile penetrates into the medium dense to dense sand, silty sand, and sandy silt layer that begins approximately 5 feet below the bottom of the Bay Mud layer, there is some risk of the pile meeting practical driving refusal before the design embedment is reached, depending on the method of pile installation. The likelihood of the pile meeting refusal increases substantially if it is driven into the dense to very dense sand layer encountered approximately 23 feet below the bottom of the Bay Mud layer.

Based on design drawings for the boat launch facility from 1981, we believe that the current guide piles on site are approximately 35 years old. We do not know the embedment depth of the existing piles. The piles appear to have remained vertical over the past 35 years and, to our knowledge, have not had significant problems. The current condition of the piles indicates that their embedment depth was sufficient to keep the pile functional under the loading applied over the past 35 years. Based on the functionality of the current guide piles, we believe that subsequent piles can be driven to an embedment depth that provides similar or better lateral load resistance.

V. RECOMMENDATIONS

A. Earthwork

1. Site Preparation

The site should be cleared and grubbed of surface and subsurface deleterious matter including trees, grasses, other vegetation and debris designated for removal. The site should be stripped to sufficient depth to remove vegetation and soil containing roots. Tree roots greater than 1-inch in diameter should be removed. Stripped and grubbed materials should be removed from the site and should not be used as fill.

If loose or soft materials are encountered, they should be excavated to expose firm soil and placed in accordance with the recommendations presented below. Debris and deleterious material encountered during grading should be removed from the site.

2. Fill Materials

Fill imported to the site should have a low expansion potential, which for this site should be defined as having a liquid limit (LL) less than 40 and plasticity index (PI) less than 15. Fill should be predominantly granular with 100 percent passing a 2-inch sieve and less than 30 percent passing the Number 200 sieve.

Aggregate base should meet the requirements for Caltrans Class 2 aggregate base.

Samples of fill material should be submitted to us for approval before importing to the site.

3. Compaction

Surfaces in areas to be filled or to support structures, pavements or improvements should be scarified to a depth of at least 8-inches or the full depth of shrinkage cracks, whichever is deeper. Although not anticipated, if shrinkage cracks extend below 12-inches, some excavation in addition to scarifying will be required to adequately moisture condition and compact soils. The scarified soil should be moisture conditioned to at least optimum moisture content and compacted to at least 95 percent relative compaction. ASTM test D-1557 should be used to establish the reference values for computing optimum moisture

content and relative compaction. If soft or yielding soils are present during subgrade preparation or fill compaction, they should be scarified, moisture conditioned and compacted or removed by excavating to expose firm soil.

Fill should be placed in lifts 8-inches or less in loose thickness and moisture conditioned to at least optimum moisture content. Moisture conditioning should be performed before compaction. Each lift should be methodically compacted to at least 95 percent relative compaction. Material that fails to meet the moisture or compaction criteria should be loosened by ripping or scarifying, moisture conditioned, and then recompact. After compaction, fills should not be allowed to dry out. This may require periodic sprinkling or covering with an impermeable barrier.

In pavement areas subject to vehicle traffic, the upper 6-inches of subgrade should be compacted to at least 95 percent relative compaction and rolled to provide a smooth, non-yielding surface. Subgrade soils should be proof-rolled before placing aggregate base. Proof-rolling should be performed with the heaviest available rubber-tired construction equipment and should be observed by the geotechnical engineer. Soft or pumping areas should be aerated or excavated and recompact.

Aggregate base should be placed in thin lifts no greater than 6-inches in loose thickness and in a manner that avoids segregation, moisture conditioned as necessary, and compacted to at least 95 percent relative compaction.

4. Utility Trenches

Utility trenches should be set back far enough from the structures so they will not affect the planned foundations. The utility lines should not extend down below an imaginary plane inclined at 2:1 (horizontal to vertical) down and away from the base of footings.

In the absence of local agency or utility company requirements, the following criteria for bedding and backfilling utility lines should be used. For pipes other than concrete storm drains, a bedding layer consisting of clean sand or fine gravel should be placed below and around pipes and extend at least 12-inches above their tops. The bedding thickness below the bottom of the pipe should be at least 3-inches. For concrete storm drains, the above bedding criteria may be modified by extending the sand or fine gravel bedding material only up

to the spring line of the pipe provided care is taken during placement and compaction of the fill around and above the pipe. Common fill may be used for trench backfill above the sand or fine gravel. Backfill materials should be placed and compacted as described above. Jetting should not be allowed for compacting backfill.

B. Mat Foundations

Mat foundations can be used for support of the new restrooms. The edges of the mat should be founded a minimum of 12-inches below the lowest adjacent finished grade and should be well reinforced. The mat should be designed for a complete loss of support beneath it, as described in the discussion and conclusions section.

The faces of shallow foundation excavations should be cut vertical. The foundation subgrade should be firm and free of water, debris, and loose or soft soils. The foundation excavations should be kept moist until concrete is placed. We should observe foundation excavations before reinforcing steel is placed.

Footings should be designed using allowable bearing pressures of 1,500 psf for dead plus sustained live loads and 2,000 psf for total loads including wind or seismic forces.

Resistance to lateral loads can be developed by friction at the base of the mat and passive pressures acting against the vertical faces of below-grade foundation elements. Frictional resistance on the base of foundation elements can be calculated using a frictional coefficient of 0.45 multiplied by the vertical dead load. An equivalent fluid weight of 350 pounds per cubic foot (pcf) may be used to calculate sustained passive resistance. These lateral resistance values do not include a factor of safety.

C. Guide Piles

The floating dock can be held in place with driven guide piles. Driven prestressed concrete piles and steel pipe piles are practical pile types that have been installed in marine applications. We recommend the piles be installed to a tip elevation of -25 feet or deeper. Below a tip elevation of about -15 feet, the piles may encounter dense sands. The pile driving contractor should select appropriate means and methods for driving piles into dense sands.

Lateral loads can be resisted by bending in the piles. Lateral resistance of the piles can be evaluated using the computer program LPILE 2013 by Ensoft.

Geotechnical parameters for use in LPILE are presented below, and may be used to analyze various conditions as needed for project design.

Table 1: LPILE Soil Parameters

Soil Layer	Elevation (feet)	LPILE Soil Type	Shear Strength C (psf)	Friction Angle Φ (deg)	Eff. Unit Weight (pcf)	Strain at 50% ϵ_{50}	Modulus K_i
	Mudline to -5	Disregard Lateral Resistance	-	-	-	-*	-*
1	-5 to -10	Soft Clay	100	0	18	0*	0*
2	-10 to -15	Sand	-	30	48	0*	0*
3	-15 and below	Sand	-	35	58	0*	0*

*We recommend using default values provided by the program for strain and modulus values which LPILE generates if a "0" value is entered.

D. Surface Drainage

Ground surfaces, including landscaped areas in the vicinity of structures and flatwork, should slope away from the structures and flatwork; no ponding of surface water should be allowed. The site should be graded to drain toward swales and/or into a storm drain system. Roofs should be provided with gutters and downspouts that discharge away from the buildings.

E. Geotechnical Services During Construction

Before construction, we should review project foundation and grading plans and specifications for conformance with the intent of our recommendations. During construction, we should observe and/or test the geotechnical aspects of grading and foundation construction including but not limited to subgrade preparation, placement and compaction of fill, and foundation excavations. If conditions are encountered during construction that are not consistent with those described herein, we should be contacted to review our recommendations and provide alternatives, if appropriate.

PLATES



0 1,500 feet
 1 inch = 1,500 feet

Encinal Boat Launch Facility
 190 Central Avenue
 Alameda, California

Vicinity Map

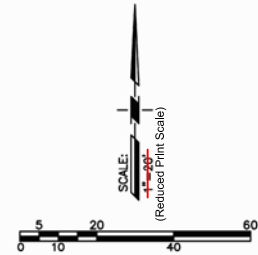
Hultgren - Tillis Engineers

Project No. 838.01

Plate No. 1

LEGEND

- △ SURVEY CONTROL POINT
- A ASPHALT SPOT ELEVATION
- CONC CONCRETE
- CLF CHAIN LINK FENCE
- D DIRT SPOT ELEVATION
- EDC EDGE OF CONCRETE
- EP EDGE OF PAVEMENT
- EW EDGE OF WATER
- GPOST GATE POST
- TBC TOP BACK OF CURB
- TOE TOE OF SLOPE
- TOP TOP OF SLOPE
- WD WOOD FENCE



TOPOGRAPHIC/BATHYMETRIC SURVEY

ENCINAL BOAT LAUNCH RAMP

A PORTION OF
RANCHO SAN ANTONIO
 T.2 S., R.4 W., M.D.M.
 ALAMEDA COUNTY, CALIFORNIA
~~SCALE: 1"=20'~~ **FEBRUARY 4, 2013**
 (Reduced Print Scale)

ANDREGG
GEOMATICS
 www.andregg.com
 800-400-7072

X:\Out\14286\130204kb\C302013_14286TPO--BATH.dwg

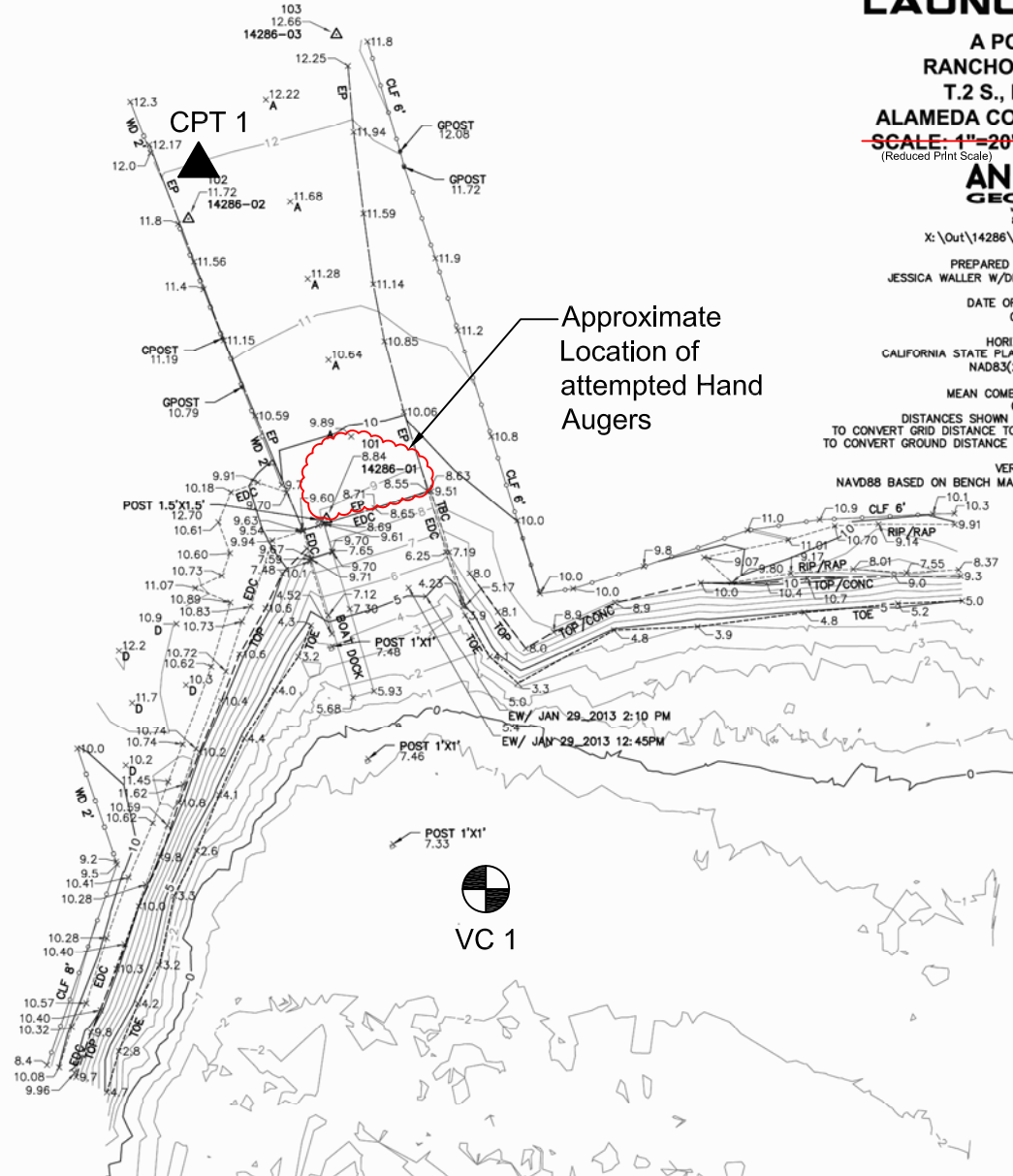
PREPARED AT THE REQUEST OF:
 JESSICA WALLER W/DEPT. OF BOATING & WATERWAYS

DATE OF GROUND SURVEY:
 01/29/2012

HORIZONTAL DATUM:
 CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE III
 NAD83(2010.00) CA HPGN

MEAN COMBINATION FACTOR (CF):
 0.99993396
 DISTANCES SHOWN HEREON ARE GRID DISTANCES
 TO CONVERT GRID DISTANCE TO GROUND DISTANCE ... DIVIDE BY THE CF
 TO CONVERT GROUND DISTANCE TO GRID DISTANCE ... MULTIPLY BY THE CF

VERTICAL DATUM:
 NAVD88 BASED ON BENCH MARK "941 4750 TIDAL 7" ELEV. 9.12 FEET



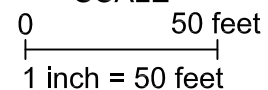
Approximate Location of Vibracore



Approximate Location of CPT



SCALE




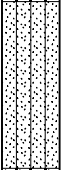
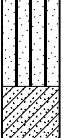

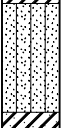

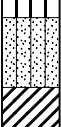



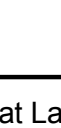
Encinal Boat Launch Facility
 190 Central Avenue
 Alameda, California

Site Plan

Hultgren - Tillis Engineers

Project No. 838.01

Plate No. 2

Depth in Feet	Samples Type/ Recovery	Blow Count	Graphic	USCS	Water Levels	Date : 12/21/2015 Drilling Method : Vibracore Elevation (Feet) : -2 (NAVD88) Latitude : 37.76922 Longitude : -122.29067	Torvane (tsf)	Pocket Pen (tsf)	Moisture Content (%)	Dry Density (pcf)	Other Laboratory Tests
						Material Description					
1				MH		Elastic Silt (MH), black, saturated, very soft, with organic odor	0.026		47		
2				SM		Silty Sand (SM), dark gray, saturated, loose			29		
						Shell pieces					
3				MH		Sandy Elastic Silt (MH), dark gray, saturated, very soft	0.1		34		
				SC		Clayey Sand (SC), dark gray, saturated, loose					
4				CH		Fat Clay (CH), dark gray, saturated, very soft	0.04 0.06		44		
5				SM		Silty Sand (SM), very dark gray, saturated, loose					
				CH		Beer can fragment	0.05		52		
						Fat Clay with Sand (CH), dark gray, saturated, very soft, with trace sand					
6				MH		Wood chips	0.06				
				SM		Elastic Silt (MH), gray, saturated, very soft					
						Silty Sand (SM), dark gray, saturated, loose to medium dense, with shell pieces					
7				CH		Fat Clay (CH), dark gray, saturated, very soft	0.09 0.08		76		
8				SM		Silty Sand (SM), gray, saturated, medium dense					
Bottom of boring at 8 feet											
Encinal Boat Launch Facility 190 Central Avenue Alameda, California						Log of Vibracore (Page 1 of 1)					
Hultgren - Tillis Engineers						Project No. 838.01			Plate No. 3		

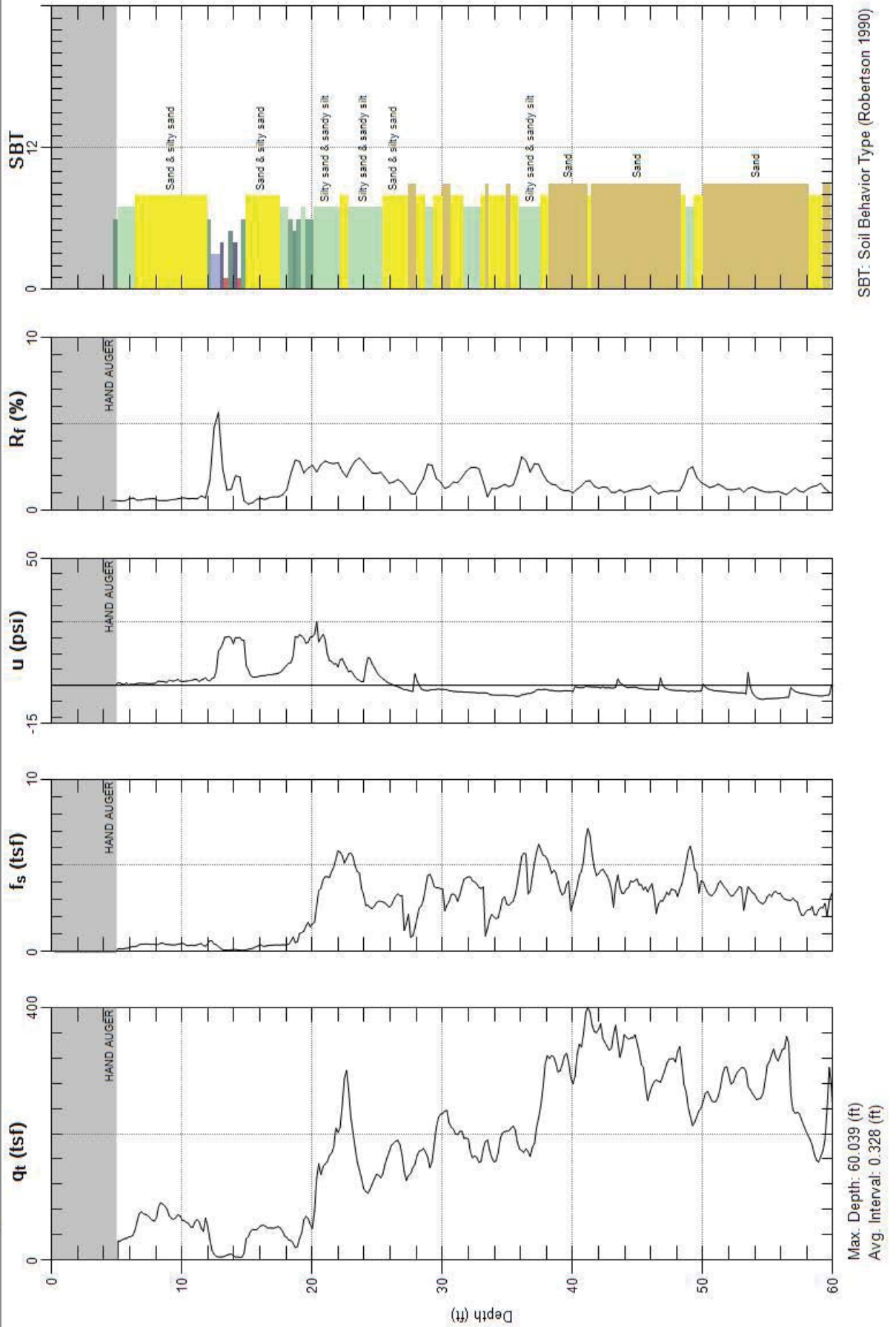
Depth in Feet	Samples Type/ Recovery	Blow Count	Graphic	USCS	Water Levels	Date : 12/21/2015 Drilling Method : Hand Auger Elevation (Feet) : 12 (NAVD88) Latitude : 37.76976 Longitude : -122.29098	Torvane (tsf)	Pocket Pen (tsf)	Moisture Content (%)	Dry Density (pcf)	Other Laboratory Tests
						Material Description					
1				SP		Asphalt (2-inches)					
2		Poorly-Graded Sand (SP), yellow brown, moist to wet, loose									
3											
4											
5											
Bottom of hand auger at 5 feet No groundwater encountered											
Encinal Boat Launch Facility 190 Central Avenue Alameda, California						Log of CPT (Upper 5 feet) (Page 1 of 1)					
Hultgren - Tillis Engineers						Project No. 838.01			Plate No. 4		

























HULTGREN-TILLIS

Latitude: 37.76976
Longitude: -122.29098

Elevation: +12 (NAVD 88)
Date: 12/21/2015 09:34



MAJOR DIVISIONS				GROUP NAMES	
COARSE GRAINED SOILS MORE THAN 50% RETAINED ON NO. 200 SIEVE	GRAVELS MORE THAN 50% OF COARSE FRACTION IS RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS WITH LESS THAN 5% FINES	GW		WELL GRADED GRAVEL
			GP		POORLY GRADED GRAVEL
		GRAVELS WITH OVER 12% FINES	GM		SILTY GRAVEL
			GC		CLAYEY GRAVEL
	SANDS 50% OR MORE OF COARSE FRACTION PASSES NO. 4 SIEVE	CLEAN SANDS WITH LESS THAN 5% FINES	SW		WELL GRADED SAND
			SP		POORLY GRADED SAND
		SANDS WITH OVER 12% FINES	SM		SILTY SAND
			SC		CLAYEY SAND
FINE GRAINED SOILS 50% OR MORE PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML		SILT
			CL		LEAN CLAY
			OL		ORGANIC CLAY, ORGANIC SILT
	SILTS AND CLAYS LIQUID LIMIT 50 OR MORE		MH		ELASTIC SILT
			CH		FAT CLAY
			OH		ORGANIC CLAY, ORGANIC SILT
HIGHLY ORGANIC SOILS		Pt		PEAT	
UNIFIED SOIL CLASSIFICATION SYSTEM- ASTM D 2487					
<div><div><div>S - SPT</div><div>M - 2.5 inch</div><div>C - 3.0 inch</div><div>T - Shelby Tube</div><div>B - Bag</div></div><div><div> - Water Level at Time of Drilling</div><div> - Water Level after Drilling (with date measured)</div><div>Consol - Consolidation</div><div>Gs - Specific Gravity</div><div>LL - Liquid Limit (%)</div><div>PI - Plasticity Index (%)</div><div>TxUU - Shear Strength (psf) - Unconsolidated Undrained Triaxial Shear</div><div>TxCU - Shear Strength (psf) - Consolidated Undrained Triaxial Shear</div><div>UC - Compressive Strength (psf) - Unconfined Compression</div></div><div><div>P - Push</div><div>Perm - Permeability</div><div>Sieve - Particle Size Analysis</div><div>VS - Laboratory Vane Shear (psf)</div><div>-200 - % Passing No. 200 Sieve</div></div></div>					
KEY TO TEST DATA					
Encinal Boat Launch Facility 190 Central Avenue Alameda, California			Soil Classification Chart		
Hultgren - Tillis Engineers		Project No. 838.01		Plate No. 6	

Cone Penetration Test Data & Interpretation

The Cone Penetration Test (CPT) data collected are presented in graphical and electronic form in the report. The plots include interpreted Soil Behavior Type (SBT) based on the charts described by Robertson (1990). Typical plots display SBT based on the non-normalized charts of Robertson et al (1986). For CPT soundings deeper than 30m, we recommend the use of the normalized charts of Robertson (1990) which can be displayed as SBTn, upon request. The report also includes spreadsheet output of computer calculations of basic interpretation in terms of SBT and SBTn and various geotechnical parameters using current published correlations based on the comprehensive review by Lunne, Robertson and Powell (1997), as well as recent updates by Professor Robertson (Guide to Cone Penetration Testing, 2015). The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg Drilling & Testing Inc. does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software. Some interpretation methods require input of the groundwater level to calculate vertical effective stress. An estimate of the in-situ groundwater level has been made based on field observations and/or CPT results, but should be verified by the user.

A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Note that it is not always possible to clearly identify a soil type based solely on q_t , f_s , and u_2 . In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the correct soil behavior type.

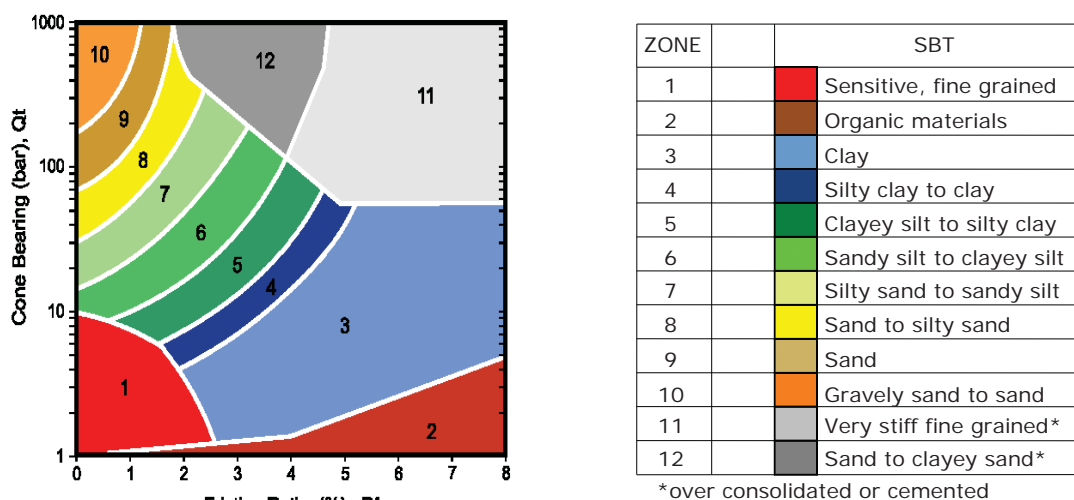


Figure SBT (After Robertson et al., 1986) – Note: Colors may vary slightly compared to plots

APPENDIX B:

PROJECT STABILIZATION AGREEMENT

PROJECT STABILIZATION AGREEMENT

FOR THE CITY OF ALAMEDA

PREAMBLE

This Agreement is made and entered into on this date, January 19, 2017, by and between the city of Alameda ("City" or "Owner") together with contractors and/or subcontractors who shall become signatory to this Agreement by signing the "Agreement To Be Bound" (Addendum "A"), ("Contractor/Employer(s)"), and the Building and Construction Trades Council of Alameda County, AFL-CIO ("Council") and its affiliated Local Unions signatory hereto ("Union(s)").

The purpose of this Agreement is to promote efficiency of construction operations during construction of the Project (as defined in Section 1.11 below) by providing for the orderly and peaceful settlement of labor disputes and grievances without strikes, work stoppages or lockouts, thereby promoting the public interest in assuring the timely and economical completion of the Project.

RECITALS

WHEREAS, the timely and successful completion of the Project is of the utmost importance to the city of Alameda; and

WHEREAS, large numbers of workers of various skills will be required in the performance of the construction work, including those to be represented by the Union(s) signatory to this Agreement employed by Contractor/Employer(s) and subcontractors who are also signatories to this Agreement; and

WHEREAS, it is recognized that on a project of this magnitude with multiple contractors and bargaining units on the job site at the same time over an extended period of time, the potential for work disruption is substantial without an overriding commitment to maintain continuity of work; and

WHEREAS, the interests of the general public, the city of Alameda, the Union(s) and Contractor/Employer(s) would be best served if the construction work proceeded in an orderly manner without disruption because of strikes, sympathy strikes, work stoppages, picketing, lockouts, slowdowns or other interferences with work; and

WHEREAS, the Contractor/Employer(s) and the Union(s) desire to mutually establish and stabilize wages, hours and working conditions for the workers employed on the Project by the Contractor/Employer(s), and further, to encourage close cooperation among the

Contractor/Employer(s) and the Union(s) so that a satisfactory, continuous and harmonious relationship will exist among the parties to this Agreement; and

WHEREAS, the parties agree that one of the primary purposes of this Agreement is to avoid the tensions that might arise on the Project if union and non-union workers of different employers were to work side by side on the Project thereby leading to labor disputes that could delay completion of the Project; and

WHEREAS, this Agreement is not intended to replace, interfere with, abrogate, diminish or modify existing local or national collective bargaining agreements in effect during the duration of the Project, insofar as a legally binding agreement exists between the Contractor/Employer(s) and the affected Union(s), except to the extent that the provisions of this Agreement are inconsistent with said collective bargaining agreements, in which event, the provisions of this Agreement shall prevail; and

WHEREAS, the contract(s) for construction work on the Project will be awarded in accordance with the applicable provisions of the California Public Contract Code; and

WHEREAS, the city of Alameda desires to provide construction training and employment opportunities for residents of the city of Alameda and Alameda County through apprentice and pre-apprentice programs; and

WHEREAS, the parties to this Agreement pledge their full good faith and trust to work towards a mutually satisfactory completion of the Project;

NOW, THEREFORE, IT IS AGREED BETWEEN AND AMONG THE PARTIES HERETO, AS FOLLOWS:

ARTICLE 1

DEFINITIONS

- 1.1 "City" means the city of Alameda.
- 1.2 "Agreement" means this Project Stabilization Agreement and all attached hereto Addenda.
- 1.3 "Agreement To Be Bound" means the document, as set forth in Addendum A hereto, that formally binds the Contractor/Employer(s) to comply with all the terms and conditions of this Agreement and that operates as a pre-condition to performing work on the Project.
- 1.4 "Apprentice" means an individual registered and participating as an apprentice in a Joint Labor/Management Apprenticeship Program approved by the State of California, Department of Industrial Relations, Division of Apprenticeship Standards.

- 1.5 "Completion" shall mean the date upon which the written notice of completion has been issued for a specific building, phase or project constructed under this Agreement.
- 1.6 "Construction Contract" means the public works or improvement contract(s) which will be awarded by the City and which are necessary to complete the Project, including subcontracts at any tier.
- 1.7 "Contractor/Employer(s)" means any individual, firm, partnership or corporation, or combination thereof, including joint ventures, and their successors and assigns that is an independent business enterprise and enters into a contract with the City or its Project Manager or any of its contractors or subcontractors at any tier, with respect to the construction of any part of the Project under contract terms and conditions approved by the City and which incorporate this Agreement.
- 1.8 "Coordinator" means that individual or entity designated and authorized by the City to provide those administrative services required by this Agreement.
- 1.9 "Council" means the Building and Construction Trades Council of Alameda County, AFL-CIO.
- 1.10 "Master Labor Agreement" ("MLA" or "Schedule A") means the Master Collective Bargaining Agreement of each craft Union(s) signatory to this Agreement listed in Exhibit A to this Agreement and incorporated herein by reference, a copy of which shall be made available to the City upon request.
- 1.11 "Project" means those Construction Contracts for individual public works, within the City of Alameda with a total value (as estimated by the City) of one million dollars (\$1,000,000.00) or more. Specifically excluded from this definition of Project and, therefore, the scope of this Agreement are multi-year contracts that have already been let by the City. The City and the Council may mutually agree in writing to add additional components to the Project Scope of Work to be covered under this Agreement.
- 1.12 "Project Manager" means the person or persons or business entity designated by City or private developer having control over a public works project to oversee all phases of construction on the Project.
- 1.13 "Trust Fund(s)" means an agreement for an established vacation, pension or other form of deferred compensation plan, apprenticeship and health benefit funds established by an applicable Master Labor Agreement as set forth in Section 17.1.
- 1.14 "Union(s)" means the Building and Construction Trades Council of Alameda County, AFL-CIO and any affiliated Labor Organization signatory to this Agreement, acting on their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed this Agreement.

ARTICLE 2

SCOPE OF AGREEMENT

- 2.1 The City will apply this Agreement as a contract specification to the award of all public works construction contracts on the Project for Covered Work as specifically defined under Article 2 of this Agreement. This Agreement does not apply to any private development projects. In the event that the City is made aware that this Agreement or portions thereof are inconsistent with the terms and conditions of any grant, loan, or contract with any Federal or State agency or with the instructions or directions of an authorized representative of a Federal or State agency regarding the requirements of any such grant, loan, or contract, the City shall notify the Council. Within seven (7) days of notification, the parties shall meet and confer to attempt to modify the Agreement to avoid forfeiture of any funding or otherwise resolve the issue. Should the parties be unable to come to agreement, the Agreement or any inconsistent provision shall be subject to resolution by the grievance arbitration procedures set forth in Article 11. The foregoing notwithstanding, if the granting agency determines that the resolution of such grievance procedure will result in the forfeiture of material grant funds (meaning an amount that would threaten viability of the project), then the Agreement may be modified or terminated in order to avoid the forfeiture.
- 2.2 Parties: The Agreement shall apply and is limited to all Contractor/Employer(s) performing work for the Project (including subcontractors at any tier), the City, the Council and the Union(s) signatory to this Agreement, acting on their own behalf and on behalf of their respective affiliates and member organizations whose names are subscribed hereto and who have through their officers executed this Agreement.
- 2.3 Covered Work: This Agreement covers, without limitation, all site preparation, surveying, construction, alteration, demolition, installation, improvement painting or repair of buildings, structures and other works, and related activities for the Project, including geotechnical and exploratory drilling, temporary HVAC, and landscaping and temporary fencing that is within the craft jurisdiction of one of the Union(s) and which is directly or indirectly part of the Project, including, without limitation to the following examples, pipelines (including those in linear corridors built to serve the project), pumps, pump stations, start-up, and modular furniture installation. On-site work includes work done for the Project in temporary yards or areas adjacent to the Project, and at any on-site or off-site batch plant constructed solely to supply materials to the Project. This scope of work includes all on-site soils and materials testing and inspection where such testing and inspection is a classification in which a prevailing wage determination has been published.
- 2.4.1 This Agreement shall apply to any start-up, calibration, commissioning, performance testing, repair, operational revisions to systems and/or subsystems performed after Completion if it is within the scope of the contract for public work unless it is performed by City employees.

- 2.4.2 This Agreement covers all on-site fabrication work over which the City, Contractor/Employer(s) or subcontractor(s) possess the right of control (including work done for the Project in any temporary yard or area established for the Project). Additionally, it is agreed hereby that this Agreement covers any off-site work, including fabrication work necessary for the Project defined herein, that is covered by a current MLA or local addenda to a National Agreement of the applicable Union(s) that is in effect as of the execution date of this Agreement.
- 2.4.3 The furnishing of supplies, equipment or materials which are stockpiled for later use shall not be covered by this Agreement. However, construction trucking work, such as the delivery of ready-mix, asphalt, aggregate, sand or other fill material which are incorporated into the construction process as well as the off-hauling of debris and excess fill, material and/or mud, shall be covered by the terms and conditions of this Agreement, to the fullest extent provided by law and by prevailing wage determinations of the California Department of Industrial Relations. Contractor/Employer(s), including brokers, of persons providing construction trucking work shall provide certified payroll records to the City within ten (10) days of written request or as required by bid specifications.
- 2.4.4 It is agreed that the Contractor shall require all contractors of whatever tier who have been awarded contracts for work covered by this Agreement, to accept and be bound by the terms and conditions of this Project Agreement by executing the Agreement to be Bound (Attachment A) prior to commencing work. The Project Manager and/or Coordinator shall assure compliance with this Agreement by the Contractors. It is further agreed that, where there is a conflict, the terms and conditions of this Project Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except work covered by the Agreement within the following craft jurisdictions shall be performed under the terms of their National Agreements as follows: National Agreement of Elevator Constructors, National Transient Lodge (NTL) Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, and all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, except that Articles 5, 6, and 11 of this Agreement shall prevail and be applied to such work. It is understood that this is a self-contained, stand alone, Agreement and that by virtue of having become bound to this Project Agreement, neither the Project Contractor/Manager nor the Contractors will be obligated to sign any other local, area, or national agreement.
- 2.5 The on-site installation or application of all items shall be performed by the craft having jurisdiction over such work as set forth under the provisions of this Agreement; provided, however, it is recognized that installation of specialty items which may be furnished by the owner of the Project or a contractor shall be performed by construction persons employed under this Agreement who may be directed by other personnel in a supervisory role.

- 2.6 After installation by the Contractor/Employer(s) and upon Completion, it is understood, the City reserves the right to perform start-up, operation, repair, maintenance or revision of equipment or systems with employees of the City. If required, the service representative may make a final check and may direct workmen on site to make any necessary repairs to protect the terms of a manufacturer's guarantee or warranty prior to start-up of a piece of equipment.
- 2.7 It is expressly agreed and understood by the parties hereto that the City shall have the right to purchase material and equipment from any source, except where limited by this Agreement, and the craftspersons will handle and install such material and equipment.
- 2.8 Exclusions. The following shall be excluded from the scope of this Agreement:
- 2.8.1 The Agreement is not intended to, and shall not affect or govern the award of public works contracts by the City which are not included in the Project.
- 2.8.2 The Agreement shall not apply to a Contractor/Employer(s)' non-construction craft employees, including, but not limited to, executives, managerial employees, engineering employees and supervisors above the level of General Foreman or Senior General Foreman (except those covered by existing MLAs), staff engineers or other professional engineers, administrative and management.
- 2.8.3 This Agreement shall not apply to any work performed on or near or leading to the site of work covered by this Agreement that is undertaken by state, county, city or other governmental bodies or their contractors; or by public or private utilities or their contractors.
- 2.8.4 Off-site maintenance of leased equipment and on-site supervision of such work;
- 2.8.5 The City shall not be required to comply with this Agreement for any work performed with its own forces as permitted by the City Charter, City Codes or Ordinances, the California Uniform Construction Cost Accounting Act, Public Contract Code and Education Code, as applicable.
- 2.9 Award of Contracts: It is understood and agreed that the City shall, for the award of contracts for public works, have the absolute right to select the bidder with the lowest responsive, responsible bid for the award of contracts under this Agreement. The bidder need only be willing, ready and able to execute and comply with this Agreement.

ARTICLE 3

EFFECT OF AGREEMENT

- 3.1 By executing the Agreement, the Union(s) and the City agree to be bound by each and all of the provisions of the Agreement.

- 3.2 By accepting the award of a construction contract for the Project, whether as contractor or subcontractor, the Contractor/Employer(s) agrees to be bound by each and every provision of the Agreement and agrees that it will evidence its acceptance prior to the commencement of work by executing the Agreement To Be Bound in the form attached hereto as Addendum A.
- 3.3 At the time that any Contractor/Employer(s) enters into a subcontract with any subcontractor providing for the performance of a construction contract, the Contractor/Employer(s) shall provide a copy of this Agreement to said subcontractor and shall require the subcontractor as a part of accepting an award of a construction subcontract to agree in writing to be bound by each and every provision of this Agreement prior to the commencement of work. The obligations of a Contractor/Employer(s) may not be evaded by subcontracting.
- 3.4 Each Contractor/Employer(s) shall give written notice to the Union(s) of any subcontract involving the performance of work covered by this Agreement within either seven (7) days of entering such subcontract or before such Contractor/Employer(s) commences work on the Project, whichever occurs first. Such notice shall specify the name, address, phone number, and the California Contractor State License Board (CSLB) license number and motor carrier permit number, and DIR registration number, of the Contractor/Employer(s). Written notice at a Pre-Job Conference shall be deemed written notice under this provision for those Contractor/Employer(s) listed at the Pre-Job only.
- 3.5 This Agreement shall only be binding on the signatory parties hereto and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such party. Each Contractor/Employer(s) shall alone be liable and responsible for its own individual acts and conduct and for any breach or alleged breach of this Agreement. Any dispute between the Union(s) and the Contractor/Employer(s) respecting compliance with the terms of the Agreement shall not affect the rights, liabilities, obligations and duties between the signatory Union(s) and other Contractor/Employer(s) party to this Agreement.
- 3.6 The provisions of this Agreement, including MLA's, shall apply to the work covered by this Agreement, notwithstanding the provisions of any other local, area and/or national agreements which may conflict with or differ from the terms of this Agreement. Where a subject covered by the provisions of this Agreement is also covered by a MLA, the provisions of this Agreement shall prevail. Where a subject is covered by the provisions of a MLA and is not covered by this Agreement, the provisions of the MLA shall prevail.
- 3.7 (a) With regard to any Contractor/Employer(s) that is independently signed to any MLA, this Project Stabilization Agreement shall in no way supersede or prevent the enforcement of any subcontracting clause contained in such MLA, except as specifically set forth in subsection (b) of this Section 3.7. Any such subcontracting clause in an MLA shall remain and be fully enforceable between each craft union and its signatory employers, and no provision of this Project Stabilization Agreement shall be interpreted and/or applied in any

manner that would give this Project Stabilization Agreement precedence over subcontracting obligations and restrictions that exist between craft unions and their respective signatory employers under an MLA, except as specifically set forth in subsection (b) of this Section 3.7.

- (b) If a craft union (hereafter "Aggrieved Union") believes that an assignment of work on this Project has been made improperly by a contractor or subcontractor, even if that assignment was as a result of another craft union's successful enforcement of the subcontracting clause in its MLA, as permitted by subsection (a) of this Section 3.7, the Aggrieved Union may submit a claim under the jurisdictional resolution process contained in Article 6 of this PLA, and the decision rendered as part of that process shall be enforceable to require the contractor or subcontractor that made the work assignment to assign that work prospectively to the Aggrieved Union. An award made to a craft union under the subcontracting clause of its MLA, as permitted pursuant to Section 3.7 (a) of this Article, shall be valid and fully enforceable by that craft union unless it conflicts with a jurisdictional award made pursuant to this Agreement. If the award made under the MLA conflicts with the jurisdictional award, the award of any damages under the former shall be null and void ab initio.

ARTICLE 4

RELATIONSHIP BETWEEN PARTIES

- 4.1 This Agreement shall only be binding on the signatory parties hereto, and shall not apply to parents, affiliates, subsidiaries, or other ventures of any such party.
- 4.2 Each Contractor/Employer(s) shall alone be liable and responsible for its own individual acts and conduct and for any breach or alleged breach of this Agreement. Any alleged breach of this Agreement by a Contractor/Employer(s) or any dispute between the Union(s) and the Contractor/Employer(s) respecting compliance with the terms of this Agreement, shall not affect the rights, liabilities, obligations and duties between the signatory Union(s) and each of the other Contractor/Employer(s), party to this Agreement.
- 4.3 It is mutually agreed by the parties that any liability of a Union(s) shall be several and not joint. Any alleged breach of this Agreement by a signatory Union(s) shall not affect the rights, liabilities, obligations and duties between the Contractor/Employer(s) and the other Union(s) party to this Agreement.
- 4.4 It is recognized by the parties to this Agreement that the Contractor/Employer(s) are acting only on behalf of said Contractor/Employer(s), and said Contractor/Employer(s) have no authority, either expressed, implied, actual, apparent or ostensible, to speak for or bind the City.

ARTICLE 5

NO STRIKES - NO LOCKOUTS

- 5.1 The Union(s), the City and Contractor/Employer(s) covered by the Agreement agree that for the duration of the Project:
- 5.1.1 There shall be no strikes, sympathy strikes, work stoppages, picketing, hand billing or otherwise advising the public that a labor dispute exists, or slowdowns of any kind, for any reason, by the Union(s) or employees employed on the Project, at the job site of the Project or at any other facility of the City because of a dispute on the Project. Disputes arising between the Union(s) and Contractor/Employer(s) on other City projects are not governed by the terms of the Agreement or this Article.
 - 5.1.2 As to employees employed on the Project, there shall be no lockout of any kind by a Contractor/Employer(s) covered by the Agreement.
 - 5.1.3 If a master collective bargaining agreement expires before the Contractor/Employer(s) completes the performance of the Construction Contract and the Union(s) or Contractor/Employer(s) gives notice of demands for a new or modified master collective bargaining agreement, the Union(s) agrees that it will not strike on work covered under this Agreement and the Union(s) and the Contractor/Employer(s) agree that the expired master collective bargaining agreement shall continue in full force and effect for work covered under this Agreement until a new or modified master collective bargaining agreement is reached. If the new or modified master collective bargaining agreement provides that any terms of the master collective bargaining agreement shall be retroactive, the Contractor/Employer(s) agrees to comply with any retroactive terms of the new or modified master collective bargaining agreement which are applicable to employees who were employed on the projects during the interim with retroactive payment due within seven (7) days of the effective date of the modified Master Agreement.
 - 5.1.4 Withholding employees for failure of a Contractor/Employer(s) to tender timely Trust Fund(s) contributions as required in accordance with Article 16 and/or for failure to timely meet its weekly payroll is not a violation of this Article 5; however, the Union(s) shall give the affected Contractor/Employer(s), the Coordinator and the City written notice seventy-two (72) hours prior to the withholding of employees when failure to tender Trust Fund(s) contributions has occurred. There shall be twenty-four (24) hours notice when failure to meet weekly payroll has occurred or when paychecks are determined to be nonnegotiable by a financial institution normally recognized to honor such paychecks.

Should a Contractor/Employer(s) performing work on this Project be delinquent in the payment of Trust Fund(s) contributions required under this Agreement, the

Union(s) may request that the general Contractor/Employer(s) issue joint checks payable to the Contractor/Employer(s) and the appropriate employee benefit Trust Fund(s), on behalf of the employee(s) until such delinquencies are satisfied. Any Trust Fund(s) claiming that a Contractor/Employer(s) is delinquent in its fringe benefit contributions to the Trust Fund(s) will provide written notice of the alleged delinquency to the affected Contractor/Employer(s), with copies to the General Contractor/Employer(s), the Coordinator and the City. The notice will indicate the amount of delinquency asserted and the period that the delinquency covers. It is agreed, however, with respect to Contractor/Employer(s) delinquent in trust or benefit contribution payments, that nothing in this Agreement shall affect normal contract remedies available under the MLAs. If the General Contractor/Employer(s) is delinquent in the payment of Trust Fund(s) contributions for covered work performed on this project, the General Contractor/Employer(s) agrees that the affected Trust Fund(s) may place the City on notice of such delinquencies and the General Contractor/Employer(s) further agrees that the City may issue joint checks to the General Contractor/Employer(s) and the Trust Fund(s), on behalf of the employee(s) until the delinquency is satisfied.

- 5.2 Expedited Arbitration: Any party to this Agreement shall institute the following procedure, prior to initiating any other action at law or equity, when a breach of this Article is alleged to have occurred:
- 5.2.1 A party invoking this procedure shall notify Bob Hirsch, as the permanent Arbitrator, or, Barry Winograd, as the alternate Arbitrator under this procedure. In the event that the permanent Arbitrator is unavailable at any time, the alternate will be contacted. If neither is available, then a selection shall be made from the list of Arbitrators in Article 11.2.2, Step 5. Should either the permanent or the alternate arbitrator listed above no longer work as a labor arbitrator, the City and the Council shall mutually agree to a replacement. Notice to the Arbitrator shall be by the most expeditious means available, with notices by facsimile, email or telephone to the Coordinator, the City and the party alleged to be in violation, and to the Council and involved local Union(s) if a Union(s) is alleged to be in violation.
 - 5.2.2 Upon receipt of said notice, the Coordinator will contact the designated Arbitrator named above or his alternate who will attempt to convene a hearing within twenty-four (24) hours if it is contended that the violation still exists.
 - 5.2.3 The Arbitrator shall notify the parties by facsimile, email or telephone of the place and time for the hearing. Said hearing shall be completed in one session, which, with appropriate recesses at the Arbitrator's discretion, shall not exceed twenty-four (24) hours unless otherwise agreed upon by all parties. A failure of any party to attend said hearings shall not delay the hearing of evidence or the issuance of an award by the Arbitrator.

- 5.2.4 The sole issue at the hearing shall be whether or not a violation of Article 5, Section 5.1.1 of the Agreement has occurred. The Arbitrator shall have no authority to consider any matter of justification, explanation or mitigation of such violation or to award damages, which issue is reserved for court proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without a written opinion. If any party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with or enforcement of the award. The Arbitrator may order cessation of the violation of this Article and other appropriate relief and such award shall be served on all parties by hand or certified mail upon issuance.
- 5.2.5 Such award may be enforced by any Court of competent jurisdiction upon the filing of this Agreement and all other relevant documents referred to above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other party. In the proceeding to obtain a temporary order enforcing the Arbitrator's award as issued under Section 5.2.4 of this Article, all parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any party's right to participate in a hearing for a final order or enforcement. The Court's order or orders enforcing the Arbitrator's award shall be served on all parties by hand or delivered by certified mail.
- 5.2.6 Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure, or which interfere with compliance, are waived by the parties.
- 5.2.7 The fees and expenses of the Arbitrator shall be divided equally between the party instituting the arbitration proceedings provided in this article and the party alleged to be in breach of its obligation under this article.

ARTICLE 6

WORK ASSIGNMENTS AND JURISDICTIONAL DISPUTES

- 6.1 The assignment of Covered Work will be solely the responsibility of the Contractor/Employer(s) performing the work involved and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.
- 6.2 All jurisdictional disputes on this Project between or among the Union(s) and the Contractor/Employer(s), parties to this Agreement, shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department, or any other plan or method of procedure that may be adopted in the future by the Building

and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractor/Employer(s) and Union(s) parties to this Agreement.

6.2.1 If a dispute arising under this Article involves the Northern California Carpenters Regional Council or any of its subordinate bodies, an Arbitrator shall be chosen by the procedures specified in Article V, Section 5, of the Plan from a list composed of John Kagel, Thomas Angelo, Robert Hirsch and Thomas Pagan and the Arbitrator's hearing on the dispute shall be held at the offices of the California State Building and Construction Trades Council in Sacramento, California, within fourteen (14) days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan.

6.3 All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor/Employer(s)' assignment shall be adhered to until the dispute is resolved. Individuals violating this Section shall be subject to immediate discharge.

6.4 Each Contractor/Employer(s) shall conduct a Pre-Job Conference with the Council prior to commencing Covered Work. The Primary Employer, the Coordinator and the City will be advised in advance of all such conferences and may participate if they wish. Pre-job conferences for different Contractor/Employer(s) may be held together.

ARTICLE 7

COORDINATOR

7.1 The City will designate a Coordinator, who will be responsible for the administration and application of this Agreement.

7.2 The Coordinator shall endeavor to facilitate harmonious relations between the Contractors and Unions signatory hereto and will represent the City at the Pre-Job Conference(s) called for in Article 8 and the A Joint Administrative Committee called for in Article 20. The Coordinator shall not be responsible for the acts of the Contractor/Employer(s) or Unions signatory hereto, and will not be a party to any arbitration or litigation arising out of this Agreement.

ARTICLE 8

PRE-JOB CONFERENCES

8.1 Pre-Job Conference Timing and Attendees:

8.1.1 The Contractor shall hold and conduct a mandatory pre-job conference with representatives of all involved sub-contractors and the Unions at a location mutually agreeable to the Council at least twenty-one (21) calendar days prior to:

(a) The commencement of any Covered Work, as defined in section 2.3 above; and

(b) The commencement of Covered Work on each subsequently awarded Construction Contract.

8.1.2 The conference shall be attended by a representative of each participating Contractor, each affected Union, and the Council. The Owner may attend at its discretion.

8.2 Pre-Job Conference Information.

8.2.1 The information to be presented at the pre-job conference will consist of:

- (a) A listing of each Contractor's scope of work;
- (b) The Contractor's craft assignments;
- (c) The estimated number of craft workers required to perform the work;
- (d) Transportation and parking arrangements, if any;
- (e) The estimated start and completion dates of the work;
- (f) Identification of any pre-fabricated materials;
- (g) All workforce projection information required under Article 14 of this Agreement; and
- (h) A listing of all specialty work to be performed by the employees of an equipment vendor or manufacturer to protect the warranty on such equipment, and a demonstration by enumeration of specific tasks why such work cannot be performed by Covered Employees.

8.3 Work will not commence for any Contractor until an **Agreement to be Bound** has been signed and submitted by a duly authorized representative of the Contractor to the applicable Union(s) and the Council.

ARTICLE 9

MANAGEMENT RIGHTS

9.1 Consistent with the Schedule A Agreements, the Contractor/Employer(s) shall retain full and exclusive authority for the management of their operations, including the right to direct their work force in their sole discretion. No rules, customs or practices shall be permitted or observed which limit or restrict production, or limit or restrict the working efforts of employees except that lawful manning provisions in the MLA shall be recognized.

ARTICLE 10

WORK RULES

10.1 Work rules shall apply as set forth in the applicable MLA.

ARTICLE 11

GRIEVANCE PROCEDURE

- 11.1 All disputes concerning the interpretation and/or application of this Agreement which do not fall within the Article 5, No Strikes-No Lockouts procedure or Article 6, Work Assignments and Jurisdictional Disputes, shall be governed by the following grievance and arbitration procedure.

Employee Grievances: All disputes involving discipline and/or discharge of employees working on the Project shall be resolved through the grievance and arbitration provision contained in the MLA for the craft of the affected employee. No employee working on the Project shall be disciplined or dismissed without just cause.

- 11.2 Grievances between one or more Union(s) and one or more Contractor/Employer(s); or between the City and one or more Contractor/Employer(s) regarding interpretation and/or application of this Agreement shall be pursued according to the following provisions:

11.2.1 A grievance shall be considered null and void if not brought to the attention of the Contractor/Employer(s) or the Union(s) within fourteen (14) calendar days after the grievance is alleged to have occurred but in no event more than thirty (30) calendar days after the charging party became aware of the event giving rise to the dispute. The Coordinator shall be delivered a copy of all grievances.

11.2.2 Grievances between one or more Union(s) and one or more Contractor/Employer(s), or between the City and one or more Contractor/Employer(s) regarding provisions of this Agreement shall be settled or otherwise resolved according to the following Steps and provisions:

Step 1: A representative of the grievant and the party against whom the grievance is filed shall meet and attempt to resolve the grievance.

Step 2: In the event the matter remains unresolved in Step 1 above, within seven (7) calendar days, the grievance shall be reduced to writing and may then be referred by the Union(s), the City, or the Contractor/Employer(s) to the other party for discussion and resolution.

Step 3: In the event that the representatives are unable to resolve the dispute within the seven (7) calendar days after its referral to Step 2, either involved party may submit the dispute within seven (7) calendar days to the Joint Administrative Subcommittee established in Section 20.2. The Joint Administrative Subcommittee shall meet within seven (7) calendar days after such referral (or such longer time as is mutually agreed upon by the representatives on the Joint Administrative Subcommittee) to confer in an attempt to resolve the grievance. If a Union(s) is party to the grievance, regardless of which party has initiated the grievance proceeding, prior to the

meeting of the Joint Administrative Subcommittee, the Union(s) shall notify its International Union Representative(s), which shall advise both parties if it intends on participating in the meeting. The participation by the International Union Representative in this Step 3 meeting shall not delay the time set herein for the meeting, unless otherwise mutually agreed by the parties. If the dispute is not resolved by the Joint Administrative Subcommittee, it may be referred within seven (7) calendar days by either party to Step 4.

At the time a grievance is submitted under this Agreement or any MLA, the Union(s) may request that the City withhold and retain an amount from what is due and owing to the Contractor/Employer(s) against whom the grievance is filed, sufficient to cover the damages alleged in the grievance, should the Union(s) prevail.

The amount shall be retained by the City until such time as the underlying grievance giving rise to the retention is withdrawn, settled, or otherwise resolved, and the retained amount shall be paid to whomever the parties to the grievance shall decide, or to whomever an Arbitrator shall so order.

Step 4: In the event the matter remains unresolved in Step 3, either Party may request, within seven (7) calendar days, that the dispute be submitted to arbitration. The time limits set out in this procedure may, upon mutual agreement, be extended. Any request for arbitration, request for extension of time limits, and agreement to extend such time limits shall be in writing with a copy delivered to the Coordinator.

Step 5: The Parties agree that the Arbitrator who will hear the grievance shall be selected from the following: Barry Winograd, William Riker, and Robert Hirsch. The parties shall flip a coin to determine who shall strike the first name and shall then alternately strike names from the list and the last remaining name shall be the neutral third party Arbitrator who shall have the power to resolve the dispute in a final and binding manner. Should a Party to the procedure fail or refuse to participate in the hearing, if the Arbitrator determines that proper notice of the hearing has been given, said hearing shall proceed to a default award. The Arbitrator's award shall be final and binding on all Parties to the arbitration. The costs of the arbitration, excluding attorney fees, including the Arbitrator's fee and expenses, shall be borne by the losing party. The Arbitrator's decision shall be confined to the question(s) posed by the grievance and the Arbitrator shall not have authority to modify amend, alter, add to, or subtract from, any provisions of this Agreement.

- 11.3 Grievances raised by the City against one or more Union(s) and/or the Council, or against the City by one or more Union(s) and/or the Council, regarding provisions of this Agreement shall be settled or otherwise resolved according to the following Steps and provisions:

Step 1: The Joint Administrative Subcommittee shall attempt to resolve the grievance. The Joint Administrative Subcommittee shall meet within five (5) working days after receipt of the grievance (or such longer time as is mutually agreed upon by the representatives on this Joint Administrative Subcommittee) to confer with regard to the grievance. If the dispute is not resolved by the Joint Administrative Subcommittee, it may be referred within five (5) working days by either party to the Joint Administrative Committee.

Step 2: The Joint Administrative Committee shall attempt to resolve the grievance. The Joint Administrative Committee shall meet within five (5) working days after receipt of the grievance (or such longer time as is mutually agreed upon by the representatives on the Joint Administrative Committee) to confer with regard to the grievance. In the event that the Joint Administrative Committee is unable to resolve the dispute within the five (5) working days after receipt of the grievance, either involved party may proceed to Step 3.

Step 3: In the event the matter remains unresolved pursuant to Step 2, either Party may request that the dispute be submitted to arbitration in accordance with the process set forth in Paragraph 11.2.2. Step 5.

Step 4: Should a Party to the procedure fail or refuse to participate in the hearing, if the Arbitrator determines that proper notice of the hearing has been given, said hearing shall proceed to a default award. The Arbitrator's award shall be final and binding on all Parties to the arbitration. The costs of the arbitration, including the Arbitrator's fee and expenses, shall be borne by the losing Party. The Arbitrator's decision shall be confined to the question(s) posed by the grievance and the Arbitrator shall not have authority to modify, amend, alter, add to, or subtract from, any provisions of this Agreement.

- 11.4 Grievances between a Union(s) and a Union(s)' signatory Contractor/Employer(s) involving interpretation or application of the MLA shall be governed by the grievance procedures contained in the MLA.

ARTICLE 12

UNION RECOGNITION AND REPRESENTATION

- 12.1 The Contractor/Employer(s) recognize the Union(s) signatory hereto as the sole and exclusive collective bargaining representatives for all craft employees on the Project.

- 12.2 The Contractor/Employer(s) shall require all employees who work on a Construction Contract on or before eight (8) days of consecutive or cumulative employment on the Project to comply with the applicable Union(s)' security provisions, and to maintain compliance for the period of time they are performing work on the Project, which requirement shall be satisfied by the tendering of periodic dues and fees uniformly required to the extent allowed by law. Further, there is nothing in this Agreement that would prevent non-union employees from joining the Union(s).
- 12.3 Authorized representatives of the Union(s) shall have access to the site at all times. Such representatives shall comply with reasonable visitor safety and security rules established for the Project at the pre-job meeting. Access for Union(s) representatives will not be unduly restricted.

ARTICLE 13

REFERRAL

- 13.1 Contractor/Employer(s) performing construction work on the Project described in the Agreement shall, in filling craft job requirements, utilize and be bound by the registration facilities and referral systems established or authorized by the Union(s) signatory hereto when such procedures are not in violation of Federal law. The Contractor/Employer(s) shall have the right to reject any applicant referred by the Union(s), in accordance with the applicable Master Agreement.
- 13.2 The Contractor/Employer(s) shall have the unqualified right to select and hire directly all supervisors above the level of general foreman or senior general foreman it considers necessary and desirable, without such persons being referred by the Union(s).
- 13.3 In the event that referral facilities maintained by the Union(s) are unable to fill the requisition of a Contractor/Employer(s) for employees within a forty-eight (48) hour period (Saturdays, Sundays and Holidays excluded) after such requisition is made by the Contractor/Employer(s), the Contractor/Employer(s) shall be free to obtain workers from any source. A Contractor/Employer(s) who hires any personnel to perform covered work on the Project pursuant to this Section shall immediately provide the appropriate Union(s) with the name and address of such employee(s) and shall immediately refer such employee(s) to the appropriate Union(s) to satisfy the requirements of Article 12 of this Agreement.

ARTICLE 14

LOCAL WORKFORCE DEVELOPMENT

- 14.1 The parties agree to a goal that residents of the city of Alameda, and Alameda County ("Local Residents"), in order of priority as here listed, will perform up to twenty-five

percent (25%) percent of all hours worked on the Project, on a craft-by-craft basis, if such workers are available, capable and willing to work. Contractors will first be required to request residents from the City of Alameda, and if those are not available, will then request residents from Alameda County. If the Local Resident is also a high school graduate of a high school located in Alameda or has received a General Educational Development diploma ("GED") while living in Alameda, those hours will count double. In addition, the parties agree that participants in the Alameda Point Collaborative Program will be referred to the apprentice programs of the Union(s) and establish a goal that such participants will perform fifteen percent (15%) of all apprentice hours worked on the Project. All participants that will be referred to the contractors to meet this requirement will have gone through a pre-apprenticeship program that meets the Multi-Craft Core Curriculum as established by the National Building Trades, or other union pre-apprenticeship programs.

- 14.2 The Contractor/Employer(s) shall make good faith efforts to reach these goals working through the hiring hall procedures of the applicable Schedule A Agreement and, when applicable, utilize their "rehire" and "name call" rights to employ such Local Residents. The Union(s) shall utilize their utmost efforts to recruit sufficient numbers of apprentice and journeymen craftspersons who are Local Residents to fulfill the requirements of the Contractor/Employer(s). The parties to this Agreement support the development and placement of increased numbers of skilled construction workers from Local Residents to meet the needs of the Project and the requirements of the industry generally.
- 14.3 To evaluate the performance of the Contractor/Employer(s) and Union(s) in achieving the employment of Local Residents goal on this Project, the Contractor/Employer(s) shall submit copies of their monthly certified payroll reporting forms to the Coordinator. The Contractor shall also submit a monthly report tabulating the ratio of Local Residents to total employees for each craft Union to the Coordinator. The performance of the Contractor/Employer(s) and Union(s) will be reviewed at the periodic Joint Administrative Committee meetings called for in Section 20 of this Agreement.

ARTICLE 15

NON-DISCRIMINATION

- 15.1 The Contractor/Employer(s) and Union(s) agree to comply with all anti-discrimination provisions of federal, state and local law, to protect employees and applicants for employment on the Project.

ARTICLE 16

APPRENTICES

- 16.1 Recognizing the need to maintain continuing support of programs designed to develop adequate numbers of competent workers in the construction industry, the Contractor/Employer(s) will employ apprentices in the respective Union(s) to perform such work as is within their capabilities and which is customarily performed by the Union(s) in which they are indentured. The apprentice ratios will be in compliance with the applicable provisions of the California Labor Code and Prevailing Wage Rate Determinations.
- 16.2 The parties only recognize the State-approved Apprenticeship training programs administered by Joint Labor/Management Apprenticeship Training Committees for the purposes of meeting the goals of this Article 16.

ARTICLE 17

WAGE SCALES AND FRINGE BENEFITS

- 17.1 All Contractor/Employer(s) agree to pay contributions to the established vacation, pension and other form of deferred compensation plan, apprenticeship, health benefit funds, and all other contributions established by the applicable MLA for each hour worked on the Project in the amounts designated in the MLAs of the appropriate Union(s) that are recognized by a prevailing wage determination and paid in accordance with the MLA. The Contractor/Employer(s) shall not be required to pay contributions to any other trust funds or other contributions that are not contained in the published prevailing wage determination to satisfy their obligation under this Article, except that those Contractor/Employer(s) who are signatory to the MLAs with the respective trades shall continue to pay all trust fund or other contributions as outlined in such MLAs.
- 17.2 By signing this Agreement, the Contractors/Employers adopt and agree to be bound by the written terms of the legally established Trust Agreements, as described in Section 17.1, which may from time to time be amended, specifying the detailed basis on which payments are to be made into, and benefits paid out of, such Trust Funds. The Contractors/Employers authorize the parties to such local trust agreements to appoint trustees and successor trustees to administer the Trust Funds and hereby ratify and accept the trustees so appointed as if made by the Contractors/Employers. The Contractors/Employers agree to execute a separate Subscription Agreement(s) for Trust Funds when such Trust Fund(s) requires such document(s).
- 17.3 Wages, Hours, Terms and Conditions of Employment: The wages, hours and other terms and conditions of employment on the Project shall be governed by the MLAs of the respective Union(s), copies of which shall be made available to the City upon request, to the extent such MLA is not inconsistent with this Agreement.

- 17.4 Holidays: Holidays shall be established as set forth in the applicable MLA.

ARTICLE 18

HEALTH AND SAFETY

- 18.1 The employees covered by the terms of this Agreement shall at all times, while in the employ of the Contractor/Employer(s), be bound by the reasonable safety rules and regulations as established by the City and Contractor/Employer(s) and in accordance with OSHA/Cal-OSHA. These rules and regulations will be published and posted at conspicuous places throughout the Project.
- 18.2 In accordance with the requirements of OSHA/Cal-OSHA, it shall be the exclusive responsibility of each Contractor/Employer(s) on the Project to assure safe working conditions for its employees and compliance by them with any safety rules contained herein or established by the Contractor/Employer(s).
- 18.3 A convenient supply of cold and potable drinking water shall be provided by the Contractor/Employer(s).
- 18.4 The Contractor/Employer(s) and Union(s) agree that the work site shall be a drug free workplace. Parties agree to recognize and use the Substance Abuse Prevention Program contained in each applicable Union(s)' MLA.

ARTICLE 19

HELMETS TO HARDHATS

- 19.1 The parties recognize a desire to facilitate the entry into the Building and Construction Trade Union(s) of veterans who are interested in careers in the building and construction industry. The parties agree to utilize the services of the Center for Military Recruitment, Assessment and Veteran's Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.
- 19.2 The Union(s) and Contractor/Employer(s) agree to coordinate with the Center to assist in the creation and maintenance an integrated database of Veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Union(s) will give credit to such Veterans for bona fide, provable past experience.

- 19.3 To evaluate the performance of the Contractor/Employer(s) and Union(s) in achieving the employment of veterans on this Project, the Contractor/Employer(s) shall submit to the Coordinator information regarding veterans it has employed on a Project. The Contractor/Employer(s) shall submit a monthly report tabulating the number of veterans employed to the Coordinator. The performance of the Contractor/Employer(s) and Union(s) will be reviewed at the periodic Joint Administrative Committee meetings called for in Section 20 of this Agreement.

ARTICLE 20

JOINT ADMINISTRATIVE COMMITTEE

- 20.1 The Council and the City to this Agreement shall establish a six (6) person Joint Administrative Committee. This Committee shall be comprised of three (3) representatives selected by the City and three (3) representatives selected by the Council. The City and the Council shall designate alternates who shall serve in the absence of designated representatives for any purpose contemplated by this Agreement. The Joint Administrative Committee shall meet as required to review the implementation of the Agreement, the progress of the Projects and the employment of Local Residents and veterans on Projects covered by this Agreement.
- 20.2 The Joint Administrative Committee shall appoint a Joint Administrative Subcommittee consisting of one City representative and one Union(s) representative for the purpose of convening to confer in an attempt to resolve a grievance that has been filed consistent with Article 11. Any question regarding the meaning, interpretation, or application of the provisions of this Agreement shall be referred directly to the Joint Administrative Subcommittee for resolution. The Joint Administrative Subcommittee shall meet as required to resolve grievances by majority vote with such resolutions to be final and binding on all signatories of the Agreement. A failure of any party or parties to attend said hearing shall not delay the hearing of evidence or issuance of an award by the Joint Administrative Subcommittee, if such award is made by a majority vote, and the hearing shall proceed ex parte. If the subcommittee is unable to resolve the grievance, the grievance may be referred in accordance with Step 3 of Article 11.

ARTICLE 21

MISCELLANEOUS PROVISIONS

- 21.1 Counterparts. This Agreement may be executed in counterparts, such that original signatures may appear on separate pages, and when bound together all necessary signatures shall constitute an original. Faxed or e-mailed pdf signature pages transmitted separately to other parties to this Agreement shall be deemed equivalent to original signatures.

- 21.2 Warranty of Authority. Each of the persons signing this Agreement represents and warrants that such person has been duly authorized to sign this Agreement on behalf of the party indicated, and each of the parties by signing this Agreement warrants and represents that such party is legally authorized and entitled to enter into this Agreement.

ARTICLE 22

GENERAL SAVINGS CLAUSE

- 22.1 It is not the intention of either the City, Contractor/Employer(s) or the Union(s) parties to violate any laws governing the subject matter of this Agreement. If any Article or provision of this Agreement shall be declared invalid, inoperative, or unenforceable by any competent authority of the executive, legislative, judicial or administrative branch of the federal, state or local government, the parties shall suspend the operation of each such Article or provision during the period of invalidity. Such suspension shall not affect the operation of any other provision covered in this Agreement to which the law or regulation is not applicable. Further, the Contractor/Employer(s) and Union(s) agree that if and when any or all provisions of this Agreement are finally held or determined to be illegal or void by a Court of competent jurisdiction, the City and the Council will promptly enter into negotiations concerning the substance affected by such decision for the purpose of achieving conformity with the requirements of an applicable law and the intent of the parties hereto.

ARTICLE 23

DURATION OF AGREEMENT

- 23.1 This Agreement shall become effective on the day the city of Alameda ratifies this Agreement and shall continue in full force and effect for a period of three (3) years, at which time this Agreement will be reviewed and considered for extension or renewal with modifications if appropriate. Individual projects within the scope of this Agreement may be completed in phases and this Agreement shall be applied to such individual projects until Completion of such phase. After the expiration of this Agreement, the provisions of the Agreement shall continue to apply to those Projects subject to this Agreement until construction is completed. The parties may mutually agree in writing to amend, extend or terminate this Agreement at any time.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

ADDENDUM "A"

PROJECT STABILIZATION AGREEMENT FOR THE CITY OF ALAMEDA

AGREEMENT TO BE BOUND

The undersigned party confirms that it agrees and assents to comply with and to be bound by the City of Alameda Project Stabilization Agreement as such Agreement may, from time to time, be amended by the parties or interpreted pursuant to its terms.

By executing this Agreement To Be Bound, the undersigned party subscribes to, adopts and agrees to be bound by the written terms of the legally established trust agreements, as set forth in section 17, specifying the detailed basis upon which contributions are to be made into, and benefits made out of, such Trust Fund(s) and ratifies and accepts the trustees appointed by the parties to such Trust Fund(s) and agrees to execute a separate Subscription Agreement(s) for Trust Funds when such Trust Fund(s) require(s) such document(s).

Such assent and obligation to comply with and to be bound by this Agreement shall extend to all work covered by said Agreement undertaken by the undersigned party. The undersigned party shall require all of its subcontractors, of whatever tier, to become similarly bound for all their work within the scope of this Agreement by signing an identical Agreement To Be Bound.

This letter shall constitute a subscription agreement, to the extent of the terms of the letter.

Dated: _____

Project: _____

Signature of Authorized Officer

Authorized Officer & Title

Name of Contractor/Employer(s)

Contractor/Employer(s) Address

CSLB #

Area Code Phone

E-mail and/or Fax

Motor Carrier (CA) Permit Number

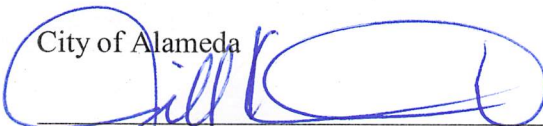
DIR Prevailing Wage Registration #

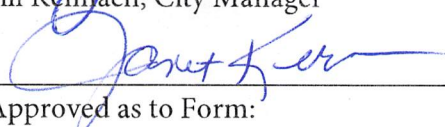
EXHIBIT A

MASTER LABOR AGREEMENTS OF SIGNATORY AFFILIATED LOCAL UNIONS:

SIGNATURES

City of Alameda


Jill Keimach, City Manager


Approved as to Form:

Janet Kern, City Attorney

Building and Construction Trades Council
Of Alameda County, AFL-CIO


Andreas Cluver, Secretary-Treasurer

SIGNATORY UNION(S)

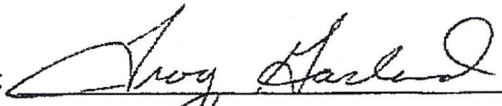
Asbestos Workers, Local 16

By: 

Boilermakers, Local 549

By: 

Bricklayers & Allied Craftsmen, Local 3

By: 

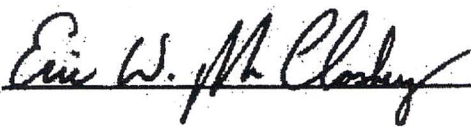
Cement Masons, Local 300

By: 


Electrical Workers, Local 595

By: 

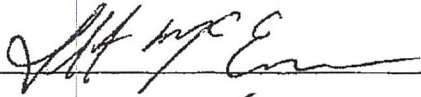
Elevator Constructors, Local 8

By: 

Laborers, Local 886

By: 

Iron Workers, Local 378

By: 

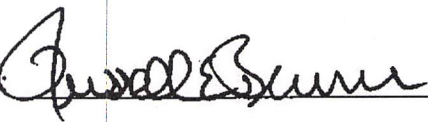
Laborers, Local 67

By: 

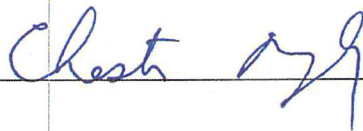
Laborers, Local 304

By: 

Operating Engineers, Local 3

By: 

Plasterers, Local 66

By: 

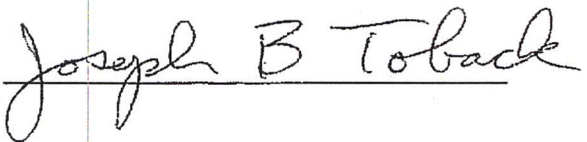
Roofers, Local 81

By: 

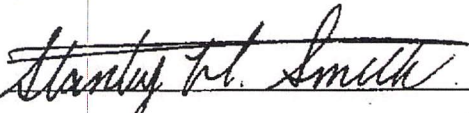
Sheet Metal Workers, Local 104

By: 

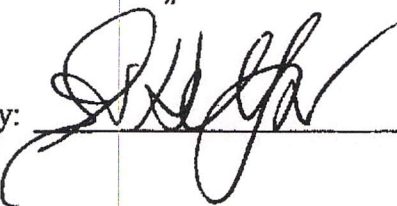
Sign Display, Local 510

By: 

Sprinkler Fitters, Local 483

By: 

Teamsters, Local 853

By: 

United Association of Journeymen and
Apprentices Fitting Industry, Underground
Utility & Landscape, Local 355

By: _____



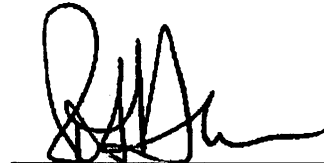
United Association of Steamfitters,
Pipefitters, Plumbers, & Gas Fitters,
Local 342

By: _____



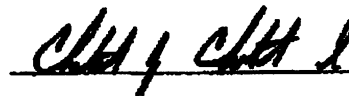
Northern California Carpenters
Regional Council (on behalf of Carpenters,
Local 713, Carpenters, Local 2236, Lathers,
Local 68L, Millwrights, Local 102,
Pile Drivers, Local 34)

By: _____



District Council No. 16 Northern
California International Union of
Painters & Allied Trades (on behalf of
Auto & Marine Painters, Local 1176,
Carpet & Linoleum Layers, Local 12,
Glaziers, Architectural Metal
& Glassworkers, Local 169,
Painters & Tapers, Local 3)

By: _____



District Council of Iron Workers of the
State of California & Vicinity Trades

By: _____

APPENDIX C:

AGREEMENT CONCERNING PROVIDING ELECTRICAL POWER TO CITY PROJECT

AGREEMENT CONCERNING PROVIDING ELECTRICAL POWER TO CITY PROJECT

THIS AGREEMENT is made April 18, 2019 between the City of Alameda, a Municipal Corporation ("City") and the Alameda Unified School District, a public school district ("AUSD") concerning AUSD's providing electrical power to a City project.

Recitals

- A. The City is constructing the Encinal Boat Launch Facility project for which it needs electrical power.
- B. Located immediately adjacent to the project site is the Encinal High School, operated by AUSD.
- C. There is existing electrical infrastructure to the Encinal Boat Launch Facility from the Encinal High School site. There is no electrical draw at this time since the existing facility does not require electricity but it will be needed for the improvements and the existing infrastructure is sufficient for the minimal electrical requirements of the project.
- D. It would cost the City more than \$75,000 to secure a new electrical service to the project site.
- E. The City has requested that AUSD allow it to utilize the electrical service from the High School to serve the Encinal Boat Launch project site subject to the City paying the AUSD an amount at least equal to its usage.
- F. Based on the facilities that will be part of the Encinal Boat Launch project, as set forth on the attached Exhibit A, it is estimated that the electrical power cost will not exceed \$300/month.
- G. As referenced in the Easement, recorded by Alameda County on July 5, 2016, that grants the City use of real property located at Encinal High School for use as part of the Encinal Boat Launch Facility, Encinal High School may utilize the Encinal Boat Launch Facility, including the restroom and parking lot area, as needed for school-related events.
- H. AUSD is willing to provide such service as provided in this Agreement.

NOW, THEREFORE, in consideration of the mutual promises, the parties agree as follows:

- 1. AUSD shall provide electrical power to the City's Encinal Boat Launch project through its electrical service serving the Encinal High School.
- 2. City shall pay AUSD \$300/month to cover the estimated cost of its use of electrical power from the Encinal High School site.
- 3. City may terminate this Agreement at any time by providing 30 days' notice to the AUSD.
- 4. AUSD may terminate this Agreement at any time by providing 90 days' notice to the City.
- 5. City shall indemnify AUSD and its officers and employees, and defend and hold them harmless from all claims for damages or injury to persons or property arising out of the AUSD's providing electrical power to the project site.

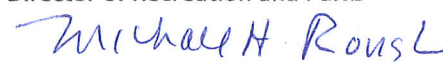
CITY OF ALAMEDA



City Manager, City of Alameda




Recommended for Approval
Director of Recreation and Parks




Approved as to form
City Attorney

ALAMEDA UNIFIED SCHOOL DISTRICT



President of its Board of Education



Secretary of its Board of Education

EXHIBIT A

Facility	Description	Info	Daily Use (assumed)	Monthly Use	kWh	Monthly Cost (\$0.48/kW)
Lift Station	Existing 3/4 hp submersible pump	1400 watts (1.4 kW)	1 hrs	30 hrs	42	\$20
Restroom	Interior lights	100 watts (0.1 kW)	4 hrs	120 hrs	12	\$6
Restroom	Two (2) handryers	1600 watts (1.6 kW)	0.5 hrs	15 hrs	24	\$12
Restroom	Four (4) exterior lights	300 watts (0.3 kW)	10 hrs	300 hrs	90	\$43
Restroom	Auxiliary outlet for maintenance staff	1000 watt (1.0 kW)	--	10 hrs	10	\$5
Fish Cleaning Station	2-hp Barracuda 6096	5600 watts (5.6 kW)	1 hour	30 hrs	168	\$80
Floodlights	Four (4) LED DSX1	138 watts each = 552 watts total (0.552 kW)	10 hrs	300 hrs	166	\$80
Irrigation	Existing (but being upgraded)	150 watts (0.15 kW)	1 hrs	30 hrs	4.5	\$2
Total					515	\$248

END OF PROJECT MANUAL