



Board of Harbor Commissioners

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IFB Addendum #2 San Mateo County Harbor District Oyster Point Marina Entrance Nav Aids Replacement Project

CONTRACT NO. 2020-04

Questions, Clarifications, Requests for Modifications

Date: September 24, 2021

To All Plan Holders:

The following changes, additions, and/or deletions are hereby made a part of the Bid Documents for the above noted project, fully and completely as if the same were fully contained therein. All other terms, Conditions, and specifications of the original Invitation to Bid remain unchanged.

This amendment must be acknowledged in the space provided in the General Conditions, Bid Acknowledgment of Addenda.

The Submittal Date and Time has NOT changed: *No later than October 7, 2021 at 2:00 p.m.*

MODIFICATIONS¹

The modifications directed by this Addendum No. 1 are described in this page and the following attachments:

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|------------------------------|---------|
| 1. Addendum Text: | 4 pages |
| 2. Technical Specifications: | 2 pages |
| 3. Special Provisions: | 1 page |
| 4. Drawings: | 2 pages |
| 5. Bid Form | 3 pages |

QUESTIONS/CLARIFICATIONS

Q1: Please confirm API 5L x 52 is acceptable and delete the requirement for 0.750 minimum wall thickness.

A1: API 5Lx52 is acceptable with the allowed tolerances for wall thickness and diameter.

¹ All questions, clarifications, and request for modifications were received and considered. Requests that required no answer, clarification or modification are not addressed in the addendum.

- Q2: Per the Prebid meeting, it was stated that bids could be received by the district via email. Please confirm and provide the email address and method of verifying receipt.
- A2: Bid packets will be accepted electronically emailed to jmoren@smharbor.com with a carbon copy (cc) to tim.magalhaes@foth.com. Confirmation will be sent immediately after receipt.
- Q3: Please confirm there are no domestic product preference requirements such as Buy America(N).
- A3: Confirmed, **no** domestic product preference such as Buy America(N) is required for this project.
- Q4: Pile point requirement not clear. Per G002 Steel pile Note 6 "The tips of piles shall be fitted with an open-end cutting shoe". However, per 02368 par 2.3.A, "The piles for this project will not require pile points". Please confirm points are not required.
- A4: Pile points/shoes are not required.
- Q5: Per Special Provisions paragraph 1.2 the bid opening is October 7, 2021. Per SP paragraph 2.1 states the award will be made within 90 days, which puts Award/NTP as late as January 2022. However, per SP paragraph 3.3 "The project will be completed in full no later than the environmental work window of November 30, 2021". Please provide the anticipated notice to proceed date.
- A5: The anticipated Award/NTP is October 22, 2021.
- Q6: Location of pile splices not clear. Per drawing G-002 under Steel Piles note 5, "No splice shall be allowed from the underside of the cap to 20 feet below mudline". Given the mudline is approximately at -11' MLLW, this results in no splices allowed in the upper 46 to 47 feet of the pile. Further, per specification section 02368 paragraph 2.2.B, "no splice in the lower 40 feet". Combining the two requirements, and given a 100' long pile, this means splices are only allowed in the middle 13 foot of the pile. Is that the intention? Will the district consider allowing splices in the middle 20 or 30 foot of the pipe to allow for more material options?
- A6: One (1) field splice max, with up to two (2) shop splices is allowed. Field splices are not allowed in the bottom 40 feet or middle 20 feet of pile. It is recommended that the contractor use a 40' and 60' section. The 60' section may be comprised of a 20' and 40' section per API 5Lx52 standard lengths and shall be shop spliced.
- Q7: Quantity of pile splices not clear. Per drawing G-002 under Steel Piles note 5, "One field splice is permitted and no more than 2 shop splices will be permitted per pile". However, per specification section 02368 paragraph 2.2.A, "No more than one splice per pile". Please confirm two shop splices and one field splice is acceptable.
- A7: Two (2) shop splices and one (1) field splice maximum are acceptable.
- Q8: Would API 5L x52 or higher yield pipe be acceptable, without meeting the requirements of A633?

A8: Yes, API 5Lx52 or higher yield pipe is acceptable without meeting the requirements of A633.

Q9: Is spiral-weld pipe acceptable or does this have to be straight seam ERW pipe?

A9: Spiral-weld pipe is acceptable. Straight seam ERW pipe is also acceptable.

Q10: SECTION 02368 3.1 EQUIPMENT

A. Drive piles with a hydraulically operated vibratory hammer with sufficient energy and energy transfer characteristics to drive the piles to the required toe elevations and capacity without damaging the pile head. Use care not to injure piles by over driving as would be indicated by rebound of hammer or staggering of pile. Cut off heads of piles accurately in accordance with the Contract Documents after completion of driving.

B. Rig the pile driver with fixed leads to guide the hammer from highest to lowest points of travel in a manner permitting free vertical movements of the hammer, and with leads laterally braced to assure firm support of the piles during driving.

C. The pile is to be located by temporary frames containing members of adequate size to guide and stabilize placement of the pile prior to driving. The frames shall be rigidly located such as to keep the pile plumb and in correct position while being driven.

Part A prescribes vibratory driving and Part B describes a method that seems to be impact driving related.

Please confirm impact driving is allowed as there are concerns that vibratory driving alone may not be able to advance the piles through ~75' of bay mud, which may be very consolidated (clay-like) at lower elevations and does not respond well to vibratory efforts.

Please confirm part C is not requiring a temporary pile driving template.

A10: Pile driving shall be performed with a vibratory hammer due to permit requirements. If an impact hammer is required to advance the pile to full depth due to difficult vibratory driving conditions, this will require a notice to regulatory agencies. Contractor shall notify engineer of pile driving conditions prior to using an impact hammer. There is no guarantee that an impact hammer will be allowed on the project.

The means and methods to locate the pile is up to the contractor. It is recommended that a template be used to locate and drive the pile accurately.

Q11: Is there an intended manufacture/specification for the navigation light? Sheet S- 103 detail 5 shows the dimension of the light but does not show the type/requirements.

A11: Reference sheet G-002, Navigation Light and Signage notes. Navigation light shall be self-contained lantern M660 as manufactured by Sabik, a Carmanah Company or equivalent accepted by the engineer and client.

Q12: What type of 1" steel grating is required for the platform?

A12: Reference sheet G-002, Steel Grating notes.

Q13: How are the ladder rung attached? Are they welded, bolted?

A13: Ladder rungs shall be welded.

Q14: What is the thickness of the pile cap shown on sheet S-102?

A14: Pile cap is 0.75 inches thick.

Q15: In the event the official Award/NTP date does not allow for enough time for material procurement/install, will the contractor be allowed an extension?

A15: Award/NTP is October 22, 2021. Due to permit requirements, project cannot be extended beyond the November 30, 2021 deadline.

Q16: While preparing the bid package for the subject project I have discovered that we are missing the Bid Form referenced in the Special Provisions. Is this something that needed to be requested separate from the documents available for download on your website?

Special Provision 1.3 paragraph 3

Each Bid Form must be signed on Bid Form page 2 [.....]. Bidder must submit the three-page Bid Form properly executed.

A16: Bid Form was missing in the contract documents. Please see attached Bid Form. All three pages of Bid Form shall be properly executed and submitted.

CHANGES TO BID DOCUMENT

1. **REVISED** technical specification language for Section 02368, Steel Piles. Reference attached revised specification.
2. **REVISED** Special Provisions, paragraph 2.1. Reference attached revised Special Provisions.
3. **REVISED** Steel Pile notes on drawing sheet G-002. Reference attached drawings.
4. **ADDED** callout on drawing sheet S-101 for pile cap thickness. Reference attached drawings.
5. **ADDED** Bid Form. See attached Bid Form.

SECTION 02368 STEEL PILES

PART 1. GENERAL

1.1 DESCRIPTION OF WORK

- A. Work included: The work covered by this section of these Specifications consists of furnishing all plant, labor, supervision, equipment, appliances and materials and in performing all operations in connection with the installation of the steel pipe piles, all in strict accordance with this Section of the Specifications and the applicable Drawings and subject to the terms and conditions of the Contract.

1.2 SUBMITTALS

- A. Submit the pre-qualified list of subcontractors and the proposed schedule of unit prices to the Engineer for review.
- B. Submit technical data for all pile driving equipment proposed for use.
- C. No later than the time of delivery of materials to the site, submit steel certificates for review.
- D. Submit details for splices in piles, if used.
- E. Provide a minimum of five (5) days notice to the Engineer prior to driving any piles. Notify the Engineer of any changes in the schedule.

1.3 PRODUCT DELIVERY AND STORAGE

- A. The Contractor shall notify the Engineer twenty-four (24) hours in advance of delivery of steel piles. Contractor guarantees that steel piles shall be handled in such a manner as to not induce stresses which will damage the materials, and shall be sorted in a safe manner within designated areas provided at the site.

PART 2. PRODUCTS

2.1 STEEL SECTIONS

- A. Steel Pipe Pile:
1. The steel pipe pile size and material shall be as specified on the Contract Drawings or equivalent as accepted by the Engineer. Steel material shall be ASTM A252, Grade 3 Modified with a minimum $F_y = 50$ ksi or API 5Lx52¹. Pile length shall be as shown on the Contract Drawings.
 2. Pipe piles shall have a minimum wall thickness as noted on the Drawings, and not less than 0.750 inches +/- allowable tolerances per the specifications listed in section 2.1.A.1².

¹ Revised 09/29/2021 Addendum #2

² Revised 09/29/2021 Addendum #2

- B. Welding shall conform to AWS D1.1 Structural Code - Steel.

2.2 SPLICES

- A. No more than one [field³](#) splice per pile.
- B. No splice in lower 40 feet.
- C. Both upper and lower sections of pipe ends smooth, square and flat prior to splicing.

2.3 PILE POINTS:

- A. The piles for this project will not require pile points.

2.4 PROTECTIVE COATING

- A. Pipe piles shall be shop coated, on outer surfaces only, to a minimum of five (5) feet below the mudline elevation.

PART 3. EXECUTION

3.1 EQUIPMENT

- A. Drive piles with a hydraulically operated vibratory hammer with sufficient energy and energy transfer characteristics to drive the piles to the required toe elevations and capacity without damaging the pile head. Use care not to injure piles by over driving as would be indicated by rebound of hammer or staggering of pile. Cut off heads of piles accurately in accordance with the Contract Documents after completion of driving.
- B. Rig the pile driver with fixed leads to guide the hammer from highest to lowest points of travel in a manner permitting free vertical movements of the hammer, and with leads laterally braced to assure firm support of the piles during driving.
- C. The pile is to be located by temporary frames containing members of adequate size to guide and stabilize placement of the pile prior to driving. The frames shall be rigidly located such as to keep the pile plumb and in correct position while being driven.

3.2 PILE DRIVING

- A. Drive the piles straight and true at indicated locations, with deviation from the longitudinal axis of not more than 1/4 inch per foot.
- B. Locate the piles within 3 inches of the positions indicated on the Drawings.
- C. Continuously drive each pile to reach the capacity and/or full embedded length called for on the Drawings.
 - 1. Lengths shown on the Drawings are considered average values, and the actual lengths may vary when so accepted by the Engineer.

³ [Revised 09/29/2021 Addendum #2](#)

any equipment, material, article or process which, in the judgment of the District, is equal to that designated.

The Bidder shall furnish, at its own expense, all test results, technical data, and background information required by the District in making the determination as to whether the proposed equipment, material, article or process is an approved equal. The District shall be the sole judge as to the comparative equality and suitability of alternative equipment, article, material or process and its decision shall be final.

1.8 Request for Approved Equals/Questions/Clarifications. A Bidder may submit to the District requests for approved equals, modifications, or clarifications regarding any requirements, terms, or conditions contained herein. Any such requests must be received in writing by **September 24, 2021, at 4:30 p.m., Pacific Time.** Any requests of approved equals must be fully supported with samples, technical data, test results, or other pertinent information as evidence that the substitute offered is essentially equal or better than that specified in the Contract Documents. The District shall make a determination on each Bidder's request under this procedure in writing. The written determination shall be mailed or otherwise furnished to the Bidder by **September 29, 2021.** Failure of the District to respond within the time limit shall be deemed to be a denial of request. In the event that a request for an approved equal, modification, or clarification is granted, an addendum detailing the approved equal, modification, or clarification will be mailed or otherwise furnished to all potential Bidders who received bid packets.

1.9 Single-Bid Response. In the event of a single-bid response, the District reserves the right to conduct a price and/or cost analysis of the bid to verify that the bid price is fair and reasonable. The Bidder will be expected to cooperate in this process and to submit cost and pricing data to verify that the bid price is fair and reasonable. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost of the replacement and the prices quoted and shall include the computations and projections used by the Bidder.

Failure to submit the data as requested by the District within ten (10) calendar days of receipt of written notification to the sole offeror shall result in the Bidder being declared non-responsive.

1.10 Bidder's Bond. As required by Section 14 of the General Conditions and Instructions for Bidders, the Bidder's Security to be submitted with the Bid shall be in the amount of at least ten (10) percent of the Total Bid Price as specified on the Bid Form.

SECTION 2. AWARD OF CONTRACT

2.1 Award of Contract. The award of Contract, if any, will be made within **fifteen (15)1** calendar days after the date of bid opening to the lowest responsible Bidder based on the Total Bid Price. Each bid as submitted shall remain in effect for ninety (90) calendar days after the date the bids are opened. No Bidder may withdraw its bid during this time period.

DESIGN CRITERIA:

1. THE COMPLETED STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE OF THE STATE OF CALIFORNIA.
2. THE COMPLETED STRUCTURE HAS BEEN DESIGNED TO WITHSTAND THE FOLLOWING DESIGN LIVE LOADS APPLIED IN CONJUNCTION WITH DESIGN DREDGE/MUDLINE ELEVATIONS INDICATED ON THE CONTRACT DRAWINGS:
 DESIGN MUDLINE ELEVATION: -11.0 FEET MLLW
 LIVE LOADS:
 WAVE LOAD, INERTIA: 2.67 KIPS
 WAVE LOAD, DRAG: 0.37 KIPS
 IMPACT LOAD: 18.42 KIPS
3. TIDAL DATUM INFORMATION IS TAKEN FROM BENCHMARK SHEET FOR STATION ID 94144392, OYSTER POINT MARINA, SAN FRANCISCO BAY, CA, ACCEPTED 10/14/2003, PUBLISHED BY THE U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEAN SERVICE (NOS). ELEVATIONS REFERENCE MEAN LOWER LOW WATER DATUM (MLLW).

TIDAL STAGE	NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)	MEAN LOWER LOW WATER (MLLW)
MEAN HIGHER HIGH WATER (MHHW)	+7.67	+7.18
MEAN HIGH WATER (MHW)	+7.03	+6.54
MEAN LOW WATER (MLW)	+1.63	+1.14
MEAN LOWER LOW WATER (MLLW)	+0.49	+0.00
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)	+0.00	-0.49

TIDAL DATA IS PER NOAA AVERAGES BASED ON THE 1983-2001 TIDAL EPOCH AND NOT GUARANTEED TO REPRESENT CONDITIONS, WHICH MAY OCCUR DURING CONSTRUCTION. ACTUAL WATER LEVELS WILL VARY FROM LEVELS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN ESTIMATES OF WATER LEVELS WHICH MAY OCCUR DURING CONSTRUCTION.

THE STRUCTURES HAVE BEEN DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER CONSTRUCTION IS COMPLETE. THE STABILITY OF THE STRUCTURES PRIOR TO COMPLETION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THIS RESPONSIBILITY EXTENDS TO RELATED ASPECTS OF THE CONSTRUCTION ACTIVITY INCLUDING, BUT NOT LIMITED TO, ERECTION METHODS, ERECTION SEQUENCE, CONNECTIONS, TEMPORARY BRACING, FORMS, SHORING, USE OF EQUIPMENT, AND SIMILAR CONSTRUCTION PROCEDURES. REVIEW OF CONSTRUCTION BY THE OWNER AND ENGINEER OF RECORD IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS ONLY. LACK OF COMMENT BY THE OWNER AND ENGINEER OF RECORD WITH REGARD TO CONSTRUCTION PROCEDURES SHALL NOT BE INTERPRETED AS APPROVAL OR ACCEPTANCE OF SUCH PROCEDURES.

GEOTECHNICAL NOTES:

1. RESULTS OF GEOTECHNICAL DATA MAY BE REFERENCED IN THE FOLLOW REPORTS:
 "GEOTECHNICAL INVESTIGATION, SOUTH SAN FRANCISCO FERRY TERMINAL, OYSTER POINT MARINA" BY TREADWELL & ROLLO DATED: 10 OCTOBER 2007.
 "GEOTECHNICAL STUDIES, OYSTER POINT MARINA, DOCKS 8 & 11 MODIFICATIONS" BY TREADWELL & ROLLO DATED: 24 JULY 2012.
 "CONSTRUCTION PLANS FOR BREAKWATER REPLACEMENT & EXTENSIONS" BY DMJM, DATED: 1978.
2. NAVIGATION AIDS ARE PLACED APPROXIMATELY 1,450 FEET FROM EXISTING BORING LOCATIONS.
3. FOTH HAS ASSUMED THAT THE SAME SOIL PARAMETERS ARE APPLICABLE.
4. THE SITE IS UNDERLAIN BY AN 88 TO 98 FEET THICK LAYER OF "BAY MUD". REFERENCE SHEETS B-101 THROUGH B-103 FOR FURTHER INFORMATION.

TOPOGRAPHIC SURVEY NOTES:

1. RESULTS OF TOPOGRAPHY SURVEY PREPARED BY HJW GEOSPATIAL, INC., IN OAKLAND CALIFORNIA USING COMPUTER ASSISTED, PHOTOGRAMMETRIC METHODS.
2. IN AREAS OF DENSE VEGETATION, ACCURACY OF CONTOURS MAY DEVIATE FROM ACCEPTED ACCURACY STANDARDS.
3. THE COORDINATES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE III, NAD 1983.
4. CONTROL SURVEY PERFORMED BY TUCKER & ASSOCIATES.
5. ELEVATIONS ARE BASED REFERENCED TO MEAN LOWER LOW WATER (MLLW) DATUM.
6. THE LOCATION OF UNDERGROUND UTILITY LINES WERE LOCATED AND CONNECTED TO THE ABOVEGROUND UTILITY STRUCTURE USING EXISTING UTILITY MAPS SUPPLIED BY THE OYSTER POINT MARINA HARBOR MASTERS OFFICE AND WERE NOT FIELD VERIFIED. ANY UNDERGROUND CONSTRUCTION MUST BE PRECEDED BY AN UNDERGROUND UTILITY SURVEY AND/OR ON-SITE "POT-HOLING" TO VERIFY LINE LOCATION.
7. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF TOPOGRAPHIC SURVEYS PERFORMED, AND CAN ONLY BE CONSIDERED AS INDICATING EXISTING CONDITIONS AT THAT TIME. NO SURVEYS WERE CONDUCTED TO LOCATE PROPERTY LINES, CHANNEL LIMITS, EASEMENTS, UTILITIES, GEOTECHNICAL FEATURES, SHORELINES, HABITATS OR ANY OTHER PHYSICAL FEATURES RELATING TO THE PROJECT SITE, NOR DOES FOTH WARRANT THE EXISTENCE OR LOCATION OF SAID PHYSICAL FEATURES.
8. POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT. ANY OTHER USE, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH INFRASTRUCTURE & ENVIRONMENT.

HYDROGRAPHIC SURVEY NOTES:

1. RESULTS OF HYDROGRAPHY FROM SURVEY CONDUCTED BY FOTH & VAN DYKE AND ASSOCIATES, INC. ON 03/11/2019.
2. SOUNDINGS ARE IN MEAN LOWER LOW WATER (MLLW) BASED ON MINIMUM VALUES, SORTED BY A 23' RADIUS.
3. DATA IS IN MEAN LOWER LOW WATER (MLLW) BASED ON AVERAGE VALUES ON A 3'X3' GRID.
4. COORDINATES ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3.
5. BENCHMARK IS MAG NAIL LOCATED APPROXIMATELY 2068895.114 USN, 6016332.087 USE AT 30.66' MLLW.
6. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF HYDROGRAPHIC SURVEYS PERFORMED ON THE DATES SHOWN, AND CAN ONLY BE CONSIDERED AS INDICATING THE SEABED CONDITIONS AT THAT TIME. INTERPOLATED INFORMATION FROM BETWEEN SOUNDING RUNS IS NOT GUARANTEED. SHOALS, OBSTRUCTIONS OR OTHER DIFFERING CONDITIONS MAY EXIST BETWEEN THESE RUNS. NO SURVEYS WERE CONDUCTED TO LOCATE PROPERTY LINES, CHANNEL LIMITS, EASEMENTS, UTILITIES, GEOTECHNICAL FEATURES, SHORELINES, STRUCTURES, HABITATS OR ANY OTHER PHYSICAL FEATURES RELATING TO THE PROJECT SITE, NOR DOES FOTH WARRANT THE EXISTENCE OR LOCATION OF SAID PHYSICAL FEATURES.

GENERAL CONDITIONS:

1. NO GUARANTEE TO THE ACCURACY OF THE REFERENCE DOCUMENTS IS PROVIDED HEREIN AND THE CONTRACTOR SHALL RELY ON HIS OWN FIELD VERIFICATION FOR ITEMS SO REQUIRED.
2. SECTIONS, DETAILS, NOTES, DIMENSIONS AND CONDITIONS ARE APPLICABLE AT ANY OTHER LOCATION WHERE CONDITIONS AND DETAIL ARE SIMILAR BUT ARE NOT SPECIFICALLY NOTED AS SUCH OR ARE NOT SHOWN.

3. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT DOES NOT IMPEDE THE OWNER'S OPERATIONS ON SITE OR THE OWNER'S ON SITE OPERATING EQUIPMENT.

4. THE CONTRACTOR PRIOR TO CONSTRUCTION AND FABRICATION OF CONSTRUCTION MATERIALS SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS.
5. IF, DURING THE PERFORMANCE OF THE WORK, THE CONTRACTOR FINDS A CONFLICT, ERROR, OR DISCREPANCY IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SO REPORT TO THE ENGINEER OF RECORD IN WRITING AT ONCE. BEFORE PROCEEDING WITH THE WORK AFFECTED THEREBY, THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION OR CLARIFICATION FROM THE ENGINEER OF RECORD. WORK DONE BEFORE THE ENGINEER OF RECORD RENDERS HIS DECISION IS AT THE CONTRACTOR'S SOLE RISK.
6. THE WORK SHALL BE PERFORMED IN A GENERAL SEQUENCE DEVELOPED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE SEQUENCES AND PROCEDURES TO BE USED.
7. THE CONTRACTOR SHALL FURNISH AND COORDINATE PLANT, LABOR, SUPERVISION, MATERIALS, EQUIPMENT AND APPLIANCES FOR DEMOLITION AND/OR CONSTRUCTION WORK IN CONNECTION WITH THE DEMOLITION AND/OR CONSTRUCTION OF THE MARINE FACILITIES.
8. THE OWNER HAS SECURED CERTAIN PERMITS REQUIRED BY FEDERAL, AND STATE AUTHORITIES FOR THE NEW ACTIVITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE WORK IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMITS. THE CONTRACTOR SHALL POST COPIES OF THE PERMITS AT THE SITE THROUGHOUT THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN PERMITS ASSOCIATED WITH THE LEGAL DISPOSAL OF CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL SECURE REQUIRED LOCAL AUTHORIZATIONS AND PERMITS.
9. SPECIAL INSPECTION REQUIREMENTS PER LOCAL AND/OR STATE BUILDING CODES SHALL BE FULFILLED AND SHALL BE COORDINATED BY THE OWNER. THE CONTRACTOR SHALL INFORM THE OWNER OF THE PROGRESS OF WORK AND PROVIDE ADEQUATE NOTICE AS TO WHEN SPECIAL INSPECTIONS ARE TO OCCUR SUCH AS TO NOT DELAY THE SCHEDULE.
10. THE CONTRACTOR SHALL FURNISH MATERIALS FOR INSTALLATION IN THE COMPLETED WORK AS SPECIFIED HEREINAFTER. THE CONTRACTOR SHALL HANDLE THESE MATERIALS AS THEY ARE DELIVERED TO THE SITE OR OFF-SITE WORK AREAS, AND SHALL STORE THEM IN A DESIGNATED STORAGE AREA.
11. THE CONTRACTOR WILL INDEMNIFY AND SAVE HARMLESS THE OWNER AND ENGINEER OF RECORD FROM AND AGAINST ALL LOSSES AND ALL CLAIMS, DEMANDS, PAYMENTS, SUITS, ACTIONS, RECOVERIES, AND JUDGMENTS OF EVERY NATURE AND DESCRIPTION BROUGHT OR RECOVERED AGAINST THE OWNER AND ENGINEER OF RECORD BY REASON OF ANY ACT OR OMISSION OF THE CONTRACTOR, OR OF ANY SUBCONTRACTOR TO THE CONTRACTOR, OR OF ANY PERSON DIRECTLY OR INDIRECTLY EMPLOYED BY THE CONTRACTOR OR ANY SUCH SUBCONTRACTOR, IN THE PERFORMANCE OF ANY WORK FOR, OR THE RENDERING OF ANY SERVICES TO, THE OWNER.
12. THE CONTRACTOR AGREES THAT, AT ITS OWN COST AND EXPENSE, IT SHALL PROCURE AND CONTINUE IN FORCE; INSURANCE COVERAGE AS REQUIRED BY THE OWNER. SUCH INSURANCE SHALL BE WRITTEN BY A COMPANY OR COMPANIES AUTHORIZED TO ENGAGE IN THE BUSINESS OF GENERAL LIABILITY INSURANCE IN THE STATE IN WHICH THE DEMISED PREMISES ARE LOCATED, AND THERE SHALL BE DELIVERED TO THE OWNER WITH THE BID CUSTOMARY CERTIFICATES EVIDENCING SUCH PAID-UP INSURANCE, WHICH CERTIFICATES ARE TO BE ISSUED BY THE INSURANCE COMPANIES. GOOD AND RESPONSIBLE COMPANIES, REASONABLY ACCEPTABLE TO THE OWNER, SHALL WRITE SUCH INSURANCE.
13. THE ENGINEER AND ITS SUB CONSULTANTS SHALL BE ADDED TO THE CONTRACTORS GENERAL LIABILITY INSURANCE POLICY AS ADDITIONAL INSURED ON PRIMARY AND CON-CONTRIBUTORY BASIS. SUBMIT CERTIFICATES OF INSURANCE TO THE ENGINEER AS EVIDENCE OF THIS COVERAGE.
14. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF LOCATIONS, DIMENSIONS, AND LEVELS AND NO PLEA AS TO INSTRUCTIONS OR ORDER RECEIVED FROM OTHER SOURCES OTHER THAN INFORMATION CONTAINED ON CONTRACT DRAWINGS, SPECIFICATIONS OR IN WRITTEN ORDERS OF THE OWNER OR ENGINEER OF RECORD SHALL JUSTIFY DEPARTURE FROM THE DIMENSIONS AND ELEVATIONS REQUIRED BY THE CONTRACT DRAWINGS.
15. THE CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AT THE SITE, VERIFYING THE SAME WITH THE CONTRACT DRAWINGS AND EXISTING FACILITIES, AND WILL BE HELD RESPONSIBLE FOR THE PROPER FIT AND ALIGNMENT OF COMPLETED WORK IN POSITION.
16. AT THE CONTRACTOR'S EXPENSE, THE CONTRACTOR'S WORKING AREAS SHALL BE CLEANED BY HIM ON A DAY-TO-DAY BASIS, WITH RUBBISH REMOVED FROM THE SITE AND WORK AREAS CLEANED AT THE END OF EACH DAY. AT FINAL COMPLETION OF WORK THE CONTRACTOR SHALL LEAVE THE ENTIRE PREMISES, WITHIN THE SITE OF HIS OPERATIONS, CLEAN AND FREE FROM THE RUBBISH RESULTING FROM HIS CONSTRUCTION OPERATIONS.
17. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND MAINTAIN UTILITIES HE DEEMS NECESSARY TO AFFECT THE WORK.
18. THE CONTRACTOR SHALL PROVIDE FIELD ENGINEERING SERVICES REQUIRED FOR PROPER COMPLETION OF THE WORK INCLUDING, BUT NOT NECESSARILY LIMITED TO: ESTABLISHING AND MAINTAINING LINES AND LEVELS; STRUCTURAL DESIGN OF SHORES, FORMS, AND SIMILAR ITEMS PROVIDED BY THE CONTRACTOR AS PART OF HIS MEANS AND METHODS OF CONSTRUCTION.
19. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT HIS EXPENSE REQUIRED FIRE PROTECTION SYSTEMS AND DEVICES AS NECESSARY TO SAFELY PERFORM THE WORK IN ACCORD WITH THE APPLICABLE REGULATIONS. IT SHALL BE OPERATIONAL THROUGHOUT THE PERIOD OF CONSTRUCTION.
20. THE OWNER SHALL HAVE THE RIGHT TO WITHHOLD WITHOUT PENALTY PAYMENT DESCRIBED ABOVE, OR SECTIONS REFERENCED HEREIN, FOR COMPLETED WORK SHOULD THE CONTRACTOR FAIL TO MEET OBLIGATIONS OR REQUIREMENTS OF THE CONTRACT. WITHHELD PAYMENT SHALL BE PROMPTLY MADE UPON THE CONTRACTOR'S FULL COMPLIANCE WITH THE CONTRACT.
21. COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR PROTECTION OF THE ENVIRONMENT DURING THE WORK. ENSURE THAT PERSONNEL ARE PROPERLY TRAINED AND THAT SUFFICIENT EQUIPMENT AND MATERIALS ARE READILY AVAILABLE FOR USE IF REQUIRED. ABIDE BY STATE AND FEDERAL SPILL REPORTING REQUIREMENTS.
22. THE OWNER RESERVES THE RIGHT TO CHARGE THE CONTRACTOR FOR ADDITIONAL ENGINEERING SERVICES IF REQUIRED DUE TO THE CONTRACTOR'S ACTIONS OR INACTIONS.
23. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFETY OF HIS OPERATIONS. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY, OR LOSS TO PERSONS EMPLOYED BY THE CONTRACTOR IN PERFORMANCE OF THE WORK, AND PERSONS NEARBY THAT MAY BE AFFECTED BY THE CONTRACTOR'S OPERATIONS OR THE WORK, INCLUDING EQUIPMENT AND MATERIALS WHICH WILL BE INCORPORATED IN THE WORK, AND OTHER PROPERTIES AND STRUCTURES AT THE SITE, OR ON ADJACENT PROPERTIES.
24. OBSTRUCTIONS ARE DEFINED AS UNFORESEEN OBJECTS, WHICH IMPEDE PROGRESS. OBJECTS, WHICH ARE MADE KNOWN TO THE CONTRACTOR, WILL NOT BE CONSIDERED TO BE OBSTRUCTIONS. NOTIFY THE ENGINEER OF RECORD IMMEDIATELY UPON ENCOUNTERING OBSTRUCTIONS. NO CONSIDERATION WILL BE GIVEN FOR ADDITIONAL COMPENSATION ON THIS ACCOUNT WITHOUT THIS TIMELY NOTIFICATION.
25. SUBSTITUTIONS MAY BE FURNISHED FOR MATERIALS SPECIFIED HEREIN PROVIDED THE CONTRACTOR SECURES ACCEPTANCE FROM THE ENGINEER OF RECORD.

SELECTIVE DEMOLITION AND DISPOSAL:

1. SELECTIVE DEMOLITION AND DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL PERMIT AND BUILDING CODE REQUIREMENTS.
2. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THOSE STRUCTURES AND DERELICT COMPONENTS AS INDICATED ON THE DRAWINGS.
3. SELECTIVE DEMOLITION INCLUDES BUT IS NOT LIMITED TO REMOVAL AND REUSE (WHERE POSSIBLE) OF EXISTING MATERIALS, UTILITIES, AND OTHER COMPONENTS ESSENTIAL FOR A COMPLETE PROJECT.
4. THE CONTRACTOR SHALL TAKE REASONABLE CARE IN REMOVING ELEMENTS SELECTED TO BE DEMOLISHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. DAMAGE OR DESTRUCTION BY THE CONTRACTOR TO EXISTING ELEMENTS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REPLACED IN-KIND AT THE DISCRETION OF THE OWNER AT NO ADDITIONAL COST.
5. ITEMS TO BE REMOVED AND REUSED SHALL BE PLACED IN A STAGING AREA ACCESSIBLE FOR INSPECTION BY THE OWNER.

6. PRIOR TO COMMENCEMENT OF SELECTIVE DEMOLITION, THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN FOR ITEMS TO BE DEMOLISHED. DEMOLITION MATERIAL DESIGNATED BY THE OWNER TO BE REMOVED FROM THE SITE SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE DEBRIS DISPOSAL PLAN SHALL ACKNOWLEDGE THIS OWNERSHIP AND SHALL IDENTIFY THE MEANS AND METHODS AND FINAL DISPOSITION FOR DISPOSAL MATERIALS.
7. PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR SHALL CLEARLY MARK THE LIMITS OF THE DEMOLITION FOR REVIEW AND APPROVAL BY THE OWNER.
8. COMPLETELY REMOVE ITEMS DESIGNATED LEAVING SURFACES CLEAN, SOUND, AND READY TO RECEIVE NEW MATERIALS AS SPECIFIED IN THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING THE COURSE OF DEMOLITION.
10. THE CONTRACTOR SHALL SUBMIT A DISPOSAL CERTIFICATE TO THE OWNER'S REPRESENTATIVE CERTIFYING LEGAL AND PROPER DISPOSAL.

TEMPORARY WORK:

1. LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK THAT, UPON COMPLETION, ARE NOT A PART OF THE WORK, SHALL BE FURNISHED, INSTALLED, AND SUBSEQUENTLY REMOVED FROM THE SITE BY THE CONTRACTOR.
2. TEMPORARY WORK SHALL BE SUBJECT TO THE REQUIREMENTS OF THE STATE AND APPLICABLE LOCAL BUILDING CODES.
3. DURING EXECUTION OF THE WORK, THE CONTRACTOR IS REQUIRED TO INSTALL AND MAINTAIN REQUIRED ENVIRONMENTAL CONTROL MEASURES TO PROTECT ADJACENT WATERWAYS. MEASURES INCLUDE BUT ARE NOT LIMITED TO TEMPORARY CONTAINMENT BOOMS, AND TURBIDITY CURTAINS. IN ACCORDANCE WITH STATE REGULATORY AUTHORIZATIONS, THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN TEMPORARY TURBIDITY CURTAINS DURING CONSTRUCTION. TEMPORARY MATERIALS AND EQUIPMENT SHALL CONFORM TO REQUIREMENTS FOR TEMPORARY WORK.

STEEL PILES:

1. STEEL PIPE PILE MATERIAL SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF API 5L X 52 OR DESIGN ENGINEER APPROVED ALTERNATIVE WITH A MINIMUM Fy OF 50 KSI.
2. STEEL PIPE PILE WITH DIAMETER 30" SHALL BE MANUFACTURED WITH STEEL PLATES IN CONFORMANCE TO THE REQUIREMENTS OF API 5L X 52, WITH A MINIMUM Fy = 50 KSI. STEEL PIPE PILES SHALL HAVE A WALL THICKNESS OF 0.75 INCHES UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
3. PILES SHALL BE FURNISHED WITH ADEQUATE LENGTH TO ALLOW FOR DRIVING TOLERANCES AND FIELD ADJUSTMENT TO MEET DRIVING CRITERIA.
4. ALL FIELD AND SHOP SPlice WELDS SHALL BE UT TESTED. WELD TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW.
5. ONE FIELD SPlice IS PERMITTED AND NO MORE THAN TWO (2) TOTAL SHOP SPlices WILL BE PERMITTED PER PILE. THE SPlice SHALL BE A FULL PENETRATION WELD AND SHALL DEVELOP THE FULL STRENGTH OF THE PILE. SUBMIT SPlice DETAILS TO THE DESIGN ENGINEER FOR REVIEW AN APPROVAL. NO SPlice SHALL BE ALLOWED IN THE BOTTOM 40 FEET OR MIDDLE 20 FEET OF PILE WITHOUT WRITTEN APPROVAL OF THE ENGINEER. THE FULL CIRCUMFERENCE AND DEPTH OF ALL FIELD SPlices SHALL BE VISUALLY INSPECTED AND UT TESTED. VISUAL AND ULTRASONIC TESTING SHALL BE PERFORMED BY A THIRD PARTY ORGANIZATION RETAINED BY THE CONTRACTOR.
6. PILES SHOE ARE NOT REQUIRED.
7. PILES SHALL BE SHOP COATED, ON OUTER SURFACES ONLY, TO A MINIMUM OF TEN (10) FEET BELOW THE DESIGN MUDLINE DEPTH ELEVATION OR AS INDICATED ON THE DRAWINGS.

PILE DRIVING:

1. STEEL PIPE PILES FOR THE NAVIGATION AID MONOPILE SHALL BE INSTALLED TO A MINIMUM EMBEDMENT LENGTH AS LISTED BELOW:
 MONOPILE
 30-INCH DIAMETER X 0.75 INCH WALL THICKNESS
 TIP ELEVATION: -84.7 FT MLLW
2. DRIVE PILES WITH A HYDRAULICALLY OPERATED VIBRATORY HAMMER, AS APPLICABLE, WITH SUFFICIENT ENERGY AND ENERGY TRANSFER CHARACTERISTICS TO DRIVE THE PILES TO THE REQUIRED CAPACITY AND TOE ELEVATIONS WITHOUT DAMAGING THE PILE HEAD. CUT OFF HEADS OF PILES ACCURATELY IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AFTER COMPLETION OF DRIVING.
3. DRIVE THE PILES STRAIGHT AND TRUE AT INDICATED LOCATIONS, WITH DEVIATION FROM THE LONGITUDINAL AXIS OF NOT MORE THAN 1/4 INCH PER FOOT.
4. LOCATE THE PILES WITHIN 3 INCHES OF THE POSITIONS INDICATED ON THE DRAWINGS.
5. CONTINUOUSLY DRIVE EACH PILE TO REACH THE CAPACITY AND FULL EMBEDDED LENGTH CALLED FOR ON THE DRAWINGS.
6. WITHDRAW PILES THAT ENCOUNTER UNDERGROUND OBSTRUCTIONS SUFFICIENT TO IMPEDE PILE DRIVING. REDRIVE AS CLOSE AS POSSIBLE TO ORIGINAL POSITION, SUBJECT TO REVIEW OF THE OWNER. REMOVE PILES THAT SPLIT, BROOM, BREAK OR DRIVE OUT OF LINE. DRIVE ANOTHER PILE IN ITS PLACE. PROVIDE AND MAINTAIN NECESSARY LIGHTING AND BARRIERS TO ADEQUATELY ASSURE PUBLIC SAFETY. PROVIDE ADEQUATE SAFEGUARDS TO PROTECT FROM DAMAGE IMPROVEMENTS ON THE WORK SITE AND ON ADJACENT PROPERTIES.
7. PROVIDE DRIVING RESISTANCE PENETRATION AND REFUSAL VALUES AS ACCEPTED BY THE ENGINEER OF RECORD.
8. USE SUITABLE CUSHIONS OR DRIVING HEADS TO AVOID DAMAGE TO THE PILES, DEVELOPING PROPER TOTAL DRIVING ENERGY, AND DIRECTING THE ENERGY ALONG THE LONGITUDINAL CENTER OF GRAVITY OF THE PILE.
9. DRIVE PILES TO THEIR FULL PENETRATION WITHOUT BENDING, RUPTURING, OR SEVERELY DAMAGING THE PILES. IF FAILURE IN THE ABOVE RESPECTS IS ENCOUNTERED, PULL THE PILE AND DRIVE A NEW PILE AT NO ADDITIONAL COST TO THE OWNER. IF A REPLACEMENT PILE FAILS TO DEVELOP FULL DRIVING RESISTANCE, PULL THE REPLACEMENT PILE AND DRIVE A NEW PILE WITH LARGER DIAMETER AT NO ADDITIONAL COST TO THE OWNER.
10. JETTING TO ASSIST PENETRATION WILL NOT BE PERMITTED UNLESS ACCEPTED BY THE ENGINEER OF RECORD. PRE-DRILLING WILL NOT BE PERMITTED UNLESS ACCEPTED BY THE ENGINEER OF RECORD, WHEREBY ACCEPTED PRE-DRILLING TO ASSIST PENETRATION MAY BE USED WHERE EXTREME DRIVING RESISTANCE IS ENCOUNTERED, OR WHERE VIBRATIONS FROM DRIVING MAY BE DETRIMENTAL TO ADJACENT STRUCTURES.
11. WHERE PILES ARE PUSHED UP BY PRESSURE FROM DRIVING OF ADJACENT PILES, RE-DRIVE AS REQUIRED AND AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL COMPLY WITH THE "STEEL CONSTRUCTION MANUAL", FIFTEENTH EDITION, PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
2. WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE - STEEL", AS ADOPTED BY THE AMERICAN WELDING SOCIETY (AWS D1.1). A WELDER CERTIFIED IN ACCORDANCE WITH AWS STANDARDS SHALL PERFORM WELDING.
3. WELDING ELECTRODES SHALL BE E70XX AND COMPLY WITH AWS A5.1 AND AWS A5.5.

4. STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A 572, GRADE 50. STEEL TUBES SHALL CONFORM TO ASTM A500, GRADE C. STEEL PLATES SHALL CONFORM TO ASTM A572 Fy = 50 KSI.

STEEL HARDWARE:

PIPE:	ASTM A53 GRADE B, SCHEDULE 40
HIGH STRENGTH STRUCTURAL BOLTS:	ASTM A325, W/ HEXAGONAL HEADS
NUTS:	ASTM A563
WASHERS:	ASTM F436

5. HIGH-STRENGTH BOLTS, NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS".
6. GALVANIZING SHALL CONFORM TO ASTM A 123 OR ASTM A 153, AS APPLICABLE.
7. STEEL SHAPES, PLATES, AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
8. BOLTED CONNECTIONS SHALL USE 1" DIAMETER F3125 GR. A325 HIGH-STRENGTH BOLTS UNLESS OTHERWISE NOTED.
9. CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE STEEL FABRICATOR EXCEPT FOR THOSE SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS.

PROTECTIVE COATING:

1. MATERIAL USED FOR FACTORY EPOXY COATING OF ALL SCHEDULED SURFACES SHALL BE BAR-RUST 235 MULTI-PURPOSE EPOXY COATING AS MANUFACTURED BY DEVCO COATINGS OR EQUIVALENT ACCEPTED BY THE ENGINEER OF RECORD.
2. FIELD TOUCH-UP COATING SHALL BE IDENTICAL TO FACTORY COATING AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
3. SURFACES SHALL BE PREPARED IN STRICT ACCORDANCE WITH THE PROTECTIVE COATING SYSTEM MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. THE PROTECTIVE COATING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COATING IS TO BE APPLIED WITH A MINIMUM OF THREE COATS TO ACHIEVE AN OVERALL DRY FILM THICKNESS OF 15 MILS.
5. ALL HOLIDAYS OR OTHER IMPERFECTIONS IN THE COATING SHALL BE REMOVED OR REPAIRED AT THE CONTRACTORS EXPENSE PRIOR TO FINAL ACCEPTANCE OF THE WORK.
6. PROTECTIVE COATING TOP COAT OF SURFACES THAT WILL BE SUBMERGED IN SALT WATER SHALL BE BLACK UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR BY THE OWNER.
7. SURFACES THAT WILL BE EXPOSED TO SUNLIGHT AND ABOVE THE WATER SHALL BE COATED WITH A MINIMUM OF 3 MILS OF A COMPATIBLE POLYURETHANE TOP COAT. COLOR OF THIS TOP COAT SHALL BE COORDINATED WITH OWNER.
8. HANDRAILS, RUB RAILS, BOLLARDS, AND OTHER SAFETY ITEMS SHALL BE PAINTED SAFETY YELLOW.
9. STEEL PILES, STEEL PILE CAPS AND STEEL BRACING THAT WILL BE IN DIRECT CONTACT WITH SALT WATER SHALL BE PAINTED BLACK.

STEEL GRATING:

1. STEEL GRATING SHALL BE WELDED RECTANGULAR DESIGN TYPE WB AS MANUFACTURED BY IKG INDUSTRIES OR EQUIVALENT ACCEPTED BY ENGINEER.
2. MAIN BEARING BARS SHALL BE 1 INCH X 3/16 INCH, SPACED 1 3/16 INCHES CENTER-TO-CENTER.
3. CROSS BARS SHALL BE RESISTANCE WELDED AT RIGHT ANGLES TO BEARING BARS. CROSS BARS SHALL BE SPACED 4 INCHES CENTER-TO-CENTER.
4. STEEL GRATING SHALL HAVE SERRATED MAIN BARS AND BE GALVANIZED.
5. PROVIDE NOSING BARS AT STAIR TREADS.

NAVIGATION LIGHT & SIGNAGE:

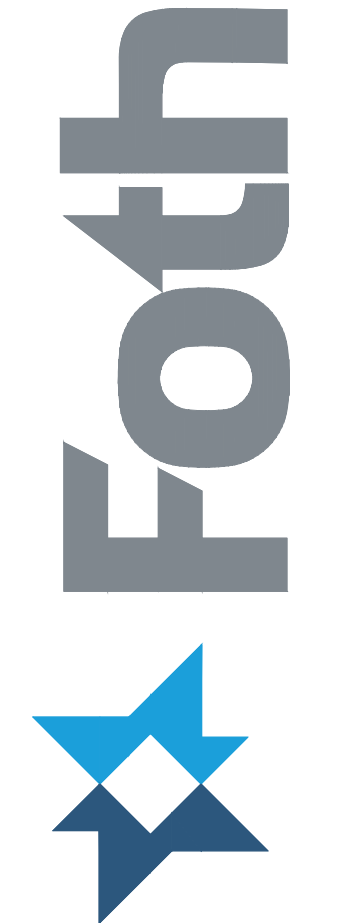
1. NAVIGATION LIGHT SHALL BE SELF-CONTAINED LANTERN M660 AS MANUFACTURED BY SABIK, A CARMANAH COMPANY OR EQUIVALENT ACCEPTED BY ENGINEER AND CLIENT.
2. COLOR OF NAVIGATION LIGHT SHALL BE GREEN AND/OR RED DEPENDENT ON NAVIGATION AID NUMBER AND AS DIRECTED ON DRAWINGS PER COAST GUARD REQUIREMENTS.
3. PROVIDE POLE MOUNT FOR NAVIGATION LIGHT. POLE SHALL BE 2" STD PIPE.
4. WELD LIGHT POST TO RAILING POST AS INDICATED ON DRAWINGS.
5. NAVIGATION SIGNS SHALL MEET COAST GUARD REQUIREMENTS.
6. MOUNT NAVIGATION SIGNS TO NEW RAILING SYSTEM AS INDICATED ON DRAWINGS.

U.S. COAST GUARD LIGHT LIST:

1. NAVIGATION AIDS REFERENCED FROM UNITED STATES COAST GUARD LIGHT LIST VOLUME VI PACIFIC COAST AND PACIFIC ISLANDS DATED 2021.

NO. (1)	NAME & LOCATION (2)	POSITION (3)	CHARACTERISTIC (4)	HEIGHT (5)	RANGE (6)	STRUCTURE (7)	REMARKS (8)
5100	LIGHT 1	37-39-50.640N 122-22-09.180W	FI G 4s	17	-	TRIPOD DOLPHIN	PRIVATE AID
5105	LIGHT 2	37-39-51.780N 122-22-09.240W	FI R 4s	20	-	TRIPOD DOLPHIN	PRIVATE AID
5108	LIGHT 3	37-39-50.820N 122-22-25.260W	Q G	10	-	SG ON SEWALL	
5110	LIGHT 4	37-39-51.600N 122-22-24.120W	Q R	10	-	TR ON SEAWALL	PRIVATE AID
5115	LIGHT 5	37-39-50.820N 122-22-27.240W	FI G 4s	10	-	SG ON SEAWALL	PRIVATE AID
5120	LIGHT A	37-39-53.460N 122-22-28.140W	FI W 4s	10	-	NR ON SEAWALL	PRIVATE AID
5125	LIGHT 6	37-39-52.200N 122-22-28.200W	FI R 4s	10	-	TR ON SEAWALL	PRIVATE AID
5130	LIGHT 8	37-36-16.634N 122-17-29.063W	FI R 4s	15	4	TR ON PILE	-

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SAN MATEO COUNTY HARBOR DISTRICT
SOUTH SAN FRANCISCO, CALIFORNIA
REPLACEMENT OF OYSTER POINT MARINA
ENTRANCE NAVIGATION AIDS

NO.	BY	DATE	REVISIONS	
			DESCRIPTION	DATE
1	TJM	9/16/21	ADDENDUM NO. 1	
2	TJM	9/28/21	ADDENDUM NO. 2	

DATE OF PREPARATION		
BY	DATE	
SURVEYED	-	-
DRAWN	SM/TM	08/24/2021
DESIGNED	SM	08/24/2021
CHECKED	AM	08/24/2021

SHEET TITLE:

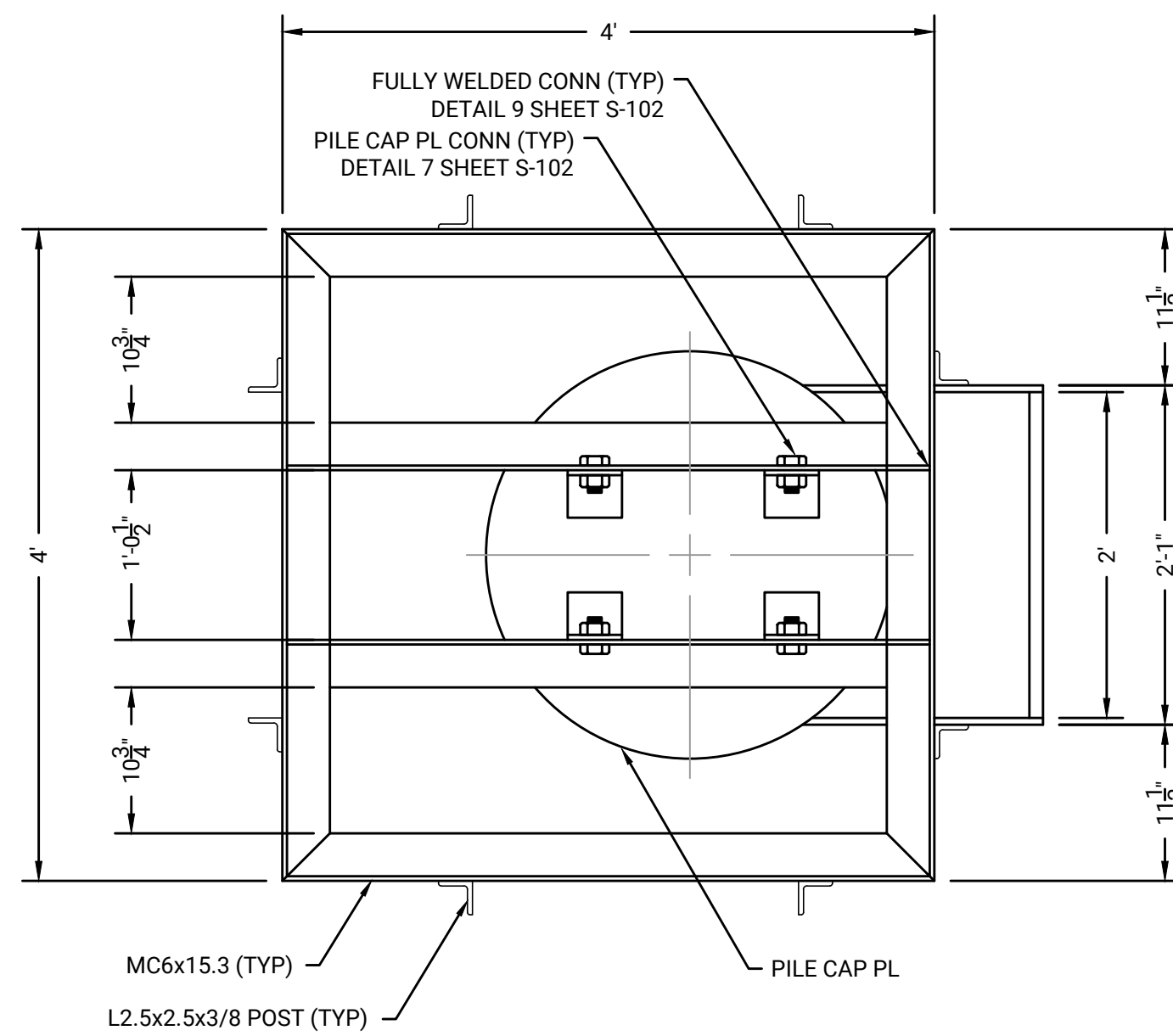
NOTES

ISSUANCE:

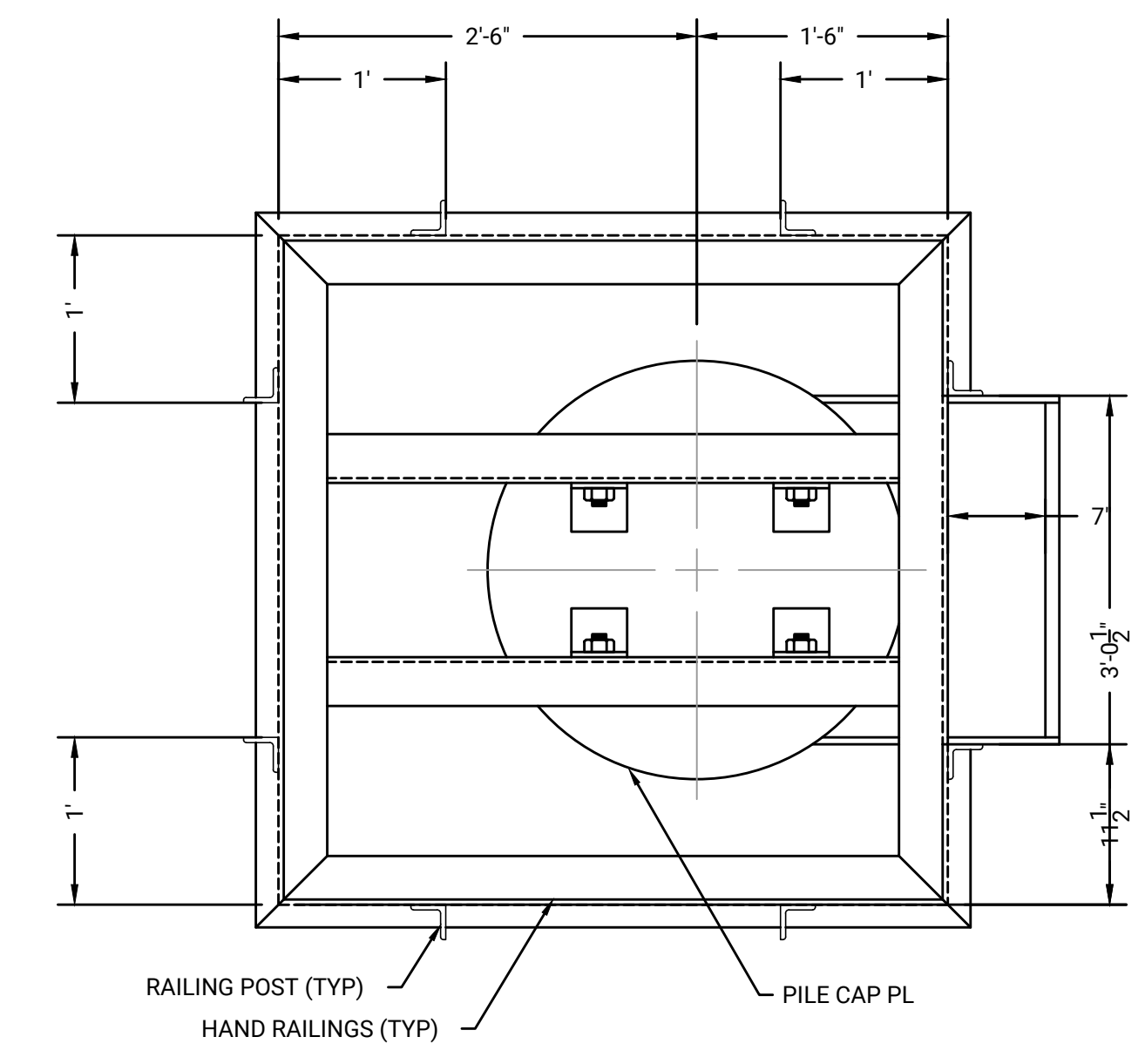
ISSUE FOR BID PURPOSES

PROJECT NO:	21S046.00
SHEET NUMBER:	G-002

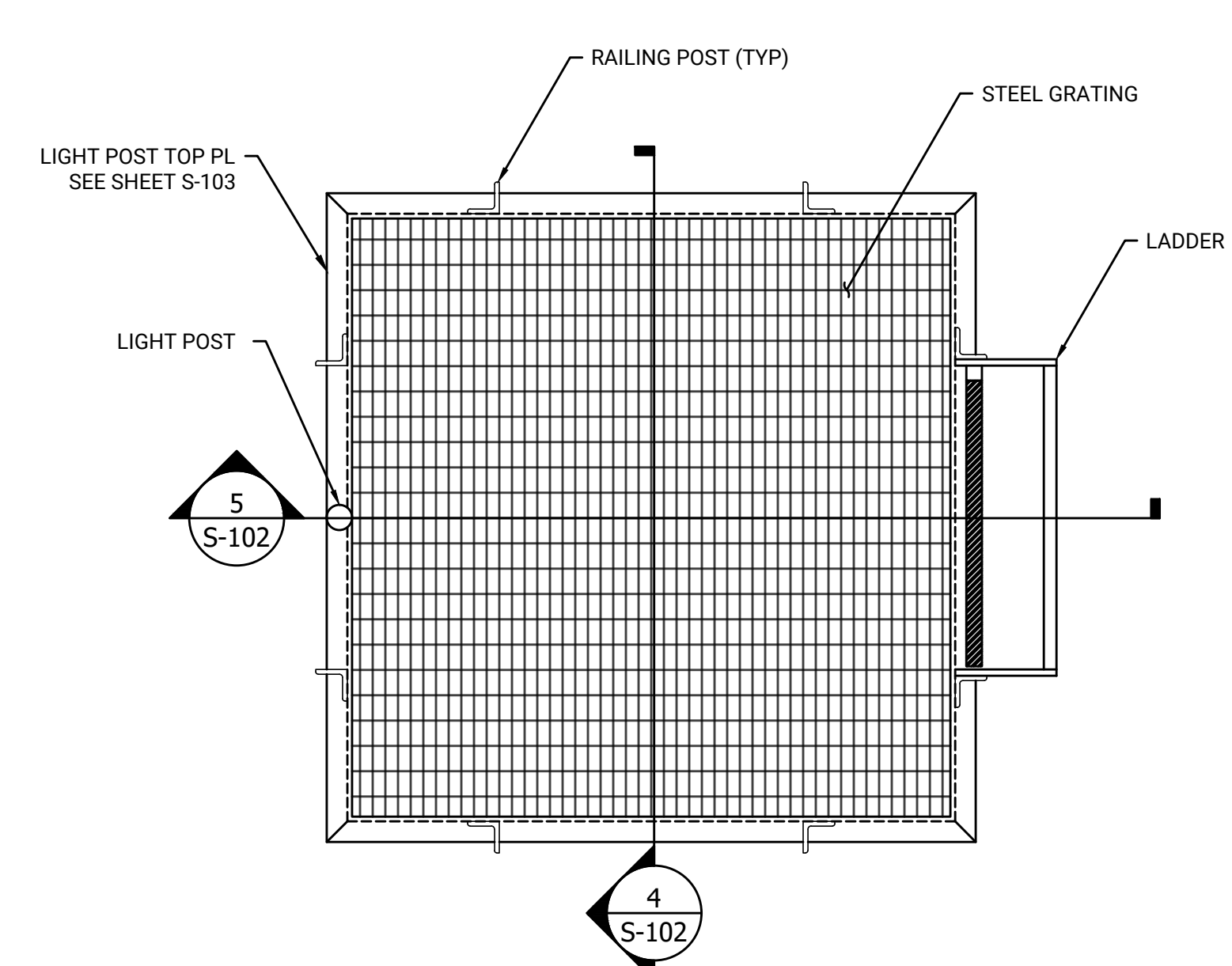
Tuesday, September 28, 2021 1:44:30 PM
 DWG Filename: 20s046_smcchd_repl of opm entr nav aids_issue for bid_l2.dwg
 DWG Folder Location: pw:\PWP-AFS1_foth.com\FW_IE\Documents\Clients\San Mateo County Harbor District\020S046.00\CAD\Drawings



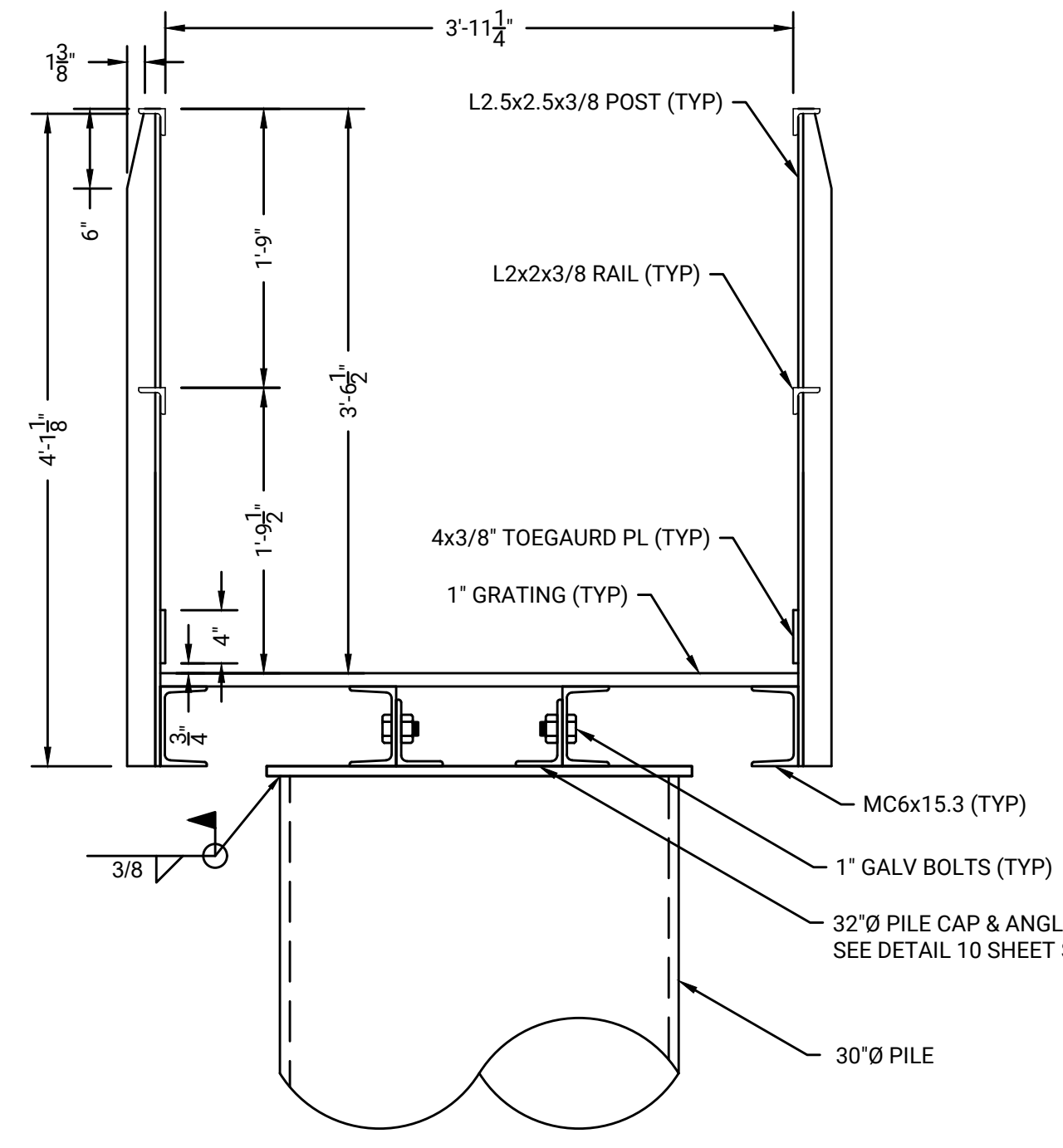
1 PLATFORM FRAMING PLAN
SCALE: 1" = 1'-0"



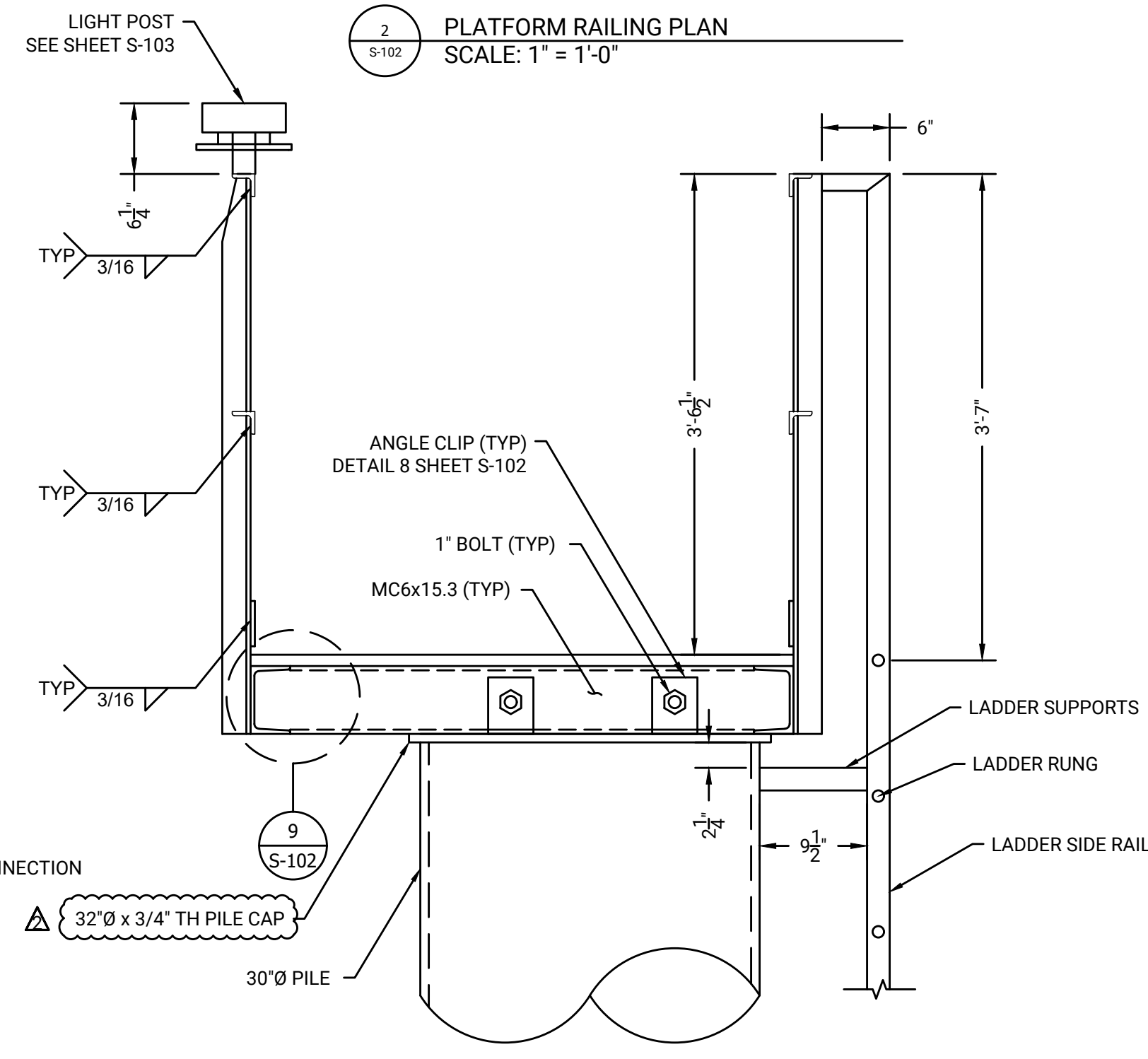
2 PLATFORM RAILING PLAN
SCALE: 1" = 1'-0"



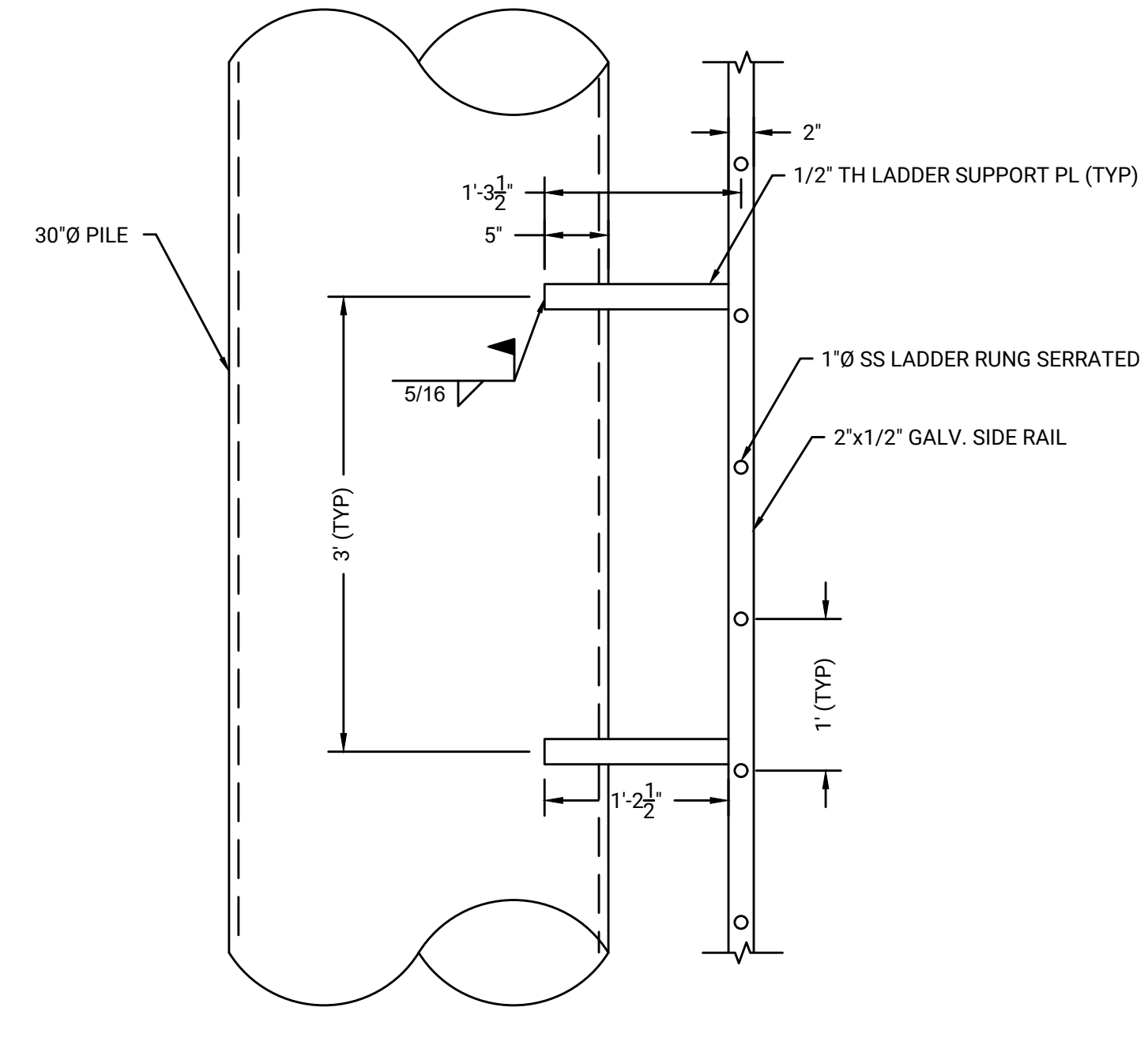
3 PLATFORM GRATING PLAN
SCALE: 1" = 1'-0"



4 PLATFORM SECTION
SCALE: 1" = 1'-0"



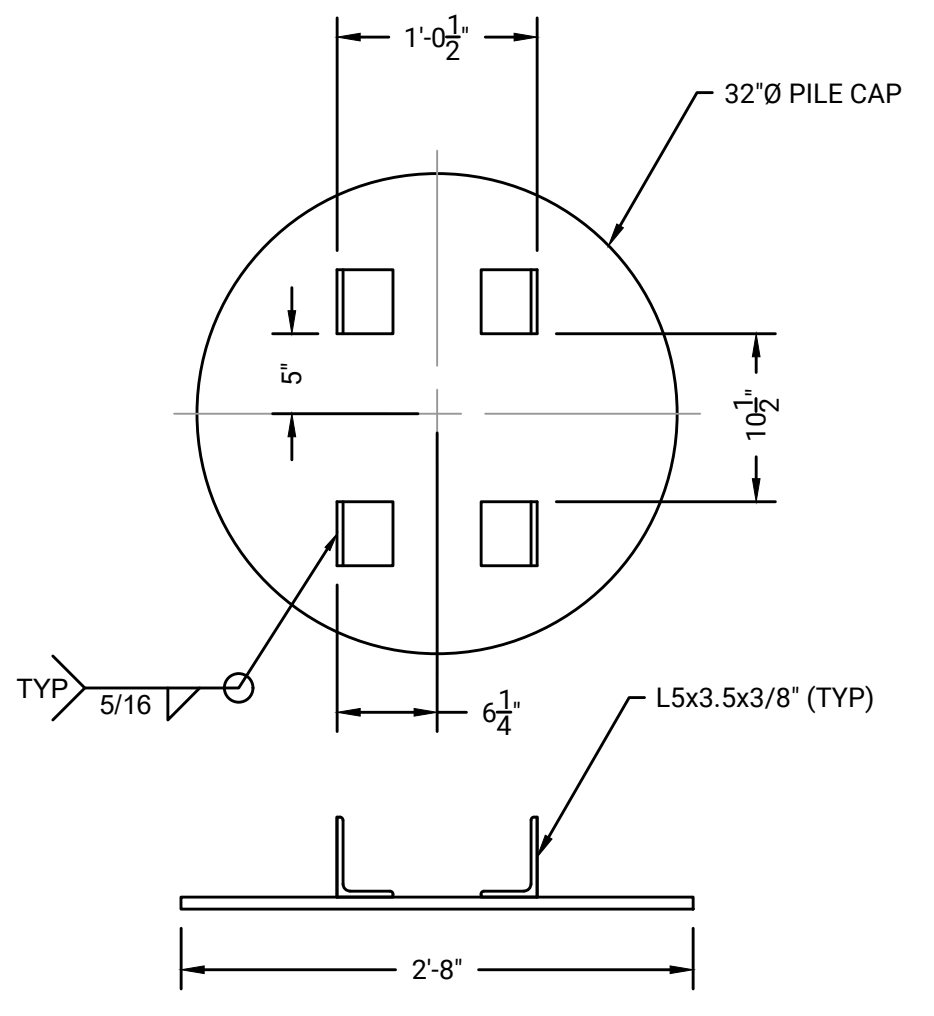
5 PLATFORM SECTION
SCALE: 1" = 1'-0"



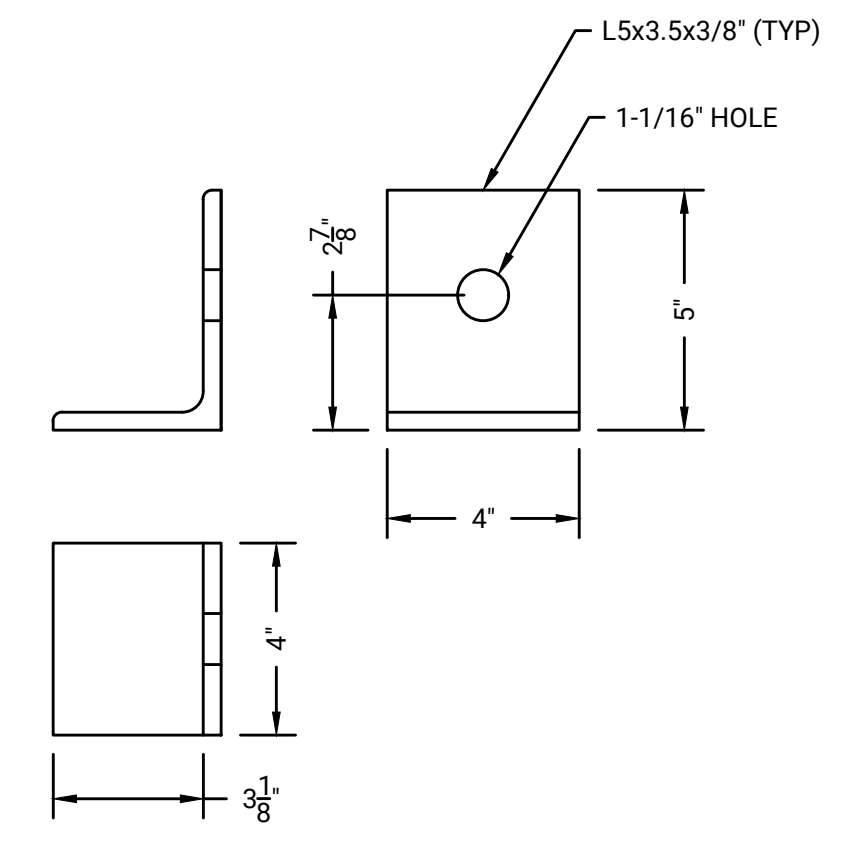
6 LADDER DETAIL
SCALE: 1" = 1'-0"

NOTES:
1. SIGNS, SIGN CONNECTIONS AND LIGHT NOT SHOWN FOR CLARITY.

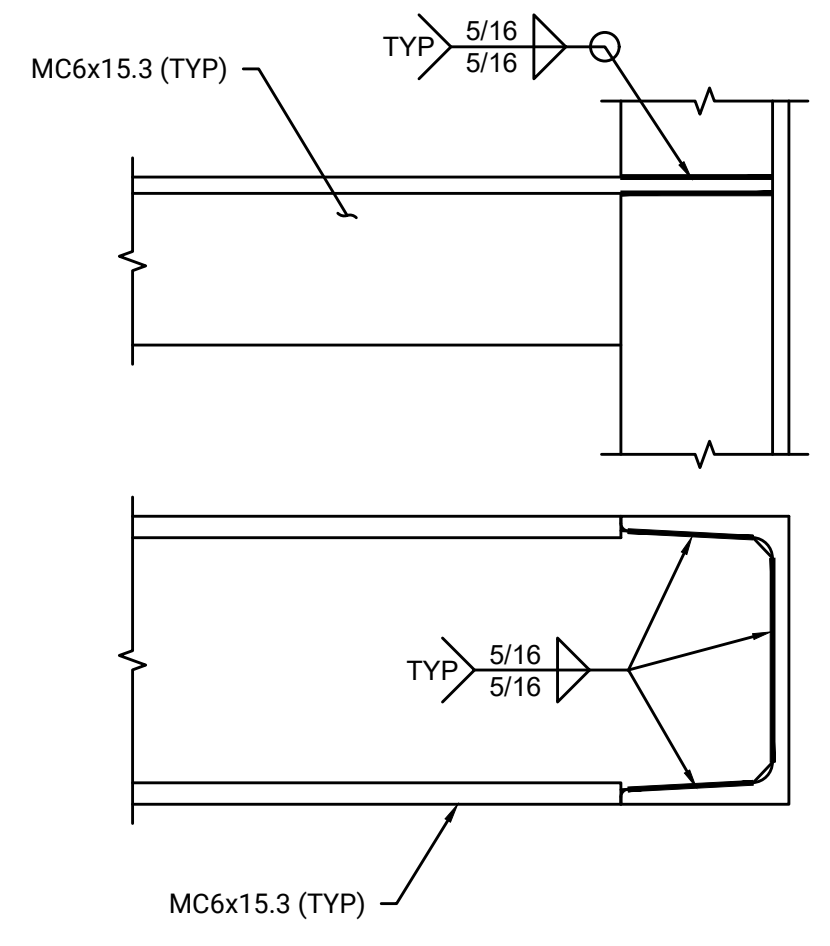
NOTES:
1. SIGNS, SIGN CONNECTIONS AND LIGHT NOT SHOWN FOR CLARITY.



7 PILE CAP PLATE
SCALE: 1" = 1'-0"

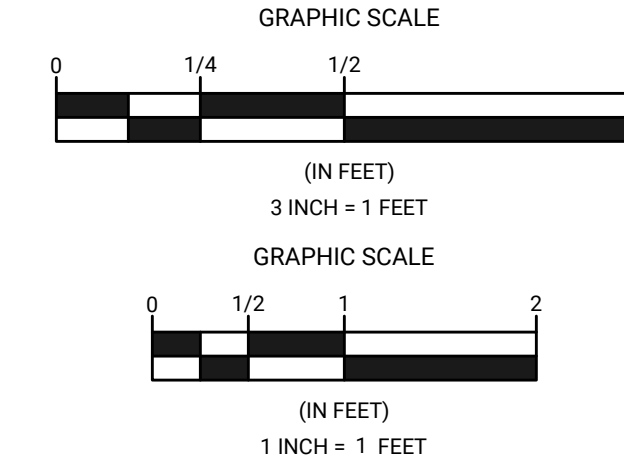


8 ANGLE CLIP
SCALE: 3" = 1'-0"



9 ANGLE CLIP CONNECTION
SCALE: 3" = 1'-0"

NOTES:
1. ALL FIELD WELDS TO BE COATED WITH 'SPLASH ZONE 2-PART EPOXY COMPOUND A-788' OR APPROVED EQUAL.
2. FASTEN GRATING TO STRUCTURAL MEMBERS WITH CLIPS PER MANUFACTURERS GUIDANCE.



REVISIONS		DESCRIPTION	DATE	BY
1	ADDENDUM NO. 1		9/16/21	TJM
2	ADDENDUM NO. 2		9/29/21	TJM

DATE OF PREPARATION		
SURVEYED	BY	DATE
DRAWN	SM/TM	08/24/2021
DESIGNED	SM	08/24/2021
CHECKED	AM	08/24/2021

SHEET TITLE:
STRUCTURAL DETAILS

ISSUANCE:
ISSUE FOR BID PURPOSES

PROJECT NO: 21S046.00
SHEET NUMBER
S-102

BID FORM

**TO: SAN MATEO COUNTY HARBOR DISTRICT
EL GRANADA, CA**

Pursuant to the Notice Inviting Bids, the undersigned bidder herewith submits a bid on the bidding form or forms attached hereto and made a part hereof and binds itself on award by the San Mateo County Harbor District under this bid to execute a contract in accordance with its bid, the bid documents and the award. The attached Notice Inviting Bids, General Conditions and Instructions for Bidders, Special Provisions, Technical Specifications, Bid Forms, and Addenda, if any, are made a part of this bid and all provisions thereof are accepted, and all representations and warranties required thereby are hereby affirmed.

Bids below include all applicable charges, including labor, insurance, bonding, and other costs necessary for the furnishing of all equipment and the performance of all services called for under the Contract. Prices quoted shall include all sales or use taxes.

BIDDER SHALL SUBMIT QUOTES FOR ALL ITEMS

CONTRACT NO. 2020-04

Replacement of Oyster Point Marina Entrance Navigation Aids

LINE #	ITEM #	DESCRIPTION	Quantity / Units	Unit Price	AMOUNT
1	Task 1	Mobilization and Demobilization	1 LS	\$	\$
2	Task 2	Demolition and Removal of Existing Navigation Aids	1 LS	\$	\$
3	Task 3	Furnish and Install 30" Monopiles	1 LS	\$	\$
4	Task 4	Furnish and Install Prefabricated Steel Platform, Ladder and Accessories	1 LS	\$	\$
5		TOTAL BID PRICE			\$

The Bid Form must be signed below in accordance with the General Conditions and Special Provisions. Bids submitted in any other form will be considered non-responsive and may be rejected.

Name Under Which Business is Conducted: _____

Business Address: _____

Telephone Number: _____ Facsimile Number: _____

E-Mail Address: _____

MANDATORY SIGNATURE(S)
(See General Condition 3 and Special Provision 1.3)

IF SOLE OWNER, sign here: I sign as sole owner of the business named above.

Entity Name: _____

By: _____ Title: _____

Signature: _____

IF PARTNERSHIP, one or more partners sign here: The undersigned certify that we are partners in the business named above and that we sign this Contract proposal with full authority to do so.

Entity Name: _____

By: _____ Title: _____

Signature: _____

IF CORPORATION OR LCC, sign here: The undersigned certify that they sign this Contract proposal with full and proper authorization to do so.

Entity Name: _____

By: _____ Title: _____

Signature: _____

*By: _____ Title: _____

Signature: _____

Incorporated under the laws of the State of _____

* If the Bidder is a corporation, this Bid Form must be executed by two corporate officers, consisting of: (1) the president, vice president or chair of the board; and (2) the secretary, assistant secretary, chief financial officer or assistant treasurer. In the alternative, this Bid Form may be executed by a single officer or a person other than an officer provided that evidence satisfactory to the District is provided, demonstrating that such individual is authorized to bind the corporation (e.g. a copy of a certified resolution from the corporation's board or a copy of the corporation's bylaws).

IF JOINT VENTURE, officers of each participating firm sign here: The undersigned certify that they sign this Contract proposal with full and proper authorization to do so:

Joint Venture Name composed of: _____

By _____ Title _____

Signature: _____

DOCUMENTS TO ACCOMPANY BID:

_____ The Bidder's Bond or certified or cashier's check required by Section 14 of the General Conditions and Special Provision 1.10, in an amount equal to at least ten percent (10%) of the Total Bid Price

_____ List of Subcontractors

_____ Acknowledgment of Addenda, if any

_____ Qualification Questionnaire

_____ Proof of DIR Registration in accordance with Special Provision 5.14

_____ Non-Collusion Declaration