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# CITY OF PETALUMA

POST OFFICE BOX 61  
PETALUMA, CA 94953-0061  
ADDENDUM NO. 2

## PETALUMA TURNING BASIN FLOATING DOCK City Project Number C14402010

March 8, 2023

This Addendum No. 2 modifies the Bidding Documents for the Petaluma Turning Basin Floating Dock City Project Number C14402010. This Addendum shall become part of the Contract and all provisions of the Contract shall apply thereto. Bidders shall acknowledge all Addendums in the Bid Schedule.

### **NOTICE INVITING BIDDERS CHANGE** **OPENING OF BIDS – REMOVE**

The emailed bids will be opened by the Project Manager and the City Clerk. The bids will be documented on the Bid Result template with the name of the bidding contractor and ranked by the Base Bid dollar amount. The Bid results will be posted on the City's webpage at <https://cityofpetaluma.org/bid-opportunities-2/>

### **4.0 DESCRIPTION OF WORK**

The work shall include the design and fabrication of approximately 395' of pre-engineered concrete floating dock system to accommodate a 16" freeboard in strict accordance with Section 02392 CONCRETE FLOATING DOCK of the Specifications and Section VI PROJECT PLANS. BID ALTERNATIVE 1: The design and fabrication of approximately 80' of pre-engineered concrete floating dock system to accommodate a 16" freeboard. BID ALTERNATIVE 2: The design and fabrication of approximately 80' of pre-engineered concrete floating dock system to accommodate a 12" freeboard.

### **12.0 CALIFORNIA PREVAILING WAGE RATE REQUIREMENTS – REMOVE**

In accordance with the provisions of California Labor Code Sections 1770, 1773, 1773.1, and 1773.7 as amended, the Director of the Department of Industrial Relations has determined the general prevailing rate of per diem wages in accordance with the standards set forth in Section 1773 for the locality in which the WORK is to be performed. A copy of said wage rates is on file at the office of the City Clerk and is available to any interested party upon request. A copy of the prevailing rate of per diem wages are also online at <http://www.dir.ca.gov/DLSR>. Each Contractor and Subcontractor must pay no less than the specified rates to all workers employed to work on the Project. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work must be at least time and one-half. It shall be mandatory upon the CONTRACTOR to whom the WORK is awarded and upon any subcontractor under the CONTRACTOR to pay not less than said specified rates to all workers employed by them in the execution of the WORK. The Contract will be subject to compliance monitoring and enforcement by the Department of Industrial Relations under Labor Code Section 1771.4. Additionally, CONTRACTOR shall post job site notices as required by Labor Code section 1771.4.

**BIDDERS SCHEDULE CHANGE****BID SCHEDULE**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Design and Fabrication of Approximately 395' of 16" Freeboard Concrete Floating Docks	1	LS		
<b>Total Base Bid</b>				<b>\$</b>	<b>\$</b>

**BID ALTERNATIVES**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Alternative 1: Design and Fabrication of Approximately 80' of 16" Freeboard Concrete Floating Docks	1	LS		
2	Alternative 2: Design and Fabrication of Approximately 80' of 12" Freeboard Concrete Floating Docks and Ramp.	1	LS		

**OPTIONAL BID ITEMS**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Concrete Float Delivery to Petaluma Turning Basin	1	LS		
2	Concrete Float Storage until November 30, 2024	1	LS		
3	East Gangway: ADA Design & Procurement	1	LS		
5	West Gangway: ADA Design & Procurement	1	LS		

**SECTION IV TECHNICAL SPECIFICATION CHANGES****SECTION 02392 – CONCRETE FLOATING DOCKS AND GANGWAYS – PART 2 PRODUCTS – 2.04.B. MATERIALS – REVISE**

3. Precast floats shall be designed to float level under dead load only. Freeboard for the main floating dock under dead load only shall be a maximum of 16". Freeboard for Bid Alternative No. 2, kayak floating docks, shall be a maximum of 12". Freeboard for all floating docks under full dead load plus live load shall not be less than 7".

**SECTION 02392 – CONCRETE FLOATING DOCKS AND GANGWAYS – PART 2 PRODUCTS – 2.04.G. MATERIALS – REVISE**

1. All cleat connection points, including walers if applicable, shall be designed for the rated capacity of the proposed cleat. Design calculations shall be submitted to the City's Engineer for review and approval.

**SECTION 02392 – CONCRETE FLOATING DOCKS AND GANGWAYS – PART 2 PRODUCTS – 2.04.I. MATERIALS – REMOVE**

1. *Float-to-float connections/waler system shall employ an elastomeric member which will not emit or transmit noise and be of non-wearing design.*

**SECTION 02392 – CONCRETE FLOATING DOCKS AND GANGWAYS – PART 2  
PRODUCTS – 2.04.J. MATERIALS – REVISE**

3. All structural timber walers shall be of Coast Region Douglas Fir, minimum "No. 1" or better per West Coast Lumber Inspection Bureau (WCLB) grading rules no. 16, paragraph 123 or paragraph 124 as applicable.
4. All non-structural timber (i.e., coverboard, fascia) shall be of Coast Region Douglas Fir; "No. 1" or better selected for best appearance.
5. Structural Timber shall be of Coast Region Douglas Fir; laminated timbers S4S appearance, grade 24F-V8, with zero camber and incised.
6. Lumber shall be fabricated accurately to provide uniform gaps and butt joint connections. Lumber splices shall not exceed ¾" inch between adjoining ends.
7. All walers, fascia, spacers, or any other member which is subject to foot traffic, shall be flush with the concrete walking surface and shall have chamfered or bull nosed edges on the top edges.
8. LUMBER TREATMENT
  - a. All lumber shall be pressure preservative treated with ACZA to .6 pound per cubic foot retention.
  - b. All lumber will be cut to length and all holes drilled prior to pressure treatment to the extent practical.
  - c. Tie bands used for delivery must have plates between the bands and the wood to prevent crushing. Bundle identification shall be done so as not to stain lumber surfaces.
  - d. All field cuts and bored holes exposed after pressure treatment shall be brush coated with a preservative solution.

**SECTION 02392 – CONCRETE FLOATING DOCKS AND GANGWAYS – PART 2  
PRODUCTS – 4.02.C PAYMENT – REMOVE**

- C. The City may request from the Contractor and the Contractor must provide documentation to fully and adequately account for and demonstrate actual funds, labor, invoices, purchase orders or other appropriate records as deemed necessary by the City.

**SECTION VI PROJECT PLANS CHANGES**

**PETALUMA TURNING BASIN FLOATING DOCK DESIGN & FABRICATION PLANS  
– SHEET C-102 – REVISE**

**PETALUMA TURNING BASIN FLOATING DOCK DESIGN & FABRICATION PLANS  
– SHEET C-103 – REVISE**

**PETALUMA TURNING BASIN FLOATING DOCK DESIGN & FABRICATION PLANS  
– SHEET D-101 – DETAIL A – REVISE**

Expanded Polystyrene Core (EPS) shall be used.

**Questions and Answers**

***Q: Can you address if and how we could consider alternative product material or construction methods, for instance use of concrete dock system but don't use FRP through rods? Do we have ultimate performance criteria that others could meet?***

**A:** Docks must be constructed of FRP through rods.

***Q: The plans show an enlarged gangway landing area, is that a concrete float as well? I ask, because we usually make this section a part of the concrete float.***

**A:** Enlarged area for gangway landing shall be built in accordance with the float specifications. This is intended to be one dock piece with an enlarged area for landing.

**Q: *The bid specifications state two different freeboards, 12" and 6". Standard freeboard for berthing vessels under deadload only is 18" +/- . This bid has utility requirements which would put the utilities under the water line with a low freeboard of 12" or 6". Will the city change the freeboard requirements under deadload only to a standard 18" +/- 1"?***

**A:** Freeboard shall not exceed the existing floats at approximately 16". Freeboard shall be able to accommodate the design vessel as detailed in the specifications. Design has been updated to accommodate a 16" freeboard. Freeboard for Bid Alternative No. 2, kayak floating docks, shall be a maximum of 12". Freeboard for all floating docks under full dead load plus live load shall not be less than 7". Freeboard shall be subject to review and approval by the City's Engineer. See Contract Plans for more information.

**Q: *What is the design live load (psf) and minimum freeboard (inches) under the specified design live load? According to the Department of Boating and Waterways Guidelines this would normally be 25psf of Uniform Live Load. Will the City approve a minimum 25 psf of Uniform Live Load requirement?***

**A:** Design live load shall be designed to 50 psf.

**Q: *Does the City have a bathymetric survey to provide the bidding contractors to ensure adequate depths of the new floating docks? If not, can the contractor assume the depths are a minimum of 5ft at the lowest low water level?***

**A:** The Turning Basin was dredged in 2022 to a depth of -8' MLLW. Bathymetric information is available upon request.

**Q: *What is the design low water level and design high water level?***

**A:** Floats shall be designed utilizing the MLLW Datum. Calculations shall account for MHHW (6.7' MLLW), MLLW (0.0' MLLW), and FEMA 100-year Flood (9.7' MLLW).

**Q: *The City specified an 8ft wide dock with an FRP Waler System. At that width the dock system will handle a 1.5ft significant wave height at 2.6 sec period (35ft). A 1.5 significant wave is equal to a 2.8 Maximum Wave Height. The existing dock system is designed for a 1ft or less wave and the existing system is in a well-protected area. A 3ft significant design wave height is more indicative of needing a much more robust dock system such as wave attenuator. Can the City confirm that the site is suitable for a dock system capable of withstanding a 1.5 significant wave as described above?***

**A:** 3-foot wave shall be used as the extreme condition (Maximum), not the significant wave condition, or continual.

**Q: *Can the City confirm that there is no fire suppression system requirement for the new docks?***

**A:** To be addressed in Addendum No. 3.

**Q: *Is the City responsible for the pile design? We are assuming that the pile design will be provided by others on the future installation bid.***

**A:** Yes

**Q: *The plans show the cleats in the concrete. Will the City accept the cleats through the Waler System? This is standard practice and will make it easier for the City to perform maintenance on the cleats and change them out easier if/when necessary.***

**A:** This shall be acceptable as long as the loading conditions are satisfied. Calculations shall be provided for review and approval by the City's Engineer.

**Q: Is delivery cost of the floating dock and gangway system to be included in the pricing? Having the delivery cost included would be to the City's best interest to know those cost upfront and prevent out of country systems to bid with expensive shipping cost discovered at a later date.**

**A: SEE REVISED BID SCHEDULE.**

**Q: This section Concrete Mix Design is blank. Will the City accept the following mix-design that has been used on hundreds of projects? We assume this will be allowed since it is the manufacture of the floats that will be providing the warranty.**

• **Light Weight Concrete Mix Design**

- Prior to the manufacturing of any flotation units, the concrete mix design shall be approved by the Owner.
- Concrete shall have a minimum twenty-eight (28) day compressive strength of 5000 psi, per ASTM C-94. Floats made of concrete with less than specified strength as defined by proper ACI, or ASTM standards may be rejected by the Owner.
- The mix shall contain a minimum of 564 pounds (six sacks) of Portland Cement per cubic yard, Type II-V modified, and low alkali. Type III cement may be used if the Tri-Calcium Aluminate of the cement is certified by the manufacturer to be between five (5) and eight (8) percent, and alkali content (Na<sub>2</sub>O) and (K<sub>2</sub>O) is less than 0.6 percent. Fly ash shall not be allowed.
- Concrete used in the flotation units shall contain polypropylene fibrous reinforcement at a rate recommended by its supplier.
- The theoretical concrete unit weight shall be 122 +/-3 pounds per cubic foot.
- Coarse aggregates shall conform to ASTM C-330 lightweight aggregates for structural concrete.
- All concrete shall be air-entrained from three (3) to seven (7) percent and shall be tested in accordance with ASTM C-138, C-173, or C-231.
- Water/cement ratio shall not exceed 0.45 for light-weight concrete.
- Slump range shall be three (3) inches to seven (7) inches when tested in accordance with ASTM C-143-78.

**A: This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Mix design laboratory tests shall be provided for review and approval by the City's Engineer.**

**Q: The floating dock system shall be precast concrete modular floats for the design load conditions and spans indicated, and for additional loads imposed by the work of other trades to comply with ACI 318 and PCI MNL-120. Will the accept the manufacture of the floating dock system to be ISO 9001 certified in lieu of ACI 318 and PCI MNL-120?**

**A: The Fabricator shall be required to comply with local codes and standards used for the fabrication of the floats which include ACI 318 and PCI MNL-120.**

**Q: Once the design wave heights are determined from the previous question above, can the contractor assume to design to the determined wave criteria and not the 200 lbs. per liner ft?**

**A: This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Calculations shall account for significant wave and period of T<sub>p</sub> = 1.5-2.5 seconds under various loading conditions. Calculations shall be provided for review and approval by the City's Engineer.**

**Q: The Structural Concrete Mix specified is not our standard mix design which would result in higher cost untested floats that couldn't be warranted. Will the City accept the following mix design which the manufacture could warranty?**

• **Light Weight Concrete Mix Design**

- Prior to the manufacturing of any flotation units, the concrete mix design

*shall be approved by the Owner.*

- *Concrete shall have a minimum twenty-eight (28) day compressive strength of 5000 psi, per ASTM C-94. Floats made of concrete with less than specified strength as defined by proper ACI, or ASTM standards may be rejected by the Owner.*
- *The mix shall contain a minimum of 564 pounds (six sacks) of Portland Cement per cubic yard, Type II-V modified, and low alkali. Type III cement may be used if the Tri-Calcium Aluminate of the cement is certified by the manufacturer to be between five (5) and eight (8) percent, and alkali content (Na<sub>2</sub>O) and (K<sub>2</sub>O) is less than 0.6 percent. Fly ash shall not be allowed.*
- *Concrete used in the flotation units shall contain polypropylene fibrous reinforcement at a rate recommended by its supplier.*
- *The theoretical concrete unit weight shall be 122 +/-3 pounds per cubic foot.*
- *Coarse aggregates shall conform to ASTM C-330 lightweight aggregates for structural concrete.*
- *All concrete shall be air-entrained from three (3) to seven (7) percent and shall be tested in accordance with ASTM C-138, C-173, or C-231.*
- *Water/cement ratio shall not exceed 0.45 for light-weight concrete.*
- *Slump range shall be three (3) inches to seven (7) inches when tested in accordance with ASTM C-143-78.*

**A:** This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Mix design laboratory tests shall be provided for review and approval by the City's Engineer.

**Q:** *Will the city accept the following Expanding Polystyrene Core specifications which has been used successfully in floating concrete docks:*

- *Closed cell Expanded Polystyrene EPS, used inside the concrete unit shall conform to the requirements of ASTM C-578, Type I for density, compressive, flexural strengths and water absorption (with the following modifications)*
- *The EPS foam shall be molded in a new generation Vacuum EDRO Mold.*
- *The EPS foam density weight shall be a minimum of 0.95 and a maximum of 1.10 pounds per cubic foot.*
- *The EPS foam shall have a minimum compressive strength of 10 psi and a minimum flexural strength of 25 psi.*
- *The EPS foam core may not have more than ten (10) percent reground EPS foam material. Reground foam pieces shall not exceed 1/2 inch in diameter.*
- *The EPS foam shall have a maximum absorption of 3% percent by volume as tested by ASTM Method C-272.*
- *The laminated EPS foam float shall be glued with a low non-solvent glue to prevent delaminating during transportation and handling. Gaps at glue lines shall be no greater than 1/8 of an inch, on standard walkways and fingers units.*
- *The EPS foam float shall be fabricated per shop drawings, with an allowable variation of dimensional tolerance of plus (+) 1/8 inch and minus (-) 0 inch. Under sized EPS foam floats will be rejected.*
- *All fabricated EPS foam floats shall be handled with care to prevent damage during transportation and handling.*
- *All fabricated EPS foam floats shall be labeled on both ends (the shorter length).*

**A:** This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Calculations shall be provided for review and approval by the City's Engineer.

**Q: *Steel are ferrous metals. Shall an aluminum pile guide with FRP rods be used in order to conform to the non-ferrous specifications?***

**A:** Any material which is a component of the float structure should be non-ferrous, attachments to the floats shall not be required to be non-ferrous. This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Calculations shall be provided for review and approval by the City's Engineer.

**Q: *What type of pile will be specified in the future installation bid? Concrete or Steel with HDPE sleeve? A low friction UHMW block on a steel pile with sleeves will create friction and bind. UHMW is typically used on a concrete pile and aluminum pad on an HDPE sleeved steel pile.***

**A:** Pile design shall be completed by the City's Engineer and shall be available at a later date.

**Q: *Shall the thru rods used to fasten the pile guide assemblies be made of FRP to conform to the non-ferrous specifications?***

**A:** Any material which is a component of the float structure should be non-ferrous, attachments to the floats shall not be required to be non-ferrous. This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Calculations shall be provided for review and approval by the City's Engineer.

**Q: *Shall the 12" cleats be made out of Aluminum in order to conform to the non-ferrous specifications?***

**A:** Any material which is a component of the float structure should be non-ferrous, attachments to the floats shall not be required to be non-ferrous. This shall be acceptable as long as all design conditions and design life expectancies are satisfied, and all warranties are provided. Calculations shall be provided for review and approval by the City's Engineer.

**Q: *Will the city accept Vinyl fendering which is more commonly used for marinas?***

**A:** This shall be acceptable as long as all design conditions, including the berthing energy and impact from the 30' LOA design vessel and design life expectancies are satisfied, and all warranties are provided. Calculations shall be provided for review and approval by the City's Engineer.

**Q: *Concrete floats with a waler connection system do not utilize an "elastomeric member" between the two dock modules. Dock modules with a waler system will have a gap between the two modules no more than 1/2" with chamfered edges keeping the two dock modules from coming in contact with one another when properly maintained. Will the City strike the "elastomeric member" requirement as this is not used when utilizing a Waler connection system. The waler system is the structural member handling the loading requirements.***

**A:** This shall be acceptable.

**Q: *Will the City provide more details in regards to the PSCC gangway? Is this gangway existing and shall it be reused for this bid? What type of gangway is it? What is the weight of the gangway? Does the connection have to be a piano hinge?***

**A:** This gangway is existing and shall be reused. Gangway and security gate shop drawing are available upon request.

**Q: *Will the city accept the following in lieu of Southern Yellow Pine for the alternate waler system?:***

- *All structural timber walers shall be of Coast Region Douglas Fir; minimum "No. 1" or better per West Coast Lumber Inspection Bureau (WCLB) grading rules no. 16, paragraph 123 or paragraph 124 as applicable.*
- *All non-structural timber (i.e., coverboard, fascia) shall be of Coast Region*

*Douglas Fir; "No. 1" or better selected for best appearance.*

- *Structural Timber shall be of Coast Region Douglas Fir; laminated timbers S4S appearance, grade 24F-V8, with zero camber and incised.*
- *Lumber shall be fabricated accurately to provide uniform gaps and butt joint connections. Lumber splices shall not exceed ¾" inch between adjoining ends.*
- *All walers, fascia, spacers, or any other member which is subject to foot traffic, shall be flush with the concrete walking surface and shall have chamfered or bull nosed edges on the top edges.*
- **LUMBER TREATMENT**
  - *All lumber shall be pressure preservative treated with ACZA to .6 pound per cubic foot retention.*
  - *All lumber will be cut to length and all holes drilled prior to pressure treatment to the extent practical.*
  - *Tie bands used for delivery must have plates between the bands and the wood to prevent crushing. Bundle identification shall be done so as not to stain lumber surfaces.*
  - *All field cuts and bored holes exposed after pressure treatment shall be brush coated with a preservative solution.*

**A:** SEE SECTION IV TECHNICAL SPECIFICATION CHANGES.

**Q:** *Will the City accept an ISO 9001 Certification from the floating dock manufacture in lieu of methodology by the American Concrete Institute? ISO 9001 Certification has been accepted for the manufacturing of floating docks on numerous public bids and is the quality management gold standard.*

**A:** The Fabricator shall be required to comply with local codes and standards used for the fabrication of the floats which include ACI 318 and PCI MNL-120.

**Q:** *Two power pedestals are not shown on the bid schedule. Can the city confirm if the supply of the power pedestals are to be included in this bid or the installation bid? If they are to be included in this bid can the city confirm the type of pedestals and the required amps?*

**A:** Power and water pedestal boxes shall be provided as part of the concrete float design. No utility connections shall be required as part of this work. Power and water pedestal boxes shall be equipped with two (2) 30-amp outlets with twist style connectors.

**Q:** *Does the City require that all floats have a PVC utility raceway or only the floats needed to supply the utilities to the two pedestal locations? Reducing the raceways to only these locations will save the City cost.*

**A:** Please see Contract Plans. All Floats shall include raceway conduits for utilities with the exception of the kayak floats south of the East Gangway.

**Q:** *Can the contractor assume this is a typo since the floating docks are made with Expanded Polystyrene Core (EPS)?*

**A:** Expanded Polystyrene Core (EPS) shall be used.

**Q:** *Can the City confirm that the pile design will be design by the City and that all pile guides will be external pile guides one side (landward side) only?*

**A:** Pile design shall be completed by the City's Engineer and will be provided at a later date prior to completion of float design.

**Q:** *Can the City confirm that the location for inspection is at the manufacturing plant so we can make repairs, if necessary, at the plant and confirm that the inspection is to take place prior to leaving the plant?*



**A:** Inspection shall take place and/or be coordinated at the manufacturing plant prior to approval of floats for delivery (to be completed by other).

**Q:** *Can we perform testing with our own crew or does it need to be through 3rd party?*

**A:** Concrete testing shall be performed by an independent contractor. Concrete test reports shall be submitted for review and acceptance of City Engineer.

**Q:** *Bellingham Marine has a plant located in Dixon, CA and makes concrete docks for multiple projects, throughout the state. Please clarify if Prevailing Wage is only applicable for work performed on the job site and NOT at our manufacturing facility. Prevailing wage labor has never been required at our manufacturing plant in our Divisions History.*

**A:** Removed.

**Q:** *Does the project include how the ADA gangways will connect at the top/landings?*

**A:** Contractor shall be responsible for providing a standard detail connection to both a concrete platform and a pile supported platform within the design phase for the City's Engineer.

**Q:** *During the mandatory pre-bid meeting on 2/28/23 it was noted that the bidder is subject to store the manufactured floats up until Nov. 30th 2024, in the event the city does not obtain the permit for the next installation bid. Can the city confirm that the bidder will be paid once the product is complete at the plant after the city has inspected? Please confirm payment terms to the bidder.*

**A:** Payment for product shall be made, less retainer, with the exception of any delivery or storage potentially awarded as part of the Optional Bid Items.

**Q:** *It was noted during the mandatory pre-bid meeting on 2/28/23 that the pile material in the future bid will be an un-sleeved steel pile. Can the city confirm that the future pile will not have an HDPE sleeve?*

**A:** The Engineer does not anticipate the need for HDPE sleeves based on the available information, however, final pile design shall be provided to the float fabricator within the design process. The Fabricator and the City Engineer shall work concurrent and maintain coordination on all pile and pile guide designs and permit requirements.

**Q:** *Sheet C-102 of the Plans show the existing gangway to Petaluma Small Craft Center Gate and Gangway to be reused. Can the city provide a detail for the gangway hinge connection? Can the city provide the weight of the existing Petaluma Small Craft Center Gate to be reused and connection details?*

**A:** Please see attached.

**Q:** *When does the warranty period begin? From date of acceptance at the factory or once the floats are installed?*

**A:** Warranty shall begin at the time of delivery.

**Q:** *Question: Can the city confirm the final pedestal locations on the plans?*

**A:** See Contract Plans.

**Q:** *Question: What are the insurance requirements for professional liability?*

**A:** Professional Liability/Errors and Omissions: \$1,000,000 per occurrence or claim. If the policy provides coverage on a claims-made basis, the retroactive date must be shown and must be before the date of the Agreement or the beginning of the contract work.

**Q:** *Question: Does the city require the bidder to self-perform the engineering services for the floating dock system and provide professional liability insurance at a minimum amount of*

**\$2,000,000?**

**A:** The Contractor may self-perform or subcontract for engineering services. Professional liability insurance shall provide coverage at a minimum amount of \$1,000,000 per occurrence or claim (refer to requirements in previous answer).

**Summary of Changes: Bids will be emailed in to the City Clerk, and original copies of the sealed bids will be mailed in. The “Notice Inviting Bids” has been updated as stated above. Some project questions have been answered above. All other items of the bid documents shall remain unchanged.**

**City of Petaluma,**



\_\_\_\_\_  
**Erica Jacobs**  
**Project Manager**  
**Public Works & Utilities Department**

**A signed copy of this Addendum and the attached acknowledgment form shall be attached to the bid proposal. Failure to do so may cause rejection of your bid as being non-responsive.**

**ADDENDUM NO. 2**

**PETALUMA TURNING BASIN FLOATING DOCK  
City Project Number C14402010**

**March 8, 2023**

**ACKNOWLEDGEMENT**

Receipt of Addendum No. 1 is hereby acknowledged by \_\_\_\_\_  
(Contractor's Name)

on the \_\_\_\_\_ day of \_\_\_\_\_, 2023.

By: \_\_\_\_\_

Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company

**CITY OF PETALUMA  
PETALUMA, CALIFORNIA**

**CONTRACT DOCUMENTS FOR  
PETALUMA TURNING BASIN FLOATING DOCK  
DESIGN & FABRICATION**

**CITY PROJECT NO. C14402010**

(Notice Inviting Bids, Instructions to Bidders, Bid Forms, General Conditions,  
Special Provisions, Technical Specifications, Construction Agreement,  
Bond Forms, Project Drawings)

**CITY OF PETALUMA - SONOMA COUNTY - CALIFORNIA**

Questions concerning interpretation of improvement plans, special provisions,  
contract documents and bid items shall be directed to:

*Department of Public Works and Utilities  
202 N. McDowell Boulevard  
Petaluma, CA. 94954  
Phone: (707) 778-4546      Fax: (707) 778-4508*

Attention: Erica Jacobs, MPA

Office Hours: Monday thru Thursday - 8:00 to 5:00 p.m.

**Bid Opening: March 16, 2023, at 2:00 p.m.**

## **NOTICE INVITING BIDS**

1. **RECEIPT OF BIDS:** Sealed Bids will be received at the office of the City Clerk of the City of Petaluma located at 11 English Street, Room 4, Petaluma, California, 94952-2610, until 2:00 PM (enter time) on Thursday, March 16<sup>th</sup>, 2023, for the Petaluma Turning Basin Floating Dock Design & Fabrication. Any Bids received after the specified time and date will not be considered. Fax and other electronically transmitted Bids will not be accepted.
2. **OPENING OF BIDS:** The Bids will be publicly opened and read at 2:00 PM (enter time) on Thursday, March 16<sup>th</sup>, 2023 at the above-mentioned office of the CITY. The CITY reserves the right to postpone the date and time for opening of Bids at any time prior to the aforesaid date and time.
3. **COMPLETION OF WORK:** The WORK must be completed within 120 working days after the commencement date stated in the Notice to Proceed.
4. **DESCRIPTION OF WORK:** The WORK includes The design and fabrication of approximately 395' of pre-engineered concrete floating dock system to accommodate a 16" freeboard in strict accordance with Section 02392 CONCRETE FLOATING DOCK of the Specifications and Section VI PROJECT PLANS. BID ALTERNATIVE 1: The design and fabrication of approximately 80' of pre-engineered concrete floating dock system to accommodate a 16" freeboard. BID ALTERNATIVE 2: The design and fabrication of approximately 80' of pre-engineered concrete floating dock system to accommodate a 12" freeboard.
5. **SITE OF WORK:** The site of the WORK is located: at the Petaluma River Turning Basin near downtown Petaluma. There are two access gangways to the Turning Basin docks located on adjacent properties to the West and the East of the Turning Basin. On the East side of the Turning Basin the gangway is close to Weller Street Park located at 150 Weller Street and on the West side the gangway is located close to Taps Restaurant located at 54 E. Washington Street, Petaluma CA.
6. **OBTAINING CONTRACT DOCUMENTS:** The Contract Documents are entitled "Petaluma Turning Basin Floating Dock Design & Fabrication."

The Contract Documents may be obtained by 4:00 P.M., Monday through Thursday at the office of Public Work & Utilities, 202 North McDowell Boulevard, Petaluma, California 94954.

If you would like to receive the bid document via the CITY's website, at no cost, please go to:

- <https://cityofpetaluma.org/bid-opportunities-2/>
- Fill out the Plan Holder's form by clicking on the Plan Holder's form link
- Fill in all fields
- Click on the submit button at the end of the form

Submitting the Plan Holder's form on-line automatically puts you on the CITY's Bidders List and you will be notified of any Addendums or information pertaining to the bid by email.

If you would like to purchase bid documents, please call Phone No. (707) 778-4585, Attention: Tiffany Avila, upon payment of \$50.00 (non-refundable) for each set of Contract Documents (including technical specification and accompanying reduced scale drawings). The scale of the reduced drawings is about one-half of the original scale. At the Bidder's request and expense, the Contract Documents may be sent by overnight mail.

- Full-scale drawings are not available.
- If full-scale drawings are available and desired, they may be purchased at reproduction cost from \_\_\_\_\_ .

7. **BID SECURITY:** Each Bid shall be accompanied by a certified or cashier's check or Bid Bond executed by an admitted surety in the amount of 10% percent of the Total Bid Price payable to the City of Petaluma as a guarantee that the Bidder, if its Bid is accepted, will promptly execute the Agreement. A Bid shall not be considered unless one of the forms of Bidder's security is enclosed with it. Upon acceptance of the Bid, if the Bidder refuses to or fails to promptly execute the Agreement the Bidder's security shall be forfeited to the CITY.
8. **CONTRACTOR'S LICENSE CLASSIFICATION:** In accordance with the provisions of California Public Contract Code Section 3300, the CITY has determined that the CONTRACTOR shall possess a valid Class A license at the time that the Contract is awarded. Failure to possess the specified license shall render the Bid as non-responsive and shall act as a bar to award of the Contract to any bidder not possessing said license at the time of award pursuant to Labor Code Section 1725.5, subject to limited legal exceptions.
9. **PREFERENCE FOR MATERIAL:** Any specification designating a material, product, thing, or service by specific brand or trade name, followed by the words "or equal" or "or equivalent" is intended only to indicate quality and type of item desired. Substitute products will be considered prior to award of the Contract in accordance with Section 3400 of the California Public Contract Code. The Bidder will submit data substantiating its request for a substitution of "an equal" item within 14 days following submission of its Bid. Substantiation date will conform to the requirements of the instructions for Proposed Substitutions of "or equal" items contained in the bid Forms. The ENGINEER will make a determination of approval or rejection of the proposed substitution prior to the award of the Contract. No request for substitution of "an equal" items will be considered by the ENGINEER after award of the Contract. This provision does not apply to materials, products, things, or services that may lawfully be designated by a specific brand or trade name under Public Contract Code Section 3400(c).
10. **REJECTION OF PROPOSALS:** The CITY reserves the right to reject all or any part of all bids submitted, waive informalities and irregularities, and will not, to the extent allowed by law, be bound to accept the lowest bid.
11. **BIDS TO REMAIN OPEN:** The Bidder shall guarantee the total bid price for a period of 90 calendar days from the date of bid opening.

12. **RESERVED.**
13. **LABOR COMPLIANCE PURSUANT TO CALIFORNIA LABOR CODE § 1771.1:** A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirement of Section 4104 of the Public Contract Code or engage in the performance of any contract for public work, as defined in Division 2, Part 7, Chapter 1 of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time contract is awarded.
14. **RETAINAGE FROM PAYMENTS:** The CONTRACTOR may elect to receive 100 percent of payments due under the Contract Documents from time to time, without retention of any portion of the payment by the CITY, by depositing securities of equivalent value with the CITY in accordance with the provisions of Section 22300 of the Public Contract Code. Alternatively, the CONTRACTOR may request, and the CITY shall make payment of retentions earned directly to the escrow agent at the expense of CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investments of the payments into securities and the CONTRACTOR shall receive the interest earned on the investments upon the same terms as provided in Section 22300 of the Public Contract Code for securities deposited by the CONTRACTOR. The CONTRACTOR shall be responsible for paying all fees for the expenses incurred by the escrow agent in administering the escrow account and all expenses of the CITY. These expenses and payment terms shall be determined by the CITY's Finance Director or their designee and the escrow agent. Upon satisfactory completion of the WORK, the CONTRACTOR shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the CITY, pursuant to the terms of Section 22300 of the Public Contract Code. Such securities, if deposited by the CONTRACTOR, shall be valued by the CITY, whose decision on valuation of the securities shall be final. Securities eligible for investment under this provision shall be limited to those listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the CONTRACTOR and the CITY.
15. **PAYMENT BOND:** Pursuant to and in accordance with California Civil Code Section 9550, a payment bond must be filed if the expenditure for the WORK is in excess of Twenty-Five Thousand Dollars (\$25,000).
16. **PRE-BID CONFERENCE VISITS:** [At least one box below MUST be checked]
- Check if no pre-bid conference/site is to be held:.**
  - Mandatory pre-bid conference/site visit to be held:** Prospective bidders are required to attend a mandatory pre-bid conference/site visit at 1:00 PM (enter time) on February 28, 2023, at the Petaluma Turning Basin, offices at River Plaza near TAPS 54 E. Washington Street, Petaluma, CA, 94952. Prospective bidders that fail to attend the mandatory pre-bid conference/site visit will be ineligible to bid on the project. Following the conference at City offices, City staff and prospective bidders will meet at the project Site. Transportation to the project site will be the responsibility of prospective bidders. The purposes of the

conference/site visit are to discuss the scope of the project and bidding requirements and to acquaint bidders with Site conditions.

No information communicated at the pre-bid conference/site visit may amend the project bidding requirements. Project bidding requirements may only be amended by addenda issued by authorized City officials. Following the pre-bid conference/site visit, prospective bidders may submit detailed technical questions in writing. If warranted, the City may respond to such questions by addenda.

- Non-Mandatory pre-bid conference/site visit to be held:** Prospective bidders are invited to attend a non-mandatory pre-bid conference/site visit at (enter time) on \_\_\_\_\_, at the \_\_\_\_\_. Following the conference at City offices, City staff and prospective bidders will meet at the project Site. Transportation to the project site will be the responsibility of prospective bidders. The purposes of the conference/site visit are to discuss the scope of the project and bidding requirements, and to acquaint bidders with Site conditions.

No information communicated at the pre-bid conference/site visit may amend the project bidding requirements. Project bidding requirements may only be amended by addenda issued by authorized City officials. Following the pre-bid conference/site visit, prospective bidders may submit detailed technical questions in writing. If warranted, the CITY may respond to such questions by addenda.

**17. PROJECT ADMINISTRATION:** All communications relative to the WORK shall be directed to the ENGINEER prior to opening of the Bids.

**18. FINDING OF SUBSTANTIAL COMPLEXITY:** Pursuant to Public Contract Code section 7201(b)(3) the CITY's Public Work's Director has found that the WORK is substantially complex due to: the amount of technical and scientific knowledge needed to complete the project; The amount of resources needed to complete the project including amount of days, workers, and labor; The urgency for project completion; The amount of tasks needed to complete the project; The number of organizational stakeholders needed to satisfy; The environmental complexity of the conditions; And in particular the external permitting agencies the project needs to satisfy; the size and impact of the project (which will require the operation of the D Street bridge affecting traffic, and fire station response times); over water work (dredging and demolition of existing docks); the specialty contractor work and therefore this is a unique project that is not regularly performed and requires a higher retention amount than 5 percent.

Notwithstanding Public Contract Code Section 7201 or any other law or regulation that purports to provide otherwise, public contracting is a quintessential municipal affair, subject to charter cities' home rule power, and the California Constitution grants charter cities supreme authority over municipal affairs, which include public works, procurement, and the mode of municipal contracting (see, Public Contract Code Section 1100.7 and e.g., *Bishop v. City of San Jose* (1969) 1 C3d 56).; and it is the courts, not the legislature, that determines which matters are municipal affairs (see, e.g., *California Federal Savings and Loan v. City of Los Angeles* (1991) 54 C3d 1); and

Article X, Section 67 of the Petaluma Charter provides in pertinent part:



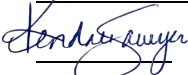
. . . no progressive payments can be provided for or made at any time which, with prior payments, if there have been such, shall exceed in amount at that time ninety percent of the value of the labor done and the materials used up to that time, and no contract shall provide for or authorize or permit the payment of more than ninety percent of the contract price before the completion of the work done under said contract and the acceptance thereof . . . ; and

City charters are documents of limitation and a restriction on the City Council's powers imposed by the voters (see, e.g., *City of Glendale v. Trondsen* (1957) 48 C2d 93) and, as a result, the City Council's contracting power is limited by the retention requirement in Article X, Section 67, and the City Council and City staff lack the power to provide for public works contract retention other than as specified in the City Charter.

19. **GOVERNMENT CODE SECTION 1090:** The successful Bidder may be precluded from competing for, or participating in, subsequent contracts that result from or relate to the Work performed pursuant to this Bid. The ethics laws that apply to the City and all its consultants, contractors, and vendors include California Government Code Section 1090 and following, which prohibits government officials, employees, and contractors from participating in making government contracts in which the official, employee or contractor has a financial interest. Because City contractors always have a financial interest in their City contracts, the Section 1090 prohibition regarding City contractors focuses on whether a contractor is or would be "making a government contract" in a quasi-governmental capacity for purposes of Section 1090. Section 1090 prohibits City contractors from using their role as a contractor to influence how the City spends the public's funds in a way that benefits the contractor. Penalties for violating Section 1090 are severe, and may include felony criminal penalties, permanent disqualification from holding public office in California, disgorgement of any benefit received by the financially interested contractor, civil and administrative penalties, and voiding of the prohibited contract.

NAME: Erica Jacobs  
ADDRESS: 202 N. McDowell Blvd  
Petaluma, CA 94954  
PHONE: 707-787-0893

20. **CITY'S RIGHTS RESERVED:** The CITY reserves the right to reject any or all bids, to waive any minor irregularity in a bid, and to make awards to the lowest responsive, responsible bidder as it may best serve the interest of the CITY.

CITY: Petaluma  
BY:   
DATE: March 6, 2023

END OF NOTICE INVITING  
BIDS

**BID SCHEDULE**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Design and Fabrication of Approximately 395' of 16" Freeboard Concrete Floating Docks	1	LS		
<b>Total Base Bid</b>				<b>\$</b>	<b>\$</b>

**BID ALTERNATIVES**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Alternative 1: Design and Fabrication of Approximately 80' of 16" Freeboard Concrete Floating Docks	1	LS		
2	Alternative 2: Design and Fabrication of Approximately 80' of 12" Freeboard Concrete Floating Docks and Ramp.	1	LS		

**OPTIONAL BID ITEMS**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Concrete Float Delivery to Petaluma Turning Basin	1	LS		
2	Concrete Float Storage Until November 30, 2024	1	LS		
3	East Gangway: ADA Design & Procurement	1	LS		
5	West Gangway: ADA Design & Procurement	1	LS		

**\*Note:** In case of error in extension of price into the total price column, the unit price will govern.

Total Amount of Bid (written in words) is: _____ _____ Dollars and _____ Cents. In the event of discrepancy between words and figures, the words shall prevail. \$ _____ _____ Figures
---

**The award of the contract shall be awarded to the lowest qualified price of the total of Base Bid items 1. Options Bid items should NOT be included in the Base Bid Price.**

\_\_\_\_\_  
Address of Bidder

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
City

\_\_\_\_\_  
Name of Bidder (Print)

\_\_\_\_\_  
Telephone Number of Bidder

\_\_\_\_\_  
Fax Number of Bidder

\_\_\_\_\_  
Contractor's License Number

\_\_\_\_\_  
License's Expiration Date

**Addendum Acknowledgement**

Addendum No. 1    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 2    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 3    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 4    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 5    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 6    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 7    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

Addendum No. 8    Signature Acknowledging Receipt: \_\_\_\_\_    Date: \_\_\_\_\_

**SECTION 02392**  
**CONCRETE FLOATING DOCKS AND GANGWAYS**

**PART 1 - GENERAL**

**1.01 Description of Work**

- A. 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 complete pre-engineered concrete floating dock system in strict accordance with this Section of the Specifications and the applicable drawings and subject to the terms and conditions of the Contract.
  
- B. BID ALTERNATIVE 1/BID ALTERNATIVE 2: 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 complete pre-engineered Americans with Disabilities Act (ADA) compliant gangway in strict accordance with this Section of the Specifications and the applicable drawings and subject to the terms and conditions of the Contract.

**1.02 Quality Assurance**

- A. The Contractor shall utilize an adequate number of workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for the proper performance of the work in this Section.
  
- B. The Owner reserves the right of approval of any Subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on:
  - 1. Documented successful experience a company duly recognized as specializing in the design and manufacturing of concrete floating structures used for the berthing and boarding of vessels for a minimum of 10 years.
  - 2. Acceptable schedule of unit prices for measurement and payment in event of changes in the Work of this Section.
  - 3. The Contractor shall comply with the requirements of the following applicable standards:
    - a. American Institute of Steel Construction (AISC)
    - b. American Concrete Institute (ACI)
    - c. American Society for Testing Materials (ASTM)
    - d. American Institute of Steel Construction (AISC)
    - e. Prestressed Concrete Institute (PCI)
    - f. Concrete Reinforcing Steel Institute (CRSI)
    - g. Americans With Disabilities Act 2010 ADA Standards

**1.03 Submittals**

- A. Drawing Information
  - 1. Submit drawings indicating complete information for the design and fabrication of the precast concrete floats. Design drawings of precast floats shall be prepared and sealed by a registered professional engineer and submitted for

review and acceptance prior to fabrication. Drawings shall indicate, as a minimum, the following information:

- a. Floating dock system layout.
- b. Marking of floats for assembly.
- c. Connections between floats and connections between floats and gangways.
- d. Wale size and splice pattern.
- e. Guide pile size, length, location, and connection to float.
- f. Reinforcing details.
- g. Material properties on all materials used.
- h. Lifting and assembly inserts and embedded items.
- i. Dimensions and surface finishes.
- j. Erection sequence and handling requirements.
- k. All loads used in design.
- l. Bracing/shoring required.
- m. Utility routing and connections for work of other trades.

C. Design Calculations

1. Submit calculations prepared and sealed by a registered professional engineer including drafts at floats' various loading scenarios for review and acceptance prior to fabrication.

D. Concrete mix design

E. BID ALTERNATIVE 1/BID ALTERNATIVE 2

1. Submit drawings indicating complete information for the design and procurement of the ADA compliant gangways. Design drawings of gangways shall be prepared and sealed by a registered professional engineer and submitted for review and acceptance prior to procurement. Drawings shall indicate, as a minimum, the following information:
  - a. Dimensions and surface finishes.
  - b. Gangway connections to existing grade and concrete floats.
  - c. Material properties on all materials used.
  - d. Lifting and assembly inserts and embedded items.
  - e. Erection sequence and handling requirements.
  - f. All loads and ADA considerations used in design.
  - g. Bracing/shoring required.
  - h. Utility routing and connections for work of other trades.
  - i. Design Calculations
2. Design Calculations
  - a. Submit calculations prepared and sealed by a registered professional engineer for review and acceptance prior to procurement.

1.04 Substitutions or Modifications

- A. Any and all design, material, or product modification or substitutions from this specification shall be submitted for review and approval by a Professional Engineer.

1.05 Product Delivery and Storage

- A. The Contractor shall notify the Owner twenty-four hours in advance of delivery of materials.
- B. All materials shall be stored off the ground in a manner to prevent damage and permit easy access for inspection. Protect from weather, marring, damage, and overload.
- C. The Contractor shall be responsible for communicating with the installer (contracted separately) for all delivery and install of the floats on site.
- D. Floats are to be stored until they are ready for installation within the Turning Basin.

## PART 2 - PRODUCTS

### 2.01 General

- A. The floating dock system shall be precast concrete modular floats for the design load conditions and spans indicated, and for additional loads imposed by the work of other trades to comply with ACI 318 and PCI MNL-120.

### 2.02 Float Design and Load Conditions

- A. The floats are required to provide berthing for generic standard recreational vessels up to 30' LOA and Kayaks.

#### B. Vertical Loads

1. The floats are to be single-cast modular monolithic units, allowing all loads to be carried by the concrete structure.
2. Dead loads shall consist of the entire weight of the floating structure, including ramps, platform, and other accessories and appurtenances.
- ~~3. Freeboard under full dead load plus live load shall not be less than 12". Precast floats shall be designed to float level under dead load only. Maximum out-of-level tolerance for transverse and longitudinal slope is 1 inch per 10 ft. Freeboard under dead and live load shall not be less than 6 in.~~
3. Precast floats shall be designed to float level under dead load only. Freeboard for the main floating dock under dead load only shall be a maximum of 16". Freeboard for Bid Alternative No. 2, kayak floating docks, shall be a maximum of 12". Freeboard for all floating docks under full dead load plus live load shall not be less than 7".
4. Maximum out-of-level tolerance for transverse and longitudinal slope is 1 inch per 10 ft.
5. Freeboard loss will be less than or equal to 1" per 5 PSF of uniformly distributed live load.
6. Point Load - Design is for a 400 lbs. point moving in any direction without causing the float systems to tilt excessively or losing more than 3" of freeboard.
7. Concentrated load: 1,000 lbs. over a 10x10 area.
8. Special precast floats must be designed to support the additional concentrated loads as imposed by gangways, transformers, or other equipment. Modules with special loadings shall have the same freeboard as standard modules without

special loading so that there will be no residual stresses or tilting when modules are interconnected.

B. Horizontal Loads

1. Wind pressure: as indicated on drawings, acting on the projected area of the pier and moored vessels, assuming full occupancy. For the vessel area, assume a generic 30' LOA recreational boat. Full wind load is to be applied to all unshielded dock and boat profiles.
  2. A horizontal load due to impact on a dock shall be the result of a generic recreational boat of 30' LOA striking the dock at 10 degrees (10°) off center line. For purposes of calculations, the craft shall be considered moving at a speed of 3 FPS.
- C. Waves: Structures and systems shall be designed to withstand storm conditions of up to 3-foot waves on a periodic, but not continual basis and boat wake of up to 1.5 feet on a continual basis. Wave loads are estimated as 200 lbs per linear foot of the float.
- D. Currents: is negligible at the project site. The floating dock shall be designed to withstand the loads generated by 0.5-knot current on a continual basis, and currents up to 1 knot, on an extreme basis.

2.03 Gangway Design and Load Condition

- A. Gangways shall be subject to the same load conditions identified in this section, except for berthing, mooring, current, wave, and pile loading conditions. Gangways shall provide connection to existing grade.
- B. Handrails shall be designed for the following independent load cases:
  - a. A continuous horizontal load of 20 PLF applied along the full length of the top rail.
  - b. A horizontal point load of 250 lbs acting at any point along the top rail.
- C. Gangways shall have a minimum clear walkway width of 3.5 ft, and an overall outside width not to exceed 4.5 ft. At a minimum all gangways shall be approximately 80' in length. Gangways shall have continuous handrails that are a minimum of 3.5 ft above the walking surface, but not to exceed 3.75 ft.
- D. Walking surface shall be skid resistant.
- E. Gangway pier end connections shall allow unrestricted vertical movement through tidal variation. Gangway bearing on floating piers shall be fitted with UHMW polyurethane rollers of adequate bearing area. Gangways shall be fitted with hinged apron plates to assure a safe uniform transition between gangway and deck surfaces. Apron plates will be designed so as to not damage or mar the floating pier surface.
- F. Maximum midspan deflection under live load shall not exceed  $L/240$ .
- G. Contact between aluminum and dissimilar metals or concrete shall be avoided, except for the use of compatible stainless-steel pins. Where potential for galvanic corrosion exists, the aluminum shall be isolated from direct contact with other metals or concrete by use of suitable non-conducting insulators or bushings.
- H. Maximum gangway slope shall be 1V:12H.



## 2.04 Materials

### A. Structural Concrete

1. Cement – In compliance with ASTM C150, type II. Blended cement shall consist of a mixture of ASTM C150 Type II cement and one of the following materials: fly ash or ground iron blast furnace slag. The fly ash content shall not be less than 20% nor exceed 40% by total mass of cementitious material. The content of granulated blast furnace slag shall not exceed 50% of the total mass of cementitious material.
2. Fly Ash – Use type N, F, or C, except that the maximum allowable loss on ignition shall be 6% for type N and F.
3. Ground Iron Blast Furnace Slag – Use Grade 100 or 120.
4. Water – Shall be fresh, clean, and potable.
5. Aggregates – Use size 8 (3/8"). Aggregates shall not contain any substance that may be deleteriously reactive with the alkalis in the cement.

### B. Reinforcing

1. Floating docks shall utilize fiber reinforced polymer (FRP) bars for concrete reinforcement and through rods.

### C. Expanded Polystyrene (EPS) Core

1. The closed cell expanded polystyrene core shall conform to ASTM C578. Type 1 C-578-07. The core shall have a density between .95 and 1.10 lbs/ft<sup>2</sup> and shall be made from virgin material containing no regrind. The EPS core will have a maximum water absorption of 4% by volume in accordance with ASTM C272. EPS foam billets shall have a maximum dimension tolerance of plus or minus 1/8". Exposed portions of the EPS and leveling billets (if required) shall be coated with a Poly Urea coat with a minimum thickness of 1.5 MM.

### D. Pile Guides

1. All pile guide structural steel to conform to ASTM A36, A500, or A768 as applicable. All members to be hot dip galvanized as defined in ASTM A123. All welding to be performed with AWS certified welders in accordance with AWS code section D1.1
2. Low friction blocks for pile contact areas shall be fabricated from UHMW polyethylene.
3. Pile guides shall be removable to allow the floating docks to be disconnected from the anchor piles for future maintenance purposes.

### E. Pile Guide and Cleat Fastening Systems

1. All fastening and or anchoring members cast or permanently embedded in the float shall be made from ASTM grade 316 stainless steel. All anchor channels to conform to ASTM A666. All thread rod to conform to ASTM A193.
2. All bolts to conform to ASTM A307, with a minimum yield of 36 ksi and minimum ultimate tensile strength of 60 ksi. All structural washers to be made to ASTM F436 and all structural nuts to meet ASTM A563. All structural fasteners and related hardware to be hot dip galvanized to ASTM A153.

### F. Rub Rail and Fender Fasteners

1. All rub rails and or fenders to be attached with fasteners made from 316 stainless steel.

G. Cleats

1. All cleats shall be 12" galvanized/stainless steel cleats with a minimum 3,000 lb. rated loading capacity. Cleats shall be spaced at 12' on-center along the full length of the dock.
2. All cleat connection points, including walers if applicable, shall be designed for the rated capacity of the proposed cleat. Design calculations shall be submitted to the City's Engineer for review and approval.

H. Fender Material

1. Fenders shall be extruded rubber fenders.

I. Float-to-Float Connectors

1. ~~Float-to-float connections/waler system shall employ an elastomeric member which will not emit or transmit noise and be of non-wearing design.~~ The member will prevent the transmission of concentrated, point, or shock loads to adjoining floats. At a minimum, the complete connection assembly will be capable of maintaining undamaged the structural integrity of the floatation system while withstanding repeated wave-induced movements, permitting connected pairs of floats to have a range of motion of at least 24 degrees when viewed broadside to the float in the elevation plane. The connections system shall be easily assembled and will allow the removal of one or more of the connection fasteners while keeping the remaining fasteners in place. The Connection Assembly must be capable of transmitting float-to-float compressive and tensile loads equal to 4 times the float design dead weight without damage or degrading wear to the floatation system.
2. Consideration shall be given to accommodate for the connection of the western most float to the adjacent Petaluma Small Craft Center (PSCC) gangway through the use of an existing piano hinge.

J. Walers

1. Walers shall be fiber reinforced polymer (FRP) and be securely fastened to the concrete floats using nylon nuts.
2. Walers may be substituted for timber at a cost reduction to the City, upon review and approval by the engineer.
3. ~~All timber, should it be required, shall be Southern Yellow Pine, S.F.P.A. Grade #1 or better, pressure treated with CCA and retention of 1.5 lbs. per cubic foot.~~
3. All structural timber walers shall be of Coast Region Douglas Fir, minimum "No. 1" or better per West Coast Lumber Inspection Bureau (WCLB) grading rules no. 16, paragraph 123 or paragraph 124 as applicable.
4. All non-structural timber (i.e., coverboard, fascia) shall be of Coast Region Douglas Fir; "No. 1" or better selected for best appearance.
5. Structural Timber shall be of Coast Region Douglas Fir; laminated timbers S4S appearance, grade 24F-V8, with zero camber and incised.

6. Lumber shall be fabricated accurately to provide uniform gaps and butt joint connections. Lumber splices shall not exceed  $\frac{3}{4}$ " inch between adjoining ends.
7. All walers, fascia, spacers, or any other member which is subject to foot traffic, shall be flush with the concrete walking surface and shall have chamfered or bull nosed edges on the top edges.
8. LUMBER TREATMENT
  - a. All lumber shall be pressure preservative treated with ACZA to .6 pound per cubic foot retention.
  - b. All lumber will be cut to length and all holes drilled prior to pressure treatment to the extent practical.
  - c. Tie bands used for delivery must have plates between the bands and the wood to prevent crushing. Bundle identification shall be done so as not to stain lumber surfaces.
  - d. All field cuts and bored holes exposed after pressure treatment shall be brush coated with a preservative solution.

K. Utility Boxes and Utility Ducts

1. Utility Boxes and hand holes will be concrete cast in with the structure. Lids will be embedded in the decks of the concrete module and have a non-skid surface and are designed to withstand a live load of 60 psf.
2. Access Boxes where required, shall be flush with the walking surface and shall have a 1" nominal concrete bottom with a smooth or light brushed, slip-resistant finish. All bolts and lids on access boxes shall be stainless steel.
3. Utility sleeves shall remain above the water surface under dead load conditions and shall be designed to facilitate installation and removal. And servicing the utilities. Access openings shall be provided at convenient locations if required for special access.

L. Thru-Rod Connections

1. Thru-rods shall be fiber reinforced polymer (FRP).
2. The minimum dimension for all thru-rods for structural attachment is  $\frac{3}{4}$ " rolled thread diameter. All thru-rods shall be placed within PVC sleeves cast in the float units. The maximum inside diameter of PVC shall not exceed  $\frac{7}{8}$ " for  $\frac{3}{4}$ " thru rods.
3. If required, after fabrication, all cut ends, holes and abrasions of FRP shapes shall be sealed with a compatible resin coating.
4. FRP products exposed to weather shall contain an ultraviolet inhibitor. Should additional ultraviolet protection be required, a one mil minimum UV coating can be applied.
5. All exposed surfaces shall be smooth and true to form.
6. Thru-rods shall be placed through each float unit within 6" of each end of that unit. and within 6" of each lumber splice.
7. No connecting device shall protrude beyond the fascia into the berth area. Any connecting device protruding above the surface of the deck shall have a low, rounded profile. Any connecting device cast into the concrete modules shall be stainless steel.

M. Gangways

1. Provide gangways of prefabricated aluminum for floating pier access, including connections at the bulkhead and bearing on the floating pier. Gangway shall be designed in accordance with "Specifications for Aluminum Structures", AA, latest edition, using allowable stresses for bridges.
2. All gangways are required to follow Americans with Disabilities Act 2010 ADA Standards.
3. Aluminum
  - i. Aluminum alloy shall be 6061-T6. Extruded in accordance with the applicable requirements of SAE AMS-QQ-A-200/8.
4. Stainless Steel Type 316 L.
  - i. Castings
    1. F-214 Cast aluminum. Castings shall be true to pattern, structurally sound and free from blow holes or other defects.
  - ii. Insulators
    1. Bushings or separation sheets shall be a minimum of 1/16 in thickness.
  - iii. Rollers
    1. UHMW polyurethane, with UV inhibitors added. Color shall be black.

## PART 3 - EXECUTION

### 3.01 Floating Docks

- A. The float modules shall consist of 6 sides of concrete with a minimum deck thickness of 2", minimum side wall, end wall of 1.5", and a minimum bottom thickness of 1.25".
- B. Floats will be fabricated according to methodology promulgated by the American Concrete Institute (ACI). The facility to provide adequate workspace, handling equipment, level casting surface and portable shelters for protection from adverse environmental conditions such as direct sunlight, wind, moisture, and freezing conditions.
- C. Casting Forms to have structural members and shoring systems adequate to ensure floats are cast without distortion or deviations from design exceeding  $\pm 1/8"$ . Form surfaces to be smooth true and of sufficient load carrying ability to ensure dimensions will not deviate more than  $\pm 1/8"$  from design dimensions. Any rough edges, form marks, or defects such as protruding fins shall be cleaned, ground smooth or patched.
- D. Each float will be cast as an individual monolithic unit and made in one continuous pour. No cold joints are permitted. During the casting process the concrete shall be vibrated internally or externally in accordance with ACI -309 to ensure a smooth, dense finish.
- E. Project shall include two distribution pedestals for utilities.
- F. Float decks shall be designed and constructed to drain freely and there shall be no floodable enclosed spaces.
- G. All precast floats are to be clearly identified on one side and one end, between the bottom of the waler and the waterline. Identification shall include name of manufacturer, date of manufacture, specific float type, and job number.
- H. Final fabricated floats shall be made available to the engineer for inspection and approval prior to the close of project. Any precast float that is deemed structurally impaired by the engineer shall be rejected. Structural repairs shall be made at no additional expense to the City. Final payment shall not be made until all float and materials have been approved by the City or its engineer.

### 3.02 Testing

- A. Concrete testing is to be carried out by certified personnel, conforming to ACI guidelines. Three concrete cylinders will be taken in accordance with ACI-318 for each day's production. Entrained air tests to be taken daily from the same material samples used for the compressive test cylinders in accordance with ASTM C173, or C231. Periodic unit weight test is to be performed as per ASTM C0138. All test results will be forwarded to the owner and design engineer.

### 3.03 Curing

- A. All floats are cured in accordance with ACI 308, 305R, and 306R as applicable.

3.04 Deck Finish

- A. Float deck surface shall have a light broom finish applied transversely to the walking deck. All top and vertical edges have a 3/4" chamfer. Float decks to have a minimum 1" to 1 1/2" wide smooth hard steel finished shiner strip placed around the entire perimeter.

3.05 Surface Defects

- A. All floats will be free of structural cracks. Chips and cracks that exceed 0.01" wide will be patched with a non-shrink patching compound. Rock pockets and or honeycombing exceeding 1" in diameter and or 3/4" deep will be patched with a non-shrink grout of a color similar to the cured concrete. Any pockets that expose the reinforcing steel will be chipped out, cleaned, and filled with a non-shrink patching compound.

3.06 Handling

- A. All floats will be properly designed for loading, shipping, lifting. Lifting points will be specified in the shop drawings.

PART 4 – Measurement & Payment

4.01 Measurement

- A. Floats will be paid for at the contract LUMP SUM (LS) price in accordance with Section 4.02 Payment. Final payment shall not be made until all float and materials have been approved by the City or its engineer.
- B. Alternative 1/Alternative 2 will be paid for at the contract LUMP SUM (LS) price in accordance with Section 4.02 Payment. Final payment shall not be made until all float and materials have been approved by the City or its engineer.
- C. All design and fabrication shall be completed within one-hundred and twenty (120) working days from the Notice to Proceed (NTP).

4.02 Payment

- A. Payment for Floats shall be paid for by the Contract Lump Sum price as contained in Bid Item No. 1. Float payment shall include all furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the complete pre-engineered concrete floating dock system required to perform the work involved as shown on the Plans, as stated in these specifications, and as directed by the Engineer.
- B. Payment will be made in two (2) installments: 60% after Notice to Proceed (NTP) upon receipt of the first payment request, and the remaining 40% upon substantial completion of fabrication.
- C. ~~The City may request from the Contractor and the Contractor must provide documentation to fully and adequately account for and demonstrate actual funds, labor, invoices, purchase orders or other appropriate records as deemed necessary by the City.~~

- D. A ten percent (10%) retention of payment amount shall be held by the City from the amount of each Application for Payment. Payment shall not be made until all float and materials have been approved by the City and the City has approved closure of the contract.

END OF SECTION

City of Petaluma, California  
**PETALUMA TURNING BASIN FLOATING DOCK  
 DESIGN & FABRICATION**  
 150 WELLER STREET, PETALUMA, CA 94952

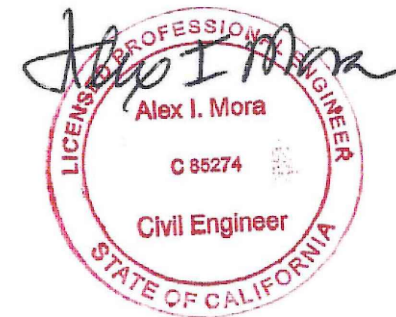
ISSUED FOR BID



**LOCATION MAP**  
 SCALE: N.T.S.

**SHEET INDEX**

- G-101 TITLE
- G-102 NOTES, ABBREVIATIONS, & SYMBOLS
- C-101 EXISTING CONDITIONS
- C-102 PROPOSED FLOATING DOCK CONFIGURATION
- C-103 ADA COMPLIMENT GANGWAY CONFIGURATION
- D-101 FLOATING DOCK DETAILS



DATE EXPIRES: 12/31/2023  
 DATE SIGNED: 3/1/2023

ALL PROJECT PLANS HAVE BEEN PREPARED AND REVIEWED TO COMPLY WITH CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS AND/OR THE CALIFORNIA BUILDING STANDARDS CODE (CBCS).

THESE PROJECT PLANS CONTAIN ELEMENT(S) THAT ARE NOT "TECHNICALLY FEASIBLE" AND/OR CAN'T MEET THE APPLICABLE CBCS BECAUSE IT WOULD CREATE AN "UNREASONABLE HARDSHIP." PLEASE SEE THE WRITTEN ANALYSIS SUPPORTING THIS DETERMINATION FILED UNDER THE PROJECT FILE.

DESIGNED BY \_\_\_\_\_

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

MAYOR  
 KEVIN MCDONNELL

COUNCIL MEMBERS  
 BRIAN BARNACLE  
 JANICE CADER-THOMPSON, DIST. 1  
 MIKE HEALY  
 KAREN NAU, DIST. 3  
 DENNIS POCEKAY  
 JOHN SHRIBBS, DIST. 2

CITY MANAGER  
 PEGGY FLYNN

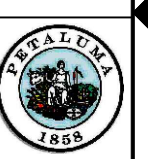
DIRECTOR OF PUBLIC WORKS & UTILITIES  
 CHRISTOPHER BOLT

	SIGNATURE	DATE
CITY ENGINEER		
ENGINEERING MANAGER		
FIRE MARSHAL		
PARKS		
PLANNING		
POLICE		
UTILITY MANAGER		

DATE: FEBRUARY 2023  
 DESIGNED BY: AM/AK  
 DRAWN BY: KEC  
 CHECKED BY: WPR

PROJECT NO.  
 0020P015.00

**CITY OF PETALUMA**  
 PUBLIC WORKS & UTILITIES  
 202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954  
 PH. 707-778-4546 FAX. 707-778-4508



PETALUMA TURNING BASIN  
 FLOAT DESIGN  
 TITLE

SHEET  
**G-101**  
 1 OF 6



**GENERAL NOTES:**

- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL NOTE ALL APPROVED CHANGES AND OTHER OCCURRENCES AND SUBMIT A FULL SIZE COMPLETE "RECORD DRAWING" SET NOTED AND DATED ON THE DRAWINGS TO THE PROJECT ENGINEER PRIOR TO ACCEPTANCE OF THE WORK.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL MATERIAL AND WORKMANSHIP FULLY CONFORMS TO THE SPECIFICATIONS, STANDARDS, AND ORDINANCES OF THE CITY OF PETALUMA.
- STRUCTURAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE BUILDING CODE OF THE STATE OF CALIFORNIA. WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL PERMIT CONDITIONS.
- SECTIONS AND DETAILS APPLY TO THE SAME AND SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.

**FLOATING DOCKS:**

- FLOATS WILL BE FABRICATED ACCORDING METHODOLOGY PROMULGATED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI). THE FACILITY TO PROVIDE ADEQUATE WORKSPACE, HANDLING EQUIPMENT, LEVEL CASTING SURFACE AND PORTABLE SHELTERS FOR PROTECTION FROM ADVERSE ENVIRONMENTAL CONDITIONS SUCH AS DIRECT SUNLIGHT, WIND, MOISTURE, AND FREEZING CONDITIONS.
  - ALL FLOATS WILL BE PROPERLY DESIGNED FOR LOADING, SHIPPING, LIFTING. LIFTING POINTS WILL BE SPECIFIED IN THE SHOP DRAWINGS.
  - FLOATING DOCK SHALL BE DESIGNED TO WITHSTAND THE FOLLOWING SERVICE DESIGN LIVE LOADS AND ENVIRONMENTAL CONDITIONS:
    - LIVE LOADS:
      - CONCRETE DOCK: 50 PSF
      - GANGWAYS: 100 PSF
      - LANDING: 100 PSF
    - WIND LOADS: PER ASCE 7 - 16
      - EXTREME WIND SPEED: 69 MPH - 30-SEC SUSTAINED WIND SPEED
    - WAVE LOAD:
      - H = 1.5 FT, T = 2.2 SECONDS CONTINUAL
      - H = 3.0 FT, T = 3.0 SECONDS EXTREME
    - CURRENT VELOCITY: 0.5 KNOT CONTINUAL, 1.0 KNOT EXTREME
    - VESSEL LOADS:
      - IMPACT LOAD FROM A GENERIC 30' LOA RECREATIONAL BOAT
      - VELOCITY: 3.0 FT/SEC
- © COPYRIGHT 2023, FOTH & VAN DYKE AND ASSOCIATES, INC.

**ABBREVIATIONS**

APPROX	APPROXIMATE
CONC	CONCRETE
CONT	CONTINUED
Ø	DIAMETER
EX	EXISTING
IN	INCH
L	LENGTH
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT-TO-SCALE
±	PLUS OR MINUS
PROP	PROPOSED
R	RADIUS
TYP	TYPICAL
VAR	VARIES

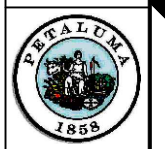
**GENERAL SYMBOLS**

EXISTING	PROPOSED	
		PROPERTY LINE
		SHORELINE
		BUILDINGS
		PETLAUMA SMALL CRAFT FLOAT
		16" FREEBOARD FLOATING DOCKS
		ALT 1/ALT 2 FLOATING DOCKS
		GANGWAYS
		PSSC GANGWAY & RAMP
		POWER AND WATER PEDESTAL
		16" PILES

DATE: FEBRUARY 2023  
 DESIGNED BY: AMIAK  
 DRAWN BY: KEC  
 CHECKED BY: WPR

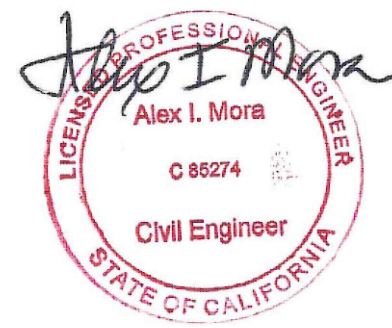
PROJECT NO.  
 0020P015.00

**CITY OF PETALUMA**  
 PUBLIC WORKS & UTILITIES  
 202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954  
 PH: 707-778-4546 FAX: 707-778-4508



RECORD DRAWING REFERENCE			
NO.	DATE	DESCRIPTION	BY

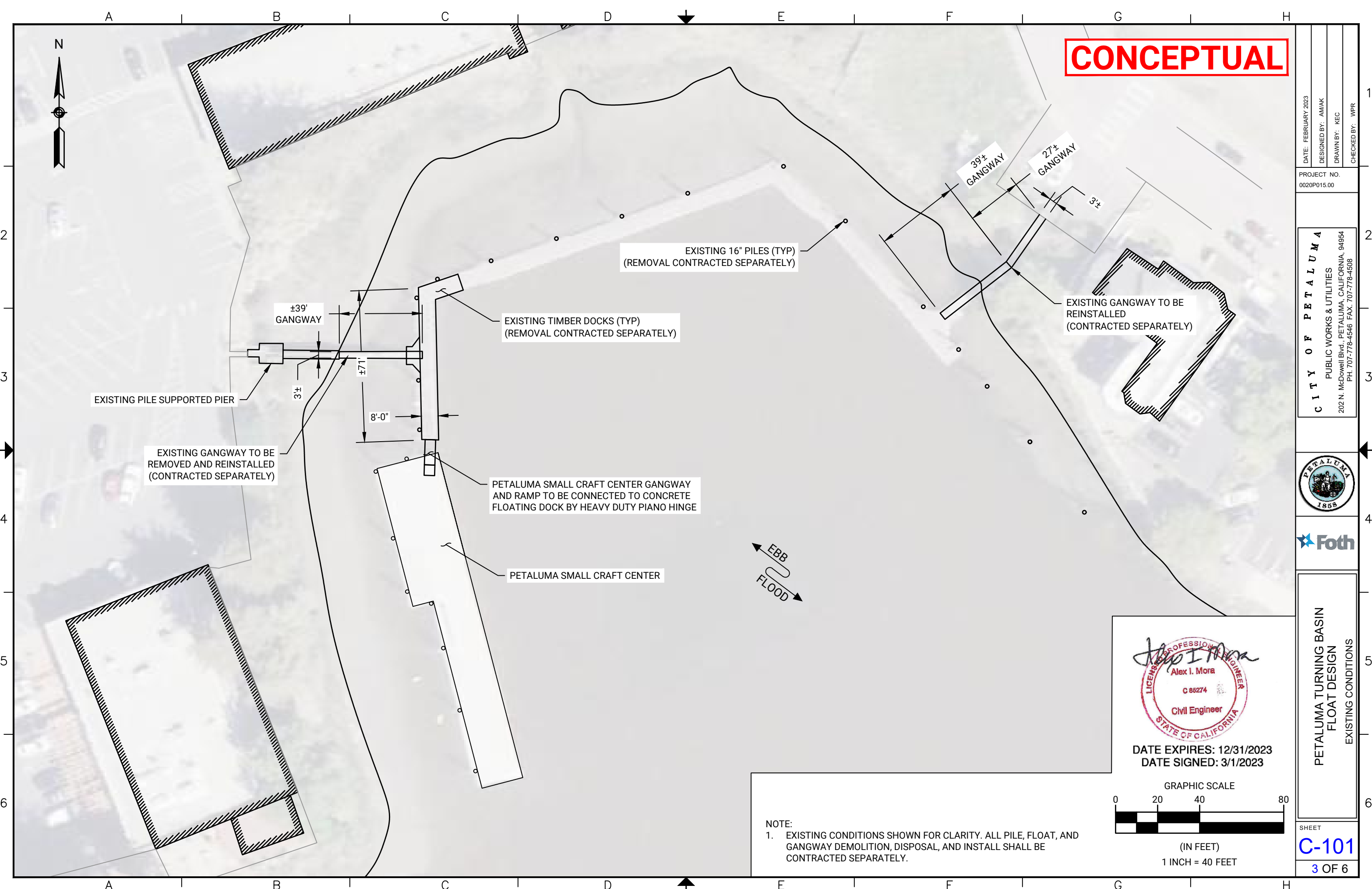
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PROJECT START	3/27/2023
PROJECT END	11/30/2023
PROJECT CONTRACTOR	TBD
CONTRACTOR'S SUPER.	TBD
REGULATORY PERMITS	NA
PROJECT MANAGER	CITY OF PETALUMA
PROJECT INSPECTOR	FOTH & VAN DYKE AND ASSOCIATES, INC.
OTHER	



DATE EXPIRES: 12/31/2023  
 DATE SIGNED: 3/1/2023

PETALUMA TURNING BASIN  
 FLOAT DESIGN  
 NOTES, ABBREVIATIONS, & SYMBOLS

**CONCEPTUAL**



DATE: FEBRUARY 2023  
DESIGNED BY: AM/AK  
DRAWN BY: KEC  
CHECKED BY: WPR

PROJECT NO.  
0020P015.00

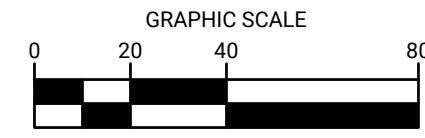
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**PETALUMA TURNING BASIN  
FLOAT DESIGN  
EXISTING CONDITIONS**



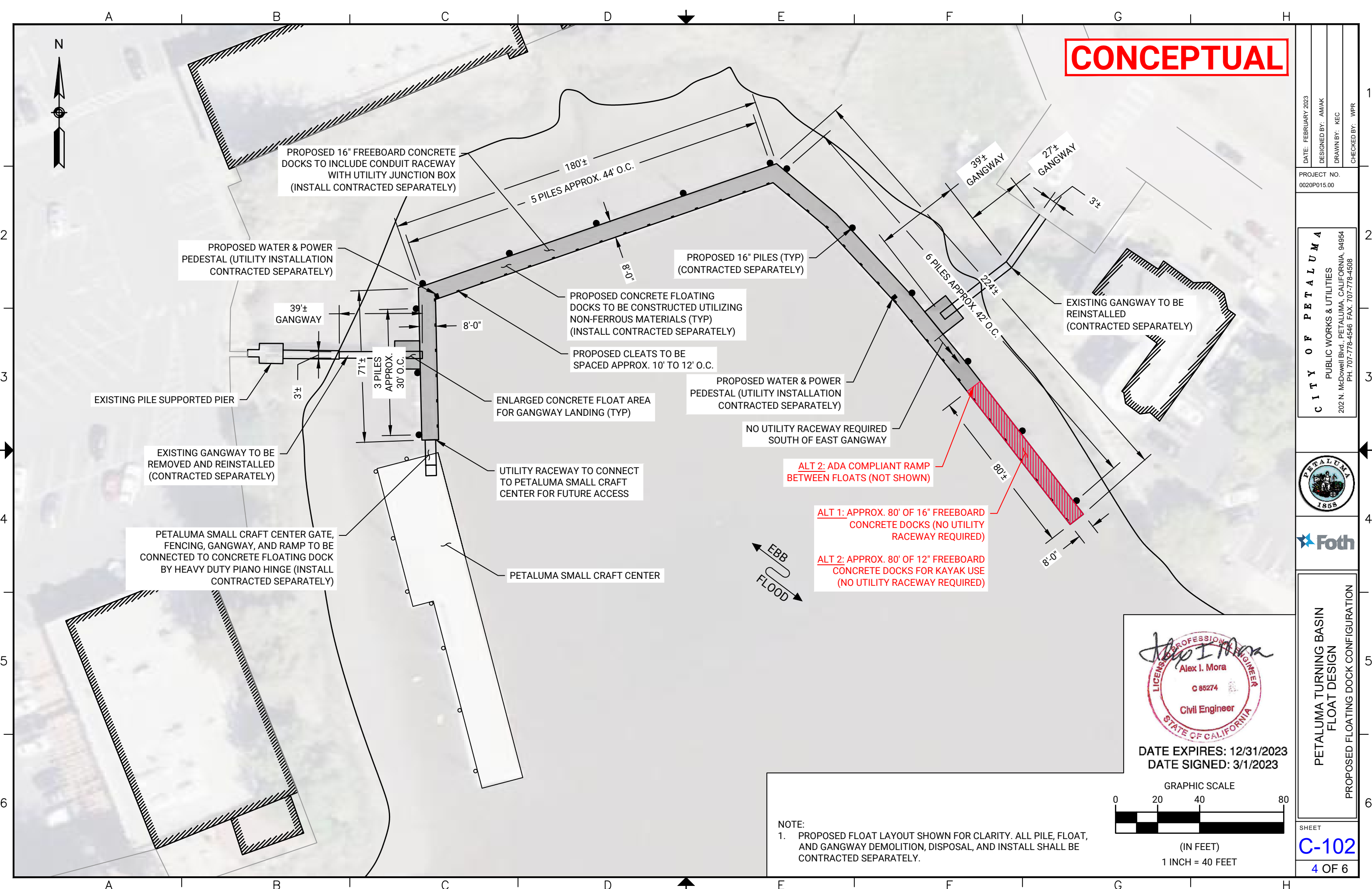
DATE EXPIRES: 12/31/2023  
DATE SIGNED: 3/1/2023



(IN FEET)  
1 INCH = 40 FEET

NOTE:  
1. EXISTING CONDITIONS SHOWN FOR CLARITY. ALL PILE, FLOAT, AND GANGWAY DEMOLITION, DISPOSAL, AND INSTALL SHALL BE CONTRACTED SEPARATELY.

**CONCEPTUAL**



DATE: FEBRUARY 2023  
DESIGNED BY: AM/AK  
DRAWN BY: KEC  
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PROJECT NO.  
0020P015.00

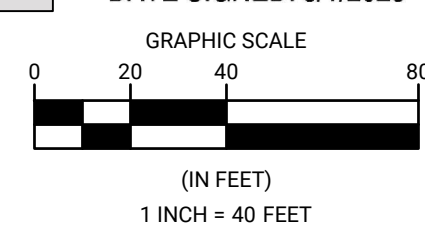
**CITY OF PETALUMA**  
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202 N. McDowell Blvd., PETALUMA, CALIFORNIA, 94954  
PH: 707-778-4546 FAX: 707-778-4508



**PETALUMA TURNING BASIN  
FLOAT DESIGN**  
PROPOSED FLOATING DOCK CONFIGURATION

SHEET  
**C-102**  
4 OF 6

NOTE:  
1. PROPOSED FLOAT LAYOUT SHOWN FOR CLARITY. ALL PILE, FLOAT, AND GANGWAY DEMOLITION, DISPOSAL, AND INSTALL SHALL BE CONTRACTED SEPARATELY.



*Alex I. Mora*  
**Alex I. Mora**  
C 85274  
Civil Engineer  
STATE OF CALIFORNIA  
DATE EXPIRES: 12/31/2023  
DATE SIGNED: 3/1/2023



**CONCEPTUAL**



DATE: FEBRUARY 2023  
DESIGNED BY: AM/AK  
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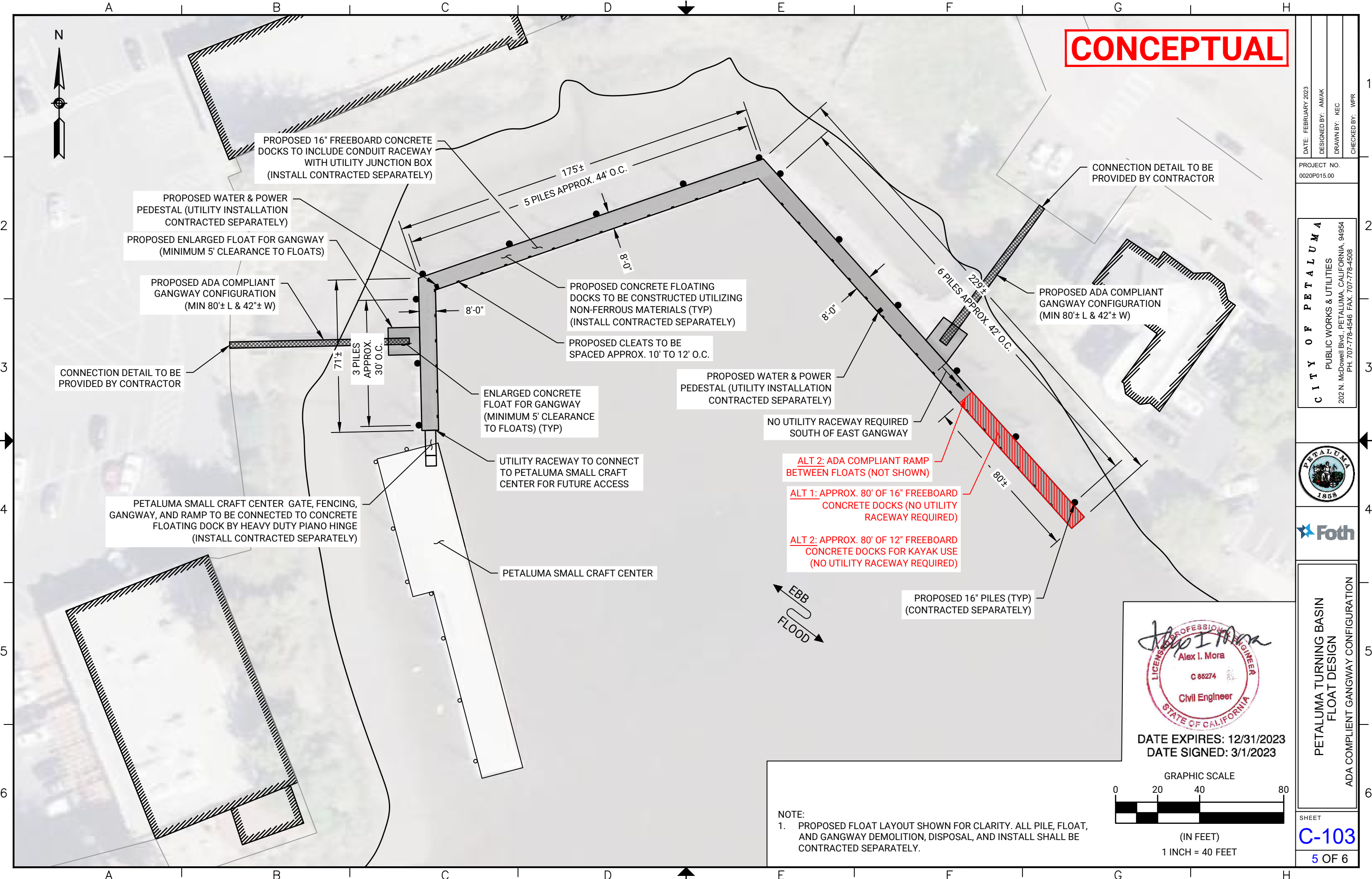
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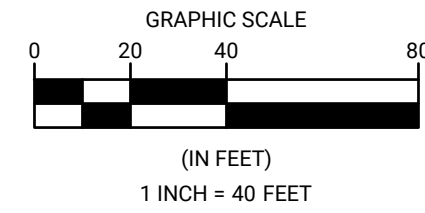


PETALUMA TURNING BASIN  
FLOAT DESIGN  
ADA COMPLIANT GANGWAY CONFIGURATION

SHEET  
**C-103**  
5 OF 6



NOTE:  
1. PROPOSED FLOAT LAYOUT SHOWN FOR CLARITY. ALL PILE, FLOAT, AND GANGWAY DEMOLITION, DISPOSAL, AND INSTALL SHALL BE CONTRACTED SEPARATELY.



*Alex I. Mora*  
Alex I. Mora  
C 65274  
Civil Engineer  
STATE OF CALIFORNIA  
DATE EXPIRES: 12/31/2023  
DATE SIGNED: 3/1/2023

**CONCEPTUAL**

DATE: FEBRUARY 2023  
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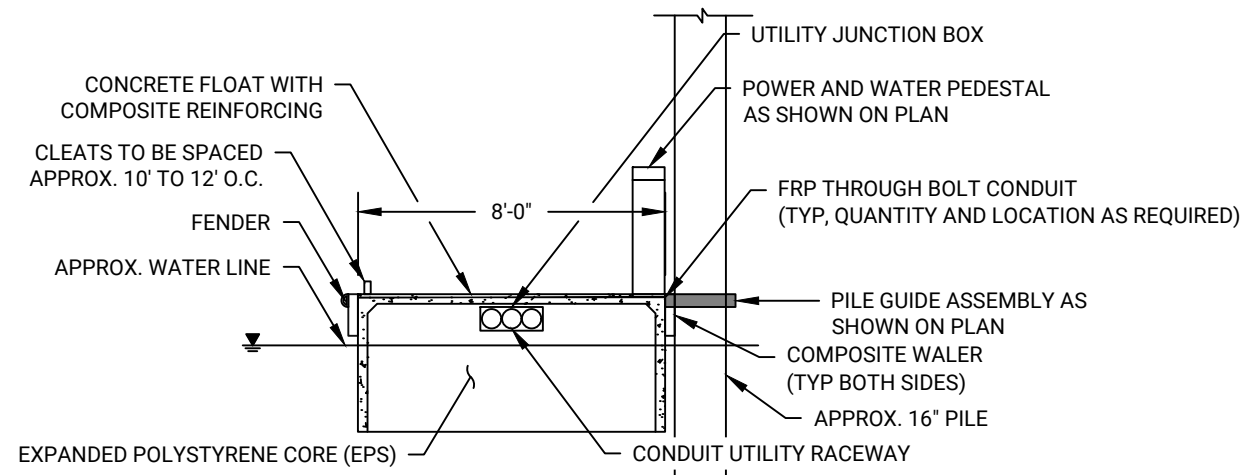
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**PETALUMA TURNING BASIN  
FLOAT DESIGN  
FLOATING DOCK DETAILS**

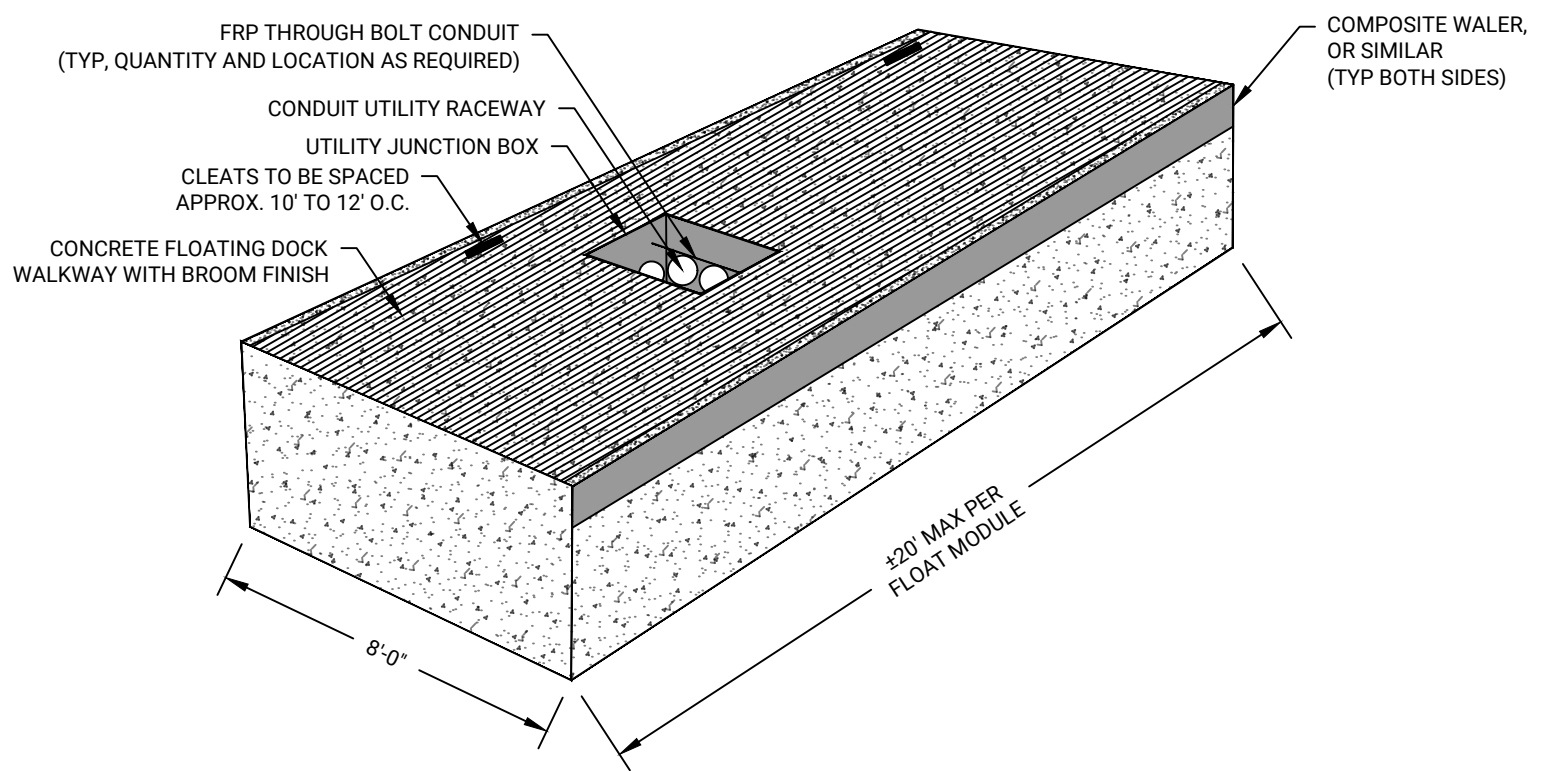
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**D-101**

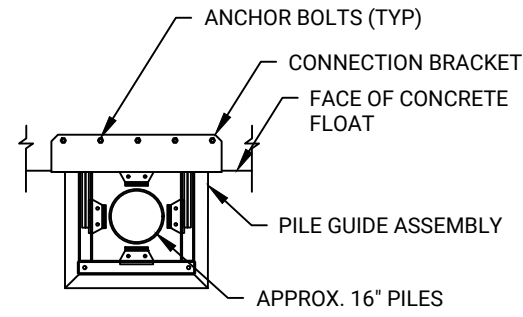
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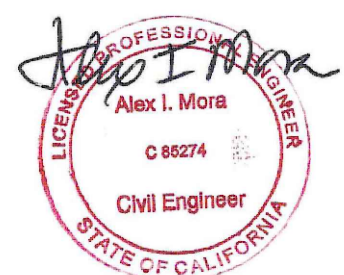
**A**  
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TYPICAL FLOAT DETAIL  
SCALE: 1" = 60'



**B**  
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TYPICAL FLOAT DETAIL  
SCALE: 1" = 60'



**C**  
5  
TYPICAL EXTERIOR PILE GUIDE ASSEMBLY (TO BE DESIGNED BY CONTRACTOR)  
SCALE: 1" = 60'



DATE EXPIRES: 12/31/2023  
DATE SIGNED: 3/1/2023