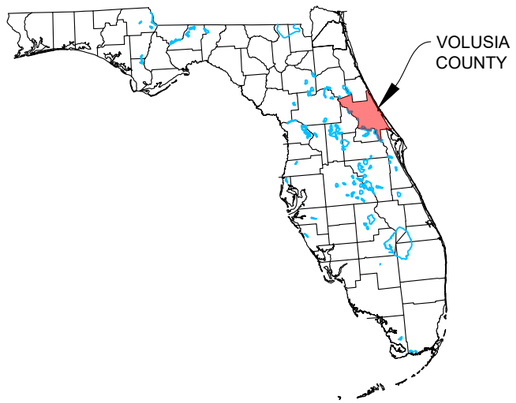
CONSTRUCTION DRAWINGS

60% PLANS

FLORIDA



CATFISH COMMONS MARINA

JUNE 8, 2023

PROJECT LOCATION MAP
SECTION 41, TOWNSHIP 16, RANGE 33

PROJECT ADDRESS: 4108 HALIFAX DR., PORT ORANGE, FL 32127

INDEX

SHEET	DESCRIPTION
CVR	INDEX & LOCATION MAP
C-01	AERIAL
C-02	DEMOLITION PLAN
C-03	SITE PLAN
C-04	BULKHEAD DETAILS
C-05	TIMBER DOCK DETAILS
C-06	FLOATING DOCK DETAILS
C-07	POWER PEDESTAL DETAILS
C-08	PARKING PLAN
C-09	DREDGE PLAN
C-10	DREDGE CROSS-SECTIONS
C-11	GENERAL NOTES
C-12	GENERAL NOTES
C-13	GENERAL NOTES
C-14	ENVIRONMENTAL NOTES

NOTE TO CONTRACTOR:

THESE DRAWINGS AND THE PROJECT SPECIFICATIONS ARE COMPLEMENTARY, AND ANY REQUIREMENT OF ONE SHALL BE A REQUIREMENT OF THE OTHER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE THE DRAWINGS AND SPECIFICATIONS AND TO COMPARE THE REQUIREMENTS OF EACH DIVISION AND ENSURE THAT EACH TRADE OR SUBCONTRACTOR IS MAKING THE ALLOWANCES NECESSARY TO PROVIDE THE OWNER A COMPLETE FACILITY, OPERATIONAL IN ALL RESPECTS, UNLESS OTHERWISE SPECIFICALLY STATED IN THE DRAWINGS OR PROJECT MANUAL.

IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR DISCREPANCIES AMONG THE DIVISIONS OF THE DRAWING AND SPECIFICATIONS PRIOR TO THE DEADLINE FOR BID SUBMITTAL. NEITHER THE OWNER OR ENGINEER WILL BE RESPONSIBLE FOR ANY DEFICIENCIES OR DISCREPANCIES RAISED AFTER THE BID OPENING. ACCORDINGLY, IN LIGHT OF THESE OBLIGATIONS, THE ENGINEER IS OBLIGATED TO INTERPRET THE DRAWINGS SPECIFICATIONS IN A MANNER THAT WILL PROVIDE THE OWNER WITH A COMPLETE, FUNCTIONING FACILITY FOR THE BID PRICE.

ENGINEER CERTIFICATION:

I HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA PRACTICING WITH DMC, DREDGING & MARINE CONSULTANTS LLC, A CORPORATION, AUTHORIZED TO OPERATE AS AN ENGINEERING BUSINESS, CERTIFICATE OF AUTHORIZATION # 9410, BY THE STATE OF FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION, AND THAT I, OR OTHERS UNDER MY DIRECT SUPERVISION, HAVE PREPARED OR APPROVED THE EVALUATIONS, FINDINGS, OPINIONS, CALCULATIONS, CONCLUSIONS OR TECHNICAL ADVICE HEREBY REPRESENTED BY THESE DRAWINGS.

STEPHEN J. KUHN, P.E.
FLORIDA LICENSE No. 67486

811 Know what's **below.** **Call** before you dig.

REPRODUCTION SCALE:
THESE PLANS SHALL BE PRINTED IN COLOR AND ARE SCALED TO ACCURATELY BE REPRODUCED ON 11X17 SIZED SHEETS. ALL OTHER SHEET SIZES ARE NOT TO SCALE.

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ENGINEERS • SCIENTISTS
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Port Orange, FL 32129
Phone:(386) 304-6505
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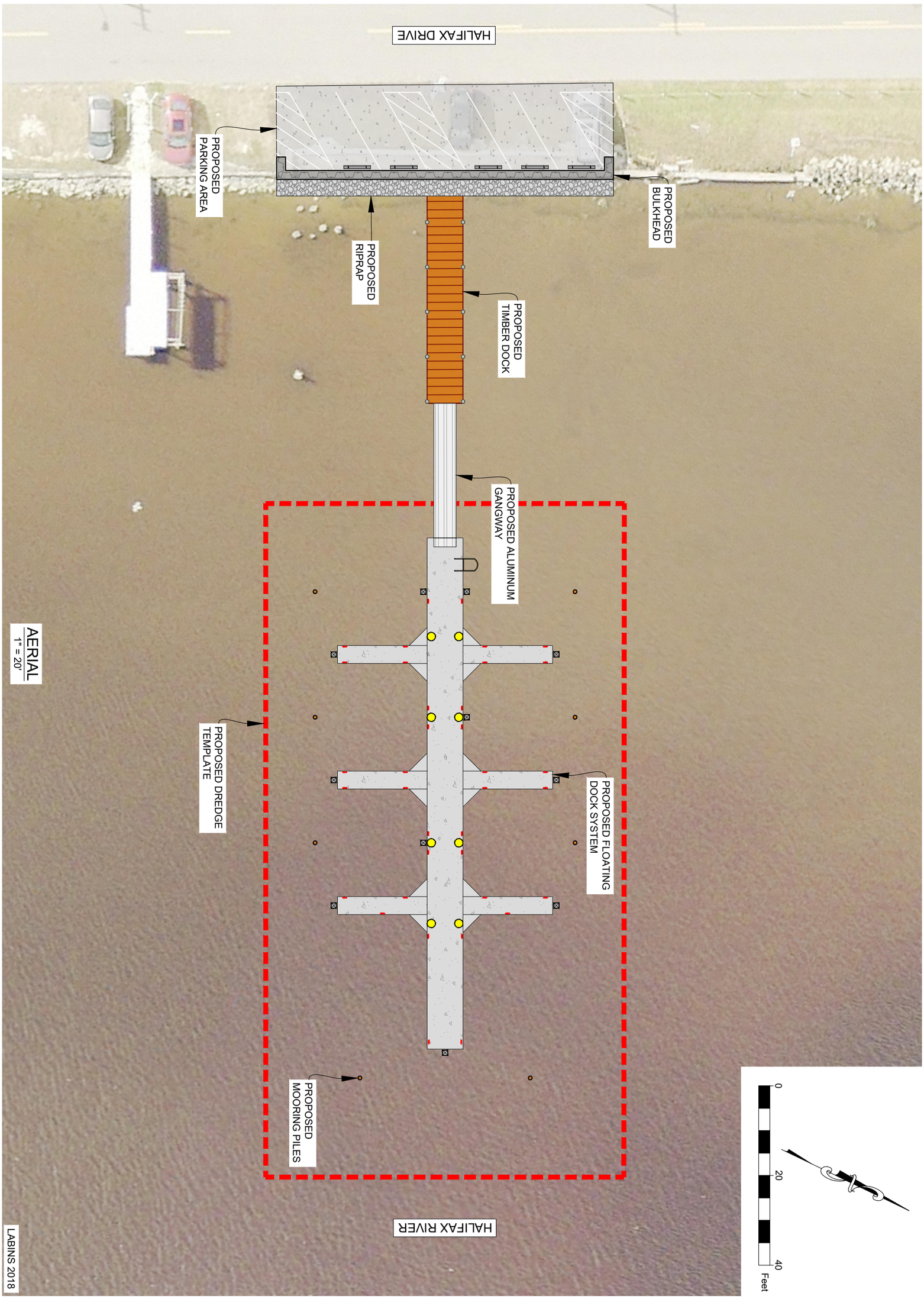

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STEPHEN J. KUHN, P.E.
FLORIDA LICENSE No. 67486

PROJECT NAME: CATFISH COMMONS MARINA

CLIENT: MR. & MRS. GALBREATH

DRAWING: AERIAL

DMC JOB NO. 22-173-01

DRAWN BL | CAD C3D | SHEET NO. C-01

CHECKED AS | SCALE AS SHOWN

APPROVED SKP | DATE 06/08/2023

- MEAN HIGH WATER EL.=(+)0.02 NAVD 88
- MEAN LOW WATER EL=(-)0.97 NAVD 88

EXISTING CONCRETE TO BE REMOVED

EXISTING COQUINA WALL REMAIN

EXISTING RIP RAP TO BE REMOVED, STORED, AND REPLACED AFTER BULKHEAD CONSTRUCTION (TYP.)

PROPOSED TYPE II FLOATING TURBIDITY BARRIER

EXISTING 10" DIA. CONCRETE PILES TO BE REMOVED (TYP.)

EXISTING CONCRETE WALL TO REMAIN

EXISTING 3' CABLE FENCE TO BE REMOVED

HALIFAX DRIVE

HALIFAX RIVER

0 20 40 Feet

DEMOLITION PLAN
1" = 20'

DRAWING: DEMOLITION PLAN
DMC JOB NO. 22-173-01
SHEET NO. C-02
DRAWN BL | CAD C3D | SCALE AS SHOWN | DATE 06/08/2023
CHECKED AS | APPROVED SKP

PROJECT NAME: CATFISH COMMONS MARINA

CLIENT: MR. & MRS. GALBREATH

STEPHEN J. KUHN, P.E.
FLORIDA LICENSE No. 67486

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DMC ENGINEERS • SCIENTISTS
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Port Orange, FL 32129
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Fax:(386) 304-6506
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Drawing Name: C:\Users\DMC-User\AppData\Local\Temp\AcPublish_32240\Catfish Commons Marina Permitting Plans.dwg By: DMC-User Tab: DEMOLITION PLAN-3 6/08/2023

- MEAN HIGH WATER EL.=(+)0.02 NAVD 88
- MEAN LOW WATER EL=(-)0.97 NAVD 88

LEGEND:

- 10" TIMBER PILE
- 14" SQ. CONCRETE PILE
- 14" DOCK CLEAT
- UTILITY PEDESTAL / LIGHT
- ALUMINUM KAYAK / CANOE LAUNCH
- 1 - BOAT SLIP NUMBER

0 20 40 Feet

HALIFAX RIVER

-2

-3

-4

HALIFAX DRIVE

75'± BULKHEAD

8'-0"

50'-0"

5'-0"

30'-0"

60°

20'-0"

-2

3'-9"

EXISTING RIPRAP PLACED IN FRONT OF PROPOSED BULKHEAD

TYPE II FLOATING TURBIDITY BARRIER

20'-0"

12'-0"

5'-0"

4'-0"

1 3 5 7 9 11

2 4 6 8 10 12

8'-0"

-3

24'-0" 24'-0" 24'-0" 30'-0"

114'-0"

SITE PLAN

1" = 20'

DRAWING: SITE PLAN
DMC JOB NO. 22-173-01
SHEET NO. C-03

DRAWN	BL	CAD	C3D	SCALE AS SHOWN	DATE 06/08/2023
CHECKED	AS				
APPROVED	SKP				

PROJECT NAME: CATFISH COMMONS MARINA

CLIENT: MR. & MRS. GALBREATH

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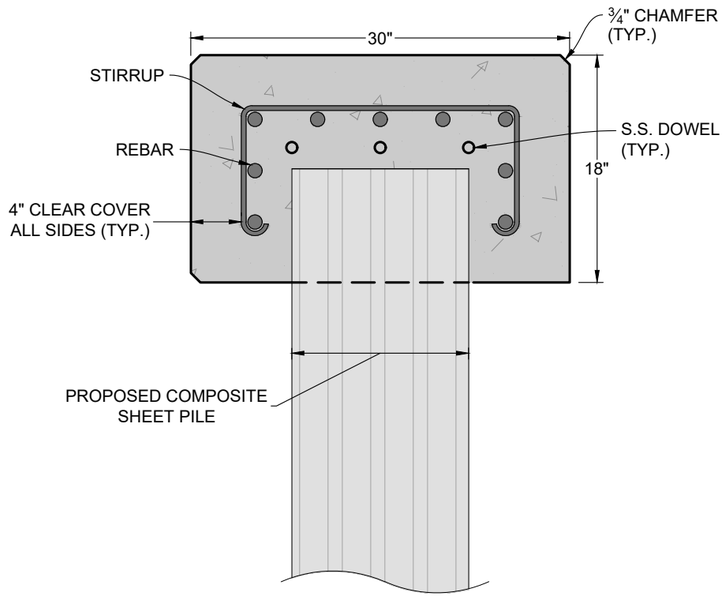
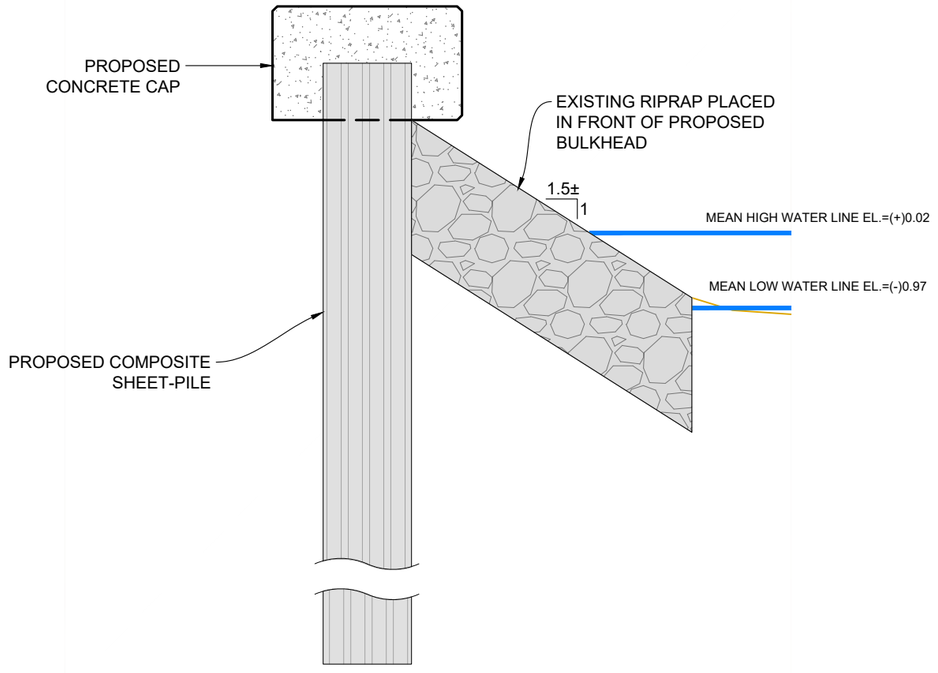


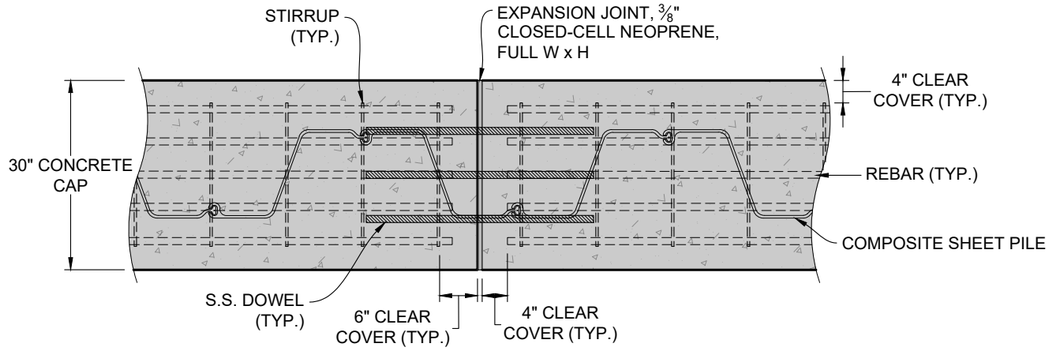
CONCRETE CAP CROSS-SECTION

1" = 1'



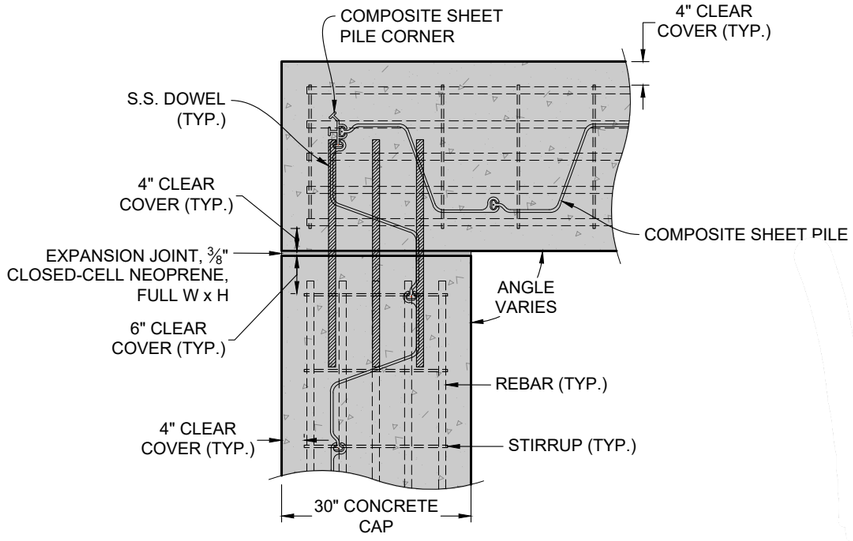
BULKHEAD CROSS-SECTION

1" = 2'



IN-LINE EXPANSION JOINT DETAIL - PLAN

1" = 2'



CORNER EXPANSION JOINT DETAIL - PLAN

1" = 2'

DRAWING: BULKHEAD DETAILS
DMC JOB NO. 22-173-01
SHEET NO. C-04
DRAWN BL | CAD C3D | SCALE AS SHOWN | DATE 06/08/2023
CHECKED AS | APPROVED SKP

PROJECT NAME: CATFISH COMMONS MARINA

CLIENT: MR. & MRS. GALBREATH

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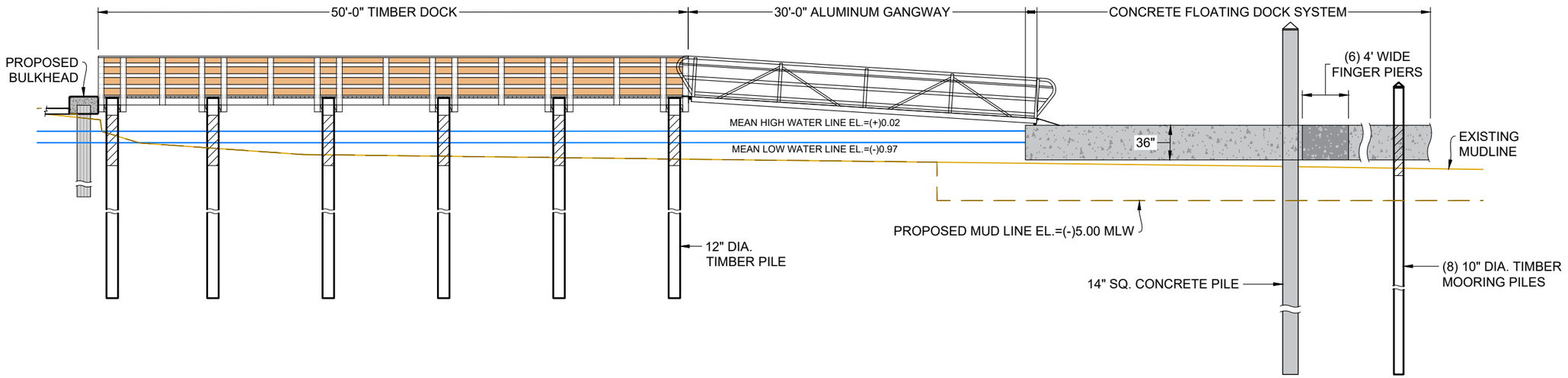
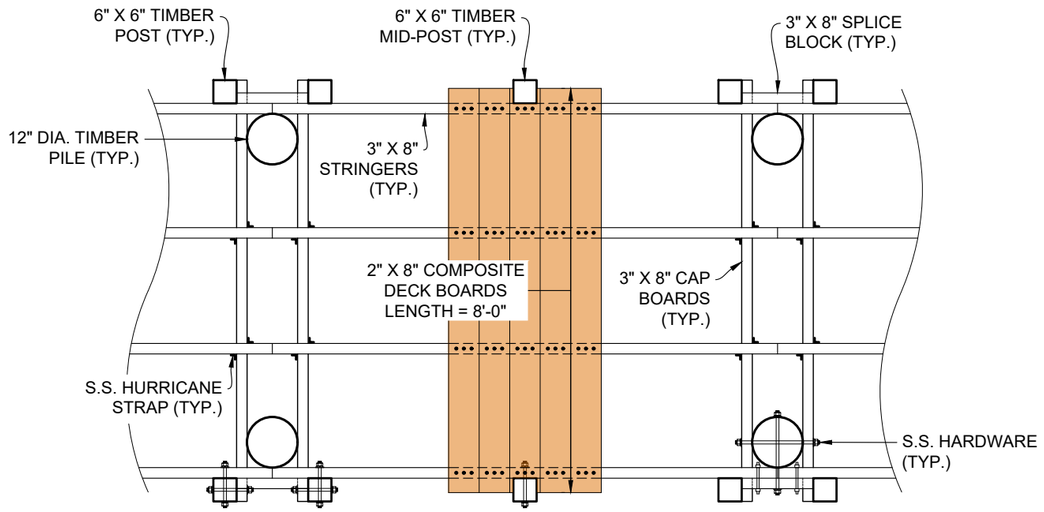
Drawing Name: C:\Users\DMC-User\AppData\Local\Temp\AcPublish_32240\Catfish Commons Marina Permitting Plans.dwg By: DMC-User Tab: BULKHEAD-3 6/08/2023



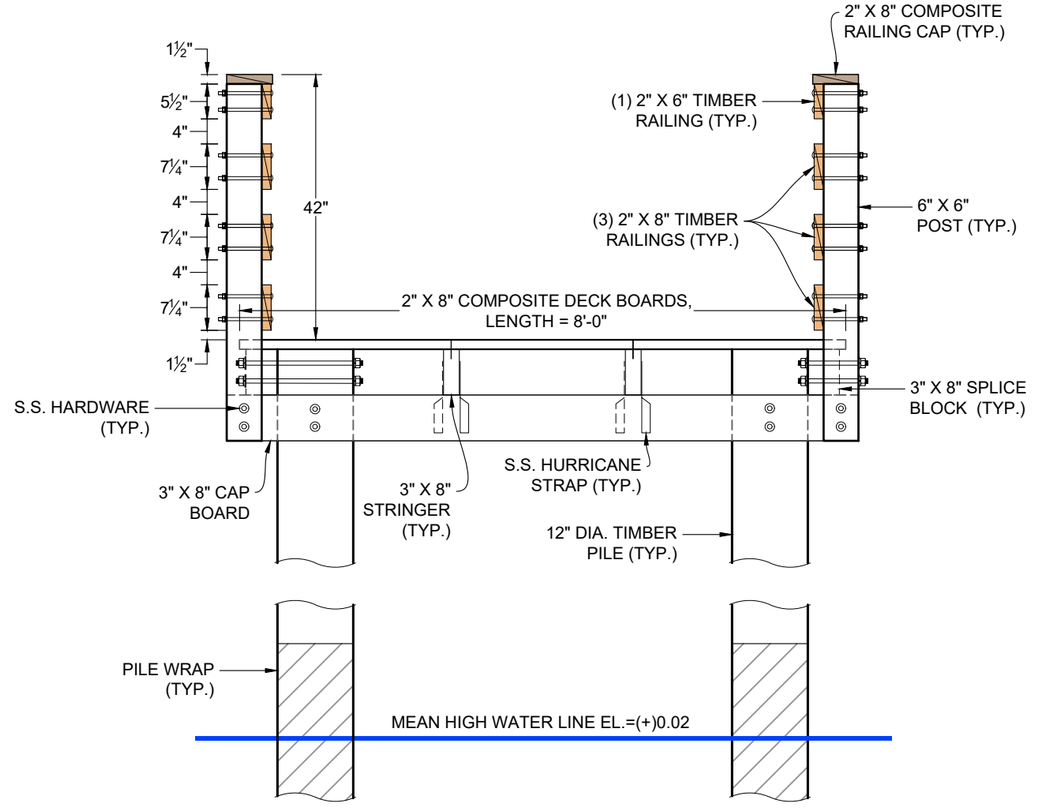
TIMBER DOCK AND FLOATING DOCK ELEVATION

1" = 10'



TIMBER DOCK PLAN

1" = 3'



TIMBER DOCK CROSS-SECTION

1" = 2'

DRAWING: TIMBER DOCK DETAILS
DMC JOB NO. 22-173-01
SHEET NO. C-05
DRAWN BL | CAD C3D | SCALE AS SHOWN | DATE 06/08/2023
CHECKED AS | APPROVED SKP

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

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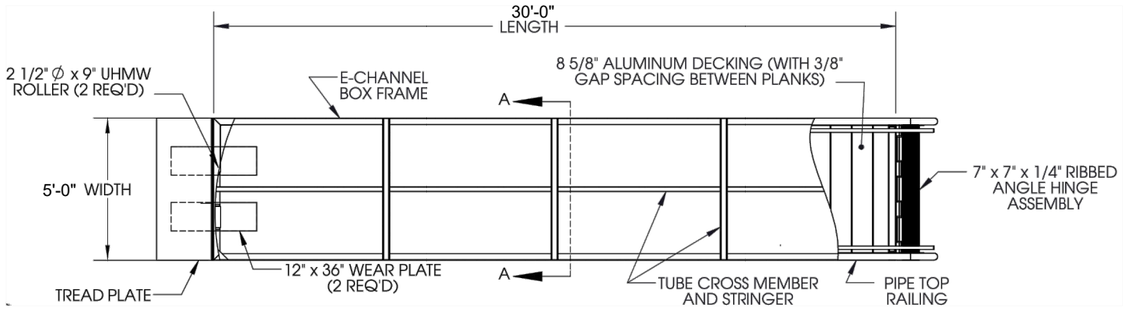
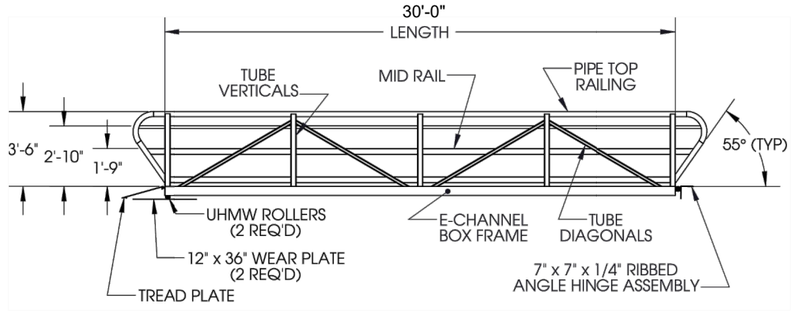
ALL ALUMINUM GANGWAY AND CONCRETE FLOATING SYSTEM COMPONENTS BY BELLINGHAM MARINE. THESE COMPONENTS DEPICTED ARE FOR INFORMATION AND BIDDING PURPOSES ONLY. SHOP DRAWINGS TO BE SUBMITTED TO PROJECT ENGINEER PRIOR TO ORDERING COMPONENTS.



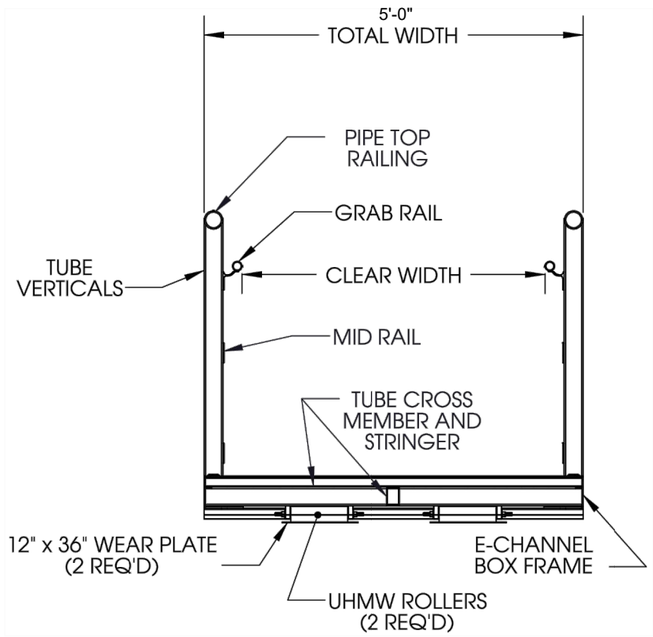
ALUMINUM GANGWAY PLAN

N.T.S.



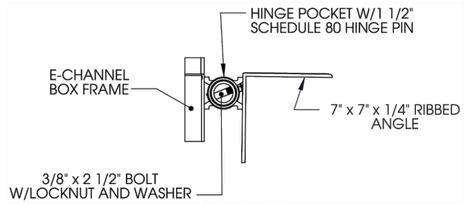
ALUMINUM GANGWAY ELEVATION

N.T.S.



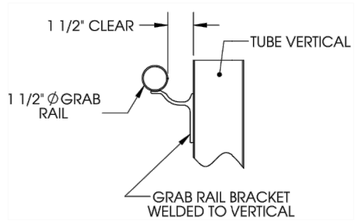
ALUMINUM GANGWAY CROSS-SECTION

N.T.S.



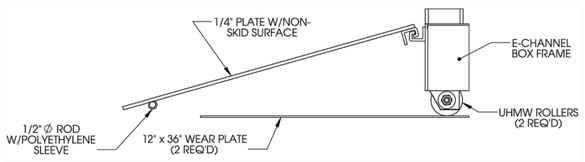
HINGE DETAIL

N.T.S.



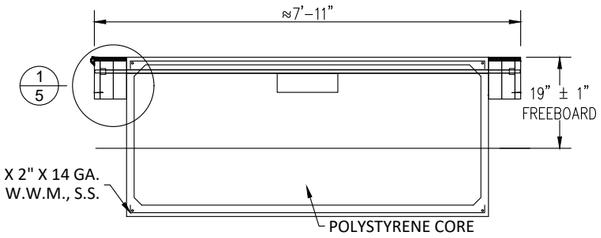
HANDRAIL DETAIL

N.T.S.



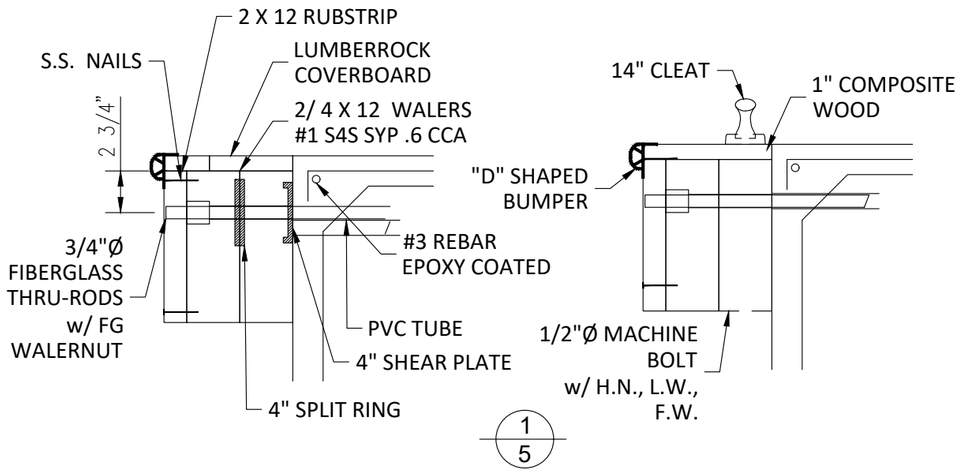
TREAD PLATE DETAIL

N.T.S.



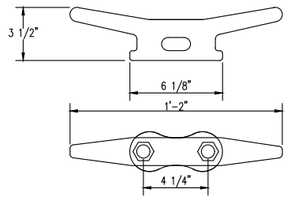
FLOATING DOCK CROSS-SECTION

N.T.S.



FLOATING DOCK CROSS-SECTIONS

N.T.S.



14" GALVANIZED CLEAT
040114-5.18 LBS

CLEAT NOTES:

1. CLEATS AE INSTALLED ON INSIDE WALER.
2. CLEATS AT THE END SHALL BE INBOARD OF THE LAST THRU-ROD.
3. AVOID LOCATING CLEATS AT FLOAT JOINTS.
4. CLEATS SHALL BE 6" MIN FROM NEAREST WOOD SPLICE.

CLEAT ATTACHMENT

N.T.S.

DRAWING: FLOATING DOCK DETAILS
DMC JOB NO.: 22-173-01
SHEET NO.: C-06
DRAWN: BL | CAD: C3D | SCALE: AS SHOWN | DATE: 06/08/2023
CHECKED: AS | APPROVED: SKP

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

STEPHEN J. KUHN, P.E.
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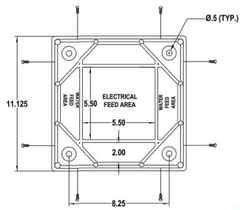
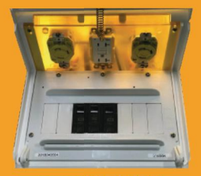
POWER PEDESTALS SHALL BE EQUIPPED WITH TWO (2) 30-20 ELECTRICAL RECEPTACLES AND TWO (2) HOSE BIBS. SHOP DRAWINGS TO BE SUBMITTED TO PROJECT ENGINEER PRIOR TO ORDERING COMPONENTS.



Harbor Light: Mounting Detail


Protected KWH Counter


Extra-Wide Back-Lit Receptacle Faceplate


Easy-Access Terminal Block


Pivoting Faceplate Assembly

HARBOR LIGHT

Power Pedestal Model HL30100

The "Harbor Light" power pedestal has been developed as a polycarbonate sister to the "Harbor Light SS" and sets a new standard for durability and ease-of-use. Built to withstand the harshest environmental conditions, the "Harbor Light" keeps with the Marina Electrical Equipment philosophy of being incredibly simple to install, maintain and operate for many years.

Intertek

STANDARD DIMENSIONS: 42.5"H 11.125"W 11.125"D

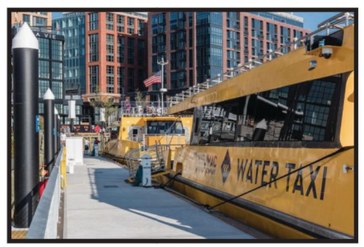
STANDARD FEATURES

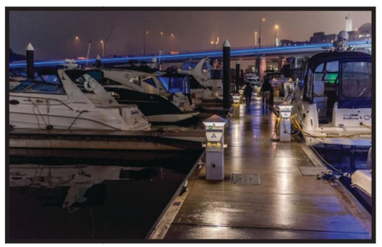
- **Intertek-ETL Listed, tested in accordance with Underwriters Laboratories-231 standards, CAN/CSA Standard C22.2 No.29 and NFPA 303.**
- **Heavy-duty .1875" thick injection-molded polycarbonate NEMA 3RX main housing, lens and top assemblies.**
- **Limited 1-Year Warranty.**
- **Extra wide back-lit receptacle faceplate for easier plug-in.**
- **Highest quality twist-lock receptacles & circuit breakers.**
- **Patented pivoting receptacle faceplate assembly, which simplifies field-maintenance tasks such as replacing circuit breakers, receptacles or meter current transformer coils.**
- **Photocell-controlled LED light fixture with fuse protection.**
- **250-Amp rated copper stud-lug single phase 125/250V terminal block.**
- **Newly designed, highly functional dual hose/cable brackets, capable of holding min. 50' of standard 5/8" ID garden hose or 50' of 50-ampere, 4-wire shore power (S.O.) cord.**
- **Clean-looking flush-mounted access panels.**
- **Durable polycarbonate mounting base plate which isolates the bottom housing from the dock surface.**
- **Lockable polycarbonate weatherproof doors which shield the receptacles and circuit breakers from the elements while in use (as required by NFPA 303 and NEC Article 555).**

OPTIONAL FEATURES

- Receptacle Options:
  - 20A, 125V Duplex GFCI.
  - 20A, 125V L5-20R Twist-Lock Shorepower.
  - 30A, 125V L5-30R Twist-Lock Shorepower.
  - 50A, 125V SS-1 Twist-Lock Shorepower.
  - 50A, 125/250V SS-2 Twist-Lock Shorepower.
- Interlocking circuit breakers, ground fault circuit breakers.
- Solid-state electric monitoring for sub-metering kWH consumption.
- Wireless NUCORE™ remote meter reading.
- Ground Fault Monitoring at each slip (patented).
- 250-Amp rated copper stud-lug three phase 125/250V terminal block.
- 250-Amp rated split terminal block.
- ¾" IPS ball valve hose bibs.
- Hose bib vacuum breakers.
- Water metering.
- Phone, Cable TV, and/or Data ports.
- Amber or Clear Polycarbonate Lens.







DRAWING: POWER PEDESTAL DETAILS
DMC JOB NO.: 22-173-01
SHEET NO.: C-07
DRAWN: BL | CAD: C3D | SCALE: AS SHOWN | DATE: 06/08/2023
CHECKED: AS | APPROVED: SKP
PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

STEPHEN J. KUHN, P.E.
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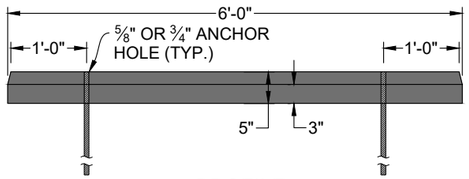
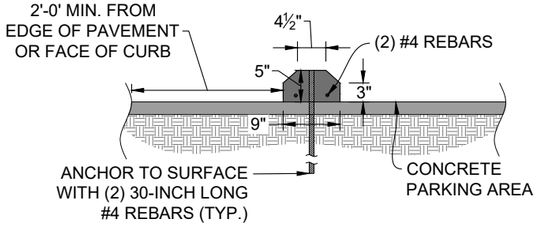


PROFILE

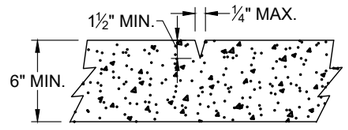


CROSS-SECTION

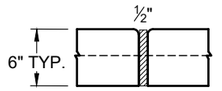
WHEEL STOP DETAIL

N.T.S.

NOTES:
1. CONCRETE WHEEL STOP TO BE PRE-MANUFACTURED REINFORCED 4,000 PSI TYPE II CEMENT.
2. #4 ANCHOR REBAR ENDS TO BE INSTALLED FLUSH WITH TOP OF WHEEL STOP.
3. SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO ORDER.

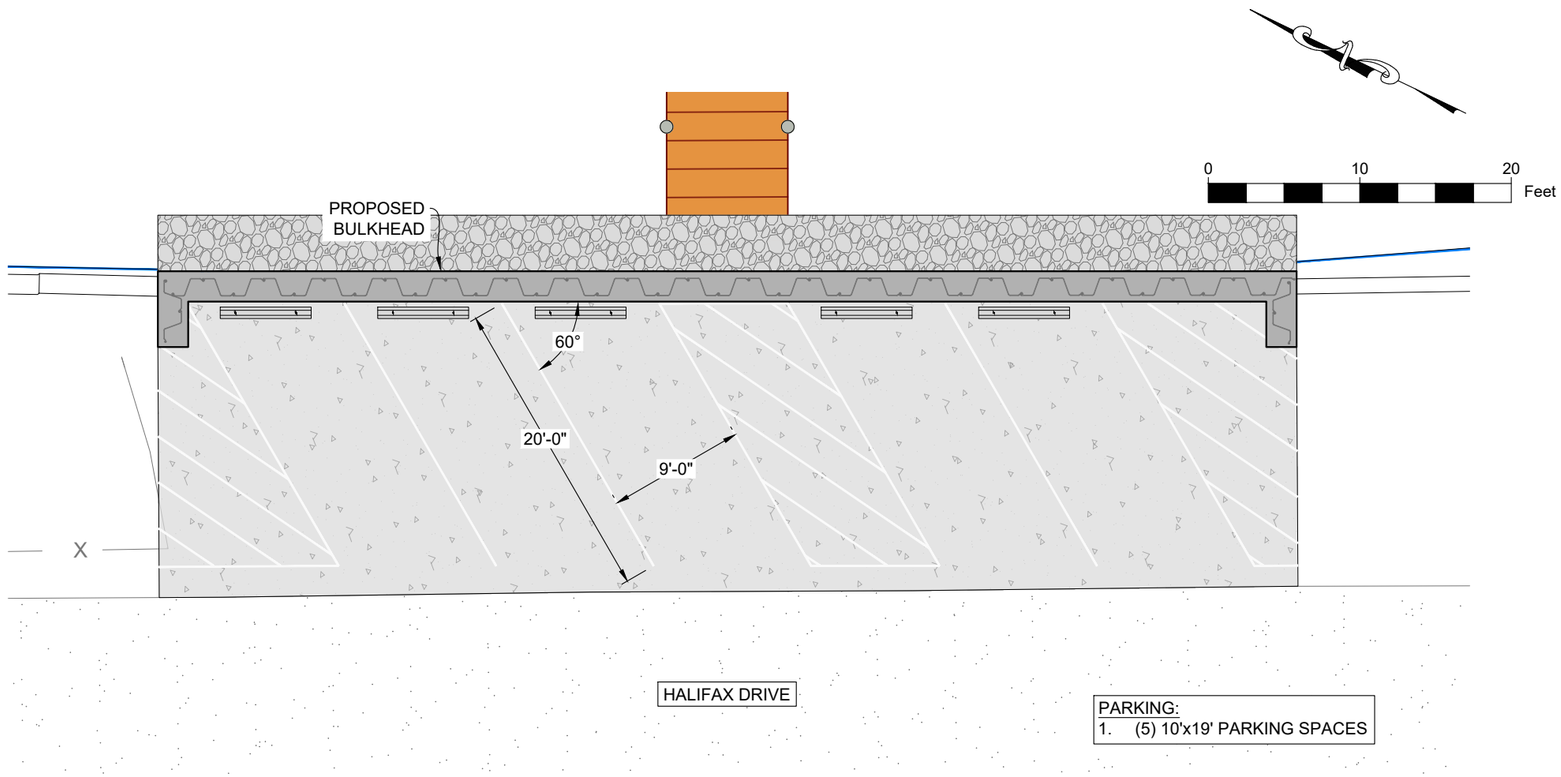


CONTRACTION JOINT



EXPANSION JOINT

CONCRETE PARKING PAD NOTES:
1. THE BEARINGS SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATERIAL REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. COMPACT TO 98% PER AASHTO T-180. ANY FILL MATERIAL SHALL BE COMPACTED WITH A VIBRATORY OR IMPACT COMPACTION MACHINE IN MAXIMUM 12-INCH LIFTS TO 98% PER AASHTO T-180.
2. STRENGTH OF 4,500 PSI AT 28 DAYS
3. LARGE AND SMALL ANGULAR AGGREGATE. NO PEA GRAVEL.
4. REINFORCED WITH 1.5 LBS. PER CUBIC YARD. FIBERMESH 150 VIRGIN HOMOPOLYMER POLYPROPYLENE MULTIFILAMENT FIBERS CONTAINING NO OLEFIN MATERIALS.
5. 1½" DEEP CONTRACTION JOINTS CENTERED ON LENGTH AND WIDTH OF SLAB.



PARKING:
1. (5) 10'x19' PARKING SPACES

PARKING PLAN

1' = 10'

DRAWING: PARKING PLAN
DMC JOB NO. 22-173-01
SHEET NO. C-08
DRAWN BL | CAD C3D | SCALE AS SHOWN
CHECKED AS | APPROVED SKP | DATE 06/08/2023

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

STEPHEN J. KUHN, P.E.
FLORIDA LICENSE No. 67486

Dredging & Marine Consultants
4643 S. Clyde Morris Blvd
Unit 302
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Phone:(386) 304-6505
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www.dmces.com
DMC ENGINEERS • SCIENTISTS

LEGEND:

PROPOSED (-)5.00 MLW DREDGE AREA
VOLUME UP TO 1,170 CY

TYPE II FLOATING
TURBIDITY BARRIER (TYP.)

150'-0"

80'-0"

DREDGE TEMPLATE
(-)5.00 MLW

HALIFAX RIVER

0 20 40 Feet

STA. 0+00
STA. 0+25
STA. 0+50
STA. 0+75
STA. 1+00
STA. 1+25
STA. 1+50

DREDGE PLAN
1" = 20'

DRAWING: DREDGE PLAN
DMC JOB NO: 22-173-01
SHEET NO: C-09
DRAWN BL | CAD C3D
CHECKED AS | SCALE AS SHOWN
APPROVED SKP | DATE 06/09/2023

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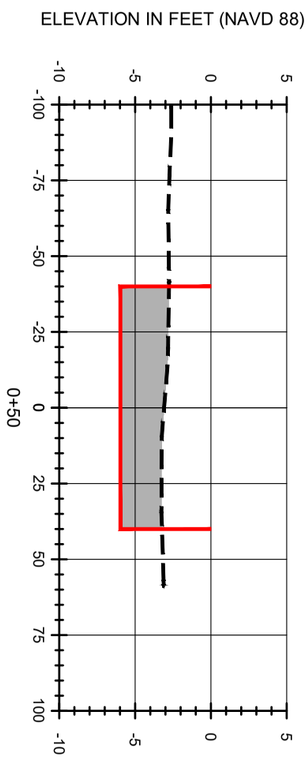
Drawing Name: C:\Users\DMC-User\AppData\Local\Temp\AcPublish_32240\Catfish Commons Marina Permitting Plans.dwg By: DMC-User Tab: DREDGE LAYOUT 6/08/2023

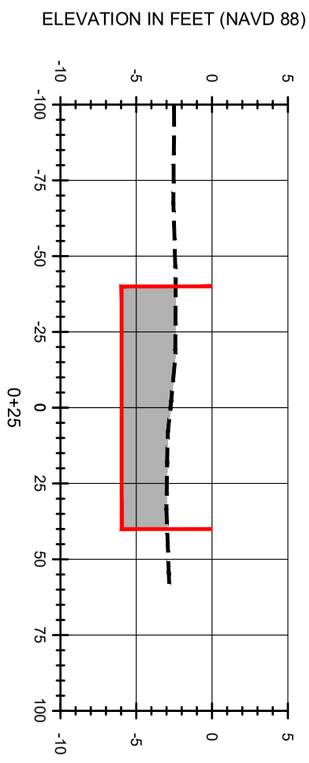
LEGEND / ABBREVIATIONS:

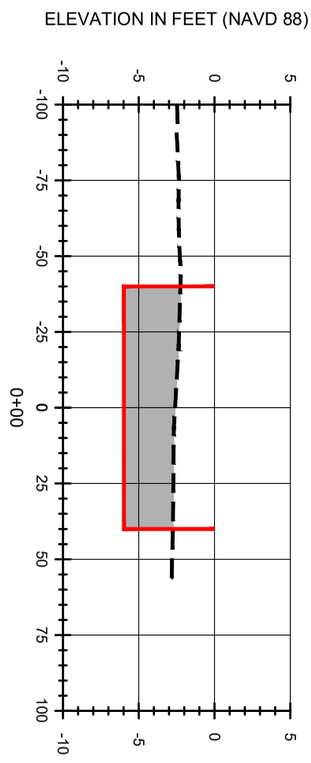
- MEAN LOW WATER = (-)0.97 NAVD 88
- APPROXIMATE MUDLINE AS PER SURVEY DATED AUGUST 9, 2022
- -5 MLW DREDGE TEMPLATE
- SEDIMENT TO BE REMOVED

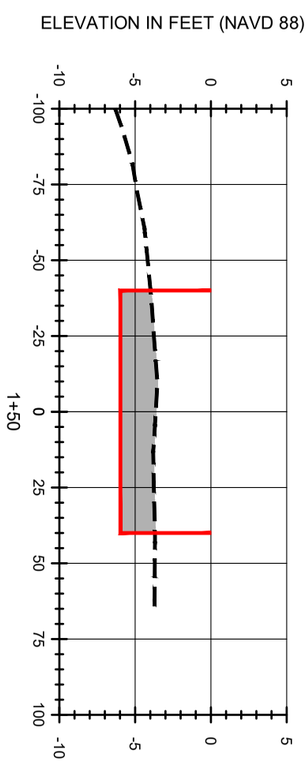
HORIZONTAL GRAPHIC SCALE
1" = 50'
25 12.5 0 25 50

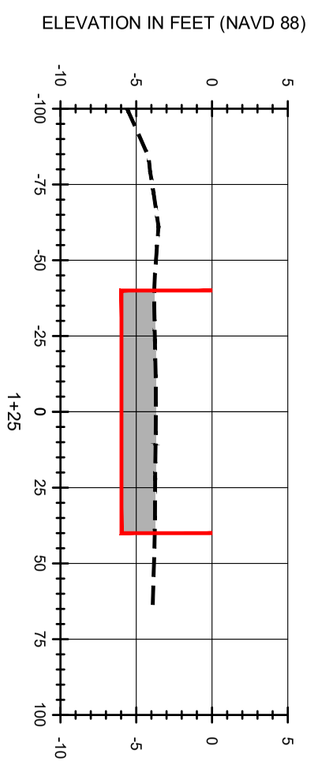
VERTICAL GRAPHIC SCALE
1" = 10'
5 2.5 0 5 10

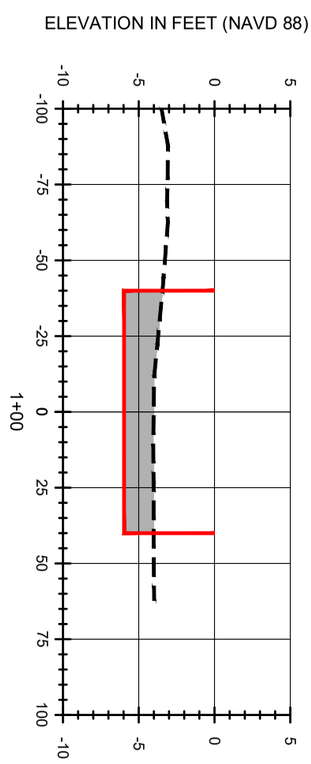


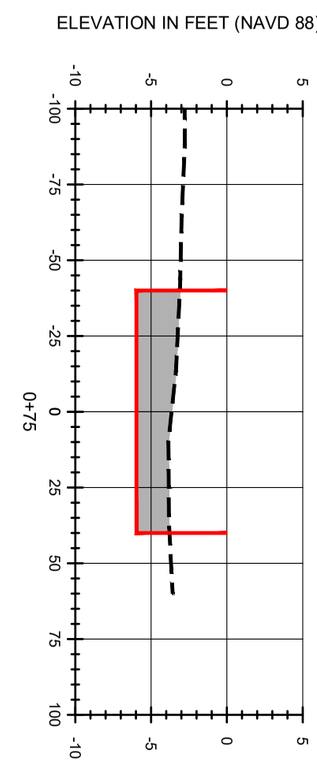












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FLORIDA LICENSE No. 67486

PROJECT NAME: CATFISH COMMONS MARINA

CLIENT: MR. & MRS. GALBREATH

DRAWING: DREDGE CROSS-SECTIONS

DMC JOB NO. 22-173-01

DRAWN	BL	CAD	C3D	SHEET NO.
CHECKED	AS	SCALE	AS SHOWN	C-10
APPROVED	SKP	DATE	06/08/2023	

IMPORTANT NOTES TO BIDDERS:

1. The Contractor shall keep a pile driving log as specified in the plans and may not cut off piles until the Engineer has given approval to do so. The Contractor must provide advanced notification of a request to cut off piles so that the Engineer may make field observations, if necessary. The Engineer will not make a structure certification if the Contractor does not comply with this requirement. If a vibratory hammer, auger or jetting equipment is used to install piles, the time needed to hammer and/or jet and/or auger each pile shall be recorded.
2. The Contractor shall retain all material delivery tickets, material testing reports and cut-sheets/shop drawings for manufactured products for the project and provide copies to the Engineer on a weekly basis. The Engineer will not make a structure certification if the Contractor does not comply with this requirement.
3. The Engineer must be given advanced notice of the critical stages of construction such as initial construction stakeout, false-work, sheet-pile installation, pile installation, forming and rebar placement prior to placing concrete, first casting of concrete, dock installation, etc. The Engineer will not make a structure certification if the Contractor does not comply with this requirement.
4. The location of existing utilities, utility services, facilities, and structural features shown on these plans has been determined from the information available at the time of the preparation of these plans, but do not purport to be absolutely correct and are provided for only the convenience of the Contractor. Any inaccuracy or omission in such information shall not relieve the Contractor of its responsibility to protect the existing features from damage and unscheduled interruption of service or from the responsibility to relocate utilities are required. Should a discrepancy arise between these plans and actual field conditions which would appreciably affect the execution of the plans the Contractor shall stop construction and notify the County and utility or facility owner immediately. The Contractor shall verify, prior to construction, the exact location, elevation, dimensions of all existing utilities, facilities, structures, and other features (whether or not shown in the plans). The Contractor shall be solely responsible for coordination of any utilities to be adjusted by others for the construction of this project and shall coordinate with other utilities and entitles as required to ensure the successful implementation of this project.
5. A pre-construction meeting must be scheduled before start of construction and all parties are to attend including: Owner or Owner's Representative, Engineer, Prime Contractor, Subcontractor(s), Surveyor, Applicable Tradesmen, etc. The Engineer will lead the meeting and provide a list of critical items to discuss.

GENERAL:

1. Owner hereinafter refers to Owner's Representative, City, County, Town, Developer or Private Entity.
2. All elevations in the project plans are referenced to feet N.A.V.D. 88.
3. The project shall be straight, plumbed, level, and elevations are correct as shown in plans.
4. Any deviation from these plans, notes or specifications must be approved in writing by the Owner or Engineer, or else the deviation will be considered construction non-compliant with the plans and specifications.
5. Any discrepancies amongst the plans, notes, specifications and other bid documents must be resolved in writing by the Owner or Engineer prior to continuing the work in question.
6. These plans, notes and specifications, along with the other components of the project bidding documents, constitute the only instructions to bidders/contractors, unless written addenda are issued.
7. All construction, manufacturing, fabrication and testing of materials shall be performed under the guidelines set forth in applicable local, state and federal codes, and/or under recommendations provided in technical publications of respected professional or industry organizations. Material testing programs, where applicable, shall be presented to the Engineer for review and approval prior to construction.
8. All products constructed or manufactured/supplied for the project shall be accompanied by industry acceptable warranties or guarantees.
9. For the purpose of these specifications. "Project Completion" is defined as completion of an agreed upon list of punchlist items compiled in a planned project walkthrough held at a time the Contractor considers the project to be "Substantially Complete". The Contractor shall notify the Owner and Engineer at least 72 hours in advance of substantial completion and schedule a mutually agreeable walkthrough.
10. A portion of the site lies within flood zones “AE" with a base flood elevation of 6.0 as indicated on Federal Emergency Management Agency Flood Insurance Rate Map Community Panel No.12127C0388J dated September 29, 2017.
11. Any materials interfering with construction, and all abandoned utility lines, pipes, structures and other subterranean objects to be removed, shall be disposed of as directed by the Owner. All materials not claimed by the Owner shall be disposed of at the Contractor's expense in areas provided by the Contractor.
12. All materials to be removed from the existing structures per the construction plans.
13. The Contractor shall provide all sheeting, shoring and bracing required to meet the requirements of the "Trench Safety Act” and to protect adjacent structures or to minimize trench width. Where a separate pay item is not provided, the cost for all sheeting, shoring and bracing required shall be included in the contract price for the item of work for which sheeting, shoring and bracing is anticipated to be required.
14. The Contractor shall endeavor to protect private property. Any damage caused by the Contractor in the performance of his work shall be corrected to the satisfaction of the Engineer at the Contractor's expense. Payment shall not be made for this work.
15. Any damage to state, county, or local roads caused by the Contractor's hauling or excavation equipment shall be repaired by the Contractor to the satisfaction of the Engineer. Payment shall not be made for this work.
16. The construction lengths indicated in these plans are approximate. Actual limits may be set in the fields as directed by the Engineer.
17. During land alteration and construction activities, it shall be unlawful to remove vegetation by grubbing, or to place soil deposits, debris, solvents, construction material, machinery or other equipment of any kind within the dripline of a tree to remain on site unless approved by the Engineer.
18. All trimming undertaken on a tree protected by provisions of the land development code shall be pruned in accordance with the National Arborist Association (NAA) Pruning Standards.
19. The Owner and the Engineer reserve the right to perform quality assurance testing on all materials delivered to project and to reject all materials not meeting acceptable standards.
20. The Contractor shall be responsible for the complete stake-out of the project, i.e., line, grade, slope stake, utility relocations or any other stake-out that may be required to complete the project in accordance with the plans and specifications. Any and all expenses incurred for this work shall be included in the unit price bid for other items. No additional payment shall be made for this work. Contractor shall also be required to provide a certified as-built survey of the grading, drainage and earthwork improvements and meet any minimum requirements of Owner.
21. Overall cleanup shall be accomplished by the Contractor in accordance with Owner standards or as directed by the Engineer. Any and all expenses incurred for this work shall be included in the unit price bid for other items.
22. If, during construction activities, any evidence of historic resources including, but not limited to, aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, or historic building foundations are discovered, work shall come to an immediate stop and the client and the Florida Division of Historical Resources shall be notified within two working days.
23. All materials and construction shall be in accordance with the more stringent of the current FDOT Standards and Specifications or Volusia County Standards and Specifications.
24. Contractor shall be responsible for independently calculating all quantities for the project including earthwork. It is the Contractors responsibility to verify the Engineers estimated quantities included on the bid schedule.
25. The Contractor shall provide pumping equipment and devices to properly remove and dispose of water during construction, if needed.
26. Refer to construction pollution prevention plan for erosion control notes.

SURVEY INFORMATION:

Topographic information shown hereon from survey performed by Arc Surveying & Mapping, Inc. August 09, 2022. Referenced on the North American Vertical Datum of 1988 (N.A.V.D. 88).

SOIL BORINGS:

Structural calculations based on the Geotechnical Evaluation, dated February 10, 2023 by Universal Engineering Sciences, Inc. The Geotechnical Evaluation has a total of six borings, B-1 through B-4 and AB-1 through AB-2. Refer to the Geotechnical Report.

ENVIRONMENTAL AND PERMITS:

1. The U.S. Army Corps of Engineers (USACE), Florida Water Management District, Florida Department of Environmental Protection (FDEP), Florida Fish & Wildlife Conservation Commission (FWC) and the local city or county may exert jurisdiction over construction of the project. The Contractor shall be responsible to understand and comply with all applicable permit conditions imposed by the jurisdictional agencies, if permits are necessary. If not, the Contractor must at least comply with general state water quality standards for siltation and guidelines for encounters with threatened and endangered species.
2. All building and construction-related permits from the local (city or county) or state authorities are the responsibility of the Contractor.
3. The Contractor shall be responsible for penalties and/or fines levied due to work that is not in accordance with permit conditions.
4. National Marine Fisheries Services has special conditions for manatees. See details.

SUBMITTALS:

All submittals shall be made to the Engineer of Record for review and approval, in writing, prior to ordering and before construction. Submittals also include but are not limited to, shop drawings, mark-up drawings, sketches, cut-sheets, product literature, additional specifications, photographs and letters.

Submittals list:

1. Schedule for completion of work with tasks and durations defined.
2. Shipping, Stockpile and Site Administration Plan (SSSAP).
3. Temporary Traffic Control plan (TTC) for vehicles and pedestrians, including material deliveries, stockpile area(s), worker's parking and construction equipment.
4. Site-Specific Safety Plan shall be distributed and reviewed with all site workers prior to said workers commencing work on the project site. See "Site Safety" heading.
5. Complete list of required shop drawing submittals shall be provided by the Engineer at the preconstruction meeting.
6. Changes, alternates or other methods different from project plans must be approved, in writing, via submittals required by the Engineer and/or Owner.
7. After completing the punchlist in the field, the Contractor must submit a itemized punchlist, as-built survey and record drawings for final changes and the Engineer of Record approving in writing.
8. The Contractor shall be responsible for keeping a log of change orders, RFI's and shop drawings. The log shall be updated and available upon request.

INSPECTION COORDINATION:

1. The Engineer will be conducting routine observations and observations at critical stages of construction. A minimum of 72 hours notice shall be given to the Engineer prior to commencing the critical stages of construction. In general, critical stages are the initial work on the major structure components. Examples of critical stages of construction include: initial construction stakeout, false-work, sheet-pile installation, pile installation, forming and rebar placement prior to placing concrete, first casting of concrete, dock installation, etc.The local city or county may perform their own construction observations in addition to the Engineer. No observers other than the Engineer or his/her designated representative shall have the authority to determine compliance with plans and specifications.
2. Other observers may relay information to the Engineer, but it will be the Contractor's ultimate responsibility to maintain contact and resolve disputes, questions, field changes, payment requests, etc. directly with the Owner or Engineer.

CONSTRUCTION SURVEYING:

1. Stake-out survey of the project is the responsibility of the Contractor. Beginning and end points will be provided by the Owner or Engineer in the project drawings.
2. The staked project must be approved by the Engineer prior to commencing construction. The Engineer reserves the right to make alignment changes based on conditions portrayed by the initial stakeout.
3. Methods and frequency of continuing stake-out during construction shall be submitted to the Engineer for approval prior to beginning construction.
4. The Contractor must perform an independent construction record survey (as-built survey) as a check for compliance at the end of the project. The record survey must be signed and sealed by a State of Florida Licensed Professional Surveyor. The record survey must be referenced to feet N.A.V.D. 88.
5. The Prime Contractor is advised that certification of the project elevations and alignment is required by the Engineer for final acceptance of work.

SITE SAFETY:

The Contractor shall prepare and adhere to a Site-Specific Safety Plan. The contents of the plan are:

1. Identification of potential hazards and injuries pertaining to the specific site and project.
2. Location of nearest hospital.
3. Assure availability of at least one working cell phone and one vehicle on site at all times.
4. Emergency contacts within the Subcontractor's organization and at the Prime Contractor's organization.
5. All field personnel shall wear appropriate safety attire and utilize appropriate personal protection equipment for a given task/operation such as safety glasses/goggles, masks, shields, gloves, harnesses, hard hats, steel-toed boots,etc.
6. Safety kit shall be available onsite at all times with appropriate materials for potential hazards and injuries.
7. The Site-Specific Safety Plan shall be distributed and reviewed with all site workers prior to said workers commencing work on the project site.
8. The Contractor shall follow all applicable local, state, and federal codes regarding site safety.
9. The Contractor shall adjust the means and methods of this plan as appropriate for maintaining site and operational safety.

DRAWING: GENERAL NOTES
DMC JOB NO. 22-173-01
SHEET NO. C-11
DRAWN BL | CAD C3D | SCALE AS SHOWN
CHECKED AS | APPROVED SKP | DATE 06/08/2023

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

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SITE MAINTENANCE:

1. The Contractor shall maintain a clean and neat site, void of loose debris, trash, remnant parts or materials.
2. Trash receptacles and removal service shall be maintained by the Contractor specifically for this project. Pre-existing trash/debris facilities shall not be used to maintain the project.
3. Temporary debris piles shall be limited in number as much as practical and contained in designated areas until removal. Debris and trash shall not be scattered in areas outside the limited designated areas at any time.
4. Removal of trash/debris shall be scheduled as appropriate to not allow piles to reach five-feet in height or greater than ten-feet in diameter. Debris individually larger than these dimensions shall be removed from the site within five working days. Receptacles shall not overflow at any time.
5. Where necessary, the Contractor shall employ a Temporary Traffic Control plan (TTC) for vehicles and pedestrians, including material deliveries, stockpile area(s), worker parking and construction equipment. The plan must be in writing, including sketches or drawings, and must be submitted to the Owner or Engineer for review and approval before commencement of any work.
6. The Contractor shall follow all applicable local, state and federal codes regarding site maintenance.

MOBILIZATION AND DEMOBILIZATION:

1. It is understood that this project will require work in and over water. Access to near water construction areas is required for material storing, hauling, erection and construction. All facilities, public or private, used for such purposes shall be repaired to their original condition following "Completion" of the project, including grade and topping (sod, tree/vegetation cover, established road, etc.)
2. The Contractor shall present a Shipping, Stockpile and Site Administration Plan (SSSAP) to the Owner or Engineer for approval. The plan shall be specific to the project requirements for the particular materials to be delivered to the site, describing delivery points, stockpile areas, temporary debris/trash storage areas, temporary field office (including utilities maintained there), fencing, security and a statement of commitment and details for maintaining safety on the site.
3. The Owner or Engineer shall have the right to exercise reasonable alterations or additions to the SSSAP.
4. It is the Contractor's responsibility to coordinate, and pay for, necessary utilities to occupy the site and perform the work.
5. The Contractor shall not demobilize until project completion, and all parties have agreed and signed off in writing.

TECHNICAL SPECIFICATIONS FOR SITE PLAN TESTING:

1. MATERIAL
   The inspection and testing of materials and finished articles to be incorporated in the work shall be made by bureaus, laboratories, or agencies approved by the Engineer of Record. The Contractor shall submit such samples, or such special or test pieces of materials as the Engineer of Record may require. The Contractor shall not incorporate any material or finished article into the work until the results of the inspections or tests are known and the Contractor has been notified by the Engineer of Record that the material or finished article is accepted. All materials must be of the specified quality and be equal to the approved sample if a sample has been submitted. Certified copies of all tests made shall be submitted to the Engineer of Record as well as to the Owner's designated site inspector. The Owner's designated site inspector must receive copies of all testing reports and certificates prior to the Engineer of Record requesting a final project inspection from the Owner.
2. LABORATORY CONTROL AND CERTIFICATES SPECIFICATIONS:
   Sampling, testing, and laboratory methods shall be in accordance with the standard specifications of the AASHTO or ASTM. Where AASHTO or ASTM specifications are used, the reference shall be construed to be the most recent standard specifications or tentative specifications of the AASHTO or ASTM in force on the date of the test.
   TEST AND CERTIFICATES:
   The Contractor shall engage an approved testing laboratory to provide the following tests and certifications signed by a registered Engineer of the State of Florida. All technicians performing the tests shall be state certified for the testing performed. Additional tests that may be required by either the Engineer of Record or the Owner shall also be provided by the Contractor, and the following shall not be taken as a complete and exhaustive list of the Contractor's testing responsibilities.
   a. Soil analysis for structural fill material prior to installation.
   b. Proctor densities, moisture content, compacted field densities and Atterberg limits.

FILL MATERIAL AND SURFACE TREATMENT:

1. Fill material shall be from an upland source and shall be clean, construction-quality sand, free from organics, oils, grease and debris. The source company shall provide a sieve analysis to the Engineer for approval prior to shipping material.
2. Fill material shall be placed in maximum 12-inch lifts and compacted to minimum 98% percent optimum proctor moisture content and density. The bottom, middle and top of fill shall be tested, at the expense of the Contractor, by a qualified independent testing company. The testing company name, qualifications and contact information shall be provided to the Owner or Engineer for approval prior to commencing soil testing.
3. Backfilling shall not be performed until after the cap has sufficiently cured to design strength.
4. The filling and compaction should be performed with the smallest practical equipment to reduce surcharge on the structure during the operation. Heavy equipment shall not be operated within 25-feet of the bulkhead. The Contractor shall review backfilling procedure with the Engineer prior to commencing.
5. Area to be filled shall be stripped of organic materials prior to filling.
6. If any muck material is discovered, it shall be required to be removed and replaced with a suitable material that is properly filled, compacted and tested using AASHTO T-180 modified proctor method.

EROSION AND TURBIDITY CONTROL:

The following measures represent minimum standards to be adhered to by the Contractor throughout the construction of this project. The Owner reserves the right to require additional measures to be employed when warranted by extreme conditions and/or the failure of the Contractor to employ the appropriate erosion and turbidity control best management practices. Failure to comply with these provisions shall result in the issuance of a "stop work order".

1. It shall be the responsibility of the Contractor to have all protective vegetation barricades, erosion and turbidity control structures and measures in place prior to the commencement of any work. These measures include, but are not limited to, temporary construction fences, hay bales, silt fences, and floating turbidity barriers. Further, it shall be the responsibility of the Contractor to maintain all erosion control devices throughout the duration of the entire project. Maintenance shall include periodic inspection and removal of debris abutting erosion control devices.
2. Prior to the installation of any fill materials on subject site, silt fences shall be installed (1) along subject site boundary and property lines, (2) at the edge of conservation easements and wetlands, (3) adjacent to natural landscape buffers, (4) around the perimeter of existing storm water treatment facilities, and (5) at any additional areas that the Owner deems necessary to be protected from potential erosion impacts during construction. These conditions shall apply in all instances where fill material is being installed within 25-feet of any of the aforementioned locations. While these items represent the minimum requirements, the Owner reserves the right to impose additional protective measures, as determined during actual site visits conducted throughout project construction.
3. At a minimum, the Contractor shall seed and mulch all disturbed areas. Sufficient grass coverage is to be established within thirty days.
4. Soils are to be stabilized by water or other means during construction. This is intended to reduce soil erosion and the impact to neighboring communities. Adequate watering methods should be employed to allow daily coverage of the entire limits of all areas that do not have an established vegetative cover. Methods to be employed include, but are not limited to, water trucks, permanent irrigation systems, temporary sprinkler systems operated by pumping units connected to wet retention ponds, water cannons, temporary irrigation systems mounted atop stockpile areas, and other methods as deemed necessary by the Owner.
5. Any permitted demolition or removal from submerged lands or adjacent uplands shall be fully contained within siltation devices such that permit turbidity requirements and state water quality standards are met.

DEMOLITION, CLEARING AND RESTORATION:

1. Demolition or clearing may require permits. The Contractor shall acquire all necessary building permits from the local municipality prior to commencing work.
2. Clearing and removal of vegetation, rocks and debris will be required within the project structure footprint.
3. Demolition or removal of objects, debris, or material specified or obstructing construction shall take place only to the extent necessary.
4. The site shall be restored by removing and finishing all evidence of construction including temporary haul roads, vehicle ruts, stockpile areas, shoreline slopes and vegetation, sod and areas subject to project work.

AS-BUILT SURVEY AND RECORD DRAWINGS:

1. As-built survey and record drawings shall be submitted at the time of the punchlist review and shall be reviewed by the Engineer for completeness and correctness.
2. The record drawings shall be a designated set of drawings maintained on site for the purpose of hand-making all changes and deviations from the original design, no matter how slight. Color markings are preferred.
3. The record drawings shall also contain any and all field changes with respect to location, alignment, height, width, length, depth, materials, products, etc.

STEEL/MISCELLANEOUS:

1. All reinforcing steel shall be ASTM A615, Grade 60.
2. All structural steel and miscellaneous metal items (other than aluminum) shall be in accordance with structural steel, Grade 316 Stainless Steel or ASTM A36 Steel.

SHEET-PILING AND CONCRETE PILING INSTALLATION:

1. Equivalent composite sheet-pile.
   a. Crane Materials International (CMI), UC-95.
   b. Contractor to submit equivalent to Engineer for approval prior to ordering
2. 12 inch pre-stressed FDOT Marine Grade piles must have strict occurence of:
   a. Fabricated at a plant that is currently on the listing of FDOT Production Facility.
   b. f'c = 6,000 psi.
   c. w/c ≤ 0.40.
   d. (8) - ½" dia. strands (minimum).
   e. 3" minimum clear cover.
3. Provide and install concrete piles in accordance with FDOT specification 455.
4. Concrete shall be FDOT class IV (special) for extremely aggressive (marine) environment. Provide sufficient fly ash or slag to cement content to increase impermeability of concrete.
5. The piles shall be of the size and length shown in the plans.
6. All piles shall be set full length with top elevation as shown in plans. Cut-offs are not allowed except for minimal required (maximum 6") to remove tops damaged by the pile driving equipment.
7. The pile-setting equipment used must be of proper size, set-up and maintenance as to not cause excessive damage to pilings. Damaged piles must be removed, discarded and replaced at the contractor's expense. The contractor shall provide information regarded the model and operating specifications of the pile-driving equipment to be used on the job for approval by the engineer prior to commencing pile-driving.
8. Prior to signing of the construction contract, the Contractor being considered shall have all major equipment items available for inspection. Any deficiencies in quality and quantity or type of equipment shall be corrected prior to commencing work and such correction shall be a required condition to properly fulfill the contract. This inspection and subsequent approval shall in no way relieve the Contractor from his obligation to provide all equipment required to properly perform the work.
9. The Contractor shall make an earnest attempt to drive pilings to grade, utilizing alternate methods or ideas to make the grade at no additional cost to the Owner.
   a. Larger hammer.
   b. Alternate hammer type.
   c. Tool Punch.
   d. Steel "shoe".
   e. Twin jetting.
   f. Multiple jetting with manifold.
   g. Auger
10. Cut-off of piles is strictly not allowed unless approved by the Engineer. When requesting permission to cut off sheet piles, the Contractor shall provide a minimum of 72 hours advance notice to the Engineer to inspect the site and make recommendations. The pile must remain "as-is" until the Engineer completes the field inspection and makes recommendations. The Engineer may request multiple driving attempts over the course of 48 hours at no additional cost to the Owner. Any pile cut off without written approval by the Engineer shall be removed and replaced at no additional cost to the Owner.
11. Contractor shall keep a pile driving log on the site at all times which shall include the following information: date, time, weather conditions, equipment used, pile location designation, blows per foot over entire driving sequence, total length of pile (after driving and cut-off, if cut-off allowed), amount of jetting or punching (if requested and approved), unusual pile behavior, damage and re-driving. This log shall be available to the Engineer or Owner at any time during the job. Updated copies of log pages shall be provided to the Engineer at least weekly throughout the project. If a vibratory hammer or jetting equipment is used to install piles, the time needed to hammer and/or jet each pile shall be recorded.
12. Jetting of piles is permitted with approval of the Engineer. The final five (5) feet of all piles must be driven.
13. If solid rock, debris or refusal is encountered prior to achieving the minimum penetration, then the pile shall be tool-punched. No additional payment will be made for pile driving where this work is required. It is the Contractor's responsibility to investigate the site and make preliminary probes if necessary. Arrange site visits for this purpose directly with the Owner.
14. The pile handling and driving procedure shall not subject the piles to excessive abuse causing damage. The pile-driver/sheet-piling connection shall be made such as to minimize damage to the pile and eliminate or reduce cut-off. Any pile so damaged in handling or driving shall be replaced by a new pile, or otherwise corrected, as directed by the Owner or Engineer and at the expense of the Contractor.
15. Proper care shall be taken for aligning piles. Pile alignment must be approved by Engineer of Record prior to framing. Piles shall be plumb and placed precisely as shown on plans, Contractor shall remove and replace any piles not meeting these requirements at no additional cost to the Owner.

DRAWING: GENERAL NOTES
DMC JOB NO. 22-173-01
SHEET NO. C-12
DRAWN BL | CAD | C3D
CHECKED AS | SCALE AS SHOWN
APPROVED SKP | DATE 06/08/2023

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

STEPHEN J. KUHN, P.E.
FLORIDA LICENSE No. 67486

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ENGINEERS • SCIENTISTS

TIMBER

1. Southern Yellow Pine (S.Y.P.) Lumber:
    a. Decking and Railing: S.Y.P. No.1 Prime Grade
    b. Posts: S.Y.P. No.1 Grade
    c. Stringers and Cap Boards: S.Y.P. No.2 Grade
2. Southern Yellow Pine (S.Y.P.) treated round timber pile grade in accordance with ASTM D25.
3. All ramps established within the wooden dock sections should be established to ADA requirements. Slopes must not exceed 1:12 (V:H) and handrails must be established on both sides of the ramp according to the typical section found in plans. Transition of the wooden access ramps should be flush with the deck and a minimum clearance of 36-inch of space should be between handrails.
4. Treatment of timber shall be as follows: Handrails and decking; 0.40 PCF ACQ (Alkaline Copper Treatment), stringers, pile cap boards and other components except piles; 0.6 CCA (Copper Chromium Arsenate), piles/posts; 2.5 CCA. All timber, lumber and pilings shall be marine grade and identified by the grade and treatment mark of a recognized organization or independent agency certified by the American Lumber Standards Committee.
5. All timber, lumber and piles shall be marine grade and identified by the grade and treatment mark of a recognized organization or independent agency certified by the American Lumber Standards Committee.
6. Decking shall be placed with ¼-inch gaps between boards.
7. One layer of roofing felt shall be placed between deck (each board) and stringers. All boards for decking shall be installed crown down.

PILES:

1. The minimum embedments are based on the penetration required to establish lateral stability of the foundation.
2. The minimum tip elevations are based on preventing the piles from tipping just above any soft silt or clay layers indicated in the boring logs.
3. Jetting of posts permitted with approval of the Engineer. Contractor shall coordinate with the Engineer of Record to obtain written approval prior to jetting.
4. Twin jetting or multiple jetting with manifold to maximum length.
5. Due to soil variabilities in borings, blow counts for each piling driven shall be recorded and verified by the Engineer of Record. If a vibratory hammer or jetting equipment is used to install pilings, the time needed to hammer and/or jet and/or auger each piling shall be recorded.
6. The pilings shall be of the size and length shown in the plans.
7. All pilings shall be set full length with top elevation as shown in plans. Cut-offs are not allowed except for minimal required (maximum 6-inch) to remove tops damaged by the pile-driver.
8. The pile-setting equipment used must be of proper size and, set up and properly maintained as to not cause excessive damage to pilings. Damaged piles must be removed, discarded and replaced at the Contractor's expense. The Contractor shall provide information regarding the model and operating specifications of the pile-driving equipment to be used on the job for approval by the Engineer prior to commencing pile-driving.
9. If solid rock, debris or refusal is encountered prior to achieving the minimum penetration, then the post/pile shall be tool-punched at least (2'-0") two feet into the strata.
10. If piling cut-off is requested, the piling must remain "in place-as is" and the engineer must be given 72 hours advanced notice to make observations and recommendations.
11. Contractor shall keep a pile driving log on the site at all times which shall include the following information: date, time, weather conditions, equipment used, pile location designation, blows per foot over entire driving sequence, total length of pile (after driving and cut-off, if cut-off allowed), amount of jetting or punching (if requested and approved), unusual pile behavior, damage and re-driving. This log shall be available to the Engineer or Owner's Representative at any time during the job. Updated copies of log pages shall be provided to the engineer at least weekly throughout the project. If a vibratory hammer, auger or jetting equipment is used to install piles, the time needed to hammer and/or jet and/or auger each pile shall be recorded.
12. Proper care shall be taken for aligning piles. Piles must be straight, plumb and squarely faced.

BOLTS, SCREWS & FASTENERS:

1. All fasteners, including nails, screws, threaded rods, bolts, nuts, washers, plates, lags, etc. shall be grade 316 stainless steel (S.S.). Washers used with single-bolted or double bolted connections (for example: stringer to piling connection, cap board connections or cross-bracing) shall be minimum 3-inch diameter "dock washers". Standard washers for splice block and railings.
2. Bolts shall extend fully through the nuts but not extend beyond the nut more than ½-inch.
3. Stainless Steel (S.S.) screws as shown in plans.
4. Simpson Strong Tie Twist Straps (stainless steel hurricane straps), MTS. Screws shall be Simpson Strong Tie 9-inch x 1½-inch Stainless Steel (S.S.).

FLOATING DOCKS:

1. The gangways may, or may not be, provided by the floating dock manufacturer, at the manufacturer's and/or contractor's preference. Gangway ramps shall be of length and width shown on the plans. Gangway ramps shall be constructed of Aluminum Alloy 6061-T6 and designed to carry its own dead load plus a live load of 50 pounds per square foot (psf). Gangway handrails shall be 42-inches in height and designed for 50 pounds per linear foot (plf) applied horizontally along the top rail and a point load of 200 pounds applied on the top rail mid-way between posts. The decking shall be a non-skid surface to prevent slippage when wet at maximum angle. The deck material shall be aluminum planking unless otherwise directed by the owner/developer. Gangway hardware shall be aluminum or stainless steel. The fixed hinge shall be at the top of the ramp and shall freely rotate over the entire range of design water level fluctuations.
2. Piling design (number, size, length, shape and type) has been performed by the project engineer. Where pilings are shown in plans, the floating dock manufacture shall provide stainless steel four-roller pile guides with UHMW rollers and stainless steel roller pins. Other pile guide hardware and metal sections required shall be stainless steel. The pile guides shall have 3-inches of clearance from the piling to each roller.
3. Floating Dock System shall be compromised of the following basic components:
    a. Individual concrete float units with main pier, when attached, forming a continuous walkway surface of the material and finish desired by the Owner.
    b. Aluminum gangway onto the float of the size and at locations shown in the plans.
    c. Pilings and pile guides, which shall be the primary support of the floating dock system.
    d. Industry standard "D" shaped bumpers to surround the entire floating dock.
    e. Transition plates as detailed in plans.
    f. Aluminum or Grade 316 Stainless Steel hardware and components, Hot Dipped Galvanized will not be accepted.
4. Contractor is responsible for ensuring that the floating dock system properly functions and that no debris hinders its functionality. If debris is located within the footprint of the floating system then the contractor must remove the hindrances in order to allow proper function.
5. The method and material type of floatation, deck system, and connection between floatation units shall be clearly described in detailed shop drawings for review by the owner and owner's representatives. For the purposes of this project, the floating dock shall be of concrete composition. System hardware shall be HDG or stainless steel, roller pins shall be stainless steel.
   The environmental forces and criteria for the floating docks design shall be as follows:
    a. Wind Speed: 130 mph (assumed no boats)
    b. Wave Height: 2.5 feet
    c. Surge: Upper Category 2, 8 feet surge
    d. Vessel Impact: 30-foot power boat at 1.5 knots
    e. Live Load (LL): 50 pounds per square foot (psf)
    f. Dock freeboard (no load/dead load): 19-inch +/- 1-inch
    g. Dock Freeboard (DL+LL): 9-inch minimum
6. Pre-stressed FDOT Marine Grade 14-inch square concrete piles to be 55 linear feet, top elevation of +13.00 N.A.V.D. 1988.
7. The contractor shall provide and properly install industrial aluminum cleats on the floating concrete system as located on the plans.
8. White square vinyl caps shall be properly placed and secured on all newly installed concrete piles. This cost should be incorporated into the cost of the floating dock.

CONCRETE - CAP:

1. All mix designs by the concrete supplier or contractor must be submitted to the engineer for approval prior to submitting order.
2. All cast-in-place cap concrete shall be of the same mix design as follows:
    a. Compressive Strength: 6,000 psi minimum (4,500 psi minimum - concrete plugs)
    b. Water-cement ratio </= 0.40
    c. Air Entrainment: Minimum 2 to 3%
    d. Potable water, no chlorides
    e. Type I Cement.
    f. 6% addition of microsilica per weight of binders.
    g. Large and small aggregates washed and free of chlorides or reactive chemicals.
    h. No pea gravel allowed.
    i. Retarders or accelerators not allowed unless justified to the engineer prior to their use.
3. Concrete cover from all exterior faces shall be 4-inch clear to the outmost face of any reinforcement, including stirrups, unless otherwise noted in the plans.
4. No greater than 45 minutes may transpire between individual castings. Trucks may not sit on for grater than 45 minutes. Trucks sitting full on site for grater than 45 minutes shall be rejected at the contractor's expense. Delays in casting a given form greater than 45 minutes shall be rejected unless an acceptable construction join can be made.
5. A working concrete vibrator must be on site prior to delivery of first concrete. The owner, owner's representative or engineer shall not allow concrete to be cast otherwise.
6. Vibrate concrete fully, particularly at corners and edges, in a continuous vertical plunging motion, never allowing the vibrator to become motionless in the concrete. Concrete with substantial voids or honeycombing will be rejected.
7. Use non-metallic chairs and spacers in reinforcement placing, or for any other necessary in-form attachments or alignments.
8. Continually wet water cure horizontal surfaces for at least three days and all exposed concrete surfaces after concrete is set. For the purpose of this specification "set" is when the concrete surface is hard enough so that when "knocked" with the knuckles the concrete is not dented. The contractor is responsible for arranging a water source for curing purposes prior to commencing casting of concrete.
9. Apply Master Builders/BASF "ConFilm" or Euclid Chemical "Eucobar" product immediately after first float and then after final finish. Refer to manufacturer's recommendations for mixing and application.
10. The final alignment of the concrete cap shell be straight and level per elevations and plans provided.
11. Concrete materials testing per acceptable ASTM methods and intervals. A material testing program must be prepared by the contractor and/or manufacture for review and approval by the engineer. At least one set of four cylinders shall be cast for any one day's work, or work between construction joints, or more if prescribed by ASTM.

VERTICAL JOINTS IN CONCRETE CAP:

1. Joints shall be placed where shown in the plans with a full cross-section width of ⅜-inch.
2. Closed-cell neoprene shall be placed the full width and height of the concrete cap with a thickness of ⅜-inch.
3. 30-inch long, 1-inch diameter, stainless steel, smooth, greased dowels (both sides) as shown in plans.
4. Concrete cap reinforcing shall stop 4-inches from the ends of each segment as shown in the plans.

WATER SERVICE NOTES

1. Locations of potable water and other underground utility lines and fittings are approximate as depicted on the civil plans. The contractor is responsible for requesting all needed utility locates from Sunshine 811, City of Port Orange, and other underground utility service providers with facilities within or adjacent to the project prior to starting any excavation or demolition activity. The contractor shall be solely responsible for any damage to underground utilities that have been located, and any damage to underground utilities that occurs prior to field locates being performed.
2. All potable water connections and service components shall be constructed in accordance with City of Port Orange standards, specifications, details, and procedures, utilizing only components, hardware and products approved by the City of Port Orange.
3. The contractor shall be responsible for determining if City of Port Orange Staff must be present to observe critical stages of potable water service construction, or to perform connections to City Water Service. The contractor shall be responsible for providing a sufficient notification period to City of Port Orange and the project engineer to permit scheduling of observation or connection duties. No additional contract time shall be approved if this notification is not given, and any work performed without required observation shall be rejected and replaced by the contractor at the contractor's expense.
4. The contractor shall perform all required pressure, bacteriological and other testing as required by the County, City of Port Orange, other local and state regulatory agencies, and the project engineer. These testing results shall be submitted to the city project manager and project engineer prior to project close-out, and must be available for inspection at any time at the request of the County, City of Port Orange, regulatory agencies, and the project engineer.

DRAWING: GENERAL NOTES
DMC JOB NO. 22-173-01
SHEET NO. C-13
DRAWN BL | CAD C3D | SCALE AS SHOWN
CHECKED AS | APPROVED SKP | DATE 06/08/2023

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.

b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.

c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.

e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.

f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006
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STANDARD MANATEE CONDITIONS FOR IN-WATER WORK
2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.

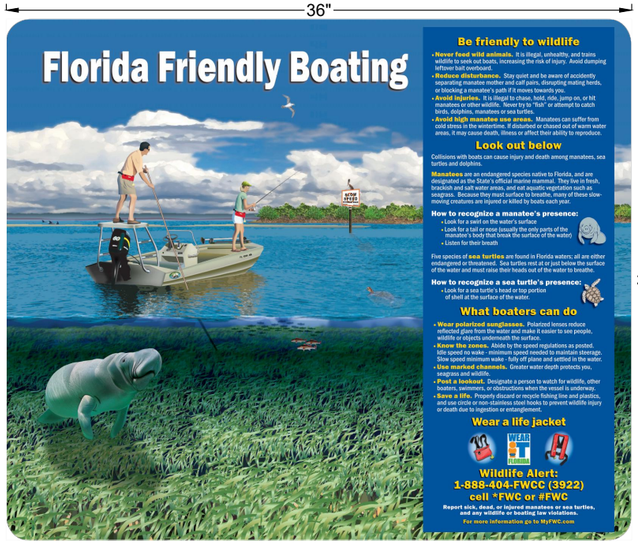
b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

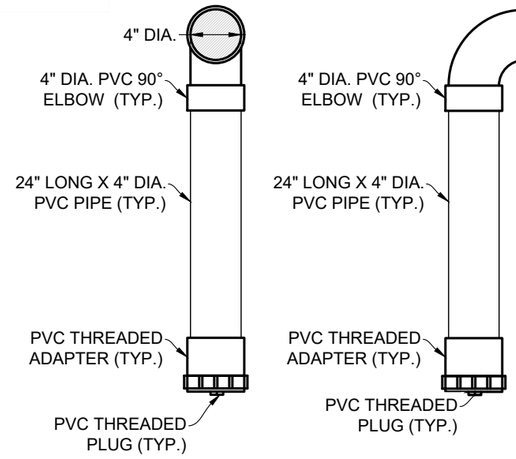
c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.

d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

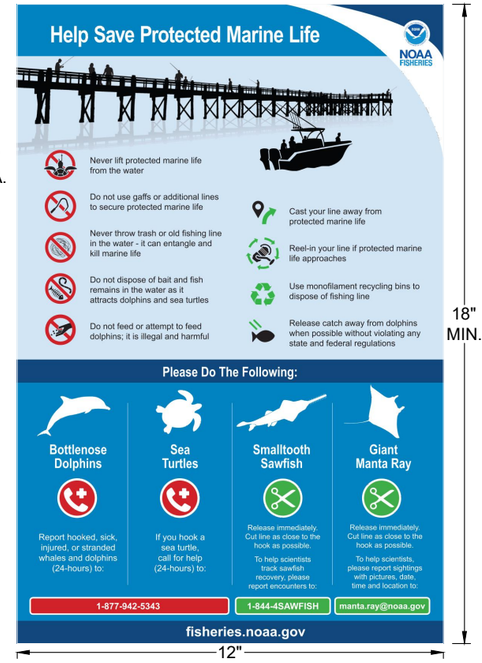
e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com

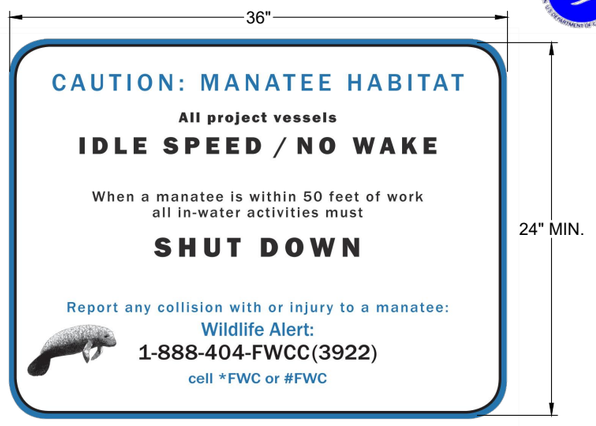
f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 ½" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.





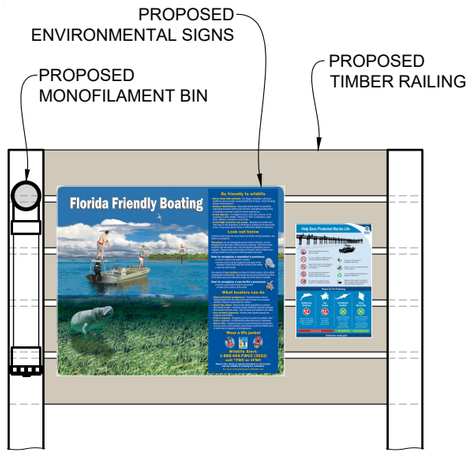
MONOFILAMENT BIN DETAILS
N.T.S.





NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND MOUNTING DETAILS/LOCATION TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION.

SIGN TO BE DISPLAYED AND VISIBLE DURING ALL CONSTRUCTION ACTIVITIES
N.T.S.



ENVIRONMENTAL INFORMATION KIOSK DETAIL
N.T.S.

ENVIRONMENTAL INFORMATION KIOSK SIGNAGE AND MONOFILAMENT BIN:
1. ALL SIGNS SHALL FOLLOW ALL FWC SIGN SPECIFICATIONS INCLUDING:
   a. SIGN SHALL BE FIBERGLASS OR METAL WITH ROUNDED CORNERS (HAND-SANDED TO REMOVE ALL SHARP EDGES AND BURRS).
   b. CONSTRUCTED OF 0.08 GAUGE 5052-H38 ALUMINUM.
   c. HAVE AN ALODINE 1200 CONVERSION COATING.
   d. HAVE ENGINEER GRADE TYPE I REFLECTIVE SHEETING.
   e. SIGNS SHALL BE MOUNTED ON 2" X 8" BOARDS (1) ⅜" DIA. 316 S.S. CARRIAGE BOLTS AT EACH CORNER OF SIGN.
2. FWC APPROVED "RECYCLE YOUR LINE OR DISCARD IT IN CONTAINERS" MONOFILAMENT BIN TO BE FURNISHED AND INSTALLED ONTO (1) POST ON THE INFORMATION KIOSK WITH 316 S.S. HARDWARE (SEE DETAIL THIS SHEET). MONOFILAMENT BIN SHALL HAVE ALL FWC REQUIRED STICKERS DISPLAYED PROPERLY AND CLEARLY. **CONTRACTOR SHALL SUBMIT MOUNTING DETAIL TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO ORDERING AND INSTALLING.**
3. MONOFILAMENT BIN SHALL BE FURNISHED WITH THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION'S REQUIRED DECALS. DECALS SHALL BE VISIBLY LOCATED ON THE MONOFILAMENT BIN; DECALS THAT ARE DAMAGED SHALL BE REMOVED AND REPLACE AT THE CONTRACTORS EXPENSE.

DRAWING: ENVIRONMENTAL NOTES
DMC JOB NO.: 22-173-01
SHEET NO.: C-14
DRAWN: BL | CAD: C3D | SCALE: AS SHOWN | DATE: 06/09/2023
CHECKED: AS | APPROVED: SKP

PROJECT NAME: CATFISH COMMONS MARINA
CLIENT: MR. & MRS. GALBREATH

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