



# SAFETY HARBOR | FL

CONTRACT PLANS COMPONENTS

- STRUCTURES  
CIVIL  
ELECTRICAL
- PLUMBING  
FIRE PROTECTION

INDEX OF STRUCTURE PLANS

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S-02	SIGNATURE SHEET
S-03	GENERAL NOTES (1 OF 2)
S-04	GENERAL NOTES (2 OF 2)
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S-06	DEMOLITION PLAN
S-07	MARINA LAYOUT PLAN
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\*NOTE - NOT INCLUDED IN THIS SUBMITTAL

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C-02	SITE CIVIL AND EROSION CONTROL PLAN

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P-01	PLUMBING NOTES, LEGEND, AND SCHEDULE
P-02	WATER FLOOR PLAN

GOVERNING DESIGN STANDARDS:

Florida Department of Transportation, FY 2024-25 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs) and as amended by Contract Documents.

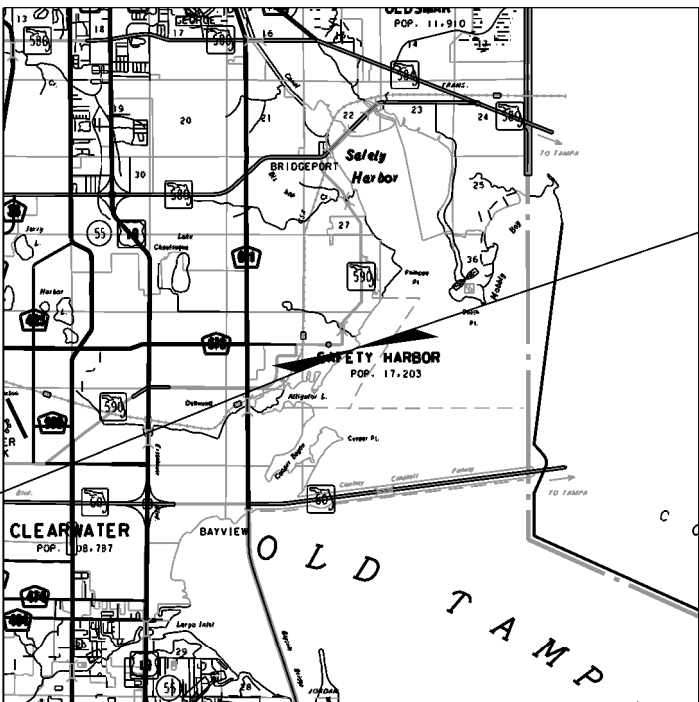
For Design Standard Plans click on "Standards Plans for Road and Bridge Construction" at the following web site: <https://www.fdot.gov/design/standardplans/>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, Standard Specifications for Road and Bridge Construction FY2024-25 as amended by Contract Documents.

CITY OF SAFETY HARBOR

CONTRACT PLANS  
MARINA REPLACEMENT  
110 VETERANS MEMORIAL LANE  
CIP #xxxxxxxx



LOCATION MAP  
SECTION 3 TOWNSHIP 29S, RANGE 16E

END PROJECT  
¢ VETERANS MEMORIAL LANE  
N 27°59'21.62"  
W 82°41'12.88"

BEGIN PROJECT  
¢ VETERANS MEMORIAL LANE  
N 27°59'22.96"  
W 82°41'15.35"

60% SUBMITTAL NOT  
FOR CONSTRUCTION

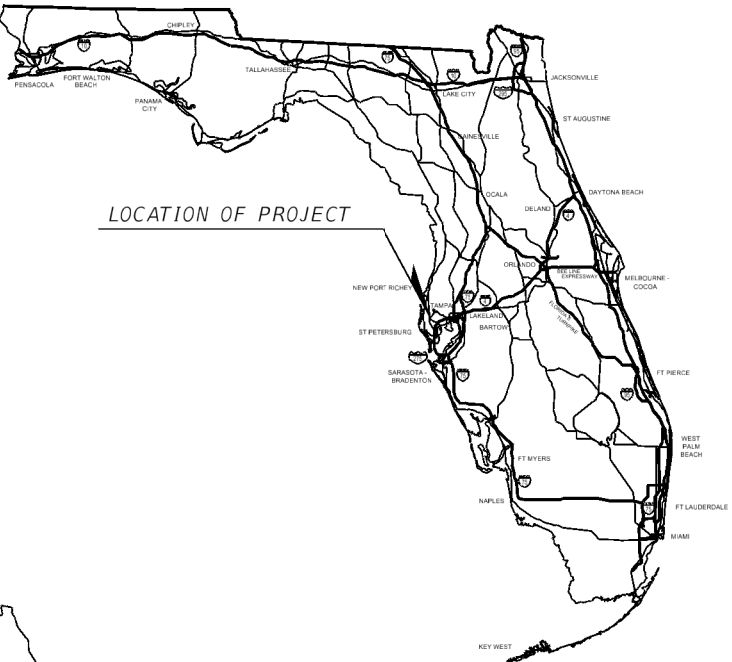
GOOGLE EARTH LINK PROVIDED FOR BRIDGE LOCATION.  
<https://maps.app.goo.gl/VC2t1DhWkQB3zUEAA>

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

ENGINEER OF RECORD: DAVID R. JOHNSON, P.E.

P.E. NO.: 79354

FISCAL YEAR	SHEET NO.
24	S-01



LOCATION OF PROJECT

BOARD OF COUNTY COMMISSIONERS

JOE AYOUB  
ANDY STEINGOLD  
NANCY BESORE  
CARLOS DIAZ  
CLIF MERZ

MAYOR  
VICE-MAYOR  
COMMISSIONER  
COMMISSIONER

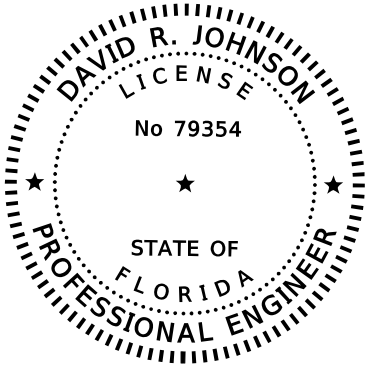
SHOP DRAWINGS  
TO BE SUBMITTED TO:

DAVID R. JOHNSON, P.E.  
DRMP, INC.  
15310 AMBERLY DRIVE  
SUITE 310  
TAMPA FL, 33647

PLANS PREPARED BY:

DRMP, INC.  
15310 AMBERLY DRIVE  
SUITE 310  
TAMPA FL, 33647  
PHONE: (813) 265-9800  
DAVID R. JOHNSON, P.E. 79354

NOTE: THE SCALE OF THESE PLANS MAY  
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DRMP, INC.  
DAVID R. JOHNSON, P.E.  
P.E. LICENSE NUMBER 79354  
15310 AMBERLY DRIVE, SUITE 200  
TAMPA, FL. 33647

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

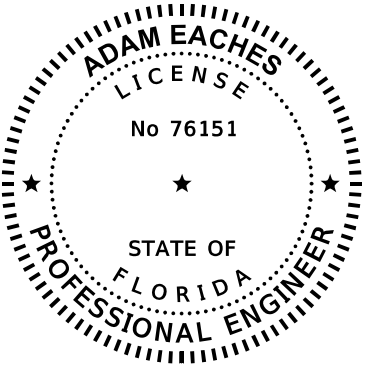
STRUCTURE PLANS

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SHEET NO.	SHEET DESCRIPTION
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HALL ENGINEERING GROUP  
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3820 GUNN HIGHWAY, SUITE 200  
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ELECTRICAL PLANS

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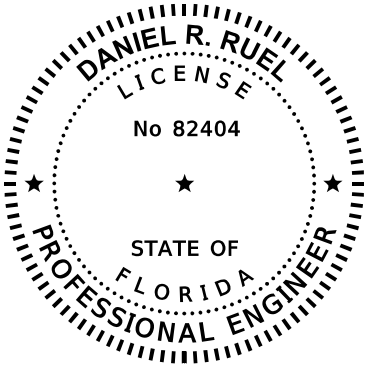
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ENGINEERING PROFESSIONALS, INC.  
SHANE R. HAMILTON, P.E.  
P.E. LICENSE NUMBER 75420  
912 W. DR. MARTIN LUTHER KING JR. BLVD.  
TAMPA, FL 33603

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

FIRE PROTECTION AND PLUMBING PLANS

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P-01	PLUMBING NOTES, LEGEND, AND SCHEDULE
P-02	WATER FLOOR PLAN



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TIERRA, INC.  
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7351 TEMPLE TERRACE HIGHWAY  
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THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE  
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

STRUCTURE PLANS

SHEET NO.	SHEET DESCRIPTION
S-02	SIGNATURE SHEET
S-08	SOIL PROFILES

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

60% SUBMITTAL NOT  
FOR CONSTRUCTION

DAVID R. JOHNSON, P.E.  
P.E. NO.: 79354  
DRMP, INC.  
15310 AMBERLY DRIVE, SUITE 200  
TAMPA, FL 33647

DRAWN BY:  
BCS 01-24  
CHECKED BY:  
DRJ 01-24  
DESIGNED BY:  
DRJ 01-24  
CHECKED BY:  
CS 02-24



SAFETY  
HARBOR

FL

SHEET TITLE:	SIGNATURE SHEET	TWA NO.
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
		S-02

SPECIFICATIONS

DESIGN AND CONSTRUCTION SPECIFICATIONS:

- A) FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FY2024-25 EDITION, AS AMENDED BY CONTRACT DOCUMENTS.
- B) FLORIDA BUILDING CODE 8TH EDITION (2023).
- C) NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION - AMERICAN WOOD COUNCIL 2018 EDITION.
- D) AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7-16.
- E) AISC STEEL CONSTRUCTION MANUAL 16TH EDITION.

DESIGN METHOD

LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD USING STRENGTH AND SERVICE LIMIT STATES.

DESIGN LOADINGS

- 1. DEAD LOAD - 10 PSF
- 2. LIVE LOAD - 100 PSF
- 3. WIND LOAD:
  - A) DESIGN WIND SPEED 150 MPH
  - B) RISK CATEGORY II
  - C) EXPOSURE CATEGORY D
  - D) IMPORTANCE FACTOR 1.0

GENERAL NOTES

- 1. COMPLY WITH ALL STATE, COUNTY, AND LOCAL ORDINANCES AND OBTAIN WORK PERMITS THAT ARE REQUIRED PRIOR TO CONSTRUCTION.
- 2. LOCATION, ELEVATION, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. VERIFY THE LOCATION, ELEVATION, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING THE WORK.
- 3. ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET AND INCHES EITHER HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.
- 4. PLAN ELEVATIONS ARE IN FEET AND REFER TO NAVD 1988 DATUM. VERTICAL DATUM CONVERSION, NGVD29 TO NAVD88 = -0.856
- 5. PROVIDE AND MAINTAIN TURBIDITY BARRIERS IN ACCORDANCE WITH PERMITS.

MARINE NAVIGATION

- 1. MAINTAIN VISIBLE AND FUNCTIONAL EXISTING SIGNS AT ALL TIMES DURING CONSTRUCTION. AT THE APPROVAL OF THE ENGINEER TEMPORARILY RELOCATE EXISTING SIGNS TO FACILITATE CONSTRUCTION. RETURN ALL RELOCATED SIGNS TO THEIR ORIGINAL LOCATION AFTER CONSTRUCTION IS COMPLETED.
- 2. MARINE TRAFFIC CONSTRUCTION SIGNS ARE TO BE PLACED AT THE ENTRANCE OF THE PARKING LOT AND AT THE CHANNEL ENTRANCE PRIOR TO THE BOAT RAMP FOR INCOMING MARINE TRAFFIC. PLACEMENT OF THE SIGNS IS TO BE SUCH THAT THEY ARE CLEARLY VISIBLE TO APPROACHING TRAFFIC. BARGES LEFT IN WATER IN LOW-LIGHT CONDITIONS SHALL BE ILLUMINATED SO AS TO BE VISIBLE TO MARINE TRAFFIC.
- 3. NOTIFY LT. CLARK SANFORD AT THE USCG SECTOR ST. PETERSBURG AT 813-228-2191 EXT. 8105 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. IN ADVANCE OF ACTIONS DURING CONSTRUCTION OR DEMOLITION WHICH POTENTIALLY AFFECT WATERWAY USERS AND PRIOR TO THE PLACEMENT OF ANY FLOATING CONSTRUCTION EQUIPMENT IN THE WATERWAY. NOTIFY NO LESS THAN 60 DAYS IN ADVANCE OF ACTIONS WHICH COULD POTENTIALLY AFFECT THE WATERWAY. KEEP THE CHANNEL OPEN TO WATERWAY TRAFFIC AT ALL TIMES.

MATERIALS

- 1. TIMBER: UNLESS OTHERWISE NOTED, ALL SAWN LUMBER AND TIMBER PILES EXCEPT BENT CAPS AND STRINGERS SHALL BE GRADE NO. 2 SOUTHERN YELLOW PINE OR BETTER. BENT CAPS AND STRINGERS SHALL BE NO. 1 SOUTHERN YELLOW PINE OR BETTER.
- 2. DECKING: ALL DECKING SHALL BE A UV-RESISTANT ENGINEERED COMPOSITE MATERIAL, WEARDECK OR EQUAL. COLOR OF DECKING SHALL BE "SADDLE".
- 3. HURRICANE FASTENERS: STAINLESS STEEL AISI TYPE 316 W/ UPLIFT CAPACITY OF 360 LBF. EACH MINIMUM.
- 4. ANCHOR BOLTS: STAINLESS STEEL AISI TYPE 316.
- 5. ANCHOR BOLT ADHESIVE: TYPE F ADHESIVE EPOXY MATERIAL.

UTILITIES

- 1. PROVIDE TWO WORKING DAYS NOTICE TO UTILITY AGENCY/OWNER'S (UAO IN ORDER TO LOCATE AND IDENTIFY THEIR EXISTING UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, AS ESTABLISHED BY THE "UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT".
- 2. COORDINATE CONSTRUCTION SCHEDULING WITH UTILITY AGENCY/OWNER'S. MEET WITH UAO'S PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONSTRUCTION SCHEDULE.

EXISTING STRUCTURE

- 1. REMOVAL OF EXISTING STRUCTURES SHALL COMPLY WITH SECTION 110-7 OF THE SPECIFICATIONS. IF PILES ARE UNABLE TO BE PULLED CLEANLY, CUT PILES 2'-0" BELOW MUDLINE. PROPERLY DISPOSE OF TREATED TIMBER PER SPECIFICATIONS. WORK IS TO BE PAID FOR UNDER PAY ITEM 110-82, "REMOVE & DISPOSE OF STRUCTURAL TIMBER."
- 2. ORIGINAL STRUCTURE YEAR BUILT IS UNKNOWN. MAJORITY OF STRUCTURE WAS RECONSTRUCTED IN 2006. 2006 EXISTING PLANS ARE PROVIDED AND ARE FOR INFORMATIONAL PURPOSES ONLY.

MONITOR EXISTING STRUCTURES

MONITOR SETTLEMENT AND VIBRATIONS ON EXISTING STRUCTURES PER SPECIFICATIONS SECTION 108.

PILE INSTALLATION NOTES

- 1. ALL 8" Ø TIMBER DOCK PILES AND 10" Ø TIE PILES SHALL BE DRIVEN. JETTING IS NOT ALLOWED WITHOUT APPROVAL OF THE ENGINEER.
- 2. VERIFY THE LOCATION OF ALL UTILITIES AND NOTIFY ALL INVOLVED UTILITY COMPANIES PRIOR TO EXCAVATION, PILE DRIVING OR CONSTRUCTION TO AVOID DAMAGE. ENSURE THAT ACTIVE UTILITIES ARE PROPERLY MAINTAINED AND PROTECTED DURING CONSTRUCTION.
- 3. FOR DETAILS REGARDING SPT SOIL BORINGS, SEE "SOIL PROFILES" SHEET.
- 4. PRIOR TO PILE DRIVING OPERATIONS, INFORM THE ENGINEER IF ANY PROPOSED PILE LOCATION INTERFERES WITH EXISTING PILE, AND PILE WAS UNABLE TO BE CLEANLY REMOVED.
- 5. DRIVE PILES TO THE NOMINAL BEARING RESISTANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 455 AND AS FOLLOWS,

$$\frac{\text{FACTORED DESIGN LOAD} + \text{NET SCOUR RESISTANCE} + \text{DOWN DRAG}}{\varnothing}$$

- 6. NOMINAL BEARING RESISTANCE = 7 TONS BASED ON FACTORED DESIGN LOAD = 8 KIPS AND Ø = 0.65.
- 7. ESTIMATED PILE TIP DEPTH BELOW MUDLINE VARIES (9 FT. TO 22 FT.). REFUSAL MAY BE ENCOUNTERED PRIOR TO THESE DEPTHS IF A DENSER SOIL LAYER IS ENCOUNTERED.
- 8. SELECT THE APPROPRIATE HAMMER TO ACHIEVE DESIGN REQUIREMENTS SHOWN IN THE PLANS AND SUBMIT A PILE INSTALLATION PLAN PRIOR TO MOBILIZATION.
- 9. RESTRICT PILE DRIVING TO DAYTIME HOURS.
- 10. WEATHERED LIMESTONE WAS ENCOUNTERED WITHIN BORINGS. EXCAVATIONS/PREFORMING INTO AND/OR THROUGH THESE MATERIALS WILL BE DIFFICULT AND REQUIRE NON-CONVENTIONAL CONSTRUCTION TECHNIQUES AND SPECIALIZED EQUIPMENT. LIMESTONE IS POROUS AND WILL BE DIFFICULT TO DEWATER.
- 11. ARTESTIAN CONDITIONS SHOULD BE EXPECTED. TOOLS AND CONSTRUCTION METHODS SHALL INCLUDE THE ABILITY TO HANDLE A POTENTIOMETRIC HEAD ELEVATION OF +10 FT. (NGVD) AT NO ADDITIONAL COST.
- 12. CONTACT THE ENGINEER IF PRACTICAL REFUSAL IS MET BEFORE 10 FEET OF EMBEDMENT IS ACHIEVED.

PILE WRAP

- 1. INSTALL PILE WRAP PER MANUFACTURER'S RECOMMENDATIONS.
- 2. PILE WRAP: 0.03" BLACK, UV-RESISTANT POLYETHYLENE MATERIAL

MISCELLANEOUS

- 1. CLEAT: 8" STANDARD MOUNT CLEAT, STAINLESS STEEL
- 2. SAFETY LADDERS: 7 STEP RETRACTABLE WITH 2" STEP WIDTH, ALUMINUM
- 3. PILE CAPS: BLACK, CONICAL SHAPED, PVC MATERIAL
- 4. SECURITY GATE: 6 FT. HEIGHT W/ GATE LOCK. HOT DIP GALVANIZED STEEL W/ BLACK POWDER COAT FINISH. PROVIDE ORNAMENTAL GATE POSTS WITH MATCHING MATERIAL AND BLACK POWDER COAT FINISH TO GATE. DURAGATE DGT-GGFW FLAT TOP GARDEN GATE OR EQUAL.

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 200 TAMPA, FL 33647	DRAWN BY: BCS 01-24 CHECKED BY: DRJ 01-24 DESIGNED BY: DRJ 01-24 CHECKED BY: CS 02-24	 SAFETY HARBOR   FL	SHEET TITLE:  GENERAL NOTES (1 OF 2)		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME:  SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.
					60% SUBMITTAL NOT FOR CONSTRUCTION						S-03

WOOD

- ALL MEMBERS SHALL BE AIR DRIED TO LESS THAN 19% MOISTURE CONTENT, GRADED IN ACCORDANCE WITH THE SPIB GRADE RULES, SECTION 4, AND MAY HAVE ANY OR ALL OF THE CHARACTERISTICS OF THIS GRADE.
- ALL DECKING SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED IN THE PLANS.
- ALL BOLT HOLES THROUGH TIMBERS TO BE AN EXTRA 1/16" IN DIAMETER RELATIVE TO THE BOLT DIAMETER.
- MEMBERS WITH WANE OF 3/8" OR MORE MAY BE GROUNDS FOR REJECTION, REMOVAL, AND REPLACEMENT.
- INSTALL DECKING PER MANUFACTURER RECOMMENDATIONS.
- TREAT ALL WOOD SURFACES EXPOSED TO VIEW WITH A FINISH & SEAL WATER REPELLENT. COLOR OF REPELLENT SHALL MATCH COLOR OF COMPOSITE DECKING.
- BEAMS, STRINGER, AND RAILS SHALL BE CONTINUOUS OVER SINGLE SPANS UNLESS OTHERWISE NOTED IN THE PLANS.
- FIELD PRESERVATIVE CHEMICALS SHALL BE APPLIED TO ALL FIELD CUTS AND DRILLED HOLES TO MAINTAIN TIMBER PRESSURE TREATMENT INTEGRITY.
- PILES SHALL BE PRESSURE PRESERVATIVE TREATED WITH CCA TO 2.5 PCF RETENTION. TIMBER PILES SHALL CONFORM TO ASTM STANDARD D-25 FOR PHYSICAL CHARACTERISTICS AND QUALITY. SIZE SHALL BE 1" TAPER IN 10 LINEAR FEET.
- PILES SHALL FOLLOW SPECIFICATION SECTION 953.
- SAWN LUMBER SHALL BE PRESSURE PRESERVATIVE TREATED WITH ACQ TO 0.6 PCF RETENTION. INSTALL WITH NATURAL CAMBER BOWED UP WHEN POSSIBLE.

FASTENERS

- ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH FLORIDA BUILDING CODE TABLE 2304.10.1 EXCEPT AS SHOWN OR NOTED BELOW:
  - PICKETS TO RAILS - TWO, #8x2½" WOOD SCREWS
  - RAILS TO RAILING POST - ONE, ¼" ○ THRU-BOLT
  - RAIL CAP TO RAILING POST - FOUR, #10x3" WOOD SCREWS
  - BLOCKING TO STRINGERS - FOUR, #10x3" WOOD SCREWS, TOE-NAILED
  - DECK BOARDS TO STRINGERS - THREE, #10x3" WOOD SCREWS PER SUPPORT, FACE SCREWED
- WOOD SCREWS SHALL BE STAINLESS STEEL AND IN ACCORDANCE WITH ANSI/ASME STANDARD B18.6.1.
- BOLTS SHALL BE IN ACCORDANCE WITH ANSI/ASME STANDARD B18.2.1.
- PRE-DRILL ALL CONNECTIONS WITH WOOD SCREWS TO AVOID SPLITTING OF THE CONNECTED MEMBERS.
- ALL THRU-BOLTS EXPOSED TO HUMAN CONTACT SHALL BE CUT OFF AND GROUND SMOOTH, FLUSH WITH THE NUT.
- "O-GEE" WASHERS SHALL BE USED FOR ALL TIMBER SIDE CONNECTOR SIZES EQUAL TO OR GREATER THAN 1/2" ○.
- HURRICANE ANCHOR SHALL BE ATTACHED WITH NAILS (8D). WHENEVER POSSIBLE ALL ANCHORS SHALL BE PLACED IN THE LEAST VISIBLE MANNER TO THE PUBLIC.
- 9/32" ○ HOLE SHALL BE DRILLED PRIOR TO LAG SCREW INSTALLATION.
- ALL THROUGH NAILS SHALL BE BENT ON PROTRUDING SIDE.
- INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS SECTION 416 FOR HOLE DIAMETER AND CLEANING TECHNIQUE.

ENVIRONMENTAL COMMITMENTS

- USE A RAMP-UP PROCEDURE DURING THE INSTALLATION OF PILES. THIS PROCEDURE ALLOWS FOR A GRADUAL INCREASE IN NOISE LEVELS IN ORDER TO GIVE SENSITIVE SPECIES AMPLE TIME TO FLEE PRIOR TO INITIATION OF FULL NOISE LEVELS. THIS APPROACH CAN ALSO REDUCE THE LIKELIHOOD OF ANY SECONDARY OR SUB-LETHAL EFFECTS FROM SOUND IMPULSES ASSOCIATED WITH PILE DRIVING.
- COMPLY WITH NOAA PROTECTED SPECIES CONSTRUCTION CONDITIONS DURING CONSTRUCTION.
- COMPLY WITH THE FOLLOWING PROTECTED SPECIES CONSTRUCTION CONDITIONS REGARDING SEA TURTLES AND SMALLTOOTH SAWFISH:
  - 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.
  - ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING SEA TURTLES AND SMALLTOOTH SAWFISH, WHICH ARE PROTECTED UNDER THE ENDANGERED SPECIES ACT OF 1973.

ENVIRONMENTAL COMMITMENTS (CONT'D.)

- SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH SEA TURTLES OR SMALLTOOTH SAWFISH CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL 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.
  - 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.
  - IF A SEA TURTLE OR SMALLTOOTH SAWFISH IS SEEN WITHIN 100 YARDS OF THE ACTIVE DAILY CONSTRUCTION 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 OF 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.
  - ANY COLLISION WITH AND/OR INJURY TO A SEA TURTLE OR SMALLTOOTH SAWFISH SHALL BE REPORTED IMMEDIATELY TO THE NATIONAL MARINE FISHERIES SERVICES PROTECTED RESOURCES DIVISION (727-824-5312) AND THE LOCAL AUTHORIZED SEA TURTLE STRANDING/RESCUE ORGANIZATION.
- THE PERMITTEE SHALL COMPLY WITH THE FOLLOWING CONDITIONS INTENDED TO PROTECT MANATEES FROM DIRECT PROJECT EFFECTS:
    - INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT OF THE POTENTIAL PRESENCE OF MANATEES AND MANATEE SPEED ZONES, AND THE NEED TO AVOID COLLISIONS WITH AND INJURY TO MANATEES. 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.
    - 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.
    - SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID PROTECTED SPECIES ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
    - 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.
    - 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 IN VERO BEACH (1-722-562-3909) FOR SOUTH FLORIDA, AND EMAILED TO FWC AT IMPERILEDSPECIES@MYFWC.COM.
    - TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL IN-WATER PROJECT ACTIVITIES. ALL SIGNS ARE TO BE REMOVED UPON COMPLETION OF THE PROJECT. TEMPORARY SIGNS THAT HAVE ALREADY BEEN APPROVED FOR THIS USE BY THE FWC MUST BE USED. ONE SIGN WHICH READ "CAUTION: BOATERS" MUST BE POSTED. A SECOND SIGN MEASURING AT LEAST 8½" 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 [HTTP://WWW.MYFWC.COM/WILDLIFEHABITATS/MANATEE\\_SIGN\\_VENDORS.HTM](http://www.myfwc.com/wildlifehabitats/manatee_sign_vendors.htm). QUESTIONS CONCERNING THESE SIGNS CAN BE FORWARDED TO THE EMAIL ADDRESS LISTED ABOVE.

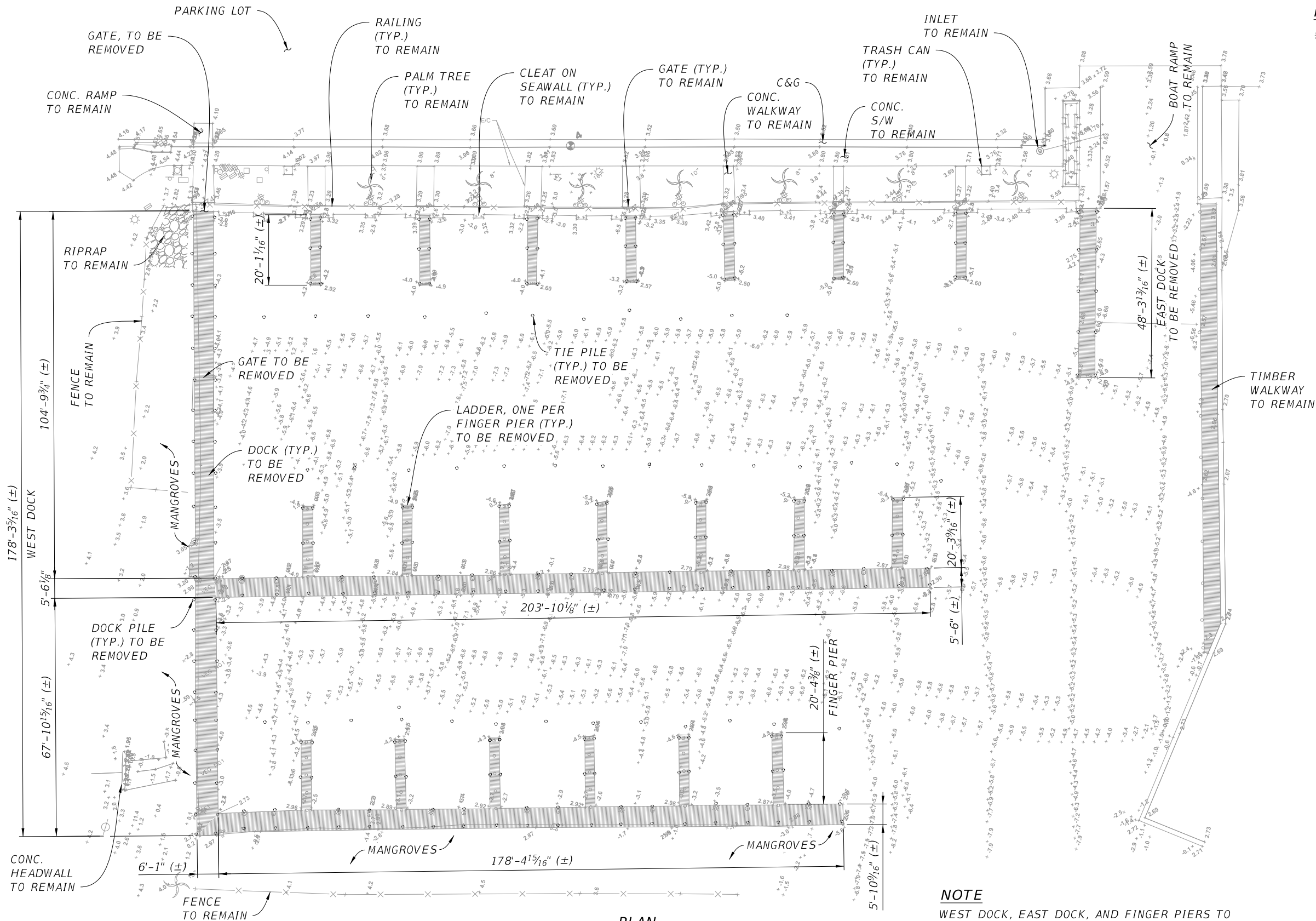
REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 200 TAMPA, FL 33647	DRAWN BY: <i>BCS 01-24</i> CHECKED BY: <i>DRJ 01-24</i> DESIGNED BY: <i>DRJ 01-24</i> CHECKED BY: <i>CS 02-24</i>	 SAFETY HARBOR   FL	SHEET TITLE:  GENERAL NOTES (2 OF 2)		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME:		SHEET NO.
					60% SUBMITTAL NOT FOR CONSTRUCTION				SAFETY HARBOR MARINA REPLACEMENT		S-04

BID ITEMS FOR SAFETY HARBOR MARINA REPLACEMENT			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
CIVIL			
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-10	SEDIMENT BARRIER	LF	130
104-11	FLOATING TURBIDITY BARRIER	LF	260
110-1-1	CLEARING & GRUBBING	LS	1
110-82	REMOVE & DISPOSE OF STRUCTURAL TIMBER	MB	44.5
350-5	CLEANING & SEALING JOINT - CONCRETE PAVEMENT	LF	30
515-2311	PEDESTRIAN / BICYCLE RAILING, ALUMINUM ONLY, 42" TYPE 1	LF	21
550-10-220	FENCING, TYPE B, 5.1'-6.0', STANDARD	LF	130
550-60-222	FENCE GATE, TYPE B, DOUBLE 6.1'-12.0' OPENING	EA	1
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12SF	EA	4
700-1-50	SINGLE POST SIGN, RELOCATE	EA	1
999-90	SECURITY GATE, 6FT.	EA	1
999-91	CLEATS	EA	53
999-92	SAFETY LADDER	EA	21
STRUCTURES			
470-1	TREATED STRUCTURAL TIMBER	MB	8.8
999-93	TREATED TIMBER PILING (8 IN. DIAMETER)	LF	5,610
999-94	TREATED TIMBER PILING (10 IN. DIAMETER)	LF	1,239
999-95	PILE WRAPS	EA	283
999-96	PILE CAP	EA	227
999-97	COMPOSITE DECKING (ALTERNATIVE 1)	SF	4,696
470-1	TIMBER DECKING (ALTERNATIVE 2)	MB	7.0

BID ITEM NOTES

- POST-INSTALLED ANCHORS LABOR AND MATERIAL IS CONSIDERED INCIDENTAL TO PAY ITEM 470-1, "TREATED STRUCTURAL TIMBER ."
- ALL HARDWARE LABOR AND MATERIAL IS CONSIDERED INCIDENTAL TO PAY ITEM 470-1, "TREATED STRUCTURAL TIMBER." TIMBER BLOCKING IS CONSIDERED INCIDENTAL TO PAY ITEM 470-1, "TREATED STRUCTURAL TIMBER."
- PAYMENT FOR NEOPRENE SHIM IS CONSIDERED INCIDENTAL TO PAY ITEM NO. 470-1, "TREATED STRUCTURAL TIMBER".
- LABOR & MATERIAL FOR INSTALLING SECURITY GATE IS TO BE PAID FOR UNDER PAY ITEM 999-90, "SECURITY GATE, 6 FT.".
- LABOR & MATERIAL FOR INSTALLING CLEATS IS TO BE PAID FOR UNDER PAY ITEM 999-91, "CLEATS".
- LABOR & MATERIAL FOR INSTALLING SAFETY LADDERS IS TO BE PAID FOR UNDER PAY ITEM 999-92, "SAFETY LADDER".
- LABOR & MATERIAL FOR INSTALLING DOCK PILES IS TO BE PAID FOR UNDER PAY ITEMS 999-93, "TREATED TIMBER PILING 8 IN. DIAMETER"
- LABOR & MATERIAL FOR INSTALLING TIE PILES IS TO BE PAID FOR UNDER PAY ITEM 999-94, "TREATED TIMBER PILING 10 IN. DIAMETER".
- LABOR & MATERIAL FOR INSTALLING PILE WRAPS IS TO BE PAID FOR UNDER PAY ITEM 999-95, "PILE WRAPS".
- LABOR & MATERIAL FOR INSTALLING PILE CONICAL CAPS IS TO BE PAID FOR UNDER PAY ITEM 999-96, "PILE CAPS".
- LABOR & MATERIAL FOR INSTALLING COMPOSITE DECKING (ALTERNATIVE 1) IS TO BE PAID FOR UNDER PAY ITEM 999-97, "COMPOSITE DECKING".

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 200 TAMPA, FL 33647	DRAWN BY: BCS 01-24 CHECKED BY: DRJ 01-24 DESIGNED BY: DRJ 01-24 CHECKED BY: CS 02-24		SAFETY HARBOR   FL	SHEET TITLE:  SUMMARY OF QUANTITIES		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					PROJECT NAME:  SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.
					60% SUBMITTAL NOT FOR CONSTRUCTION							S-05



PLAN  
(STRINGERS, BENT CAPS, AND RAILINGS NOT SHOWN FOR CLARITY)

REVISIONS							
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY

60% SUBMITTAL NOT  
FOR CONSTRUCTION

DAVID R. JOHNSON, P.E.  
P.E. NO.: 79354  
DRMP, INC.  
15310 AMBERLY DRIVE, SUITE 200  
TAMPA, FL 33647

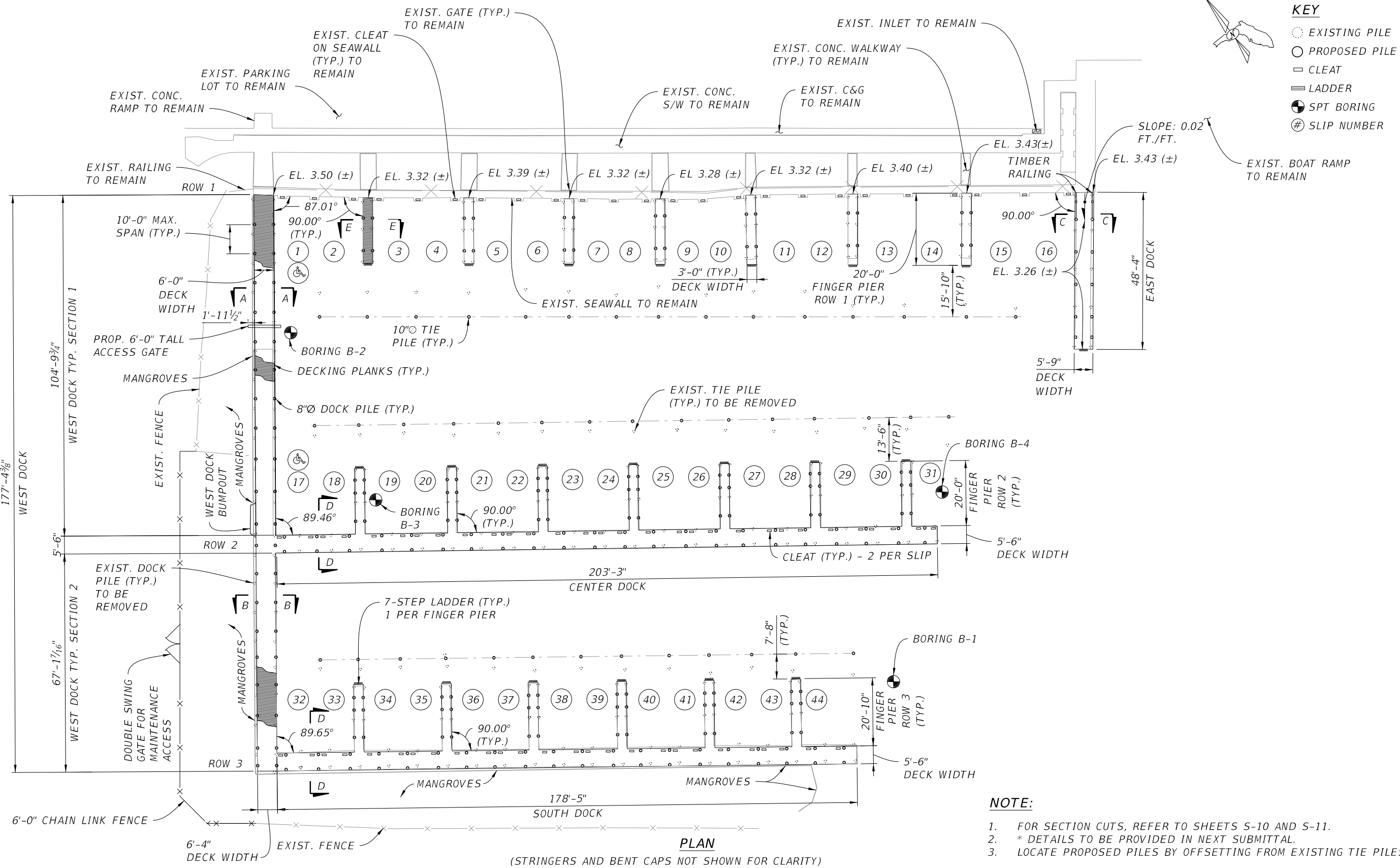
DRAWN BY:  
CAH 01-24  
CHECKED BY:  
DRJ 01-24  
DESIGNED BY:  
DRJ 01-24  
CHECKED BY:  
CS 02-24



SAFETY  
HARBOR



SHEET TITLE:	DEMOLITION PLAN	TWA NO.
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
		S-06



REVISIONS						DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DRAWN BY: CAH 01-24 CHECKED BY: DRJ 01-24 DESIGNED BY: DRJ 01-24 CHECKED BY: CS 02-24		SHEET TITLE:  MARINA LAYOUT PLAN  PROJECT NAME:  SAFETY HARBOR MARINA REPLACEMENT	TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION										
					60% SUBMITTAL NOT FOR CONSTRUCTION										



LEGEND

- 1

DARK GRAY TO DARK BROWN SILT (ML/MH)
- 2

GRAY SILTY SAND (SM)
- 3

GRAY TO BLUE CLAYEY SAND (SC)
- 4

GRAY TO BLUE CLAY (CL/CH)
- 5

WEATHERED LIMESTONE, OCCASIONALLY WITH CALCAREOUS CLAY
- W - WATER
- SP

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- N

NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4

NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- WH

SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- WR

SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD
- 200  
NMC  
LL  
PI

PERCENT PASSING #200 SIEVE  
NATURAL MOISTURE CONTENT (%)  
LIQUID LIMIT (%)  
PLASTICITY INDEX (%)
- CASING
- EASTING

EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.
- NORTHING

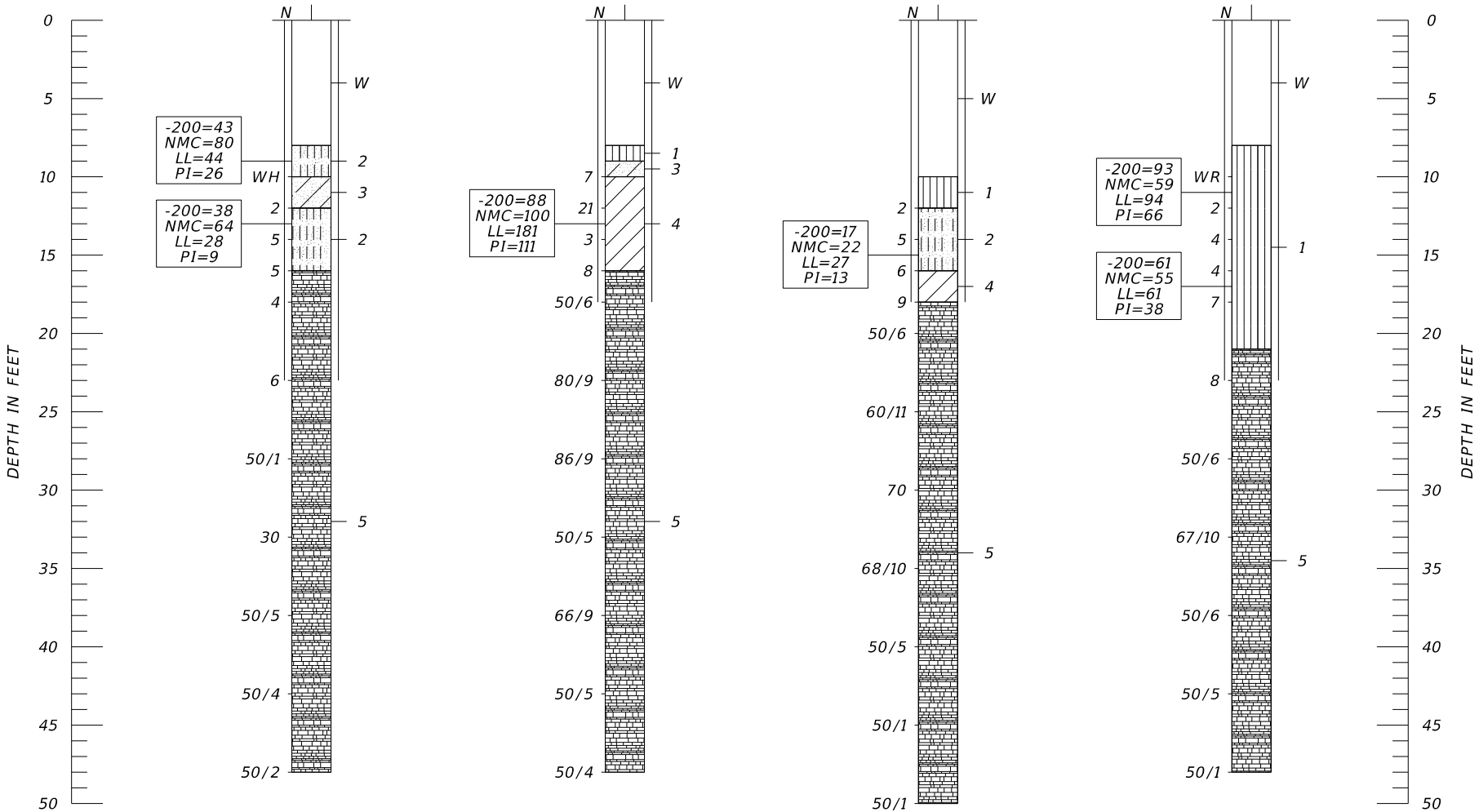
NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA WEST ZONE, N.A.D. 83.

BOR # B-1  
EASTING 434324  
NORTHING 1329300  
DATE 8/24/2023  
DRILLER D. STAKELIN  
HAMMER AUTOMATIC  
RIG CME 55

BOR # B-2  
EASTING 434227  
NORTHING 1329497  
DATE 8/22/2023  
DRILLER D. STAKELIN  
HAMMER AUTOMATIC  
RIG CME 55

BOR # B-3  
EASTING 434224  
NORTHING 1329437  
DATE 8/23/2023  
DRILLER D. STAKELIN  
HAMMER AUTOMATIC  
RIG CME 55

BOR # B-4  
EASTING 434376  
NORTHING 1329350  
DATE 8/24/2023  
DRILLER D. STAKELIN  
HAMMER AUTOMATIC  
RIG CME 55

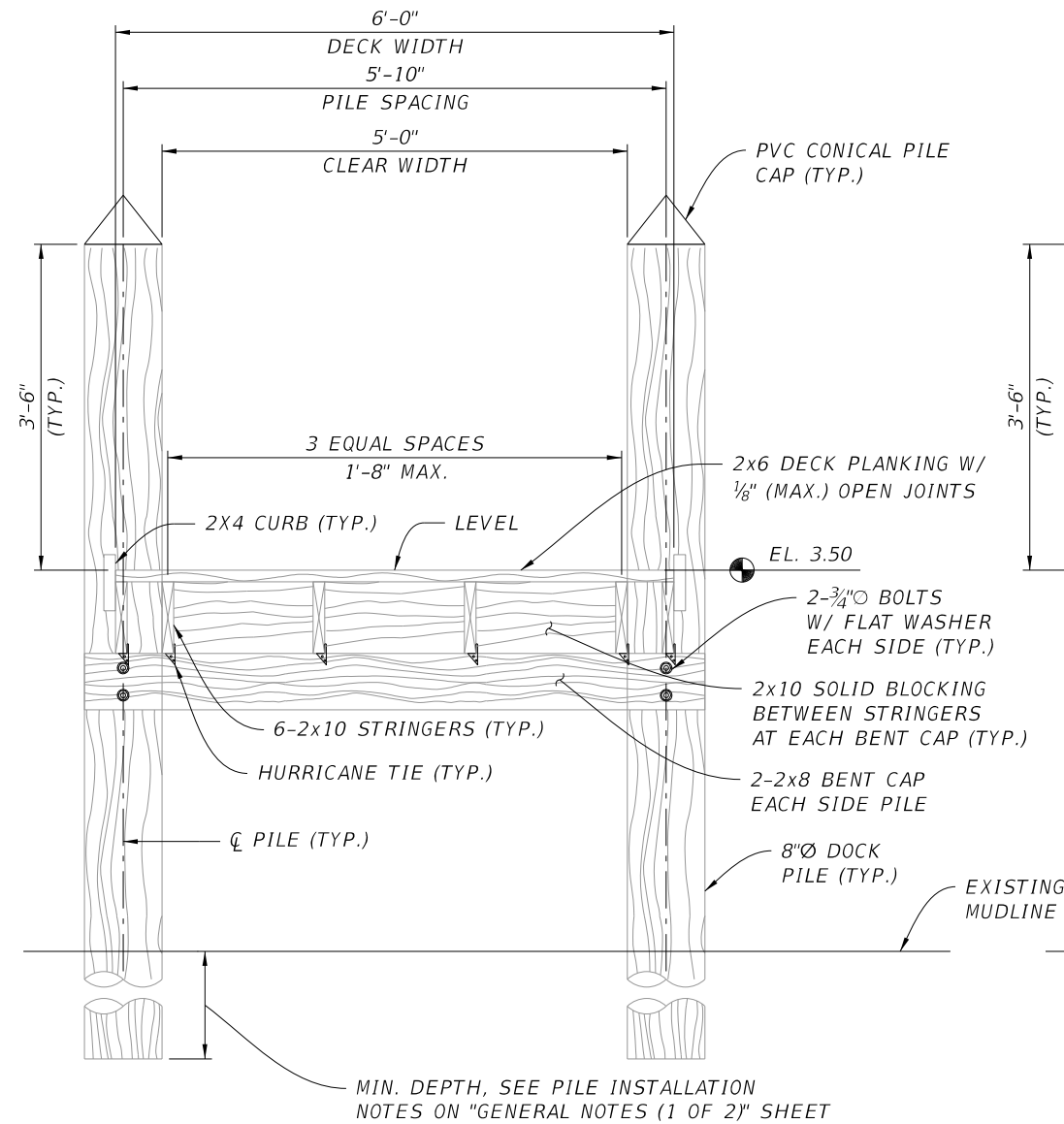


	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	LESS THAN 4 4 to 10 10 to 30 30 to 50 GREATER THAN 50	LESS THAN 3 3 to 8 8 to 24 24 to 40 GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT SOFT FIRM STIFF VERY STIFF HARD	LESS THAN 2 2 to 4 4 to 8 8 to 15 15 to 30 GREATER THAN 30	LESS THAN 1 1 to 3 3 to 6 6 to 12 12 to 24 GREATER THAN 24

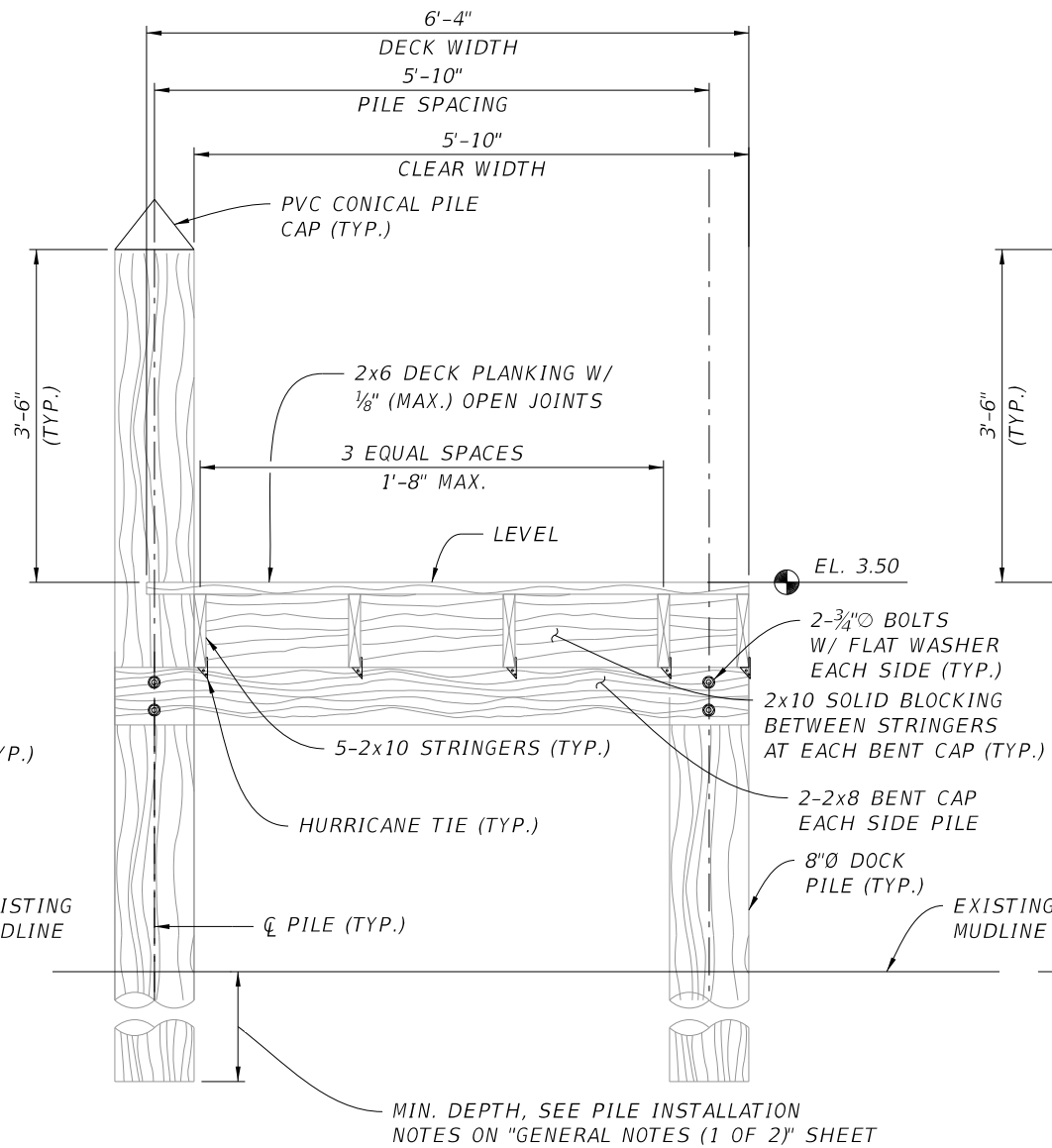
REVISIONS						DRAWN BY: BMG 02/24 CHECKED BY: DRR 02/24 DESIGNED BY: BMG 02/24 CHECKED BY: DRR 02/24		SHEET TITLE:  PROJECT NAME:  SAFETY HARBOR MARINA REPLACEMENT	TWA NO.  SHEET NO.  S-08
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				

DANIEL R. RUEL, P.E.  
P.E. LICENSE NUMBER 82404  
TIERRA, INC.  
7351 TEMPLE TERRACE HIGHWAY  
TAMPA, FLORIDA 33637

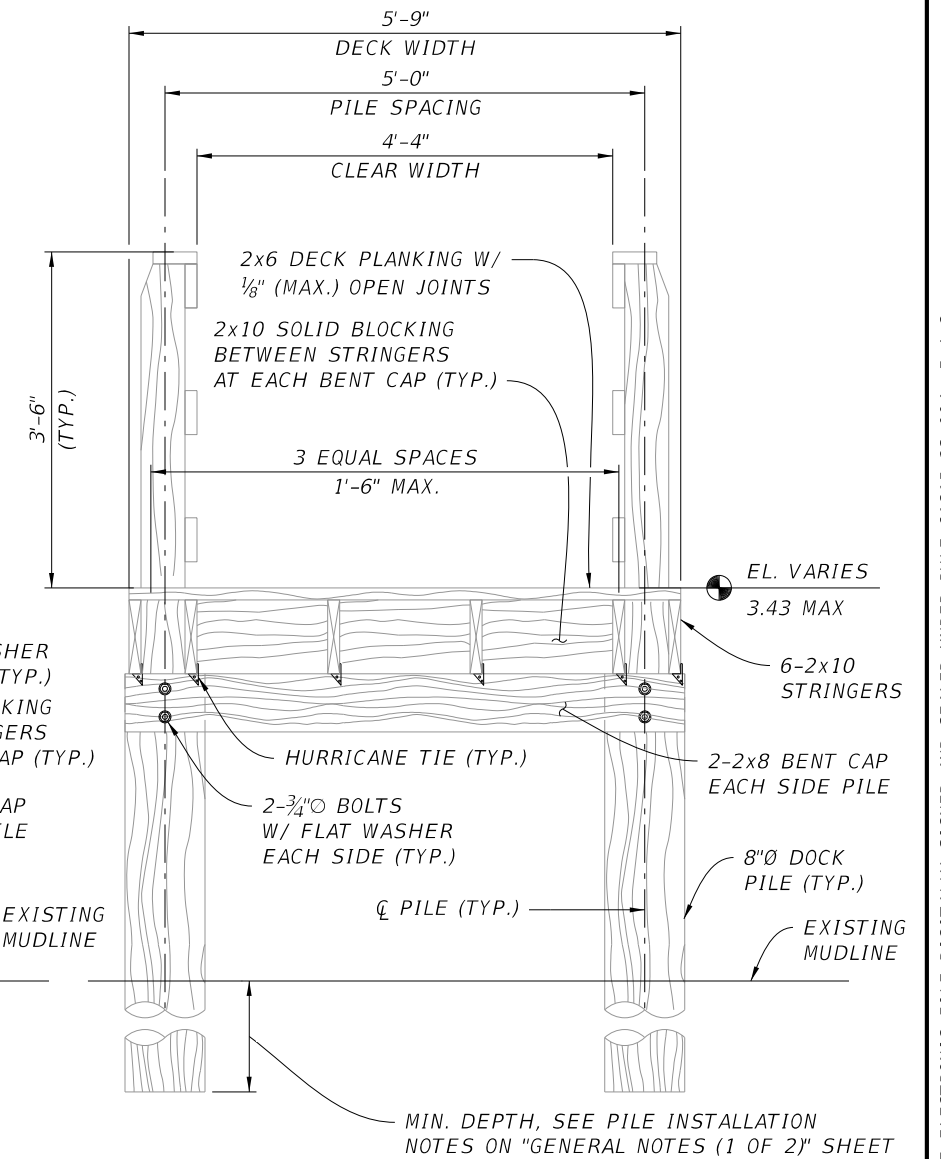




**SECTION A-A**  
**WEST DOCK TYPICAL SECTION 1**  
(DIAGONAL CROSS BRACING NOT SHOWN)



**SECTION B-B**  
**WEST DOCK TYPICAL SECTION 2**  
(DIAGONAL CROSS BRACING NOT SHOWN)



**SECTION C-C**  
**EAST DOCK RAMP SECTION**  
(DIAGONAL CROSS BRACING NOT SHOWN)

**NOTE:**

PROVIDE FLAT WASHERS BETWEEN PILING AND BENT CAP ON EITHER THE TOP OR BOTTOM CONNECTION BOLTS AS NECESSARY TO ENSURE PLUMB INSTALLATION.

REVISIONS						DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DRAWN BY: CAH 01-24 CHECKED BY: DRJ 01-24 DESIGNED BY: DRJ 01-24 CHECKED BY: CS 02-24	SHEET TITLE:  PROJECT NAME:  SAFETY HARBOR MARINA REPLACEMENT	TWA NO.  SHEET NO.  S-10
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION									

**60% SUBMITTAL NOT  
FOR CONSTRUCTION**

DAVID R. JOHNSON, P.E.  
P.E. NO.: 79354  
DRMP, INC.  
15310 AMBERLY DRIVE, SUITE 200  
TAMPA, FL 33647

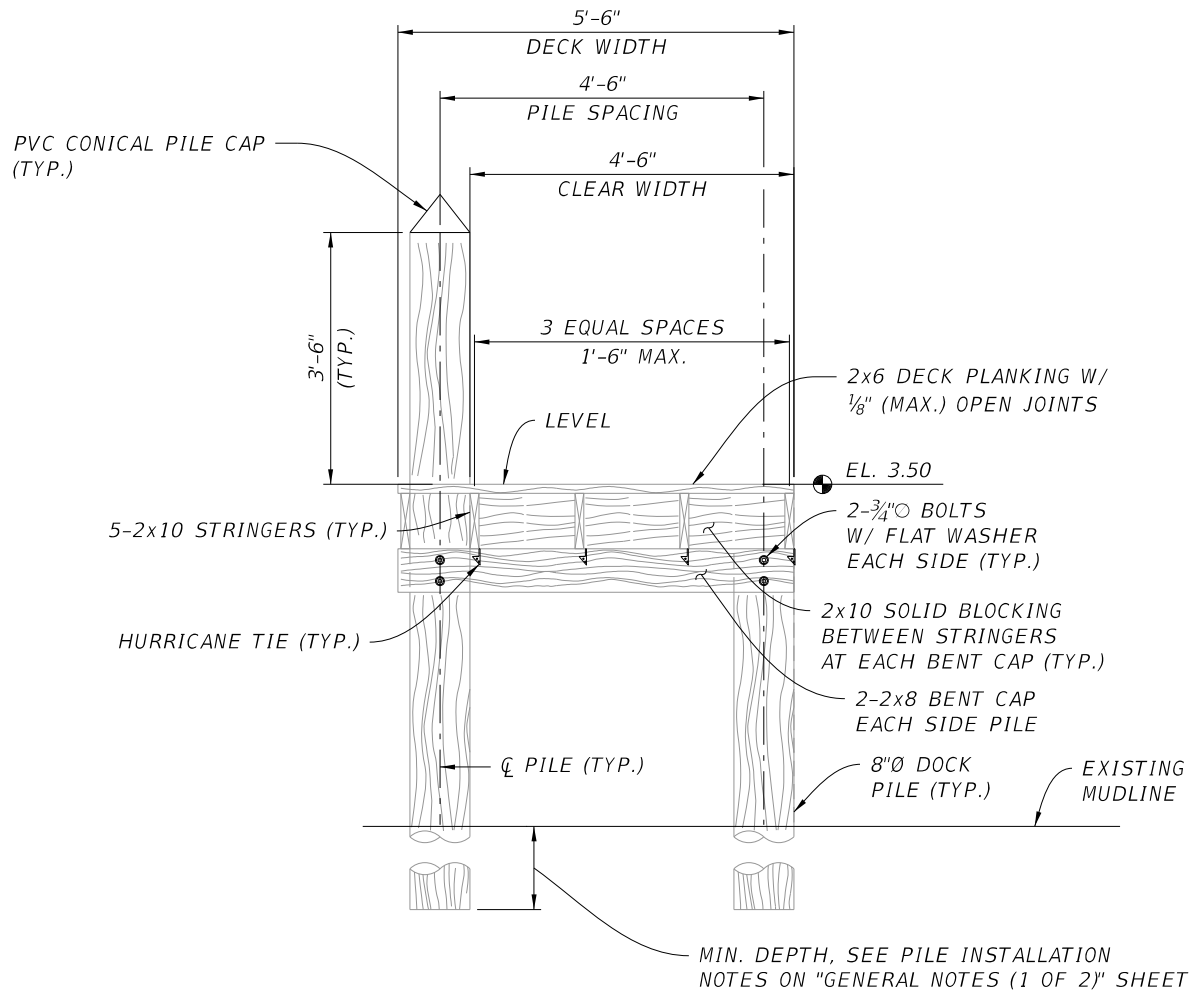


**SAFETY  
HARBOR**

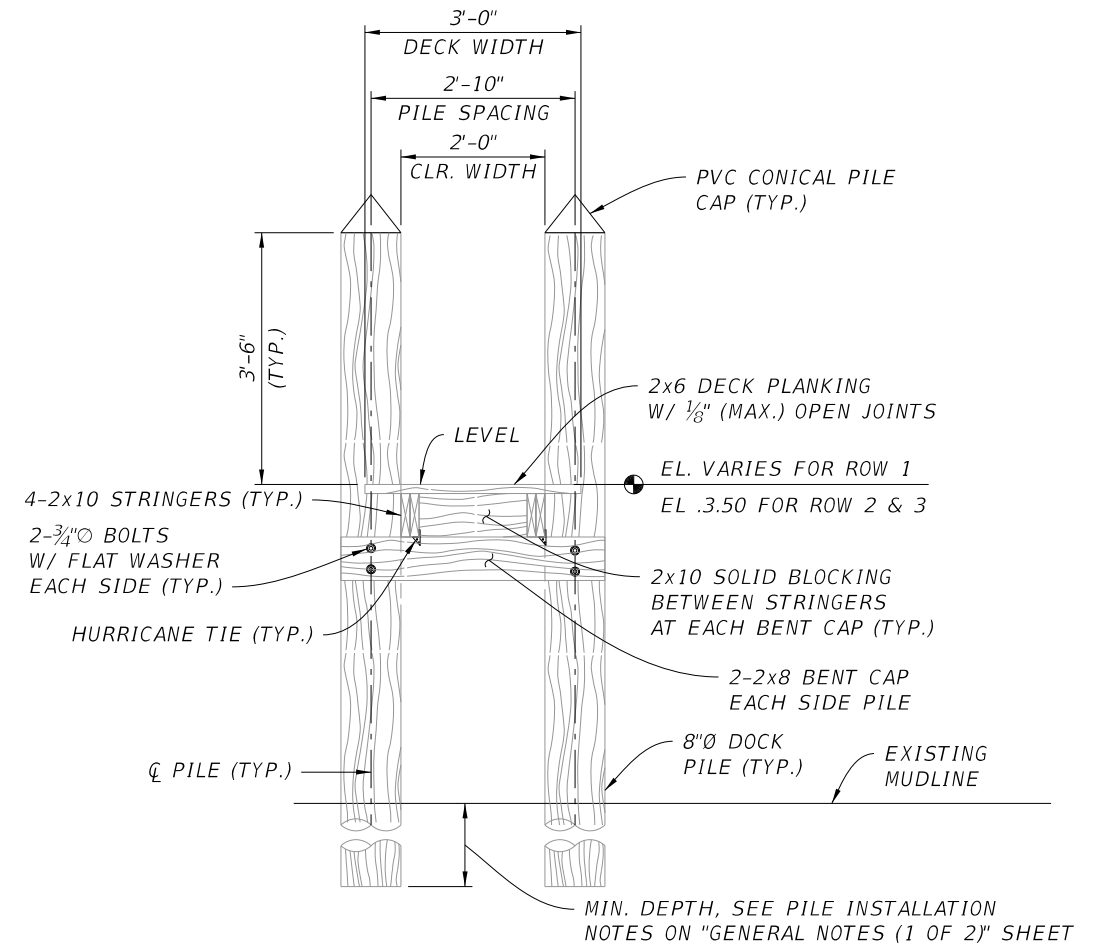
**FL**

TYPICAL SECTIONS (1 OF 2)

SAFETY HARBOR MARINA REPLACEMENT




**SECTION D-D**  
**CENTER DOCK TYPICAL SECTION**  
(SOUTH DOCK IS SIMILAR)  
(DIAGONAL CROSS BRACING NOT SHOWN)



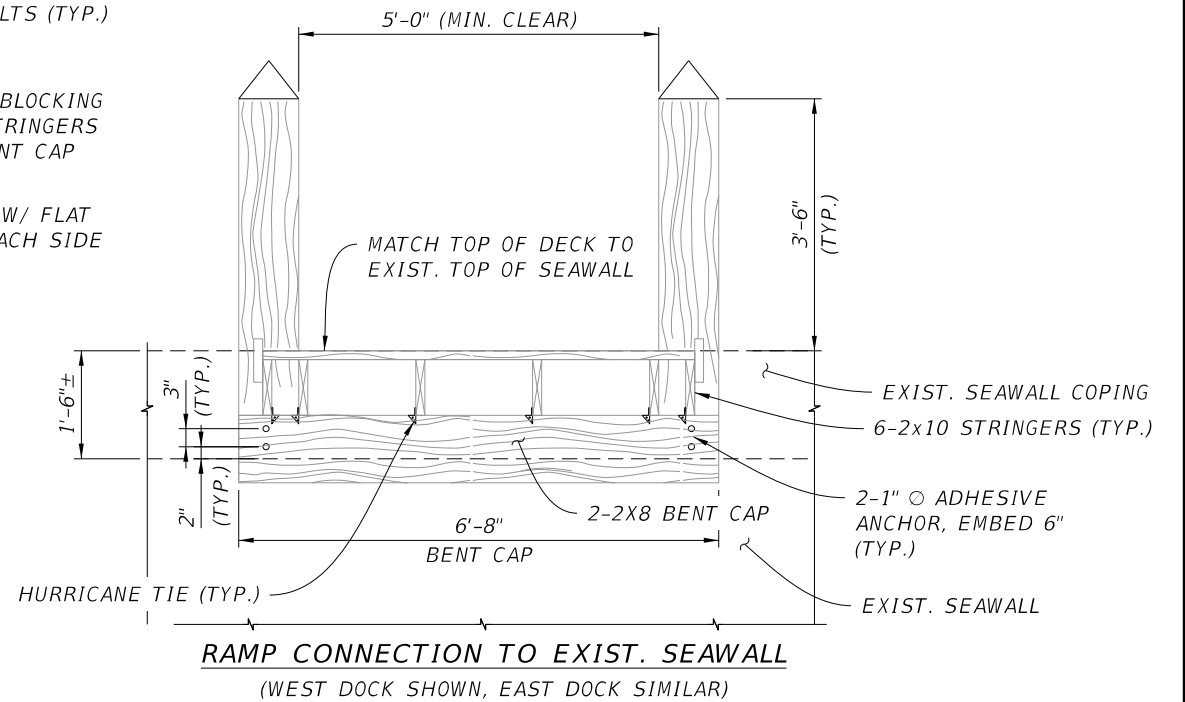
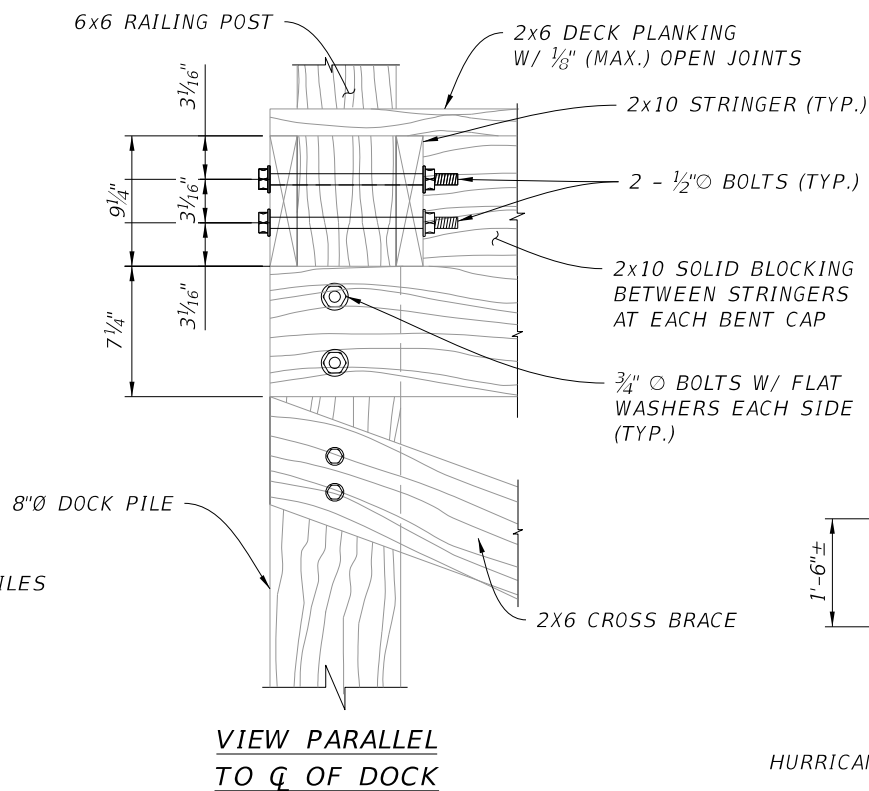
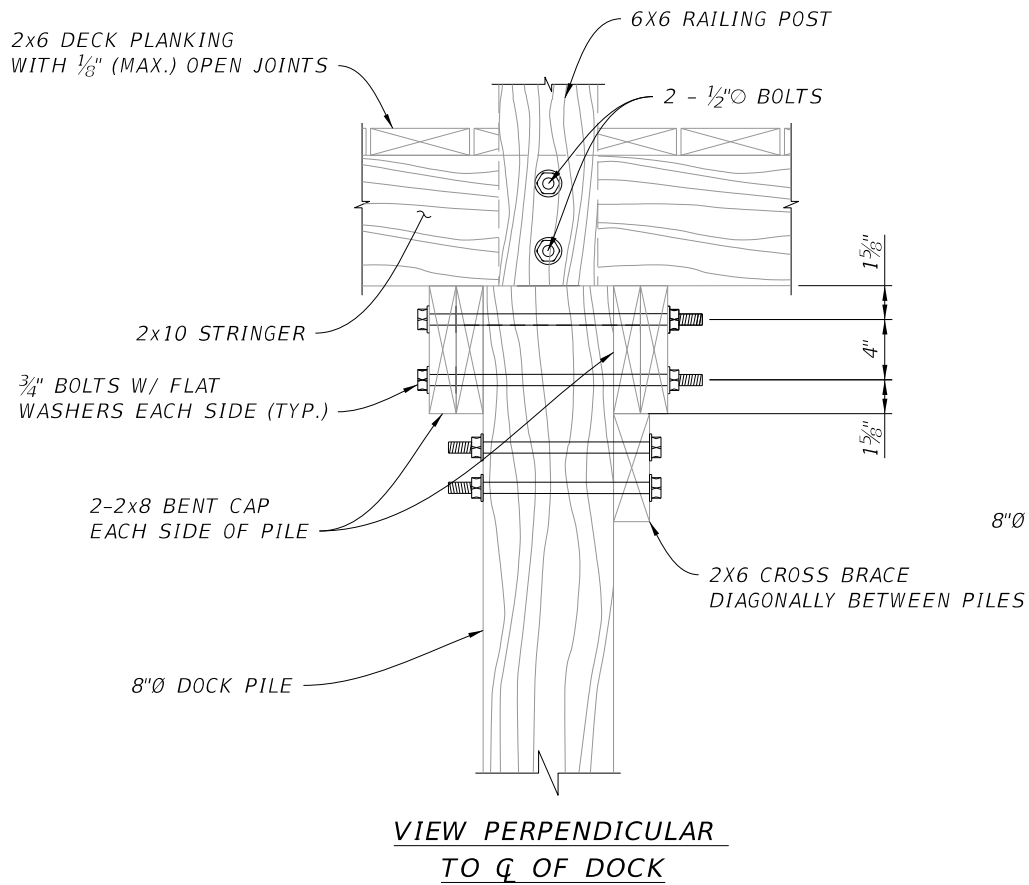
**SECTION E-E**  
**FINGER PIER TYPICAL SECTION**

**NOTE:**

PROVIDE FLAT WASHERS BETWEEN PILING AND BENT CAP  
ON EITHER THE TOP OR BOTTOM CONNECTION BOLTS AS  
NECESSARY TO ENSURE PLUMB INSTALLATION.

REVISIONS						DRAWN BY: CAH 01-24 CHECKED BY: DRJ 01-24 DESIGNED BY: DRJ 01-24 CHECKED BY: CS 02-24	 <b>SAFETY HARBOR</b>   FL	SHEET TITLE:  TYPICAL SECTIONS (2 OF 2)		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			PROJECT NAME:  SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.  S-11	
					60% SUBMITTAL NOT FOR CONSTRUCTION					





### HANDRAIL POST / GIRDER CONNECTION DETAILS

NOTE:  
PROVIDE FLAT WASHERS BETWEEN THE RAILING POST AND PILING ON EITHER THE TOP OR BOTTOM CONNECTION BOLTS AS NECESSARY TO ENSURE PLUMB INSTALLATION OF RAILING.

REVISIONS						DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 200 TAMPA, FL 33647	DRAWN BY: CAH 01-24 CHECKED BY: DRJ 01-24 DESIGNED BY: DRJ 01-24 CHECKED BY: CS 02-24	 <b>SAFETY HARBOR</b>   FL	SHEET TITLE:	TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				MISCELLANEOUS DETAILS (2 OF 2)	
						<div>60% SUBMITTAL NOT FOR CONSTRUCTION</div>			PROJECT NAME:	SHEET NO.
									SAFETY HARBOR MARINA REPLACEMENT	S-13

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EROSION AND SEDIMENT CONTROL

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS USING BEST MANAGEMENT PRACTICES. REFER TO CONSTRUCTION PLANS, DETAILS, SPECIFICATIONS AND APPROVED PERMITS FOR DETAILS. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH ONE HALF THE HEIGHT ON AN EROSION DEVICE OR AS DIRECTED BY THE ENGINEER.

2. DURING THE CONSTRUCTION OF STRUCTURES REQUIRING EXCAVATION, THE CONTRACTOR SHALL PLACE APPROVED BARRIERS OR OTHER APPROVED DEVICES AROUND SUCH STRUCTURES TO PREVENT EROSION AND THE MIGRATION OF SEDIMENT TO POINTS OUTSIDE THE CONSTRUCTION AREA. THE APPROVED BARRIERS OR OTHER APPROVED DEVICES SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS OF FLORIDA STORM WATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2018, STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION OR AS DIRECTED BY THE ENGINEER.

3. REQUIRED EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. FAILURE TO INSTALL OR PROPERLY MAINTAIN REQUIRED EROSION CONTROL WILL RESULT IN ENFORCEMENT ACTION. ALL EROSION CONTROL MEASURES, SAND, SILT, AND DEBRIS SHALL BE REMOVED FROM ALL STRUCTURES AFTER CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO CITY FINAL WALK-THROUGH.

4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT/TURBIDITY BARRIERS TO CONTROL EROSION AND SEDIMENT FROM TAKING PLACE OUTSIDE THE PROJECT LIMITS. THE SILT/TURBIDITY BARRIERS SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS OF FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2018, STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION, THROUGHOUT THE DURATION OF THE PROJECT AND ALL ASPECTS OF CONSTRUCTION. ALL DAMAGED OR INEFFECTIVE EROSION CONTROL DEVICES SHALL BE REPLACED AT NO ADDITIONAL COST TO THE CITY.

5. EROSION CONTROL PLAN - ANY MODIFICATIONS TO THIS PLAN MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REPRESENTING THE CONTRACTOR. THESE MODIFICATIONS MUST BE APPROVED BY THE CITY AND THE PERMITTING AGENCY. NO CONTRACT DELAYS WILL BE ALLOWED FOR SUCH MODIFICATIONS OR APPROVALS.

6. APPROVED BARRIERS (OR OTHER APPROVED SEDIMENT CONTROL DEVICES) THESE SHALL BE PLACED AT THE BASE OF ANY SLOPE WHERE A RAINFALL EVENT COULD ERODE A SLOPE AND TRANSPORT SEDIMENTS OFF-SITE. APPROVED BARRIERS SHALL BE DOUBLE STAKED IN ACCORDANCE WITH FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL, 2018, AND STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, LATEST EDITION. ANY DAMAGED OR INEFFECTIVE APPROVED BARRIERS ARE TO BE REPLACED WITH NEW ONES. THE LOCATION AND INSTALLATION OF APPROVED BARRIERS SHALL BE AS DIRECTED BY THE PROJECT ENGINEER.

7. STOCKPILED MATERIALS SHALL BE PROTECTED BY COVER, APPROVED BARRIERS OR OTHER APPROVED SEDIMENT CONTROL DEVICES.

8. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 3 DAYS AFTER ½" RAIN EVENT DISTURBANCE.

9. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION, OR OTHER ACCEPTABLE METHODS.

10. THE EROSION CONTROL DEVICE QUANTITIES SHOWN ON THE BID FORMS ARE ESTIMATES OF THE ACTUAL QUANTITIES THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SPECIFY ACTUAL QUANTITIES AND COSTS ASSOCIATED WITH THIS SPECIFIC EROSION CONTROL IMPLEMENTATION SCHEDULE. EROSION CONTROL ITEMS MAY BE ADDED OR DELETED FROM THE PAY ITEM LIST AS THE EROSION CONTROL IMPLEMENTATION SCHEDULE PROVIDED BY THE CONTRACTOR IS MODIFIED TO MEET SITE SPECIFIC CONDITIONS.

11. ALL EROSION CONTROL FENCES, BARRIERS, AND SILTATION DEVICES SHALL BE ERECTED PRIOR TO ANY LAND ALTERATIONS, SHALL BE MAINTAINED IN GOOD WORKING ORDER DURING CONSTRUCTION, AND REMOVED FOLLOWING SOIL STABILIZATION AND FINAL DRESSING. STOCKPILE AREAS SHALL INCLUDE SILT FENCING AROUND THE PERIMETER.

12. THE CONTRACTOR SHALL NOT RESTRICT OR BLOCK THE EXISTING DRAINAGE FLOW OVERLAND OR WITHIN RESHAPED SWALES. FLOW WITHIN EXISTING DRAINAGE PIPES SHALL BE MAINTAINED AT ALL TIMES. STORM WATER WILL BE CONVEYED VIA EXISTING SWALES, DITCHES, OR PROPOSED DITCHES, EXISTING AND PROPOSED STORM SEWERS.

13. THERE IS TO BE NO DISCHARGE (I.E. PUMPING, SHEET FLOW, SWALE, DITCH, ETC.) INTO EXISTING DITCHES OR CANALS WITHOUT THE USE OF SETTLING PONDS. IF THE CONTRACTOR DESIRES TO DISCHARGE INTO EXISTING DITCHES OR CANALS A SETTLING POND PLAN PREPARED BY THE CONTRACTOR MUST BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND LOCAL REGULATORY AGENCY PRIOR TO CONSTRUCTION.

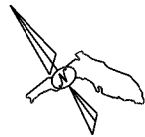
REVISIONS						<div>DAVID R. JOHNSON, P.E. P.E. NO.: 79354 DRMP, INC. 15310 AMBERLY DRIVE, SUITE 200 TAMPA, FL 33647</div>	<div><div><div>DRAWN BY: BCS 01-24</div><div>CHECKED BY: DRJ 01-24</div><div>DESIGNED BY: DRJ 01-24</div><div>CHECKED BY: CS 02-24</div></div><div> SAFETY HARBOR   FL</div></div>	SHEET TITLE:	EROSION CONTROL GENERAL NOTES	TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			PROJECT NAME:		SHEET NO.
					60% SUBMITTAL NOT FOR CONSTRUCTION				SAFETY HARBOR MARINA REPLACEMENT	C-01

dmontoya

3/1/2024

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PROP. HANDRAIL PER FDOT STANDARD  
PLANS INDEX 515-062 (TYP.)

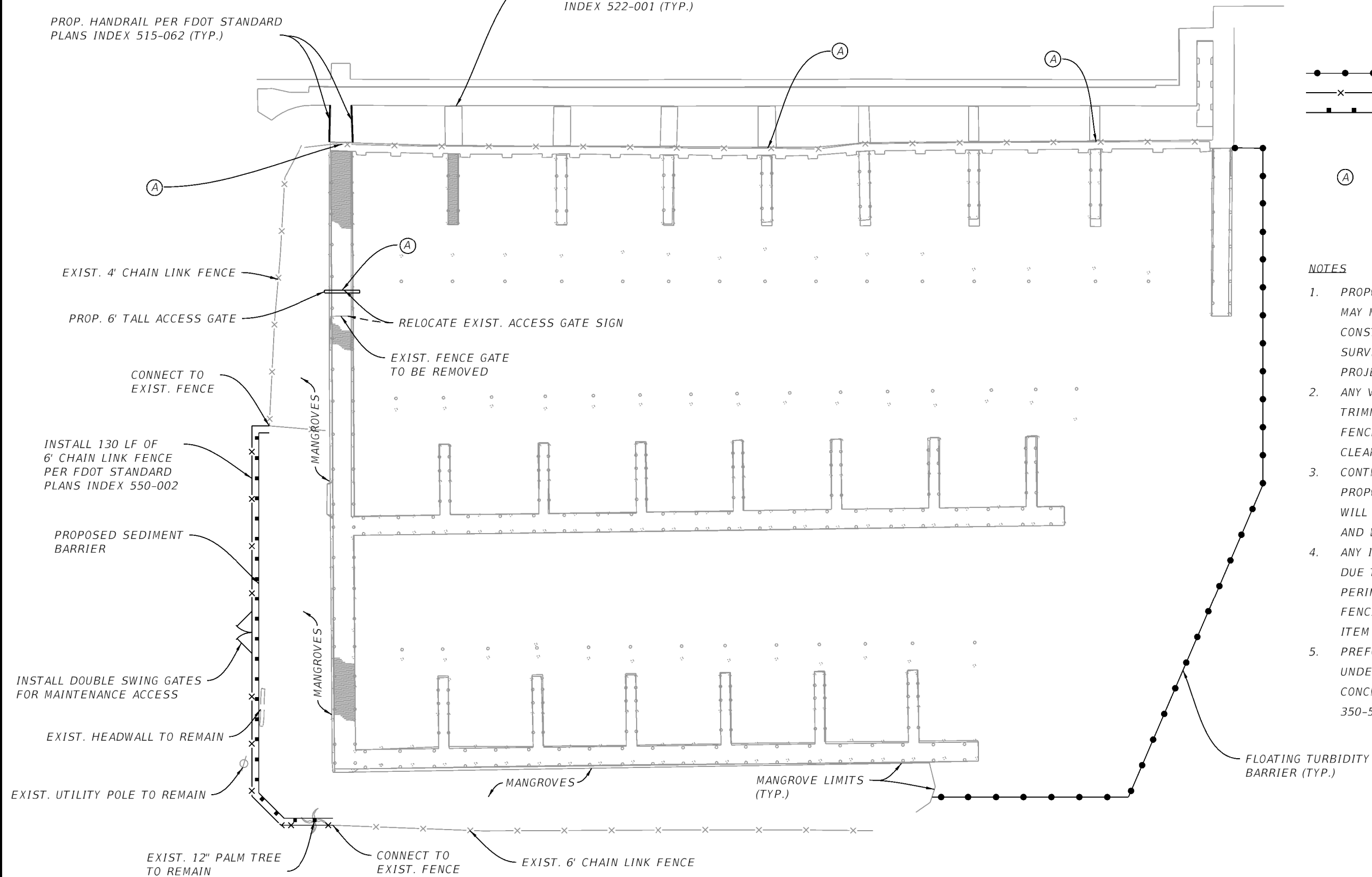
FILL EXIST. JOINT GAP WITH  
PREFORMED JOINT FILLER  
PER FDOT STANDARD PLANS  
INDEX 522-001 (TYP.)

- KEY**
- FLOATING TURBIDITY BARRIER
  - 6' CHAIN LINK FENCE
  - SEDIMENT BARRIER

INSTALL "NO SWIMMING -  
WARNING - POTENTIAL SHOCK  
HAZARD - ELECTRICAL CURRENTS  
MAY BE PRESENT IN THE WATER."  
PER NATIONAL ELECTRICAL CODE  
555.10

**NOTES**

- PROPOSED PERIMETER FENCE LAYOUT  
MAY NEED FIELD ADJUSTMENTS DURING  
CONSTRUCTION SINCE TOPOGRAPHIC  
SURVEY LIMITS DO NOT COVER THIS  
PROJECT AREA.
- ANY VEGETATION REMOVAL AND/OR TREE  
TRIMMING REQUIRED FOR THE PERIMETER  
FENCE INSTALLATION TO BE PAID UNDER  
CLEARING AND GRUBBING.
- CONTRACTOR TO FIELD VERIFY THAT  
PROPOSED PERIMETER FENCE POSTS  
WILL NOT IMPACT EXISTING UTILITIES  
AND DRAINAGE STRUCTURES.
- ANY INCIDENTAL GRADING AND SODDING  
DUE TO INSTALLATION OF THE PROPOSED  
PERIMETER FENCE TO BE PAID UNDER  
FENCING, TYPE B, 5.1'-6.0', STANDARD PAY  
ITEM NUMBER 550-10-220.
- PREFORMED JOINT FILLER TO BE PAID  
UNDER CLENING & SEALING JOINTS-  
CONCRETE PAVEMENT PAY ITEM NUMBER  
350-5.



**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

60% SUBMITTAL NOT  
FOR CONSTRUCTION

DAVID R. JOHNSON, P.E.  
P.E. NO.: 79354  
DRMP, INC.  
15310 AMBERLY DRIVE, SUITE 200  
TAMPA, FL 33647

DRAWN BY:  
CAH 01-24  
CHECKED BY:  
DRJ 01-24  
DESIGNED BY:  
DRJ 01-24  
CHECKED BY:  
CS 02-24










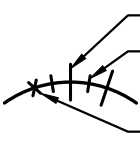




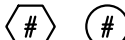








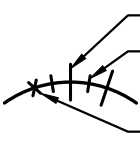




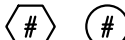








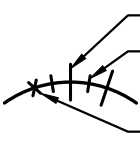




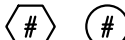



**SAFETY HARBOR** | FL

SHEET TITLE:	SITE CIVIL AND EROSION CONTROL PLAN	TWA NO.	
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.	C-02

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## LEGEND

SYMBOL	DESCRIPTION	MOUNTING/REMARKS	SYMBOL	DESCRIPTION				MOUNTING/REMARKS																																																																																																																																																						
	LIGHTING CABINET: DENOTED BY LABEL	SURFACE, TOP 78" AFF OR AS REQUIRED BY MANUFACTURER	<b>ABBREVIATIONS:</b> <div><div><div>A</div><div>AMPS OR AMPERE</div></div><div><div>A/E</div><div>ARCHITECT/ENGINEER</div></div><div><div>AF</div><div>AMPERE FRAME</div></div><div><div>AFCI</div><div>ARC-FAULT CIRCUIT INTERRUPTER</div></div><div><div>AFF</div><div>ABOVE FINISHED FLOOR</div></div><div><div>AFG</div><div>ABOVE FINISHED GRADE</div></div><div><div>AHJ</div><div>AUTHORITY HAVING JURISDICTION</div></div><div><div>AIC</div><div>AMPERE INTERRUPTING CAPACITY</div></div><div><div>AL</div><div>ALUMINUM</div></div><div><div>ANSI</div><div>AMERICAN NATIONAL STANDARDS INSTITUTE</div></div><div><div>ASD</div><div>ADJUSTABLE SPEED DRIVE</div></div><div><div>AT</div><div>AMPERE TRIP</div></div><div><div>ATS</div><div>AUTOMATIC TRANSFER SWITCH</div></div><div><div>AUTO</div><div>AUTOMATIC</div></div><div><div>AWG</div><div>AMERICAN WIRE GAUGE</div></div><div><div>BLDG</div><div>BUILDING</div></div><div><div>BFG</div><div>BELOW FINISHED GRADE</div></div><div><div>BRKR</div><div>BREAKER</div></div><div><div>C</div><div>CONDUIT</div></div><div><div>CB</div><div>CIRCUIT BREAKER</div></div><div><div>CKT</div><div>CIRCUIT</div></div><div><div>COMM</div><div>COMMUNICATIONS</div></div><div><div>CT</div><div>CURRENT TRANSFORMER</div></div><div><div>CU</div><div>COPPER</div></div><div><div>°C</div><div>DEGREES CELSIUS</div></div><div><div>°F</div><div>DEGREES FAHRENHEIT</div></div><div><div>DISC</div><div>DISCONNECT</div></div><div><div>DP</div><div>DISTRIBUTION PANELBOARD</div></div><div><div>DS</div><div>DISCONNECT SWITCH</div></div><div><div>DWG</div><div>DRAWING</div></div><div><div>EC</div><div>ELECTRICAL CONTRACTOR</div></div><div><div>EG</div><div>EQUIPMENT GROUND</div></div><div><div>ELEC</div><div>ELECTRIC OR ELECTRICAL</div></div><div><div>ELEV</div><div>ELEVATOR</div></div><div><div>EMER</div><div>EMERGENCY</div></div><div><div>EPO</div><div>EMERGENCY POWER OFF</div></div><div><div>EPS</div><div>EMERGENCY POWER SUPPLY</div></div><div><div>EXIST</div><div>EXISTING</div></div><div><div>FA</div><div>FIRE ALARM</div></div></div> <div><div>FC</div><div>FOOTCANDLE</div></div> <div><div>FLA</div><div>FULL LOAD AMPS</div></div> <div><div>FO</div><div>FIBER OPTIC</div></div> <div><div>FT</div><div>FOOT (FEET)</div></div> <div><div>GC</div><div>GENERAL CONTRACTOR</div></div> <div><div>GEN</div><div>GENERATOR</div></div> <div><div>GFCI</div><div>GROUND-FAULT CIRCUIT INTERRUPTER</div></div> <div><div>GND</div><div>GROUND</div></div> <div><div>HOA</div><div>HAND-OFF-AUTO</div></div> <div><div>HP</div><div>HORSEPOWER</div></div> <div><div>HPS</div><div>HIGH PRESSURE SODIUM</div></div> <div><div>HV</div><div>HIGH VOLTAGE</div></div> <div><div>HZ</div><div>HERTZ</div></div> <div><div>IG</div><div>ISOLATED GROUND</div></div> <div><div>IN</div><div>INCH (INCHES)</div></div> <div><div>JB</div><div>JUNCTION BOX</div></div> <div><div>kcmil</div><div>THOUSAND CIRCULAR MIL</div></div> <div><div>kV</div><div>KILOVOLT</div></div> <div><div>kVA</div><div>KILOVOLT AMPERE</div></div> <div><div>kW</div><div>KILOWATT</div></div> <div><div>kWh</div><div>KILOWATT HOUR</div></div> <div><div>LED</div><div>LIGHT EMITTING DIODE</div></div> <div><div>LPS</div><div>LIGHTNING PROTECTION SYSTEM</div></div> <div><div>LTG</div><div>LIGHTING</div></div> <div><div>LTNG</div><div>LIGHTNING</div></div> <div><div>LV</div><div>LOW VOLTAGE</div></div> <div><div>MAX</div><div>MAXIMUM</div></div> <div><div>MCA</div><div>MINIMUM CIRCUIT AMPACITY</div></div> <div><div>MCB</div><div>MAIN CIRCUIT BREAKER</div></div> <div><div>MCC</div><div>MOTOR CONTROL CENTER</div></div> <div><div>MDP</div><div>MAIN DISTRIBUTION PANELBOARD</div></div> <div><div>MH</div><div>METAL HALIDE</div></div> <div><div>MHz</div><div>MEGAHERTZ</div></div> <div><div>MIN</div><div>MINIMUM</div></div> <div><div>MLO</div><div>MAIN LUGS ONLY</div></div> <div><div>MOCp</div><div>MAXIMUM OVERCURRENT PROTECTION</div></div> <div><div>MTS</div><div>MANUAL TRANSFER SWITCH</div></div> <div><div>N</div><div>NEUTRAL</div></div> <div><div>NA</div><div>NOT APPLICABLE</div></div> <div><div>NC</div><div>NORMALLY CLOSED</div></div> <div><div>NEC</div><div>NATIONAL ELECTRICAL CODE</div></div> <div><div>NEMA</div><div>NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION</div></div> <div><div>NFPA</div><div>NATIONAL FIRE PROTECTION ASSOCIATION</div></div> <div><div>NO</div><div>NORMALLY OPEN</div></div> <div><div>NTS</div><div>NOT TO SCALE</div></div> <div><div>OB</div><div>OUTLET BOX</div></div> <div><div>P</div><div>POLE</div></div> <div><div>PA</div><div>PUBLIC ADDRESS</div></div> <div><div>PB</div><div>PULL BOX</div></div> <div><div>PH/φ</div><div>PHASE</div></div> <div><div>PNL</div><div>PANELBOARD (PANEL)</div></div> <div><div>RECPT</div><div>RECEPTACLE</div></div> <div><div>SCC</div><div>SHORT CIRCUIT CAPACITY</div></div> <div><div>SF</div><div>SQUARE FOOT (FEET)</div></div> <div><div>SPEC</div><div>SPECIFICATION</div></div> <div><div>SPD</div><div>SURGE PROTECTIVE DEVICE</div></div> <div><div>SS</div><div>STAINLESS STEEL</div></div> <div><div>SWBD</div><div>SWITCHBOARD</div></div> <div><div>SWGR</div><div>SWITCHGEAR</div></div> <div><div>TR</div><div>TAMPER RESISTANT</div></div> <div><div>TYP</div><div>TYPICAL</div></div> <div><div>U</div><div>UNKNOWN CIRCUIT</div></div> <div><div>UL</div><div>UNDERWRITERS LABORATORY</div></div> <div><div>UON</div><div>UNLESS OTHERWISE NOTED</div></div> <div><div>UPS</div><div>UNINTERRUPTIBLE POWER SUPPLY</div></div> <div><div>UTIL</div><div>UTILITY</div></div> <div><div>V</div><div>VOLT OR VOLTAGE</div></div> <div><div>VA</div><div>VOLT AMPERE</div></div> <div><div>VD</div><div>VOLTAGE DROP</div></div> <div><div>VFD</div><div>VARIABLE FREQUENCY DRIVE</div></div> <div><div>W</div><div>WATT OR WIRE</div></div> <div><div>WP</div><div>WEATHERPROOF</div></div> <div><div>WR</div><div>WEATHER RESISTANT</div></div> <div><div>WT</div><div>WATERTIGHT</div></div> <div><div>XFER</div><div>TRANSFER</div></div> <div><div>XFMR</div><div>TRANSFORMER</div></div> <div><div>XP</div><div>EXPLOSION RATED</div></div> <tr><td></td><td>DEVICE AS NOTED</td><td>AS NOTED</td><td colspan="6"></td></tr> <tr><td></td><td>BRANCH CIRCUIT PANELBOARD: 240 VAC</td><td>TOP 78" AFF</td><td colspan="6"></td></tr> <tr><td></td><td>CIRCUIT BREAKER</td><td>TOP 78" AFF</td><td colspan="6"></td></tr> <tr><td></td><td>ELECTRICAL EQUIPMENT: DENOTED BY LABEL</td><td>AS NOTED</td><td colspan="6"></td></tr> <tr><td></td><td>ELECTRIC UTILITY METER/CABINET</td><td>AS REQUIRED BY UTILITY COMPANY</td><td colspan="6"></td></tr> <tr><td></td><td>CIRCUIT/CONDUIT OR CABLE TURNING UP/RISER</td><td> TWO WIRES: *</td><td colspan="6"></td></tr> 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EQUIPMENT GROUND WIRE</div></td><td colspan="6"></td></tr> <tr><td></td><td>CIRCUIT HOME RUN TO PANELBOARD INDICATED</td><td colspan="6"></td></tr> <tr><td></td><td>CIRCUIT/CONDUIT FLEXIBLE CONNECTION</td><td colspan="6"></td></tr> <tr><td></td><td>CIRCUIT/CONDUIT OR CABLE CONCEALED IN CEILING OR WALL</td><td colspan="6"></td></tr> <tr><td></td><td>CIRCUIT/CONDUIT OR CABLE UNDERGROUND OR UNDER FLOOR</td><td>*MIN 2 #12 + #12 EG - 1/2" C FOR ALL POWER AND LIGHTING RACEWAYS UON OR SPECIFIED</td><td colspan="6"></td></tr> <tr><td>'EQUIP'</td><td>EQUIPMENT LABEL</td><td>REFER TO RESPECTIVE SCHEDULE</td><td colspan="6"></td></tr> <tr><td>PNL-CIR</td><td>PANELBOARD-CIRCUIT DESIGNATION</td><td>REFER TO PANEL SCHEDULE</td><td colspan="6"></td></tr> <tr><td></td><td>KEYED NOTES</td><td>REFER TO LIKE-NUMBERED NOTES</td><td colspan="6"></td></tr> <tr><td colspan="3"><b>NOTES:</b> A. 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OSHA PART 1926: SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION</td><td colspan="6"></td></tr> <tr><td colspan="3"></td><td colspan="6"><b>OBJECT STATE LINETYPES:</b> EXISTING OBJECT OR CONSTRUCTION: _____ EXISTING OBJECT OR CONSTRUCTION TO BE DEMOLISHED: - - - - - NEW OBJECT OR CONSTRUCTION TO BE PROVIDED: _____</td></tr> <tr><td colspan="3"></td><td colspan="6"><b>OBJECT STATE SUBSCRIPTS:</b> D EXISTING OBJECT TO BE DEMOLISHED E EXISTING OBJECT TO BE REMOVED &amp; RELOCATED R RELOCATED EXISTING OBJECT</td></tr>							DEVICE AS NOTED	AS NOTED								BRANCH CIRCUIT PANELBOARD: 240 VAC	TOP 78" AFF								CIRCUIT BREAKER	TOP 78" AFF								ELECTRICAL EQUIPMENT: DENOTED BY LABEL	AS NOTED								ELECTRIC UTILITY METER/CABINET	AS REQUIRED BY UTILITY COMPANY								CIRCUIT/CONDUIT OR CABLE TURNING UP/RISER	 TWO WIRES: *								CIRCUIT/CONDUIT OR CABLE TURNING DOWN/DROP	 <div>NEUTRAL WIRE (TYP) PHASE WIRE (TYP) THREE WIRES, ETC. 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<b>REVISIONS</b>						- TO THE BEST OF THE ENGINEER'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES. - THIS DOCUMENT IS VALID FOR 12 MONTHS FROM DATE OF ENGINEER'S SIGNATURE AND SEAL. - HALL ENGINEERING GROUP, INC. RETAINS INTELLECTUAL AND PHYSICAL RIGHTS TO THIS DOCUMENT AND ITS CONTENT AND PROHIBITS ITS PUBLISHING, DISCLOSURE OR REPRODUCTION WITHOUT CONSENT.	DRAWN BY: CJV CHECKED BY: AVE DESIGNED BY: AVE CHECKED BY: AVE	 <div style="display: inline-block; vertical-align: middle;"> <b>SAFETY HARBOR</b> FL           </div>	SHEET TITLE:	ELECTRICAL LEGEND	TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.
											E-01






DRAWING NOTES (SHEETS E-03 – E-04)

- 1. EXISTING EQUIPMENT RACK. REFER TO THE POWER ONE-LINE DIAGRAM ON SHEET E-06 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- 2. EXISTING PANELBOARD AND ASSOCIATED FEEDER AND BRANCH CIRCUIT CONDUCTORS AND CONDUITS TO BE REMOVED AND REPLACED WITH NEW.
- 3. EXISTING MARINA RECEPTACLE PEDESTAL AND ASSOCIATED DEVICES, CONDUCTORS, AND CONDUITS TO BE REMOVED AND REPLACED WITH NEW.
- 4. EXISTING 240/120 V, 1ϕ, 3W, 150 A MCB PANELBOARD TO REMAIN.
- 5. EXISTING LIGHTING CONTROL CABINET TO REMAIN.
- 6. ENCLOSED CIRCUIT BREAKER. REFER TO POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 7. MARINA PEDESTAL. REFER TO SCHEDULE ON SHEET E-10.

DRAWING GENERAL NOTES (SHEETS E-03 – E-04)

- A. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- B. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- C. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- D. REFER TO POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- E. MAXIMUM 3 QUARTER TURNS (TOTAL 270°) CONDUIT BENDS BETWEEN JUNCTION/PULL BOXES.
- F. MAINTAIN MINIMUM 12” SEPARATION BETWEEN ELECTRICAL AND OTHER UTILITIES/INFRASTRUCTURE.
- G. COORDINATE WITH EXISTING UNDERGROUND UTILITIES AND CONDITIONS. HAND DIG TRENCHES AS REQUIRED.
- H. SAW CUT AND PATCH PAVEMENT AS REQUIRED. COORDINATE WORK WITH OWNER.
- I. ALL CONDUCTORS SHALL BE TYPE XHHW-2.
- J. ALL EXPOSED CONDUITS SHALL BE UV RESISTANT, SCHEDULE 80 PVC.
- K. ALL FASTENERS, ANCHORS, STRAPS, HARDWARE, STRUT-CHANNEL, ETC. SHALL BE STAINLESS STEEL (TYPE 316).
- L. THE ELECTRICAL DATUM PLANE SHALL BE 2 FEET ABOVE THE HIGHEST TIDE LEVEL.
- M. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE LOCATED ABOVE THE ELECTRICAL DATUM PLANE.
- N. ELECTRICAL EQUIPMENT AND DEVICES LOCATED ON THE DOCK SHALL BE MINIMUM 12” ABOVE THE DECK BUT SHALL NOT BE LOCATED BELOW THE ELECTRICAL DATUM PLANE.
- O. CONDUITS ROUTED UNDER THE DOCK SHALL BE SECURELY FASTENED TO THE STRUCTURE MAXIMUM EVERY 6’ USING LISTED, 2-HOLE, STAINLESS STEEL (TYPE 316) CONDUIT STRAPS.
- P. PROVIDE SAFETY SIGNS PER NEC 555.10.

REVISIONS						<div><div><div>TO THE BEST OF THE ENGINEER'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES.</div><div>THIS DOCUMENT IS VALID FOR 12 MONTHS FROM DATE OF ENGINEER'S SIGNATURE AND SEAL.</div><div>HALL ENGINEERING GROUP, INC. RETAINS INTELLECTUAL AND PHYSICAL RIGHTS TO THIS DOCUMENT AND ITS CONTENT AND PROHIBITS ITS PUBLISHING, DISCLOSURE OR REPRODUCTION WITHOUT CONSENT.</div></div></div>	<div><div>DRAWN BY: CJV</div><div>CHECKED BY: AVE</div><div>DESIGNED BY: AVE</div><div>CHECKED BY: AVE</div></div>	<div><div></div><div><div>SAFETY HARBOR</div><div>FL</div></div></div>	<div><div>SHEET TITLE:</div><div>ELECTRICAL PLAN NOTES</div></div> <div><div>PROJECT NAME:</div><div>SAFETY HARBOR MARINA REPLACEMENT</div></div>	<div><div>TWA NO.</div><div></div></div> <div><div>SHEET NO.</div><div>E-02</div></div>
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					

SUSERS

SDATES

STIMES

SFILES

60% CDs

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ADAM V. EACHES

LICENSE


No. 76151

STATE OF

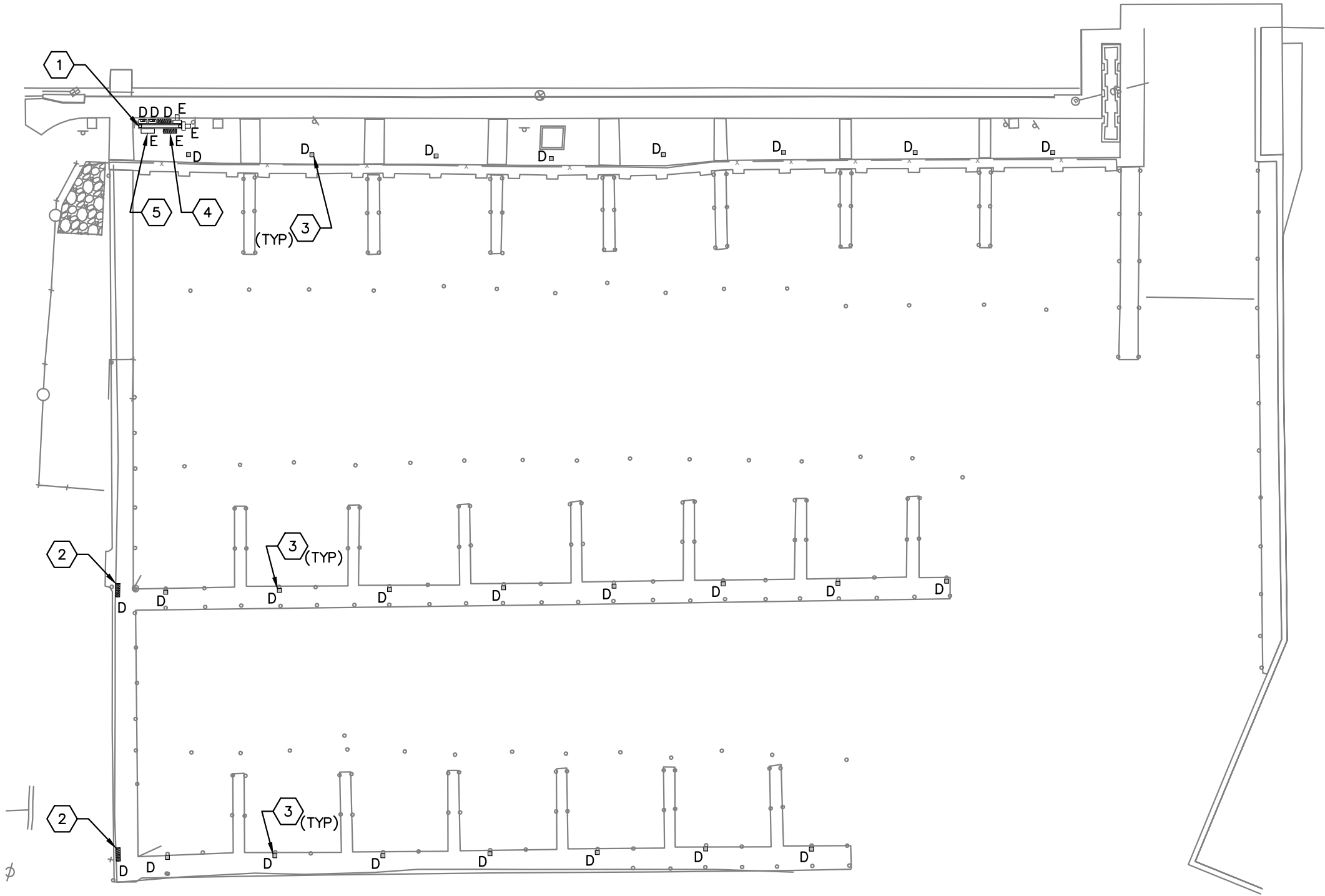
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FL C.O.A. #: 27620



01

ELECTRICAL DEMOLITION PLAN

SCALE: 1"=30'

60% CDs

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SAFETY HARBOR FL

SHEET TITLE:

ELECTRICAL DEMOLITION PLAN

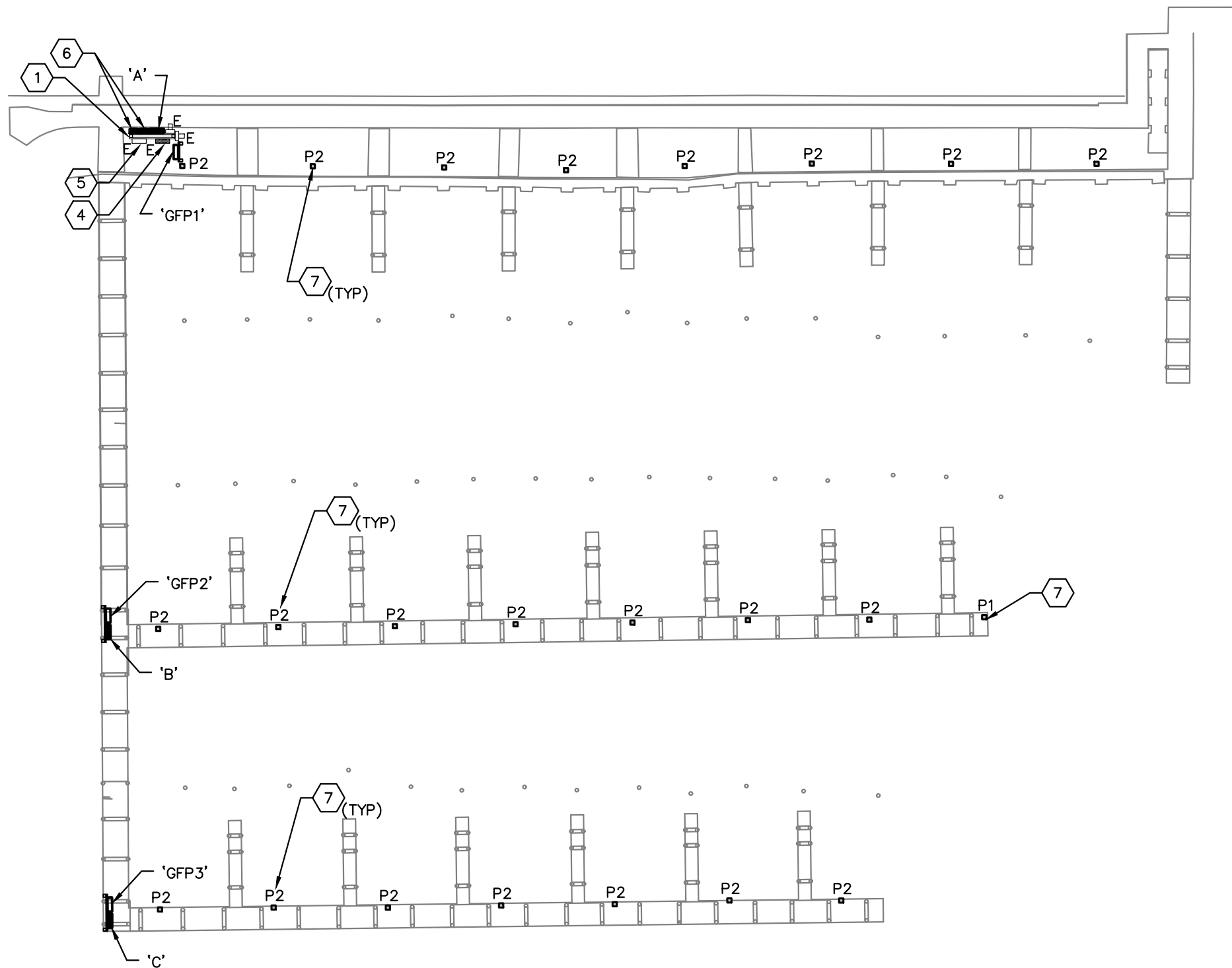
TWANO.

PROJECT NAME:

SAFETY HARBOR MARINA REPLACEMENT

SHEET NO.

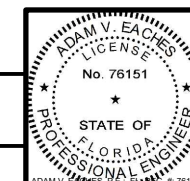
E-03



01 ELECTRICAL PLAN  
SCALE: 1"=30'

60% CDs

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SHEET TITLE:  
PROJECT NAME:

ELECTRICAL PLAN

SAFETY HARBOR MARINA REPLACEMENT

TWA NO.

SHEET NO.

E-04

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DRAWING NOTES (SHEET E-06)

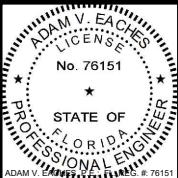
- 1. EXISTING EQUIPMENT RACK.
- 2. EXISTING WIREWAY.
- 3. EXISTING UTILITY METER.
- 4. REPLACE EXISTING 240/120 V, 1φ, 3W, 150 A MCB PANELBOARD WITH NEW: REFER TO PANEL SCHEDULE.
- 5. REPLACE EXISTING ENCLOSED CIRCUIT BREAKER WITH NEW 240 V 1φ, 3W, 225 A, SHUNT-TRIP CIRCUIT BREAKER IN STAINLESS STEEL (TYPE 316) ENCLOSURE.
- 6. NEW EQUIPMENT RACK; MINIMUM 5" X 5" CONCRETE POSTS WITH STAINLESS STEEL (TYPE 316) STRUT CHANNEL. SIZE AS REQUIRED.
- 7. NEW EQUIPMENT RACK MOUNTED TO DOCK PILES; STAINLESS STEEL (TYPE 316) STRUT CHANNEL. SIZE AS REQUIRED.
- 8. GROUND FAULT MONITORING PANEL; BENDER, MARINAGUARD MG-T OR ENGINEER APPROVED EQUAL.
- 9. GROUND FAULT MONITORING PANEL WILL MONITOR THE FEEDERS TO PANELBOARDS "A", "B" AND "C" AS WELL AS THE BRANCH CIRCUIT CONDUCTORS SERVING SLIPS 1-16; GROUND FAULT PROTECTION SHALL BE SET TO 100 mA MAX.
- 10. GROUND FAULT MONITORING PANEL WILL MONITOR THE BRANCH CIRCUIT CONDUCTORS SERVING SLIPS 17-31; GROUND FAULT PROTECTION SHALL BE SET TO 100 mA MAX.
- 11. GROUND FAULT MONITORING PANEL WILL MONITOR THE BRANCH CIRCUIT CONDUCTORS SERVING SLIPS 32-44; GROUND FAULT PROTECTION SHALL BE SET TO 100 mA MAX.
- 12. REPLACE EXISTING 240/120 V, 1φ, 3W, 225 A MLO PANELBOARD WITH NEW; REFER TO PANEL SCHEDULE.
- 13. REPLACE EXISTING CONDUIT AND CONDUCTORS AS FOLLOWS: 3 #4/0 + #4 EG - 2 1/2" C.
- 14. REPLACE EXISTING CONDUIT AND CONDUCTORS AS FOLLOWS: 3 #250 KCMIL + #3 EG - 3" C.
- 15. SPD; PQ PROTECTION, MODEL #PQC160-240V OR ENGINEER APPROVED EQUAL.
- 16. FEEDS PANEL "B".
- 17. FEEDS PANEL "C".
- 18. EXISTING GROUNDING ELECTRODE SYSTEM.
- 19. GROUNDING ELECTRODE SYSTEM.
- 20. PROVIDE (1) SPARE 2 1/2" C.
- 21. PROVIDE (1) SPARE 3" C.


DRAWING GENERAL NOTES (SHEET E-06)

- A. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- B. MAXIMUM 3 QUARTER TURNS (TOTAL 270°) CONDUIT BENDS BETWEEN JUNCTION/PULL BOXES.
- C. MAINTAIN MINIMUM 12" SEPARATION BETWEEN ELECTRICAL AND OTHER UTILITIES/INFRASTRUCTURE.
- D. COORDINATE WITH EXISTING UNDERGROUND UTILITIES AND CONDITIONS. HAND DIG TRENCHES AS REQUIRED.
- E. SAW CUT AND PATCH PAVEMENT AS REQUIRED. COORDINATE WORK WITH OWNER.
- F. ALL CONDUCTORS SHALL BE TYPE XHHW-2.
- G. ALL EXPOSED CONDUITS SHALL BE UV RESISTANT, SCHEDULE 80 PVC.
- H. ALL FASTENERS, ANCHORS, STRAPS, HARDWARE, STRUT-CHANNEL, ETC. SHALL BE STAINLESS STEEL (TYPE 316).
- I. THE ELECTRICAL DATUM PLANE SHALL BE 2 FEET ABOVE THE HIGHEST TIDE LEVEL.
- J. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE LOCATED ABOVE THE ELECTRICAL DATUM PLANE.
- K. ELECTRICAL EQUIPMENT AND DEVICES LOCATED ON THE DOCK SHALL BE MINIMUM 12" ABOVE THE DECK BUT SHALL NOT BE LOCATED BELOW THE ELECTRICAL DATUM PLANE.
- L. CONDUITS ROUTED UNDER THE DOCK SHALL BE SECURELY FASTENED TO THE STRUCTURE MAXIMUM EVERY 6' USING LISTED, 2-HOLE, STAINLESS STEEL (TYPE 316) CONDUIT STRAPS.

60% CDs

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REVISIONS						<div><div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div><div><div><div></div><div></div></div></div></div><div>SAFETY HARBOR FL</div></div>
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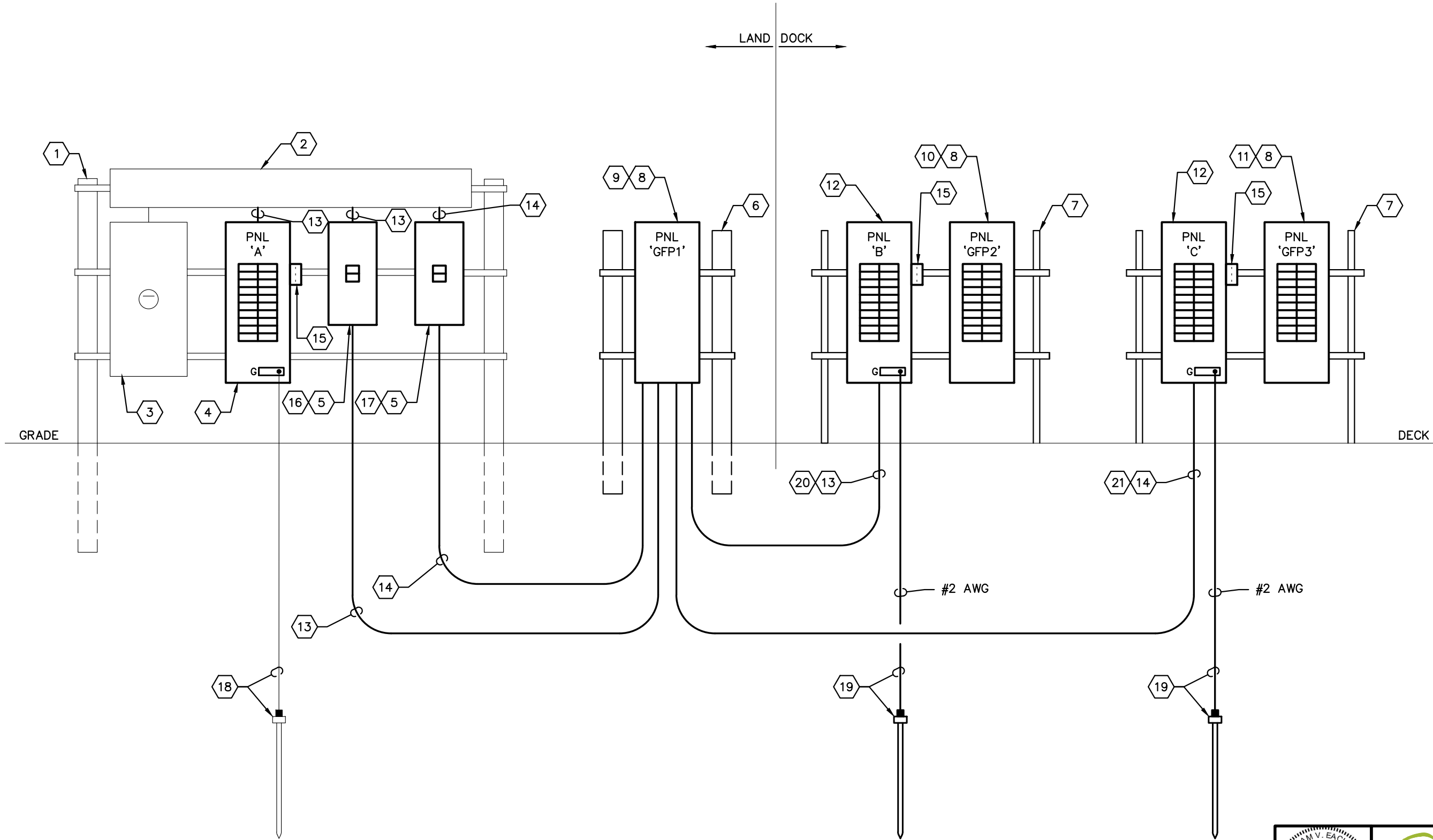
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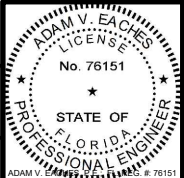


01

POWER ONE-LINE DIAGRAM  
SCALE: NONE

60% CDs

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SAFETY HARBOR FL

SHEET TITLE:  
PROJECT NAME:

POWER ONE-LINE DIAGRAM

SAFETY HARBOR MARINA REPLACEMENT

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SHEET NO.

E-06

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PANELBOARD A SCHEDULE																																																											
VOLTAGE (L-L/L-N): 240 / 120 V				PHASE: 1		WIRES: 3		MAIN TYPE: MCB		MAIN OC DEVICE (2): 225 A																																																	
BUS RATING: 225 A				MIN AIC RATING: 10,000 A				ENCLOSURE TYPE (1): NEMA 4X			MOUNTING: SURFACE																																																
FEED-THRU LUGS: NO				SUB-FEED LUGS: NO				ISOLATED GND BUS: NO			NEUTRAL BUS: YES																																																
CKT NO	DESCRIPTION	BREAKER		PHASE LOADS (VA)				BREAKER		DESCRIPTION	CKT NO																																																
		POLE	TRIP	A		B		TRIP	POLE																																																		
1	SLIP 1 & 2 (2)	2	30	3,600	0			20	2	SPD	2																																																
3	"					3,600	0			"	4																																																
5	(SHUNT-TRIP)			0	3,600			30	2	SLIP 9 & 10 (2)	6																																																
7	SLIP 3 & 4 (2)	2	30			3,600	3,600			"	8																																																
9	"			3,600	0					(SHUNT-TRIP)	10																																																
11	(SHUNT-TRIP)					0	3,600	30	2	SLIP 11 & 12 (2)	12																																																
13	SLIP 5 & 6 (2)	2	30	3,600	3,600					"	14																																																
15	"					3,600	0			(SHUNT-TRIP)	16																																																
17	(SHUNT-TRIP)			0	3,600			30	2	SLIP 13 & 14 (2)	18																																																
19	SLIP 7 & 8 (2)	2	30			0	3,600			"	20																																																
21	"			3,600	0					(SHUNT-TRIP)	22																																																
23	(SHUNT-TRIP)					3,600	3,600	30	2	SLIP 15 & 16 (2)	24																																																
25	GFP1 CONTROL POWER	1	20	300	3,600					"	26																																																
27	SPACE					-	0			(SHUNT-TRIP)	28																																																
29	SPACE			-	-					SPACE	30																																																
31	SPACE					-	-			SPACE	32																																																
33	SPACE			-	-					SPACE	34																																																
35	SPACE					-	-			SPACE	36																																																
37	SPACE			-	-					SPACE	38																																																
39	SPACE					-	-			SPACE	40																																																
41	SPACE			-	-					SPACE	42																																																
TOTAL				29,100		28,800																																																					
<table><tr><th>LOAD CLASSIFICATION</th><th>CONNECTED (VA)</th><th>DEMAND FACTOR</th><th>DEMAND (VA)</th></tr><tr><td>EXTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>INTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>RECEPTACLE (1st 10 k)</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>RECEPTACLE (Over 10 k)</td><td>0</td><td>0.50</td><td>0</td></tr><tr><td>AIR HANDLERS</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>ELECTRIC HEAT</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>COOLING</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>EQUIPMENT/MOTORS</td><td>300</td><td>1.00</td><td>300</td></tr><tr><td>LARGEST MOTOR</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>SHORE POWER RECPTS</td><td>57,600</td><td>0.70</td><td>40,320</td></tr><tr><td>TOTAL</td><td>57,900</td><td></td><td>40,620</td></tr></table>												LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)	EXTERIOR LIGHTING	0	1.25	0	INTERIOR LIGHTING	0	1.25	0	RECEPTACLE (1st 10 k)	0	1.00	0	RECEPTACLE (Over 10 k)	0	0.50	0	AIR HANDLERS	0	1.00	0	ELECTRIC HEAT	0	1.00	0	COOLING	0	1.00	0	EQUIPMENT/MOTORS	300	1.00	300	LARGEST MOTOR	0	1.25	0	SHORE POWER RECPTS	57,600	0.70	40,320	TOTAL	57,900		40,620
LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)																																																								
EXTERIOR LIGHTING	0	1.25	0																																																								
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<table><tr><th colspan="2">PANEL SUMMARY</th></tr><tr><td>CONNECTED</td><td>241 A</td></tr><tr><td>DEMAND</td><td>169 A</td></tr><tr><td>SPARE CAPACITY</td><td>6 %</td></tr></table>												PANEL SUMMARY		CONNECTED	241 A	DEMAND	169 A	SPARE CAPACITY	6 %																																								
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NOTES:																																																											
1. PROVIDE STAINLESS STEEL (TYPE 316) ENCLOSURE.																																																											
2. PROVIDE SHUNT-TRIP CIRCUIT BREAKER.																																																											

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SAFETY HARBOR

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60% CDs

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FLORIDA  
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HALL

ENGINEERING GROUP

PROJECT NAME:  
SAFETY HARBOR MARINA REPLACEMENT

TWANO.

SHEET NO.  
E-07

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PANELBOARD B SCHEDULE																																																											
VOLTAGE (L-L/L-N): 240 / 120 V			PHASE: 1		WIRES: 3		MAIN TYPE: MCB		MAIN OC DEVICE: 225 A																																																		
BUS RATING: 225 A			MIN AIC RATING: 10,000 A			ENCLOSURE TYPE (1): NEMA 4X			MOUNTING: SURFACE																																																		
FEED-THRU LUGS: NO			SUB-FEED LUGS: NO			ISOLATED GND BUS: NO			NEUTRAL BUS: YES																																																		
CKT NO	DESCRIPTION	BREAKER		PHASE LOADS (VA)				BREAKER		DESCRIPTION	CKT NO																																																
		POLE	TRIP	A		B		TRIP	POLE																																																		
1	SLIP 17 & 18 (2)	2	30	3,600	0			20	2	SPD	2																																																
3	"					3,600	0			"	4																																																
5	(SHUNT-TRIP)			0	3,600			30	2	SLIP 25 & 26 (2)	6																																																
7	SLIP 19 & 20 (2)	2	30			3,600	3,600			"	8																																																
9	"			3,600	0					(SHUNT-TRIP)	10																																																
11	(SHUNT-TRIP)					0	3,600	30	2	SLIP 27 & 28 (2)	12																																																
13	SLIP 21 & 22 (2)	2	30	3,600	3,600					"	14																																																
15	"					3,600	0			(SHUNT-TRIP)	16																																																
17	(SHUNT-TRIP)			0	3,600			30	2	SLIP 29 & 30 (2)	18																																																
19	SLIP 23 & 24 (2)	2	30			0	3,600			"	20																																																
21	"			3,600	0					(SHUNT-TRIP)	22																																																
23	(SHUNT-TRIP)					3,600	1,800	30	2	SLIP 31 (2)	24																																																
25	GFP2 CONTROL POWER	1	20	300	1,800					"	26																																																
27	SPACE					-	0			(SHUNT-TRIP)	28																																																
29	SPACE			-	-					SPACE	30																																																
31	SPACE					-	-			SPACE	32																																																
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TOTAL				27,300		27,000																																																					
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AVE  
CHECKED BY:  
AVE



SAFETY HARBOR



ADAM V. EACHES  
No. 76151  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

60% CDs  
03-01-2024: NOT FOR CONSTRUCTION



SHEET TITLE: PANEL SCHEDULE B		TWANO.
PROJECT NAME: SAFETY HARBOR MARINA REPLACEMENT		SHEET NO. E-08

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Z:\2023 Projects\2307C Safety Harbor Marina\Drawings\Electrical\Sheet Set\2307C\_E-09 Panel Schedule C.dwg      Feb.29.2024      11:47 am

PANELBOARD C SCHEDULE																																																											
VOLTAGE (L-L/L-N): 240 / 120 V			PHASE: 1		WIRES: 3		MAIN TYPE: MCB		MAIN OC DEVICE: 225 A																																																		
BUS RATING: 225 A			MIN AIC RATING: 10,000 A			ENCLOSURE TYPE (1): NEMA 4X			MOUNTING: SURFACE																																																		
FEED-THRU LUGS: NO			SUB-FEED LUGS: NO			ISOLATED GND BUS: NO			NEUTRAL BUS: YES																																																		
CKT NO	DESCRIPTION	BREAKER		PHASE LOADS (VA)				BREAKER		DESCRIPTION	CKT NO																																																
		POLE	TRIP	A		B		TRIP	POLE																																																		
1	SLIP 32 & 33 (2)	2	30	3,600	0			20	2	SPD	2																																																
3	"					3,600	0			"	4																																																
5	(SHUNT-TRIP)			0	3,600			30	2	SLIP 40 & 41 (2)	6																																																
7	SLIP 34 & 35 (2)	2	30			3,600	3,600			"	8																																																
9	"			3,600	0					(SHUNT-TRIP)	10																																																
11	(SHUNT-TRIP)					0	3,600	30	2	SLIP 42 & 43 (2)	12																																																
13	SLIP 36 & 37 (2)	2	30	3,600	3,600					"	14																																																
15	"					3,600	0			(SHUNT-TRIP)	16																																																
17	(SHUNT-TRIP)			0	1,800			30	2	SLIP 44 (2)	18																																																
19	SLIP 38 & 39 (2)	2	30			0	1,800			"	20																																																
21	"			3,600	0					(SHUNT-TRIP)	22																																																
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TOTAL				23,700		23,400																																																					
<table><tr><th>LOAD CLASSIFICATION</th><th>CONNECTED (VA)</th><th>DEMAND FACTOR</th><th>DEMAND (VA)</th></tr><tr><td>EXTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>INTERIOR LIGHTING</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>RECEPTACLE (1st 10 k)</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>RECEPTACLE (Over 10 k)</td><td>0</td><td>0.50</td><td>0</td></tr><tr><td>AIR HANDLERS</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>ELECTRIC HEAT</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>COOLING</td><td>0</td><td>1.00</td><td>0</td></tr><tr><td>EQUIPMENT/MOTORS</td><td>300</td><td>1.00</td><td>300</td></tr><tr><td>LARGEST MOTOR</td><td>0</td><td>1.25</td><td>0</td></tr><tr><td>SHORE POWER RECPTS</td><td>46,800</td><td>0.80</td><td>37,440</td></tr><tr><td>TOTAL</td><td>47,100</td><td></td><td>37,740</td></tr></table>												LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)	EXTERIOR LIGHTING	0	1.25	0	INTERIOR LIGHTING	0	1.25	0	RECEPTACLE (1st 10 k)	0	1.00	0	RECEPTACLE (Over 10 k)	0	0.50	0	AIR HANDLERS	0	1.00	0	ELECTRIC HEAT	0	1.00	0	COOLING	0	1.00	0	EQUIPMENT/MOTORS	300	1.00	300	LARGEST MOTOR	0	1.25	0	SHORE POWER RECPTS	46,800	0.80	37,440	TOTAL	47,100		37,740
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NOTES: 1. PROVIDE STAINLESS STEEL (TYPE 316) ENCLOSURE. 2. PROVIDE SHUNT-TRIP CIRCUIT BREAKER.																																																											

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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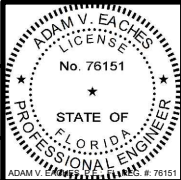
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**SAFETY HARBOR** | **FL**

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SHEET TITLE: <b>PANEL SCHEDULE C</b>		TWANO.
PROJECT NAME: <b>SAFETY HARBOR MARINA REPLACEMENT</b>		SHEET NO. <b>E-09</b>



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MARINA PEDESTAL SCHEDULE	
TAG	DESCRIPTION
P1	(1) 30 A, 1 PH, 125 V RECEPTACLE; NEMA L5-30, 1 HOSE BIBB, LED LIGHT, 30 mA GFPE RELAY AND SHUNT-TRIP CIRCUIT BREAKER, NEMA 3R, SS (TYPE 316) PEDESTAL, MEE – MARINA MATE SS OR ENGINEER APPROVED EQUIVALENT.
P2	(2) 30 A, 1 PH, 125 V RECEPTACLE; NEMA L5-30 (ONE RECEPTACLE PER SIDE), 2 HOSE BIBBS (ONE HOSE BIBB PER SIDE), LED LIGHT, 30 mA GFPE RELAYS AND SHUNT-TRIP CIRCUIT BREAKERS, NEMA 3R, SS (TYPE 316) PEDESTAL, MEE – MARINA MATE SS OR ENGINEER APPROVED EQUIVALENT.
NOTES:  1.    RECEPTACLES SHALL BE ENCLOSED IN WET LOCATION LISTED, WHILE-IN-USE WEATHERPROOF ASSEMBLIES.  2.    RECEPTACLES SHALL BE MARINE GRADE, WEATHER RESISTANT TYPE.  3.    SUBMIT MARINA PEDESTALS FOR OWNER/ENGINEER REVIEW AND APPROVAL.	

DATE

BY

DESCRIPTION

DATE

BY


DESCRIPTION

DRAWN BY:  
CJV

CHECKED BY:  
AVE

DESIGNED BY:  
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SAFETY HARBOR

FL

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ADAM V. EACHES  
LICENSE  
No. 76151  
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PROFESSIONAL ENGINEER



HALL

ENGINEERING GROUP

Electrical · Lighting · Mechanical · Renewables

3620 Gunn Hwy., Suite 200 | Tampa, FL 33618-6720

www.hallengroup.com | Tel: 813.374.2121

FL C.O.A. #: 27620

SHEET TITLE:  
  
MARINA PEDESTAL SCHEDULE

PROJECT NAME:  
  
SAFETY HARBOR MARINA REPLACEMENT

TWA NO.

SHEET NO.

E-10

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COMPLIANCE NOTES

FLORIDA ADMINISTRATIVE CODE: 61G15-32.004

SCOPE OF WORK

ADDITION / EXTENSION TO AN EXISTING CLASS 1 MANUAL DRY STANDPIPE SYSTEM DESIGNED IN COMPLIANCE WITH THE APPLICABLE NFPA STANDARDS LISTED WITHIN THESE DOCUMENTS.

ACCEPTANCE TEST CRITERIA

SHALL COMPLY WITH NFPA-14. SPRINKLER SYSTEM SHALL BE PROPERLY INSPECTED AND MAINTAINED IN ACCORDANCE WITH NFPA-25 STANDARD FOR INSPECTION, TESTING, AND MAINTENANCE OF WATER BASED SYSTEM.

HAZARD CLASSIFICATION

CLASSIFICATION: ORDINARY HAZARD (GROUP 1 AND GROUP 2).

APPLICABLE NFPA STANDARDS TO BE APPLIED

FLORIDA BUILDING CODE (8TH EDITION)  
FLORIDA FIRE PREVENTION CODE (8TH EDITION)  
NFPA 303  
NFPA 13  
NFPA 14  
NFPA 24  
NFPA 25

FIRE ALARM SYSTEM

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

POINT OF SERVICE

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OR AREA

ORDINARY HAZARD (GROUP 2): MARINA / DOCK

DESIGN APPROACH

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

CHARACTERISTICS OF THE WATER SUPPLY TO BE USED

STREET MAIN IS CIRCULATING. MINIMUM DURATION OF 60-90 MINUTES.

FLOW TEST DATA:

TO BE PREFORMED BY CONTRACTOR, UPON REQUEST BY AHJ.

COMPLIANCE NOTES CONTINUED

VALVING AND ALARM REQUIREMENTS TO MINIMIZE POTENTIAL FOR IMPAIRMENTS AND UNRECOGNIZED FLOW OF WATER:

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

MICROBIAL INDUCED CORROSION (MIC)

WATER SOURCE IS FROM EXISTING PUBLIC UTILITY WATER MAIN. THERE ARE NO KNOWN CONDITIONS PRESENT THAT CONTRIBUTE TO MICROBIOLOGICAL CORROSION (M.I.C.). CONTRACTOR SHALL REEVALUATE WATER SUPPLY AND ENVIRONMENTAL CONDITIONS FOR EXISTENCE OF MICROBES AND CONDITIONS THAT CONTRIBUTE TO M.I.C. PRIOR TO START OF CONSTRUCTION. WHERE CONDITIONS ARE FOUND THAT CONTRIBUTE TO M.I.C. THE CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER.

BACKFLOW PREVENTION AND METERING SPECIFICATIONS

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS

ALL NEW YARD AND INTERIOR FIRE PROTECTION EQUIPMENT SHALL BE UL LISTED AND/OR FM APPROVED.

FIRE PUMP REQUIREMENT

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

WATER STORAGE TANK REQUIREMENT

N/A, MANUAL DRY STANDPIPE, SERVING FIXED DOCK IN MARINE ENVIRONMENT.

OWNER’S CERTIFICATE FOR STORAGE FACILITIES

PROPERTY IS NOT A STORAGE OCCUPANCY. OWNER’S CERTIFICATE IS NOT REQUIRED.

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NOT FOR CONSTRUCTION

03-01-2024

SHANE R. HAMILTON, PE  
FLORIDA LICENSE #75420

Engineering Professionals, Inc.

Mechanical Engineers  
EB 6437  
912 W. Dr. Martin Luther King Jr. Blvd.  
Tampa, FL 33603 (813) 251-6848

REVISIONS						<div><div>DRAWN BY:</div><div>CHECKED BY:</div><div>DESIGNED BY:</div><div>CHECKED BY:</div></div> <div> SAFETY HARBOR   FL</div>	SHEET TITLE:		TWA NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		FIRE PROTECTION COMPLIANCE NOTES		
							PROJECT NAME:		SHEET NO.
							SAFETY HARBOR MARINA REPLACEMENT		FP-01

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




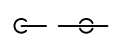












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FIRE PROTECTION SPECIFICATIONS						FIRE PROTECTION SPECIFICATIONS CONTINUED																									
<div><div>1.0GENERAL PROVISIONS</div><div><div>1.1</div><div>PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT FOR A COMPLETE AND PROPERLY OPERATING FIRE PROTECTION SYSTEM.</div></div><div><div>1.2</div><div>CODES AND STANDARDS: THE FIRE SPRINKLER PROTECTION SYSTEMS INSTALLATION, FLUSHING AND TESTING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 14, AND ALL LOCAL CODES HAVING JURISDICTION.</div></div><div><div>1.3</div><div>PIPE THREAD PATTERN: ALL THREADS SHALL BE IN ACCORDANCE WITH LOCAL FIRE DEPARTMENT SPECIFICATIONS AND NFPA 1963.</div></div><div><div>1.4</div><div>UL/FM APPROVAL: ALL EQUIPMENT, VALVES, COUPLINGS, HANGERS AND DEVICES SHALL BE APPROVED BY UNDERWRITERS' LABORATORY (UL) OR FACTORY MUTUAL (FM) FOR USE IN FIRE PROTECTION SERVICES.</div></div><div><div>1.5</div><div>LICENSURE: THE FIRE PROTECTION SYSTEMS SHALL BE INSTALLED BY A STATE CERTIFIED FIRE PROTECTION CONTRACTOR.</div></div><div><div>1.6</div><div>ALL FIRE PROTECTION WORK SHALL BE DONE IN A NEAT AND WORKMAN-LIKE MANNER.</div></div><div><div>1.7</div><div>CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND FEES, ETC., REQUIRED FOR THE EXECUTION OF THIS WORK.</div></div><div><div>1.8</div><div>CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES BEFORE FABRICATION OR INSTALLATION. OFFSETS AND/OR TRANSITIONS REQUIRED SHALL BE PROVIDED WITHOUT ADDITIONAL COST. CONTRACTOR SHALL COORDINATE AND INSTALL WORK IN A TIMELY MANNER TO PREVENT DELAYS IN THE CONSTRUCTION.</div></div><div><div>1.9</div><div>CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACE DAMAGED EQUIPMENT AND/OR MATERIAL.</div></div><div>2.0BASIC MATERIALS AND METHODS</div><div><div>2.1</div><div>ALL PIPING MATERIALS SHALL HAVE A CORROSION RESISTANCE RATING (CFR) OF 1.0 OR GREATER.</div></div><div><div>2.2</div><div>HANGERS: ALL HANGER SPACING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA-13. HANGERS TO BE PROTECTED FROM CORROSION (316 STAINLESS STEEL)</div></div><div><div>2.3</div><div>HYDROSTATIC TESTS: ABOVE GROUND AND BELOW GROUND PIPING SYSTEMS SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI PRESSURE OR AT 50 PSI IN EXCESS OF THE MAXIMUM PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD OF 2 HOURS. THE TEST PRESSURE SHALL BE READ FROM A GAUGE LOCATED AT THE LOW ELEVATION POINT OF THE INDIVIDUAL SYSTEM OR PORTION OF THE SYSTEM BEING TESTED. THE SPRINKLER PIPING SHALL NOT HAVE LEAKAGE EXCEEDING THE AMOUNTS SPECIFIED IN NFPA 24. LEAKAGE QUANTITIES SHALL BE DETERMINED BY PUMPING AT THE SPECIFIED TEST PRESSURE FROM A CALIBRATED CONTAINER. REPAIR LEAKING JOINTS AND RETEST AS NECESSARY UNTIL ALL SYSTEMS HAVE BEEN TESTED. TEST THE PIPING BETWEEN THE CHECK VALVE IN THE FIRE DEPARTMENT INLET PIPE AND THE OUTSIDE CONNECTION THE SAME AS THE BALANCE OF THE SYSTEM.</div></div></div>						<div><div>3.0FIRE PROTECTION VALVES AND ACCESSORIES</div><div><div>3.1</div><div>BALL VALVE: TWO INCH (2") AND SMALLER: STANDARD FULL PORT BALL VALVE WITH BRASS BODY CONFORMING TO ASTM584, CHROME PLATED BRASS BALL AND STAINLESS STEEL STEM WITH TFE SEAL RATED FOR 365PSI. ACCEPTABLE MANUFACTURERS, VICTAULIC SERIES 728.</div></div><div><div>3.2</div><div>BUTTERFLY VALVE: TWO INCH (2") AND LARGER IN LIEU OF GATE VALVE: 300 PSI GROOVED ENDS. DUCTILE IRON BODY, ASTM A536 GRADE 65-45-12; DUCTILE IRON DISC, ASTM A536 WITH ELECTROLESS NICKEL COATING CONFORMING TO ASTM B-733; STAINLESS STEEL STEM AND HAND WHEEL OPERATED WITH WEATHER PROOF ACTUATOR RATED TO 300PSI. (STEM SHALL BE OFFSET FROM THE DISC CENTERLINE TO PROVIDE COMPLETE 360-DEGREE CIRCUMFERENTIAL SEATING ON NITRILE SEAT.) VICTAULIC SERIES 705 AND SERIES 765</div></div><div><div>3.3</div><div>CHECK VALVE: TWO INCH (2") - TWELVE INCH (12"), DUCTILE IRON BODY, ASTM A-536, GRADE 65-45-12, MINIMUM OF 250 PSI WITH SINGLE DISC MECHANISM INCORPORATING A SPRING ASSISTED FEATURE FOR NON-SLAMMING OPERATION AND CAN BE INSTALLED EITHER VERTICALLY OR HORIZONTALLY. VICTAULIC SERIES 717, AND SERIES 717H.</div></div><div><div>3.4</div><div>ZONE CONTROL VALVES: CAST FROM DUCTILE IRON CONFORMING TO ASTM A-536, GRADE 65-45-12 WITH INTEGRATED MODULE BODY CONSISTING OF A SHUT OFF VALVE, TEST AND DRAIN COMBINATION, FLOW SWITCH, AND PRESSURE GAUGE WITH WORKING PRESSURE OF 300PSI.<div><div>1) 1" THROUGH 2": FOR NFPA 13, 13D, AND 13R COMMERCIAL AND RESIDENTIAL REQUIREMENTS. VICTAULIC SERIES 247.</div><div>2) 1¼" THROUGH 6": FOR NFPA 13 COMMERCIAL REQUIREMENTS. VICTAULIC SERIES 747M</div></div></div></div><div><div>3.6</div><div>TAMPER SWITCH: SPST, NORMALLY CLOSED CONTACTS, DESIGNED TO SIGNAL VALVE IN OTHER THAN FULL OPEN POSITION. ACCEPTABLE MANUFACTURER: POTTER</div></div><div><div>3.7</div><div>FIRE DEPARTMENT CONNECTION:<div><div>1) SIAMESE CONNECTION: CAST BRASS, ANGLE BODY, TWO-WAY, SIAMESE CONNECTION. CONNECTION SIZES SHALL BE 4" OUTLET AND TWO (2) AND 2½" FEMALE INLETS, HAVING NH STANDARD THREADS, FOR THE CONNECTION SIZE INDICATED, AS SPECIFIED IN NFPA 1963. EACH INLET SHALL HAVE A CLAPPER VALVE, AND PLUG AND CHAIN. WHEN REQUIRED PROVIDE AN 18" HIGH CHROME PLATED BRASS SLEEVE AND CHROME PLATED BRASS SIDEWALK PLATE, WITH WORDS "STANDPIPE - FIRE DEPT CONNECTION" OR "AUTO SPKR - FIRE DEPT CONNECTION," OR "AUTO SPKR &amp; STANDPIPE - FIRE DEPT CONNECTION" IN RAISED LETTERS. ACCEPTABLE MANUFACTURER OF FIRE DEPARTMENT CONNECTION IS GUARDIAN FIRE EQUIPMENT, INC.</div></div></div></div></div>						<div>60% CDs</div> <div>NOT FOR CONSTRUCTION</div> <div>03-01-2024</div>		<div>SHANE R. HAMILTON, PE FLORIDA LICENSE #75420</div> <div><div>Engineering Professionals, Inc.</div><div>Mechanical Engineers EB 6437 912 W. Dr. Martin Luther King Jr. Blvd. Tampa, FL 33603 (813) 251-6848</div></div>																	
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GENERAL NOTES						GENERAL NOTES CONTINUED																	
<div>1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA 13, 14, AND STATE FIRE PREVENTION CODE.</div> <div>2. FINAL INSPECTION AND APPROVAL BY THE AUTHORITY HAVING JURISDICTION.</div> <div>3. CONTRACTOR TO SUBMIT A SET OF WORKING PLANS AS DEFINED IN NFPA-13 TO ENGINEER FOR REVIEW PRIOR TO SUBMITTING WORKING PLANS TO AUTHORITY HAVING JURISDICTION FOR FINAL APPROVAL.</div> <div>4. ALL MATERIAL SHALL BE OF APPROVED QUALITY AND THE WORK SHALL BE DONE IN A THOROUGH AND WORKMANLIKE MANNER. THE WORK, MATERIALS AND TEST SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NFPA REQUIREMENTS.</div> <div>5. PIPE ROUTING SHOWN IS SCHEMATIC ONLY. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE ANY ADDITIONAL OFFSETS, ETC. REQUIRED FOR A COMPLETE AND NFPA COMPLIANT INSTALLATION. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND SITE TO ENSURE SPRINKLER OPERATION IS NOT OBSTRUCTED AND SPACING IS MAINTAINED PER NFPA-13.</div> <div>6. PROVIDE A PERMANENTLY ATTACHED NAME TAG ATTACHED TO THE FIRE DEPARTMENT CONNECTION, STATING NEW AND EXISTING COVERAGE AREAS. METAL (RED WITH WHITE LETTERS)</div> <div>7. COORDINATE PIPING WITH ALL OTHER TRADES (PANELS, UTILITIES, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES.</div> <div>8. FIRE PROTECTION SYSTEM ACCEPTANCE TESTS SHALL BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS OF THE ASSOCIATED NFPA CODES.</div> <div>9. FIRE PROTECTION SYSTEM ACCEPTANCE TESTS SHALL BE WITNESSED BY AUTHORITY HAVING JURISDICTION.</div> <div>10. CONTRACTOR SHALL PROVIDE FLUSHING CONNECTIONS AT THE END OF ALL MAINS.</div> <div>11. PIPE SUPPORTS: HANGERS, CLAMPS, RODS AND OTHER ACCESSORIES OF AN APPROVED TYPE AND IN SUFFICIENT NUMBER TO PROPERLY SUPPORT ALL PIPING SHALL BE FURNISHED AND INSTALLED.</div> <div>12. CONTRACTOR SHALL PROVIDE THE OWNER WITH A THREE RING BINDER OF ALL LITERATURE AND INSTRUCTIONS AS PROVIDED BY THE MANUFACTURER DESCRIBING PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND DEVICES INSTALLED, A COPY OF NFPA-25 "STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS", AND THE APPROPRIATE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE(S), COMPLETED AND SIGNED, AS INDICATED IN NFPA-13.</div>						<div>13. CONTRACTOR SHALL COORDINATE STRUCTURAL SUPPORT AND OPENINGS REQUIRED FOR INSTALLATION OF FIRE PROTECTION SYSTEM WITH STRUCTURAL ENGINEER.</div> <div>14. COORDINATE FIRE PROTECTION PIPING WITH ALL OTHER TRADES. PROVIDE OFFSETS AS REQUIRED FOR THE INSTALLATION AS REQUIRED. FINAL FIELD COORDINATION BETWEEN ALL TRADES SHALL BE COMPLETED PRIOR TO START OF CONSTRUCTION.</div> <div>15. PROVIDE ACCESS PANELS FOR ALL VALVES IN NON-ACCESSIBLE LOCATIONS.</div> <div>16. ALL HANGERS AND FASTENERS SHALL BE 316 STAINLESS STEEL.</div> <div>17. PROVIDE DIALECTIC SEPARATION AS REQUIRED TO PREVENT DISSIMILAR METAL/ GALVANIC CORROSION IN ALL MATERIALS. TWO MATERIALS WITH KNOWN POTENTIAL FOR GALVANIC ACTION SHALL NOT BE USED IN CONNECTION TO ONE ANOTHER..</div>																	
						PIPE MATERIAL SPECIFICATION																	
						LOCATION USED			MATERIAL														
						UNDERGROUND			DR14 (BLUE BRUTE)														
						IN-BUILDING RISER			NA														
						FIRE RISER			NA														
						STANDPIPE			FM APPROVED, DR9 HDPE, UV RESISTANT, 250 PSI, EQUAL TO JM EAGLE														
						COMMERCIAL			NA														
						RESIDENTIAL			NA														
						EXTERIOR / DRY			FM APPROVED, DR9 HDPE, UV RESISTANT, 250 PSI, EQUAL TO JM EAGLE														
						<div><div>SHANE R. HAMILTON, PE FLORIDA LICENSE #75420</div><div><div>60% CDs</div><div>NOT FOR CONSTRUCTION</div><div>03-01-2024</div></div><div><div>Engineering Professionals, Inc.</div><div>Mechanical Engineers EB 6437 912 W. Dr. Martin Luther King Jr. Blvd. Tampa, FL 33603 (813) 251-6848</div></div></div>																	
						<table><thead><tr><th colspan="6">REVISIONS</th></tr><tr><th>DATE</th><th>BY</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th><th>DESCRIPTION</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> <div><div>DRAWN BY:</div><div>CHECKED BY:</div><div>DESIGNED BY:</div><div>CHECKED BY:</div></div> <div><div> SAFETY HARBOR FL</div><div>SHEET TITLE:  PROJECT NAME:</div></div> <div><div>FIRE PROTECTION GENERAL NOTES</div><div>SAFETY HARBOR MARINA REPLACEMENT</div></div> <div><div>TWA NO.</div><div>SHEET NO.</div></div>						REVISIONS						DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
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FIRE PROTECTION LEGEND	
SYMBOL	DESCRIPTION
	CONTROL VALVE WITH TAMPER SWITCH
	OS&Y VALVE WITH TAMPER SWITCH
	CHECK VALVE
FDC  FDC	FIRE DEPARTMENT CONNECTION – SIAMESE
	FLOW SWITCH
	CABINET WITH 2i” FDV, 1i” REDUCER, CAP, AND CHAIN
	STANDPIPE WITH FIRE DEPARTMENT VALVE
	STANDPIPE, FLOOR CONTROL VALVE, INSPECTOR’S TEST, AND DRAIN RISER
	PIPE CONTINUATION
	PIPE UP
	PIPE DOWN
	FIRE RISER
	ENDCAP WITH FLUSHING CONNECTION
	AREA OF REVISION
	HYDRAULIC REFERENCE NODE
	NEW SPRINKLER PIPING
	NEW SPRINKLER MAIN
	NEW UNDERGROUND FIRE MAIN
	NEW STANDPIPE PIPING
EC	EXTENDED COVERAGE
FC	FLUSHING CONNECTION
FCV	FLOOR CONTROL VALVE
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
SIV	STANDPIPE ISOLATION VALVE
	REVISION REFERENCE

REVISIONS						<div><div>DRAWN BY:</div><div>CHECKED BY:</div><div>DESIGNED BY:</div><div>CHECKED BY:</div></div> <div> SAFETY HARBOR   FL</div>	SHEET TITLE:		TWA NO.	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		FIRE PROTECTION LEGEND			
							PROJECT NAME:		SHEET NO.	
							SAFETY HARBOR MARINA REPLACEMENT		FP-04	

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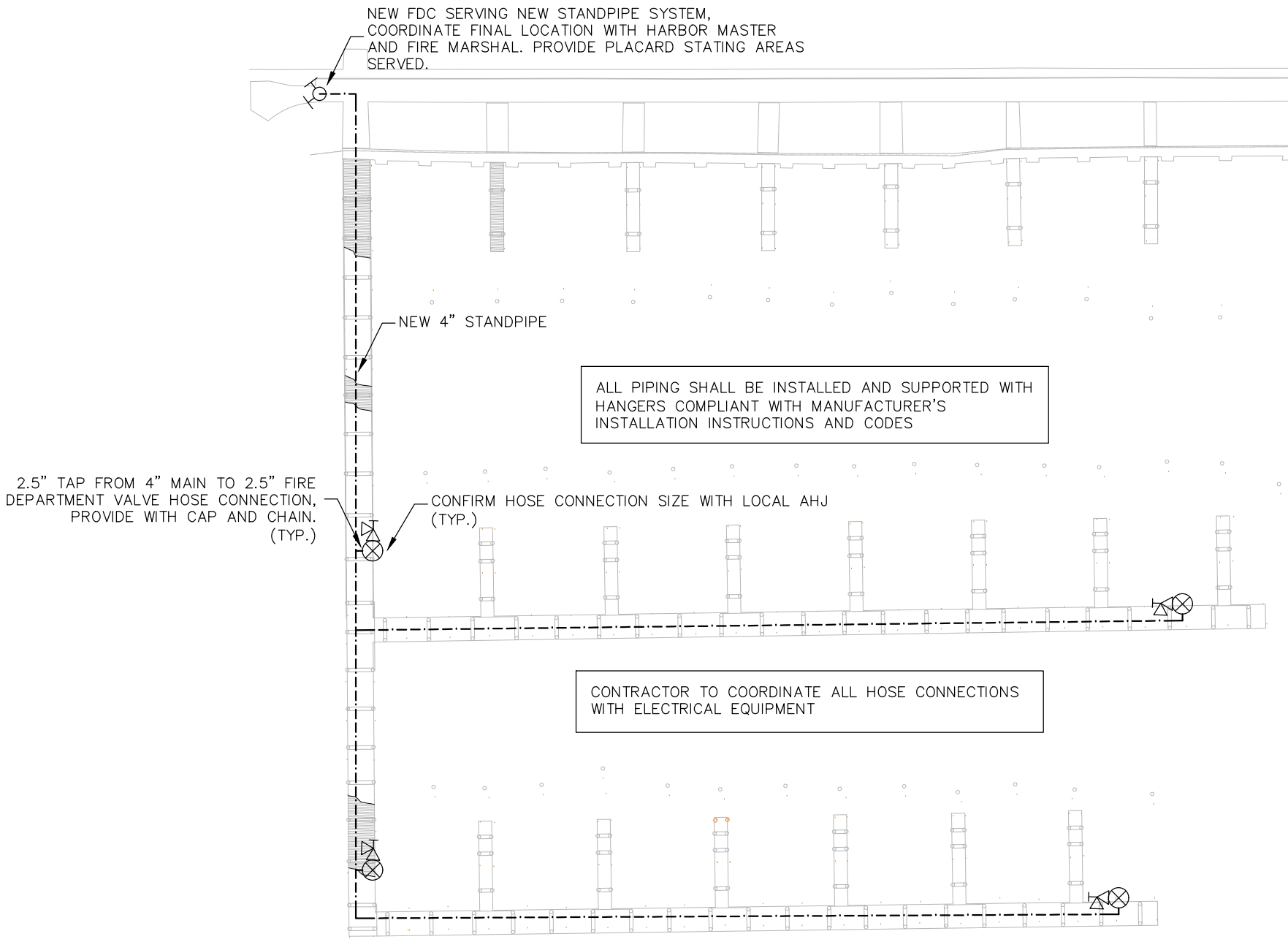
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FIRE PROTECTION FLOOR PLAN  
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SHEET TITLE:	FIRE PROTECTION FLOOR PLAN	TWA NO.	
PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT	SHEET NO.	FP-05

# PLUMBING GENERAL NOTES

DESCRIPTION	ABBREV.	SYMBOL
SANITARY PIPING	SAN	
VENT PIPING	V	
COLD WATER PIPING	CW	
EXISTING PIPING TO REMAIN		
EXISTING PIPING TO BE REMOVED		
HOSE BIBB	HB	
TEE UP		
TEE DOWN		
90° UP		
90° DOWN		
LEAD FREE BALL VALVE	BV	


1. DOMESTIC COLD WATER PIPING AND SOLVENT FITTINGS SHALL BE CPVC. ALL AREAS EXPOSED TO SUNLIGHT SHALL BE INSULATED WITH A UV STABLE INSULATION OR CONDUIT. FIELD COORDINATE AREAS OF UV EXPOSURE.

ALL PIPING SHALL BE INSTALLED AND SUPPORTED WITH HANGERS COMPLIANT WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CODES

## PLUMBING FIXTURE SCHEDULE

HB: HOSE BIBB – STAINLESS STEEL HOSE BIBB EQUALS TO SSHB5205. SEE PEDESTAL MANUFACTURER DOCUMENTS FOR DETAILS. 3/4" CW.

- ALL PLUMBING WORK SHALL MEET ALL THE REQUIREMENTS OF THE "FLORIDA BUILDING CODE, PLUMBING – 8TH EDITION (2023)".
- REVIEW PLANS OF ALL TRADES PRIOR TO BIDDING AND INSTALLATION TO INCLUDE ALL PLUMBING FOR COMPLETE SYSTEMS SHOWN ON THE PLANS AND AS REQUIRED.
- COORDINATE WITH OTHER TRADES TO PREVENT INTERFERENCE.
- ALL CHANGES SHALL BE APPROVED BY THE ENGINEER.
- COORDINATE WITH OTHER TRADE DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES AND EQUIPMENT SUPPLIES.
- THE PLUMBING SUBCONTRACTOR SHALL FURNISH AND INSTALL ALL PLUMBING FIXTURES, UNLESS NOTED OTHERWISE.
- THE PLUMBING SUBCONTRACTOR SHALL INSTALL AND MAKE ALL PLUMBING CONNECTIONS TO OWNER FURNISHED EQUIPMENT.
- VERIFY MOUNTING HEIGHT AND WATER CONNECTION SIZES TO ALL PLUMBING FIXTURES PRIOR TO ROUGH-IN.
- MAKE PROPER COLD WATER PIPING CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL FITTINGS AND CONNECTIONS ARE NOT SHOWN.
- VERIFY LOCATION OF EXISTING WATER SERVICE.
- THIS CONTRACTOR TO DO ALL CUTTING AND PATCHING REQUIRED TO INSTALL ANY PORTION OF THIS WORK. PATCH WITH NEW MATERIALS OF THE SAME TYPE THAT WAS REMOVED. REFINISH PATCHED SURFACE TO MATCH EXISTING ADJACENT SURFACES.
- IT IS IN THE INTENT OF THESE DRAWINGS TO COVER ALL WORK AND MATERIAL FOR A FIRST CLASS INSTALLATION. ANY EQUIPMENT, PLUMBING FIXTURE, TRIM HARDWARE AND/OR DEVICES USUALLY UTILIZED IN THE CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THESE DRAWINGS, BUT WHICH MAY BE NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK (AS DETERMINED BY THE ARCHITECT) SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AS PART OF HIS TOTAL WORK.
- ALL HANGERS AND FASTENERS SHALL BE 316 STAINLESS STEEL.

REVISIONS						<div><div></div><div><div>SAFETY HARBOR</div><div>FL</div></div></div>	DRAWN BY:		SHEET TITLE:		TWA NO.	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		<div><div></div><div></div></div>	PLUMBING NOTES, LEGEND, AND SCHEDULE				
								PROJECT NAME:	SAFETY HARBOR MARINA REPLACEMENT		SHEET NO.	
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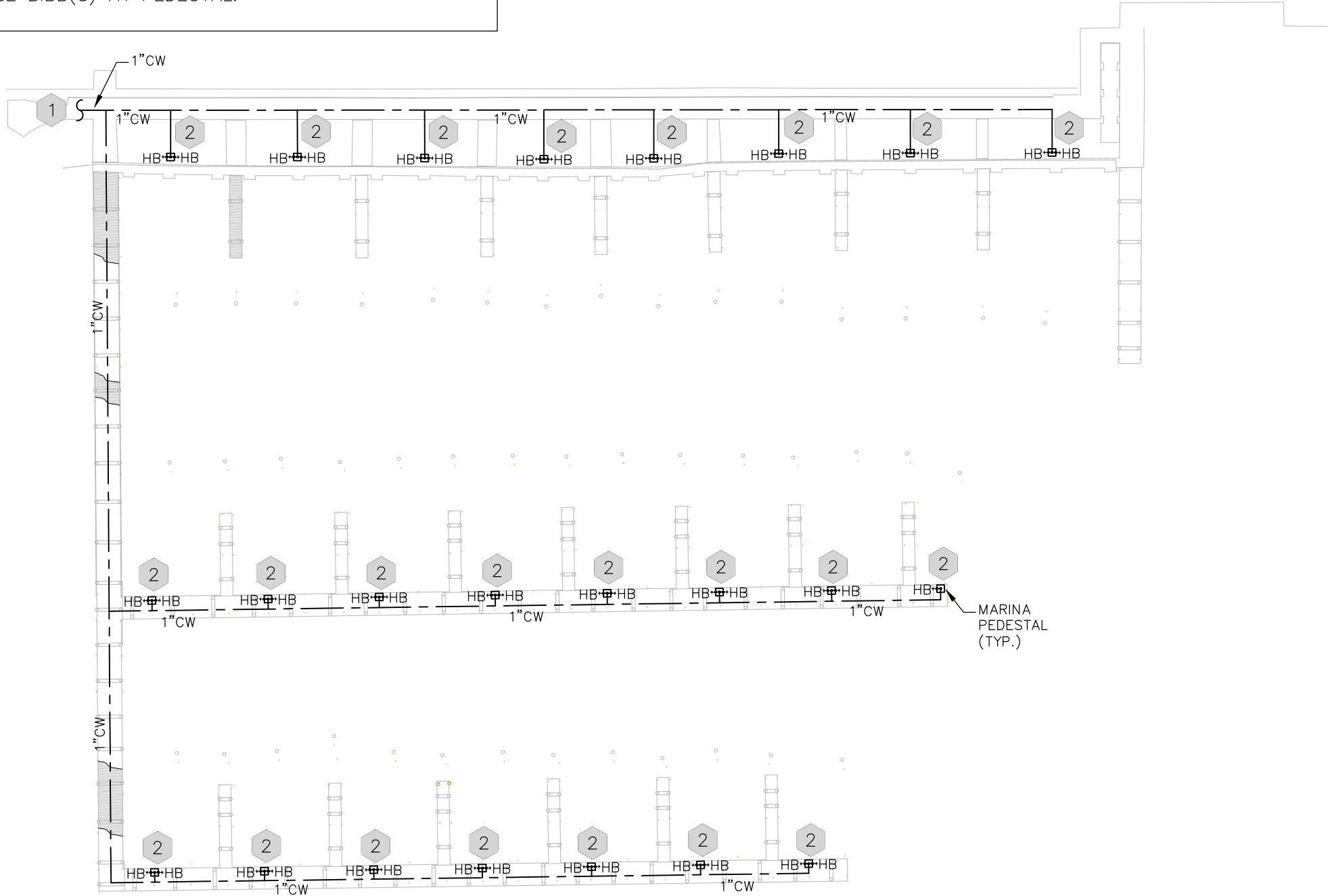
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CONSTRUCTION NOTES:

- 1

CONTRACTOR TO FIELD LOCATE AND CONNECT NEW 1" CW LINE TO NEAREST EXISTING WATER LINE.
- 2

3/4" CW TO HOSE BIBB(S) AT PEDESTAL.




WATER FLOOR PLAN  
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			PLUMBING FLOOR PLAN		
								PROJECT NAME:		SHEET NO.
								SAFETY HARBOR MARINA REPLACEMENT		P-02