



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
9900 SOUTHWEST 107TH AVENUE, SUITE 203
MIAMI, FLORIDA 33176

REPLY TO
ATTENTION OF

March 13, 2020

Regulatory Division
South Permits Branch
Miami Permits Section

PUBLIC NOTICE

Permit Application Number SAJ-2005-07380 (SP-MIB)

TO WHOM IT MAY CONCERN: The Jacksonville District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403) as described below:

APPLICANT: Seasons, Inc.
C/o Michael Aranda
P.O. Box 7384
Ft. Myers, Florida 33919

WATERWAY AND LOCATION: The project would affect waters of the United States associated with the Florida Bay. The proposed project is located at 881 50th Street adjacent to Florida Bay in Section 10, Township 66 South, Range 32 East, Marathon, Monroe County, Florida (MM±49). RE#00327150-000100

Directions to the site are as follows: Take US Highway No 1 South to MM49; Turn right onto 50th Street; Project is located at 881 50th Street.

APPROXIMATE CENTRAL COORDINATES: Latitude: 24.717367°
Longitude: -81.081068°

PROJECT PURPOSE:

Basic: The basic project purpose is to provide improved boating and recreational access.

Overall: The overall project purpose is to provide improved boating and recreational access in Marathon, Florida.

EXISTING CONDITIONS: The project is located within a mixed use developed subdivision adjacent to a canal tributary to the Florida Bay. The existing shoreline infrastructure includes a boat basin, riprap, concrete docks, a boat ramp, and piles. The majority of the infrastructure is in severe disrepair. The benthos ranges from sandy-gravel to muck. Medium to large pieces of concrete debris are located at the base of the seawalls where the docks and supporting structures have fallen in. This debris is

located in the basin and portions of the canal. The benthos outside of the basin, where the swim platform is proposed, supports seagrasses. Macroalgae is supported on the benthos, and the existing piles. Corals are located on the boulders located along the shoreline. *Siderastrea* was the only coral species located onsite. *Thalassia testudinum* and *Halodule wrightii* were the only seagrass species located onsite. The property is currently under construction for the development of 44 townhome units on the upland lot.

PROPOSED WORK: The applicant seeks authorization to place 165 cubic yards of fill along 724 linear feet of shoreline to repair and expand the existing boulder seawall/revetment, to construct a marginal wood dock varying in width between 8 feet to 10 feet wide along the boat basin and canal shoreline totaling 7,237 square feet, to place 10 cubic yards of fill within a 520 square foot area to abandon an existing boat ramp, to construct six (6) 3 foot wide by 20 foot long finger piers and five (5) 3 foot wide by 15 foot long finger piers totaling 585 square feet within the boat basin, to remove the existing pilings and install 20 new mooring piles within the boat basin, to construct a 250 square foot "T"-shaped swim platform with a 4 foot wide by 22 foot long access walkway leading to a 8 foot wide by 20 foot long grated terminal platform with permanent hand railing along the permanent of the structure and no mooring sign along the Florida Bay, and to install temporary floating turbidity barriers around all work areas that are in/over U.S. navigable waters. Marina improvements will enable mooring for up to 30 vessels for the subject lot. All proposed slips will be used by the unit owners of the property currently designated by RE: 00327150-000100.

AVOIDANCE AND MINIMIZATION INFORMATION – The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment: Prior to the start of construction, turbidity curtains will be deployed to isolate the construction site from ambient waters.

COMPENSATORY MITIGATION – The applicant has offered the following compensatory mitigation plan to offset unavoidable functional loss to the aquatic environment: If it is determined that the issuance of a DA permit is appropriate, mitigation will be required. The applicant has indicated that the mitigation proposal will be based on the Keys Restoration Fund (KRF). Time lag and risk will be a required component of any mitigation requirement.

CULTURAL RESOURCES: The Corps is not aware of any known historic properties within the permit area. By copy of this public notice, the Corps is providing information for review. Our final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer and those federally recognized tribes with concerns in Florida and the Permit Area.

ENDANGERED SPECIES:

The real estate parcel number is 00327150-000100 and **is not** on the U.S. Fish and Wildlife Service Suitable Habitat List, dated August 2010, for Monroe County.

The U.S. Army Corps of Engineers (Corps) has determined the project *may affect, but is not likely to adversely affect* ("MANLAA") the West Indian manatee (*Trichechus manatus*) or its designated critical habitat. Since the proposal by the applicant is for in-water construction, potential impacts to the endangered manatee were evaluated using The Corps of Engineers, Jacksonville District, and the State of Florida Effect Determination Key for the Manatee in Florida (Manatee Key), dated April 2013. Use of the Manatee Key resulted in the following sequential determination: A > B > C > G > H > I > J > L > N > O > P1 "*may affect, but is not likely to adversely affect.*" The Corps will request initiation of formal consultation with the Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act by separate letter.

The Corps has determined the proposed project *may affect, but is not likely to adversely affect* ("MANLAA") the swimming green sea turtles (*Chelonia mydas*), loggerhead sea turtles (*Caretta caretta*), hawksbill sea turtles (*Eretmochelys imbricata*), Kemp's ridley sea turtles (*Lepidochelys kempii*), leatherback sea turtles (*Dermochelys coriacea*), the smalltooth sawfish (*Pristis pectinata*) and Acropora sp. critical habitat. The Corps has reached a *no effect* determination on Acropora sp. and corals species; (*Dendrogyra cylindrus*, *Orbicella annularis*, *Orbicella faveolata*, *Orbicella franksi*, *Mycetophyllia ferox*). The Corps will request National Marine Fisheries Service's concurrence with this determination pursuant to Section 7 of the Endangered Species Act.

ESSENTIAL FISH HABITAT (EFH): This notice initiates consultation with the National Marine Fisheries Service on EFH as required by the Magnuson-Stevens Fishery Conservation and Management Act 1996. The proposal would impact approximately 8,092 square feet of submerged bottom utilized by various life stages of marine life. The Corps has not independently verified if wetlands and/or submerged aquatic resources area located within the project footprint. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries in the Florida Keys. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The jurisdictional line and confirmation of resources located within the project footprint has not been verified by Corps personnel. Site inspections will be conducted by the Corps and/or benthic surveys will be required to document existing site conditions within the project footprint prior to reaching a final decision on the project.

AUTHORIZATION FROM OTHER AGENCIES: Water Quality Certification may be required from the Florida Department of Environmental Protection and/or one of the state Water Management Districts.

COMMENTS regarding the potential authorization of the work proposed should be submitted in writing to the attention of the District Engineer through the Miami Permits Section, 9900 SW 107th Avenue, Suite 203, Miami, Florida 33176 within 21 days from the date of this notice.

The decision whether to issue or deny this permit application will be based on the information received from this public notice and the evaluation of the probable impact to the associated wetlands. This is based on an analysis of the applicant's avoidance and minimization efforts for the project, as well as the compensatory mitigation proposed.

QUESTIONS concerning this application should be directed to the project manager, Maria Bezanilla, in writing at the Miami Permits Section, 9900 SW 107th Avenue, Suite 203, Miami, Florida 33176, by electronic mail at Maria.I.Bezanilla@usace.army.mil, by fax at (305) 526-7184, or by telephone at (305) 779-6057.

IMPACT ON NATURAL RESOURCES: Coordination with U.S. Fish and Wildlife Service, Environmental Protection Agency (EPA), the National Marine Fisheries Services, and other Federal, State, and local agencies, environmental groups, and concerned citizens generally yields pertinent environmental information that is instrumental in determining the impact the proposed action will have on the natural resources of the area.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.

The US Army Corps of Engineers (Corps) is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to endangered species, historic properties, water

quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COASTAL ZONE MANAGEMENT CONSISTENCY: In Florida, the State approval constitutes compliance with the approved Coastal Zone Management Plan. In Puerto Rico, a Coastal Zone Management Consistency Concurrence is required from the Puerto Rico Planning Board. In the Virgin Islands, the Department of Planning and Natural Resources permit constitutes compliance with the Coastal Zone Management Plan.

REQUEST FOR PUBLIC HEARING: Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.

PROJECT LOCATION

RE: 00327150-000100

SEC. 10, TWP. 66S, RGE. 32E

MARATHON

LATITUDE: 24.717808°N LONGITUDE: 81.081028°W

DIRECTIONS:

U.S. HIGHWAY NO. 1 NORTH TO MM 49.5±.

RIGHT AT 50TH STREET

PROJECT SITE: 881 50TH STREET

ADJOINING OWNERS

HOLTON BUTLER SHIPMAN JR REV TR AG 5/26/04

2809 DEEPWATER TRL

EDGEWATER MD 21037

MCFALLS FAMILY JOINT TRUST 3/1/2018

15470 CHLOE CIR

FORT MYERS FL 33908



REVISIONS:

1	01/21/20

LOCATION & VICINITY MAP

SCALE: AS SHOWN

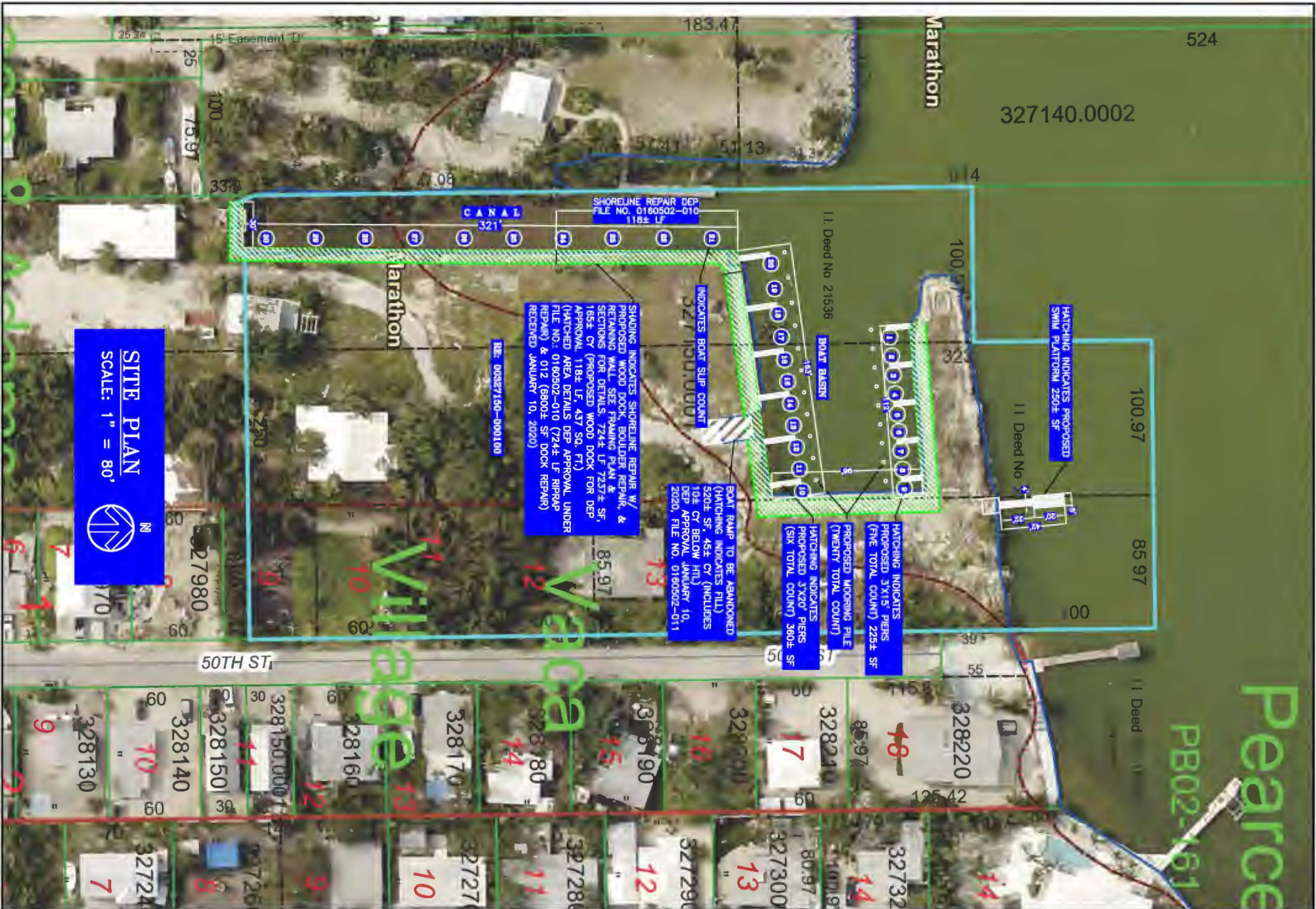
SHORELINE REPAIR & IMPROVEMENTS FOR SEASONS, INC.

881 50TH STREET
MARATHON, MONROE COUNTY, FL

GLEN BOE AND ASSOCIATES, INC. # 4061

5800 OVERSEAS HIGHWAY, SUITE 4, MARATHON, FL 33050
Telephone (305) 743-9121 Fax (305) 743-9197
Email: glenboe@bellsouth.net

DATE: 10/18/19



SITE PLAN
SCALE: 1" = 80'



SHEET 2 OF 10 2	DATE: 10/18/19	GLEN BOE AND ASSOCIATES, INC. # 4061 5800 OVERSEAS HIGHWAY, SUITE 4, MARATHON , FL 33050 Telephone (305) 743-9121 Fax (305) 743-9197 Email: glenboe@bellsouth.net	SHORELINE REPAIR & IMPROVEMENTS FOR SEASONS, INC. 881 50TH STREET MARATHON, MONROE COUNTY, FL	CERTIFIED BY: SEAN KIRWAN, P.E. #57506	REVISIONS:	
					1	01/08/20
					2	01/21/20
					3	02/18/20
					4	03/11/20

BAY OF FLORIDA

REVISIONS:

1	01/08/20
2	01/21/20
3	02/18/20

CERTIFIED BY:
SEAN KIRWAN, P.E. #57506

SHORELINE REPAIR & IMPROVEMENTS FOR SEASONS, INC.
881 50TH STREET
MARATHON, MONROE COUNTY, FL

GLEN BOE AND ASSOCIATES, INC. # 4061
5900 OVERSEAS HIGHWAY, SUITE 4, MARATHON, FL 33060
Telephone (305) 743-9121 Fax (305) 743-9197
Email: glenboe@bellsouth.net

DATE: 10/18/19

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SHEET 3 OF 10

HATCHING INDICATES PROPOSED
SWIM PLATFORM 250± SF

A.M.H.W.L.
H.T.L.

SHADING INDICATES PROPOSED
WOOD DOCK W/ UPLAND
RETAINING WALL. SEE FRAMING
PLAN & SECTIONS FOR DETAILS.

HATCHING INDICATES PROPOSED
3'x15' PIERS (FIVE TOTAL COUNT) 225± SF

BOAT BASIN

HATCHING INDICATES EXISTING
CONCRETE DOCK TO BE
REMOVED AS NEEDED.

PROPOSED MOORING PILE
(TWENTY TOTAL COUNT)

EXISTING MOORING PILES TO
BE REMOVED (FOUR TOTAL COUNT)

HATCHING INDICATES PROPOSED
3'x20' PIERS (SIX TOTAL COUNT)
360± SF

PORTION OF CONCRETE
DOCK HAS COLLAPSED

PROPOSED BOULDER REPAIR

PROPOSED DOCK W/
RETAINING WALL

A.M.H.W.L.
H.T.L.

BOAT RAMP TO BE ABANDONED
(HATCHING INDICATES FILL)
520± SF, 45± CY (INCLUDES
10± CY BELOW HTL)

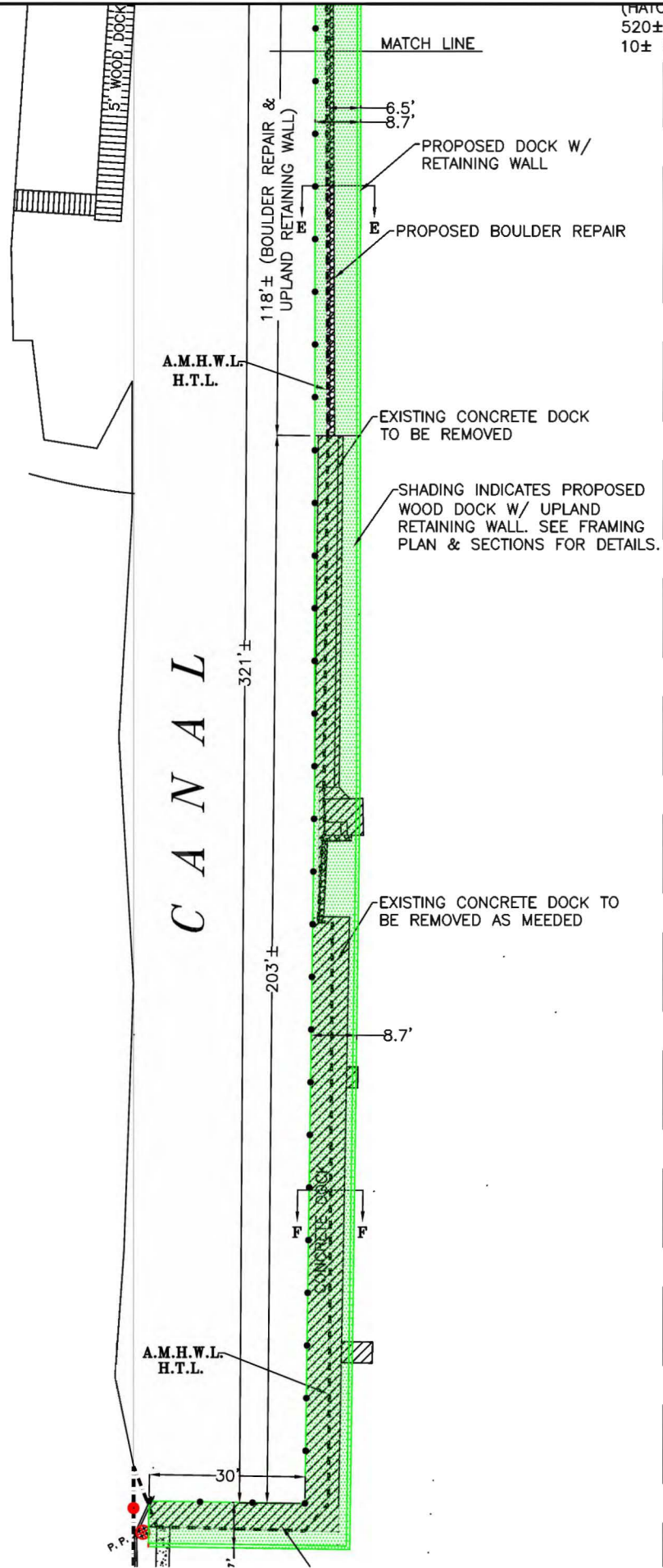
MATCH LINE

PARTIAL SITE PLAN-BOAT BASIN

SCALE: 1" = 30'



(HATCHING INDICATES)
520± SF, 45± CY
10± CY BELOW HT



PARTIAL SITE PLAN-CANAL
SCALE: 1" = 30'

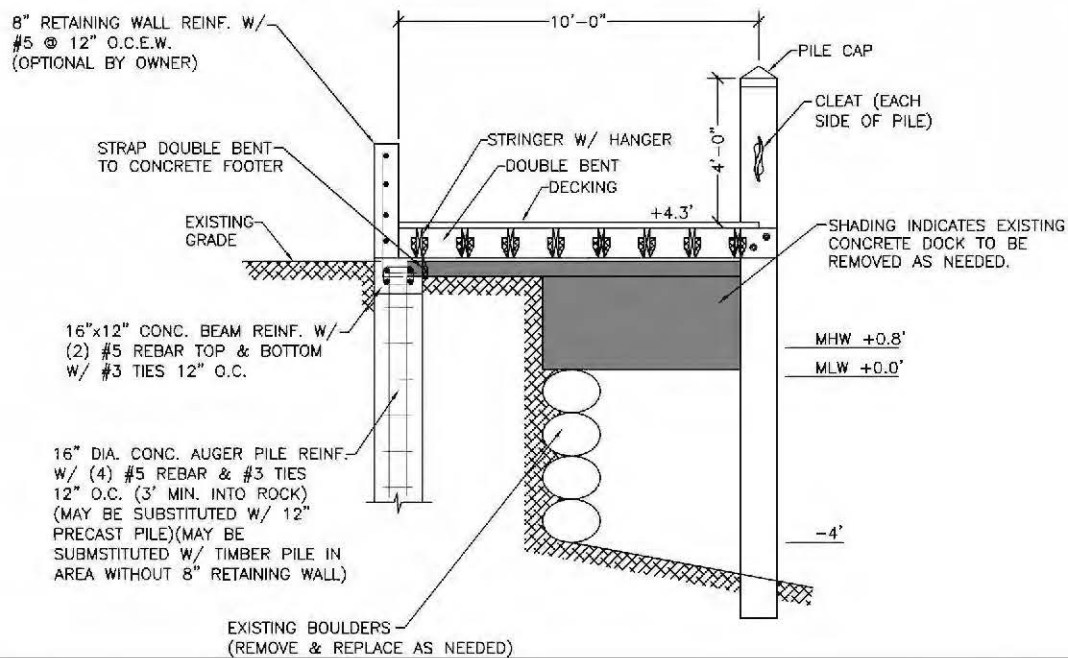
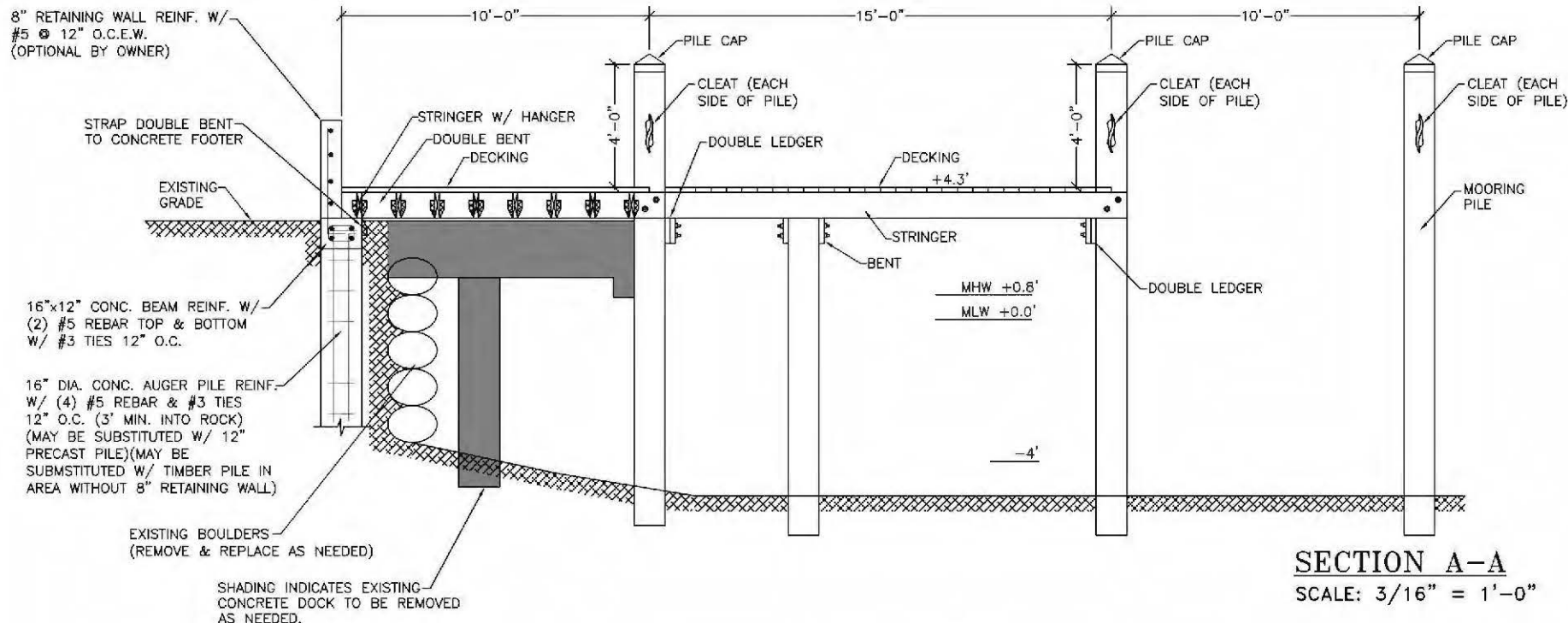
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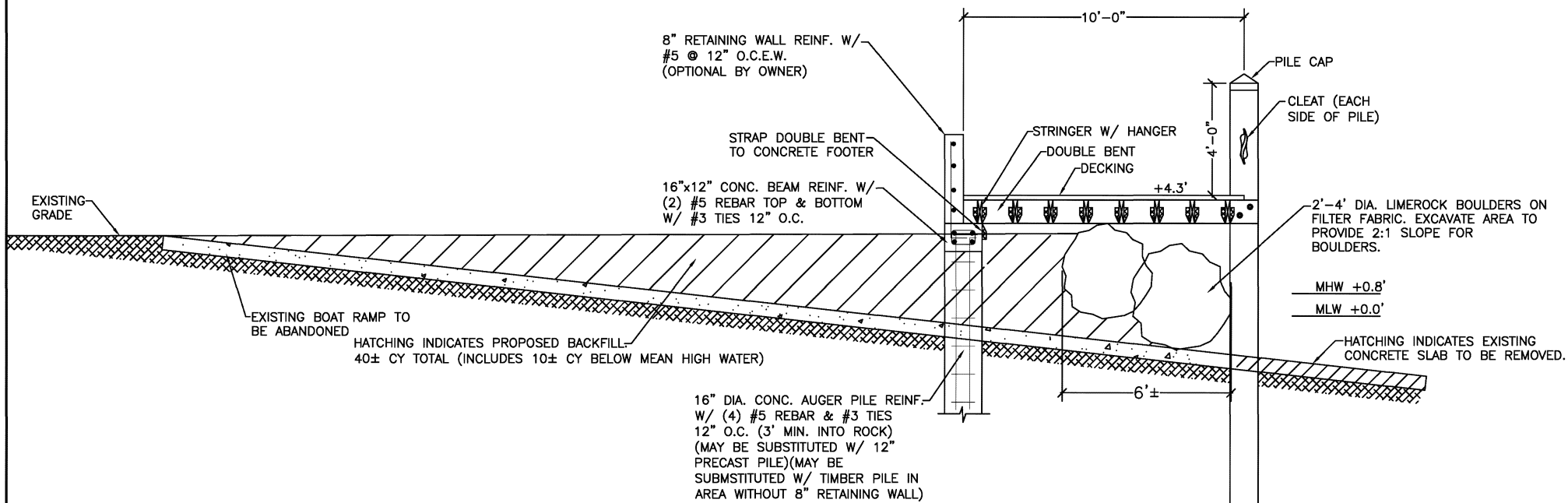
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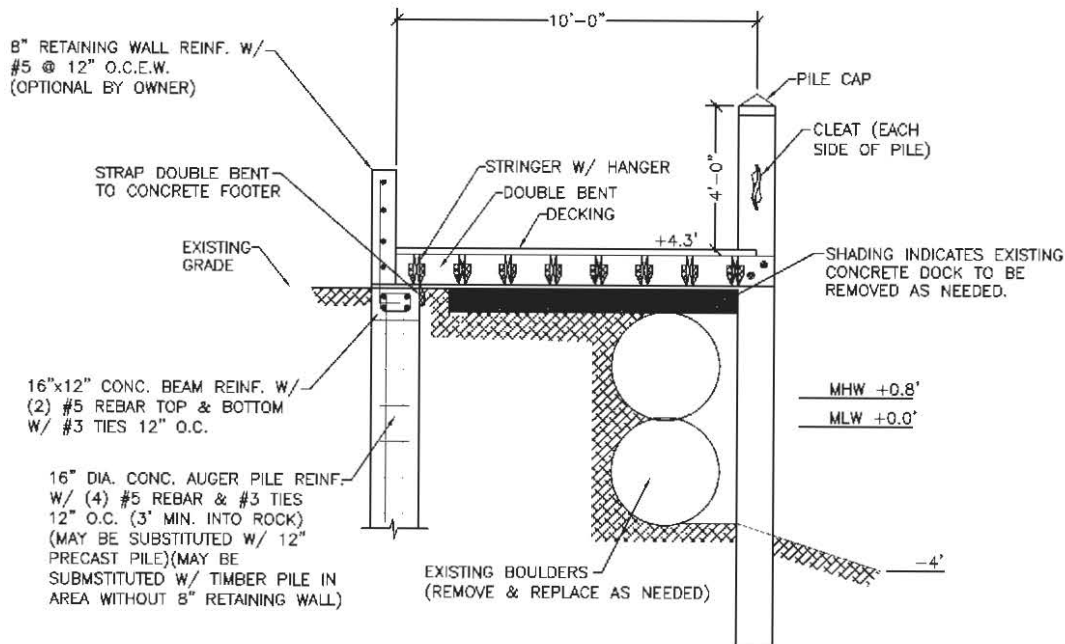
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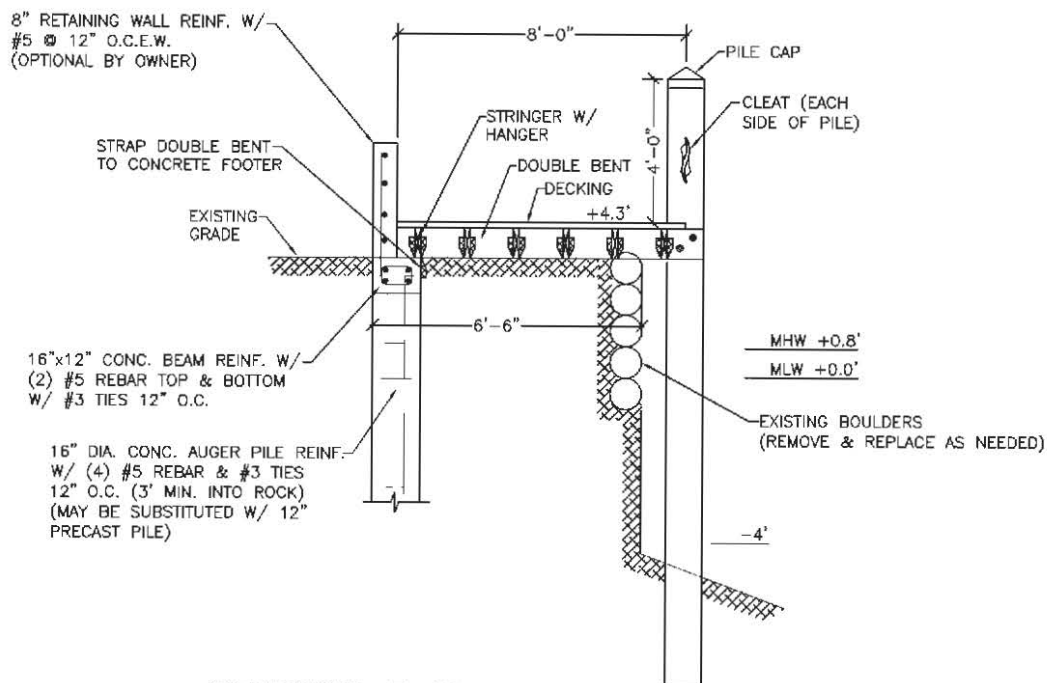


BOAT RAMP ABANONMENT – SECTION C-C

SCALE: 3/16" = 1'-0"



SECTION D-D
SCALE: 3/16" = 1'-0"



SECTION E-E
SCALE: 3/16" = 1'-0"

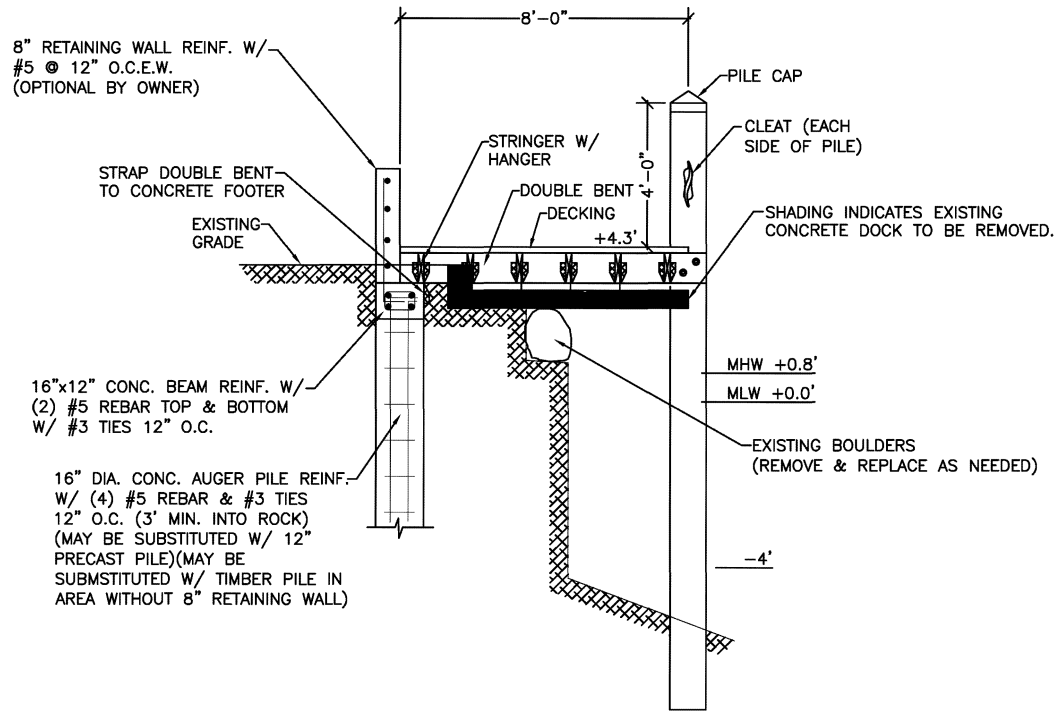
REVISIONS:		
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2	01/21/20	

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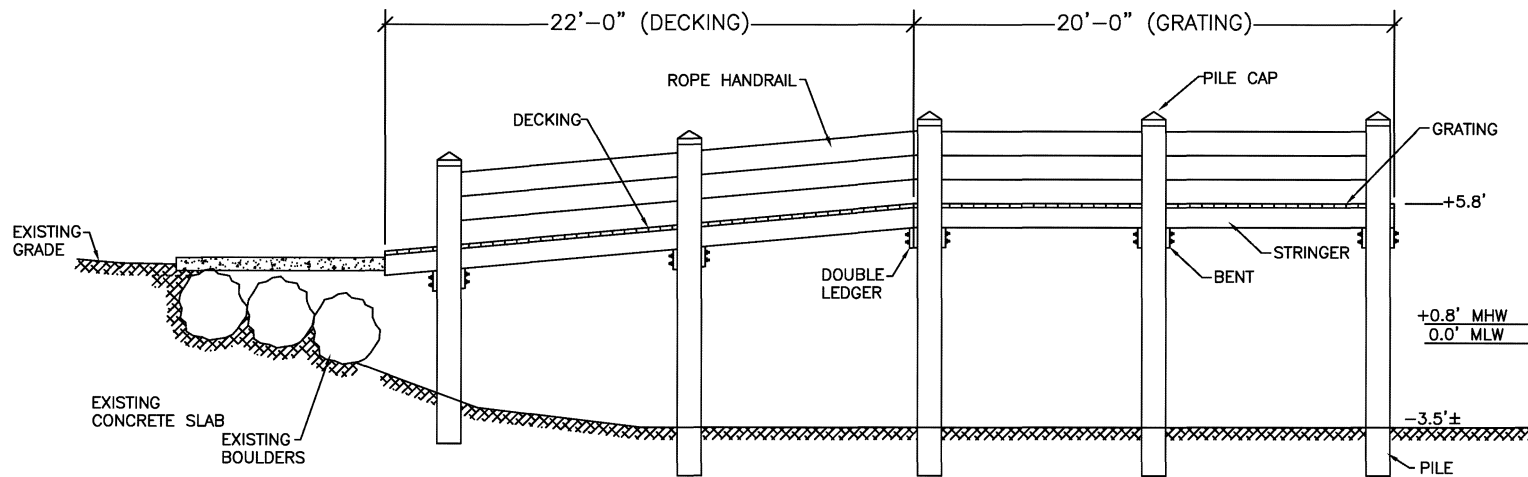
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DATE: 10/18/19



SECTION F-F

SCALE: 3/16" = 1'-0"



SECTION G-G

SCALE: 1/8" = 1'-0"

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS PRIOR TO COMMENCING WORK. THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE ARMY CORPS OF ENGINEERS & LOCAL REGULATIONS SHALL GOVERN ALL WORK.
2. WORK SHOWN ON DRAWINGS IS DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2017. FOLLOW ALL APPLICABLE PROVISIONS FOR ALL PHASES OF CONSTRUCTION. THE PROPOSED STRUCTURE(S) IS DESIGNED FOR A MINIMUM LIVE LOAD OF 100 PSF/DEAD LOAD 10 PSF, 180 MPH (3 SECOND GUST), EXPOSURE D, RISK CATEGORY 1, ASCE 7-10.
3. CONTRACTOR SHALL ADHERE TO THE STANDARD MANATEE CONSTRUCTION CONDITIONS (LATEST EDITION). IF NEEDED, THE CONTRACTOR CAN CONTACT THE ARMY CORPS OF ENGINEERS OR THIS OFFICE TO OBTAIN A COPY OF THE STANDARD MANATEE CONSTRUCTION CONDITIONS.
4. BEST MANAGEMENT PRACTICES, INCLUDING THE USE OF TURBIDITY SCREENS, ARE REQUIRED TO ISOLATE THE CONSTRUCTION AREA FROM THE ADJACENT WATERS. CONTRACTOR SHALL INSTALL TURBIDITY SCREENS AROUND THE IMMEDIATE PROJECT AREA PRIOR TO CONSTRUCTION. THE TURBIDITY SCREENS REMAIN IN PLACE UNTIL WATER QUALITY CONDITIONS RETURN TO PRECONSTRUCTION CONDITIONS. WATER QUALITY MONITORING SHALL ADHERE TO STATE REGULATIONS.
5. ELECTRIC & WATER (DESIGN PROVIDED BY OTHERS) SHALL BE PROVIDED AS DIRECTED BY OWNER. CONTRACTOR SHALL COORDINATE FINAL LOCATION OF ALL PROPOSED UTILITIES WITH OWNER PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS & WATER DEPTHS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK.
7. THE STRUCTURAL INTEGRITY OF THE COMPLETED STRUCTURE DEPENDS ON INTERACTION OF VARIOUS CONNECTED COMPONENTS. PROVIDE ADEQUATE BRACING, SHORING, AND OTHER TEMPORARY SUPPORTS AS REQUIRED TO SAFELY COMPLETE THE WORK.
8. EXERCISE EXTREME CARE AND CAUTION WHEN EXCAVATING AND FILLING ADJACENT TO EXISTING STRUCTURES. UNDER NO CIRCUMSTANCES SHALL THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURES BE IMPAIRED IN ANY WAY BY CONSTRUCTION OPERATIONS AND PROCEDURES. DO NOT EXCAVATE OR DISTURB SOIL ADJACENT TO OR BENEATH EXISTING FOOTINGS.
9. CONTRACTOR SHALL COORDINATE INSTALLATION OF CLEATS, LADDERS, PILE CAPS, AND OTHER DOCK ACCESSORIES WITH OWNER PRIOR TO CONSTRUCTION. ALL DOCK ACCESSORIES SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. STAINLESS STEEL HARDWARE SHALL BE USED FOR ALL CONNECTIONS TO DOCK.
10. FOR OPEN WATER DOCKS PROVIDE REFLECTORS ON EACH SIDE OF WALKWAY EVERY 50' AND ON EACH END OF THE TERMINAL PLATFORM.

TIMBER PILES:

PILES SHALL BE ROUND SOUTHERN PINE OR DOUGLAS FIR AND SHALL CONFORM TO ASTM D 25, UNUSED, CLEAN PEELED, UNIFORMLY TAPERED, ONE PIECE FROM BUTT TO TIP. PILES SHALL BE PRESSURE TREATED IN CONFORMANCE WITH AWPA C3 AND C18 FOR MARINE PILES. THE MINIMUM BUTT DIAMETER SHALL BE 12 INCHES, MEASURED AT A SECTION 3 FEET FROM THE END. FOR PILES UP TO 50 FEET IN LENGTH THE MINIMUM TIP DIAMETER SHALL BE 9 INCHES.

A STRAIGHT LINE DRAWN FROM THE CENTER OF THE BUTT TO THE CENTER OF THE TIP SHALL NOT, AT ANY POINT, FALL FURTHER AWAY FROM THE CENTER OF THE PILE THAN A DISTANCE EQUAL TO 1% OF THE LENGTH OF THE PILE.

PILES SHALL BE SET IN PREDRILLED OR PREPUNCHED HOLES AND DRIVEN TO PENETRATE FIRM ROCK 7' MIN.

PILES SHALL BE SPACED @ MAXIMUM OF 10' O.C. UNLESS OTHERWISE SHOWN.

DO NOT DRIVE PILES WITHIN 20 FEET OF CONCRETE LESS THAN SEVEN DAYS OLD.

CONTRACTOR SHALL INVESTIGATE ANY SUDDEN DECREASE IN DRIVING RESISTANCE FOR POSSIBLE BREAKAGE OF THE PILE. IF SUDDEN DECREASE IN DRIVING RESISTANCE CANNOT BE CORRELATED TO BORING DATA OR SOME INCIDENT IN THE DRIVING, AND IF THE PILE CANNOT BE INSPECTED, SUCH DECREASE IN DRIVING RESISTANCE MAY BE CAUSE FOR REJECTION OF THE PILE.

RE-DRIVE ANY PILE WHICH IS RAISED DURING DRIVING OF ADJACENT PILES, TO THE ORIGINAL TIP ELEVATION.

HEIGHT OF PILES SHALL BE FIELD DETERMINED BY OWNER. CUT OFF PILES AT TOP ELEVATION DIRECTED BY THE OWNER. REPLACE OR REPAIR PILES WHICH ARE DAMAGED WHEN CUT OFF.

PILES SHALL DEViate FROM PLUMB AND ANGLE OF BATTER NO MORE THAN ¼ INCH PER FOOT OF PILE LENGTH, BUT NOT MORE THAN 6 INCHES OVERALL. PILES SHALL NOT DEViate FROM LOCATION OF PILE TOP MORE THAN 6 INCHES.

PILES NOT MEETING ASTM D25 REQUIREMENTS WILL BE REJECTED. REMOVE SUCH PILES FROM THE SITE AND REPLACE WITH SOUND PILES. PILES BROKEN UNDER DRIVING STRESSES MAY BE CUT OFF AND LEFT IN PLACE IF APPROVED BY THE DESIGN ENGINEER FOR THE LOCATION. OTHERWISE THEY SHALL BE EXTRACTED AND REMOVED FROM THE SITE.

REMOVE CUTOFF SECTIONS OF PILES FROM THE SITE AND LEGALLY DISPOSE.

LUMBER, DECKING, & FASTENERS:

ALL BENTS AND STRINGERS SHALL BE SOUTHERN PINE NO. 2. LUMBER SHALL BE PRESSURE TREATED PER AWPA UC4B SPECIFICATIONS. MINIMUM RETENTION OF CCA SHALL BE 0.60 POUNDS/CUBIC FOOT.

ALL DECKING SHALL BE SOUTHERN PINE NO. 1 WITH ROUNDED EDGES. LUMBER SHALL BE PRESSURE TREATED. MINIMUM RETENTION OF ACQ SHALL BE 0.40 POUNDS/CUBIC FOOT. ATTACH DECKING TO EACH STRINGER WITH TWO #10 3" STAINLESS STEEL DECK SCREWS AT EACH CONNECTION POINT. PRESSURE TREATED DECKING MAY BE SUBSTITUTED WITH SYNTHETIC DECKING OR FIBERGLASS GRATING AS DIRECTED BY OWNER. SYNTHETIC DECKING & FIBERGLASS GRATING SHALL BE CAPABLE OF SUPPORTING THE LIVE LOAD & DEAD LOAD LISTED ABOVE AND BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

STRINGERS: 2x10 @ 16" CENTERS MAX. (Fb=800 MIN.)

BENTS: 4' DOCKS DOUBLE 2x10 OR 3x10 W/ ¾" BOLTS (Fb=800 MIN.)

5' DOCKS DOUBLE 2x10 OR 3x10 W/ ¾" BOLTS (Fb=800 MIN.)

8' DOCKS DOUBLE 2x10 OR 3x10 W/ ¾" BOLTS (Fb=800 MIN.)

10' DOCKS 4x12 NO. 1 W/ 1" BOLTS (Fb=750 MIN.)

DECKING: 2x6 (1/2" SPACING) (Fb=1,350 MIN.)

ATTACH BENTS TO PILING WITH TWO 5/8" 316 STAINLESS STEEL BOLTS, WASHERS, AND NUTS AT EACH CONNECTION POINT. BORE HOLES SHALL BE 1/16 INCH GREATER IN DIAMETER THAN THE BOLT. UPON COMPLETION OF THE INSTALLATION, CHECK ALL NUTS FOR TIGHTNESS. PROVIDE BITUMINOUS PAINT, CAULK, OR SIMILAR FOR TO PREVENT DISSIMILAR METAL CONTACT.

ATTACH EACH STRINGER TO EACH BENT WITH STAINLESS STEEL STRAPS AT EACH CONTACT POINT. PROVIDE SIMPSON STRONG-TIE LTS12, ALPINE MTS12, OR APPROVED EQUAL. ALL CONNECTORS SHALL BE HEAVY DUTY TYPE FOR MARINE ENVIRONMENT APPLICATIONS.

OR

ATTACH EACH STRINGER TO EACH BENT WITH STAINLESS STEEL HANGERS AT EACH CONTACT POINT. PROVIDE SIMPSON STRONG-TIE LUS210SS OR APPROVED EQUAL. ALL CONNECTORS SHALL BE HEAVY DUTY TYPE FOR MARINE ENVIRONMENT APPLICATIONS.

LAY THE PLANKS WITH THE BEST SIDE UP AND WITH ADJACENT EDGES IN CONTACT UNLESS OTHER SPACING SPECIFIED.

PERFORM COUNTERSINKING WHEREVER THE HEADS OF SCREWS OR BOLTS WOULD OTHERWISE INTERFERE WITH THE ASSEMBLY OF THE

REVISIONS:

1 01/21/20

CERTIFIED BY:
SEAN KIRWAN, P.E. #67506

SHORELINE REPAIR & IMPROVEMENTS FOR SEASONS, INC.
881 50TH STREET
MARATHON, MONROE COUNTY, FL

GLEN BOE AND ASSOCIATES, INC. # 4061

5800 OVERSEAS HIGHWAY, SUITE 4, MARATHON, FL 33060

Telephone (305) 743-9121 Fax (305) 743-9197

Email: glenboe@bellsouth.net

DATE: 10/18/19

9

SHEET 9 OF 10

LUMBER, DECKING, & FASTENERS:

ALL BENTS AND STRINGERS SHALL BE SOUTHERN PINE NO. 2. LUMBER SHALL BE PRESSURE TREATED PER AWPA UC4B SPECIFICATIONS. MINIMUM RETENTION OF CCA SHALL BE 0.60 POUNDS/CUBIC FOOT.

ALL DECKING SHALL BE SOUTHERN PINE NO. 1 WITH ROUNDED EDGES. LUMBER SHALL BE PRESSURE TREATED. MINIMUM RETENTION OF ACQ SHALL BE 0.40 POUNDS/CUBIC FOOT. ATTACH DECKING TO EACH STRINGER WITH TWO #10 3" STAINLESS STEEL DECK SCREWS AT EACH CONNECTION POINT. PRESSURE TREATED DECKING MAY BE SUBSTITUTED WITH SYNTHETIC DECKING OR FIBERGLASS GRATING AS DIRECTED BY OWNER. SYNTHETIC DECKING & FIBERGLASS GRATING SHALL BE CAPABLE OF SUPPORTING THE LIVE LOAD & DEAD LOAD LISTED ABOVE AND BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

STRINGERS: 2x10 @ 16" CENTERS MAX. (Fb=800 MIN.)

BENTS: 4' DOCKS DOUBLE 2x10 OR 3x10 W/ 3/4" BOLTS (Fb=800 MIN.)

5' DOCKS DOUBLE 2x10 OR 3x10 W/ 3/4" BOLTS (Fb=800 MIN.)

8' DOCKS DOUBLE 2x10 OR 3x10 W/ 3/4" BOLTS (Fb=800 MIN.)

10' DOCKS 4x12 NO. 1 W/ 1" BOLTS (Fb=750 MIN.)

DECKING: 2x6 (1/2" SPACING) (Fb=1,350 MIN.)

ATTACH BENTS TO PILING WITH TWO 5/8" 316 STAINLESS STEEL BOLTS, WASHERS, AND NUTS AT EACH CONNECTION POINT. BORE HOLES SHALL BE 1/16 INCH GREATER IN DIAMETER THAN THE BOLT. UPON COMPLETION OF THE INSTALLATION, CHECK ALL NUTS FOR TIGHTNESS. PROVIDE BITUMINOUS PAINT, CAULK, OR SIMILAR FOR TO PREVENT DISSIMILAR METAL CONTACT.

ATTACH EACH STRINGER TO EACH BENT WITH STAINLESS STEEL STRAPS AT EACH CONTACT POINT. PROVIDE SIMPSON STRONG-TIE LTS12, ALPINE MTS12, OR APPROVED EQUAL. ALL CONNECTORS SHALL BE HEAVY DUTY TYPE FOR MARINE ENVIRONMENT APPLICATIONS.

LAY THE PLANKS WITH THE BEST SIDE UP AND WITH ADJACENT EDGES IN CONTACT UNLESS OTHER SPACING SPECIFIED.

PERFORM COUNTERSINKING WHEREVER THE HEADS OF SCREWS OR BOLTS WOULD OTHERWISE INTERFERE WITH THE ASSEMBLY OF THE WORK.

CONCRETE WALL, BEAMS & AUGER PILES

CAST IN PLACE CONCRETE SHALL BE TYPE II CONCRETE WITH A COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS. MAXIMUM WATER-CEMENTIOUS MATERIALS RATIO BY WEIGHT RATIO SHALL BE 0.40. SLUMP SHALL NOT EXCEED 5" (1"±).

REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A 615, GRADE 60. ALL DETAILING AND ACCESSORIES TO CONFORM TO ACI DETAILING MANUAL (LATEST EDITION).

PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE SLABS.

REINFORCED CONCRETE CONSTRUCTION TO CONFORM TO ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

PROVIDE SLEEVES FOR ALL PIPES, CONDUITS, ETC. THAT PENETRATE CONCRETE STRUCTURAL MEMBERS PRIOR TO PLACEMENT OF CONCRETE. CUTTING OR DRILLING OF HARDENED CONCRETE NOT PERMITTED.

DO NOT EMBED HORIZONTAL CONDUITS, PIPES, ETC., IN HORIZONTAL CONCRETE STRUCTURAL MEMBERS UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.

REQUIRED CONCRETE COVER FOR REINFORCING STEEL (UNLESS NOTED OTHERWISE):

TOP 3" MINIMUM, BOTTOM 3" MINIMUM, SIDES 3" MINIMUM

PROVIDE CHAIRS, SPACERS, TIES, AND ALL DEVICES NECESSARY FOR PROPER PLACING, SPACING, SUPPORTING, AND FASTENING REINFORCEMENT AS REQUIRED BY ACI 315. PROVIDE CHAIRS, SPACERS, BOLSTERS, AND ITEMS IN CONTACT WITH FORMS WITH HOT-DIP GALVANIZED LEGS OR PLASTIC LEGS.

LAP SPLICE CONTINUOUS VERTICAL OR HORIZONTAL BARS IN CONCRETE MEMBERS BY WIRING TOGETHER IN CONTACT IN ACCORDANCE WITH ACI 318, LATEST EDITION, FOR CLASS "B" TENSION LAP SPLICES. DO NOT SPLICE CONTINUOUS TOP BARS IN BEAMS AT ENDS OF CLEAR SPANS. DO NOT SPLICE CONTINUOUS BOTTOM BARS IN BEAMS IN CLEAR SPANS BETWEEN SUPPORTS.

AUGER PILES SHALL PENETRATE FIRM ROCK 3' MIN.

REVISIONS:

1 01/21/20

CERTIFIED BY:
SEAN KIRWAN, P.E. #67506

SHORELINE REPAIR & IMPROVEMENTS FOR SEASONS, INC.
881 50TH STREET
MARATHON, MONROE COUNTY, FL

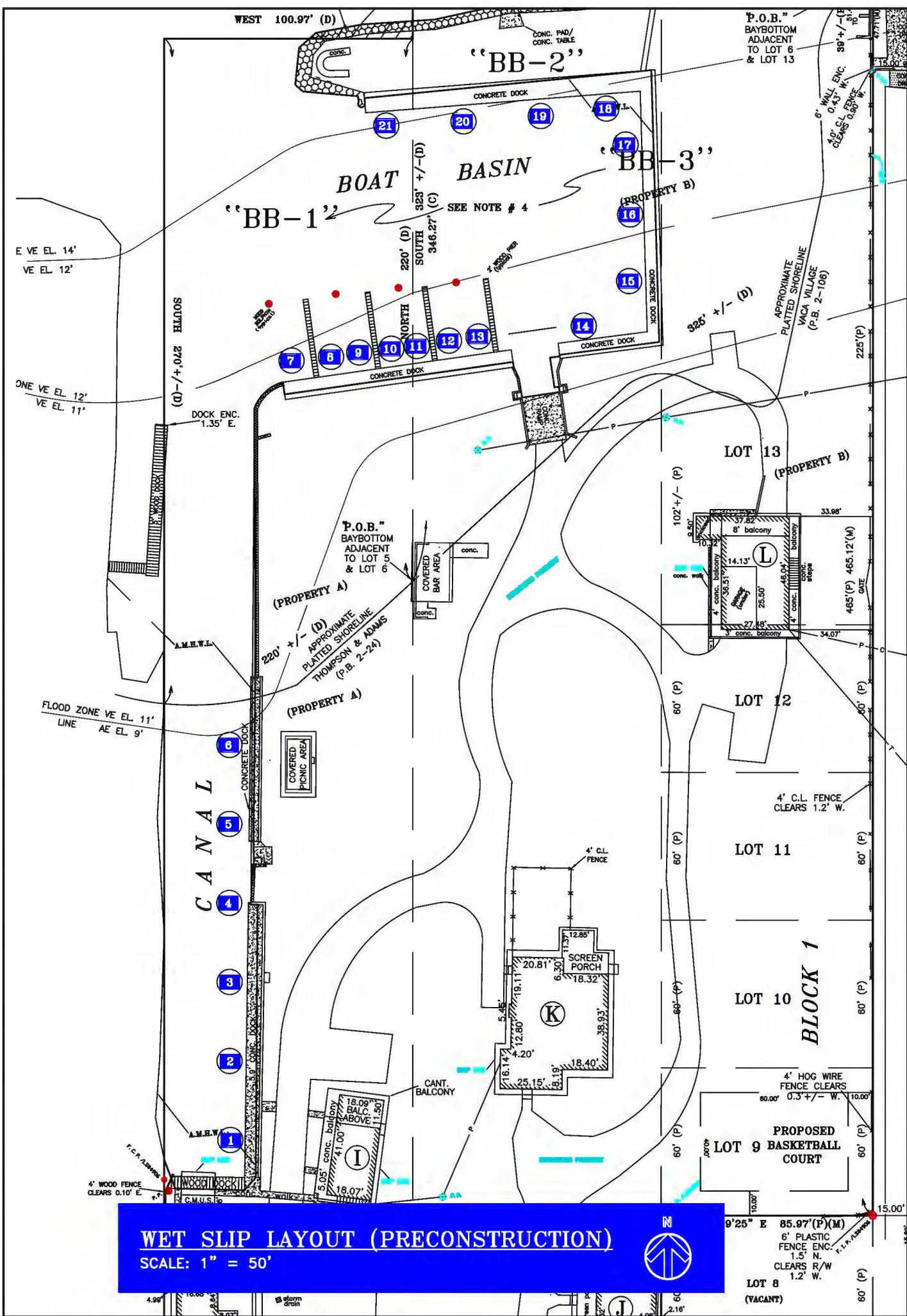
GLEN BOE AND ASSOCIATES, INC. # 4061

5800 OVERSEAS HIGHWAY, SUITE 4, MARATHON, FL 33050
Telephone (305) 743-9121 Fax (305) 743-9197
Email: glenboe@bellsouth.net

DATE: 10/18/19

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SHEET 100F 10



REVISIONS:	
1	03/11/20
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