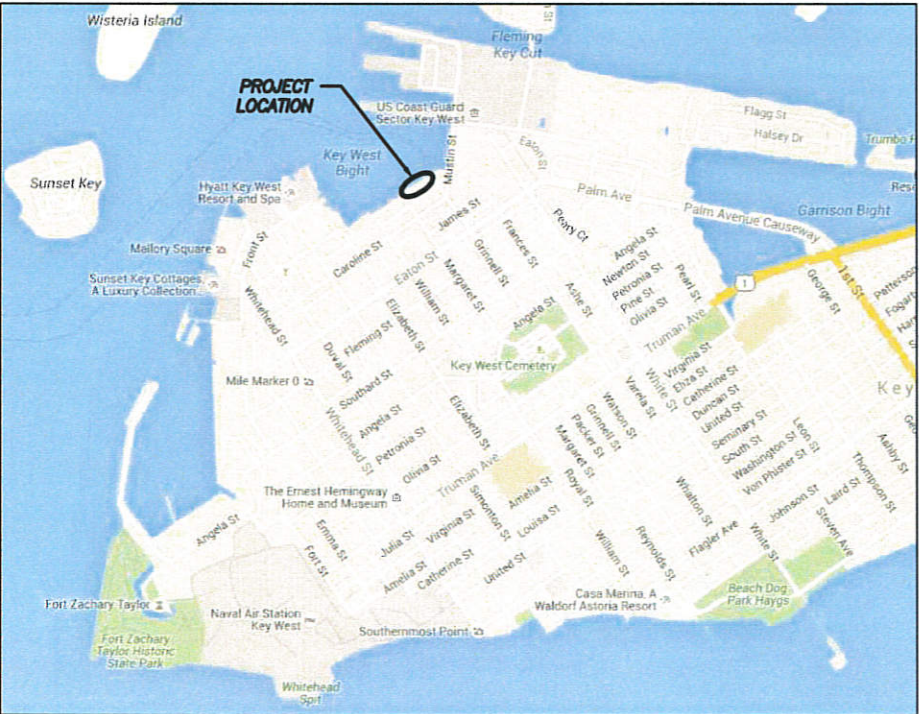


HALF SHELL RAW BAR PROPOSED SEAWALL REPAIRS ITB #17-002



LOCATION MAP
N.T.S.



VICINITY MAP
N.T.S.

SHEET INDEX

Sheet Number	Sheet Title
S1.0	COVER SHEET
S1.1	GENERAL NOTES
S1.2	STANDARD MANATEE CONDITION SIGN
S2.0	PLAN VIEW
S2.1	ENLARGED PLAN VIEW
S3.0	TYPICAL SECTIONS (SHEET 1 OF 3)
S3.1	TYPICAL SECTIONS (SHEET 2 OF 3)
S3.2	TYPICAL SECTIONS (SHEET 3 OF 3)
S4.0	TYPICAL DETAILS AND SECTIONS
S5.0	SPALL REPAIR DETAILS

NOTE:
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CERTIFICATE OF AUTHORIZATION
NO. 2429

NO.	REVISION	DATE	BY

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Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

**PROPOSED SEAWALL REPAIRS FOR:
HALF SHELL RAW BAR
231 MARGARET STREET
KEY WEST, FLORIDA**

DRAWN D.A.M.	SEAL FLORIDA STATE ENGINEER	SHEET 1.0
CHECKED C.B.L.	DATE OCTOBER 2016	PROJECT NO. 16162144.00
SCALE AS NOTED	10/27/16	

BID PLAN SET

GENERAL NOTES:

1. DESIGNED IN ACCORDANCE WITH FLORIDA BUILDING CODE (2014 EDITION) HIGH VELOCITY HURRICANE ZONE.

CONCRETE:

1. CONCRETE SHALL CONFORM TO SECTION 346 OF THE FDOT STANDARD SPECIFICATIONS. THE PROVISIONS OF SECTION 346 SHALL APPLY EXCEPT AS AMENDED IN THIS TECHNICAL SPECIFICATION.
2. NO FLYASH OR SLAG WILL BE PERMITTED AS A SUBSTITUTE FOR CEMENT.
3. ENVIRONMENT: EXTREMELY AGGRESSIVE
4. MATERIAL: MINIMUM 28 DAY STRENGTH: $f'c$
CLASS IV: 5,500 PSI (CAST IN PLACE CONCRETE)
5. MAXIMUM WATER TO CEMENT RATIO 0.40.
6. MINIMUM CEMENT CONTENT 658 LBS PER CUBIC YARD OF CONCRETE.
7. FINISH: ALL EXPOSED EXTERIOR SURFACES SHALL RECEIVE AN APPROVED FDOT CLASS 5 APPLIED FINISH COATING, COLOR TO BE SELECTED BY OWNER.
8. PROVIDE 3/4 INCH CHAMFERS ON ALL EDGES AND CORNERS.
9. CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED ON THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN WILL REQUIRE APPROVAL BY THE ENGINEER.
10. MINIMUM CONCRETE COVER: UNFORMED AND EXPOSED TO EARTH:
4 INCHES
FORMED AND EXPOSED TO EARTH:
4 INCHES
11. CONTROL JOINTS TO BE 1/8" x 1" DEEP TOOLED JOINT @ 30'-0" O.C. (MAX.) AND 1/4" EXPANSION JOINT TO BE SPACED TO MATCH EXISTING..

DESIGN LOAD:

SURCHARGE LIVE LOAD = 100 PSF

PILE LOAD = 4 TON (SERVICE)

GROUND SNOW LOAD = 0 PSF

FLOOD ZONE VE

WIND DESIGN:

WIND DESIGN PER ASCE 7-10
 $V_{ULT} = 180$ MPH (3 SEC.)
 $V_{ASD} = 139$ MPH (3 SEC.)
RISK CATEGORY II
 $K_{ZT} = 1.0$
 $K_d = 0.85$
 $G = 0.85$
 $q_h = 43.6$ PSF (SERVICE)
EXPOSURE D

SEISMIC DESIGN DATA:

RISK CATEGORY II
 $I_e = 1.0$
 $S_s = 0.05$
 $S_i = 0.02$
SITE CLASS = D
 $S_{D1} = 0.053$
 $S_{D2} = 0.032$
SEISMIC DESIGN CATEGORY = A
 $R = 4$ (ORDINARY REINFORCED CONCRETE SHEAR WALL)
 $C_s = 0.013$

GENERAL SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2016 EDITION)

FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS (2016 EDITION)

CONSTRUCTION NOTES:

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO ANY PILE DRIVING.
2. CONTRACTOR TO REPAIR ALL SPALLS GREATER THAN 6" DEEP IN ACCORDANCE WITH NOTES ON SHEET SS.0.
3. THE CONTRACTOR SHALL REMOVE ALL LOOSE MATERIAL AND CONSTRUCTION DEBRIS ON THE SEAWARD FACE OF THE WALL EACH NIGHT AND DISPOSE OF MATERIAL AND DEBRIS AT AN UPLAND DISPOSAL LOCATION APPROVED BY THE CITY.
4. CONTRACTOR TO SUBMIT CONSTRUCTION SHORING PLAN FOR THE SUPPORT OF DECK AND BOARDWALK DURING CONSTRUCTION AND SEAWALL REPAIR PRIOR TO COMMENCING CONSTRUCTION. SHORING PLAN SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.
5. CONTRACTOR TO PRE-AUGER OR JET PILES A MINIMUM OF 5'-0".

GLASS FIBER REINFORCED POLYMER REINFORCEMENT:

1. REINFORCEMENT IS TO BE GFRP (GLASS FIBER REINFORCED POLYMER) BARS DESIGNED IN ACCORDANCE WITH ACI 440.1R-06.
2. GFRP BARS TO BE PULTRALL V-ROD FRP BARS OR ENGINEER APPROVED EQUIVALENT.
3. BARS TO HAVE A MINIMUM TENSILE STRENGTH OF 66 KSI FOR #4 BARS AND 65 KSI FOR #5 BARS.
4. ALL REINFORCEMENT TO BE PLACED AND SUPPORTED USING NON-CORROSIVE MATERIALS.
5. REINFORCEMENT TO BE SECURED AGAINST DISPLACEMENT WHILE CONCRETE IS BEING PLACED.
6. REINFORCING IN CONCRETE WALLS SHALL BE CONTINUOUS-LAP BARS 36 DIAMETERS. HORIZONTAL BAR LAPS SHALL BE STAGGERED.
7. REINFORCEMENT SHALL BE CAREFULLY PLACED, RIGIDLY SUPPORTED, AND WELL TIED WITH BAR SUPPORTS AND SPACERS.
8. REINFORCEMENT SHALL BE ASSEMBLED AS MATS WITH BARS EQUALLY SPACED AND WIRED TOGETHER AT EACH INTERSECTION BEFORE CONCRETE IS PLACED.

TIMBER SPECIFICATIONS:

1. WOOD PRESERVATIVE AND RETENTION (PCF):
STRINGERS AND BLOCKING ACQ 0.6 CCA 0.6
TIMBER PILE CCA 2.5
SUBMIT PRESERVATIVE TREATMENT AND RETENTION FOR APPROVAL.
2. SOUTHERN YELLOW PINE (SYP) GRADE NO. 1 DIMENSIONAL LUMBER.
3. LUMBER SIZES INDICATED ARE NOMINAL.
4. ALL SCREWS, NAILS, NUTS, BOLTS, WASHERS AND FASTENERS TO BE TYPE 316 STAINLESS STEEL (SS) UNLESS NOTED OTHERWISE.
SIMPSON HARDWARE TO USE TYPE 316 STAINLESS STEEL CONNECTORS AND FASTENERS.
STAINLESS STEEL DECK SCREWS SHALL BE ALIGNED WITH CHALK SNAP LINE.
5. EXISTING DECKING TO BE SALVAGED AND REUSED AS POSSIBLE. REPLACEMENT DECK LUMBER SHALL BE KILN DRIED BRAZILIAN HARDWOOD CLEAR GRADE (IPE), TABEULA IMPELIGINOSA. CONTRACTOR TO RE-LEVEL ANY DECK UNITS THAT ARE ALTERED DURING CONSTRUCTION.

KILN DRIED LUMBER SHALL HAVE A MOISTURE CONTENT OF 15% OR LESS FOR 2" NOMINAL THICKNESS OR LESS & A MOISTURE CONTENT OF 19% OR LESS FOR A NOMINAL THICKNESS GREATER THAN 2".

6. FASTEN IPE CLEAR SOLID WOOD DECKING (HEART SIDE DOWN) TO STRINGERS WITH #8 x 3" STAINLESS STEEL SCREWS, TWO PER STRINGER LOCATION. DECKING MUST BE PRE-DRILLED FOR A FLUSH SCREW SET. SPACING BETWEEN DECK BOARDS IS 20d NAIL (0.203") OR LESS.
7. SOUTHERN YELLOW PINE GRADE NO. 1 STRINGERS AND PILE CAP TIMBERS (ALTERNATE PILE CAP DESIGN) TO BE WRAPPED IN GRACE VYCOR DECK PROTECTOR AT ALL POINTS OF CONTACT BETWEEN WOOD AND GALVANIZED CONNECTORS AND BENEATH IPE DECKING.
8. CANTILEVERED DECK WOOD PILES SHALL BE WRAPPED IN ACCORDANCE WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) REGULATIONS. TOP OF PILES TO BE CAPPED WITH CONICAL SHAPED CAP.

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK - 2011:

THE PERMITTEE SHALL COMPLY WITH THE FOLLOWING CONDITIONS INTENDED TO PROTECT MANATEES FROM DIRECT PROJECT EFFECTS:

- a. ALL PERSONNEL ASSOCIATED WITH THE PROJECT SHALL BE INSTRUCTED ABOUT THE PRESENCE OF MANATEES AND MANATEE SPEED ZONES, AND THE NEED TO AVOID COLLISIONS WITH AND INJURY TO MANATEES. THE PERMITTEE SHALL ADVISE ALL CONSTRUCTION PERSONNEL THAT THERE ARE CIVIL AND CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING MANATEES WHICH ARE PROTECTED UNDER THE MARINE MAMMAL PROTECTION ACT, THE ENDANGERED SPECIES ACT, AND THE FLORIDA MANATEE SANCTUARY ACT.
- b. ALL VESSELS ASSOCIATED WITH THE CONSTRUCTION PROJECT SHALL OPERATE AT "IDLE SPEED/NO WAKE" AT ALL TIMES WHILE IN THE IMMEDIATE AREA AND WHILE IN WATER WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. ALL VESSELS WILL FOLLOW ROUTES OF DEEP WATER WHENEVER POSSIBLE.
- c. SILTATION OR TURBIDITY BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID MANATEE ENTANGLEMENT OR ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
- d. ALL ON-SITE PROJECT PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S). ALL IN-WATER OPERATIONS, INCLUDING VESSELS, MUST BE SHUTDOWN IF A MANATEE(S) COMES WITHIN 50 FEET OF THE OPERATION. ACTIVITIES WILL NOT RESUME UNTIL THE MANATEE(S) HAS MOVED BEYOND THE 50-FOOT RADIUS OF THE PROJECT OPERATION, OR UNTIL 30 MINUTES ELAPSES IF THE MANATEE(S) HAS NOT REAPPEARED WITHIN 50 FEET OF THE OPERATION. ANIMALS MUST NOT BE HERDED AWAY OR HARASSED INTO LEAVING.
- e. ANY COLLISION WITH OR INJURY TO A MANATEE SHALL BE REPORTED IMMEDIATELY TO THE FWC HOTLINE AT 1-888-404-3922. COLLISION AND/OR INJURY SHOULD ALSO BE REPORTED TO THE U.S. FISH AND WILDLIFE SERVICE IN JACKSONVILLE (1-904-731-3336) FOR NORTH FLORIDA OR VERO BEACH (1-772-562-3909) FOR SOUTH FLORIDA, AND TO FWC AT ImperiledSpecies@myFWC.com
- f. TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO AND DURING ALL IN-WATER PROJECT ACTIVITIES. ALL SIGNS ARE TO BE REMOVED BY THE PERMITTEE UPON COMPLETION OF THE PROJECT. TEMPORARY SIGNS THAT HAVE ALREADY BEEN APPROVED FOR THIS USE BY THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) MUST BE USED (SEE MYFWC.COM/MANATEE). ONE SIGN WHICH READS CAUTION: BOATERS MUST BE POSTED. A SECOND SIGN MEASURING AT LEAST 8 1/2" 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. QUESTIONS CONCERNING THESE SIGNS CAN BE SENT TO THE EMAIL ADDRESS LISTED ABOVE.
- g. FLOATING TURBIDITY BARRIER WITH FINE MESH SHALL BE USED IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS, SECTION 104. BARRIER SHALL BE PLACED AROUND THE ENTIRE WORK SITE AND REMAIN IN PLACE FOR THE PROJECT DURATION.

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ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING

PROPOSED SEAWALL REPAIRS FOR:
HALF SHELL RAW BAR
231 MARGARET STREET
KEY WEST, FLORIDA

DRAWN
D.A.M.
CHECKED
C.B.L.
DATE
OCTOBER 2016
SCALE
AS NOTED

STATE OF
FLORIDA
Christopher B. LaForte
Professional Engineer
No. 76797
EXPIRATION DATE 12/31/2017

SHEET
1.1
PROJECT NO.
18162144.00

BID PLAN SET

CAUTION: MANATEE HABITAT

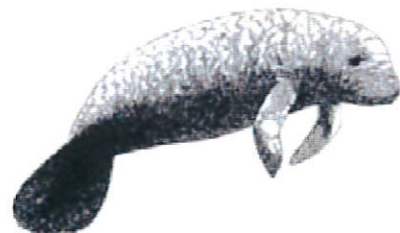
All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:



Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

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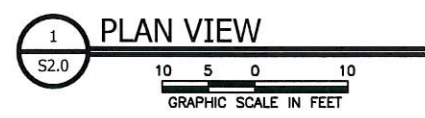
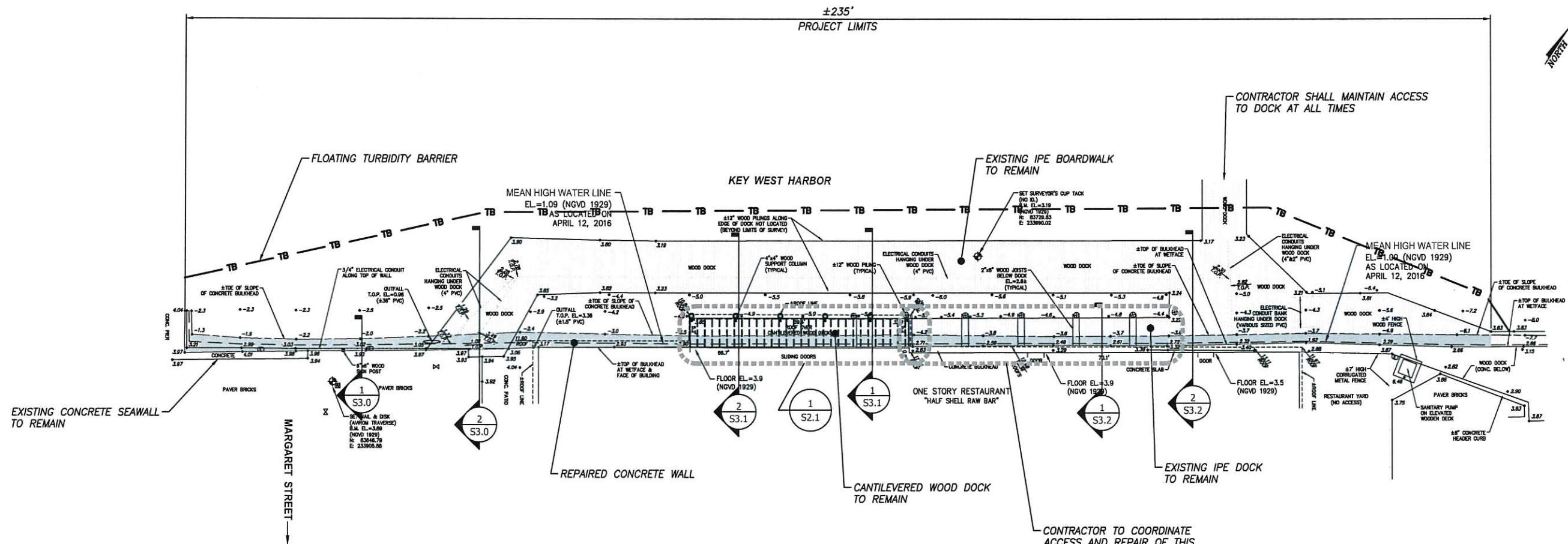
DRAWN
D.A.M.
CHECKED
C.B.L.
DATE
OCTOBER 2016
SCALE
AS NOTED

SEAL
CHRISTOPHER B. LAFORCE
No. 76797
FLORIDA P.E. NAME & NUMBER
10/27/16

PROJECT NO.
18102144.00
SHEET

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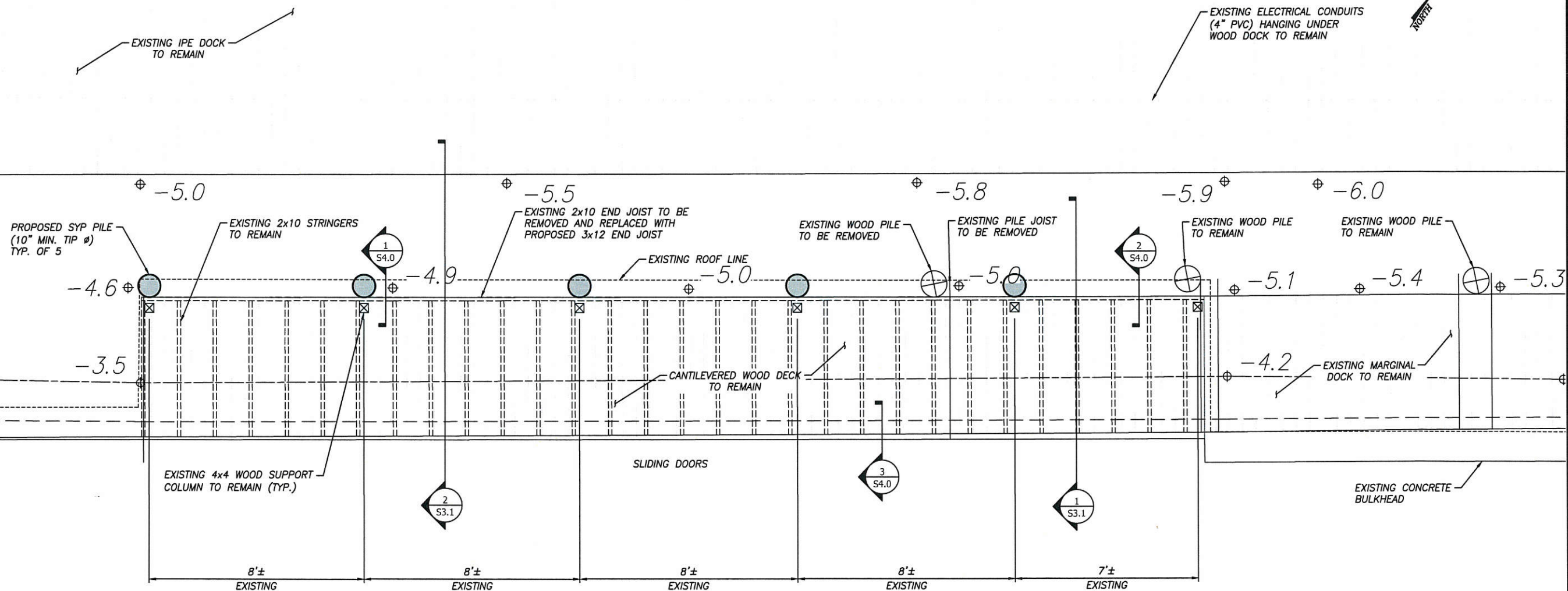
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**PROPOSED SEAWALL REPAIRS FOR:
HALF SHELL RAW BAR
231 MARGARET STREET
KEY WEST, FLORIDA**

DRAWN D.A.M.	SEAL Christopher B. LaForte-76797	SHEET S2.0
CHECKED C.B.L.	DATE OCTOBER 2016	PROJECT NO. 16162144.00
SCALE AS NOTED	FLORIDA P.E. NAME & NUMBER	

10/27/16

BID PLAN SET



ONE STORY RESTAURANT
 "HALF SHELL RAW BAR"
 FLOOR EL. = 3.9



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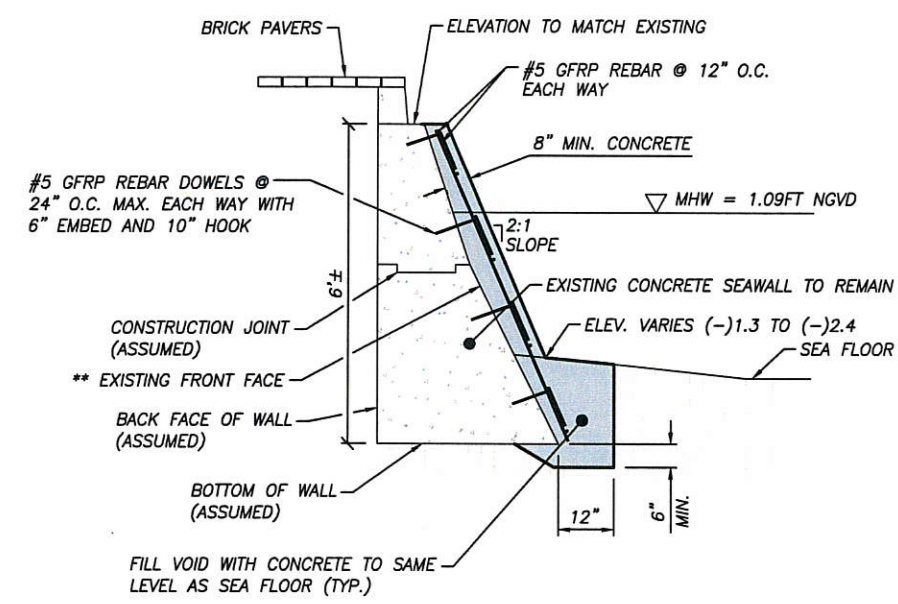
CHRISTOPHER B. LAFORTE
 LICENSE
 No. 76797
 10/27/16

SHEET
 S2.1
 PROJECT NO.
 16162144.00

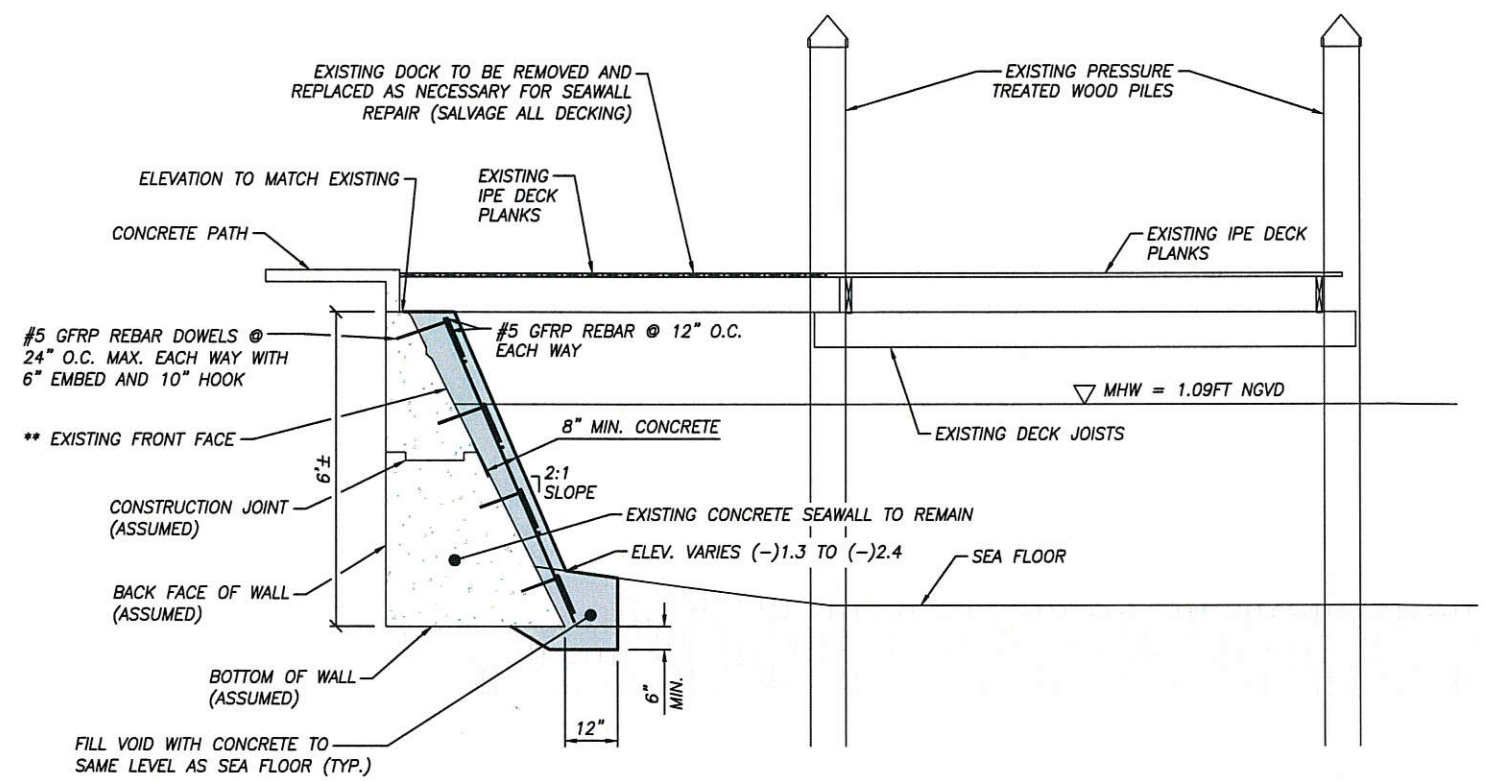
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DOCK/BOARDWALK NOTE:
EXISTING STRINGER SUPPORT ANCHORAGES TO BE
REMOVED AND REPLACED WITH STAINLESS STEEL ANCHORS
EMBEDDED FOR PROPOSED SEAWALL CONCRETE REPAIRS



1 TYPICAL SECTION
S3.0
GRAPHIC SCALE IN FEET



2 TYPICAL SECTION
S3.0
GRAPHIC SCALE IN FEET

** EXISTING FRONT FACE TO BE PREPARED IN ACCORDANCE
WITH THE CONCRETE SPALL REPAIR SURFACE PREPARATION

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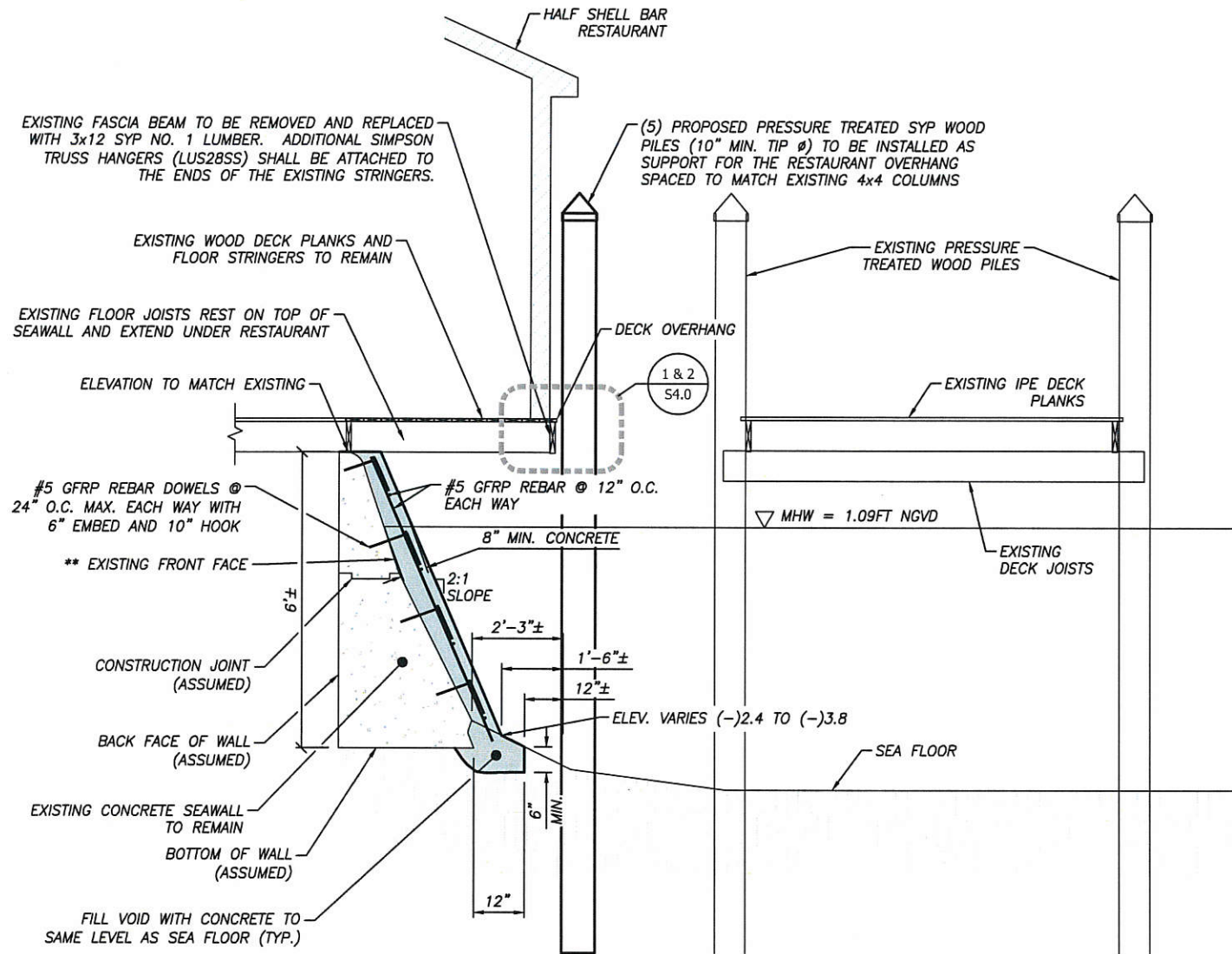
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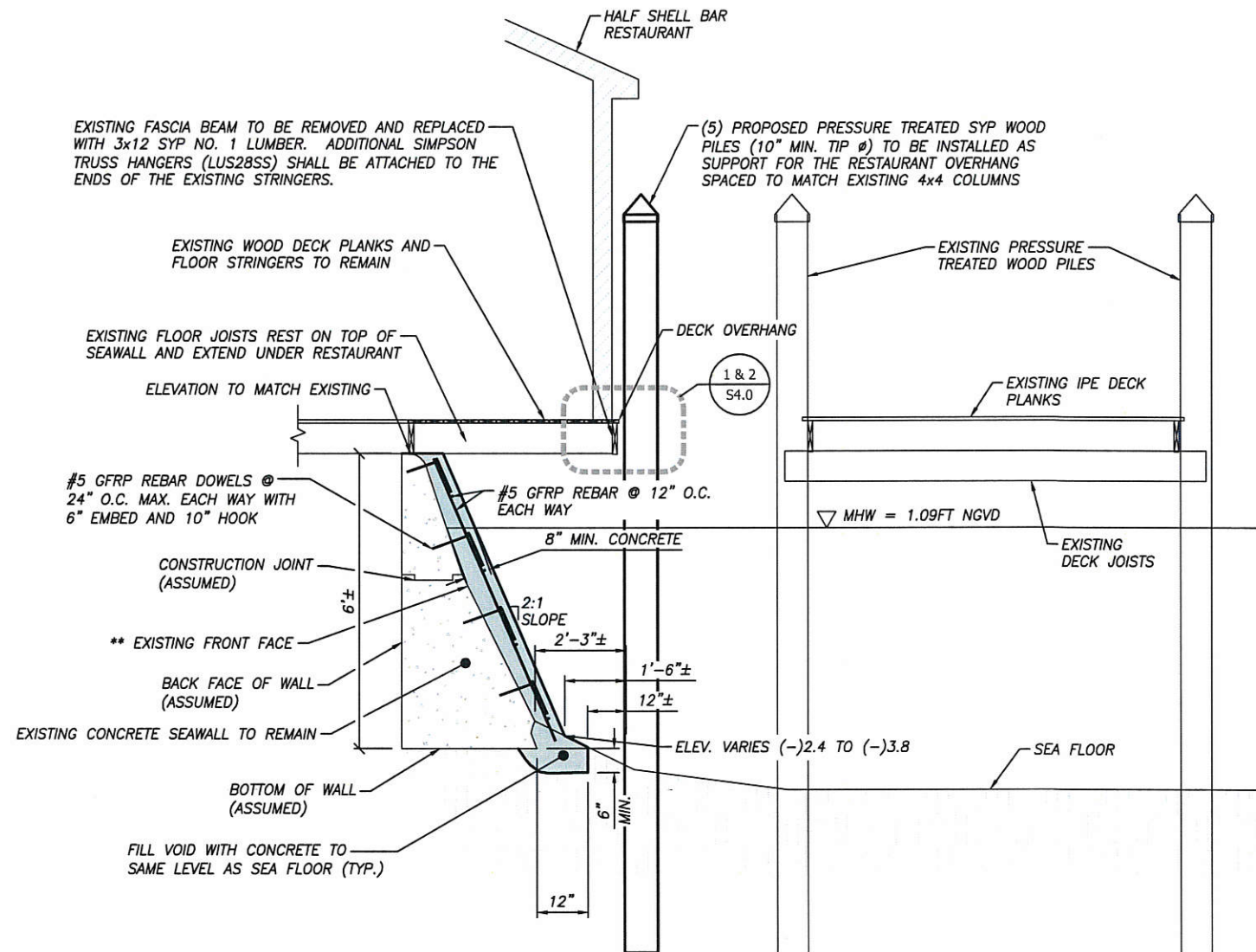
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S3.0
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1 TYPICAL SECTION
S3.1
GRAPHIC SCALE IN FEET



2 TYPICAL SECTION
S3.1
GRAPHIC SCALE IN FEET

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CHRISTOPHER B. LAFORTE
LICENSE
No. 76797

BID PLAN SET

10/27/16

Drawn: 10/27/2016 4:17:17 PM
Checked: 10/27/2016 4:17:17 PM
Date: 10/27/2016 4:17:17 PM
Project: 16162144.00
Sheet: 3 of 3
Title: PROPOSED SEAWALL REPAIRS FOR HALF SHELL BAR RESTAURANT



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231 MARGARET STREET
KEY WEST, FLORIDA

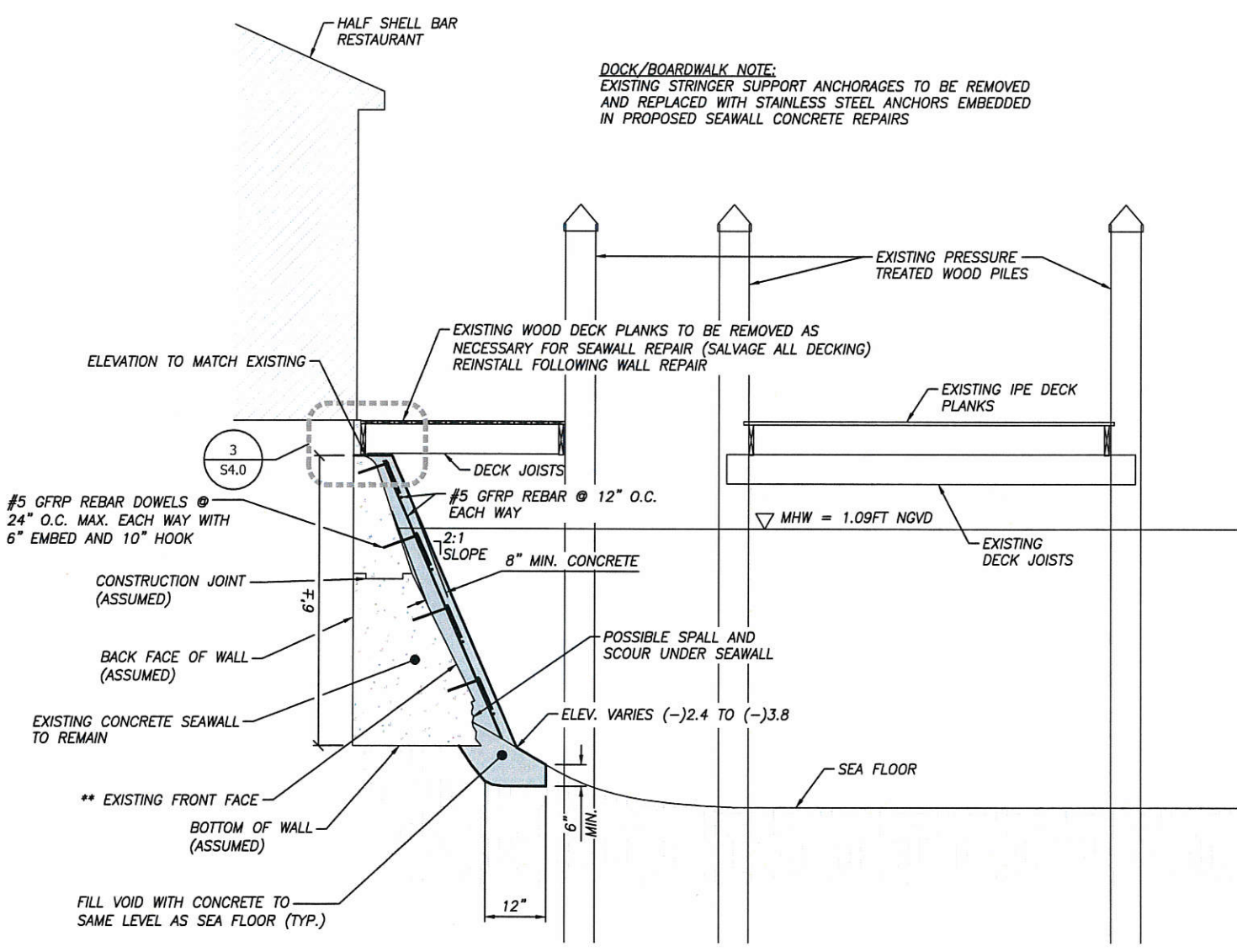
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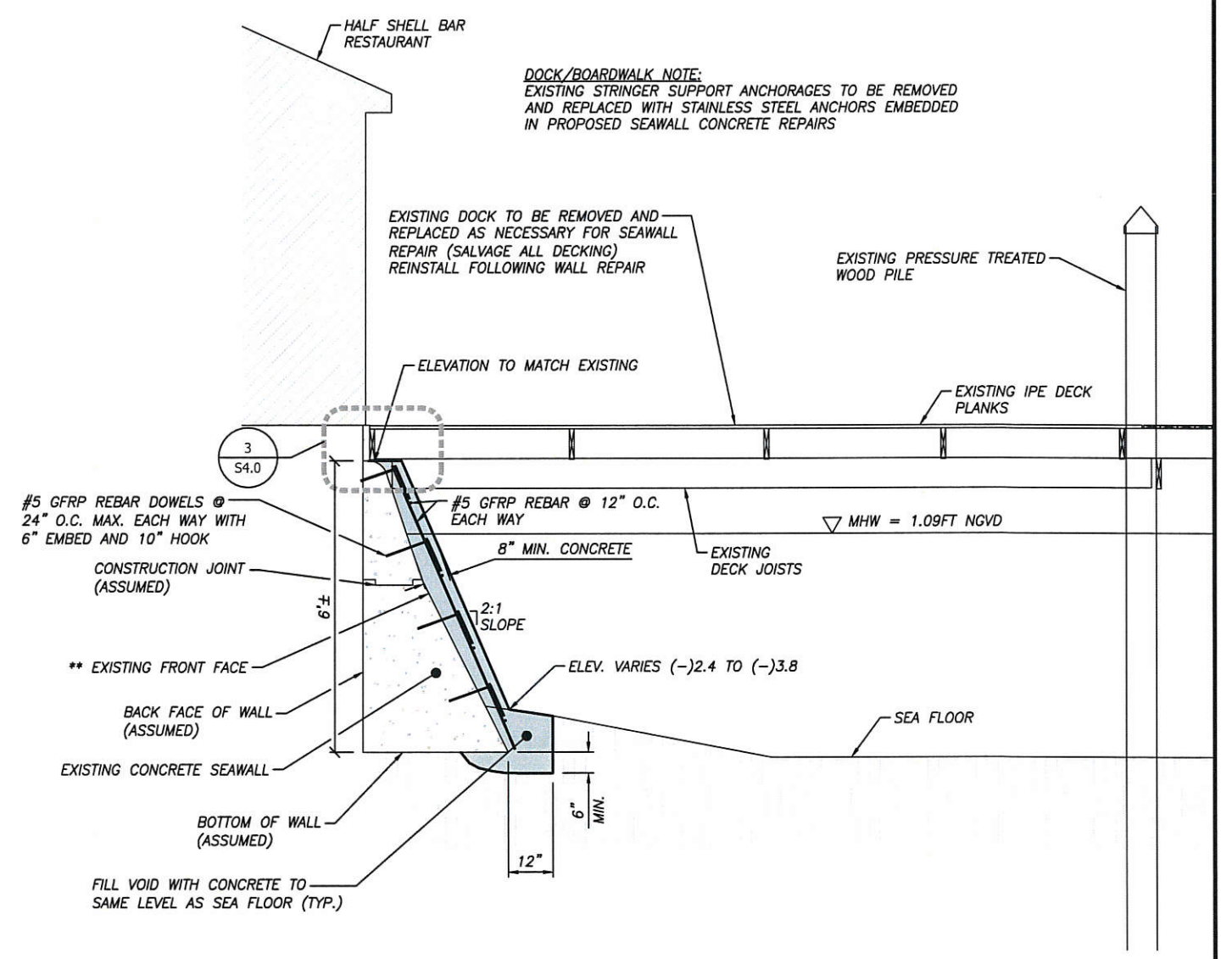
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33.2
PROJECT NO.
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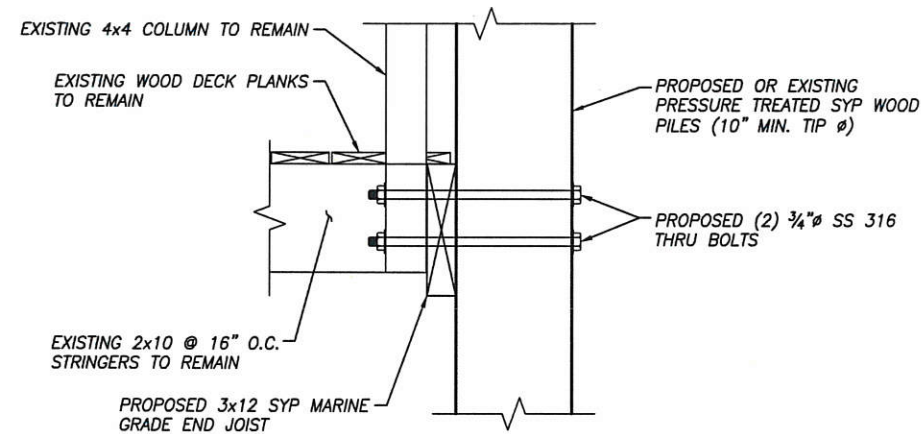


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S3.2
TYPICAL SECTION
GRAPHIC SCALE IN FEET

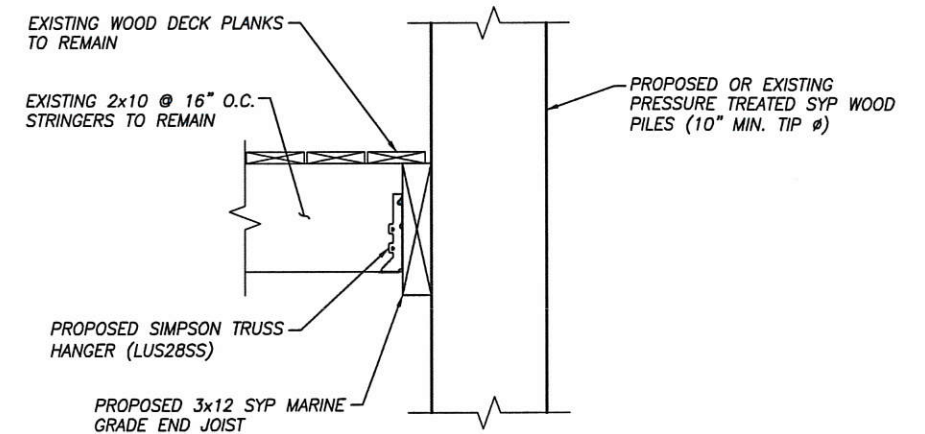


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S3.2
TYPICAL SECTION
GRAPHIC SCALE IN FEET

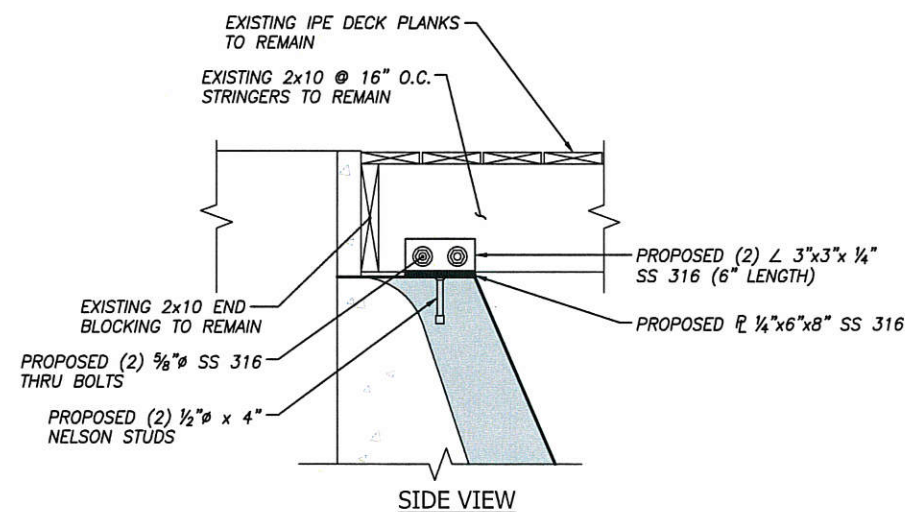
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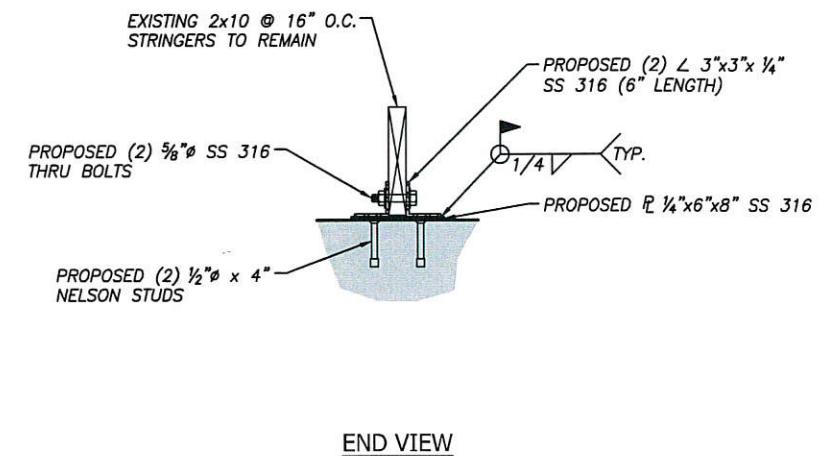
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S4.0
TYPICAL COLUMN CONNECTION DETAIL
1 0.5 0 1
GRAPHIC SCALE IN FEET



2
S4.0
TYPICAL JOIST CONNECTION DETAIL
1 0.5 0 1
GRAPHIC SCALE IN FEET



3
S4.0
TYPICAL JOIST CONNECTION DETAIL
1 0.5 0 1
GRAPHIC SCALE IN FEET



NOTE:
ELEVATIONS SHOWN HEREON ARE BASED ON NGVD '29 DATUM. TO
CONVERT TO NAVD '88 SUBTRACT 1.34' FROM THE NGVD VALUE.

NOTE: THE SCALE OF THESE DRAWINGS MAY
HAVE CHANGED DUE TO REPRODUCTION.



TETRA TECH INC.
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CERTIFICATE OF AUTHORIZATION
NO. 2429

NO.	REVISION	DATE	BY



ENGINEERING // SURVEYING // ENVIRONMENTAL // PLANNING

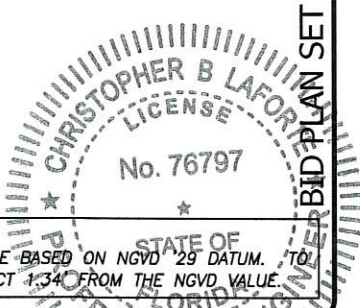
2035 Vista Parkway
West Palm Beach, FL 33411
Phone No. 561.687.2220
Fax No. 561.687.1110
Cert No. 6091 - LB No. 7055

**PROPOSED SEAWALL REPAIRS FOR:
HALF SHELL RAW BAR
231 MARGARET STREET
KEY WEST, FLORIDA**

DRAWN
D.A.M.
CHECKED
C.B.L.
DATE
OCTOBER 2016
SCALE
AS NOTED

SEAL
Christopher B. Lafora-76797
FLORIDA P.E. NAME & NUMBER

SHEET
S4.0
PROJECT NO.
16162144.00



10/27/16

CONCRETE SPALL REPAIRS:

THE ENTIRE PROJECT SHALL BE SURVEYED AND MARKED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT THE SURVEY AND MARKING RESULTS, INCLUDING PROJECTED QUANTITIES, TO THE ENGINEER PRIOR TO THE START OF THE CONCRETE REPAIR WORK. THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK WHEN:

- ADDITIONAL DEFICIENCIES NOT APPEARING IN THESE PLANS ARE PRESENT AT THE TIME OF THE REPAIRS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER REGARDING THE EXTENT OF DAMAGED CONCRETE ADDITIONAL TO THAT SHOWN IN THESE PLANS PRIOR TO BEGINNING WORK ON THE REPAIRS CONSIDERED ADDITIONAL.

- REPAIR AREAS EXTEND MORE THAN TWELVE (12) INCHES BEYOND THE REPAIR AREA INITIALLY IDENTIFIED.

ALL CONCRETE WHICH IS REMOVED DOWN TO SOUND CONCRETE SHALL BE ACCOMPLISHED USING METHODS THAT DO NOT DAMAGE THE SOUND PORTION OF THE STRUCTURE THAT IS TO REMAIN.

IN ADDITION TO DAMAGED CONCRETE, ALL CONCRETE ADJACENT TO CORRODED REINFORCEMENT SHALL BE REMOVED UNTIL A MINIMUM OF TWO (2) INCHES AND A MAXIMUM OF FOUR (4) INCHES OF UNCORRODED REINFORCING STEEL IS UNDERCUT AND EXPOSED ALONG THE LENGTH OF THE BAR IN EACH DIRECTION. THIS IS TO BE DONE ONLY AFTER APPROVAL BY THE ENGINEER WHO AT HIS DISCRETION CAN ALLOW FOR SOME DEGREE OF CORROSION TO REMAIN AND SHALL STOP THE CONCRETE REMOVAL IN ORDER TO KEEP THE CONCRETE REPAIR QUANTITIES WITHIN THE SCOPE OF WORK.

IN ALL CASES WHERE REINFORCING STEEL IS EXPOSED, CONCRETE SHALL BE REMOVED TO PROVIDE A MINIMUM OF 3/4" INCH CLEARANCE AROUND THE CIRCUMFERENCE OF THE BARS WHICH WILL PERMIT UNIFORM SURFACE PREPARATION OF THE BARS AND ADEQUATE CONCRETE BOND TO THE BAR SURFACE.

ALL DEFICIENCIES SHALL BE RESTORED SUCH THAT THERE IS A UNIFORM TRANSITION FROM RESTORED SURFACES TO ADJACENT UNRESTORED SURFACES.

CONCRETE SPALL REPAIR SURFACE PREPARATION:

HEAVY OXIDES, SCALE, OR OTHER BOND-INHIBITING MATERIALS SHALL BE REMOVED FROM THE ENTIRE CIRCUMFERENCE OF EXPOSED REINFORCING STEEL BY USING A HAND HELD GRINDER OR BRUSH TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.

PRELIMINARY CLEANING: CONCRETE SURFACES SHALL BE THOROUGHLY CLEANED OF ALL DIRT, GREASE, OIL, SHEL CHIPS OF PARTIALLY LOOSENEED CONCRETE, OR OTHER FOREIGN MATTER BY USING A HAND HELD GRINDER OR BRUSH TO THE SATISFACTION OF THE ENGINEER PRIOR TO THE PLACEMENT OF CONCRETE.

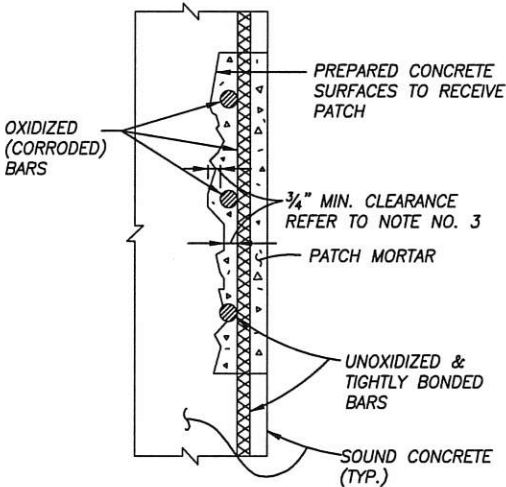
FINAL CLEANING: AFTER THE ABOVE SURFACE PREPARATION STEPS HAVE BEEN COMPLETE, AND IMMEDIATELY PRIOR TO REPAIR, ALL AREAS CLEANED SHALL BE WASHED WITH FRESH WATER AND AIR BLASTED, OR BLASTED WITH A STIFF NOSE STREAM OF FRESH WATER UNTIL ALL LOOSENEED MATERIALS AND SALT WATER SPRAY ARE REMOVED. THE CONCRETE SUBSTRATE SHALL BE FREE OF STANDING WATER PRIOR TO THE REPAIR.

AFTER THE ABOVE SURFACE PREPARATION STEPS ARE COMPLETE, THE CONTRACTOR SHALL OBTAIN FINAL APPROVAL FROM THE ENGINEER PRIOR TO PERFORMING THE REPAIR. AREAS THAT HAVE UNDERGONE FINAL CLEANING SHALL BE REPAIRED THE SAME DAY THAT THE FINAL CLEANING OPERATION WAS COMPLETED. IF NOT REPAIRED THE SAME DAY, THE FINAL CLEANING OPERATION SHALL BE REPEATED IMMEDIATELY PRIOR TO THE REPAIR TAKING PLACE.

MANUFACTURER'S REFERENCES AND SUBSTITUTIONS:

REFERENCE TO A PARTICULAR MANUFACTURER, TRADE NAME, OR CATALOG NUMBER ESTABLISHES THE QUALITY STANDARDS OF MATERIAL AND EQUIPMENT REQUIRED FOR THIS INSTALLATION IN ACCORDANCE WITH THE FDOT QUALIFIED PRODUCTS LIST, ETC. AND IS NOT INTENDED TO EXCLUDE OR SOLE-SOURCE PRODUCTS EQUAL/EQUIVALENT/SIMILAR IN QUALITY AND DESIGN. WHENEVER THE PLANS SPECIFY A PROPRIETARY PRODUCT, MATERIAL, EQUIPMENT, ETC. AND THE TERM "OR APPROVED EQUAL" IS NOT USED, "OR APPROVED EQUAL" SHALL BE IMPLIED.

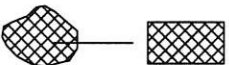
EQUIVALENT PRODUCTS, MATERIALS, EQUIPMENT, ETC. MAY BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR REVIEW AND APPROVAL AT THE TIME OF CONSTRUCTION (IE: AFTER THE BID), PROVIDED THAT THE CHANGE IS AT NO ADDITIONAL COST TO THE CITY. ALL STRUCTURAL, ETC. DETAILS SHALL BE REVISED BY THE CONTRACTOR AS REQUIRED TO SUIT THE CERTIFIED DIMENSIONS, SPECIFICATIONS, ETC. OF THE COMPONENTS ACTUALLY BEING FURNISHED AS A RESULT OF A SUBSTITUTION APPROVED BY THE ENGINEER.



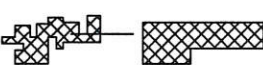
1 SPALL REPAIR DETAIL
S5.0 NOT TO SCALE

SPALL REPAIR NOTES:

1. REMOVE LOOSE OR DELAMINATED CONCRETE. ONCE INITIAL REMOVALS ARE MADE, PROCEED WITH THE UNDERCUTTING OF ALL EXPOSED OXIDIZED (CORRODED) BARS. IF A CHIPPING HAMMER IS USED IT'S MAXIMUM WEIGHT SHALL BE 15 LBS.
2. PROVIDE RIGHT ANGLE 1/2" SAW CUTS AT ALL EDGES OF PATCH. AVOID FEATHER EDGES. PATCH CONFIGURATIONS SHALL BE KEPT AS SIMPLE AS POSSIBLE. FOR EXAMPLE:

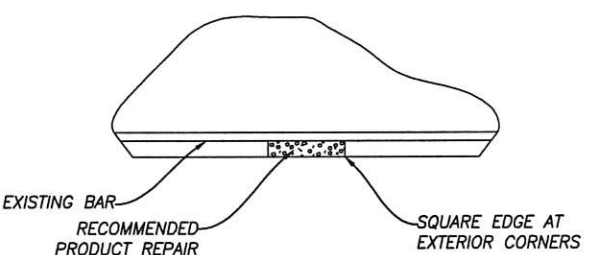


PREFERRED



PREFERRED

3. PROVIDE MINIMUM 3/4" CLEARANCE BETWEEN EXPOSED REINFORCING BARS AND SURROUNDING CONCRETE OR 1/4" LARGER THAN LARGEST AGGREGATE IN REPAIR MORTAR, WHICHEVER IS GREATER.
4. CONCRETE REMOVALS SHALL EXTEND ALONG THE BARS TO LOCATIONS ALONG THE BAR FREE OF BOND INHIBITING CORROSION, AND WHERE THE BAR IS WELL BONDED TO SURROUNDING CONCRETE.
5. IF UNOXIDIZED REINFORCING STEEL IS EXPOSED DURING THE UNDERCUTTING PROCESS, CARE SHALL BE TAKEN NOT TO DAMAGE THE BAR'S BOND TO SURROUNDING CONCRETE. IF BOND BETWEEN BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR SHALL BE REQUIRED.
6. REMOVE ALL HEAVY OXIDES, SCALE OR OTHER BOND INHIBITING MATERIALS FROM EXPOSED REINFORCEMENT PRIOR TO PLACEMENT OF PATCH MATERIAL.
7. LOCATIONS AND DIMENSIONS OF SPALL REPAIR AREAS ARE APPROXIMATE. PAYMENT FOR SPALL REPAIR SHALL BE BASED UPON FIELD MEASUREMENTS OF ACTUAL WORK COMPLETED AS DIRECTED BY THE ENGINEER.
8. GUNITE ON ALL REPAIR SURFACES SHALL BE THOROUGHLY REMOVED BY HAND GRIND AND/OR BRUSH CLEAN FOLLOWED BY BLOWING WITH COMPRESSED AIR.
9. DETAILS ARE APPLICABLE TO ALL ORIENTATIONS: HORIZONTAL OR VERTICAL.
10. CHIP TO SOUND CONCRETE AT ALL CORROSION BLEED-OUT ON CONCRETE SURFACES AND REPAIR AS INDICATED ON THIS SHEET.



2 SPALL REPAIR DETAIL
S5.0 NOT TO SCALE
(FOR NO REINFORCING STEEL EXPOSED)

SPALL REPAIR NOTES:

1. CHIP TO SOUND CONCRETE.
2. IF MORE THAN HALF OF PERIMETER OF REINFORCING BAR IS EXPOSED OR BOND AROUND BAR IS BROKEN USE SPALL REPAIR FOR REINFORCING STEEL EXPOSED.
3. THOROUGHLY CLEAN CONCRETE SURFACES BY HAND GRIND AND / OR BRUSH CLEAN FOLLOWED BY BLOWING WITH COMPRESSED AIR.
4. PRIME THE SURFACE TO BE REPAIRED WITH RECOMMENDED PRODUCT, USING STIFF BRUSHES TO WORK INTO SURFACE.
5. WHILE PRIMING MATERIAL IS TACKY, FILL VOIDS WITH RECOMMENDED PRODUCT TO ORIGINAL NEAT LINES.
6. COMPLETION OF CLEANING OPERATIONS AND REPAIR SHALL OCCUR WITHIN THE SAME DAY.

LOSS OF AREA NOTE:

THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK WHEN:

- REPAIRS REQUIRE MORE THAN TWELVE (12) INCHES OF CONCRETE TOTAL DEPTH REMOVAL.
- REPAIR AREAS EXTEND MORE THAN TWELVE (12) INCHES BEYOND THE REPAIR AREA INITIALLY IDENTIFIED.

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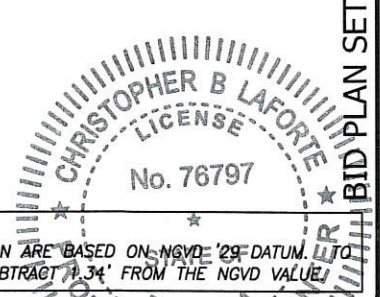
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Drawn: M. LaForte, 10/27/2016 4:10:35 PM
Checked: C. B. LaForte, 10/27/2016 4:10:35 PM
Date: 10/27/2016 4:10:35 PM
Scale: AS NOTED