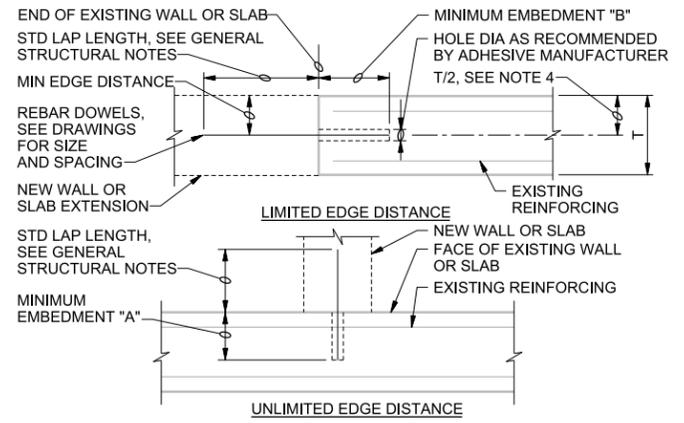


NOTE:
FOR USE IN NON-MOVING CONSTRUCTION JOINTS AND ONLY WHERE SPECIFICALLY INDICATED ON PLANS.

GROUTING PROCEDURE:

1. WAIT UNTIL NEW CONCRETE MINIMUM 28 DAYS OLD PRIOR TO GROUTING GROOVE.
2. ROUGHEN AND CLEAN SURFACES OF GROOVE WITH POWER WIRE BRUSH OR SANDBLASTING.
3. SATURATE AREA FOR 24 HOURS PRIOR TO GROUTING.
4. DRY PACK WITH TYPE II NON-SHRINK GROUT.
5. USE STEEL HAMMER AND STEEL TOOL TO DENSELY PACK GROUT INTO GROOVE.
6. WATER CURE GROUT FOR 4 DAYS MINIMUM.

7 HYDROPHILIC/ GROOVE WATERSTOP DETAIL
NTS
SD-1

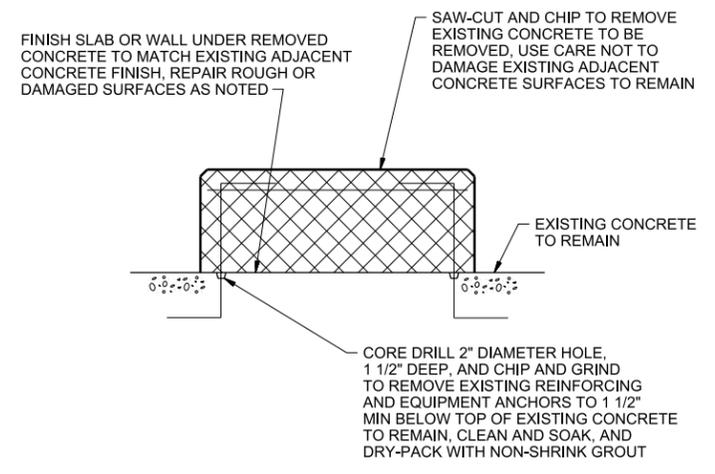


DOWEL SIZE	MINIMUM EDGE DIST	MINIMUM EMBEDMENT A	MINIMUM EMBEDMENT B
#3	2 1/2"	5"	8"
#4	3 1/2"	7"	11"
#5	4"	8"	13"
#6	5"	10 1/2"	16"
#7	6"	12 1/2"	20"
#8	7"	14"	22"
#9	7 1/2"	15"	24"

NOTES:

1. CONFORM TO THE REQUIREMENTS OF SPECIFICATION SECTION 05 50 00, METAL FABRICATIONS.
2. FOLLOW ADHESIVE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
3. USE MINIMUM EMBEDMENTS SHOWN, EXCEPT USE MANUFACTURER'S MINIMUM RECOMMENDED EMBEDMENT IF GREATER.
4. LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE 2 ROWS OF DOWELS INDICATED, STAGGER SPACING & LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.

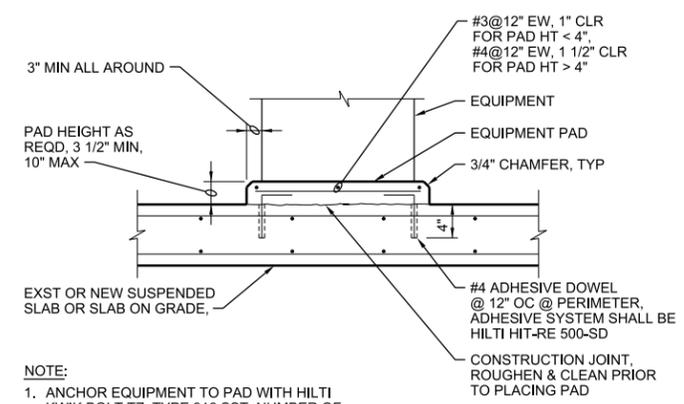
8 ADHESIVE DOWEL DETAIL
NTS
SD-1



NOTES:

1. REMOVE CONCRETE OUT TO SOUND CONCRETE.
2. IF CHIPPING INTO THE SURFACE OF THE EXISTING SLAB OR WALL TO REMAIN IS REQUIRED, MAKE EDGES PERPENDICULAR TO THE SURFACE. DO NOT FEATHER EDGES.
3. FILL DEFECTIVE AREA WITH NON-SHRINK GROUT OR AN APPROVED PREPACKAGED PATCHING MATERIAL TO MATCH APPEARANCE OF ADJACENT CONCRETE SURFACES.
4. USE APPROVED BONDING AGENT ON SURFACES TO BE PATCHED PRIOR TO PLACING NON-SHRINK GROUT.
5. DEMONSTRATE METHODS FOR REPAIR USING ACTUAL MATERIALS, METHODS, AND CURING PROCEDURES REQUIRED BY MATERIAL MANUFACTURERS. CONSULT WITH BONDING AGENT MANUFACTURER AND NON-SHRINK GROUT MANUFACTURER ON TECHNIQUES.

9 CONCRETE DEMOLITION DETAIL
NTS
R-11



NOTE:

1. ANCHOR EQUIPMENT TO PAD WITH HILTI KWIK BOLT TZ, TYPE 316 SST. NUMBER OF ANCHORS, LOCATION, DIAMETER, AND EMBEDMENT SHALL MATCH EXISTING ANCHORS.

10 EQUIPMENT PAD DETAIL
NTS

3011 S.W. WILLISTON ROAD
GAINESVILLE, FLORIDA 32608
EB0000072 / AAC001892
Delayne Lange PE 70184

SWR CONCRETE REPAIRS
RICHARD A. HEYMAN
ENVIRONMENTAL PROTECTION FACILITY
AND FLEMING KEY BRIDGE

CITY OF KEY WEST
KEY WEST, FLORIDA

NO. DATE DSGN DR REVISION

BY APVD

P. KARABAN D. GARCIA

D. LANGE

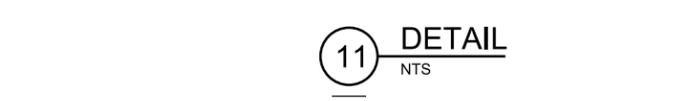
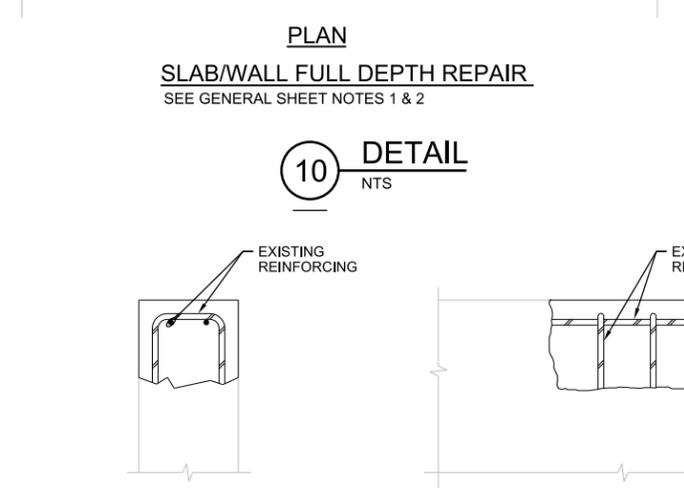
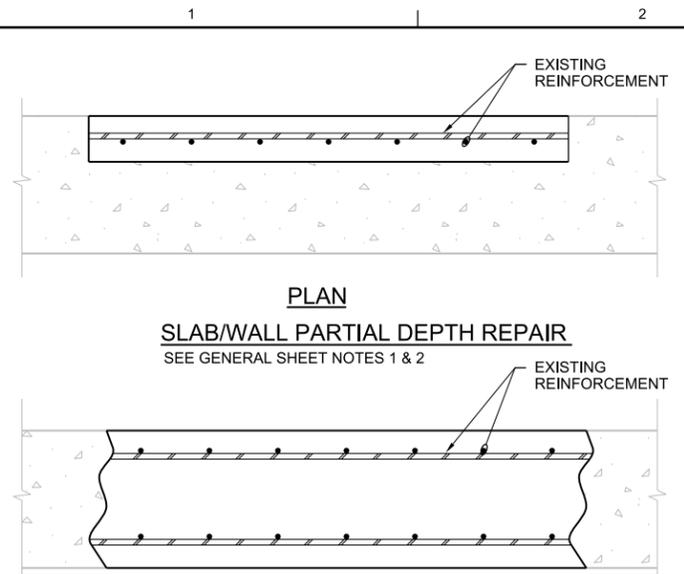
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STRUCTURAL
DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

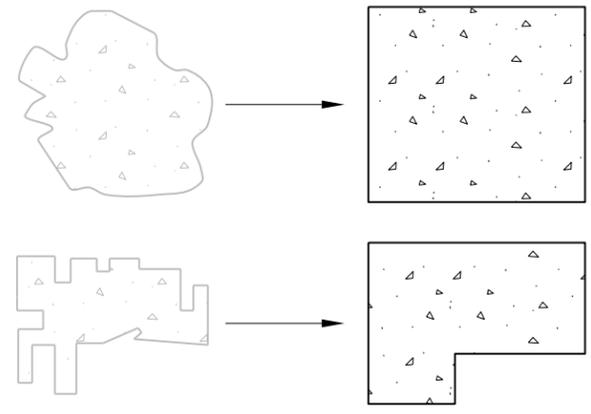
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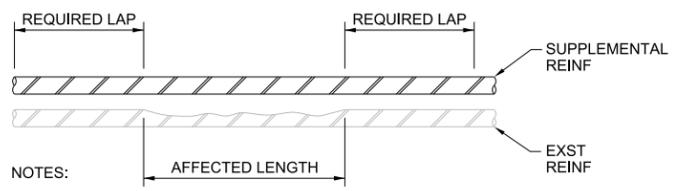
10 **DETAIL**
NTS

11 **DETAIL**
NTS



NOTE:
CONFIGURE AREA OF REPAIR TO SIMPLIFY AND TO ELIMINATE MULTIPLE RE-ENTRANT CORNERS. SQUARE CORNERS PREFERRED.

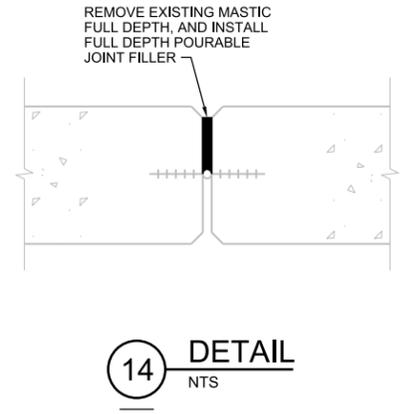
12 **DETAIL**
NTS



NOTES:
NOTIFY ENGINEER IMMEDIATELY IF EXISTING REINFORCING STEEL IS CUT THROUGH, CRACKED, OR CROSS SECTIONAL AREA IS REDUCED BY MORE THAN 10 PERCENT. IF DETERMINED THAT EXISTING REINFORCING MUST BE REPAIRED, ONE OF THE FOLLOWING REPAIR METHODS SHOULD BE USED.

- COMPLETE BAR REPLACEMENT USING NEW REINFORCING WITH CROSS SECTIONAL AREA EQUAL TO ORIGINAL CROSS SECTION OF EXISTING REINFORCING STEEL.
- ADD SUPPLEMENTAL REINFORCING STEEL OVER AFFECTED SECTION. SUPPLEMENTAL REINFORCING TO HAVE CROSS SECTIONAL AREA EQUAL TO ORIGINAL CROSS SECTION OF EXISTING REINFORCING STEEL.
- LAP NEW REINFORCING TO EXISTING BASED ON SIZE OF NEW REINFORCING STEEL.

13 **DETAIL**
NTS

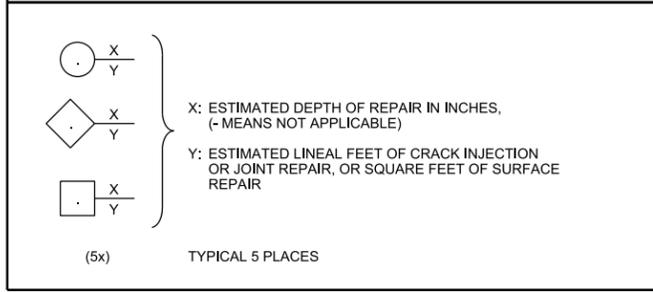


14 **DETAIL**
NTS

GENERAL SHEET NOTES

- FOR CONFIGURATION OF REPAIR AREA, SEE DETAIL **12**
- FOR REPAIR OF DETERIORATED REINFORCING STEEL, SEE DETAIL **13**
- REMOVE ALL CONTAMINANT, ALL LOOSE, DELAMINATED, OR UNSOUND CONCRETE. USE HYDRODEMOLITION TECHNIQUES FOR REMOVAL OF EXISTING SURFACES. REFER TO SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS WITH RESPECT TO PREPARING EXISTING CONCRETE SURFACES FOR REPAIR. REMOVE LOOSE MATERIAL AND DEBRIS FROM EXISTING CRACKS IN TOP AND SIDES OF WALL. AFTER CRACKS ARE DRY, PRESSURE INJECT WITH CRACK REPAIR MATERIAL. RESURFACE TOP OF EXISTING WALLS WITH STRUCTURAL REPAIR MORTAR PER SPECIFICATIONS.
- FOR CONCRETE SLAB OPENING REPAIR, SEE STANDARD DETAIL **5** AND **6** AS REQUIRED.
- CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS, SIZES, QUANTITIES, AND PROPOSED REPAIR PRODUCTS FOR EACH TYPE OF REPAIR.
- CORE DRILL APPROXIMATELY 1 1/2" DIAMETER x 2" DEEP HOLE. REMOVE REINFORCEMENT OR FORM TIE TO 2" BELOW ORIGINAL CONCRETE SURFACE. PATCH WITH CONCRETE REPAIR MATERIAL.
- REFER TO G-1 FOR SEALANT PRODUCT REQUIREMENTS.

LEGEND



CONCRETE REPAIR SCHEDULE

SLAB REPAIR			
SYMBOL	DAMAGE	TYPE OF REPAIR	NOTES/DETAIL
1	CRACK	INJECT WITH EPOXY INJECTION SYSTEM	---
2	SPALL	SURFACE PATCH	NOTE 1, 4
3	SPALL	PATCH INVOLVING REINFORCING STEEL	10 & 11
VERTICAL OR OVERHEAD REPAIR			
SYMBOL	DAMAGE	TYPE OF REPAIR	NOTES/DETAIL
1	CRACK	INJECT WITH POLYURETHANE INJECTION SYSTEM	---
2	SPALL	SURFACE PATCH	10/ - SIM, NOTES 1, 4
3	SPALL	PATCH INVOLVING REINFORCING STEEL	10
4	CHEMICAL	SURFACE PATCH	12
5		EXPOSED REBAR OR FORM TIES	NOTE 6
6	STUCCO	REMOVE ENTIRE THICKNESS DOWN TO CONCRETE	---
JOINT REPAIR			
SYMBOL	TYPE OF REPAIR	NOTES/DETAIL	
1	REMOVE AND REPLACE JOINT MATERIAL	NOTE 7	
2	REPLACE SEALANT AND BACKER ROD	NOTE 7	

LOCATION	CONCRETE REPAIR QUANTITIES									
	SLAB REPAIR		VERTICAL OR OVERHEAD REPAIR						JOINT REPAIR	
	2	3	1	2	3	4	5	6	1	2
	SPALL/SURFACE PATCH	SPALL/SURFACE PATCH WITH REBAR	CRACK DEPTH AS NOTED	SPALL/SURFACE PATCH	SPALL/SURFACE PATCH WITH REBAR	SURFACE PATCH	TIE HOLE	STUCCO REPLACEMENT	REMOVE/REPLACE JOINT MATERIAL	JOINT SEALANT REPLACEMENT
	2" DEEP	4" DEEP		2" DEEP	4" DEEP	1" DEEP	1.5" DEEP 2" DIAM	1" THICK	DEPTH AS NOTED	
C-1										
R-2					10		400			
R-3					8					
R-4						2000				
R-5								20		
R-6	15			4	48	12000	20	30	8", 22ft	23
R-7					287					
R-8	10	10	18", 18ft	80	10					
R-8			30", 22ft							
R-10										11
R-12					384					
R-14					12					
R-15				3	3400					
R-16					3300					
TOTALS	25 SF	10 SF	40 LF	87 LF	7459 SF	14000 SF	420 EA	50 SF	22 LF	34 LF

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Delyne Lange PE 70184

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RICHARD A. HEYMAN
ENVIRONMENTAL PROTECTION FACILITY
AND FLEMING KEY BRIDGE

CITY OF KEY WEST
KEY WEST, FLORIDA

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DETAILS AND NOTES

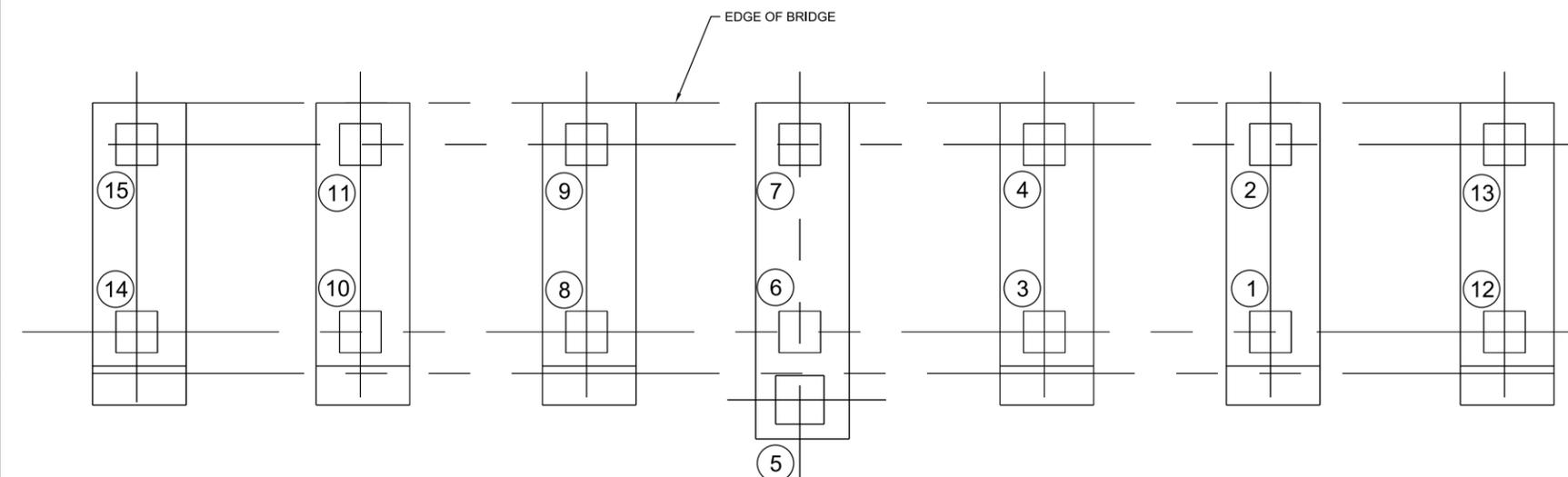
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BID DOCUMENTS



TOP VIEW - PILE CAP AND PILE LAYOUT
KEY WEST - FLEMING KEY PIPE SUPPORT BRIDGE

ESTIMATE OF REPAIR QUANTITIES FOR FLEMING KEY BRIDGE			
DESCRIPTION	REPAIR MATERIAL	QUANTITY	UNITS
SPALL BOTTOM SURFACE OF PILECAP AT PILE #13	SIKA TOP 123 PLUS	8.0	Cu. ft
CRACKS IN BOTTOM SURFACE OF PILECAP AT PILE #12	SIKA TOP 123 PLUS	4.0	Cu. ft
CRACKS IN SIDE OF PILECAP AT PILE #12	SIKA TOP 123 PLUS	4.0	Cu. ft
DELAMINATION IN BOTTOM SURFACE OF PILECAP AT PILES #14 & 15	SIKA TOP 123 PLUS	8.0	Cu. ft
CRACK IN TOP SURFACE OF PILECAP AT PILE #3	SIKA TOP 122 PLUS	3.0	Cu. ft
DELAMINATION IN TOP SURFACE OF PILECAP AT PILE #3	SIKA TOP 122 PLUS	3.0	Cu. ft
SPALL IN TOP SURFACE OF PILECAP AT PILE #14	SIKA TOP 122 PLUS	2.0	Cu. ft
		32.0	Cu. ft
JACKET PILE #6 AND INJECT EPOXY/SAND GROUT.	FIBERGLASS JACKET & EPOXY / SOND GROUT	1.0	EACH

THE LIMITS AND QUANTITIES OF THE FIELD REPAIR SHALL BE FIELD MEASURED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF THE REPAIRS.

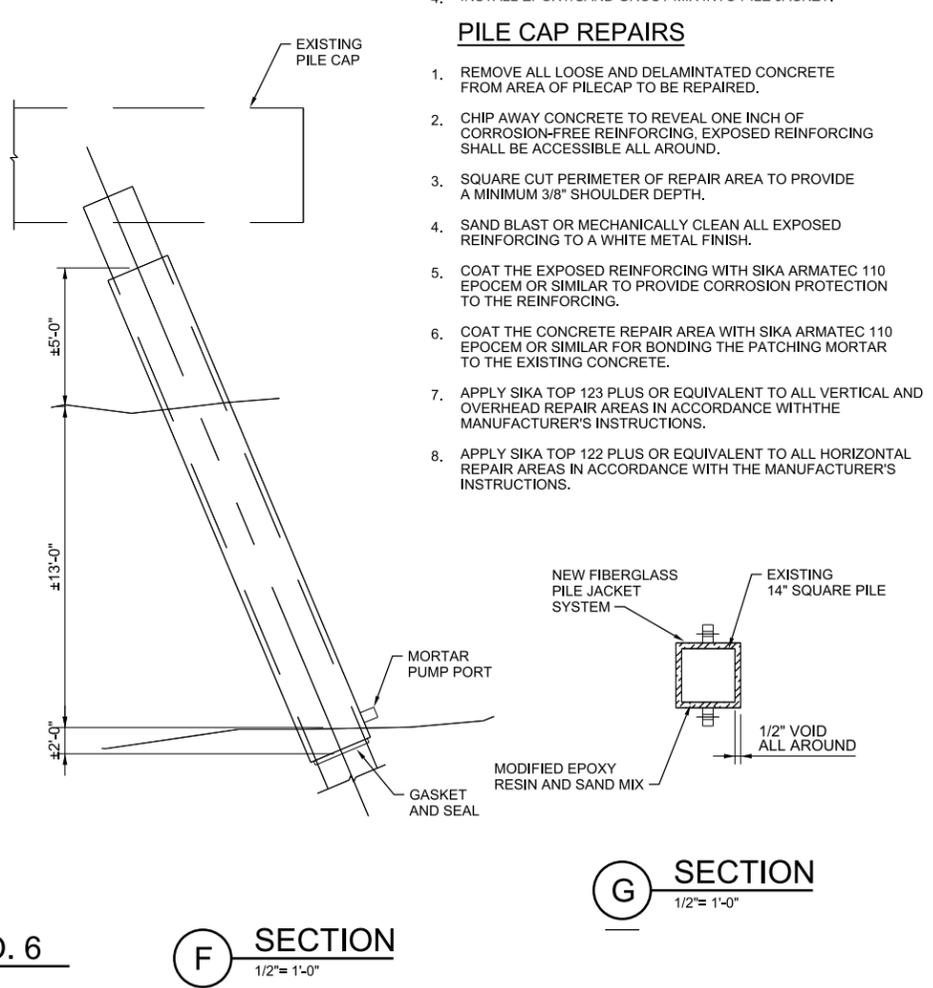
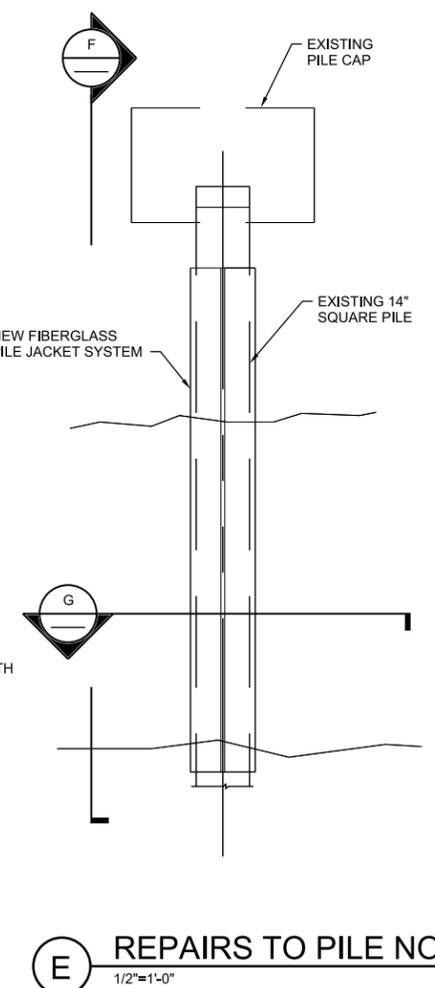
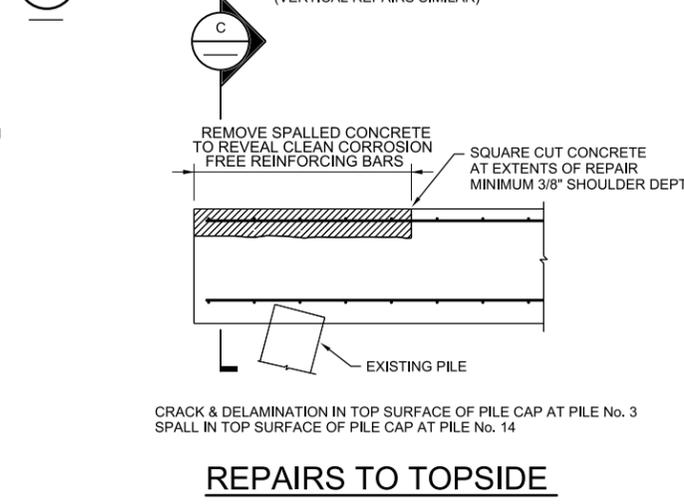
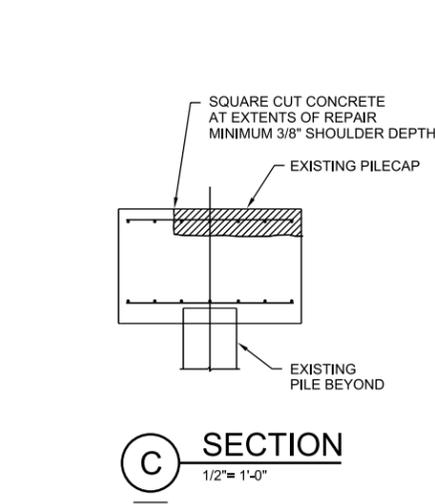
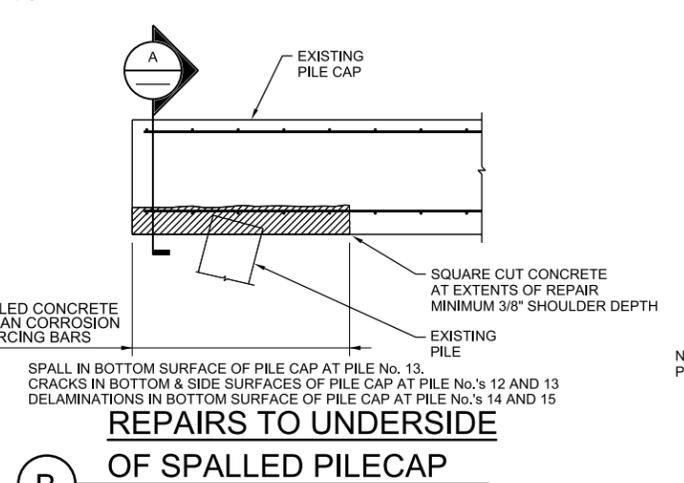
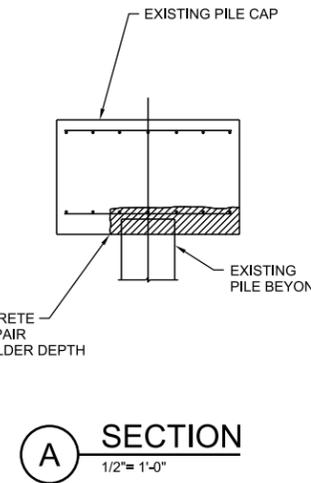
GENERAL NOTES

PILE REPAIRS

1. REMOVE ALL MARINE GROWTH AND PREVIOUS PATCH MATERIAL FROM PILE NO. 6.
2. INSTALL NEW FIBERGLASS PILE JACKET AROUND PILE NO. 6.
3. BRACE AND SECURE PILE JACKET TO RESIST CURRENT.
4. INSTALL EPOXY/SAND GROUT MIX INTO PILE JACKET.

PILE CAP REPAIRS

1. REMOVE ALL LOOSE AND DELAMINATED CONCRETE FROM AREA OF PILECAP TO BE REPAIRED.
2. CHIP AWAY CONCRETE TO REVEAL ONE INCH OF CORROSION-FREE REINFORCING. EXPOSED REINFORCING SHALL BE ACCESSIBLE ALL AROUND.
3. SQUARE CUT PERIMETER OF REPAIR AREA TO PROVIDE A MINIMUM 3/8" SHOULDER DEPTH.
4. SAND BLAST OR MECHANICALLY CLEAN ALL EXPOSED REINFORCING TO A WHITE METAL FINISH.
5. COAT THE EXPOSED REINFORCING WITH SIKA ARMATEC 110 EPOCEM OR SIMILAR TO PROVIDE CORROSION PROTECTION TO THE REINFORCING.
6. COAT THE CONCRETE REPAIR AREA WITH SIKA ARMATEC 110 EPOCEM OR SIMILAR FOR BONDING THE PATCHING MORTAR TO THE EXISTING CONCRETE.
7. APPLY SIKA TOP 123 PLUS OR EQUIVALENT TO ALL VERTICAL AND OVERHEAD REPAIR AREAS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
8. APPLY SIKA TOP 122 PLUS OR EQUIVALENT TO ALL HORIZONTAL REPAIR AREAS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



NO.	DATE	DR	CHK	APVD	D LANGE

3011 S.W. WILSTON ROAD
 GAINESVILLE, FLORIDA 32608
 EB0000072 - AAC001892
 Delayne Lange PE 70184
 SWR CONCRETE REPAIRS
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 ENVIRONMENTAL PROTECTION FACILITY
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**FLEMING KEY PIPE SUPPORT
 BRIDGE PILING REPAIRS**

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