



# CONSTRUCTION PLANS BEACH ROAD WEIR RESTORATION

## PREPARED FOR CITY OF SANIBEL DECEMBER 2025

### PROJECT TEAM

**OWNER:**  
CITY OF SANIBEL  
SANIBEL, FL 33957  
PHONE: (239) 472-6397  
CONTACT: SCOTT KRAWCZUK

**CITY COUNCIL**  
MIKE MILLER — MAYOR  
HOLLY D. SMITH — VICE MAYOR  
LAURA DEBRUCE — COUNCILMEMBER  
JOHN HENSHAW — COUNCILMEMBER  
RICHARD JOHNSON — COUNCILMEMBER

**CIVIL ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
1514 BROADWAY, SUITE 301  
FORT MYERS, FL 33901  
PHONE: (239) 984-3376  
CONTACT: DOUGLAS H. ECKMANN, P.E.

**STRUCTURAL ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
1800 2ND ST #900  
SARASOTA, FL 34236  
PHONE: (941) 379-7600  
CONTACT: SETH E. SCHMID, P.E.

### UTILITIES

**POTABLE WATER**  
THE ISLAND WATER  
ASSOCIATION, INC.  
3651 SANIBEL CAPTIVA RD  
SANIBEL, FL 33957  
PHONE: (239) 472-1502

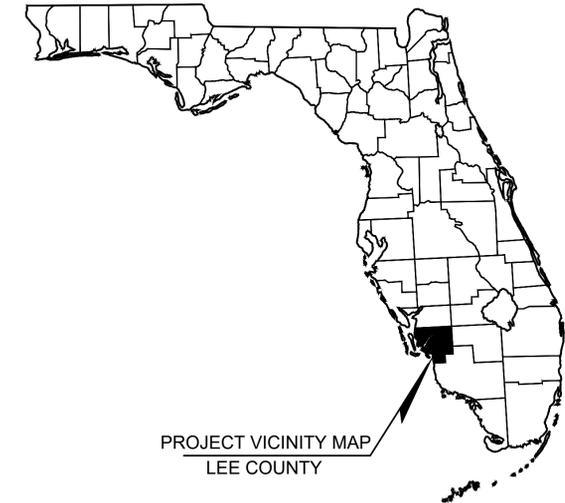
**SANITARY SEWER**  
CITY OF SANIBEL  
800 DUNLOP ROAD  
SANIBEL, FL 33957  
PHONE: (239) 472-3700

### SHEET INDEX

SHEET NUMBER	SHEET TITLE
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LOCATION MAP  
1" = 60'



PROJECT VICINITY MAP  
LEE COUNTY

DOUGLAS H. ECKMANN  
FLORIDA P.E. LICENSE NUMBER #47259

DATE

PREPARED BY  
**Kimley»Horn**

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1514 BROADWAY, SUITE 301, FORT MYERS, FL 33901  
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**NOTE:**  
THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED DEWATERING PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE ENGINEER PRIOR TO ANY EXCAVATION.



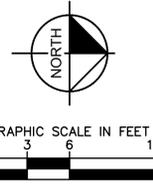
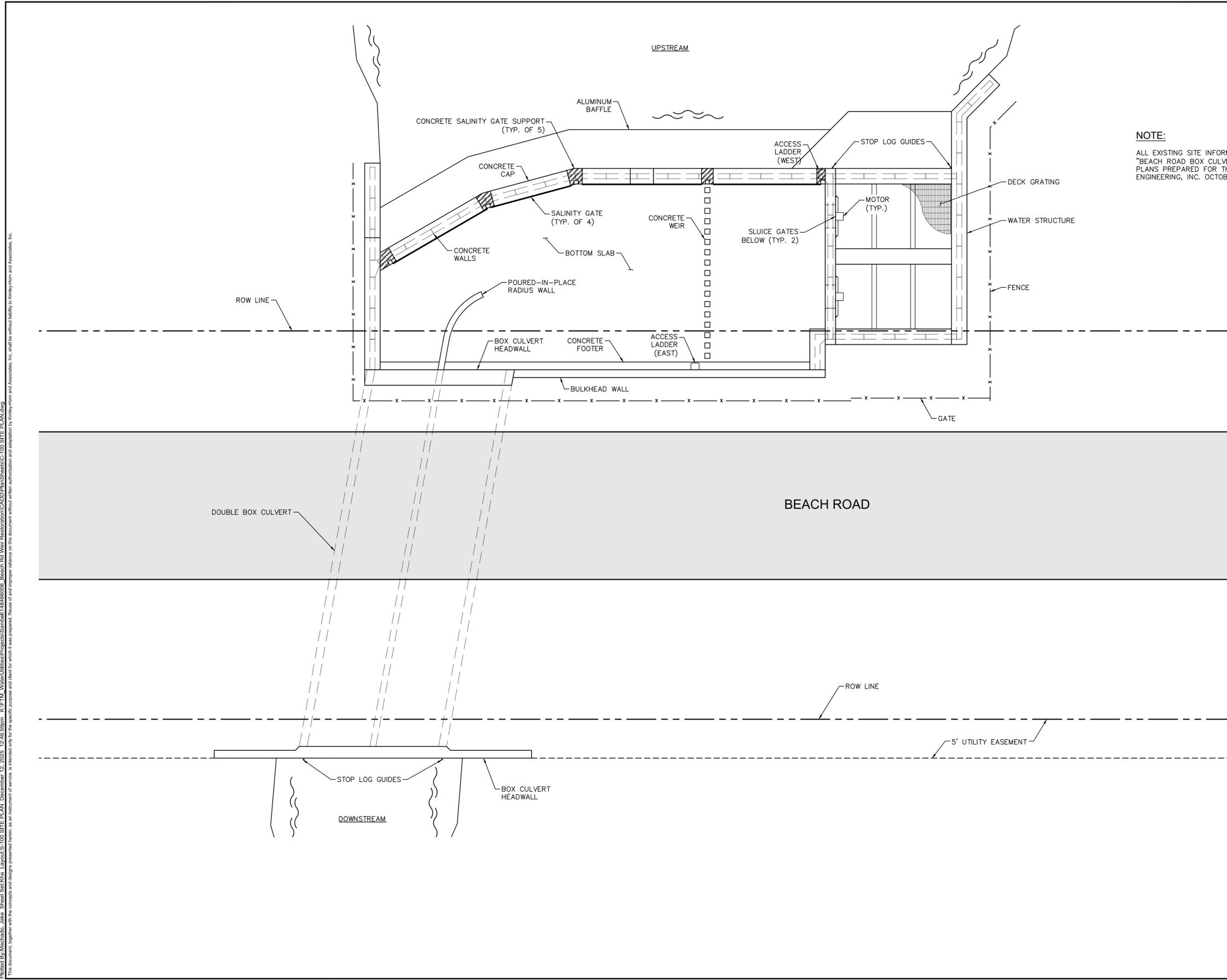
SHEET NUMBER  
G-001

Printed By: Machado, Jake Sheet: SANIBEL BEACH ROAD WEIR RESTORATION, Layout: G-001 COVER SHEET, December 12, 2025 12:46:46pm K:\ITM\_VWater\Utilities\Projects\Sanibel\184466006 Beach Rd Weir Restoration\CADD\PlanSheets\C-001 COVER.dwg  
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Plotted By: Machado, Jake Sheet: S-100 SITE PLAN December 12, 2025 12:46:59pm K:\FTM Water Utilities\Projects\Sanibel\14846606 Beach Rd Weir Restoration\CADD\PlanSheets\C-100 SITE PLAN.dwg  
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**NOTE:**  
 ALL EXISTING SITE INFORMATION SHOWN WAS OBTAINED FROM "BEACH ROAD BOX CULVERT & WATER CONTROL STRUCTURE" PLANS PREPARED FOR THE CITY OF SANIBEL BY JOHNSON ENGINEERING, INC. OCTOBER, 1991.

No.	REVISIONS	DATE	BY

**Kimley»Horn**  
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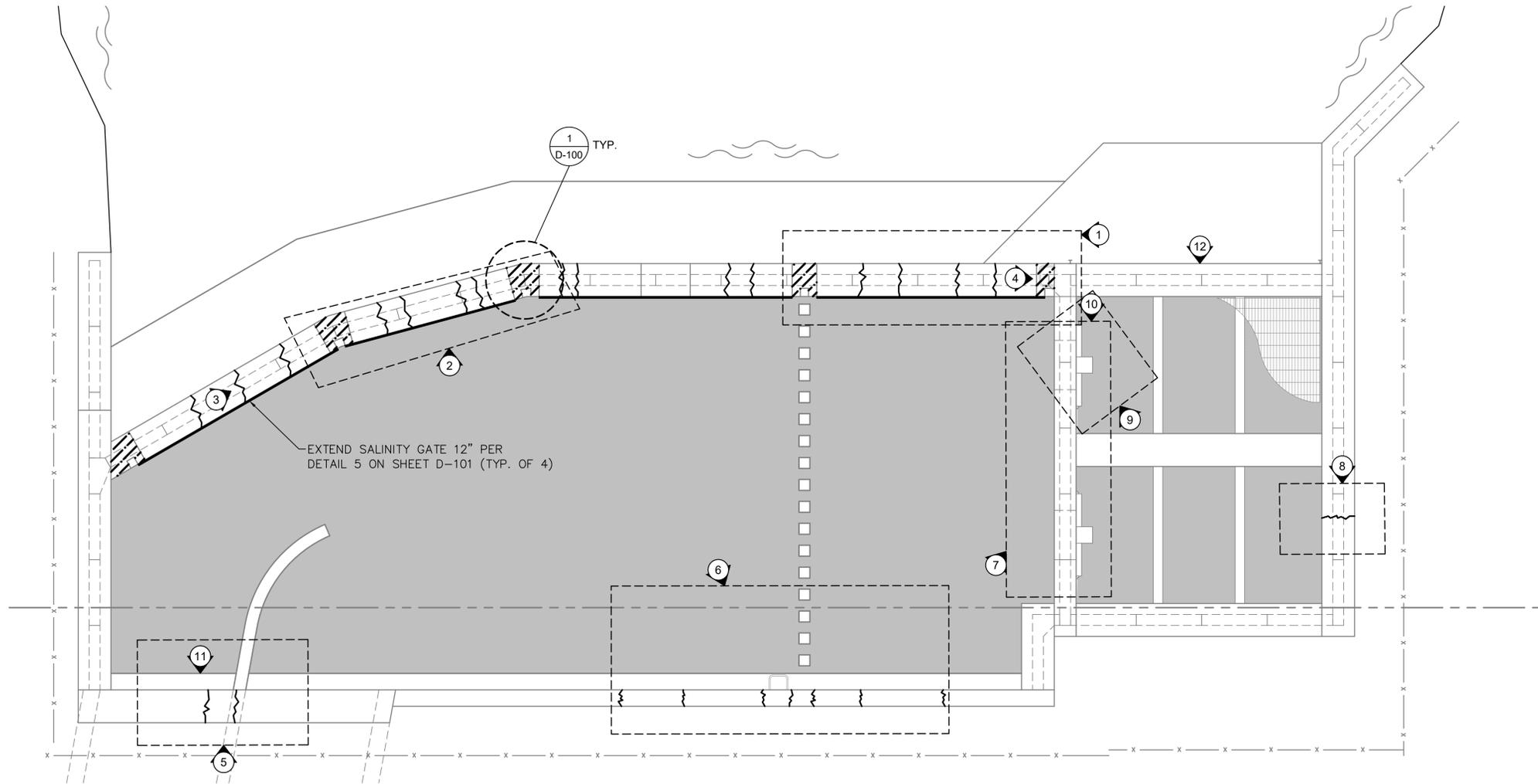
KHA PROJECT	14846606
DATE	DECEMBER 2025
SCALE	AS SHOWN
DESIGNED BY	DHE
DRAWN BY	JAM
CHECKED BY	SES
LICENSED PROFESSIONAL	DOUGLAS H. ECKWANN, P.E.
FLORIDA LICENSE NUMBER	47259
DATE	

## SITE PLAN

**BEACH ROAD  
 WEIR RESTORATION**  
 PREPARED FOR  
 CITY OF SANIBEL  
 LEE COUNTY FLORIDA

SHEET NUMBER  
**S-100**

Printed By: Machado, Jake Sheet: S-200 STRUCTURAL PLAN December 12, 2025 12:47:05pm K:\FTM - Water Utilities\Projects\Sanibel\14466006 - Beach Rd Weir Restoration\CADD\PlanSheets\C200 STRUCTURAL PLAN.dwg  
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**LEGEND**

-  APPROXIMATE AREA DEPICTED IN PHOTO
-  PHOTO IDENTIFIER / AREA OF REPAIR
-  EXISTING CRACK TO BE REPAIRED PER MANUFACTURER RECOMMENDATIONS
-  MINIMUM DEWATERING LIMITS
-  CONCRETE SALINITY GATE SUPPORTS TO BE RAISED 12". SEE DETAIL 1 ON SHEET D-100

DEFICIENCIES SHOWN BASED ON STRUCTURAL INSPECTIONS CONDUCTED JANUARY 2017 AND OCTOBER 2025 BY KIMLEY-HORN

**ANTICIPATED SEQUENCE OF CONSTRUCTION:**

1. USE COFFER DAMS TO SEAL THE BOX CULVERT UNDER BEACH ROAD AND THE WEIR CONTROL STRUCTURE INLET
2. DEWATER THE CONTROL STRUCTURE
3. INSPECT DEWATERED STRUCTURE FOR ANY ADDITIONAL DEFECTS NOT INDICATED ON THE PLANS AND COORDINATE ADDITIONAL REPAIR AREAS WITH ENGINEER
4. PERFORM CONCRETE REPAIRS AND SEAL LEAKS IN STRUCTURE
5. REMOVE EXISTING LADDER RINGS AND PLUG HOLES IF NEEDED
6. INSPECT GATE SEALS AND COORDINATE ADDITIONAL WORK WITH ENGINEER IF NEEDED
7. MECHANICALLY CLEAN AND REPAINT THE GATE OPERATORS
8. EXTEND THE CONCRETE SALINITY GATE SUPPORTS BY 12 INCHES IN PLACE AND RELOCATE HINGE PARTS WITH NEW 316 STAINLESS STEEL ANCHORS
9. WELD AN ADDITIONAL 12 INCH PLATE TO THE EXISTING FLAP GATES (OBJECTIVE IS TO RAISE THE SALINITY BARRIER BY 12 INCHES FROM THE CURRENT ELEVATION)

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 DOUGLAS H. ECKWANN, P.E.  
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 47259

KHA PROJECT  
 14466006  
 DATE  
 DECEMBER 2025  
 SCALE AS SHOWN  
 DESIGNED BY DHE  
 DRAWN BY JAM  
 CHECKED BY SES

**STRUCTURAL PLAN**

**BEACH ROAD WEIR RESTORATION**  
 PREPARED FOR  
 CITY OF SANIBEL  
 LEE COUNTY FLORIDA

SHEET NUMBER  
**S-200**

Printed By: Machado, Jake Sheet: S-201 STRUCTURAL PLAN AREAS 1-4 Date: December 12, 2025 12:47:11pm K:\FTM\_WaterUtilities\Projects\Sanibel\148466006 - Beach Rd Weir Restoration\CADD\PlanSheets\IC-200 STRUCTURAL PLAN.dwg  
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1



2

- LEGEND**
- # PHOTO NUMBER ON SHEET S-200
  - EXISTING LEAKS TO BE REPAIRED.
  - ▨ APPROXIMATE LIMITS OF CRACK REPAIR (TYP.).



3



3  
CLOSE UP VIEW OF TYPICAL CRACK TO BE REPAIRED

EXISTING LADDER RUNGS TO BE REMOVED. SEE LADDER REMOVAL PROCEDURE ON SHEET S-003



4

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 47259

KHA PROJECT  
 148466006  
 DATE  
 DECEMBER 2025  
 SCALE AS SHOWN  
 DESIGNED BY DHE  
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 DATE

**STRUCTURAL PLAN  
 AREAS 1-4**

**BEACH ROAD  
 WEIR RESTORATION**  
 PREPARED FOR  
 CITY OF SANIBEL  
 LEE COUNTY FLORIDA

SHEET NUMBER  
**S-201**





Prepared By: Machado, Jake Sheet: S-204 STRUCTURAL PLAN AREAS 11-12 December 12, 2025 12:47:24pm K:\FTM - Water\Utilities\Projects\Sanibel\148468006\_Beach Rd Weir Restoration\CADD\PlanSheets\C-200 STRUCTURAL PLAN.dwg  
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11



12

**LEGEND**

- # PHOTO NUMBER ON SHEET S-200
- EXISTING LEAKS TO BE REPAIRED.
- ▨ APPROXIMATE LIMITS OF CRACK REPAIR (TYP.).
- ▨ APPROXIMATE LIMITS OF AREA TO BE STOP LOGGED (TYP.).

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KHA PROJECT 148468006	LICENSED PROFESSIONAL
DATE DECEMBER 2025	DOUGLAS H. ECKWANN, P.E.
SCALE AS SHOWN	FLORIDA LICENSE NUMBER 47259
DESIGNED BY DHE	DATE
DRAWN BY JAM	SES
CHECKED BY	DATE

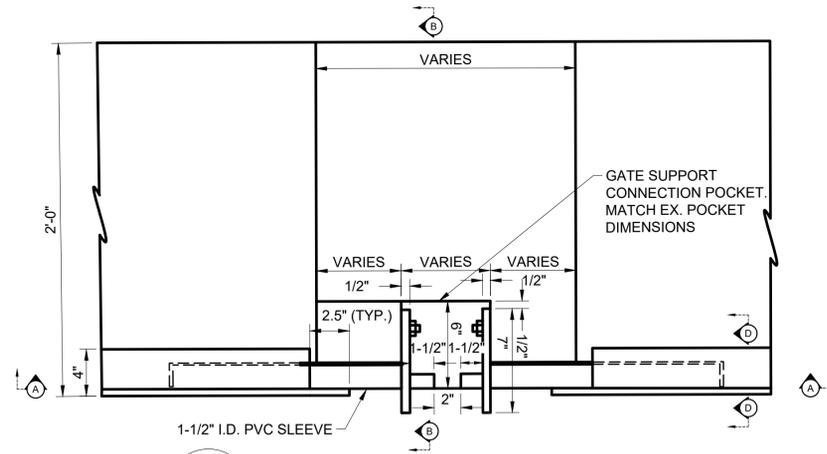
**STRUCTURAL PLAN  
AREAS 11-12**

**BEACH ROAD  
WEIR RESTORATION**  
 PREPARED FOR  
CITY OF SANIBEL  
 LEE COUNTY FLORIDA

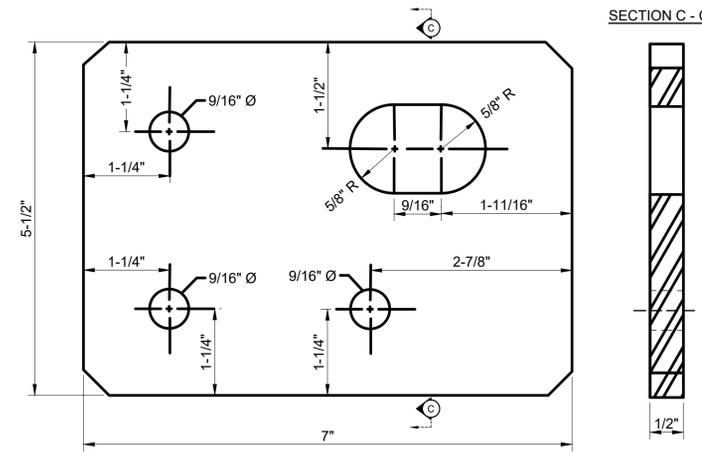
SHEET NUMBER  
**S-204**

NOTES:

- 1) BALANCE SALINITY GATE IN FIELD SUCH THAT IT IS CLOSED WHEN NO HYDROSTATIC HEAD IS ON IT.
- 2) ALL EXISTING DIMENSIONS AND DETAIL INFORMATION SHOWN WAS OBTAINED FROM "BEACH ROAD BOX CULVERT & WATER CONTROL STRUCTURE" PLANS PREPARED FOR THE CITY OF SANIBEL BY JOHNSON ENGINEERING, INC., OCTOBER, 1991.
- 3) CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS AND DETAIL INFORMATION PRIOR TO FABRICATION AND CONSTRUCTION.



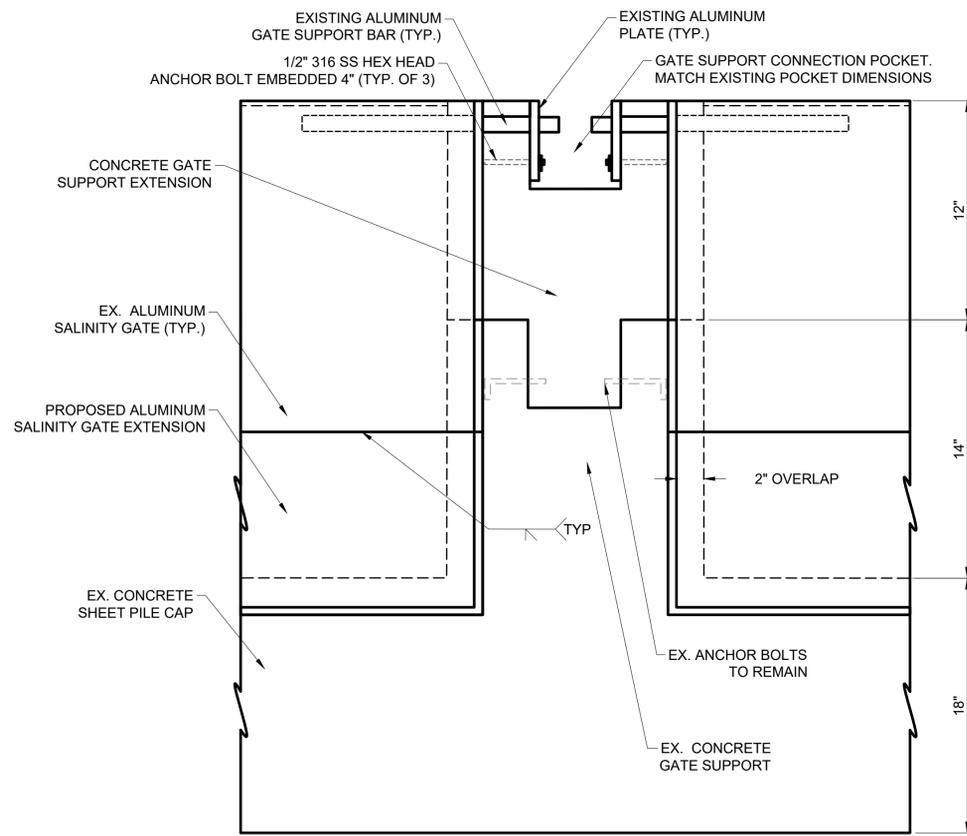
1 SALINITY GATE SUPPORT PLAN  
D-100 N.T.S.



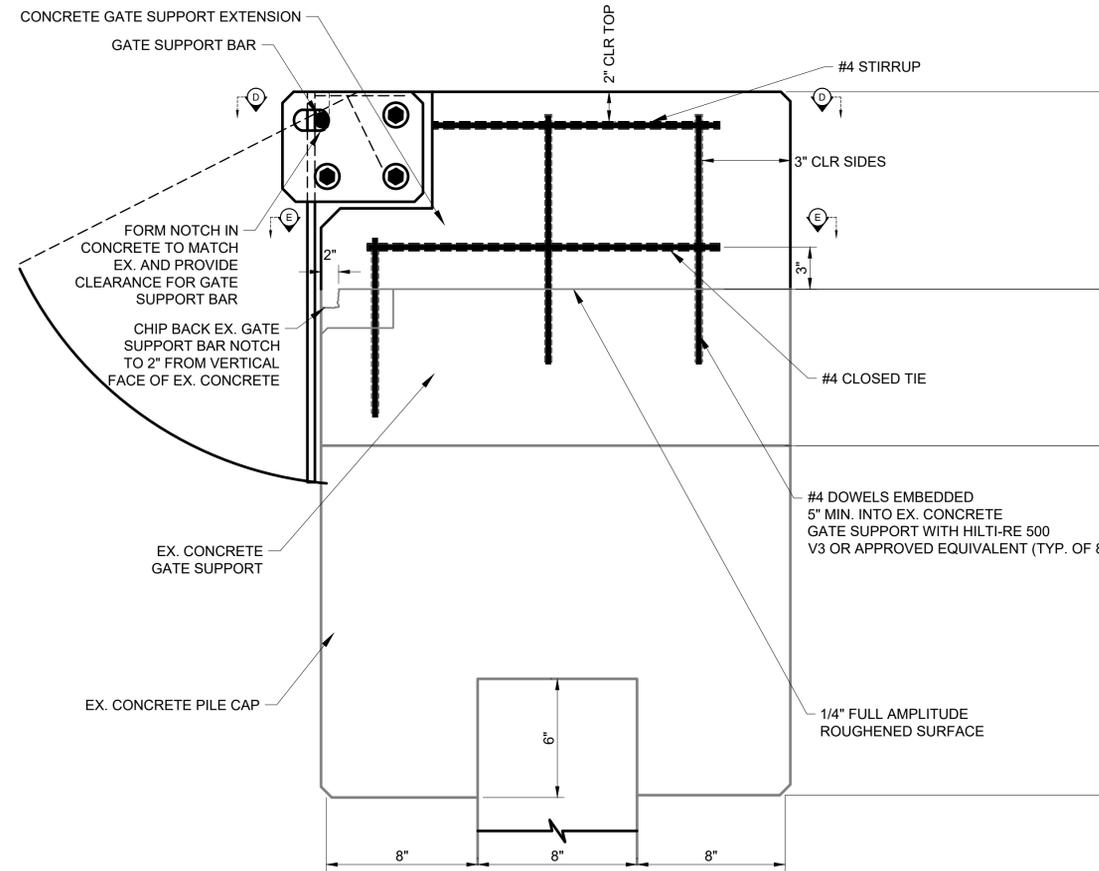
2 EXISTING ALUMINUM PLATE (FOR REFERENCE)  
D-100 N.T.S.

NOTE: IT IS THE INTENT OF THIS PROJECT TO REUSE EXISTING ALUMINUM PLATES FOR THE NEW GATE CONNECTION LOCATIONS. CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS AND DETAIL INFORMATION PRIOR TO FABRICATION AND CONSTRUCTION

NOTE: APPLY THREE COATS OF LIQUID TEFLON TO THE 1" DIAMETER ALUMINUM BAR AND TO THE ELLIPTICAL HOLE IN THE ALUMINUM PLATE



3 SALINITY GATE SUPPORT ELEVATION A - A  
D-100 N.T.S.



4 SALINITY GATE SUPPORT SECTION B - B  
D-100 N.T.S. NOTE: EX. REINFORCEMENT NOT SHOWN FOR CLARITY

Printed By: Mchaddo, Jake Sheet: Sst-Kha Layout: D-100 SALINITY GATE SUPPORT DETAILS December 12, 2025 12:47:34pm K:\ITM - Water Utilities\Projects\Sanibel\148466006 - Beach Rd Weir Restoration\CADD\PlanSheets\C-300 DETL.dwg  
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KHA PROJECT 148466006	LICENSED PROFESSIONAL DOUGLAS H. ECKWANN, P.E.
DATE DECEMBER 2025	FLORIDA LICENSE NUMBER 47259
SCALE AS SHOWN	DRAWN BY JAM
DESIGNED BY DHE	CHECKED BY SES
DATE	

**SALINITY GATE  
SUPPORT DETAILS**

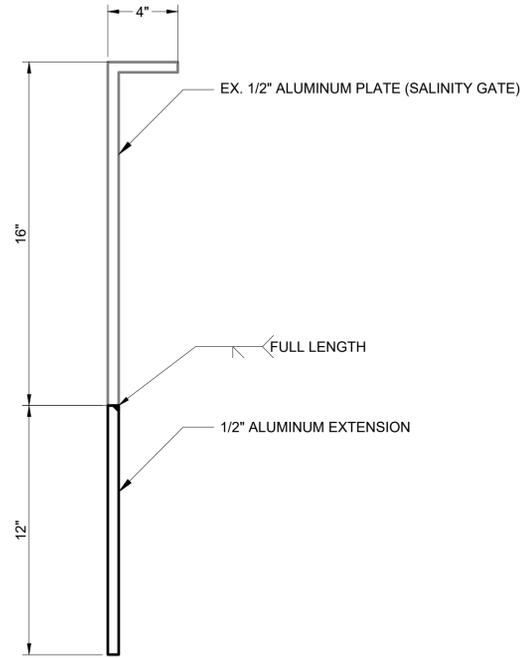
**BEACH ROAD  
WEIR RESTORATION**  
 PREPARED FOR  
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 LEE COUNTY FLORIDA

SHEET NUMBER  
**D-100**

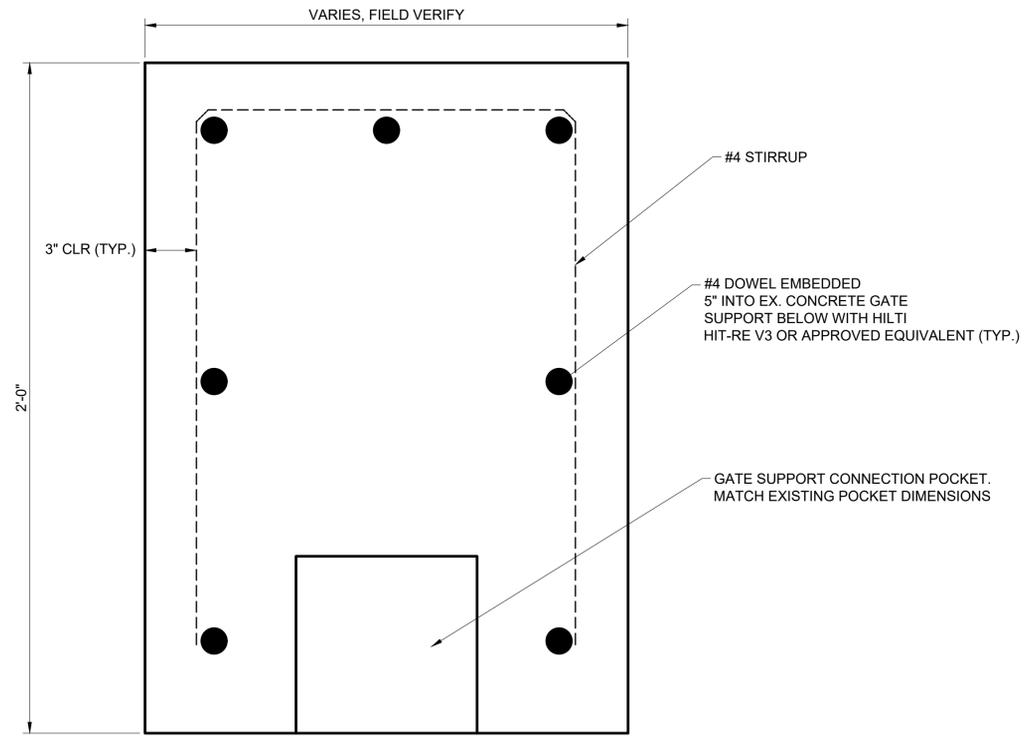
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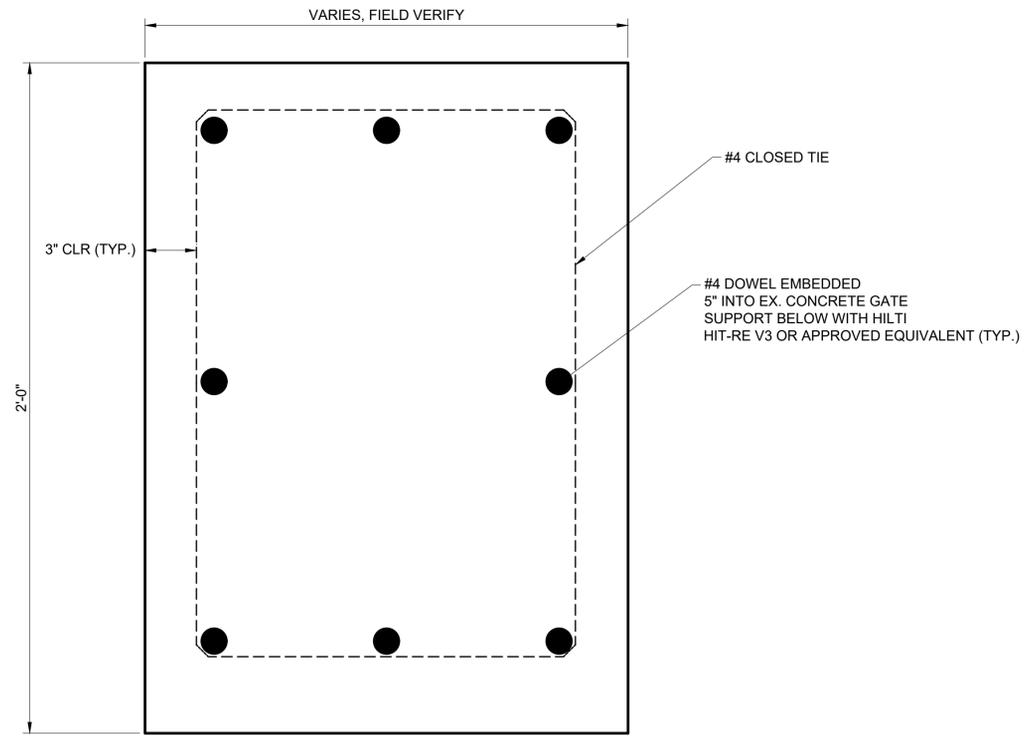
- 1) BALANCE SALINITY GATE IN FIELD SUCH THAT IT IS CLOSED WHEN NO HYDROSTATIC HEAD IS ON IT.
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- 3) CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS AND DETAIL INFORMATION PRIOR TO FABRICATION AND CONSTRUCTION.



5 SALINITY GATE EXTENSION SECTION D - D  
D-101 N.T.S.



6 SALINITY GATE SUPPORT SECTION E - E  
D-101 N.T.S.



7 SALINITY GATE SUPPORT SECTION F - F  
D-101 N.T.S.

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KHA PROJECT 14866006	LICENSED PROFESSIONAL
DATE DECEMBER 2025	DOUGLAS H. ECKWANN, P.E.
SCALE AS SHOWN	FLORIDA LICENSE NUMBER 47259
DESIGNED BY DHE	SES
DRAWN BY JAM	DATE
CHECKED BY	DATE

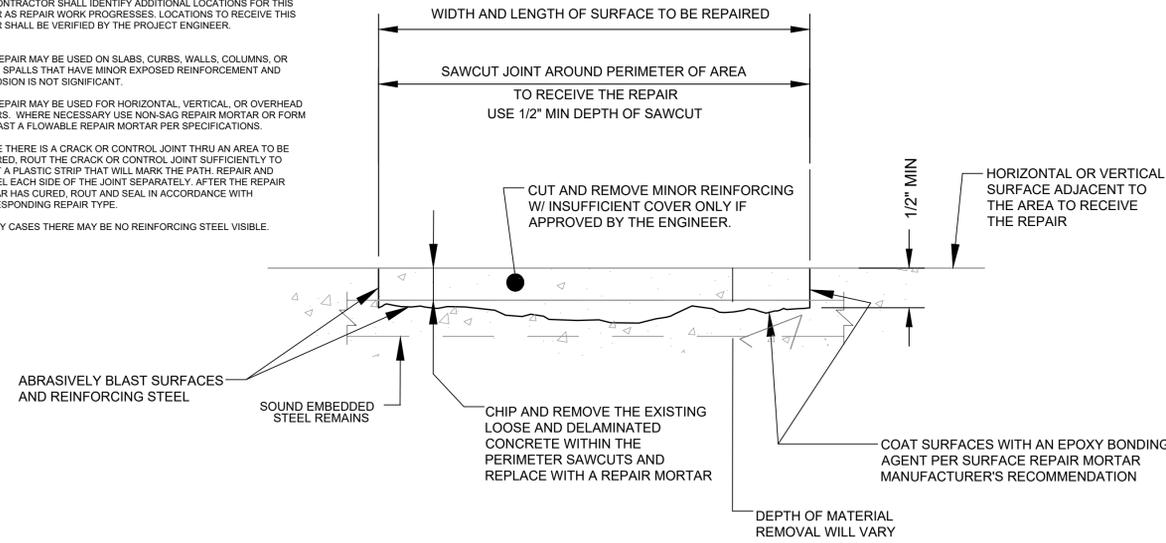
**SALINITY GATE  
SUPPORT DETAILS**

**BEACH ROAD  
WEIR RESTORATION**  
 PREPARED FOR  
 CITY OF SANIBEL  
 LEE COUNTY FLORIDA

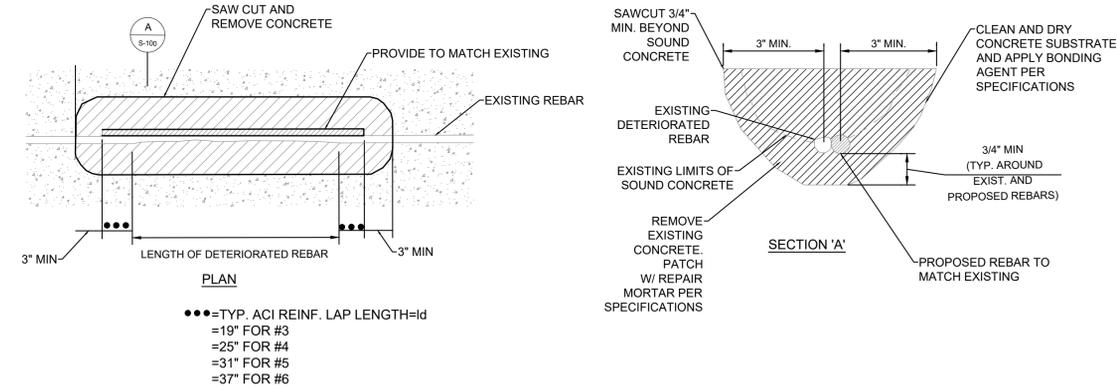
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**NOTES:**

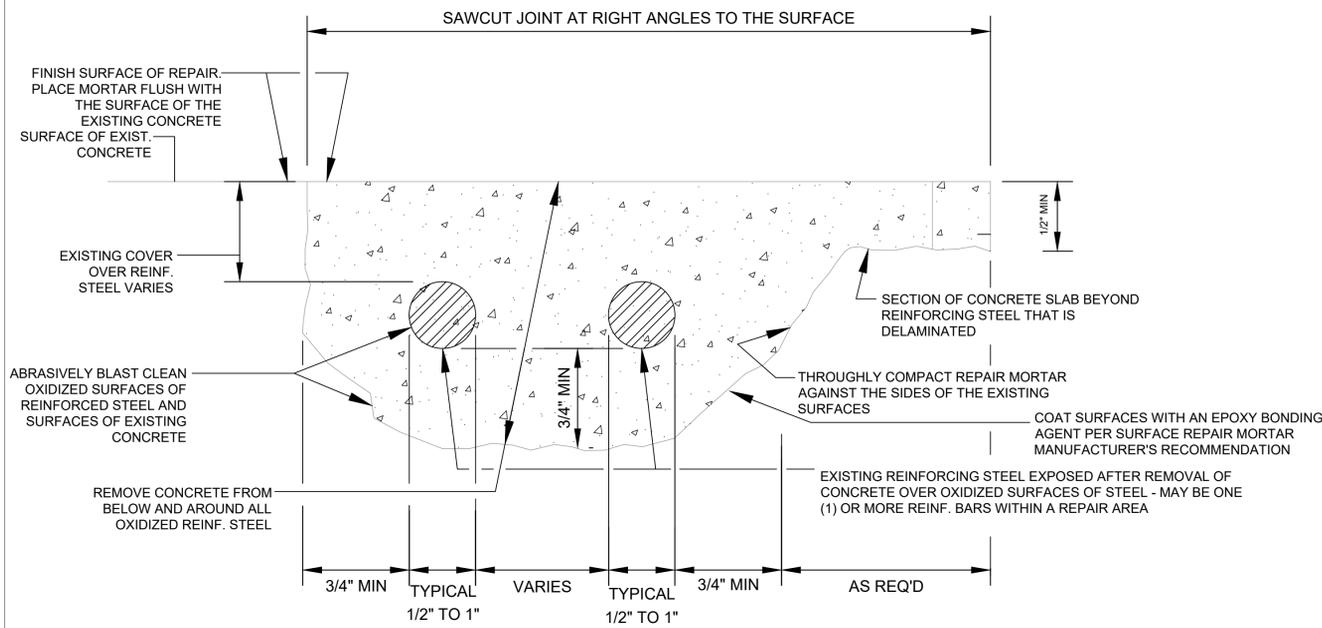
1. THE PURPOSE OF THIS REPAIR IS TO MAKE SURFACE REPAIRS AT ALL LOOSE, DELAMINATED OR OTHER UNSOUND CONCRETE.
2. THE CONTRACTOR SHALL IDENTIFY ADDITIONAL LOCATIONS FOR THIS REPAIR AS REPAIR WORK PROGRESSES. LOCATIONS TO RECEIVE THIS REPAIR SHALL BE VERIFIED BY THE PROJECT ENGINEER.
3. THIS REPAIR MAY BE USED ON SLABS, CURBS, WALLS, COLUMNS, OR OTHER SPALLS THAT HAVE MINOR EXPOSED REINFORCEMENT AND CORROSION IS NOT SIGNIFICANT.
4. THIS REPAIR MAY BE USED FOR HORIZONTAL, VERTICAL, OR OVERHEAD REPAIRS. WHERE NECESSARY USE NON-SAG REPAIR MORTAR OR FORM AND CAST A FLOWABLE REPAIR MORTAR PER SPECIFICATIONS.
5. WHERE THERE IS A CRACK OR CONTROL JOINT THRU AN AREA TO BE REPAIRED, ROUT THE CRACK OR CONTROL JOINT SUFFICIENTLY TO INSERT A PLASTIC STRIP THAT WILL MARK THE PATH. REPAIR AND TROWEL EACH SIDE OF THE JOINT SEPARATELY. AFTER THE REPAIR MORTAR HAS CURED, ROUT AND SEAL IN ACCORDANCE WITH CORRESPONDING REPAIR TYPE.
6. IN MANY CASES THERE MAY BE NO REINFORCING STEEL VISIBLE.



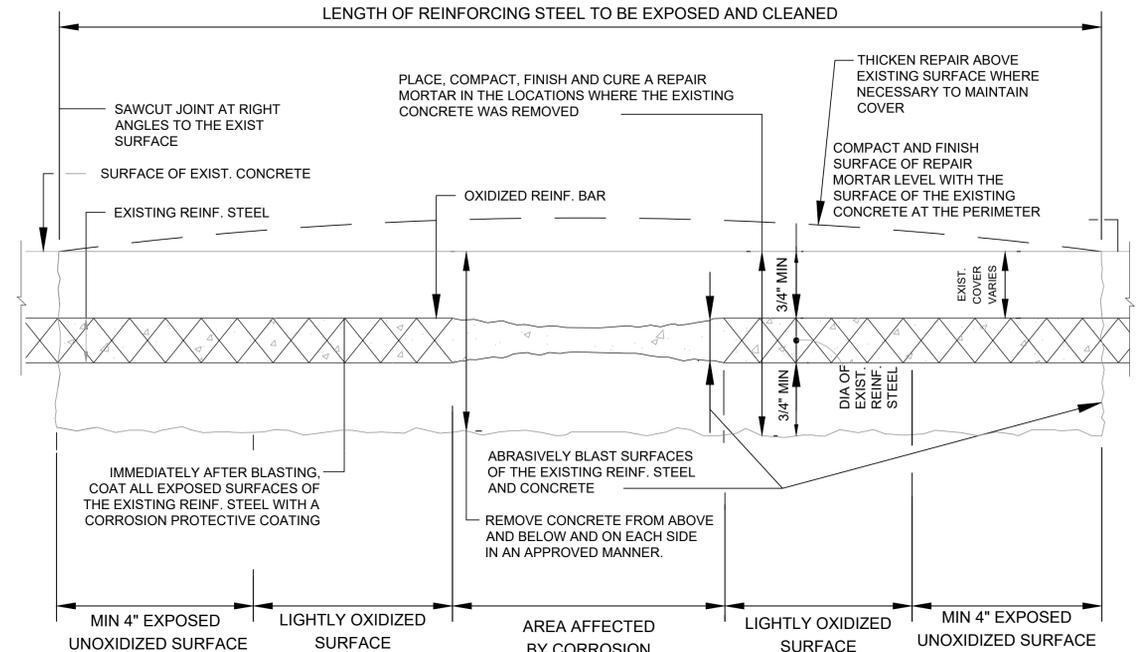
**8 SHALLOW SPALL REPAIR**  
D-102 N.T.S.



**9 EXPOSED REBAR REPAIR**  
D-102 N.T.S.



**10 CONCRETE CROSS-SECTION THROUGH CORRODED REINFORCEMENT**  
D-102 N.T.S.



NOTE: REPAIR CORRODED REINFORCEMENT WITH MORE THAN 20% SECTION LOSS

**11 CONCRETE CROSS-SECTION ALONG CORRODED REINFORCEMENT**  
D-102 N.T.S.

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KHA PROJECT: 14646006  
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**STRUCTURAL DETAILS**

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SHEET NUMBER  
**D-102**