INDEX OF STRUCTURE PLANS

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STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430204-2-52-01

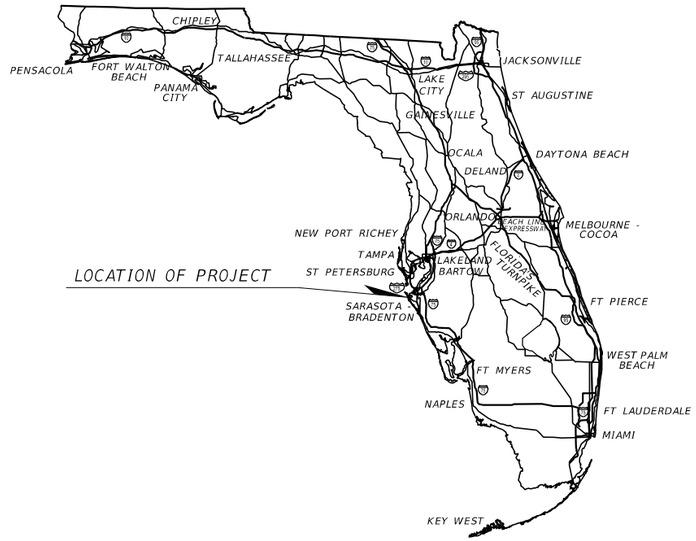
(FEDERAL FUNDS)

MANATEE COUNTY (13040)

STATE ROAD NO. 684

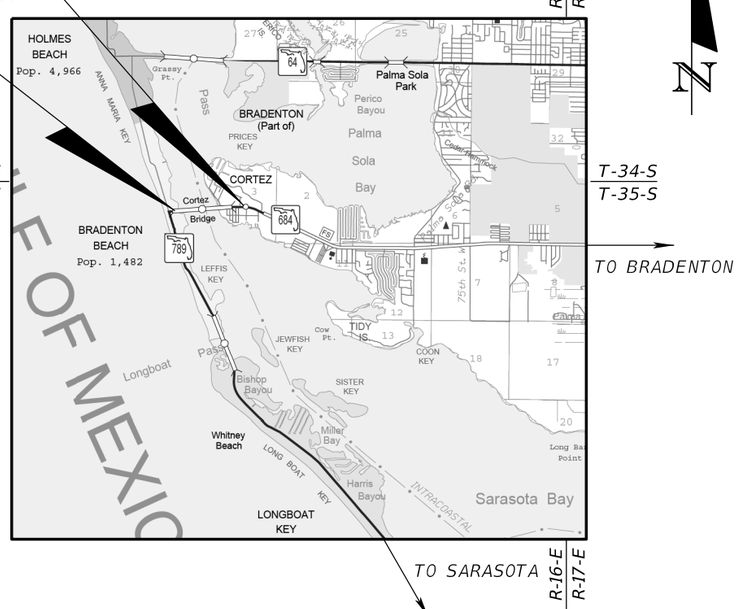
BRIDGE REPLACEMENT PROJECT

STRUCTURE PLANS



END PROJECT
STA. 250+80.00
MP 0.869

BEGIN PROJECT
STA. 205+05.63
MP 0.003



STRUCTURE PLANS ENGINEER OF RECORD:

DOUGLAS M. HERSHEY, P.E.
P.E. NO.: 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET
SUITE 500
TAMPA, FL 33607
(813) 357-3750
CONTRACT NO.: C9V47
VENDOR NO.: VF 362338811001

FDOT PROJECT MANAGER:

AMY E. BLAIR, P.E., CPM

PHASE IV PLANS
MAY 2025

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
T1920	26	B-1

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

DOUGLAS M. HERSHEY
LICENSE
No 63325
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

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H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607
DOUGLAS M. HERSHEY, P.E. NO. 63325

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

SHEET NO.	SHEET DESCRIPTION
B-1	KEY SHEET
B-2	SIGNATURE SHEET (1 OF 3)
B-4	SIGNATURE SHEET (3 OF 3)
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BQ1-2	SUMMARY OF STRUCTURES QUANTITIES (2 OF 16)
BQ1-3	SUMMARY OF STRUCTURES QUANTITIES (3 OF 16)
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BQ1-8	SUMMARY OF STRUCTURES QUANTITIES (8 OF 16)
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B1-74	FOOTING DETAILS (7 OF 26)
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B1-203	REINFORCING BAR LIST (5 OF 24)
B1-204	REINFORCING BAR LIST (6 OF 24)
B1-205	REINFORCING BAR LIST (7 OF 24)
B1-206	REINFORCING BAR LIST (8 OF 24)
B1-207	REINFORCING BAR LIST (9 OF 24)
B1-208	REINFORCING BAR LIST (10 OF 24)
B1-209	REINFORCING BAR LIST (11 OF 24)
B1-210	REINFORCING BAR LIST (12 OF 24)
B1-211	REINFORCING BAR LIST (13 OF 24)
B1-212	REINFORCING BAR LIST (14 OF 24)
B1-213	REINFORCING BAR LIST (15 OF 24)
B1-214	REINFORCING BAR LIST (16 OF 24)
B1-215	REINFORCING BAR LIST (17 OF 24)
B1-216	REINFORCING BAR LIST (18 OF 24)
B1-217	REINFORCING BAR LIST (19 OF 24)
B1-218	REINFORCING BAR LIST (20 OF 24)
B1-219	REINFORCING BAR LIST (21 OF 24)
B1-220	REINFORCING BAR LIST (22 OF 24)
B1-221	REINFORCING BAR LIST (23 OF 24)
B1-222	REINFORCING BAR LIST (24 OF 24)
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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: HAN
CHECKED BY: NAH
DESIGNED BY: CH
CHECKED BY: ASE

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

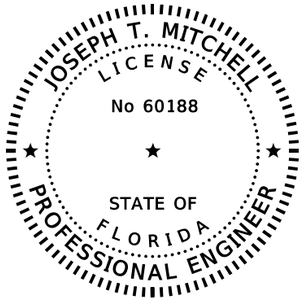
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SIGNATURE SHEET (1 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B-2



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WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607
JOSEPH T. MITCHELL, P.E. NO. 60188

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

SHEET NO.	SHEET DESCRIPTION
B-3	SIGNATURE SHEET (2 OF 3)
B1-4	PLAN AND ELEVATION (4 OF 6)
B1-42	FOUNDATION LAYOUT (4 OF 6)
B1-47	FOUNDATION LAYOUT DETAILS (3 OF 3)
B1-49	PILE DATA TABLE (2 OF 3)
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B1-84	FOOTING DETAILS (17 OF 26)
B1-85	FOOTING DETAILS (18 OF 26)
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B1-105	PIER 11 - 14 DETAILS (2 OF 5)
B1-106	PIER 11 - 14 DETAILS (3 OF 5)
B1-107	PIER 11 - 14 DETAILS (4 OF 5)
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B1-116	FRAMING PLAN (7 OF 14)
B1-117	FRAMING PLAN (8 OF 14)
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B1-135	FINISH GRADE ELEVATIONS [SPANS 11 - 13] (3 OF 4)
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B1-223	REINFORCING BAR LIST [UNIT 6] (1 OF 7)
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B1-228	REINFORCING BAR LIST [UNIT 6] (6 OF 7)
B1-229	REINFORCING BAR LIST [UNIT 6] (7 OF 7)

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SIGNATURE SHEET (2 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-3

THOMAS E. MUSGRAVE, JR. LICENSE No 81669 STATE OF FLORIDA PROFESSIONAL ENGINEER

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ON THE DATE ADJACENT TO THE SEAL

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TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FL 33637
THOMAS E. MUSGRAVE, JR., P.E. NO. 81669

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

SHEET NO.	SHEET DESCRIPTION
B-4	SIGNATURE SHEET (3 OF 3)
B1-18	REPORT OF CORE BORINGS (1 OF 21)
B1-19	REPORT OF CORE BORINGS (2 OF 21)
B1-20	REPORT OF CORE BORINGS (3 OF 21)
B1-21	REPORT OF CORE BORINGS (4 OF 21)
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B1-26	REPORT OF CORE BORINGS (9 OF 21)
B1-27	REPORT OF CORE BORINGS (10 OF 21)
B1-28	REPORT OF CORE BORINGS (11 OF 21)
B1-29	REPORT OF CORE BORINGS (12 OF 21)
B1-30	REPORT OF CORE BORINGS (13 OF 21)
B1-31	REPORT OF CORE BORINGS (14 OF 21)
B1-32	REPORT OF CORE BORINGS (15 OF 21)
B1-33	REPORT OF CORE BORINGS (16 OF 21)
B1-34	REPORT OF CORE BORINGS (17 OF 21)
B1-35	REPORT OF CORE BORINGS (18 OF 21)
B1-36	REPORT OF CORE BORINGS (19 OF 21)
B1-37	REPORT OF CORE BORINGS (20 OF 21)
B1-38	REPORT OF CORE BORINGS (21 OF 21)
BW-60	REPORT OF CORE BORINGS (1 OF 16)
BW-61	REPORT OF CORE BORINGS (2 OF 16)
BW-62	REPORT OF CORE BORINGS (3 OF 16)
BW-63	REPORT OF CORE BORINGS (4 OF 16)
BW-64	REPORT OF CORE BORINGS (5 OF 16)
BW-65	REPORT OF CORE BORINGS (6 OF 16)
BW-66	REPORT OF CORE BORINGS (7 OF 16)
BW-67	REPORT OF CORE BORINGS (8 OF 16)
BW-68	REPORT OF CORE BORINGS (9 OF 16)
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BW-73	REPORT OF CORE BORINGS (14 OF 16)
BW-74	REPORT OF CORE BORINGS (15 OF 16)
BW-75	REPORT OF CORE BORINGS (16 OF 16)
BW-76	REPORT OF CORE BORINGS (NOISE WALL)

DOUGLAS M. HERSHEY LICENSE No 63325 STATE OF FLORIDA PROFESSIONAL ENGINEER

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607
DOUGLAS M. HERSHEY, P.E. NO. 63325

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

SHEET NO.	SHEET DESCRIPTION
B-4	SIGNATURE SHEET (3 OF 3)
BW-1	WALL LOCATION MAP
BW-2	MSE WALL GENERAL NOTES & DATA TABLES (1 OF 2)
BW-3	MSE WALL GENERAL NOTES & DATA TABLES (2 OF 2)
BW-4	PLAN - PERMANENT WALLS (1 OF 2)
BW-5	PLAN - PERMANENT WALLS (2 OF 2)
BW-6	ELEVATION - MSE WALL W-1A & W-3
BW-7	ELEVATION - MSE WALL W-1C
BW-8	ELEVATION - MSE WALL W-2A
BW-9	ELEVATION - MSE WALL W-2C
BW-10	ELEVATION - MSE WALL W-1B & W-2B
BW-11	MSE WALL DETAILS
BW-12	MODIFICATIONS TO STANDARD PLANS INDEX 521-630
BW-13	MSE WALL ICON DETAILS (1 OF 6)
BW-14	MSE WALL ICON DETAILS (2 OF 6)
BW-15	MSE WALL ICON DETAILS (3 OF 6)
BW-16	MSE WALL ICON DETAILS (4 OF 6)
BW-17	MSE WALL ICON DETAILS (5 OF 6)
BW-18	MSE WALL ICON DETAILS (6 OF 6)
BW-19	ELEVATION - WALL SP-1
BW-20	WALL SP-1 DETAILS (1 OF 2)
BW-21	WALL SP-1 DETAILS (2 OF 2)
BW-22	ELEVATION - WALLS CIP-1, CIP-2, GW-1 & GW-2
BW-23	WALLS CIP-1 & CIP-2 DETAILS (1 OF 2)
BW-24	WALLS CIP-1 & CIP-2 DETAILS (2 OF 2)
BW-25	WALL GW-2 DETAILS
BW-26	ELEVATION - WALLS SPW-1 & SPW-2
BW-27	ELEVATION - WALLS GW-3 & GW-4
BW-28	ELEVATION - WALL NW-1 (SEGMENTS 1, 2 & 3)
BW-29	WALL NW1 [SEGMENTS 1, 2 & 3] DETAILS (1 OF 5)
BW-30	WALL NW1 [SEGMENTS 1, 2 & 3] DETAILS (2 OF 5)
BW-31	WALL NW1 [SEGMENTS 1, 2 & 3] DETAILS (3 OF 5)
BW-32	WALL NW1 [SEGMENTS 1, 2 & 3] DETAILS (4 OF 5)
BW-33	WALL NW1 [SEGMENTS 1, 2 & 3] DETAILS (5 OF 5)
BW-34	WALLS SPW-1 & SPW-2 DETAILS (1 OF 2)
BW-35	WALLS SPW-1 & SPW-2 DETAILS (2 OF 2)
BW-36	SEAWALL DATA TABLES
BW-37	PLAN & ELEVATION - SEAWALL A
BW-38	PLAN - SEAWALL B
BW-39	ELEVATION - SEAWALL B
BW-40	SEAWALL DETAILS (1 OF 6)
BW-41	SEAWALL DETAILS (2 OF 6)
BW-42	SEAWALL DETAILS (3 OF 6)
BW-43	SEAWALL DETAILS (4 OF 6)
BW-44	SEAWALL DETAILS (5 OF 6)
BW-45	SEAWALL DETAILS (6 OF 6)
BW-46	TEMPORARY MSE WALL DATA TABLES

SHEET NO.	SHEET DESCRIPTION
BW-47	PLAN - TEMPORARY WALLS (1 OF 3)
BW-48	PLAN - TEMPORARY WALLS (2 OF 3)
BW-49	PLAN - TEMPORARY WALLS (3 OF 3)
BW-50	ELEVATION - TEMPORARY MSE WALL TW-1
BW-51	ELEVATION - TEMPORARY MSE WALL TW-2
BW-52	ELEVATION - CRITICAL TEMPORARY SHEET PILE WALL TSPW-1
BW-53	ELEVATION - CRITICAL TEMPORARY SHEET PILE WALL TSPW-2
BW-54	ELEVATION - CRITICAL TEMPORARY SHEET PILE WALL TSPW-3
BW-55	CRITICAL TEMPORARY SHEET PILE WALL DATA TABLES (1 OF 2)
BW-56	CRITICAL TEMPORARY SHEET PILE WALL DATA TABLES (2 OF 2)
BW-57	ANCHOR DETAILS
BW-58	MODIFICATIONS TO STANDARD PLANS INDEX 715-002
BW-59	MODIFICATIONS TO STANDARD PLANS INDEX 521-001

MICHAEL R. KRECIC LICENSE No 57509 STATE OF FLORIDA PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

INTERA Incorporated
2114 NW 40TH TERRACE, SUITE A1
GAINESVILLE, FL 32605
MICHAEL R. KRECIC, P.E. NO. 57509

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

SHEET NO.	SHEET DESCRIPTION
B-4	SIGNATURE SHEET (3 OF 3)
B1-8	BRIDGE HYDRAULIC RECOMMENDATIONS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SIGNATURE SHEET (3 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-4

JHERNANDEZ 5/22/2025 1:17:25 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\SIGNST103.dgn

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
LUMP SUM ITEMS	0103 1 26	TEMPORARY WORK STRUCTURE, PROJECT NUMBER 430204-2-52-01	BRIDGE	LS/LS	1.0		1		141311 SF	
	0110 3	REMOVAL OF EXISTING STRUCTURES/BRIDGE	BRIDGE	LS/SF	1.0		1		97904 SF. INCLUDES REMOVAL OF EXISTING BRIDGE AND FENDER SYSTEM AND PARTIAL REMOVAL OF EXISTING SEAWALL.	
	0465 20	MOVABLE BRIDGE - PREVENTATIVE MAINTENANCE & ROUTINE REPAIR	BRIDGE	LS/DA	1.0		1		550 DAYS	
	0465 21	MOVABLE BRIDGE OPERATOR	BRIDGE	DA	550.0		550		PHASE IV PRELIM. EST.	
	0471 3 2	POLYMERIC FENDER SYSTEM (41-200 KIP-FT)	FENDER	LS/LS	1.0		1			
	0510 1	NAVIGATION LIGHTS - FIXED BRIDGE, SYSTEM	BRIDGE	LS/LS	1.0		1			
FOUNDATION	0455 15 16	PREFORMED PILE HOLES, 36" TO 43" DRILL/PUNCH SIZE	END BENT 1	LF	130.6		17026		PHASE 1	
			PIER 2		655.1					
			PIER 3		638.8					
			PIER 4		501.9					
			PIER 5		518.4					
			PIER 6		589.6					
			PIER 7		613.0					
			PIER 8		553.8					
			PIER 9		598.3					
			PIER 10		554.4					
			PIER 11		632.6					
			PIER 12		688.5					
			PIER 13		651.2					
			PIER 14		620.3					
			PIER 15		529.2					
			PIER 16		655.9					
			PIER 17		751.8					
			PIER 18		703.2					
			PIER 19		698.4					
			END BENT 20		134.8					
			END BENT 1		66.5				PHASE 2	
			PIER 2		329.8					
			PIER 3		316.4					
			PIER 4		239.5					
			PIER 5		250.2					
			PIER 6		294.0					
			PIER 7		307.1					
			PIER 8		277.2					
			PIER 9		299.7					
			PIER 10		279.9					
			PIER 11		282.2					
			PIER 12		306.3					
			PIER 13		281.3					
			PIER 14		298.5					
			PIER 15		263.0					
			PIER 16		323.1					
			PIER 17		376.2					
			PIER 18		370.8					
			PIER 19		347.8					
			END BENT 20		97.2					

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REVISIONS

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TAMPA, FL 33607

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CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (1 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-1

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
FOUNDATION	0455 20 1	PILE INSPECTION, DRIVEN PILE	END BENT 1	EA	4		339		PHASE 1	
			PIER 2		12					
			PIER 3		12					
			PIER 4		12					
			PIER 5		12					
			PIER 6		12					
			PIER 7		12					
			PIER 8		12					
			PIER 9		12					
			PIER 10		12					
			PIER 11		14					
			PIER 12		14					
			PIER 13		14					
			PIER 14		14					
			PIER 15		12					
			PIER 16		12					
			PIER 17		12					
			PIER 18		10					
			PIER 19		10					
			END BENT 20		4					
			END BENT 1		2				PHASE 2	
			PIER 2		6					
			PIER 3		6					
			PIER 4		6					
			PIER 5		6					
			PIER 6		6					
			PIER 7		6					
			PIER 8		6					
			PIER 9		6					
			PIER 10		6					
			PIER 11		6					
			PIER 12		6					
			PIER 13		6					
			PIER 14		6					
			PIER 15		6					
			PIER 16		6					
			PIER 17		6					
			PIER 18		5					
			PIER 19		5					
			END BENT 20		3					

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REVISIONS

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DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (2 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-2

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
FOUNDATION	0455 34 6	PRESTRESSED CONCRETE PILING, 30" SQ	END BENT 1	LF	274.1		30884		PHASE 1 [SEE NOTE 13 ON SHEET B1-50]	
			PIER 2		1020.0					
			PIER 3		1023.0					
			PIER 4		1067.0					
			PIER 5		1012.0					
			PIER 6		1045.0					
			PIER 7		1100.0					
			PIER 8		1078.0					
			PIER 9		1089.0					
			PIER 10		1012.0					
			PIER 11		1235.0				PHASE 1 [INDEX 455-031]	
			PIER 12		1235.0					
			PIER 13		1235.0					
			PIER 14		1235.0					
			PIER 15		1067.0				PHASE 1 [SEE NOTE 13 ON SHEET B1-50]	
			PIER 16		1111.0					
			PIER 17		1174.0					
			PIER 18		906.0					
			PIER 19		870.0					
			END BENT 20		332.9					
			END BENT 1		182.5				PHASE 2 [SEE NOTE 13 ON SHEET B1-50]	
			PIER 2		558.0					
			PIER 3		558.0					
			PIER 4		582.0					
			PIER 5		552.0					
			PIER 6		570.0					
			PIER 7		600.0					
			PIER 8		588.0					
			PIER 9		594.0					
			PIER 10		552.0					
			PIER 11		570.0				PHASE 2 [INDEX 455-031]	
			PIER 12		570.0					
			PIER 13		570.0					
			PIER 14		570.0					
			PIER 15		582.0				PHASE 2 [SEE NOTE 13 ON SHEET B1-50]	
			PIER 16		606.0					
			PIER 17		642.0					
			PIER 18		502.0					
			PIER 19		482.0					
			END BENT 20		332.7					

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DOUGLAS M. HERSHEY, P.E.
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TAMPA, FL 33607

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CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (3 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-3

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
FOUNDATION	0455 115	PILE REDRIVE	END BENT 1	EA	4		193		PHASE 1	
			PIER 2		7					
			PIER 3		7					
			PIER 4		7					
			PIER 5		7					
			PIER 6		7					
			PIER 7		7					
			PIER 8		7					
			PIER 9		7					
			PIER 10		7					
			PIER 11		8					
			PIER 12		8					
			PIER 13		8					
			PIER 14		8					
			PIER 15		7					
			PIER 16		7					
			PIER 17		7					
			PIER 18		5					
			PIER 19		5					
			END BENT 20		4					
			END BENT 1		2				PHASE 2	
			PIER 2		3					
			PIER 3		3					
			PIER 4		3					
			PIER 5		3					
			PIER 6		3					
			PIER 7		3					
			PIER 8		3					
			PIER 9		3					
			PIER 10		3					
			PIER 11		3					
			PIER 12		3					
			PIER 13		3					
			PIER 14		3					
			PIER 15		3					
			PIER 16		3					
			PIER 17		3					
			PIER 18		3					
			PIER 19		3					
			END BENT 20		3					

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STATE OF FLORIDA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (4 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-4

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
FOUNDATION	0455 137	LOAD TEST (DYNAMIC), DATA COLLECTION AND ANALYSIS	END BENT 1	EA	4		339		PHASE 1	
			PIER 2		12					
			PIER 3		12					
			PIER 4		12					
			PIER 5		12					
			PIER 6		12					
			PIER 7		12					
			PIER 8		12					
			PIER 9		12					
			PIER 10		12					
			PIER 11		14					
			PIER 12		14					
			PIER 13		14					
			PIER 14		14					
			PIER 15		12					
			PIER 16		12					
			PIER 17		12					
			PIER 18		10					
			PIER 19		10					
			END BENT 20		4					
			END BENT 1		2				PHASE 2	
			PIER 2		6					
			PIER 3		6					
			PIER 4		6					
			PIER 5		6					
			PIER 6		6					
			PIER 7		6					
			PIER 8		6					
			PIER 9		6					
			PIER 10		6					
			PIER 11		6					
			PIER 12		6					
			PIER 13		6					
			PIER 14		6					
			PIER 15		6					
			PIER 16		6					
			PIER 17		6					
			PIER 18		5					
			PIER 19		5					
			END BENT 20		3					

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (5 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-5

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
FOUNDATION	0455 137 2	LOAD TEST (DYNAMIC), VERIFICATION TEST	END BENT 1	EA	1		20		PHASE 1	
			PIER 2		1					
			PIER 3		1					
			PIER 4		1					
			PIER 5		1					
			PIER 6		1					
			PIER 7		1					
			PIER 8		1					
			PIER 9		1					
			PIER 10		1					
			PIER 11		1					
			PIER 12		1					
			PIER 13		1					
			PIER 14		1					
			PIER 15		1					
			PIER 16		1					
			PIER 17		1					
			PIER 18		1					
			PIER 19		1					
			END BENT 20		1					
	0455 143 6	TEST PILES - PRESTRESSED CONCRETE, 30" SQ	END BENT 1	LF	110.0		2225		PHASE 1 [SEE NOTE 13 ON SHEET B1-50]	
			PIER 2		105.0					
			PIER 3		110.0					
			PIER 4		110.0					
			PIER 5		105.0					
			PIER 6		105.0					
			PIER 7		110.0					
			PIER 8		110.0					
			PIER 9		115.0					
			PIER 10		110.0					
			PIER 11		110.0				PHASE 1 [INDEX 455-031]	
			PIER 12		110.0					
			PIER 13		110.0					
			PIER 14		110.0					
			PIER 15		115.0				PHASE 1 [SEE NOTE 13 ON SHEET B1-50]	
			PIER 16		115.0					
			PIER 17		120.0					
			PIER 18		115.0					
			PIER 19		110.0					
			END BENT 20		120.0					
	0459 71	PILES, POLYETHYLENE SHEETING	END BENT 1	SY	32.9		158		PHASE 1	
			END BENT 20		51.6					
			END BENT 1		21.7				PHASE 2	
			END BENT 20		51.3					
	0530 3 3	RIPRAP - RUBBLE, BANK AND SHORE	SEAWALL A	TN	380.3		1360.1		SPECIAL [S.G. = 2.65]	
			SEAWALL B		732.3					
			END BENT 1		118.2				STANDARD	
			END BENT 20		129.3					
	0530 2 15	GABION, MATTRESS 1 FOOT AND GREATER THICKNESS	MSE WALL W-1A	SY	111.2		219			
			MSE WALL W-1C		107.7					
	0530 74	BEDDING STONE	SEAWALL A	TN	93.0		361.2			
			SEAWALL B		176.1					
			END BENT 1		44.0					
			END BENT 20		48.1					

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (6 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-6

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUBSTRUCTURE	0400 1 30	CONCRETE, CLASS I (SEAL)	FOOTING (PIERS 2 & 17)	CY	73.5		1003.8		PHASE 1 (2 PIERS)	
			FOOTING (PIERS 3-10 & 15-16)		414.9				PHASE 1 (10 PIERS)	
			FOOTING (PIERS 11-14)		177.1				PHASE 1 (4 PIERS)	
			FOOTING (PIERS 2 & 17)		50.6				PHASE 2 (2 PIERS)	
			FOOTING (PIERS 3-10 & 15-16)		205.5				PHASE 2 (10 PIERS)	
			FOOTING (PIERS 11-14)		82.2				PHASE 2 (4 PIERS)	
	0400 4 5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	END BENT 1	CY	24.84		225.6			
			PIER 2		6.54					
			PIER 3		6.95					
			PIER 4		3.54					
			PIER 5		3.54					
			PIER 6		3.54					
			PIER 7		3.53					
			PIER 8		3.53					
			PIER 9		3.53					
			PIER 10		3.53					
			PIER 11		3.25				PHASE 1	
			PIER 12		5.13					
			PIER 13		5.18					
			PIER 14		3.27					
			PIER 15		3.58					
			PIER 16		3.58					
			PIER 17		3.57					
			PIER 18		3.81					
			PIER 19		9.60					
			END BENT 20		28.35					
			END BENT 1		18.95					
			PIER 2		4.07					
			PIER 3		4.12					
			PIER 4		2.46					
			PIER 5		2.46					
			PIER 6		2.45					
			PIER 7		2.45					
			PIER 8		2.45					
			PIER 9		2.45					
			PIER 10		2.45					
			PIER 11		2.27				PHASE 2	
			PIER 12		2.23					
			PIER 13		2.26					
			PIER 14		2.28					
			PIER 15		2.47					
			PIER 16		2.47					
			PIER 17		2.47					
			PIER 18		2.65					
			PIER 19		7.56					
			END BENT 20		22.28					

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (7 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-7

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUBSTRUCTURE	0400 4 25	CONCRETE CLASS IV, MASS, SUBSTRUCTURE	FOOTING (PIERS 2 & 17)		401.89		10104.1		PHASE 1 (2 PIERS)	
			FOOTING (PIERS 3-10 & 15-16)		2259.07				PHASE 1 (10 PIERS)	
			FOOTING (PIERS 11-14)		954.50				PHASE 1 (4 PIERS)	
			FOOTING (PIER 18)		181.57				PHASE 1	
			FOOTING (PIER 19)		202.13					
			FOOTING (PIERS 2 & 17)		286.48				PHASE 2 (2 PIERS)	
			FOOTING (PIERS 3-10 & 15-16)		1168.89				PHASE 2 (10 PIERS)	
			FOOTING (PIERS 11-14)		493.30				PHASE 2 (4 PIERS)	
			FOOTING (PIER 18)		151.06				PHASE 2	
			FOOTING (PIER 19)		143.84					
			PIER 2 COLUMNS		17.26				PHASE 1	
			PIER 3 COLUMNS		25.82					
			PIER 4 COLUMNS		42.56					
			PIER 5 COLUMNS		59.11					
			PIER 6 COLUMNS		75.92					
			PIER 7 COLUMNS		92.92					
			PIER 8 COLUMNS		109.88					
			PIER 9 COLUMNS		126.84					
			PIER 10 COLUMNS		143.80					
			PIER 11 COLUMNS		160.65					
			PIER 12 COLUMNS		168.16					
			PIER 13 COLUMNS		164.59					
			PIER 14 COLUMNS		150.09					
			PIER 15 COLUMNS		126.90					
			PIER 16 COLUMNS		103.91					
			PIER 17 COLUMNS		80.91					
			PIER 18 COLUMNS		56.19					
			PIER 19 COLUMNS		33.27					
			PIER 2 COLUMN		8.82				PHASE 2	
			PIER 3 COLUMN		13.11					
			PIER 4 COLUMN		21.31					
			PIER 5 COLUMN		29.59					
			PIER 6 COLUMN		38.01					
			PIER 7 COLUMN		46.53					
			PIER 8 COLUMN		55.02					
			PIER 9 COLUMN		63.52					
			PIER 10 COLUMN		72.01					
			PIER 11 COLUMN		80.32					
			PIER 12 COLUMN		84.08					
			PIER 13 COLUMN		82.29					
			PIER 14 COLUMN		75.04					
			PIER 15 COLUMN		63.55					
			PIER 16 COLUMN		52.03					
			PIER 17 COLUMN		40.51					
			PIER 18 COLUMN		28.13					
			PIER 19 COLUMN		16.65					
			CAP (PIERS 2 & 3)		90.48				PHASE 1 (2 PIERS)	
			CAP (PIERS 4-10 & 15-18)		489.94				PHASE 1 (11 PIERS)	
			CAP (PIERS 11-14)		181.46				PHASE 1 (4 PIERS)	
			CAP (PIER 19)		47.54				PHASE 1	
			CAP (PIERS 2 & 3)		47.94				PHASE 2 (2 PIERS)	
			CAP (PIERS 4-10 & 15-18)		271.37				PHASE 2 (11 PIERS)	
			CAP (PIERS 11-14)		95.82				PHASE 2 (4 PIERS)	
			CAP (PIER 19)		27.51				PHASE 2	

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DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (8 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-8

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUBSTRUCTURE	0415 1 5	REINFORCING STEEL - BRIDGE SUBSTRUCTURE	END BENT 1	LB	4186		3055960		PHASE 1	
			PIER 2		87037					
			PIER 3		87752					
			PIER 4		104550					
			PIER 5		109874					
			PIER 6		106112					
			PIER 7		113637					
			PIER 8		117912					
			PIER 9		122195					
			PIER 10		126589					
			PIER 11		119806					
			PIER 12		122252					
			PIER 13		121295					
			PIER 14		117090					
			PIER 15		122319					
			PIER 16		116542					
			PIER 17		109261					
			PIER 18		89708					
			PIER 19		86934					
			END BENT 20		4772					
			END BENT 1		3239				PHASE 2	
			PIER 2		53449					
			PIER 3		46056					
			PIER 4		54368					
			PIER 5		57030					
			PIER 6		55148					
			PIER 7		58911					
			PIER 8		61048					
			PIER 9		63190					
			PIER 10		65387					
			PIER 11		62185					
			PIER 12		63126					
			PIER 13		62647					
			PIER 14		60827					
			PIER 15		63258					
			PIER 16		60363					
			PIER 17		63639					
			PIER 18		56412					
			PIER 19		51917					
			END BENT 20		3937					
	0524 2 2	CONCRETE SLOPE PAVEMENT, NON REINFORCED, 4"	END BENT 1	SY	13.0		49		PHASE 1	
			END BENT 20		14.9					
			END BENT 1		9.7				PHASE 2	
			END BENT 20		11.5					
APPROACH SLABS	0400 2 10	CONCRETE CLASS II. APPROACH SLABS	APPROACH SLAB 1	CY	41.99		166.6		PHASE 1	
			APPROACH SLAB 2		47.53					
			APPROACH SLAB 1		35.70				PHASE 2	
			APPROACH SLAB 2		41.37					
	0415 1 9	REINFORCING STEEL - APPROACH SLABS	APPROACH SLAB 1	LB	8360.3		32692		PHASE 1	
			APPROACH SLAB 2		9428.6					
			APPROACH SLAB 1		6900.3				PHASE 2	
			APPROACH SLAB 2		8002.4					

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (9 OF 16)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BQ1-9

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUPERSTRUCTURE	0400 4 4	CONCRETE CLASS IV, SUPERSTRUCTURE	UNIT 1	CY	274.30		6006.8			
			UNIT 2		393.53					
			UNIT 3		393.24					
			UNIT 4		391.58					
			UNIT 5		396.88				PHASE 1	
			UNIT 6		662.55					
			UNIT 7		388.78					
			UNIT 8		391.26					
			UNIT 9		321.98					
			UNIT 1		184.04					
			UNIT 2		250.90					
			UNIT 3		261.91					
			UNIT 4		262.05					
			UNIT 5		265.30				PHASE 2	
			UNIT 6		426.58					
			UNIT 7		251.62					
			UNIT 8		253.44					
			UNIT 9		236.88					
	0400 7 1	BRIDGE DECK GROOVING	APPROACH SLAB 1 NOSING	SY	5.6		14515			
			UNIT 1		726.4					
			UNIT 2		1051.6					
			UNIT 3		1050.4					
			UNIT 4		1054.8					
			UNIT 5		1054.8				PHASE 1	
			UNIT 6		1585.8					
			UNIT 7		1045.2					
			UNIT 8		1045.9					
			UNIT 9		860.6					
			APPROACH SLAB 2 NOSING		6.8					
			APPROACH SLAB 1 NOSING		4.2					
			UNIT 1		385.4					
			UNIT 2		523.7					
			UNIT 3		554.2					
			UNIT 4		559.5					
			UNIT 5		559.5				PHASE 2	
			UNIT 6		833.4					
			UNIT 7		531.0					
			UNIT 8		530.4					
			UNIT 9		540.5					
			APPROACH SLAB 2 NOSING		5.4					

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H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (10 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-10

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUPERSTRUCTURE	0400 9 1	BRIDGE DECK PLANING	APPROACH SLAB 1 NOSING	SY	5.6		14515			
			UNIT 1		726.4					
			UNIT 2		1051.6					
			UNIT 3		1050.4					
			UNIT 4		1054.8					
			UNIT 5		1054.8				PHASE 1	
			UNIT 6		1585.8					
			UNIT 7		1045.2					
			UNIT 8		1045.9					
			UNIT 9		860.6					
			APPROACH SLAB 2 NOSING		6.8					
			APPROACH SLAB 1 NOSING		4.2					
			UNIT 1		385.4					
			UNIT 2		523.7					
			UNIT 3		554.2					
			UNIT 4		559.5					
			UNIT 5		559.5				PHASE 2	
			UNIT 6		833.4					
			UNIT 7		531.0					
			UNIT 8		530.4					
			UNIT 9		540.5					
			APPROACH SLAB 2 NOSING		5.4					

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (11 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-11

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUPERSTRUCTURE	0400 147	COMPOSITE NEOPRENE PADS	END BENT 1	CF	1.77		131.4		PHASE 1	
			PIER 2		3.88					
			PIER 2 COLUMN 1		0.74					
			PIER 3		3.53					
			PIER 3 COLUMN 1		0.74					
			PIER 4		4.72					
			PIER 5		4.72					
			PIER 6		4.72					
			PIER 7		4.72					
			PIER 8		4.72					
			PIER 9		4.72					
			PIER 10		4.72					
			PIER 11		4.26					
			PIER 12		3.80					
			PIER 13		3.80					
			PIER 14		4.26					
			PIER 15		4.72					
			PIER 16		4.72					
			PIER 17		4.72					
			PIER 18		5.31					
			PIER 19		4.72					
			END BENT 20		1.77					
			END BENT 1		1.06				PHASE 2	
			PIER 2		2.12					
			PIER 2 COLUMN 3		0.74					
			PIER 3		1.77					
			PIER 3 COLUMN 3		0.74					
			PIER 4		2.36					
			PIER 5		2.36					
			PIER 6		2.36					
			PIER 7		2.36					
			PIER 8		2.36					
			PIER 9		2.36					
			PIER 10		2.36					
			PIER 11		2.13					
			PIER 12		1.90					
			PIER 13		1.90					
			PIER 14		2.13					
			PIER 15		2.36					
			PIER 16		2.36					
			PIER 17		2.36					
			PIER 18		2.95					
			PIER 19		3.18					
			END BENT 20		1.41					

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (12 OF 16)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BQ1-12

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUPERSTRUCTURE	0415 1 4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	UNIT 1	LB	52994		1150097		PHASE 1	
			UNIT 2		71286					
			UNIT 3		71431					
			UNIT 4		72736					
			UNIT 5		72736					
			UNIT 6		130236					
			UNIT 7		70983					
			UNIT 8		70996					
			UNIT 9		62121					
			UNIT 1		38386				PHASE 2	
			UNIT 2		50239					
			UNIT 3		49819					
			UNIT 4		50392					
			UNIT 5		50392					
			UNIT 6		85842					
			UNIT 7		50182					
			UNIT 8		49634					
			UNIT 9		49693					
	0450 2 36	PRESTRESSED BEAMS: FLORIDA I-BEAM 36''	SPAN 1	LF	446.9		1555		PHASE 1	
			SPAN 19		465.2					
			SPAN 1		270.6				PHASE 2	
			SPAN 19		372.1					
	0450 2 63	PRESTRESSED BEAMS: FLORIDA I-BEAM 63''	SPAN 2	LF	825.2		1234		PHASE 1	
			SPAN 2		408.9				PHASE 2	
	0450 2 84	PRESTRESSED BEAMS: FLORIDA I-BEAM 84''	SPAN 3	LF	645.7		15971			
			SPAN 4		645.7					
			SPAN 5		652.3					
			SPAN 6		659.8					
			SPAN 7		659.8					
			SPAN 8		659.8					
			SPAN 9		659.8					
			SPAN 10		659.8					
			SPAN 11		658.1				PHASE 1	
			SPAN 12		656.7					
			SPAN 13		659.2					
			SPAN 14		645.5					
			SPAN 15		645.5					
			SPAN 16		645.5					
			SPAN 17		645.1					
			SPAN 18		805.4					
			SPAN 3		319.8					
			SPAN 4		319.8					
			SPAN 5		325.4					
			SPAN 6		329.9					
			SPAN 7		329.9					
			SPAN 8		329.9					
			SPAN 9		329.9					
			SPAN 10		329.9					
			SPAN 11		329.1				PHASE 2	
			SPAN 12		328.4					
			SPAN 13		328.3					
			SPAN 14		320.7					
			SPAN 15		320.7					
			SPAN 16		320.7					
			SPAN 17		321.3					
			SPAN 18		483.2					

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (13 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-13

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE NO. 130168

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
SUPERSTRUCTURE	0458 1 11	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION, F&I POURED JOINT WITH BACKER ROD	END BENT 1	LF	36.7		280			
			PIER 3		41.7				PHASE 1	
			PIER 18		40.8					
			END BENT 20		42.3					
			END BENT 1		30.7					
			PIER 3		25.6				PHASE 2	
			PIER 18		26.5					
			END BENT 20		36.1					
	0458 1 12	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION, F&I STRIP SEAL	PIER 5	LF	39.7		395			
			PIER 7		39.7					
			PIER 9		39.7				PHASE 1	
			PIER 11		39.7					
			PIER 14		39.7					
			PIER 16		39.7					
			PIER 5		26.2					
			PIER 7		26.2					
			PIER 9		26.2				PHASE 2	
			PIER 11		26.2					
			PIER 14		26.2					
			PIER 16		26.2					
RAILING/ BARRIERS	0515 2 720	PEDESTRIAN/BICYCLE RAILING, ALUMINUM, CUSTOM INFILL PANELS	APPROACH SLAB 1	LF	30.0		5998			
			BRIDGE		2946.5				PHASE 1. TYPE 1 TO BE MODIFIED TO INCLUDE WAVE PATTERN.	
			APPROACH SLAB 2		30.1					
			APPROACH SLAB 1		30.0					
			BRIDGE		2930.9				PHASE 2. TYPE 1 TO BE MODIFIED TO INCLUDE WAVE PATTERN.	
			APPROACH SLAB 2		30.1					
	0521 5 13	CONCRETE TRAFFIC RAILING-BRIDGE, 36" SINGLE-SLOPE	APPROACH SLAB 2 & BRIDGE	LF	2861.6		5985		PHASE 1	
			APPROACH SLABS & BRIDGE		2987.7				PHASE 2	
			APPROACH SLAB 1 & BRIDGE		136.1				PHASE 3	
	0630 2 16	CONDUIT, FURNISH & INSTALL, EMBEDDED CONCRETE BARRIERS AND TRAFFIC RAILINGS	APPROACH SLAB 2 & BRIDGE	LF	8584.9		20944		PHASE 1	
			APPROACH SLABS & BRIDGE		8963.2				PHASE 2	
			APPROACH SLAB 1 & BRIDGE		408.5				PHASE 3	
			APPROACH SLABS & BRIDGE		2987.7				PHASE 2. ONE 1.50" DIA. CONDUIT EMBEDDED IN BRIDGE DECK & APP. SLABS	

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DRAWN BY: DMH
CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (14 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-14

SUMMARY OF WALLS

PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		TOTAL QUANTITY		LOCATION					DESIGN NOTES	CONSTRUCTION REMARKS
			P	F	P	F	WALL NO.	ALIGNMENT	BEGIN STA.	END STA.	SIDE		
0400 0 11	CONCRETE CLASS NS, GRAVITY WALL INDEX 400-011	CY	7.28		41.3		GW-1	SR 684	208+39.32	208+63.85	RT.	PHASE 2	
			9.48				GW-2	SR 684	208+78.48	209+03.03	RT.	PHASE 2	
			12.25				GW-3	125TH ST. W.	30+45.15	30+77.00	LT.		
			12.34				GW-4	125TH ST. W.	30+45.45	30+77.00	RT.		
0400 4 8	CONCRETE CLASS IV, BULKHEAD	CY	20.77		148.8		SEAWALL A	SR 684	211+26.26	211+68.93	LT. & RT.	PHASE 1	
			27.93				SEAWALL A	SR 684	236+93.09	238+62.76	LT. & RT.	PHASE 2	
			46.91				SEAWALL B	SR 684	237+53.62	238+63.91	LT. & RT.	PHASE 1	
			26.90				SEAWALL B	SR 684	236+93.09	237+53.62	LT. & RT.	PHASE 2	
			11.49				SPW-1	SR 684	208+05.09	208+62.84	RT.	PHASE 2	
			14.79				SPW-2	SR 684	208+77.38	209+53.00	RT.	PHASE 2	
0400 4 11	CONCRETE CLASS IV, RETAINING WALLS	CY	12.21		239.7		CIP-1	SR 684	208+62.82	208+63.93	RT.	PHASE 2	
			12.42				CIP-2	SR 684	208+77.27	208+78.48	RT.	PHASE 2	
			62.68				NW-1 [SEG. 1]	SR 684	205+69.99	206+27.86	RT.	PHASE 2	
			40.52				NW-1 [SEG. 2]	SR 684	206+27.85	206+17.33	RT.	PHASE 2	
			111.88				NW-1 [SEG. 3]	SR 684	206+16.29	207+20.00	RT.	PHASE 2	
0415 1 3	REINFORCING STEEL - RETAINING WALLS	LB	2125.0		32656		CIP-1	SR 684	208+62.82	208+63.93	RT.	PHASE 2	
			2140.8				CIP-2	SR 684	208+77.27	208+78.48	RT.	PHASE 2	
			8089.0				NW-1 [SEG. 1]	SR 684	205+69.99	206+27.86	RT.	PHASE 2	
			5492.0				NW-1 [SEG. 2]	SR 684	206+27.85	206+17.33	RT.	PHASE 2	
			14809.0				NW-1 [SEG. 3]	SR 684	206+16.29	207+20.00	RT.	PHASE 2	
0415 1 8	REINFORCING STEEL - BULKHEAD	LB	882.0		2003		SPW-1	SR 684	208+05.09	208+62.84	RT.	PHASE 2	
			1121.0				SPW-2	SR 684	208+77.38	209+53.00	RT.	PHASE 2	
0415 10 5	FIBER REINFORCED POLYMER BARS, #5 BAR	LF	1394.1		7974		SEAWALL A	SR 684	211+26.26	211+68.93	LT. & RT.	PHASE 1	
			1842.2				SEAWALL A	SR 684	211+51.87	211+68.93	LT. & RT.	PHASE 2	
			3045.4				SEAWALL B	SR 684	237+53.62	238+63.91	LT. & RT.	PHASE 1	
			1692.2				SEAWALL B	SR 684	236+93.09	237+53.62	LT. & RT.	PHASE 2	
0455 133 2	SHEET PILING STEEL, TEMPORARY-CRITICAL	SF	2028.9		12773		TSPW-1	SR 684	210+59.99	211+15.59	RT.	PHASE 1	
			9691.9				TSPW-2	SR 684	237+12.72	239+59.77	LT.	PHASE 1	
			1052.2				TSPW-3	SR 684	240+15.75	240+72.75	RT.	PHASE 1	
0455 133 3	SHEET PILING STEEL, F&I PERMANENT	SF	1876.9		20613		SEAWALL A	SR 684	211+26.26	211+68.93	LT. & RT.	PHASE 1	
			2809.9				SEAWALL A	SR 684	236+93.09	238+62.76	LT. & RT.	PHASE 2	
			8630.4				SEAWALL B	SR 684	237+53.62	238+63.91	LT. & RT.	PHASE 1	
			4615.6				SEAWALL B	SR 684	236+93.09	237+53.62	LT. & RT.	PHASE 2	
			1135.1				SPW-1	SR 684	208+05.09	208+62.84	RT.	PHASE 2	
			1545.4				SPW-2	SR 684	208+77.38	209+53.00	RT.	PHASE 2	
0455 133 208	SOLDIER PILE WALL, PERMANENT, WITH CAST-IN-PLACE CONCRETE FASCIA	SF	1368.8		1369		SP-1	SR 684	241+83.84	243+63.00	RT.	PHASE 2	
0515 2 720	PEDESTRIAN/BICYCLE RAILING, ALUMINUM, CUSTOM INFILL PANELS	LF	236.5		2197		MSE WALL W-1A	SR 684	208+77.80	211+10.66	RT.	PHASE 2	
			439.4				MSE WALL W-1C	SR 684	206+65.00	211+10.85	LT.	PHASE 1	
			256.9				MSE WALL W-2A	SR 684	240+26.75	242+83.00	LT.	PHASE 1	
			293.7				MSE WALL W-2C	SR 684	240+26.75	243+20.00	RT.	PHASE 2	
			82.4				MSE WALL W-3	SR 684	207+84.99	208+65.96	RT.	PHASE 2	
			146.5				SP-1	SR 684	241+83.84	243+23.51	RT.	PHASE 2	
			62.4				SPW-1	SR 684	208+05.09	208+62.84	RT.	PHASE 2	TYPE 1 TO BE MODIFIED TO INCLUDE WAVE PATTERN
			82.6				SPW-2	SR 684	208+77.38	209+53.00	RT.	PHASE 2	
			27.7				GW-1	SR 684	208+39.32	208+63.85	RT.	PHASE 2	
			28.4				GW-2	SR 684	208+78.48	209+03.03	RT.	PHASE 2	
			83.0				SEAWALL A	SR 684	211+26.26	211+68.93	LT. & RT.	PHASE 1	
			125.7				SEAWALL A	SR 684	211+51.87	211+68.93	RT.	PHASE 2	
			213.1				SEAWALL B	SR 684	236+93.09	238+63.91	LT. & RT.	PHASE 1	
			119.0				SEAWALL B	SR 684	236+93.09	237+53.62	RT.	PHASE 2	

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCV
CHECKED BY: DMH
DESIGNED BY: LCV
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (15 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-15

SUMMARY OF WALLS

PAY ITEM NUMBER	PAY ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY		TOTAL QUANTITY		LOCATION					DESIGN NOTES	CONSTRUCTION REMARKS
			P	F	P	F	WALL NO.	ALIGNMENT	BEGIN STA.	END STA.	SIDE		
0521 6 34	CONCRETE PARAPET, RETAINING WALL SYSTEM MOUNTED W/ SIDEWALK, CURB	LF	236.5		1457		MSE WALL W-1A	SR 684	208+77.80	211+10.66	RT.	PHASE 2	
			439.4				MSE WALL W-1C	SR 684	206+65.00	211+10.85	LT.	PHASE 1	
			256.9				MSE WALL W-2A	SR 684	240+26.75	242+83.00	LT.	PHASE 1	
			293.7				MSE WALL W-2C	SR 684	240+26.75	243+20.00	RT.	PHASE 2	
			82.4				MSE WALL W-3	SR 684	207+84.99	208+65.96	RT.	PHASE 2	
			148.2				SP-1	SR 684	241+83.84	243+63.00	RT.	PHASE 2	
0548 12	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	SF	3002.0		19440		MSE WALL W-1A	SR 684	208+77.80	211+10.66	RT.	PHASE 2	
			617.9				MSE WALL W-1B	SR 684	211+04.55	211+04.55	LT. & RT.	PHASE 1	
			327.9				MSE WALL W-1B	SR 684	211+04.55	211+04.55	RT.	PHASE 2	
			4651.8				MSE WALL W-1C	SR 684	206+65.00	211+10.85	LT.	PHASE 1	
			4421.3				MSE WALL W-2A	SR 684	240+26.75	242+83.00	LT.	PHASE 1	
			748.2				MSE WALL W-2B	SR 684	240+26.75	240+26.75	LT. & RT.	PHASE 1	
			579.0				MSE WALL W-2B	SR 684	240+26.75	240+26.75	RT.	PHASE 2	
			4748.6				MSE WALL W-2C	SR 684	240+26.75	243+20.00	RT.	PHASE 2	
			343.3				MSE WALL W-3	SR 684	207+84.99	208+65.96	RT.	PHASE 2	
0548 13	RETAINING WALL SYSTEM, TEMPORARY, EXCLUDING BARRIER	SF	1041.1		4653		TW-1	SR 684	209+00.00	211+10.24	RT.	PHASE 1	
			3611.7				TW-2	SR 684	240+27.25	244+50.00	RT.	PHASE 1	

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES (16 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BQ1-16

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BRIDGE NO. 130168

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BRIDGE NO. 130168 (CONTINUED)

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BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
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DRAWN BY: LCY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: INDEX OF SHEETS (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-5

BRIDGE NO. 130168 (CONTINUED)

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EXISTING BRIDGE PLANS

BX1-1 - BX1-295 EXISTING BRIDGE NO. 130006 PLANS

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: INDEX OF SHEETS (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B-6

GENERAL NOTES

DESIGN SPECIFICATIONS:

FDOT STRUCTURES MANUAL DATED JANUARY 2023.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.

FDOT DESIGN MANUAL DATED JANUARY 2023 AND SUBSEQUENT ROADWAY DESIGN BULLETINS 23-01 & 23-02.

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2025-26 STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND FY 2025-26 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

VERTICAL DATUM:

NAVD 88

DESIGN METHODOLOGY:

1. LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD USING STRENGTH, SERVICE AND FATIGUE LIMIT STATES.
2. OPERATIONAL IMPORTANCE FACTOR = 1.0.

STRUCTURAL ANALYSIS PROGRAM:

LEAP BRIDGE CONCRETE - VERSION 21.02.00.38
FB-MULTIPIER - VERSION 5.9.0
FDOT LRFDBeam VERSION 6.1

DESIGN LOADING:

1. LIVE LOADS: HL-93 WITH DYNAMIC LOAD ALLOWANCE.
   75 PSF PEDESTRIAN LOAD.

2. DEAD LOADS:

COMPACTED SOIL:	115 PCF
36" SINGLE-SLOPE TRAFFIC RAILING:	430 PLF
BRIDGE PICKET RAILING (ALUMINUM):	15 PLF
STAY-IN-PLACE FORMS:	20 PSF
REINFORCED CONCRETE:	150 PCF
FUTURE WEARING SURFACE:	0 PSF

THE 8½" DECK THICKNESS INCLUDES A ½" SACRIFICIAL THICKNESS INCLUDED IN THE DEAD LOAD OF THE SLAB AND OMITTED FROM THE SECTION PROPERTIES USED FOR DESIGN.

3. CONSTRUCTION LOADS:

FINISHING MACHINE LOAD: 13 KIPS

FINISHING MACHINE WHEEL LOCATION BEYOND THE EDGE OF DECK OVERHANG: 6 INCHES

CONSTRUCTION LIVE LOAD: 20 PSF EXTENDED OVER THE ENTIRE BRIDGE WIDTH AND 50 FEET IN LONGITUDINAL LENGTH CENTERED ON THE FINISHING MACHINE.

REMOVABLE DECK CANTILEVER TIMBER FORMS WITH OVERHANG BRACKETS: 15 PSF

LIVE LOAD AT OR NEAR THE OUTSIDE EDGE OF DECK DURING DECK CASTING: 75 PLF APPLIED AS A MOVING LOAD OVER A LENGTH OF 20 FEET.

DESIGN LOADING, CONT'D.:

CONSTRUCTION INACTIVE DESIGN WIND SPEED: 90 MPH

VELOCITY PRESSURE EXPOSURE COEFFICIENT (kz): 1.34

CONSTRUCTION ACTIVE DESIGN WIND SPEED: 30 MPH

4. VEHICLE COLLISION FORCE: PIER 18 & 19 COLUMNS HAVE BEEN DESIGNED TO WITHSTAND THE 600 KIP VEHICULAR COLLISION FORCE PER LRFD.

5. UTILITIES: NO ALLOWANCE FOR UTILITY LOADS HAS BEEN INCLUDED IN THE DESIGN.

6. VESSEL IMPACT:

DISTANCE FROM CHANNEL CL.	≤ 85 FT.	86 FT. TO 250 FT.	251 FT. TO 415 FT.	416 FT. TO 580 FT.	> 580 FT.
VESSEL IMPACT LOAD (KIP)	2120	1600	1120	550	100

7. WIND LOAD: 150 MPH (3-SECOND GUST WIND SPEED)

8. UNIFORM TEMPERATURE:

STRUCTURAL MATERIAL	TEMPERATURE (°F)				COEFFICIENT OF THERMAL EXPANSION
	MEAN	HIGH	LOW	RANGE	
CONCRETE DECK ON CONCRETE BEAMS	+70	+105	+35	70	0.000006 PER °F

ENVIRONMENT:

BRIDGE NO.	SUPERSTRUCTURE	SUBSTRUCTURE	
		CONCRETE	STEEL
130168	EXTREMELY AGGRESSIVE	EXTREMELY AGGRESSIVE	EXTREMELY AGGRESSIVE
		WATER: RESISTIVITY = 24 OHM-CM, CHLORIDES = 30,000 PPM & SULFATES = 2700 PPM	

MATERIALS:

1. CONCRETE:

ALL CONCRETE SHALL CONFORM TO SPECIFICATIONS SECTION 346.

CONCRETE CLASS	MIN. 28-DAY COMPRESSIVE STRENGTH (PSI)	LOCATION OF CONCRETE IN STRUCTURE
IV	5500	TRAFFIC RAILING
IV	5500	BRIDGE DECK
II (BRIDGE DECK)	4500	APPROACH SLAB
IV	5500	C.I.P. SUBSTRUCTURE (UNO)
IV WITH HIGHLY REACTIVE POZZOLANS	5500	C.I.P. COLUMNS AND CAPS WHOSE PORTION IS BELOW EL. 13.25
III (SEAL)	3000	FOOTING SEAL SLAB
V (SPECIAL)	6000	PRESTRESSED CONCRETE PILES
VI	8500	HIGH-STRENGTH CONCRETE PILES
VII	10000	PRESTRESSED CONCRETE BEAMS

MATERIAL, CONT'D.:

2. CONCRETE COVER:

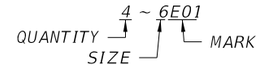
CONCRETE COVER DIMENSIONS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE SPECIFICATION SECTION 415 FOR ALLOWABLE TOLERANCES. ALL DIMENSIONS PERTAINING TO THE LOCATION OF REINFORCING STEEL ARE TO THE CENTERLINE OF BAR EXCEPT WHERE CLEAR DIMENSION IS NOTED TO FACE OF CONCRETE.

CAST-IN-PLACE SUPERSTRUCTURE (TOP OF DECK)	2½"
CAST-IN-PLACE SUPERSTRUCTURE (EXCEPT TOP OF DECK)	2"
PRECAST PRESTRESSED BEAMS (EXCEPT TOP SURFACE)	2"
TOP SURFACE OF BEAM TOP FLANGE	¾"
CAST-IN-PLACE SUBSTRUCTURE (CAST AGAINST EARTH AND SURFACES IN CONTACT WITH WATER)	4½"
CAST-IN-PLACE SUBSTRUCTURE (FORMED SURFACES)	4"
CAST-IN-PLACE SUBSTRUCTURE (TOP OF BEAM PEDESTALS AND CHEEKWALLS)	2"

3. REINFORCING STEEL:

A. PROVIDE GRADE 60 CARBON STEEL PER SPECIFICATION SECTION 931.

B. TYPICAL REINFORCING BARS ARE DESIGNATED AS:



CONCRETE SURFACE FINISH:

SEE SHEETS B-9 & B-10 FOR SURFACE FINISH DETAILS.

PLAN DIMENSIONS:

ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET EITHER HORIZONTALLY OR VERTICALLY UNLESS NOTED OTHERWISE.

UTILITIES:

FOR PLAN LOCATION OF EXISTING UTILITIES, SEE PLAN AND ELEVATION AND FOUNDATION LAYOUT SHEETS. LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. FOR DISPOSITION OF UTILITIES, SEE THE UTILITY ADJUSTMENT SHEETS IN THE ROADWAY PLANS.

BRIDGE NAME AND NUMBER:

PLACE THE FOLLOWING BRIDGE NAME AND NUMBER ON THE TRAFFIC RAILINGS IN ACCORDANCE WITH THE TRAFFIC RAILING DESIGN STANDARDS:

BRIDGE NO.	BRIDGE NAME
130168	SR 684 (CORTEZ RD.) OVER SARASOTA BAY

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: GENERAL NOTES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B-7

STAY-IN-PLACE DECK FORMS:

DESIGN INCLUDES ALLOWANCE FOR 20 PSF OVER THE PROJECTED PLAN AREA OF THE METAL FORMS FOR THE UNIT WEIGHT OF THE METAL FORMS AND THE CONCRETE REQUIRED TO FILL THE FORM FLUTES. STAY-IN-PLACE FORMS ARE NOT ALLOWED AT DECK CANTILEVERS.

JOINTS IN CONCRETE:

CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.

SCREEDING DECK SLABS:

SCREED THE RIDING SURFACE OF THE BRIDGE DECK AND APPROACH SLABS TO ACHIEVE THE FINISH GRADE ELEVATIONS SHOWN IN THE PLANS. ACCOUNT FOR THEORETICAL DEFLECTIONS DUE TO SELF WEIGHT, DECK CASTING SEQUENCE, DECK FORM SYSTEMS, CONSTRUCTION LOADS, OVERLAYS AND TEMPORARY SHORING, ETC. AS REQUIRED.

EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS:

1. THE EXISTING BRIDGE HAS NOT BEEN EVALUATED FOR CONSTRUCTION LOADS.
2. DIMENSION VERIFICATION: UNLESS OTHERWISE NOTED, THE DIMENSIONS, ELEVATIONS AND INTERSECTING ANGLES SHOWN ARE BASED ON THE INFORMATION AS DETAILED IN THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGE AND MAY NOT REPRESENT AS-BUILT CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THIS DATA BEFORE BEGINNING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

BRIDGE OPERATIONS AND MAINTENANCE:

COMPLY WITH TECHNICAL SPECIAL PROVISION T465 FOR EXISTING BRIDGE OPERATIONS AND MAINTENANCE REQUIREMENTS.

TRAFFIC CONTROL PLANS:

SEE THE ROADWAY PLANS AND INDEX 102-600.

MARINE TRAFFIC

MAINTENANCE OF MARINE TRAFFIC SHALL COMPLY WITH THE PROVISIONS OF THE U.S. COAST GUARD PERMIT. SEE THE ROADWAY PLANS FOR ADDITIONAL NOTES.

PHASING OF WORK:

1. WORK PHASING AND PROGRESSION OF THE WORK SHALL CONFORM TO THE TRAFFIC CONTROL PLANS LOCATED IN THE ROADWAY PLANS AND NOTES ON THE CONSTRUCTION SEQUENCE DRAWINGS. FULL WIDTH CONSTRUCTION IN LIEU OF THE PHASED BRIDGE CONSTRUCTION SHOWN WILL NOT BE PERMITTED.
2. REINFORCING STEEL LEFT EXPOSED PRIOR TO CONCRETE PLACEMENT SHALL BE TESTED FOR CHLORIDES USING SOLUBLE SALT TEST KITS IN ACCORDANCE WITH SPECIFICATION SECTION 560-2.4. A MINIMUM OF 10% OF THE REINFORCING WITHIN EACH POUR SHALL BE TESTED. CHLORIDE LEVELS MUST MEET THE ACCEPTANCE CRITERIA IN SPECIFICATIONS TABLE 560-1.

NOISE:

COMPLY WITH ALL LOCAL NOISE ORDINANCES.

SALVAGEABLE BASCULE BRIDGE ITEMS (FDOT):

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) WILL TAKE OWNERSHIP OF THE FOLLOWING ITEMS FROM THE EXISTING BASCULE BRIDGE TO BE REMOVED:

TWO SPAN LOCK HYDRAULIC POWER UNITS, TWO TRAFFIC LIGHT SIGNAL ASSEMBLIES, CONTROL CONSOLE WITH PUSH BUTTONS AND INDICATOR LIGHT ASSEMBLIES & AUTOMATIC TRANSFER SWITCH.

A WALK THROUGH 45 DAYS PRIOR TO DEMOLISHING THE EXISTING BRIDGE IS REQUIRED WITH A REPRESENTATIVE FROM THE FDOT DISTRICT 1 STRUCTURES MAINTENANCE OFFICE TO IDENTIFY THE ELEMENTS TO BE SLAVAGED. THE CONTRACTOR WILL TEMPORARILY STOCKPILE THE MATERIAL. FDOT WILL BE RESPONSIBLE FOR TRANSPORTING THE MATERIAL FROM THE STOCKPILE LOCATION.

SALVAGEABLE BASCULE BRIDGE ITEMS (CORTEZ CULTURAL CENTER):

CORTEZ CULTURAL CENTER WILL TAKE OWNERSHIP OF THE FOLLOWING ITEMS FROM THE EXISTING BASCULE BRIDGE:

SIGN PANELS ON AND IN ADVANCE OF THE EXISTING BRIDGE AS NOTED IN THE SIGNING & PAVEMENT MARKING PLANS, PENDANT LIGHT LOCATED AT THE END OF EACH FLARED PORTION OF THE EXISTING BRDIGE FENDER SYSTEM, FOUR COMPLETE TRAFFIC GATE ASSEMPLIES INCLUDING THE TRAFFIC GATE ARMS, TENDER HOUSE ELECTRONIC CONTROL PANEL, TENDER HOUSE PHONE, WEATHER VANE LOCATED ON TOP OF THE TENDER HOUSE, TENDER HOUSE CHAIR, TENDER HOUSE LOG BOOOKS, ANY PHOTOGRAPHS LOCATED INSIDE OF THE TENDER HOUSE, LIFE RING LOCATED IN THE LOWER PORTION OF THE TENDER HOUSE, TENDER HOUSE HATCH TO THE LOWER LEVEL, LADDER RUNGS TO THE LOWER LEVEL AND THE BLUE FENCE AROUND THE TENDER HOUSE HATCH.

A WALK THROUGH 45 DAYS PRIOR TO DEMOLISHING THE EXISTING BRIDGE IS REQUIRED WITH A REPRESENTATIVE FROM CORTEZ CULTURAL CENTER TO CONFIRM THE ITEMS NOTED AND TO COORDINATE THE CORTEZ CULTURAL CENTER'S COLLECTION OF THE ITEMS NOTED. ITEMS NOTED ARE TO BE DELIVERED BY THE CONTRACTOR TO THE ENGINEER'S FIELD OFFICE.

EXISTING PLAQUES:

EXISTING PLAQUES LOCATED AT THE SOUTHWEST AND NORTHEAST QUADRANTS OF THE EXISTING BRIDGE SHALL BE SALVAGED AND DELIVERED TO THE ENGINEER. THE ENGINEER SHALL PROVIDE ONE PLAQUE TO THE CORTEZ CULTURAL CENTER AND THE OTHER PLAQUE TO THE FLORIDA MARITIME MUSEUM.

HAZARDOUS MATERIALS:

SURVEYS OF THE EXISTING BRIDGE INDICATED THE PRESENCE OF THE FOLLOWING VERIFIED AND ASSUMED HAZARDOUS MATERIALS:

a) GRAY LEAD BASED PAINT IS PRESENT ON THE FLOOR COATING IN THE MECHANICAL ROOM (SAMPLE NO. PC-2).
b) GRAY LEAD BASED POINT IS PRESENT ON THE HANDRAIL COATING AROUND THE ACCESS HATCH LOCATED IN THE TENDERHOUSE (SAMPLE NO. PC-8).

REVIEW TIERRA'S METALS-BASED COATINGS SAMPLING REPORT FOR ADDITIONAL DETAILS.

COORDINATE WITH THE ENGINEER, DISTRICT CONTAMINATION IMPACT COORDINATOR AND CONTAMINATION ASSESSMENT & REMEDIATION CONTRACTOR WHEN WORKING IN THESE AREAS PREVIOUSLY IDENTIFIED AS HAVING THE PRESENCE OF VERIFIED OR ASSUMED HAZARDOUS MATERIALS.

PAY ITEM NOTES:

1. PAY ITEM NO. 110-3 INCLUDES THE COMPLETE REMOVAL OF THE EXISTING BRIDGE, APPROACH SLABS AND FENDER SYSTEM, PARTIAL REMOVAL OF THE EXISTING SEAWALL AND SALVAGING THE ITEMS NOTED ABOVE. ALL EXISTING BRIDGE AND FENDER SYSTEM PILES SHALL BE COMPLETELY REMOVED. THE COST TO FURNISH AND INSTALL TEMPORARY COFFERDAMS FOR COMPLETE BASCULE PIER REMOVAL SHALL BE INCLUDED IN PAY ITEM NO. 110-3.
2. PAY ITEM NO. 103-1-26 INCLUDES THE COMPLETE INSTALLATION AND THE COMPLETE REMOVAL OF THE TEMPORARY WORK STRUCTURE. FOUNDATIONS FOR THE TEMPORARY WORK STRUCTURE SHALL BE COMPLETELY REMOVED. THE LOW MEMBER FOR THE TEMPORARY WORK STRUCTURE SHALL BE AT OR ABOVE EL. 4.25 WITHIN THE LIMITS OF SARASOTA BAY.

ABBREVIATIONS:

C.J.	DENOTES "CONSTRUCTION JOINT"
DMHW	DENOTES "DESIGN MEAN HIGH WATER"
E	DENOTES "EXPANSION BEARING"
E.F.	DENOTES "EACH FACE"
E.J.	DENOTES "EXPANSION JOINT"
E.S.	DENOTES "EACH SIDE"
EPS	DENOTES "EXPANDED POLYSTYRENE"
FFBW	DENOTES "FRONT FACE OF BACKWALL"
FFNW	DENOTES "FRONT FACE OF NOISE WALL"
FFRW	DENOTES "FRONT FACE OF RETAINING WALL"
F.F.	DENOTES "FAR FACE"
GCL	DENOTES "GREEN CENTER CHANNEL LIGHT"
MHC	DENOTES "MINIMUM HORIZONTAL CLEARANCE"
MVC	DENOTES "MINIMUM VERTICAL CLEARANCE"
N.F.	DENOTES "NEAR FACE"
RFL	DENOTES "RED PIER/FENDER LIGHT"
SSL	DENOTES "SOVEREIGN SUBMERGED LAND"
T.C.	DENOTES "TANGENT TO CURVE"
UNO	DENOTES "UNLESS NOTED OTHERWISE"
PGL	DENOTES "PROFILE GRADE LINE"
W.P.	DENOTES "WORKING POINT"

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: GENERAL NOTES (2 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B-8

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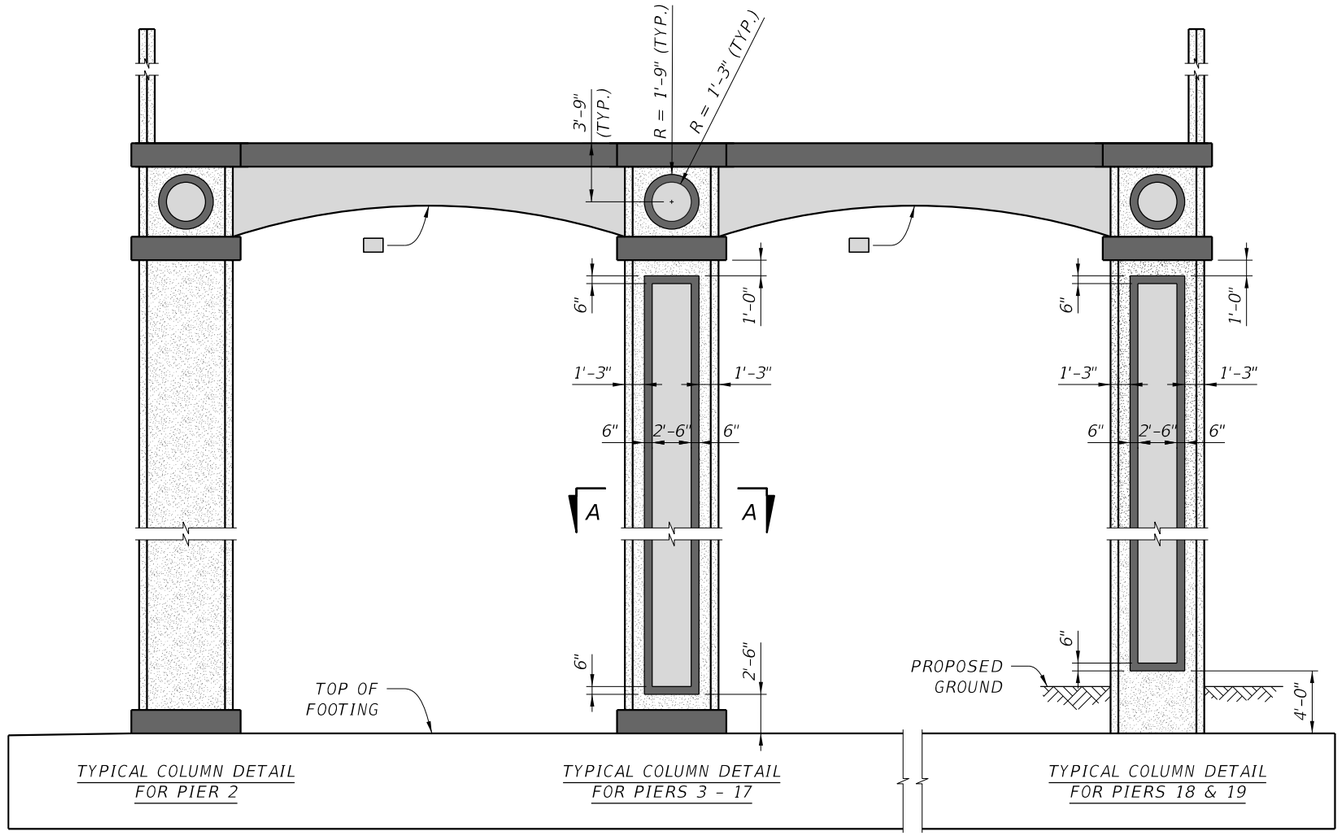
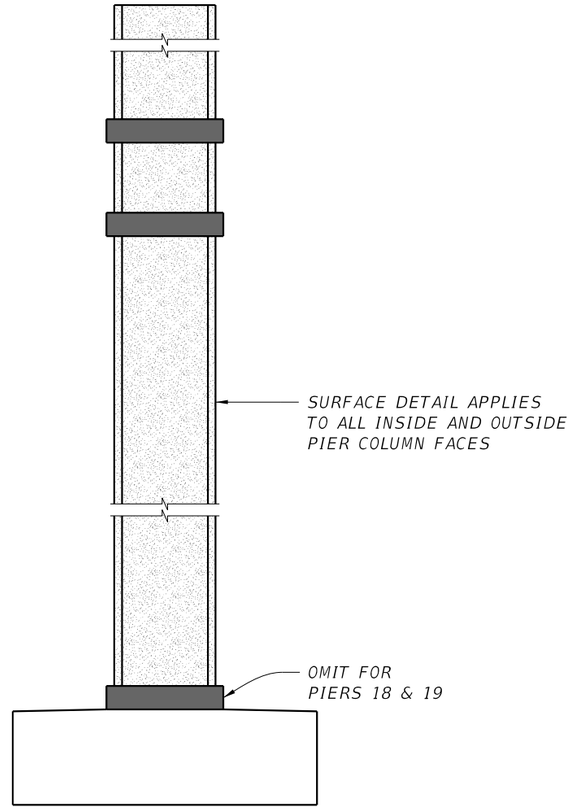
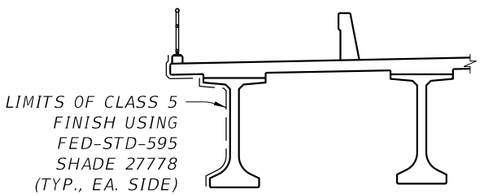


PIER ELEVATION

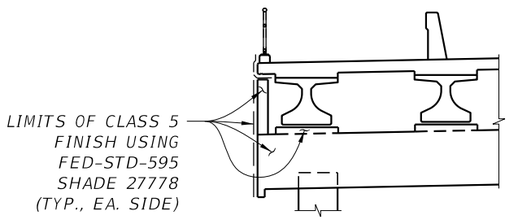
(TREATMENT APPLIED TO NEAR SIDE AND FAR SIDE FACES)



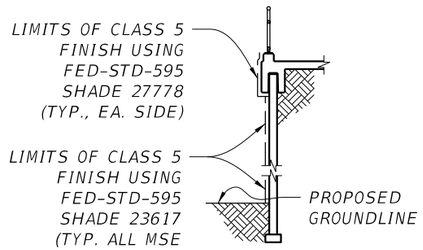
PIER SIDE VIEW



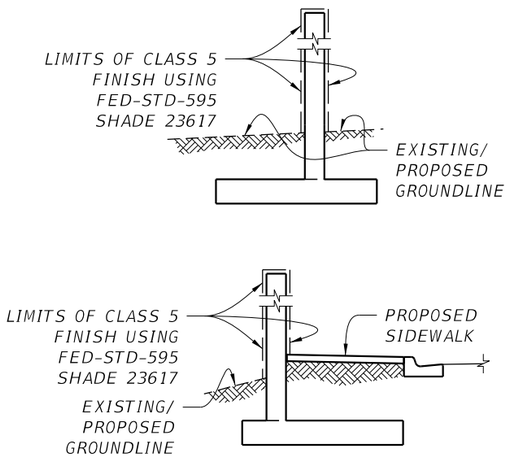
BRIDGE TYPICAL SECTION



END BENT



MSE WALLS



NOISE WALL

NOTES:

1. CLASS 5 SURFACE FINISH TO BE APPLIED AS SHOWN. NO SURFACE FINISH IS TO BE APPLIED TO THE TOP OF THE PIER CAP, TOP OF THE END BENT CAP, TOP OF THE PEDESTALS OR ANY SURFACE OF THE FOOTING.
2. FOR SECTION A-A, SEE SHEET B-10.

LEGEND:

- SMOOTH SURFACE WITH CLASS 5 FINISH USING FED-STD-595, SHADE 27780
- SMOOTH SURFACE WITH CLASS 5 FINISH USING FED-STD-595, SHADE 27778
- EXTRUDED SHELL SURFACE TEXTURE WITH CLASS 5 FINISH USING FED-STD-595, SHADE 33531

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

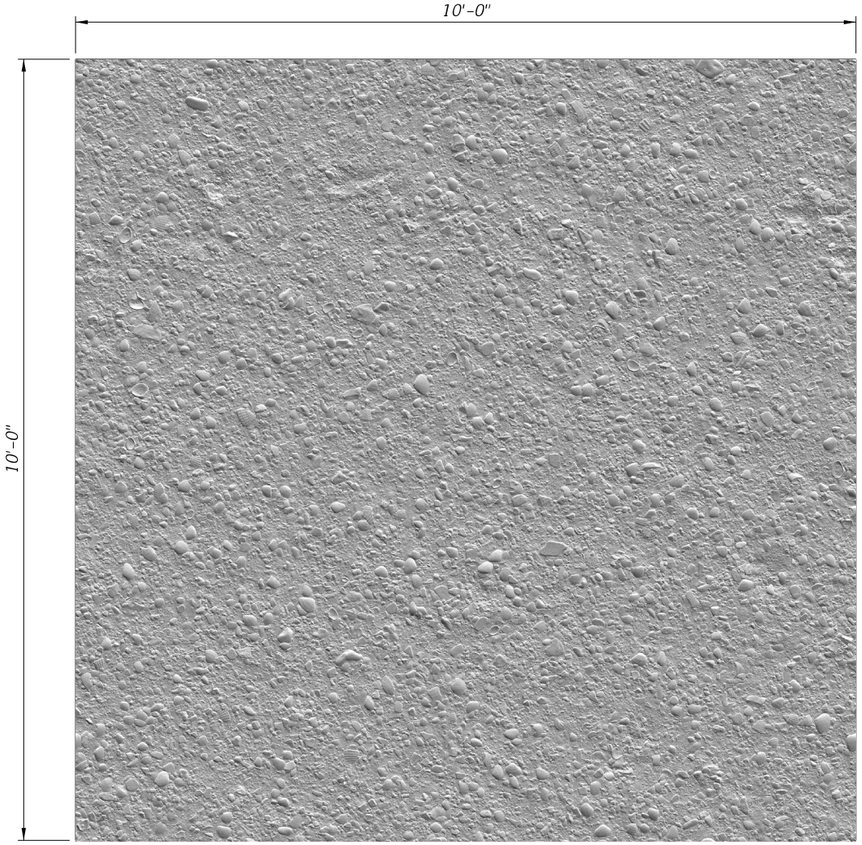
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SURFACE FINISH DETAILS (1 OF 2)

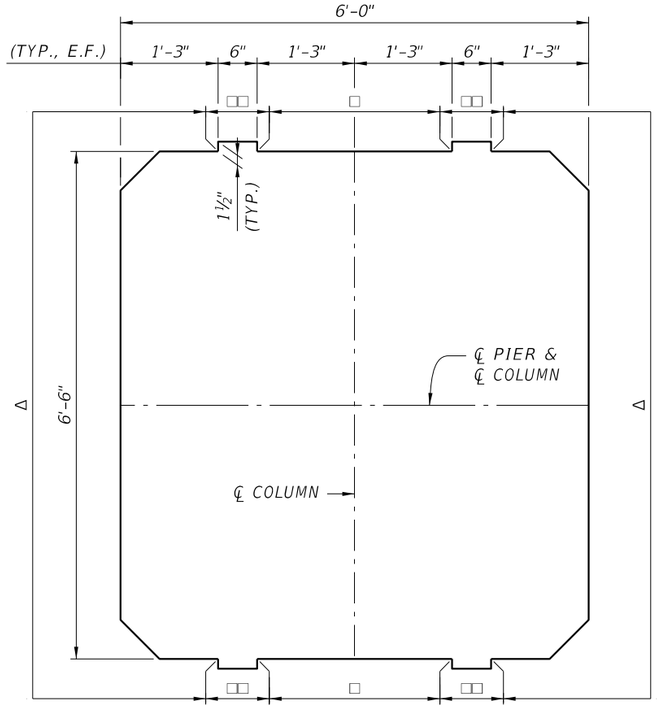
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-9



EXTRUDED SHELL SURFACE TEXTURE



SECTION A-A

NOTE:

CUSTOM FORM LINERS ARE REQUIRED FOR THE PIER ELEMENTS SHOWN ON SHEET B-9 IN ORDER TO PRODUCE THE EXTRUDED SHELL SURFACE TEXTURE SHOWN. THE FORM LINERS SHALL EMULATE THE SIZE, SHAPE, TEXTURE, SPACING AND OVERALL APPEARANCE OF THE IMAGE PROVIDED ON THIS SHEET AND PROVIDE AMPLE VARIETY SUCH THAT THE PATTERN DOES NOT REPEAT WITHIN A CONTINUOUS 10-FOOT SECTION. THE SURFACE TREATMENT SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE MAXIMUM EXTRUSION SHALL BE NO GREATER THAN ½".

THE PROPOSED FORMS FOR THE LINERS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF THE FABRICATION OF THE CUSTOM FORM LINERS. ALL COSTS ASSOCIATED WITH THE CUSTOM FORM LINERS ARE INCLUDED IN THE COST OF THE SUBSTRUCTURE CONCRETE.

LEGEND:

□ SMOOTH SURFACE WITH CLASS 5 FINISH USING FED-STD-595, SHADE 27780
□□ SMOOTH SURFACE WITH CLASS 5 FINISH USING FED-STD-595, SHADE 27778
Δ EXTRUDED SHELL SURFACE TEXTURE WITH CLASS 5 FINISH USING FED-STD-595, SHADE 33531

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY: DMH
CHECKED BY: ADM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SURFACE FINISH DETAILS (2 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B-10

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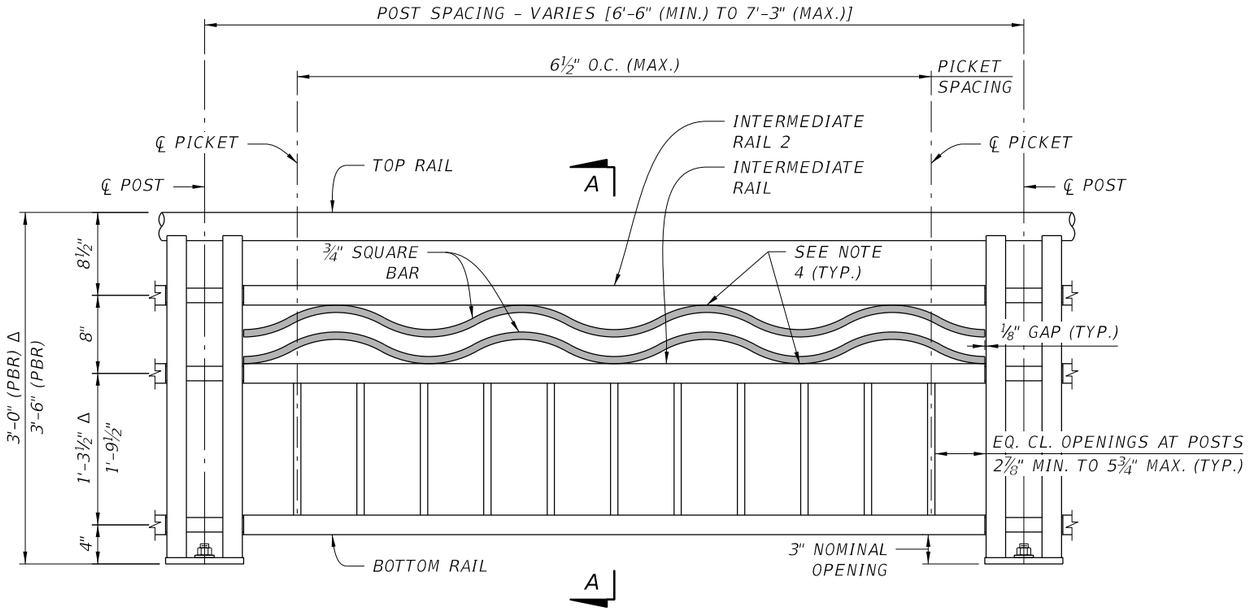
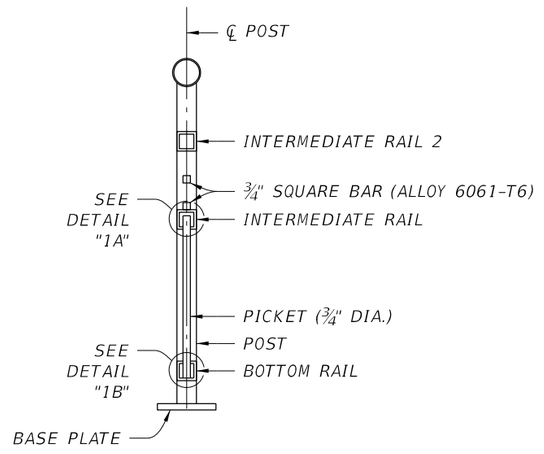


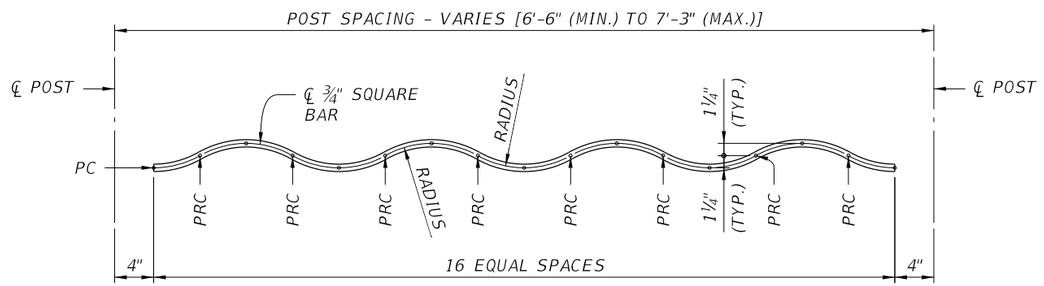
TYPE SP - MODIFIED PICKET INFILL PANEL WITH FOUR CREST WAVE

Δ = CURB MOUNTED

(SEE NOTE 5 FOR TWO CREST WAVE AND THREE CREST WAVE INFORMATION)



SECTION A-A



FOUR CREST WAVE GEOMETRY

(THE SAME RADIUS IS TO BE USED BETWEEN ALL PRC'S)

(SEE NOTE 5 FOR TWO CREST WAVE AND THREE CREST WAVE INFORMATION)

NOTES:

1. SEE INDEX 515-062 FOR DETAILS NOT SHOWN.
2. INTERMEDIATE RAIL 2 MATERIAL PROPERTIES AND DIMENSIONS SHALL MATCH THE MATERIAL PROPERTIES AND DIMENSIONS FOR THE INTERMEDIATE RAIL.
3. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
4. TACK WELD BOTH SIDES OF THE ¾" SQUARE BAR TO THE INTERMEDIATE RAILS AT ALL POINTS OF CONTACT TO THE INTERMEDIATE RAILS.
5. WHERE GEOMETRY DICTATES THE FOUR CREST WAVE CANNOT BE USED, TWO CREST WAVE OR THREE CREST WAVE OPTIONS ARE PERMITTED. FOR TWO CREST WAVE GEOMETRY, THE POST SPACING MAY VARY FROM 3'-6" (MIN.) TO 4'-0" (MAX.). FOR THREE CREST WAVE GEOMETRY, THE POST SPACING MAY VARY FROM 5'-3" (MIN.) TO 5'-9" (MAX.).

BRIDGE NO. 130168

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CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

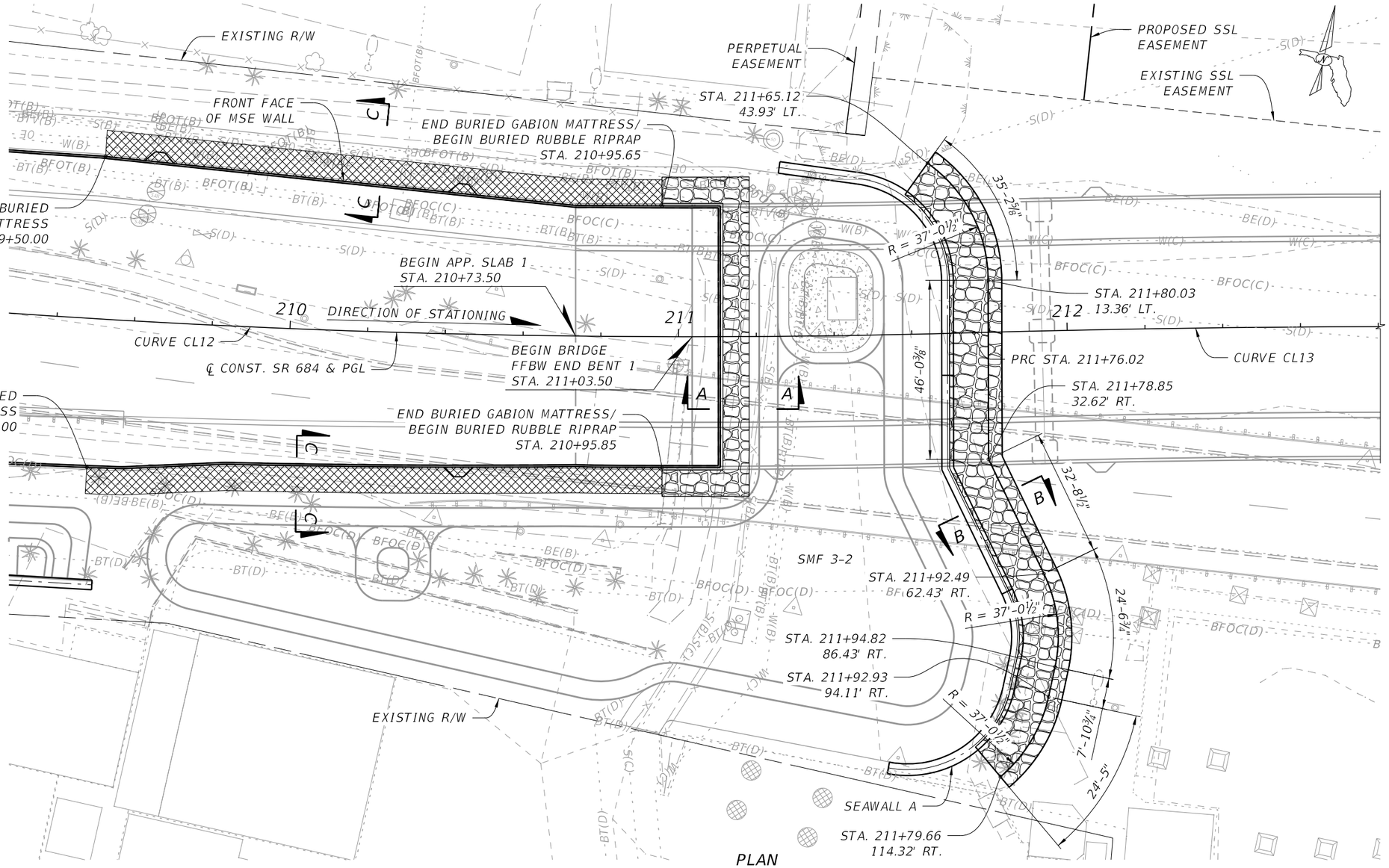
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MODIFICATIONS TO STANDARD PLANS INDEX 515-062

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B-11



PLAN

NOTES:

1. SEE SHEET BW-4 FOR MSE WALL PLAN VIEW.
2. SEE SHEET BW-37 FOR SEAWALL A PLAN VIEW.
3. SEE SHEET B1-7 FOR HORIZONTAL CURVE DATA.
4. SEE SHEET B-14 FOR SECTIONS A-A, B-B & C-C.

BRIDGE NO. 130168

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DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

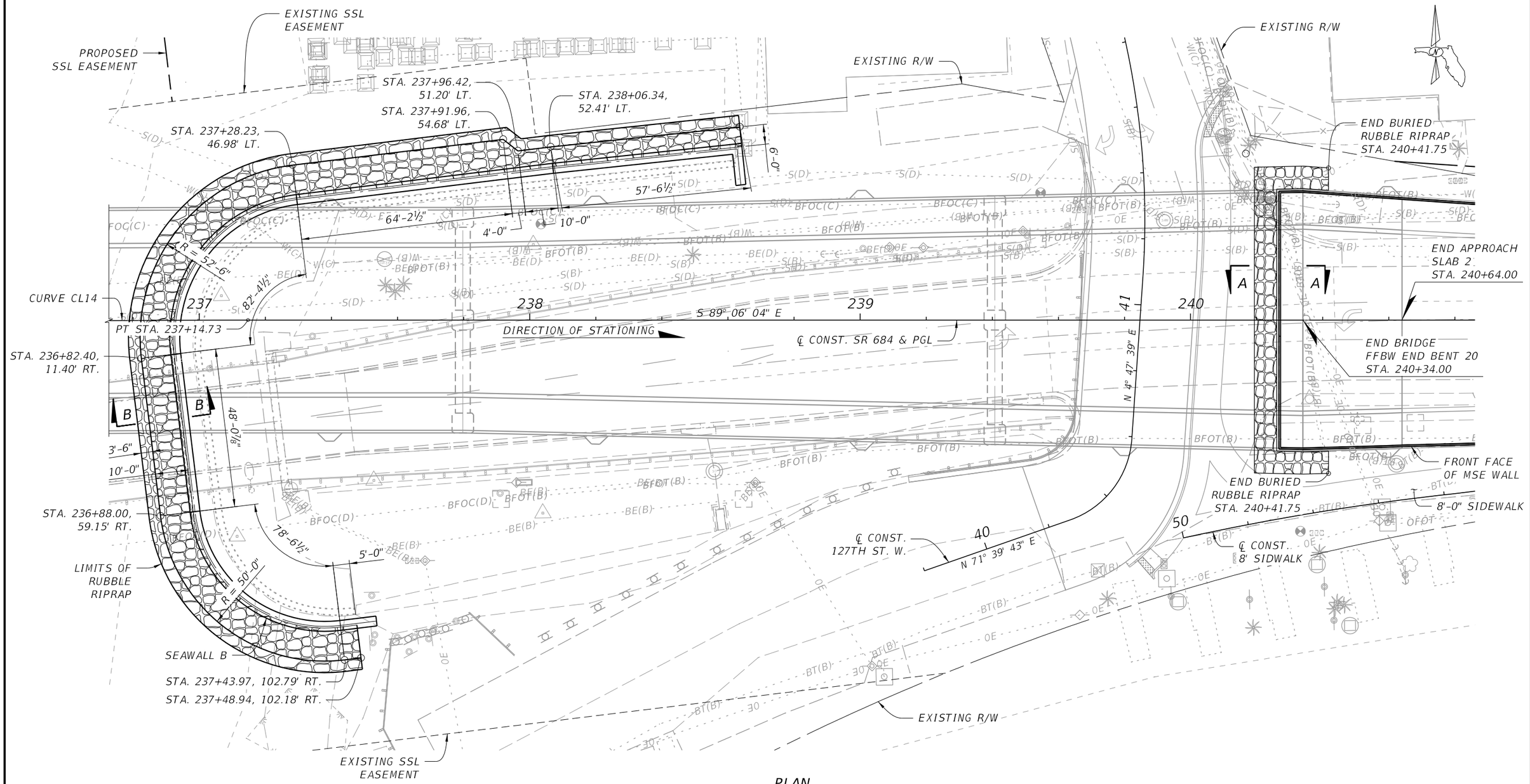
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SLOPE PROTECTION DETAILS (1 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-12



PLAN

NOTES:

1. SEE SHEET BW-5 FOR MSE WALL PLAN VIEW.
2. SEE SHEET BW-38 FOR SEAWALL B PLAN VIEW.
3. SEE SHEET B1-7 FOR HORIZONTAL CURVE DATA.
4. SEE SHEET B-14 FOR SECTIONS A-A & B-B.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY:	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SLOPE PROTECTION DETAILS (2 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-13

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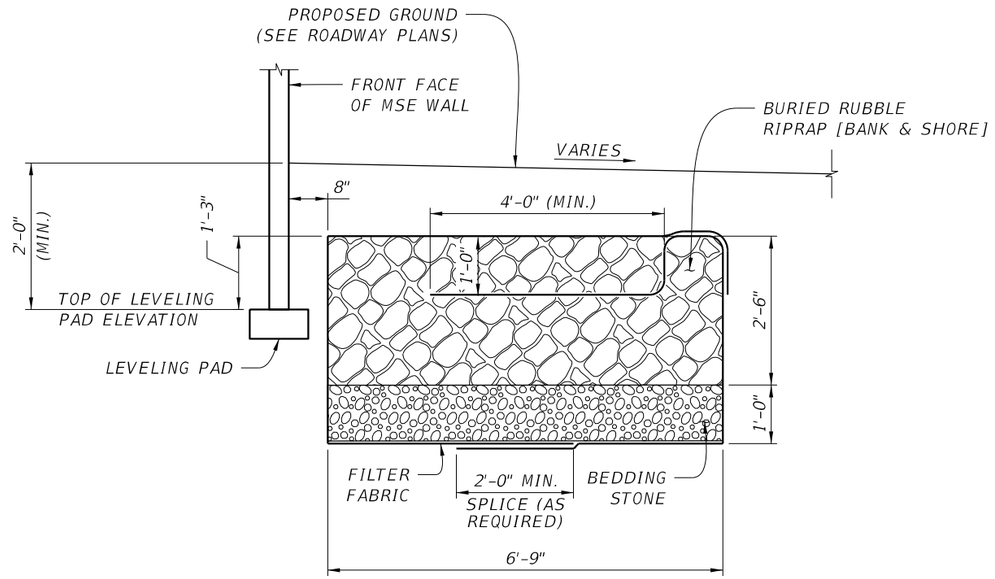
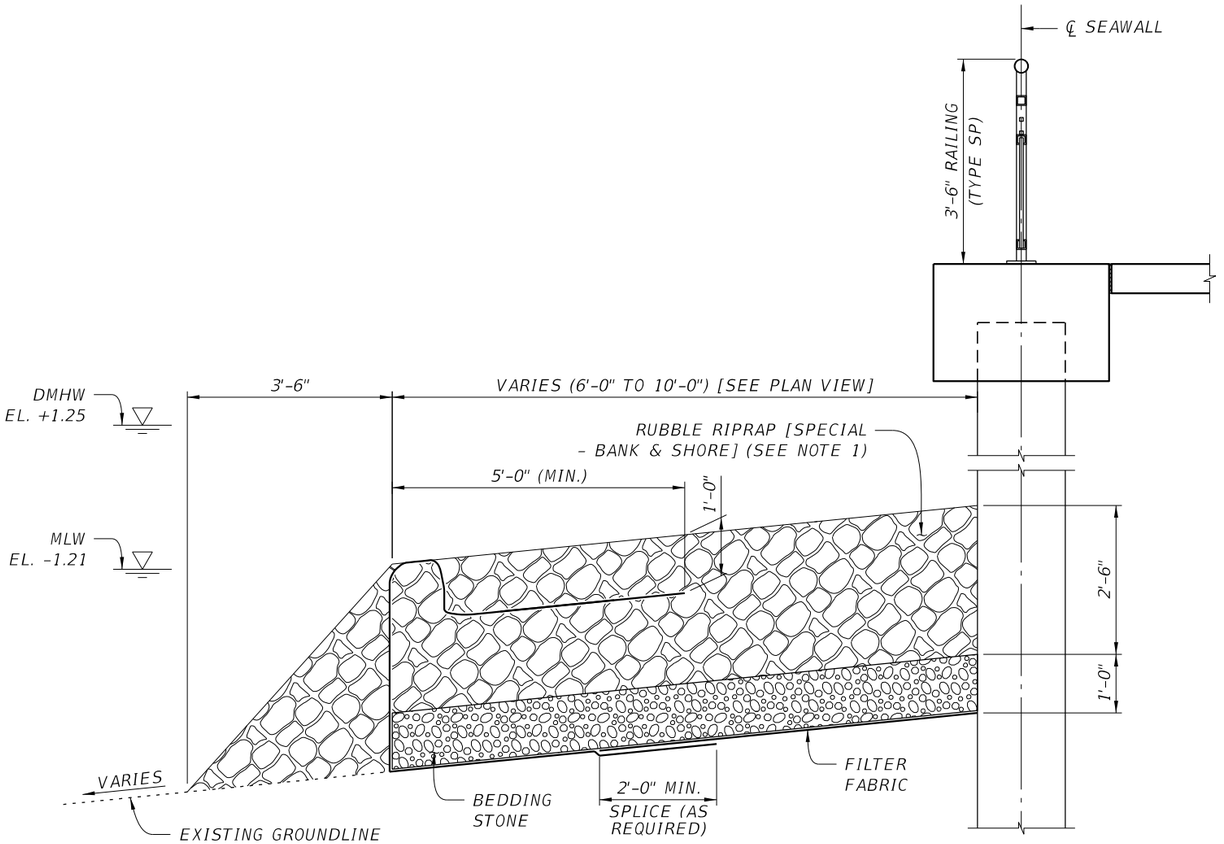
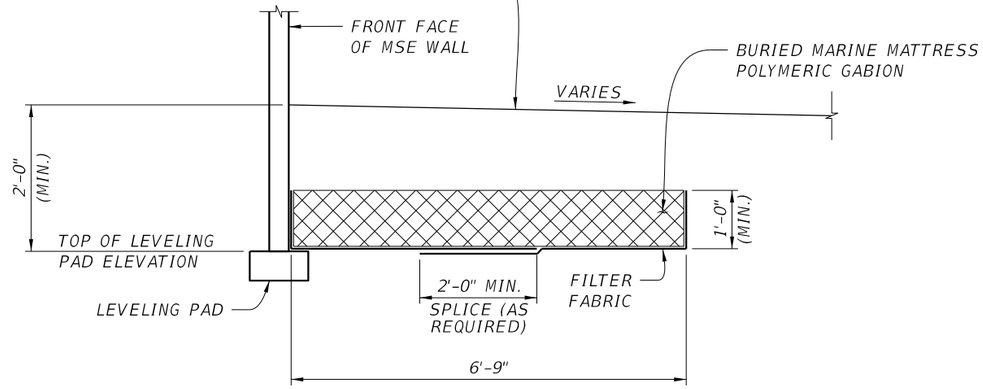


SECTION A-A



SECTION B-B



SECTION C-C

NOTE:

1. REFER TO THE SECTION 530 (REVETMENT SYSTEMS) MODIFIED SPECIAL PROVISION FOR RUBBLE RIPRAP [SPECIAL - BANK & SHORE] REQUIREMENTS ALONG THE PROPOSED SEAWALLS.

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

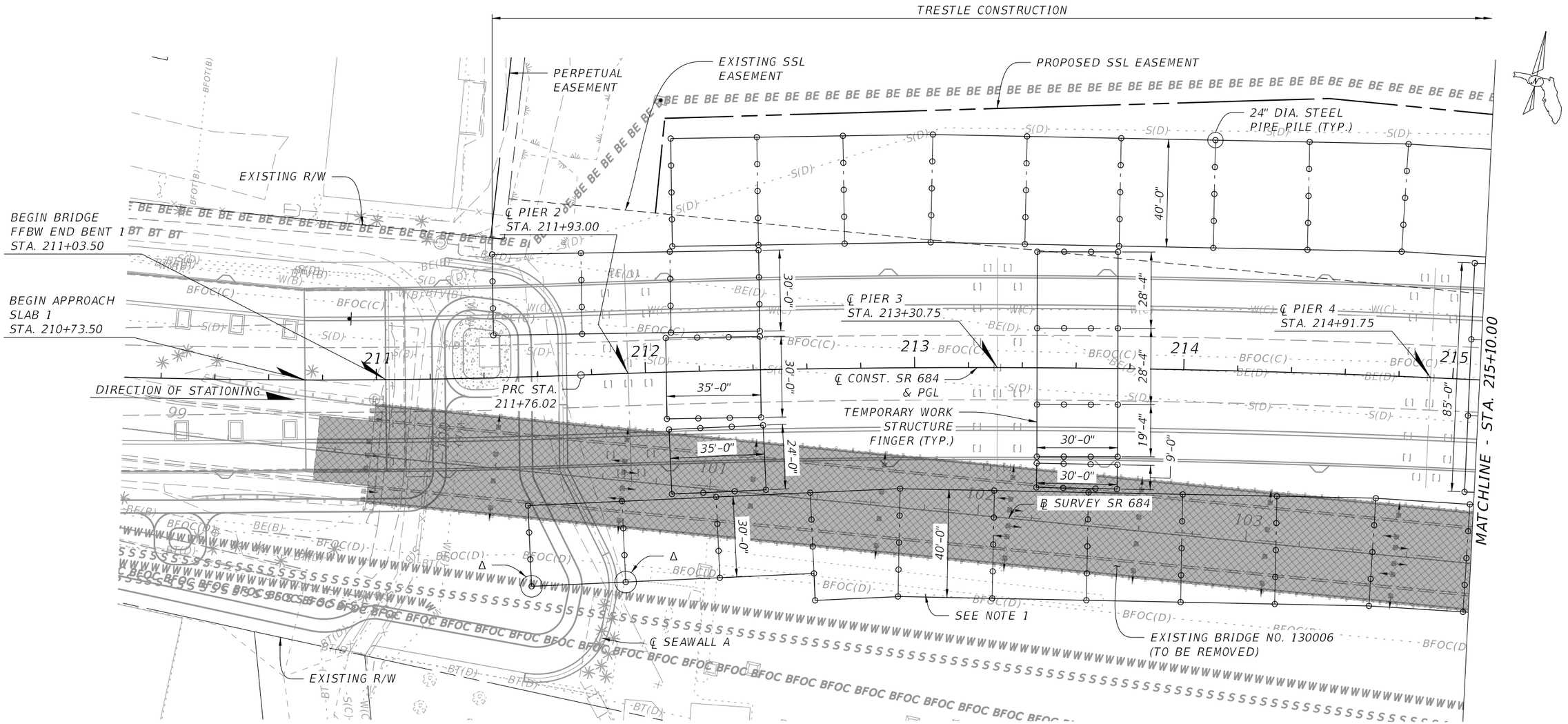
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SLOPE PROTECTION DETAILS (3 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-14



TEMPORARY WORK TRESTLE PLAN

(SCHEMATIC ONLY – CONTRACTOR TO PROVIDE DETAILED TEMPORARY WORKS PLAN)

NOTE:

1. UNLESS NOTED OTHERWISE, THE PROPOSED TEMPORARY WORK TRESTLE FOUNDATION TIP ELEVATION SHALL NOT BE LOWER THAN EL. -50.000 WHERE THE FOOTPRINT OF THE TEMPORARY WORK TRESTLE IS WITHIN 5 FEET OF THE EXISTING BURIED FIBER OPTIC CONDUIT.

LEGEND:

Δ PROPOSED TEMPORARY WORK TRESTLE FOUNDATION TIP ELEVATION SHALL NOT BE LOWER THAN EL. -25.000.

BRIDGE NO. 130168

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TEMPORARY WORK TRESTLE PLAN (1 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B-15

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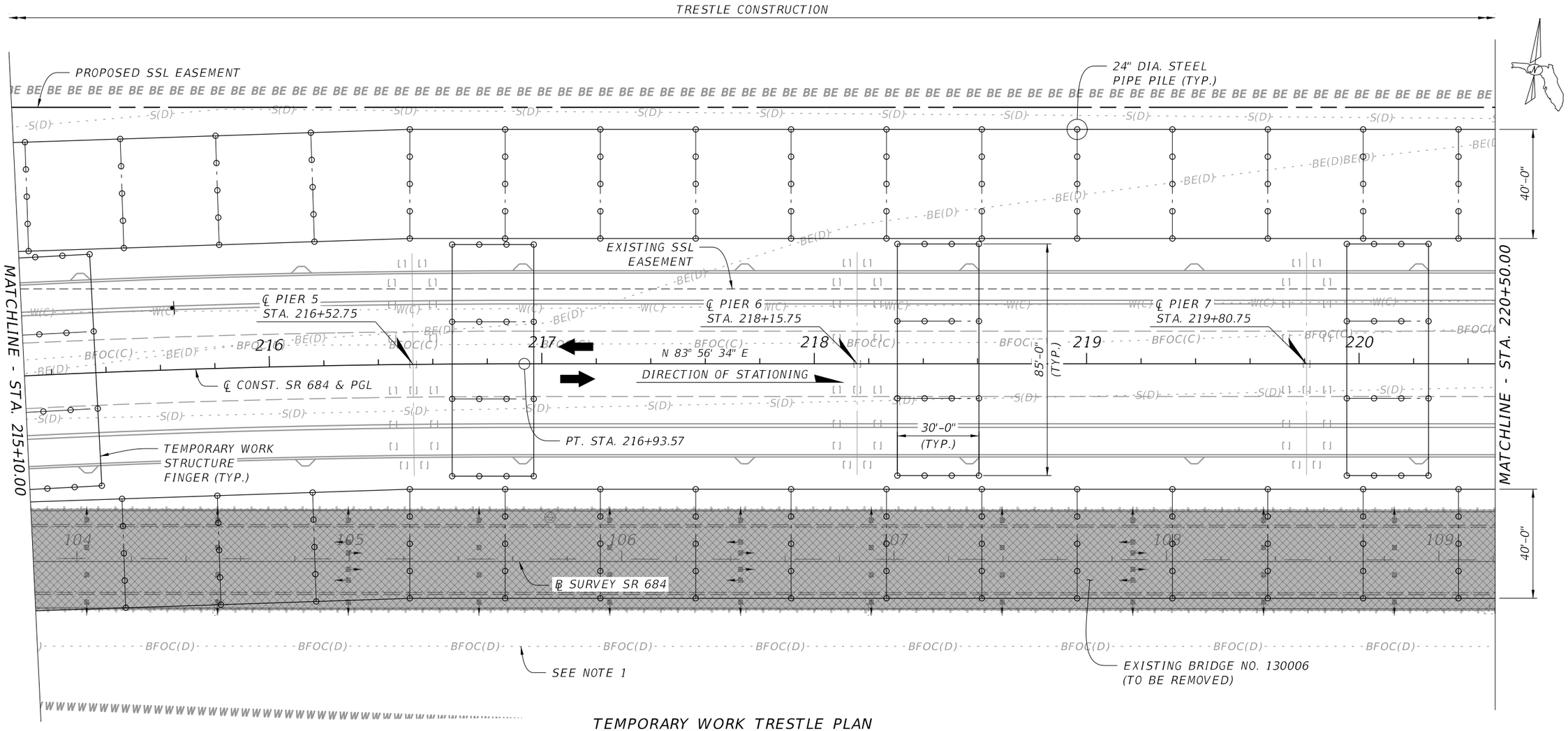

TEMPORARY WORK TRESTLE PLAN

(SCHEMATIC ONLY - CONTRACTOR TO PROVIDE DETAILED TEMPORARY WORKS PLAN)

NOTE:

1. UNLESS NOTED OTHERWISE, THE PROPOSED TEMPORARY WORK TRESTLE FOUNDATION TIP ELEVATION SHALL NOT BE LOWER THAN EL. -50.000 WHERE THE FOOTPRINT OF THE TEMPORARY WORK TRESTLE IS WITHIN 5 FEET OF THE EXISTING BURIED FIBER OPTIC CONDUIT.

BRIDGE NO. 130168

REVISIONS					
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TEMPORARY WORK TRESTLE PLAN (2 OF 4)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-16

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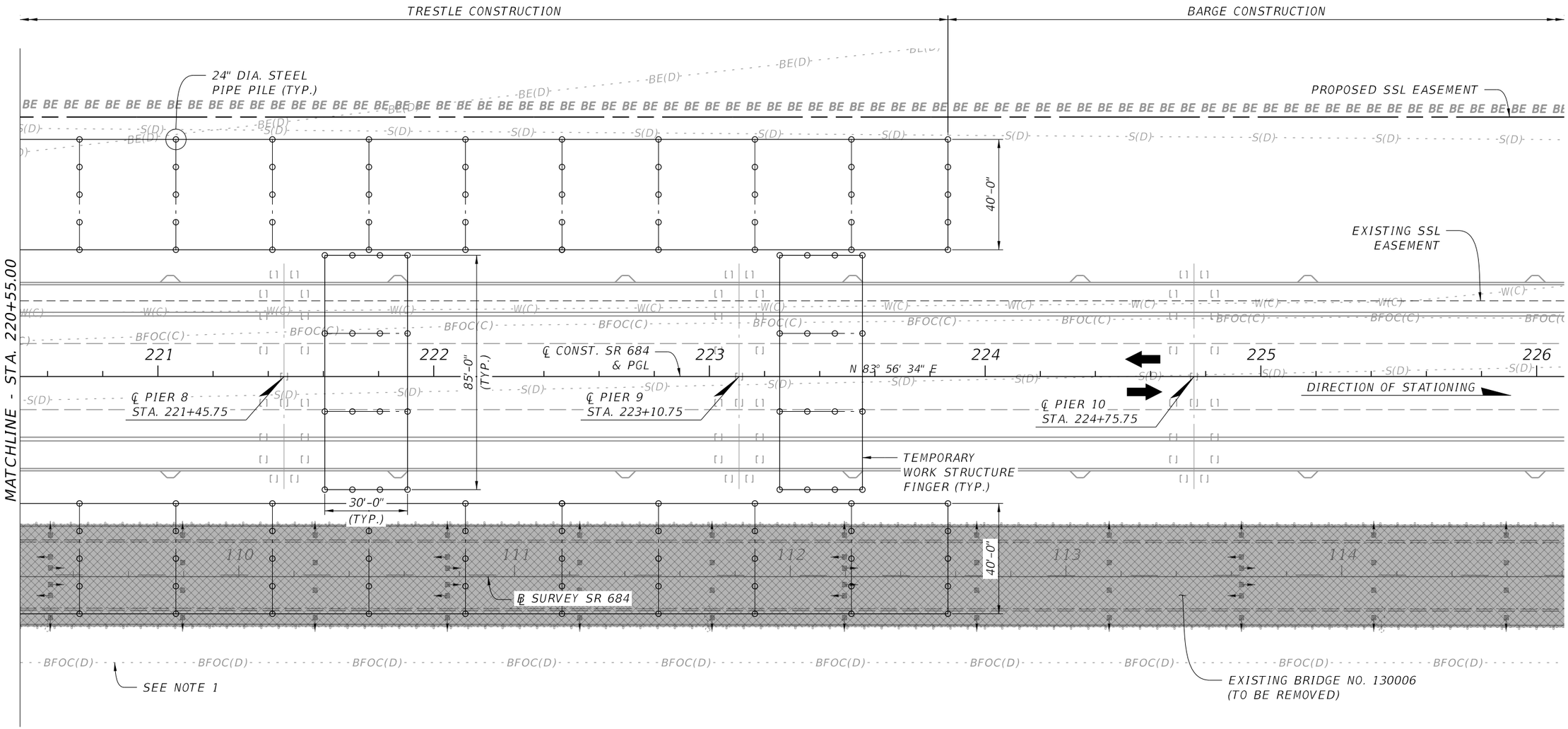

TEMPORARY WORK TRESTLE PLAN

(SCHEMATIC ONLY – CONTRACTOR TO PROVIDE DETAILED TEMPORARY WORKS PLAN)

NOTE:

1. UNLESS NOTED OTHERWISE, THE PROPOSED TEMPORARY WORK TRESTLE FOUNDATION TIP ELEVATION SHALL NOT BE LOWER THAN EL. -50.000 WHERE THE FOOTPRINT OF THE TEMPORARY WORK TRESTLE IS WITHIN 5 FEET OF THE EXISTING BURIED FIBER OPTIC CONDUIT.

BRIDGE NO. 130168

REVISIONS					
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TEMPORARY WORK TRESTLE PLAN (3 OF 4)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-17

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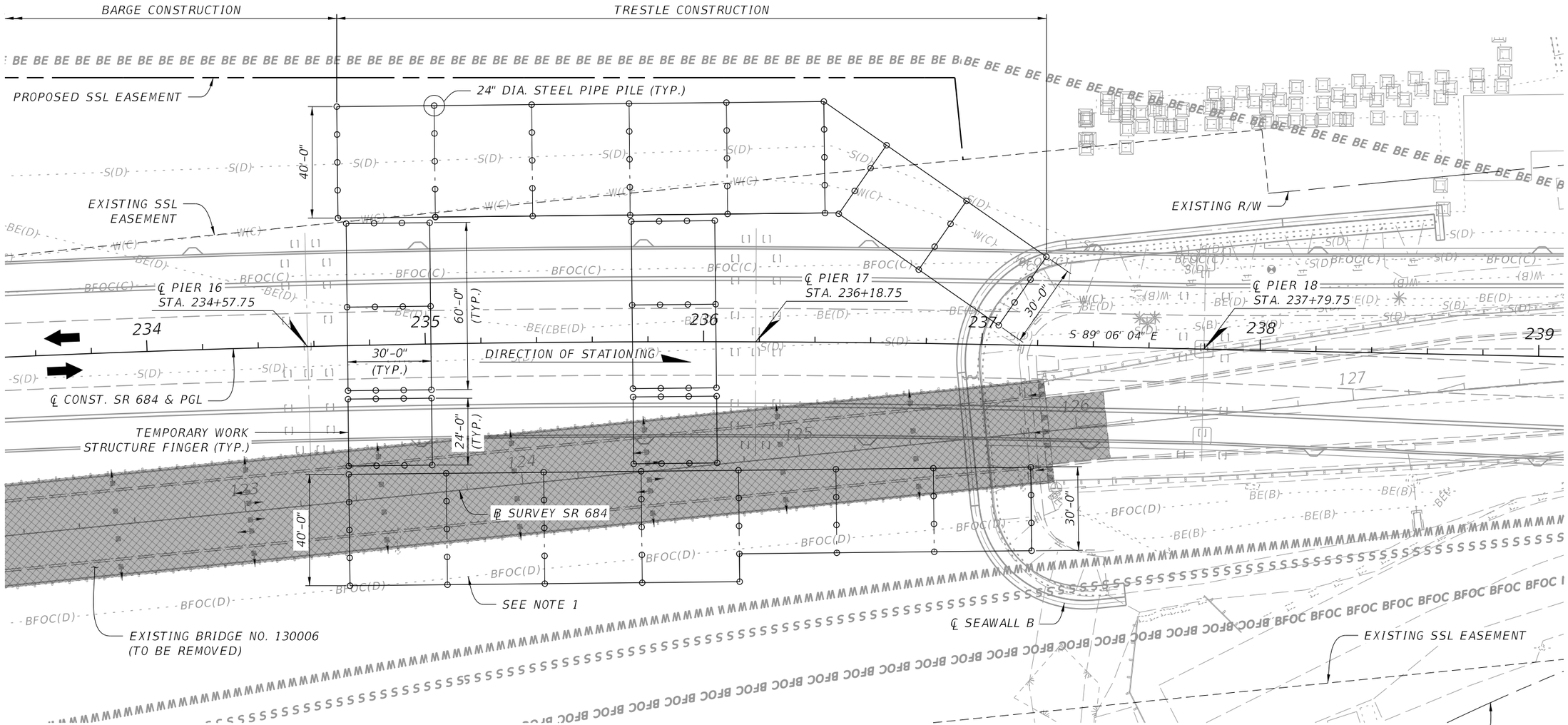

TEMPORARY WORK TRESTLE PLAN

(SCHEMATIC ONLY – CONTRACTOR TO PROVIDE DETAILED TEMPORARY WORKS PLAN)

NOTE:

1. UNLESS NOTED OTHERWISE, THE PROPOSED TEMPORARY WORK TRESTLE FOUNDATION TIP ELEVATION SHALL NOT BE LOWER THAN EL. -50.000 WHERE THE FOOTPRINT OF THE TEMPORARY WORK TRESTLE IS WITHIN 5 FEET OF THE EXISTING BURIED FIBER OPTIC CONDUIT.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

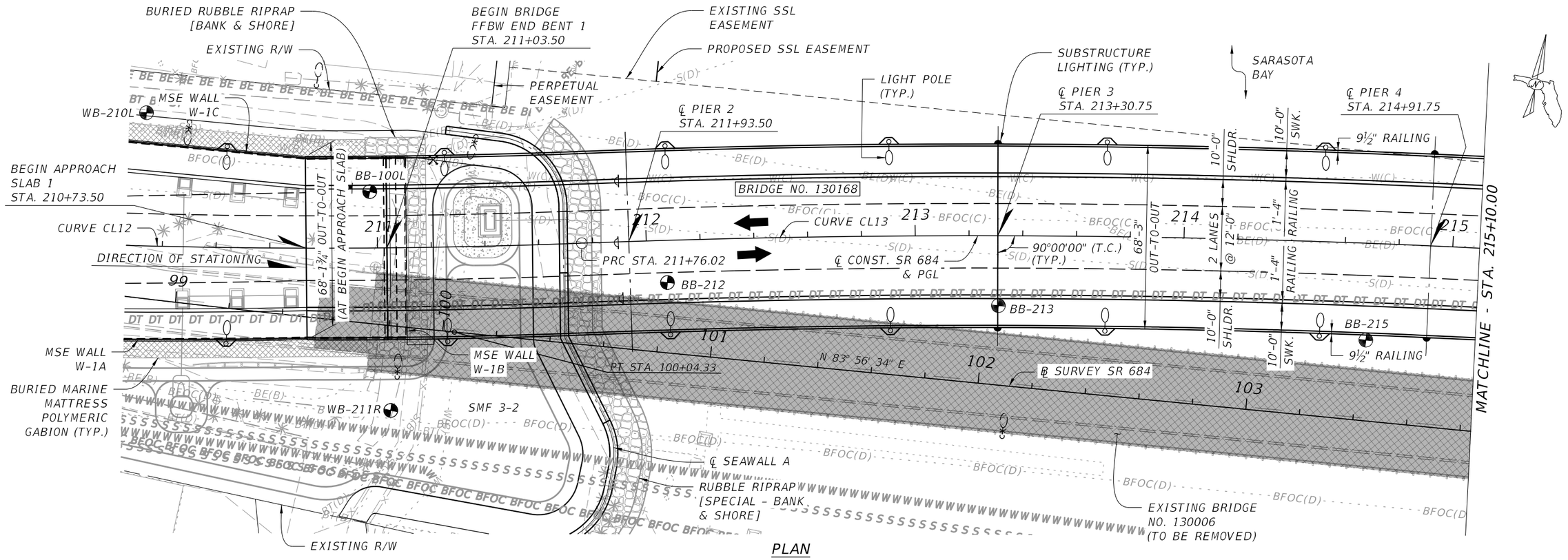
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TEMPORARY WORK TRESTLE PLAN (4 OF 4)

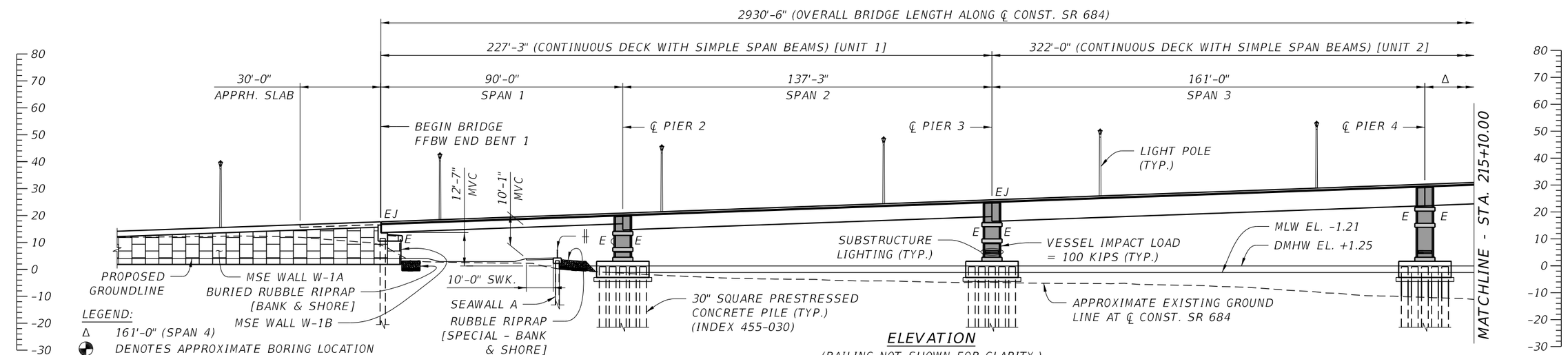
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B-18



PLAN



ELEVATION

(RAILING NOT SHOWN FOR CLARITY.)

LEGEND:

- Δ 161'-0" (SPAN 4)
- DENOTES APPROXIMATE BORING LOCATION
- REMOVAL OF EXISTING BRIDGE
- PEDESTRIAN/BICYCLE RAILING (ALUMINUM) (INDEX 515-062 [CASE II])
- DIRECTION OF TRAFFIC
- LOCATION OF MINIMUM VERTICAL CLEARANCE
- SURFACE MOUNTED LUMINAIRE

NOTES:

1. SEE THE ROADWAY PLANS FOR WETLAND AND SEAGRASS LIMITS.
2. SPAN AND DECK UNIT LENGTHS ARE ALONG ℄ CONST. SR 684.
3. SEE SUPERSTRUCTURE PLAN AND APPROACH SLAB DRAWINGS FOR LIGHT POLE STATIONING.
4. SEE SHEETS B1-15 THRU B1-17 AND THE APPROACH SLAB DETAILS FOR THE CONSTRUCTION LIMITS FOR EACH PHASE.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

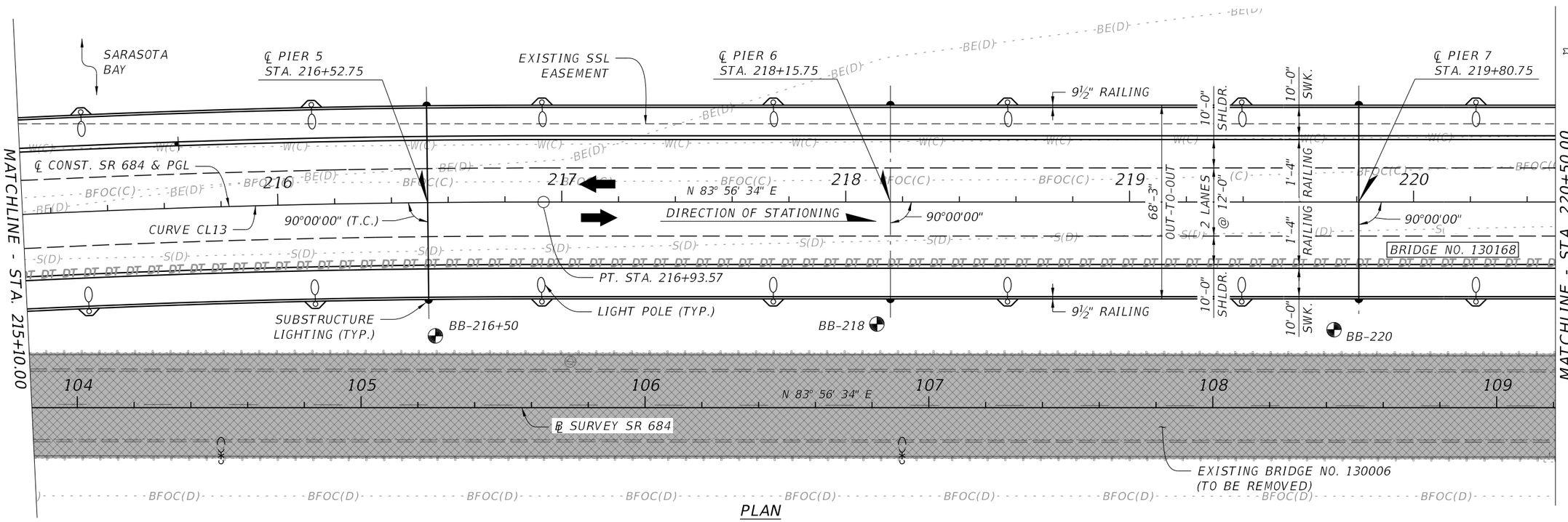
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN AND ELEVATION (1 OF 6)

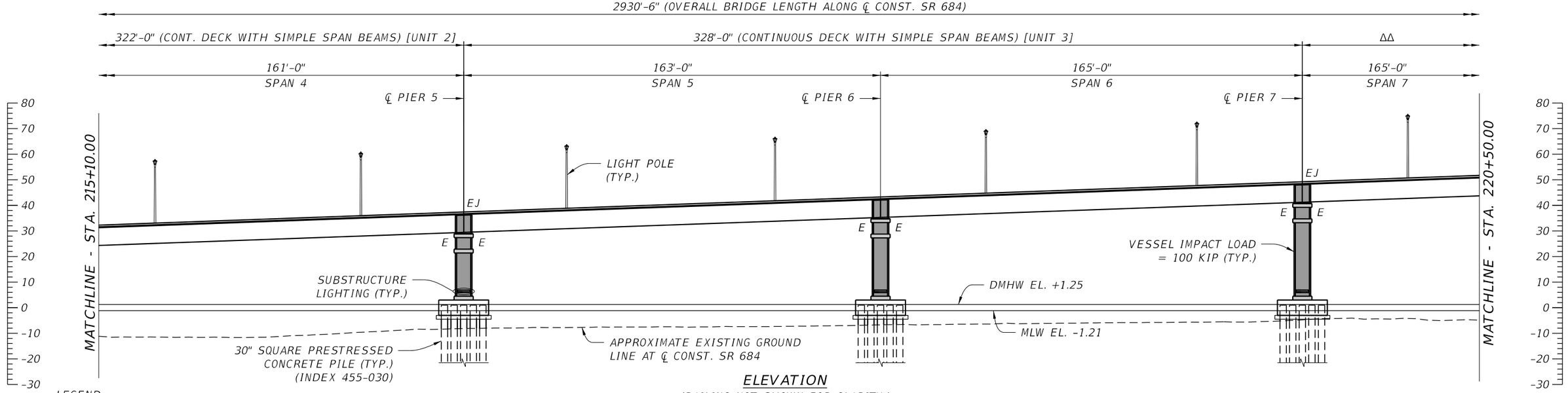
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-1



PLAN



ELEVATION

(RAILING NOT SHOWN FOR CLARITY.)

LEGEND:

- DENOTES APPROXIMATE BORING LOCATION
- REMOVAL OF EXISTING BRIDGE
- DIRECTION OF TRAFFIC
- ΔΔ 330'-0" (CONT. DECK WITH SIMPLE SPAN BEAMS) [UNIT 4]

NOTES:

1. SEE THE ROADWAY PLANS FOR WETLAND AND SEAGRASS LIMITS.
2. SPAN AND DECK UNIT LENGTHS ARE ALONG ℄ CONST. SR 684.
3. SEE SUPERSTRUCTURE PLAN DRAWINGS FOR LIGHT POLE STATIONING.
4. SEE SHEETS B1-15 THRU B1-17 FOR THE CONSTRUCTION LIMITS FOR EACH PHASE.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN AND ELEVATION (2 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-2

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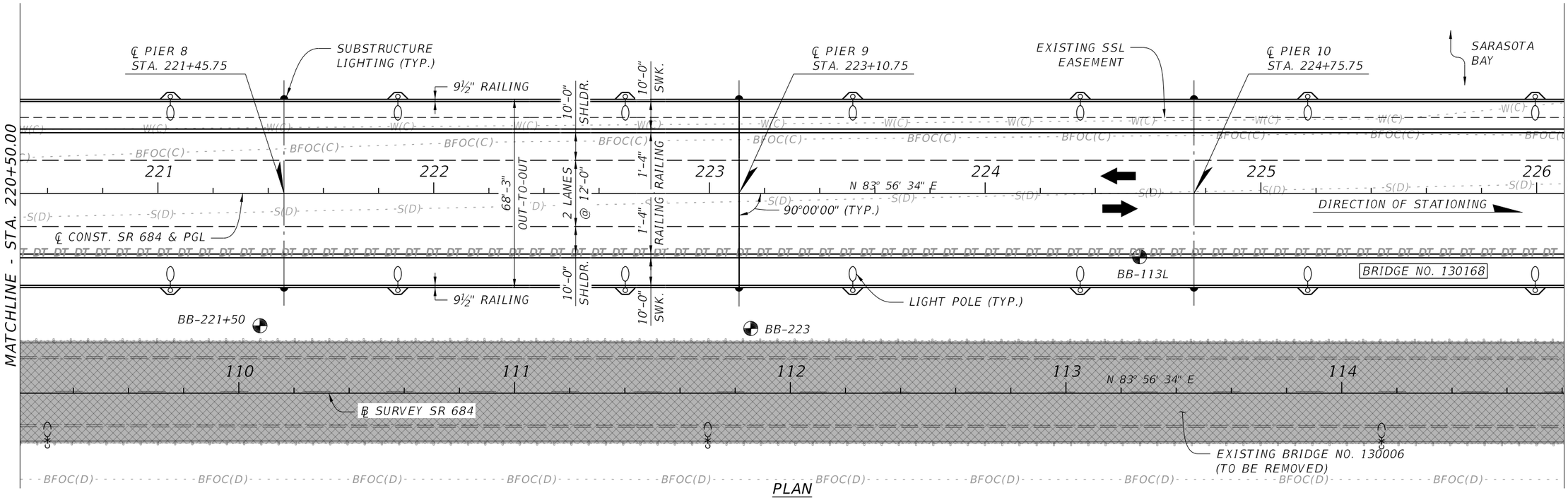

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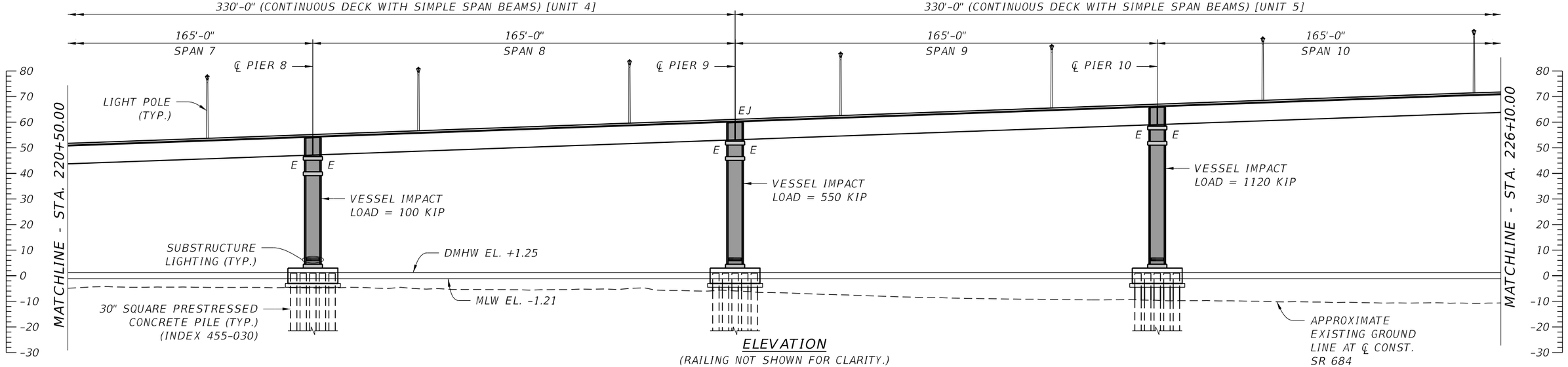

ELEVATION

(RAILING NOT SHOWN FOR CLARITY.)

LEGEND:

- DENOTES APPROXIMATE BORING LOCATION
- REMOVAL OF EXISTING BRIDGE
- DIRECTION OF TRAFFIC

NOTES:

1. SEE THE ROADWAY PLANS FOR WETLAND AND SEAGRASS LIMITS.
2. SPAN AND DECK UNIT LENGTHS ARE ALONG ℄ CONST. SR 684.
3. SEE SUPERSTRUCTURE PLAN DRAWINGS FOR LIGHT POLE STATIONING.
4. SEE SHEETS B1-15 THRU B1-17 FOR THE CONSTRUCTION LIMITS FOR EACH PHASE.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN AND ELEVATION (3 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-3

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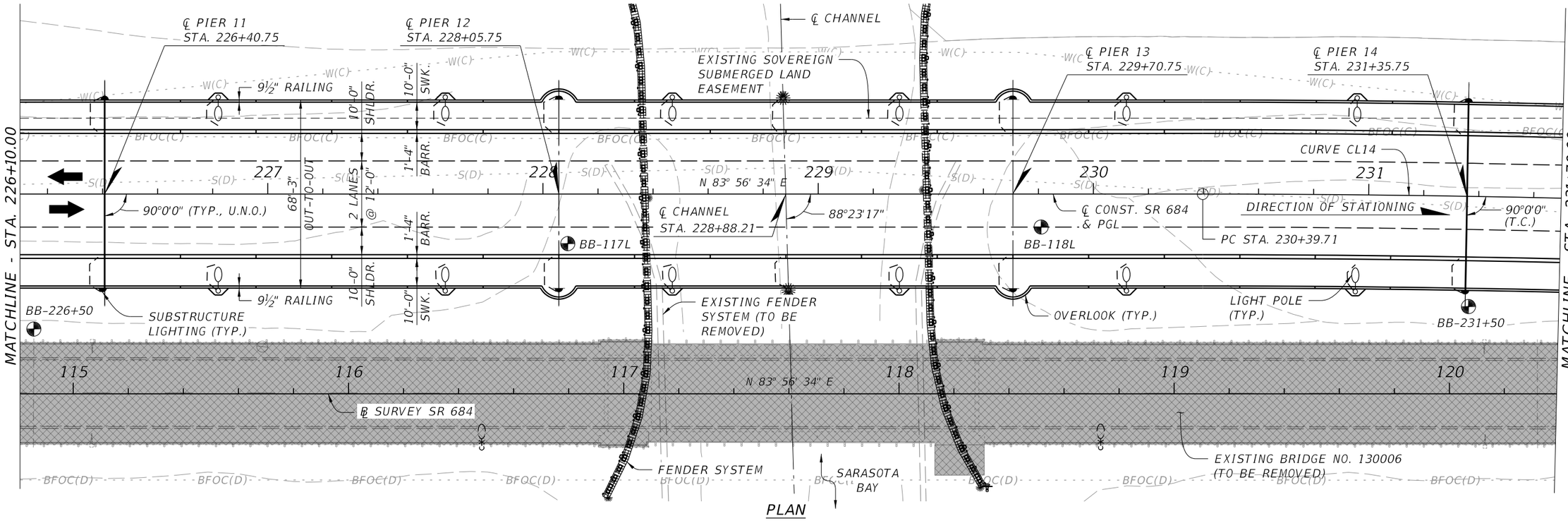
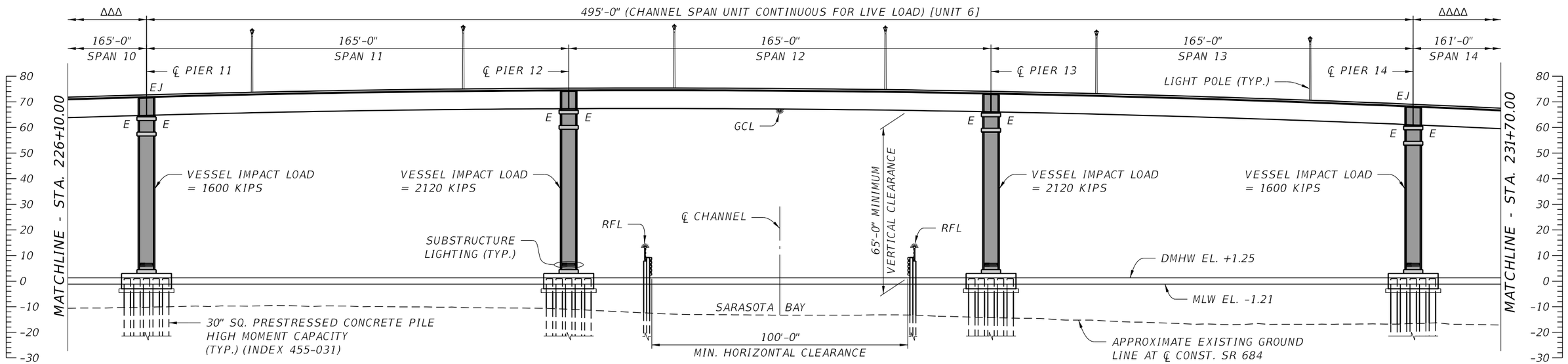


PLAN



ELEVATION

LEGEND:

- ΔΔΔ 330'-0" (CONTINUOUS DECK WITH SIMPLE SPAN BEAMS) [UNIT 5]
- ΔΔΔΔ 322'-0" (CONTINUOUS DECK WITH SIMPLE SPAN BEAMS) [UNIT 7]
- DENOTES APPROXIMATE BORING LOCATION
- REMOVAL OF EXISTING BRIDGE
- DIRECTION OF TRAFFIC

NOTE:

(RAILING NOT SHOWN FOR CLARITY)

1. SEE THE ROADWAY PLANS FOR WETLAND AND SEAGRASS LIMITS.
2. FENDER SYSTEM TO BE REMOVED IN PHASES. CONTRACTOR SHALL MAINTAIN PROTECTION TO EXISTING BRIDGE BETWEEN PHASED FENDER SYSTEM REMOVAL OPERATIONS.
3. SPAN AND DECK UNIT LENGTHS ARE ALONG ℄ CONST. SR 684.
4. SEE SHEETS B1-15 THRU B1-18 FOR THE CONSTRUCTION LIMITS FOR EACH PHASE.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN AND ELEVATION (4 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-4

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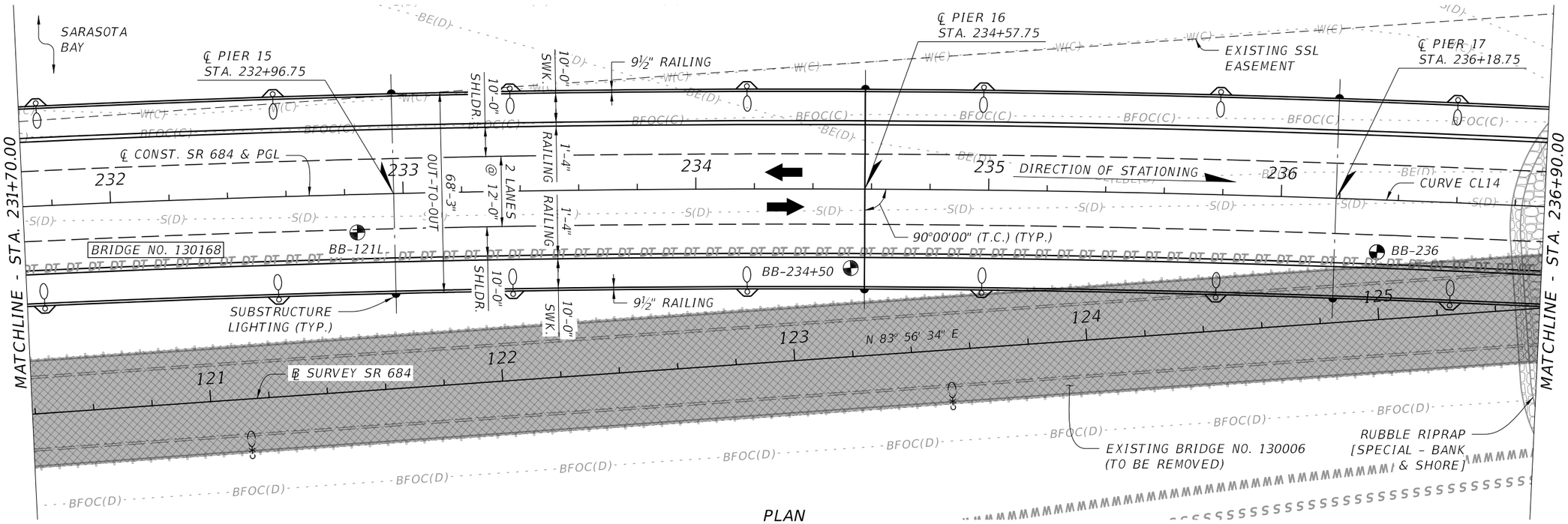
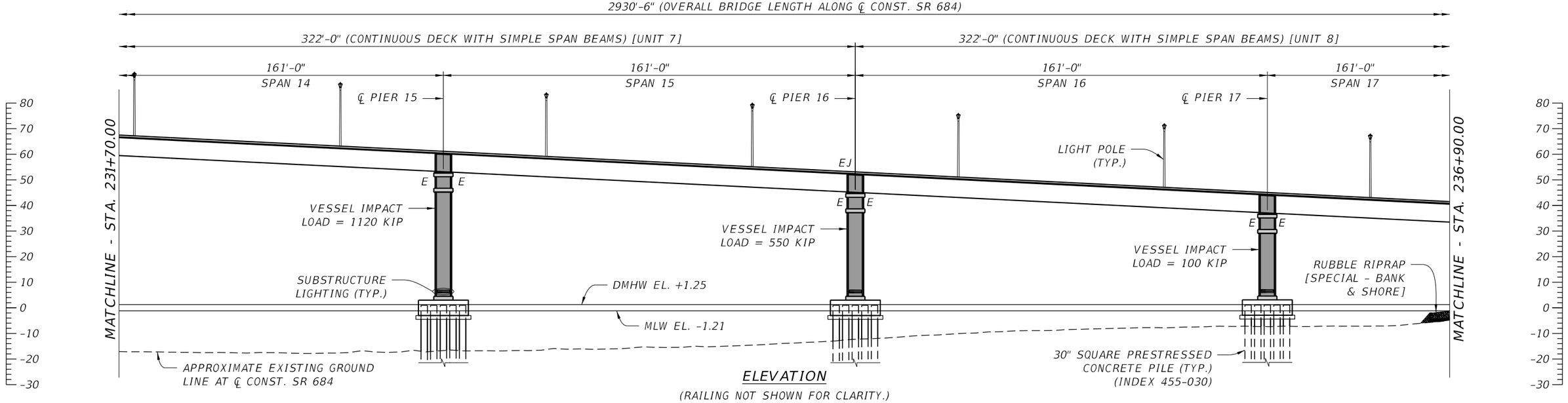


PLAN

2930'-6" (OVERALL BRIDGE LENGTH ALONG ℄ CONST. SR 684)



ELEVATION

(RAILING NOT SHOWN FOR CLARITY.)

LEGEND:

- DENOTES APPROXIMATE BORING LOCATION
- REMOVAL OF EXISTING BRIDGE
- DIRECTION OF TRAFFIC

NOTES:

1. SEE THE ROADWAY PLANS FOR WETLAND AND SEAGRASS LIMITS.
2. SPAN AND DECK UNIT LENGTHS ARE ALONG ℄ CONST. SR 684.
3. SEE SUPERSTRUCTURE PLAN DRAWINGS FOR LIGHT POLE STATIONING.
4. SEE SHEETS B1-15 THRU B1-17 FOR THE CONSTRUCTION LIMITS FOR EACH PHASE.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN AND ELEVATION (5 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-5

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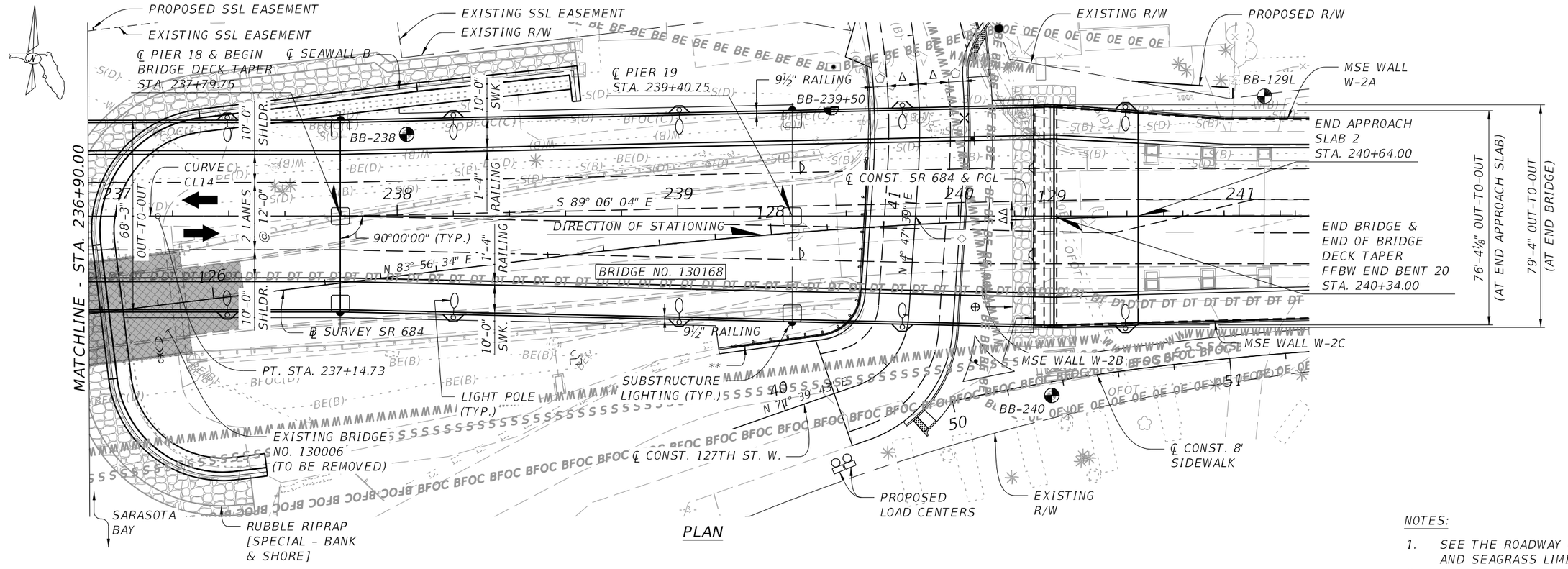

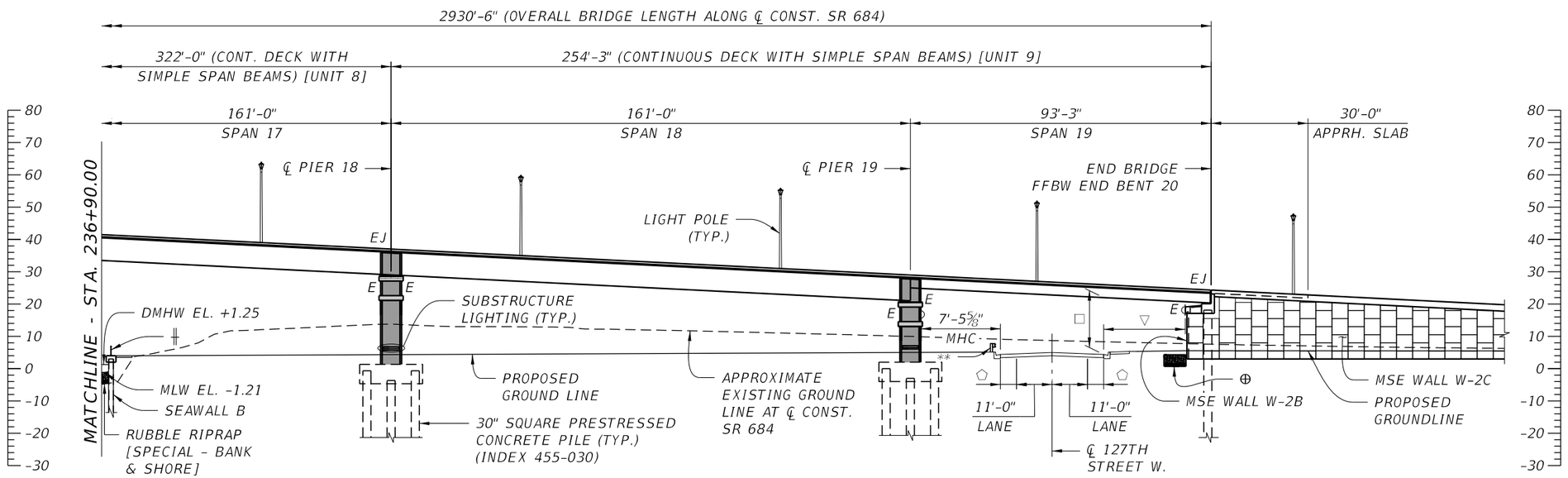

ELEVATION

(RAILING NOT SHOWN FOR CLARITY.)

NOTES:

1. SEE THE ROADWAY PLANS FOR WETLAND AND SEAGRASS LIMITS.
2. SPAN AND DECK UNIT LENGTHS ARE ALONG ℄ CONST. SR 684.
3. SEE SHEETS B1-15 THRU B1-17 AND THE APPROACH SLAB DETAILS FOR THE CONSTRUCTION LIMITS FOR EACH PHASE.
4. SEE SUPERSTRUCTURE PLAN AND APPROACH SLAB DRAWINGS FOR LIGHT POLE STATIONING.

LEGEND:

- □ 17'-0" MIN. VERTICAL CLEARANCE
- ▽ 24'-0" MIN. HORIZONTAL CLEARANCE
- ⬠ 5'-0" BIKE LANE
- ΔΔ VARIES (0'-0" TO 12'-0")
- DENOTES APPROXIMATE BORING LOCATION
- × LOCATION OF MINIMUM VERTICAL CLEARANCE
- REMOVAL OF EXISTING BRIDGE
- ╫ PEDESTRIAN/BICYCLE RAILING (ALUMINUM) (INDEX 515-062 [CASE II])
- ** GUARDRAIL (INDEX 536-001)
- ➡ DIRECTION OF TRAFFIC
- SURFACE MOUNTED LUMINAIRE
- Δ 11'-0" LANE
- ◇ ℄ CONST. SR 684 - STA. 239+84.67
  ℄ CONST. 127TH ST. W. - STA. 40+95.34
- ⊕ BURIED RUBBLE RIPRAP [BANK & SHORE]

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN AND ELEVATION (6 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-6

HORIZONTAL CURVE DATA

CURVE DATA C6 (OLD SR684)

P.I. STA.	= 96+85.31
Δ	= 6° 22' 49" (LT)
D	= 1° 00' 00"
T	= 319.35
L	= 638.04
R	= 5,729.58
P.C. STA.	= 93+66.29
P.T. STA.	= 100+04.33
e	= N.C.

CURVE DATA C7 (OLD SR684)

P.I. STA.	= 128+42.40
Δ	= 6° 57' 22" (RT)
D	= 3° 00' 00"
T	= 116.08
L	= 231.87
R	= 1,909.86
P.C. STA.	= 127+26.46
P.T. STA.	= 129+56.87
e	= N.C.

CURVE DATA CL11 (SR684)

P.I. STA.	= 205+42.13
Δ	= 0° 58' 27" (LT)
D	= 1° 00' 00"
T	= 48.71
L	= 97.42
R	= 5,729.58
P.C. STA.	= 204+93.42
P.T. STA.	= 205+90.84
e	= N.C.

CURVE DATA CL12 (SR684)

P.I. STA.	= 208+83.43
Δ	= 13° 10' 08" (LT)
D	= 2° 15' 02"
T	= 293.88
L	= 585.17
R	= 2,546.00
P.C. STA.	= 205+90.84
P.T. STA.	= 211+76.02
e	= N.C.

CURVE DATA CL13 (SR684)

P.I. STA.	= 214+34.79
Δ	= 7° 45' 46" (LT)
D	= 1° 30' 00"
T	= 259.17
L	= 517.56
R	= 3,820.00
P.C. STA.	= 211+76.02
P.T. STA.	= 216+93.57
e	= N.C.

CURVE DATA CL14 (SR684)

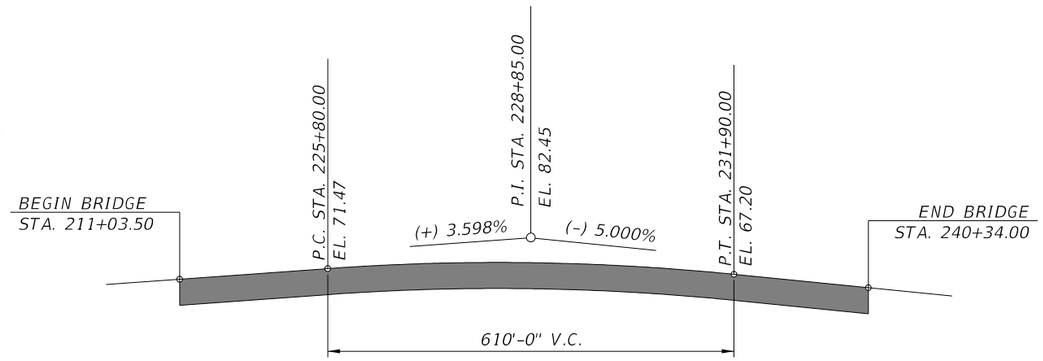
P.I. STA.	= 233+77.22
Δ	= 6° 57' 22" (RT)
D	= 1° 01' 50"
T	= 337.93
L	= 675.02
R	= 5,560.00
P.C. STA.	= 230+39.71
P.T. STA.	= 237+14.73
e	= N.C.

CURVE DATA CL127STW1

P.I. STA.	= 40+42.99
Δ	= 66° 52' 04" (LT)
D	= 204° 37' 40"
T	= 18.49
L	= 32.68
R	= 28.00
P.C. STA.	= 40+26.65
P.T. STA.	= 40+59.33
e	= N.C.

CURVE DATA CL127STW2

P.I. STA.	= 41+58.15
Δ	= 22° 37' 32" (LT)
D	= 22° 55' 06"
T	= 50.01
L	= 98.72
R	= 250.00
P.C. STA.	= 41+08.79
P.T. STA.	= 42+07.51
e	= N.C.



VERTICAL CURVE DATA
(PGL)

CURVE DATA CL124CTW1

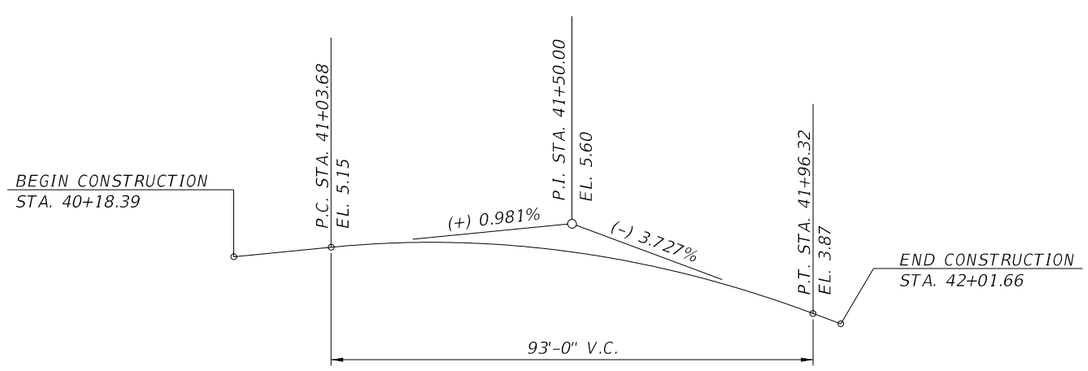
P.I. STA.	= 14+55.34
Δ	= 103° 36' 59" (LT)
D	= 40° 55' 32"
T	= 177.96
L	= 253.18
R	= 140.00
P.C. STA.	= 12+77.38
P.T. STA.	= 15+30.56
e	= N.C.

CURVE DATA BOSTIET0127ST1

P.I. STA.	= 50+41.58
Δ	= 6° 11' 19" (LT)
D	= 7° 26' 28"
T	= 41.62
L	= 83.17
R	= 770.00
P.C. STA.	= 50+00.00
P.T. STA.	= 50+83.17
e	= N.C.

CURVE DATA BOSTIET0127ST2

P.I. STA.	= 51+35.26
Δ	= 6° 49' 20" (RT)
D	= 6° 32' 53"
T	= 52.16
L	= 104.19
R	= 875.00
P.C. STA.	= 50+83.17
P.T. STA.	= 51+87.36
e	= N.C.



VERTICAL CURVE DATA
(℄ CONST. 127TH ST. W.)

TRAFFIC DATA

ROADWAY	AADT CURRENT YEAR 2020	AADT OPENING YEAR 2024	AADT DESIGN YEAR 2044	DESIGN SPEED (MPH)	K (%)	D (%)	TRUCK 24 HOUR (%)	DESIGN HOUR TRUCK (%)
SR 684	16,000	17,000	22,000	40 MPH	9.0	57	5.1	2.6
127TH STREET W.	2400	2550	3300	30 MPH	9.0	57	5.1	2.6

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CURVE DATA AND TRAFFIC DATA

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-7

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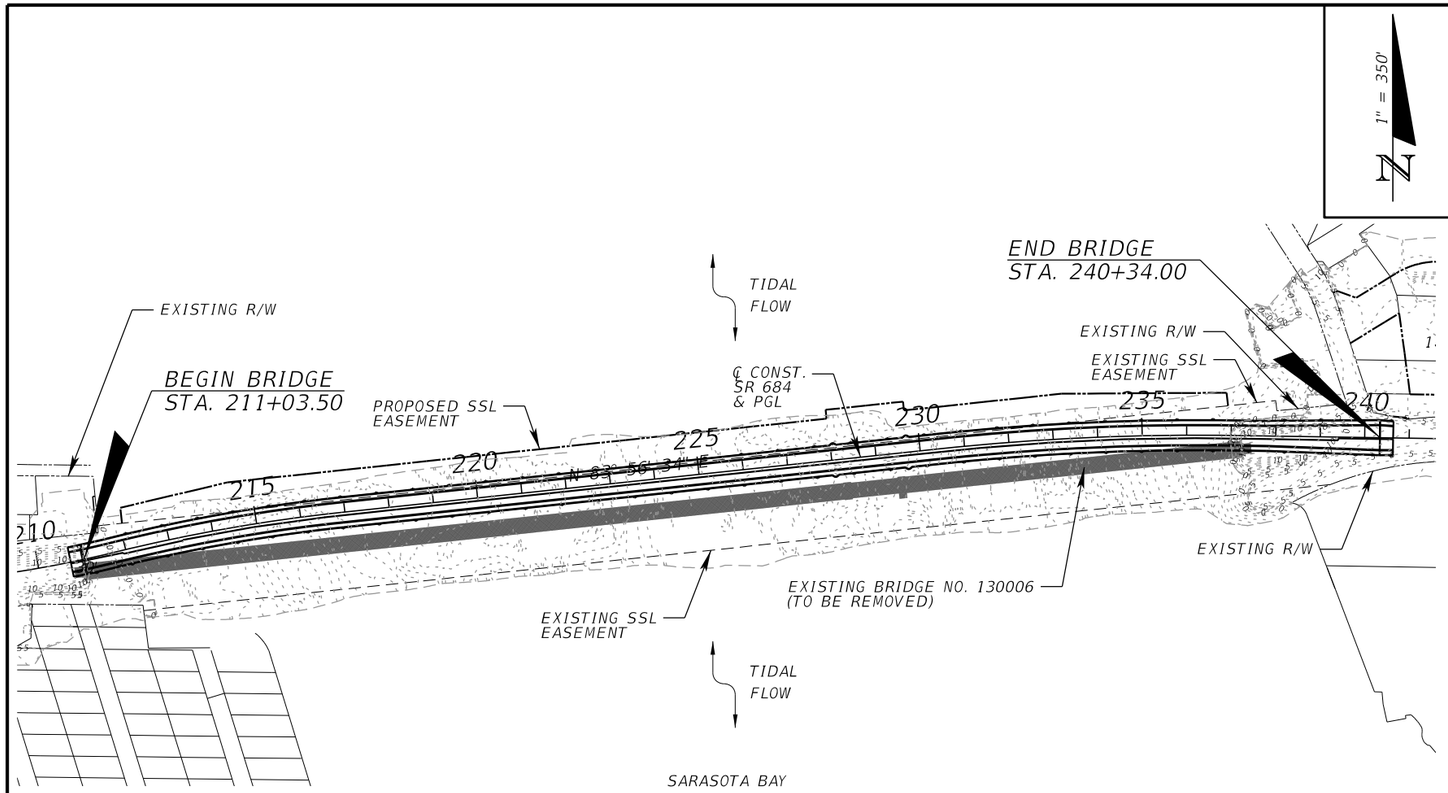
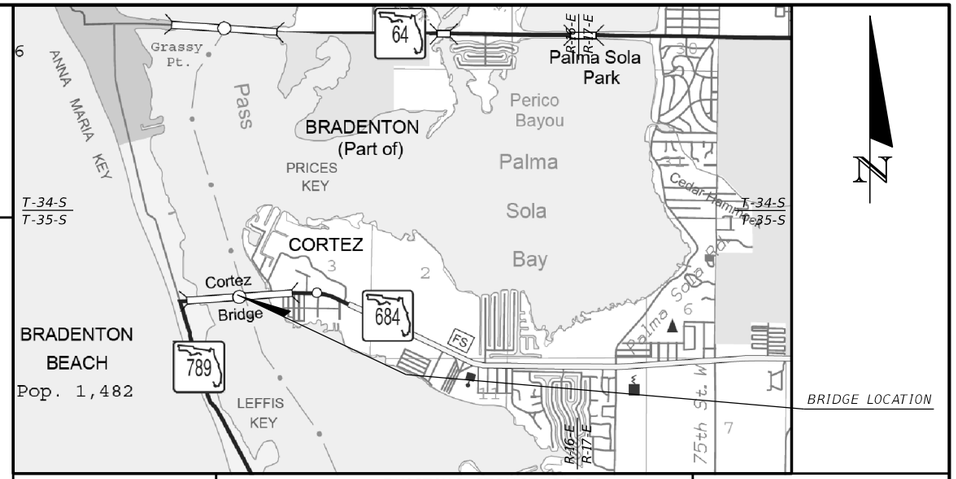
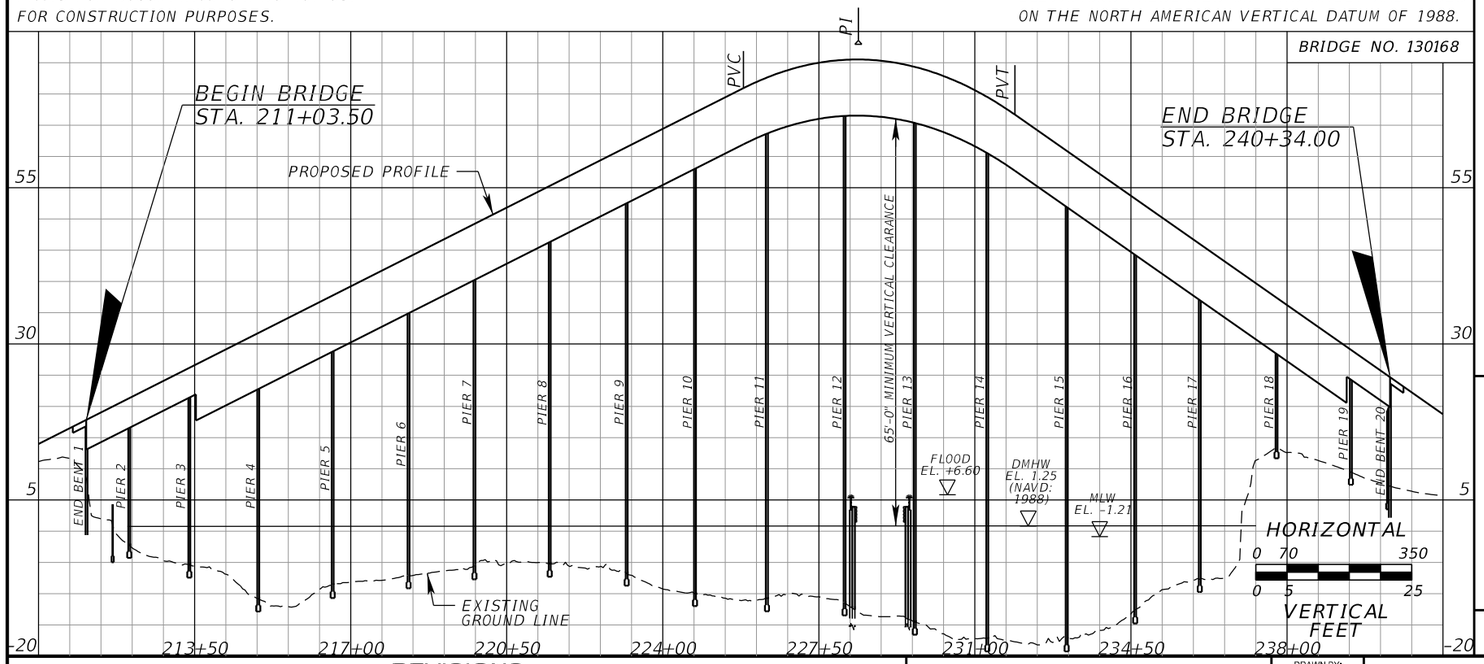




THIS SHEET HAS BEEN INCLUDED IN THE PLANS FOR DOCUMENTATION. DO NOT USE FOR CONSTRUCTION PURPOSES.

ELEVATIONS PRESENTED ON THIS SHEET ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.

BRIDGE NO. 130168



(REFERENCE)	EXISTING STRUCTURES (1)	PROPOSED STRUCTURE
FOUNDATION	CONC. PILES	CONC. PILES
OVERALL LENGTH	2,616'-9"	2,930'-6"
SPAN LENGTH	VARIES 47'-1/2" TO 103"	VARIES 90' TO 165"
TYPE CONSTRUCTION	CONC. BEAMS	CONC. BEAMS
AREA OF OPENING@D.F.	UNKNOWN	39,546 SF
BRIDGE WIDTH	37'-5"	VARIES 68'-3" TO 79'-2 1/2"
ELEV. LOW MEMBER	+9.84'	+13.8'

HYDRAULIC DESIGN DATA

NOTE:
1. THE STAGE, DISCHARGE, AND VELOCITY DESCRIBED IN THE FLOOD DATA DID NOT OCCUR AT THE SAME TIME. THE HYDRAULIC DATA IS SHOWN FOR INFORMATIONAL PURPOSES ONLY TO INDICATE THE FLOOD DISCHARGES AND WATER SURFACE ELEVATIONS WHICH MAYBE ANTICIPATED IN ANY GIVEN YEAR. THIS DATA WAS GENERATED USING HIGHLY VARIABLE FACTORS DETERMINED BY A STUDY OF THE WATERSHED. MANY JUDGEMENTS AND ASSUMPTIONS ARE REQUIRED TO ESTABLISH THESE FACTORS. THE RESULTNAT HYDRAULIC DATA IS SENSITIVE TO CHANGES, PARTICULARLY ANTECENDENT CONDITIONS, URBANIZATION, CHANNELIZATION, AND LAND USE. USERS OF THIS DATA ARE CAUTIONED AGAINST THE ASSUMPTION OF PRECISION WHICH CANNOT BE OBTAINED.

TERMS:
DESIGN FLOOD: UTILIZED TO ASSURE A DESIRED LEVEL OF HYDRAULIC PERFORMANCE.
BASE FLOOD: HAS A 1% CHANCE OF BEING EXCEEDED IN ANY GIVEN YEAR (100 YEAR FREQUENCY)
OVERTOPPING FLOOD: CAUSES FLOW OVER THE HIGHWAY, OVER A WATERSHED DIVIDE, OR THRU EMERGENCY RELIEF STRUCTURES.
GREATEST FLOOD: THE MOST SEVERE THAT CAN BE PREDICTED WHERE OVERTOPPING IS NOT PRACTICABLE.

WATER SURFACE ELEVATIONS: N.H.W. (Non-Tidal) N/A; CONTROL (Non-Tidal) N/A; M.H.W. (Tidal) +0.25; M.L.W. (Tidal) -1.21; DMHW +1.25

FLOOD DATA:	MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	☐ OVERTOPPING or ☒ GREATEST FLOOD
STAGE ELEV. NAVD (ft)	UNKNOWN	+6.6	+7.8	+10.5
DISCHARGE (cfs)	N/A	158,980	182,968	255,287
AVERAGE VELOCITY (f/s)	N/A	4.0	4.3	5.2
EXCEEDANCE PROB. (%)	N/A	2	1	0.2
FREQUENCY (yr.)	N/A	50	100	500

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:

PIER INFORMATION NUMBERS	SIZE AND TYPE	LONG TERM SCOUR ELEV.	TOTAL SCOUR ELEVATION WORST CASE < 100 yr. FREQ. (yr.)	WORST CASE < 500 yr. FREQ. (yr.)
2-4	CONCRETE PILES	-9.1	-24.1	-26.1
5-11, 17	CONCRETE PILES	-21.2	-28.2	-29.2
12-16	CONCRETE PILES	-29.0	-37.0	-39.0
18-19	CONCRETE PILES	+4.0	-16.0	-17.0

HYDRAULIC RECOMMENDATIONS

1. BEGIN BRIDGE STATION 211+03.50; END BRIDGE STATION 240+34.00; SKEW ANGLE 0°
2. CLEARANCE PROVIDED: NAV: HORIZ. 100' VERT. 66' ABOVE EL. +0.25'; DRIFT: HORIZ. 30' VERT. 10.9' ABOVE EL. +2.9'
3. MINIMUM CLEARANCE: NAV: HORIZ. 90' VERT. 65' ABOVE EL. +0.25'; DRIFT: HORIZ. N/A VERT. 2' ABOVE EL. +2.9'
4. ABUTMENTS:

	BEGIN BRIDGE	END BRIDGE
RUBBLE GRADE:	ARTICULATED CONC. BLOCK	ARTICULATED CONC. BLOCK
SLOPE:	7:1 (MAX.)	7:1 (MAX.)
BURIED OR NON-BURIED HORIZ. TOE:	NON-BURIED	NON-BURIED
TOE HORIZ. DISTANCE:	10' (MIN.)	10' (MIN.)
LIMIT OF PROTECTION:	10'	10'

5. DECK DRAINAGE: INLETS AT BEGIN AND END BRIDGES WILL CAPTURE RUNOFF FROM DECK.

REMARKS: MAXIMUM 100-YR. WAVE CREST ELEVATION EQUALS +13.6' NEAR PIER 17.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

MICHAEL R. KRECIC, P.E.
P.E. LICENSE NUMBER 57509
INTERA INCORPORATED
2114 NW 40TH TERRACE, SUITE A1
GAINESVILLE, FL 32605

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: MRK
CHECKED BY: INT

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: BRIDGE HYDRAULIC RECOMMENDATIONS

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-8

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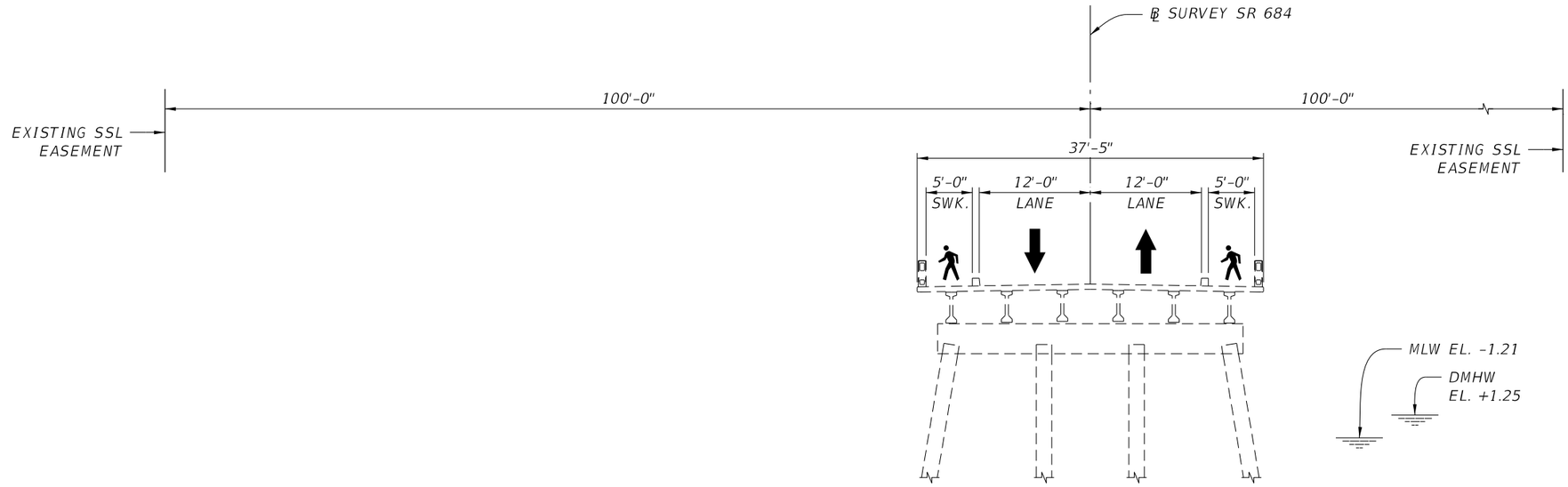
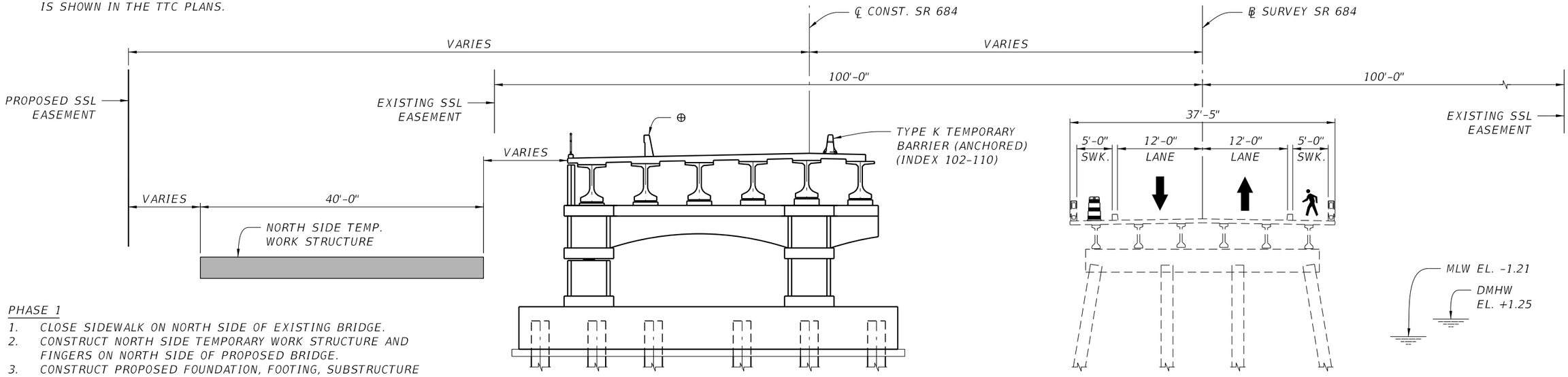


EXISTING CONDITION - WEST END

⊕ TRAFFIC RAILING ON APPROACH SLAB 1, SPAN 1 AND PORTION OF SPAN 2 TO BE CONSTRUCTED IN PHASE 3. SEE SHEET B1-15 FOR THE SPAN 2 LIMITS. THE LOCATION OF AN ADDITIONAL TYPE K TEMPORARY BARRIER WITHIN THESE LIMITS IS SHOWN IN THE TTC PLANS.



PHASE 1

1. CLOSE SIDEWALK ON NORTH SIDE OF EXISTING BRIDGE.
2. CONSTRUCT NORTH SIDE TEMPORARY WORK STRUCTURE AND FINGERS ON NORTH SIDE OF PROPOSED BRIDGE.
3. CONSTRUCT PROPOSED FOUNDATION, FOOTING, SUBSTRUCTURE AND SUPERSTRUCTURE.
4. PLACE TEMPORARY TYPE K BARRIER.
5. REMOVE NORTH SIDE TEMPORARY WORK STRUCTURE AND ANY FINGERS NOT REQUIRED FOR PHASE 2 WORK.

PHASE 1 - WEST END
(PIER 3 & SPAN 2 SHOWN)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

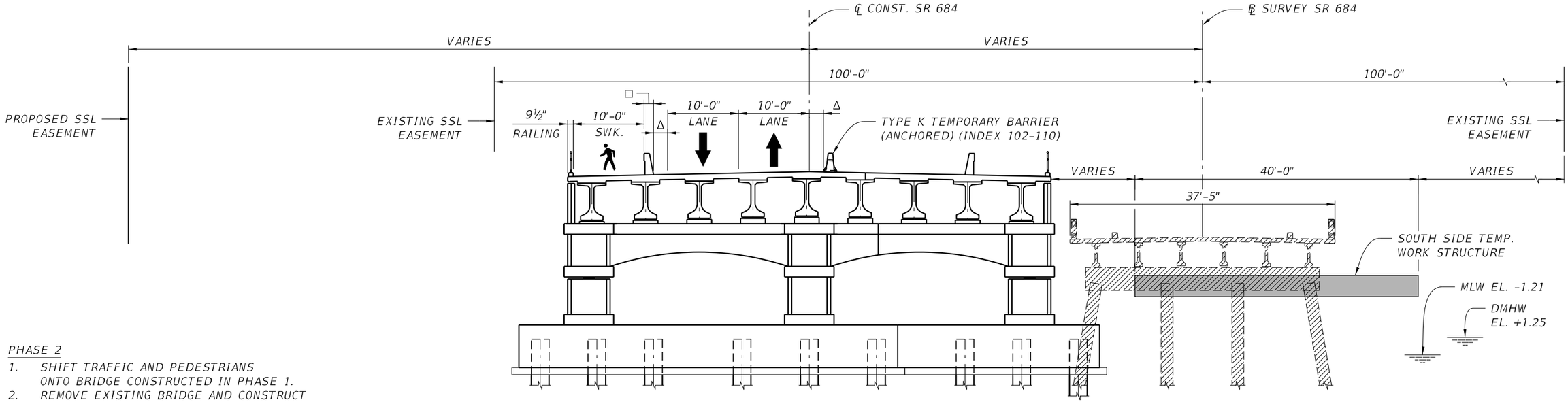
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CONSTRUCTION SEQUENCE - WEST END (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-9

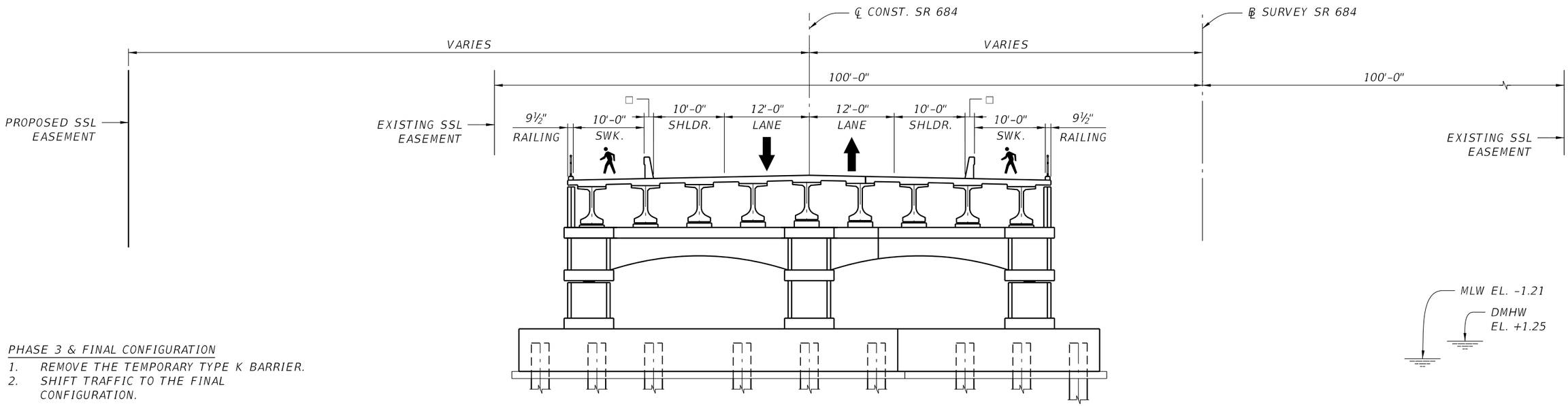


PHASE 2

1. SHIFT TRAFFIC AND PEDESTRIANS ONTO BRIDGE CONSTRUCTED IN PHASE 1.
2. REMOVE EXISTING BRIDGE AND CONSTRUCT SOUTH SIDE TEMPORARY WORK STRUCTURE AND FINGERS ON SOUTH SIDE OF PROPOSED BRIDGE.
3. INSTALL REMAINING PILES AND THEN CONSTRUCT FOOTING, COLUMN & PIER CAP.
4. CONSTRUCT THE SUPERSTRUCTURE.
5. REMOVE THE SOUTH SIDE TEMPORARY WORK STRUCTURE AND ALL REMAINING FINGERS.

PHASE 2 - WEST END

(PIER 3 & SPAN 2 SHOWN)
(Δ = 2'-0" SHOULDER, □ = 1'-4" RAILING)



PHASE 3 & FINAL CONFIGURATION

1. REMOVE THE TEMPORARY TYPE K BARRIER.
2. SHIFT TRAFFIC TO THE FINAL CONFIGURATION.

PHASE 3 & FINAL CONFIGURATION - WEST END

(PIER 3 & SPAN 2 SHOWN)
(□ = 1'-4" RAILING)

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	JGH
DESIGNED BY:	DMH
CHECKED BY:	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CONSTRUCTION SEQUENCE - WEST END (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-10

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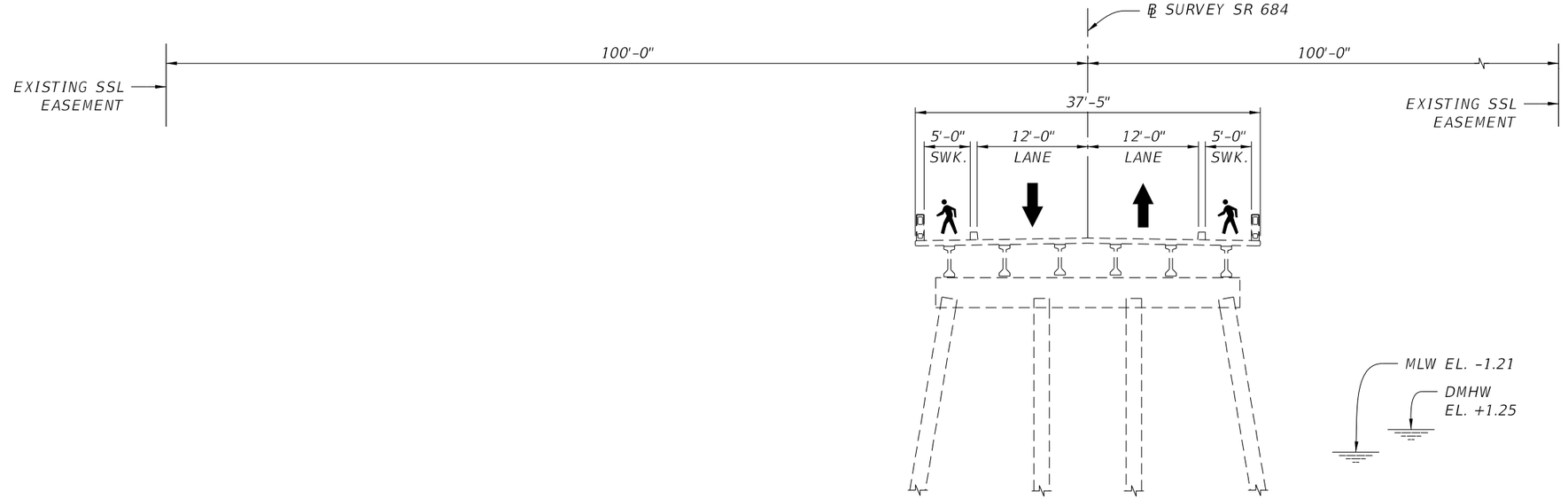
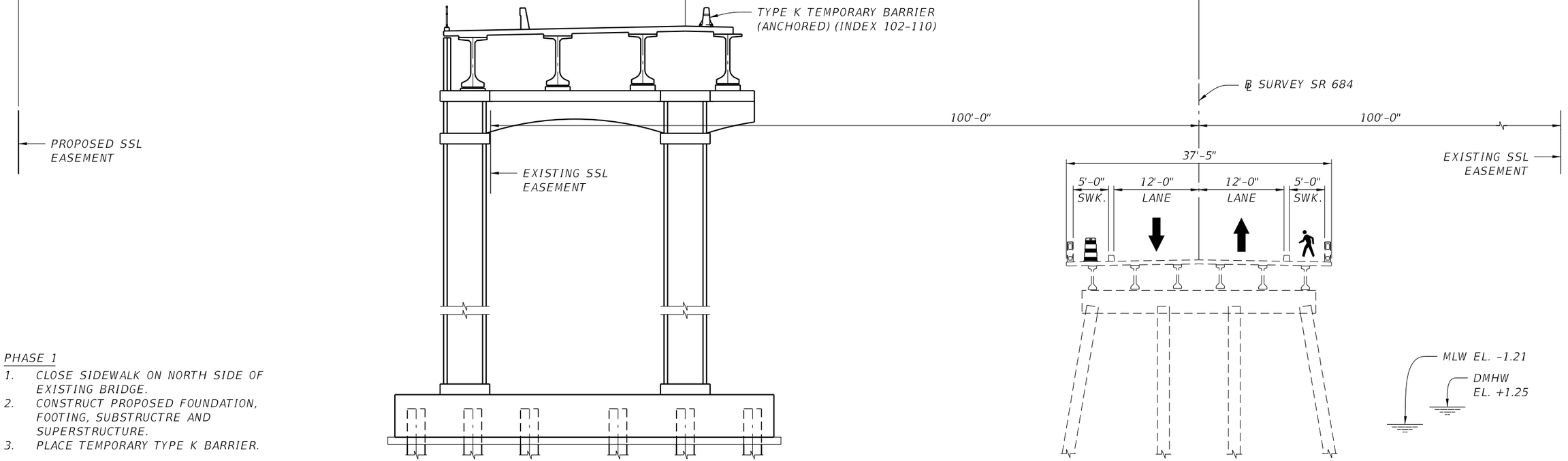


EXISTING CONDITION - MIDDLE



PHASE 1

1. CLOSE SIDEWALK ON NORTH SIDE OF EXISTING BRIDGE.
2. CONSTRUCT PROPOSED FOUNDATION, FOOTING, SUBSTRUCTRE AND SUPERSTRUCTURE.
3. PLACE TEMPORARY TYPE K BARRIER.

PHASE 1 - MIDDLE

(PIER 10 & SPAN 9 SHOWN)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

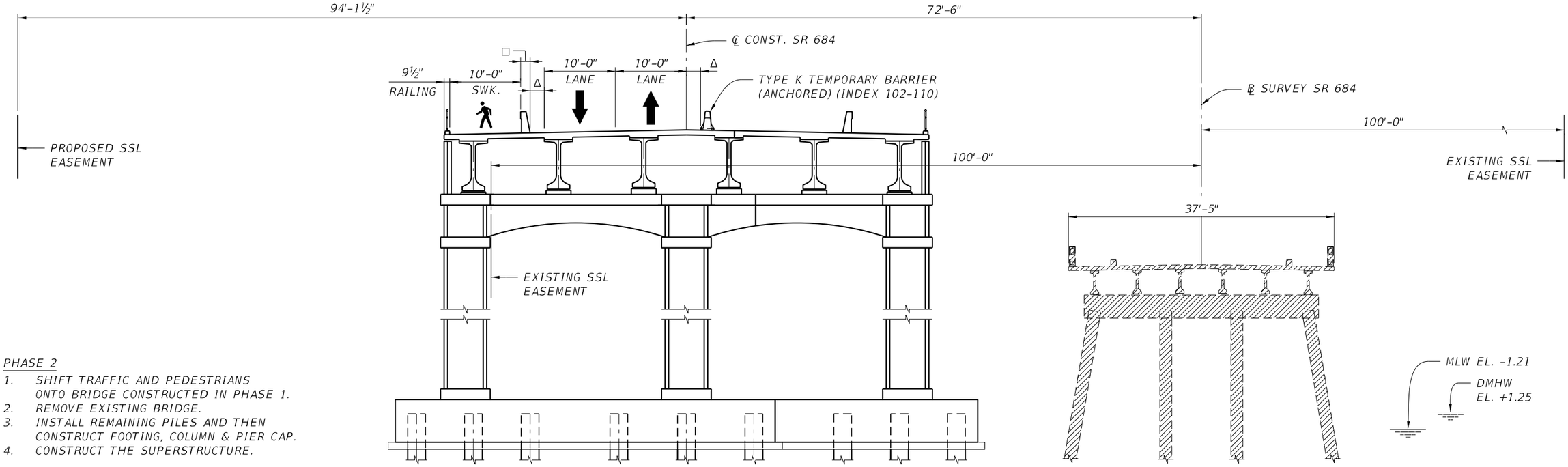
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CONSTRUCTION SEQUENCE - MIDDLE (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-11

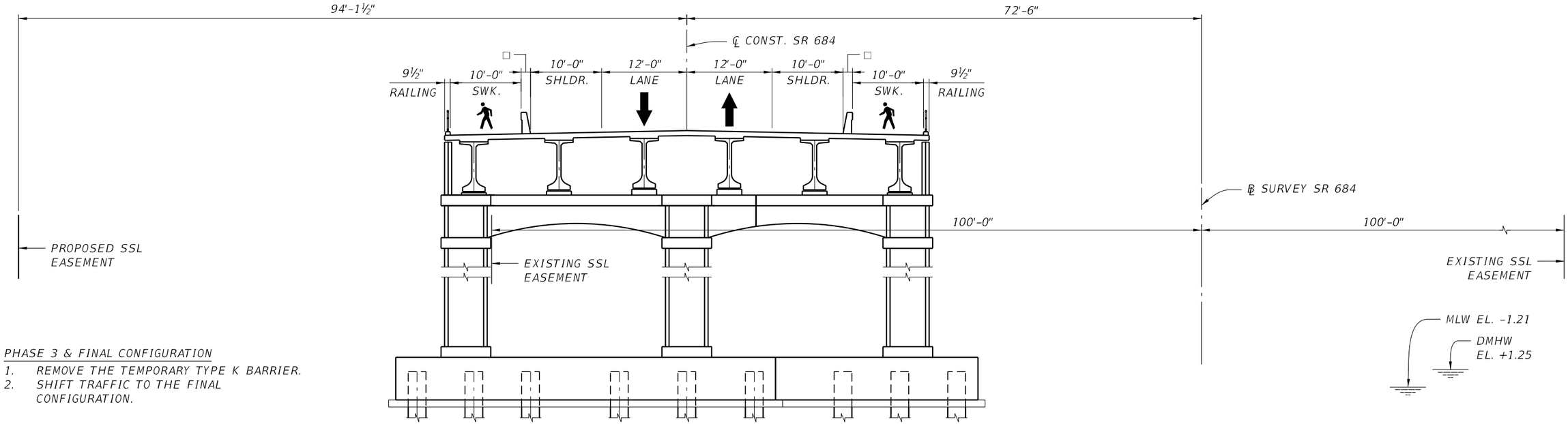


PHASE 2

1. SHIFT TRAFFIC AND PEDESTRIANS ONTO BRIDGE CONSTRUCTED IN PHASE 1.
2. REMOVE EXISTING BRIDGE.
3. INSTALL REMAINING PILES AND THEN CONSTRUCT FOOTING, COLUMN & PIER CAP.
4. CONSTRUCT THE SUPERSTRUCTURE.

PHASE 2 - MIDDLE

(PIER 10 & SPAN 9 SHOWN)
(Δ = 2'-0" SHOULDER, □ = 1'-4" RAILING)



PHASE 3 & FINAL CONFIGURATION

1. REMOVE THE TEMPORARY TYPE K BARRIER.
2. SHIFT TRAFFIC TO THE FINAL CONFIGURATION.

PHASE 3 & FINAL CONFIGURATION - MIDDLE

(PIER 10 & SPAN 9 SHOWN)
(□ = 1'-4" RAILING)

BRIDGE NO. 130168

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TAMPA, FL 33607

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DESIGNED BY:	DMH
CHECKED BY:	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

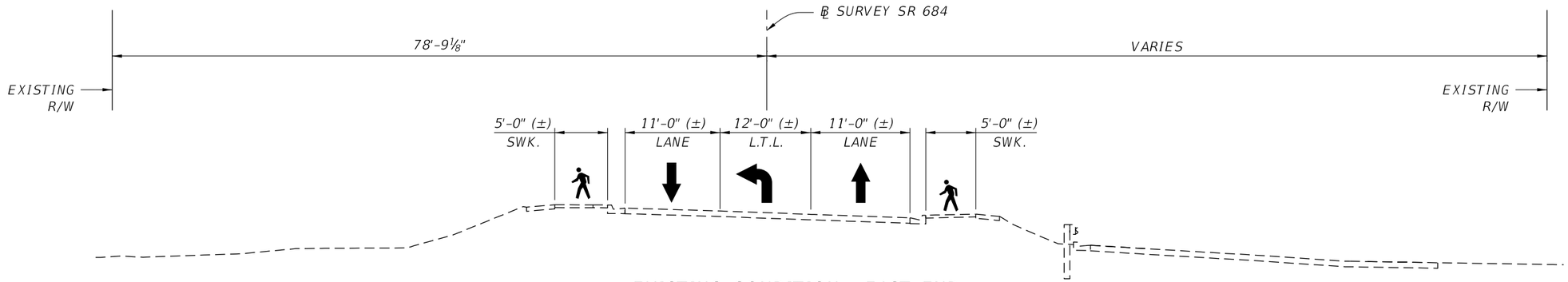
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CONSTRUCTION SEQUENCE - MIDDLE (2 OF 2)

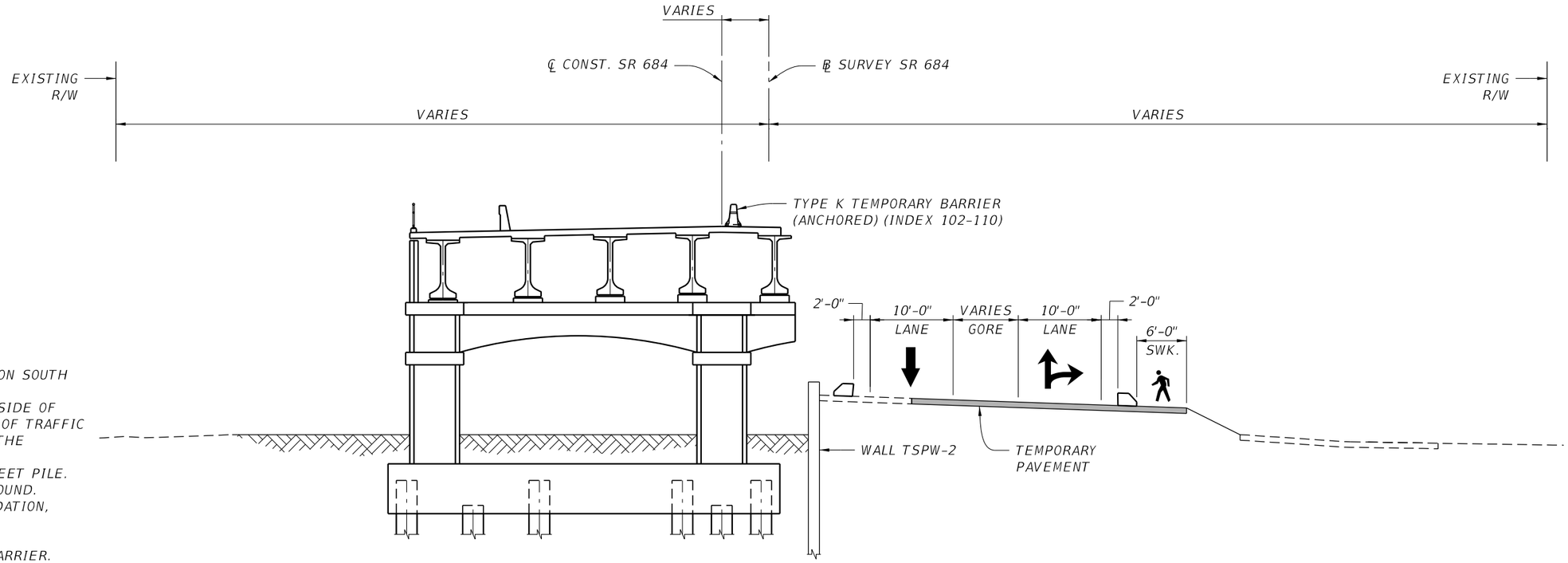
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-12



EXISTING CONDITION - EAST END



PHASE 1

1. PLACE TEMPORARY ASPHALT ON SOUTH SIDE OF EXISTING ROADWAY.
2. CLOSE SIDEWALK ON NORTH SIDE OF EXISTING ROADWAY AS PART OF TRAFFIC AND SIDEWALK SHIFT ONTO THE TEMPORARY ASPHALT.
3. INSTALL THE TEMPORARY SHEET PILE.
4. EXCAVATE THE EXISTING GROUND.
5. CONSTRUCT PROPOSED FOUNDATION, FOOTING, SUBSTRUCTRE AND SUPERSTRUCTURE.
6. PLACE TEMPORARY TYPE K BARRIER.

PHASE 1 - EAST END

(PIER 19 & SPAN 18 SHOWN)

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

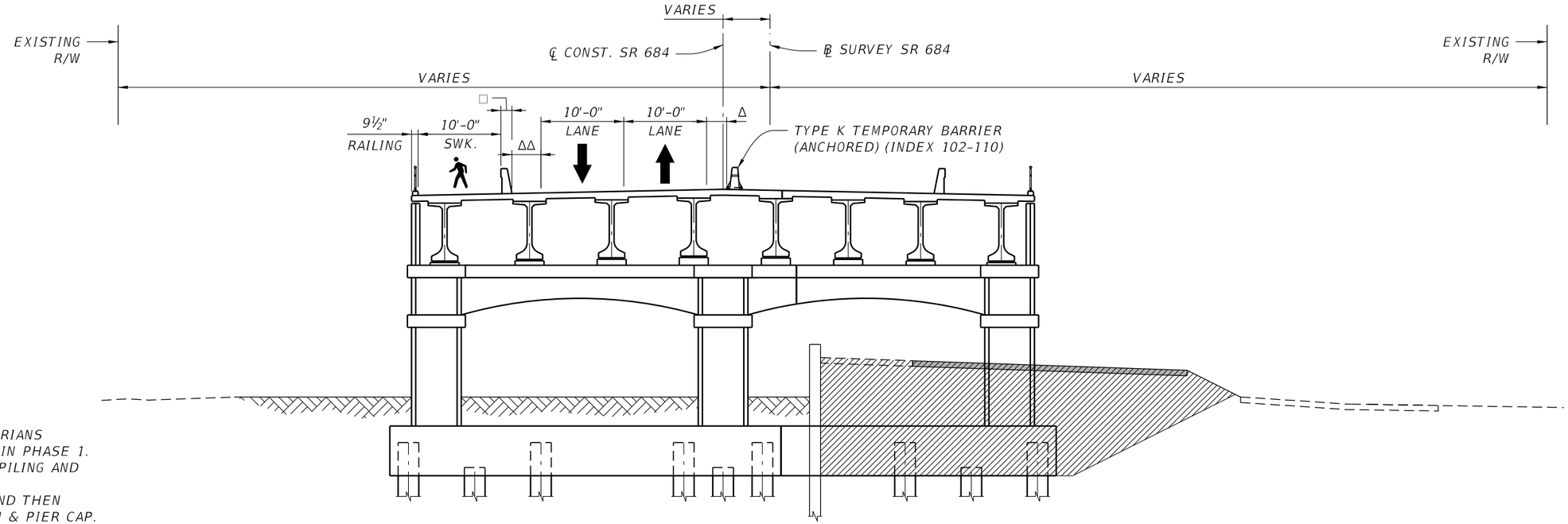
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CONSTRUCTION SEQUENCE - EAST END (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-13



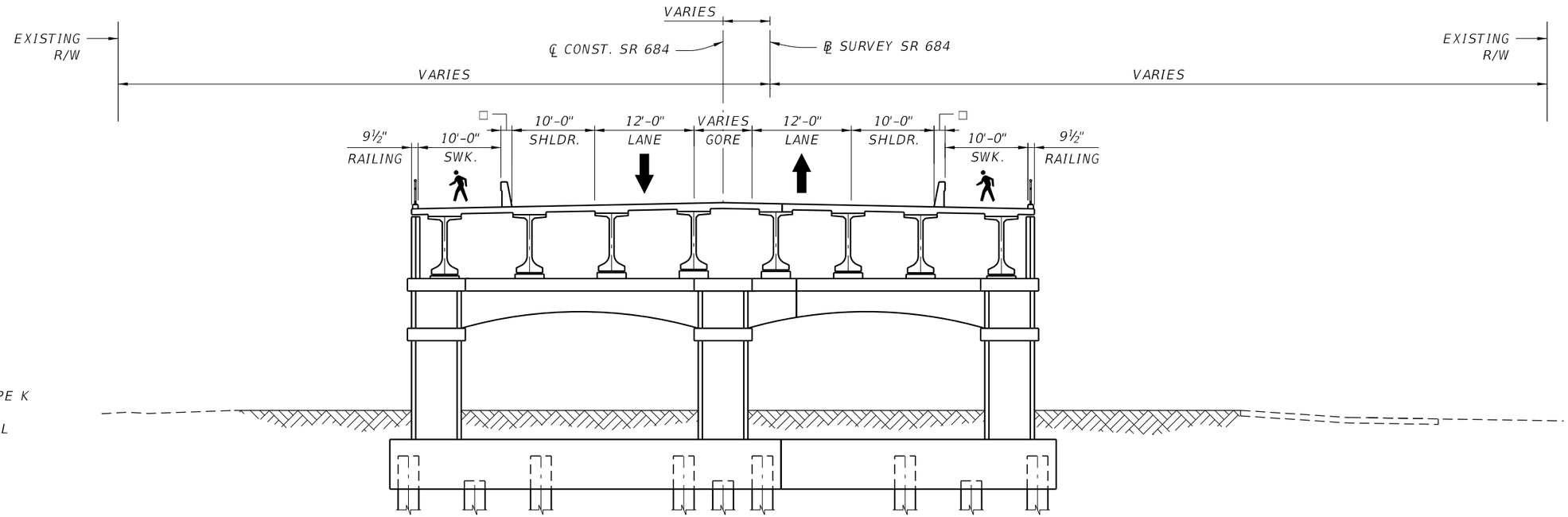
PHASE 2

1. SHIFT TRAFFIC AND PEDESTRIANS ONTO BRIDGE CONSTRUCTED IN PHASE 1.
2. REMOVE TEMPORARY SHEET PILING AND EXISTING EMBANKMENT.
3. INSTALL REMAINING PILES AND THEN CONSTRUCT FOOTING, COLUMN & PIER CAP.
4. CONSTRUCT THE SUPERSTRUCTURE.

PHASE 2 - EAST END

(PIER 19 & SPAN 18 SHOWN)

(Δ = 2'-0" SHOULDER, ΔΔ = 2'-0" (MIN.) SHOULDER, □ = 1'-4" RAILING)



PHASE 3 & FINAL CONFIGURATION

1. REMOVE THE TEMPORARY TYPE K BARRIER.
2. SHIFT TRAFFIC TO THE FINAL CONFIGURATION.

PHASE 3 & FINAL CONFIGURATION - EAST END

(PIER 19 & SPAN 18 SHOWN)

(□ = 1'-4" RAILING)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	JGH
DESIGNED BY:	DMH
CHECKED BY:	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

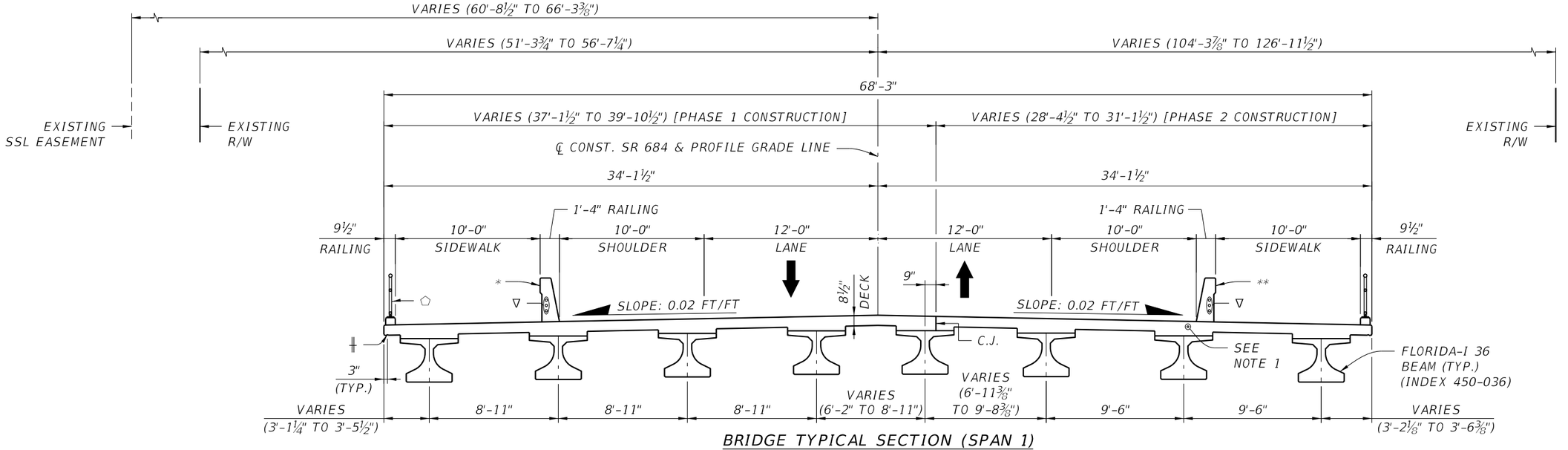
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CONSTRUCTION SEQUENCE - EAST END (2 OF 2)

REF. DWG. NO.:

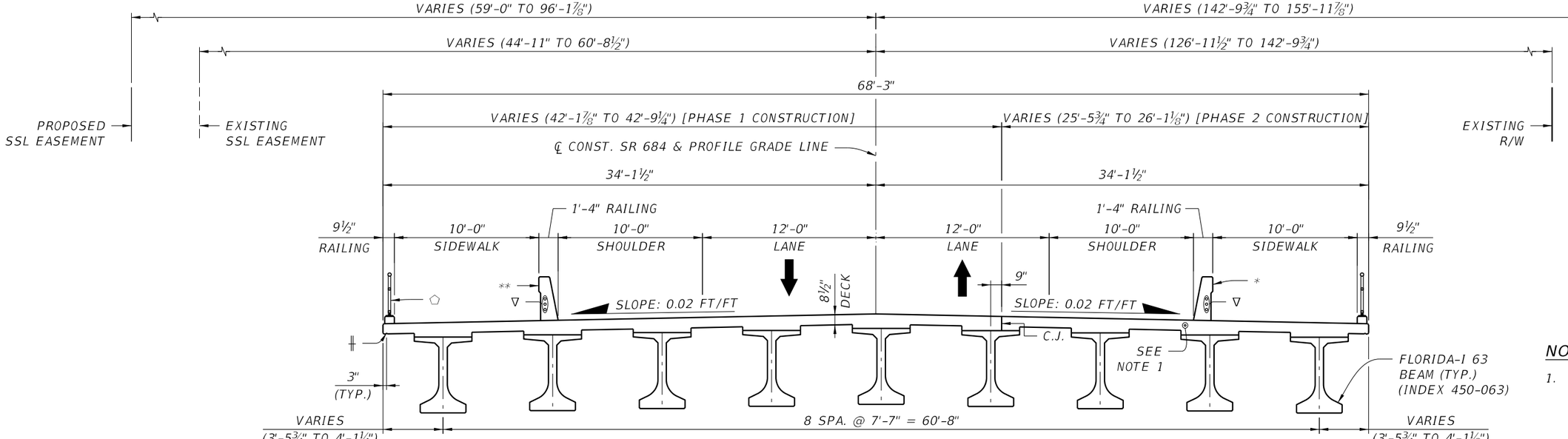
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-14



BRIDGE TYPICAL SECTION (SPAN 1)

⬠ = BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP)] (TYP.)
∇ = 3 - 2" DIA. CONDUIT W/ EXPANSION FITTING COUPLER AND EJB "B" (INDEX 630-010)
* = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427)
** = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) [MOD.]
⫴ = ½" V-GROOVE (TYP.)



BRIDGE TYPICAL SECTION (SPAN 2)

⬠ = BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP)] (TYP.)
∇ = 3 - 2" DIA. CONDUIT W/ EXPANSION FITTING COUPLER AND EJB "B" (INDEX 630-010)
* = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427)
** = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) (MOD.) FROM STA. 211+93.50 TO STA. 212+10.00
& 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) FROM STA. 212+10.00 TO STA. 213+30.75
⫴ = ½" V-GROOVE (TYP.)

NOTE:

1. 1½" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. SEE SUPERSTRUCTURE SECTIONS & APPROACH SLAB DETAILS FOR PLACEMENT. NO PULL BOXES ARE REQUIRED.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

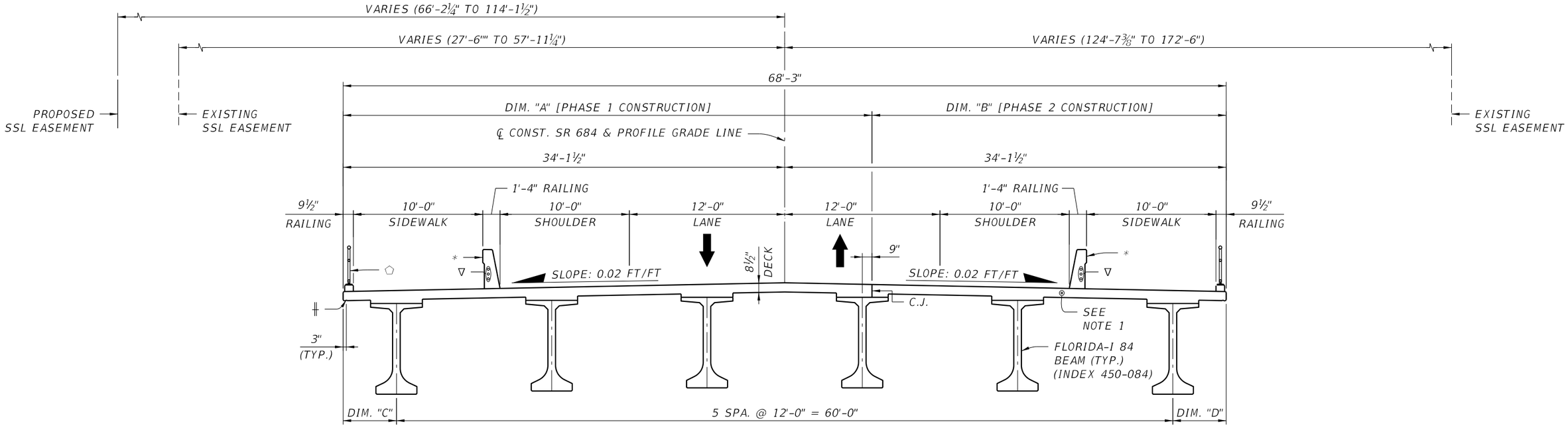
DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TYPICAL SECTION (1 OF 3)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. B1-15

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



BRIDGE TYPICAL SECTION (SPANS 3 - 17)

⬠ = BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP)] (TYP.)
∇ = 3 - 2" DIA. CONDUIT W/ EXPANSION FITTING COUPLER AND EJB "B" (INDEX 630-010)
* = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427)
⫳ = ½" V-GROOVE (TYP.)

SPAN	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
3 & 4	VARIES (40'-10½" TO 41'-8⅝")	VARIES (26'-6⅜" TO 27'-4½")	VARIES (4'-1⅜" TO 4'-11⅝")	VARIES (3'-3⅜" TO 4'-1⅜")
5	VARIES (40'-10½" TO 41'-0½")	VARIES (27'-2½" TO 27'-4½")	VARIES (4'-1½" TO 4'-3½")	VARIES (3'-11½" TO 4'-1½")
6 - 12	40'-10½"	27'-4½"	4'-1½"	4'-1½"
13	VARIES (40'-10½" TO 41'-3½")	VARIES (26'-11½" TO 27'-4½")	VARIES (4'-1½" TO 4'-6½")	VARIES (3'-8½" TO 4'-1½")
14 - 17	VARIES (40'-10½" TO 41'-5½")	VARIES (26'-9½" TO 27'-4½")	VARIES (4'-1½" TO 4'-8½")	VARIES (3'-6½" TO 4'-1½")

NOTE:

1. 1½" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. SEE SUPERSTRUCTURE SECTIONS & APPROACH SLAB DETAILS FOR PLACEMENT. NO PULL BOXES ARE REQUIRED.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

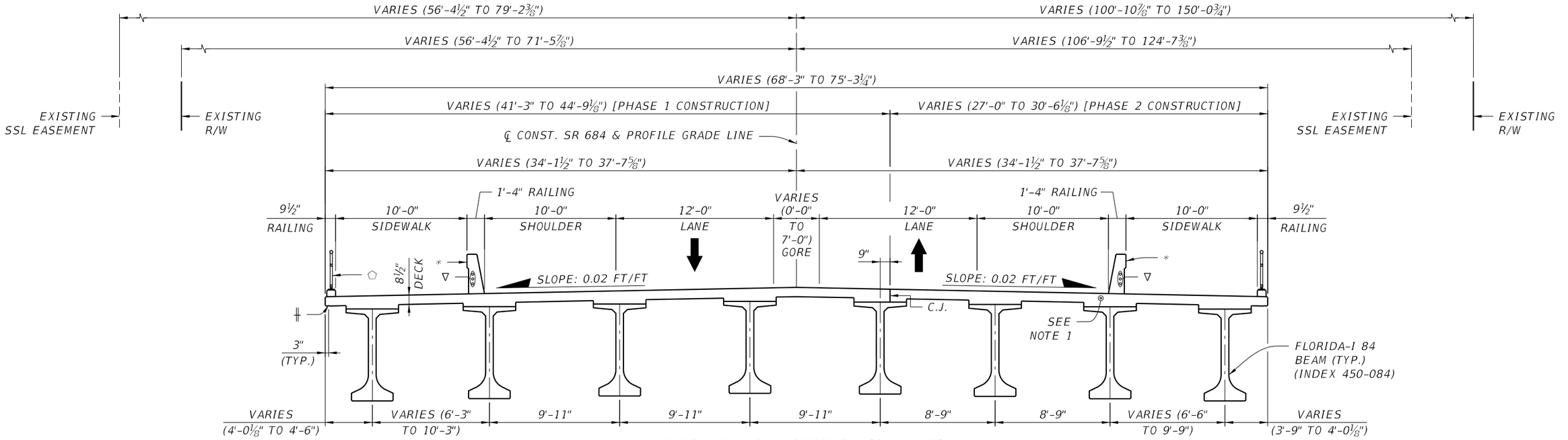
DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

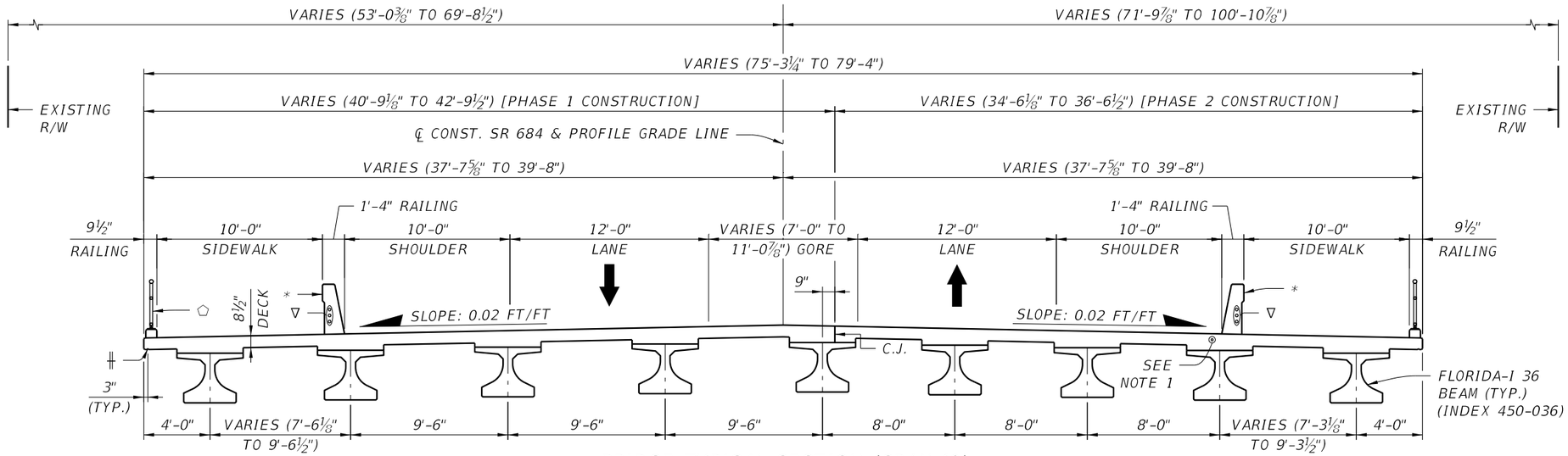
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TYPICAL SECTION (2 OF 3)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-16



BRIDGE TYPICAL SECTION (SPAN 18)

⬠ = BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP)] (TYP.)
∇ = 3 - 2" DIA. CONDUIT W/ EXPANSION FITTING COUPLER AND EJB "B" (INDEX 630-010)
* = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427)
⫴ = ½" V-GROOVE (TYP.)



BRIDGE TYPICAL SECTION (SPAN 19)

⬠ = BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP)] (TYP.)
∇ = 3 - 2" DIA. CONDUIT W/ EXPANSION FITTING COUPLER AND EJB "B" (INDEX 630-010)
* = 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427)
⫴ = ½" V-GROOVE (TYP.)

NOTE:

1. 1½" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. SEE SUPERSTRUCTURE SECTIONS & APPROACH SLAB DETAILS FOR PLACEMENT. NO PULL BOXES ARE REQUIRED.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TYPICAL SECTION (3 OF 3)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-17

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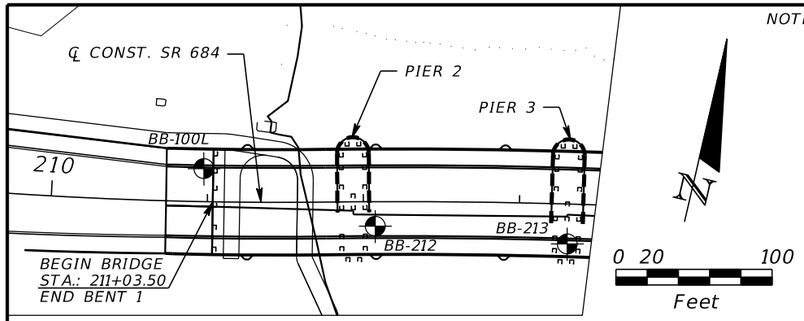


BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

- SAND
- CLAY
- SILTY SAND
- SILTY CLAY
- CLAYEY SAND
- WEATHERED LIMESTONE
- SILT
- SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

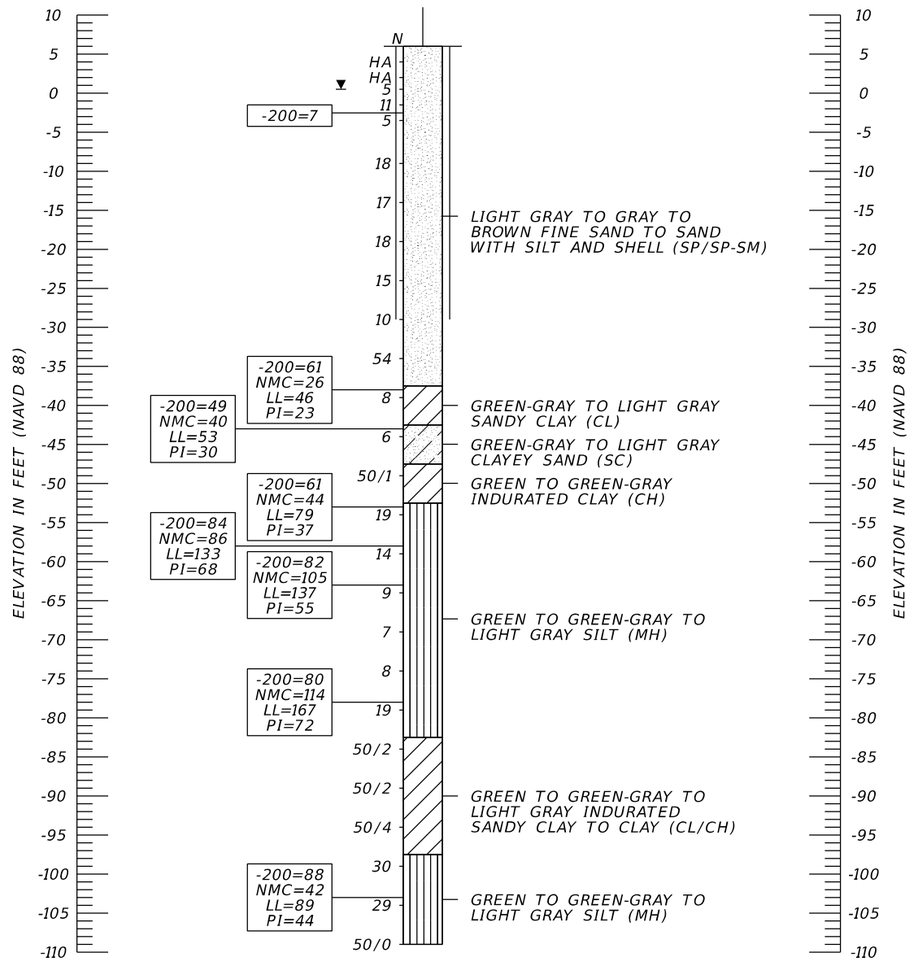
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-100L*
STA. 210+97
REF. ℄ CONST. SR 684
OFF. 21' LT.
ELEV. 6.0
DATE 7/28/2020
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -109.0 FT (NAVD 88)

LATITUDE: N 27.46849
LONGITUDE: W 82.69776

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200 NMC LL PI NP	PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) LIQUID LIMIT (%) PLASTICITY INDEX (%) NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (1 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-18

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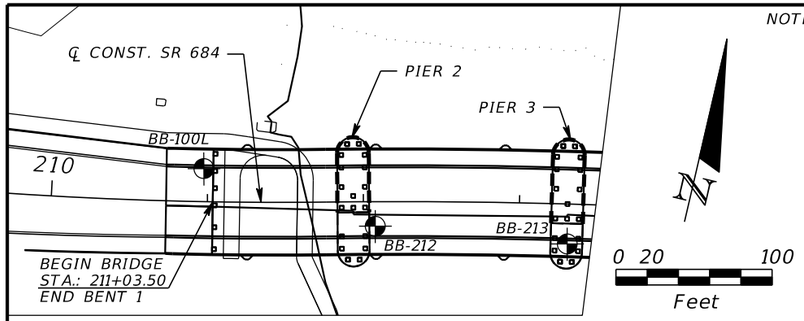


BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-212
STA. 212+08
REF. ℄ CONST. SR 684
OFF. 16' RT.
ELEV. -4.0 (MUDLINE)
DATE 8/4/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25

ENVIRONMENTAL CLASSIFICATION:

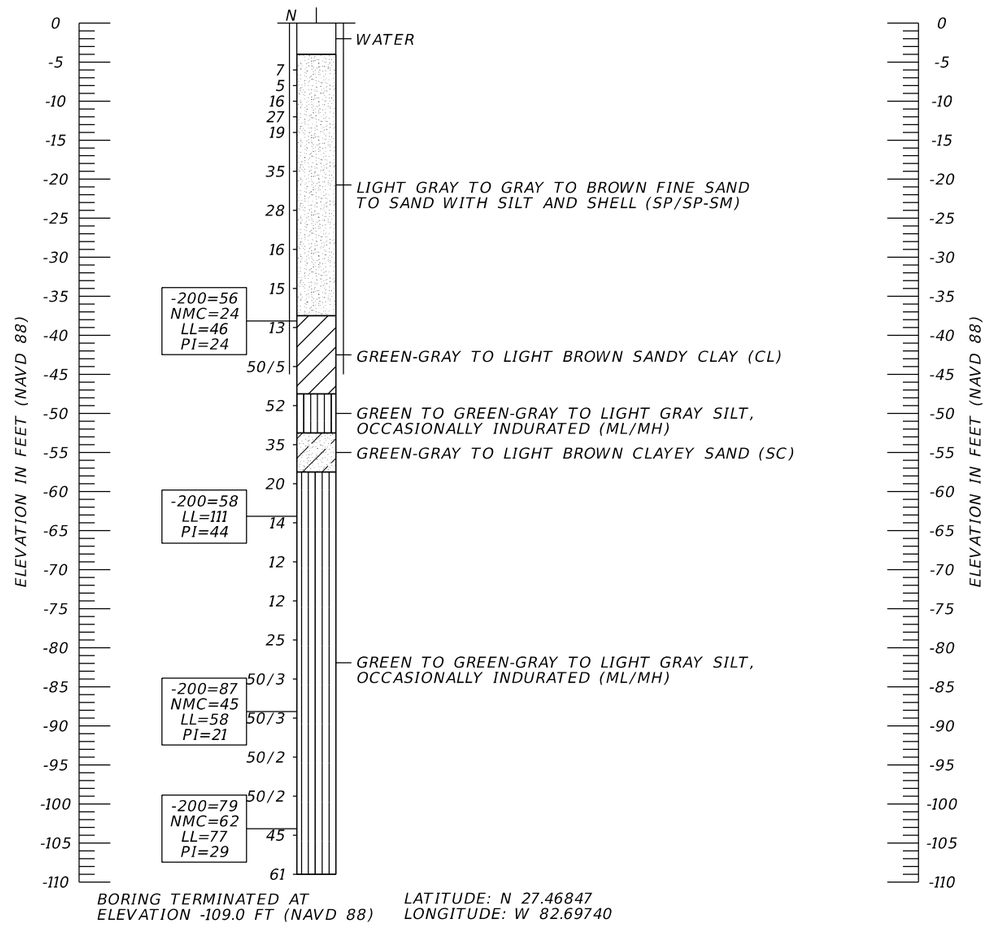
SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3



BORING TERMINATED AT ELEVATION -109.0 FT (NAVD 88)

LATITUDE: N 27.46847
LONGITUDE: W 82.69740

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

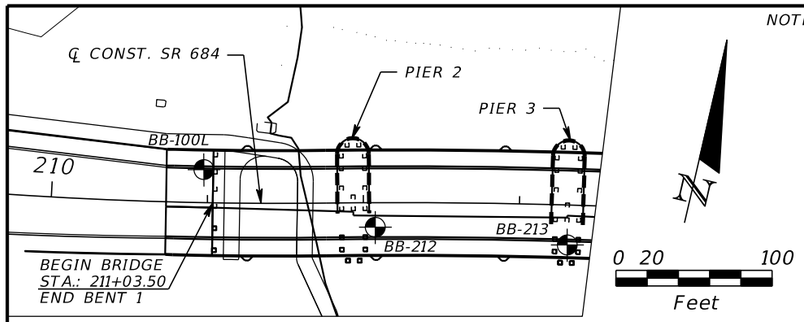
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (2 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-19



BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

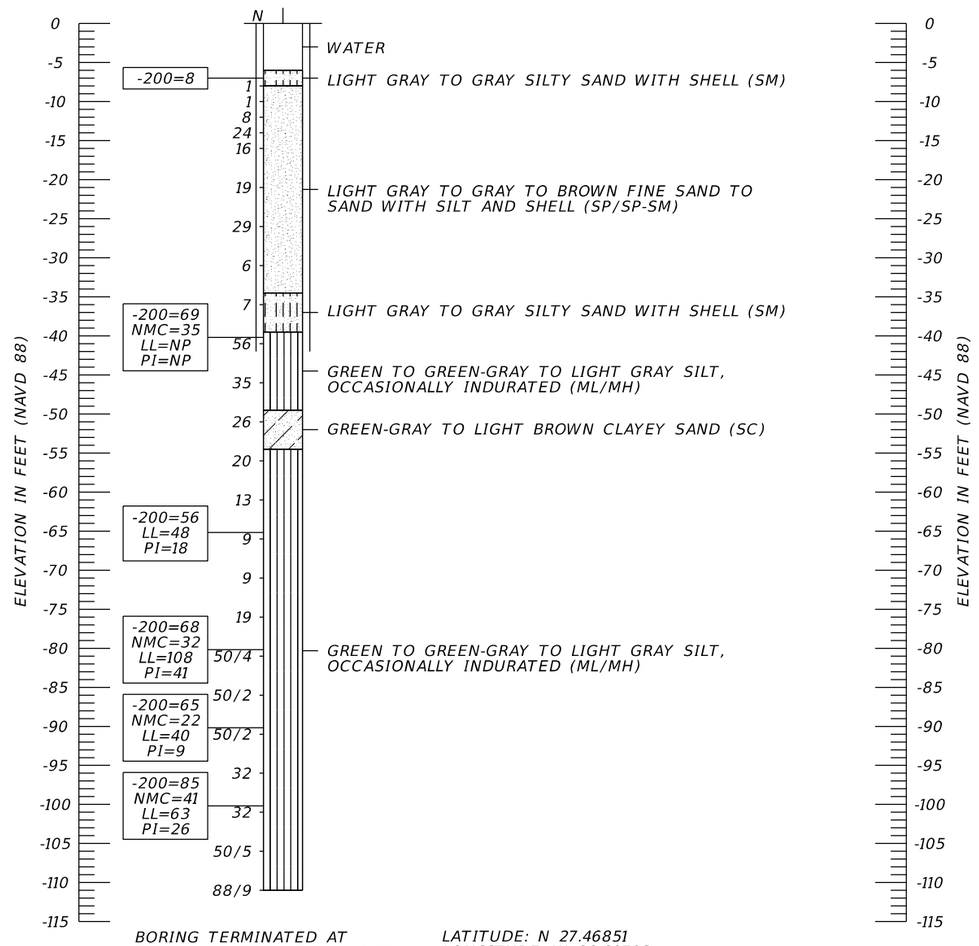
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-213
STA. 213+31
REF. ℄ CONST. SR 684
OFF. 26' RT.
ELEV. -6.0 (MUDLINE)
DATE 7/31/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -111.0 FT (NAVD 88)

LATITUDE: N 27.46851
LONGITUDE: W 82.69703

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200 NMC LL PI NP	PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) LIQUID LIMIT (%) PLASTICITY INDEX (%) NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
⇦ 100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

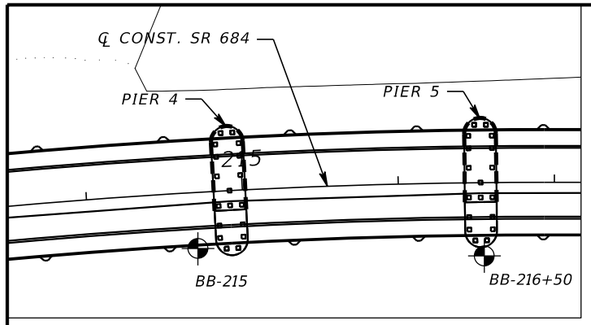
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

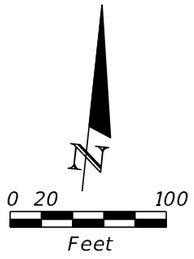
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (3 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-20





BORING LOCATION PLAN

NOTES: 1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.

2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

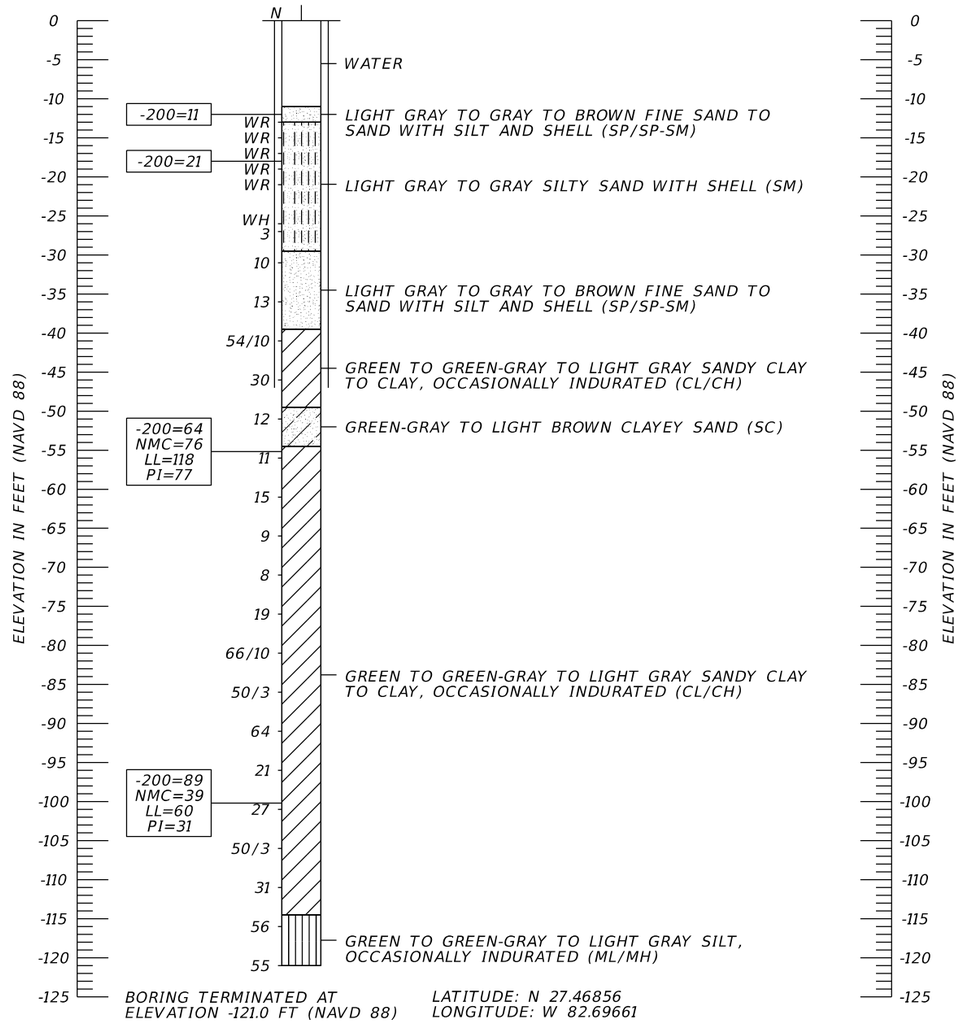
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-215
STA. 214+69
REF. ℄ CONST. SR 684
OFF. 36' RT.
ELEV. -11.0 (MUDLINE)
DATE 8/9/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -121.0 FT (NAVD 88)

LATITUDE: N 27.46856
LONGITUDE: W 82.69661

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

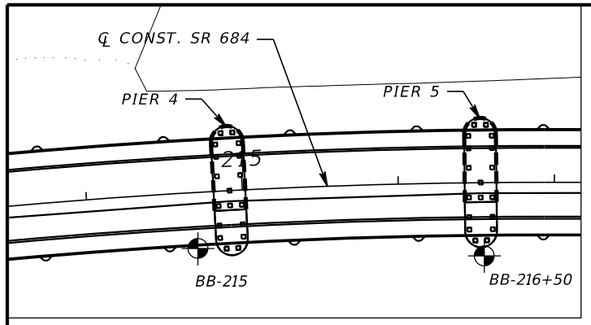
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

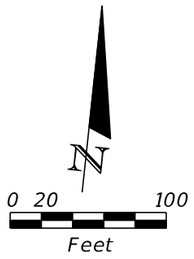
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (4 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-21





BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

- SAND
- CLAY
- SILTY SAND
- SILTY CLAY
- CLAYEY SAND
- WEATHERED LIMESTONE
- SILT
- SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

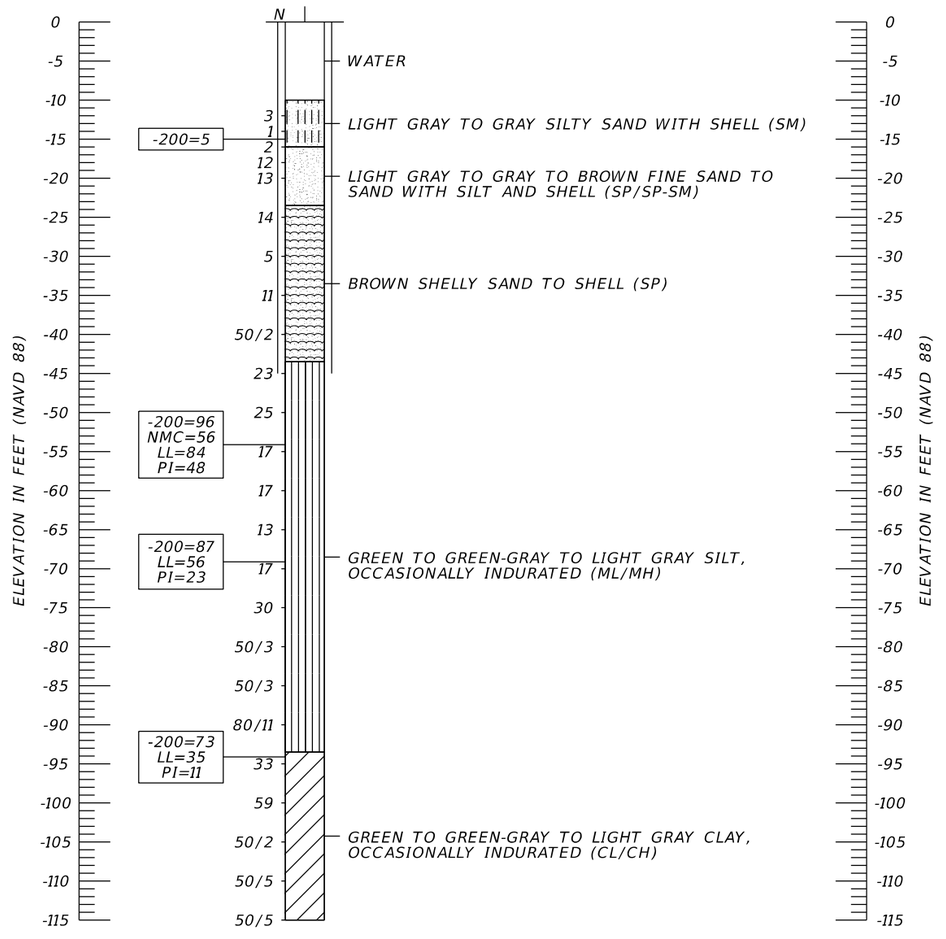
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-216+50
STA. 216+55
REF. ℄ CONST. SR 684
OFF. 47' RT.
ELEV. -10.0 (MUDLINE)
DATE 7/30/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -115.0 FT (NAVD 88)

LATITUDE: N 27.46860
LONGITUDE: W 82.69604

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
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7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
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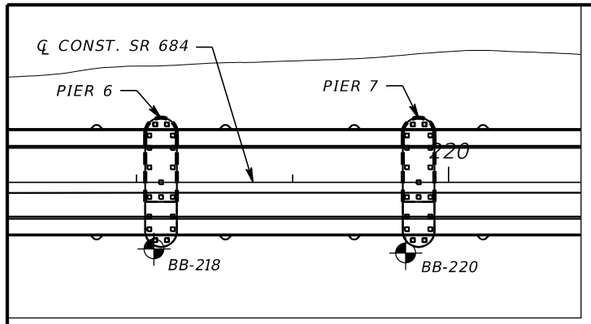
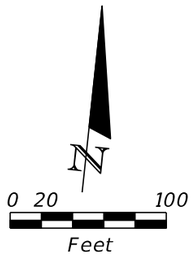
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (5 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-22





BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
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LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

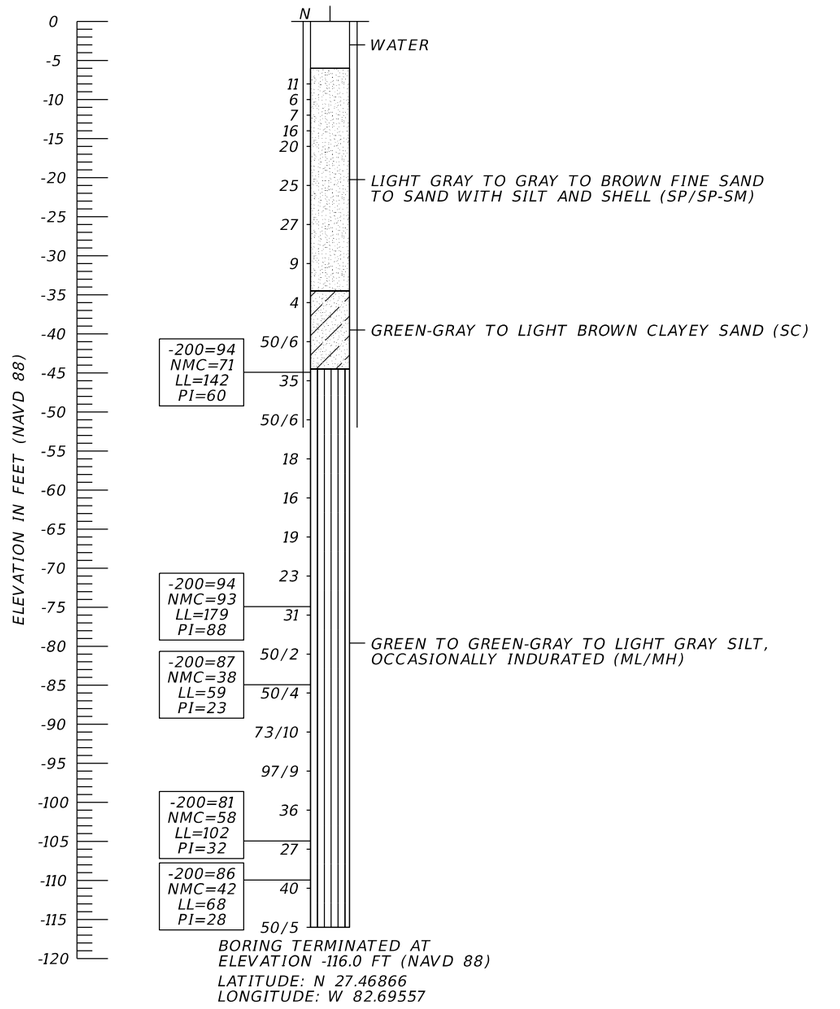
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-218
STA. 218+11
REF. ℄ CONST. SR 684
OFF. 43' RT.
ELEV. -6.0 (MUDLINE)
DATE 7/29/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (6 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-23

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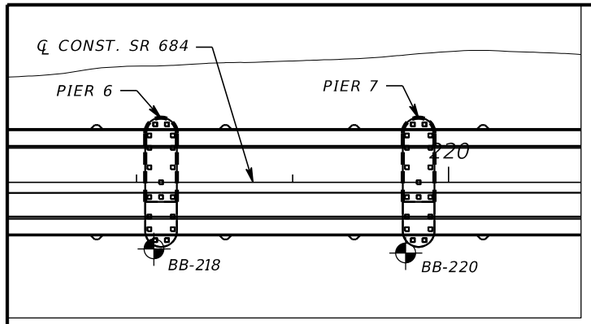
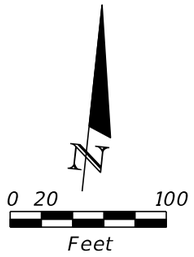


BORING LOCATION PLAN

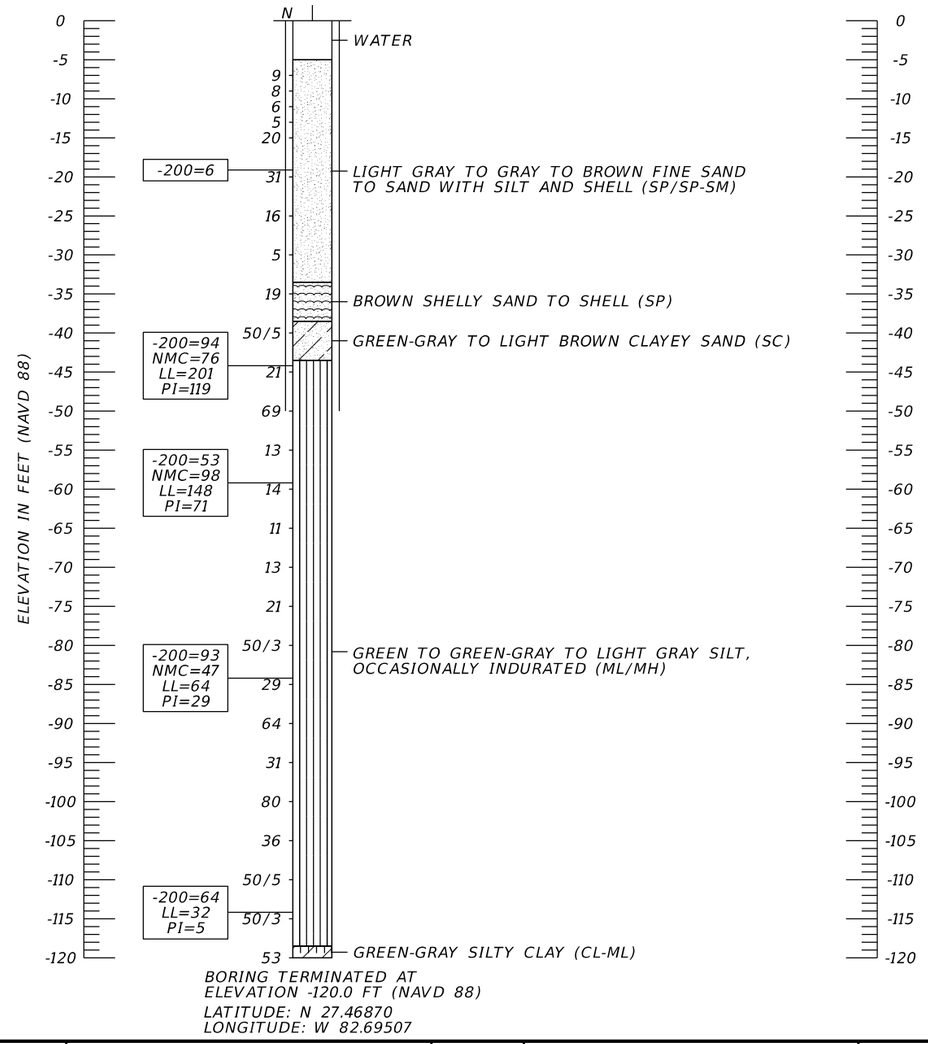


NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-220
STA. 219+72
REF. ℄ CONST. SR 684
OFF. 45' RT.
ELEV. -5.0 (MUDLINE)
DATE 7/28/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT
ELEVATION -120.0 FT (NAVD 88)
LATITUDE: N 27.46870
LONGITUDE: W 82.69507

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

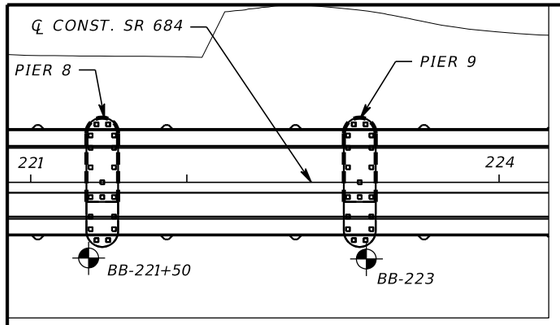
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

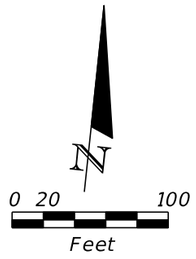
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (7 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-24





BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

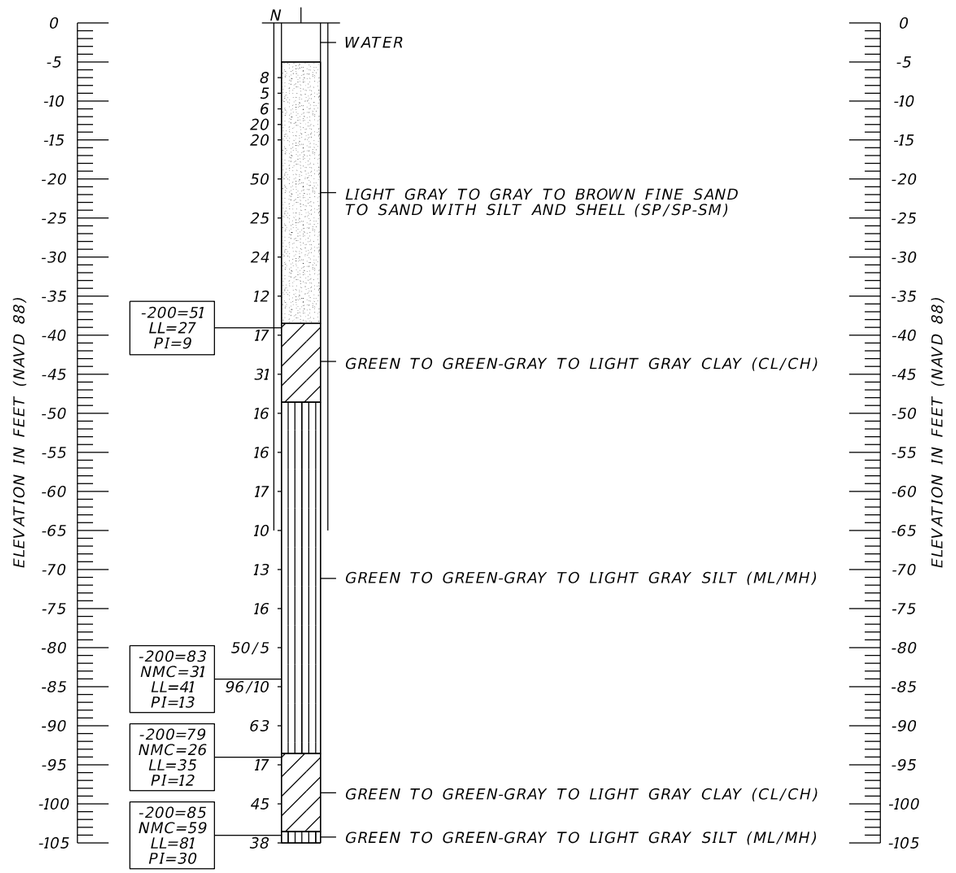
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-221+50
STA. 221+37
REF. ℄ CONST. SR 684
OFF. 48' RT.
ELEV. -5.0 (MUDLINE)
DATE 7/22/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -105.0 FT (NAVD 88)

LATITUDE: N 27.46874
LONGITUDE: W 82.69457

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

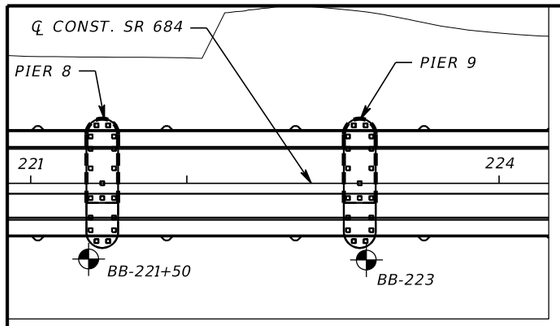
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

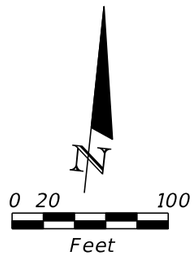
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (8 OF 21)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. B1-25





BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

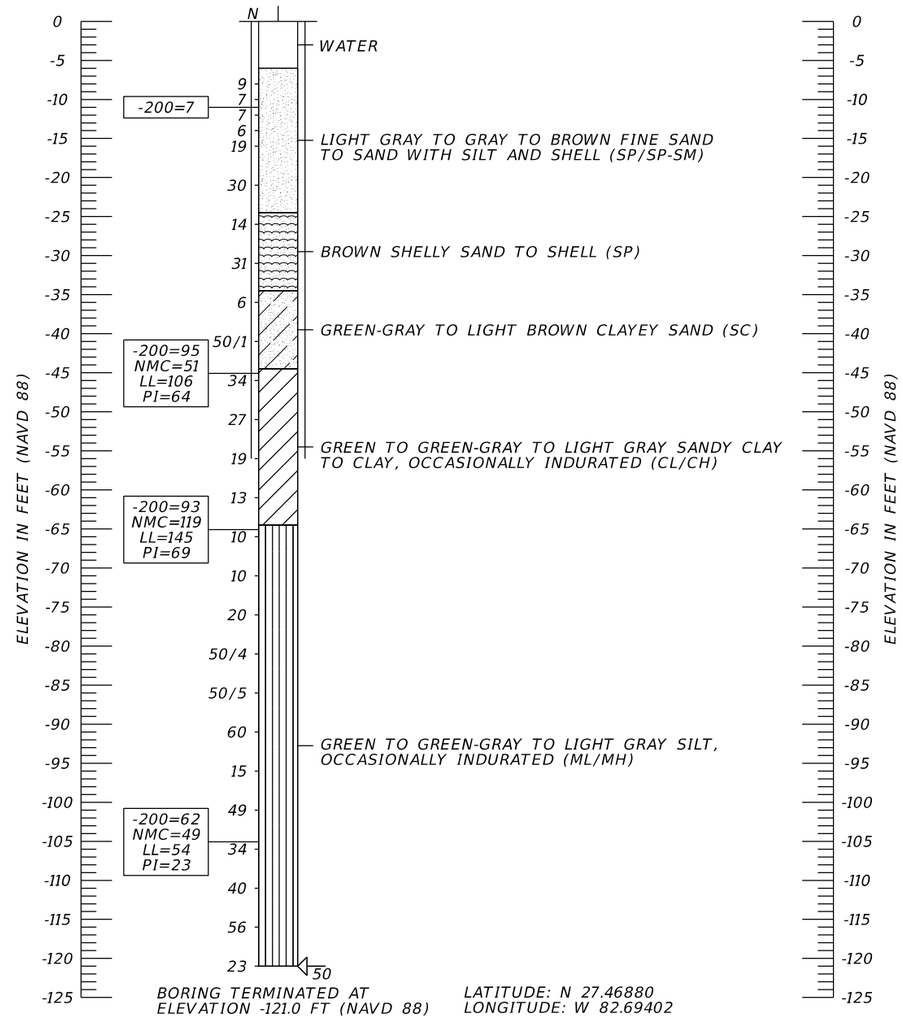
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-223
STA. 223+15
REF. ℄ CONST. SR 684
OFF. 49' RT.
ELEV. -6.0 (MUDLINE)
DATE 7/14/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -121.0 FT (NAVD 88)

LATITUDE: N 27.46880
LONGITUDE: W 82.69402

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

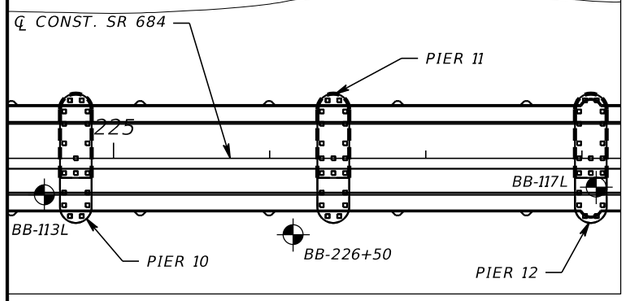
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

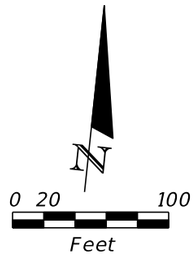
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (9 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-26



BORING LOCATION PLAN



NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
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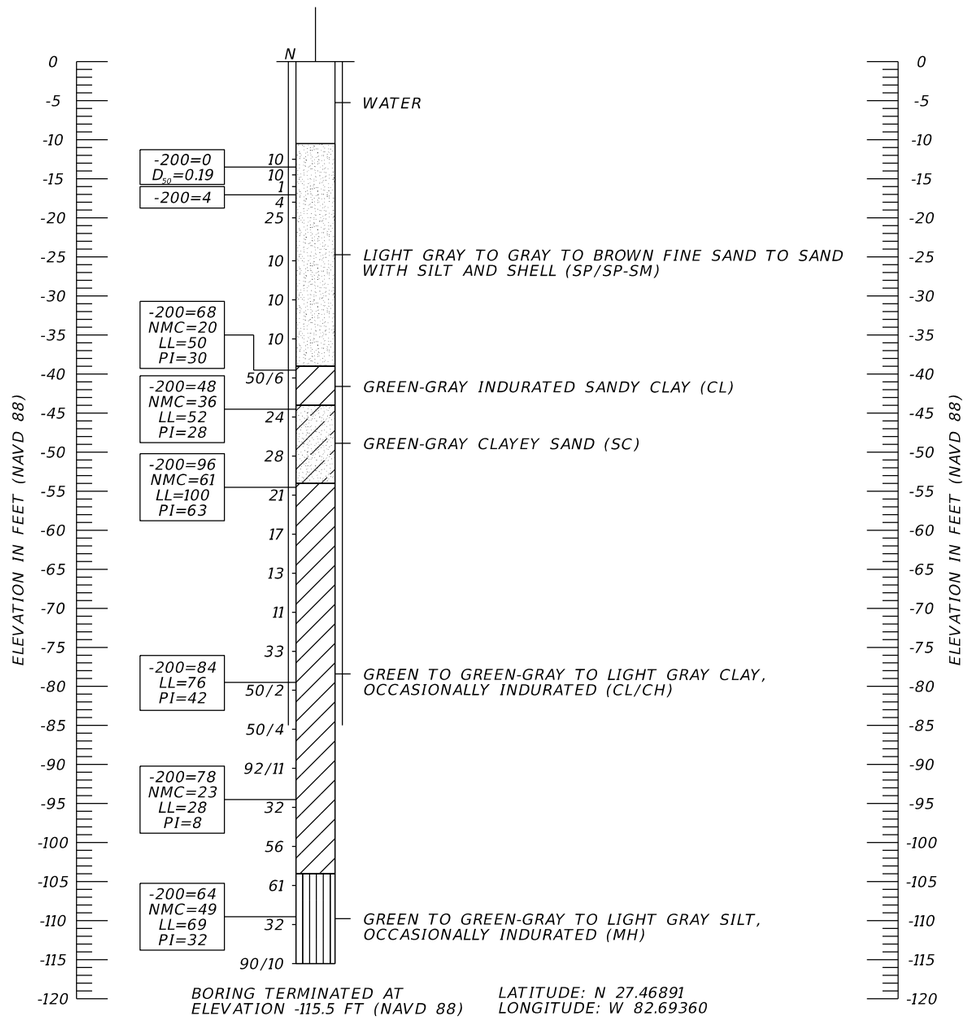
LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-113L
STA. 224+56
REF. ℄ CONST. SR 684
OFF. 23' RT.
ELEV. -10.5 (MUDLINE)
DATE 5/19/2020
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -115.5 FT (NAVD 88)

LATITUDE: N 27.46891
LONGITUDE: W 82.69360

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

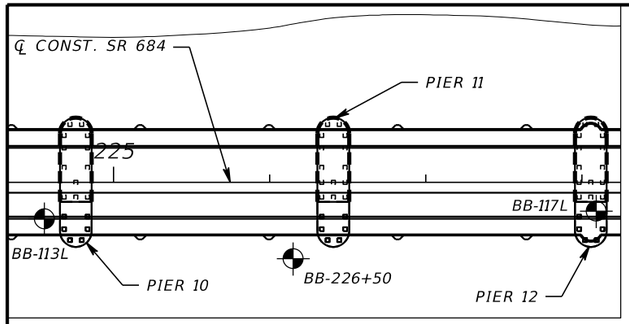
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

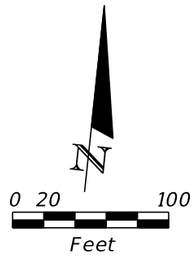
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (10 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-27



BORING LOCATION PLAN



NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

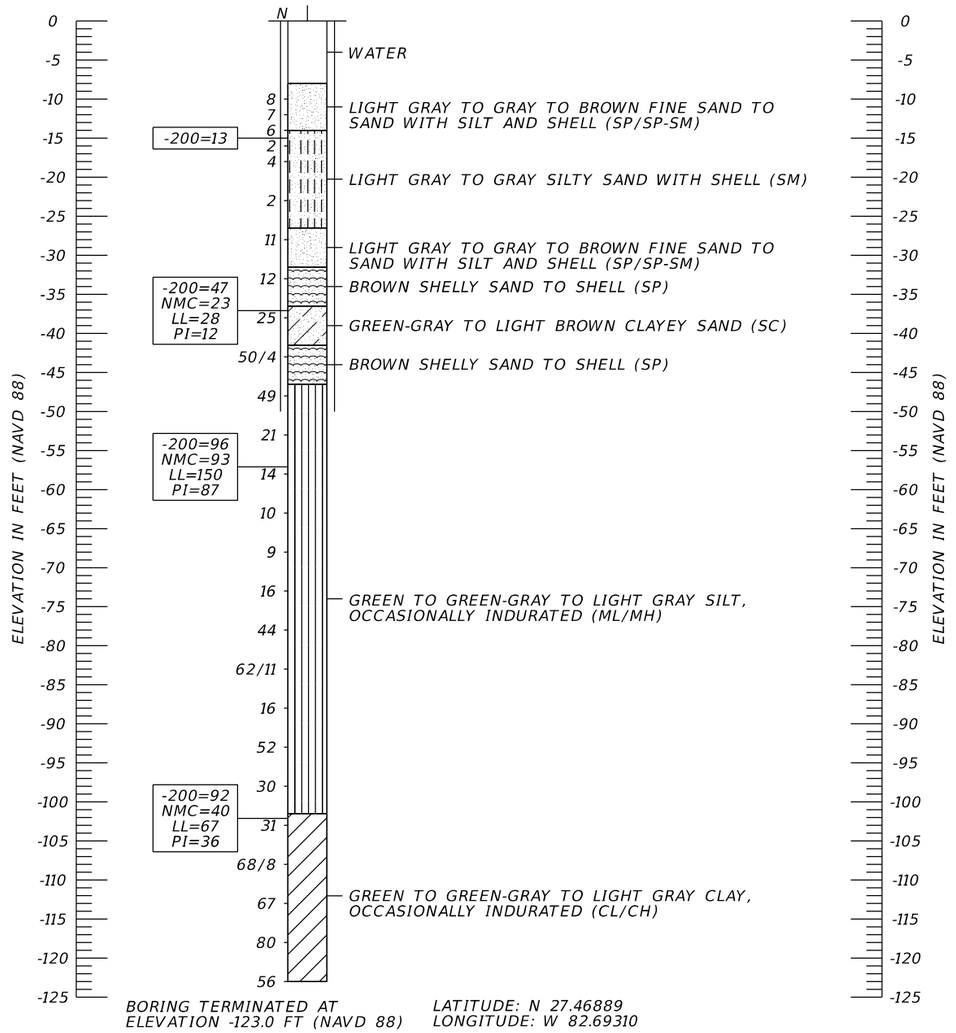
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-226+50
STA. 226+15
REF. ℄ CONST. SR 684
OFF. 49' RT.
ELEV. -8.0 (MUDLINE)
DATE 7/12/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -123.0 FT (NAVD 88)

LATITUDE: N 27.46889
LONGITUDE: W 82.69310

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

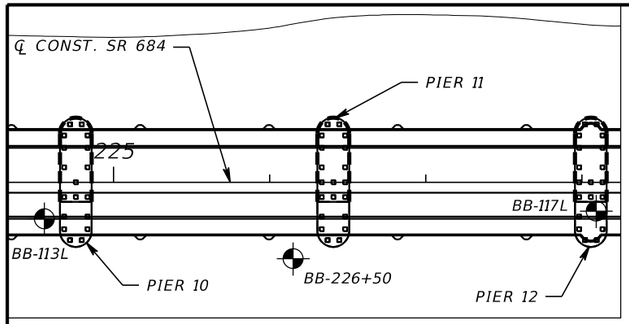
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

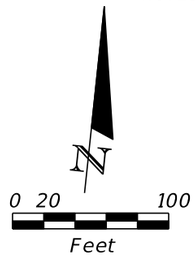
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (11 OF 21)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. B1-28



BORING LOCATION PLAN

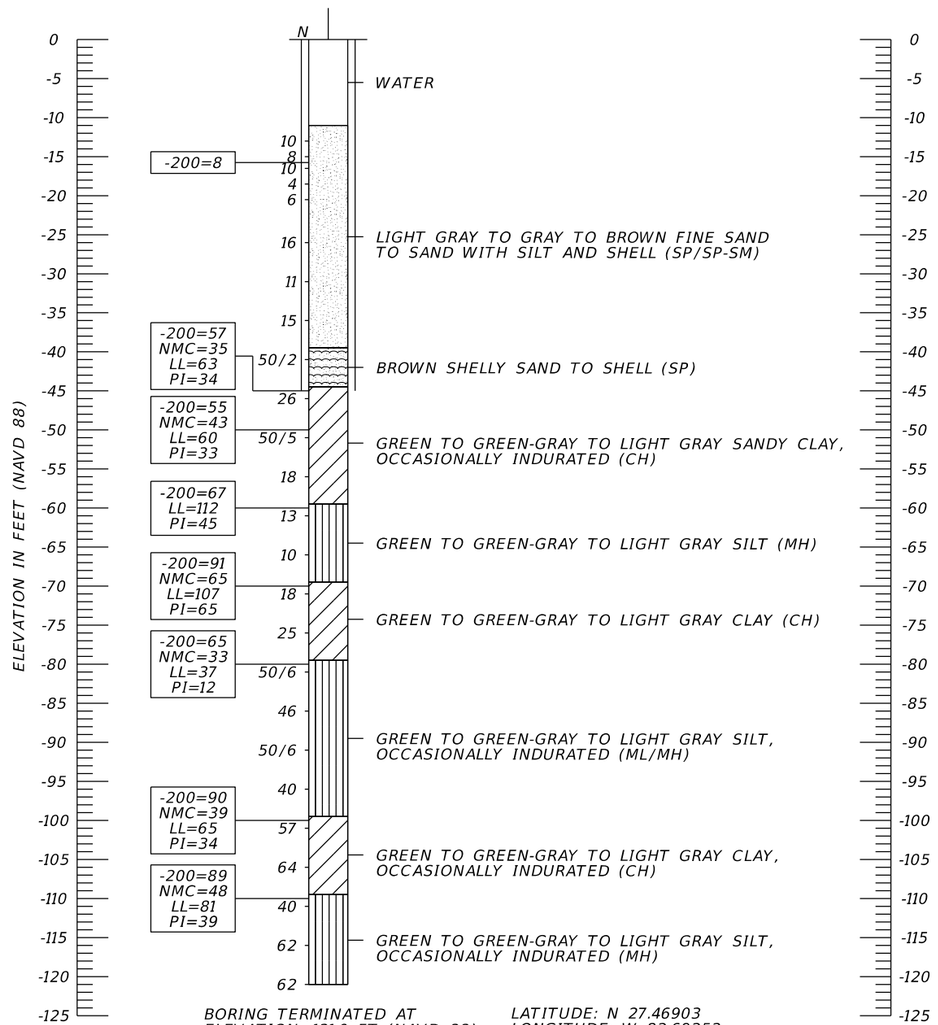


NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-117L
STA. 228+09
REF. ℄ CONST. SR 684
OFF. 18' RT.
ELEV. -11.0 (MUDLINE)
DATE 7/7/2020
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -121.0 FT (NAVD 88)

LATITUDE: N 27.46903
LONGITUDE: W 82.69252

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

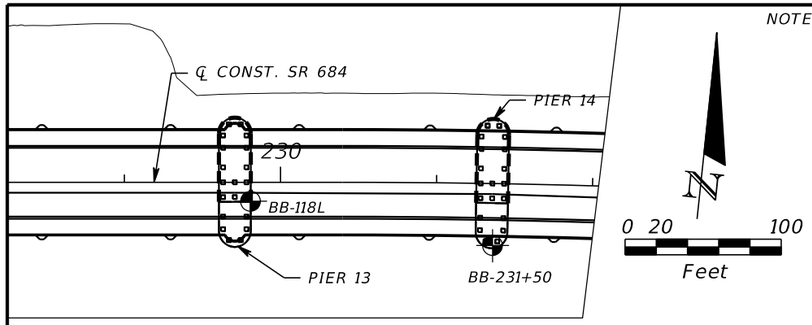
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (12 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-29

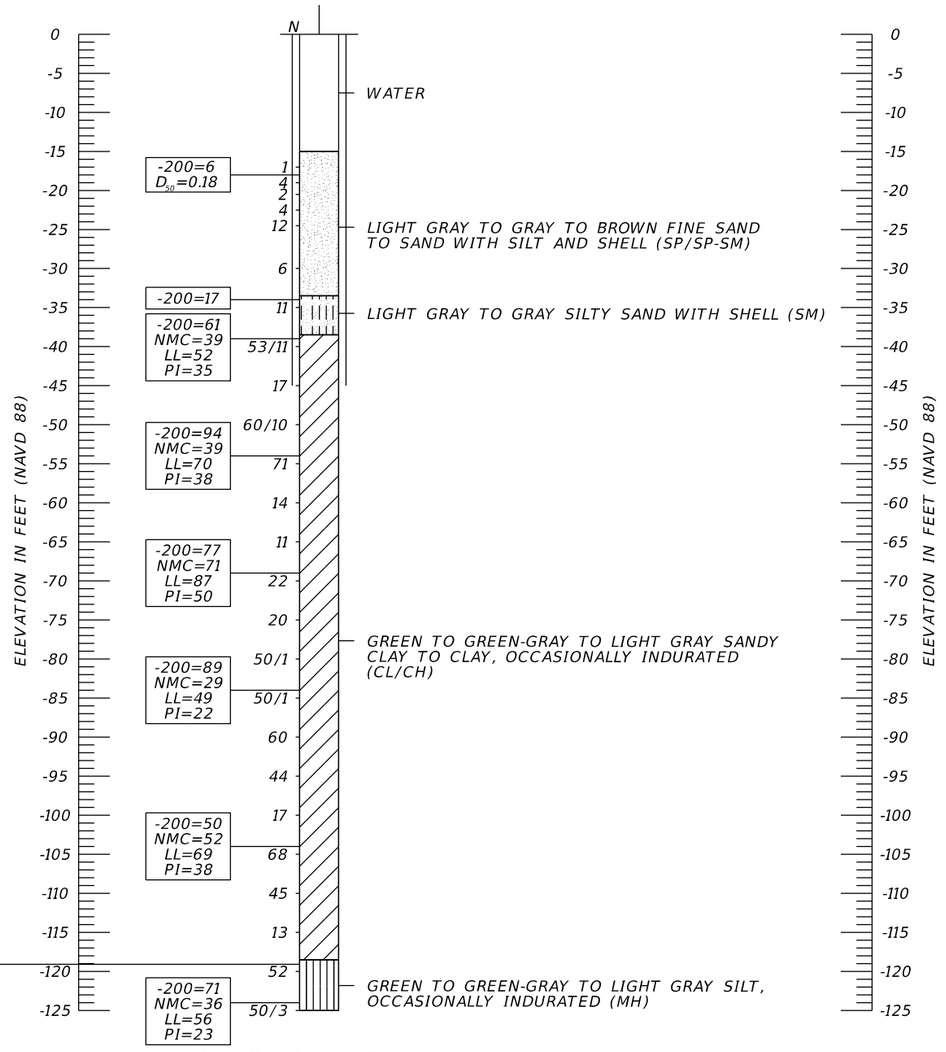


BORING LOCATION PLAN

NOTES: 1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.

2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

BOR # BB-118L
STA. 229+81
REF. ℄ CONST. SR 684
OFF. 12' RT.
ELEV. -15.0 (MUDLINE)
DATE 7/9/2020
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -125.0 FT (NAVD 88)

LATITUDE: N 27.46910
LONGITUDE: W 82.69199

LEGEND

SAND
CLAY
SILTY SAND
SILTY CLAY
CLAYEY SAND
WEATHERED LIMESTONE
SILT
SHELLY SAND

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

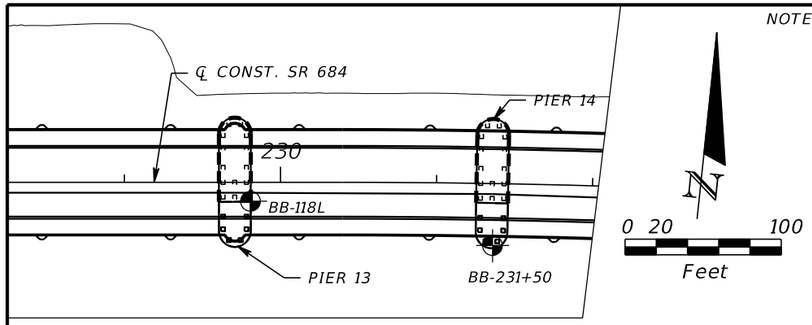
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (13 OF 21)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. B1-30



BORING LOCATION PLAN

NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
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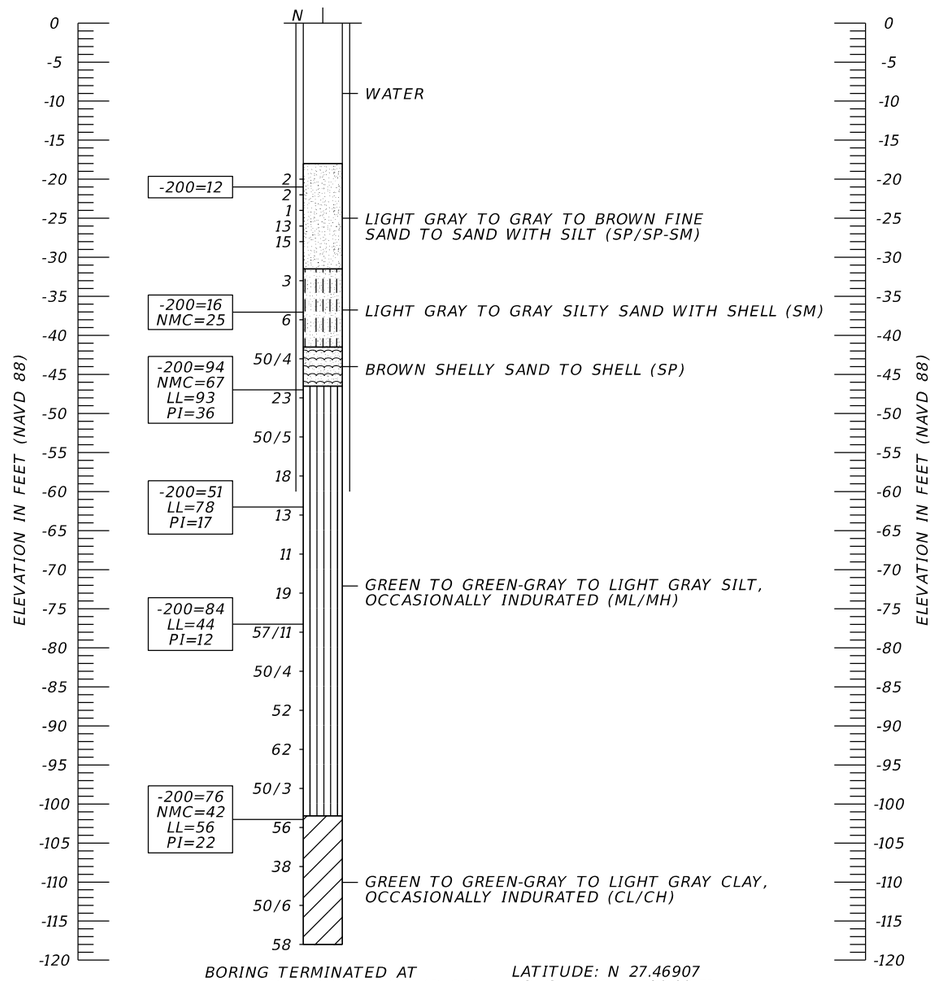
LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-231+50
STA. 231+37
REF. ℄ CONST. SR 684
OFF. 40' RT.
ELEV. -18.0 (MUDLINE)
DATE 7/19/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -118.0 FT (NAVD 88)

LATITUDE: N 27.46907
LONGITUDE: W 82.69151

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)

℄ CONST. SR 684 CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

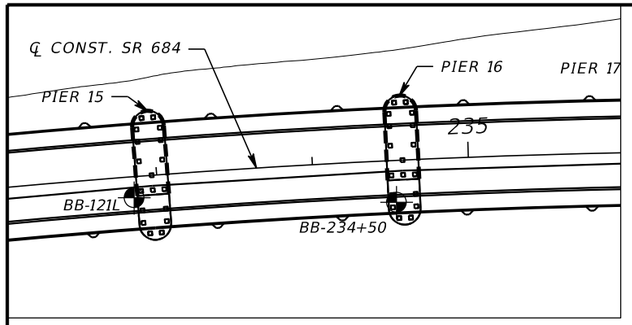
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

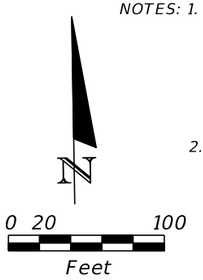
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (14 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-31



BORING LOCATION PLAN

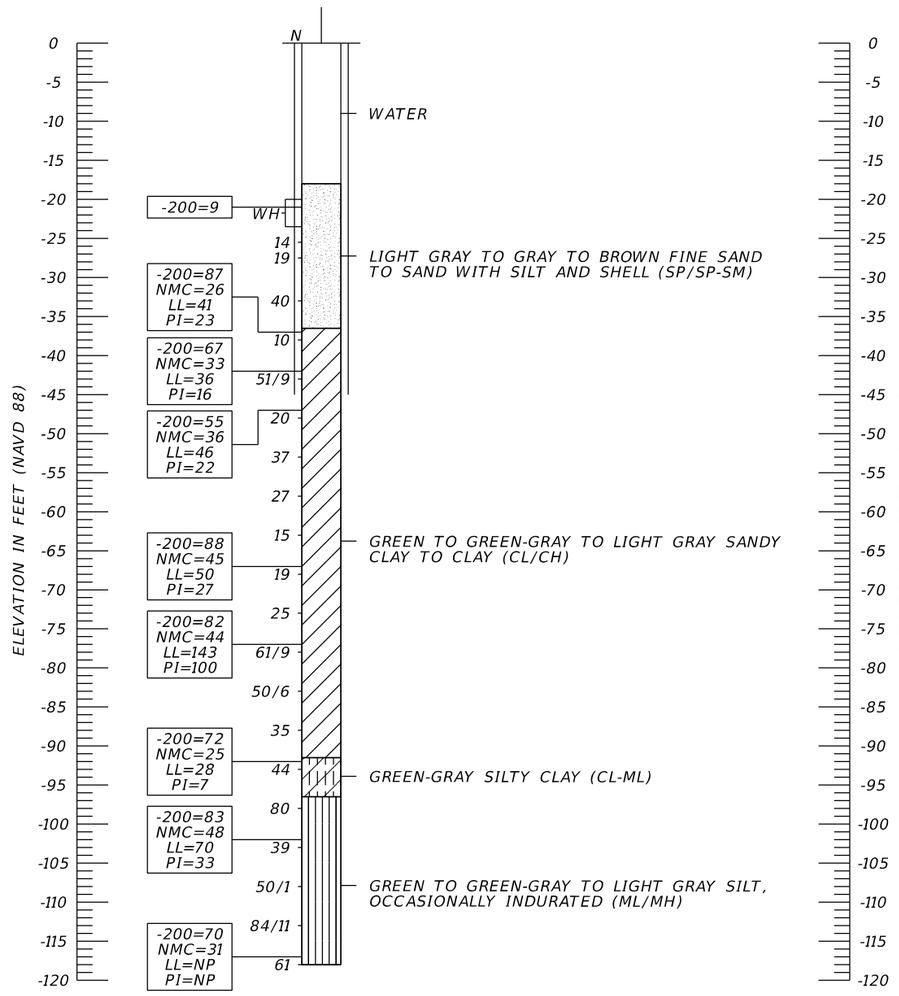


NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-121L
STA. 232+84
REF. ℄ CONST. SR 684
OFF. 13' RT.
ELEV. -18.0 (MUDLINE)
DATE 7/15/2020
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -118.0 FT (NAVD 88)

LATITUDE: N 27.46917
LONGITUDE: W 82.69106

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

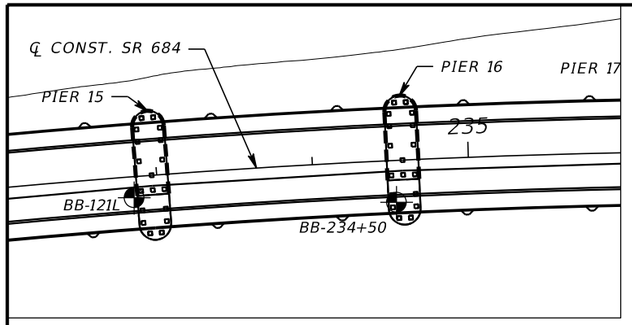
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

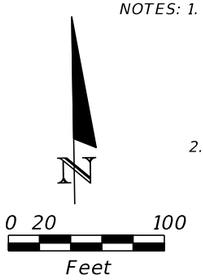
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (15 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-32





NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
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LEGEND

SAND
CLAY
SILTY SAND
SILTY CLAY
CLAYEY SAND
WEATHERED LIMESTONE
SILT
SHELLY SAND

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

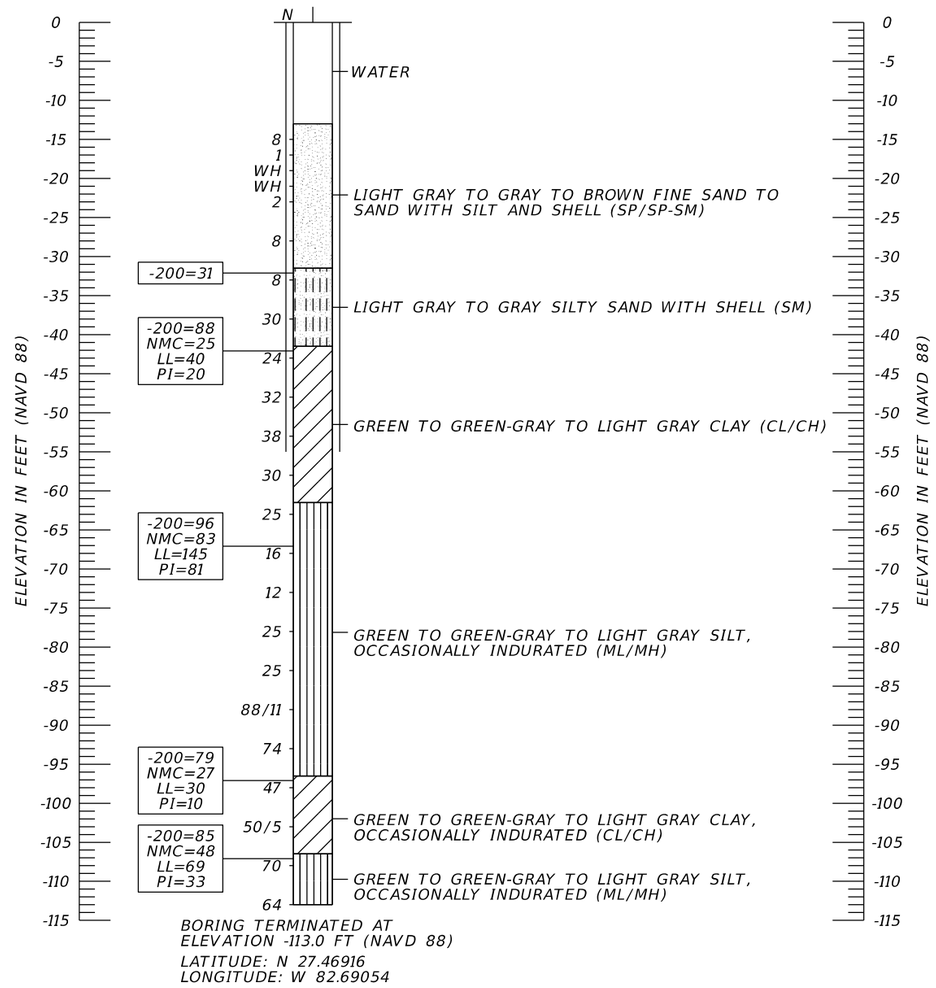
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-234+50
STA. 234+53
REF. ℄ CONST. SR 684
OFF. 27' RT.
ELEV. -13.0 (MUDLINE)
DATE 7/26/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT
ELEVATION -113.0 FT (NAVD 88)
LATITUDE: N 27.46916
LONGITUDE: W 82.69054

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200 NMC LL PI NP	PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) LIQUID LIMIT (%) PLASTICITY INDEX (%) NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (16 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-33

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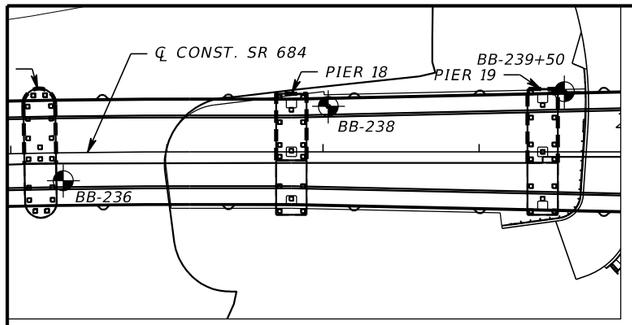
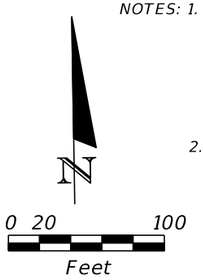


BORING LOCATION PLAN



NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
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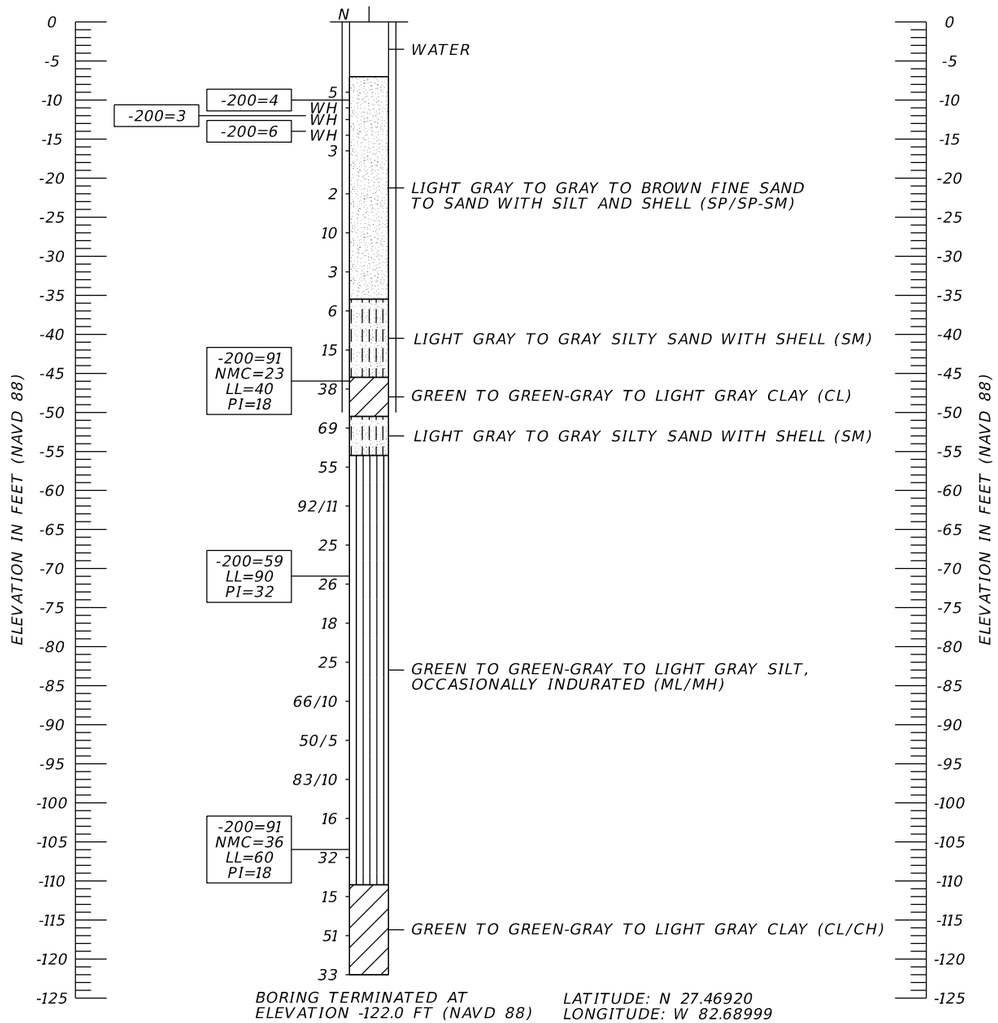
LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-236
STA. 236+33
REF. ℄ CONST. SR 684
OFF. 18' RT.
ELEV. -7.0 (MUDLINE)
DATE 7/16/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -122.0 FT (NAVD 88)

LATITUDE: N 27.46920
LONGITUDE: W 82.68999

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

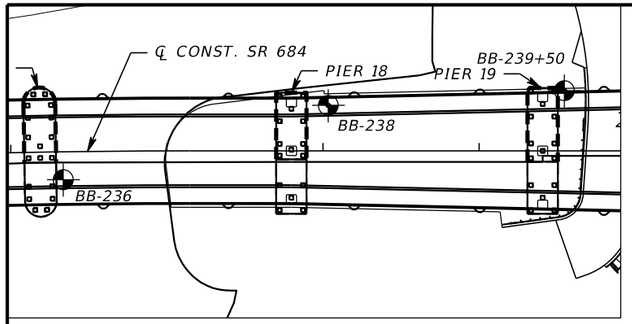
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

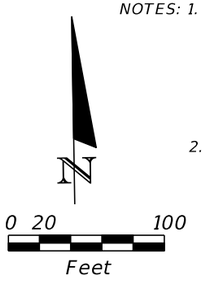
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (17 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-34



BORING LOCATION PLAN



NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
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LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

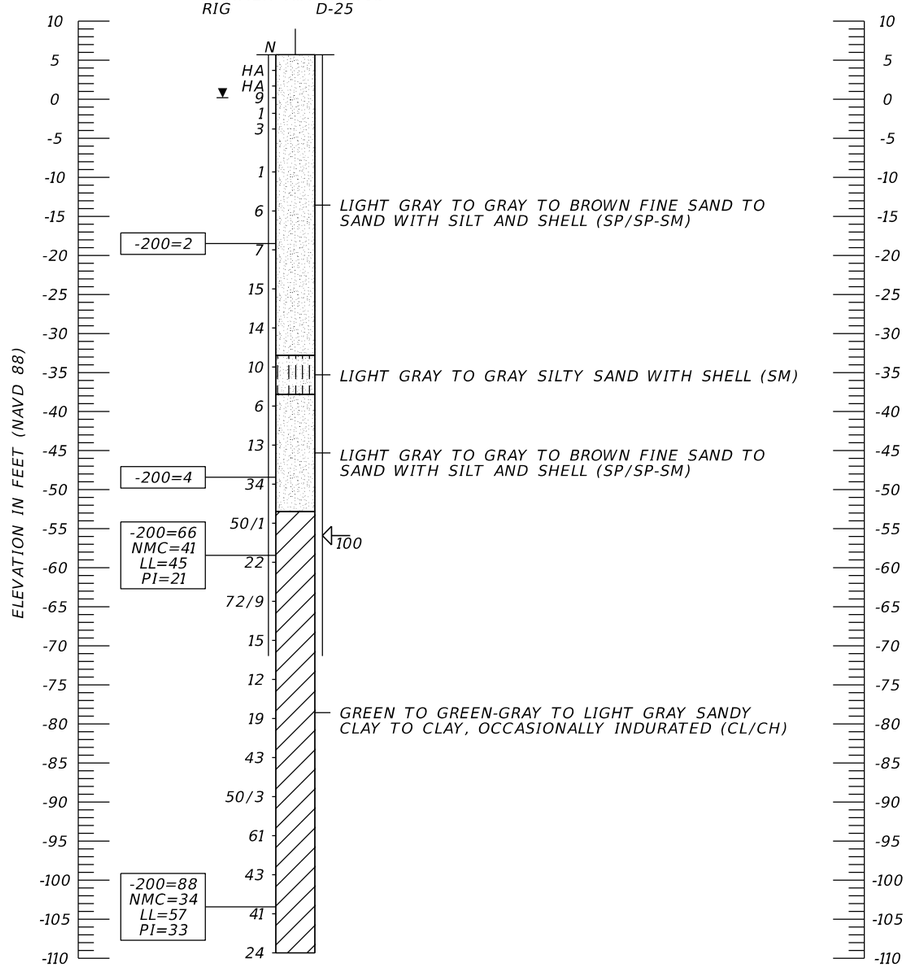
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-238*
STA. 238+03
REF. ℄ CONST. SR 684
OFF. 29' LT.
ELEV. 5.7
DATE 8/12/2021
DRILLER M. ATKINSON
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -109.3 FT (NAVD 88)

LATITUDE: N 27.46932
LONGITUDE: W 82.68946

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

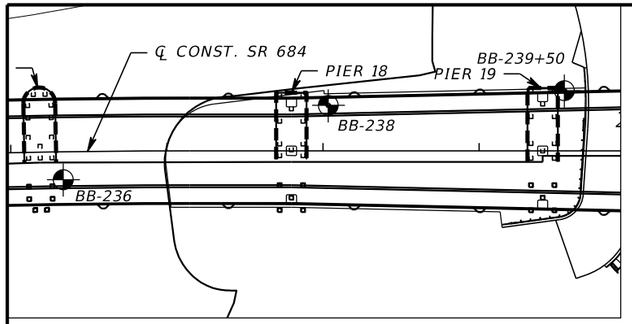
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

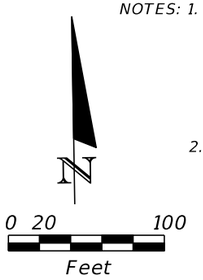
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (18 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-35



BORING LOCATION PLAN

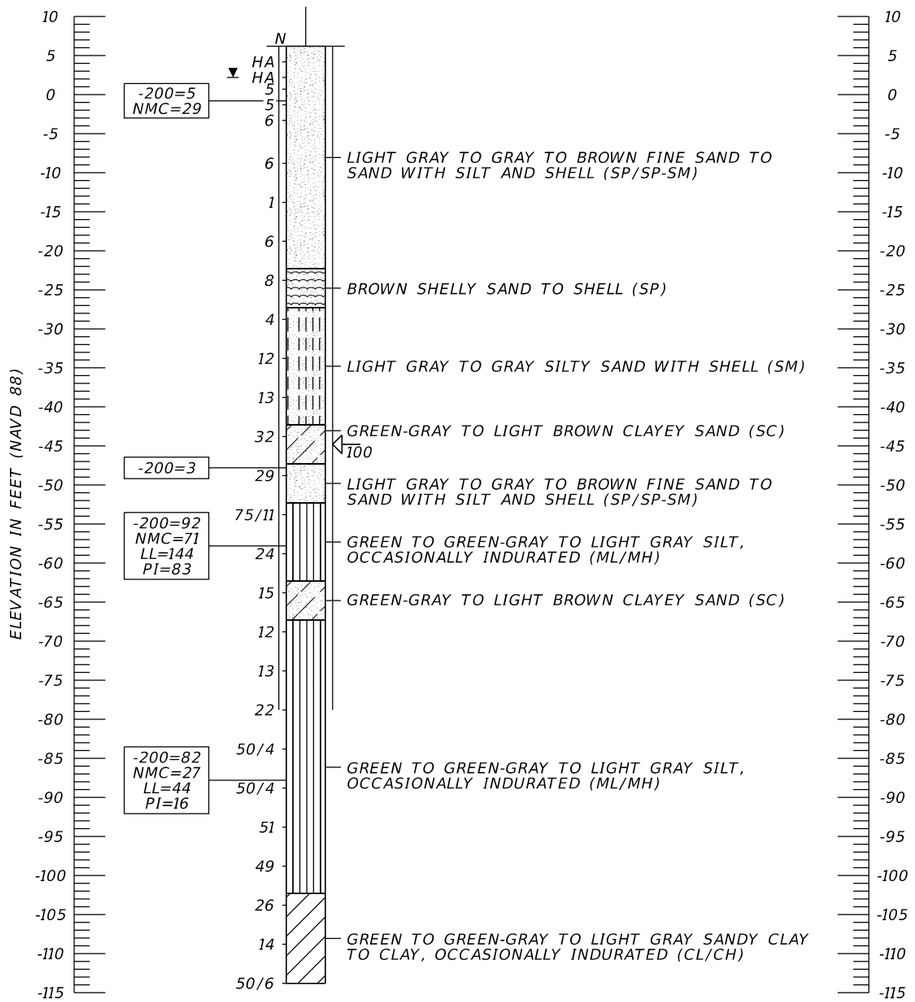


NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

BOR # BB-239+50*
STA. 239+55
REF. ℄ CONST. SR 684
OFF. 39' LT.
ELEV. 6.2
DATE 8/18/2021
DRILLER M. ATKINSON
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -114.8 FT (NAVD 88)
LATITUDE: N 27.46934
LONGITUDE: W 82.68900

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (19 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-36

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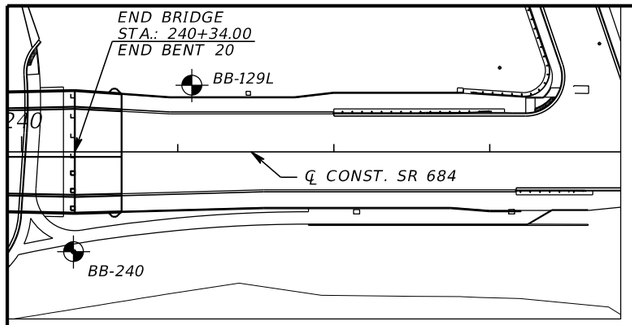
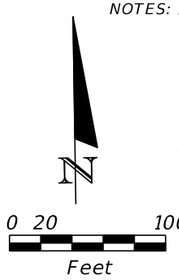


BORING LOCATION PLAN



NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

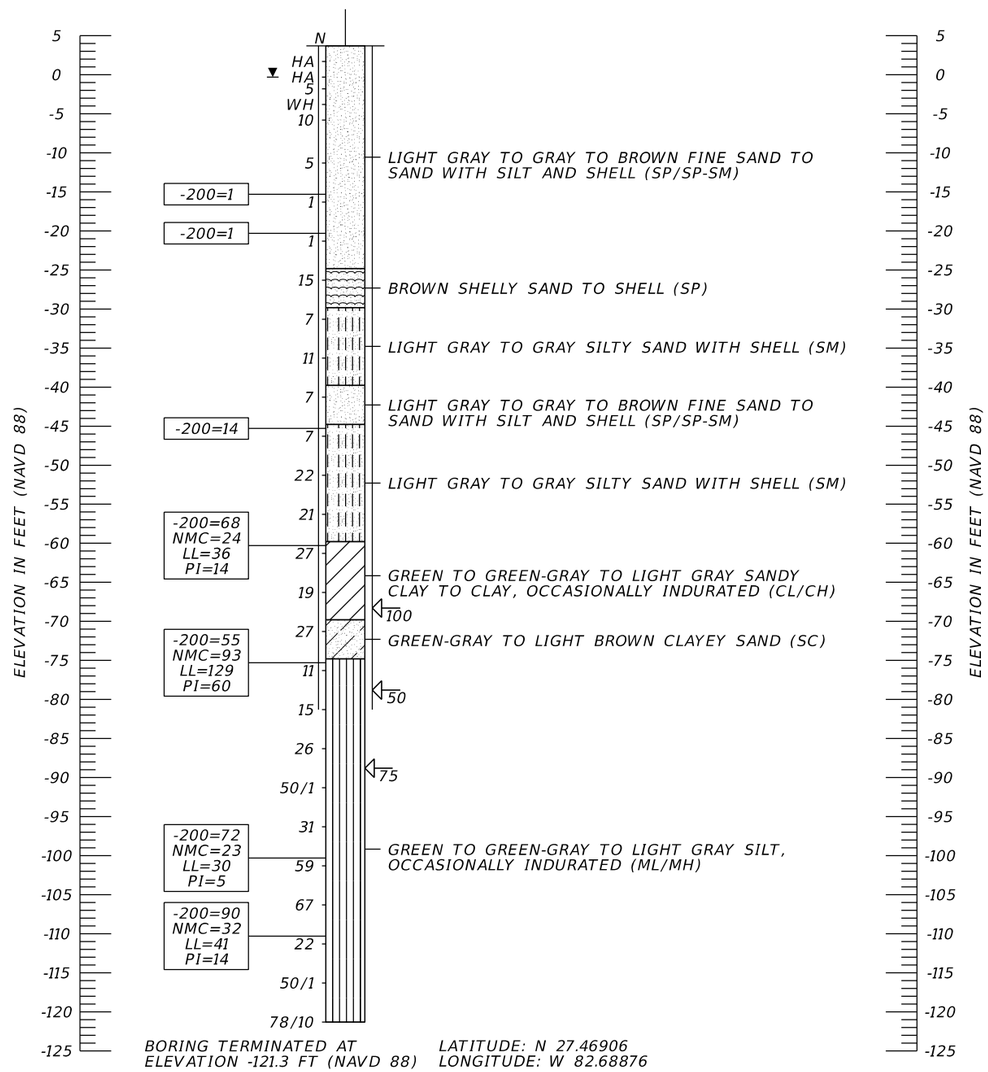
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # BB-240*
STA. 240+33
REF. ℄ CONST. SR 684
OFF. 64' RT.
ELEV. 3.7
DATE 8/9/2021
DRILLER M. ATKINSON
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -121.3 FT (NAVD 88)
LATITUDE: N 27.46906
LONGITUDE: W 82.68876

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

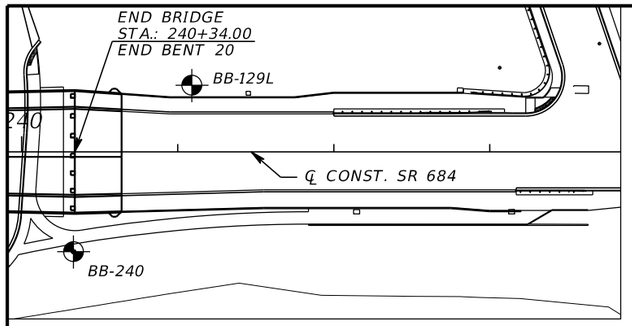
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

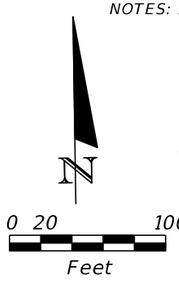
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (20 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-37



BORING LOCATION PLAN



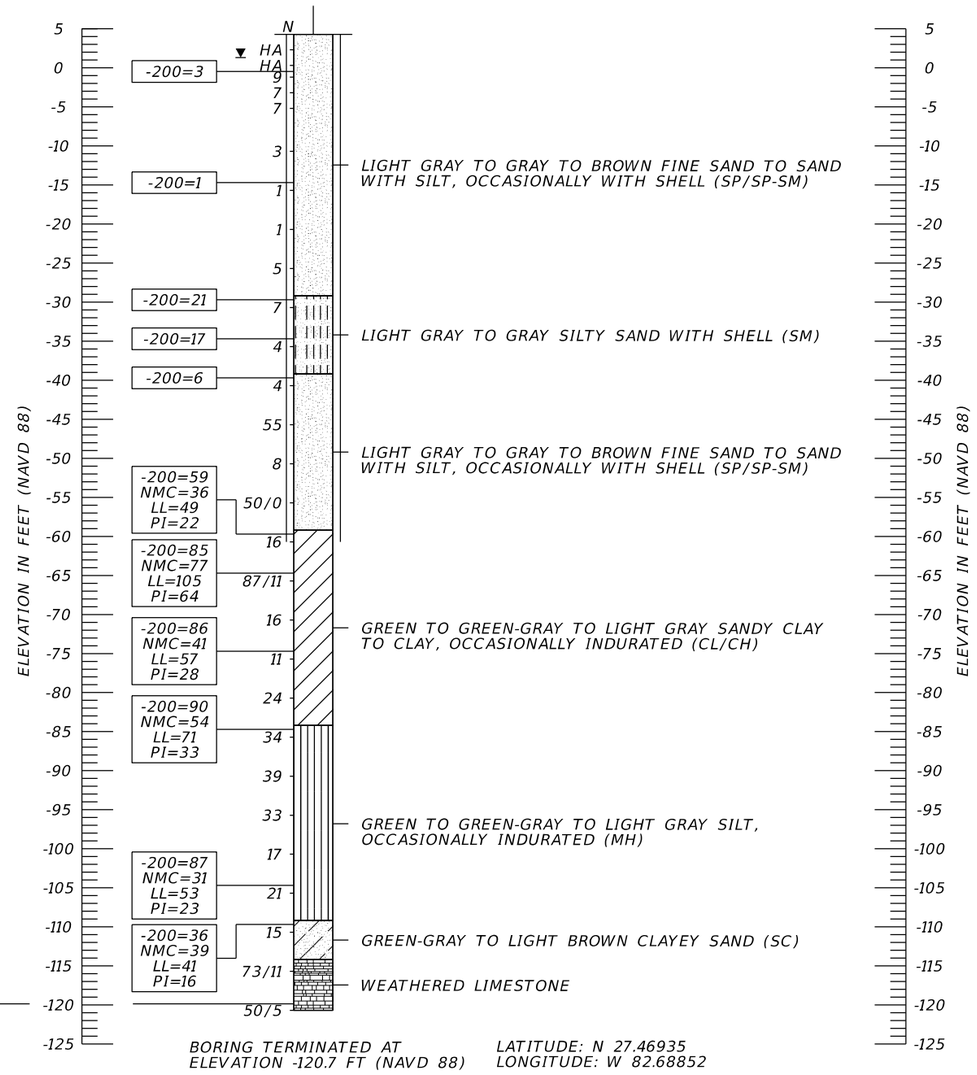
NOTES:
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC SURFACE" MAPS PUBLISHED BY THE USGS; THE POTENTIOMETRIC SURFACE ELEVATION OF THE UPPER FLORIDAN AQUIFER IN THE BRIDGE VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WERE ENCOUNTERED WITHIN SOME OF THE BORINGS PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29. ARTESIAN FLOWS NOTED BY THE DRILL CREWS ARE SHOWN ADJACENT TO THE BORINGS. THE USE OF DRILLING MUD TO COUNTERACT ARTESIAN CONDITIONS MAY HAVE OBSCURED OR REDUCED ARTESIAN CONDITIONS IN THE BORINGS.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.

LEGEND

SAND	CLAY
SILTY SAND	SILTY CLAY
CLAYEY SAND	WEATHERED LIMESTONE
SILT	SHELLY SAND

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).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
D_{50}	DIAMETER CORRESPONDING TO 50% FINER IN PARTICLE-SIZE DISTRIBUTION CURVE (MM)
| |	CASING
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
℄ CONST. SR 684	CENTERLINE CONSTRUCTION OF SR 684

BOR # BB-129L*
STA. 241+09
REF. ℄ CONST. SR 684
OFF. 43' LT.
ELEV. 4.3
DATE 5/5/2020
DRILLER B. CRAIG
HAMMER AUTOMATIC
RIG D-25



ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
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SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

ARTESIAN WATER ENCOUNTERED WITH A WATER HEAD OF 5.1 FEET ABOVE THE EXISTING GROUND SURFACE (I.E. APPROXIMATE HEAD ELEVATION +9.4 FEET, NAVD 88)

BORING TERMINATED AT ELEVATION -120.7 FT (NAVD 88)

LATITUDE: N 27.46935
LONGITUDE: W 82.68852

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

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: KWL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (21 OF 21)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-38

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: END BENT 1

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-51

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: END BENT 20

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-52

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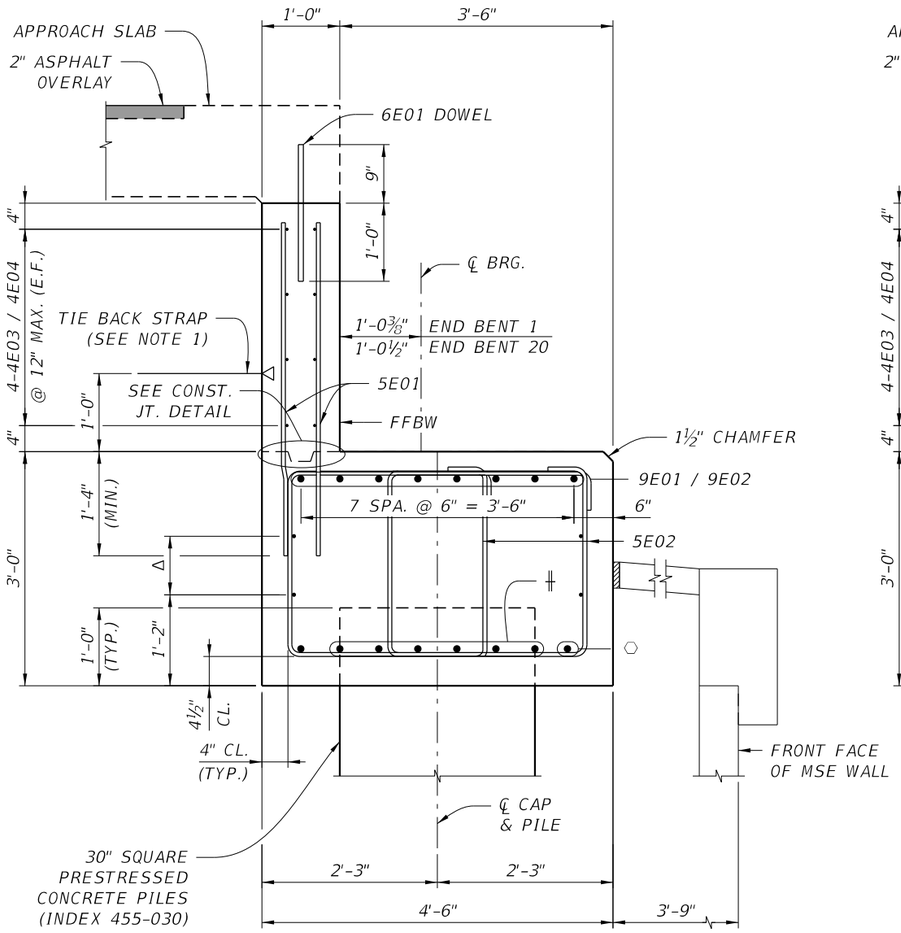
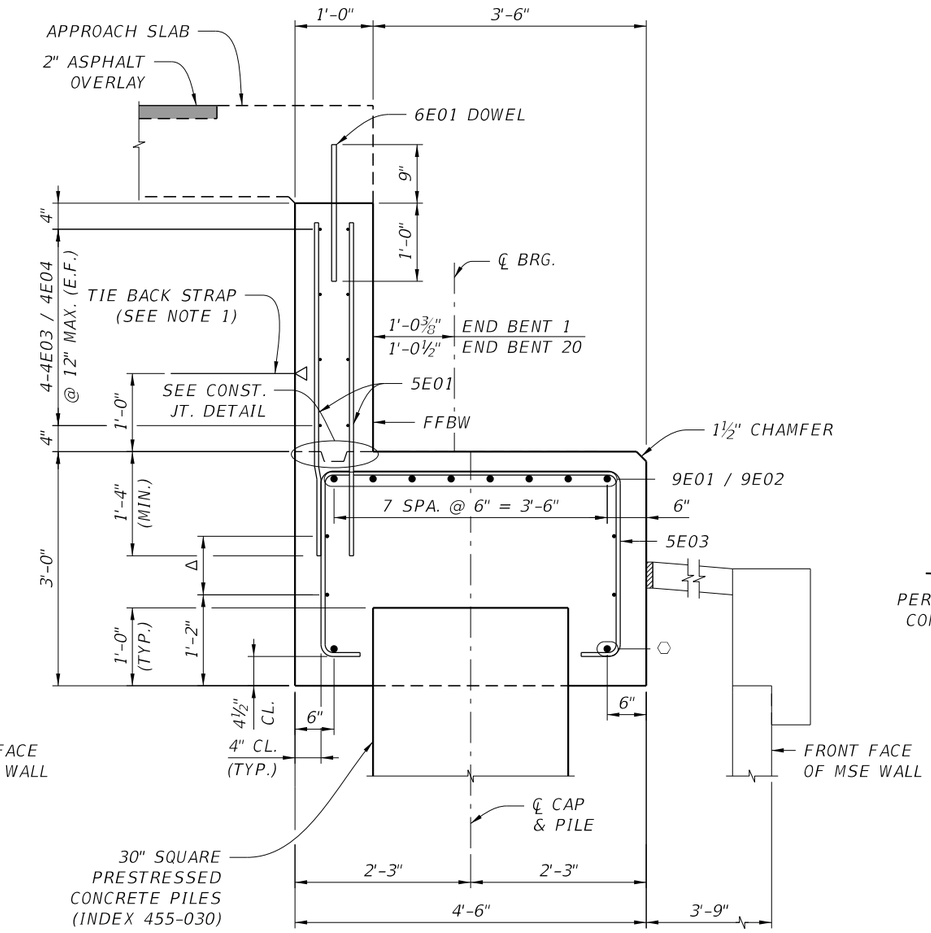


SECTION A-A

Δ 2-5E04 / 5E05 @ 9" (E.F.)

⬡ 9E03 / 9E04 (TYP. EACH SIDE)

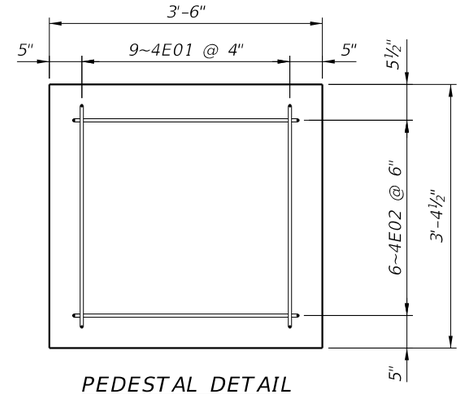
╫ 6-9E05 / 9E06 / 9E07 @ 6" (B/W PILES)
6-5E06 / 5E07 @ 6" (ENDS OF CAP)



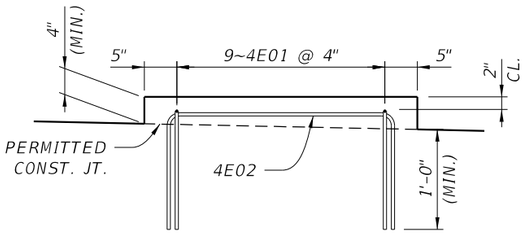
SECTION B-B

Δ 2-5E04 / 5E05 @ 9" (E.F.)

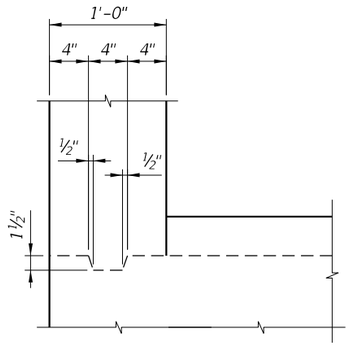
⬡ 9E03 / 9E04 (TYP. EACH SIDE)



PEDESTAL DETAIL



PEDESTAL ELEVATION



CONSTRUCTION JOINT DETAIL

NOTE:

1. THE SOIL REINFORCEMENT ATTACHED TO THE BACKWALL SHALL BE DESIGNED BY A SPECIALTY ENGINEER FOR THE SERVICE AND FACTORED LOADS AS SHOWN USING THE DESIGN CRITERIA FOR PERMANENT MSE WALLS. THE STRAPS SHALL BE DESIGNED TO RESIST A SERVICE LOAD OF 4.76 KIP/FT AND A FACTORED LOAD OF 6.53 KIP/FT PERPENDICULAR TO THE END BENT BACKWALL.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: END BENT DETAILS (1 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-53

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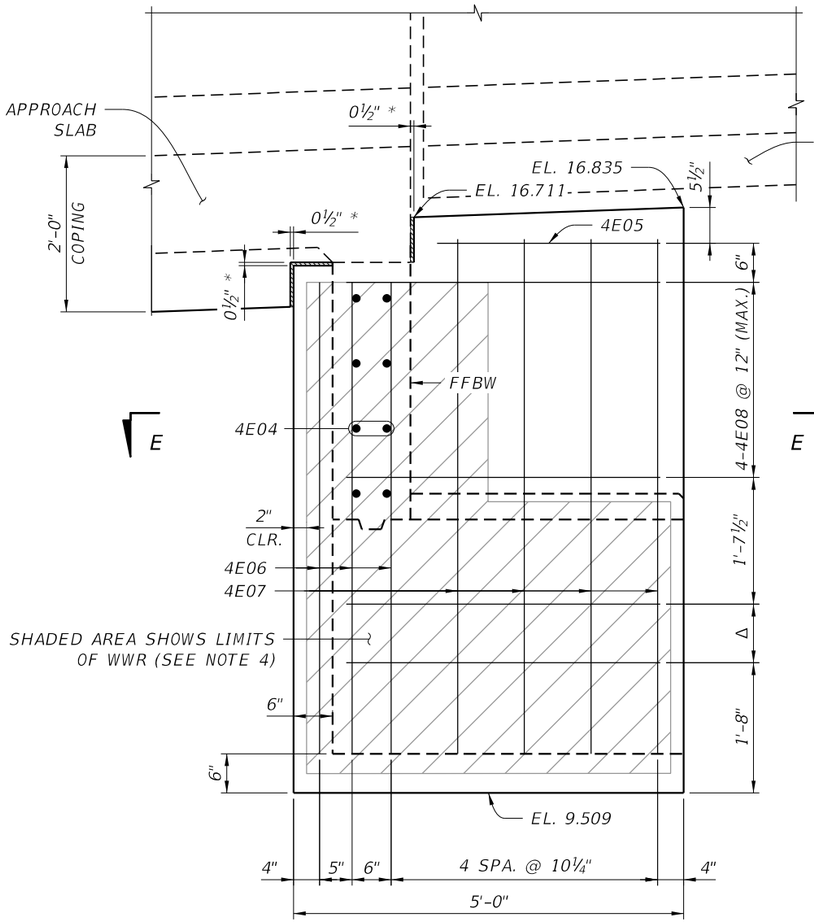
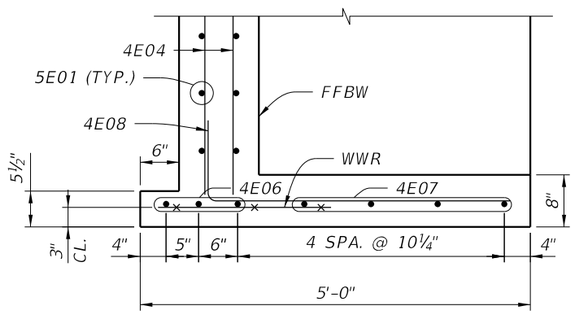
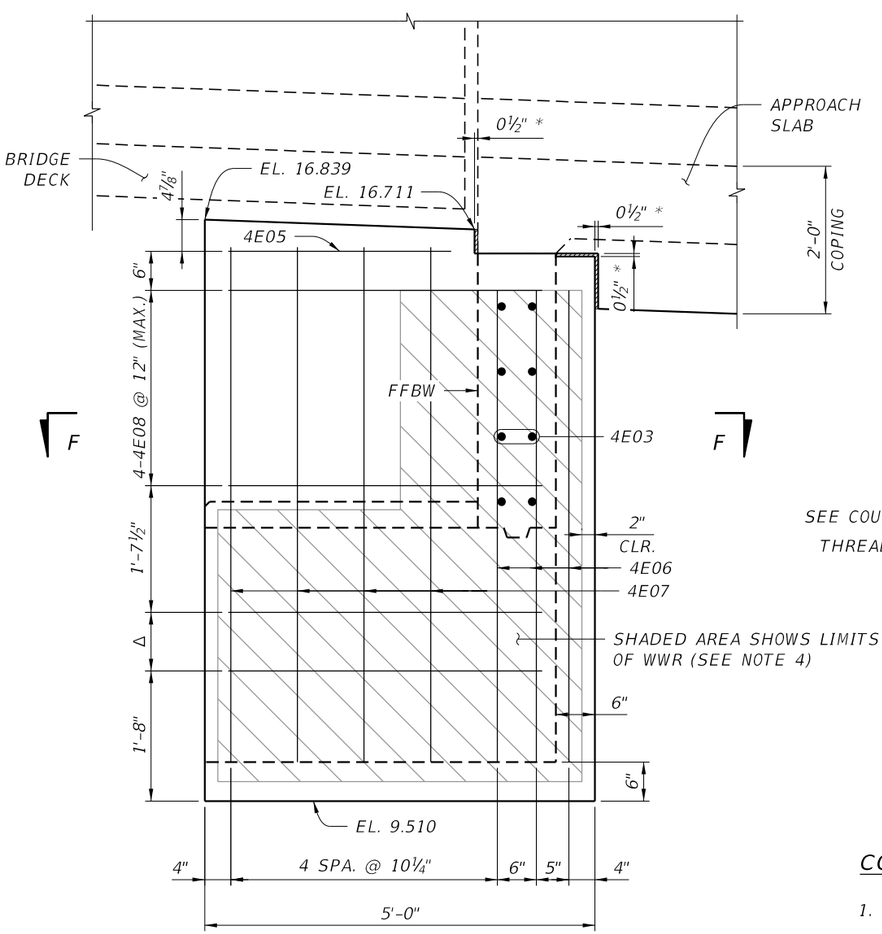


VIEW C-C

Δ 2-4E08 @ 9"

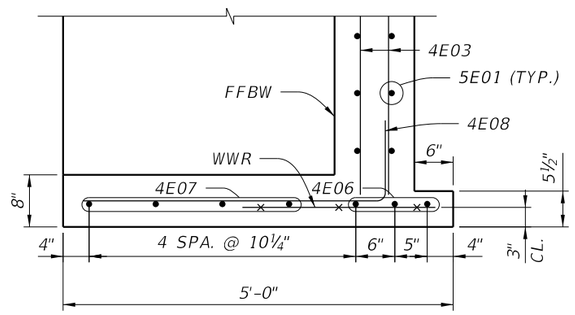


SECTION E-E



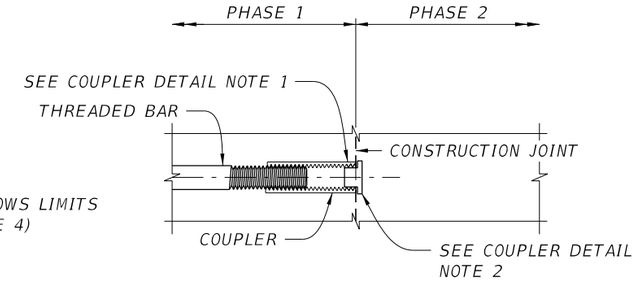
VIEW D-D

Δ 2-4E08 @ 9"



SECTION F-F

CONST. PHASE	TOP OF PEDESTAL ELEVATIONS	
	BEAM NO.	ELEVATION (LEVEL)
1	1-1	13.567
	1-2	13.745
	1-3	13.924
	1-4	14.102
	1-5	14.135
2	1-6	13.942
	1-7	13.751
	1-8	13.561



COUPLER DETAIL

(REINFORCING BARS NOT SHOWN FOR CLARITY)

COUPLER DETAIL NOTES:

1. COUPLER TO DEVELOP 75 KSI STRESS IN TENSION AND COMPRESSION. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. REBAR COUPLER SHALL BE GREASED AND CAPPED IN BETWEEN PHASES OF CONSTRUCTION TO PREVENT CORROSION.

NOTES:

1. FOR LOCATION OF VIEW C-C, SEE SHEETS B1-51.
2. FOR LOCATION OF VIEW D-D, SEE SHEETS B1-51.
3. FOR MSE WALL DETAILS, SEE WALL PLANS.
4. WELDED WIRE REINFORCEMENT (WWR) 4x4 W4.0xW4.0 (MIN. 3'-6" WIDE) SHALL BE TIED TO REINFORCING STEEL.
5. FIELD CUT BARS AS REQUIRED TO MAINTAIN CONCRETE COVER.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

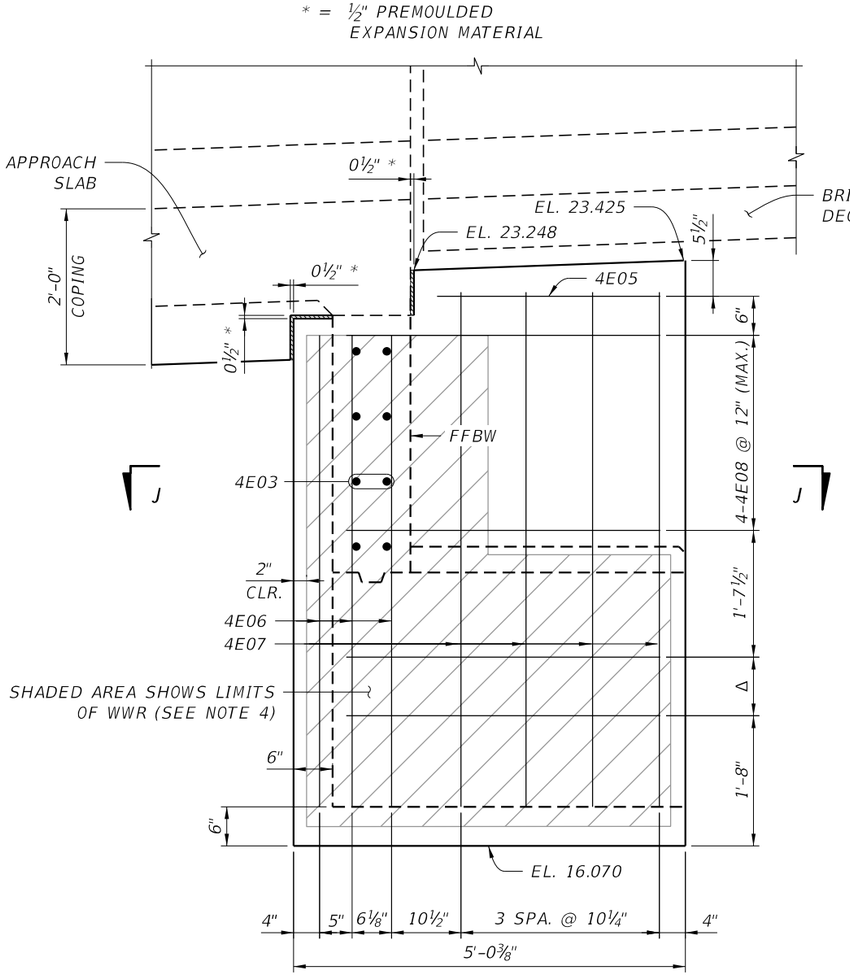
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: END BENT DETAILS (2 OF 3)

REF. DWG. NO.

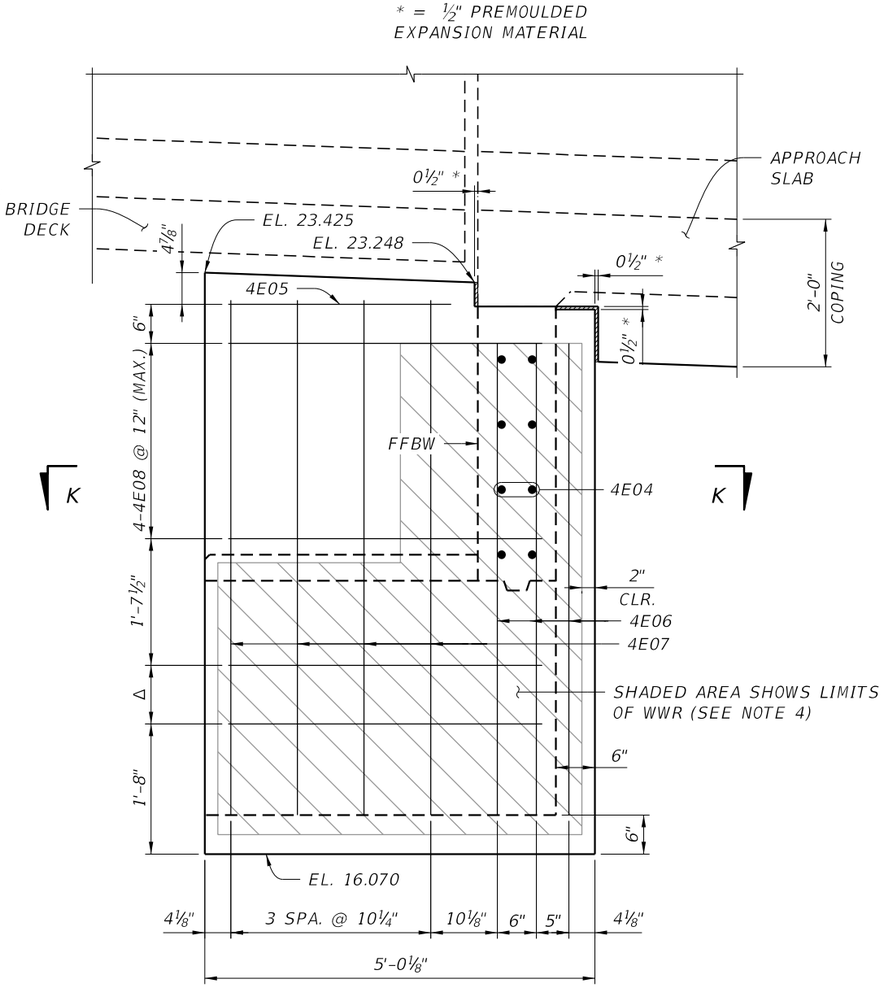
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-54



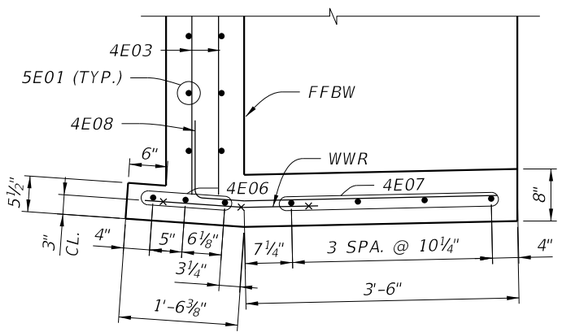
VIEW G-G

Δ 2-4E08 @ 9"

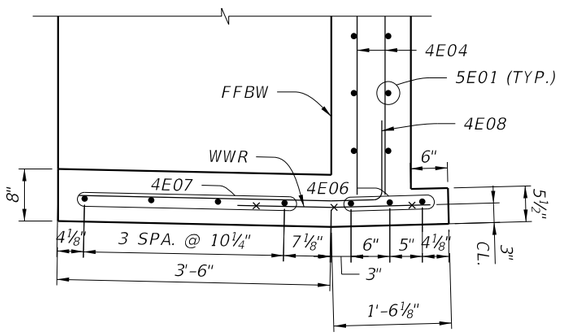


VIEW H-H

Δ 2-4E08 @ 9"



SECTION J-J



SECTION K-K

CONST. PHASE	TOP OF PEDESTAL ELEVATIONS	
	BEAM NO.	ELEVATION (LEVEL)
1	19-1	20.154
	19-2	20.345
	19-3	20.535
	19-4	20.725
	19-5	20.820
2	19-6	20.660
	19-7	20.500
	19-8	20.340
	19-9	20.154

NOTES:

1. FOR LOCATION OF VIEW G-G, SEE SHEETS B1-52.
2. FOR LOCATION OF VIEW H-H, SEE SHEETS B1-52.
3. FOR MSE WALL DETAILS, SEE WALL PLANS.
4. WELDED WIRE REINFORCEMENT (WWR) 4x4 W4.0xW4.0 (MIN. 3'-6" WIDE) SHALL BE TIED TO REINFORCING STEEL.
5. FIELD CUT BARS AS REQUIRED TO MAINTAIN CONCRETE COVER.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

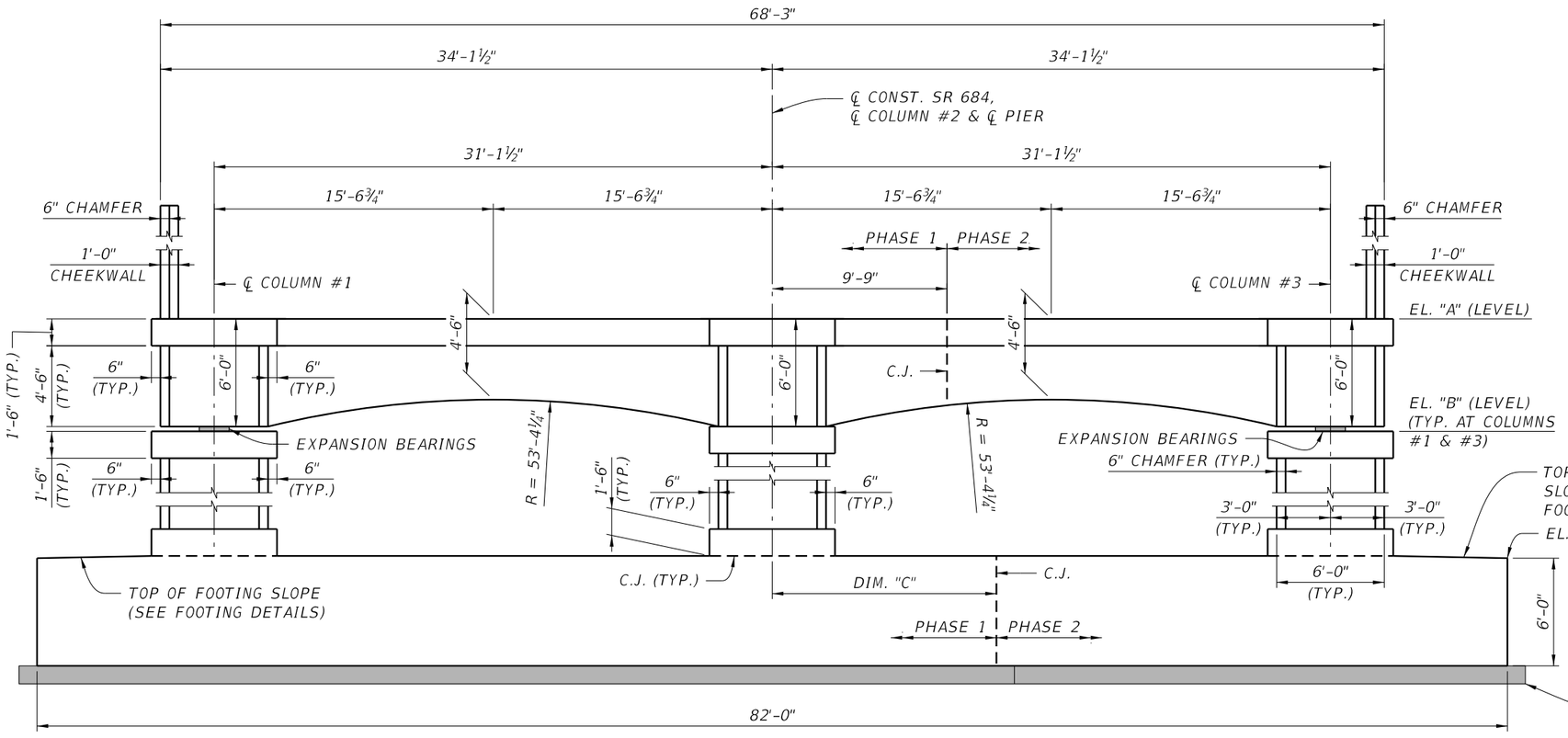
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: END BENT DETAILS (3 OF 3)

REF. DWG. NO.

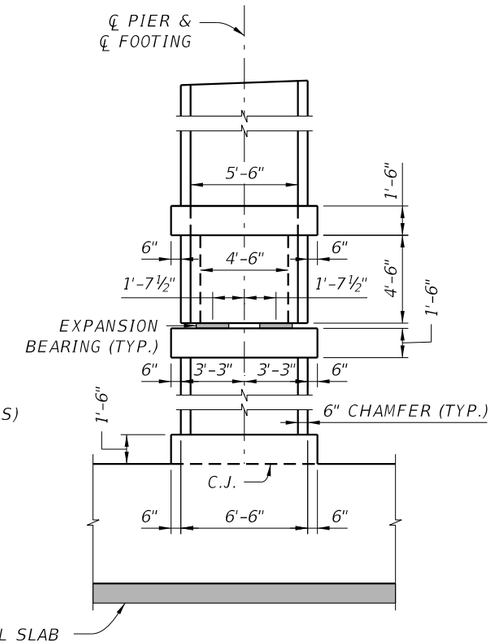
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-55



ELEVATION

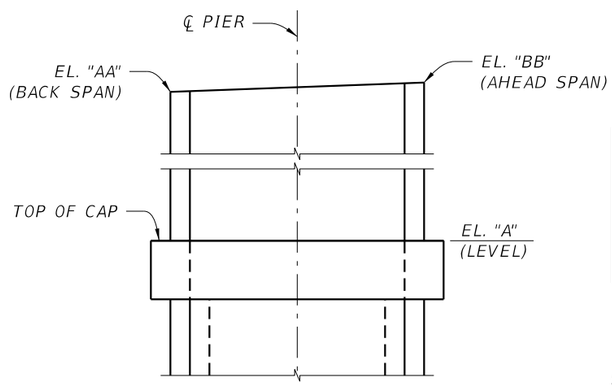
(PILES AND PEDESTALS NOT SHOWN FOR CLARITY.)



SIDE VIEW

TABLE OF VARIABLES					
LOCATION	STATION	EL. "A"	EL. "B"	DIM. "C"	FOOTING
PIER 2	211+93.50	14.218	7.954	6'-9"	TYPE 1
PIER 3	213+30.75	17.213	10.949	12'-6"	TYPE 2

TOP OF PEDESTAL ELEVATIONS							
PIER 2				PIER 3			
BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION
1-1	16.735	2-1	14.635	2-1	19.508	3-1	17.630
1-2	16.914	2-2	14.787	2-2	19.659	3-2	17.870
1-3	17.092	2-3	14.938	2-3	19.811	3-3	18.111
1-4	17.270	2-4	15.090	2-4	19.963	3-4	18.110
1-5	17.249	2-5	15.242	2-5	20.114	3-5	17.870
1-6	17.110	2-6	15.102	2-6	19.974	3-6	17.630
1-7	16.920	2-7	14.950	2-7	19.822		
1-8	16.729	2-8	14.799	2-8	19.671		
		2-9	14.647	2-9	19.519		



CHEEKWALL DETAIL

CHEEKWALL ELEVATIONS					
LOCATION	STATION	EL. "AA" (LT.)	EL. "AA" (RT.)	EL. "BB" (LT.)	EL. "BB" (RT.)
PIER 2	211+93.50	19.833	19.831	20.065	20.067
PIER 3	213+30.75	24.771	24.769	25.003	25.005

NOTE:

1. SEE SHEET B1-62 FOR THE PLAN VIEW FOR PIERS 2 & 3.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 2 & 3 GEOMETRY

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-56

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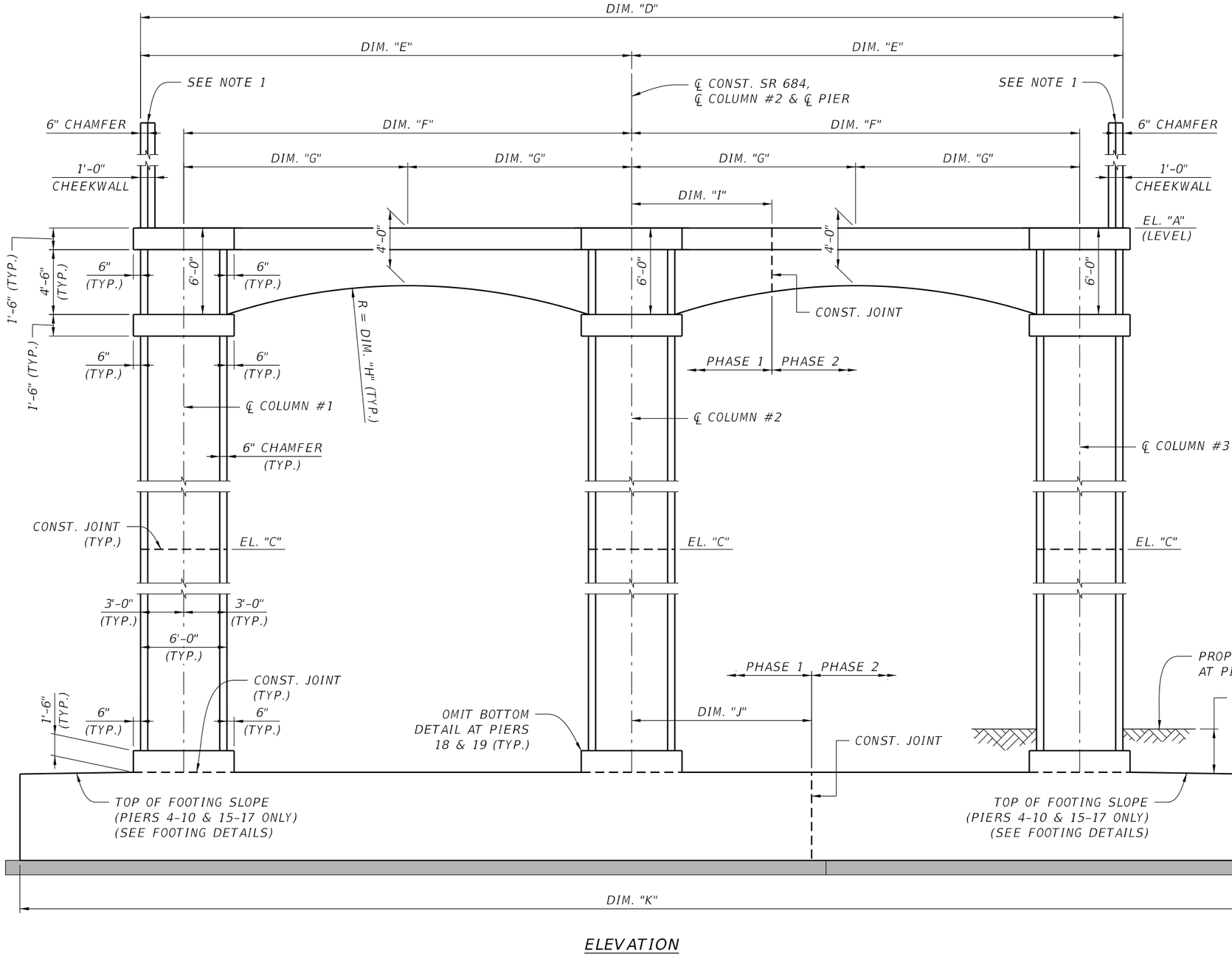
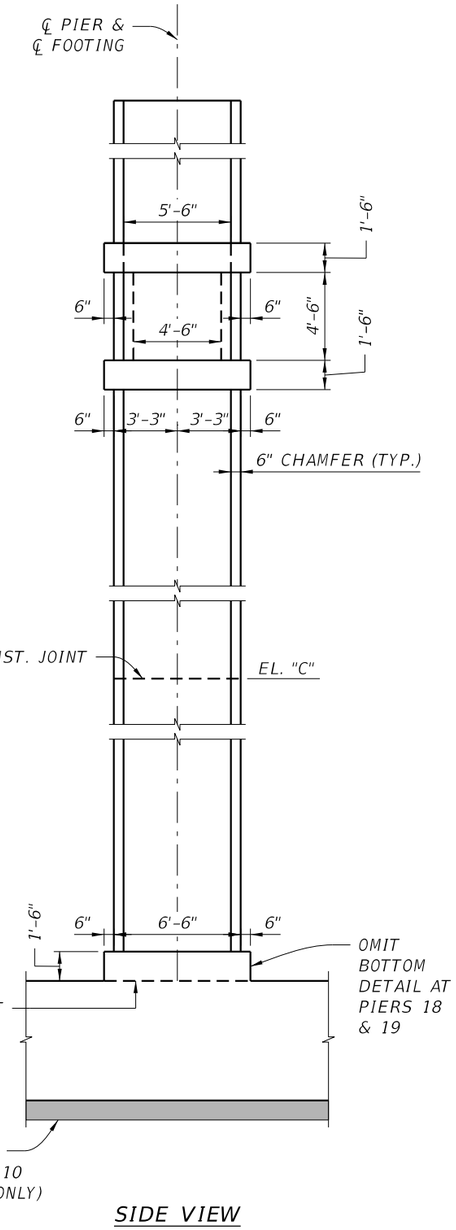


ELEVATION

(PIELS AND PEDESTALS NOT SHOWN FOR CLARITY.)



SIDE VIEW

NOTES:

1. SEE SHEET B1-58 FOR THE TABLE OF VARIABLES AND TOP OF CHEEKWALL ELEVATIONS.
2. SEE SHEET B1-59 FOR TOP OF PEDESTAL ELEVATIONS.
3. SEE SHEETS B1-63 & B1-67 FOR THE PLAN VIEW FOR PIERS 4 - 10 & 15 - 19.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 4 - 10 & 15 - 19 GEOMETRY (1 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-57

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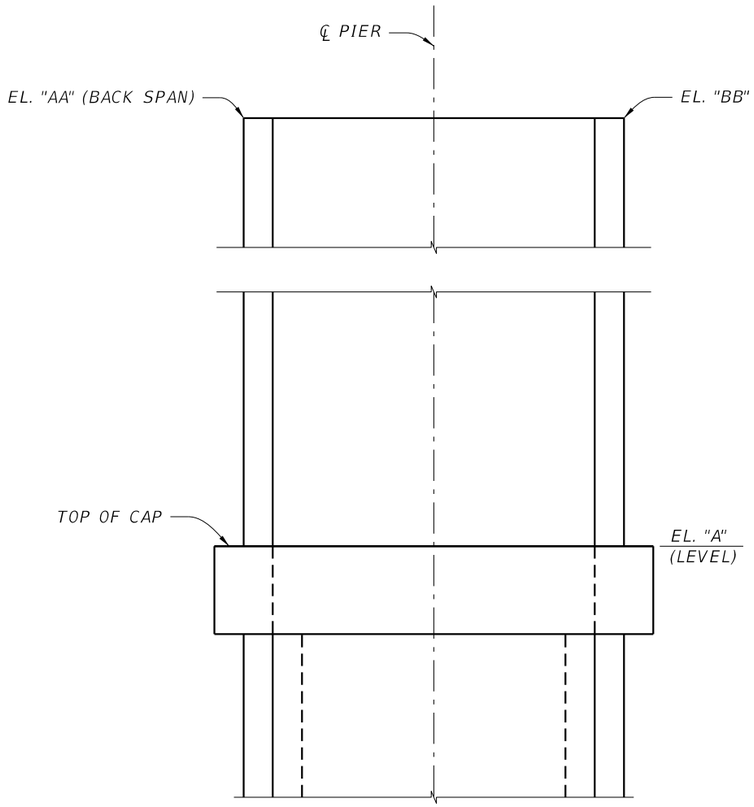
TABLE OF VARIABLES													
LOCATION	STATION	EL. "A"	EL. "B"	EL. "C"	DIM. "D"	DIM. "E"	DIM. "F"	DIM. "G"	DIM. "H"	DIM. "I"	DIM. "J"	DIM. "K"	FOOTING
PIER 4	214+91.75	22.940	3.00	N/A	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 5	216+52.75	28.732	3.00	N/A	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 6	218+15.75	34.619	3.00	N/A	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 7	219+80.75	40.571	3.00	19.00	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 8	221+45.75	46.508	3.00	21.00	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 9	223+10.75	52.445	3.00	28.00	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 10	224+75.75	58.381	3.00	28.00	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 15	232+96.75	52.466	3.00	28.00	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 16	234+57.75	44.416	3.00	21.00	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	12'-6"	82'-0"	TYPE 2
PIER 17	236+18.75	36.366	3.00	N/A	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	6'-9"	82'-0"	TYPE 1
PIER 18	237+79.75	28.257	1.00	N/A	68'-3"	34'-1½"	31'-1½"	15'-6¾"	40'-5 7/16"	8'-10½"	5'-4½"	77'-6"	TYPE 4
PIER 19	239+40.75	20.233	1.00	N/A	75'-3"	37'-7½"	34'-7½"	17'-3¾"	52'-2 9/16"	8'-10½"	7'-0"	80'-6"	TYPE 5



CHEEKWALL DETAIL

CHEEKWALL ELEVATIONS					
LOCATION	STATION	EL. "AA" (LT.)	EL. "AA" (RT.)	EL. "BB" (LT.)	EL. "BB" (RT.)
PIER 4	214+91.75	30.564	30.562	30.796	30.798
PIER 5	216+52.75	36.357	36.355	36.589	36.591
PIER 6	218+15.75	42.221	42.221	42.454	42.454
PIER 7	219+80.75	48.157	48.157	48.391	48.391
PIER 8	221+45.75	54.094	54.094	54.328	54.328
PIER 9	223+10.75	60.031	60.031	60.265	60.265
PIER 10	224+75.75	65.967	65.967	66.201	66.201
PIER 15	232+96.75	60.383	60.385	60.060	60.058
PIER 16	234+57.75	52.333	52.335	52.010	52.008
PIER 17	236+18.75	44.283	44.285	43.960	43.958
PIER 18	237+79.75	36.234	36.234	35.909	35.909
PIER 19	239+40.75	28.117	28.117	27.789	27.789

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 4 - 10 & 15 - 19 GEOMETRY (2 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-58

TOP OF PEDESTAL ELEVATIONS											
PIER 4				PIER 5				PIER 6			
BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION
3-1	23.358	4-1	23.423	4-1	29.150	5-1	29.216	5-1	35.035	6-1	35.101
3-2	23.598	4-2	23.663	4-2	29.390	5-2	29.456	5-2	35.275	6-2	35.341
3-3	23.838	4-3	23.903	4-3	29.630	5-3	29.696	5-3	35.515	6-3	35.581
3-4	23.837	4-4	23.903	4-4	29.629	5-4	29.696	5-4	35.515	6-4	35.581
3-5	23.597	4-5	23.663	4-5	29.389	5-5	29.456	5-5	35.275	6-5	35.341
3-6	23.356	4-6	23.423	4-6	29.149	5-6	29.216	5-6	35.035	6-6	35.101

TOP OF PEDESTAL ELEVATIONS															
PIER 7				PIER 8				PIER 9				PIER 10				PIER 15			
BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION
6-1	40.988	7-1	41.054	7-1	46.925	8-1	46.990	8-1	52.861	9-1	52.927	9-1	58.798	10-1	58.864	14-1	52.978	15-1	52.884
6-2	41.228	7-2	41.294	7-2	47.165	8-2	47.230	8-2	53.101	9-2	53.167	9-2	59.038	10-2	59.104	14-2	53.218	15-2	53.124
6-3	41.468	7-3	41.534	7-3	47.405	8-3	47.470	8-3	53.341	9-3	53.407	9-3	59.278	10-3	59.344	14-3	53.458	15-3	53.364
6-4	41.468	7-4	41.534	7-4	47.405	8-4	47.470	8-4	53.341	9-4	53.407	9-4	59.278	10-4	59.344	14-4	53.457	15-4	53.363
6-5	41.228	7-5	41.294	7-5	47.165	8-5	47.230	8-5	53.101	9-5	53.167	9-5	59.038	10-5	59.104	14-5	53.217	15-5	53.123
6-6	40.988	7-6	41.054	7-6	46.925	8-6	46.990	8-6	52.861	9-6	52.927	9-6	58.798	10-6	58.864	14-6	52.977	15-6	52.883

TOP OF PEDESTAL ELEVATIONS															
PIER 16				PIER 17				PIER 18				PIER 19			
BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION	BEAM NO.	ELEVATION
15-1	44.925	16-1	44.834	16-1	36.875	17-1	36.784	17-1	28.779	18-1	28.688	18-1	20.649	19-1	24.760
15-2	45.165	16-2	45.074	16-2	37.115	17-2	37.024	17-2	29.019	18-2	28.814	18-2	20.854	19-2	24.911
15-3	45.405	16-3	45.314	16-3	37.355	17-3	37.264	17-3	29.259	18-3	29.012	18-3	21.052	19-3	25.101
15-4	45.405	16-4	45.313	16-4	37.354	17-4	37.263	17-4	29.244	18-4	29.210	18-4	21.251	19-4	25.291
15-5	45.165	16-5	45.073	16-5	37.114	17-5	37.023	17-5	29.004	18-5	29.154	18-5	21.194	19-5	25.386
15-6	44.925	16-6	44.833	16-6	36.874	17-6	36.783	17-6	28.764	18-6	28.979	18-6	21.019	19-6	25.226
										18-7	28.804	18-7	20.844	19-7	25.066
										18-8	28.673	18-8	20.649	19-8	24.906
														19-9	24.760

NOTE:

1. ALL TOP OF PEDESTAL ELEVATIONS ARE LEVEL.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

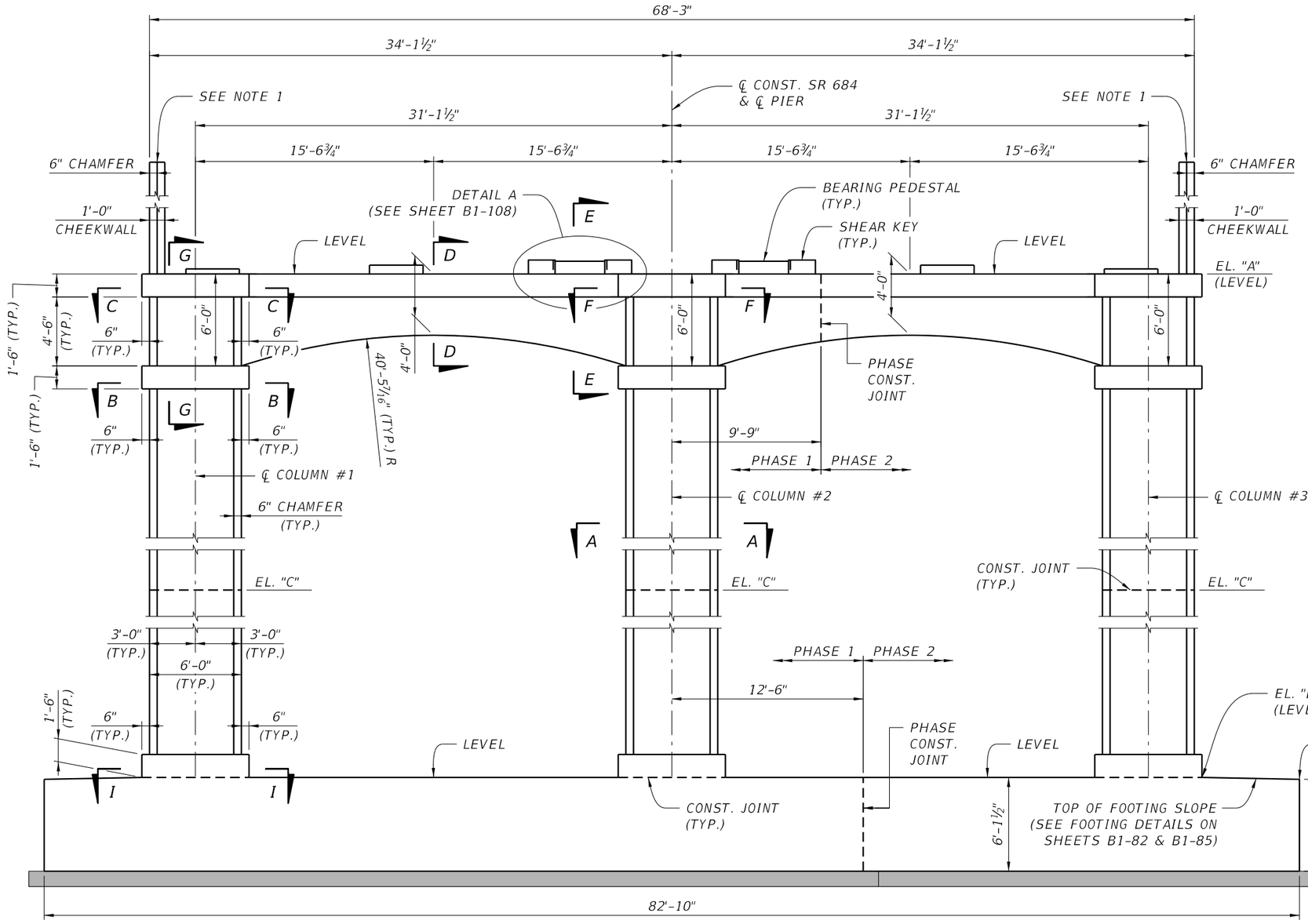
SHEET TITLE: PIERS 4 - 10 & 15 - 19 GEOMETRY (3 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

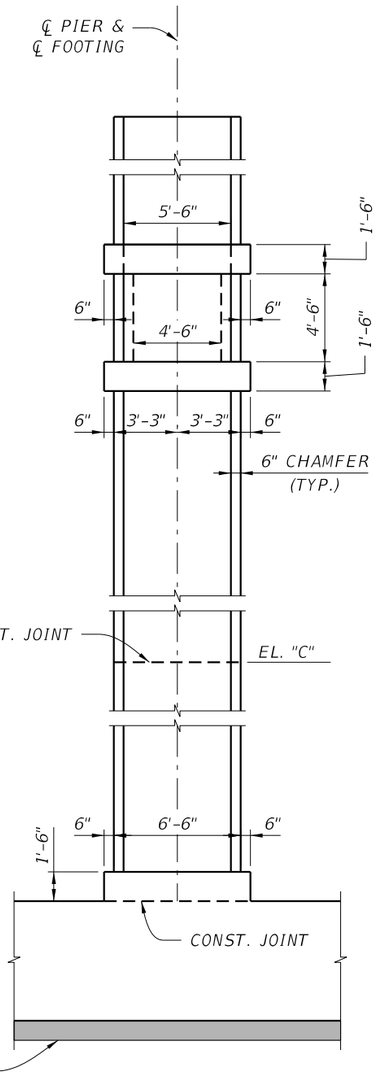
SHEET NO. B1-59

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



ELEVATION

(PILES NOT SHOWN FOR CLARITY)
(LOOKING UPSTATION)



SIDE VIEW

TABLE OF PIER ELEVATIONS

LOCATION	STATION	EL. "A"	EL. "B"	EL. "C"	FOOTING
PIER 11	226+40.75	64.365	3.000	31.000	Type 3
PIER 12	228+05.75	66.999	3.000	32.000	Type 3
PIER 13	229+70.75	65.747	3.000	32.000	Type 3
PIER 14	231+35.75	60.663	3.000	29.000	Type 3

NOTES:

1. SEE SHEET B1-61 FOR TOP OF CHEEK WALL ELEVATIONS.
2. WORK THIS SHEET WITH SHEETS B1-106 THRU B1-108 FOR SECTION VIEWS.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 11-14 GEOMETRY (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-60

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TOP OF PEDESTAL ELEVATIONS (LEVEL)				
LOCATION		CONST. PHASE	BEAM NO.	ELEVATION
PIER 11	BACK STATION (SPAN 10)	1	10-1	64.698
			10-2	64.938
			10-3	65.178
			10-4	65.178
		2	10-5	64.938
			10-6	64.698
	AHEAD STATION (SPAN 11)	1	11-1	64.758
			11-2	64.998
			11-3	65.238
			11-4	65.238
		2	11-5	64.998
			11-6	64.758
PIER 12	BACK STATION (SPAN 11)	1	11-1	67.332
			11-2	67.572
			11-3	67.812
			11-4	67.812
		2	11-5	67.572
			11-6	67.332
	AHEAD STATION (SPAN 12)	1	12-1	67.342
			12-2	67.582
			12-3	67.822
			12-4	67.822
		2	12-5	67.582
			12-6	67.342

TOP OF PEDESTAL ELEVATIONS (LEVEL)				
LOCATION		CONST. PHASE	BEAM NO.	ELEVATION
PIER 13	BACK STATION (SPAN 12)	1	12-1	66.129
			12-2	66.369
			12-3	66.609
			12-4	66.609
		2	12-5	66.369
			12-6	66.129
	AHEAD STATION (SPAN 13)	1	13-1	66.081
			13-2	66.321
			13-3	66.561
			13-4	66.561
		2	13-5	66.321
			13-6	66.081
PIER 14	BACK STATION (SPAN 13)	1	13-1	61.074
			13-2	61.314
			13-3	61.554
			13-4	61.554
		2	13-5	61.314
			13-6	61.074
	AHEAD STATION (SPAN 14)	1	14-1	60.996
			14-2	61.236
			14-3	61.476
			14-4	61.476
		2	14-5	61.236
			14-6	60.996

CHEEKWALL ELEVATIONS			
LOCATION	STATION	EL. "AA"	EL. "BB"
PIER 11	226+40.75	71.617	71.815
PIER 12	228+05.75	74.222	74.420
PIER 13	229+70.75	73.226	72.951
PIER 14	231+35.75	68.156	67.881

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

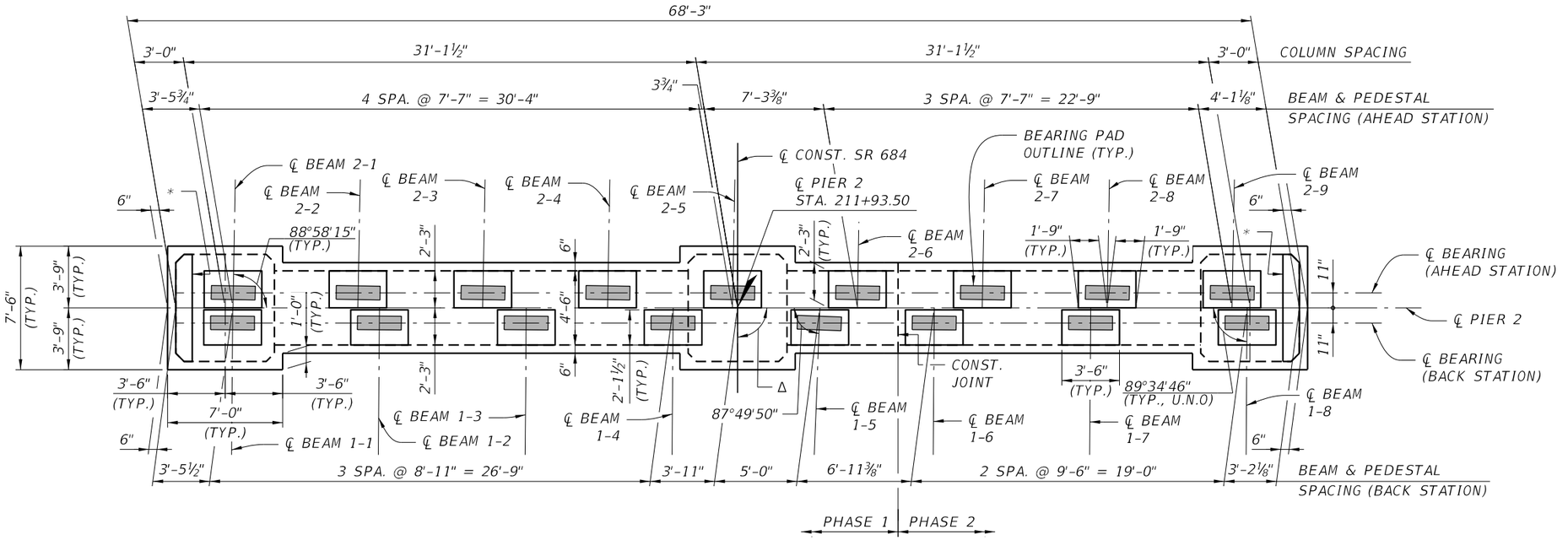
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 11-14 GEOMETRY (2 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-61

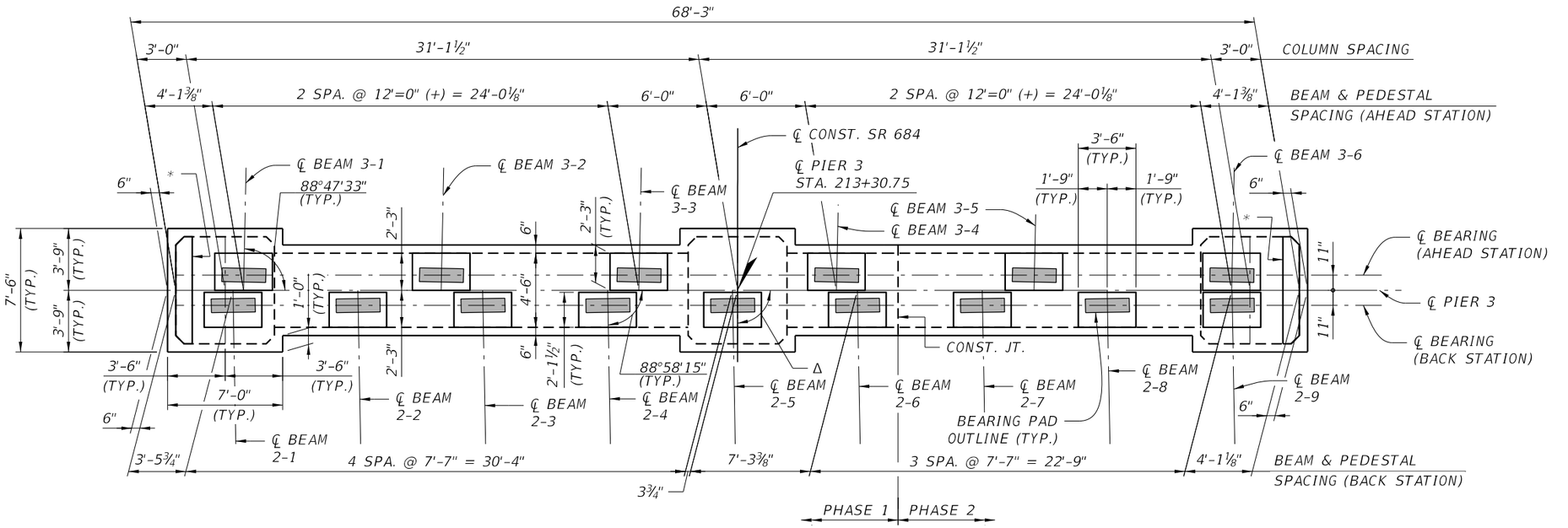


PLAN

(PIER 2)

(Δ = 90°00'00" T.C.)

(* = SEE CHEEKWALL DETAIL ON SHEET B1-63)



PLAN

(PIER 3)

(Δ = 90°00'00" T.C., * = SEE CHEEKWALL DETAIL ON SHEET B1-63)

DIRECTION OF STATIONING

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PIERS 2 & 3

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-62

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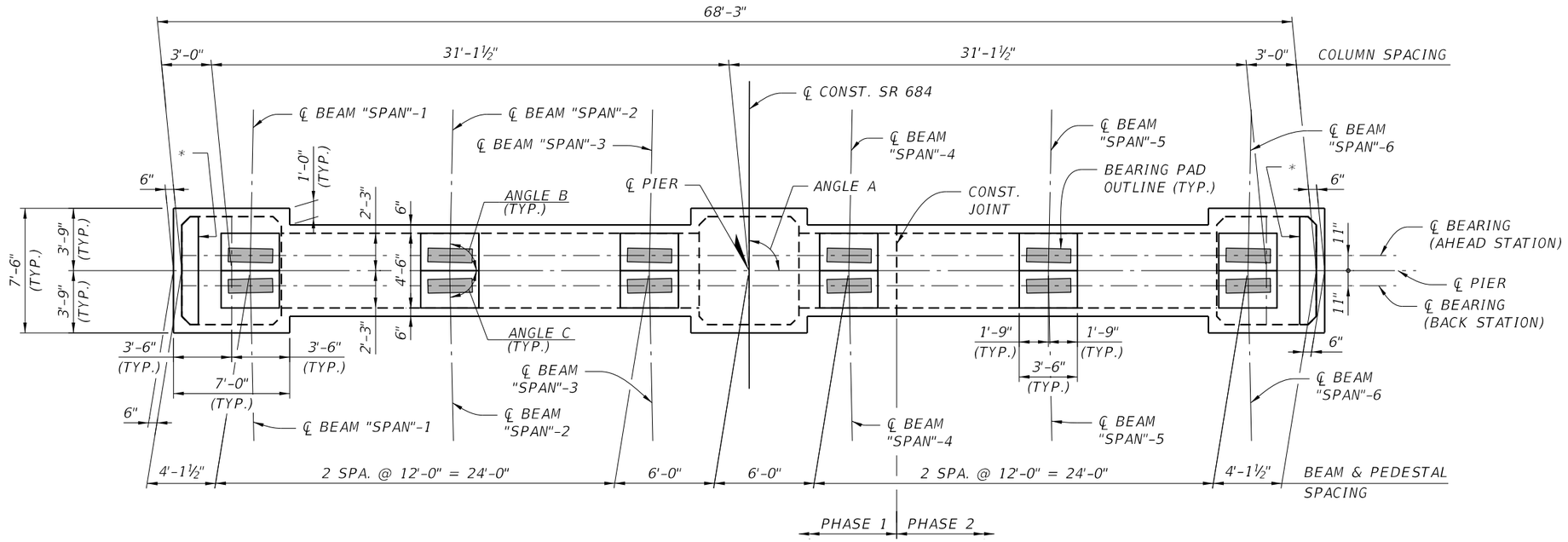
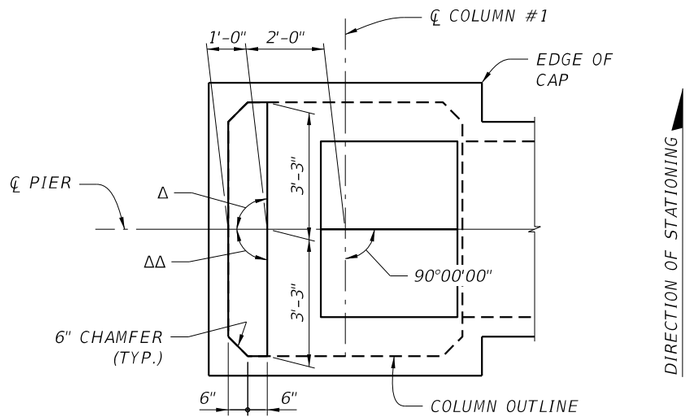


PLAN

(PIERS 4 - 10 & 15 - 17)
(* = SEE CHEEKWALL DETAIL)



CHEEKWALL DETAIL

(COLUMN #1 SHOWN, COLUMN #3 OPPOSITE HAND)
(Δ = 90°00'00" FOR PIERS 2 - 10 & 15 - 17, 88°45'04" FOR PIERS 18 & 19)
(ΔΔ = 90°00'00" FOR PIERS 2 - 10 & 15 - 18, 91°14'56" FOR PIER 19)

TABLE OF VARIABLES				
LOCATION	STATION	ANGLE A	ANGLE B	ANGLE C
PIER 4	214+91.75	90°00'00" (T.C.)	88°47'33"	88°47'33"
PIER 5	216+52.75	90°00'00" (T.C.)	89°27'52"	88°47'33"
PIER 6	218+15.75	90°00'00"	90°00'00"	89°55'24"
PIER 7	219+80.75	90°00'00"	90°00'00"	90°00'00"
PIER 8	221+45.75	90°00'00"	90°00'00"	90°00'00"
PIER 9	223+10.75	90°00'00"	90°00'00"	90°00'00"
PIER 10	224+75.75	90°00'00"	90°00'00"	90°00'00"
PIER 15	232+96.75	90°00'00" (T.C.)	89°10'14"	89°10'14"
PIER 16	234+57.75	90°00'00" (T.C.)	89°10'14"	89°10'14"
PIER 17	236+18.75	90°00'00" (T.C.)	89°10'14"	89°10'14"

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PIERS 4 - 10 & 15 - 17
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-63

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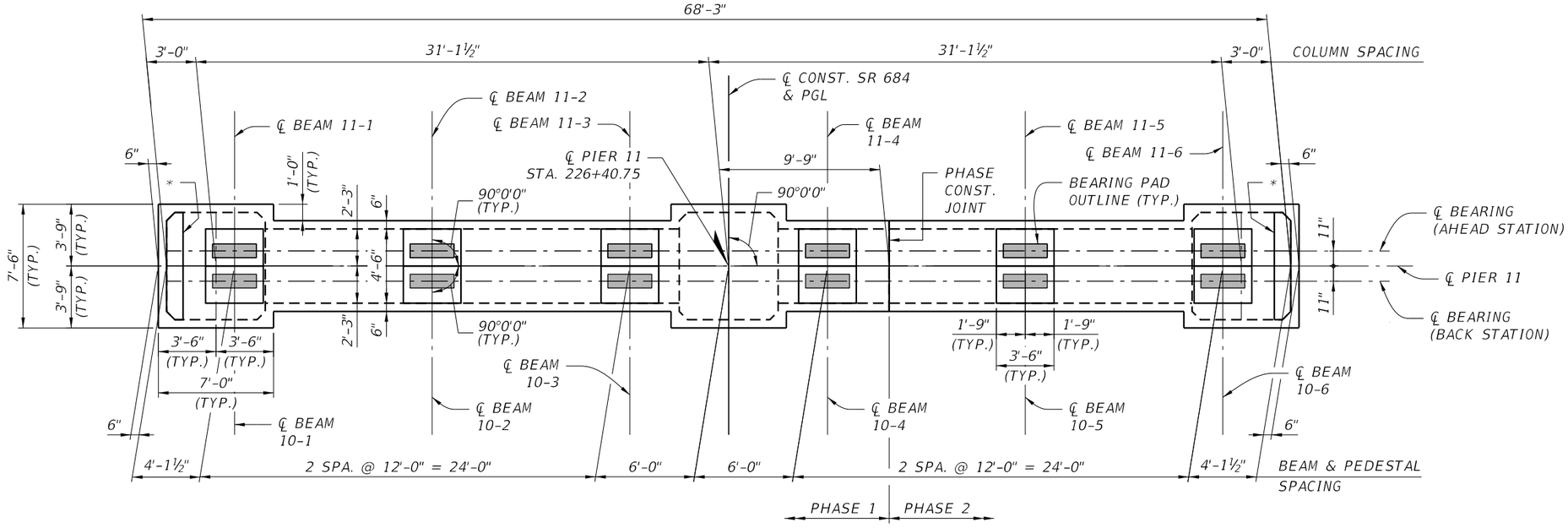
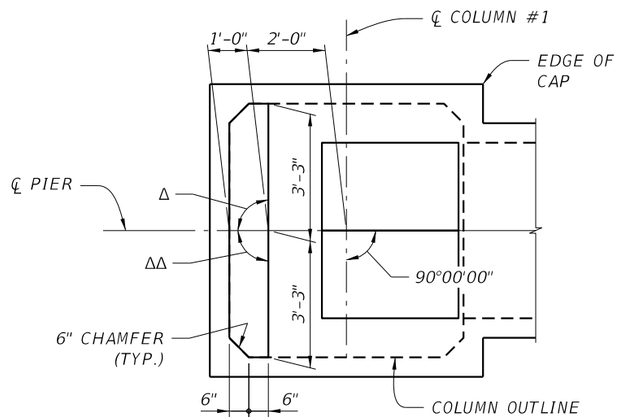


PLAN

(PIER 11)
(* SEE CHEEK WALL DETAIL ON THIS SHEET)



CHEEK WALL DETAIL

(COLUMN #1 SHOWN, COLUMN #3 OPPOSITE HAND)
(Δ = 90°00'00" FOR PIERS 11 – 14)
(ΔΔ = 90°00'00" FOR PIERS 11 – 14)

NOTES:
1. FOR PEDESTAL & CHEEKWALL REINFORCING DETAILS, SEE SHEET B1-108.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PIER 11
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-64

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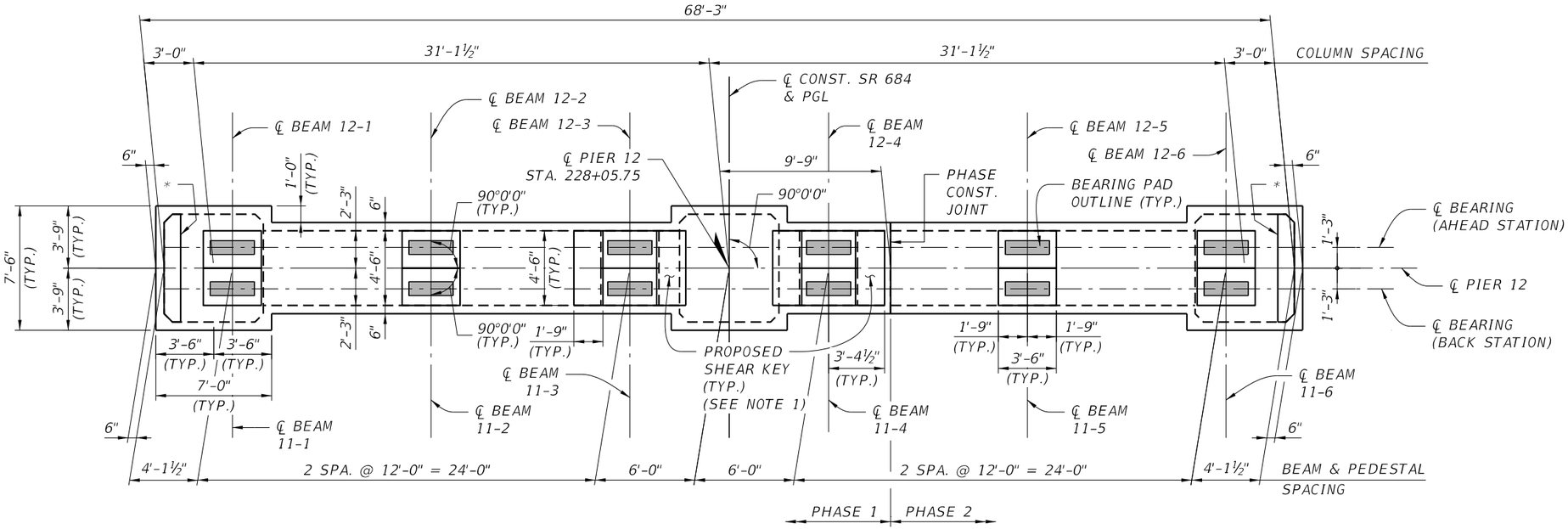
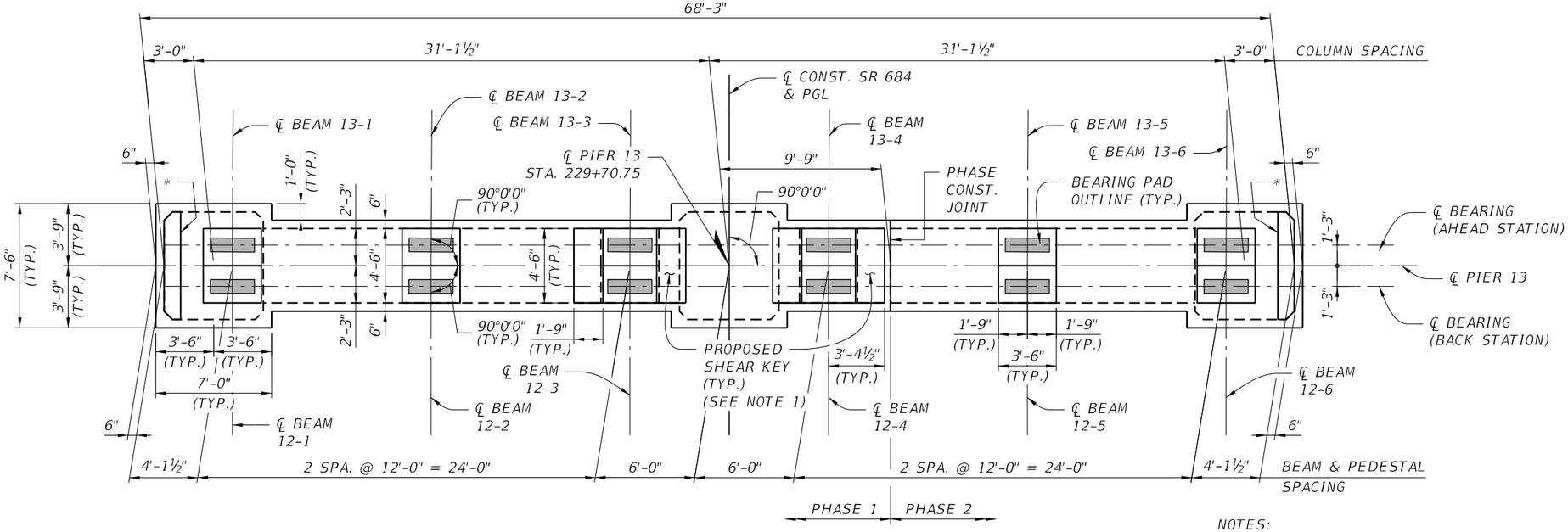


PLAN

(PIER 12)

(* SEE CHEEK WALL DETAIL ON SHEET B1-64)



PLAN

(PIER 13)

(* SEE CHEEK WALL DETAIL ON SHEET B1-64)

NOTES:
1. FOR PEDESTAL, SHEAR KEY & CHEEKWALL REINFORCING DETAILS, SEE SHEET B1-108.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SL	JTM	RMD	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

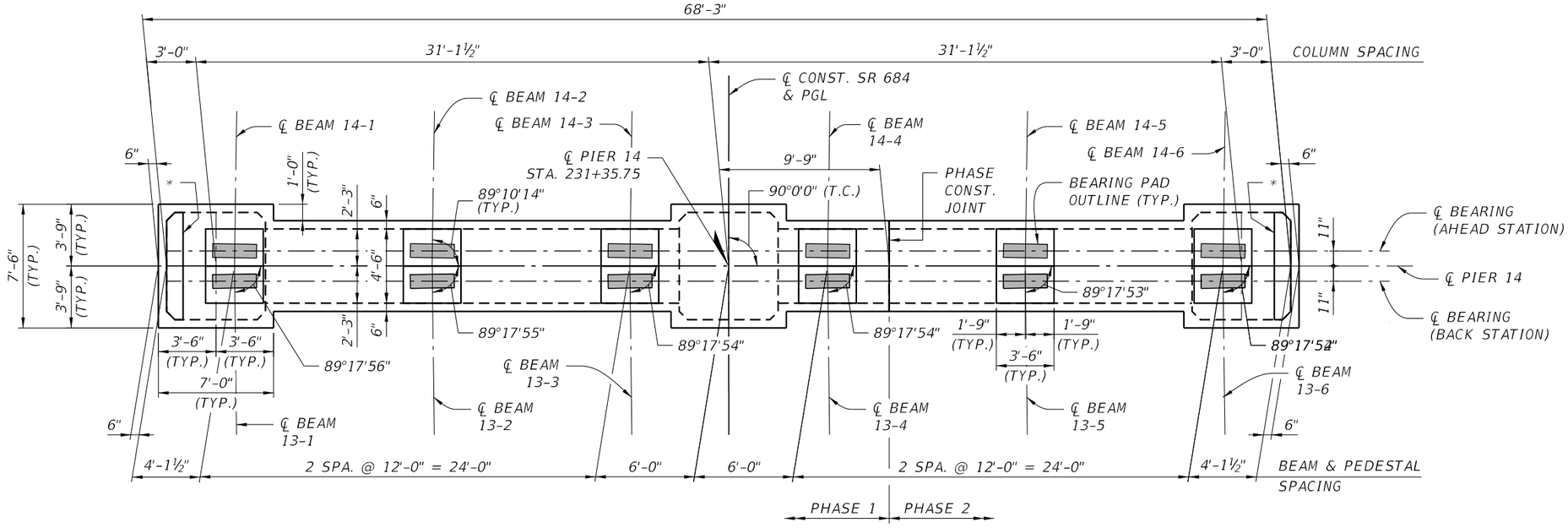
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PIERS 12 & 13

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-65



PLAN

(PIER 14)

(* SEE CHEEK WALL DETAIL ON SHEET B1-64)

NOTES:
1. FOR PEDESTAL & CHEEKWALL REINFORCING DETAILS, SEE SHEET B1-108.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SL	JTM	RMD	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

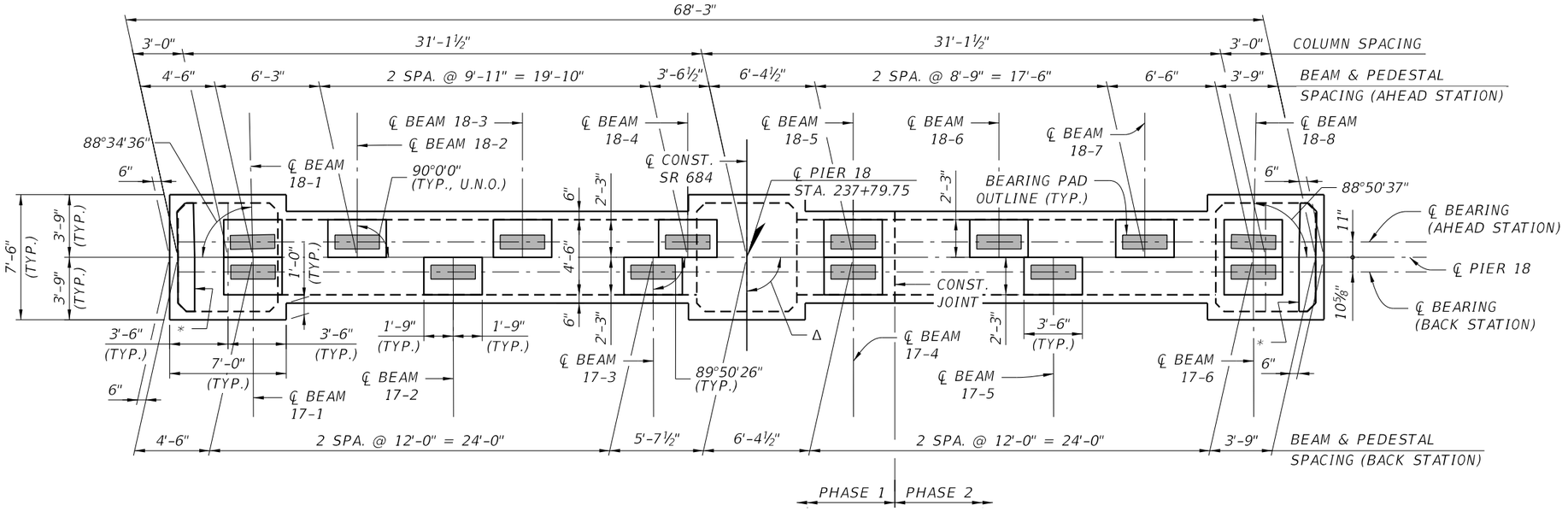
SHEET TITLE: PLAN - PIER 14

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

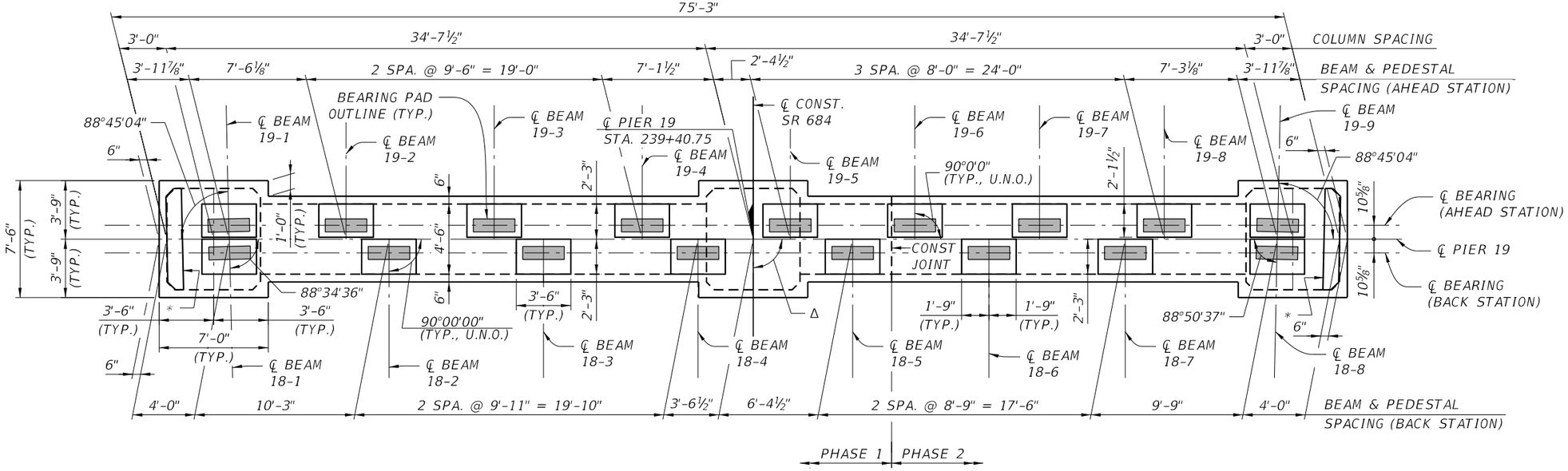
SHEET NO.: B1-66

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



PLAN

(PIER 18)
(Δ = 90°00'00")
(* = SEE CHEEKWALL DETAIL ON SHEET B1-63)



PLAN

(PIER 19)
(Δ = 90°00'00")
(* = SEE CHEEKWALL DETAIL ON SHEET B1-63)

DIRECTION OF STATIONING

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PIERS 18 & 19

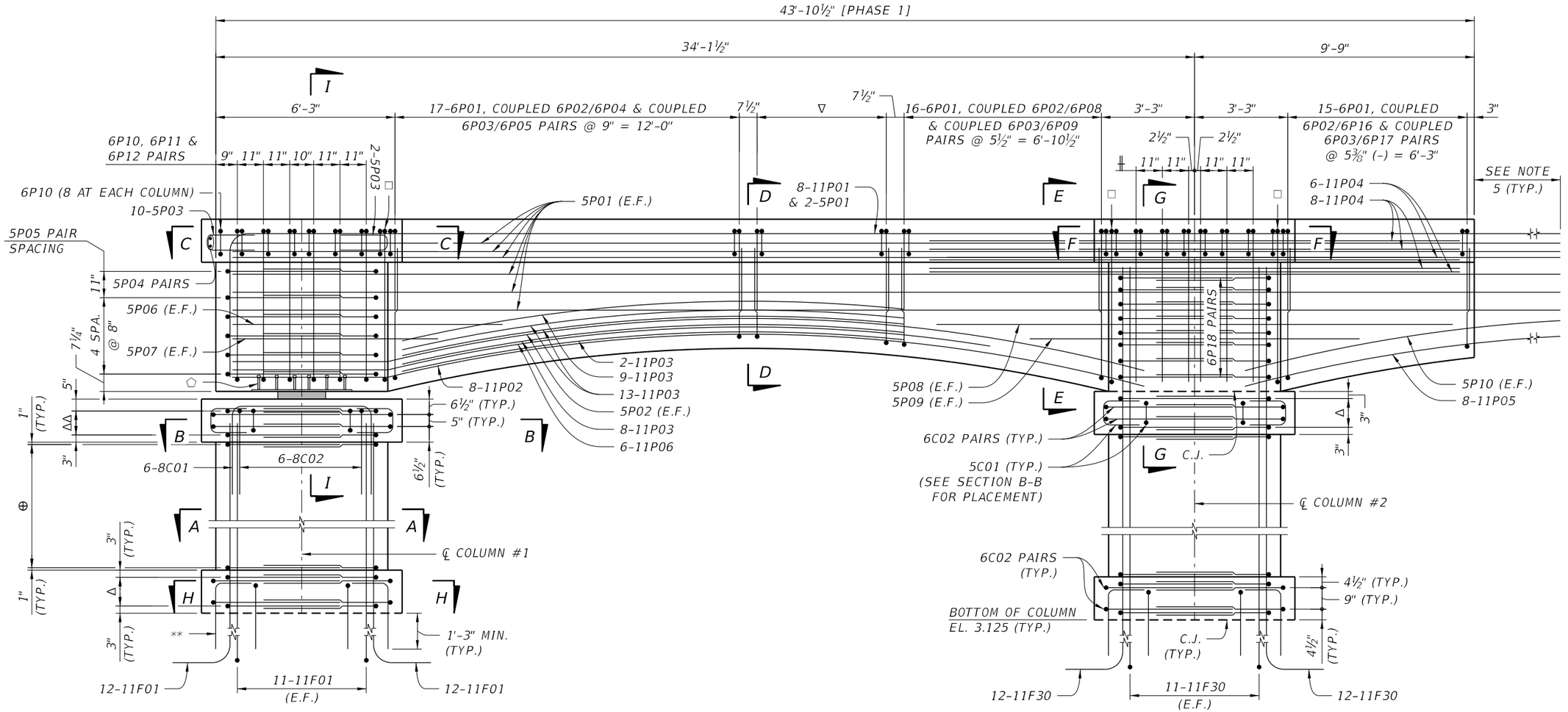
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-67

JHERNANDEZ 5/22/2025 2:03:02 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1Pier105.dgn

TABLE OF VARIABLES	
PIER	'F'
2	5
3	11



ELEVATION (PHASE 1)

(6" COLUMN CHAMFERS, CHEEKWALL, PEDESTALS AND AESTHETIC TREATMENTS NOT SHOWN FOR CLARITY.)

LEGEND:

- Δ 3 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 6" = 1'-0" (TYP.)
- ΔΔ 3 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 5" = 10"
- ** 5F01 (TYP.) (SEE NOTE 1 AND 2)
- □ 6P10, 6P14 & 2-6P15
- ∇ 7-6P01, COUPLED 6P02/6P06 & COUPLED 6P03/6P07 PAIRS @ 9" = 4'-6"
- ⬠ EMBEDDED BEARING PLATE
- ⊕ 'F' SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 6" (MAX.) (TYP.)
- ⫲ 6P10 & 6P13 SPACING

NOTES:

1. SEE SHEET B1-96 FOR SECTIONS A-A, B-B, C-C, D-D, E-E & F-F. SEE SHEET B1-97 FOR SECTIONS G-G & I-I.
2. SECTION H-H IS IDENTICAL TO SECTION B-B EXCEPT THAT 5F01 BARS SHALL REPLACE THE 5C01 BARS AND THE 8C01/8C02 BARS ARE OMITTED.
3. SEE SHEET B1-95 FOR PHASE 2 REINFORCING DETAILS.
4. SEE SHEET B1-103 FOR CHEEKWALL & PEDESTAL REINFORCING DETAILS.
5. #5 BAR = 2'-6" (MIN.) & #11 BAR = 7'-0" (MIN.) COMPLY WITH "PHASING OF WORK" NOTE 2 ON SHEET B-8.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

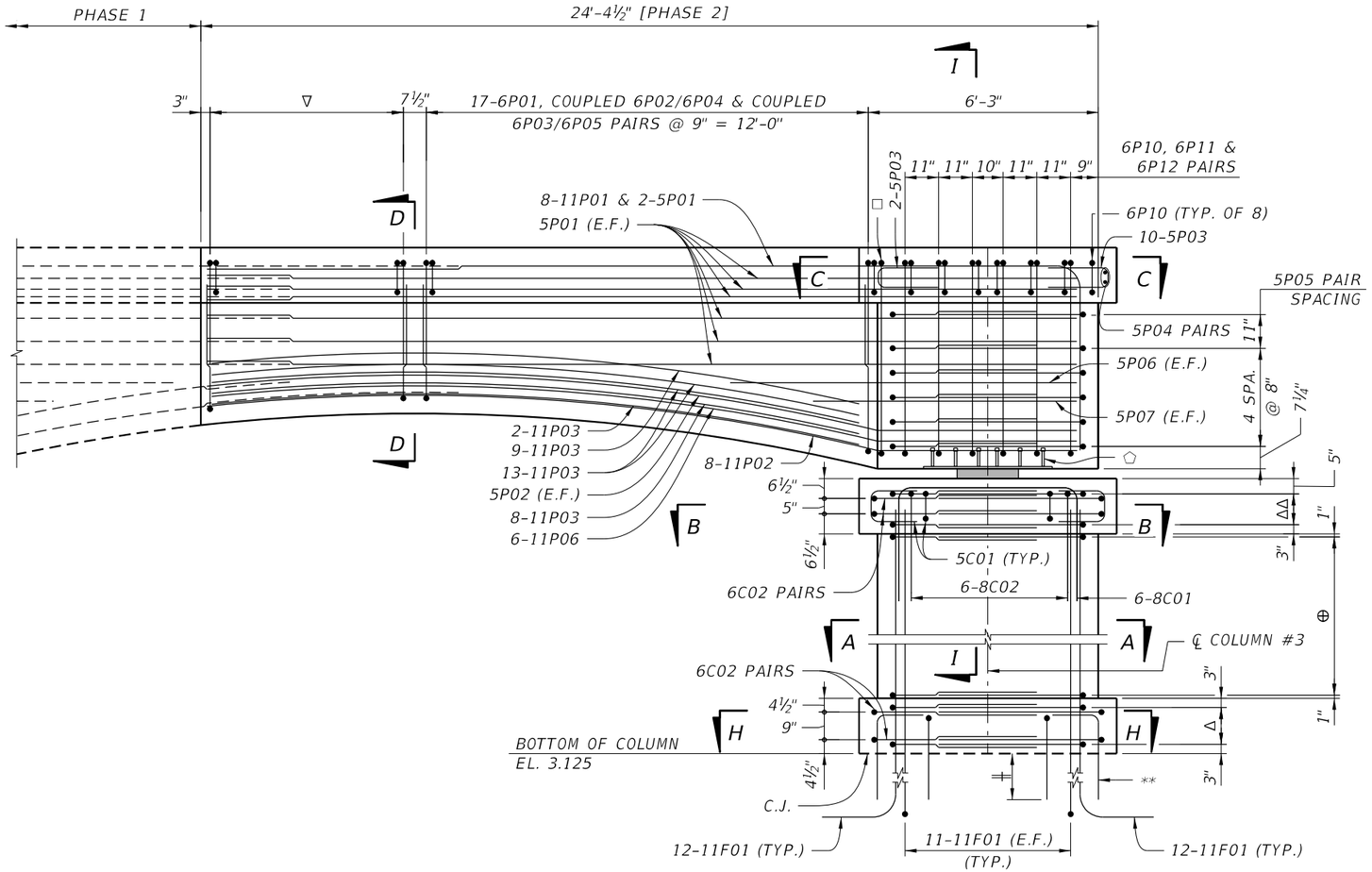
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIER 2 & 3 DETAILS (1 OF 5)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. B1-94

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

TABLE OF VARIABLES	
PIER	'F'
2	5
3	11



ELEVATION (PHASE 2)

(6" COLUMN CHAMFERS, CHEEKWALL, PEDESTALS AND AESTHETIC TREATMENTS NOT SHOWN FOR CLARITY.)

LEGEND:

- Δ 3 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 6" = 1'-0"
- ΔΔ 3 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 5" = 10"
- ** 5F01 (TYP.) (SEE NOTE 1 AND 2)
- □ 6P10, 6P14 & 2-6P15
- ∇ 8-6P01, COUPLED 6P02/6P06 & COUPLED 6P03/6P07 PAIRS @ 9" = 5'-3"
- ⬠ EMBEDDED BEARING PLATE
- ⊕ 'F' SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 6" (MAX.)
- ⫫ 1'-3" MIN. EMBEDMENT (TYP.)

NOTES:

1. SEE SHEET B1-96 FOR SECTIONS A-A, B-B, C-C, D-D, E-E & F-F. SEE SHEET B1-97 FOR SECTION I-I.
2. SECTION H-H IS IDENTICAL TO SECTION B-B EXCEPT THAT 5F01 BARS SHALL REPLACE THE 5C01 BARS AND THE 8C01/8C02 BARS ARE OMITTED.
3. SEE SHEET B1-94 FOR PHASE 1 REINFORCING DETAILS.
4. SEE SHEET B1-103 FOR CHEEKWALL & PEDESTAL REINFORCING DETAILS.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCV
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIER 2 & 3 DETAILS (2 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-95

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

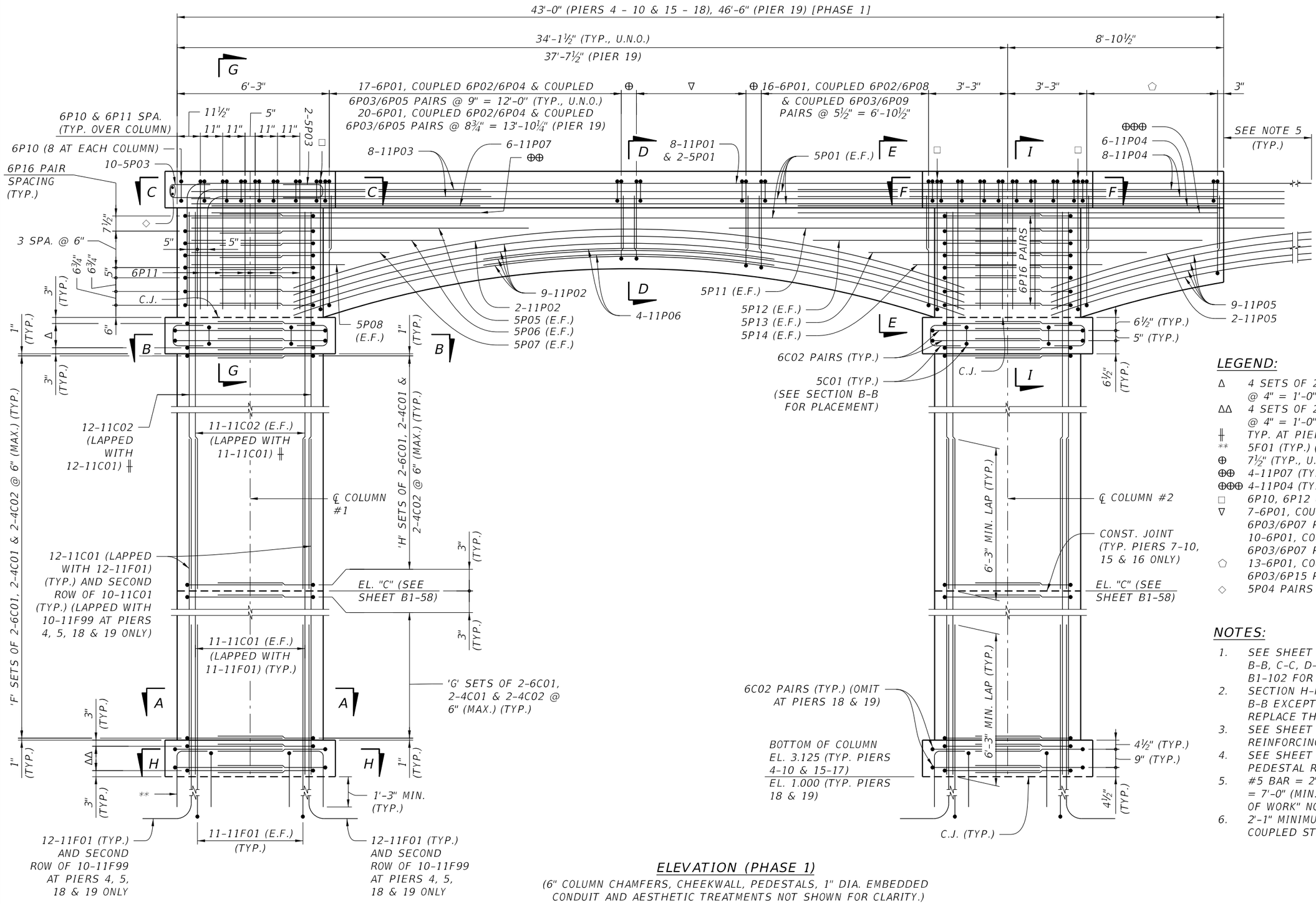


TABLE OF VARIABLES

PIER	'F'	'G'	'H'
4	23	–	–
5	34	–	–
6	46	–	–
7	–	30	29
8	–	34	37
9	–	48	35
10	–	48	48
15	–	48	36
16	–	34	34
17	50	–	–
18	38	–	–
19	22	–	–

LEGEND:

- Δ 4 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 4" = 1'-0" (TYP.)
- ΔΔ 4 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 4" = 1'-0" (TYP.)
- ‖ TYP. AT PIERS 7-10, 15 & 16 ONLY
- ** 5F01 (TYP.) (SEE NOTE 1 AND 2)
- ⊕ 7½" (TYP., U.N.O.), 5" (PIER 19)
- ⊕⊕ 4-11P07 (TYP., U.N.O.), 8-11P07 (PIER 19)
- ⊕⊕⊕ 4-11P04 (TYP., U.N.O.), 8-11P04 (PIER 19)
- □ 6P10, 6P12 & 2-6P13
- ▽ 7-6P01, COUPLED 6P02/6P06 & COUPLED 6P03/6P07 PAIRS @ 9" = 4'-6" (TYP., U.N.O.) 10-6P01, COUPLED 6P02/6P06 & COUPLED 6P03/6P07 PAIRS @ 8¾" = 6'-6¾" (PIER 19)
- ⬠ 13-6P01, COUPLED 6P02/6P14 & COUPLED 6P03/6P15 PAIRS @ 5⅜" = 5'-4½"
- ◇ 5P04 PAIRS

NOTES:

1. SEE SHEET B1-101 FOR SECTIONS A-A, B-B, C-C, D-D, E-E & F-F. SEE SHEET B1-102 FOR SECTIONS G-G & I-I.
2. SECTION H-H IS IDENTICAL TO SECTION B-B EXCEPT THAT 5F01 BARS SHALL REPLACE THE 5C01 BARS.
3. SEE SHEET B1-100 FOR PHASE 2 REINFORCING DETAILS.
4. SEE SHEET B1-103 FOR CHEEKWALL & PEDESTAL REINFORCING DETAILS.
5. #5 BAR = 2'-6" (MIN.) & #11 BAR = 7'-0" (MIN.). COMPLY WITH "PHASING OF WORK" NOTE 2 ON SHEET B-8.
6. 2'-1" MINIMUM LAP ON PIER CAP 6P## COUPLED STIRRUPS.

ELEVATION (PHASE 1)

(6" COLUMN CHAMFERS, CHEEKWALL, PEDESTALS, 1" DIA. EMBEDDED CONDUIT AND AESTHETIC TREATMENTS NOT SHOWN FOR CLARITY.)

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

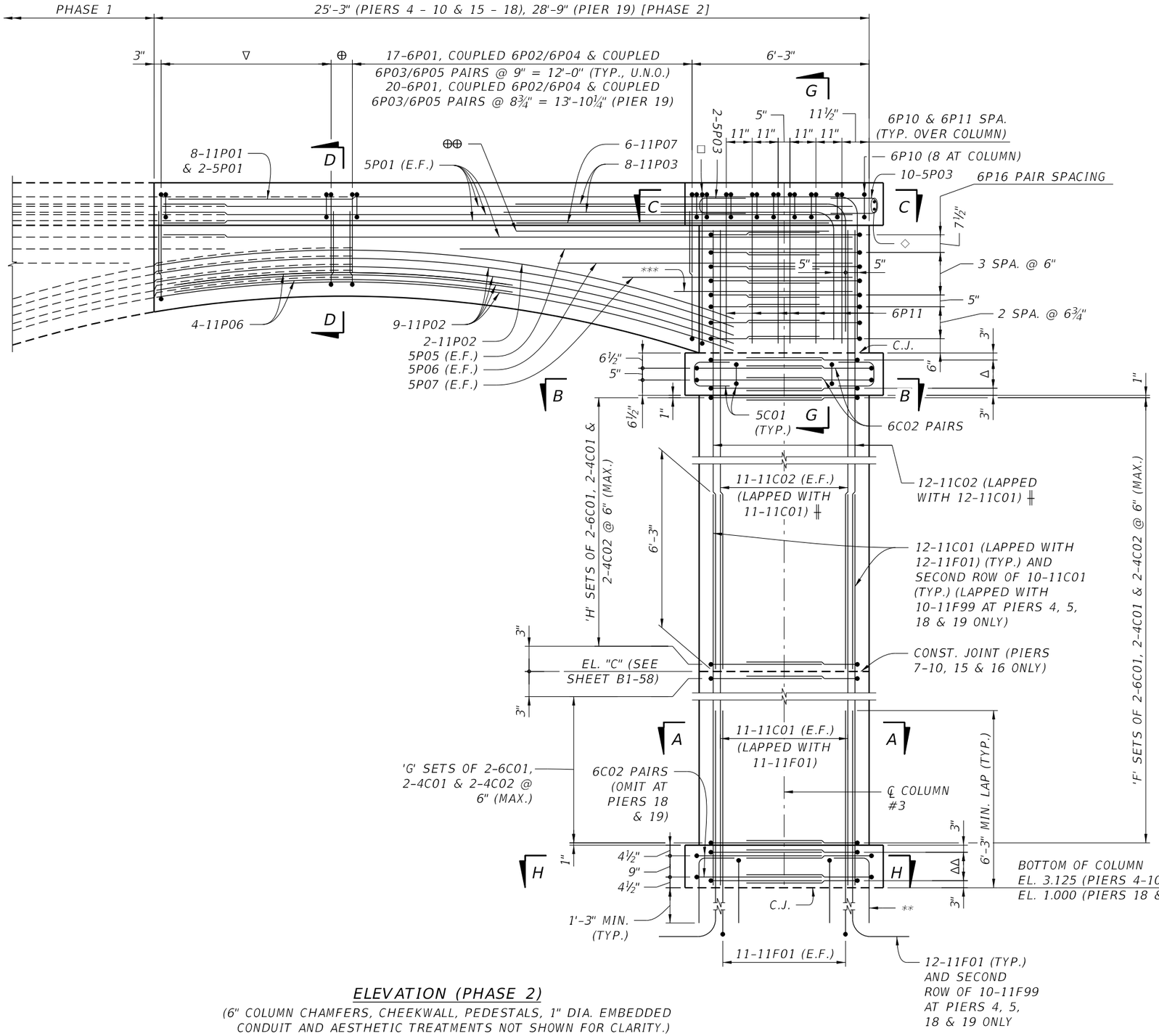
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIER 4 - 10 & 15 - 19 DETAILS (1 OF 4)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-99



ELEVATION (PHASE 2)

(6" COLUMN CHAMFERS, CHEEKWALL, PEDESTALS, 1" DIA. EMBEDDED CONDUIT AND AESTHETIC TREATMENTS NOT SHOWN FOR CLARITY.)

TABLE OF VARIABLES

PIER	'F'	'G'	'H'
4	23	–	–
5	34	–	–
6	46	–	–
7	–	30	29
8	–	34	37
9	–	48	35
10	–	48	48
15	–	48	36
16	–	34	34
17	50	–	–
18	38	–	–
19	22	–	–

LEGEND:

- Δ 4 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 4" = 1'-0" (TYP.)
- ΔΔ 4 SETS OF 2-6C01, 2-4C01 & 2-4C02 @ 4" = 1'-0" (TYP., U.N.O.)
- ╫ TYP. AT PIERS 7-10, 15 & 16 ONLY
- ** 5F01 (TYP.) (SEE NOTE 1 AND 2) (OMIT AT PIERS 18 & 19)
- *** 5P08 (E.F.)
- ⊕ 9" (TYP., U.N.O.), 5⅞" (PIER 19)
- ⊕⊕ 4-11P07 (TYP., U.N.O.) 8-11P07 (PIER 19)
- □ 6P10, 6P12 & 2-6P13
- ▽ 9-6P01, COUPLED 6P02/6P06 & COUPLED 6P03/6P07 PAIRS @ 9" = 6'-0" (TYP., U.N.O.) 12-6P01, COUPLED 6P02/6P06 & COUPLED 6P03/6P07 PAIRS @ 8⅝" = 7'-10⅞" (PIER 19)
- ◇ 5P04 PAIRS

NOTES:

1. SEE SHEET B1-101 FOR SECTIONS A-A, B-B, C-C, D-D, E-E & F-F. SEE SHEET B1-102 FOR SECTION G-G.
2. SECTION H-H IS IDENTICAL TO SECTION B-B EXCEPT THAT 5F01 BARS SHALL REPLACE THE 5C01 BARS.
3. SEE SHEET B1-99 FOR PHASE 1 REINFORCING DETAILS.
4. SEE SHEET B1-103 FOR CHEEKWALL & PEDESTAL REINFORCING DETAILS.
5. SEE SECTION B-B FOR PLACEMENT OF 5C01 BARS.
6. 2'-1" MINIMUM LAP ON PIER CAP 6P## COUPLED STIRRUPS.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIER 4 - 10 & 15 - 19 DETAILS (2 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-100

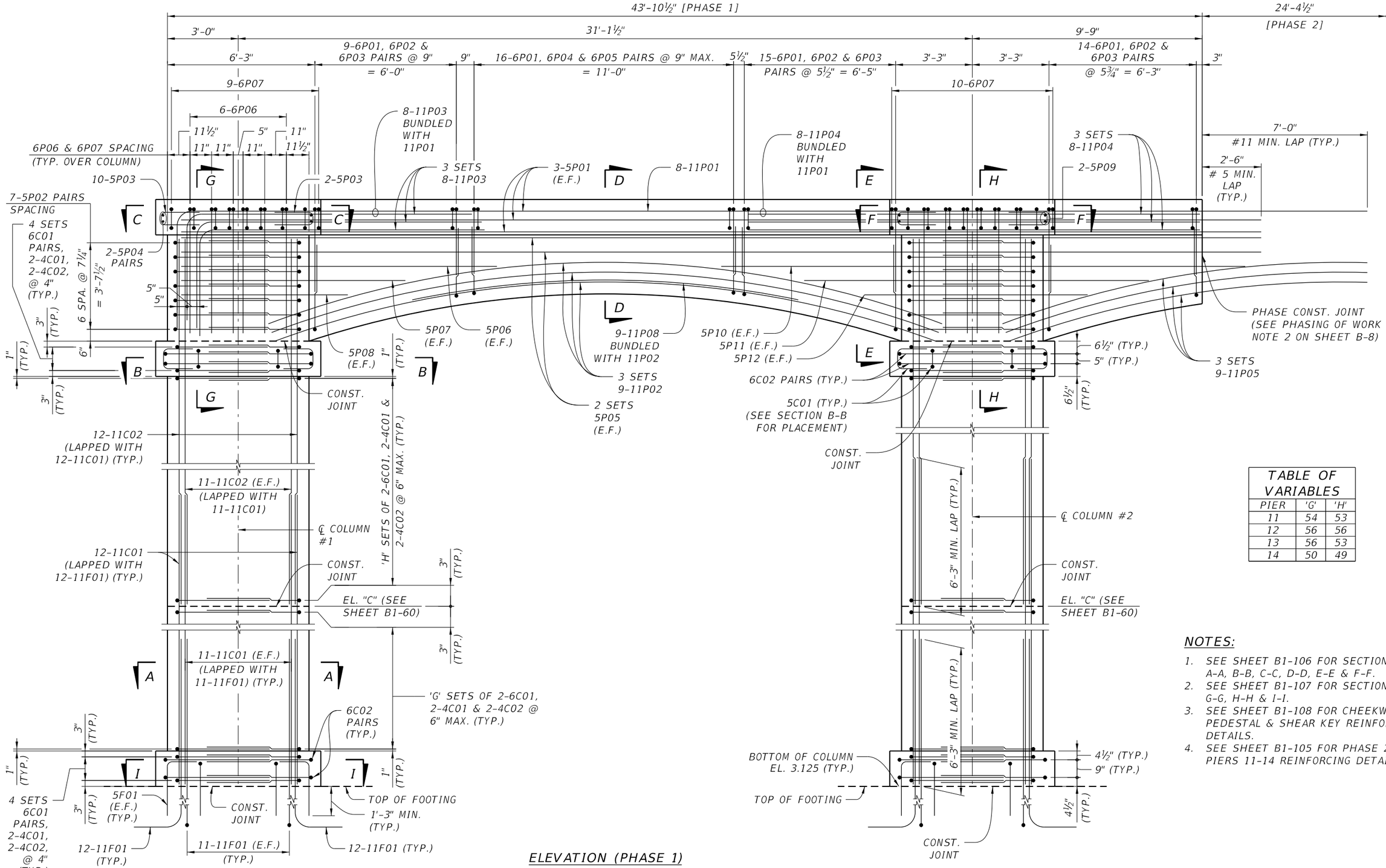


TABLE OF VARIABLES		
PIER	'G'	'H'
11	54	53
12	56	56
13	56	53
14	50	49

NOTES:

1. SEE SHEET B1-106 FOR SECTIONS A-A, B-B, C-C, D-D, E-E & F-F.
2. SEE SHEET B1-107 FOR SECTIONS G-G, H-H & I-I.
3. SEE SHEET B1-108 FOR CHEEKWALL, PEDESTAL & SHEAR KEY REINFORCING DETAILS.
4. SEE SHEET B1-105 FOR PHASE 2 PIERS 11-14 REINFORCING DETAILS.

ELEVATION (PHASE 1)

(6" COLUMN CHAMFERS)

(CHEEKWALL, PEDESTALS AND AESTHETIC TREATMENTS NOT SHOWN FOR CLARITY)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	SL
CHECKED BY:	JTM
DESIGNED BY:	RMD
CHECKED BY:	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 11-14 DETAILS (1 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-104

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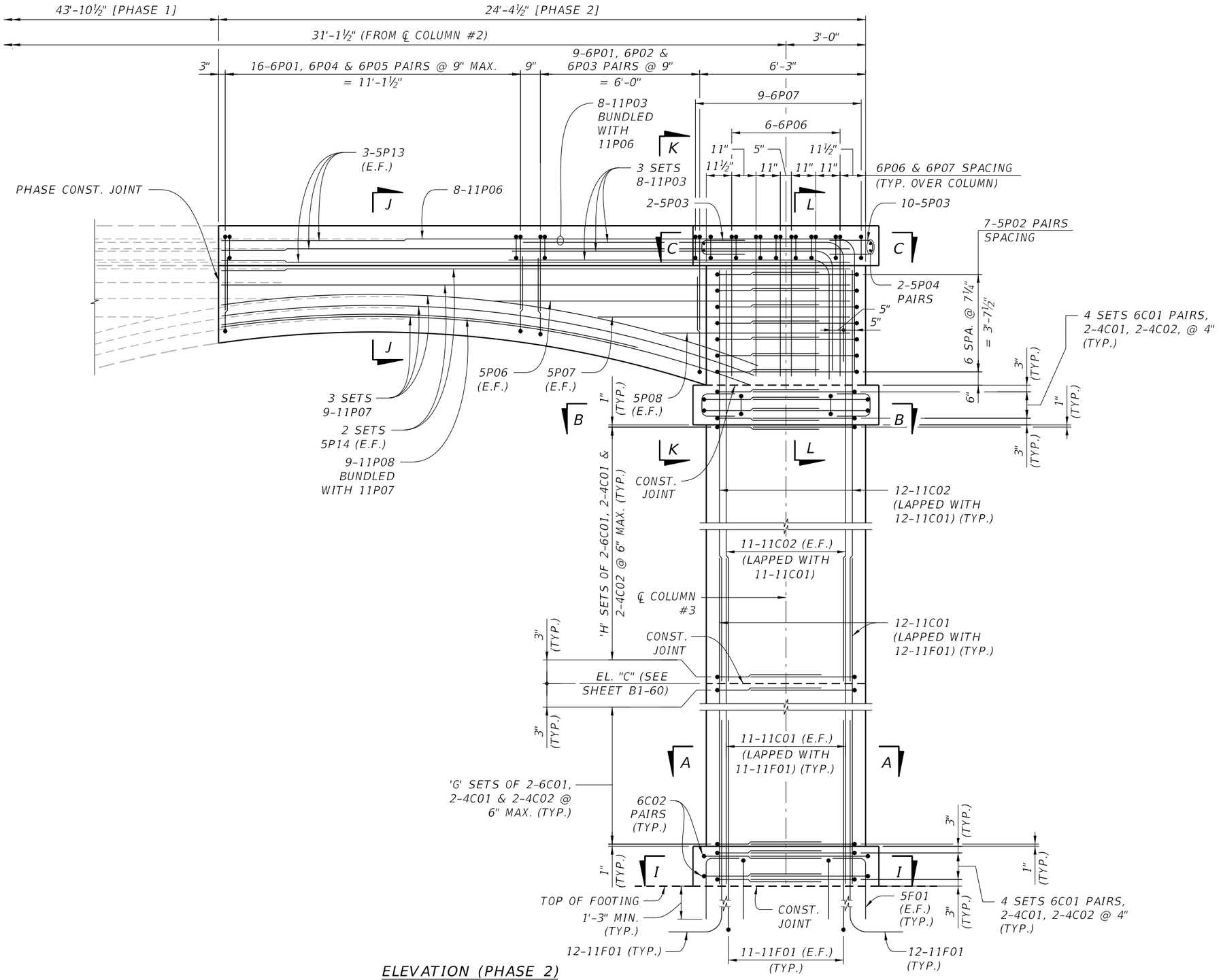

ELEVATION (PHASE 2)

(6" COLUMN CHAMFERS, CHEEKWALL, PEDESTALS AND AESTHETIC TREATMENTS NOT SHOWN FOR CLARITY)

NOTES:

1. SEE SHEET B1-106 FOR SECTIONS A-A, B-B & C-C.
2. SEE SHEET B1-107 FOR SECTIONS I-I, J-J, K-K & L-L.
3. SEE SHEET B1-108 FOR CHEEKWALL, PEDESTAL & SHEAR KEY REINFORCING DETAILS.
4. SEE SHEET B1-104 FOR PHASE 1 PIERS 11-14 REINFORCING DETAILS.
5. SEE SHEET B1-104 FOR TABLE OF VARIABLES FOR REINFORCING.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	SL
CHECKED BY:	JTM
DESIGNED BY:	RMD
CHECKED BY:	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

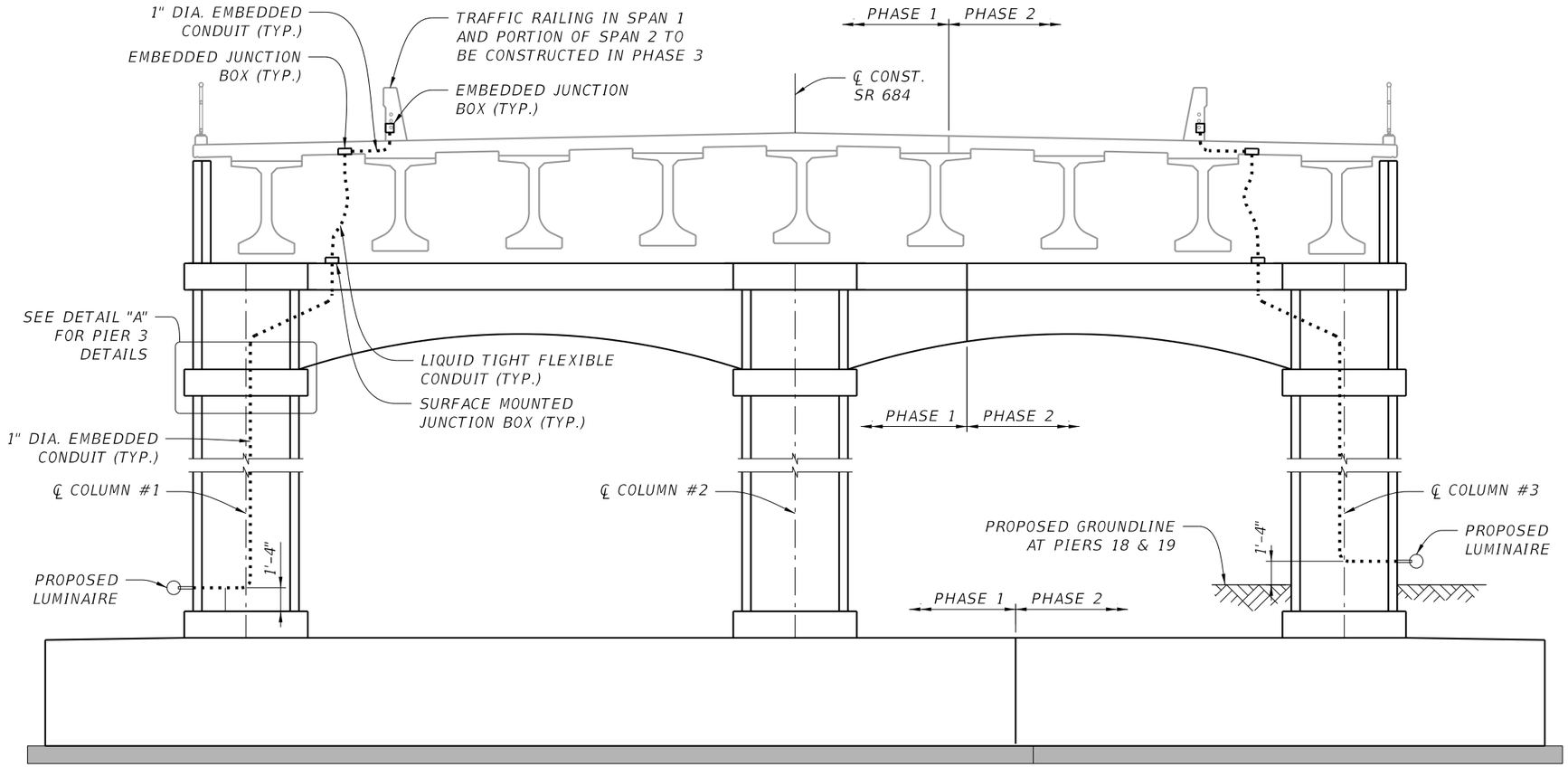
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIERS 11-14 DETAILS (2 OF 5)

REF. DWG. NO.:

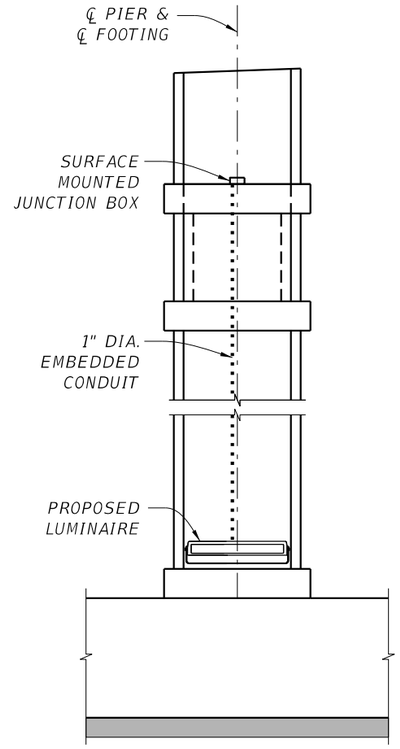
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-105

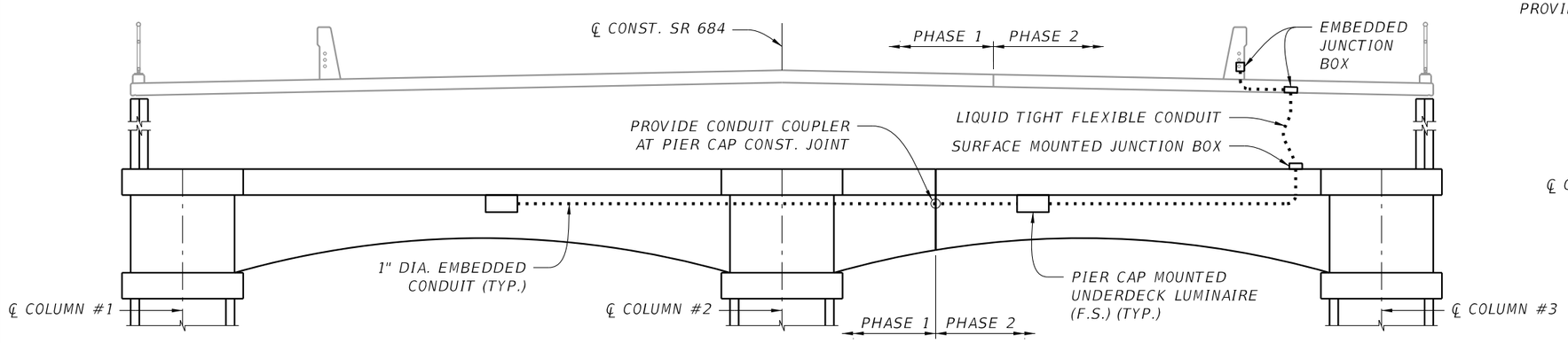


ELEVATION

(PIER 4 & SPAN 3 SHOWN, OTHER PIERS SIMILAR)

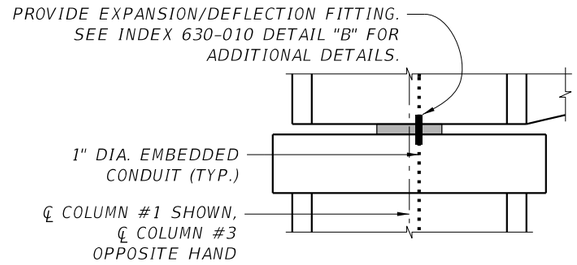


SIDE VIEW



PIER 19 PARTIAL ELEVATION

(BEAMS NOT SHOWN FOR CLARITY)
(PIER 2 SIMILAR WITH THREE PIER CAP MOUNTED UNDERDECK LUMINAIRE ON NEAR SIDE)



DETAIL "A"

NOTE:

1. SEE LIGHTING PLANS FOR ADDITIONAL DETAILS.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	BLM	DMH	BLM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PIER LIGHTING DETAILS

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-109

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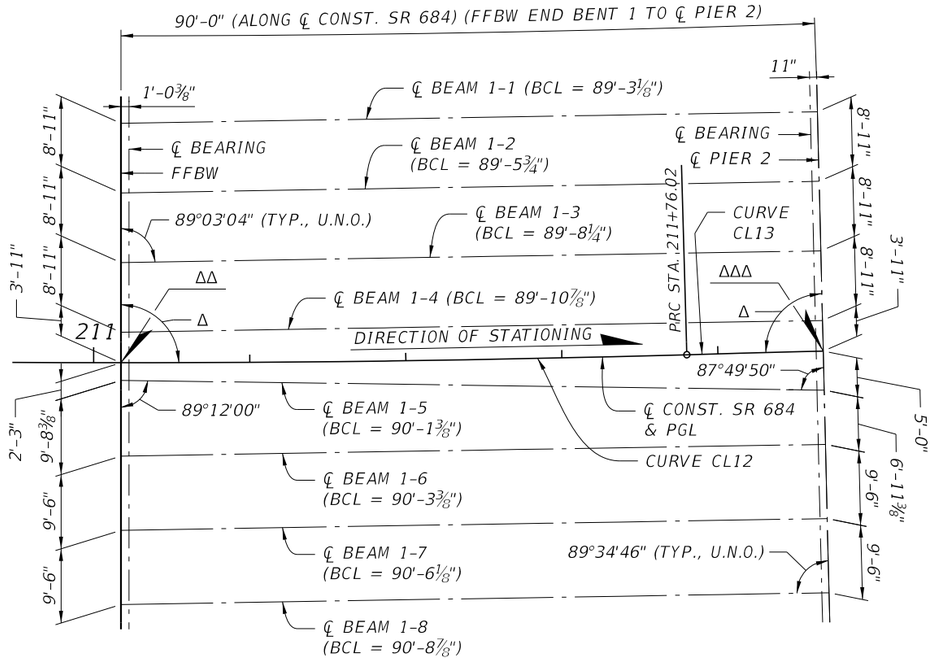
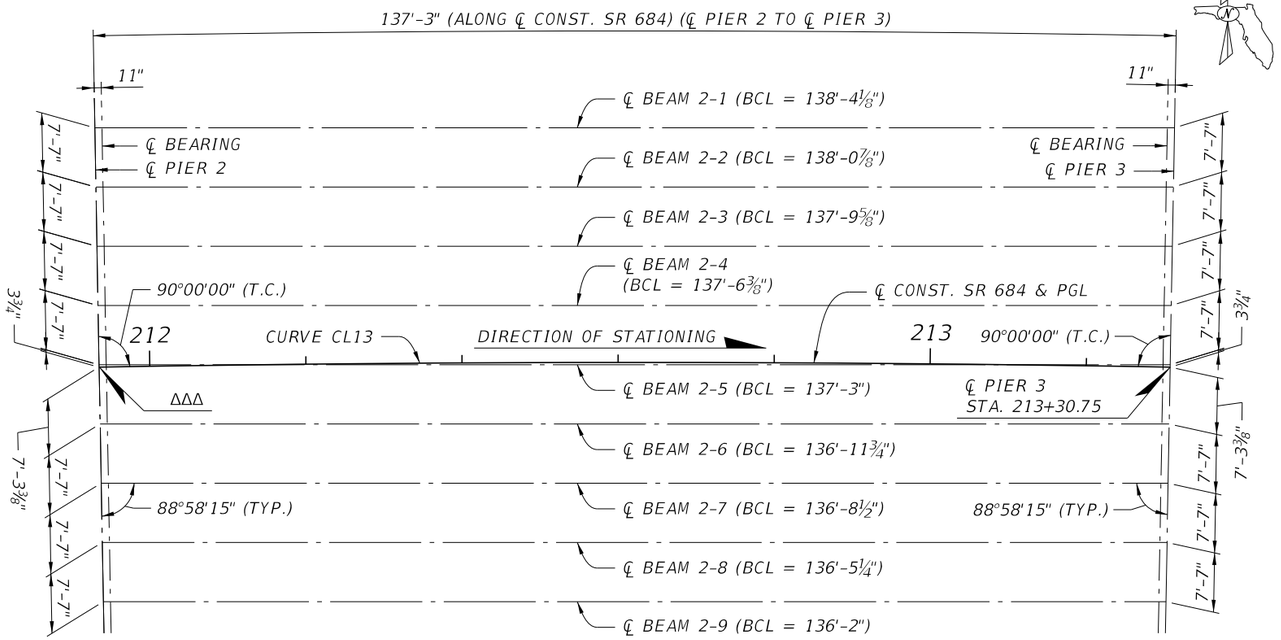


SPAN 1



SPAN 2

LEGEND:

Δ 90°00'00" (T.C.)
ΔΔ BEGIN BRIDGE FFBW END BENT 1 STA. 211+03.50
ΔΔΔ ℄ PIER 2 STA. 211+93.50

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM THE FFBW TO ℄ PIER 2 FOR SPAN 1 AND FROM ℄ PIER 2 TO ℄ PIER 3 FOR SPAN 2.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	JGH	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

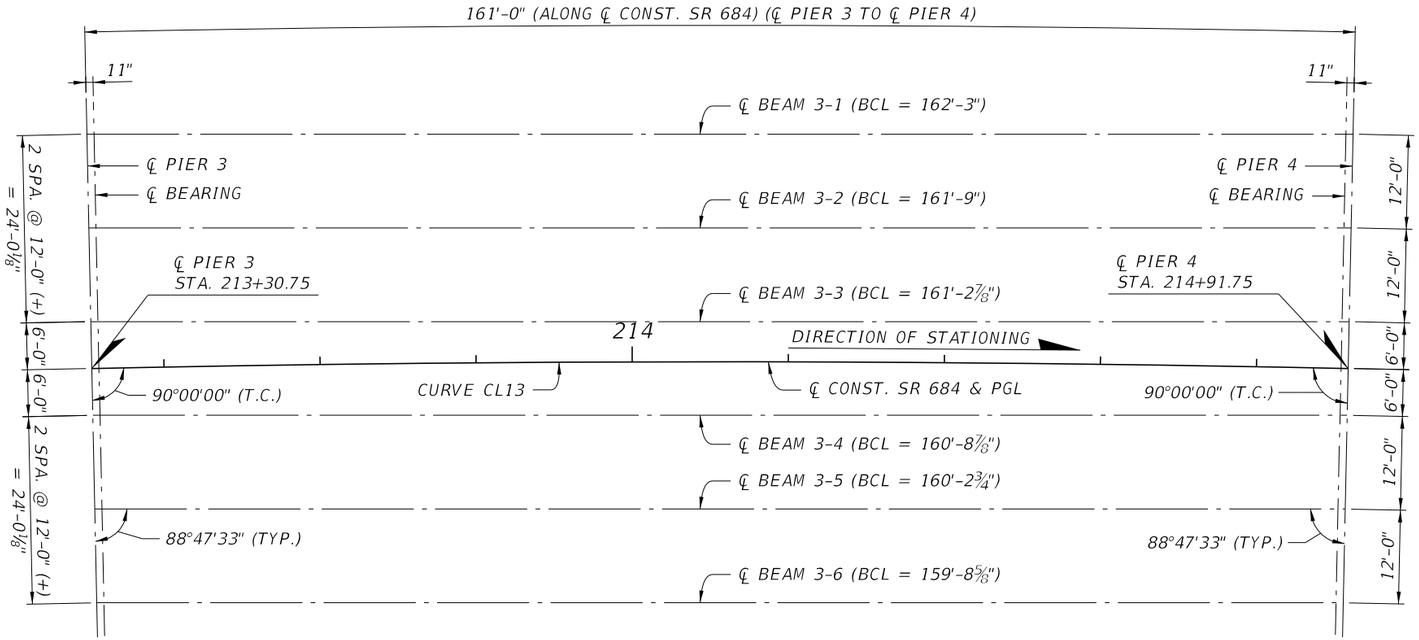
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (1 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-110



SPAN 3

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 3 TO ℄ PIER 4.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	JGH	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

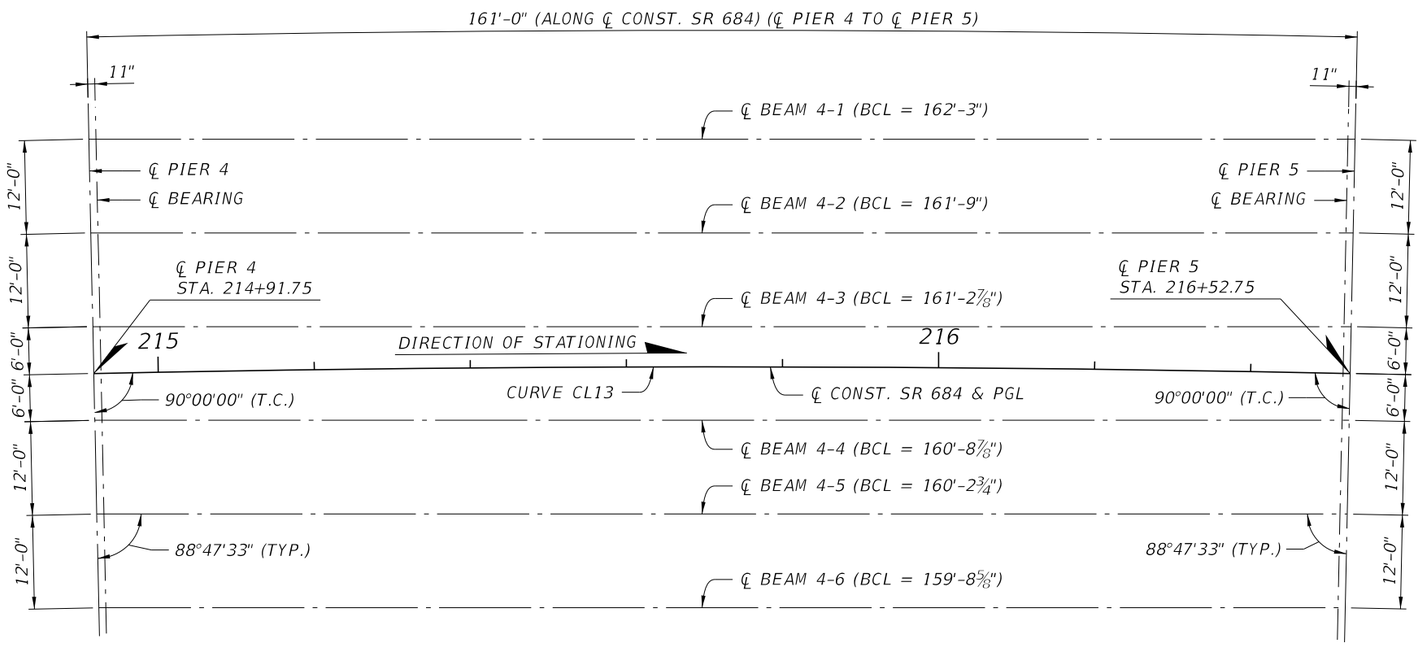
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (2 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-111



SPAN 4

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 4 TO ℄ PIER 5.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

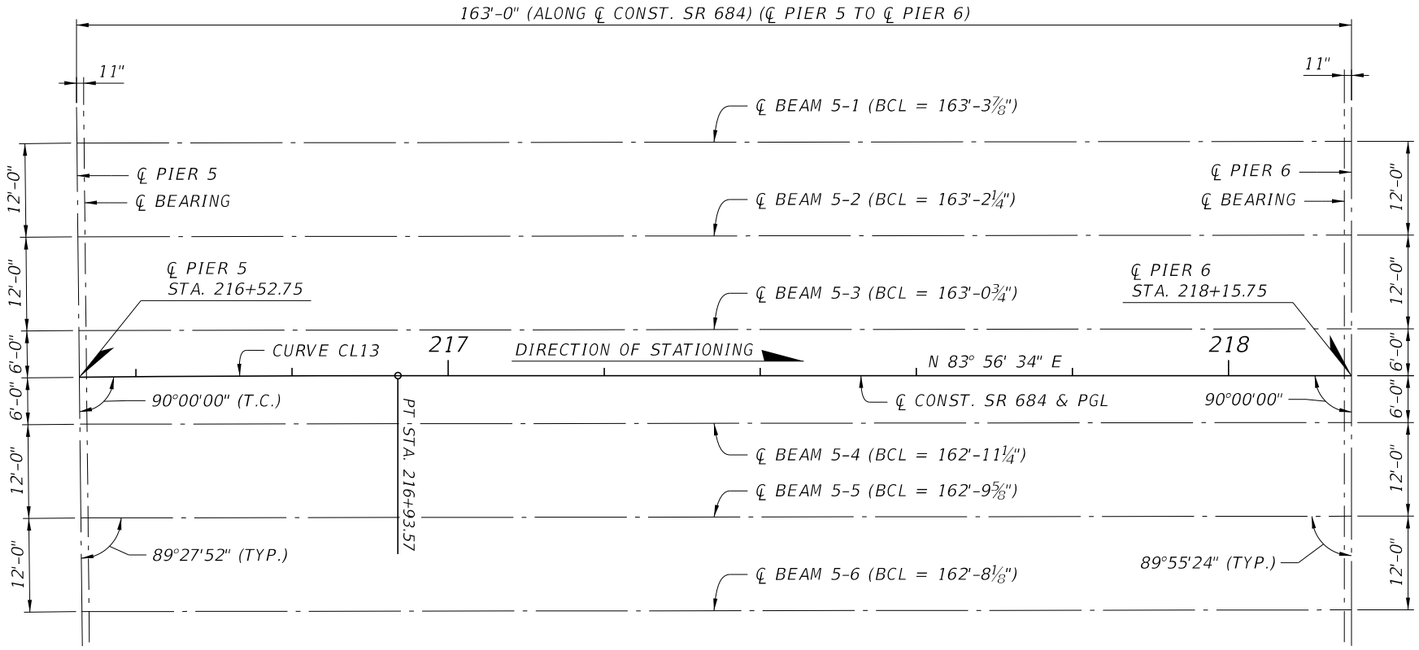
SHEET TITLE: FRAMING PLAN (3 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-112

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



SPAN 5

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 5 TO ℄ PIER 6.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

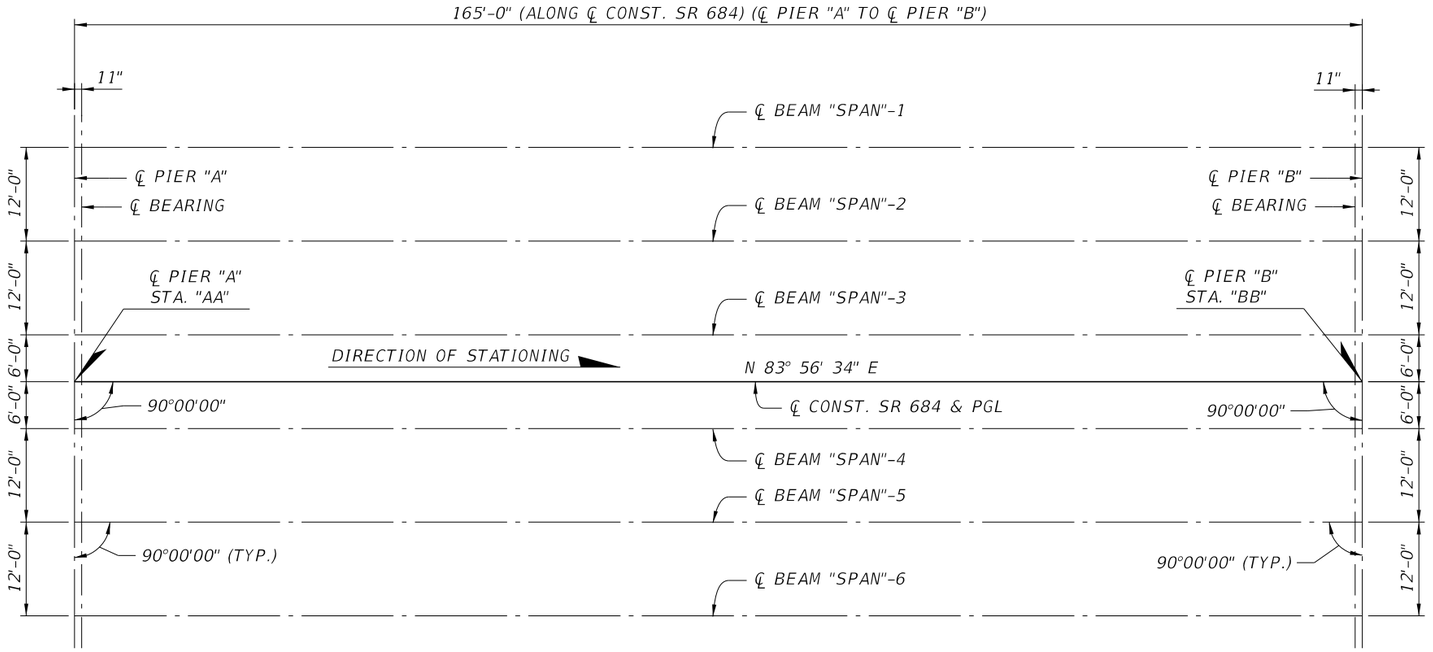
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (4 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-113



SPANS 6-10

TABLE OF VARIABLES				
"SPAN"	"A"	"AA"	"B"	"BB"
6	6	218+15.75	7	219+80.75
7	7	219+80.75	8	221+45.75
8	8	221+45.75	9	223+10.75
9	9	223+10.75	10	224+75.75
10	10	224+75.75	11	226+40.75

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

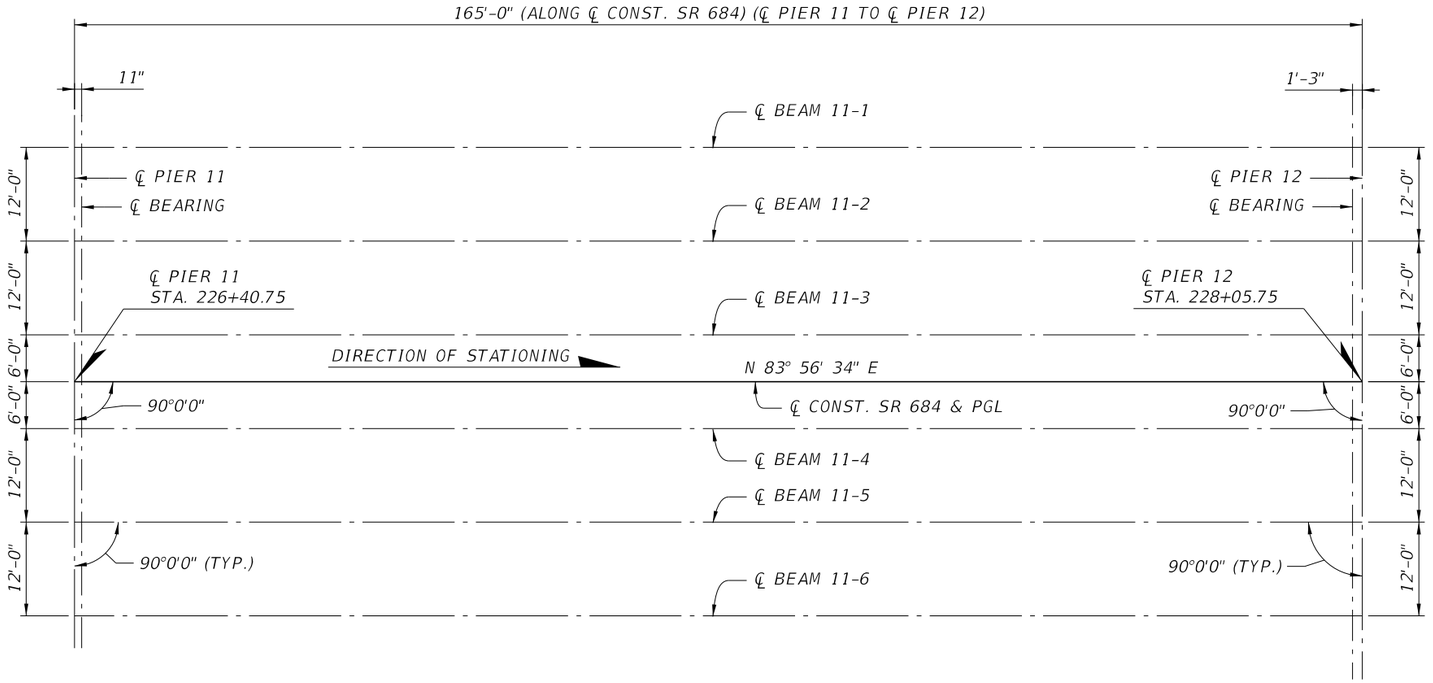
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (5 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-114



SPAN 11

NOTES:

1. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE THE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-191.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

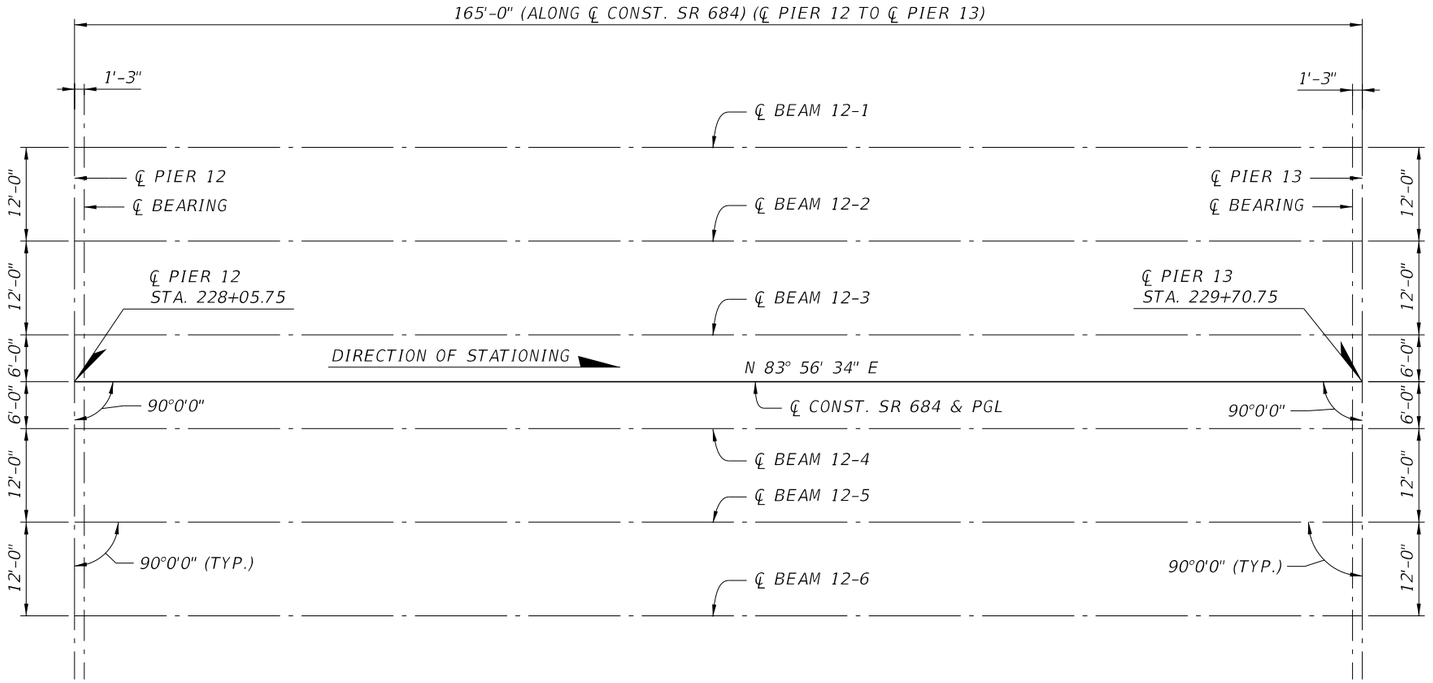
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (6 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-115



SPAN 12

NOTES:

1. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE THE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS". ON SHEET B1-191.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

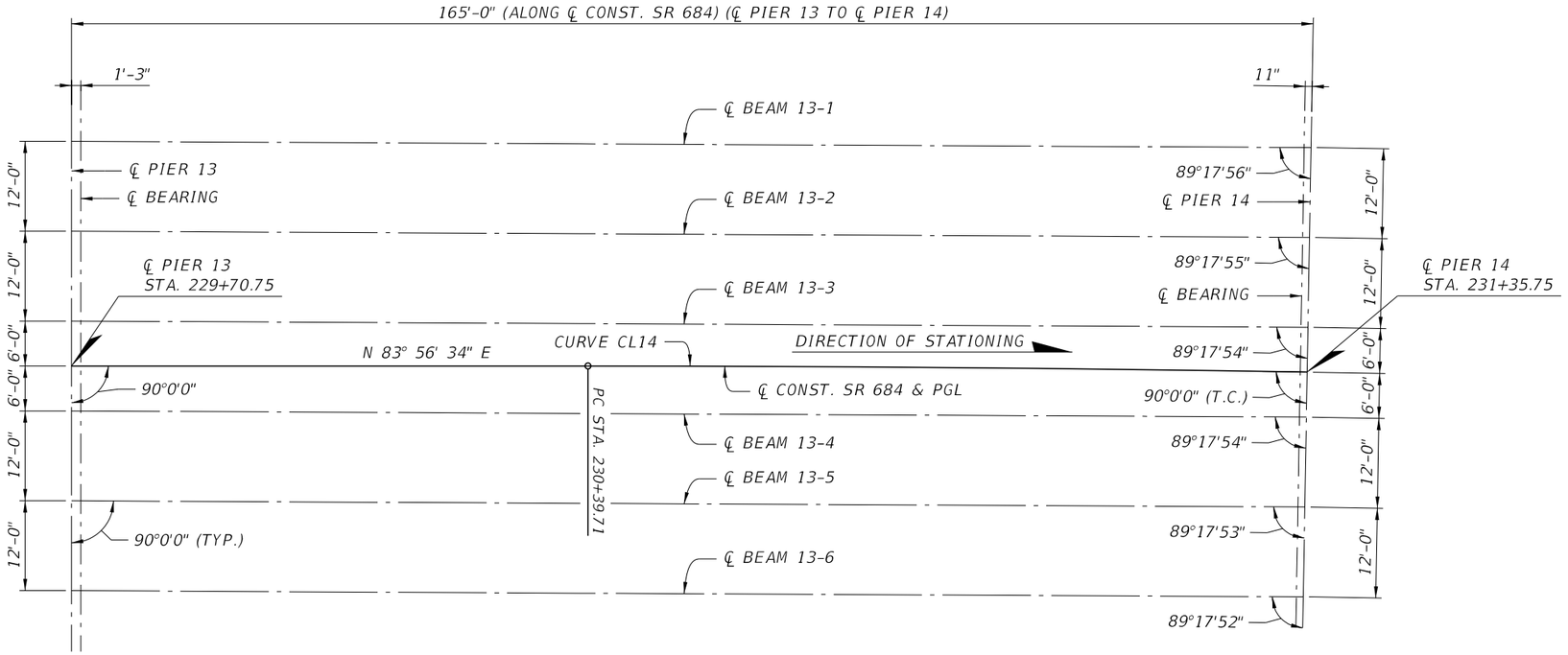
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (7 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-116



SPAN 13

NOTES:

1. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE THE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-191.
2. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

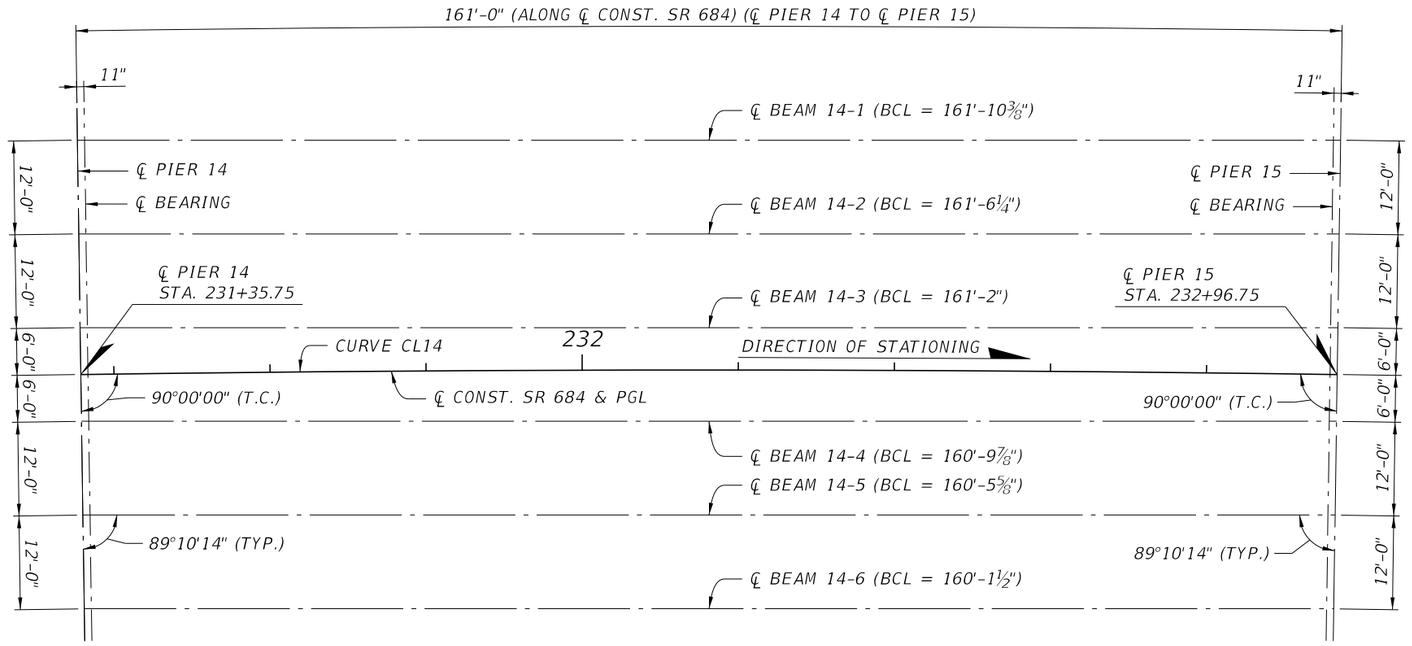
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (8 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-117



SPAN 14

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 14 TO ℄ PIER 15.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

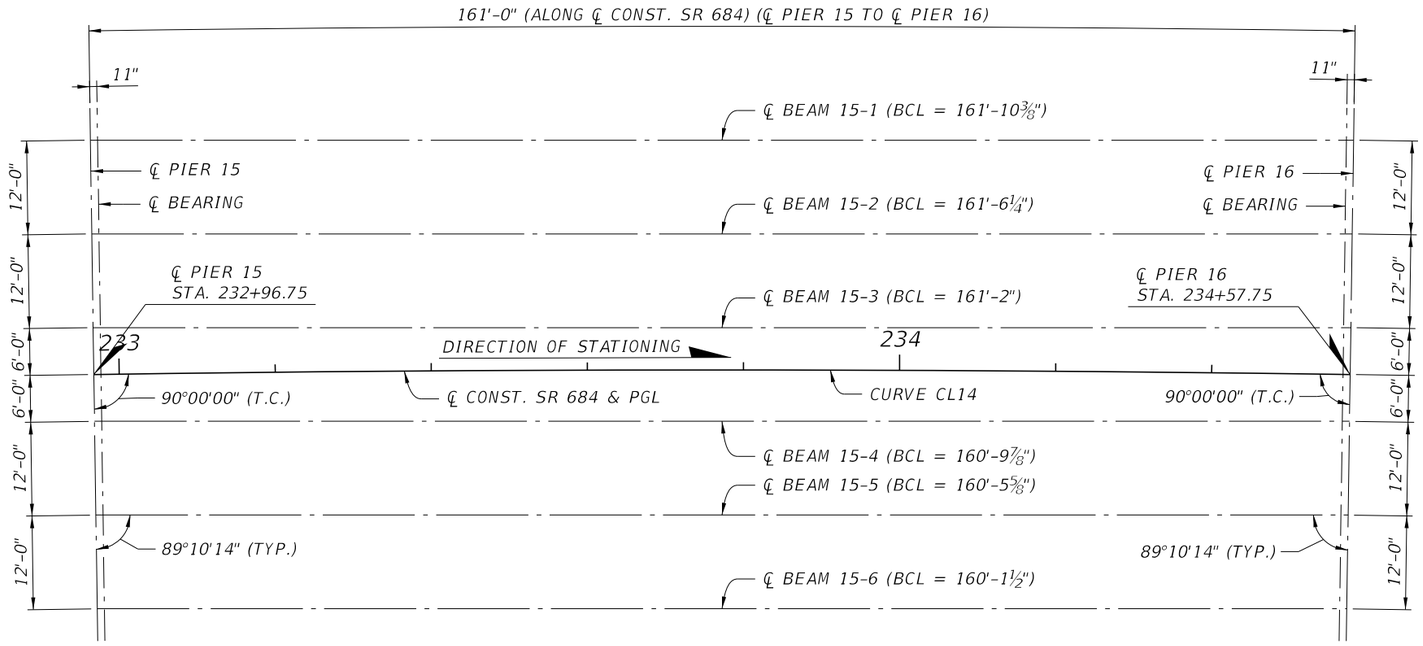
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (9 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-118



SPAN 15

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 15 TO ℄ PIER 16.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

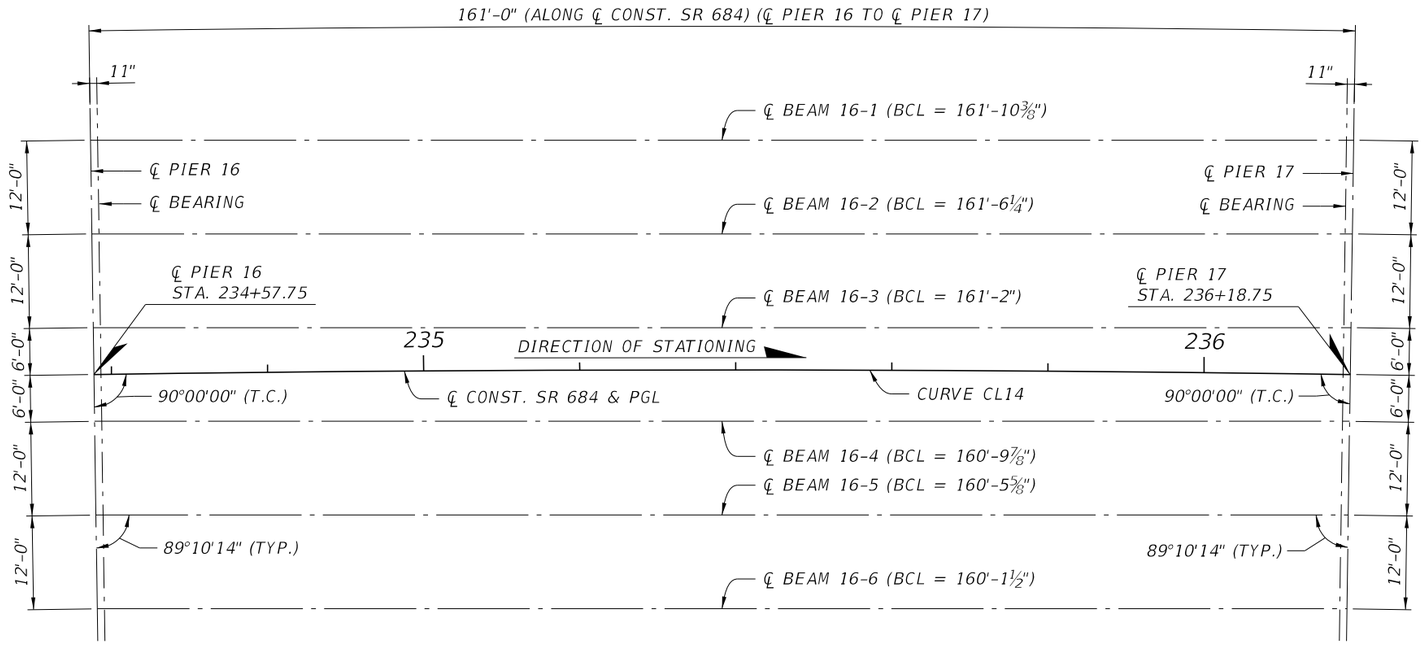
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (10 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-119



SPAN 16

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4 BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 16 TO ℄ PIER 17.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	JGH	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

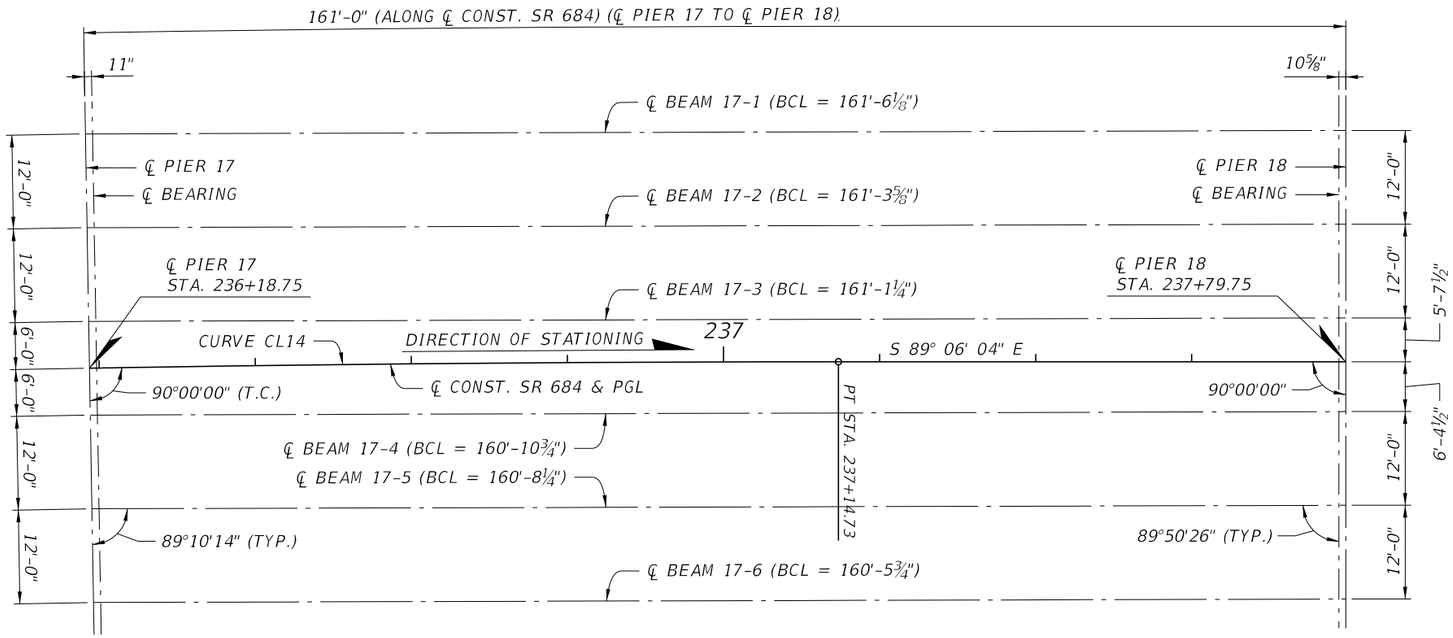
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (11 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-120



SPAN 17

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.
3. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
4. BEAM CHORD LENGTHS (BCL) SHOWN ARE FROM ℄ PIER 17 TO ℄ PIER 18.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	JGH
DESIGNED BY:	JGH
CHECKED BY:	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

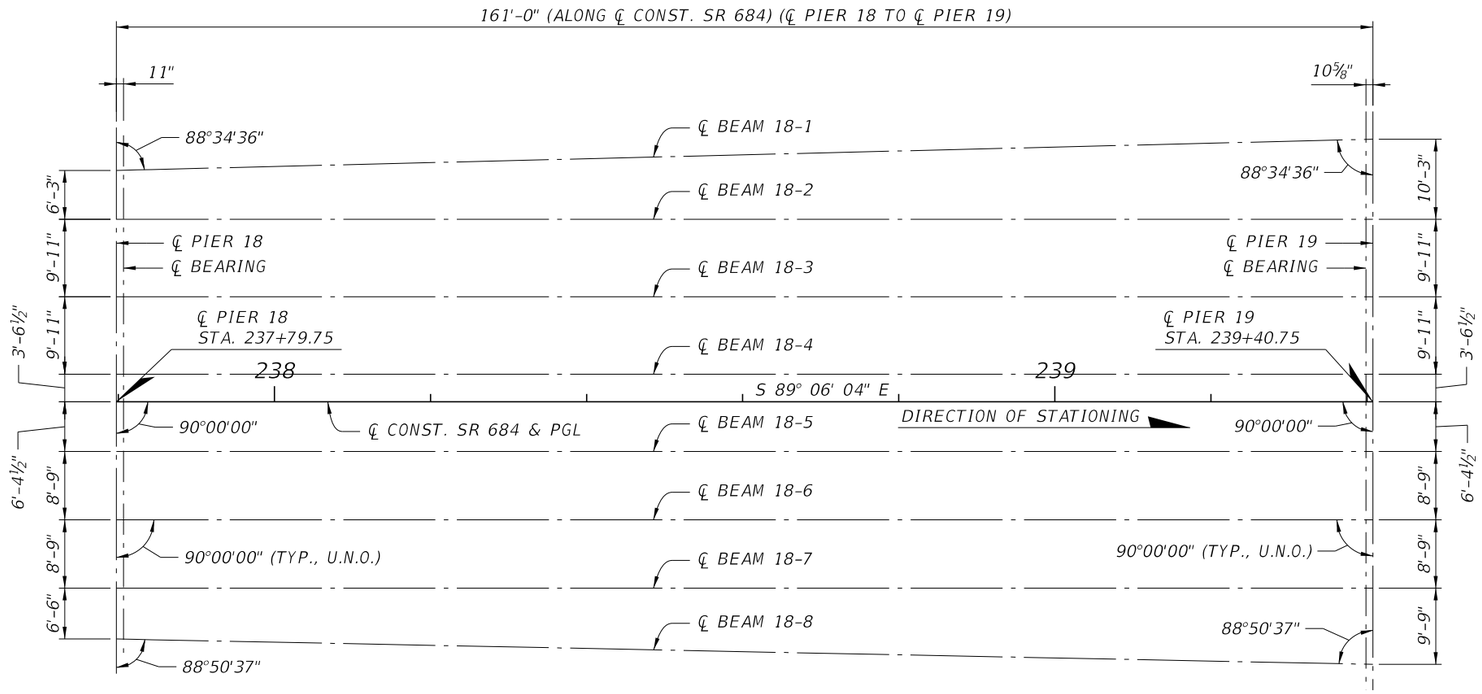
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (12 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-121



SPAN 18

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	JGH
DESIGNED BY:	JGH
CHECKED BY:	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

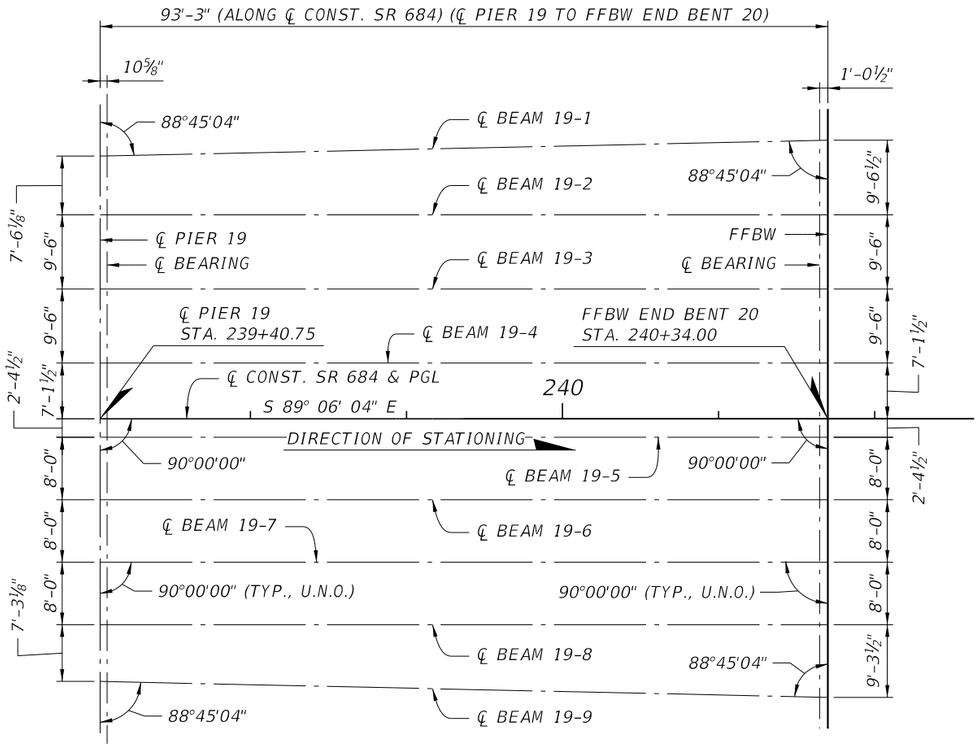
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (13 OF 14)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-122



SPAN 19

NOTES:

1. ALL BEARINGS ARE EXPANSION BEARINGS.
2. TEMPORARY BRACING LOCATIONS ARE NOT SHOWN. FOR LOCATIONS OF TEMPORARY BRACING, SEE "TABLE OF PRESTRESSED I-BEAM TEMPORARY BRACING MINIMUM REQUIREMENTS AND LOADS" ON SHEET B1-167.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	JGH
DESIGNED BY:	JGH
CHECKED BY:	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

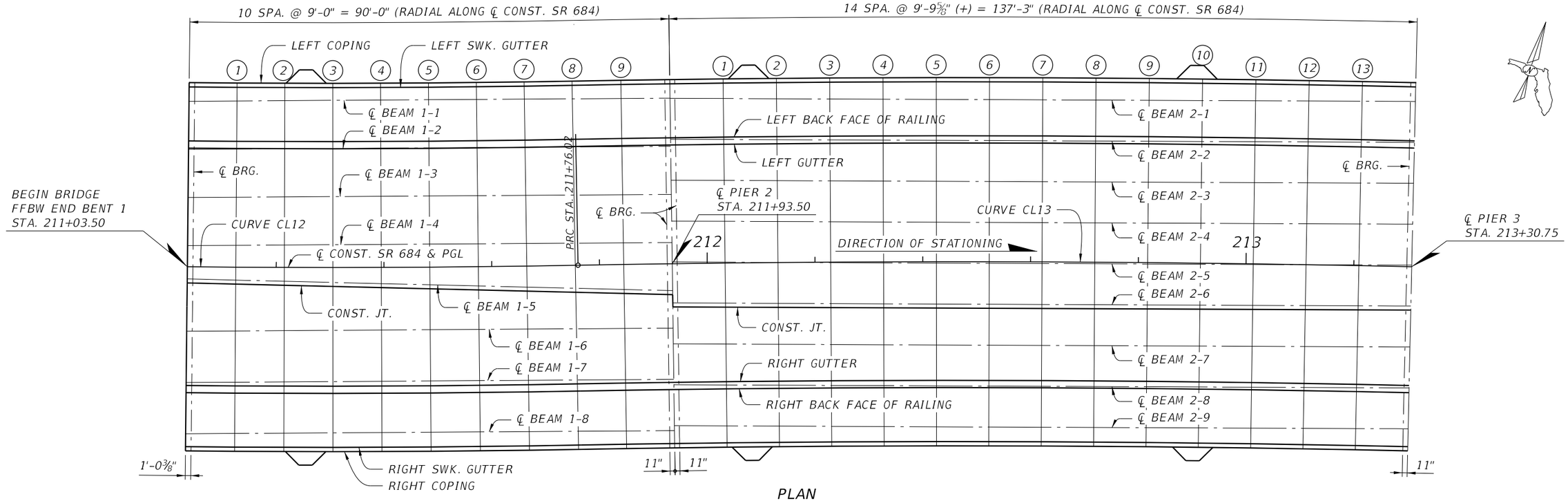
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FRAMING PLAN (14 OF 14)

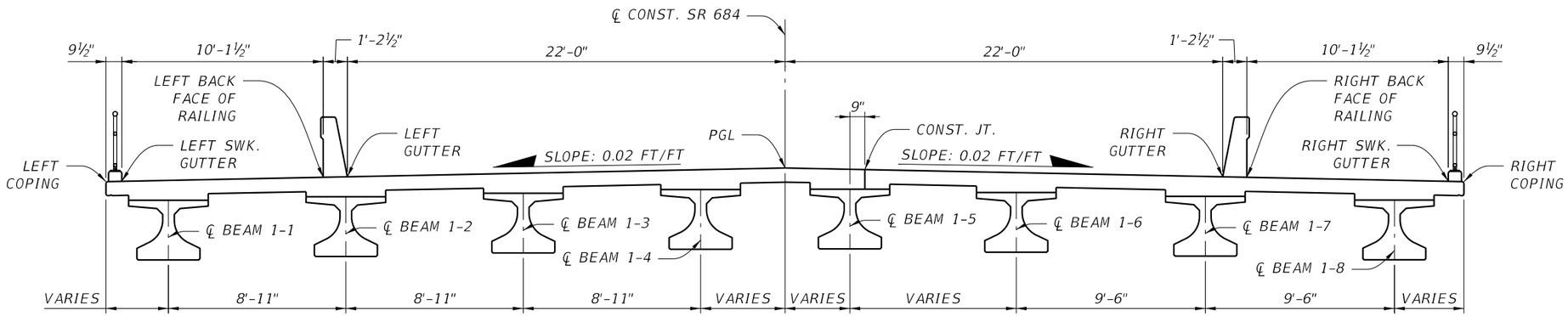
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-123



PLAN
(SPANS 1 & 2)



BRIDGE TYPICAL SECTION (SPAN 1)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

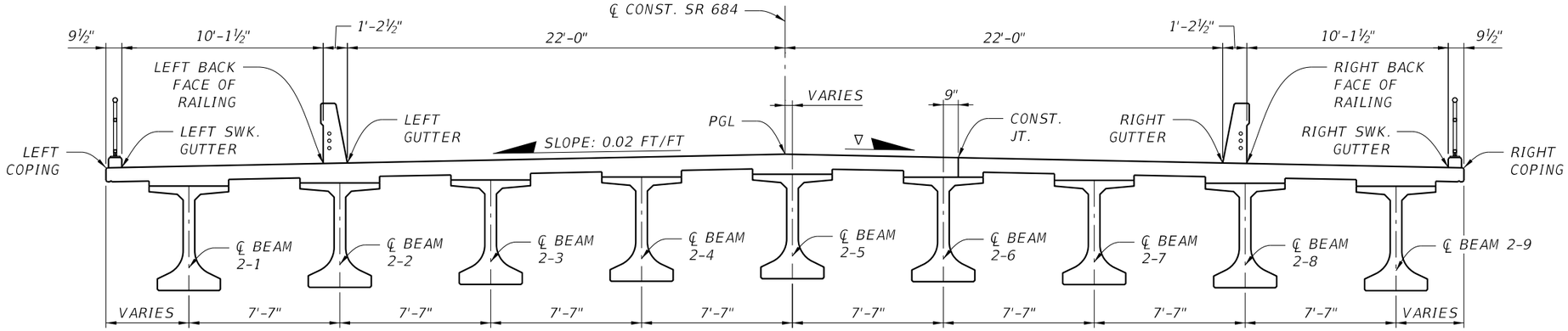
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 1 & 2] (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-124



BRIDGE TYPICAL SECTION (SPAN 2)

(∇ = SLOPE: 0.02 FT/FT)

SPAN 1

POINTS	BEGIN BRIDGE	℄ BEARING	1	2	3	4	5 MID-SPAN	6	7	8	9	℄ BEARING	℄ PIER 2
LEFT COPING	17.669	---	17.993	18.317	18.641	18.964	19.288	19.612	19.936	20.260	20.584	---	20.907
LEFT SWK. GUTTER	17.685	---	18.009	18.333	18.656	18.980	19.304	19.628	19.952	20.276	20.599	---	20.923
℄ BEAM 1-1	17.738	17.776	18.059	18.381	18.704	19.027	19.351	19.675	20.000	20.325	20.651	20.944	20.976
LEFT BACK FACE OF RAILING	17.887	---	18.211	18.535	18.859	19.183	19.507	19.830	20.154	20.478	20.802	---	21.126
LEFT GUTTER	17.912	---	18.235	18.559	18.883	19.207	19.531	19.855	20.178	20.502	20.826	---	21.150
℄ BEAM 1-2	17.917	17.954	18.238	18.559	18.882	19.205	19.529	19.853	20.178	20.504	20.829	21.122	21.155
℄ BEAM 1-3	18.095	18.132	18.416	18.738	19.060	19.383	19.707	20.031	20.356	20.682	21.008	21.300	21.333
℄ BEAM 1-4	18.273	18.310	18.594	18.916	19.239	19.562	19.886	20.210	20.535	20.860	21.186	21.478	21.511
℄ CONST. SR 694 & PGL	18.352	---	18.675	18.999	19.323	19.647	19.971	20.295	20.618	20.942	21.266	---	21.590
℄ BEAM 1-5	18.307	18.343	18.628	18.948	19.268	19.587	19.905	20.223	20.540	20.857	21.173	21.458	21.490
CONST. JT.	18.292	---	18.613	18.933	19.253	19.572	19.890	20.208	20.525	20.842	21.158	---	21.475
℄ BEAM 1-6	18.113	18.150	18.439	18.765	19.090	19.415	19.739	20.062	20.385	20.707	21.029	21.318	21.351
℄ BEAM 1-7	17.923	17.960	18.249	18.575	18.900	19.225	19.549	19.872	20.195	20.517	20.839	21.128	21.161
RIGHT GUTTER	17.912	---	18.235	18.559	18.883	19.207	19.531	19.855	20.178	20.502	20.826	---	21.150
RIGHT BACK FACE OF RAILING	17.887	---	18.211	18.535	18.859	19.183	19.507	19.830	20.154	20.478	20.802	---	21.126
℄ BEAM 1-8	17.733	17.770	18.059	18.385	18.710	19.035	19.359	19.682	20.005	20.327	20.649	20.938	20.971
RIGHT SWK. GUTTER	17.685	---	18.009	18.333	18.656	18.980	19.304	19.628	19.952	20.276	20.599	---	20.923
RIGHT COPING	17.669	---	17.993	18.317	18.641	18.964	19.288	19.612	19.936	20.260	20.584	---	20.907

SPAN 2

POINTS	℄ PIER 2	℄ BEARING	1	2	3	4	5	6	7 MID-SPAN	8	9	10	11	12	13	℄ BEARING	℄ PIER 3
LEFT COPING	20.907	---	21.260	21.613	21.966	22.318	22.671	23.024	23.376	23.729	24.082	24.435	24.787	25.140	25.493	---	25.846
LEFT SWK. GUTTER	20.923	---	21.276	21.629	21.981	22.334	22.687	23.040	23.392	23.745	24.098	24.450	24.803	25.156	25.509	---	25.861
℄ BEAM 2-1	20.977	21.010	21.333	21.688	22.043	22.398	22.752	23.105	23.458	23.811	24.163	24.514	24.865	25.216	25.566	25.883	25.915
LEFT BACK FACE OF RAILING	21.126	---	21.478	21.831	22.184	22.537	22.889	23.242	23.595	23.948	24.300	24.653	25.006	25.358	25.711	---	26.064
℄ BEAM 2-2	21.129	21.162	21.485	21.840	22.195	22.550	22.904	23.257	23.610	23.963	24.315	24.666	25.017	26.278	25.717	26.034	26.067
LEFT GUTTER	21.150	---	21.503	21.855	22.208	22.561	22.913	23.266	23.619	23.972	24.324	24.677	25.030	25.383	25.735	---	26.088
℄ BEAM 2-3	21.280	21.313	21.636	21.992	22.347	22.701	23.055	23.409	23.762	24.114	24.466	24.818	25.169	25.519	25.869	26.186	26.218
℄ BEAM 2-4	21.432	21.465	21.788	22.143	22.498	22.853	23.207	23.560	23.913	24.266	24.618	24.969	25.320	25.671	26.021	26.338	26.370
℄ BEAM 2-5	21.584	21.617	21.940	22.295	22.646	22.997	23.348	23.700	24.053	24.406	24.759	25.113	25.468	25.822	26.173	26.489	26.522
℄ CONST. SR 694 & PGL	21.590	---	21.943	22.295	22.648	23.001	23.353	23.706	24.059	24.412	24.764	25.117	25.470	25.823	26.175	---	26.528
℄ BEAM 2-6	21.444	21.477	21.794	22.144	22.494	22.845	23.197	23.549	23.901	24.254	24.608	24.962	25.316	25.671	26.027	26.349	26.382
CONST. JT.	21.429	---	21.779	22.129	22.479	22.830	23.182	23.534	23.886	24.239	24.593	24.947	25.301	25.656	26.012	---	26.367
℄ BEAM 2-7	21.293	21.325	21.642	21.992	22.343	22.694	23.045	23.397	23.750	24.102	24.456	24.810	25.164	25.519	25.875	26.197	26.231
RIGHT GUTTER	21.150	---	21.503	21.855	22.208	22.561	22.913	23.266	23.619	23.972	24.324	24.677	25.030	25.383	25.735	---	26.088
℄ BEAM 2-8	21.141	21.174	21.490	21.840	22.191	22.542	22.893	23.245	23.598	23.951	24.304	24.658	25.013	25.368	25.723	26.046	26.079
RIGHT BACK FACE OF RAILING	21.126	---	21.478	21.831	22.184	22.537	22.889	23.242	23.595	23.948	24.300	24.653	25.006	25.358	25.711	---	26.064
℄ BEAM 2-9	20.989	21.022	21.339	21.689	22.039	22.390	22.742	23.094	23.446	23.799	24.153	24.507	24.861	25.216	25.572	25.894	25.927
RIGHT SWK. GUTTER	20.923	---	21.276	21.629	21.981	22.334	22.687	23.040	23.392	23.745	24.098	24.450	24.803	25.156	25.509	---	25.861
RIGHT COPING	20.907	---	21.260	21.613	21.966	22.318	22.671	23.024	23.376	23.729	24.082	24.435	24.787	25.140	25.493	---	25.846

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

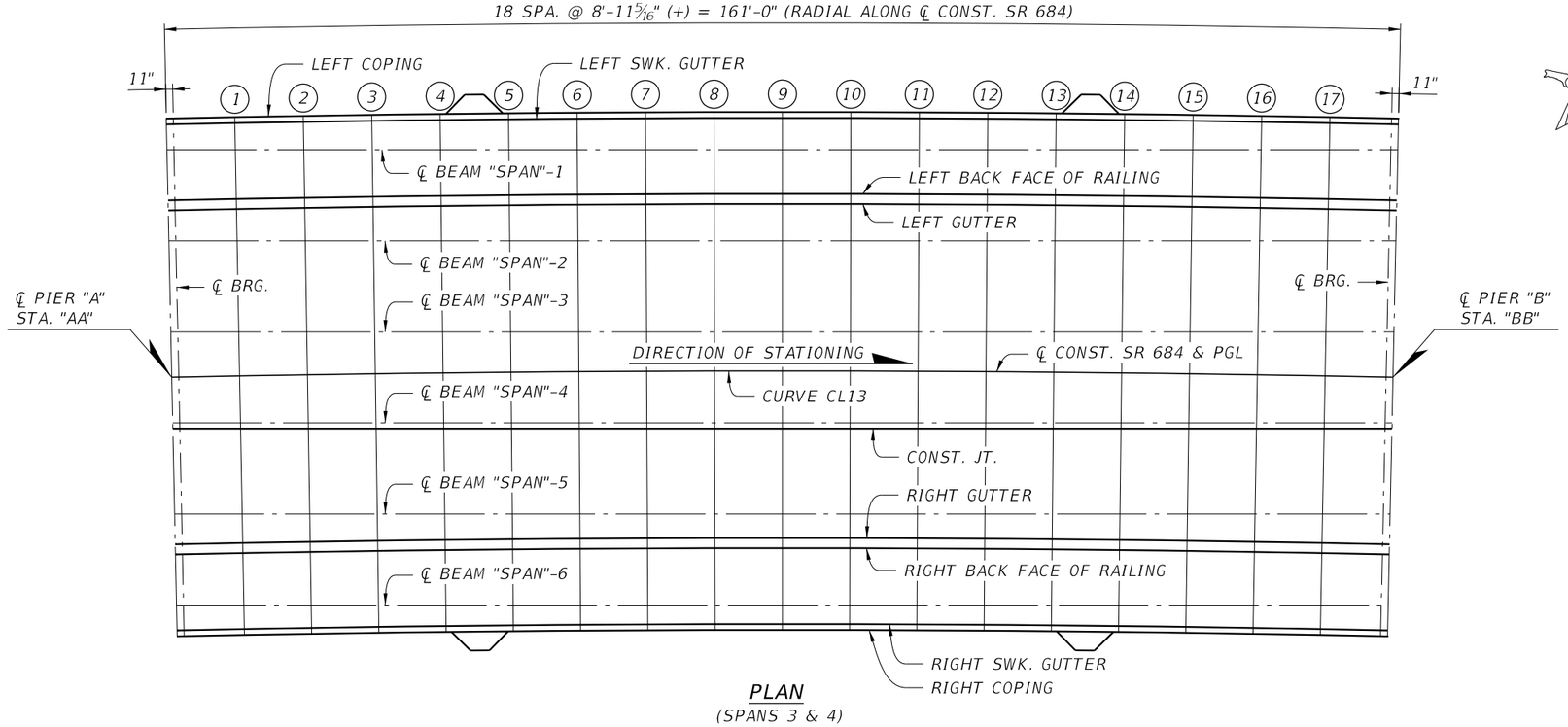
SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 1 & 2] (2 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

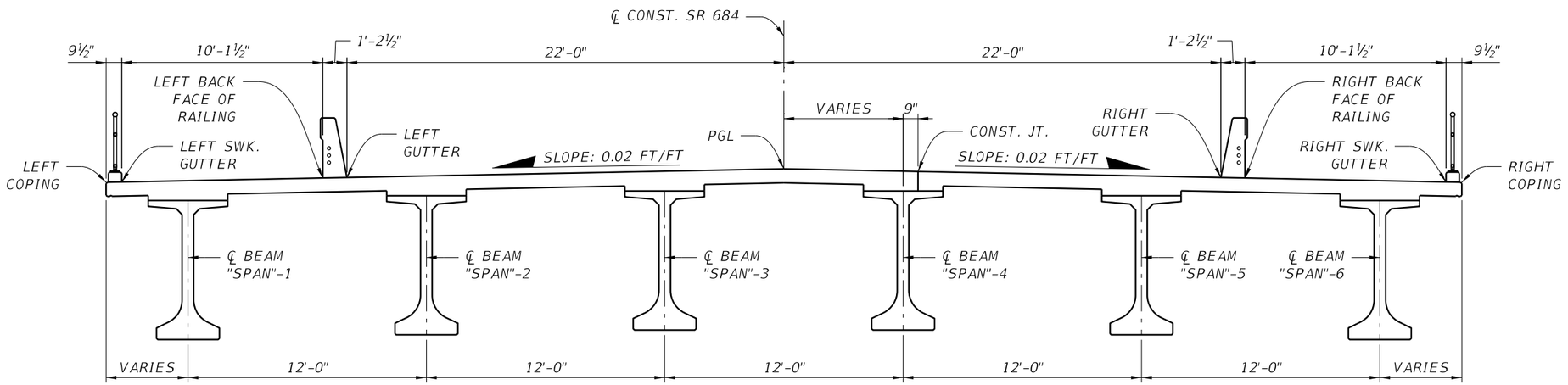
SHEET NO.: B1-125

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



PLAN
(SPANS 3 & 4)

TABLE OF VARIABLES				
"SPAN"	"A"	"AA"	"B"	"BB"
3	3	213+30.75	4	214+91.75
4	4	214+91.75	5	216+52.75



BRIDGE TYPICAL SECTION (SPANS 3 & 4)

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 3 & 4] (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-126

SPAN 3

POINTS	℄ PIER 3	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 4
LEFT COPING	25.846	---	26.167	26.489	26.811	27.133	27.455	27.777	28.098	28.420	28.742	29.064	29.386	29.707	30.029	30.351	30.673	30.995	31.317	---	31.638
LEFT SWK. GUTTER	25.861	---	26.183	26.505	26.827	27.149	27.471	27.792	28.114	28.436	28.758	29.080	29.401	29.723	30.045	30.367	30.689	31.011	31.332	---	31.654
℄ BEAM 3-1	25.928	25.961	26.253	26.578	26.903	27.227	27.551	27.874	28.197	28.519	28.841	29.223	29.484	29.805	30.125	30.445	30.765	31.084	31.402	31.688	31.721
LEFT BACK FACE OF RAILING	26.064	---	26.386	26.708	27.029	27.351	27.673	27.995	28.317	28.638	28.960	29.282	29.604	29.926	30.248	30.569	30.891	31.213	31.535	---	31.857
LEFT GUTTER	26.088	---	26.410	26.732	27.054	27.375	27.697	28.019	28.341	28.663	28.984	29.306	29.628	29.950	30.272	30.594	30.915	31.237	31.559	---	31.881
℄ BEAM 3-2	26.168	26.201	26.493	26.818	27.143	27.467	27.791	28.114	28.437	28.759	29.081	29.403	29.724	30.045	30.365	30.685	31.005	31.324	31.642	31.928	31.961
℄ BEAM 3-3	26.408	26.441	26.734	27.058	27.383	27.707	28.031	28.354	28.677	28.999	29.321	29.643	29.964	30.285	30.605	30.925	31.245	31.564	31.883	32.168	32.201
℄ CONST. SR 694 & PGL	26.528	---	26.850	27.172	27.494	27.815	28.137	28.459	28.781	29.103	29.424	29.746	30.068	30.390	30.712	31.034	31.355	31.677	31.999	---	32.321
℄ BEAM 3-4	26.408	26.441	26.726	27.045	27.364	27.684	28.004	28.324	28.645	28.966	29.287	29.609	29.932	30.255	30.578	30.902	31.226	31.550	31.875	32.167	32.201
CONST. JT.	26.393	---	26.711	27.030	27.349	27.669	27.989	28.309	28.630	28.951	29.272	29.594	29.917	30.240	30.563	30.887	31.211	31.535	31.860	---	32.186
℄ BEAM 3-5	26.168	26.201	26.486	26.805	27.124	27.444	27.764	28.084	28.405	28.726	29.047	29.369	29.692	30.015	30.338	30.662	30.986	31.310	31.635	31.927	31.961
RIGHT GUTTER	26.088	---	26.410	26.732	27.054	27.375	27.697	28.019	28.341	28.663	28.984	29.306	29.628	29.950	30.272	30.594	30.915	31.237	31.559	---	31.881
RIGHT BACK FACE OF RAILING	26.064	---	26.386	26.708	27.029	27.351	27.673	27.995	28.317	28.638	28.960	29.282	29.604	29.926	30.248	30.569	30.891	31.213	31.535	---	31.857
℄ BEAM 3-6	25.928	25.961	26.246	26.565	26.884	27.204	27.524	27.844	28.165	28.486	28.807	29.129	29.452	29.775	30.098	30.422	30.746	31.070	31.395	31.687	31.721
RIGHT SWK. GUTTER	25.861	---	26.183	26.505	26.827	27.149	27.471	27.792	28.114	28.436	28.758	29.080	29.401	29.723	30.045	30.367	30.689	31.011	31.332	---	31.654
RIGHT COPING	25.846	---	26.167	26.489	26.811	27.133	27.455	27.777	28.098	28.420	28.742	29.064	29.386	29.707	30.029	30.351	30.673	30.995	31.317	---	31.638

SPAN 4

POINTS	℄ PIER 4	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 5
LEFT COPING	31.638	---	31.960	32.282	32.604	32.926	33.247	33.569	33.891	34.213	34.535	34.857	35.178	35.500	35.822	36.144	36.466	36.788	37.109	---	37.431
LEFT SWK. GUTTER	31.654	---	31.976	32.298	32.620	32.941	33.263	33.585	33.907	34.229	34.551	34.872	35.194	35.516	35.838	36.160	36.482	36.803	37.125	---	37.447
℄ BEAM 4-1	31.721	31.754	32.046	32.371	32.696	33.020	33.344	33.667	33.990	34.312	34.634	35.016	35.277	35.598	35.918	36.238	36.558	36.877	37.195	37.481	37.514
LEFT BACK FACE OF RAILING	31.857	---	32.179	32.500	32.822	33.144	33.466	33.788	34.109	34.431	34.753	35.075	35.397	35.719	36.040	36.362	36.684	37.006	37.328	---	37.649
LEFT GUTTER	31.881	---	32.203	32.525	32.846	33.168	33.490	33.812	34.134	34.455	34.777	35.099	35.421	35.743	36.065	36.386	36.708	37.030	37.352	---	37.674
℄ BEAM 4-2	31.961	31.994	32.286	32.611	32.936	33.260	33.584	33.907	34.230	34.552	34.874	35.196	35.517	35.838	36.158	36.478	36.798	37.117	37.435	37.721	37.754
℄ BEAM 4-3	32.201	32.234	32.526	32.851	33.176	33.500	33.824	34.147	34.470	34.792	35.114	35.436	35.757	36.078	36.398	36.718	37.038	37.357	37.675	37.961	37.994
℄ CONST. SR 694 & PGL	32.321	---	32.643	32.965	33.286	33.608	33.930	34.252	34.574	34.895	35.217	35.539	35.861	36.183	36.505	36.826	37.148	37.470	37.792	---	38.114
℄ BEAM 4-4	32.201	32.233	32.519	32.838	33.157	33.476	33.796	34.117	34.437	34.759	35.080	35.402	35.725	36.048	36.371	36.695	37.019	37.343	37.668	37.960	37.994
CONST. JT.	32.186	---	32.504	32.823	33.142	33.461	33.781	34.102	34.422	34.744	35.065	35.387	35.710	36.033	36.356	36.680	37.004	37.328	37.653	---	37.979
℄ BEAM 4-5	31.961	31.994	32.279	32.598	32.917	33.236	33.556	33.877	34.197	34.519	34.840	35.162	35.485	35.808	36.131	36.455	36.779	37.103	37.428	38.441	37.754
RIGHT GUTTER	31.881	---	32.203	32.525	32.846	33.168	33.490	33.812	34.134	34.455	34.777	35.099	35.421	35.743	36.065	36.386	36.708	37.030	37.352	---	37.674
RIGHT BACK FACE OF RAILING	31.857	---	32.179	32.500	32.822	33.144	33.466	33.788	34.109	34.431	34.753	35.075	35.397	35.719	36.040	36.362	36.684	37.006	37.328	---	37.649
℄ BEAM 4-6	31.721	31.754	32.039	32.358	32.677	32.996	33.316	33.637	33.957	34.279	34.600	34.922	35.245	35.568	35.891	36.215	36.539	36.863	37.188	37.480	37.514
RIGHT SWK. GUTTER	31.654	---	31.976	32.298	32.620	32.941	33.263	33.585	33.907	34.229	34.551	34.872	35.194	35.516	35.838	36.160	36.482	36.803	37.125	---	37.447
RIGHT COPING	31.638	---	31.960	32.282	32.604	32.926	33.247	33.569	33.891	34.213	34.535	34.857	35.178	35.500	35.822	36.144	36.466	36.788	37.109	---	37.431

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

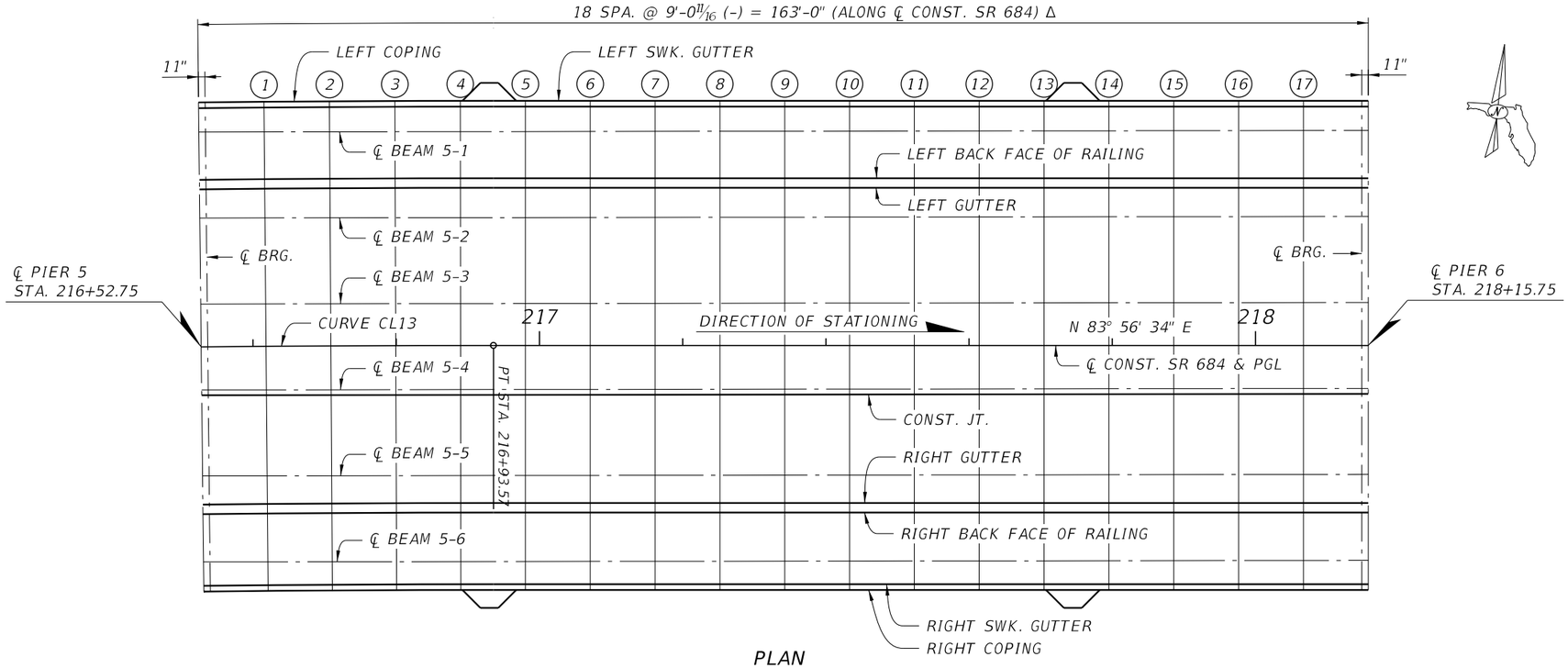
SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 3 & 4] (2 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

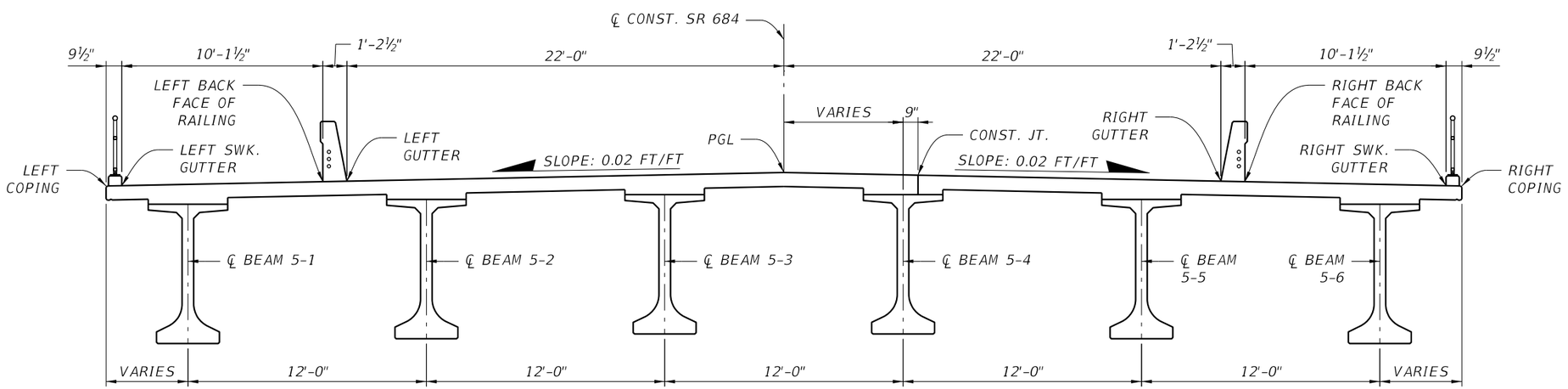
SHEET NO.: B1-127

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



PLAN
(SPAN 5)

(Δ = LINES 1 THRU 4 ARE SPACED RADIALLY ALONG ℄ CONST. SR 684 & LINES 5 THRU 17 ARE PARALLEL TO ℄ PIER 6.)



BRIDGE TYPICAL SECTION (SPAN 5)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	LCY
CHECKED BY:	JGH
DESIGNED BY:	LCY
CHECKED BY:	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPAN 5] (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-128

JHERNANDEZ 5/22/2025 2:16:23 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1FinishGrEl103.dgn

SPAN 5

POINTS	℄ PIER 5	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 6
LEFT COPING	37.431	---	37.757	38.083	38.409	38.734	39.060	39.386	39.712	40.038	40.364	40.689	41.015	41.341	41.667	41.993	42.318	42.644	42.970	---	43.296
LEFT SWK. GUTTER	37.447	---	37.773	38.099	38.424	38.750	39.076	39.402	39.728	40.054	40.379	40.705	41.031	41.357	41.683	42.008	42.334	42.660	42.986	---	43.312
℄ BEAM 5-1	37.514	37.547	37.841	38.168	38.494	38.820	39.146	39.472	39.797	40.123	40.448	40.774	41.099	41.425	41.750	42.076	42.402	42.727	43.053	43.345	43.378
LEFT BACK FACE OF RAILING	37.649	---	37.975	38.301	38.627	38.953	39.279	39.604	39.930	40.256	40.582	40.908	41.233	41.559	41.885	42.211	42.537	42.863	43.188	---	43.514
LEFT GUTTER	37.674	---	37.999	38.325	38.651	38.977	39.303	39.629	39.954	40.280	40.606	40.932	41.258	41.583	41.909	42.235	42.561	42.887	43.213	---	43.538
℄ BEAM 5-2	37.754	37.787	38.081	38.408	38.734	39.060	39.386	39.712	40.037	40.363	40.688	41.014	41.339	41.665	41.990	42.316	42.642	42.967	43.293	43.585	43.618
℄ BEAM 5-3	37.994	38.027	38.321	38.648	38.974	39.300	39.626	39.952	40.277	40.603	40.928	41.254	41.579	41.905	42.230	42.556	42.882	43.207	43.533	43.825	43.858
℄ CONST. SR 694 & PGL	38.114	---	38.439	38.765	39.091	39.417	39.743	40.069	40.394	40.720	41.046	41.372	41.698	42.023	42.349	42.675	43.001	43.327	43.653	---	43.978
℄ BEAM 5-4	37.994	38.027	38.318	38.643	38.968	39.294	39.620	39.946	40.272	40.598	40.924	41.250	41.576	41.902	42.228	42.554	42.880	43.206	43.532	43.825	43.858
CONST. JT.	37.979	---	38.303	38.628	38.953	39.279	39.605	39.931	40.257	40.583	40.909	41.235	41.561	41.887	42.213	42.539	42.865	43.191	43.517	---	43.843
℄ BEAM 5-5	37.754	37.787	38.078	38.403	38.728	39.054	39.380	39.706	40.032	40.358	40.684	41.010	41.336	41.662	41.988	42.314	42.640	42.966	43.292	43.585	43.618
RIGHT GUTTER	37.674	---	37.999	38.325	38.651	38.977	39.303	39.629	39.954	40.280	40.606	40.932	41.258	41.583	41.909	42.235	42.561	42.887	43.213	---	43.538
RIGHT BACK FACE OF RAILING	37.649	---	37.975	38.301	38.627	38.953	39.279	39.604	39.930	40.256	40.582	40.908	41.233	41.559	41.885	42.211	42.537	42.863	43.188	---	43.514
℄ BEAM 5-6	37.514	37.547	37.838	38.163	38.488	38.814	39.140	39.466	39.792	40.118	40.444	40.770	41.096	41.422	41.748	42.074	42.400	42.726	43.052	43.345	43.378
RIGHT SWK. GUTTER	37.447	---	37.773	38.099	38.424	38.750	39.076	39.402	39.728	40.054	40.379	40.705	41.031	41.357	41.683	42.008	42.334	42.660	42.986	---	43.312
RIGHT COPING	37.431	---	37.757	38.083	38.409	38.734	39.060	39.386	39.712	40.038	40.364	40.689	41.015	41.341	41.667	41.993	42.318	42.644	42.970	---	43.296

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

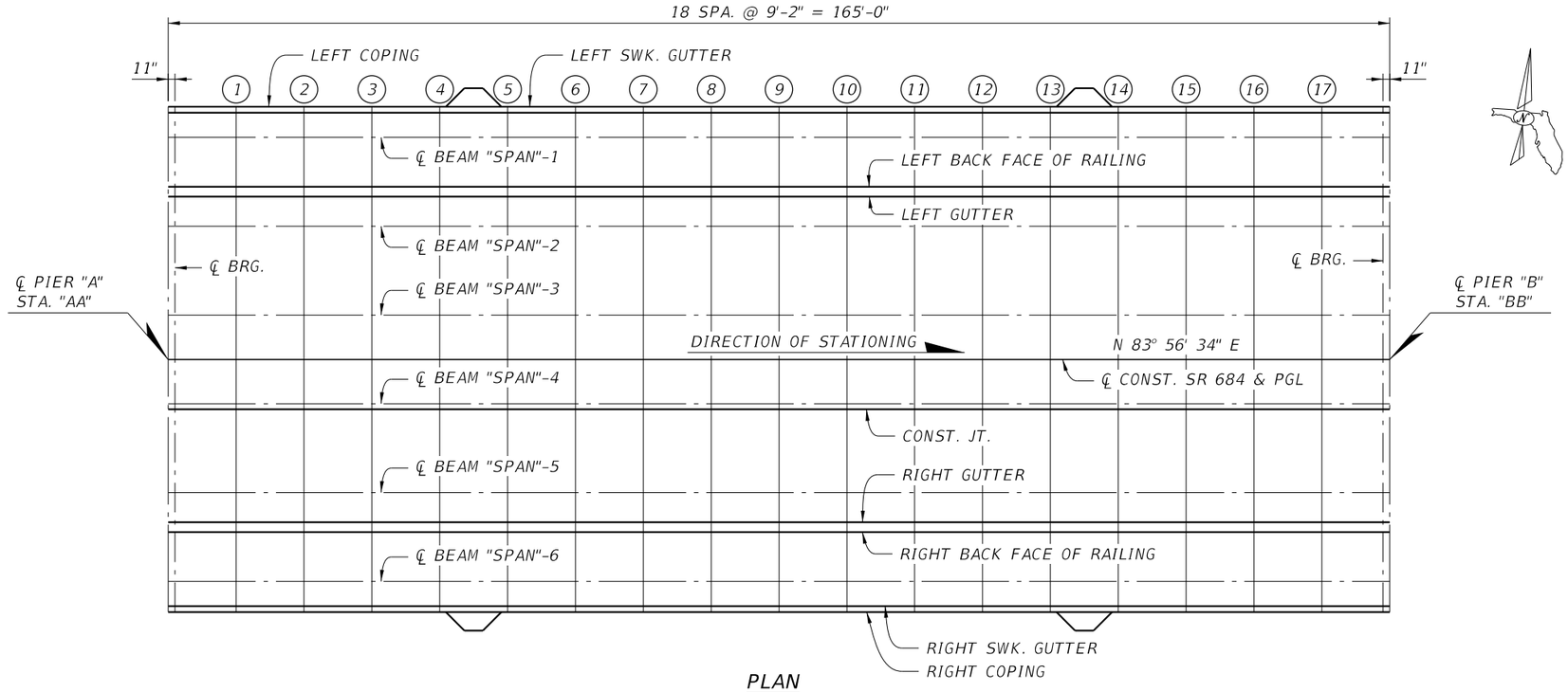
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPAN 5] (2 OF 2)

REF. DWG. NO.:

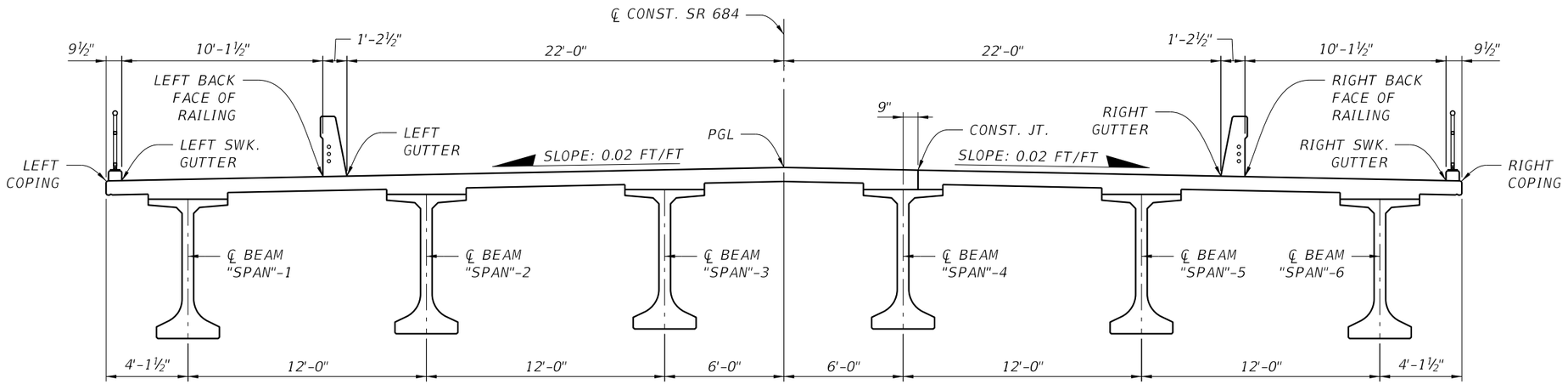
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-129



PLAN
(SPANS 6 - 10)

TABLE OF VARIABLES				
"SPAN"	"A"	"AA"	"B"	"BB"
6	6	218+15.75	7	219+80.75
7	7	219+80.75	8	221+45.75
8	8	221+45.75	9	223+10.75
9	9	223+10.75	10	224+75.75
10	10	224+75.75	11	226+40.75



BRIDGE TYPICAL SECTION (SPANS 6 - 10)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 6 - 10] (1 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-130

SPAN 6

POINTS	℄ PIER 6	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 7
LEFT COPING	43.296	---	43.626	43.956	44.285	44.615	44.945	45.275	45.605	45.934	46.264	46.594	46.924	47.254	47.584	47.913	48.243	48.573	48.903	---	49.233
LEFT SWK. GUTTER	43.312	---	43.642	43.971	44.301	44.631	44.961	45.291	45.620	45.950	46.280	46.610	46.940	47.270	47.599	47.929	48.259	48.589	48.919	---	49.248
℄ BEAM 6-1	43.378	43.411	43.708	44.038	44.368	44.698	45.027	45.357	45.687	46.017	46.347	46.677	47.006	47.336	47.666	47.996	48.326	48.655	48.985	49.282	49.315
LEFT BACK FACE OF RAILING	43.514	---	43.844	44.174	44.504	44.833	45.163	45.493	45.823	46.153	46.483	46.812	47.142	47.472	47.802	48.132	48.461	48.791	49.121	---	49.451
LEFT GUTTER	43.538	---	43.868	44.198	44.528	44.858	45.187	45.517	45.847	46.177	46.507	46.837	47.166	47.496	47.826	48.156	48.486	48.815	49.145	---	49.475
℄ BEAM 6-2	43.618	43.651	43.948	44.278	44.608	44.938	45.267	45.597	45.927	46.257	46.587	46.917	47.246	47.576	47.906	48.236	48.566	48.895	49.225	49.522	49.555
℄ BEAM 6-3	43.858	43.891	44.188	44.518	44.848	45.178	45.507	45.837	46.167	46.497	46.827	47.157	47.486	47.816	48.146	48.476	48.806	49.135	49.465	49.762	49.795
℄ CONST. SR 694 & PGL	43.978	---	44.308	44.638	44.968	45.298	45.627	45.957	46.287	46.617	46.947	47.277	47.606	47.936	48.266	48.596	48.926	49.255	49.585	---	49.915
℄ BEAM 6-4	43.858	43.891	44.188	44.518	44.848	45.178	45.507	45.837	46.167	46.497	46.827	47.157	47.486	47.816	48.146	48.476	48.806	49.135	49.465	49.762	49.795
CONST. JT.	43.843	---	44.173	44.503	44.833	45.163	45.492	45.822	46.152	46.482	46.812	47.142	47.471	47.801	48.131	48.461	48.791	49.120	49.450	---	49.780
℄ BEAM 6-5	43.618	43.651	43.948	44.278	44.608	44.938	45.267	45.597	45.927	46.257	46.587	46.917	47.246	47.576	47.906	48.236	48.566	48.895	49.225	49.522	49.555
RIGHT GUTTER	43.538	---	43.868	44.198	44.528	44.858	45.187	45.517	45.847	46.177	46.507	46.837	47.166	47.496	47.826	48.156	48.486	48.815	49.145	---	49.475
RIGHT BACK FACE OF RAILING	43.514	---	43.844	44.174	44.504	44.833	45.163	45.493	45.823	46.153	46.483	46.812	47.142	47.472	47.802	48.132	48.461	48.791	49.121	---	49.451
℄ BEAM 6-6	43.378	43.411	43.708	44.038	44.368	44.698	45.027	45.357	45.687	46.017	46.347	46.677	47.006	47.336	47.666	47.996	48.326	48.655	48.985	49.282	49.315
RIGHT SWK. GUTTER	43.312	---	43.642	43.971	44.301	44.631	44.961	45.291	45.620	45.950	46.280	46.610	46.940	47.270	47.599	47.929	48.259	48.589	48.919	---	49.248
RIGHT COPING	43.296	---	43.626	43.956	44.285	44.615	44.945	45.275	45.605	45.934	46.264	46.594	46.924	47.254	47.584	47.913	48.243	48.573	48.903	---	49.233

SPAN 7

POINTS	℄ PIER 7	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 8
LEFT COPING	49.233	---	49.562	49.892	50.222	50.552	50.882	51.211	51.541	51.871	52.201	52.531	52.861	53.190	53.520	53.850	54.180	54.510	54.839	---	55.169
LEFT SWK. GUTTER	49.248	---	49.578	49.908	50.238	50.568	50.898	51.227	51.557	51.887	52.217	52.547	52.876	53.206	53.536	53.866	54.196	54.525	54.855	---	55.185
℄ BEAM 7-1	49.315	49.348	49.645	49.975	50.305	50.634	50.964	51.294	51.624	51.954	52.283	52.613	52.943	53.273	53.603	53.933	54.262	54.592	54.922	55.219	55.252
LEFT BACK FACE OF RAILING	49.451	---	49.781	50.111	50.440	50.770	51.100	51.430	51.760	52.089	52.419	52.749	53.079	53.409	53.739	54.068	54.398	54.728	55.058	---	55.388
LEFT GUTTER	49.475	---	49.805	50.135	50.465	50.794	51.124	51.454	51.784	52.114	52.443	52.773	53.103	53.433	53.763	54.093	54.422	54.752	55.082	---	55.412
℄ BEAM 7-2	49.555	49.588	49.885	50.215	50.545	50.874	51.204	51.534	51.864	52.194	52.523	52.853	53.183	53.513	53.843	54.173	54.502	54.832	55.162	55.459	55.492
℄ BEAM 7-3	49.795	49.828	50.125	50.455	50.785	51.114	51.444	51.774	52.104	52.434	52.763	53.093	53.423	53.753	54.083	54.413	54.742	55.072	55.402	55.699	55.732
℄ CONST. SR 694 & PGL	49.915	---	50.245	50.575	50.905	51.234	51.564	51.894	52.224	52.554	52.883	53.213	53.543	53.873	54.203	54.533	54.862	55.192	55.522	---	55.852
℄ BEAM 7-4	49.795	49.828	50.125	50.455	50.785	51.114	51.444	51.774	52.104	52.434	52.763	53.093	53.423	53.753	54.083	54.413	54.742	55.072	55.402	55.699	55.732
CONST. JT.	49.780	---	50.110	50.440	50.770	51.099	51.429	51.759	52.089	52.419	52.748	53.078	53.408	53.738	54.068	54.398	54.727	55.057	55.387	---	55.717
℄ BEAM 7-5	49.555	49.588	49.885	50.215	50.545	50.874	51.204	51.534	51.864	52.194	52.523	52.853	53.183	53.513	53.843	54.173	54.502	54.832	55.162	55.459	55.492
RIGHT GUTTER	49.475	---	49.805	50.135	50.465	50.794	51.124	51.454	51.784	52.114	52.443	52.773	53.103	53.433	53.763	54.093	54.422	54.752	55.082	---	55.412
RIGHT BACK FACE OF RAILING	49.451	---	49.781	50.111	50.440	50.770	51.100	51.430	51.760	52.089	52.419	52.749	53.079	53.409	53.739	54.068	54.398	54.728	55.058	---	55.388
℄ BEAM 7-6	49.315	49.348	49.645	49.975	50.305	50.634	50.964	51.294	51.624	51.954	52.283	52.613	52.943	53.273	53.603	53.933	54.262	54.592	54.922	55.219	55.252
RIGHT SWK. GUTTER	49.248	---	49.578	49.908	50.238	50.568	50.898	51.227	51.557	51.887	52.217	52.547	52.876	53.206	53.536	53.866	54.196	54.525	54.855	---	55.185
RIGHT COPING	49.233	---	49.562	49.892	50.222	50.552	50.882	51.211	51.541	51.871	52.201	52.531	52.861	53.190	53.520	53.850	54.180	54.510	54.839	---	55.169

SPAN 8

POINTS	℄ PIER 8	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 9
LEFT COPING	55.169	---	55.499	55.829	56.159	56.489	56.818	57.148	57.478	57.808	58.138	58.467	58.797	59.127	59.457	59.787	60.117	60.446	60.776	---	61.106
LEFT SWK. GUTTER	55.185	---	55.515	55.845	56.175	56.504	56.834	57.164	57.494	57.824	58.153	58.483	58.813	59.143	59.473	59.803	60.132	60.462	60.792	---	61.122
℄ BEAM 7-1	55.252	55.285	55.582	55.911	56.241	56.571	56.901	57.231	57.561	57.890	58.220	58.550	58.880	59.210	59.539	59.869	60.199	60.529	60.859	61.156	61.188
LEFT BACK FACE OF RAILING	55.388	---	55.717	56.047	56.377	56.707	57.037	57.367	57.696	58.026	58.356	58.686	59.016	59.345	59.675	60.005	60.335	60.665	60.995	---	61.324
LEFT GUTTER	55.412	---	55.742	56.071	56.401	56.731	57.061	57.391	57.721	58.050	58.380	58.710	59.040	59.370	59.699	60.029	60.359	60.689	61.019	---	61.348
℄ BEAM 7-2	55.492	55.525	55.822	56.151	56.481	56.811	57.141	57.471	57.801	58.130	58.460	58.790	59.120	59.450	59.779	60.109	60.439	60.769	61.099	61.396	61.428
℄ BEAM 7-3	55.732	55.765	56.062	56.391	56.721	57.051	57.381	57.711	58.041	58.370	58.700	59.030	59.360	59.690	60.019	60.349	60.679	61.009	61.339	61.636	61.668
℄ CONST. SR 694 & PGL	55.852	---	56.182	56.511	56.841	57.171	57.501	57.831	58.161	58.490	58.820	59.150	59.480	59.810	60.139	60.469	60.799	61.129	61.459	---	61.788
℄ BEAM 7-4	55.732	55.765	56.062	56.391	56.721	57.051	57.381	57.711	58.041	58.370	58.700	59.030	59.360	59.690	60.019	60.349	60.679	61.009	61.339	61.636	61.668
CONST. JT.	55.717	---	56.047	56.376	56.706	57.036	57.366	57.696	58.026	58.355	58.685	59.015	59.345	59.675	60.004	60.334	60.664	60.994	61.324	---	61.653
℄ BEAM 7-5	55.492	55.525	55.822	56.151	56.481	56.811	57.141	57.471	57.801	58.130	58.460	58.790	59.120	59.450	59.779	60.109	60.439	60.769	61.099	61.396	61.428
RIGHT GUTTER	55.412	---	55.742	56.071	56.401	56.731	57.061	57.391	57.721	58.050	58.380	58.710	59.040	59.370	59.699	60.029	60.359	60.689	61.019	---	61.348
RIGHT BACK FACE OF RAILING	55.388	---	55.717	56.047	56.377	56.707	57.037	57.367	57.696	58.026	58.356	58.686	59.016	59.345	59.675	60.005	60.335	60.665	60.995	---	61.324
℄ BEAM 7-6	55.252	55.285	55.582	55.911	56.241	56.571	56.901	57.231	57.561	57.890	58.220	58.550	58.880	59.210	59.539	59.869	60.199	60.529	60.859	61.156	61.188
RIGHT SWK. GUTTER	55.185	---	55.515	55.845	56.175	56.504	56.834	57.164	57.494	57.824	58.153	58.483	58.813	59.143	59.473	59.803	60.132	60.462	60.792	---	61.122
RIGHT COPING	55.169	---	55.499	55.829	56.159	56.489	56.818	57.148	57.478	57.808	58.138	58.467	58.797	59.127	59.457	59.787	60.117	60.446	60.776	---	61.106

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
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DRAWN BY: LCY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 6 - 10] (2 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-131

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

SPAN 9

POINTS	℄ PIER 9	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 10
LEFT COPING	61.106	---	61.436	61.766	62.095	62.425	62.755	63.085	63.415	63.745	64.074	64.404	64.734	65.064	65.394	65.723	66.053	66.383	66.713	---	67.043
LEFT SWK. GUTTER	61.122	---	61.452	61.781	62.111	62.441	62.771	63.101	63.431	63.760	64.090	64.420	64.750	65.080	65.409	65.739	66.069	66.399	66.729	---	67.059
℄ BEAM 9-1	61.188	61.221	61.518	61.848	62.178	62.508	62.838	63.167	63.497	63.827	64.157	64.487	64.816	65.146	65.476	65.806	66.136	66.466	66.795	67.092	67.125
LEFT BACK FACE OF RAILING	61.324	---	61.654	61.984	62.314	62.644	62.973	63.303	63.633	63.963	64.293	64.622	64.952	65.282	65.612	65.942	66.272	66.601	66.931	---	67.261
LEFT GUTTER	61.348	---	61.678	62.008	62.338	62.668	62.998	63.327	63.657	63.987	64.317	64.647	64.976	65.306	65.636	65.966	66.296	66.626	66.955	---	67.285
℄ BEAM 9-2	61.428	61.461	61.758	62.088	62.418	62.748	63.078	63.407	63.737	64.067	64.397	64.727	65.056	65.386	65.716	66.046	66.376	66.706	67.035	67.332	67.365
℄ BEAM 9-3	61.668	61.701	61.998	62.328	62.658	62.988	63.318	63.647	63.977	64.307	64.637	64.967	65.296	65.626	65.956	66.286	66.616	66.946	67.275	67.572	67.605
℄ CONST. SR 694 & PGL	61.788	---	62.118	62.448	62.778	63.108	63.438	63.767	64.097	64.427	64.757	65.087	65.416	65.746	66.076	66.406	66.736	67.066	67.395	---	67.725
℄ BEAM 9-4	61.668	61.701	61.998	62.328	62.658	62.988	63.318	63.647	63.977	64.307	64.637	64.967	65.296	65.626	65.956	66.286	66.616	66.946	67.275	67.572	67.605
CONST. JT.	61.653	---	61.983	62.313	62.643	62.973	63.303	63.632	63.962	64.292	64.622	64.952	65.281	65.611	65.941	66.271	66.601	66.931	67.260	---	67.590
℄ BEAM 9-5	61.428	61.461	61.758	62.088	62.418	62.748	63.078	63.407	63.737	64.067	64.397	64.727	65.056	65.386	65.716	66.046	66.376	66.706	67.035	67.332	67.365
RIGHT GUTTER	61.348	---	61.678	62.008	62.338	62.668	62.998	63.327	63.657	63.987	64.317	64.647	64.976	65.306	65.636	65.966	66.296	66.626	66.955	---	67.285
RIGHT BACK FACE OF RAILING	61.324	---	61.654	61.984	62.314	62.644	62.973	63.303	63.633	63.963	64.293	64.622	64.952	65.282	65.612	65.942	66.272	66.601	66.931	---	67.261
℄ BEAM 9-6	61.188	61.221	61.518	61.848	62.178	62.508	62.838	63.167	63.497	63.827	64.157	64.487	64.816	65.146	65.476	65.806	66.136	66.466	66.795	67.092	67.125
RIGHT SWK. GUTTER	61.122	---	61.452	61.781	62.111	62.441	62.771	63.101	63.431	63.760	64.090	64.420	64.750	65.080	65.409	65.739	66.069	66.399	66.729	---	67.059
RIGHT COPING	61.106	---	61.436	61.766	62.095	62.425	62.755	63.085	63.415	63.745	64.074	64.404	64.734	65.064	65.394	65.723	66.053	66.383	66.713	---	67.043

SPAN 10

POINTS	℄ PIER 10	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 11
LEFT COPING	67.043	---	67.373	67.702	68.032	68.362	68.692	69.022	69.351	69.681	70.011	70.341	70.671	70.998	71.315	71.619	71.912	72.193	72.462	---	72.719
LEFT SWK. GUTTER	67.059	---	67.388	67.718	68.048	68.378	68.708	69.037	69.367	69.697	70.027	70.357	70.687	71.014	71.330	71.635	71.928	72.209	72.478	---	72.735
℄ BEAM 10-1	67.125	67.158	67.455	67.785	68.115	68.444	68.774	69.104	69.434	69.764	70.094	70.423	70.753	71.081	71.397	71.702	71.995	72.275	72.545	72.777	72.802
LEFT BACK FACE OF RAILING	67.261	---	67.591	67.921	68.250	68.580	68.910	69.240	69.570	69.900	70.229	70.559	70.889	71.216	71.533	71.838	72.130	72.411	72.680	---	72.938
LEFT GUTTER	67.285	---	67.615	67.945	68.275	68.604	68.934	69.264	69.594	69.924	70.254	70.583	70.913	71.241	71.557	71.862	72.155	72.435	72.705	---	72.962
℄ BEAM 10-2	67.365	67.398	67.695	68.025	68.355	68.684	69.014	69.344	69.674	70.004	70.334	70.663	70.993	71.321	71.637	71.942	72.235	72.515	72.785	73.017	73.042
℄ BEAM 10-3	67.605	67.638	67.935	68.265	68.595	68.924	69.254	69.584	69.914	70.244	70.574	70.903	71.233	71.561	71.877	72.182	72.475	72.755	73.025	73.257	73.282
℄ CONST. SR 694 & PGL	67.725	---	68.055	68.385	68.715	69.044	69.374	69.704	70.034	70.364	70.694	71.023	71.353	71.681	71.997	72.302	72.595	72.875	73.145	---	73.402
℄ BEAM 10-4	67.605	67.638	67.935	68.265	68.595	68.924	69.254	69.584	69.914	70.244	70.574	70.903	71.233	71.561	71.877	72.182	72.475	72.755	73.025	73.257	73.282
CONST. JT.	67.590	---	67.920	68.250	68.580	68.909	69.239	69.569	69.899	70.229	70.559	70.888	71.218	71.546	71.862	72.167	72.460	72.740	73.010	---	73.267
℄ BEAM 10-5	67.365	67.398	67.695	68.025	68.355	68.684	69.014	69.344	69.674	70.004	70.334	70.663	70.993	71.321	71.637	71.942	72.235	72.515	72.785	73.017	73.042
RIGHT GUTTER	67.285	---	67.615	67.945	68.275	68.604	68.934	69.264	69.594	69.924	70.254	70.583	70.913	71.241	71.557	71.862	72.155	72.435	72.705	---	72.962
RIGHT BACK FACE OF RAILING	67.261	---	67.591	67.921	68.250	68.580	68.910	69.240	69.570	69.900	70.229	70.559	70.889	71.216	71.533	71.838	72.130	72.411	72.680	---	72.938
℄ BEAM 10-6	67.125	67.158	67.455	67.785	68.115	68.444	68.774	69.104	69.434	69.764	70.094	70.423	70.753	71.081	71.397	71.702	71.995	72.275	72.545	72.777	72.802
RIGHT SWK. GUTTER	67.059	---	67.388	67.718	68.048	68.378	68.708	69.037	69.367	69.697	70.027	70.357	70.687	71.014	71.330	71.635	71.928	72.209	72.478	---	72.735
RIGHT COPING	67.043	---	67.373	67.702	68.032	68.362	68.692	69.022	69.351	69.681	70.011	70.341	70.671	70.998	71.315	71.619	71.912	72.193	72.462	---	72.719

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

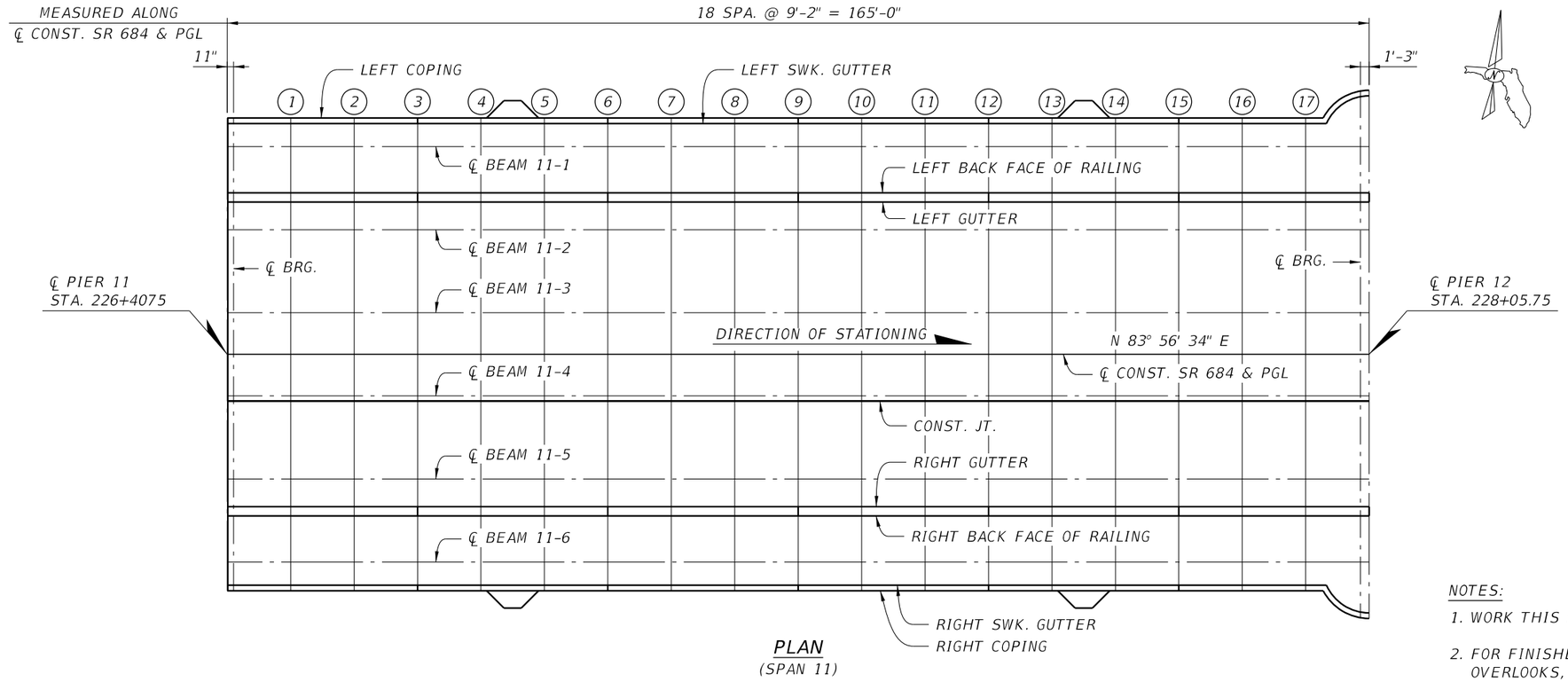
SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 6 - 10] (3 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-132

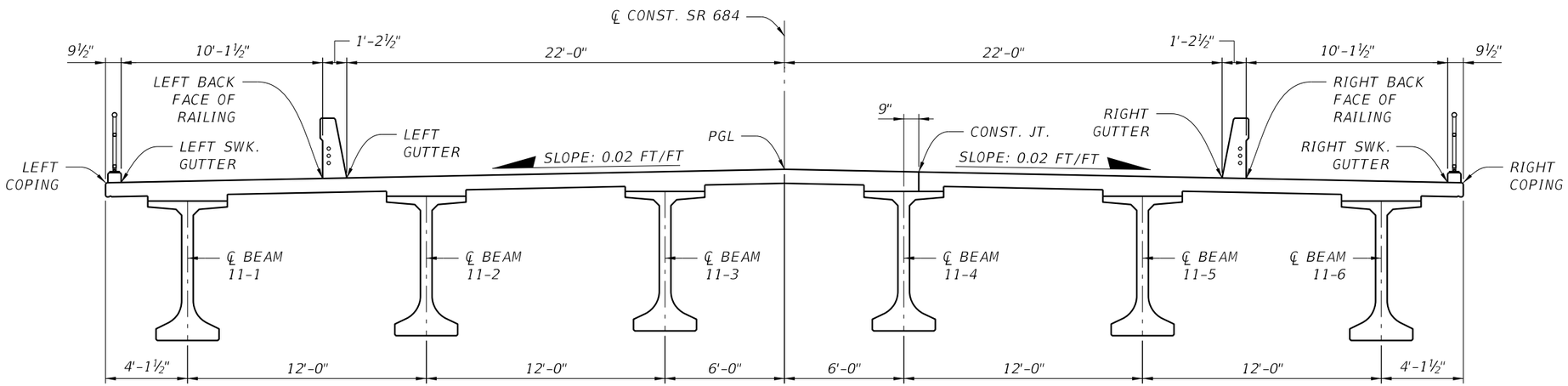
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



PLAN
(SPAN 11)

NOTES:

1. WORK THIS SHEET WITH SHEET B1-136.
2. FOR FINISHED GRADE ELEVATIONS ON PIER OVERLOOKS, SEE SHEET B1-137.
3. ALL T-LINES ARE RADIAL.



BRIDGE TYPICAL SECTION (SPAN 11)

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	SL
CHECKED BY:	JTM
DESIGNED BY:	RMD
CHECKED BY:	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

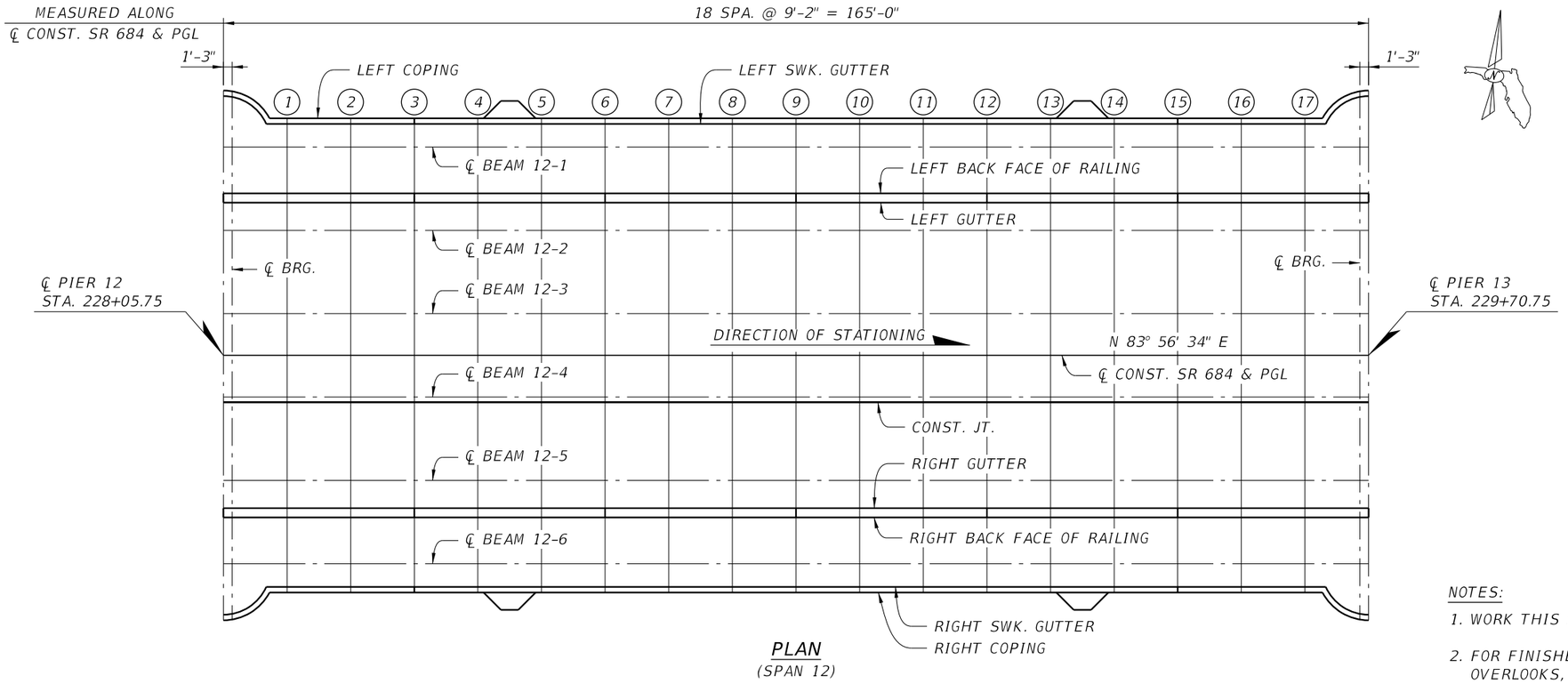
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISHED GRADE ELEVATIONS (SPANS 11 - 13) (1 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

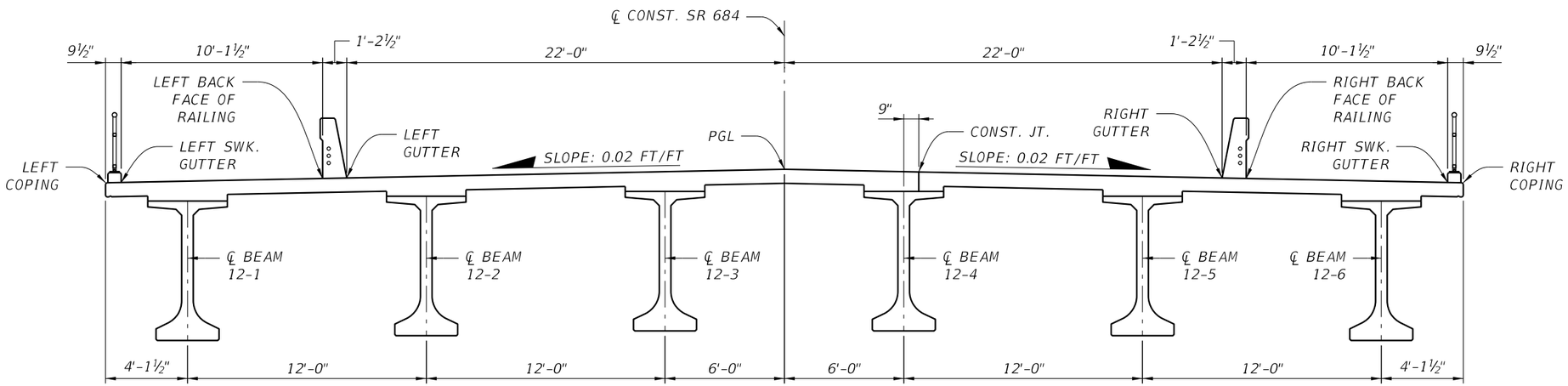
SHEET NO. B1-133



PLAN
(SPAN 12)

NOTES:

1. WORK THIS SHEET WITH SHEET B1-136.
2. FOR FINISHED GRADE ELEVATIONS ON PIER OVERLOOKS, SEE SHEET B1-137.
3. ALL T-LINES ARE RADIAL.



BRIDGE TYPICAL SECTION (SPAN 12)

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

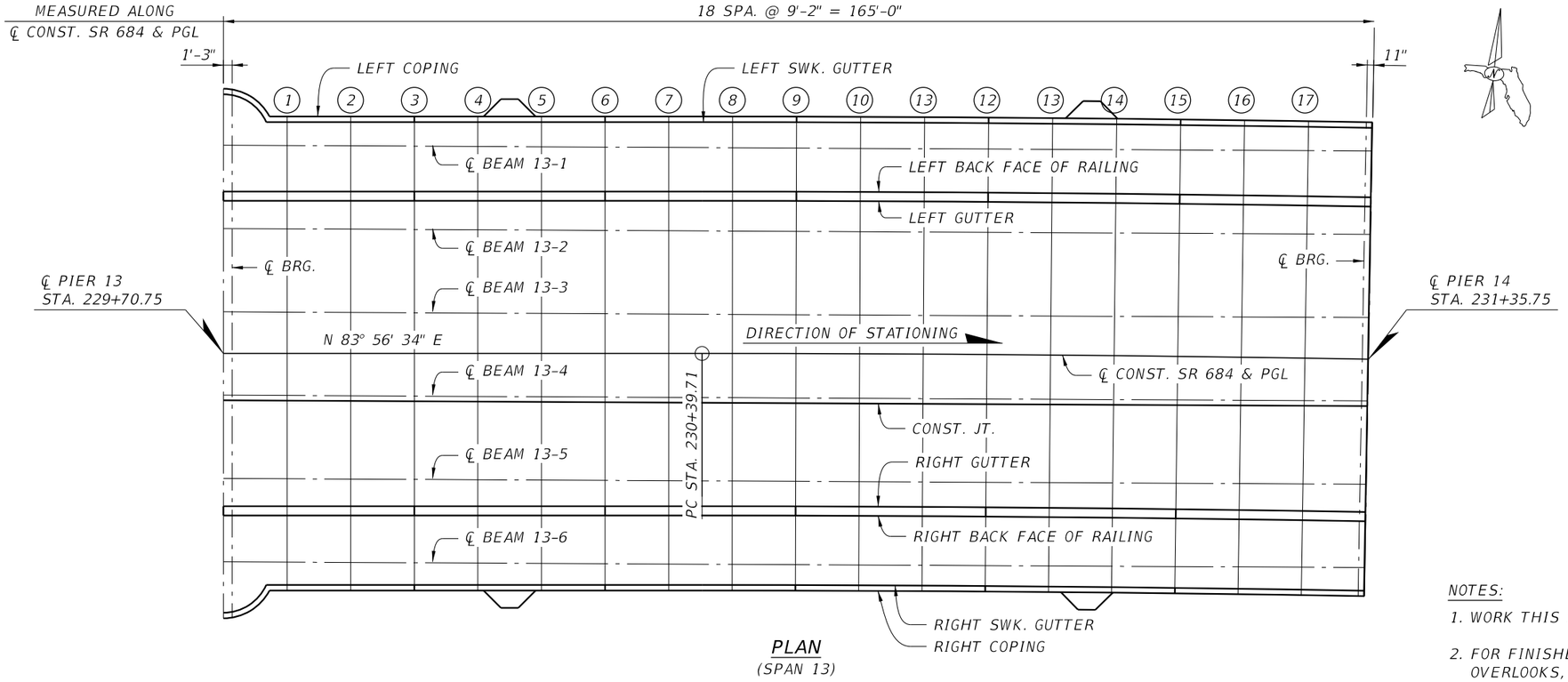
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISHED GRADE ELEVATIONS (SPANS 11 - 13) (2 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

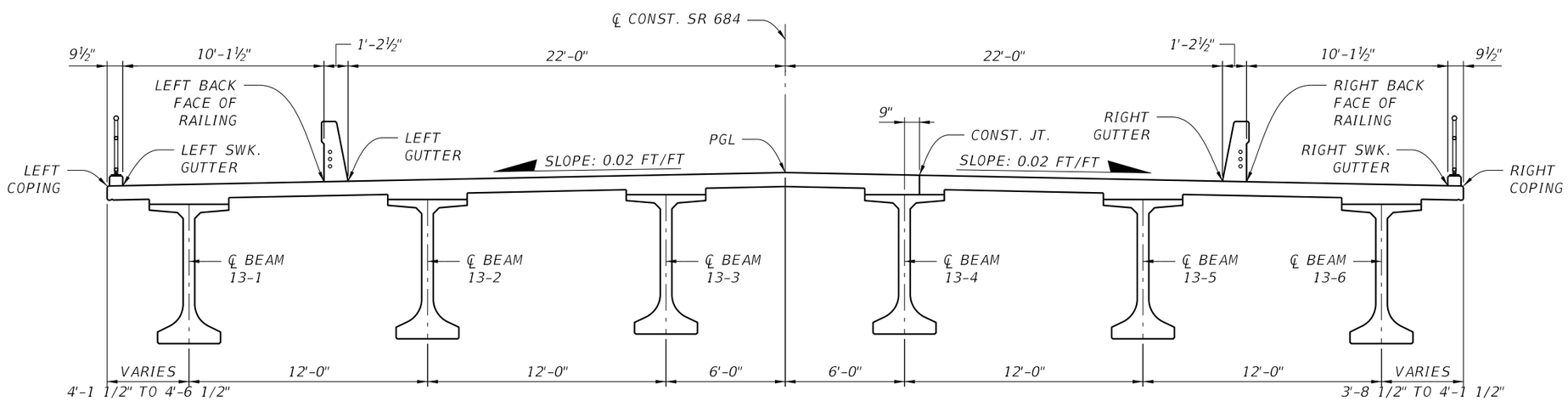
SHEET NO. B1-134



PLAN
(SPAN 13)

NOTES:

1. WORK THIS SHEET WITH SHEET B1-136.
2. FOR FINISHED GRADE ELEVATIONS ON PIER OVERLOOKS, SEE SHEET B1-137.
3. ALL T-LINES ARE RADIAL.



BRIDGE TYPICAL SECTION (SPAN 13)

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISHED GRADE ELEVATIONS (SPANS 11 - 13) (3 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-135

FINISH GRADE ELEVATIONS (SPAN 11)

LOCATION	SPAN 11																				
	℄ PIER 11	℄ BEARING	1	2	3	4	5	6	7	8	9 MIDSPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 12
STATION	226+40.75	226+41.67	226+49.92	226+59.08	226+68.25	226+77.42	226+86.58	226+95.75	227+04.92	227+14.08	227+23.25	227+32.42	227+41.58	227+50.75	227+59.92	227+69.08	227+78.25	227+87.42	227+96.58	228+04.50	228+05.75
LEFT COPING	72.716	72.741	72.962	73.195	73.417	73.627	73.825	74.011	74.185	74.348	74.498	74.637	74.764	74.879	74.982	75.074	75.153	75.221	75.277	75.316	75.321
LEFT SWK. GUTTER	72.732	72.757	72.977	73.211	73.433	73.642	73.840	74.027	74.201	74.363	74.514	74.653	74.780	74.895	74.998	75.090	75.169	75.237	75.293	75.316	75.321
℄ BEAM 11-1	72.799	72.824	73.044	73.278	73.499	73.709	73.907	74.093	74.268	74.430	74.581	74.719	74.846	74.961	75.065	75.156	75.236	75.303	75.359	75.398	75.403
LEFT BACK FACE OF RAILING	72.934	72.960	73.180	73.413	73.635	73.845	74.043	74.229	74.403	74.566	74.716	74.855	74.982	75.097	75.201	75.292	75.372	75.439	75.495	75.534	75.539
LEFT GUTTER	72.959	72.984	73.204	73.438	73.659	73.869	74.067	74.253	74.428	74.590	74.741	74.879	75.006	75.121	75.225	75.316	75.396	75.463	75.519	75.558	75.563
℄ BEAM 11-2	73.039	73.064	73.284	73.518	73.739	73.949	74.147	74.333	74.508	74.670	74.821	74.959	75.086	75.201	75.305	75.396	75.476	75.543	75.599	75.638	75.643
℄ BEAM 11-3	73.279	73.304	73.524	73.758	73.979	74.189	74.387	74.573	74.748	74.910	75.061	75.199	75.326	75.441	75.545	75.636	75.716	75.783	75.839	75.878	75.883
℄ CONST. SR 694 & PGL	73.399	73.424	73.644	73.878	74.099	74.309	74.507	74.693	74.868	75.030	75.181	75.319	75.446	75.561	75.665	75.756	75.836	75.903	75.959	75.998	76.003
℄ BEAM 11-4	73.279	73.304	73.524	73.758	73.979	74.189	74.387	74.573	74.748	74.910	75.061	75.199	75.326	75.441	75.545	75.636	75.716	75.783	75.839	75.878	75.883
CONST. JT.	73.264	73.289	73.509	73.743	73.964	74.174	74.372	74.558	74.733	74.895	75.046	75.184	75.311	75.426	75.530	75.621	75.701	75.768	75.824	75.863	75.868
℄ BEAM 11-5	73.039	73.064	73.284	73.518	73.739	73.949	74.147	74.333	74.508	74.670	74.821	74.959	75.086	75.201	75.305	75.396	75.476	75.543	75.599	75.638	75.643
RIGHT GUTTER	72.959	72.984	73.204	73.438	73.659	73.869	74.067	74.253	74.428	74.590	74.741	74.879	75.006	75.121	75.225	75.316	75.396	75.463	75.519	75.558	75.563
RIGHT BACK FACE OF RAILING	72.934	72.960	73.180	73.413	73.635	73.845	74.043	74.229	74.403	74.566	74.716	74.855	74.982	75.097	75.201	75.292	75.372	75.439	75.495	75.534	75.539
℄ BEAM 11-6	72.799	72.824	73.044	73.278	73.499	73.709	73.907	74.093	74.268	74.430	74.581	74.719	74.846	74.961	75.065	75.156	75.236	75.303	75.359	75.398	75.403
RIGHT SWK. GUTTER	72.732	72.757	72.977	73.211	73.433	73.642	73.840	74.027	74.201	74.363	74.514	74.653	74.780	74.895	74.998	75.090	75.169	75.237	75.293	75.316	75.321
RIGHT COPING	72.716	72.741	72.962	73.195	73.417	73.627	73.825	74.011	74.185	74.348	74.498	74.637	74.764	74.879	74.982	75.074	75.153	75.221	75.277	75.316	75.321

FINISH GRADE ELEVATIONS (SPAN 12)

LOCATION	SPAN 12																				
	℄ PIER 12	℄ BEARING	1	2	3	4	5	6	7	8	9 MIDSPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 13
STATION	228+05.75	228+07.00	228+14.92	228+24.08	228+33.25	228+42.42	228+51.58	228+60.75	228+69.92	228+79.08	228+88.25	228+97.42	229+06.58	229+15.75	229+24.92	229+34.08	229+43.25	229+52.42	229+61.58	229+69.50	229+70.75
LEFT COPING	75.321	75.326	75.353	75.373	75.382	75.379	75.363	75.336	75.298	75.247	75.184	75.110	75.024	74.926	74.816	74.694	74.560	74.415	74.258	74.112	74.088
LEFT SWK. GUTTER	75.321	75.326	75.369	75.389	75.398	75.394	75.379	75.352	75.313	75.263	75.200	75.126	75.040	74.941	74.832	74.710	74.576	74.431	74.273	74.112	74.088
℄ BEAM 12-1	75.403	75.408	75.436	75.456	75.464	75.461	75.446	75.419	75.380	75.329	75.267	75.192	75.106	75.008	74.898	74.776	74.643	74.497	74.340	74.195	74.171
LEFT BACK FACE OF RAILING	75.539	75.544	75.571	75.592	75.600	75.597	75.582	75.555	75.516	75.465	75.403	75.328	75.242	75.144	75.034	74.912	74.779	74.633	74.476	74.331	74.307
LEFT GUTTER	75.563	75.568	75.596	75.616	75.624	75.621	75.606	75.579	75.540	75.489	75.427	75.352	75.266	75.168	75.058	74.936	74.803	74.657	74.500	74.355	74.331
℄ BEAM 12-2	75.643	75.648	75.676	75.696	75.704	75.701	75.686	75.659	75.620	75.569	75.507	75.432	75.346	75.248	75.138	75.016	74.883	74.737	74.580	74.435	74.411
℄ BEAM 12-3	75.883	75.888	75.916	75.936	75.944	75.941	75.926	75.899	75.860	75.809	75.747	75.672	75.586	75.488	75.378	75.256	75.123	74.977	74.820	74.675	74.651
℄ CONST. SR 694 & PGL	76.003	76.008	76.036	76.056	76.064	76.061	76.046	76.019	75.980	75.929	75.867	75.792	75.706	75.608	75.498	75.376	75.243	75.097	74.940	74.795	74.771
℄ BEAM 12-4	75.883	75.888	75.916	75.936	75.944	75.941	75.926	75.899	75.860	75.809	75.747	75.672	75.586	75.488	75.378	75.256	75.123	74.977	74.820	74.675	74.651
CONST. JT.	75.868	75.873	75.901	75.921	75.929	75.926	75.911	75.884	75.845	75.794	75.732	75.657	75.571	75.473	75.363	75.241	75.108	74.962	74.805	74.660	74.636
℄ BEAM 12-5	75.643	75.648	75.676	75.696	75.704	75.701	75.686	75.659	75.620	75.569	75.507	75.432	75.346	75.248	75.138	75.016	74.883	74.737	74.580	74.435	74.411
RIGHT GUTTER	75.563	75.568	75.596	75.616	75.624	75.621	75.606	75.579	75.540	75.489	75.427	75.352	75.266	75.168	75.058	74.936	74.803	74.657	74.500	74.355	74.331
RIGHT BACK FACE OF RAILING	75.539	75.544	75.571	75.592	75.600	75.597	75.582	75.555	75.516	75.465	75.403	75.328	75.242	75.144	75.034	74.912	74.779	74.633	74.476	74.331	74.307
℄ BEAM 12-6	75.403	75.408	75.436	75.456	75.464	75.461	75.446	75.419	75.380	75.329	75.267	75.192	75.106	75.008	74.898	74.776	74.643	74.497	74.340	74.195	74.171
RIGHT SWK. GUTTER	75.321	75.326	75.369	75.389	75.398	75.394	75.379	75.352	75.313	75.263	75.200	75.126	75.040	74.941	74.832	74.710	74.576	74.431	74.273	74.112	74.088
RIGHT COPING	75.321	75.326	75.353	75.373	75.382	75.379	75.363	75.336	75.298	75.247	75.184	75.110	75.024	74.926	74.816	74.694	74.560	74.415	74.258	74.112	74.088

FINISH GRADE ELEVATIONS (SPAN 13)

LOCATION	SPAN 13																				
	℄ PIER 13	℄ BEARING	1	2	3	4	5	6	7	8	9 MIDSPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 14
STATION	229+70.75	229+72.00	229+79.92	229+89.08	229+98.25	230+07.42	230+16.58	230+25.75	230+34.92	230+44.08	230+53.25	230+62.42	230+71.58	230+80.75	230+89.92	230+99.08	231+08.25	231+17.42	231+26.58	231+34.83	231+35.75
LEFT COPING	74.088	74.064	73.907	73.715	73.510	73.293	73.065	72.825	72.573	72.309	72.033	71.746	71.446	71.135	70.812	70.477	70.130	69.771	69.401	69.057	69.019
LEFT SWK. GUTTER	74.088	74.064	73.923	73.730	73.526	73.309	73.081	72.841	72.589	72.325	72.049	71.761	71.462	71.151	70.828	70.493	70.146	69.787	69.417	69.073	69.035
℄ BEAM 13-1	74.171	74.147	73.991	73.799	73.595	73.380	73.152	72.913	72.662	72.399	72.124	71.836	71.537	71.226	70.902	70.566	70.218	69.858	69.486	69.140	69.101
LEFT BACK FACE OF RAILING	74.307	74.283	74.126	73.933	73.728	73.512	73.283	73.043	72.791	72.527	72.252	71.964	71.665	71.353	71.030	70.695	70.348	69.990	69.619	69.276	69.237
LEFT GUTTER	74.331	74.307	74.150	73.957	73.752	73.536	73.308	73.067	72.815	72.551	72.276	71.988	71.689	71.377	71.054	70.719	70.373	70.014	69.644	69.300	69.261
℄ BEAM 13-2	74.411	74.387	74.231	74.039	73.835	73.620	73.392	73.153	72.902	72.639	72.364	72.076	71.777	71.466	71.142	70.806	70.458	70.098	69.726	69.380	69.341
℄ BEAM 13-3	74.651	74.627	74.471	74.279	74.075	73.860	73.632	73.393	73.142	72.879	72.604	72.316	72.017	71.705	71.382	71.046	70.698	70.338	69.966	69.620	69.581
℄ CONST. SR 694 & PGL	74.771	74.747	74.590	74.397	74.192	73.976	73.748	73.507	73.255	72.991	72.716	72.428	72.129	71.817	71.494	71.159	70.813	70.454	70.084	69.740	69.701
℄ BEAM 13-4	74.651	74.627	74.469	74.275	74.070	73.852	73.623	73.382	73.129	72.864	72.588	72.300	72.000	71.689	71.367	71.033	70.687	70.330	69.961	69.620	69.581
CONST. JT.	74.636	74.612	74.454	74.260	74.055	73.837	73.608	73.367	73.114	72.849	72.573	72.285	71.985	71.674	71.352	71.018	70.672	70.315	69.946	69.605	69.566
℄ BEAM 13-5	74.411	74.387	74.229	74.035	73.830	73.612	73.383	73.142	72.889	72.624	72.348	72.060	71.760	71.449	71.127	70.793	70.447	70.090	69.721	69.380	69.341
RIGHT GUTTER	74.331	74.307	74.150	73.957	73.752	73.536	73.308	73.067	72.815	72.551	72.276	71.988	71.689	71.377	71.054	70.719	70.373	70.014	69.644	69.300	69.261
RIGHT BACK FACE OF RAILING	74.307	74.283	74.126	73.933	73.728	73.512	73.283	73.043	72.791	72.527	72.252	71.964	71.665	71.353	71.030	70.695	70.348	69.990	69.619	69.276	69.237
℄ BEAM 13-6	74.171	74.147	73.989	73.795	73.590	73.372	73.143	72.902	72.649	72.384	72.108	71.820	71.520	71.209	70.887	70.553	70.207	69.850	69.481	69.140	69.101
RIGHT SWK. GUTTER	74.088	74.064	73.923	73.730	73.526	73.309	73.081	72.841	72.589	72.325	72.049	71.761	71.462	71.151	70.828	70.493	70.146	69.787	69.417	69.073	69.035
RIGHT COPING	74.088	74.064	73.907	73.715	73.510	73.293	73.065	72.825	72.573	72.309	72.033	71.746	71.446	71.135	70.812	70.477	70.130	69.771	69.401	69.057	69.019

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

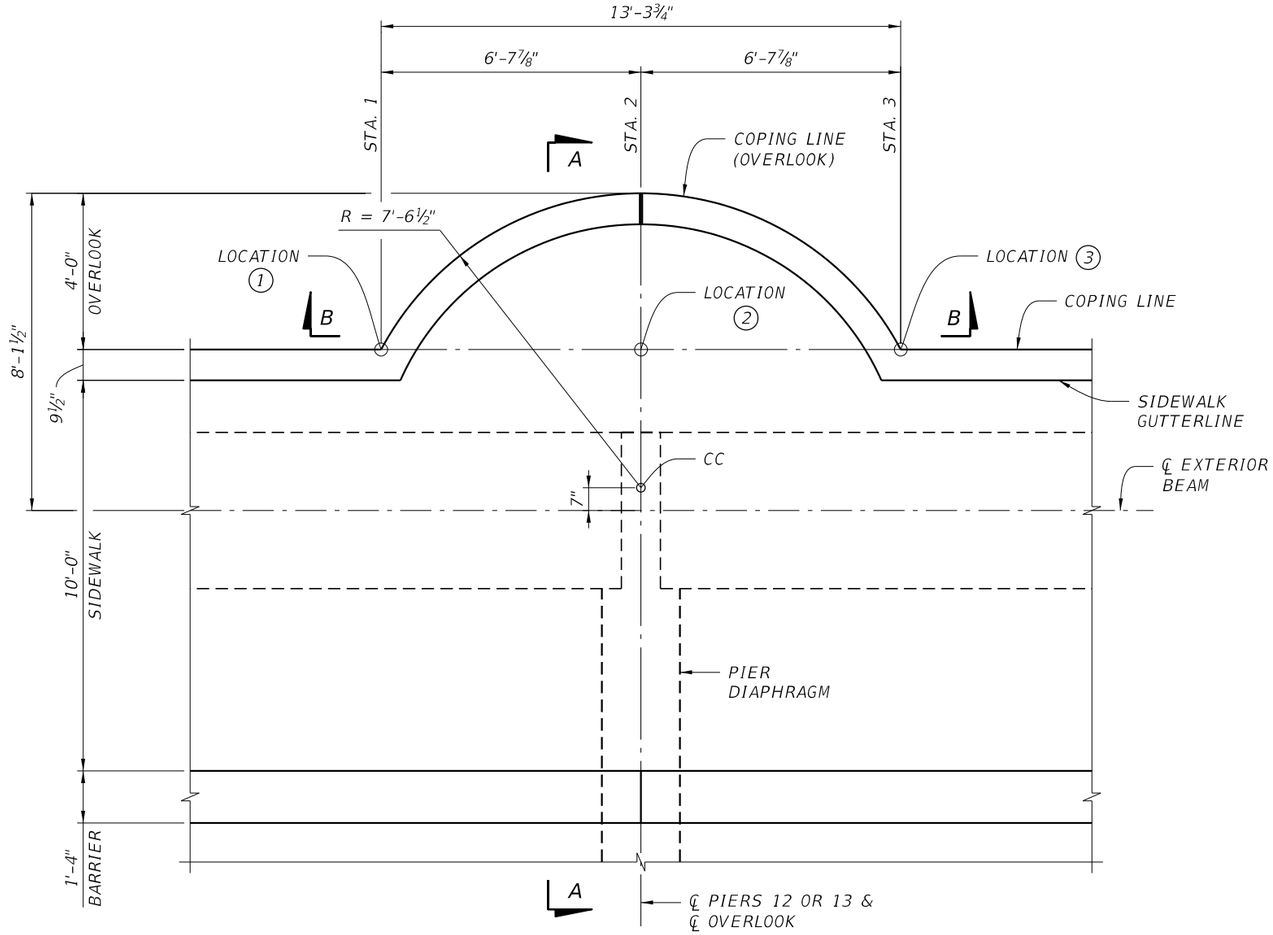
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISHED GRADE ELEVATIONS (SPANS 11 - 13) (4 OF 4)

REF. DWG. NO.

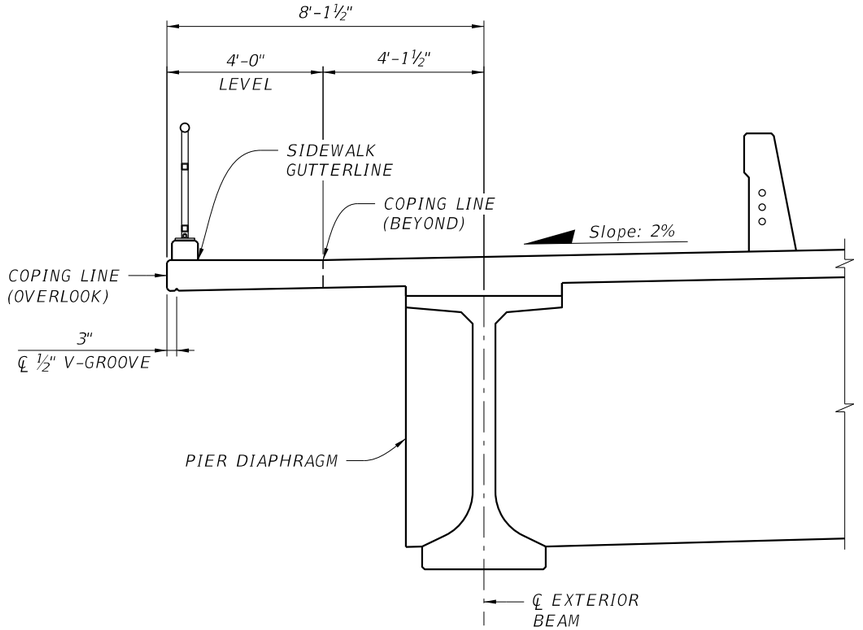
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-136

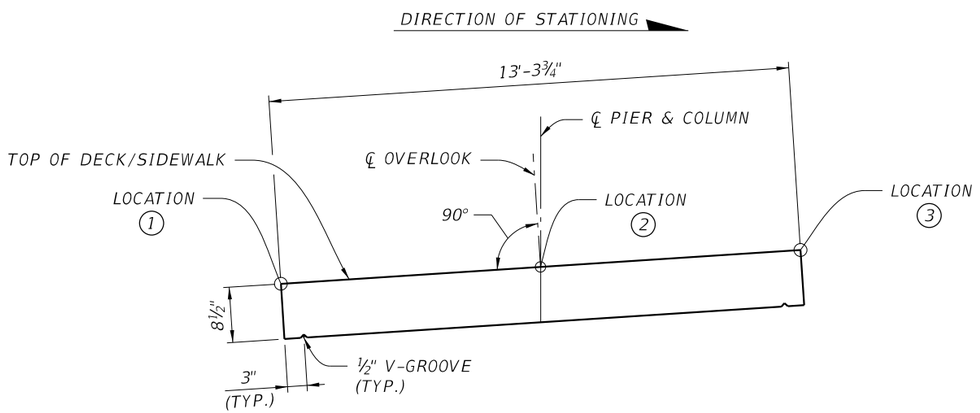


PLAN - OVERLOOK

(BRIDGE PEDESTRIAN/BICYCLE RAILING NOT SHOWN FOR CLARITY)
(NORTH OVERLOOK SHOWN, SOUTH OVERLOOK SYMMETRICAL ABOUT ℄ OF BRIDGE)



SECTION A-A



SECTION B-B

PIER OVERLOOK ELEVATION

(CONCRETE CURB AND SIDEWALK OVERBUILD NOT SHOWN FOR CLARITY)

TABLE OF OVERLOOK FINISH GRADE ELEVATIONS						
OVERLOOK LOCATION	LOCATION					
	①		②		③	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
PIER 12 (NORTH)	227+99.09	75.288	228+05.75	75.318	228+12.41	75.343
PIER 12 (SOUTH)	227+99.09	75.288	228+05.75	75.318	228+12.41	75.343
PIER 13 (NORTH)	229+64.09	74.210	229+70.75	74.086	229+77.41	73.956
PIER 13 (SOUTH)	229+64.09	74.210	229+70.75	74.086	229+77.41	73.956

NOTE: FINISH GRADE ELEVATIONS SHOWN ARE TO TOP OF DECK/SIDEWALK

NOTE:

1. WORK THIS SHEET WITH SHEETS B1-133 THRU B1-135.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

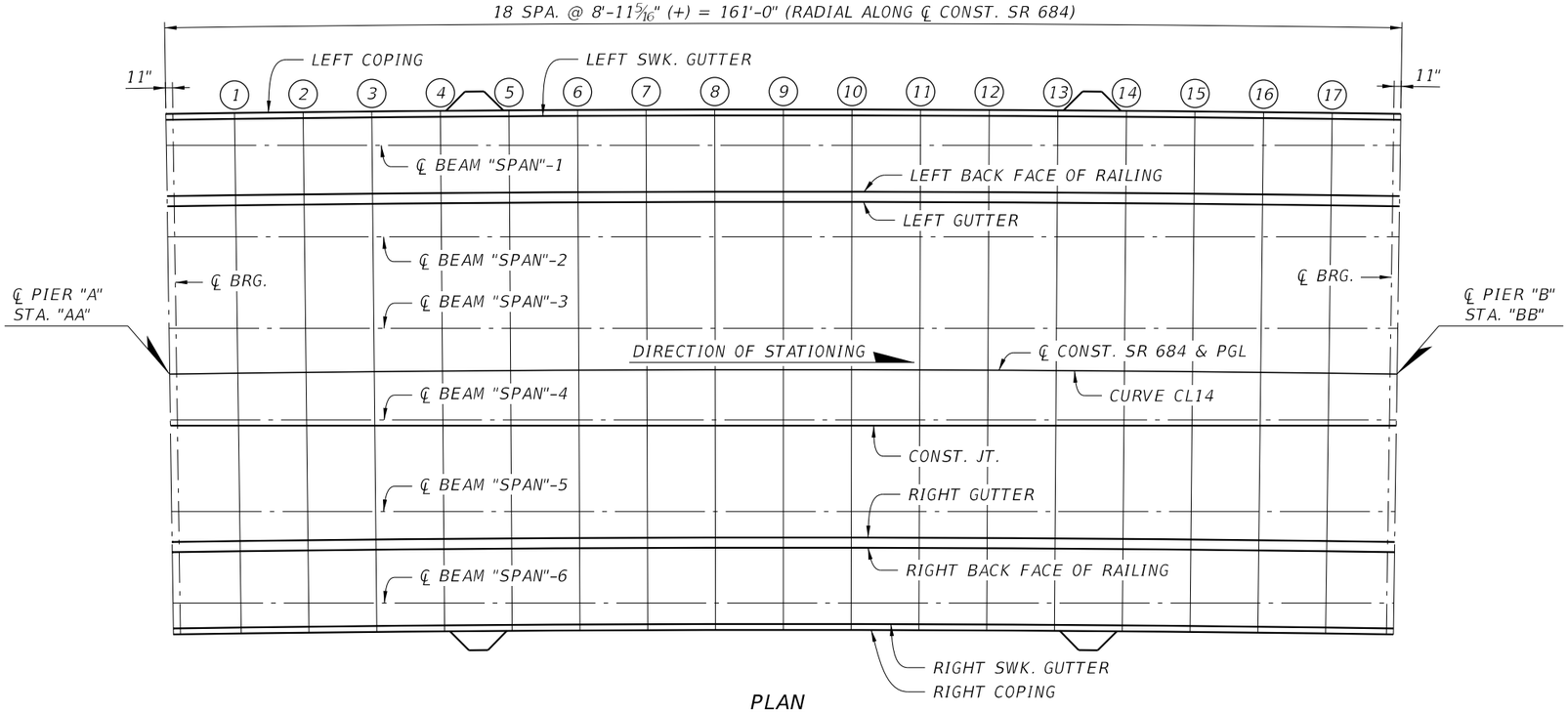
DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

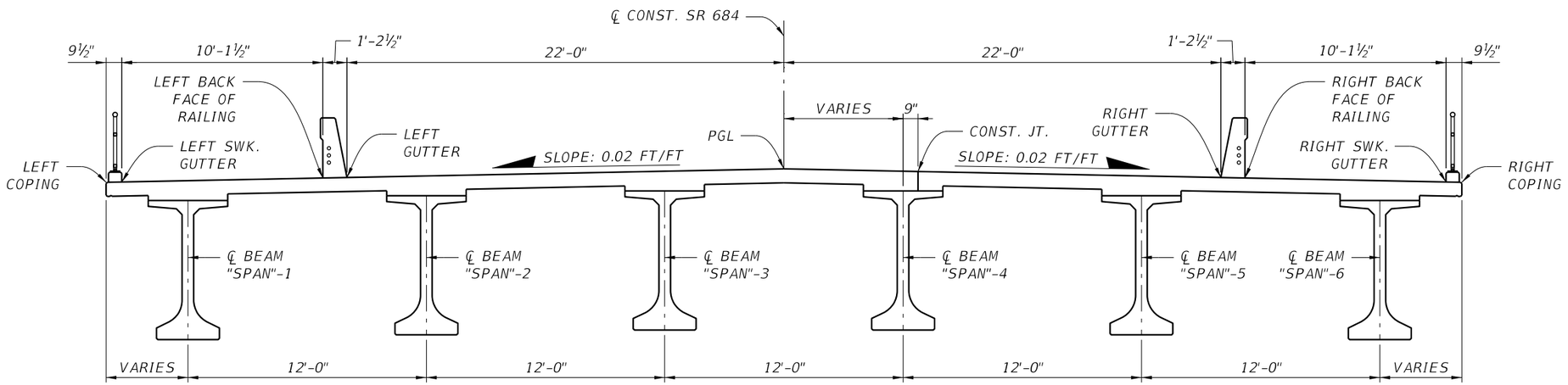
SHEET TITLE: FINISH GRADE ELEVATIONS - OVERLOOKS
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-137

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



PLAN
(SPANS 14 - 16)

TABLE OF VARIABLES				
"SPAN"	"A"	"AA"	"B"	"BB"
14	14	231+35.75	15	232+96.75
15	15	232+96.75	16	234+57.75
16	16	234+57.75	17	236+18.75



BRIDGE TYPICAL SECTION (SPANS 14 - 16)

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 14 - 16] (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-138

SPAN 14

POINTS	℄ PIER 14	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 15
LEFT COPING	69.023	---	68.638	68.242	67.835	67.417	66.987	66.547	66.099	65.652	65.205	64.758	64.311	63.863	63.416	62.969	62.522	62.074	61.627	---	61.180
LEFT SWK. GUTTER	69.038	---	68.654	68.258	67.851	67.433	67.003	66.562	66.115	65.668	65.221	64.774	64.326	63.879	63.432	62.985	62.538	62.090	61.643	---	61.196
℄ BEAM 14-1	69.105	69.066	68.723	68.329	67.924	67.508	67.079	66.640	66.193	65.746	65.299	64.852	64.404	63.956	63.508	63.059	62.611	62.162	61.712	61.309	61.263
LEFT BACK FACE OF RAILING	69.241	---	68.856	68.461	68.054	67.635	67.206	66.765	66.318	65.871	65.423	64.976	64.529	64.082	63.634	63.187	62.740	62.293	61.846	---	61.398
LEFT GUTTER	69.265	---	68.881	68.485	68.078	67.660	67.230	66.789	66.342	65.895	65.447	65.000	64.553	64.106	63.659	63.211	62.764	62.317	61.870	---	61.423
℄ BEAM 14-2	69.345	69.306	68.963	68.569	68.164	67.748	67.319	66.880	66.433	65.986	65.539	65.092	64.644	64.196	63.748	63.299	62.851	62.402	61.952	61.549	61.503
℄ BEAM 14-3	69.585	69.546	69.203	68.809	68.404	67.988	67.559	67.120	66.673	66.226	65.779	65.332	64.884	64.436	63.988	63.539	63.091	62.642	62.192	61.789	61.743
℄ CONST. SR 694 & PGL	69.705	---	69.321	68.925	68.518	68.100	67.670	67.229	66.782	66.335	65.887	65.440	64.993	64.546	64.099	63.651	63.204	62.757	62.310	---	61.863
℄ BEAM 14-4	69.585	69.546	69.198	68.800	68.391	67.972	67.541	67.099	66.651	66.203	65.756	65.309	64.862	64.415	63.969	63.523	63.078	62.632	62.187	61.788	61.743
CONST. JT.	69.570	---	69.183	68.785	68.376	67.957	67.526	67.084	66.636	66.188	65.741	65.294	64.847	64.400	63.954	63.508	63.063	62.617	62.172	---	61.728
℄ BEAM 14-5	69.345	69.306	68.958	68.560	68.151	67.732	67.301	66.859	66.411	65.963	65.516	65.069	64.622	64.175	63.729	63.283	62.838	62.392	61.947	61.548	61.503
RIGHT GUTTER	69.265	---	68.881	68.485	68.078	67.660	67.230	66.789	66.342	65.895	65.447	65.000	64.553	64.106	63.659	63.211	62.764	62.317	61.870	---	61.423
RIGHT BACK FACE OF RAILING	69.241	---	68.856	68.461	68.054	67.635	67.206	66.765	66.318	65.871	65.423	64.976	64.529	64.082	63.634	63.187	62.740	62.293	61.846	---	61.398
℄ BEAM 14-6	69.105	69.066	68.718	68.320	67.911	67.492	67.061	66.619	66.171	65.723	65.276	64.829	64.382	63.935	63.489	63.043	62.598	62.152	61.707	61.308	61.263
RIGHT SWK. GUTTER	69.038	---	68.654	68.258	67.851	67.433	67.003	66.562	66.115	65.668	65.221	64.774	64.326	63.879	63.432	62.985	62.538	62.090	61.643	---	61.196
RIGHT COPING	69.023	---	68.638	68.242	67.835	67.417	66.987	66.547	66.099	65.652	65.205	64.758	64.311	63.863	63.416	62.969	62.522	62.074	61.627	---	61.180

SPAN 15

POINTS	℄ PIER 15	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 16
LEFT COPING	61.180	---	60.733	60.286	59.838	59.391	58.944	58.497	58.049	57.602	57.155	56.708	56.261	55.813	55.366	54.919	54.472	54.024	53.577	---	53.130
LEFT SWK. GUTTER	61.196	---	60.749	60.301	59.854	59.407	58.960	58.513	58.065	57.618	57.171	56.724	56.276	55.829	55.382	54.935	54.488	54.040	53.593	---	53.146
℄ BEAM 15-1	61.263	61.217	60.818	60.373	59.927	59.482	59.036	58.590	58.143	57.696	57.249	56.802	56.354	55.906	55.458	55.009	54.561	54.112	53.662	53.259	53.213
LEFT BACK FACE OF RAILING	61.398	---	60.951	60.504	60.057	59.609	59.162	58.715	58.268	57.821	57.373	56.926	56.479	56.032	55.584	55.137	54.690	54.243	53.796	---	53.348
LEFT GUTTER	61.423	---	60.975	60.528	60.081	59.634	59.186	58.739	58.292	57.845	57.397	56.950	56.503	56.056	55.609	55.161	54.714	54.267	53.820	---	53.373
℄ BEAM 15-2	61.503	61.457	61.058	60.613	60.167	59.722	59.276	58.830	58.383	57.936	57.489	57.042	56.594	56.146	55.698	55.249	54.801	54.352	53.902	53.499	53.453
℄ BEAM 15-3	61.743	61.697	61.298	60.853	60.407	59.962	59.516	59.070	58.623	58.176	57.729	57.282	56.834	56.386	55.938	55.489	55.041	54.592	54.142	53.739	53.693
℄ CONST. SR 694 & PGL	61.863	---	61.415	60.968	60.521	60.074	59.626	59.179	58.732	58.285	57.837	57.390	56.943	56.496	56.049	55.601	55.154	54.707	54.260	---	53.813
℄ BEAM 15-4	61.743	61.696	61.293	60.843	60.394	59.946	59.497	59.049	58.601	58.153	57.706	57.259	56.812	56.365	55.919	55.473	55.028	54.582	54.137	53.738	53.693
CONST. JT.	61.728	---	61.278	60.828	60.379	59.931	59.482	59.034	58.586	58.138	57.691	57.244	56.797	56.350	55.904	55.458	55.013	54.567	54.122	---	53.678
℄ BEAM 15-5	61.503	61.456	61.053	60.603	60.154	59.706	59.257	58.809	58.361	57.913	57.466	57.019	56.572	56.125	55.679	55.233	54.788	54.342	53.897	53.498	53.453
RIGHT GUTTER	61.423	---	60.975	60.528	60.081	59.634	59.186	58.739	58.292	57.845	57.397	56.950	56.503	56.056	55.609	55.161	54.714	54.267	53.820	---	53.373
RIGHT BACK FACE OF RAILING	61.398	---	60.951	60.504	60.057	59.609	59.162	58.715	58.268	57.821	57.373	56.926	56.479	56.032	55.584	55.137	54.690	54.243	53.796	---	53.348
℄ BEAM 15-6	61.263	61.216	60.813	60.363	59.914	59.466	59.017	58.569	58.121	57.673	57.226	56.779	56.332	55.885	55.439	54.993	54.548	54.102	53.657	53.258	53.213
RIGHT SWK. GUTTER	61.196	---	60.749	60.301	59.854	59.407	58.960	58.513	58.065	57.618	57.171	56.724	56.276	55.829	55.382	54.935	54.488	54.040	53.593	---	53.146
RIGHT COPING	61.180	---	60.733	60.286	59.838	59.391	58.944	58.497	58.049	57.602	57.155	56.708	56.261	55.813	55.366	54.919	54.472	54.024	53.577	---	53.130

SPAN 16

POINTS	℄ PIER 16	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 17
LEFT COPING	53.130	---	52.683	52.236	51.788	51.341	50.894	50.447	49.999	49.552	49.105	48.658	48.211	47.763	47.316	46.869	46.422	45.974	45.527	---	45.080
LEFT SWK. GUTTER	53.146	---	52.699	52.251	51.804	51.357	50.910	50.463	50.015	49.568	49.121	48.674	48.226	47.779	47.332	46.885	46.438	45.990	45.543	---	45.096
℄ BEAM 16-1	53.213	53.167	52.768	52.323	51.877	51.432	50.986	50.540	50.093	49.646	49.199	48.752	48.304	47.856	47.408	46.959	46.511	46.062	45.612	45.208	45.163
LEFT BACK FACE OF RAILING	53.348	---	52.901	52.454	52.007	51.559	51.112	50.665	50.218	49.771	49.323	48.876	48.429	47.982	47.534	47.087	46.640	46.193	45.746	---	45.298
LEFT GUTTER	53.373	---	52.925	52.478	52.031	51.584	51.136	50.689	50.242	49.795	49.347	48.900	48.453	48.006	47.559	47.111	46.664	46.217	45.770	---	45.323
℄ BEAM 16-2	53.453	53.407	53.008	52.563	52.117	51.672	51.226	50.780	50.333	49.886	49.439	48.992	48.544	48.096	47.648	47.199	46.751	46.302	45.852	45.448	45.403
℄ BEAM 16-3	53.693	53.647	53.248	52.803	52.357	51.912	51.466	51.020	50.573	50.126	49.679	49.232	48.784	48.336	47.888	47.439	46.991	46.542	46.092	45.688	45.643
℄ CONST. SR 694 & PGL	53.813	---	53.365	52.918	52.471	52.024	51.576	51.129	50.682	50.235	49.787	49.340	48.893	48.446	47.999	47.551	47.104	46.657	46.210	---	45.763
℄ BEAM 16-4	53.693	53.646	53.243	52.793	52.344	51.896	51.447	50.999	50.551	50.103	49.656	49.209	48.762	48.315	47.869	47.423	46.978	46.532	46.087	45.688	45.643
CONST. JT.	53.678	---	53.228	52.778	52.329	51.881	51.432	50.984	50.536	50.088	49.641	49.194	48.747	48.300	47.854	47.408	46.963	46.517	46.072	---	45.628
℄ BEAM 16-5	53.453	53.406	53.003	52.553	52.104	51.656	51.207	50.759	50.311	49.863	49.416	48.969	48.522	48.075	47.629	47.183	46.738	46.292	45.847	45.448	45.403
RIGHT GUTTER	53.373	---	52.925	52.478	52.031	51.584	51.136	50.689	50.242	49.795	49.347	48.900	48.453	48.0058	47.559	47.111	46.664	46.217	45.770	---	45.323
RIGHT BACK FACE OF RAILING	53.348	---	52.901	52.454	52.007	51.559	51.112	50.665	50.218	49.771	49.323	48.876	48.429	47.982	47.534	47.087	46.640	46.193	45.746	---	45.298
℄ BEAM 16-6	53.213	53.166	52.763	52.313	51.864	51.416	50.967	50.519	50.071	49.623	49.176	48.729	48.282	47.8354	47.389	46.943	46.498	46.052	45.607	45.208	45.163
RIGHT SWK. GUTTER	53.146	---	52.699	52.251	51.804	51.357	50.910	50.463	50.015	49.568	49.121	48.674	48.226	47.779	47.332	46.885	46.438	45.990	45.543	---	45.096
RIGHT COPING	53.130	---	52.683	52.236	51.788	51.341	50.894	50.447	49.999	49.552	49.105	48.658	48.211	47.7633	47.316	46.869	46.422	45.974	45.527	---	45.080

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

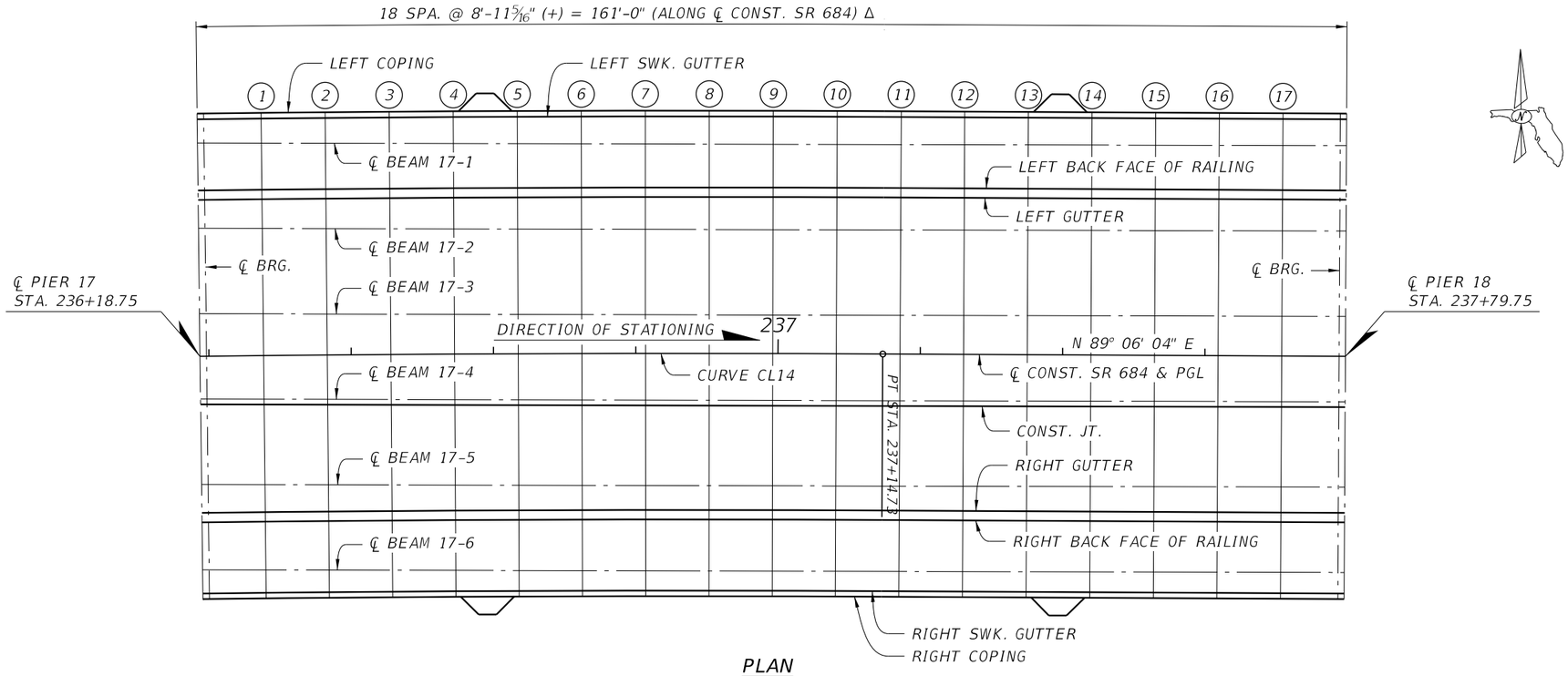
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 14 - 16] (2 OF 2)

REF. DWG. NO.

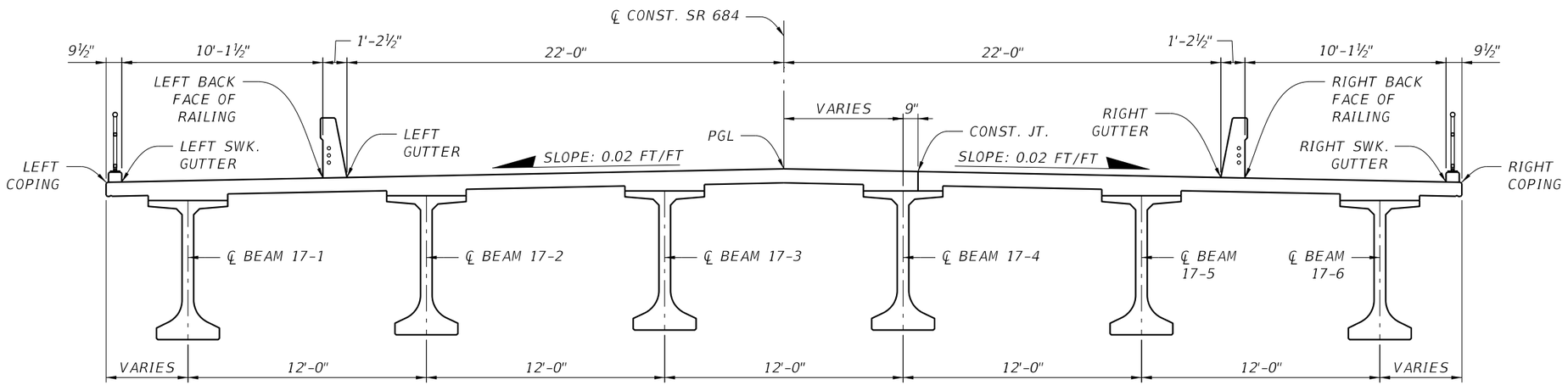
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-139



PLAN
(SPAN 17)

(Δ = LINES 1 THRU 10 ARE SPACED RADIALLY ALONG ℄ CONST. SR 684 & LINES 11 THRU 17 ARE PARALLEL TO ℄ PIER 18.)



BRIDGE TYPICAL SECTION (SPAN 17)

BRIDGE NO. 130168

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REVISIONS					
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P.E. LICENSE NUMBER 63325
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TAMPA, FL 33607

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LCY	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPAN 17] (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-140

SPAN 17

POINTS	℄ PIER 17	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 18
LEFT COPING	45.080	---	44.633	44.186	43.738	43.291	42.844	42.397	41.949	41.502	41.055	40.608	40.161	39.713	39.266	38.819	38.372	37.924	37.477	---	37.030
LEFT SWK. GUTTER	45.096	---	44.649	44.201	43.754	43.307	42.860	42.413	41.965	41.518	41.071	40.624	40.176	39.729	39.282	38.835	38.388	37.940	37.493	---	37.046
℄ BEAM 17-1	45.163	45.117	44.718	44.273	43.827	43.382	42.936	42.490	42.043	41.596	41.149	40.702	40.254	39.806	39.359	38.911	38.463	38.016	37.568	37.165	37.120
LEFT BACK FACE OF RAILING	45.298	---	44.851	44.404	43.957	43.509	43.062	42.615	42.168	41.721	41.273	40.826	40.379	39.932	39.484	39.037	38.590	38.143	37.696	---	37.248
LEFT GUTTER	45.323	---	44.875	44.428	43.981	43.534	43.086	42.639	42.192	41.745	41.297	40.850	40.403	39.956	39.509	39.061	38.614	38.167	37.720	---	37.273
℄ BEAM 17-2	45.403	45.357	44.958	44.513	44.067	43.622	43.176	42.730	42.283	41.836	41.389	40.942	40.494	40.046	39.599	39.151	38.703	38.256	37.808	37.405	37.360
℄ BEAM 17-3	45.643	45.597	45.198	44.753	44.307	43.862	43.416	42.970	42.523	42.076	41.629	41.182	40.734	40.286	39.839	39.391	38.943	38.496	38.048	37.645	37.600
℄ CONST. SR 694 & PGL	45.763	---	45.315	44.868	44.421	43.974	43.526	43.079	42.632	42.185	41.737	41.290	40.843	40.396	39.949	39.501	39.054	38.607	38.160	---	37.713
℄ BEAM 17-4	45.643	45.596	45.193	44.743	44.294	43.846	43.397	42.949	42.501	42.053	41.606	41.159	40.712	40.265	39.819	39.372	38.925	38.478	38.032	37.629	37.585
CONST. JT.	45.628	---	45.178	44.728	44.279	43.831	43.382	42.934	42.486	42.038	41.591	41.144	40.697	40.250	39.804	39.357	38.910	38.463	38.017	---	37.570
℄ BEAM 17-5	45.403	45.356	44.953	44.503	44.054	43.606	43.157	42.709	42.261	41.813	41.366	40.919	40.472	40.025	39.579	39.132	38.685	38.238	37.792	37.389	37.345
RIGHT GUTTER	45.323	---	44.875	44.428	43.981	43.534	43.086	42.639	42.192	41.745	41.297	40.850	40.403	39.956	39.509	39.061	38.614	38.167	37.720	---	37.273
RIGHT BACK FACE OF RAILING	45.298	---	44.851	44.404	43.957	43.509	43.062	42.615	42.168	41.721	41.273	40.826	40.379	39.932	39.484	39.037	38.590	38.143	37.696	---	37.248
℄ BEAM 17-6	45.163	45.116	44.713	44.263	43.814	43.366	42.917	42.469	42.021	41.573	41.126	40.679	40.232	39.785	39.339	38.892	38.445	37.998	37.552	37.149	37.105
RIGHT SWK. GUTTER	45.096	---	44.649	44.201	43.754	43.307	42.860	42.413	41.965	41.518	41.071	40.624	40.176	39.729	39.282	38.835	38.388	37.940	37.493	---	37.046
RIGHT COPING	45.080	---	44.633	44.186	43.738	43.291	42.844	42.397	41.949	41.502	41.055	40.608	40.161	39.713	39.266	38.819	38.372	37.924	37.477	---	37.030

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

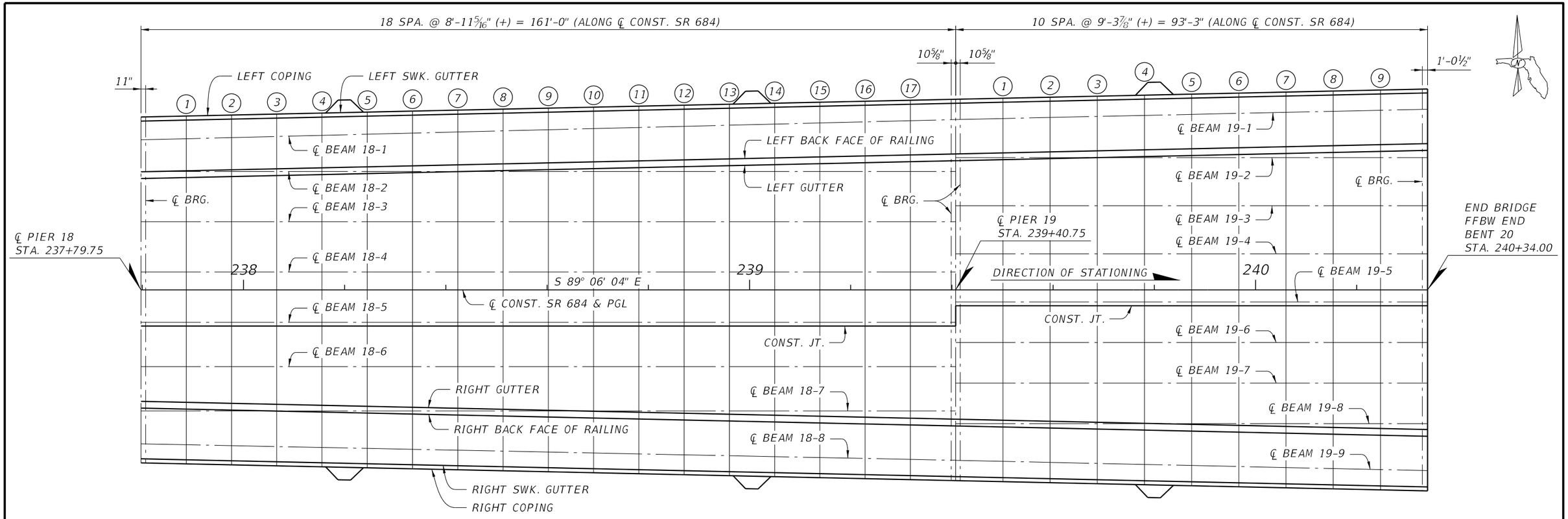
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPAN 17] (2 OF 2)

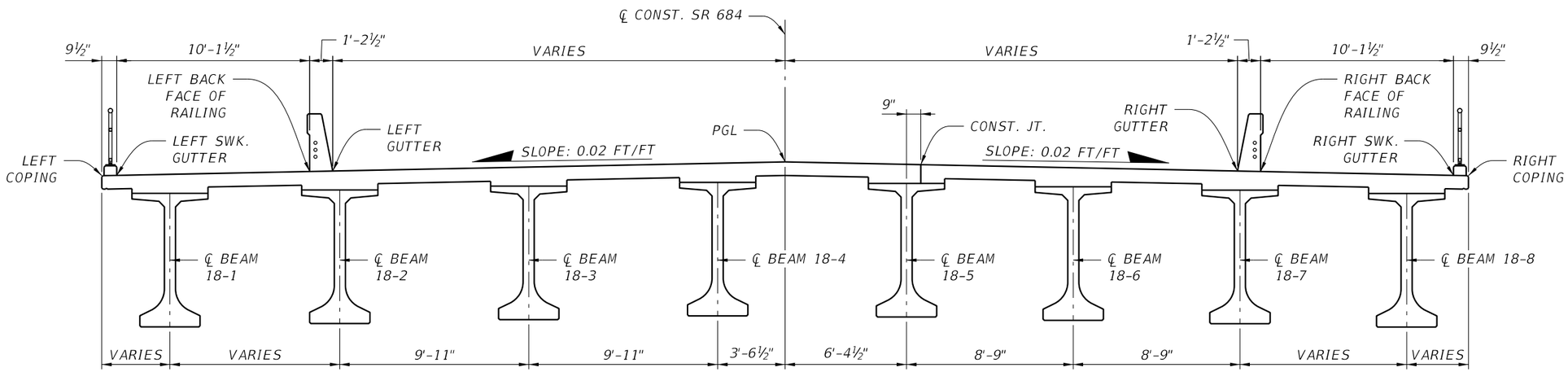
REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-141



PLAN
(SPANS 18 & 19)



BRIDGE TYPICAL SECTION (SPAN 18)

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

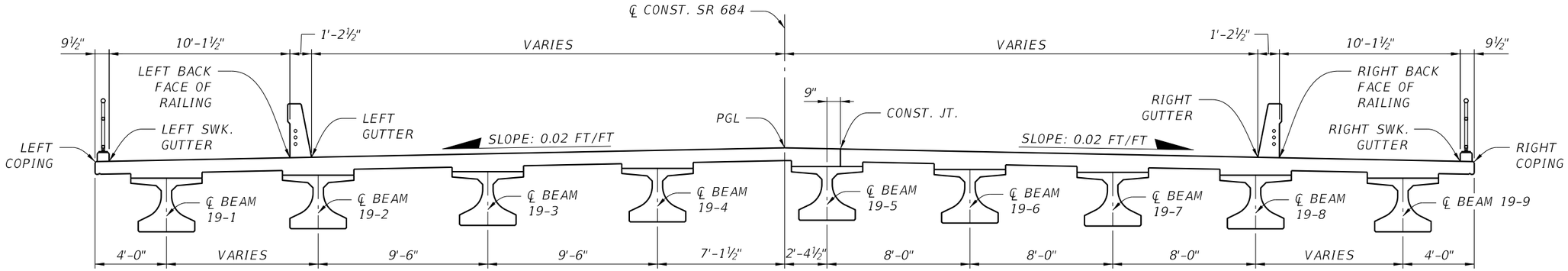
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 18 & 19] (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-142



BRIDGE TYPICAL SECTION (SPAN 19)

SPAN 18																					
POINTS	℄ PIER 18	℄ BEARING	1	2	3	4	5	6	7	8	9 MID-SPAN	10	11	12	13	14	15	16	17	℄ BEARING	℄ PIER 19
LEFT COPING	37.030	---	36.579	36.128	35.677	35.226	34.774	34.323	33.872	33.421	32.970	32.519	32.068	31.617	31.165	30.714	30.263	29.812	29.361	---	28.910
LEFT SIDEWALK GUTTER	37.046	---	36.595	36.144	35.692	35.241	34.790	34.339	33.888	33.437	32.986	32.535	32.083	31.632	31.181	30.730	30.279	29.828	29.377	---	28.926
CENTERLINE OF BEAM 18-1	37.120	37.074	36.668	36.217	35.765	35.313	34.862	34.410	33.958	33.507	33.055	32.603	32.152	31.700	31.248	30.797	30.345	29.893	29.442	29.035	28.990
LEFT BACK FACE OF RAILING	37.248	---	36.797	36.346	35.895	35.444	34.993	34.542	34.090	33.639	33.188	32.737	32.286	31.835	31.384	30.933	30.481	30.030	29.579	---	29.128
LEFT GUTTER	37.273	---	36.821	36.370	35.919	35.468	35.017	34.566	34.115	33.664	33.212	32.761	32.310	31.859	31.408	30.957	30.506	30.055	29.604	---	29.152
CENTERLINE OF BEAM 18-2	37.245	37.199	36.798	36.351	35.903	35.456	35.009	34.562	34.115	33.667	33.220	32.773	32.326	31.878	31.431	30.984	30.537	30.090	29.642	29.239	29.195
CENTERLINE OF BEAM 18-3	37.443	37.398	36.996	36.549	36.102	35.654	35.207	34.760	34.313	33.866	33.418	32.971	32.524	32.077	31.629	31.182	30.735	30.288	29.841	29.438	29.393
CENTERLINE OF BEAM 18-4	37.642	37.596	37.194	36.747	36.300	35.853	35.406	34.958	34.511	34.064	33.617	33.169	32.722	32.275	31.828	31.381	30.933	30.486	30.039	29.636	29.592
CENTERLINE CONST. SR 684 & PGL	37.713	---	37.265	36.818	36.371	35.924	35.476	35.029	34.582	34.135	33.687	33.240	32.793	32.346	31.899	31.451	31.004	30.557	30.110	---	29.663
CENTERLINE OF BEAM 18-5	37.585	37.539	37.138	36.690	36.243	35.796	35.349	34.902	34.454	34.007	33.560	33.113	32.665	32.218	31.771	31.324	30.877	30.429	29.982	29.579	29.535
CONST. JOINT	37.570	---	37.123	36.675	36.228	35.781	35.334	34.887	34.439	33.992	33.545	33.098	32.650	32.203	31.756	31.309	30.862	30.414	29.967	---	29.520
CENTERLINE OF BEAM 18-6	37.410	37.364	36.963	36.515	36.068	35.621	35.174	34.727	34.279	33.832	33.385	32.938	32.490	32.043	31.596	31.149	30.702	30.254	29.807	29.404	29.360
RIGHT GUTTER	37.273	---	36.821	36.370	35.919	35.468	35.017	34.566	34.115	33.664	33.212	32.761	32.310	31.859	31.408	30.957	30.506	30.055	29.604	---	29.152
RIGHT BACK FACE OF RAILING	37.248	---	36.797	36.346	35.895	35.444	34.993	34.542	34.090	33.639	33.188	32.737	32.286	31.835	31.384	30.933	30.481	30.030	29.579	---	29.128
CENTERLINE OF BEAM 18-7	37.235	37.189	36.788	36.340	35.893	35.446	34.999	34.552	34.104	33.657	33.210	32.763	32.315	31.868	31.421	30.974	30.527	30.079	29.632	29.229	29.185
CENTERLINE OF BEAM 18-8	37.105	37.059	36.654	36.203	35.752	35.302	34.851	34.400	33.949	33.498	33.047	32.597	32.146	31.695	31.244	30.793	30.343	29.892	29.441	29.035	28.990
RIGHT SIDEWALK GUTTER	37.046	---	36.595	36.144	35.692	35.241	34.790	34.339	33.888	33.437	32.986	32.535	32.083	31.632	31.181	30.730	30.279	29.828	29.377	---	28.926
RIGHT COPING	37.030	---	36.579	36.128	35.677	35.226	34.774	34.323	33.872	33.421	32.970	32.519	32.068	31.617	31.165	30.714	30.263	29.812	29.361	---	28.910

SPAN 19													
POINTS	℄ PIER 19	℄ BEARING	1	2	3	4	5 MID-SPAN	6	7	8	9	℄ BEARING	END BRIDGE
LEFT COPING	28.910	---	28.439	27.969	27.499	27.028	26.558	26.088	25.618	25.147	24.677	---	24.207
LEFT SIDEWALK GUTTER	28.926	---	28.455	27.985	27.515	27.044	26.574	26.104	25.633	25.163	24.693	---	24.223
CENTERLINE OF BEAM 19-1	28.990	28.945	28.519	28.049	27.579	27.108	26.638	26.168	25.698	25.227	24.757	24.339	24.287
LEFT BACK FACE OF RAILING	29.128	---	28.658	28.187	27.717	27.247	26.777	26.306	25.836	25.366	24.895	---	24.425
CENTERLINE OF BEAM 19-2	29.140	29.096	28.674	28.207	27.741	27.275	26.809	26.342	25.876	25.410	24.944	24.530	24.477
LEFT GUTTER	29.152	---	28.682	28.212	27.741	27.271	26.801	26.330	25.860	25.390	24.919	---	24.449
CENTERLINE OF BEAM 19-3	29.330	29.286	28.864	28.397	27.931	27.465	26.999	26.532	26.066	25.600	25.134	24.720	24.667
CENTERLINE OF BEAM 19-4	29.520	29.476	29.054	28.587	28.121	27.655	27.189	26.722	26.256	25.790	25.324	24.910	24.857
CENTERLINE CONST. SR 684 & PGL	29.663	---	29.196	28.730	28.264	27.797	27.331	26.865	26.399	25.932	25.466	---	25.000
CENTERLINE OF BEAM 19-5	29.615	29.571	29.149	28.683	28.216	27.750	27.284	26.818	26.351	25.885	25.419	25.005	24.953
CONST. JOINT	29.600	---	29.134	28.667	28.201	27.735	27.269	26.802	26.336	25.870	25.404	---	24.937
CENTERLINE OF BEAM 19-6	29.455	29.411	28.989	28.523	28.056	27.590	27.124	26.658	26.191	25.725	25.259	24.845	24.793
CENTERLINE OF BEAM 19-7	29.295	29.251	28.829	28.363	27.896	27.430	26.964	26.498	26.031	25.565	25.099	24.685	24.633
RIGHT GUTTER	29.152	---	28.682	28.212	27.741	27.271	26.801	26.330	25.860	25.390	24.919	---	24.449
CENTERLINE OF BEAM 19-8	29.135	29.091	28.669	28.203	27.736	27.270	26.804	26.338	25.871	25.405	24.939	24.525	24.473
RIGHT BACK FACE OF RAILING	29.128	---	28.658	28.187	27.717	27.247	26.777	26.306	25.836	25.366	24.895	---	24.425
CENTERLINE OF BEAM 19-9	28.990	28.945	28.519	28.049	27.579	27.108	26.638	26.168	25.698	25.227	24.757	24.339	24.287
RIGHT SIDEWALK GUTTER	28.926	---	28.455	27.985	27.515	27.044	26.574	26.104	25.633	25.163	24.693	---	24.222
RIGHT COPING	28.910	---	28.439	27.969	27.499	27.028	26.558	26.088	25.618	25.147	24.677	---	24.207

BRIDGE NO. 130168

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

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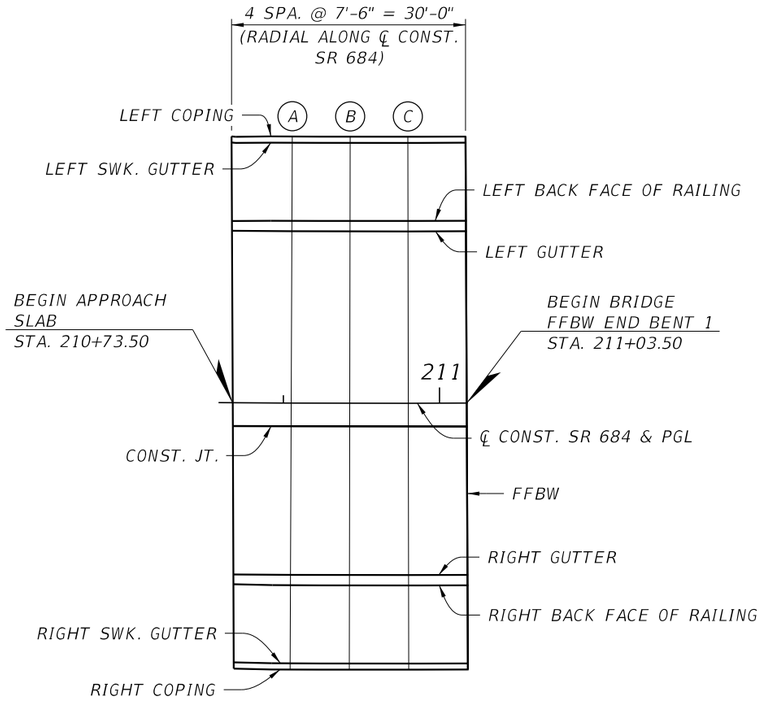
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FINISH GRADE ELEVATIONS [SPANS 18 & 19] (2 OF 2)

REF. DWG. NO.

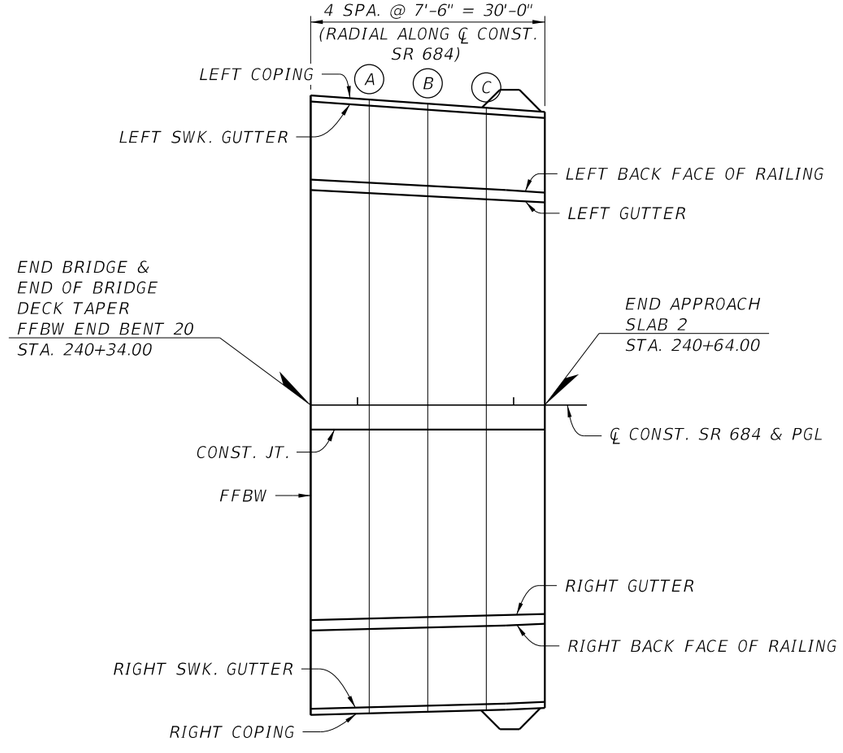
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-143



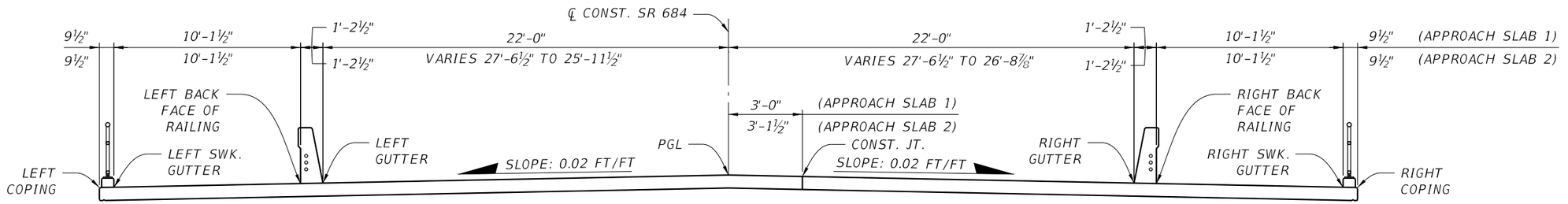
PLAN

(APPROACH SLAB 1)



PLAN

(APPROACH SLAB 2)



APPROACH SLAB TYPICAL SECTION

APPROACH SLAB 1

POINTS	BEGIN APP. SLAB	A	B	C	END APP. SLAB
LEFT COPING	16.575	16.859	17.129	17.399	17.669
LEFT SWK. GUTTER	16.592	16.875	17.145	17.415	17.685
LEFT BACK FACE OF RAILING	16.799	17.078	17.348	17.618	17.887
LEFT GUTTER	16.823	17.102	17.372	17.642	17.912
℄ CONST. SR 684 & PGL	17.272	17.542	17.812	18.082	18.352
CONST. JT.	17.213	17.483	17.753	18.022	18.292
RIGHT GUTTER	16.842	17.102	17.372	17.642	17.912
RIGHT BACK FACE OF RAILING	16.819	17.078	17.348	17.618	17.888
RIGHT SWK. GUTTER	16.621	16.875	17.145	17.415	17.685
RIGHT COPING	16.606	16.860	17.130	17.399	17.669

APPROACH SLAB 2

POINTS	BEGIN APP. SLAB	A	B	C	END APP. SLAB
LEFT COPING	24.207	23.842	23.478	23.113	22.749
LEFT SWK. GUTTER	24.223	23.858	23.494	23.129	22.765
LEFT BACK FACE OF RAILING	24.425	24.058	23.691	23.324	22.958
LEFT GUTTER	24.449	24.082	23.715	23.348	22.981
℄ CONST. SR 684 & PGL	25.000	24.625	24.250	23.875	23.500
CONST. JT.	24.937	24.562	24.187	23.812	23.437
RIGHT GUTTER	24.449	24.078	23.707	23.336	22.965
RIGHT BACK FACE OF RAILING	24.425	24.054	23.683	23.312	22.943
RIGHT SWK. GUTTER	24.222	23.851	23.480	23.109	22.740
RIGHT COPING	24.207	23.836	23.465	23.094	22.724

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

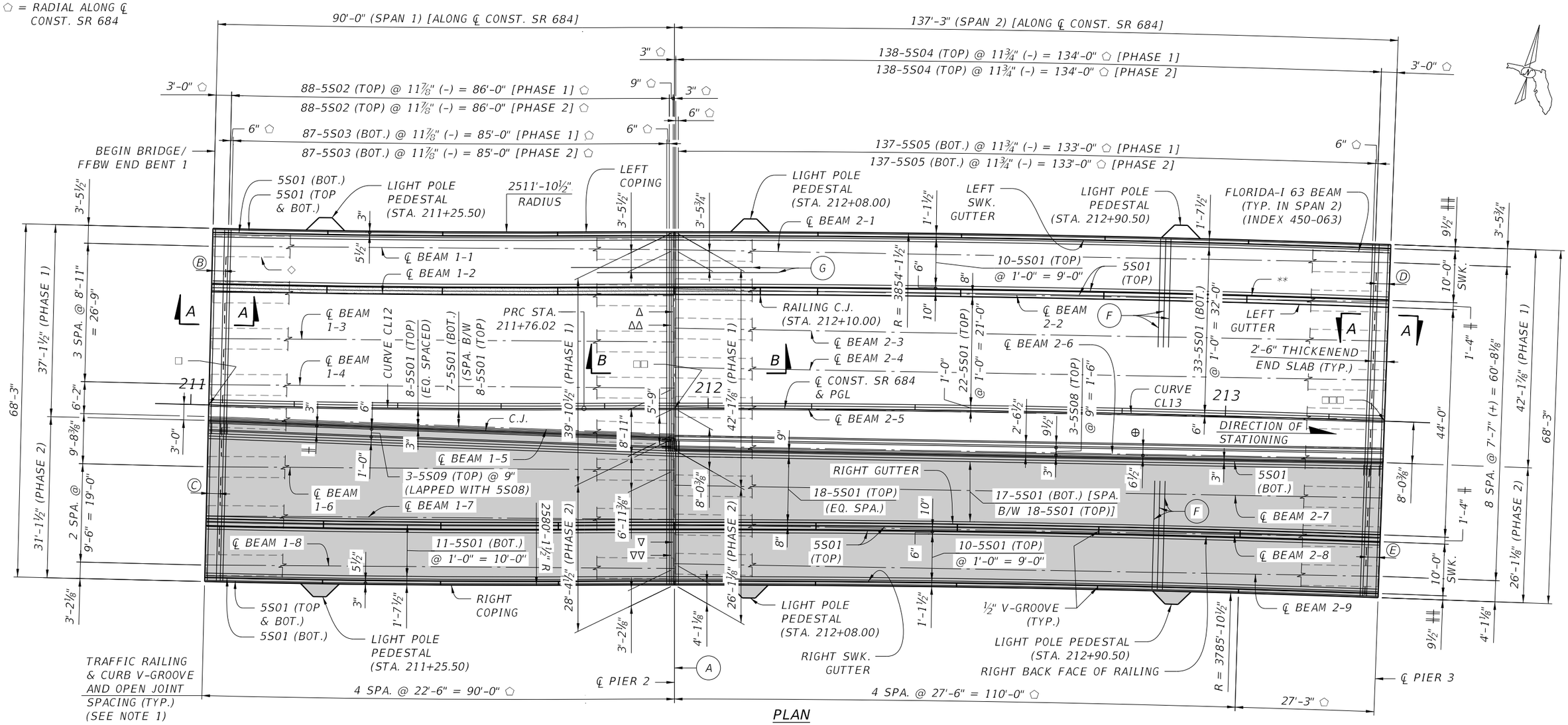
SHEET TITLE: FINISH GRADE ELEVATIONS [APPROACH SLABS]

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-144

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



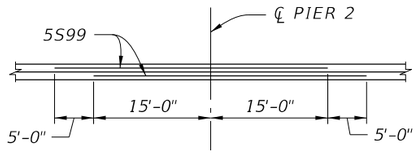
PLAN

LEGEND:

▭	PHASE 2 CONSTRUCTION
Δ	5S11 (TOP & BOT.) [PHASE 1]
ΔΔ	5S11 (BOT.) & 5S10 (TOP) [PHASE 1]
∇	5S11 (TOP & BOT.) [PHASE 2]
∇∇	5S11 (BOT.) & 5S10 (TOP) [PHASE 2]
⊕	3-5S08 (BOT.) @ 9" [PHASE 1]
╫	3-5S09 (BOT.) @ 9" [PHASE 2] LAPPED WITH 5S08
□	BEGIN BRIDGE/FFBW END BENT 1 STA. 211+03.50
□□	℄ PIER 2, STA. 211+93.50
□□□	℄ PIER 3, STA. 213+30.75
Ⓐ	¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
▭	PHASE 3 RAILING CONSTRUCTION
Ⓑ	6-5S06 @ 5¼" (TOP) [PHASE 1]
Ⓒ	6-5S06 @ 5¼" (TOP) [PHASE 2]
Ⓓ	6-5S07 @ 5¼" (TOP) [PHASE 1]
Ⓔ	6-5S07 @ 5¼" (TOP) [PHASE 2]
Ⓕ	224-5S10 (TOP) (SEE NOTE 8)
Ⓖ	5S99 (SEE NOTE 7)
╫	TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427 & INDEX 521-427 (MOD.)]
╫╫	BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]
◇	FLORIDA-I 36 BEAM (TYP. IN SPAN 1) (INDEX 450-036)
**	LEFT BACK FACE OF RAILING

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS. SEE DETAIL A ON SHEET B1-155 FOR MODIFICATIONS TO BARS 4V.
2. FOR SPAN 1 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-155.
3. FOR SPAN 1 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-161.
4. FOR SPAN 2 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-156.
5. FOR SPAN 2 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-162.
6. FOR SECTIONS A-A & B-B, SEE SHEET B1-167.
7. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
8. 5S10 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
9. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
10. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
11. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 521-660 AND SHEET B1-178.
12. FROM THE FFBW END BENT 1 TO ℄ PIER 3, THE LENGTH ALONG THE LEFT COPING IS 227'-7 15/16" AND THE LENGTH ALONG THE RIGHT COPING IS 226'-10 1/16".
13. MINIMUM LAP LENGTH IS 1'-8" FOR ALL #5 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	CS
DESIGNED BY:	DMH
CHECKED BY:	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 1]

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-145

JHERNANDEZ 5/22/2025 2:25:20 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1SuperSt101.dgn

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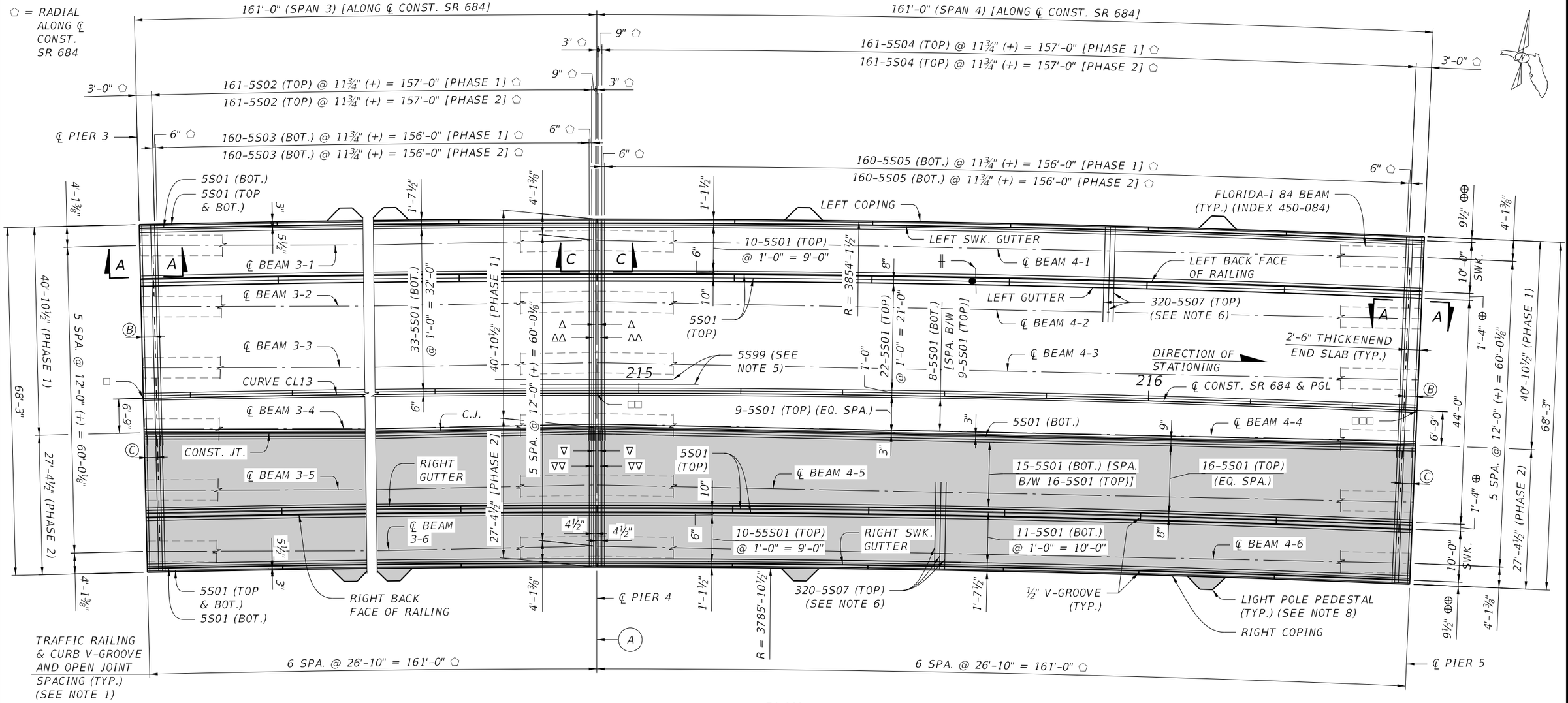


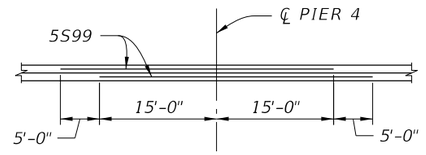
PLAN

LEGEND:

- ▭ PHASE 2 CONSTRUCTION
- Δ 5S06 (TOP & BOT.) [PHASE 1]
- ΔΔ 5S06 (BOT.) & 5S07 (TOP) [PHASE 1]
- ∇ 5S06 (TOP & BOT.) [PHASE 2]
- ∇∇ 5S06 (BOT.) & 5S07 (TOP) [PHASE 2]
- □ ℄ PIER 3, STA. 213+30.75
- □□ ℄ PIER 4, STA. 214+91.75
- □□□ ℄ PIER 5, STA. 216+52.75
- Ⓐ ¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
- Ⓑ 6-5S06 @ 5¼" (TOP) [PHASE 1]
- Ⓒ 6-5S06 @ 5¼" (TOP) [PHASE 2]
- ⊕ TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427]
- ⊕⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]
- ╫ TRAFFIC RAILING MOUNTED SIGN (STA. 215+65.00) [INDEX 700-013]

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS.
2. FOR SPANS 3 & 4 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-157.
3. FOR SPANS 3 & 4 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-163.
4. FOR SECTIONS A-A & C-C, SEE SHEET B1-167.
5. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
6. 5S07 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
7. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
8. LIGHT POLE PEDESTALS ARE LOCATED ON THE LEFT AND RIGHT SIDE AT THE FOLLOWING LOCATIONS: STA. 213+71.00, STA. 214+51.50, STA. 215+32.00 & STA. 216+12.50. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 521-660 AND SHEET B1-178.
9. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
10. FROM THE ℄ PIER 3 TO ℄ PIER 5, THE LENGTH ALONG THE LEFT COPING IS 324'-10½" AND THE LENGTH ALONG THE RIGHT COPING IS 319'-1½".
11. MINIMUM LAP LENGTH IS 1'-8" FOR ALL #5 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 2]

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-146

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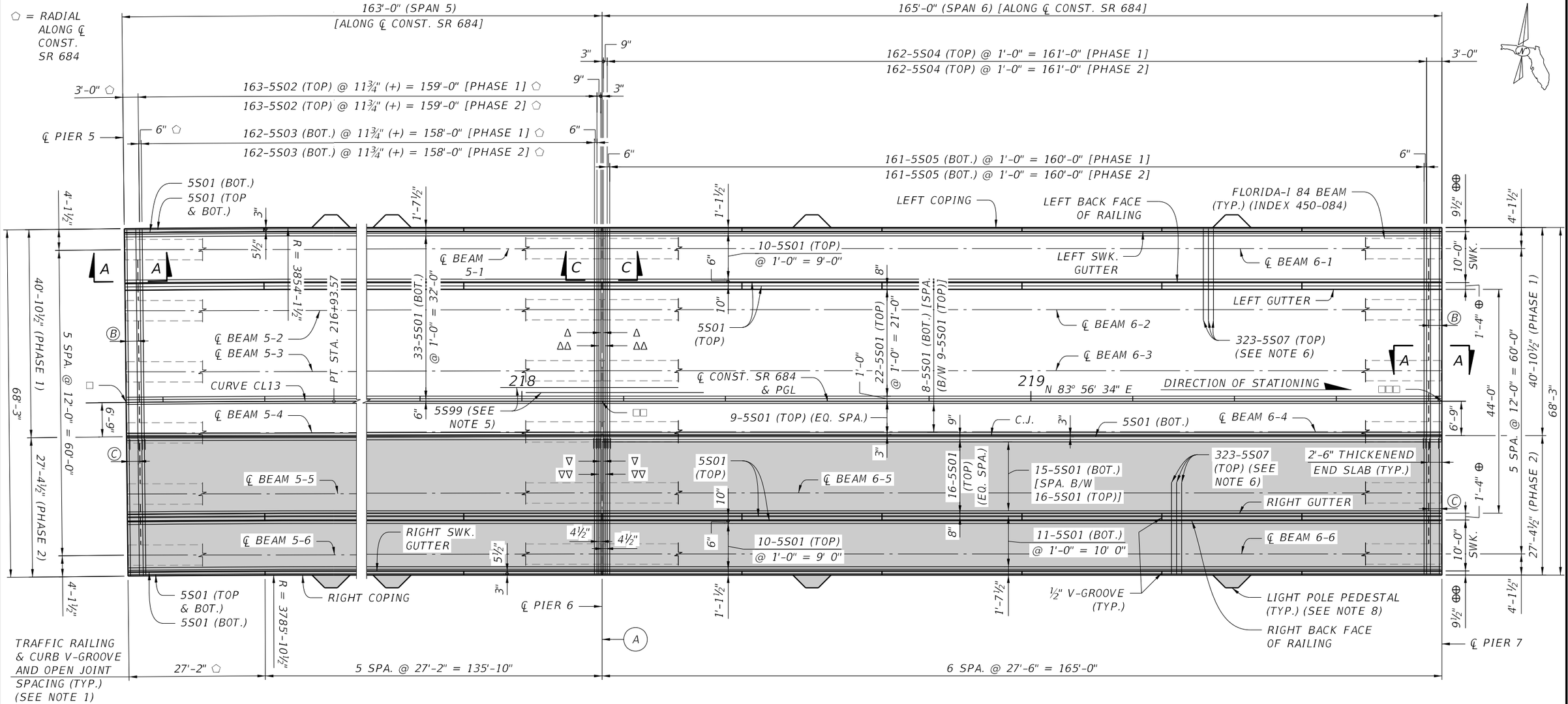


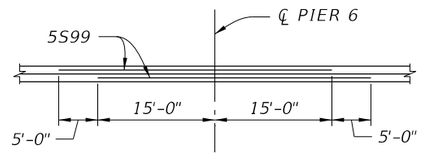
PLAN

LEGEND:

- ▭ PHASE 2 CONSTRUCTION
- Δ 5S06 (TOP & BOT.) [PHASE 1]
- ΔΔ 5S06 (BOT.) & 5S07 (TOP) [PHASE 1]
- ∇ 5S06 (TOP & BOT.) [PHASE 2]
- ∇∇ 5S06 (BOT.) & 5S07 (TOP) [PHASE 2]
- □ ℄ PIER 5, STA. 216+52.75
- □□ ℄ PIER 6, STA. 218+15.75
- □□□ ℄ PIER 7, STA. 219+80.75
- Ⓐ ¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
- Ⓑ 6-5S06 @ 5¼" (TOP) [PHASE 1]
- Ⓒ 6-5S06 @ 5¼" (TOP) [PHASE 2]
- ⊕ TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427]
- ⊕⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS.
2. FOR SPANS 5 & 6 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-157.
3. FOR SPANS 5 & 6 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-163.
4. FOR SECTIONS A-A & C-C, SEE SHEET B1-167.
5. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
6. 5S07 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
7. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
8. LIGHT POLE PEDESTALS ARE LOCATED ON THE LEFT AND RIGHT SIDE AT THE FOLLOWING LOCATIONS: STA. 216+93.00, STA. 217+74.50, STA. 218+57.00 & STA. 219+39.50. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 521-660 AND SHEET B1-178.
9. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
10. FROM THE ℄ PIER 5 TO ℄ PIER 7, THE LENGTH ALONG THE LEFT COPING IS 328'-4⅜" AND THE LENGTH ALONG THE RIGHT COPING IS 327'-7⅝".
11. MINIMUM LAP SPLICE IS 1'-8" FOR ALL #5 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 3]

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-147

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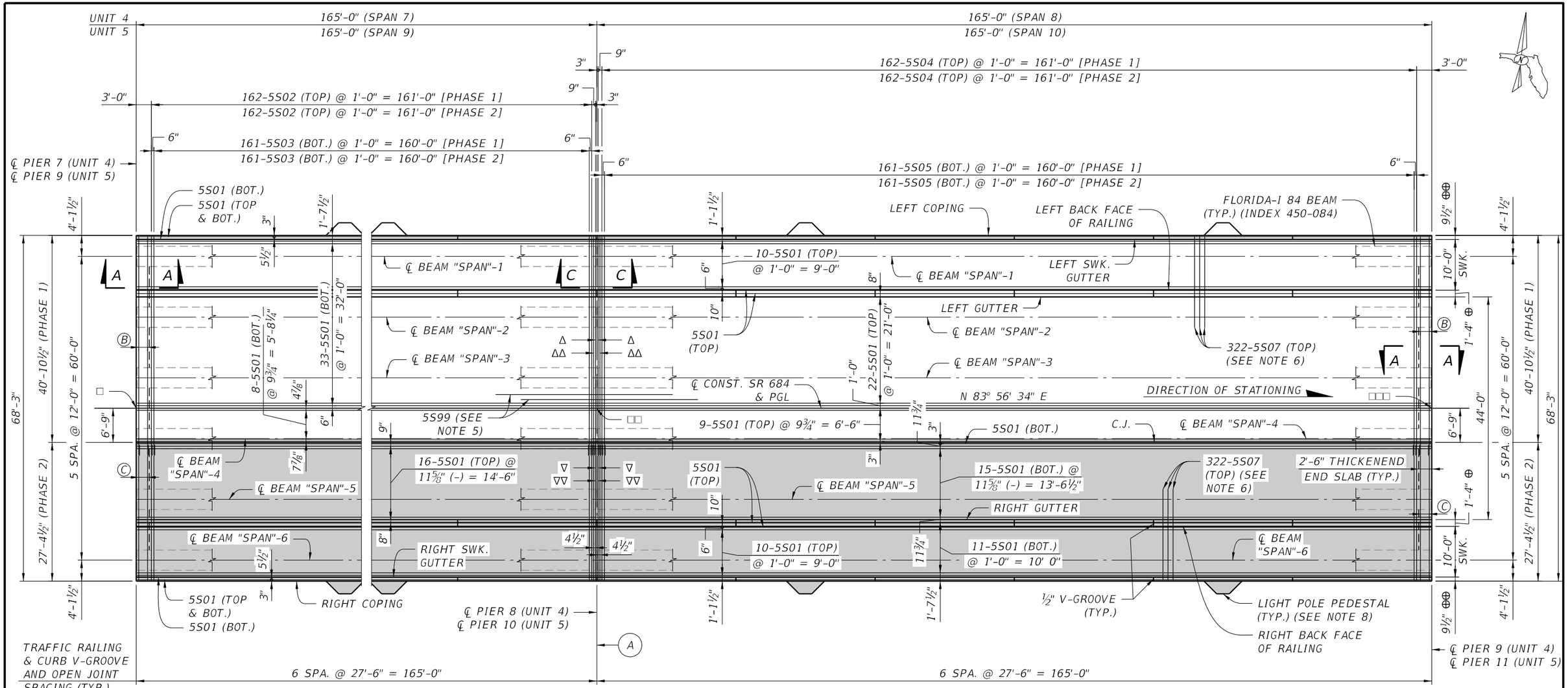


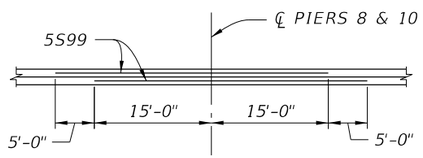
PLAN

LEGEND:

- ▭ PHASE 2 CONSTRUCTION
- Δ 5S06 (TOP & BOT.) [PHASE 1]
- ΔΔ 5S06 (BOT.) & 5S07 (TOP) [PHASE 1]
- ∇ 5S06 (TOP & BOT.) [PHASE 2]
- ∇∇ 5S06 (BOT.) & 5S07 (TOP) [PHASE 2]
- □ ℄ PIER 7, STA. 219+80.75 (UNIT 4)
  ℄ PIER 9, STA. 223+10.75 (UNIT 5)
- □□ ℄ PIER 8, STA. 221+45.75 (UNIT 4)
  ℄ PIER 10, STA. 224+75.75 (UNIT 5)
- □□□ ℄ PIER 9, STA. 223+10.75 (UNIT 4)
  ℄ PIER 11, STA. 226+40.75 (UNIT 5)
- Ⓐ ¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
- Ⓑ 6-5S06 @ 5¼" (TOP) [PHASE 1]
- Ⓒ 6-5S06 @ 5¼" (TOP) [PHASE 2]
- ⊕ TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427]
- ⊕⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS.
2. FOR SPANS 7-10 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-157.
3. FOR SPANS 7-10 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-163.
4. FOR SECTIONS A-A & C-C, SEE SHEET B1-167.
5. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
6. 5S07 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
7. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
8. LIGHT POLE PEDESTALS ARE LOCATED ON THE LEFT AND RIGHT SIDE AT THE FOLLOWING LOCATIONS: STA. 220+22.00, STA. 221+04.00, STA. 221+87.00, STA. 222+69.50, STA. 223+52.00, STA. 224+34.50, STA. 225+17.00 & STA. 225+99.50. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 521-660 AND SHEET B1-178.
9. MINIMUM LAP LENGTH IS 1'-8" FOR ALL #5 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

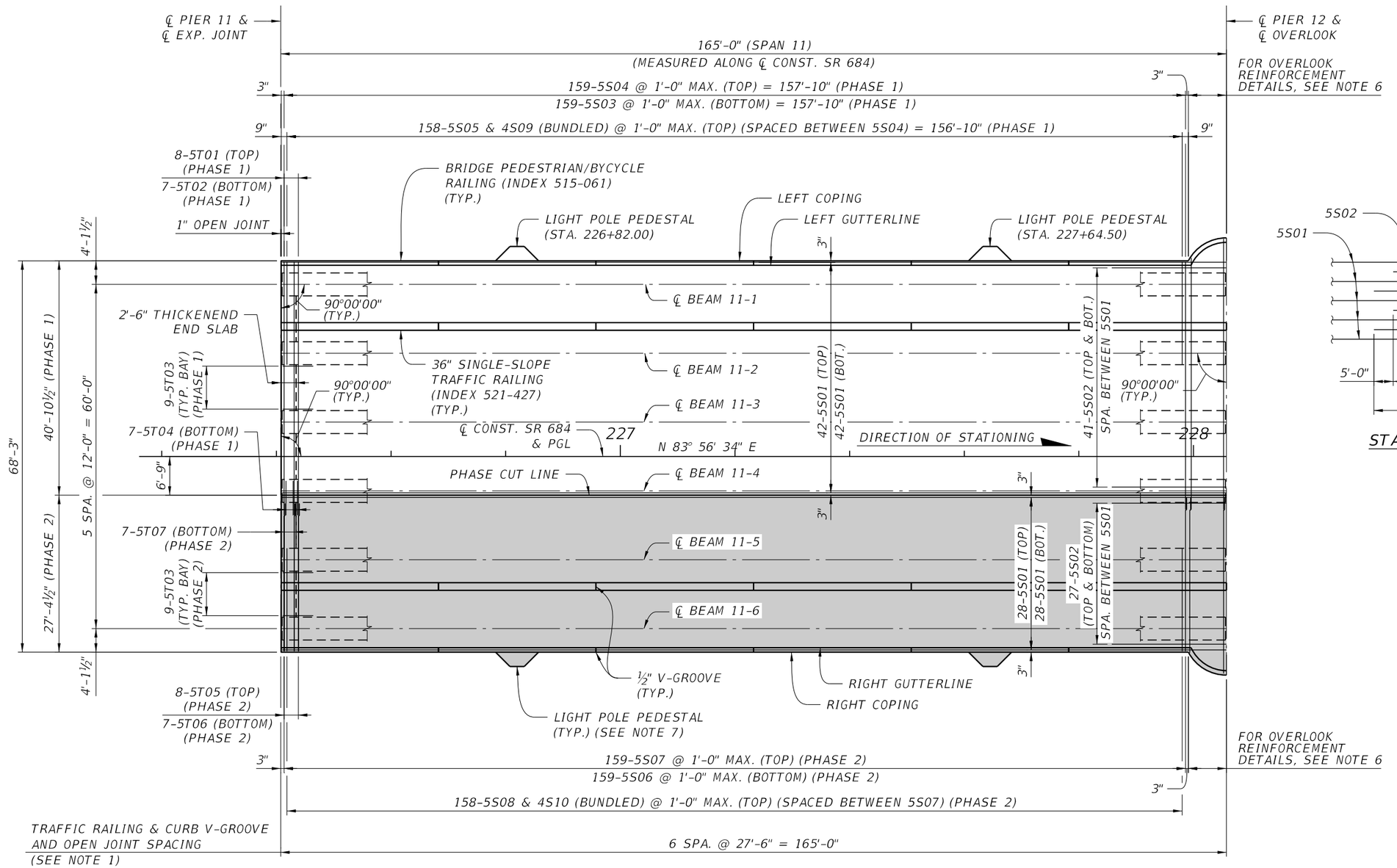
DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

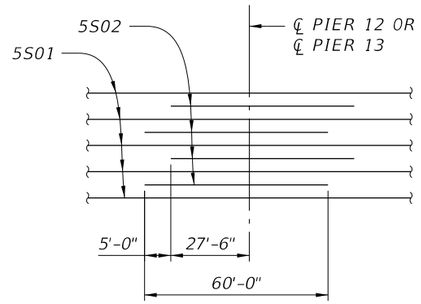
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNITS 4 & 5]
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-148

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



PLAN



STAGGER DIAGRAM

LEGEND:

PHASE 2 CONSTRUCTION

NOTES:

1. SEE INDEXES 521-427 AND 515-051 FOR DETAILS. BARS 4S NOT SHOWN FOR CLARITY.
2. SEE SHEET B1-192 FOR STRIP SEAL EXPANSION JOINT DATA TABLE.
3. FOR SPANS 11-13 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-158.
4. FOR SPAN 11-13 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-164.
5. FOR THICKENED END SLAB REINFORCING PLACEMENT DETAILS, SEE SHEET B1-171.
6. FOR OVERLOOK DETAILS & REINFORCING PLACEMENT, SEE SHEET B1-177.
7. FOR LIGHT POLE PEDESTAL DETAILS, SEE SHEET B1-178.
8. 5S02 BARS SHALL BE PLACED IN THE TOP LAYER BETWEEN THE 5S01 BARS. SEE SUPERSTRUCTURE SECTIONS FOR SPACING OF 5S02 BARS. 5S02 BARS SHALL BE STAGGERED AS SHOWN ON THE STAGGER DIAGRAM.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 6] (1 OF 3)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-149

JHERNANDEZ 5/22/2025 2:30:50 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1SuperSt201.dgn

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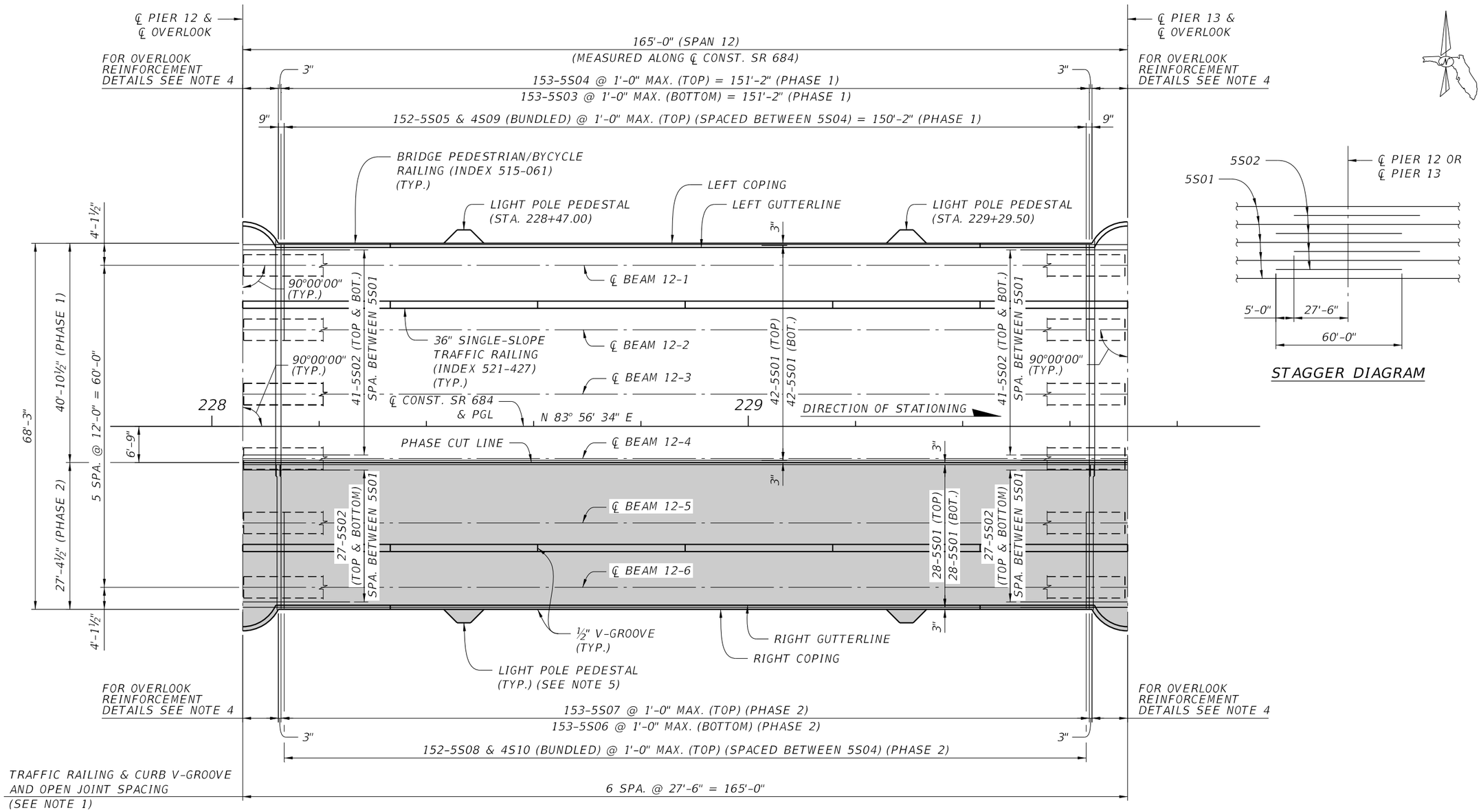


PLAN

STAGGER DIAGRAM

LEGEND:

PHASE 2 CONSTRUCTION

NOTES:

1. SEE INDEXES 521-427 AND 515-051 FOR DETAILS. BARS 4S NOT SHOWN FOR CLARITY.
2. FOR SPANS 11-13 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-158.
3. FOR SPAN 11-13 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-164.
4. FOR OVERLOOK DETAILS & REINFORCING PLACEMENT, SEE SHEET B1-177.
5. FOR LIGHT POLE PEDESTAL DETAILS, SEE SHEET B1-178.
6. 5S02 BARS SHALL BE PLACED IN THE TOP LAYER BETWEEN THE 5S01 BARS. SEE SUPERSTRUCTURE SECTIONS FOR SPACING OF 5S02 BARS. 5S02 BARS SHALL BE STAGGERED AS SHOWN ON THE STAGGER DIAGRAM.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	SL
CHECKED BY:	JTM
DESIGNED BY:	RMD
CHECKED BY:	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

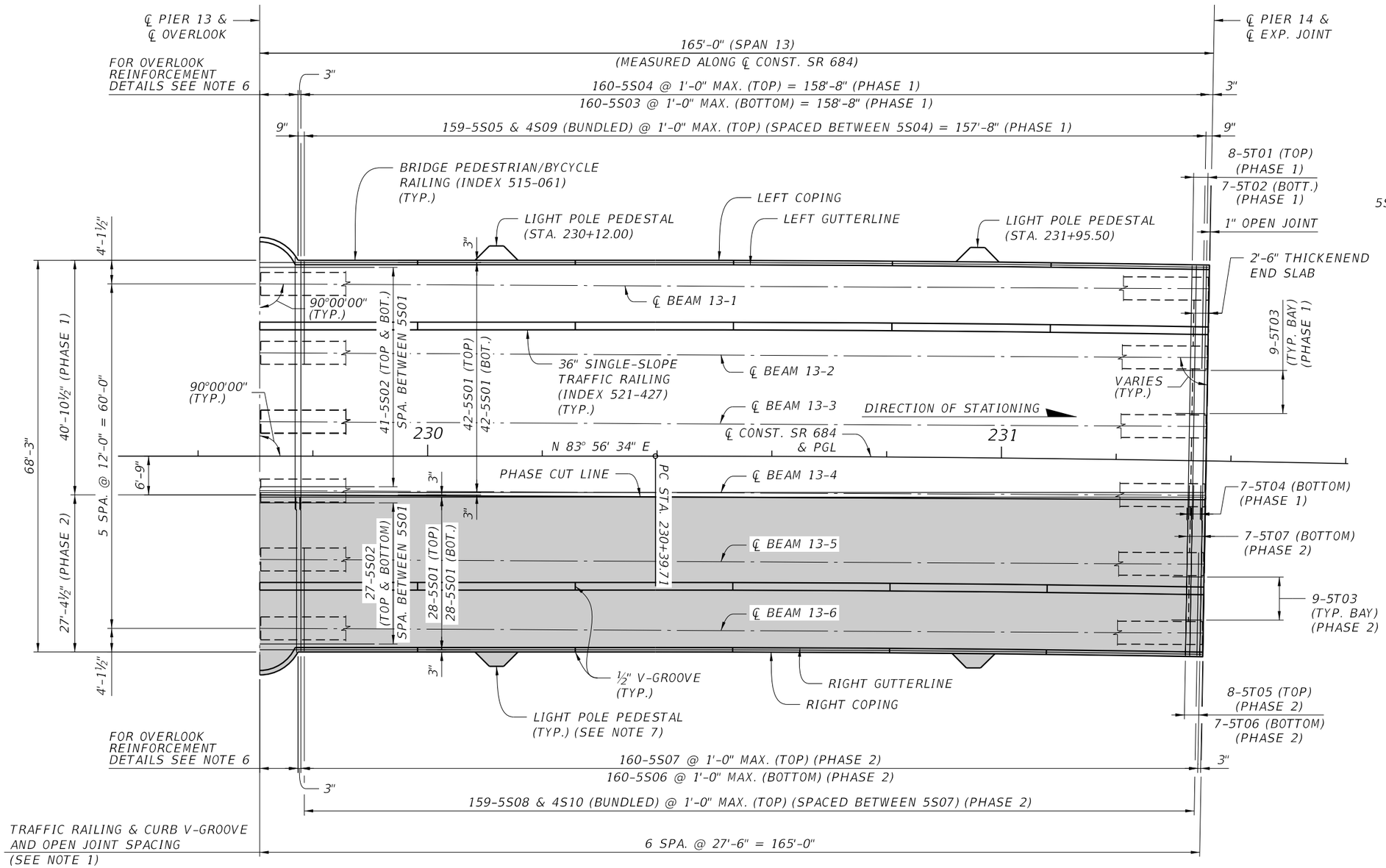
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 6] (2 OF 3)

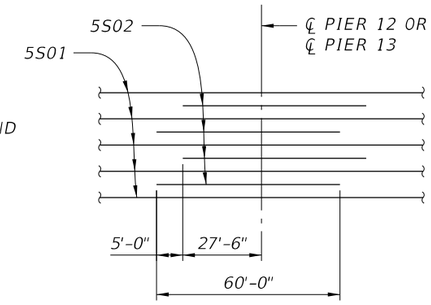
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-150



PLAN



STAGGER DIAGRAM

LEGEND:

PHASE 2 CONSTRUCTION

NOTES:

1. SEE INDEXES 521-427 AND 515-051 FOR DETAILS. BARS 4S NOT SHOWN FOR CLARITY.
2. SEE SHEET B1-192 FOR STRIP SEAL EXPANSION JOINT DATA TABLE.
3. FOR SPANS 11-13 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-158.
4. FOR SPAN 11-13 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-164.
5. FOR THICKENED END SLAB REINFORCING PLACEMENT DETAILS, SEE SHEET B1-171.
6. FOR OVERLOOK DETAILS & REINFORCING PLACEMENT, SEE SHEET B1-177.
7. FOR LIGHT POLE PEDESTAL DETAILS, SEE SHEET B1-178.
8. 5S02 BARS SHALL BE PLACED IN THE TOP LAYER BETWEEN THE 5S01 BARS. SEE SUPERSTRUCTURE SECTIONS FOR SPACING OF 5S02 BARS. 5S02 BARS SHALL BE STAGGERED AS SHOWN ON THE STAGGER DIAGRAM.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

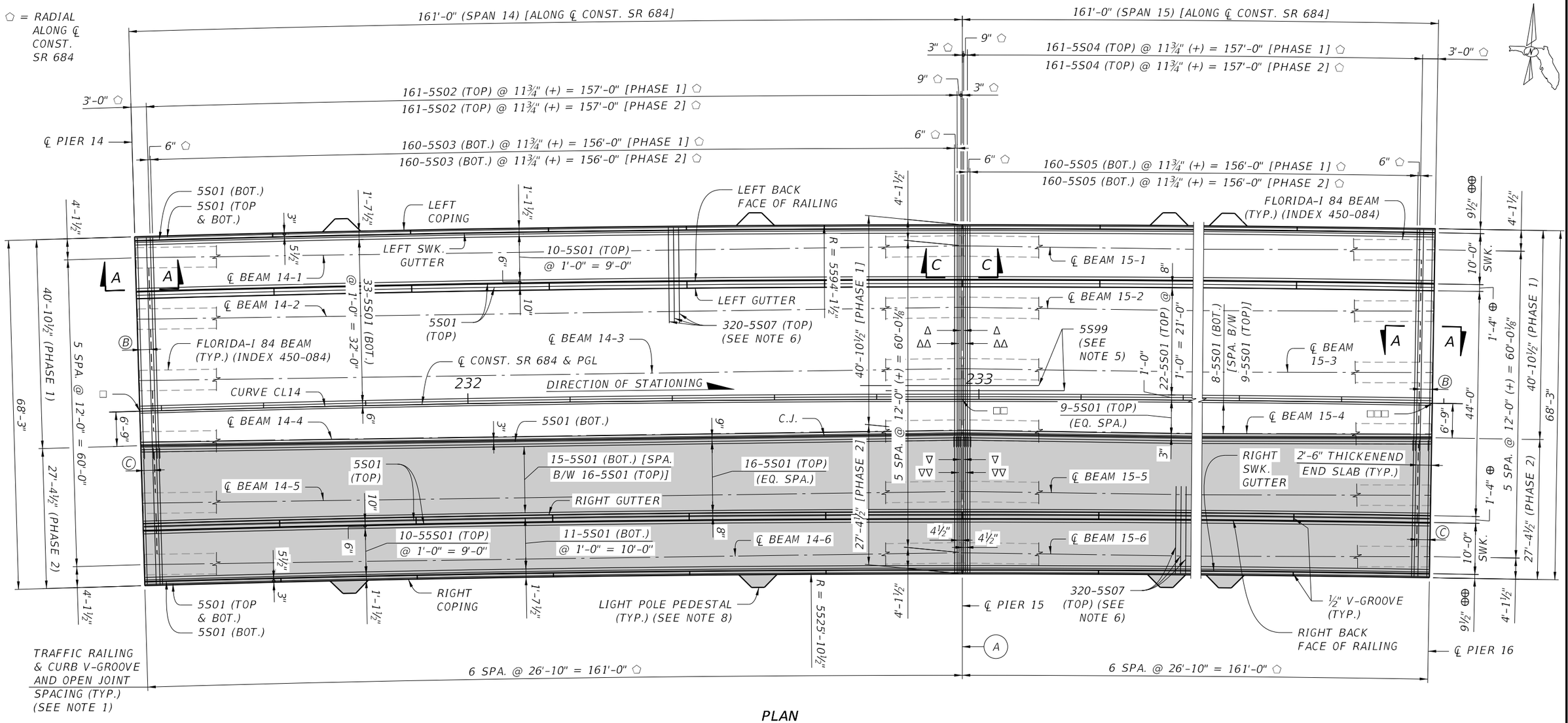
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 6] (3 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-151



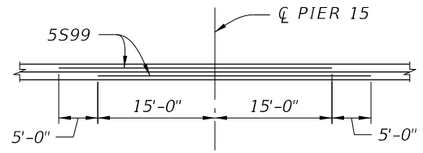
PLAN

LEGEND:

- ▭ PHASE 2 CONSTRUCTION
- Δ 5S06 (TOP & BOT.) [PHASE 1]
- ΔΔ 5S06 (BOT.) & 5S07 (TOP) [PHASE 1]
- ∇ 5S06 (TOP & BOT.) [PHASE 2]
- ∇∇ 5S06 (BOT.) & 5S07 (TOP) [PHASE 2]
- □ ℄ PIER 14, STA. 231+35.75
- □□ ℄ PIER 15, STA. 232+96.75
- □□□ ℄ PIER 16, STA. 234+57.75
- Ⓐ ¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
- Ⓑ 6-5S06 @ 5¼" (TOP) [PHASE 1]
- Ⓒ 6-5S06 @ 5¼" (TOP) [PHASE 2]
- ⊕ TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427]
- ⊕⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS.
2. FOR SPANS 14 & 15 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-157.
3. FOR SPANS 14 & 15 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-163.
4. FOR SECTIONS A-A & C-C, SEE SHEET B1-167.
5. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
6. 5S07 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
7. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
8. LIGHT POLE PEDESTALS ARE LOCATED ON THE LEFT AND RIGHT SIDE AT THE FOLLOWING LOCATIONS: STA. 231+76.00, STA. 232+56.00, STA. 233+37.00 & STA. 234+15.50. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 521-660 AND SHEET B1-178.
9. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
10. FROM THE ℄ PIER 14 TO ℄ PIER 16, THE LENGTH ALONG THE LEFT COPING IS 323'-11 11/16" AND THE LENGTH ALONG THE RIGHT COPING IS 320'-0 5/16".
11. MINIMUM LAP LENGTH IS 1'-8" FOR ALL #5 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 7]
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-152

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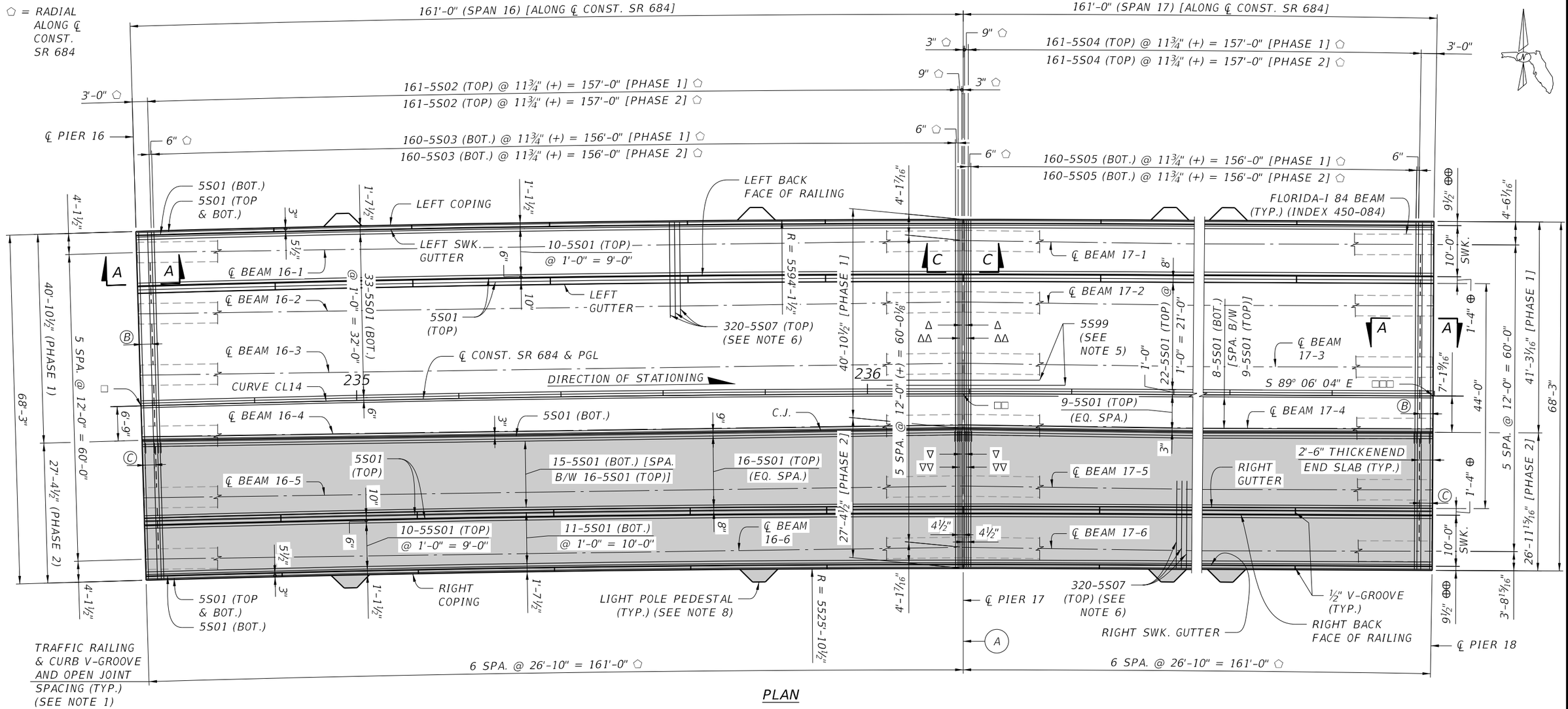


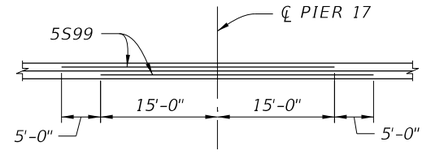
PLAN

LEGEND:

- PHASE 2 CONSTRUCTION
- Δ 5S06 (TOP & BOT.) [PHASE 1]
- ΔΔ 5S06 (BOT.) & 5S07 (TOP) [PHASE 1]
- ∇ 5S06 (TOP & BOT.) [PHASE 2]
- ∇∇ 5S06 (BOT.) & 5S07 (TOP) [PHASE 2]
- □ ℄ PIER 16, STA. 234+57.75
- □□ ℄ PIER 17, STA. 236+18.75
- □□□ ℄ PIER 18, STA. 237+79.75
- Ⓐ ¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
- Ⓑ 6-5S06 @ 5¼" (TOP) [PHASE 1]
- Ⓒ 6-5S06 @ 5¼" (TOP) [PHASE 2]
- ⊕ TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427]
- ⊕⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS.
2. FOR SPANS 16 & 17 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-157.
3. FOR SPANS 16 & 17 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-163.
4. FOR SECTIONS A-A & C-C, SEE SHEET B1-167.
5. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
6. 5S07 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
7. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
8. LIGHT POLE PEDESTALS ARE LOCATED ON THE LEFT AND RIGHT SIDE AT THE FOLLOWING LOCATIONS: STA. 234+98.00, STA. 235+78.50, STA. 236+59.00 & STA. 237+39.50. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 521-660 AND SHEET B1-178.
9. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7. THE P.T. AT STA. 237+14.73 FALLS WITHIN THE BREAK LINE LIMITS AND IS NOT SHOWN IN THE PLAN VIEW.
10. FROM THE ℄ PIER 16 TO ℄ PIER 18, THE LENGTH ALONG THE LEFT COPING IS 323'-6¹⁵⁄₁₆" AND THE LENGTH ALONG THE RIGHT COPING IS 320'-5¹⁄₁₆".
11. MINIMUM LAP LENGTH IS 1'-8" FOR ALL #5 BARS.
12. FIELD BEND 5S01 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 8]

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-153

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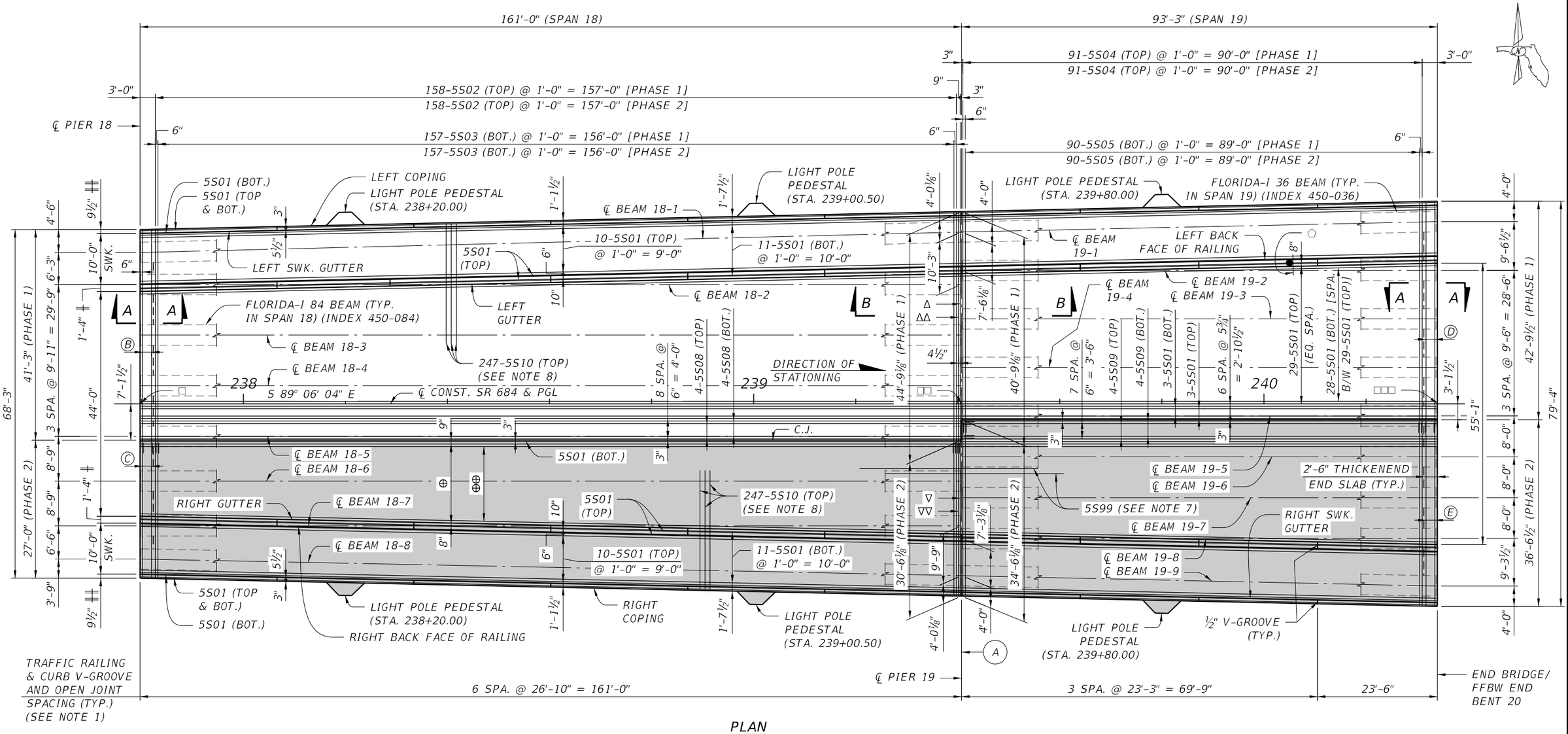


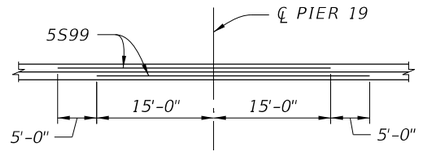
PLAN

LEGEND:

- PHASE 2 CONSTRUCTION
- Δ 5S11 (TOP & BOT.) [PHASE 1]
- ΔΔ 5S11 (BOT.) & 5S10 (TOP) [PHASE 1]
- ∇ 5S11 (TOP & BOT.) [PHASE 2]
- ∇∇ 5S11 (BOT.) & 5S10 (TOP) [PHASE 2]
- ⊕ 21-5S01 EQ. SPA. (TOP) [PHASE 2]
- ⊕⊕ 20-5S01 (BOT.) [PHASE 2] SPACED BETWEEN 21-5S01 (TOP) [PHASE 2]
- □ ℄ PIER 18, STA. 237+79.75
- □□ ℄ PIER 19, STA. 239+40.75
- □□□ END BRIDGE/FFBW END BENT 20, STA. 240+34.00
- Ⓐ ¾" OPEN JOINT IN TRAFFIC RAILING AND CURB (TYP.)
- Ⓑ 6-5S06 @ 5¼" (TOP) [PHASE 1]
- Ⓒ 6-5S06 @ 5¼" (TOP) [PHASE 2]
- Ⓓ 6-5S07 @ 5¼" (TOP) [PHASE 1]
- Ⓔ 6-5S07 @ 5¼" (TOP) [PHASE 2]
- ╫ TRAFFIC RAILING - (36" SINGLE-SLOPE) [INDEX 521-427]
- ## BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX NOS. 516-061 (SCHEME 2) & 515-062 (TYPE SP)]
- ⬠ TRAFFIC RAILING MOUNTED SIGN (STA. 240+05) [INDEX 700-013]

NOTES:

1. BARS 4P, 4S & 4V NOT SHOWN FOR CLARITY. SEE INDEX 521-427 AND 515-061 FOR DETAILS.
2. FOR SPAN 18 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-159.
3. FOR SPAN 18 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-165.
4. FOR SPAN 19 PHASE 1 SUPERSTRUCTURE SECTION, SEE SHEET B1-160.
5. FOR SPAN 19 PHASE 2 SUPERSTRUCTURE SECTION, SEE SHEET B1-166.
6. FOR SECTIONS A-A & B-B, SEE SHEET B1-167.
7. SEE SUPERSTRUCTURE SECTIONS FOR PLACEMENT OF THE 5S99 BARS. 5S99 BARS SHALL BE STAGGERED AS SHOWN IN THE "STAGGER DIAGRAM".
8. 5S10 (TOP) BARS ARE TO BE PLACED IN BETWEEN 5S02 (TOP) & 5S04 (TOP) BARS.
9. FOR ADDITIONAL THICKENED END SLAB REINFORCING, SEE SHEETS B1-168 & B1-170.
10. FOR LIGHT POLE PEDESTAL DETAILS, SEE INDEX 520-660 AND SHEET B1-178.
11. FROM THE ℄ PIER 18 TO FFBW END BENT 20, THE LENGTH ALONG THE LEFT & RIGHT COPING IS 254'-3¾".
12. MINIMUM LAP LENGTH IS 1'-8" FOR ALL #5 BARS.



STAGGER DIAGRAM

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	CS	DMH	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE PLAN [UNIT 9]

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-154

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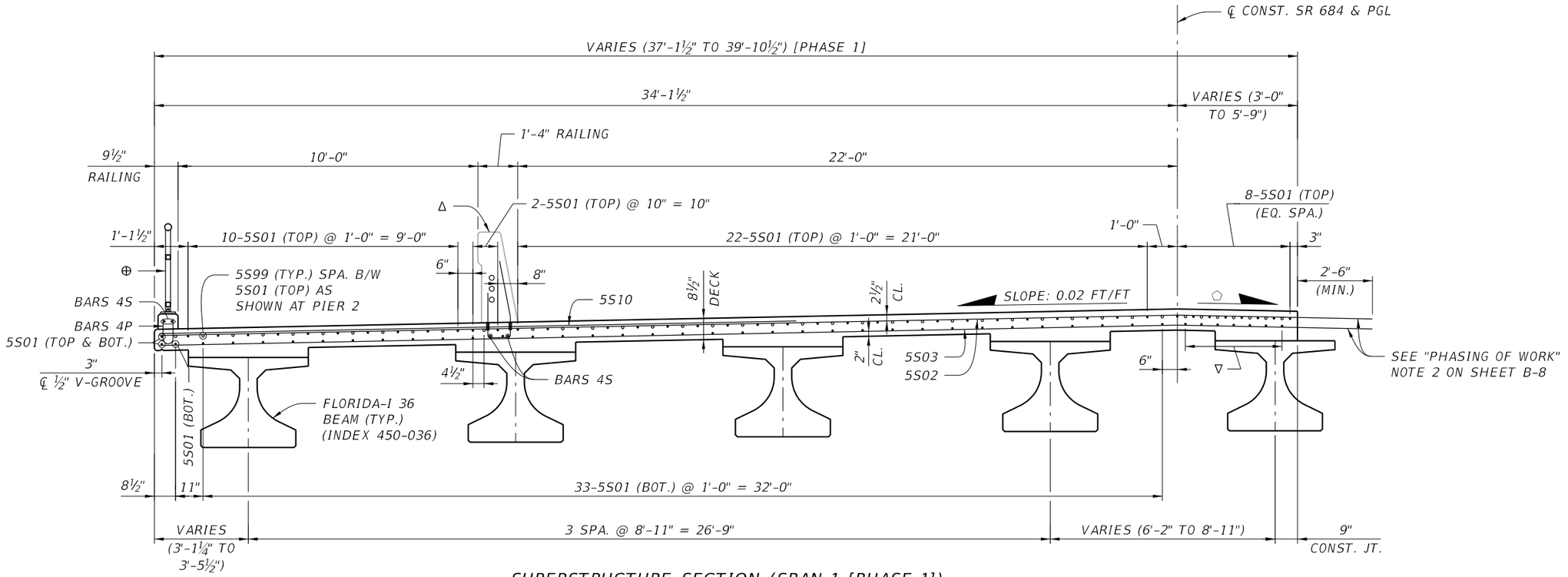
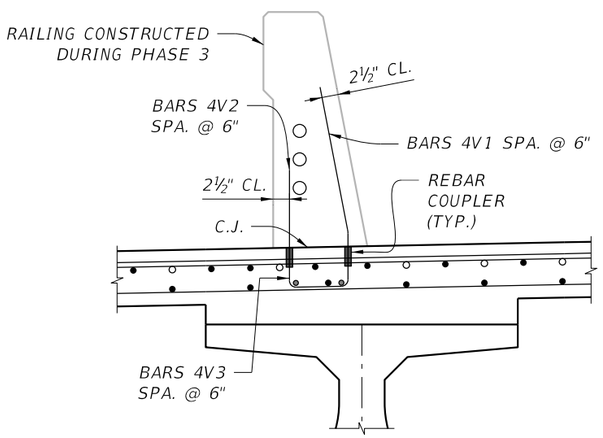
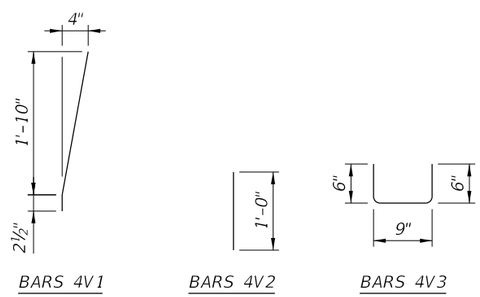


SUPERSTRUCTURE SECTION (SPAN 1 [PHASE 1])



DETAIL A



MODIFIED BAR DETAILS

BARS 4V1, 4V2 & 4V3 SHALL BE UTILIZED IN LIEU OF BARS 4V. [BARS 4V1, 4V2 & 4V3 SHALL CONTAIN THREADS ON THE END CONNECTING TO THE REBAR COUPLER. THE THREAD LENGTH SHALL BE DETERMINED BY THE CONTRACTOR BASED UPON THE SELECTED REBAR COUPLER.]

RAILING NOTES:

1. THE MODIFICATIONS TO BARS 4V ARE THE ONLY DEVIATION FROM INDEX 521-427.
2. 36" SINGLE-SLOPE TRAFFIC RAILING SHALL BE CONSTRUCTED IN PHASE 3.
3. BARS 4V3 AND THE REBAR COUPLERS SHALL BE CONSTRUCTED WITH THE DECK IN PHASE 1. SEAL THE END OF THE COUPLERS WITH A REMOVABLE PLASTIC CAP OR SIMILAR UNTIL CONSTRUCTION OF PHASE 3.
4. THE BENDING DIAGRAMS FOR BARS 4V1, 4V2 & 4V3 ARE DETAILED TO THE CONSTRUCTION JOINT. BAR DIMENSIONS MAY NEED TO BE ADJUSTED TAKING INTO ACCOUNT THE COUPLERS SELECTED.

LEGEND:

⬠ SLOPE: 0.02 FT/FT
Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) [MOD.]. WITH 3-2" DIA. CONDUIT (INDEX 630-010). SEE DETAIL A ON THIS SHEET.
▽ 7-5S01 (BOT.) (SPACED BETWEEN 8-5S01 (TOP) AS SHOWN)
⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (1 OF 12)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. B1-155

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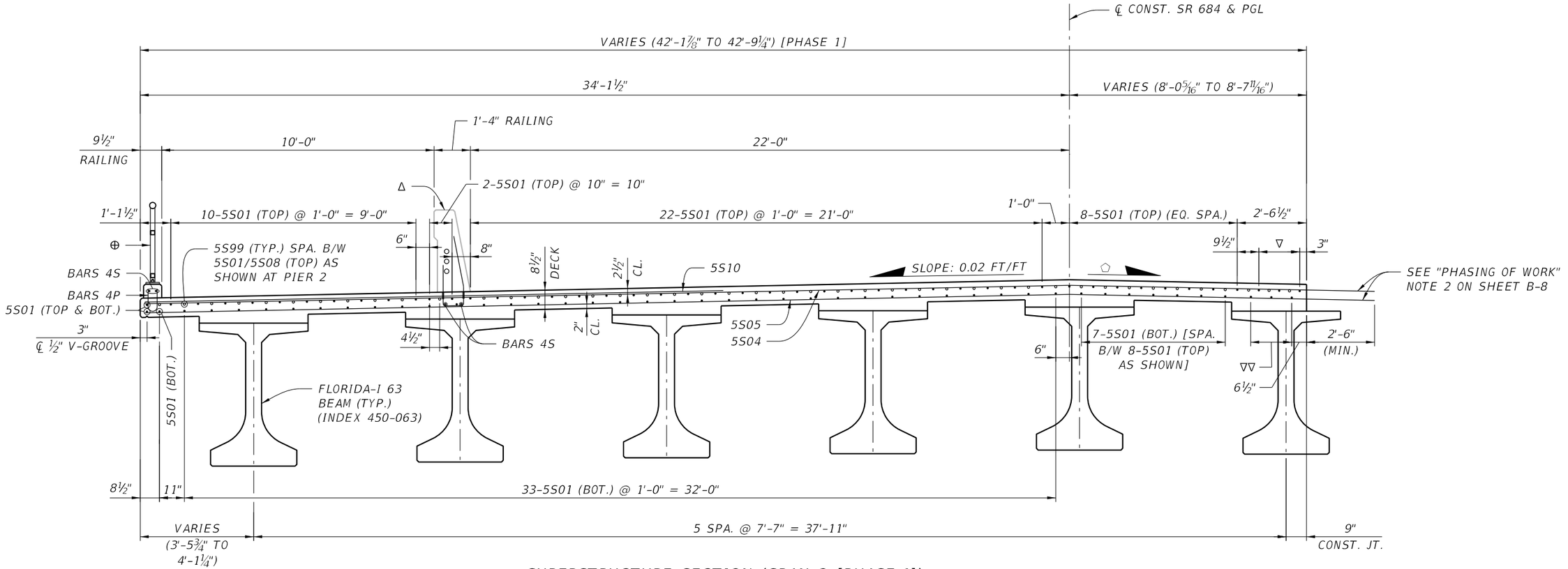

SUPERSTRUCTURE SECTION (SPAN 2 [PHASE 1])

NOTES:

1. DETAIL A SHOWN ON SHEET B1-155 IS TO BE USED IN SPAN 2 FROM STA. 211+93.50 TO STA. 212+10.00. INDEX 521-427 SHALL BE USED FROM STA. 212+10.00 TO THE END OF SPAN 2.
2. SEE SHEET B1-155 FOR RAILING NOTES.

LEGEND:

- ⬠ SLOPE: 0.02 FT/FT
- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) [MOD.]. WITH 3-2" DIA. CONDUIT (INDEX 630-010). SEE NOTE 1.
- ∇ 3-5S08 (TOP) SPA. @ 9" = 1'-6"
- ∇∇ 3-5S08 (BOT.) SPA. @ 9" = 1'-6"
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (2 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-156

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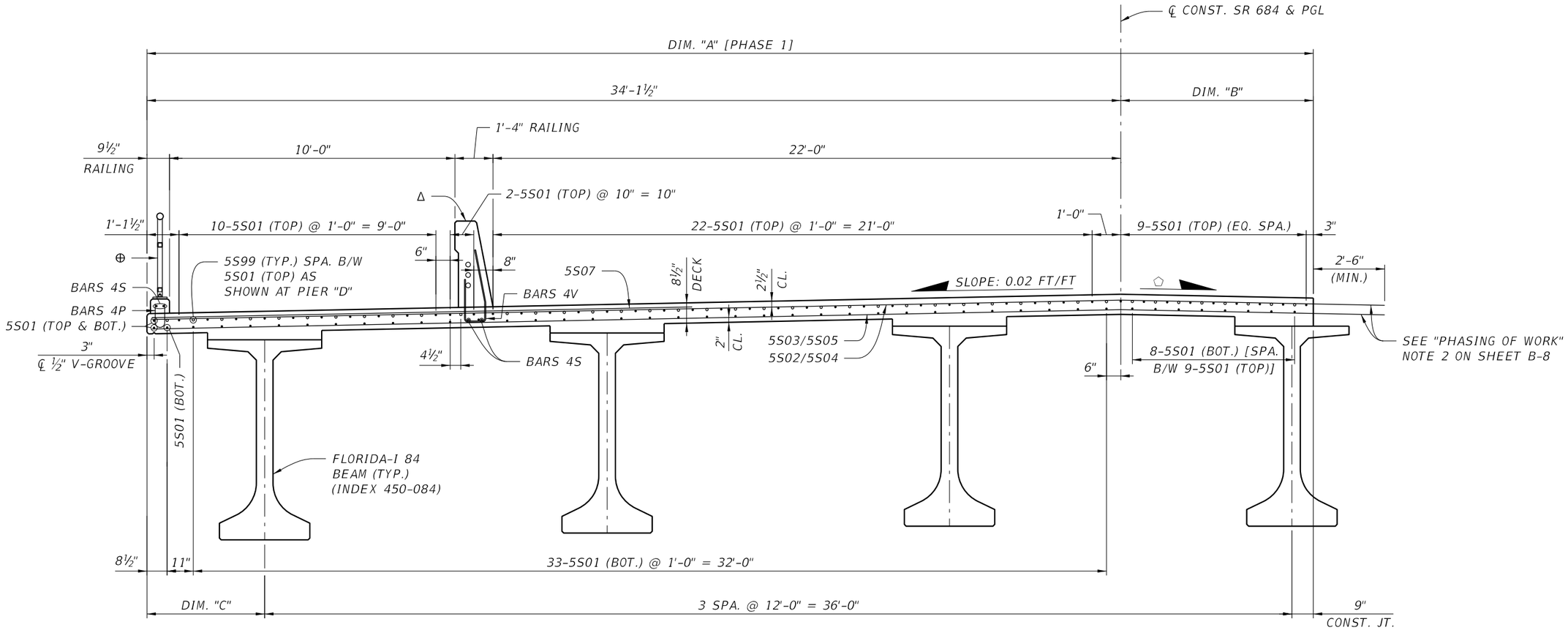


SUPERSTRUCTURE SECTION (SPANS 3 - 10 AND 14 - 17 [PHASE 1])

SPAN	DIM. "A"	DIM. "B"	DIM. "C"	"D"
3	VARIES (40'-10½" TO 41'-8⅝")	VARIES (6'-9" TO 7'-7⅛")	VARIES (4'-1⅜" TO 4'-11⅝")	4
4	VARIES (40'-10½" TO 41'-8⅝")	VARIES (6'-9" TO 7'-7⅛")	VARIES (4'-1⅜" TO 4'-11⅝")	4
5	VARIES (40'-10½" TO 41'-0½")	VARIES (6'-9" TO 6'-11")	VARIES (4'-1½" TO 4'-3½")	6
6	40'-10½"	6'-9"	4'-1½"	6
7	40'-10½"	6'-9"	4'-1½"	8
8	40'-10½"	6'-9"	4'-1½"	8
9	40'-10½"	6'-9"	4'-1½"	10
10	40'-10½"	6'-9"	4'-1½"	10
14	VARIES (40'-10½" TO 41'-5½")	VARIES (6'-9" TO 7'-4")	VARIES (4'-1½" TO 4'-8½")	15
15	VARIES (40'-10½" TO 41'-5½")	VARIES (6'-9" TO 7'-4")	VARIES (4'-1½" TO 4'-8½")	15
16	VARIES (40'-10½" TO 41'-5½")	VARIES (6'-9" TO 7'-4")	VARIES (4'-1½" TO 4'-8½")	17
17	VARIES (40'-10½" TO 41'-5½")	VARIES (6'-9" TO 7'-4")	VARIES (4'-1½" TO 4'-8½")	17

LEGEND:

- ⬠ SLOPE: 0.02 FT/FT
- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

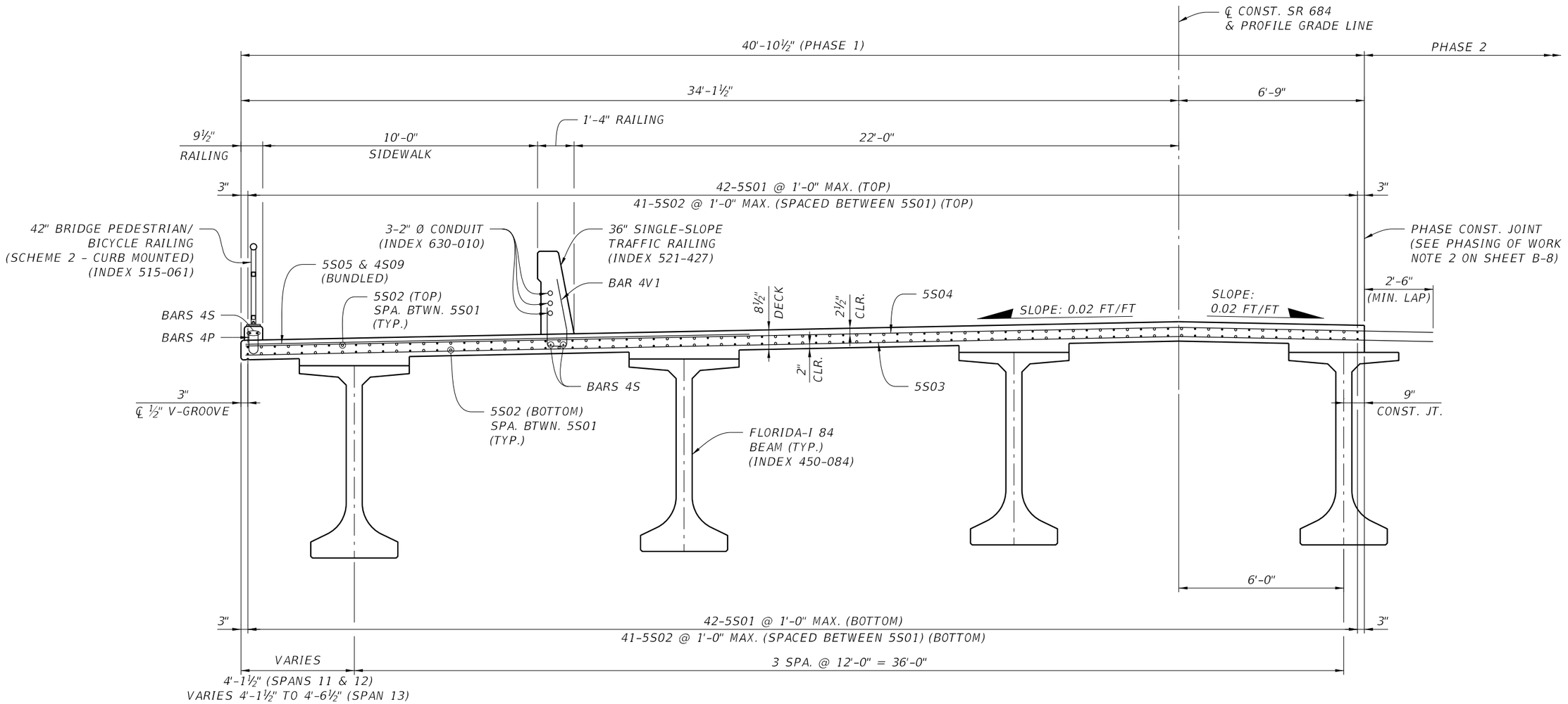
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (3 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-157



SUPERSTRUCTURE SECTION (SPANS 11-13) [PHASE 1]

(LOOKING UPSTATION)

NOTES:

1. FOR CONCRETE BUILD-UP, SEE SHEET B1-190.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (4 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-158

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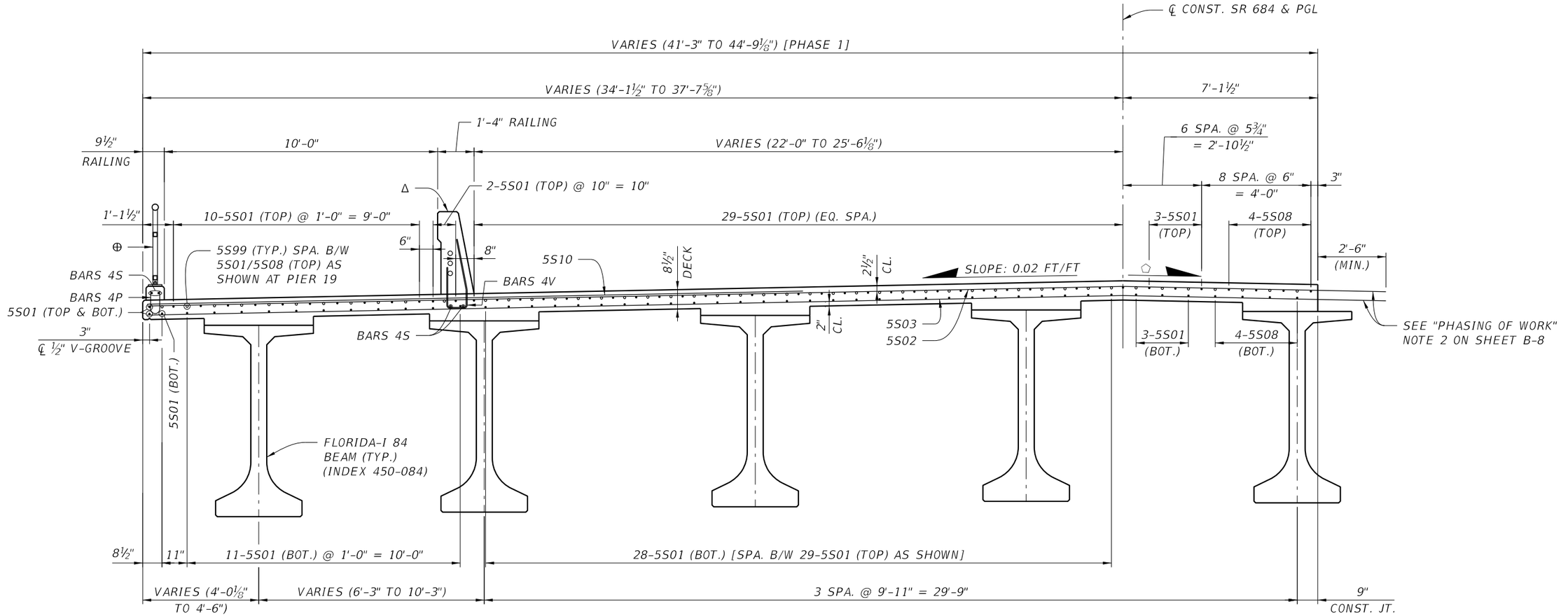


SUPERSTRUCTURE SECTION (SPAN 18 [PHASE 1])

LEGEND:

- ⬠ SLOPE: 0.02 FT/FT
- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

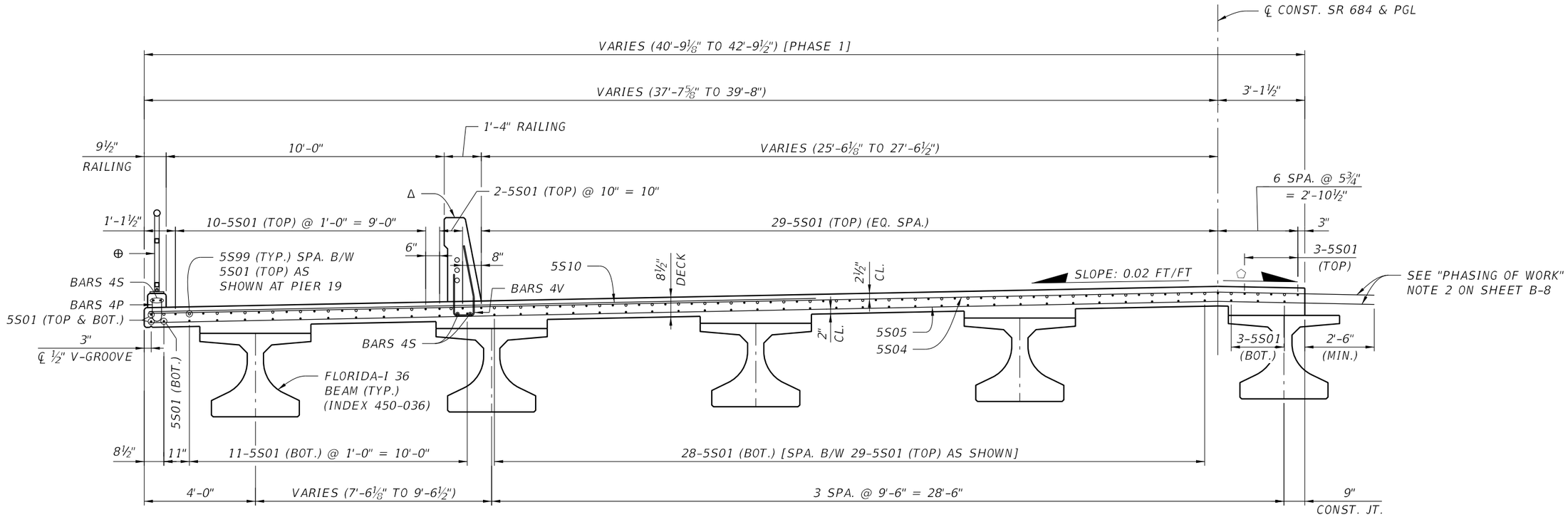
SHEET TITLE: SUPERSTRUCTURE SECTION (5 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-159

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



SUPERSTRUCTURE SECTION (SPAN 19 [PHASE 1])

LEGEND:

- ⬠ SLOPE: 0.02 FT/FT
- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (6 OF 12)

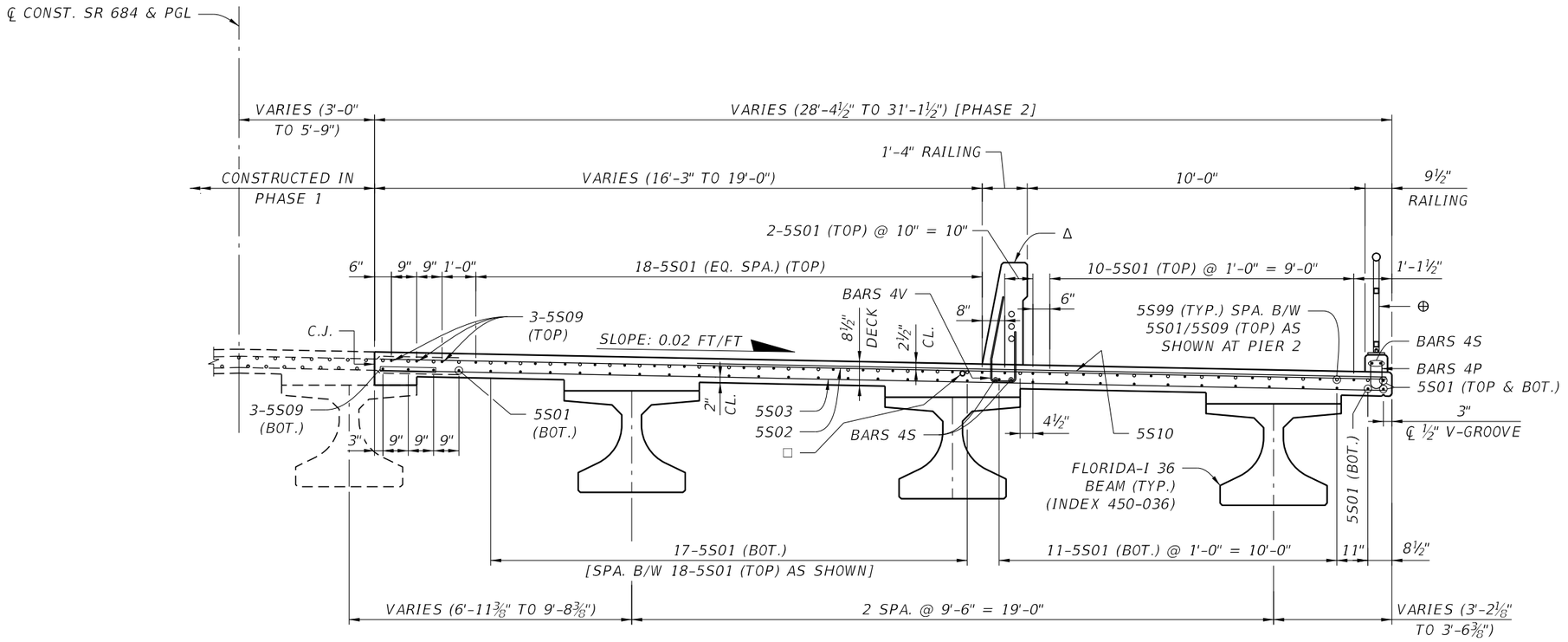
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-160

JHERNANDEZ 5/22/2025 2:35:42 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1SuperstSection101.dgn

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



SUPERSTRUCTURE SECTION (SPAN 1 [PHASE 2])

LEGEND:

- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]
- □ 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. PLACE CONDUIT 7" (+/-) FROM THE FRONT FACE OF THE SINGLE-SLOPE TRAFFIC RAILING. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED DECK REINFORCING STEEL.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

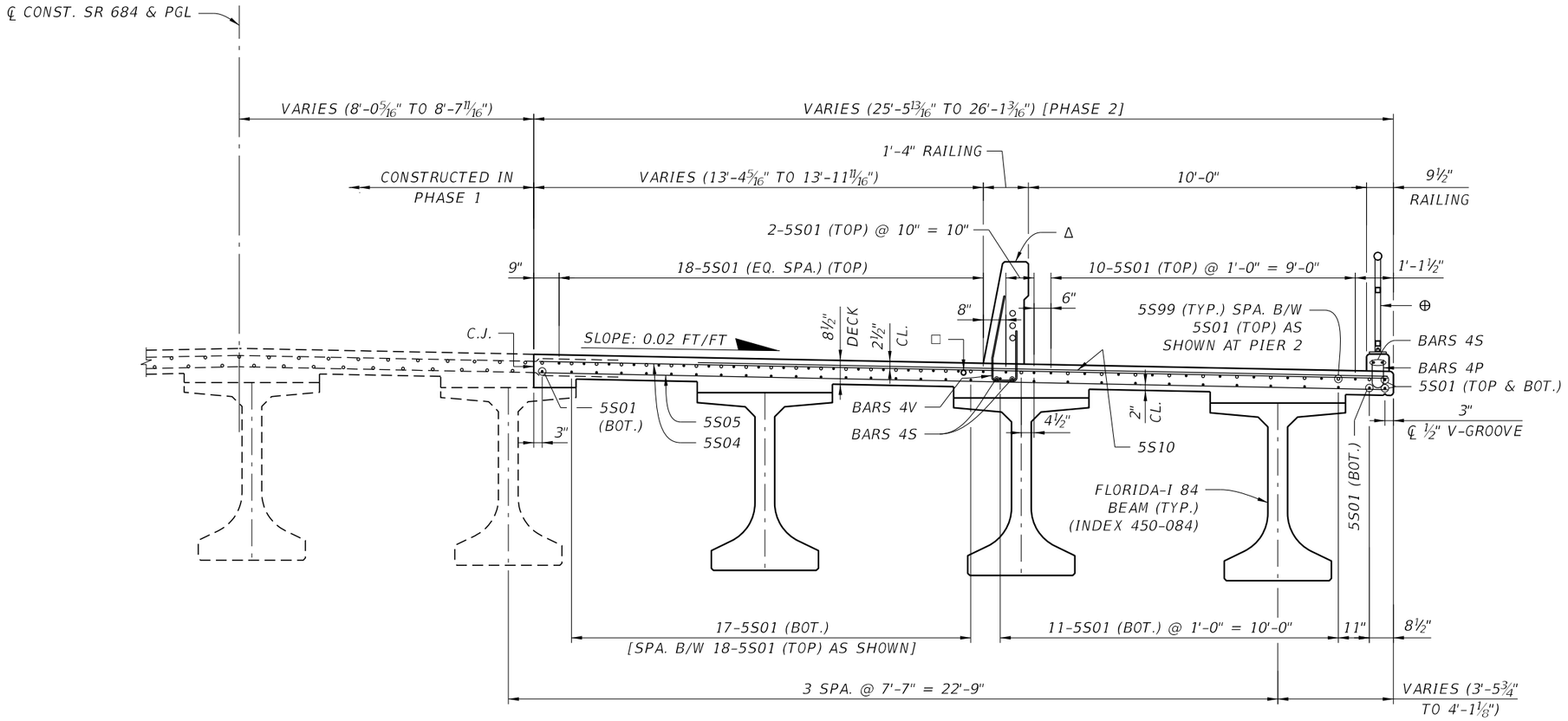
DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (7 OF 12)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-161

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



SUPERSTRUCTURE SECTION (SPAN 2 [PHASE 2])

LEGEND:

- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]
- □ 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. PLACE CONDUIT 7" (+/-) FROM THE FRONT FACE OF THE SINGLE-SLOPE TRAFFIC RAILING. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED DECK REINFORCING STEEL.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	CS	DMH	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

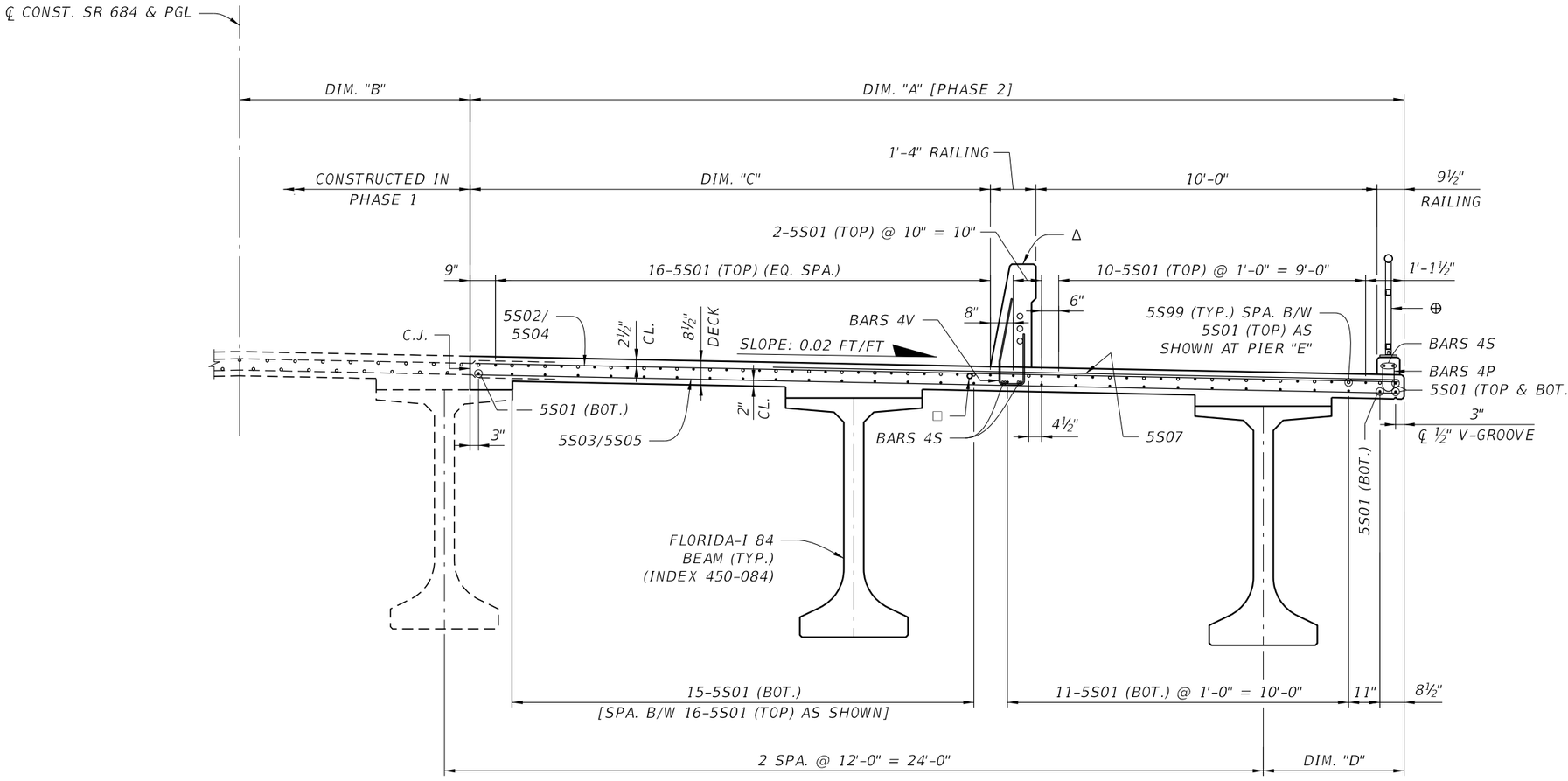
SHEET TITLE: SUPERSTRUCTURE SECTION (8 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-162

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



SUPERSTRUCTURE SECTION (SPANS 3 - 10 AND 14 - 17 [PHASE 2])

SPAN	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	"E"
3	VARIES (26'-6⅜" TO 27'-4½")	VARIES (6'-9" TO 7'-7⅛")	VARIES (14'-4⅞" TO 15'-3")	VARIES (3'-3⅜" TO 4'-1⅜")	4
4	VARIES (26'-6⅜" TO 27'-4½")	VARIES (6'-9" TO 7'-7⅛")	VARIES (14'-4⅞" TO 15'-3")	VARIES (3'-3⅜" TO 4'-1⅜")	4
5	VARIES (27'-2½" TO 27'-4½")	VARIES (6'-9" TO 6'-11")	VARIES (15'-1" TO 15'-3")	VARIES (3'-11½" TO 4'-1½")	6
6	27'-4½"	6'-9"	15'-3"	4'-1½"	6
7	27'-4½"	6'-9"	15'-3"	4'-1½"	8
8	27'-4½"	6'-9"	15'-3"	4'-1½"	8
9	27'-4½"	6'-9"	15'-3"	4'-1½"	10
10	27'-4½"	6'-9"	15'-3"	4'-1½"	10
14	VARIES (26'-9½" TO 27'-4½")	VARIES (6'-9" TO 7'-4")	VARIES (14'-8" TO 15'-3")	VARIES (3'-6½" TO 4'-1½")	15
15	VARIES (26'-9½" TO 27'-4½")	VARIES (6'-9" TO 7'-4")	VARIES (14'-8" TO 15'-3")	VARIES (3'-6½" TO 4'-1½")	15
16	VARIES (26'-9½" TO 27'-4½")	VARIES (6'-9" TO 7'-4")	VARIES (14'-8" TO 15'-3")	VARIES (3'-6½" TO 4'-1½")	17
17	VARIES (26'-9½" TO 27'-4½")	VARIES (6'-9" TO 7'-4")	VARIES (14'-8" TO 15'-3")	VARIES (3'-6½" TO 4'-1½")	17

LEGEND:

- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]
- □ 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. PLACE CONDUIT 7" (+/-) FROM THE FRONT FACE OF THE SINGLE-SLOPE TRAFFIC RAILING. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED DECK REINFORCING STEEL.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

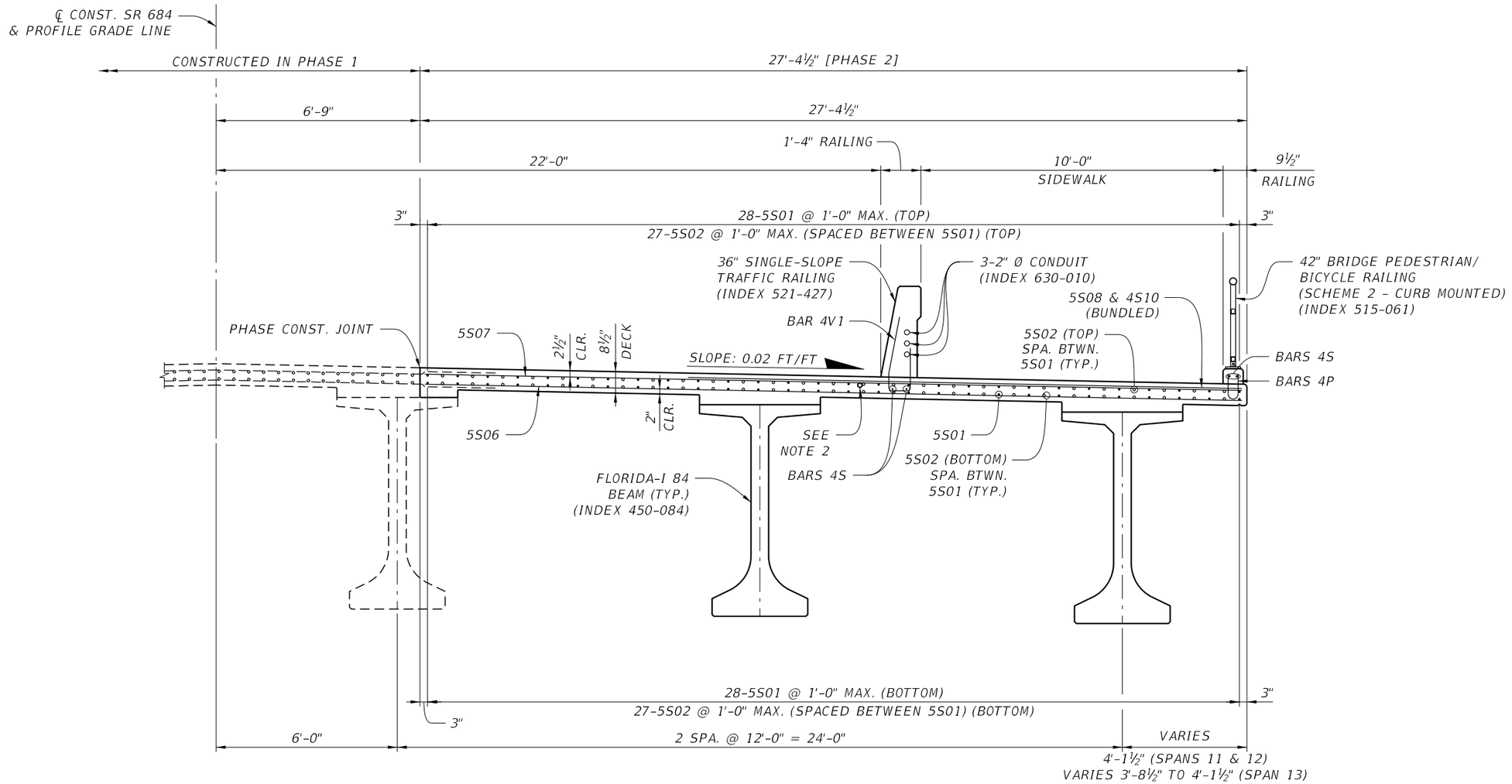
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (9 OF 12)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-163



SUPERSTRUCTURE SECTION (SPANS 11-13) [PHASE 2]

(LOOKING UPSTATION)

NOTES:

1. FOR CONCRETE BUILD-UP, SEE SHEET B1-190.
2. 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. PLACE CONDUIT 7" (+/-) FROM THE FRONT FACE OF THE SINGLE-SLOPE TRAFFIC RAILING. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED DECK REINFORCING STEEL.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (10 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-164

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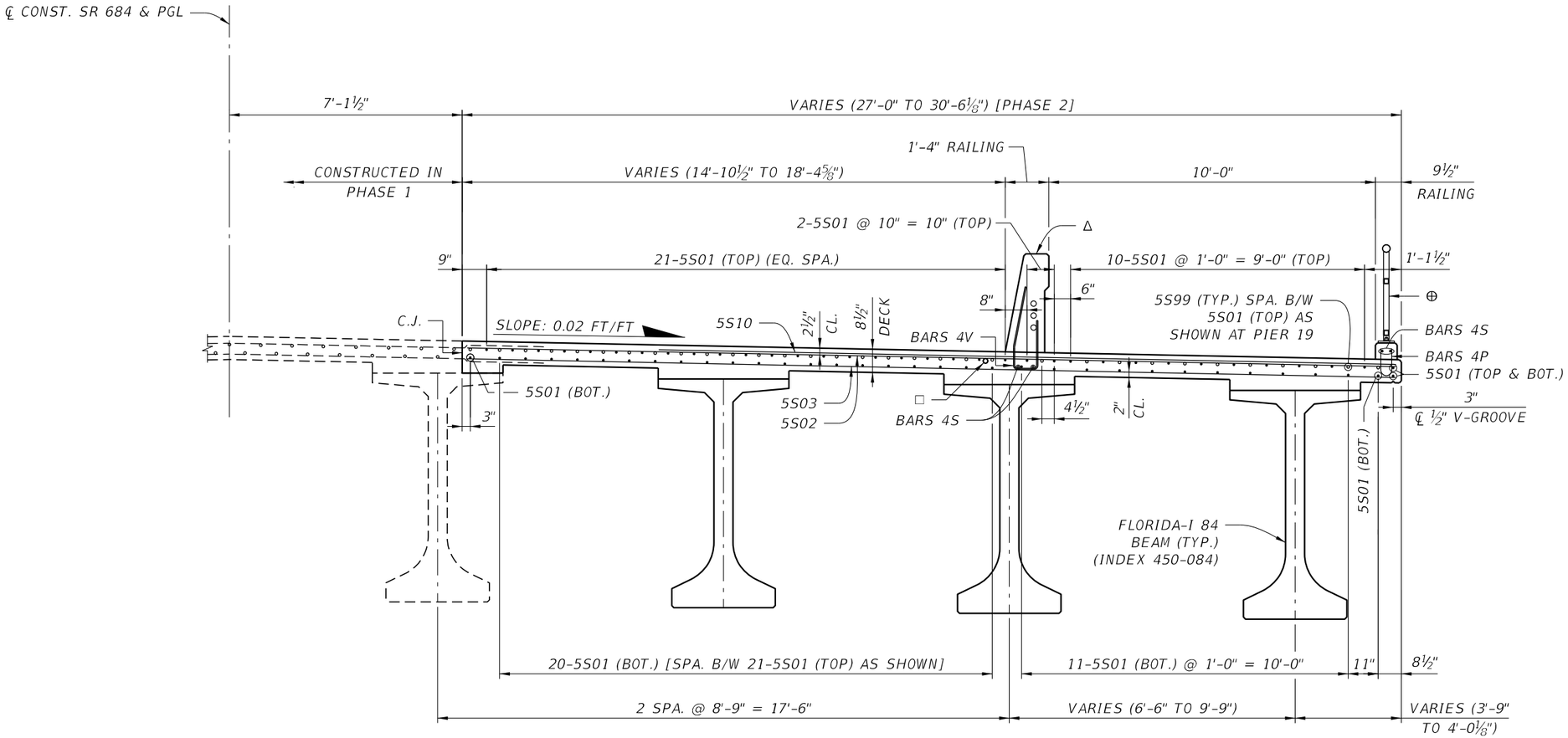

SUPERSTRUCTURE SECTION (SPAN 18 [PHASE 2])

LEGEND:

- Δ 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]
- □ 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. PLACE CONDUIT 7" (+/-) FROM THE FRONT FACE OF THE SINGLE-SLOPE TRAFFIC RAILING. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED DECK REINFORCING STEEL.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (11 OF 12)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-165

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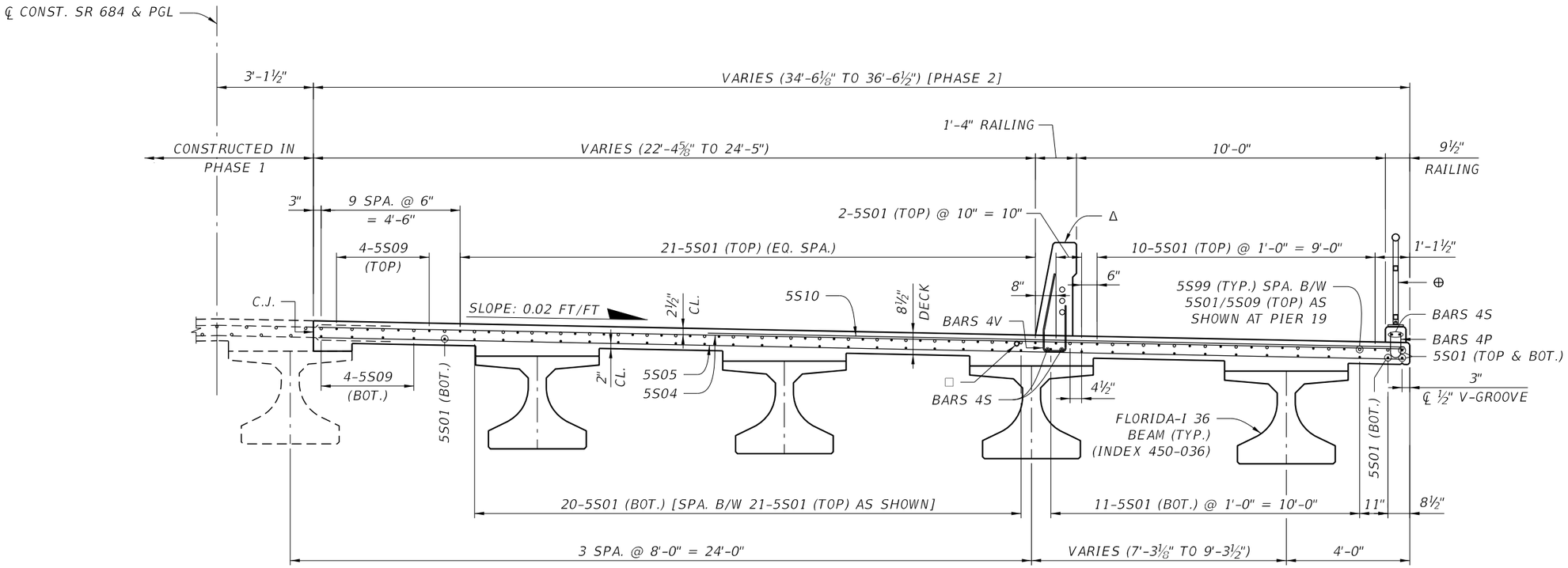

SUPERSTRUCTURE SECTION (SPAN 19 [PHASE 2])

LEGEND:

- Δ — 36" SINGLE-SLOPE TRAFFIC RAILING (INDEX 521-427) WITH 3-2" DIA. CONDUIT (INDEX 630-010)
- ⊕ — BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) [INDEX 515-061 (SCHEME 2) & INDEX 515-062 (TYPE SP) WITH SHEET B-11]
- □ — 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN DECK. PLACE CONDUIT 7" (+/-) FROM THE FRONT FACE OF THE SINGLE-SLOPE TRAFFIC RAILING. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED DECK REINFORCING STEEL.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE SECTION (12 OF 12)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-166

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	DMH
CHECKED BY:	CS
DESIGNED BY:	DMH
CHECKED BY:	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

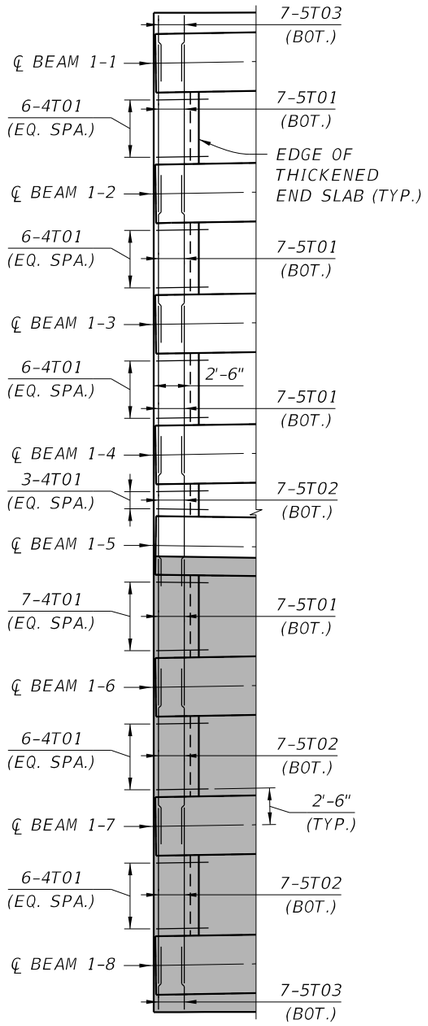
SHEET TITLE:
SUPERSTRUCTURE DETAILS
[UNITS 1 - 5 & 7 - 9] (1 OF 4)

REF. DWG. NO.:

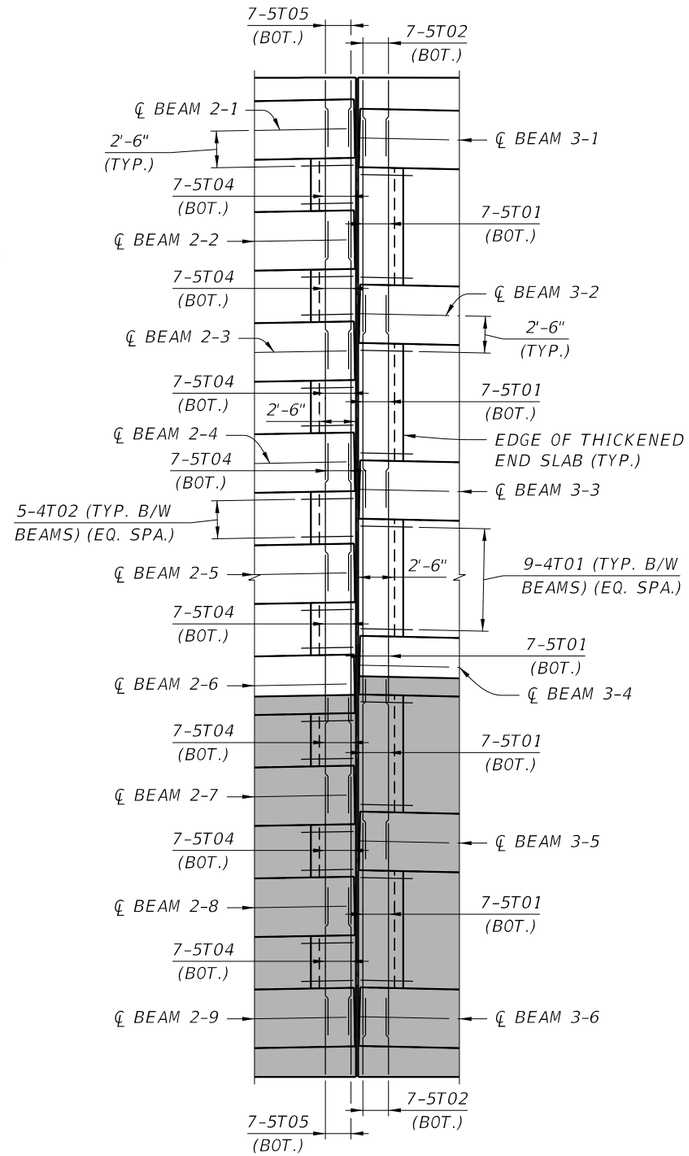
PROJECT NAME:
SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE)
TO 123RD STREET WEST

SHEET NO.:
B1-167

DIRECTION OF STATIONING

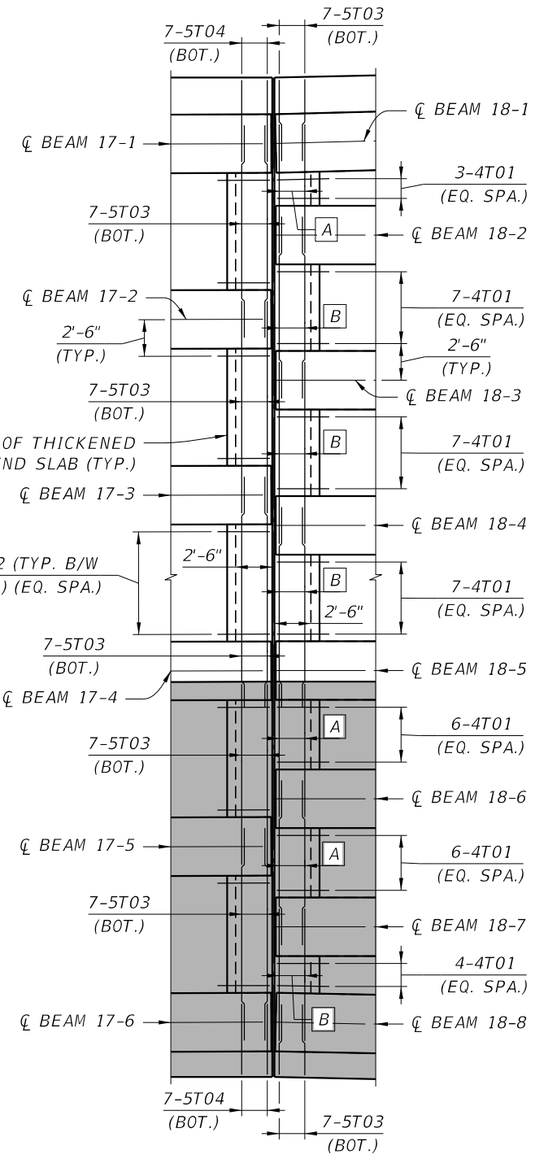


THICKENED END SLAB PLAN
(UNIT 1 - END BENT 1)



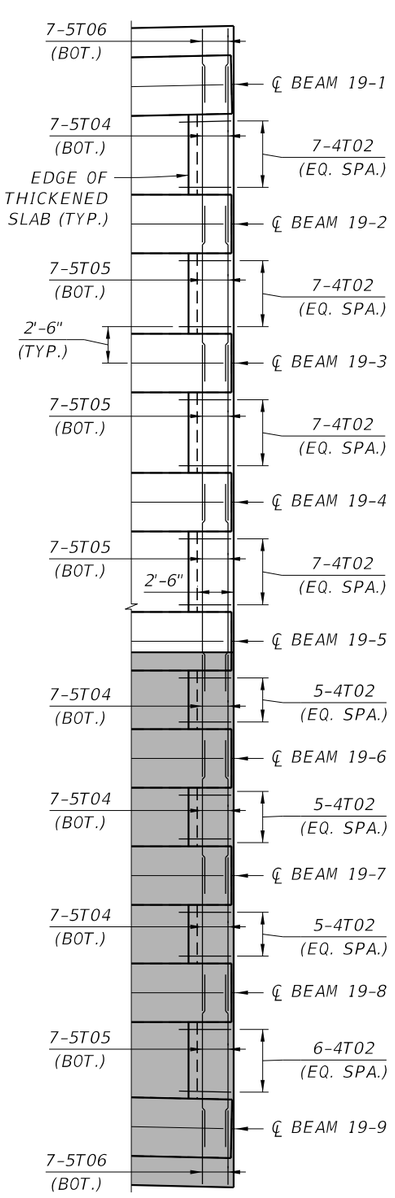
THICKENED END SLAB PLAN
(UNITS 1 & 2 - PIER 3)

(REINFORCING FOR BEGIN UNIT 2 SHOWN, REINFORCING SIMILAR FOR BEGIN UNITS 3 - 5, 7 & 8)



THICKENED END SLAB PLAN
(UNITS 8 & 9 - PIER 18)

(REINFORCING FOR END UNIT 8 SHOWN, REINFORCING SIMILAR FOR END UNITS 2 - 5 & 7)



THICKENED END SLAB PLAN
(UNIT 9 - END BENT 20)

LEGEND:

- PHASE 2 CONSTRUCTION
- [A] 7-5T01 (BOT.)
- [B] 7-5T02 (BOT.)

NOTE:

1. FOR THICKENED END SLAB DETAILS, SEE SHEETS B1-167 & B1-170.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	CS	DMH	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

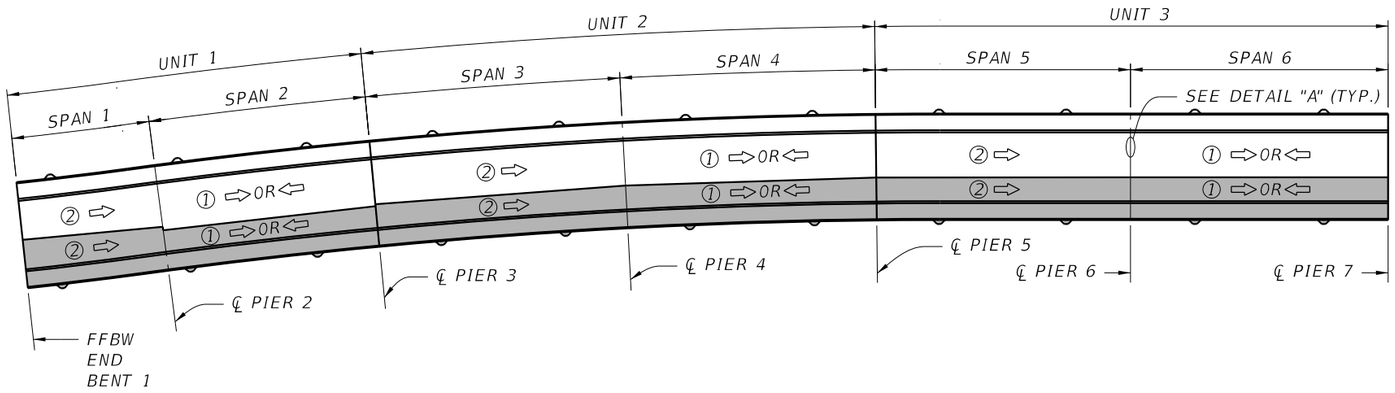
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

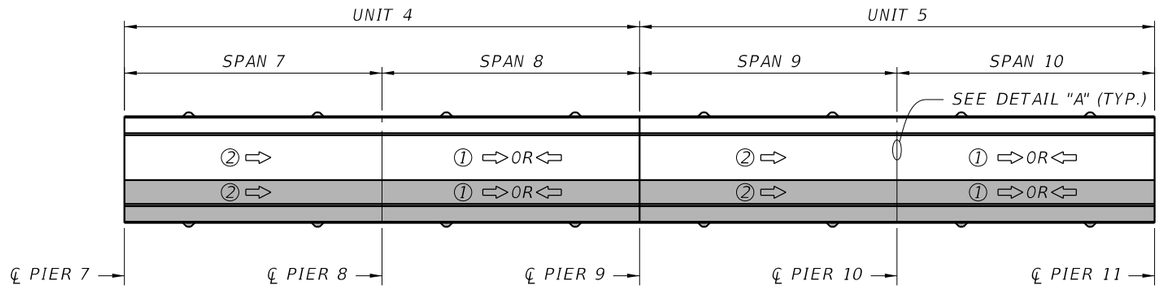
SHEET TITLE:
SUPERSTRUCTURE DETAILS
[UNITS 1 - 5 & 7 - 9] (2 OF 4)

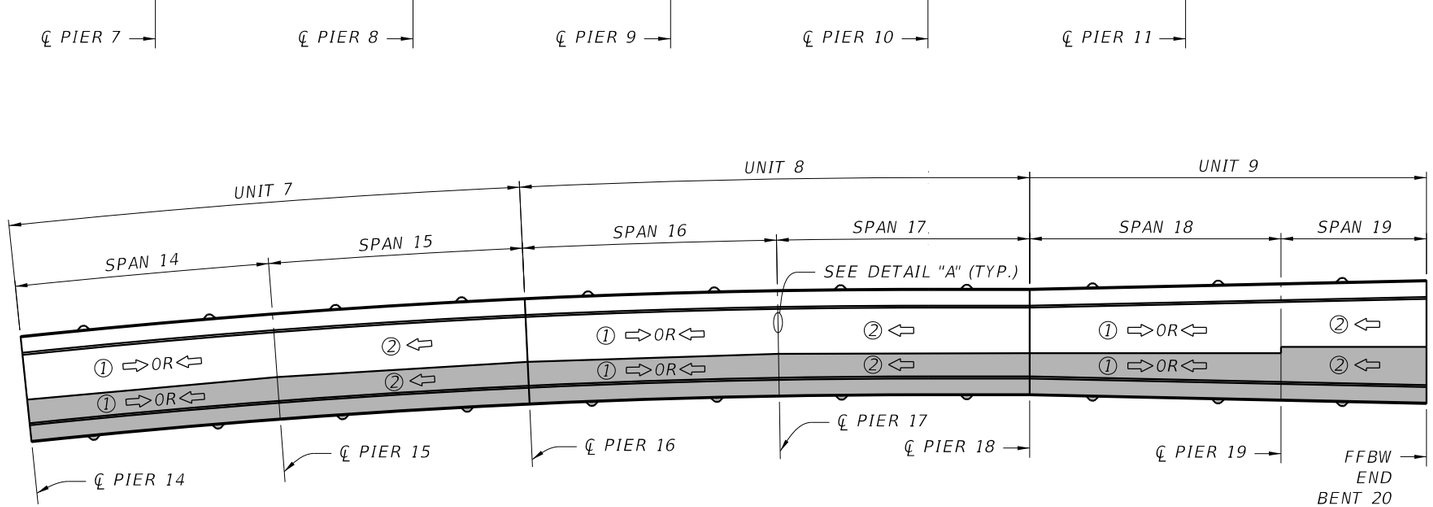
REF. DWG. NO.

PROJECT NAME:
SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

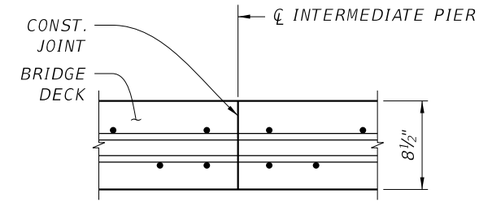
SHEET NO.
B1-168



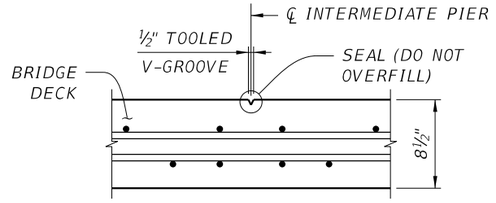




DECK CASTING SEQUENCE



DETAIL "A"



DETAIL "B"

LEGEND:

- PHASE 2 CONSTRUCTION
- (N) POUR NUMBER
- ⇦ DIRECTION OF POUR

DECK PLACEMENT NOTES:

1. TWO POURS PER UNIT OR A SINGLE POUR PER UNIT ARE PERMITTED. SHOULD THE CONTRACTOR ELECT TO MAKE A SINGLE POUR, DETAIL "B" SHALL BE USED OVER THE INTERMEDIATE PIER. A SINGLE POUR CAN BE MADE IN EITHER DIRECTION.
2. A MINIMUM OF 72 HOURS IS REQUIRED BETWEEN ADJACENT DECK POURS IN A GIVEN CONTINUOUS UNIT. ALTERNATIVELY, THE NEXT SUCCESSIVE DECK POUR IN A GIVEN CONTINUOUS UNIT MAY BE PLACED AFTER THE PREVIOUS DECK POUR HAS OBTAINED A COMPRESSIVE STRENGTH OF 3,300 PSI BASED ON CYLINDER TESTING IN ACCORDANCE WITH SECTION 400-14 OF THE SPECIFICATIONS.
3. FILL TOOLED V-GROOVE WITH TYPE D SEALANT PER SPECIFICATION SECTION 932. GROOVE SHALL BE CLEAN AND FREE OF GREASE AND DEBRIS BEFORE FILLING.
4. A REVISED DECK CASTING SEQUENCE MAY BE SUBMITTED FOR APPROVAL.

NOTES:

1. MINIMUM LAP LENGTH FOR #5 LONGITUDINAL DECK BARS IS 1'-8".
2. WHERE TWO POURS ARE MADE IN A UNIT, THE LONGITUDINAL DECK BARS SHALL EXTEND A MINIMUM OF 2'-0" PAST THE C.J.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	CS	DMH	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

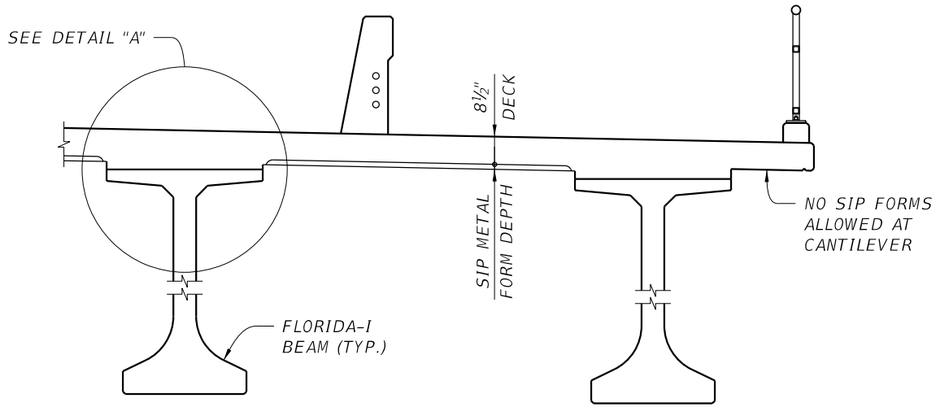
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DETAILS [UNITS 1 - 5 & 7 - 9] (3 OF 4)

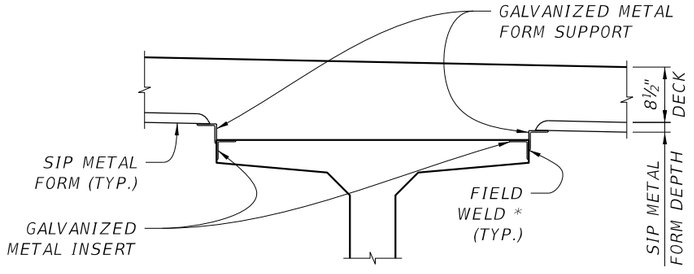
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-169

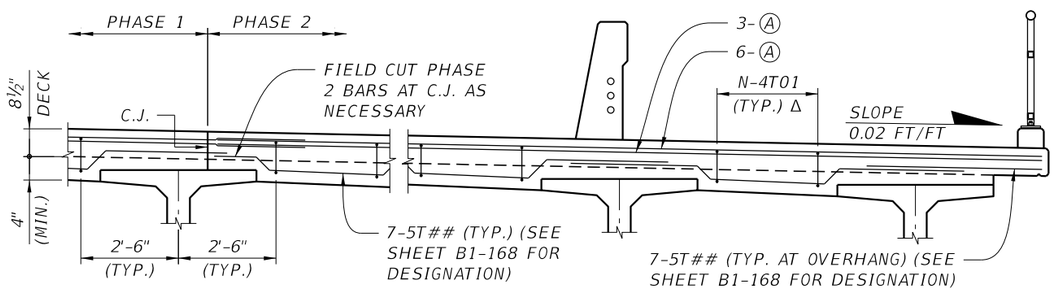


STAY-IN-PLACE METAL FORM DETAILS



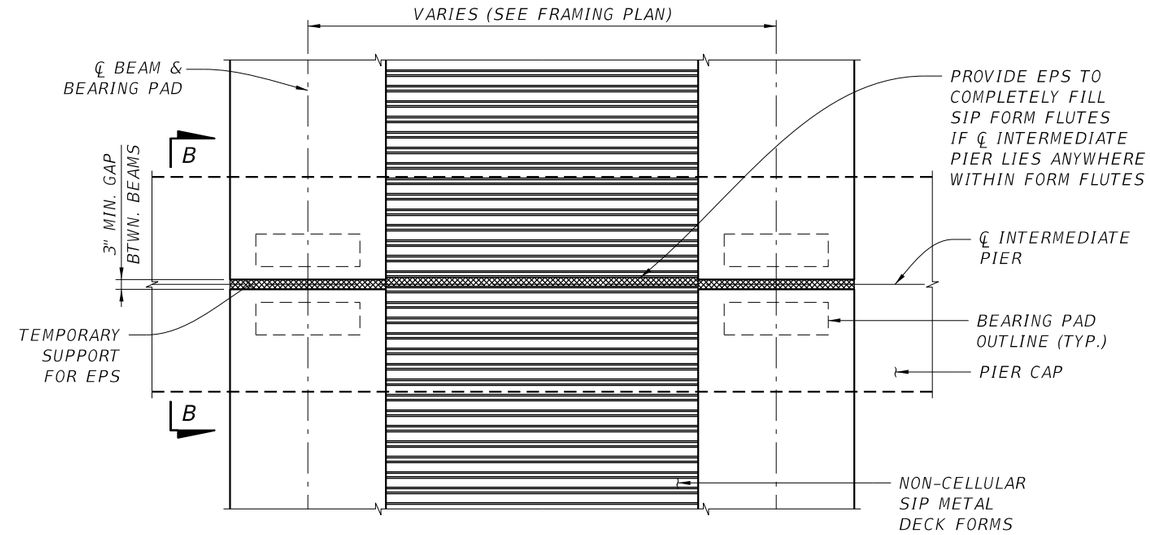
DETAIL "A"

* ELECTRICAL GROUNDING TO REINFORCING STEEL IS PROHIBITED

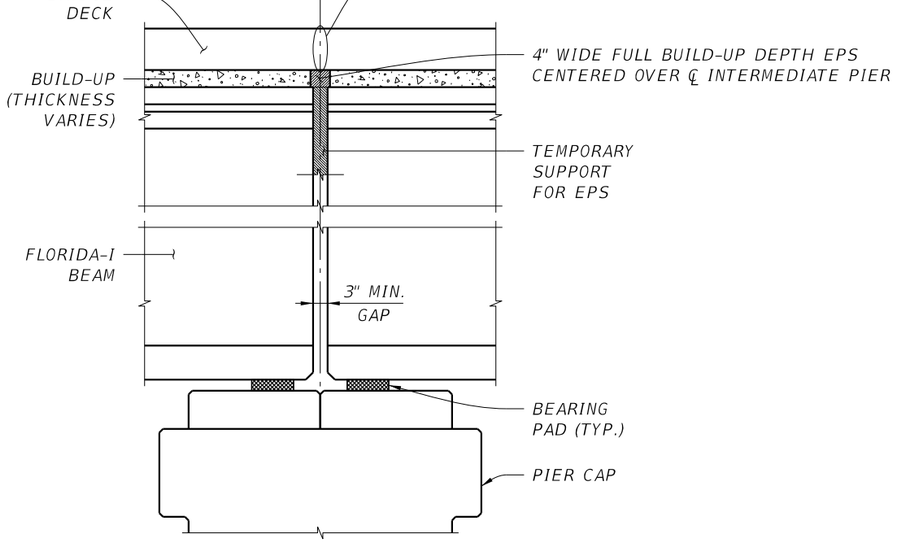


PARTIAL SUPERSTRUCTURE SECTION AT THICKENED END SLAB

(TYPICAL DECK REINFORCEMENT NOT SHOWN FOR CLARITY)
Δ = SEE SHEET B1-168 FOR NUMBER AND SPACING OF 4T01 BARS BETWEEN BEAMS
Ⓐ = 5S06/5S07 (UNITS 1 & 9) OR 5S06 (UNITS 2 - 5, 7 & 8)



SIP METAL FORM DETAIL AT INTERMEDIATE PIER



SECTION B-B

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: CS
DESIGNED BY: DMH
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

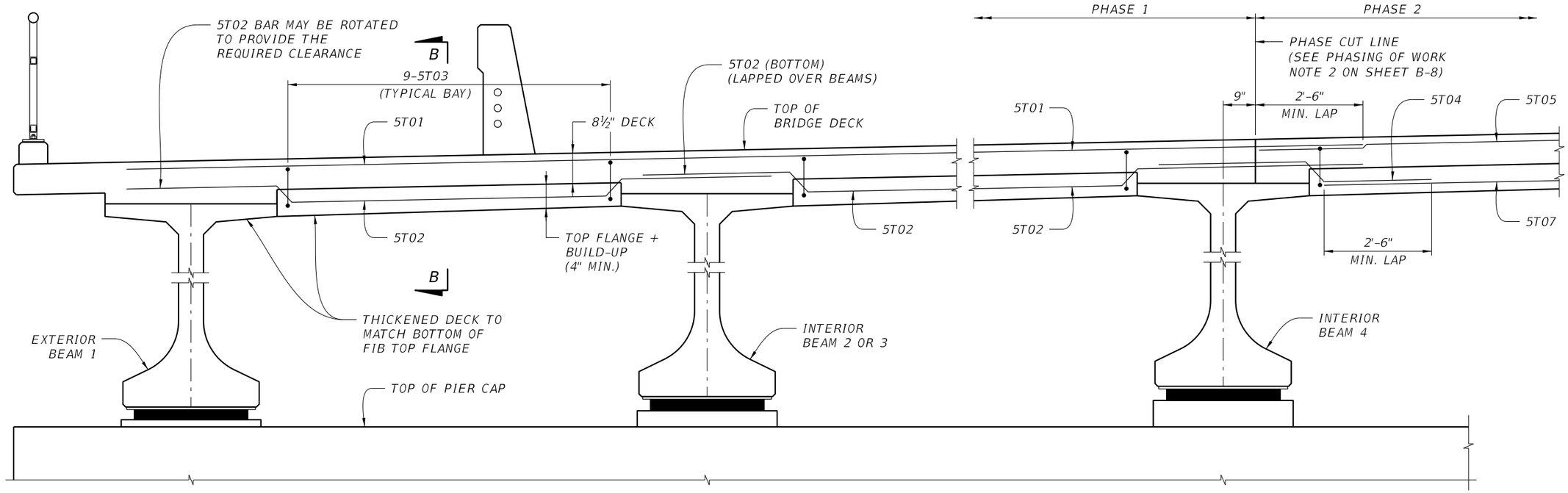
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE:
SUPERSTRUCTURE DETAILS
[UNITS 1 - 5 & 7 - 9] (4 OF 4)

REF. DWG. NO.

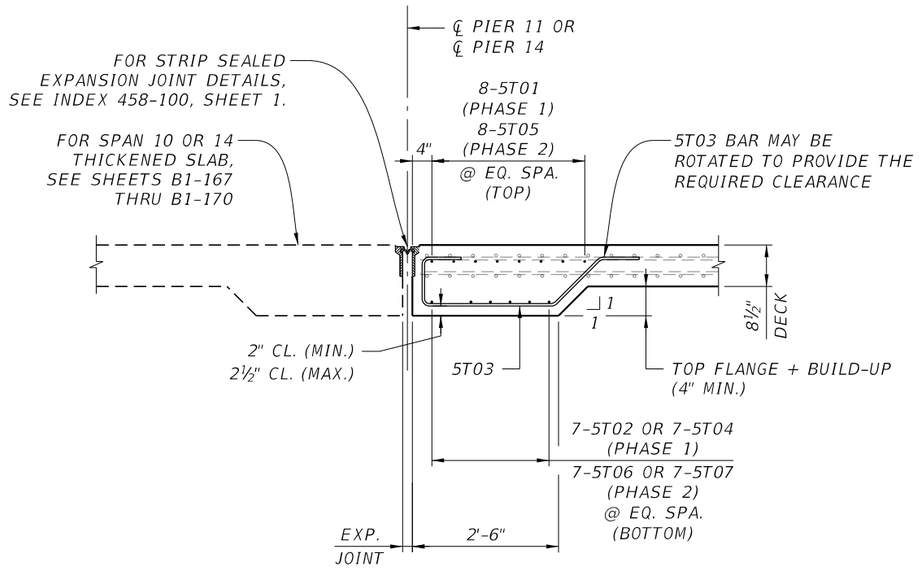
PROJECT NAME:
SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.
B1-170



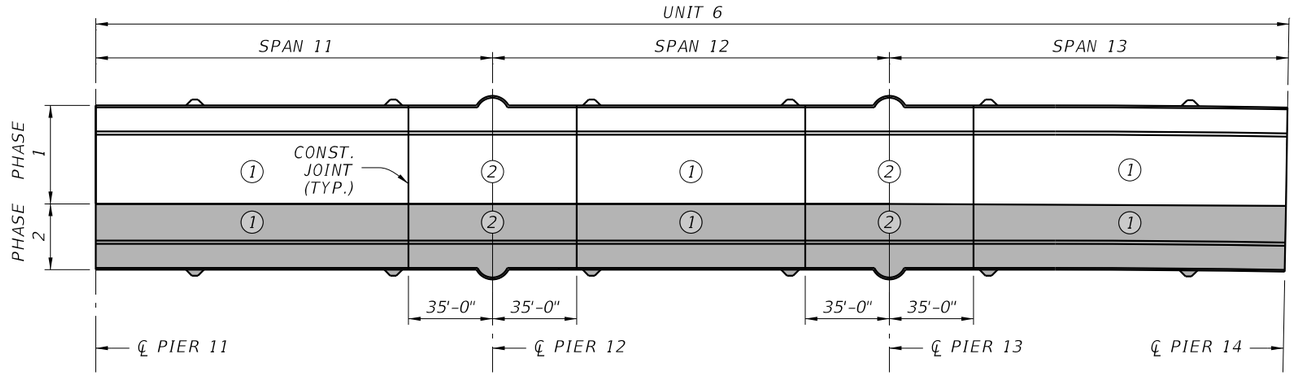
SECTION A-A

(LOOKING UPSTATION)
(DECK REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION B-B

(PIER 11 SHOWN, PIER 14 SIMILAR BUT OPPOSITE HAND)



DECK/DIAPHRAGM CASTING SEQUENCE

DECK REPLACEMENT NOTES:
1. IN EACH PHASE, CAST POSITIVE MOMENT REGIONS AS SHOWN ONCE PRESTRESSED BEAMS HAVE REACHED A MINIMUM AGE OF 90 DAYS.
2. PROCEED WITH CASTING OF NEGATIVE MOMENT REGIONS ONCE PREVIOUS POURS HAVE CURED FOR A MINIMUM OF 72 HOURS OR REACHED COMPRESSIVE STRENGTH OF 3300 PSI.
3. CAST NEGATIVE MOMENT REGIONS OVER PIERS 12 AND 13 MONOLITHICALLY WITH PIER DIAPHRAGMS. NO CONSTRUCTION JOINT IS PERMITTED.
4. POURS WITHIN EACH PHASE AND STAGE OF CASTING CAN BE MADE CONCURRENTLY OR SEQUENTIALLY.
5. A REVISED DECK CASTING SEQUENCE MAY BE SUBMITTED FOR APPROVAL.
6. (1) - POUR SEQUENCE NUMBER

NOTES:
1. WORK THIS SHEET WITH SHEETS B1-149 THRU B1-151.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

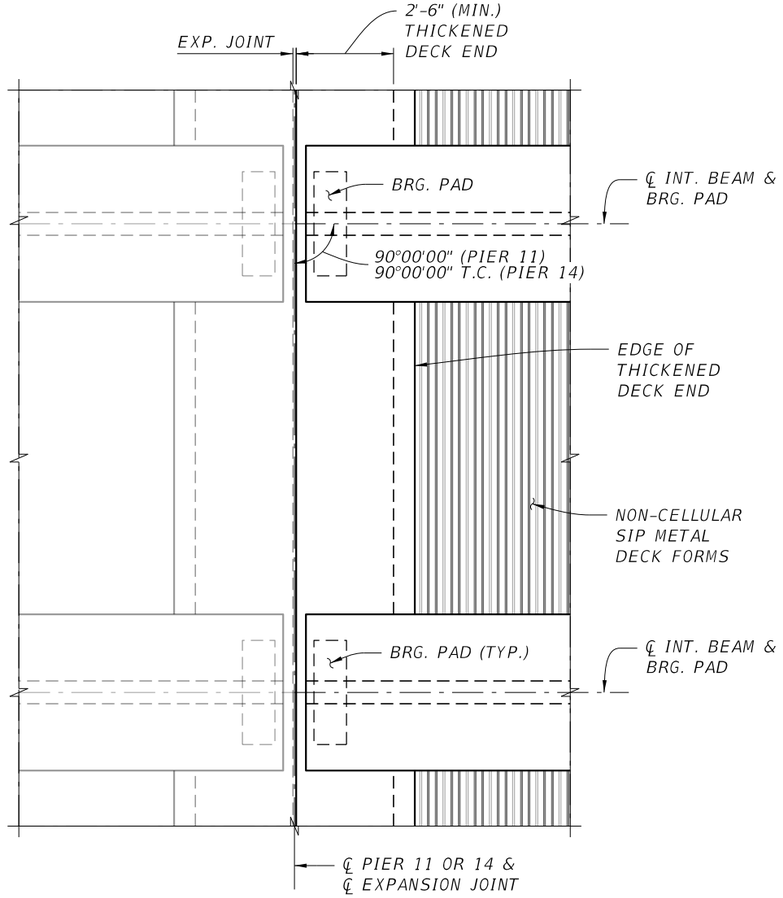
DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

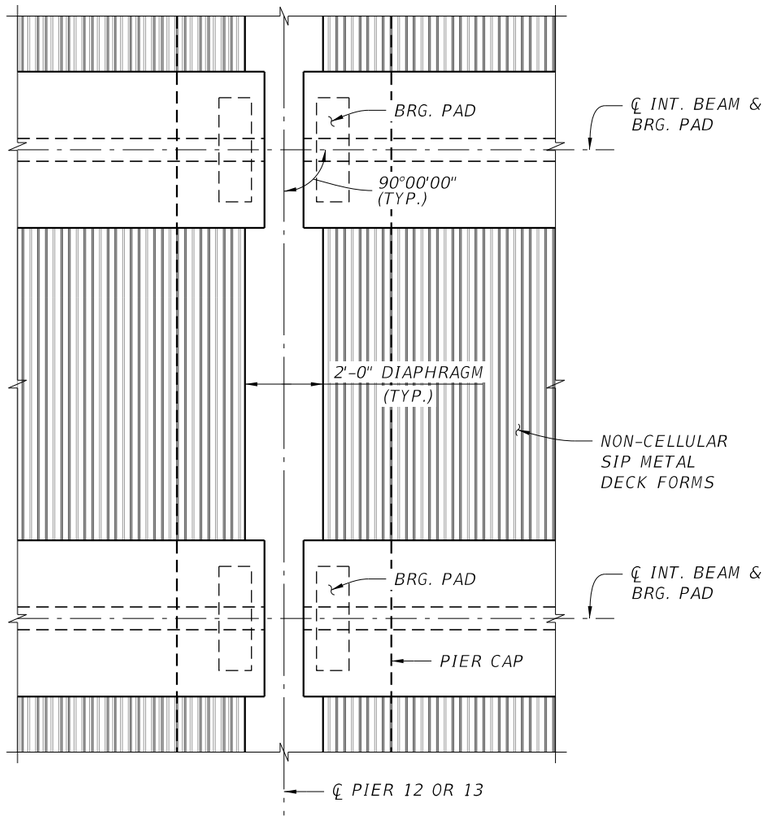
SHEET TITLE: SUPERSTRUCTURE DETAILS [UNIT 6] (1 OF 7)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-171

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

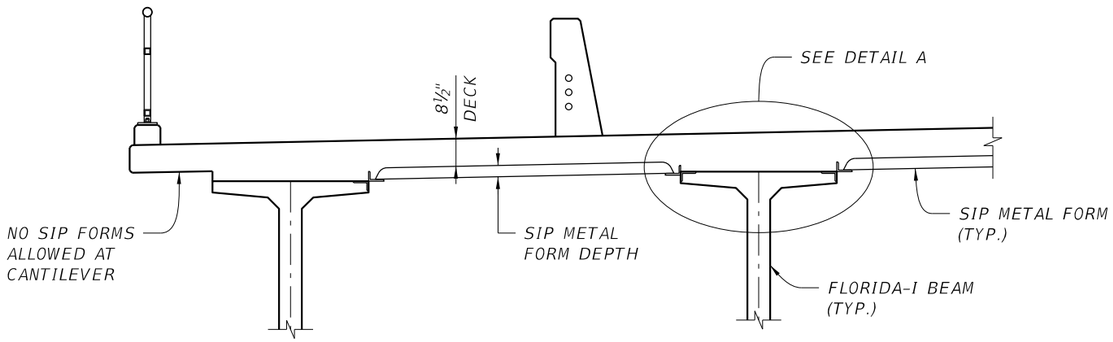


EXPANSION JOINT AT PIERS 11 & 14 - PLAN

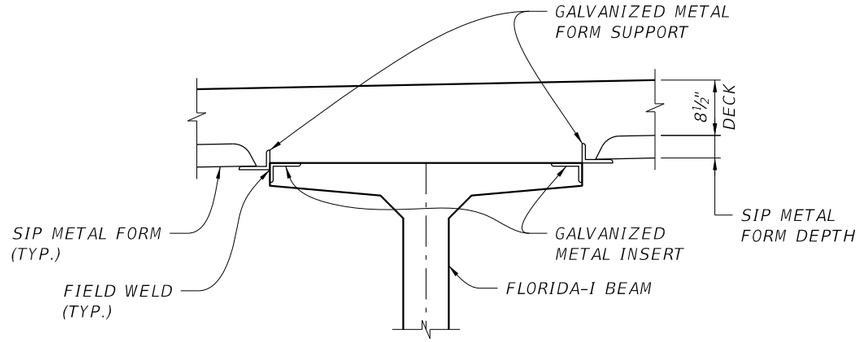
(PIER 11 SHOWN, PIER 14 SIMILAR OPPOSITE HAND)



CONTINUITY DECK AT PIERS 12 & 13 - PLAN



PARTIAL SECTION THRU SUPERSTRUCTURE



DETAIL A

STAY-IN-PLACE METAL FORM DETAILS

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	SL
CHECKED BY:	JIM
DESIGNED BY:	RMD
CHECKED BY:	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

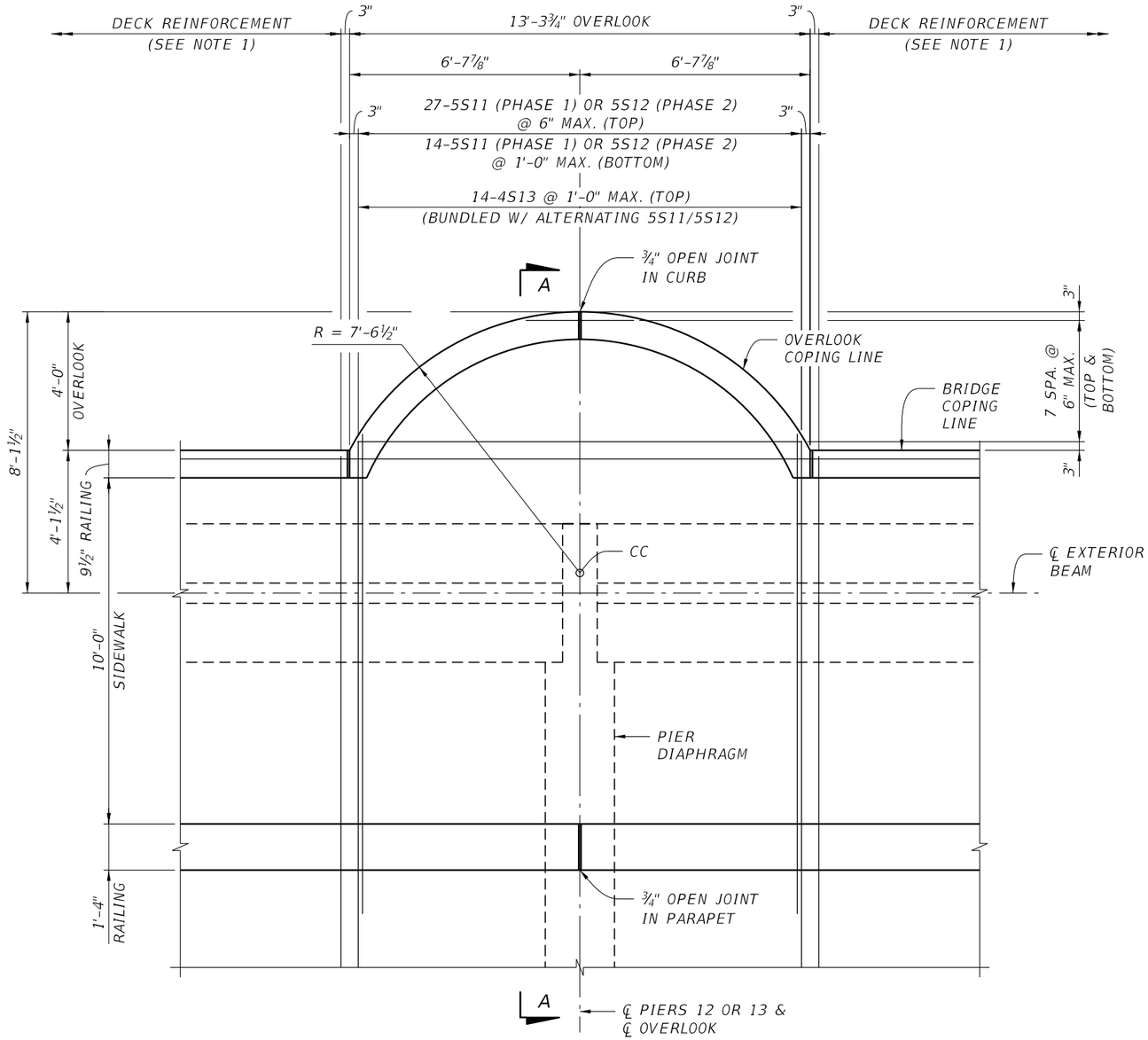
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DETAILS [UNIT 6] (2 OF 7)

REF. DWG. NO.:

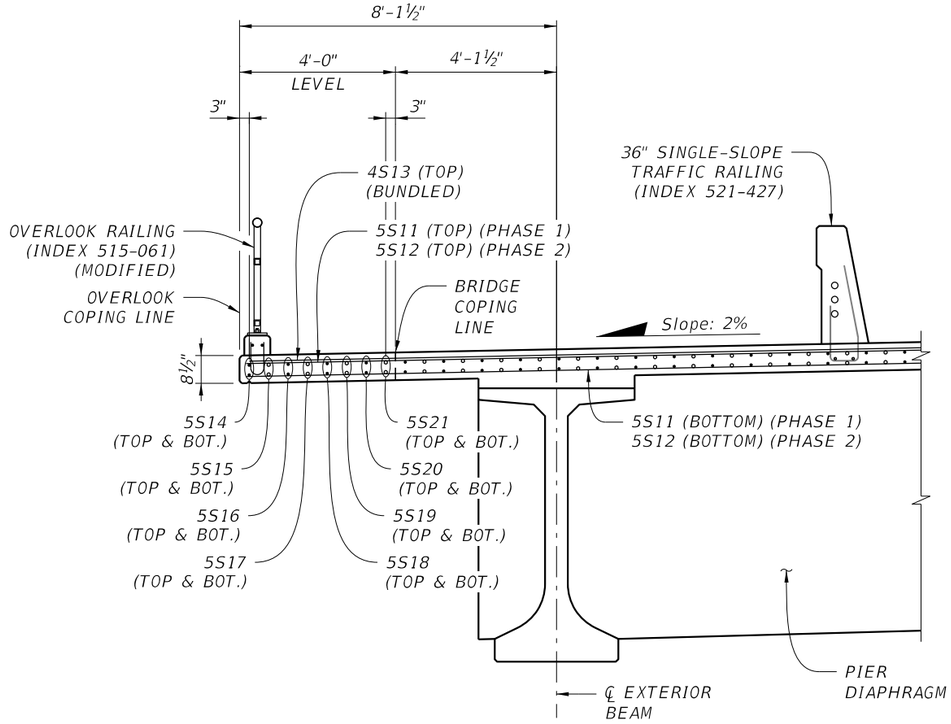
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-172



OVERLOOK - PLAN

(BRIDGE PEDESTRIAN/BICYCLE RAILING NOT SHOWN FOR CLARITY
(REINFORCEMENT IN RAILING CURB NOT SHOWN FOR CLARITY)



SECTION A-A

NOTES:

1. FOR DECK REINFORCEMENT PLANS, SEE SHEETS B1-149 THRU B1-151.
2. FOR DECK REINFORCEMENT SECTIONS, SEE SHEETS B1-158 & B1-164.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SL	JTM	RMD	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

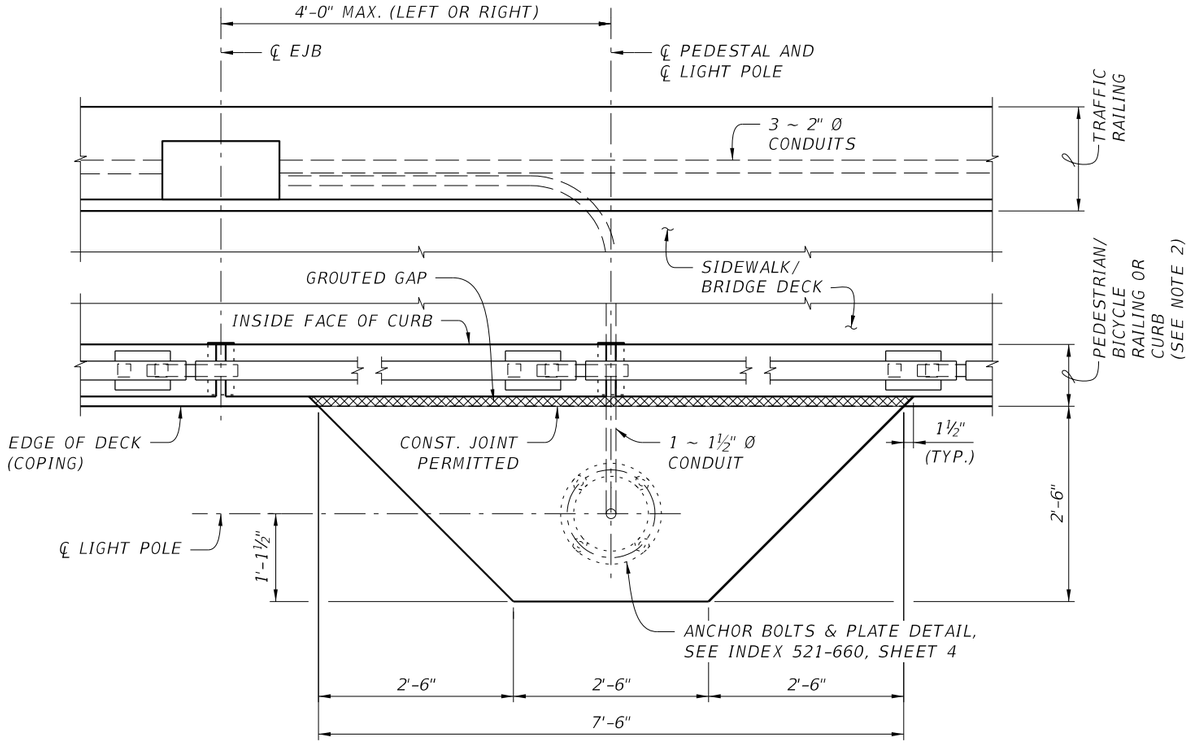
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DETAILS [UNIT 6] (7 OF 7)

REF. DWG. NO.:

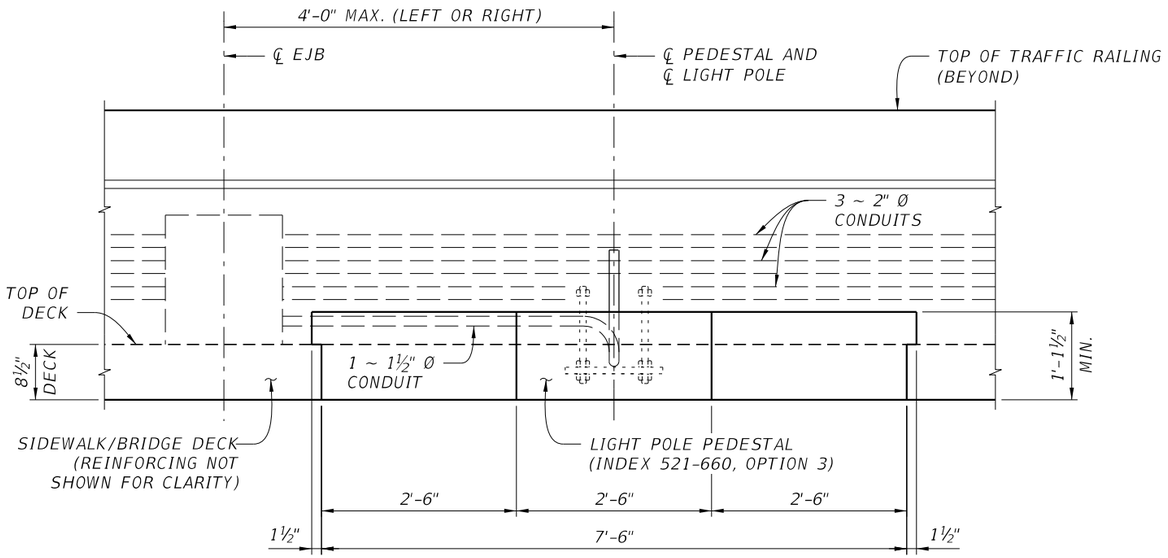
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-177



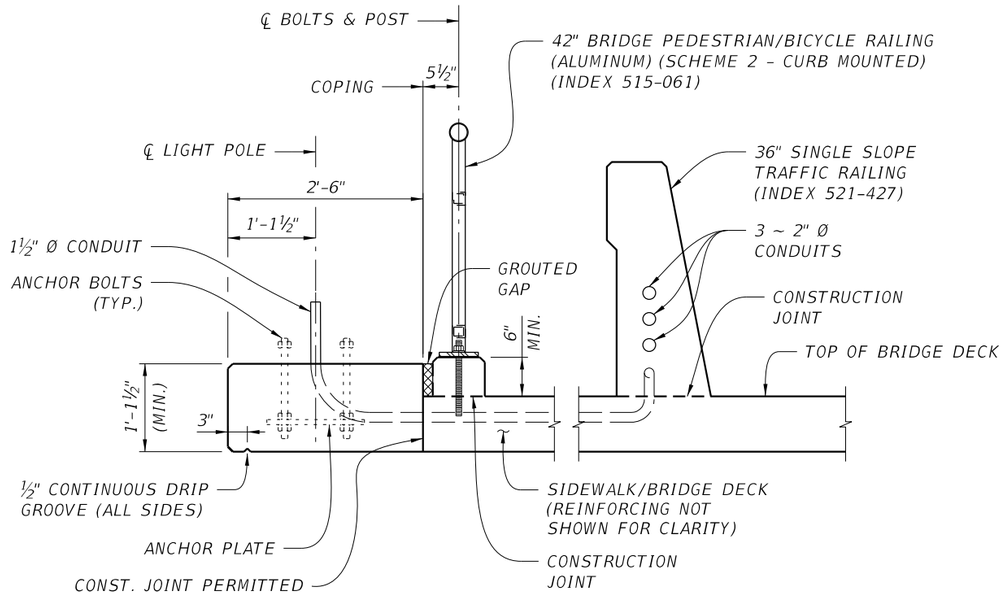
LIGHT POLE PEDESTAL - PLAN VIEW

(SIDEWALK/BRIDGE DECK REINFORCING NOT SHOWN FOR CLARITY)



LIGHT POLE PEDESTAL - ELEVATION VIEW

(BRIDGE PEDESTRIAN/BICYCLE RAILING NOT SHOWN FOR CLARITY)



TYPICAL SECTION AT LIGHT POLE PEDESTAL

(WITH GAP BETWEEN BARRIER AND PEDESTAL)

NOTES:

1. WORK THIS SHEET WITH INDEX 521-660 [OPTION 3].
2. FOR BRIDGE PEDESTRIAN/BICYCLE RAILING MOUNTING AND CURB DETAILS, SEE INDEX 515-061 [SCHEME 2 - CURB MOUNTED].
3. FOR LIGHT POLE PEDESTAL NOTES, SEE INDEX 521-660, SHEET 4.
4. FOR LOCATIONS OF LIGHT POLE PEDESTAL, SEE SUPERSTRUCTURE PLANS ON SHEETS B1-145 THRU B1-154.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

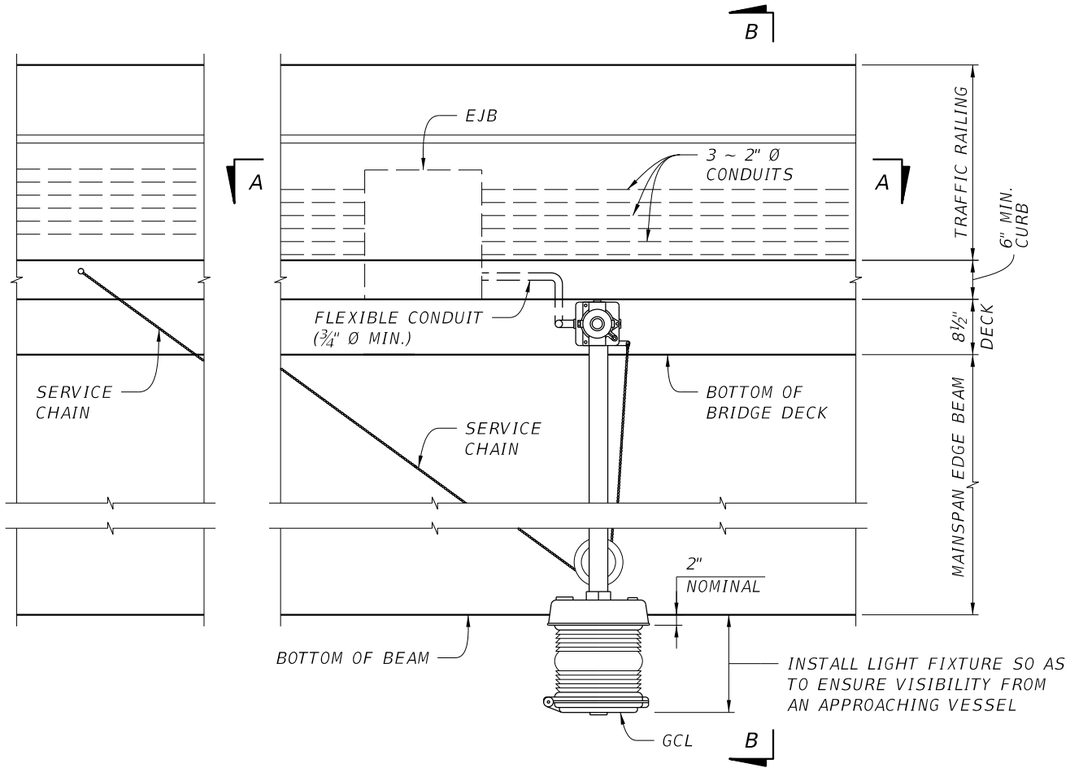
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: LIGHT POLE PEDESTAL DETAILS - BRIDGE MOUNTED

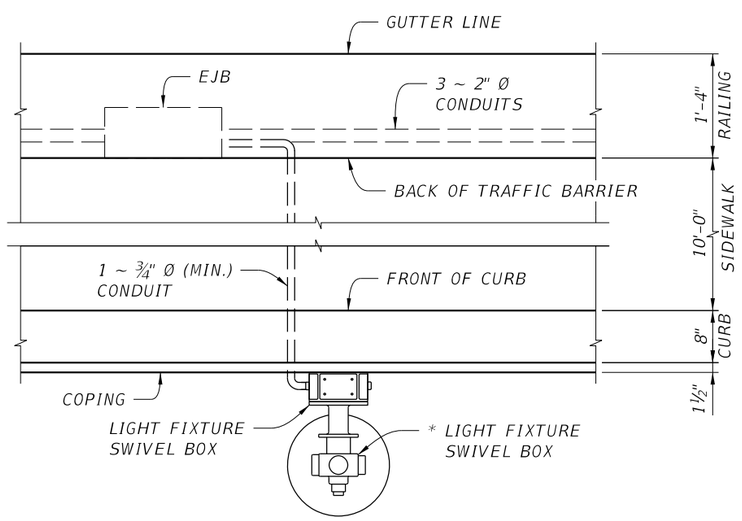
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-178

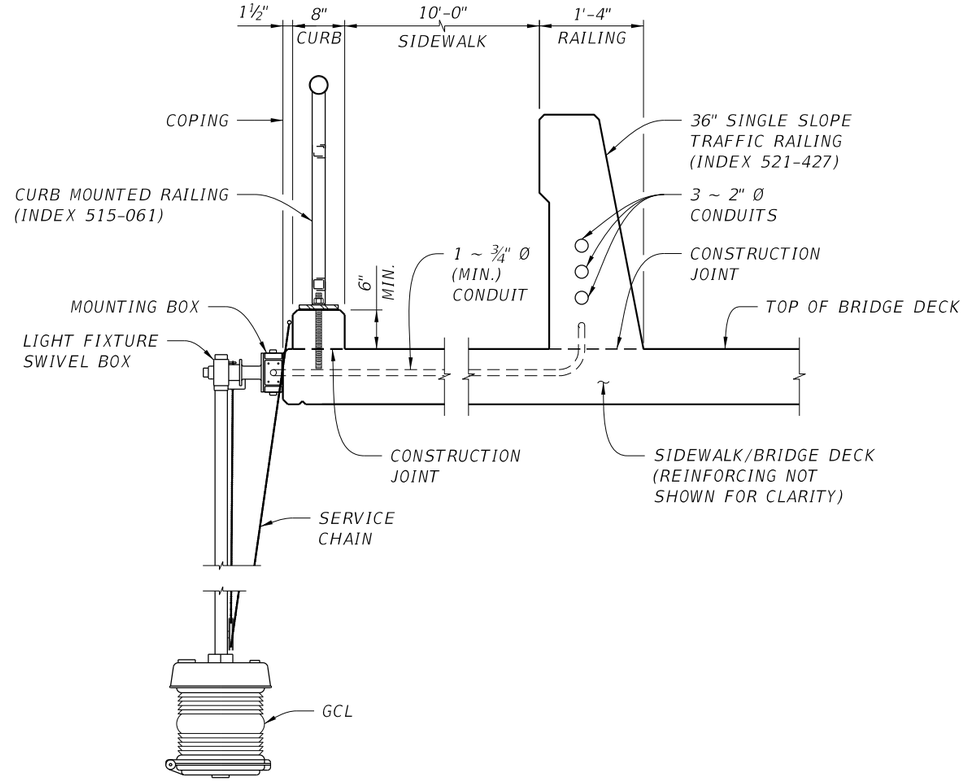


NAVIGATION LIGHT (GCL) MOUNTING DETAILS
ELEVATION VIEW



PLAN VIEW A-A

* SUPPLIED BY LIGHT FIXTURE MANUFACTURER



SECTION B-B
TYPICAL POSITION OF GCL
(PEDESTRIAN RAILING NOT SHOWN FOR CLARITY)

NOTES:

1. WORK THIS SHEET WITH SHEET 1 OF STANDARD INDEX 510-001.
2. SEE LIGHTING PLANS FOR CONDUIT DETAILS, EJB DIMENSIONS & LOCATIONS.
3. PROVIDE NAVIGATION LIGHT SYSTEM IN COMPLIANCE WITH SECTION 510.
4. THE CONDUIT AND CONDUCTORS SHALL BE SIZED PER NEC REQUIREMENTS. THE MINIMUM CONDUIT SIZE SHALL BE ¾" IN DIAMETER. CONDUIT SIZE SHALL NOT EXCEED 1¼" IN DIAMETER.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SL	JTM	RMD	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: NAVIGATION LIGHT SYSTEM DETAILS

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

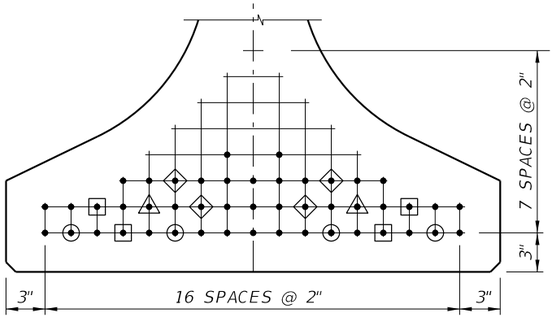
SHEET NO.: B1-179

FLORIDA-I BEAM - TABLE OF BEAM VARIABLES

Table Date 01-01-16

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL															
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE Ø		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3	5K	NO. OF SPACES BARS 5K				SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	S1	S2	S3	S4	V1
1	1	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	88'-11 1/2"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	108	3'-8"	3'-8"	82	150	30	20	5	3	6"
1	2	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	89'-2 1/16"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	108	3'-8"	3'-8"	82	150	30	20	5	3	6"
1	3	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	89'-4 5/8"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	108	3'-8"	3'-8"	82	152	31	20	5	3	6"
1	4	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	89'-7 3/16"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	108	3'-8"	3'-8"	82	152	31	20	5	3	6"
1	5	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 1/4"	9"	1'-0 3/8"	11"	89'-9 1 1/16"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	112	3'-8"	3'-8"	82	152	31	20	5	3	6"
1	6	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	89'-11 3/4"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	112	3'-8"	3'-8"	82	152	31	20	5	3	6"
1	7	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	90'-2 7/16"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	112	3'-8"	3'-8"	82	152	31	20	5	3	6"
1	8	36	VII	10,000	7,000	1	2	1	1	T1	T1	90°	90°	1 5/16"	9"	1'-0 3/8"	11"	90'-5 3/16"	1 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	112	3'-8"	3'-8"	82	154	32	20	5	3	6"
2	1	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	138'-2 1 1/16"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	168	3'-8"	3'-8"	126	218	40	25	5	12	6"
2	2	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	137'-11 3/8"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	168	3'-8"	3'-8"	126	218	40	25	5	12	6"
2	3	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	137'-8 1/8"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	168	3'-8"	3'-8"	124	218	40	25	5	12	6"
2	4	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	137'-4 7/8"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	168	3'-8"	3'-8"	124	218	41	25	4	12	6"
2	5	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	137'-1 9/16"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	168	3'-8"	3'-8"	124	218	41	25	4	12	6"
2	6	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	136'-10 5/16"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	168	3'-8"	3'-8"	124	218	41	25	4	12	6"
2	7	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	136'-7 1/16"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	164	3'-8"	3'-8"	124	216	40	25	4	12	6"
2	8	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 1/4"	9"	11"	11"	136'-3 1 3/16"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	164	3'-8"	3'-8"	124	216	40	25	4	12	6"
2	9	63	VII	10,000	7,000	2	2	1	1	T1	T1	90°	90°	2 5/16"	9"	11"	11"	136'-0 1/2"	1 1/2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	164	3'-8"	3'-8"	124	216	40	25	4	12	6"

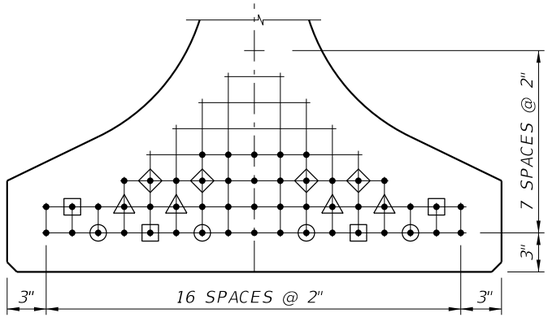
NOTE: WORK THIS SHEET WITH STANDARD PLANS INDEX 450-010 AND THE APPLICABLE "FLORIDA-I BEAM STANDARD DETAILS" INDEX.



TYPE (1) 47 STRANDS

STRAND DEBONDING LEGEND

- • – FULLY BONDED STRANDS.
- ⊙ – STRANDS DEBONDED 18'-0" FROM END OF BEAM.
- ⊡ – STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◬ – STRANDS DEBONDED 12'-0" FROM END OF BEAM.
- ◈ – STRANDS DEBONDED 9'-0" FROM END OF BEAM.



TYPE (2) 50 STRANDS

STRAND DEBONDING LEGEND

- • – FULLY BONDED STRANDS.
- ⊙ – STRANDS DEBONDED 25'-0" FROM END OF BEAM.
- ⊡ – STRANDS DEBONDED 20'-0" FROM END OF BEAM.
- ◬ – STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◈ – STRANDS DEBONDED 10'-0" FROM END OF BEAM.

DIMENSION NOTES

* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE CENTERLINE OF BEAM. DIMENSION "R" IS CALCULATED AT MID-HEIGHT OF THE BEAM.

** END BEAM BEARING DIMENSIONS "J" AND "K" ARE MEASURED PERPENDICULAR TO ℄ BEARING ALONG THE BOTTOM OF THE BEAM.

BEARING PLATES

*** SEE THE BEARING PLATE DATA TABLE ON SHEET B1-187 FOR DETAILS.

STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270 LOW-RELAXATION CARBON STEEL STRANDS STRESSED AT 43.94 KIPS EACH. AREA PER STRAND EQUALS 0.217 SQ. IN.

STRAND PATTERNS

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FLORIDA-I BEAM TABLE OF BEAM VARIABLES [SPANS 1 - 10 & 14 - 19] (1 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-180

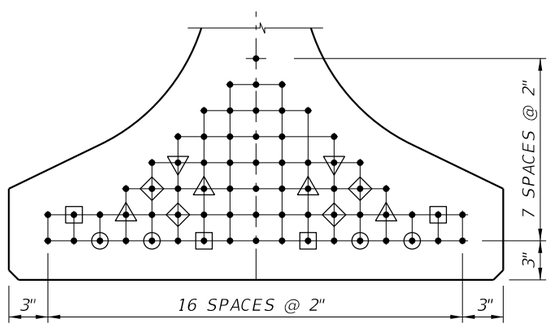
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

FLORIDA-I BEAM - TABLE OF BEAM VARIABLES

Table Date 01-01-16

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL															
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE Ø		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3	5K	NO. OF SPACES BARS 5K				SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	S1	S2	S3	S4	V1
3	1	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	162'-2 5/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	144	250	37	20	20	12	6"
3	2	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	161'-8 3/16"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
3	3	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	161'-2 1/8"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
3	4	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	160'-8 1/16"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
3	5	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	160'-2"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
3	6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	159'-7 15/16"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
4	1	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	162'-2 5/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	144	250	37	20	20	12	6"
4	2	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	161'-8 3/16"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
4	3	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	161'-2 1/8"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
4	4	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	160'-8 1/16"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
4	5	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	160'-2"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
4	6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	159'-7 15/16"	2"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
5	1	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	163'-3 3/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	146	248	35	20	20	13	6"
5	2	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	163'-1 5/8"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	146	248	35	20	20	13	6"
5	3	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	163'-0 1/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	146	248	35	20	20	13	6"
5	4	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	162'-10 9/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	144	248	35	20	20	13	6"
5	5	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	162'-9"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	144	248	35	20	20	13	6"
5	6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3 1/16"	9"	11"	11"	162'-7 7/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	144	248	35	20	20	13	6"
6	1 - 6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	164'-11 5/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	148	252	37	20	20	13	6"
7	1 - 6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	164'-11 5/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	148	252	37	20	20	13	6"
8	1 - 6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	164'-11 5/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	148	252	37	20	20	13	6"
9	1 - 6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	3"	9"	11"	11"	164'-11 5/16"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	148	252	37	20	20	13	6"
10	1 - 6	84	VII	10,000	7,000	3	2	1	1	T1	T1	90°	90°	2 15/16"	9"	11"	11"	164'-11 1/4"	2 1/16"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	196	3'-8"	3'-8"	148	252	37	20	20	13	6"

NOTE: WORK THIS SHEET WITH STANDARD PLANS INDEX 450-010 AND THE APPLICABLE "FLORIDA-I BEAM STANDARD DETAILS" INDEX.



TYPE (3) 70 STRANDS

STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270 LOW-RELAXATION CARBON STEEL STRANDS STRESSED AT 43.94 KIPS EACH. AREA PER STRAND EQUALS 0.217 SQ. IN.

STRAND PATTERNS

STRAND DEBONDING LEGEND

- • - FULLY BONDED STRANDS.
- ⊙ - STRANDS DEBONDED 30'-0" FROM END OF BEAM.
- ⊡ - STRANDS DEBONDED 25'-0" FROM END OF BEAM.
- △ - STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◇ - STRANDS DEBONDED 10'-0" FROM END OF BEAM.
- ▽ - STRANDS DEBONDED 5'-0" FROM END OF BEAM.

DIMENSION NOTES

* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE CENTERLINE OF BEAM. DIMENSION "R" IS CALCULATED AT MID-HEIGHT OF THE BEAM.

** END BEAM BEARING DIMENSIONS "J" AND "K" ARE MEASURED PERPENDICULAR TO ℄ BEARING ALONG THE BOTTOM OF THE BEAM.

BEARING PLATES

*** SEE THE BEARING PLATE DATA TABLE ON SHEETS B1-187 & B1-188 FOR DETAILS.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FLORIDA-I BEAM TABLE OF BEAM VARIABLES [SPANS 1 - 10 & 14 - 19] (2 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-181

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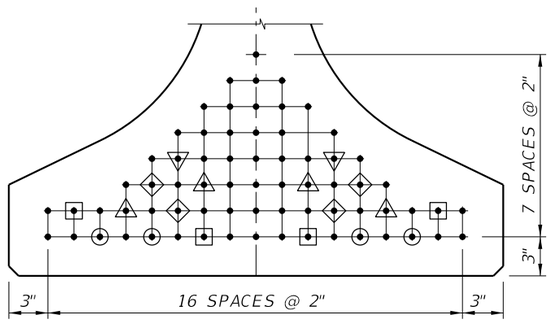
FLORIDA-I BEAM - TABLE OF BEAM VARIABLES

Table Date 01-01-16

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL															
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE Ø		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3	5K	NO. OF SPACES BARS 5K				SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	S1	S2	S3	S4	V1
14	1	84	VII	10,000	7,000	3	3	1	1	T2	T2	90°	90°	4⅛"	9"	11"	11"	161'-10 11/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	250	37	20	20	12	6"
14	2	84	VII	10,000	7,000	3	3	1	1	T2	T2	90°	90°	4⅛"	9"	11"	11"	161'-6½"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
14	3	84	VII	10,000	7,000	3	3	1	1	T2	T2	90°	90°	4⅛"	9"	11"	11"	161'-2 5/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
14	4	84	VII	10,000	7,000	3	3	1	1	T2	T2	90°	90°	4⅛"	9"	11"	11"	160'-10 3/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	248	36	20	20	12	6"
14	5	84	VII	10,000	7,000	3	3	1	1	T2	T2	90°	90°	4⅛"	9"	11"	11"	160'-6"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
14	6	84	VII	10,000	7,000	3	3	1	1	T2	T2	90°	90°	4 3/16"	9"	11"	11"	160'-1 13/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
15	1	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	161'-10¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	250	37	20	20	12	6"
15	2	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	161'-6 9/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
15	3	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	161'-2⅜"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
15	4	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	160'-10¼"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	248	36	20	20	12	6"
15	5	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	160'-6 1/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
15	6	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	160'-1⅞"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
16	1	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	161'-10¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	250	37	20	20	12	6"
16	2	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	161'-6 9/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
16	3	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	161'-2⅜"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
16	4	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	160'-10¼"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	248	36	20	20	12	6"
16	5	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	160'-6 1/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
16	6	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	11"	160'-1⅞"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
17	1	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-6 15/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	250	37	20	20	12	6"
17	2	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-4 7/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
17	3	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-2"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
17	4	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4¼"	9"	11"	10⅝"	160'-11½"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	248	36	20	20	12	6"
17	5	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4¼"	9"	11"	10⅝"	160'-9"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"
17	6	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4¼"	9"	11"	10⅝"	160'-6 9/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	142	246	35	20	20	12	6"

NOTE: WORK THIS SHEET WITH STANDARD PLANS INDEX 450-010 AND THE APPLICABLE "FLORIDA-I BEAM STANDARD DETAILS" INDEX.



TYPE (3) 70 STRANDS

STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270 LOW-RELAXATION CARBON STEEL STRANDS STRESSED AT 43.94 KIPS EACH. AREA PER STRAND EQUALS 0.217 SQ. IN.

STRAND PATTERNS

STRAND DEBONDING LEGEND

- • - FULLY BONDED STRANDS.
- ⊙ - STRANDS DEBONDED 30'-0" FROM END OF BEAM.
- ⊡ - STRANDS DEBONDED 25'-0" FROM END OF BEAM.
- △ - STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◇ - STRANDS DEBONDED 10'-0" FROM END OF BEAM.
- ▽ - STRANDS DEBONDED 5'-0" FROM END OF BEAM.

DIMENSION NOTES

* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE CENTERLINE OF BEAM. DIMENSION "R" IS CALCULATED AT MID-HEIGHT OF THE BEAM.

** END BEAM BEARING DIMENSIONS "J" AND "K" ARE MEASURED PERPENDICULAR TO ℄ BEARING ALONG THE BOTTOM OF THE BEAM.

BEARING PLATES

*** SEE THE BEARING PLATE DATA TABLE ON SHEET B1-188 FOR DETAILS.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FLORIDA-I BEAM TABLE OF BEAM VARIABLES [SPANS 1 - 10 & 14 - 19] (3 OF 4)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

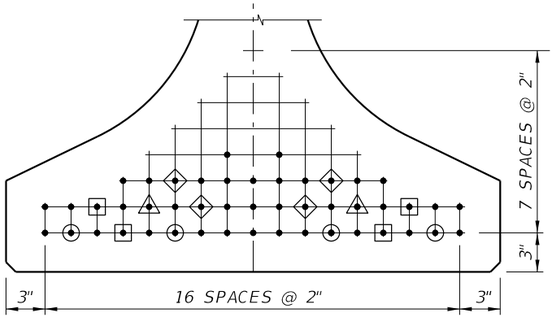
SHEET NO. B1-182

FLORIDA-I BEAM - TABLE OF BEAM VARIABLES

Table Date 01-01-16

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL															
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE Ø		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3	5K	NO. OF SPACES BARS 5K				SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	S1	S2	S3	S4	V1
18	1	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4¼"	9"	11"	10⅝"	161'-1⅜"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	2	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-0¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	3	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-0¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	4	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-0¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	5	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-0¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	6	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-0¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	7	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4 3/16"	9"	11"	10⅝"	161'-0¾"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
18	8	84	VII	10,000	7,000	3	3	1	1	T3	T3	90°	90°	4¼"	9"	11"	10⅝"	161'-1 3/16"	2"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	192	3'-8"	3'-8"	144	208	16	10	15	27	6"
19	1	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	2	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	3	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	4	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	5	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	6	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	7	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	8	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅜"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"
19	9	36	VII	10,000	7,000	1	3	1	1	T3	T3	90°	90°	1 13/16"	9"	10⅝"	1'-0½"	93'-0⅝"	1⅛"	1'-5½"	1'-5½"	8½"	1'-3"	8½"	1'-3"	116	3'-8"	3'-8"	86	154	31	20	5	4	6"

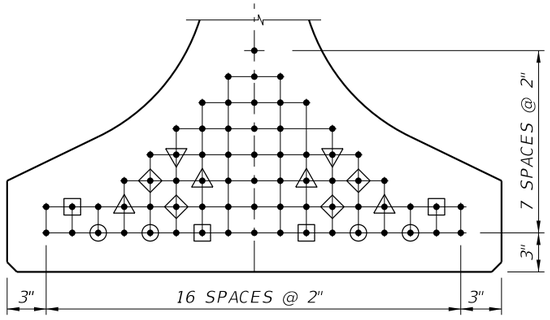
NOTE: WORK THIS SHEET WITH STANDARD PLANS INDEX 450-010 AND THE APPLICABLE "FLORIDA-I BEAM STANDARD DETAILS" INDEX.



TYPE (1) 47 STRANDS

STRAND DEBONDING LEGEND

- • – FULLY BONDED STRANDS.
- ⊙ – STRANDS DEBONDED 18'-0" FROM END OF BEAM.
- ⊡ – STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◬ – STRANDS DEBONDED 12'-0" FROM END OF BEAM.
- ◈ – STRANDS DEBONDED 9'-0" FROM END OF BEAM.



TYPE (3) 70 STRANDS

STRAND DEBONDING LEGEND

- • – FULLY BONDED STRANDS.
- ⊙ – STRANDS DEBONDED 30'-0" FROM END OF BEAM.
- ⊡ – STRANDS DEBONDED 25'-0" FROM END OF BEAM.
- ◬ – STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◈ – STRANDS DEBONDED 10'-0" FROM END OF BEAM.
- ▼ – STRANDS DEBONDED 5'-0" FROM END OF BEAM.

STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270 LOW-RELAXATION CARBON STEEL STRANDS STRESSED AT 43.94 KIPS EACH. AREA PER STRAND EQUALS 0.217 SQ. IN.

STRAND PATTERNS

DIMENSION NOTES

* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE CENTERLINE OF BEAM. DIMENSION "R" IS CALCULATED AT MID-HEIGHT OF THE BEAM.

** END BEAM BEARING DIMENSIONS "J" AND "K" ARE MEASURED PERPENDICULAR TO ℄ BEARING ALONG THE BOTTOM OF THE BEAM.

BEARING PLATES

*** SEE THE BEARING PLATE DATA TABLE ON SHEET B1-189 FOR DETAILS.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCV	JGH	LCV	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FLORIDA-I BEAM TABLE OF BEAM VARIABLES [SPANS 1 - 10 & 14 - 19] (4 OF 4)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

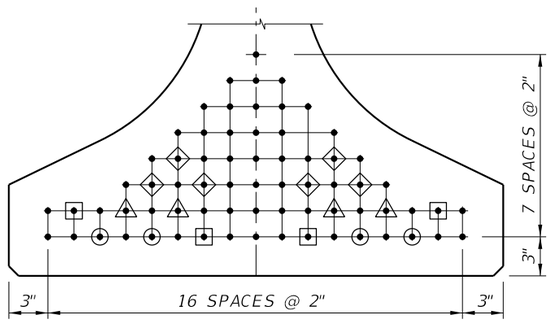
SHEET NO.: B1-183

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

FLORIDA-I BEAM - TABLE OF BEAM VARIABLES

Table Date 06-06-17

LOCATION		BEAM TYPE	CONCRETE PROPERTIES		STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL														
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)			END 1	END 2	END 1	END 2	ANGLE Ø		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3 ##	5K ****	NO. OF SPACES BARS 5K				SP. BARS 5K *
				28 DAY	RELEASE						END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	S1	S2	S3	S4	V1
11	11-1	84	VII	10000	7000	4	2	1	1	B1111	B1112	90 °	90 °	1 3/8"	9"	11"	15"	164'-6 3/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
11	11-2	84	VII	10000	7000	4	2	1	1	B1121	B1122	90 °	90 °	1 3/8"	9"	11"	15"	164'-6 3/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
11	11-3	84	VII	10000	7000	4	2	1	1	B1131	B1132	90 °	90 °	1 3/8"	9"	11"	15"	164'-6 3/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
11	11-4	84	VII	10000	7000	4	2	1	1	B1141	B1142	90 °	90 °	1 3/8"	9"	11"	15"	164'-6 3/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
11	11-5	84	VII	10000	7000	4	2	1	1	B1151	B1152	90 °	90 °	1 3/8"	9"	11"	15"	164'-6 3/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
11	11-6	84	VII	10000	7000	4	2	1	1	B1161	B1162	90 °	90 °	1 3/8"	9"	11"	15"	164'-6 3/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
12	12-1	84	VII	10000	7000	4	1	1	1	B1211	B1212	90 °	90 °	N/A	9"	15"	15"	164'-2 1/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
12	12-2	84	VII	10000	7000	4	1	1	1	B1221	B1222	90 °	90 °	N/A	9"	15"	15"	164'-2 1/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
12	12-3	84	VII	10000	7000	4	1	1	1	B1231	B1232	90 °	90 °	N/A	9"	15"	15"	164'-2 1/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
12	12-4	84	VII	10000	7000	4	1	1	1	B1241	B1242	90 °	90 °	N/A	9"	15"	15"	164'-2 1/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
12	12-5	84	VII	10000	7000	4	1	1	1	B1251	B1252	90 °	90 °	N/A	9"	15"	15"	164'-2 1/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
12	12-6	84	VII	10000	7000	4	1	1	1	B1261	B1262	90 °	90 °	N/A	9"	15"	15"	164'-2 1/8"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
13	13-1	84	VII	10000	7000	4	3	1	1	B1311	B1312	90 °	90 °	2 1/2"	9"	15"	11"	165'-1 1/4"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
13	13-2	84	VII	10000	7000	4	3	1	1	B1321	B1322	90 °	90 °	2 1/2"	9"	15"	11"	164'-10 3/4"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
13	13-3	84	VII	10000	7000	4	3	1	1	B1331	B1332	90 °	90 °	2 1/2"	9"	15"	11"	164'-8 1/4"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
13	13-4	84	VII	10000	7000	4	3	1	1	B1341	B1342	90 °	90 °	2 1/2"	9"	15"	11"	164'-5 3/4"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
13	13-5	84	VII	10000	7000	4	3	1	1	B1351	B1352	90 °	90 °	2 5/8"	9"	15"	11"	164'-3 1/4"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	16	28	6"
13	13-6	84	VII	10000	7000	4	3	1	1	B1361	B1362	90 °	90 °	2 5/8"	9"	15"	11"	164'-0 3/4"	2 1/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	194	3'-8"	3'-8"	146	210	15	10	17	27	6"



TYPE (4) 70 STRANDS

STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270 LOW-RELAXATION CARBON STEEL STRANDS STRESSED AT 43.94 KIPS EACH. AREA PER STRAND EQUALS 0.217 SQ. IN.

STRAND PATTERNS

STRAND DEBONDING LEGEND

- • - FULLY BONDED STRANDS.
- ⊙ - STRANDS DEBONDED 10'-0" FROM END OF BEAM.
- ⊡ - STRANDS DEBONDED 15'-0" FROM END OF BEAM.
- ◬ - STRANDS DEBONDED 20'-0" FROM END OF BEAM.
- ◈ - STRANDS DEBONDED 25'-0" FROM END OF BEAM.

DIMENSION NOTES

* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE CENTERLINE OF BEAM. DIMENSION "R" IS CALCULATED AT MID-HEIGHT OF THE BEAM.

** END BEAM BEARING DIMENSIONS "J" AND "K" ARE MEASURED PERPENDICULAR TO ℄ BEARING ALONG THE BOTTOM OF THE BEAM.

BEARING PLATES

*** SEE THE BEARING PLATE DATA TABLES ON SHEET B1-192 FOR DETAILS.

5K BARS

**** SEE SHEET B1-190 FOR HEIGHT OF 5K BARS.

NOTE: WORK THIS SHEET WITH DESIGN STANDARDS INDEX NO. 450-010 AND THE APPLICABLE "FLORIDA-I BEAM STANDARD DETAILS" INDEX.

BEAMS MUST BE A MINIMUM OF 90 DAYS OLD WHEN THE DECK IS CAST.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FLORIDA-I BEAM TABLE OF BEAM VARIABLES [SPANS 11-13]

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-184

BUILD-UP & DEFLECTION DATA TABLE FOR PRESTRESSED I-BEAMS

Table Date 07/01/17

LOCATION		REQUIRED THEORETICAL BUILD-UP OVER ℄ BEAM			NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ RELEASE	NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ 120 DAYS	DEAD LOAD DEFLECTION DURING DECK POUR @ 120 DAYS DIM A	BUILD-UP CASE NO.
SPAN NO.	BEAM NO.	AT BEGIN SPAN DIM B	AT ℄ SPAN DIM C	AT END SPAN DIM D				
1	1	3 3/8"	1"	3 3/8"	2"	4 3/16"	1 7/8"	3
1	2	3 3/8"	1 5/16"	3 3/8"	2"	4 3/16"	2 1/4"	3
1	3	3 3/8"	1 3/8"	3 3/8"	2"	4 3/16"	2 1/4"	3
1	4	3 3/8"	1 3/16"	3 3/8"	2"	4 3/16"	2 1/8"	3
1	5	3 3/8"	1 5/16"	3 3/8"	2"	4 3/16"	2 1/16"	3
1	6	3 3/8"	1 9/16"	3 3/8"	2"	4 3/16"	2 5/16"	3
1	7	3 3/8"	1 3/4"	3 3/8"	2"	4 3/16"	2 1/2"	3
1	8	3 3/8"	1 3/8"	3 3/8"	2"	4 1/4"	2 1/8"	3
2	1	2 3/8"	1 1/4"	2 3/8"	1 13/16"	3 13/16"	2 9/16"	3
2	2	2 3/8"	1 5/16"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	3	2 3/8"	1 5/16"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	4	2 3/8"	1 5/16"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	5	2 3/8"	1 1/8"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	6	2 3/8"	1"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	7	2 3/8"	1"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	8	2 3/8"	1"	2 3/8"	1 13/16"	3 13/16"	2 5/8"	3
2	9	2 3/8"	1"	2 3/8"	1 13/16"	3 13/16"	2 9/16"	3
3	1	3 9/16"	1 3/8"	3 9/16"	2 5/8"	5 5/8"	3 3/16"	3
3	2	3 9/16"	2 1/16"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
3	3	3 9/16"	2 1/16"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
3	4	3 9/16"	1 5/8"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
3	5	3 9/16"	1 5/8"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
3	6	3 9/16"	1"	3 9/16"	2 5/8"	5 5/8"	3 3/16"	3
4	1	3 9/16"	1 3/8"	3 9/16"	2 5/8"	5 5/8"	3 3/16"	3
4	2	3 9/16"	2 1/16"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
4	3	3 9/16"	2 1/16"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
4	4	3 9/16"	1 5/8"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
4	5	3 9/16"	1 5/8"	3 9/16"	2 5/8"	5 5/8"	3 7/8"	3
4	6	3 9/16"	1"	3 9/16"	2 5/8"	5 5/8"	3 3/16"	3
5	1	3 9/16"	1 5/16"	3 5/16"	2 5/8"	5 5/8"	3 5/16"	3
5	2	3 9/16"	2"	3 5/16"	2 5/8"	5 5/8"	4"	3
5	3	3 9/16"	2"	3 5/16"	2 5/8"	5 5/8"	4"	3
5	4	3 9/16"	1 15/16"	3 5/16"	2 5/8"	5 5/8"	4"	3
5	5	3 9/16"	1 15/16"	3 5/16"	2 5/8"	5 5/8"	4"	3
5	6	3 9/16"	1 1/4"	3 5/16"	2 5/8"	5 5/8"	3 5/16"	3
6	1	3 5/16"	1 1/8"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
6	2-5	3 5/16"	1 7/8"	3 1/8"	2 5/8"	5 5/8"	4 3/16"	3
6	6	3 5/16"	1 1/8"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3

NOTE: WORK THIS TABLE WITH STANDARD PLANS INDEX 450-199.

BUILD-UP & DEFLECTION DATA TABLE FOR PRESTRESSED I-BEAMS

Table Date 07/01/17

LOCATION		REQUIRED THEORETICAL BUILD-UP OVER ℄ BEAM			NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ RELEASE	NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ 120 DAYS	DEAD LOAD DEFLECTION DURING DECK POUR @ 120 DAYS DIM A	BUILD-UP CASE NO.
SPAN NO.	BEAM NO.	AT BEGIN SPAN DIM B	AT ℄ SPAN DIM C	AT END SPAN DIM D				
7	1	3 1/8"	1"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
7	2-5	3 1/8"	1 11/16"	3 1/8"	2 5/8"	5 5/8"	4 3/16"	3
7	6	3 1/8"	1"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
8	1	3 1/8"	1"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
8	2-5	3 1/8"	1 11/16"	3 1/8"	2 5/8"	5 5/8"	4 3/16"	3
8	6	3 1/8"	1"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
9	1	3 1/8"	1"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
9	2-5	3 1/8"	1 11/16"	3 1/8"	2 5/8"	5 5/8"	4 3/16"	3
9	6	3 1/8"	1"	3 1/8"	2 5/8"	5 5/8"	3 7/16"	3
10	1	3 1/8"	2 1/2"	1 5/8"	2 5/8"	5 5/8"	3 7/16"	4
10	2-5	3 1/8"	3 3/16"	1 5/8"	2 5/8"	5 5/8"	4 3/16"	4
10	6	3 1/8"	2 1/2"	1 5/8"	2 5/8"	5 5/8"	3 7/16"	4
14	1	2 5/16"	1 1/4"	3 1/2"	2 5/8"	5 5/8"	3 3/16"	3
14	2	2 5/16"	1 15/16"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
14	3	2 5/16"	1 15/16"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
14	4	2 5/16"	1 5/8"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
14	5	2 5/16"	1 5/8"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
14	6	2 5/16"	1"	3 1/2"	2 5/8"	5 5/8"	3 3/16"	3
15	1	3 1/2"	1 1/4"	3 1/2"	2 5/8"	5 5/8"	3 3/16"	3
15	2	3 1/2"	1 15/16"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
15	3	3 1/2"	1 15/16"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
15	4	3 1/2"	1 5/8"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
15	5	3 1/2"	1 5/8"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
15	6	3 1/2"	1"	3 1/2"	2 5/8"	5 5/8"	3 3/16"	3
16	1	3 1/2"	1 1/4"	3 1/2"	2 5/8"	5 5/8"	3 3/16"	3
16	2	3 1/2"	1 15/16"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
16	3	3 1/2"	1 15/16"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
16	4	3 1/2"	1 5/8"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
16	5	3 1/2"	1 5/8"	3 1/2"	2 5/8"	5 5/8"	3 7/8"	3
16	6	3 1/2"	1"	3 1/2"	2 5/8"	5 5/8"	3 3/16"	3
17	1	3 1/2"	1 3/16"	4 1/8"	2 5/8"	5 5/8"	3 3/16"	3
17	2	3 1/2"	1 7/8"	4 1/8"	2 5/8"	5 5/8"	3 7/8"	3
17	3	3 1/2"	1 7/8"	4 1/8"	2 5/8"	5 5/8"	3 7/8"	3
17	4	3 1/2"	1 11/16"	4 1/8"	2 5/8"	5 5/8"	3 7/8"	3
17	5	3 1/2"	1 11/16"	4 1/8"	2 5/8"	5 5/8"	3 7/8"	3
17	6	3 1/2"	1"	4 1/8"	2 5/8"	5 5/8"	3 3/16"	3

NOTE: WORK THIS TABLE WITH STANDARD PLANS INDEX 450-199.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCV
CHECKED BY: JGH
DESIGNED BY: LCV
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLES [SPANS 1 - 10 & 14 - 19] (1 OF 5)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-185

BUILD-UP & DEFLECTION DATA TABLE FOR PRESTRESSED I-BEAMS

Table Date 07/01/17

LOCATION		REQUIRED THEORETICAL BUILD-UP OVER ℄ BEAM			NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ RELEASE	NET BEAM CAMBER (PRESTRESS - DEAD LOAD OF BEAM) @ 120 DAYS	DEAD LOAD DEFLECTION DURING DECK POUR @ 120 DAYS DIM A	BUILD-UP CASE NO.
SPAN NO.	BEAM NO.	AT BEGIN SPAN DIM B	AT ℄ SPAN DIM C	AT END SPAN DIM D				
18	1	4 1/8"	1 1/8"	4 1/8"	2 5/8"	5 5/8"	2 9/16"	3
18	2	4 1/8"	1 7/16"	4 1/8"	2 5/8"	5 5/8"	2 7/8"	3
18	3	4 1/8"	1 11/16"	4 1/8"	2 5/8"	5 5/8"	3 3/16"	3
18	4	4 1/8"	1 11/16"	4 1/8"	2 5/8"	5 5/8"	3 3/16"	3
18	5	4 1/8"	1 1/2"	4 1/8"	2 5/8"	5 5/8"	3"	3
18	6	4 1/8"	1 5/16"	4 1/8"	2 5/8"	5 5/8"	2 13/16"	3
18	7	4 1/8"	1 1/4"	4 1/8"	2 5/8"	5 5/8"	2 11/16"	3
18	8	4 1/8"	1"	4 1/8"	2 5/8"	5 5/8"	2 7/16"	3
19	1	3"	1"	3"	2 1/16"	4 1/4"	2 3/8"	3
19	2	3"	1 5/16"	3"	2 1/16"	4 1/4"	2 11/16"	3
19	3	3"	1 7/16"	3"	2 1/16"	4 1/4"	2 13/16"	3
19	4	3"	1 7/16"	3"	2 1/16"	4 1/4"	2 13/16"	3
19	5	3"	1 1/4"	3"	2 1/16"	4 1/4"	2 5/8"	3
19	6	3"	1 1/16"	3"	2 1/16"	4 1/4"	2 3/8"	3
19	7	3"	1 1/16"	3"	2 1/16"	4 1/4"	2 3/8"	3
19	8	3"	1 1/16"	3"	2 1/16"	4 1/4"	2 7/16"	3
19	9	3"	1"	3"	2 1/16"	4 1/4"	2 5/16"	3

NOTE: WORK THIS TABLE WITH STANDARD PLANS INDEX 450-199.

BEARING PAD DATA TABLE

Table Date 7-01-13

SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM TYPE	BEAM END *
1	1 - 8	E	FLORIDA-I 36	1 & 2
2	1 - 9	E	FLORIDA-I 63	1 & 2
3	1 - 6	H	FLORIDA-I 84	1 & 2
4	1 - 6	H	FLORIDA-I 84	1 & 2
5	1 - 6	H	FLORIDA-I 84	1 & 2
6	1 - 6	H	FLORIDA-I 84	1 & 2
7	1 - 6	H	FLORIDA-I 84	1 & 2
8	1 - 6	H	FLORIDA-I 84	1 & 2
9	1 - 6	H	FLORIDA-I 84	1 & 2
10	1 - 6	H	FLORIDA-I 84	1 & 2
14	1 - 6	H	FLORIDA-I 84	1 & 2
15	1 - 6	H	FLORIDA-I 84	1 & 2
16	1 - 6	H	FLORIDA-I 84	1 & 2
17	1 - 6	H	FLORIDA-I 84	1 & 2
18	1 - 8	H	FLORIDA-I 84	1 & 2
19	1 - 9	E	FLORIDA-I 36	1 & 2

NOTE: WORK THIS TABLE WITH INDEX 400-510 FOR PAD TYPES AA, AB, D, E, F, G, H, J & K, AND/OR ANY PROJECT SPECIFIC BEARING PADS.

* END 1 = BEGIN BRIDGE END OF BEAM (BACK STATION).
END 2 = END BRIDGE END OF BEAM (AHEAD STATION).

POURED EXPANSION JOINT DATA TABLE INDEX 458-110

Table Date 1-01-09

LOCATION	DIM. "A" @ 70°F	TOTAL DESIGN MOVEMENT	DIM. "A" ADJUSTMENT PER 10°F
END BENT 1	1.75"	0.69"	0.082"
PIER 3	1.75"	1.66"	0.198"
PIER 18	1.75"	1.74"	0.207"
END BENT 20	1.75"	0.77"	0.092"

NOTE:
DIM. "A" ADJUSTMENT PER 10°F SHOWN IS MEASURED PERPENDICULAR TO ℄ EXPANSION JOINT. WORK THIS TABLE WITH STANDARD PLANS INDEX 458-110.

COVER PLATE OVER DECK OPEN JOINTS ARE REQUIRED ON SIDEWALKS.

STRIP SEAL EXPANSION JOINT DATA TABLE INDEX 458-100

Table Date 01/01/12

LOCATION	TOTAL DESIGN MOVEMENT			MOVEMENT ANGLE α	SKEW ANGLE		DIM. A @ 70°F	DIM. A ADJUSTMENT PER 10°F
	IN DIRECTION OF MOVEMENT	PERPENDICULAR TO ℄ JOINT	PARALLEL TO ℄ JOINT		LEFT SIDE	RIGHT SIDE		
PIER 5	1.97"	1.97"	0"	--	0	0	2.00"	0.234"
PIER 7	1.99"	1.99"	0"	--	0	0	2.00"	0.237"
PIER 9	2.00"	2.00"	0"	--	0	0	2.00"	0.238"
PIER 16	1.95"	1.95"	0"	--	0	0	2.00"	0.232"

NOTE:
DIM. A ADJUSTMENT PER 10°F SHOWN IS MEASURED PERPENDICULAR TO ℄ EXPANSION JOINT. FOR THEORETICAL DIRECTION OF MOVEMENT, SEE INDEX 458-100, SHEET 1.

COVER PLATE OVER DECK OPEN JOINTS ARE REQUIRED ON SIDEWALKS.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLES [SPANS 1 - 10 & 14 - 19] (2 OF 5)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

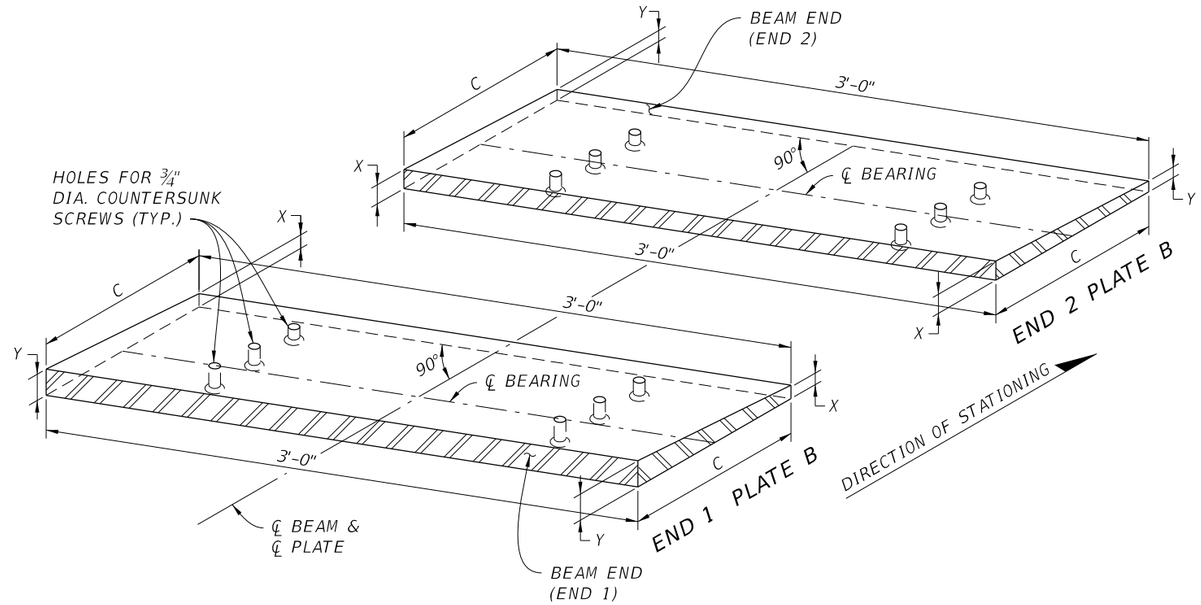
SHEET NO. B1-186

BEARING PLATE DATA TABLE - TYPE 2

Table Date 7-01-13

GENERAL BEARING PLATE DATA							BEVELED PLATE REQUIRED (YES/NO)	BEVELED PLATE DIMENSIONS (PLATE B) (INCHES)					
								BEGIN SPAN (END 1)			END SPAN (END 2)		
BRG. PLATE MARK **	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) *		C	X	Y	C	X	Y
T1	1	1	E	1 & 2	1	3.628	YES	12	15/16	1/2	12	1/2	15/16
T1	1	2	E	1 & 2	1	3.620	YES	12	15/16	1/2	12	1/2	15/16
T1	1	3	E	1 & 2	1	3.611	YES	12	15/16	1/2	12	1/2	15/16
T1	1	4	E	1 & 2	1	3.602	YES	12	15/16	1/2	12	1/2	15/16
T1	1	5	E	1 & 2	1	3.532	YES	12	15/16	1/2	12	1/2	15/16
T1	1	6	E	1 & 2	1	3.586	YES	12	15/16	1/2	12	1/2	15/16
T1	1	7	E	1 & 2	1	3.577	YES	12	15/16	1/2	12	1/2	15/16
T1	1	8	E	1 & 2	1	3.568	YES	12	15/16	1/2	12	1/2	15/16
T1	2	1	E	1 & 2	1	3.570	YES	12	15/16	1/2	12	1/2	15/16
T1	2	2	E	1 & 2	1	3.576	YES	12	15/16	1/2	12	1/2	15/16
T1	2	3	E	1 & 2	1	3.583	YES	12	15/16	1/2	12	1/2	15/16
T1	2	4	E	1 & 2	1	3.591	YES	12	15/16	1/2	12	1/2	15/16
T1	2	5	E	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	2	6	E	1 & 2	1	3.605	YES	12	15/16	1/2	12	1/2	15/16
T1	2	7	E	1 & 2	1	3.612	YES	12	15/16	1/2	12	1/2	15/16
T1	2	8	E	1 & 2	1	3.620	YES	12	15/16	1/2	12	1/2	15/16
T1	2	9	E	1 & 2	1	3.627	YES	12	15/16	1/2	12	1/2	15/16
T1	3	1	H	1 & 2	1	3.570	YES	12	15/16	1/2	12	1/2	15/16
T1	3	2	H	1 & 2	1	3.582	YES	12	15/16	1/2	12	1/2	15/16
T1	3	3	H	1 & 2	1	3.593	YES	12	15/16	1/2	12	1/2	15/16
T1	3	4	H	1 & 2	1	3.604	YES	12	15/16	1/2	12	1/2	15/16
T1	3	5	H	1 & 2	1	3.615	YES	12	15/16	1/2	12	1/2	15/16
T1	3	6	H	1 & 2	1	3.627	YES	12	15/16	1/2	12	1/2	15/16
T1	4	1	H	1 & 2	1	3.570	YES	12	15/16	1/2	12	1/2	15/16
T1	4	2	H	1 & 2	1	3.582	YES	12	15/16	1/2	12	1/2	15/16
T1	4	3	H	1 & 2	1	3.593	YES	12	15/16	1/2	12	1/2	15/16
T1	4	4	H	1 & 2	1	3.604	YES	12	15/16	1/2	12	1/2	15/16
T1	4	5	H	1 & 2	1	3.615	YES	12	15/16	1/2	12	1/2	15/16
T1	4	6	H	1 & 2	1	3.627	YES	12	15/16	1/2	12	1/2	15/16

NOTES:
SEE INDEX 450-512 FOR ADDITIONAL NOTES AND DETAILS.
EMBEDDED BEARING PLATE A DIMENSIONS ARE 1/2" X 1'-1 1/2" X 3'-0" FOR FLORIDA-I BEAMS.
* SLOPE MEASURED ALONG ℄ OF BEAM AT ℄ OF BEARING.
** SEE "TABLE OF BEAM VARIABLES" AND INDEX 450-010 FOR FLORIDA-I BEAMS.



ISOMETRIC VIEW OF BEVELED BEARING PLATES (TYPE 2) FOR FLORIDA I-BEAMS

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLES [SPANS 1 - 10 & 14 - 19] (3 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-187

BEARING PLATE DATA TABLE - TYPE 2

Table Date 7-01-13

GENERAL BEARING PLATE DATA							BEVELED PLATE REQUIRED (YES/NO)	BEVELED PLATE DIMENSIONS (PLATE B) (INCHES)					
								BEGIN SPAN (END 1)			END SPAN (END 2)		
BRG. PLATE MARK **	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) *		C	X	Y	C	X	Y
T1	5	1	H	1 & 2	1	3.591	YES	12	15/16	1/2	12	1/2	15/16
T1	5	2	H	1 & 2	1	3.594	YES	12	15/16	1/2	12	1/2	15/16
T1	5	3	H	1 & 2	1	3.597	YES	12	15/16	1/2	12	1/2	15/16
T1	5	4	H	1 & 2	1	3.599	YES	12	15/16	1/2	12	1/2	15/16
T1	5	5	H	1 & 2	1	3.602	YES	12	15/16	1/2	12	1/2	15/16
T1	5	6	H	1 & 2	1	3.605	YES	12	15/16	1/2	12	1/2	15/16
T1	6	1	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	6	2	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	6	3	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	6	4	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	6	5	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	6	6	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	7	1	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	7	2	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	7	3	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	7	4	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	7	5	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	7	6	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	8	1	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	8	2	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	8	3	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	8	4	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	8	5	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	8	6	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	9	1	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	9	2	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	9	3	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	9	4	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	9	5	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16
T1	9	6	H	1 & 2	1	3.598	YES	12	15/16	1/2	12	1/2	15/16

NOTES:
SEE INDEX 450-512 FOR ADDITIONAL NOTES AND DETAILS.
EMBEDDED BEARING PLATE A DIMENSIONS ARE 1/2" X 1'-1 1/2" X 3'-0" FOR FLORIDA-I BEAMS.
* SLOPE MEASURED ALONG ℄ OF BEAM AT ℄ OF BEARING.
** SEE "TABLE OF BEAM VARIABLES" AND INDEX 450-010 FOR FLORIDA-I BEAMS.

BEARING PLATE DATA TABLE - TYPE 2

Table Date 7-01-13

GENERAL BEARING PLATE DATA							BEVELED PLATE REQUIRED (YES/NO)	BEVELED PLATE DIMENSIONS (PLATE B) (INCHES)					
								BEGIN SPAN (END 1)			END SPAN (END 2)		
BRG. PLATE MARK **	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) *		C	X	Y	C	X	Y
T1	10	1	H	1 & 2	1	3.443	YES	12	15/16	1/2	12	1/2	15/16
T1	10	2	H	1 & 2	1	3.443	YES	12	15/16	1/2	12	1/2	15/16
T1	10	3	H	1 & 2	1	3.443	YES	12	15/16	1/2	12	1/2	15/16
T1	10	4	H	1 & 2	1	3.443	YES	12	15/16	1/2	12	1/2	15/16
T1	10	5	H	1 & 2	1	3.443	YES	12	15/16	1/2	12	1/2	15/16
T1	10	6	H	1 & 2	1	3.443	YES	12	15/16	1/2	12	1/2	15/16
T2	14	1	H	1 & 2	1	-4.848	YES	12	1/2	1 1/16	12	1 1/16	1/2
T2	14	2	H	1 & 2	1	-4.858	YES	12	1/2	1 1/16	12	1 1/16	1/2
T2	14	3	H	1 & 2	1	-4.869	YES	12	1/2	1 1/16	12	1 1/16	1/2
T2	14	4	H	1 & 2	1	-4.880	YES	12	1/2	1 1/16	12	1 1/16	1/2
T2	14	5	H	1 & 2	1	-4.890	YES	12	1/2	1 1/16	12	1 1/16	1/2
T2	14	6	H	1 & 2	1	-4.901	YES	12	1/2	1 1/16	12	1 1/16	1/2
T3	15	1	H	1 & 2	1	-4.973	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	15	2	H	1 & 2	1	-4.984	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	15	3	H	1 & 2	1	-4.995	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	15	4	H	1 & 2	1	-5.006	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	15	5	H	1 & 2	1	-5.017	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	15	6	H	1 & 2	1	-5.028	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	16	1	H	1 & 2	1	-4.973	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	16	2	H	1 & 2	1	-4.984	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	16	3	H	1 & 2	1	-4.995	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	16	4	H	1 & 2	1	-5.006	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	16	5	H	1 & 2	1	-5.017	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	16	6	H	1 & 2	1	-5.028	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	17	1	H	1 & 2	1	-4.984	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	17	2	H	1 & 2	1	-4.990	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	17	3	H	1 & 2	1	-4.997	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	17	4	H	1 & 2	1	-5.003	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	17	5	H	1 & 2	1	-5.010	YES	12	1/2	1 1/8	12	1 1/8	1/2
T3	17	6	H	1 & 2	1	-5.016	YES	12	1/2	1 1/8	12	1 1/8	1/2

NOTES:
SEE INDEX 450-512 FOR ADDITIONAL NOTES AND DETAILS.
EMBEDDED BEARING PLATE A DIMENSIONS ARE 1/2" X 1'-1 1/2" X 3'-0" FOR FLORIDA-I BEAMS.
* SLOPE MEASURED ALONG ℄ OF BEAM AT ℄ OF BEARING.
** SEE "TABLE OF BEAM VARIABLES" AND INDEX 450-010 FOR FLORIDA-I BEAMS.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLES [SPANS 1 - 10 & 14 - 19] (4 OF 5)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-188

BEARING PLATE DATA TABLE - TYPE 2

Table Date 7-01-13

GENERAL BEARING PLATE DATA							BEVELED PLATE REQUIRED (YES/NO)	BEVELED PLATE DIMENSIONS (PLATE B) (INCHES)					
								BEGIN SPAN (END 1)			END SPAN (END 2)		
BRG. PLATE MARK **	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) *		C	X	Y	C	X	Y
T3	18	1	H	1 & 2	1	-5.049	YES	12	½	1⅛	12	1⅛	½
T3	18	2	H	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	18	3	H	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	18	4	H	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	18	5	H	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	18	6	H	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	18	7	H	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	18	8	H	1 & 2	1	-5.040	YES	12	½	1⅛	12	1⅛	½
T3	19	1	E	1 & 2	1	-5.044	YES	12	½	1⅛	12	1⅛	½
T3	19	2	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	3	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	4	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	5	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	6	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	7	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	8	E	1 & 2	1	-5.000	YES	12	½	1⅛	12	1⅛	½
T3	19	9	E	1 & 2	1	-5.044	YES	12	½	1⅛	12	1⅛	½

NOTES:
SEE INDEX 450-512 FOR ADDITIONAL NOTES AND DETAILS.
EMBEDDED BEARING PLATE A DIMENSIONS ARE ½" X 1'-1½" X 3'-0" FOR FLORIDA-I BEAMS.
* SLOPE MEASURED ALONG ℄ OF BEAM AT ℄ OF BEARING.
** SEE "TABLE OF BEAM VARIABLES" AND INDEX 450-010 FOR FLORIDA-I BEAMS.

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLES [SPANS 1 - 10 & 14 - 19] (5 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-189

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLE [SPANS 11-13] (1 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-190

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	SL
CHECKED BY:	JTM
DESIGNED BY:	RMD
CHECKED BY:	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE:
SUPERSTRUCTURE DATA TABLE [SPANS 11-13] (2 OF 3)

REF. DWG. NO.

PROJECT NAME:
SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.
B1-191

BEARING PLATE DATA TABLE - TYPE 2

Table Date 7-01-13

GENERAL BEARING PLATE DATA							BEVELED PLATE REQUIRED (YES/NO)	BEVELED PLATE DIMENSIONS (PLATE B) (INCHES)		
BRG. PLATE MARK **	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) *		C	X	Y
B1111	11	11-1	G	1	1	1.57	YES	12"	11/16"	1/2"
B1112	11	11-1	G	2	1	1.57	YES	12"	1/2"	11/16"
B1121	11	11-2	G	1	1	1.57	YES	12"	11/16"	1/2"
B1122	11	11-2	G	2	1	1.57	YES	12"	1/2"	11/16"
B1131	11	11-3	G	1	1	1.57	YES	12"	11/16"	1/2"
B1132	11	11-3	G	2	1	1.57	YES	12"	1/2"	11/16"
B1141	11	11-4	G	1	1	1.57	YES	12"	11/16"	1/2"
B1142	11	11-4	G	2	1	1.57	YES	12"	1/2"	11/16"
B1151	11	11-5	G	1	1	1.57	YES	12"	11/16"	1/2"
B1152	11	11-5	G	2	1	1.57	YES	12"	1/2"	11/16"
B1161	11	11-6	G	1	1	1.57	YES	12"	11/16"	1/2"
B1162	11	11-6	G	2	1	1.57	YES	12"	1/2"	11/16"
B1211	12	12-1	G	1	1	-0.74	YES	12"	1/2"	9/16"
B1212	12	12-1	G	2	1	-0.74	YES	12"	9/16"	1/2"
B1221	12	12-2	G	1	1	-0.74	YES	12"	1/2"	9/16"
B1222	12	12-2	G	2	1	-0.74	YES	12"	9/16"	1/2"
B1231	12	12-3	G	1	1	-0.74	YES	12"	1/2"	9/16"
B1232	12	12-3	G	2	1	-0.74	YES	12"	9/16"	1/2"
B1241	12	12-4	G	1	1	-0.74	YES	12"	1/2"	9/16"
B1242	12	12-4	G	2	1	-0.74	YES	12"	9/16"	1/2"
B1251	12	12-5	G	1	1	-0.74	YES	12"	1/2"	9/16"
B1252	12	12-5	G	2	1	-0.74	YES	12"	9/16"	1/2"
B1261	12	12-6	G	1	1	-0.74	YES	12"	1/2"	9/16"
B1262	12	12-6	G	2	1	-0.74	YES	12"	9/16"	1/2"
B1311	13	13-1	G	1	1	-3.04	YES	12"	1/2"	7/8"
B1312	13	13-1	G	2	1	-3.04	YES	12"	7/8"	1/2"
B1321	13	13-2	G	1	1	-3.04	YES	12"	1/2"	7/8"
B1322	13	13-2	G	2	1	-3.04	YES	12"	7/8"	1/2"
B1331	13	13-3	G	1	1	-3.04	YES	12"	1/2"	7/8"
B1332	13	13-3	G	2	1	-3.04	YES	12"	7/8"	1/2"
B1341	13	13-4	G	1	1	-3.05	YES	12"	1/2"	7/8"
B1342	13	13-4	G	2	1	-3.05	YES	12"	7/8"	1/2"
B1351	13	13-5	G	1	1	-3.05	YES	12"	1/2"	7/8"
B1352	13	13-5	G	2	1	-3.05	YES	12"	7/8"	1/2"
B1361	13	13-6	G	1	1	-3.06	YES	12"	1/2"	7/8"
B1362	13	13-6	G	2	1	-3.06	YES	12"	7/8"	1/2"

NOTES:

SEE INDEX NO. 450-512 FOR ADDITIONAL NOTES AND DETAILS.

EMBEDDED BEARING PLATE A DIMENSIONS ARE 1/2" X 1'-1 1/2" X 3'-0"

* SLOPE MEASURED ALONG ℄ OF BEAM AT ℄ OF BEARING.

** SEE "TABLE OF BEAM VARIABLES" ON SHEET B1-184 AND INDEX NO. 450-010.

STRIP SEAL EXPANSION JOINT DATA TABLE INDEX NO. 458-100

Table Date 01/01/12

LOCATION	TOTAL DESIGN MOVEMENT			MOVEMENT ANGLE α	SKEW ANGLE		DIM. "A" @ 70 °F	DIM. "A" ADJUSTMENT PER 10 °F
	IN DIRECTION OF MOVEMENT	PERPENDICULAR TO ℄ JOINT	PARALLEL TO ℄ JOINT		LEFT SIDE	RIGHT SIDE		
PIER 11	2.917	2.917	-	0.00	0° 00' 00"	0° 00' 00"	2"	0.297"
PIER 14	2.891	2.891	-	0.15	0° 00' 00"	0° 00' 00"	2"	0.294"

NOTES:

DIM. A ADJUSTMENT PER 10 °F SHOWN IS MEASURED PERPENDICULAR TO ℄ EXPANSION JOINT

WORK THIS TABLE WITH INDEX NO. 458-100.

BEARING PAD DATA TABLE

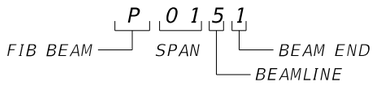
Table Date 7-01-13

SPAN NO (s)	BEAM NO (s)	PAD TYPE	BEAM TYPE	BEAM END #
11 THRU 13	1 THRU 6	G	FIB 84	1 & 2

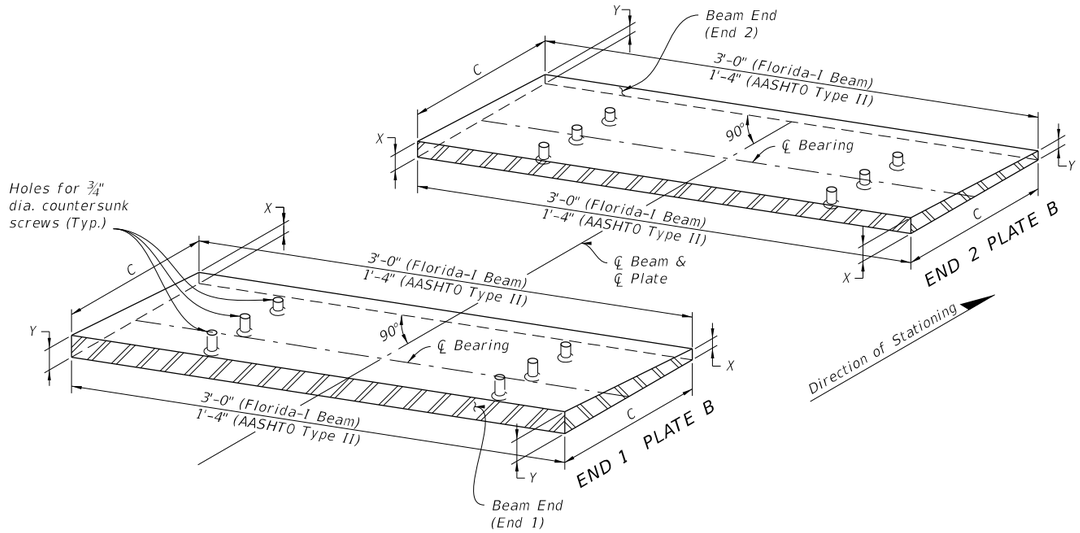
NOTE:

WORK THIS TABLE WITH INDEX NO. 400-510 FOR PAD TYPE G

END 1 = BEGIN BRIDGE END OF BEAM (BACK STATION).
END 2 = END BRIDGE END OF BEAM (AHEAD STATION).



FIB BEARING PLATE MARK NAMING CONVENTION



ISOMETRIC VIEW OF BEVELED BEARING PLATES (TYPE 2) FOR FLORIDA I-BEAMS (AASHTO TYPE II BEAMS SIMILAR)

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SUPERSTRUCTURE DATA TABLE [SPANS 11-13] (3 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-192

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

FENDER SYSTEM GENERAL NOTES:

1. PROVIDE FENDER SYSTEMS IN ACCORDANCE WITH SPECIFICATIONS SECTION 471.

2. DO NOT USE THE FOLLOWING MATERIALS FOR PILE OR WALE MEMBERS IN THE DESIGN OF THE FENDER SYSTEM:
   TIMBER
   CONCRETE CONTAINING FERROUS METAL STRANDS AND REINFORCING

3. USE THE FOLLOWING INFORMATION TO COMPLETE THE FENDER SYSTEM DESIGN MEETING THE SPECIFICATIONS AND THE REQUIREMENTS STATED HEREIN:
   MAXIMUM ALLOWABLE FENDER SYSTEM DEFLECTION (FT) = 2.5
   REQUIRED EAC (K-FT) = 179
   ½ OF 100-YR SCOUR ELEVATION (FT) = -25.0
   CHANNEL DEPTH (FT) = 12.0
   MHW ELEVATION (FT) = 1.25
   MLW ELEVATION (FT) = -1.21

4. U.S. COAST GUARD NOTIFICATION: NOTIFY THE LOCAL OFFICE OF THE U.S. COAST GUARD AT LEAST 30 DAYS PRIOR TO BEGINNING OF CONSTRUCTION OF THE FENDER SYSTEM.

5. PILES: PROVIDE REINFORCED THERMOPLASTIC STRUCTURAL SHAPES FOR PILES IN ACCORDANCE WITH SPECIFICATIONS SECTION 973. INSTALL ALL PILES PLUMB AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PILE SPLICES ARE NOT ALLOWED.

6. WALES: PROVIDE REINFORCED THERMOPLASTIC STRUCTURAL SHAPES FOR WALES IN ACCORDANCE WITH SPECIFICATIONS SECTION 973. PROVIDE CONTINUOUS WALES WITH SPLICES ONLY AT LOCATIONS SHOWN ON THE PLANS.

7. FRP DECKING FOR CATWALKS: PROVIDE 2" X 12" (NOMINAL) THERMOPLASTIC STRUCTURAL SHAPES FOR DECKING FOR CATWALKS IN ACCORDANCE WITH SPECIFICATIONS SECTION 973. INSTALL DECKING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS USING STAINLESS STEEL #10 X 3" (MINIMUM) DECK SCREWS.

8. FRP HANDRAILS: PROVIDE THERMOPLASTIC STRUCTURAL SHAPES FOR HANDRAILS IN ACCORDANCE WITH SPECIFICATIONS SECTION 973.

9. CLEARANCE GAUGES AND LIGHTS: PROVIDE CLEARANCE GAUGES AND MINIMUM CLEARANCE SIGNS IN ACCORDANCE WITH SPECIFICATIONS SECTION 700 AND THAT ARE A MINIMUM OF 0.08 INCHES THICK. INCLUDE COMPLETE DETAILS OF THE CLEARANCE GAUGES, MINIMUM CLEARANCE SIGNS AND THEIR ASSOCIATED SUPPORT/ATTACHMENT SYSTEMS IN THE SHOP DRAWINGS. PROVIDE AND INSTALL CLEARANCE GAUGE LIGHTS IN ACCORDANCE WITH SPECIFICATIONS SECTION 510 AND DESIGN STANDARDS INDEX 510-001.

10. NAVIGATION LIGHTS: PROVIDE AND INSTALL NAVIGATION LIGHTS IN ACCORDANCE WITH SPECIFICATIONS SECTION 510, DESIGN STANDARDS INDEX 510-001, AND/OR IF APPROPRIATE, PROJECT SPECIFIC DETAILS. PROVIDE AND MAINTAIN TEMPORARY NAVIGATION LIGHTS DURING CONSTRUCTION UNTIL PERMANENT NAVIGATION LIGHTS ARE OPERATIONAL. EXISTING NAVIGATION LIGHTS SHALL NOT BE REUSED AND SHALL BE REMOVED AFTER THE PROPOSED NAVIGATION LIGHTS ARE OPERATIONAL.

11. BOLTS, THREADED BARS, NUTS, SCREWS AND WASHERS: FURNISH STAINLESS STEEL BOLTS IN ACCORDANCE WITH ASTM F593 TYPE 316. FURNISH STAINLESS STEEL THREADED BARS IN ACCORDANCE WITH ASTM A193 GRADE B8M. FURNISH STAINLESS STEEL NUTS IN ACCORDANCE WITH ASTM F594 TYPE 316. FURNISH STAINLESS STEEL SCREWS IN ACCORDANCE WITH ASTM F593 TYPE 305. FURNISH STAINLESS STEEL WASHERS COMPATIBLE WITH BOLTS, THREADED RODS AND NUTS UNDER HEADS AND NUTS. TORQUE NUTS ON 1" DIAMETER BOLTS AND THREADED BARS TO 150 LB-FT. KEEP THE THREADS ON BOLTS, THREADED BARS AND NUTS FREE FROM DIRT, COARSE GRIME AND SAND TO PREVENT GALLING AND SEIZING DURING TIGHTENING. RECESS HARDWARE A MINIMUM OF ½" FROM FRONT FACE OF WALES.

12. WALE SPLICE PLATES: PROVIDE FRP OR STAINLESS STEEL WALE SPLICE PLATES. STAINLESS STEEL WALE SPLICE PLATES SHALL BE IN ACCORDANCE WITH ASTM A240 TYPE 316. FRP WALE SPLICE PLATES SHALL BE IN ACCORDANCE WITH SPECIFICATIONS SECTION 973.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

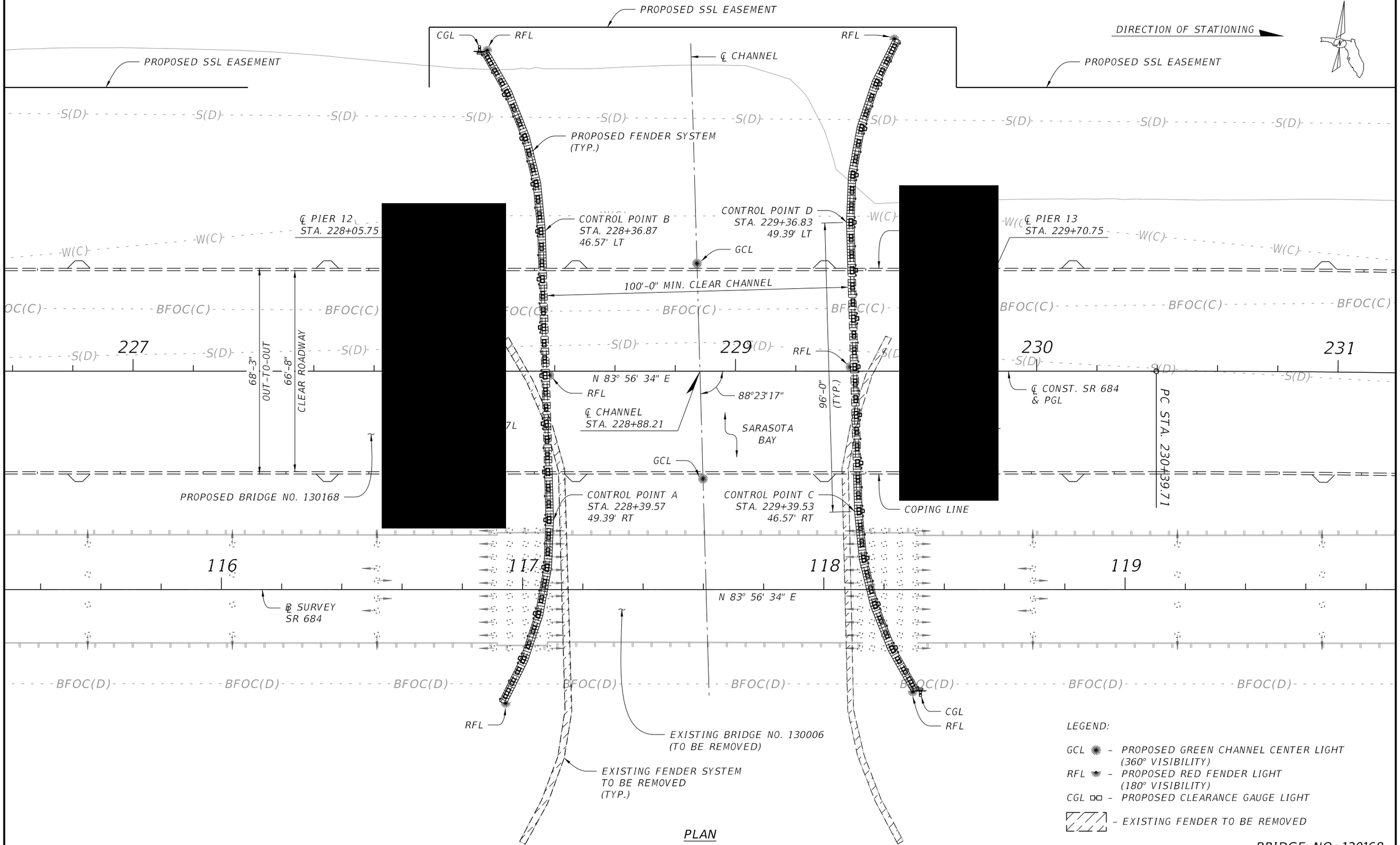
JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FENDER SYSTEM (1 OF 5)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-193



PLAN

BRIDGE NO. 130168

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SL	JTM	RMD	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

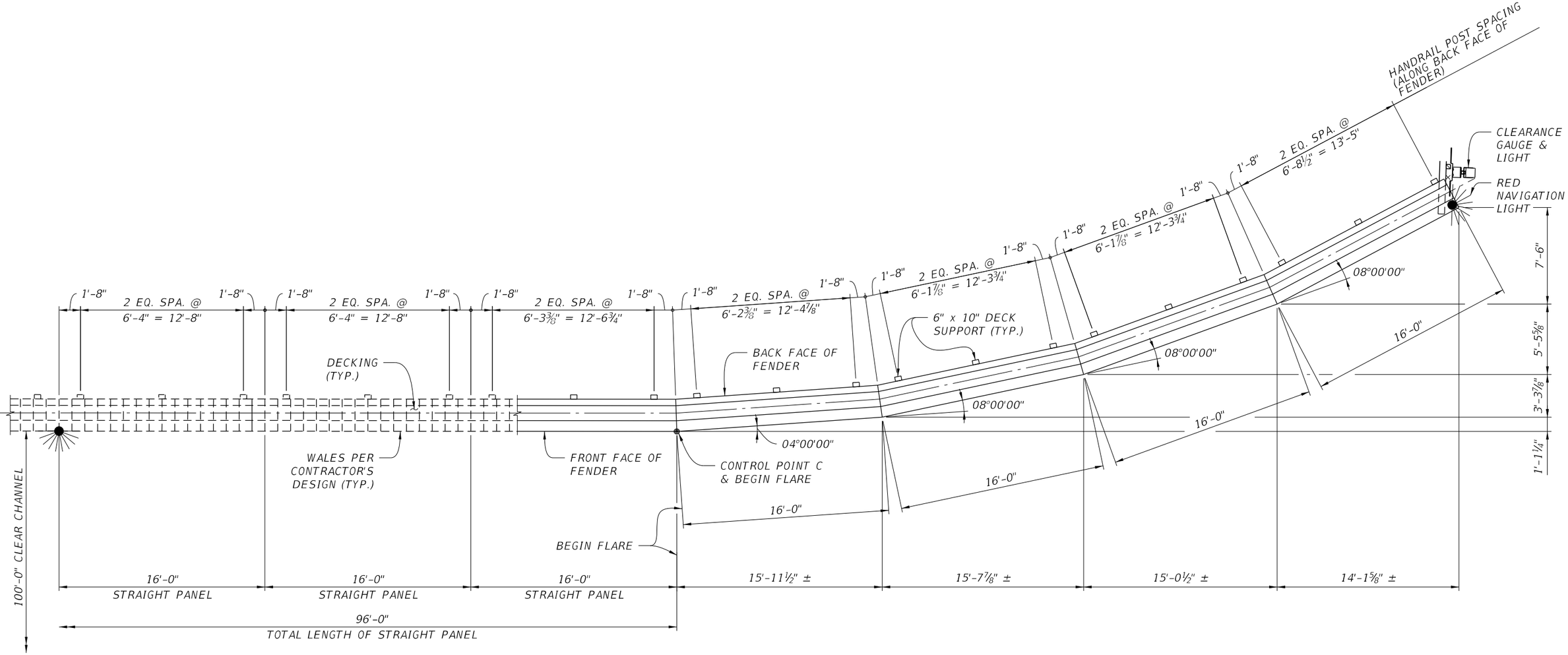
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FENDER SYSTEM (2 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-194



PARTIAL PLAN VIEW (TYPICAL FLARE)

(FLARE AT CONTROL POINT C SHOWN, CONTROL POINTS A, B & D SIMILAR)
(PILES, CATWALK AND HANDRAIL NOT SHOWN FOR CLARITY)

NOTES:

1. WORK THIS SHEET WITH SHEET B1-194.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

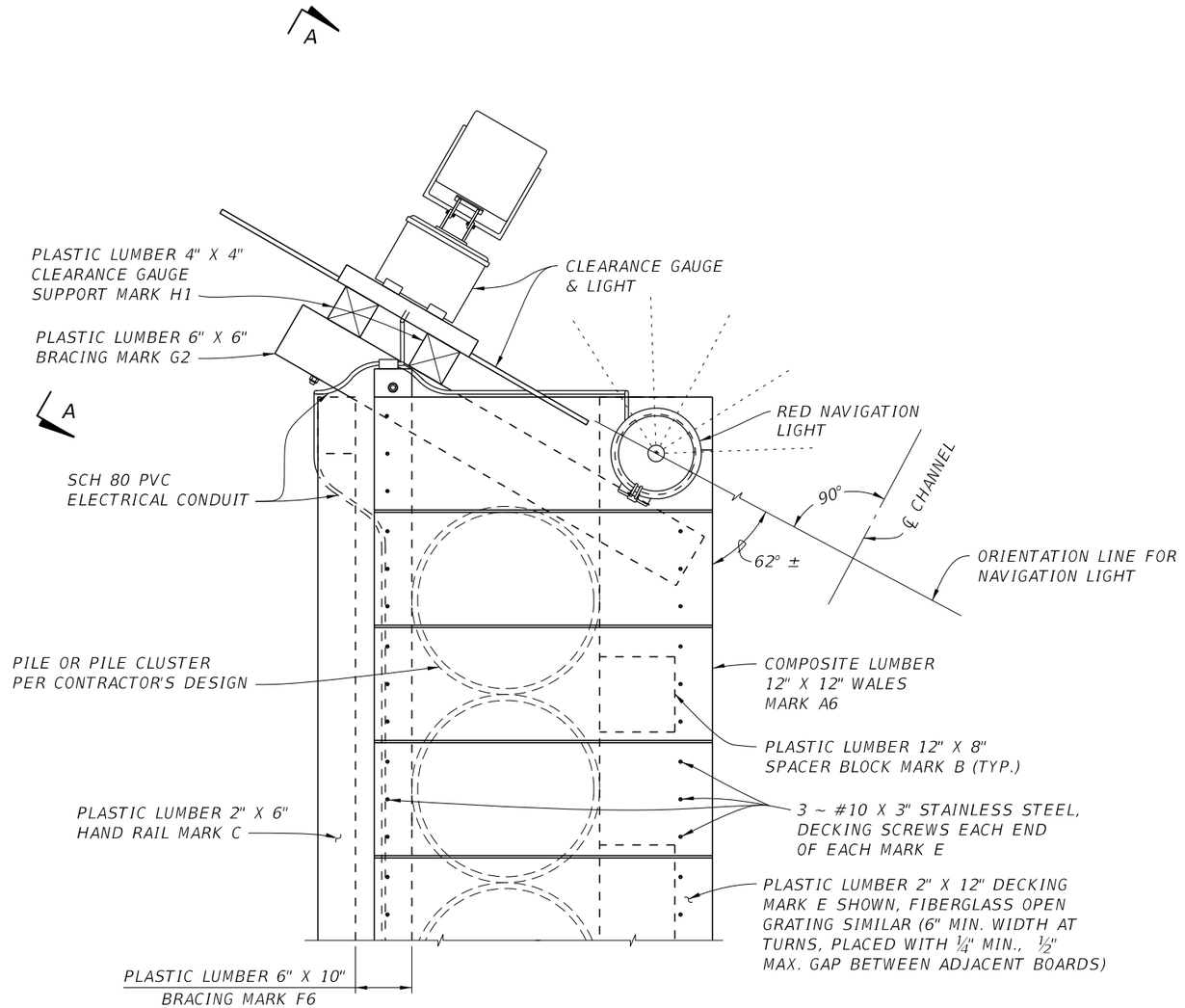
DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: FENDER SYSTEM (3 OF 5)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: B1-195

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



PARTIAL PLAN VIEW
(SHOWING FENDER END WITH CLEARANCE GAUGE)

NOTES:

1. FOR VIEW A-A, SEE SHEET B1-197.
2. CLEARANCE GAUGE CONNECTION SCHEMATIC DETAILS PRIVIDED FOR INFORMATION PURPOSES ONLY. PROVIDE CLEARANCE GAUGE CONNECTION DETAILS IN CONJUNCTION WITH FENDER SYSTEM DESIGN AND DETAILS.
3. FOR NAVIGATION LIGHTS AND SCH 80 PVC ELECTRICAL CONDUIT DETAILS, SEE STANDARD PLANS INDEX 510-001.

BRIDGE NO. 130168

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

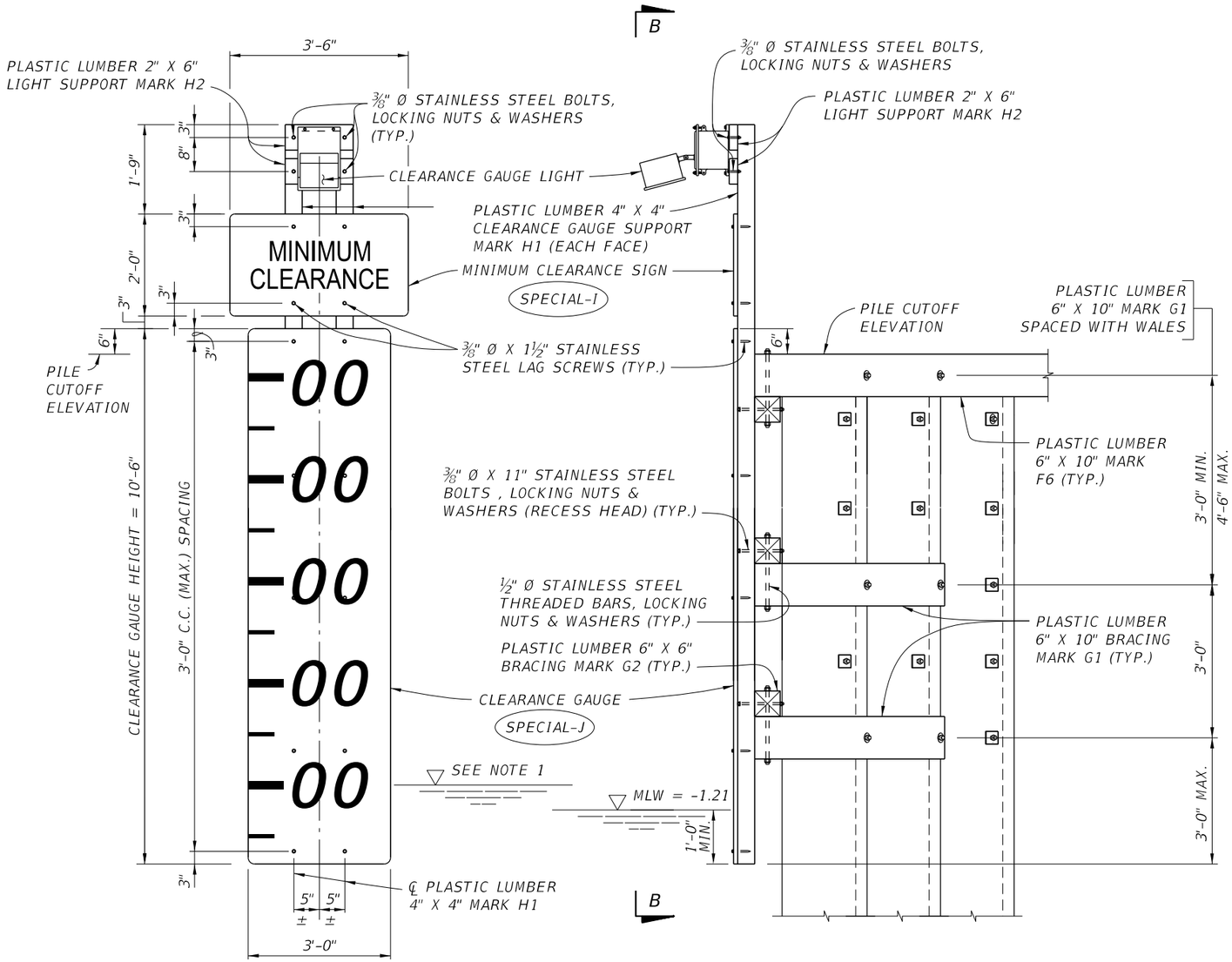
SHEET TITLE: FENDER SYSTEM (4 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-196

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



VIEW B-B
(WALES, PILES AND BRACING NOT SHOWN FOR CLARITY)

VIEW A-A
(WALES, DECKING AND HANDRAIL NOT SHOWN FOR CLARITY)

CLEARANCE GAUGE DETAILS

FOR DETAILS OF SIGN SPECIAL-I AND SPECIAL-J, REFER TO SIGNING AND MARKING PLANS.

NOTES:

1. EL. 6.250 = 60 ON CLEARANCE GAUGE.

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
SL	JTM	RMD	ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

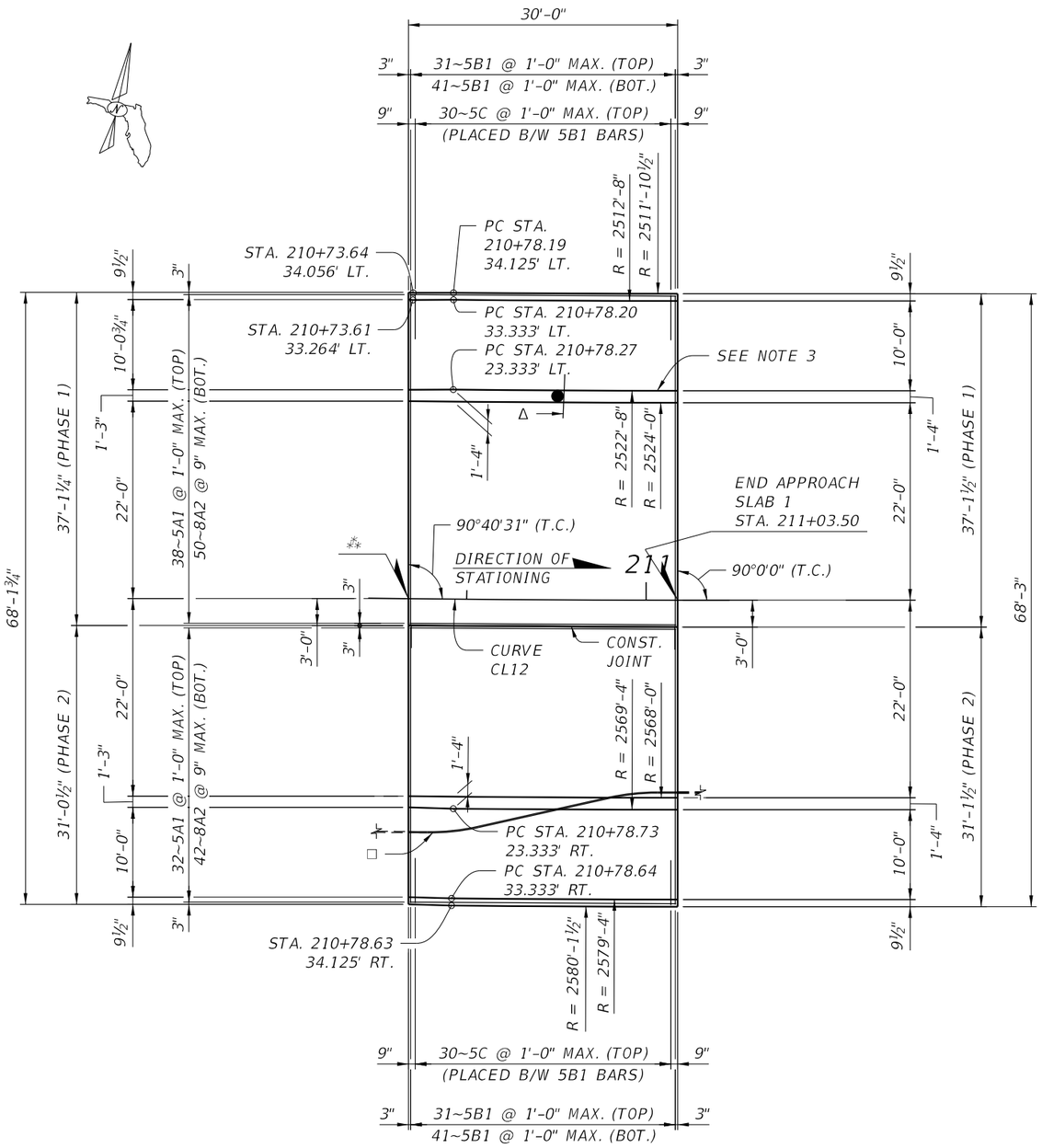
SHEET TITLE: FENDER SYSTEM (5 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

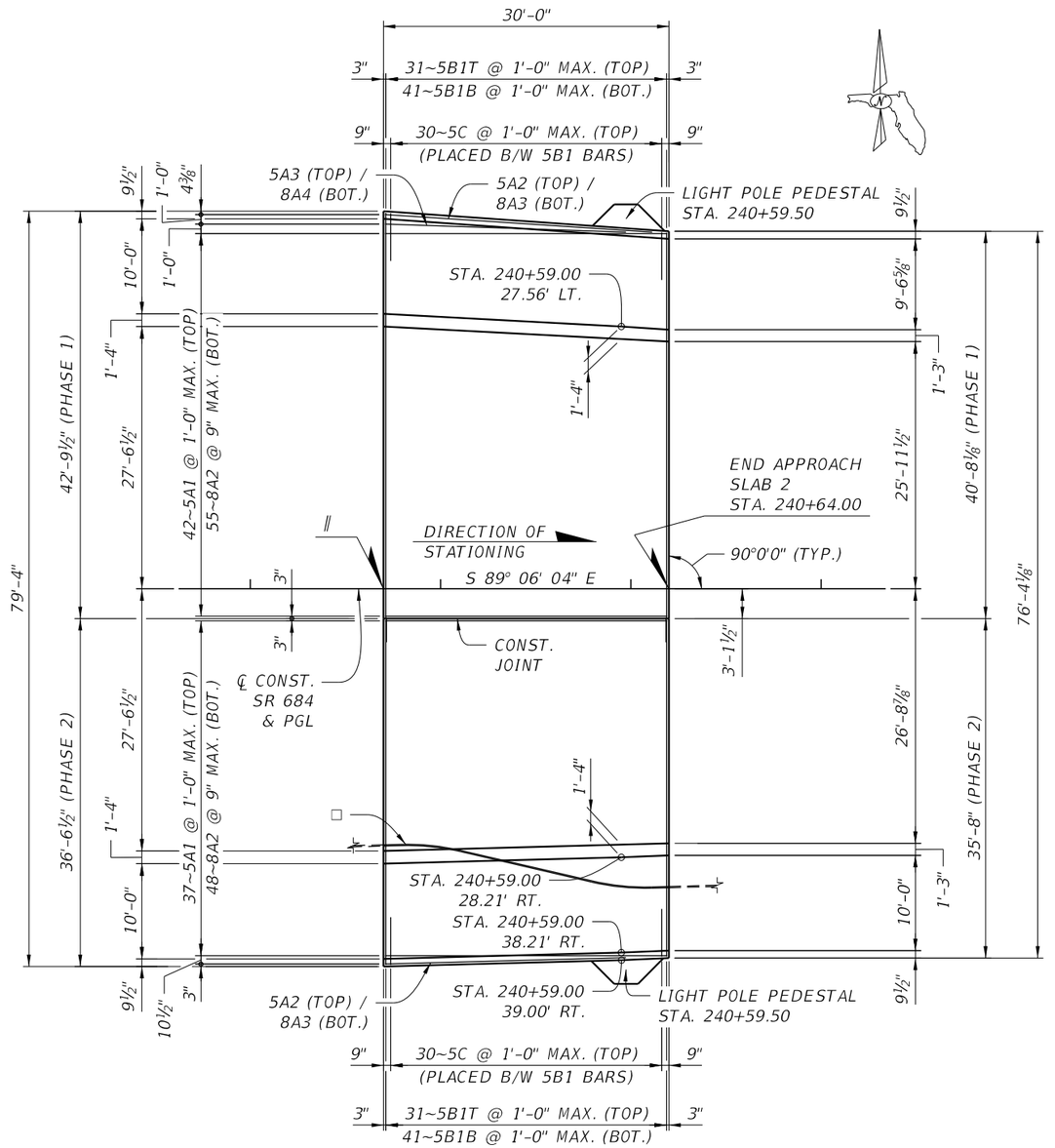
SHEET NO.: B1-197

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



APPROACH SLAB 1

Δ = TRAFFIC RAILING MOUNTED SIGN (STA. 210+90.00) [INDEX 700-013]
⁂ = BEGIN APPROACH SLAB 1, STA. 210+73.50



APPROACH SLAB 2

‖ = BEGIN APPROACH SLAB 2, STA. 240+34.00

LEGEND:

□ 1-1.5" DIA. FUTURE USE CONDUIT WITH EXPANSION FITTING COUPLER EMBEDDED IN APPROACH SLAB. CONNECT CONDUIT TO EMBEDDED CONDUIT IN THE BRIDGE DECK. SWEEP CONDUIT TO WITHIN THE 10-FOOT SIDEWALK AS SHOWN. LOCATION MAY BE ADJUSTED AS NEEDED TO AVOID CONFLICTS WITH THE PROPOSED APPROACH SLAB REINFORCING STEEL.

NOTES:

1. WORK THIS SHEET WITH INDEX 400-090 & 515-061 [SCHEME 2].
2. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
3. 36" SINGLE-SLOPE RAILING CONSTRUCTION SHALL OCCUR DURING PHASE 3. SEE SHEET B1-155 FOR RAILING NOTES AND MODIFIED BAR DETAILS.
4. FOR LIGHT POLE PEDESTAL DETAILS, SEE SHEET B1-178.
5. SEE "PHASING OF WORK" NOTE 2 ON SHEET B-8.
6. ASPHALT OVERLAY THICKNESS SHALL BE 2".

BRIDGE NO. 130168

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: APPROACH SLABS

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-198

JHERNANDEZ 5/22/2025 2:46:05 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1ApproachSlab101.dgn

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

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION END BENT 1 - PHASE 1											NO. REQUIRED = 1					
4	E01	5- 5	45	11			2- 8 1/2	1- 4	1- 4							
4	E02	5- 6	30	11			2-10	1- 4	1- 4							
4	E03	38- 6	8	33	6		38- 5 1/2	0- 1								
4	E05	2-11	1	1			2-10 1/4									
4	E06	6- 3	3	1			6- 3									
4	E07	6- 7	4	1			6- 6 1/2									
4	E08	5- 1	6	10			4- 0 1/4	1- 0								
5	E01	4- 5	96	1			4- 5									
5	E02	10- 7	72	4	4	4	2- 3 1/2	2- 6								
5	E03	9- 1	16	5			2- 3 1/2	3-10	0- 4	0- 4						
5	E04	38- 6	4	33	6		38- 5 1/2	0- 1								
5	E06	3- 3	6	11			1- 6 1/2	0-10	0-10							
6	E01	3- 9	10	23			1- 6 3/4	0- 2 1/4	1- 6 3/4							
9	E01	40- 0	8	15			33- 9 1/2	1- 7	4- 7 1/4						2	91
9	E03	38- 5	2	12			33- 9 1/2	4- 7 1/4								2
9	E05	11- 2	18	11			8- 0	1- 7	1- 7							
LOCATION END BENT 1 - PHASE 2											NO. REQUIRED = 1					
4	E01	5- 5	27	11			2- 8 1/2	1- 4	1- 4							
4	E02	5- 6	18	11			2-10	1- 4	1- 4							
4	E04	29- 2	8	33	6		29- 2	0- 1								
4	E05	2-11	1	1			2-10 1/2									
4	E06	6- 3	3	1			6- 3									
4	E07	6- 7	4	1			6- 6 1/2									
4	E08	4-11	6	10			3-10 1/2	1- 0								
5	E01	4- 5	72	1			4- 5									
5	E02	10- 7	62	4	4	4	2- 3 1/2	2- 6								
5	E03	9- 1	8	5			2- 3 1/2	3-10	0- 4	0- 4						
5	E05	29- 2	4	33	6		29- 1 1/2	0- 1								
5	E07	3- 9	6	11			2- 0 1/2	0-10	0-10							
6	E01	3- 9	8	23			1- 6 3/4	0- 2 1/4	1- 6 3/4							
9	E02	30-10	8	10			29- 2 1/4	1- 7								
9	E04	29- 3	2	33	6		29- 2 1/4	0- 1 3/4								
9	E06	12-11	6	11			9- 9	1- 7	1- 7							
9	E07	14- 2	6	11			11- 0	1- 7	1- 7							
LOCATION END BENT 20 - PHASE 1											NO. REQUIRED = 1					
4	E01	5- 7	45	11			2- 8 1/2	1- 5	1- 5							
4	E02	5- 8	30	11			2-10	1- 5	1- 5							
4	E03	44- 3	8	33	6		44- 2 1/2	0- 1								
4	E05	3- 2	1	1			3- 1 3/4									
4	E06	6- 3	3	1			6- 2 3/4									
4	E07	6- 7	4	1			6- 6 1/4									
4	E08	4-11	6	10			3-10 1/2	1- 0								
5	E01	4- 5	110	1			4- 4 3/4									
5	E02	10- 7	86	4	4	4	2- 3 1/2	2- 6								
5	E03	9- 1	16	5			2- 3 1/2	3-10	0- 4	0- 4						
5	E04	44- 2	4	33	6		44- 1 3/4	0- 1								
5	E06	3- 8	6	11			1-11 1/2	0-10	0-10							
6	E01	3- 9	11	23			1- 6 3/4	0- 2 1/4	1- 6 3/4							
9	E01	45- 8	8	15			39- 4	1- 7	4- 8 3/4						2	91
9	E03	44- 1	2	12			39- 4	4- 8 3/4								2
9	E05	12-11	18	11			9- 9	1- 7	1- 7							
LOCATION END BENT 20 - PHASE 2											NO. REQUIRED = 1					
4	E01	5- 7	36	11			2- 8 1/2	1- 5	1- 5							

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

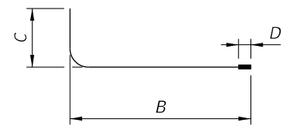
SHEET TITLE: REINFORCING BAR LIST (1 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-199

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
4	E02	5- 8	24	11			2-10	1- 5	1- 5							
4	E04	34- 7	8	33	6		34- 6 1/2	0- 1								
4	E05	3- 2	1	1			3- 1 3/4									
4	E06	6- 3	3	1			6- 2 3/4									
4	E07	6- 7	4	1			6- 6 1/4									
4	E08	4-11	6	10			3-10 1/2	1- 0								
5	E01	4- 5	86	1			4- 4 3/4									
5	E02	10- 7	78	4	4	4	2- 3 1/2	2- 6								
5	E03	9- 1	12	5			2- 3 1/2	3-10	0- 4	0- 4						
5	E05	34- 7	4	33	6		34- 6 1/2	0- 1								
5	E07	3- 5	6	11			1- 8 1/2	0-10	0-10							
6	E01	3- 9	9	23			1- 6 3/4	0- 2 1/4	1- 6 3/4							
9	E02	36- 3	8	10			34- 7 1/4	1- 7								
9	E04	34- 8	2	33	6		34- 7 1/4	0- 1 3/4								
9	E06	11- 5	12	11			8- 3	1- 7	1- 7							
9	E07	10- 2	6	11			7- 0	1- 7	1- 7							
LOCATION PIERS 2 & 17 FOOTING - PHASE 1 NO. REQUIRED = 2																
5	F01	3- 7	52	10			2- 3 3/4	1- 3								
5	F02	5- 0	80	1			4-11 1/2									
7	F01	44-10	7	23			7- 0	9- 9 1/2	7- 0							
7	F02	34- 5	14	33	6		34- 4 3/4	0- 1 1/4								
7	F03	23- 7	7	11			19- 7	2- 0	2- 0							
7	F05	40- 4	4	33	3		39- 1 1/2	0- 1 1/4								
8	F01	8- 5	2	11			4- 4 3/4	2- 0	2- 0							
8	F02	9- 9	2	11			5- 8 1/2	2- 0	2- 0							
8	F03	10- 7	2	11			6- 7	2- 0	2- 0							
8	F04	5- 6	2	11			1- 6	2- 0	2- 0							
8	F05	5-10	2	11			1-10	2- 0	2- 0							
8	F06	8- 8	6	11			4- 7 1/2	2- 0	2- 0							
8	F07	13- 2	6	11			9- 1 1/2	2- 0	2- 0							
8	F08	13-11	6	11			9-10 1/2	2- 0	2- 0							
8	F09	3- 3	6	10*			1- 2 1/4	2- 0	0-1 1/2							
8	F10	9- 6	1	11			5- 5 1/4	2- 0	2- 0							
8	F11	13-11	1	11			9-10 3/4	2- 0	2- 0							
8	F12	16- 7	1	11			12- 7	2- 0	2- 0							
8	F13	5-11	2	11			1-10 1/4	2- 0	2- 0							
8	F14	6- 7	2	11			2- 6 1/4	2- 0	2- 0							
8	F15	7- 1	2	11			3- 0 3/4	2- 0	2- 0							
8	F16	8- 5	3	11			4- 5	2- 0	2- 0							
8	F17	15- 7	9	11			11- 7	2- 0	2- 0							
8	F18	8- 1	6	11			4- 1	2- 0	2- 0							
8	F19	16- 7	1	11			6- 3 1/2	5- 1 1/2	5- 1 1/2							
8	F20	20-10	1	11			10- 6 3/4	5- 1 1/2	5- 1 1/2							
8	F21	23- 6	1	11			13- 2 3/4	5- 1 1/2	5- 1 1/2							
8	F22	25- 6	1	11			15- 2 1/4	5- 1 1/2	5- 1 1/2							
8	F23	26-10	1	11			16- 6 3/4	5- 1 1/2	5- 1 1/2							
8	F24	28- 0	1	11			17- 9	5- 1 1/2	5- 1 1/2							
8	F25	28-10	1	11			18- 6 1/4	5- 1 1/2	5- 1 1/2							
8	F26	29- 4	1	11			19- 0 3/4	5- 1 1/2	5- 1 1/2							
8	F27	29- 8	1	11			19- 4 1/4	5- 1 1/2	5- 1 1/2							
8	F28	29- 9	38	11			19- 5 1/4	5- 1 1/2	5- 1 1/2							
8	F29	10- 6	20	11			4- 8	0- 9 1/2	5- 0							
10	F01	47- 5	2	10*			42- 1 3/4	5- 3 1/4	0- 2							
10	F02	48- 5	2	10*			43- 1 1/4	5- 3 1/4	0- 2							
10	F03	49- 1	2	10*			43- 9 1/2	5- 3 1/2	0- 2							
10	F04	49-10	2	10*			44- 6	5- 3 1/2	0- 2							
10	F05	50- 5	2	10*			45- 0 1/2	5- 3 3/4	0- 2							
10	F06	50-10	2	10*			45- 5 3/4	5- 3 3/4	0- 2							
10	F07	51- 3	2	10*			45-10 1/2	5- 4	0- 2							



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

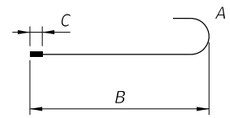
SHEET TITLE: REINFORCING BAR LIST (2 OF 24)

REF. DWG. NO.

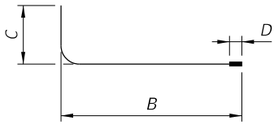
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-200

	MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
	SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
	10	F08	51- 7	2	10*			46- 2 3/4	5- 4	0- 2							
	10	F09	51-11	2	10*			46- 6 1/4	5- 4 1/4	0- 2							
	10	F10	52- 2	2	10*			46- 9 1/4	5- 4 1/4	0- 2							
	10	F11	52- 5	2	10*			46-11 3/4	5- 4 1/2	0- 2							
	10	F12	52- 7	2	10*			47- 1 3/4	5- 4 1/2	0- 2							
	10	F13	52- 8	2	10*			47- 3 1/4	5- 4 1/2	0- 2							
	10	F14	52- 9	2	10*			47- 4 1/2	5- 4 1/2	0- 2							
	10	F15	52-10	2	10*			47- 5 1/2	5- 4 1/2	0- 2							
	10	F16	52-11	2	10*			47- 6	5- 4 1/2	0- 2							
	10	F17	52-11	2	10*			47- 6 1/4	5- 4 1/2	0- 2							
	10	F18	52-11	1	10*			47- 6 1/2	5- 4 1/2	0- 2							
(FOR PIER 2)	11	F01	12- 3	46	10			10- 2 1/2	2- 0								
(FOR PIER 17)	11	F01	13- 7	92	10			11- 7	2- 0								
	11	F02	43-11	18	33	3		41-10 1/2	0- 2 1/4								
	11	F03	49- 4	2	33	3		47- 3 1/4	0- 2 1/4								
	11	F04	49- 5	2	33	3		47- 4 1/4	0- 2 1/4								
	11	F05	39- 6	7	11			35- 6	2- 0	2- 0							
	11	F06	8- 5	7	11			4- 4 1/2	2- 0	2- 0							
	11	F07	3- 3	7	33	3		1- 3	0- 2 1/4								
	11	F08	47-10	2	33	3		45- 9 1/4	0- 2 1/4								
	11	F09	47- 6	2	33	3		45- 6	0- 2 1/4								
	11	F10	42-11	2	33	3		40-11	0- 2 1/4								
	11	F11	21- 7	1	11			17- 6 3/4	2- 0	2- 0							
	11	F12	22- 0	1	11			18- 0	2- 0	2- 0							
	11	F13	22- 4	1	11			18- 4	2- 0	2- 0							
	11	F14	22- 8	1	11			18- 7 3/4	2- 0	2- 0							
	11	F15	22-11	1	11			18-10 3/4	2- 0	2- 0							
	11	F16	23- 1	1	11			19- 1	2- 0	2- 0							
	11	F17	23- 3	1	11			19- 3	2- 0	2- 0							
	11	F18	23- 5	1	11			19- 4 1/4	2- 0	2- 0							
	11	F19	23- 5	1	11			19- 5	2- 0	2- 0							
	11	F20	23- 6	47	11			19- 5 1/4	2- 0	2- 0							
	11	F21	43- 3	18	17#	1		41- 8	0- 2 1/4								
	11	F22	48- 7	2	17#	1		46-11 1/4	0- 2 1/4								
	11	F23	48- 8	2	17#	1		47- 0 1/4	0- 2 1/4								
	11	F24	38- 0	7	18	1	1	34-10									
	11	F25	6-10	7	18	1	1	3- 7 1/2									
	11	F26	3- 1	7	10*			1- 0 1/4	2- 0	0- 2 1/4							
	11	F27	46-11	2	17#	1		45- 3 3/4	0- 2 1/4								
	11	F28	46- 8	2	17#	1		45- 0 1/2	0- 2 1/4								
	11	F29	7- 8	24	11			5- 0 1/4	2- 0	0- 7 1/2							
(FOR PIER 2)	11	F30	15- 8	46	10			13- 7 3/4	2- 0								
	11	F50	19- 2	80	8			5-10	3-10	5- 6	2- 0	2- 0					
	11	F98	12- 0	10	11			8- 0	2- 0	2- 0							
	LOCATION PIERS 2 & 17 FOOTING - PHASE 2 NO. REQUIRED = 2																
	5	F01	3- 7	26	10			2- 3 3/4	1- 3								
	5	F02	5- 0	48	1			4-11 1/2									
	7	F01	44-10	7	23			7- 0	9- 9 1/2	7- 0							
	7	F02	21- 2	14	33	6		21- 1 1/4	0- 1 1/4								
	7	F05	25-10	4	33	6		25-10	0- 1 1/4								
	8	F01	8- 5	2	11			4- 4 3/4	2- 0	2- 0							
	8	F02	9- 9	2	11			5- 8 1/2	2- 0	2- 0							
	8	F03	10- 7	2	11			6- 7	2- 0	2- 0							
	8	F04	5- 6	2	11			1- 6	2- 0	2- 0							
	8	F05	5-10	2	11			1-10	2- 0	2- 0							
	8	F06	8- 8	6	11			4- 7 1/2	2- 0	2- 0							
	8	F09	15- 8	6	10*			13- 8	2- 0	0- 1 1/2							
	8	F10	9- 6	1	11			5- 5 1/4	2- 0	2- 0							
	8	F11	13-11	1	11			9-10 3/4	2- 0	2- 0							



MODIFIED TYPE 17 BAR



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR
\# MODIFIED TYPE 17 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

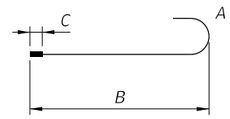
SHEET TITLE: REINFORCING BAR LIST (3 OF 24)

REF. DWG. NO.:

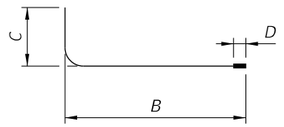
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-201

	MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
	SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
	8	F12	16- 8	1	11			12- 7 1/4	2- 0	2- 0							
	8	F13	5-11	2	11			1-10 1/4	2- 0	2- 0							
	8	F14	6- 7	2	11			2- 6 1/4	2- 0	2- 0							
	8	F15	7- 1	2	11			3- 0 3/4	2- 0	2- 0							
	8	F16	8- 5	3	11			4- 5	2- 0	2- 0							
	8	F17	15- 7	6	11			11- 7	2- 0	2- 0							
	8	F19	16- 7	1	11			6- 3 1/2	5- 1 1/2	5- 1 1/2							
	8	F20	20-10	1	11			10- 7	5- 1 1/2	5- 1 1/2							
	8	F21	23- 6	1	11			13- 3	5- 1 1/2	5- 1 1/2							
	8	F22	25- 4	1	11			15- 0 3/4	5- 1 1/2	5- 1 1/2							
	8	F23	26-11	1	11			16- 7 3/4	5- 1 1/2	5- 1 1/2							
	8	F24	28- 0	1	11			17- 9	5- 1 1/2	5- 1 1/2							
	8	F25	28-10	1	11			18- 6 1/4	5- 1 1/2	5- 1 1/2							
	8	F26	29- 4	1	11			19- 0 3/4	5- 1 1/2	5- 1 1/2							
	8	F27	29- 8	1	11			19- 4 1/4	5- 1 1/2	5- 1 1/2							
	8	F28	29- 9	25	11			19- 5 1/4	5- 1 1/2	5- 1 1/2							
	10	F01	34- 3	2	10*			28-11 3/4	5- 3 1/4	0- 2							
	10	F02	35- 3	2	10*			29-11 1/4	5- 3 1/4	0- 2							
	10	F03	36- 0	2	10*			30- 8	5- 3 1/2	0- 2							
	10	F04	36- 8	2	10*			31- 4	5- 3 1/2	0- 2							
	10	F05	37- 2	2	10*			31-10 1/4	5- 3 3/4	0- 2							
	10	F06	37- 8	2	10*			32- 3 3/4	5- 3 3/4	0- 2							
	10	F07	38- 1	2	10*			32- 8 1/2	5- 4	0- 2							
	10	F08	38- 5	2	10*			33- 0 3/4	5- 4	0- 2							
	10	F09	38- 9	2	10*			33- 4 1/4	5- 4 1/4	0- 2							
	10	F10	39- 0	2	10*			33- 7 1/4	5- 4 1/4	0- 2							
	10	F11	39- 3	2	10*			33- 9 3/4	5- 4 1/2	0- 2							
	10	F12	39- 5	2	10*			33-11 3/4	5- 4 1/2	0- 2							
	10	F13	39- 6	2	10*			34- 1 1/4	5- 4 1/2	0- 2							
	10	F14	39- 7	2	10*			34- 2 1/2	5- 4 1/2	0- 2							
	10	F15	39- 8	2	10*			34- 3 1/4	5- 4 1/2	0- 2							
	10	F16	39- 9	2	10*			34- 4	5- 4 1/2	0- 2							
	10	F17	39- 9	2	10*			34- 4 1/4	5- 4 1/2	0- 2							
	10	F18	39- 9	1	10*			34- 4 1/2	5- 4 1/2	0- 2							
(FOR PIER 2)	11	F01	12- 3	46	10			10- 2 1/2	2- 0								
(FOR PIER 17)	11	F01	13- 7	46	10			11- 7	2- 0								
	11	F02	30- 9	18	33	3		28- 9	0- 2 1/4								
	11	F03	36- 3	2	33	3		34- 2 1/4	0- 2 1/4								
	11	F04	36- 3	2	33	3		34- 2 3/4	0- 2 1/4								
	11	F07	36- 4	7	33	3		34- 3 1/2	0- 2 1/4								
	11	F08	34- 8	2	33	3		32- 7 3/4	0- 2 1/4								
	11	F09	34- 5	2	33	3		32- 4 1/2	0- 2 1/4								
	11	F10	29-10	2	33	3		27- 9 1/2	0- 2 1/4								
	11	F11	21- 7	1	11			17- 6 3/4	2- 0	2- 0							
	11	F12	22- 0	1	11			17-11 3/4	2- 0	2- 0							
	11	F13	22- 4	1	11			18- 4	2- 0	2- 0							
	11	F14	22- 8	1	11			18- 7 3/4	2- 0	2- 0							
	11	F15	22-11	1	11			18-10 3/4	2- 0	2- 0							
	11	F16	23- 1	1	11			19- 1	2- 0	2- 0							
	11	F17	23- 3	1	11			19- 3	2- 0	2- 0							
	11	F18	23- 5	1	11			19- 4 1/4	2- 0	2- 0							
	11	F19	23- 5	1	11			19- 5	2- 0	2- 0							
	11	F20	23- 6	39	11			19- 5 1/4	2- 0	2- 0							
	11	F21	30- 0	18	17#	1		28- 5	0- 2 1/4								
	11	F22	35- 6	2	17#	1		33-10 1/4	0- 2 1/4								
	11	F23	35- 6	2	17#	1		33-10 3/4	0- 2 1/4								
	11	F26	35- 7	7	17#	1		33-11 1/2	0- 2 1/4								
	11	F27	33-11	2	17#	1		32- 3 3/4	0- 2 1/4								
	11	F28	33- 8	2	17#	1		32- 0 1/2	0- 2 1/4								
	11	F29	7- 8	12	11			5- 0 1/4	2- 0	0- 7 1/2							
	11	F50	19- 2	48	8			5-10	3-10	5- 6	2- 0	2- 0					



MODIFIED TYPE 17 BAR



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR
\# MODIFIED TYPE 17 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

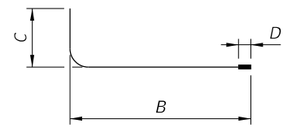
SHEET TITLE: REINFORCING BAR LIST (4 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-202

MARK SIZE	MARK DES	LENGTH FT IN	NO BARS	TYP BAR	STY A	STY G	B FT IN FR	C FT IN FR	D FT IN FR	E FT IN FR	F FT IN FR	H FT IN FR	J FT IN FR	K FT IN FR	N NO	Ø ANG
LOCATION PIERS 3-10 & 15-16 FOOTING - PHASE 1 NO. REQUIRED = 10																
5	F01	3- 7	52	10			2- 3 3/4	1- 3								
5	F02	5- 0	80	1			4-11 1/2									
7	F01	44-10	7	23			7- 0	9- 9 1/2	7- 0							
7	F02	40- 2	14	33	6		40- 1 3/4	0- 1 1/4								
7	F03	23- 7	7	11			19- 7	2- 0	2- 0							
7	F05	46- 1	4	33	3		44-10 3/4	0- 1 1/4								
8	F01	8- 5	2	11			4- 4 3/4	2- 0	2- 0							
8	F02	9- 9	2	11			5- 8 1/2	2- 0	2- 0							
8	F03	10- 7	2	11			6- 7	2- 0	2- 0							
8	F04	5- 6	2	11			1- 6	2- 0	2- 0							
8	F05	5-10	2	11			1-10	2- 0	2- 0							
8	F06	8- 8	6	11			4- 7 1/2	2- 0	2- 0							
8	F07	13- 2	6	11			9- 1 1/2	2- 0	2- 0							
8	F08	19- 8	6	11			15- 7 1/2	2- 0	2- 0							
8	F09	3- 3	6	10*			1- 2 1/4	2- 0	0- 1 1/2							
8	F10	9- 6	1	11			5- 5 1/4	2- 0	2- 0							
8	F11	13-11	1	11			9-10 3/4	2- 0	2- 0							
8	F12	16- 7	1	11			12- 7	2- 0	2- 0							
8	F13	5-11	2	11			1-10 1/4	2- 0	2- 0							
8	F14	6- 7	2	11			2- 6 1/4	2- 0	2- 0							
8	F15	7- 1	2	11			3- 0 3/4	2- 0	2- 0							
8	F16	8- 5	3	11			4- 5	2- 0	2- 0							
8	F17	15- 7	9	11			11- 7	2- 0	2- 0							
8	F18	8- 1	6	11			4- 1	2- 0	2- 0							
8	F19	16- 7	1	11			6- 3 1/2	5- 1 1/2	5- 1 1/2							
8	F20	20-10	1	11			10- 6 3/4	5- 1 1/2	5- 1 1/2							
8	F21	23- 6	1	11			13- 2 1/2	5- 1 1/2	5- 1 1/2							
8	F22	25- 6	1	11			15- 2 1/4	5- 1 1/2	5- 1 1/2							
8	F23	26-11	1	11			16- 7 1/2	5- 1 1/2	5- 1 1/2							
8	F24	28- 0	1	11			17- 9	5- 1 1/2	5- 1 1/2							
8	F25	28-10	1	11			18- 6 1/4	5- 1 1/2	5- 1 1/2							
8	F26	29- 4	1	11			19- 0 3/4	5- 1 1/2	5- 1 1/2							
8	F27	29- 8	1	11			19- 4 1/4	5- 1 1/2	5- 1 1/2							
8	F28	29- 9	44	11			19- 5 1/4	5- 1 1/2	5- 1 1/2							
8	F29	10- 6	20	11			4- 8	0- 9 1/2	5- 0							
10	F01	53- 2	2	10*			47-10 3/4	5- 3 1/4	0- 2							
10	F02	54- 2	2	10*			48-10 1/4	5- 3 1/4	0- 2							
10	F03	54-10	2	10*			49- 6 1/2	5- 3 1/2	0- 2							
10	F04	55- 7	2	10*			50- 3	5- 3 1/2	0- 2							
10	F05	56- 2	2	10*			50- 9 1/2	5- 3 3/4	0- 2							
10	F06	56- 7	2	10*			51- 2 3/4	5- 3 3/4	0- 2							
10	F07	57- 0	2	10*			51- 7 1/2	5- 4	0- 2							
10	F08	57- 4	2	10*			51-11 3/4	5- 4	0- 2							
10	F09	57- 8	2	10*			52- 3 1/4	5- 4 1/4	0- 2							
10	F10	57-11	2	10*			52- 6 1/4	5- 4 1/4	0- 2							
10	F11	58- 2	2	10*			52- 8 3/4	5- 4 1/2	0- 2							
10	F12	58- 4	2	10*			52-10 3/4	5- 4 1/2	0- 2							
10	F13	58- 5	2	10*			53- 0 1/4	5- 4 1/2	0- 2							
10	F14	58- 6	2	10*			53- 1 1/2	5- 4 1/2	0- 2							
10	F15	58- 7	2	10*			53- 2 1/2	5- 4 1/2	0- 2							
10	F16	58- 8	2	10*			53- 3	5- 4 1/2	0- 2							
10	F17	58- 8	2	10*			53- 3 1/4	5- 4 1/2	0- 2							
10	F18	58- 8	1	10*			53- 3 1/2	5- 4 1/2	0- 2							
(FOR PIER 3) 11	F01	15- 3	46	10			13- 2 1/2	2- 0								
(FOR PIERS 4-10 & 15-16) 11	F01	14- 5	92	10			12- 4 1/2	2- 0								
11	F02	49- 8	18	33	3		47- 7 1/2	0- 2 1/4								
11	F03	55- 1	2	33	3		53- 0 1/4	0- 2 1/4								
11	F04	55- 2	2	33	3		53- 1 1/4	0- 2 1/4								



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

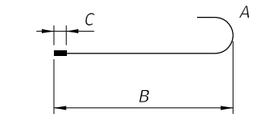
SHEET TITLE: REINFORCING BAR LIST (5 OF 24)

REF. DWG. NO.:

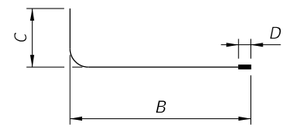
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-203

	MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
	SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
	11	F05	43- 3	7	11			39- 3	2- 0	2- 0							
	11	F06	10- 5	7	11			6- 4 1/2	2- 0	2- 0							
	11	F07	3- 3	7	33	3		1- 3	0- 2 1/4								
	11	F08	53- 7	2	33	3		51- 6 1/4	0- 2 1/4								
	11	F09	53- 3	2	33	3		51- 3	0- 2 1/4								
	11	F10	48- 8	2	33	3		46- 8	0- 2 1/4								
	11	F11	21- 7	1	11			17- 6 3/4	2- 0	2- 0							
	11	F12	22- 0	1	11			18- 0	2- 0	2- 0							
	11	F13	22- 4	1	11			18- 4	2- 0	2- 0							
	11	F14	22- 8	1	11			18- 7 3/4	2- 0	2- 0							
	11	F15	22-11	1	11			18-10 3/4	2- 0	2- 0							
	11	F16	23- 1	1	11			19- 1	2- 0	2- 0							
	11	F17	23- 3	1	11			19- 3	2- 0	2- 0							
	11	F18	23- 5	1	11			19- 4 1/4	2- 0	2- 0							
	11	F19	23- 5	1	11			19- 5	2- 0	2- 0							
	11	F20	23- 6	58	11			19- 5 1/4	2- 0	2- 0							
	11	F21	48-11	18	17#	1		47- 3 1/2	0- 2 1/4								
	11	F22	54- 4	2	17#	1		52- 8 1/4	0- 2 1/4								
	11	F23	54- 5	2	17#	1		52- 9 1/4	0- 2 1/4								
	11	F24	41- 6	7	18	1	1	38- 4									
	11	F25	8-10	7	18	1	1	5- 7 1/2									
	11	F26	3- 1	7	10*			1- 0 1/4	2- 0	0- 2 1/4							
	11	F27	53- 0	2	17#	1		51- 4 1/4	0- 2 1/4								
	11	F28	52- 9	2	17#	1		51- 1 1/4	0- 2 1/4								
	11	F29	7- 8	24	11			5- 0 1/4	2- 0	0- 7 1/2							
(PIER 3)	11	F30	19- 2	46	10			17- 2	2- 0								
	11	F50	19- 2	80	8			5-10	3-10	5- 6	2- 0	2- 0					
	11	F98	12- 1	10	11			8- 0 1/4	2- 0	2- 0							
(PIERS 4 & 5)	11	F99	13- 7	40	10			11- 7	2- 0								
	LOCATION PIERS 3-10 & 15-16 FOOTING - PHASE 2 NO. REQUIRED = 10																
	5	F01	3- 7	26	10			2- 3 3/4	1- 3								
	5	F02	5- 0	48	1			4-11 1/2									
	7	F01	44-10	7	23			7- 0	9- 9 1/2	7- 0							
	7	F02	15- 5	14	33	6		15- 4 1/4	0- 1 1/4								
	7	F05	20- 1	4	33	6		20- 1	0- 1 1/4								
	8	F01	8- 5	2	11			4- 4 3/4	2- 0	2- 0							
	8	F02	9- 9	2	11			5- 8 1/2	2- 0	2- 0							
	8	F03	10- 7	2	11			6- 7	2- 0	2- 0							
	8	F04	5- 6	2	11			1- 6	2- 0	2- 0							
	8	F05	5-10	2	11			1-10	2- 0	2- 0							
	8	F06	8- 8	6	11			4- 7 1/2	2- 0	2- 0							
	8	F09	9-11	6	10*			7-11	2- 0	0- 1 1/2							
	8	F10	9- 6	1	11			5- 5 1/4	2- 0	2- 0							
	8	F11	13-11	1	11			9-10 3/4	2- 0	2- 0							
	8	F12	16- 8	1	11			12- 7 1/4	2- 0	2- 0							
	8	F13	5-11	2	11			1-10 1/4	2- 0	2- 0							
	8	F14	6- 7	2	11			2- 6 1/4	2- 0	2- 0							
	8	F15	7- 1	2	11			3- 0 3/4	2- 0	2- 0							
	8	F16	8- 5	3	11			4- 5	2- 0	2- 0							
	8	F17	15- 7	6	11			11- 7	2- 0	2- 0							
	8	F19	16- 6	1	11			6- 3	5- 1 1/2	5- 1 1/2							
	8	F20	20-10	1	11			10- 6 3/4	5- 1 1/2	5- 1 1/2							
	8	F21	23- 6	1	11			13- 3	5- 1 1/2	5- 1 1/2							
	8	F22	25- 5	1	11			15- 2	5- 1 1/2	5- 1 1/2							
	8	F23	26-11	1	11			16- 7 3/4	5- 1 1/2	5- 1 1/2							
	8	F24	28- 0	1	11			17- 9	5- 1 1/2	5- 1 1/2							
	8	F25	28-10	1	11			18- 6 1/4	5- 1 1/2	5- 1 1/2							
	8	F26	29- 4	1	11			19- 0 3/4	5- 1 1/2	5- 1 1/2							
	8	F27	29- 8	1	11			19- 4 1/4	5- 1 1/2	5- 1 1/2							



MODIFIED TYPE 17 BAR



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR
\# MODIFIED TYPE 17 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

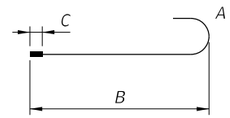
SHEET TITLE: REINFORCING BAR LIST (6 OF 24)

REF. DWG. NO.

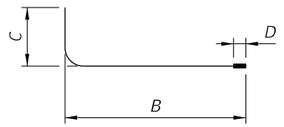
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-204

	MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
	SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
	8	F28	29- 9	19	11			19- 5 1/4	5- 1 1/2	5- 1 1/2							
	10	F01	28- 6	2	10*			23- 2 3/4	5- 3 1/4	0- 2							
	10	F02	29- 6	2	10*			24- 2 1/4	5- 3 1/4	0- 2							
	10	F03	30- 2	2	10*			24-10 1/2	5- 3 1/2	0- 2							
	10	F04	30-11	2	10*			25- 7	5- 3 1/2	0- 2							
	10	F05	31- 5	2	10*			26- 1 1/4	5- 3 3/4	0- 2							
	10	F06	31-11	2	10*			26- 6 3/4	5- 3 3/4	0- 2							
	10	F07	32- 4	2	10*			26-11 1/2	5- 4	0- 2							
	10	F08	32- 8	2	10*			27- 3 1/2	5- 4	0- 2							
	10	F09	33- 0	2	10*			27- 7 1/4	5- 4 1/4	0- 2							
	10	F10	33- 3	2	10*			27-10 1/4	5- 4 1/4	0- 2							
	10	F11	33- 6	2	10*			28- 0 3/4	5- 4 1/2	0- 2							
	10	F12	33- 8	2	10*			28- 2 3/4	5- 4 1/2	0- 2							
	10	F13	33- 9	2	10*			28- 4 1/4	5- 4 1/2	0- 2							
	10	F14	33-10	2	10*			28- 5 1/2	5- 4 1/2	0- 2							
	10	F15	33-11	2	10*			28- 6	5- 4 1/2	0- 2							
	10	F16	34- 0	2	10*			28- 7	5- 4 1/2	0- 2							
	10	F17	34- 0	2	10*			28- 7	5- 4 1/2	0- 2							
	10	F18	34- 0	2	10*			28- 7 1/2	5- 4 1/2	0- 2							
(PIER 3)	11	F01	15- 3	46	10			13- 2 1/2	2- 0								
(PIERS 4-10 & 15-16)	11	F01	14- 5	46	10			12- 4 1/2	2- 0								
	11	F02	25- 0	18	33	3		23- 0	0- 2 1/4								
	11	F03	30- 6	2	33	3		28- 5 1/4	0- 2 1/4								
	11	F04	30- 6	2	33	3		28- 5 3/4	0- 2 1/4								
	11	F07	30- 7	7	33	3		28- 6 1/2	0- 2 1/4								
	11	F08	28-11	2	33	3		26-10 3/4	0- 2 1/4								
	11	F09	28- 8	2	33	3		26- 7 1/2	0- 2 1/4								
	11	F10	24- 1	2	33	3		22- 0 1/2	0- 2 1/4								
	11	F11	21- 7	1	11			17- 6 3/4	2- 0	2- 0							
	11	F12	22- 0	1	11			18- 0	2- 0	2- 0							
	11	F13	22- 4	1	11			18- 4	2- 0	2- 0							
	11	F14	22- 8	1	11			18- 7 3/4	2- 0	2- 0							
	11	F15	22-11	1	11			18-10 3/4	2- 0	2- 0							
	11	F16	23- 1	1	11			19- 1	2- 0	2- 0							
	11	F17	23- 3	1	11			19- 3	2- 0	2- 0							
	11	F18	23- 5	1	11			19- 4 1/4	2- 0	2- 0							
	11	F19	23- 5	1	11			19- 5	2- 0	2- 0							
	11	F20	23- 6	27	11			19- 5 1/4	2- 0	2- 0							
	11	F21	24- 3	18	17#	1		22- 8	0- 2 1/4								
	11	F22	29- 9	2	17#	1		28- 1 1/4	0- 2 1/4								
	11	F23	29- 9	2	17#	1		28- 1 3/4	0- 2 1/4								
	11	F26	29-10	7	17#	1		28- 2 1/2	0- 2 1/4								
	11	F27	28- 2	2	17#	1		26- 6 3/4	0- 2 1/4								
	11	F28	27-11	2	17#	1		26- 3 1/2	0- 2 1/4								
	11	F29	7- 4	12	11			4- 9 1/2	0- 6 1/4	2- 0							
	11	F50	19- 2	48	8			5-10	3-10	5- 6	2- 0	2- 0					
(PIERS 4 & 5)	11	F99	13- 7	20	10			11- 7	2- 0								
	LOCATION PIER 18 FOOTING - PHASE 1											NO. REQUIRED = 1					
	5	F01	3- 7	52	10			2- 3 3/4	1- 3								
	7	F01	22- 3	10	10			11- 1 1/4	11- 1 1/4								
	7	F02	34- 7	10	33	6		34- 6 3/4	0- 1 1/4								
	8	F01	16- 8	6	11			12- 7 1/2	2- 0	2- 0							
	8	F02	15- 3	6	11			11- 3	2- 0	2- 0							
	8	F03	8- 2	6	11			4- 1 1/2	2- 0	2- 0							
	8	F04	15- 7	12	11			11- 7	2- 0	2- 0							
	8	F05	29- 3	42	11			18-10	5- 2	5- 2							
	11	F01	15- 2	92	10			13- 1 3/4	2- 0								
	11	F02	44- 2	35	33	3		42- 1 1/4	0- 2 1/4								
	11	F03	22-10	67	11			18-10	2- 0	2- 0							



MODIFIED TYPE 17 BAR



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR
\# MODIFIED TYPE 17 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

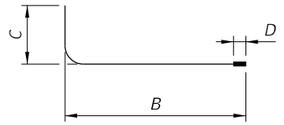
SHEET TITLE: REINFORCING BAR LIST (7 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-205

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
11	F04	47- 5	39	10			42- 1 1/4	5- 3 1/2								
11	F99	15- 2	40	10			13- 1 3/4	2- 0								
LOCATION PIER 18 FOOTING - PHASE 2											NO. REQUIRED = 1					
5	F01	3- 7	26	10			2- 3 3/4	1- 3								
7	F01	22- 3	10	10			11- 1 1/4	11- 1 1/4								
7	F02	27- 1	10	33	6		27- 0 1/4	0- 1 1/4								
8	F01	16- 8	6	11			12- 7 1/2	2- 0	2- 0							
8	F02	18- 9	6	11			14- 8 1/4	2- 0	2- 0							
8	F04	15- 7	6	11			11- 7	2- 0	2- 0							
8	F05	29- 3	35	11			18-10	5- 2	5- 2							
11	F01	15- 2	46	10			13- 1 3/4	2- 0								
11	F02	36- 9	35	33	3		34- 8 3/4	0- 2 1/4								
11	F03	22-10	64	11			18-10	2- 0	2- 0							
11	F04	40- 1	39	10			34- 8 3/4	5- 3 1/2								
11	F99	15- 2	20	10			13- 1 3/4	2- 0								
LOCATION PIER 19 FOOTING - PHASE 1											NO. REQUIRED = 1					
5	F01	3- 7	52	10			2- 3 3/4	1- 3								
7	F01	22- 3	10	10			11- 1 1/4	11- 1 1/4								
7	F02	39- 3	10	33	6		39- 2 1/4	0- 1 1/4								
8	F01	16- 8	6	11			12- 7 1/2	2- 0	2- 0							
8	F02	17-11	6	11			13-10 1/2	2- 0	2- 0							
8	F03	10- 2	6	11			6- 1 1/2	2- 0	2- 0							
8	F04	15- 7	12	11			11- 7	2- 0	2- 0							
8	F05	29- 3	47	11			18-10	5- 2	5- 2							
11	F01	15- 2	92	10			13- 1 3/4	2- 0								
11	F02	48- 9	29	33	3		46- 8 3/4	0- 2 1/4								
11	F03	22-10	62	11			18-10	2- 0	2- 0							
11	F04	52- 1	43	10			46- 8 3/4	5- 3 1/2								
11	F99	15- 2	40	10			13- 1 3/4	2- 0								
LOCATION PIER 19 FOOTING - PHASE 2											NO. REQUIRED = 1					
5	F01	3- 7	26	10			2- 3 3/4	1- 3								
7	F01	22- 3	10	10			11- 1 1/4	11- 1 1/4								
7	F02	25- 5	10	33	6		25- 4 3/4	0- 1 1/4								
8	F01	16- 8	6	11			12- 7 1/2	2- 0	2- 0							
8	F02	17- 1	6	11			13- 0 3/4	2- 0	2- 0							
8	F04	15- 7	6	11			11- 7	2- 0	2- 0							
8	F05	29- 3	33	11			18-10	5- 2	5- 2							
11	F01	15- 2	46	10			13- 1 3/4	2- 0								
11	F02	33- 2	29	33			33- 1 1/4	0- 2 1/4								
11	F03	22-10	48	11			18-10	2- 0	2- 0							
11	F04	38- 5	43	10			33- 1 1/4	5- 3 1/2								
11	F99	15- 2	20	10			13- 1 3/4	2- 0								
LOCATION PIER 2 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	C01	6- 1	44	18	4	5	5- 4									
4	C02	6- 4	44	18	4	5	5- 7									
5	C01	3- 4	52	11			0-10	1- 3	1- 3							
6	C01	13- 7	44	11			5- 7	4- 0	4- 0							
6	C02	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
8	C01	11- 5	7	11			5- 2 1/2	3- 1	3- 1							
8	C02	11- 8	7	11			5- 5 1/2	3- 1	3- 1							



MODIFIED TYPE 10 BAR

LEGEND:

* MODIFIED TYPE 10 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (8 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-206

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION PIER 2 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	22	18	4	5	5- 4									
4	CO2	6- 4	22	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	22	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
8	CO1	11- 5	7	11			5- 2 1/2	3- 1	3- 1							
8	CO2	11- 8	7	11			5- 5 1/2	3- 1	3- 1							
LOCATION PIER 3 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	68	18	4	5	5- 4									
4	CO2	6- 4	68	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	68	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
8	CO1	11- 5	7	11			5- 2 1/2	3- 1	3- 1							
8	CO2	11- 8	7	11			5- 5 1/2	3- 1	3- 1							
LOCATION PIER 3 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	34	18	4	5	5- 4									
4	CO2	6- 4	34	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	34	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
8	CO1	11- 5	7	11			5- 2 1/2	3- 1	3- 1							
8	CO2	11- 8	7	11			5- 5 1/2	3- 1	3- 1							
LOCATION PIER 4 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	124	18	4	5	5- 4									
4	CO2	6- 4	124	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	124	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	18- 4	132	1			18- 3 3/4									
LOCATION PIER 4 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	62	18	4	5	5- 4									
4	CO2	6- 4	62	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	62	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	18- 4	66	1			18- 3 3/4									
LOCATION PIER 5 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	168	18	4	5	5- 4									
4	CO2	6- 4	168	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	168	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	24- 2	132	1			24- 1 1/4									
LOCATION PIER 5 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	84	18	4	5	5- 4									
4	CO2	6- 4	84	18	4	5	5- 7									

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (9 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-207

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	84	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	24- 2	66	1			24- 1 1/4									
LOCATION PIER 6 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	216	18	4	5	5- 4									
4	CO2	6- 4	216	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	216	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	30- 0	92	1			29-11 3/4									
LOCATION PIER 6 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	108	18	4	5	5- 4									
4	CO2	6- 4	108	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	108	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	30- 0	46	1			29-11 3/4									
LOCATION PIER 7 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	268	18	4	5	5- 4									
4	CO2	6- 4	268	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	268	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	22- 3	92	1			22- 3									
11	CO2	20- 1	92	1			20- 0 3/4									
LOCATION PIER 7 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	134	18	4	5	5- 4									
4	CO2	6- 4	134	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	134	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	22- 3	46	1			22- 3									
11	CO2	20- 1	46	1			20- 0 3/4									
LOCATION PIER 8 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	316	18	4	5	5- 4									
4	CO2	6- 4	316	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	316	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	24- 3	92	1			24- 3									
11	CO2	24- 0	92	1			24- 0									
LOCATION PIER 8 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	158	18	4	5	5- 4									
4	CO2	6- 4	158	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	158	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	24- 3	46	1			24- 3									

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (10 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-208

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
11	CO2	24- 0	46	1			24- 0									
LOCATION PIER 9 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	364	18	4	5	5- 4									
4	CO2	6- 4	364	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	364	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	31- 3	92	1			31- 3									
11	CO2	23- 0	92	1			22-11 1/4									
LOCATION PIER 9 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	182	18	4	5	5- 4									
4	CO2	6- 4	182	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	182	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	31- 3	46	1			31- 3									
11	CO2	23- 0	46	1			22-11 1/4									
LOCATION PIER 10 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	416	18	4	5	5- 4									
4	CO2	6- 4	416	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	416	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	31- 3	92	1			31- 3									
11	CO2	28-11	92	1			28-10 1/2									
LOCATION PIER 10 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	208	18	4	5	5- 4									
4	CO2	6- 4	208	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	208	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	31- 3	46	1			31- 3									
11	CO2	28-11	46	1			28-10 1/2									
LOCATION PIER 15 COLUMNS #1 & #2 - PHASE 1											NO. REQUIRED = 1					
4	CO1	6- 1	368	18	4	5	5- 4									
4	CO2	6- 4	368	18	4	5	5- 7									
5	CO1	3- 4	52	11			0-10	1- 3	1- 3							
6	CO1	13- 7	368	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	CO1	31- 3	92	1			31- 3									
11	CO2	23- 0	92	1			22-11 1/2									
LOCATION PIER 15 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	CO1	6- 1	184	18	4	5	5- 4									
4	CO2	6- 4	184	18	4	5	5- 7									
5	CO1	3- 4	26	11			0-10	1- 3	1- 3							
6	CO1	13- 7	184	11			5- 7	4- 0	4- 0							
6	CO2	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	CO1	31- 3	46	1			31- 3									
11	CO2	23- 0	46	1			22-11 3/4									

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (11 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-209

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION PIER 16 COLUMNS #1 & #2 - PHASE 1 NO. REQUIRED = 1																
4	C01	6- 1	304	18	4	5	5- 4									
4	C02	6- 4	304	18	4	5	5- 7									
5	C01	3- 4	52	11			0-10	1- 3	1- 3							
6	C01	13- 7	304	11			5- 7	4- 0	4- 0							
6	C02	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	C01	24- 3	92	1			24- 3									
11	C02	21-11	92	1			21-10 3/4									
LOCATION PIER 16 COLUMN #3 - PHASE 2 NO. REQUIRED = 1																
4	C01	6- 1	152	18	4	5	5- 4									
4	C02	6- 4	152	18	4	5	5- 7									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	152	11			5- 7	4- 0	4- 0							
6	C02	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	C01	24- 3	46	1			24- 3									
11	C02	21-11	46	1			21-10 3/4									
LOCATION PIER 17 COLUMNS #1 & #2 - PHASE 1 NO. REQUIRED = 1																
4	C01	6- 1	232	18	4	5	5- 4									
4	C02	6- 4	232	18	4	5	5- 7									
5	C01	3- 4	52	11			0-10	1- 3	1- 3							
6	C01	13- 7	232	11			5- 7	4- 0	4- 0							
6	C02	15- 9	16	11			6- 8 3/4	4- 6	4- 6							
11	C01	31- 9	92	1			31- 8 3/4									
LOCATION PIER 17 COLUMN #3 - PHASE 2 NO. REQUIRED = 1																
4	C01	6- 1	116	18	4	5	5- 4									
4	C02	6- 4	116	18	4	5	5- 7									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	116	11			5- 7	4- 0	4- 0							
6	C02	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	C01	31- 9	46	1			31- 8 3/4									
LOCATION PIER 18 COLUMNS #1 & #2 - PHASE 1 NO. REQUIRED = 1																
4	C01	6- 1	184	18	4	5	5- 4									
4	C02	6- 4	184	18	4	5	5- 7									
5	C01	3- 4	52	11			0-10	1- 3	1- 3							
6	C01	13- 7	184	11			5- 7	4- 0	4- 0							
6	C02	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	C01	25- 9	132	1			25- 9									
LOCATION PIER 18 COLUMN #3 - PHASE 2 NO. REQUIRED = 1																
4	C01	6- 1	92	18	4	5	5- 4									
4	C02	6- 4	92	18	4	5	5- 7									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	92	11			5- 7	4- 0	4- 0							
6	C02	15- 9	4	11			6- 8 3/4	4- 6	4- 6							
11	C01	25- 9	66	1			25- 9									
LOCATION PIER 19 COLUMNS #1 & #2 - PHASE 1 NO. REQUIRED = 1																
4	C01	6- 1	120	18	4	5	5- 4									
4	C02	6- 4	120	18	4	5	5- 7									

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

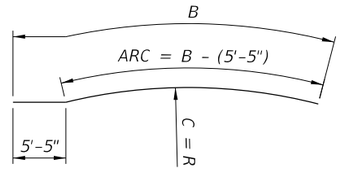
SHEET TITLE: REINFORCING BAR LIST (12 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-210

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	C01	3- 4	52	11			0-10	1- 3	1- 3							
6	C01	13- 7	120	11			5- 7	4- 0	4- 0							
6	C02	15- 9	8	11			6- 8 3/4	4- 6	4- 6							
11	C01	17- 9	132	1			17- 8 3/4									
LOCATION PIER 19 COLUMN #3 - PHASE 2											NO. REQUIRED = 1					
4	C01	6- 1	60	18	4	5	5- 4									
4	C02	6- 4	60	18	4	5	5- 7									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	60	11			5- 7	4- 0	4- 0							
6	C02	15- 9	4	11			6- 8 3/4	4- 6	4- 6							
11	C01	17- 9	66	1			17- 8 3/4									
LOCATION PIERS 2 & 3 CAP - PHASE 1											NO. REQUIRED = 2					
5	K01	6- 6	9	43			0- 5 1/4	5- 1 1/4	0- 5 1/4	0- 0 3/4	0- 0 3/4					
5	K02	6-11	14	1			6-11									
5	P01	46- 6	14	1			46- 6									
BAR 5P02 SHALL BE A MODIFIED TYPE 3																
5	P02	32- 1	2	3>			32- 1	53- 4 1/4								
5	P03	3- 5	16	11			0- 8 1/2	1- 4	1- 4							
5	P04	13- 0	4	26			6- 0 3/4	1- 1 1/4	4- 6	1- 3 3/4						
5	P05	13- 0	12	43			0- 4	5- 0 1/2	0- 4	3- 6	3- 6					
5	P06	9- 5	2	1			9- 5									
5	P07	7- 5	2	1			7- 5									
5	P08	18- 0	2	1			18- 0									
5	P09	11- 6	2	1			11- 6									
5	P10	11- 2	2	3			11- 1 3/4	53- 4 1/4								
5	P11	10- 8	4	6			1- 1 1/4	1- 3	5-10 3/4	1- 3						
6	P01	8- 0	55	5			0-10	4-10	0- 9	0- 9						
6	P02	9- 6	55	11			3-10	2-10	2-10							
6	P03	6- 8	110	11			1- 0	2-10	2-10							
6	P04	VARY	17	11			3-10	3- 2	3- 2							
		11- 8	0	11			3-10	4- 7 1/4	4- 7 1/4							
6	P05	VARY	17	11			1- 0	3- 2	3- 2							
		8-10	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P05	VARY	17	11			1- 0	3- 2	3- 2							
		8-10	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P06	VARY	7	11			3-10	3- 2	3- 2							
		10- 5	0	11			3-10	3- 4 3/4	3- 4 3/4							
6	P07	VARY	7	11			1- 0	3- 2	3- 2							
		7- 7	0	11			1- 0	3- 4 3/4	3- 4 3/4							
6	P07	VARY	7	11			1- 0	3- 2	3- 2							
		7- 7	0	11			1- 0	3- 4 3/4	3- 4 3/4							
6	P08	VARY	16	11			3-10	3- 5 1/2	3- 5 1/2							
		11-11	0	11			3-10	4- 7 1/4	4- 7 1/4							
6	P09	VARY	16	11			1- 0	3- 5 1/2	3- 5 1/2							
		9- 1	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P09	VARY	16	11			1- 0	3- 5 1/2	3- 5 1/2							
		9- 1	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P10	10- 0	19	5			0-10	6-10	0- 9	0- 9						
6	P11	24- 4	6	4	4	4	5- 4	5-10								
6	P12	15- 4	12	4	4	4	5- 4	1- 4								
6	P13	16- 6	6	11			5-10	5- 4	5- 4							
6	P14	20- 4	3	4	4	4	5- 4	3-10								
6	P15	14- 8	6	4	4	4	5- 4	1- 0								
6	P16	VARY	15	11			3-10	3- 6 1/4	3- 6 1/4							
		12- 0	0	11			3-10	4- 7 1/4	4- 7 1/4							
6	P17	VARY	15	11			1- 0	3- 6 1/4	3- 6 1/4							
		9- 2	0	11			1- 0	4- 7 1/4	4- 7 1/4							



MODIFIED TYPE 3 BAR

LEGEND:

> MODIFIED TYPE 3 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

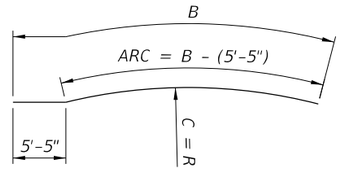
SHEET TITLE: REINFORCING BAR LIST (13 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-211

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
6	P17	VARY	15	11			1- 0	3- 6 1/4	3- 6 1/4							
		9- 2	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P18	13- 7	16	11			5- 7	4- 0	4- 0							
11	P01	56- 1	8	10			51- 0 1/2	5- 0								
BAR 11P02 SHALL BE A MODIFIED TYPE 3																
11	P02	32- 1	8	3>			32- 1	53- 4 1/4								
11	P03	17- 8	45	3			17- 8	53- 4 1/4								
11	P04	18- 6	36	1			18- 6									
11	P05	15- 8	8	3			15- 8	53- 4 1/4								
BAR 11P06 SHALL BE A MODIFIED TYPE 3																
11	P06	26- 7	6	3>			26- 7	53- 4 1/4								
LOCATION PIERS 2 & 3 CAP - PHASE 2 NO. REQUIRED = 2																
5	K01	6- 6	9	43			0- 5 1/4	5- 1 1/4	0- 5 1/4	0- 0 3/4	0- 0 3/4					
5	K02	6-11	14	1			6-11									
5	P01	23-10	14	1			23- 9 1/2									
BAR 5P02 SHALL BE A MODIFIED TYPE 3																
5	P02	23- 9	2	3>			23- 9	53- 4 1/4								
5	P03	3- 5	12	11			0- 8 1/2	1- 4	1- 4							
5	P04	13- 0	4	26			6- 0 3/4	1- 1 1/4	4- 6	1- 3 3/4						
5	P05	13- 0	12	43			0- 4	5- 0 1/2	0- 4	3- 6	3- 6					
5	P06	9- 8	2	1			9- 8									
5	P07	7- 5	2	1			7- 5									
6	P01	8- 0	25	5			0-10	4-10	0- 9	0- 9						
6	P02	9- 6	25	11			3-10	2-10	2-10							
6	P03	6- 8	50	11			1- 0	2-10	2-10							
6	P04	VARY	17	11			3-10	3- 2	3- 2							
		11- 8	0	11			3-10	4- 7 1/4	4- 7 1/4							
6	P05	VARY	17	11			1- 0	3- 2	3- 2							
		8-10	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P05	VARY	17	11			1- 0	3- 2	3- 2							
		8-10	0	11			1- 0	4- 7 1/4	4- 7 1/4							
6	P06	VARY	8	11			3-10	3- 2	3- 2							
		10- 6	0	11			3-10	3- 5 1/2	3- 5 1/2							
6	P07	VARY	8	11			1- 0	3- 2	3- 2							
		7- 8	0	11			1- 0	3- 5 1/2	3- 5 1/2							
6	P07	VARY	8	11			1- 0	3- 2	3- 2							
		7- 8	0	11			1- 0	3- 5 1/2	3- 5 1/2							
6P08 & 6P09 NOT USED																
6	P10	10- 0	8	5			0-10	6-10	0- 9	0- 9						
6	P11	24- 4	6	4	4	4	5- 4	5-10								
6	P12	15- 4	12	4	4	4	5- 4	1- 4								
6P13 NOT USED																
6	P14	20- 4	1	4	4	4	5- 4	3-10								
6	P15	14- 8	2	4	4	4	5- 4	1- 0								
11	P01	28-10	8	10			23- 9 1/4	5- 0								
BAR 11P02 SHALL BE A MODIFIED TYPE 3																
11	P02	23- 9	8	3>			23- 9	53- 4 1/4								
11	P03	17- 8	45	3			17- 8	53- 4 1/4								
11P04 & 11P05 NOT USED																
BAR 11P06 SHALL BE A MODIFIED TYPE 3																
11	P06	23- 8	6	3>			23- 8	53- 4 1/4								
LOCATION PIERS 4-10 & 15-18 CAP - PHASE 1 NO. REQUIRED = 11																
5	K01	6- 6	9	43			0- 5 1/4	5- 1 1/4	0- 5 1/4	0- 0 3/4	0- 0 3/4					
5	K02	8-11	14	1			8-10 3/4									
5	P01	45- 8	10	1			45- 8									
5P02 NOT USED																
5	P03	3- 5	16	11			0- 8 1/2	1- 4	1- 4							



MODIFIED TYPE 3 BAR

LEGEND:

> MODIFIED TYPE 3 BAR

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (14 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-212

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	P04	13- 0	4	26			6- 0 3/4	1- 1 1/4	4- 6	1- 3 3/4						
5	P05	13-11	2	1			13-10 1/4									
5	P06	10- 8	2	1			10- 8									
5	P07	8- 5	2	1			8- 5									
5	P08	6- 7	2	1			6- 7									
5P09 NOT USED																
5	P10	10- 9	4	6			1- 1 1/4	1- 3 3/4	5-10 3/4	1- 3 3/4						
5	P11	23- 4	2	1			23- 4									
5	P12	16- 0	2	1			16- 0									
5	P13	11- 6	2	1			11- 6									
5	P14	7-10	2	1			7-10									
6	P01	8- 0	53	5			0-10	4-10	0- 9	0- 9						
6	P02	9- 6	53	11			3-10	2-10	2-10							
6	P03	6- 8	106	11			1- 0	2-10	2-10							
6	P04	VARY	17	11			3-10	2- 8	2- 8							
		11- 1	0	11			3-10	4- 7	4- 7							
6	P05	VARY	17	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P05	VARY	17	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P06	VARY	7	11			3-10	2- 8	2- 8							
		9- 6	0	11			3-10	2-11 1/2	2-11 1/2							
6	P07	VARY	7	11			1- 0	2- 8	2- 8							
		6- 8	0	11			1- 0	2-11 1/2	2-11 1/2							
6	P07	VARY	7	11			1- 0	2- 8	2- 8							
		6- 8	0	11			1- 0	2-11 1/2	2-11 1/2							
6	P08	VARY	16	11			3-10	3- 0 1/2	3- 0 1/2							
		11- 6	0	11			3-10	4- 7	4- 7							
6	P09	VARY	16	11			1- 0	3- 0 1/2	3- 0 1/2							
		8- 8	0	11			1- 0	4- 7	4- 7							
6	P09	VARY	16	11			1- 0	3- 0 1/2	3- 0 1/2							
		8- 8	0	11			1- 0	4- 7	4- 7							
6	P10	10- 0	16	5			0-10	6-10	0- 9	0- 9						
6	P11	16- 6	12	11			5-10	5- 4	5- 4							
6	P12	24- 4	3	4	4	4	5-10	5- 4								
6	P13	14- 8	6	4	4	4	1- 0	5- 4								
6	P14	VARY	13	11			3-10	3- 3 1/4	3- 3 1/4							
		11- 9	0	11			3-10	4- 7	4- 7							
6	P15	VARY	13	11			1- 0	3- 3 1/4	3- 3 1/4							
		8-11	0	11			1- 0	4- 7	4- 7							
6	P15	VARY	13	11			1- 0	3- 3 1/4	3- 3 1/4							
		8-11	0	11			1- 0	4- 7	4- 7							
6	P16	13- 7	32	11			5- 7	4- 0	4- 0							
11	P01	55- 2	8	10			50- 2	5- 0								
11	P02	28- 1	38	3			28- 1	40- 5 1/2								
11	P03	16- 6	16	10			12- 0	4- 6								
11	P04	17- 3	26	1			17- 3									
11	P05	14-10	38	3			14-10	40- 5 1/2								
11	P06	12- 0	8	3			12- 0	40- 5 1/2								
11	P07	11- 3	10	1			11- 3									
LOCATION PIERS 4-10 & 15-18 CAP - PHASE 2 NO. REQUIRED = 11																
5	K01	6- 6	9	43			0- 5 1/4	5- 1 1/4	0- 5 1/4	0- 0 3/4	0- 0 3/4					
5	K02	8-11	14	1			8-10 3/4									
5	P01	24- 8	10	1			24- 8									
5P02 NOT USED																
5	P03	3- 5	12	11			0- 8 1/2	1- 4	1- 4							
5	P04	13- 0	4	26			6- 0 3/4	1- 1 1/4	4- 6	1- 3 3/4						
5	P05	14- 2	2	1			14- 2									
5	P06	10- 8	2	1			10- 8									

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (15 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-213

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	P07	8- 5	2	1			8- 5									
5	P08	6- 7	2	1			6- 7									
6	P01	8- 0	26	5			0-10	4-10	0- 9	0- 9						
6	P02	9- 6	26	11			3-10	2-10	2-10							
6	P03	6- 8	52	11			1- 0	2-10	2-10							
6	P04	VARY	17	11			3-10	2- 8	2- 8							
		11- 1	0	11			3-10	4- 7	4- 7							
6	P05	VARY	17	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P05	VARY	17	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P06	VARY	9	11			3-10	2- 8	2- 8							
		9- 9	0	11			3-10	3- 2 1/4	3- 2 1/4							
6	P07	VARY	9	11			1- 0	2- 8	2- 8							
		6-11	0	11			1- 0	3- 2 1/4	3- 2 1/4							
6	P07	VARY	9	11			1- 0	2- 8	2- 8							
		6-11	0	11			1- 0	3- 2 1/4	3- 2 1/4							
6P08 & 6P09 NOT USED																
6	P10	10- 0	8	5			0-10	6-10	0- 9	0- 9						
6	P11	16- 6	6	11			5-10	5- 4	5- 4							
6	P12	24- 4	1	4	4	4	5-10	5- 4								
6	P13	14- 8	2	4	4	4	1- 0	5- 4								
6P14 & 6P15 NOT USED																
6	P16	13- 7	16	11			5- 7	4- 0	4- 0							
11	P01	29- 8	8	10			24- 8	5- 0								
11	P02	20- 8	38	3			20- 8	40- 5 1/2								
11	P03	16- 6	16	10			12- 0	4- 6								
11P04 & 11P05 NOT USED																
11	P06	12- 0	8	3			12- 0	40- 5 1/2								
11	P07	11- 3	10	1			11- 3									
LOCATION PIER 19 CAP - PHASE 1											NO. REQUIRED = 1					
5	K01	6- 6	9	43			0- 5 1/4	5- 1 1/4	0- 5 1/4	0- 0 3/4	0- 0 3/4					
5	K02	9- 0	14	1			8-11 1/2									
5	P01	49- 2	10	1			49- 2									
5P02 NOT USED																
5	P03	3- 5	16	11			0- 8 1/2	1- 4	1- 4							
5	P04	13- 0	4	26			6- 0 3/4	1- 1 1/4	4- 6	1- 3 3/4						
5	P05	17- 5	2	1			17- 4 1/4									
5	P06	11- 5	2	1			11- 5									
5	P07	8-10	2	1			8-10									
5	P08	6- 9	2	1			6- 9									
5P09 NOT USED																
5	P10	10- 9	4	6			1- 1 1/4	1- 3 3/4	5-10 3/4	1- 3 3/4						
5	P11	24- 7	2	1			24- 7									
5	P12	17- 6	2	1			17- 6									
5	P13	12- 4	2	1			12- 4									
5	P14	8- 2	2	1			8- 2									
6	P01	8- 0	59	5			0-10	4-10	0- 9	0- 9						
6	P02	9- 6	59	11			3-10	2-10	2-10							
6	P03	6- 8	118	11			1- 0	2-10	2-10							
6	P04	VARY	20	11			3-10	2- 8	2- 8							
		11- 1	0	11			3-10	4- 7	4- 7							
6	P05	VARY	20	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P05	VARY	20	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P06	VARY	10	11			3-10	2- 8	2- 8							
		9- 6	0	11			3-10	2-11 1/2	2-11 1/2							
6	P07	VARY	10	11			1- 0	2- 8	2- 8							

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (16 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-214

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
		6- 8	0	11			1- 0	2-11 ½	2-11 ½							
6	P07	VARY	10	11			1- 0	2- 8	2- 8							
		6- 8	0	11			1- 0	2-11 ½	2-11 ½							
6	P08	VARY	16	11			3-10	3- 0 ½	3- 0 ½							
		11- 7	0	11			3-10	4- 7	4- 7							
6	P09	VARY	16	11			1- 0	3- 0 ½	3- 0 ½							
		8- 9	0	11			1- 0	4- 7	4- 7							
6	P09	VARY	16	11			1- 0	3- 0 ½	3- 0 ½							
		8- 9	0	11			1- 0	4- 7	4- 7							
6	P10	10- 0	16	5			0-10	6-10	0- 9	0- 9						
6	P11	16- 6	12	11			5-10	5- 4	5- 4							
6	P12	24- 4	3	4	4	4	5-10	5- 4								
6	P13	14- 8	6	4	4	4	1- 0	5- 4								
6	P14	VARY	13	11			3-10	3- 3 ¼	3- 3 ¼							
		11- 9	0	11			3-10	4- 7	4- 7							
6	P15	VARY	13	11			1- 0	3- 3 ¼	3- 3 ¼							
		8-11	0	11			1- 0	4- 7	4- 7							
6	P15	VARY	13	11			1- 0	3- 3 ¼	3- 3 ¼							
		8-11	0	11			1- 0	4- 7	4- 7							
6	P16	13- 7	32	11			5- 7	4- 0	4- 0							
11	P01	58- 8	8	10			53- 8	5- 0								
11	P02	31- 6	38	3			31- 6	52- 2 ½								
11	P03	18- 3	16	10			13- 9	4- 6								
11	P04	19- 0	30	1			19- 0									
11	P05	14-10	38	3			14-10	52- 2 ½								
11	P06	15- 9	8	3			15- 9	52- 2 ½								
11	P07	13- 0	14	1			13- 0									
LOCATION PIER 19 CAP - PHASE 2										NO. REQUIRED = 1						
5	K01	7- 8	9	43			0- 5 ¼	5- 1 ¼	0- 5 ¼	0- 8	0- 8					
5	K02	9- 0	14	1			8-11 ½									
5	P01	28- 2	10	1			28- 2									
5P02 NOT USED																
5	P03	3- 5	12	11			0- 8 ½	1- 4	1- 4							
5	P04	13- 0	4	26			6- 0 ¾	1- 1 ¼	4- 6	1- 3 ¾						
5	P05	17- 5	2	1			17- 4 ¼									
5	P06	11- 5	2	1			11- 5									
5	P07	8-10	2	1			8-10									
5	P08	6- 9	2	1			6- 9									
6	P01	8- 0	32	5			0-10	4-10	0- 9	0- 9						
6	P02	9- 6	32	11			3-10	2-10	2-10							
6	P03	6- 8	64	11			1- 0	2-10	2-10							
6	P04	VARY	20	11			3-10	2- 8	2- 8							
		11- 1	0	11			3-10	4- 7	4- 7							
6	P05	VARY	20	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P05	VARY	20	11			1- 0	2- 8	2- 8							
		8- 3	0	11			1- 0	4- 7	4- 7							
6	P06	VARY	12	11			3-10	2- 8	2- 8							
		9- 6	0	11			3-10	2-11 ½	2-11 ½							
6	P07	VARY	12	11			1- 0	2- 8	2- 8							
		6- 8	0	11			1- 0	2-11 ½	2-11 ½							
6	P07	VARY	12	11			1- 0	2- 8	2- 8							
		6- 8	0	11			1- 0	2-11 ½	2-11 ½							
6P08 & 6P09 NOT USED																
6	P10	10- 0	8	5			0-10	6-10	0- 9	0- 9						
6	P11	16- 6	6	11			5-10	5- 4	5- 4							
6	P12	24- 4	1	4	4	4	5-10	5- 4								
6	P13	14- 8	2	4	4	4	1- 0	5- 4								
6P14 & 6P15 NOT USED																

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (17 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-215

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
6	P16	13- 7	16	11			5- 7	4- 0	4- 0							
11	P01	33- 2	8	10			28- 2	5- 0								
11	P02	24- 1	38	3			24- 1	52- 2 ½								
11	P03	18- 3	16	10			13- 9	4- 6								
11P04 & 11P05 NOT USED																
11	P06	15- 9	8	3			15- 9	52- 2 ½								
11	P07	13- 0	14	1			13- 0									
LOCATION PIER 2 PEDESTALS - PHASE 1 NO. REQUIRED = 1																
4	P01	6- 0	36	11			1- 9	2- 1 ½	2- 1 ½							
4	P02	7- 5	30	11			3- 2	2- 1 ½	2- 1 ½							
4	P03	9-11	30	11			1- 7	4- 1 ¾	4- 1 ¾							
4	P04	11- 5	20	11			3- 1	4- 1 ¾	4- 1 ¾							
4	P05	10- 5	30	4	4	4	3- 2	1- 8								
LOCATION PIER 2 PEDESTALS - PHASE 2 NO. REQUIRED = 1																
4	P01	6- 0	18	11			1- 9	2- 1 ½	2- 1 ½							
4	P02	7- 5	15	11			3- 2	2- 1 ½	2- 1 ½							
4	P03	9-11	18	11			1- 7	4- 1 ¾	4- 1 ¾							
4	P04	11- 5	12	11			3- 1	4- 1 ¾	4- 1 ¾							
4	P05	10- 5	18	4	4	4	3- 2	1- 8								
LOCATION PIER 3 PEDESTALS - PHASE 1 NO. REQUIRED = 1																
4	P01	5- 9	24	11			1- 9	2- 0	2- 0							
4	P02	7- 2	20	11			3- 2	2- 0	2- 0							
4	P03	9- 7	36	11			1- 7	4- 0	4- 0							
4	P04	11- 1	24	11			3- 1	4- 0	4- 0							
4	P05	10- 5	36	4	4	4	3- 2	1- 8								
LOCATION PIER 3 PEDESTALS - PHASE 2 NO. REQUIRED = 1																
4	P01	5- 9	12	11			1- 9	2- 0	2- 0							
4	P02	7- 2	10	11			3- 2	2- 0	2- 0							
4	P03	9- 7	18	11			1- 7	4- 0	4- 0							
4	P04	11- 1	12	11			3- 1	4- 0	4- 0							
4	P05	10- 5	18	4	4	4	3- 2	1- 8								
LOCATION PIERS 4-10 PEDESTALS - PHASE 1 NO. REQUIRED = 7																
4	P01	5-11	48	11			1- 9	2- 0 ¾	2- 0 ¾							
4	P02	7- 4	40	11			3- 2	2- 0 ¾	2- 0 ¾							
LOCATION PIERS 4-10 PEDESTALS - PHASE 2 NO. REQUIRED = 7																
4	P01	5-11	24	11			1- 9	2- 0 ¾	2- 0 ¾							
4	P02	7- 4	20	11			3- 2	2- 0 ¾	2- 0 ¾							
LOCATION PIERS 15-17 PEDESTALS - PHASE 1 NO. REQUIRED = 3																
4	P01	5-11	48	11			1- 9	2- 1	2- 1							
4	P02	7- 4	40	11			3- 2	2- 1	2- 1							
LOCATION PIERS 15-17 PEDESTALS - PHASE 2 NO. REQUIRED = 3																
4	P01	5-11	24	11			1- 9	2- 1	2- 1							
4	P02	7- 4	20	11			3- 2	2- 1	2- 1							

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (18 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-216

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION PIER 18 PEDESTALS - PHASE 1											NO. REQUIRED = 1					
4	P01	6- 0	54	11			1- 9	2- 1 1/4	2- 1 1/4							
4	P02	7- 5	45	11			3- 2	2- 1 1/4	2- 1 1/4							
LOCATION PIER 18 PEDESTALS - PHASE 2											NO. REQUIRED = 1					
4	P01	6- 0	30	11			1- 9	2- 1 1/4	2- 1 1/4							
4	P02	7- 5	25	11			3- 2	2- 1 1/4	2- 1 1/4							
LOCATION PIER 19 PEDESTALS - PHASE 1											NO. REQUIRED = 1					
4	P01	6- 0	30	11			1- 9	2- 1 1/4	2- 1 1/4							
4	P02	7- 5	25	11			3- 2	2- 1 1/4	2- 1 1/4							
4	P03	14- 1	30	11			1- 7	6- 3	6- 3							
4	P04	15- 7	20	11			3- 1	6- 3	6- 3							
4	P05	10- 5	50	4	4	4	3- 2	1- 8								
LOCATION PIER 19 PEDESTALS - PHASE 2											NO. REQUIRED = 1					
4	P01	6- 0	18	11			1- 9	2- 1 1/4	2- 1 1/4							
4	P02	7- 5	15	11			3- 2	2- 1 1/4	2- 1 1/4							
4	P03	14- 1	24	11			1- 7	6- 3	6- 3							
4	P04	15- 7	16	11			3- 1	6- 3	6- 3							
4	P05	10- 5	40	4	4	4	3- 2	1- 8								
LOCATION SUPERSTRUCTURE UNIT 1 - PHASE 1											NO. REQUIRED = 1					
5	S01	235- 1	85	2			2- 6	227- 6 1/4							3	
5	S02	44- 9	88	2			2- 6	42- 2 1/2							1	
5	S03	44- 9	87	2			2- 6	42- 2 1/2							1	
5	S04	47- 8	138	2			2- 6	45- 1 1/4							1	
5	S05	47- 8	137	2			2- 6	45- 1 1/4							1	
5	S06	42- 0	9	2			2- 6	39- 5 1/2							1	
5	S07	47- 0	9	2			2- 6	44- 6							1	
5	S08	144- 4	6	2			2- 6	139- 3 1/2							2	
5	S10	21- 4	225	1			21- 4									
5	S11	42- 3	3	1			42- 2 1/2									
5	S99	35- 0	43	1			35- 0									
4	T01	5- 7	21	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
4	T02	5- 6	25	25			0- 9 1/4	2- 2	0- 9 1/4	0-10 1/4	0- 8	0- 8				
5	T01	12- 8	21	42			0- 5	3- 6	4- 5	3- 6		12- 3				
5	T02	8-11	7	42			0- 4	3- 6	1- 8	2- 9		8- 7				
5	T03	4- 7	7	1			4- 6 1/2									
5	T04	11- 1	35	42			0- 4	3- 6	3- 1	3- 6		10- 9				
5	T05	4- 7	7	1			4- 7									
LOCATION SUPERSTRUCTURE UNIT 1 - PHASE 2											NO. REQUIRED = 1					
5	S01	233-11	62	2			2- 6	226- 4 1/2							3	
5	S02	33- 6	88	2			2- 6	30-11 1/2							1	
5	S03	33- 6	87	2			2- 6	30-11 1/2							1	
5	S04	28- 5	138	2			2- 6	25-11							1	
5	S05	28- 5	137	2			2- 6	25-11							1	
5	S06	30-11	9	1			30-11									
5	S07	25-11	9	1			25-10 1/2									
5	S09	92- 4	6	2			2- 6	89- 9 3/4							1	
5	S10	21- 4	225	1			21- 4									
5	S11	27- 9	3	1			27- 8 1/2									
5	S99	35- 0	32	1			35- 0									
4	T01	5- 7	19	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
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DRAWN BY: LCY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (19 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-217

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
4	T02	5- 6	15	25			0- 9 1/4	2- 2	0- 9 1/4	0-10 1/4	0- 8	0- 8				
5	T01	13- 2	7	42			0- 4	3- 6	5- 2 1/4	3- 6		12-10 1/4				
5	T02	13- 0	14	42			0- 4	3- 6	5- 0	3- 6		12- 8				
5	T03	4- 4	7	1			4- 4									
5	T04	11- 1	21	42			0- 4	3- 6	3- 1	3- 6		10- 9				
5	T05	5- 2	7	1			5- 2									
LOCATION SUPERSTRUCTURE UNIT 2 - PHASE 1 NO. REQUIRED = 1																
5	S01	337- 4	87	2			2- 6	324- 9 1/2							5	
5	S02	44- 1	161	1			44- 0 3/4									
5	S03	44- 1	160	1			44- 0 3/4									
5	S04	44- 1	161	1			44- 0 3/4									
5	S05	44- 1	160	1			44- 0 3/4									
5	S06	43- 3	24	1			43- 2 1/2									
5	S07	18-10	322	1			18-10									
5	S99	35- 0	41	1			35- 0									
4	T01	5- 7	27	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
4	T02	5- 7	27	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
5	T01	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 7	7	1			5- 7									
LOCATION SUPERSTRUCTURE UNIT 2 - PHASE 2 NO. REQUIRED = 1																
5	S01	337- 4	58	2			2- 6	324- 9 1/2							5	
5	S02	29- 9	161	2			2- 6	27- 2 1/2							1	
5	S03	29- 9	160	2			2- 6	27- 2 1/2							1	
5	S04	29- 9	161	2			2- 6	27- 2 1/2							1	
5	S05	29- 9	160	2			2- 6	27- 2 1/2							1	
5	S06	27- 2	24	1			27- 1 3/4									
5	S07	18-10	322	1			18-10									
5	S99	35- 0	27	1			35- 0									
4	T01	5- 7	18	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
4	T02	5- 7	18	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
5	T01	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 7	7	1			5- 7									
LOCATION SUPERSTRUCTURE UNIT 3 - PHASE 1 NO. REQUIRED = 1																
5	S01	340-10	87	2			2- 6	328- 3 1/4							5	
5	S02	43- 5	163	1			43- 4 1/2									
5	S03	43- 5	162	1			43- 4 1/2									
5	S04	43- 3	162	1			43- 2 1/2									
5	S05	43- 3	161	1			43- 2 1/2									
5	S06	43- 5	24	1			43- 4 1/2									
5	S07	18-10	325	1			18-10									
5	S99	35- 0	41	1			35- 0									
4	T01	5- 7	27	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
4	T02	5- 7	27	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
5	T01	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 7	7	1			5- 7									
LOCATION SUPERSTRUCTURE UNIT 3 - PHASE 2 NO. REQUIRED = 1																
5	S01	339-11	58	2			2- 6	327- 4 1/4							5	

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (20 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-218

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	S02	29- 9	163	2			2- 6	27- 2 1/2							1	
5	S03	29- 9	162	2			2- 6	27- 2 1/2							1	
5	S04	27- 3	162	1			27- 2 1/2									
5	S05	27- 3	161	1			27- 2 1/2									
5	S06	27- 3	24	1			27- 2 1/4									
5	S07	18-10	325	1			18-10									
5	S99	35- 0	27	1			35- 0									
4	T01	5- 7	18	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
4	T02	5- 7	18	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
5	T01	15- 0	14	42			0- 5	3- 6	7- 6	2- 9		14- 7				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 7	7	1			5- 7									
LOCATION SUPERSTRUCTURE UNIT 4 & 5 - PHASE 1 NO. REQUIRED = 2																
5	S01	342- 5	87	2			2- 6	329-11							5	
5	S02	43- 3	162	1			43- 2 1/2									
5	S03	43- 3	161	1			43- 2 1/2									
5	S04	43- 3	162	1			43- 2 1/2									
5	S05	43- 3	161	1			43- 2 1/2									
5	S06	43- 3	24	1			43- 2 1/2									
5	S07	18-10	324	1			18-10									
5	S99	35- 0	41	1			35- 0									
4	T01	5- 7	27	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
4	T02	5- 7	27	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
5	T01	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 3	7	1			5- 2 3/4									
LOCATION SUPERSTRUCTURE UNIT 4 & 5 - PHASE 2 NO. REQUIRED = 2																
5	S01	342- 5	58	2			2- 6	329-11							5	
5	S02	27- 3	162	1			27- 2 1/2									
5	S03	27- 3	161	1			27- 2 1/2									
5	S04	27- 3	162	1			27- 2 1/2									
5	S05	27- 3	161	1			27- 2 1/2									
5	S06	27- 3	24	1			27- 2 1/2									
5	S07	18-10	324	1			18-10									
5	S99	35- 0	27	1			35- 0									
4	T01	5- 7	18	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
4	T02	5- 7	18	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
5	T01	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 3	7	1			5- 2 3/4									
LOCATION SUPERSTRUCTURE UNIT 7 - PHASE 1 NO. REQUIRED = 1																
5	S01	335-11	87	2			2- 6	323- 4 1/2							5	
5	S02	43-10	161	1			43- 9 1/2									
5	S03	43-10	160	1			43- 9 1/2									
5	S04	43-10	161	1			43- 9 1/2									
5	S05	43-10	160	1			43- 9 1/2									
5	S06	43-10	24	1			43- 9 1/2									
5	S07	18-10	322	1			18-10									
5	S99	35- 0	41	1			35- 0									
4	T01	5- 5	27	25			0- 9 1/4	2- 2	0- 9 1/4	0- 9 1/4	0- 8	0- 8				
4	T02	5- 7	27	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
5	T01	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (21 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-219

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 7	7	1			5- 7									
LOCATION SUPERSTRCTURE UNIT 7 - PHASE 2 NO. REQUIRED = 1																
5	S01	336- 5	58	2			2- 6	323-10 3/4							5	
5	S02	29- 9	161	2			2- 6	27- 2 1/2							1	
5	S03	29- 9	160	2			2- 6	27- 2 1/2							1	
5	S04	29- 9	161	2			2- 6	27- 2 1/2							1	
5	S05	29- 9	160	2			2- 6	27- 2 1/2							1	
5	S06	27- 2	24	1			27- 2									
5	S07	18-10	322	1			18-10									
5	S99	35- 0	27	1			35- 0									
4	T01	5- 4	18	25			0- 9	2- 2	0- 9	0- 9	0- 8	0- 8				
4	T02	5- 7	18	25			0-10	2- 2	0-10	0-10	0- 8	0- 8				
5	T01	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 3	7	1			5- 2 3/4									
LOCATION SUPERSTRUCTURE UNIT 8 - PHASE 1 NO. REQUIRED = 1																
5	S01	336- 0	87	2			2- 6	323- 6							5	
5	S02	43-10	161	1			43- 9 1/2									
5	S03	43-10	160	1			43- 9 1/2									
5	S04	43-10	161	1			43- 9 1/2									
5	S05	43-10	160	1			43- 9 1/2									
5	S06	43-10	24	1			43- 9 1/2									
5	S07	18-10	322	1			18-10									
5	S99	35- 0	41	1			35- 0									
4	T01	5- 7	27	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
4	T02	5- 9	27	25			0-11	2- 2	0-11	0-11	0- 8	0- 8				
5	T01	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	21	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 3	7	1			5- 2 3/4									
LOCATION SUPERSTRUCTURE UNIT 8 - PHASE 2 NO. REQUIRED = 1																
5	S01	334- 2	58	2			2- 6	321- 7 1/4							5	
5	S02	29- 9	161	2			2- 6	27- 2 1/2							1	
5	S03	29- 9	160	2			2- 6	27- 2 1/2							1	
5	S04	29- 9	161	2			2- 6	27- 2 1/2							1	
5	S05	27- 3	160	1			27- 2 1/2									
5	S06	27- 2	24	1			27- 2									
5	S07	18-10	322	1			18-10									
5	S99	35- 0	27	1			35- 0									
4	T01	5- 7	18	25			0-10 1/4	2- 2	0-10 1/4	0-10 1/4	0- 8	0- 8				
4	T02	5- 9	18	25			0-11	2- 2	0-11	0-11	0- 8	0- 8				
5	T01	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T02	5- 3	7	1			5- 2 3/4									
5	T03	15- 9	14	42			0- 5	3- 6	7- 6	3- 6		15- 4				
5	T04	5- 3	7	1			5- 2 3/4									
LOCATION SUPERSTRUCTURE UNIT 9 - PHASE 1 NO. REQUIRED = 1																
5	S01	264- 2	89	2			2- 6	254- 2							4	
5	S02	49- 8	158	2			2- 6	47- 1 1/4							1	
5	S03	49- 8	157	2			2- 6	47- 1 1/4							1	
5	S04	47- 8	91	2			2- 6	45- 1 1/2							1	
5	S05	47- 8	90	2			2- 6	45- 1 1/2							1	

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (22 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-220

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	S06	43- 7	9	1			43- 7									
5	S07	45- 1	9	1			45- 0 3/4									
5	S08	168- 2	8	2			2- 6	163- 1 1/2							2	
5	S10	24- 0	248	1			24- 0									
5	S11	47- 1	3	1			47- 1									
5	S99	35- 0	46	1			35- 0									
4	T01	5- 9	24	25			0-11	2- 2	0-11	0-11	0- 8	0- 8				
4	T02	5- 6	28	25			0- 9 3/4	2- 2	0- 9 3/4	0- 9 3/4	0- 8	0- 8				
5	T01	10- 0	7	42			0- 5	3- 6	1- 9	3- 6		9- 7				
5	T02	13- 8	21	42			0- 5	3- 6	5- 5	3- 6		13- 3				
5	T03	5- 1	7	1			5- 1									
5	T04	13- 3	7	42			0- 5	3- 6	5- 0 1/2	3- 6		12-10 1/2				
5	T05	13- 3	21	42			0- 5	3- 6	5- 0	3- 6		12-10				
5	T06	5- 1	7	1			5- 1									
LOCATION SUPERSTRUCTURE UNIT 9 - PHASE 2 NO. REQUIRED = 1																
5	S01	264- 2	68	2			2- 6	254- 2							4	
5	S02	38-11	158	2			2- 6	36- 4 1/2							1	
5	S03	38-11	157	2			2- 6	36- 4 1/2							1	
5	S04	38-11	91	2			2- 6	36- 4 1/2							1	
5	S05	38-11	90	2			2- 6	36- 4 1/2							1	
5	S06	26-10	9	1			26-10									
5	S07	36- 4	9	1			36- 3 3/4									
5	S09	95- 5	8	2			2- 6	92-11							1	
5	S10	24- 0	248	1			24- 0									
5	S11	30- 4	3	1			30- 4									
5	S99	35- 0	36	1			35- 0									
4	T01	5- 9	16	25			0-11	2- 2	0-11	0-11	0- 8	0- 8				
4	T02	5- 6	21	25			0- 9 3/4	2- 2	0- 9 3/4	0- 9 3/4	0- 8	0- 8				
5	T01	12- 6	14	42			0- 5	3- 6	4- 3	3- 6		12- 1				
5	T02	10- 3	7	42			0- 5	3- 6	2- 0	3- 6		9-10				
5	T03	5- 1	7	1			5- 1									
5	T04	11- 9	21	42			0- 5	3- 6	3- 6	3- 6		11- 4				
5	T05	13- 0	7	42			0- 5	3- 6	4- 9 1/2	3- 6		12- 7 1/2				
5	T06	5- 1	7	1			5- 1									
LOCATION APPROACH SLAB 1 - PHASE 1 NO. REQUIRED = 1																
5	B1	39- 3	72	1			39- 3									
5	C	5- 0	30	1			5- 0									
5	A1	29- 8	38	1			29- 8									
8	A2	29- 8	50	1			29- 8									
LOCATION APPROACH SLAB 1 - PHASE 2 NO. REQUIRED = 1																
5	B1	30- 9	72	1			30- 8 1/2									
5	C	5- 0	30	1			5- 0									
5	A1	29- 8	32	1			29- 8									
8	A2	29- 8	42	1			29- 8									
LOCATION APPROACH SLAB 2 - PHASE 1 NO. REQUIRED = 1																
5	B1T	VARY	31	1			42-10 1/4									
		43-11	0	1			44-11 1/4									
5	B1B	VARY	41	1			42-10 1/4									
		43-11	0	1			44-11 1/4									
5	C	5- 0	30	1			5- 0									
5	A1	29- 8	42	1			29- 8									
8	A2	29- 8	55	1			29- 8									
5	A2	28- 2	1	1			28- 1 3/4									

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST (23 OF 24)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-221

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
8	A3	28- 2	1	1			28- 1 3/4									
5	A3	25- 4	1	1			25- 4									
8	A4	25- 4	1	1			25- 4									
LOCATION APPROACH SLAB 2 - PHASE 2											NO. REQUIRED = 1					
5	B1T	VARY	31	1			35- 3 3/4									
		35- 9	0	1			36- 2 1/4									
5	B1B	VARY	41	1			35- 3 3/4									
		35- 9	0	1			36- 2 1/4									
5	C	5- 0	30	1			5- 0									
5	A1	29- 8	37	1			29- 8									
8	A2	29- 8	48	1			29- 8									
5	A2	25- 4	1	1			25- 4									
8	A3	25- 4	1	1			25- 4									

END OF LIST

NOTE:

1. WORK THIS SHEET WITH STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: BAS
DESIGNED BY: LCY
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

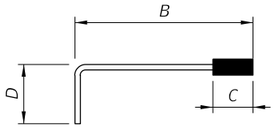
SHEET TITLE: REINFORCING BAR LIST (24 OF 24)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. B1-222

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION		FOOTING (PIER 11-14) - PHASE 1								NO. REQUIRED = 4						
5	F01	3- 2	52	17	3		2- 4 1/4									
5	F02	13- 9	48	11			3- 9	5- 0	5- 0							
7	F01	44-10	7	23			7- 0	9- 9 1/2	7- 0							
7	F02	40- 2	14	33	6		40- 1 3/4	0- 1 1/4								
7	F03	21-11	7	18	3	3	19- 7									
7	F04	5- 4	14	17	3		4- 2									
7	F05	46- 1	4	33	3		44-10 3/4	0- 1 1/4								
8	F01	7- 1	2	18	3	3	4- 4 3/4									
8	F02	8- 5	2	18	3	3	5- 8 1/2									
8	F03	9- 3	2	18	3	3	6- 7									
8	F04	4- 2	2	18	3	3	1- 6									
8	F05	4- 6	2	18	3	3	1-10									
8	F06	7- 4	6	18	3	3	4- 7 1/2									
8	F07	11-10	6	18	3	3	9- 1 1/2									
8	F08	9- 2	12	18	3	3	6- 6									
8	F09	2- 7	6	33	3		1- 3	0- 1 1/2								
8	F10	8- 5	1	18	3	3	5- 8 1/2									
8	F11	12- 8	1	18	3	3	10- 0									
8	F12	15- 4	1	18	3	3	12- 8									
8	F13	4- 6	2	18	3	3	1- 9 1/2									
8	F14	5- 2	2	18	3	3	2- 5 1/2									
8	F15	5- 8	2	18	3	3	3- 0									
8	F16	7- 1	3	18	3	3	4- 5									
8	F17	14- 3	9	18	3	3	11- 7									
8	F18	7- 2	12	18	3	3	4- 6									
8	F19	17- 1	1	11			6- 4 1/2	5- 4	5- 4							
8	F20	21- 4	1	11			10- 7	5- 4	5- 4							
8	F21	24- 0	1	11			13- 3	5- 4	5- 4							
8	F22	25-11	1	11			15- 2 1/2	5- 4	5- 4							
8	F23	27- 4	1	11			16- 7 3/4	5- 4	5- 4							
8	F24	28- 6	1	11			17- 9	5- 4	5- 4							
8	F25	29- 3	1	11			18- 6 1/4	5- 4	5- 4							
8	F26	29- 9	1	11			19- 0 3/4	5- 4	5- 4							
8	F27	30- 1	1	11			19- 4 1/4	5- 4	5- 4							
8	F28	30- 2	44	11			19- 5 1/4	5- 4	5- 4							
8	F29	6- 2	20	17	3		4-10									
10	F01	53- 5	2	44			47-11 3/4	0- 2	5- 3							
10	F02	54- 4	2	44			48-11	0- 2	5- 3							
10	F03	55- 1	2	44			49- 8	0- 2	5- 3							
10	F04	55- 9	2	44			50- 3 1/2	0- 2	5- 3							
10	F05	56- 3	2	44			50- 9 3/4	0- 2	5- 3							
10	F06	56- 9	2	44			51- 3 1/4	0- 2	5- 3							
10	F07	57- 1	2	44			51- 7 3/4	0- 2	5- 3							
10	F08	57- 5	2	44			52- 0	0- 2	5- 3							
10	F09	57- 9	2	44			52- 3 1/2	0- 2	5- 3							
10	F10	58- 0	2	44			52- 6 1/2	0- 2	5- 3							
10	F11	58- 2	2	44			52- 9	0- 2	5- 3							
10	F12	58- 4	2	44			52-11	0- 2	5- 3							
10	F13	58- 6	2	44			53- 0 1/2	0- 2	5- 3							
10	F14	58- 7	2	44			53- 1 3/4	0- 2	5- 3							
10	F15	58- 8	2	44			53- 2 1/2	0- 2	5- 3							
10	F16	58- 9	2	44			53- 3 1/4	0- 2	5- 3							
10	F17	58- 9	2	44			53- 3 1/2	0- 2	5- 3							
10	F18	58- 9	1	44			53- 3 1/2	0- 2	5- 3							
11	F01	13- 9	92	17	3		11- 9									
11	F02	49-11	18	33	3		47-10 1/4	0- 2 1/4								
11	F03	55- 1	2	33	3		53- 1	0- 2 1/4								
11	F04	55- 2	2	33	3		53- 1 3/4	0- 2 1/4								
11	F05	43- 6	7	18	3	3	39- 5 1/2									



TYPE 44

NOTES:

1. BAR BEND TYPE 44 IS SHOWN ABOVE, FOR ADDITIONAL BAR BENDING DETAILS, REFER TO STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

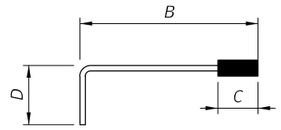
SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (1 OF 7)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-223

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
11	F06	10- 6	7	18	3	3	6- 5 3/4									
11	F07	3- 4	7	33	3		1- 3 3/4	0- 2 1/4								
11	F08	53- 7	2	33	3		51- 6 3/4	0- 2 1/4								
11	F09	53- 4	2	33	3		51- 3 3/4	0- 2 1/4								
11	F10	48- 9	2	33	3		46- 9	0- 2 1/4								
11	F11	21- 5	1	18	3	3	17- 5									
11	F12	21- 9	1	18	3	3	17- 9									
11	F13	22- 5	1	18	3	3	18- 4 1/4									
11	F14	22- 8	1	18	3	3	18- 8									
11	F15	22-11	1	18	3	3	18-11									
11	F16	23- 2	1	18	3	3	19- 1 1/4									
11	F17	23- 3	1	18	3	3	19- 3									
11	F18	23- 5	1	18	3	3	19- 4 1/4									
11	F19	23- 5	1	18	3	3	19- 5									
11	F20	23- 6	58	18	3	3	19- 5 1/4									
11	F21	49- 3	18	33	1		47- 8	0- 2 1/4								
11	F22	54- 5	2	33	1		52-10	0- 2 1/4								
11	F23	54- 6	2	33	1		52-10 3/4	0- 2 1/4								
11	F24	42- 2	7	18	1	1	38-11 1/2									
11	F25	9- 2	7	18	1	1	5-11 3/4									
11	F26	3- 2	7	33	3		1- 2	0- 2 1/4								
11	F27	52-11	2	33	1		51- 3 3/4	0- 2 1/4								
11	F28	52- 8	2	33	1		51- 0 3/4	0- 2 1/4								
11	F29	7- 4	24	17	3		5- 4									
11	F50	21- 6	96	8			6- 0	3- 8	5-10	3- 0	3- 0					
LOCATION FOOTING (PIER 11-14) - PHASE 2 NO. REQUIRED = 4																
5	F01	3- 2	26	17	3		2- 4 1/4									
5	F02	13- 9	24	11			3- 9	5- 0	5- 0							
7	F01	44-10	7	23			7- 0	9- 9 1/2	7- 0							
7	F06	15- 5	14	33	6		15- 4 1/4	0- 1 1/4								
7	F07	21- 2	4	33	3		20- 0	0- 1 1/4								
8	F01	7- 4	2	18	3	3	4- 8									
8	F02	8- 6	2	18	3	3	5- 9 3/4									
8	F03	9- 5	2	18	3	3	6- 8									
8	F04	4- 2	2	18	3	3	1- 6									
8	F05	4- 6	2	18	3	3	1-10									
8	F06	7- 8	6	18	3	3	5- 0									
8	F10	8- 5	1	18	3	3	5- 8 1/2									
8	F11	12- 8	1	18	3	3	10- 0									
8	F12	15- 4	1	18	3	3	12- 8									
8	F13	4- 6	2	18	3	3	1- 9 1/2									
8	F14	5- 2	2	18	3	3	2- 5 1/2									
8	F15	5- 8	2	18	3	3	3- 0									
8	F16	7- 1	3	18	3	3	4- 5									
8	F17	14- 3	9	18	3	3	11- 7									
8	F18	7- 2	12	18	3	3	4- 6									
8	F19	17- 1	1	11			6- 4 1/2	5- 4	5- 4							
8	F20	21- 4	1	11			10- 7	5- 4	5- 4							
8	F21	24- 0	1	11			13- 3	5- 4	5- 4							
8	F22	25-11	1	11			15- 2 1/2	5- 4	5- 4							
8	F23	27- 4	1	11			16- 7 3/4	5- 4	5- 4							
8	F24	28- 6	1	11			17- 9	5- 4	5- 4							
8	F25	29- 3	1	11			18- 6 1/4	5- 4	5- 4							
8	F26	29- 9	1	11			19- 0 3/4	5- 4	5- 4							
8	F27	30- 1	1	11			19- 4 1/4	5- 4	5- 4							
8	F28	30- 2	44	11			19- 5 1/4	5- 4	5- 4							
8	F30	9- 4	6	33	3		8- 0	0- 1 1/2								
10	F19	28- 9	2	44			23- 3 3/4	0- 2	5- 3							
10	F20	29- 8	2	44			24- 3	0- 2	5- 3							



TYPE 44

NOTES:

1. BAR BEND TYPE 44 IS SHOWN ABOVE, FOR ADDITIONAL BAR BENDING DETAILS, REFER TO STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (2 OF 7)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-224

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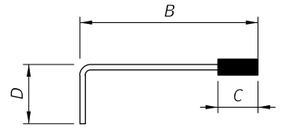
MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
10	F21	30- 5	2	44			25- 0	0- 2	5- 3							
10	F22	31- 1	2	44			25- 7 1/2	0- 2	5- 3							
10	F23	31- 7	2	44			26- 1 3/4	0- 2	5- 3							
10	F24	32- 1	2	44			26- 7 1/4	0- 2	5- 3							
10	F25	32- 5	2	44			26-11 3/4	0- 2	5- 3							
10	F26	32- 9	2	44			27- 4	0- 2	5- 3							
10	F27	33- 1	2	44			27- 7 1/2	0- 2	5- 3							
10	F28	33- 4	2	44			27-10 1/2	0- 2	5- 3							
10	F29	33- 6	2	44			28- 1	0- 2	5- 3							
10	F30	33- 8	2	44			28- 3	0- 2	5- 3							
10	F31	33-10	2	44			28- 4 1/2	0- 2	5- 3							
10	F32	33-11	2	44			28- 5 3/4	0- 2	5- 3							
10	F33	34- 0	2	44			28- 6 1/2	0- 2	5- 3							
10	F34	34- 1	2	44			28- 7 1/4	0- 2	5- 3							
10	F35	34- 1	2	44			28- 7 1/2	0- 2	5- 3							
10	F36	34- 1	1	44			28- 7 1/2	0- 2	5- 3							
11	F01	13- 9	46	17	3		11- 9									
11	F11	21- 7	1	18	3	3	17- 7									
11	F12	22- 0	1	18	3	3	18- 0									
11	F13	22- 5	1	18	3	3	18- 4 1/4									
11	F14	22- 8	1	18	3	3	18- 8									
11	F15	22-11	1	18	3	3	18-11									
11	F16	23- 2	1	18	3	3	19- 1 1/4									
11	F17	23- 3	1	18	3	3	19- 3									
11	F18	23- 5	1	18	3	3	19- 4 1/4									
11	F19	23- 5	1	18	3	3	19- 5									
11	F20	23- 6	27	18	3	3	19- 5 1/4									
11	F29	7- 4	12	17	3		5- 4									
11	F30	25- 3	18	33	3		23- 2 1/4	0- 2 1/4								
11	F31	30- 6	2	33	3		28- 5 1/2	0- 2 1/4								
11	F32	30- 7	2	33	3		28- 6 1/4	0- 2 1/4								
11	F33	30- 8	7	33	3		28- 7 3/4	0- 2 1/4								
11	F34	29- 0	2	33	3		26-11 1/4	0- 2 1/4								
11	F35	28- 9	2	33	3		26- 8 1/4	0- 2 1/4								
11	F36	24- 2	2	33	3		22- 1 1/2	0- 2 1/4								
11	F37	24- 6	18	33	1		22-10 3/4	0- 2 1/4								
11	F38	29-10	2	33	1		28- 2 1/4	0- 2 1/4								
11	F39	29-11	2	33	1		28- 3 1/4	0- 2 1/4								
11	F40	30- 0	7	33	1		28- 4 3/4	0- 2 1/4								
11	F41	28- 4	2	33	1		26- 8 1/4	0- 2 1/4								
11	F42	28- 1	2	33	1		26- 5 1/4	0- 2 1/4								
11	F50	21- 6	48	8			6- 0	3- 8	5-10	3- 0	3- 0					

END OF LIST



TYPE 44

NOTES:

1. BAR BEND TYPE 44 IS SHOWN ABOVE, FOR ADDITIONAL BAR BENDING DETAILS, REFER TO STANDARD PLANS INDEX 415-001.

BRIDGE NO. 130168

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (3 OF 7)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-225

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION COLUMN REBAR FOR PIER 11											NO. REQUIRED = 3					
4	C01	6- 1	230	18	4	5	5- 4									
4	C02	6- 7	230	18	4	5	5-10									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	230	11			5- 7	4- 0	4- 0							
6	C02	15- 7	8	11			6- 7	4- 6	4- 6							
11	C01	34- 0	46	1			34- 0									
11	C02	31- 7	46	1			31- 7									
LOCATION COLUMN REBAR FOR PIER 12											NO. REQUIRED = 3					
4	C01	6- 1	240	18	4	5	5- 4									
4	C02	6- 7	240	18	4	5	5-10									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	240	11			5- 7	4- 0	4- 0							
6	C02	15- 7	8	11			6- 7	4- 6	4- 6							
11	C01	35- 0	46	1			35- 0									
11	C02	33- 3	46	1			33- 3									
LOCATION COLUMN REBAR FOR PIER 13											NO. REQUIRED = 3					
4	C01	6- 1	234	18	4	5	5- 4									
4	C02	6- 7	234	18	4	5	5-10									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	234	11			5- 7	4- 0	4- 0							
6	C02	15- 7	8	11			6- 7	4- 6	4- 6							
11	C01	35- 0	46	1			35- 0									
11	C02	32- 0	46	1			32- 0									
LOCATION COLUMN REBAR FOR PIER 14											NO. REQUIRED = 3					
4	C01	6- 1	214	18	4	5	5- 4									
4	C02	6- 7	214	18	4	5	5-10									
5	C01	3- 4	26	11			0-10	1- 3	1- 3							
6	C01	13- 7	214	11			5- 7	4- 0	4- 0							
6	C02	15- 7	8	11			6- 7	4- 6	4- 6							
11	C01	32- 0	46	1			32- 0									
11	C02	29-11	46	1			29-11									

END OF LIST

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (4 OF 7)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-226

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION PIER CAP PHASE 1 REBAR FOR PIERS 11-14 NO. REQUIRED = 4																
5	P01	46- 0	6	1			46- 0									
5	P02	13- 7	28	11			5- 7	4- 0	4- 0							
5	P03	3- 3	16	11			0- 8 ½	1- 3	1- 3							
5	P04	13- 1	4	26			6- 4	1- 0	4- 6	1- 3						
5	P05	46- 1	4	1			46- 1									
5	P06	13- 7	2	1			13- 7									
5	P07	9- 8	2	1			9- 8									
5	P08	7- 3	2	1			7- 3									
5	P09	10-10	4	6			1- 0	1- 3	6- 4	1- 3						
5	P10	22-10	2	1			22-10									
5	P11	14- 7	2	1			14- 7									
5	P12	9- 5	2	1			9- 5									
6	P01	8- 2	54	5			0-10	4-10	0-10	0-10						
6	P02	11- 4	76	11			3-10	3- 9	3- 9							
6	P03	8- 6	152	11			1- 0	3- 9	3- 9							
6	P04	9- 8	32	11			3-10	2-11	2-11							
6	P05	6-10	64	11			1- 0	2-11	2-11							
6	P06	16-10	12	11			5-10	5- 6	5- 6							
6	P07	10- 2	16	5			0-10	6-10	0-10	0-10						
11	P01	55-10	8	10			50- 7	5- 3								
11	P02	28- 3	27	3			28- 3	40-11								
11	P03	17- 0	24	10			12- 6	4- 6								
11	P04	19- 3	24	1			19- 3									
11	P05	15- 6	27	3			15- 6	40-11								
11	P08	16- 4	9	3			16- 4	40-11								
LOCATION PIER CAP PHASE 2 REBAR FOR PIERS 11-14 NO. REQUIRED = 4																
5	P02	13- 7	14	11			5- 7	4- 0	4- 0							
5	P03	3- 3	12	11			0- 8 ½	1- 3	1- 3							
5	P04	13- 1	4	26			6- 4	1- 0	4- 6	1- 3						
5	P06	13- 7	2	1			13- 7									
5	P07	9- 8	2	1			9- 8									
5	P08	7- 3	2	1			7- 3									
5	P13	24- 4	6	1			24- 4									
5	P14	23-10	4	1			23-10									
6	P01	8- 2	25	5			0-10	4-10	0-10	0-10						
6	P02	11- 4	18	11			3-10	3- 9	3- 9							
6	P03	8- 6	36	11			1- 0	3- 9	3- 9							
6	P04	9- 8	32	11			3-10	2-11	2-11							
6	P05	6-10	64	11			1- 0	2-11	2-11							
6	P06	16-10	6	11			5-10	5- 6	5- 6							
6	P07	10- 2	8	5			0-10	6-10	0-10	0-10						
11	P03	17- 0	24	10			12- 6	4- 6								
11	P06	28- 6	8	10			23- 3	5- 3								
11	P07	20- 3	27	3			20- 3	40-11								
11	P08	16- 4	9	3			16- 4	40-11								

END OF LIST

BRIDGE NO. 130168

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

JOSEPH T. MITCHELL, P.E.
P.E. LICENSE NUMBER 60188
WSP USA INC.
5411 SKYCENTER DRIVE, SUITE 650
TAMPA, FL 33607

DRAWN BY: SL
CHECKED BY: JTM
DESIGNED BY: RMD
CHECKED BY: ESS/JVH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (5 OF 7)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-227

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION PEDESTAL GROUP PIERS 11-14 NO. REQUIRED = 4																
4	K01	5- 9	72	11			1- 9	2- 0	2- 0							
4	K02	7- 2	60	11			3- 2	2- 0	2- 0							
4	K02	6- 2	8	11			1- 8	2- 3	2- 3							
LOCATION CHEEKWALLS PIERS 11-14 NO. REQUIRED = 4																
5	E01	6- 8	18	13			5- 3	0- 8 ½	0- 8 ½						45	45
5	E02	8- 6	28	1			8- 6									
LOCATION SHEAR KEY GROUP PIERS 12-13 NO. REQUIRED = 2																
4	S01	9-10	16	11			3-10	3- 0	3- 0							
4	S02	6- 5	16	11			1- 1 ½	2- 7 ½	2- 7 ½							
6	S01	7- 3	36	11			1- 3	3- 0	3- 0							
LOCATION PIER DIAPHRAGM (PIERS 12-13) PHASE 1 NO. REQUIRED = 2																
5	D01	13- 7	7	4	5	5	4- 8	1- 8								
5	D02	15- 1	7	4	5	5	5- 5	1- 8								
5	D03	17-11	48	4	5	5	6-10	1- 8								
5	D04	17- 4	28	6			7- 4	1- 0	0- 8	1- 0						
6	D01	14- 4	42	11			11- 0	1- 8	1- 8							
6	D02	11- 0	6	11			7- 8	1- 8	1- 8							
6	D03	11-10	6	11			8- 6	1- 8	1- 8							
6	D04	26- 8	16	17	1		26- 0									
6	D05	27- 6	2	10			26- 0	1- 6								
6	D06	14-10	2	11			6-10	4- 0	4- 0							
6	D07	8- 8	8	11			0- 8	4- 0	4- 0							
6	D08	19- 4	18	13			12- 0	2- 8	4- 8						1	1
6	D09	10- 2	7	11			1- 8	4- 3	4- 3							
LOCATION PIER DIAPHRAGM (PIERS 12-13) PHASE 2 NO. REQUIRED = 2																
5	D01	13- 7	3	4	5	5	4- 8	1- 8								
5	D02	15- 1	3	4	5	5	5- 5	1- 8								
5	D03	17-11	32	4	5	5	6-10	1- 8								
5	D04	17- 4	14	6			7- 4	1- 0	0- 8	1- 0						
6	D01	14- 4	14	11			11- 0	1- 8	1- 8							
6	D02	11- 0	4	11			7- 8	1- 8	1- 8							
6	D03	11-10	4	11			8- 6	1- 8	1- 8							
6	D06	14-10	2	11			6-10	4- 0	4- 0							
6	D07	8- 8	8	11			0- 8	4- 0	4- 0							
6	D10	19- 2	7	11			0- 8	9- 3	9- 3							
6	D13	24- 4	16	17	1		23- 8									
6	D14	25- 2	2	10			23- 8	1- 6								

END OF LIST

BRIDGE NO. 130168

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TAMPA, FL 33607

DRAWN BY: SL
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (6 OF 7)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-228

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION SUPERSTRUCTURE UNIT 6 PHASE1 NO. REQUIRED = 1																
4	S09	11- 0	469	1			11- 0									
5	S01	512-10	84	2			2- 2	495- 6							8	
5	S02	60- 0	164	1			60- 0									
5	S03	43- 2	472	12			33-11	9- 3								2
5	S04	43- 2	472	12			33-11	9- 3								2
5	S05	13- 0	469	1			13- 0									
5	T01	43- 2	16	12			33-11	9- 3								2
5	T02	16- 8	42	42			0- 5	4- 0	7- 6	4- 0		16- 4				
5	T03	5- 7	54	25			0- 5	2- 0	0- 5	0- 9	0- 9	1- 6				
5	T04	7- 4	14	28			4- 0	2- 9	0- 5	0- 5						
5	H1	107- 3	12	2			105- 0	2- 3							1	
5	H2	8- 0	984	6			0- 8	1- 6	3- 8	1- 6						
OVERLOOKS																
5	S11	47- 2	82	12			37-11	9- 3								2
4	S13	14- 0	14	1			14- 0									
5	S14	3- 5	4	1			3- 5									
5	S15	6- 2	4	1			6- 2									
5	S16	7-11	4	1			7-11									
5	S17	9- 3	4	1			9- 3									
5	S18	10- 4	4	1			10- 4									
5	S19	11- 3	4	1			11- 3									
5	S20	12- 0	4	1			12- 0									
5	S21	12- 8	4	1			12- 8									
LOCATION SUPERSTRUCTURE UNIT 6 PHASE2 NO. REQUIRED = 1																
4	S10	11- 0	469	1			11- 0									
5	S01	512-10	56	2			2- 2	495- 6							8	
5	S02	60- 0	108	1			60- 0									
5	S06	27- 1	472	1			27- 1									
5	S07	27- 1	472	1			27- 1									
5	S08	13- 0	469	1			13- 0									
5	T03	5- 7	36	25			0- 5	2- 0	0- 5	0- 9	0- 9	1- 6				
5	T05	27- 1	16	1			27- 1									
5	T06	16- 8	14	42			0- 5	4- 0	7- 6	4- 0		16- 4				
5	T07	12- 1	14	28			4- 0	7- 6	0- 5	0- 5						
5	H1	107- 3	6	2			105- 0	2- 3							1	
5	H2	8- 0	492	6			0- 8	1- 6	3- 8	1- 6						
OVERLOOKS																
5	S12	31- 1	82	1			31- 1									
4	S13	14- 0	14	1			14- 0									
5	S14	3- 5	4	1			3- 5									
5	S15	6- 2	4	1			6- 2									
5	S16	7-11	4	1			7-11									
5	S17	9- 3	4	1			9- 3									
5	S18	10- 4	4	1			10- 4									
5	S19	11- 3	4	1			11- 3									
5	S20	12- 0	4	1			12- 0									
5	S21	12- 8	4	1			12- 8									

END OF LIST

BRIDGE NO. 130168

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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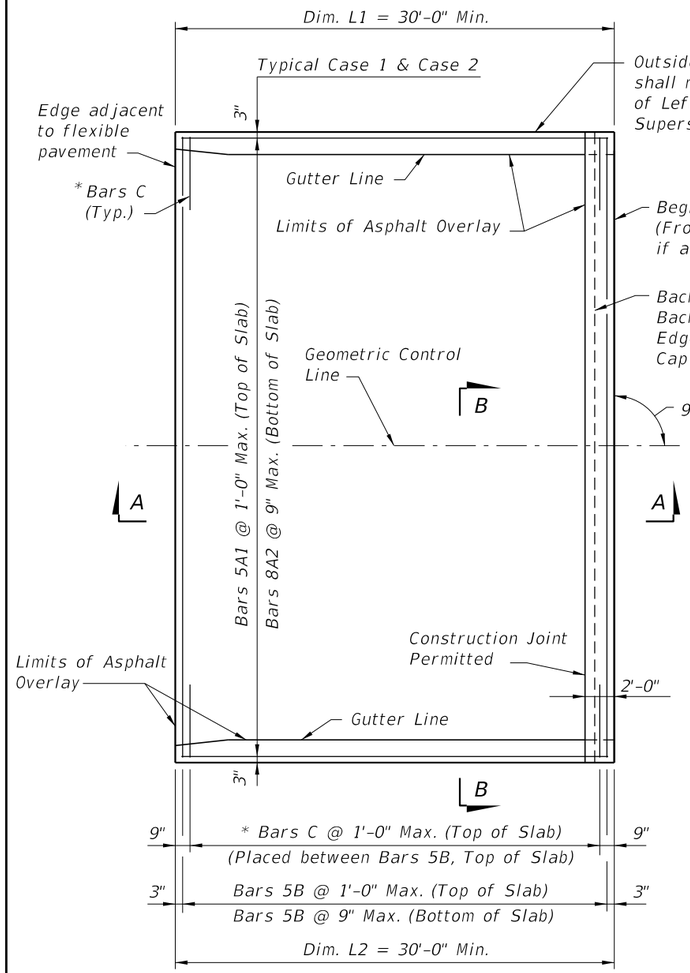
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REINFORCING BAR LIST [UNIT 6] (7 OF 7)

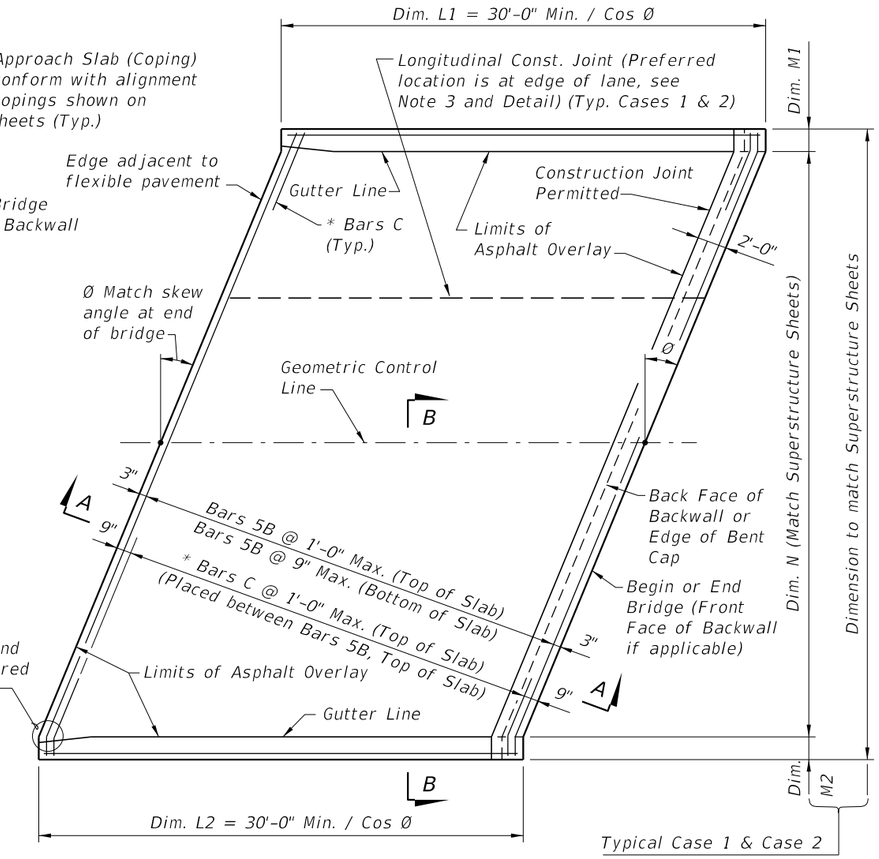
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: B1-229

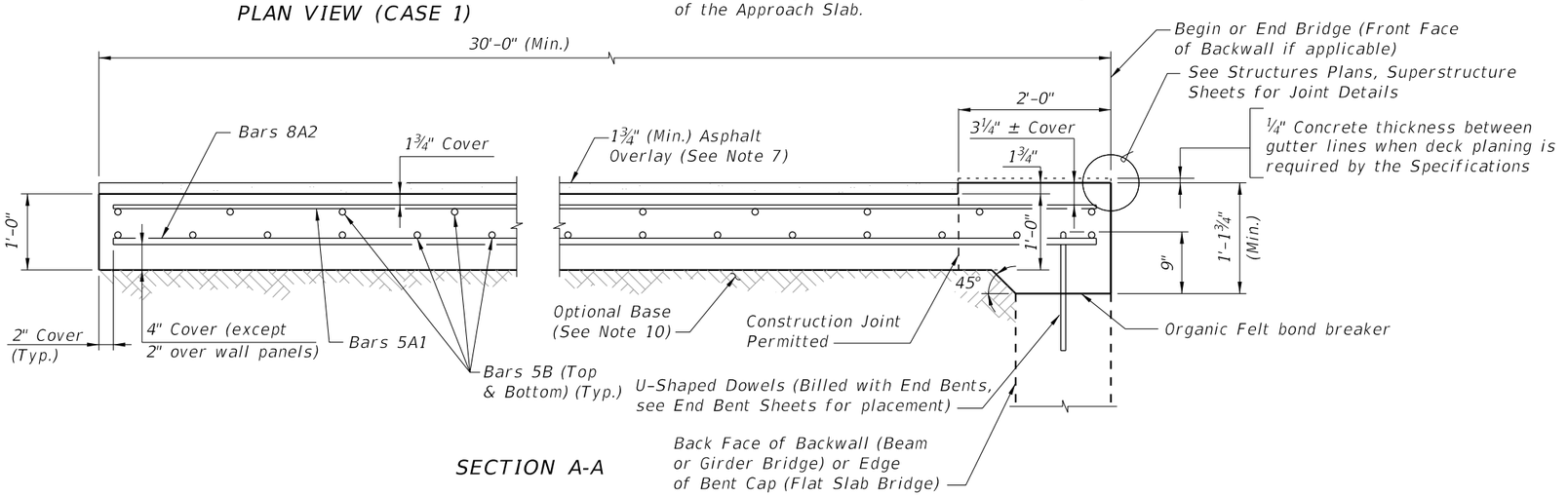


PLAN VIEW (CASE 1)



PLAN VIEW (CASE 2)

* NOTE: Bars C are required as shown when the 36" or 42" Single-Slope Traffic Railings, or the Traffic Railing/Noise Wall, are used at the edge of the Approach Slab.



SECTION A-A

GENERAL NOTES

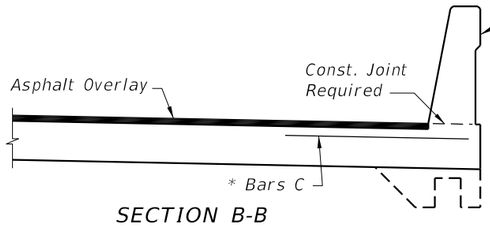
1. SURFACE TREATMENT: As an option to Class 4 Floor Finish (Bridge Floor Grooving) per Section 400 a hand tined or heavy broomed finish may be permitted on the concrete portion of the riding surface. Sidewalk areas shall receive a broomed finish. The top surface of the concrete beneath the asphalt overlay shall be raked.
2. CONDUIT: If required, see Structures Plans for Conduit Details.
3. When a longitudinal construction joint is necessary or allowed by the Engineer, the transverse steel shall be extended as shown in the Longitudinal Construction Joint Detail.
4. The plan view for CASE 1 applies when the skew angle (Ø) = 0°. Relevant details also apply to CASE 2.
5. The plan view for CASE 2 applies where the skew angle (Ø) is > 0°. The slab shown represents a skew to the right for an approach slab at begin bridge; approach slab at the end of bridge or a left skew shall be treated similarly.
6. Deformed WWR must meet the requirements of Specification Section 931.
7. Continue the asphalt pavement over the approach slab and match the friction course type used on the roadway.
8. Approach slabs shown in Plan View Cases 1 and 2 represent a typical approach slab with edge barriers and no sidewalks. Provide railings, parapets and raised sidewalks as detailed in the Contract Plans.
9. PAYMENT: Deformed WWR for the edge of Approach Slabs on retaining walls is not included in the estimated quantity for reinforcing steel and is considered incidental to the work.
10. See Roadway Plans for Asphalt Overlay and Optional Base details and quantities.

CROSS REFERENCES:

For Section B-B, Longitudinal Construction Joint Detail and Approach Slab Details see Sheet 2.

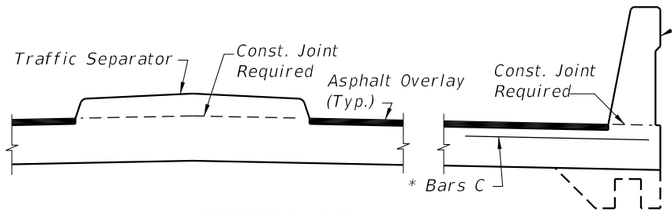
10/17/2024 8:05:07 AM

LAST REVISION	REVISION	DESCRIPTION:	FY 2025-26 STANDARD PLANS	APPROACH SLABS (30 FT.) (FLEXIBLE PAVEMENT APPROACHES)	INDEX	SHEET
11/01/22					400-090	1 of 2



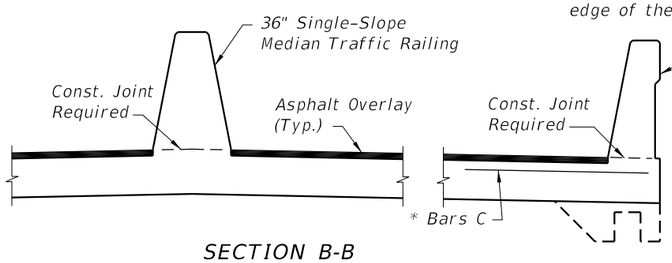
SECTION B-B
STANDARD APPROACH SLAB

NOTE:
Geometry of Traffic Railings, Pedestrian/Bicycle Railings, Traffic Separators and Sidewalks to match those on adjoining bridge.

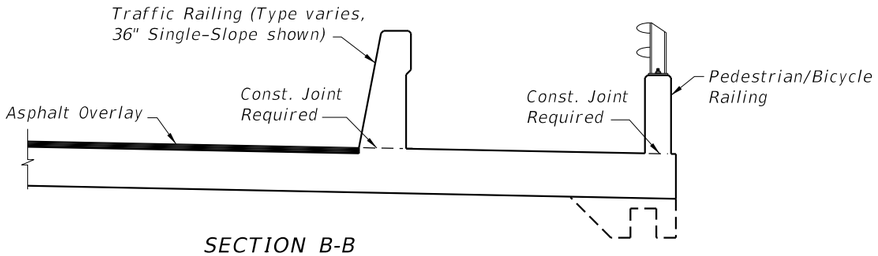


SECTION B-B
APPROACH SLAB WITH TRAFFIC SEPARATOR

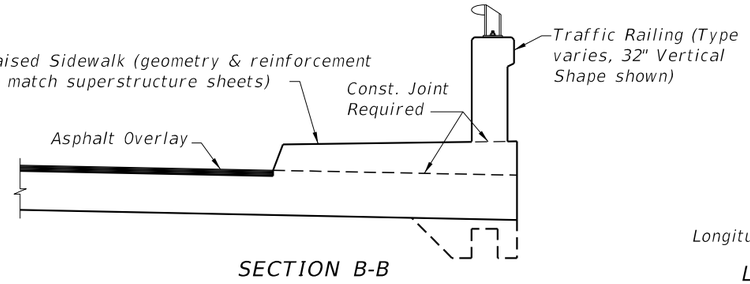
*NOTE: Bars C are required as shown when the 36" or 42" Single-Slope Traffic Railing, or the Traffic Railing/Noise Wall, are used at the edge of the Approach Slab.



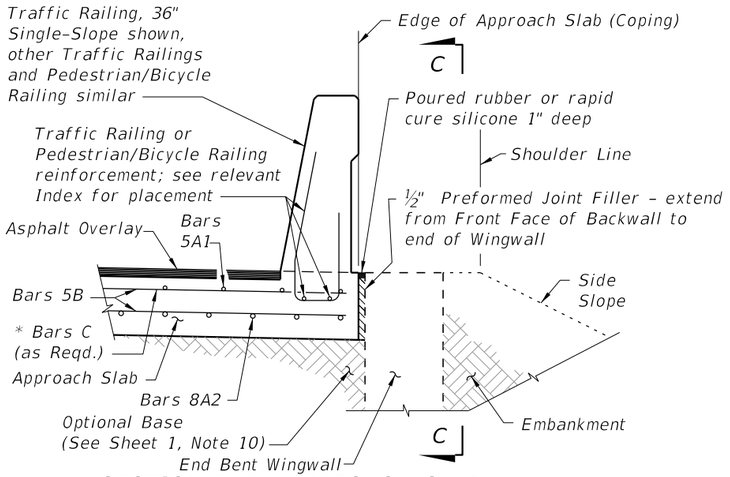
SECTION B-B
APPROACH SLAB WITH MEDIAN TRAFFIC RAILING



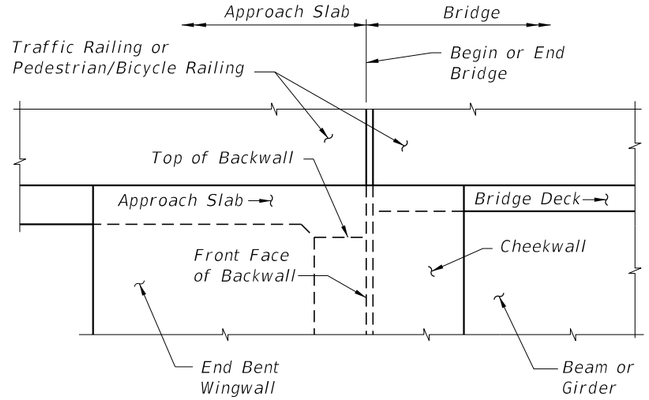
SECTION B-B
APPROACH SLAB WITH SIDEWALK



SECTION B-B
APPROACH SLAB WITH RAISED SIDEWALK

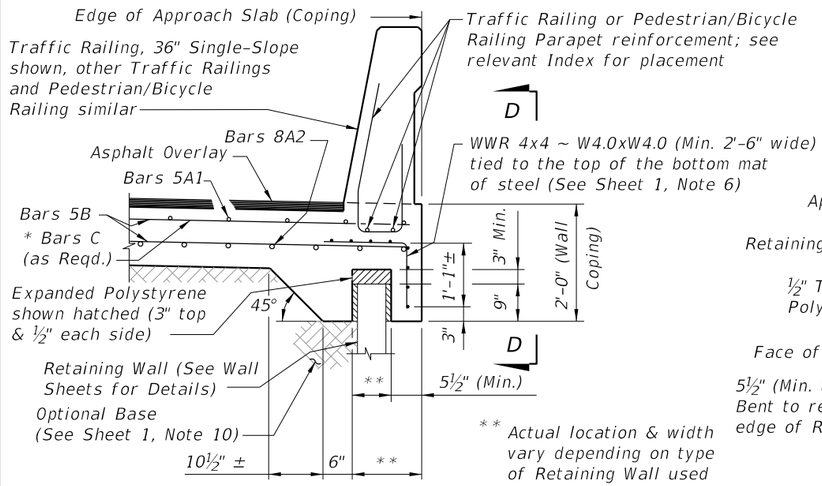


SECTION THRU APPROACH SLAB
AND END BENT WINGWALL

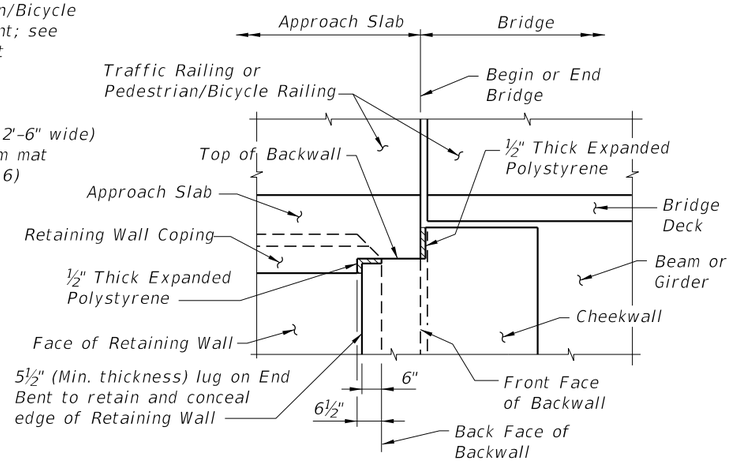


VIEW C-C AT BEGIN OR END BRIDGE (BEAM
BRIDGE SHOWN, FLAT SLAB BRIDGE SIMILAR)

APPROACH SLAB WITH WINGWALL DETAILS

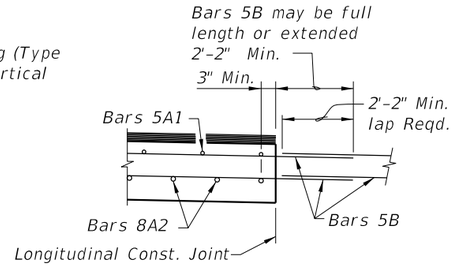


SECTION THRU APPROACH SLAB
AND RETAINING WALL

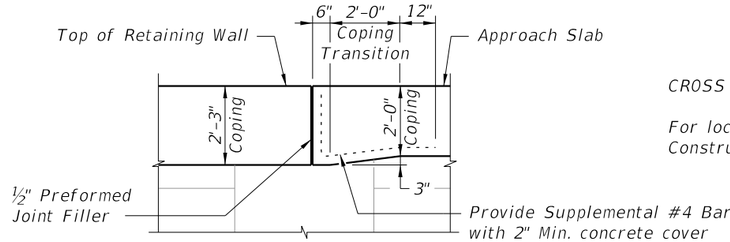


VIEW D-D AT BEGIN OR END BRIDGE (BEAM
BRIDGE SHOWN, FLAT SLAB BRIDGE SIMILAR)

APPROACH SLAB WITH RETAINING WALL DETAILS



LONGITUDINAL CONSTRUCTION
JOINT DETAIL



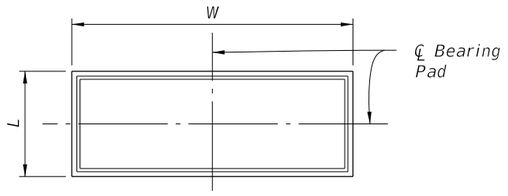
COPING TRANSITION DETAIL FOR
RETAINING WALLS WITH 2'-3" COPING HEIGHT
(Railing Not Shown For Clarity)

CROSS REFERENCES:

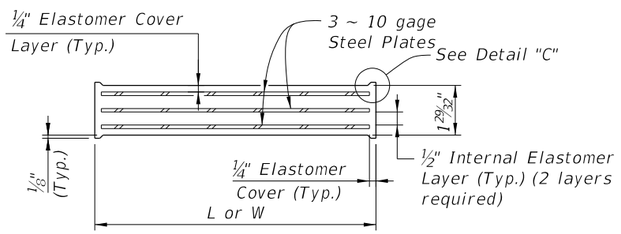
For location of Section B-B and Longitudinal Construction Joint see Sheet 1.

10/17/2024 8:05:13 AM

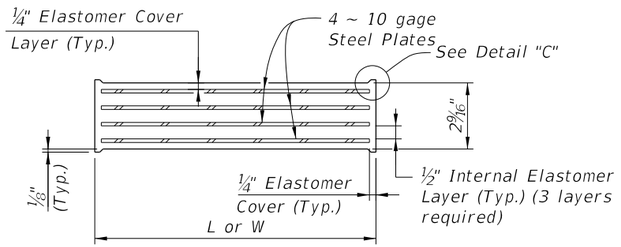
LAST REVISION	REVISION	DESCRIPTION:				
11/01/24			FDOT FY 2025-26 STANDARD PLANS	APPROACH SLABS (30 FT.) (FLEXIBLE PAVEMENT APPROACHES)	INDEX 400-090	SHEET 2 of 2



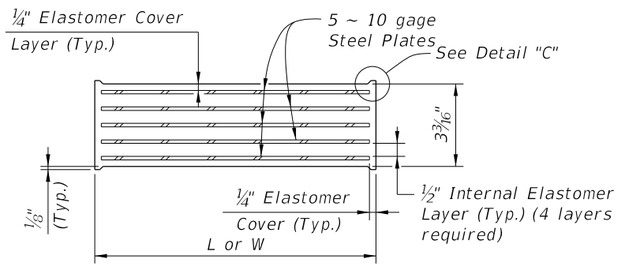
PLAN



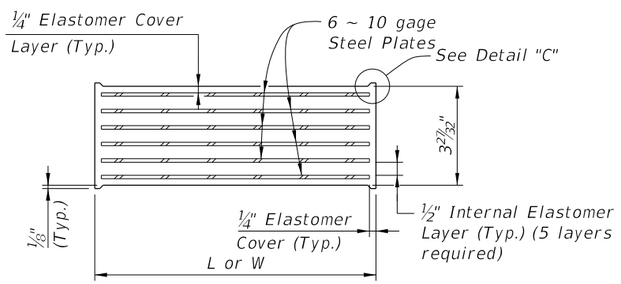
TYPICAL SECTION TYPE D, E & AA PAD



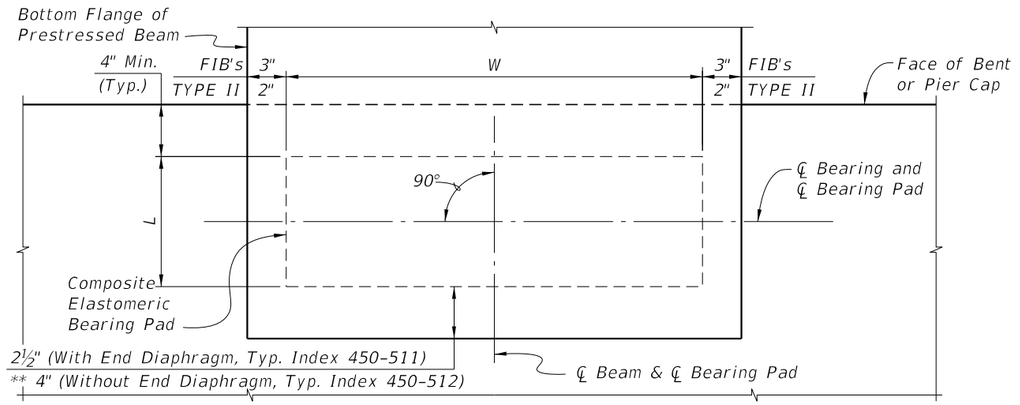
TYPICAL SECTION TYPE F, G & AB PAD



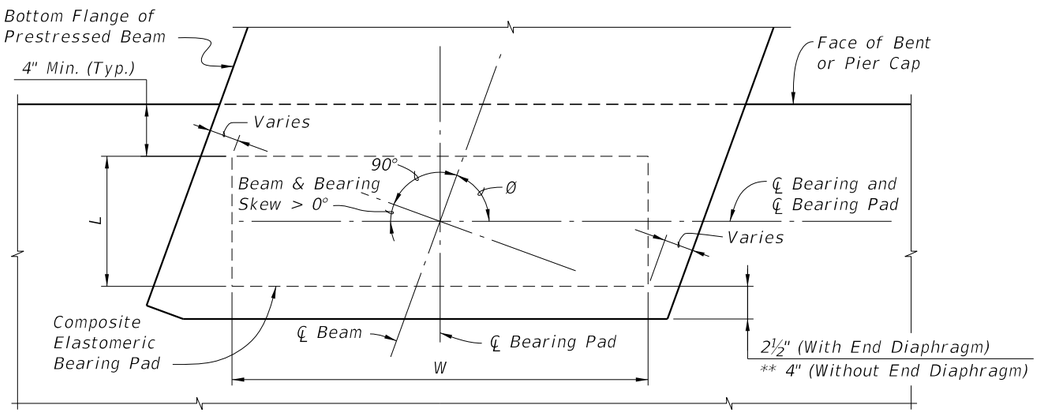
TYPICAL SECTION TYPE H PAD



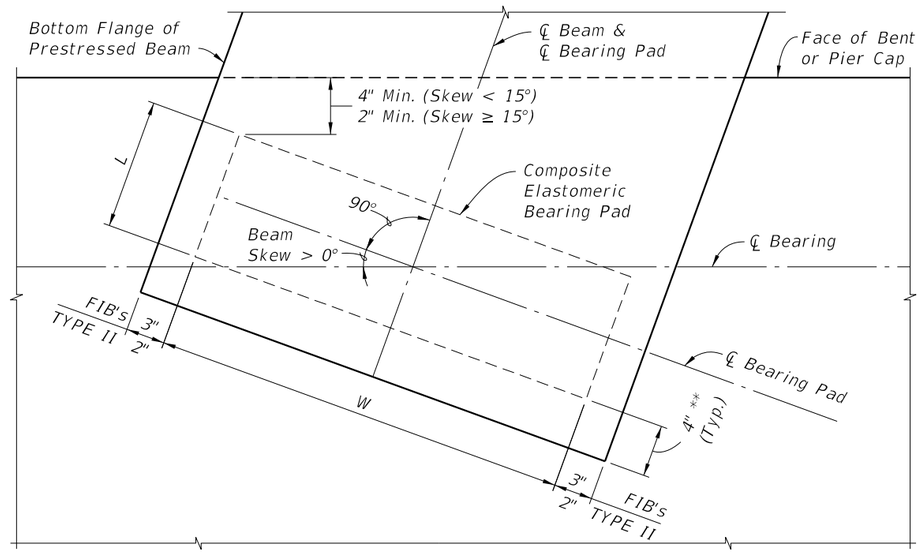
TYPICAL SECTION TYPE J & K PAD



PARTIAL PLAN (Beam & Bearing Skew = 0°)



PARTIAL PLAN (Beam & Bearing Skew > 0°) (Use Index 450-511)

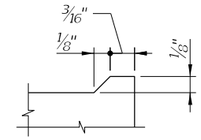


PARTIAL PLAN WITH SQUARED END BEAM (Use Index 450-512)
(Beam Skew > 0°; Bearing Skew = 0°)

	BEAM TYPE	BEARING PAD DIMENSIONS		*BEVELED BEARING PLATE DIMENSIONS	
PAD TYPE (See Note 1)		L	W	C	D
D (G=110psi)	FLORIDA I-BEAM	8"	2'-8"	1'-0"	3'-0"
E (G=110psi)		10"	2'-8"	1'-0"	3'-0"
F (G=110psi)		10"	2'-8"	1'-0"	3'-0"
G (G=150psi)		10"	2'-8"	1'-0"	3'-0"
H (G=150psi)		10"	2'-8"	1'-0"	3'-0"
J (G=150psi)		10"	2'-8"	1'-0"	3'-0"
K (G=150psi)		1'-0"	2'-8"	1'-1½"	3'-0"
AA (G=110psi)	AASHTO TYPE II	10"	1'-2"	1'-0"	1'-4"
AB (G=150psi)		10"	1'-2"	1'-0"	1'-4"

* Work this sheet with the appropriate type Bearing Plate Detail (See Bearing Plate Data Table) and BEARING PAD DATA TABLE in the Structures Plans. See TABLE OF BEAM VARIABLES and BEARING PLATE DATA TABLE in the Structures Plans for locations where beveled bearing plates are required.

** Offset to End of Beam is reduced to 2" for Type K Pad.



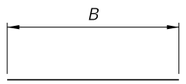
DETAIL "C"

BEARING PAD NOTES:

1. Neoprene in Type D, E, F & AA bearing pads shall have a shear modulus (G) of 110 psi. Neoprene in Type G, H, J, K & AB bearing pads shall have a shear modulus (G) of 150 psi.
2. Steel Plates in bearing pads shall conform to ASTM A1011 Grade 36, Type 1.
3. See Bearing Pad Data Table in Structures Plans for quantities of Type D, E, F, G, H, J, K, AA and/or AB Bearing Pads.

10/17/2024 8:16:38 AM

LAST REVISION	REVISION	DESCRIPTION:				
07/01/15			FDOT	FY 2025-26 STANDARD PLANS	COMPOSITE ELASTOMERIC BEARING PADS - PRESTRESSED FLORIDA-I & AASHTO TYPE II BEAM	INDEX 400-510 / SHEET 1 of 1



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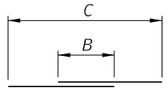

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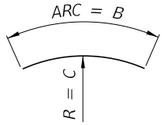

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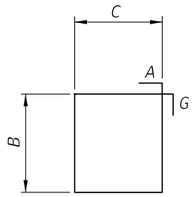

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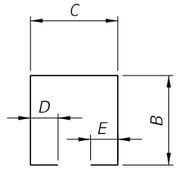

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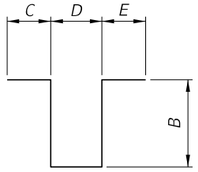

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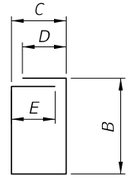

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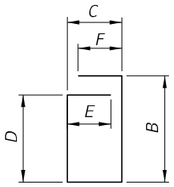

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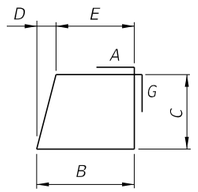

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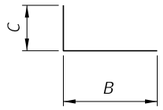

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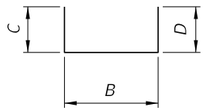
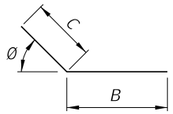


TYPE 1 1



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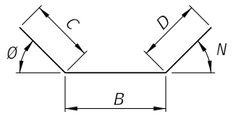

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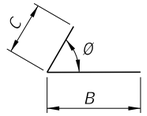

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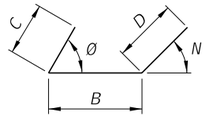

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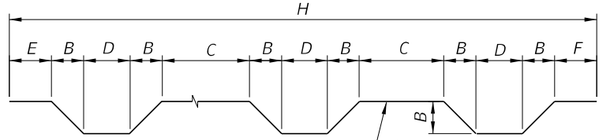
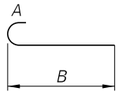


TYPE 16

Number of Beams or Walls = N
Number of D's = N–1
Number of B's = 2N–2
Number of C's = N–2
45° Typical



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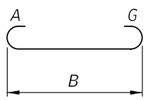

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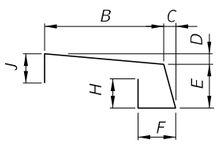

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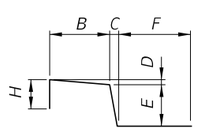

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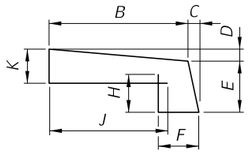

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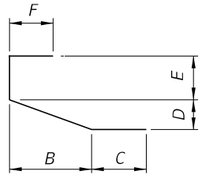

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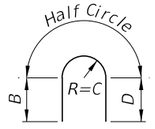

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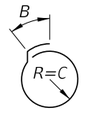

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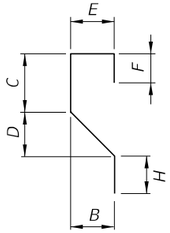

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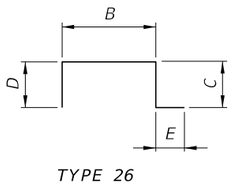

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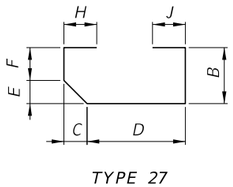

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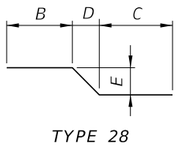

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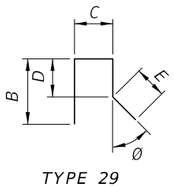
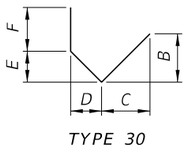
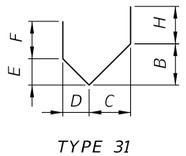


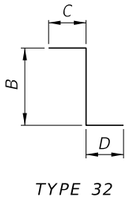
TYPE 29



TYPE 30



TYPE 31



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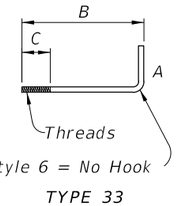
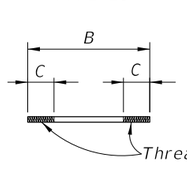


Style 6 = No Hook

TYPE 33



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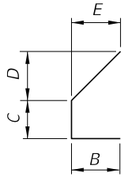

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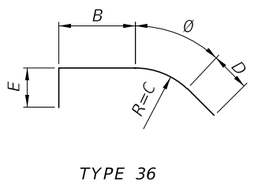

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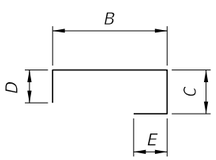

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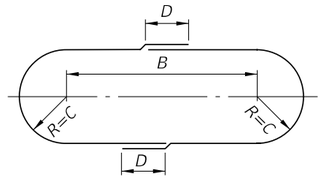
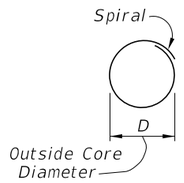


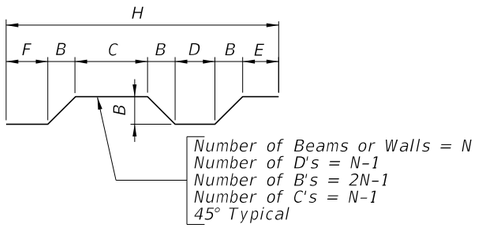
TYPE 38



TYPE 39

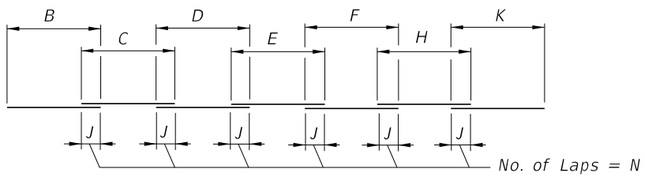
C = Pitch
B = Overall Height
N = Total number of closed turns at Top and Bottom of columns

Splices may be accomplished by lapping 1.5 turns. Cost of Channel Spacers and Splices shall be included in the Contract Unit Price for Reinf. Steel (Substructure)

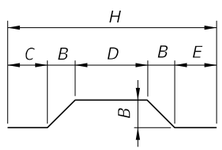


Number of Beams or Walls = N
Number of D's = N–1
Number of B's = 2N–1
Number of C's = N–1
45° Typical

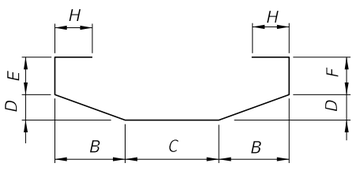
TYPE 40



TYPE 41

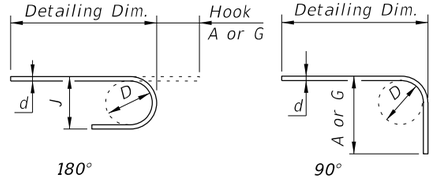


TYPE 42



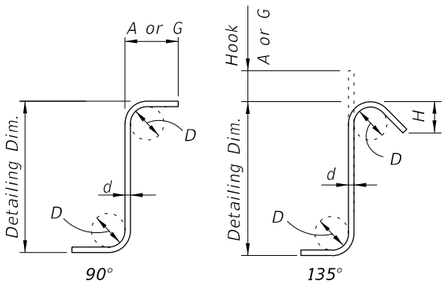
TYPE 43

HOOK DETAILS



180° 90°

BAR SIZE	D	180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G
#3	2¼"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3¾"	7"	5"	10"
#6	4½"	8"	6"	1'–0"
#7	5¼"	10"	7"	1'–2"
#8	6"	11"	8"	1'–4"
#9	9½"	1'–3"	11¾"	1'–7"
#10	10¾"	1'–5"	1'–1¼"	1'–10"
#11	12"	1'–7"	1'–2¾"	2'–0"
#14	18¼"	2'–3"	1'–9¾"	2'–7"
#18	24"	3'–0"	2'–4½"	3'–5"
STYLE		1		3



90° 135°

STIRRUPS (TIES SIMILAR)

STIRRUP & TIE HOOK DIMENSIONS

BAR SIZE	D	90° HOOKS A or G	135° HOOKS A or G	135° HOOKS H *
#3	1½"	4"	4"	2½"
#4	2"	4½"	4½"	3"
#5	2½"	6"	5½"	3¾"
#6	4½"	1'–0"	8"	4½"
#7	5¼"	1'–2"	9"	5¼"
#8	6"	1'–4"	10½"	6"
STYLE		4	5	

STYLE 6 = NO HOOK

* Dimension is approximate.

Hook Styles Detailed on this sheet are for Illustration Only.

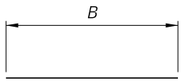
Actual Hook Style for any particular bar will be shown under A or G Heading on REINFORCING BAR LIST sheet(s) in Structures Plans.

All Dimensions are out-to-out.

NOTE: For Bar Dimensions See REINFORCING BAR LIST Sheet(s) in Structures Plans.

10/17/2024 8:17:12 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/24			FDOT FY 2025-26 STANDARD PLANS	BAR BENDING DETAILS (STEEL)	415-001	1 of 1



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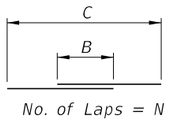
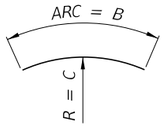


TYPE 2



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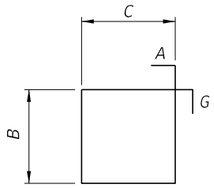

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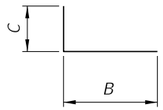

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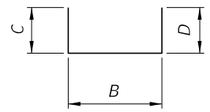

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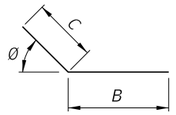

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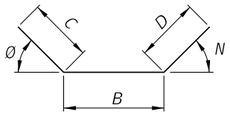

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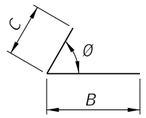

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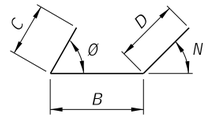

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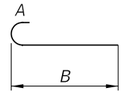

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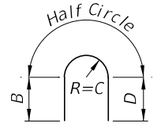

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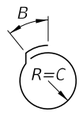

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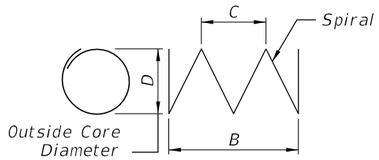
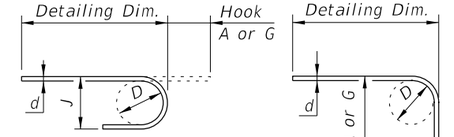


TYPE 39

SINGLE BAR BENDING DETAILS

HOOK DETAILS



BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2¼"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3¾"	7"	5"	10"
#6	4½"	8"	6"	1'-0"
#7	5¼"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"
STYLE		1		3

NOTES

GENERAL
All dimensions are out-to-out.
For Bar dimensions See REINFORCING BAR LIST Sheet(s) in Structures Plans.

SPIRALS (TYPE 39 BARS)

C = Pitch
B = Overall Height
N = Total number of closed turns at Top and Bottom of columns
Spirals = 1.5 turns

Include spiral splice in Contract Unit Price for FRP Reinforcing.

HOOKS
All Dimensions are approximate.
Hook Styles Detailed on this sheet are for Illustration Only.
Actual Hook Style for any particular bar will be shown under A or G Heading on REINFORCING BAR LIST sheet(s) in Structures Plans.

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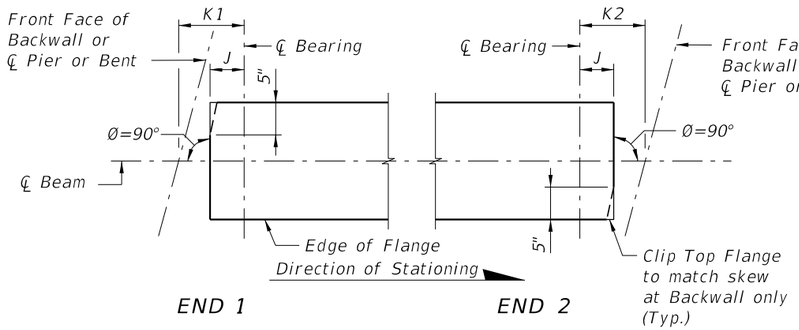
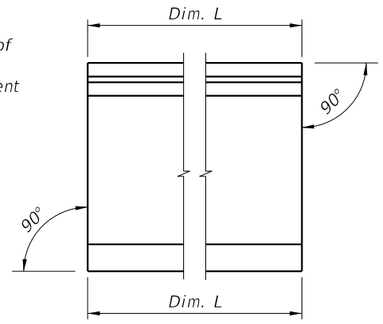
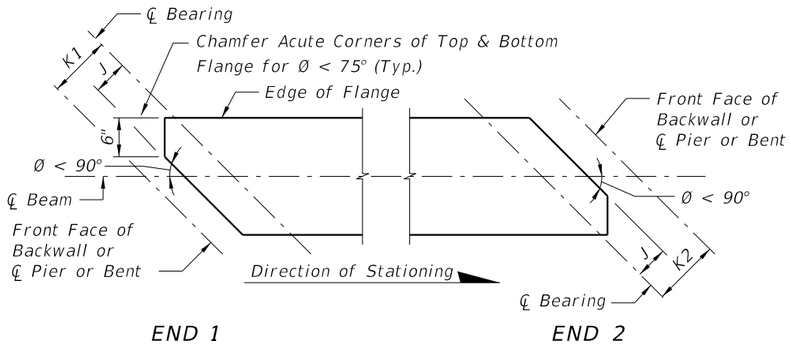
LAST REVISION	REVISION	DESCRIPTION:				
11/01/24			FDOT	FY 2025-26 STANDARD PLANS	BAR BENDING DETAILS (FRP)	INDEX 415-010 / SHEET 1 of 1



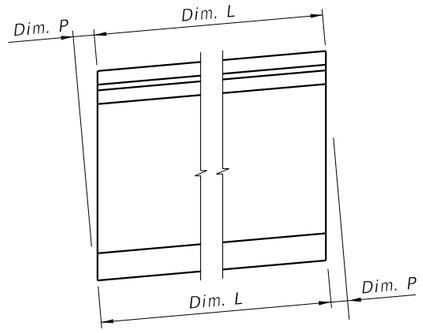
CASE 1
(Standard Orientation for New Construction)



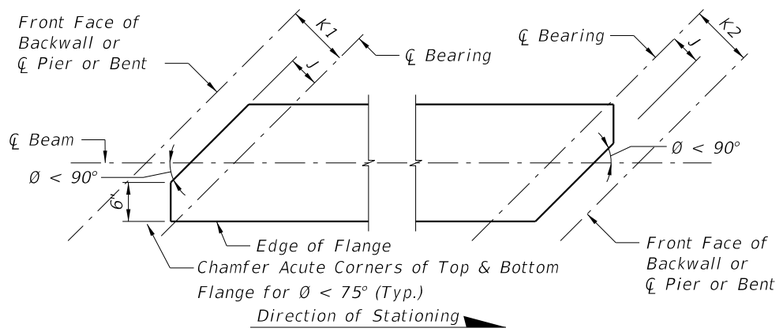
CONDITION 1
(Dim P = 0.0)



CASE 2
(Special Orientation for Widenings)

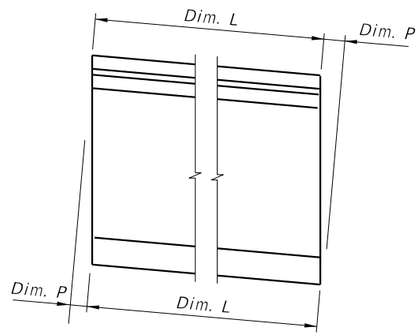


CONDITION 2



CASE 3
(Special Orientation for Widenings)

SCHEMATIC PLAN VIEWS AT BEAM ENDS



CONDITION 3

SCHEMATIC END ELEVATIONS OF BEAMS
(Showing Vertical Bevel of Beam End)

BEAM NOTES

1. Work this Index with the Florida-I Beam Standard Details (Index 450-036 thru 450-096) and the Table of Beam Variables in Structures Plans.
2. All bar bend dimensions are out-to-out.
3. Concrete cover: 2 inches minimum.
4. Stress Strands N to 10 kips each.
5. Place one (1) Bar 5K or 5Z at each location. Alternate the direction of the ends for each bar (see "ELEVATION AT END OF BEAM" in Standard Details.
6. Tie Bars 5K and 5Z to the fully bonded strands in the bottom or center row (see "STRAND PATTERN" on the Table of Beam Variables sheet in Structures Plans).
   A. At the Contractor's option, the length of the bottom legs of Bars 5K and 5Z may be extended to facilitate tying to the exterior strands.
   B. For deformed WWR, supplemental transverse #4 bars are permitted to support Pieces K & S under the cross wires on the bottom row of strands.
7. Place Bars 3C1, 3D1 and 4M1 in beam END 1, and Bars 3C2, 3D2 and 4M2 in beam END 2. END 1 and END 2 are shown on the Standard Details "ELEVATION".
8. For Beams with vertically beveled end conditions: Place first row of Bars 3C1, 3C2, 3D1, 3D2, 5K, 5Y and 5Z parallel to the end of the beam. Progressively rotate remaining bars within the limits of Bars 5Z until vertical by adjusting the spacing at the top of beam up to a maximum of 1". For deformed WWR, cut top cross wire and rotate bars as required or reduce end cover at top of the beam to 1" minimum.
9. For beams with skewed end conditions:
   A. Place end reinforcement parallel to the skewed end of the beam. End reinforcement is defined as Bars 3C1, 3C2, 3D1, 3D2, 5K, 4M1, 4M2, 5Y and 5Z placed within the limits of the spacing for Bars 3C in "ELEVATION AT END OF BEAM".
   B. Beyond the limits of the spacing for Bars 3C, place Bars 3D3, 5K and 4M3 perpendicular to the longitudinal axis of the beam. Fan Bars as needed to avoid overlapping bars at the transition to Bars 3D3 and 4M3, and field cut to maintain minimum cover. Provide additional Bars 4M1, 4M2, 3D1 and 3D2 as required; additional bars are not included in the "BILL OF REINFORCING STEEL". For placement locations see Skewed Beam End Details for Widening Existing Bridges.
   C. Adjust the dimensions of Bars 3C1, 3C2, 3D1, 3D2, 4M1 and 4M2 as shown on the Bending Diagram.
   D. WWR is not permitted for end reinforcement Bars 3D1, 3D2, 4M1 and 4M2; use bar reinforcement.
10. Contractor Options:
    A. Deformed WWR may be used in lieu of Bars 3D, 5K, 4M, and 5Z as shown on the Standard Details; except at skewed ends (see Note 9).
    B. Bars 3D1, 3D2 and 3D3 may be fabricated as a single bar with a 1'-0" minimum lap splice of the top legs, or the length of the bottom legs may be extended to facilitate tying to the exterior strands.
11. Embedment of Safety Line Anchorage Devices are permitted in the top flange to accommodate fall protection systems. See shop drawings for details and spacing of any required anchorage devices.
12. For beams with ends that will not be permanently encased in concrete diaphragms, cut wedges and recess Prestressing strands at the end of the beam without damaging the surrounding concrete. See "STRAND CUTTING AND PROTECTING DETAIL" on Sheet 2. Protect end of wedged recessed strands in accordance with Specification Section 450.
13. Holes in the beam web for temporary bracing or shipping devices must be formed prior to casting. Fill holes not meeting all the following criteria in accordance with Specification Section 450.
    A. The superstructure environmental classification is slightly or moderately aggressive
    B. Clear cover to adjacent steel reinforcing is 1"or greater
    C. Hole inside diameter is 2" maximum
    D. Non-metallic, non-water absorbing forming materials such as PVC, may be left in place permanently.

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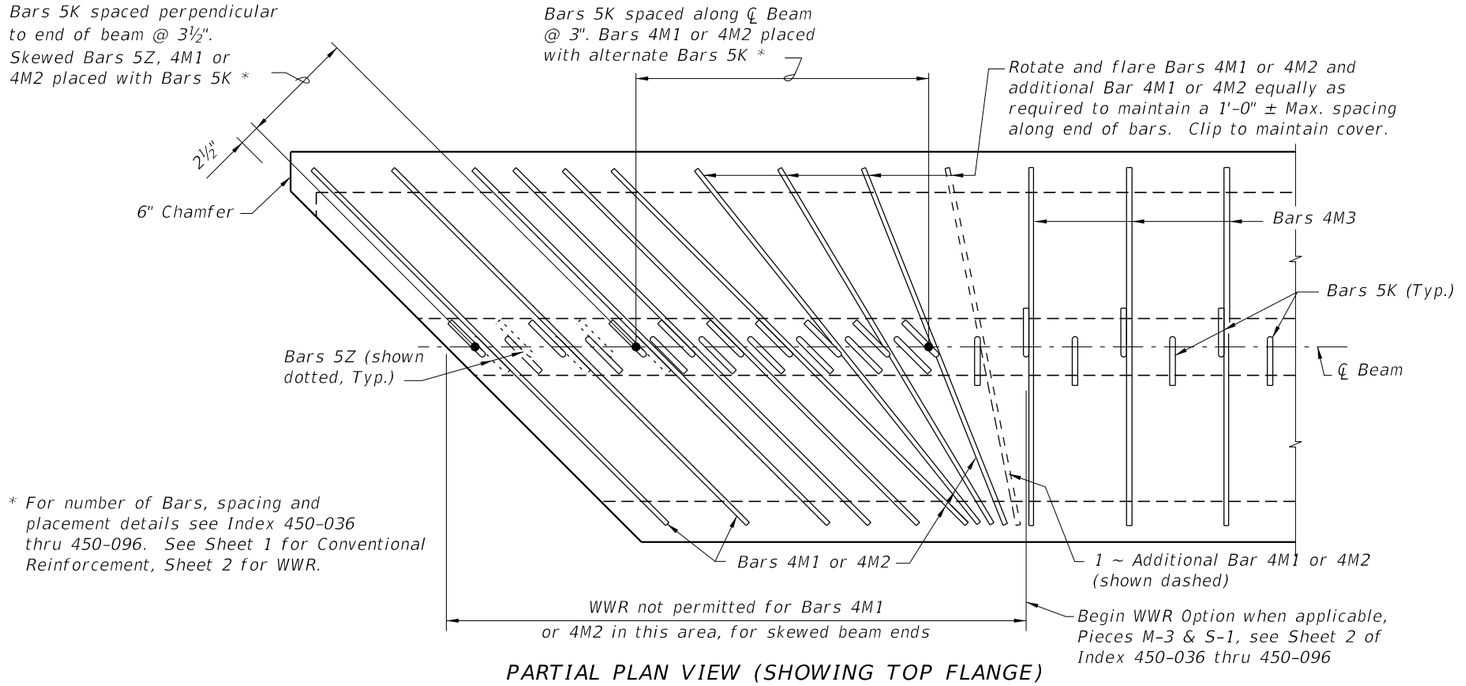
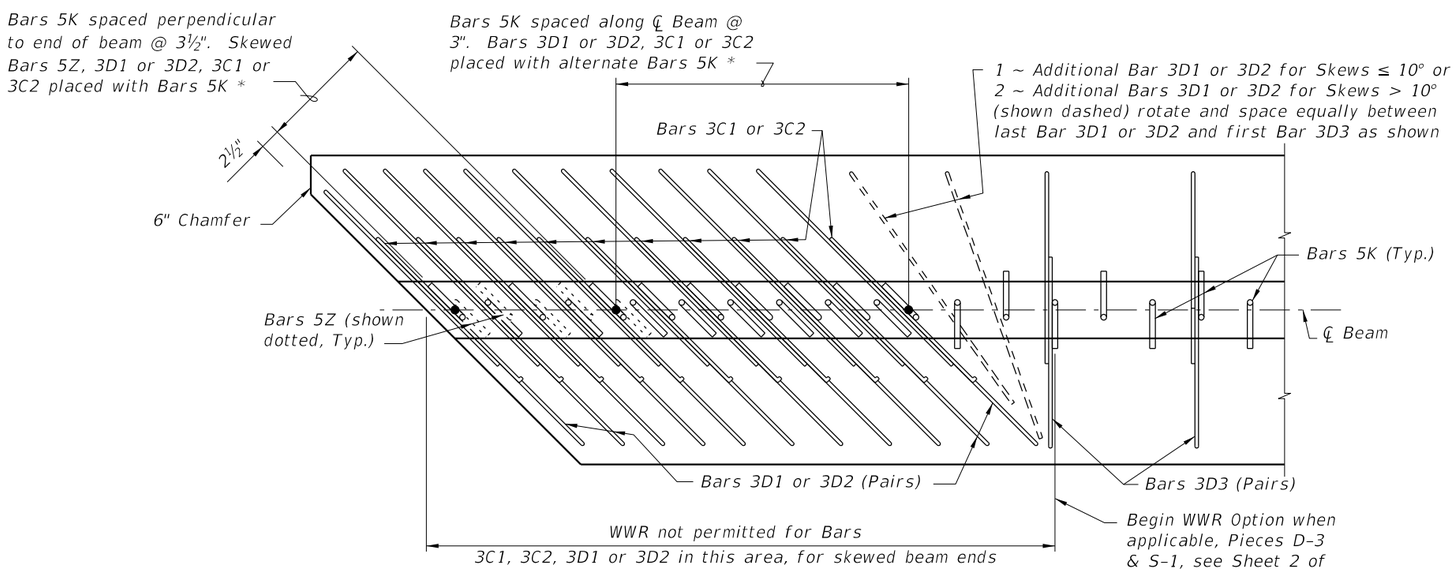


* For number of Bars, spacing and placement details see Index 450-036 thru 450-096. See Sheet 1 for Conventional Reinforcement, Sheet 2 for WWR.

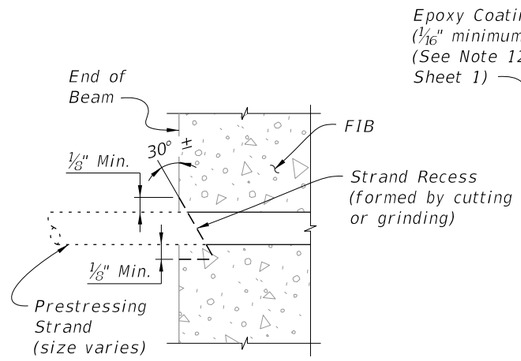
PARTIAL PLAN VIEW (SHOWING TOP FLANGE)
(End 1 Shown, End 2 Similar)
(Bars 5A, 5Y & Strands N not shown for clarity)



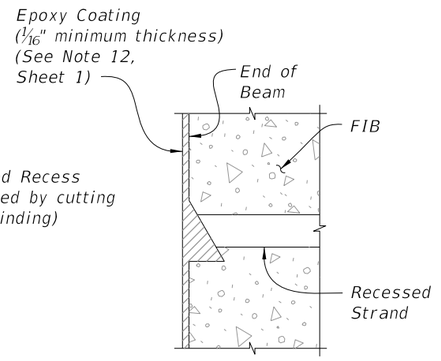
PARTIAL SECTION THRU WEB (SHOWING BOTTOM FLANGE)
(END 1 Shown, END 2 Similar)
(Bars 5Y, Strands, and Embedded Bearing Plate "A" not shown for clarity)

SKEWED BEAM END DETAILS FOR WIDENING EXISTING BRIDGES

(Florida-I 36 Beam shown, others similar)



TYPICAL SECTION
SHOWING CUT STRAND RECESS LIMITS



TYPICAL SECTION
AFTER PROTECTING

STRAND CUTTING AND PROTECTING DETAIL

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LAST REVISION	REVISION	DESCRIPTION:				
11/01/19			FY 2025-26 STANDARD PLANS	FLORIDA-I BEAM - TYPICAL DETAILS & NOTES	INDEX 450-010	SHEET 2 of 2

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LAST REVISION	REVISION	DESCRIPTION:				
11/01/19			FDOT FY 2025-26 STANDARD PLANS	FLORIDA-I 36 BEAM - STANDARD DETAILS	INDEX 450-036	SHEET 1 of 2

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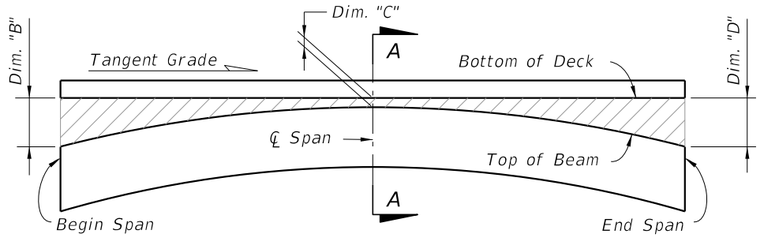
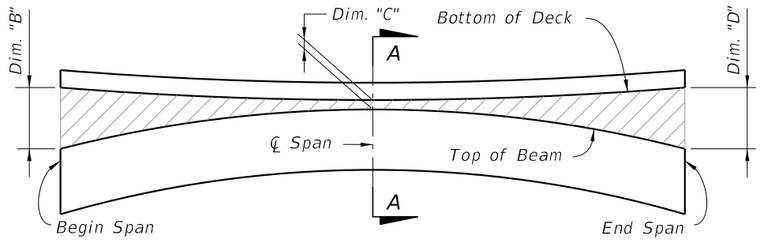
LAST REVISION	REVISION	DESCRIPTION:				
11/01/19			FDOT FY 2025-26 STANDARD PLANS	FLORIDA-I 63 BEAM - STANDARD DETAILS	INDEX 450-063	SHEET 1 of 2

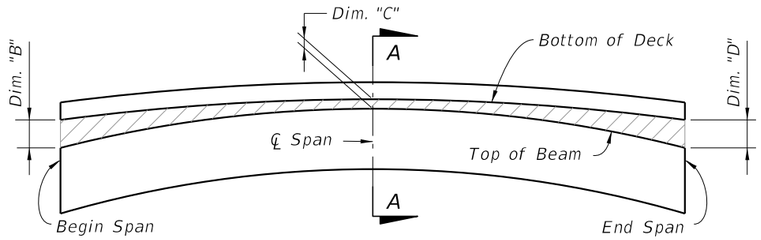
[redacted]



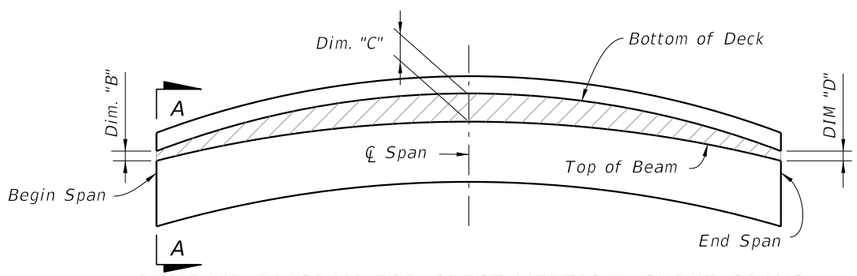
BUILD-UP DIAGRAM FOR TANGENT SPANS
(ALONG ℄ BEAM) (CASE 1)



BUILD-UP DIAGRAM FOR SAG VERTICAL CURVE & HORIZONTAL CURVE SPANS
(ALONG ℄ BEAM) (CASE 2)



BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT ℄ SPAN
(ALONG ℄ BEAM) (CASE 3)

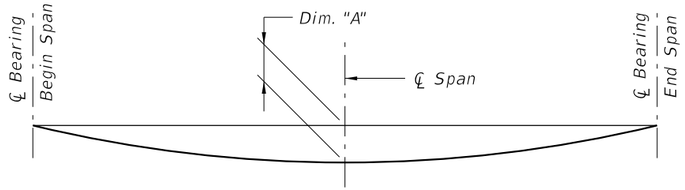


BUILD-UP DIAGRAM FOR CREST VERTICAL CURVE SPANS
- CONTROL AT BEGIN OR END SPAN
(ALONG ℄ BEAM) (CASE 4)

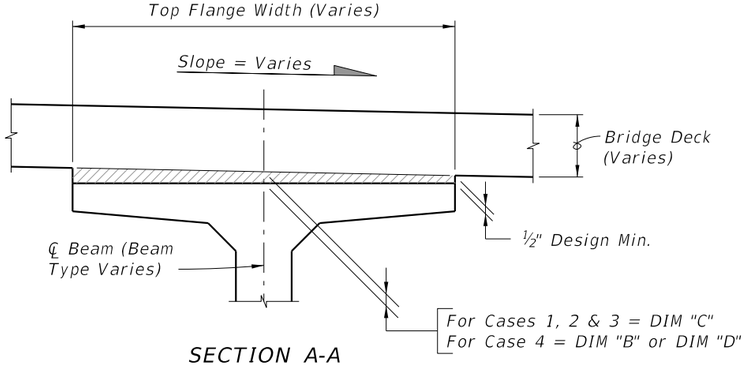
BEAM CAMBER AND BUILD-UP NOTES:

The build-up values given in the Data Table* are based on theoretical beam cambers. The Contractor shall monitor beam cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than +/- 1" from the theoretical "Net Beam Camber @ 120 Days" shown in the Data Table*, obtain approval from the Engineer to modify the build-up dimensions as required. When the measured beam cambers create a conflict with the bottom mat of deck steel, notify the Engineer a minimum of 21 days prior to casting.

Dim. "A" includes the weight of the Stay-In-Place Formwork.



DEAD LOAD DEFLECTION DIAGRAM



SECTION A-A
BUILD-UP OVER BEAMS
(Florida-I Beam Shown
AASHTO Type II Similar)

* NOTE:
Work this Index with the Build-up and Deflection Data Table for Florida-I and AASHTO Type II Beams in Structures Plans.

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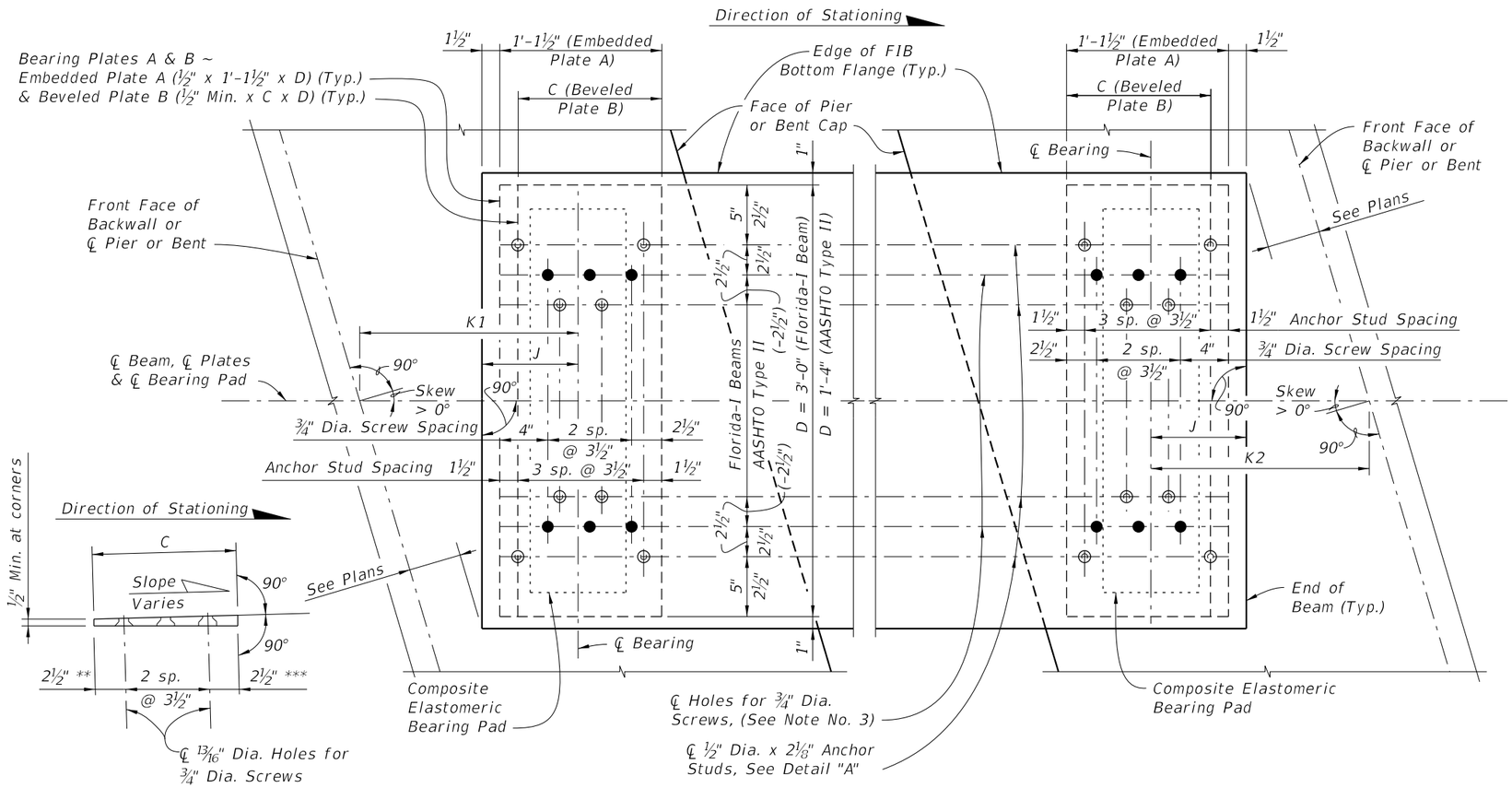
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2025-26 STANDARD PLANS	PRESTRESSED I-BEAMS BUILD-UP & DEFLECTION DATA	INDEX	SHEET
11/01/21						450-199	1 of 1



BEVELED BEARING PLATE B
(Along ℄ Beam)
(Positive Slope shown; Negative Slope similar)

PLAN
(FIB Skewed Alignment Shown, Skew = 0° and AASHTO Type II Similar)

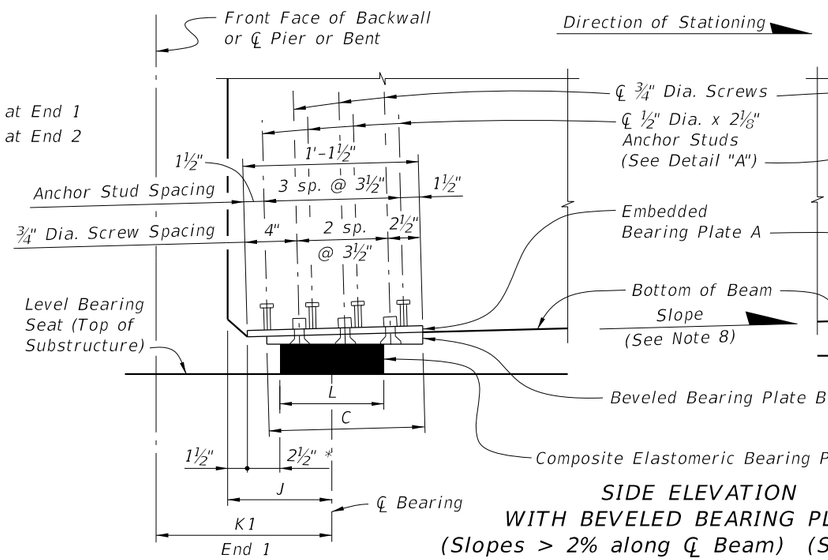
NOTES:

1. *Work this sheet with Index 400-510 – Composite Elastomeric Bearing Pads, and 'BEARING PLATE DATA TABLE' in the Structures Plans.*
2. *Embedded Bearing Plates A are required for all Florida-I beams. Beveled Bearing Plates B with Embedded Bearing Plates A are required for beams as scheduled in the 'BEARING PLATE DATA TABLE' in the Structures Plans.*
3. *Bearing plate material shall conform to ASTM A36 or ASTM A709 (Grade 36 or 50). Headed Concrete Anchor Studs shall conform to Specification Section 502. Hot-dip galvanize Bearing Plates A & B after fabrication except that Galvanized Caps may be welded in place after hot-dip galvanizing. Drill Bearing Plates A and B as an assembled unit, thread Bearing Plate A only. Holes are not required in Plate A when Plate B is not required. Drill and thread holes perpendicular to Embedded Plate A and prior to plates being galvanized (ASTM A 123).*
4. *Provide Electroplated, Flat Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B633, SC 2, Type 1. Provide screws long enough to maintain a ¾" minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide steel Galvanized Caps with ½" Min. to 1½" Max. height and nominal 1" inside diameter.*
5. *Include the cost of Bearing Plates in the pay item for Prestressed Beams.*
6. *For Pad Type and Dimension C, see the 'BEARING PLATE DATA TABLE' in the Structures Plans. For Dimensions J, K1 and K2, see 'TABLE OF BEAM VARIABLES' in the Structures Plans.*
7. *All details and dimensions shown are along ℄ Beam. Positive Slope shown, Negative Slope similar.*
8. *Slope is determined along ℄ Beam at ℄ Bearing. See 'BEARING PLATE DATA TABLE' in the Structures Plans for Slope.*

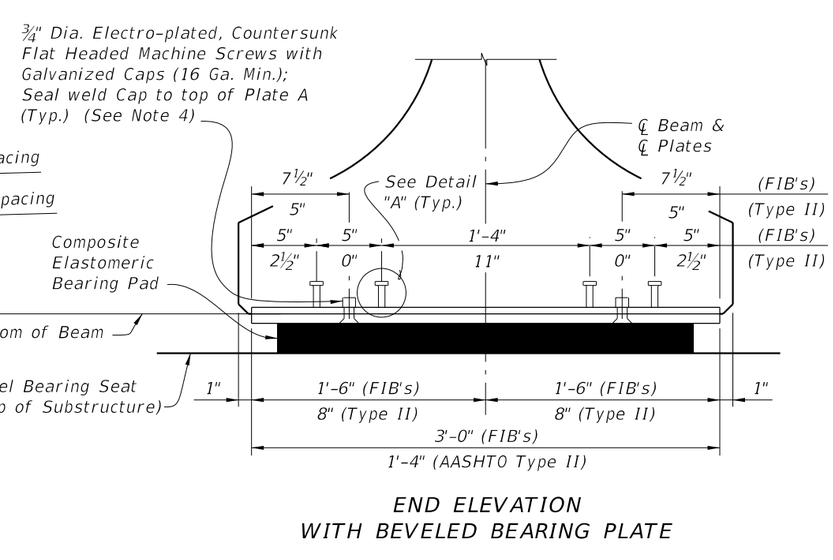
CROSS REFERENCE:
See Sheet 2 for Detail "A"

LEGEND:

* ½" for Pad Type K
** 4" for Pad Type K at End 1
*** 4" for Pad Type K at End 2



SIDE ELEVATION
WITH BEVELED BEARING PLATES
(Slopes > 2% along ℄ Beam) (See Note 7)



END ELEVATION
WITH BEVELED BEARING PLATE

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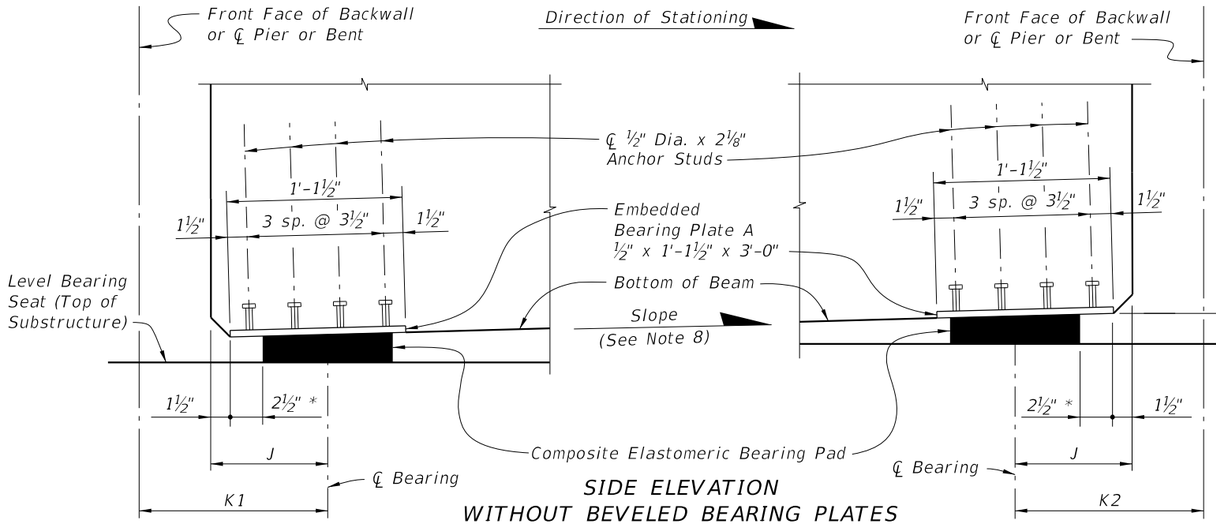
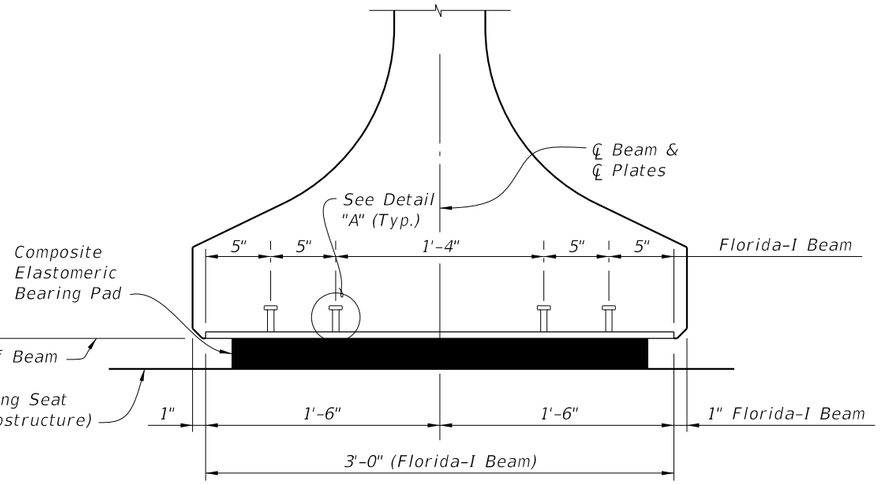
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
07/01/14			FY 2025-26 STANDARD PLANS	BEARING PLATES (TYPE 2) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAMS	450-512	1 of 2

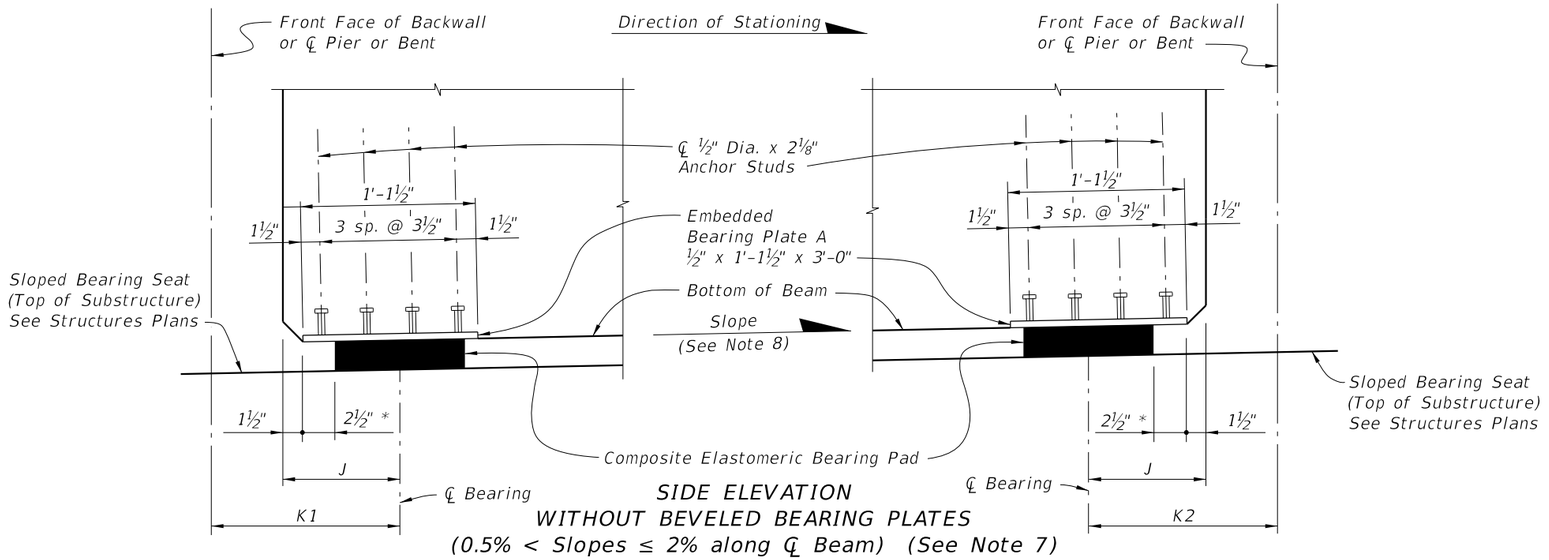


SIDE ELEVATION
WITHOUT BEVELED BEARING PLATES
(Slopes ≤ 0.5% along ℄ Beam) (See Note 7)

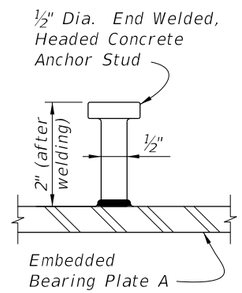


END ELEVATION
WITHOUT BEVELED BEARING PLATE

* ½" for Pad Type K



SIDE ELEVATION
WITHOUT BEVELED BEARING PLATES
(0.5% < Slopes ≤ 2% along ℄ Beam) (See Note 7)

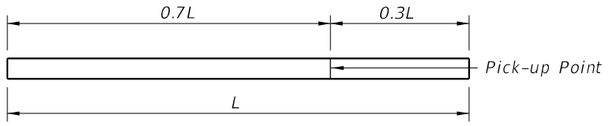


DETAIL "A"

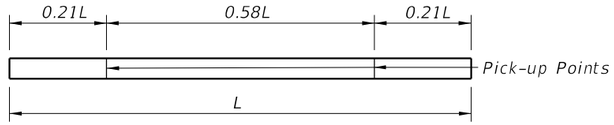
CROSS REFERENCE:
See Sheet 1 for Notes.

10/17/2024 9:56:49 AM

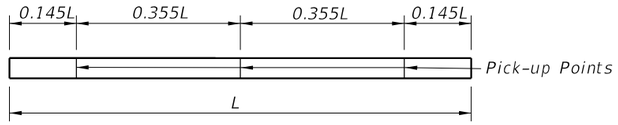
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
07/01/14			FY 2025-26 STANDARD PLANS	BEARING PLATES (TYPE 2) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAMS	450-512	2 of 2



1-POINT PICK-UP

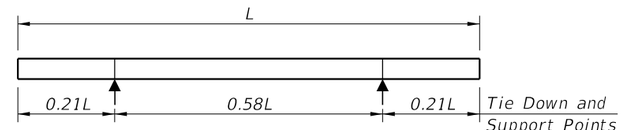


2-POINT PICK-UP

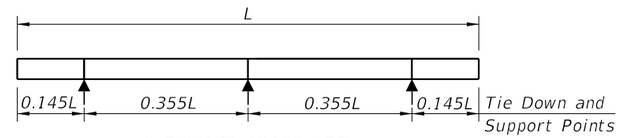


3-POINT PICK-UP

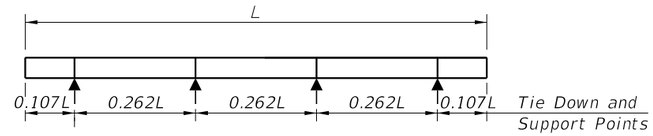
PILE PICK-UP DETAILS



2-POINT SUPPORT



3-POINT SUPPORT



4-POINT SUPPORT

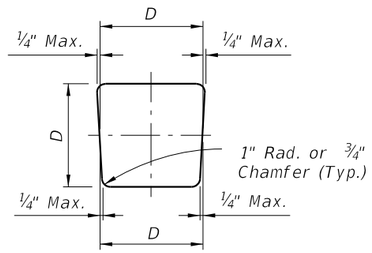
STORAGE AND TRANSPORTATION SUPPORT DETAILS

PRESTRESSED CONCRETE PILE NOTES:

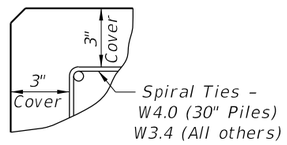
1. Work this Index with the Square Prestressed Concrete Pile Splices (Index 455-002), the Prestressed Concrete Pile Standards (Index 455-012 thru 455-030), the High Moment Capacity Square Prestressed Concrete Pile (Index 455-031) and the Pile Data Table in the Structures Plans.
2. Concrete:
   - A. Piles: Class V, except use Class VI for High Moment Capacity Pile (Index 455-031).
   - B. High Capacity Splice Collar: Class V.
   - C. See "GENERAL NOTES" in the Structures Plans for locations where the use of Highly Reactive Pozzolans is required.
3. Concrete strength at time of prestress transfer:
   - A. Piles: 4,000 psi minimum.
   - B. High Moment Capacity Piles: 6,500 psi minimum.
4. Carbon-Steel Reinforcing:
   - A. Bars: Meet the requirements of Specification Section 415.
   - B. Prestressing Strands: Meet the requirements of Specification Section 933.
   - C. Protect all strands permanently exposed to the environment and not embedded under final conditions in accordance with Specification Section 450.
5. Spiral Ties:
   - A. Tie each wrap of the spiral strand to a minimum of two corner strands.
   - B. One full turn required for spiral splices.
6. Pile Splices: Fill dowel holes and form the joint between pile sections with a Type AB Epoxy Compound in accordance with Specification Section 926. Use an Epoxy Bonding Compound or an Epoxy Mortar as recommended by the Manufacturer.

TABLE OF MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS

	D = Square Pile Size (inches)					Required Storage and Transportation Detail	Pick-Up Detail
	12	14	18	24	30		
Maximum Pile Length (Feet)	48	52	59	68	87	2, 3, or 4 point	1 Point
	69	75	85	98	124	2, 3, or 4 point	2 Point
	99	107	121	140	178	3 or 4 point	3 Point



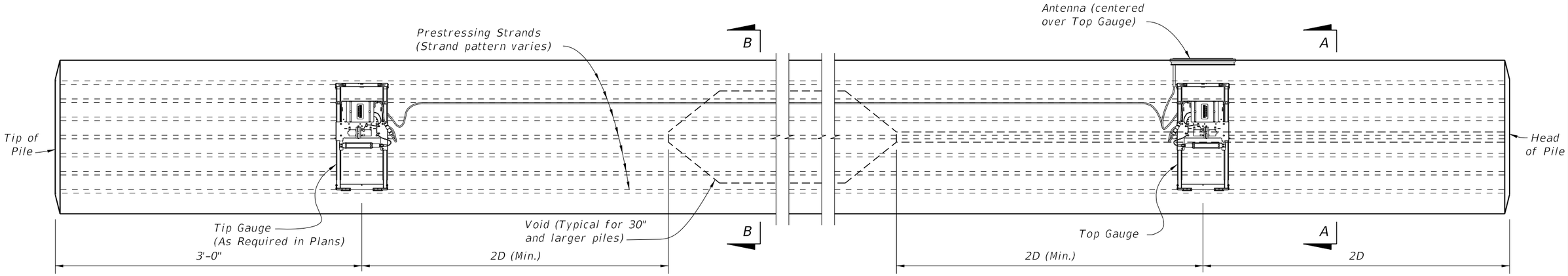
TYPICAL PILE SHAPE FOR MOLD FORMS



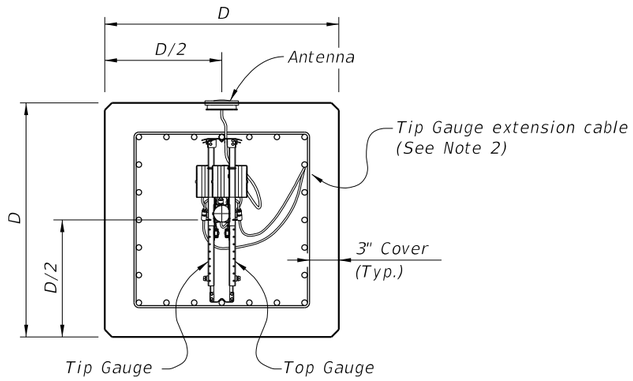
DETAIL SHOWING TYPICAL COVER

10/17/2024 9:57:19 AM

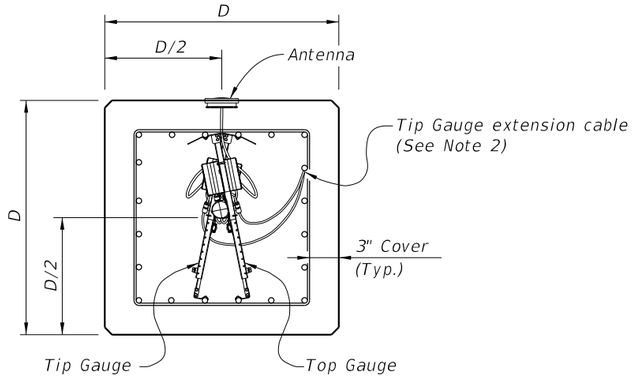
LAST REVISION	REVISION	DESCRIPTION:				
11/01/22			FDOT	FY 2025-26 STANDARD PLANS	SQUARE PRESTRESSED CONCRETE PILES - TYPICAL DETAILS & NOTES	INDEX 455-001 / SHEET 1 of 1



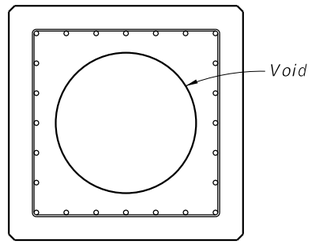
ELEVATION



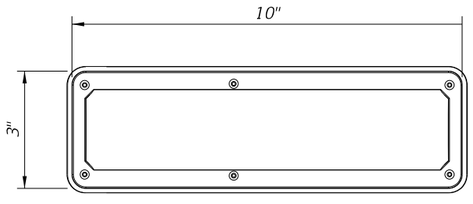
SECTION A-A
(Strand Pattern with odd number of strands per face)



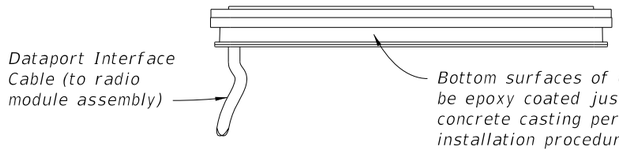
SECTION A-A
(Strand Pattern with even number of strands per face)



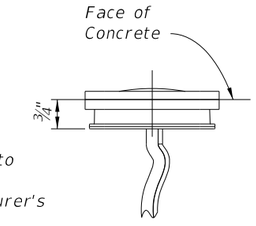
SECTION B-B
(Showing Voided Pile, Solid Pile Similar)



ANTENNA TOP VIEW



ANTENNA SIDE VIEW



ANTENNA END VIEW

NOTES:

1. For piles 18" and larger installed for bridge foundations, provide EDC Instrumentation in accordance with Specification Section 455.

2. Attach Tip Gauge extension cable to the underside of the strand shown in Section A–A. Secure cable to strand with nylon wire ties spaced a maximum of 6ft. along cable.

10/17/2024 9:58:14 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/20			FDOT FY 2025-26 STANDARD PLANS	SQUARE PRESTRESSED CONCRETE PILES - EDC INSTRUMENTATION	455-003	1 of 1

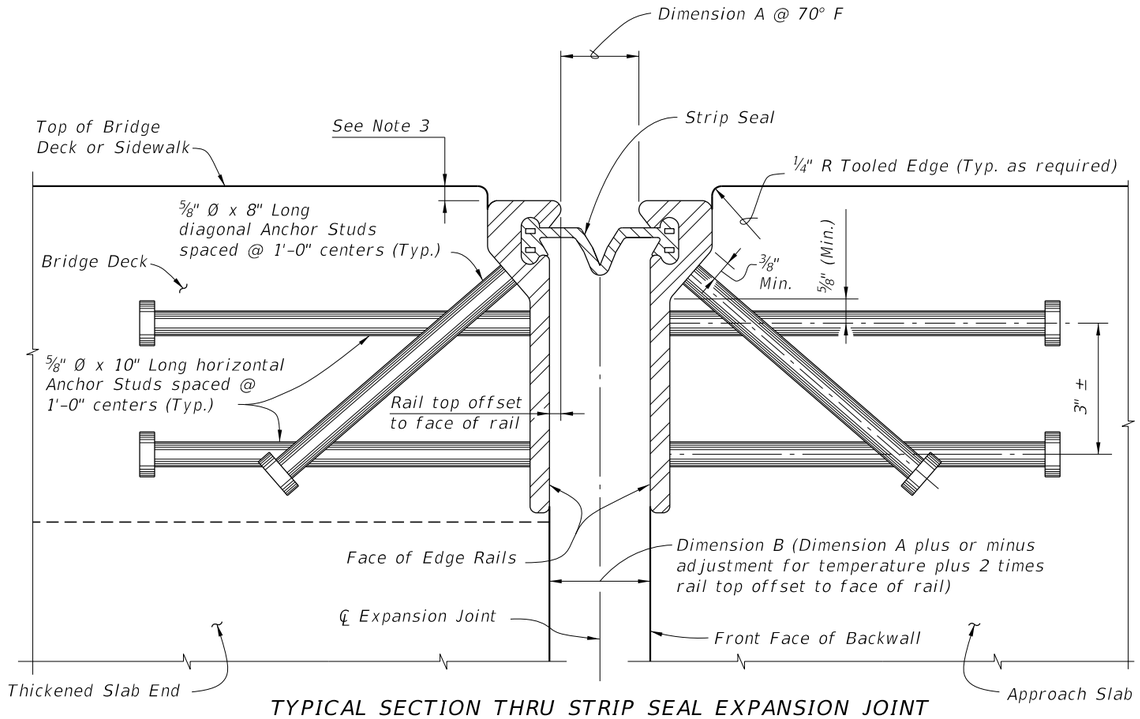
[redacted]

10/17/2024 10:00:31 AM

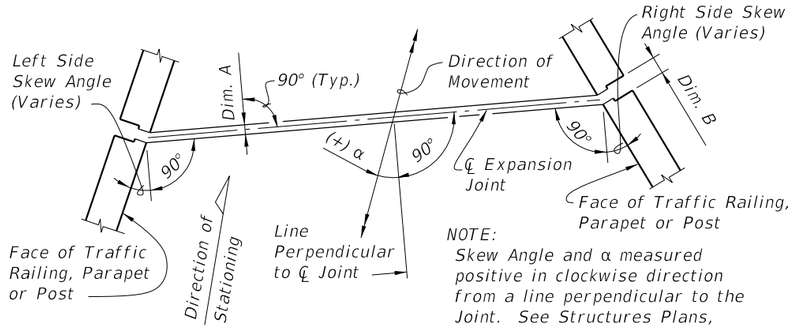
LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2025-26 STANDARD PLANS	30" SQUARE PRESTRESSED CONCRETE PILE	INDEX	SHEET
11/01/22					455-030	1 of 1

10/17/2024 10:01:48 AM

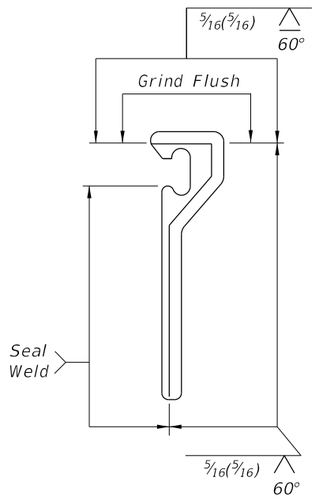
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/23			FY 2025-26 STANDARD PLANS	30" SQUARE PRESTRESSED CONCRETE PILE - HIGH MOMENT CAPACITY	455-031	1 of 1



TYPICAL SECTION THRU STRIP SEAL EXPANSION JOINT
(Begin or End Concrete Girder Bridge shown,
Intermediate Supports and Steel Girder Bridge similar.
Reinforcing Steel and Girder details not shown for clarity.)



MOVEMENT SCHEMATIC



SHOP SPLICE DETAIL

GENERAL NOTES:

1. *Furnish Strip Seal Expansion Joint Systems in accordance with Specification Section 458.*
2. *Shape of Edge Rail shown is representative, minor variations depending on manufacturer are permitted.*
3. *Recess the Edge Rail below the concrete surface in accordance with Specification Section 458.*
4. *Refer to the Expansion Joint Data Table in the Structures Plans for joint movement and Dimension A.*
5. *Refer to Specification Section 458 for installation and fabrication requirements.*

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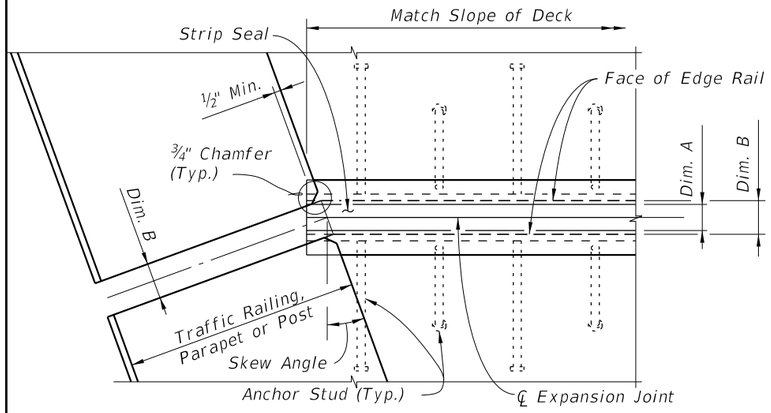
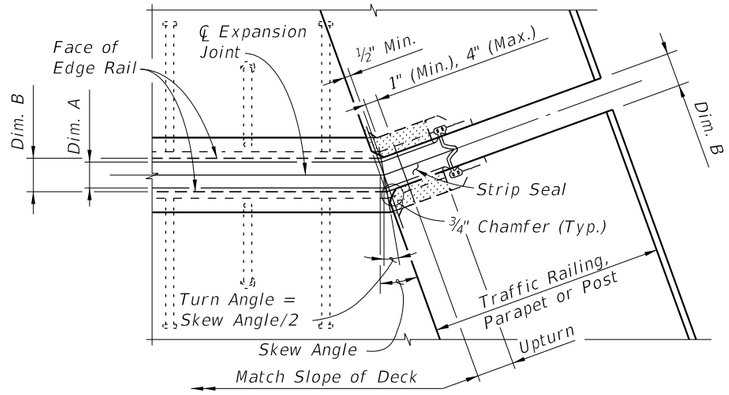
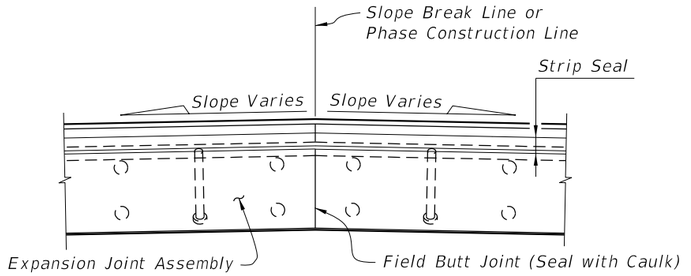
LAST REVISION	REVISION	DESCRIPTION:				
11/01/19			FDOT	FY 2025-26 STANDARD PLANS	EXPANSION JOINT SYSTEM - STRIP SEAL	INDEX 458-100 / SHEET 1 of 3



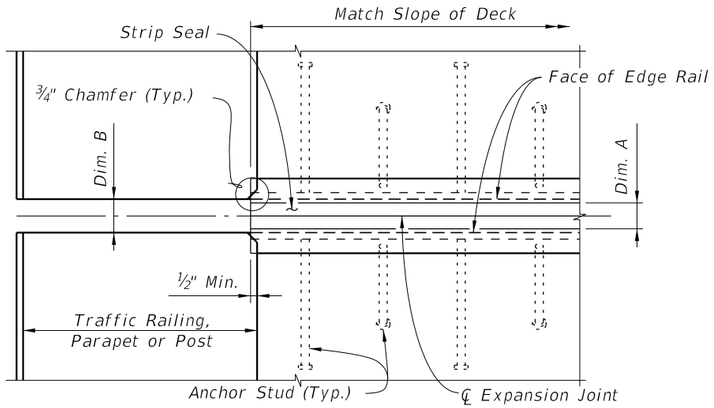
PARTIAL PLAN VIEW OF SKEWED JOINTS



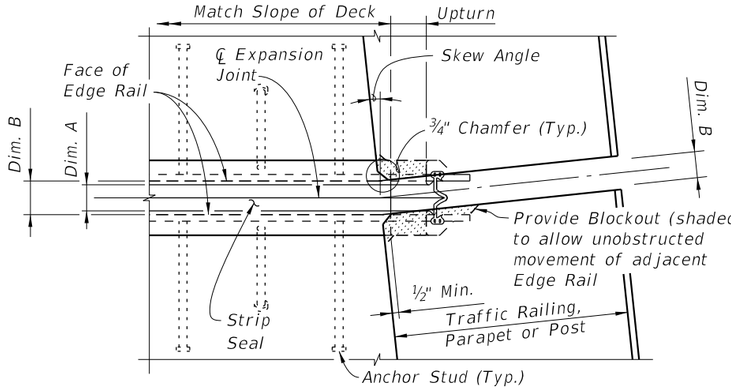
PARTIAL PLAN VIEW OF JOINTS SKEWED GREATER THAN 6°



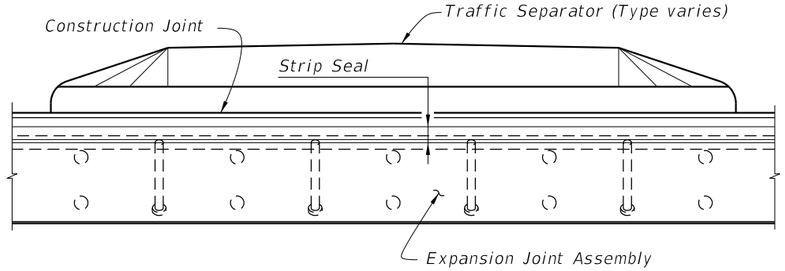
PARTIAL SECTION ALONG ℄ JOINT AT FIELD BUTT JOINT LOCATION (CROWNED DECK OR SLAB SHOWN)



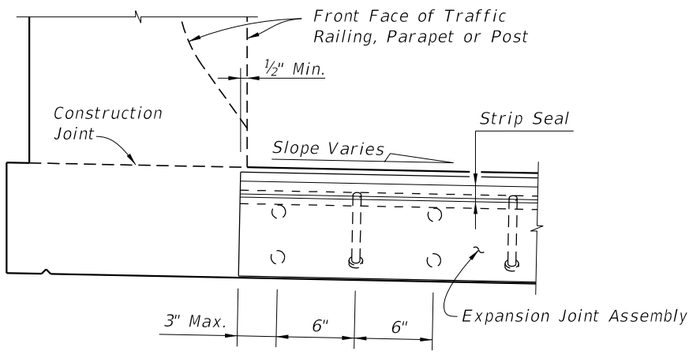
PARTIAL PLAN VIEW OF NONSKEWED JOINTS



PARTIAL PLAN VIEW OF NONSKEWED JOINTS & JOINTS SKEWED 6° OR LESS



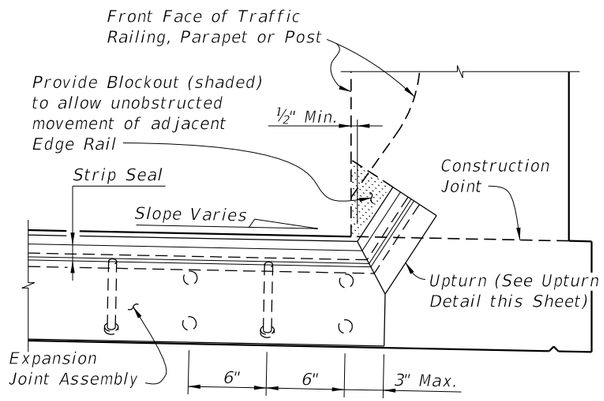
PARTIAL SECTION ALONG ℄ JOINT THRU TRAFFIC SEPARATOR



PARTIAL SECTION ALONG ℄ JOINT

JOINT TREATMENT AT HIGH SIDE OF DECK WITH SLOPE ≥ 1%

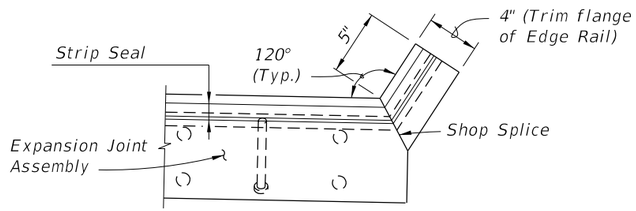
(Sidewalk Cover Plate where applicable not shown for clarity)



PARTIAL SECTION ALONG ℄ JOINT

JOINT TREATMENT AT LOW SIDE OF DECK & HIGH SIDE OF DECK WITH SLOPE < 1%

(Sidewalk Cover Plate where applicable not shown for clarity)

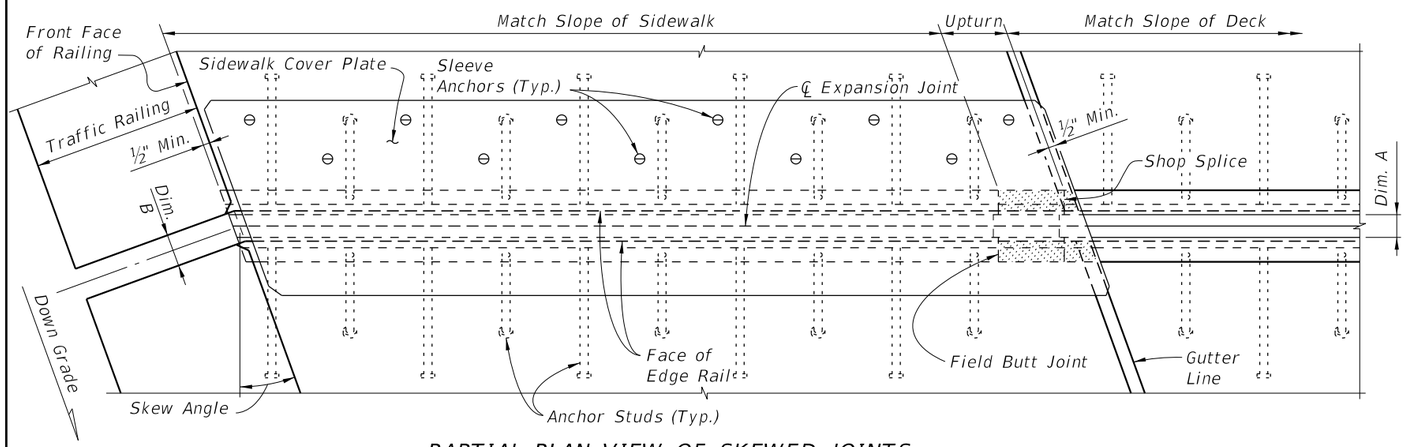


UPTURN DETAIL

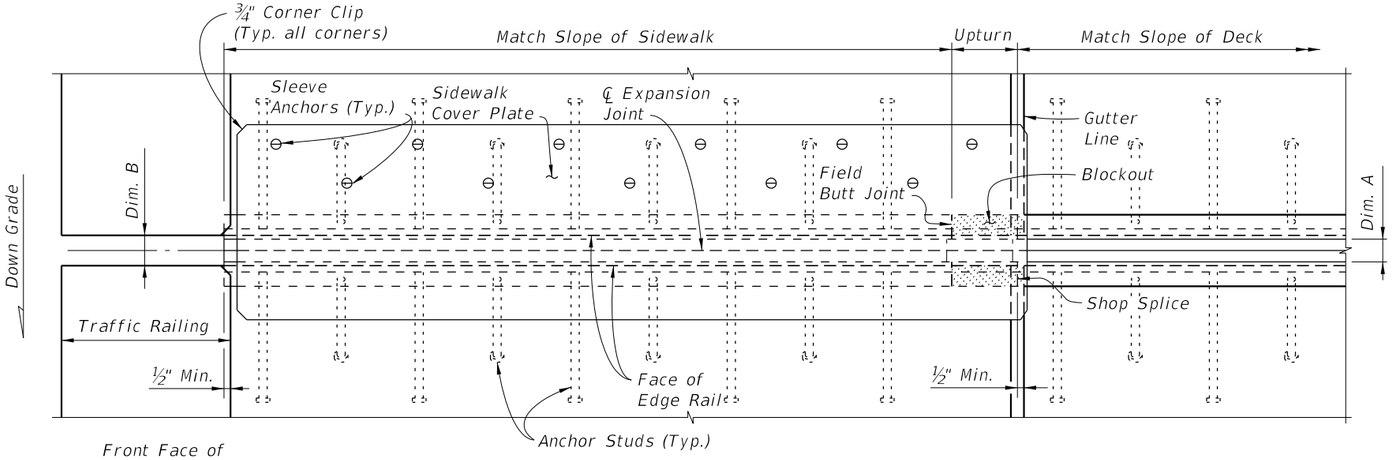
(TYPICAL AT TRAFFIC BARRIERS AND PARAPETS)

10/17/2024 10:10:29 AM

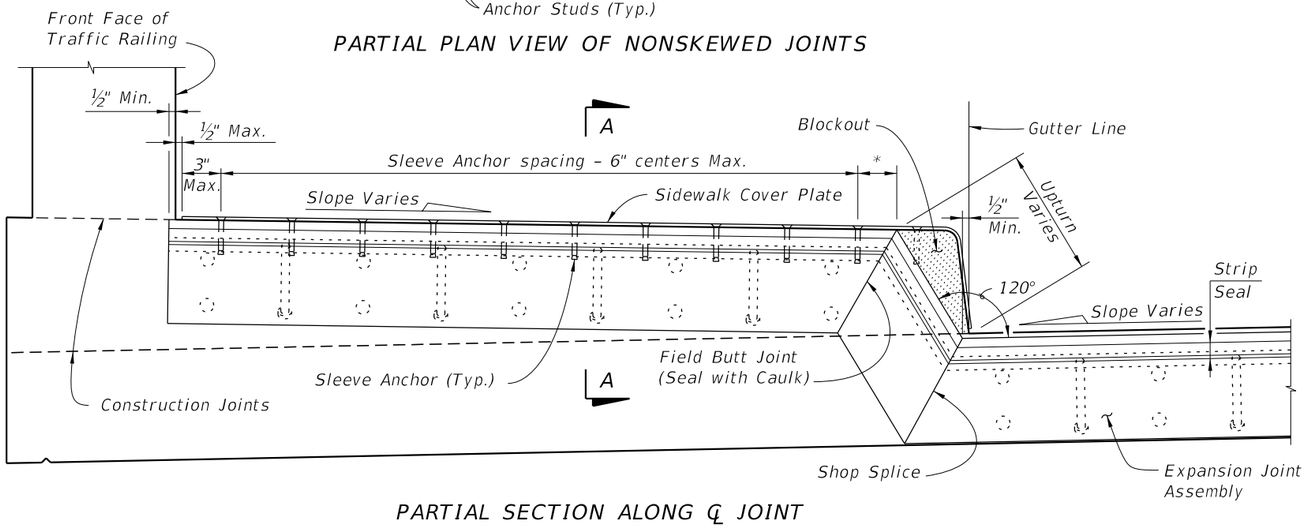
LAST REVISION	REVISION	DESCRIPTION:	FY 2025-26 STANDARD PLANS	EXPANSION JOINT SYSTEM - STRIP SEAL	INDEX	SHEET
11/01/19					458-100	2 of 3



PARTIAL PLAN VIEW OF SKEWED JOINTS



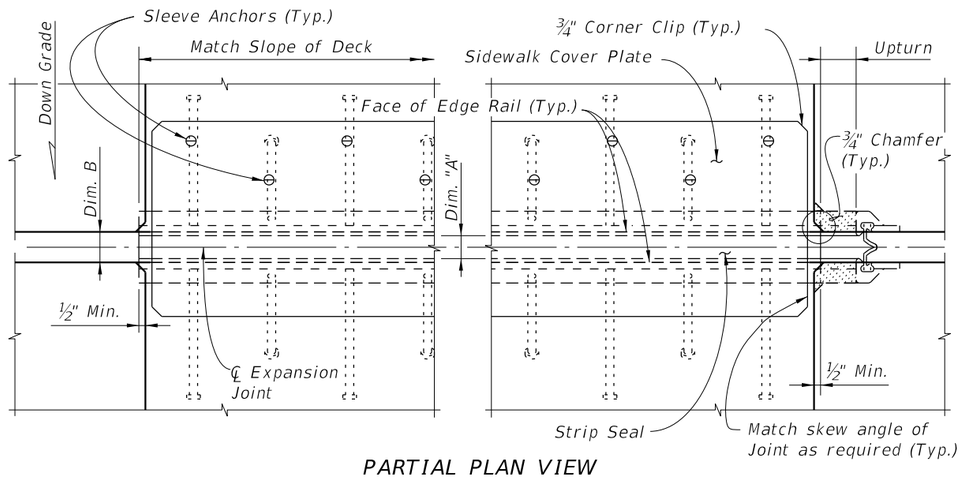
PARTIAL PLAN VIEW OF NONSKEWED JOINTS



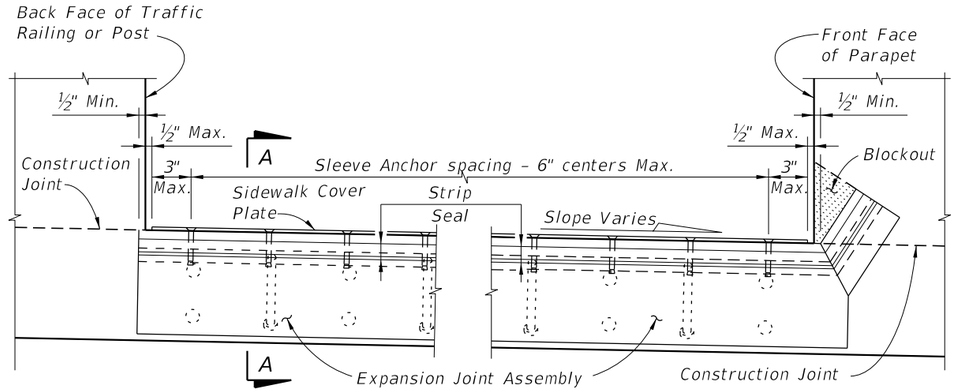
PARTIAL SECTION ALONG ℄ JOINT

RAISED SIDEWALK DETAIL

* Distance from ℄ Sleeve Anchor to edge of concrete is 2 inches minimum, 3 inches maximum.

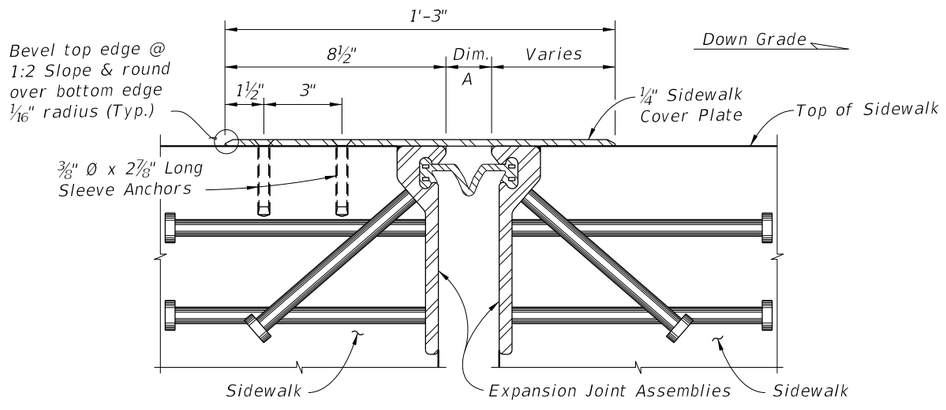


PARTIAL PLAN VIEW



PARTIAL SECTION ALONG ℄ JOINT

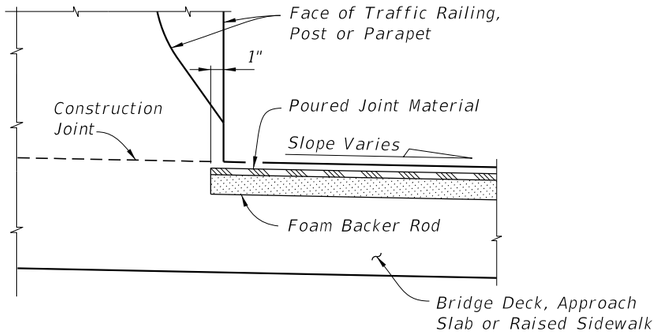
FLUSH SIDEWALK DETAIL



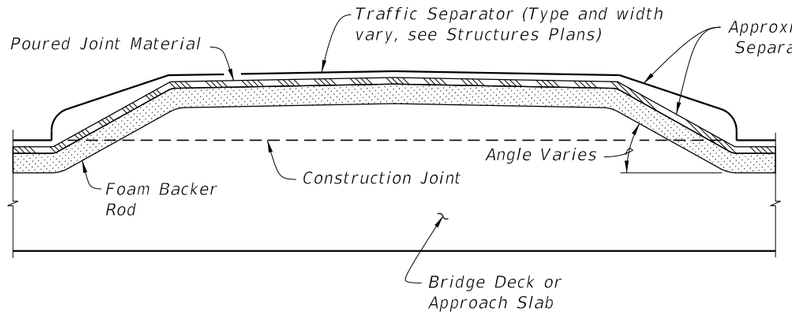
SECTION A-A

10/17/2024 10:10:36 AM

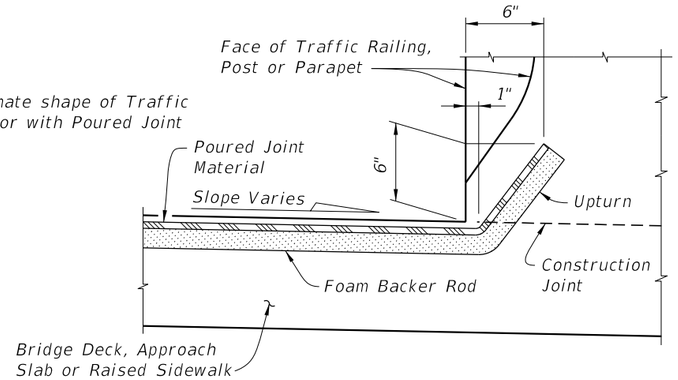
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/19			FY 2025-26 STANDARD PLANS	EXPANSION JOINT SYSTEM - STRIP SEAL	458-100	3 of 3



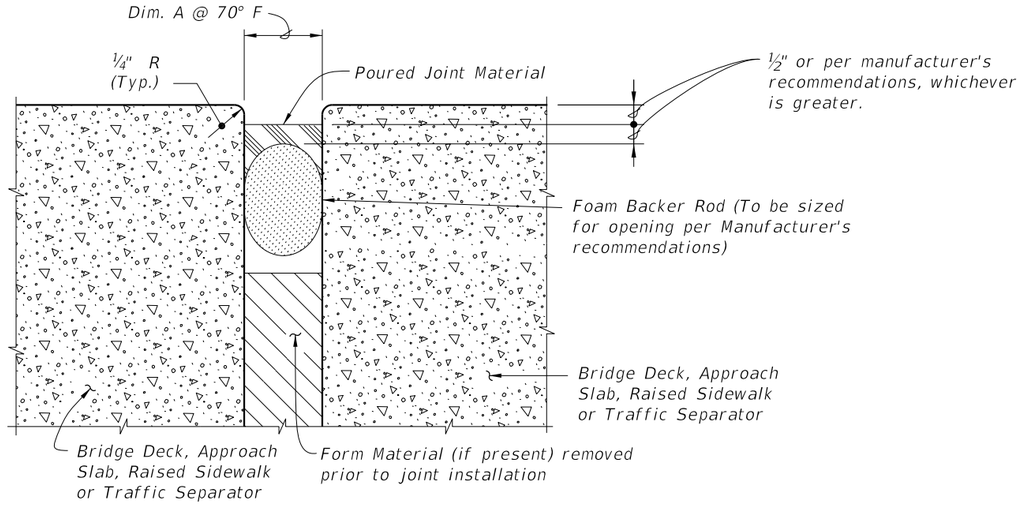
PARTIAL SECTION ALONG ℄ JOINT
JOINT TREATMENT AT HIGH SIDE OF
DECK WITH SLOPES 1% OR GREATER



PARTIAL SECTION ALONG ℄ JOINT,
JOINT TREATMENT AT TRAFFIC SEPARATOR



PARTIAL SECTION ALONG ℄ JOINT
JOINT TREATMENT AT LOW SIDE OF DECK OR
HIGH SIDE OF DECK WITH SLOPES < 1%



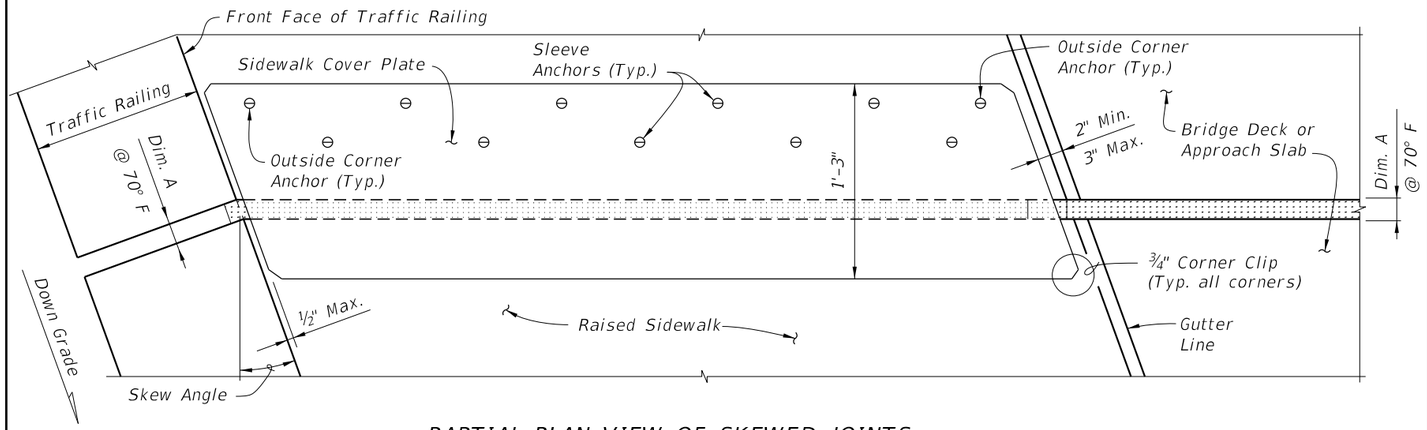
TYPICAL SECTION THRU JOINT

GENERAL NOTES:

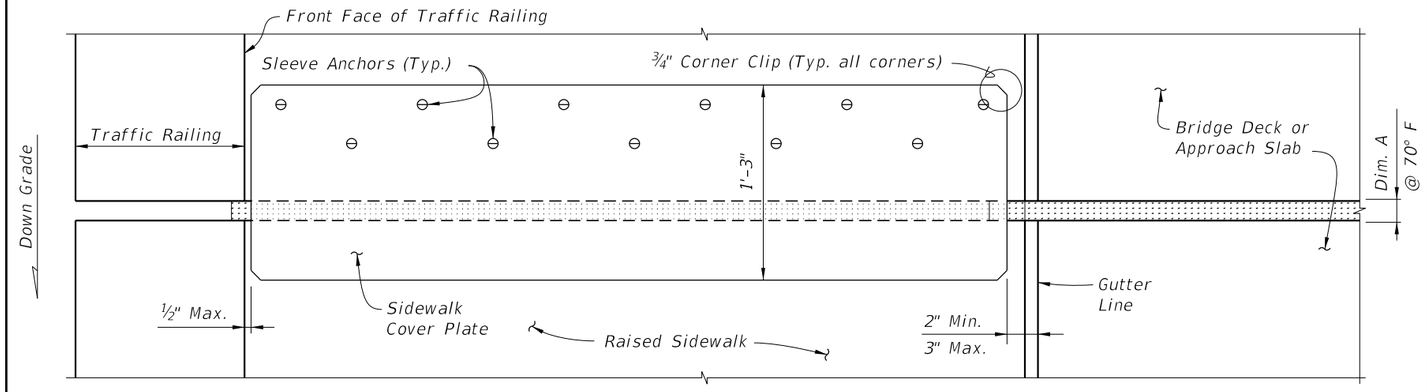
1. Furnish and install Poured Joint With Backer Rod Expansion Joint Systems in accordance with Specification Sections 458 and 932 using Type D silicone sealant material.
2. Refer to the Structures Plans, Poured Expansion Joint Data Table for Dim. A @ 70° F.

10/17/2024 10:11:00 AM

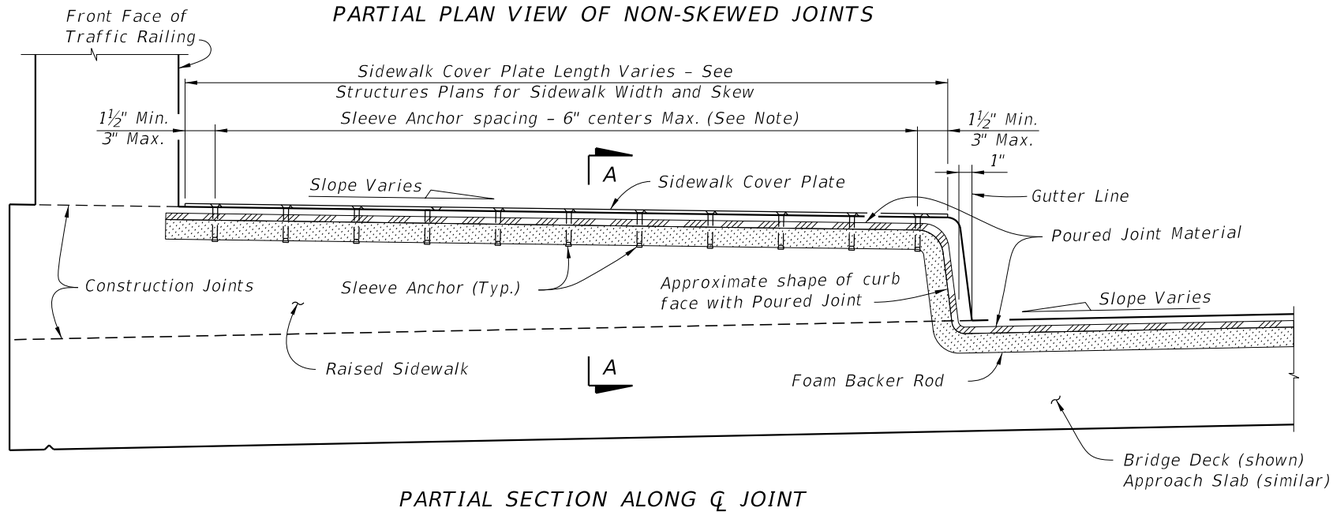
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/23			FY 2025-26 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	458-110	1 of 2



PARTIAL PLAN VIEW OF SKEWED JOINTS

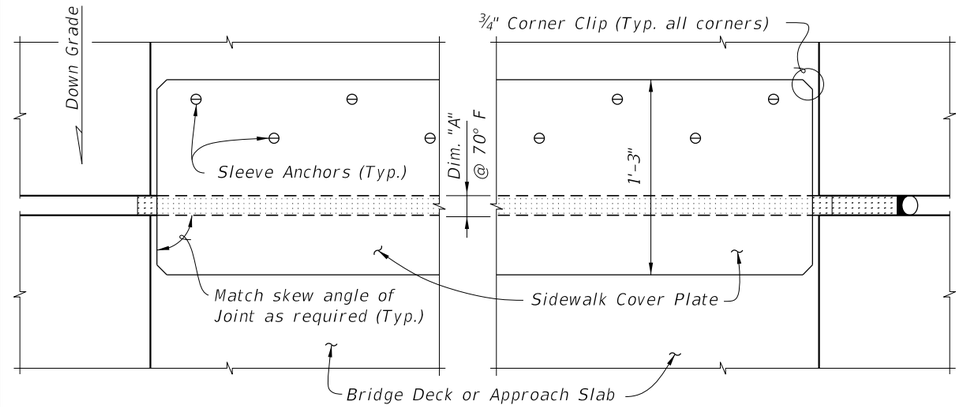


PARTIAL PLAN VIEW OF NON-SKEWED JOINTS

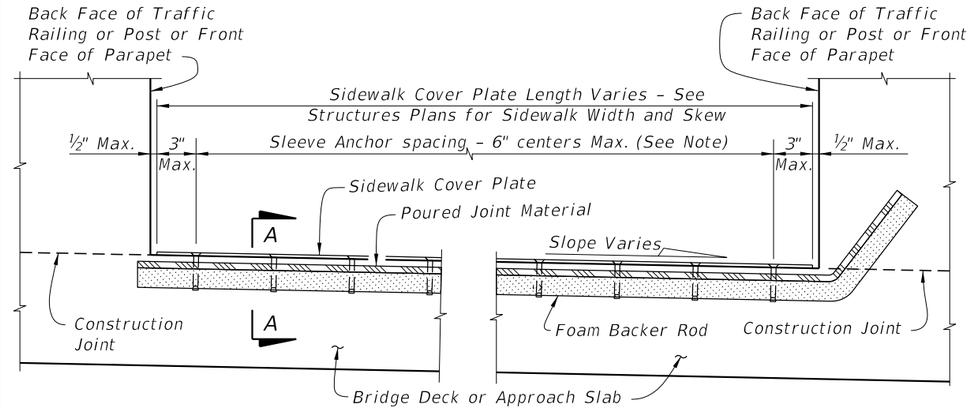


PARTIAL SECTION ALONG ℄ JOINT

RAISED SIDEWALK DETAIL

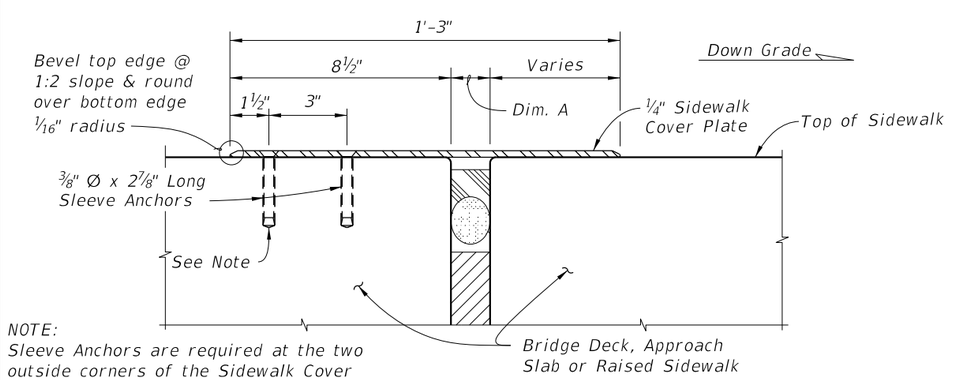


PARTIAL PLAN VIEW



PARTIAL SECTION ALONG ℄ JOINT

FLUSH SIDEWALK DETAIL



NOTE:
Sleeve Anchors are required at the two outside corners of the Sidewalk Cover Plate. Space Sleeve Anchors uniformly between the corner anchors.

SECTION A-A

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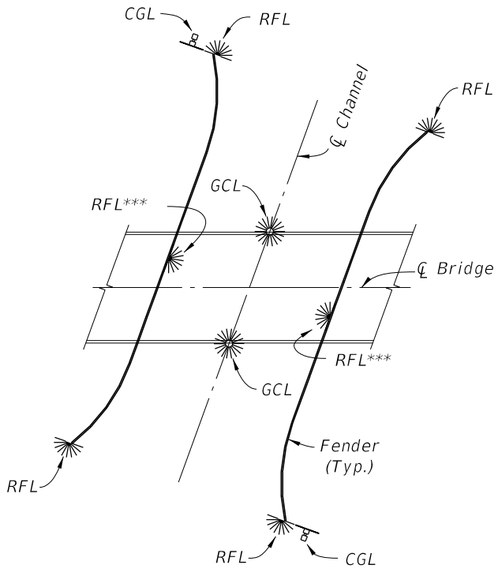
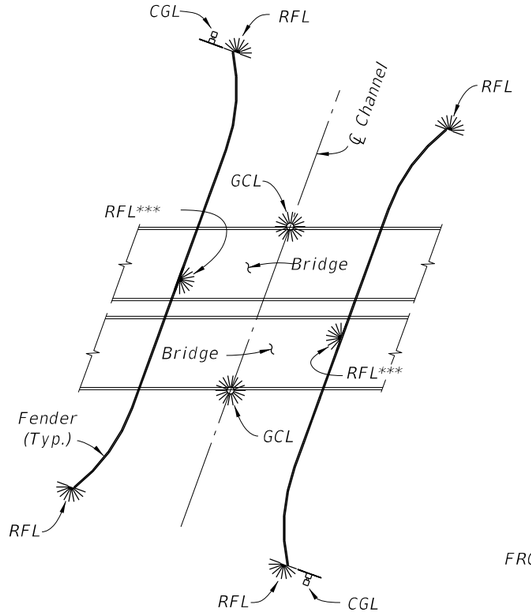
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
07/01/13			FY 2025-26 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	458-110	2 of 2



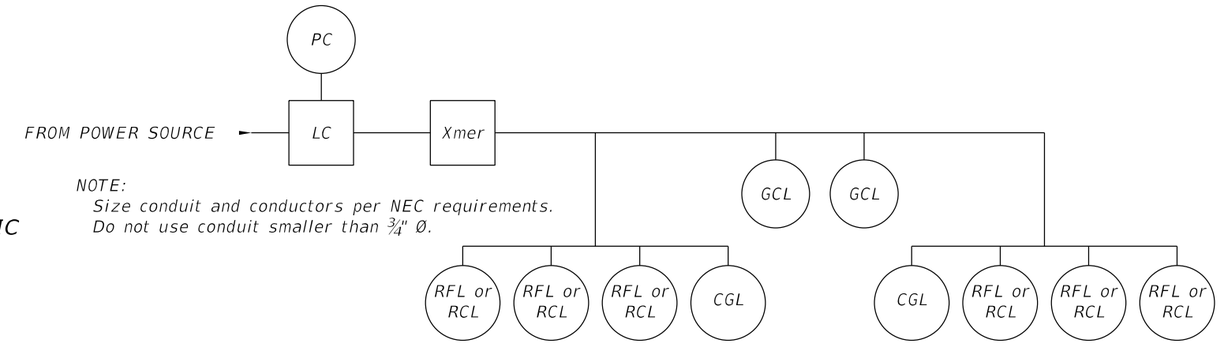
NAVIGATION LIGHT SYSTEM SCHEMATIC
FOR SINGLE BRIDGE WITH FENDERS



NAVIGATION LIGHT SYSTEM SCHEMATIC
FOR DUAL BRIDGES WITH FENDERS

NAVIGATION LIGHT NOTES:

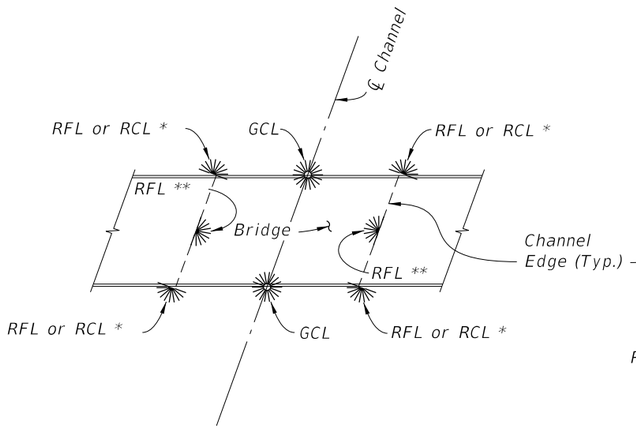
1. Provide Navigation Light System in compliance with Specifications Section 510.



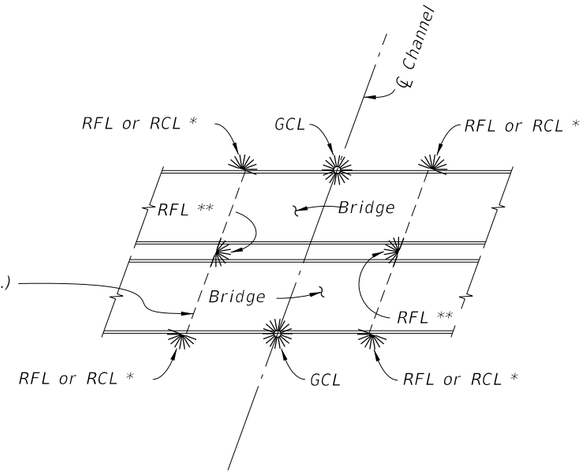
NOTE:
Size conduit and conductors per NEC requirements.
Do not use conduit smaller than $\frac{3}{4}$" Ø.

TYPICAL ELECTRICAL SCHEMATIC DIAGRAM

POWER CONDUCTORS			
DISTANCE (feet)	VOLTS	CONDUCTOR	TRANSFORMER
0 - 75	120	#12 AWG	N/A
75 - 500	120 or 240	#10 AWG	N/A
500-1000	240	#10 AWG	N/A
1000-2000	480	#10 AWG	2 KVA
2000-5000	480	#8 AWG	2 KVA
5000-10000	480	#6 AWG	2 KVA
over 10000	480	#4 AWG	2 KVA



NAVIGATION LIGHT SYSTEM SCHEMATIC
FOR SINGLE BRIDGE WITHOUT FENDERS



NAVIGATION LIGHT SYSTEM SCHEMATIC
FOR DUAL BRIDGES WITHOUT FENDERS

LEGEND

SYMBOL	DESCRIPTION
LC	Lighting Contactor
PC	Photocell Control
Xmer	Transformer (If Required)
RFL or RCL	Red Pier/Fender Light (180° visibility)
RFL or RCL	Red Channel Margin Light (180° visibility)
GCL	Green Center Channel Light (360° visibility)
CGL	Clearance Gauge Light
CM	Channel Margin or Pier inner surface whichever defines Channel Edge.

* Use RFL when Pier is at Channel Edge and see CFR, Title 33, part 118 for Mounting Height restrictions. Use RCL otherwise.
** Mounted only on the Pier that defines CM, otherwise does not apply.
*** RFL to be located at mid length of straight portion of fender.

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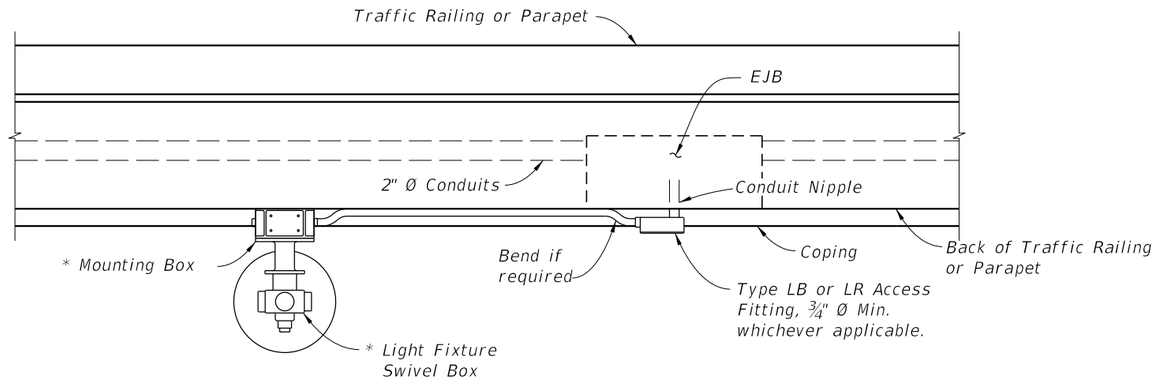
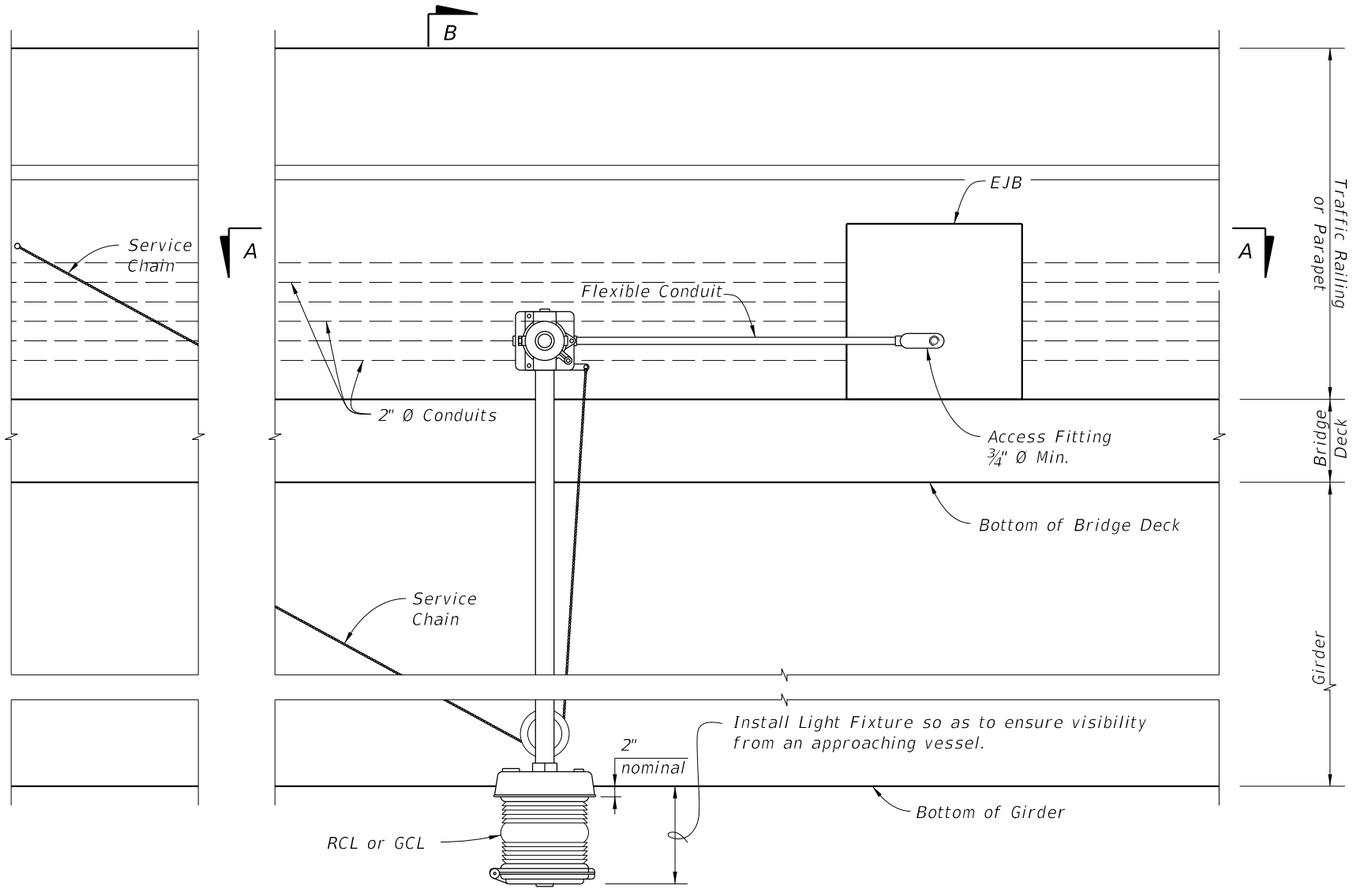
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/17			FDOT FY 2025-26 STANDARD PLANS	NAVIGATION LIGHT SYSTEM DETAILS (FIXED BRIDGES)	510-001	1 of 2



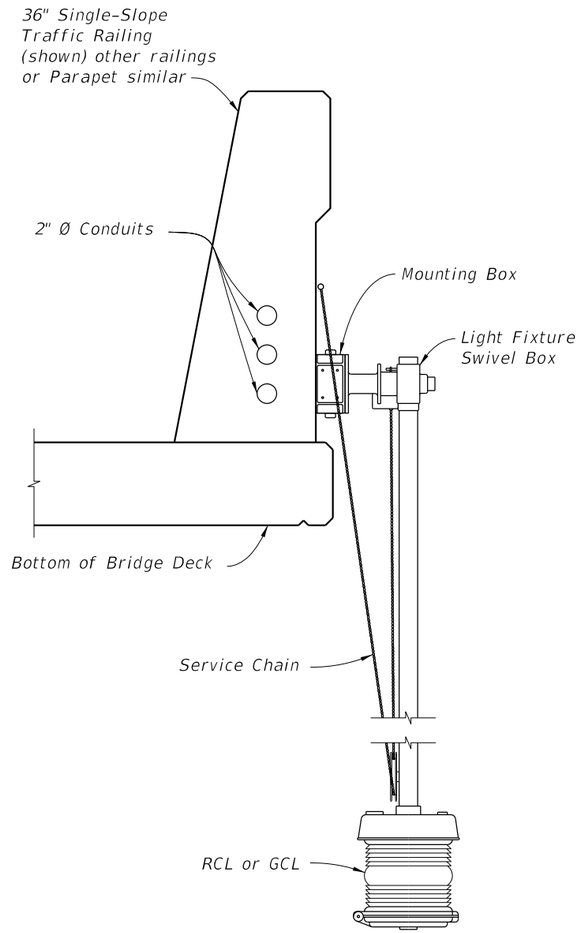
CROSS REFERENCES:
1. For Navigation Light System notes and legend, see Sheet 1.
2. See Utility Conduit Detail sheets for Embedded Junction Box (EJB) dimensions & locations.

* Supplied by Light Fixture Manufacturer

GCL OR RCL MOUNTING DETAILS (SCHEMATIC)
VIEW A-A



GCL OR RCL MOUNTING DETAILS (SCHEMATIC)
ELEVATION VIEW
(Traffic Railing (36" Single-Slope) shown, other railings similar)



SECTION B-B
TYPICAL POSITION OF RCL OR GCL
RELATIVE TO SUPERSTRUCTURES

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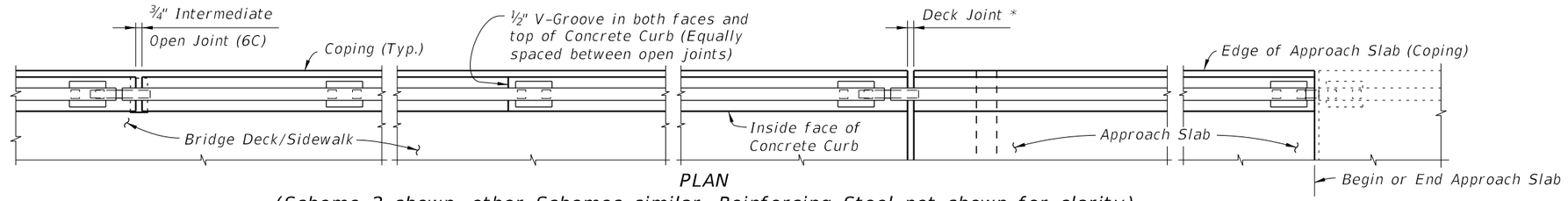
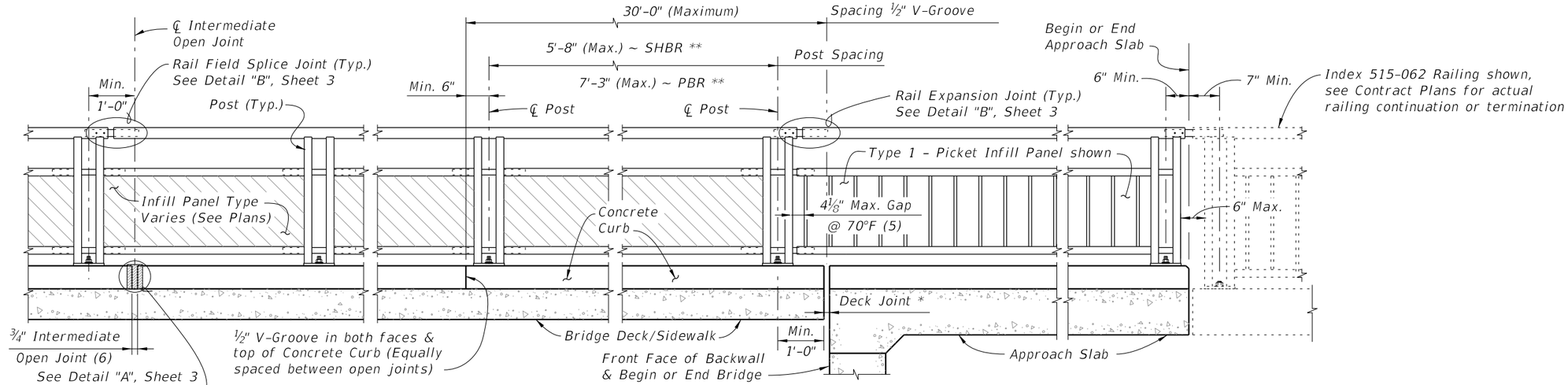
LAST REVISION	REVISION	DESCRIPTION:	FY 2025-26 STANDARD PLANS	NAVIGATION LIGHT SYSTEM DETAILS (FIXED BRIDGES)	INDEX	SHEET
11/01/17					510-001	2 of 2



PLAN

(Scheme 2 shown, other Schemes similar, Reinforcing Steel not shown for clarity)



ELEVATION OF INSIDE FACE OF RAILING

(Scheme 2 shown with Post "A", other Schemes similar, Reinforcing Steel not shown for clarity)

* Deck Joint at Begin Bridge or End Bridge shown; Deck Joint at ℄ Pier or Intermediate Bent similar.

** SHBR ~ Special Height Bicycle Railing
PBR ~ Pedestrian/Bicycle Railing

NOTES:

1. Shop Drawings are required.
2. Work this Index with Index 515-062 Aluminum Bicycle/Pedestrian Railing Details and Specification Section 515. Refer to the IDS for Design Criteria and Limits of Use.
3. Materials:
   - A. Galvanized Steel Fasteners: Hex Head Bolt ASTM A307, Hex Nuts ASTM A563, Washers ASTM F436
   - B. Aluminum:
     - a. Support Bracket (Scheme 3) L-shape and Stiffener Plate: ASTM B209, Alloy 6061-T6
     - b. Bottle-guard (Schemes 1 & 3) L-shape: ASTM B209, Alloy 6061-T6 or 6063-T5
   - C. Concrete: Same as bridge deck
   - D. Pre-cured Silicone Sealant: Specification Section 932
   - E. Bearing Pads: Provide ⅛" thick Plain, Fabric Reinforced or Fabric Laminated pads meeting the requirements of Specification Section 932 for Ancillary Structures.
4. See Structures Plans, Superstructure Sheets for bridge information including concrete type, deck expansion joint locations and orientations, and thermal movement.
5. Railings:
   - A. For thermal movement greater than 4" (up to a maximum of 5"), clear opening between adjacent pickets, or panels at Rail Expansion Joints above Deck Joints must be reduced to 3½".
   - B. For treatment of railings on skewed bridges see Index 521-427.
6. Curbs:
   - A. Match open curb joints at Deck Expansion Joint locations to the deck joint dimension.
   - B. Construct Concrete Curb (Scheme 2) vertical with the top surface finished level transversely. See Concrete Curb Details Sheet 3.
   - C. Provide ¾" Intermediate open joints in curbs coinciding with the ¾" joints in the traffic railing.
7. Payment: Support bracket (Scheme 3) is incidental to the cost of railing. Curb concrete and reinforcing steel (Scheme 2) are included in the bridge deck quantities.

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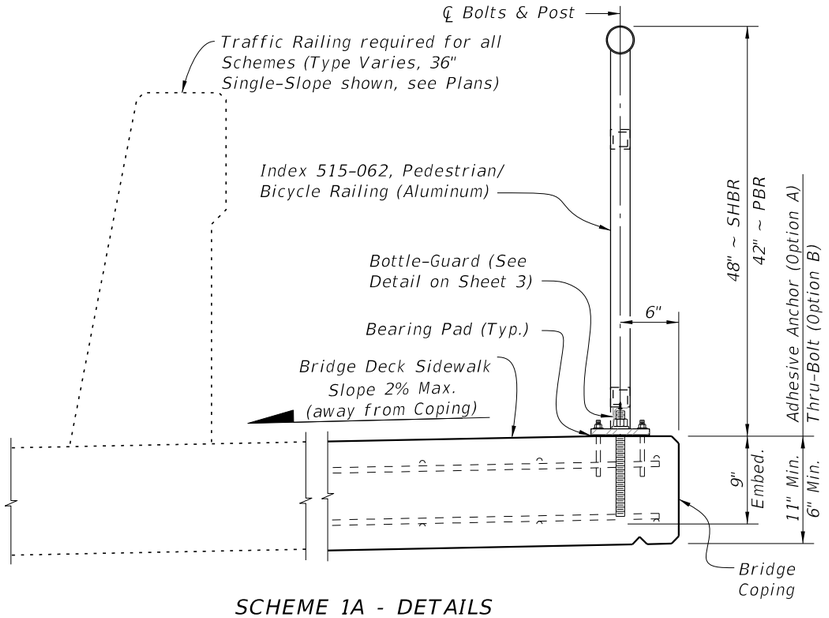
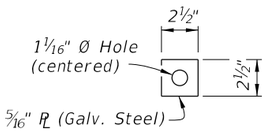
LAST REVISION	REVISION	DESCRIPTION:				
11/01/17			FDOT FY 2025-26 STANDARD PLANS	BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM)	INDEX 515-061	SHEET 1 of 3



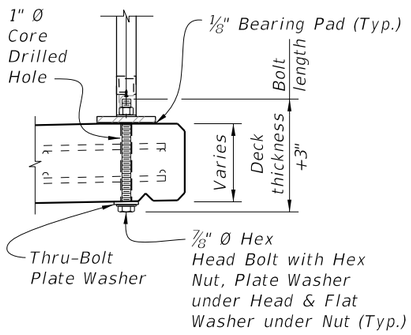
SCHEME 1A - DETAILS
(Adhesive Anchor Option)

CROSS REFERENCE:

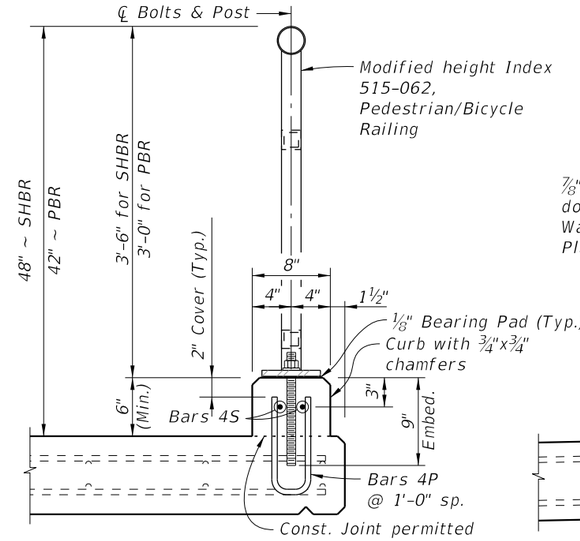
See Sheet 1 for Bridge Railing Notes.



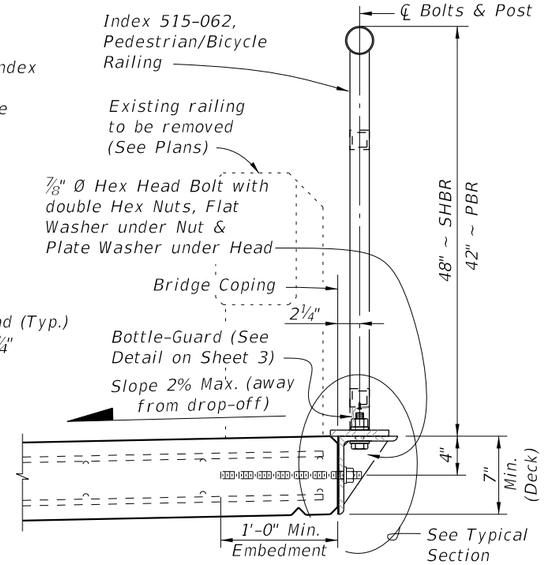
THRU-BOLT PLATE WASHER DETAIL



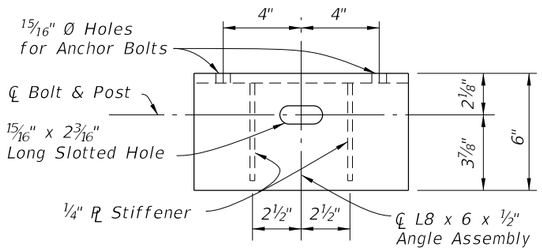
SCHEME 1B - DETAILS
(Thru-Bolt Option)



SCHEME 2 -
TYPICAL SECTION THROUGH
CURB MOUNTED RAILING



SCHEME 3 -
TYPICAL SECTION THROUGH
SIDE MOUNTED RAILING (RETROFIT)



PLAN VIEW

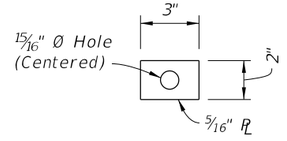
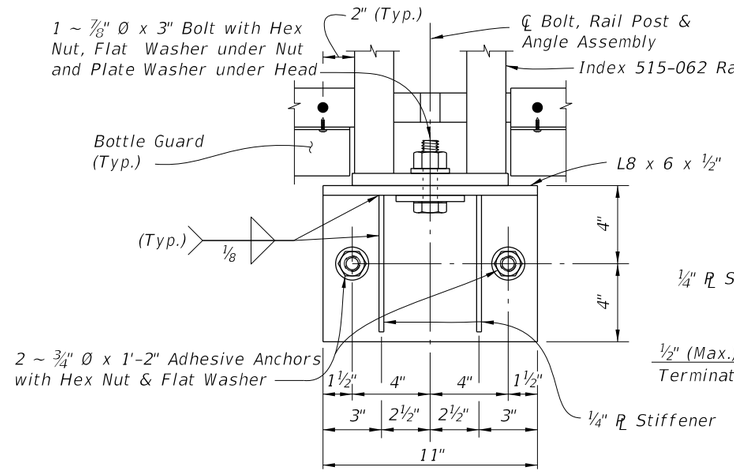
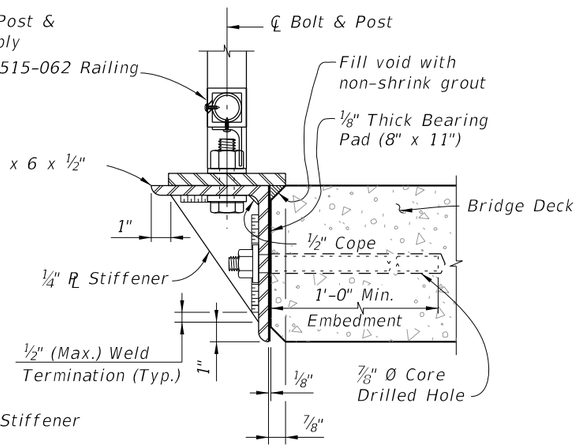


PLATE WASHER DETAIL



ELEVATION VIEW



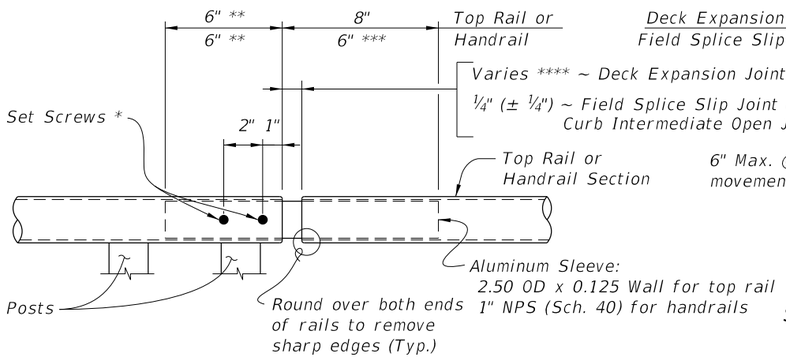
TYPICAL SECTION

SCHEME 1 - TYPICAL SECTION THROUGH DECK MOUNTED RAILING

SCHEME 3 - SIDE-MOUNTED SUPPORT BRACKET DETAILS

10/17/2024 10:25:42 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2025-26 STANDARD PLANS	BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM)	INDEX	SHEET
11/01/17					515-061	2 of 3



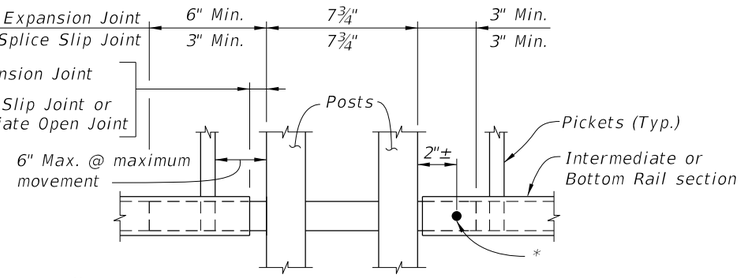
ROUND RAILS - TOP RAIL OR HANDRAIL

* ¼" Ø x ¾" Pan Head Aluminum (Alloy 7075-T73) or Stainless Steel (Type 316 or 18-8 Alloy) Set Screws along outside face of railing. Set screws must be set flush against the rail surface. A ¾" Ø plug weld may be substituted for the two set screws at expansion joints.

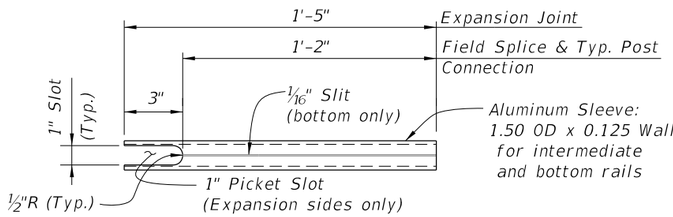
** Embedded length may be 4" for plug welded connection.

*** Increase handrail sleeve embedment to 8" for Expansion Joint openings greater than 2".

**** Expansion Joint opening shall match the clear opening in the deck joint but not greater than 3".

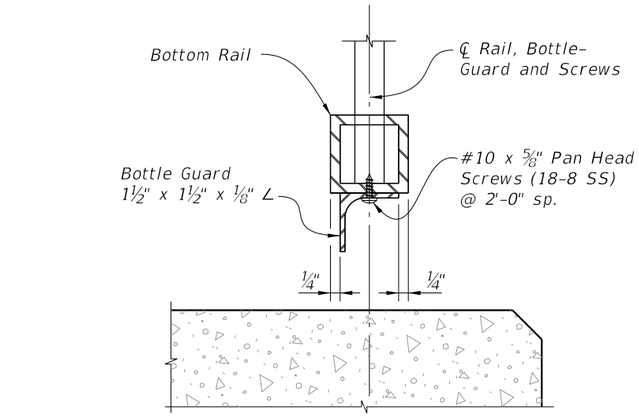


SQUARE RAILS - INTERMEDIATE OR BOTTOM RAIL



INTERMEDIATE OR BOTTOM RAIL - ALUMINUM SLEEVE DETAIL (Bottom Side Shown)

DETAIL "B" EXPANSION JOINT (FIELD SPLICE SIMILAR)

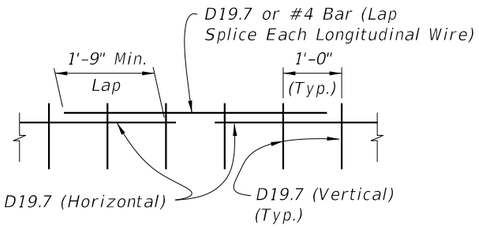


TYPICAL SECTION THROUGH BOTTOM RAIL
(Post Not Shown for Clarity)

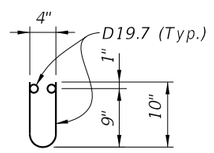
SCHEME 1 - BOTTLE GUARD DETAIL

ALTERNATE REINFORCING (WWR) DETAILS

NOTE: Place wire panels to minimize the end overhang. End Overhangs greater than 4¾" are not permitted.



SPLICE DETAIL
(Between WWR Sections)

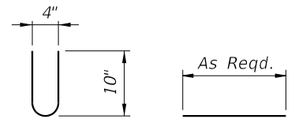


WWR
SECTION DETAIL

CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

BILL OF REINFORCING STEEL

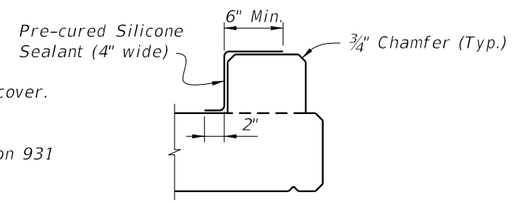
MARK	SIZE	LENGTH
P	4	2'-0"
S	4	As Reqd.



BAR 4P BAR 4S

CURB REINFORCING STEEL NOTES:

1. All bar dimensions in the bending diagrams are out to out.
2. The reinforcement for the curb on a retaining wall shall be the same as detailed for an 8" deck.
3. All reinforcing steel at the open joints shall have a 2" minimum cover.
4. Bars 4S may be continuous or spliced at the construction joints. Bar splices for Bars 4S shall be a minimum of 1'-8".
5. Deformed WWR meeting the requirements of Specifications Section 931 may be used in lieu of all Bars 4P and 4S.



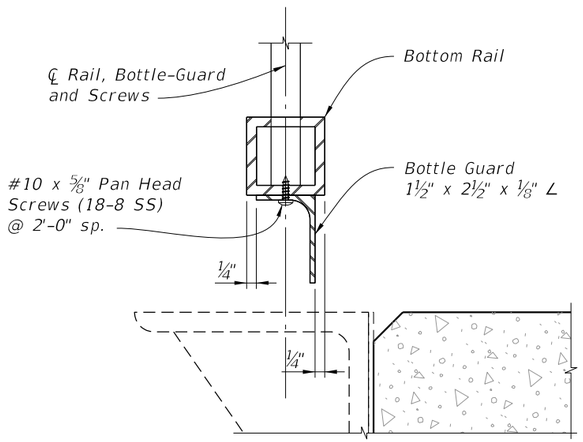
DETAIL "A" - SECTION
AT INTERMEDIATE OPEN JOINT

INTERMEDIATE JOINT SEAL NOTE:

At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.

ESTIMATED CONCRETE CURB QUANTITIES (SCHEME 2)		
ITEM	UNIT	QUANTITY
Concrete	CY/LF	0.0124
Reinforcing Steel	LB/LF	4.01

SCHEME 2 - CONCRETE CURB DETAILS



TYPICAL SECTION THROUGH BOTTOM RAIL
(Post Not Shown for Clarity)

SCHEME 3 - BOTTLE GUARD DETAIL

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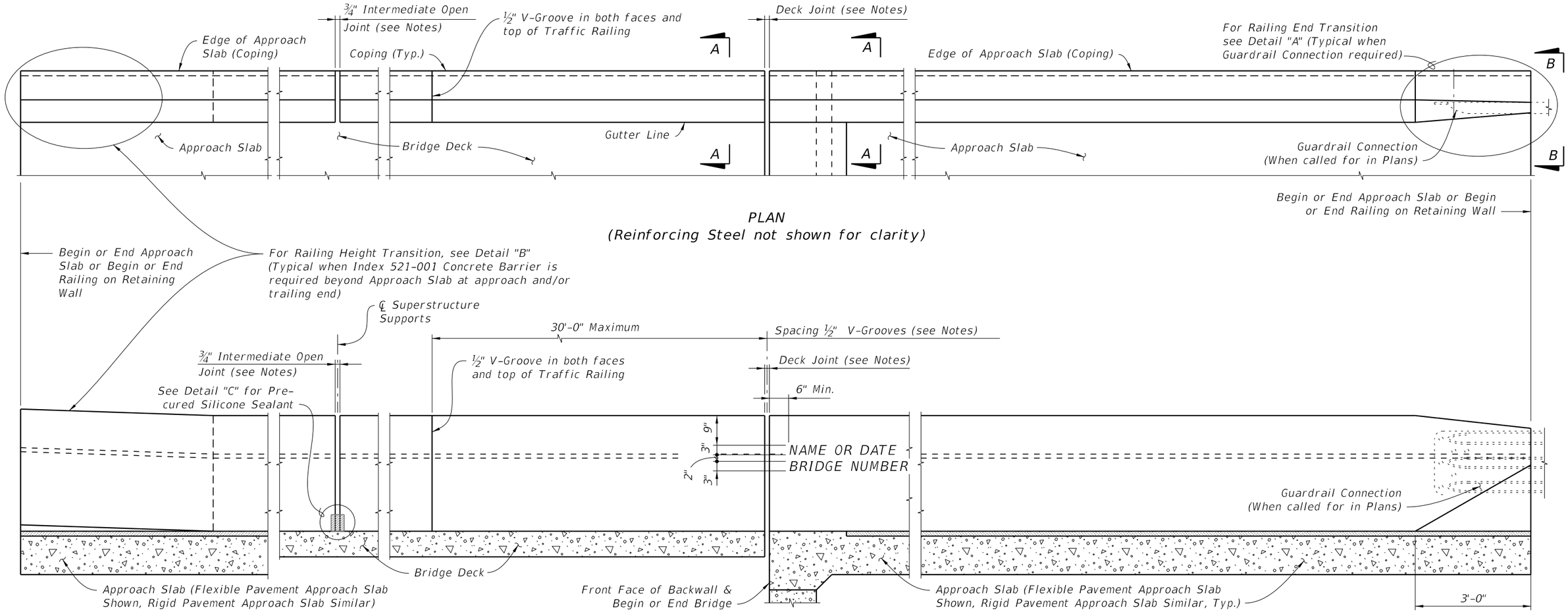
LAST REVISION	REVISION	DESCRIPTION:	FY 2025-26 STANDARD PLANS	BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM)	INDEX	SHEET
11/01/16					515-061	3 of 3



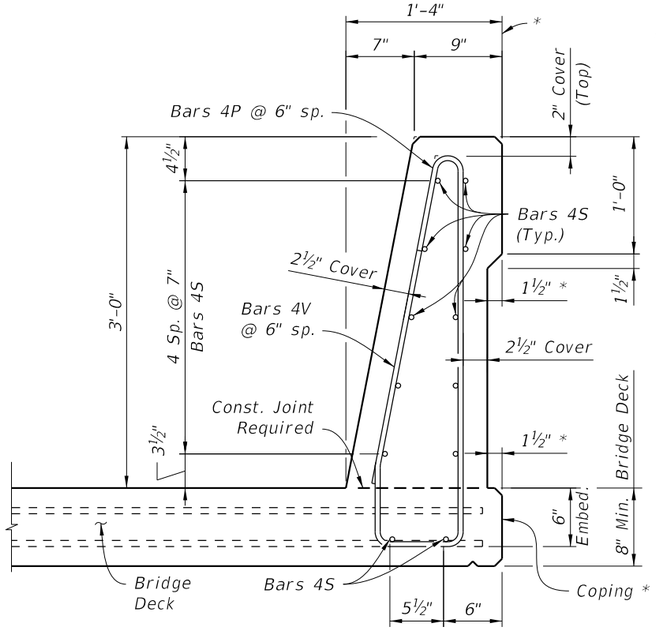
CROSS REFERENCE:
For Section A-A, View B-B, Detail "A" and Detail "B", see Sheet 2. For Detail "C", see Sheet 4.

TRAFFIC RAILING NOTES

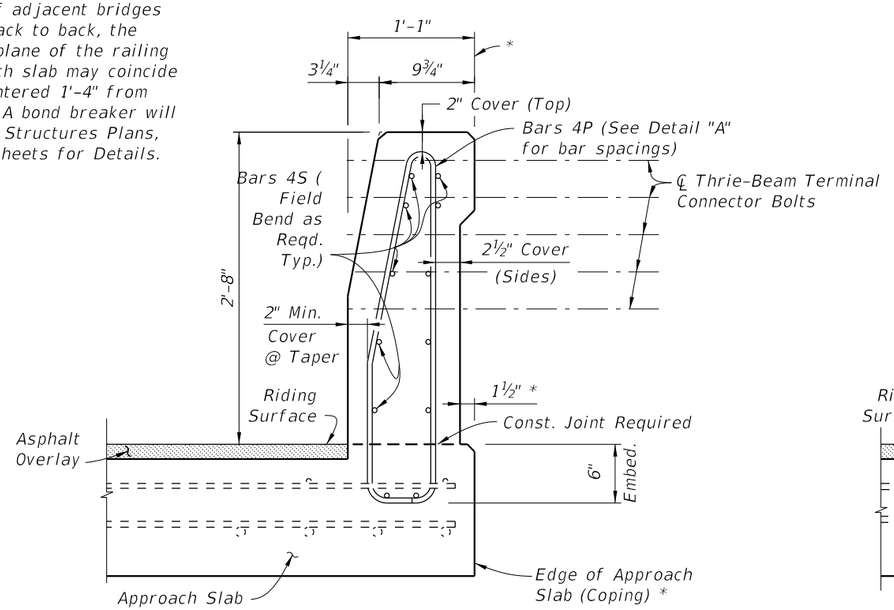
1. Materials: See Structures Plans, General Notes
2. Guardrail Connection Details: See Index 536-001
3. Superelevation: Traffic Railings on Superelevated bridges may be constructed perpendicular to the roadway surface. If an adjoining railing is constructed plumb, transition the end of the Traffic Railing from perpendicular to plumb over a minimum distance of 20'-0". The cost of all modifications will be at the Contractor's expense.
4. Name, Date & Bridge Number: Place the Name and Bridge Number on the Traffic Railing on the driver's right side when approaching the bridge. Place the Date on the driver's left side when approaching the bridge. Use the Name as shown in the General Notes of the Structures Plans. The Date is the year the bridge is completed. For a widening when the existing railing is removed, use both the date on the removed rail and the year of the widening. Form letters and figures with ⅜" V-Grooves using preformed letters and figures. Black plastic letters and figures 3" tall may be used, if approved by the Engineer.
5. Open Joints: See the Superstructure Plans, Approach Slab and Retaining Wall Sheets for Deck Joint dimensions and orientation. Provide Open Railing Joints matching the dimensions of the Deck Joint at Deck Expansion Joint locations.
   A. For treatment of railings on skewed bridges see Sheet 3.
6. Open Joints: Provide ¾" Open Joints at:
   A. Superstructure supports where the slab is continuous.
   B. At ends of approach slabs when adjacent to retaining walls and at expansion joints on retaining wall junction slabs.
7. V-Grooves: Construct ½" V-Grooves plumb. Space V-Grooves equally between ¾" Open Joints and/or Deck Joints and the at V-Groove locations on the Retaining Wall footing/junction slabs.
8. Barrier Delineators: Install Barrier Delineators on top of the Traffic Railing 2" from the face of the traffic side in accordance with Specification Section 705. Match the Barrier Delineator to the color (white or yellow) of the near edgeline.
9. Traffic Railing Transitions:
   A. Transition to guardrail: see Detail "A" and View B-B.
   B. Transition to 38" Concrete Barriers: See Detail "B" and View C-C.
10. See Superstructure Plans for drainage slot locations and size (when required)
11. For embedded conduit and junction boxes see Index 630-010. For Traffic Railings with Pedestrian/Bicycle Bullet Railings see Index 515-021 and 515-022 for notes, details and post spacing.

10/17/2024 10:30:38 AM

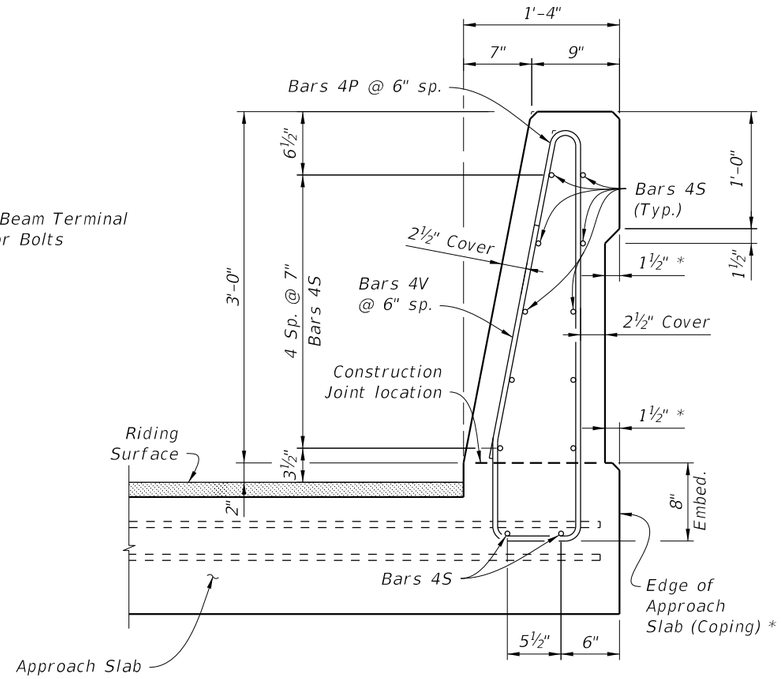
LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2025-26 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
11/01/20					521-427	1 of 5



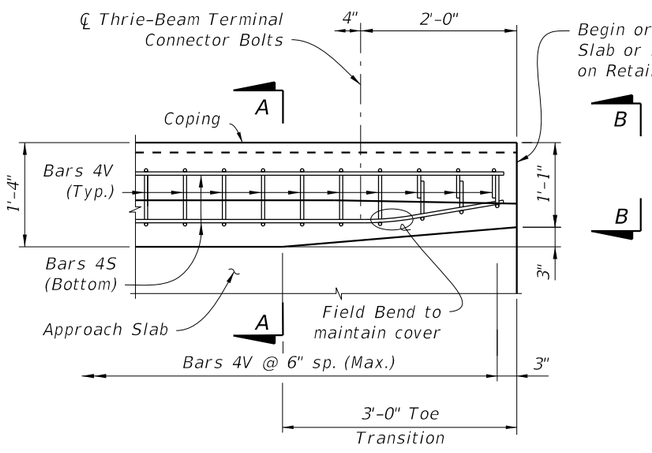
* *Where railings of adjacent bridges are to be built back to back, the outside vertical plane of the railing and deck/approach slab may coincide along a plane centered 1'-4" from each gutter line. A bond breaker will be required. See Structures Plans, Superstructure Sheets for Details.*



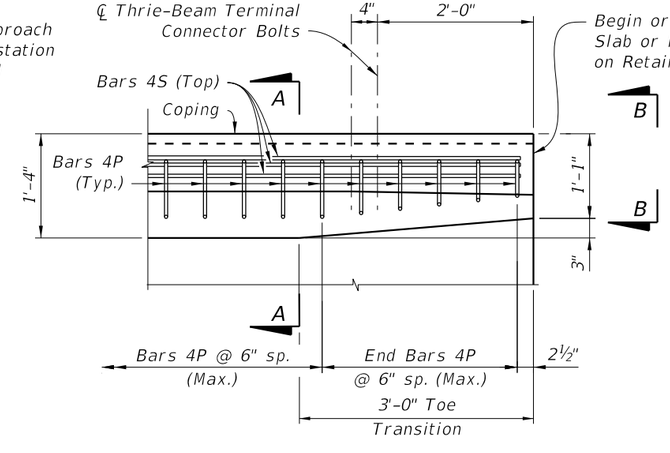
VIEW B-B
END TRANSITION
(Section thru Approach Slab shown, Section thru Retaining Walls similar)



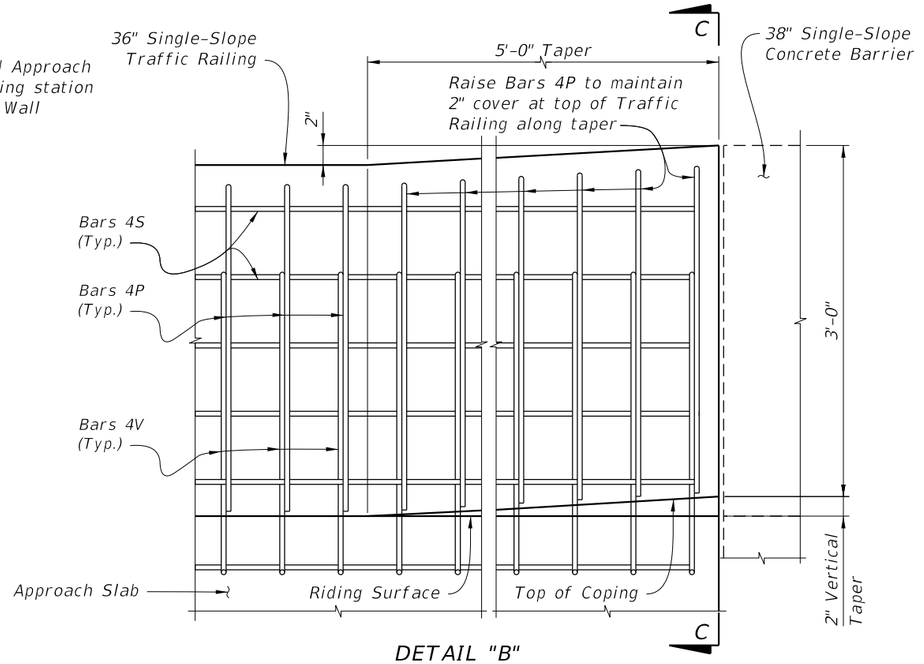
VIEW C-C
HEIGHT TRANSITION



PLAN - RAILING END TRANSITION
(Showing Bars 4V and 4S)



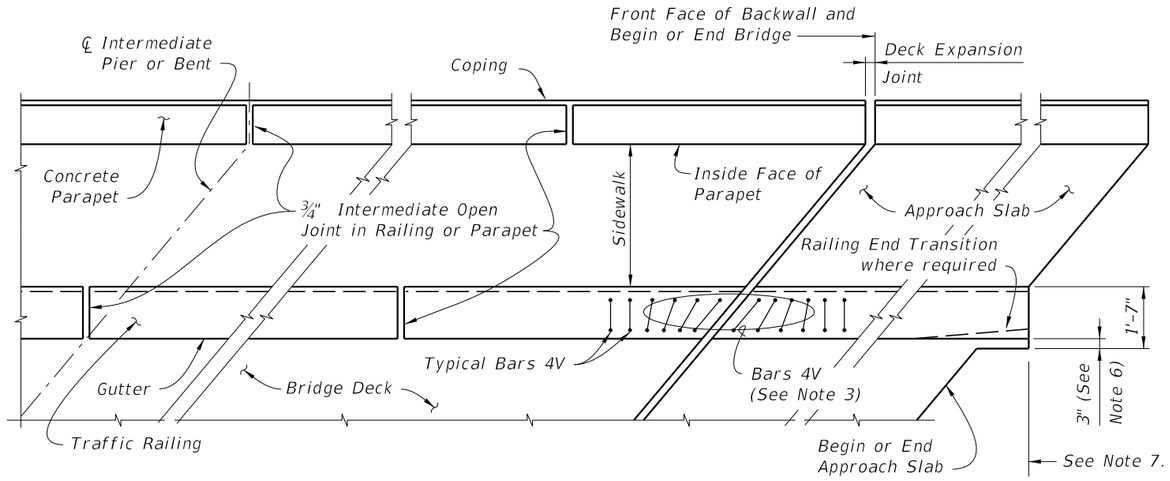
PLAN - RAILING END TRANSITION
(Showing Bars 4P and 4S)



DETAIL "B"
ELEVATION - RAILING HEIGHT TRANSITION
(Showing Transition to Index 521-001 38" Single-Slope Concrete Barrier)

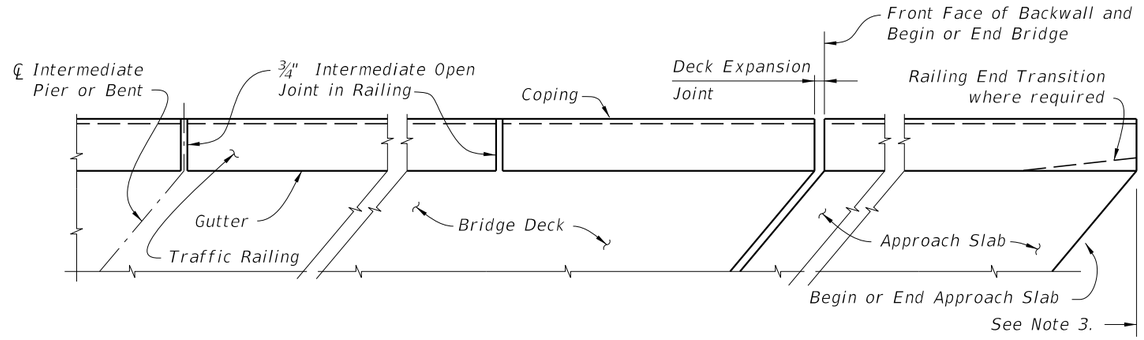
DETAIL "A"

NOTES: Omit Detail "A" and provide Detail "B" if Index 521-001 Concrete Barrier is used beyond the Approach Slab; See Structures Plans, Plan and Elevation Sheet and Roadway Plans.
Detail "B" is not required when transitioning to Index 521-610.
If Transitions A or B are not required, extend Typical Section to end of the Approach Slab.



PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH SIDEWALK, SINGLE-SLOPE TRAFFIC RAILING AND PEDESTRIAN/BICYCLE RAILING INDEX 521-820 or 521-825, OTHER TRAFFIC RAILINGS SIMILAR

NOTES:
1) Concrete Parapet reinforcement is not effected by skew angle, see Index 521-820 for details.
2) Parapet expansion joint shall match the deck expansion joint which shall be turned perpendicular or radial to the gutter line. See Structures Plans, Superstructure Sheets for details.
3) Traffic Railing reinforcement vertical Bars 4V & 4P may be shifted up to 1" (Max.) and rotated up to 10 degrees as required to allow proper placement. Bars 4V adjacent to expansion joints shall be field adjusted to maintain clearance and spacing, extra Bars 4V will be required. Cut bottom horizontal portion of 4V Bars to maintain maximum horizontal length to each vertical leg being placed. Discard the remainder of the bar. Rotate cut bars to maintain clearance.
4) Railing ends at deck expansion joints shall follow the deck joint with allowance for joint movement. Expansion joint at the inside face of parapet shall be turned perpendicular or radial to this line. See Structures Plans, Superstructure and Approach Slab Sheets for details.
5) ¾" Intermediate Open Joints and V-Grooves in railing and parapet shall be placed perpendicular or radial to the gutter line or inside face of parapet line. See Structures Plans, Superstructure Sheets for locations.
6) At begin or end approach slab extend slab at the railing ends 3" (gutter side or back face of railing as required) as shown to provide a base for casting of the railing. Field trim toe of Bars 4V by 1 inch as required to maintain concrete cover at edge of deck.
7) When Guardrail is shown on the approach, begin placing Railing Bars 4P and 4V on Approach Slab at the railing end and proceed toward Begin or End Bridge to ensure placement of guardrail bolt holes. If required, adjustments to the bar spacing for Bars 4P and 4V shall be made immediately adjacent to Begin or End Bridge.



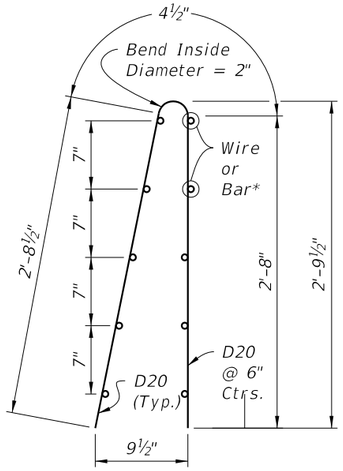
PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH SINGLE-SLOPE TRAFFIC RAILING, OTHER TRAFFIC RAILINGS SIMILAR

NOTES:
1) Railing expansion joint shall match the deck expansion joint which shall be turned perpendicular or radial to the gutter line. See Structures Plans, Superstructure Sheets for details.
2) ¾" Intermediate Open Joints and ½" V-Grooves in railing shall be placed perpendicular or radial to the gutter line. See Structures Plans, Superstructure and Approach Slab Sheets for locations.
3) When Guardrail is shown on the approach, begin placing Railing Bars 4P and 4V on Approach Slab at the railing end and proceed toward Begin or End Bridge to ensure placement of guardrail bolt holes. If required, adjustments to the bar spacing for Bars 4P and 4V shall be made immediately adjacent to Begin or End Bridge.

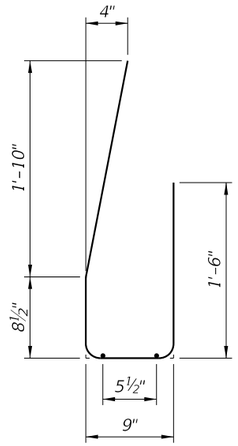
GENERAL NOTES:
1) Work this Sheet with Traffic Railing, Pedestrian/Bicycle Railing, and Approach Slab Indexes as applicable.
2) Deck Expansion Joint at begin or end bridge shown. Deck Expansion Joints at ℄ Pier or Intermediate Bents are similar.
3) Partial Plan Views shown are intended as guides only. See Structures Plans, Superstructure and Approach Slab Sheets for skew angles, joint orientation, dimensions and details.
4) Railings on Raised Sidewalks shall be treated similar to the Partial Plan View of Bridge Deck with Traffic Railing.
5) If Welded Wire Reinforcement is used in lieu of conventional reinforcement, placement of the WWR vertical elements shall be similar to those shown above. Clipping of horizontal elements to facilitate placement shall be minimized where possible. When clipping is required, supplement horizontal elements by lap splicing with deformed bars having an equivalent area of steel.

ALTERNATE REINFORCING STEEL (WWR) DETAILS

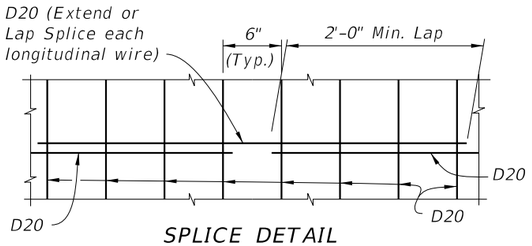
* Longitudinal D20 Wires or #4 Bars may be tied.



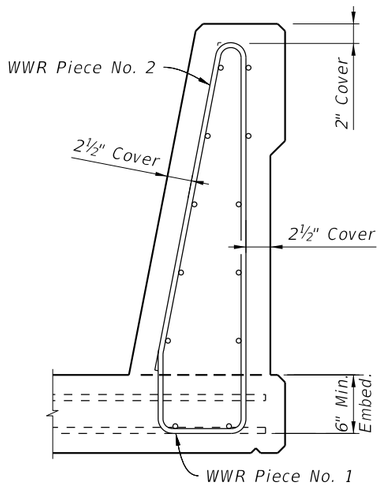
WWR Piece No. 2



WWR Piece No. 1



SPLICE DETAIL
(Between WWR Sections)



WELDED WIRE REINFORCEMENT NOTES:

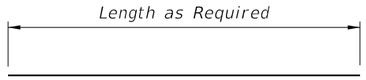
1. At the option of the Contractor deformed Welded Wire Reinforcement (WWR) may be utilized in lieu of all Bars 4P, 4S and 4V. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.
2. WWR at Railing End Transition shall be field bent inward as required (Piece 2) to maintain cover. The bottom of the vertical wires (D20) in Piece 2 shall be cut a maximum of 4 inches and the gutter side portion bent inward as required to allow placement.

CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

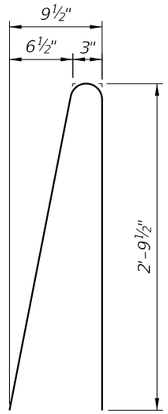
ROADWAY CROSS-SLOPE	LOW GUTTER	HIGH GUTTER
	ØB	ØB
0% to 2%	90°	90°
2% to 6%	87°	93°
6% to 10%	84°	96°

ØB shall be 90° if Contractor elects to place railing perpendicular to the deck and approach slabs.

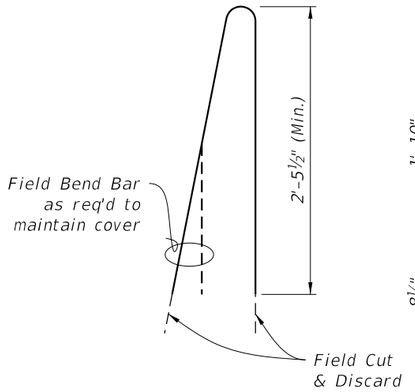
BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
P	4	5'-11"
S	4	As Reqd.
V	4	4'-10"



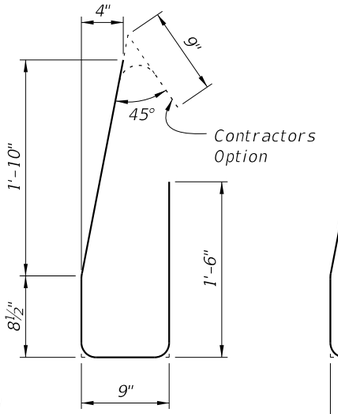
BAR 4S



STIRRUP BAR 4P



END STIRRUP BAR 4P
To Be Field Cut
and Bent

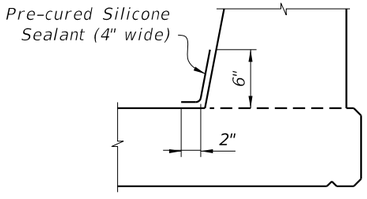


BAR 4V

END TRANSITION BAR 4V
Field Cut and Lapped

REINFORCING STEEL NOTES:

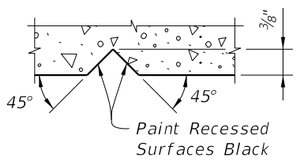
1. All bar dimensions in the bending diagrams are out to out.
2. The 8½" vertical dimensions shown for Bar 4V is based on a 6" embedment into the bridge deck without a raised sidewalk. If a raised sidewalk is to be provided, increase this dimension to achieve a 6" minimum embedment into the bridge deck. See Structures Plans, Superstructure and Approach Slab Sheets.
3. All reinforcing steel at the open joints shall have a 2" minimum cover.
4. Bars 4S may be continuous or spliced at the construction joints. Bar splices for Bars 4S shall be a minimum of 2'-0".



DETAIL "C" - SECTION
AT INTERMEDIATE OPEN JOINT

INTERMEDIATE JOINT SEAL NOTES:

1. At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant in accordance with Specification Section 932.
2. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.
3. Include the cost of the Pre-cured Silicone Sealant in the Contract Unit Price for the Traffic Railing.



SECTION THRU RECESSED
"V" GROOVE TO FORM INSCRIBED
LETTERS AND FIGURES

ESTIMATED TRAFFIC RAILING QUANTITIES		
ITEM	UNIT	QUANTITY
Concrete	CY/LF	0.107
Reinforcing Steel	LB/LF	24.78

(The above quantities are based on a 2% deck cross slope; railing on low side of deck.)

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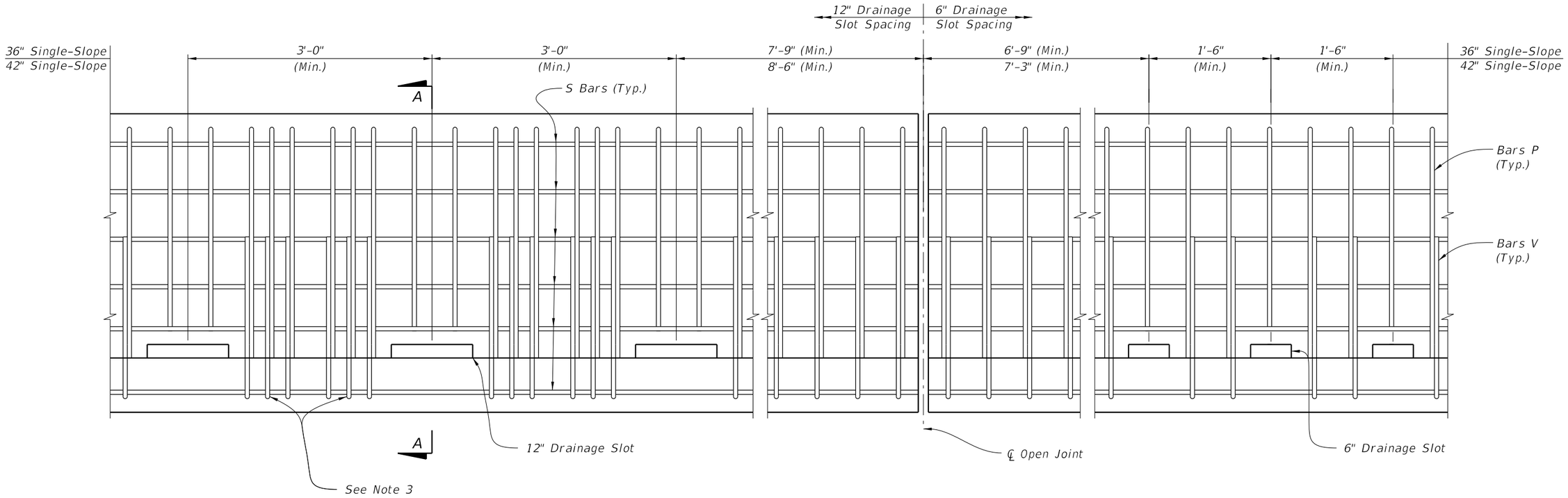
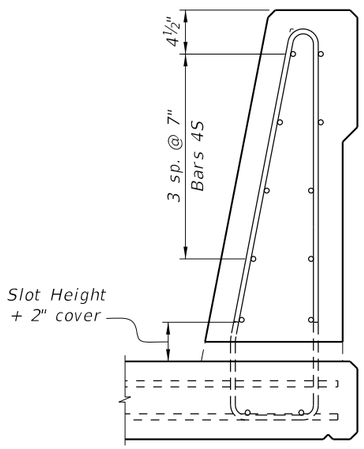
11/01/17						521-427	4 of 5



ELEVATION



SECTION A-A
36" Single-Slope Shown
Other traffic railings similar

DRAINAGE SLOT NOTES:

1. Use only when required for safety. See Plans for locations and size of drainage slots.
2. Maintain 2" minimum cover to all reinforcing. Trim P Bars over drainage slots and raise bottom S bars as necessary to maintain cover.
3. For slots greater than 6" in length, add additional vertical bars (V & P) on each side of the opening.
4. Drainage slot heights are 2" or 3". See the plans for size and location details.

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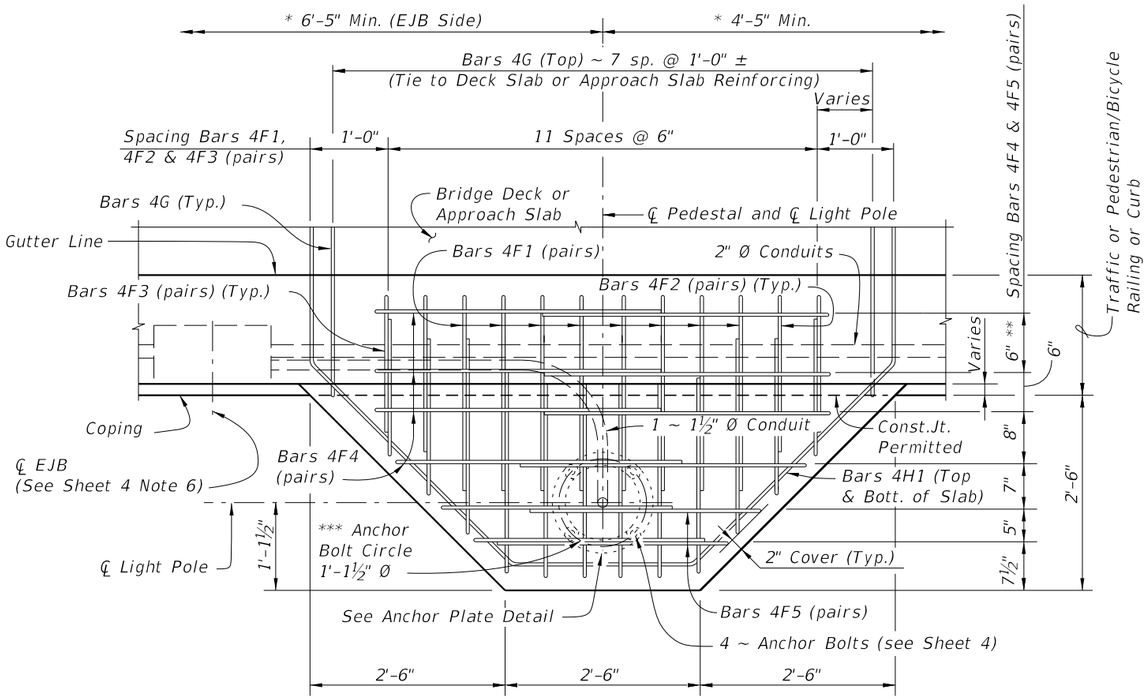
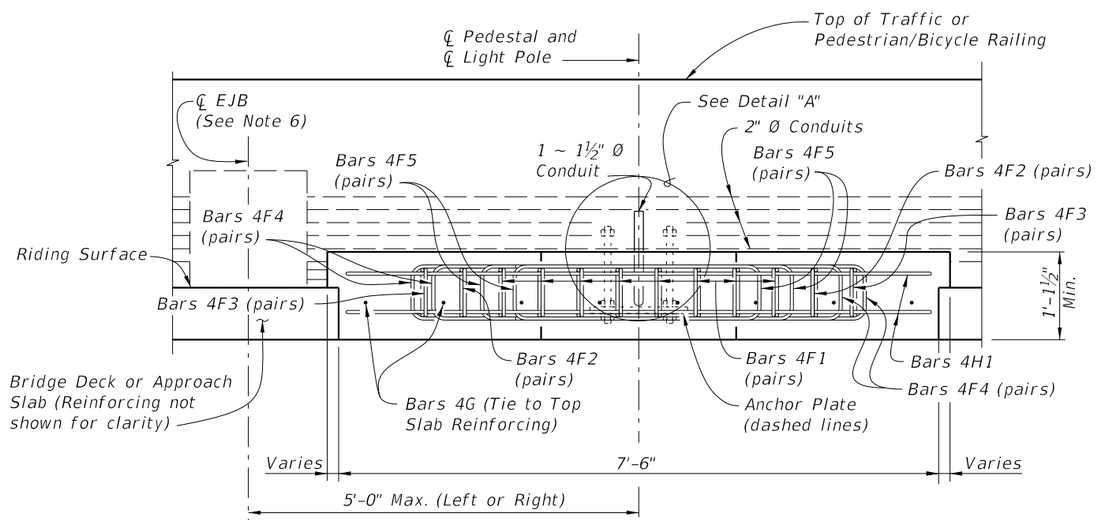
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2025-26 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
11/01/19						521-427	5 of 5

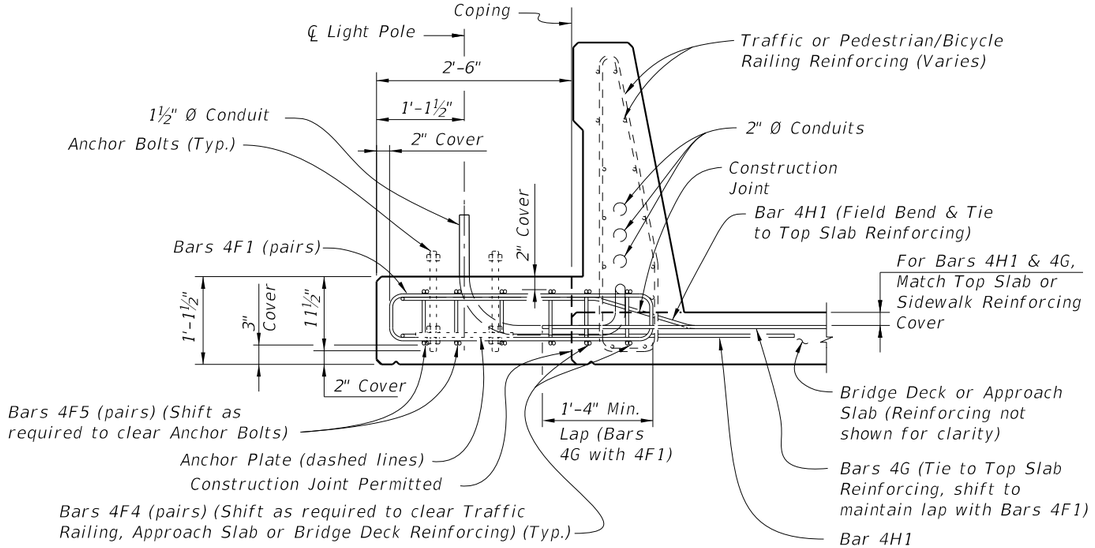


* Slip Forming Method of Construction requires the Engineer's approval within the limits shown.
** For Index 521-820 – Pedestrian/Bicycle Railing and concrete curb, this dimension is 3½". For raised sidewalks, this dimension is 1'-0" Max.
*** Anchor Bolt pattern orientation shall be as shown.

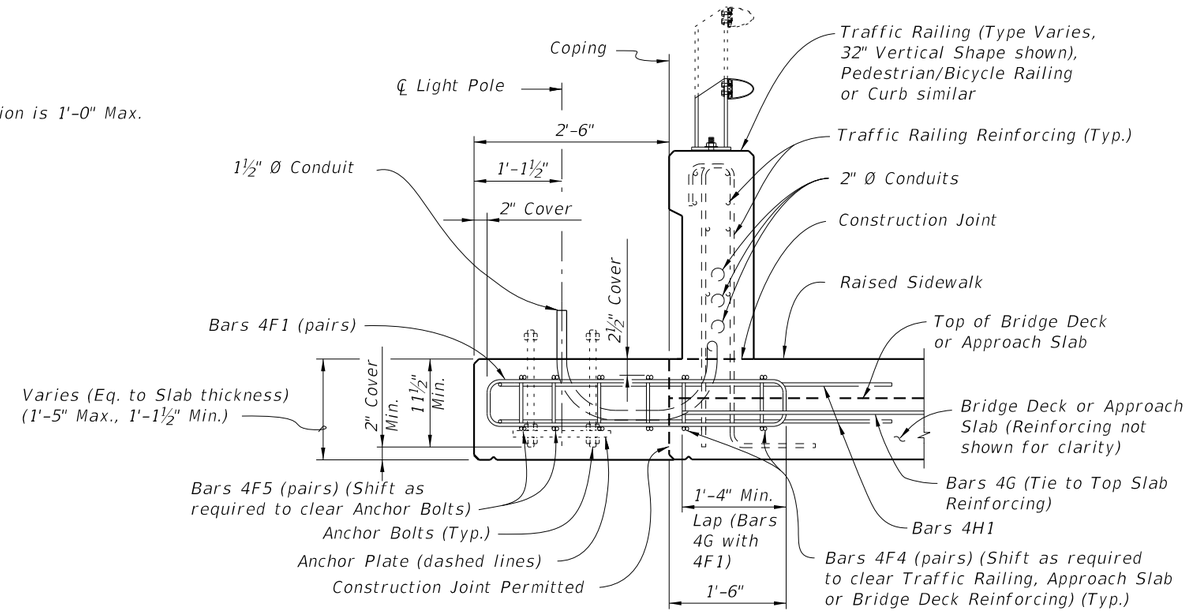
OPTION 1 & 2
PLAN VIEW



OPTION 1
ELEVATION VIEW
(Without Raised Sidewalk shown, with Raised Sidewalk similar)



OPTION 1
TYPICAL SECTION AT LIGHT POLE PEDESTAL



TYPICAL SECTION AT LIGHT POLE PEDESTAL
WITH RAISED SIDEWALK

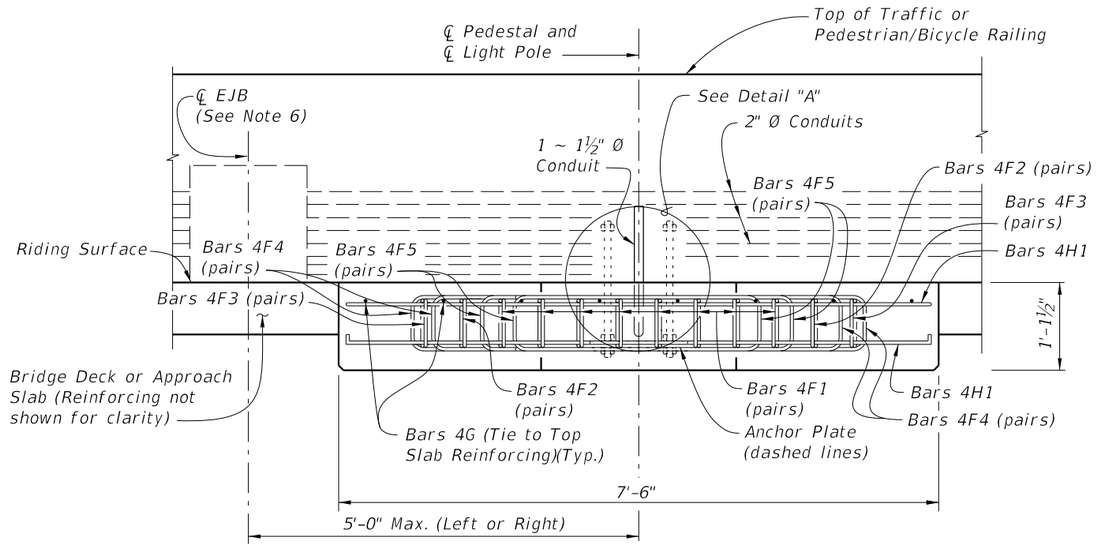
CROSS REFERENCE:
For Detail "A", Anchor Plate Detail and Light Pole Pedestal Notes, see Sheet 4.

NOTE: Anchor Bolt, Nuts, Washers and Anchor Plate are dashed for clarity.

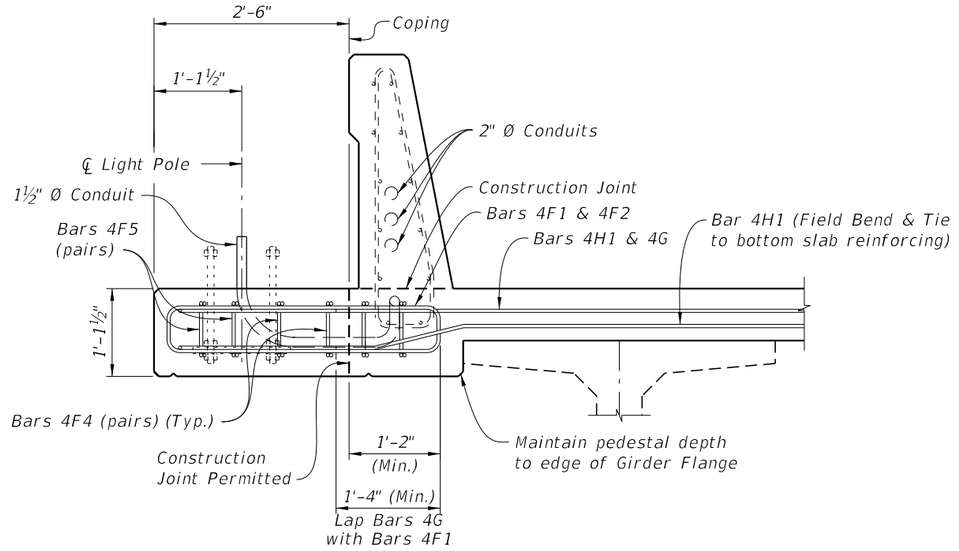
CASE 1 LIGHT POLE PEDESTAL FOR APPROACH SLAB OR BRIDGE DECK THICKNESS LESS THAN 1'-5½" AT COPING

10/17/2024 10:37:27 AM

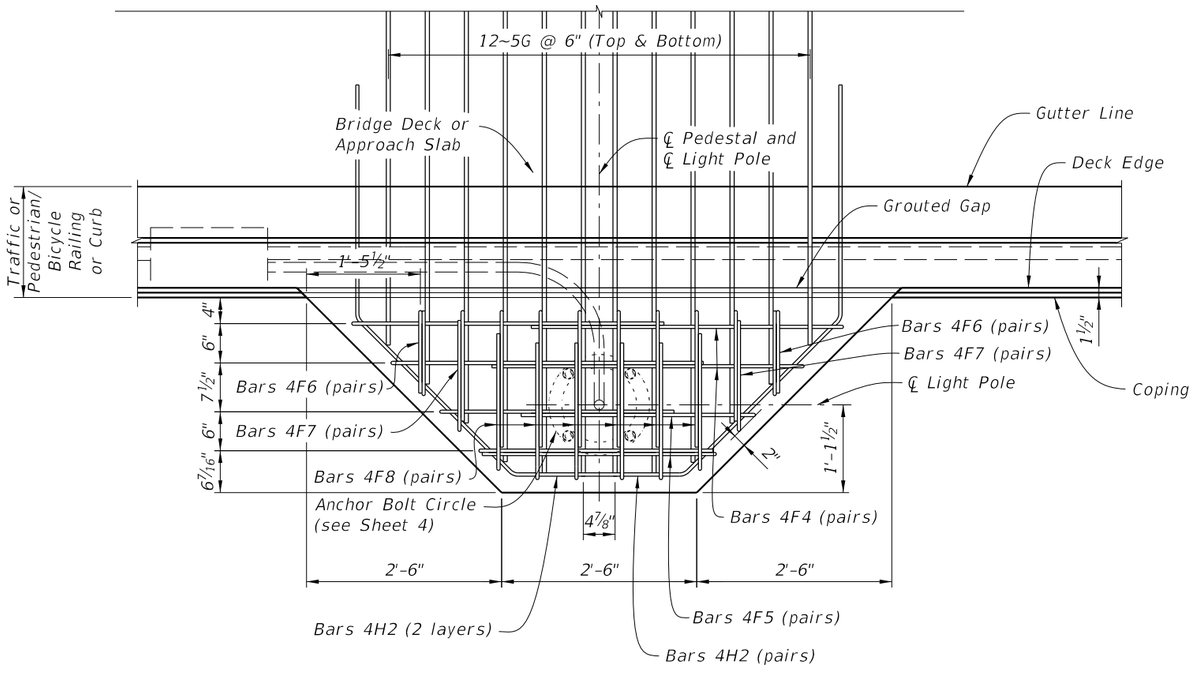
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/21			FY 2025-26 STANDARD PLANS	LIGHT POLE PEDESTAL - BRIDGE	521-660	1 of 4



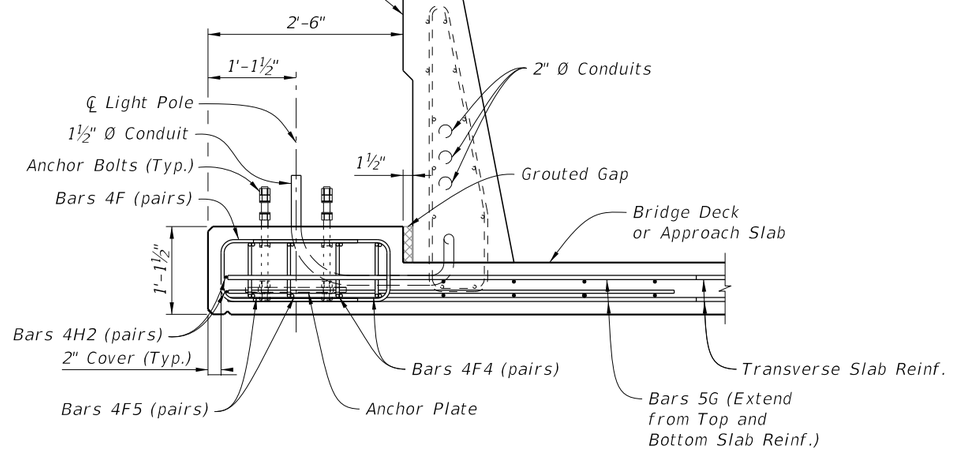
OPTION 2 - ELEVATION VIEW



OPTION 2 - TYPICAL SECTION AT LIGHT POLE PEDESTAL
(Approach Slab Similar)



OPTION 3 – PLAN VIEW
WITH GAP BETWEEN BARRIER AND PEDESTAL TO ALLOW SLIP FORMING



OPTION 3 – TYPICAL SECTION AT LIGHT POLE PEDESTAL
WITH GAP BETWEEN BARRIER AND PEDESTAL TO ALLOW SLIP FORMING

CROSS REFERENCE:
For Detail "A", Anchor Plate Detail and Light Pole Pedestal Notes, see Sheet 4.

NOTE: Anchor Bolt, Nuts, Washers and Anchor Plate are dashed for clarity.

CASE 1 LIGHT POLE PEDESTAL FOR APPROACH SLAB OR BRIDGE DECK LESS THAN 1'-5½" AT COPING

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/24			FY 2025-26 STANDARD PLANS	LIGHT POLE PEDESTAL - BRIDGE	521-660	2 of 4

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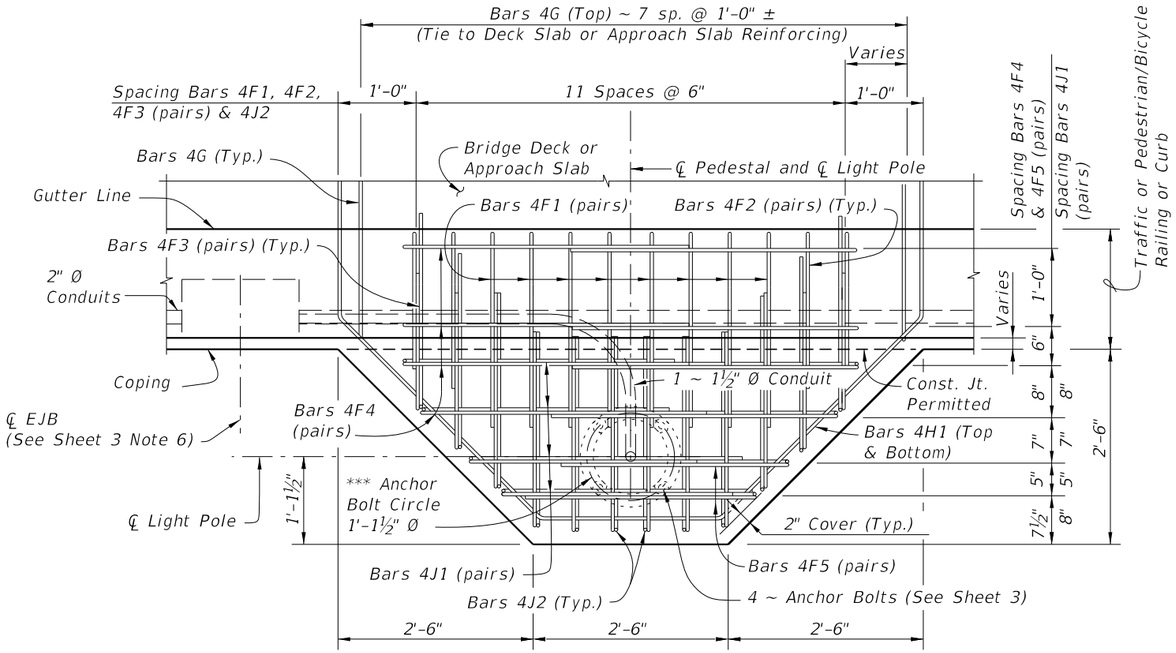
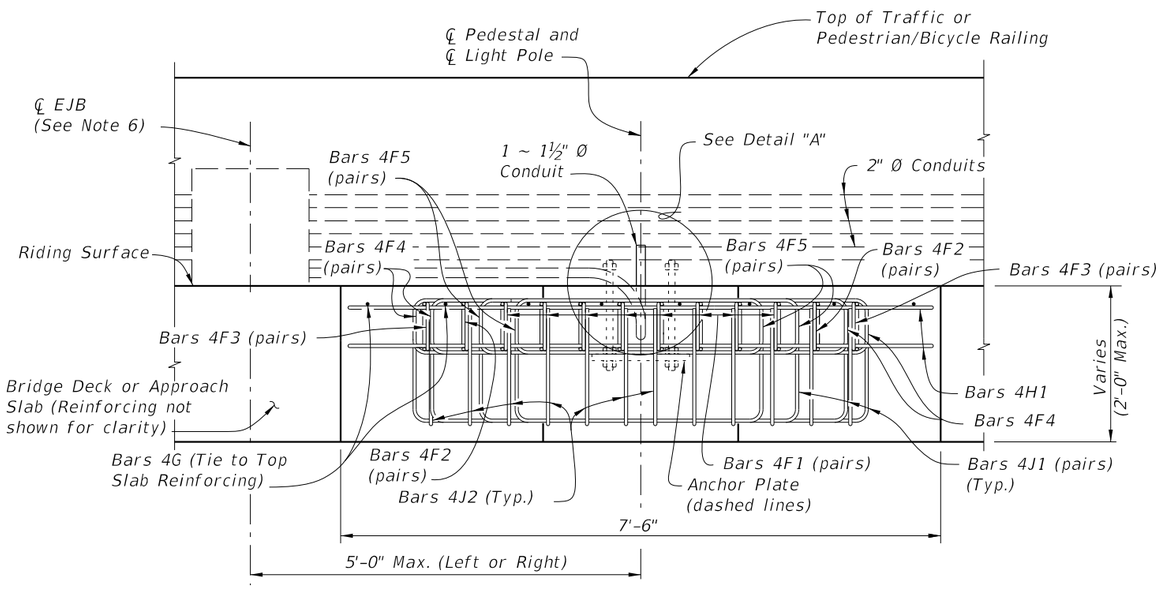
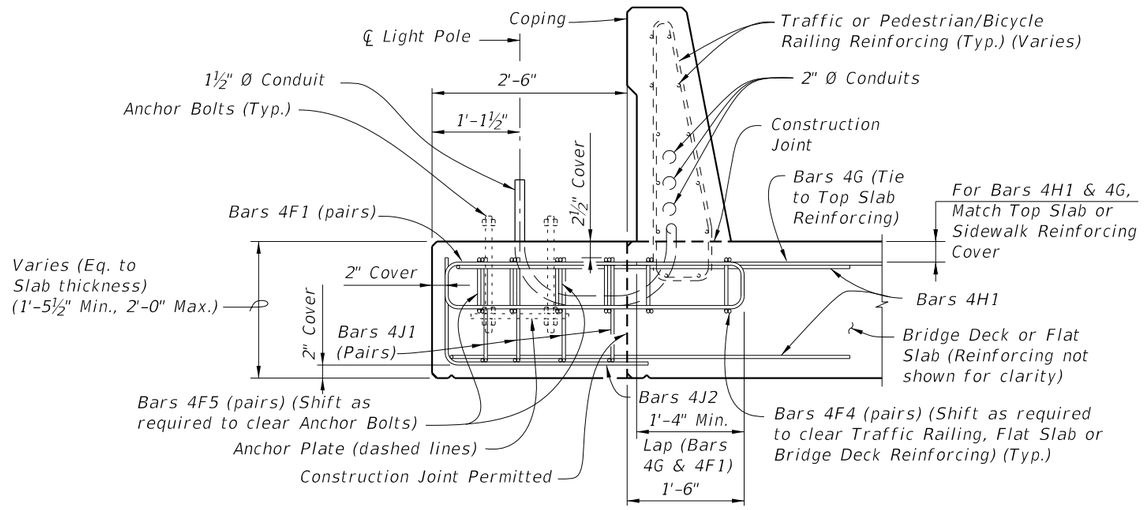


*** Anchor Bolt pattern orientation shall be as shown.

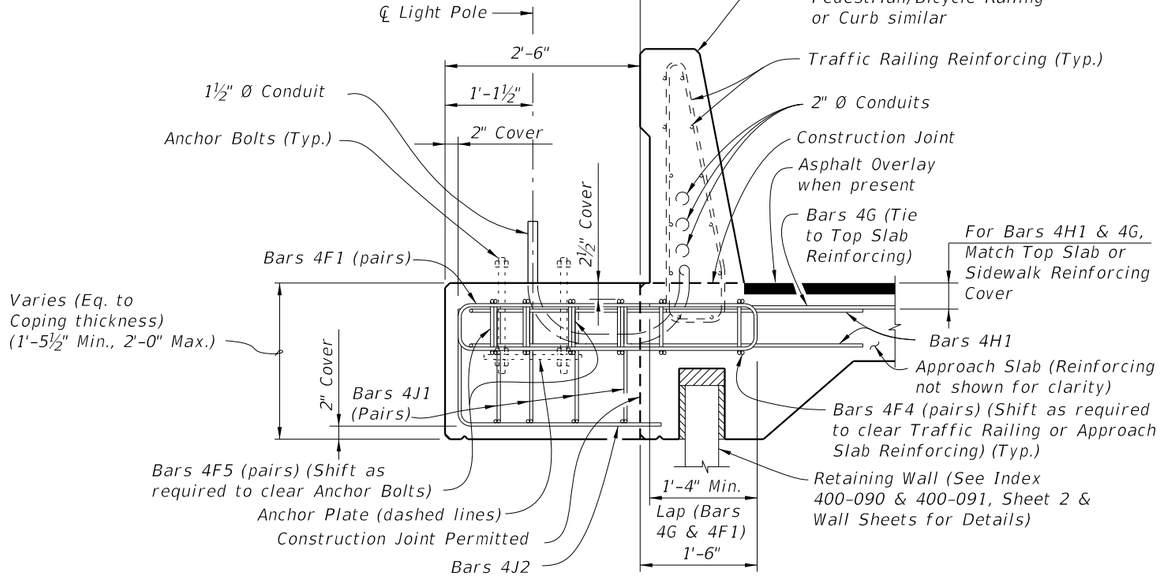
PLAN VIEW



ELEVATION VIEW



TYPICAL SECTION AT LIGHT POLE PEDESTAL



TYPICAL SECTION AT LIGHT POLE PEDESTAL FOR APPROACH SLAB ON RETAINING WALL

CROSS REFERENCE:
For Detail "A", Anchor Plate Detail and Light Pole Pedestal Notes, see Sheet 4.

NOTE: Anchor Bolt, Nuts, Washers and Anchor Plate are dashed for clarity.

CASE 2 LIGHT POLE PEDESTAL FOR APPROACH SLAB OR BRIDGE DECK THICKNESS AT COPING 1'-5½" OR GREATER

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/21			FY 2025-26 STANDARD PLANS	LIGHT POLE PEDESTAL - BRIDGE	521-660	3 of 4

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CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

REINFORCING STEEL NOTES:

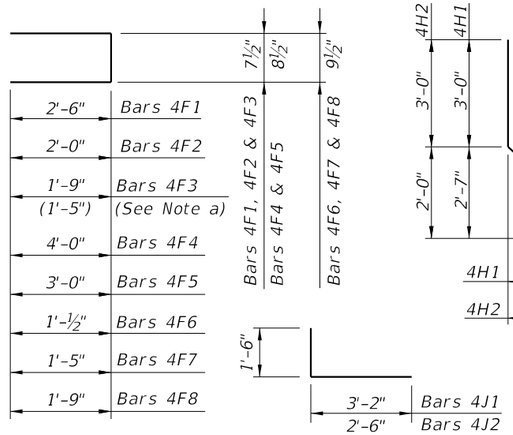
a. When Pedestal is attached to Pedestrian/Bicycle Railing – Index 521-820 or an 8" wide concrete curb and the Bridge Deck or Approach Slab thickness is less than 1'-1½", Bars 4F3 shall have leg length and bar length shown in parentheses.

b. The number of bars shown in parentheses is for Bars 4F4 when Pedestal is attached to Pedestrian/Bicycle Railing – Index 521-820 or an 8" wide concrete curb, and the Bridge Deck or Approach Slab thickness is less than 1'-1½".

c. Lap Splices for Bars 4F1, 4F2 & 4F3 shall be a minimum of 1'-4". Lap Splices for Bars 4F4 & 4F5 shall be minimum of 1'-8".

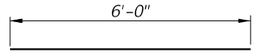
d. Bars 4J1 and 4J2 are not required when Pedestal thickness is less than 1'-5½". Field trim height of bars to maintain cover when Pedestal thickness is less than 2'-0". Field trim length of Bars 4J2 on Retaining Wall Coping to maintain cover.

e. All bar dimensions in the bending diagrams are out to out.

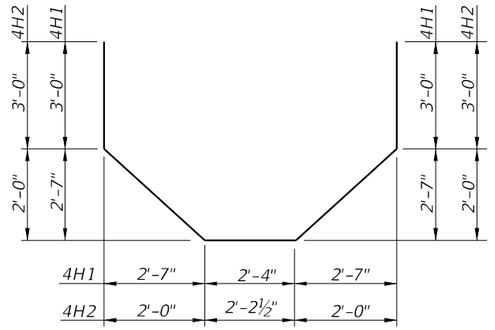


BARS 4F

BARS 4J1 & 4J2



BAR 5G

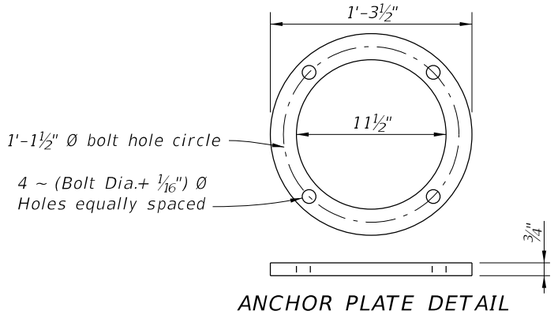


PLAN BARS 4H

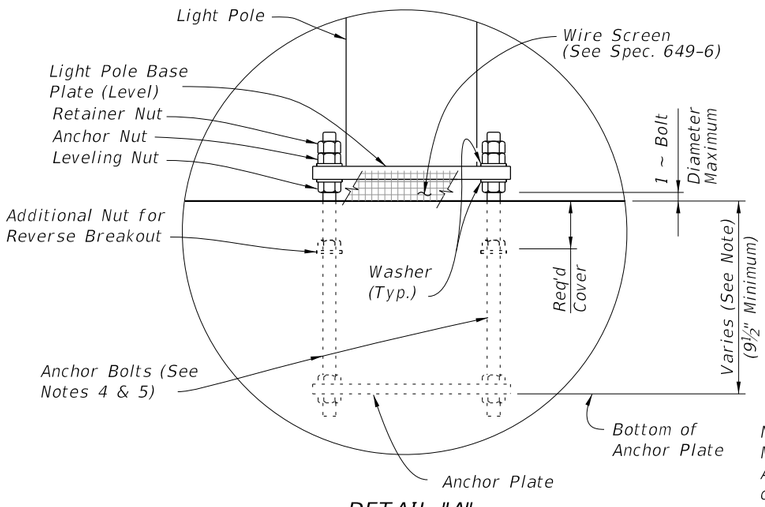
BILL OF REINFORCING STEEL

MARK	SIZE	NO. REQD.	LENGTH	NOTES
F1	4	16	5'-8"	c
F2	4	4	4'-8"	c
F3	4	4	4'-2" (3'-6")	a, c
F4	4	8 (6) [4 for Option 3]	8'-9"	b, c
F5	4	4	6'-9"	c
F6	4	4	2'-11"	–
F7	4	4	3'-8"	–
F8	4	12	4'-4"	–
G	4 [5 for Option 3]	8 [24 for Option 3]	6'-0"	–
H1	4	2	15'-8"	–
H2	4	2	13'-10"	–
J1	4	8	4'-8"	d
J2	4	12	4'-0"	d

( ) See Reinforcing Steel Note a & b.



ANCHOR PLATE DETAIL



DETAIL "A"

Note: Min. anchor bolt embed is 9 1/2".
Max embed must maintain min. required bottom cover.
Anchor bolt embed max. may be as long as required for constructability depending on which pedestal option is used.

CROSS REFERENCE:
For location of Detail "A" see Sheets 1,2 and 3.

LIGHT POLE PEDESTAL NOTES

1. Concrete and Reinforcing Steel required for the construction of the Pedestal shall meet the same requirements as the Traffic Railing or Pedestrian/Bicycle Railing the Pedestal is attached to.

2. Light Pole Pedestal may be used with the following:
   Index 521-422 – Traffic Railing (42" Vertical Shape),
   Index 521-423 – Traffic Railing (32" Vertical Shape),
   Index 521-427 – Traffic Railing (36" Single-Slope),
   Index 521-428 – Traffic Railing (42" Single-Slope),
   Index 521-820 – Pedestrian/Bicycle Railing,
   Index 515-021 – Pedestrian/Bicycle Bullet Railing for Traffic Railing or
   Index 515-509 – Traffic Railing /Noise Wall – Bridge.

3. Unless otherwise noted, Traffic Railing (36" Single-Slope) is shown in all Views and Sections. The Pedestal details for other Traffic Railings or Pedestrian/Bicycle Railing are similar.

4. ANCHOR BOLTS:
   Anchor Bolt design is based on the standard Roadway Aluminum Light Pole configurations shown on Index 715-002 with a maximum 40 ft. luminaire mounting height and a maximum 12 ft. arm length.
   Use 1" Ø anchor bolt for up to 75 ft. bridge deck height above natural ground or MLW.

   Anchor Bolts: ASTM F1554 Grade 55.
   Nuts: ASTM A563 Grade A, Heavy-Hex.
   Washers: ASTM F436 Type 1.
   Anchor Plate: ASTM A709 (Grade 36) or ASTM A36.
   Coating: Galvanize all Nuts, Bolts Washers, in accordance with ASTM F2329. Galvanize plates in accordance with ASTM A123.

   The Contractor is responsible for ensuring the anchor bolt configuration is compatible with the light pole base plate. Submit modifications of the anchor bolt design to the Engineer for approval.

5. Install Anchor Bolts plumb.

6. For Conduit, Embedded Junction Boxes (EJB), Expansion/Deflection Fitting and adjacent Reinforcing Steel Details, see Utility Conduit Detail Sheets and Index 630-010.

7. PAYMENT: The cost of Wire Screen, Anchor Bolts, Nuts, Washers and Anchor Plates shall be included in the Bid Price for Light Poles. The cost of all Labor, Concrete and Reinforcing Steel required for the Construction of the Pedestals, and Miscellaneous Hardware required for the completion of the Electrical System, shall be included in the Bid Price for the Traffic Railing or Pedestrian/Bicycle Railing the Pedestal is attached to.

ESTIMATED LIGHT POLE PEDESTAL QUANTITIES PER LIGHT POLE PEDESTAL

ITEM	UNIT	QUANTITY
Concrete Per Pedestal Thickness	CY/In.	0.040
Reinforcing Steel	LB	195 (182)

(The Reinforcing Steel quantity shown in parenthesis is for a Pedestal attached to Pedestrian/Bicycle Railing – Index 521-820 with Bridge Deck or Approach Slab thinner than 1'-1½". Add 59 Lbs. for Bars 4J1 & 4J2 when Pedestal Thickness is 1'-5½" or greater)

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CONDUIT GENERAL NOTES:

1. Furnish and install approved Conduits, Fittings and Embedded Junction Boxes (EBJ's) in accordance with Specification Sections 630 and 635, this Standard, the National Electric Code (NEC) and as directed by the Engineer.

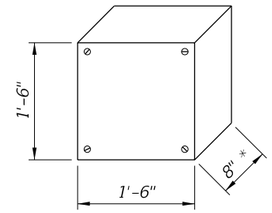
2. Furnish and install Embedded Junction Boxes (EJB) with weatherproof covers sized in accordance with NEC requirements and the maximum size limits shown. Install EJB adjacent to the Begin and End of Bridges, Begin and End of Retaining Walls, (except omit EJB adjacent to the Bridge unless a precast Traffic Railing with junction slab is used), and at other locations as necessary to maintain 300 foot maximum spacing. See Plans for additional locations and details.

3. For Conduit not designated for future use, see Plans for details. For Conduit designated for future use, stub out and cap the Conduit. Drive a 3'-0"± long ¾" (min.) diameter Steel Pipe flush with the ground line adjacent to the end of the Conduit as shown on Sheets 2, 3 or 4. Provide the location of the stub out with Steel Pipe to the Engineer for inclusion on the As-Built Plans.

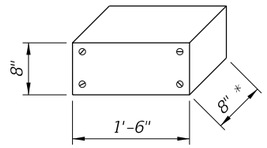
4. Shift vertical Railing reinforcement symmetrically to provide 2" clearance to EJB. Space shifted vertical reinforcement at minimum 3" centers. Cut horizontal Railing reinforcement to provide 2" clearance to EJB and provide supplemental reinforcement as shown. To facilitate placement of Conduit, Expansion Fittings, and Expansion/Deflection Fittings, shift reinforcing a maximum of 1" but do not cut railing reinforcing to facilitate Conduit or Fittings. Do not bundle Conduits, or Conduit and horizontal reinforcement.

5. Place conduits as indicated in this Standard unless Structures Plans indicate fewer.

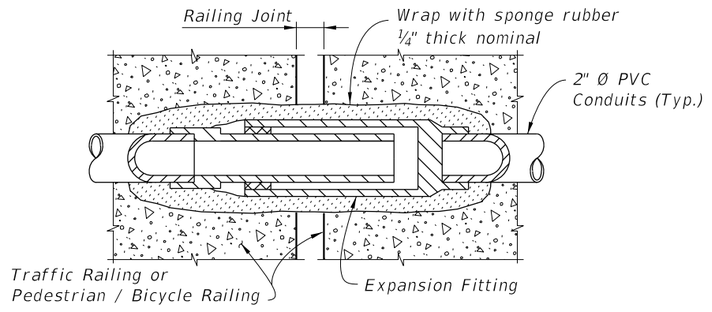
* Reduce to 6" maximum when installed in Pedestrian/ Bicycle Railings.



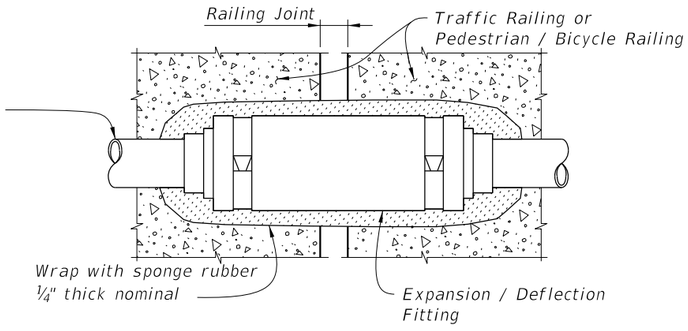
EJB "A"
Double or Triple Conduit
(Maximum Dimensions)



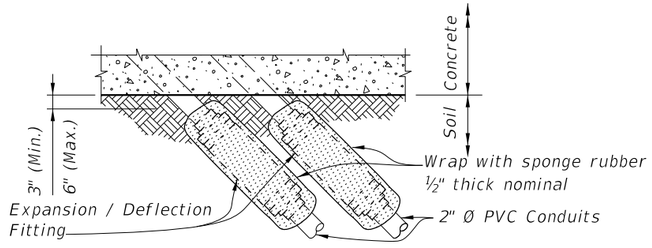
EJB "B"
Single Conduit
(Maximum Dimensions)



DETAIL "A"
EXPANSION FITTING DETAIL



DETAIL "B" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / CONCRETE)



DETAIL "C" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / SOIL)

GENERAL

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LAST REVISION	REVISION	DESCRIPTION:	FY 2025-26 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX	SHEET
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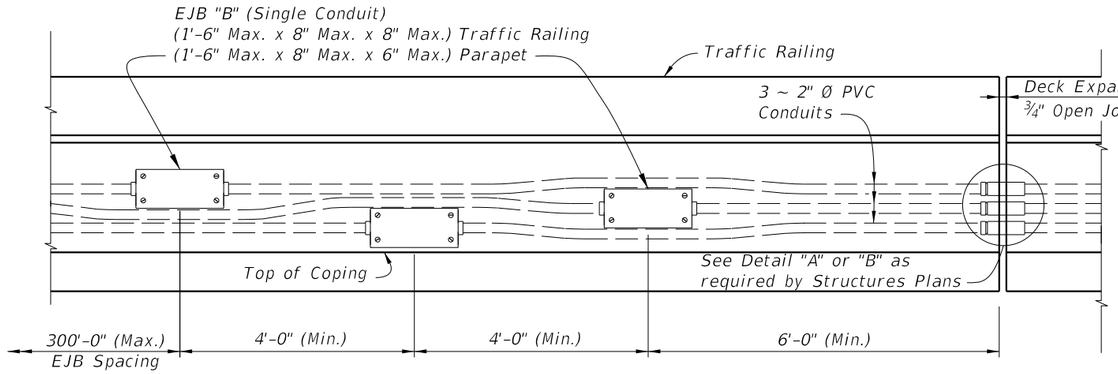
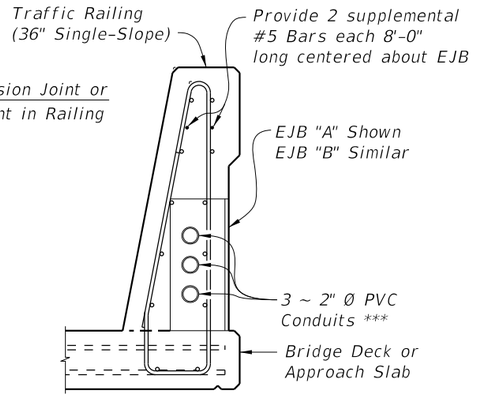
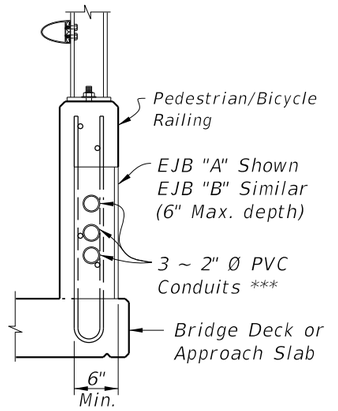


EJB "B" DETAIL

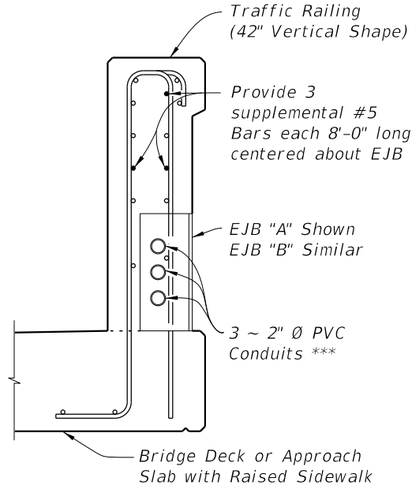
* 36" Single-Slope Traffic Railing shown, other Traffic Railings and Pedestrian/Bicycle Railings similar.
** EJB "A" shown, EJB "B" similar. See EJB "B" Detail.
*** See Sheet 1, Note 5.



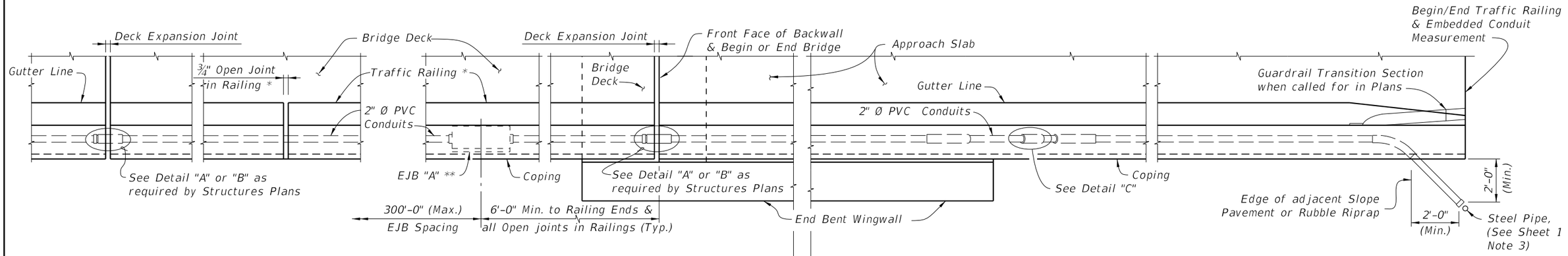
SECTION THRU
TRAFFIC RAILING AT EJB
(36" SINGLE-SLOPE SHOWN,
42" SINGLE-SLOPE SIMILAR)



SECTION THRU PEDESTRIAN /
BICYCLE RAILING AT EJB

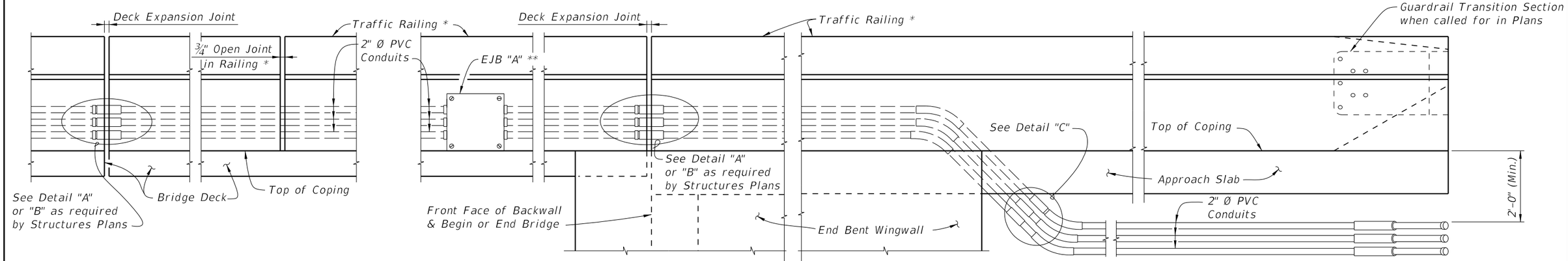


SECTION THRU
TRAFFIC RAILING AT EJB
(42" VERTICAL SHAPE SHOWN,
32" VERTICAL SHAPE SIMILAR)



PARTIAL PLAN VIEW ALONG BRIDGE

PARTIAL PLAN VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING



PARTIAL ELEVATION VIEW ALONG BRIDGE

PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING

BRIDGE AND APPROACH SLAB WITH EDGE RAILING

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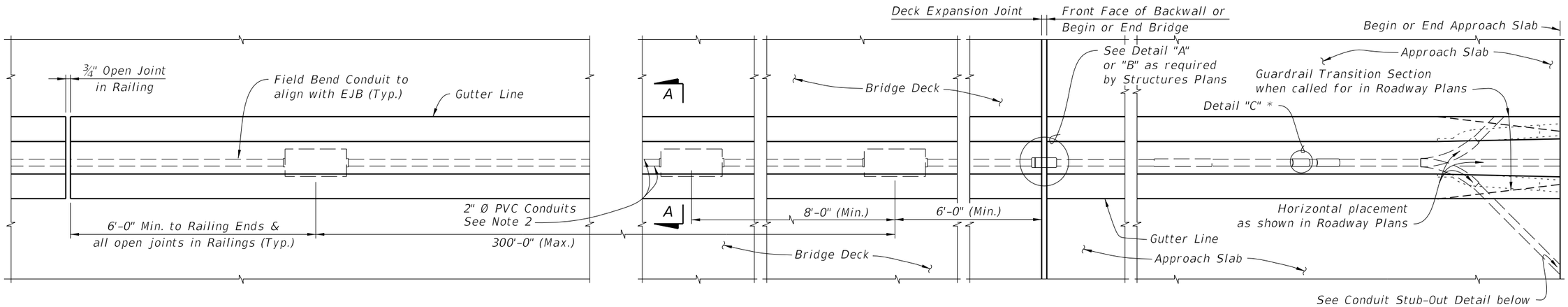
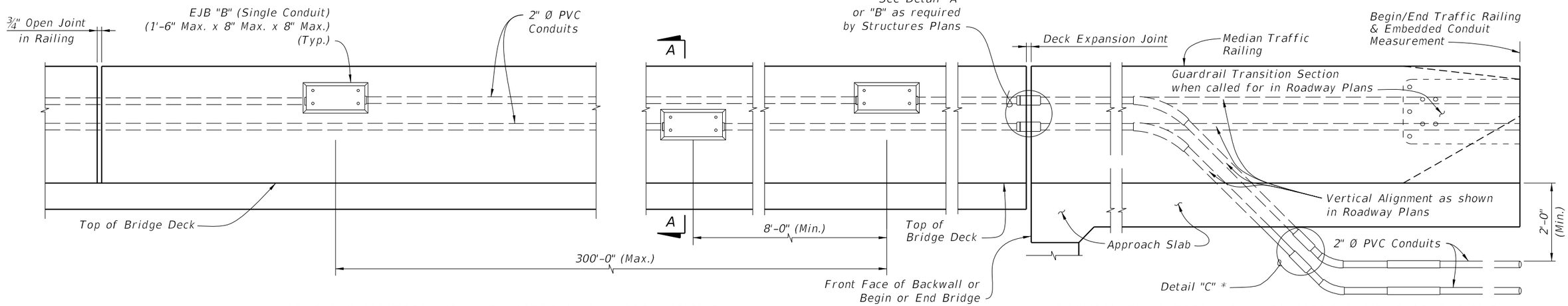


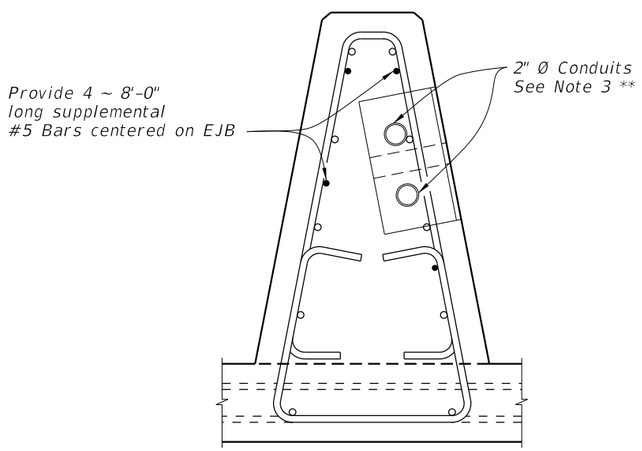
PARTIAL PLAN VIEW OF MEDIAN TRAFFIC RAILING ALONG BRIDGE

PARTIAL PLAN VIEW OF MEDIAN TRAFFIC RAILING ALONG APPROACH SLAB

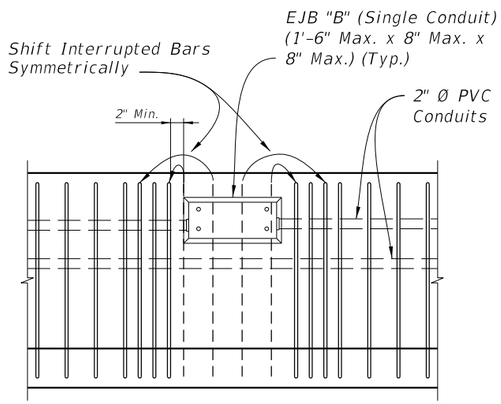


PARTIAL ELEVATION VIEW OF MEDIAN TRAFFIC RAILING ALONG BRIDGE

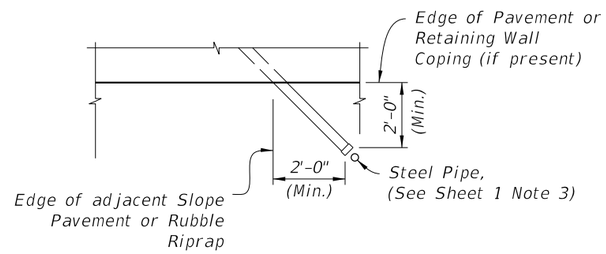
PARTIAL ELEVATION VIEW OF MEDIAN TRAFFIC RAILING ALONG APPROACH SLAB



SECTION A-A
Median Traffic Railing (See Note 4)



JUNCTION BOX REBAR CONFLICT ELEVATION



CONDUIT STUB-OUT DETAIL

NOTES:

1. Work this sheet with Index 521-426.
2. Adjust Conduit horizontally and vertically as necessary to align with EJB "B".
3. When installed in traffic face of a railing, use EJB "B" with a minimum 3/8" thick galvanized steel cover.
4. Position EJB such that, with gasket and cover plate secured and in place, cover plate is flush with the railing face. Flush is +1/8" to -1/4" measured with a horizontal straightedge.

* For non-continuing Traffic Railing only.
** See Sheet 1, Note 5

BRIDGE AND APPROACH SLAB WITH MEDIAN TRAFFIC RAILING

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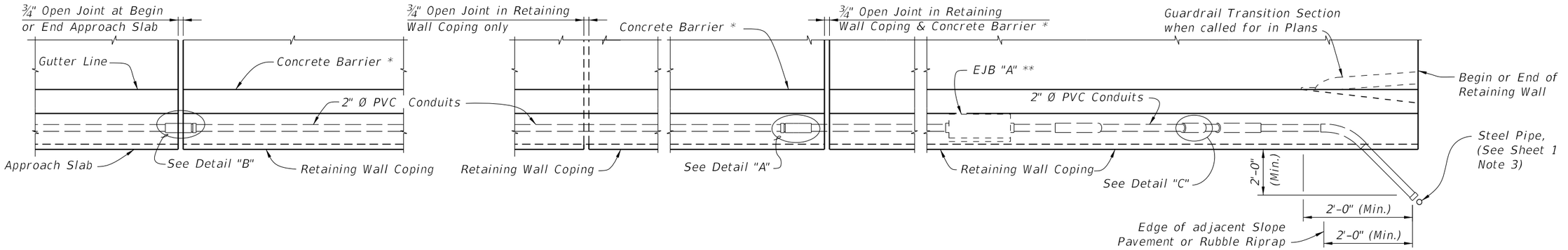
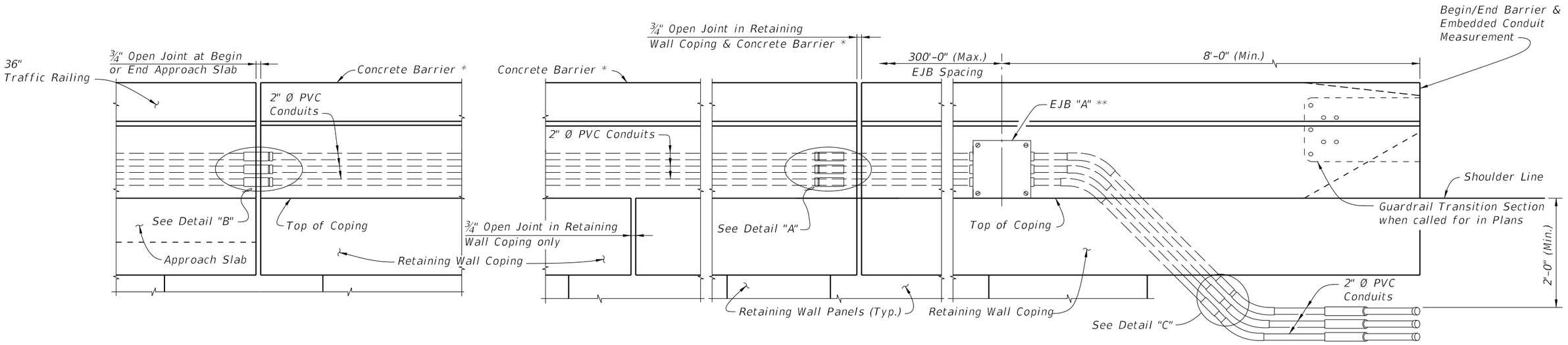


PARTIAL PLAN VIEW ALONG APPROACH SLAB WITH CONTINUING CONCRETE BARRIER

PARTIAL PLAN VIEW ALONG RETAINING WALL



PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITH CONTINUING Concrete Barrier (Retaining Wall Mounted Concrete Barrier shown, Traffic Railing similar)

PARTIAL ELEVATION VIEW ALONG RETAINING WALL

* Index 521-610 Concrete Barrier/Junction Slab shown, other railings and parapets similar.
** EJB "A" shown EJB "B" similar. See EJB "B" Detail on Sheet 2.

APPROACH SLAB AND RETAINING WALL WITH CONCRETE BARRIER

LAST REVISION	REVISION	DESCRIPTION:	FY 2025-26 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX	SHEET
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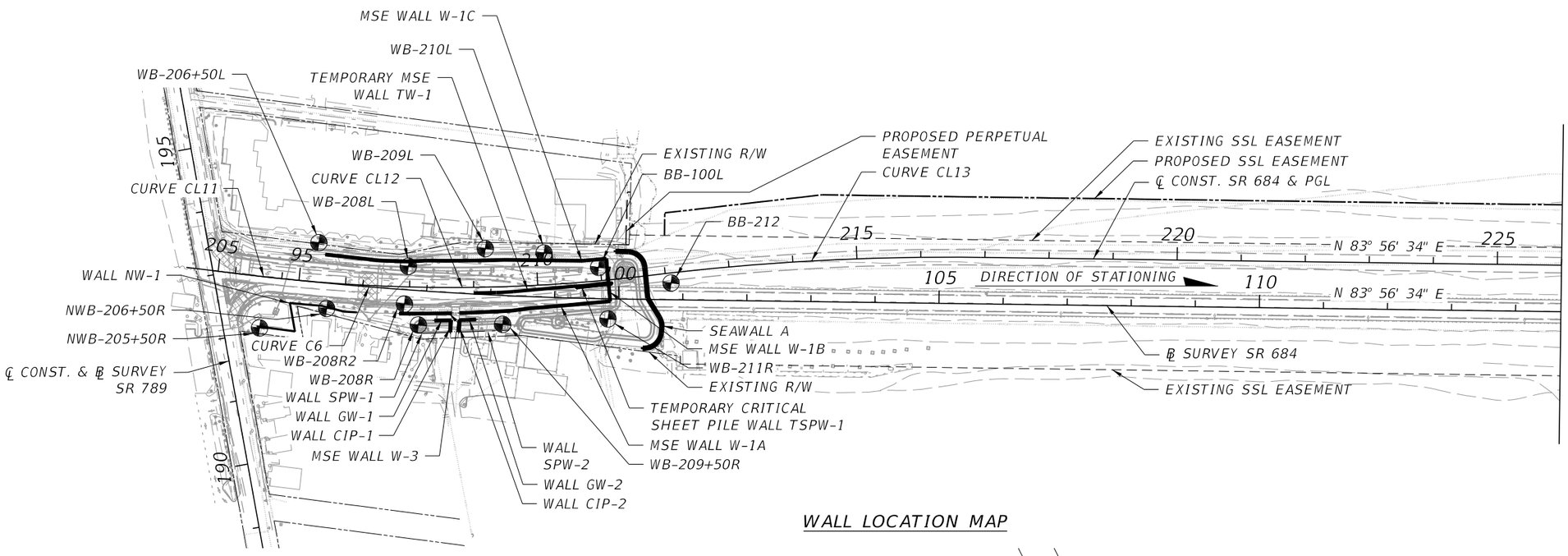
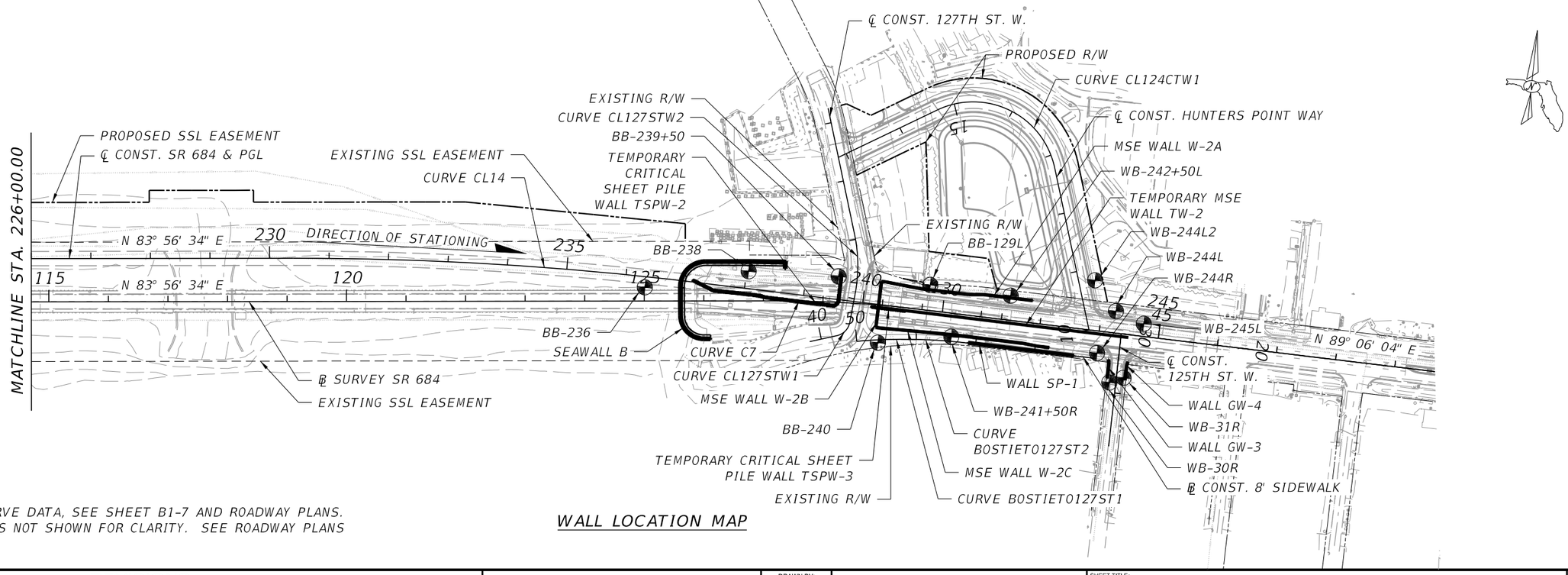


WALL LOCATION MAP



WALL LOCATION MAP

NOTES:

1. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7 AND ROADWAY PLANS.
2. PC AND PT LOCATIONS NOT SHOWN FOR CLARITY. SEE ROADWAY PLANS FOR DETAILS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL LOCATION MAP

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW - 1

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

JHERNANDEZ 5/22/2025 2:49:38 PM I:\TPA\PRJ\000010877\3_Design\43020425201\struct\B1WallControl01.dgn

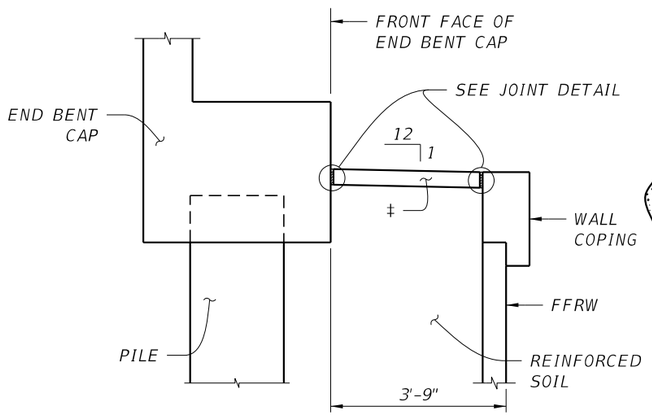
PERMANENT MSE RETAINING WALL SYSTEM GENERAL NOTES AND DATA TABLES

GENERAL NOTES :

1. CONCRETE FACING PANEL SURFACE TREATMENT WILL BE AS SHOWN ON THE MSE WALL ICON DETAILS SHEETS. SEE SHEET B-9 FOR SURFACE FINISH DETAILS.
2. APPLICABLE FDOT WALL TYPES FOR EACH WALL LOCATION ARE LISTED BELOW. SEE THE APPROVED PRODUCTS LIST FOR APPROVED WALL SYSTEMS AND STANDARD PLANS INDEX 548-020 FOR ALLOWABLE WALL TYPE SUBSTITUTIONS.
   - WALL NOS. W-1A, W-1B, W-1C & W-3 - FDOT WALL TYPE 2F
   - WALL NOS. W-2A, W-2B & W-2C - FDOT WALL TYPE 2F
3. CONCRETE FOR COPING, JUNCTION SLAB & CURB SHALL BE CLASS IV (F'C = 5500 PSI) WITH HIGHLY REACTIVE POZZOLANS.
4. SEE STANDARD PLANS INDEX 548-020 FOR GENERAL NOTES AND DETAILS.
5. HORIZONTAL DIMENSIONS, STATIONS AND OFFSETS SHOWN IN THE PLANS ARE MEASURED AT THE FRONT FACE OF RETAINING WALL. ELEVATIONS SHOWN ARE TO THE TOP OF COPING OR TOP OF LEVELING PAD UNLESS NOTED OTHERWISE.
6. DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD).
7. FOR TYPICAL SECTIONS THROUGH ROADWAY, SEE ROADWAY PLANS.
8. LOCATION OF UTILITIES SHOWN ON WALL PLANS ARE APPROXIMATE. REFER TO UTILITY ADJUSTMENT SHEETS FOR DETAILS.
9. THE SOIL REINFORCEMENT AND FASTENERS FOR THE END BENT BACKWALLS WILL BE DESIGNED AND FURNISHED BY THE PROPRIETARY WALL COMPANY. THE SOIL REINFORCEMENT WILL BE DESIGNED TO RESIST THE FACTORED HORIZONTAL LOAD (KIPS/FT. OF BACK WALL WIDTH) NOTED ON SHEET B1-53. THE COST OF SOIL REINFORCEMENT AND FASTENERS WILL BE INCLUDED IN THE COST OF THE RETAINING WALL SYSTEM.
10. DEWATERING MAY BE NECESSARY. THE COST OF DEWATERING SHALL BE INCLUDED IN THE COST OF THE WALL.

SOIL REINFORCEMENT LENGTHS FOR EXTERNAL STABILITY									Table Date 1-01-11	
WALL NOS. W-1A, W-1B, W-1C & W-3	WALL HEIGHT (FT.)	≤ 8	10	12	14	16	18	20		
	REINFORCEMENT LENGTH (FT.)	8	10	12	14	16	18	20		
	FACTORED BEARING RESISTANCE (PSF)	2,175	2,537	2,903	3,273	3,649	4,022	4,395		
WALL NOS. W-2A, W-2B & W-2C	WALL HEIGHT (FT.)	≤ 8	10	12	14	16	18	20	22	24
	REINFORCEMENT LENGTH (FT.)	10	12	14	17	19	21	23	26	28
	FACTORED BEARING RESISTANCE (PSF)	2,087	2,368	2,651	3,130	3,414	3,698	3,983	4,471	4,757

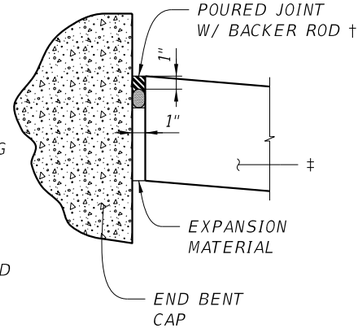
NOTES:
1. THE REINFORCEMENT STRAP LENGTHS SHOWN ABOVE ARE THE MINIMUM LENGTHS REQUIRED FOR EXTERNAL STABILITY. THE REINFORCEMENT LENGTHS USED IN THE CONSTRUCTION OF THE RETAINING WALLS WILL BE THE LONGER OF THAT REQUIRED FOR EXTERNAL OR INTERNAL STABILITY (DETERMINED BY PROPRIETARY WALL COMPANIES).
2. THE FACTORED BEARING RESISTANCES SHOWN ABOVE ARE THE CRITICAL (LOWEST) VALUES FROM ALL THE LOAD CASES ANALYZED USING LRFD METHODOLOGY.
3. WALL HEIGHT FOR PERMANENT WALLS IS DEFINED AS THE DISTANCE FROM TOP OF LEVELING PAD TO TOP OF COPING OR GUTTER GRADE. FOR WALLS W-1B & W-2B, THE WALL HEIGHT IS MEASURED FROM TOP OF LEVELING PAD TO FINISHED GRADE.



SLOPE PAVEMENT DETAIL

† LOW MODULUS SILICONE SEALANT POURED JOINT IN ACCORDANCE WITH SPECIFICATION 932 PLACED LEVEL WITH TOP OF SLOPE PAVEMENT

‡ 4" THICK CONCRETE SLOPE PAVEMENT



JOINT DETAIL

NOTE:
JOINT DETAIL APPLIES TO ALL CONTACT SURFACES OF SLOPE PAVEMENT WITH END BENTS, COPING, CONSTRUCTION JOINTS AND ALL OTHER JOINTS AS DIRECTED BY THE ENGINEER.

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL GENERAL NOTES & DATA TABLES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-2

GEOTECHNICAL INFORMATION						Table Date 1-01-11
MSE WALL NO. W-1A, W-1B, W-1C & W-3	REINFORCED SOIL & RANDOM BACKFILL	LOOSE TO MEDIUM DENSE SAND TO SAND WITH SILT	MEDIUM DENSE TO DENSE SAND WITH SILT	LOOSE SILTY SAND	FIRM TO VERY STIFF CLAYEY SAND TO SILT TO CLAY	HARD INDURATED SILT TO CLAY
DEPTH BELOW EXISTING GROUND LINE (FT.)	---	0 - 18	18 - 33	33 - 38	38 - 83	83 - 115
EFFECTIVE UNIT WEIGHT (PCF)	105	42.6	47.6	42.6	57.6	62.6
COHESION (PSF)	0	---	---	---	1,700	3,000
INTERNAL FRICTION ANGLE (DEGREES)	30	29	30	28	---	---
MSE WALL NO. W-2A, W-2B & W-2C	REINFORCED SOIL & RANDOM BACKFILL	LOOSE TO VERY LOOSE SAND TO SAND WITH SILT	LOOSE TO MEDIUM DENSE SAND TO SAND WITH SILT TO SILTY SAND	STIFF TO HARD CLAYEY SAND TO SILT TO CLAY	VERY STIFF TO HARD INDURATED SILT TO CLAY	---
DEPTH BELOW EXISTING GROUND LINE (FT.)	---	0 - 28	28 - 63	63 - 93	93 - 125	---
EFFECTIVE UNIT WEIGHT (PCF)	105	37.6	42.6	57.6	62.6	---
COHESION (PSF)	0	---	---	3,000	3,000	---
INTERNAL FRICTION ANGLE (DEGREES)	30	28	29	---	---	---

NOTE:
IF THE UNIT WEIGHT AND/OR INTERNAL FRICTION ANGLE OF THE FILL PROPOSED BY THE CONTRACTOR DIFFERS FROM THAT SHOWN ABOVE, THE PROJECT ENGINEER WILL CONTACT BOTH THE DISTRICT GEOTECHNICAL ENGINEER AND THE WALL DESIGNER FOR A POSSIBLE REDESIGN.

RETAINING WALL VARIABLES					Table Date 7-01-13
WALL NO.	WALL SETTLEMENT				DESIGN HIGH WATER ELEVATION (FT.) (SEE NOTE 5)
	LONG TERM SETTLEMENT (IN.)	SHORT TERM SETTLEMENT (IN.)	DIFFERENTIAL SETTLEMENT		
			LONGITUDINAL (%) (FT./100FT.)	TRANSVERSE (IN.)	
W-1A, W-1B, W-2C & W-3	< 0.5	1.0 - 1.5	< 0.1	N/A	7.8
W-2A, W-2B, W-2C	< 0.5	4.0 - 4.5	< 0.2	N/A	7.8

NOTE:
1. DESIGN WALLS FOR THE SETTLEMENTS NOTED IN THE TABLE.
2. LONG-TERM SETTLEMENT IS MEASURED FROM THE END OF WALL CONSTRUCTION THROUGH THE SERVICE LIFE OF THE WALL.
3. SHORT-TERM SETTLEMENT IS MEASURED DURING THE DURATION OF WALL CONSTRUCTION.
4. TRANSVERSE DIFFERENTIAL SETTLEMENT IS MEASURED FROM THE FACE OF WALL TO THE END OF THE SOIL REINFORCEMENT.
5. COURSE AGGREGATE PER SPECIFICATION REQUIREMENTS SHALL BE USED FOR ANY MATERIAL BELOW DHW + 1 FOOT (EL. 8.80).

ALUMINUM PEDESTRIAN/BICYCLE RAILING DATA TABLES

PROJECT REQUIREMENTS					Table Date 01-01-11
STATION TO STATION (LT. OR RT.)	HEIGHT (in.)	STYLE TYPE (1)	REQUIRED: (YES/NO)		
			BOTTLE GUARD	COLORED COATINGS	INFILL PANEL TO REJECT PASSAGE OF 4" SPHERE (SPECIAL CONDITIONS ONLY)
206+65.00 (LT.) TO 211+03.50 (LT.)	42	TYPE SP	NO	NO	NO
207+84.99 (RT.) TO 208+65.96 (RT.)	42	TYPE SP	NO	NO	NO
208+77.80 (RT.) TO 211+10.66 (RT.)	42	TYPE SP	NO	NO	NO
240+34.00 (LT.) TO 242+83.00 (LT.)	42	TYPE SP	NO	NO	NO
240+34.00 (RT.) TO 243+20.00 (RT.)	42	TYPE SP	NO	NO	NO

(1) FOR TYPE SP DETAILS, SEE SHEET B-11.

NOTE:

1. WORK THIS DATA TABLE WITH SHEET B-11 AND INDEX 515-062.

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCV
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

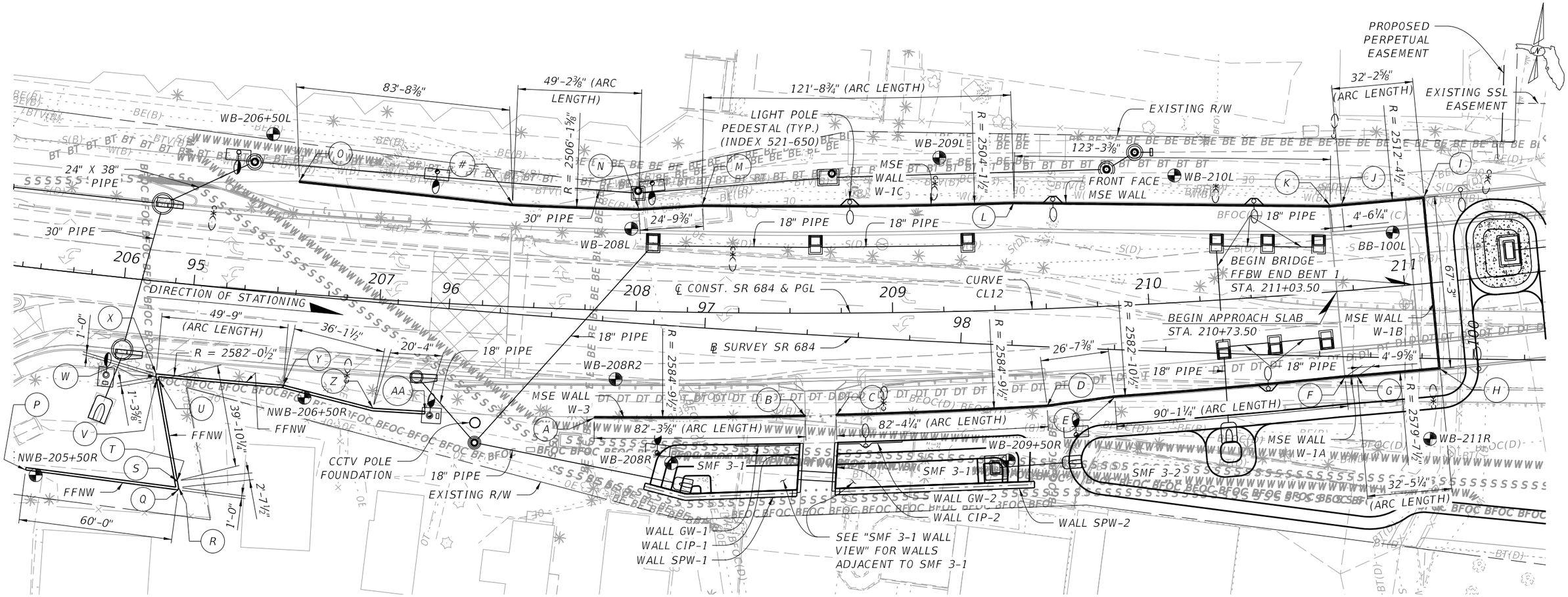
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL GENERAL NOTES & DATA TABLES (2 OF 2)

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

REF. DWG. NO.

SHEET NO. BW-3



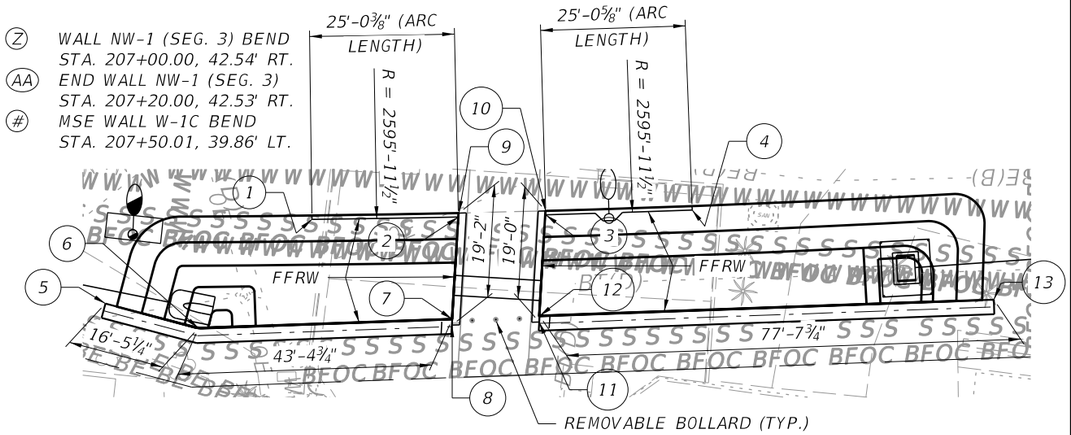
PLAN - PERMANENT WALLS

LEGEND:

- APPROX. BORING LOCATION
- (1) BEGIN WALL GW-1 STA. 208+39.32, 52.00' RT.
- (2) END WALL GW-1 STA. 208+63.85, 51.44' RT.
- (3) BEGIN WALL GW-2 STA. 208+78.48, 51.10' RT.
- (4) END WALL GW-2 STA. 209+03.03, 50.54' RT.
- (5) END WALL SPW-1 STA. 208+05.09, 66.98' RT.
- (6) WALL SPW-1 BEND STA. 208+20.65, 70.78' RT.
- (7) BEGIN WALL SPW-1 STA. 208+62.84, 68.91' RT.
- (8) END WALL CIP-1 STA. 208+62.82, 69.91' RT.
- (9) BEGIN WALL CIP-1 STA. 208+63.93, 50.77' RT.
- (10) END WALL CIP-2 STA. 208+78.48, 50.44' RT.
- (11) BEGIN WALL CIP-2 STA. 208+77.28, 69.40' RT.
- (12) END WALL SPW-2 STA. 208+77.38, 68.39' RT.
- (13) BEGIN WALL SPW-2 STA. 209+53.00, 67.11' RT.
- (A) BEGIN MSE WALL W-3 STA. 207+84.99, 42.08' RT.
- (B) END MSE WALL W-3 STA. 208+65.96, 40.22' RT.
- (C) BEGIN MSE WALL W-1A STA. 208+77.80, 39.95' RT.
- (D) MSE WALL W-1A BEND STA. 209+58.89, 38.09' RT.
- (E) MSE WALL W-1A BEND STA. 209+85.02, 35.57' RT.
- (F) MSE WALL W-1A BEND STA. 210+73.89, 33.54' RT.
- (G) MSE WALL W-1A BEND STA. 210+78.64, 33.62' RT.
- (H) END MSE WALL W-1A BEGIN MSE WALL W-1B STA. 211+10.66, 33.62' RT.
- (I) END MSE WALL W-1B BEGIN MSE WALL W-1C STA. 211+10.85, 33.63' LT.
- (J) MSE WALL W-1C BEND STA. 210+78.19, 33.63' LT.
- (K) MSE WALL W-1C BEND STA. 210+73.62, 33.56' LT.
- (L) MSE WALL W-1C BEND STA. 209+48.75, 41.87' LT.
- (M) MSE WALL W-1C BEND STA. 208+25.09, 41.87' LT.
- (N) MSE WALL W-1C BEND STA. 207+99.99, 39.86' LT.
- (O) END MSE WALL W-1C STA. 206+65.00, 43.79' LT.
- (P) BEGIN WALL NW-1 (SEG. 1) STA. 205+69.99, 78.71' RT.
- (Q) WALL NW-1 (SEG. 1) BEND STA. 206+28.51, 80.27' RT.
- (R) WALL NW-1 (SEG. 1) BEND STA. 206+28.54, 79.27' RT.
- (S) END WALL NW-1 (SEG. 1) STA. 206+27.86, 76.75' RT.
- (T) BEGIN WALL NW-1 (SEG. 2) STA. 206+27.85, 76.71' RT.
- (U) END WALL NW-1 (SEG. 2) STA. 206+17.33, 38.33' RT.
- (V) BEGIN WALL NW-1 (SEG. 3) STA. 206+16.29, 38.29' RT.
- (W) WALL NW-1 (SEG. 3) BEND STA. 206+15.94, 37.04' RT.
- (X) WALL NW-1 (SEG. 3) BEND STA. 206+15.94, 36.04' RT.
- (Y) WALL NW-1 (SEG. 3) BEND STA. 206+65.00, 36.04' RT.
- (Z) WALL NW-1 (SEG. 3) BEND STA. 207+00.00, 42.54' RT.
- (AA) END WALL NW-1 (SEG. 3) STA. 207+20.00, 42.53' RT.
- (#) MSE WALL W-1C BEND STA. 207+50.01, 39.86' LT.

NOTES:

1. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.
2. FOR PIPE SIZES NOT SHOWN, SEE ROADWAY PLANS.
3. FOR SEAWALL A PLAN VIEW, SEE SHEET BW-37.
4. STATION/OFFSET IS TO THE FRONT FACE OF THE WALL.



SMF 3-1 WALL VIEW

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	LCY
CHECKED BY:	DMH
DESIGNED BY:	JGH
CHECKED BY:	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PERMANENT WALLS (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-4

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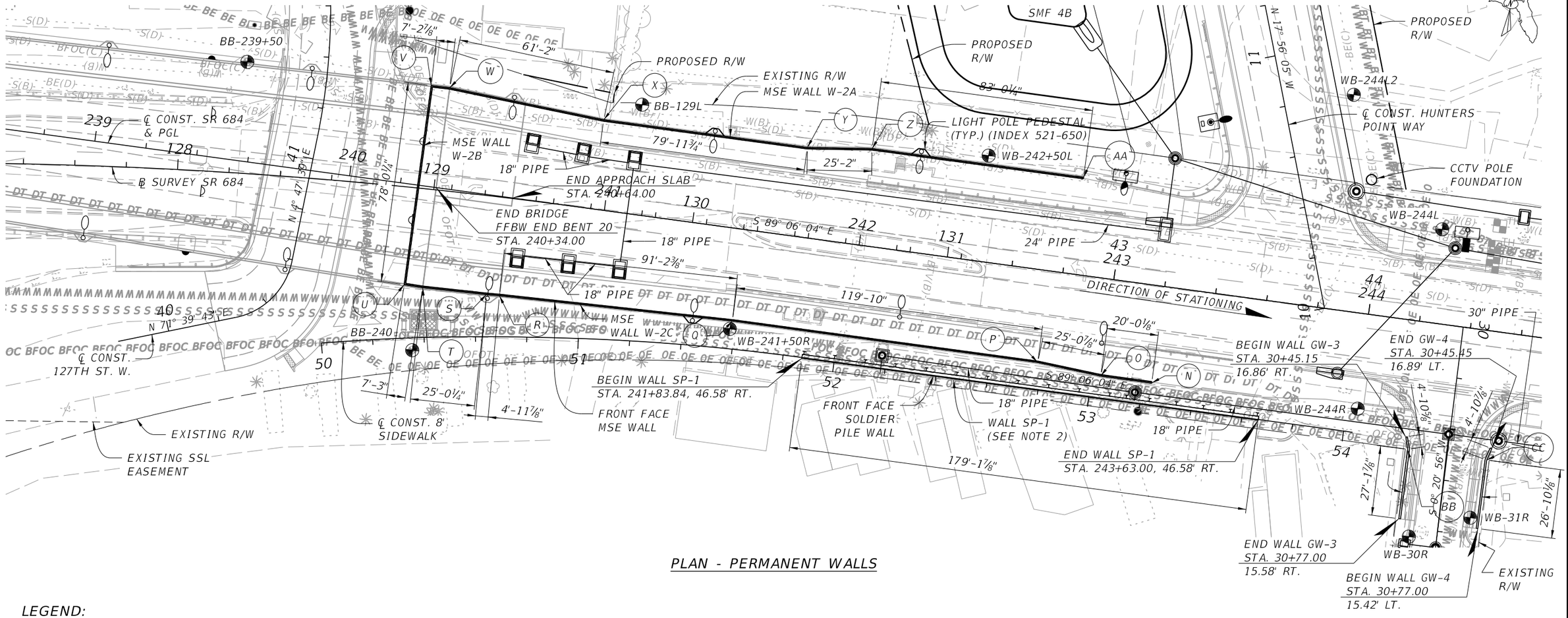

PLAN - PERMANENT WALLS

LEGEND:

- (N) END MSE WALL W-2C STA. 243+20.00 OFFSET 37.79 RT.
- (O) STA. 243+00.00 OFFSET 37.79 RT.
- (P) STA. 242+74.99 OFFSET 35.87' RT.
- (Q) STA. 241+55.15 OFFSET 35.87' RT.
- (R) STA. 240+63.99 OFFSET 38.29' RT.
- (S) STA. 240+59.01 OFFSET 38.50' RT.
- (T) STA. 240+34.00 OFFSET 39.17' RT.
- (U) END MSE WALL W-2B BEGIN MSE WALL W-2C STA. 240+26.75 OFFSET 39.01' RT.
- (V) END MSE WALL W-2A BEGIN MSE WALL W-2B STA. 240+26.75 OFFSET 39.01' LT.
- (W) STA. 240+34.00 OFFSET 39.17' LT.
- (X) STA. 240+95.00 OFFSET 34.87 LT.
- (Y) STA. 241+74.98 OFFSET 34.87' LT.
- (Z) STA. 241+99.98 OFFSET 37.79' LT.
- (AA) BEGIN MSE WALL W-2A STA. 242+83.00 OFFSET 37.79' RT.
- (BB) WALL GW-3 BEND STA. 30+49.85 OFFSET 15.50' RT.
- (CC) WALL GW-4 BEND STA. 30+50.16 OFFSET 15.50' LT.
- □ FRONT FACE OF WALL
- APPROX. BORING LOCATION

NOTES:

1. FOR PIPE SIZES NOT SHOWN, SEE ROADWAY PLANS.
2. LOW PROFILE EQUIPMENT SHALL BE REQUIRED FOR INSTALLATION OF THE H-PILES ASSOCIATED WITH WALL SP-1. DE-ENERGIZING OF THE EXISTING OVERHEAD ELECTRIC LINES SHALL NOT BE ANTICIPATED.
3. STATION AND OFFSET FOR WALLS GW-3 AND GW-4 ARE BASED ON THE ℄ CONST. 125TH ST. W.

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - PERMANENT WALLS (2 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-5

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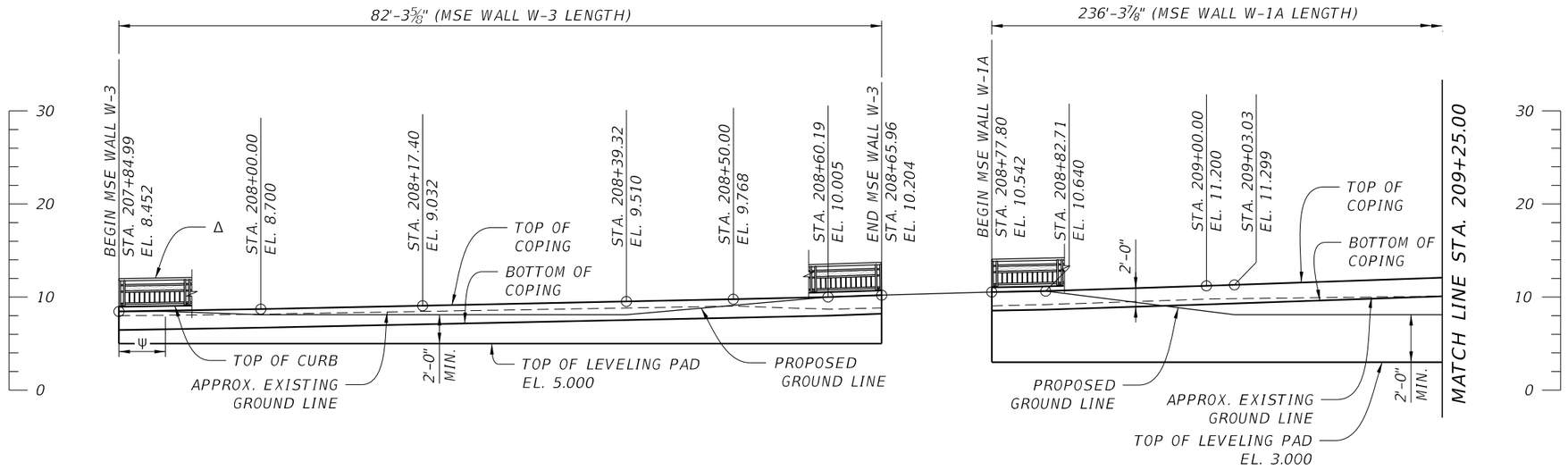
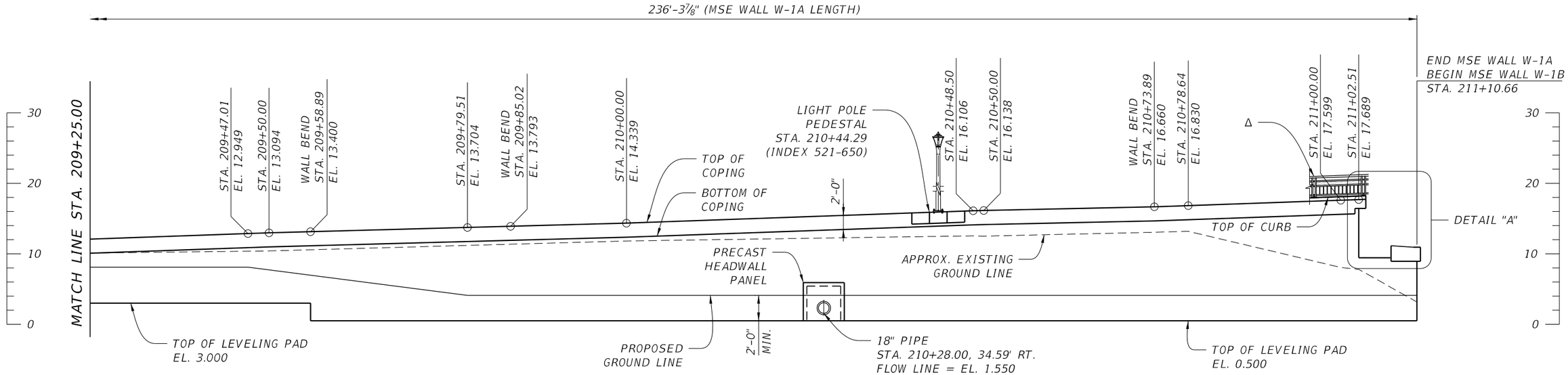


ELEVATION

TABLE OF GROUND ELEVATIONS			
STATION	OFFSET (RIGHT)	PROPOSED GROUND	EXISTING GROUND
207+84.99	42.08	8.45	8.00
208+00.00	41.73	8.32	8.15
208+17.40	41.33	8.10	8.39
208+39.32	40.83	8.10	8.86
208+50.00	40.59	9.07	9.03
208+60.19	40.35	10.01	8.69
208+65.96	40.22	10.20	8.84
208+77.80	39.95	10.54	9.05
208+82.71	39.84	10.64	9.19
209+00.00	39.44	8.48	9.79
209+03.03	39.37	8.10	9.80
209+47.01	38.37	8.10	10.34
209+50.00	38.30	7.73	10.40
209+79.51	36.08	4.10	11.40
210+00.00	35.23	4.10	11.81
210+48.50	34.12	4.10	12.54
210+50.00	34.09	4.10	12.35
210+73.89	33.54	4.10	13.05
210+78.64	33.62	4.10	13.18
211+00.00	33.62	4.10	8.06
211+02.51	33.62	4.10	7.79



ELEVATION

LEGEND:

Δ TOP OF PED. RAILING (PEDESTRIAN/ BICYCLE RAIL - TYPE SP) (INDEX 515-062) SEE SHEET B-11 FOR DETAILS.

ψ 5'-0" (MIN.) BERM

NOTE:

1. SEE SHEET BW-11 FOR DETAIL "A" AND PRECAST HEADWALL PANEL DETAILS.

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P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

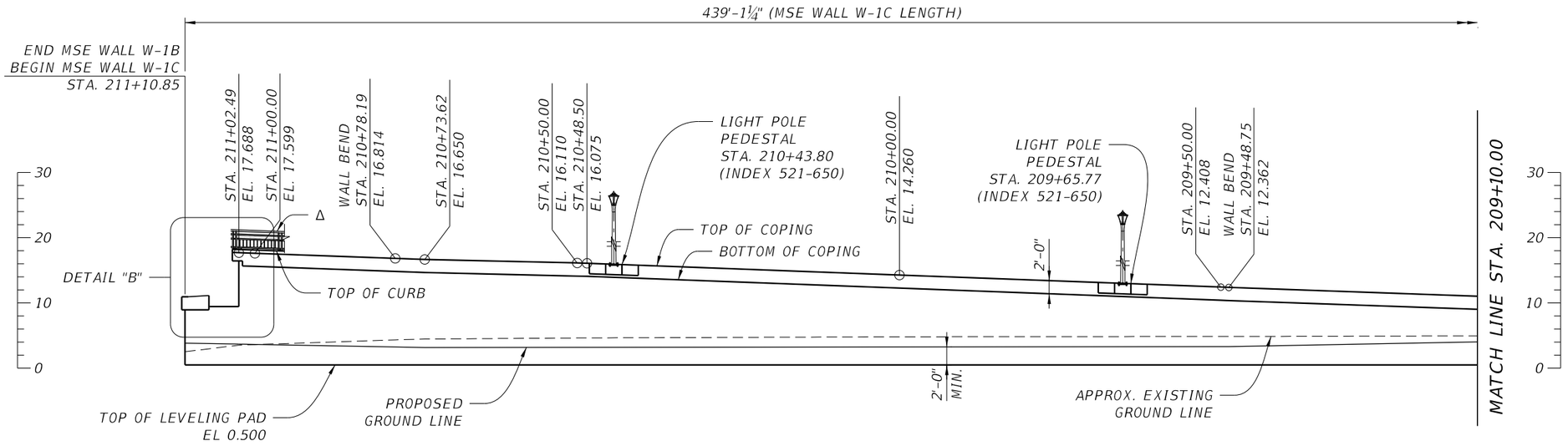
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - MSE WALLS W-1A & W-3

REF. DWG. NO.:

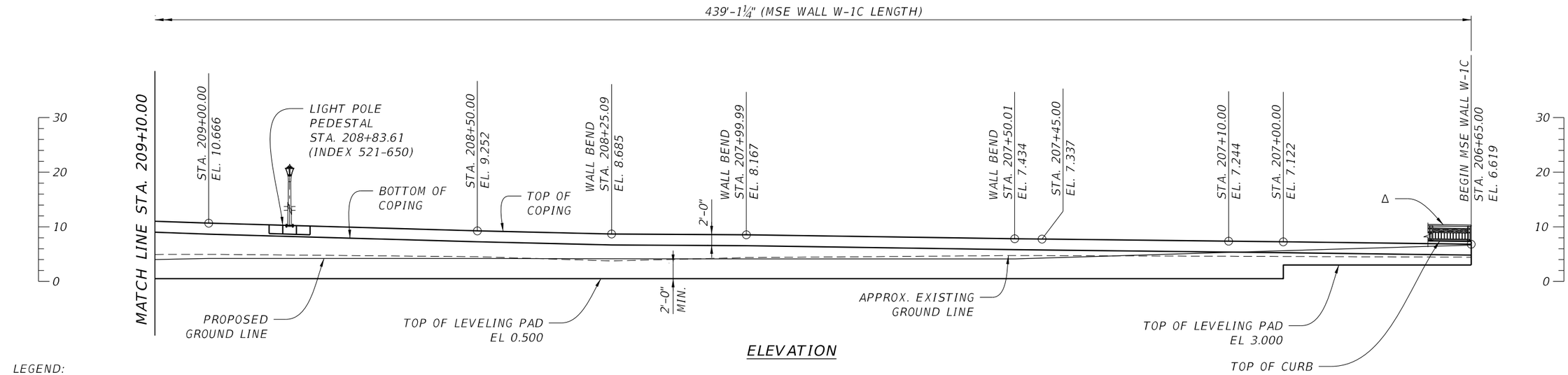
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-6



ELEVATION

TABLE OF GROUND ELEVATIONS			
STATION	OFFSET (LEFT)	PROPOSED GROUND	EXISTING GROUND
206+65.00	43.78	6.64	4.44
207+00.00	42.51	5.63	4.58
207+50.00	39.86	4.13	4.74
207+99.99	39.87	4.13	4.37
208+25.09	41.87	4.15	3.76
208+50.00	41.87	4.20	4.53
209+00.00	41.87	4.20	4.97
209+48.75	41.87	3.30	4.84
209+50.00	41.82	3.30	4.85
210+00.00	39.19	3.24	4.80
210+50.00	35.60	3.18	4.62
210+73.62	33.56	3.16	4.45
210+78.19	33.63	3.24	4.33
211+00.00	33.63	3.62	3.60
211+02.49	33.63	3.67	3.52



ELEVATION

LEGEND:

Δ TOP OF PED. RAILING (PEDESTRIAN/ BICYCLE RAIL - TYPE SP) (INDEX 515-062) SEE SHEET B-11 FOR DETAILS.

NOTE:

1. SEE SHEET BW-11 FOR DETAIL "B".

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REVISIONS					
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DRAWN BY: QF
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - MSE WALL W-1C

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-7

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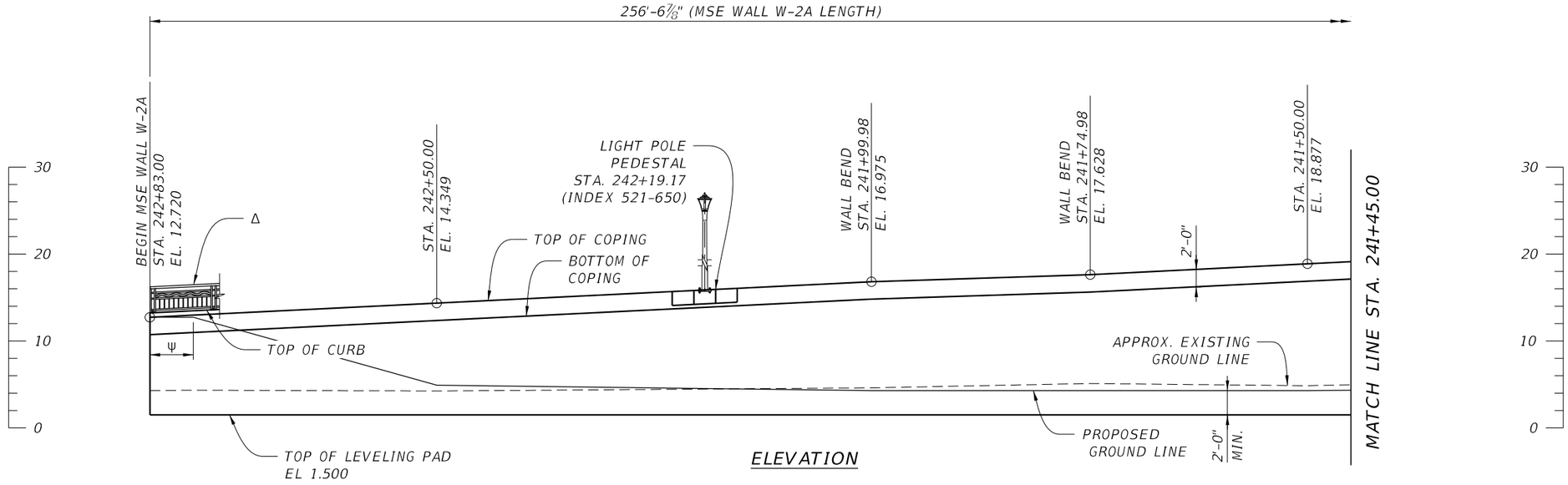
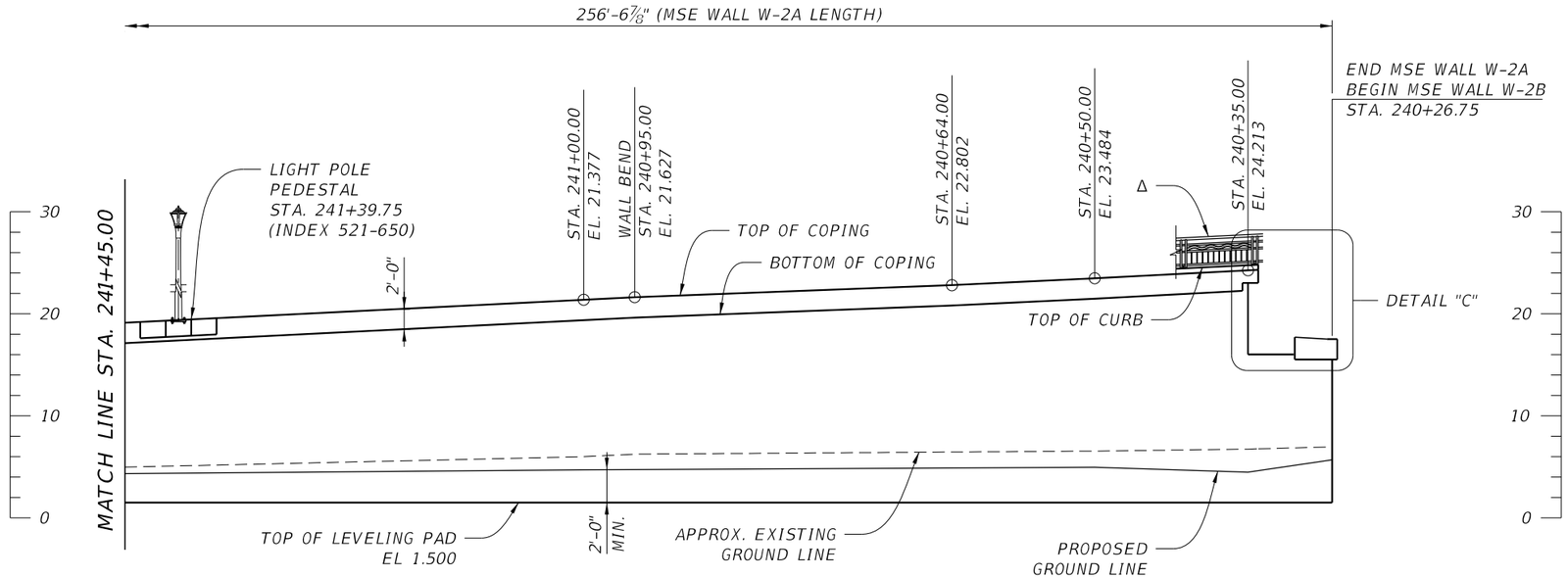


ELEVATION



ELEVATION

TABLE OF GROUND ELEVATIONS			
STATION	OFFSET (LEFT)	PROPOSED GROUND	EXISTING GROUND
240+26.75	39.17	5.68	6.95
240+35.00	39.17	4.48	6.73
240+50.00	38.04	4.95	6.54
240+64.00	37.05	4.88	6.36
240+95.00	34.87	4.73	6.24
241+00.00	34.87	4.71	5.99
241+50.00	34.87	4.29	4.85
241+74.98	34.87	4.29	5.10
241+99.98	37.79	4.28	4.60
242+50.00	37.79	4.92	4.24
242+78.00	37.79	12.72	4.33
242+83.00	37.79	12.72	4.28

LEGEND:

Δ TOP OF PED. RAILING (PEDESTRIAN/ BICYCLE RAIL - TYPE SP) (INDEX 515-062) SEE SHEET B-11 FOR DETAILS.

ψ 5'-0" (MIN.) BERM

NOTE:

1. SEE SHEET BW-11 FOR DETAIL "C".

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - MSE WALL W-2A

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-8

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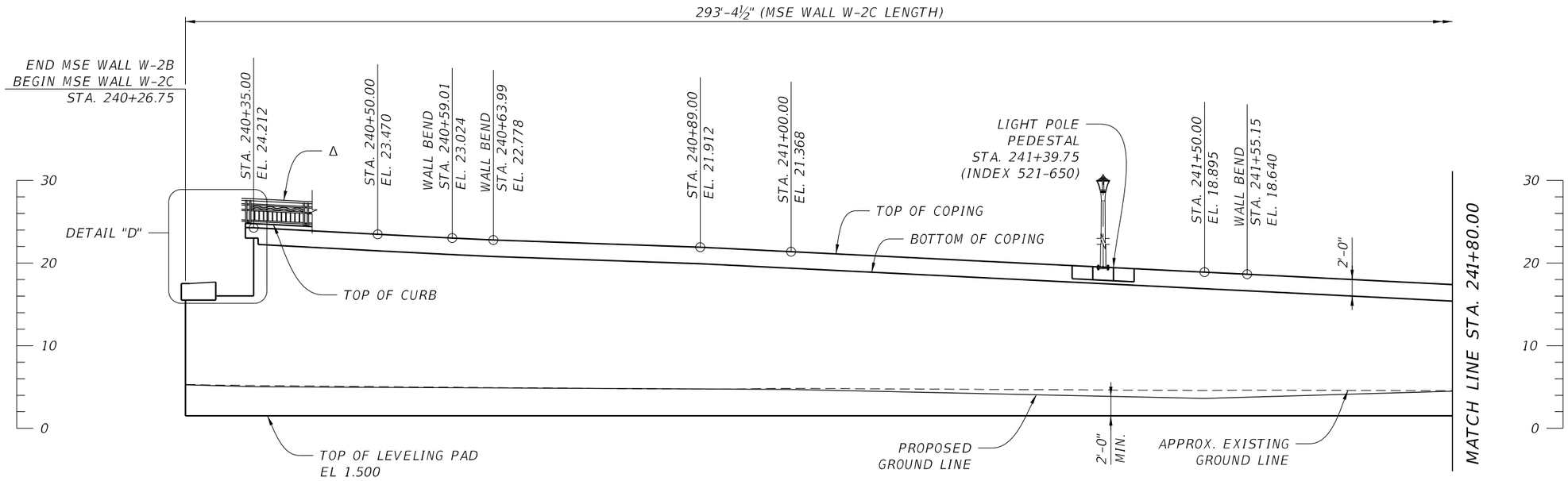
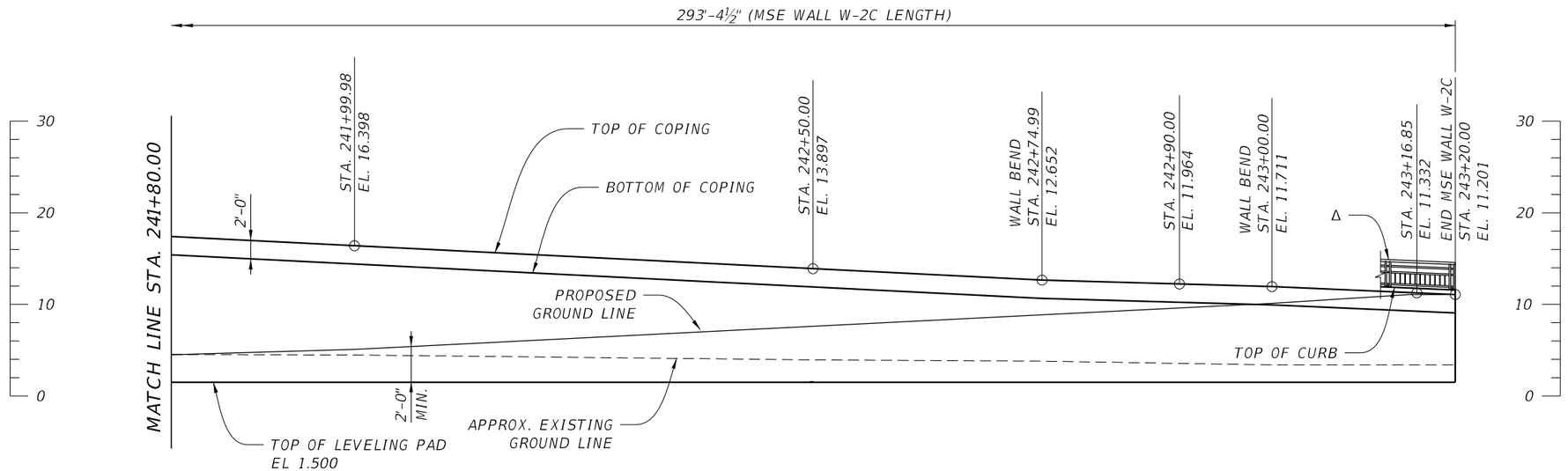


ELEVATION



ELEVATION

LEGEND:

Δ TOP OF PED. RAILING (PEDESTRIAN/ BICYCLE RAIL - TYPE SP) (INDEX 515-062) SEE SHEET B-11 FOR DETAILS.

TABLE OF GROUND ELEVATIONS			
STATION	OFFSET (RIGHT)	PROPOSED GROUND	EXISTING GROUND
240+26.75	39.17	5.26	5.18
240+35.00	39.17	5.03	5.17
240+50.00	38.74	4.95	5.04
240+59.01	38.50	4.90	4.96
240+63.99	38.29	4.88	4.93
240+89.00	37.63	4.76	4.73
241+00.00	37.33	4.70	4.83
241+50.00	36.01	3.62	4.57
241+55.15	35.87	3.77	4.62
241+99.98	35.87	5.11	4.48
242+50.00	35.87	7.61	3.95
242+74.99	35.87	8.84	3.81
243+00.00	37.79	10.08	3.40
243+20.00	37.79	11.20	3.41

NOTE:

1. SEE SHEET BW-11 FOR DETAIL "D".

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - MSE WALL W-2C

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-9

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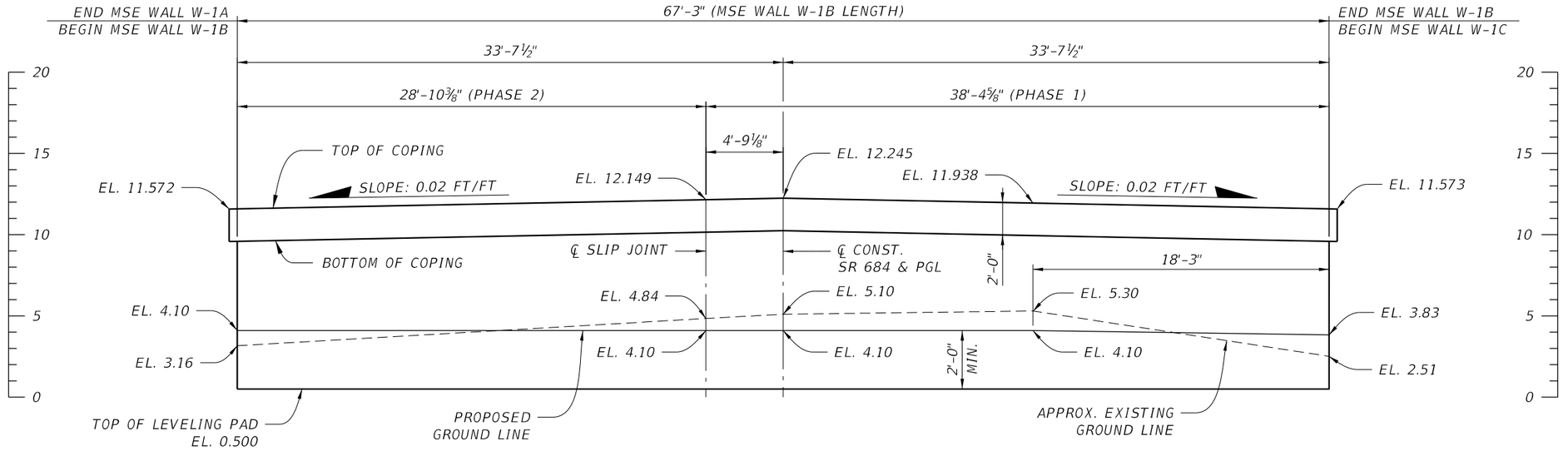
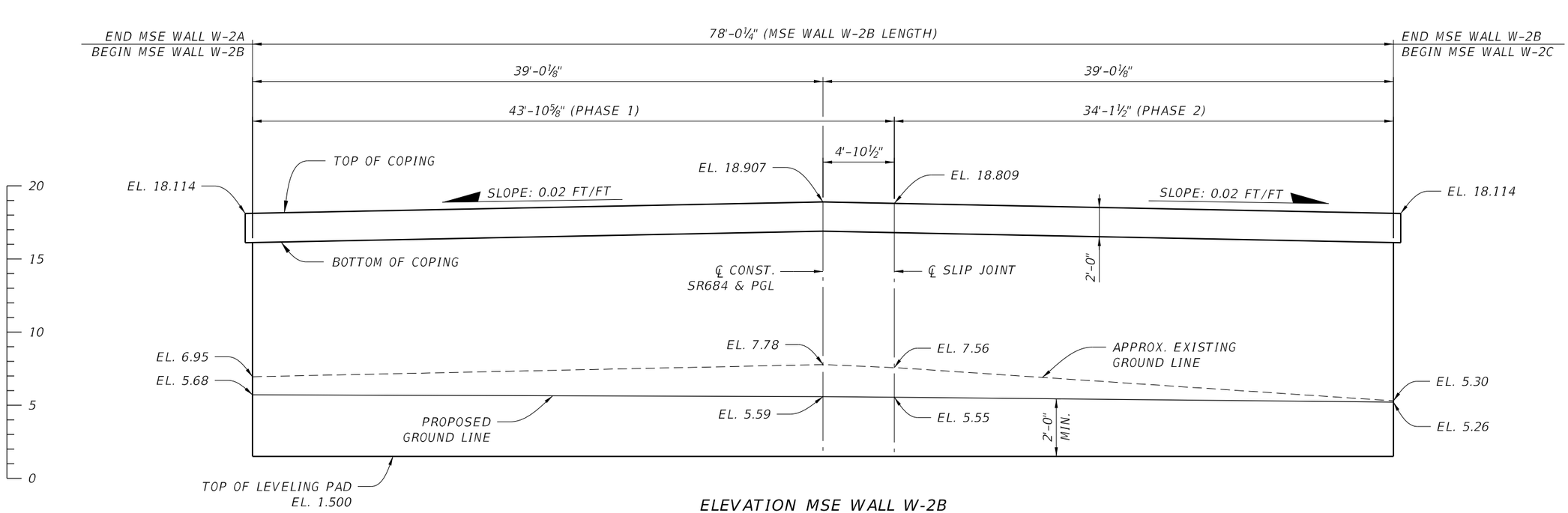


ELEVATION MSE WALL W-1B

(LOOKING DOWNSTATION)



ELEVATION MSE WALL W-2B

(LOOKING UPSTATION)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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CHECKED BY:	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - MSE WALL W-1B & W-2B

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-10

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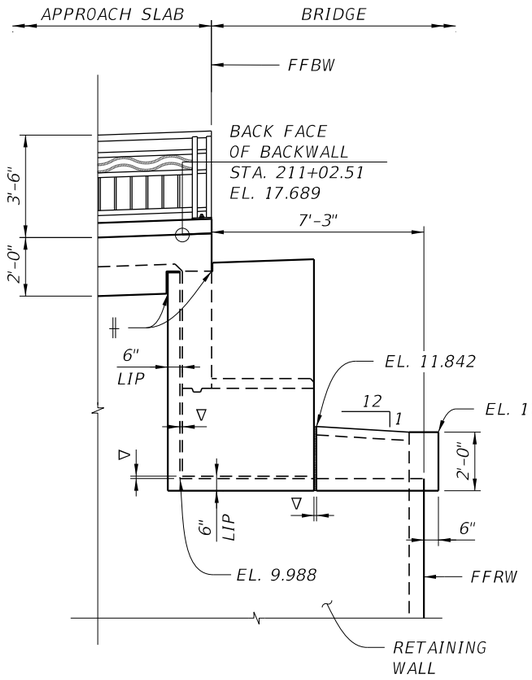
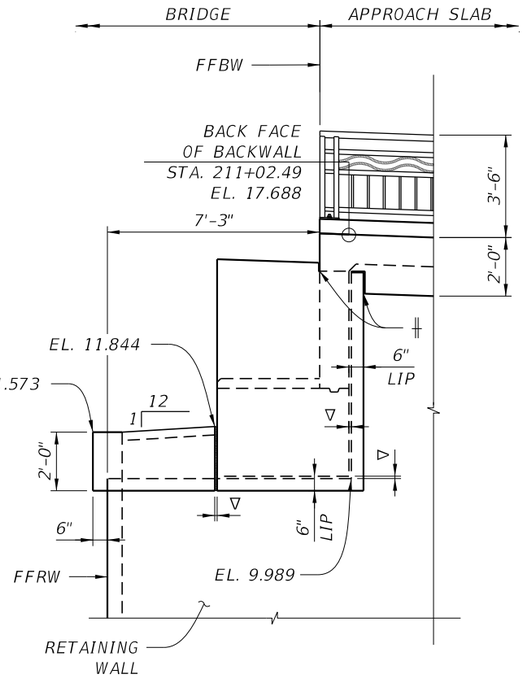
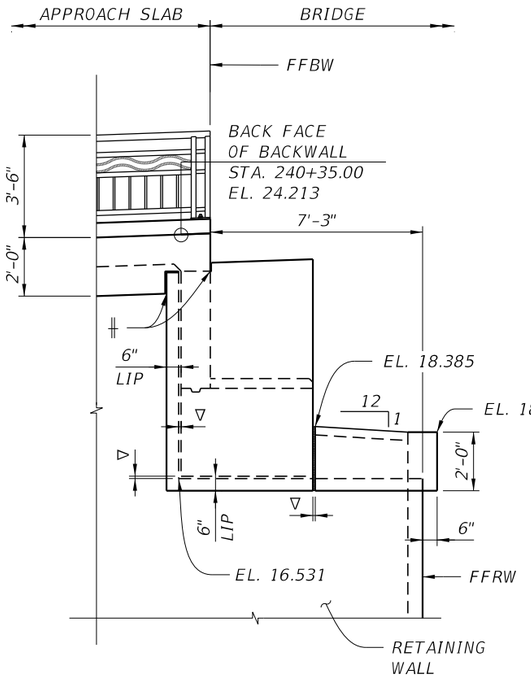


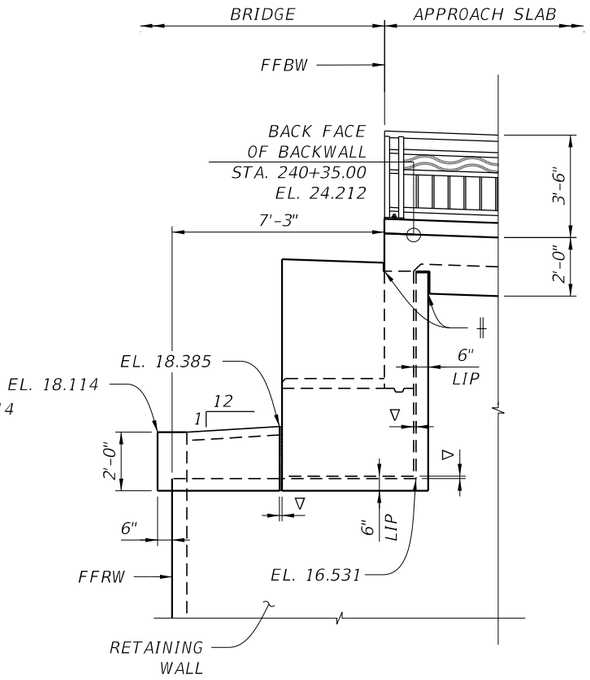
DETAIL "A"
(MSE WALL W-1A)



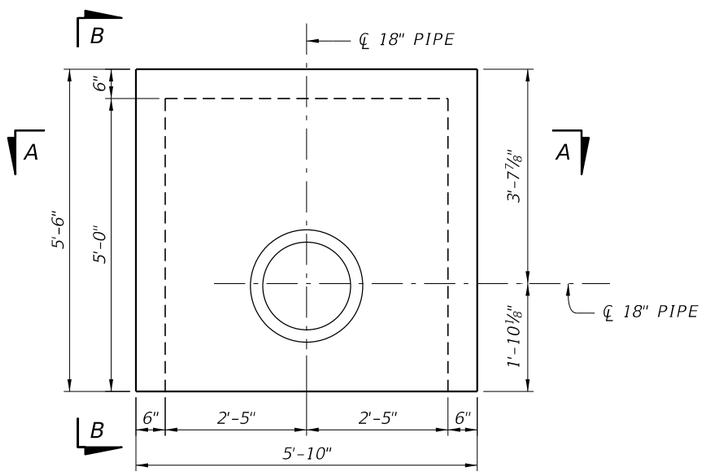
DETAIL "B"
(MSE WALL W-1C)



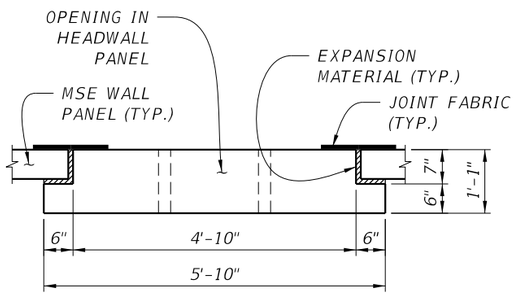
DETAIL "C"
(MSE WALL W-2A)



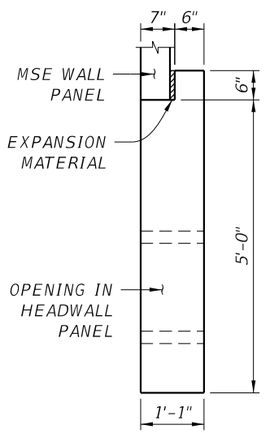
DETAIL "D"
(MSE WALL W-2C)



ELEVATION



SECTION A-A



SECTION B-B

PRECAST HEADWALL PANEL DETAILS
(SEE NOTE 5)

LEGEND:

╫ = ½" EXPANDED POLYSTYRENE
∇ = 1" EXPANDED POLYSTYRENE

NOTES:

1. FOR LOCATION OF DETAIL "A", SEE SHEET BW-6.
2. FOR LOCATION OF DETAIL "B", SEE SHEET BW-7.
3. FOR LOCATION OF DETAIL "C", SEE SHEET BW-8.
4. FOR LOCATION OF DETAIL "D". SEE SHEET BW-9.
5. PRECAST HEADWALL PANEL DIMENSIONS ARE PROVIDED AS A GENERAL GUIDELINE. MSE WALL FABRICATOR SHALL PROVIDE PRECAST HEADWALL PANEL DESIGN AND FINAL DIMENSIONS IN SHOP DRAWINGS. MSE WALL FABRICATOR SHALL ADJUST THE PANEL DIMENSIONS PROVIDED TO OPTIMIZE THE ADJACENT MSE WALL PANELS. MSE WALL FABRICATOR SHALL PROVIDE THE PRECAST HEADWALL PANEL REINFORCEMENT AND STRAP LOCATIONS.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL DETAILS

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-11

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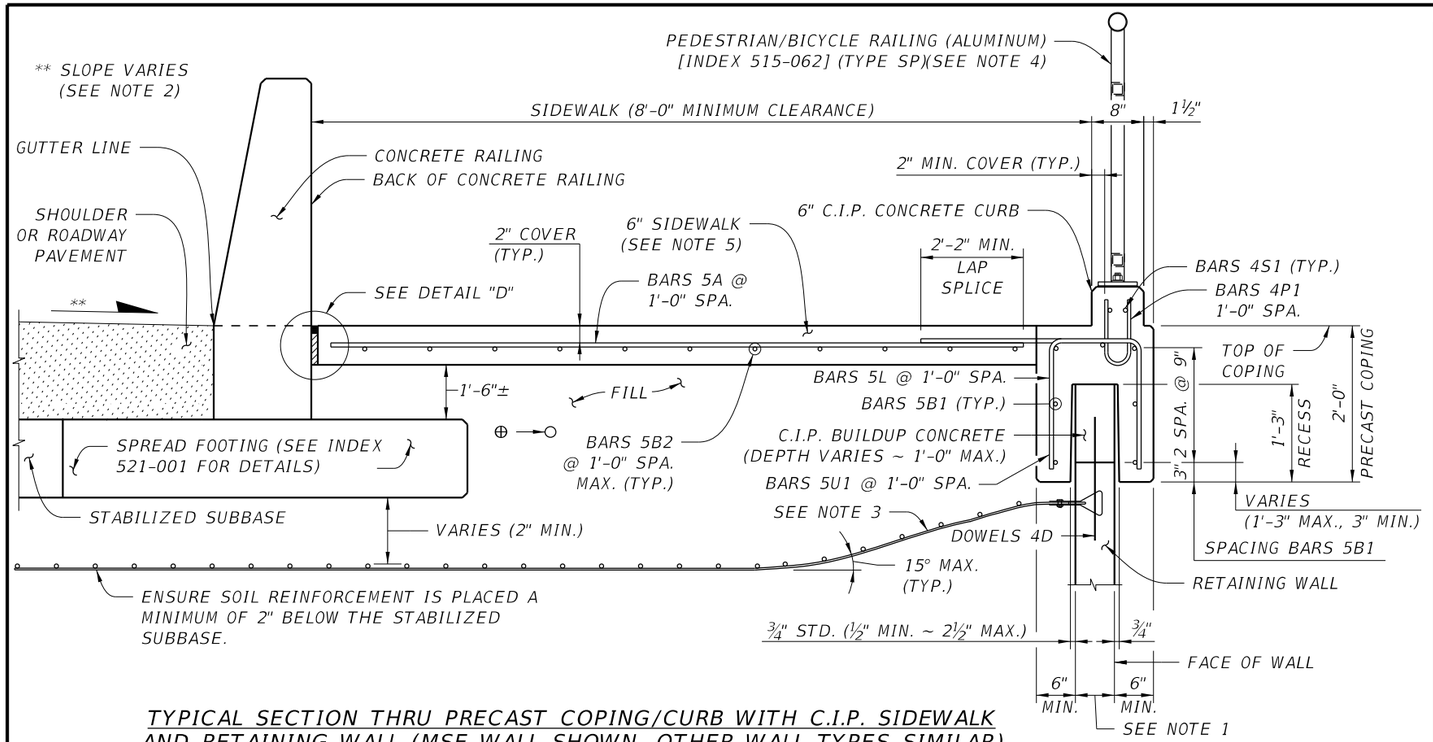
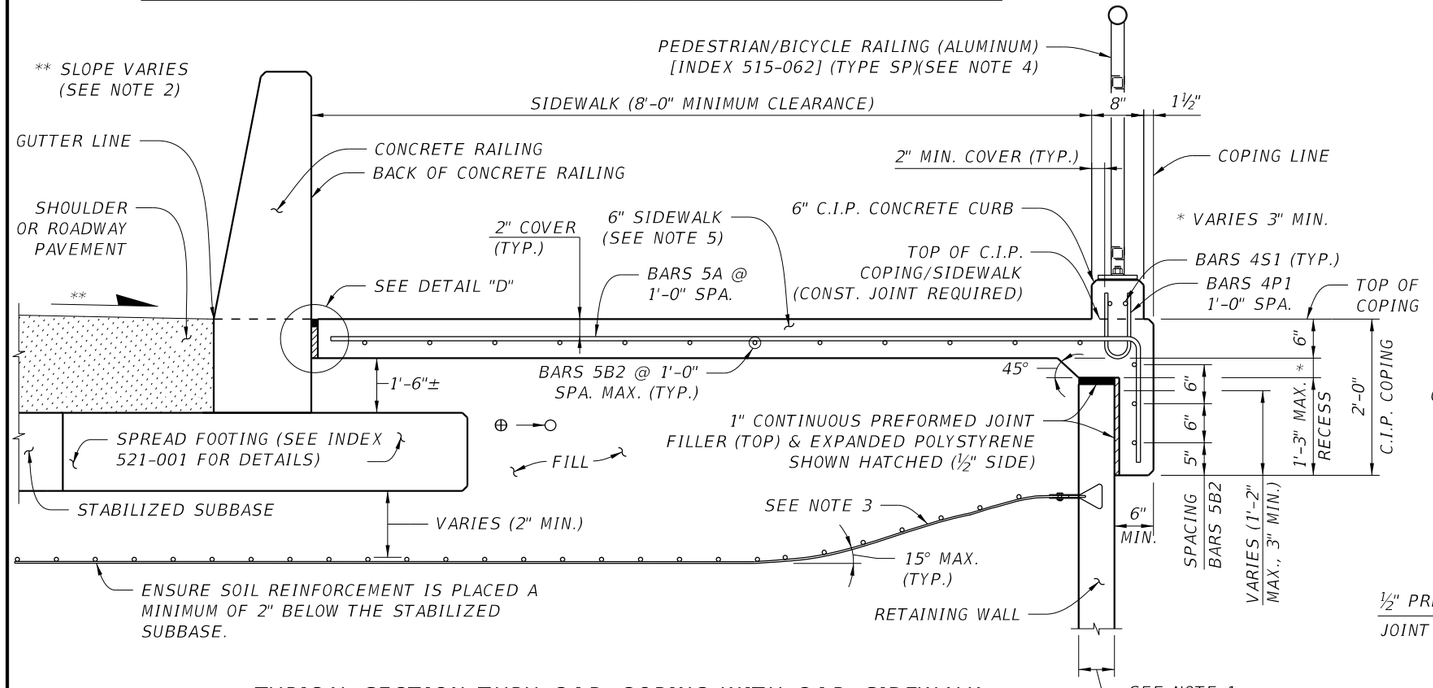


TYPICAL SECTION THRU PRECAST COPING/CURB WITH C.I.P. SIDEWALK AND RETAINING WALL (MSE WALL SHOWN, OTHER WALL TYPES SIMILAR)

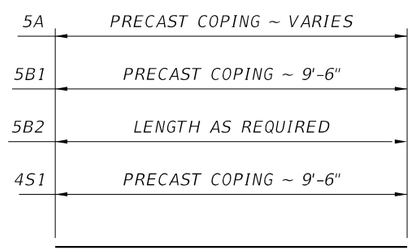


TYPICAL SECTION THRU C.I.P. COPING WITH C.I.P. SIDEWALK AND RETAINING WALL (MSE WALL SHOWN, OTHER WALL TYPES SIMILAR)

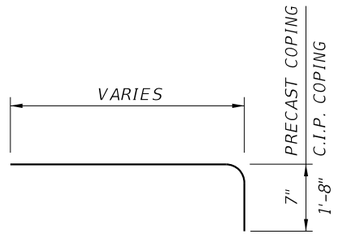
REINFORCING STEEL BENDING DIAGRAMS - COPING/PARAPET AND SIDEWALK

BILL OF REINFORCING STEEL

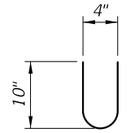
MARK	SIZE	LENGTH	
		PRECAST COPING	C.I.P. COPING
A	5	VARIES	N/A
B1	5	9'-6"	N/A
B2	5	AS REQD.	AS REQD.
D	4	2'-0"	N/A
L	5	VARIES	VARIES
P1	4	2'-6¼"	2'-6¼"
S1	4	9'-6"	N/A
U1	5	VARIES	N/A



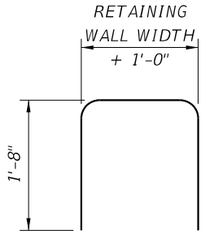
BARS 5A, 5B1, 5B2 & 4S1



BAR 5L

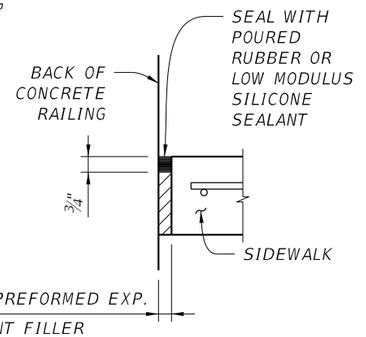


BAR 4P1



BAR 5U1

REINFORCING STEEL NOTES:
1. ALL BAR DIMENSIONS IN THE BENDING DIAGRAMS ARE OUT TO OUT.
2. ALL REINFORCING STEEL AT EXPANSION JOINTS WILL HAVE A 2" MINIMUM COVER.
3. LAP SPLICES FOR BARS 5B2 WILL BE A MINIMUM OF 2'-2".
4. FOR PRECAST COPING ONLY, LAP SPLICE BARS 5L WITH BARS 5A. LAP SPLICES WILL BE A MINIMUM OF 2'-2".
5. THE CONTRACTOR MAY USE DEFORMED WWR WHEN APPROVED BY THE ENGINEER. WWR MUST MEET THE REQUIREMENTS OF SPECIFICATIONS SECTION 931.



DETAIL "D"

PRECAST COPING/PARAPET AND SIDEWALK NOTES:
1. ACTUAL WIDTH VARIES DEPENDING ON TYPE OF RETAINING WALL USED.
2. MATCH CROSS SLOPE OF TRAVEL LANE OR SHOULDER.
3. GRADUALLY DEFLECT/DISPLACE SOIL REINFORCEMENT DOWNWARD AS REQUIRED. SOIL REINFORCEMENT IS SHOWN DEFLECTED DOWNWARD FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO SCALE. SEE WALL COMPANY DRAWINGS FOR DETAILS.
4. COMPLETE DETAILS AND DIMENSIONS FOR THE BRIDGE PEDESTRIAN/BICYCLE RAILING (ALUMINUM) ARE REQUIRED IN THE SHOP DRAWINGS. SEE SHEET B-11.
5. MATCH CROSS SLOPE OF CONNECTING SIDEWALK OR AS SHOWN IN THE WALL CONTROL OR ROADWAY DRAWINGS.

LEGEND:

⊕ 1½" DIA. FUTURE USE CONDUIT FROM STA. 207+80.00 TO STA. 210+73.50 & STA. 240+64.00 TO STA. 243+80.00 ON SOUTH SIDE ONLY. CONNECT TO 1½" DIA. EMBEDDED CONDUIT IN APPROACH SLAB. TERMINATE THE BEGIN/END OF THE FUTURE USE CONDUIT PER INDEX 630-010. HORIZONTAL & VERTICAL LOCATION VARIES.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MODIFICATIONS TO STANDARD PLANS INDEX 521-630

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-12

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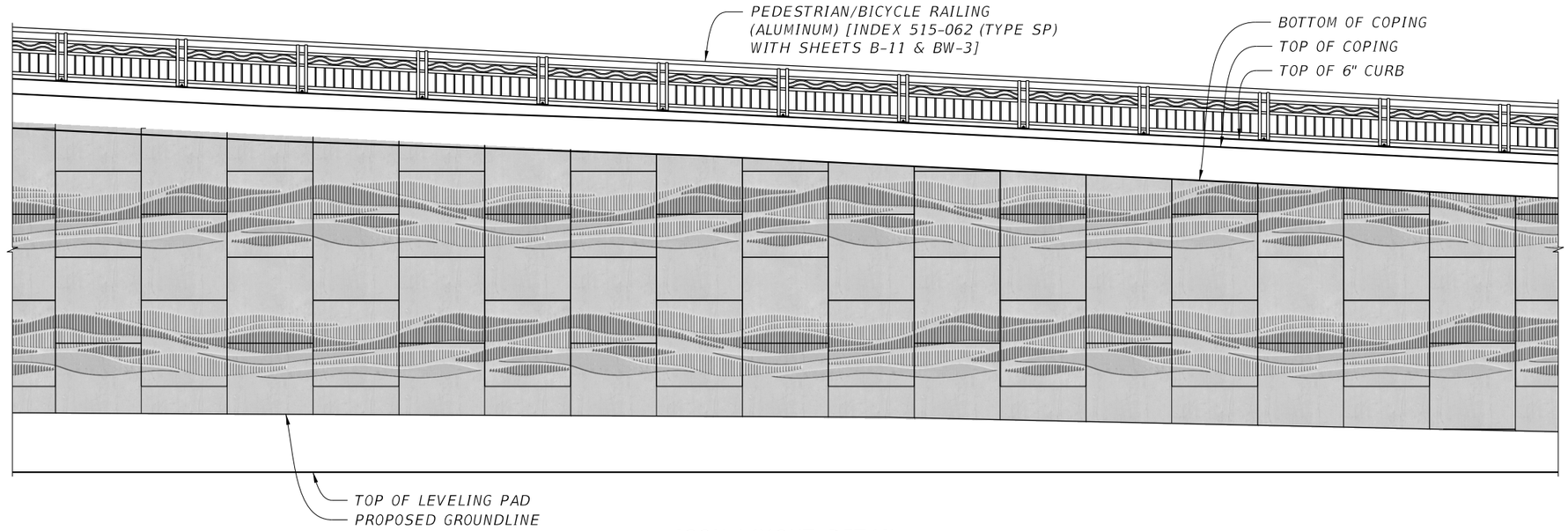
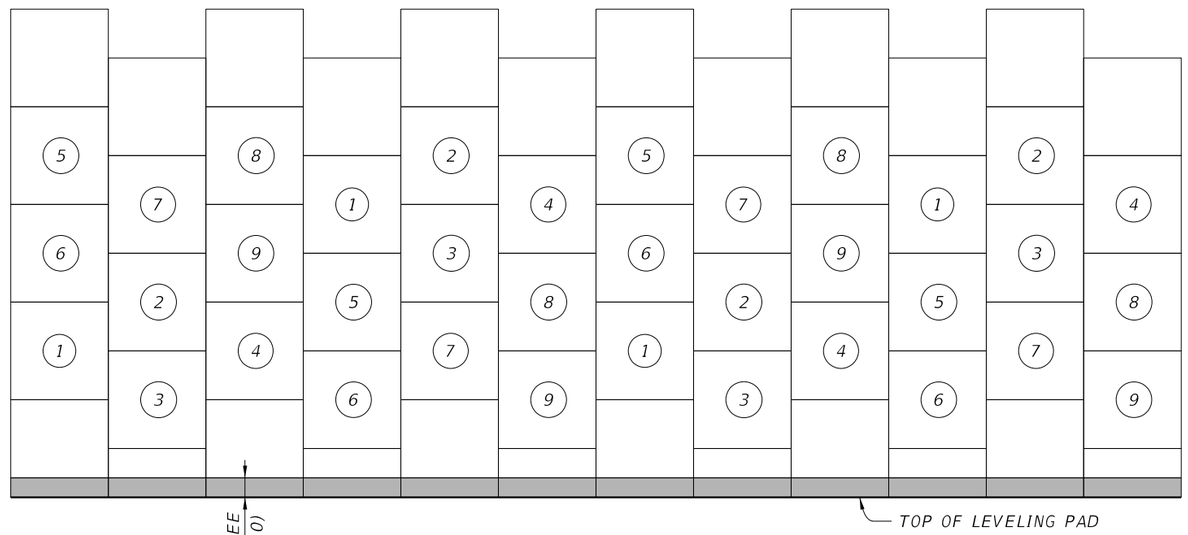


ICON LAYOUT DETAIL

(PARTIAL WALL ELEVATION SHOWN)

NOTES:

1. CUSTOM FORM LINERS FOR PRECAST PANELS WITH EXTRUDED WAVES ARE REQUIRED ON SOME OF THE PRECAST PANELS, AS INDICATED IN THE ICON LAYOUT DETAIL SHOWN ON THIS SHEET. THE WALL ICONS SHALL BE INCLUDED ON ALL SECTIONS OF MSE WALLS 1A, 1B, 1C, 2A, 2B AND 2C. THE GRAPHIC DESIGN SHALL BE CARVED RECESSED INTO THE LINERS TO CREATE AN EXTRUDED DESIGN. LINERS FOR GRAPHICS SHALL BE COMPOSED OF ELASTOMERIC MATERIAL (RUBBER). THE LINERS SHALL BE MANUFACTURED TO ACHIEVE THE FOLLOWING EFFECT:
   A. THE WAVES SHALL EXTRUDE ¾" AS DEPICTED.
2. THE ARTIST, AS RECOMMENDED BY THE CONTRACTOR'S FORMWORK MANUFACTURER AND APPROVED BY THE ENGINEER, SHALL CREATE CLAY FORMS FOR USE IN THE CUSTOM FORM LINER MANUFACTURE. THE CUSTOM FORM LINERS SHALL BE MANUFACTURED IN THE FORM LINER MANUFACTURER'S PLANT UNDER THE DIRECTION OF THE SELECTED ARTIST.
3. THE GRAPHIC FORMS FOR THE LINERS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE FABRICATION OF THE CUSTOM FORM LINERS.
4. PANELS NOT CONTAINING ICONS SHALL HAVE A CLASS 3 SMOOTH FINISH.
5. PRODUCE A FULL-SCALE MOCK-UP OF THREE REPRESENTATIVE PANELS FOR THE ENGINEER'S APPROVAL PRIOR TO INCORPORATING THE CUSTOM LINERS IN THE FINAL CONSTRUCTION.
6. THE COST OF ALL LABOR AND MATERIALS REQUIRED TO PRODUCE AND INSTALL THE WALL PANEL ICONS SHALL BE INCLUDED IN PAY ITEM 548-12.
7. SUBMIT MSE WALL SHOP DRAWINGS FOR REVIEW AND APPROVAL THAT INCORPORATE THESE AESTHETIC TREATMENTS. THE SHOP DRAWINGS SHALL SHOW WALL ELEVATIONS WITH THE ICON LAYOUT AND DETAILS OF THE MODIFIED PRECAST CONCRETE PANELS. SEE INDEX 548-020 FOR ADDITIONAL NOTES REGARDING THE MSE WALL SHOP DRAWINGS.
8. THE ICON SEQUENCE SHALL CONTINUE AS SHOWN AT CHANGES IN THE TOP OF LEVELING PAD. THE TOP OF LEVELING PAD ELEVATION AT WALLS W-1B & W-2B SHALL BE USED FOR ESTABLISHING THE ICON LAYOUT.
9. NO ICONS ARE REQUIRED ON WALL W-3.
10. THE MSE PANEL SHALL BE FIELD PAINTED FROM THE TOP OF LEVELING PAD TO 1 FOOT ABOVE THE TOP OF LEVELING PAD. A RED COLOR SHALL BE USED FOR THE FIELD PAINTING AND THE SELECTED PAINT SHALL BE APPROPRIATE FOR APPLICATION ON CONCRETE SURFACES.



ICON SEQUENCE

(#) = PANEL ICON NUMBER

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REVISIONS					
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P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	JGH	LCY	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

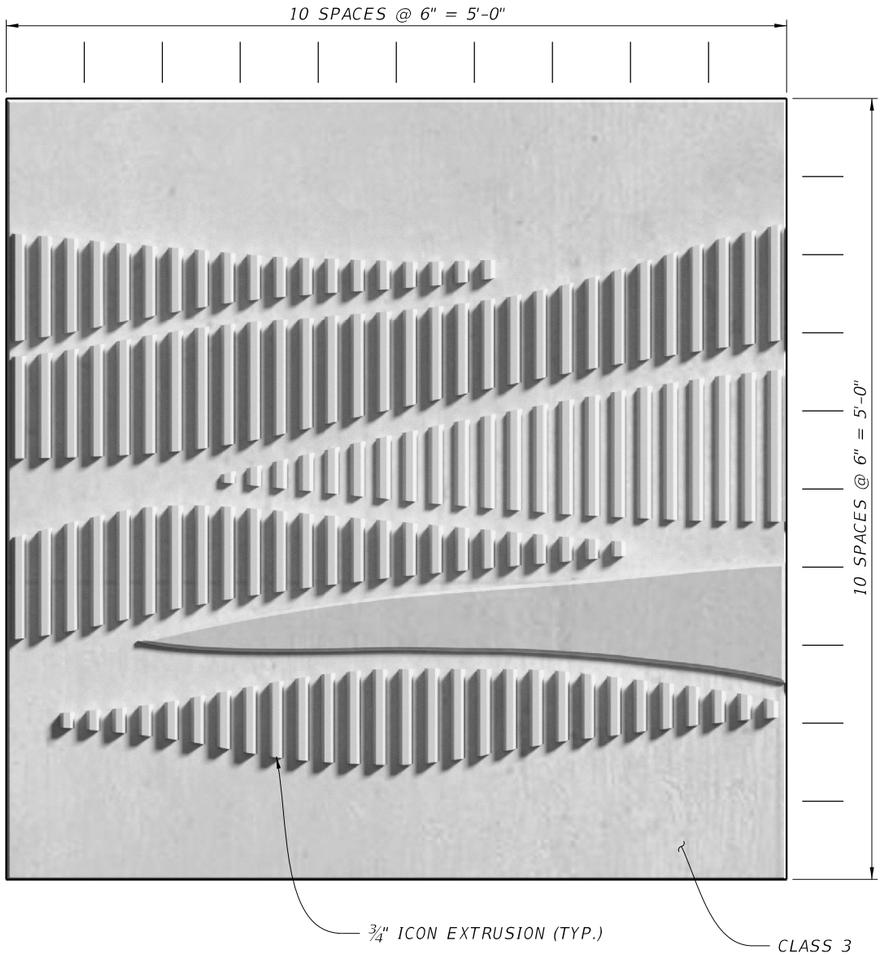
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL ICON DETAILS (1 OF 6)

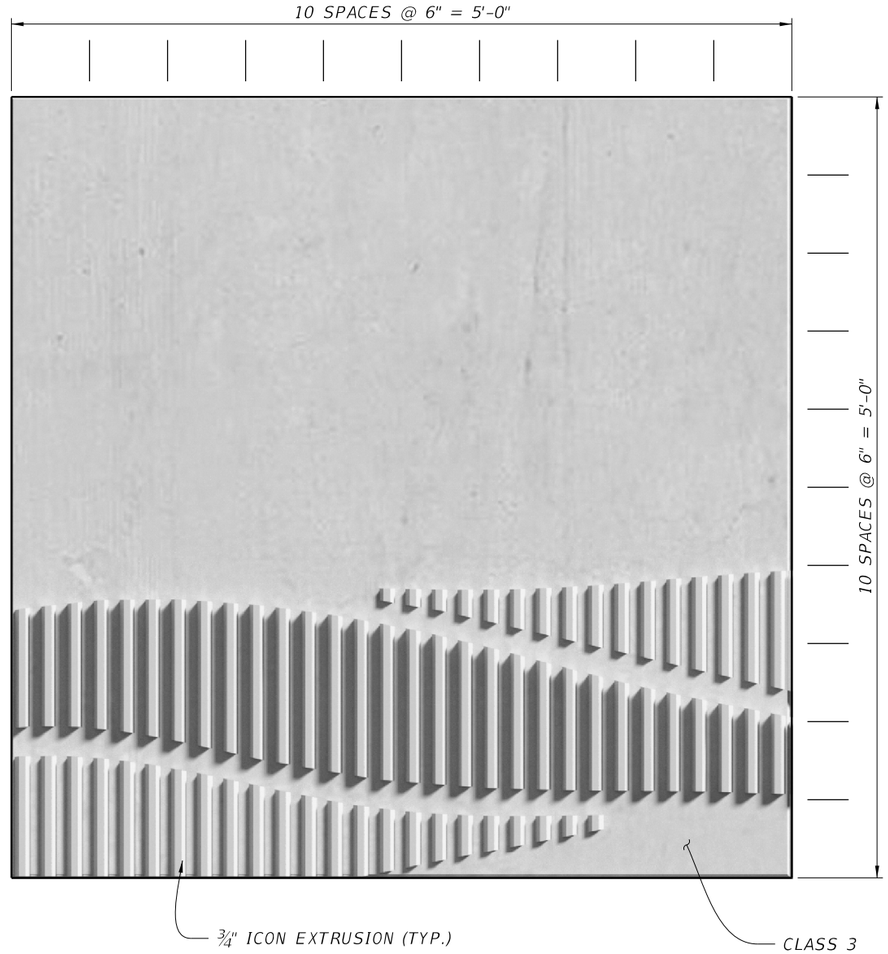
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-13



ICON NO. 1



ICON NO. 2

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	LCY
CHECKED BY:	JGH
DESIGNED BY:	ADM
CHECKED BY:	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL ICON DETAILS (2 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-14

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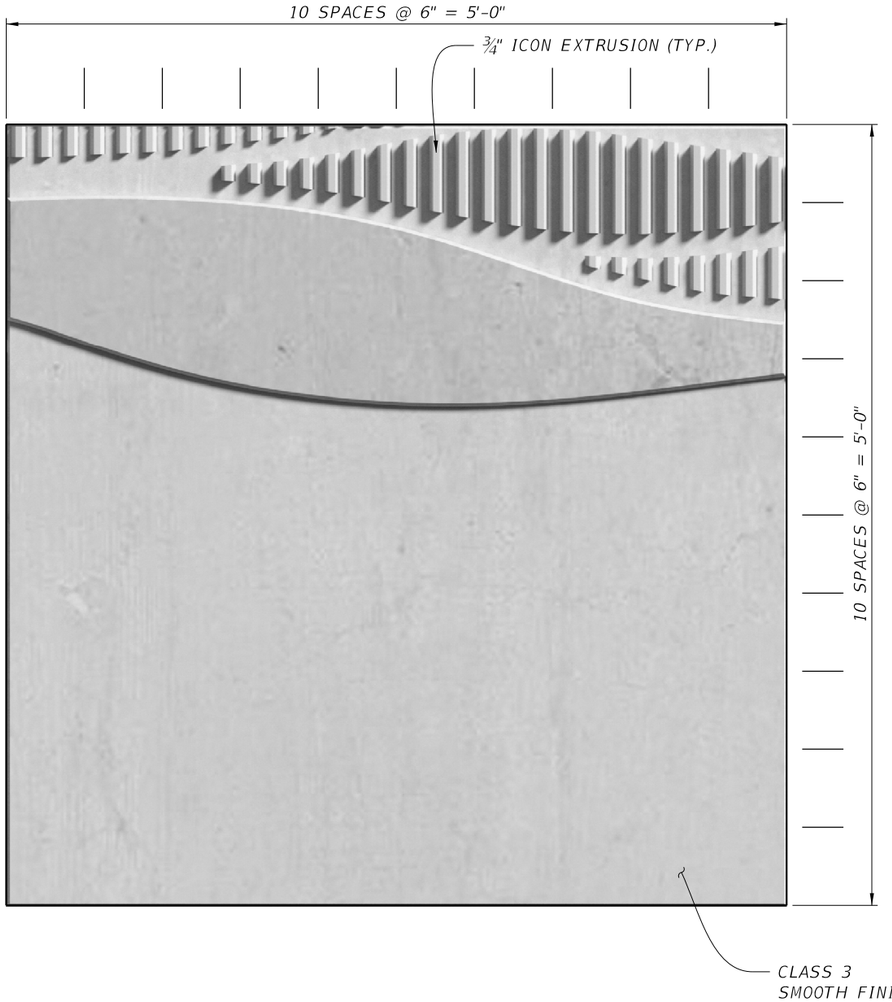

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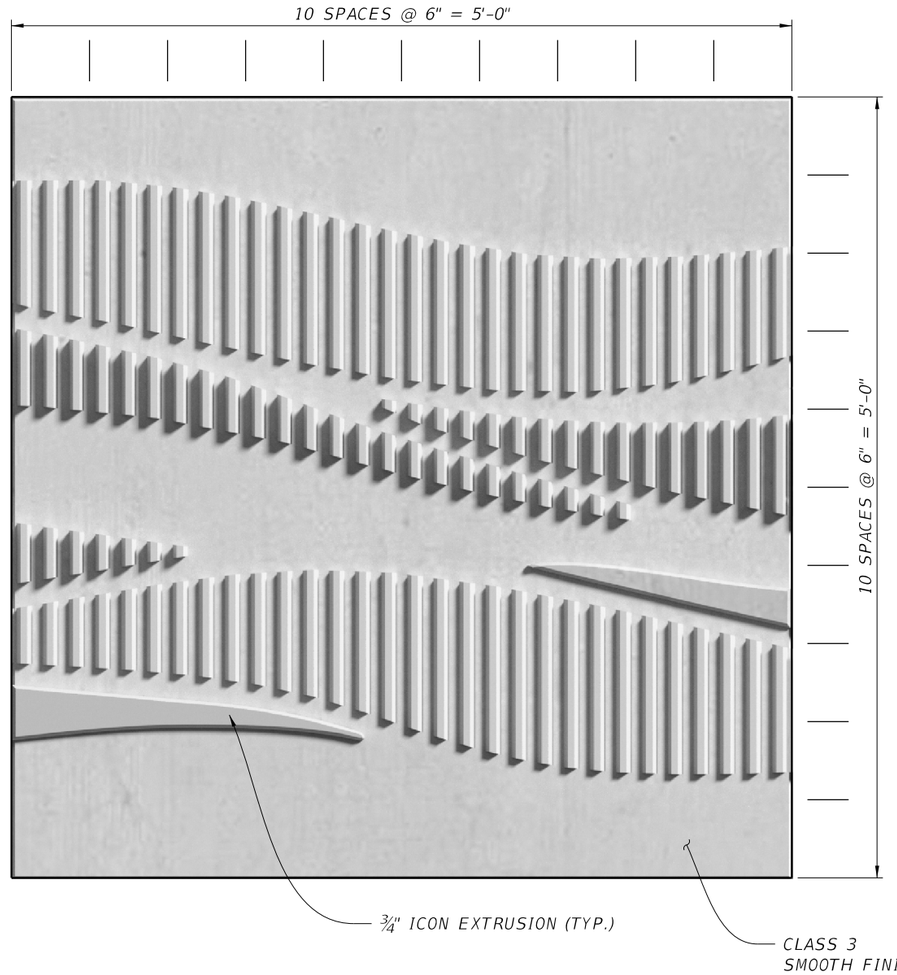

ICON NO. 4

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: ADM
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

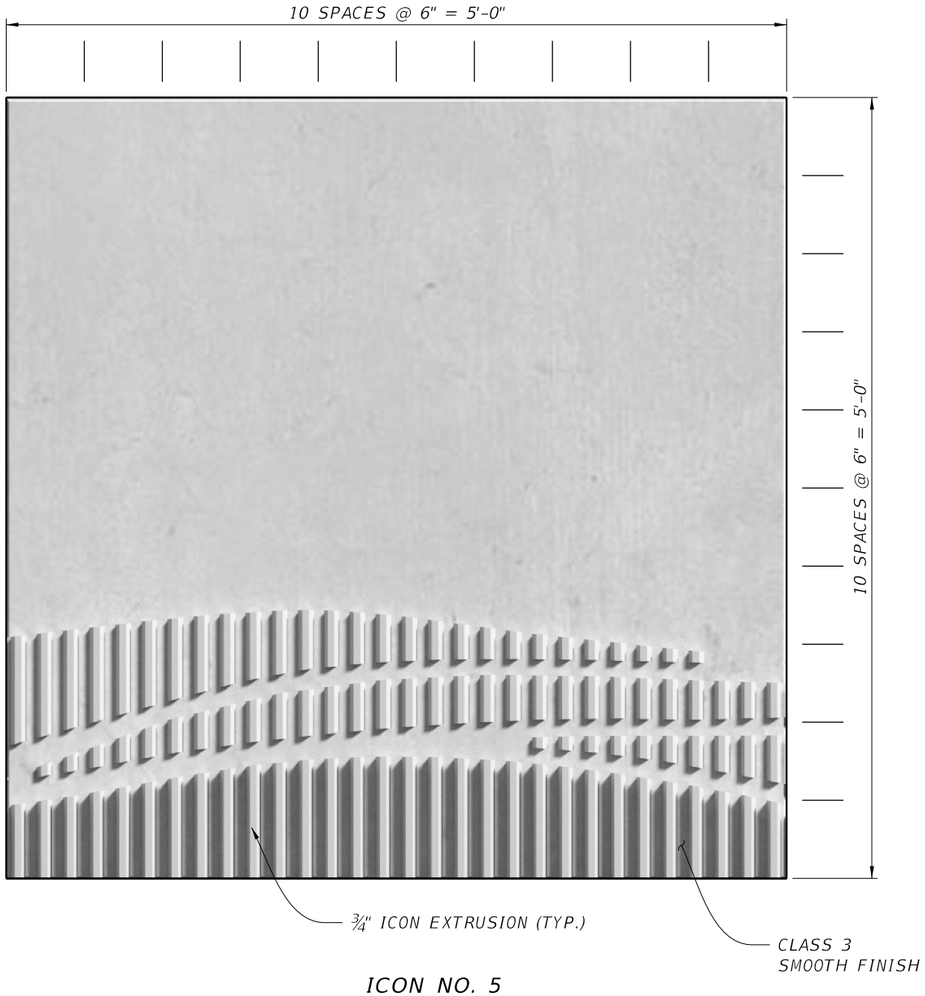
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL ICON DETAILS (3 OF 6)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-15



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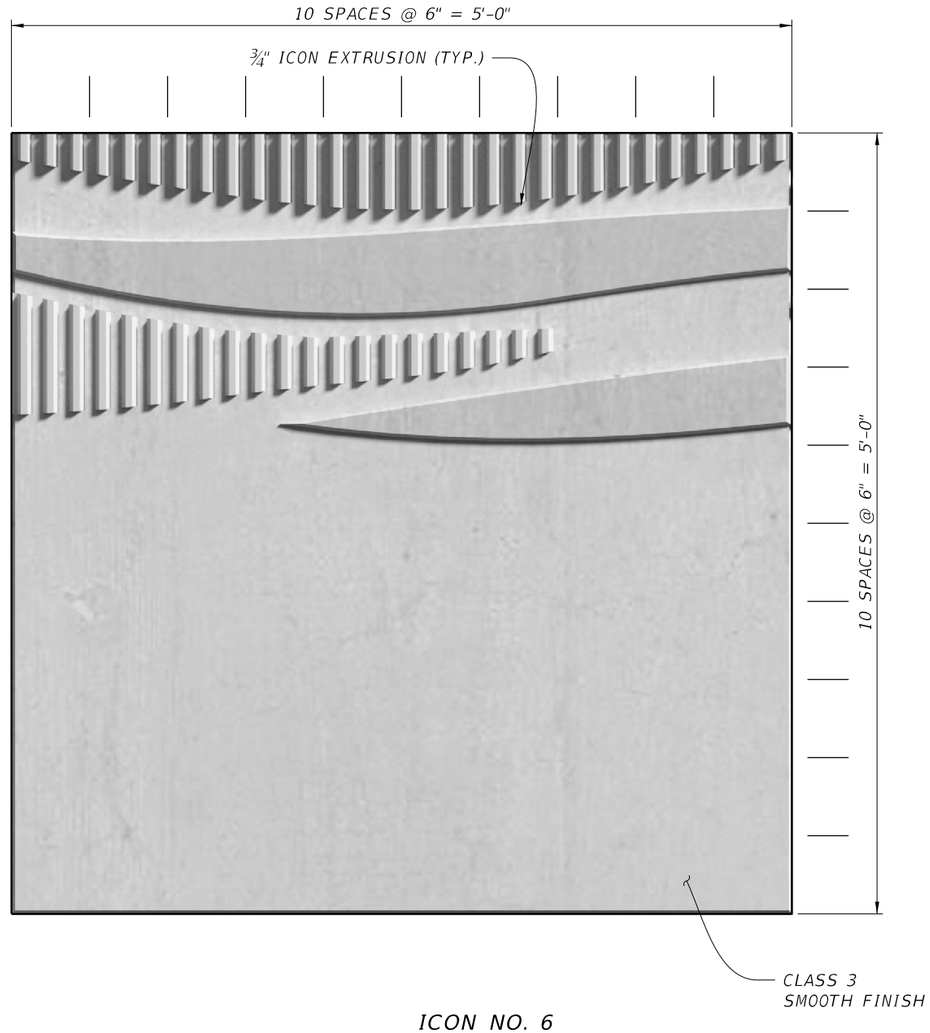

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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LCY	JGH	ADM	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL ICON DETAILS (4 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-16

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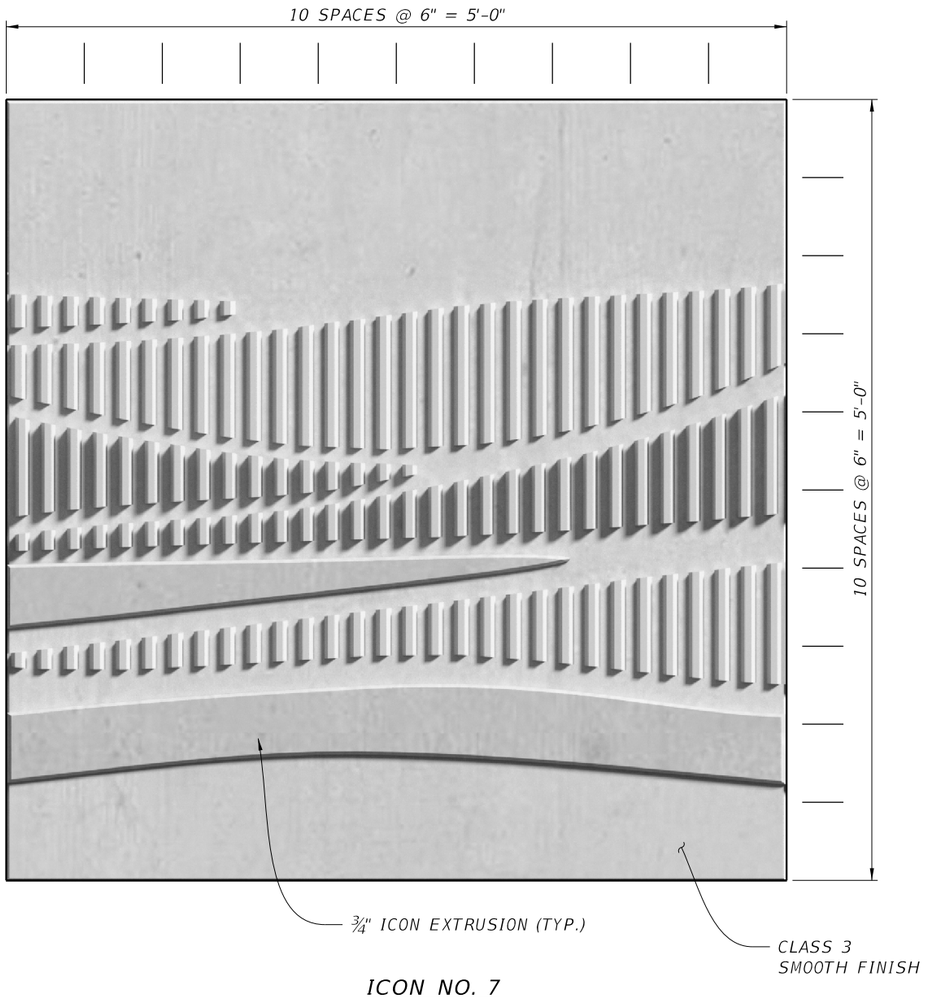

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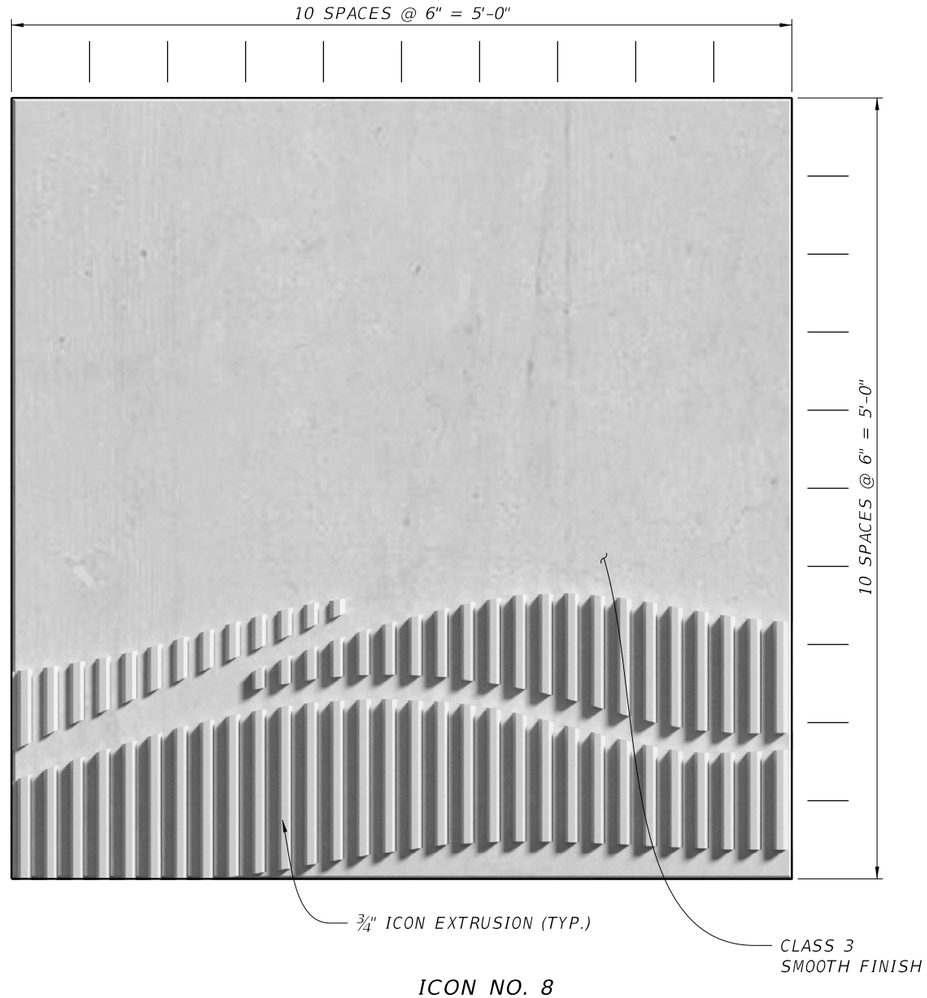

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL ICON DETAILS (5 OF 6)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

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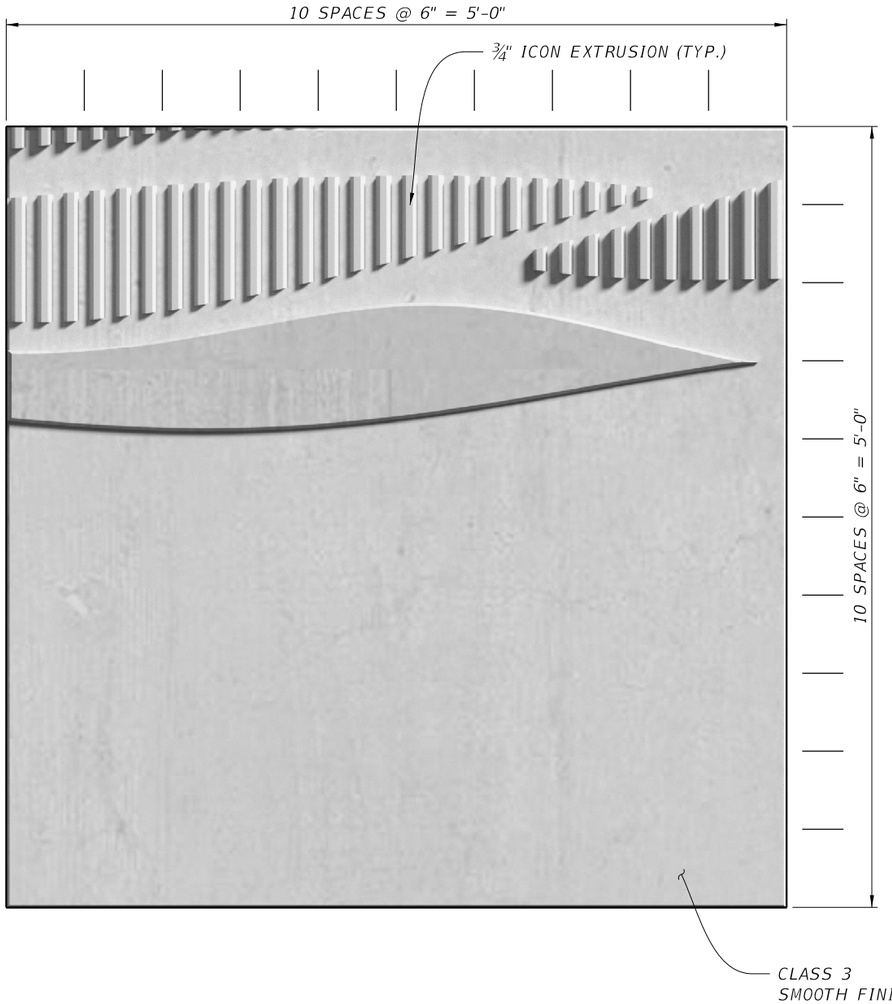

ICON NO. 9

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REVISIONS					
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TAMPA, FL 33607

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LCY	JGH	ADM	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

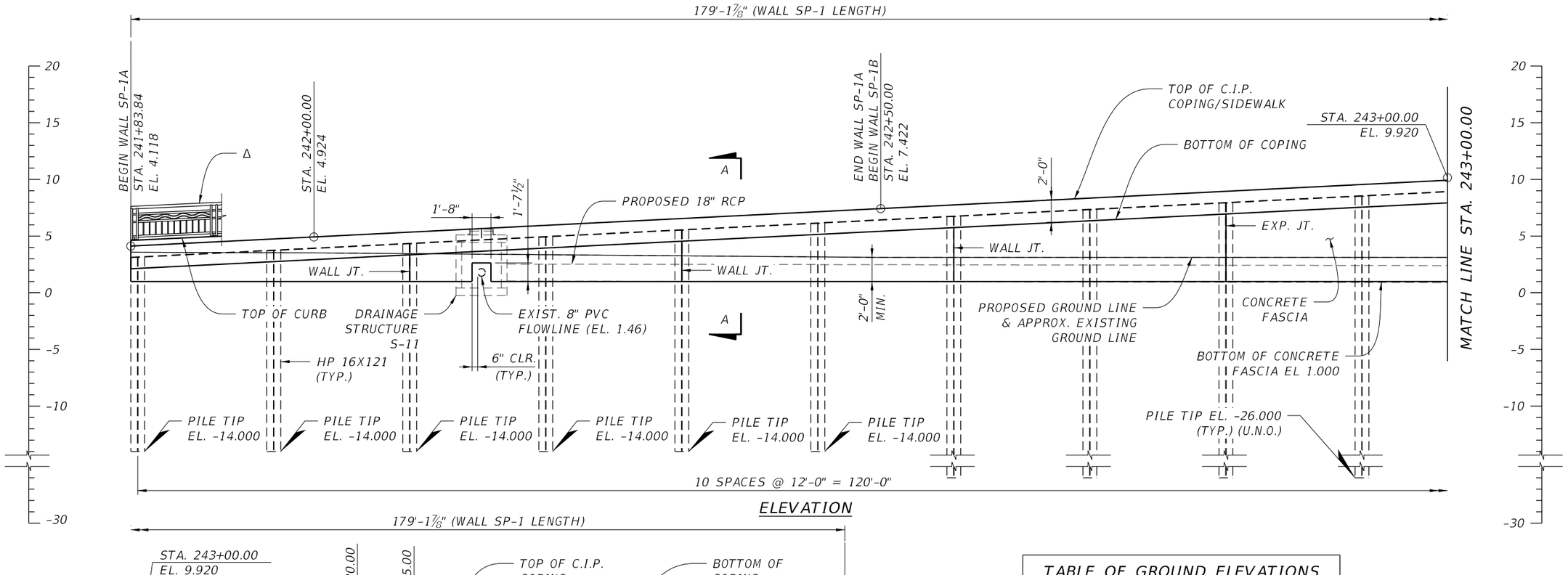
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MSE WALL ICON DETAILS (6 OF 6)

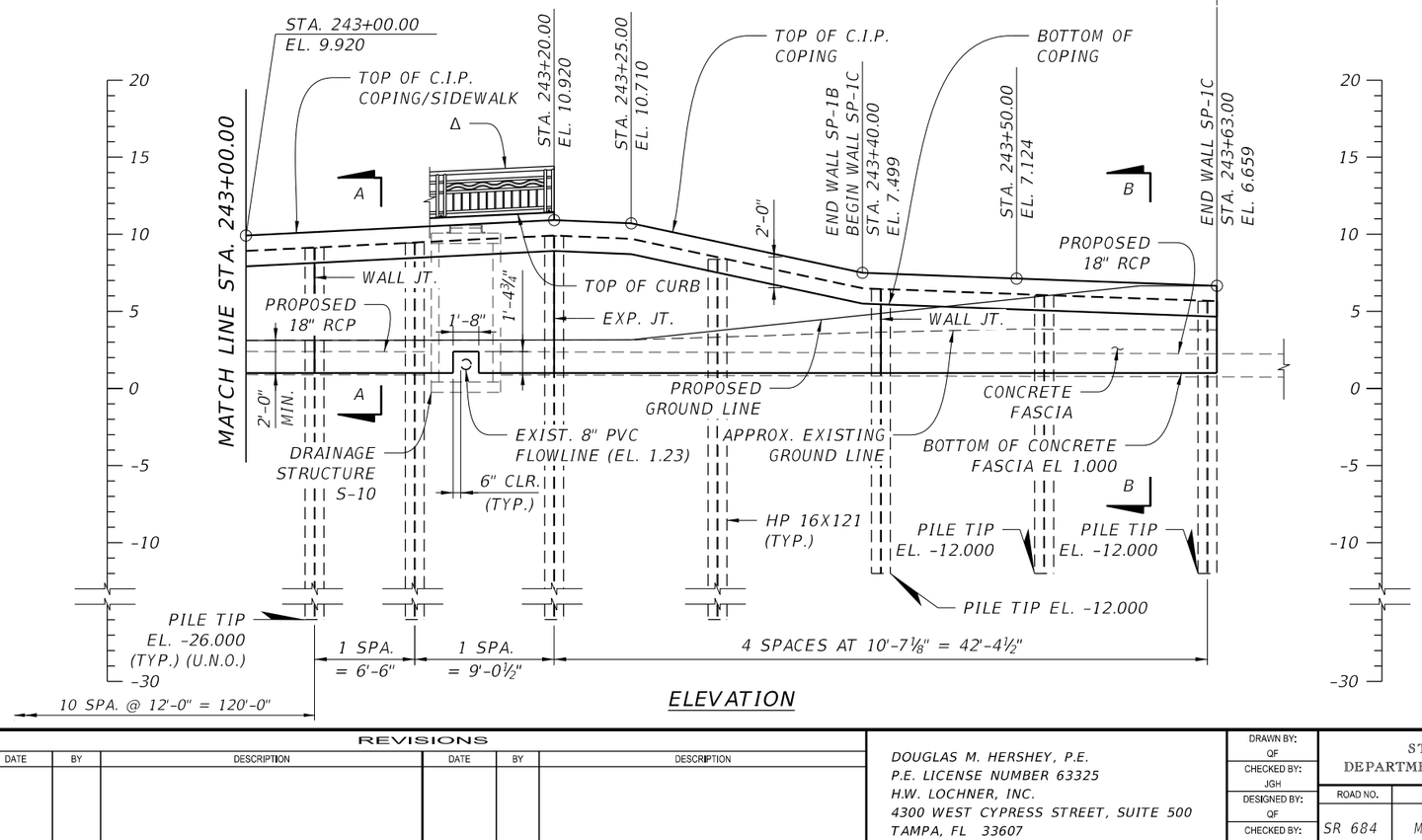
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-18



ELEVATION



ELEVATION

TABLE OF GROUND ELEVATIONS			
STATION	OFFSET (RIGHT)	PROPOSED GROUND	EXISTING GROUND
241+83.84	46.58	3.58	3.58
242+00.00	46.58	3.52	3.52
242+50.00	46.58	3.12	3.12
243+00.00	46.58	3.12	3.12
243+25.00	46.58	3.15	3.15
243+40.00	46.58	4.74	3.63
243+50.00	46.58	5.81	3.85
243+63.00	46.58	6.66	3.80

LEGEND:

Δ TOP OF PED. RAILING (PEDESTRIAN/ BICYCLE RAIL - TYPE SP) (INDEX 515-062) SEE SHEET B-11 FOR DETAILS.

NOTES:

1. FOR PERMANENT SOLDIER PILE GENERAL NOTES, SEE SHEET BW-20.
2. FOR PERMANENT SOLDIER PILE WALL PLAN VIEW, SEE SHEET BW-5.
3. FOR SECTIONS A-A, B-B AND ADDITIONAL DETAILS, SEE SHEET BW-21.
4. FIELD CUT REINFORCING STEEL AS NECESSARY AT CONCRETE FASCIA STEP LOCATIONS FOR EXIST. 8" PVC.
5. FAN HORIZONTAL REINFORCEMENT AT EACH SECTION OF CONCRETE FASCIA (FROM JOINT TO JOINT) SUCH THAT BARS ARE EVENLY SPACED THROUGHOUT LENGTH OF EACH SECTION.
6. FOR WALL JOINT AND EXPANSION JOINT DETAILS, SEE INDEX 400-010.
7. FOR DRAINAGE STRUCTURES ADDITIONAL INFORMATION, SEE ROADWAY PLANS.

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DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - WALL SP-1

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-19

GENERAL NOTES FOR PERMANENT SOLDIER PILE WALLS:

DESIGN SPECIFICATIONS:

FDOT STRUCTURES MANUAL DATED JANUARY 2023 AND SUBSEQUENT STRUCTURES DESIGN BULLETINS, IF ANY.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.

FDOT DESIGN MANUAL DATED JANUARY 2023 AND SUBSEQUENT ROADWAY DESIGN BULLETINS 23-01 & 23-02.

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2025-26 STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND FY 2025-26 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

GENERAL:

1. CONSTRUCT THE PERMANENT SOLDIER PILE WALL TO THE DIMENSIONS AND MINIMUM ELEVATIONS SHOWN IN THE PLANS. THE PILES MAY PENETRATE BELOW THE BOTTOM ELEVATION.
2. WALL DEFLECTIONS ARE LIMITED TO 1.5 INCHES.
3. NO ADDITIONAL PAYMENT WILL BE MADE FOR EXTRA AREA OF WALL IF CONTRACTOR ELECTS TO FURNISH LONGER SOLDIER PILES.
4. FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO DRIVING SOLDIER PILES. UTILITIES SHOWN ON THE PERMANENT WALL PLANS ARE APPROXIMATE. REFER TO UTILITY ADJUSTMENT SHEETS FOR DETAILS. PROTECT AND SUPPORT ALL EXISTING UTILITIES THAT ARE TO REMAIN IN PLACE ADJACENT TO SOLDIER PILE WALLS DURING CONSTRUCTION.
5. FIELD VERIFY LOCATION OF ALL EXISTING DRAINAGE PIPES PRIOR TO DRIVING SOLDIER PILES. EXISTING DRAINAGE PIPE LOCATIONS SHOWN ON THE WALL PLANS ARE APPROXIMATE.
6. IF THE CONTRACTOR ANTICIPATES PARAMETERS DIFFERENT FROM THOSE SHOWN IN THE PERMANENT SOLDIER PILE WALL TABLE OF VARIABLES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO BRING THIS TO THE ATTENTION OF THE ENGINEER FOR A POSSIBLE REDESIGN.
7. TIMBER LAGGING SHALL MEET THE REQUIREMENTS OF SPECIFICATION 952 AND SHALL BE 6" X 12" ROUGH SAWN LUMBER, NO. 1 SOUTHERN PINE ($5\frac{5}{8}$" X $11\frac{3}{8}$" NET DIMENSIONS) RATED AT Fb = 2795 PSI.
8. PREVENTION OF VOIDS FROM FORMING BEHIND THE LAGGING DURING CONSTRUCTION IS THE RESONSIBILITY OF THE CONTRACTOR.
9. NO EXCAVATION SHALL BE LEFT UN-STABILIZED BY TIMBER LAGGING AT THE END OF THE WORK DAY.
10. LONGITUDINAL DIMENSIONS SHOWN IN THE PLANS ARE MEASURED ALONG THE FRONT FACE OF THE WALL. WALL OFFSETS SHOWN ARE MEASURED TO THE FRONT FACE OF THE WALL.

DESIGN LOADS:

1. DESIGN PEDESTRIAN LIVE LOAD SURCHARGE OF 90 PSF.
2. ANY ADDITIONAL LOADS WHICH EXCEED THE DESIGN LOADS IS THE RESPONSIBILITY OF THE CONTRACTOR. IF THE CONTRACTOR DEEMS THAT ADDITIONAL LOAD WILL BE PLACED WITHIN A HORIZONTAL DISTANCE FROM THE TOP OF THE WALL EQUAL TO ONE HALF OF THE WALL HEIGHT, THEN A REDESIGN OF THE WALL IS REQUIRED. ANY REDESIGN COST AND ADDITIONAL WALLS OR DETAILS USED IS THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL PAYMENT WILL BE MADE OVER THE AREA SPECIFIED IN THE PLANS.
3. ALL SOLDIER PILING IS DESIGNED BASED ON THE "PERMANENT SOLDIER PILE WALL SOIL PARAMETERS" TABLE ON THIS SHEET.

SHOP DRAWINGS:

SHOP DRAWINGS MUST BE SUBMITTED FOR REVIEW AND APPROVAL. THE FULLY DETAILED SHOP DRAWINGS CONTAINING ALL DETAILS AND DIMENSIONS NECESSARY TO CONSTRUCT THE WALLS SHALL BE PREPARED TO DEPARTMENT STANDARDS AND SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. AS A MINIMUM, THE SHOP DRAWINGS SHALL INCLUDE:

1. SOLDIER PILE LAYOUT SHOWING STATIONS AND OFFSETS AT CRITICAL POINTS ALONG THE WALL (BEGIN WALL, END WALL, ETC.).
2. SHAPES AND SIZES OF MEMBERS USED AND SPLICE DETAILS ALONG WITH MATERIAL PROPERTIES.
3. TOP OF WALL AND TIP ELEVATIONS.
4. DETAILS RELATED TO UTILITIES AND DRAINAGE STRUCTURES THAT PENETRATE THE WALL.
5. METHODS FOR PREVENTION OF RETAINED FILL LOSS DURING CONSTRUCTION.

PAY ITEM NOTES:

1. COSTS OF TIMBER LAGGING, STEEL H-PILES, H-PILE SPLICES, CONCRETE FASCIA, REINFORCEMENT AND ANY OTHER ITEMS INCIDENTAL TO THE CONSTRUCTION OF THE PERMANENT SOLDIER PILE WALL SHALL BE INCLUDED IN PAY ITEM NO. 455-133-208. THE QUANTITY IS MEASURED ALONG THE FACE OF THE WALL FROM THE TOP TO THE BOTTOM OF THE CONCRETE FASCIA.
2. THE COST OF DEWATERING, IF NEEDED, SHALL BE INCLUDED IN PAY ITEM NO. 455-133-208.
3. NON-VIBRATORY INSTALLATION SHALL BE REQUIRED FOR WALL SP-1. THE COST ASSOCIATED WITH THE NON-VIBRATORY INSTALLATION METHOD SHALL BE INCLUDED IN PAY ITEM NO. 455-133-208.

SOLDIER PILE SPLICING

1. SEE NOTE 2 ON SHEET BW-5. THE TOTAL H-PILE LENGTH NEEDED TO ACHIEVE THE MINIMUM TIP ELEVATION SHALL BE ACCOMPLISHED BY USING MULTIPLE SPLICED SECTIONS OF H-PILE. MULTIPLE SPLICES FOR EACH H-PILE SHALL BE ANTICIPATED. THE LENGTH OF EACH H-PILE SECTION NEEDED TO ACHIEVE THE MINIMUM TIP ELEVATION SHALL BE DETERMINED BY THE CONTRACTOR.
2. SOLDIER PILE FIELD SPLICES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE PILE IN BOTH BEARING AND BENDING.
3. SPLICING SHALL BE PER SPECIFICATION 455.

MATERIALS:

1. H-PILES: ASTM A572 GRADE 50 (FY = 50 KSI)
2. CONCRETE CLASS IV: f'c = 5500 PSI
3. REINFORCING STEEL: GRADE 60 CARBON STEEL PER SPECIFICATION 931
4. WELD METAL: E70XX

ENVIRONMENTAL CLASSIFICATION:

1. EXTREMELY AGGRESSIVE

WELDING:

1. WELDING DETAILS AND WELDING OPERATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE ANSI/ AASHTO/AWS D1.5 BRIDGE WELDING CODE.

CORROSION PROTECTION:

1. H-PILES SHALL NOT BE COATED.
2. H-PILES HAVE BEEN DESIGNED WITH A SACRIFICIAL THICKNESS OF 0.225 INCHES.

PERMANENT SOLDIER PILE WALL SOIL PARAMETERS

APPROXIMATE ELEVATION (FT)	TOTAL UNIT WEIGHT (PCF)	EFFECTIVE UNIT WEIGHT (PCF)	ANGLE OF INTERNAL FRICTION (°)	COHESION (PSF)
SOLDIER PILE WALL SP-1				
> -14.8	105	43	29	0
-14.8 TO -24.8	100	38	26	0
-24.8 TO -49.8	112	50	30	0

PERMANENT SOLDIER PILE WALL TABLE OF VARIABLES

CONSTRUCTION INFORMATION						DESIGN PARAMETERS					
LOCATION						MAXIMUM ALLOWABLE DEFLECTION (IN)	SOIL AT BACKWALL ELEVATION (FT) *	SOIL AT FRONT OF WALL EL. (FT)	WATER ELEVATION (FT)		DESIGN LIVE LOAD (PSF)
WALL	BEGIN STATION	END STATION	OFFSET (FT)	MINIMUM WALL TIP ELEVATION (FT)	WALL TOP ELEVATION (FT)				FRONT OF WALL	BACK OF WALL	
SP-1 (SECTION A)	241+83.84	242+50.00	46.58' (RT)	**	**	1.50	7.42	3.00	3.00	6.60	90
SP-1 (SECTION B)	242+50.00	243+40.00	46.58' (RT)	**	**	1.50	10.92	3.00			
SP-1 (SECTION C)	243+40.00	243+63.00	46.58' (RT)	**	**	1.50	7.50	3.00			

* MATCHED MAXIMUM TOP OF WALL COPING ELEVATION WITHIN WALL SEGMENT

** FOR WALL TOP ELEVATIONS AND SOLDIER PILE WALL MINIMUM WALL TIP ELEVATIONS, SEE SHEET BW-19.

REVISIONS

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL SP-1 DETAILS (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW - 20

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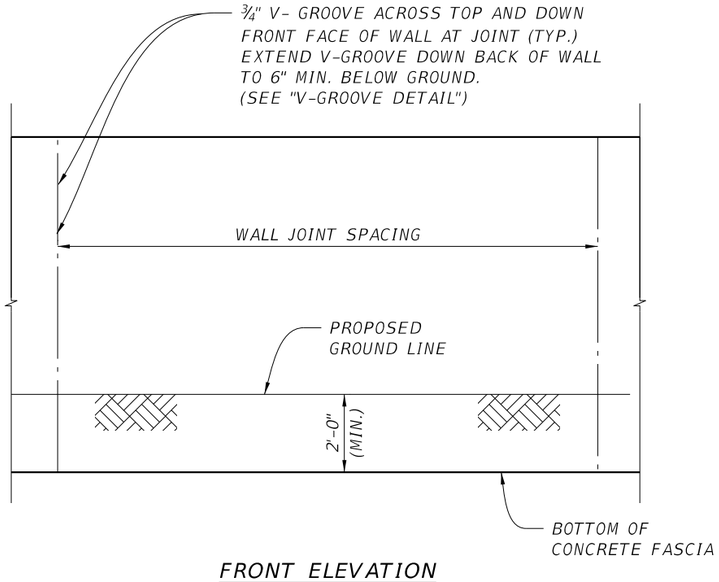
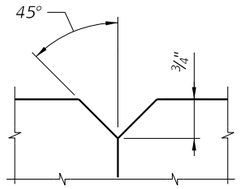
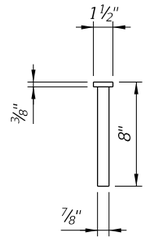


FRONT ELEVATION

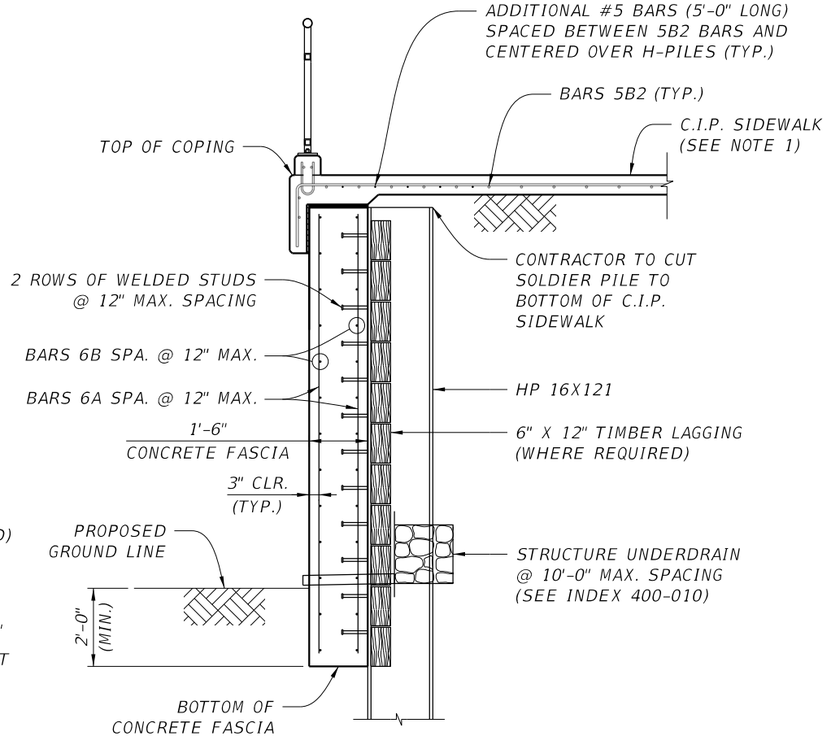
(PEDESTRIAN/BICYCLE RAILING AND COPING NOT SHOWN FOR CLARITY)



V-GROOVE DETAIL



WELDED STUD DETAIL



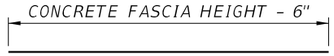
SECTION A-A

(STA. 241+83.84 TO STA. 243+25.00)

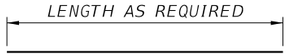
BILL OF REINFORCING STEEL

MARK	SIZE	NO. BARS	LENGTH
A	6	AS REQUIRED	
B	6	AS REQUIRED	
A	4	AS REQUIRED	
U1	4	30	5'-10"
D	4	30	2'-8"

BAR BENDING DIAGRAM

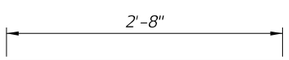


BARS 6A

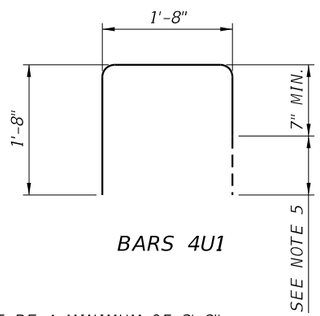


BARS 4A

BARS 6B



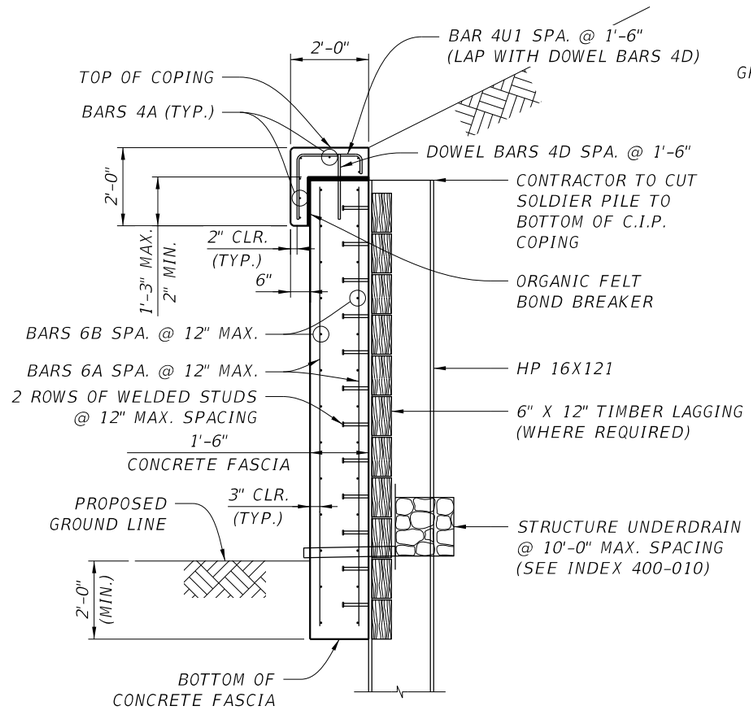
DOWEL BARS 4D



BARS 4U1

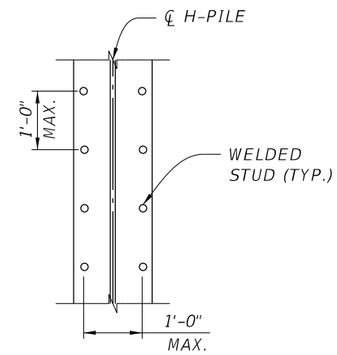
NOTES:

1. ALL BAR DIMENSIONS ARE OUT TO OUT.
2. LAP SPLICES FOR BARS 6A AND 6B MUST BE A MINIMUM OF 2'-8". LAP SPLICES FOR BARS 4A MUST BE A MINIMUM OF 1'-8".
3. FIELD BEND AS NECESSARY TO MAINTAIN MINIMUM CLEAR COVER.
4. EMBED DOWEL BARS 4D 12" INTO CONCRETE FASCIA. FIELD CUT TOP OF BAR AS NECESSARY TO MAINTAIN 2" MINIMUM COVER.
5. FIELD CUT BARS 4U1 AS REQUIRED TO MAINTAIN 2" MINIMUM COVER.



SECTION B-B

(STA. 243+25.00 TO 243+63.00)



H-PILE PARTIAL ELEVATION

NOTES:

1. FOR ADDITIONAL C.I.P COPING WITH C.I.P. SIDEWALK DETAILS, SEE SHEET BW-12.

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REVISIONS

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DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

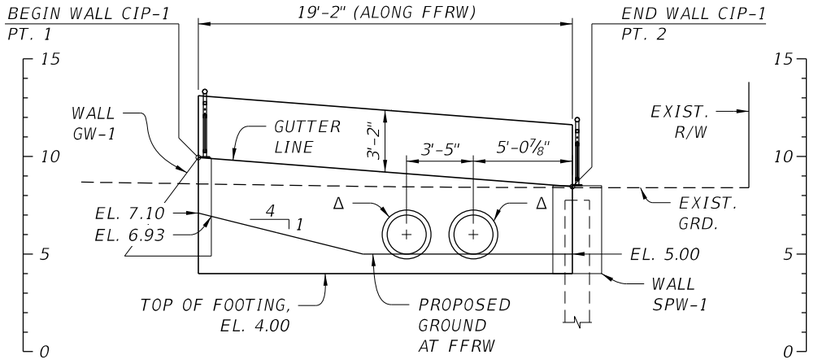
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL SP-1 DETAILS (2 OF 2)

REF. DWG. NO.:

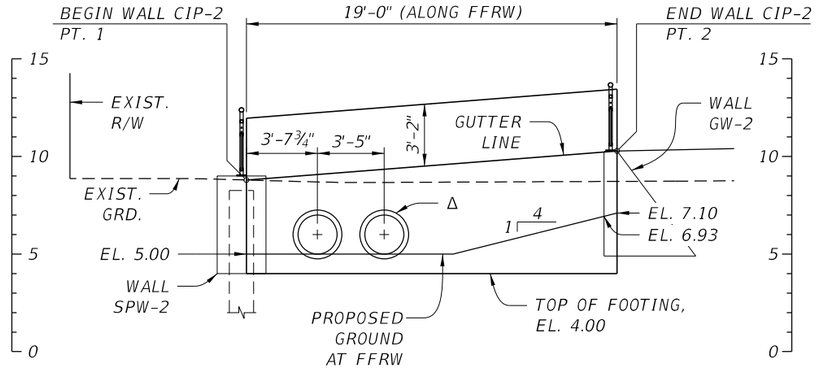
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-21



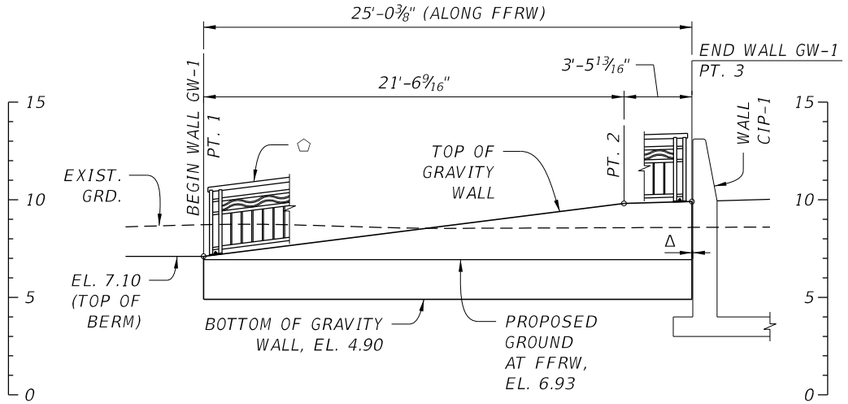
WALL CIP-1 ELEVATION

Δ = 24" DIA. PIPE WITH INVERT EL. 5.00



WALL CIP-2 ELEVATION

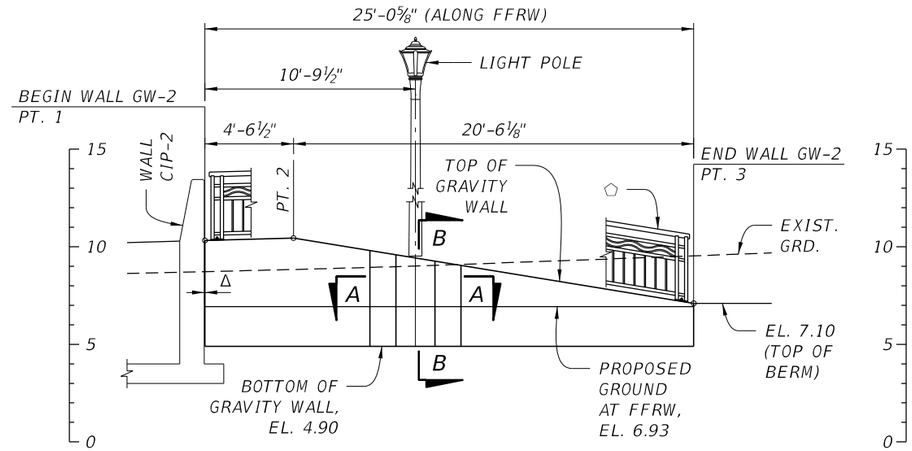
Δ = 24" DIA. PIPE WITH INVERT EL. 5.00



WALL GW-1 ELEVATION

Δ = ½" PREFORMED JOINT FILLER FOR FULL HEIGHT OF GRAVITY WALL

⬠ = PEDESTRIAN/BICYCLE RAILING (ALUMINUM) (TYPE SP) (INDEX 515-062 & SHEET B-11)



WALL GW-2 ELEVATION

Δ = ½" PREFORMED JOINT FILLER FOR FULL HEIGHT OF GRAVITY WALL

⬠ = PEDESTRIAN/BICYCLE RAILING (ALUMINUM) (TYPE SP) (INDEX 515-062 & SHEET B-11)

WALL CIP-1 ELEVATIONS

POINT	STATION	OFFSET (RT.)	GUTTER LINE ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	208+63.93	50.77'	9.939	7.100	8.590
2	208+62.82	69.91'	8.450	5.000	8.400

WALL CIP-2 ELEVATIONS

POINT	STATION	OFFSET (RT.)	GUTTER LINE ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	208+77.28	69.40'	8.791	5.000	8.800
2	208+78.48	50.44'	10.280	7.100	8.720

WALL GW-1 ELEVATIONS

POINT	STATION	OFFSET (RT.)	TOP OF WALL ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	208+39.32	52.00'	7.100	6.933	8.720
2	208+60.44	51.52'	9.805	6.933	8.598
3	208+63.85	51.44'	9.902	6.933	8.580

WALL GW-2 ELEVATIONS

POINT	STATION	OFFSET (RT.)	TOP OF WALL ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	208+78.48	51.10'	10.316	6.933	8.720
2	208+82.92	51.00'	10.440	6.933	8.813
3	209+03.03	50.54'	7.100	6.933	9.530

ALUMINUM PEDESTRIAN/BICYCLE RAILING DATA TABLE

PROJECT REQUIREMENTS					Table Date 01-01-11
STATION TO STATION (LT. OR RT.)	HEIGHT (in.)	STYLE TYPE (1)	REQUIRED: (YES/NO)		
			BOTTLE GUARD	COLORED COATINGS	INFILL PANEL TO REJECT PASSAGE OF 4" SPHERE (SPECIAL CONDITIONS ONLY)
208+39.32 (RT.) TO 208+63.85 (RT.)	42	TYPE SP	NO	NO	NO
208+78.48 (RT.) TO 209+03.03 (RT.)	42	TYPE SP	NO	NO	NO

(1) FOR TYPE SP DETAILS, SEE SHEET B-11.

NOTES:

1. SEE SHEET BW-4 FOR PLAN VIEW.
2. WALLS GW-1 & GW-2 SHALL BE PER INDEX 400-011 (SCHEME 2).
3. SEE SHEETS BW-23 & BW-24 FOR WALLS CIP-1 & CIP-2 DETAILS.
4. SEE SHEET BW-25 FOR SECTIONS A-A & B-B.
5. WORK THE ALUMINUM PEDESTRIAN/BICYCLE RAILING DATA TABLE WITH SHEET B-11 AND INDEX 515-062.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - WALLS CIP-1, CIP-2, GW-1 & GW-2

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

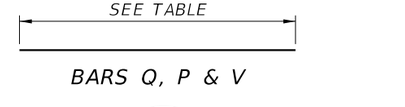
SHEET NO.: BW-22

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

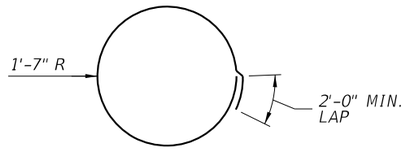
BILL OF REINFORCING STEEL

MARK	SIZE	NO. BARS	LENGTH
Q	4	8 (CIP-1) 8 (CIP-2)	4'-2"
P	4	8 (CIP-1) 8 (CIP-2)	4'-4½"
T	4	4 (CIP-1) 4 (CIP-2)	(CIRCULAR) 11'-11⅜"
V	4	10 (CIP-1) 10 (CIP-2)	18'-8" (CIP-1) 18'-6" (CIP-2)
W	5	51 (CIP-1) 50 (CIP-2)	7'-4"

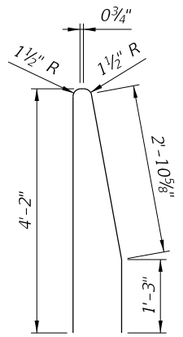
BAR BENDING DIAGRAM



BARS Q, P & V



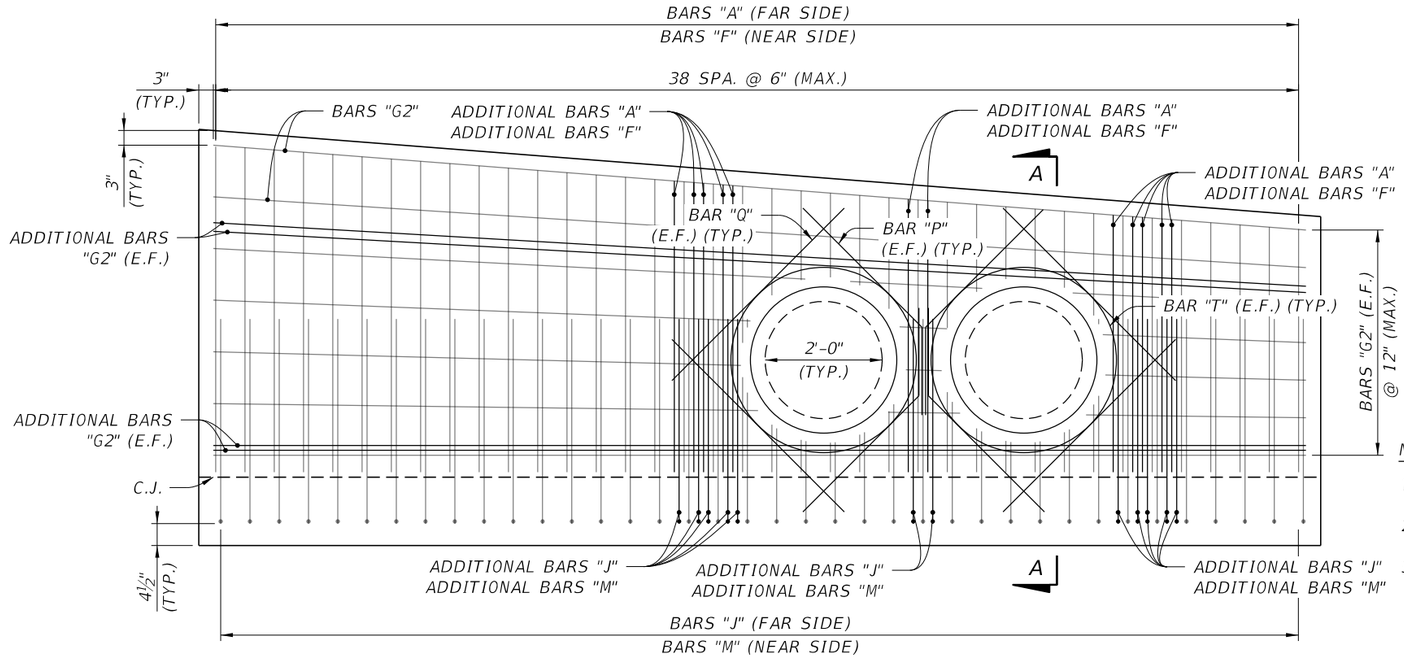
BARS T



BARS W

NOTES:

1. ALL BAR DIMENSIONS ARE OUT TO OUT.
2. FIELD BEND BARS P AS NECESSARY TO MAINTAIN MINIMUM CLEAR COVER.
3. PLACE BARS Q, P & T IN BTWN. WALL REINFORCING MATS.



PIPE PENETRATION DETAIL

(CIP-1 SHOWN, CIP-2 SIMILAR)

SECTION A-A

(WALL REINFORCEMENT NOT SHOWN FOR CLARITY)

NOTES:

1. WORK THIS SHEET WITH STANDARD PLAN INDEX 400-010 AND SHEET BW-24.
2. FIELD CUT WALL REINFORCING STEEL AS NECESSARY TO CLEAR PIPE OPENING.
3. BARS H, G1 NOT SHOWN IN PIPE PENETRATION DETAIL FOR CLARITY.

LEGEND:

* BAR "V" AT 8" SPACING (MAX.) (TYP.)

Δ BAR "W" (TIED TO WALL BARS A AND F)

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALLS CIP-1 & CIP-2 DETAILS (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-23

C-I-P CANTILEVER RETAINING WALLS DATA TABLES

WALL DIMENSIONS — Table Date 01-01-11

WALL NO.	BEGIN		END		HEIGHT BEGIN		HEIGHT END		WALL LENGTH		D	W	L_{foot}		L_{toe}		SLOPE BKWALL	D_{soil}		L_{key}	D_{key}	V_{step}	WALL COVER	FTGCOV (TYP.)	FTGCOV (BOT.)
	STATION	OFFSET	STATION	OFFSET	FT.	IN.	FT.	IN.	FT.	IN.	IN.	IN.	FT.	IN.	FT.	IN.		FT.	IN.	IN.	IN.	IN.	IN.	IN.	IN.
CIP-1	208+63.93	50.77	208+62.82	69.91	5	11.25	4	5.5	19	2	14	16	6	6	1	0	0	1	0	0	0	0	3	4	4.5
CIP-2	208+77.28	69.40	208+78.48	50.44	4	9.5	6	3.25	19	0	14	16	6	6	1	0	0	1	0	0	0	0	3	4	4.5

BILL OF REINFORCING STEEL — Table Date 01-01-11

WALL NO.	BARS J										BARS K										BARS M							
	SIZE	NO.	SPACING	A BEGIN		A END		B		AVERAGE TOTAL LENGTH		SIZE	NO.	SPACING	A BEGIN		A END		B		AVERAGE TOTAL LENGTH		SIZE	NO.	A		B		TOTAL LENGTH	
			IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.			IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.			FT.	IN.	FT.	IN.	FT.	IN.
CIP-1	5	51	6	2	8.5	2	8.5	1	9	4	3.5	0	0	0	0	0	0	0	0	0	0	0	4	51	2	0.75	4	11	6	11.75
CIP-2	5	50	6	2	8.5	2	8.5	1	9	4	5.5	0	0	0	0	0	0	0	0	0	0	0	4	50	2	0.75	4	11	6	11.75

BILL OF REINFORCING STEEL — Table Date 01-01-11

WALL NO.	BARS H					BARS G1						BARS R				BARS Z					BARS A						
	SIZE	NO.	SPACING	LENGTH		SIZE	NO.	SPACING	NO. OF LAP SPLICES	TOTAL LENGTH		SIZE	NO.	LENGTH		SIZE	NO.	SPACING	LENGTH		SIZE	NO.	LENGTH BEGIN		LENGTH END		AVERAGE LENGTH	
			IN.	FT.	IN.			IN.		FT.	IN.			FT.	IN.			IN.	FT.	IN.			FT.	IN.	FT.	IN.	FT.	IN.
CIP-1	5	39	6	5	10	4	14	12	0	18	6	0	0	0	0	0	0	0	0	0	5	51	5	8.25	4	2.5	4	11.25
CIP-2	5	38	6	5	10	4	14	12	0	18	4	0	0	0	0	0	0	0	0	0	5	50	4	6.5	6	0.25	5	3.5

BILL OF REINFORCING STEEL — Table Date 01-01-11

WALL NO.	BARS F									BARS G2				BARS D			
	SIZE	NO.	SPACING	LENGTH BEGIN		LENGTH END		AVERAGE LENGTH		SIZE	NO.	LENGTH		SIZE	NO.	LENGTH	
			IN.	FT.	IN.	FT.	IN.	FT.	IN.			FT.	IN.			FT.	IN.
CIP-1	4	51	6	5	8.25	4	2.5	4	11.25	4	22	18	8	5	0	1	6
CIP-2	4	50	6	4	6.5	6	0.25	5	3.5	4	20	18	6	5	0	1	6

NOTES:

1. WORK THESE DATA TABLES WITH INDEX 400-010 AND SHEET BW-23.
2. CONCRETE CLASS IV (F'C = 5500 PSI) WITH HIGHLY REACTIVE POZZOLANS.
3. WALL EXPOSED FACE SURFACE TEXTURE SHALL BE SMOOTH FINISH.
4. ENVIRONMENTAL CLASSIFICATION IS EXTREMELY AGGRESSIVE.
5. MINIMUM SOIL NOMINAL BEARING RESISTANCE = 4000 PSF.
6. A VALUE OF '0' FOR SLOPE BACKWALL INDICATES FRONT AND BACK OF WALL ARE PARALLEL.
7. D_{soil} IS TYPICAL DEPTH OF SOIL AND IS USED FOR DESIGN PURPOSES ONLY. SEE CONTROL DRAWINGS FOR ACTUAL GROUND LINE.
8. NON-ZERO VALUES FOR L_{key} AND D_{key} INDICATE THE EXISTENCE OF A SHEAR KEY.
9. A NON-ZERO VALUE FOR V_{step} INDICATES THE EXISTENCE OF A FOOTING STEP, SEE CONTROL DRAWINGS FOR LOCATION.
10. BARS J, K, A AND F VARY UNIFORMLY BETWEEN BEGIN AND END WALL HEIGHTS AS INDICATED BY BEGIN AND END DIMENSIONS.
11. THE NUMBER OF G1 BARS INCLUDES 2 ADDITIONAL BARS WHEN A SHEAR KEY IS SPECIFIED.
12. FOR WALLS WITH VARIABLE BEGIN/END HEIGHT, BARS G2 SHALL BE FANNED SUCH THAT THEY ARE EVENLY SPACED THROUGHOUT LENGTH OF WALL.
13. NUMBER OF BARS SHOWN FOR BARS "J", "M", "A", "F" AND "G2" INCLUDE ADDITIONAL BARS SHOWN ON PIPE PENETRATION DETAIL ON SHEET BW-23.
14. FIELD CUT BARS "A" AND "F" AS NECESSARY TO MAINTAIN COVER AT TOP OF WALL.
15. CONCRETE AND REINFORCEMENT QUANTITIES REQUIRED FOR BARRIER ON TOP OF C-I-P CANTILEVER WALL TO BE INCLUDED IN PAY ITEMS 400-4-11 AND 415-1-3, RESPECTIVELY.

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: JGH
DESIGNED BY: LCY
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

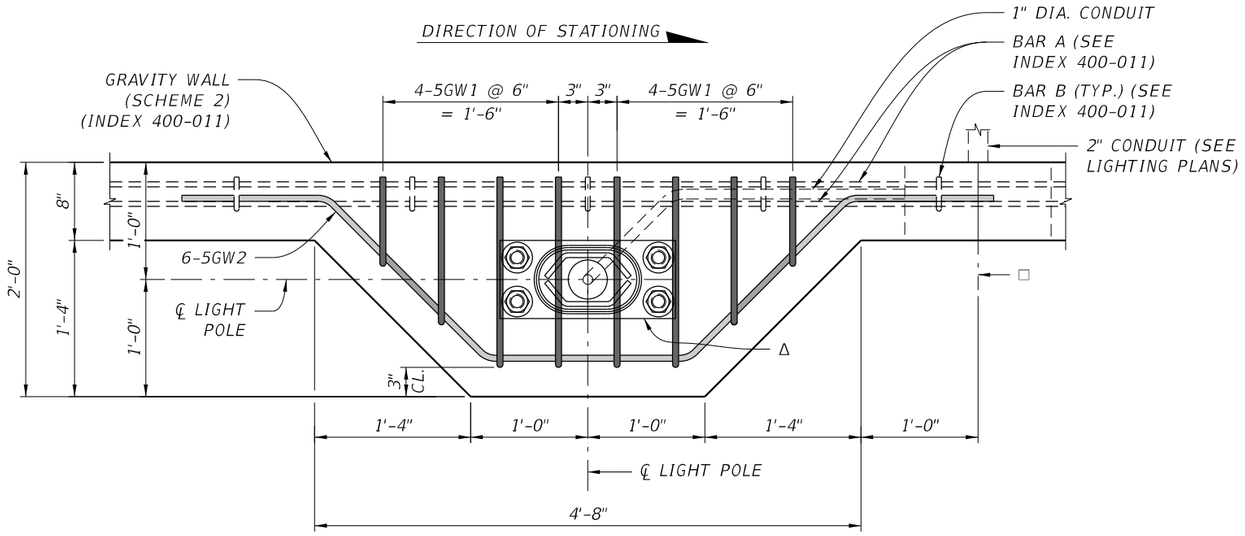
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALLS CIP-1 & CIP-2 DETAILS (2 OF 2)

REF. DWG. NO.:

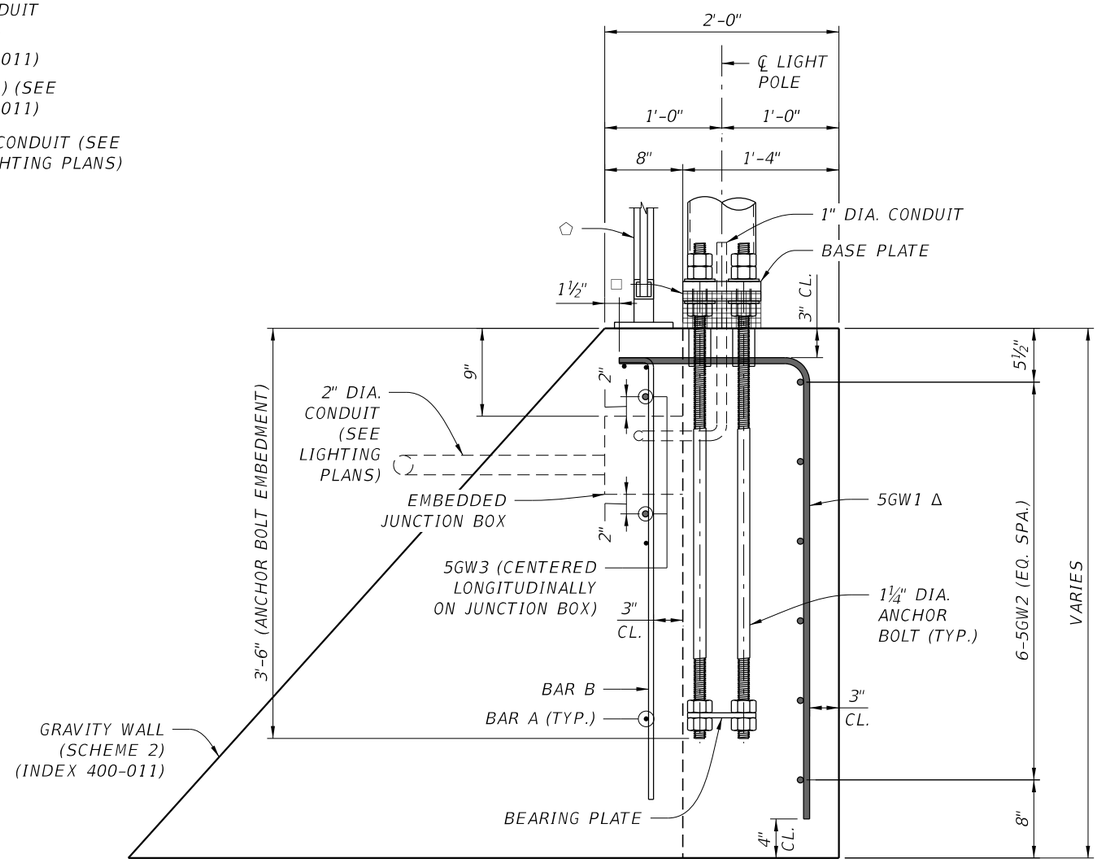
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-24



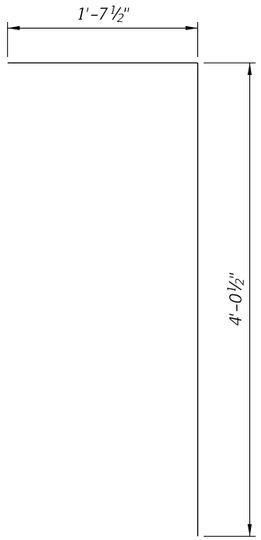
SECTION A-A

(2" DIA. CONDUIT & 5GW3 BARS NOT SHOWN FOR CLARITY.)
Δ = SEE INDEX 715-002 FOR BASE PLATE & BEARING PLATE DETAILS FOR MEDIAN BARRIER MOUNTED LIGHT POLES
□ = ℄ EMBEDDED JUNCTION BOX



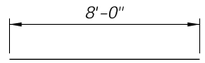
SECTION B-B

(SEE INDEX 400-011 & INDEX 715-002 FOR DETAILS NOT SHOWN.)
Δ = FIELD CUT BARS AS NEEDED TO MAINTAIN REQUIRED COVER
□ = WIRE SCREEN. SEE SPECIFICATION 649 FOR INSTALLATION REQUIREMENTS.
⬠ = PEDESTRIAN/BICYCLE RAIL - TYPE SP (INDEX 515-062 AND SHEET B-11)



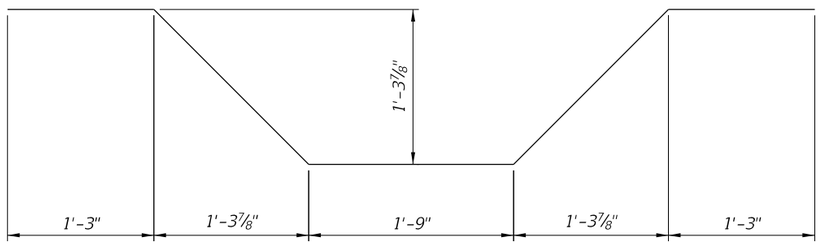
BAR 5GW1 (TYPE 10)

(8 BARS REQUIRED)



BAR 5GW3 (TYPE 1)

(2 BARS REQUIRED)



BAR 5GW2 (TYPE 42)

(6 BARS REQUIRED)

NOTES:

1. FOR LOCATION OF SECTIONS A-A & B-B, SEE SHEET BW-22.
2. BARS 5GW1, 5GW2 AND 5GW2 SHALL MEET THE REQUIREMENTS PROVIDED IN INDEX 400-011.
3. THE COST TO FURNISH AND INSTALL BARS 5GW1, 5GW2 AND 5GW3 SHALL BE INCLUDED IN THE COST OF THE GRAVITY WALL.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

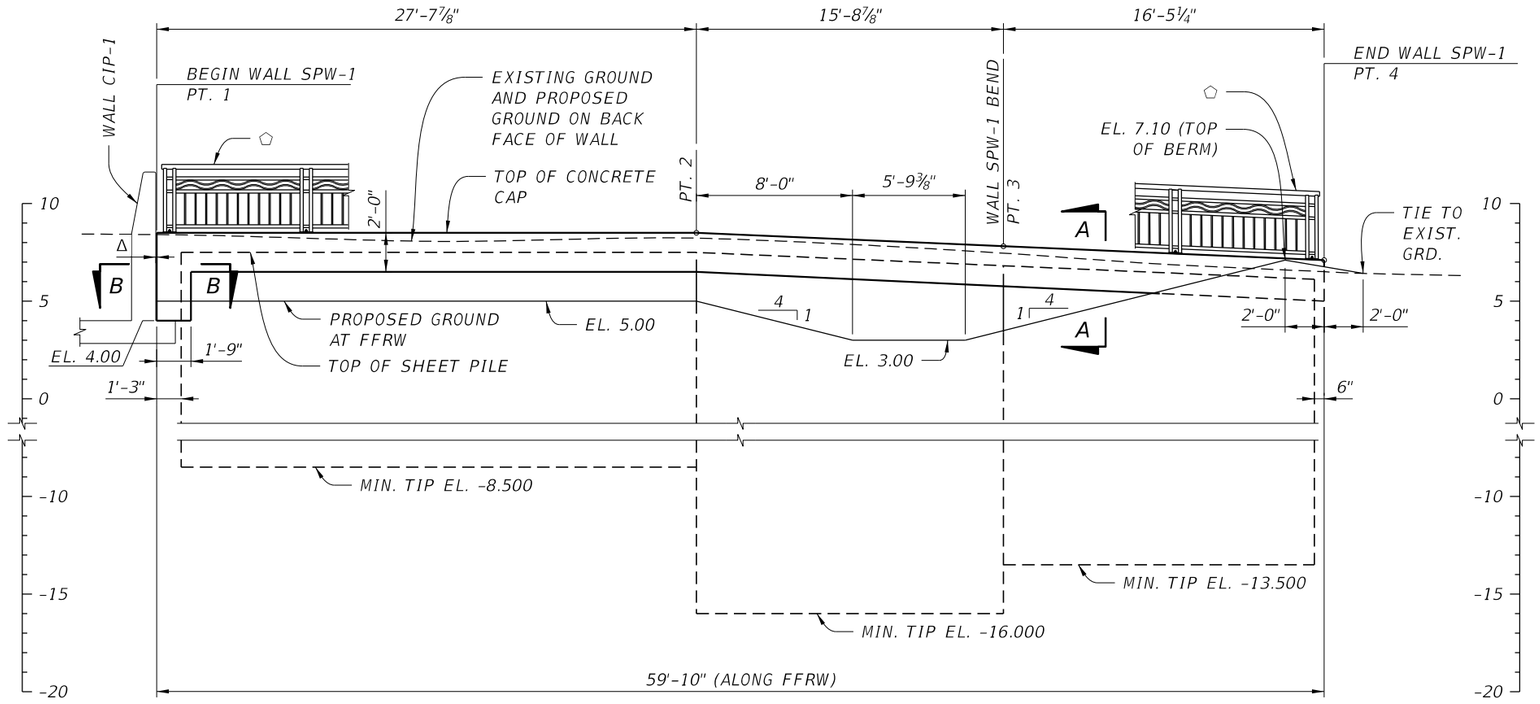
SHEET TITLE: WALL GW-2 DETAILS

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-25

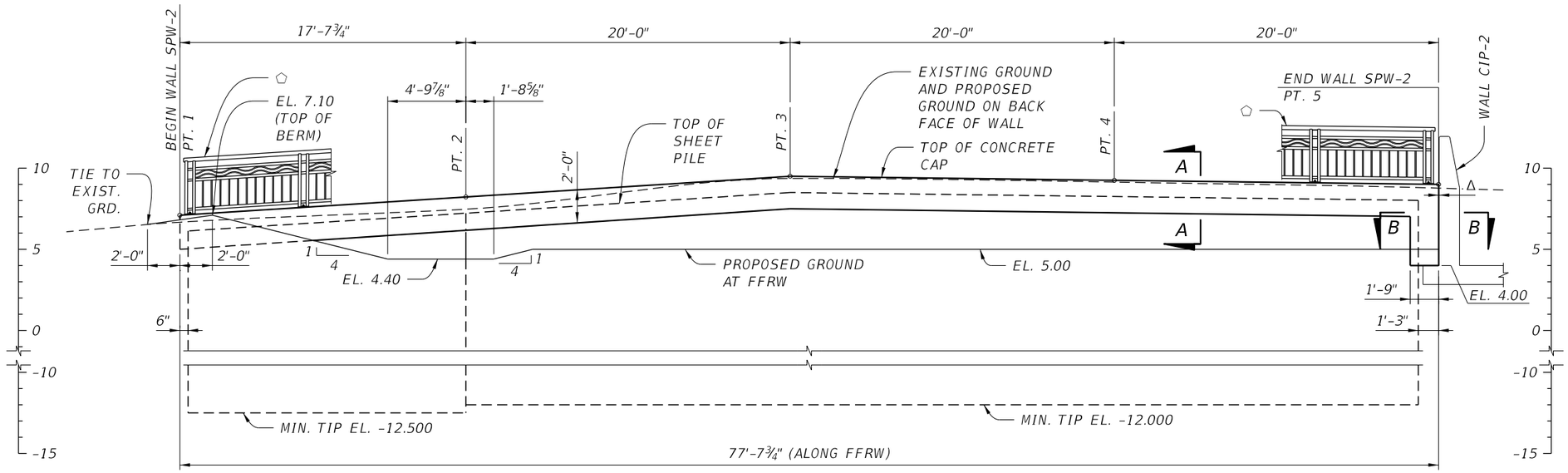
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



WALL SPW-1 ELEVATION

Δ = ½" PREFORMED JOINT FILLER

⬠ = PEDESTRIAN/BICYCLE RAILING (ALUMINUM) (TYPE SP) (INDEX 515-062 & SHEET B-11)



WALL SPW-2 ELEVATION

Δ = ½" PREFORMED JOINT FILLER

⬠ = PEDESTRIAN/BICYCLE RAILING (ALUMINUM) (TYPE SP) (INDEX 515-062 & SHEET B-11)

WALL SPW-1 ELEVATIONS

POINT	STATION	OFFSET (RT.)	TOP OF WALL ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	208+62.84	68.91'	8.500	5.000	8.401
2	208+34.06	70.17'	8.500	5.000	8.108
3	208+20.65	70.87'	7.815	3.390	6.698
4	208+05.09	66.98'	7.100	6.710	5.948

WALL SPW-2 ELEVATIONS

POINT	STATION	OFFSET (RT.)	TOP OF WALL ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	209+53.00	67.11'	7.100	6.765	6.657
2	209+35.81	67.20'	8.225	4.400	7.535
3	209+16.33	67.44'	9.500	5.000	9.339
4	208+96.85	67.84'	9.250	5.000	9.159
5	208+77.38	68.39'	9.000	5.000	8.844

NOTES:

1. SEE SHEET BW-4 FOR PLAN VIEW.
2. SEE SHEETS BW-34 & BW-35 FOR WALLS SPW-1 & SPW-2 DETAILS.

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: LTH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

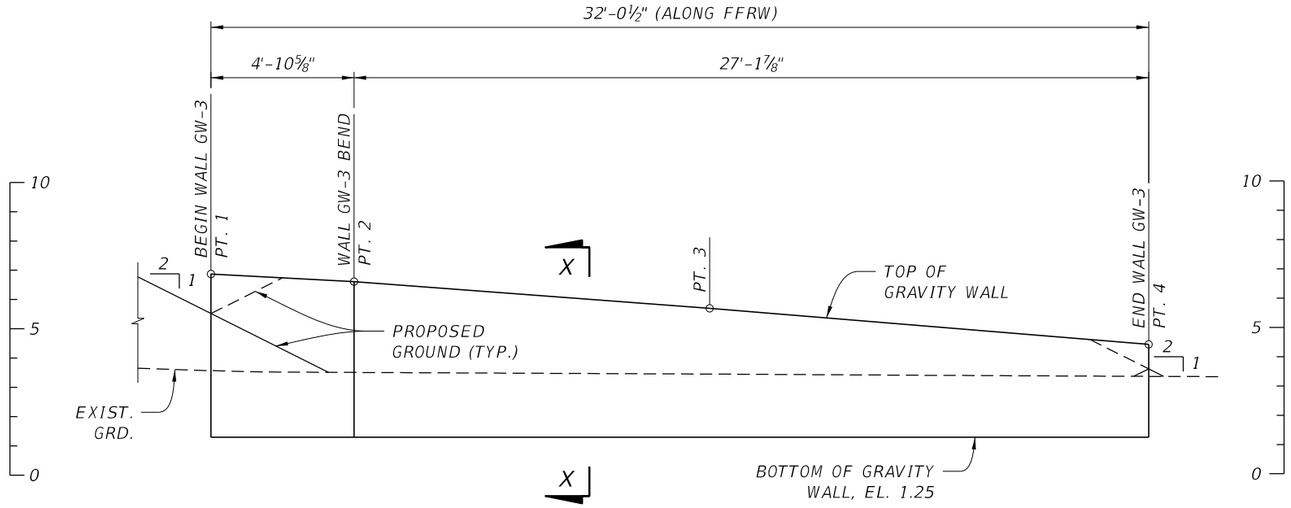
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - WALLS SPW-1 & SPW-2

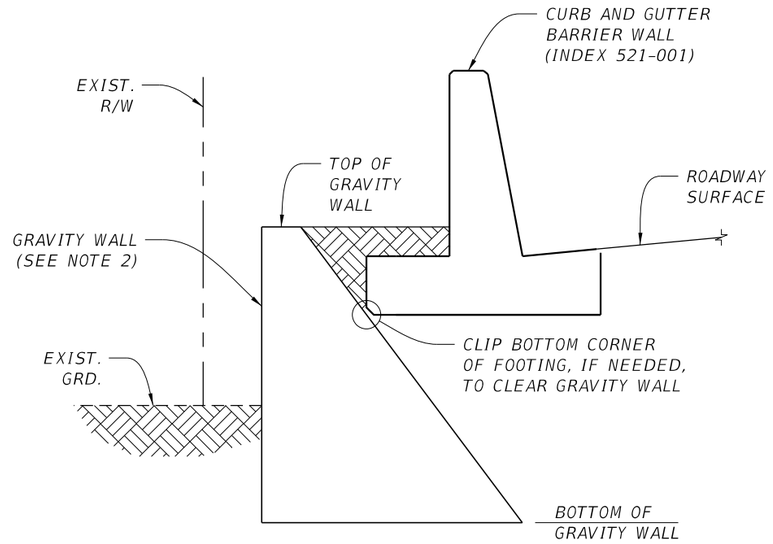
REF. DWG. NO.

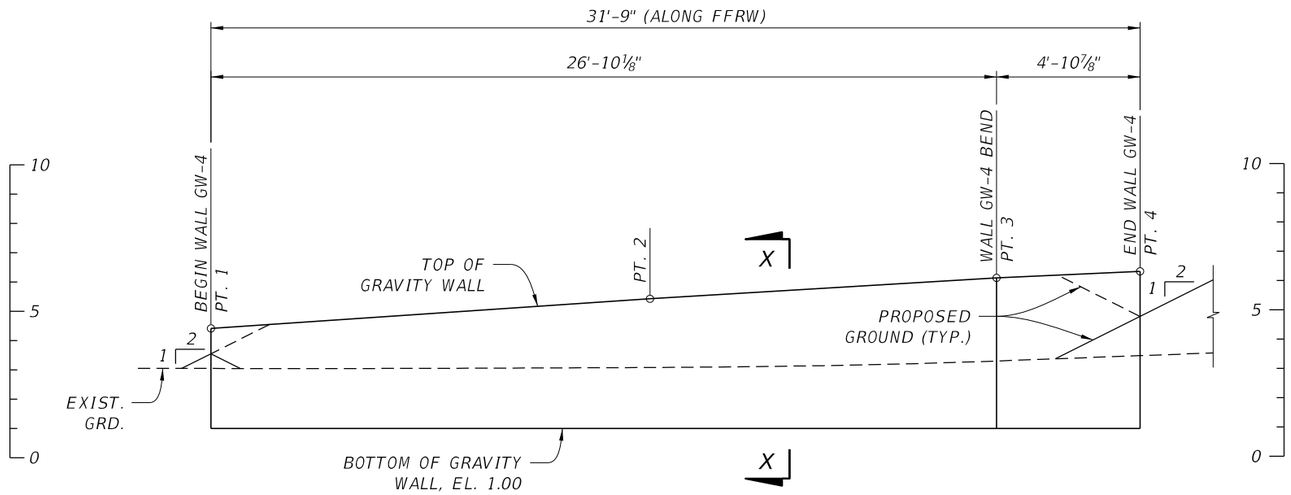
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-26



WALL GW-3 ELEVATION





WALL GW-4 ELEVATION

WALL GW-3 ELEVATIONS					
POINT	STATION	OFFSET (RT.)	TOP OF WALL ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	30+45.15	16.86'	6.836	5.521	3.521
2	30+49.85	15.50'	6.562	6.562	3.461
3	30+62.00	15.53'	5.649	5.649	3.405
4	30+77.00	15.58'	4.417	3.581	3.326

WALL GW-4 ELEVATIONS					
POINT	STATION	OFFSET (LT.)	TOP OF WALL ELEV.	PROPOSED GRD. ELEV.	EXIST. GRD. ELEV.
1	30+77.00	15.42'	4.416	3.552	3.049
2	30+62.00	15.47'	5.428	5.428	3.080
3	30.50.16	15.50'	6.141	6.141	3.304
4	30+45.45	16.89'	6.366	4.826	3.486

NOTES:

1. SEE SHEET BW-5 FOR PLAN VIEW.
2. WALLS GW-3 & GW-4 SHALL BE PER INDEX 400-011 (SCHEME 2).

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

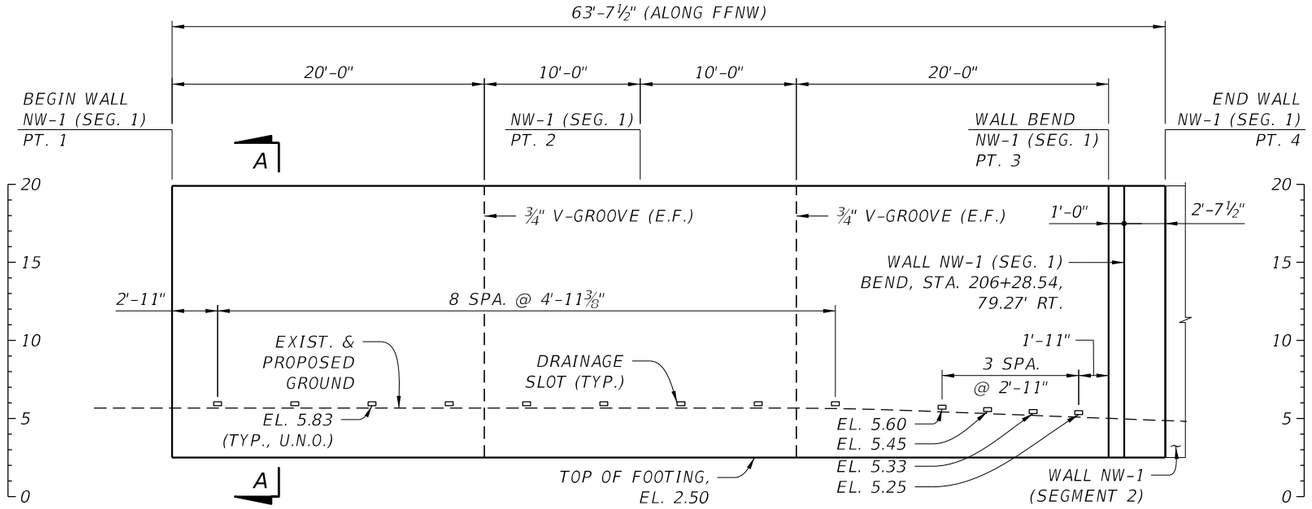
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - WALLS GW-3 & GW-4

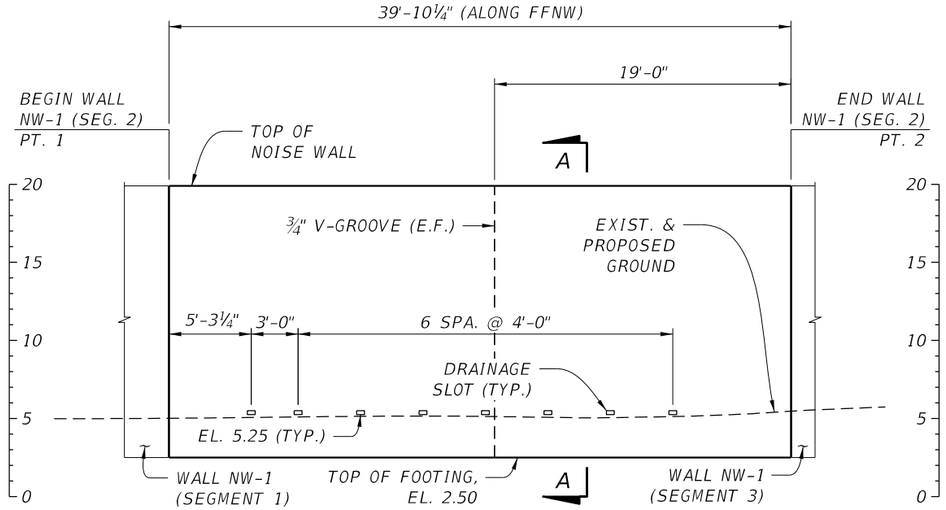
REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

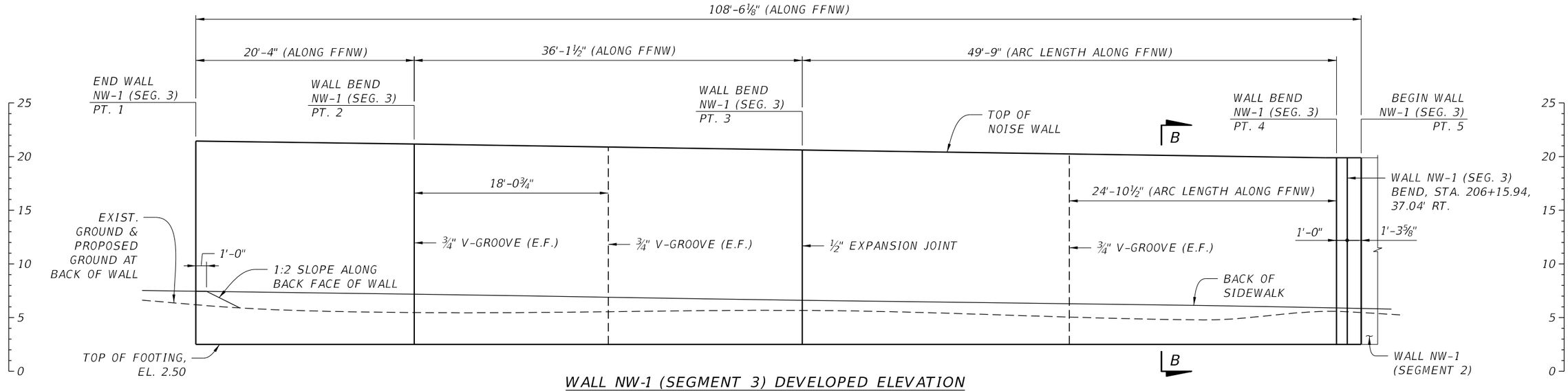
SHEET NO. BW-27



WALL NW-1 (SEGMENT 1) DEVELOPED ELEVATION



WALL NW-1 (SEGMENT 2) ELEVATION



WALL NW-1 (SEGMENT 3) DEVELOPED ELEVATION

WALL NW-1 (SEGMENT 1) ELEVATIONS				
POINT	STATION	OFFSET (RT.)	TOP OF NOISE WALL ELEV.	EXIST. & PROPOSED GROUND ELEV.
1	205+69.99	78.71'	19.894	5.670
2	205+99.42	79.34'	19.894	5.671
3	206+28.51	80.27'	19.894	5.010
4	206+27.86	76.75'	19.894	5.009

WALL NW-1 (SEGMENT 2) ELEVATIONS				
POINT	STATION	OFFSET (RT.)	TOP OF NOISE WALL ELEV.	EXIST. & PROPOSED GROUND ELEV.
1	206+27.85	76.71'	19.894	5.009
2	206+17.33	38.33'	19.894	5.416

WALL NW-1 (SEGMENT 3) ELEVATIONS					
POINT	STATION	OFFSET (RT.)	TOP OF NOISE WALL ELEV.	EXIST. GROUND ELEV.	BACK OF SW. ELEV.
1	207+20.00	42.53'	21.452	6.190	7.452
2	207+00.00	42.54'	21.174	5.467	7.174
3	206+65.00	36.04'	20.615	5.670	6.615
4	206+15.94	36.04'	19.894	---	5.894
5	206+16.29	38.29'	19.894	5.416	---

NOTES:

1. SEE SHEET BW-4 FOR PLAN VIEW.
2. SEE SHEETS BW-29 THRU BW-33 FOR DETAILS.
3. SEE SHEET BW-29 FOR SECTIONS A-A & B-B.
4. WORK THIS SHEET WITH INDEX 400-010.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

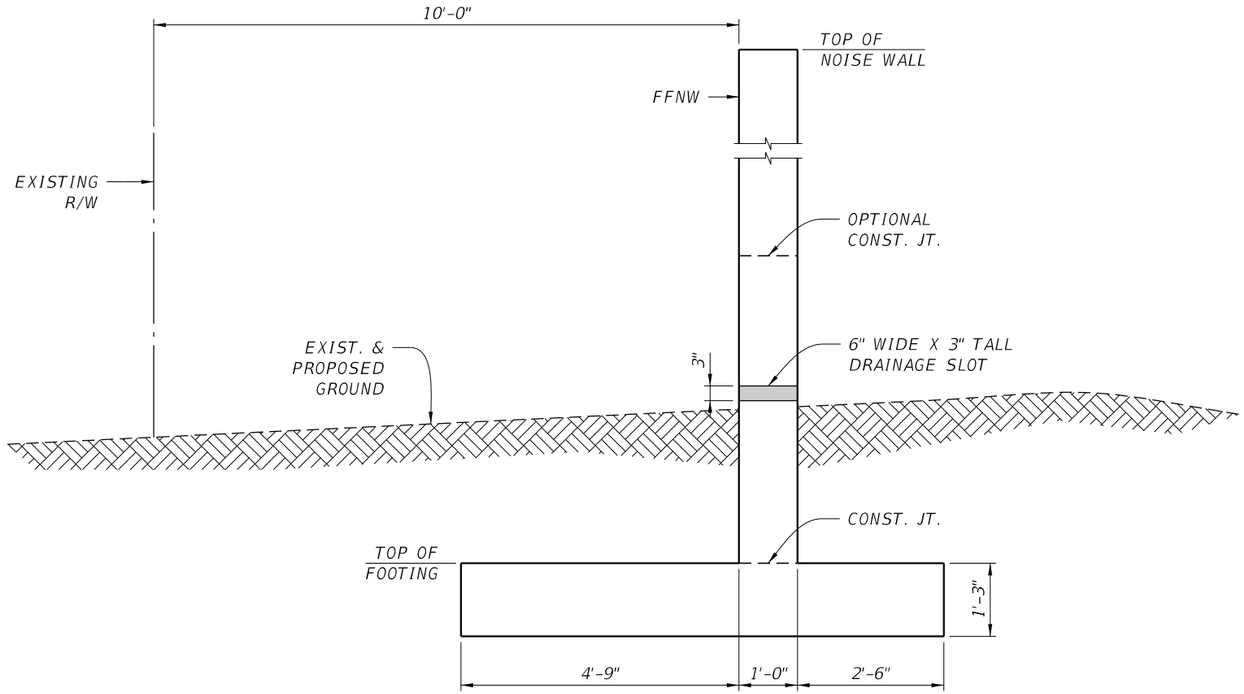
SHEET TITLE: ELEVATION - WALL NW-1 (SEGMENTS 1, 2 & 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

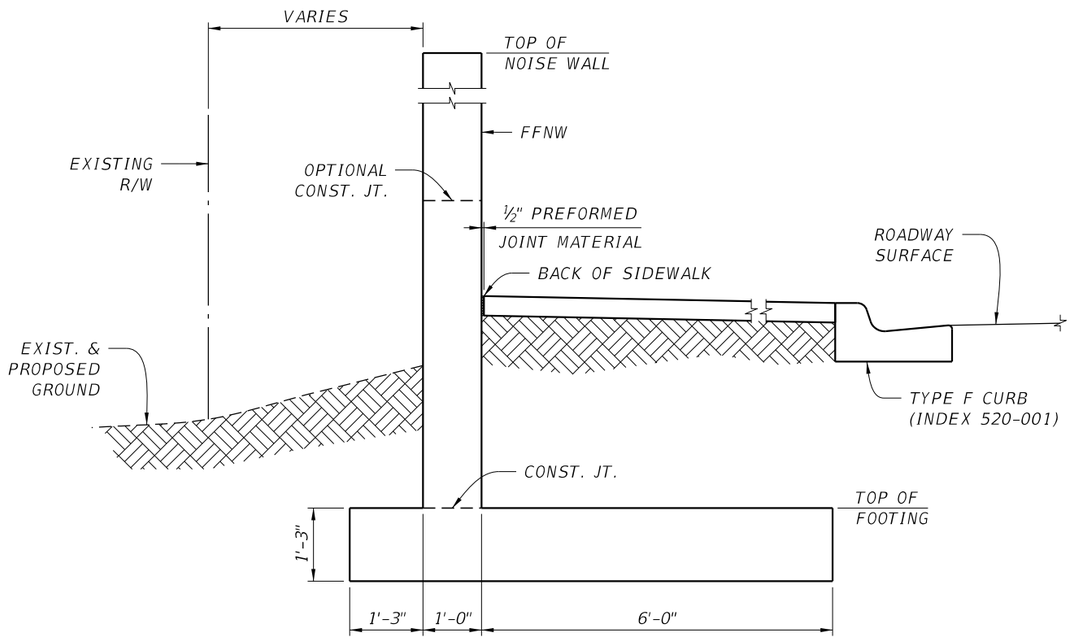
SHEET NO.: BW-28

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

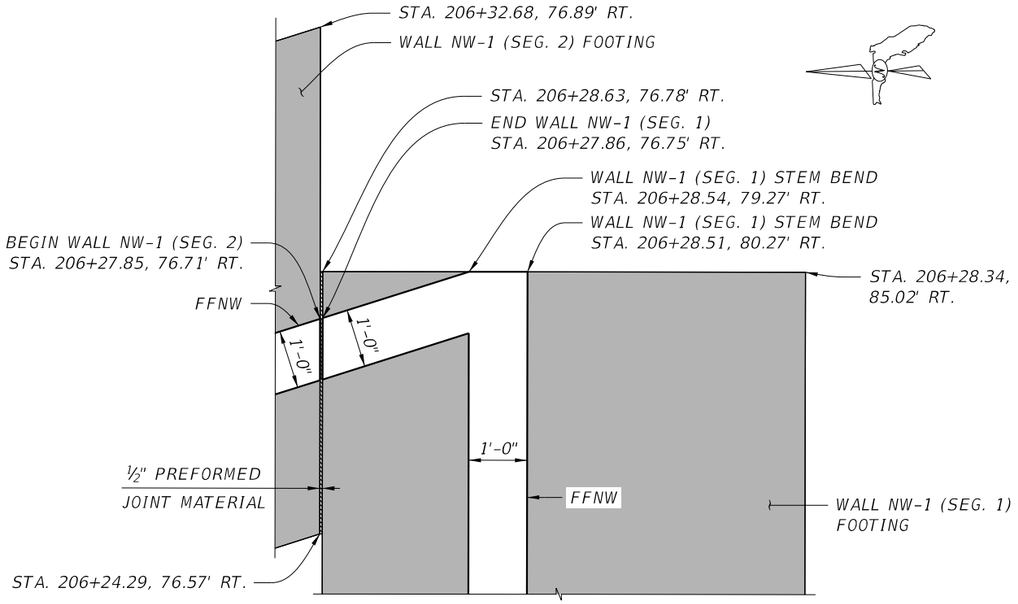


SECTION A-A

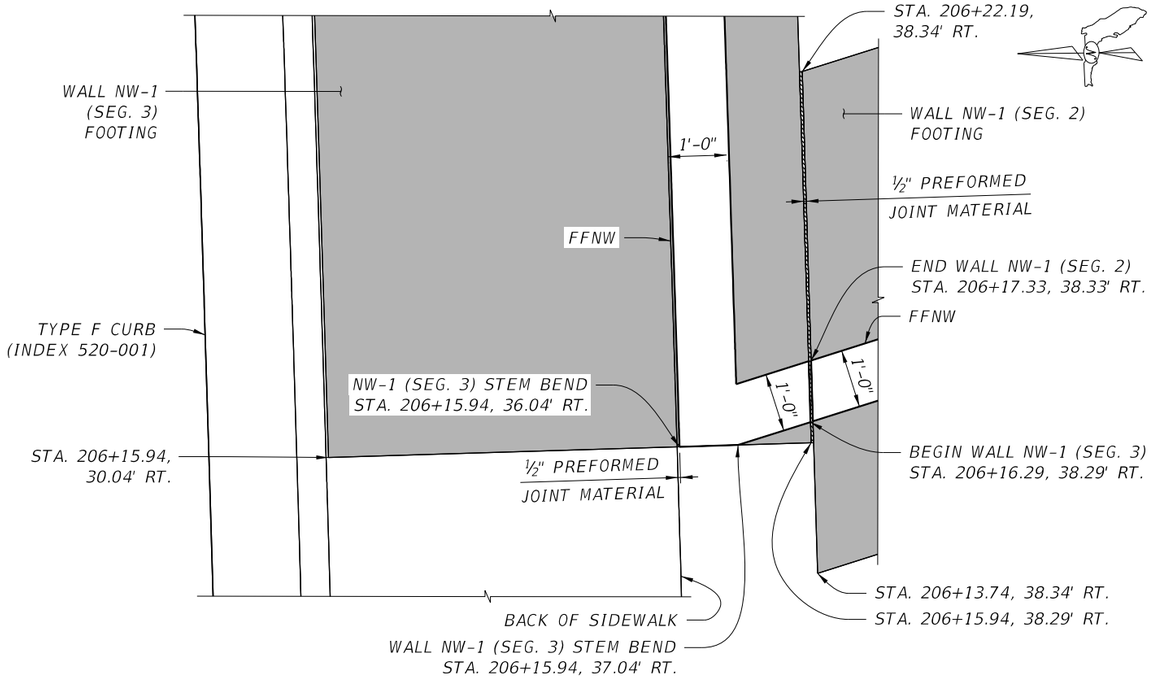
(SEE ELEVATION VIEWS FOR DRAINAGE SLOT INVERT ELEVATION)



SECTION B-B



WALL NW-1 (SEG. 1) & WALL NW-1 (SEG. 2) INTERFACE DETAIL



WALL NW-1 (SEG. 2) & WALL NW-1 (SEG. 3) INTERFACE DETAIL

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: BAS
DESIGNED BY: DMH
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

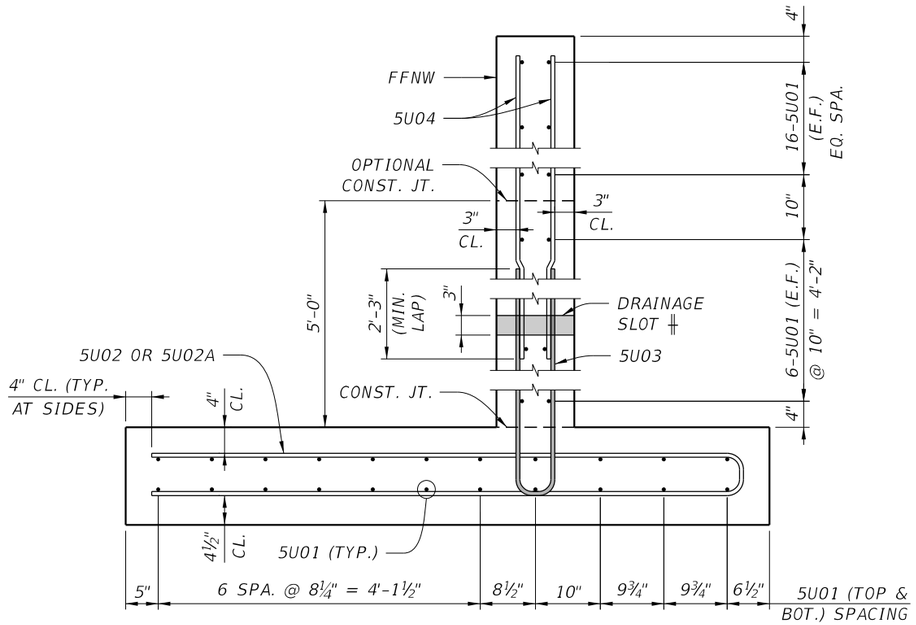
SHEET TITLE: WALL NW-1 [SEGMENTS 1, 2 & 3] DETAILS (1 OF 5)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

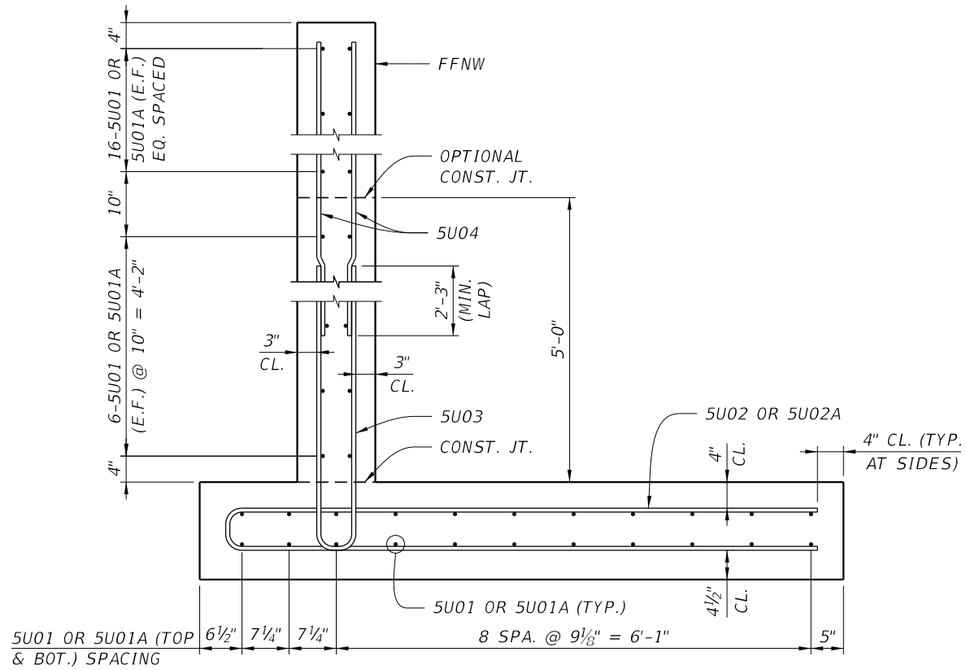
SHEET NO. BW-29

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



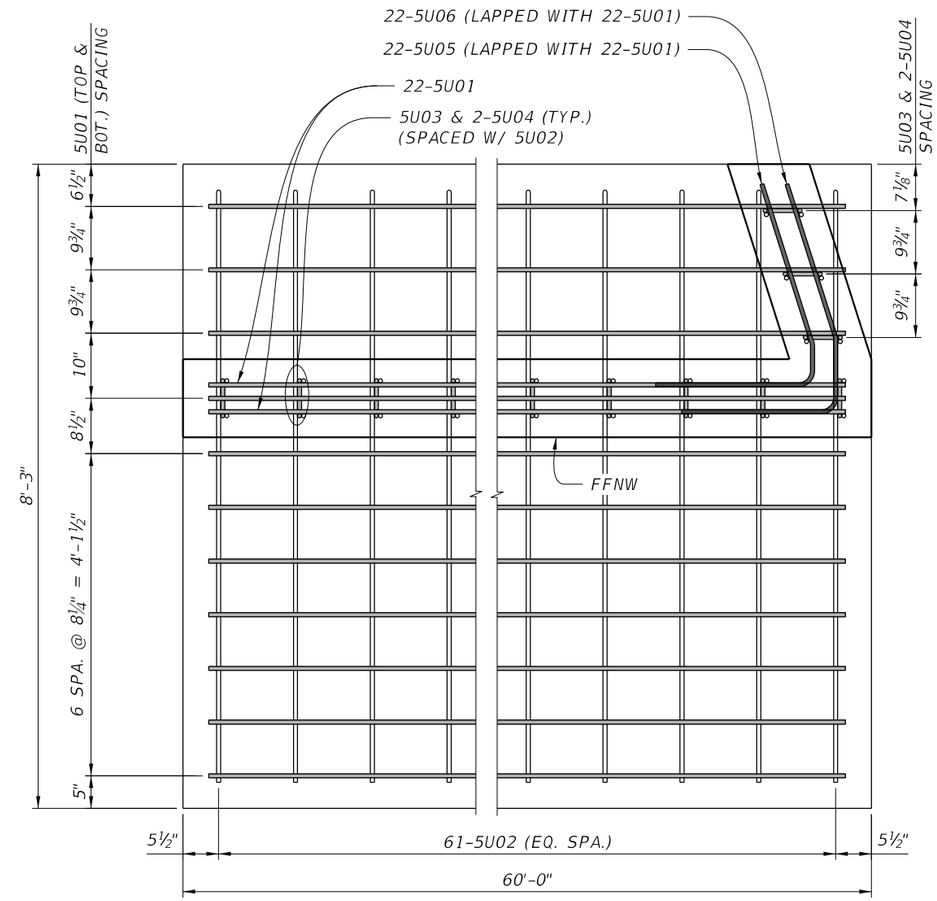
NW-1 (SEGMENTS 1 & 2) REINFORCING DETAILS

(SEE SECTION A-A ON SHEET BW-29 FOR DIMENSIONS NOT SHOWN.)
(╫ = ADJUST OR FIELD CUT LONGITUDINAL BARS TO PROVIDE 1" MINIMUM CLEARANCE AROUND DRAINAGE SLOT OPENING. SEE ELEVATION VIEWS FOR INVERT ELEVATION.)



NW-1 (SEGMENT 3) REINFORCING DETAILS

(SEE SECTION B-B ON SHEET BW-29 FOR DIMENSIONS NOT SHOWN.)



WALL NW-1 (SEGMENT 1) REINFORCING DETAILS

NOTE:

1. SEE SHEET BW-32 FOR NOTES.

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	BAS	DMH	BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

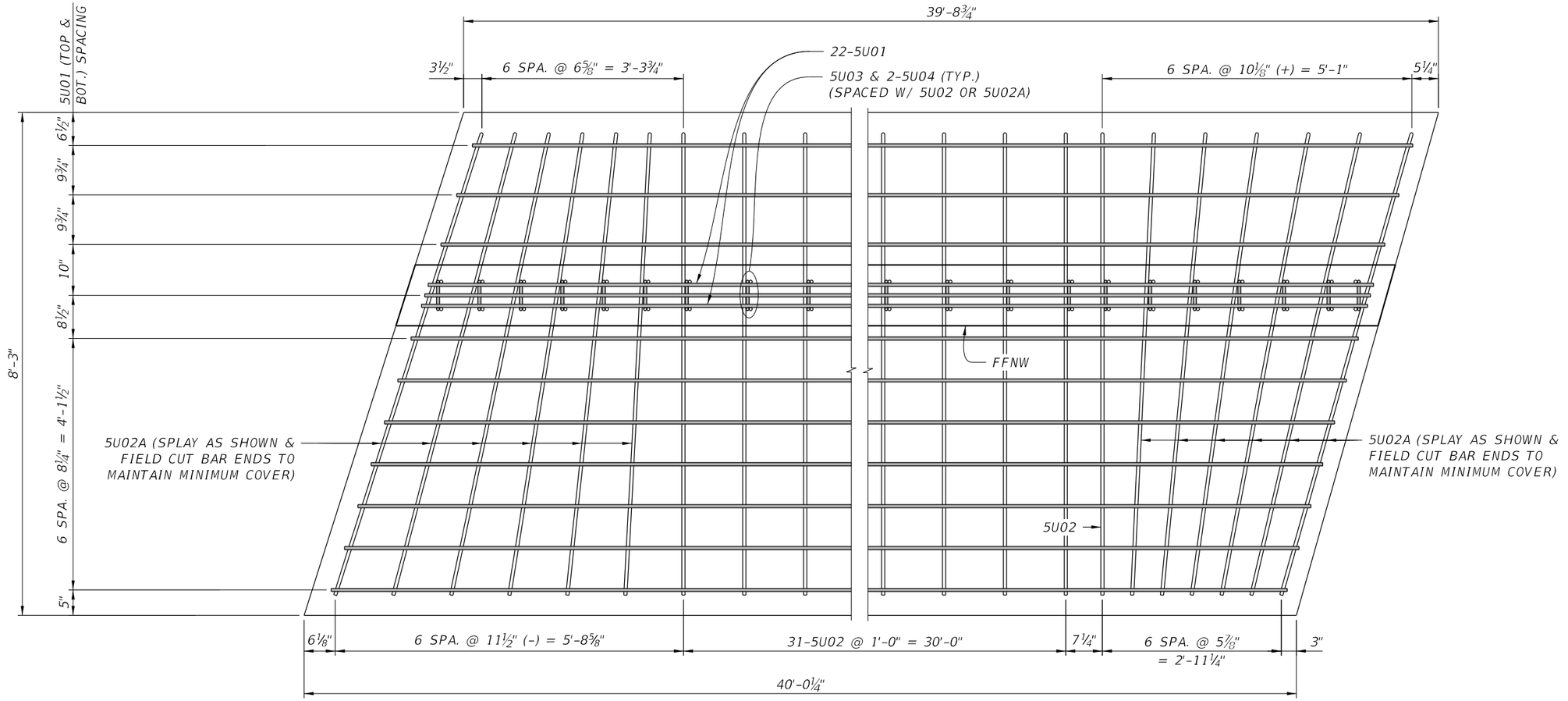
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL NW-1 [SEGMENTS 1, 2 & 3] DETAILS (2 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-30



WALL NW-1 (SEGMENT 2) REINFORCING DETAILS

NOTE:

1. SEE SHEET BW-32 FOR NOTES.

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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CHECKED BY: BAS
DESIGNED BY: DMH
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

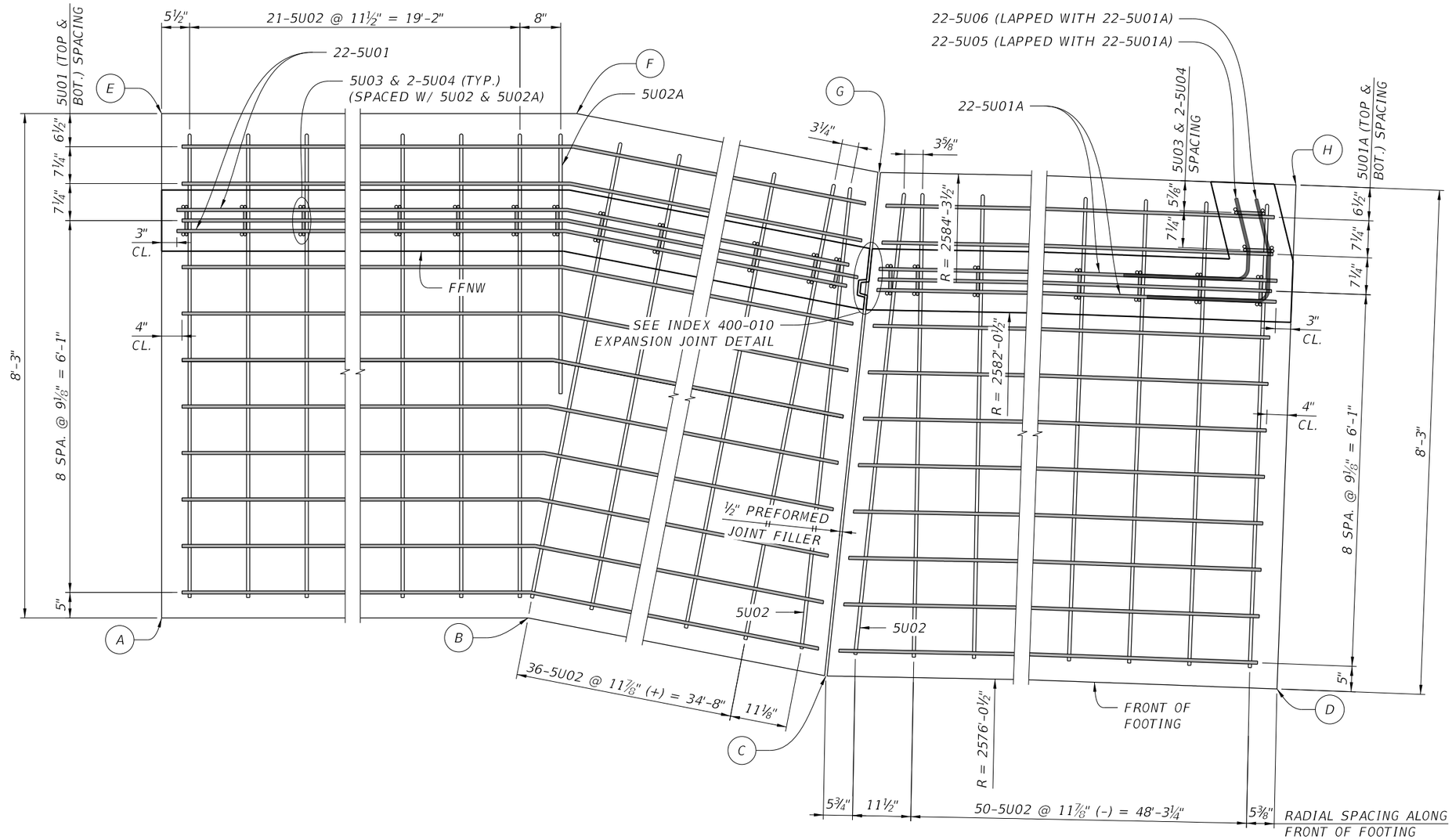
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL NW-1 [SEGMENTS 1, 2 & 3] DETAILS (3 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-31



WALL NW-1 (SEGMENT 3) REINFORCING DETAILS

LEGEND:

- (A) STA. 207+20.02, 36.53' RT.
- (B) STA. 207+00.54, 36.54' RT.
- (C) STA. 206+65.51, 30.04' RT.
- (D) STA. 206+15.94, 30.04' RT.
- (E) STA. 207+19.99, 44.78' RT.
- (F) STA. 206+99.79, 44.79' RT.
- (G) STA. 206+64.80, 38.29' RT.
- (H) STA. 206+15.94, 38.29' RT.

NOTES:

1. FIELD BEND BARS 5U01 & 5U01A AS REQUIRED TO ACCOMMODATE THE FOOTING AND STEM GEOMETRY. VARY THE LAP LENGTH FOR BARS 5U01 & 5U01A TO MAINTAIN THE REQUIRED CLEAR DISTANCE.
2. SEE SHEET BW-28 FOR THE LOCATION OF THE ¾" V-GROOVES. THE "WALL JOINT DETAIL" SHOWN IN INDEX 400-010 SHALL BE PROVIDED AT ALL LOCATIONS NOTED HAVING THE ¾" V-GROOVE.
3. THE TYPE D-5 GEOTEXTILE SHOWN IN THE INDEX 400-010 "EXPANSION JOINT DETAIL" SHALL BE PROVIDED FROM THE TOP OF FOOTING TO THE BOTTOM OF THE PROPOSED SIDEWALK AT THE EXPANSION JOINT ALONG SEGMENT 3 AND ON BOTH FACES OF THE STEM AT THE SEGMENT 1 / SEGMENT 2 AND SEGMENT 2 / SEGMENT 3 EXPANSION JOINTS FROM THE TOP OF THE FOOTING TO 1 INCH BELOW THE PROPOSED GROUND LINE.
4. CONSTRUCTION OF THE STEM OFFSET SHOWN IN INDEX 400-010 SHALL NOT BE REQUIRED.
5. DO NOT PROVIDE THE 3" DIAMETER PVC DRAIN PIPE AND THE CONTINUOUS DRAIN SHOWN IN INDEX 400-010.
6. PREPARE THE SOIL BELOW THE NOISE WALL FOOTING IN ACCORDANCE WITH THE REQUIREMENTS FOR SPREAD FOOTINGS IN SPECIFICATION SECTION 455.
7. SEE SHEET B-9 FOR NOISE WALL SURFACE FINISH DETAILS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
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DESIGNED BY: DMH
CHECKED BY: BAS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL NW-1 [SEGMENTS 1, 2 & 3] DETAILS (4 OF 5)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-32

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

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION WALL NW-1 (SEGMENT 1) NO. REQUIRED = 1																
5	U01	59- 4	66	1			59- 4									
5	U02	15- 9	61	11			0- 6 ½	7- 7	7- 7							
5	U03	10- 6	64	11			0- 6	5- 0	5- 0							
5	U04	15- 6	128	1			15- 6									
5	U05	5- 0	22	35			2- 3	0- 6 ½	2- 0 ½	0- 7 ¾						
5	U06	5- 4	22	35			2- 3	0-11 ¾	1-11 ¾	0- 7 ½						
LOCATION WALL NW-1 (SEGMENT 2) NO. REQUIRED = 1																
5	U01	41- 6	66	41			18- 0	23- 6					2- 3		1	
5	U02	15- 9	32	11			0- 6 ½	7- 7	7- 7							
5	U02A	16- 6	12	11			0- 6 ½	7-11 ½	7-11 ½							
5	U03	10- 6	44	11			0- 6	5- 0	5- 0							
5	U04	15- 6	88	1			15- 6									
LOCATION WALL NW-1 (SEGMENT 3) NO. REQUIRED = 1																
5	U01	58- 6	66	41			25- 0	33- 6					2- 3		1	
5	U01A	52- 6	66	41			22- 0	30- 6					2- 3		1	
5	U02	15- 9	109	11			0- 6 ½	7- 7	7- 7							
5	U02A	9- 1	1	11			0- 6 ½	4- 3	4- 3							
5	U03	10- 6	112	11			0- 6	5- 0	5- 0							
5	U04	17- 0	224	1			17- 0									
5	U05	3- 8	22	35			2- 3	0- 6 ¼	0-10	0- 3						
5	U06	4- 0	22	35			2- 3	0-10	0-10 ½	0- 3						

END OF LIST

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REVISIONS

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STATE OF FLORIDA
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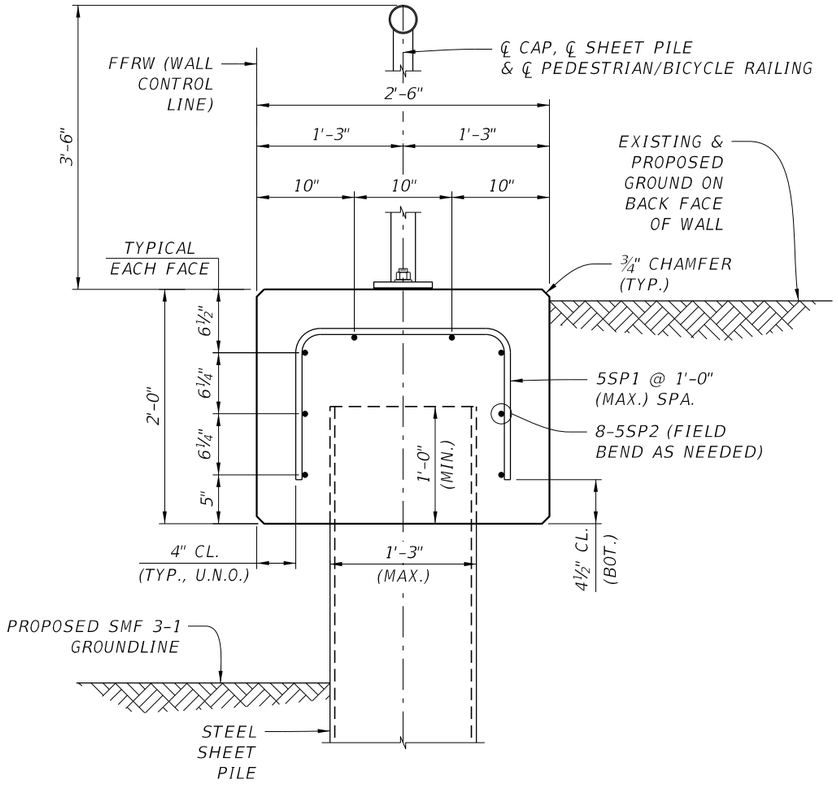
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALL NW-1 [SEGMENTS 1, 2 & 3] DETAILS (5 OF 5)

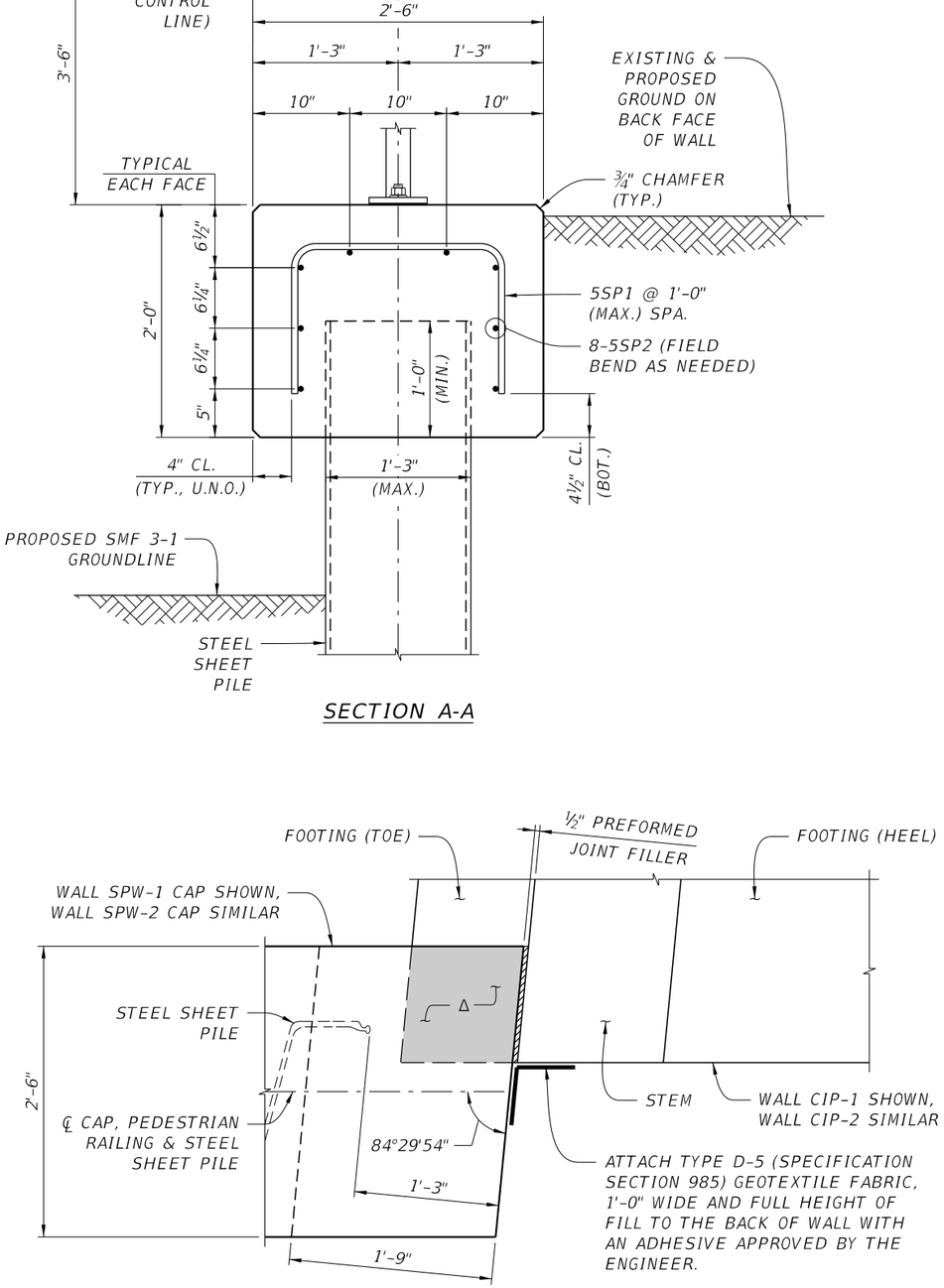
REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-33

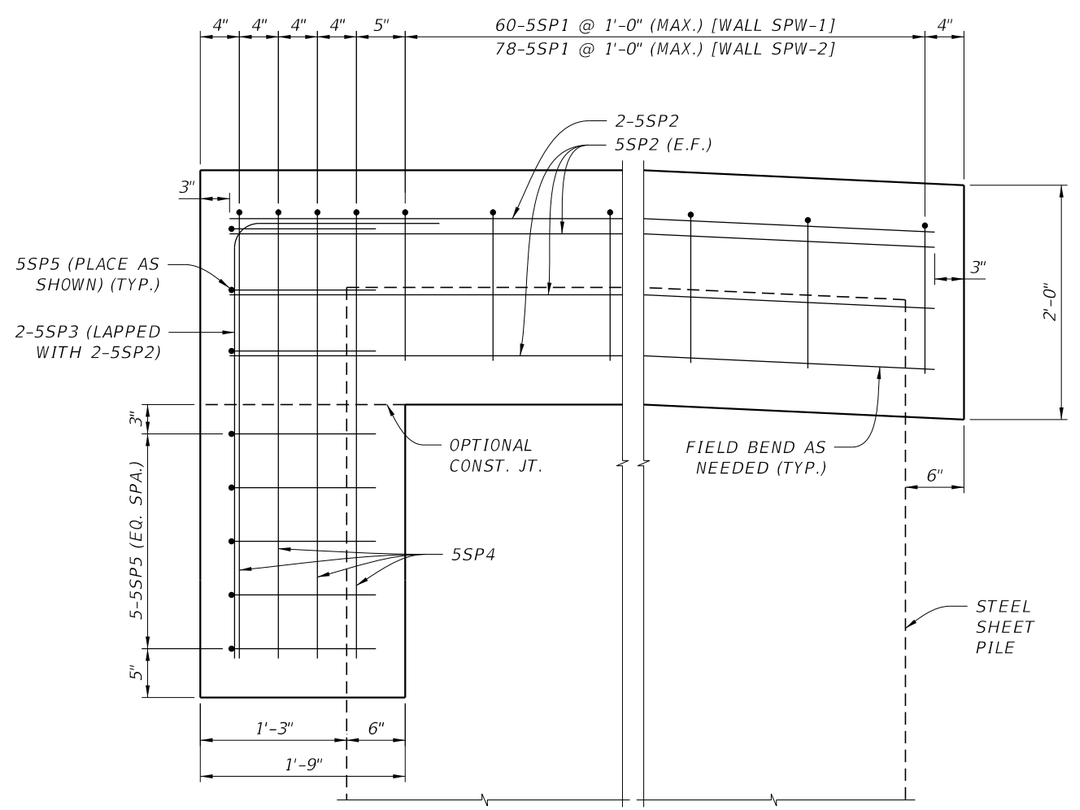


SECTION A-A



SECTION B-B

Δ = PLACE ORGANIC FELT BOND BREAKER BETWEEN TOP OF WALL CIP-1 & CIP-2 FOOTING (TOE) AND BOTTOM OF WALL SPW-1 & SPW-2 CAP



SHEET PILE CAP DETAILS

(RAILING NOT SHOWN FOR CLARITY. WALL SPW-1 SHOWN, WALL SPW-2 SIMILAR AND AS NOTED.)

ALUMINUM PEDESTRIAN/BICYCLE RAILING DATA TABLES

PROJECT REQUIREMENTS					Table Date 01-01-11
WALL (STA. TO STA.)	HEIGHT (in.)	STYLE TYPE (1)	REQUIRED: (YES/NO)		
			BOTTLE GUARD	COLORED COATINGS	INFILL PANEL TO REJECT PASSAGE OF 4" SPHERE (SPECIAL CONDITIONS ONLY)
SPW-1 (STA. 208+62.84 TO STA. 208+05.09)	42"	TYPE SP	NO	NO	NO
SPW-2 (STA. 209+53.00 TO STA. 208+77.38)	42"	TYPE SP	NO	NO	NO

(1) FOR TYPE SP DETAILS, SEE SHEET B-11.

NOTES:

1. WORK THIS DATA TABLE WITH SHEET B-11 AND INDEX 515-062.
2. BEGIN/END STATIONING IS ALONG FFRW.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

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DESIGNED BY: DMH
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALLS SPW-1 & SPW-2 DETAILS (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-34

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

STEEL SHEET PILE WALL, CANTILEVER DATA TABLE

Table Date 07-01-12

	CONSTRUCTION INFORMATION						DESIGN PARAMETERS				
	WALL LOCATION		MINIMUM * PLASTIC SECTION MODULUS (in^3/ft)		MINIMUM REQUIRED MOMENT OF INERTIA (in^4/ft)	MINIMUM WALL TIP ELEVATION (ft)	WALL TOP ELEV. (ft)	SOIL ELEVATION		WATER ELEVATION		FACTORED DESIGN LIVE LOAD (psf)
WALL	STATION (begin to end)	OFFSET (ft)	A-328 (ksi) fy=39 ksi	A-572 (ksi) fy=50 ksi				** FRONT OF WALL (ft)	BACK OF WALL (ft)	FRONT OF WALL (ft)	BACK OF WALL (ft)	
SPW-1 (SECTION 1)	208+62.84 TO 208+34.06	68.91 TO 70.17	5.7	4.4	10.7	-8.50	***	4.50	8.50	4.50	6.60	367.5
SPW-1 (SECTION 2)	208+34.06 TO 208+20.65	70.17 TO 70.87	14.7	11.5	60.2	-16.00	***	2.50	8.50	2.50	6.60	367.5
SPW-1 (SECTION 3)	208+20.65 TO 208+05.09	70.87 TO 66.98	9.7	7.5	30.4	-13.50	***	2.89	7.82	2.89	6.60	367.5
SPW-2 (SECTION 1)	209+53.00 TO 209+35.81	67.11 TO 67.20	8.3	6.5	19.3	-12.50	***	3.90	8.23	3.90	6.60	367.5
SPW-2 (SECTION 2)	209+35.81 TO 208+77.38	67.20 TO 68.39	10.0	7.8	25.2	-12.00	***	4.50	9.50	4.50	6.60	367.5

* MINIMUM PLASTIC SECTION MODULUS IS BASED ON HOT ROLLED SECTIONS. FOR COLD ROLLED SECTIONS, INCREASE MINIMUM PLASTIC SECTION MODULUS BY 20%.

** MINIMUM OF DESIGN GROUND SURFACE OF DESIGN SCOUR DEPTH.

*** FOR TOP OF WALL ELEVATIONS, REFER TO SEE SHEET BW-26.

PERMANENT SHEET PILE WALL DESIGN SOIL PARAMETERS

APPROXIMATE ELEVATION (ft)	MOIST UNIT WEIGHT (pcf)	EFFECTIVE UNIT WEIGHT (pcf)	ANGLE OF INTERNAL FRICTION (°)	COHESION (psf)	WALL FRICTION ANGLE (°)
WALL SPW-1					
GROUND TO EL. 0.1	105	43	29	---	11
EL. 0.1 TO EL. -5.4	112	50	30	---	14
EL. -5.4 TO EL. -10.4	105	43	29	---	11
EL. -10.4 TO EL. -21.9	115	53	32	---	14
WALL SPW-2					
GROUND TO EL. -11.5	105	43	29	---	11
EL. -11.5 TO EL. -16.5	120	58	32	---	14
EL. -16.5 TO EL. -21.5	125	63	34	---	17
EL. -21.5 TO EL. -31.5	115	53	32	---	14
EL. -31.5 TO EL. -33.0	112	50	30	---	14

NOTES:

1. THE DESIGN PARAMETERS INDICATED IN THIS TABLE WERE USED IN THE SHEET PILE WALL ANALYSIS. IF THE CONTRACTOR PLANS OPERATIONS, WHICH EXCEED THE DESIGN PARAMETERS SHOWN ABOVE, THE CONTRACTOR'S SPECIALTY ENGINEER WILL REDESIGN THE WALL TO RESIST CONSTRUCTION LOADS AT A MAXIMUM DEFLECTION OF 1.5 INCHES.
2. ENVIRONMENTAL CLASSIFICATION IS EXTREMELY AGGRESSIVE.
3. DESIGN INCLUDES ALLOWANCE FOR A MINIMUM SACRIFICIAL THICKNESS OF 0.135 INCHES.
4. CONCRETE FOR CAST-IN-PLACE WALL CAP SHALL BE CLASS IV (F'C = 5500 PSI) WITH SILICA FUME, METAKAOLIN OR ULTRAFINE FLY ASH.
5. COAT EXPOSED SURFACE OF STEEL SHEET PILES TO 5 FEET BELOW THE FRONT OF WALL SOIL ELEVATION (**), WITH COAL TAR-EPOXY IN ACCORDANCE WITH SPECIFICATION SECTION 560.
6. ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHALL BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED. THE COST ASSOCIATED WITH THE DIFFICULT INSTALLATION INCLUDING THE COST OF PREFORMED HOLES, PUNCHING AND/OR OTHER METHODS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR SHEET PILING STEEL, F&I PERMANENT, PAY ITEM NO. 455-133-3.

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Φ
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION WALL SPW-1 CAP											NO. REQUIRED = 1					
5	SP1	4- 5	60	11			1-10	1- 3½	1- 3½							
5	SP2	62- 3	8	2			2- 3	60- 0							1	
5	SP3	5- 7	2	10			1- 9	3- 9¼								
5	SP4	9- 7	4	11			1-10	3-10	3-10							
5	SP5	4- 3	8	15			1- 8¾	1- 3	1- 3						85	85
LOCATION WALL SPW-2 CAP											NO. REQUIRED = 1					
5	SP1	4- 5	78	11			1-10	1- 3½	1- 3½							
5	SP2	80- 3	8	2			2- 3	78- 0							1	
5	SP3	6- 1	2	10			1- 9	4- 3¼								
5	SP4	10- 7	4	11			1-10	4- 4	4- 4							
5	SP5	4- 3	8	15			1- 8¾	1- 3	1- 3						85	85
END OF LIST																

FOR BAR BENDING DETAILS, SEE INDEX 415-001.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: WALLS SPW-1 & SPW-2 DETAILS (2 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-35

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

STEEL SHEET PILE WALL, CANTILEVER DATA TABLE

Table Date 07-01-12

	CONSTRUCTION INFORMATION							DESIGN PARAMETERS				
			MINIMUM * PLASTIC SECTION MODULUS (in^3/ft)					SOIL ELEVATION		WATER ELEVATION		
WALL	WALL LOCATION: STATION (begin to end)	WALL LOCATION: OFFSET (ft)	A-328 (ksi) fy=39 ksi	A-572 (ksi) fy=50 ksi	MINIMUM REQUIRED MOMENT OF INERTIA (in^4/ft)	MINIMUM WALL TIP ELEVATION (ft)	WALL TOP ELEV. (ft)	** FRONT OF WALL (ft)	BACK OF WALL (ft)	FRONT OF WALL (ft)	BACK OF WALL (ft)	DESIGN LIVE LOAD (psf)
SEAWALL A (SECTION 1)	VARIES (SEE PLAN VIEW)	VARIES (SEE PLAN VIEW)	4.6	3.6	4.7	-12.5	4.30	0.5	4.30	-1.21	2.27	368
SEAWALL A (SECTION 2)	VARIES (SEE PLAN VIEW)	VARIES (SEE PLAN VIEW)	14.6	11.4	55.4	-22.0	4.30	-1.0	4.30	-1.21	2.27	368
SEAWALL B (SECTION 1)	VARIES (SEE PLAN VIEW)	VARIES (SEE PLAN VIEW)	25.1	19.6	152.2	-31.0	4.00	-2.0	4.00	-1.55	1.54	350
SEAWALL B (SECTION 2)	VARIES (SEE PLAN VIEW)	VARIES (SEE PLAN VIEW)	33.0	25.7	282.9	-34.5	4.00	-3.5	4.00	-1.55	1.54	350
SEAWALL B (SECTION 3)	VARIES (SEE PLAN VIEW)	VARIES (SEE PLAN VIEW)	44.6	34.8	463.0	-39.0	4.00	-5.0	4.00	-1.55	1.54	350

* MINIMUM PLASTIC SECTION MODULUS IS BASED ON HOT ROLLED SECTIONS. FOR COLD ROLLED SECTIONS, INCREASE MINIMUM PLASTIC SECTION MODULUS BY 20%.

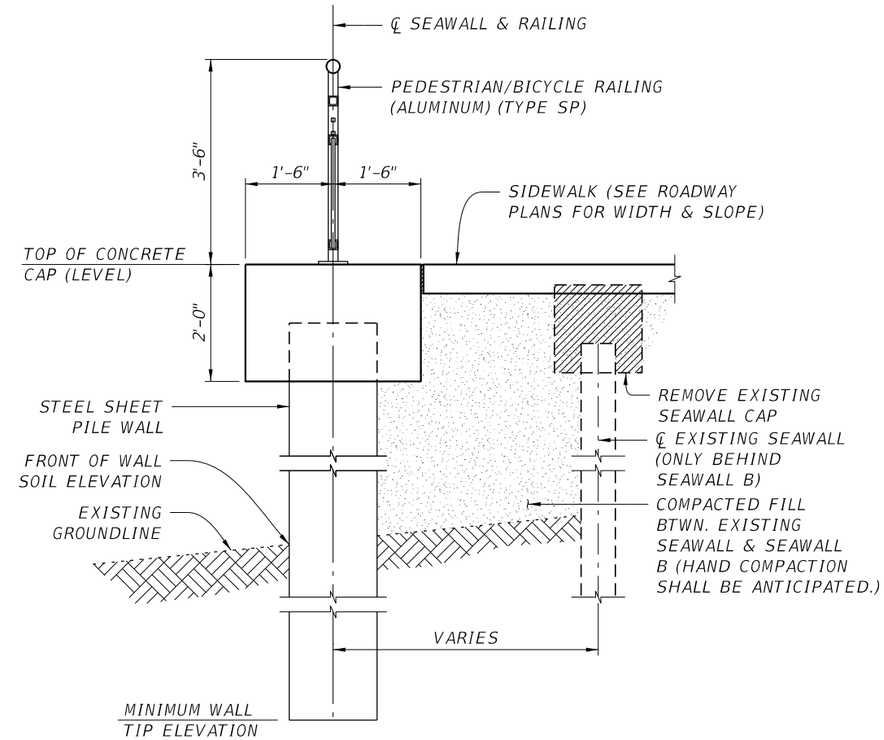
** MINIMUM OF DESIGN GROUND SURFACE OF DESIGN SCOUR DEPTH.

NOTES:

1. THE DESIGN PARAMETERS INDICATED IN THIS TABLE WERE USED IN THE SHEET PILE WALL ANALYSIS. IF THE CONTRACTOR PLANS OPERATIONS, WHICH EXCEED THE DESIGN PARAMETERS SHOWN ABOVE, THE CONTRACTOR'S SPECIALTY ENGINEER WILL REDESIGN THE WALL TO RESIST CONSTRUCTION LOADS AT A MAXIMUM DEFLECTION OF 1.5 INCHES.
2. ENVIRONMENTAL CLASSIFICATION IS EXTREMELY AGGRESSIVE.
3. CONCRETE FOR CAST-IN-PLACE RETAINING WALL CAP SHALL BE CLASS IV (F'C = 5500 PSI) WITH SILICA FUME, METAKAOLIN OR ULTRAFINE FLY ASH.
4. COAT EXPOSED SURFACE OF STEEL SHEET PILES TO 5 FEET BELOW THE FRONT OF WALL SOIL ELEVATION (**), WITH COAL TAR-EPOXY IN ACCORDANCE WITH SPECIFICATION SECTION 560.
5. ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHALL BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED. THE COST ASSOCIATED WITH THE DIFFICULT INSTALLATION INCLUDING THE COST OF PREFORMED HOLES, PUNCHING AND/OR OTHER METHODS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR SHEET PILING STEEL, F&I PERMANENT, PAY ITEM NO. 455-133-3.

SEAWALL DESIGN SOIL PARAMETERS

APPROXIMATE ELEVATION (ft)	MOIST UNIT WEIGHT (pcf)	EFFECTIVE UNIT WEIGHT (pcf)	ANGLE OF INTERNAL FRICTION (°)	COHESION (psf)	WALL FRICTION ANGLE (°)
SEAWALL A					
GROUND TO EL. -10.0	105	42.6	29	---	11
EL. -10.0 TO EL. -37.5	115	52.6	32	---	14
SEAWALL B					
GROUND TO EL. -12.7	100	37.6	28	---	11
EL. -12.7 TO EL. -47.7	112	49.6	31	---	14



TYPICAL SECTION

(RUBBLE RIPRAP AND BEDDING STONE NOT SHOWN FOR CLARITY. SEE SHEET B-14 FOR DETAILS.)

ALUMINUM PEDESTRIAN/BICYCLE RAILING DATA TABLES

PROJECT REQUIREMENTS — Table Date 01-01-11

WALL (STA. TO STA.)	HEIGHT (in.)	STYLE TYPE (1)	REQUIRED: (YES/NO) BOTTLE GUARD	REQUIRED: (YES/NO) COLORED COATINGS	REQUIRED: (YES/NO) INFILL PANEL TO REJECT PASSAGE OF 4" SPHERE (SPECIAL CONDITIONS ONLY)
SEAWALL A (STA. 211+51.87, 111.33' RT. TO STA. 211+26.26, 43.44' LT.)	42	TYPE SP	NO	NO	NO
SEAWALL B (STA. 238+63.91, 40.89' LT. TO STA. 237+53.62, 91.02' RT.)	42	TYPE SP	NO	NO	NO

(1) FOR TYPE SP DETAILS, SEE SHEET B-11.

NOTE:

1. WORK THIS DATA TABLE WITH SHEET B-11 AND INDEX 515-062.

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: QF
DESIGNED BY: DMH
CHECKED BY: QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SEAWALL DATA TABLES

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-36

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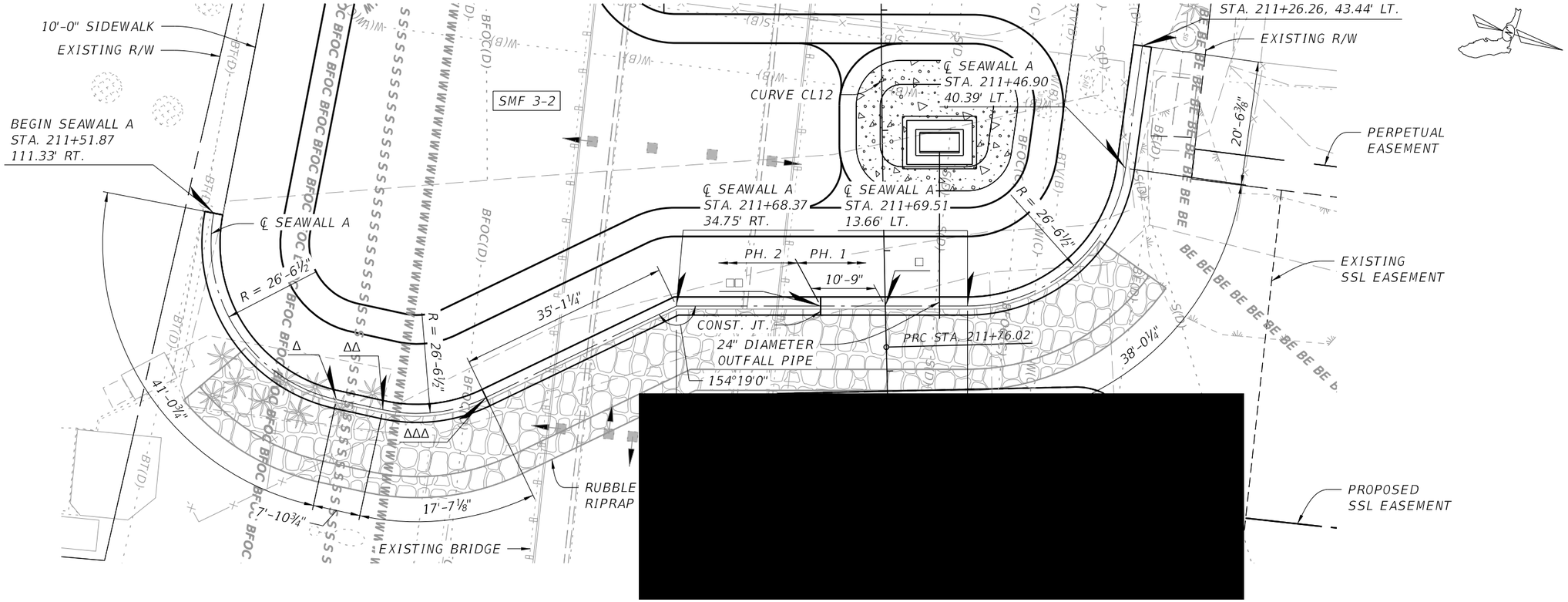
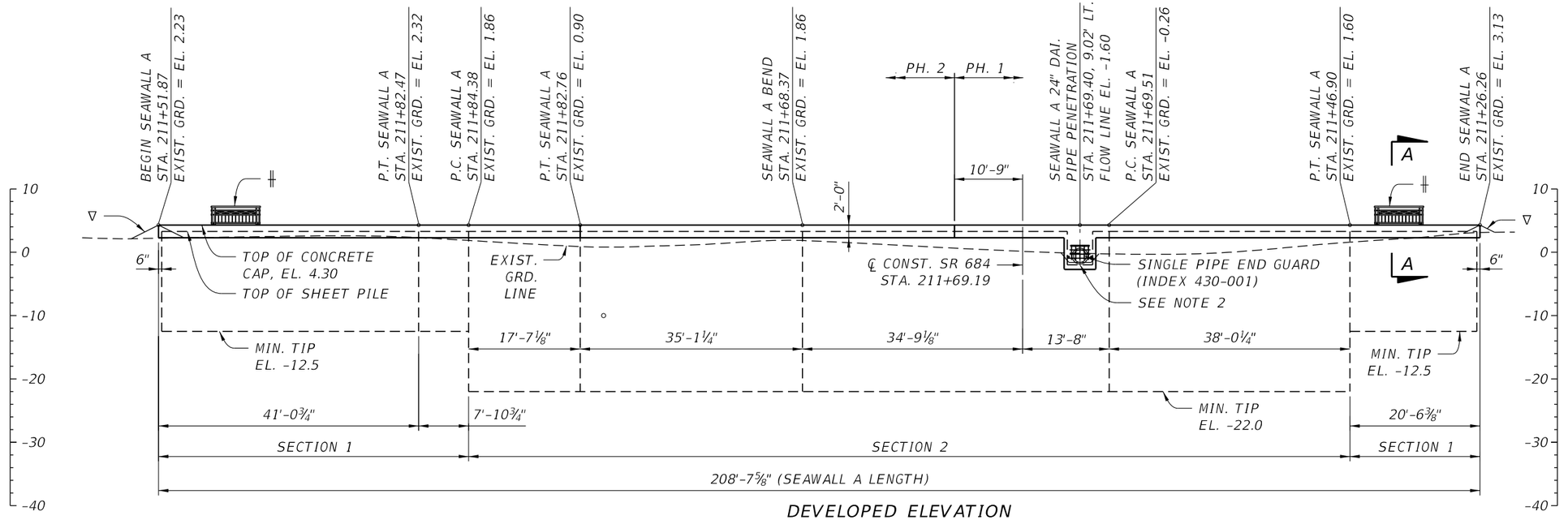




DEVELOPED ELEVATION

LEGEND:

- Δ ℄ SEAWALL A, STA. 211+82.47, 91.63' RT.
- ΔΔ ℄ SEAWALL A, STA. 211+84.38, 83.96' RT.
- ΔΔΔ ℄ SEAWALL A, STA. 211+82.76, 66.76' RT.
- □ ℄ SEAWALL A & ℄ CONST. SR 684, STA. 211+69.19
- □□ ℄ SEAWALL A, STA. 211+68.93, 10.75' RT.
- ╪ PEDESTRIAN/BICYCLE RAIL – TYPE SP (INDEX 515-062). SEE SHEET B-11 FOR DETAILS.
- ▽ 1:2 SLOPE FROM BACK OF SIDEWALK TO EXISTING GROUND (TYP. AT BEGIN/ END SEAWALL A)

NOTES:

1. STATIONS, OFFSETS & DIMENSIONS ARE MEASURED ALONG THE ℄ SEAWALL A.
2. SEE SHEET BW-40 FOR PIPE PENETRATION DETAILS.
3. SEE SHEETS BW-42 & BW-43 FOR FOR SEAWALL CAP REINFORCING DETAILS.
4. SEE SHEET BW-40 FOR SECTION A-A.
5. SEE SHEET B1-7 FOR HORIZONTAL CURVE DATA.
6. SEE SHEET BW-36 FOR THE PEDESTRIAN/BICYCLE RAILING DATA TABLE AND FOR SECTION 1 & 2 DESIGNATION REQUIREMENTS.
7. SEE UTILITY ADJUSTMENT SHEETS FOR DISPOSITION OF EXISTING UTILITIES.

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

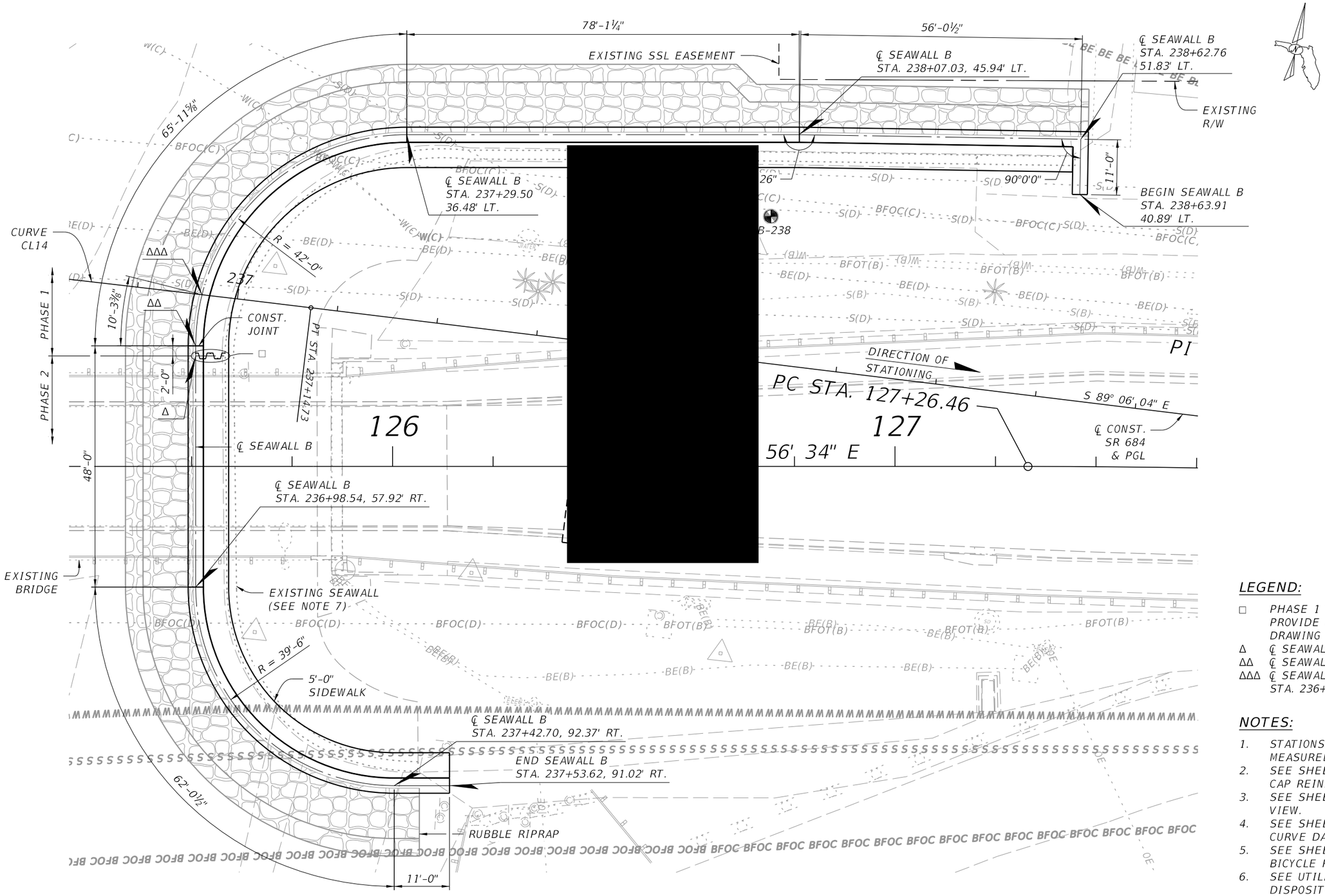
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN & ELEVATION - SEAWALL A

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-37



PLAN

LEGEND:

- □ PHASE 1 TIE-IN TO EXISTING SEAWALL. PROVIDE DETAILS WITH THE SHOP DRAWING SUBMITTAL.
- Δ ℄ SEAWALL B, STA. 236+93.09, 12.24' RT.
- ΔΔ ℄ SEAWALL B, STA. 236+92.85, 10.25' RT.
- ΔΔΔ ℄ SEAWALL B & ℄ CONST. SR 684, STA. 236+92.90

NOTES:

1. STATIONS, OFFSETS & DIMENSIONS ARE MEASURED ALONG THE ℄ SEAWALL B.
2. SEE SHEET BW-43 FOR FOR SEAWALL CAP REINFORCING DETAILS.
3. SEE SHEET BW-39 FOR THE ELEVATION VIEW.
4. SEE SHEET B1-7 FOR HORIZONTAL CURVE DATA.
5. SEE SHEET BW-36 FOR THE PEDESTRIAN/ BICYCLE RAILING DATA TABLE.
6. SEE UTILITY ADJUSTMENT SHEETS FOR DISPOSITION OF EXISTING UTILITIES.
7. SEE "TYPICAL SECTION" ON SHEET BW-36 AND NOTE 7 ON SHEET B1-44.

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: JGH
DESIGNED BY: DMH
CHECKED BY: QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - SEAWALL B

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-38

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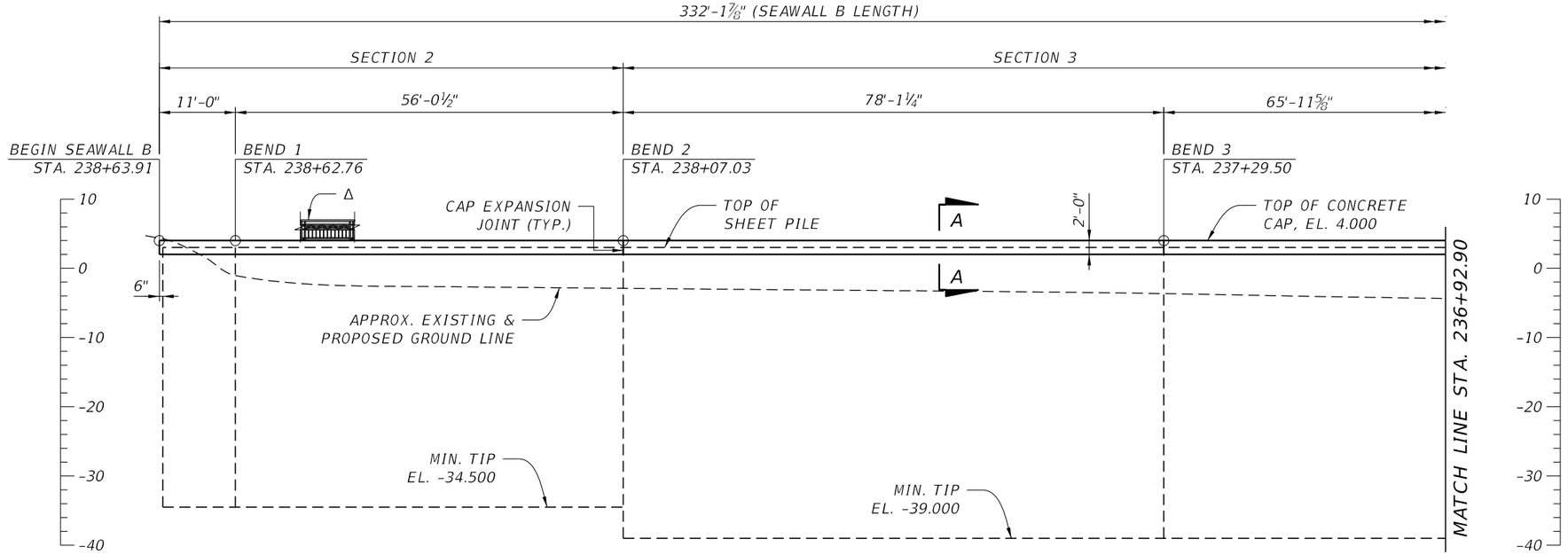
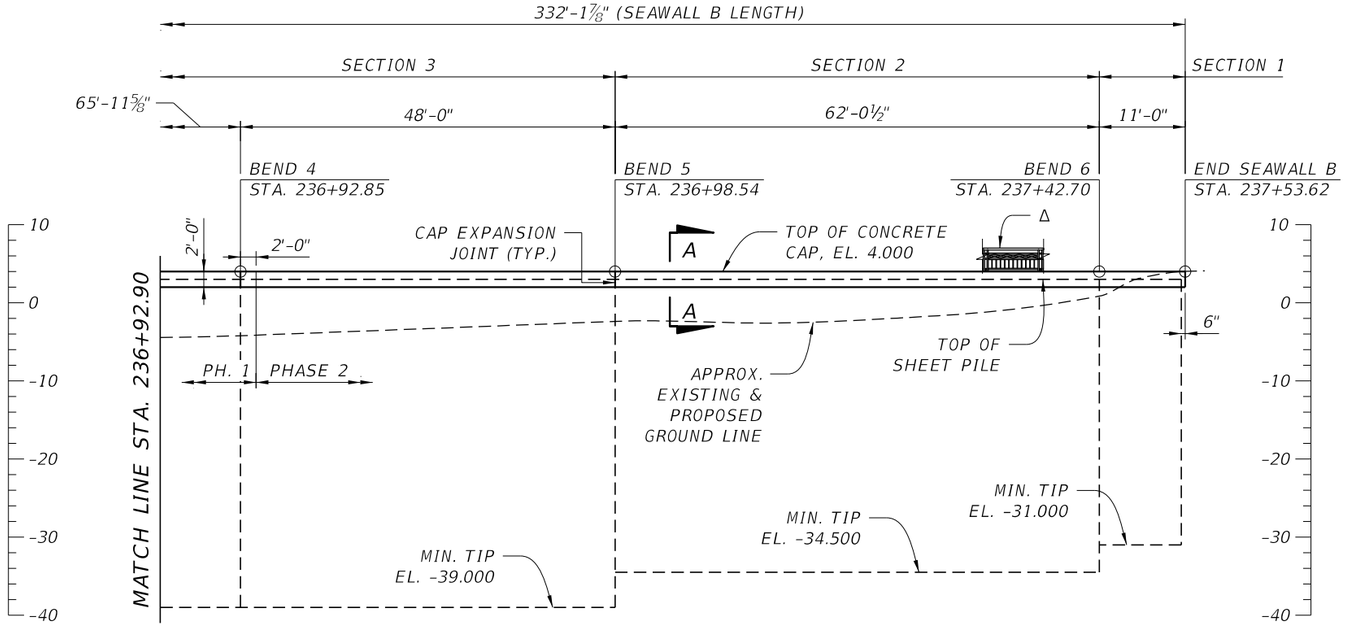


DEVELOPED ELEVATION



DEVELOPED ELEVATION

TABLE OF GROUND ELEVATIONS

STATION	OFFSET	EXISTING GROUND
238+63.91	40.89' LT.	4.27
238+62.76	51.83' LT.	-1.05
238+34.90	48.89' LT.	-2.64
238+07.03	45.94' LT.	-2.89
237+81.19	42.79' LT.	-3.12
237+55.34	39.64' LT.	-3.33
237+29.50	36.48' LT.	-3.65
237+09.36	28.36' LT.	-4.07
236+95.97	11.26' LT.	-4.41
236+92.85	10.25' RT.	-4.22
236+95.68	34.09' RT.	-3.31
236+98.54	57.92' RT.	-2.38
237+06.23	76.90' RT.	-2.60
237+22.45	89.51' RT.	-1.66
237+42.70	92.37' RT.	0.85
237+53.62	91.02' RT.	4.02

LEGEND:

Δ TOP OF PED. RAILING (PEDESTRIAN/BICYCLE RAIL - TYPE SP) (INDEX 515-062). SEE SHEET B-11 FOR DETAILS.

NOTES:

1. SEE SHEET BW-40 FOR SECTION A-A.
2. SEE SHEET BW-43 FOR SEAWALL CAP REINFORCING DETAILS.
3. STATIONING AND DIMENSIONS ARE MEASURED ALONG THE ℄ SEAWALL B.
4. SEE SHEET BW-36 FOR THE PEDESTRIAN/BICYCLE RAILING DATA TABLE AND FOR SECTION 1, 2 & 3 DESIGNATION REQUIREMENTS.

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
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CHECKED BY: QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

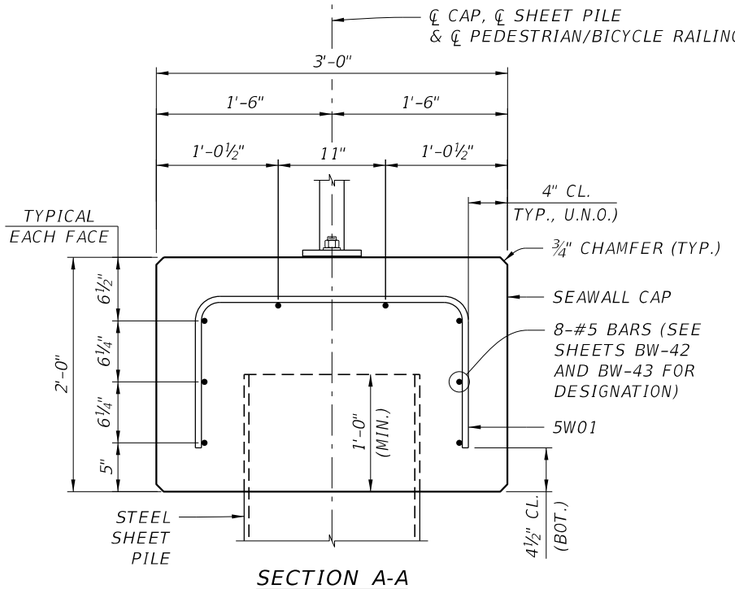
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - SEAWALL B

REF. DWG. NO.:

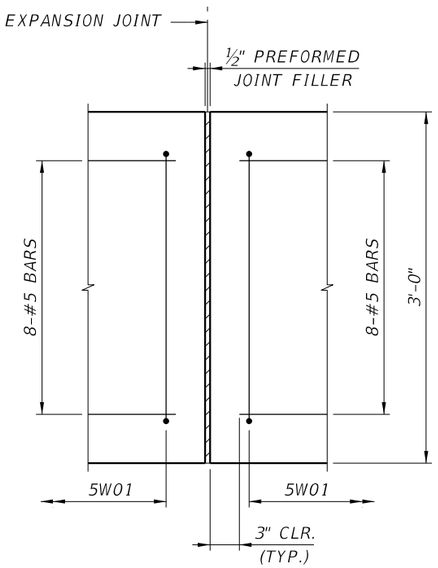
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-39

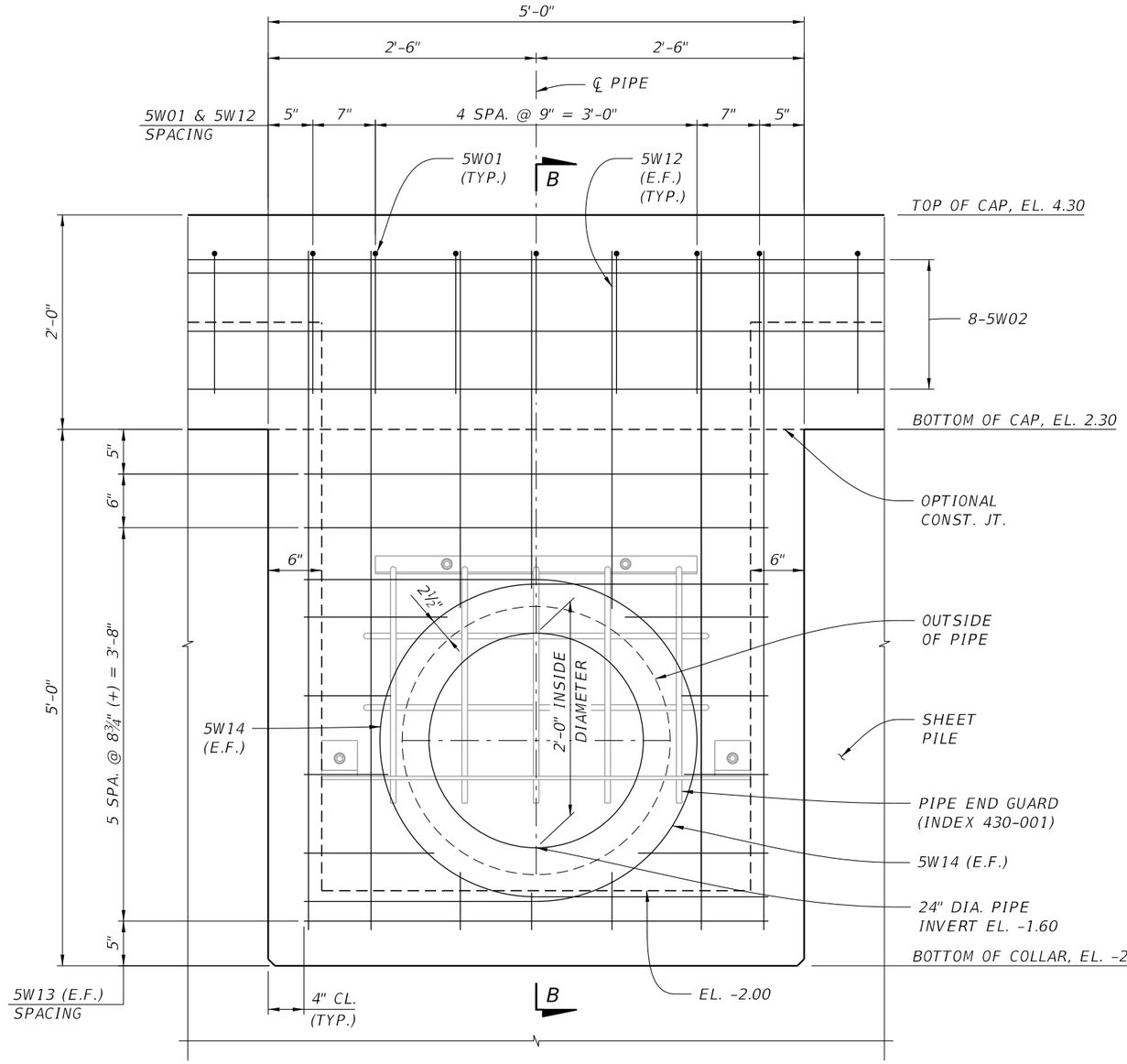


SECTION A-A

(ADJACENT SIDEWALK NOT SHOWN)



CAP EXPANSION JOINT DETAIL



PIPE COLLAR REINFORCING

NOTES:

1. ALL REINFORCING SHALL BE CFRP BARS.
2. CUT BARS AS NEEDED TO MAINTAIN COVER.
3. FOR SECTION B-B, SEE SHEET BW-41.
4. FOR REINFORCING BAR LIST, SEE SHEETS BW-44 & BW-45.

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

REVISIONS					
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DOUGLAS M. HERSHEY, P.E.
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STATE OF FLORIDA
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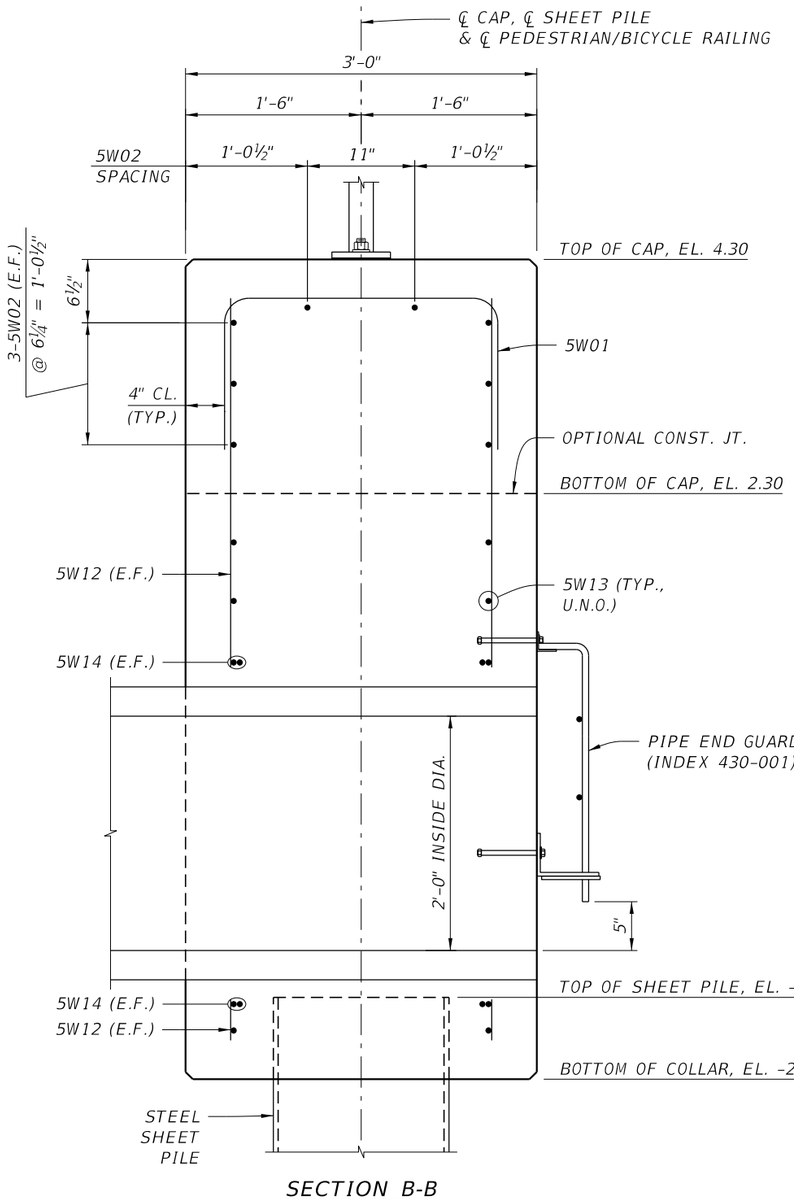
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SEAWALL DETAILS (1 OF 6)

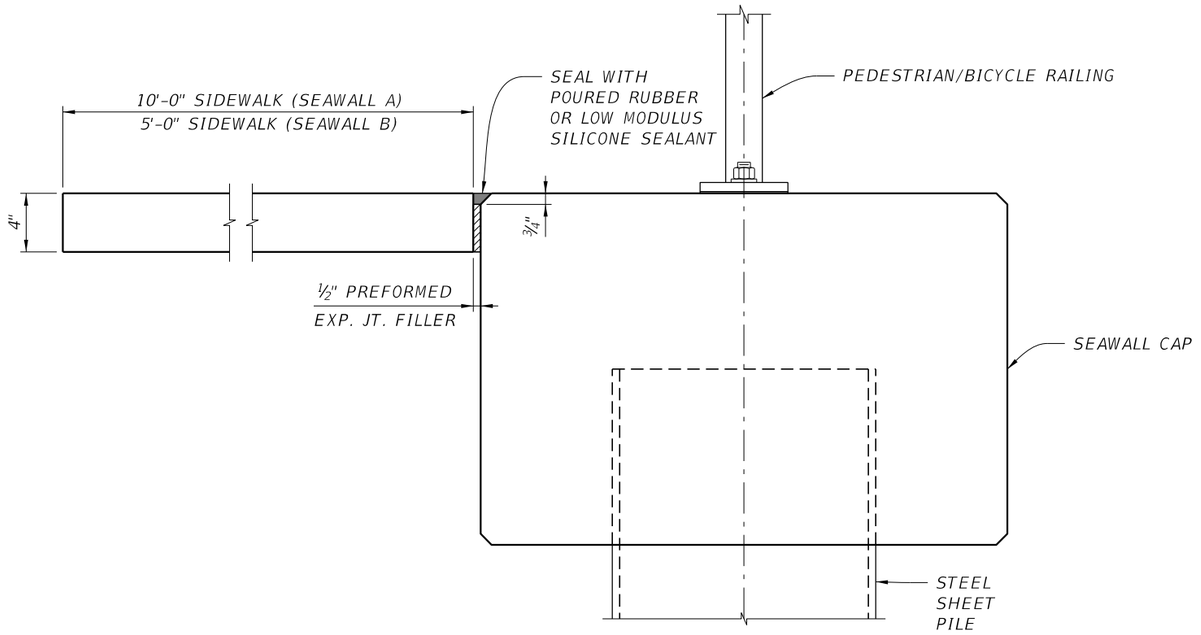
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-40



SECTION B-B



SIDEWALK / SEAWALL CAP INTERFACE DETAIL

NOTES:

1. ALL REINFORCING SHALL BE CFRP BARS.
2. CUT BARS AS NEEDED TO MAINTAIN COVER.
3. FOR LOCATION OF SECTION B-B, SEE SHEET BW-40.
4. FOR REINFORCING BAR LIST, SEE SHEETS BW-44 & BW-45.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: QF
DESIGNED BY: DMH
CHECKED BY: QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

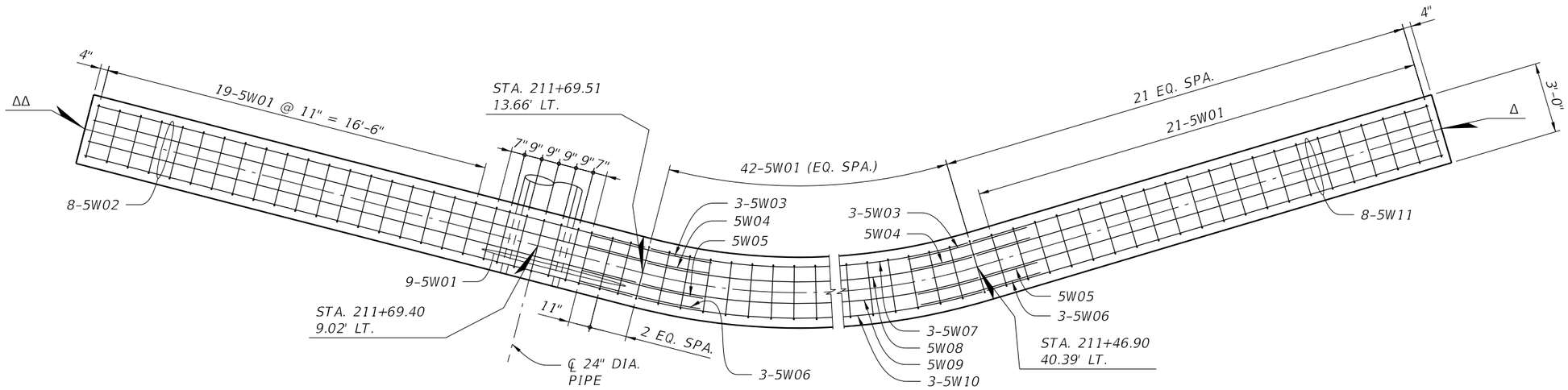
SHEET TITLE: SEAWALL DETAILS (2 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

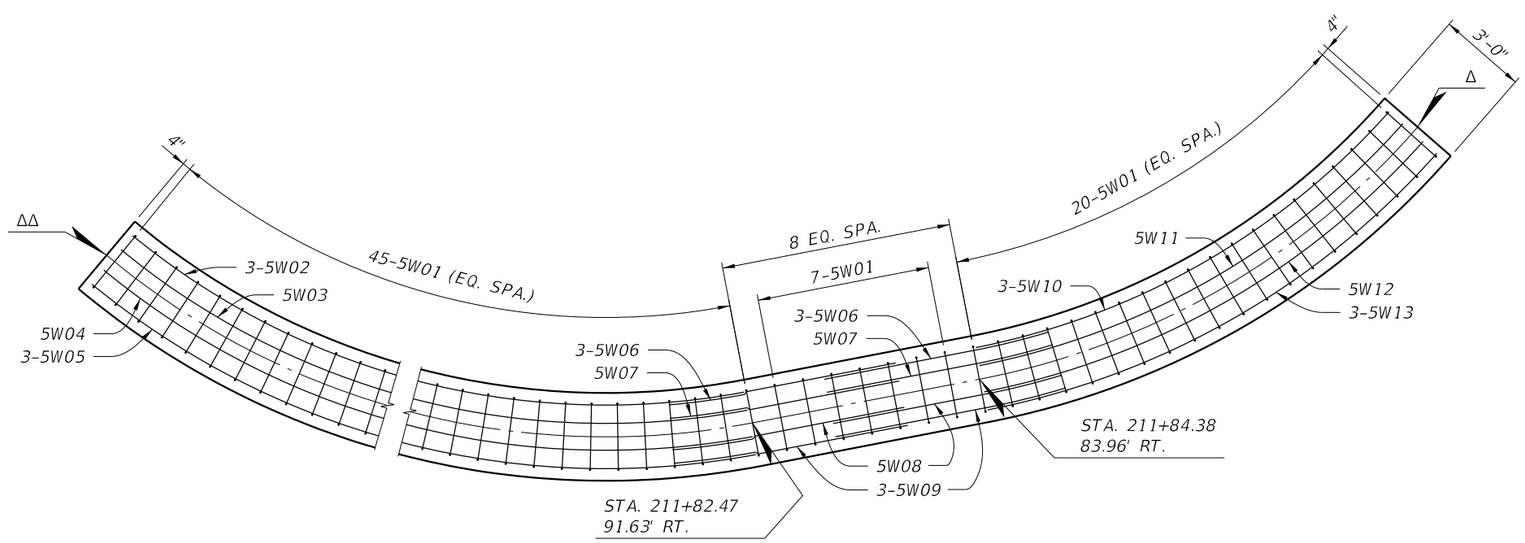
SHEET NO.: BW-41

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



SEAWALL A CAP - SEGMENT A

Δ = STA. 211+26.26, 43.44' LT.
ΔΔ = STA. 211+68.93, 10.75' RT.



SEAWALL A CAP - SEGMENT C

Δ = STA. 211+82.76, 66.76' RT.
ΔΔ = STA. 211+51.87, 111.33' RT.

NOTES:

1. ALL REINFORCING SHALL BE CFRP BARS.
2. FOR REINFORCING BAR LIST, SEE SHEETS BW-44 & BW-45.
3. FOR SEAWALL A PLAN VIEW, SEE SHEET BW-37.
4. MINIMUM LAP LENGTH = 2'-0".

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	QF	DMH	QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SEAWALL DETAILS (3 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-42

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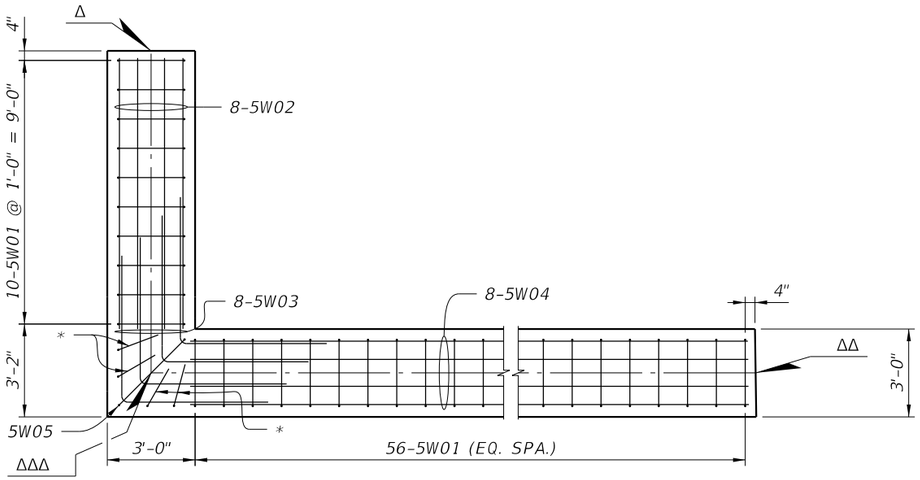
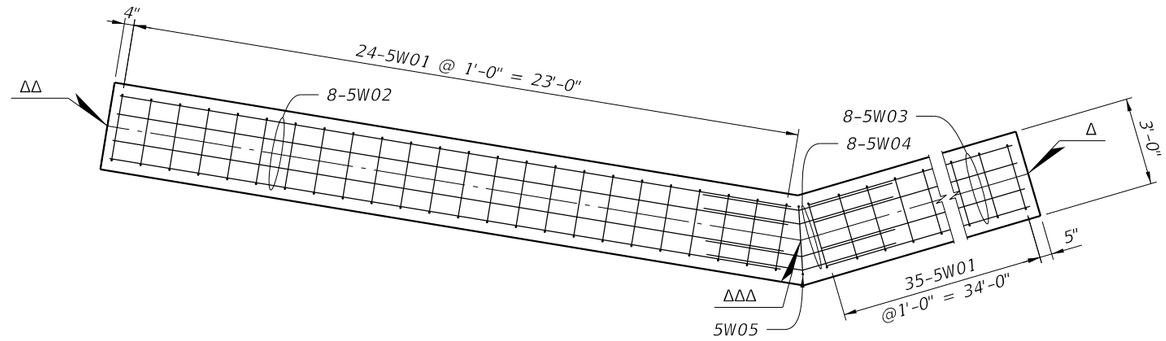


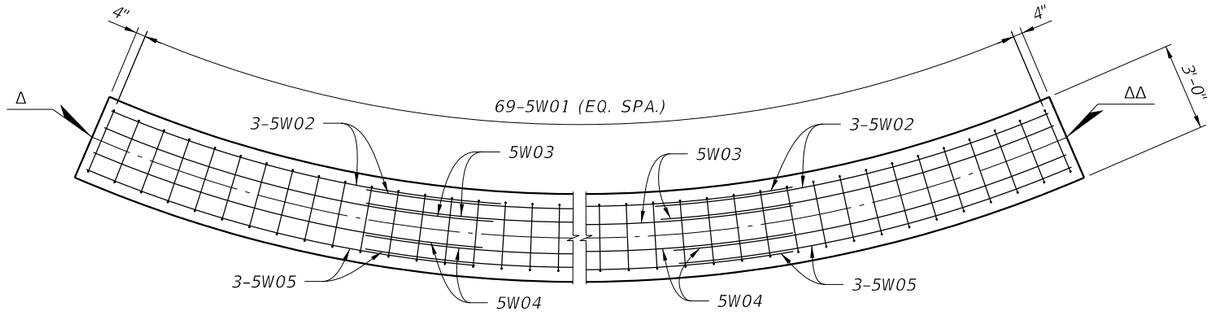
SEAWALL B CAP - SEGMENT A

* = 5W06 (PLACE AS SHOWN AND ROTATE TO MAINTAIN CLEAR COVER)
Δ = STA. 238+63.91, 40.89' LT.
ΔΔ = STA. 238+07.03, 45.94' LT.
ΔΔΔ = STA. 238+62.76, 51.83' LT.



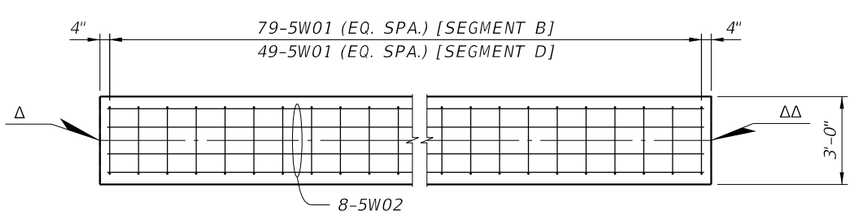
SEAWALL A CAP - SEGMENT B

Δ = STA. 211+82.76, 66.76' RT.
ΔΔ = STA. 211+68.93, 10.75' RT.
ΔΔΔ = STA. 211+68.37, 34.75' RT.



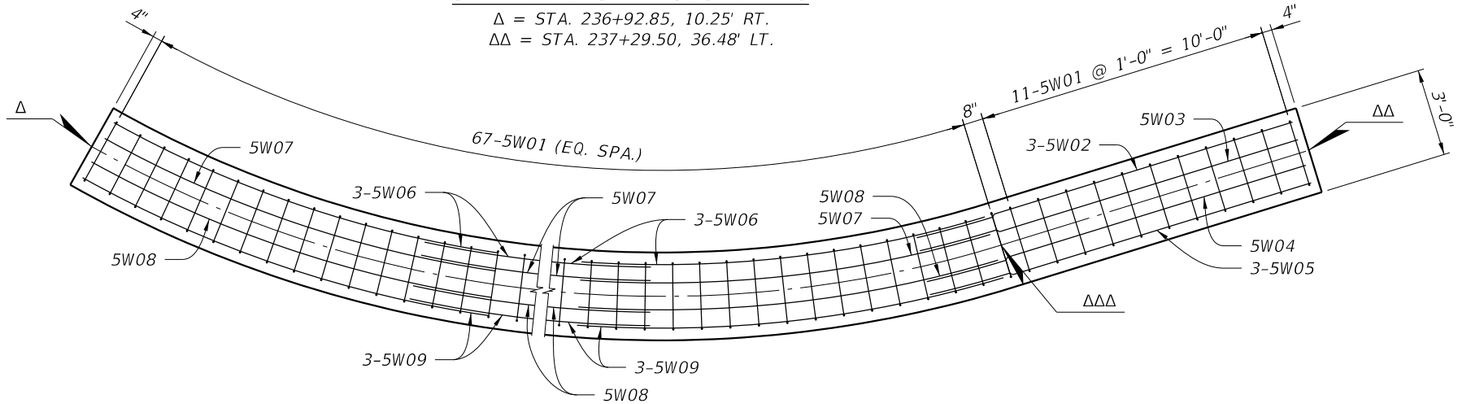
SEAWALL B CAP - SEGMENT C

Δ = STA. 236+92.85, 10.25' RT.
ΔΔ = STA. 237+29.50, 36.48' LT.



SEAWALL B CAP - SEGMENTS B & D

Δ = STA. 237+29.50, 36.48' LT. [SEGMENT B]
= STA. 236+92.85, 10.25' RT. [SEGMENT D]
ΔΔ = STA. 238+07.03, 45.94' LT. [SEGMENT B]
= STA. 236+98.54, 57.92' RT. [SEGMENT D]



SEAWALL B CAP - SEGMENT E

Δ = STA. 236+98.54, 57.92' RT.
ΔΔ = STA. 237+53.62, 91.02' RT.
ΔΔΔ = STA. 237+42.70, 92.37' RT.

NOTES:

1. ALL REINFORCING SHALL BE CFRP BARS.
2. FOR REINFORCING BAR LIST, SEE SHEETS BW-44 & BW-45.
3. FOR SEAWALL A PLAN VIEW, SEE SHEET BW-37. FOR SEAWALL B PLAN VIEW, SEE SHEET BW-38.
4. MINIMUM LAP LENGTH = 2'-0".

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: QF
DESIGNED BY: DMH
CHECKED BY: QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

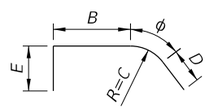
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SEAWALL DETAILS (4 OF 6)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-43

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION		SEAWALL A CAP - SEGMENT A									NO. REQUIRED = 1					
5	W01	4-11	91	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	24- 0	8	1			24- 0									
5	W03	5- 2	6	36			2- 6	25- 5 3/4								6
5	W04	5- 3	2	36			2- 6	26- 1 1/4								6
5	W05	5- 4	2	36			2- 6	27- 0 1/4								6
5	W06	5- 5	2	36			2- 6	27- 7 3/4								6
5	W07	13- 9	9	3			13- 9	25- 5 3/4								
5	W08	14- 0	3	3			14- 0	26- 1 1/4								
5	W09	14- 9	3	3			14- 9	27- 0 1/4								
5	W10	15- 0	9	3			15- 0	27- 7 3/4								
5	W11	20- 2	8	1			20- 2									
5	W12	6- 4	14	1			6- 4									
5	W13	4- 4	14	1			4- 4									
5	W14	9- 0	4	23			2- 2	1- 5 3/4	2- 2							
LOCATION		SEAWALL A CAP - SEGMENT B									NO. REQUIRED = 1					
5	W01	4-11	59	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	23- 3	8	1			23- 3									
5	W03	34- 3	8	1			34- 3									
5	W04	6- 8	8	12			3- 4	3- 4								26
5	W05	5- 0	1	11			2- 4 3/4	1- 3 1/2	1- 3 1/2							
LOCATION		SEAWALL A CAP - SEGMENT C									NO. REQUIRED = 1					
5	W01	4-11	72	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	15- 3	9	3			15- 3	25- 5 3/4								
5	W03	15- 3	3	3			15- 3	26- 1 1/4								
5	W04	15- 9	3	3			15- 9	27- 0 1/4								
5	W05	16- 0	9	3			16- 0	27- 8 1/2								
5	W06	7-11	6	36			5- 3	25- 5 3/4								6
5	W07	8- 0	3	36			5- 3	26- 1 1/4								6
5	W08	8- 1	3	36			5- 3	27- 0 1/4								6
5	W09	8- 2	9	36			5- 3	27- 7 3/4								6
5	W10	16- 7	3	3			16- 6 1/2	25- 5 3/4								
5	W11	17- 0	1	3			16-11 1/2	26- 1 1/4								
5	W12	15- 7	1	3			15- 6 3/4	27- 0 1/4								
5	W13	18- 0	3	3			17-11 3/4	27- 7 3/4								
LOCATION		SEAWALL B CAP - SEGMENT A									NO. REQUIRED = 1					
5	W01	4-11	66	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	9- 3	8	1			9- 3									
5	W03	10- 0	8	10			5- 0	5- 0								
5	W04	54- 6	8	1			54- 6									
5	W05	5-10	1	11			3- 3	1- 3 1/2	1- 3 1/2							
5	W06	2-10	4	10			1- 6	1- 3 1/2								
LOCATION		SEAWALL B CAP - SEGMENT B									NO. REQUIRED = 1					
5	W01	4-11	79	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	80- 3	8	2			2- 3	78- 0							1	
LOCATION		SEAWALL B CAP - SEGMENT C									NO. REQUIRED = 1					
5	W01	4-11	69	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	15- 0	18	3			15- 0	40-11 1/4								
5	W03	15- 3	6	3			15- 3	41- 6 3/4								
5	W04	15- 9	6	3			15- 9	42- 5 3/4								

NOTES:

1. ALL REINFORCING SHALL BE CFRP. FOR BAR BENDING DETAILS, SEE INDEX 415-010.
2. BAR TYPE 36 GEOMETRY:



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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SEAWALL DETAILS (5 OF 6)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

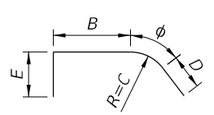
SHEET NO. BW-44

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
5	W05	16- 0	18	3			16- 0	43- 1 1/2								
LOCATION SEAWALL B CAP - SEGMENT D											NO. REQUIRED = 1					
5	W01	4-11	49	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	47- 6	8	1			47- 6									
LOCATION SEAWALL B CAP - SEGMENT E											NO. REQUIRED = 1					
5	W01	4-11	78	11			2- 4	1- 3 1/2	1- 3 1/2							
5	W02	13- 6	3	36			10- 9	38- 5 1/4								4
5	W03	13- 6	1	36			10- 9	39- 0 3/4								4
5	W04	13- 7	1	36			10- 9	39-11 3/4								4
5	W05	13- 7	3	36			10- 9	40- 7 1/2								4
5	W06	14- 0	15	3			14- 0	38- 5 1/4								
5	W07	14- 3	5	3			14- 3	39- 0 3/4								
5	W08	14- 7	5	3			14- 7	39-11 3/4								
5	W09	14- 9	15	3			14- 9	40- 7 1/2								

END OF LIST

NOTES:

1. ALL REINFORCING SHALL BE CFRP. FOR BAR BENDING DETAILS, SEE INDEX 415-010.
2. BAR TYPE 36 GEOMETRY:



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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: LCY
DESIGNED BY: DMH
CHECKED BY: LCY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: SEAWALL DETAILS (6 OF 6)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-45

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TEMPORARY MSE RETAINING WALL SYSTEM DATA TABLES

GEOTECHNICAL INFORMATION						Table Date 1-01-11
TEMP. MSE WALL TW-1	REINFORCED SOIL & RANDOM BACKFILL	LOOSE TO MEDIUM DENSE SAND TO SAND WITH SILT	MEDIUM DENSE TO DENSE SAND WITH SILT	LOOSE SILTY SAND	FIRM TO VERY STIFF CLAYEY SAND TO SILT TO CLAY	HARD INDURATED SILT TO CLAY
DEPTH BELOW EXISTING GROUND LINE (FT.)	---	0 - 18	18 - 33	33 - 38	38 - 83	83 - 115
EFFECTIVE UNIT WEIGHT (PCF)	105	42.6	47.6	42.6	57.6	62.6
COHESION (PSF)	0	---	---	---	1,700	3,000
INTERNAL FRICTION ANGLE (DEGREES)	30	29	30	28	---	---
TEMP. MSE WALL TW-2	REINFORCED SOIL & RANDOM BACKFILL	LOOSE TO VERY LOOSE SAND TO SAND WITH SILT	LOOSE TO MEDIUM DENSE SAND TO SAND WITH SILT TO SILTY SAND	STIFF TO HARD CLAYEY SAND TO SILT TO CLAY	VERY STIFF TO HARD INDURATED SILT TO CLAY	---
DEPTH BELOW EXISTING GROUND LINE (FT.)	---	0 - 28	28 - 63	63 - 93	93 - 125	---
EFFECTIVE UNIT WEIGHT (PCF)	105	37.6	42.6	57.6	62.6	---
COHESION (PSF)	0	---	---	3,000	3,000	---
INTERNAL FRICTION ANGLE (DEGREES)	30	28	29	---	---	---

NOTE:
IF THE UNIT WEIGHT AND/OR INTERNAL FRICTION ANGLE OF THE FILL PROPOSED BY THE CONTRACTOR DIFFERS FROM THAT SHOWN ABOVE, THE PROJECT ENGINEER WILL CONTACT BOTH THE DISTRICT GEOTECHNICAL ENGINEER AND THE WALL DESIGNER FOR A POSSIBLE REDESIGN.

RETAINING WALL VARIABLES				Table Date 07-01-13
WALL NO.	WALL SETTLEMENT			AIR CONTAMINANTS CLASSIFICATION
	LONG TERM SETTLEMENT (IN.)	SHORT TERM SETTLEMENT (IN.)	DIFFERENTIAL SETTLEMENT (%) (FT./100FT.)	
TW-1	< 0.5	1.0 - 1.5	< 0.1	LOW
TW-2	< 0.5	4.0 - 4.5	< 0.2	LOW

NOTE:
DESIGN WALLS FOR THE SETTLEMENTS NOTED IN THE TABLE.
LONG TERM SETTLEMENT IS MEASURED FROM THE BEGINNING OF WALL CONSTRUCTION.

SOIL REINFORCEMENT LENGTHS FOR EXTERNAL STABILITY										Table Date 1-01-11	
WALL TW-1	WALL HEIGHT (FT.)	≤ 8	10	12	14	16	18				
	REINFORCEMENT LENGTH (FT.)	10	12	14	16	18	20				
	FACTORED BEARING RESISTANCE (PSF)	1,939	2,303	2,669	3,039	3,415	3,787				
WALL TW-2	WALL HEIGHT (FT.)	≤ 8	10	12	14	16	18	20	22	24	
	REINFORCEMENT LENGTH (FT.)	12	14	16	18	20	22	24	26	28	
	FACTORED BEARING RESISTANCE (PSF)	1,865	2,150	2,435	2,717	3,002	3,287	3,572	3,862	4,148	

NOTES:
1. THE REINFORCEMENT STRAP LENGTHS SHOWN ABOVE ARE THE MINIMUM LENGTHS REQUIRED FOR EXTERNAL STABILITY. THE REINFORCEMENT LENGTHS USED IN THE CONSTRUCTION OF THE RETAINING WALLS WILL BE THE LONGER OF THAT REQUIRED FOR EXTERNAL OR INTERNAL STABILITY (DETERMINED BY PROPRIETARY WALL COMPANIES).
2. THE FACTORED BEARING RESISTANCES SHOWN ABOVE ARE THE CRITICAL (LOWEST) VALUES FROM ALL THE LOAD CASES ANALYZED USING LRFD METHODOLOGY.

NOTES:
1. SEE THE APPROVED PRODUCTS LIST FOR APPROVED WALL SYSTEMS (FDOT WALL TYPE 3).
2. SEE STANDARD PLANS INDEX 548-030 FOR GENERAL NOTES AND DETAILS.

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

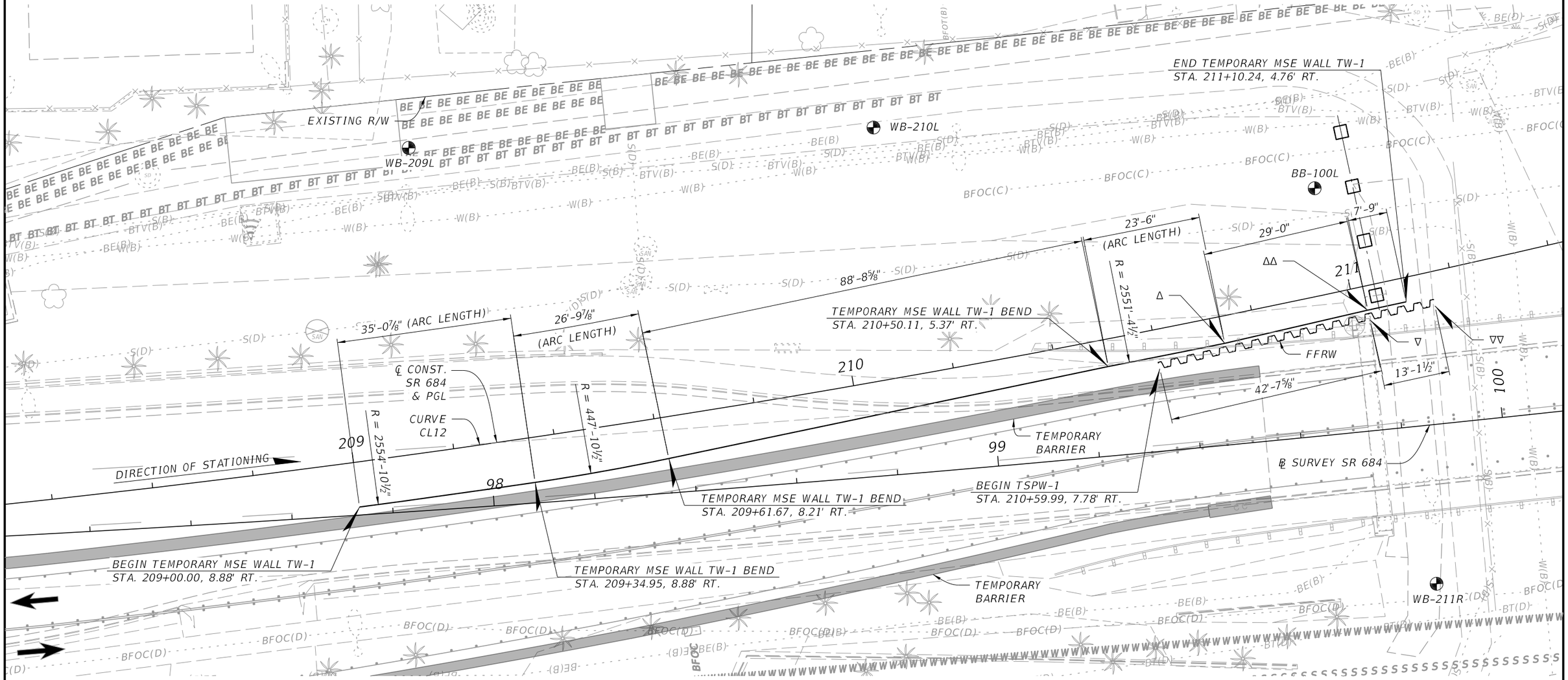
DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: QF
DESIGNED BY: DMH
CHECKED BY: QF

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: TEMPORARY MSE WALL DATA TABLES
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-46



PLAN - TEMPORARY WALLS

LEGEND

Δ TEMPORARY MSE WALL TW-1 BEND
STA. 210+73.56, 5.37' RT.

ΔΔ TEMPORARY MSE WALL TW-1 BEND
STA. 211+02.50, 4.75' RT.

APPROX. BORING LOCATION

∇ TSPW-1 BEND
STA. 211+02.50, 6.75' RT.

∇∇ END TSPW-1
STA. 211+15.59, 6.78' RT.

NOTE:

1. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.

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REVISIONS					
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DOUGLAS M. HERSHEY, P.E.
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H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	DMH	JGH	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

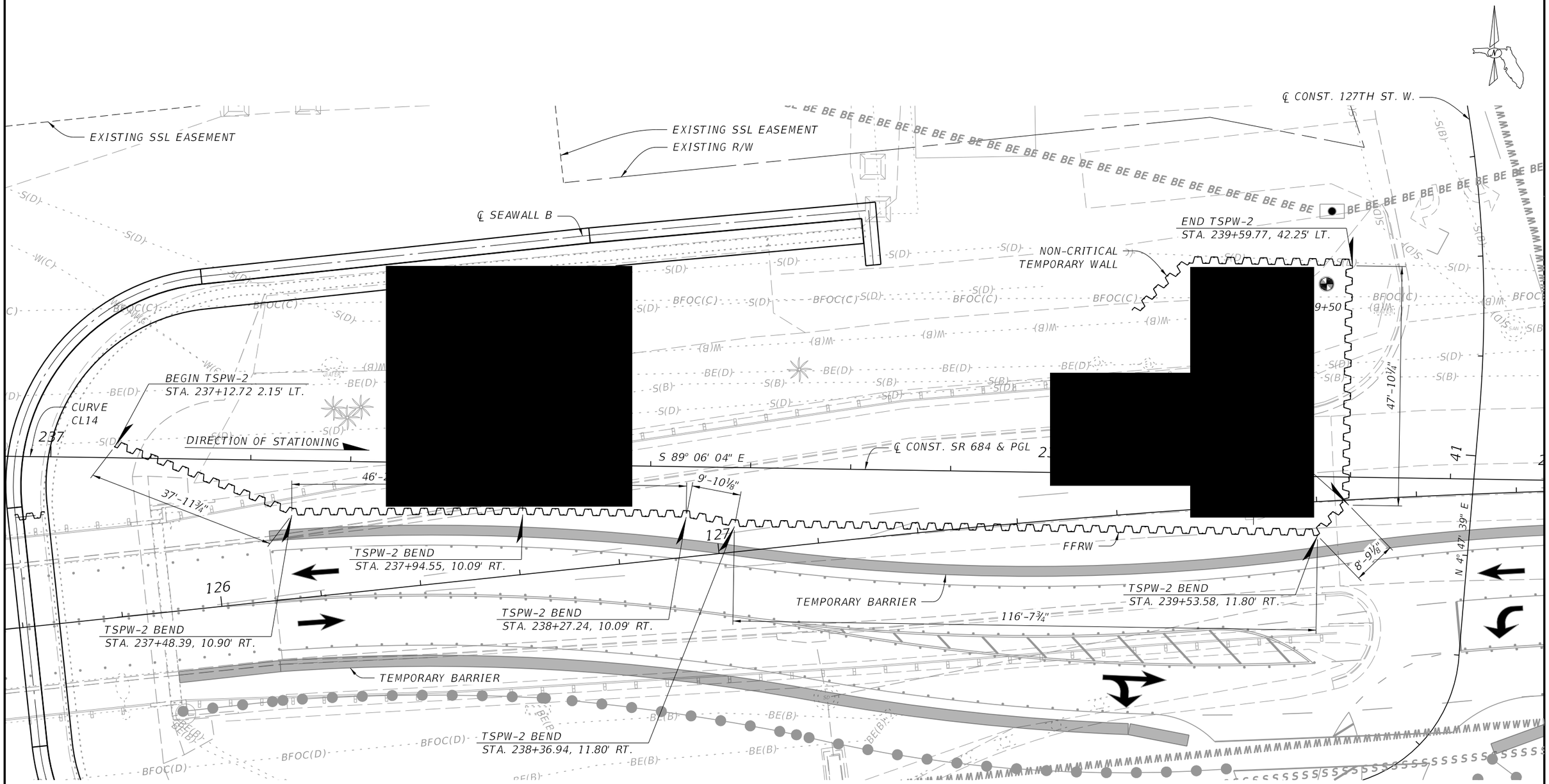
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - TEMPORARY WALLS (1 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW - 47



PLAN - TEMPORARY WALLS

LEGEND:

APPROX. BORING LOCATION

NOTE:

1. FOR HORIZONTAL CURVE DATA, SEE SHEET B1-7.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
LCY	DMH	JGH	DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - TEMPORARY WALLS (2 OF 3)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-48

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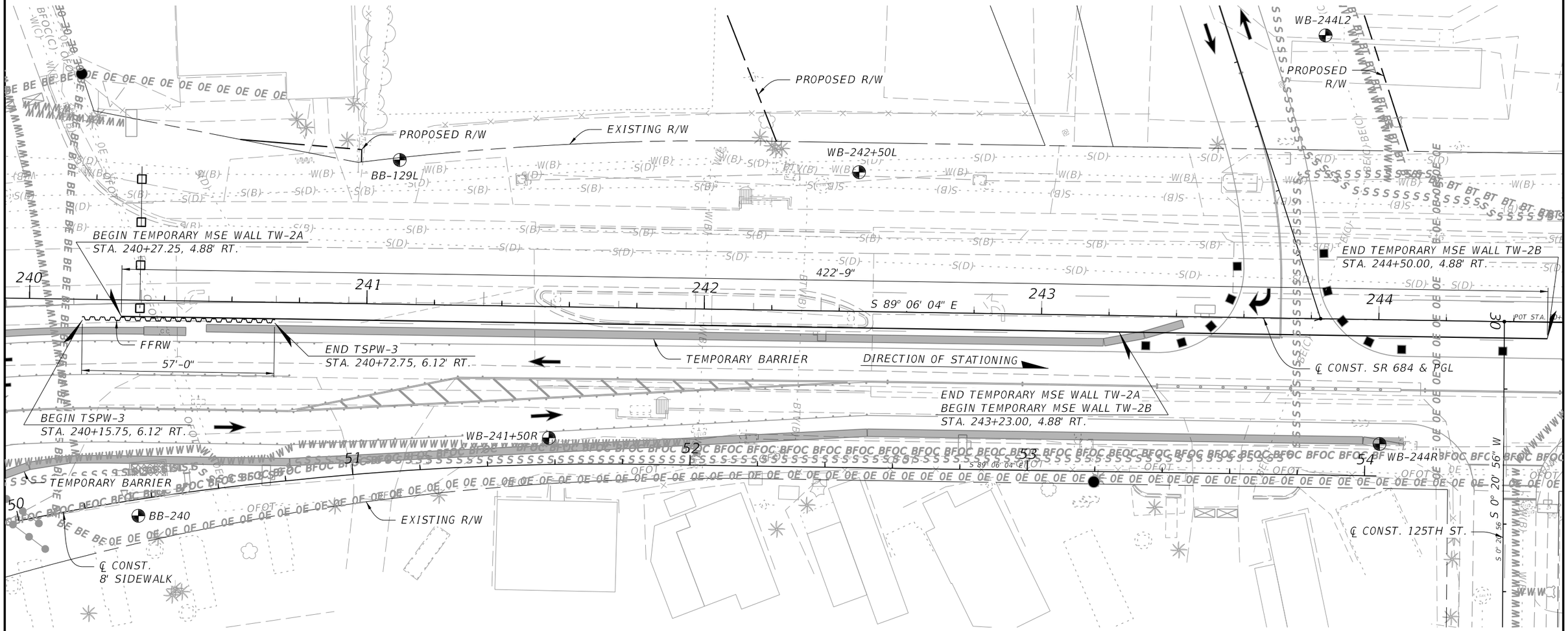

PLAN - TEMPORARY WALLS

LEGEND:

APPROX. BORING LOCATION

NOTE:

1. TEMPORARY MSE WALL TW-2A SHALL BE CONSTRUCTED IN PHASE 1B-1. TEMPORARY MSE WALL TW-2B SHALL BE CONSTRUCTED IN PHASE 1B-2.
2. TEMPORARY MSE WALL TW-2A HAS A LENGTH OF 295'-9". TEMPORARY MSE WALL TW-2B HAS A LENGTH OF 127'-0".

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: LCY
CHECKED BY: DMH
DESIGNED BY: JGH
CHECKED BY: DMH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: PLAN - TEMPORARY WALLS (3 OF 3)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-49

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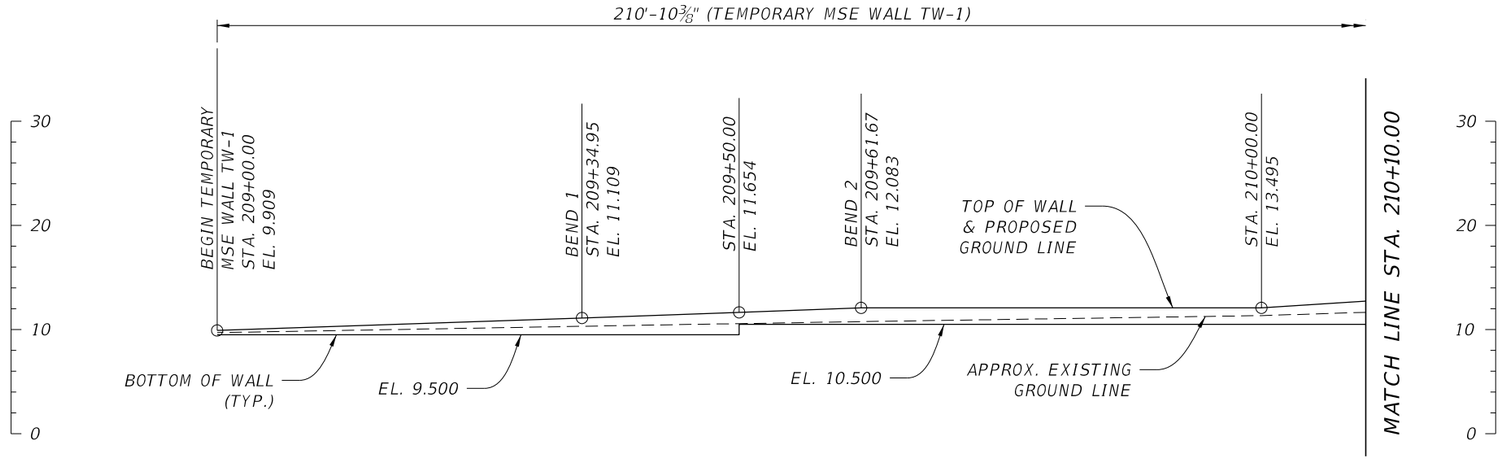
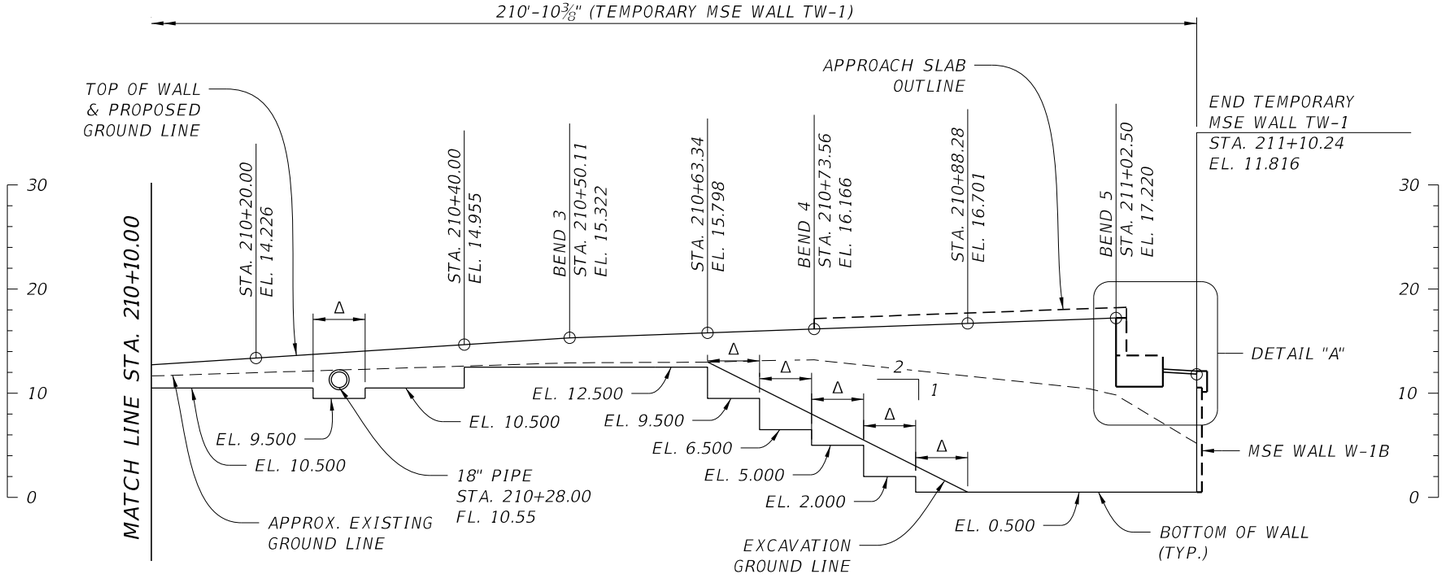
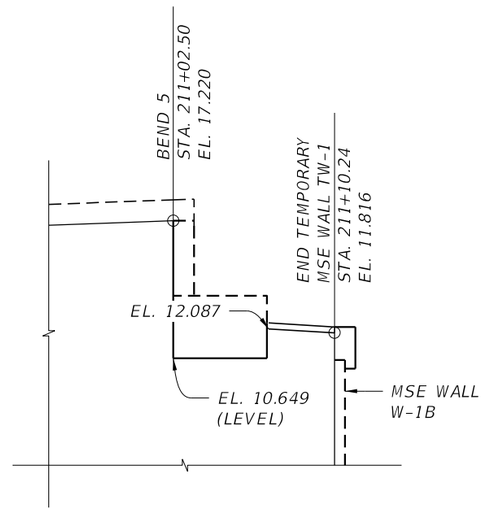


ELEVATION

TABLE OF GROUND ELEVATIONS		
STATION	OFFSET (RIGHT)	EXISTING GROUND
209+00.00	8.88	9.71
209+34.95	8.88	10.31
209+50.00	8.66	10.57
209+61.67	8.21	10.76
210+00.00	6.60	11.34
210+20.00	5.99	12.14
210+40.00	5.54	12.67
210+50.11	5.37	12.92
210+63.34	5.37	12.98
210+73.56	5.37	13.20
210+88.28	5.10	12.63
211+02.50	4.75	9.83
211+10.24	4.76	5.18



ELEVATION



DETAIL "A"

LEGEND:

Δ 5'-0"

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
QF	JGH	QF	CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - TEMPORARY MSE WALL TW-1

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-50

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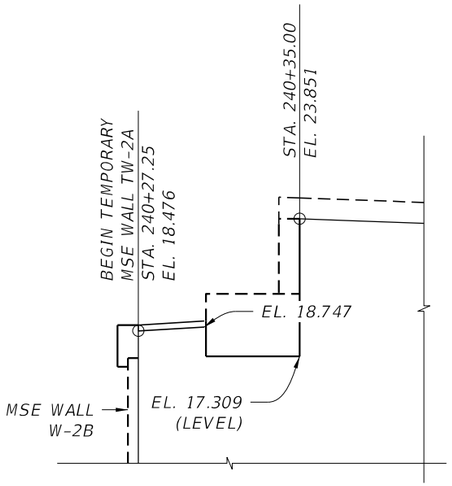
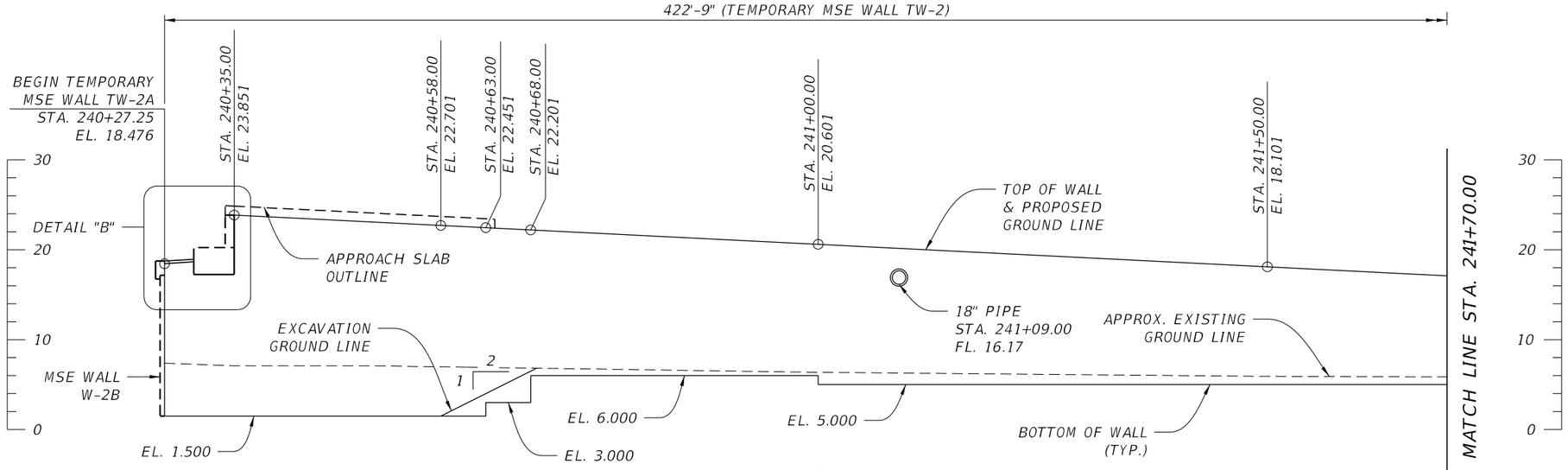
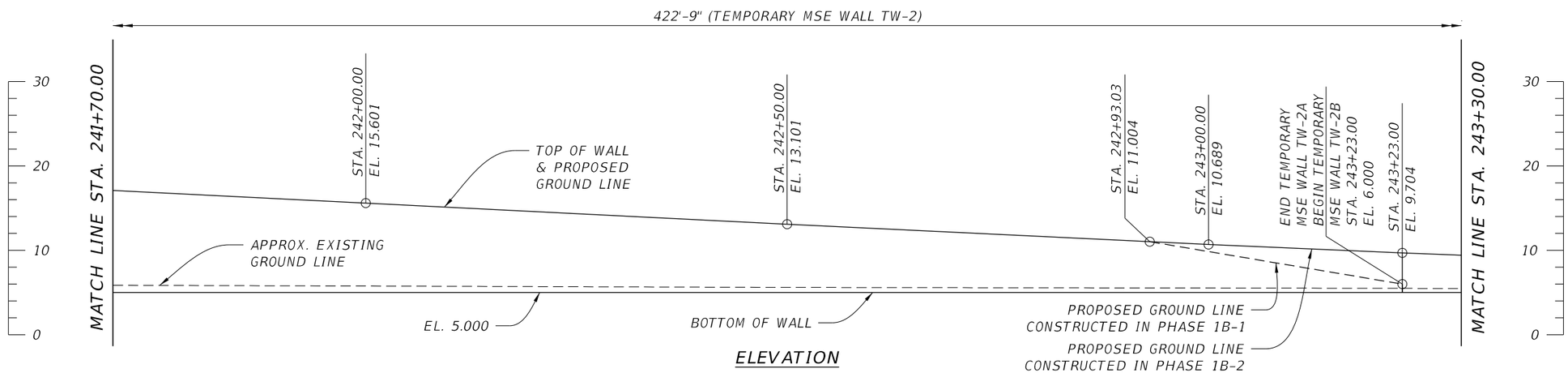


DETAIL "B"

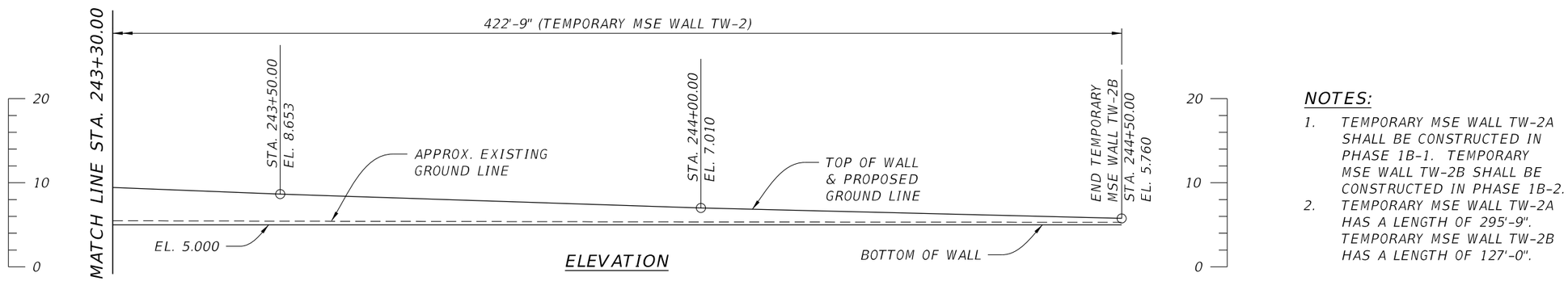


ELEVATION

TABLE OF GROUND ELEVATIONS		
STATION	OFFSET (RIGHT)	EXISTING GROUND
240+27.25	4.88	7.56
240+35.00	4.88	7.38
240+58.00	4.88	6.99
240+63.00	4.88	6.91
240+68.00	4.88	6.84
241+00.00	4.88	6.37
241+50.00	4.88	5.92
242+00.00	4.88	5.77
242+50.00	4.88	5.61
242+93.03	4.88	5.55
243+00.00	4.88	5.54
243+23.00	4.88	5.50
243+50.00	4.88	5.44
244+00.00	4.88	5.34
244+50.00	4.88	5.29



ELEVATION



ELEVATION

NOTES:

1. TEMPORARY MSE WALL TW-2A SHALL BE CONSTRUCTED IN PHASE 1B-1. TEMPORARY MSE WALL TW-2B SHALL BE CONSTRUCTED IN PHASE 1B-2.
2. TEMPORARY MSE WALL TW-2A HAS A LENGTH OF 295'-9". TEMPORARY MSE WALL TW-2B HAS A LENGTH OF 127'-0".

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: QF
CHECKED BY: JGH
DESIGNED BY: QF
CHECKED BY: CS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - TEMPORARY MSE WALL TW-2

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-51

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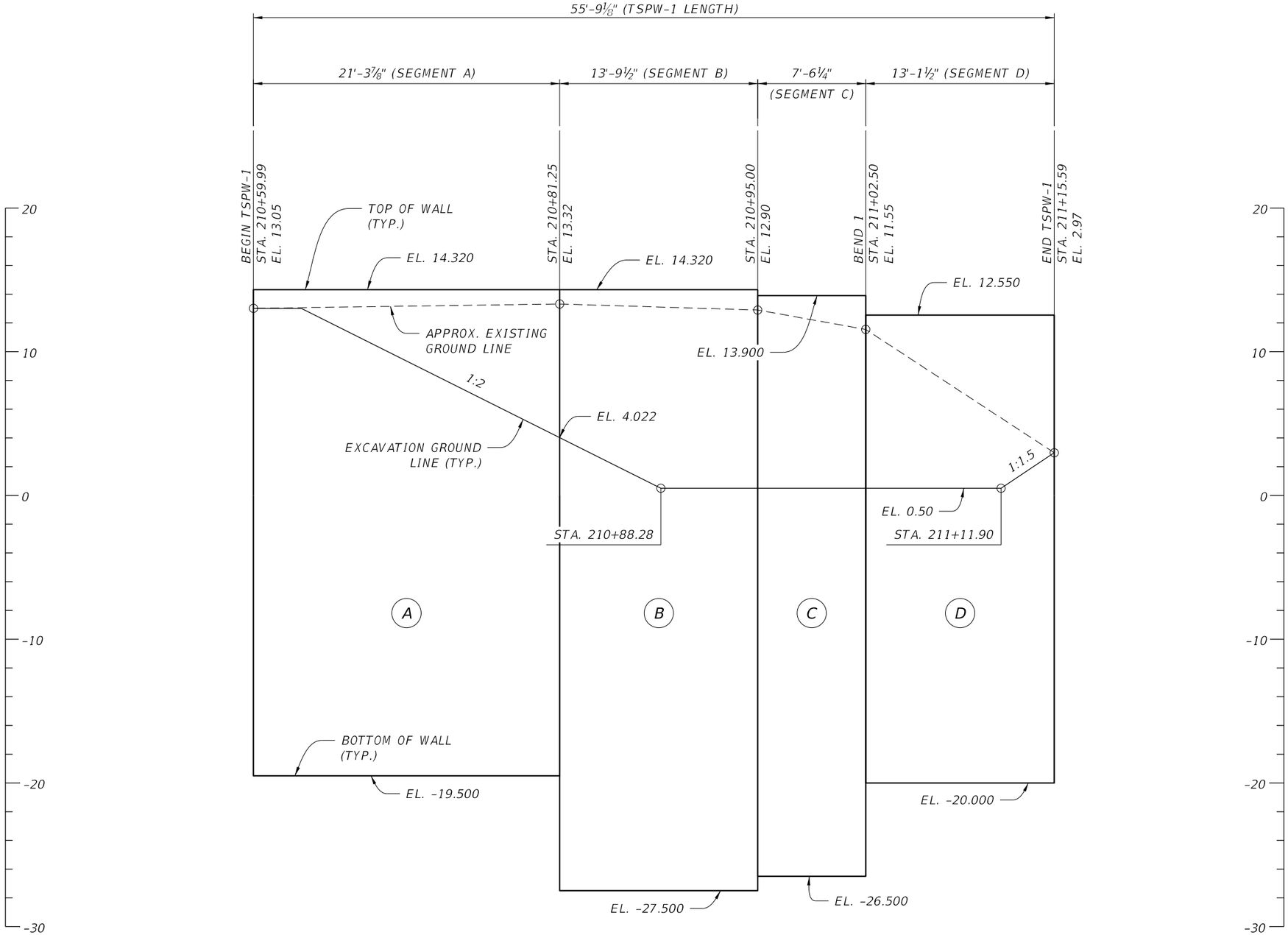

LEGEND:

(#) SHEET PILE WALL SEGMENT DESIGNATION

ELEVATION

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
QF	JGH	QF	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

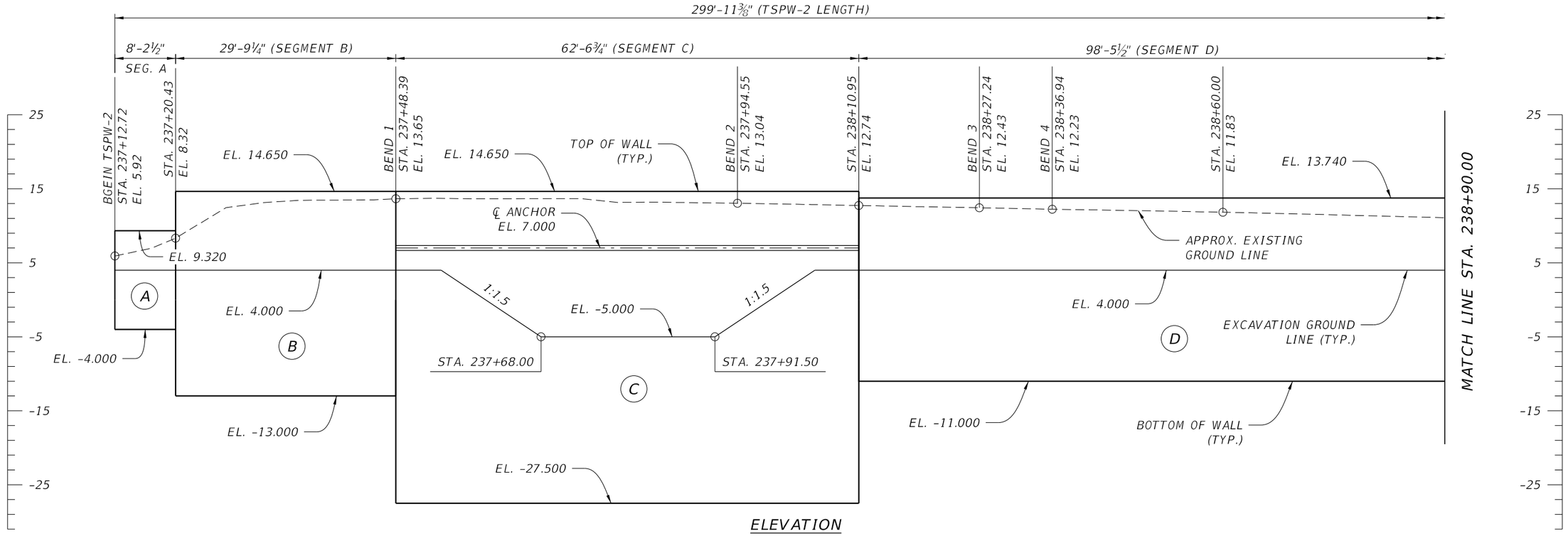
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - CRITICAL TEMPORARY SHEET PILE WALL TSPW-1

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-52



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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
QF	JGH	QF	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

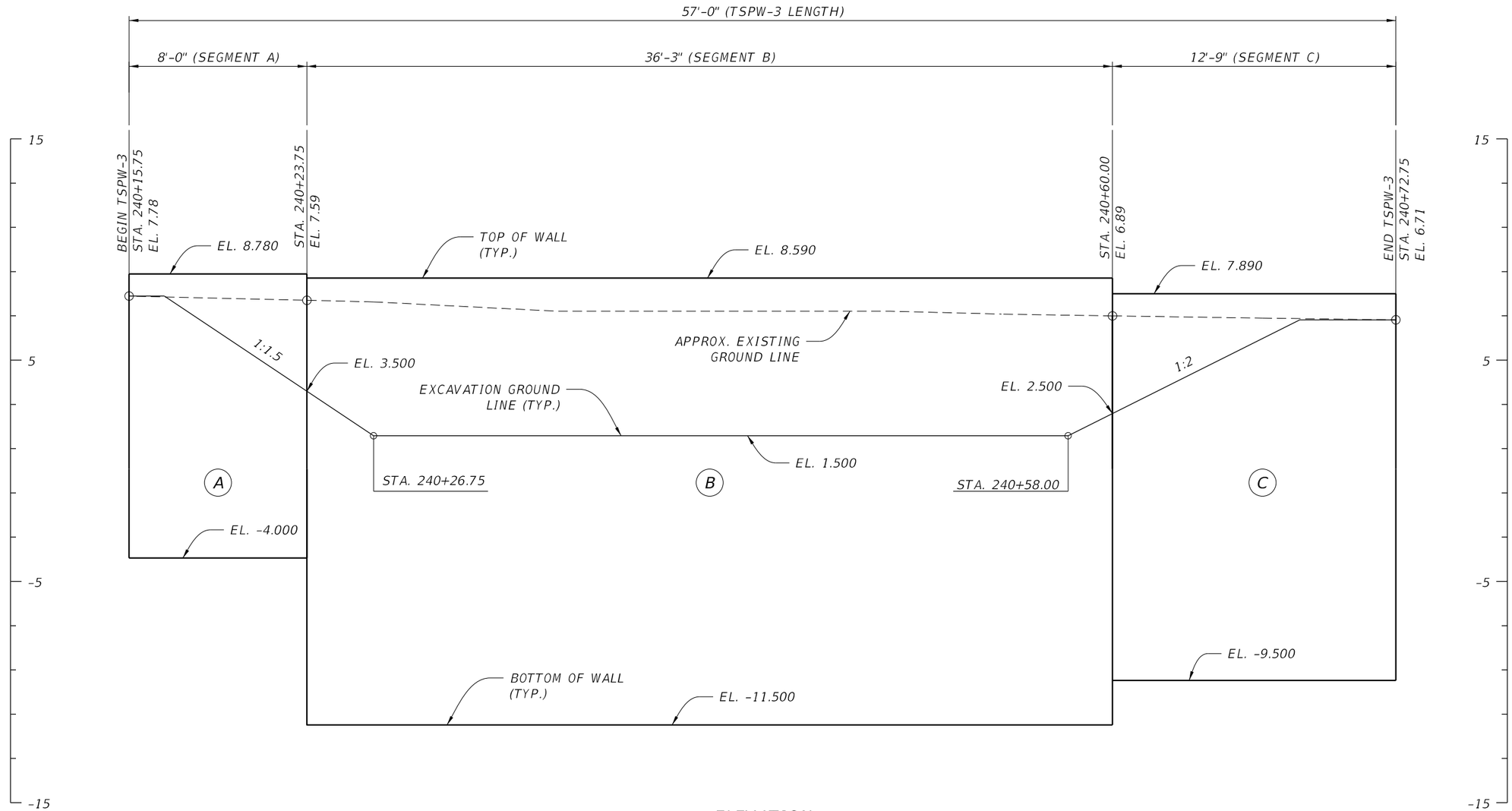
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - CRITICAL TEMPORARY SHEET PILE WALL TSPW-2

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-53



ELEVATION

LEGEND:

(#) SHEET PILE WALL SEGMENT DESIGNATION

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
QF	JGH	QF	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ELEVATION - CRITICAL TEMPORARY SHEET PILE WALL TSPW-3

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-54

STEEL SHEET PILE WALL, CANTILEVER DATA TABLE

Table Date 07-01-12

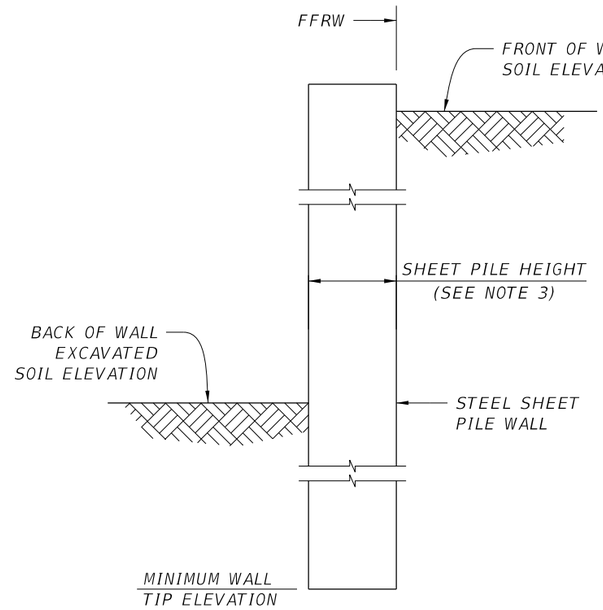
WALL	WALL LOCATION: STATION (begin to end)	WALL LOCATION: OFFSET (ft)	MINIMUM * PLASTIC SECTION MODULUS (in^3/ft): A-328 (ksi) fy=39 ksi	MINIMUM * PLASTIC SECTION MODULUS (in^3/ft): A-572 (ksi) fy=50 ksi	MINIMUM REQUIRED MOMENT OF INERTIA (in^4/ft)	MINIMUM WALL TIP ELEVATION (ft)	WALL TOP ELEV. (ft)	DESIGN PARAMETERS: SOIL ELEVATION: ** FRONT OF WALL (ft)	SOIL ELEVATION: BACK OF WALL (ft)	WATER ELEVATION: FRONT OF WALL (ft)	WATER ELEVATION: BACK OF WALL (ft)	DESIGN LIVE LOAD (psf)
TSPW-1 SEGMENT A	210+59.99 TO 210+81.25	7.78' RT. 7.18' RT.	29.3	22.9	113.1	-19.50	14.32	13.32	2.00	0.50	0.50	367.5
TSPW-1 SEGMENT B	210+81.25 TO 210+95.00	7.18' RT. 6.88' RT.	47.7	37.2	292.8	-27.50	14.32	13.32	0.50	0.50	0.50	367.5
TSPW-1 SEGMENT C	210+95.00 TO 211+02.50	6.88' RT. 6.75' RT.	43.4	33.9	248.4	-26.50	13.90	12.90	0.50	0.50	0.50	367.5
TSPW-1 SEGMENT D	211+02.50 TO 211+15.59	6.75' RT. 6.78' RT.	17.7	13.8	50.9	-20.00	12.55	11.55	0.50	0.50	0.50	367.5
TSPW-2 SEGMENT A	237+12.72 TO 237+20.43	2.15' LT. 0.67' RT.	2.4	1.8	1.5	-4.00	9.32	8.32	4.00	0.00	0.00	350.0
TSPW-2 SEGMENT B	237+20.43 TO 237+48.39	0.67' RT. 10.90' RT.	17.7	13.8	46.0	-13.00	14.65	13.65	4.00	0.00	0.00	350.0
TSPW-2 SEGMENT D	238+10.95 TO 239+09.25	10.09' RT. 11.80' RT.	13.2	10.3	28.5	-11.00	13.74	12.74	4.00	0.00	0.00	350.0
TSPW-3 SEGMENT A	240+15.75 TO 240+23.75	6.12' RT. 6.12' RT.	2.2	1.7	1.4	-4.00	8.78	7.78	3.50	0.00	0.00	350.0
TSPW-3 SEGMENT B	240+23.75 TO 240+60.00	6.12' RT. 6.12' RT.	6.8	5.3	8.3	-11.50	8.59	7.59	1.50	0.00	0.00	350.0
TSPW-3 SEGMENT C	240+60.00 TO 240+72.75	6.12' RT. 6.12' RT.	4.5	3.5	3.9	-9.50	7.89	6.89	1.50	0.00	0.00	350.0

* MINIMUM PLASTIC SECTION MODULUS IS BASED ON HOT ROLLED SECTIONS. FOR COLD ROLLED SECTIONS, INCREASE MINIMUM PLASTIC SECTION MODULUS BY 20%.

** MINIMUM OF DESIGN GROUND SURFACE OF DESIGN SCOUR DEPTH.

CRITICAL TEMP. SHEET PILE WALL DESIGN SOIL PARAMETERS

APPROXIMATE ELEVATION (ft)	MOIST UNIT WEIGHT (pcf)	EFFECTIVE UNIT WEIGHT (pcf)	ANGLE OF INTERNAL FRICTION (°)	COHESION (psf)	WALL FRICTION ANGLE (°)
TSPW-1					
GROUND TO EL. -7.5	105	42.6	29	---	11
EL. -7.5 TO EL. -32.5	112	49.6	31	---	14
EL. -32.5 TO EL. -37.5	125	62.6	34	---	17
TSPW-2					
GROUND TO EL. -12.7	100	37.6	28	---	11
EL. -12.7 TO EL. -47.7	112	49.6	31	---	14
EL. -47.7 TO EL. -52.7	125	62.6	34	---	17
TSPW-3					
GROUND TO EL. -14.8	105	42.6	29	---	11
EL. -14.8 TO EL. -24.8	100	37.6	28	---	11
EL. -24.8 TO EL. -49.8	112	49.6	30	---	14



TYPICAL SECTION

NOTES:

1. WALL DEFLECTIONS WILL CAUSE DISTRESS OF ADJACENT PAVEMENT DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN PAVEMENT CONDITIONS BEHIND THE SHEET PILE WALLS DURING CONSTRUCTION. THE COST OF MAINTAINING ADJACENT PAVEMENT SHALL BE INCLUDED IN THE COST OF THE TEMPORARY STEEL SHEET PILE WALL.
2. THE DESIGN PARAMETERS INDICATED IN THIS TABLE WERE USED IN THE SHEET PILE WALL ANALYSIS. IF THE CONTRACTOR PLANS OPERATIONS, WHICH EXCEED THE DESIGN PARAMETERS SHOWN ABOVE, THE CONTRACTOR'S SPECIALTY ENGINEER WILL REDESIGN THE WALL TO RESIST CONSTRUCTION LOADS AT A MAXIMUM DEFLECTION OF 3.0 INCHES.
3. THE SHEET PILE SELECTED FOR WALL TSPW-1 SHALL HAVE A HEIGHT NOT GREATER THAN 18 INCHES. THE SHEET PILE SELECTED FOR WALL TSPW-3 SHALL HAVE A HEIGHT NOT GREATER THAN 12 INCHES.
4. ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED. THE COST ASSOCIATED WITH THE DIFFICULT INSTALLATION INCLUDING THE COST OF PREFORMED HOLES, PUNCHING AND/OR OTHER METHODS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR SHEET PILING STEEL, TEMPORARY-CRITICAL, PAY ITEM NO. 455-133-2.
5. EXTRACT TEMPORARY SHEET PILING WITHOUT DAMAGING ADJACENT MSE WALLS, STRUCTURES AND BRIDGE APPROACH SLABS. WITHIN 30 FEET DISTANCE FROM ANY PERMANENT MSE WALL PANELS, STRUCTURES AND BRIDGE APPROACH SLABS, TEMPORARY SHEET PILES SHALL BE CUTOFF TO 2 FEET BELOW FINISH GRADE OR EXISTING GRADE AFTER THE SHEET PILES ARE INSTALLED, WHICHEVER IS LOWER. ALTERNATIVELY, THOSE SHEET PILES MAY BE EXTRACTED USING NON-VIBRATORY, NON-IMPACT METHODS (SUCH AS HYDRAULIC JACKING). THE COST TO CUT THE SHEET PILES, MATERIAL COSTS OF SHEET PILES, SHEET PILE EXTRACTION USING NON-VIBRATORY, NON-IMPACT METHOD, SHEET PILES ABANDONED IN PLACE, AND ALL ASSOCIATED COSTS WITH THE TEMPORARY SHEET PILES SHALL BE INCLUDED IN THE UNIT BID PRICE FOR SHEET PILING STEEL, TEMPORARY-CRITICAL, PAY ITEM NO. 455-133-2.
6. FOR TSPW-2 SEGMENT H, WATER LEVEL IS ASSUMED TO BE AT EL. 0.00 FOR IN-SITU CONDITIONS. DEWATERING WILL LOWER THE WATER LEVEL ON THE BACK OF THE WALL TO EL. -5.00 PRIOR TO EXCAVATION. THE WATER LEVEL IS TO BE MONITORED TO ENSURE THAT THE DEWATERED CONDITION IS MAINTAINED FOR THE ENTIRE CONSTRUCTION OF THE PIER FOOTINGS.

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: QF
DESIGNED BY: QF
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CRITICAL TEMPORARY SHEET PILE WALL DATA TABLES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-55

STEEL SHEET PILE WALL WITH PRESTRESSED SOIL ANCHORS DATA TABLE

Table Date 07-01-12

CONSTRUCTION INFORMATION												DESIGN PARAMETERS				
	WALL LOCATION		ANCHORS					SHEET PILES			MINIMUM WALL TIP ELEVATION (ft)	WALL TOP ELEV. (ft)	SOIL ELEVATION		WATER ELEVATION		
								* MINIMUM PLASTIC SECTION MODULUS (in^3/ft)					**				
WALL	STATION (begin to end)	OFFSET (ft)	MAXIMUM ANCHOR SPACING (ft)	FACTORED ANCHOR LOAD (kips/ft)	SERVICE ANCHOR LOAD (kips/ft)	MINIMUM UNBONDED LENGTH (ft)	INSTALLATION ANGLE BELOW HORIZONTAL (degrees)	A-328 (fy=39 ksi)	A-572 (fy=50 ksi)	MINIMUM REQUIRED MOMENT OF INERTIA (in^4/ft)			FRONT OF WALL (ft)	BACK OF WALL (ft)	FRONT OF WALL (ft)	BACK OF WALL (ft)	FACTORED DESIGN SURCHARGE LOAD (psf)
TSPW-2 (SEGMENT C)	237+48.98 TO 238+10.95	10.90' RT. 10.09' RT.	6.00	17.5	10.3	15.0	10	61.9	48.2	83.4	-27.50	14.65	13.65	-5.00	0.00	-5.00	350.0
TSPW-2 (SEGMENT E)	239+09.25 TO 239+53.58	11.80' RT. 11.80' RT.	6.00	13.2	7.8	15.0	10	45.1	35.2	51.8	-26.00	11.52	10.52	-5.00	0.00	-5.00	350.0
TSPW-2 (SEGMENT F)	239+53.58 TO 239+59.77	11.80' RT. 5.61' RT.	5.00	10.7	6.3	15.0	10	38.5	30.0	35.3	-25.00	10.21	9.21	-5.00	0.00	-5.00	350.0
TSPW-2 (SEGMENT G)	239+59.77 TO 239+59.77	5.61' RT. 42.25' LT.	6.00	12.1	7.2	15.0	10	40.1	31.3	45.6	-25.00	10.83	9.83	-5.00	0.00	-5.00	350.0

* MINIMUM PLASTIC SECTION MODULUS IS BASED ON HOT ROLLED SECTIONS. FOR COLD ROLLED SECTIONS, INCREASE MINIMUM PLASTIC SECTION MODULUS BY 20%.
** MINIMUM OF DESIGN GROUND SURFACE OR DESIGN SCOUR DEPTH.

NOTES:

1. WALL DEFLECTIONS WILL CAUSE DISTRESS OF ADJACENT PAVEMENT DURING CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN PAVEMENT CONDITIONS BEHIND THE SHEET PILE WALLS DURING CONSTRUCTION. THE COST OF MAINTAINING ADJACENT PAVEMENT SHALL BE INCLUDED IN THE COST OF THE TEMPORARY STEEL SHEET PILE WALL.
2. THE DESIGN PARAMETERS INDICATED IN THE TABLE WERE USED IN THE SHEET PILE WALL ANALYSIS. IF THE CONTRACTOR PLANS OPERATIONS WHICH EXCEED THE DESIGN PARAMETERS SHOWN ABOVE, THE CONTRACTOR'S ENGINEER OF RECORD WILL REDESIGN THE WALL TO RESIST CONSTRUCTION LOADS AT A MAXIMUM DEFLECTION OF 3.0 INCHES.
3. FACTORED ANCHOR DESIGN LOAD = FACTORED ANCHOR LOAD (kips/ft) X ANCHOR SPACING (ft). ANCHOR LOAD SHOWN ACCOUNTS FOR INCLINATION ANGLE BELOW HORIZONTAL.
4. THE SHEET PILE SELECTED FOR WALL TSPW-2 SHALL HAVE A HEIGHT NOT GREATER THAN 18 INCHES. PART OF WALL TSPW-2 IS LOCATED UNDERNEATH AND/OR IN CLOSE PROXIMITY TO THE PORTION OF THE BRIDGE CONSTRUCTED IN PHASE 1. DIFFICULT EXTRACTION OF THE SHEET PILES SHALL BE EXPECTED INCLUDING THE POTENTIAL FOR SHEET PILES TO BE ABANDONED. ALL ABANDONED SHEET PILES SHALL BE REMOVED TO AT LEAST 2 FEET BELOW THE FINAL PROPOSED GROUND LINE OR A MINIMUM OF 3 INCHES BELOW THE ADJACENT FOOTING WHEN THE SHEET PILING INTERFERES WITH PHASE 2 FOOTING CONSTRUCTION. NO ADDITIONAL PAYMENT SHALL BE MADE FOR SHEET PILES THAT ARE TO BE ABANDONED.
5. ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHALL BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED. THE COST ASSOCIATED WITH THE DIFFICULT INSTALLATION INCLUDING THE COST OF PREFORMED HOLES, PUNCHING AND/OR OTHER METHODS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR SHEET PILING STEEL, TEMPORARY-CRITICAL, PAY ITEM NO. 455-133-2.
6. EXTRACT TEMPORARY SHEET PILING WITHOUT DAMAGING ADJACENT MSE WALLS, STRUCTURES, BRIDGE FOUNDATION ELEMENTS AND BRIDGE APPROACH SLABS. WITHIN 30 FEET DISTANCE FROM ANY PERMANENT MSE WALL PANELS, STRUCTURES, BRIDGE FOUNDATOIN ELEMENTS AND BRIDGE APPROACH SLABS, TEMPORARY SHEET PILES SHALL BE CUTOFF TO 2 FEET BELOW FINISH GRADE OR EXISTING GRADE AFTER THE SHEET PILES ARE INSTALLED, WHICHEVER IS LOWER. ALTERNATIVELY, THOSE SHEET PILES MAY BE EXTRACTED USING NON-VIBRATORY, NON-IMPACT METHODS (SUCH AS HYDRAULIC JACKING). THE COST TO CUT THE SHEET PILES, MATERIAL COSTS OF SHEET PILES, SHEET PILE EXTRACTION USING NON-VIBRATORY, NON-IMPACT METHOD, SHEET PILES ABANDONED IN PLACE, AND ALL ASSOCIATED COSTS WITH THE SHEET PILES SHALL BE INCLUDED IN THE UNIT BID PRICE FOR SHEET PILING STEEL, TEMPORARY-CRITICAL, PAY ITEM NO. 455-133-2.
7. WATER LEVEL IS ASSUMED TO BE AT EL. 0.00 FOR IN-SITU CONDITIONS. DEWATERING WILL LOWER THE WATER LEVEL ON THE BACK OF THE WALL TO EL. -5.00 PRIOR TO EXCAVATION. THE WATER LEVEL IS TO BE MONITORED TO ENSURE THAT THE DEWATERED CONDITION IS MAINTAINED FOR THE ENTIRE CONSTRUCTION OF THE PIER FOOTINGS.

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY: DMH
CHECKED BY: QF
DESIGNED BY: QF
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

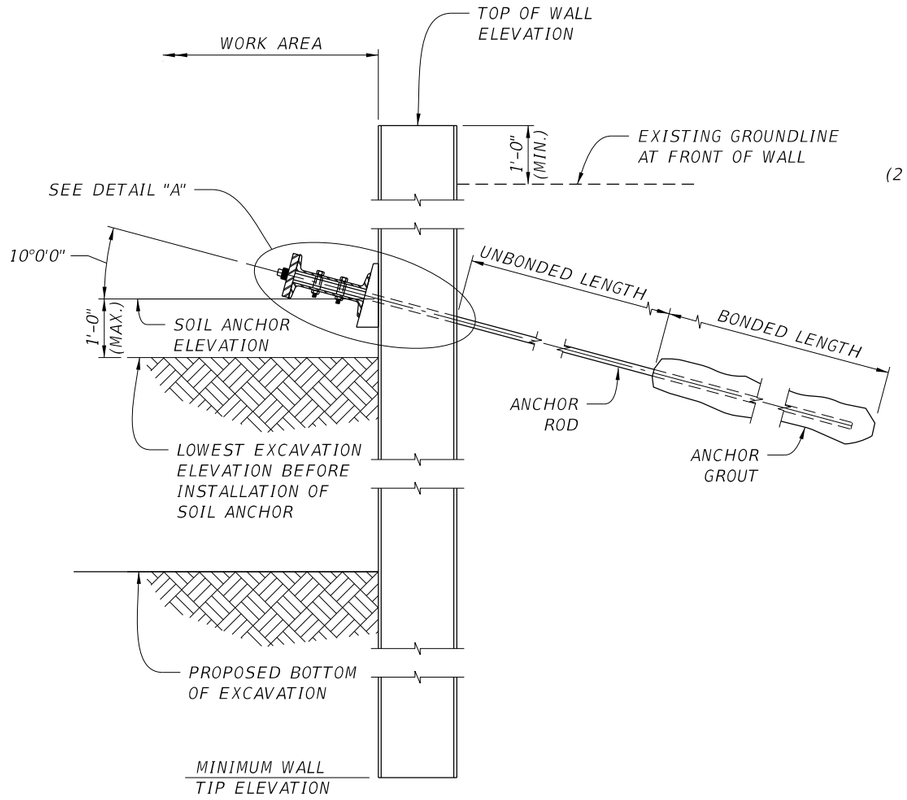
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: CRITICAL TEMPORARY SHEET PILE WALL DATA TABLES (2 OF 2)

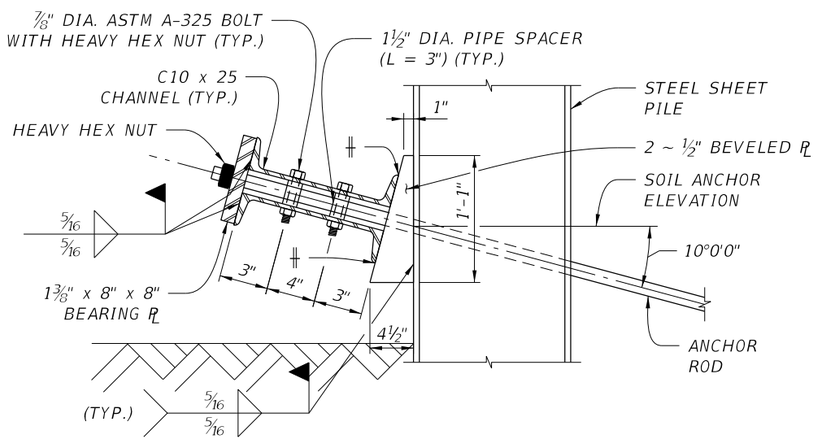
REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-56

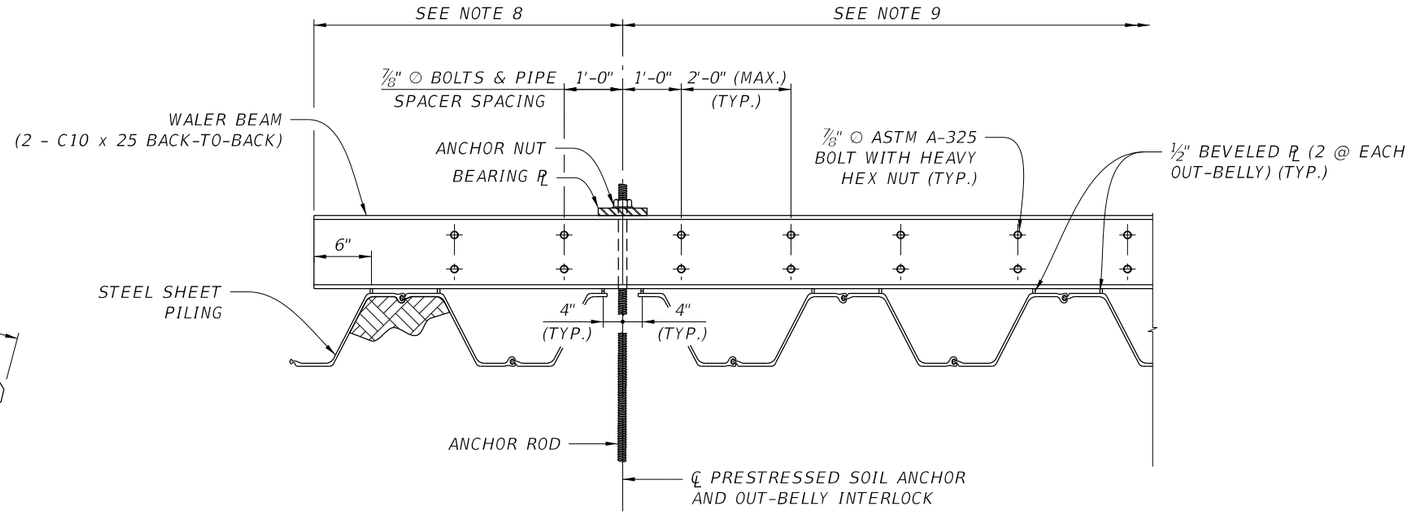


TIE BACK DETAIL



DETAIL "A"

⫴ = 5/16" FILLET WELD (FIELD WELDED) TO BOTH BEVELED PLATES



PLAN VIEW AT ANCHOR BAR

(NOT TO SCALE)

NOTES:

1. TIE BACK WALL CONSTRUCTION SEQUENCE
   A. INSTALL STEEL SHEET PILES AT THE LIMITS SHOWN ON THE DRAWINGS TO THE MINIMUM WALL TIP ELEVATION.
   B. EXCAVATE SOILS TO A DEPTH OF 1'-0" (MAXIMUM) BELOW SOIL ANCHOR ELEVATION.
   C. CUT HOLES IN SHEET PILE SECTIONS AND CONSTRUCT PRESTRESSED SOIL ANCHORS.
   D. INSTALL WEDGE PLATES, WALER BEAM SECTIONS AND BEARING PLATES.
   E. TEST ANCHORS FOR THE REQUIRED DESIGN LOADS AFTER GROUT HAS ACHIEVED THE NECESSARY DESIGN STRENGTH.
   F. PRESTRESS ANCHOR BAR AND ANCHORAGE TO THE REQUIRED LOCK-OFF LOAD.
   G. EXCAVATE TO PROPOSED EXCAVATION ELEVATION.
2. SELECT THE PRESTRESSED SOIL ANCHOR TYPE AND REQUIREMENTS.
3. PRESTRESSED SOIL ANCHORS AND ALL ASSOCIATED ITEMS SHALL BE INCLUDED IN THE COST OF CRITICAL TEMPORARY SHEET PILE WALL.
4. ANCHOR SPACINGS ARE BASED ON THE LOCATION OF ANCHORS AT OUT-BELLY INTERLOCKS FOR ASSUMED STEEL SHEET PILE SHAPES. ADJUSTMENTS TO ANCHOR SPACING BASED ON THE STEEL SHEET PILE SHAPES SELECTED BY THE CONTRACTOR MAY REQUIRE MODIFICATIONS TO DESIGN LOADS AND WALER BEAM. ADJUSTMENTS TO ANCHOR SPACING IN EXCESS OF 3" WILL REQUIRE THE APPROVAL OF THE ENGINEER. ALL ADJUSTMENTS SHALL BE INCLUDED IN THE SHOP DRAWINGS.
5. ADJUST VERTICAL POSITION OF BEVELED PLATES TO COMPENSATE FOR HORIZONTAL MISALIGNMENT OF STEEL SHEET PILES (1" MAX.) AND PROVIDE UNIFORM SUPPORT OF WALER BEAM.
6. ANCHOR FORCES AND SHEET PILE SIZE SHALL BE BASED ON THE ANCHORED SHEET PILE WALL DATA TABLE.
7. WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.
8. WALER BEAM SHALL CANTILEVER ONE OUT-BELLY MAXIMUM.
9. WALER BEAM SHALL BE CONTINUOUS ACROSS TWO ANCHORS MINIMUM.

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

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
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TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
QF	JGH	QF	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

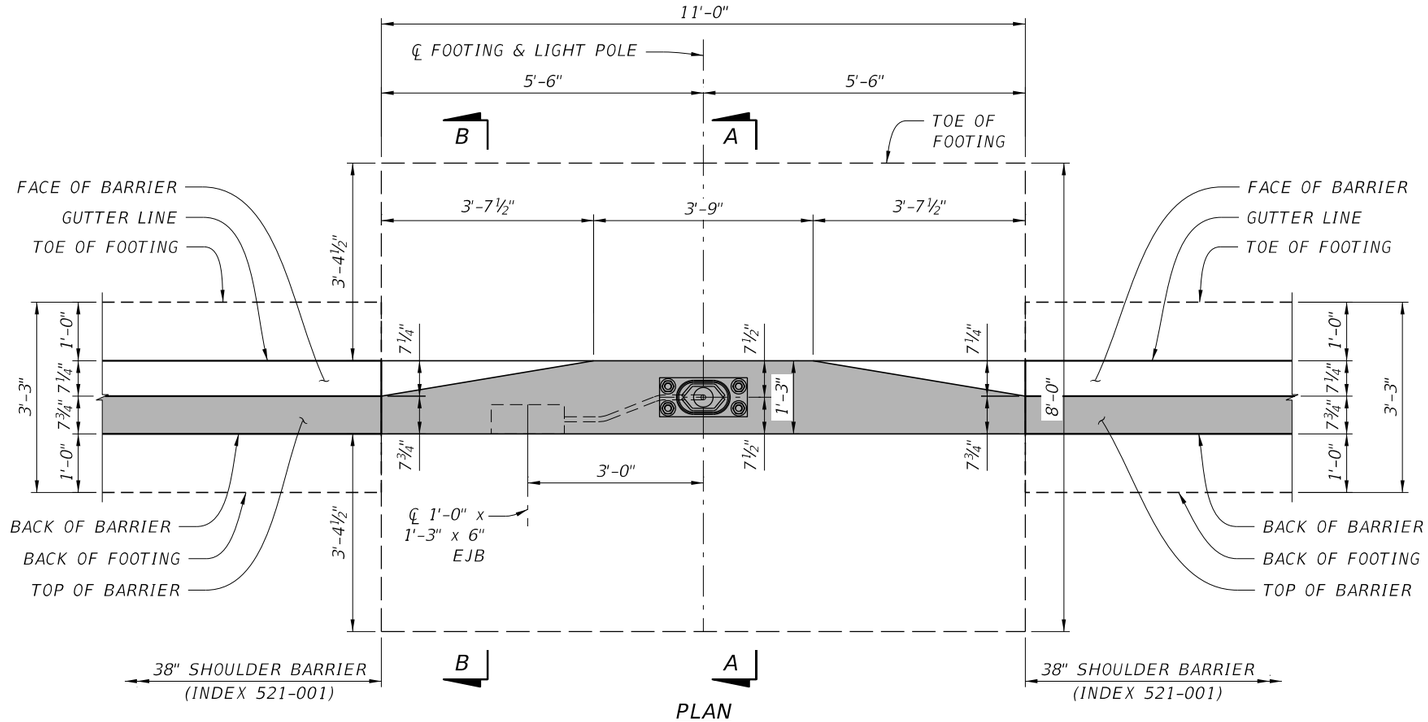
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: ANCHOR DETAILS

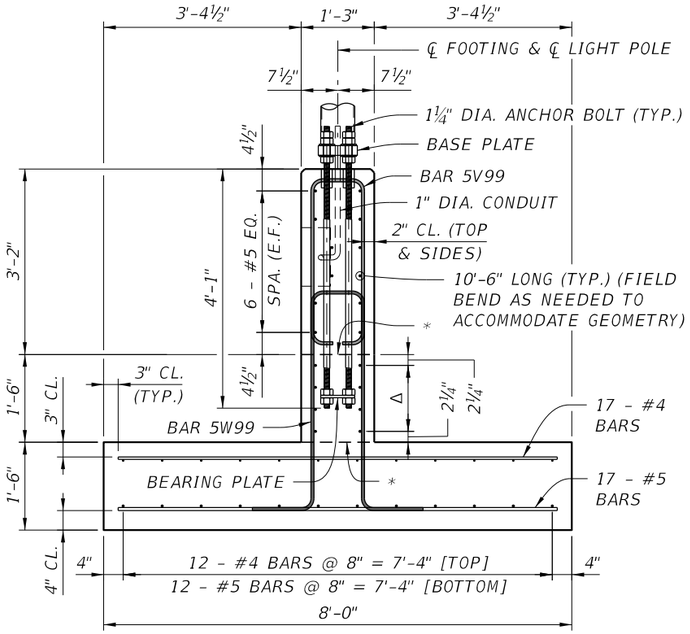
REF. DWG. NO.

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO. BW-57

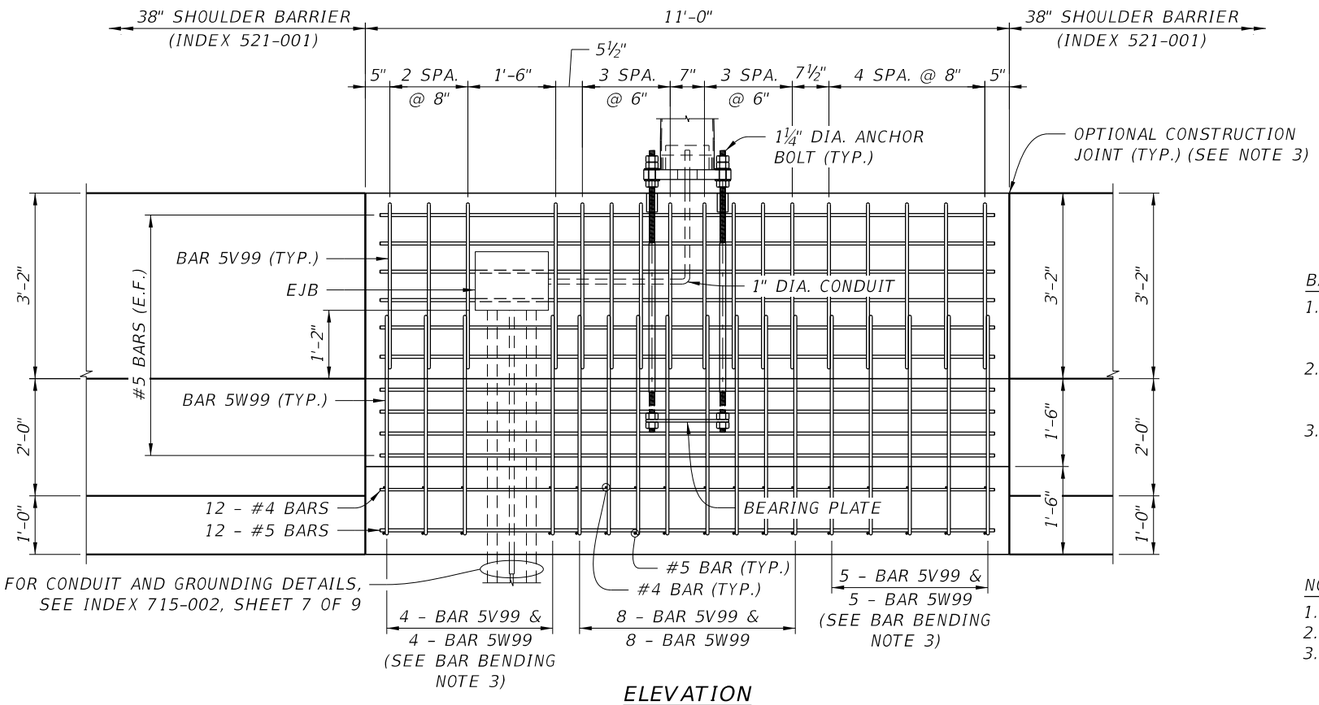


PLAN

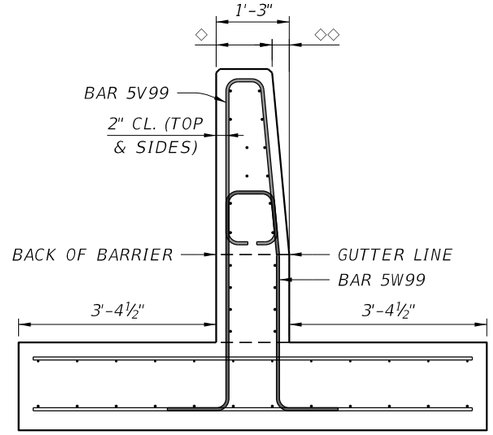


SECTION A-A

Δ = 4 - #5 BARS (E.F.)
* = CONSTRUCTION JOINT



ELEVATION



SECTION B-B

(SEE SECTION A-A FOR DETAILS NOT SHOWN)
◇ = VARIES FROM 7¾" TO 1'-3"
◇◇ = VARIES FROM 7¼" TO 0"

BAR BENDING (INDEX 415-001) NOTES:

1. BAR 5W99 SHALL BE TYPE 6 WITH B = 3'-11", C - 1'-0", D = 11" & E = 1'-0"
2. BAR 5V99 SHALL BE TYPE 5 WITH B = 2'-10", C = 11", D = 4½" & E = 4½"
3. FIELD BEND BARS WITHIN THE TOP OF BARRIER TRANSITION ZONES TO ACCOMMODATE THE GEOMETRY CHANGE.

NOTES:

1. SEE INDEX 715-002 FOR DETAILS NOT SHOWN.
2. SEE LIGHTING PLANS FOR LIGHT POLE LOCATIONS UTILIZING THESE DETAILS.
3. FOR CONNECTION TO ADJACENT SHOULDER BARRIER, USE THE DOWEL JOINT DETAIL PER INDEX 521-001. ALTERNATIVELY, A CONTINUOUS CONCRETE POUR OR A CONSTRUCTION JOINT MAY BE SUBSTITUTED. THESE ALTERNATIVES REQUIRE THE SHOULDER BARRIER'S LONGITUDINAL STEEL TO LAP A MINIMUM OF 2'-0" WITH THE LONGITUDINAL STEEL SHOWN HEREIN.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DOUGLAS M. HERSHEY, P.E.
P.E. LICENSE NUMBER 63325
H.W. LOCHNER, INC.
4300 WEST CYPRESS STREET, SUITE 500
TAMPA, FL 33607

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DMH	JGH	DMH	JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

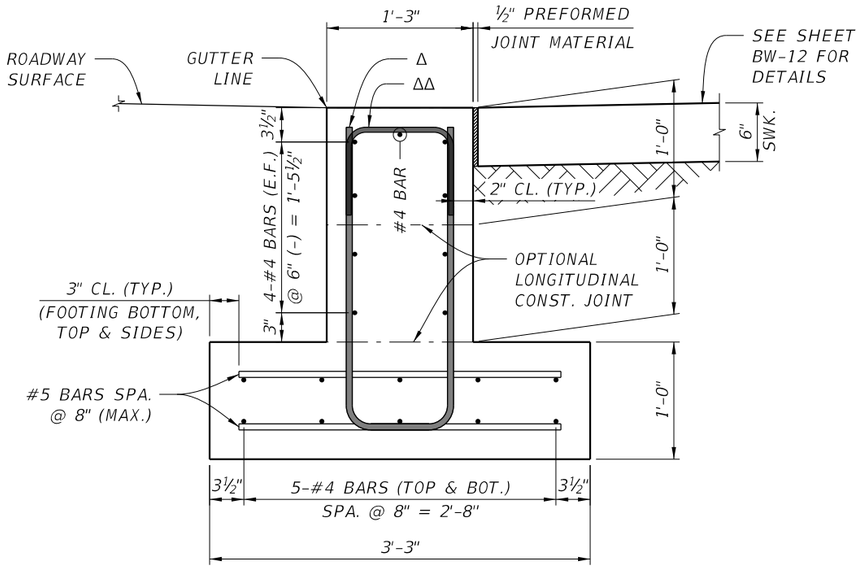
SHEET TITLE: MODIFICATIONS TO STANDARD PLANS INDEX 715-002

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

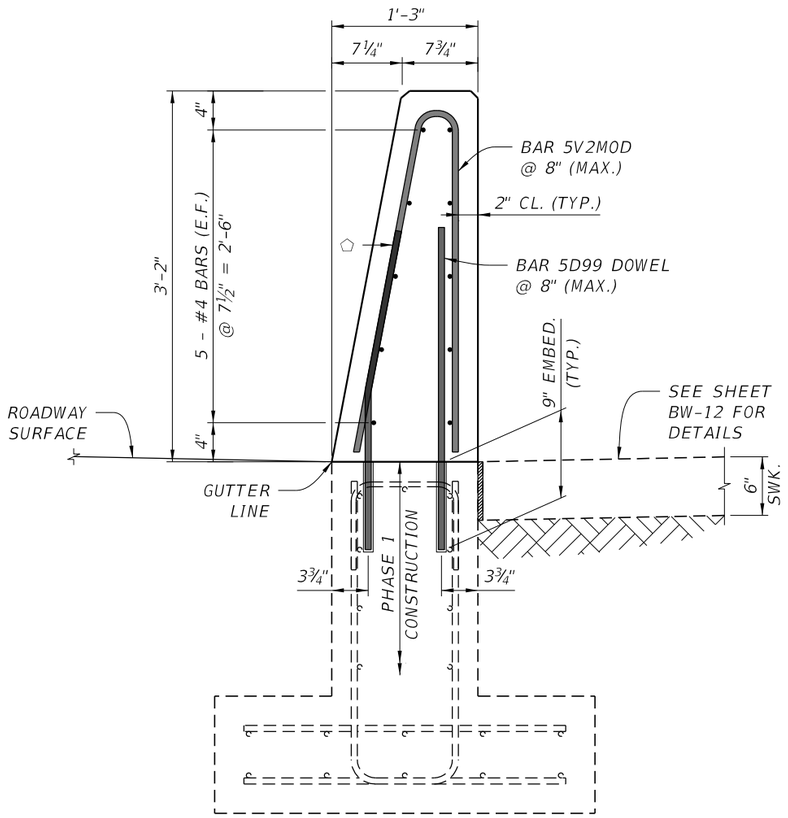
SHEET NO.: BW - 58

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



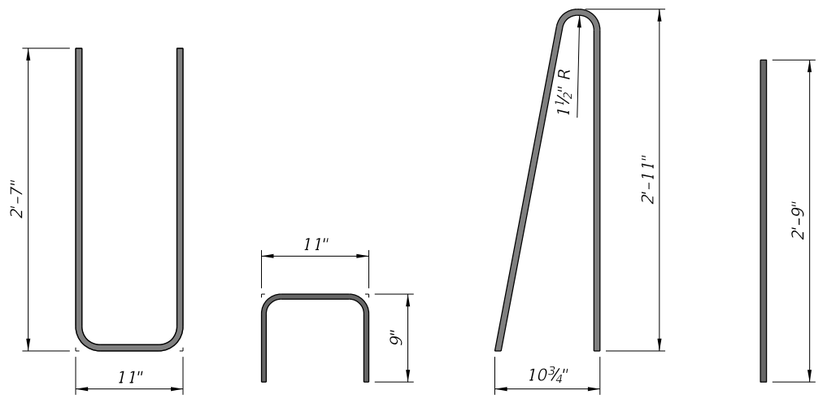
SECTION A-A (PHASE 1)

Δ = BAR 5U3MOD SPA. @ 8" (MAX.)
ΔΔ – BAR 4U99 SPA. @ 8" (MAX.)

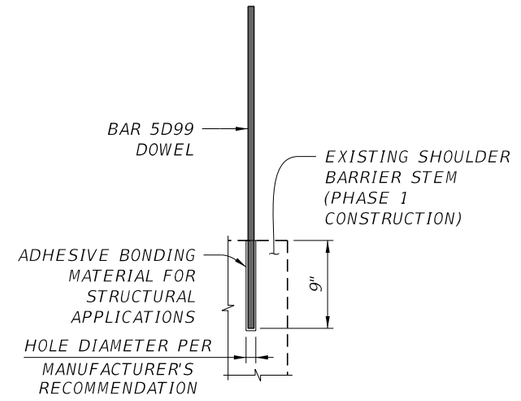


SECTION A-A (PHASE 3)

⬠ = BAR 5D99 DOWEL @ 8" (MAX.) [FIELD BEND AS NEEDED]



BAR 5U3MOD | BAR 4U99 | BAR 5V2MOD | BAR 5D99



DOWEL DETAIL

DOWEL DETAIL NOTES:

1. VERIFY THAT HOLES FOR DOWEL BARS ARE THOROUGHLY CLEAN AND DRY PRIOR TO PLACING ADHESIVE BONDING MATERIAL.
2. SHIFT DOWEL HOLE LOCATIONS IF EXISTING REINFORCING STEEL IS ENCOUNTERED. FILL UNUSED HOLES WITH EPOXY.
3. ADHESIVE BONDING MATERIAL SHALL BE TYPE HSHV IN ACCORDANCE WITH SPECIFICATION SECTION 937 AND SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATION SECTION 416.

NOTES:

1. THIS DETAIL APPLIES TO THE 38" SHOULDER BARRIER WALL LOCATED ON THE NORTH SIDE OF SR 684 FROM STA. 210+44.94 TO STA. 210+73.24 (BEGIN APP. SLAB 1).
2. FOR DETAILS NOT SHOWN, SEE INDEX 521-001.

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4300 WEST CYPRESS STREET, SUITE 500
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DRAWN BY: DMH
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DESIGNED BY: DMH
CHECKED BY: JGH

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

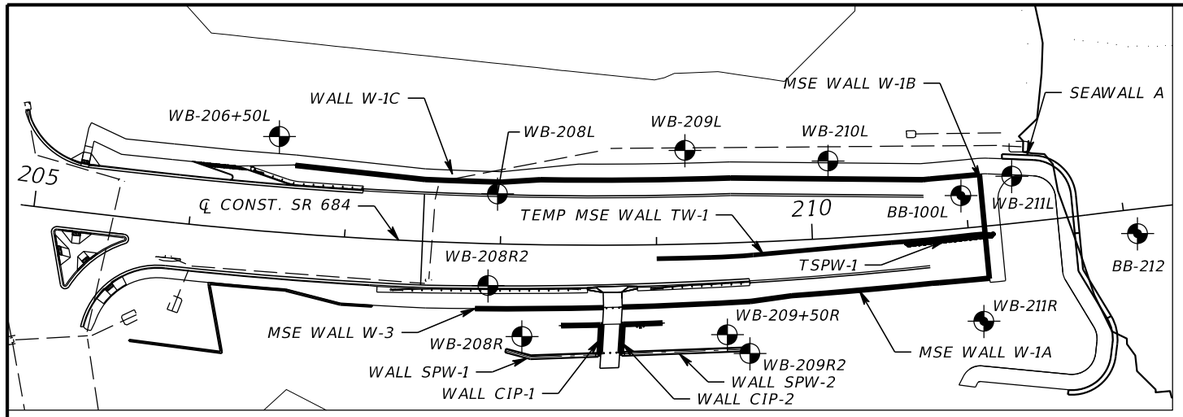
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: MODIFICATIONS TO STANDARD PLANS INDEX 521-001

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-59



BORING LOCATION PLAN

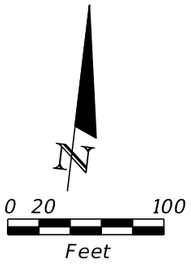
ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:	
RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6
WATER TEST RESULTS:	
RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

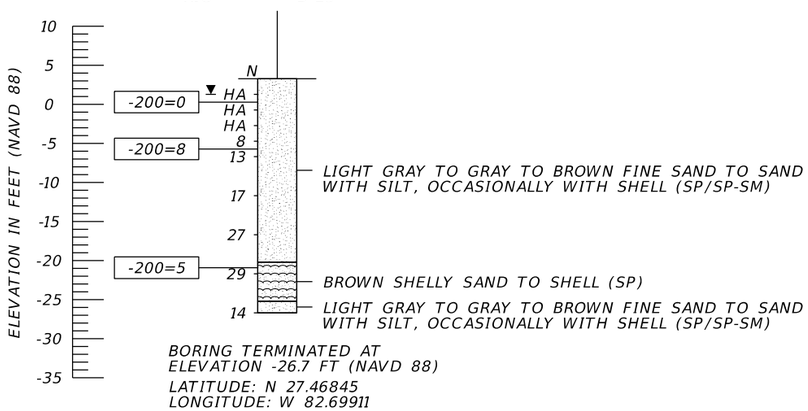


LEGEND

SAND
SILTY SAND
CLAYEY SAND
SILT
CLAY
SHELLY SAND
ORGANIC SAND

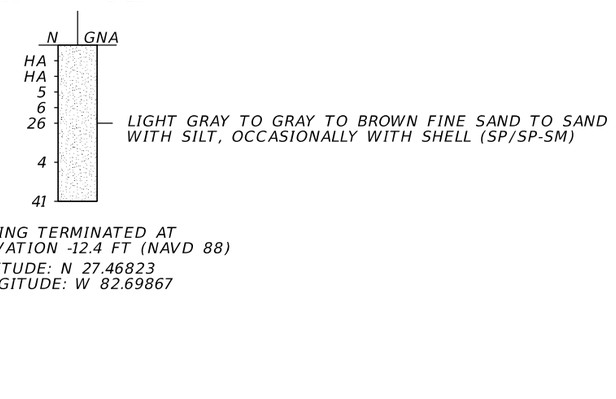
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
⟵100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

BOR # WB-206+50L
STA. 206+53
REF. ℄ CONST. SR 684
OFF. 61' LT.
ELEV. 3.3
DATE 6/28/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -26.7 FT (NAVD 88)
LATITUDE: N 27.46845
LONGITUDE: W 82.69911

BOR # WB-208R2
STA. 207+93
REF. ℄ CONST. SR 684
OFF. 27' RT.
ELEV. 7.6
DATE 7/24/2022
DRILLER I. POORAN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -12.4 FT (NAVD 88)
LATITUDE: N 27.46823
LONGITUDE: W 82.69867

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

RETAINING WALLS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (1 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-60

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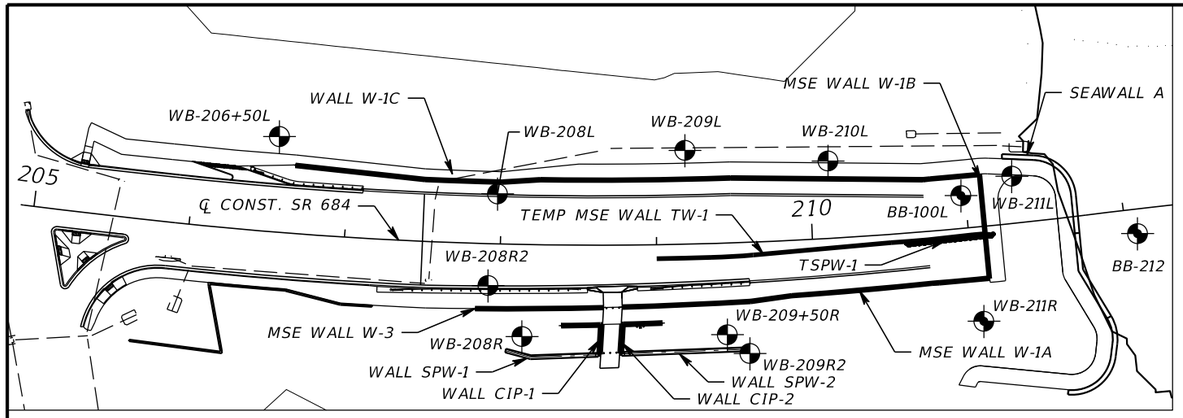
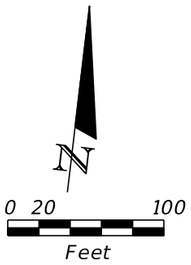


BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:	
RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6
WATER TEST RESULTS:	
RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3



LEGEND

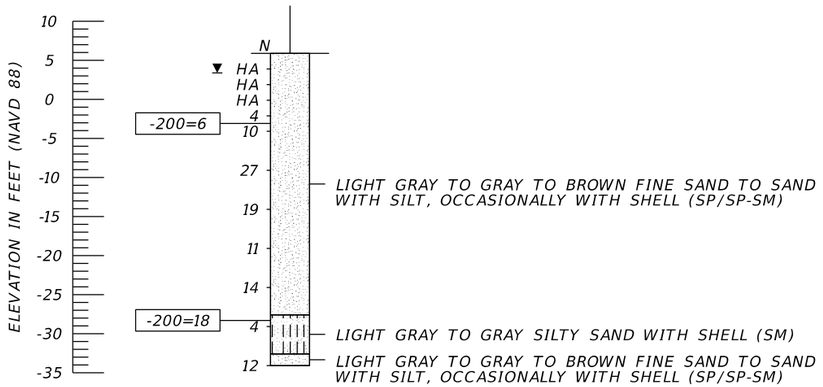
SAND
SILTY SAND
CLAYEY SAND
SILT
CLAY
SHELLY SAND
ORGANIC SAND

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

NOTES:

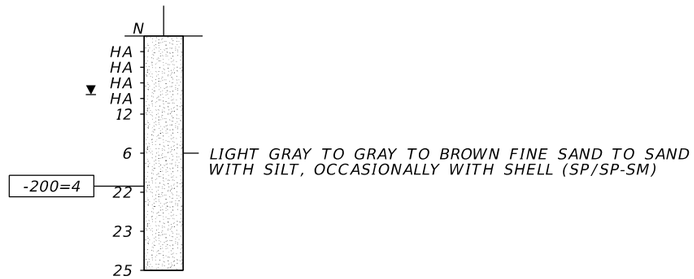
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # WB-208L
STA. 207+97
REF. ℄ CONST. SR 684
OFF. 32' LT.
ELEV. 5.9
DATE 6/28/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25

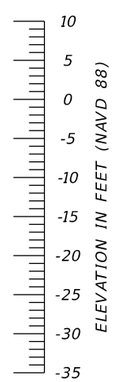


BORING TERMINATED AT
ELEVATION -34.1 FT (NAVD 88)
LATITUDE: N 27.46844
LONGITUDE: W 82.69879

BOR # WB-208R
STA. 208+15
REF. ℄ CONST. SR 684
OFF. 59' RT.
ELEV. 8.1
DATE 10/21/2021
DRILLER R. SCRUGGS
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -21.9 FT (NAVD 88)
LATITUDE: N 27.46819
LONGITUDE: W 82.69861



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

RETAINING WALLS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (2 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-61

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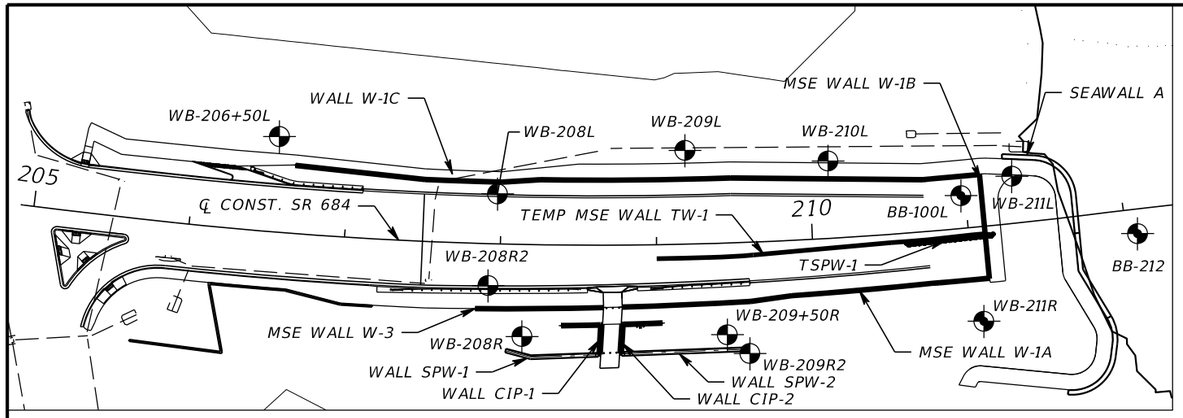
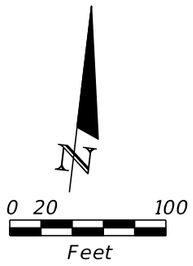




LEGEND

SAND	CLAY
SILTY SAND	SHELLY SAND
CLAYEY SAND	ORGANIC SAND
SILT	

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
⇦100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

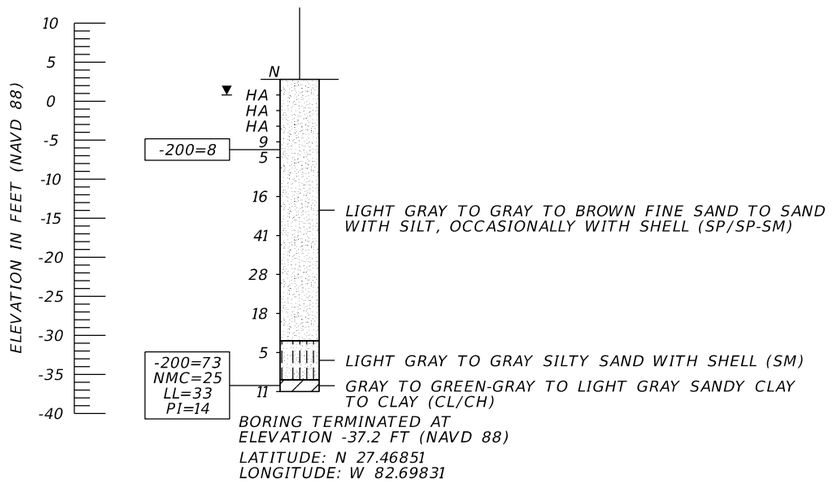
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

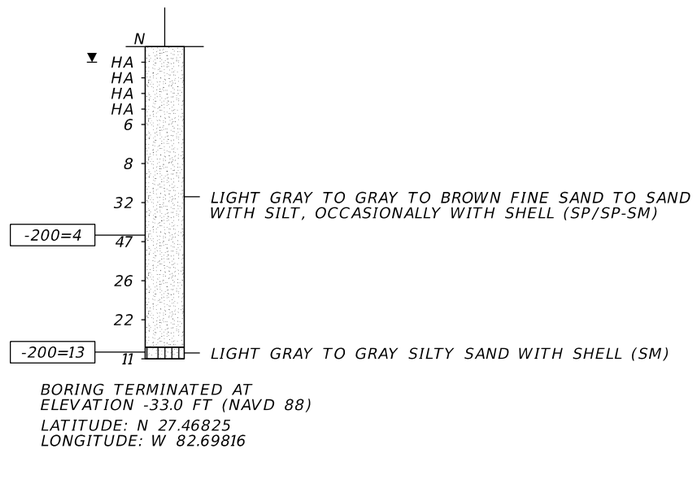
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # WB-209L
STA. 209+20
REF. ℄ CONST. SR 684
OFF. 60' LT.
ELEV. 2.8
DATE 6/28/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25

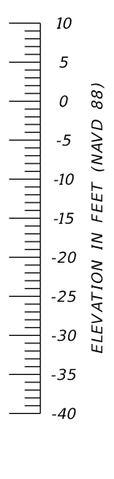


BORING TERMINATED AT
ELEVATION -37.2 FT (NAVD 88)
LATITUDE: N 27.46851
LONGITUDE: W 82.69831

BOR # WB-209+50R
STA. 209+43
REF. ℄ CONST. SR 684
OFF. 59' RT.
ELEV. 7.0
DATE 10/21/2021
DRILLER R. SCRUGGS
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -33.0 FT (NAVD 88)
LATITUDE: N 27.46825
LONGITUDE: W 82.69816



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

RETAINING WALLS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (3 OF 16)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-62

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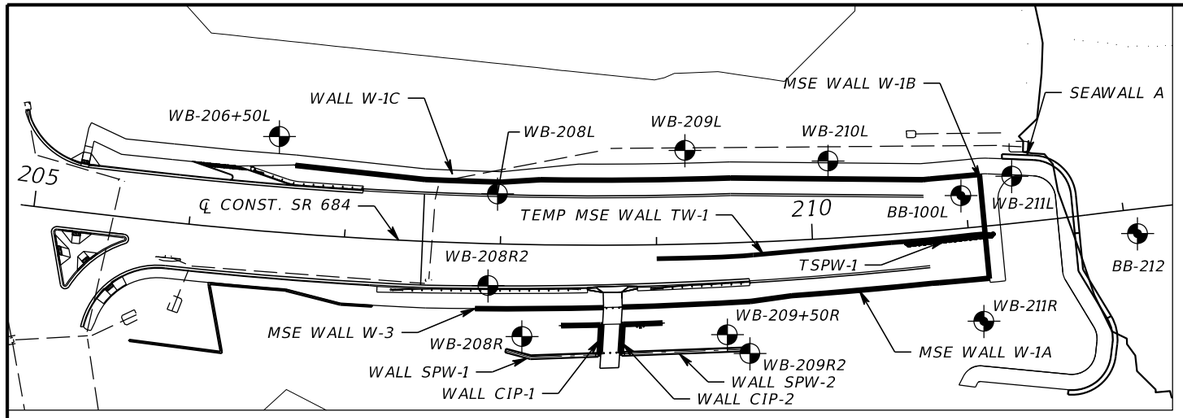
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

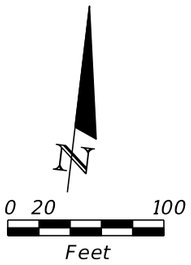
RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

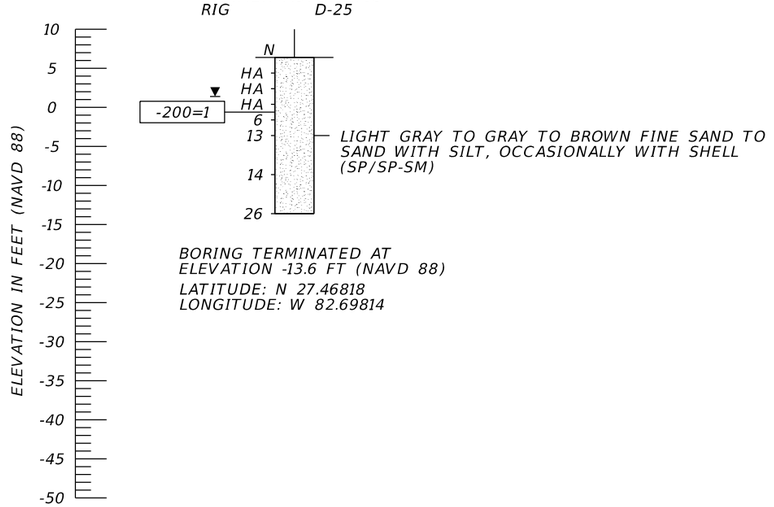


LEGEND

SAND	CLAY
SILTY SAND	SHELLY SAND
CLAYEY SAND	ORGANIC SAND
SILT	

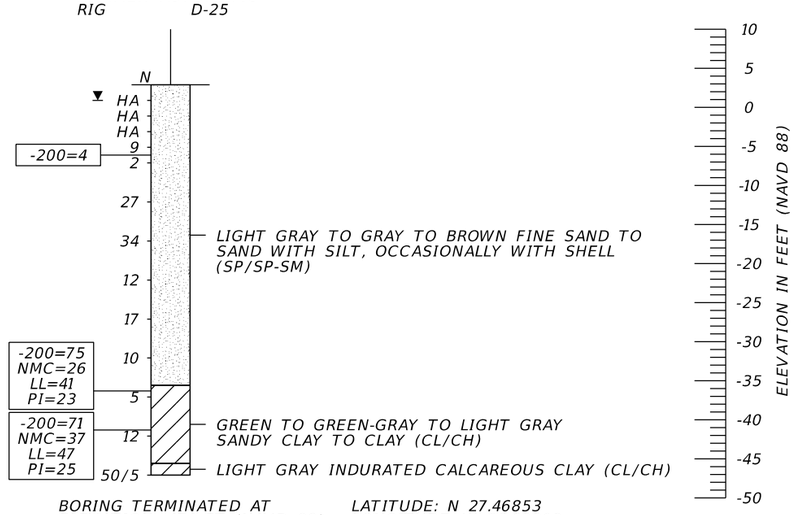
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
⟵100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
‖ ‖	CASING

BOR # WB-209R2
STA. 209+57
REF. ℄ CONST. SR 684
OFF. 71' RT.
ELEV. 6.4
DATE 8/10/2022
DRILLER R. JAUREGUI
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -13.6 FT (NAVD 88)
LATITUDE: N 27.46818
LONGITUDE: W 82.69814

BOR # WB-210L
STA. 210+13
REF. ℄ CONST. SR 684
OFF. 50' LT.
ELEV. 2.9
DATE 6/27/2022
DRILLER R. JAUREGUI
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -47.1 FT (NAVD 88)
LATITUDE: N 27.46853
LONGITUDE: W 82.69803

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

RETAINING WALLS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (4 OF 16)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-63

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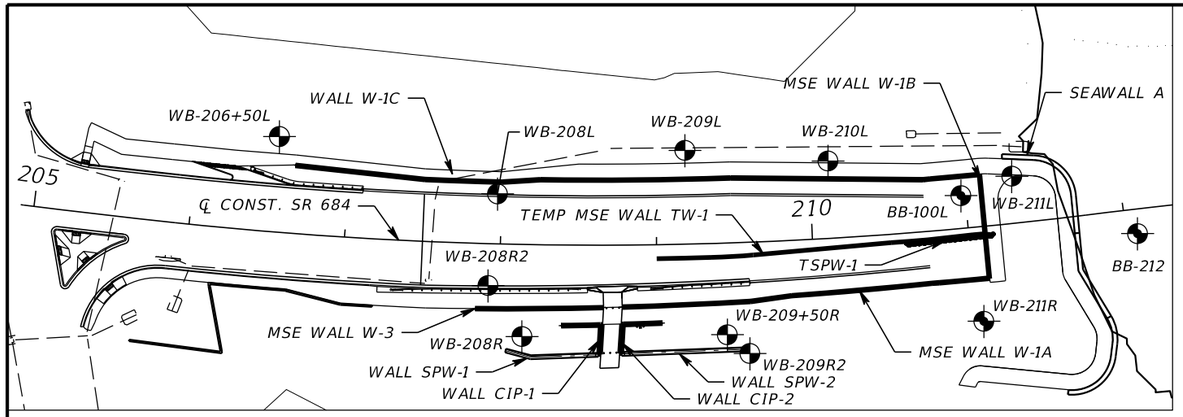
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

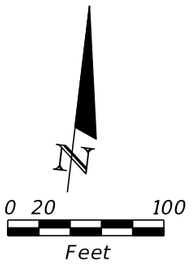
RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.



LEGEND

SAND	CLAY	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.
SILTY SAND	SHELLY SAND	N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
CLAYEY SAND	ORGANIC SAND	50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
SILT		HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
		WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
		-200	PERCENT PASSING #200 SIEVE
		NMC	NATURAL MOISTURE CONTENT (%)
		LL	LIQUID LIMIT (%)
		PI	PLASTICITY INDEX (%)
		OC	ORGANIC CONTENT (%)
		NP	NON-PLASTIC
		NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
		NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

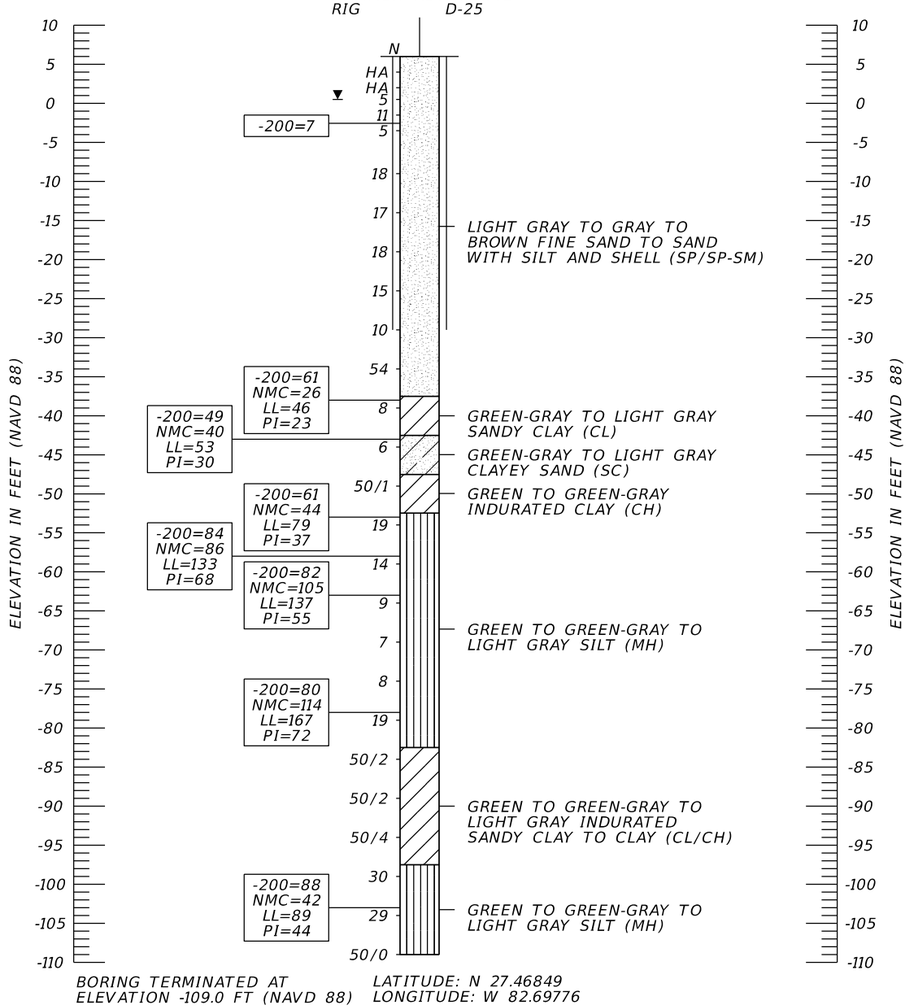
APPROXIMATE SPT BORING LOCATION

GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

100 — LOSS OF CIRCULATION OF DRILLING FLUID (%)

CASING



BORING TERMINATED AT ELEVATION -109.0 FT (NAVD 88)

LATITUDE: N 27.46849
LONGITUDE: W 82.69776

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

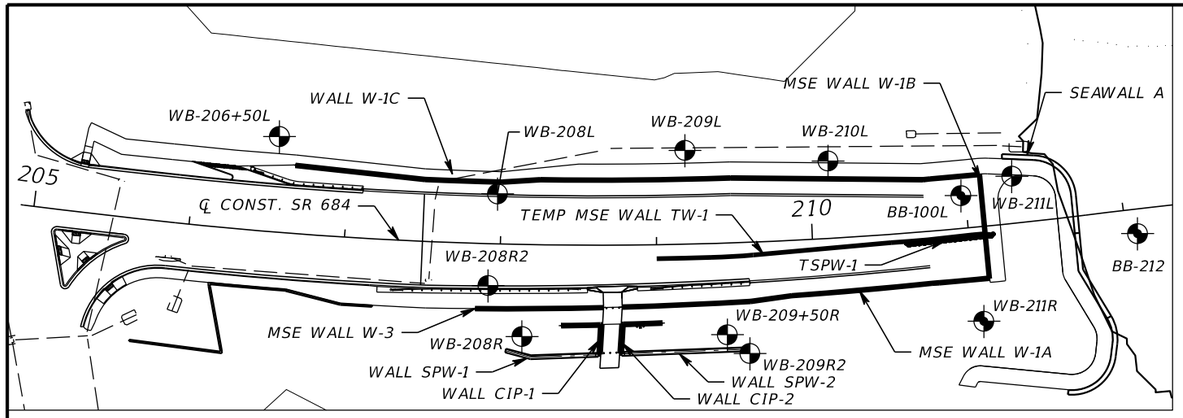
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

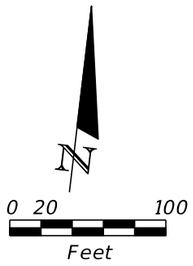
SHEET TITLE: REPORT OF CORE BORINGS (5 OF 16)

REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-64





LEGEND

SAND
SILTY SAND
CLAYEY SAND
SILT
CLAY
SHELLY SAND
ORGANIC SAND

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
⇦100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

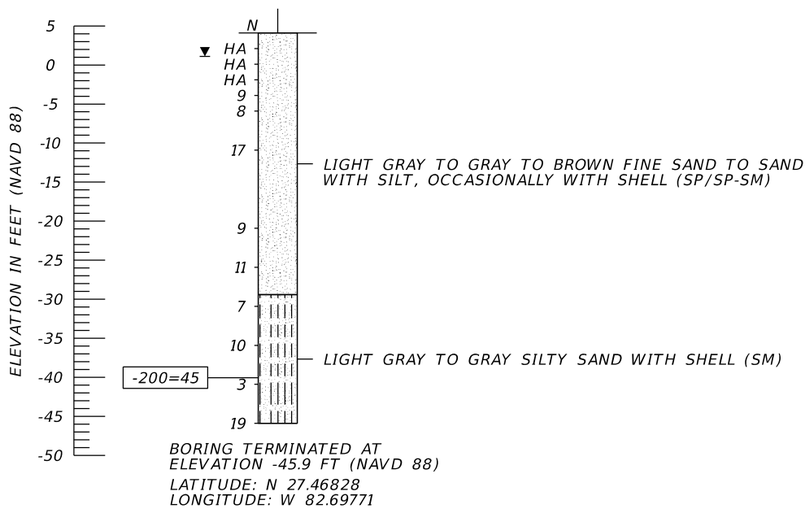
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

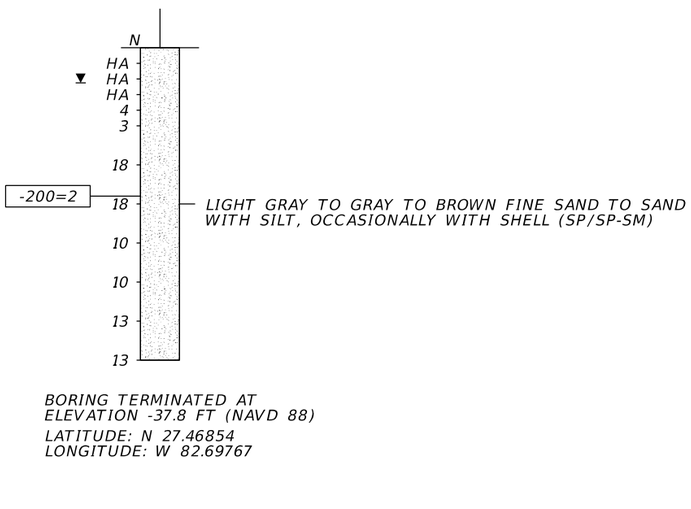
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # WB-211R
STA. 211+04
REF. ℄ CONST. SR 684
OFF. 60' RT.
ELEV. 4.1
DATE 6/28/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -45.9 FT (NAVD 88)
LATITUDE: N 27.46828
LONGITUDE: W 82.69771

BOR # WB-211L
STA. 211+31
REF. ℄ CONST. SR 684
OFF. 30' LT.
ELEV. 2.2
DATE 8/12/2022
DRILLER R. JAUREGUI
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -37.8 FT (NAVD 88)
LATITUDE: N 27.46854
LONGITUDE: W 82.69767

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

RETAINING WALLS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (6 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-65

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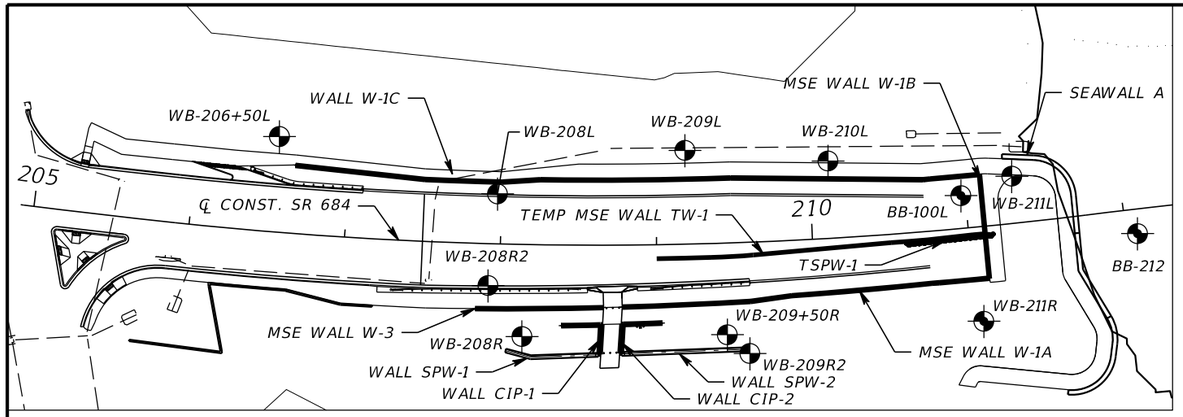


BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:	
RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6
WATER TEST RESULTS:	
RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

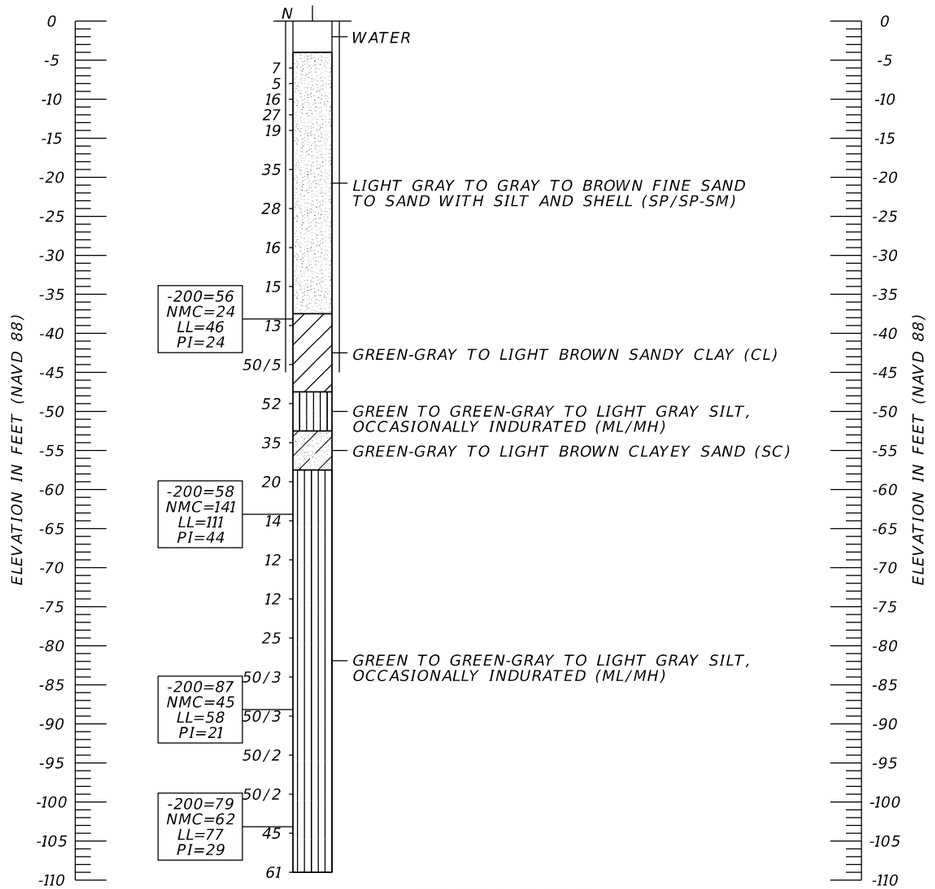
N

0 20 100
Feet

LEGEND

SAND	CLAY	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.
SILTY SAND	SHELLY SAND	N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
CLAYEY SAND	ORGANIC SAND	50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
SILT		HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
		WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
		-200	PERCENT PASSING #200 SIEVE
		NMC	NATURAL MOISTURE CONTENT (%)
		LL	LIQUID LIMIT (%)
		PI	PLASTICITY INDEX (%)
		OC	ORGANIC CONTENT (%)
		NP	NON-PLASTIC
		NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
		NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
			APPROXIMATE SPT BORING LOCATION
			GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
		GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
		100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
			CASING

BOR # BB-212
STA. 212+08
REF. ℄ CONST. SR 684
OFF. 16' RT.
ELEV. -4.0 (MUDLINE)
DATE 8/4/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25



BORING TERMINATED AT ELEVATION -109.0 FT (NAVD 88)

LATITUDE: N 27.46847
LONGITUDE: W 82.69740

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

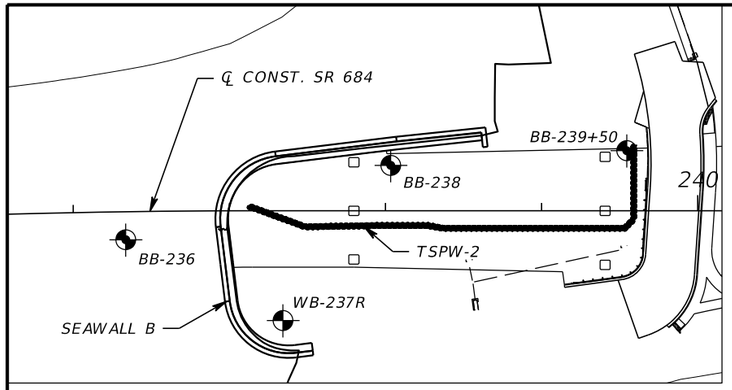
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

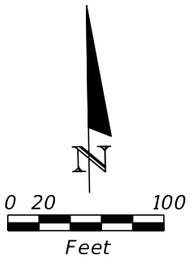
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (7 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-66

JHERNANDEZ 5/22/2025 3:23:29 PM I:\TPA\PRJ\0000I0877\3_Design\4302042520I\geotech\RetaInIngWallGeo07.dgn



BORING LOCATION PLAN



BOR # BB-236
STA. 236+33
REF. ℄ CONST. SR 684
OFF. 18' RT.
ELEV. -7.0 (MUDLINE)
DATE 7/16/2021
DRILLER J. ERICKSON
HAMMER SAFETY
RIG D-25

LEGEND

SAND	CLAY
SILTY SAND	SHELLY SAND
CLAYEY SAND	ORGANIC SAND
SILT	

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
	CASING

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

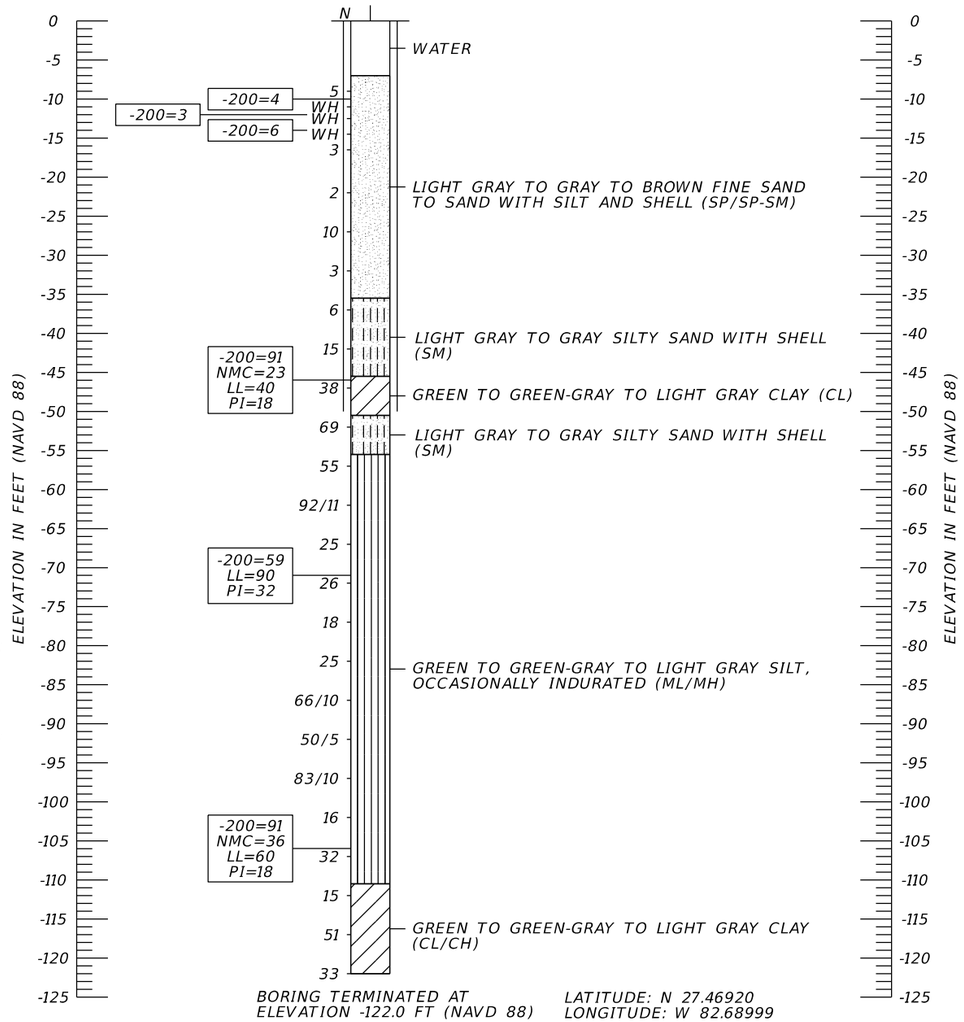
RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.



BORING TERMINATED AT ELEVATION -122.0 FT (NAVD 88)

LATITUDE: N 27.46920
LONGITUDE: W 82.68999

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

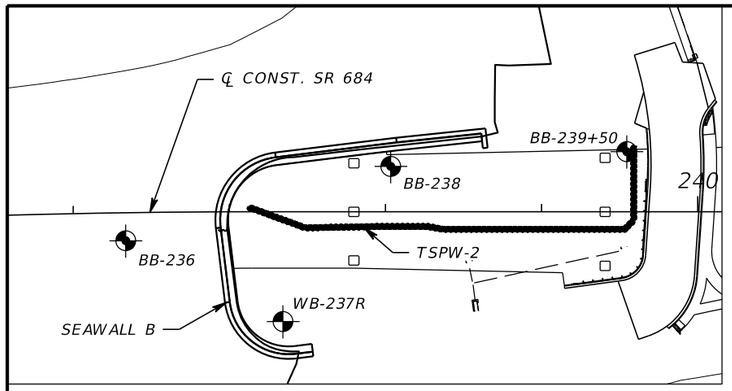
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (8 OF 16)

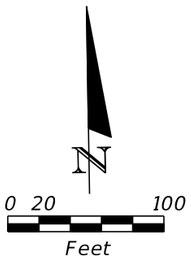
REF. DWG. NO.:

PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST

SHEET NO.: BW-67



BORING LOCATION PLAN



LEGEND

SAND	CLAY
SILTY SAND	SHELLY SAND
CLAYEY SAND	ORGANIC SAND
SILT	

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
⟵100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

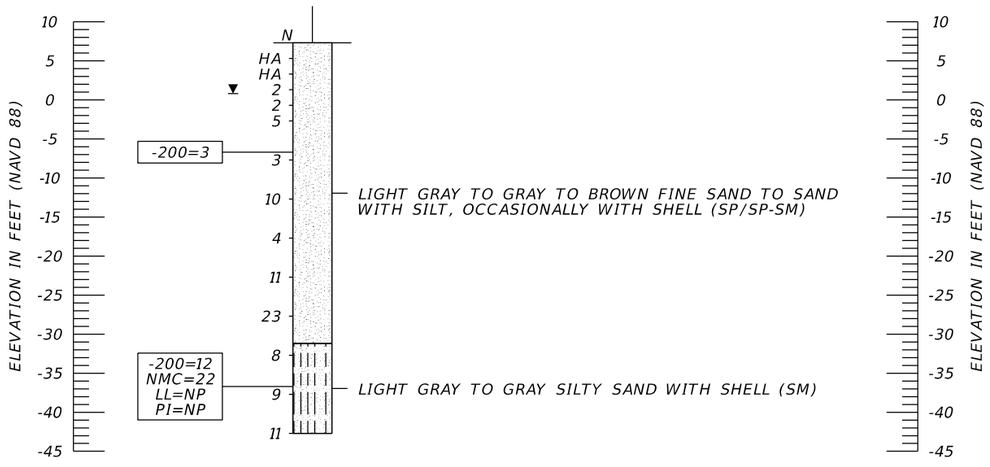
SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

BOR # WB-237R
STA. 237+34
REF. ℄ CONST. SR 684
OFF. 70' RT.
ELEV. 7.3
DATE 8/11/2022
DRILLER R. JAUREGUI
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -42.7 FT (NAVD 88)
LATITUDE: N 27.46906
LONGITUDE: W 82.68968

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (9 OF 16)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-68

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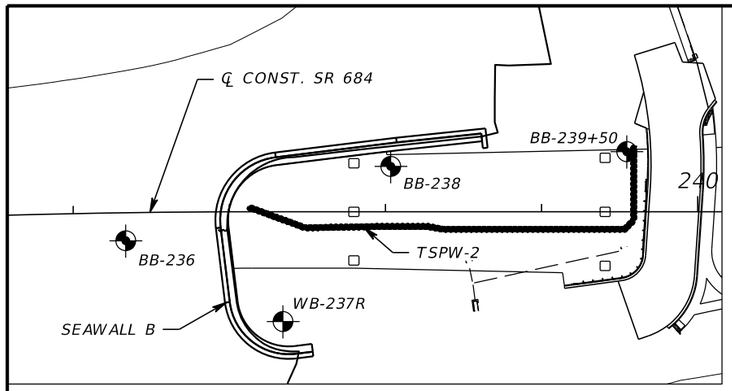
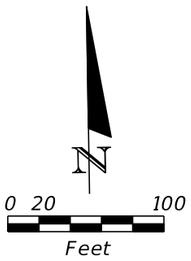


BORING LOCATION PLAN



LEGEND

SAND
SILTY SAND
CLAYEY SAND
SILT
CLAY
SHELLY SAND
ORGANIC SAND

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
	CASING

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

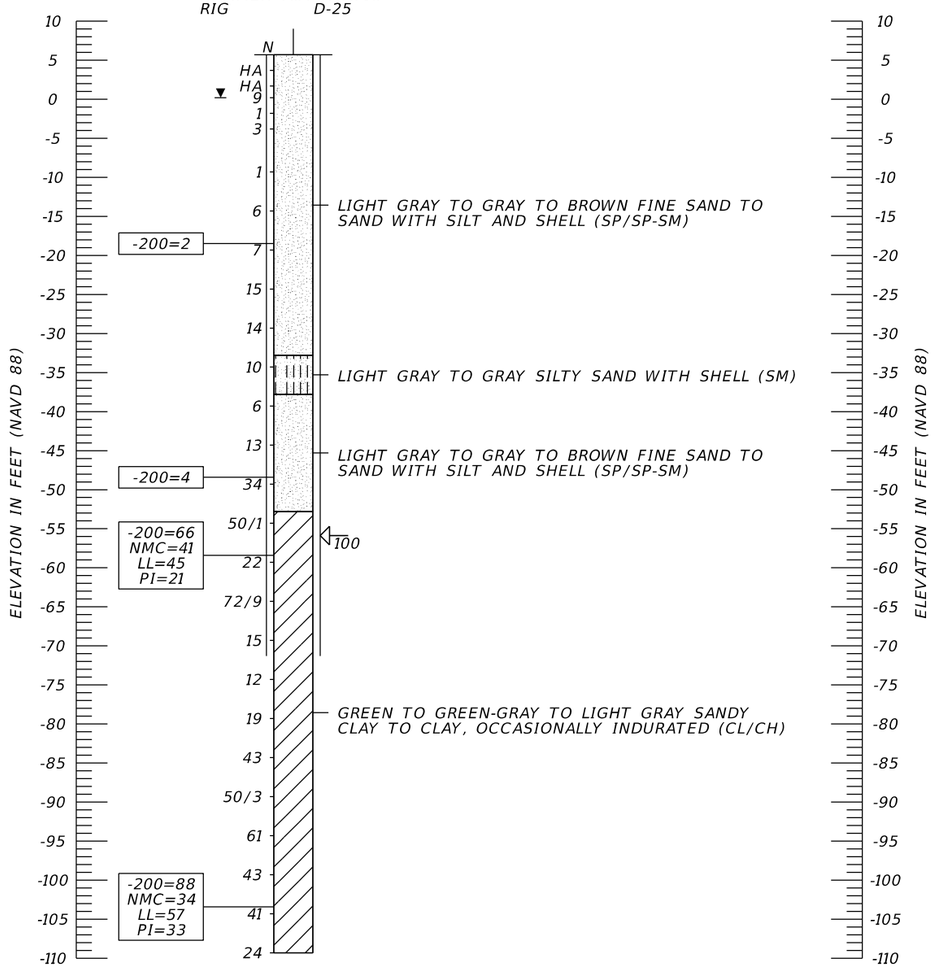
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # BB-238*
STA. 238+03
REF. ℄ CONST. SR 684
OFF. 29' LT.
ELEV. 5.7
DATE 8/12/2021
DRILLER M. ATKINSON
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -109.3 FT (NAVD 88)

LATITUDE: N 27.46932
LONGITUDE: W 82.68946

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (10 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-69

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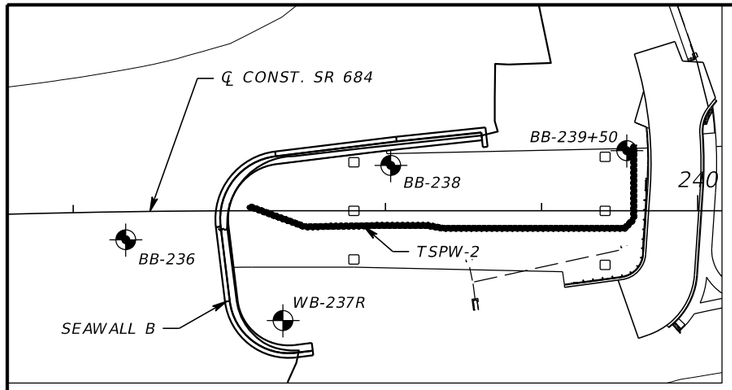
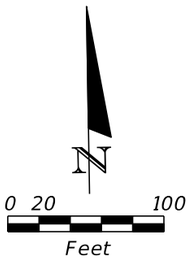


BORING LOCATION PLAN



BOR # BB-239+50*
STA. 239+55
REF. ℄ CONST. SR 684
OFF. 39' LT.
ELEV. 6.2
DATE 8/18/2021
DRILLER M. ATKINSON
HAMMER AUTOMATIC
RIG D-25

LEGEND

SAND
SILTY SAND
CLAYEY SAND
SILT
CLAY
SHELLY SAND
ORGANIC SAND

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
	CASING

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
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SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
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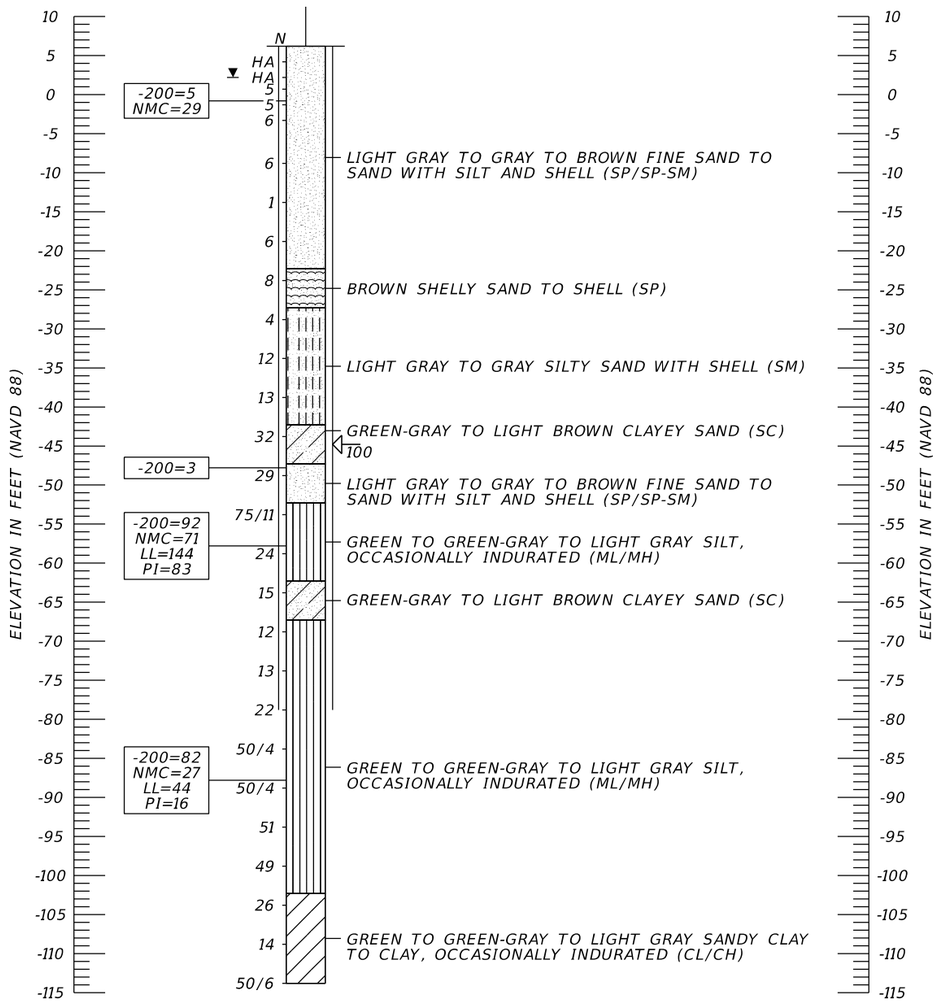
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.



BORING TERMINATED AT ELEVATION -114.8 FT (NAVD 88)

LATITUDE: N 27.46934
LONGITUDE: W 82.68900

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (11 OF 16)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-70

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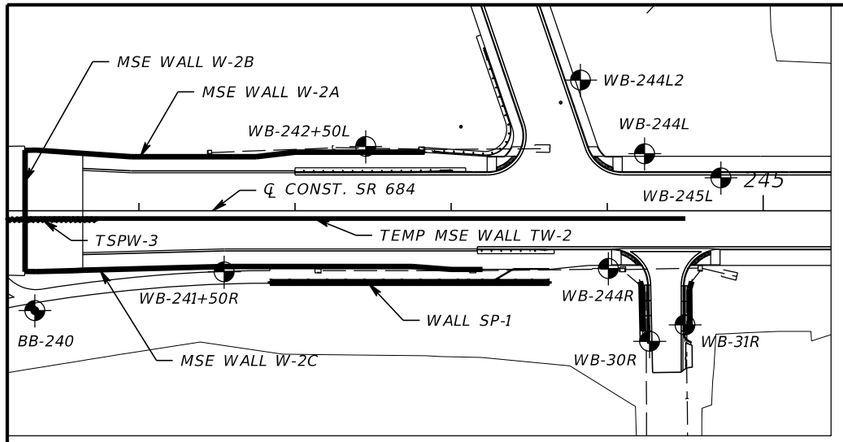
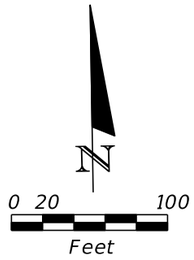




BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

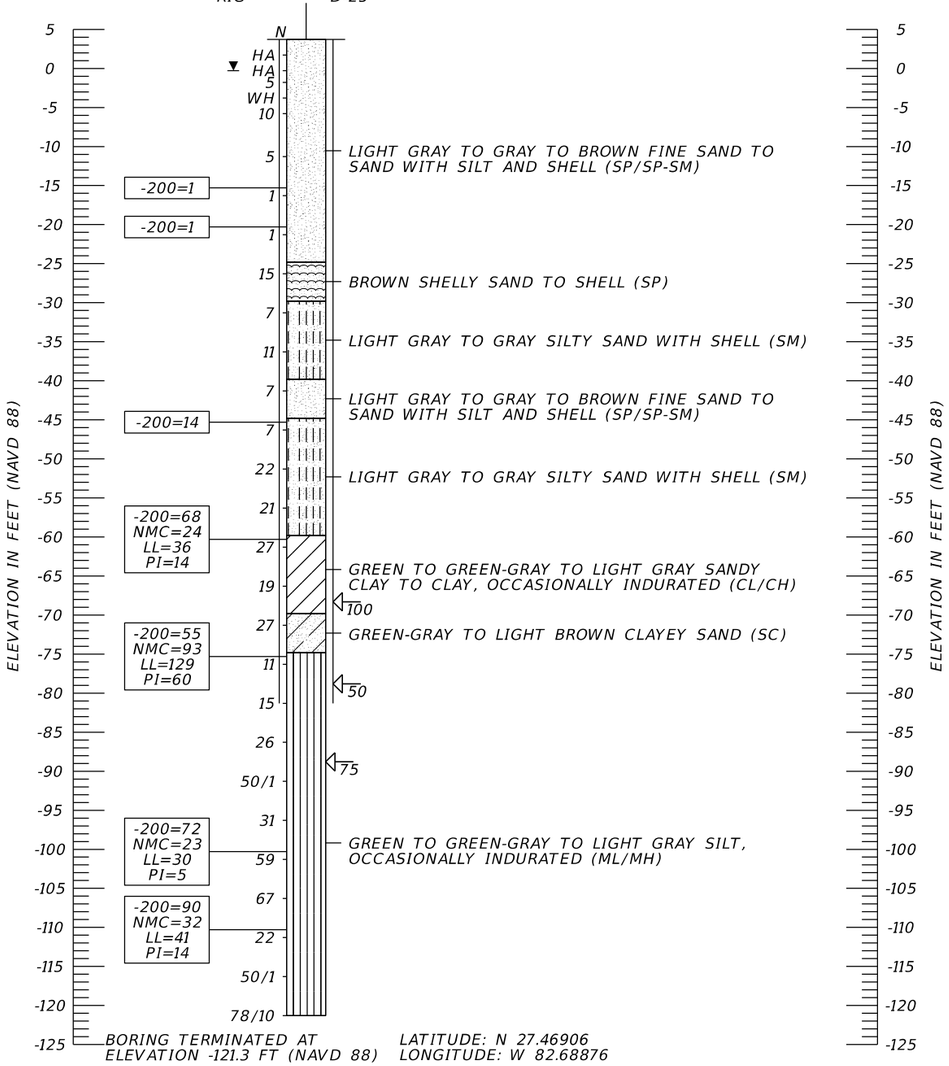
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # BB-240*
STA. 240+33
REF. ℄ CONST. SR 684
OFF. 64' RT.
ELEV. 3.7
DATE 8/9/2021
DRILLER M. ATKINSON
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -121.3 FT (NAVD 88)

LATITUDE: N 27.46906
LONGITUDE: W 82.68876

LEGEND

SAND	CLAY	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.
SILTY SAND	SHELLY SAND	N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
CLAYEY SAND	ORGANIC SAND	50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
SILT		HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
		WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
		-200	PERCENT PASSING #200 SIEVE
		NMC	NATURAL MOISTURE CONTENT (%)
		LL	LIQUID LIMIT (%)
		PI	PLASTICITY INDEX (%)
		OC	ORGANIC CONTENT (%)
		NP	NON-PLASTIC
		NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
		NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
			APPROXIMATE SPT BORING LOCATION
			GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
		GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
		100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
			CASING

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (12 OF 16)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-71

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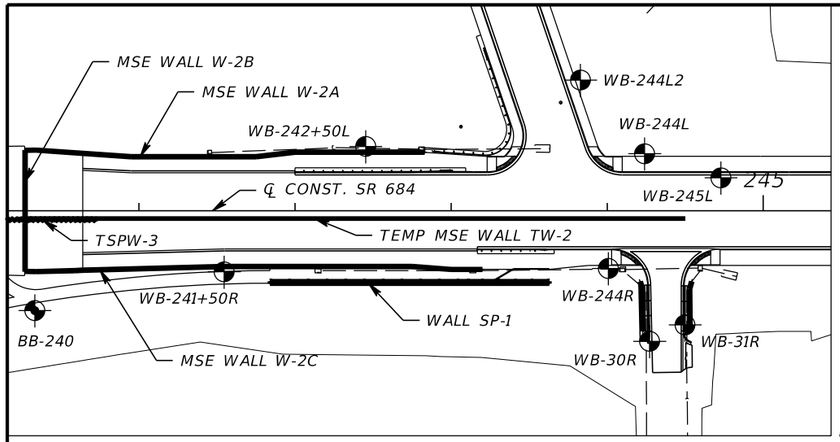

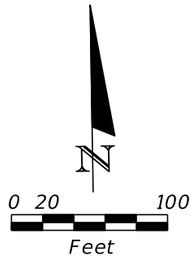

LEGEND

SAND
CLAY
SILTY SAND
SHELLY SAND
CLAYEY SAND
ORGANIC SAND
SILT

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
◁ 100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
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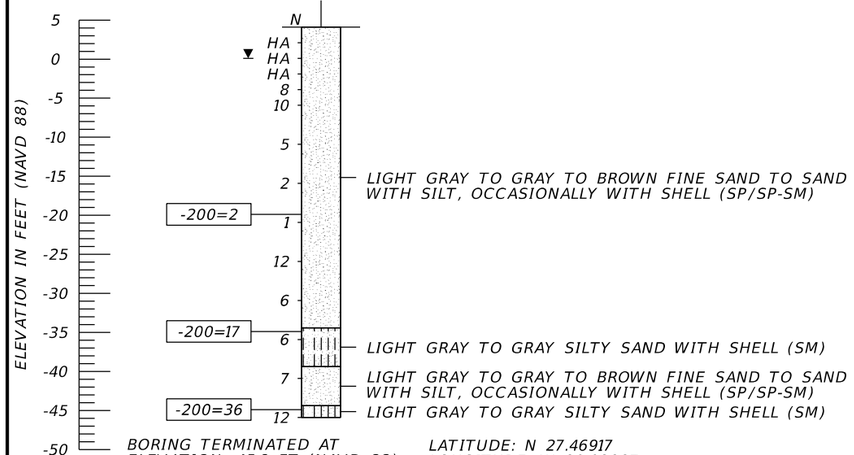
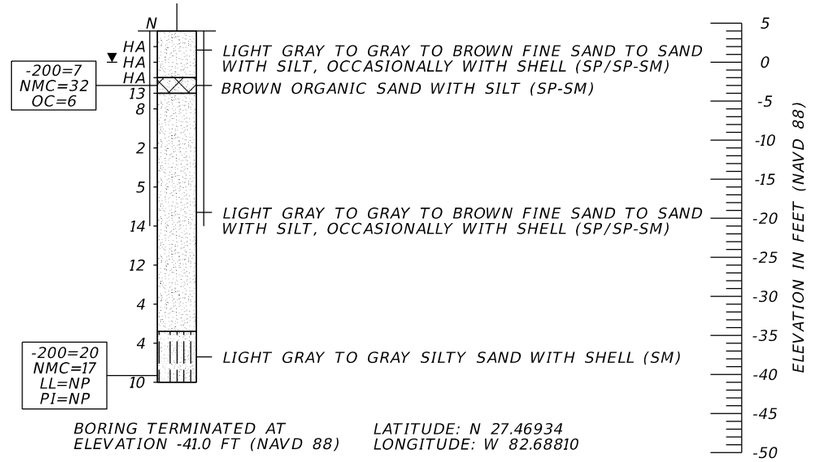
BOR # WB-241+50R
STA. 241+55
REF. ℄ CONST. SR 684
OFF. 39' RT.
ELEV. 4.1
DATE 10/25/2021
DRILLER R. SCRUGGS
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -45.9 FT (NAVD 88)
LATITUDE: N 27.46917
LONGITUDE: W 82.68837

BOR # WB-242+50L
STA. 242+45
REF. ℄ CONST. SR 684
OFF. 47' LT.
ELEV. 4.0
DATE 10/14/2021
DRILLER R. SCRUGGS
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -41.0 FT (NAVD 88)
LATITUDE: N 27.46934
LONGITUDE: W 82.68810

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

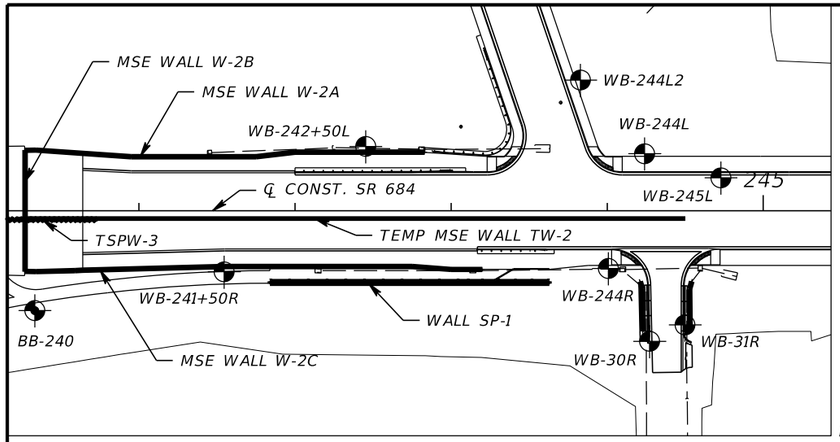
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

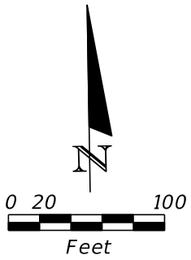
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (13 OF 16)
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-72





LEGEND

SAND	CLAY
SILTY SAND	SHELLY SAND
CLAYEY SAND	ORGANIC SAND
SILT	

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⊕	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

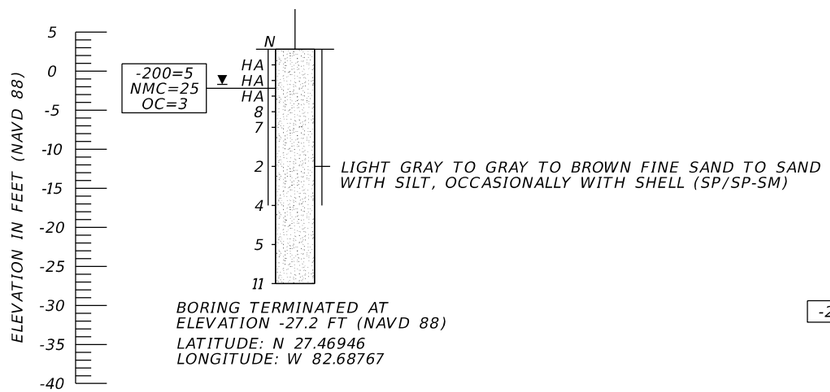
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

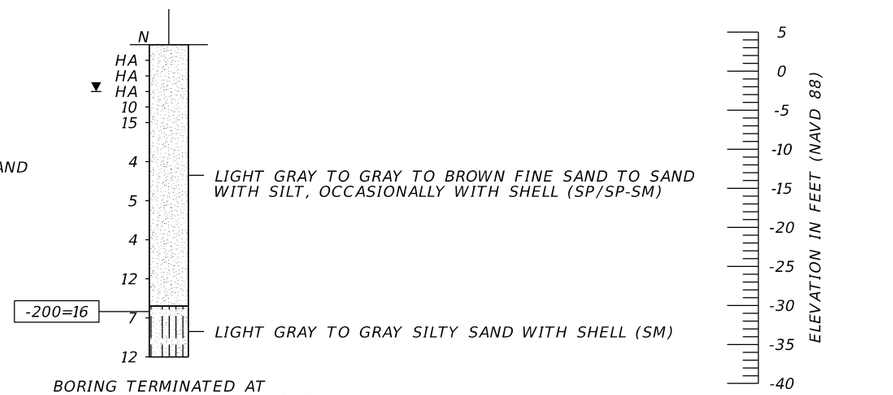
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # WB-244L2
STA. 243+83
REF. ℄ CONST. SR 684
OFF. 84' LT.
ELEV. 2.8
DATE 10/14/2021
DRILLER R. SCRUGGS
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -27.2 FT (NAVD 88)
LATITUDE: N 27.46946
LONGITUDE: W 82.68767

BOR # WB-244R
STA. 244+01
REF. ℄ CONST. SR 684
OFF. 37' RT.
ELEV. 3.4
DATE 7/6/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -36.6 FT (NAVD 88)
LATITUDE: N 27.46912
LONGITUDE: W 82.68763

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

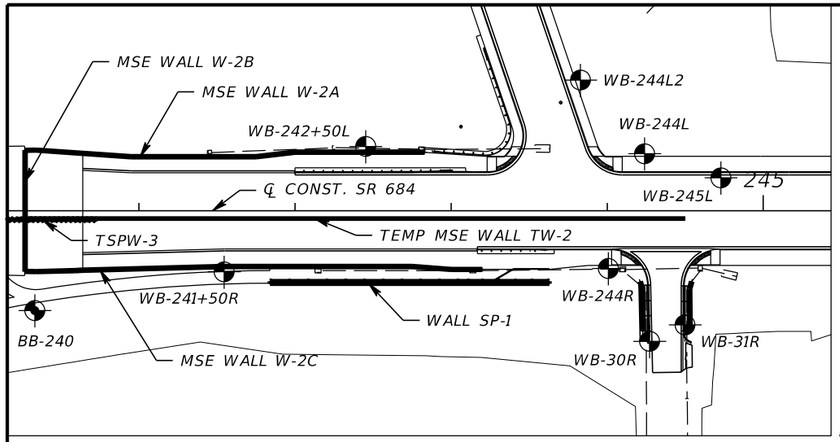
THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

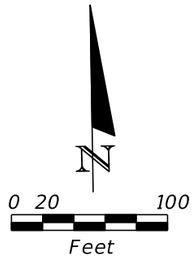
DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (14 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-73





LEGEND

SAND
CLAY
SILTY SAND
SHELLY SAND
CLAYEY SAND
ORGANIC SAND
SILT

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
	CASING

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

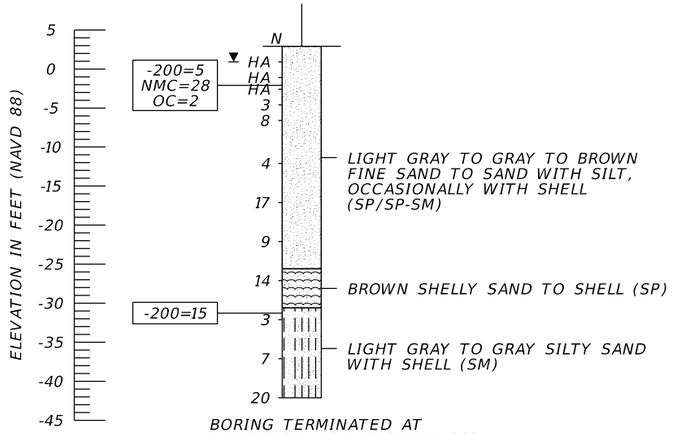
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

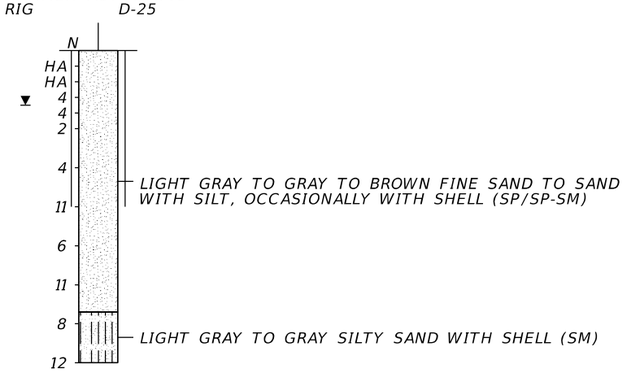
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # WB-244L
STA. 244+24
REF. ℄ CONST. SR 684
OFF. 37' LT.
ELEV. 2.9
DATE 6/3/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25

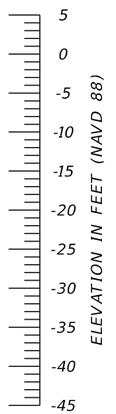


BORING TERMINATED AT
ELEVATION -42.1 FT (NAVD 88)
LATITUDE: N 27.46937
LONGITUDE: W 82.68763

BOR # WB-245L
STA. 244+73
REF. ℄ CONST. SR 684
OFF. 21' LT.
ELEV. 4.8
DATE 7/24/2022
DRILLER I. POORAN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -35.2 FT (NAVD 88)
LATITUDE: N 27.46828
LONGITUDE: W 82.68740



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

RETAINING WALLS

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (15 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-74

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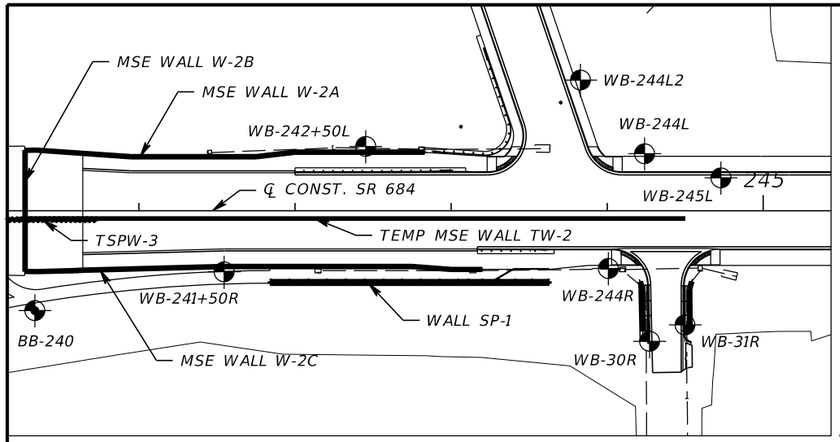
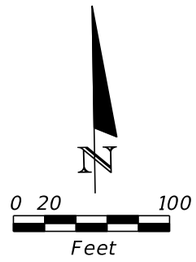
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.





LEGEND

SAND	CLAY
SILTY SAND	SHELLY SAND
CLAYEY SAND	ORGANIC SAND
SILT	

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
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
WH	SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
OC	ORGANIC CONTENT (%)
NP	NON-PLASTIC
NGVD 29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
⌖	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
100	LOSS OF CIRCULATION OF DRILLING FLUID (%)
| |	CASING

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

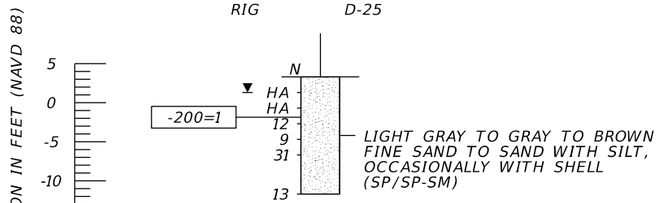
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

NOTES:

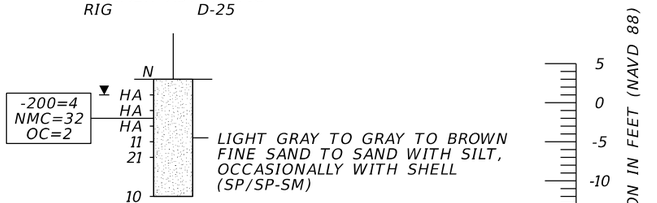
1. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.
2. THE LOCATIONS AND ELEVATIONS OF THE BORINGS DENOTED WITH AN ASTERISK (*) WERE PROVIDED BY THE PROJECT SURVEYOR. THE REMAINING BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX® HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
3. THE CONTRACTOR SHOULD ANTICIPATE THAT DIFFICULT INSTALLATION OF SHEET PILES MAY BE ENCOUNTERED DUE TO THE PRESENCE OF HARD SILT/CLAY AT THE PROJECT SITE. VARIATIONS IN THE DEPTH AND CONSISTENCY OF THIS MATERIAL SHOULD BE ANTICIPATED. SPECIALIZED EQUIPMENT AND/OR INSTALLATION METHODS, INCLUDING THE USE OF PREFORMED PILE HOLES, PUNCHING, AND/OR OTHER METHODS MAY BE REQUIRED TO INSTALL THE SHEET PILES TO THE REQUIRED MINIMUM TIP ELEVATION. JETTING IS NOT ALLOWED.

BOR # WB-30R
STA. 30+38
REF. ℄ CONST. SR 684
OFF. 11' RT.
ELEV. 3.3
DATE 7/1/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -11.7 FT (NAVD 88)
LATITUDE: N 27.46900
LONGITUDE: W 82.68754

BOR # WB-31R
STA. 30+73
REF. ℄ CONST. SR 684
OFF. 12' LT.
ELEV. 3.0
DATE 7/1/2022
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -12.0 FT (NAVD 88)
LATITUDE: N 27.46902
LONGITUDE: W 82.68747

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

RETAINING WALLS

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: KCW
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS (16 OF 16)
REF. DWG. NO.
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO. BW-75

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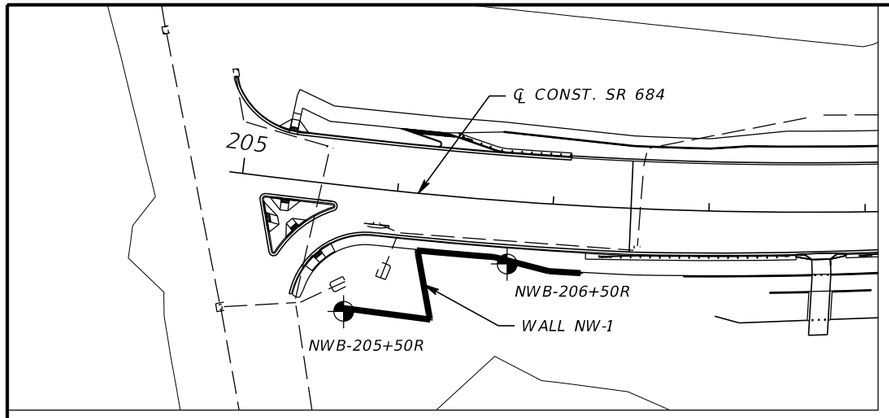
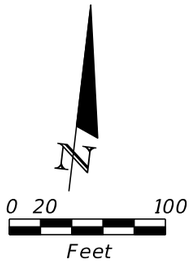


BORING LOCATION PLAN



NOTES:

1. THE BORINGS WERE LOCATED IN THE FIELD BY A REPRESENTATIVE OF TIERRA USING GARMIN ETREX®HAND-HELD, NON-SURVEY GRADE GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT WITH A MANUFACTURER'S REPORTED ACCURACY OF ±10 FEET. STATION, OFFSET AND ELEVATION OF THE BORING LOCATIONS WERE DETERMINED USING THE GPS COORDINATES OBTAINED IN THE FIELD IN CONJUNCTION WITH PROJECT DESIGN FILES. THEREFORE, THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
2. BASED ON A REVIEW OF THE "UPPER FLORIDAN AQUIFER POTENTIOMETRIC MAPS" PUBLISHED BY THE USGS, THE POTENTIOMETRIC SURFACE ELEVATION IN THE PROJECT VICINITY RANGES FROM APPROXIMATELY +10 TO +20 FEET, NGVD 29. ARTESIAN FLOW CONDITIONS WITH A WATER HEAD OF +3.4 TO +9.4 FEET, NAVD 88 WERE ENCOUNTERED WITHIN BRIDGE BORINGS BB-118L AND BB-129L PERFORMED AT THE TIME OF OUR FIELD ACTIVITIES; THEREFORE, THE CONTRACTOR SHOULD BE PREPARED TO ADDRESS ARTESIAN LEVELS UP TO A HEAD OF +20 FEET NGVD 29.

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (WATER-RESISTIVITY=24 OHM-CM, CHLORIDES=30,000 PPM, SULFATES=2,700 PPM)
SUPERSTRUCTURE	EXTREMELY AGGRESSIVE (WATER-CHLORIDES=30,000 PPM)

SOIL TEST RESULTS:

RESISTIVITY	1,000 TO 18,000 OHM-CM
CHLORIDES	15 TO 60 PPM
SULFATES	72 TO 660 PPM
pH	6.5 TO 8.6

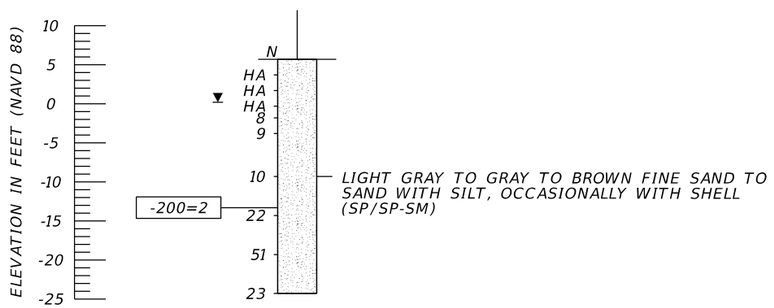
WATER TEST RESULTS:

RESISTIVITY	24 TO 25 OHM-CM
CHLORIDES	30,000 PPM
SULFATES	2,400 TO 2,700 PPM
pH	7.1 TO 7.3

LEGEND

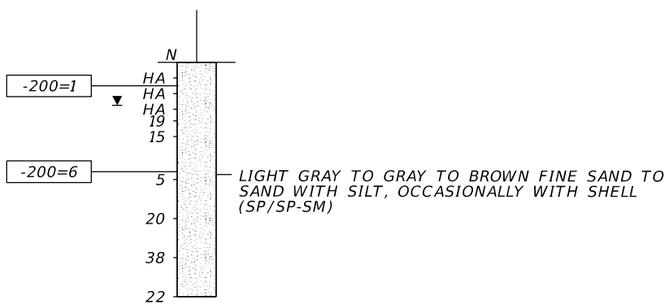
	LIGHT GRAY TO GRAY TO BROWN FINE SAND TO SAND WITH SILT, OCCASIONALLY WITH SHELL (SP/SP-SM)
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
-200	PERCENT PASSING #200 SIEVE
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
	APPROXIMATE SPT BORING LOCATION
▼	GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS

BOR # NWB-205+50R
STA. 205+74
REF. ℄ CONST. SR 684
OFF. 80' RT.
ELEV. 5.7
DATE 6/24/2024
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -24.3 FT (NAVD 88)
LATITUDE: N 27.46806
LONGITUDE: W 82.69935

BOR # NWB-206+50R
STA. 206+73
REF. ℄ CONST. SR 684
OFF. 41' RT.
ELEV. 5.3
DATE 6/24/2024
DRILLER C. VIRGEN
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -24.7 FT (NAVD 88)
LATITUDE: N 27.46818
LONGITUDE: W 82.69904

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

NOISE WALL

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

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

THOMAS E. MUSGRAVE, JR., P.E.
P.E. LICENSE NUMBER 81669
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BJS
CHECKED BY: NCB
DESIGNED BY: BJS
CHECKED BY: TEM

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 684	MANATEE	430204-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS
REF. DWG. NO.:
PROJECT NAME: SR 684 (CORTEZ ROAD) FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST
SHEET NO.: BW-76

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