MANATEE COUNTY

PUBLIC WORKS DEPARTMENT

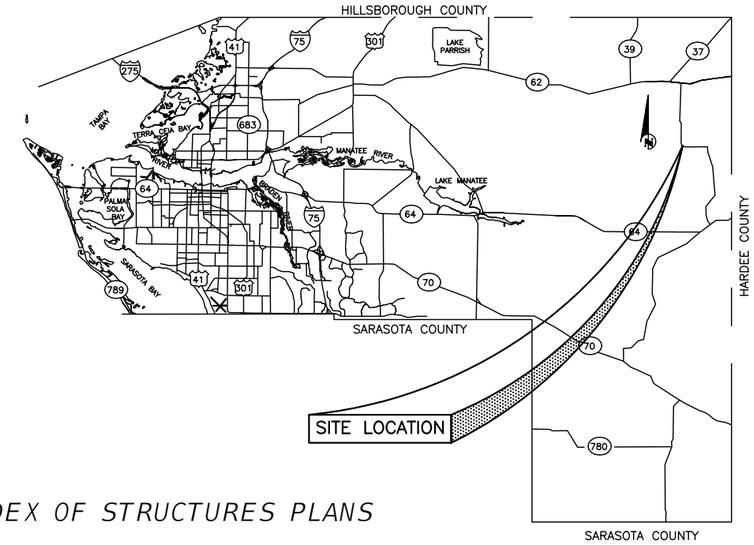
CONTRACT PLANS

MANATEE PROJECT ID 6104760

DUETTE ROAD BRIDGE REPLACEMENT

STRUCTURES PLANS

BRIDGE NO. 134183



GOVERNING STANDARD PLANS:
FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2024-25 STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND APPLICABLE INTERIM REVISIONS (IRS).

STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED IRS ARE AVAILABLE AT THE FOLLOWING WEBSITE:
HTTPS://WWW.FDOT.GOV/DESIGN/STANDARDPLANS

STANDARD PLANS FOR BRIDGE CONSTRUCTION ARE INCLUDED IN THE STRUCTURES PLANS COMPONENT.

GOVERNING STANDARD SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION, FY 2024-25 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AT THE FOLLOWING WEBSITE:
HTTPS://WWW.FDOT.GOV/PROGRAMMANAGEMENT/IMPLEMENTED/SPECSBOOKS"

OTHER RELATED STANDARDS AND SPECIFICATIONS

A. MANATEE COUNTY HIGHWAY & TRAFFIC STANDARDS MANUAL AND STORMWATER MANAGEMENT DESIGN MANUAL (APRIL 2022).

B. MANATEE COUNTY UTILITIES STANDARDS MANUAL (JUNE 2020).

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

UTILITY WARNING NOTE

ABOVE GROUND AND / OR UNDERGROUND UTILITIES MAY BE IN THE AREA OF THIS PROJECT – PROCEED WITH CAUTION – THE CONTRACTOR SHALL CALL SUNSHINE STATE "ONE CALL" AT 1-800-432-4770 AND THE UTILITY OWNERS IN ADVANCE OF BEGINNING WORK, IN ACCORDANCE WITH CHAPTER 556, FLORIDA STATUTES.

48 HOURS BEFORE DIGGING
"CALL SUNSHINE"
1-800-432-4770

SUMMARY OF REVISIONS

FINAL PLAN SET
MARCH 2025

PLANS PREPARED BY:

STANTEC CONSULTING SERVICES, INC.
380 PARK PLACE BOULEVARD
SUITE 300
CLEARWATER, FLORIDA, 33759
(727)531-3505

ROADWAY PLANS

ENGINEER OF RECORD:
CHRISTOPHER P. GAMACHE, PE
P.E. NO.: 82122

MANATEE COUNTY PROJECT MANAGER:
MARCENEL JOSEPH, PE

INDEX OF STRUCTURES PLANS

SHEET NO.
1

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

CHRISTOPHER P. GAMACHE
LICENSE
No. 82122
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGN AND SEALED BY:

Christopher P Gamache
2025.04.29 11:22:58 -04'00'

ON THE DATE ADJACENT TO THE SEAL.

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STANTEC
380 PARK PLACE BOULEVARD
CLEARWATER, FL 33579
PHONE NUMBER (727) 531-3505
CHISTOPHER P. GAMACHE, P.E. 82122

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

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF QUANTITIES
4	GENERAL NOTES
5	PLAN AND ELEVATION
8	FOUNDATION LAYOUT
9	PILE DATA TABLE
10	END BENT 1
11	INTERMEDIATE BENT 2
12	END BENT 3
13	END BENT DETAILS
14	INTERMEDIATE BENT DETAILS
15	SUPERSTRUCTURE TYPICAL SECTION
16	SUPERSTRUCTURE PLAN
17	FINISH GRADE ELEVATIONS (1 OF 2)
18	FINISH GRADE ELEVATIONS (2 OF 2)
19	SUPERSTRUCTURE DETAILS
20	APPROACH SLABS
21	REINFORCING BAR DETAILS (1 OF 2)
22	REINFORCING BAR DETAILS (2 OF 2)
23	LOAD RATING SUMMARY TABLE
24	CRITICAL TYPICAL TEMPORARY WALL NOTES
25	CRITICAL TYPICAL TEMPORARY WALL PLAN AND ELEVATION

TIMOTHY W. FOUSHEE
LICENSE
No. 63044
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGN AND SEALED BY:

Timothy W Foushee
Digitally signed by Timothy W Foushee
Date: 2025.04.29 11:49:30-04'00'

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STANTEC
6920 PROFESSIONAL PARKWAY EAST
SARASOTA, FL 34240
PHONE NUMBER (941) 907-6900
TIMOTY W. FOUSHEE, P.E. 63044

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

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
6	BRIDGE HYDRAULIC RECOMMENDATIONS

AMY GUISINGER
LICENSE
No. 63989
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGN AND SEALED BY:

Amy Guisinger
Amy Guisinger
2025.04.29 10:51:47 -04'00'

ON THE DATE ADJACENT TO THE SEAL.

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TIERRA SOUTH FLORIDA, INC.
2765 VISTA PARKWAY SUITE H10
WEST PALM BEACH, FL 33411
PHONE NUMBER: (813)-993-0093
AMY GUISINGER, P.E. 63989

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

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET
7	REPORT OF CORE BORINGS

BRIDGE NO. 134183

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Stantec
STANTEC CONSULTING SERVICES, INC.

CHRISTOPHER P. GAMACHE, P.E.
P.E. LICENSE NUMBER 82122
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SUITE 300
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Manatee County FLORIDA

MANATEE COUNTY
PUBLIC WORKS
COUNTY PROJECT NO:
6104760

DUETTE ROAD BRIDGE REPLACEMENT

SIGNATURE SHEET

SHEET NO.
2

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 134183

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
LUMP SUM ITEMS	110-3	REMOVAL OF EXISTING STRUCTURE	BRIDGE 134030	LS/SF	1250		1250			
FOUNDATION	455-34-3	PRESTRESSED CONCRETE PILING 18" SQ.	END BENT 1	LF	280		970			
			INTERMEDIATE BENT 2		340					
			END BENT 3		350					
	455-143-3	TEST PILES, PRESTRESSED CONCRETE, 18" SQ.	END BENT 1	LF	85		185			
			INTERMEDIATE BENT 2		100					
	530-78	RIPRAP, RUBBLE, F&I, DITCH LINING	CHANNEL	TN	459		459			
SUBSTRUCTURE	400-2-5	CONCRETE CLASS II, BRIDGE SUBSTRUCTURE	END BENT 1	CY	6.9		19.8			
			INTERMEDIATE BENT 2		5.9					
			END BENT 3		7.0					
	415-1-5	REINFORCING STEEL, BRIDGE SUBSTRUCTURE	END BENT 1	LB	2352		6857			
			INTERMEDIATE BENT 2		2133					
			END BENT 3		2372					
	548-13	RETAINING WALL SYSTEM, TEMPORARY, EXCLUDING BARRIER	WALL 1	SF	1125		1125			
	459-71	PILES, POLYETHYLENE SHEETING	END BENT 1	SY	24		48			
			END BENT 3	SY	24					
APPROACH SLABS	400-2-10	CONCRETE CLASS II, APPROACH SLABS	APPROACH SLAB 1	CY	65.0		131.4			
			APPROACH SLAB 2		66.4					
	415-1-9	REINFORCING STEEL, APPROACH SLABS	APPROACH SLAB 1	LB	17874		36137			
			APPROACH SLAB 2		18264					
SUPERSTRUCTURE	400-2-4	CONCRETE CLASS II, BRIDGE SUPERSTRUCTURE	SPANS 1 & 2	CY	193.3		193.3			
	415-1-4	REINFORCING STEEL, BRIDGE SUPERSTRUCTURE	SPANS 1 & 2	LB	52719		52719			
	400-7-1	BRIDGE DECK GROOVING	APPROACH SLAB 1	SY	11		388			
			SPAN 1 & 2		365					
			APPROACH SLAB 2		12					
	400-148	PLAIN NEOPRENE BEARING PADS	END BENT 1	CF	2.2		6.7			
			INTERMEDIATE BENT 2		2.2					
			END BENT 3		2.3					
	458-1-11	BRIDGE DECK EXPANSION JOINT, NEW CONST.	BEGIN BRIDGE	LF	50		101			
		F&I POURED JOINT WITH BACKER ROD	END BRIDGE		51					
RAILING/ BARRIERS	521-5-13	CONCRETE TRAFFIC RAILING - BRIDGE, 36" SINGLE SLOPE	APPROACH SLAB 1	LF	62		262			
			SPAN 1		137					
			APPROACH SLAB 2		63					

BRIDGE NO. 134183

REVISIONS NO.	DESCRIPTION	DATE	BY

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MANATEE COUNTY PUBLIC WORKS
COUNTY PROJECT NO: 6104760

DUETTE ROAD BRIDGE REPLACEMENT

SUMMARY OF QUANTITIES

SHEET NO. 3

DESIGN SPECIFICATIONS:

FDOT STRUCTURES MANUAL 2024.

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

FDOT DESIGN MANUAL DATED JANUARY 2024.

GOVERNING STANDARDS:

FDOT FY 2024-25 DESIGN STANDARD PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN.

CONSTRUCTION SPECIFICATIONS:

FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FY2024-25.

DESIGN METHOD:

LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD) FOR ALL ELEMENTS.

DESIGN LOADING:

DEAD LOADS:

UNIT WEIGHT OF STEEL REINFORCED CONCRETE	150	PCF
36" SINGLE SLOPE TRAFFIC RAILING	430	PLF

LIVE LOADS:

HL-93 LOADING WITH IMPACT

TEMPERATURE EFFECTS:

STRUCTURE MATERIAL: CONCRETE

MEAN	RISE FROM MEAN	FALL FROM MEAN	RANGE
70°	+35°	-35°	70°

COEFFICIENT OF THERMAL EXPANSION: 0.000006 PER °F.
NOTE: 1.2 FACTOR APPLIED TO MOVEMENT.

ENVIRONMENT:

SUPERSTRUCTURE - SLIGHTLY AGGRESSIVE
SUBSTRUCTURE - SLIGHTLY AGGRESSIVE

CONCRETE:

CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH (psi)	LOCATION OF CONCRETE IN STRUCTURE
II	f'c = 3,400	TRAFFIC RAILING & BENT CAPS
II (BRIDGE DECK)	f'c = 4,500	DECK SLAB & APPROACH SLABS
V	f'c = 6,500	PRESTRESSED CONCRETE PILES

CONCRETE COVER:

CONCRETE COVER SHOWN IN THE PLANS DOES NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE TOLERANCES. ALL DIMENSIONS PERTAINING TO LOCATIONS OF REINFORCING ARE TO THE CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO THE FACE OF CONCRETE.

SUPERSTRUCTURE:	2" TO EXTERNAL FORMED SURFACES
SUBSTRUCTURE:	3" TO EXTERNAL FORMED SURFACES 4" TO SURFACES CAST AGAINST EARTH

STEEL REINFORCING:

ALL REINFORCEMENT BARS SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS SECTION 931. ALL REINFORCEMENT BARS SHALL BE GRADE 60.

SCREEDING DECKS:

SCREED THE RIDING SURFACE OF THE BRIDGE DECK AND APPROACH SLABS TO ACHIEVE THE FINISH GRADE ELEVATIONS SHOWN IN THE PLANS AND MEET THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS 400 FOR A CLASS 4 DECK FINISH. ACCOUNT FOR THEORETICAL DEFLECTIONS DUE TO SELF WEIGHT, DECK CASTING SEQUENCE, DECK FORMING SYSTEMS, CONSTRUCTION LOADS, OVERLAY AND TEMPORARY SHORING, ETC. AS REQUIRED.

BRIDGE DECK GROOVING:

GROOVE THE BRIDGE DECK AND APPROACH SLABS IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS 400.

CONCRETE FINISH:

CLASS II FINISH SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. EXCEPT A CLASS IV FINISH SHALL BE USED ON THE DECK AND APPROACH TOP SURFACES.

UTILITIES:

LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE.

PLAN DIMENSIONS:

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

VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

BRIDGE NAME AND NUMBER:

PLACE THE FOLLOWING BRIDGE NAME AND NUMBER ON THE TRAFFIC RAILINGS IN ACCORDANCE WITH THE TRAFFIC RAILING DESIGN STANDARD.

NAME	NUMBER
DUETTE ROAD OVER EAST FORK MANATEE RIVER	134183

EXISTING DIMENSIONS:

THE EXISTING DIMENSIONS, ELEVATIONS, AND ANGLES SHOWN ARE BASED ON AVAILABLE INFORMATION AND MAY NOT REPRESENT AS-BUILT CONDITIONS. VERIFY ALL EXISTING INFORMATION BEFORE BEGINNING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

EXISTING BRIDGE REMOVAL AND DISPOSAL:

ALL MATERIAL IN THE EXISTING BRIDGE, APPROACH SLABS AND WALLS SHALL BE REMOVED. THE ESTIMATED PLAN AREA OF REMOVAL IS APPROXIMATELY 1,250 SF.

DESIGNATION:

REFER TO FDOT ABBREVIATIONS FY 2023-24 STANDARD PLANS AND THIS NOTE FOR ABBREVIATIONS USED IN THESE PLANS.

EF = EACH FACE
EJ = EXPANSION JOINT
FFBW = FRONT FACE BACKWALL
PGL = PROFILE GRADE LINE
PLF = POUNDS PER LINEAR FOOT
TC = TANGENT TO CURVE

CONCRETE FINISH GENERAL NOTES:

CLASS 2 FINISH ON ALL EXPOSED CIP CONCRETE EXCEPT FOR CLASS 4 FINISH ON TOP AND SIDE OF BRIDGE DECK AND APPROACH SLAB.

BRIDGE NO. 134183

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Stantec
STANTEC CONSULTING SERVICES, INC.

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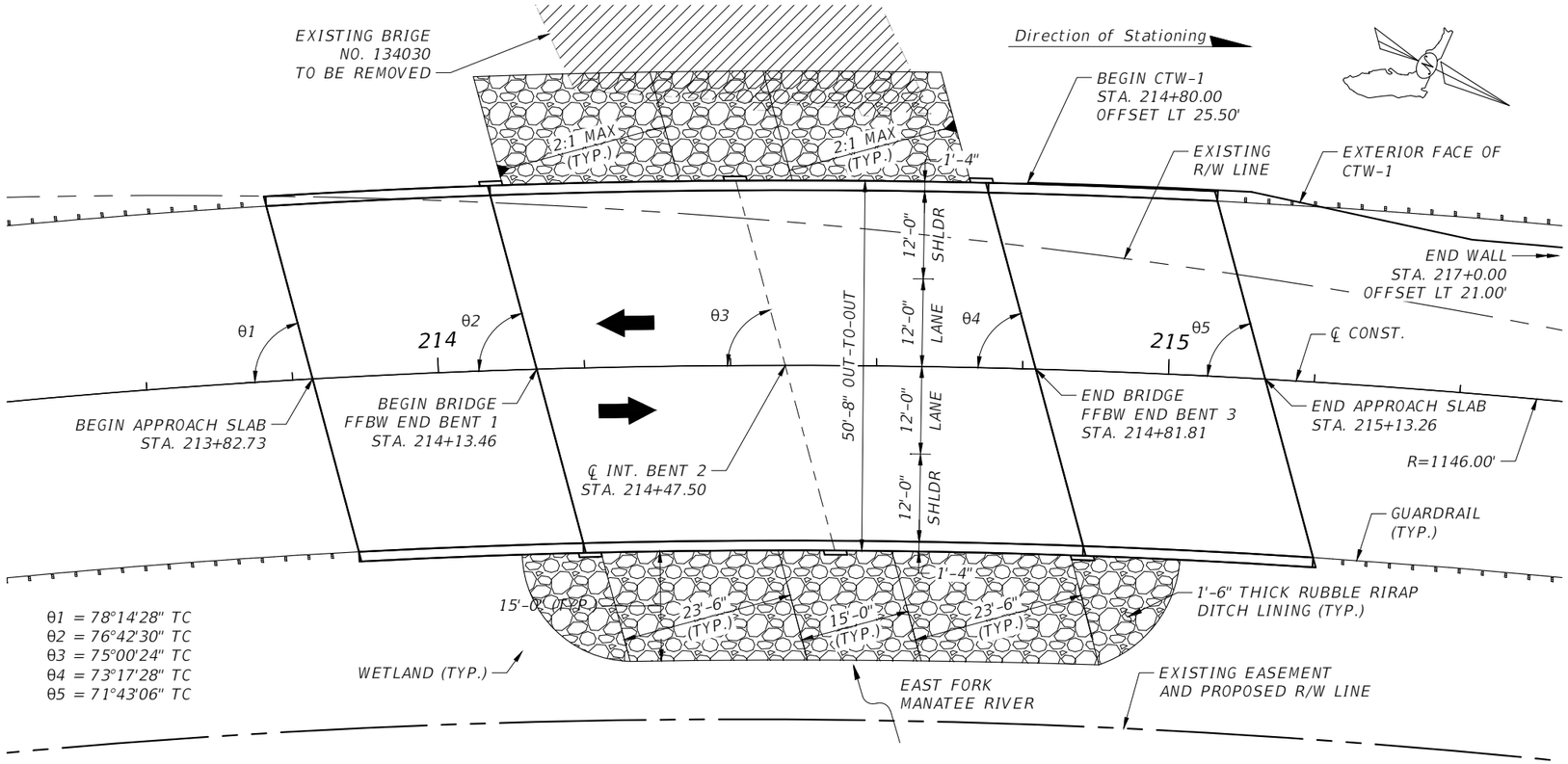
MANATEE COUNTY PUBLIC WORKS
COUNTY PROJECT NO: 6104760

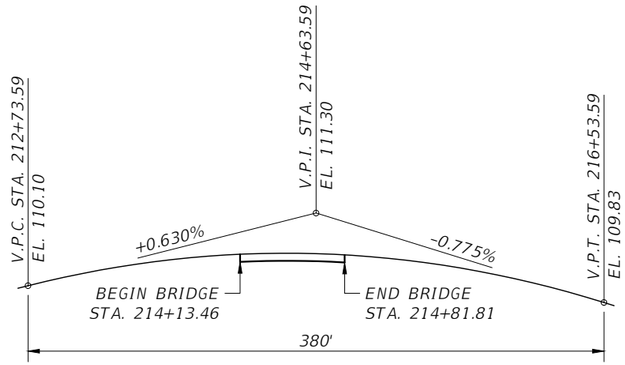
DUETTE ROAD BRIDGE REPLACEMENT

GENERAL NOTES

SHEET NO. 4



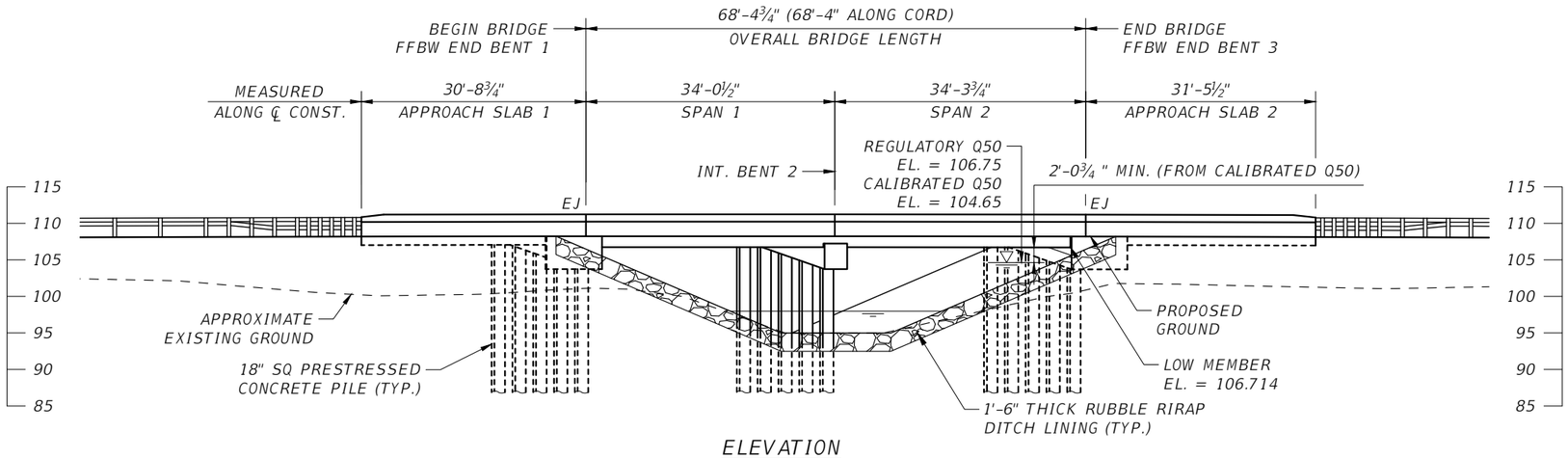
PLAN



VERTICAL CURVE

CURVE DATA

PI STA. = 213+27.51
DELTA = 84° 30' 34"
D = 4° 59' 59"
T = 1041.13
L = 1690.31
R = 1146.00
PC STA. = 202+86.39
PT STA. = 319+76.70



ELEVATION

TRAFFIC DATA:

CURRENT YR. EST. = 2021 AADT = 1350
DESIGN SPEED = 55 MPH
K = 9.5
D = 56.1
T = 40

NOTES:

1. MINIMUM ELEVATION FOR THE PROPOSED CHANNEL BOTTOM/TOP OF RIPRAP NEEDED 95'.
2. MINIMUM DEPTH OF RUBBLE RIPRAP 1.5'.

LEGEND:

EXISTING BRIDGE TO BE REMOVED

BRIDGE NO. 134183

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REVISIONS			
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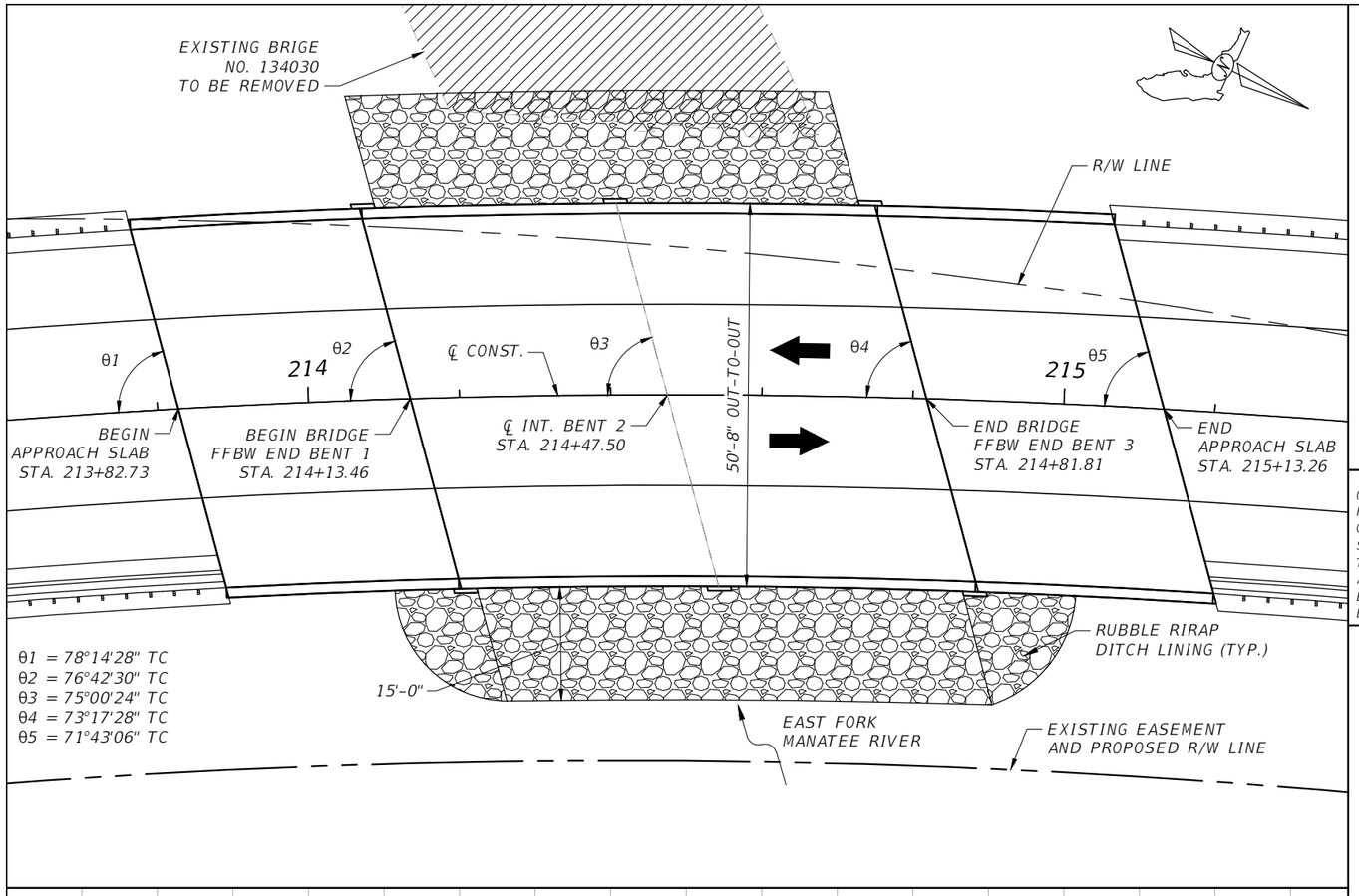
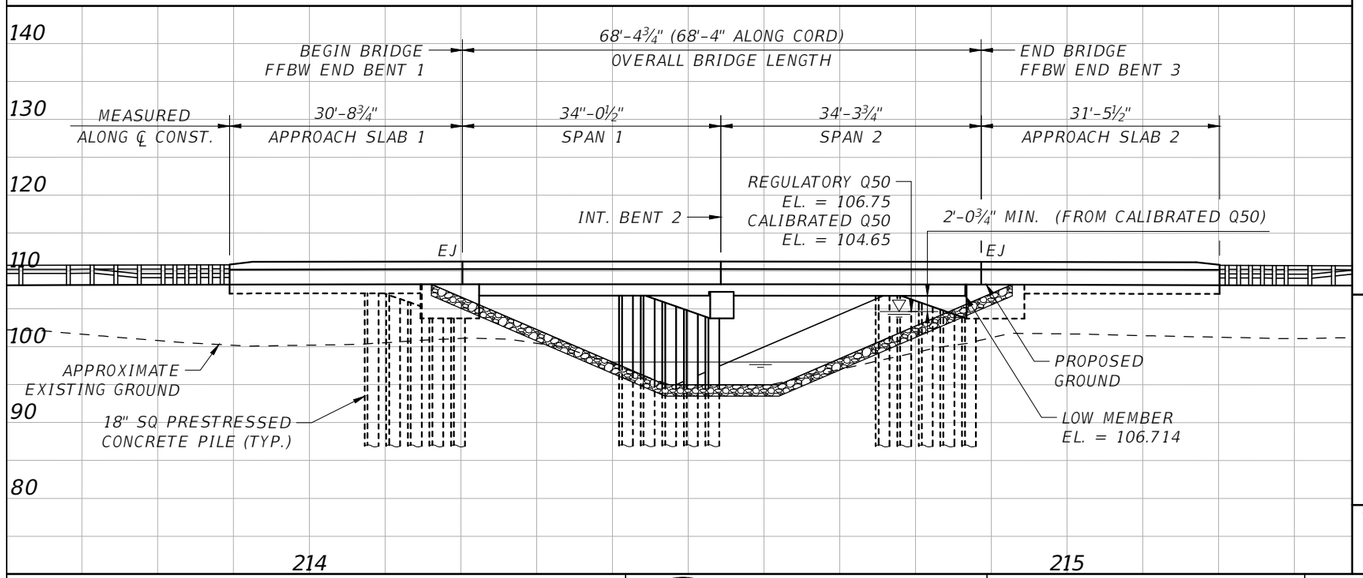
MANATEE COUNTY
PUBLIC WORKS
COUNTY PROJECT NO:
6104760

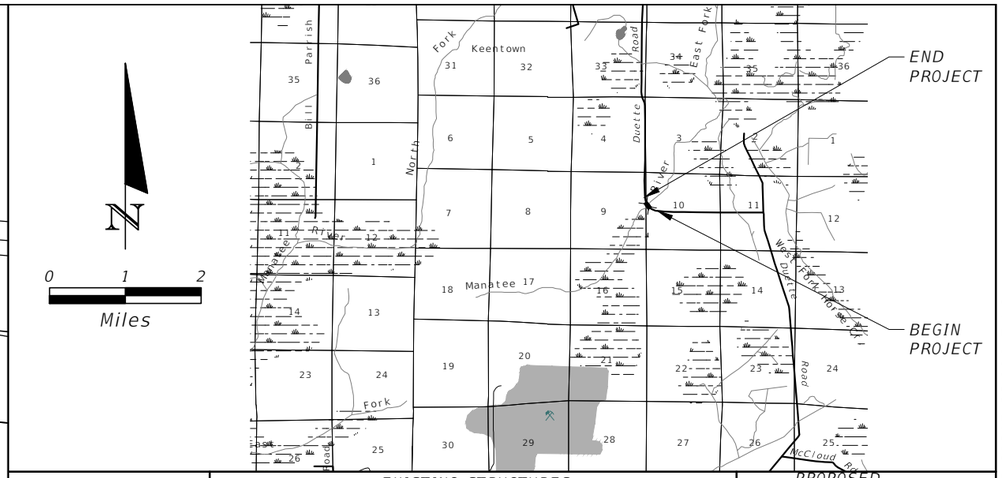
DUETTE ROAD BRIDGE REPLACEMENT

PLAN AND ELEVATION

SHEET NO. 5







(REFERENCE)	EXISTING STRUCTURES (1)	(2)	(3)	(4)	PROPOSED STRUCTURE
FOUNDATION	CONCRETE PILES				CONCRETE PILES
OVERALL LENGTH	32.4'				68.3'
SPAN LENGTH	15.1 & 15.1'				34.0' & 34.3
TYPE CONSTRUCTION	CONCRETE				CONCRETE
AREA OF OPENING@D.F.	309 SQ FT				427 SQ FT
BRIDGE WIDTH	25.7'				50.7 FT
ELEV. LOW MEMBER	104.66				106.7

HYDRAULIC DESIGN DATA

NOTE:

1. The stage elevation of the design flood overtops the bridge, and subsequently, the area of the opening during the design flood only includes the area beneath the bridge.

The hydraulic data is shown for informational purposes only to indicate the flood discharges and water surface elevations which may be 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 resultant hydraulic data is sensitive to changes, particularly antecedent 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) ____ M.H.W. (Tidal) ____
CONTROL (Non-Tidal) ____ M.L.W. (Tidal) ____

FLOOD DATA:	MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	☐ OVERTOPPING or ☒ GREATEST FLOOD
STAGE ELEV. NAVD (ft)		+104.7	+105.5	+107.1
DISCHARGE (cfs)		799.5	988.3	1114.26
AVERAGE VELOCITY (f/s)		2.5	2.7	1.93
EXCEEDANCE PROB. (%)		2	1	N/A
FREQUENCY (yr.)		50	100	N/A

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:

TOTAL SCOUR ELEVATION ____

PIER INFORMATION NUMBERS	SIZE AND TYPE	LONG TERM SCOUR ELEV.	WORST CASE < 100 yr. FREQ. (yr.) 100	WORST CASE < 500 yr. FREQ. (yr.) 500
2	18" concrete pile	N/A	14.3'	N/A

HYDRAULIC RECOMMENDATIONS

1. BEGIN BRIDGE STATION 214+13.46 END BRIDGE STATION 214+81.81 SKEW ANGLE 15°
2. CLEARANCE PROVIDED: NAV: HORIZ. ____ VERT. ____ ABOVE EL. ____ DRIFT: HORIZ. 29.5' VERT. 2.0' ABOVE EL. +104.7'
3. MINIMUM CLEARANCE: NAV: HORIZ. ____ VERT. ____ ABOVE EL. ____ DRIFT: HORIZ. 29.5' VERT. 2.0' ABOVE EL. +104.7'
4. ABUTMENTS:
5. DECK DRAINAGE: Bridge drains to the east curb and then north & south along the approach curb. Runoff is collected by curb inlets approximately 145 feet beyond the approach slabs.

*REMARKS:

BRIDGE NO. 134183

REVISIONS NO.	DESCRIPTION	DATE	BY

Stantec
STANTEC CONSULTING SERVICES, INC.

TIMOTHY W. FOUSHEE, P.E.
P.E. LICENSE NUMBER 63044
6920 PROFESSIONAL PARKWAY EAST
SARASOTA, FLORIDA, 34240
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MANATEE COUNTY
PUBLIC WORKS
COUNTY PROJECT NO:
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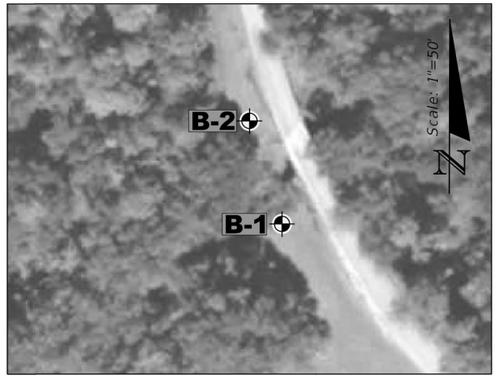
DUETTE ROAD BRIDGE REPLACEMENT

BRIDGE HYDRAULIC RECOMMENDATIONS

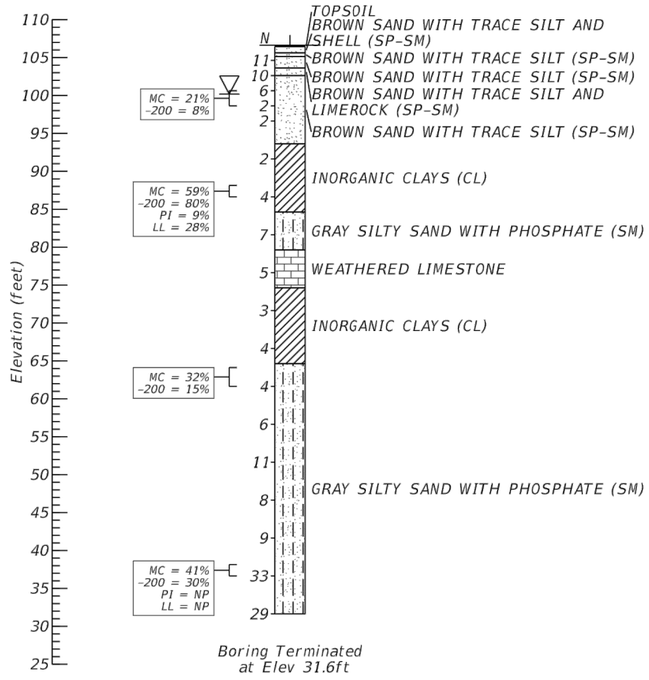
SHEET NO. 6



BORING LOCATION PLAN

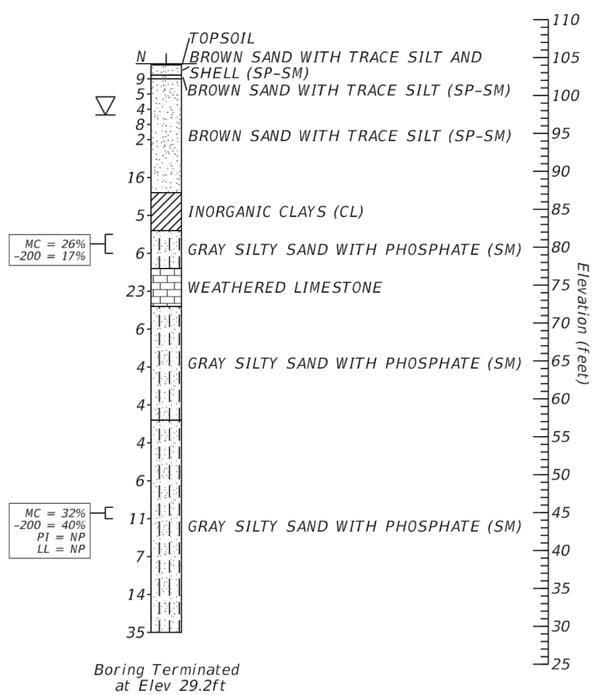
Approximate Location of SPT Boring

Bore # B-1
Elevation 106.6'
Date 10/7/2022
Hammer Auto
Rig CME-45
Latitude 27.5388966
Longitude -82.1036274
Northing 1165085
Easting 622586



Boring Terminated at Elev 31.6ft

Bore # B-2
Elevation 104.2'
Date 10/8/2022
Hammer Auto
Rig CME-45
Latitude 27.5391194
Longitude -82.1037101
Northing 1165166
Easting 622559



Boring Terminated at Elev 29.2ft

LEGEND

- Asphalt / Topsoil
- Sand
- Clay
- Silty Sand
- Shelly Sand
- Limestone

NOTES:

- ▽ ENCOUNTERED WATER TABLE DURING DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION. (UNLESS OTHERWISE NOTED)
- GNE GROUNDWATER NOT ENCOUNTERED IN UPPER 10 FEET
- WOH WEIGHT OF HAMMER
- || CASING
- MC= Natural Moisture Content (%)
- -200= Fines Passing #200 Sieve (%)
- OC= Organic Content (%)
- LL= Liquid Limit
- PL= Plastic Limit
- PI= Plasticity Index

1. STRATA BOUNDARIES ARE APPROXIMATE AND MAY VARY BETWEEN OR AWAY FROM BORING LOCATIONS.
2. BORING LOCATIONS WERE MARKED IN THE FIELD USING A HANDHELD GPSMap GARMIN 78s. ACTUAL LOCATIONS AND THEIR COORDINATES ARE APPROXIMATE. STATION AND OFFSETS WERE DETERMINED BASED ON THE ALIGNMENT FILE.
3. THE STRATA ENCOUNTERED WITHIN THE PROJECT SITE CORRESPOND TO ROCK FORMATIONS THAT OFFER HIGH RESISTANCE TO DRIVING AND EXCAVATION.
   SPECIAL EQUIPMENT AND BREAKING TOOLS ARE TYPICALLY REQUIRED TO EXCAVATE THESE LAYERS. THESE LAYERS ARE ALSO DIFFICULT TO DEWATER DUE TO THEIR HIGH POROSITY AND PERMEABILITY.
4. THE CONTRACTOR IS ADVISED THAT CAVING SOILS MAY BE ENCOUNTERED DURING THE EXCAVATION AND FLUID LEVEL MAY BE DIFFICULT TO MAINTAIN.
5. ALTHOUGH NOT APPARENT DURING DRILLING OPERATION THE CONTRACTOR IS ADVISED THAT PERIODIC TOTAL LOSS OF CIRCULATION MAY OCCUR WHICH MAY MAKE IT DIFFICULT TO MAINTAIN THE FLUID LEVEL DURING EXCAVATION

ENVIRONMENTAL CLASSIFICATION
SUPERSTRUCTURE: SLIGHTLY AGGRESSIVE
SUBSTRUCTURE: SLIGHTLY AGGRESSIVE

STANDARD PENETRATION TEST DATA	
SPOON INSIDE DIA.	1.375 inches
SPOON OUTSIDE DIA.	2.0 inches
AVG. HAMMER DROP	30.0 inches
HAMMER WEIGHT	140.0 pounds

SPT CONSISTENCY CHART (SILTS AND CLAYS)		
CONSISTENCY	SAFETY HAMMER SPT N-VALUE (BLOW/FOOT)	AUTOMATIC HAMMER SPT N-VALUE (BLOW/FOOT)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 - 4	1 - 3
FIRM	4 - 8	3 - 6
STIFF	8 - 15	6 - 12
VERY STIFF	15 - 30	12 - 24
HARD	GREATER THAN 30	GREATER THAN 24

SPT DENSITY CHART / GRANULAR MATERIALS		
RELATIVE DENSITY	SAFETY HAMMER SPT N-VALUE (BLOW/FOOT)	AUTOMATIC HAMMER SPT N-VALUE (BLOW/FOOT)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 - 10	3 - 8
MEDIUM	10 - 30	8 - 24
DENSE	30 - 50	24 - 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40

BRIDGE NO. 134183

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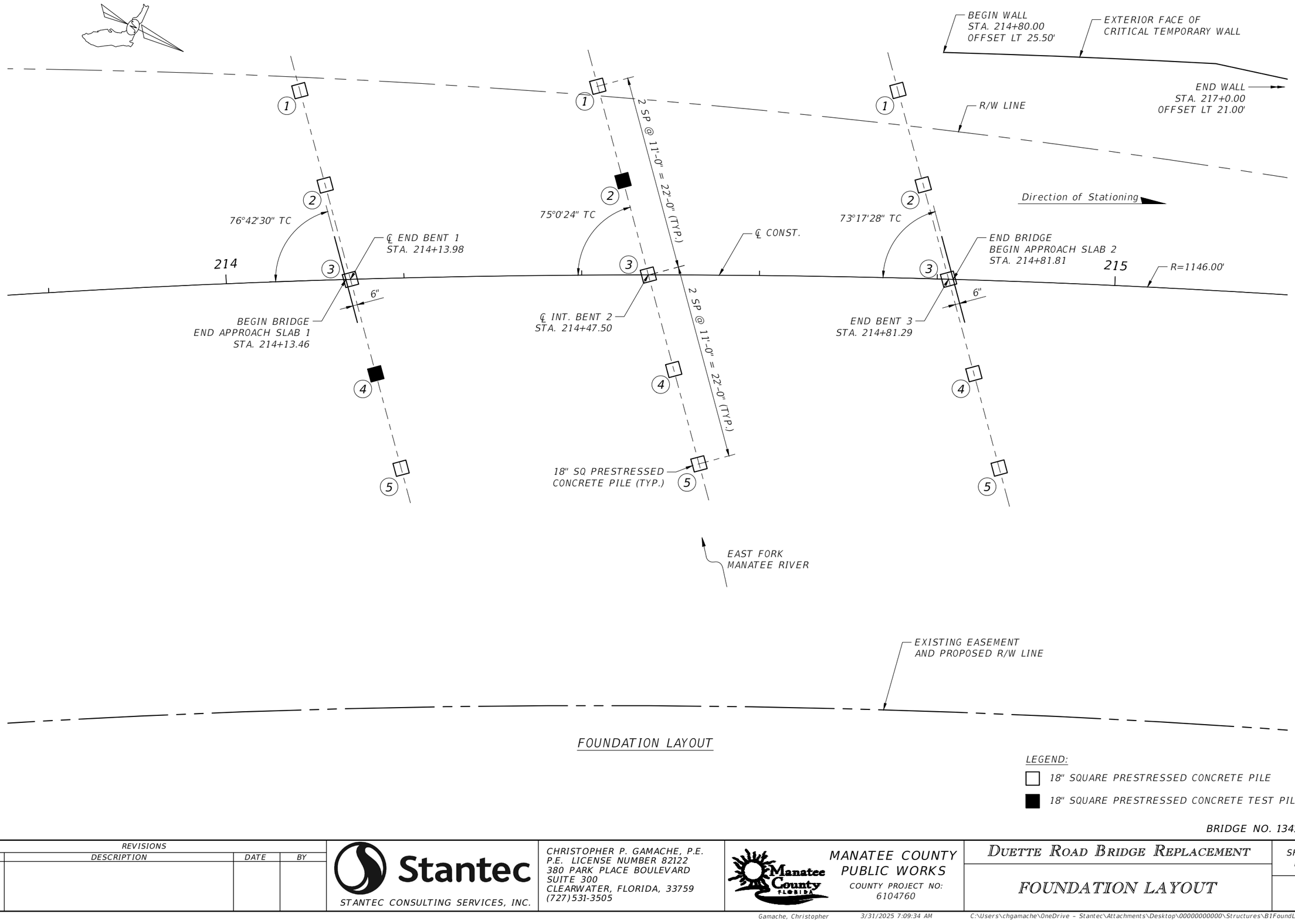
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS
COUNTY PROJECT NO: 6104760

DUETTE ROAD BRIDGE REPLACEMENT

REPORT OF CORE BORINGS

SHEET NO. 7



FOUNDATION LAYOUT

LEGEND:

- 18" SQUARE PRESTRESSED CONCRETE PILE
- 18" SQUARE PRESTRESSED CONCRETE TEST PILE

BRIDGE NO. 134183

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DUETTE ROAD BRIDGE REPLACEMENT

FOUNDATION LAYOUT

SHEET NO. 8

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PILE DATA TABLE

Table Date 01/01/16

INSTALLATION CRITERIA								DESIGN CRITERIA								PILE CUT-OFF ELEVATIONS				
PIER or BENT NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT	PILE 1	PILE 2	PILE 3	PILE 4	PILE 5
1	18	137	N/A	75.0	85	N/A	N/A	103	N/A	N/A	N/A	N/A	N/A	0.75	N/A	109.04	108.04	107.04	106.03	105.03
2	18	172	N/A	75.0	100	N/A	N/A	129	N/A	N/A	N/A	N/A	N/A	0.75	N/A	109.04	108.05	107.05	106.06	105.06
3	18	137	N/A	75.0	N/A	N/A	N/A	103	N/A	N/A	N/A	N/A	N/A	0.75	N/A	109.02	108.02	107.03	106.03	105.04

$$\frac{\text{Factored Design Load + Net Scour Resistance + Down Drag}}{\text{Ø}} \leq \text{Nominal Bearing Resistance}$$

UPLIFT RESISTANCE – The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires uplift capacity).

TOTAL SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the scourable soil.

NET SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.

100-YEAR SCOUR ELEVATION – Estimated elevation of scour due to the 100 year storm event.

PILE INSTALLATION NOTES

1. CONCRETE PILES SHALL BE PER FDOT STANDARD PLANS INDEXES 455-001, 455-002, AND 455-018 WITH STEEL REINFORCEMENT.
2. VERIFY LOCATION OF ALL UTILITIES PRIOR TO ANY PILE INSTALLATION ACTIVITIES.
3. MINIMUM TIP ELEVATION IS REQUIRED FOR LATERAL STABILITY.
4. NO JETTING WILL BE ALLOWED WITHOUT THE APPROVAL OF THE ENGINEER. DO NOT ANTICIPATE BEING ALLOWED TO JET PILES BELOW THE 100-YEAR SCOUR ELEVATION OR REQUIRED JET ELEVATION, WHICHEVER IS DEEPER. AT EACH BENT, PILE DRIVING IS TO COMMENCE AT THE CENTER OF THE BENT AND PROCEED OUTWARD.
5. WRAP END BENT PILES AFTER INSTALLATION, FROM EXPOSED GRADE TO BOTTOM OF CAP, PER FDOT STANDARD SPECIFICATION 459.
6. ALL PILES SHALL BE DYNAMICALLY MONITORED IN ACCORDANCE WITH SPECIFICATION 455.

BRIDGE NO. 134183

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DUETTE ROAD BRIDGE REPLACEMENT

PILE DATA TABLE

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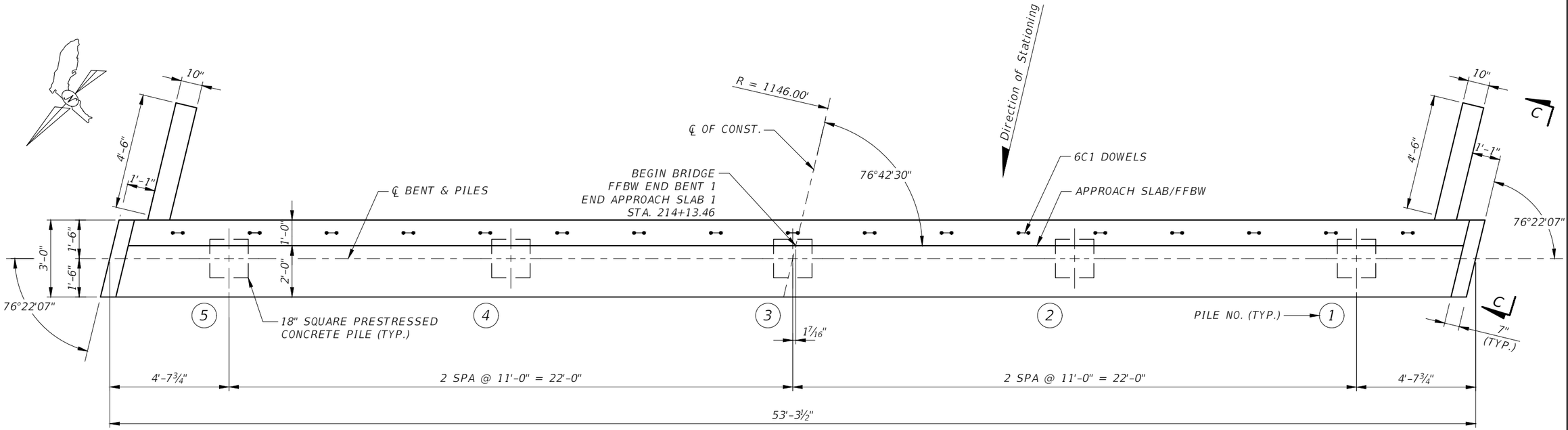
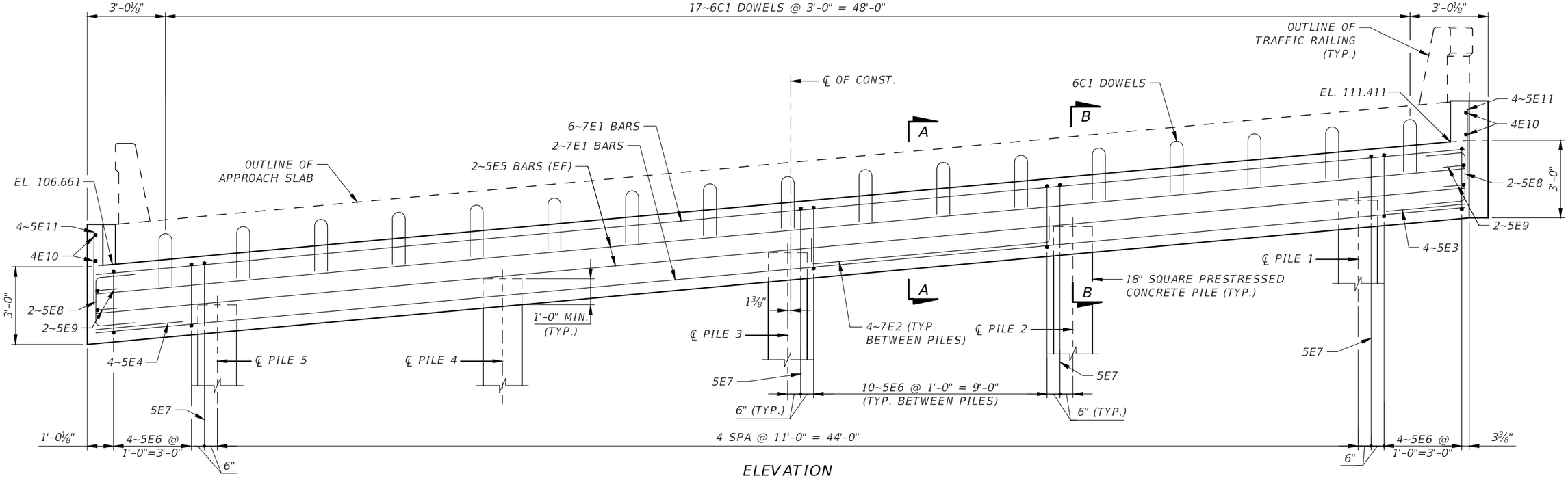


PLAN



ELEVATION

BRIDGE NO. 134183

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DUETTE ROAD BRIDGE REPLACEMENT

END BENT 1

SHEET NO. 10

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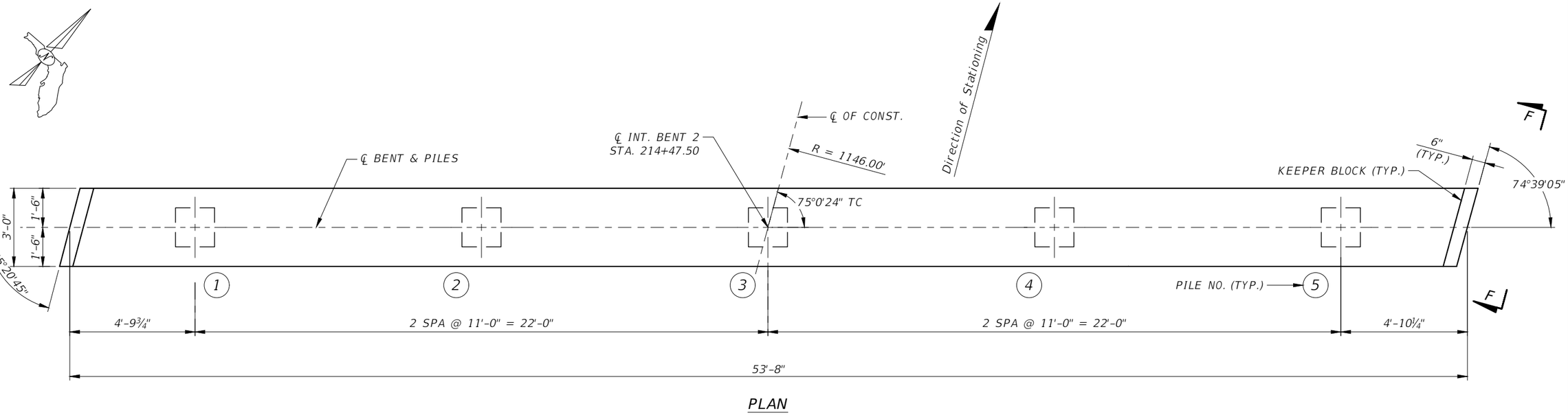

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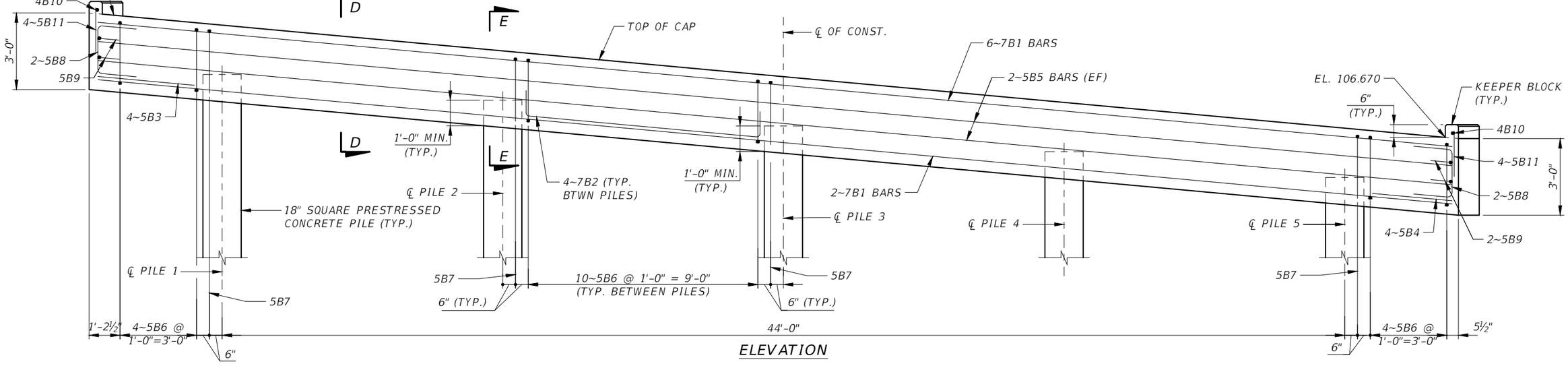

ELEVATION

BRIDGE NO. 134183

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DUETTE ROAD BRIDGE REPLACEMENT

INTERMEDIATE BENT 2

SHEET NO. 11

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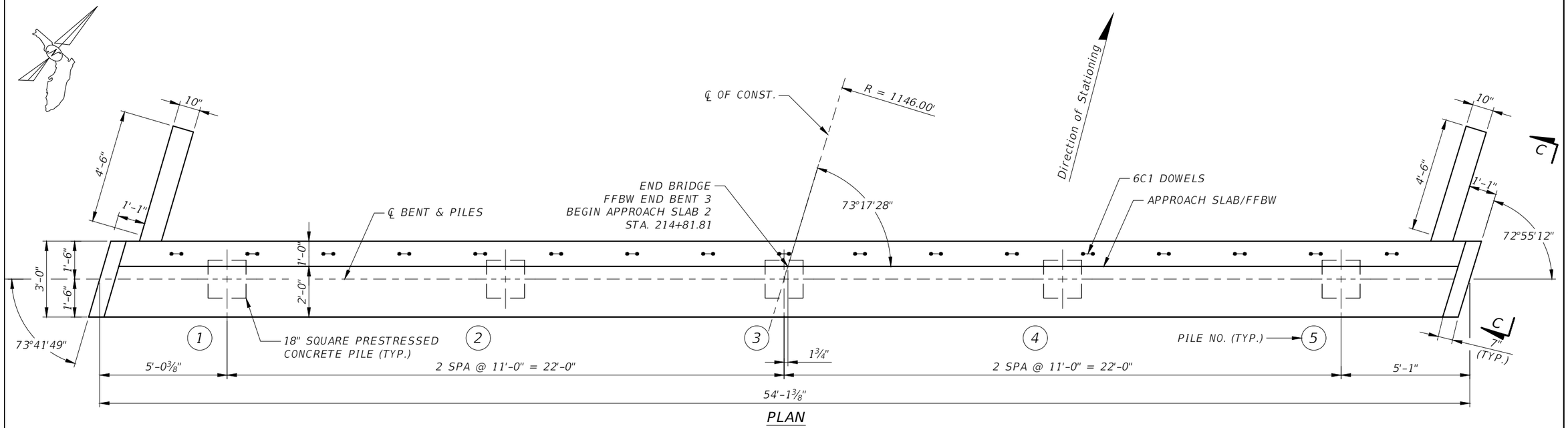

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DUETTE ROAD BRIDGE REPLACEMENT

END BENT 3

SHEET NO. 12

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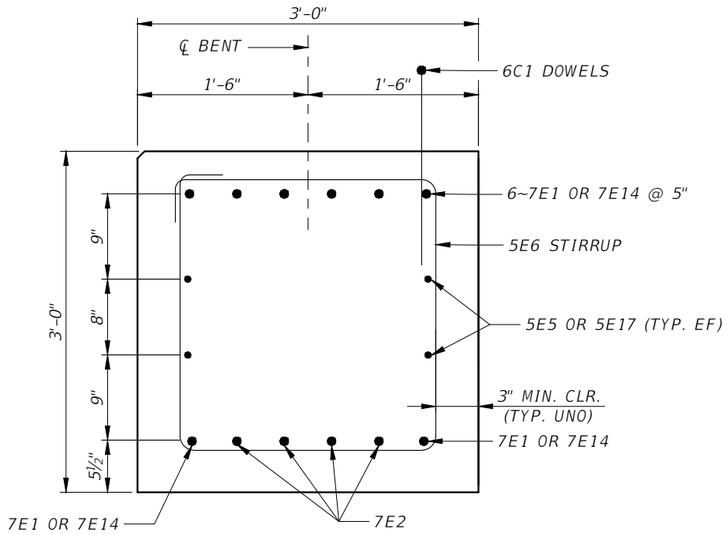

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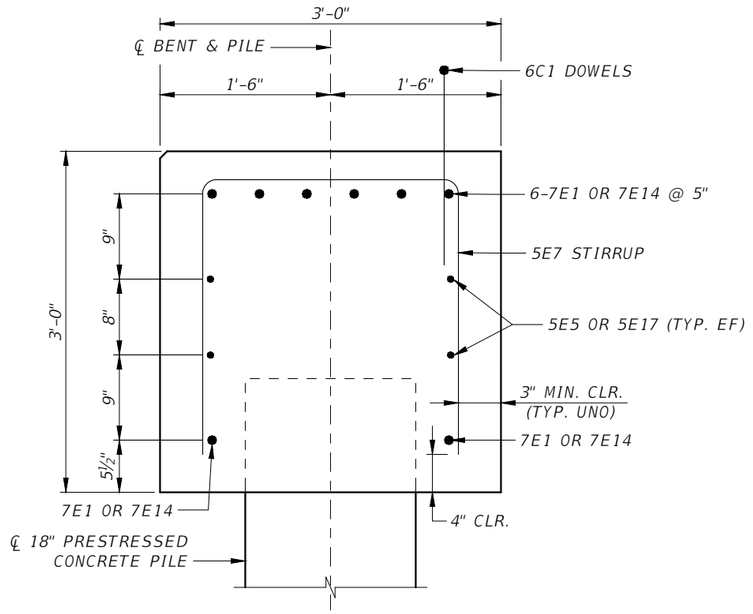

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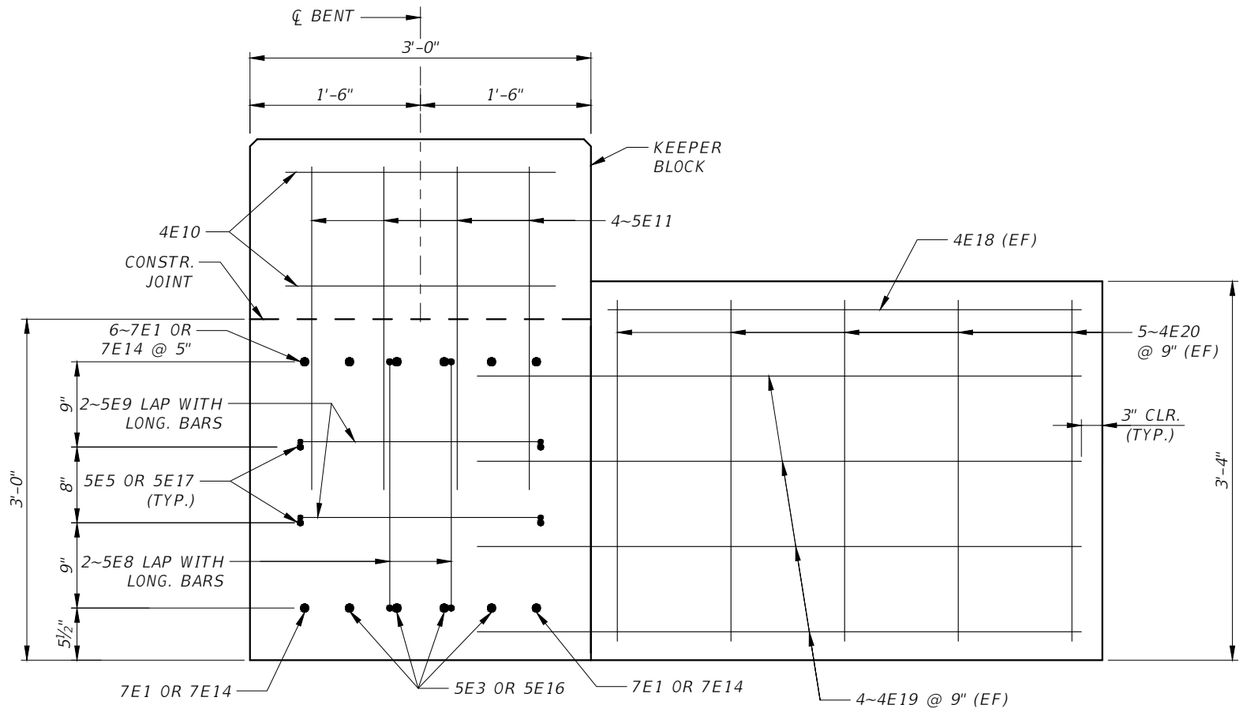

VIEW C-C

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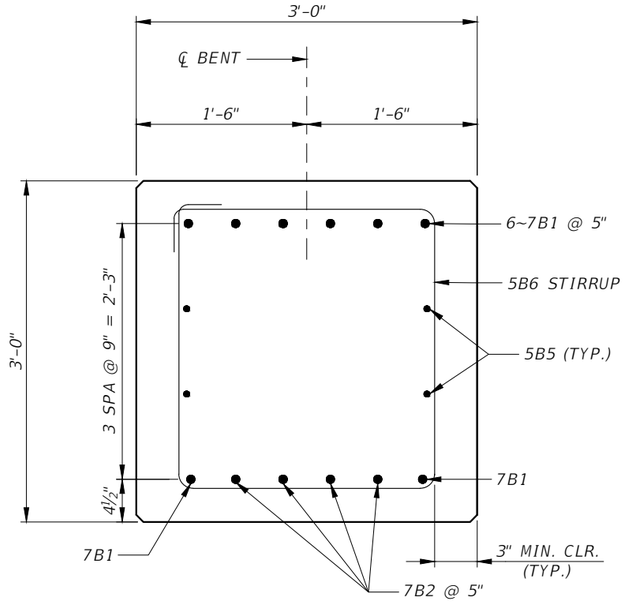
DUETTE ROAD BRIDGE REPLACEMENT

END BENT DETAILS

SHEET NO. 13



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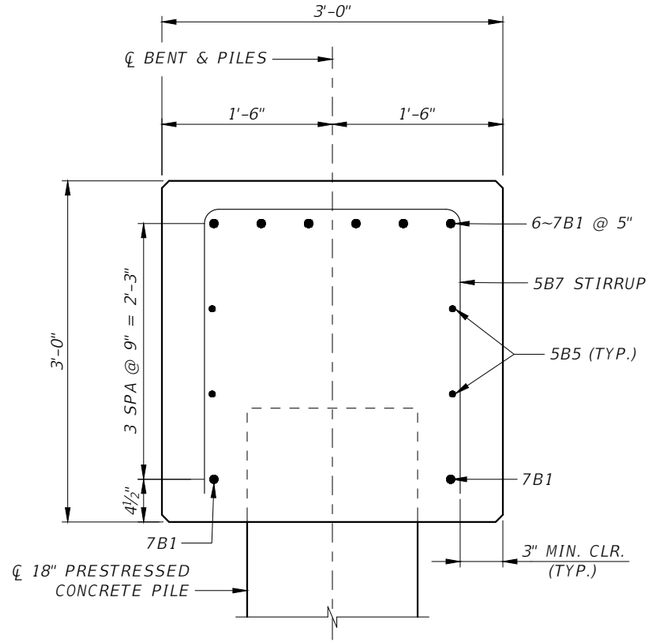

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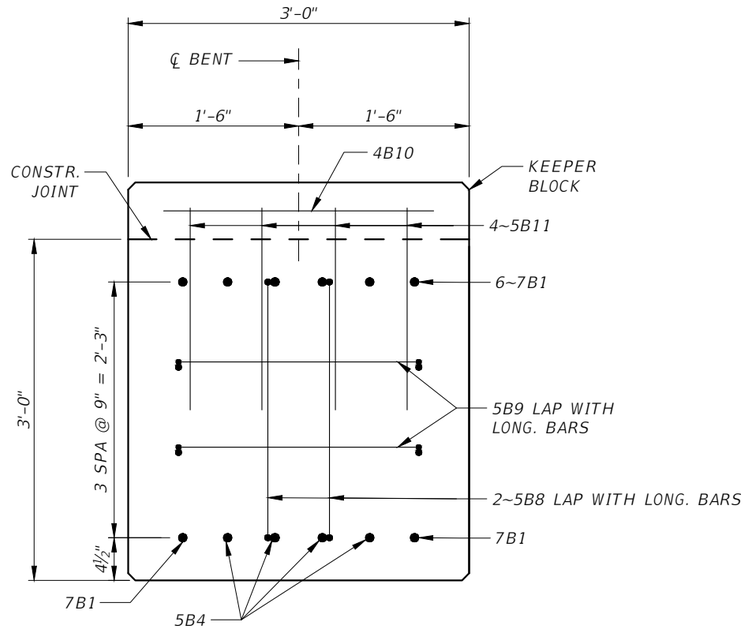

VIEW F-F

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DUETTE ROAD BRIDGE REPLACEMENT

INTERMEDIATE BENT DETAILS

SHEET NO. 14

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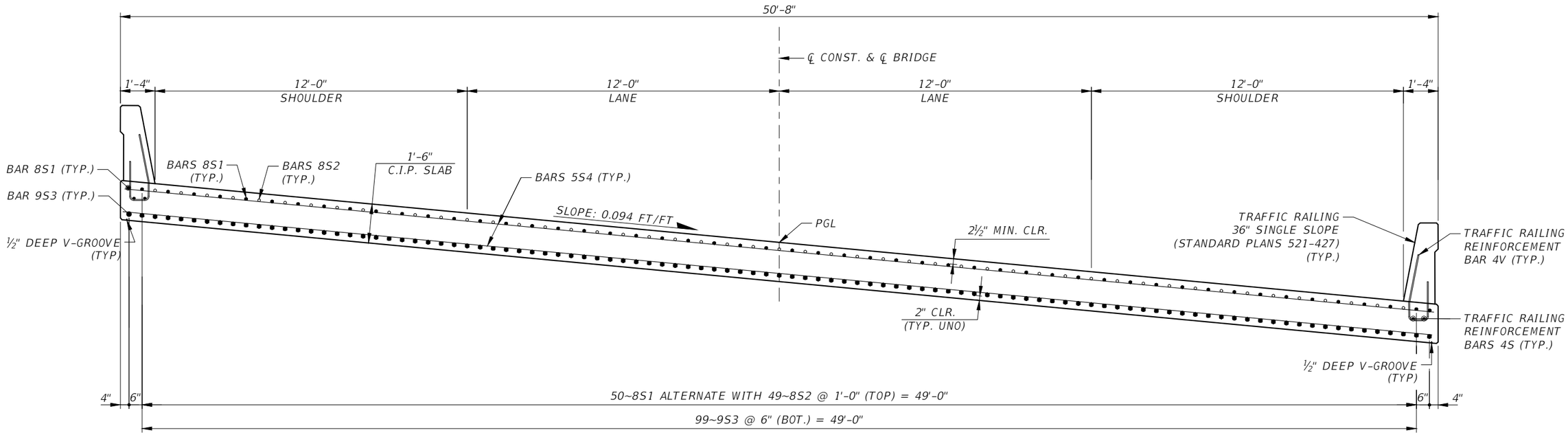

SUPERSTRUCTURE TYPICAL SECTION

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DUETTE ROAD BRIDGE REPLACEMENT

SUPERSTRUCTURE TYPICAL SECTION

SHEET NO. 15

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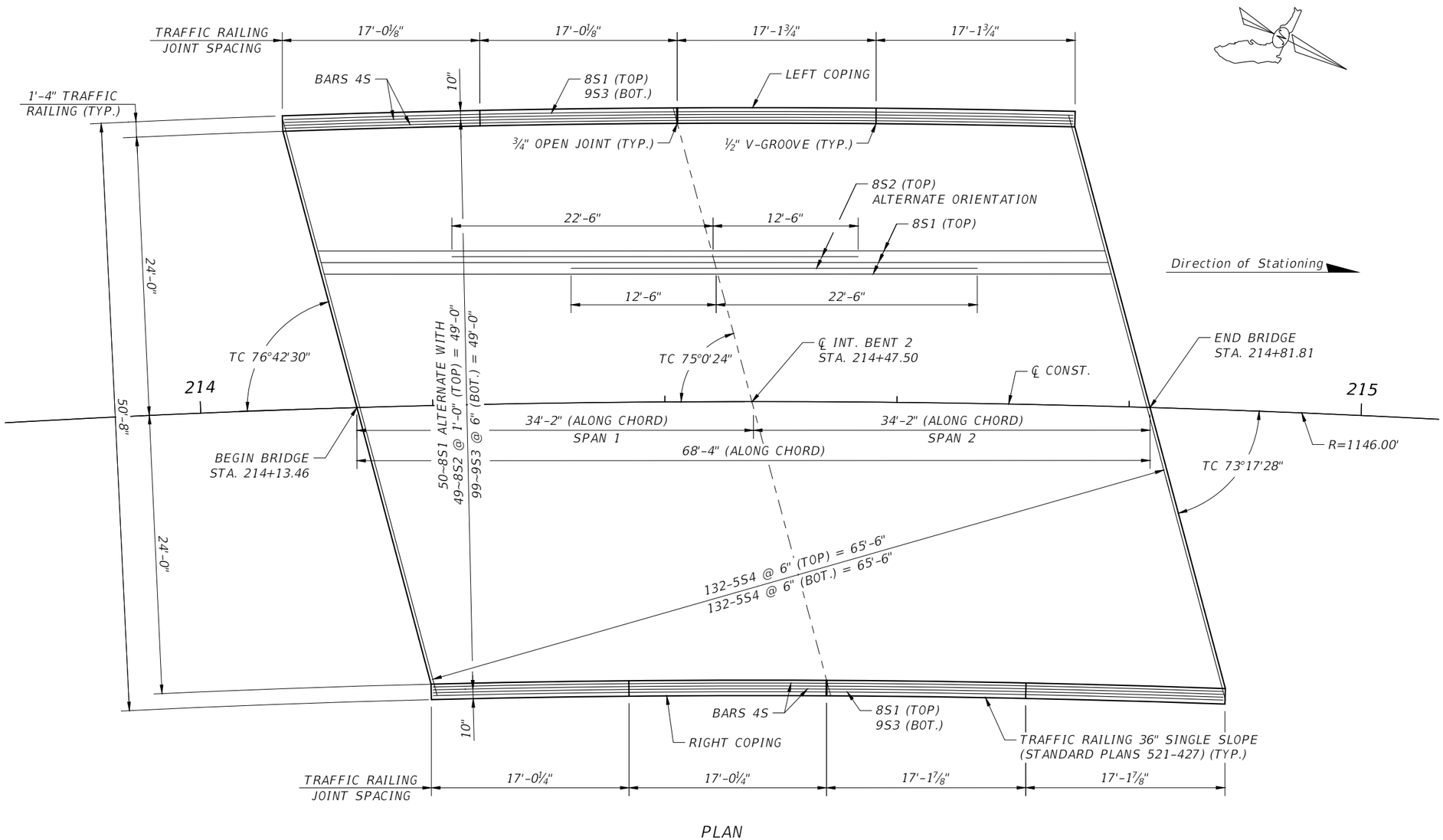

PLAN

BRIDGE NO. 134183

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DUETTE ROAD BRIDGE REPLACEMENT

SUPERSTRUCTURE PLAN

SHEET NO. 16

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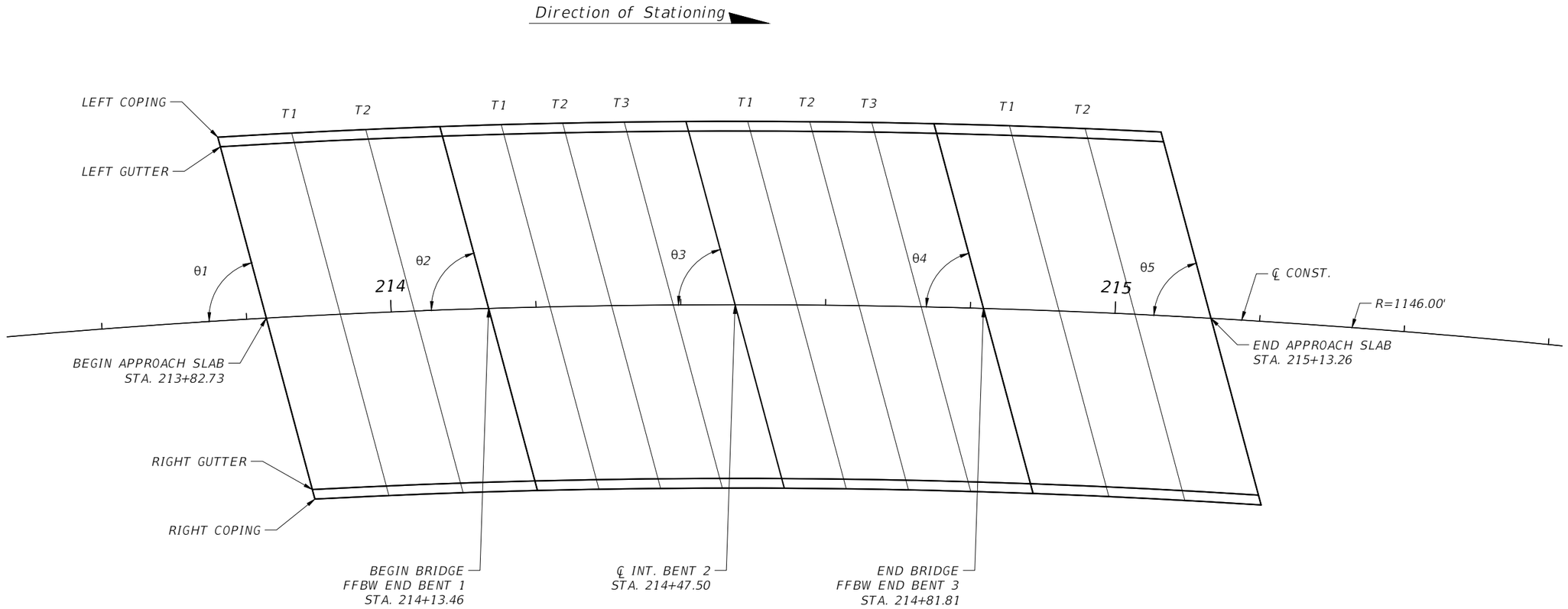

FINISH GRADE ELEVATION

θ1 = 78°14'28" TC

θ2 = 76°42'30" TC

θ3 = 75°00'24" TC

θ4 = 73°17'28" TC

θ5 = 71°43'06" TC

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DUETTE ROAD BRIDGE REPLACEMENT

FINISH GRADE ELAVATIONS (1 OF 2)

SHEET NO. 17

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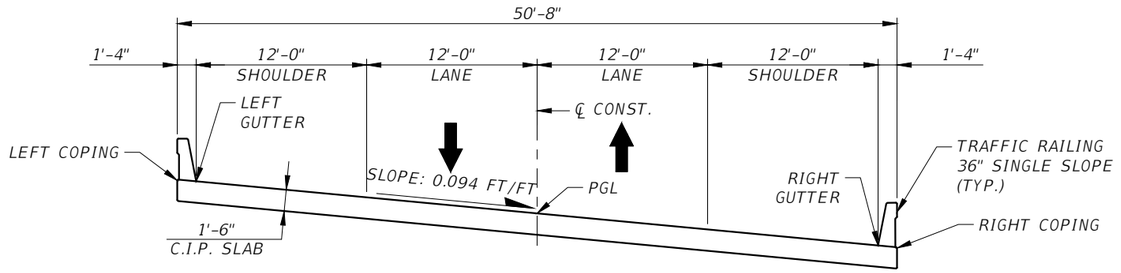

BRIDGE SECTION

LOCATION	APPROACH SLAB 1				SPAN 1					SPAN 2					APPROACH SLAB 2			
	BEGIN APPROACH SLAB	T-1	T-2	END APPROACH SLAB	BEGIN BRIDGE	T-1	T-2	T-3	END SPAN	BEGIN SPAN	T-1	T-2	T-3	END BRIDGE	BEGIN APPROACH SLAB	T-1	T-2	END APPROACH SLAB
LEFT COPING	112.937	112.959	112.978	112.994	112.994	113.004	113.011	113.016	113.018	113.018	113.018	113.015	113.009	113.001	113.001	112.988	112.970	112.949
LEFT GUTTER	112.812	112.835	112.853	112.869	112.869	112.878	112.886	112.890	112.893	112.893	112.892	112.889	112.883	112.875	112.875	112.862	112.844	112.823
PGL	110.567	110.589	110.606	110.620	110.620	110.628	110.633	110.636	110.637	110.637	110.634	110.629	110.621	110.610	110.610	110.594	110.573	110.548
RIGHT GUTTER	108.322	108.342	108.358	108.369	108.369	108.376	108.380	108.381	108.379	108.379	108.374	108.367	108.356	108.343	108.343	108.323	108.299	108.270
RIGHT COPING	108.198	108.217	108.233	108.244	108.244	108.251	108.255	108.255	108.253	108.253	108.249	108.241	108.230	108.217	108.217	108.197	108.172	108.143

BRIDGE NO. 134183

REVISIONS

NO.	DESCRIPTION	DATE	BY

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DUETTE ROAD BRIDGE REPLACEMENT

FINISH GRADE ELAVATIONS
(2 OF 2)

SHEET NO.
18

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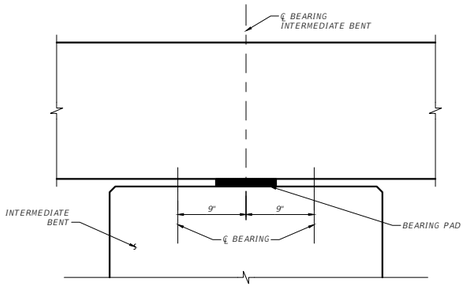
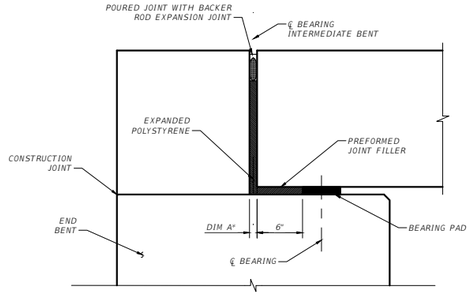


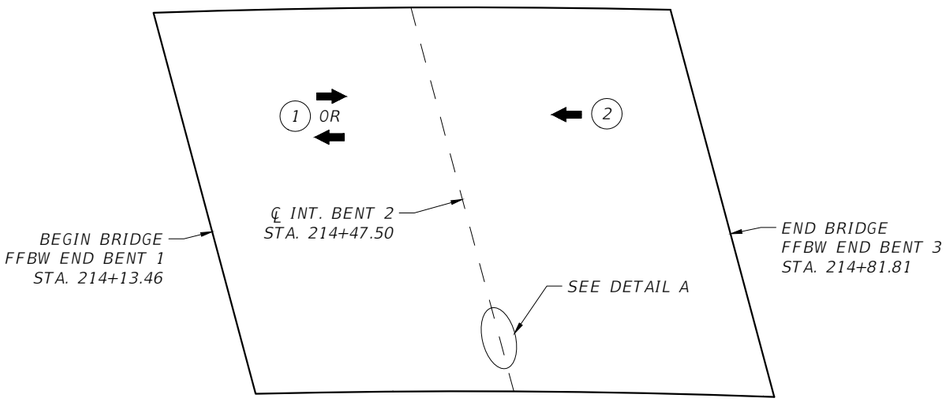


BEARING STRIP DATA TABLE			
LOCATION	SHEAR MODULUS, G (psi)	WIDTH (in)	THICKNESS (in)
END BENT 1	110	5	1
INT. BENT 2	110	8	1
END BENT 3	110	5	1

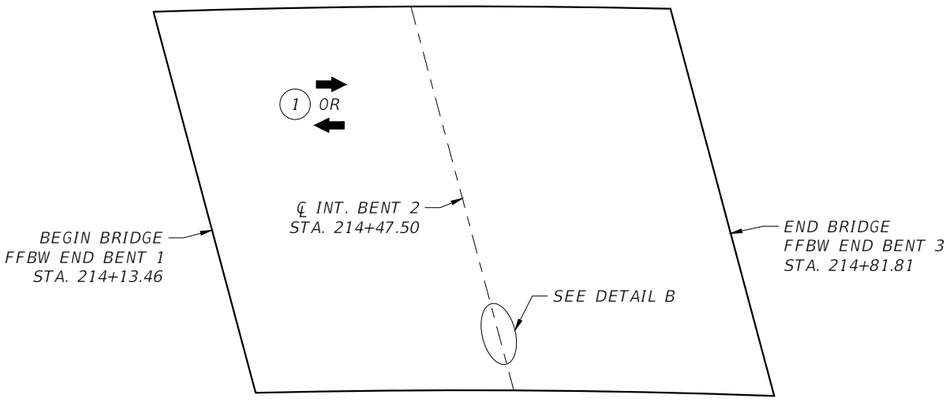
NOTE:
Provide plain neoprene bearing pads in accordance with Specification 932.

POURED EXPANSION JOINT DATA TABLE STANDARD PLANS 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"	0.13"	0.01"
END BENT 3	1"	0.13"	0.01"

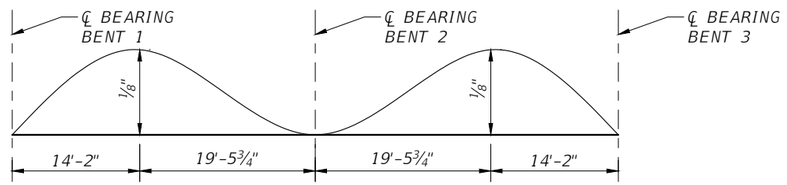
NOTE:
Dim. "A" adjustment per 10°F shown is measured perpendicular to ℄ Expansion Joint. Work this table with Standard Plans Index 458-110.



DECK CASTING SEQUENCE - MULTIPLE POURS



DECK CASTING SEQUENCE - SINGLE POUR



DEAD LOAD CAMBER DIAGRAM

NOTES:

1. SET SLAB FORMS FOR FINISH GRADE ELEVATIONS. ADJUST DECK FORMS UPWARD BY THE AMOUNT SHOWN IN THE DEAD LOAD CAMBER DIAGRAM.
2. DETERMINE DEFLECTION OF THE FORMWORK DUE TO THE WEIGHT OF THE WET DECK CONCRETE, SCREED, AND OTHER CONSTRUCTION LOADS.

LEGEND:

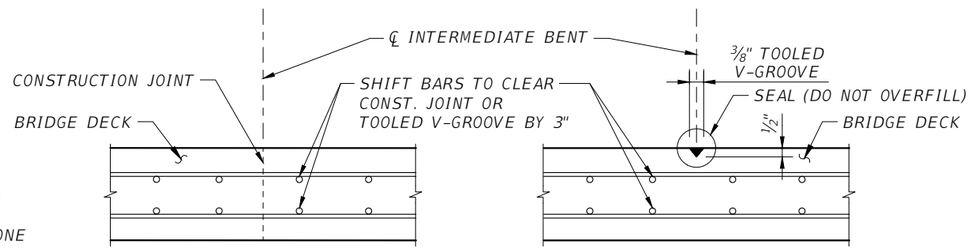
(1) POUR NUMBER

DIRECTION OF POUR

NOTES:

EITHER DECK CASTING SEQUENCE MAY BE USED.

1. A MINIMUM OF 72 HOURS IS REQUIRED BETWEEN POURS IN A GIVEN CONTINUOUS UNIT.
2. FILL TOOLED V-GROOVE WITH RAPID CURE SILICONE OR HOT POURED SEAL. GROOVE SHALL BE CLEAN AND FREE OF GREASE AND DEBRIS BEFORE FILLING.



DETAIL A

DETAIL B

BRIDGE NO. 134183

REVISIONS			
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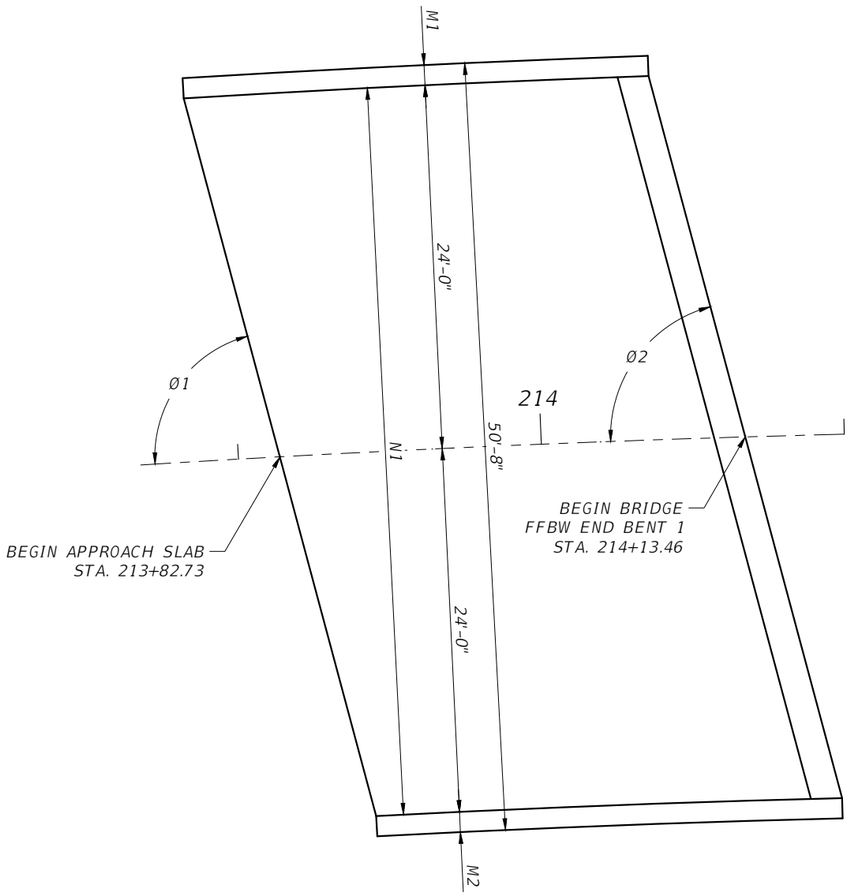
MANATEE COUNTY PUBLIC WORKS
COUNTY PROJECT NO: 6104760

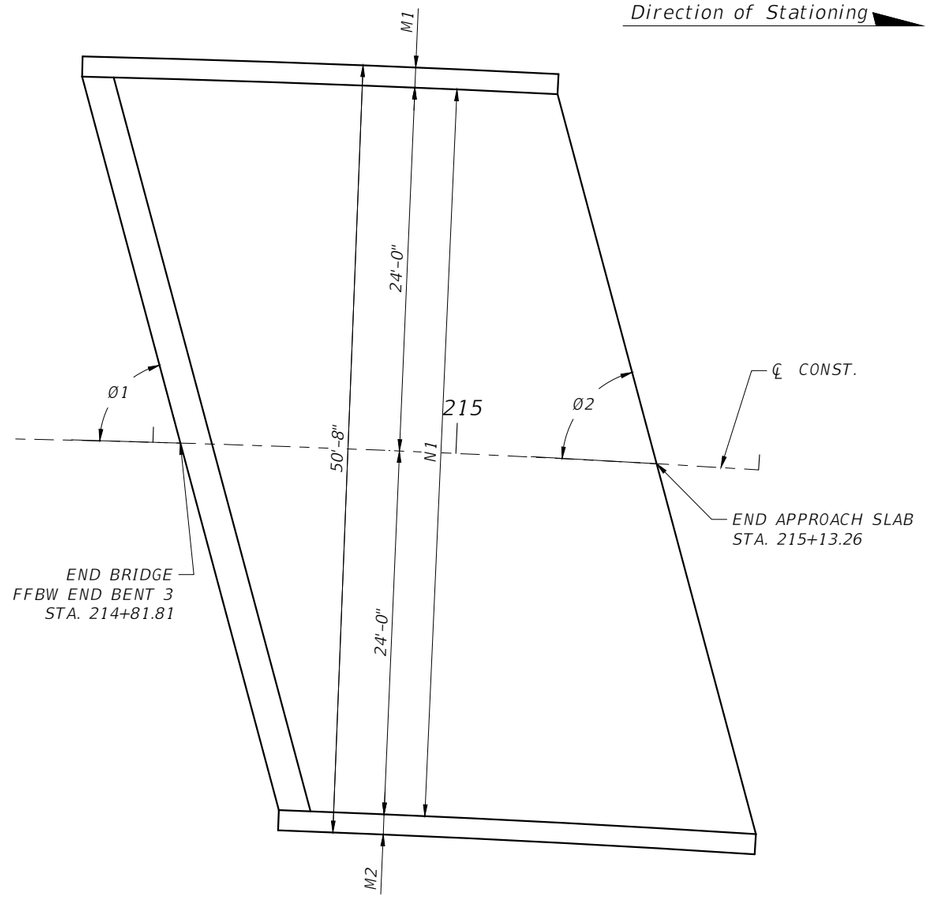
DUETTE ROAD BRIDGE REPLACEMENT

SUPERSTRUCTURE DETAILS

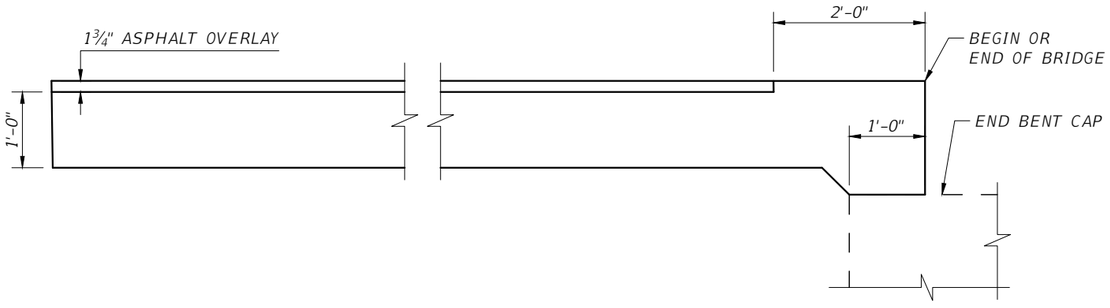
SHEET NO. 19



PLAN VIEW APPROACH SLAB 1



PLAN VIEW APPROACH SLAB 2



TYPICAL APPROACH SLAB SECTION

APPROACH SLAB TABLE OF DIMENSIONS — Table Date 11-01-16

LOCATION	DIMENSIONS					ANGLE Ø1	ANGLE Ø2
	L1	L2	M1	M2	N1		
APPROACH SLAB 1	30'-8 3/4"	30'-9 1/8"	1'-4"	1'-4"	48'-0"	78°14'28" TC	76°42'30" TC
APPROACH SLAB 2	31'-4 5/8"	31'-6 1/4"	1'-4"	1'-4"	48'-0"	73°17'28" TC	71°43'06" TC

Dimension Notes:
- Dimensions L1 & L2 are measured along gutter line, inside face of parapet or inside face of railing on raised sidewalks.
- Dimensions L1 & L2 are arc dimensions within curve alignments.

Work this Data Table with FDOT Standard Plans Index 400-090.

BRIDGE NO. 134183

REVISIONS			
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MANATEE COUNTY PUBLIC WORKS
COUNTY PROJECT NO: 6104760

DUETTE ROAD BRIDGE REPLACEMENT

APPROACH SLABS

SHEET NO. 20

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	NØ	
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		DECK				NO. REQUIRED = 1								
8	S1	71 - 3	50	2			3 - 5	67 - 10							1	
8	S2	35 - 0	49	1			35 - 0									
9	S3	72 - 1	99	2			4 - 3	67 - 10							1	
5	S4	52 - 2	264	1			52 - 2									
		LOCATION		SOUTH APPROACH SLAB				NO. REQUIRED = 1								
5	A1	30 - 3	101	1			30 - 3									
8	A2	30 - 3	101	1			30 - 3									
5	A3	52 - 2	120	1			52 - 2									
		LOCATION		NORTH APPROACH SLAB				NO. REQUIRED = 1								
5	A4	31 - 0	101	1			31 - 0									
8	A5	31 - 0	101	1			31 - 0									
5	A6	52 - 2	122	1			52 - 2									
		LOCATION		EXTERIOR BENT 1				NO. REQUIRED = 1								
7	E1	53 - 0	8	1			53 - 0									
7	E2	11 - 2	16	11			9 - 2	1 - 0	1 - 0							
5	E3	3 - 0	4	1			3 - 0									
5	E4	3 - 4	4	1			3 - 4									
5	E5	53 - 0	4	1			53 - 0									
5	E6	10 - 3	48	4	0 - 5 ½	5 ½	2 - 3	2 - 5								
5	E7	6 - 11	10	11			2 - 5	2 - 3	2 - 3							
5	E8	4 - 2	4	11			1 - 10	1 - 6	1 - 6							
5	E9	5 - 2	4	11			2 - 5	0 - 10	0 - 10							
4	E10	2 - 5	4	1			2 - 5									
5	E11	2 - 9	8	1			2 - 9									
4	E18	4 - 0	4	1			4 - 0									
4	E19	5 - 9	16	1			5 - 9									
4	E20	2 - 10	20	1			2 - 10									
6	C1	4 - 3	17	32	1 - 9 ¾		0 - 2 ½	1 - 9 ¾								
		LOCATION		INTERIOR BENT 2				NO. REQUIRED = 1								
7	B1	53 - 3	8	1			53 - 3									
7	B2	11 - 2	16	11			9 - 2	1 - 0	1 - 0							
5	B3	3 - 10	4	1			3 - 10									
5	B4	3 - 2	4	1			3 - 2									
5	B5	53 - 3	4	1			53 - 3									
5	B6	10 - 3	48	4	0 - 5 ½	5 ½	2 - 3	2 - 5								
5	B7	6 - 11	10	11			2 - 5	2 - 3	2 - 3							
5	B8	4 - 2	4	11			1 - 10	1 - 6	1 - 6							
5	B9	5 - 2	4	11			2 - 5	0 - 10	0 - 10							
4	B10	2 - 5	4	1			2 - 5									
5	B11	1 - 9	8	1			1 - 9									

BRIDGE NO. 134183

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DUETTE ROAD BRIDGE REPLACEMENT

REINFORCING BAR LIST (1 OF 2)

SHEET NO. 21

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	NØ	
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				EXTERIOR BENT 3				NO. REQUIRED = 1								
7	E2	11 - 2	16	11			9 - 2	1 - 0	1 - 0							
5	E6	10 - 3	48	4	0 - 5 ½	5 ½	2 - 3	2 - 5								
5	E7	6 - 11	10	11			2 - 5	2 - 3	2 - 3							
5	E8	4 - 2	4	11			1 - 10	1 - 6	1 - 6							
5	E9	5 - 2	4	11			2 - 5	0 - 10	0 - 10							
4	E10	2 - 5	4	1			2 - 5									
5	E11	2 - 9	8	1			2 - 9									
7	E14	53 - 9	8	1			53 - 9									
5	E15	4 - 0	4	1			4 - 0									
5	E16	3 - 4	4	1			3 - 4									
5	E17	53 - 9	4	1			53 - 9									
4	E18	4 - 0	4	1			4 - 0									
4	E19	5 - 9	16	1			5 - 9									
4	E20	2 - 10	20	1			2 - 10									
6	C1	4 - 3	17	32	1 - 9 ¾		0 - 2 ½	1 - 9 ¾								

END OF LIST

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COUNTY PROJECT NO: 6104760

DUETTE ROAD BRIDGE REPLACEMENT

REINFORCING BAR LIST (2 OF 2)

SHEET NO. 22

Load Rating Summary Details for Reinforced Concrete Bridges

Table Date 01-01-11

Table 2 - LRFR

Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength)					Shear (Strength)					Comments:
				LL	DC	DW	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	Interior/exterior beam DF method if other than LRFD. Other appropriate comments
Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.084	1.162	41.8	A	13'-9⅜"	N/A	N/A	N/A	N/A	N/A	
Design Load Rating	Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.084	1.507	54.3	A	13'-9⅜"	N/A	N/A	N/A	N/A	N/A	
Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.084	1.176	70.6	B	12'-7½"	N/A	N/A	N/A	N/A	N/A	

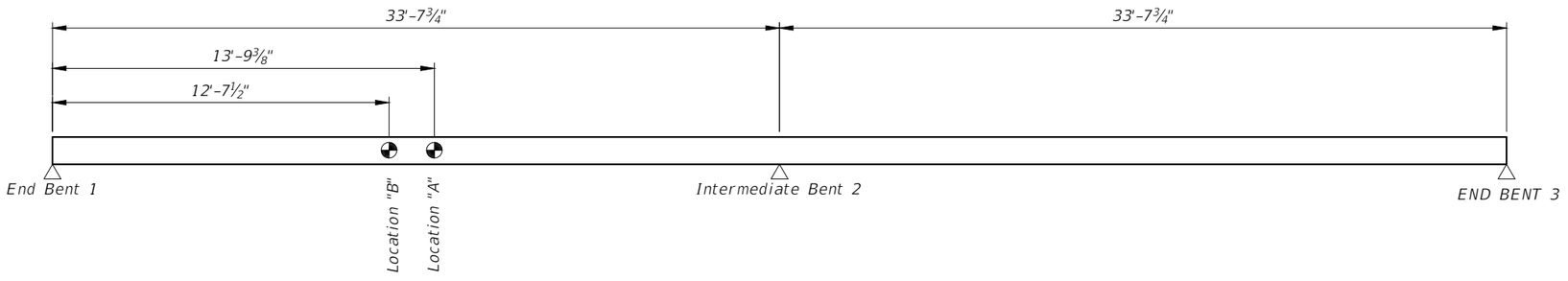
General Notes:
1. This table is based on the requirements established in the January 2024 "Structures Manual".

Table 2 Notes:
1. Permit capacity is determined by using the permit vehicle in all lanes.
2. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? ☒Yes ☐No
2. The software utilized for this load rating analysis was Mathcad 15.0 (2017).

Abbreviations:

Inv – Inventory

Op – Operating



RATING LOCATIONS

BRIDGE NO. 134183

REVISIONS			
NO.	DESCRIPTION	DATE	BY

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COUNTY PROJECT NO: 6104760

DUETTE ROAD BRIDGE REPLACEMENT

LOAD RATING SUMMARY TABLE

SHEET NO. 23

Gamache, Christopher 3/31/2025 7:17:49 AM

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TEMPORARY MSE RETAINING WALL SYSTEM DATA TABLES

GEOTECHNICAL INFORMATION							Table Date 1-01-11
		Reinforced Soil & Random Backfill	Loose Sand	Firm Clay	Loose Sand	Weathered Limestone	Loose Sand
Depth Below Existing Ground Line (ft.)	CTW-1	———	0 to 17	17 to 22	22 to 27	27 to 32	32 to 70
Effective Unit Weight (pcf)		105	42.6	47.6	42.6	62.6	42.6
Cohesion (psf)		0	0	625	0	0	0
Internal Friction Angle		30°	29°	-	29°	-	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 1-01-11
Wall No.	Wall Settlement			Air Contaminants Classification
	Long Term Settlement (in.)	Short Term Settlement (in.)	Differential Settlement (%) (ft./100ft.)	
CTW-1	1½	1½	½	N/A

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
CTW-1	Wall Height (ft.)	<8	<10										
	Reinforcement Length (ft.)	10	11										
	Factored Bearing Resistance (psf)	4400	4500										

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 [Notes Date 07-01-14]:

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.
3. TEMPORARY MSE RETAINING WALL SYSTEM MAY BE BURIED AND LEFT IN PLACE AT COMPLETION OF CONSTRUCTION.

BRIDGE NO. 134183

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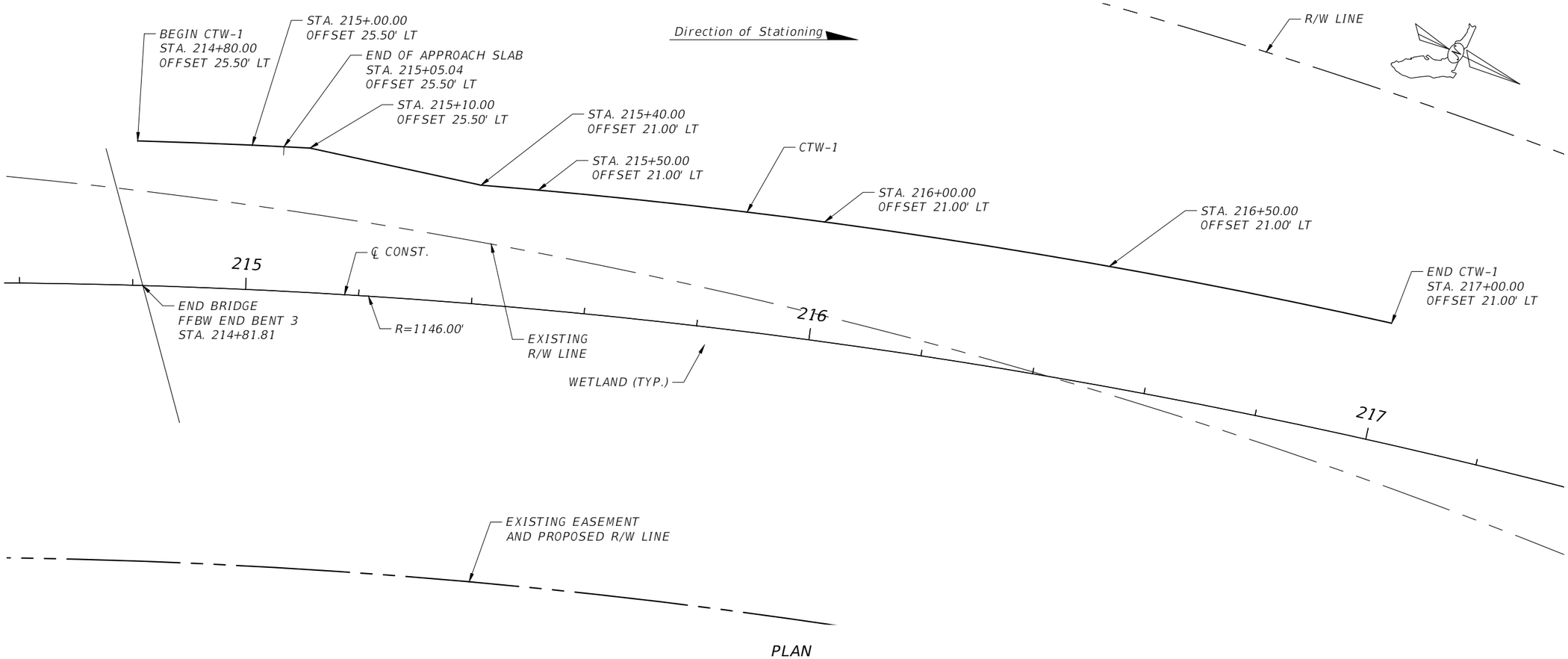
MANATEE COUNTY PUBLIC WORKS
COUNTY PROJECT NO: 6104760

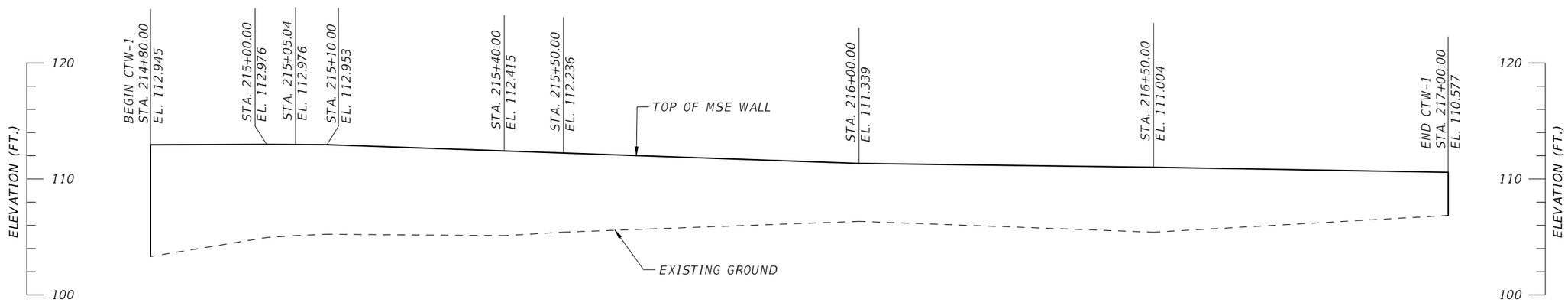
DUETTE ROAD BRIDGE REPLACEMENT

CRITICAL TEMPORARY WALL NOTES

SHEET NO. 24



PLAN



EXPANDED ELEVATION

BRIDGE NO. 134183

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6104760

DUETTE ROAD BRIDGE REPLACEMENT

CRITICAL TEMPORARY WALL
PLAN AND ELEVATION

SHEET NO.
25

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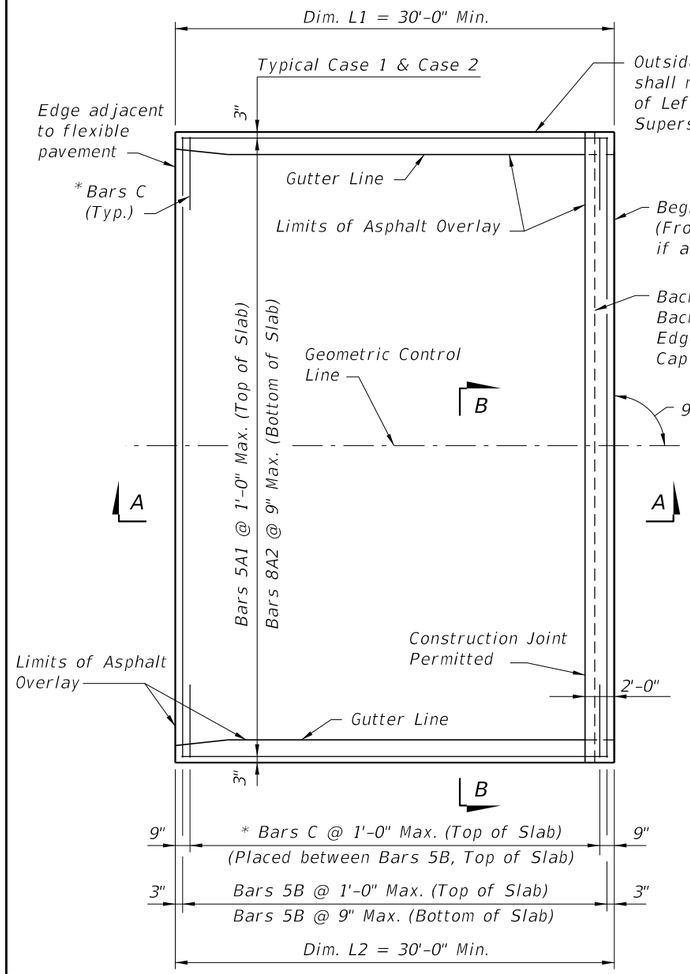
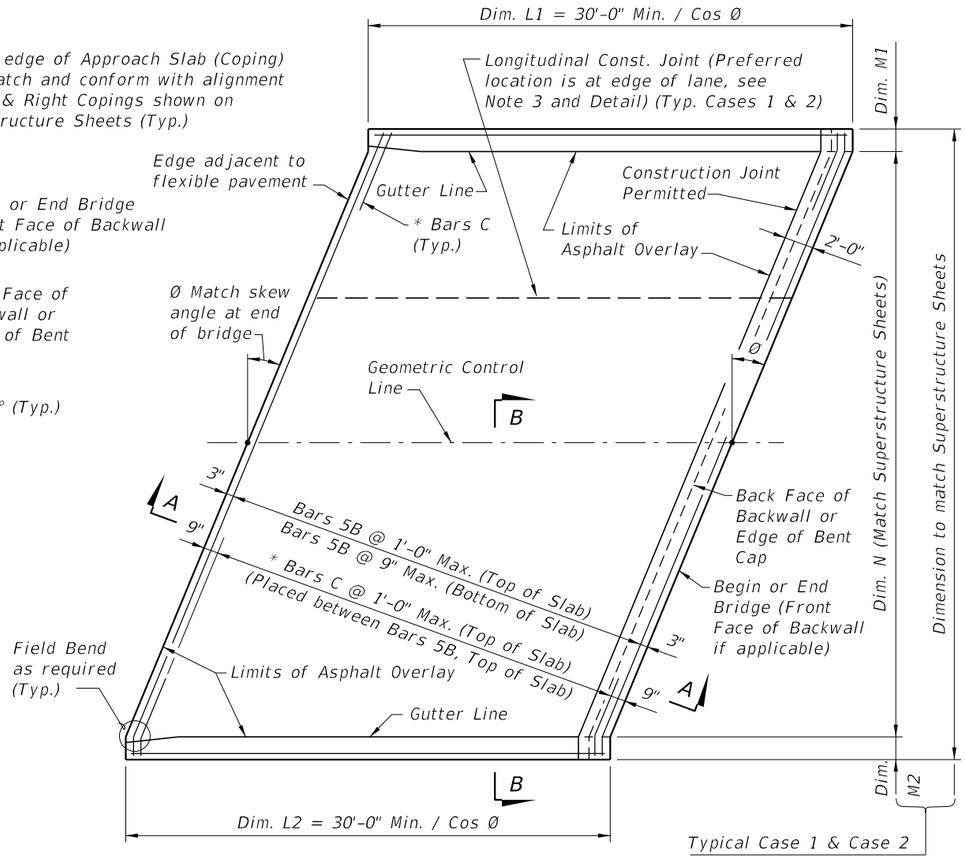
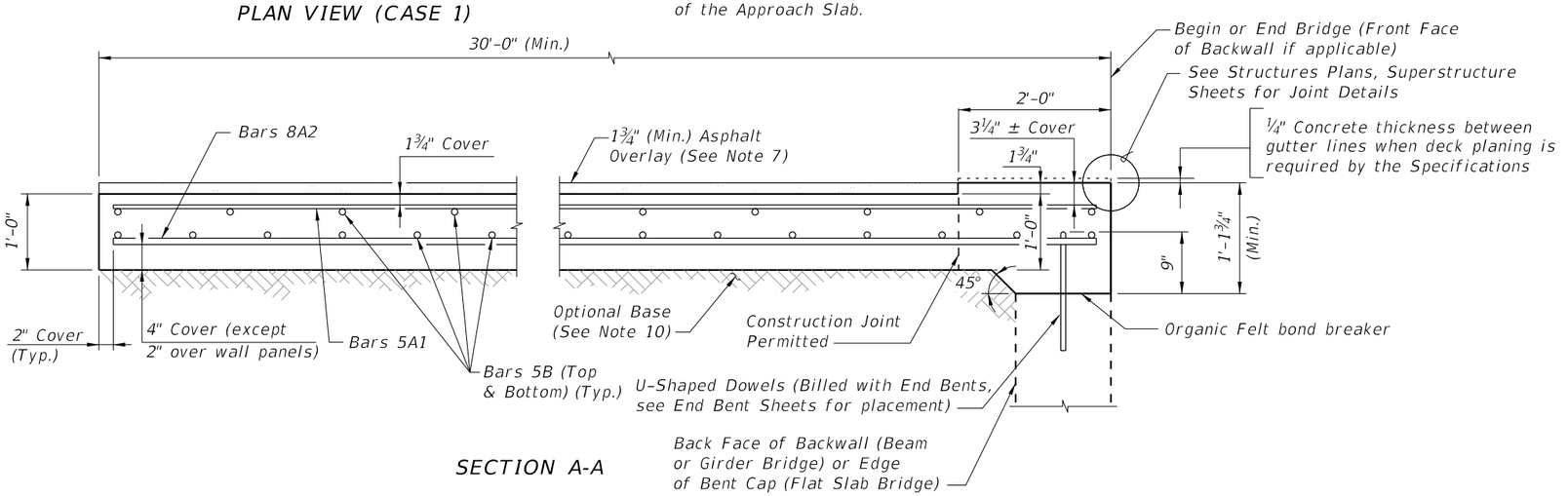


PLAN VIEW (CASE 1)



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

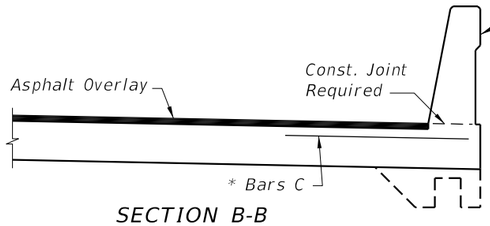
1. SURFACE TREATMENT: As an option to Class 4 Floor Finish (Bridge Floor Grooving) per Section 400 a hand tined or heavy broomed finish may be permitted on the concrete portion of the riding surface. Sidewalk areas shall receive a broomed finish. The top surface of the concrete beneath the asphalt overlay 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.

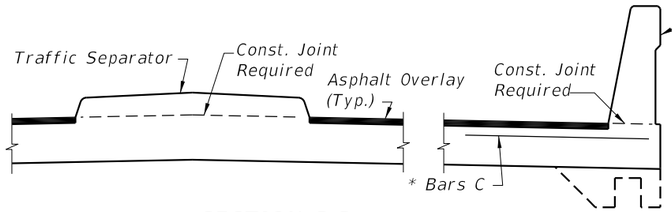
10/15/2023 11:13:15 AM

LAST REVISION	REVISION	DESCRIPTION:	FY 2024-25 STANDARD PLANS	APPROACH SLABS (30 FT.) (FLEXIBLE PAVEMENT APPROACHES)	INDEX	SHEET
11/01/22					400-090	1 of 2



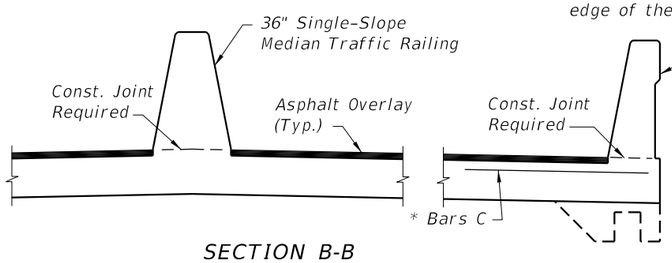
NOTE:
Geometry of Traffic Railings, Pedestrian/Bicycle Railings, Traffic Separators and Sidewalks to match those on adjoining bridge.

SECTION B-B
STANDARD APPROACH SLAB

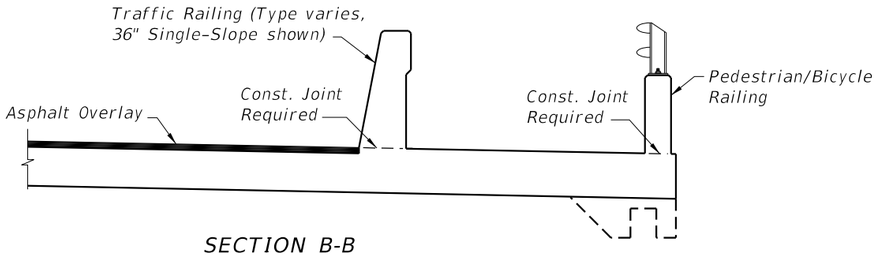


SECTION B-B
APPROACH SLAB WITH TRAFFIC SEPARATOR

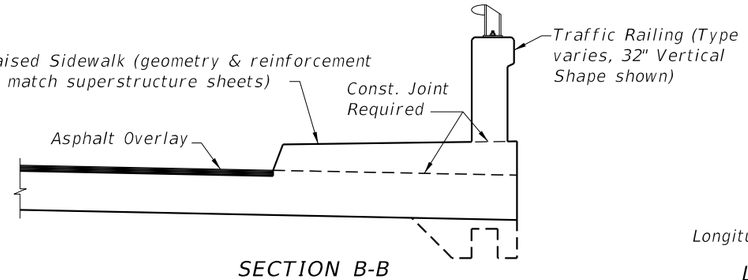
*NOTE: Bars C are required as shown when the 36" or 42" Single-Slope Traffic Railing, or the Traffic Railing/Noise Wall, are used at the edge of the Approach Slab.



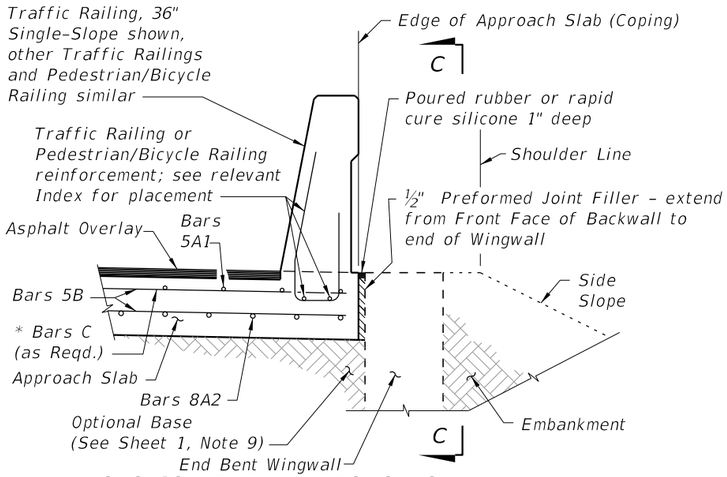
SECTION B-B
APPROACH SLAB WITH MEDIAN TRAFFIC RAILING



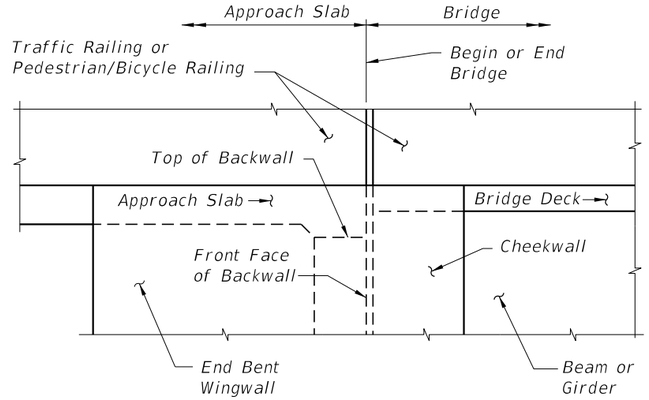
SECTION B-B
APPROACH SLAB WITH SIDEWALK



SECTION B-B
APPROACH SLAB WITH RAISED SIDEWALK

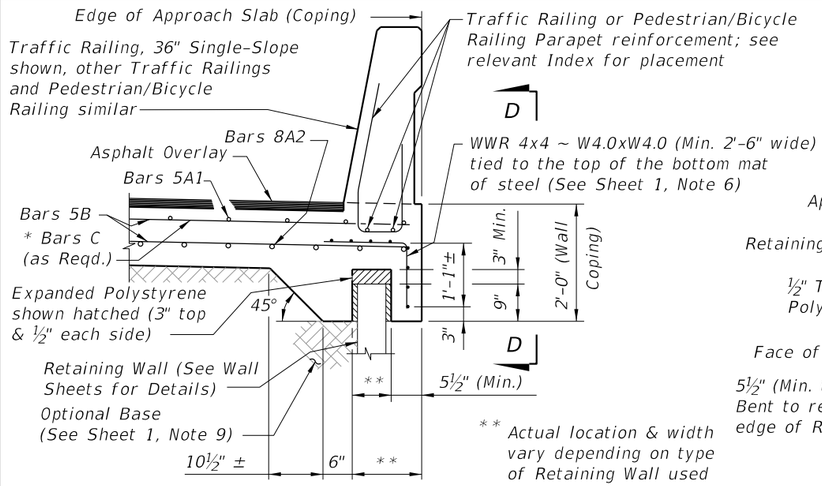


SECTION THRU APPROACH SLAB
AND END BENT WINGWALL

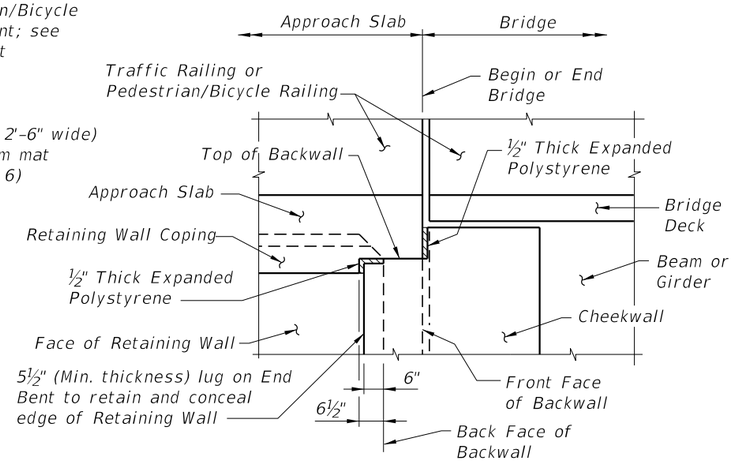


VIEW C-C AT BEGIN OR END BRIDGE (BEAM
BRIDGE SHOWN, FLAT SLAB BRIDGE SIMILAR)

APPROACH SLAB WITH WINGWALL DETAILS

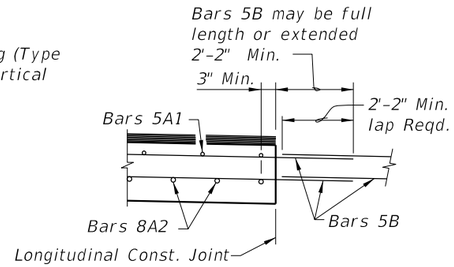


SECTION THRU APPROACH SLAB
AND RETAINING WALL

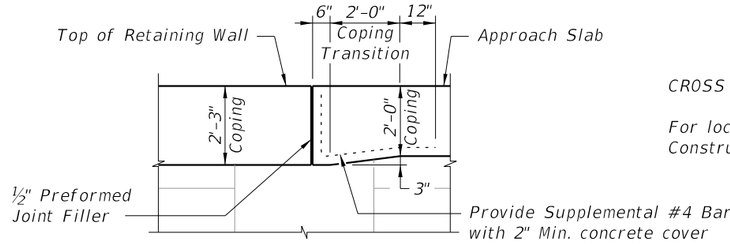


VIEW D-D AT BEGIN OR END BRIDGE (BEAM
BRIDGE SHOWN, FLAT SLAB BRIDGE SIMILAR)

APPROACH SLAB WITH RETAINING WALL DETAILS



LONGITUDINAL CONSTRUCTION
JOINT DETAIL



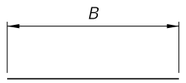
COPING TRANSITION DETAIL FOR
RETAINING WALLS WITH 2'-3" COPING HEIGHT
(Railing Not Shown For Clarity)

CROSS REFERENCES:

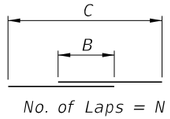
For location of Section B-B and Longitudinal Construction Joint see Sheet 1.

10/15/2023 11:13:23 AM

LAST REVISION	REVISION	DESCRIPTION:				
11/01/17			FDOT FY 2024-25 STANDARD PLANS	APPROACH SLABS (30 FT.) (FLEXIBLE PAVEMENT APPROACHES)	INDEX 400-090	SHEET 2 of 2

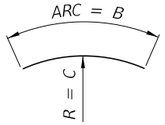


TYPE 1



No. of Laps = N

TYPE 2



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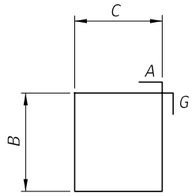

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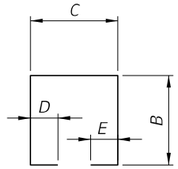

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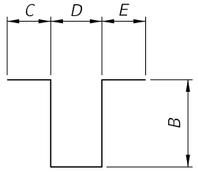

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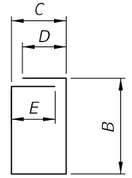

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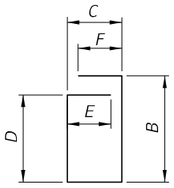

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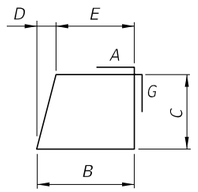

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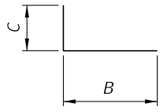

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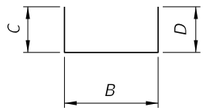
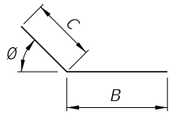


TYPE 1 1



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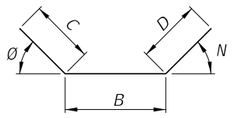

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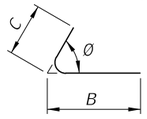

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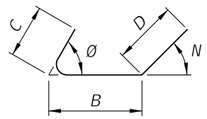

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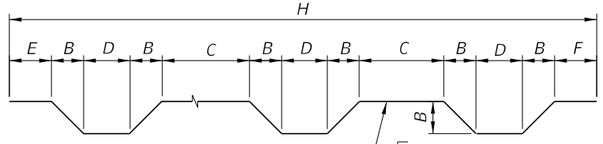
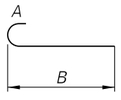
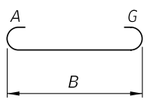


TYPE 16

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



TYPE 17



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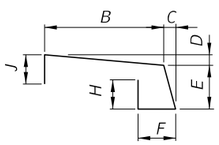

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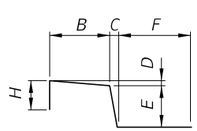

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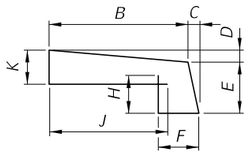

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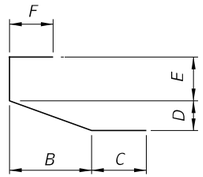

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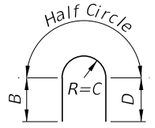

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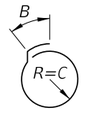

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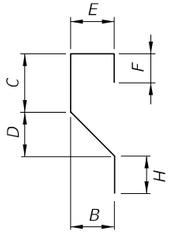

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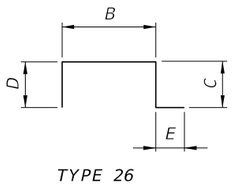

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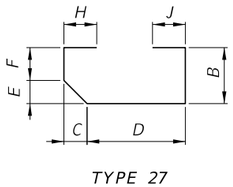
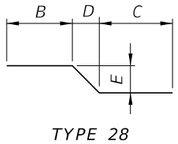


TYPE 27



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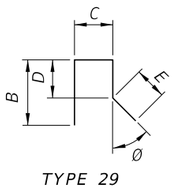

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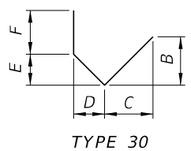
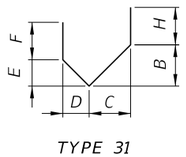
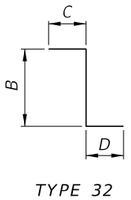


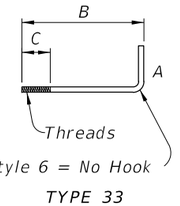
TYPE 30



TYPE 31

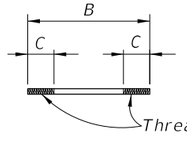


TYPE 32

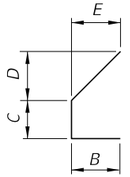


Style 6 = No Hook

TYPE 33



TYPE 34



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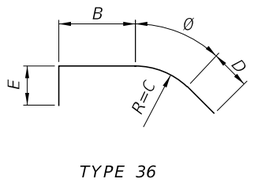

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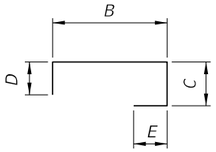

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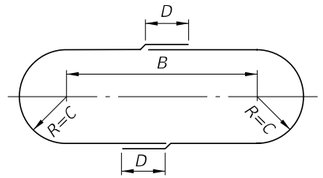
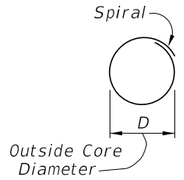


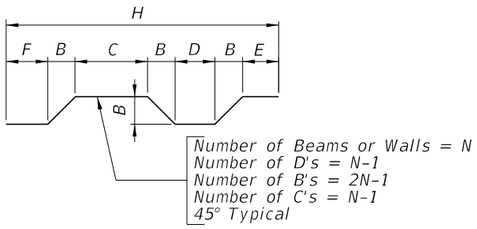
TYPE 38



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.

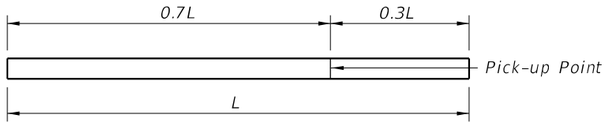
Actual Hook Style for any particular bar will be shown under A or G Heading on REINFORCING BAR LIST sheet(s) in Structures Plans.

All Dimensions are out-to-out.

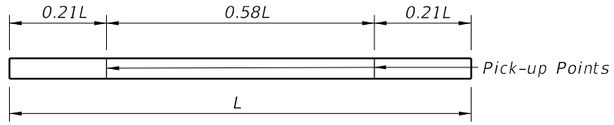
NOTE: For Bar Dimensions See REINFORCING BAR LIST Sheet(s) in Structures Plans.

10/15/2023 11:22:09 AM

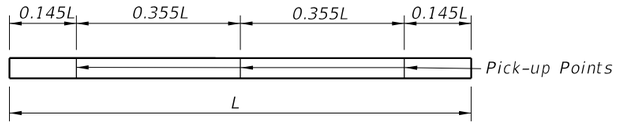
LAST REVISION	REVISION	DESCRIPTION:				
11/01/20			FDOT FY 2024-25 STANDARD PLANS	BAR BENDING DETAILS (STEEL)	INDEX 415-001	SHEET 1 of 1



1-POINT PICK-UP

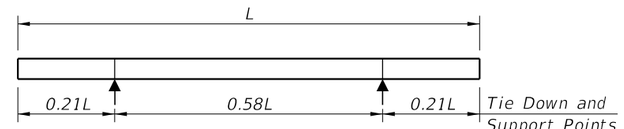


2-POINT PICK-UP

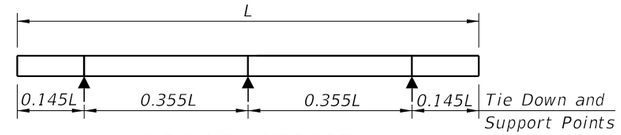


3-POINT PICK-UP

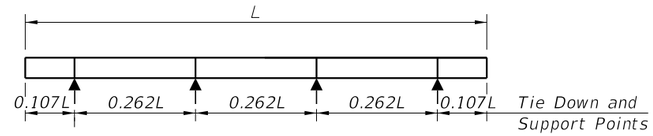
PILE PICK-UP DETAILS



2-POINT SUPPORT



3-POINT SUPPORT



4-POINT SUPPORT

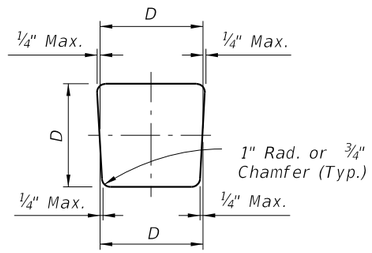
STORAGE AND TRANSPORTATION SUPPORT DETAILS

PRESTRESSED CONCRETE PILE NOTES:

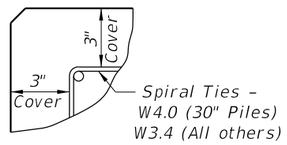
1. Work this Index with the Square Prestressed Concrete Pile Splices (Index 455-002), the Prestressed Concrete Pile Standards (Index 455-012 thru 455-030), the High Moment Capacity Square Prestressed Concrete Pile (Index 455-031) and the Pile Data Table in the Structures Plans.
2. Concrete:
   - A. Piles: 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



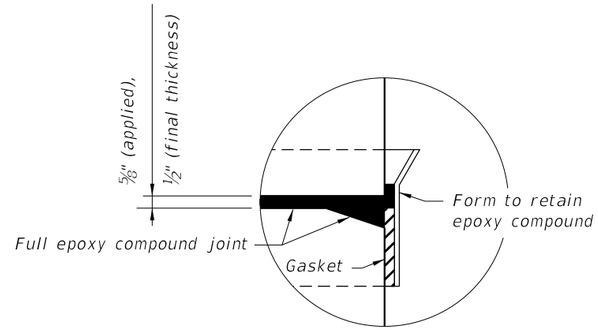
DETAIL SHOWING TYPICAL COVER

10/15/2023 11:45:13 AM

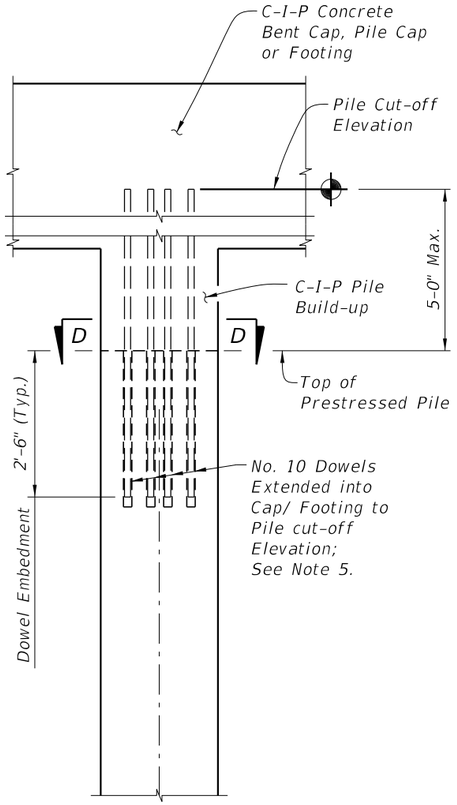
LAST REVISION	REVISION	DESCRIPTION:				
11/01/22			FDOT	FY 2024-25 STANDARD PLANS	SQUARE PRESTRESSED CONCRETE PILES - TYPICAL DETAILS & NOTES	INDEX 455-001 / SHEET 1 of 1

NOTES:

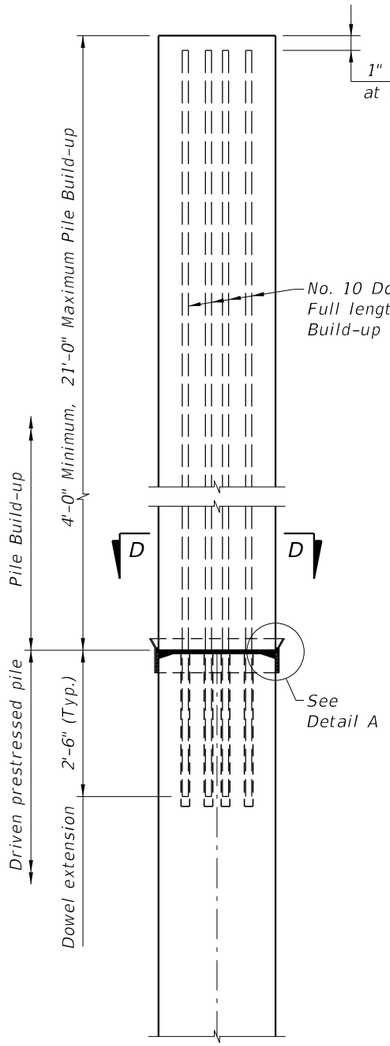
1. For Sections D–D, E–E, & F–F see Index 455–012 thru 455–030 for applicable concrete pile size and Pile Splice Reinforcement Details.
2. Prestressing strands, spiral ties and/or reinforcement are not shown for clarity.
3. When pile splices are necessary due to shipping and handling limitations, use the "Drivable Planned Prestressed Precast Splice Detail" or Mechanical Pile Splices on the Approved Products List (APL).
4. When preformed dowel holes are used, continue the 1" spiral tie pitch to 4'–0" below the head of the pile, See Index 455–018, 455–020 & 455–024. For preformed holes; use either removable preforming material or stay–in–place corrugated galvanized steel ducts meeting ASTM Specification A653, Coating Designation G90, 26 gauge. Use 2" diameter ducts with a minimum corrugation (rib) height of 0.12 in. fabricated with either welded or interlocked seams. Galvanizing of welded seams is not required.
5. For tension piles where top of Prestressed Pile is less than 3 feet below Pile Cut–off Elevation, extend No. 10 Dowels into cap beyond Pile Cut–off Elevation to achieve development as approved by the Engineer.



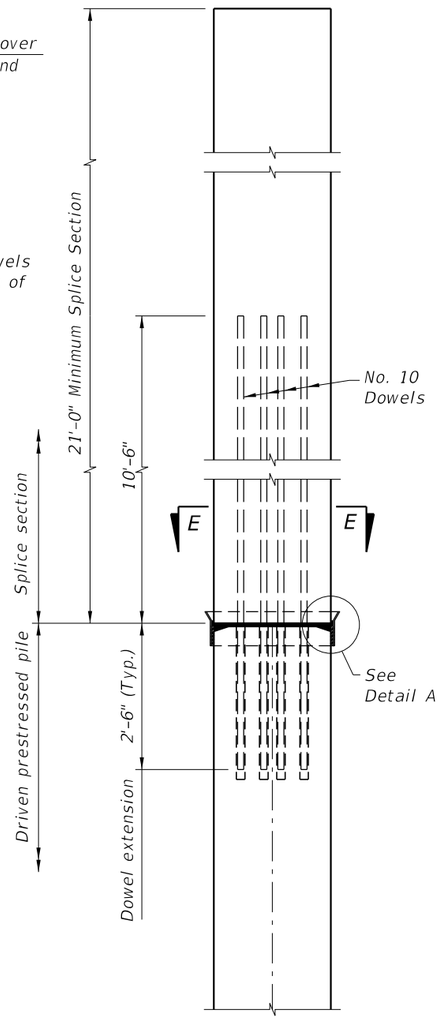
DETAIL A



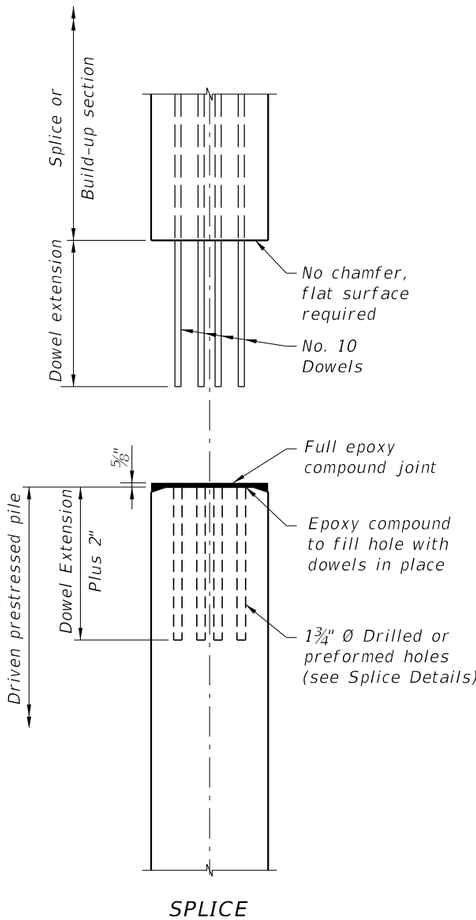
UNPLANNED
REINFORCED C-I-P
PILE BUILD-UP DETAIL



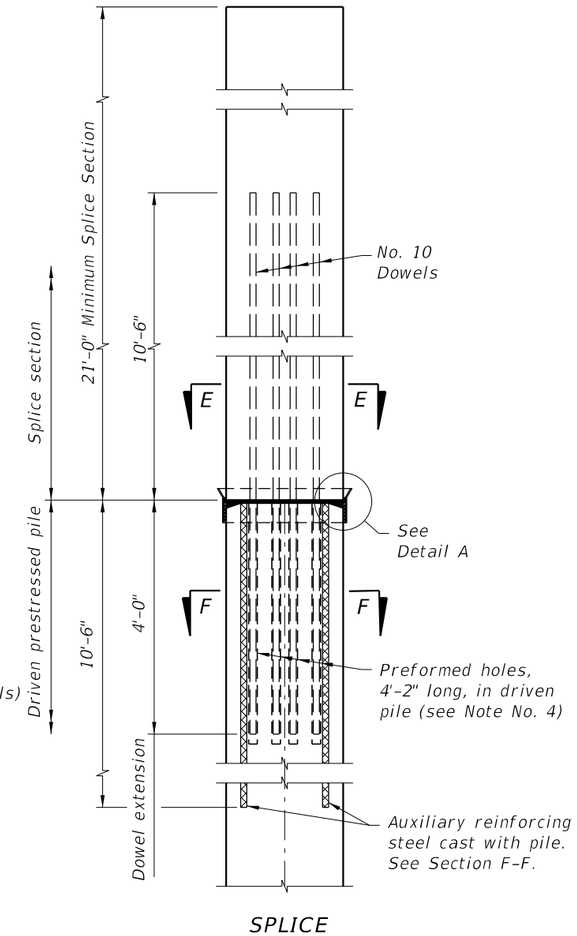
NON-DRIVABLE UNPLANNED
REINFORCED PRECAST
PILE BUILD-UP DETAIL



DRIVABLE UNPLANNED
PRESTRESSED PRECAST
PILE SPLICE DETAIL



SPLICE
BEFORE BONDING

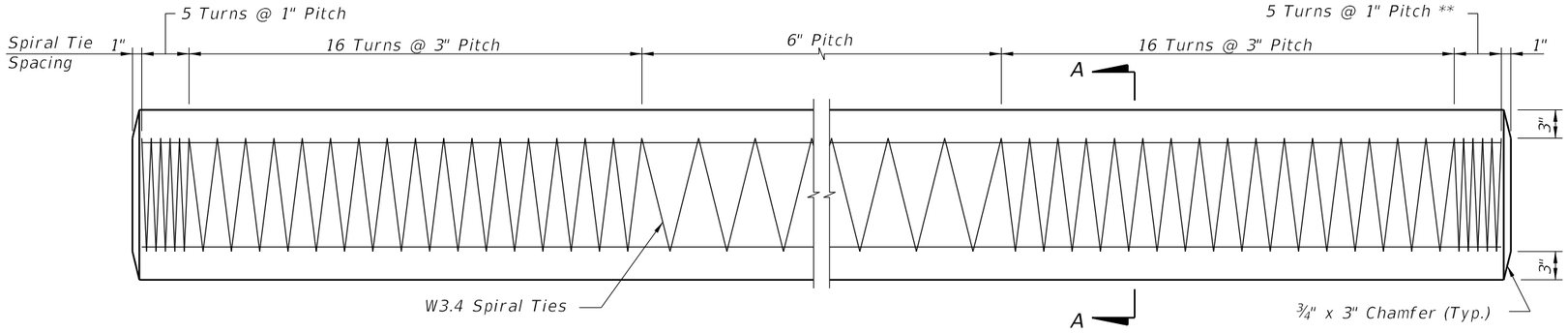


SPLICE
AFTER BONDING

DRIVABLE PLANNED
PRESTRESSED PRECAST
PILE SPLICE DETAIL

10/14/2023 12:01:19 PM

LAST REVISION	REVISION	DESCRIPTION:			
11/01/22			FY 2024-25 STANDARD PLANS	SQUARE PRESTRESSED CONCRETE PILE SPLICES	INDEX 455-002 / SHEET 1 of 1

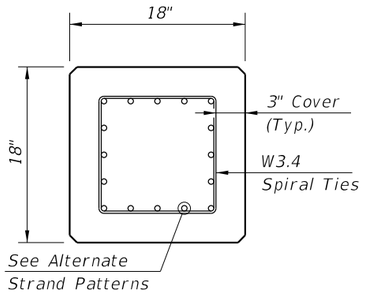


ELEVATION

** See Note 4 on Index 455-002

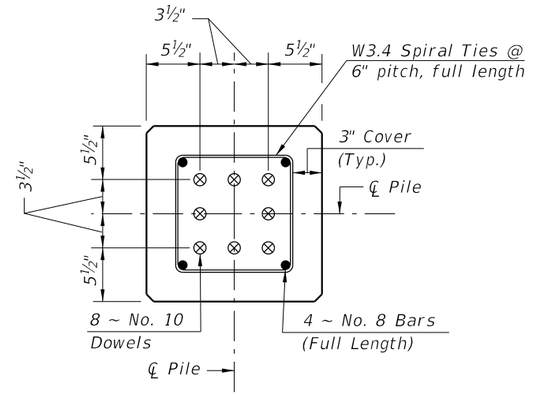
ALTERNATE STRAND PATTERNS

12 ~ 0.6" Ø, Grade 270 LRS, at 35 kips
12 ~ ½" Ø (Special), Grade 270 LRS, at 34 kips
16 ~ ½" Ø, Grade 270 LRS, at 26 kips
20 ~ 7/16" Ø, Grade 270 LRS, at 21 kips
24 ~ ⅜" Ø, Grade 270 LRS, at 17 kips

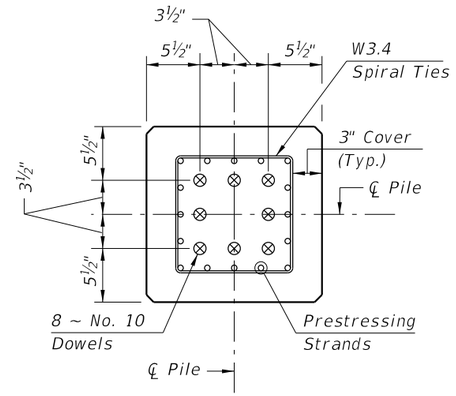


SECTION A-A

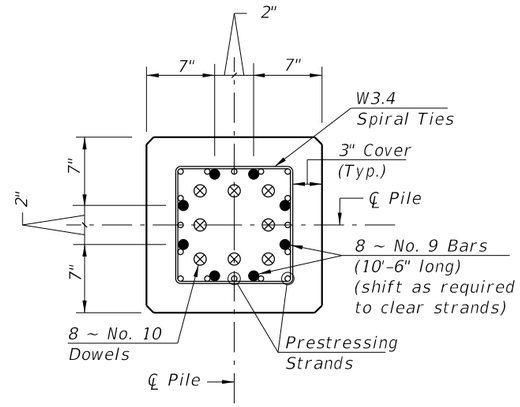
NOTES:
1. Work this Index with Index 455-001 – Typical Details and Notes for Square Prestressed Concrete Piles and Index 455-002 – Square Prestressed Concrete Pile Splices.
2. Any of the given Alternate Strand Patterns may be utilized. The strands shall be located as follows:
   Place one strand at each corner and place the remaining strands equally spaced between the corner strands.
   The total strand pattern shall be concentric with the nominal concrete section of the pile.



SECTION D-D
(See Non-Drivable Unforeseen Reinforced Precast Splice Detail)



SECTION E-E
(See Drivable Prestressed Precast Splice Detail)

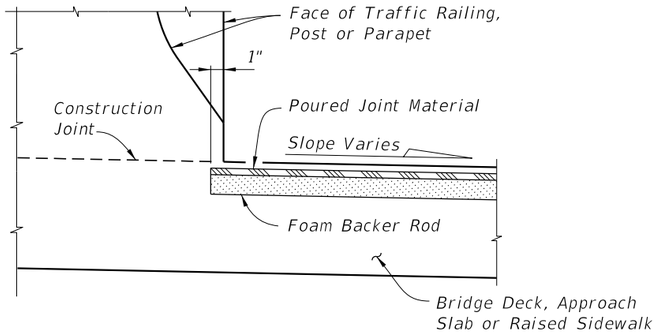


SECTION F-F
(See Drivable Preplanned Splice Detail)

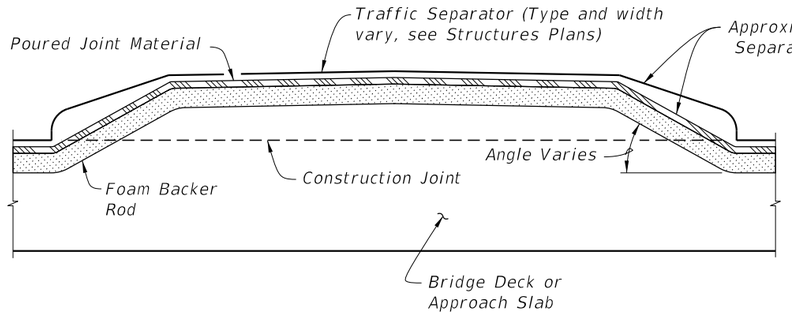
PILE SPLICE REINFORCEMENT DETAILS

10/15/2023 11:47:27 AM

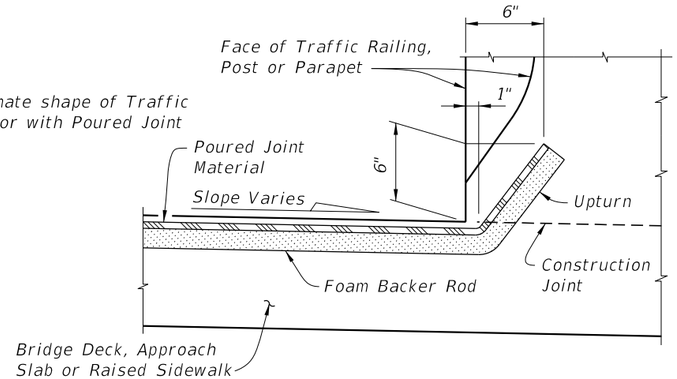
LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
01/01/12			FY 2024-25 STANDARD PLANS	18" SQUARE PRESTRESSED CONCRETE PILE	455-018	1 of 1



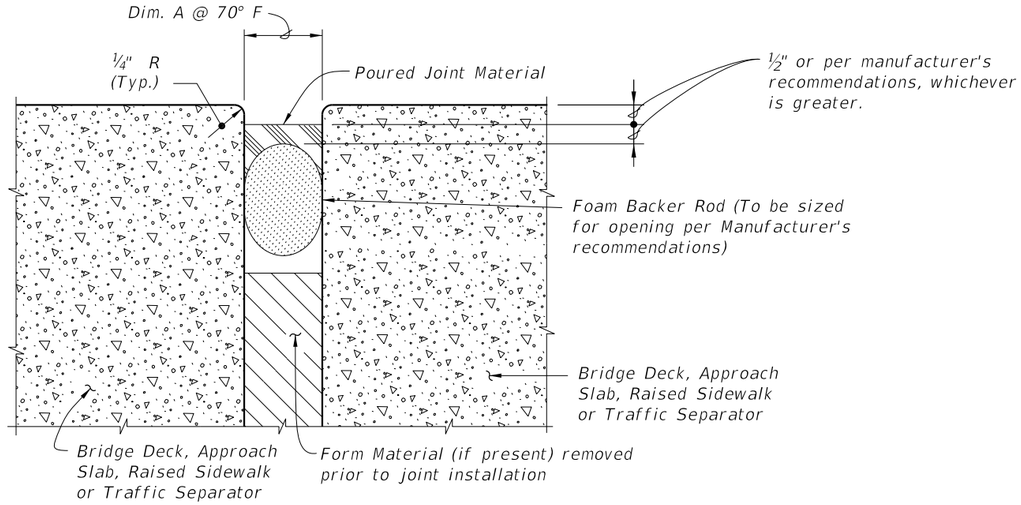
PARTIAL SECTION ALONG ℄ JOINT
JOINT TREATMENT AT HIGH SIDE OF
DECK WITH SLOPES 1% OR GREATER



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%



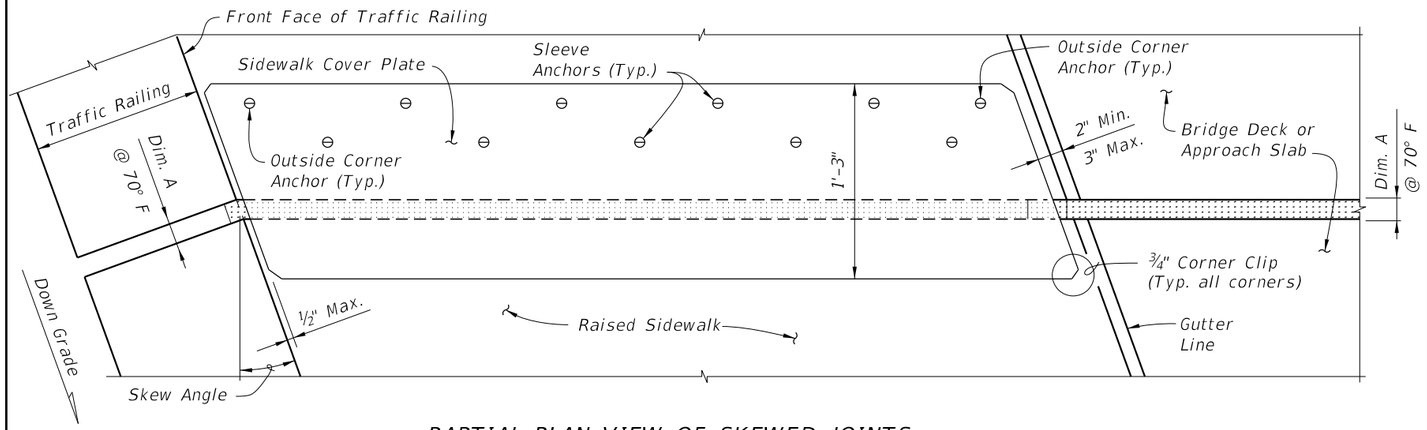
TYPICAL SECTION THRU JOINT

GENERAL NOTES:

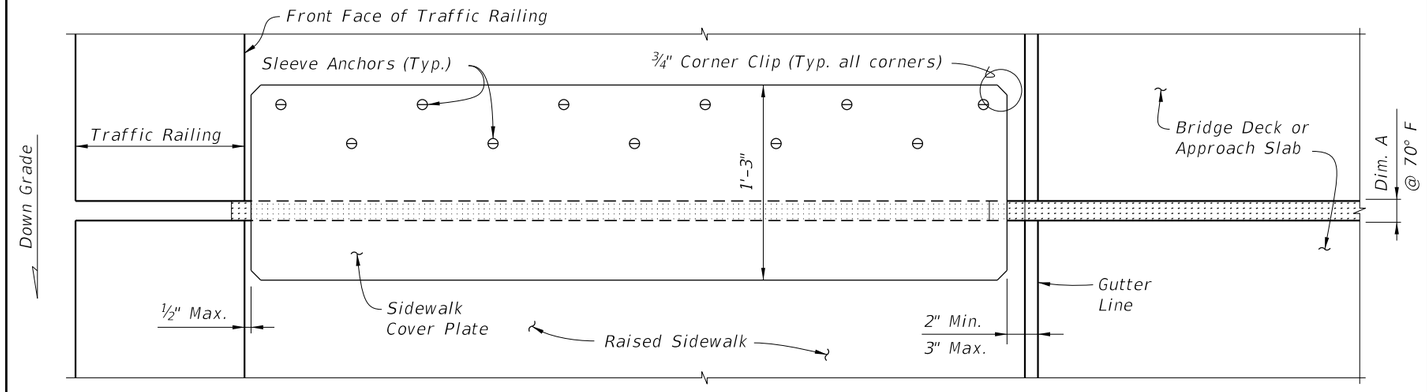
1. Furnish and install Poured Joint With Backer Rod Expansion Joint Systems in accordance with Specification Sections 458 and 932 using Type D silicone sealant material.
2. Refer to the Structures Plans, Poured Expansion Joint Data Table for Dim. A @ 70° F.

10/15/2023 12:02:14 PM

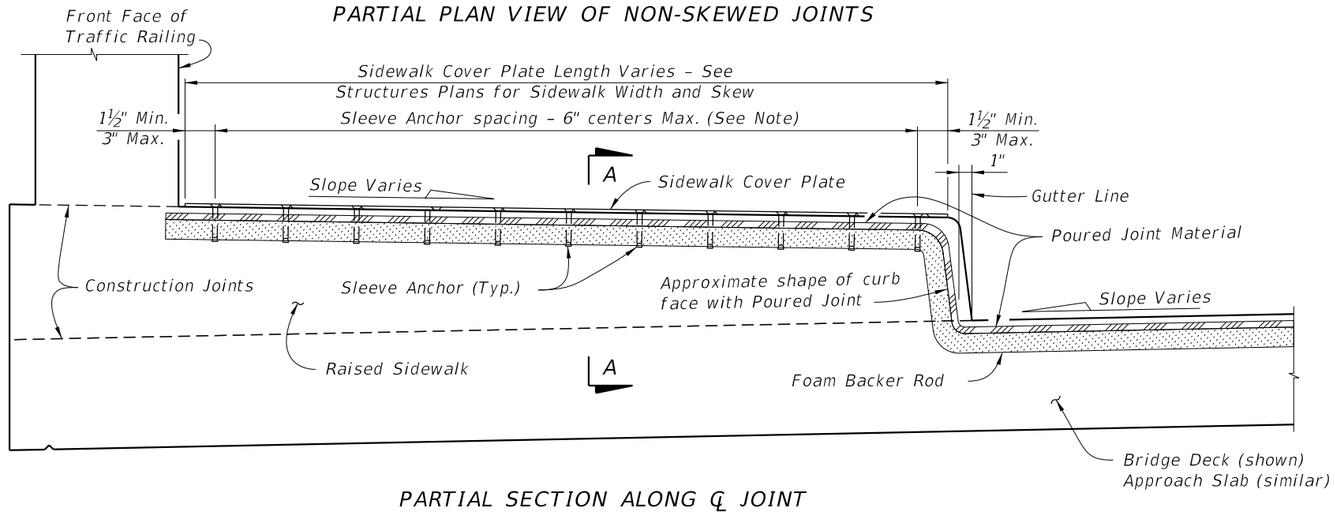
LAST REVISION	REVISION	DESCRIPTION:				
11/01/23			FY 2024-25 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	INDEX 458-110	SHEET 1 of 2



PARTIAL PLAN VIEW OF SKEWED JOINTS

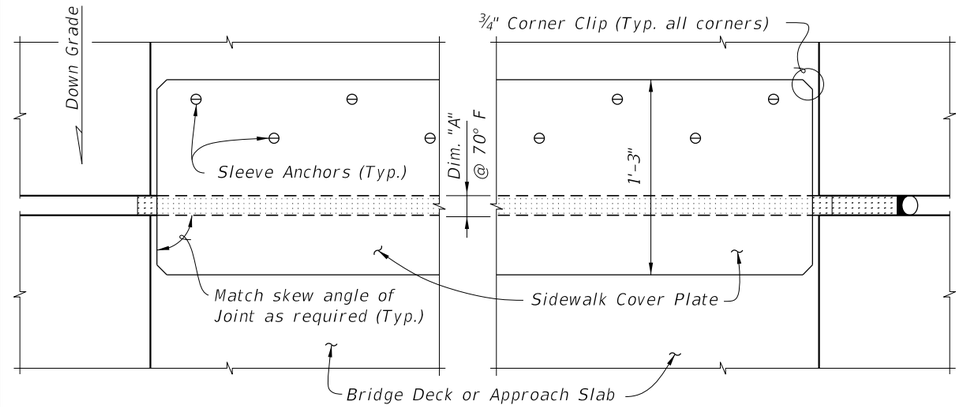


PARTIAL PLAN VIEW OF NON-SKEWED JOINTS

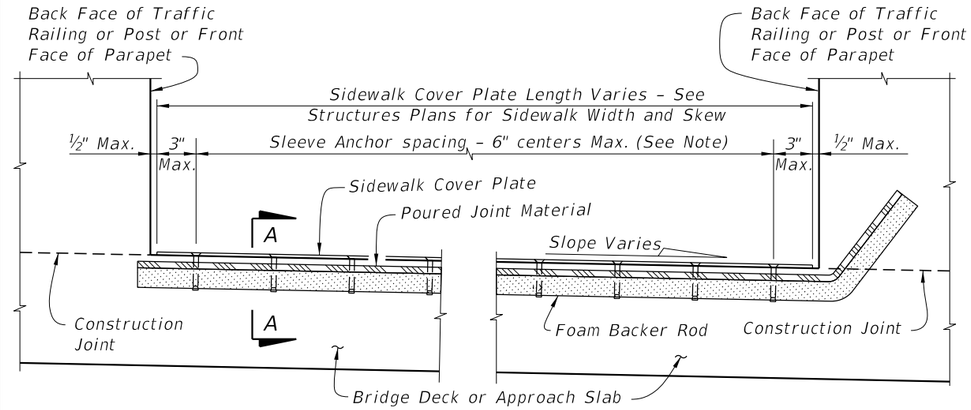


PARTIAL SECTION ALONG ℄ JOINT

RAISED SIDEWALK DETAIL

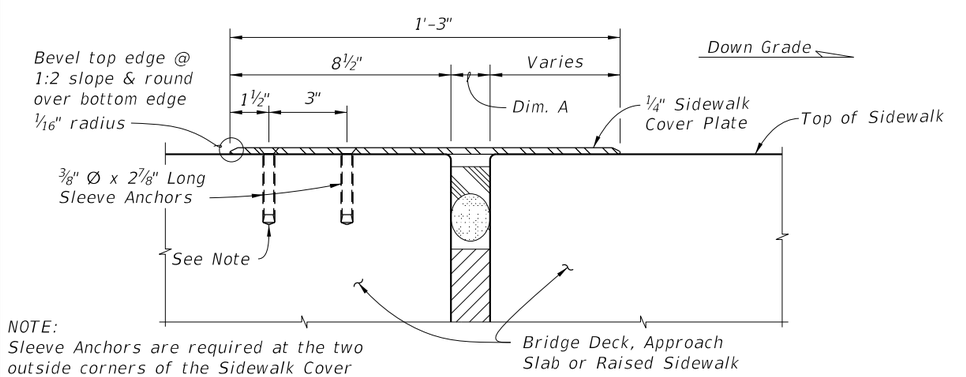


PARTIAL PLAN VIEW



PARTIAL SECTION ALONG ℄ JOINT

FLUSH SIDEWALK DETAIL

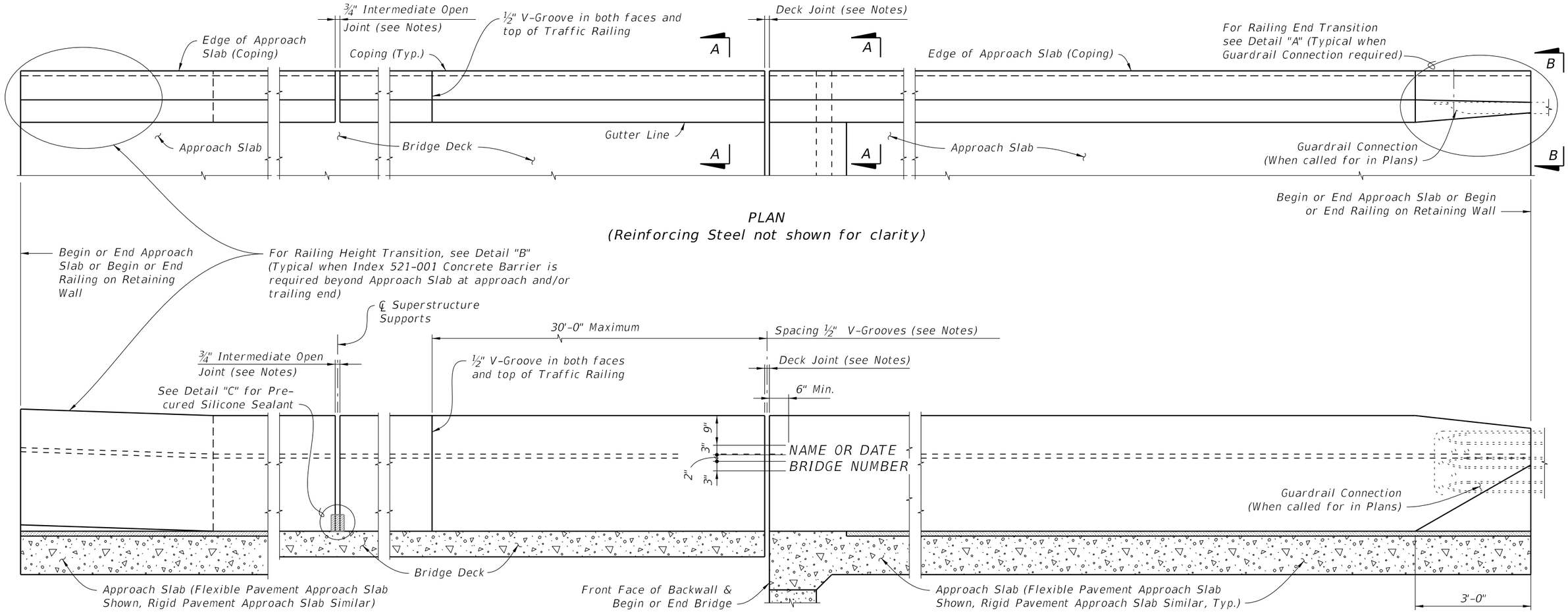


NOTE:
Sleeve Anchors are required at the two outside corners of the Sidewalk Cover Plate. Space Sleeve Anchors uniformly between the corner anchors.

SECTION A-A

10/15/2023 12:02:22 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
07/01/13			FY 2024-25 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	458-110	2 of 2



ELEVATION OF INSIDE FACE OF RAILING
(Reinforcing Steel not shown for clarity)
(Railing on Bridge Deck and Approach Slab shown, Railing on Retaining Wall similar)

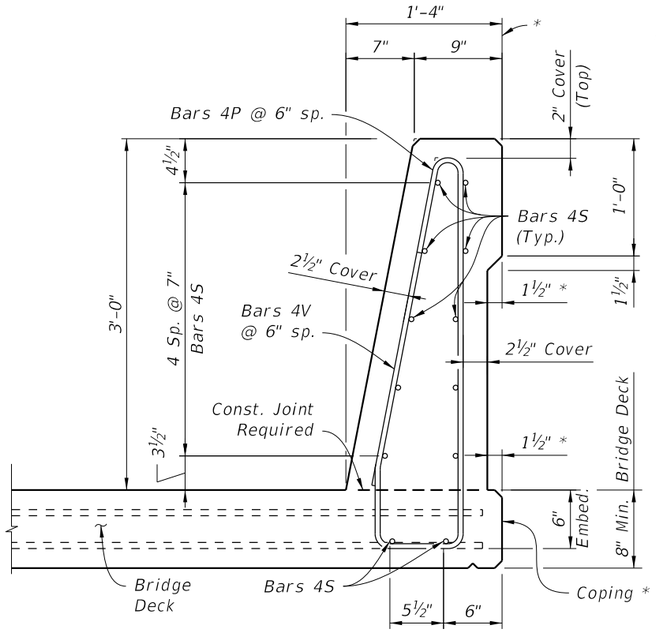
CROSS REFERENCE:
For Section A-A, View B-B, Detail "A" and Detail "B", see Sheet 2. For Detail "C", see Sheet 4.

TRAFFIC RAILING NOTES

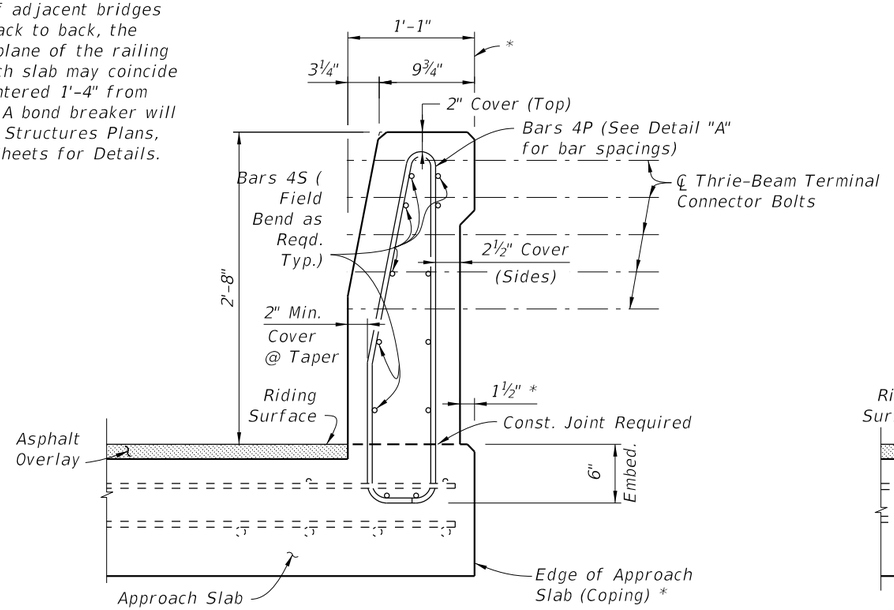
1. Materials: See Structures Plans, General Notes
2. Guardrail Connection Details: See Index 536-001
3. Superelevation: Traffic Railings on Superelevated bridges may be constructed perpendicular to the roadway surface. If an adjoining railing is constructed plumb, transition the end of the Traffic Railing 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 3/8" 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.

10/16/2023 7:33:22 AM

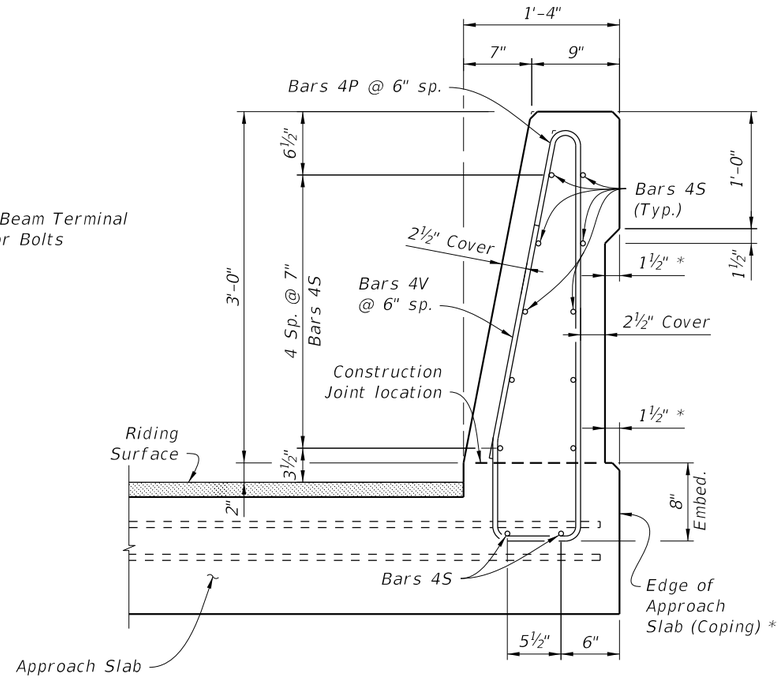
LAST REVISION	REVISION	DESCRIPTION:	FY 2024-25 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
11/01/20					521-427	1 of 5



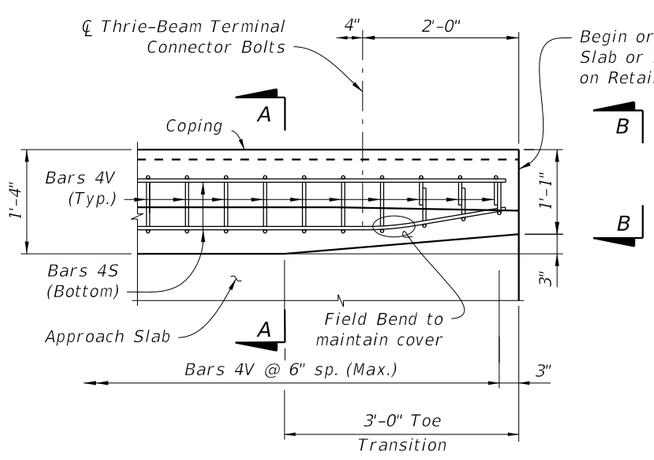
* *Where railings of adjacent bridges are to be built back to back, the outside vertical plane of the railing and deck/approach slab may coincide along a plane centered 1'-4" from each gutter line. A bond breaker will be required. See Structures Plans, Superstructure Sheets for Details.*



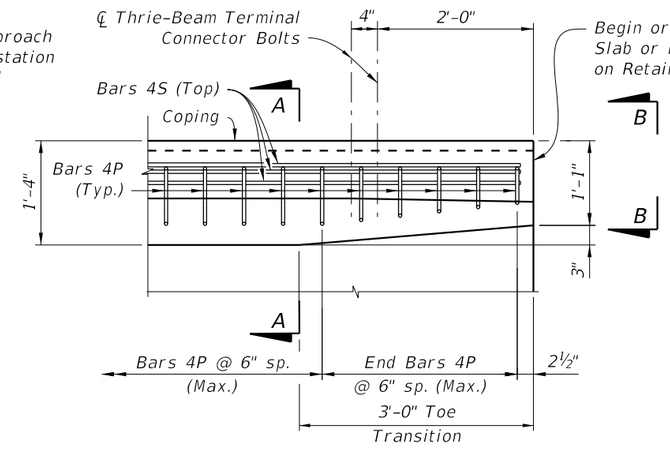
VIEW B-B
END TRANSITION
(Section thru Approach Slab shown, Section thru Retaining Walls similar)



VIEW C-C
HEIGHT TRANSITION

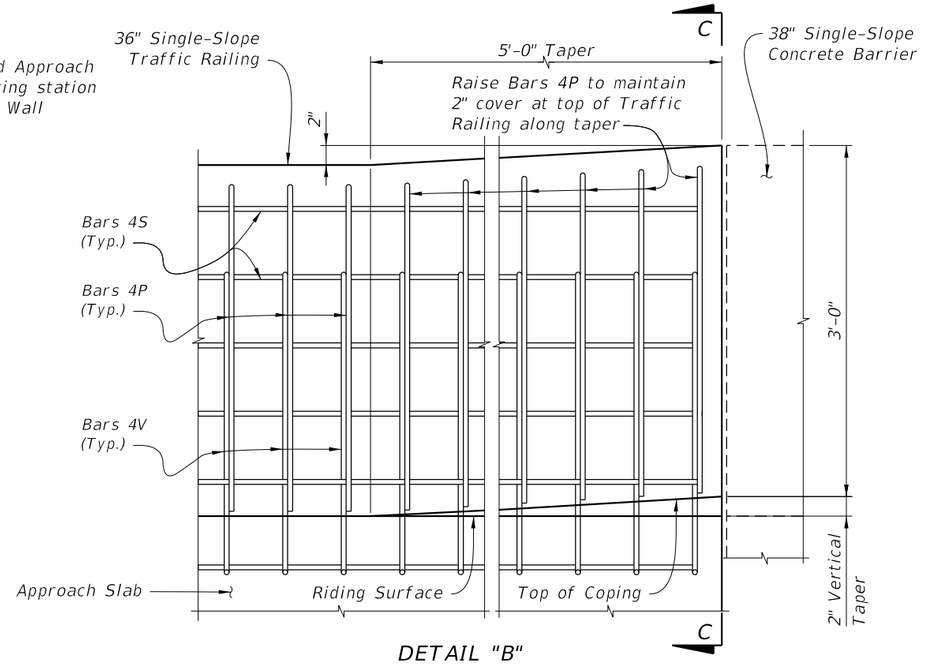


PLAN - RAILING END TRANSITION
(Showing Bars 4V and 4S)



PLAN - RAILING END TRANSITION
(Showing Bars 4P and 4S)

DETAIL "A"

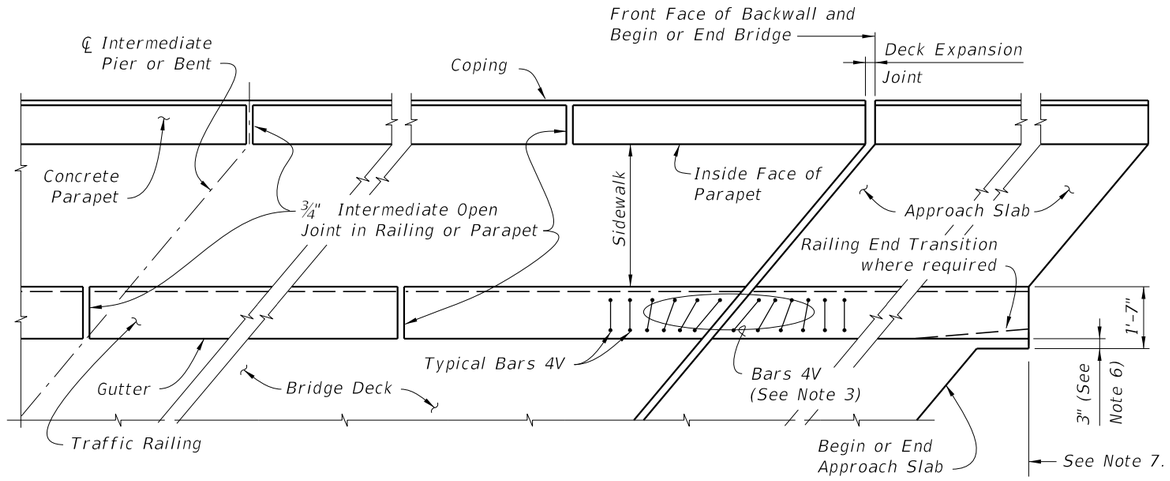


DETAIL "B"
ELEVATION - RAILING HEIGHT TRANSITION
(Showing Transition to Index 521-001 38" Single-Slope Concrete Barrier)

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.

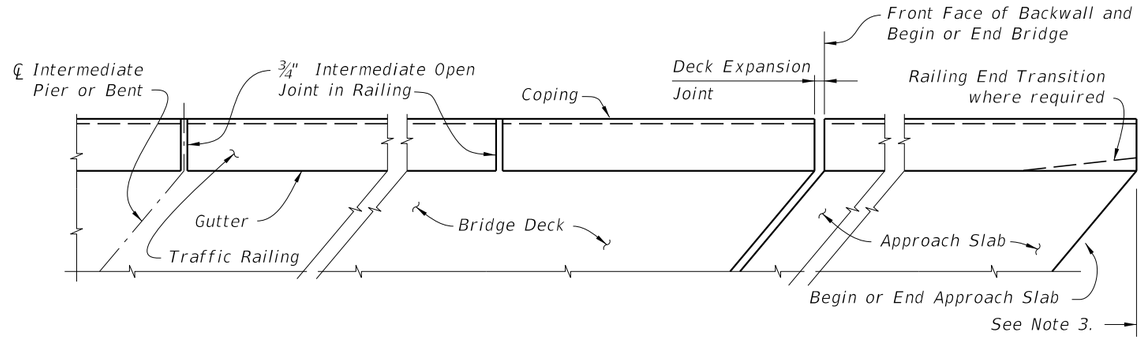
10/16/2023 7:33:32 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
11/01/20					521-427	2 of 5



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.



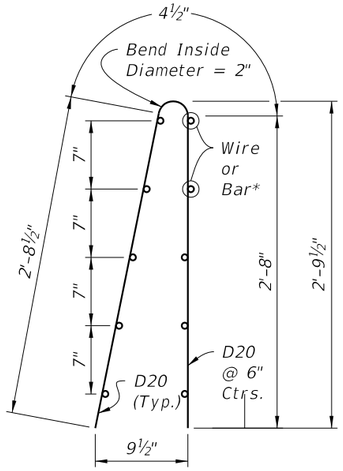
PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH SINGLE-SLOPE TRAFFIC RAILING, OTHER TRAFFIC RAILINGS SIMILAR

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.

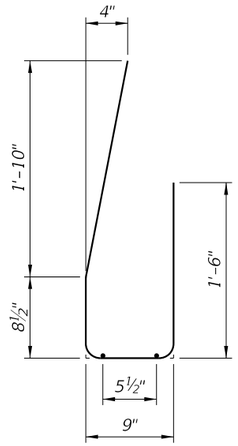
GENERAL NOTES:
1) Work this Sheet with Traffic Railing, Pedestrian/Bicycle Railing, and Approach Slab Indexes as applicable.
2) Deck Expansion Joint at begin or end bridge shown. Deck Expansion Joints at ℄ Pier or Intermediate Bents are similar.
3) Partial Plan Views shown are intended as guides only. 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

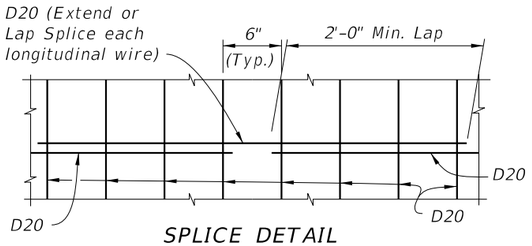
* Longitudinal D20 Wires or #4 Bars may be tied.



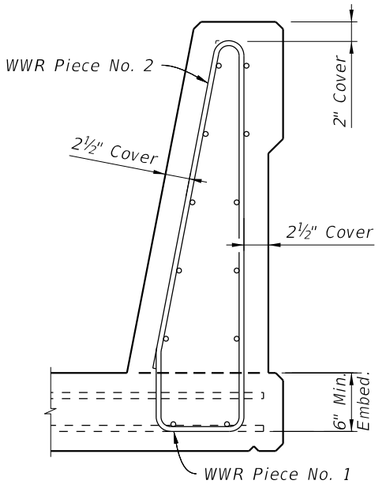
WWR Piece No. 2



WWR Piece No. 1



SPLICE DETAIL
(Between WWR Sections)



WELDED WIRE REINFORCEMENT NOTES:

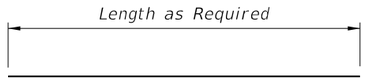
1. At the option of the Contractor deformed Welded Wire Reinforcement (WWR) may be utilized in lieu of all Bars 4P, 4S and 4V. WWR must consist of Deformed wire meeting the requirements of Specification Section 931.
2. WWR at Railing End Transition shall be field bent inward as required (Piece 2) to 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

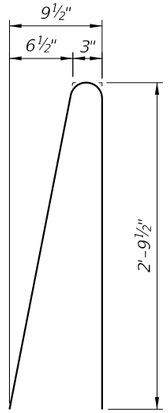
ROADWAY CROSS-SLOPE	LOW GUTTER	HIGH GUTTER
	ØB	ØB
0% to 2%	90°	90°
2% to 6%	87°	93°
6% to 10%	84°	96°

ØB shall be 90° if Contractor elects to place railing perpendicular to the deck and approach slabs.

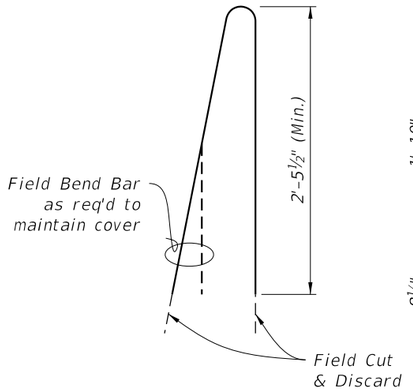
BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
P	4	5'-11"
S	4	As Reqd.
V	4	4'-10"



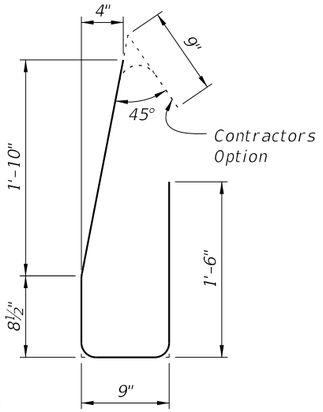
BAR 4S



STIRRUP BAR 4P



END STIRRUP BAR 4P
To Be Field Cut
and Bent

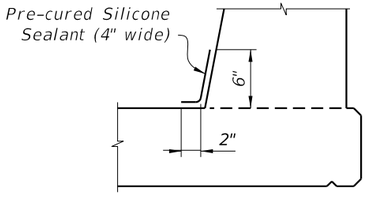


BAR 4V

END TRANSITION BAR 4V
Field Cut and Lapped

REINFORCING STEEL NOTES:

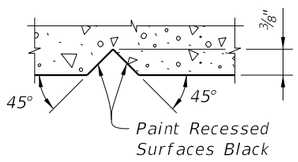
1. All bar dimensions in the bending diagrams are out to out.
2. The 8½" vertical dimensions shown for Bar 4V is based on a 6" embedment into the bridge deck without a raised sidewalk. If a raised sidewalk is to be provided, increase this dimension to achieve a 6" minimum embedment into the bridge deck. 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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LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
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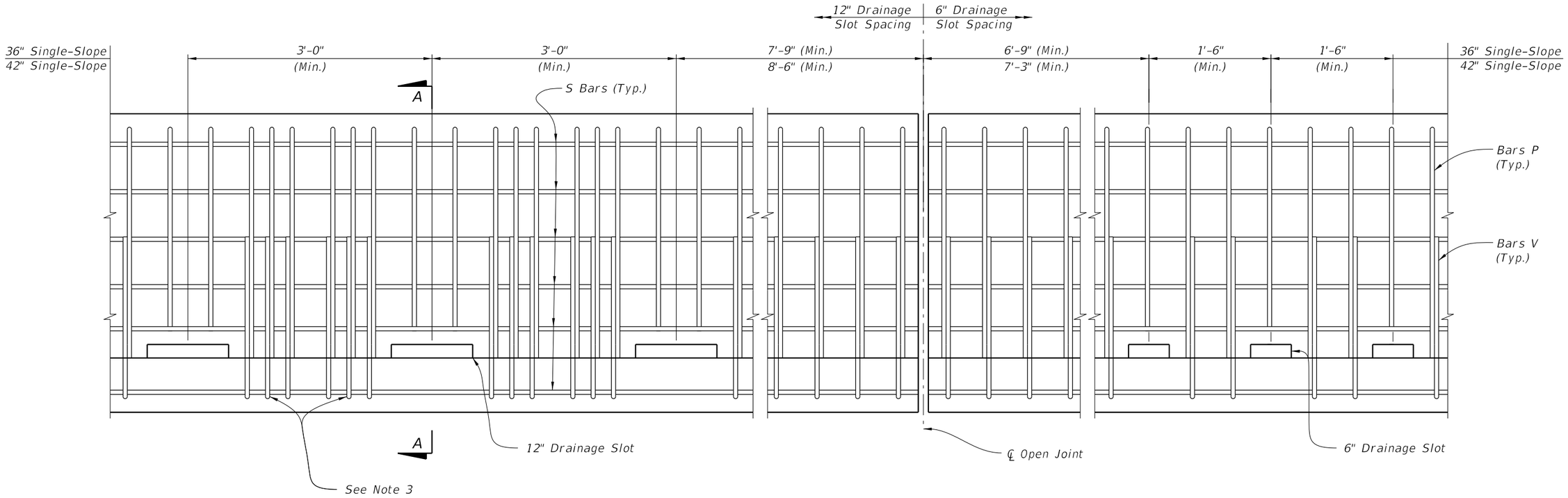
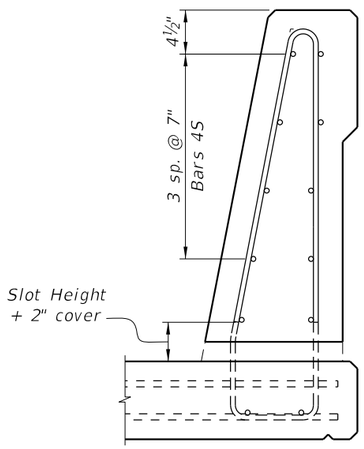
TRAFFIC RAILING - (36" SINGLE-SLOPE)



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 2024-25 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
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NOTES

DESIGN CRITERIA:

1. Design is based on the assumption that the material contained within the reinforced soil volume, methods of construction and quality of prefabricated materials are in accordance with Specification Section 548 and FDOT Structures Design Guidelines Section 3.13.2.
2. It is the responsibility of the Engineer to determine that the factored bearing pressure shown for the wall does not exceed the factored bearing resistance of the foundation for that specific wall location.
3. The Wall Company is responsible for internal stability of the wall. External stability design, including foundation and slope stability, is the responsibility of the Engineer.
4. If present, consider in design and analysis and locate manholes and drop inlets as shown on wall elevations.

SOIL PARAMETERS:

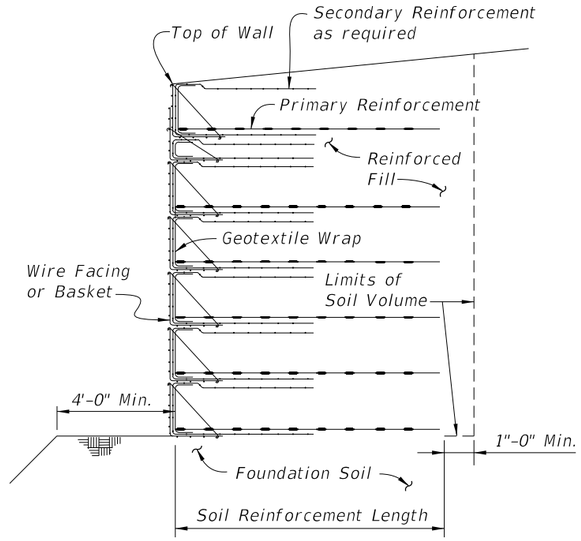
1. See wall control drawings for soil characteristics of foundation material to be used in the design of the wall system. The Contractor must provide soil design parameters for backfill material based on the actual soil characteristics utilized at the site. Provide the values of unit weight, cohesion and internal friction angle in the Shop Drawings.

MATERIALS:

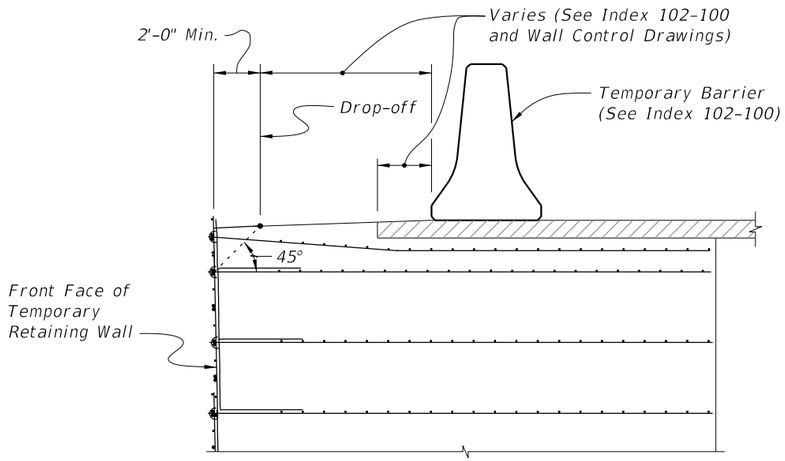
1. Provide soil reinforcement in accordance with Specification Section 548.
2. For additional material notes, see Wall Company General Notes.

CONSTRUCTION:

1. Walls must be constructed in accordance with Specification Section 548 and the Wall Company's instructions.
2. For location and alignment of retaining walls, see Wall Control Drawings.
3. Refer to Plan and Elevation sheets of individual walls for minimum reinforcement strip/mesh length, factored bearing resistance's, minimum wall embedment and anticipated long term and differential settlements.
4. If existing or future structures, pipes, foundations or guardrail posts within the reinforced soil volume interfere with the normal placement of soil reinforcement and specific directions have not been provided on the plans, the Contractor must notify the Engineer to determine what course of action should be taken.
5. The Contractor is responsible for gradually deflecting upper layer(s) of soil reinforcement downward (15° maximum from horizontal) to avoid cutting soil reinforcement and conflicts with paving and subgrade preparation. The Contractor's attention is directed especially to situations where roadway superelevation and/or soil mixing are anticipated.



TYPICAL RETAINING WALL SECTION
(Showing Limits of the Reinforced Soil Volume)



TEMPORARY TRAFFIC RAILING
PLACEMENT DETAIL

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GENERAL NOTES AND DETAILS

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	MSE RETAINING WALL SYSTEMS - TEMPORARY	INDEX	SHEET
11/01/17						548-030	1 of 1