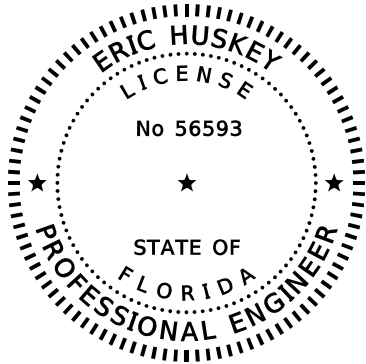


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SHEET: *B-1*

OF: *1 OF 95*

PROJECT NO. *2019803*

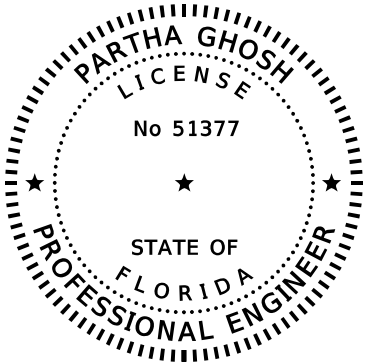


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STANLEY CONSULTANTS, INC.
1641 WORTHINGTON ROAD, SUITE 400
WEST PALM BEACH, FLORIDA 33409
ERIC HUSKEY, P.E. NO. 56593



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GCME, INC.
1730 W 10TH STREET
RIVIERA BEACH, FLORIDA 33404
PARTHA GHOSH, P.E. NO. 51377

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.005, F.A.C.

SHEET NO.	SHEET DESCRIPTION	SHEET NO.	SHEET DESCRIPTION
B-1	KEY SHEET	B1-35	SUPERSTRUCTURE DETAILS (1 OF 6) SPANS 1 AND 2
B-1B	SIGNATURE SHEET	B1-36	SUPERSTRUCTURE DETAILS (2 OF 6) SPANS 3 AND 4
B-2	INDEX OF SHEETS	B1-37	SUPERSTRUCTURE DETAILS (3 OF 6) SPANS 3 AND 4
B-3	STRUCTURE GENERAL NOTES (1 OF 2)	B1-38	SUPERSTRUCTURE DETAILS (4 OF 6) SPANS 3 AND 4
B-4	STRUCTURE GENERAL NOTES (2 OF 2)	B1-39	SUPERSTRUCTURE DETAILS (5 OF 6) SPAN 5
B1-1	PLAN AND ELEVATION	B1-40	SUPERSTRUCTURE DETAILS (6 OF 6)
B1-2	BRIDGE HYDRAULIC RECOMMENDATIONS	B1-41	BEAM DETAILS DATA TABLE
B1-5	FOUNDATION LAYOUT	B1-42	APPROACH SLAB (1 OF 2)
B1-6	PILE DATA TABLE	B1-43	APPROACH SLAB (2 OF 2)
B1-7	END BENT 1 (1 OF 2)	B1-44	RUBBLE RIPRAP SLOPE PROTECTION
B1-8	END BENT 1 (2 OF 2)	B1-45	REINFORCING BAR LIST (1 OF 7)
B1-9	END BENT 6	B1-46	REINFORCING BAR LIST (2 OF 7)
B1-10	END BENT DETAILS (1 OF 7)	B1-47	REINFORCING BAR LIST (3 OF 7)
B1-11	END BENT DETAILS (2 OF 7)	B1-48	REINFORCING BAR LIST (4 OF 7)
B1-12	END BENT DETAILS (3 OF 7)	B1-49	REINFORCING BAR LIST (5 OF 7)
B1-13	END BENT DETAILS (4 OF 7)	B1-50	REINFORCING BAR LIST (6 OF 7)
B1-14	END BENT DETAILS (5 OF 7)	B1-51	REINFORCING BAR LIST (7 OF 7)
B1-15	END BENT DETAILS (6 OF 7)	B1-52	LOAD RATING CHARTS SPANS 1, 2, AND 5 (BRIDGE NO. 934000)
B1-16	END BENT DETAILS (7 OF 7)	B1-53	LOAD RATING CHARTS SPANS 3 AND 4 (BRIDGE NO. 934000)
B1-17	INTERMEDIATE BENT 2		
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B1-19	INTERMEDIATE BENT 4		
B1-20	INTERMEDIATE BENT 5		
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B1-22	TYPICAL SECTION THROUGH BRIDGE DECK (1 OF 2)		
B1-23	TYPICAL SECTION THROUGH BRIDGE DECK (2 OF 2)		
B1-24	FINISH GRADE ELEVATIONS (1 OF 5)		
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B1-34	SUPERSTRUCTURE (5 OF 5) SPAN 5		

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
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SHEET NO.	SHEET DESCRIPTION
B1-3	REPORT OF CORE BORINGS (1 OF 2)
B1-4	REPORT OF CORE BORINGS (2 OF 2)

BRIDGE NO. 934000

Stanley Consultants INC.
1641 WORTHINGTON ROAD, SUITE 400
WEST PALM BEACH, FLORIDA 33409
WWW.STANLEYGROUP.COM
CERTIFICATE OF AUTHORIZATION NO. 1978
ERIC HUSKEY, P.E. NO. 56593

**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE



PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE: 1"=1'
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H
DATE: 11/5/24

SIGNATURE SHEET

DESIGN FILE NAMEDRAWING NO.

SHEET: B-1B
OF: 1B OF 95
PROJECT NO.
2019803

STRUCTURAL PLANS - CR 880 AT SAM SENTER ROAD

COMMON SHEETS

B-1	KEY SHEET
B-1B	SIGNATURE SHEET
B-2	INDEX OF SHEETS
B-3	STRUCTURE GENERAL NOTES (1 OF 2)
B-4	STRUCTURE GENERAL NOTES (2 OF 2)
B-5 TO B-6	FDOT STANDARD ABBREVIATIONS - (2 SHEETS)
B-7 TO B-8	APPROACH SLAB (30FT.) (FLEXIBLE PAVEMENT APPROACHES) - INDEX NO. 400-090 (2 SHEETS)
B-9	STANDARD BAR BENDING DETAILS - INDEX NO. 415-001
B-10 TO B-12	FLORIDA SLAB BEAM TYPICAL DETAILS AND NOTES - 450-450 - (3 SHEETS)
B-13	12" FLORIDA SLAB BEAM - INDEX NO. 450-451
B-14	SQUARE PRESTRESSED CONCRETE PILES - TYPICAL DETAILS AND NOTES - INDEX NO. 455-001
B-15	SQUARE PRESTRESSED CONCRETE PILE SPLICES - INDEX NO. 455-002
B-16	18" SQUARE PRESTRESSED CONCRETE PILE - INDEX NO. 455-018
B-17 TO B-18	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD - INDEX NO. 458-110 (2 SHEETS)
B-19 TO B-23	TRAFFIC RAILING (36" SINGLE-SLOPE) - INDEX NO. 521-427 (5 SHEETS)
B-24 TO B-27	CONDUIT DETAILS - EMBEDDED - INDEX NO. 630-010 (4 SHEETS)

BRIDGE OVER L-13 CANAL (BRIDGE NO. 934000)

B1-1	PLAN AND ELEVATION
B1-2	BRIDGE HYDRAULIC RECOMMENDATIONS
B1-3	REPORT OF CORE BORINGS (1 OF 2)
B1-4	REPORT OF CORE BORINGS (2 OF 2)
B1-5	FOUNDATION LAYOUT
B1-6	PILE DATA TABLE
B1-7	END BENT 1 (1 OF 2)
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B1-9	END BENT 6
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B1-27	FINISH GRADE ELEVATIONS (4 OF 5)
B1-28	FINISH GRADE ELEVATIONS (5 OF 5)

BRIDGE OVER L-13 CANAL (BRIDGE NO. 934000) (CONT.)

B1-29	FRAMING PLAN
B1-30	SUPERSTRUCTURE (1 OF 5) SPANS 1 AND 2
B1-31	SUPERSTRUCTURE (2 OF 5) SPANS 1 AND 2
B1-32	SUPERSTRUCTURE (3 OF 5) SPAN 3
B1-33	SUPERSTRUCTURE (4 OF 5) SPAN 4
B1-34	SUPERSTRUCTURE (5 OF 5) SPAN 5
B1-35	SUPERSTRUCTURE DETAILS (1 OF 6) SPANS 1 AND 2
B1-36	SUPERSTRUCTURE DETAILS (2 OF 6) SPANS 3 AND 4
B1-37	SUPERSTRUCTURE DETAILS (3 OF 6) SPANS 3 AND 4
B1-38	SUPERSTRUCTURE DETAILS (4 OF 6) SPANS 3 AND 4
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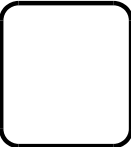
EXISTING BRIDGE PLANS

BX1-1 TO BX1-15	EXISTING BRIDGE PLANS
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BRIDGE NO. 934000

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1641 WORTHINGTON ROAD, SUITE 400
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ERIC HUSKEY, P.E. NO. 56593

CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT



NO.	REVISION	BY	DATE



PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE: 1"=1'
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H
DATE: 11/5/24

INDEX OF SHEETS	
DESIGN FILE NAME	DRAWING NO.

SHEET: B-2
OF: 2 OF 95
PROJECT NO. 2019803

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DESIGN SPECIFICATIONS:

FDOT Structures Manual Dated January 2024.

AASHTO LRFD Bridge Design Specifications, 8th Edition 2017,

FDOT FY 2024-25 Design Standards.

FDOT FY 2024-25 Standards Specification for Road and Bridge Construction.

DESIGN METHOD:

Load and Resistance Factor Design (LRFD) method using strength, service, and fatigue limit states.

DESIGN LOADING:

DEAD LOADS:

Unit Weight of Reinforced Concrete (Including Reinforcement):.....150 PCF

Traffic Railing Barrier (32" Single-Slope):.....430 PLF (Each)

LIVE LOADS:

HL93 Loading With Dynamic Load Allowance. Pedestrian Load

WIND LOADS:

Wind loads are in accordance with AASHTO LRFD Specifications for Highway Bridges, Section 3.8 and Structures Design Guidelines Section 2.4.

FUTURE WEARING SURFACE:

15 PSF (Applied over projected plan area of the exposed bridge deck).

CONSTRUCTION LOADS:

50 PSF

TEMPERATURE EFFECTS:

STRUCTURAL MATERIAL	TEMPERATURE (°F)			
	MEAN	HIGH	LOW	RANGE
CONCRETE	70	105	35	70

Coefficient of Thermal Expansion: 0.0000060 per °F

DIMENSIONS:

All dimensions are in feet and inches ("'-"), and are measured horizontally and vertically unless otherwise noted. All dimension and joint openings are given at an assumed ambient temperature of 70°F.

ENVIRONMENT:

BRIDGE NUMBER	SUPERSTRUCTURE	SUBSTRUCTURE	
		STEEL	CONCRETE
		MODERATELY AGGRESSIVE	

MATERIALS:

CONCRETE:

CLASS	MINIMUM 28 DAY COMPRESSION STRENGTH (PSI)	LOCATION IN STRUCTURE
II	3400	Superstructure CIP Concrete other than Bridge Deck
II (BRIDGE DECK)	4500	Cast-in-Place Slab/ Overlay
VI	8500	Prestressed Slab Units
II (BRIDGE DECK)	4500	Cast-in-Place Approach Slabs
IV	5500	Precast Substructure
IV	5500	Precast Panels
V (SPECIAL)	6500	Prestressed Piles

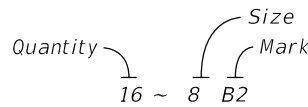
NOTE:

- a) Concrete shall be in accordance with Florida Department of Transportation Specification Section 346.
- b) Grout for precast concrete pile caps and concrete panels shall be in accordance with Florida Department of Transportation Specification Section 934.
- c) Provide 3⁄4 inch chamfers on all exposed concrete edges except as otherwise noted.
- d) Construction joints will be permitted only at locations indicated on the plans. Obtain approval of the engineer for additional construction joints or any other alteration to the plans.

REINFORCING STEEL:

Grade 60 carbon steel per Specifications Section 931.

Typical reinforcing bars are marked as follows:



PRESTRESSING STRANDS:

Strands shall meet the requirements of ASTM A416, Grade 270, low-relaxation.

ELEVATIONS:

All elevations in the proposed bridge plans refer to North American Vertical Datum (NAVD) of 1988. All elevations in the existing bridge plans refer to M.S.L. The conversion between the two datums is NAVD = M.S.L -1.423.

CONCRETE COVER:

Unless noted otherwise, concrete cover shall conform to the following:

Cast-in-Place Superstructure (Top of Deck)	2½"
Cast-in-Place Superstructure (Except Top of Deck)	2"
Cast-in-Place Substructure	
Bent Caps Cast Against Earth	4"
Bent Caps Formed Surfaces	3"

NOTE:

Concrete covers shown in the plans do not include placement and fabrication tolerances unless shown as "minimum cover". See specifications for allowable tolerances.

UTILITIES:

1) See Roadway Plans for the location of existing utilities. The utilities shown in the Bridge Plans are at approximate locations.

2) All utilities in conflict with bridge construction shall be coordinated with the Utility Owners and will need to be temporarily relocated or de-energized prior to bridge construction. After the bridge construction, all utilities shall be placed back to original location and back to original condition or better.

PILE FOUNDATIONS:

All piles shall be installed according to the Pile Data Table sheet. For concrete pile notes and details, refer to Standard Index Nos. 455-001 and 455-018. For concrete pile splice information, refer to Standard Index No. 455-002. The pile driving operations are limited to daytime.

EXISTING BRIDGE CONSIDERATIONS:

Dimension Verification: Unless otherwise noted, the dimensions, elevations and intersecting angles shown are based on the information as detailed in the original construction plans of the existing bridge and may not represent as-built conditions. It is the contractor's responsibility to verify this data before beginning construction and notify the Engineer of any discrepancies.

BRIDGE NAME AND NUMBER:

Place the following bridge name and number on the traffic railing in accordance with the FDOT Traffic Railing - (32" Single-Slope) - Standard Index 521-427.

Name	Number
Sam Senter Road Over L-13 Canal	934000

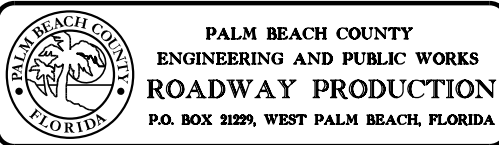
Place the date of construction in accordance with the FDOT Traffic Railing - (32" Single-Slope) - Standard Index 521-427.

BRIDGE NO. 934000

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**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE



SCALE:
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

STRUCTURE GENERAL NOTES (1 OF 2)	
DESIGN FILE NAME	DRAWING NO.

SHEET: B-3
OF: 3 OF 95
PROJECT NO. 2019803

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ABBREVIATIONS AND SYMBOLS:

Refer to *FDOT Standards Plans* for Standard Abbreviations. The following are additional abbreviations and symbols used in the Contract Plans, which are not covered in *FDOT Standard Abbreviations* sheet.

- BM. - BEAM
- CLR. - CLEAR
- C.J. - CONSTRUCTION JOINT
- EF - EACH FACE
- EXT. - EXTERIOR
- EW - EACH WAY
- FF - FAR FACE
- NF - NEAR FACE
- PSU - PRESTRESSED SLAB UNIT
- T&B - TOP & BOTTOM
- TOC - TOP OF COPING
- UNO - UNLESS NOTED OTHERWISE
-  - BORING LOCATION
-  - DIAMETER
- LM - LOW MEMBER
- DWSE - DESIGN WATER SURFACE ELEVATION
- OWCE - OPTIMUM WATER CONTROL ELEVATION

EXISTING BRIDGE DEMOLITION:

The contractor shall completely remove the existing bridge including the steel girders, prestressed slab units, concrete barriers, metal railings, cast-in-place slabs, approach slabs, pile caps, and concrete retaining wall panels. The existing concrete piles shall be cut off at least 2'-0" below the existing mud line. The concrete retaining wall panels shall be completely removed. See *Roadway Plans* for limits of removal, replacements, and relocations of utilities.

CONTAMINATED MATERIALS

Contractor is to contact Palm Beach County thirty days prior to construction on the bridges for coordination and instructions regarding demolition and disposal of contaminated materials.

PAY ITEM NOTES:

1. See *Roadway Plans* for Pay Item numbers and summary of Pay Item Quantities.
2. Payment for incidental items not specifically covered in individual Bid Items shall be included in the Contract Unit Price for the Bid Items.
3. Payment for Rip-Rap and Bedding Stone are included in Roadway Pay Items. See *Roadway Plan* for additional Rip-rap and Bedding stone details.
4. All demolition activities including methods, materials, labor, work zone protection, equipment and disposal shall be included in the Contract unit Price for Bid Item Number 51, Demolition and Removal.
5. Payment for backer rod with adhesive between FSB's is incidental to payment for FSB's. Estimated quantity for backer rod with adhesive is 595 LF.
6. Payment for Precast Concrete Panels are included in Bid Item Number 68 and includes the cost to furnish and install the following items:

a) Concrete panels, including the cost of trenching or preformed holes (If necessary).

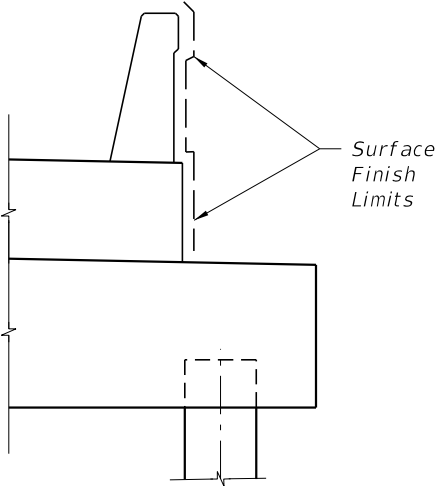
b) Platic filter fabric - Estimated quantity is 1435 SF.

c) Non-shrink Grout - Estimated quantity is 2 CY.

d) Reinforcing steel - Estimated quantity is 24777 LB.
7. Payment for bridge deck grooving and planing is incidental to the payment of the flat slab bridge deck and FSB overlays. The estimated quantities for bridge deck grooving is 827 SY and bridge deck Planing is 827 SY.
8. The cost of the Class 5 Concrete Finish is incidental to the cost of the concrete in which the finish is being applied to. See Concrete Surface Finish for application instructions. Estimated quantities for Class 5 Concrete Finish is 166 SY.

CONCRETE SURFACE FINISH:

Finish all exposed surfaces of the superstructure as indicated in the sketch (dashed) with a Class 5 Finish Coating. The Class 5 Finish shall be applied in accordance with the *FDOT Standard Specifications*. Limits of surface finish are similar for the Approach Slabs.



CONSTRUCTION NOTES:

1. Cranes shall not be allowed on the bridge during construction without an analysis of the crane loading on the structure. The Contractor shall submit an analysis to the Engineer of Record for approval prior to beginning construction.

SFWMD BARGE REQUIREMENT NOTES:

1. The smallest size barge needed to get the work done shall be utilized.
2. The barge width shall not obstruct more than 25 percent of the canal width at the seasonal water level.
3. The length of the barge shall be less than 50 percent of the canal width at the seasonal water level.
4. The barge shall be safely and securely held in place during the work day and overnights and weekends. A barge management plan prescribing the securing mechanism and procedures shall be prepared by a Florida licensed Specialty Engineer experienced with the design of marine facilities. The barge management plan will provide:

a) The full range of historical stage and rate of stage changes based on break point data.

b) The historical range of flow at the nearest downstream structure with flow data;

c) Summary of the design flows and stages, and

d) The procedure for removal of the barge from the canal and storage in 24 hours of the issuing of Tropical Watch, Tropical Warning, Hurricane Watch, or Hurricane Warning.
5. Maintain access for water crafts during working hours when the barge is in the water (see Item No. 2 above). Contractor shall be able to move equipment or backfill material within 24 hour notice at all access points to permit SFWMD personnel or equipment access to their canal right of way.
6. Contractor shall submit to SFWMD for approval details regarding means and methods, needs, scheduling, or other activities related to construction. Contractor shall submit information including use of barge, staging of materials, vehicle types and duration of construction.

FSB NOTES:

HANDLING AND STORAGE

During handling and storage, FSBs must be picked up at the ends of the unit to prevent damage. The slabs must be always stored in the up-right position.

SHOP DRAWINGS

The Contractor shall submit three (3) sets of shop drawings on paper not larger than 11 x 17", showing complete details of FSBs. The drawings shall include a bill of reinforcing steel for each type of FSB, prestressing bed layout, tensioning and detensioning schedules, and all computations necessary to control the work.

BRIDGE NO. 934000

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INTERSECTION IMPROVEMENT AND BRIDGE
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PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE:
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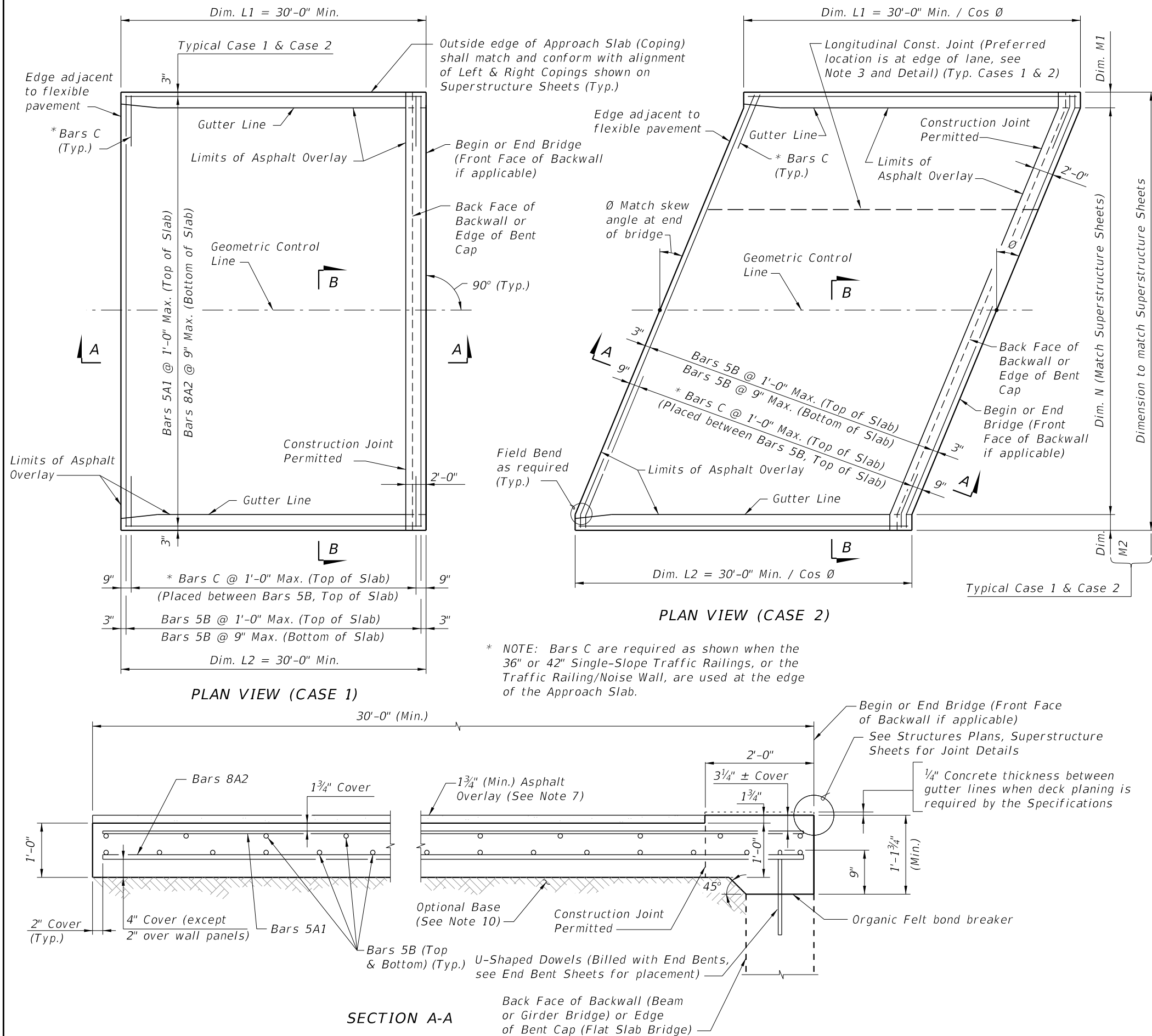
STRUCTURE GENERAL NOTES (2 OF 2)	
DESIGN FILE NAME	DRAWING NO.

SHEET: B-4
OF: 4 OF 95
PROJECT NO. 2019803

ABBREVIATIONS					
FY 2024–25 STANDARD PLANS					
Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
A		C		G	
AASHTO	American Association Of State Highway And Transportation Officials	CSIP	Cost Savings Initiative Proposal	G	Shear Modulus
AC	Alternating Current	CSL	Cross-hole Sonic Logging	g	Gram
Accel.	Acceleration	CTPB	Cement Treated Permeable Base	Ga.	Gauge or Gage
ACI	American Concrete Institute	Ctr., Ctrs.	Center	Galv.	Galvanized
ADA	Americans With Disabilities Act	Cu. Ft.	Cubic Feet	GFI	Ground Fault Interrupter
ADT	Average Daily Traffic	Cu. Yd., CY,	Cubic Yard	GFRP	Glass Fiber Reinforced Polymer
AFAD	Automated Flagger Assistance Device	D		Grd.	Ground
AISC	American Institute Of Steel Construction	D	Depth, Distance or Diameter	H	
AISI	American Iron and Steel Institute	Dia. or Ø	Diameter	Hd.	Head
Alt.	Alternate	Dbl.	Double	H.S., HS	High Strength
Alum.	Aluminum	Decel.	Deceleration	HDPE	High Density Polyethylene
ANSI	American National Standards Institute	Deg.	Degree	Horiz.	Horizontal
AOS	Apparent Opening Size	Dim.	Dimension	HP	Horsepower or H-Pile
APL	Approved Products List	Dist.	Distance	HSHV	High Strength Horizontal Vertical
App.	Approach	DMM	Domestic Mail Manual	I	
Approx.	Approximate	DPI	Ditch Point Intersection	ID, I.D.	Inside Diameter or Identification
ARTBA	American Road & Transportation Builders Association	Dt	Ditch	in.	Inch(es)
Asph.	Asphalt	DTOE	District Traffic Operations Engineer	Inc.	Incorporated
Assem.	Assembly	E		Int.	Interior
ASTM	American Society For Testing And Materials	e	Superelevation Rate	Inv.	Invert
ATPB	Asphalt Treated Permeable Base	E.P. or EOP	Edge Of Pavement	ITS	Intelligent Transportation Systems
Auxil.	Auxiliary	EA or Ea.	Each	J	
AWG	American Wire Gauge	EIA	Electronic Industries Alliance	JCT	Junction
AWS	American Welding Society	El. or Elev.	Elevation	Jt.	Joint
B		Embed.	Embedment	K	
Bot.	Bottom	EPDM	Ethylene Propylene Diene Monomer	k	kip
Brkwy.	Breakaway	Eq.	Equation or Equal	kip	1000 Pounds
b/w	Between	Equip.	Equipment	ksi	Kips Per Square Inch
C		etc.	Et Cetera (And So Forth)	kVA	Kilovolt Ampere
CC, C to C	Center to Center	ETP	Electronic Tough Pitch	L	
C & G	Curb And Gutter	Ex.	Example	L	Length
C.C.	Crash Cushion	Exist.	Existing	LA	Limited Access
CCTV	Closed-Circuit Television	Exp.	Expansion	lb or lbs.	Pound(s)
CFR	Code of Federal Regulations	Ext.	Extension	lb/sy	Pounds Per Square Yard
CFRP	Carbon Fiber Reinforced Polymer	F		lbf	Pound force
cfs, CFS	Cubic Feet Per Second	FAC	Florida Administrative Code	LBR	Lime rock Bearing Ratio
CIP, C.I.P. or C-I-P	Cast In Place	FC	Friction Course	LF	Linear Foot (Feet)
CJP	Complete Joint Penetration	Fdn.	Foundation	Lgth.	Length
Ckt.	Circuit	F.L. or $\overline{f}_L$	Flow Line	Long.	Longitudinally or Longitudinal
☐	Center Line	Fl.	Florida	LRFD	Load Resistance Factor Design
Cl.	Clearance	FDEP	Florida Department Of Environmental Protection	LRS	Low-Relaxation Strand
CMP	Corrugated Metal Pipe	FDOT	Florida Department Of Transportation	LS	Lump Sum
Con.	Connection	FHWA	Federal Highway Administration	LSD	Lump Sum per Day
Conc.	Concrete	FIB	Florida-I Beam	Lt.	Left
Const.	Construct or Construction	F.S.	Florida Statutes		
Cont.	Continuation or Continuous	FS	Far Side		
Corr.	Corrugated	FSB	Florida Slab Beam		
Cov.	Cover	Ft.	Foot or Feet		
CP	Concrete Pipe	FTP	Florida Traffic Plans		

ABBREVIATIONS					
FY 2024–25 STANDARD PLANS					
Abbreviation	Meaning	Abbreviation	Meaning	Abbreviation	Meaning
----- M -----		----- P -----		----- S -----	
m	Meter	Pen.	Penetration	St. or ST.	Street
m²	Meter Square	PPB	Pier Protection Barrier	Sta.	Station
Mach.	Machine	PPP	Polypropylene pipe	Std.	Standard
MAS	Motorist Awareness System	Prest.	Prestressed	Stg.	Strong
MASH	Manual for Assessing Safety Hardware (AASHTO)	PRS	Portable Regulatory Sign	Stl.	Steel
Max.	Maximum	psf	Pounds Per Square Foot	SW	Skewed Angle
MES	Mitered End Section	PSI or psi	Pounds Per Square Inch	Swk.	Sidewalk
M.H.	Manhole or Mounting Height	PT	Point of Tangency or Pressure Treated	SYM	Symmetrical
MHW	Mean High Water	PTFE	Polytetrafluoroethylene	----- T -----	
Mid.	Middle	PVC	Polyvinyl Chloride	T or t	Thickness, Tangent Distance or Time
Mil or Mils	One-Thousandth Of An Inch	----- Q -----		Tan	Tangent
Min.	Minimum or Minute	Q	Flow Volume	T&G	Tongue and Groove
Misc.	Miscellaneous	Qty.	Quantity	TCP	Traffic Control Plan(s)
MLW	Mean Low Water	----- R -----		TCZ	Traffic Control Zone
mm	Millimeter	R or Rad.	Radius	Temp.	Temperature or Temporary
Mod.	Modification	Rt.	Right	Theo.	Theoretical
MOT	Maintenance Of Traffic	R/W	Right Of Way	THW or THWN	Insulation (Flame Retardant, Moisture And Heat Resistant Thermoplastic)
MPH or mph	Miles Per Hour	RC	Reverse Crown	TMA	Truck/Trailer Mounted Attenuator
MUTCD	Manual On Uniform Traffic Control Devices	RCP	Reinforced Concrete Pipe	TN	Ton
----- N -----		Rd.	Road or Round	Trans.	Transition or Transverse
N	Standard Penetration Number	Rdwy.	Roadway	TTC	Temporary Traffic Control
NA or N/A	Not Available or Not Applicable	Rect.	Reticuline or Rectangular	TVSS	Transient Voltage Surge Suppression
NC	Normal Crown	Ref.	Reference	TX	Transmit
NCHRP	National Cooperative Highway Research Program	Reinf.	Reinforced or Reinforcement	Typ.	Typical
NDCBU	Neighborhood Delivery And Collection Box Unit	Req. or Reqd.	Required	----- U -----	
NEMA	National Electrical Manufacturers Association	RGS	Rigid Galvanized Steel	UL	Underwriters Laboratories
NHW	Normal High Water	RPM	Raised Pavement Markers	UPS	Uninterruptible Power Supply
No.	Number	R/R or RR	Railroad	USPS	United States Postal Service
Nom.	Nominal	RSDU	Radar Speed Display Unit	Util.	Utilities
NPS	Nominal Pipe Size	RU	Rack Unit	UV	Ultraviolet
NPT	National Pipe Thread	RX	Receive	----- V -----	
NS or N.S.	Near Side	----- S -----		Veh.	Vehicle
NS	Non-Structural	S or s	Speed, Spacing or Second	Vert.	Vertical
NTS	Not To Scale	Sch.	Schedule	VPD or Vpd.	Vehicles Per Day
----- O -----		SHBR	Special Height Bicycle Railing	----- W -----	
O.C.	On Center	Shldr.	Shoulder	W	Width or Wide
O to O or O.O.	Out to Out	SHW	Seasonal High Water	WT	Weight
O.B.G.	Optional Base Group	SIP	Stay In Place	WWM	Welded Wire Mesh
OD or O.D.	Outside Diameter	SP	Superpave	WWR	Welded Wire Reinforcing
Oz.	Ounce	Spa., Spcg. or Sp.	Space(ing)(s)	----- Y -----	
----- P -----		Spec.	Specification	Yd.	Yard
Pavt.	Pavement	sq	Square	Yr.	Year
PBR	Pedestrian/Bicycle Railing	Sq. Ft., SF, sf or S.F.	Square Foot		
PC	Point Of Curvature	sq. in.	Square Inch		
PCC	Plain Cement Concrete	Sq. Yd., SY or S.Y.	Square Yard		
pcf	Pounds per Cubic Foot	SR	State Road		
PCMS	Portable Changeable Message Sign	FSB	Florida Slab Beam		
P.E. or PE	Professional Engineer	SS	Stainless Steel		

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GENERAL NOTES

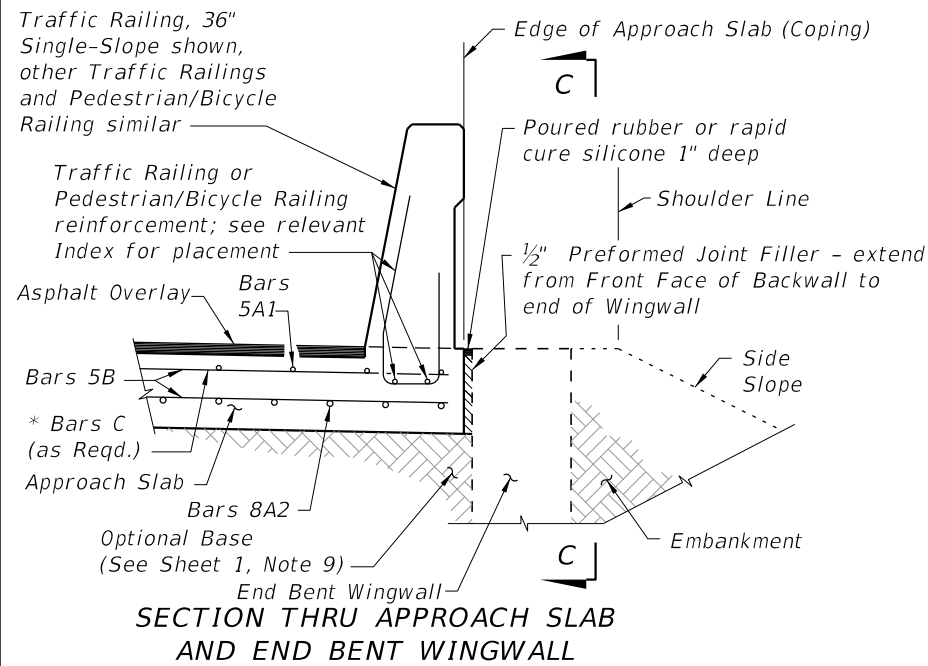
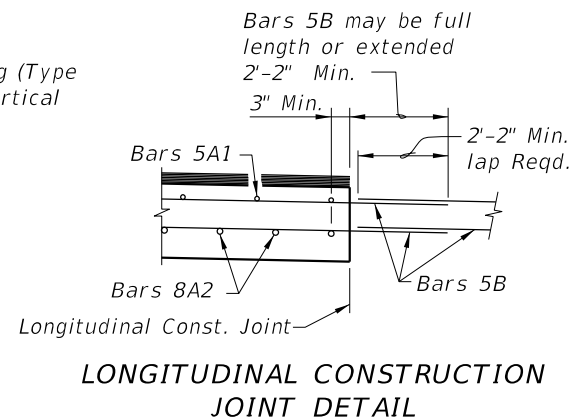
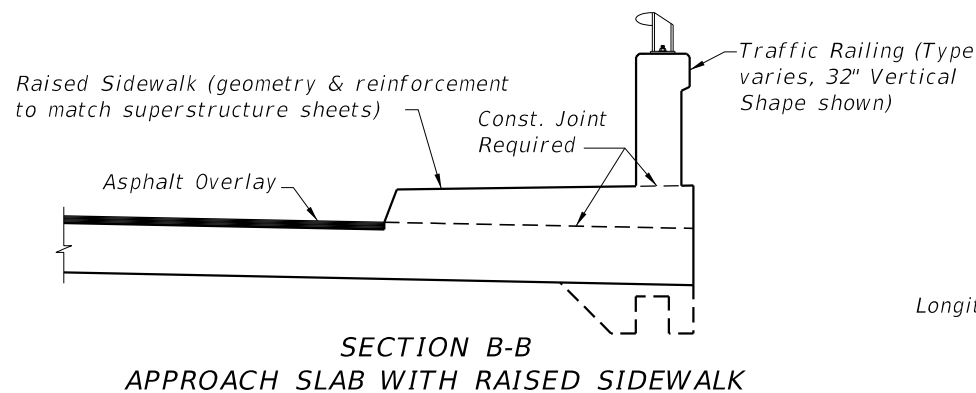
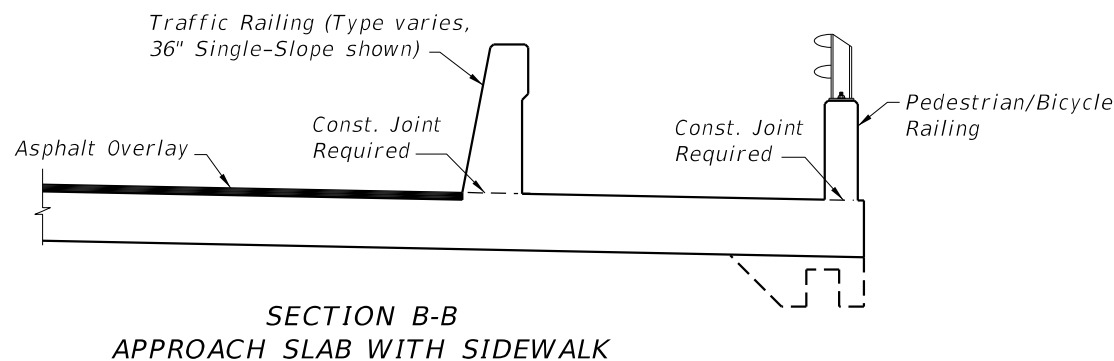
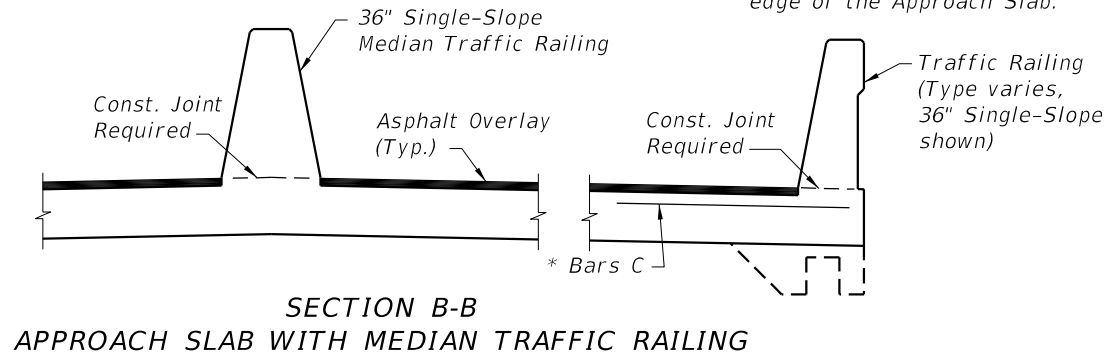
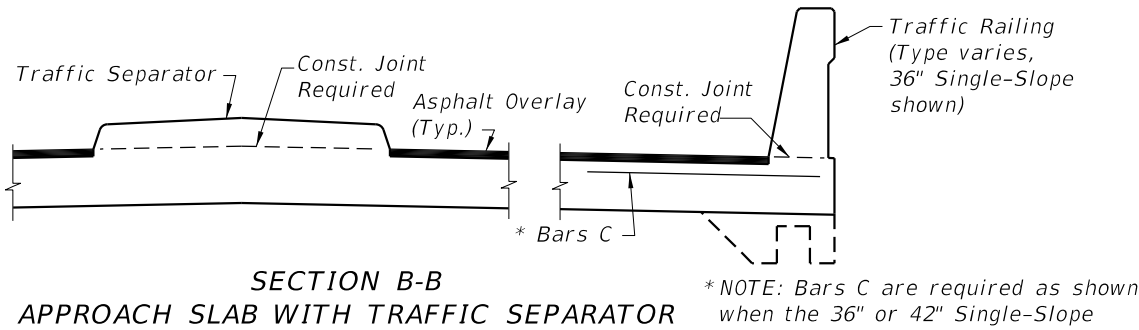
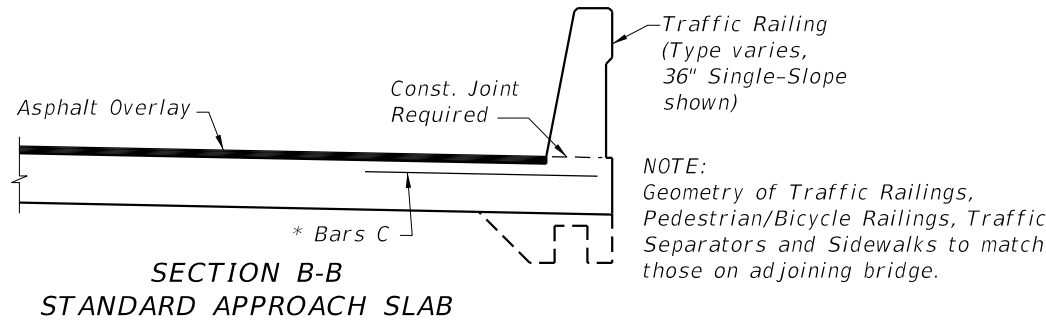
1. **SURFACE TREATMENT:** As an option to Class 4 Floor Finish (Bridge Floor Grooving) per Section 400 a hand tined or heavy broomed finish may be permitted on the concrete portion of the riding surface. Sidewalk areas shall receive a broomed finish. The top surface of the concrete beneath the asphalt 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 (θ) = 0°.
5. The plan view for CASE 2 applies where the skew angle (θ) 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:

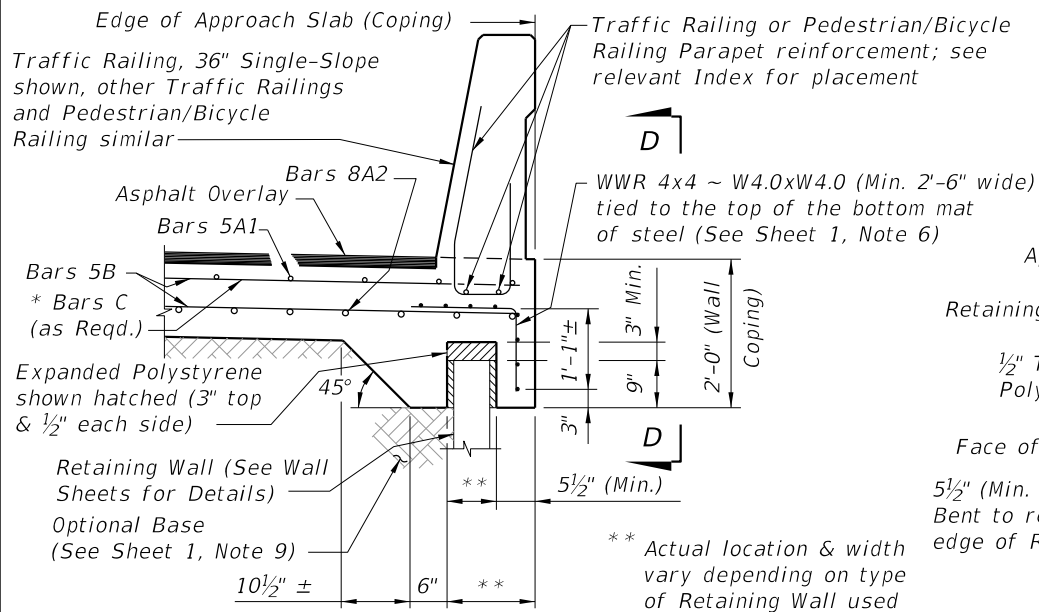
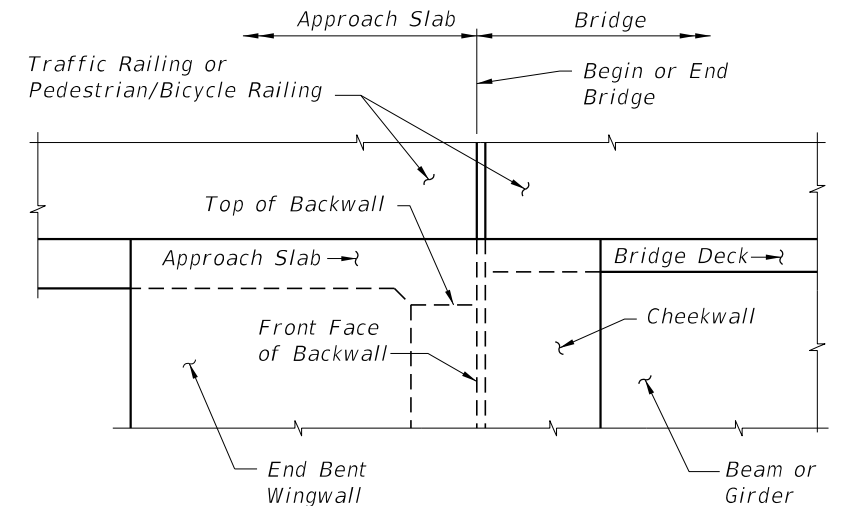
For Section B-B, Longitudinal Construction Joint Detail and Approach Slab Details see Sheet 2.

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

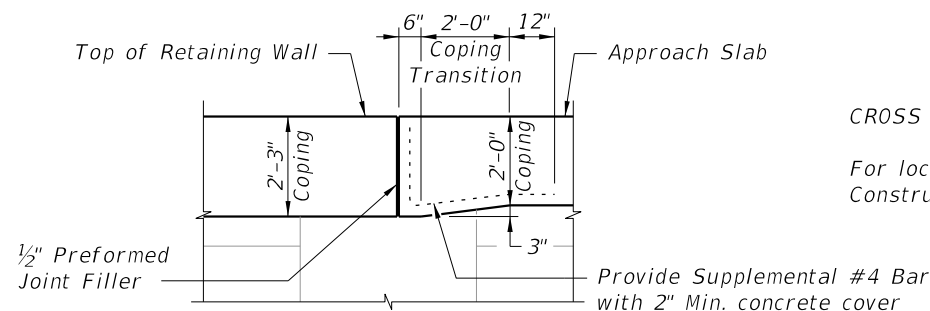
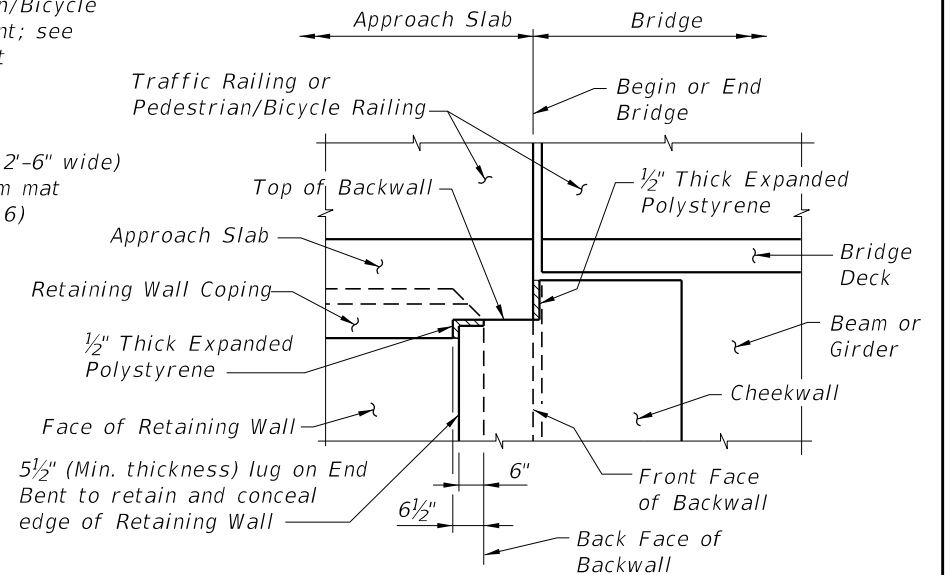
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APPROACH SLAB WITH WINGWALL DETAILS



APPROACH SLAB WITH RETAINING WALL DETAILS



CROSS REFERENCES:

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

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FY 2024-25
STANDARD PLANS

APPROACH SLABS (30 FT.)
(FLEXIBLE PAVEMENT APPROACHES)

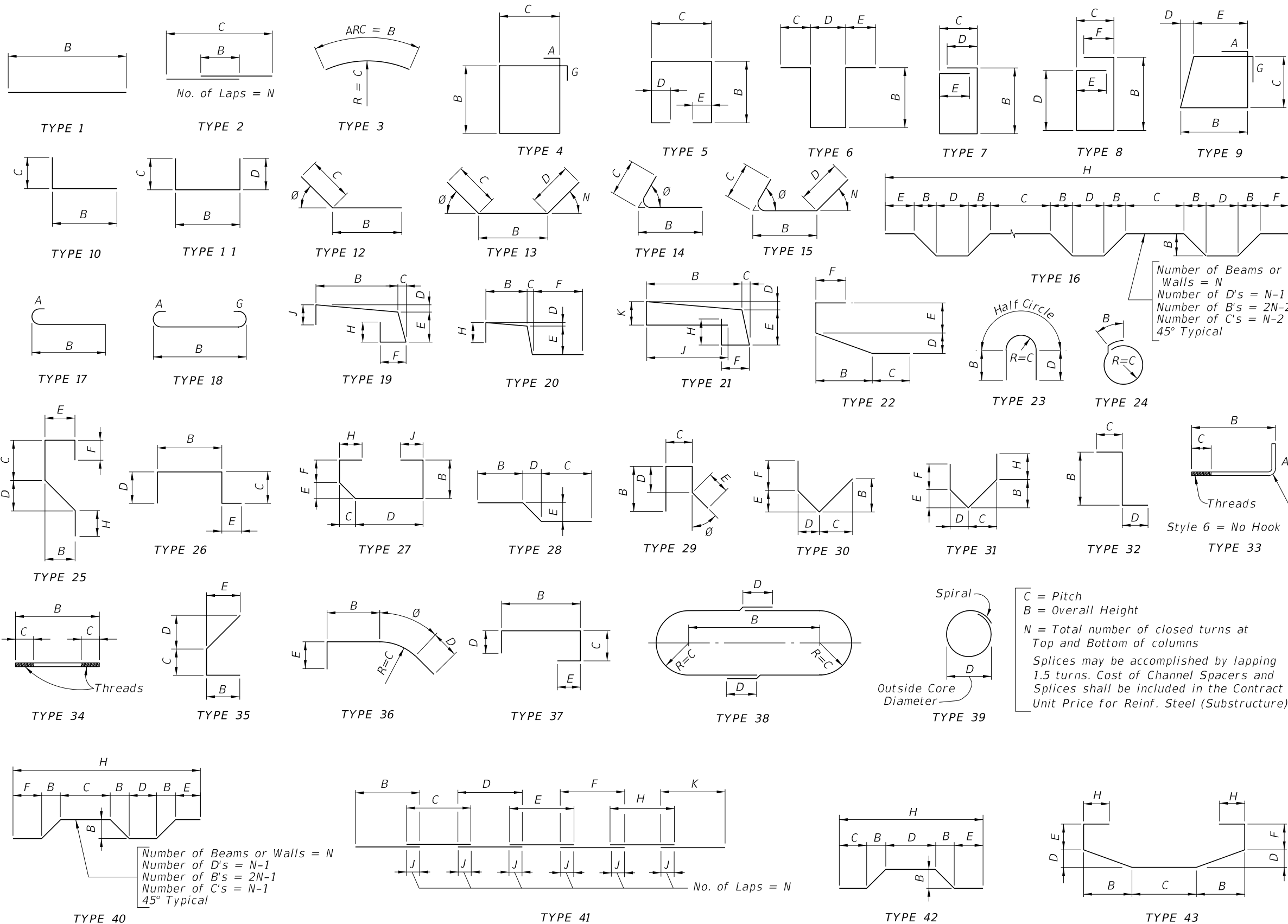
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400-090

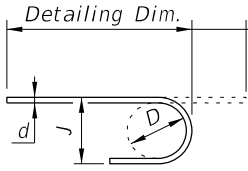
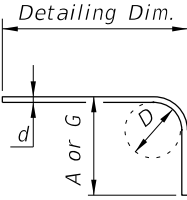
SHEET
2 of 2

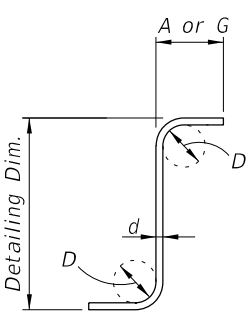
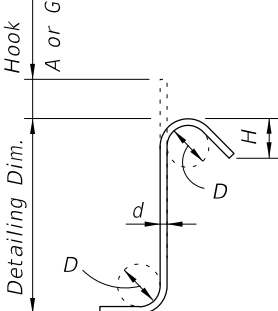
LAST
REVISION
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REVISION

DESCRIPTION:



HOOK DETAILS				
				
180°		90°		
BAR SIZE	D	180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#3	2¼"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3¾"	7"	5"	10"
#6	4½"	8"	6"	1'-0"
#7	5¼"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"
#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)			

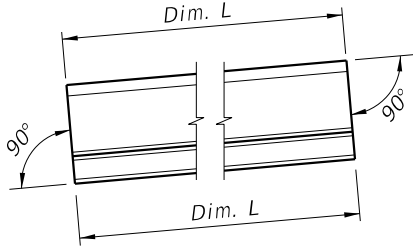
STIRRUP & TIE HOOK DIMENSIONS				
BAR SIZE	D	90° HOOKS	135° HOOKS	
		A or G	A or G	H *
#3	1½"	4"	4"	2½"
#4	2"	4½"	4½"	3"
#5	2½"	6"	5½"	3¾"
#6	4½"	1'-0"	8"	4½"
#7	5¼"	1'-2"	9"	5¼"
#8	6"	1'-4"	10½"	6"
STYLE		4	5	
STYLE 6 = NO HOOK				

* 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.

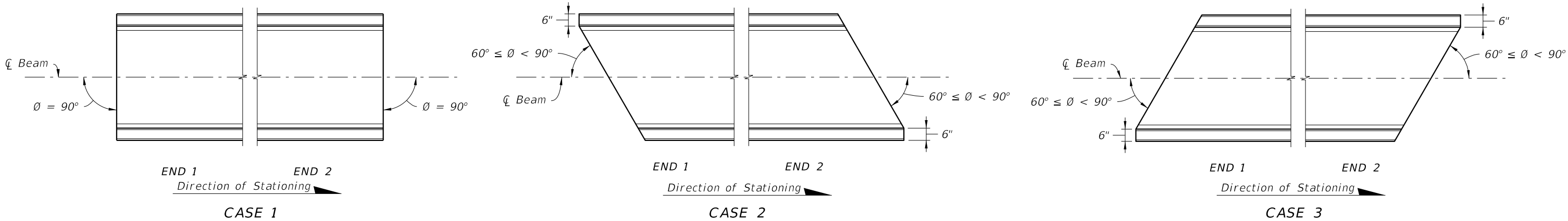
NOTE: For Bar Dimensions See REINFORCING BAR LIST Sheet(s) in Structures Plans.

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- FABRICATION NOTES
- 1. The abbreviated FSB designation for depth and width is FSB "depth" x "width", e.g. FSB 12 x 48.
 - 2. All bar dimensions are out-to-out.
 - 3. Strands N shall be ASTM A416, Grade 250 or 270, $\frac{3}{8}$ " $\varnothing$ or larger strands, stressed to 10,000 lbs. each.
 - 4. Unless otherwise noted, the minimum concrete cover for reinforcing steel shall be 2".
 - 5. For referenced Dimensions, Angles and Case Numbers, see Florida Slab Beam - Table of Variables in Structures Plans.
 - 6. Bars 4D1 & 6Y1 correspond to END 1, and 4D2 & 6Y2 correspond to END 2.
 - 7. Bars 5E1 correspond to interior FSBs, and 5E2 correspond to exterior FSBs.
 - 8. Rake the top surface of the Slab Beams transversely to provide a roughened surface with $\frac{1}{4}$ " amplitude.
 - 9. Embedment of Safety Line Anchorage Devices are permitted to accommodate full protection systems. See shop drawings for details and spacings.



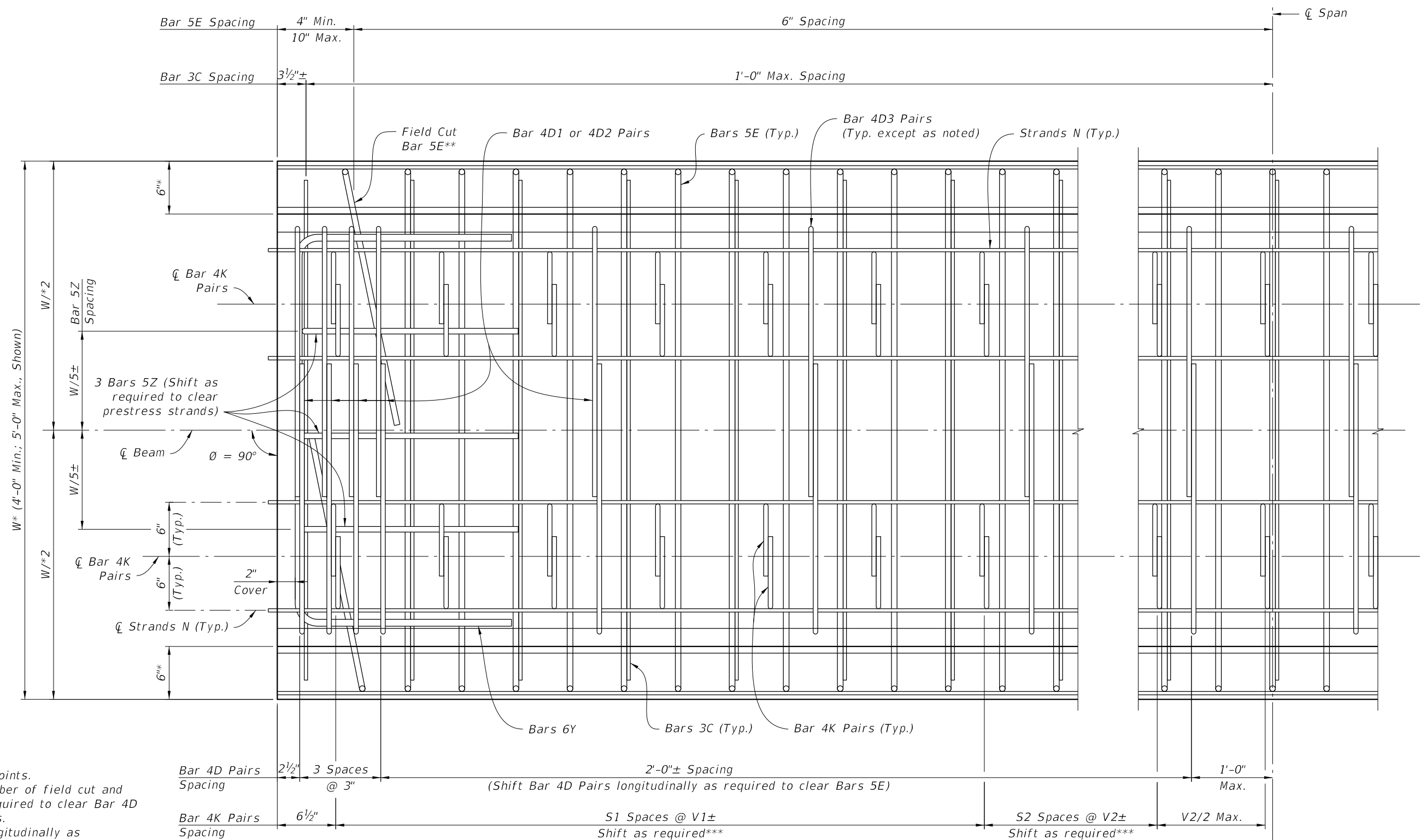
SCHEMATIC SIDE ELEVATION OF BEAM
(Beam on a Positive Grade shown; Beam on a Negative Grade or Horizontal Grade similar.)



SCHEMATIC PLAN VIEWS AT BEAM ENDS

LAST REVISION 04/01/23	REVISION	DESCRIPTION:	 FY 2024-25 STANDARD PLANS	FLORIDA SLAB BEAM TYPICAL DETAILS AND NOTES	INDEX 450-450	SHEET 1 of 3
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* Measured to Working Points.
** At Beam ends, use number of field cut and rotated Bars 5E as required to clear Bar 4D Pairs and Bar 4K Pairs.
*** Shift Bar 4K Pairs longitudinally as required to clear Bar 4D Pairs and Bars 3C and 5E.

CROSS REFERENCE:
For Dimensions V1, V2 & W and number of spaces S1 & S2, see Florida Slab Beam - Table of Variables in Structures Plans.

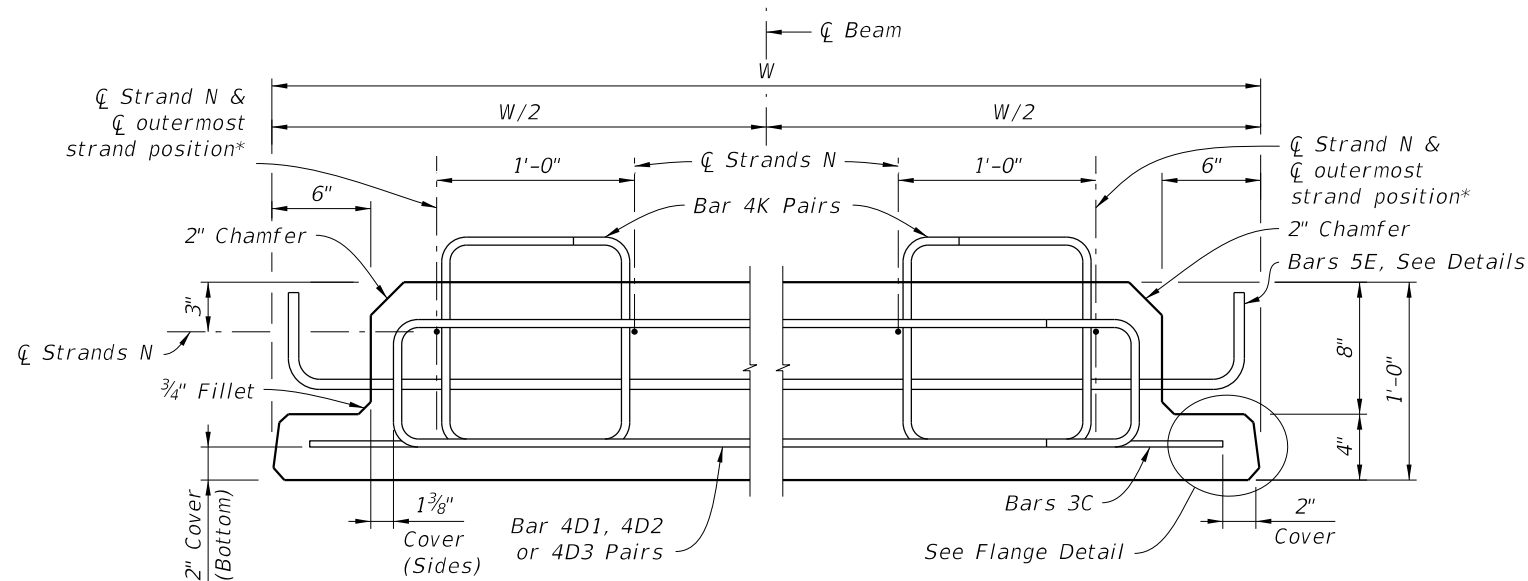
See Indexes 450-451, 450-452 and 450-453 for Bars 5E Details.

PARTIAL PLAN VIEW $\varnothing = 90^\circ$
(END 1 SHOWN, END 2 SIMILAR)
(INTERIOR BEAM SHOWN, EXTERIOR BEAM SIMILAR, SEE BARS 5E DETAILS)

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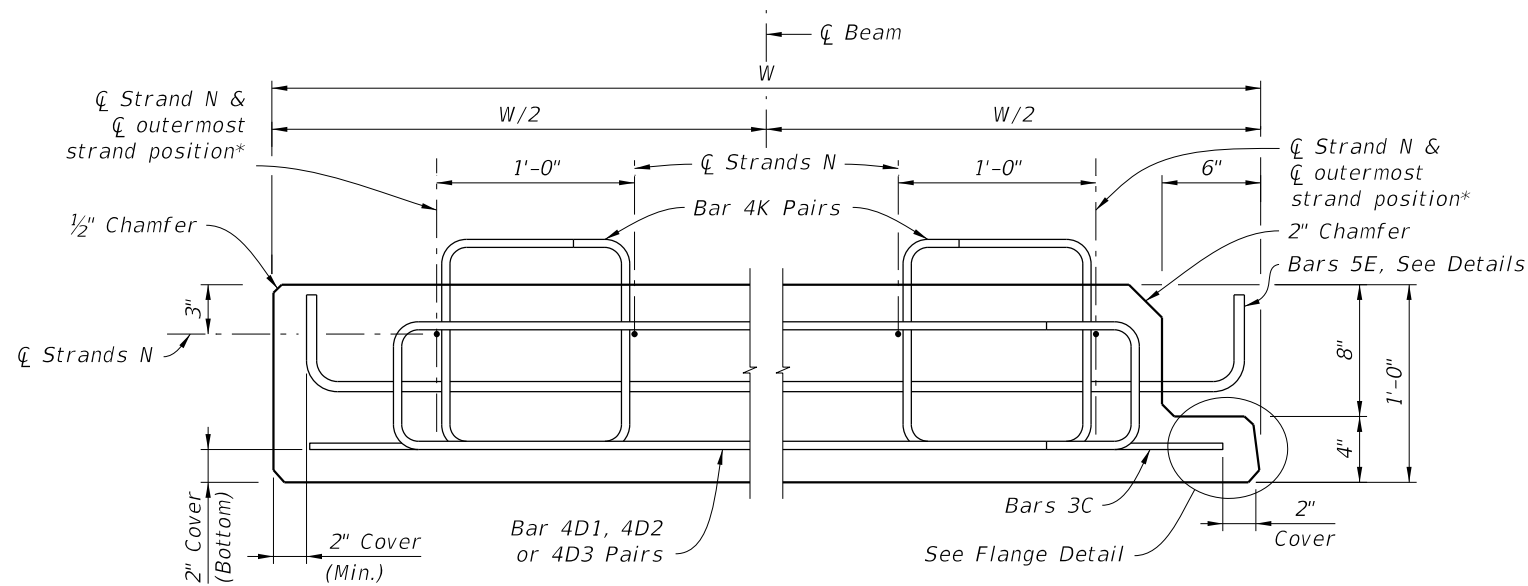
LAST REVISION	REVISION	DESCRIPTION:	 FY 2024-25 STANDARD PLANS	FLORIDA SLAB BEAM TYPICAL DETAILS AND NOTES	INDEX 450-450	SHEET 2 of 3
04/01/23						

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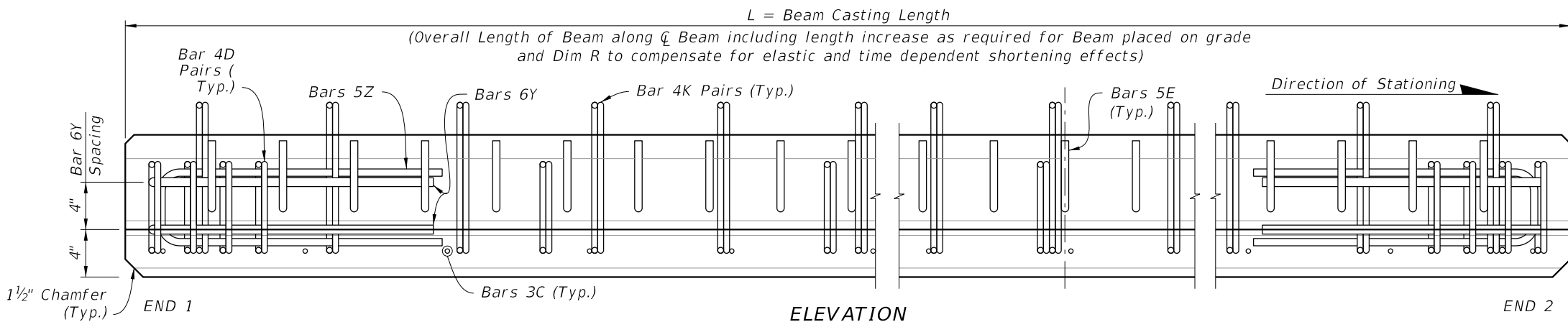


TYPICAL SECTION

(INTERIOR BEAM SHOWN; EXTERIOR BEAM SIMILAR, SEE BARS 5E DETAILS)



OPTIONAL EXTERIOR BEAM SECTION***



ELEVATION

NOTES:

Work this Index with Index 450-450 and Florida Slab Beams - Table of Variables in Structures Plans.

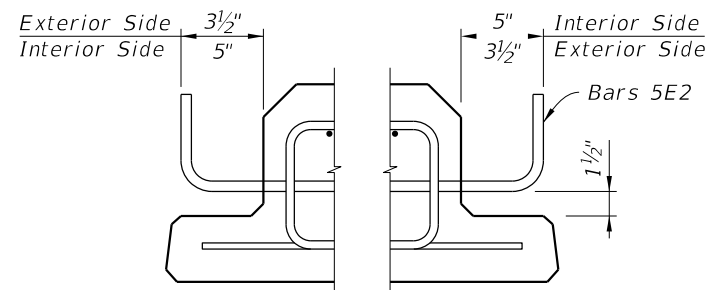
For Dimensions C, D, E, L, R, W & Y and Angle $\emptyset$, see Florida Slab Beam - Table of Variables in Structures Plans.

For referenced notes, see Index 450-450, Sheet 1.

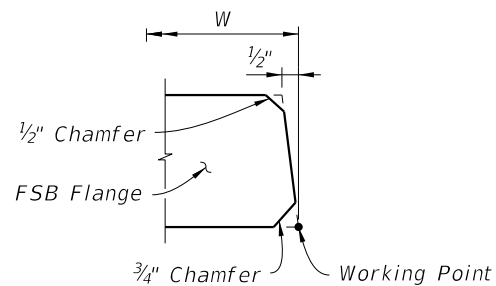
* For $\emptyset$ of outermost strand positions, see corresponding Strand Pattern on Florida Slab Beams - Table of Variables in Structures Plans.

** At the Contractor's option, the Detail as shown for Interior Beams may be used for Exterior Beams and the Bars 5E field bent on the exterior side of the Beam to provide the specified cover to the coping line.

*** At the Contractor's option, the Optional Exterior Beam Section may be used.



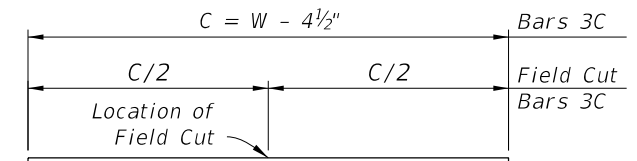
EXTERIOR BEAMS**
BARS 5E DETAIL



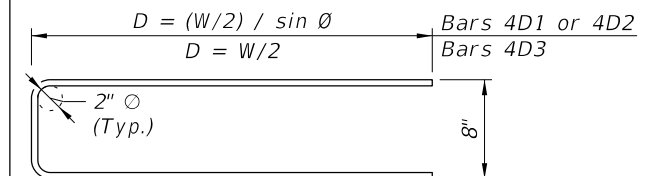
FLANGE DETAIL
(TYPICAL BOTH SIDES OF FSB)

BILL OF REINFORCING BARS FOR ONE BEAM ONLY				
MARK	SIZE	NOTE NUMBERS	NUMBER REQUIRED	LENGTH (NOTE 1)
C	3		See Table	Varies
D1	4	6	10 (End 1)	Varies
D2	4	6	10 (End 2)	Varies
D3	4		See Table	Varies
E1	5	7	See Table	Varies
E2	5	7	See Table	Varies
K	4		See Table	2'-5"
N	See Note 3	3	4	Varies
Y1	6	6	2 (End 1)	Varies
Y2	6	6	2 (End 2)	Varies
Z	5		6	4'-6 1/2"

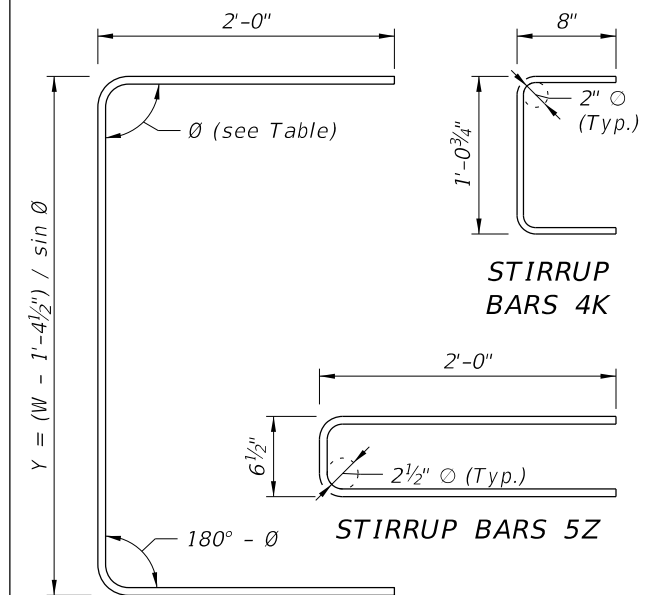
BENDING DIAGRAMS (See Note 1)



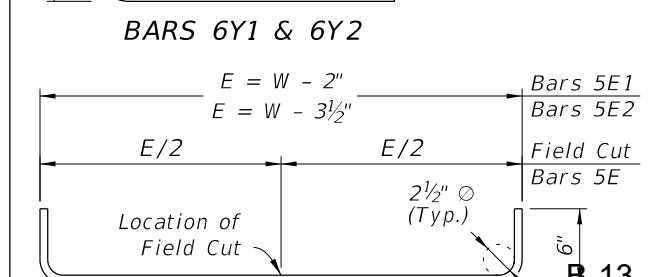
BARS 3C



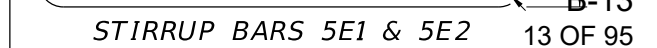
STIRRUP BARS 4D1, 4D2 & 4D3



STIRRUP
BARS 4K



STIRRUP BARS 5Z



STIRRUP BARS 5E1 & 5E2

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FY 2024-25
STANDARD PLANS

12" FLORIDA SLAB BEAM

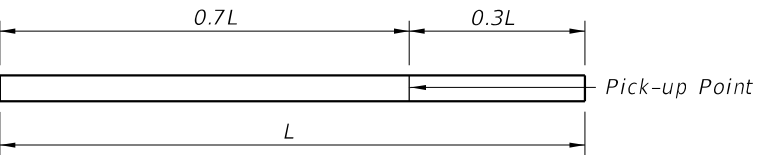
INDEX
450-451

SHEET
1 of 1

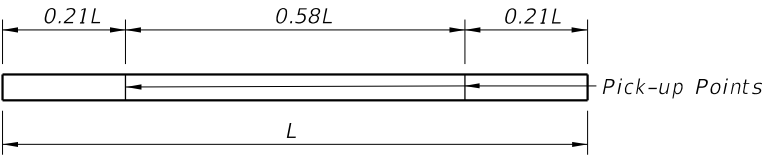
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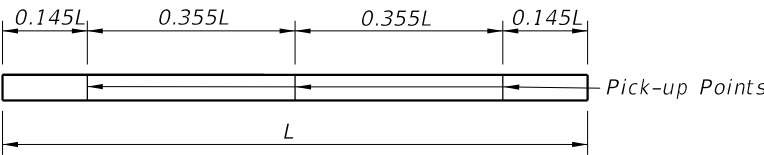
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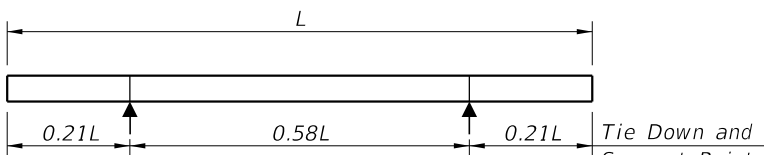
1-POINT PICK-UP



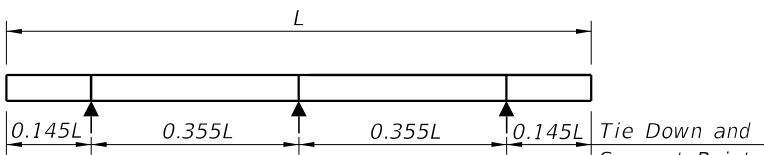
2-POINT PICK-UP



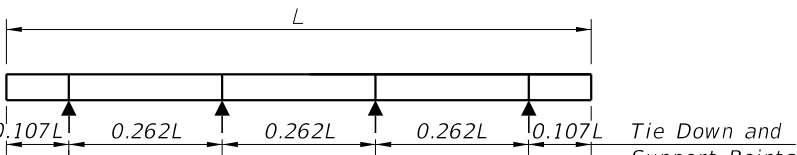
3-POINT PICK-UP
PILE PICK-UP DETAILS



2-POINT SUPPORT



3-POINT SUPPORT



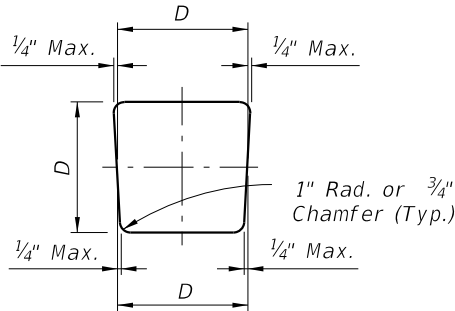
4-POINT SUPPORT

STORAGE AND TRANSPORTATION SUPPORT DETAILS

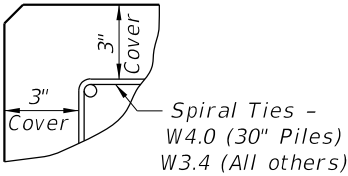
PRESTRESSED CONCRETE PILE NOTES:

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

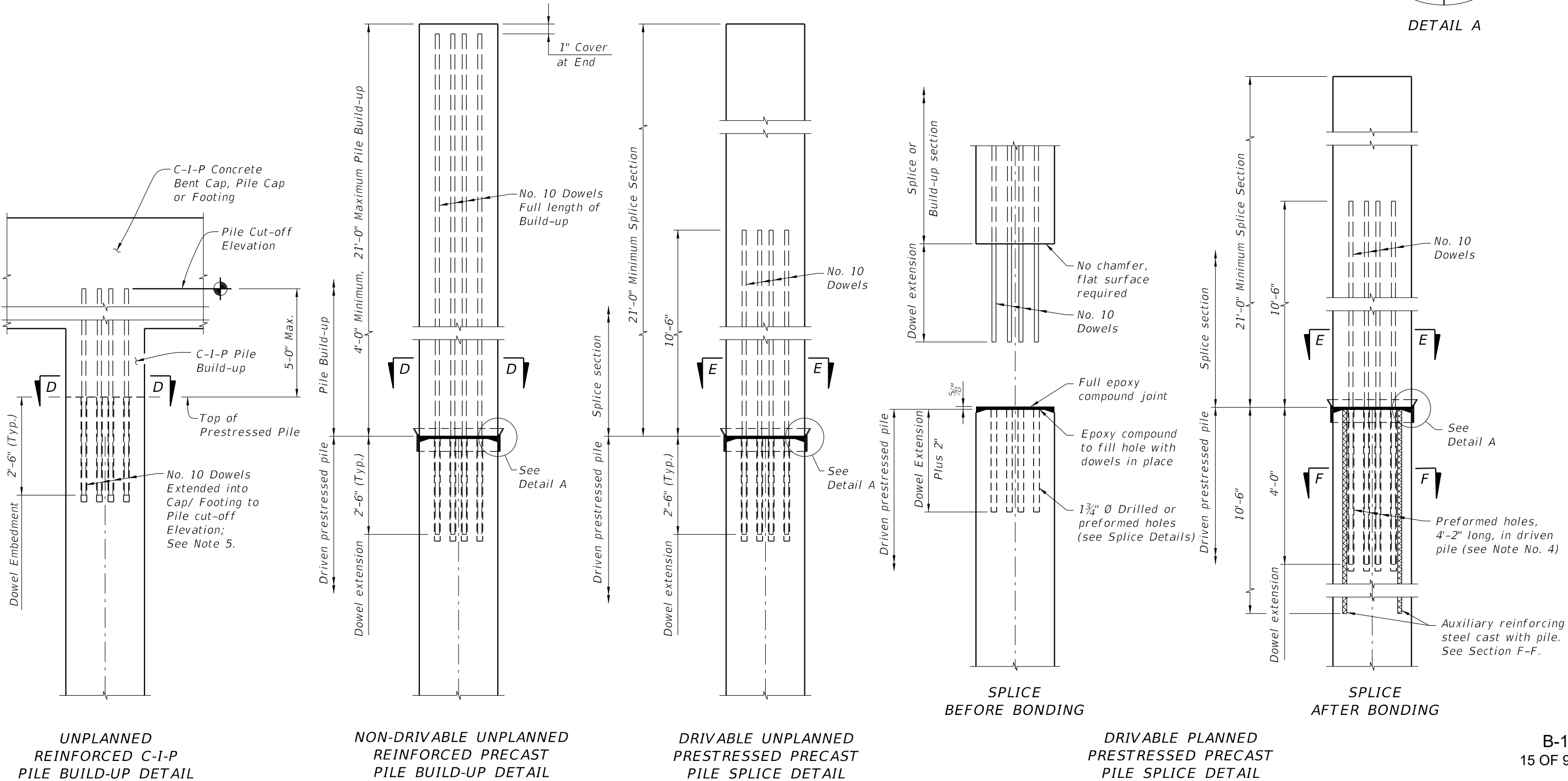
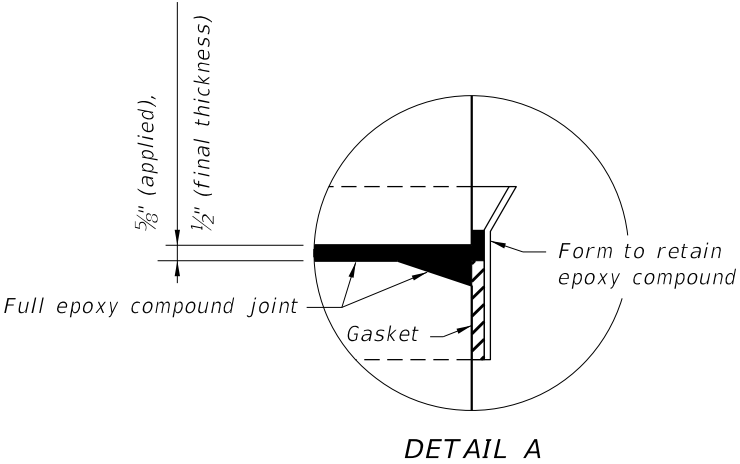


TYPICAL PILE SHAPE
FOR MOLD FORMS



DETAIL SHOWING
TYPICAL COVER

- NOTES:
- 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.
 - Prestressing strands, spiral ties and/or reinforcement are not shown for clarity.
 - 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).
 - 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.
 - 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.



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FY 2024-25
STANDARD PLANS

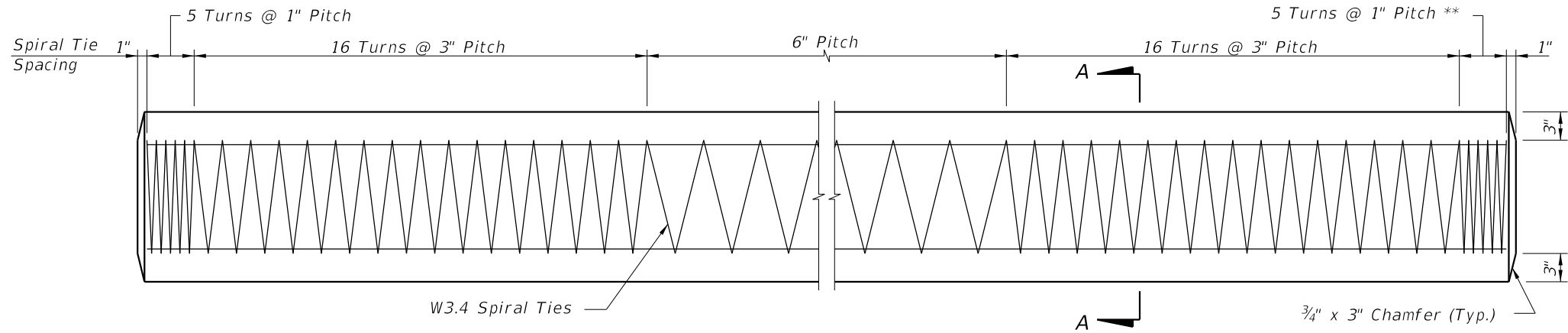
SQUARE PRESTRESSED CONCRETE PILE SPLICES

INDEX
455-002

SHEET
1 of 1

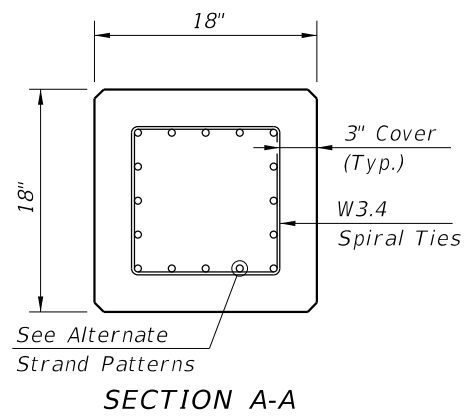
B-15
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ELEVATION

** See Note 4 on Index 455-002



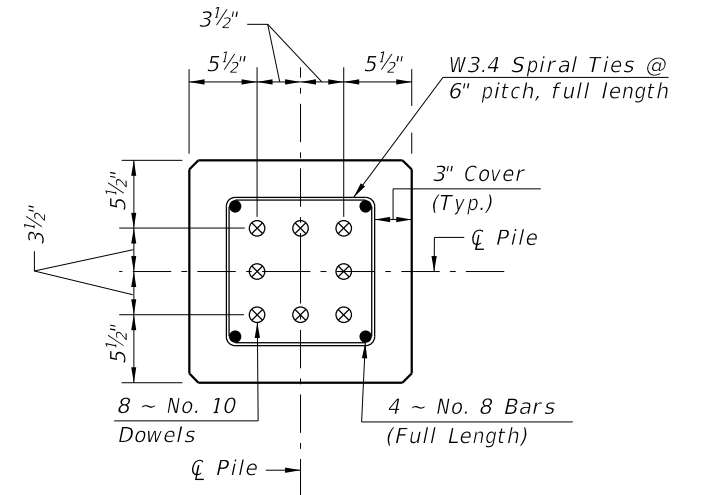
SECTION A-A

ALTERNATE STRAND PATTERNS

- 12 ~ 0.6" Ø, Grade 270 LRS, at 35 kips
- 12 ~ 1/2" Ø (Special), Grade 270 LRS, at 34 kips
- 16 ~ 1/2" Ø, Grade 270 LRS, at 26 kips
- 20 ~ 7/16" Ø, Grade 270 LRS, at 21 kips
- 24 ~ 3/8" Ø, Grade 270 LRS, at 17 kips

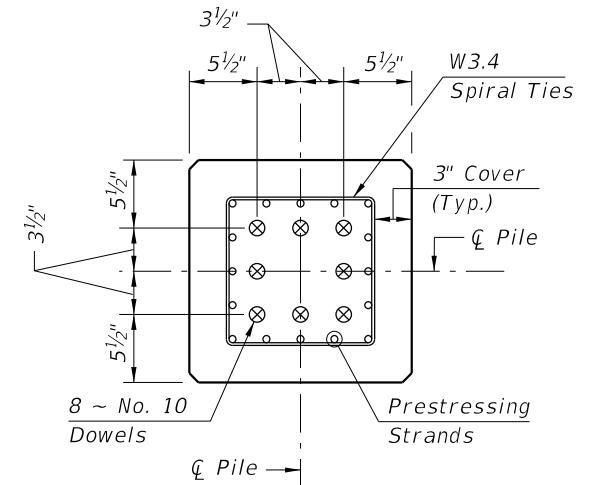
NOTES:

- 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.
- 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.



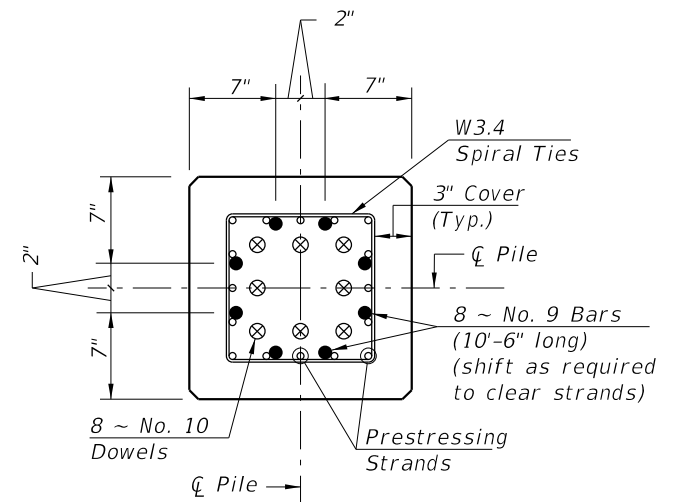
SECTION D-D

(See Non-Drivable Unforeseen Reinforced Precast Splice Detail)



SECTION E-E

(See Drivable Prestressed Precast Splice Detail)



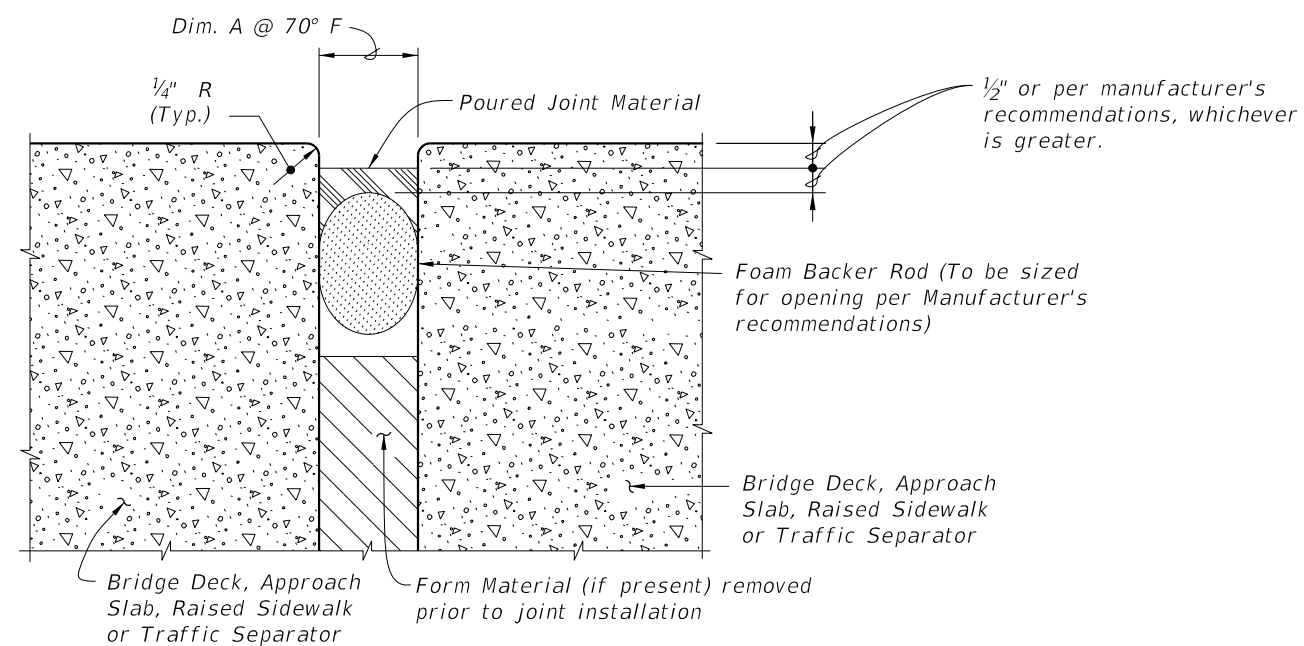
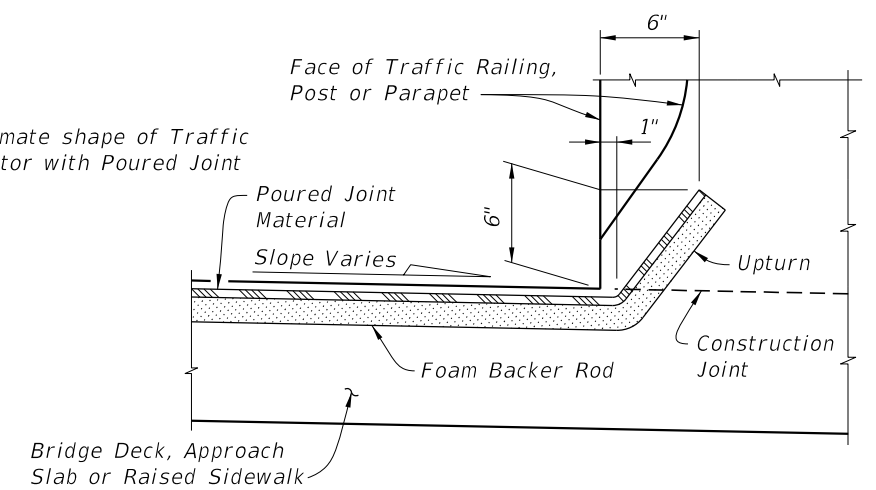
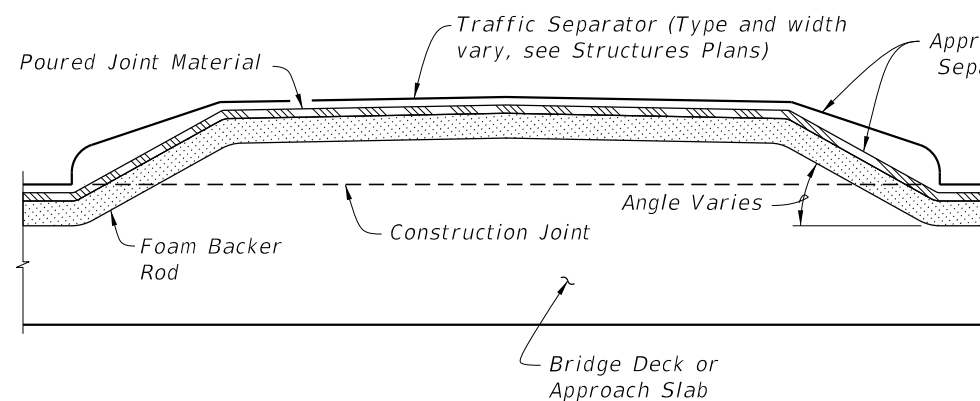
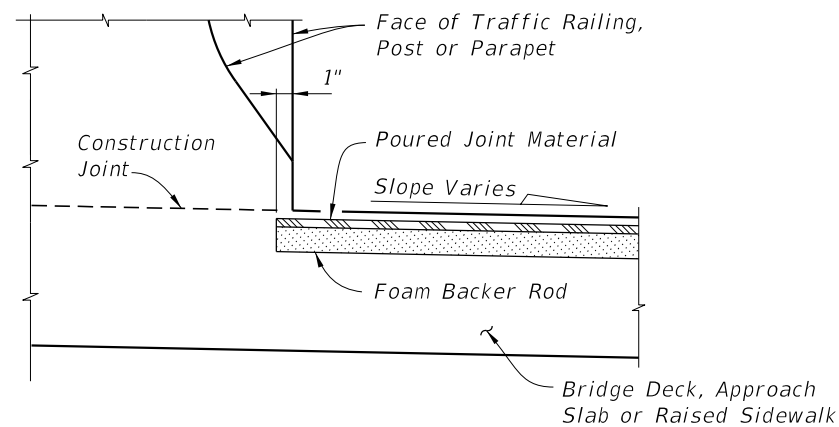
SECTION F-F

(See Drivable Preplanned Splice Detail)

PILE SPLICE REINFORCEMENT DETAILS

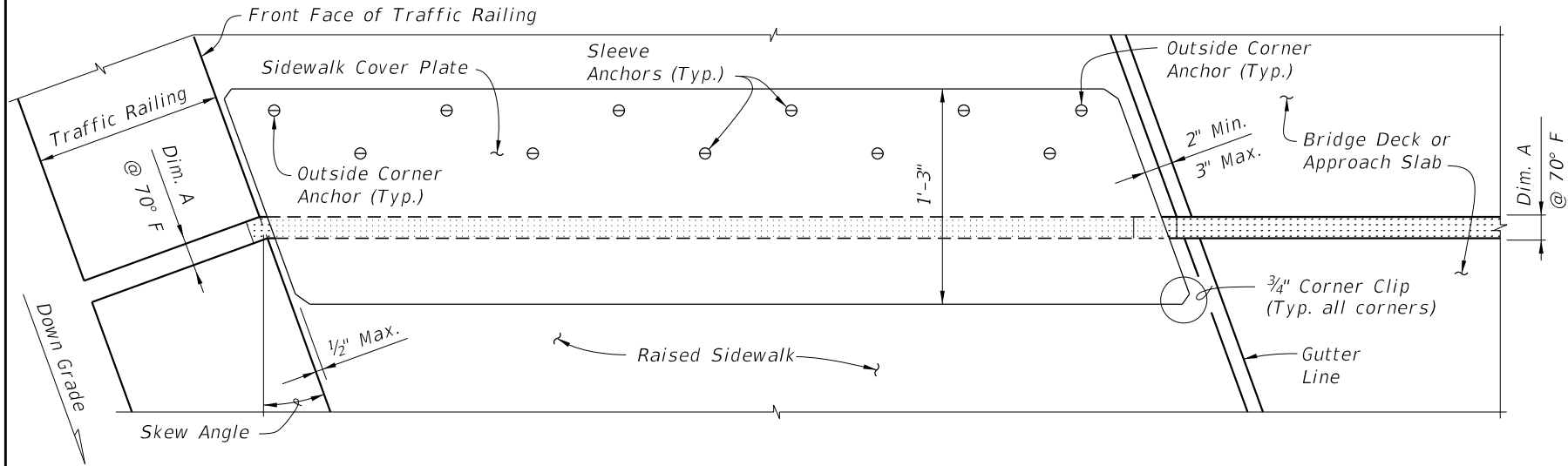
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LAST REVISION 01/01/12	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	18" SQUARE PRESTRESSED CONCRETE PILE	INDEX 455-018	SHEET 1 of 1
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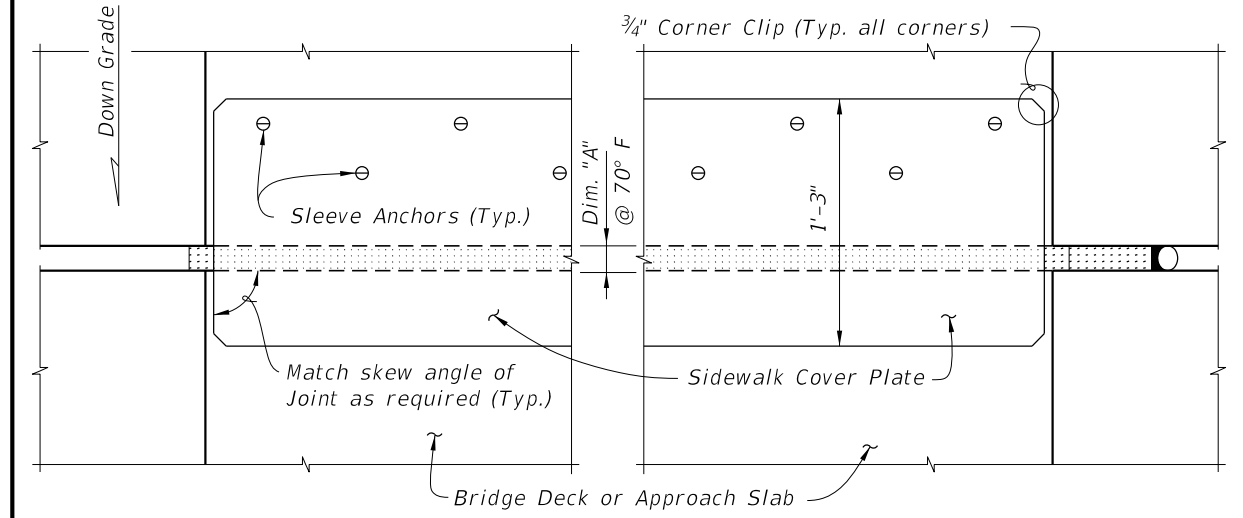


GENERAL NOTES:

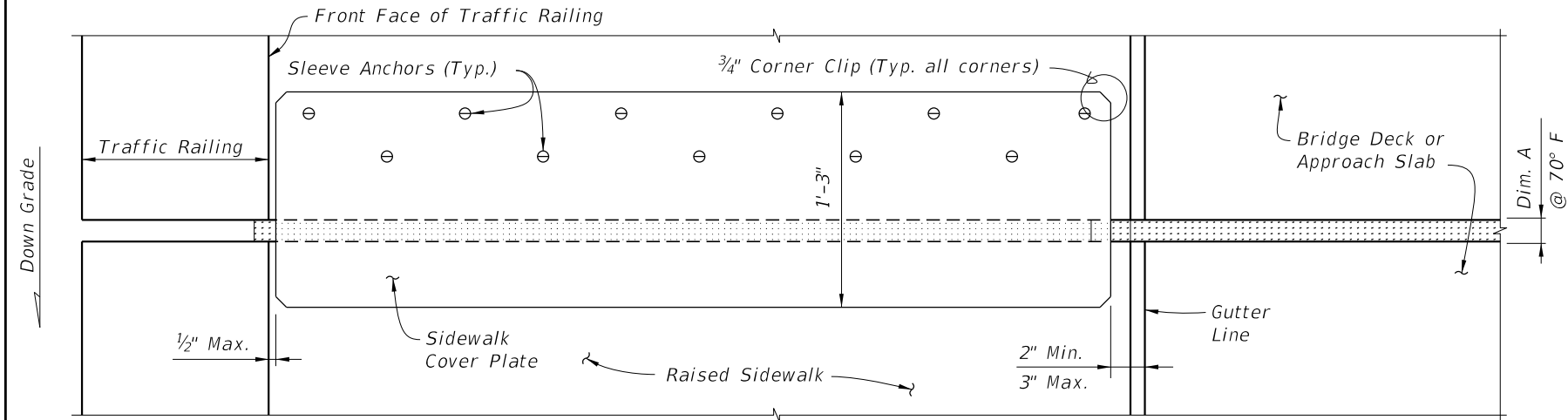
1. Furnish and install Poured Joint With Backer Rod Expansion Joint Systems in accordance with Specification Sections 458 and 932 using Type D silicone sealant material.
2. Refer to the Structures Plans, Poured Expansion Joint Data Table for Dim. A @ 70° F.



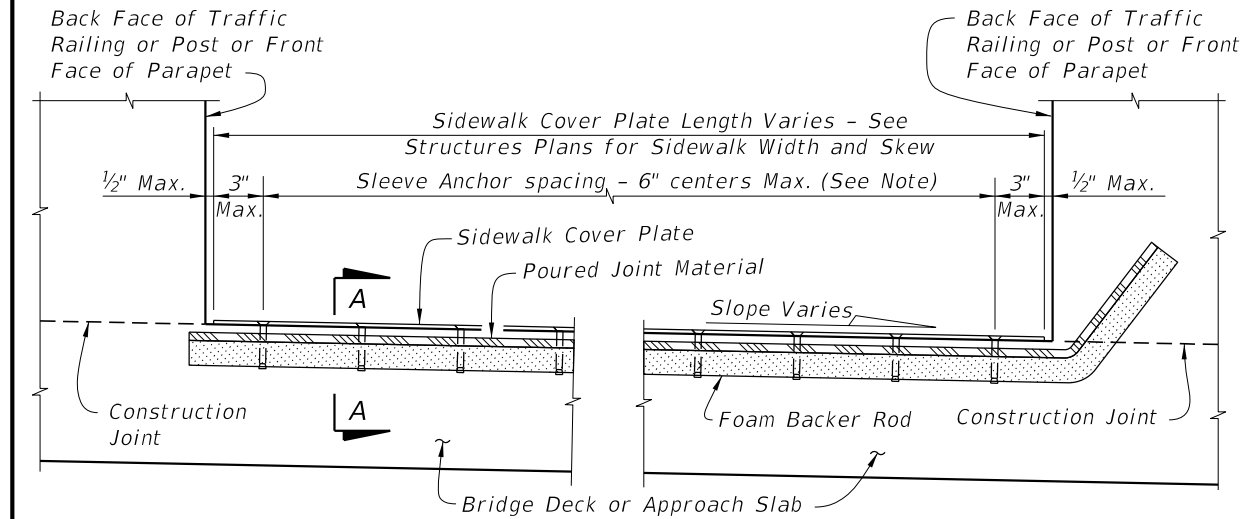
PARTIAL PLAN VIEW OF SKEWED JOINTS



PARTIAL PLAN VIEW

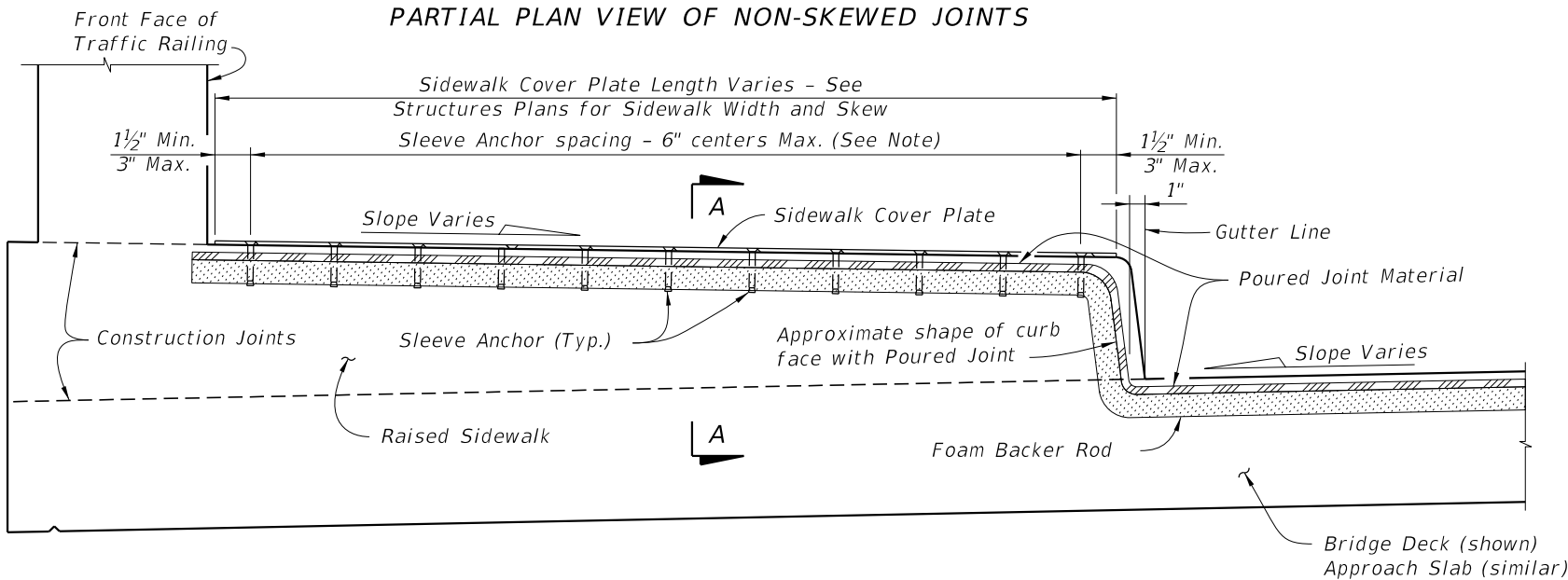


PARTIAL PLAN VIEW OF NON-SKEWED JOINTS



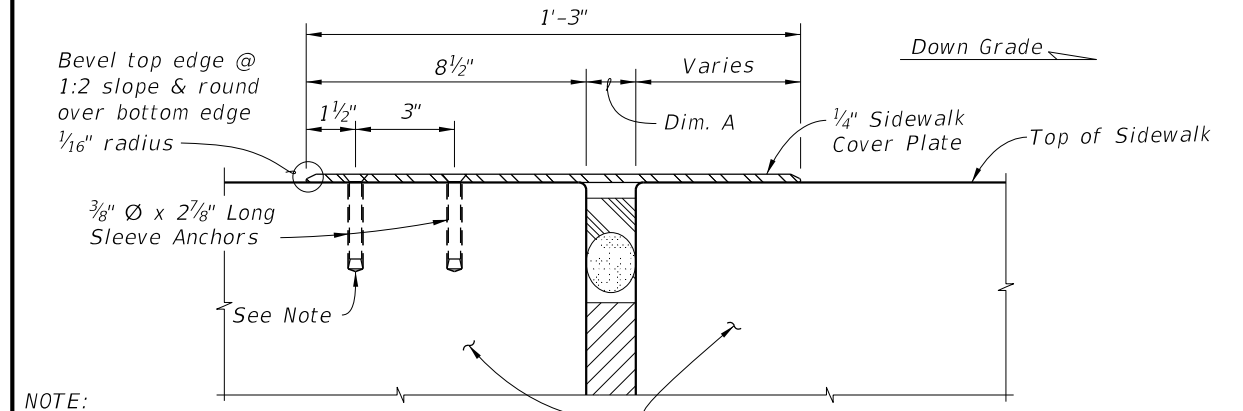
PARTIAL SECTION ALONG Q JOINT

FLUSH SIDEWALK DETAIL



PARTIAL SECTION ALONG Q JOINT

RAISED SIDEWALK DETAIL

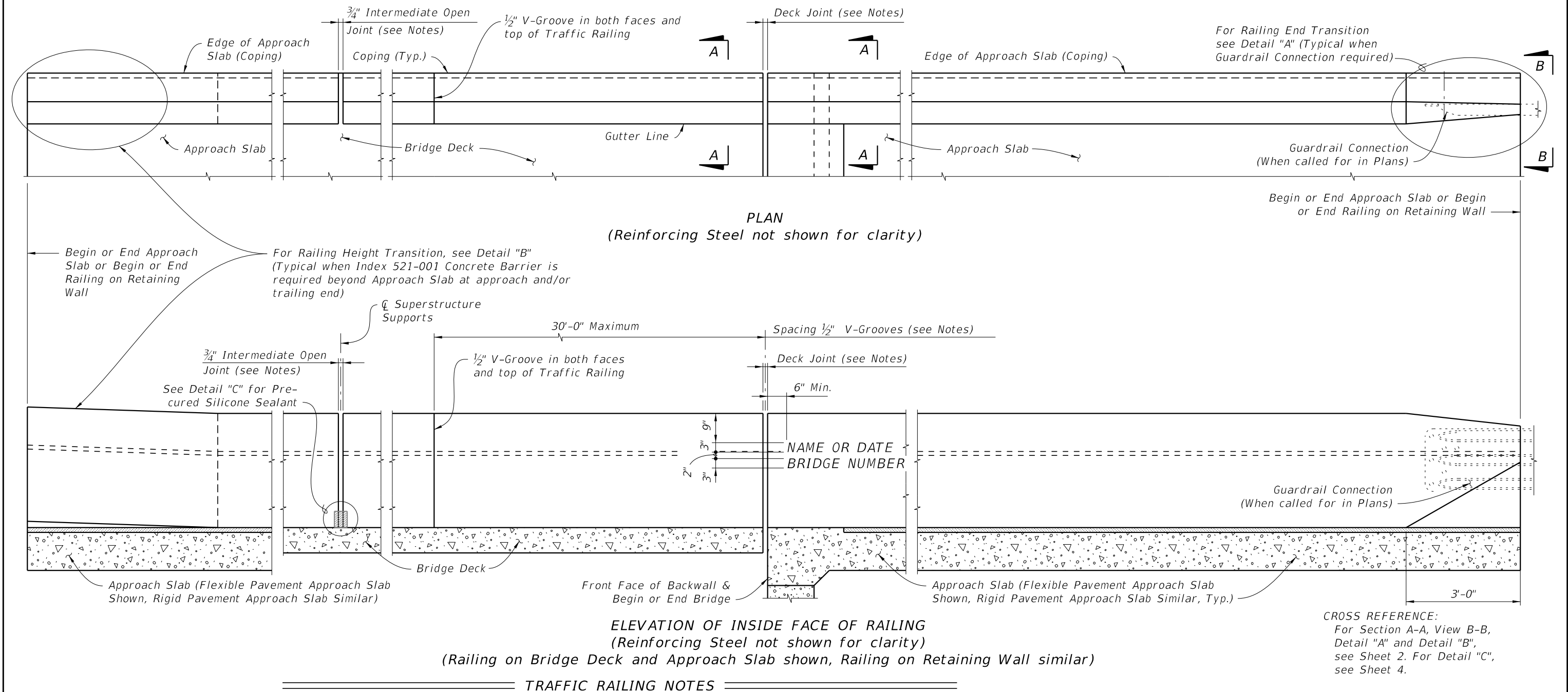


NOTE:
Sleeve Anchors are required at the two outside corners of the Sidewalk Cover Plate. Space Sleeve Anchors uniformly between the corner anchors.

SECTION A-A

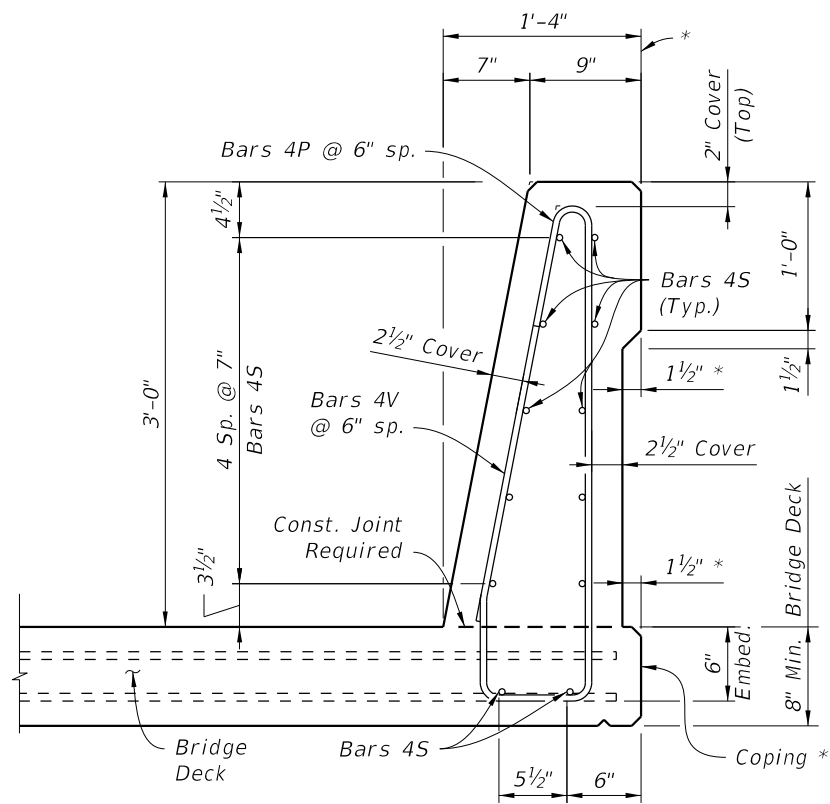
LAST REVISION 07/01/13	REVISION	DESCRIPTION:		FY 2024-25 STANDARD PLANS	EXPANSION JOINT SYSTEM - POURED JOINT WITH BACKER ROD	INDEX 458-110	SHEET 2 of 2
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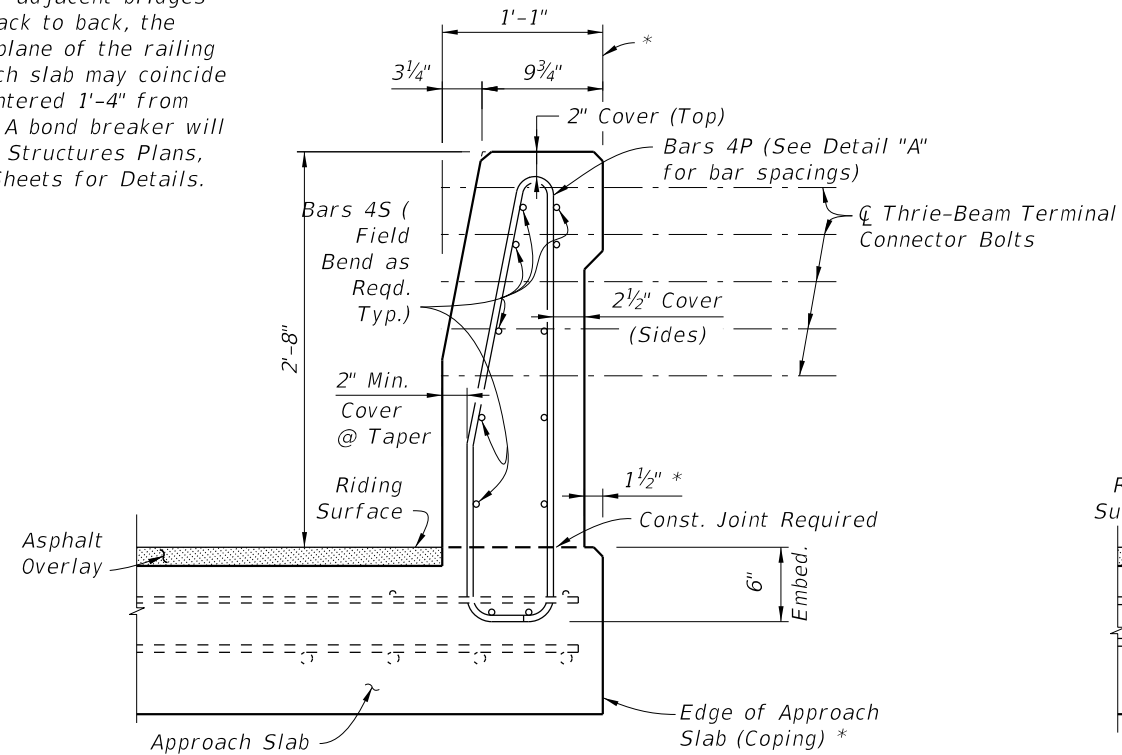


LAST REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
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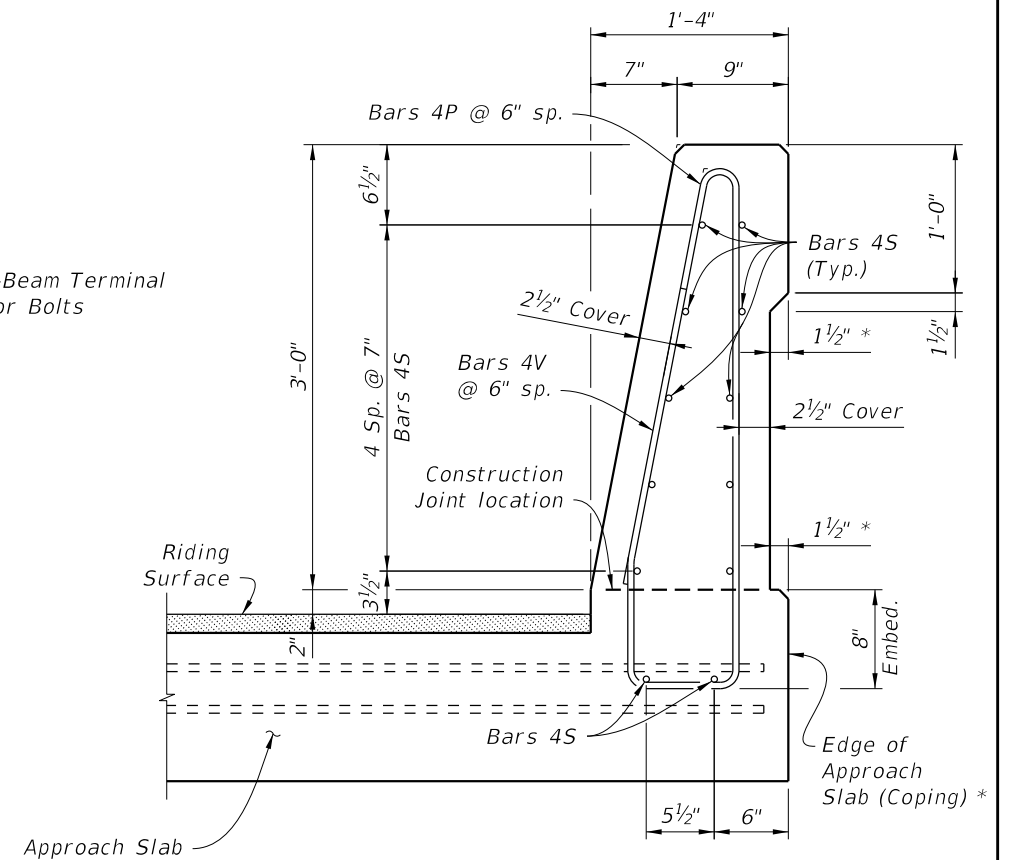
10/16/2023 7:33:32 AM



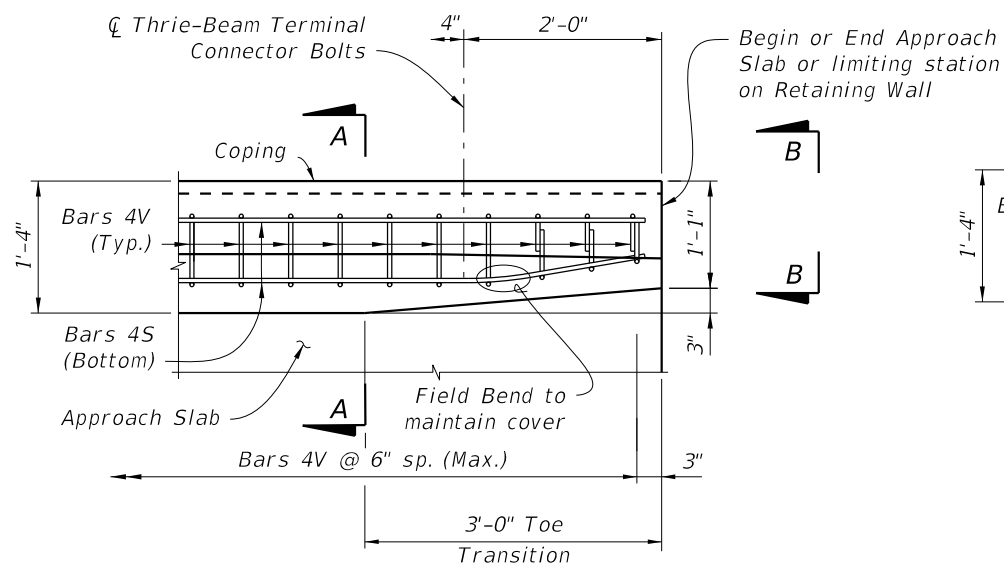
* Where railings of adjacent bridges are to be built back to back, the outside vertical plane of the railing and deck/approach slab may coincide along a plane centered 1'-4" from each gutter line. A bond breaker will be required. See Structures Plans, Superstructure Sheets for Details.



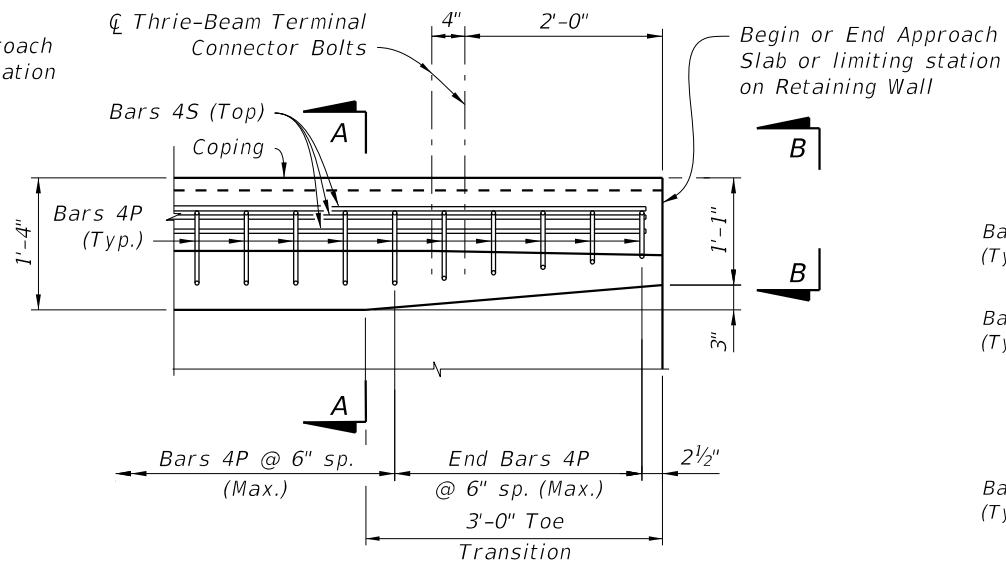
VIEW B-B
END TRANSITION
(Section thru Approach Slab shown,
Section thru Retaining Walls similar)



VIEW C-C
HEIGHT TRANSITION



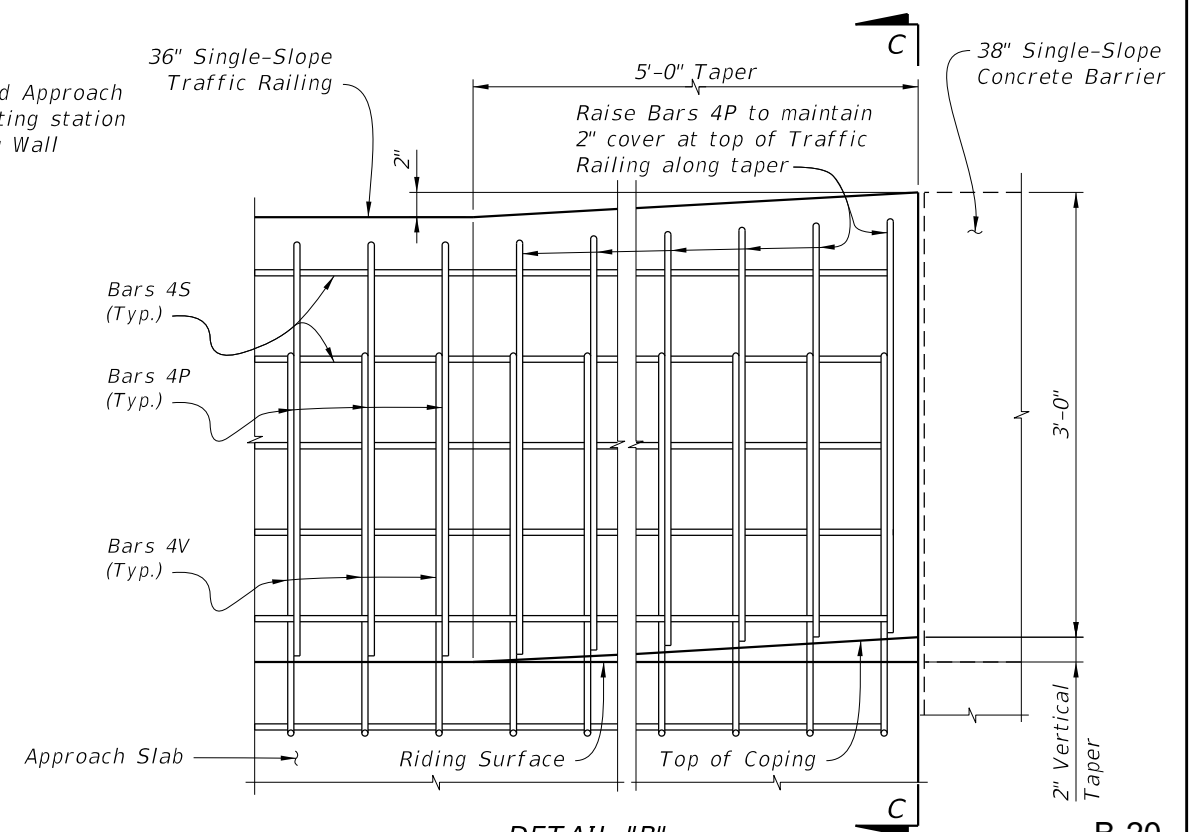
PLAN - RAILING END TRANSITION
(Showing Bars 4V and 4S)



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

DETAIL "A"

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.



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

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11/01/20

REVISION

DESCRIPTION:

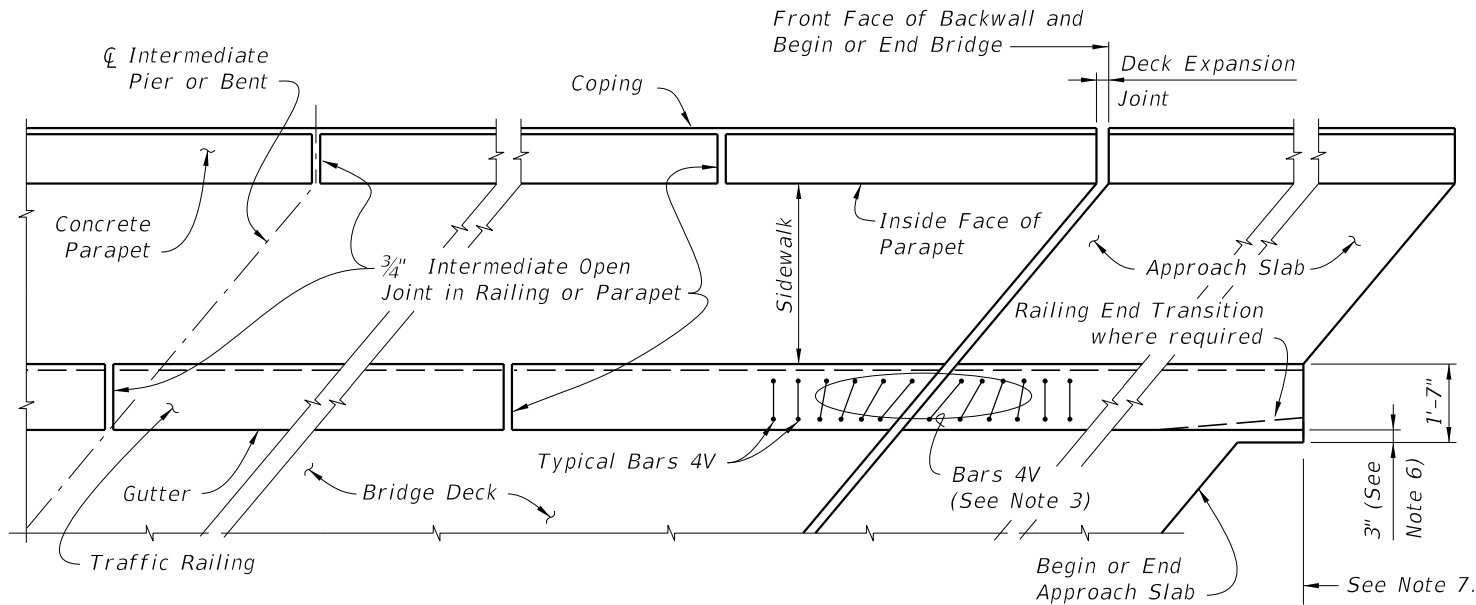


FY 2024-25
STANDARD PLANS

TRAFFIC RAILING - (36" SINGLE-SLOPE)

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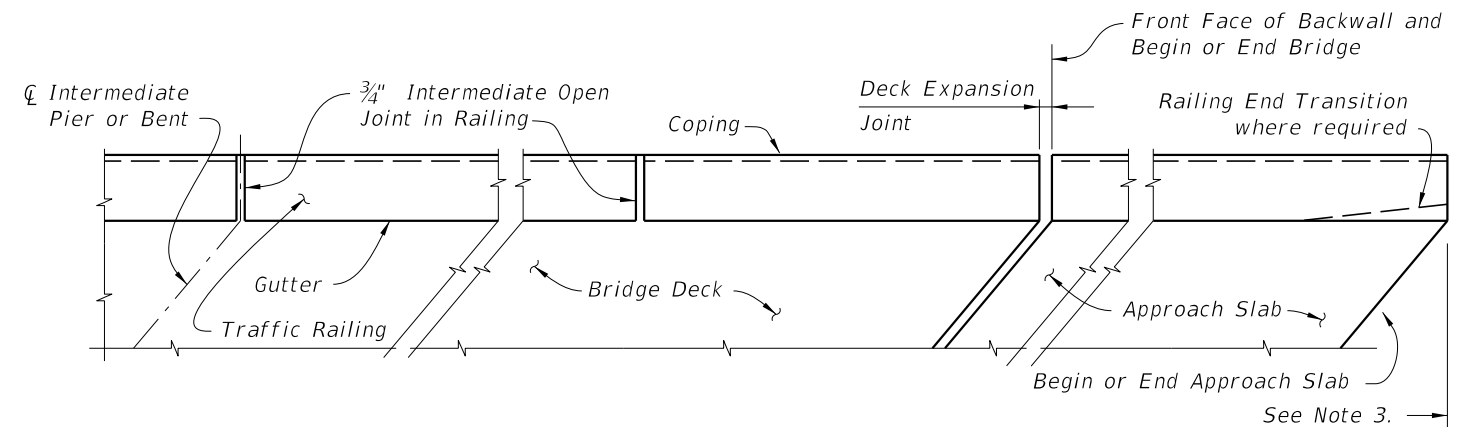
SHEET
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PARTIAL PLAN VIEW OF SKEWED BRIDGE DECK AND APPROACH SLAB WITH SIDEWALK, SINGLE-SLOPE TRAFFIC RAILING AND PEDESTRIAN/BICYCLE RAILING
INDEX 521-820 or 521-825, OTHER TRAFFIC RAILINGS SIMILAR

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) 3/4" 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) 3/4" Intermediate Open Joints and 1/2" 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.

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LAST
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REVISION
DESCRIPTION:



FY 2024-25
STANDARD PLANS

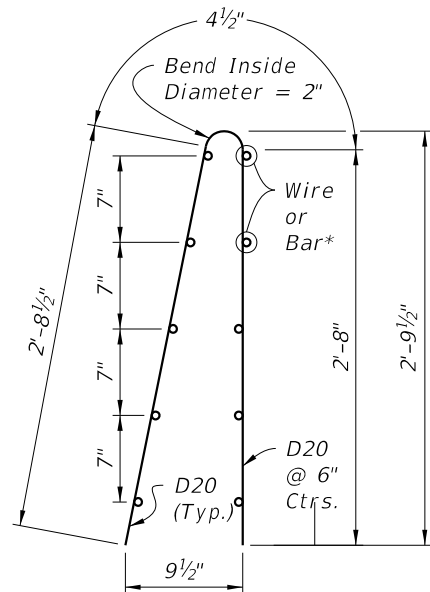
TRAFFIC RAILING - (36" SINGLE-SLOPE)

INDEX
521-427

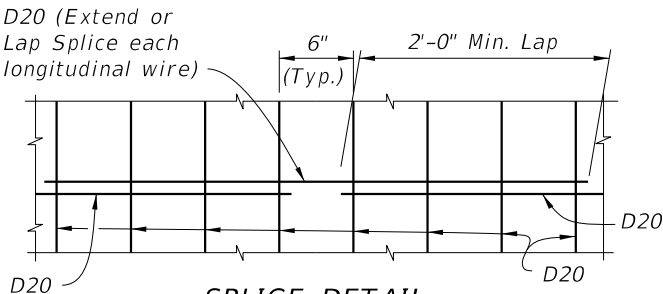
SHEET
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ALTERNATE REINFORCING STEEL (WWR) DETAILS

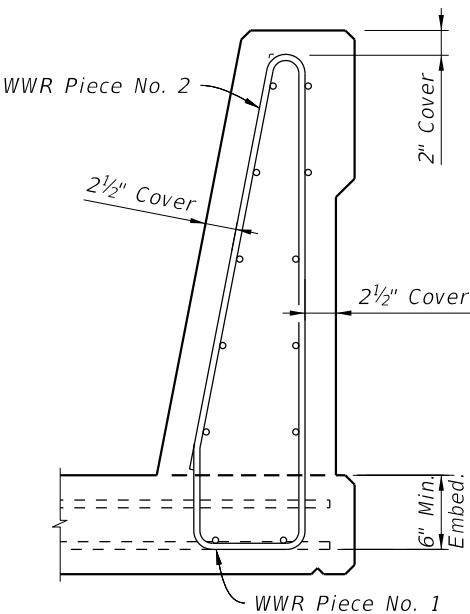
* Longitudinal D20 Wires or #4 Bars may be tied.



WWR Piece No. 2



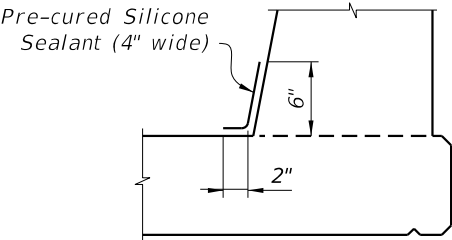
WWR Piece No. 1



WWR Piece No. 1

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.



DETAIL "C" - SECTION AT INTERMEDIATE OPEN JOINT

INTERMEDIATE JOINT SEAL NOTES:

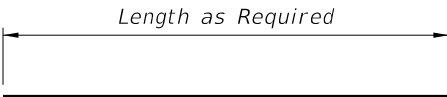
- 1. At Intermediate Open Joints, seal the lower 6" portion of the open joint with Pre-cured Silicone Sealant in accordance with Specification Section 932.
- 2. Apply sealant prior to any Class V finish coating and remove all curing compound and loose material from the surface prior to application of bonding agent.
- 3. Include the cost of the Pre-cured Silicone Sealant in the Contract Unit Price for the Traffic Railing.

CONVENTIONAL REINFORCING STEEL BENDING DIAGRAMS

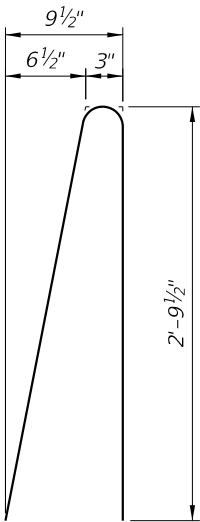
ROADWAY CROSS-SLOPE	LOW GUTTER	HIGH GUTTER
	ØB	ØB
0% to 2%	90°	90°
2% to 6%	87°	93°
6% to 10%	84°	96°

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

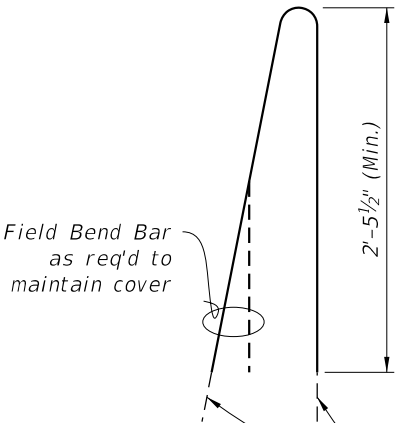
BILL OF REINFORCING STEEL		
MARK	SIZE	LENGTH
P	4	5'-11"
S	4	As Req'd.
V	4	4'-10"



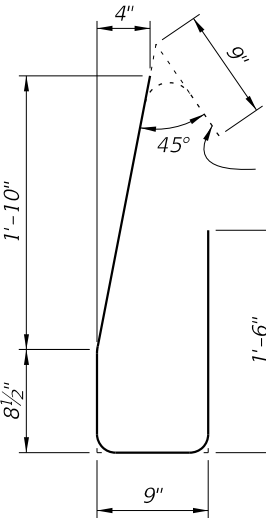
BAR 4S



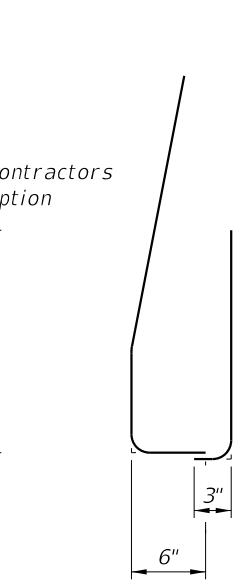
STIRRUP BAR 4P



END STIRRUP BAR 4P To Be Field Cut and Bent



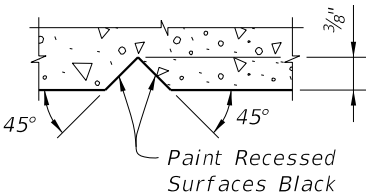
BAR 4V



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 8 1/2" 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".

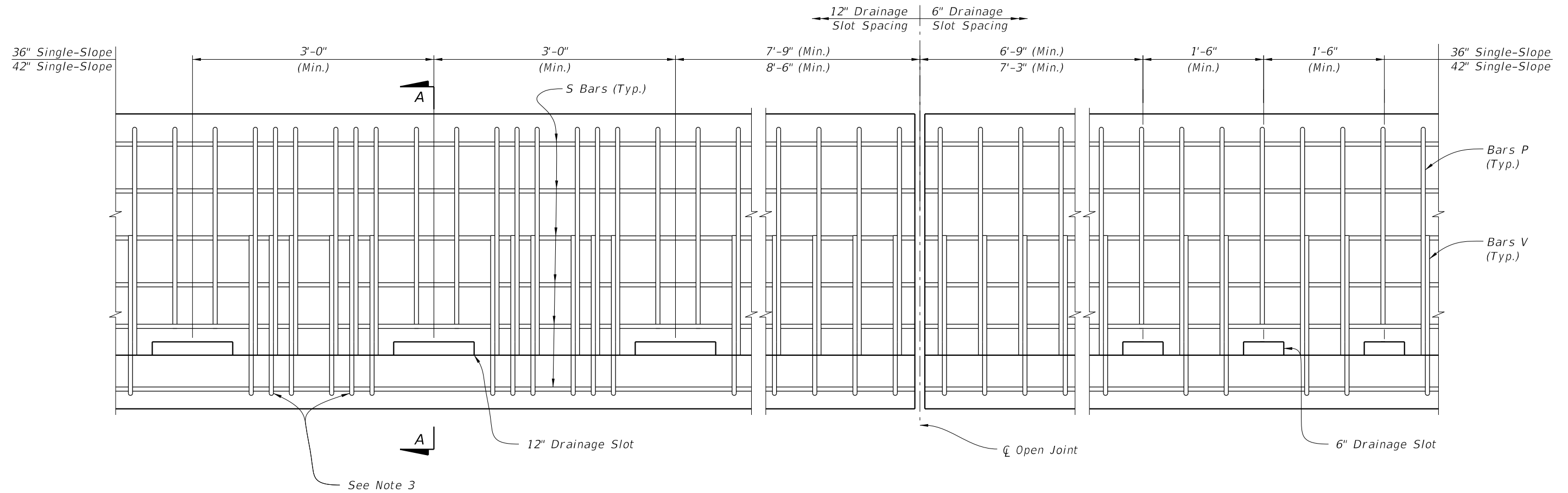


SECTION THRU RECESSED "V" GROOVE TO FORM INSCRIBED LETTERS AND FIGURES

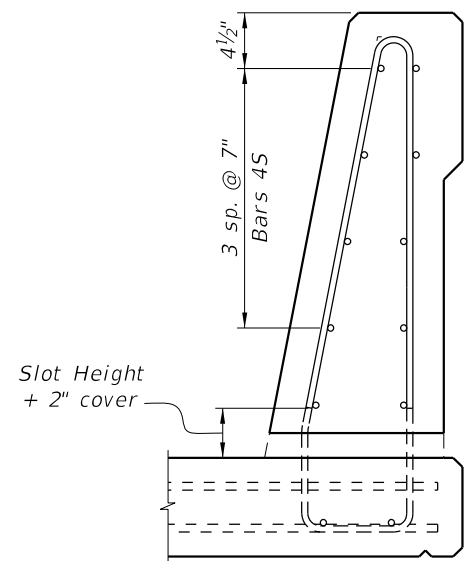
ESTIMATED TRAFFIC RAILING QUANTITIES		
ITEM	UNIT	QUANTITY
Concrete	CY/LF	0.107
Reinforcing Steel	LB/LF	24.78

(The above quantities are based on a 2% deck cross slope; railing on low side of deck.)

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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	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	TRAFFIC RAILING - (36" SINGLE-SLOPE)	INDEX	SHEET
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1. *Furnish and install approved Conduits, Fittings and Embedded Junction Boxes (EJB's) in accordance with Specification Sections 630 and 635, this Standard, the National Electric Code (NEC) and as directed by the Engineer.*
2. *Furnish and install Embedded Junction Boxes (EJB) with weatherproof covers sized in accordance with NEC requirements and the maximum size limits shown. Install EJB adjacent to the Begin and End of Bridges, Begin and End of Retaining Walls, (except omit EJB adjacent to the Bridge unless a precast Traffic Railing with junction slab is used), and at other locations as necessary to maintain 300 foot maximum spacing. See Plans for additional locations and details.*
3. *For Conduit not designated for future use, see Plans for details. For Conduit designated for future use, stub out and cap the Conduit. Drive a 3'-0"± long ¾" (min.) diameter Steel Pipe flush with the ground line adjacent to the end of the Conduit as shown on Sheets 2, 3 or 4. Provide the location of the stub out with Steel Pipe to the Engineer for inclusion on the As-Built Plans.*
4. *Shift vertical Railing reinforcement symmetrically to provide 2" clearance to EJB. Space shifted vertical reinforcement at minimum 3" centers. Cut horizontal Railing reinforcement to provide 2" clearance to EJB and provide supplemental reinforcement as shown. To facilitate placement of Conduit, Expansion Fittings, and Expansion/Deflection Fittings, shift reinforcing a maximum of 1" but do not cut railing reinforcing to facilitate Conduit or Fittings. Do not bundle Conduits, or Conduit and horizontal reinforcement.*
5. *Place conduits as indicated in this Standard unless Structures Plans indicate fewer.*

EJB "A"
Double or Triple Conduit
(Maximum Dimensions)

Railing Joint

*Wrap with sponge rubber
1/4" thick nominal*

*2" Ø PVC
Conduits (Typ.)*

*Traffic Railing or
Pedestrian / Bicycle Railing*

Expansion Fitting

DETAIL "A"
EXPANSION FITTING DETAIL

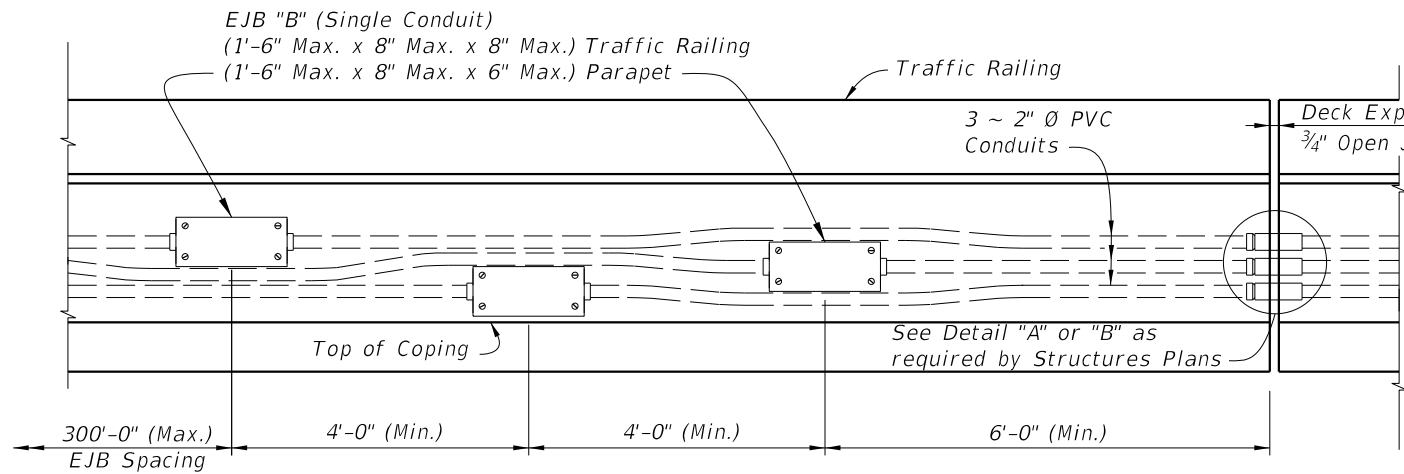
Railing Joint

*Traffic Railing or
Pedestrian / Bicycle Railing*

*Expansion / Deflection
Fitting*

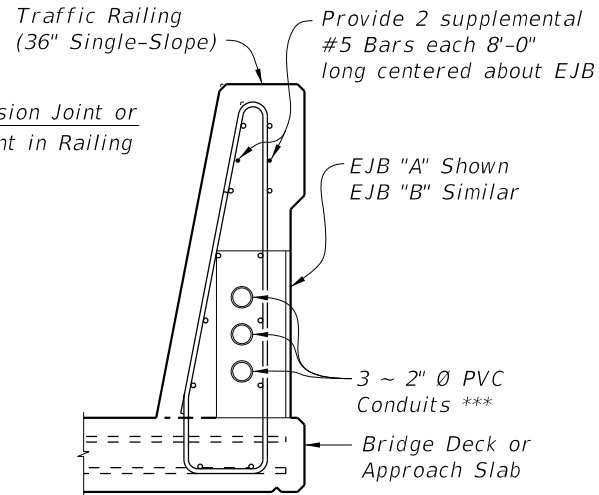
*Wrap with sponge rubber
1/4" thick nominal*

***DETAIL "B" EXPANSION / DEFLECTION
FITTING DETAIL (CONCRETE / CONCRETE)***

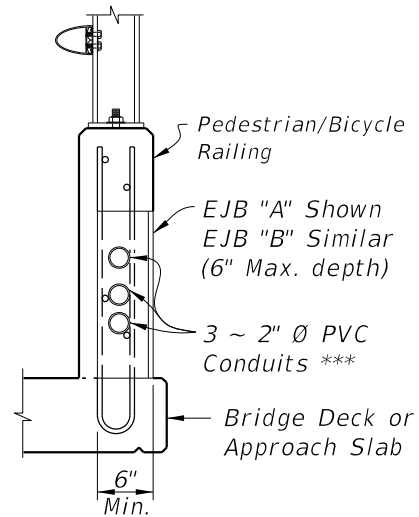


EJB "B" DETAIL

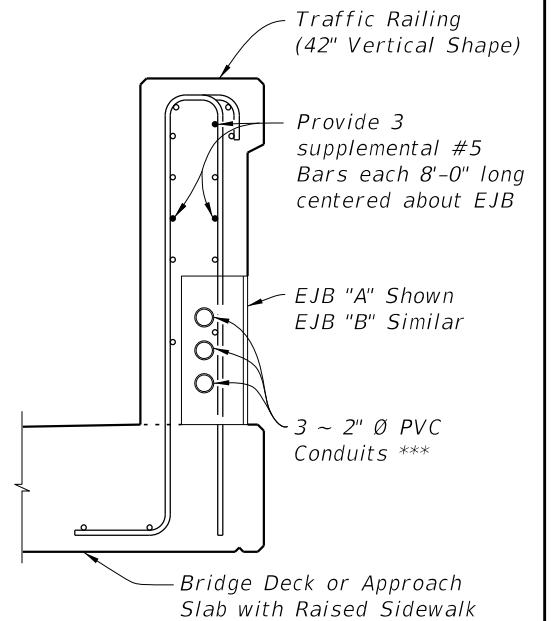
* 36" Single-Slope Traffic Railing shown, other Traffic Railings and Pedestrian/Bicycle Railings similar.
 ** EJB "A" shown, EJB "B" similar. See EJB "B" Detail.
 *** See Sheet 1, Note 5.



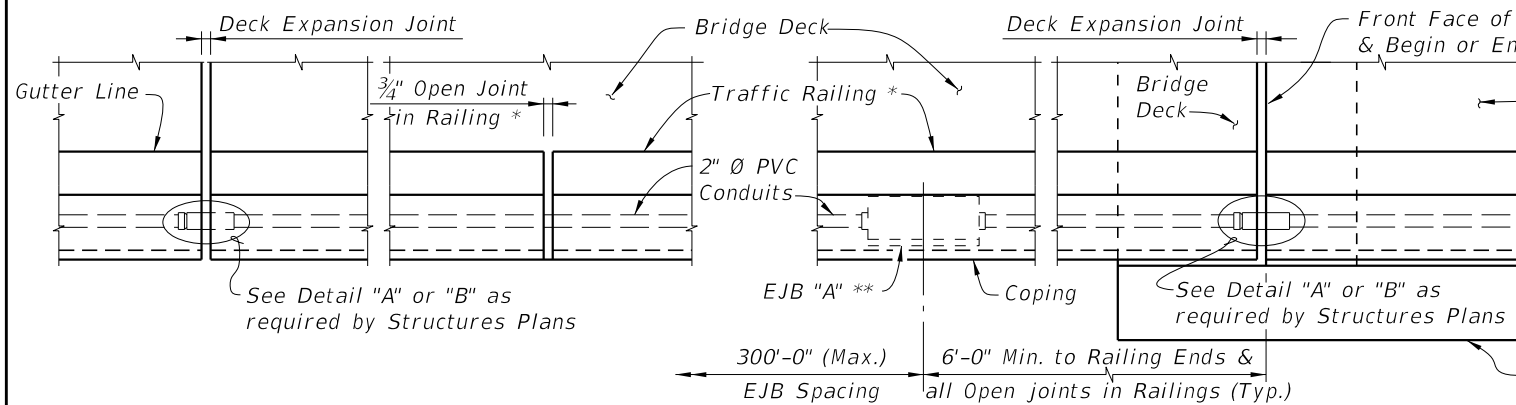
SECTION THRU TRAFFIC RAILING AT EJB (36" SINGLE-SLOPE SHOWN, 42" SINGLE-SLOPE SIMILAR)



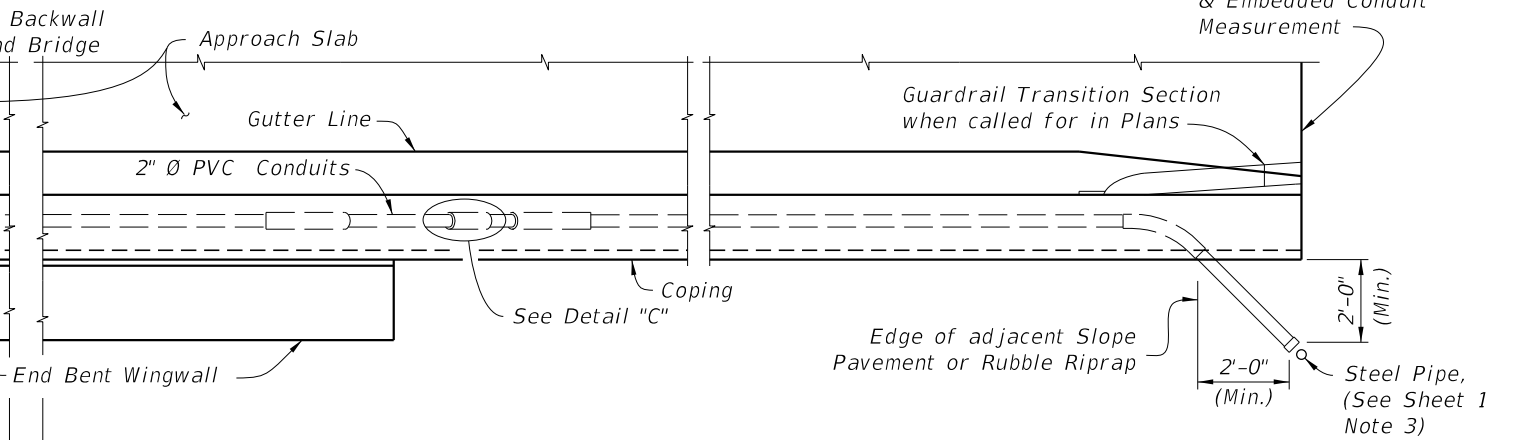
SECTION THRU PEDESTRIAN / BICYCLE RAILING AT EJB



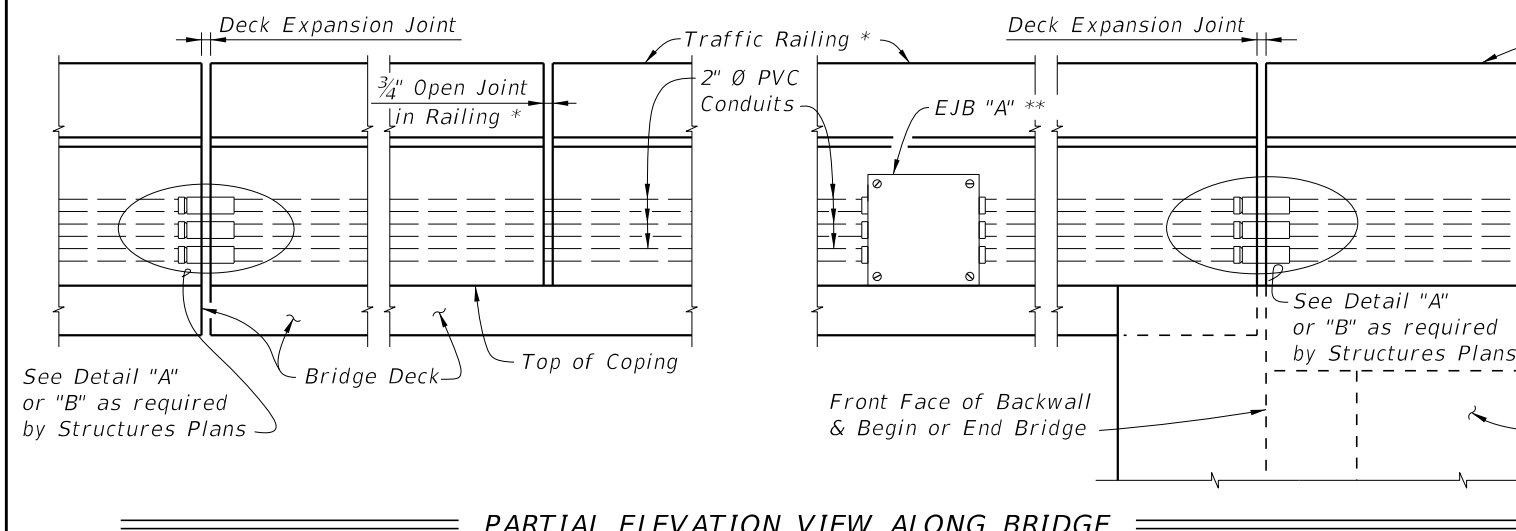
SECTION THRU TRAFFIC RAILING AT EJB (42" VERTICAL SHAPE SHOWN, 32" VERTICAL SHAPE SIMILAR)



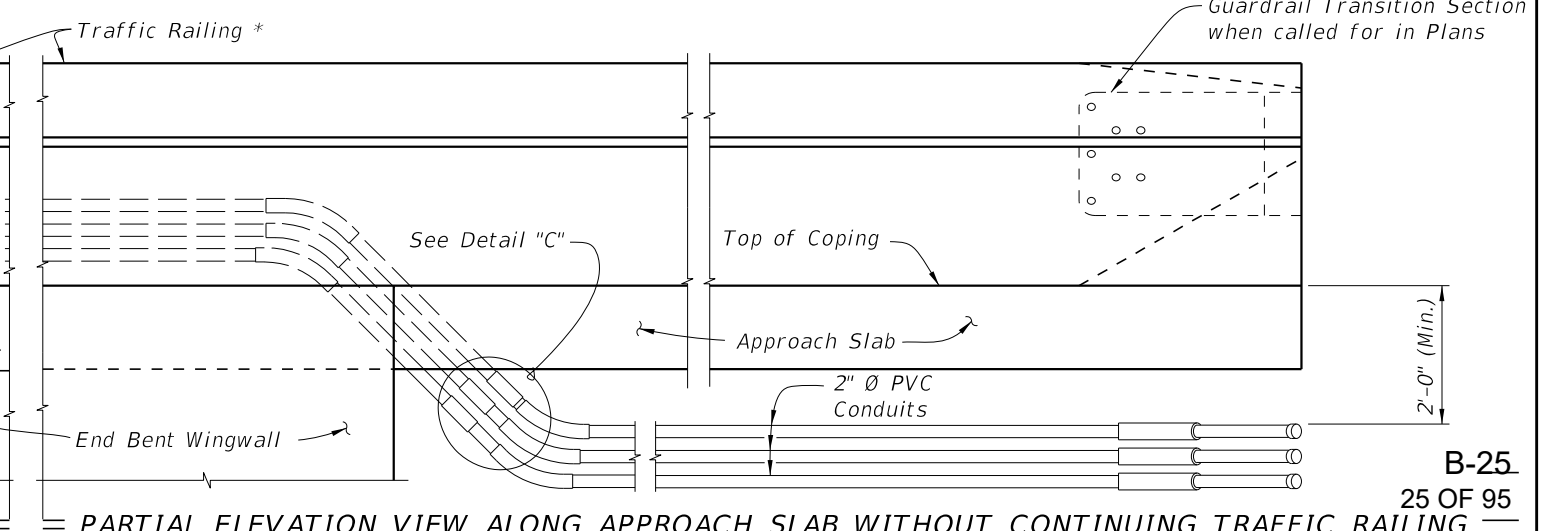
PARTIAL PLAN VIEW ALONG BRIDGE



PARTIAL PLAN VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING



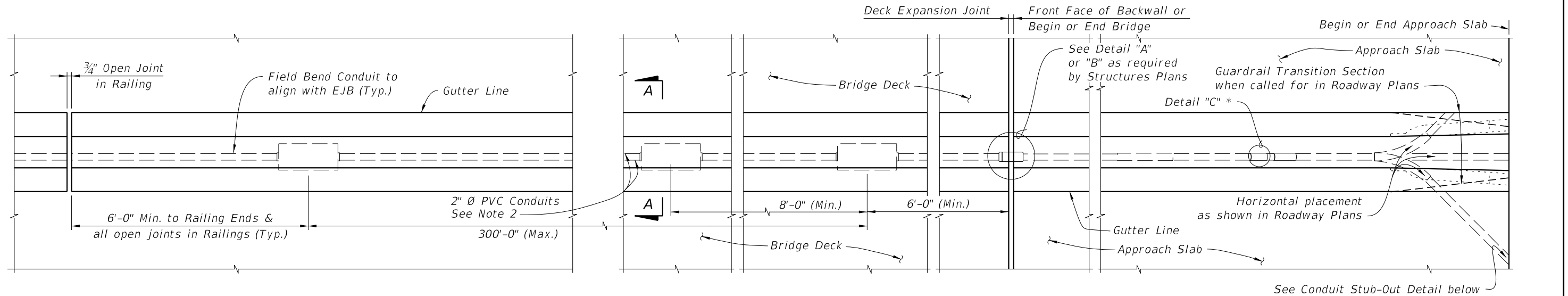
PARTIAL ELEVATION VIEW ALONG BRIDGE



PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITHOUT CONTINUING TRAFFIC RAILING

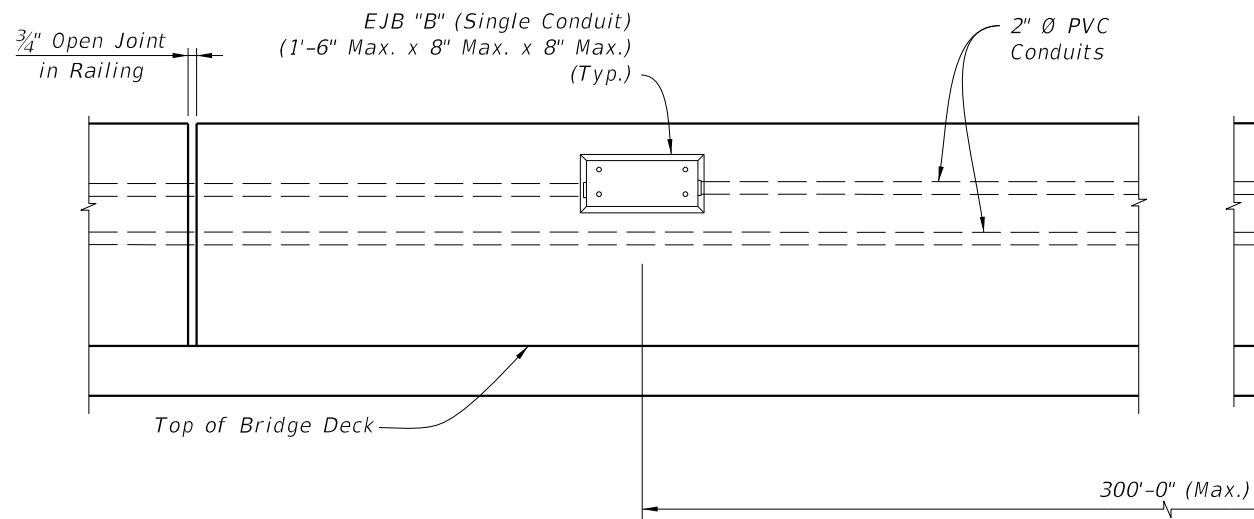
BRIDGE AND APPROACH SLAB WITH EDGE RAILING

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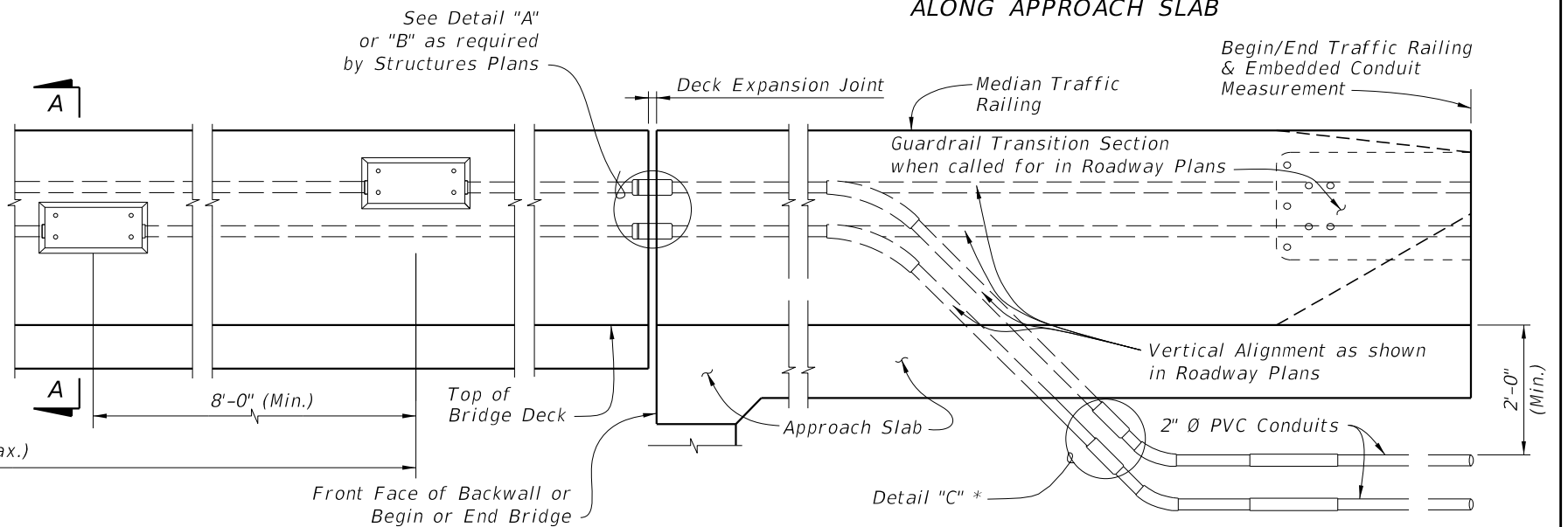


PARTIAL PLAN VIEW OF MEDIAN TRAFFIC RAILING
ALONG BRIDGE

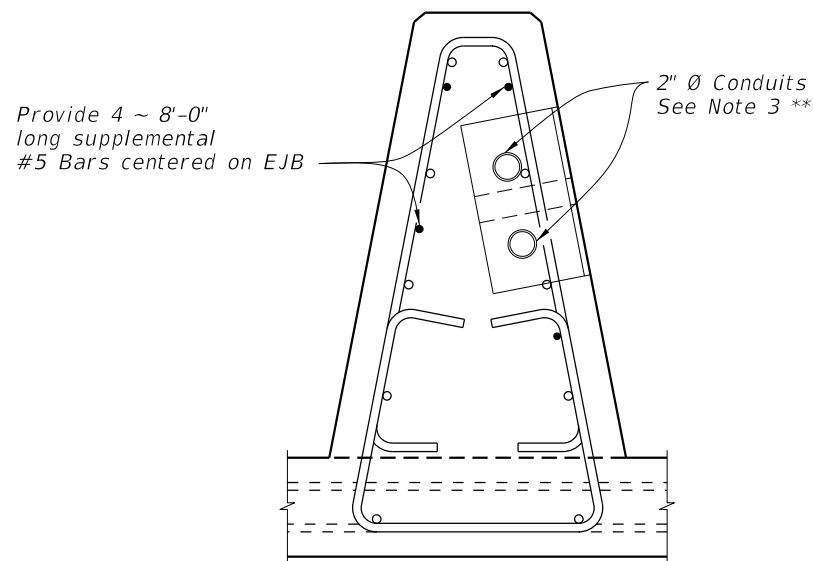
PARTIAL PLAN VIEW OF MEDIAN TRAFFIC RAILING
ALONG APPROACH SLAB



PARTIAL ELEVATION VIEW OF MEDIAN TRAFFIC RAILING
ALONG BRIDGE

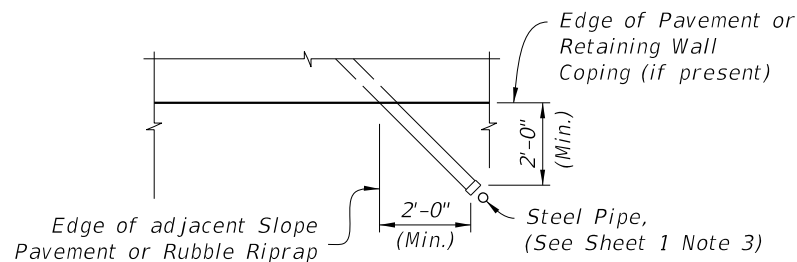


PARTIAL ELEVATION VIEW OF MEDIAN TRAFFIC RAILING
ALONG APPROACH SLAB



SECTION A-A
Median Traffic Railing (See Note 4)

* For non-continuing Traffic Railing only.
** See Sheet 1, Note 5



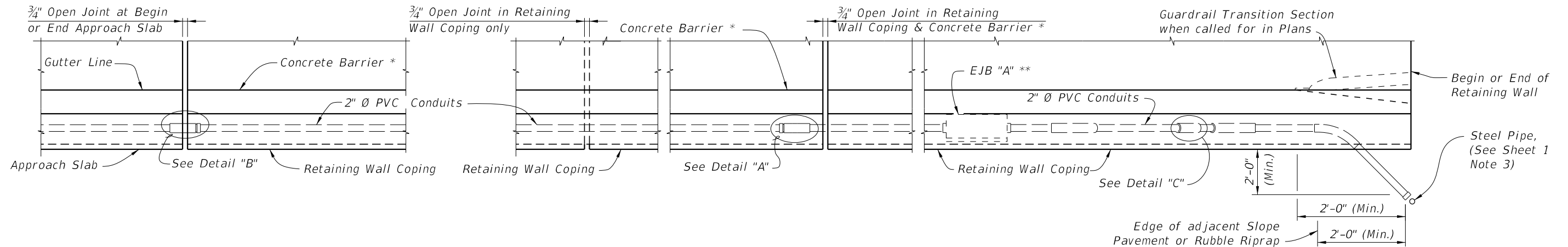
CONDUIT STUB-OUT DETAIL

NOTES:

1. Work this sheet with Index 521-426.
2. Adjust Conduit horizontally and vertically as necessary to align with EJB "B".
3. When installed in traffic face of a railing, use EJB "B" with a minimum 3/8" thick galvanized steel cover.
4. Position EJB such that, with gasket and cover plate secured and in place, cover plate is flush with the railing face. Flush is +1/8" to -1/4" measured with a horizontal straightedge.

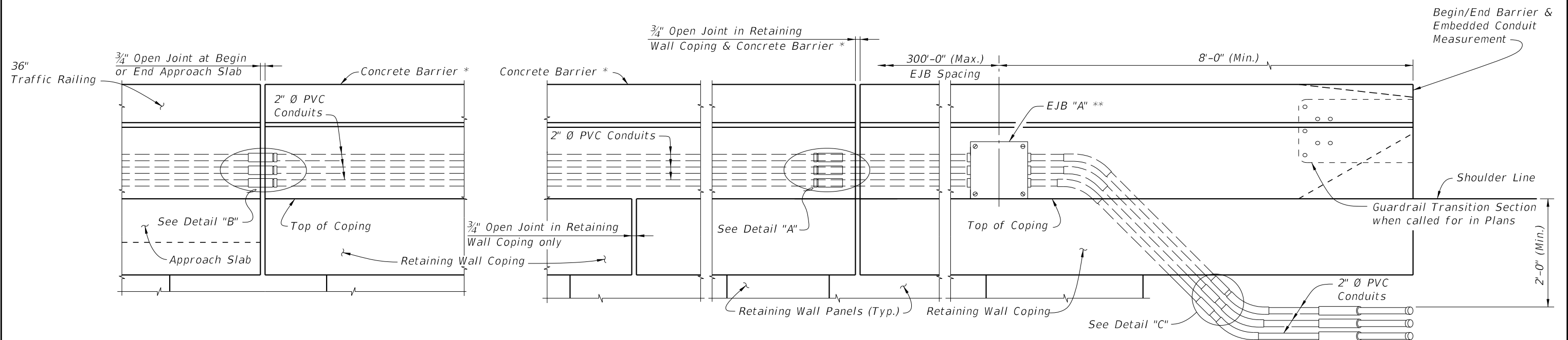
B-26
26 OF 95
BRIDGE AND APPROACH SLAB WITH MEDIAN TRAFFIC RAILING

LAST REVISION	DESCRIPTION:	FDOT	FY 2024-25 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX	SHEET
11/01/17					630-010	3 of 4



PARTIAL PLAN VIEW ALONG APPROACH SLAB WITH CONTINUING CONCRETE BARRIER

PARTIAL PLAN VIEW ALONG RETAINING WALL



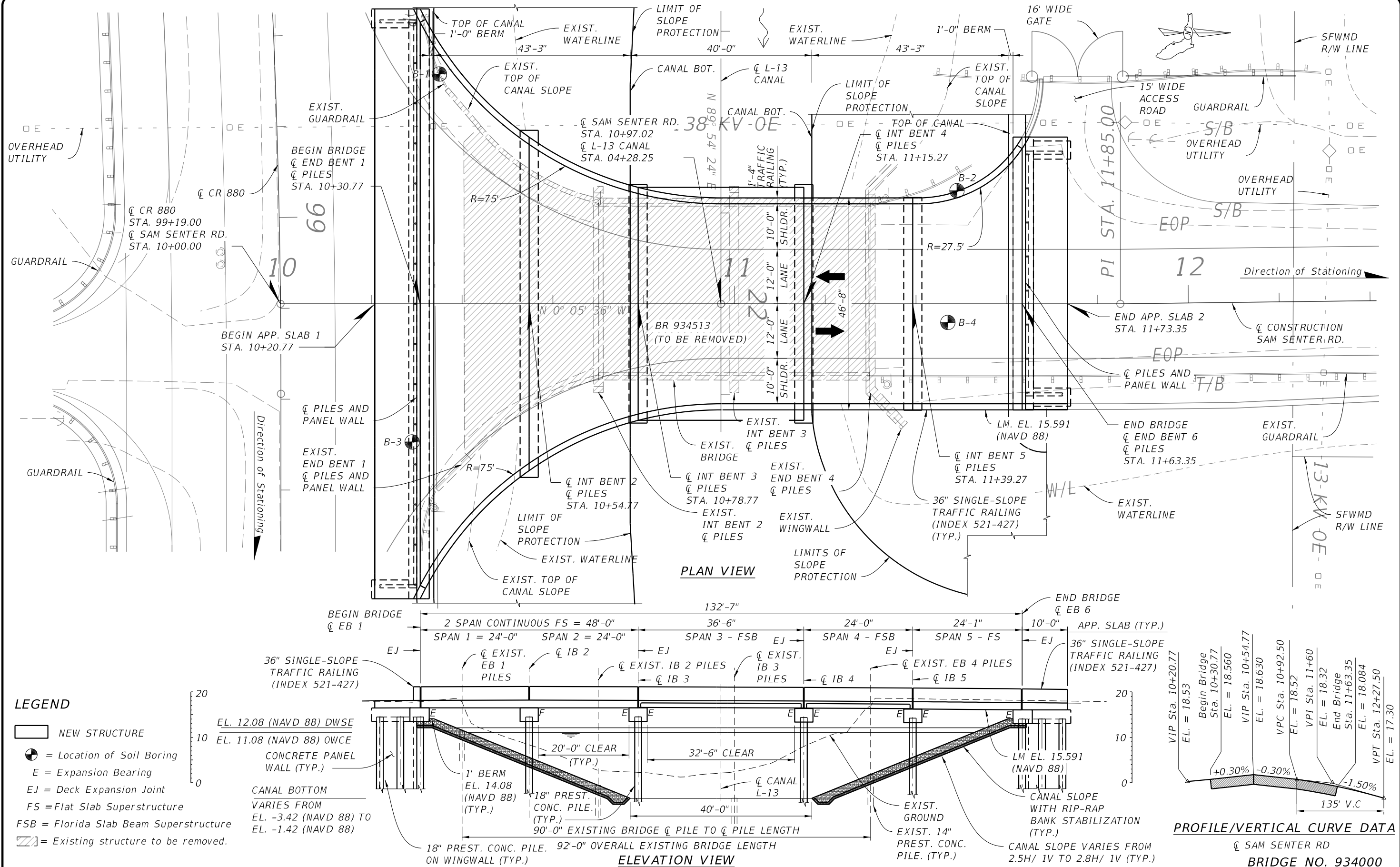
PARTIAL ELEVATION VIEW ALONG APPROACH SLAB WITH CONTINUING Concrete Barrier (Retaining Wall Mounted Concrete Barrier shown, Traffic Railing similar)

PARTIAL ELEVATION VIEW ALONG RETAINING WALL

* Index 521-610 Concrete Barrier/Junction Slab shown, other railings and parapets similar.
 ** EJB "A" shown EJB "B" similar. See EJB "B" Detail on Sheet 2.

LAST REVISION 11/01/22	REVISION	DESCRIPTION:	FDOT FY 2024-25 STANDARD PLANS	CONDUIT DETAILS - EMBEDDED	INDEX 630-010	SHEET 4 of 4
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Stanley Consultants INC.
1641 WORTHINGTON ROAD, SUITE 400
WEST PALM BEACH, FLORIDA 33409
WWW.STANLEYGROUP.COM
CERTIFICATE OF AUTHORIZATION NO. 1978
ERIC HUSKEY, P.E. NO. 56593

CR 880 AT SAM SENTER ROAD INTERSECTION IMPROVEMENT AND BRIDGE REPLACEMENT

NO.	REVISION	BY	DATE

**PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION**
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

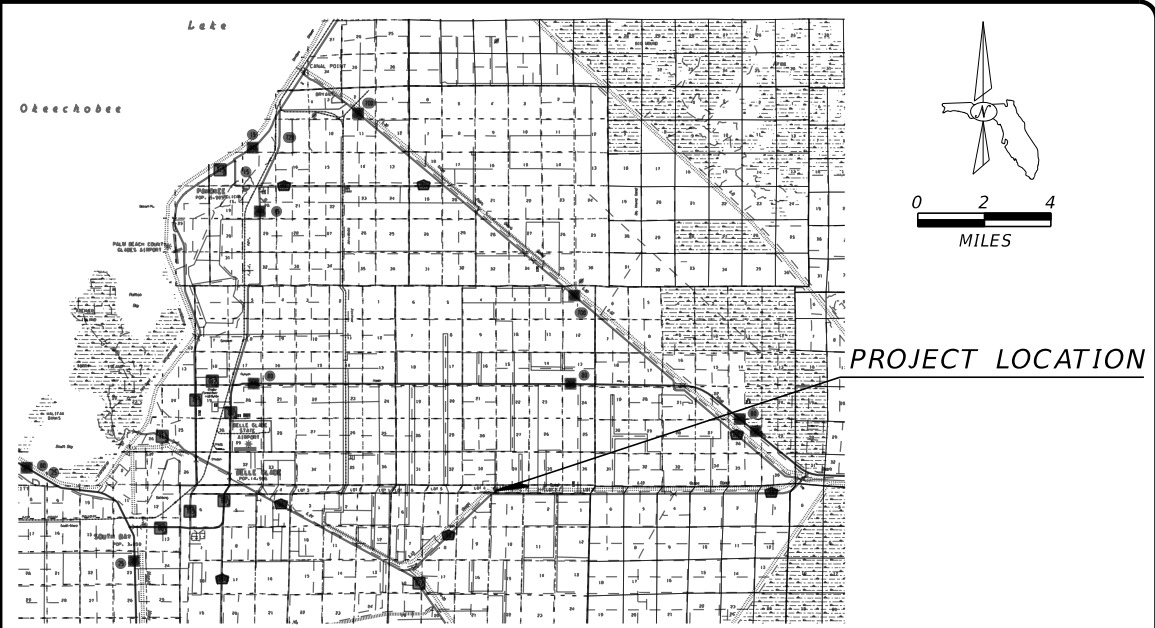
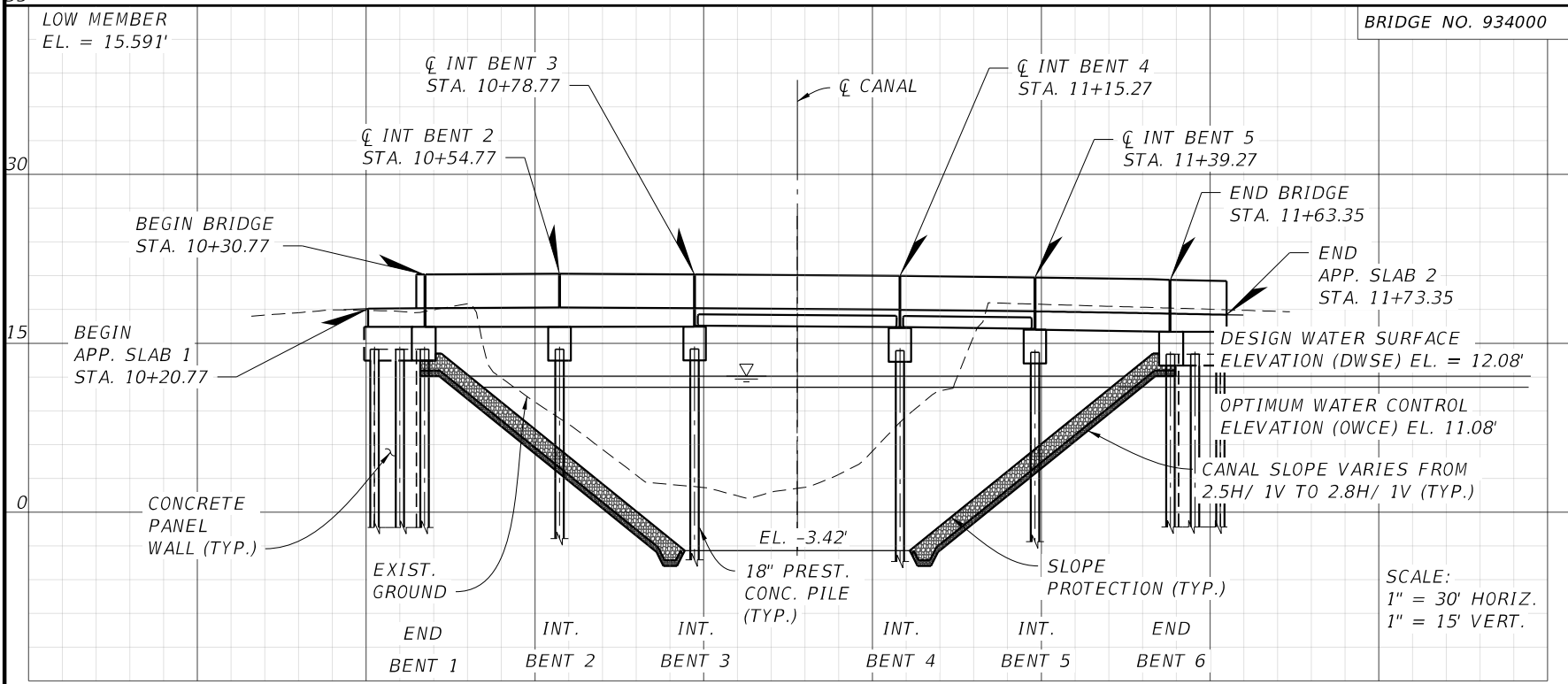
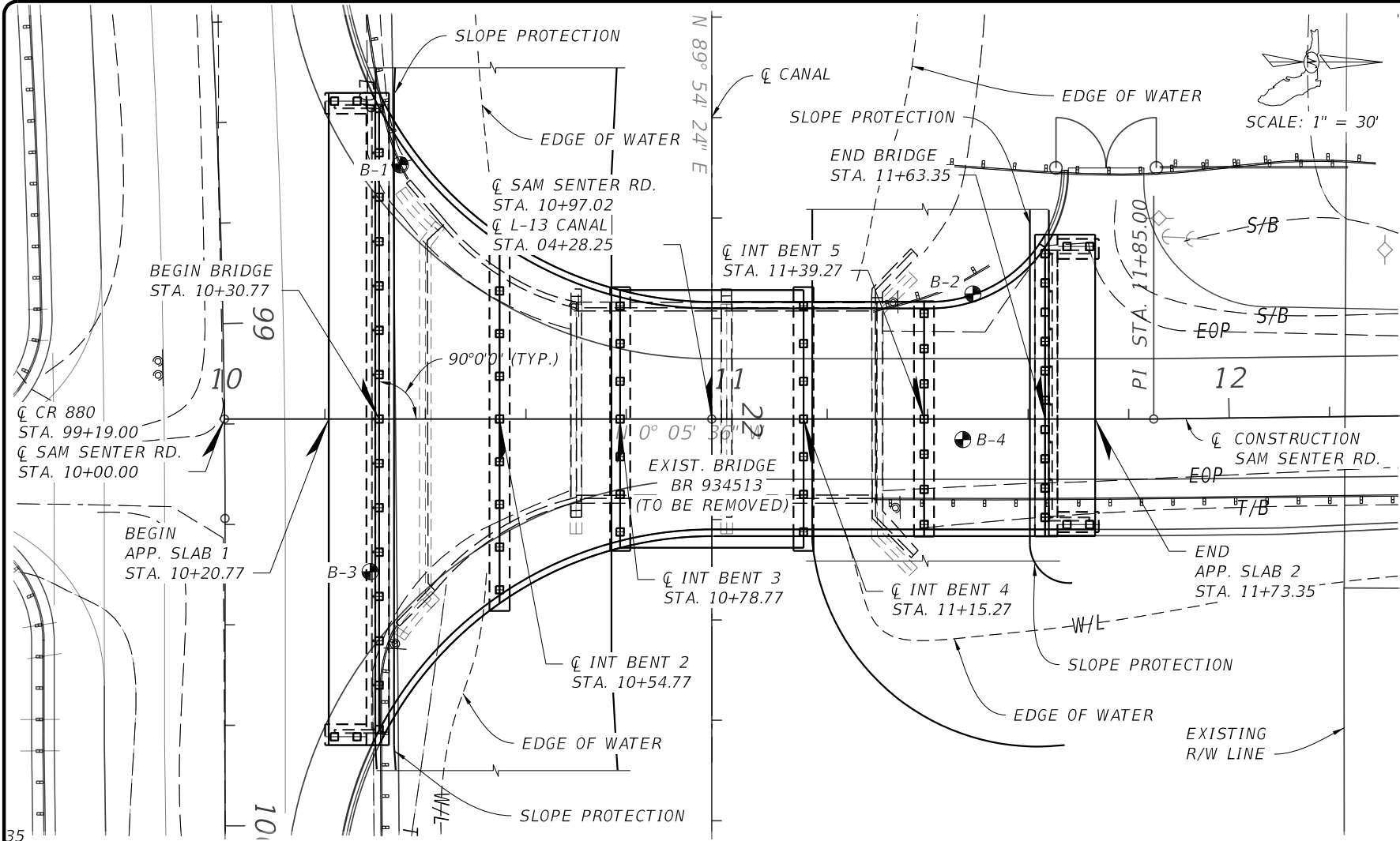
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APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

PLAN AND ELEVATION

DESIGN FILE NAME: DRAWING NO.:

SHEET: B1-1
OF: 28 OF 95
PROJECT NO. 2019803

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(REFERENCE)	EXISTING STRUCTURES			PROPOSED STRUCTURE
	BR 934513	(2)	(3)	
FOUNDATION	CONC. PILES			CONC. PILES
OVERALL LENGTH	92'-4"			132'-7"
SPAN LENGTH	3 @ 30'-0"			4 @ 24'-0", 1 @ 36'-6"
TYPE CONSTRUCTION	CONC./ STEEL			CONCRETE
AREA OF OPENING@D.F.	N/A			N/A
BRIDGE WIDTH	68'-11" TO 32'-0"			46'-8" TO 129'-10 1/4"
ELEV. LOW MEMBER	16.63'			15.591'

NOTE:
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.W.L. (Non-Tidal)	12.08'	M.H.W. (Tidal)	N/A
CONTROL (Non-Tidal)			11.08'	M.L.W. (Tidal)	N/A
FLOOD DATA:		MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	
STAGE ELEV. NAVD (ft)	N/A		13.02	N/A	
DISCHARGE (cfs)	N/A		1126	N/A	
AVERAGE VELOCITY (f/s)	N/A		0.84	N/A	
EXCEEDANCE PROB. (%)	N/A		N/A	N/A	
FREQUENCY (yr.)	N/A		N/A	N/A	

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:		TOTAL SCOUR ELEVATION		
PIER INFORMATION		LONG TERM SCOUR ELEV.	WORST CASE < N/A yr.	WORST CASE < 500 yr.
NUMBERS	SIZE AND TYPE		FREQ. (yr.)	FREQ. (yr.)
END BENT 1 & 6	18" CONC. PILES	N/A	11.810	N/A
INT BENT 2 & 5	18" CONC. PILES	N/A	2.210	N/A
INT BENT 3 & 4	18" CONC. PILES	N/A	-6.390	N/A

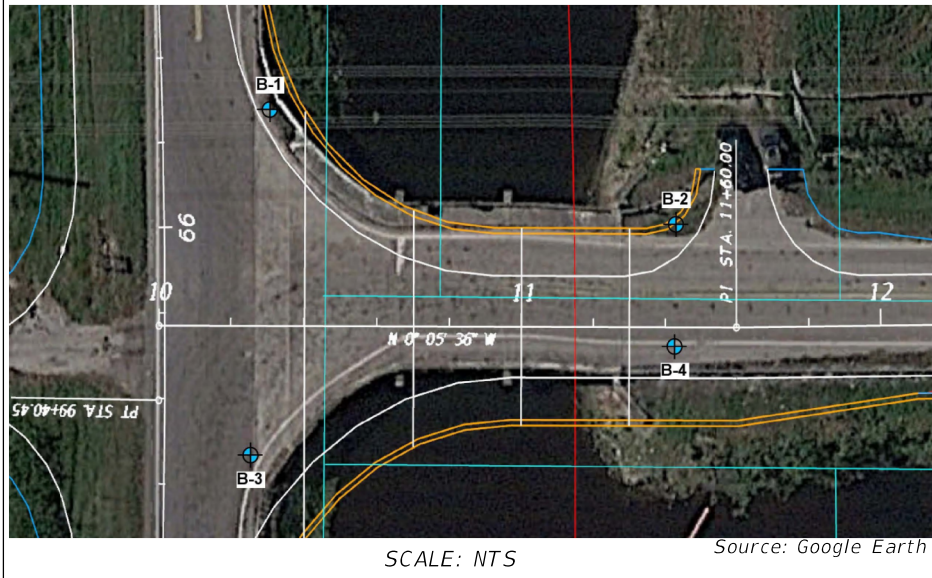
HYDRAULIC RECOMMENDATIONS			
1. BEGIN BRIDGE STATION	10+30.77	END BRIDGE STATION	11+63.35
2. CLEARANCE PROVIDED: NAV: HORIZ. N/A	VERT. N/A	ABOVE EL. N/A	DRIFT: HORIZ. 22' VERT. 4.125' ABOVE EL. 12.08'
3. MINIMUM CLEARANCE: NAV: HORIZ. N/A	VERT. N/A	ABOVE EL. N/A	DRIFT: HORIZ. 22' VERT. 4.125' ABOVE EL. 12.08'
4. ABUTMENTS:			
RUBBLE GRADE:		BEGIN BRIDGE	END BRIDGE
SLOPE:		D50, 6"	D50, 6"
BURIED OR NON-BURIED HORIZ. TOE:		VARIES FROM 1:2.5 TO 1:2.8 (V:H)	VARIES FROM 1:2.5 TO 1:2.8 (V:H)
TOE HORIZ. DISTANCE:		N/A	N/A
LIMIT OF PROTECTION:		0.0'	0.0'
5. DECK DRAINAGE:		50' MIN.	50' MIN.
SPREAD IS CONTAINED IN SHOULDER. RUNOFF CAPTURED BY INLETS AT BEGIN/END BRIDGE			

REMARKS: N/A

BRIDGE NO. 934000

GCME PROJECT NO. 2000-01-21005

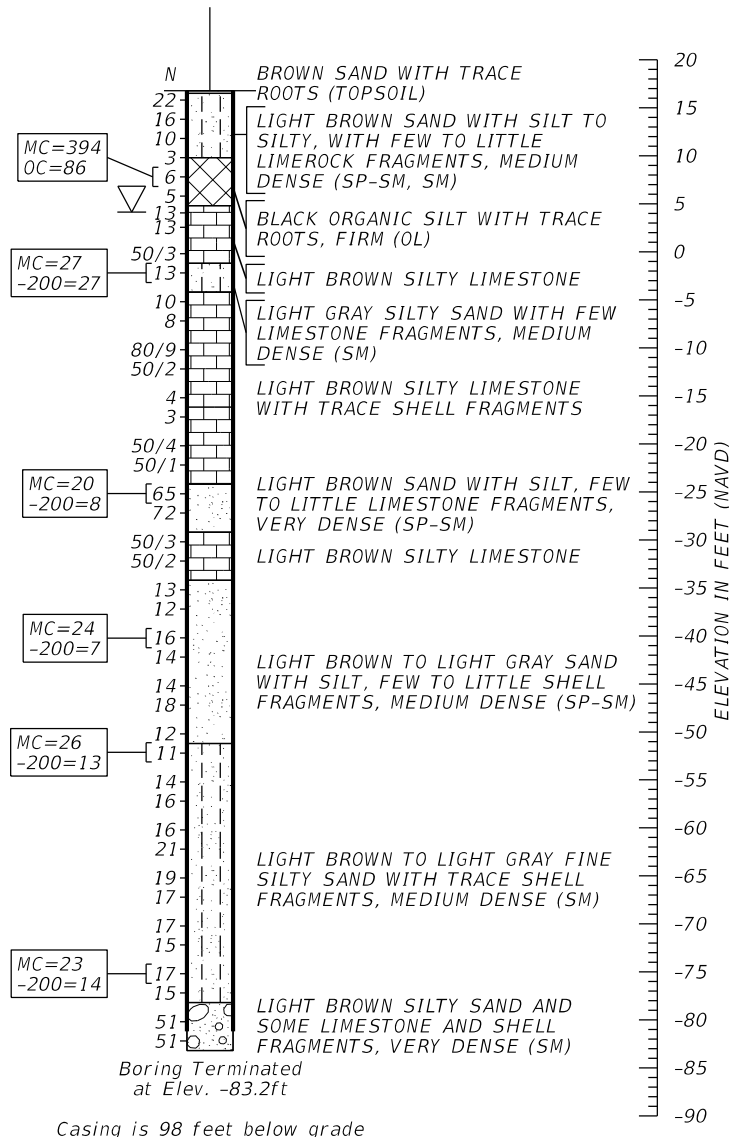
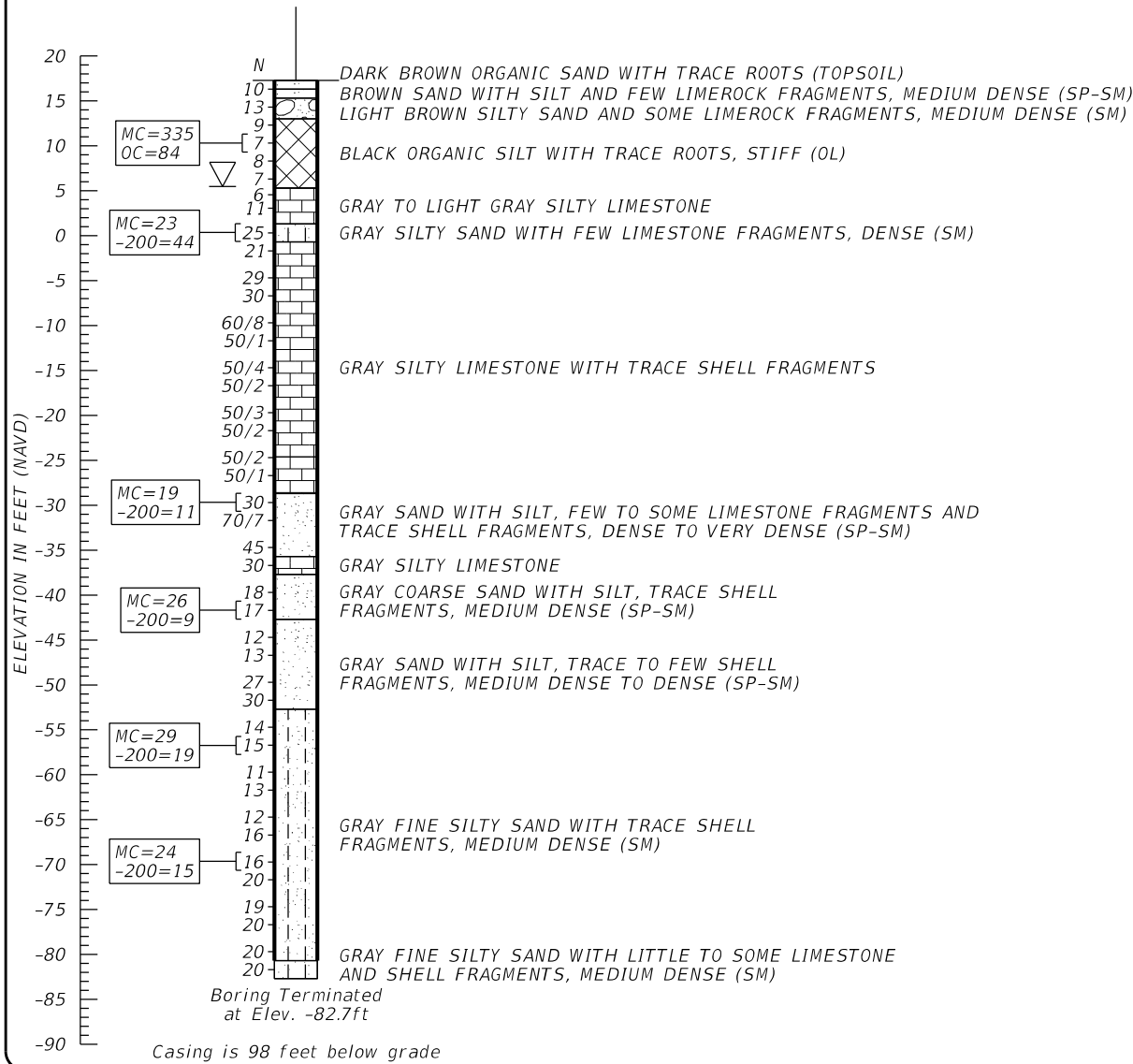
BOR # B-1
STA. 10+35 (CL SRR)
OFF. 50.6' LT
ELEV. +17.3'
DATE 8/9/2022
DRILLER Alexandre / Miquel
HAMMER Auto
RIG CME-45
COORDINATES 26.6783°
-80.5387°



SCALE: NTS

Source: Google Earth

BOR # B-2
STA. 11+49 (CL SRR)
OFF. 24.9' LT
ELEV. +16.8'
DATE 7/14/2022
DRILLER Alexandre / Miquel
HAMMER Auto
RIG CME-45
COORDINATES 26.6786°
-80.5386°



(SP) UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOL
N STANDARD PENETRATION RESISTANCE IN BLOWS PER 12 inches UNLESS OTHERWISE NOTED. 50/3 INDICATES (50) BLOWS REQUIRED TO DRIVE A SAMPLING SPOON 3 INCHES.
8/9/22 WATER LEVEL WITH DATE OF READING
LOSS OF CIRCULATION
WR SAMPLER DROPPED DUE TO WEIGHT OF ROD
WH SAMPLER DROPPED DUE TO WEIGHT OF HAMMER
HA DRILLED WITH A HAND AUGER IN ORDER TO CLEAR LOCATION FROM UNDERGROUND UTILITIES
NR NO RECOVERY- NO SOIL/ROCK WAS RECOVERED IN THE SAMPLING SPOON
STATION / OFFSET / ELEVATION / COORDINATE INFORMATION ARE PROVIDED BY SURVEYORS.
MC= NATURAL MOISTURE CONTENT (%)
-200= FINES PASSING #200 SIEVE (%)
OC= ORGANIC CONTENT (%)
LL= LIQUID LIMIT (%)
PI= PLASTICITY INDEX (%)
NP= INDICATES NON-PLASTIC

NOTES: STRATA BOUNDARIES ARE APPROXIMATE AND MAY VARY BETWEEN OR AWAY FROM BORING LOCATIONS.

DRILLER: ALEXANDRE / MIQUEL

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-	SAFETY HAMMER	AUTOMATIC HAMMER
CONSISTENCY	SPT (BLOWS/1.0 ft)	SPT (BLOWS/1.0 ft)
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

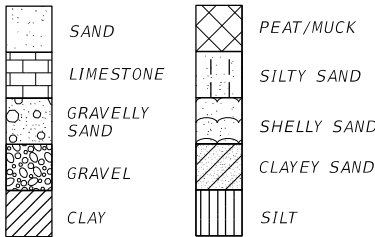
SPT DENSITY CHART

GRANULAR MATERIALS-	SAFETY HAMMER	AUTOMATIC HAMMER
RELATIVE DENSITY	SPT (BLOWS/1.0 ft)	SPT (BLOWS/1.0 ft)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 - 10	3 - 8
MEDIUM DENSE	10 - 30	8 - 24
DENSE	30 - 50	24 - 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE:	SLIGHTLY AGGRESSIVE (CONCRETE) MODERATELY AGGRESSIVE (STEEL)
SUPERSTRUCTURE:	SLIGHTLY AGGRESSIVE

SOIL TYPE SYMBOLS:



GCME

GCME, INC.
1730 W. 10TH STREET
RIVIERA BEACH, FLORIDA 33404
CERTIFICATE OF AUTHORIZATION NO. 9076
PHONE (561) 845-8727

Seal:

xx
P.E.# x

No.	Revisions	By	Date

PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

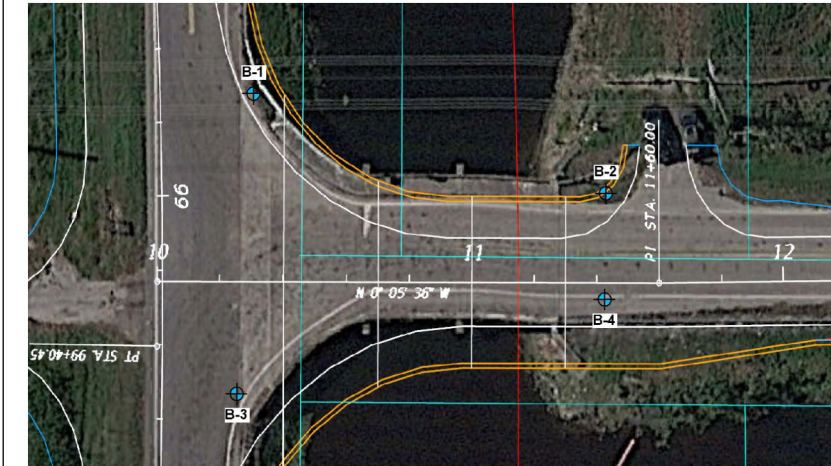
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DRAWN: FP
CHECKED: ZP
DATE: 09/12/22

CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE REPLACEMENT
REPORT OF CORE BORINGS

SHEET: B1-3
OF: 30 OF 95
PROJECT NO. 2019803

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C. FIGURE: 1

GCME PROJECT NO. 2000-01-21005

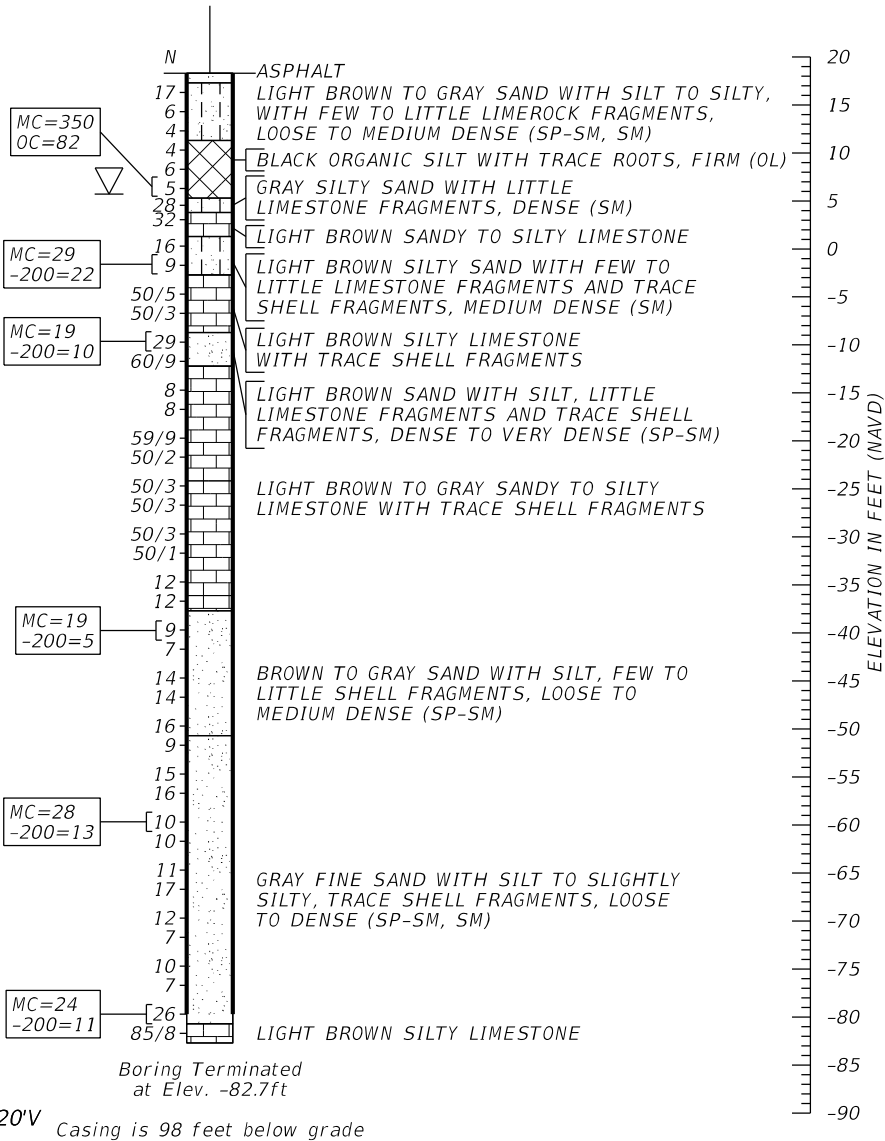
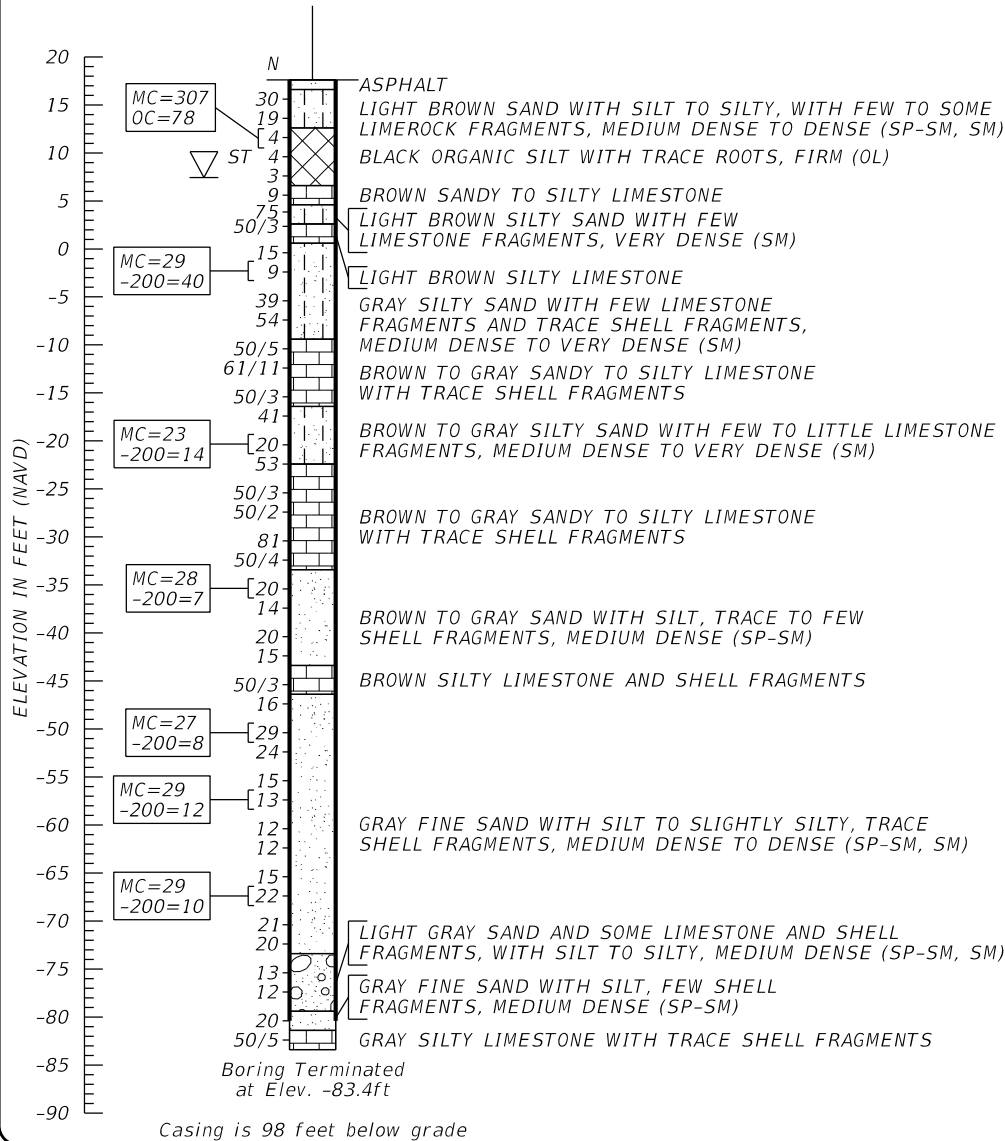


SCALE: NTS

Source: Google Earth

BOR # B-3
STA. 10+29 (CL SRR)
OFF. 30.4' RT
ELEV. +17.6'
DATE 8/17/22
DRILLER Carlos Charris
HAMMER Auto
RIG CME-55
COORDINATES 26.6783°
-80.5385°

BOR # B-4
STA. 11+47 (CL SRR)
OFF. 4.1' RT
ELEV. +18.3'
DATE 7/15/22
DRILLER Alexandre / Miquel
HAMMER Auto
RIG CME-45
COORDINATES 26.6786°
-80.5386°



LEGEND

- (SP) UNIFIED SOIL CLASSIFICATION SYSTEM SYMBOL
- N STANDARD PENETRATION RESISTANCE IN BLOWS PER 12 inches UNLESS OTHERWISE NOTED. 50/3 INDICATES (50) BLOWS REQUIRED TO DRIVE A SAMPLING SPOON 3 INCHES.
- 7/15/22 WATER LEVEL WITH DATE OF READING
- LOSS OF CIRCULATION
- WR SAMPLER DROPPED DUE TO WEIGHT OF ROD
- WH SAMPLER DROPPED DUE TO WEIGHT OF HAMMER
- HA DRILLED WITH A HAND AUGER IN ORDER TO CLEAR LOCATION FROM UNDERGROUND UTILITIES
- ST SHELBY TUBE SAMPLE OBTAINED FROM DEPTH INTERVAL SHOWN.
- NR NO RECOVERY- NO SOIL/ROCK WAS RECOVERED IN THE SAMPLING SPOON
- STATION / OFFSET / ELEVATION / COORDINATE INFORMATION ARE PROVIDED BY SURVEYORS.
- MC= NATURAL MOISTURE CONTENT (%)
- 200= FINES PASSING #200 SIEVE (%)
- OC= ORGANIC CONTENT (%)
- LL= LIQUID LIMIT (%)
- PI= PLASTICITY INDEX (%)
- NP= INDICATES NON-PLASTIC

NOTES: STRATA BOUNDARIES ARE APPROXIMATE AND MAY VARY BETWEEN OR AWAY FROM BORING LOCATIONS.

DRILLER: ALEXANDRE / MIQUEL

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-	SAFETY HAMMER	AUTOMATIC HAMMER
CONSISTENCY	SPT (BLOWS/1.0 ft)	SPT (BLOWS/1.0 ft)
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-	SAFETY HAMMER	AUTOMATIC HAMMER
RELATIVE DENSITY	SPT (BLOWS/1.0 ft)	SPT (BLOWS/1.0 ft)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 - 10	3 - 8
MEDIUM DENSE	10 - 30	8 - 24
DENSE	30 - 50	24 - 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE:	SLIGHTLY AGGRESSIVE (CONCRETE)
	MODERATELY AGGRESSIVE (STEEL)
SUPERSTRUCTURE:	SLIGHTLY AGGRESSIVE

SOIL TYPE SYMBOLS:

SAND	PEAT/MUCK
LIMESTONE	SILTY SAND
GRAVELLY SAND	SHELLY SAND
GRAVEL	CLAYEY SAND
CLAY	SILT

GCME

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CERTIFICATE OF AUTHORIZATION NO. 9076
PHONE (561) 845-8727

Seal:

xx
P.E.# x

No.	Revisions	By	Date



PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE: N.T.S.
APPROVED: PG
DRAWN: FP
CHECKED: ZP
DATE: 09/12/22

CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT
REPORT OF CORE BORINGS

SHEET: B1-4
OF: 31 OF 95
PROJECT NO.
2019803

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PILE DATA TABLE														Table Date 8/23/23		
INSTALLATION CRITERIA								DESIGN CRITERIA								
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.)	LONG TERM SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT
EB1, PILES 1 TO 4 AND 7 TO 19	18	172	N/A	-37.00	76	N/A	-35.0	108.6	N/A	N/A	N/A	N/A	11.8	N/A	0.65	N/A
EB1, PILES 5 AND 6	18	125	N/A	-28.00	76	N/A	-35.0	81.2	N/A	N/A	N/A	N/A	11.8	N/A	0.65	N/A
IB2, PILE 1	18	125	N/A	-28.00	93	N/A	-35.0	81.2	N/A	N/A	N/A	N/A	2.2	N/A	0.65	N/A
IB2, PILES 2 TO 9	18	204	N/A	-46.00	93	N/A	-35.0	131.3	N/A	N/A	N/A	N/A	2.2	N/A	0.65	N/A
IB3	18	211	N/A	-61.00	98	N/A	-35.0	137.2	N/A	N/A	N/A	N/A	-6.4	N/A	0.65	N/A
IB4	18	212	N/A	-51.00	106	N/A	-35.0	137.8	N/A	N/A	N/A	N/A	-6.4	N/A	0.65	N/A
IB5	18	171	N/A	-46.00	102	N/A	-35.0	111.2	N/A	N/A	N/A	N/A	2.2	N/A	0.65	N/A
EB6, PILES 1 TO 3	18	123	N/A	-29.00	76	N/A	-35.0	79.9	N/A	N/A	N/A	N/A	11.8	N/A	0.65	N/A
EB6, PILES 4 TO 14	18	128	N/A	-37.00	76	N/A	-35.0	81.9	N/A	N/A	N/A	N/A	11.8	N/A	0.65	N/A

PILE DATA TABLE																		Table Date 8/23/23	
PILE CUT-OFF ELEVATIONS																			
PIER or BENT NUMBER	PILE 1	PILE 2	PILE 3	PILE 4	PILE 5	PILE 6	PILE 7	PILE 8	PILE 9	PILE 10	PILE 11	PILE 12	PILE 13	PILE 14	PILE 15	PILE 16	PILE 17	PILE 18	PILE 19
EB1	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
IB2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IB3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IB4	14.3	14.3	14.3	14.3	14.3	14.3	14.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IB5	14.1	14.1	14.1	14.1	14.1	14.1	14.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EB6	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	N/A	N/A	N/A	N/A	N/A

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

- TENSION 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 tension 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.
- LONG TERM SCOUR ELEVATIO
- Estimated elevation of scour used in design for extreme event loading.

- PILE INSTALLATION NOTES:**
1. Contractor to verify location of all utilities prior to any pile installation activities.
2. Minimum Tip Elevation is required for lateral stability.
3. No jetting will be allowed without the approval of the Engineer.
4. The Contractor should not anticipate being allowed to jet piles below the 100-year scour elevation or required jet elevation, whichever is deeper.
5. At each Bent, pile driving is to commence at the center of the Bent and proceed outward.
6. Preforming is required to allow for easier pile driving.
7. For piles whose installation could be affected by the overhead electric utility (identified on the Foundation Layout Sheet), if spliced pile segments are utilized, suggest that a PDA (Ø Compression = 0.75) be utilized during the pile driving operation (pile installation).

BRIDGE NO. 934000

Stanley Consultants INC.
1641 WORTHINGTON ROAD, SUITE 400
WEST PALM BEACH, FLORIDA 33409
WWW.STANLEYGROUP.COM
CERTIFICATE OF AUTHORIZATION NO. 1978
ERIC HUSKEY, P.E. NO. 56593

**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE



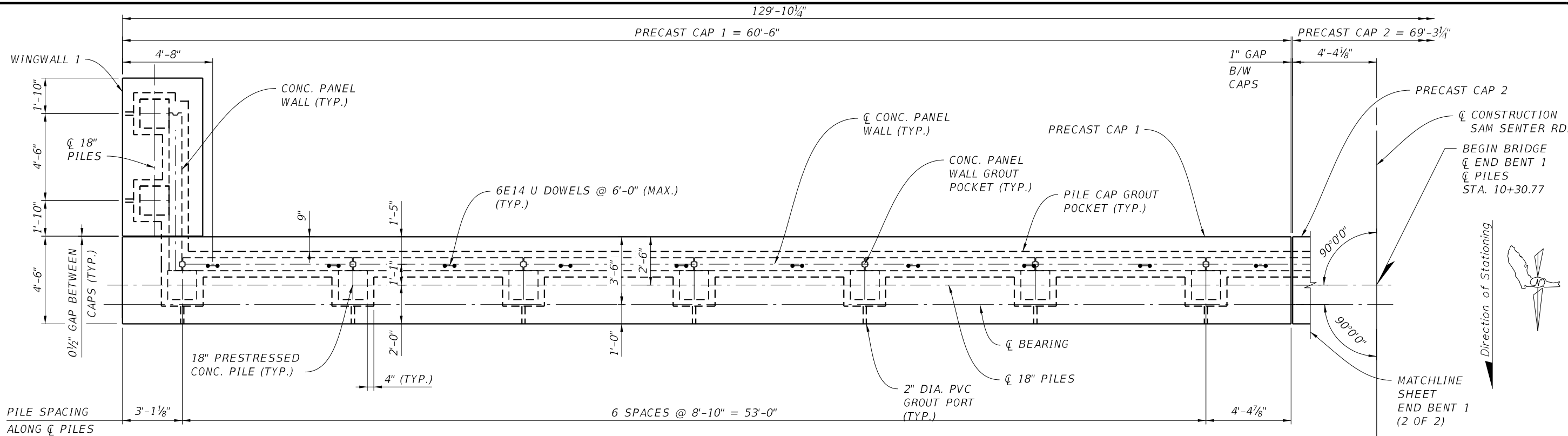
PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE: N.T.S.
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H
DATE: 11/5/24

PILE DATA TABLE	
DESIGN FILE NAME	DRAWING NO.

SHEET: B1-6
OF: 33 OF 95
PROJECT NO. 2019803

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PILE SPACING
ALONG ϕ PILES

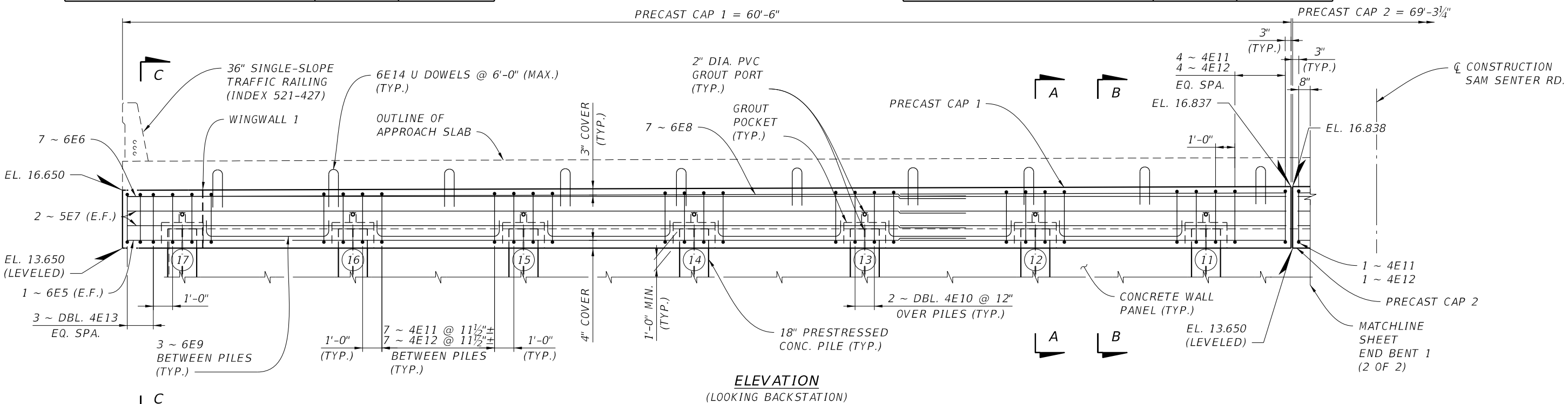
ESTIMATED QUANTITIES - PRECAST CAP 1		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	35
Reinforcing Steel (Substructure)	LB	2,985
18" Sq. Prestressed Concrete Piles	LF	610
18" Sq. Prestressed Concrete Test Piles	LF	N/A

PLAN

NOTES

- SEE END BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
- SEE END BENT DETAILS FOR SECTION A-A AND SECTION B-B.

ESTIMATED QUANTITIES - PRECAST CAP 2		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	42
Reinforcing Steel (Substructure)	LB	3,433
18" Sq. Prestressed Concrete Piles	LF	488
18" Sq. Prestressed Concrete Test Piles	LF	76



ELEVATION
(LOOKING BACKSTATION)

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**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
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NO.	REVISION	BY	DATE

**PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION**
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE: 3/16"=1'-0"
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

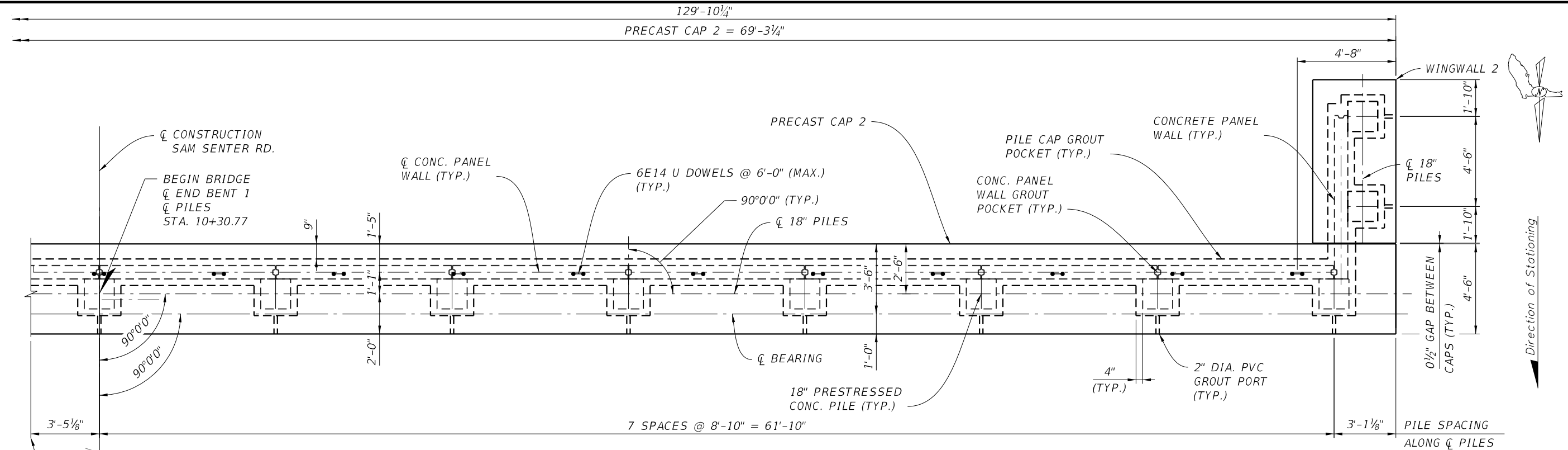
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SHEET: B1-7
OF: 34 OF 95
PROJECT NO. 2019803

BRIDGE NO. 934000

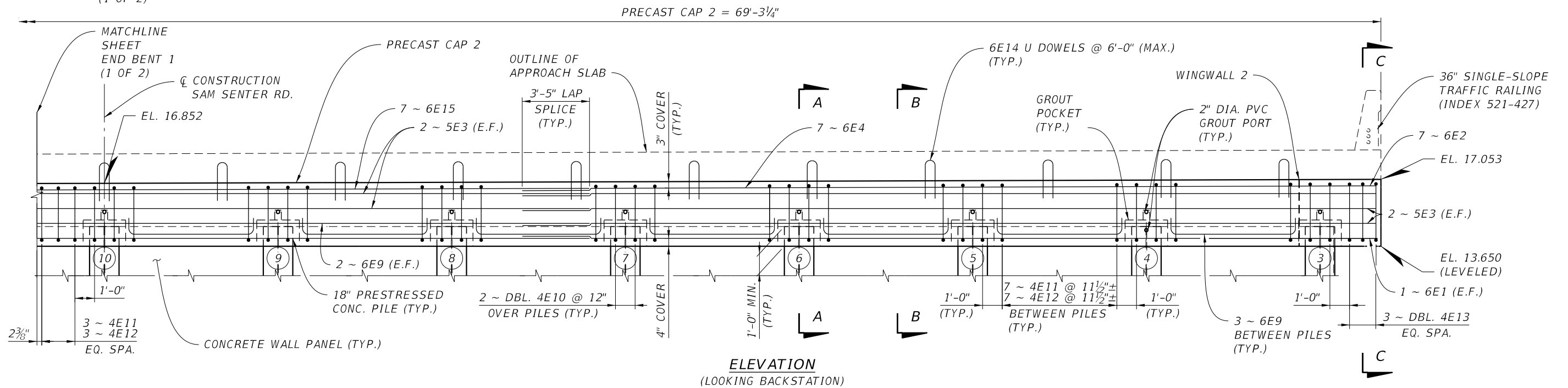
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NOTES

1. SEE END BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
2. SEE END BENT DETAILS FOR SECTION A-A AND SECTION B-B.

PLAN



ELEVATION (LOOKING BACKSTATION)

BRIDGE NO. 934000

Stanley Consultants INC.
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**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE

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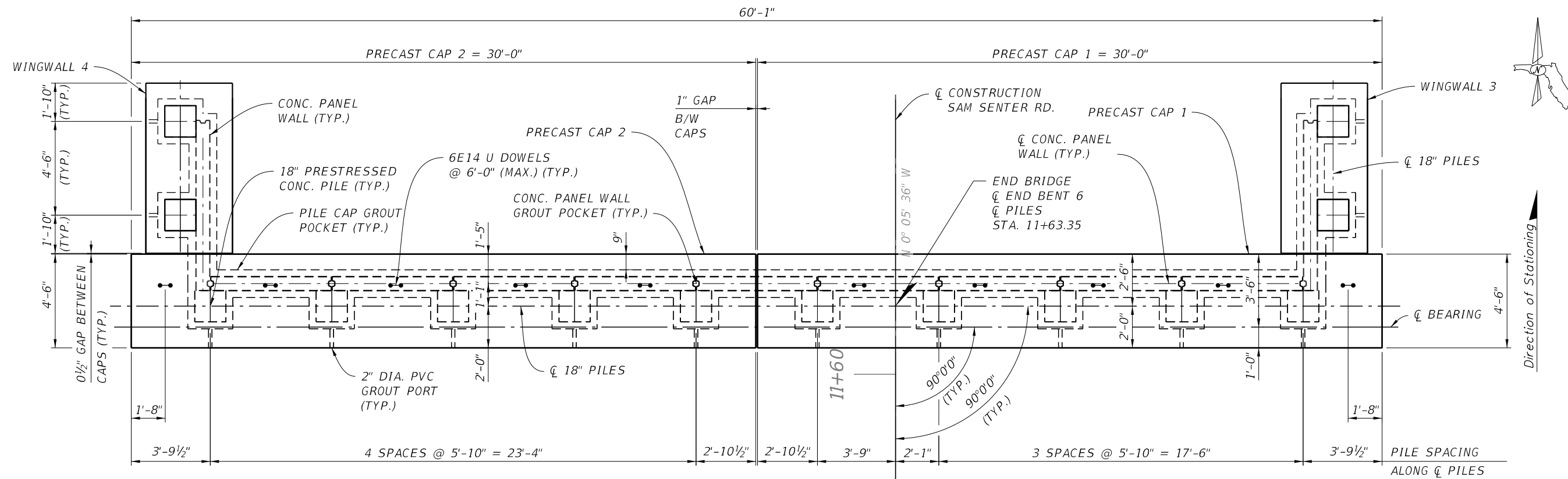
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OF: 35 OF 95
PROJECT NO.
2019803

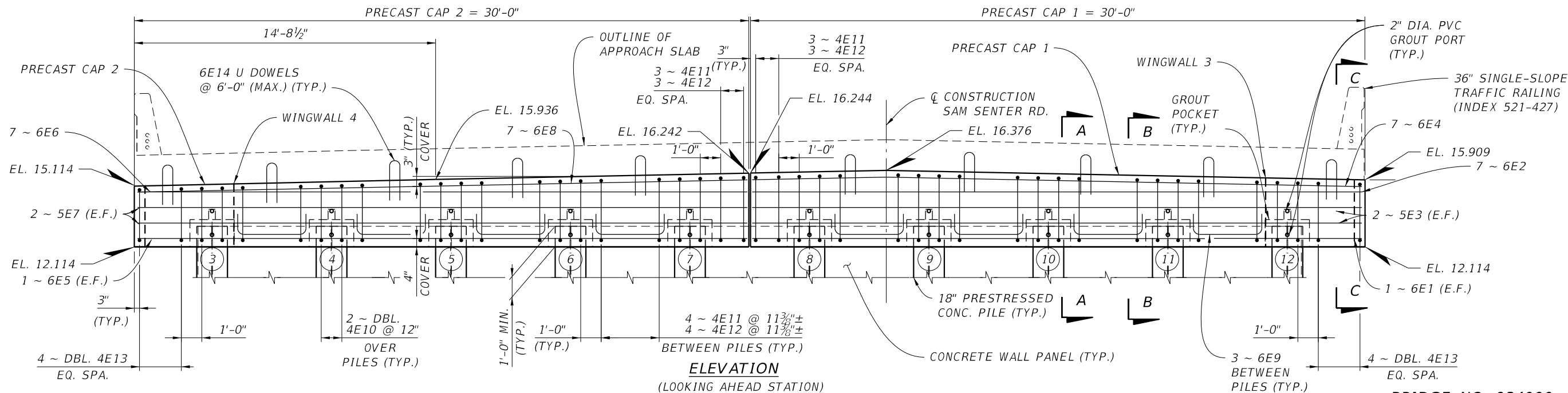
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ESTIMATED QUANTITIES - PRECAST CAP 2		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	23
Reinforcing Steel (Substructure)	LB	1,678
18" Sq. Prestressed Concrete Piles	LF	427
18" Sq. Prestressed Concrete Test Piles	LF	N/A

- PLAN**
- NOTES**
- SEE END BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
 - SEE END BENT DETAILS FOR SECTION A-A AND SECTION B-B.

ESTIMATED QUANTITIES - PRECAST CAP 1		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	24
Reinforcing Steel (Substructure)	LB	1,657
18" Sq. Prestressed Concrete Piles	LF	244
18" Sq. Prestressed Concrete Test Piles	LF	76



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ROADWAY PRODUCTION**
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

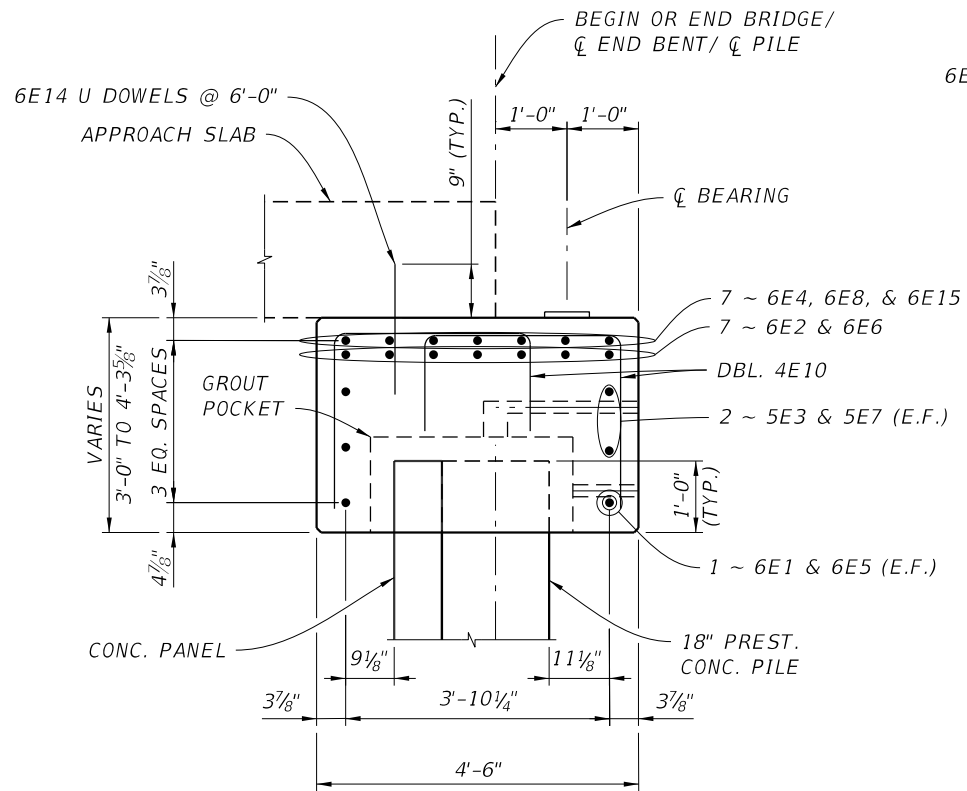
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DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

END BENT 6

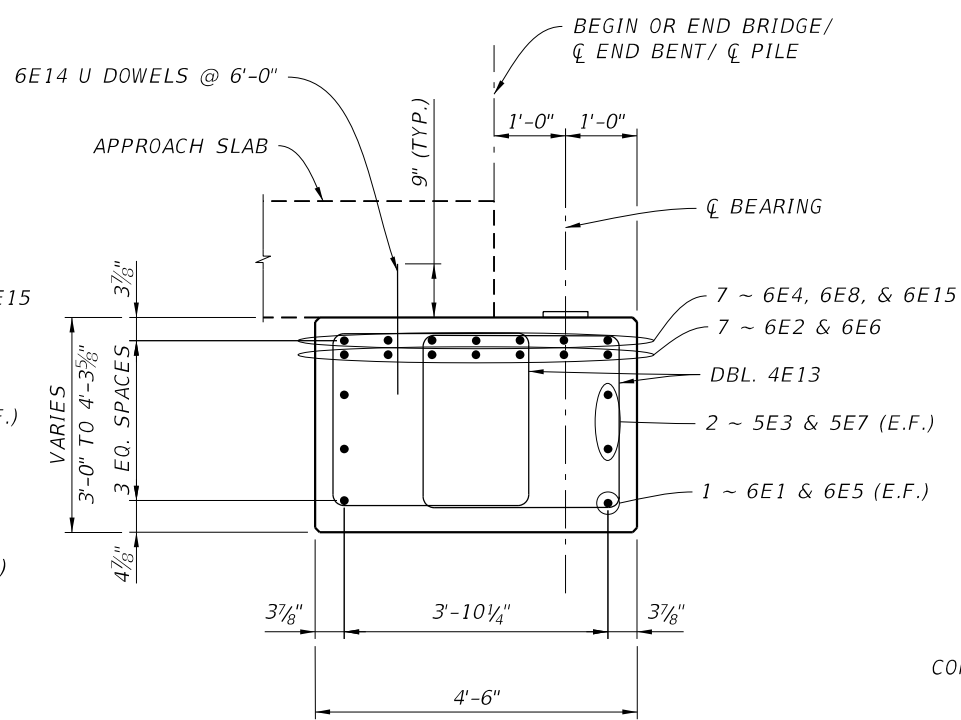
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SHEET: B1-9
OF: 36 OF 95
PROJECT NO.
2019803

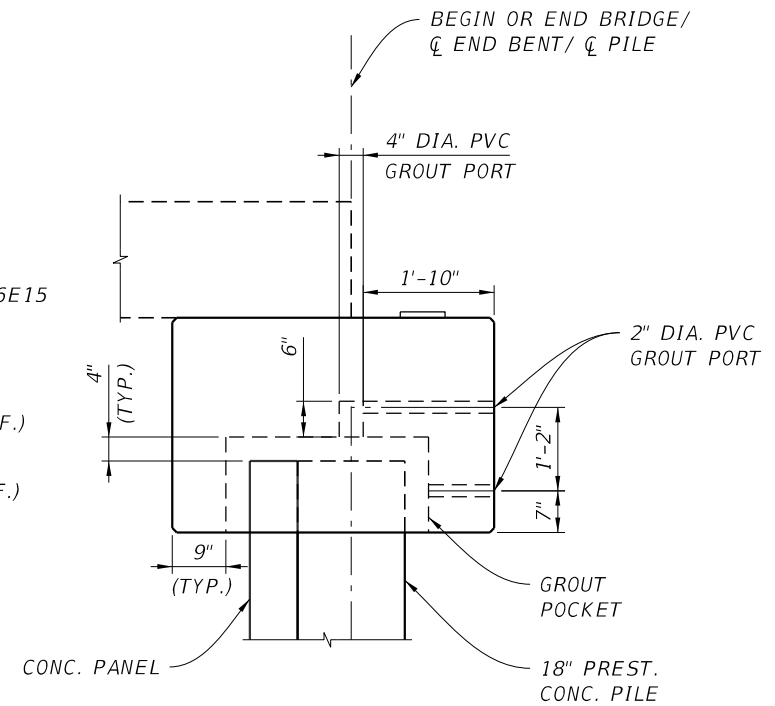
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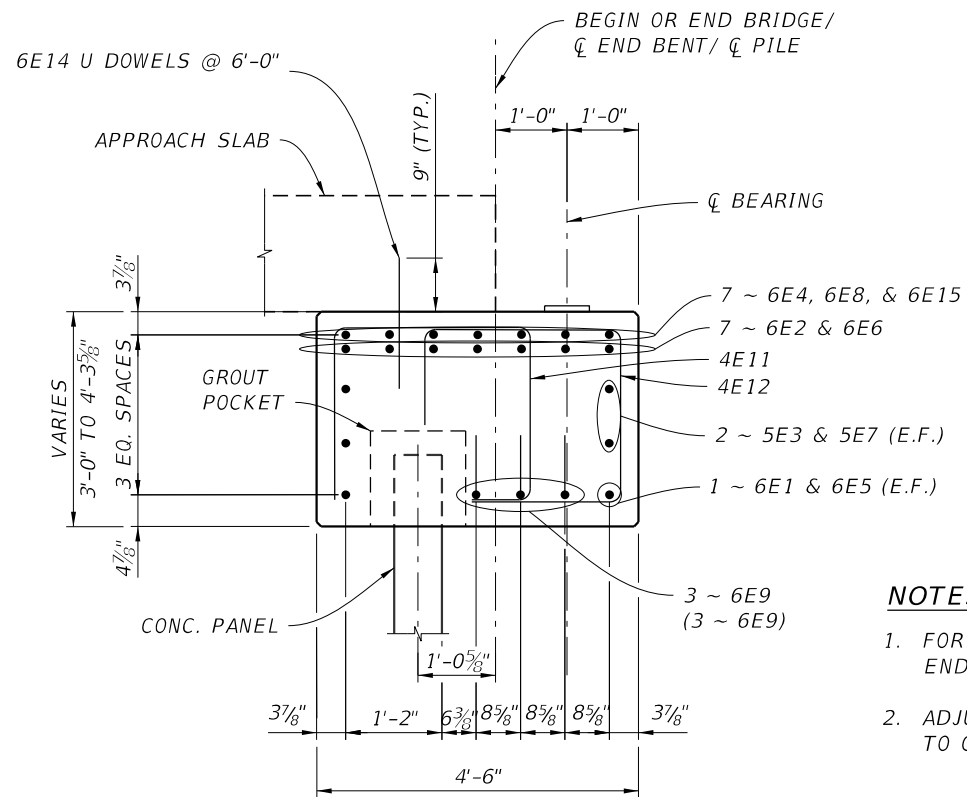
SECTION A-A



SECTION C-C



GROUT POCKET AND PORT DETAIL



SECTION B-B

NOTES

- FOR LOCATION OF SECTIONS, SEE END BENT 1 & END BENT 6 SHEETS.
- ADJUST BARS 4E10, 4E11, AND 4E12 TO CLEAR GROUT PORTS.

PILE GROUTING NOTES

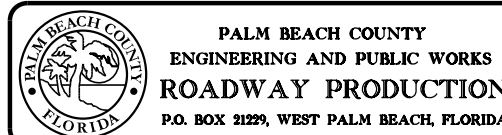
- CONTRACTOR SHALL TAKE CARE TO DRIVE ALL PILES AS INDICATED ON THE FOUNDATION LAYOUT SHEET. PILES SHALL BE DRIVEN PLUMB SO THE TOPS OF THE PILES ARE LEVEL. IF PILES ARE NOT DRIVEN WITHIN TOLERANCES OF THE LOCATION AS SPECIFIED IN THE PLANS, CONTRACTOR SHALL NOTIFY EOR IMMEDIATELY.
- CONTRACTOR SHALL WAIT UNTIL PILES HAVE BEEN DRIVEN BEFORE BEGINNING CONSTRUCTION OF CAPS. CONTRACTOR SHALL VERIFY CAP DIMENSIONS, GROUT POCKET LOCATIONS AND ADJUST REINFORCEMENT AS NEEDED.
- CONTRACTOR SHALL INSTALL SPACERS BETWEEN THE TOP AND SIDES OF THE PILE TO ALLOW FOR A 4" GAP BETWEEN THE PILE AND CAP (ALL SIDES).
- CONTRACTOR SHALL INSTALL LIFTING POINTS IN THE CAPS SO THE CAPS DO NOT BEND DURING LIFTING OPERATIONS. LIFTING HOOKS SHALL BE CUT OFF OR CONCRETE LIFTING PORTS SHALL BE CAPPED OFF. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF PRECAST CAP TO THE EOR FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL LOWER THE PRECAST CAPS AND PLACE ON TOP OF THE PILES. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE PRECAST CAPS. THE BOTTOM OF THE CAPS SHALL BE INSTALLED LEVELED.
- CONTRACTOR SHALL USE SACRIFICIAL FORMS TO FORM THE BOTTOM OF THE GROUT POCKET. THE FORM SHALL BE FLUSH WITH THE BOTTOM OF THE CAP.
- HYDRAULIC GROUT SHALL BE PUMPED INTO THE BOTTOM GROUT PORT UNTIL THE GROUT FLOWS OUT OF THE TOP GROUT PORT. AFTER PUMPING OPERATIONS, GROUT PORTS SHALL BE SEALED. THE GROUT SHALL FOLLOW FDOT STANDARD SPECIFICATIONS SECTION 934.
- ALLOW THE HYDRAULIC GROUT TO CURE FOR A MINIMUM OF 72 HOURS BEFORE PLACING ANY LOADS ON TOP OF THE CAP.
- CONTRACTOR IS PERMITTED TO CHANGE HOW THE PRECAST CAPS ARE CONSTRUCTED AND INSTALLED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND STRUCTURAL DESIGN CALCULATIONS (SIGNED AND SEALED BY A REGISTERED FLORIDA ENGINEER) TO EOR FOR APPROVAL IF ANY CHANGES ARE MADE TO THE PRECAST PILE CAPS AS SHOWN.

BRIDGE NO. 934000

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**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
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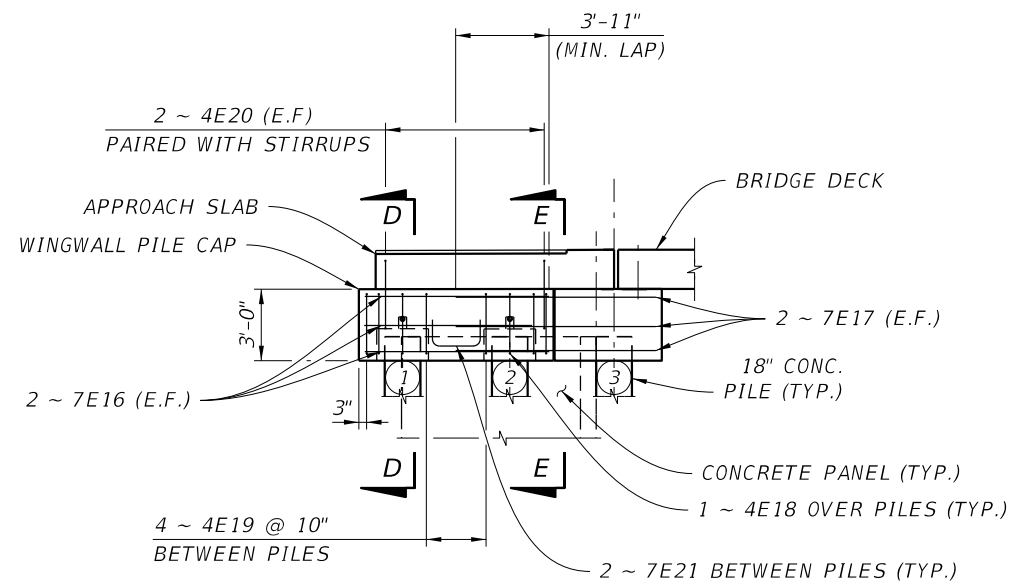
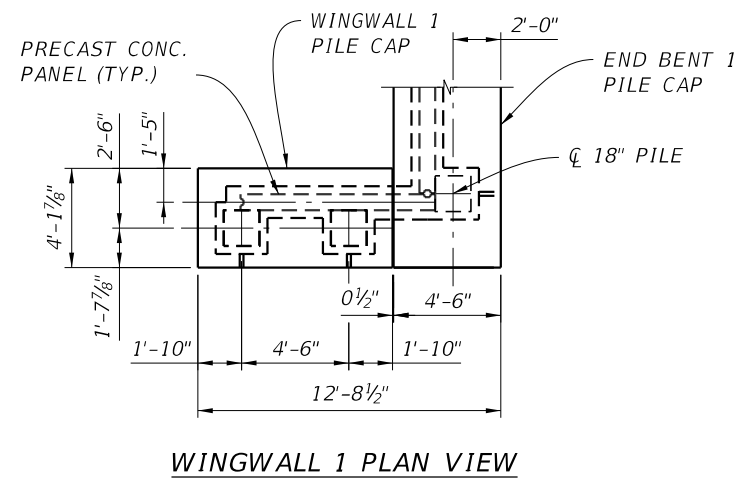
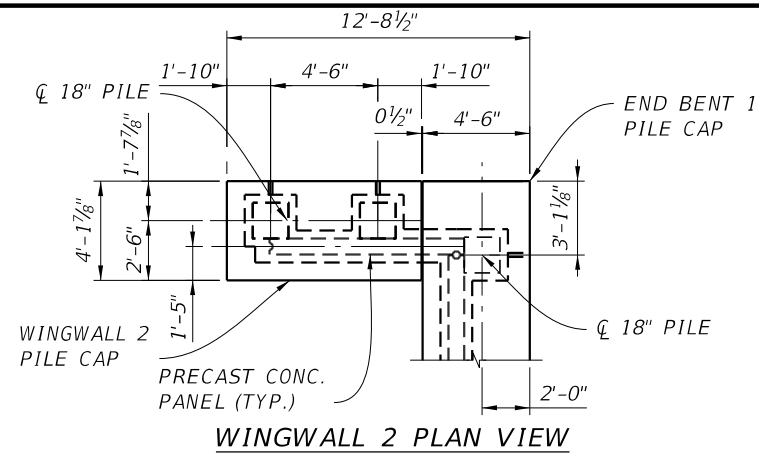


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APPROVED: A.A.
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CHECKED: E.H.
DATE: 11/5/24

**END BENT DETAILS
(1 OF 7)**

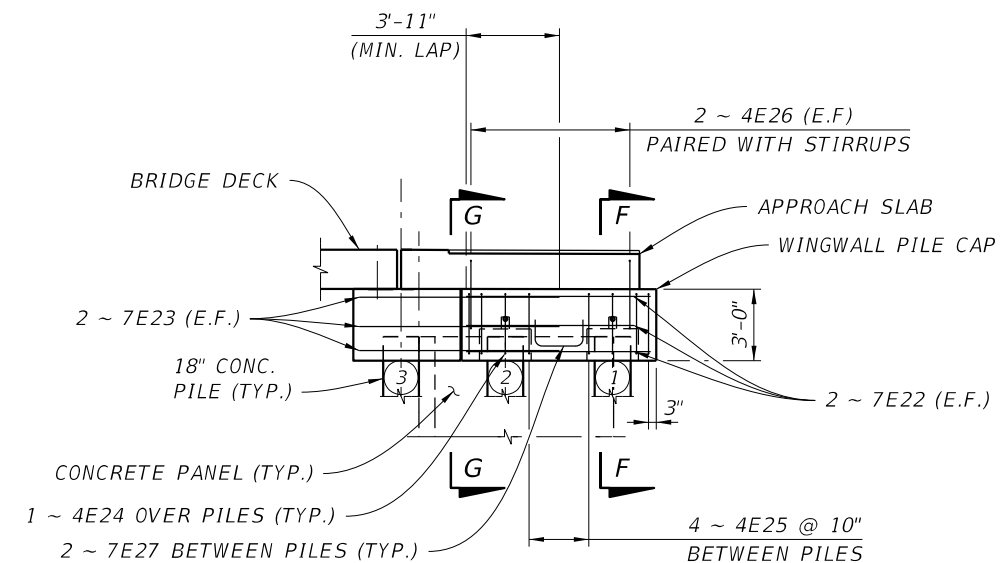
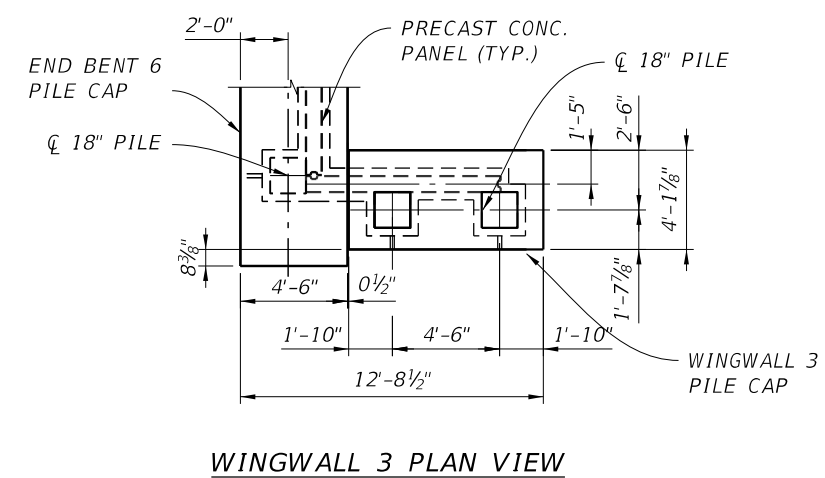
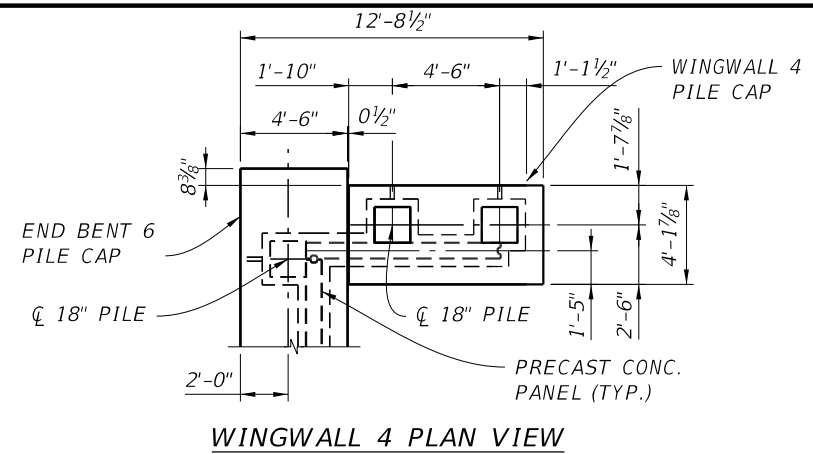
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SHEET: B1-10
OF: 37 OF 95
PROJECT NO.
2019803



WINGWALL 1 & 2 ELEVATION VIEW

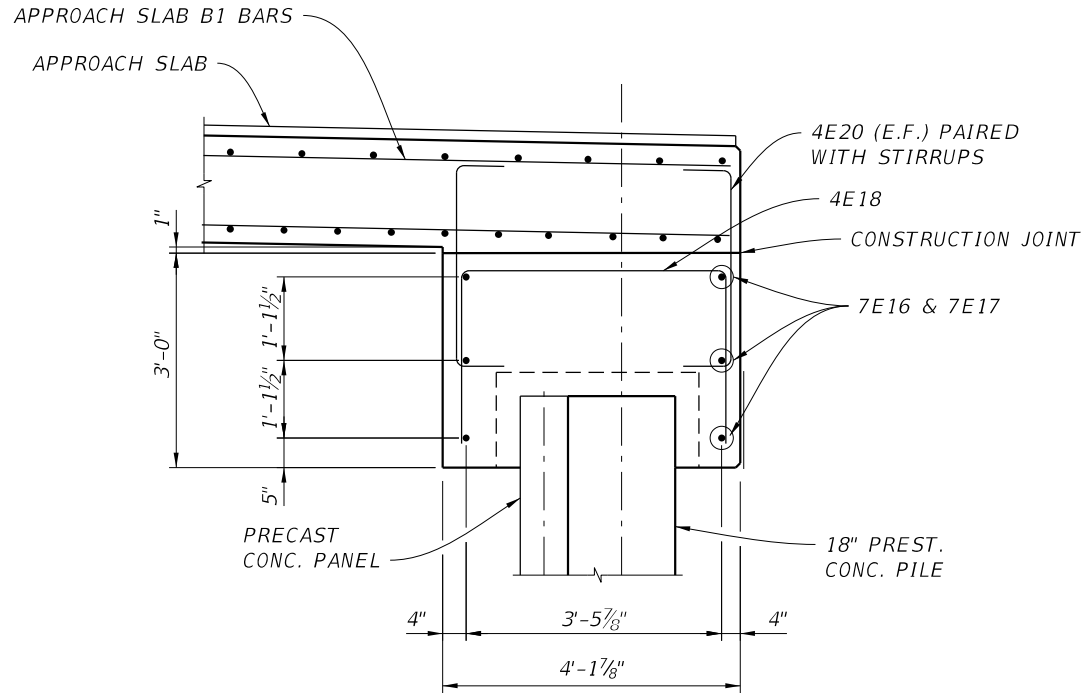
(WINGWALL 2 SHOWN. WINGWALL 1 IS SIMILAR)



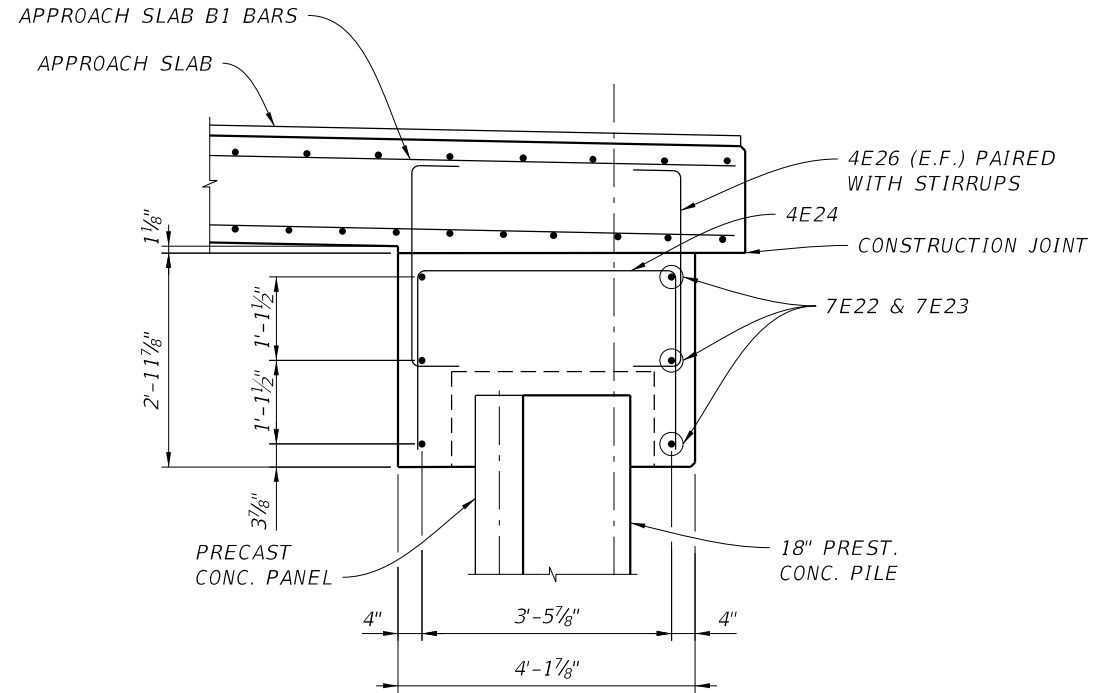
WINGWALL 3 & 4 ELEVATION VIEW

(WINGWALL 4 SHOWN. WINGWALL 3 IS SIMILAR)

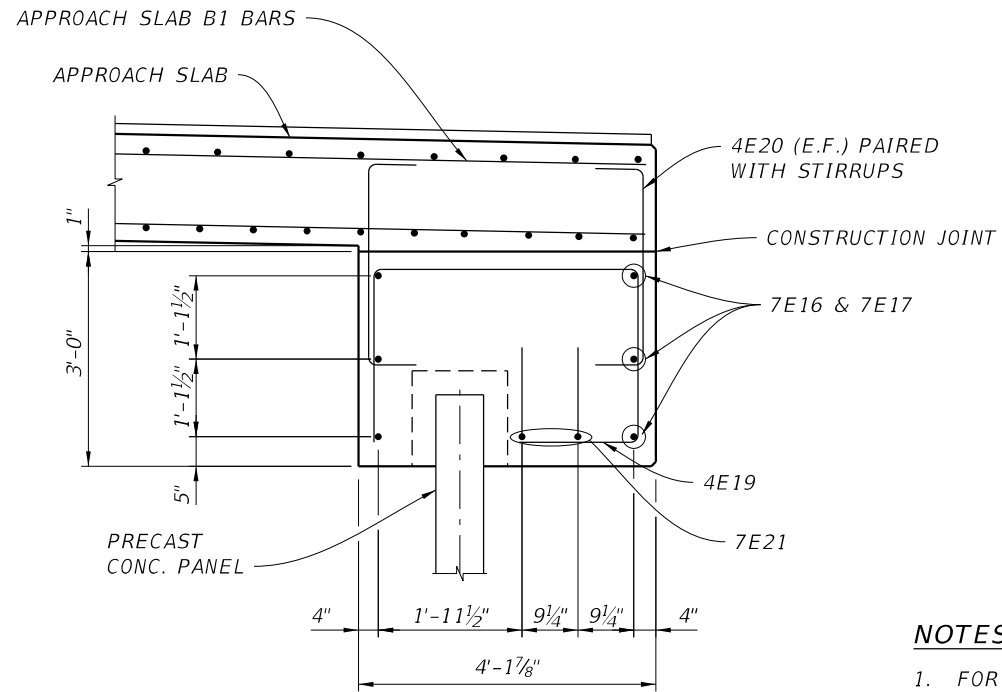
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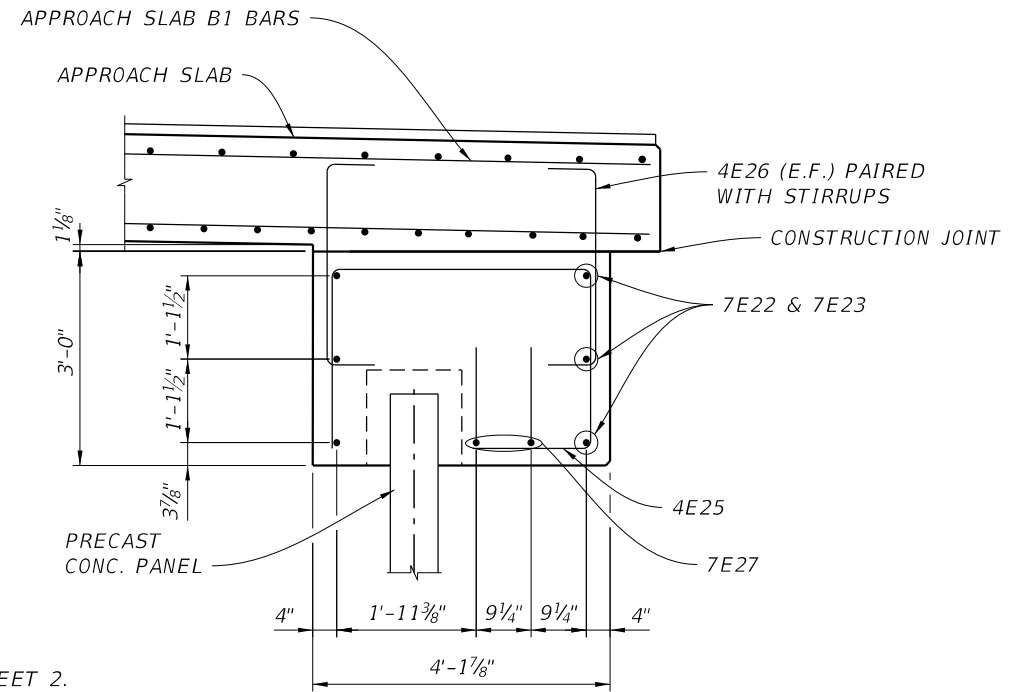
WINGWALL SECTION D-D
(END BENT 1)



WINGWALL SECTION F-F
(END BENT 6)



WINGWALL SECTION E-E
(END BENT 1)



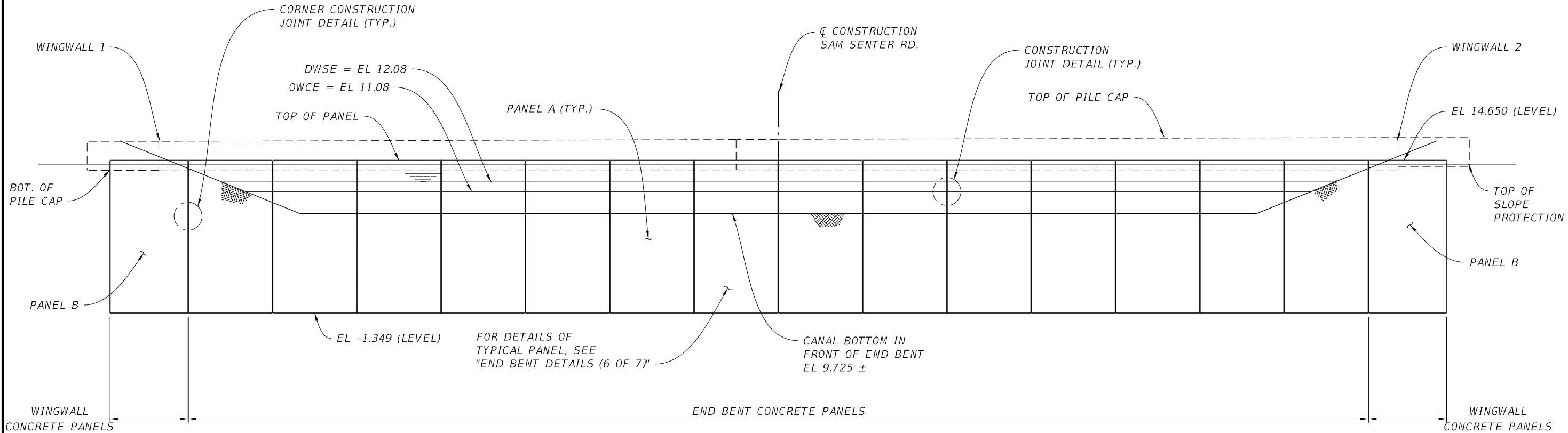
WINGWALL SECTION G-G
(END BENT 6)

NOTES:

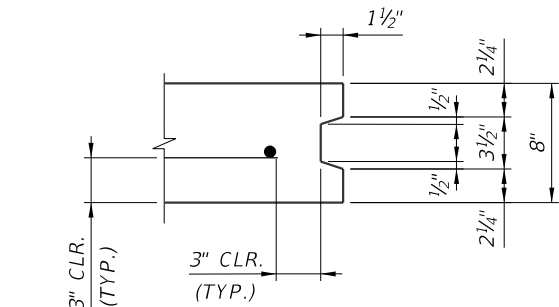
1. FOR LOCATION OF SECTIONS, SEE END BENT DETAIL SHEET 2.
2. BOTTOM APPROACH SLAB REINFORCEMENT IS NOT SHOWN FOR CLARITY.

NO.	REVISION	BY	DATE

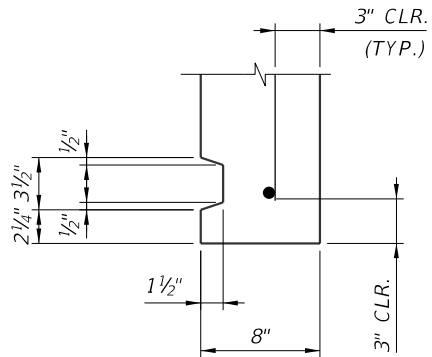
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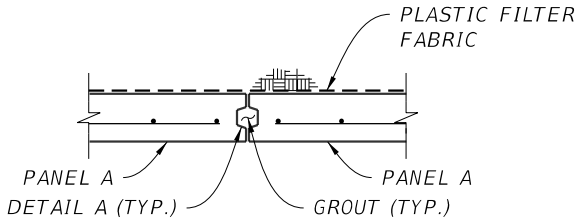
ELEVATION VIEW (UNFOLDED)
END BENT 1



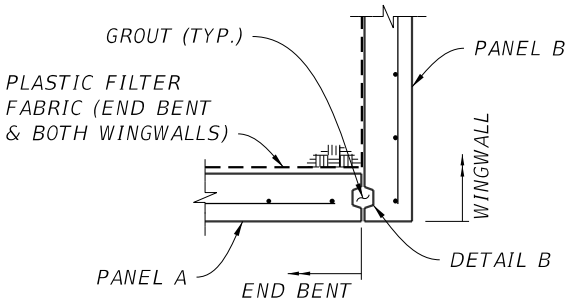
PANEL A DETAIL



PANEL B DETAIL



CONSTRUCTION JOINT DETAIL



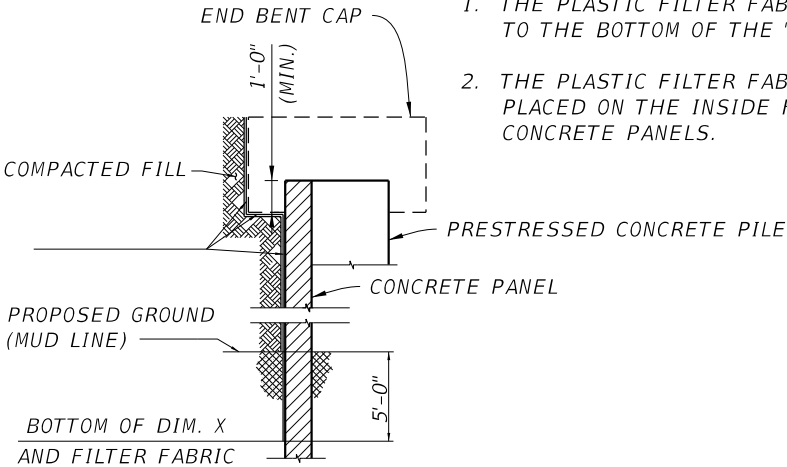
CORNER CONSTRUCTION JOINT DETAIL

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Class IV Concrete (Precast Panels)	CY	56
Reinforcing Steel	LB	16,946

1. QUANTITIES ARE FOR END BENT 1.
2. SEE PAY ITEM NOTE NO. 6 ON "STRUCTURE GENERAL NOTES (2 OF 2)".

NOTES FOR PLASTIC FILTER FABRIC:

1. THE PLASTIC FILTER FABRIC SHALL EXTEND TO THE BOTTOM OF THE "X" DIMENSION.
2. THE PLASTIC FILTER FABRIC SHALL BE PLACED ON THE INSIDE FACE OF THE CONCRETE PANELS.



SECTION THRU END BENT CAP
(SECTION THRU WINGWALL CAP SIMILAR)

BRIDGE NO. 934000

Stanley Consultants INC.
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WEST PALM BEACH, FLORIDA 33409
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**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE



**PALM BEACH COUNTY
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ROADWAY PRODUCTION**
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE:
APPROVED: A.A.
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CHECKED: E.H.
DATE: 11/5/24

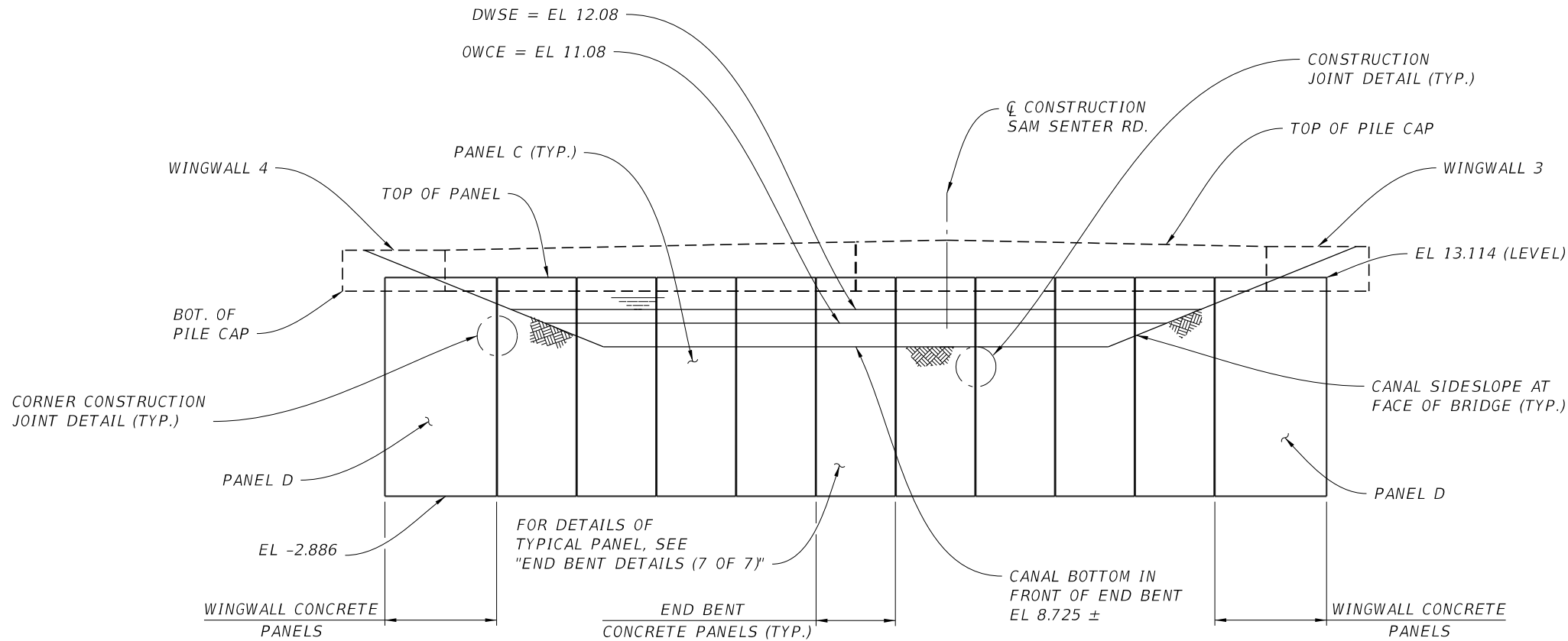
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(4 OF 7)**

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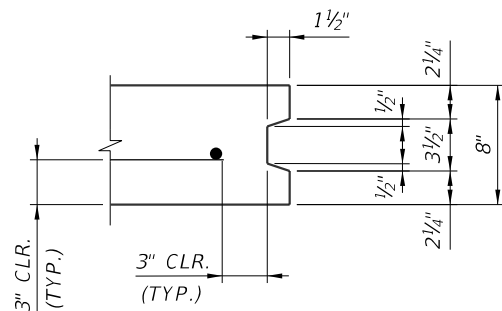
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SHEET: B1-13
OF: 40 OF 95
PROJECT NO.
2019803

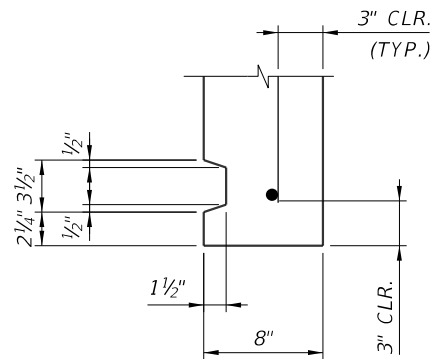
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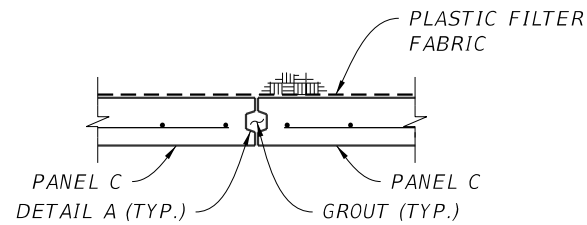
ELEVATION VIEW (UNFOLDED)
END BENT 6



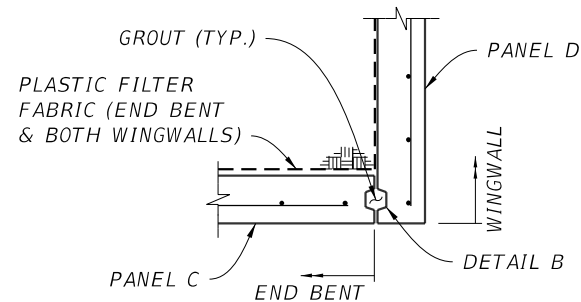
PANEL C DETAIL



PANEL D DETAIL



CONSTRUCTION JOINT DETAIL



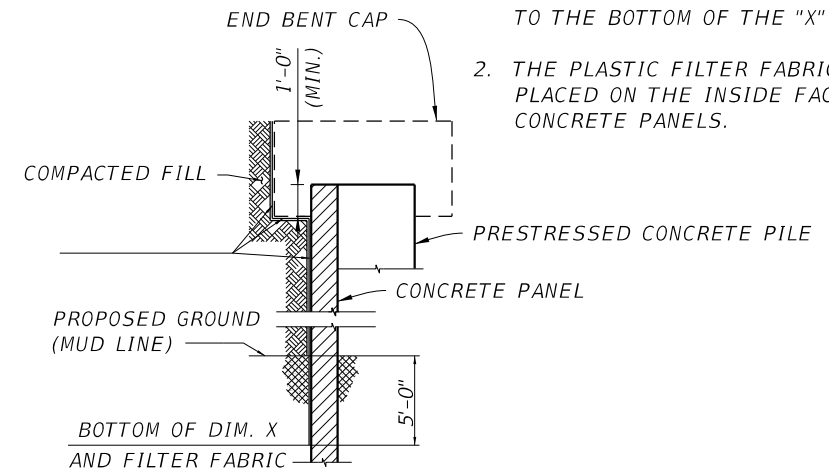
CORNER CONSTRUCTION JOINT DETAIL

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Class IV Concrete (Precast Panels)	CY	27
Reinforcing Steel	LB	8003

1. QUANTITIES ARE FOR END BENT 6.
2. SEE PAY ITEM NOTE NO. 6 ON "STRUCTURE GENERAL NOTES (2 OF 2)".

NOTES FOR PLASTIC FILTER FABRIC:

1. THE PLASTIC FILTER FABRIC SHALL EXTEND TO THE BOTTOM OF THE "X" DIMENSION.
2. THE PLASTIC FILTER FABRIC SHALL BE PLACED ON THE INSIDE FACE OF THE CONCRETE PANELS.



SECTION THRU END BENT CAP
(SECTION THRU WINGWALL CAP SIMILAR)

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**PALM BEACH COUNTY
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P.O. BOX 21229, WEST PALM BEACH, FLORIDA

SCALE:
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

**END BENT DETAILS
(5 OF 7)**

DESIGN FILE NAME DRAWING NO.

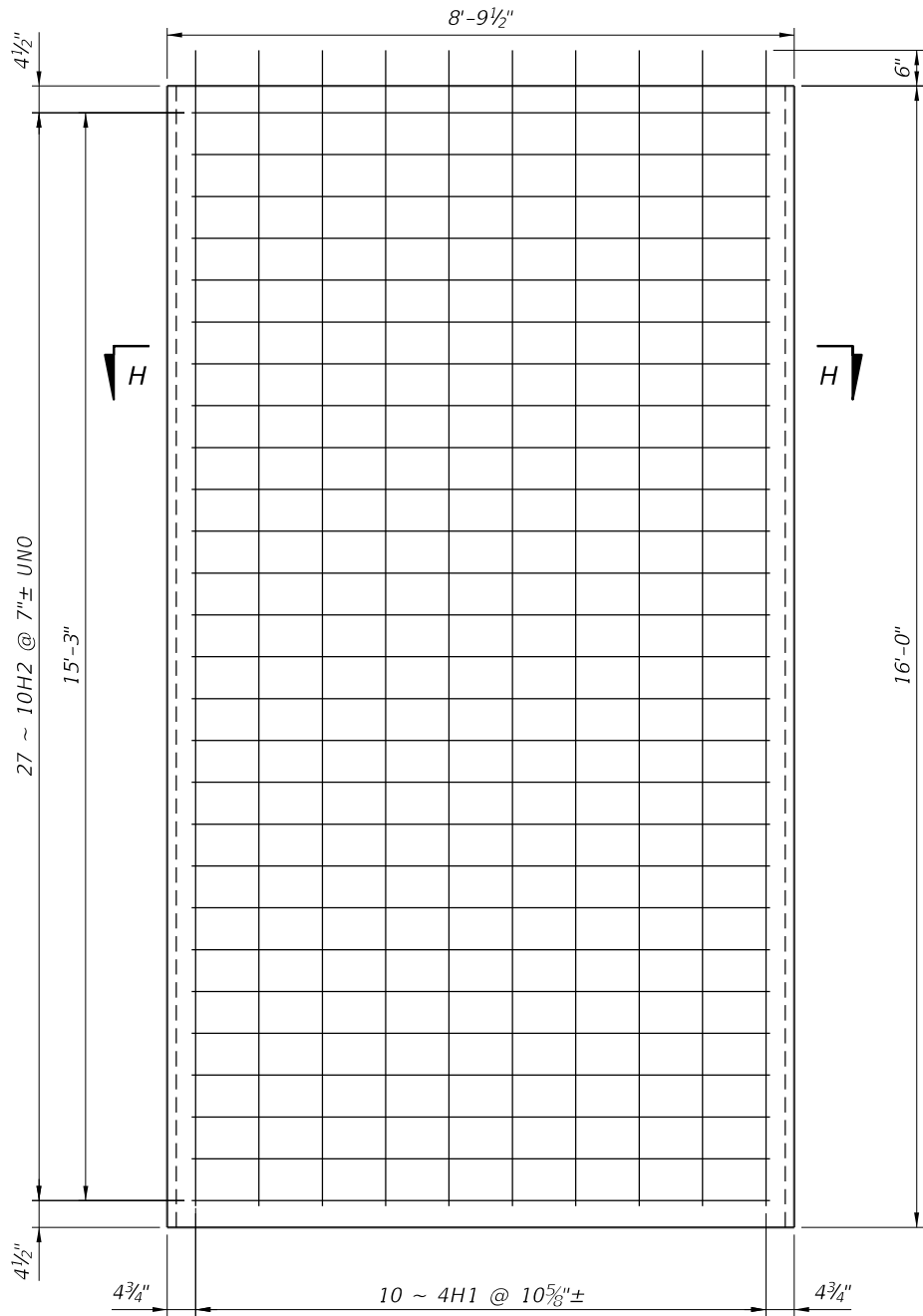
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OF: 41 OF 95
PROJECT NO.
2019803

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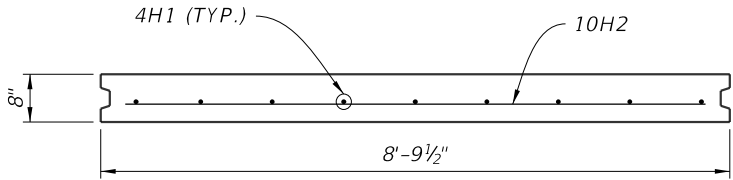
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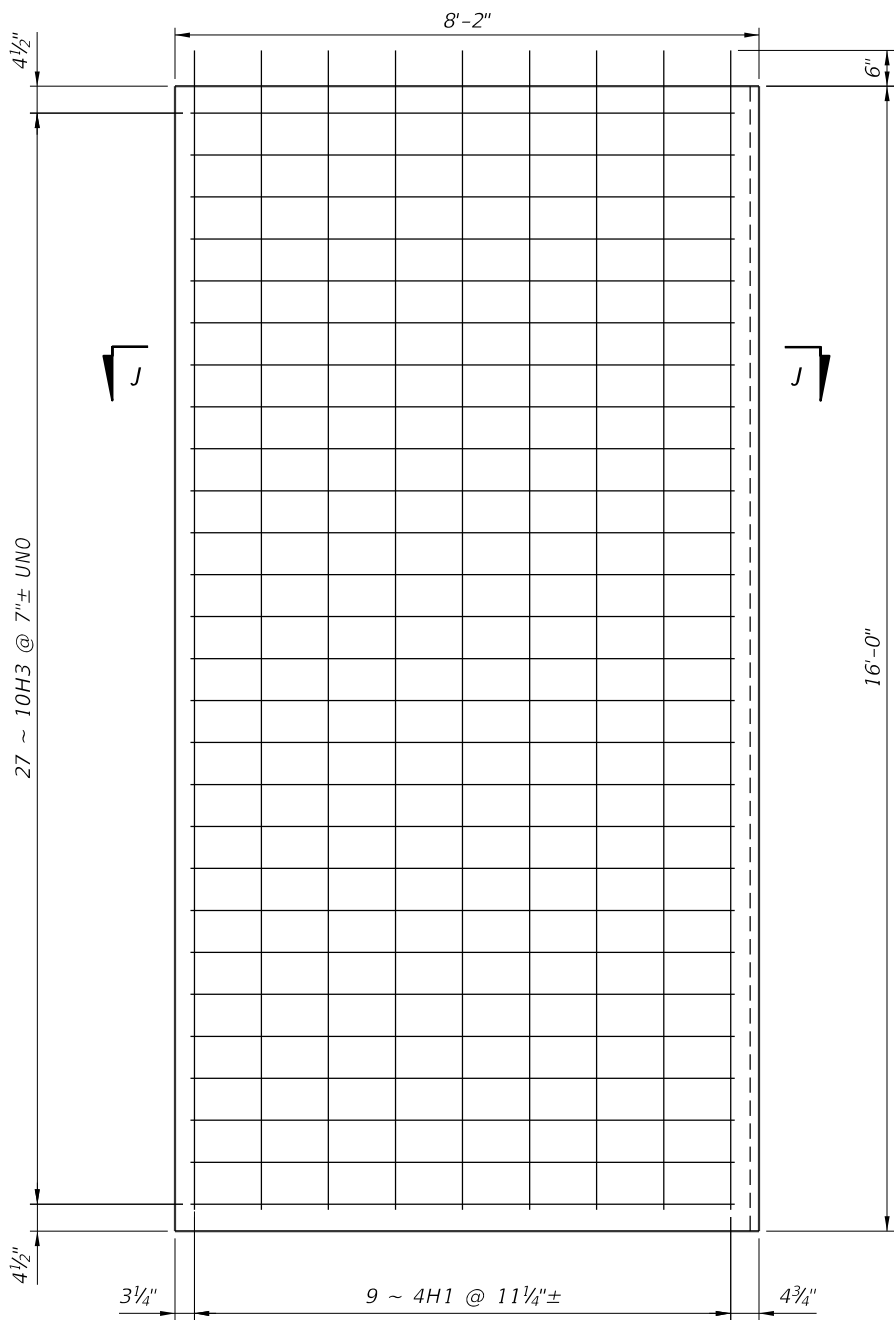
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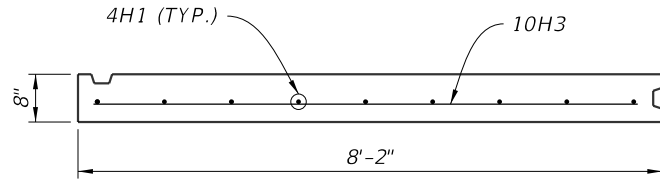
ELEVATION OF PANEL A
(End Bent 1)



SECTION H-H



ELEVATION OF PANEL B
(End Bent 1 Wingwall)



SECTION J-J

NOTE:

- 1) CONTRACTOR/FABRICATOR SHALL PROVIDE LIFTING HOOKS IN A PATTERN THAT PREVENTS THE PANEL FROM BENDING DURING LIFTING. LIFTING HOOKS SHALL BE GALVANIZED. LIFTING HOOKS SHALL BE CUTOFF AFTER INSTALLATION AND CAP OFF.

LEGEND

UNO = UNLESS NOTED OTHERWISE

BRIDGE NO. 934000

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SCALE: 3/8"=1'-0"
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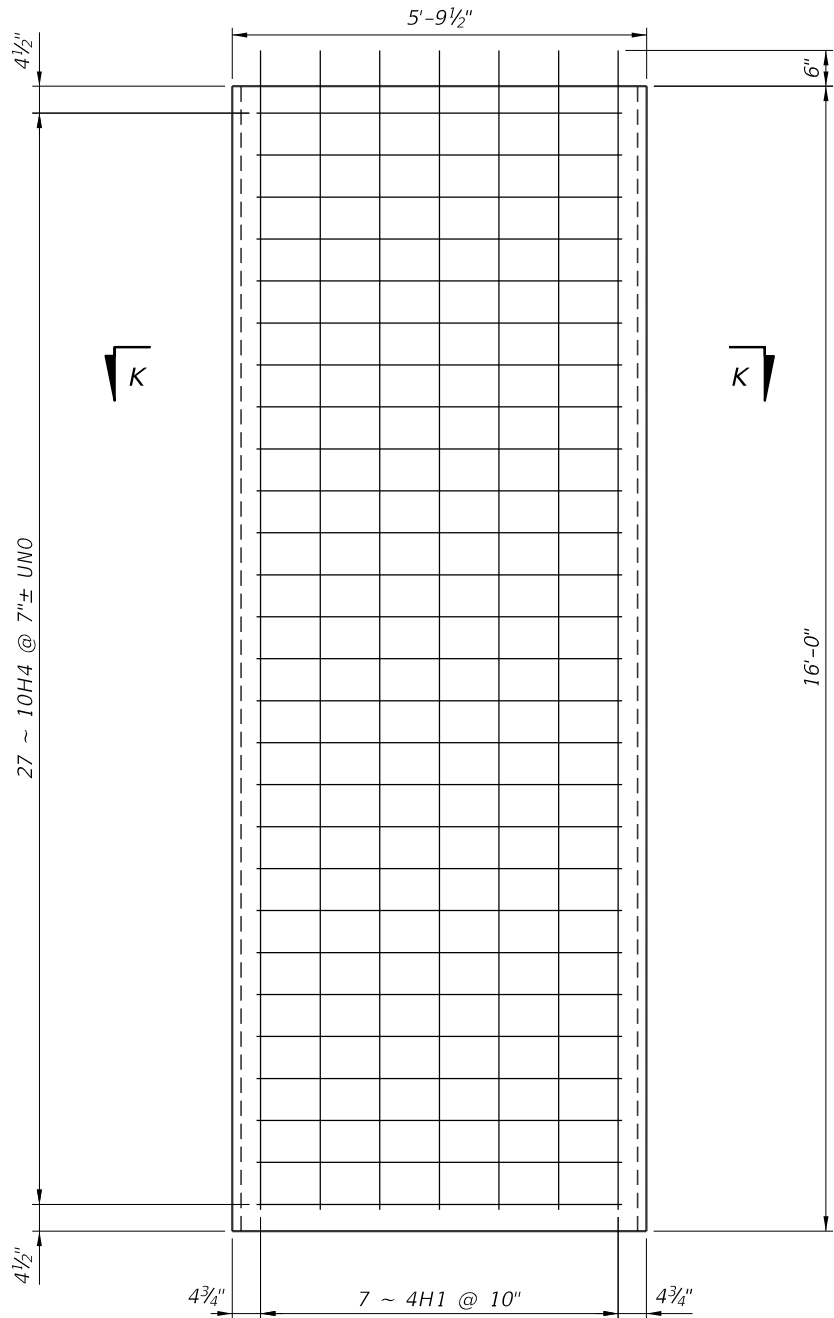
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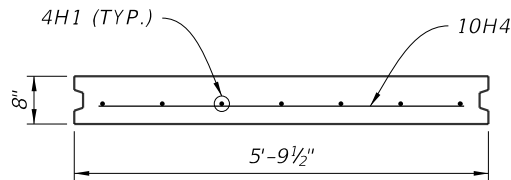
DRAWING NO.

SHEET: B1-15
OF 42 OF 95
PROJECT NO.
2019803

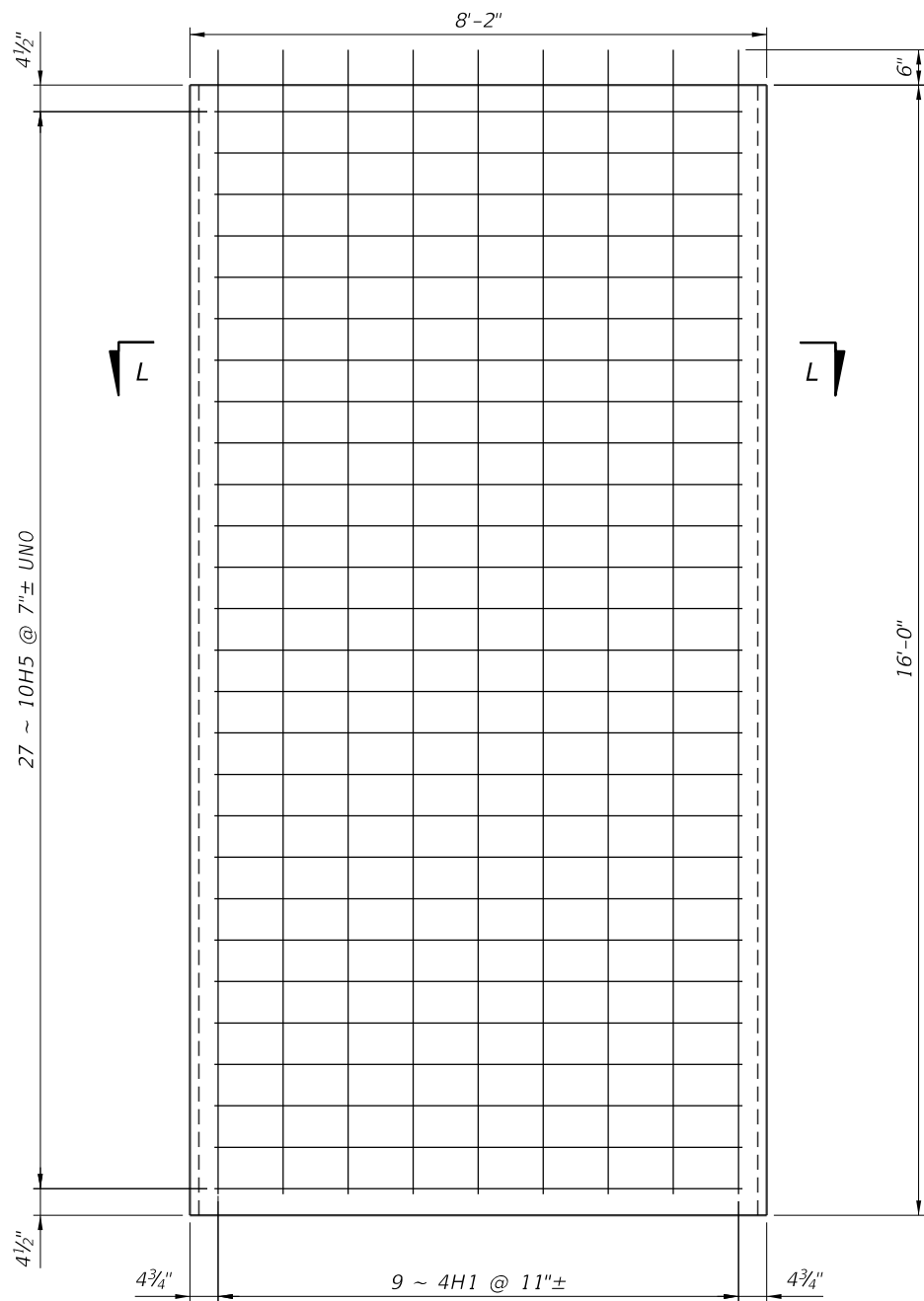
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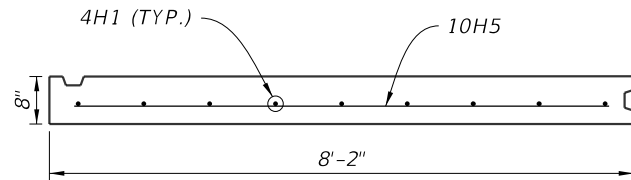
ELEVATION OF PANEL C
(End Bent 6)



SECTION K-K



ELEVATION OF PANEL D
(End Bent 6 Wingwall)



SECTION L-L

LEGEND

UNO = UNLESS NOTED OTHERWISE

NOTE:

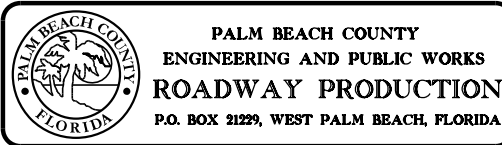
1) CONTRACTOR/FABRICATOR SHALL PROVIDE LIFTING HOOKS IN A PATTERN THAT PREVENTS THE PANEL FROM BENDING DURING LIFTING. LIFTING HOOKS SHALL BE GALVANIZED. LIFTING HOOKS SHALL BE CUTOFF AFTER INSTALLATION AND CAP OFF.

BRIDGE NO. 934000

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ERIC HUSKEY, P.E. NO. 56593

**CR 880 AT SAM SENTER ROAD
INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE



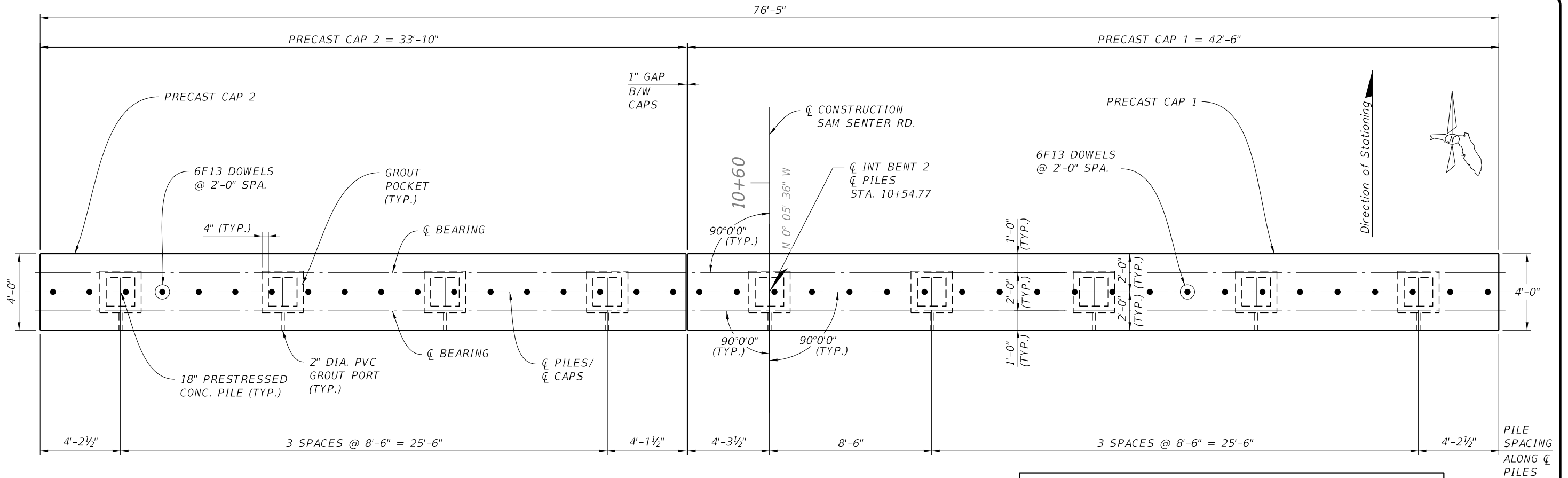
SCALE: 3/8"=1'-0"
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

**END BENT DETAILS
(7 OF 7)**

DESIGN FILE NAME	DRAWING NO.
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SHEET: B1-16
OF 43 OF 95
PROJECT NO.
2019803

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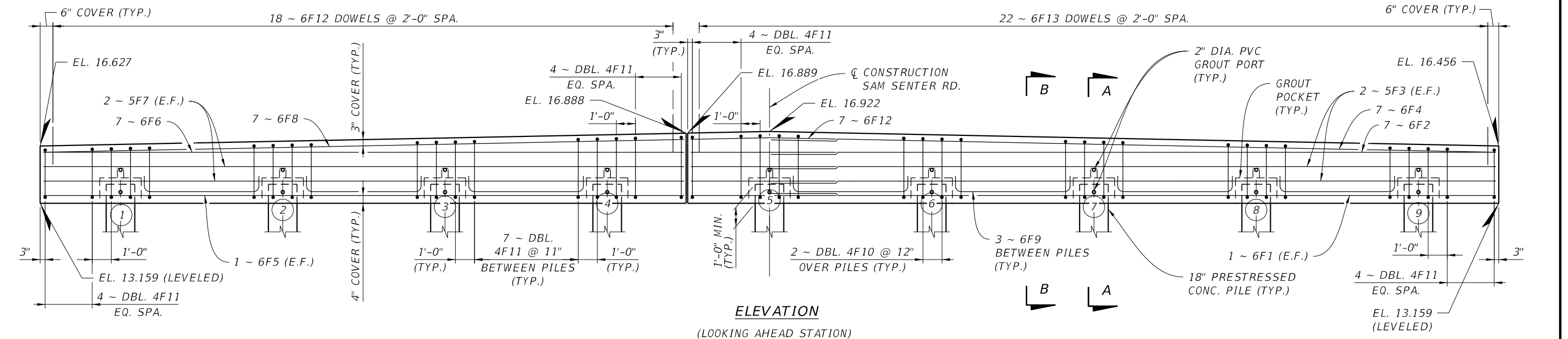


ESTIMATED QUANTITIES - PRECAST CAP 2		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	18
Reinforcing Steel (Substructure)	LB	1631
18" Sq. Prestressed Concrete Piles	LF	234
18" Sq. Prestressed Concrete Test Piles	LF	93

PLAN

- NOTES:**
- SEE INTERMEDIATE BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
 - SEE INTERMEDIATE BENT DETAIL SHEET FOR SECTION A-A AND SECTION B-B.

ESTIMATED QUANTITIES - PRECAST CAP 1		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	23
Reinforcing Steel (Substructure)	LB	2092
18" Sq. Prestressed Concrete Piles	LF	390
18" Sq. Prestressed Concrete Test Piles	LF	N/A



ELEVATION

(LOOKING AHEAD STATION)

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**CR 880 AT SAM SENTER ROAD
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**PALM BEACH COUNTY
ENGINEERING AND PUBLIC WORKS
ROADWAY PRODUCTION**
P.O. BOX 21229, WEST PALM BEACH, FLORIDA

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DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

INTERMEDIATE BENT 2

DESIGN FILE NAME

DRAWING NO.

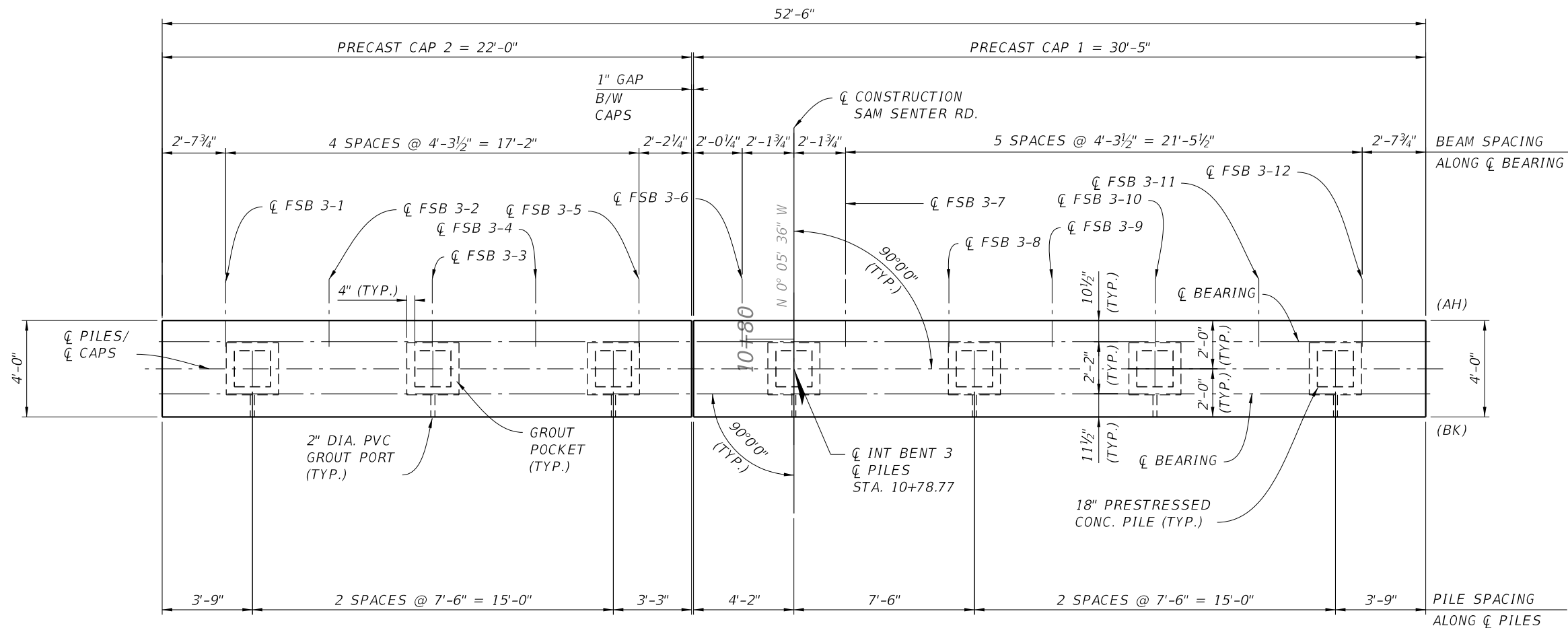
SHEET: B1-17
OF: 44 OF 95
PROJECT NO.
2019803

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7661

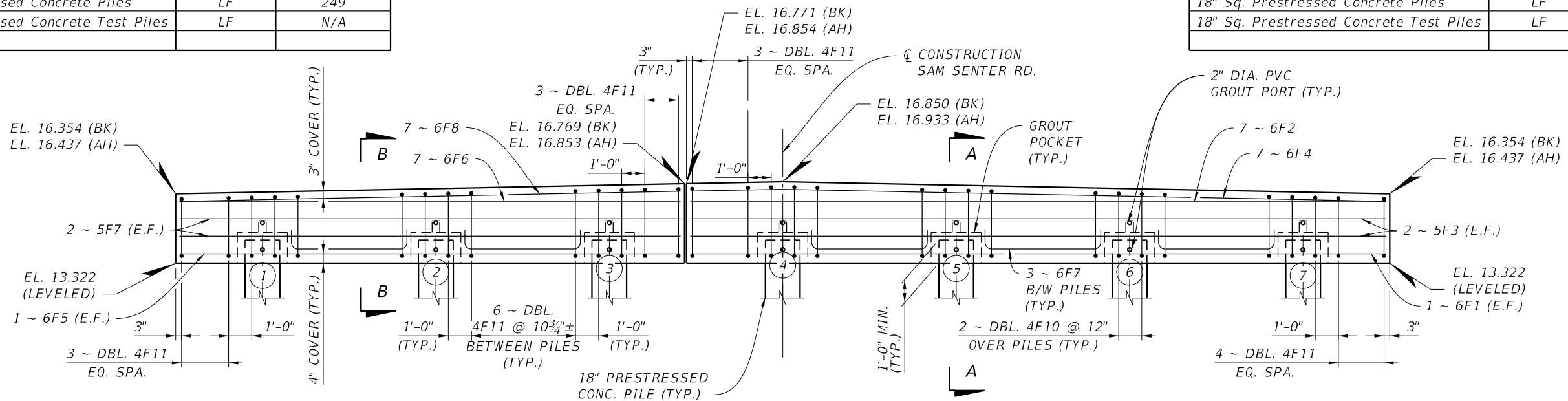


ESTIMATED QUANTITIES - PRECAST CAP 2		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	11
Reinforcing Steel (Substructure)	LB	1011
18" Sq. Prestressed Concrete Piles	LF	249
18" Sq. Prestressed Concrete Test Piles	LF	N/A

NOTES

- SEE INTERMEDIATE BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
- SEE INTERMEDIATE BENT DETAILS FOR SECTION A-A AND SECTION B-B.

ESTIMATED QUANTITIES - PRECAST CAP 1		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	15
Reinforcing Steel (Substructure)	LB	1411
18" Sq. Prestressed Concrete Piles	LF	249
18" Sq. Prestressed Concrete Test Piles	LF	98



BK = BACK STATION ELEVATIONS
AH = AHEAD STATION ELEVATIONS

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INTERSECTION IMPROVEMENT AND BRIDGE
REPLACEMENT**

NO.	REVISION	BY	DATE



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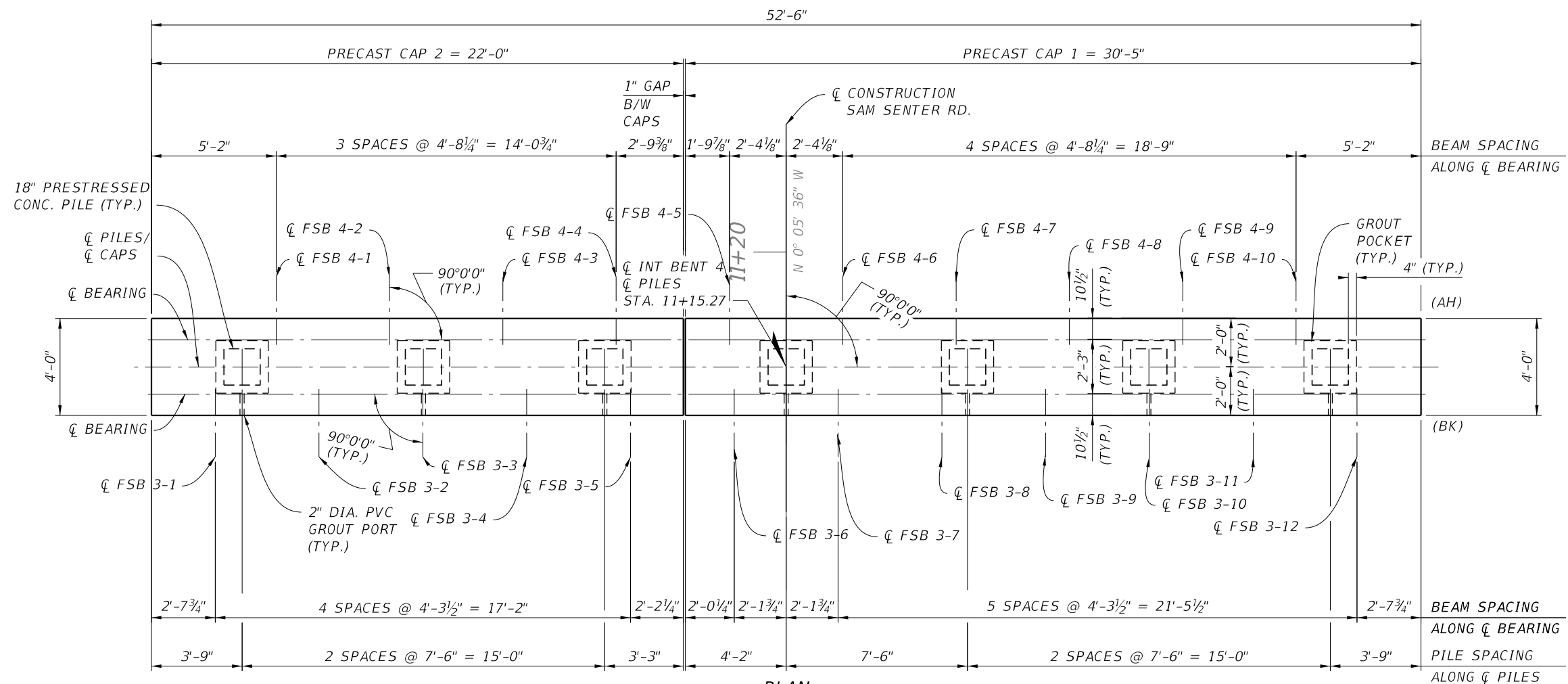
SCALE: 3/16"=1'-0"
APPROVED: A.A.
DRAWN: S.S.
CHECKED: E.H.
DATE: 11/5/24

INTERMEDIATE BENT 3

DESIGN FILE NAME

DRAWING NO.

SHEET: B1-18
OF: 45 OF 95
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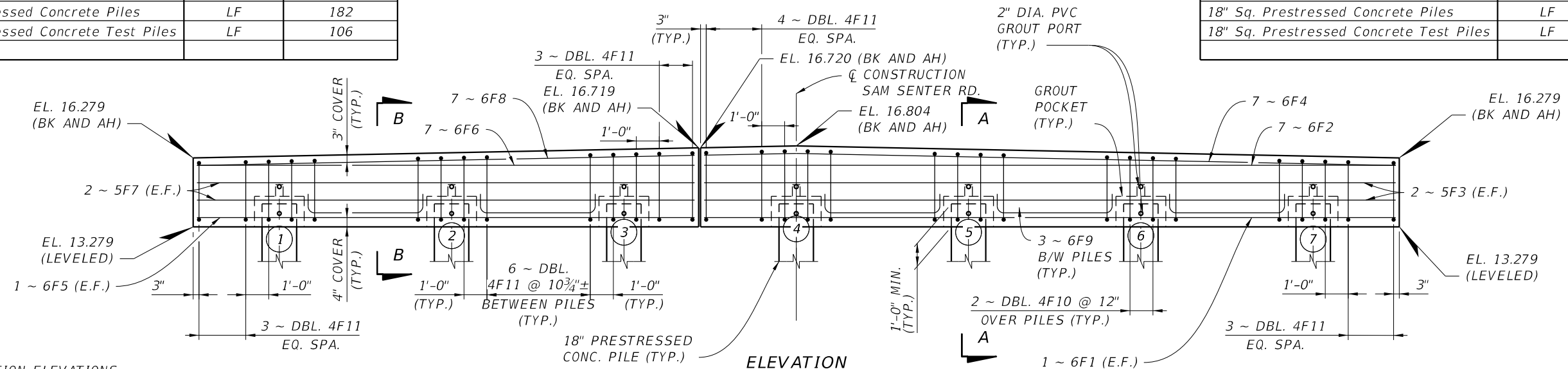


ESTIMATED QUANTITIES - PRECAST CAP 2		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	11
Reinforcing Steel (Substructure)	LB	1011
18" Sq. Prestressed Concrete Piles	LF	182
18" Sq. Prestressed Concrete Test Piles	LF	106

NOTES

1. SEE INTERMEDIATE BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
2. SEE INTERMEDIATE BENT DETAILS FOR SECTION A-A AND SECTION B-B.

ESTIMATED QUANTITIES - PRECAST CAP 1		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	15
Reinforcing Steel (Substructure)	LB	1411
18" Sq. Prestressed Concrete Piles	LF	364
18" Sq. Prestressed Concrete Test Piles	LF	N/A



BK = BACK STATION ELEVATIONS
AH = AHEAD STATION ELEVATIONS

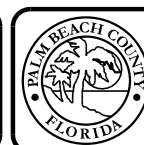
ELEVATION
(LOOKING AHEAD STATION)

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CR 880 AT SAM SENTER ROAD INTERSECTION IMPROVEMENT AND BRIDGE REPLACEMENT

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ENGINEERING AND PUBLIC WORKS
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P.O. BOX 21229, WEST PALM BEACH, FLORIDA**

SCALE: $\frac{3}{16}'' = 1' - 0''$
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DRAWN: S.S.
CHECKED: E.H
DATE: 11/5/24

INTERMEDIATE BENT 4

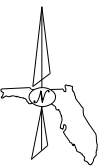
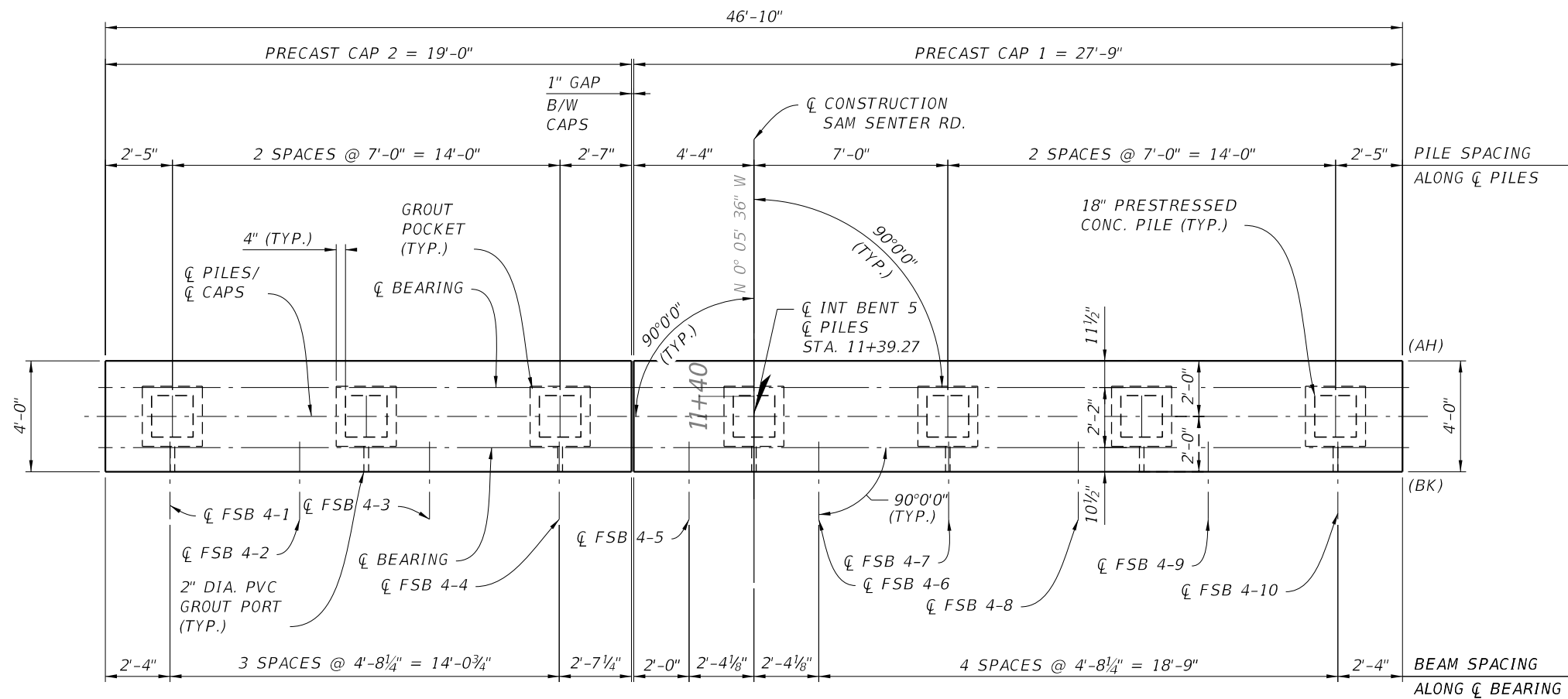
DESIGN FILE NAME	DRAWING NO.
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HEET: *B1-19*
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PROJECT NO.
2019803

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Direction of Stationing

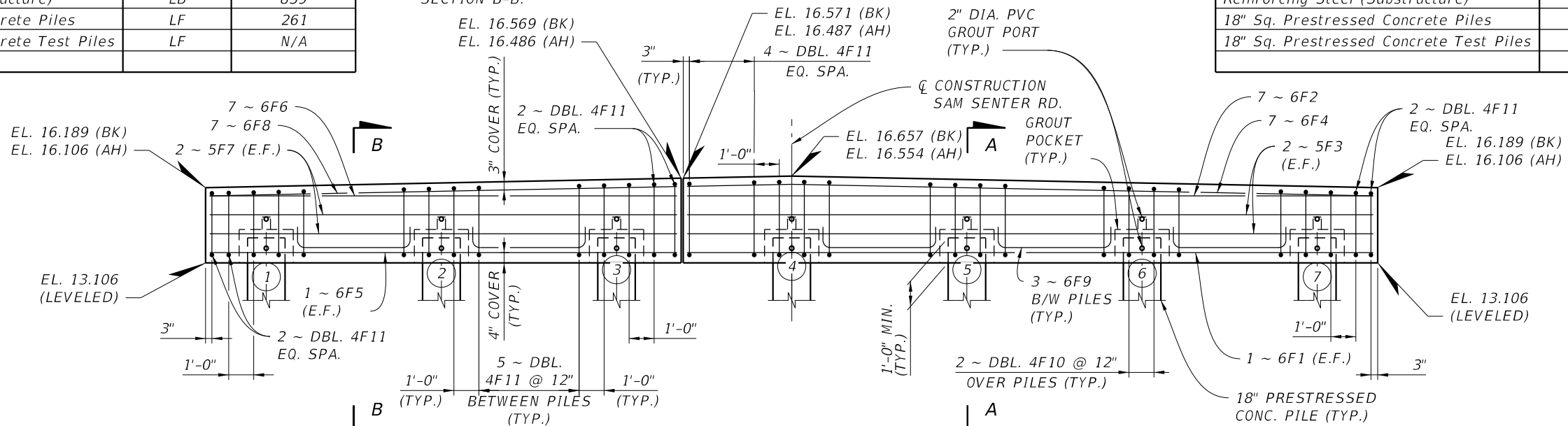
PLAN

NOTES

1. SEE INTERMEDIATE BENT DETAIL SHEET FOR PILE GROUT POCKET INFORMATION AND DETAILS.
2. SEE INTERMEDIATE BENT DETAILS FOR SECTION A-A AND SECTION B-B.

ESTIMATED QUANTITIES - PRECAST CAP 2		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	9
Reinforcing Steel (Substructure)	LB	859
18" Sq. Prestressed Concrete Piles	LF	261
18" Sq. Prestressed Concrete Test Piles	LF	N/A

ESTIMATED QUANTITIES - PRECAST CAP 1		
ITEM	UNIT	QUANTITY
Class IV Concrete (Substructure)	CY	14
Reinforcing Steel (Substructure)	LB	1265
18" Sq. Prestressed Concrete Piles	LF	261
18" Sq. Prestressed Concrete Test Piles	LF	102



ELEVATION

(LOOKING AHEAD STATION)

BK = BACK STATION ELEVATIONS
AH = AHEAD STATION ELEVATIONS

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**CR 880 AT SAM SENTER ROAD
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REPLACEMENT**

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DATE: 11/5/24

INTERMEDIATE BENT 5

DESIGN FILE NAME DRAWING NO.

SHEET: B1-20
OF: 47 OF 95
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