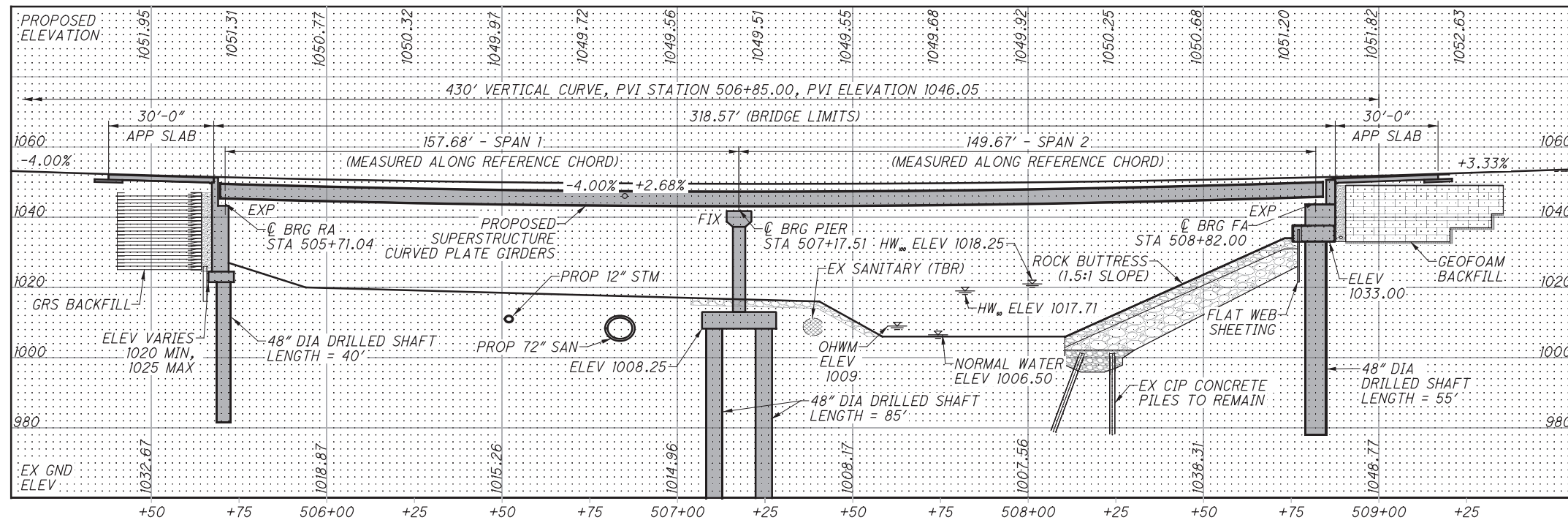
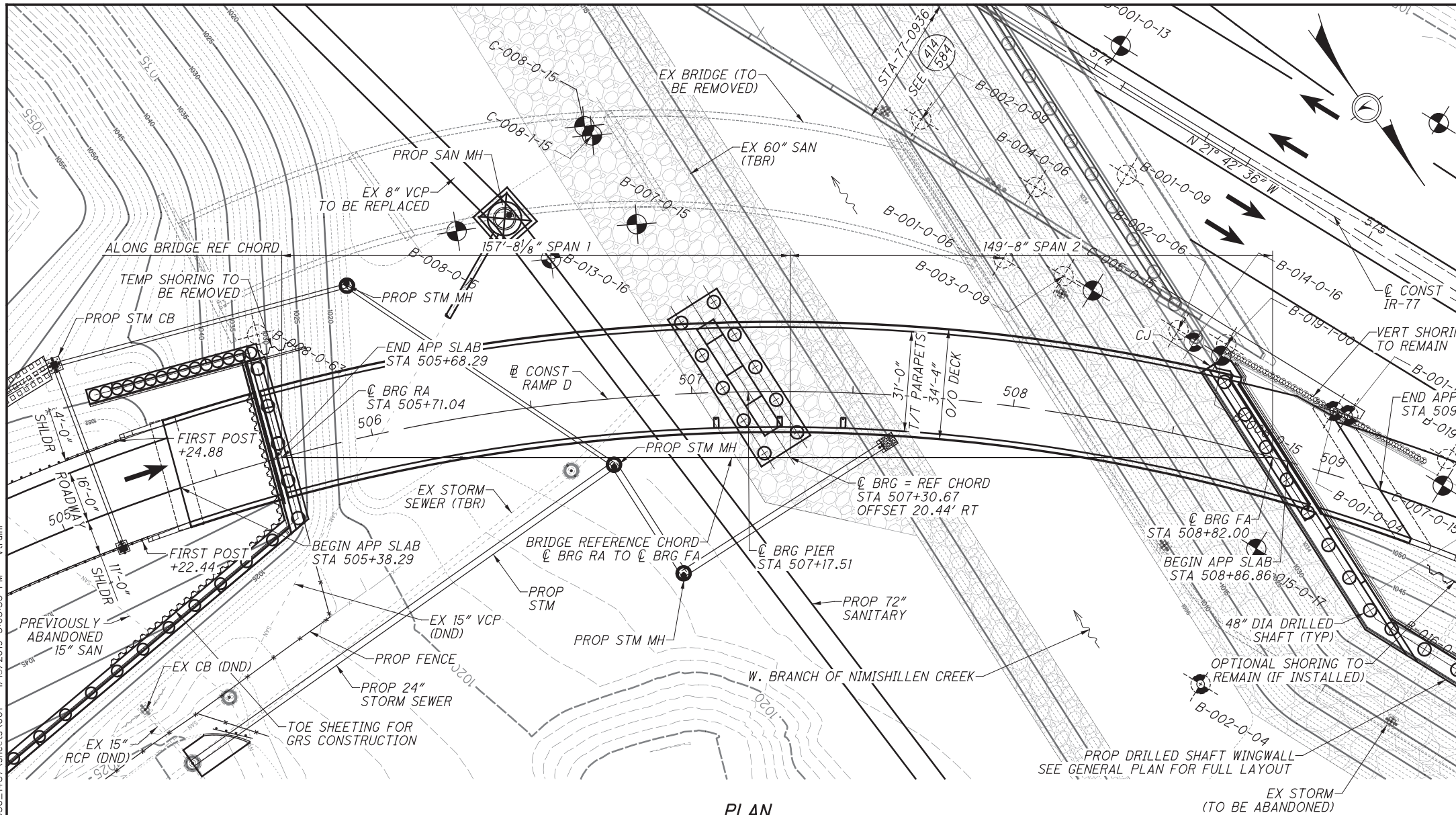




BENCHMARK DATA

BM #3 IRON PIN SET STA. 568+62.63, 45.98' RT. EL. 1042.006	BM #4 IRON PIN SET STA. 572+28.94, 50.95' LT. EL. 1046.295
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HYDRAULIC DATA

DRAINAGE AREA = 46.6 SQ. MILES
Q 50 = 3580 CFS V 50 = 4.38 FT/S HW 50 = EL 1017.71
Q 100 = 4100 CFS V 100 = 4.49 FT/S HW 100 = EL 1018.25

RAMP D TRAFFIC DATA (STA-30-1487)

2019 ADT = 10,080 2019 ADTT = 605
2039 ADT = 12,690 2039 ADTT = 762
DIRECTIONAL DISTRIBUTION = 100%

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

LEGEND

--- APPROXIMATE LIMITS OF SHORING LEFT IN PLACE U.N.O.
--- LIMITS OF PROPOSED CHANNEL PROTECTION

HORIZONTAL CURVE DATA

B CONST RAMP D

P.I. STA. 506+79.38
Δ = 67° 30' 36" (RT)
Dc = 9° 45' 00"
R = 587.65'
T = 392.73'
L = 692.41'
E = 119.15'
C = 653.04'
C.B. = N 62° 22' 53" W

BRIDGE REFERENCE CHORD DEFINITION

℄ RA BRG TO ℄ FA BRG, LENGTH = 307.35', BEARING N 53°14'59" W

EXISTING STRUCTURE

TYPE: CONTINUOUS CURVED WELDED PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 60.60±, 80.00±, 95.11± C/C BEARINGS MEASURED AS CHORDS ON BASE LINE
WIDTH: 28'-0" F/F OF PARAPETS INCLUDING 12" CURBS
ORIGINAL DESIGN LOADING: C.F. 2000 (57) ADEQUATE FOR AASHTO ALTERNATE LOADING
SKEW: VARIES
WEARING SURFACE: 3" SUPER-PLASTICIZED DENSE CONCRETE (SDC)
ALIGNMENT: CURVE RIGHT AND SPIRAL
APPROACH SLABS: ABUTMENT NO 1: AS-1-54 (25' LONG)
ABUTMENT NO 2: SPECIAL (25' LONG)
SUPERELEVATION: VARIABLE AND 0.083'
YEAR BUILT: 1969 ORIGINAL CONST
STRUCTURE FILE NUMBER: 7603665
DISPOSITION: TO BE REPLACED

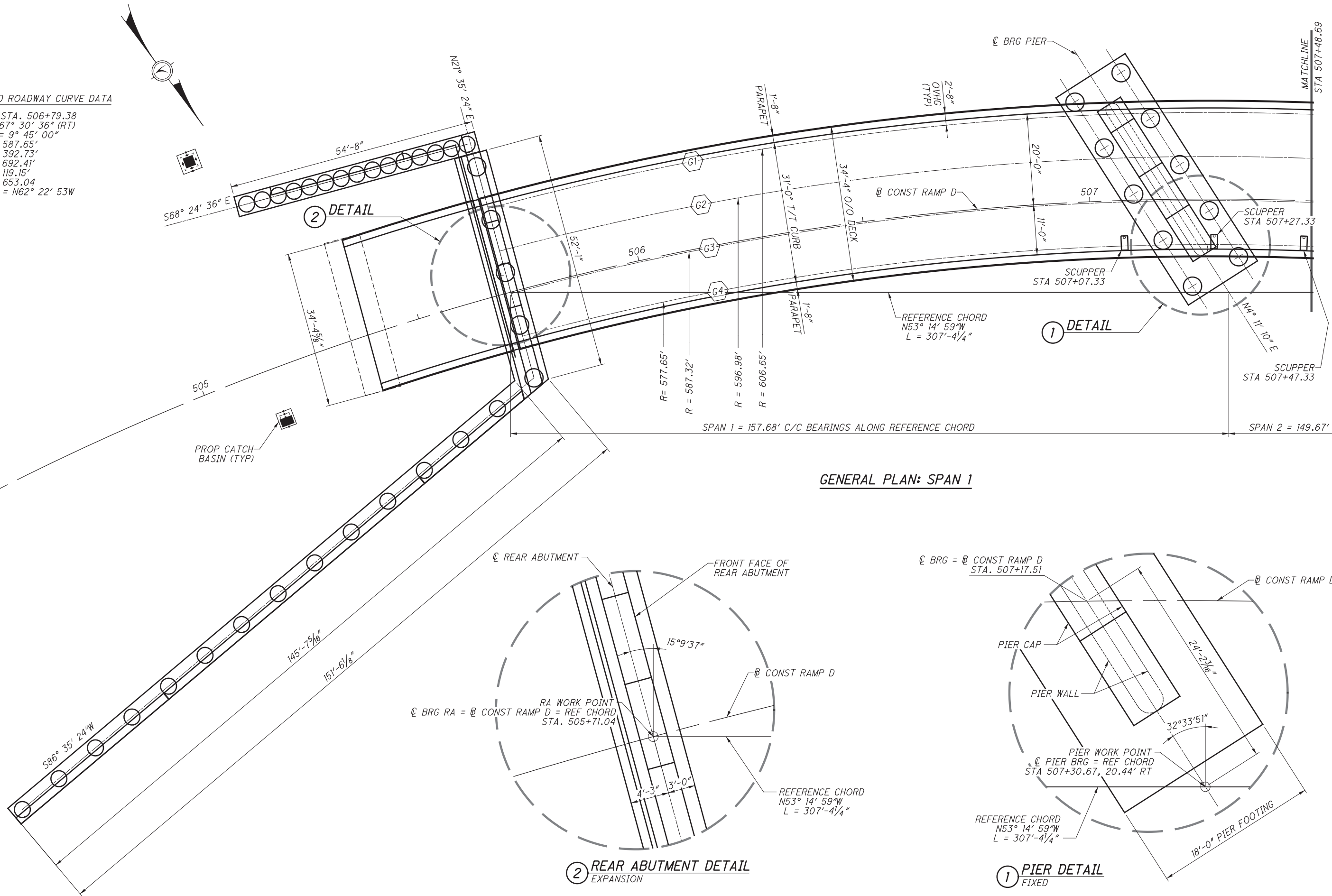
PROPOSED STRUCTURE

TYPE: CURVED CONTINUOUS WELDED PLATE GIRDERS (VARIABLE WEB DEPTHS, A709 GRADE 50W) WITH COMPOSITE REINFORCED CONCRETE DECK, WALL ABUTMENTS ON DRILLED SHAFTS, AND A WALL TYPE PIER FOUNDED ON DRILLED SHAFTS
SPANS: 157.68', 149.67' C/C BRGS ALONG REFERENCE CHORD
ROADWAY: 31'-0" T/T PARAPETS: 1 - 16'-0" LANE
4'-0" LEFT SHOULDER, 11'-0" RIGHT SHOULDER
DESIGN LOADING: HL-93 WITH 60 PSF FWS
ALIGNMENT: 9°45'00" CURVE RIGHT (587.65' RADIUS)
SKEW: REAR ABUTMENT 15°09'37", FORWARD ABUTMENT AND PIER 32°33'51" TO BRIDGE REFERENCE CHORD
WEARING SURFACE: 1" MONOLITHIC CONCRETE
SUPERELEVATION: VARIES - 0.058 MAX, 0.0565 MIN
APPROACH SLABS: AS-1-15 (MODIFIED), AS-2-15 (TYPE A INSTALLATION, 30' LONG, 17" THICK)
COORDINATES: LATITUDE N 40° 47' 13.50"
LONGITUDE W 81° 23' 07.10"
STRUCTURE FILE NUMBER: 7603666

SUBMITTAL: SEALED TRACINGS
PLOT DRIVER: ODOTV8ISS3_PDF.pltcfgr
PENTABLE: 90973-0DOTV8ISS3_Pen.tbl
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RAMP D ROADWAY CURVE DATA

P.I STA. 506+79.38
 $\Delta = 67^\circ 30' 36''$ (RT)
 $Dc = 9^\circ 45' 00''$
 $R = 587.65'$
 $T = 392.73'$
 $L = 692.41'$
 $E = 119.15'$
 $C = 653.04$
 $C.B = N62^\circ 22' 53'' W$



SUBMITTAL: SEALED TRACINGS PLOT DRIVER: ODOTV8ISS3_PDF.pltcf9 PLOT: 90973 PENTABLE: 90973_ODOTV8ISS3_Pen.tbl pwa:\gfpwmg02.corporate.gannettfleming.com:gfpw02.DOCuments\Projects\55774\90973\structures\STA030-1487\sheets\005 1/15/2019 3:03:49 PM vtraini	PRIMARY PROPOSED WORK CONSTRUCT REPLACEMENT BRIDGE WHILE MAINTAINING TRAFFIC ON EXISTING RAMP D BRIDGE.					DESIGN AGENCY GannettFleming ENGINEERS & ARCHITECTS, P.C. 2600 CORPORATE EXCHANGE DRIVE SUITE 230 COLUMBUS, OHIO 43231
	SHARED BRIDGE PLANS AND NOTES THIS BRIDGE SHARES ITS FORWARD ABUTMENT WITH BRIDGE STA-077-0936. DETAILS AND PAYMENT FOR FORWARD ABUTMENT ITEMS ARE IN THE SHARED SUBSET OF PLANS. PROJECT-WIDE NOTES APPLICABLE TO THIS PROJECT ARE ALSO CONTAINED IN THE SHARED SET.					
	SEE SHEETS (299/584) THROUGH (355/584) FOR THE SHARED DETAILS.					
	REFERENCED STANDARD DRAWINGS AS-1-15 -----REVISED 07-17-2015 AS-2-15 -----REVISED 01-19-2018 EXJ-4-87 -----REVISED 01-19-2018 HL-50.21 -----REVISED 07-20-2018 PCB-91 -----REVISED 01-18-2013 SBR-1-13 -----REVISED 07-20-2018					
	REFERENCED SUPPLEMENTAL SPECIFICATIONS 800 -----DATED 01-18-2019 840 -----DATED 07-20-2018 846 -----DATED 04-17-2015 863 -----DATED 10-17-2014 869 -----DATED 10-17-2014					
	DESIGN SPECIFICATIONS THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS", ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017 (EIGHTH EDITION), AND THE ODOT BRIDGE DESIGN MANUAL, 2007, EXCEPT AS NOTED ELSEWHERE IN THE PLANS.					
	SPECIAL DESIGN SPECIFICATIONS THE BRIDGE REQUIRED THE USE OF A THREE DIMENSIONAL MODEL USING THE FINITE ELEMENT DESIGN METHOD TO ANALYZE THE STRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS LEAP BRIDGE STEEL (VERSION 18, WITH FINITE ELEMENT MESHING ANALYSIS SELECTED). THIS PROGRAM WAS USED TO DESIGN THE STEEL GIRDERS AND CROSSFRAMES AND TO CALCULATE REACTIONS FOR THE DESIGN OF THE BEARINGS AND SUBSTRUCTURES.					
	DEAD LOAD DISTRIBUTION: THE NON-COMPOSITE DEAD LOAD WAS DISTRIBUTED TO THE GIRDERS BASED ON TRIBUTARY AREA. COMPOSITE DEAD LOAD WAS DISTRIBUTED EQUALLY TO ALL GIRDERS.					
	LIVE LOAD DISTRIBUTION: THE DESIGN ANALYSIS WAS CARRIED OUT BY APPLYING TRUCK AND LANE LOADS DIRECTLY TO THE FINITE ELEMENT MODEL, RATHER THAN BY USING CALCULATED DISTRIBUTION FACTORS.					
	LRFD OPERATIONAL IMPORTANCE A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.					
DESIGN LOADING HL-93 FUTURE WEARING SURFACE (FWS) OF 0.060 KSF						
DESIGN DATA CONCRETE DRILLED SHAFTS, CLASS QC5: F'c = 4.5 KSI SUBSTRUCTURE, CLASS QC1: F'c = 4.0 KSI SUPERSTRUCTURE, CLASS QC2: F'c = 4.5 KSI STEEL STRUCTURAL STEEL, ASTM A709 (GRADE 50W): Fy = 50 KSI REINFORCING STEEL, ASTM A615 OR A996: MINIMUM Fy = 60 KSI						
DECK PROTECTION METHODS EPOXY COATED REINFORCING STEEL 2 1/2" CONCRETE COVER SEALING OF CONCRETE SURFACES						
MONOLITHIC WEARING SURFACE MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.						
EXISTING STRUCTURE VERIFICATION DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.						
BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.						
DECK PLACEMENT DESIGN ASSUMPTIONS THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.						
AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.47 KIPS						
A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103"						
A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48"						
A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA BEAM TO THE FACE OF THE SAFETY HANDRAIL OF 65"						
DRILLED SHAFT DESIGN LOADS 48" DIAMETER DRILLED SHAFTS AT REAR ABUTMENT: MAX FACTORED LOAD TO BE SUPPORTED BY EACH SHAFT = 550 KIPS FACTORED TIP RESISTANCE = 211 KIPS FACTORED SKIN RESISTANCE = 390 KIPS ASSUMED TO OCCUR ALONG THE BOTTOM 35' OF THE DRILLED SHAFT TOTAL FACTORED RESISTANCE = 601 KIPS						
48" DIAMETER DRILLED SHAFTS AT PIER: MAX FACTORED LOAD TO BE SUPPORTED BY EACH SHAFT = 660 KIPS FACTORED TIP RESISTANCE = 133 KIPS FACTORED SKIN RESISTANCE = 605 KIPS ASSUMED TO OCCUR ALONG THE BOTTOM 75' OF THE DRILLED SHAFT TOTAL FACTORED RESISTANCE = 738 KIPS						
48" DIAMETER DRILLED SHAFTS AT FORWARD ABUTMENT: MAX FACTORED LOAD TO BE SUPPORTED BY EACH SHAFT = 655 KIPS FACTORED TIP RESISTANCE = 196 KIPS FACTORED SKIN RESISTANCE = 483 KIPS ASSUMED TO OCCUR ALONG THE BOTTOM 50' OF THE DRILLED SHAFT TOTAL FACTORED RESISTANCE = 679 KIPS						
REQUIRED SHAFT LENGTH FOR LATERALLY LOADED DRILLED SHAFTS WAS DEFINED AS THE LENGTH AT WHICH THE MOMENT OF EQUILIBRIUM REQUIREMENTS WERE SATISFIED UTILIZING STRENGTH-I LOADING CASE.						
ITEM 202 - WEARING COURSE REMOVED, AS PER PLAN THIS ITEM INCLUDES REMOVAL OF THE EXISTING ASPHALT WEARING COURSE ATOP BRIDGE DECK AND APPROACH SLABS.						
ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING BRIDGE NO. STA-30-1487 CARRYING RAMP D OVER THE WEST BRANCH OF NIMISHILLEN CREEK.						
THE EXISTING BRIDGE MUST REMAIN IN SERVICE UNTIL PHASE 4 CONSTRUCTION BEGINS AND ALL TRAFFIC HAS BEEN MOVED OFF THE EXISTING MAINLINE BRIDGE. PAYMENT FOR REMOVAL OF THE EXISTING FORWARD ABUTMENT IS MADE WITH THE SHARED SET QUANTITIES.						
THE REMOVAL OF THE EXISTING BRIDGE INCLUDES THE REMOVAL OF ALL SUPERSTRUCTURE ELEMENTS AND ALL SUBSTRUCTURE ELEMENTS TO A MINIMUM DISTANCE OF 2'-0" BELOW PROPOSED FINAL GRADE.						
THE CONTRACTOR MUST REVIEW THE EXISTING STRUCTURES WHEN PREPARING THEIR BID.						
ITEM 203 - ROADWAY MISC.: EPS GEOFOAM FILL SEE PLAN NOTES ON SHEET (302/584)						
ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN THE DEPARTMENT WILL REQUIRE A VALUE ENGINEERING CHANGE PROPOSAL IN ACCORDANCE WITH C&MS 105.19 FOR MODIFICATIONS OF THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATIONS. HOWEVER, SEE NOTE ON SHEET (300/584) FOR RESTRICTIONS ON VECP.						
ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN EXCAVATION QUANTITIES INCLUDED FOR PAYMENT WITH BRIDGE STA-30-1487 ARE THOSE REQUIRED TO CONSTRUCT THE PROPOSED ABUTMENTS AND PIERS FOR THIS STRUCTURE.						
FOR CHANNEL AND ROCK BUTTRESS EXCAVATION DETAILS AND NOTES, SEE SHARED GENERAL NOTES ON SHEET (309/584)						
THE PIER EXCAVATION IS DEFINED AS THE PLAN AREA 1'-0" BEYOND THE PIER FOOTING PLAN AREA. THE DEPTH OF EXCAVATION ASSUMED IS FROM THE EXISTING GROUND ELEVATION TO BOTTOM OF PROPOSED PIER FOOTING ELEVATION.						
THE REAR ABUTMENT EXCAVATION IS DEFINED AS THE PLAN AREA BOUNDED BY A DISTANCE 1'-0" BEYOND THE LIMITS OF THE FRONT FACE OF PROPOSED REAR ABUTMENT FOOTING TO A DISTANCE 1'-0" BEYOND THE LIMITS OF THE GRS FILL. THE AREA IS 1'-0" BEYOND THE LIMITS OF THE PROPOSED REAR ABUTMENT FOOTING WHEN NO GRS FILL IS PRESENT. THE LATERAL LIMITS EXTEND FROM 1'-0" BEYOND THE END OF RIGHT WINGWALL TO THE TANGENT SHAFT WALL. THE DEPTH OF EXCAVATION IS ASSUMED TO BE FROM THE EXISTING GROUND ELEVATION (IN FRONT OF GRS SHEET PILING) OR BOTTOM OF PROPOSED REAR ABUTMENT GRS MASS.						
THE FORWARD ABUTMENT EXCAVATION IS DEFINED AS THE PLAN AREA BOUNDED BY THE FILL FACE OF EXISTING FORWARD ABUTMENT BACKWALL TO A DISTANCE 1'-0" BEYOND THE LIMITS OF EITHER THE GEOFOAM OR THE LIMITS OF THE PROPOSED FORWARD ABUTMENT AND WINGWALL FOOTING, WHICHEVER IS FURTHEST FROM THE EXISTING FORWARD ABUTMENT BACKWALL. THE LATERAL LIMITS EXTEND FROM THE PHASE 1 VERTICAL SHORING ELEMENTS, TO 1'-0" BEYOND THE END OF THE PROPOSED FORWARD ABUTMENT WINGWALL. THE DEPTH OF EXCAVATION IS ASSUMED TO BE FROM THE EXISTING GROUND ELEVATION TO BOTTOM OF PROPOSED FORWARD ABUTMENT FOOTING ELEVATION.						
ITEM 507 - PILING MISC.: SHORING ATTACHED TO SLEEPER SLAB SEE PLAN NOTES ON SHEET (303/584)						
ITEM 511 - CONCRETE MISC.: TEMPORARY SLEEPER SLAB AND PARAPET SEE PLAN NOTES ON SHEET (303/584)						
ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN IN ADDITION TO THE BRIDGE DECK PARAPETS, THE DEPARTMENT WILL PAY FOR CONCRETE PARAPETS ON THE BACKWALLS AND APPROACH SLABS WITH ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.						
ITEM 511 - CONCRETE, MISC.: FACING OF DRILLED SHAFT WALLS IN ADDITION TO THE REQUIREMENTS OF CMS 511,THIS WORK CONSISTS OF FURNISHING AND INSTALLING A PERMANENT CAST-IN-PLACE CONCRETE FACE ON TANGENT DRILLED SHAFT WALLS AS SHOWN IN THE PLANS.						
WORK SHALL ALSO INCLUDE ANY SUBSURFACE PREPARATION REQUIRED, DRILLING OF DOWEL HOLES INTO DRILLED SHAFTS (WHERE REQUIRED), FURNISHING AND INSTALLING REQUIRED REINFORCING PER PLAN DETAILS AND NOTES, THE INSTALLATION AND SUBSEQUENT REMOVAL OF ALL REQUIRED FORM WORK, 1" PEJF MATERIAL REQUIRED FOR CONTRACTION JOINTS, AND CONCRETE FURNISHED AND INSTALLED PER THIS NOTE.						
THE DRILLED SHAFT SURFACES SHALL BE CLEANED OF ALL FOREIGN AND LOOSE MATERIAL AND/OR UNSOUND CONCRETE USING WATER AND AIR UNDER PRESSURE PRIOR TO FORMING AND INSTALLING THE WALL FACING.						
DOWEL HOLES SHALL BE CONSTRUCTED PER CMS 510. DOWELS SHALL BE DEFORMED BARS, ASTM A615, GRADE 60, AND SHALL BE SPACED AS SHOWN ON THE PLANS. DOWELS SHALL BE GROUTED IN PLACE WITH NON-SHRINK, NON METALLIC GROUT PER CMS 510. ALL FREE WATER SHALL BE REMOVED BY AN AIR JET OR VACUUM PRIOR TO PLACEMENT OF GROUT.						
ITEM 511 - CONCRETE, MISC.: FACING OF DRILLED SHAFT WALLS (CONTINUED) 1" PREFORMED EXPANSION JOINT FILLER SHALL BE FURNISHED AND INSTALLED PER CMS 516.						
CONCRETE SHALL BE PLACED PER CMS 511. THE MAXIMUM NOMINAL SIZE OF COURSE AGGREGATE SHALL BE 3/4". THE MIX DESIGN SHALL ADHERE TO CMS 499 (TYPE QC 2, TABLE 499.03-1).						
THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES (SQ FT) DETERMINED BY CALCULATIONS FROM PLAN DIMENSIONS, IN PLACE, AT THE CONTRACT PRICE.						
ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN THE GIRDERS SHALL BE DETAILED FOR A NO-LOAD FIT (NLF).						
GIRDERS MAY BE HEAT CURVED PER CMS 513.15 EXCEPT HEAT CURVING SHALL CONFORM TO THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATION, CURRENT EDITION. IF HEAT CURVING IS USED, THE FABRICATOR SHALL ACCOUNT FOR EXPECTED LOSS OF CAMBER PER THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS", CURRENT EDITION.						
ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN SEE PLAN NOTES ON SHEET (304/584)						
ITEM 524 - DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN THE DESIGNATED DEMONSTRATION SHAFT SHALL BE TESTED PER ITEM 524 - DRILLED SHAFTS, MISC.: HIGH-STRAIN DYNAMIC TESTING OF DRILLED SHAFTS. PAYMENT FOR THIS TEST SHALL BE MADE WITH THE SHARED SET OF QUANTITIES AND NOTES.						
SEE PLAN NOTES ON SHEETS (304/584) AND (305/584) .						
THE 48" DIAMETER PIER SHAFTS SHALL CONFORM TO ALL MIX DESIGN AND INSTALLATION PROCEDURES USED DURING THE 42" DIAMETER DEMONSTRATION SHAFT INSTALLATION.						
ITEM 524 - DRILLED SHAFTS, MISC.: EXCAVATED SHAFT INSPECTIONS SEE PLAN NOTES ON SHEET (302/584)						
ITEM 524 - DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) WIRE CABLE TESTING OF DRILLED SHAFTS SEE PLAN NOTES ON SHEET (306/584)						
ITEM 863 - REINFORCED EMBANKMENT, AS PER PLAN: THE REINFORCED EMBANKMENT IN THE GEOWALLS SHALL BE SELECT GRANULAR BACKFILL PER ODOT SUPPLEMENTAL SPECIFICATION 840, SECTION 840.03E. PLACEMENT OF THE SELECT GRANULAR BACKFILL SHALL BE PER SUPPLEMENTAL SPECIFICATION 840, SECTION 840.06.I.						
OVERVIEW OF PLAN SUBSET: STA-30-1487 GENERAL PLAN - (2/52) TO (3/52) STA-30-1487 SPECIFIC GENERAL NOTES (4/52) ESTIMATED QUANTITIES - (5/52) PHASED CONST SECTIONS AND DETAILS - (6/52) TO (8/52) FOUNDATION PLANS AND DETAILS - (9/52) TO (12/52) PROPOSED REAR ABUTMENT DETAILS - (13/52) TO (19/52) PROPOSED FORWARD ABUTMENT DETAILS - (20/52) TO (25/52) PROPOSED PIER DETAILS - (26/52) DISC BEARING DETAILS - (27/52) TO (28/52) PROPOSED FRAMING AND ERECTION PLAN - (29/52) TO (31/52) STRUCTURAL STEEL DETAILS - (32/52) TO (38/52) TRANSVERSE SECTION AND DETAILS (39/52) DECK AND PARAPET PLAN AND DETAILS - (40/52) TO (41/52) TOP OF HAUNCH, SCREED, AND FINAL . DECK ELEVATIONS - (42/52) TO (45/52) EXPANSION JOINT DETAILS - (46/52) APPROACH SLAB DETAILS - (47/52) TO (49/52) REINFORCING LIST - (50/52) TO (52/52)						
GENERAL NOTES BRIDGE NO. STA-30-1487 (RAMP D) OVER WEST BRANCH OF NIMISHILLEN CREEK				DESIGNED CTM CHECKED VDT		
STA - 77 - 8.40 / VAR PID No. 90973						
4 / 52				(519/584)		

SUBMITTAL: SEALED TRACINGS
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ASBESTOS NOTIFICATION
AN ASBESTOS SURVEY OF BRIDGE NO. STA-30-1487 (SFN: 7603665) SCHEDULED FOR REMOVAL WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

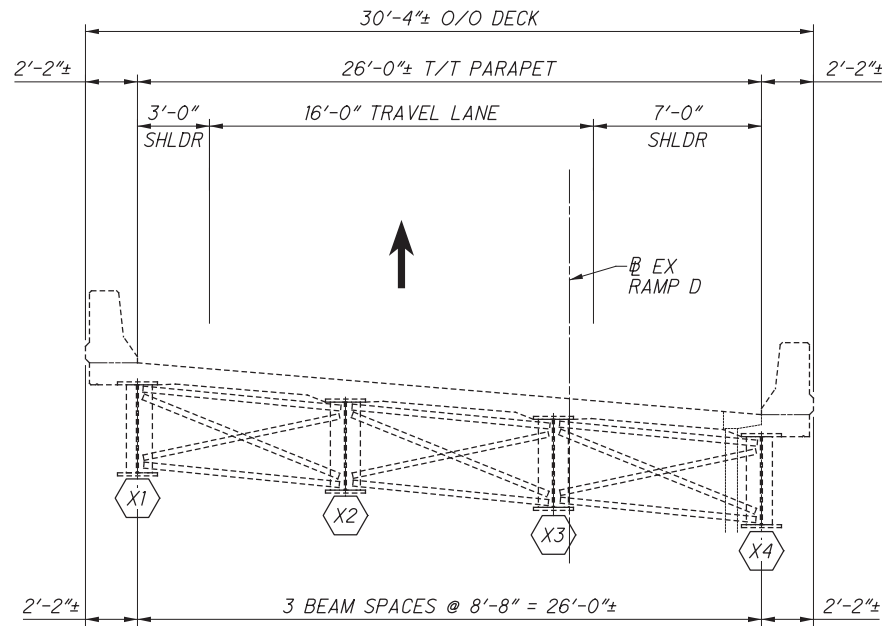
FOR FURTHER ASBESTOS NOTIFICATION NOTES, SEE SHARED GENERAL NOTE SHEET

301584

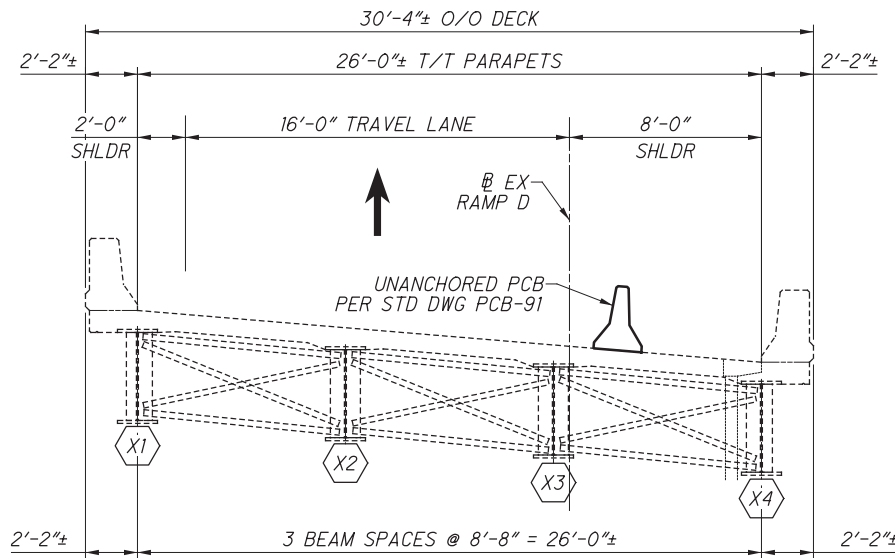
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STA-30-1487 (RAMP D) ESTIMATED BRIDGE QUANTITIES - 03/NHS/BR								CALC: RSN, 11/14/18	CHECK: HJ, 11/15/18
ITEM	ITEM EXT.	TOTAL QUANTITY	UNIT	DESCRIPTION	PHASE 1				APP/REF SHEET NO.
					ABUT.	PIERS	SUPER	GENERAL	
202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	4
202	22900	167	SY	APPROACH SLAB REMOVED	167				
202	23501	967	SY	WEARING COURSE REMOVED, AS PER PLAN			967		4
203	98000	1,155	CY	ROADWAY, MISC.: EPS GEOFOAM FILL	1,155				
204	30010	595	CY	GRANULAR MATERIAL, TYPE B	595				
204	50000	3,902	SY	GEOTEXTILE FABRIC	3,902				
503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	4
503	21101	1,995	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	1,756	239			4
504	11100	2,475	SF	STEEL SHEET PILING LEFT IN PLACE - FWD ABUTMENT FLAT WEB SHEETING (3/8" Min, Sx > 0.28 in3)	2,475				24
507	98020	LS		PILING, MISC.: SHORING ATTACHED TO SLEEPER SLAB				LS	4
509	10000	216,846	LB	EPOXY COATED REINFORCING STEEL	66,187	39,683	110,976		
511	34446	351	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			351		
511	34451	110	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			110		4
511	40512	132	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		132			
511	43512	838	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	838				
511	46512	171	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING		171			
511	71100	114	CY	CONCRETE, MISC.: TEMPORARY SLEEPER SLAB AND PARAPET				114	4
511	71200	492	SF	CONCRETE, MISC.: FACING OF DRILLED SHAFT WALL	492				4
512	10100	1,595	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	805	20	770		
512	33000	11	SY	TYPE 2 WATERPROOFING	11				
513	10301	641,861	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN			641,861		4
513	20000	4,312	EACH	WELDED STUD SHEAR CONNECTORS			4,312		
516	11211	83	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN			83		46
516	13600	222	SF	1" PREFORMED EXPANSION JOINT FILLER	222				
518	12500	3	EACH	SCUPPER, MISC.: NEENAH R-4014-C1 OR APPROVED EQUAL			3		29
518	21200	579	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	579				
518	40000	404	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	404				
518	40010	2	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	2				
524	94801	1,100	FT	DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN	1,100				4
524	94901	1,765	FT	DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN	915	850			4
524	95100	57	EACH	DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) WIRE CABLE TESTING OF DRILLED SHAFTS	47	10			4
524	95200	LS		DRILLED SHAFTS, MISC.: EXCAVATED SHAFT INSPECTIONS				LS	4
526	30010	222	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")	222				
526	90010	81	FT	TYPE A INSTALLATION	81				
611	01500	35	FT	6" CONDUIT, TYPE F , DUCTILE IRON, CLASS 56	35				
863	00100	6,146	SY	GEOGRID, TYPE P1	6,146				
863	00801	1,767	CY	REINFORCED EMBANKMENT, AS PER PLAN	1,767				4
869	00101	12	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN	8	4			27

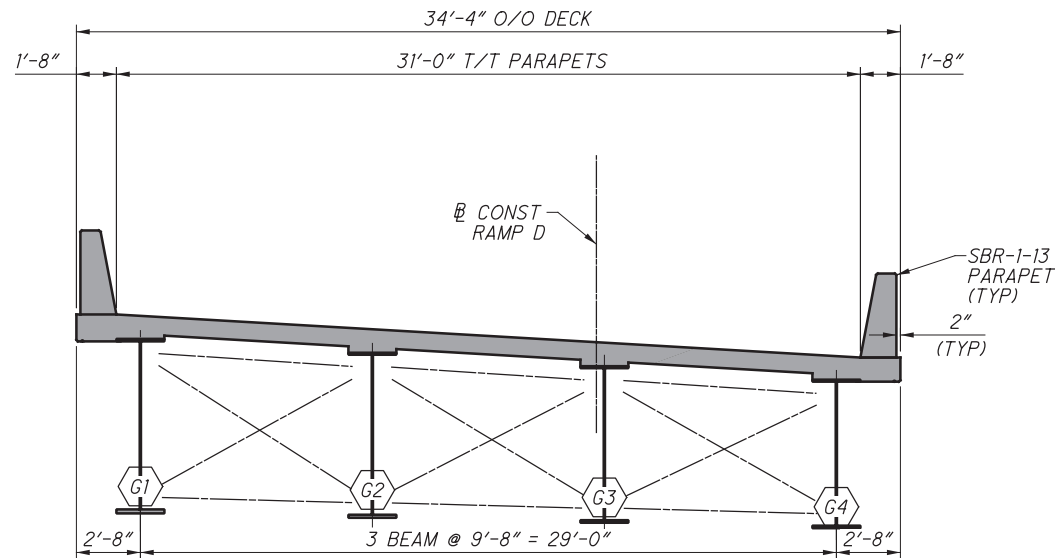
LEGEND
- CONSTRUCTION LIMITS



EXISTING TYPICAL SECTION



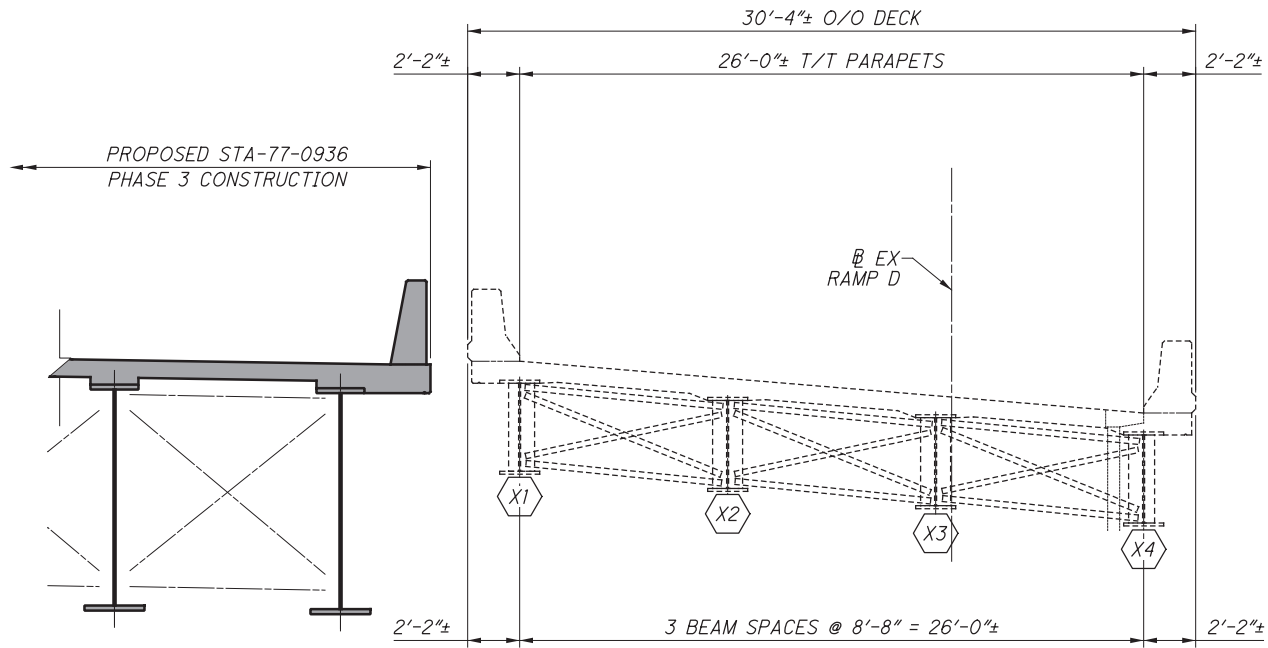
PHASE 1 CONSTRUCTION



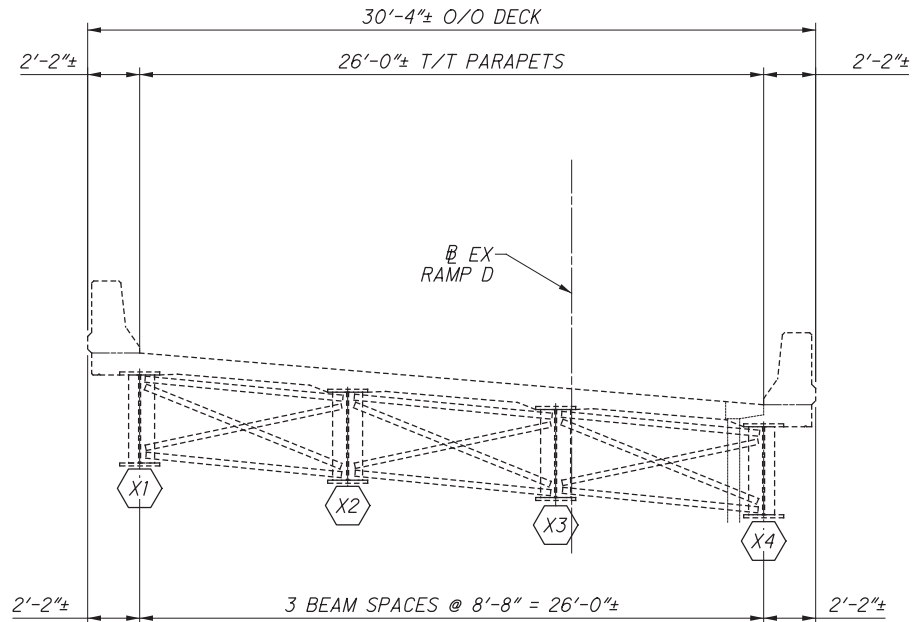
NOTES
1. PCB IS INCLUDED AND PAID FOR WITH ROADWAY MOT QUANTITIES.

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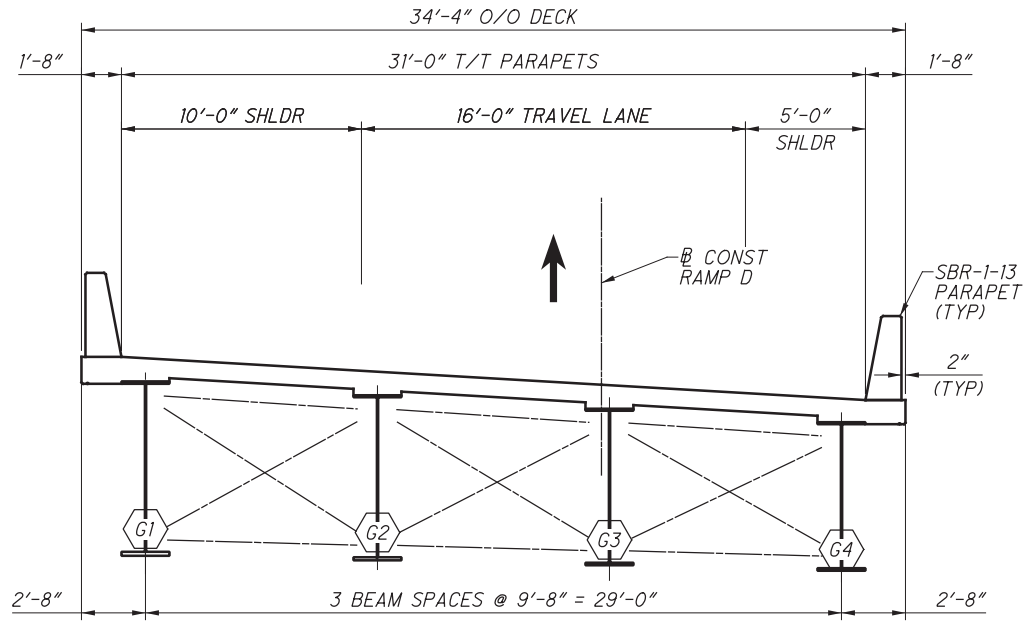
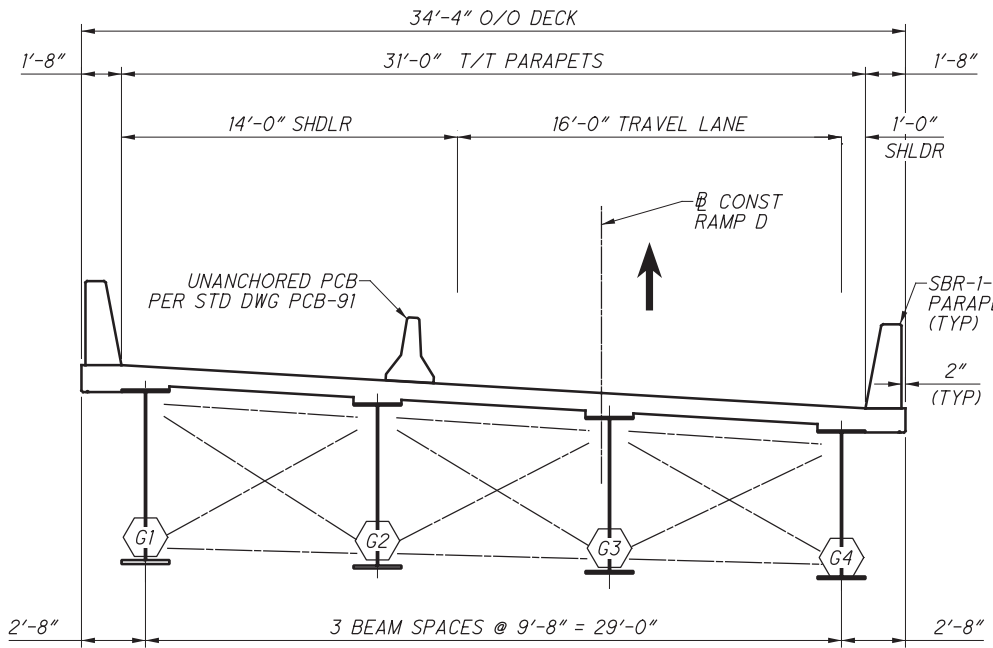
LEGEND
- CONSTRUCTION LIMITS



PHASE 3



PHASE 2



NOTES
1. PCB IS INCLUDED AND PAID FOR WITH ROADWAY MOT QUANTITIES.

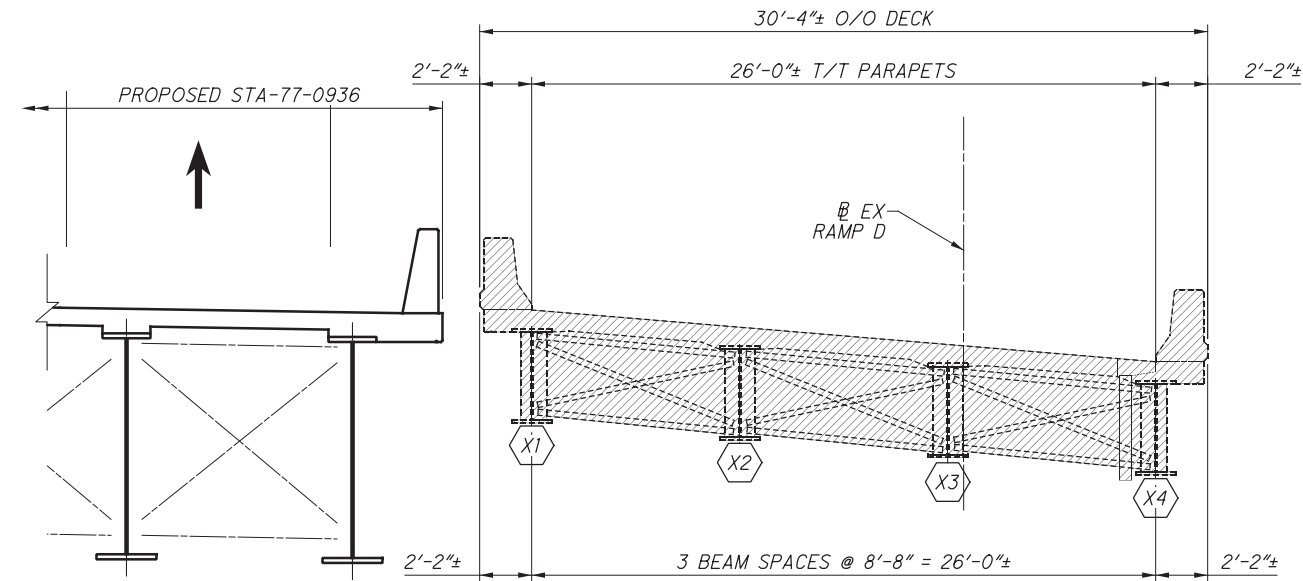
STA -77-8.40/ VAR
PID No. 90973

PHASED CONSTRUCTION DETAIL - 2 OF 3
BRIDGE NO. STA-30-1487 (RAMP D)
OVER WEST BRANCH OF NIMISHILLEN CREEK

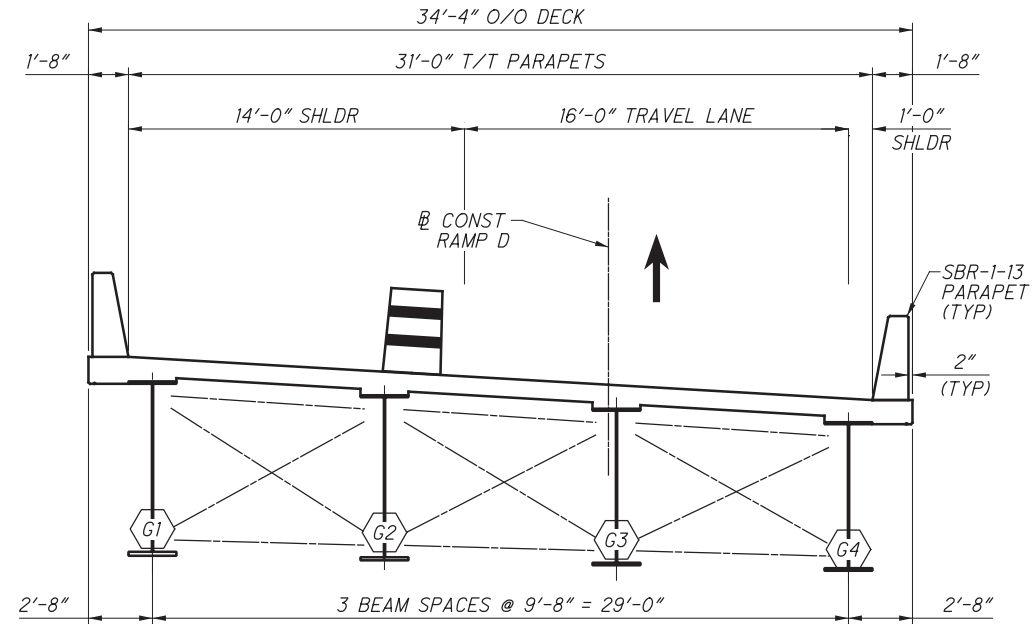
DESIGNED CTM
CHECKED VDT
DRAWN AH/RSN
REVIEWED EFD
DATE 01/11/2019
STRUCTURE FILE NUMBER 760366

DESIGN AGENCY
Gannett Fleming
ENGINEERS & ARCHITECTS, P.C.
2500 CORPORATE EXCHANGE DRIVE, SUITE 230
COLUMBUS, OHIO 43231

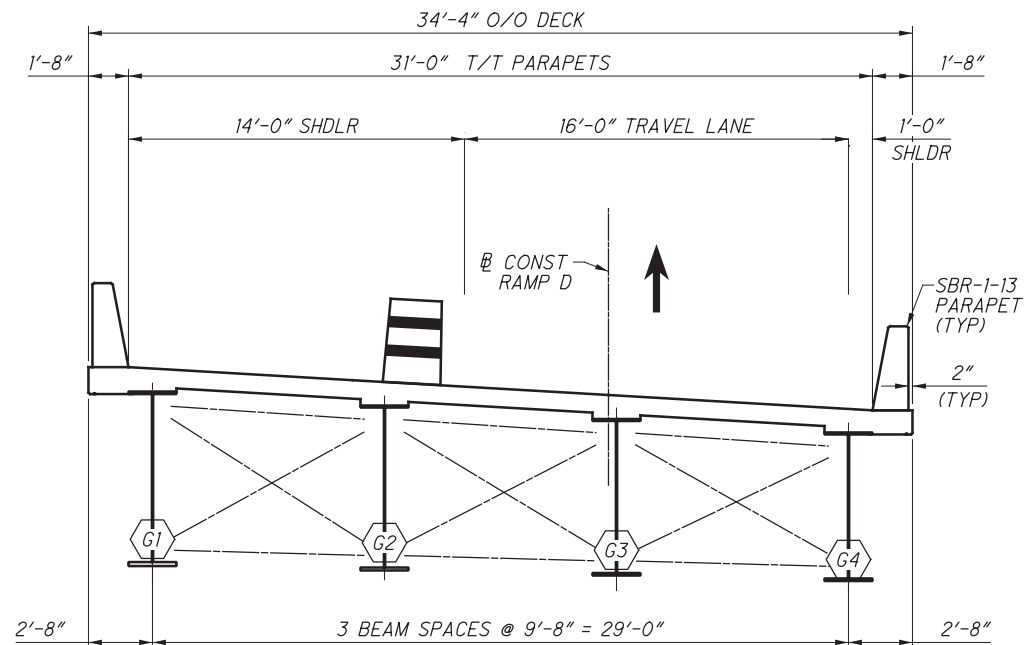
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PHASE 4



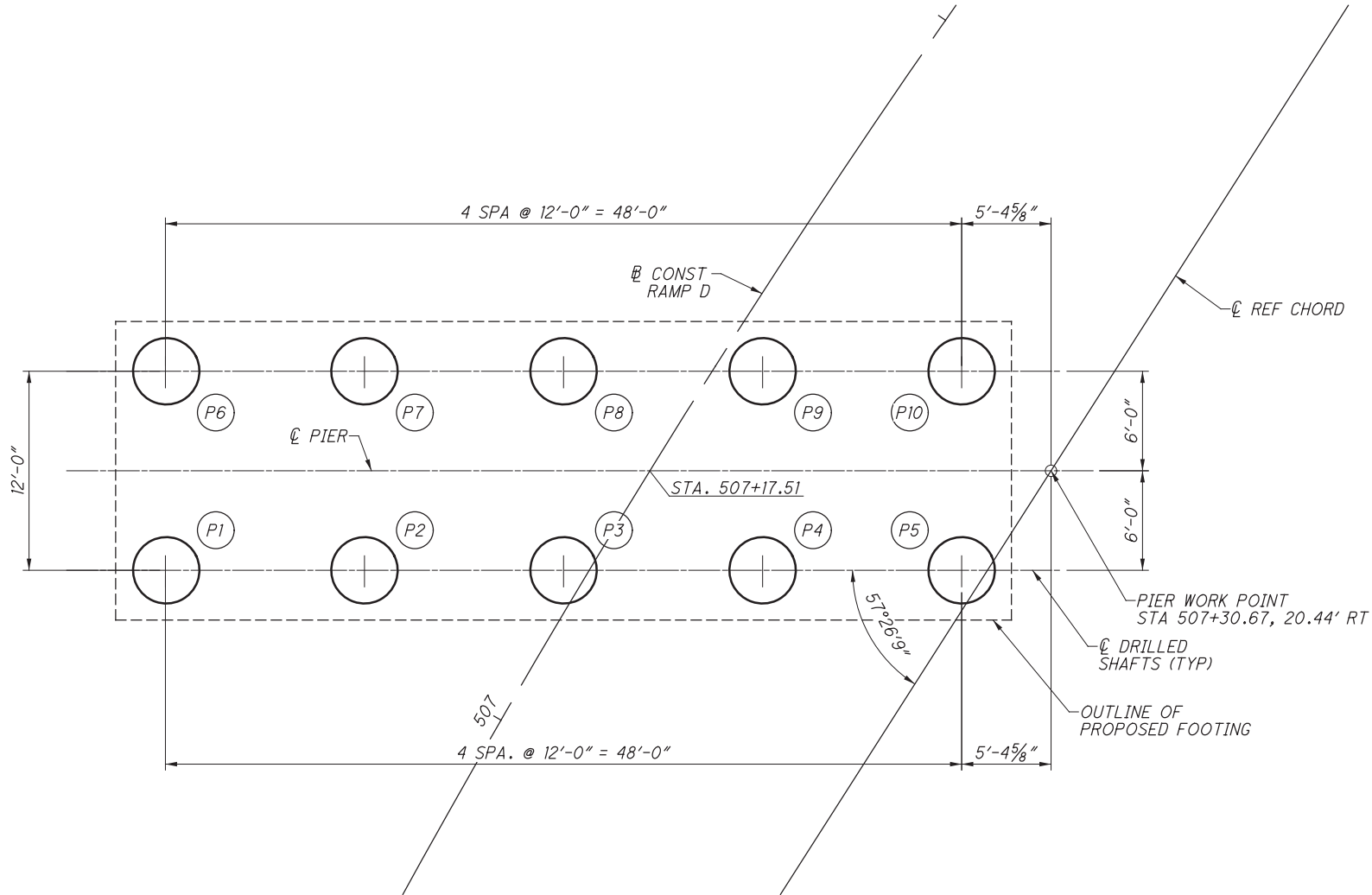
PHASE 5



LEGEND

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DRILLED SHAFT DATA								
DRILLED SHAFT NUMBER	TOP OF SHAFT ELEV.	TOP OF VERTICAL REINF. ELEV.	TIP ELEV.	SPIRAL ELEV.	SHAFT PAY LENGTH	VERTICAL REINF. LENGTH	VERTICAL REINF. BAR SIZE	SHAFT DIA
P1 - P10	1008.25	1010.75	923.25	1009.25	85'	87'-3"	#10	48"



FOUNDATION PLAN - PIER

LEGEND:

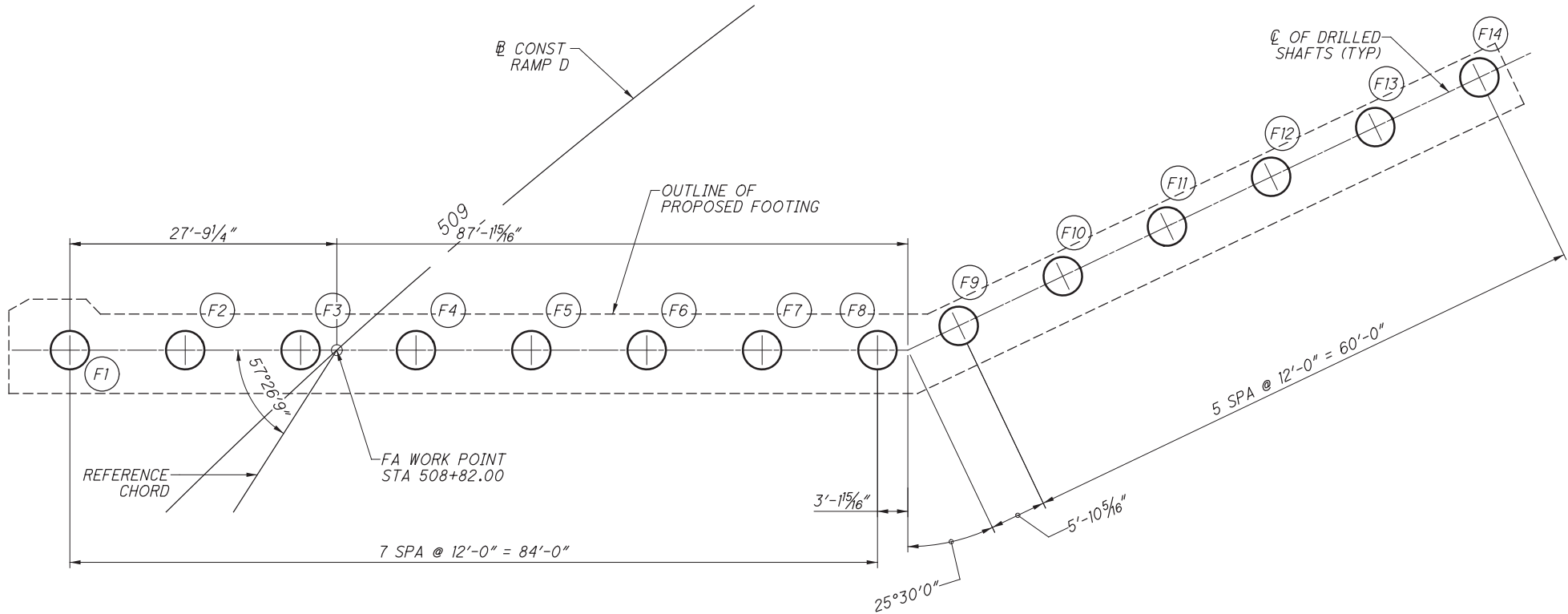
P# INDICATES PIER DRILLED SHAFT NUMBER

NOTES:

- FOR REAR ABUTMENT FOUNDATION LAYOUT PLAN, SEE SHEET 9/52.
- FOR FORWARD ABUTMENT FOUNDATION LAYOUT PLAN, SEE SHEET 11/52.



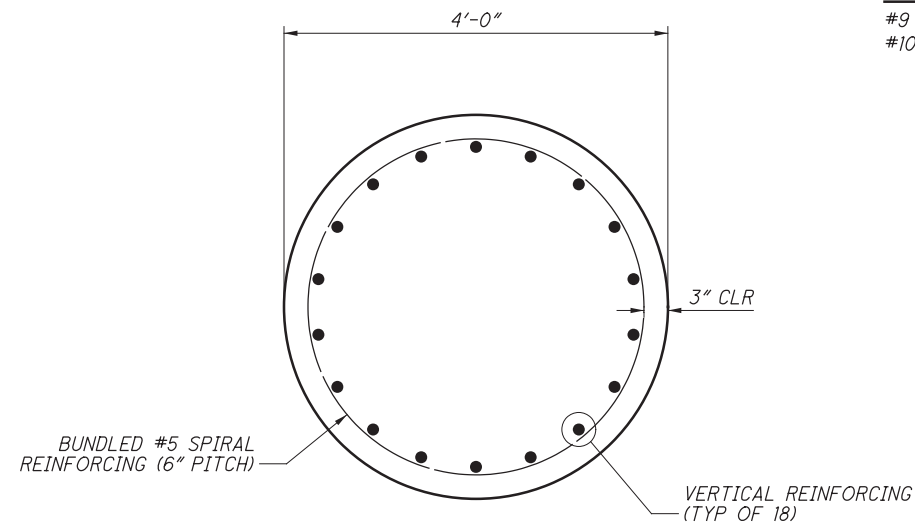
DRILLED SHAFT DATA								
DRILLED SHAFT NUMBER	TOP OF SHAFT ELEV	TOP OF VERTICAL REINF ELEV	TIP ELEV	SPIRAL ELEV	SHAFT PAY LENGTH	VERTICAL REINF LENGTH	VERTICAL REINF BAR SIZE	SHAFT DIA
F1-F14	1033.00	1035.50	978.00	1034.00	55'	57'-3"	#10	48"



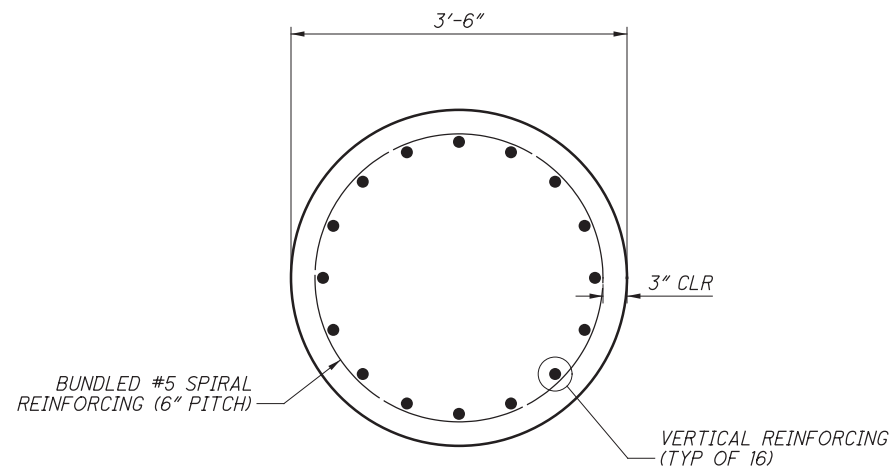
FOUNDATION PLAN - FORWARD ABUTMENT

LEGEND:
F# INDICATES FORWARD ABUTMENT DRILLED SHAFT NUMBER

- NOTES:
- FOR REAR ABUTMENT FOUNDATION LAYOUT PLAN, SEE SHEET 9 / 52.
 - FOR PIER FOUNDATION LAYOUT PLAN, SEE SHEET 10 / 52.
 - ONE OF THE WINGWALL DRILLED SHAFTS (F9-F14) SHALL BE DESIGNATED THE 48" DIAMETER DEMONSTRATION SHAFT. PAYMENT FOR THIS SHAFT SHALL BE INCLUDED WITH ITEM 524 - DRILLED SHAFTS, MISC.: 48" DEMONSTRATION SHAFT. FOR ADDITIONAL WORK REQUIRED TO CONFORM TO THE DEMONSTRATION SHAFT REQUIREMENTS, INCLUDING ALL SUBMITTALS AND HIGH-STRAIN DYNAMIC TESTING, SEE SHEET 304 / 584.



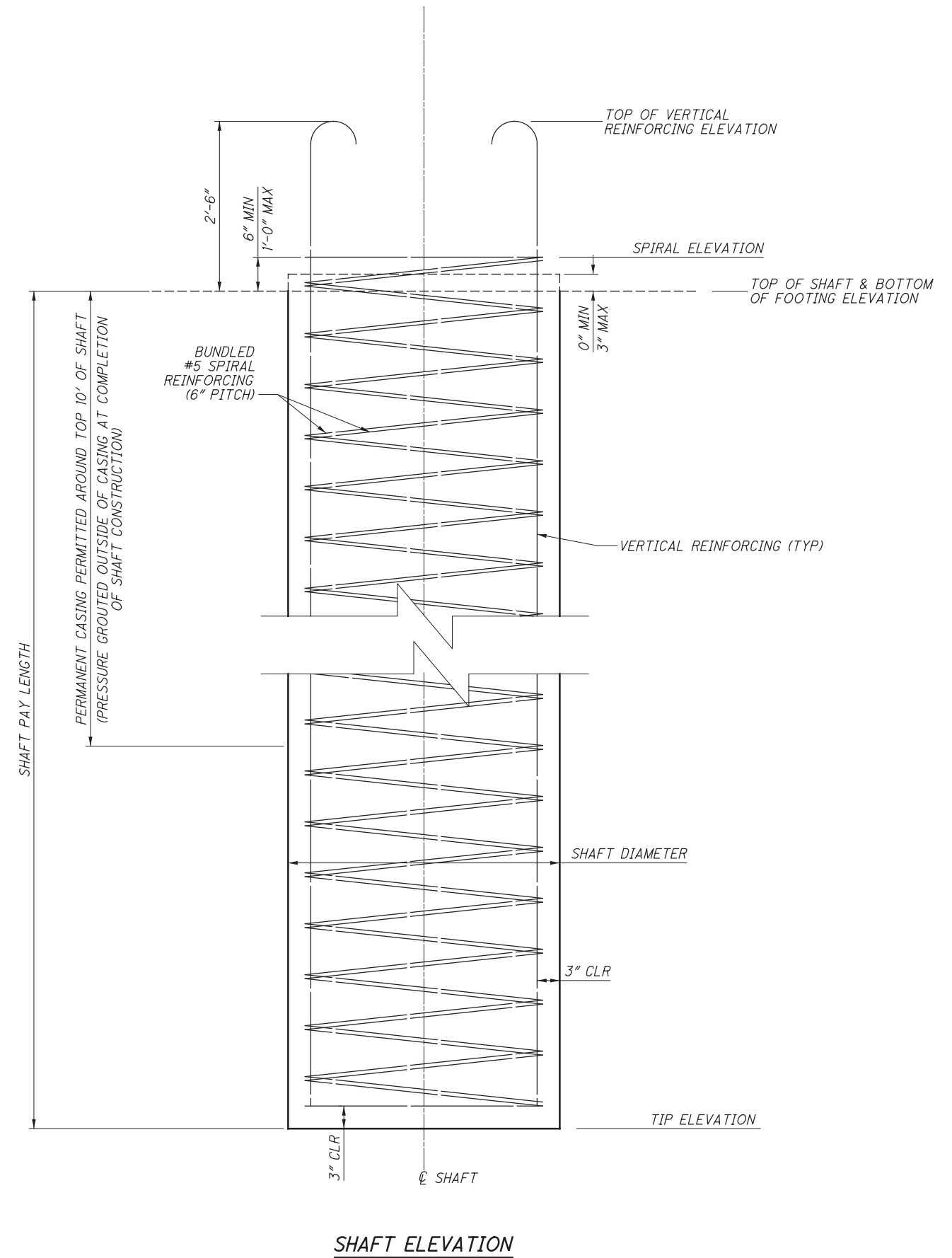
REAR AND FORWARD ABUTMENT, PIER & FORWARD WINGWALL SHAFTS



REAR NORTH AND TANGENT WINGWALL SHAFTS

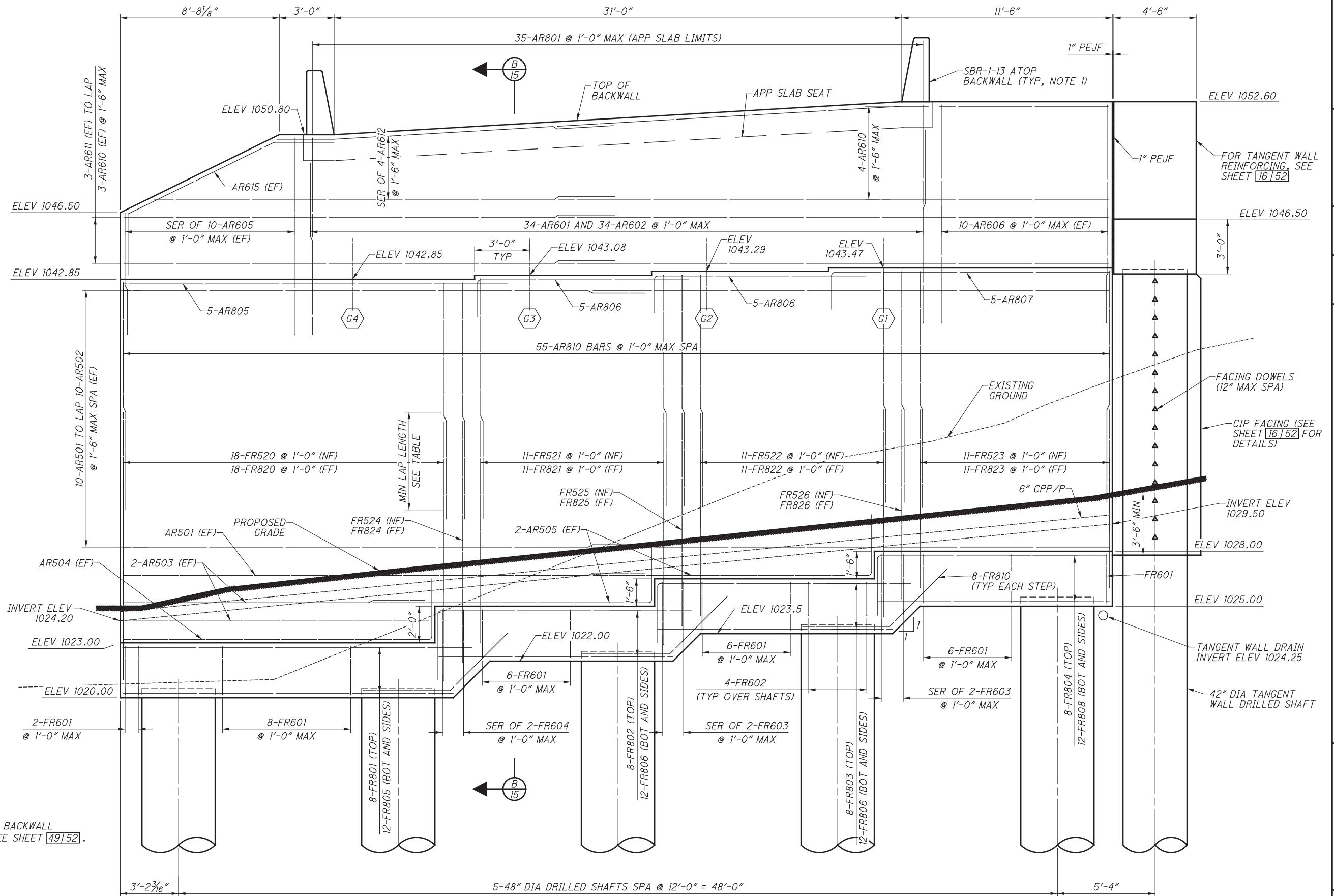
DRILLED SHAFT CAGE SPLICING

#9 VERTICAL REINFORCING SHALL BE SPLICED MECHANICALLY OR WITH 5'-0" LAP SPLICES
#10 VERTICAL REINFORCING SHALL BE SPLICED MECHANICALLY OR WITH 5'-8" LAP SPLICES
ALL SPLICES SHALL BE STAGGERED BY THE LENGTH OF THE LAP SPLICE (ALTERNATING BARS)

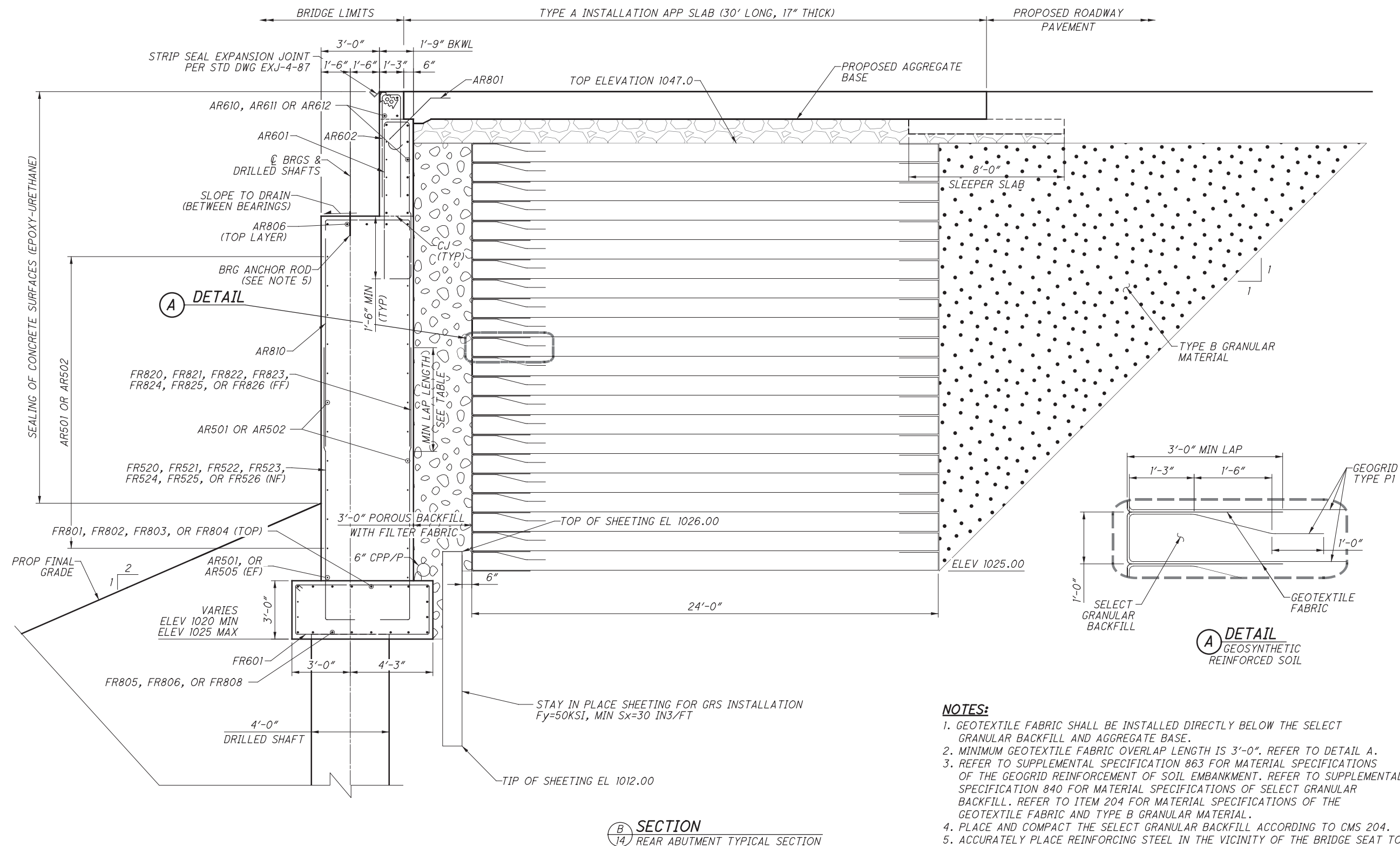


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NOTES:
1. FOR PARAPET ON TOP OF BACKWALL
REINFORCING DETAILS, SEE SHEET 49/52.

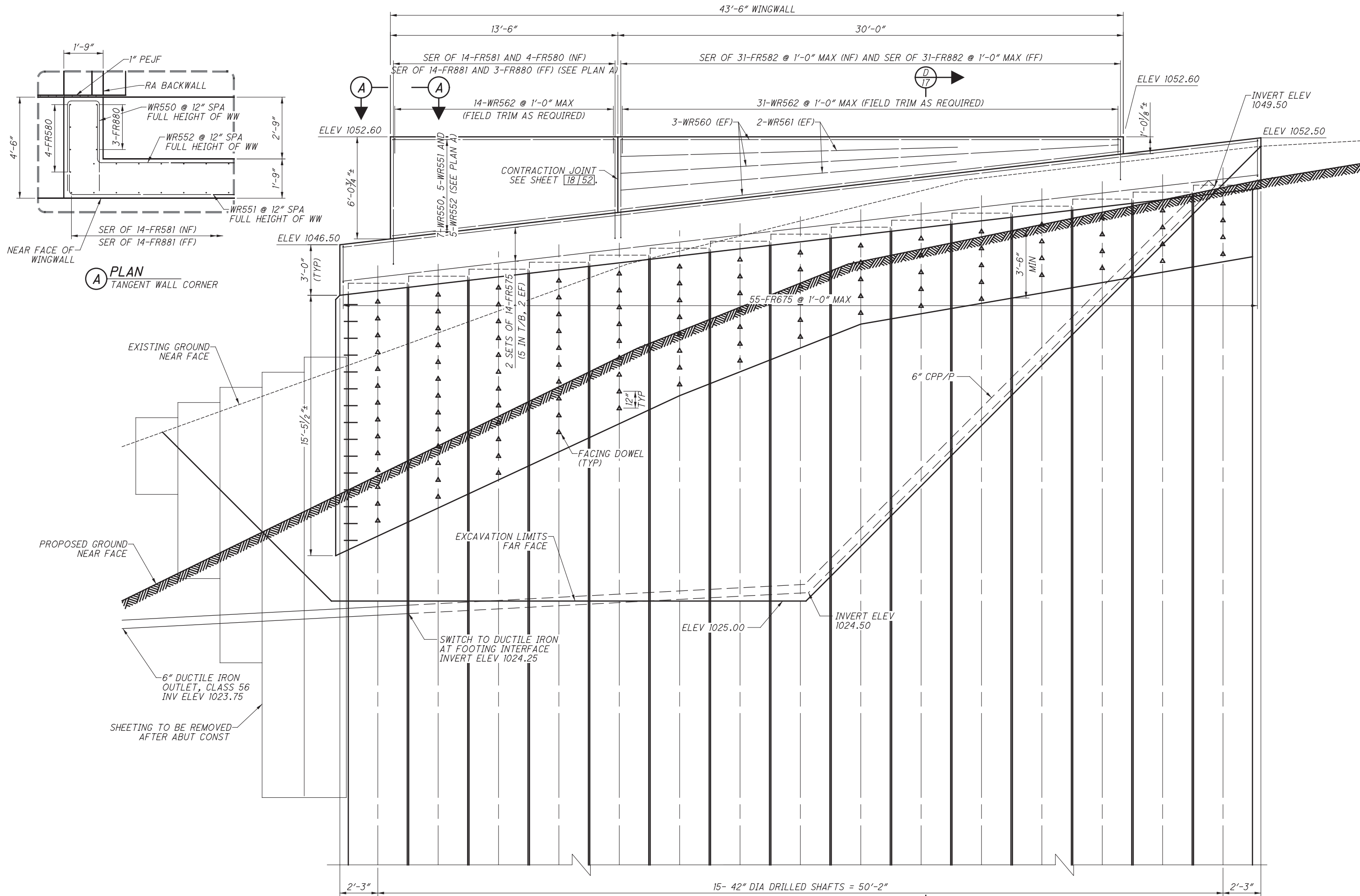


SECTION
13 REAR ABUTMENT ELEVATION VIEW
(ALONG FACE OF BACKWALL)



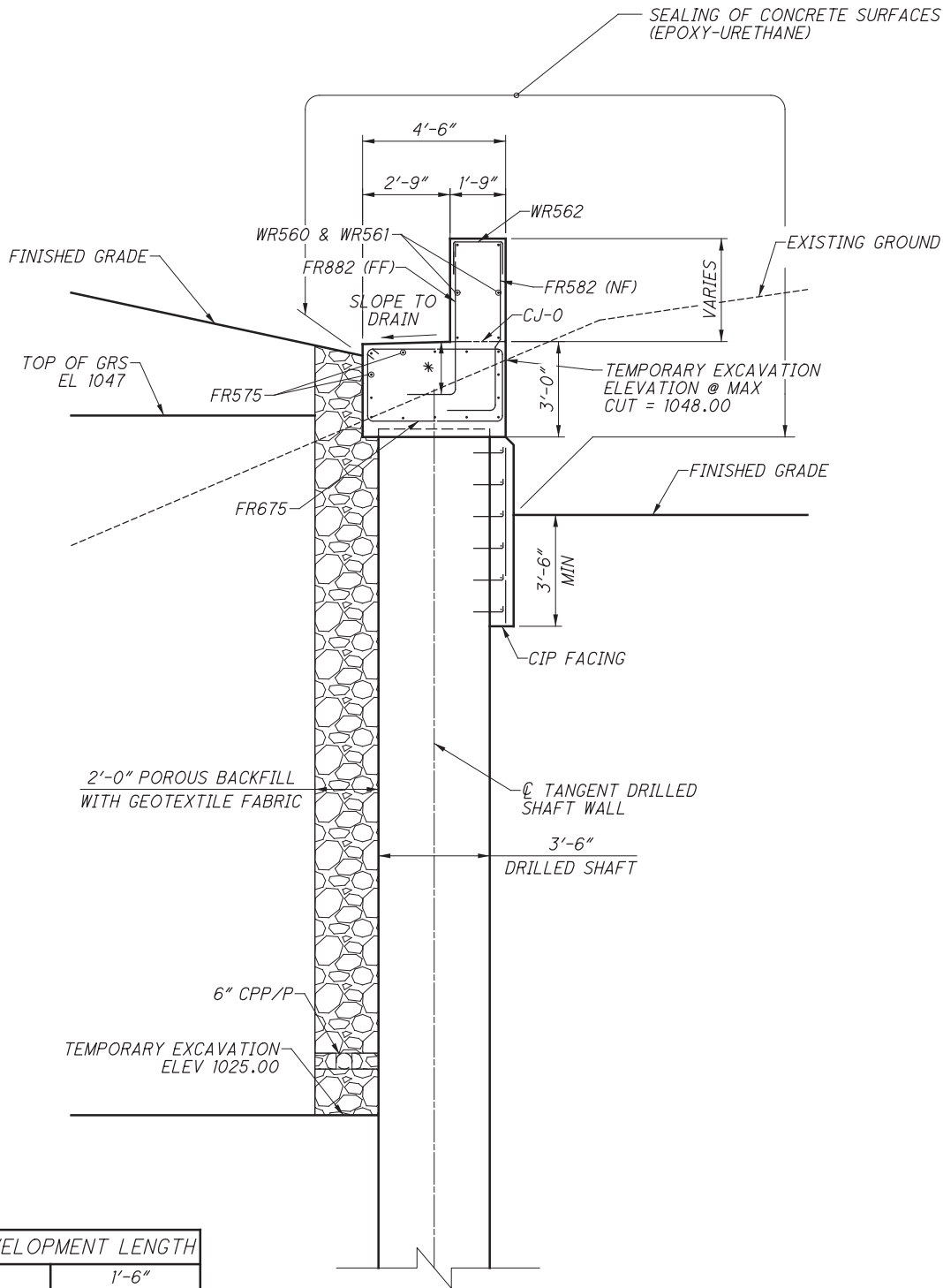
- NOTES:**
1. GEOTEXTILE FABRIC SHALL BE INSTALLED DIRECTLY BELOW THE SELECT GRANULAR BACKFILL AND AGGREGATE BASE.
 2. MINIMUM GEOTEXTILE FABRIC OVERLAP LENGTH IS 3'-0". REFER TO DETAIL A.
 3. REFER TO SUPPLEMENTAL SPECIFICATION 863 FOR MATERIAL SPECIFICATIONS OF THE GEOGRID REINFORCEMENT OF SOIL EMBANKMENT. REFER TO SUPPLEMENTAL SPECIFICATION 840 FOR MATERIAL SPECIFICATIONS OF SELECT GRANULAR BACKFILL. REFER TO ITEM 204 FOR MATERIAL SPECIFICATIONS OF THE GEOTEXTILE FABRIC AND TYPE B GRANULAR MATERIAL.
 4. PLACE AND COMPACT THE SELECT GRANULAR BACKFILL ACCORDING TO CMS 204.
 5. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR PRE-SETTING OF BEARING ANCHORS.

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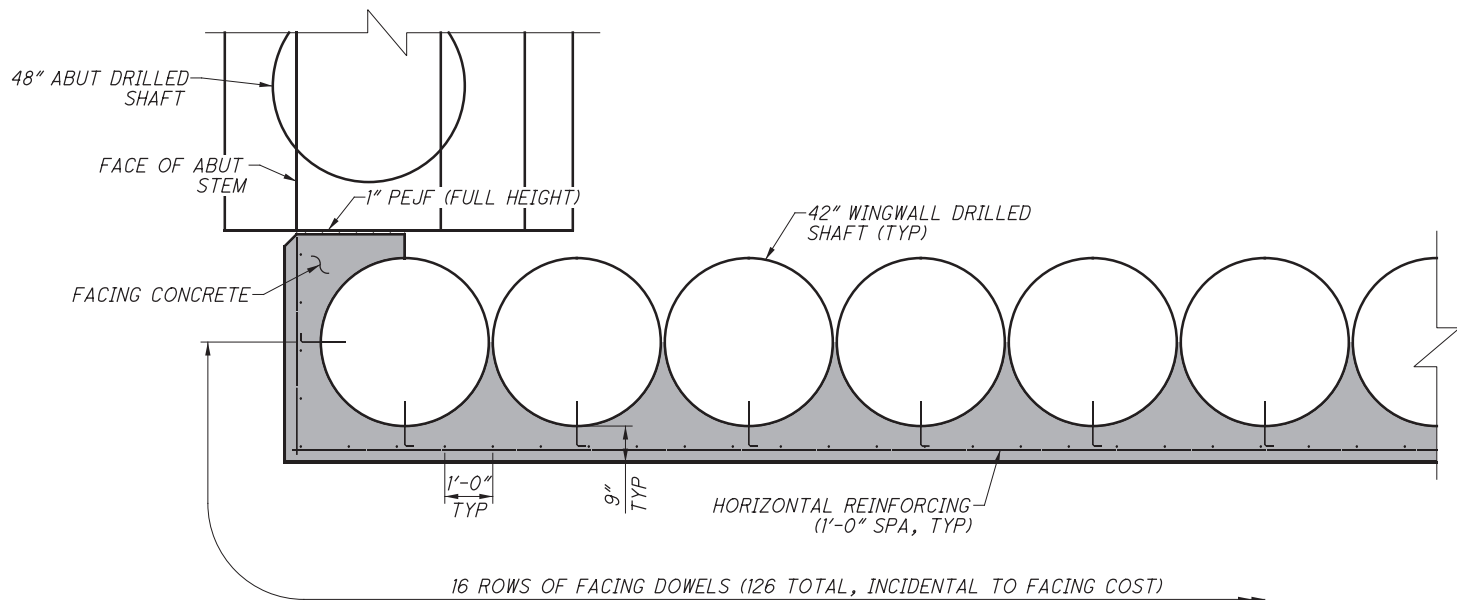


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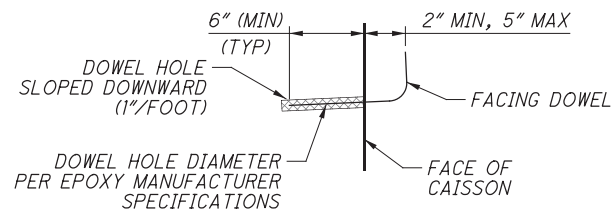
MIN DEVELOPMENT LENGTH	
*	1'-6"



D SECTION
16 TANGENT DRILLED SHAFT WALL DETAILS



TANGENT DRILLED SHAFT WALL
CIP FACING DETAILS



FACING DOWEL DETAIL

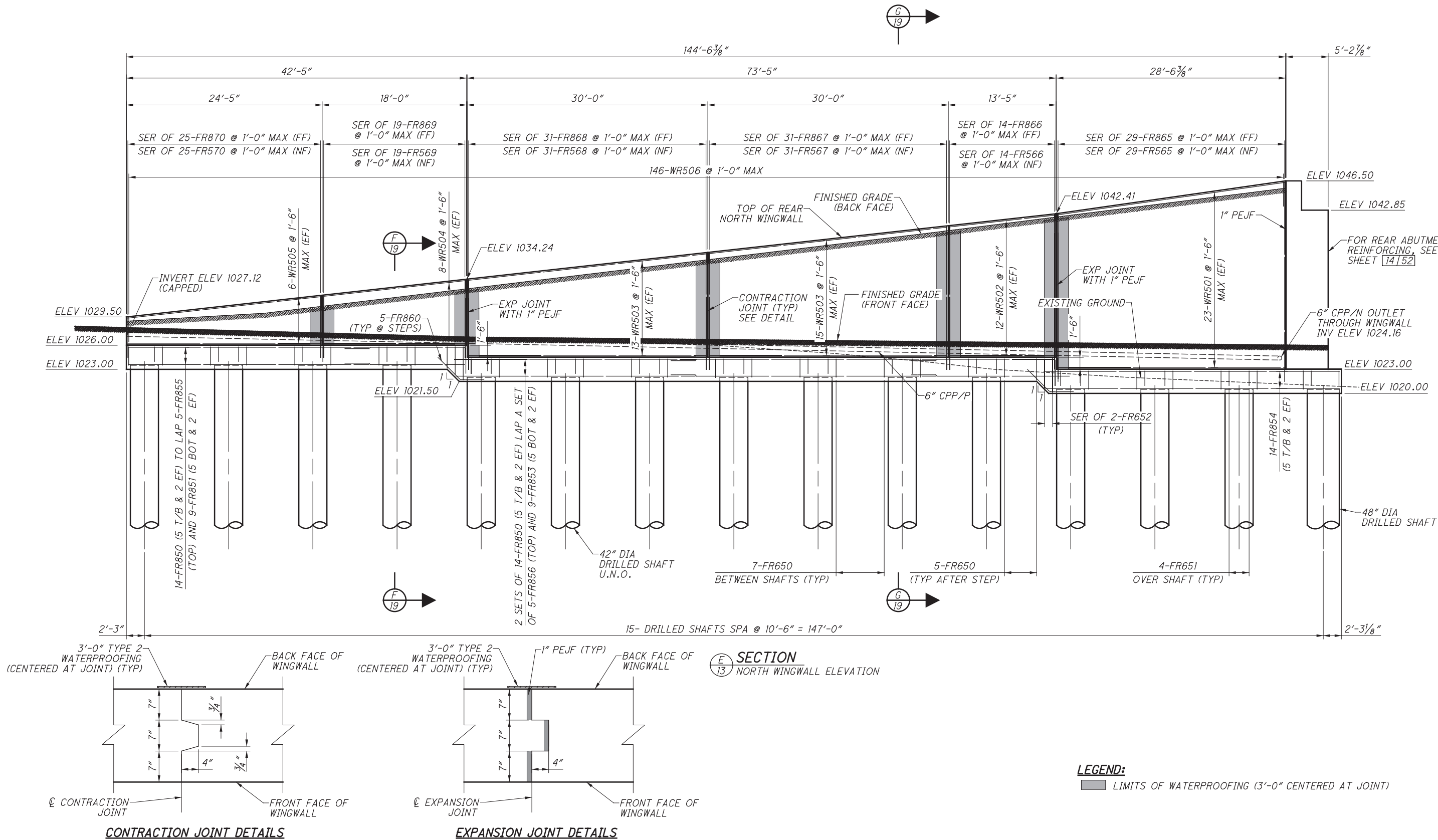
ITEM 511 - CONCRETE, MISC.: FACING OF DRILLED SHAFT WALLS

THE APPROXIMATE VOLUME OF CONCRETE TO FACE THE REAR TANGENT DRILLED SHAFT WALL IS 21.5 CUBIC YARDS. THIS VALUE IS GIVEN ONLY FOR ESTIMATING PURPOSES AND INCLUDES ANNULAR SPACES BETWEEN DRILLED SHAFTS. THE CONTRACTOR SHALL PROVIDE ACTUAL QUANTITIES REQUIRED TO FACE THE WALL PER THESE PLANS.

THE HORIZONTAL AND VERTICAL REINFORCING STEEL SPACING SHALL NOT EXCEED 12" AND SHALL CONTAIN 0.25 SQUARE INCHES OF STEEL PER FOOT IN EACH DIRECTION. REINFORCING STEEL MAY CONSIST OF REINFORCING BARS OR WELDED WIRE FABRIC. PERIMETER BARS SHALL BE #5.

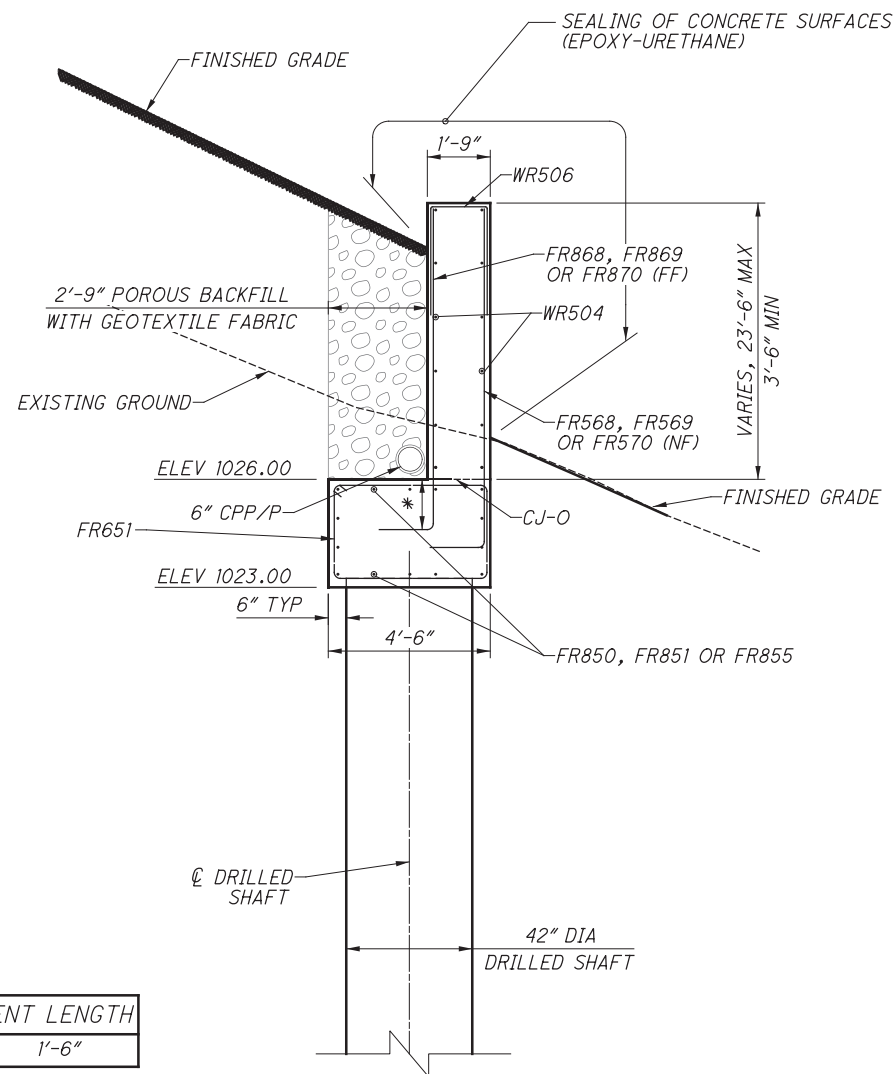
FOR MORE NOTES, INCLUDING BASIS OF PAYMENT, SEE SHEET 4/52.

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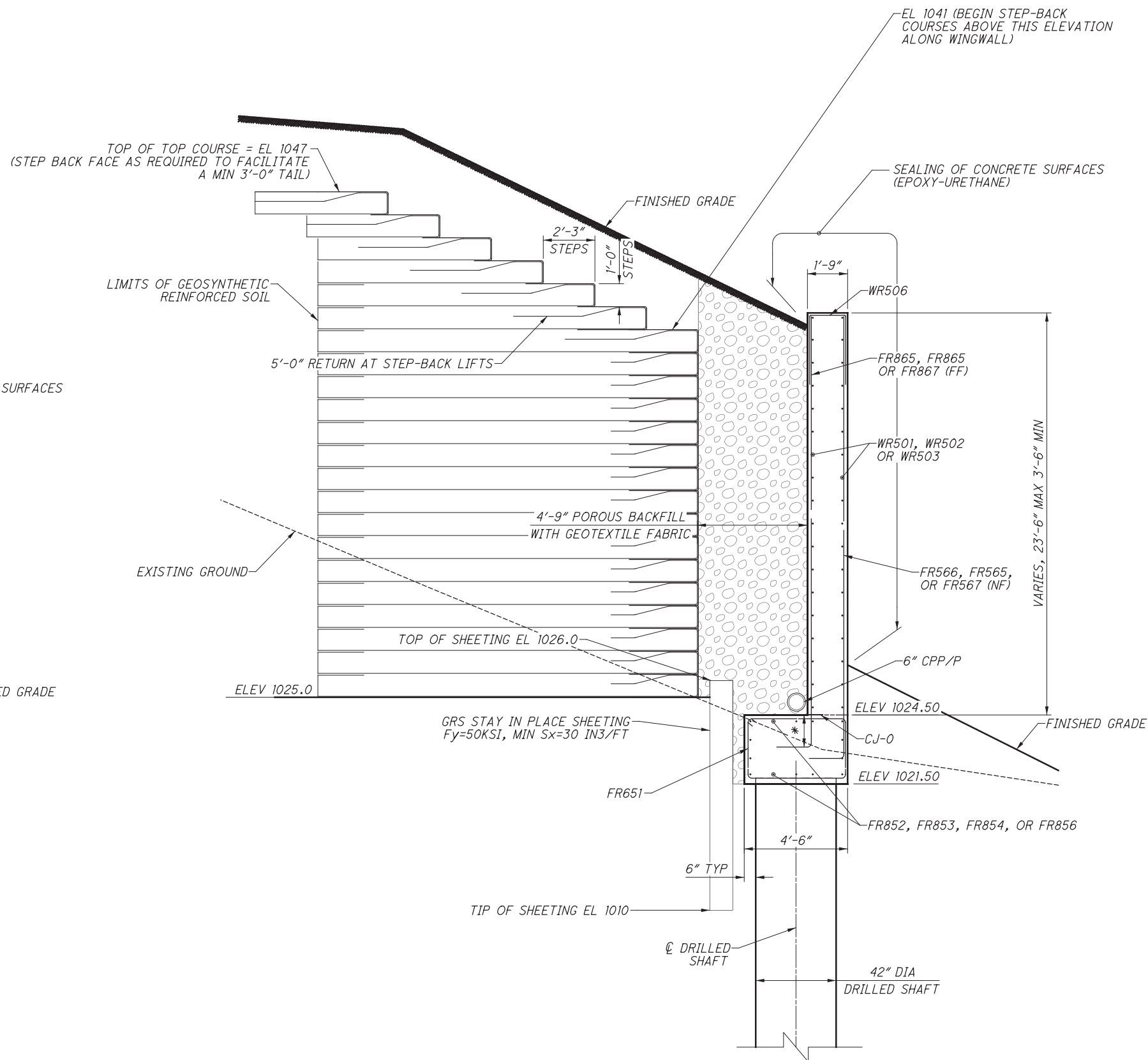


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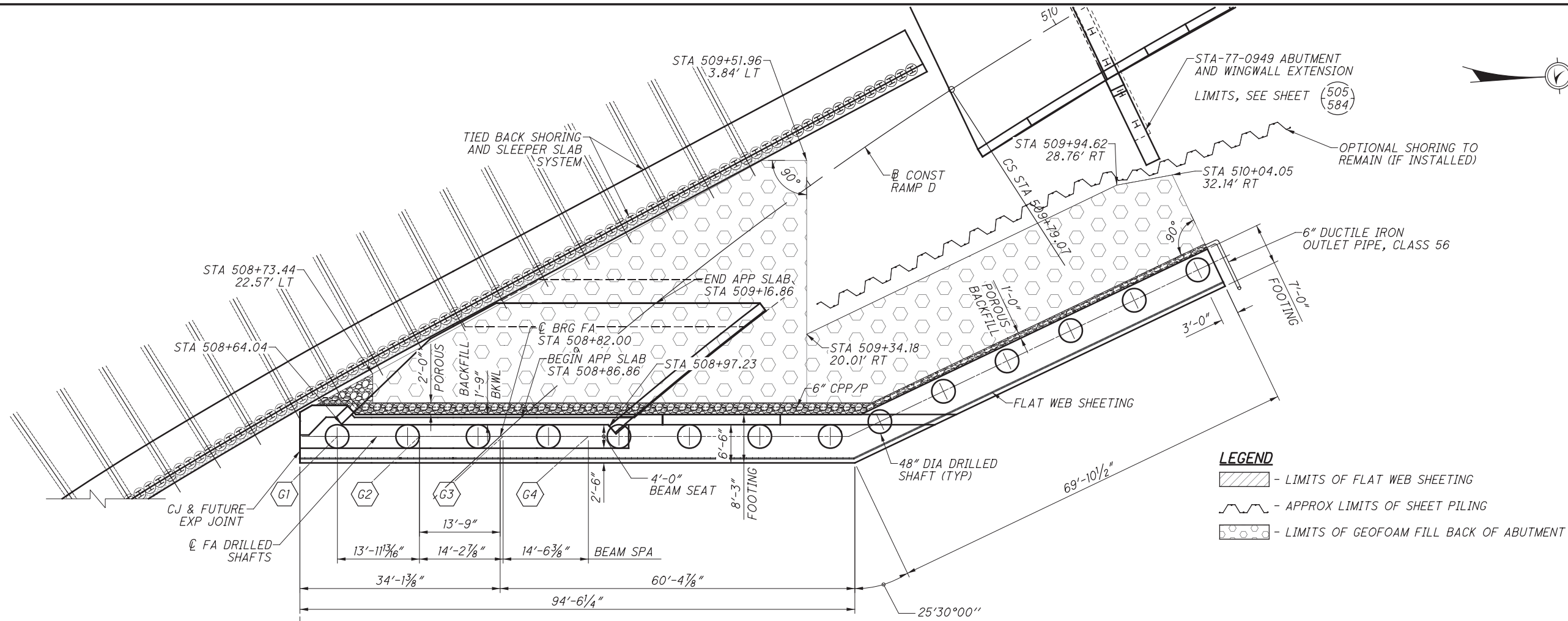
MIN DEVELOPMENT LENGTH	
*	1'-6"



SECTION
18 NORTH WINGWALL DETAILS



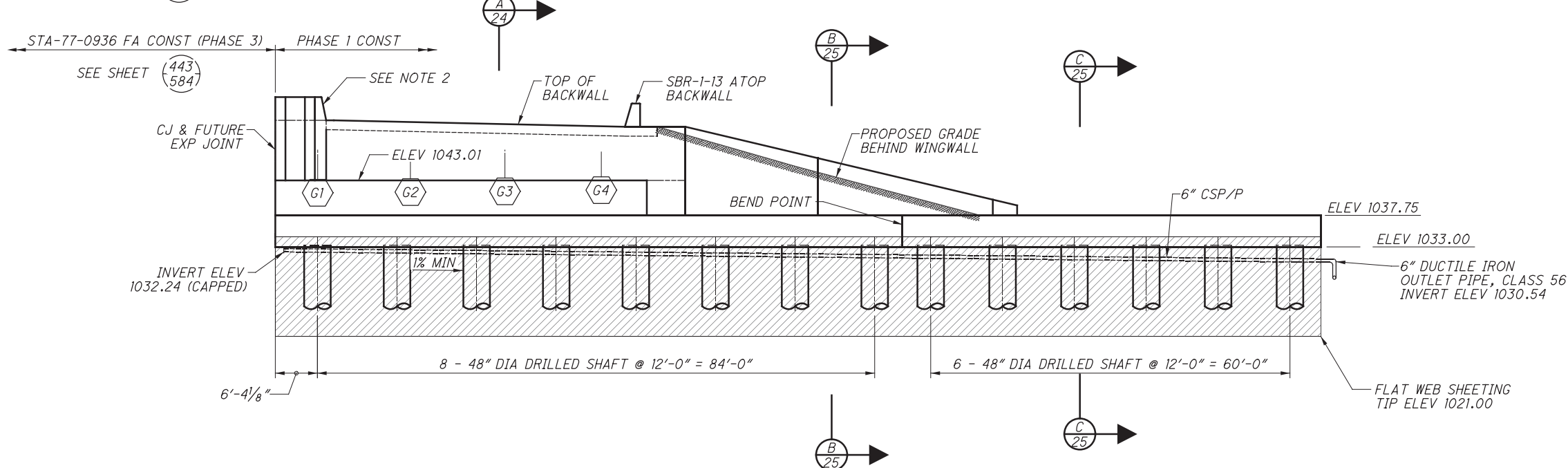
SECTION
18 NORTH WINGWALL DETAILS



STA-77-0936 FA CONST (PHASE 3) PHASE 1 CONST
SEE SHEET (443/584)

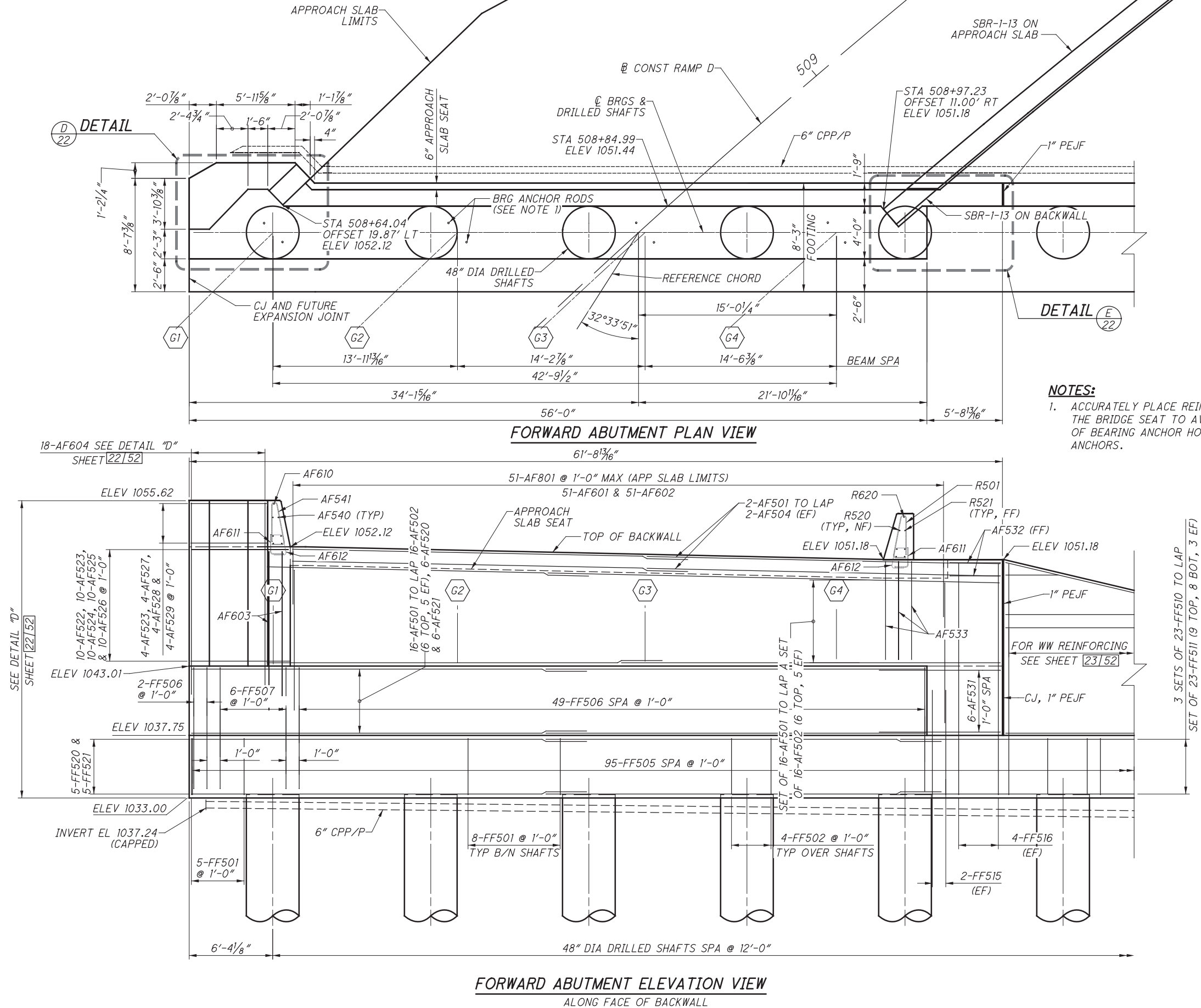
STA-77-0936 FA CONST (PHASE 3) PHASE 1 CONST
SEE SHEET (443/584)

FORWARD ABUTMENT PLAN



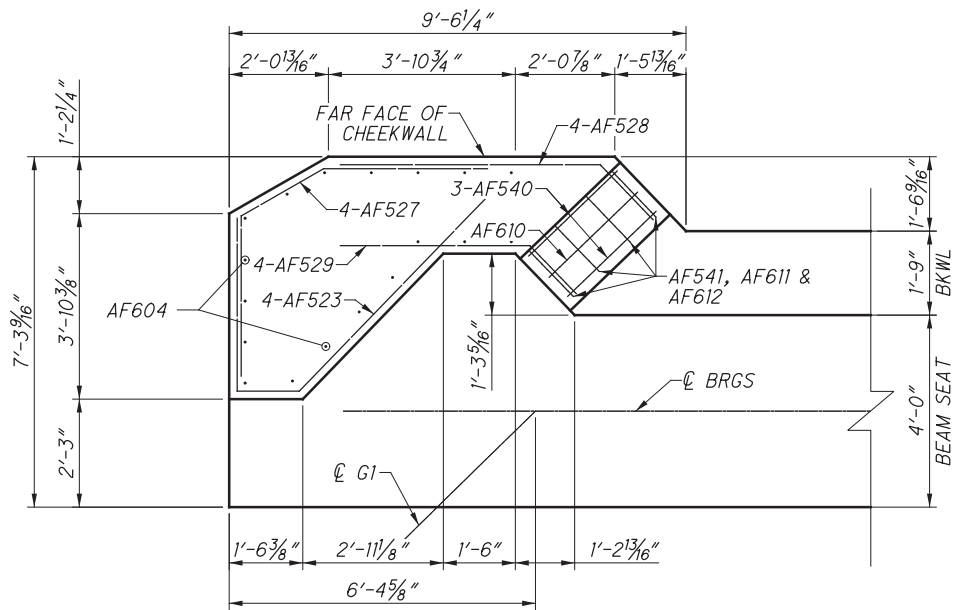
FORWARD ABUTMENT ELEVATION
ALONG FRONT FACE OF ABUTMENT

- NOTES:**
1. FOR LIMITS OF GEOFOAM, SEE SHEETS (319/584) TO (325/584).
 2. FACE OF CHEEKWALL SHALL MATCH DECK PARAPET (SBR-1-13). PORTIONS OF EXPANSION JOINT WILL BE EMBEDDED PER EXJ-4-87, SEE SHEET (46/52).

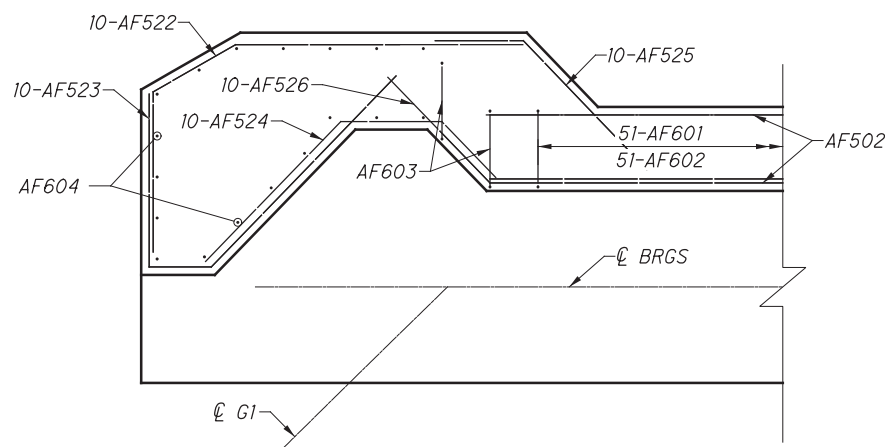


NOTES:

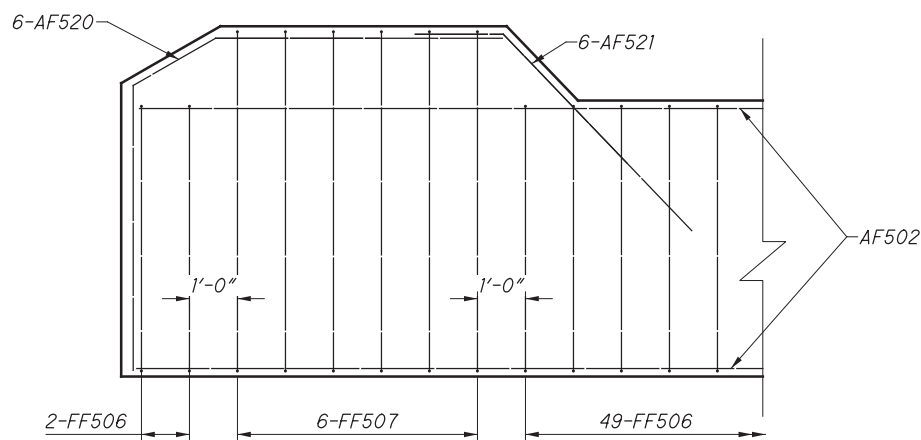
1. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR PRE-SETTING OF BEARING ANCHORS.



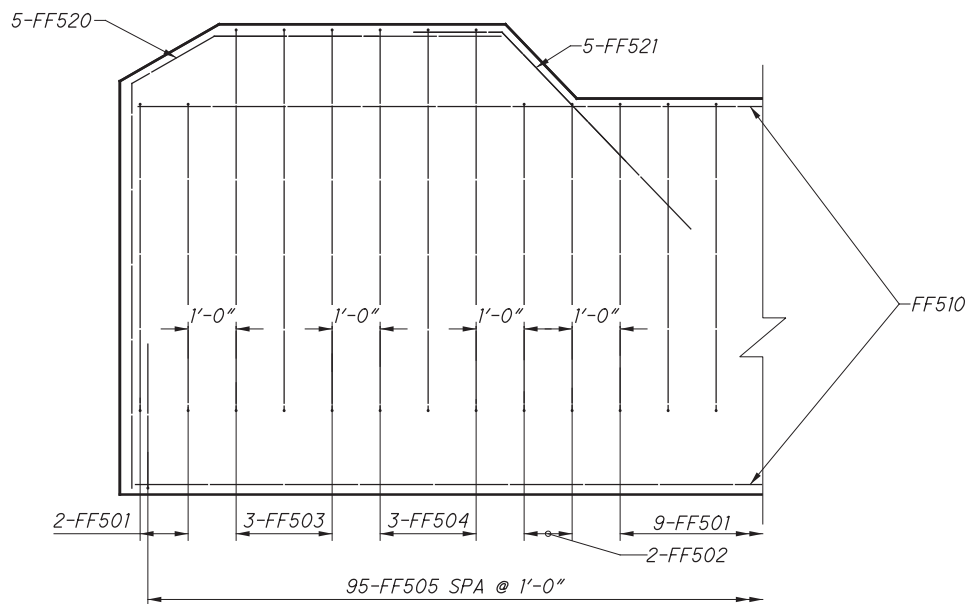
DETAIL
21 TOP OF CHEEKWALL (NOTE 1)



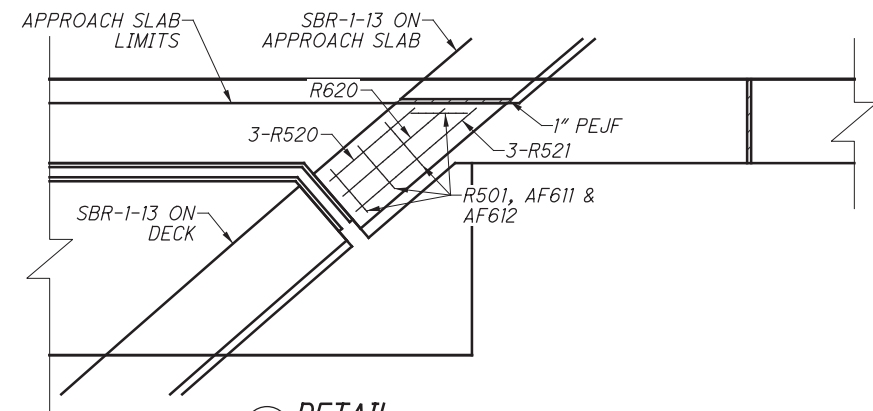
DETAIL
21 CHEEKWALL AND BACKWALL



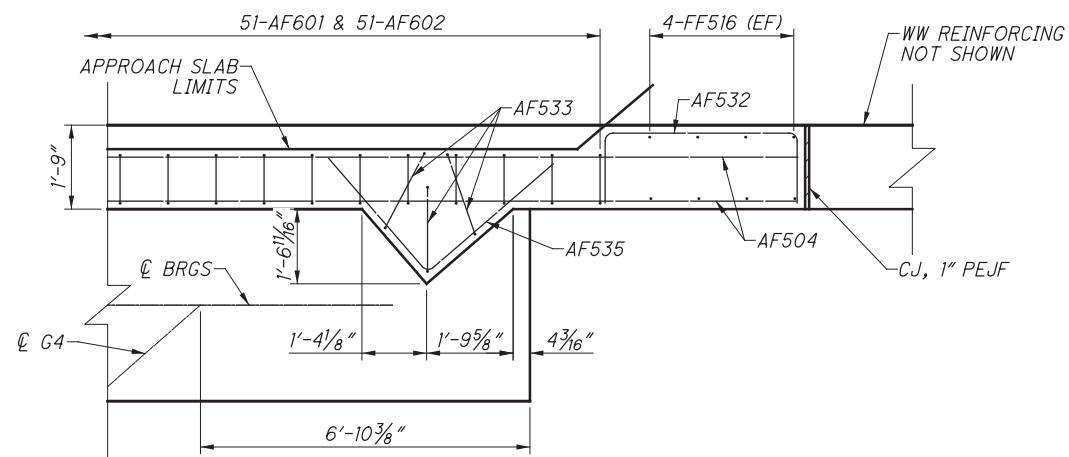
DETAIL
21 ABUTMENT STEM



DETAIL
21 ABUTMENT FOOTING



DETAIL
21 PARAPET ATOP BACKWALL

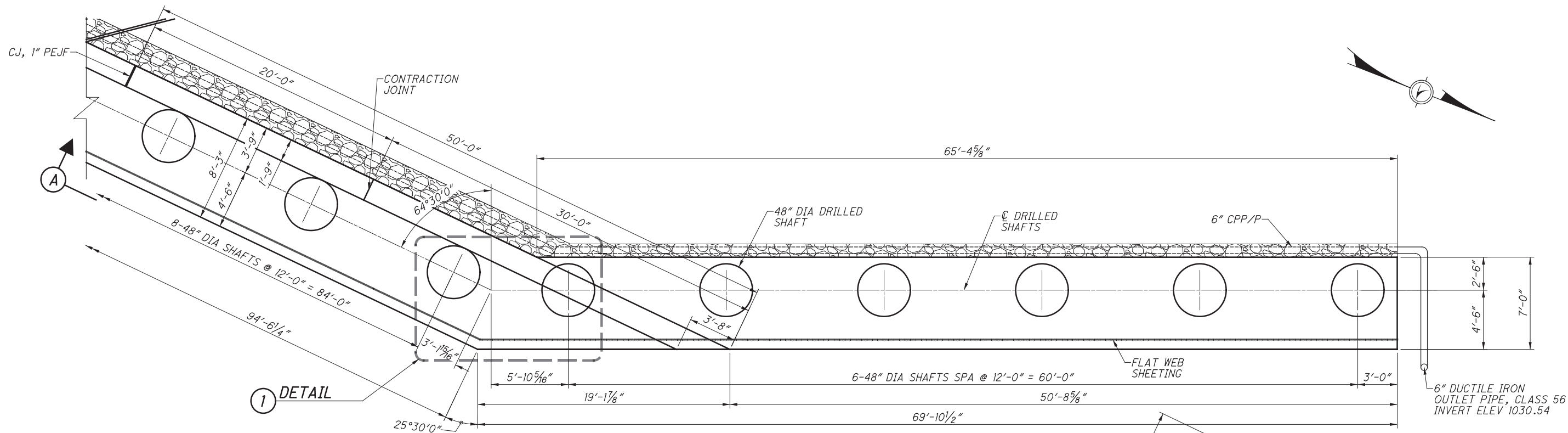


DETAIL
21 BACKWALL BUMPOUT

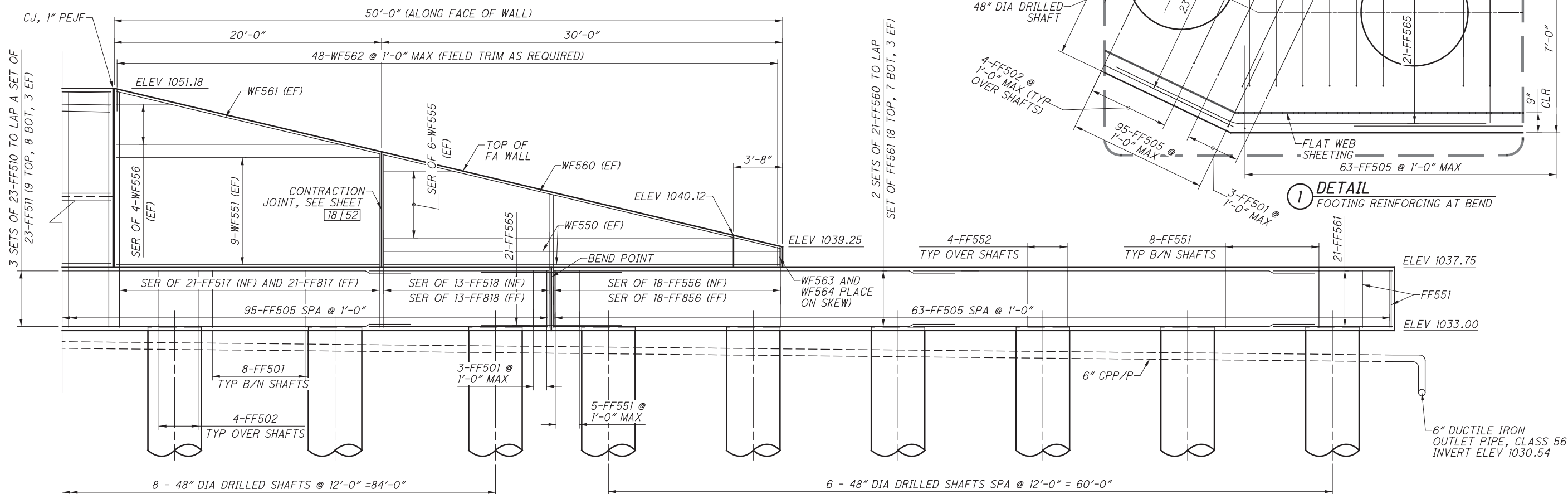
NOTES

1. THE FAR FACE OF CHEEKWALL GEOMETRY IS CONSISTENT THROUGH THE ABUTMENT BACKWALL, STEM, AND FOOTING.

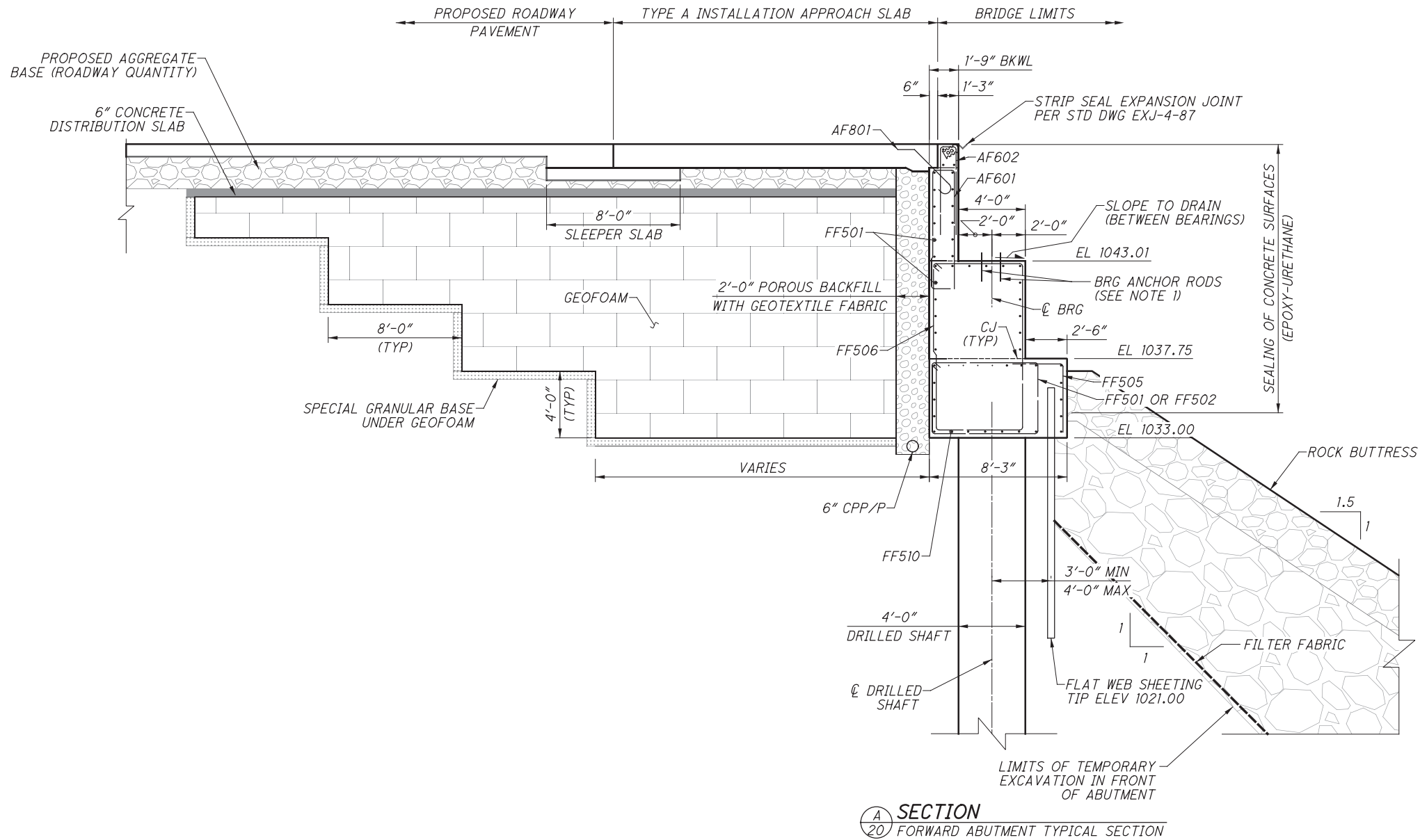
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FORWARD ABUTMENT WALL PLAN VIEW



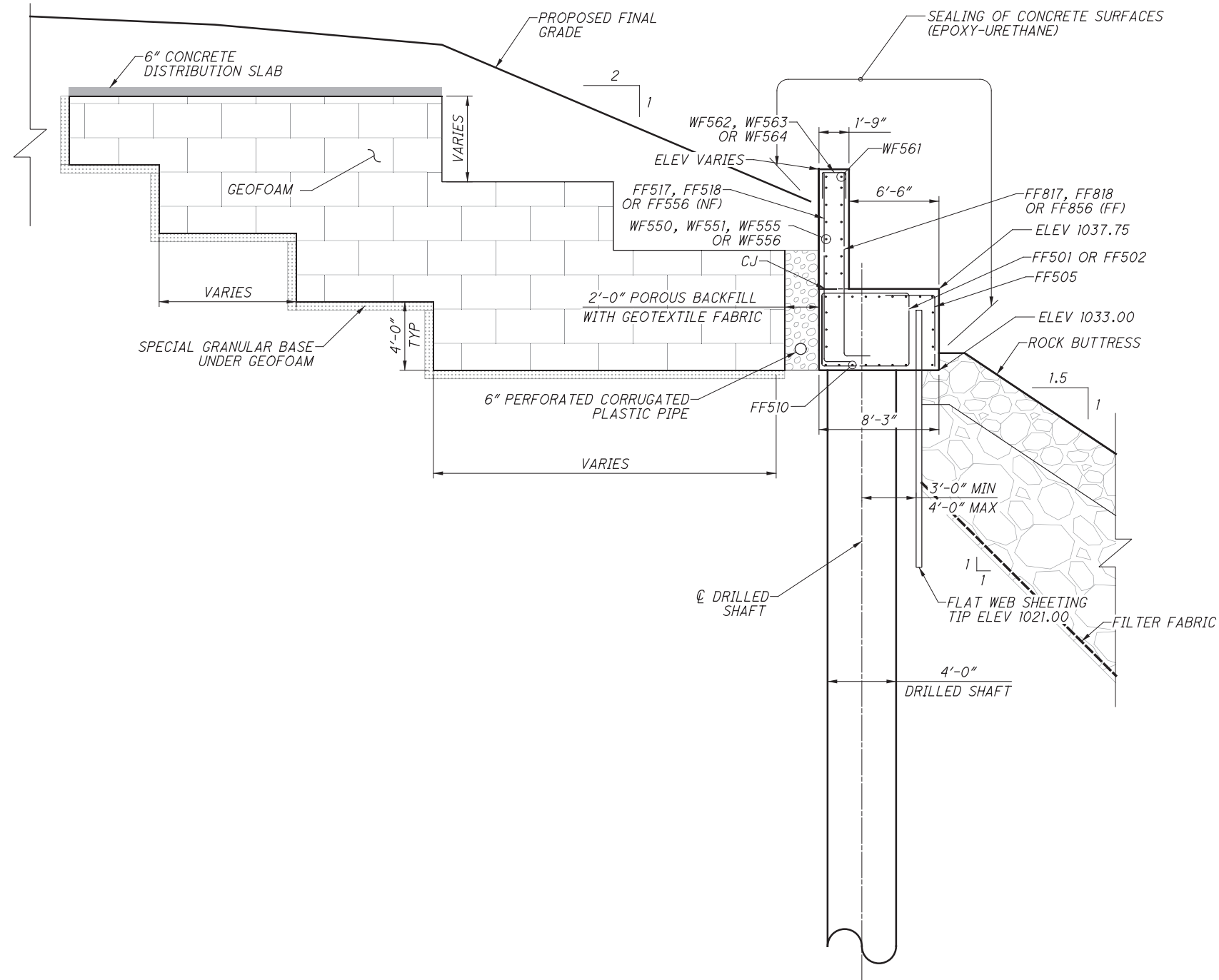
FORWARD ABUTMENT ELEVATION



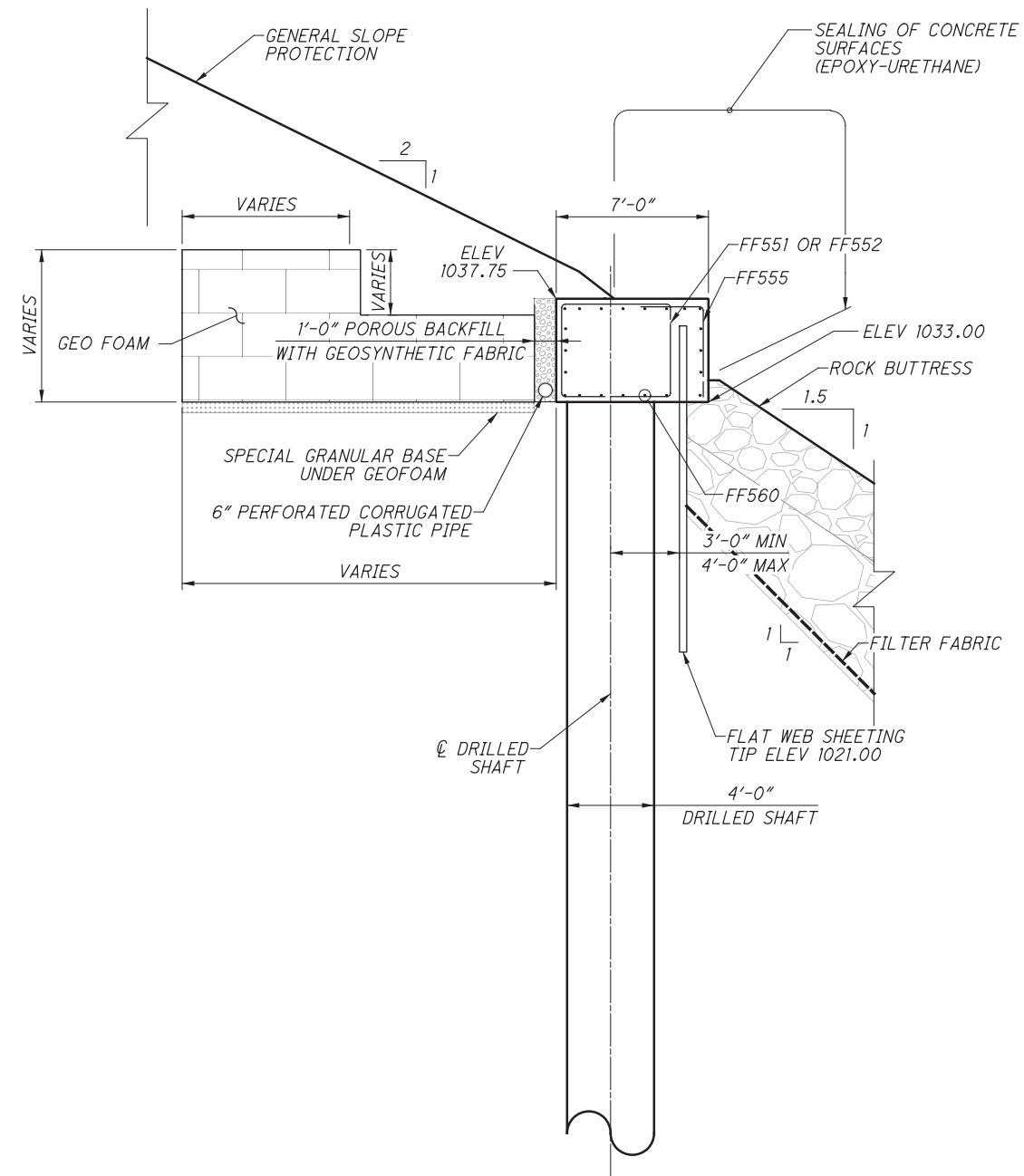
SECTION
20 FORWARD ABUTMENT TYPICAL SECTION

NOTES

1. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR PRE-SETTING OF BEARING ANCHORS.
2. FLAT WEB SHEETING SHALL BE AT LEAST $\frac{3}{8}$ " THICK WITH A MINIMUM F_y OF 36 KSI. SHEETING SHALL BE EMBEDDED INTO THE FOOTING A MINIMUM OF 3'-0", MAXIMUM OF 4'-0".



SECTION
20 FORWARD ABUTMENT WALL DETAILS (1 OF 2)

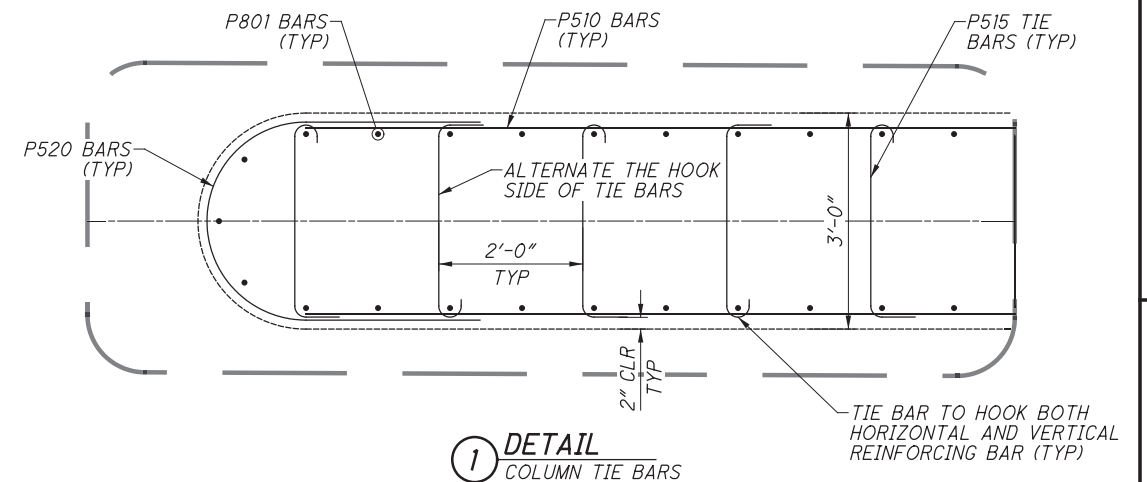
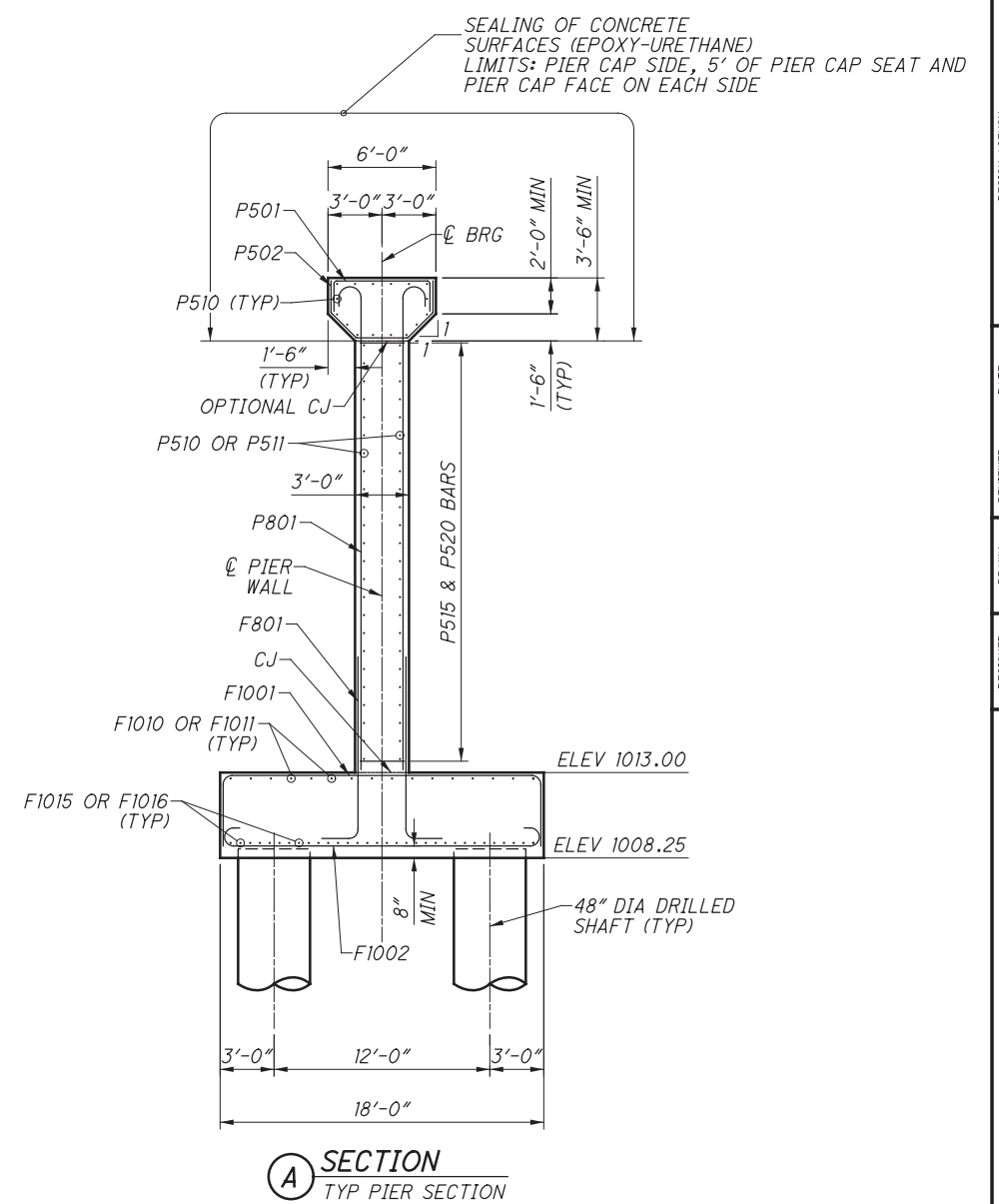
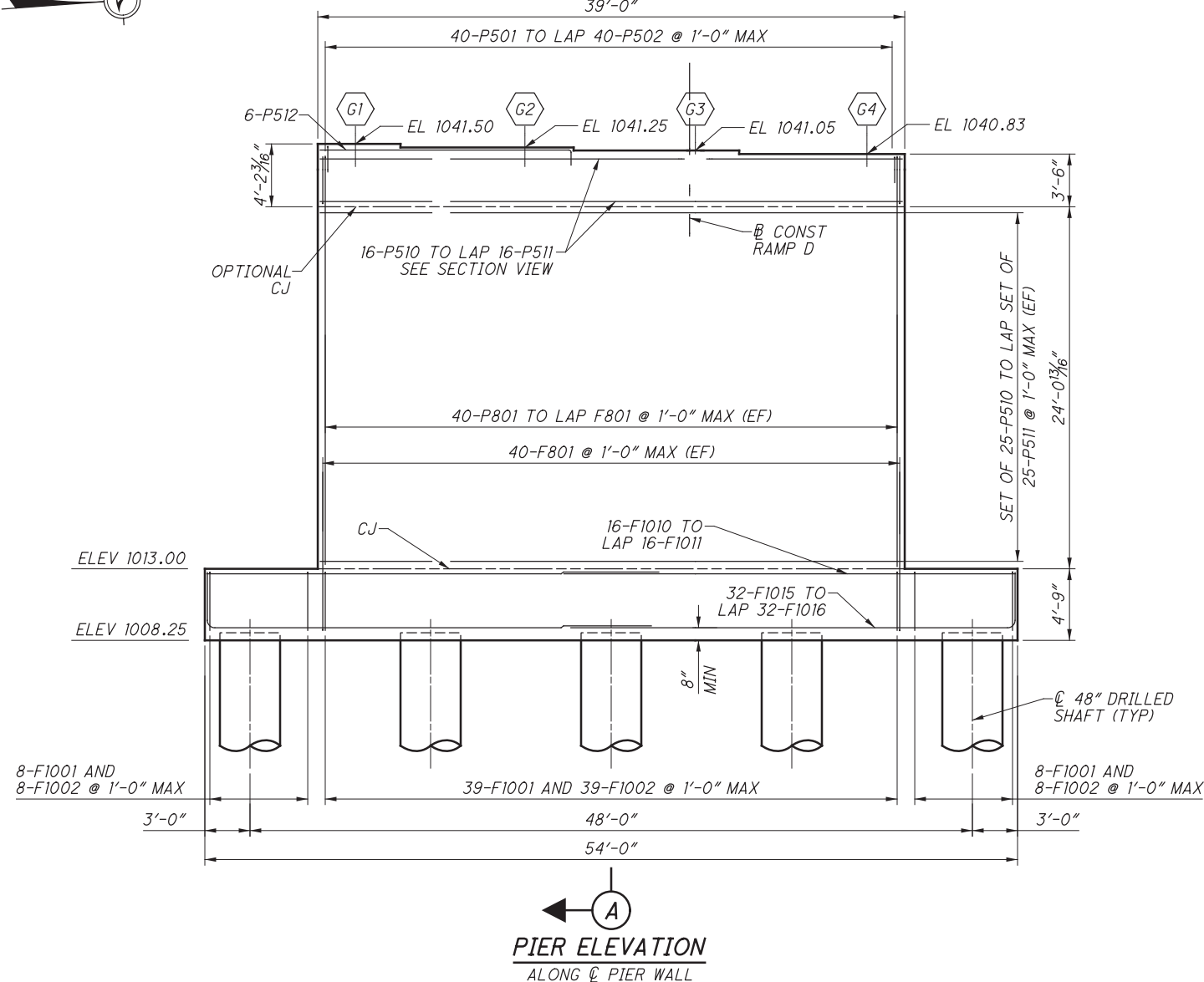
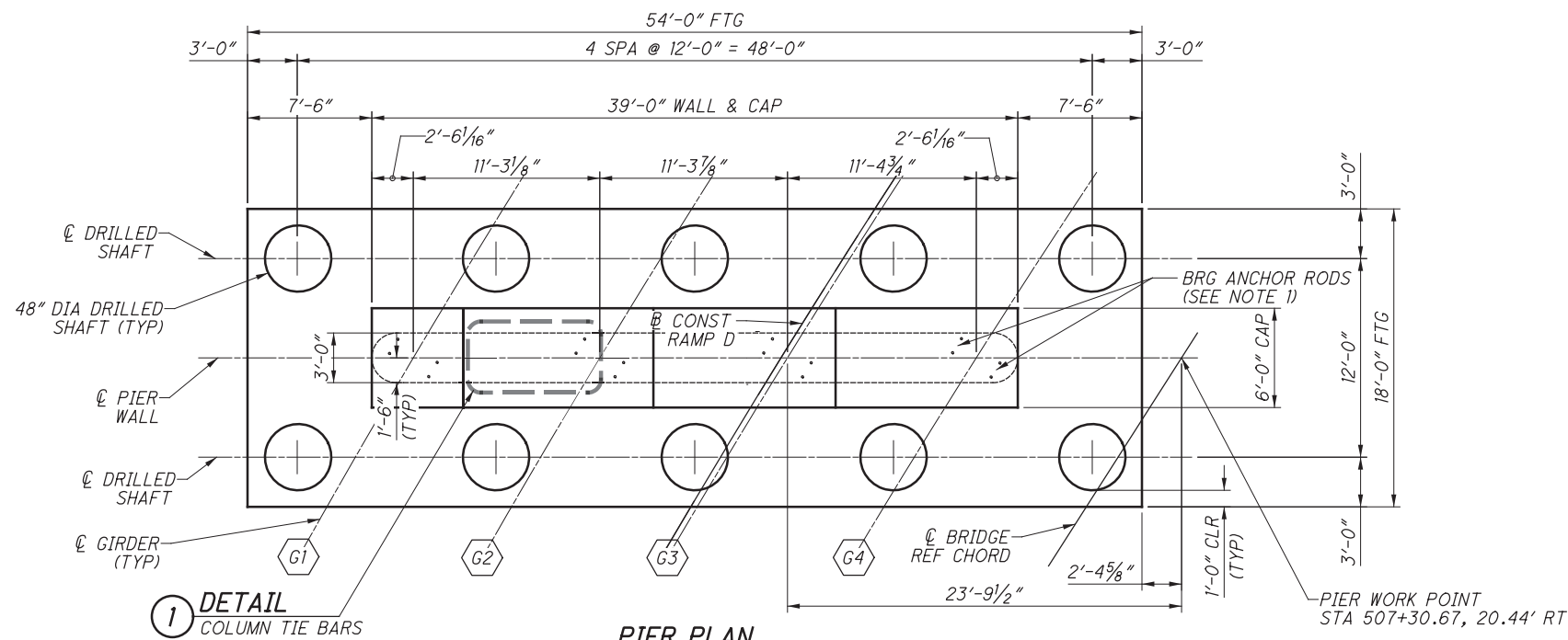


SECTION
20 FORWARD ABUTMENT WALL DETAILS (2 OF 2)

NOTES

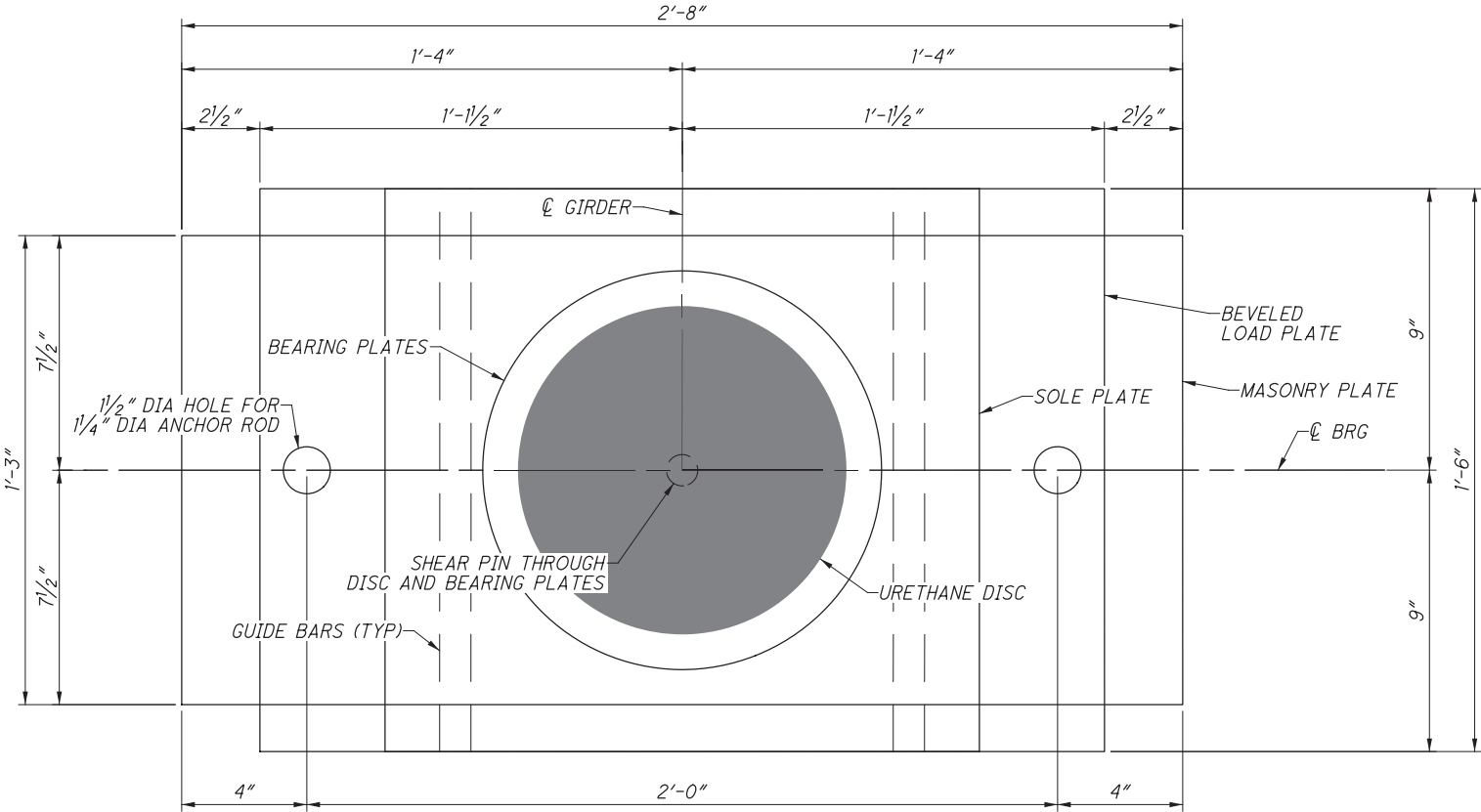
1. FLAT WEB SHEETING SHALL BE AT LEAST $\frac{3}{8}$ " THICK WITH A MINIMUM F_y OF 36 KSI. SHEETING SHALL BE EMBEDDED INTO THE FOOTING A MINIMUM OF 3'-0", MAXIMUM OF 4'-0".

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NOTES:

1. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR PRE-SETTING OF BEARING ANCHORS.

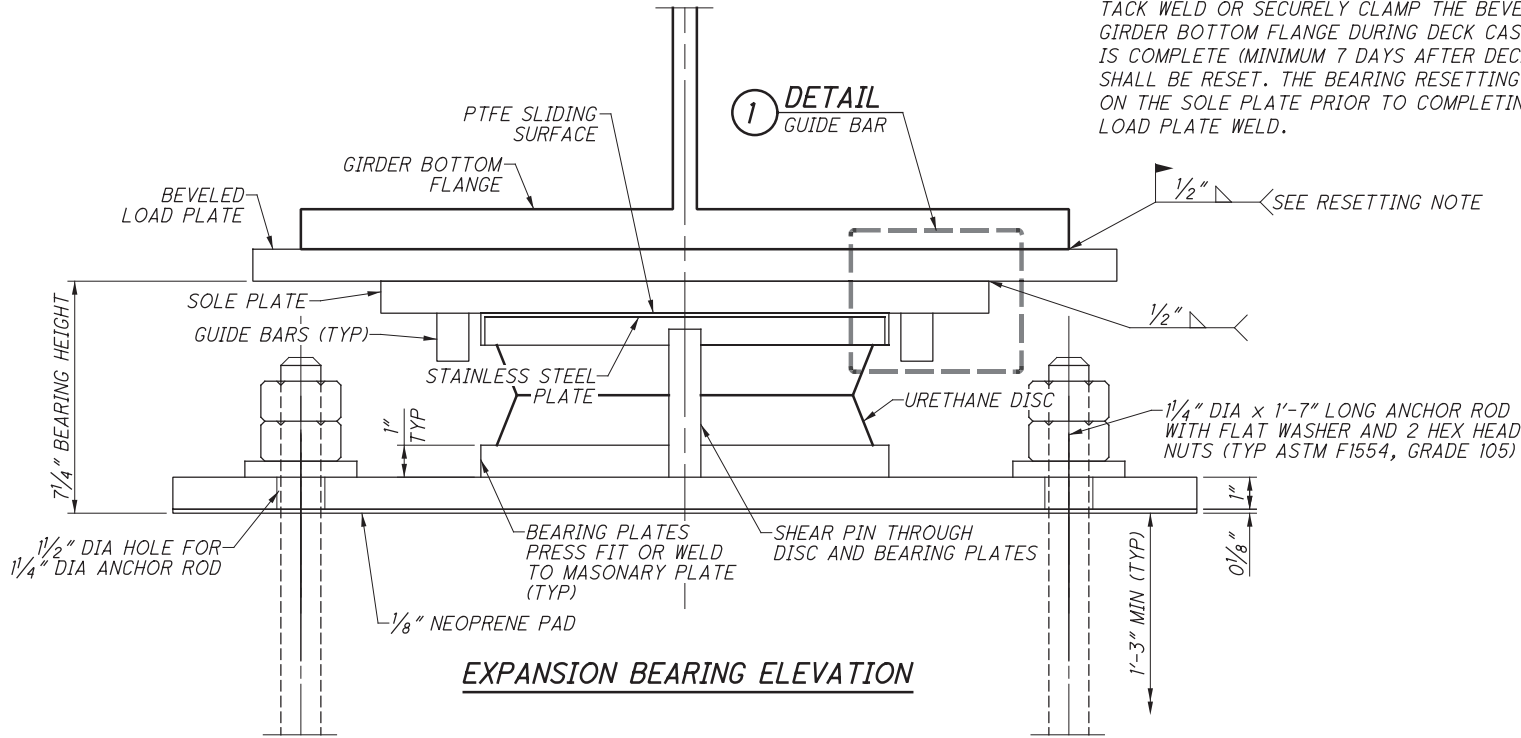


EXPANSION BEARING PLAN
REAR ABUTMENT SHOWN, FWD SIMILAR

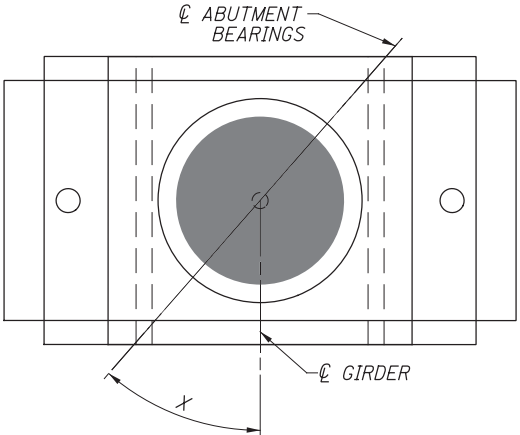
ABUTMENT	STRENGTH LIMIT STATE				SERVICE LIMIT STATE							
	TOTAL VERTICAL	TOTAL LATERAL	LONGITUDINAL ROTATION	TRANSVERSE ROTATION	LONGITUDINAL ROTATION	TRANSVERSE ROTATION	LONGITUDINAL MOVEMENT	TRANSVERSE MOVEMENT	TOTAL VERTICAL	VERTICAL DL	TOTAL LATERAL	MAX COEFF FRICTION
REAR	380 KIP	45 KIP	.009 RAD	.005 RAD	.006 RAD	.004 RAD	1"	0 7/8"	258 KIP	143 KIP	36 KIP	0.06
FORWARD	498 KIP	63 KIP	.017 RAD	.005 RAD	.013 RAD	.004 RAD	0 5/8"	0 1/8"	342 KIP	202 KIP	50 KIP	0.06

RESETTING NOTE:

TACK WELD OR SECURELY CLAMP THE BEVELED LOAD PLATE TO THE GIRDER BOTTOM FLANGE DURING DECK CASTING. AFTER DECK CASTING IS COMPLETE (MINIMUM 7 DAYS AFTER DECK CASTING), THE BEARINGS SHALL BE RESET. THE BEARING RESETTNG SHALL CENTER THE DISK ON THE SOLE PLATE PRIOR TO COMPLETING THE 1/2" FLANGE TO BEVELED LOAD PLATE WELD.

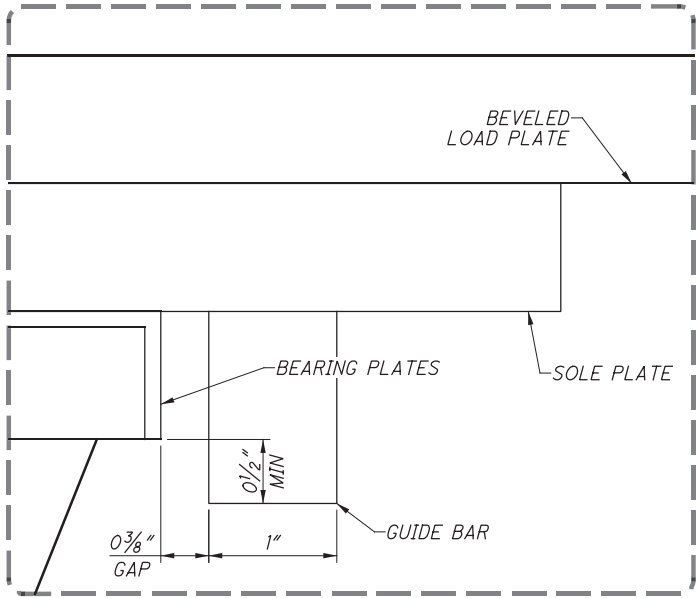


EXPANSION BEARING ELEVATION

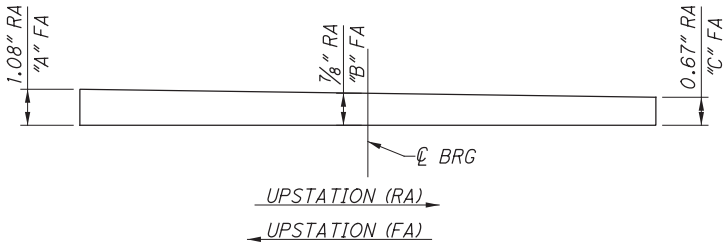


BEARING SKEW LAYOUT
FWD ABUTMENT SHOWN

ABUTMENT	GIRDER			
	1	2	3	4
REAR	90°	90°	90°	90°
FORWARD	44°13'	43°15'	42°15'	41°11'



1 DETAIL
GUIDE BAR

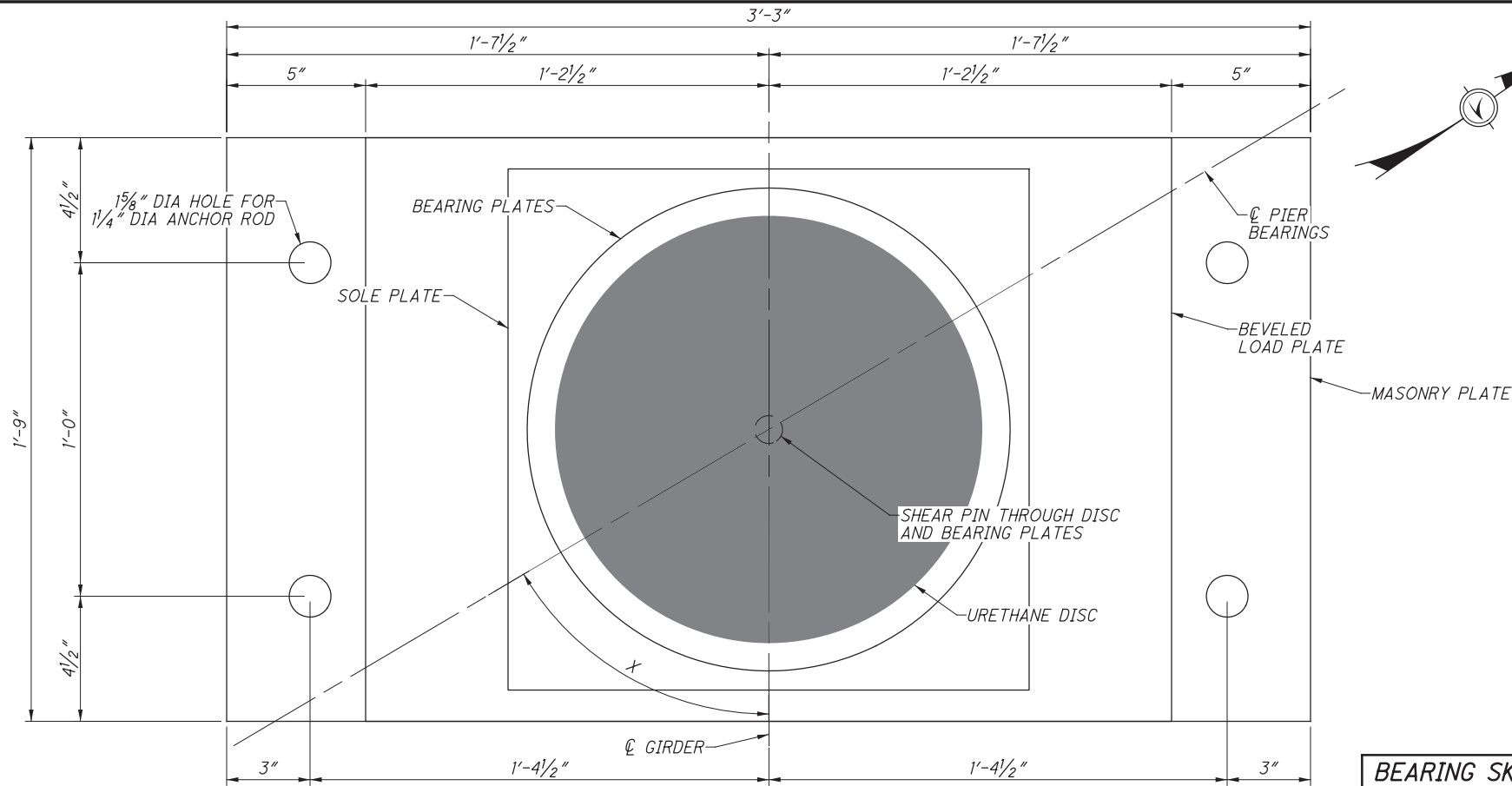


BEVELED PLATE DETAIL

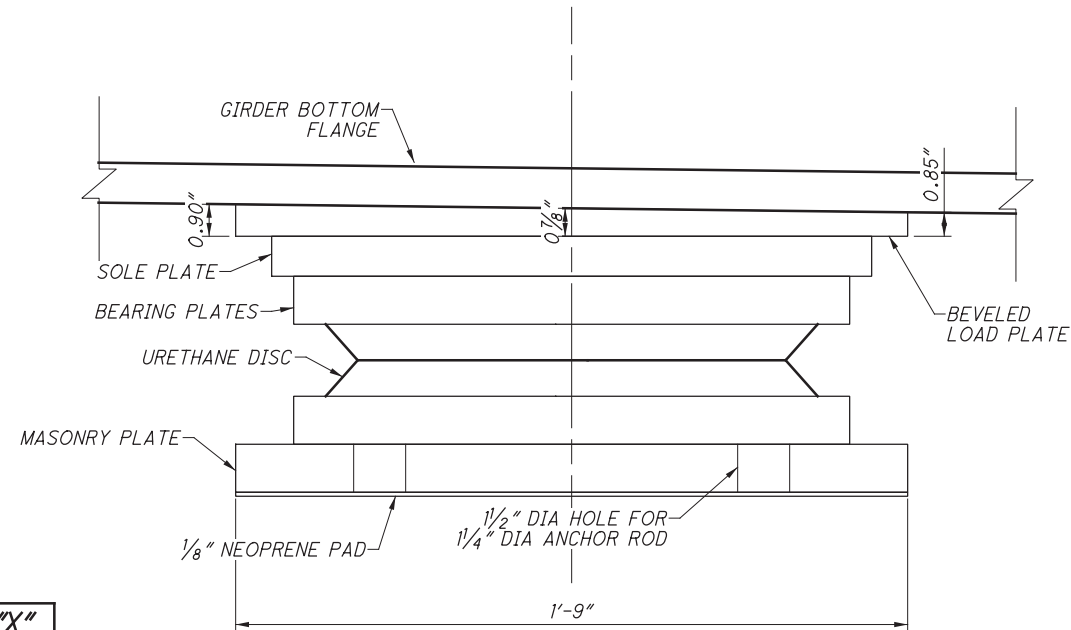
FORWARD ABUTMENT	GIRDER			
	1	2	3	4
A	1.05"	1.16"	1.62"	2.77"
B	0.88"	0.98"	1.41"	2.52"
C	0.70"	0.79"	1.20"	2.27"

NOTES:

- THE ABUTMENT BEAM SEAT ELEVATIONS ARE BASED ON BEARING HEIGHTS PROVIDED ON THIS SHEET. IF THE CONTRACTOR'S SELECTED BEARING MANUFACTURER HAS A DESIGN THAT DOES NOT CONFORM TO THE HEIGHTS PROVIDED IN THE TABLE, ADJUST THE BEARING SEAT ELEVATIONS AT NO ADDITIONAL COST TO THE STATE. ADJUST THE LOCATION OF REINFORCING STEEL HORIZONTALLY AS NECESSARY TO AVOID INTERFERENCE WITH THE BEARING ANCHOR BOLTS. MAINTAIN THE MINIMUM CONCRETE COVER AND MINIMUM SPACING REQUIRED BY THE PROJECT PLANS. IF THE REINFORCING STEEL CANNOT BE MOVED TO PROVIDE THE REQUIRED POSITION FOR THE ANCHOR BOLTS, THE CONTRACTOR'S BEARING MANUFACTURER SHALL RE-DESIGN THE BEARINGS TO ACCOMMODATE AN ACCEPTABLE ANCHOR BOLT CONFIGURATION.
- FURNISHING AND INSTALLING ANCHOR RODS AND ALL ASSOCIATED NUTS/WASHERS SHALL BE INCLUDED WITH PAYMENT FOR BEARINGS.
- THE MANUFACTURER SHALL INCLUDE A ROTATIONAL ALLOWANCE OF ±0.005 RADIANS IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS TO ACCOUNT FOR ANY UNCERTAINTIES. THE MANUFACTURER SHALL WELD OR PRESS FIT THE BEARING PLATE TO MASONRY PLATE TO ENSURE THE FULL LATERAL CAPACITY CAN BE TAKEN BY THE BEARING.
- MOVEMENT SHOWN IS MAX CONTRACTION OR EXPANSION WHEN BEAM IS PLACED AT 60°F. BOTH ABUTMENT BEARINGS PROVIDE A MAXIMUM OF 2" OF LONGITUDINAL MOVEMENT IN BOTH DIRECTIONS.
- ALL NON-SLIDING BEARING ELEMENTS SHALL BE PAINTED WITH THE SAME SYSTEM USED ON THE END 10' OF THE GIRDERS AND INCLUDED WITH PAYMENT FOR ITEM 869 - HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.



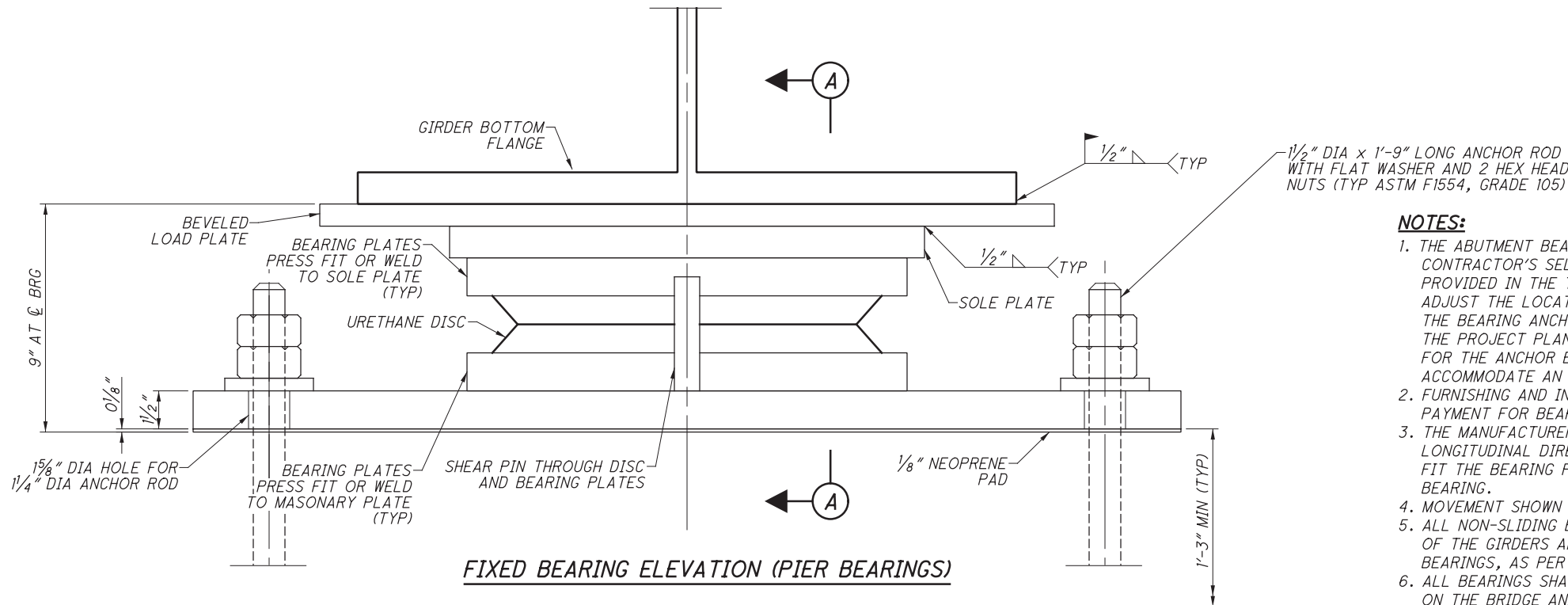
FIXED BEARING PLAN (PIER BEARINGS)



SECTION A
UPSTATION

BEARING SKEW "X"			
GIRDER			
1	2	3	4
59°25'	58°52'	58°18'	57°42'

MAX BEARING REACTION TABLE (SEE NOTE 3)												
	STRENGTH LIMIT STATE				SERVICE LIMIT STATE							
	TOTAL VERTICAL	TOTAL LATERAL	LONGITUDINAL ROTATION	TRANSVERSE ROTATION	LONGITUDINAL ROTATION	TRANSVERSE ROTATION	LONGITUDINAL MOVEMENT	TRANSVERSE MOVEMENT	TOTAL VERTICAL	VERTICAL DL	TOTAL LATERAL	MAX COEFF FRICTION
PIER	1059 KIP	170 KIP	.020 RAD	.017 RAD	.015 RAD	.014 RAD	0"	0"	760 KIP	543 KIP	136 KIP	0.06



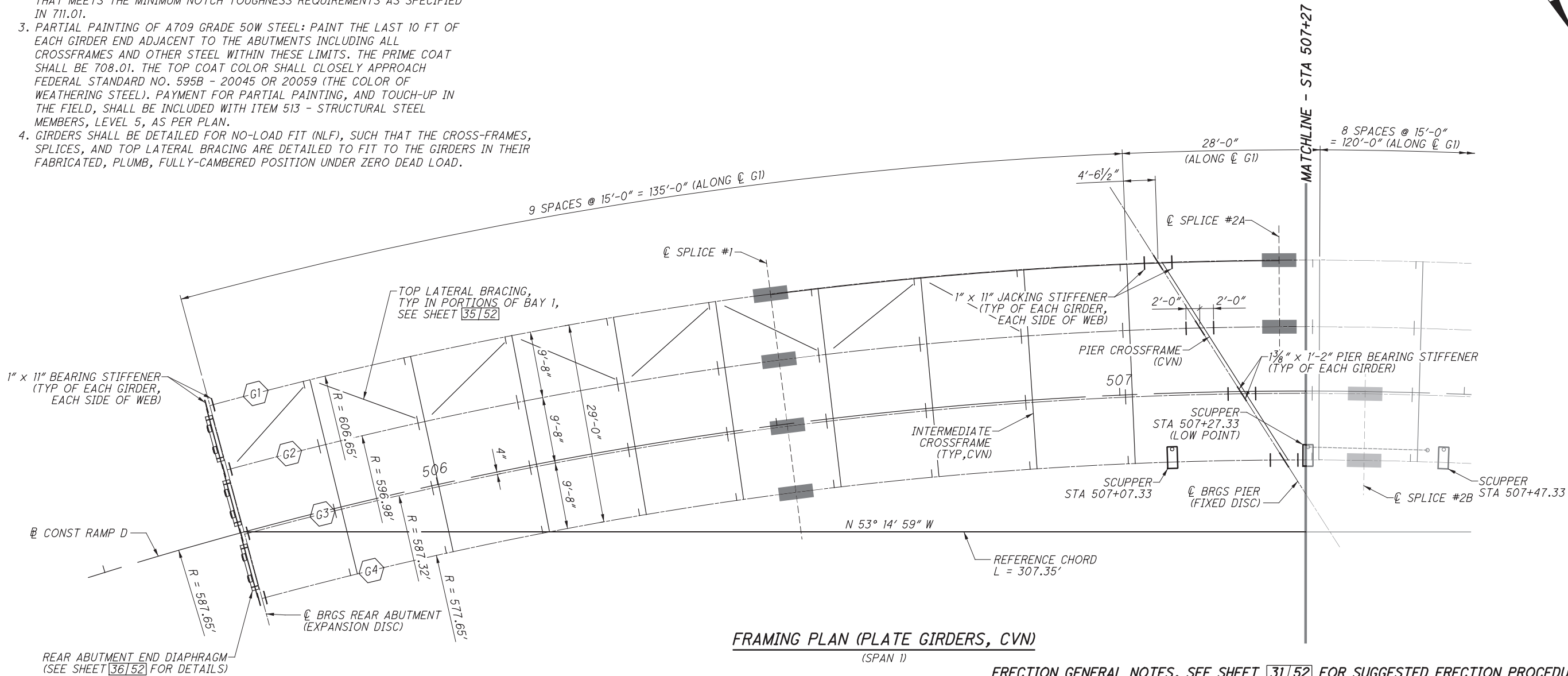
FIXED BEARING ELEVATION (PIER BEARINGS)

NOTES:

1. THE ABUTMENT BEAM SEAT ELEVATIONS ARE BASED ON BEARING HEIGHTS PROVIDED ON THIS SHEET. IF THE CONTRACTOR'S SELECTED BEARING MANUFACTURER HAS A DESIGN THAT DOES NOT CONFORM TO THE HEIGHTS PROVIDED IN THE TABLE, ADJUST THE BEARING SEAT ELEVATIONS AT NO ADDITIONAL COST TO THE STATE. ADJUST THE LOCATION OF REINFORCING STEEL HORIZONTALLY AS NECESSARY TO AVOID INTERFERENCE WITH THE BEARING ANCHOR BOLTS. MAINTAIN THE MINIMUM CONCRETE COVER AND MINIMUM SPACING REQUIRED BY THE PROJECT PLANS. IF THE REINFORCING STEEL CANNOT BE MOVED TO PROVIDE THE REQUIRED POSITION FOR THE ANCHOR BOLTS, THE CONTRACTOR'S BEARING MANUFACTURER SHALL RE-DESIGN THE BEARINGS TO ACCOMMODATE AN ACCEPTABLE ANCHOR BOLT CONFIGURATION.
2. FURNISHING AND INSTALLING ANCHOR RODS AND ALL ASSOCIATED NUTS/WASHERS SHALL BE INCLUDED WITH PAYMENT FOR BEARINGS.
3. THE MANUFACTURER SHALL INCLUDE A ROTATIONAL ALLOWANCE OF ± 0.005 RADIAN IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS TO ACCOUNT FOR ANY UNCERTAINTIES. THE MANUFACTURER SHALL WELD OR PRESS FIT THE BEARING PLATE TO MASONRY PLATE TO ENSURE THE FULL LATERAL CAPACITY CAN BE TAKEN BY THE BEARING.
4. MOVEMENT SHOWN IS MAX CONTRACTION OR EXPANSION WHEN BEAM IS PLACED AT 60°F.
5. ALL NON-SLIDING BEARING ELEMENTS SHALL BE PAINTED WITH THE SAME SYSTEM USED ON THE END 10' OF THE GIRDERS AND INCLUDED WITH PAYMENT FOR ITEM 869 - HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN.
6. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.

NOTES

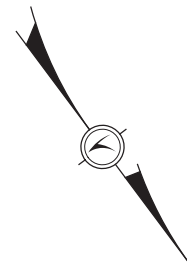
1. SCUPPERS SHALL BE NEENAH R-4014-C1 OR EQUAL AND BE PIPED TO OUTLET 24" BELOW THE BOTTOM OF THE BOTTOM FLANGE OF GIRDER G4. SCUPPERS SHALL BE MOUNTED FLUSH WITH THE DECK (+0", -1/4") AND AS CLOSE TO THE TOE OF PARAPET THAT WILL STILL ALLOW FOR SLIPFORMING. SCUPPER TAT STA 507+27.33 SHALL BE Laterally Piped to Outlet at 507+47 as shown in these drawings.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. PARTIAL PAINTING OF A709 GRADE 50W STEEL: PAINT THE LAST 10 FT OF EACH GIRDER END ADJACENT TO THE ABUTMENTS INCLUDING ALL CROSSFRAMES AND OTHER STEEL WITHIN THESE LIMITS. THE PRIME COAT SHALL BE 708.01. THE TOP COAT COLOR SHALL CLOSELY APPROACH FEDERAL STANDARD NO. 595B - 20045 OR 20059 (THE COLOR OF WEATHERING STEEL). PAYMENT FOR PARTIAL PAINTING, AND TOUCH-UP IN THE FIELD, SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN.
4. GIRDERS SHALL BE DETAILED FOR NO-LOAD FIT (NLF), SUCH THAT THE CROSS-FRAMES, SPLICES, AND TOP LATERAL BRACING ARE DETAILED TO FIT TO THE GIRDERS IN THEIR FABRICATED, PLUMB, FULLY-CAMBERED POSITION UNDER ZERO DEAD LOAD.



FRAMING PLAN (PLATE GIRDERS, CVN)
(SPAN 1)

ERECTION GENERAL NOTES, SEE SHEET 31/52 FOR SUGGESTED ERECTION PROCEDURE

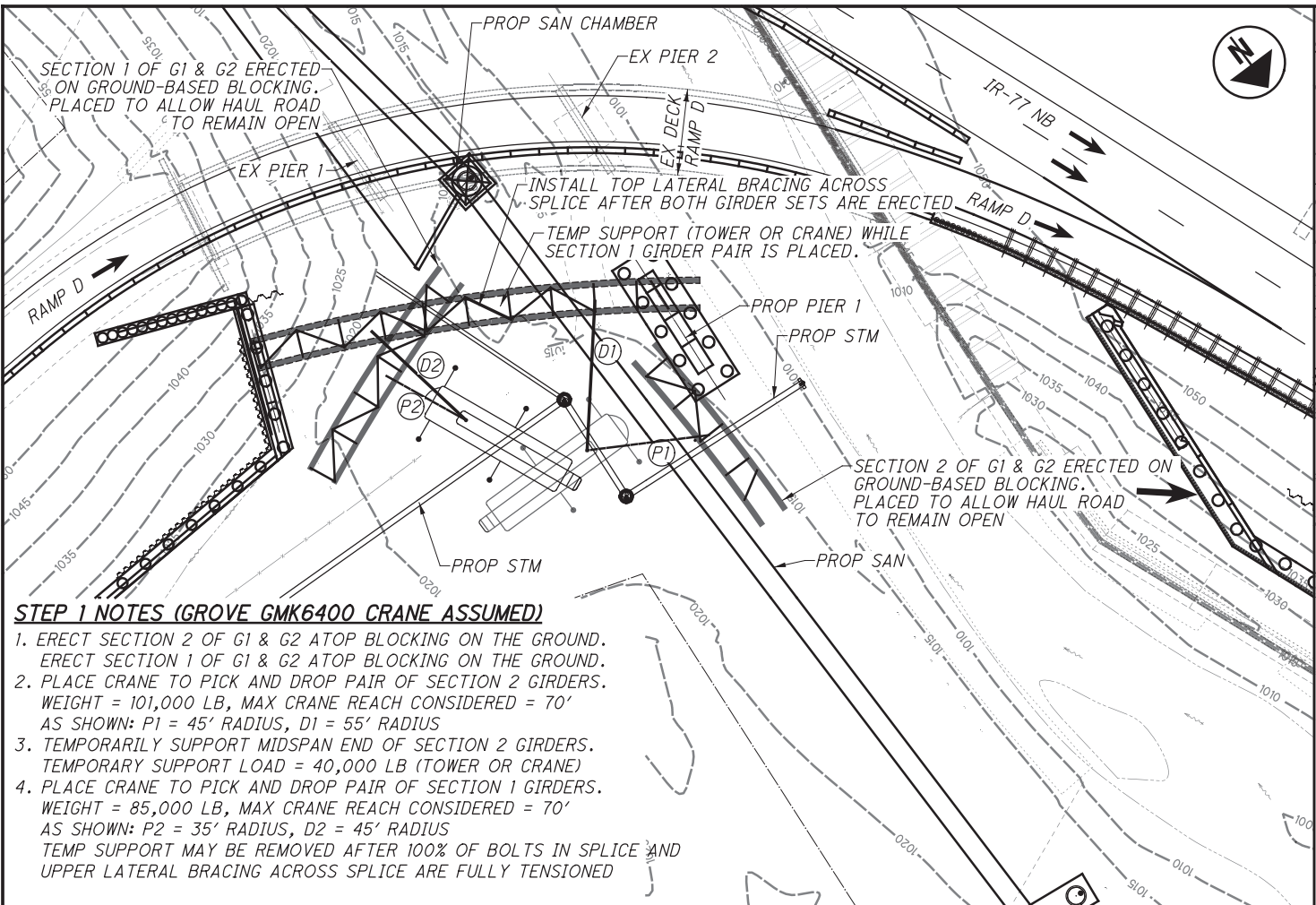
1. THE METHODS USED BY THE CONTRACTOR SHALL BE DOCUMENTED ON THE ERECTION DRAWINGS WITH ALL SUPPORTING STABILITY CALCULATIONS SUBMITTED IN ACCORDANCE WITH CMS ITEMS 501 AND 513. THE CONTRACTOR MAY SUBMIT AN ALTERNATE MEANS OF ERECTION FROM THE ONE SHOWN IN THESE PLANS.
2. THE CONTRACTOR'S ATTENTION IS DIRECTED TO REQUIREMENTS FOR STABILITY OF STEEL GIRDERS DURING ERECTION (CMS 513.26) AND THE SUBMITTAL REQUIREMENTS OF 501.05.B.4.
3. THIS BRIDGE SHALL BE STABILIZED DURING ERECTION USING FALSE WORK, TEMPORARY BRACING, COMPRESSION FLANGE STIFFENING TRUSS, EXISTING SUBSTRUCTURES, OR USING A HOLDING CRANE UNTIL A SUFFICIENT NUMBER OF GIRDERS HAVE BEEN ERECTED AND CROSS-FRAMES INSTALLED.
4. WIND LOADING ON THE PARTIALLY ERECTED STRUCTURE SHALL BE CONSIDERED IN THE DEVELOPMENT OF ERECTION PLANS AND ANY SHORING TOWERS. ERECTION PLANS SHALL CONVEY WIND SPEED WORK LIMITATIONS AND ANY PROCEDURES FOR HIGH WIND EVENTS. THE FOLLOWING LOADS ARE RECOMMENDED AS THE MINIMUM GUIDELINES FOR ERECTION WIND LOADING.
 - FOR THE FIRST LIFT IN EACH STEP, AND GROUND-BASED ERECTION BLOCKING REQUIREMENTS, DETERMINE PRESSURES BASED UPON A DESIGN WIND VELOCITY OF 60-MPH.
 - ONCE THE TWO SETS OF GIRDER PAIRS ARE FULLY SPLICED IN EACH STEP (WITH 100% OF BOLTS FULLY TENSIONED), DETERMINE PRESSURES BASED UPON A DESIGN WIND VELOCITY OF 100-MPH.
5. ERECTION SCHEMES THAT PLACE SINGLE GIRDERS SECTIONS AT A TIME SHALL DOCUMENT THEIR STABILITY DURING EACH STEP OF ERECTION. THE MINIMUM DESIGN WIND VELOCITY TO VERIFY STABILITY OF ERECTION STEPS THAT WILL BE EXPOSED FOR SHORT DURATION (LESS THAN 2 DAYS) SHALL BE 30-MPH. ERECTION STEPS ANTICIPATED TO BE EXPOSED FOR LONG DURATIONS (MORE THAN 2 DAYS) SHALL VERIFY STABILITY USING A DESIGN WIND VELOCITY OF 100-MPH.
6. GROUND ERECTION WILL INCLUDE 100% OF CONNECTION BOLTS (EXCEPT SPLICES AND TOP LATERAL BRACING ACROSS SPLICE LOCATIONS) TO BE FULLY INSTALLED AND PRETENSIONED.



1. FREE FALL OUTLET OF ALL SCUPPER (INCLUDING PIPED CENTER SCUPPER) SHALL EXTEND AT LEAST 24" BELOW THE BOTTOM OF THE BOTTOM FLANGE OF GIRDER G4. HORIZONTAL PIPING SHALL BE SUPPORTED FROM G4 CONNECTION PLATES OR CROSSFRAMES. NO WELDING IS ALLOWED TO CROSSFRAMES. THE COST AND DETAILING OF HORIZONTAL CONNECTION PIPING AND SUPPORTS SHALL BE INCLUDED IN THE COST OF THE SCUPPER.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. PARTIAL PAINTING OF A709 GRADE 50W STEEL: PAINT THE LAST 10 FT OF EACH GIRDER END ADJACENT TO THE ABUTMENTS INCLUDING ALL CROSSFRAMES AND OTHER STEEL WITHIN THESE LIMITS. THE PRIME COAT SHALL BE 708.01. THE TOP COAT COLOR SHALL CLOSELY APPROACH FEDERAL STANDARD NO. 595B - 20045 OR 20059 (THE COLOR OF WEATHERING STEEL). PAYMENT FOR PARTIAL PAINTING, AND TOUCH-UP IN THE FIELD, SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN.
4. GIRDERS SHALL BE DETAILED FOR NO-LOAD FIT (NLF), SUCH THAT THE CROSS-FRAMES, SPLICES, AND TOP LATERAL BRACING ARE DETAILED TO FIT TO THE GIRDERS IN THEIR FABRICATED, PLUMB, FULLY-CAMBERED POSITION UNDER ZERO DEAD LOAD.
5. SEE SHEET 29|52 FOR ERECTION GENERAL NOTES.
SEE SHEET 31|52 FOR SUGGESTED ERECTION PROCEDURE.

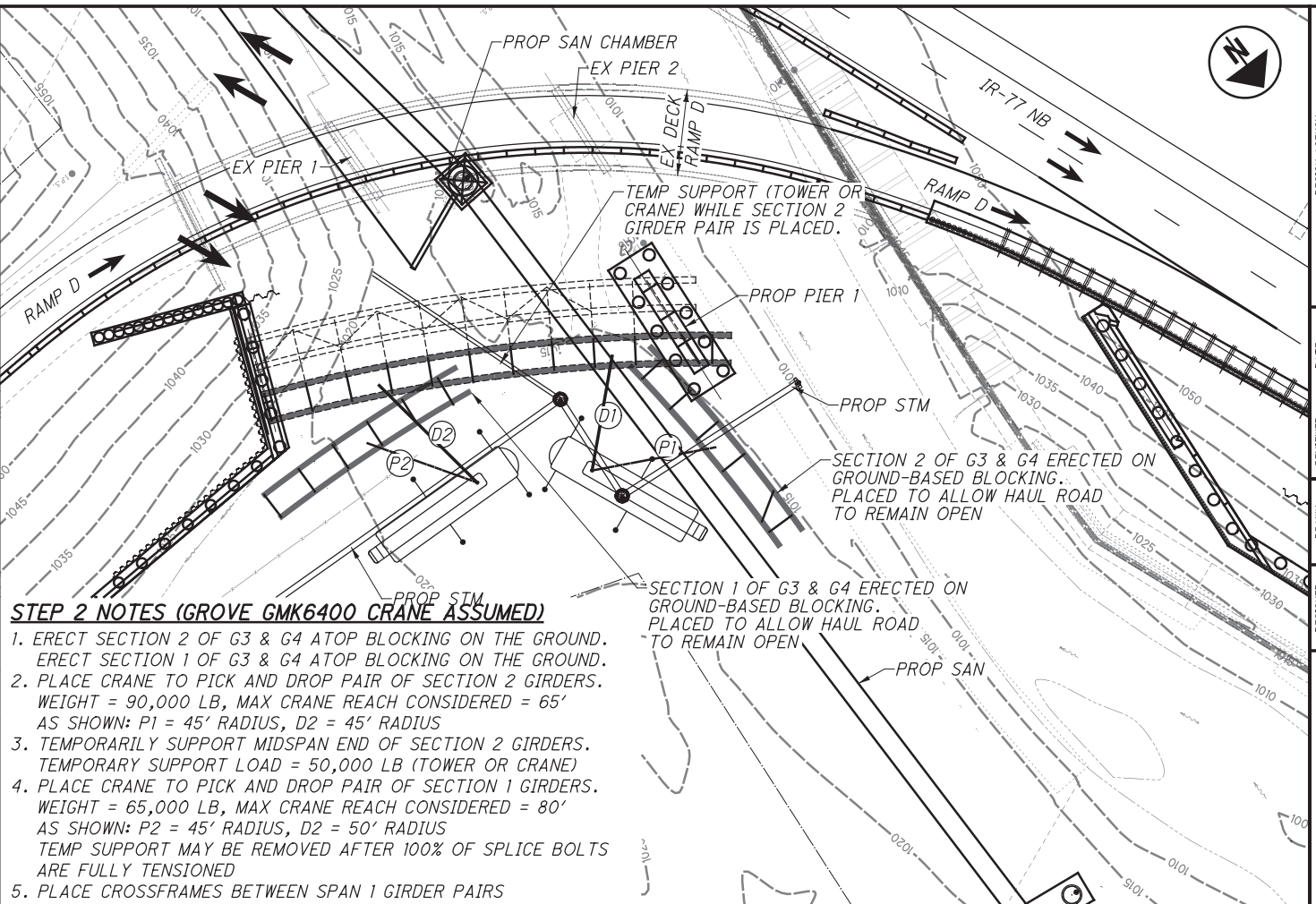
FRAMING PLAN (PLATE GIRDERS, CVN)
(SPAN 2)

1/15/2019 3:06:57 PM vtr001
SUBMITTAL: SEALED TRACINGS
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PLOT: 90973-000TV8ISS3_Pen.tbl
PENTABLE: 90973-000TV8ISS3_Pen.tbl
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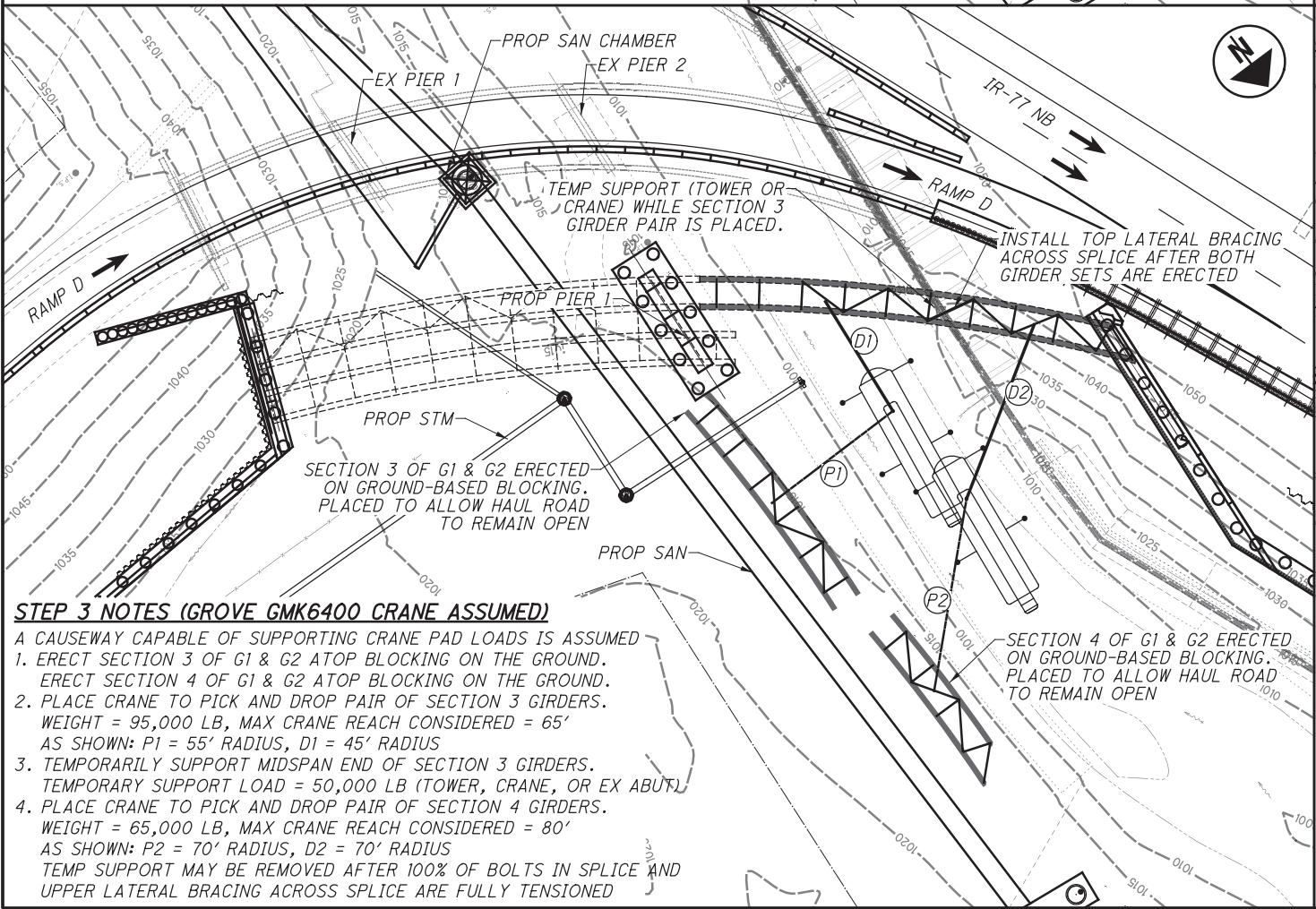
STEP 1 NOTES (GROVE GMK6400 CRANE ASSUMED)

1. ERECT SECTION 2 OF G1 & G2 ATOP BLOCKING ON THE GROUND. ERECT SECTION 1 OF G1 & G2 ATOP BLOCKING ON THE GROUND.
2. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 2 GIRDERS. WEIGHT = 101,000 LB, MAX CRANE REACH CONSIDERED = 70' AS SHOWN: P1 = 45' RADIUS, D1 = 55' RADIUS
3. TEMPORARILY SUPPORT MIDSPAN END OF SECTION 2 GIRDERS. TEMPORARY SUPPORT LOAD = 40,000 LB (TOWER OR CRANE)
4. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 1 GIRDERS. WEIGHT = 85,000 LB, MAX CRANE REACH CONSIDERED = 70' AS SHOWN: P2 = 35' RADIUS, D2 = 45' RADIUS
TEMP SUPPORT MAY BE REMOVED AFTER 100% OF BOLTS IN SPLICE AND UPPER LATERAL BRACING ACROSS SPLICE ARE FULLY TENSIONED



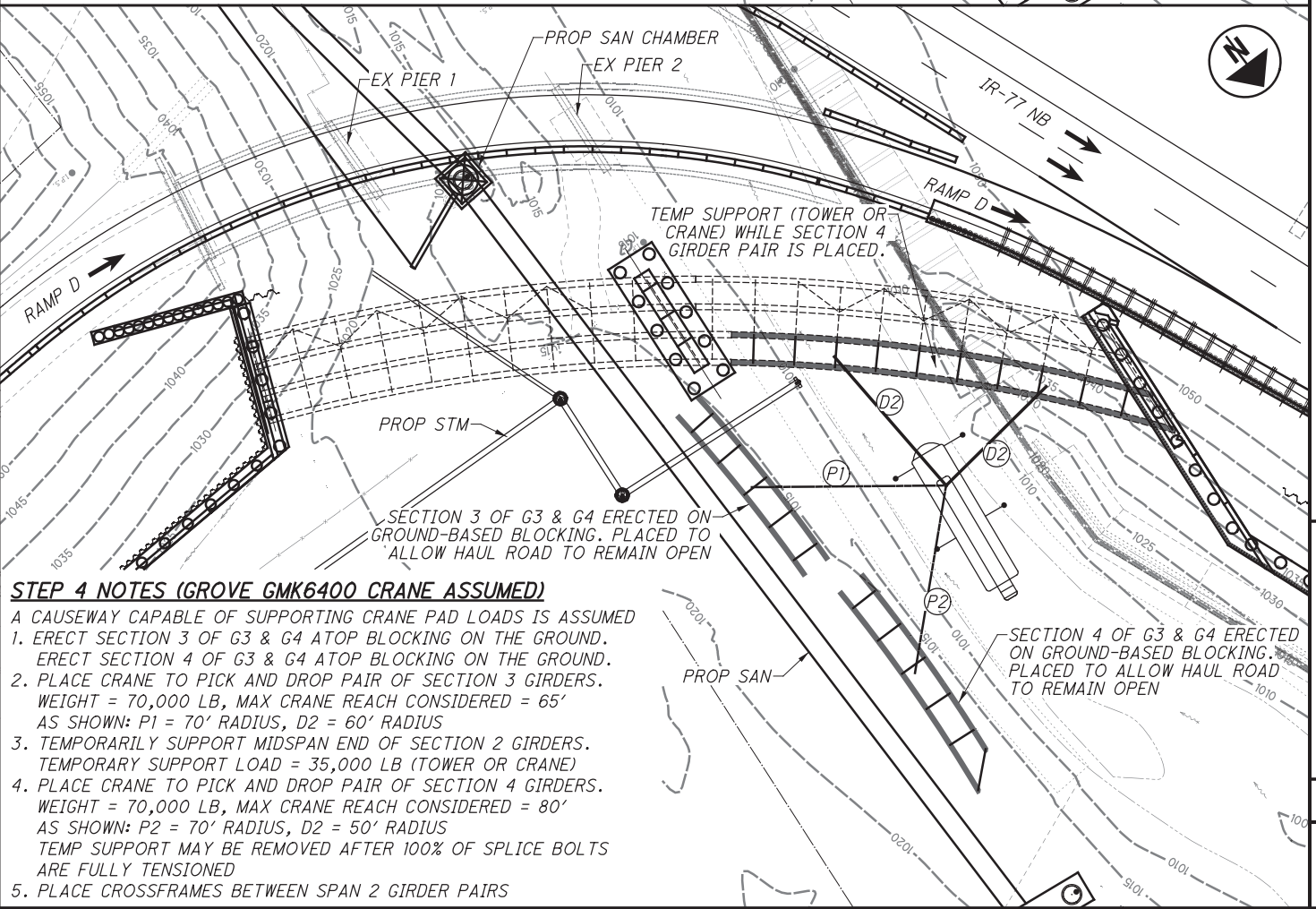
STEP 2 NOTES (GROVE GMK6400 CRANE ASSUMED)

1. ERECT SECTION 2 OF G3 & G4 ATOP BLOCKING ON THE GROUND. ERECT SECTION 1 OF G3 & G4 ATOP BLOCKING ON THE GROUND.
2. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 2 GIRDERS. WEIGHT = 90,000 LB, MAX CRANE REACH CONSIDERED = 65' AS SHOWN: P1 = 45' RADIUS, D2 = 45' RADIUS
3. TEMPORARILY SUPPORT MIDSPAN END OF SECTION 2 GIRDERS. TEMPORARY SUPPORT LOAD = 50,000 LB (TOWER OR CRANE)
4. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 1 GIRDERS. WEIGHT = 65,000 LB, MAX CRANE REACH CONSIDERED = 80' AS SHOWN: P2 = 45' RADIUS, D2 = 50' RADIUS
TEMP SUPPORT MAY BE REMOVED AFTER 100% OF SPLICE BOLTS ARE FULLY TENSIONED
5. PLACE CROSSFRAMES BETWEEN SPAN 1 GIRDER PAIRS



STEP 3 NOTES (GROVE GMK6400 CRANE ASSUMED)

- A CAUSEWAY CAPABLE OF SUPPORTING CRANE PAD LOADS IS ASSUMED
1. ERECT SECTION 3 OF G1 & G2 ATOP BLOCKING ON THE GROUND. ERECT SECTION 4 OF G1 & G2 ATOP BLOCKING ON THE GROUND.
 2. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 3 GIRDERS. WEIGHT = 95,000 LB, MAX CRANE REACH CONSIDERED = 65' AS SHOWN: P1 = 55' RADIUS, D1 = 45' RADIUS
 3. TEMPORARILY SUPPORT MIDSPAN END OF SECTION 3 GIRDERS. TEMPORARY SUPPORT LOAD = 50,000 LB (TOWER, CRANE, OR EX ABUT.)
 4. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 4 GIRDERS. WEIGHT = 65,000 LB, MAX CRANE REACH CONSIDERED = 80' AS SHOWN: P2 = 70' RADIUS, D2 = 70' RADIUS
TEMP SUPPORT MAY BE REMOVED AFTER 100% OF BOLTS IN SPLICE AND UPPER LATERAL BRACING ACROSS SPLICE ARE FULLY TENSIONED

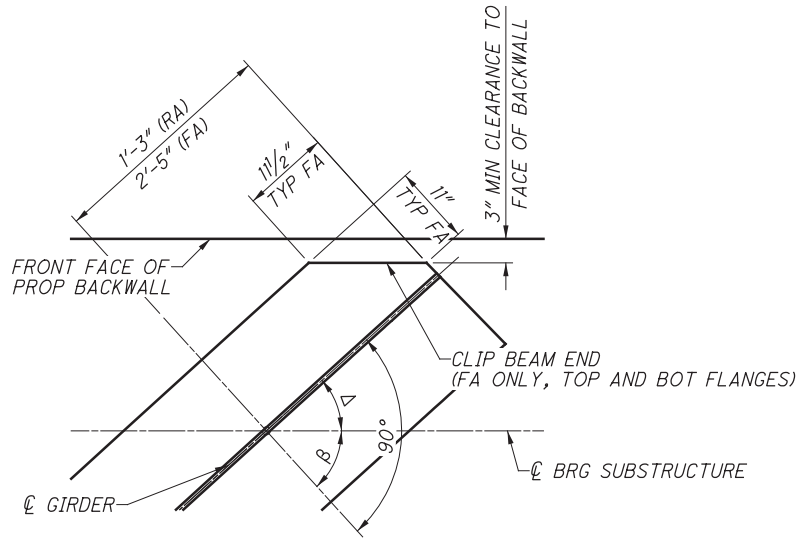


STEP 4 NOTES (GROVE GMK6400 CRANE ASSUMED)

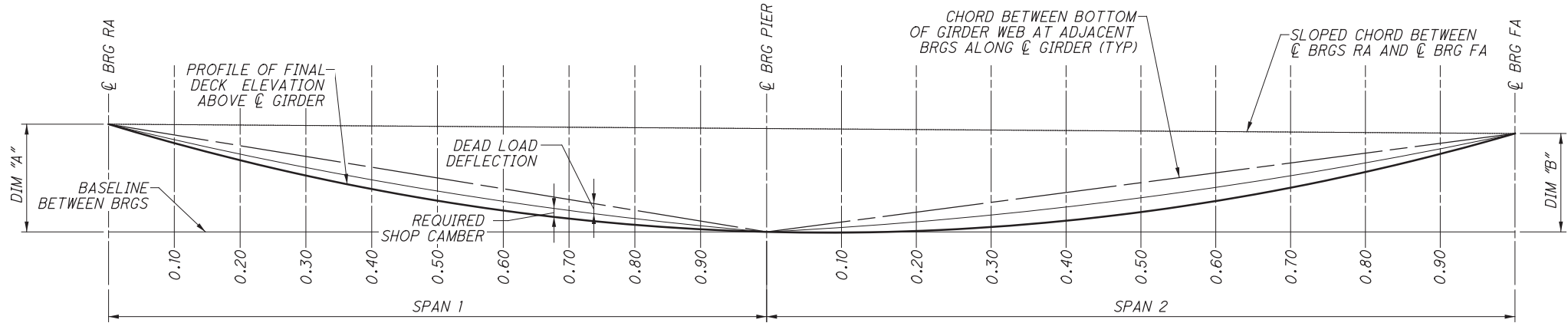
- A CAUSEWAY CAPABLE OF SUPPORTING CRANE PAD LOADS IS ASSUMED
1. ERECT SECTION 3 OF G3 & G4 ATOP BLOCKING ON THE GROUND. ERECT SECTION 4 OF G3 & G4 ATOP BLOCKING ON THE GROUND.
 2. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 3 GIRDERS. WEIGHT = 70,000 LB, MAX CRANE REACH CONSIDERED = 65' AS SHOWN: P1 = 70' RADIUS, D2 = 60' RADIUS
 3. TEMPORARILY SUPPORT MIDSPAN END OF SECTION 2 GIRDERS. TEMPORARY SUPPORT LOAD = 35,000 LB (TOWER OR CRANE)
 4. PLACE CRANE TO PICK AND DROP PAIR OF SECTION 4 GIRDERS. WEIGHT = 70,000 LB, MAX CRANE REACH CONSIDERED = 80' AS SHOWN: P2 = 70' RADIUS, D2 = 50' RADIUS
TEMP SUPPORT MAY BE REMOVED AFTER 100% OF SPLICE BOLTS ARE FULLY TENSIONED
 5. PLACE CROSSFRAMES BETWEEN SPAN 2 GIRDER PAIRS



BEARING ANGULAR DATA TABLE						
GIRDER NUMBER	REAR ABUTMENT		PIER		FORWARD ABUTMENT	
	θ	Δ	θ	Δ	θ	Δ
G1	0°	90°	30°35'	59°25'	45°47'	44°13'
G2	0°	90°	31°08'	58°52'	46°45'	43°15'
G3	0°	90°	31°42'	58°18'	47°46'	42°14'
G4	0°	90°	32°18'	57°42'	48°50'	41°10'



1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA GIRDER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAT 2" LONG, AND BE AT LEAST $\frac{5}{16}$ ".
3. PIER BEARING STIFFENERS SHALL BE ALONG THE PIER SKEW.
4. FOR ABUTMENT BEARING STIFFENER AND PIER JACKING STIFFENER DETAILS, SEE SHEET 34|52.
5. FOR SHEAR STUD SPACING ON TOP OF SPLICE, SEE SHEET 38|52.
6. TERMINATE STIFFENER WELDS $\frac{1}{4}$ " ($\pm \frac{1}{8}$ ") FROM THE END OF STIFFENER TO GIRDER INTERFACE.



CAMBER AND BLOCKING DIAGRAM
ALONG $\varnothing$ OF GIRDER

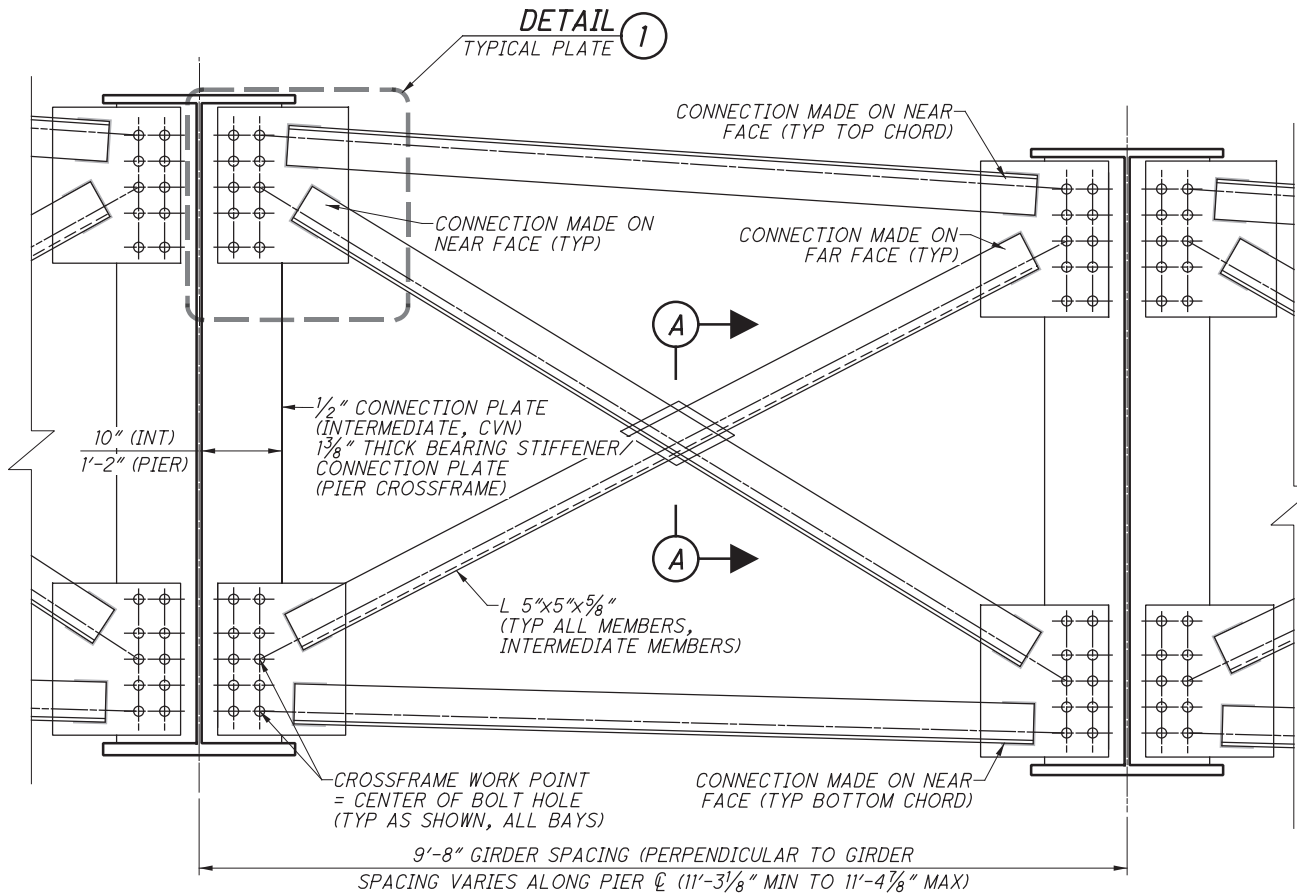
CAMBER BLOCKING DIAGRAM TABLE *			
GIRDER NUMBER	DIMENSION		CHORD SLOPE
	A	B	
GIRDER 1	22.86"	17.30"	-0.161%
GIRDER 2	23.55"	20.32"	-0.088%
GIRDER 3	23.43"	23.11"	-0.009%
GIRDER 4	23.51"	27.02"	0.092%

* BLOCKING DIMENSIONS ARE FROM THE LEVEL BASELINE TO THE BOTTOM OF BOTTOM FLANGE STEEL.

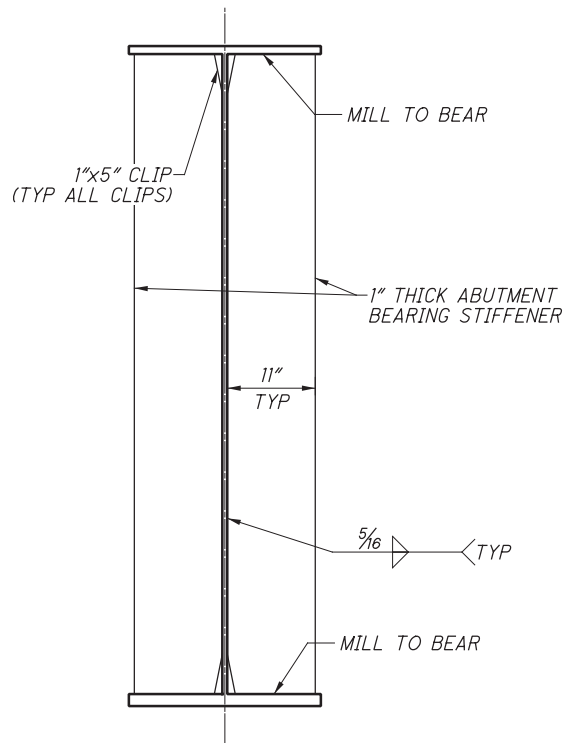
GIRDER CAMBER AND DEFLECTIONS																					
POINT		GIRDER 1					GIRDER 2					GIRDER 3					GIRDER 4				
		DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER
REAR ABUT		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"
SPAN 1	0.10	0.16"	0.31"	0.05"	-1.53"	-1.02"	0.18"	0.40"	0.07"	-1.66"	-1.02"	0.20"	0.50"	0.08"	-1.81"	-1.02"	0.23"	0.60"	0.10"	-1.96"	-1.03"
	0.20	0.28"	0.55"	0.10"	-2.73"	-1.80"	0.32"	0.72"	0.12"	-2.96"	-1.79"	0.37"	0.91"	0.15"	-3.21"	-1.78"	0.41"	1.09"	0.18"	-3.48"	-1.80"
	0.30	0.36"	0.69"	0.12"	-3.58"	-2.41"	0.41"	0.93"	0.16"	-3.88"	-2.39"	0.48"	1.17"	0.19"	-4.21"	-2.37"	0.54"	1.41"	0.23"	-4.57"	-2.40"
	0.40	0.38"	0.73"	0.13"	-4.09"	-2.86"	0.45"	0.99"	0.17"	-4.44"	-2.84"	0.52"	1.26"	0.21"	-4.82"	-2.83"	0.59"	1.51"	0.25"	-5.23"	-2.88"
	0.50	0.35"	0.65"	0.11"	-4.26"	-3.15"	0.42"	0.91"	0.15"	-4.62"	-3.14"	0.49"	1.17"	0.20"	-5.02"	-3.16"	0.56"	1.40"	0.24"	-5.44"	-3.25"
	SPLICE #1	0.28"	0.50"	0.09"	-4.11"	-3.24"	0.37"	0.78"	0.13"	-4.53"	-3.25"	0.45"	1.07"	0.18"	-4.97"	-3.27"	0.54"	1.34"	0.23"	-5.43"	-3.33"
	0.60	0.28"	0.49"	0.09"	-4.09"	-3.24"	0.34"	0.72"	0.12"	-4.44"	-3.26"	0.40"	0.94"	0.16"	-4.82"	-3.32"	0.46"	1.12"	0.19"	-5.23"	-3.45"
	0.70	0.18"	0.29"	0.05"	-3.58"	-3.06"	0.23"	0.48"	0.08"	-3.88"	-3.09"	0.28"	0.64"	0.11"	-4.21"	-3.18"	0.33"	0.76"	0.14"	-4.57"	-3.34"
	0.80	0.08"	0.11"	0.02"	-2.73"	-2.52"	0.12"	0.24"	0.04"	-2.96"	-2.56"	0.16"	0.33"	0.06"	-3.21"	-2.67"	0.18"	0.40"	0.07"	-3.48"	-2.83"
0.90	0.01"	-0.01"	0.00"	-1.53"	-1.53"	0.04"	0.06"	0.01"	-1.66"	-1.56"	0.05"	0.09"	0.02"	-1.81"	-1.65"	0.06"	0.11"	0.02"	-1.96"	-1.77"	
PIER 1		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"
SPAN 2	SPLICE #2A or INT	0.06"	0.32"	0.03"	-1.21"	-0.79"	0.07"	0.18"	0.04"	-1.58"	-1.29"	0.05"	0.33"	0.03"	-1.07"	-0.66"	0.05"	0.18"	0.03"	-1.78"	-1.51"
	0.10	0.12"	0.29"	0.06"	-2.04"	-1.57"	0.11"	0.28"	0.06"	-2.15"	-1.70"	0.11"	0.30"	0.06"	-2.28"	-1.82"	0.09"	0.31"	0.05"	-2.47"	-2.02"
	SPLICE #2B or INT	0.14"	0.32"	0.07"	-2.20"	-1.67"	0.21"	0.18"	0.10"	-2.96"	-2.46"	0.12"	0.33"	0.06"	-2.45"	-1.94"	0.18"	0.18"	0.10"	-3.00"	-2.54"
	0.20	0.32"	0.73"	0.15"	-3.63"	-2.43"	0.31"	0.75"	0.15"	-3.83"	-2.62"	0.29"	0.79"	0.15"	-4.05"	-2.82"	0.27"	0.86"	0.15"	-4.40"	-3.13"
	0.30	0.54"	1.22"	0.24"	-4.76"	-2.76"	0.52"	1.27"	0.24"	-5.02"	-2.99"	0.50"	1.35"	0.24"	-5.31"	-3.22"	0.48"	1.47"	0.25"	-5.80"	-3.59"
	0.40	0.74"	1.65"	0.32"	-5.44"	-2.73"	0.71"	1.71"	0.32"	-5.74"	-3.00"	0.68"	1.83"	0.33"	-6.07"	-3.23"	0.67"	1.99"	0.34"	-6.66"	-3.66"
	0.50	0.87"	1.91"	0.37"	-5.67"	-2.51"	0.82"	1.99"	0.37"	-5.98"	-2.80"	0.79"	2.12"	0.38"	-6.32"	-3.03"	0.78"	2.31"	0.39"	-6.98"	-3.50"
	SPLICE #3 or INT	0.88"	1.89"	0.38"	-5.56"	-2.41"	0.83"	2.03"	0.37"	-5.92"	-2.68"	0.81"	2.18"	0.39"	-6.26"	-2.88"	0.78"	2.31"	0.39"	-6.98"	-3.50"
	0.60	0.90"	1.97"	0.38"	-5.44"	-2.20"	0.84"	2.04"	0.38"	-5.74"	-2.49"	0.81"	2.17"	0.38"	-6.07"	-2.71"	0.81"	2.35"	0.40"	-6.77"	-3.21"
	SPLICE #3 or INT	0.87"	1.89"	0.37"	-5.11"	-1.99"	0.84"	2.03"	0.37"	-5.72"	-2.48"	0.77"	2.18"	0.36"	-5.74"	-2.43"	0.77"	2.31"	0.38"	-6.42"	-2.96"
	0.70	0.82"	1.78"	0.34"	-4.76"	-1.83"	0.75"	1.84"	0.34"	-5.19"	-2.26"	0.73"	1.96"	0.34"	-5.31"	-2.29"	0.73"	2.10"	0.36"	-6.02"	-2.83"
	0.80	0.62"	1.35"	0.26"	-3.63"	-1.40"	0.57"	1.39"	0.25"	-3.83"	-1.61"	0.55"	1.48"	0.26"	-4.05"	-1.76"	0.56"	1.58"	0.27"	-4.74"	-2.33"
0.90	0.34"	0.73"	0.14"	-2.04"	-0.83"	0.31"	0.76"	0.14"	-2.15"	-0.95"	0.30"	0.81"	0.14"	-2.28"	-1.03"	0.30"	0.85"	0.15"	-2.92"	-1.62"	
FWD ABUT		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"

NOTES

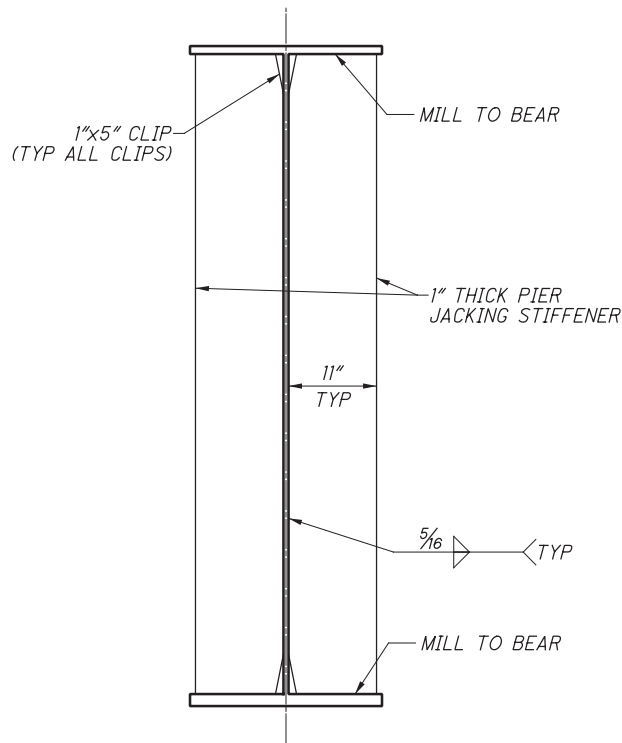
- CAMBER IS MEASURED ALONG THE BOTTOM OF THE GIRDER WEB.
- THE TOTAL ANTICIPATED DEAD LOAD DEFLECTION IS LESS THAN THE REQUIRED DOWNWARD CAMBER. THE REQUIRED SHOP CAMBER IS THE ADDITIONAL DOWNWARD CAMBER, AFTER TOTAL DEAD LOAD DEFLECTION, THAT IS REQUIRED TO ALLOW THE GIRDER PROFILE TO MATCH THE TOP OF DECK PROFILE ABOVE IT.
- GIRDERS MAY BE HEAT CURVED PER CMS 513.15. IF HEAT CURVING IS USED, THE FABRICATOR SHALL ACCOUNT FOR EXPECTED LOSS OF CAMBER PER THE "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS", CURRENT EDITION. CAMBER ADDED TO ACCOUNT FOR EXPECTED LOSS OF CAMBER DUE TO HEAT CURVING SHALL BE ADDED TO THE SCREED AND TOP OF HAUNCH TABLES.



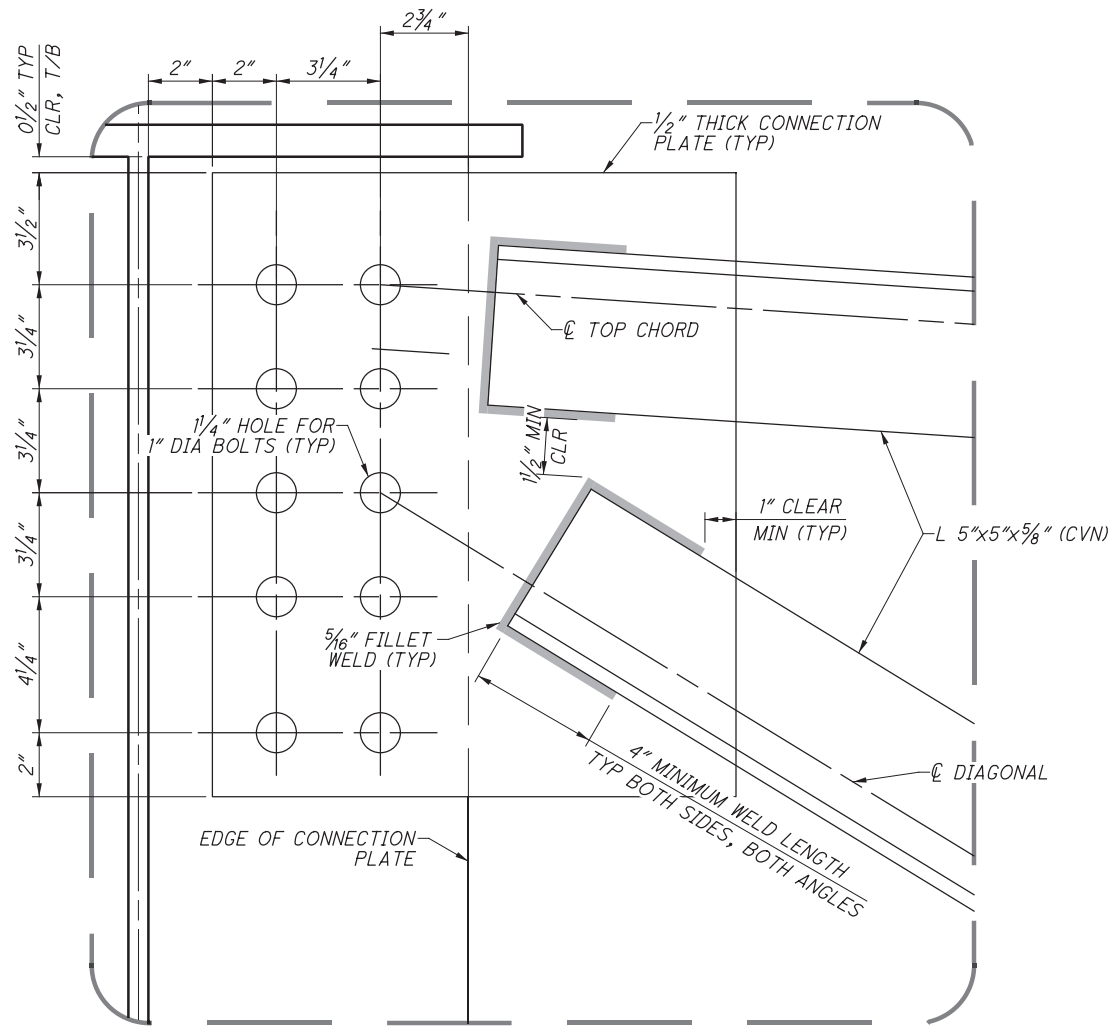
INTERMEDIATE & PIER CROSSFRAME
BAY 2 SHOWN, OTHER BAYS SIMILAR



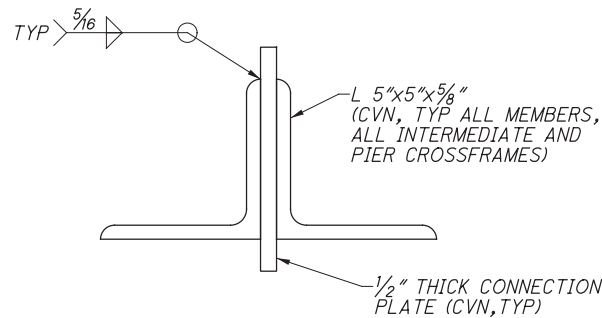
ABUTMENT BEARING STIFFENER



PIER JACKING STIFFENER



DETAIL 1
TOP PLATE SHOWN,
BOTTOM PLATE SIMILAR

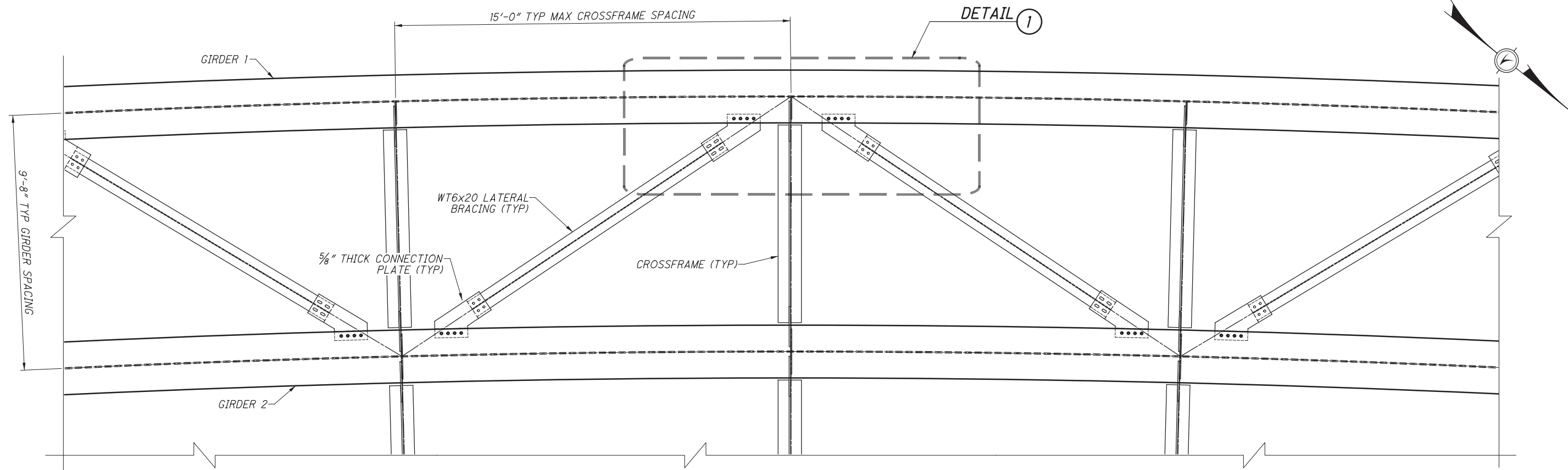


SECTION A

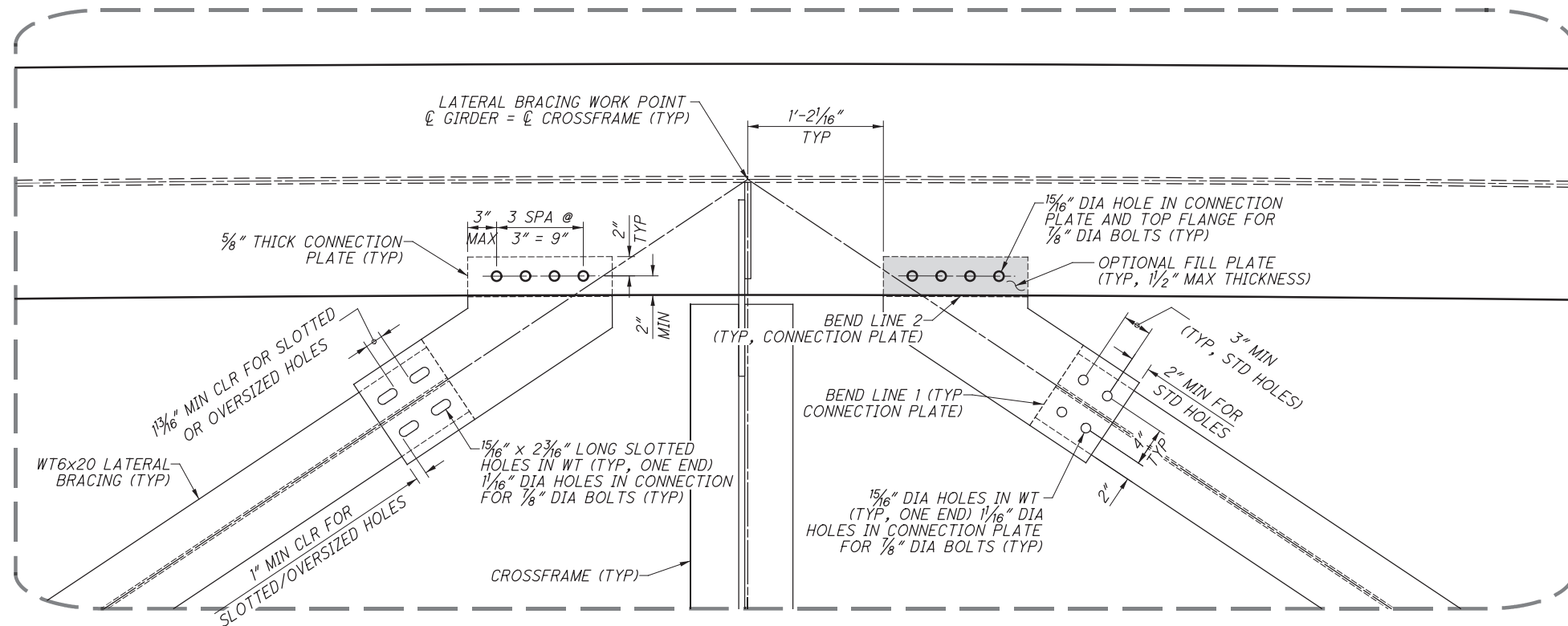
NOTES:

1. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER ASTM F3125, GRADE A325 BOLTS.
3. PIER BEARING STIFFENER WIDTH IS MEASURED ALONG THE C PIER BEARINGS.

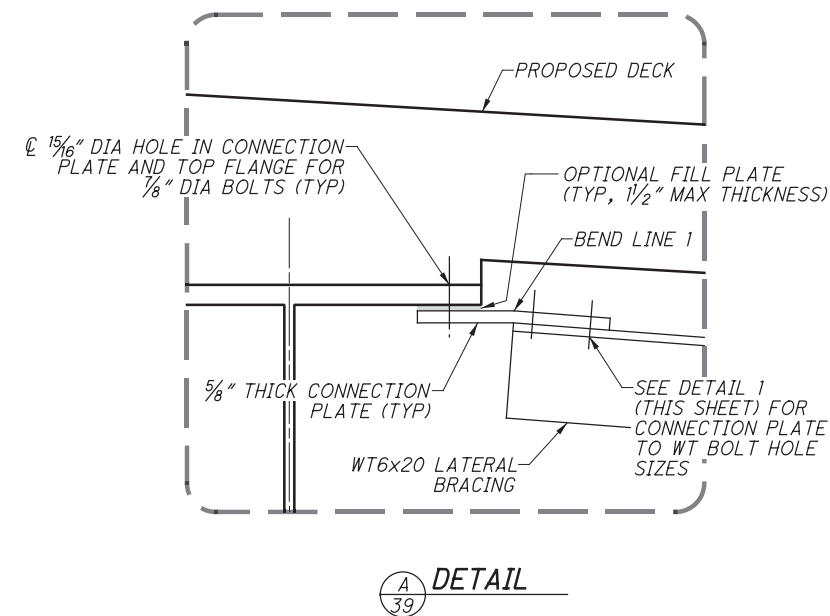
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PENTABLE: 90973-0DOTV8ISS3_Pen.tbl
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TOP FLANGE LATERAL BRACING PLAN
BAY 1

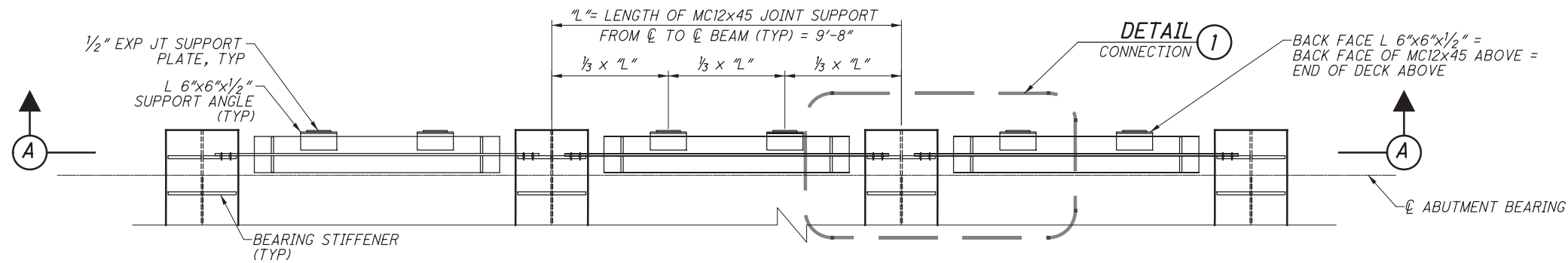


1 DETAIL

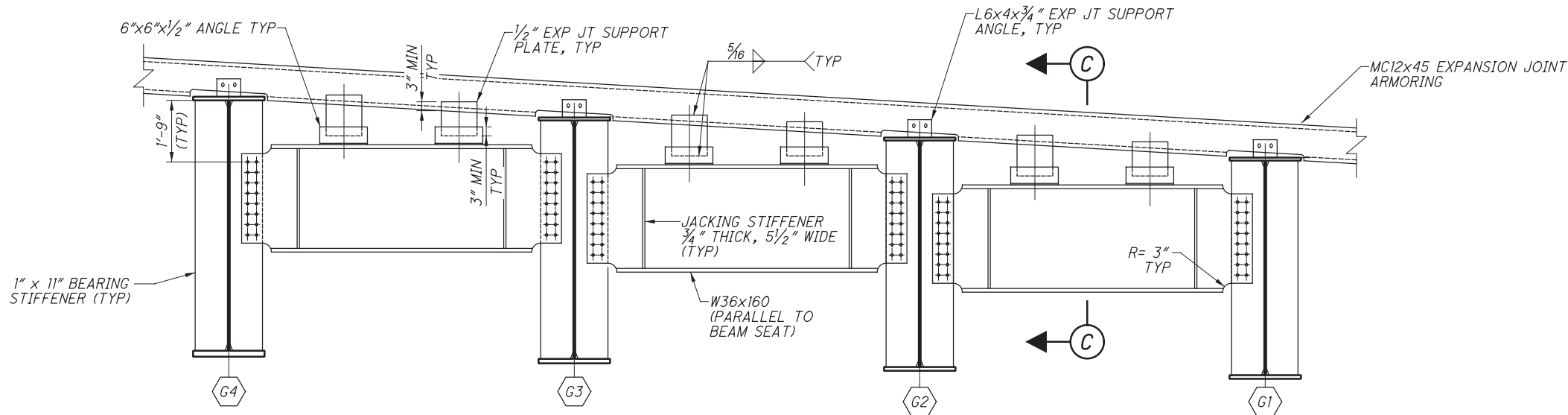


A 39 DETAIL

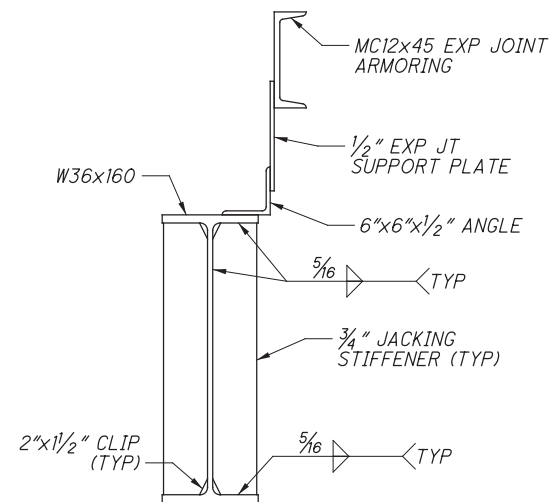
NOTES
1. HIGH STRENGTH BOLTS SHALL BE 7/8" DIA ASTM F3125, GRADE A325.



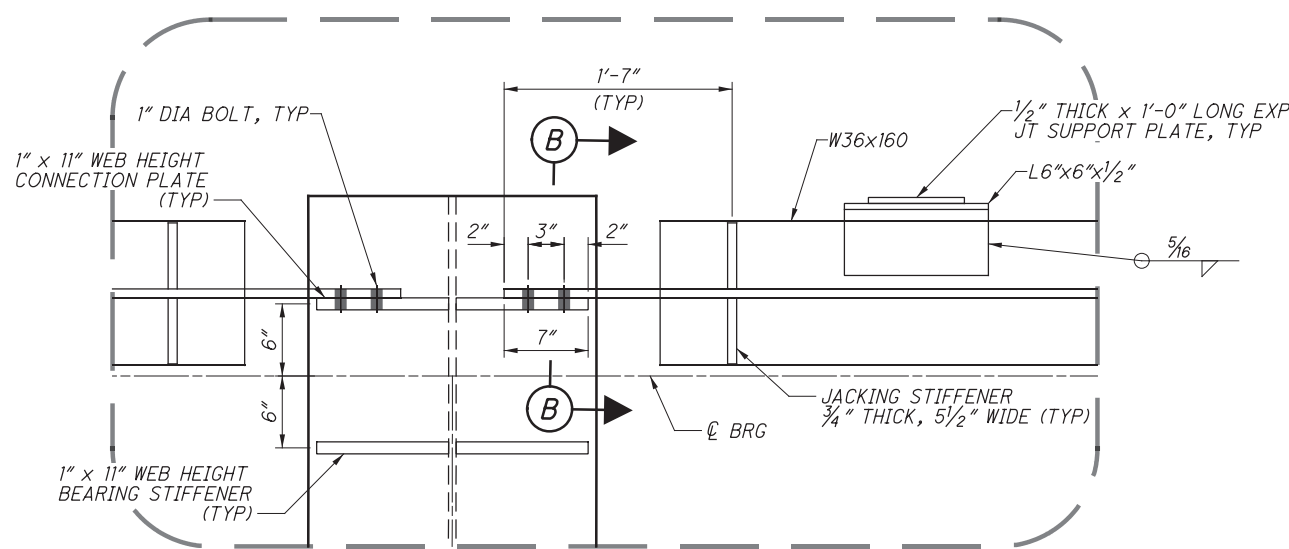
END DIAPHRAGM PLAN



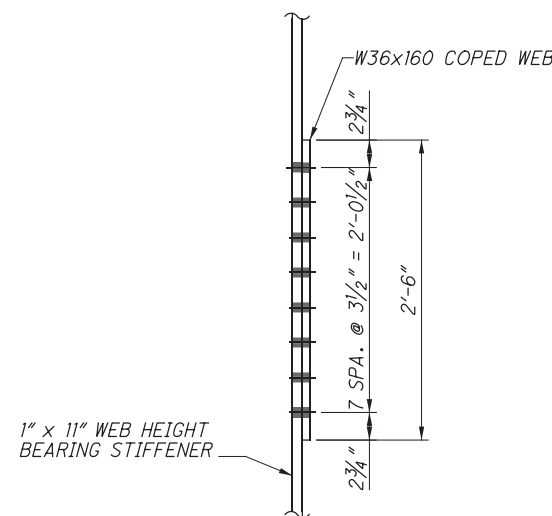
A ELEVATION PARALLEL TO CL ABUTMENT
SHOWN AT FACE OF CONNECTION PLATES



C SECTION



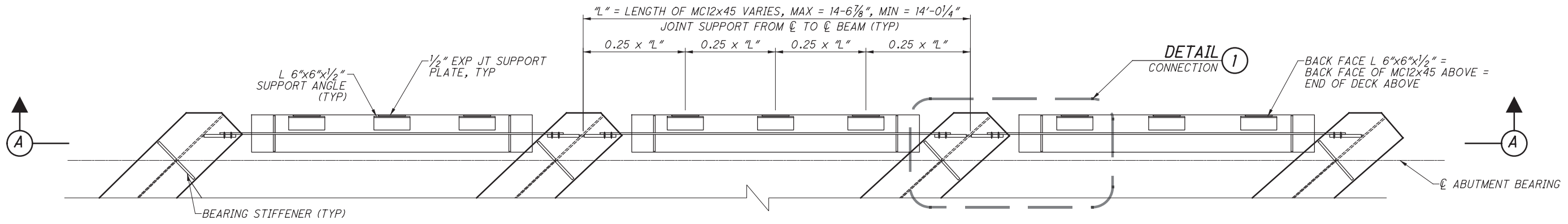
1 DETAIL CONNECTION



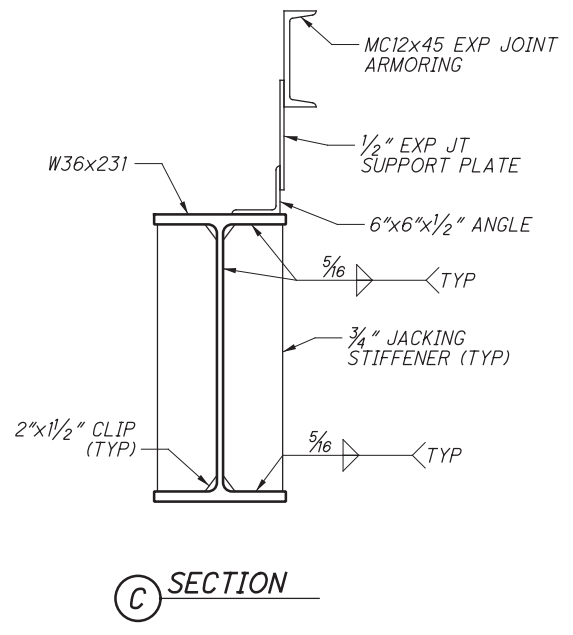
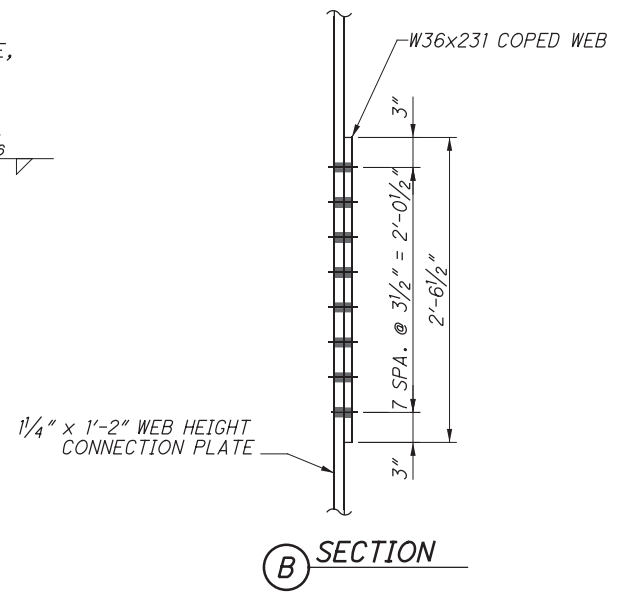
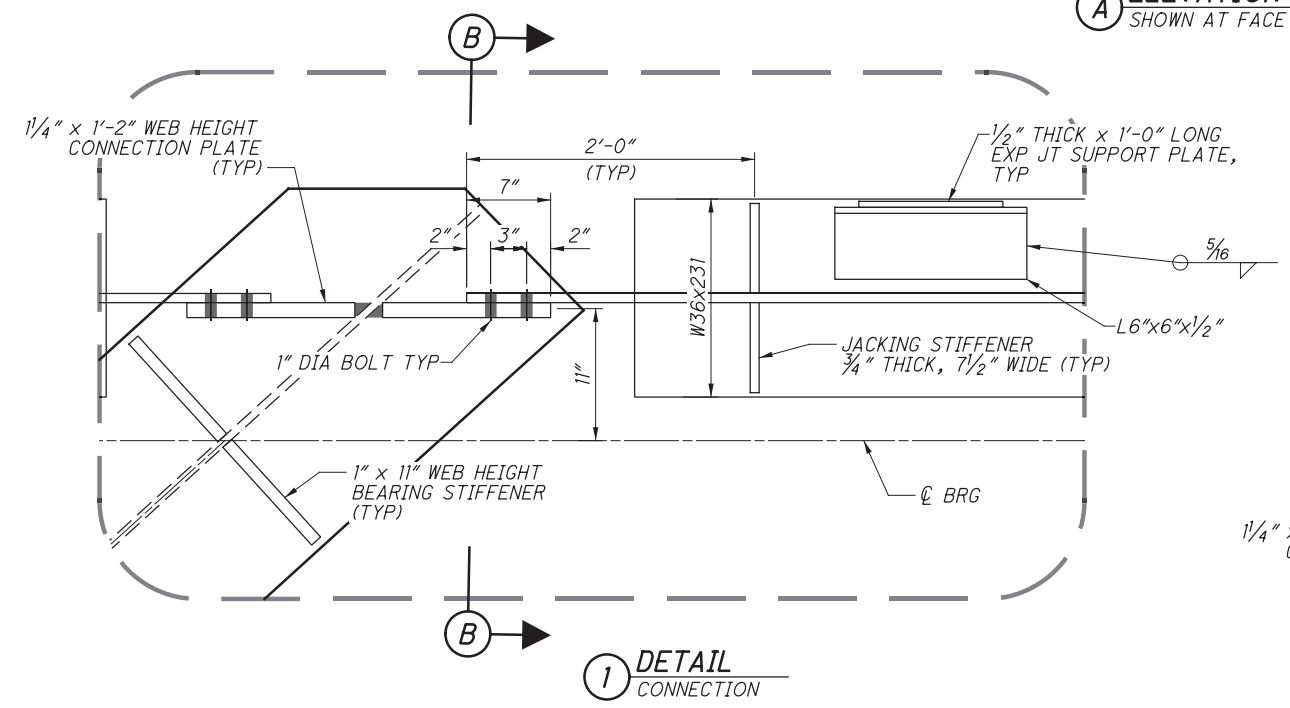
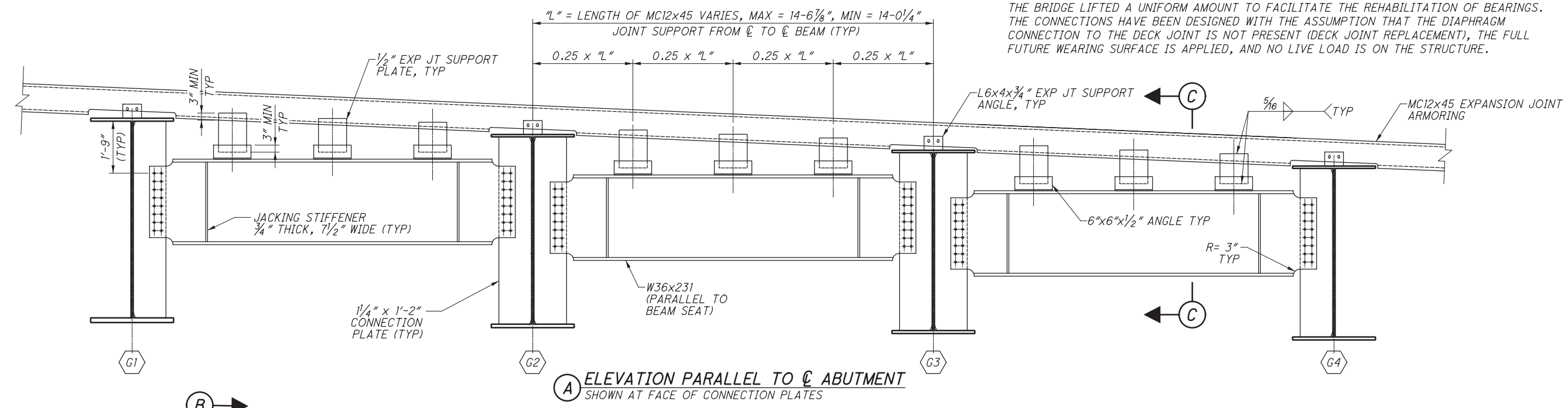
B SECTION

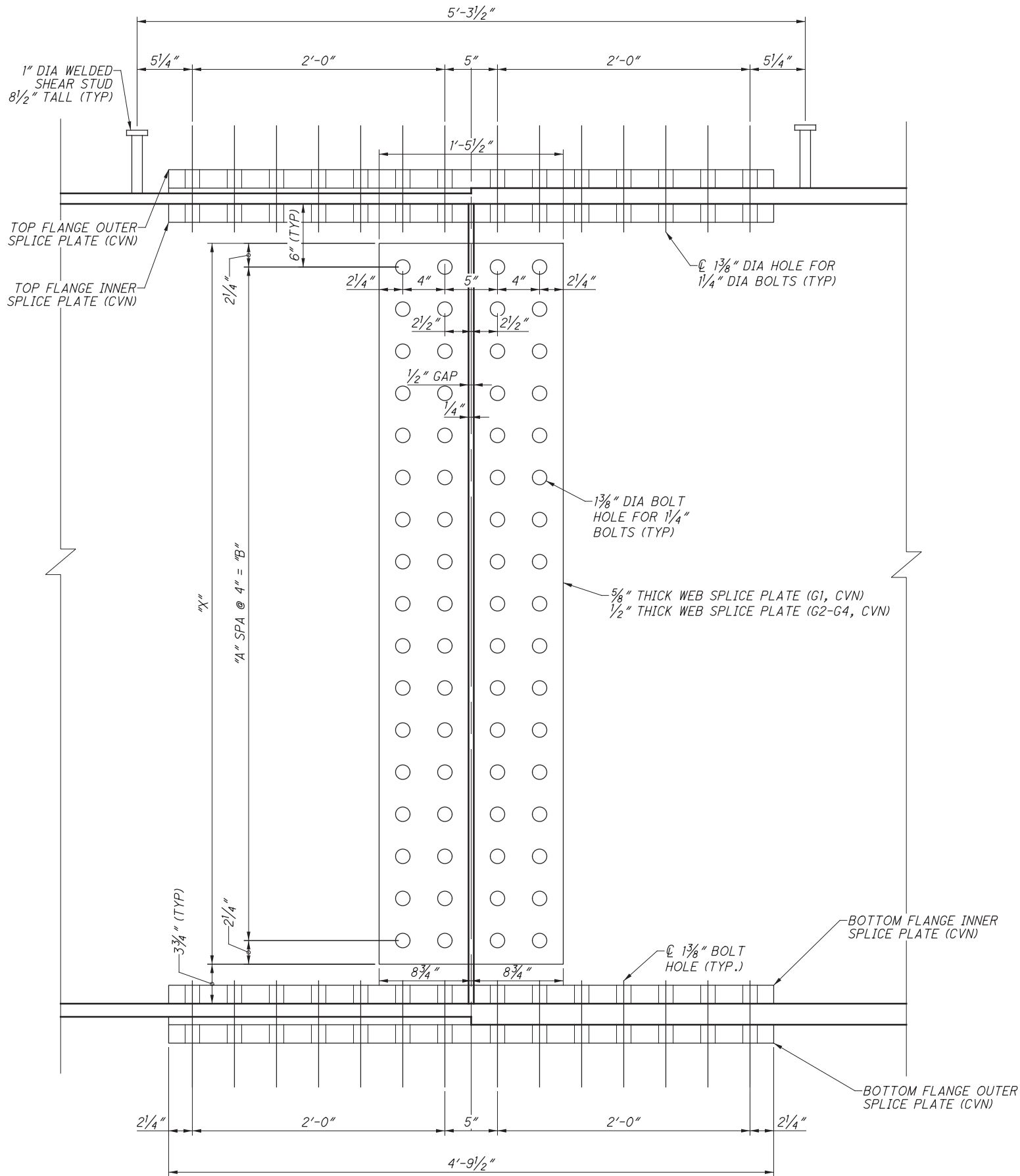
NOTES

1. SEE SHEET 46/52 AND SCD EXJ-4-87 FOR EXPANSION JOINT DETAILS NOT SHOWN. EXPANSION JOINT SUPPORT PLATES, ANGLES, AND MC12x45 SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.
2. BOLTS SHALL BE HIGH STRENGTH, ASTM F3125, GRADE A325.
3. IT IS ASSUMED THAT A JACK WILL BE PLACED UNDER EACH DIAPHRAGM JACKING STIFFENER AND THE BRIDGE LIFTED A UNIFORM AMOUNT TO FACILITATE THE REHABILITATION OF BEARINGS. THE CONNECTIONS HAVE BEEN DESIGNED WITH THE ASSUMPTION THAT THE DIAPHRAGM CONNECTION TO THE DECK JOINT IS NOT PRESENT (DECK JOINT REPLACEMENT), THE FULL FUTURE WEARING SURFACE IS APPLIED, AND NO LIVE LOAD IS ON THE STRUCTURE.

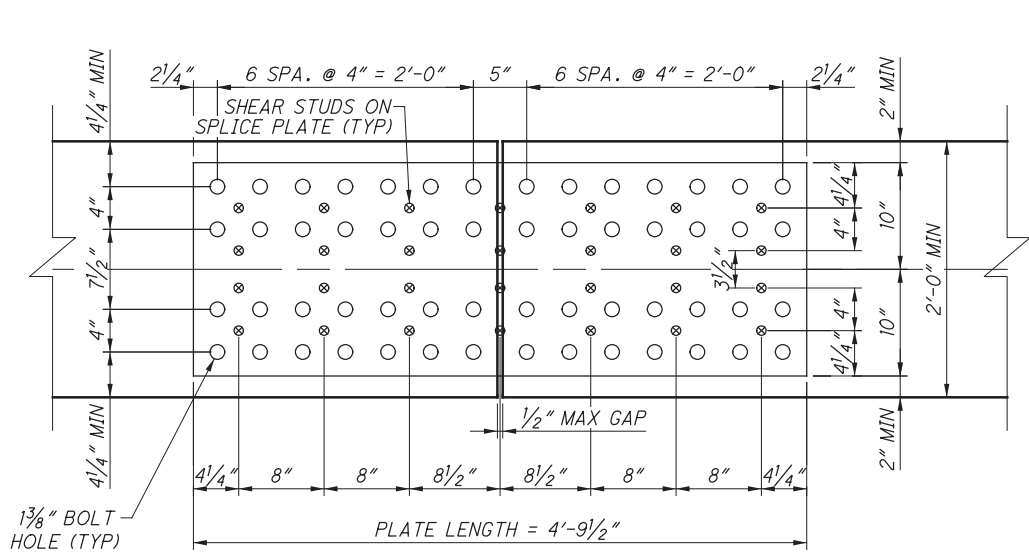


- NOTES**
1. SEE SHEET 46/52 AND SCD EXJ-4-87 FOR EXPANSION JOINT DETAILS NOT SHOWN. EXPANSION JOINT SUPPORT PLATES, ANGLES, AND MC12x45 SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.
 2. BOLTS SHALL BE HIGH STRENGTH, ASTM F3125, GRADE A325.
 3. IT IS ASSUMED THAT A JACK WILL BE PLACED UNDER EACH DIAPHRAGM JACKING STIFFENER AND THE BRIDGE LIFTED A UNIFORM AMOUNT TO FACILITATE THE REHABILITATION OF BEARINGS. THE CONNECTIONS HAVE BEEN DESIGNED WITH THE ASSUMPTION THAT THE DIAPHRAGM CONNECTION TO THE DECK JOINT IS NOT PRESENT (DECK JOINT REPLACEMENT), THE FULL FUTURE WEARING SURFACE IS APPLIED, AND NO LIVE LOAD IS ON THE STRUCTURE.

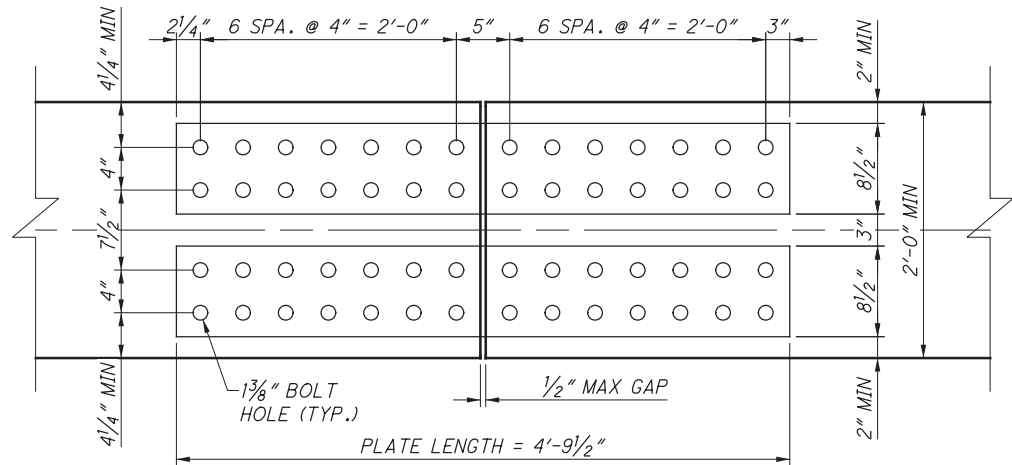




TYPICAL SPLICE ELEVATION



OUTER SPLICE PLATE
TOP FLANGE SHOWN, BOTTOM SIMILAR



INNER SPLICE PLATE

FLANGE SPLICE PLATE THICKNESS				
	PLATE THICKNESS	SPLICE NUMBER		
		1	2	3
GIRDER 1	TOP FLANGE	1"	1 1/2"	1 1/2"
	BOT FLANGE	1 3/4"	1 3/4"	1 3/4"
GIRDER 2	TOP FLANGE	1"	1 1/4"	1"
	BOT FLANGE	1 1/4"	1 1/4"	1 1/4"
GIRDER 3	TOP FLANGE	1"	1 1/4"	1"
	BOT FLANGE	1 1/4"	1 1/4"	1 1/4"
GIRDER 4	TOP FLANGE	1"	1 1/4"	1"
	BOT FLANGE	1 1/4"	1 1/4"	1 1/4"

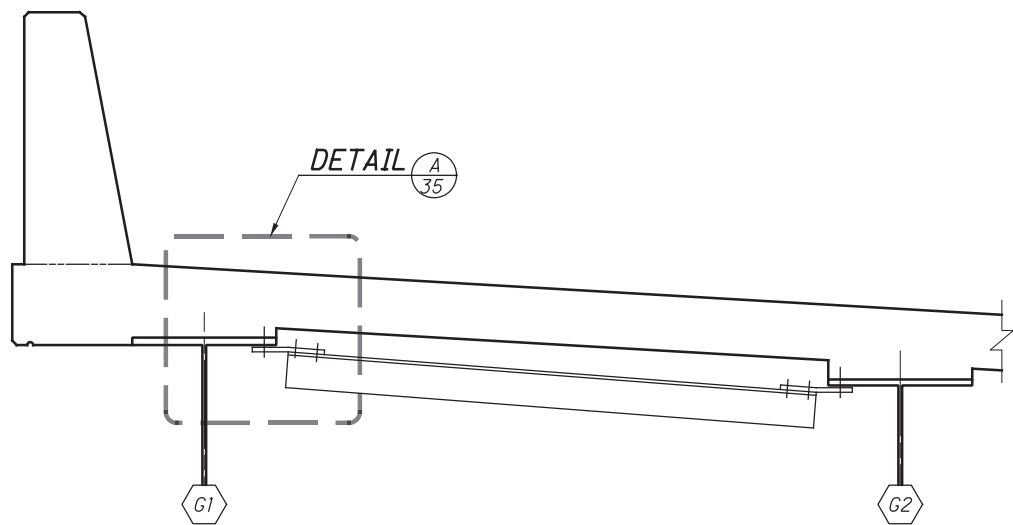
SPLICE FILL PLATE THICKNESS				
	PLATE THICKNESS	SPLICE NUMBER		
		1	2	3
GIRDER 1	TOP FLANGE	3/4"	1/4"	N/A
	BOT FLANGE	1/2"	1/2"	1/4"
GIRDER 2	TOP FLANGE	3/4"	1/2"	N/A
	BOT FLANGE	1"	1"	N/A
GIRDER 3	TOP FLANGE	1/2"	1/4"	N/A
	BOT FLANGE	3/4"	3/4"	N/A
GIRDER 4	TOP FLANGE	1/2"	1/4"	N/A
	BOT FLANGE	3/4"	3/4"	N/A

WEB SPLICE PLATE				
	SPLICE NUMBER	"X"	"A"	"B"
GIRDER 1	1	6'-4 1/2"	18	6'-0"
	2	6'-4 1/2"	18	6'-0"
	3	6'-4 1/2"	18	6'-0"
GIRDER 2	1	6'-0 1/2"	17	5'-8"
	2	6'-0 1/2"	17	5'-8"
	3	6'-0 1/2"	17	5'-8"
GIRDER 3	1	5'-8 1/2"	16	5'-4"
	2	5'-8 1/2"	16	5'-4"
	3	5'-8 1/2"	16	5'-4"
GIRDER 4	1	5'-4 1/2"	15	5'-0"
	2	5'-4 1/2"	15	5'-0"
	3	5'-4 1/2"	15	5'-0"

NOTES:

- CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
- HIGH STRENGTH BOLTS SHALL BE 1/4" DIA ASTM F3125, GRADE A325 BOLTS.

REFERENCE: STEEL DETAILS	
TRANSVERSE SECTION -	39/52
FRAMING PLAN - 29/52 TO	30/52
BEAM ELEVATION & DIMENSIONS -	32/52
BOLTED FIELD SPLICE DETAILS -	38/52
BEAM CAMBER & BLOCKING -	33/52



TOP FLANGE LATERAL BRACING

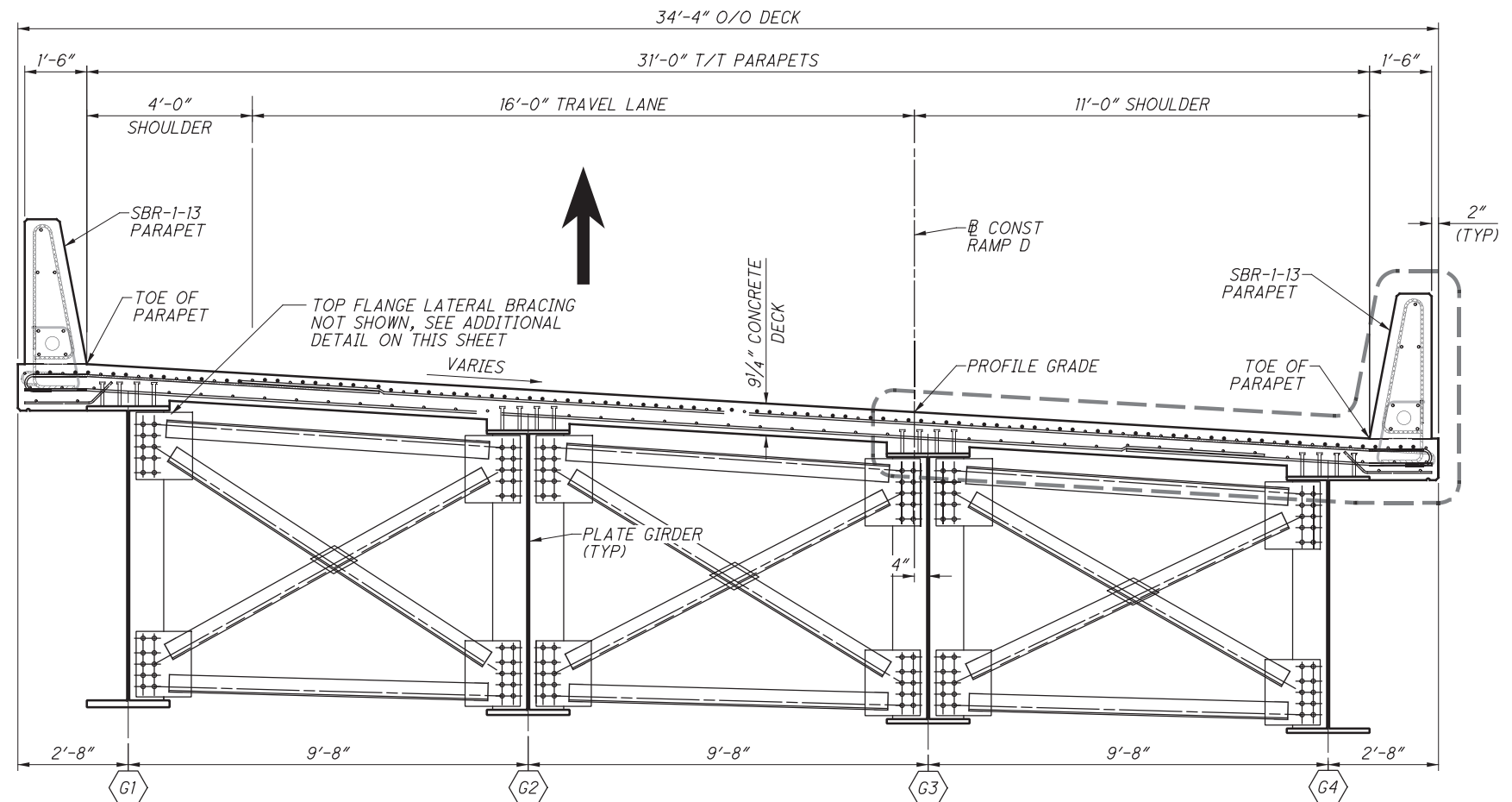
PLACED IN POSITIVE FLEXURE REGIONS OF BAY 1, SEE FRAMING PLAN
(CROSSFRAMES NOT SHOWN FOR CLARITY)

NOTES

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 5" AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

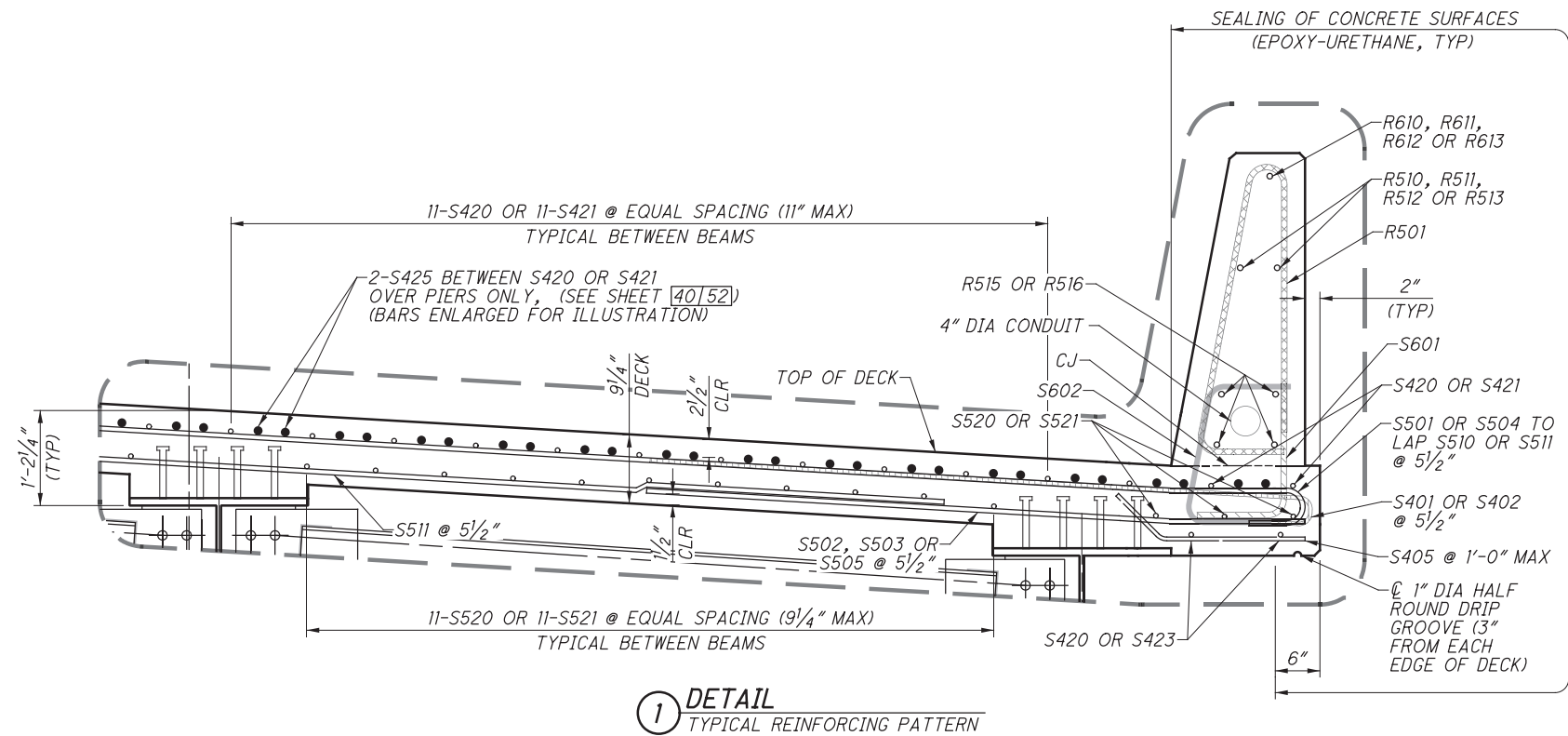
THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.

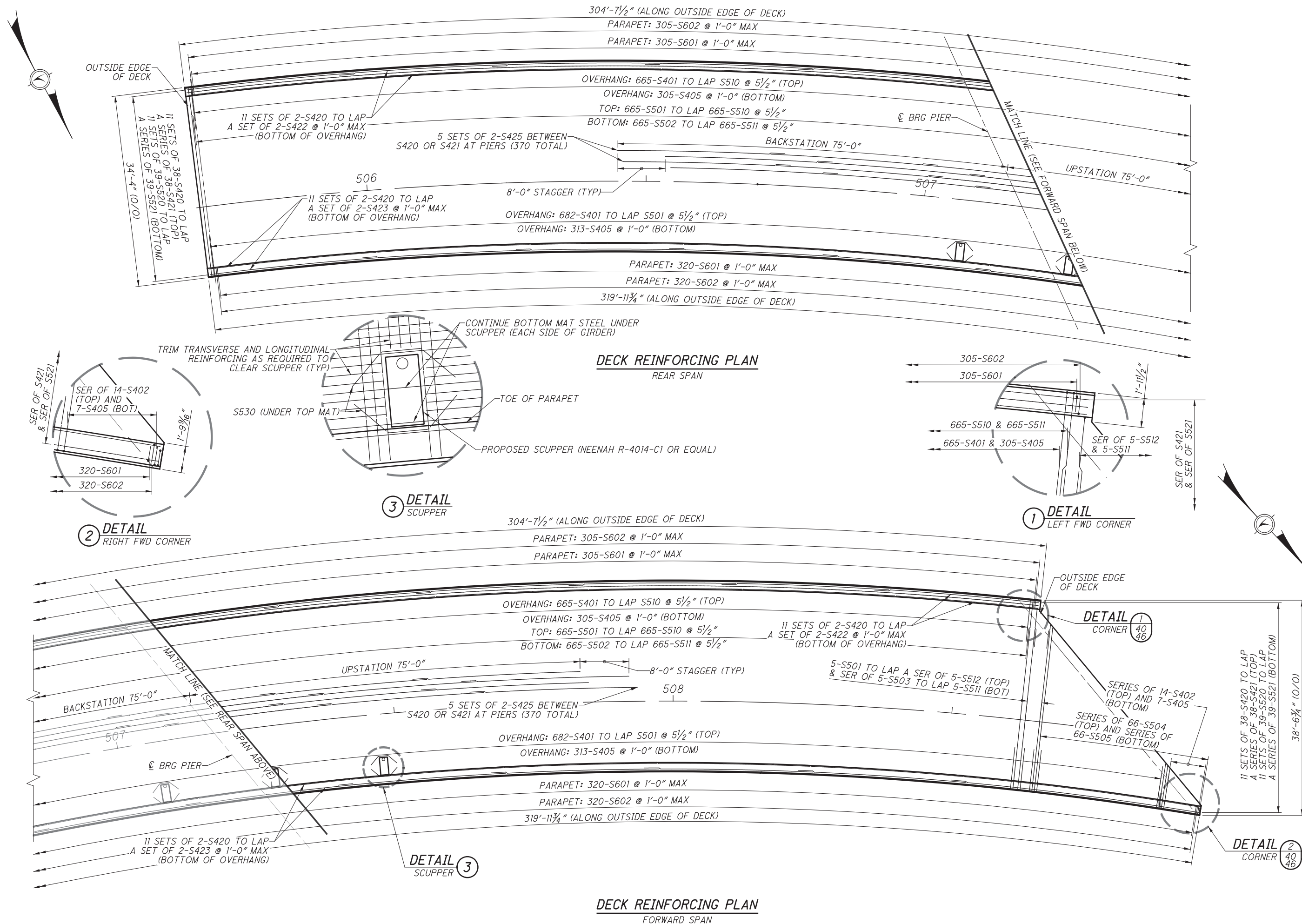
2. THE CONCRETE DECK SHALL BE POURED IN ONE CONTINUOUS POUR FROM REAR ABUTMENT TO FORWARD ABUTMENT.



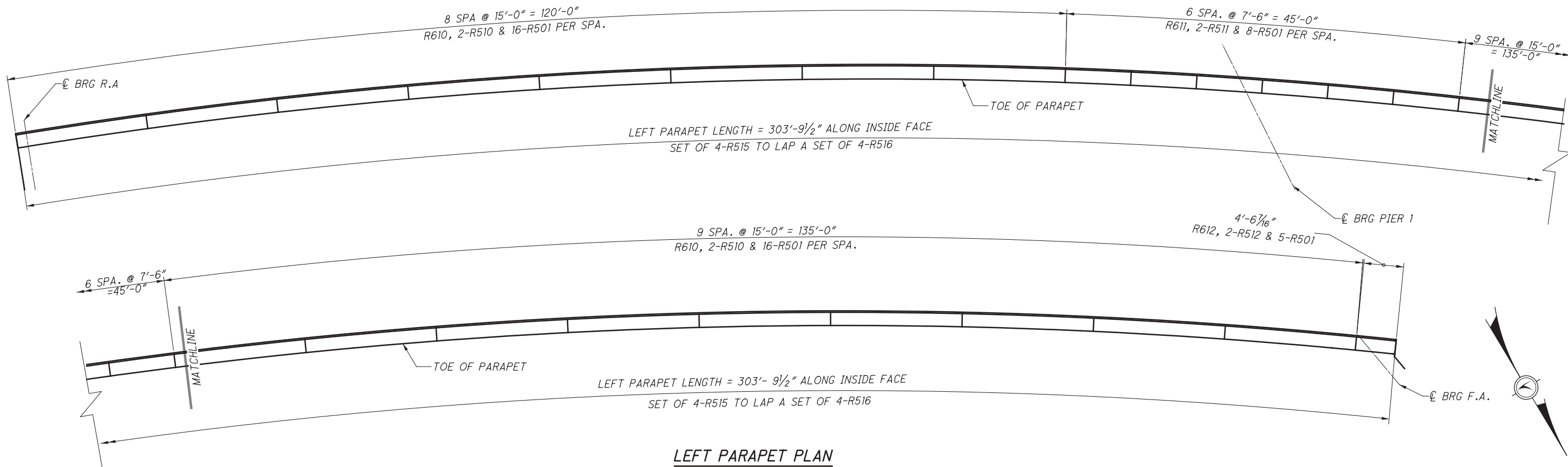
TRANSVERSE SECTION

DIMENSIONS NORMAL TO B CONST RAMP D
(RADIALLY DIMENSIONED)

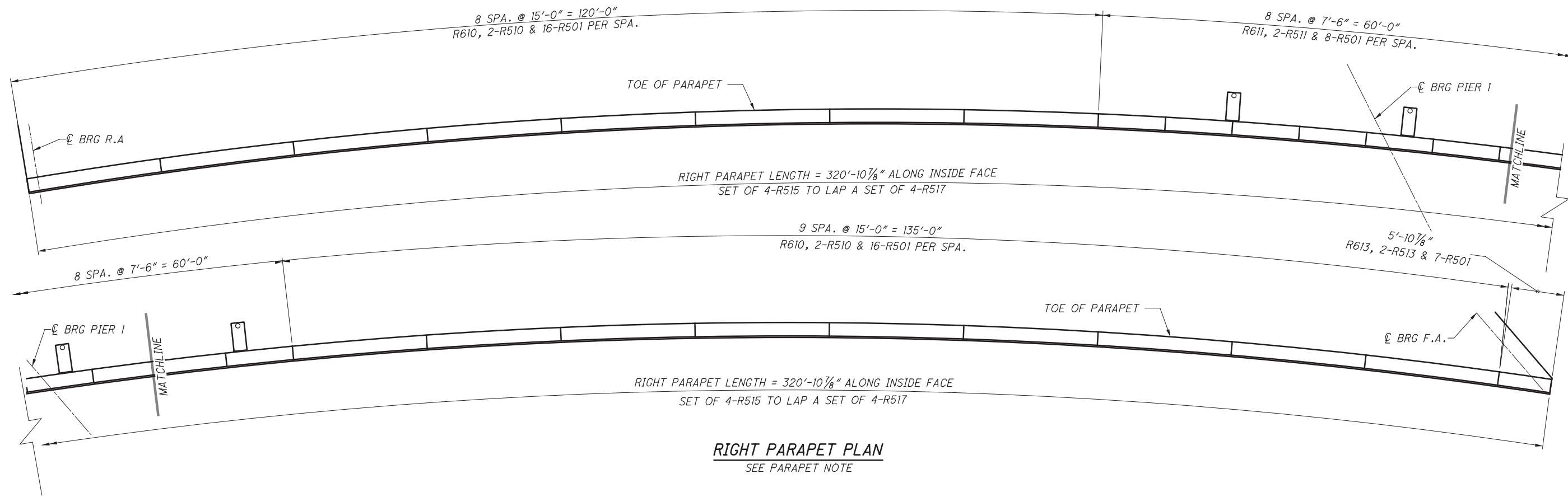




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LEFT PARAPET PLAN
SEE PARAPET NOTE

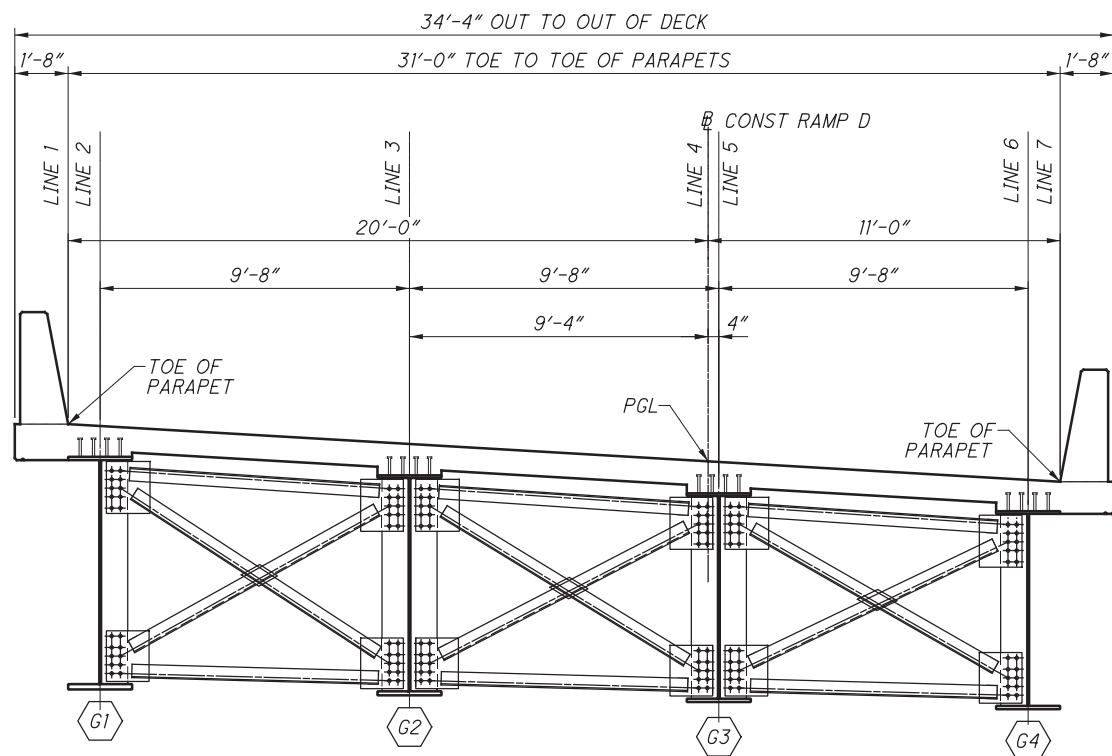
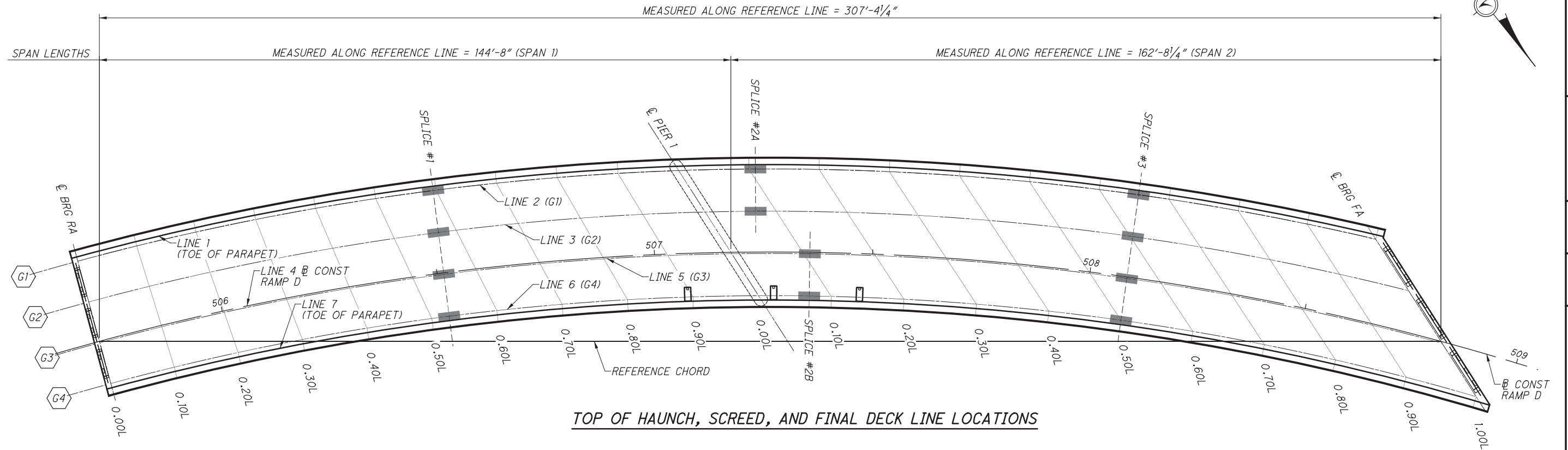


RIGHT PARAPET PLAN
SEE PARAPET NOTE

NOTE

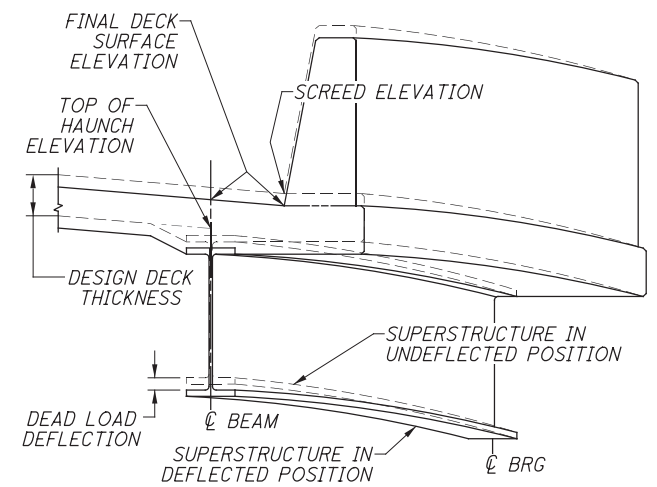
1. PARAPET REINFORCING SHALL BE PLACED TO CLEAR DEFLECTION JOINTS PER ODOT SCD SBR-1-13,
TYPICAL DEFLECTION JOINT DETAILS AND CLEARANCE ARE SHOWN ON SHEET $\begin{pmatrix} 408 \\ 584 \end{pmatrix}$.

SUBMITTAL: SEALED TRACINGS
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SUPERSTRUCTURE SECTION: TOP OF HAUNCH, SCREED, AND FINAL DECK LINE LOCATIONS

DIMENSIONS NORMAL TO CL CONST RAMP D



TOP OF HAUNCH, SCREED, AND FINAL DECK ELEVATION

NOTES

1. TOP OF THE HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS
2. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND ANTICIPATED DEAD LOADS
3. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED

TOP OF HAUNCH ELEVATIONS									
SPAN NO.	LOCATION	GIRDER #1		GIRDER #2		GIRDER #3		GIRDER #4	
		STA.	T/HAUNCH ELEV.	STA.	T/HAUNCH ELEV.	STA.	T/HAUNCH ELEV.	STA.	T/HAUNCH ELEV.
REAR ABUT		505+71.04	1051.73	505+71.04	1051.17	505+71.04	1050.61	505+71.04	1050.05
SPAN 1	0.10 L	505+84.56	1051.45	505+85.12	1050.89	505+85.71	1050.32	505+86.32	1049.76
	0.20 L	505+98.07	1051.19	505+99.20	1050.62	506+00.37	1050.05	506+01.59	1049.49
	0.30 L	506+11.59	1050.94	506+13.28	1050.38	506+15.04	1049.81	506+16.87	1049.24
	0.40 L	506+25.11	1050.72	506+27.36	1050.15	506+29.71	1049.58	506+32.15	1049.00
	0.50 L	506+38.63	1050.51	506+41.45	1049.94	506+44.38	1049.36	506+47.42	1048.79
	SPLICE #1	506+51.50	1050.33	506+51.50	1049.80	506+51.50	1049.26	506+51.50	1048.73
	0.60 L	506+52.14	1050.32	506+55.53	1049.75	506+59.04	1049.17	506+62.70	1048.59
	0.70 L	506+65.66	1050.16	506+69.61	1049.58	506+73.71	1049.00	506+77.98	1048.42
	0.80 L	506+79.18	1050.03	506+83.69	1049.45	506+88.38	1048.86	506+93.25	1048.28
0.90 L	506+92.70	1049.93	506+97.77	1049.35	507+03.05	1048.77	507+08.53	1048.19	
PIER 1		507+06.21	1049.87	507+11.85	1049.29	507+17.71	1048.72	507+23.81	1048.15
SPAN 2	SPLICE #2A or INT	507+15.00	1049.88	507+23.23	1049.29	507+25.00	1048.74	507+35.62	1048.18
	0.10 L	507+21.81	1049.87	507+27.87	1049.30	507+34.18	1048.75	507+40.76	1048.20
	SPLICE #2B or INT	507+23.23	1049.87	507+35.00	1049.30	507+35.62	1048.75	507+45.00	1048.20
	0.20 L	507+37.40	1049.92	507+43.88	1049.37	507+50.65	1048.83	507+57.71	1048.31
	0.30 L	507+52.99	1050.01	507+59.89	1049.48	507+67.11	1048.97	507+74.66	1048.47
	0.40 L	507+68.58	1050.13	507+75.91	1049.63	507+83.58	1049.14	507+91.61	1048.67
	0.50 L	507+84.17	1050.28	507+91.92	1049.80	508+00.04	1049.33	508+08.55	1048.89
	SPLICE #3 or INT	507+95.00	1050.38	508+00.00	1049.89	508+08.55	1049.44	508+08.55	1048.89
	0.60 L	507+99.76	1050.44	508+07.94	1049.98	508+16.51	1049.55	508+25.51	1049.13
	SPLICE #3 or INT	508+08.55	1050.54	508+08.55	1049.99	508+25.00	1049.67	508+35.00	1049.28
	0.70 L	508+15.35	1050.62	508+23.05	1050.17	508+32.97	1049.77	508+42.46	1049.39
	0.80 L	508+30.94	1050.81	508+39.96	1050.40	508+49.44	1050.02	508+59.41	1049.67
	0.90 L	508+46.53	1051.01	508+55.98	1050.64	508+65.90	1050.29	508+76.36	1049.96
FORWARD ABUT		508+62.12	1051.25	508+71.99	1050.90	508+82.37	1050.58	508+93.31	1050.34

TOP OF HAUNCH ELEVATION TABLE

NOTES

1. TOP OF THE HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

SCREED ELEVATIONS							
SPAN NO.	LOCATION	LEFT TOE		PGL		RIGHT TOE	
		STA.	SCREED ELEV.	STA.	SCREED ELEV.	STA.	SCREED ELEV.
REAR ABUT		505+71.04	1052.56	505+71.04	1051.40	505+71.04	1050.76
SPAN 1	0.10 L	505+84.56	1052.28	505+85.68	1051.11	505+86.32	1050.47
	0.20 L	505+98.07	1052.02	506+00.33	1050.85	506+01.59	1050.20
	0.30 L	506+11.59	1051.77	506+14.98	1050.60	506+16.87	1049.95
	0.40 L	506+25.11	1051.55	506+29.63	1050.37	506+32.15	1049.72
	SPLICE #1	506+51.50	1051.16	506+51.50	1050.05	506+51.50	1049.44
	0.60 L	506+52.14	1051.15	506+58.92	1049.96	506+62.70	1049.30
	0.70 L	506+65.66	1050.99	506+73.57	1049.79	506+77.98	1049.13
	0.80 L	506+79.18	1050.85	506+88.21	1049.66	506+93.25	1049.00
	0.90 L	506+92.70	1050.76	507+02.86	1049.56	507+08.53	1048.90
PIER 1		507+06.21	1050.70	507+17.51	1049.51	507+23.81	1048.87
SPAN 2	SPLICE #2A or INT	507+15.00	1050.71	507+25.00	1049.53	507+25.00	1048.89
	0.10 L	507+21.81	1050.70	507+33.96	1049.54	507+40.76	1048.91
	SPLICE #2B or INT	507+35.00	1050.70	507+35.00	1049.54	507+45.00	1048.91
	0.20 L	507+37.40	1050.75	507+50.41	1049.62	507+57.71	1049.02
	0.30 L	507+52.99	1050.84	507+66.86	1049.76	507+74.66	1049.18
	0.40 L	507+68.58	1050.96	507+83.31	1049.93	507+91.61	1049.38
	0.50 L	507+84.17	1051.11	507+99.76	1050.12	508+08.55	1049.61
	SPLICE #3 or INT	507+95.00	1051.21	508+08.55	1050.13	508+08.55	1049.61
	0.60 L	507+99.76	1051.27	508+16.20	1050.33	508+25.51	1049.85
	SPLICE #3 or INT	508+08.55	1051.37	508+25.00	1050.46	508+35.00	1049.99
	0.70 L	508+15.35	1051.44	508+32.65	1050.56	508+42.46	1050.10
	0.80 L	508+30.94	1051.63	508+49.10	1050.80	508+59.41	1050.38
	0.90 L	508+46.53	1051.84	508+65.55	1051.07	508+76.36	1050.68
FORWARD ABUT		508+61.13	1052.06	508+82.00	1051.37	508+94.48	1051.10

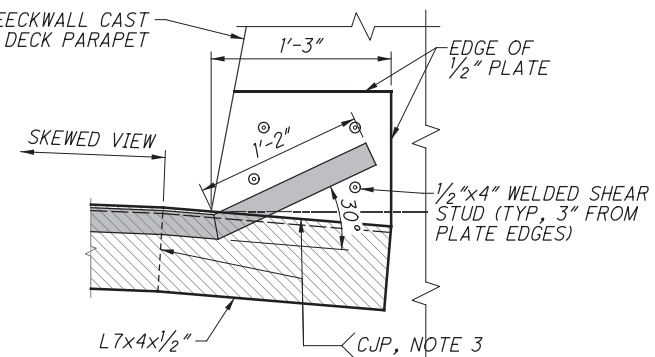
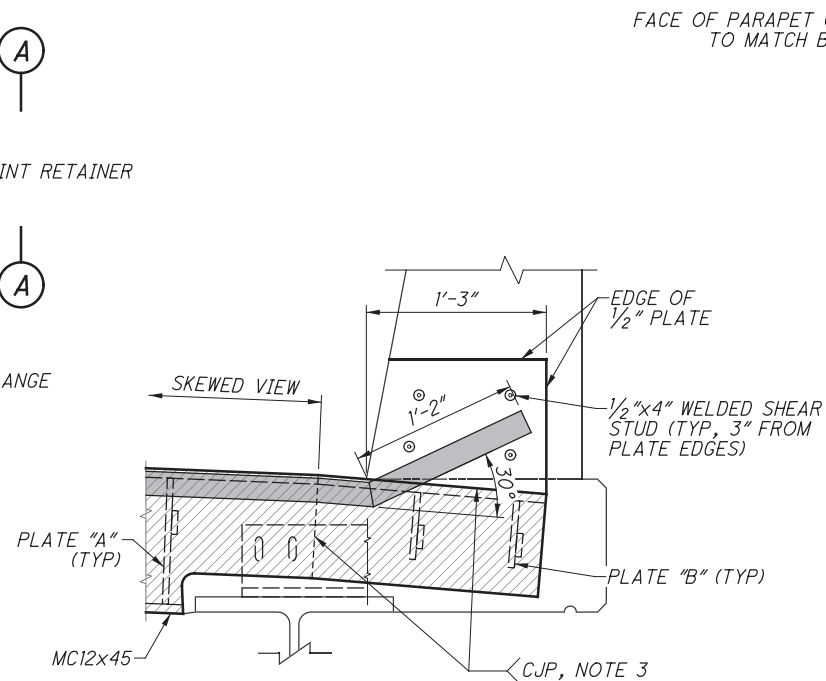
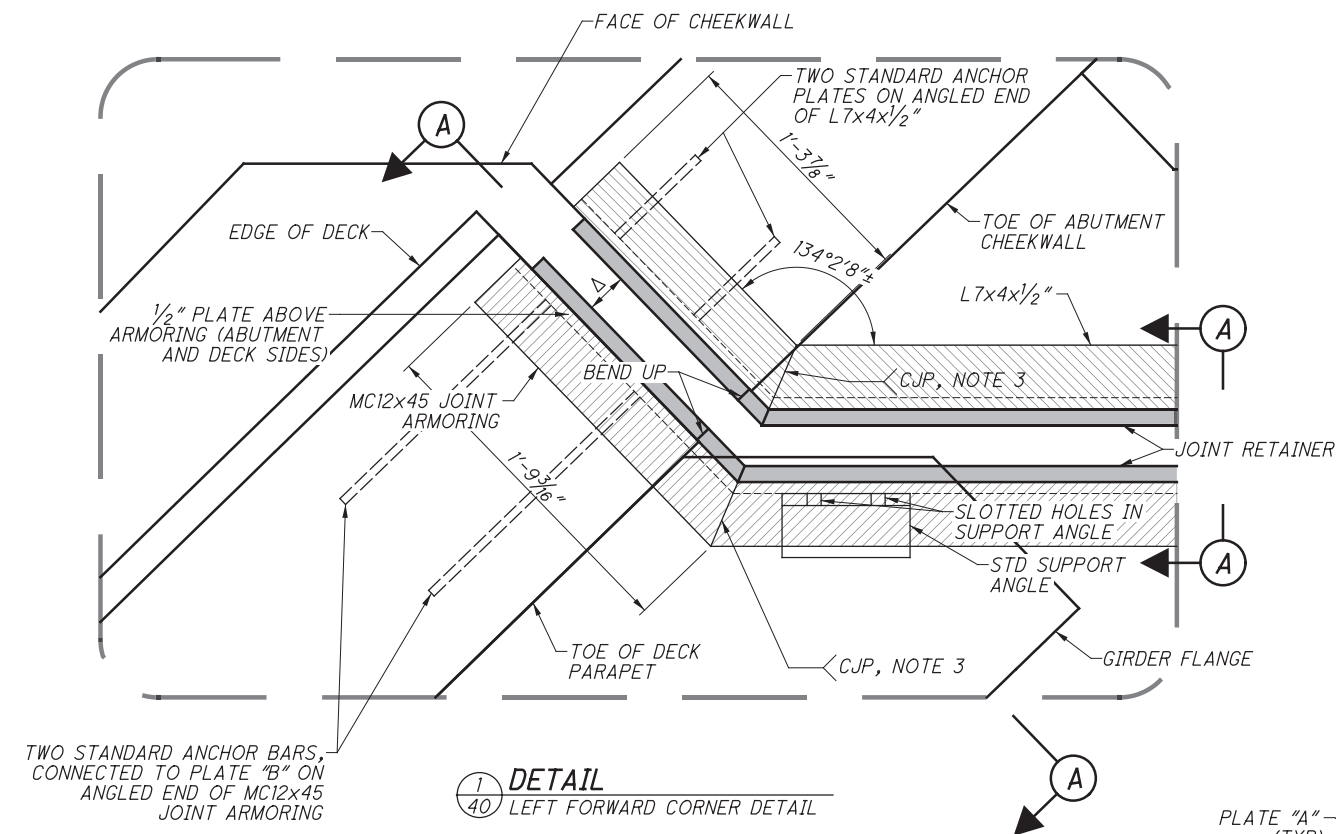
SCREED LINE ELEVATION TABLE

NOTES:
1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED LOADS.

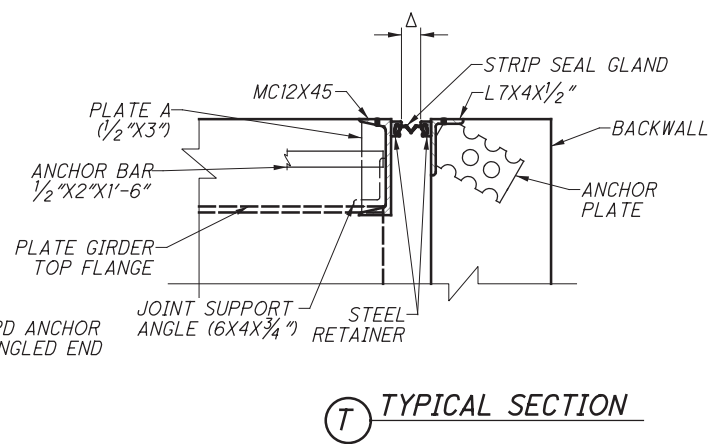
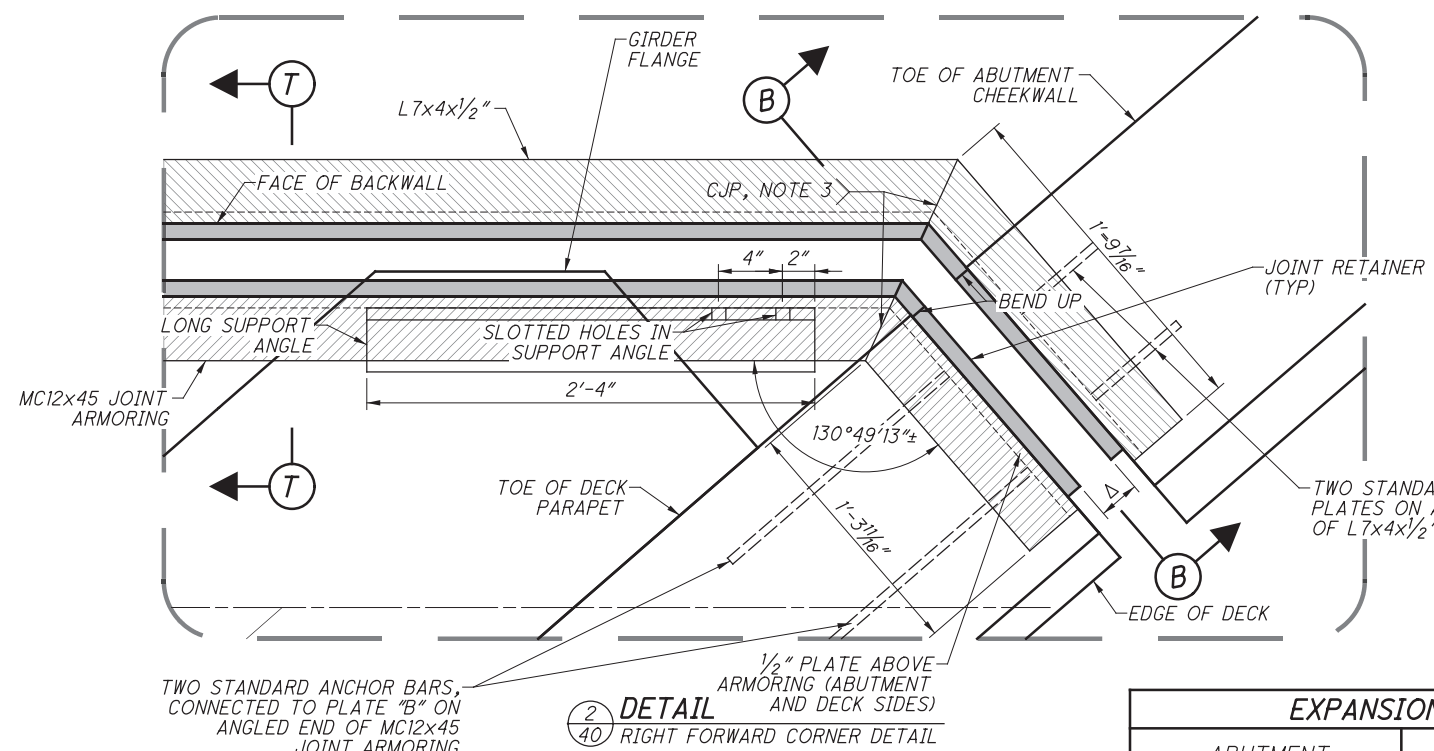
FINAL DECK SURFACE ELEVATIONS															
SPAN NO.	LOCATION	LEFT TOE		GIRDER #1		GIRDER #2		PGL		GIRDER #3		GIRDER #4		RIGHT TOE	
		STA.	DECK ELEV.	STA.	DECK ELEV.	STA.	DECK ELEV.	STA.	DECK ELEV.	STA.	DECK ELEV.	STA.	DECK ELEV.	STA.	DECK ELEV.
REAR ABUT		505+71.04	1052.56	505+71.04	1052.50	505+71.04	1051.94	505+71.04	1051.40	505+71.04	1051.38	505+71.04	1050.82	505+71.04	1050.76
SPAN 1	0.10 L	505+84.56	1052.25	505+84.56	1052.19	505+85.12	1051.62	505+85.68	1051.06	505+85.71	1051.04	505+86.32	1050.47	505+86.32	1050.41
	0.20 L	505+98.07	1051.96	505+98.07	1051.90	505+99.20	1051.32	506+00.33	1050.76	506+00.37	1050.74	506+01.59	1050.15	506+01.59	1050.09
	0.30 L	506+11.59	1051.70	506+11.59	1051.65	506+13.28	1051.06	506+14.98	1050.48	506+15.04	1050.46	506+16.87	1049.87	506+16.87	1049.81
	0.40 L	506+25.11	1051.48	506+25.11	1051.42	506+27.36	1050.82	506+29.63	1050.25	506+29.71	1050.23	506+32.15	1049.63	506+32.15	1049.57
	0.50 L	506+38.63	1051.28	506+38.63	1051.22	506+41.45	1050.62	506+44.27	1050.04	506+44.38	1050.02	506+47.42	1049.42	506+47.42	1049.36
	SPLICE #1	506+51.50	1051.11	506+51.50	1051.05	506+51.50	1050.49	506+51.50	1049.95	506+51.50	1049.93	506+51.50	1049.37	506+51.50	1049.31
	0.60 L	506+52.14	1051.10	506+52.14	1051.05	506+55.53	1050.45	506+58.92	1049.87	506+59.04	1049.85	506+62.70	1049.25	506+62.70	1049.19
	0.70 L	506+65.66	1050.96	506+65.66	1050.90	506+69.61	1050.30	506+73.57	1049.73	506+73.71	1049.71	506+77.98	1049.11	506+77.98	1049.06
	0.80 L	506+79.18	1050.84	506+79.18	1050.79	506+83.69	1050.19	506+88.21	1049.62	506+88.38	1049.60	506+93.25	1049.01	506+93.25	1048.96
0.90 L	506+92.70	1050.76	506+92.70	1050.70	506+97.77	1050.11	507+02.86	1049.55	507+03.05	1049.53	507+08.53	1048.95	507+08.53	1048.89	
PIER 1		507+06.21	1050.70	507+06.21	1050.64	507+11.85	1050.06	507+17.51	1049.51	507+17.71	1049.49	507+23.81	1048.93	507+23.81	1048.87
SPAN 2	SPLICE #2A or INT	507+15.00	1050.68	507+15.00	1050.62	507+23.23	1050.05	507+25.00	1049.50	507+25.00	1049.49	507+35.62	1048.93	507+25.00	1048.87
	0.10 L	507+21.81	1050.67	507+21.81	1050.61	507+27.87	1050.05	507+33.96	1049.51	507+34.18	1049.49	507+40.76	1048.94	507+40.76	1048.88
	SPLICE #2B or INT	507+35.00	1050.67	507+23.23	1050.61	507+35.00	1050.05	507+35.00	1049.51	507+35.62	1049.49	507+45.00	1048.95	507+45.00	1048.89
	0.20 L	507+37.40	1050.67	507+37.40	1050.61	507+43.88	1050.07	507+50.41	1049.55	507+50.65	1049.53	507+57.71	1049.00	507+57.71	1048.94
	0.30 L	507+52.99	1050.72	507+52.99	1050.66	507+59.89	1050.13	507+66.86	1049.63	507+67.11	1049.61	507+74.66	1049.10	507+74.66	1049.04
	0.40 L	507+68.58	1050.80	507+68.58	1050.74	507+75.91	1050.23	507+83.31	1049.75	507+83.58	1049.73	507+91.61	1049.25	507+91.61	1049.19
	0.50 L	507+84.17	1050.92	507+84.17	1050.86	507+91.92	1050.37	507+99.76	1049.91	508+00.04	1049.90	508+08.55	1049.44	508+08.55	1049.38
	SPLICE #3 or INT	507+95.00	1051.02	507+95.00	1050.96	508+00.00	1050.46	508+08.55	1049.92	508+08.55	1050.00	508+08.55	1049.44	508+08.55	1049.38
	0.60 L	507+99.76	1051.07	507+99.76	1051.02	508+07.94	1050.55	508+16.20	1050.12	508+16.51	1050.10	508+25.51	1049.67	508+25.51	1049.62
	SPLICE #3 or INT	508+08.55	1051.18	508+08.55	1051.12	508+08.55	1050.56	508+25.00	1050.25	508+25.00	1050.23	508+35.00	1049.83	508+35.00	1049.77
	0.70 L	508+15.35	1051.27	508+15.35	1051.21	508+23.05	1050.76	508+32.65	1050.37	508+32.97	1050.35	508+42.46	1049.96	508+42.46	1049.90
	0.80 L	508+30.94	1051.50	508+30.94	1051.44	508+39.96	1051.03	508+49.10	1050.66	508+49.44	1050.65	508+59.41	1050.28	508+59.41	1050.22
0.90 L	508+46.53	1051.77	508+46.53	1051.71	508+55.98	1051.33	508+65.55	1050.99	508+65.90	1050.98	508+76.36	1050.65	508+76.36	1050.59	
FORWARD ABUT		508+61.13	1052.06	508+62.12	1052.02	508+71.99	1051.67	508+82.00	1051.37	508+82.37	1051.36	508+93.31	1051.11	508+94.48	1051.10

FINAL DECK ELEVATION TABLE

NOTES:
1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTINS HAVE OCCURED.



- LEGEND**
- MC12x45 ARMORING
 - L7x4x1/4" BACKWALL ARMORING
 - RETAINER INSTALLED PER EXJ-4-87

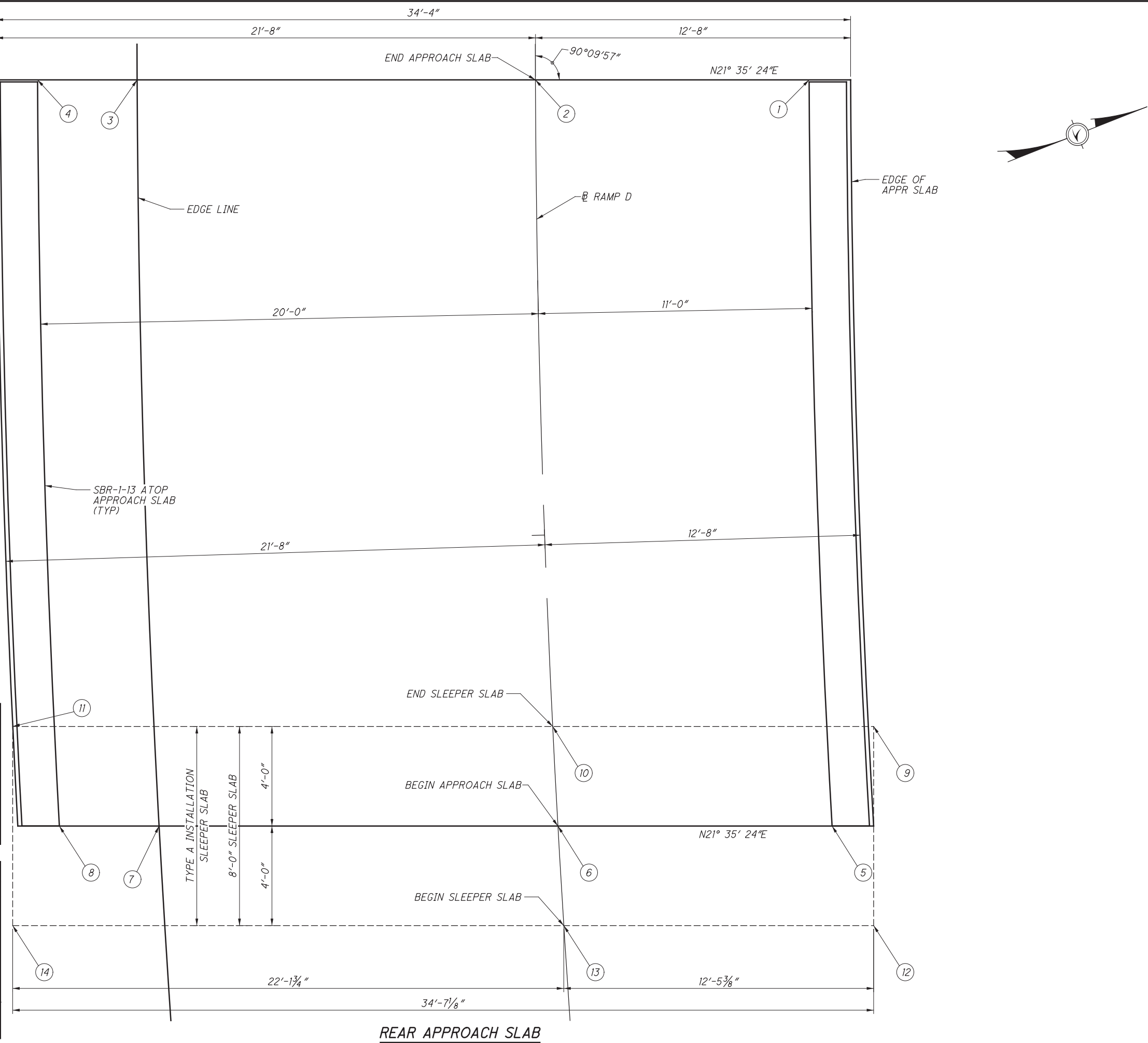


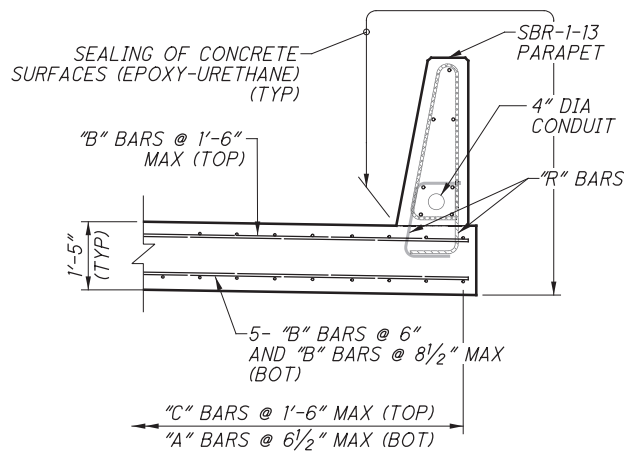
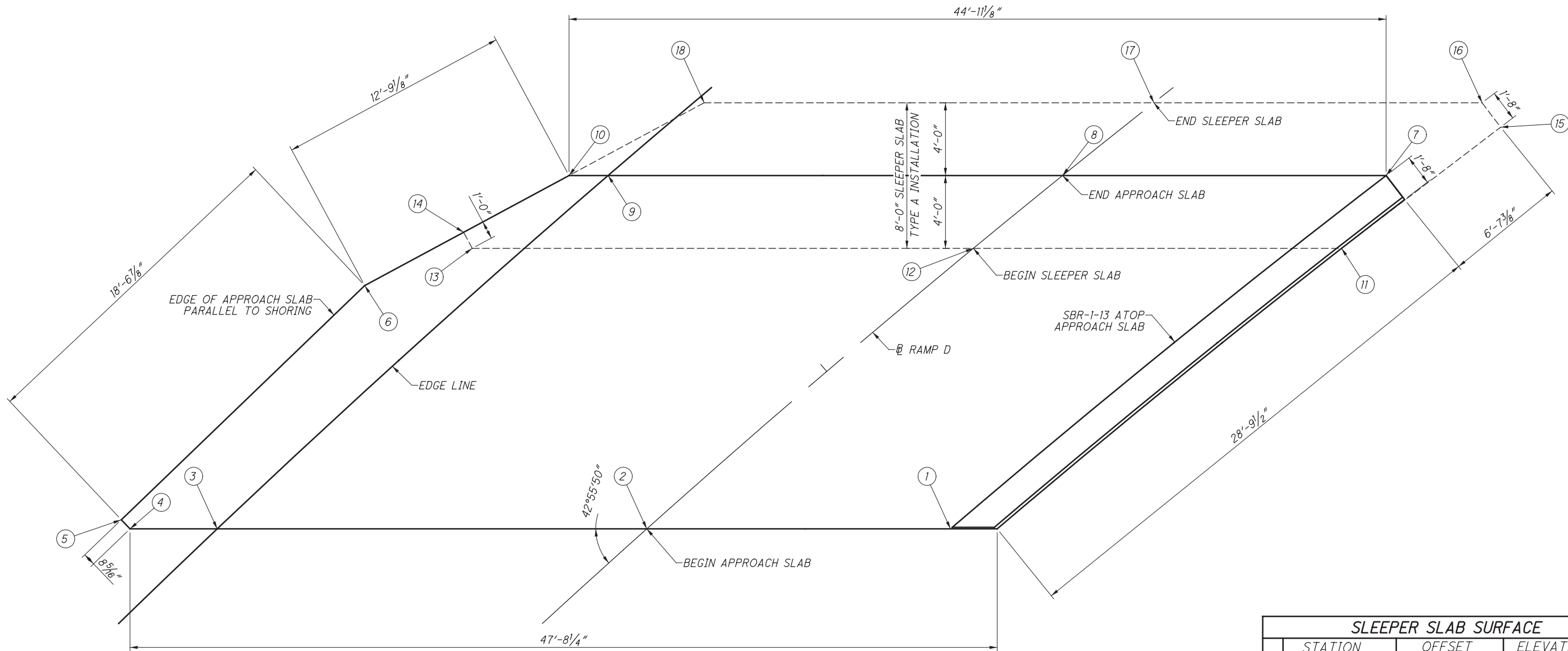
EXPANSION JOINT OPENING "Δ"							
ABUTMENT	TEMPERATURE (°F)						
	30°	40°	50°	60°	70°	80°	90°
RA (3" STRIP SEAL GLAND)	1 5/16"	1 3/16"	1 1/16"	1 9/16"	1 1/2"	1 3/8"	1 1/4"
FA (5" STRIP SEAL GLAND)	2 7/8"	2 3/4"	2 1/16"	2 9/16"	2 1/2"	2 3/8"	2 5/16"

- NOTES:**
- HORIZONTAL ANGLE IN STRIP SEAL SHALL BE SHOP VULCANIZED.
 - ARMORING DETAILS ARE TO BE PROVIDED PER THESE PLANS AND THE EXJ-4-87 DETAILS. ARMORING IS TO BE ANGLED TO MATCH THE ROADWAY SLOPE AT THE FRONT FACE OF BACKWALL.
 - COMPLETE JOINT PENETRATION (CJP) WELDS SHALL BE USED FOR ALL JOINTS IN ARMORING PER STANDARD DRAWING EXJ-4-87. CJP WELDS IN ARMORING SHALL BE GROUND SMOOTH ON ALL SURFACES ACCESSIBLE FROM THE ROADWAY SURFACE, IN ADDITION TO ALL SURFACES IN CONTACT WITH THE SEAL RETAINER.
 - FOR EXPANSION JOINT DETAILS NOT SHOWN (INCLUDING STANDARD PLATE NOMENCLATURE USED HEREIN), SEE STANDARD CONSTRUCTION DRAWING EXJ-4-87 REVISED 01-19-2018.
 - REAR ABUTMENT EXPANSION JOINT DETAILS SHALL BE FABRICATED PER THE EXJ-4-87 STANDARD DETAIL.

SLEEPER SLAB SURFACE			
	STATION	OFFSET	ELEVATION
9	STA 505+41.66	12.88' RT	1050.13
10	STA 505+42.30	-	1050.75
11	STA 505+43.32	21.67' LT	1051.88
12	STA 505+33.50	12.42' RT	1050.29
13	STA 505+34.29	-	1050.98
14	STA 505+35.62	22.10' LT	1049.66

APPROACH SLAB SURFACE			
	STATION	OFFSET	ELEVATION
1	STA 505+68.24	11.00' RT	1050.83
2	STA 505+68.29	-	1051.47
3	STA 505+68.36	16.00' LT	1052.40
4	STA 505+68.38	20.00' LT	1052.63
5	STA 505+37.67	11.00' RT	1051.66
6	STA 505+38.29	-	1052.31
7	STA 505+39.17	16.00' LT	1053.18
8	STA 505+39.38	20.00' LT	1053.41





APPROACH SLAB REINFORCING
REAR APP SLAB SHOWN, FORWARD SIMILAR
LOOKING UPSTATION

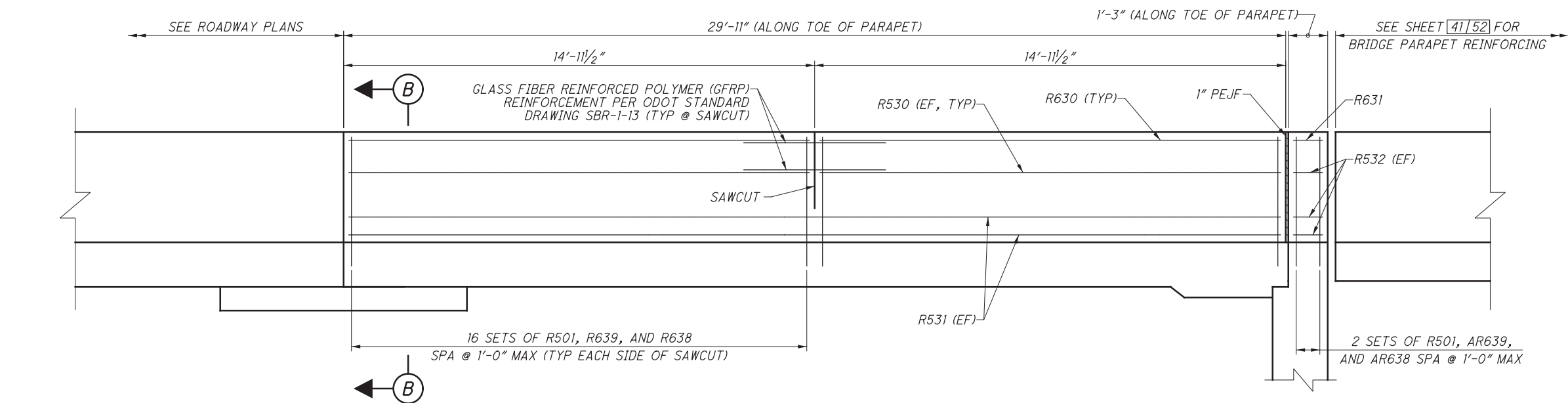
NOTES:

1. PARAPET "R" REINFORCING SHOWN ARE INCLUDED WITH THE PARAPET REINFORCING TABLE, BUT IS PLACED WITH THE APPROACH SLAB CONCRETE.
2. FOR PARAPET REINFORCING DETAILS, SEE SHEET 49/52.

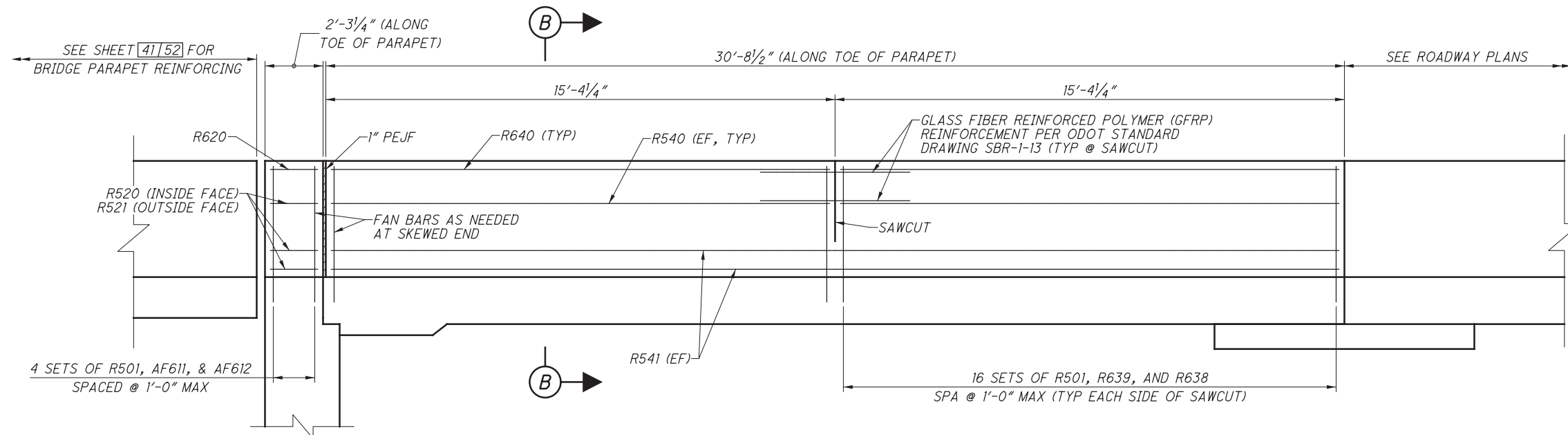
SLEEPER SLAB SURFACE			
	STATION	OFFSET	ELEVATION
11	STA 509+26.50	12.67' RT	1050.81
12	STA 509+10.53	-	1050.74
13	STA 508+89.89	17.90' LT	1051.12
14	STA 508+90.11	18.87' LT	1051.18
15	STA 509+37.73	12.69' RT	1051.16
16	STA 509+37.73	11.00' RT	1051.22
17	STA 509+23.27	-	1051.16
18	STA 509+04.36	15.62' LT	1051.30

APPROACH SLAB SURFACE			
	STATION	OFFSET	ELEVATION
1	STA 508+99.55	11.00' RT	1051.25
2	STA 508+86.86	-	1051.48
3	STA 508+69.71	16.00' LT	1052.01
4	STA 508+66.35	19.31' LT	1052.13
5	STA 508+66.35	20.00' LT	1052.17
6	STA 508+84.40	20.31' LT	1052.60
7	STA 509+30.97	11.00' RT	1052.39
8	STA 509+16.86	-	1052.36
9	STA 508+97.91	16.00' LT	1052.59
10	STA 508+96.33	17.40' LT	1052.63

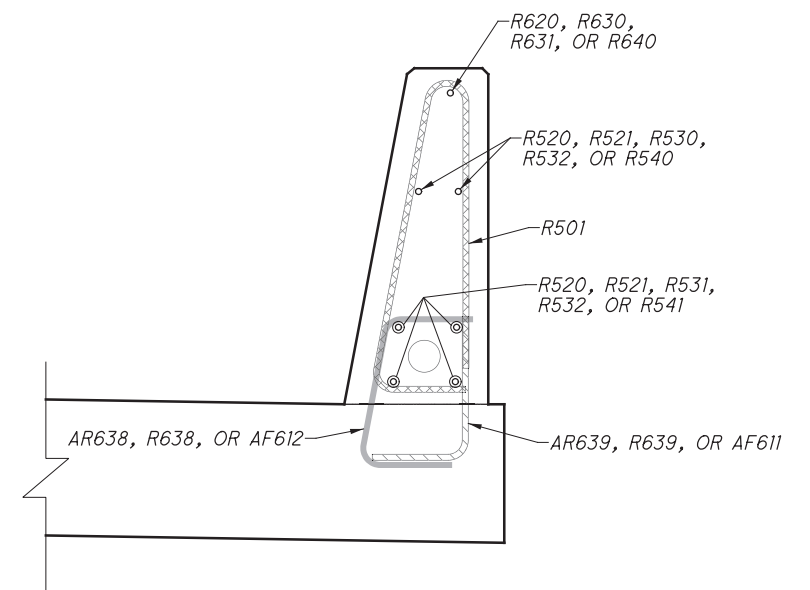
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REAR APPROACH SLAB PARAPET ELEVATION
ONE SHOWN, OTHER SIMILAR



FORWARD APPROACH SLAB PARAPET ELEVATION
RIGHT SHOWN, NO PARAPET ON LEFT SIDE



NOTES:

1. BARS R639 AND R638 ARE QUANTIFIED WITH THE PARAPET REINFORCING, BUT ARE CAST WITH THE APPROACH SLAB CONCRETE.

B SECTION
APP SLAB PARAPET

MARK	TOTAL NUMBER	LENGTH	TOTAL WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	INC
REAR ABUTMENT										
AR501	22	30'-0"	689	STR.						
AR502	20	27'-0"	564	STR.						
AR503	4	16'-10"	71	STR.						
AR504	2	20'-1"	42	1	3'-4"	16'-10"				
AR505	4	18'-5"	77	1	3'-4"	15'-2"				
AR601	34	23'-2"	1,184	7	10'-7"	1'-5"	10'-6"	1'-1"		
AR602	34	11'-6"	588	2	5'-5"	11"	5'-5"			
	2	7'-8"				6'-7"				
AR605	SER OF	to	293	1	1'-3"	to				5 1/2"
	10	11'-10"				10'-9"				
AR606	20	13'-0"	391	1	1'-3"	11'-11"				
AR610	7	30'-0"	316	STR.						
AR611	3	27'-10"	126	STR.						
	1	18'-5"								
AR612	SER OF	to	131	STR.						2'-3"
	4	25'-2"								
AR615	2	15'-10"	48	20	3'-0"	1'-6"	9'-4"	2'-11"	1'-5"	
AR638	2	3'-2"	10	68	1'-6"	1'-0"	11"	5'-3"		
AR639	2	2'-4"	8	1	1'-0"	1'-6"				
AR801	35	5'-4"	499	18	3'-0"	1'-0"	1'-0"			
AR805	5	21'-0"	281	STR.						
AR806	10	13'-5"	359	1	2'-1"	11'-6"				
AR807	5	17'-1"	229	1	2'-1"	15'-2"				
AR810	55	29'-8"	4,357	2	12'-10"	4'-5"	12'-10"			
FR520	18	15'-9"	296	1	1'-6"	14'-4"				
FR521	11	13'-11"	160	1	1'-6"	12'-6"				
FR522	11	12'-5"	143	1	1'-6"	11'-0"				
FR523	11	11'-2"	129	1	1'-6"	9'-9"				
FR524	1	14'-10"	16	1	1'-6"	13'-5"				
FR525	1	13'-1"	14	1	1'-6"	11'-8"				
FR526	1	11'-9"	13	1	1'-6"	10'-4"				
FR601	29	19'-9"	861	3	6'-11"	2'-8"				
FR602	20	18'-8"	561	3	6'-11"	2'-2"				
	2	21'-8"			6'-11"	3'-8"				
FR603	SER OF	to	134	3	to	to				1'-1"
	2	22'-9"			6'-11"	4'-2"				
	1	21'-8"			6'-11"	3'-8"				
FR604	SER OF	to	69	3	to	to				2'-1"
	2	23'-9"			6'-11"	4'-8"				
FR801	8	19'-0"	406	STR.						
FR802	8	17'-6"	374	1	3'-10"	13'-10"				
FR803	8	17'-0"	364	1	3'-4"	13'-10"				
FR804	8	15'-10"	339	1	3'-4"	12'-8"				
FR805	12	18'-0"	577	STR.						
FR806	24	12'-10"	823	STR.						
FR808	12	12'-8"	406	STR.						
FR810	24	9'-4"	599	19	4'-10"	3'-2"	3'-2"			
FR820	18	15'-8"	753	1	1'-6"	14'-4"				
FR821	11	13'-10"	407	1	1'-6"	12'-6"				
FR822	11	12'-4"	363	1	1'-6"	11'-0"				
FR823	11	11'-1"	326	1	1'-6"	9'-9"				
FR824	1	14'-9"	40	1	1'-6"	13'-5"				
FR825	1	13'-0"	35	1	1'-6"	11'-8"				
FR826	1	11'-8"	32	1	1'-6"	10'-4"				
SUB-TOTAL			18,503							

MARK	TOTAL NUMBER	LENGTH	TOTAL WEIGHT	TYPE	DIMENSIONS			
					A	B	C	INC
RIGHT REAR WINGWALL								
	1	22'-3"				20'-10"		
FR565	SER OF	to	735	1	1'-6"	to		1 3/4"
	29	26'-4"				24'-11"		
	1	19'-3"				17'-10"		
FR566	SER OF	to	292	1	1'-6"	to		1 1/4"
	14	20'-8"				19'-3"		
	1	15'-11"				14'-6"		
FR567	SER OF	to	569	1	1'-6"	to		1 1/4"
	31	19'-3"				17'-10"		
	1	12'-7"				11'-2"		
FR568	SER OF	to	461	1	1'-6"	to		1 1/4"
	31	15'-11"				14'-6"		
	1	9'-1"				7'-8"		
FR569	SER OF	to	200	1	1'-6"	to		1 1/4"
	19	11'-1"				9'-8"		
	1	6'-5"				5'-0"		
FR570	SER OF	to	203	1	1'-6"	to		1 1/4"
	25	9'-1"				7'-8"		
FR650	94	14'-3"	2,012	3	4'-2"	2'-8"		
FR651	60	13'-2"	1,187	3	4'-2"	2'-2"		
	2	15'-11"				4'-2"	3'-6"	
FR652	SER OF	to	100	3	to	to		1'-3"
	2	17'-2"			4'-2"	4'-2"		
FR850	42	30'-0"	3,365	STR.				
FR851	9	17'-6"	421	STR.				
FR853	9	16'-7"	399	STR.				
FR854	14	36'-9"	1,374	STR.				
FR855	5	20'-8"	276	1	3'-4"	17'-6"		
FR856	5	28'-9"	384	1	3'-4"	25'-7"		
FR860	10	6'-11"	185	19	2'-11"	2'-11"	2'-9"	
	1	22'-2"				20'-10"		
FR865	SER OF	to	1,875	1	1'-6"	to		1 3/4"
	29	26'-3"				24'-11"		
	1	19'-2"				17'-10"		
FR866	SER OF	to	745	1	1'-6"	to		1 3/8"
	14	20'-8"				19'-4"		
	1	15'-10"				14'-6"		
FR867	SER OF	to	1,449	1	1'-6"	to		1 1/4"
	31	19'-2"				17'-10"		
	1	12'-6"				11'-2"		
FR868	SER OF	to	1,173	1	1'-6"	to		1 1/4"
	31	15'-10"				14'-6"		
	1	9'-0"				7'-8"		
FR869	SER OF	to	508	1	1'-6"	to		1 1/4"
	19	11'-0"				9'-8"		
	1	6'-4"				5'-0"		
FR870	SER OF	to	512	1	1'-6"	to		1 1/4"
	25	9'-0"				7'-8"		
WR501	23	28'-2"	676	STR.				
WR502	12	13'-1"	164	STR.				
WR503	28	29'-8"	867	STR.				
WR504	8	17'-8"	148	STR.				
WR505	6	24'-1"	151	STR.				
WR506	146	7'-2"	1,092	2	3'-0"	1'-5"	3'-0"	
SUB-TOTAL			21,523					

REINFORCING DETAILS			
RA DETAILS -	14/52	TO	15/52
RWW DETAILS -	16/52	TO	19/52
FA DETAILS -	21/52	TO	22/52
FWW DETAILS -	23/52	TO	25/52
PIER DETAILS - 26/52			
DECK DETAILS -	39/52	TO	40/52
PARAPET DETAILS -	41/52		

MARK	TOTAL NUMBER	LENGTH	TOTAL WEIGHT	TYPE	DIMENSIONS			
					A	B	C	INC
LEFT REAR WINGWALL								
FR575	28	30'-0"	877	STR.				
FR580	5	8'-10"	47	1	1'-6"	7'-5"		
	1	7'-4"				5'-11"		
FR581	SER OF	to	119	1	1'-6"	to		1 3/8"
	14	8'-10"				7'-5"		
	1	3'-10"				2'-5"		
FR582	SER OF	to	180	1	1'-6"	to		1 1/4"
	31	7'-3"				5'-10"		
FR675	55	13'-8"	1,130	3	4'-2"	2'-5"		
FR880	3	8'-9"	71	1	1'-6"	7'-5"		
	1	7'-3"				5'-11"		
FR881	SER OF	to	300	1	1'-6"	to		1 3/8"
	14	8'-9"				7'-5"		
	1	3'-9"				2'-5"		
FR882	SER OF	to	452	1	1'-6"	to		1 1/4"
	31	7'-2"				5'-10"		
WR550	7	9'-6"	70	2	4'-2"	1'-5"	4'-2"	
WR551	5	17'-3"	90	1	4'-2"	13'-2"		
WR552	5	14'-2"	74	1	2'-7"	11'-8"		
WR560	6	29'-10"	187	STR.				
WR561	4	20'-0"	84	STR.				
WR562	45	4'-2"	196	2	1'-6"	1'-5"	1'-6"	
SUB-TOTAL			3,877					
RIGHT FORWARD WINGWALL								
FF551	47	22'-1"	1,083	3	6'-4"	4'-5"		
FF552	24	21'-7"	541	3	6'-4"	4'-2"		
	1	7'-4"				5'-11"		
FF556	SER OF	to	177	1	1'-6"	to		2 7/8"
	18	11'-5"				10'-0"		
FF560	42	30'-0"	1,315	STR.				
FF561	21	8'-11"	196	STR.				
	1	7'-3"				5'-11"		
FF856	SER OF	to	447	1	1'-6"	to		2 7/8"
	18	11'-4"				10'-0"		
WF550	4	29'-8"	124	STR.				
WF551	18	19'-8"	370	STR.				
	2	5'-3"						
WF555	SER OF	to	199	STR.				4'-3"
	6	26'-6"						
	2	4'-0"						
WF556	SER OF	to	87	STR.				4'-3"
	4	16'-9"						
WF560	2	30'-6"	64	STR.				
WF561	2	20'-2"	43	STR.				
WF562	48	4'-2"	209	2	1'-6"	1'-5"	1'-6"	
WF563	1	6'-5"	7	2	1'-6"	3'-8"	1'-6"	
WF564	1	4'-11"	6	2	1'-6"	2'-2"	1'-6"	
SUB-TOTAL			4,868					

MARK	TOTAL NUMBER	LENGTH	TOTAL WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	E	INC
FORWARD ABUTMENT										
AF501	36	28'-9"	1,080	STR.						
AF502	32	28'-9"	960	STR.						
AF504	4	26'-10"	112	STR.						
AF520	6	13'-11"	88	20	5'-2"	3'-0"	2'-0"	5'-2"	3'-0"	
AF521	6	7'-6"	47	19	5'-8"	1'-3"	1'-4"			
AF522	10	11'-3"	118	20	2'-11"	1'-8"	2'-0"	5'-2"	3'-0"	
AF523	14	10'-3"	150	10	3'-10"	4'-0"	1'-3"	3'-7"		
AF524	10	7'-9"	81	20	2'-11"	2'-10"	2'-1"	1'-1"	1'-2"	
AF525	10	5'-7"	59	19	3'-9"	1'-3"	1'-4"			
AF526	10	9'-8"	101	19	6'-2"	2'-2"	2'-9"			
AF527	4	8'-9"	37	20	2'-11"	1'-8"	2'-0"	3'-0"	1'-8"	
AF528	4	7'-1"	30	19	5'-5"	1'-2"	1'-2"			
AF529	4	5'-5"	23	19	4'-0"	1'-0"	1'-0"			
AF531	6	23'-7"	148	2	9'-2"	5'-5"	9'-2"			
AF532	4	6'-8"	28	2	1'-5"	4'-0"	1'-5"			
AF533	3	16'-5"	52	2	7'-5"	1'-9"	7'-5"			
AF535	9	6'-7"	62	1	3'-6"	3'-2"				
AF540	6	2'-6"	16	STR.						
AF541	4	7'-4"	31	22	11"	3'-3"	3'-0"			
AF601	51	23'-3"	1,781	7	10'-8"	1'-5"	10'-8"	1'-0"		
AF602	51	8'-7"	645	2	4'-0"	11"	4'-0"			
AF603	2	25'-7"	77	2	12'-3"	1'-5"	12'-3"			
AF604	18	15'-10"	429	1	1'-6"	14'-6"				
AF610	1	2'-6"	4	STR.						
AF611	8	2'-4"	29	1	1'-0"	1'-6"				
AF612	8	3'-2"	39	68	1'-6"	1'-0"	11"	5'-3"		
AF801	51	5'-3"	715	18	2'-11"	1'-0"	1'-0"			
FF501	64	22'-1"	1,475	3	6'-4"	4'-5"				
FF502	28	21'-7"	631	3	6'-4"	4'-2"				
FF503	3	25'-3"	80	3	7'-11"	4'-5"				
FF504	3	24'-9"	78	3	7'-11"	4'-2"				
FF505	158	7'-5"	1,223	1	3'-1"	4'-5"				
FF506	51	30'-9"	1,636	3	5'-5"	9'-8"				
FF507	6	33'-11"	213	3	7'-0"	9'-8"				
FF510	69	30'-0"	2,160	STR.						
FF511	23	14'-8"	352	STR.						
FF515	4	9'-5"	40	1	1'-6"	8'-0"				
FF516	8	18'-11"	158	1	1'-6"	17'-6"				
	1	14'-5"				13'-0"				
FF517	SER OF	to	366	1	1'-6"	to				2 5/8"
	21	18'-11"				17'-6"				
	1	11'-5"				10'-0"				
FF518	SER OF	to	176	1	1'-6"	to				3"
	13	14'-5"				13'-0"				
FF520	5	16'-4"	86	20	7'-4"	4'-2"	2'-0"	5'-2"	3'-0"	
FF521	5	7'-6"	40	19	5'-8"	1'-3"	1'-4"			
FF565	21	17'-6"	384	19	12'-4"	4'-8"	2'-1"			
	1	14'-4"				13'-0"				
FF817	SER OF	to	930	1	1'-6"	to				2 5/8"
	21	18'-10"				17'-6"				
	1	11'-4"				10'-0"				
FF818	SER OF	to	446	1	1'-6"	to				3"
	13	14'-4"				13'-0"				
SUB-TOTAL			17,416							

NOTES:

- ALL REINFORCEMENT BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.
- "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
- "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS/SERIES.
- REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
- MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH C.M.S. SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WITH MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509 - EPOXY COATED REINFORCING STEEL.

REINFORCING DETAILS

RA DETAILS - 14/52 TO 15/52
RWW DETAILS - 16/52 TO 19/52
FA DETAILS - 21/52 TO 22/52
FWW DETAILS - 23/52 TO 25/52
PIER DETAILS - 26/52
DECK DETAILS - 39/52 TO 40/52
PARAPET DETAILS - 41/52

REINFORCING LIST 02

BRIDGE NO. STA-30-1487 (RAMP D)
OVER WEST BRANCH OF NIMISHILLEN CREEK

STA - 77 - 8.40/ VAR

PID No. 90973

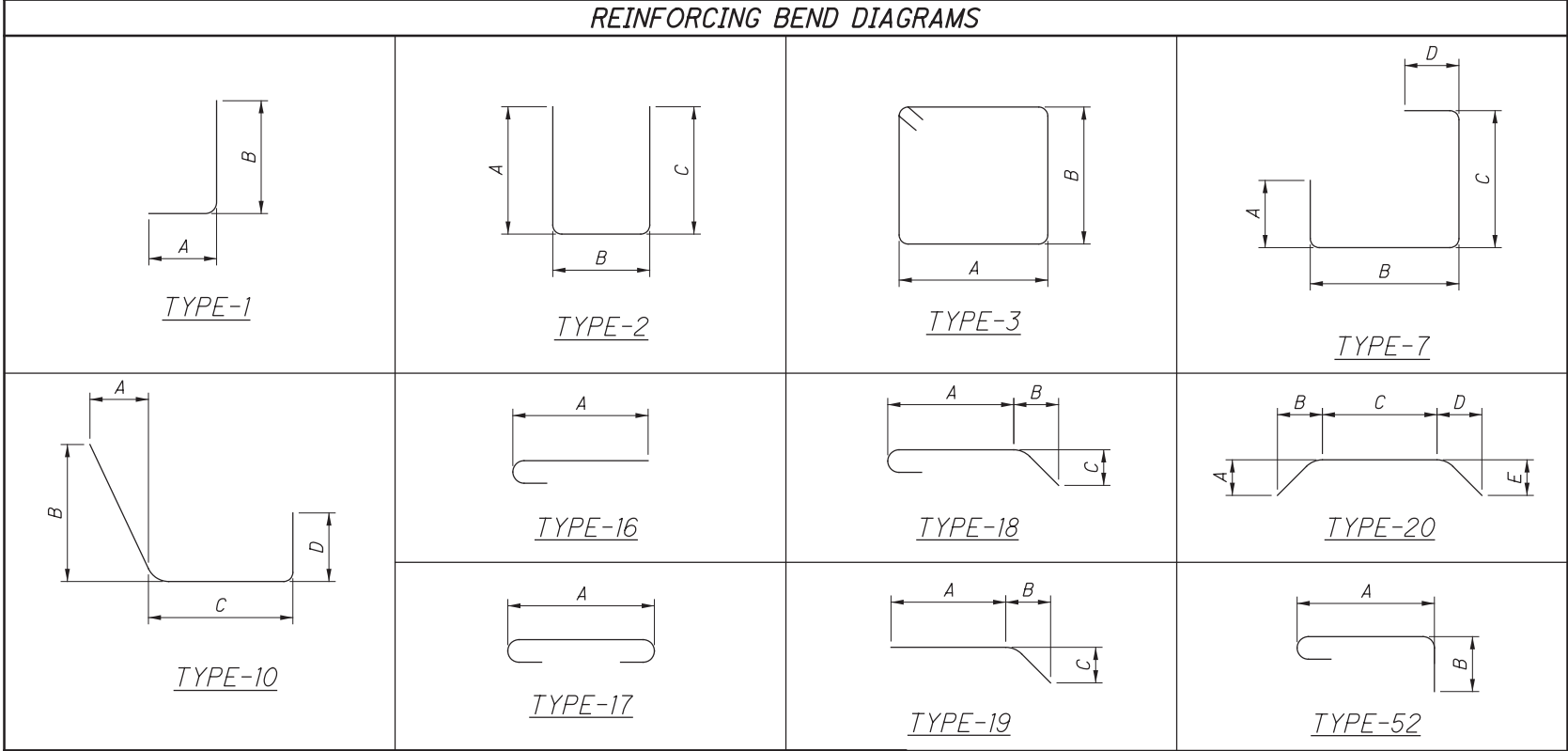
DESIGNED	DRAWN	REVIEWED	DATE
CTM	AH/RSN	EFD	01/11/2019
CHECKED	REVISED	STRUCTURE FILE NUMBER	
VDT		7603666	

DESIGN AGENCY

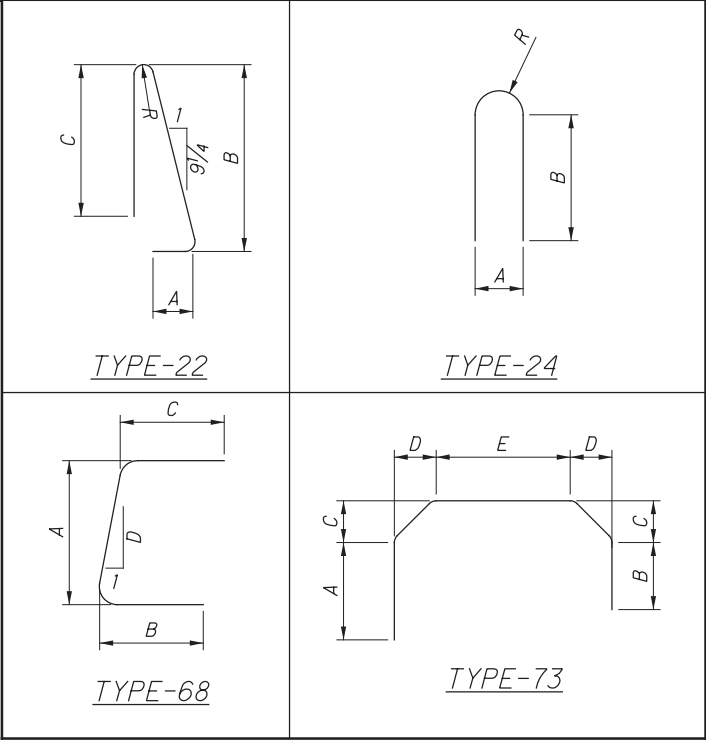
 **Gannett Fleming**

ENGINEERS & ARCHITECTS, P.C.
2800 CORPORATE EXCHANGE DRIVE SUITE 230
COLUMBUS, OHIO 43231

MARK	TOTAL NUMBER	LENGTH	TOTAL WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
DECK											
S401	1347	8'-0"	7,199	16	7'-5"						
	1	2'-0"			1'-6"						
S402	SER OF	to	47	16	to						5 1/2"
	14	8'-0"			7'-5"						
S405	625	2'-5"	1,009	19	1'-7"	7"	7"				
S420	440	30'-0"	8,818	STR.							
	1	1'-10"									
S421	SER OF	to	242	STR.							4 7/8"
	38	17'-2"									
S422	2	1'-10"	3	STR.							
S423	2	17'-2"	23	STR.							
S425	370	30'-0"	7,415	STR.							
S501	670	30'-0"	20,965	16	29'-5"						
S502	665	7'-1"	4,913	STR.							
	1	3'-3"									
S503	SER OF	to	27	STR.							11 1/2"
	5	7'-1"									
	1	2'-8"			1'-6"						
S504	SER OF	to	1,136	17	to						5"
	66	30'-4"			29'-2"						
	1	1'-6"									
S505	SER OF	to	1,056	STR.							5"
	66	29'-2"									
S510	665	7'-8"	5,318	16	7'-1"						
S511	670	30'-0"	20,965	STR.							
	1	3'-10"			3'-3"						
S512	SER OF	to	30	16	to						11 1/4"
	5	7'-7"			7'-0"						
S520	429	30'-0"	13,424	STR.							
	1	8'-3"									
S521	SER OF	to	648	STR.							4 3/4"
	39	23'-7"									
S530	6	5'-9"	36	20	1'-5"	1'-6"	1'-8"	1'-6"	1'-5"		
S601	625	2'-4"	2,191	1	1'-0"	1'-6"					
S602	625	3'-2"	2,973	68	1'-6"	1'-0"	11"	5'-3"			
SUB-TOTAL			98,438								
PIER											
P501	40	8'-9"	366	2	1'-8"	5'-8"	1'-8"				
P502	40	10'-6"	439	73	1'-9"	1'-9"	1'-6"	1'-6"	2'-10"		
P510	66	30'-0"	2,066	STR.							
P511	66	11'-9"	809	STR.							
P512	6	17'-7"	111	1	1'-0"	16'-8"					
P515	475	3'-10"	1,900	52	2'-8"	8"					
P520	50	9'-1"	474	24	2'-8"	2'-5"				1'-4"	
P801	80	28'-1"	5,999	16	27'-2"						
F801	80	12'-4"	2,635	1	2'-0"	10'-6"					
F1001	55	25'-11"	6,134	2	4'-5"	17'-8"	4'-5"				
F1002	55	20'-6"	4,852	17	17'-8"						
F1010	16	30'-0"	2,066	STR.							
F1011	16	31'-10"	2,192	STR.							
F1015	32	34'-1"	4,694	1	4'-5"	30'-0"					
F1016	32	35'-11"	4,946	1	4'-5"	31'-10"					
SUB-TOTAL			39,683								



MARK	TOTAL NUMBER	LENGTH	TOTAL WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	R	INC	
PARAPET											
R501	776	7'-4"	5,936	22	11"	3'-3"	3'-0"		2 3/4"		
R510	68	14'-8"	1,041	STR.							
R511	28	7'-2"	210	STR.							
R512	2	4'-3"	9	STR.							
R513	2	5'-9"	12	STR.							
R515	88	30'-0"	2,754	STR.							
R516	4	8'-3"	35	STR.							
R517	4	23'-7"	99	STR.							
R520	3	2'-4"	8	STR.							
R521	3	3'-4"	11	STR.							
R530	8	14'-7"	122	STR.							
R531	8	29'-7"	247	STR.							
R532	12	0'-11"	12	STR.							
R540	4	15'-0"	63	STR.							
R541	4	30'-4"	127	STR.							
R610	34	14'-8"	749	STR.							
R611	14	7'-2"	151	STR.							
R612	1	4'-3"	7	STR.							
R613	1	5'-7"	9	STR.							
R620	1	2'-10"	5	STR.							
R630	4	14'-7"	88	STR.							
R631	2	0'-11"	3	STR.							
R638	96	3'-2"	457	68	1'-6"	1'-0"	11"	5'-3"			
R639	96	2'-4"	337	1	1'-0"	1'-6"					
R640	2	15'-0"	46	STR.							
SUB-TOTAL			12,538								
TOTAL ALL REINFORCING			216,846								



MINIMUM LAP SPLICE LENGTH

#4 BAR (ALL) = 2'-6"
#5 BAR (ALL) = 3'-1"
#6 BAR (ALL) = 4'-0"
#8 BAR (ALL) = 5'-4"

REINFORCING DETAILS

RA DETAILS - 14/52 TO 15/52
RWW DETAILS - 16/52 TO 19/52
FA DETAILS - 21/52 TO 22/52
FWW DETAILS - 23/52 TO 25/52
PIER DETAILS - 26/52
DECK DETAILS - 39/52 TO 40/52
PARAPET DETAILS - 41/52