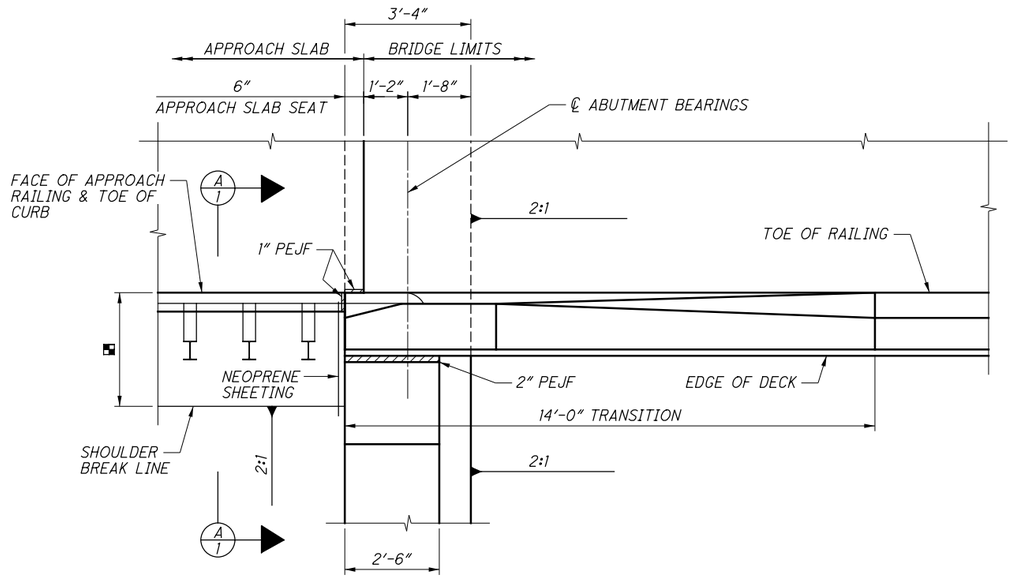
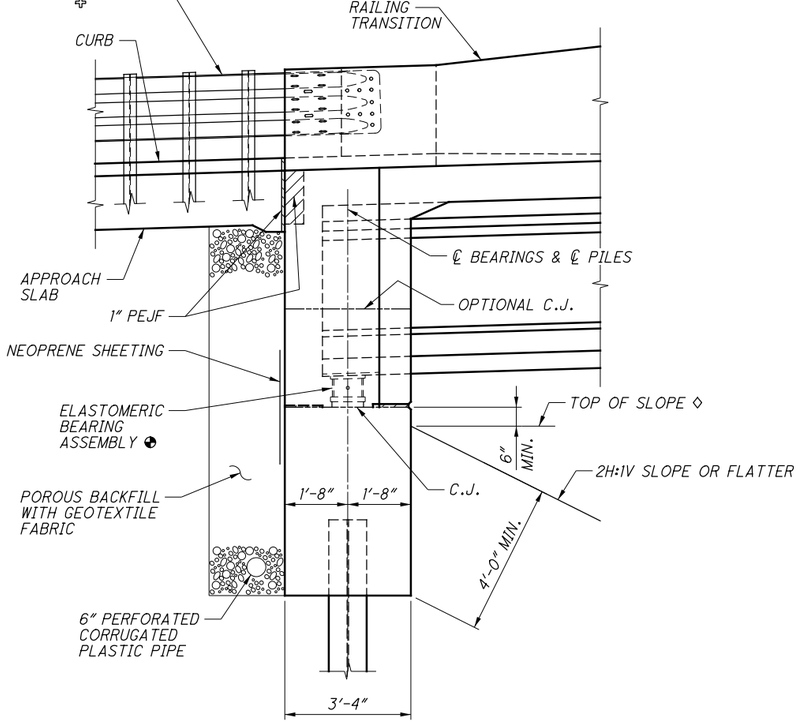
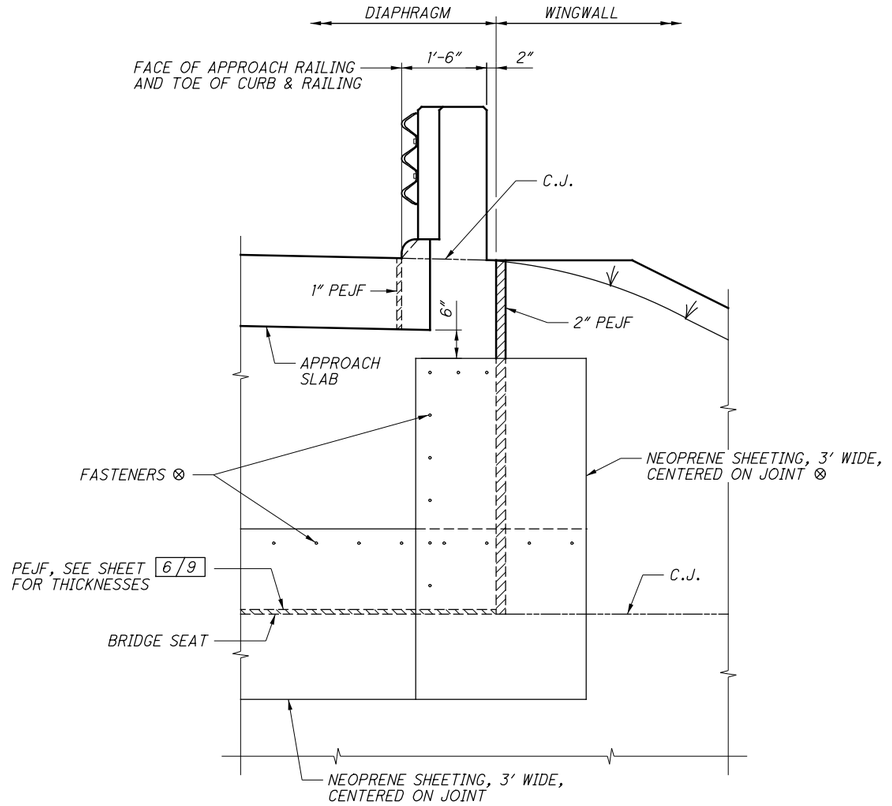


PART PLAN AT ABUTMENT

(SQUARE STRUCTURE WITH CONCRETE BRIDGE RAILING)
(SBR-1-20 SHOWN, SBR-3-20 SIMILAR)



ELEVATION



SECTION A-A

SHEET 1 NOTES AND LEGEND:

C.J. = CONSTRUCTION JOINT. REFER TO BDM SECTION 304.2.3 FOR DESIGN REQUIREMENTS.

PEJF = PREFORMED EXPANSION JOINT FILLER

⊗ = SEE PROJECT PLANS AND/OR CMS 516.05 FOR ADDITIONAL NEOPRENE SHEETING PLACEMENT REQUIREMENTS.

◘ = SEE ROADWAY TYPICAL SECTION FOR LOCATION OF SHOULDER BREAK LINE.

◇ = TOP OF SLOPE: ON SUPERELEVATED STRUCTURES, A LATERALLY SLOPING "TOP OF SLOPE" MAY BE USED TO AVOID EXCESSIVELY LONG WINGWALLS.

✣ = SEE ROADWAY STANDARD DRAWING MGS-3.1 OR MGS-3.2 FOR BRIDGE TERMINAL ASSEMBLY DETAILS. STATE ON THE PROJECT PLANS WHICH STANDARD DRAWING APPLIES.

◓ = SEE SHEET 8/9 FOR ELASTOMERIC BEARING ASSEMBLY DETAILS.

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
07-20-18 DATE
Tim Keller
ADMINISTRATOR

REVISIONS
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STANDARD DRAWING
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS

SHEET 2 NOTES AND LEGEND:

C.J. = CONSTRUCTION JOINT. REFER TO BDM SECTION 304.2.3 FOR DESIGN REQUIREMENTS.

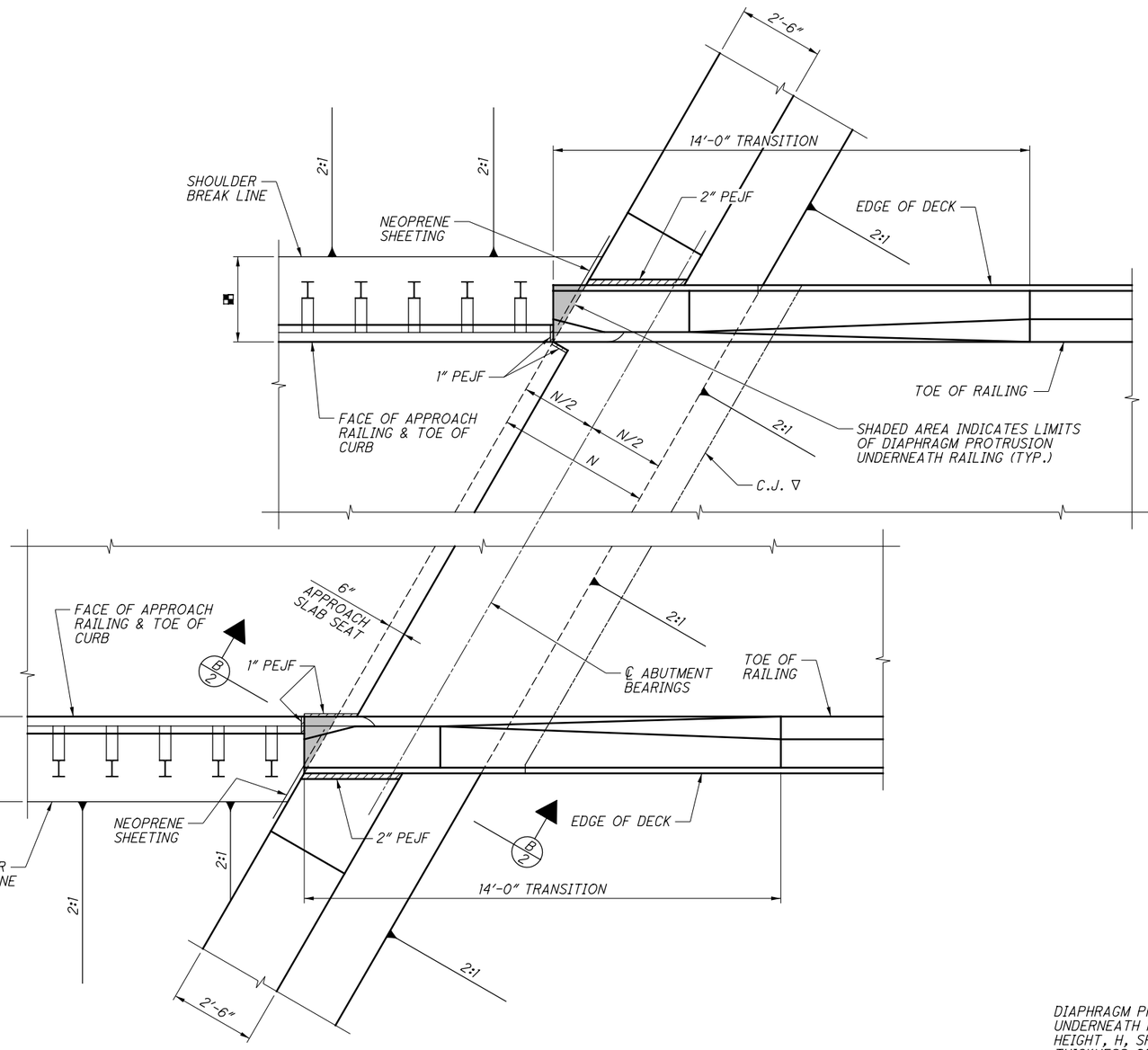
PEJF = PREFORMED EXPANSION JOINT FILLER

■ = SEE ROADWAY TYPICAL SECTION FOR LOCATION OF SHOULDER BREAK LINE.

▽ = THE CONTRACTOR MAY ELECT TO SUBMIT AN ALTERNATE PROCEDURE THAT PLACES THE DIAPHRAGM AND DECK CONCRETE IN THE SAME POUR; HOWEVER, THIS REQUIRES APPROVAL OF THE ENGINEER.

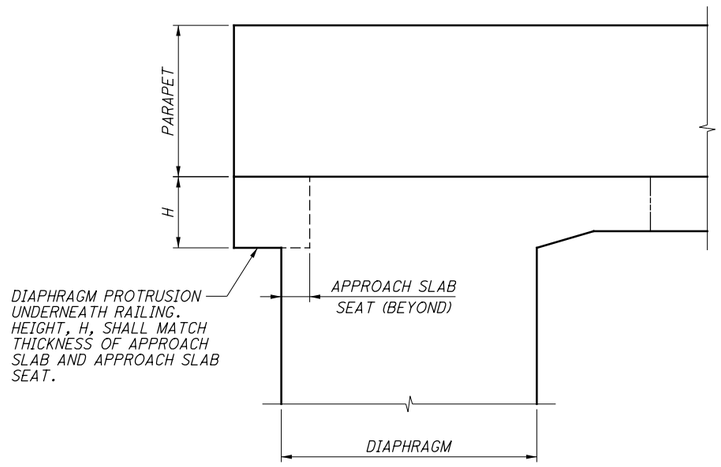
N = DIAPHRAGM WIDTH FOR SKEWED BRIDGES. SEE SHEET 7/9.

NEOPRENE SHEETING LIMITS SHALL BE SIMILAR TO THOSE SHOWN IN SECTION A-A ON SHEET 1/9.



PART PLAN AT ABUTMENT

(STRUCTURE WITH LEFT FORWARD SKEW AND CONCRETE BRIDGE RAILING (SBR-1-20 SHOWN, SBR-3-20 SIMILAR)



SECTION B-B

(APPLIES AT BOTH ENDS OF ABUTMENT) (BEAM & APPROACH RAILING NOT SHOWN)

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STANDARD DRAWING
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS

SHEET 3 NOTES AND LEGEND:

C.J. = CONSTRUCTION JOINT. REFER TO BDM SECTION 304.2.3 FOR DESIGN REQUIREMENTS.

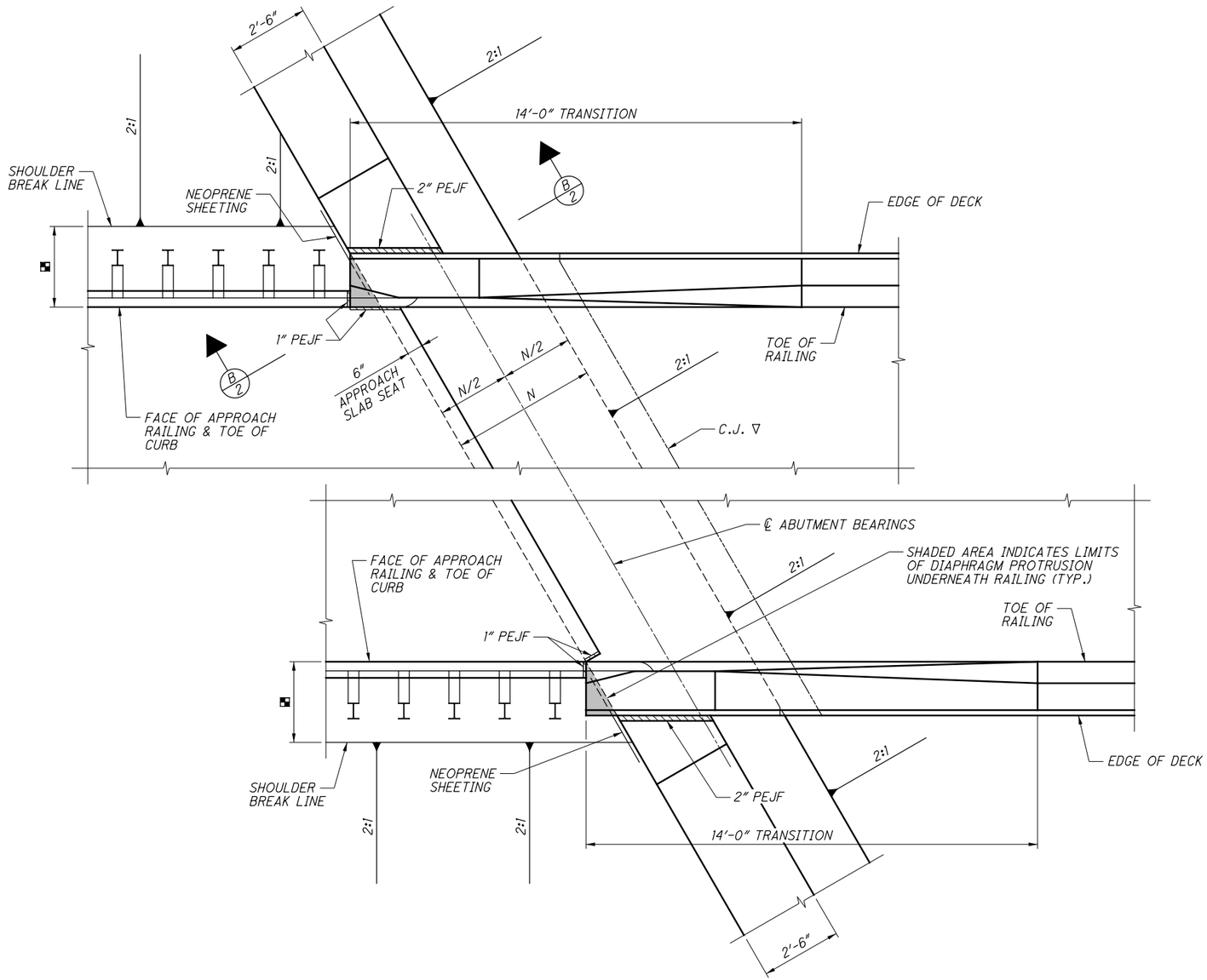
PEJF = PREFORMED EXPANSION JOINT FILLER

■ = SEE ROADWAY TYPICAL SECTION FOR LOCATION OF SHOULDER BREAK LINE.

∇ = THE CONTRACTOR MAY ELECT TO SUBMIT AN ALTERNATE PROCEDURE THAT PLACES THE DIAPHRAGM AND DECK CONCRETE IN THE SAME POUR; HOWEVER, THIS REQUIRES APPROVAL OF THE ENGINEER.

N = DIAPHRAGM WIDTH FOR SKEWED BRIDGES. SEE SHEET 7/9.

NEOPRENE SHEETING LIMITS SHALL BE SIMILAR TO THOSE SHOWN IN SECTION A-A ON SHEET 1/9.



PART PLAN AT ABUTMENT

(STRUCTURE WITH RIGHT FORWARD SKEW AND CONCRETE BRIDGE RAILING)
(SBR-1-20 SHOWN, SBR-3-20 SIMILAR)

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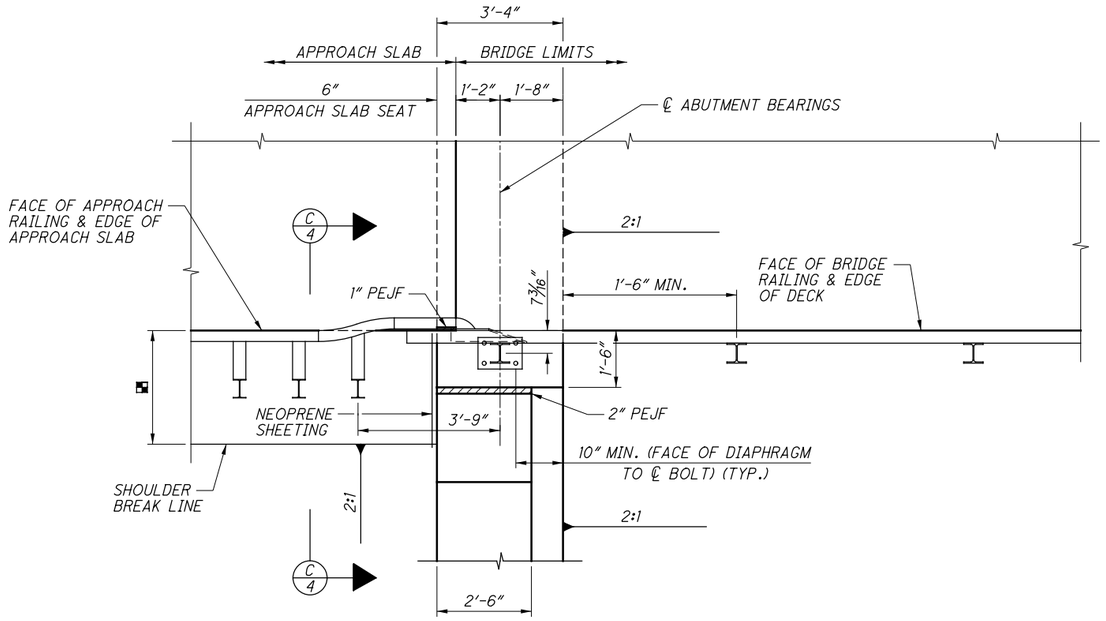
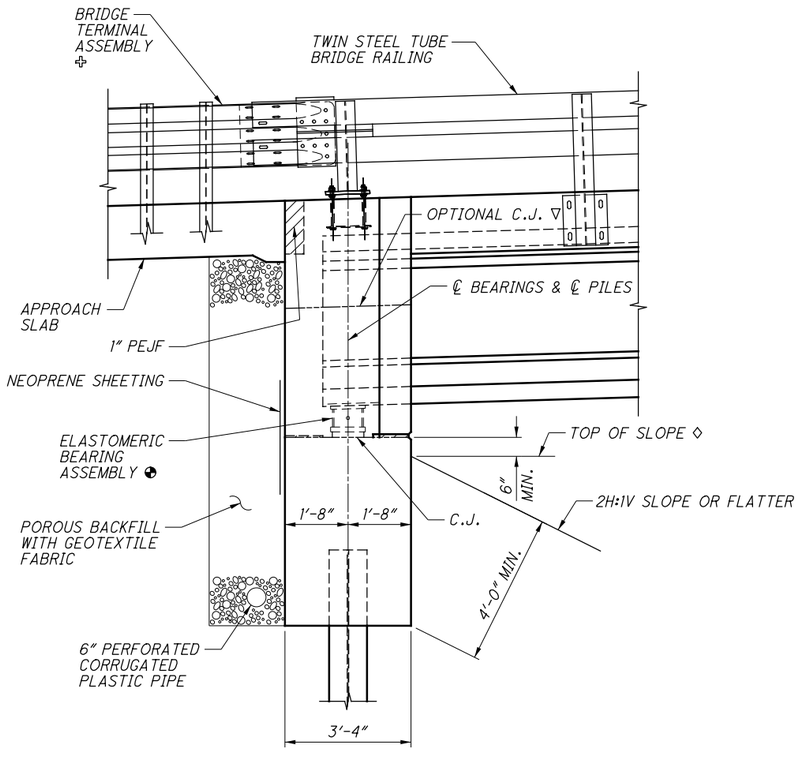
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS

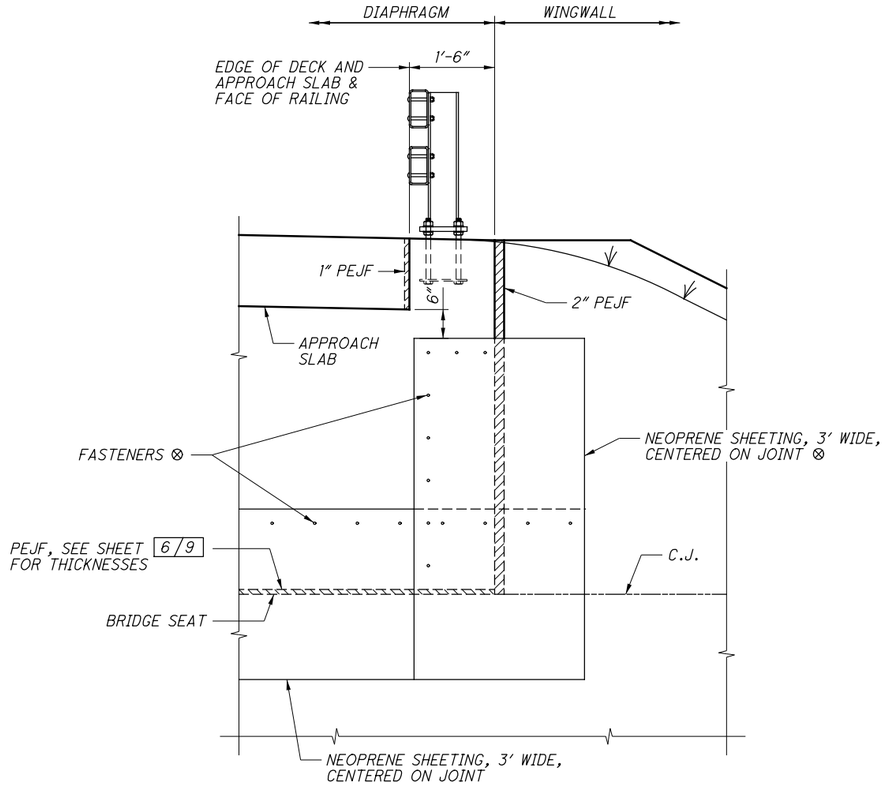


PART PLAN AT ABUTMENT

(SQUARE STRUCTURE WITH TWIN STEEL TUBE BRIDGE RAILING)



ELEVATION



SECTION C-C

SHEET 4 NOTES AND LEGEND:

C.J. = CONSTRUCTION JOINT. REFER TO BDM SECTION 304.2.3 FOR DESIGN REQUIREMENTS.

PEJF = PREFORMED EXPANSION JOINT FILLER

⊗ = SEE PROJECT PLANS AND/OR CMS 516.05 FOR ADDITIONAL NEOPRENE SHEETING PLACEMENT REQUIREMENTS.

◪ = SEE ROADWAY TYPICAL SECTION FOR LOCATION OF SHOULDER BREAK LINE.

◊ = TOP OF SLOPE: ON SUPERELEVATED STRUCTURES, A LATERALLY SLOPING "TOP OF SLOPE" MAY BE USED TO AVOID EXCESSIVELY LONG WINGWALLS.

✣ = SEE ROADWAY STANDARD DRAWING MGS-3.1 FOR BRIDGE TERMINAL ASSEMBLY DETAILS.

▽ = THE CONTRACTOR MAY ELECT TO SUBMIT AN ALTERNATE PROCEDURE THAT PLACES THE DIAPHRAGM AND DECK CONCRETE IN THE SAME POUR; HOWEVER, THIS REQUIRES APPROVAL OF THE ENGINEER.

◕ = SEE SHEET 8/9 FOR ELASTOMERIC BEARING ASSEMBLY DETAILS.

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STANDARD DRAWING
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SHEET 5 NOTES AND LEGEND:

C.J. = CONSTRUCTION JOINT. REFER TO BDM SECTION 304.2.3 FOR DESIGN REQUIREMENTS.

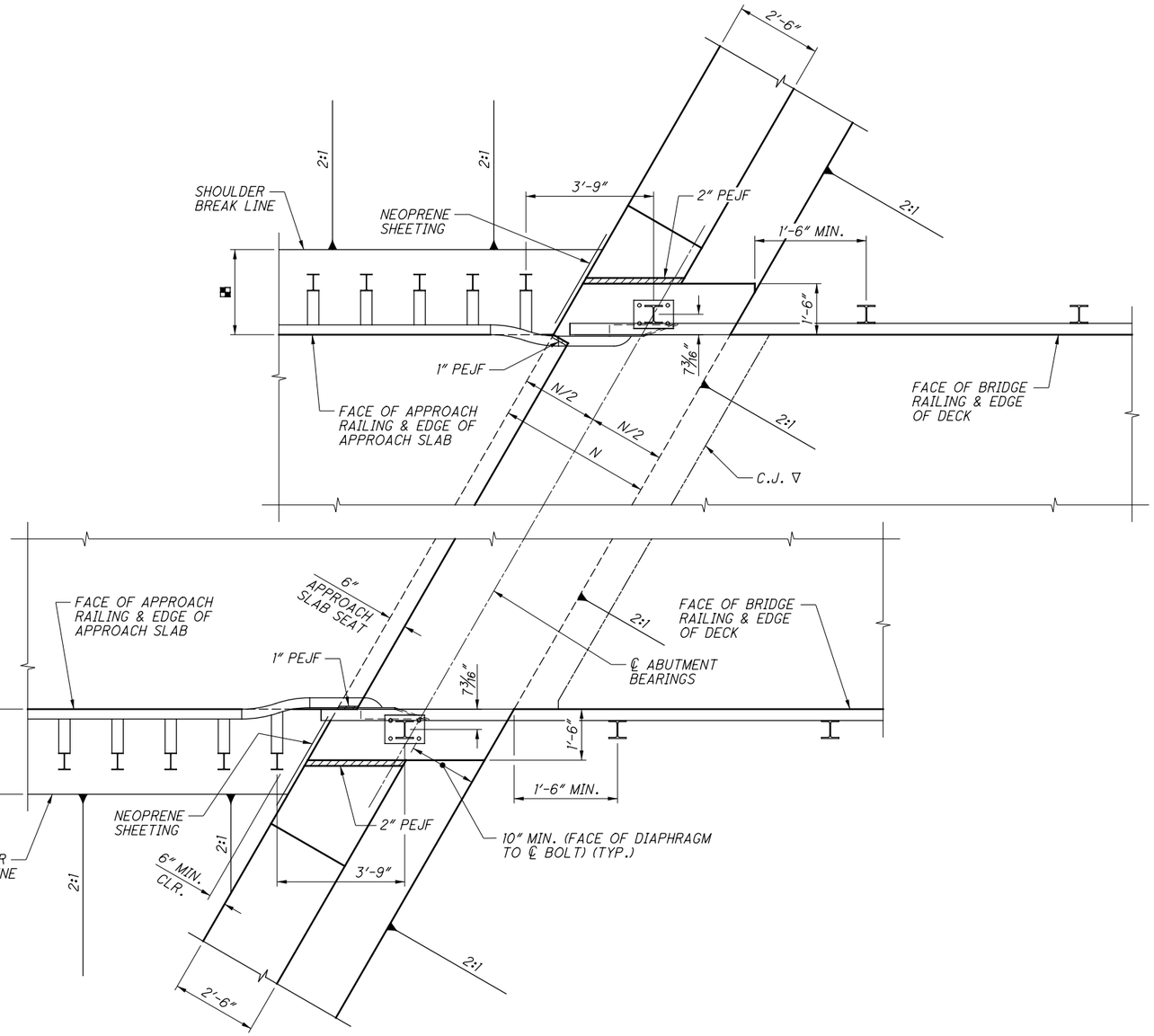
PEJF = PREFORMED EXPANSION JOINT FILLER

■ = SEE ROADWAY TYPICAL SECTION FOR LOCATION OF SHOULDER BREAK LINE.

▽ = THE CONTRACTOR MAY ELECT TO SUBMIT AN ALTERNATE PROCEDURE THAT PLACES THE DIAPHRAGM AND DECK CONCRETE IN THE SAME POUR; HOWEVER, THIS REQUIRES APPROVAL OF THE ENGINEER.

N = DIAPHRAGM WIDTH FOR SKEWED BRIDGES. SEE SHEET 7 / 9 .

NEOPRENE SHEETING LIMITS SHALL BE SIMILAR TO THOSE SHOWN IN SECTION C-C ON SHEET 4 / 9 .



PART PLAN AT ABUTMENT

(SKEWED STRUCTURE WITH TWIN STEEL TUBE BRIDGE RAILING)
(STRUCTURE WITH LEFT FORWARD SKEW SHOWN, STRUCTURE WITH RIGHT FORWARD SKEW SIMILAR)

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STANDARD DRAWING
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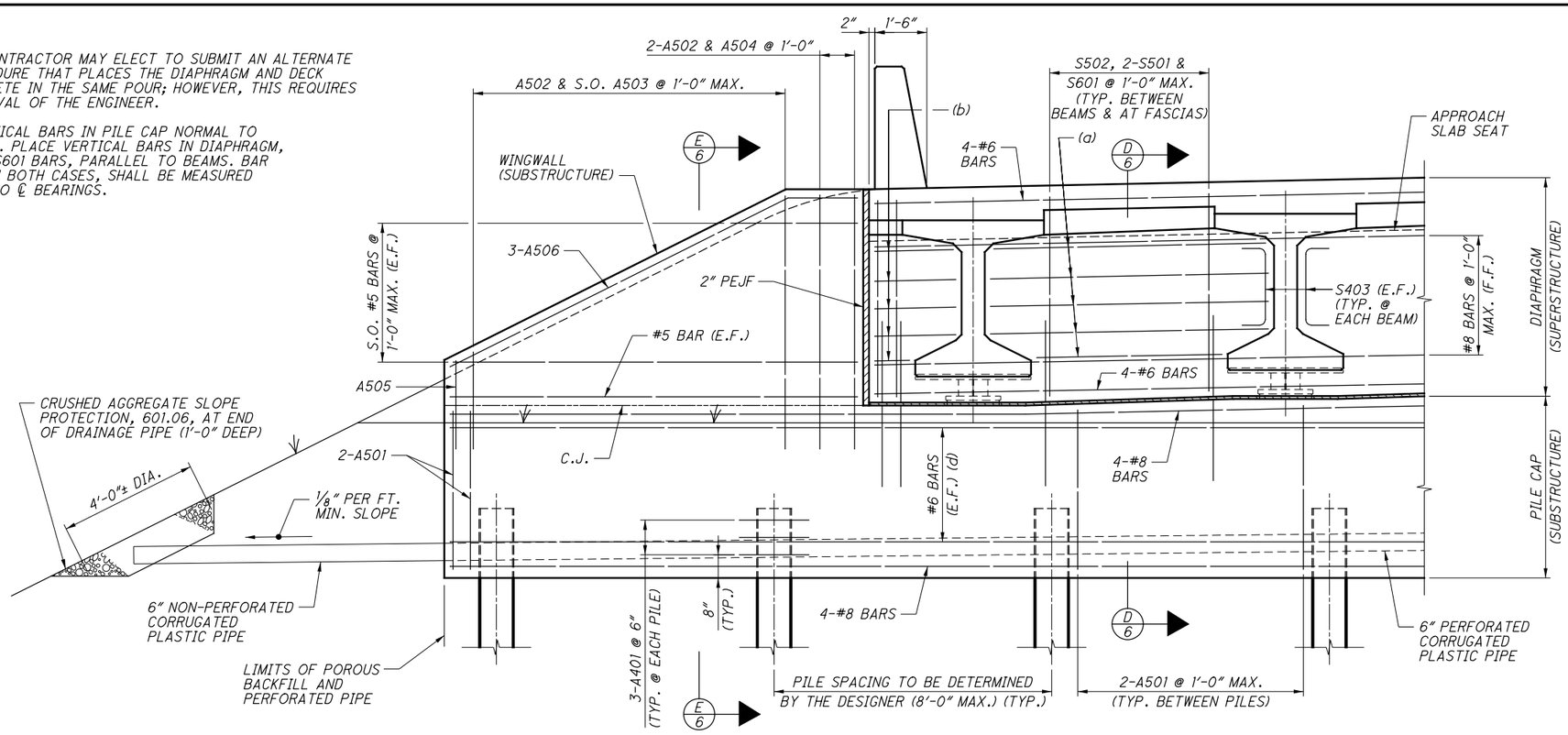
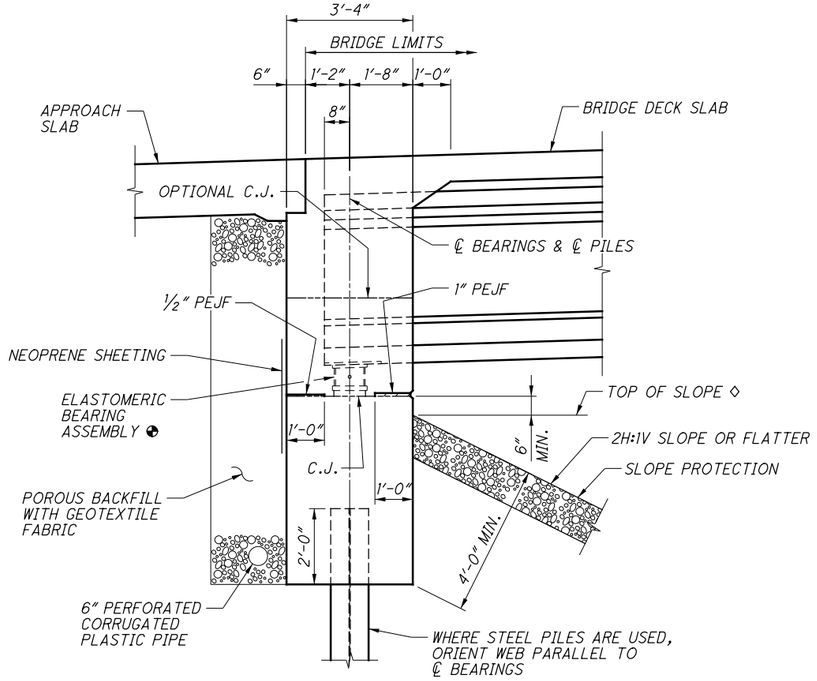
▽ = THE CONTRACTOR MAY ELECT TO SUBMIT AN ALTERNATE PROCEDURE THAT PLACES THE DIAPHRAGM AND DECK CONCRETE IN THE SAME POUR; HOWEVER, THIS REQUIRES APPROVAL OF THE ENGINEER.

PLACE VERTICAL BARS IN PILE CAP NORMAL TO ℄ BEARINGS. PLACE VERTICAL BARS IN DIAPHRAGM, INCLUDING S601 BARS, PARALLEL TO BEAMS. BAR SPACING, IN BOTH CASES, SHALL BE MEASURED PARALLEL TO ℄ BEARINGS.



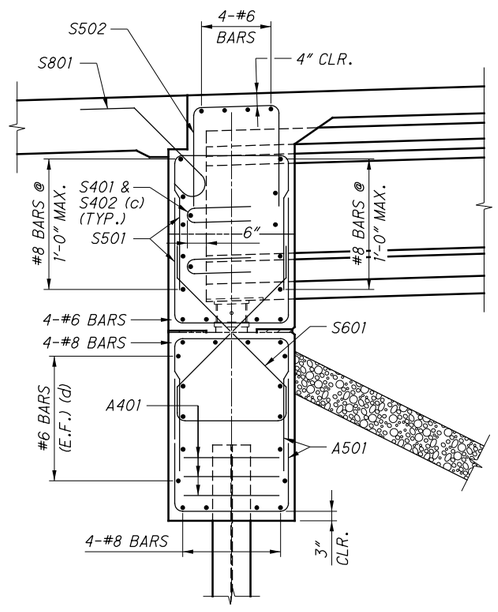
ELEVATION

(SHOWN WITH CONCRETE PARAPET AND NO SKEW)

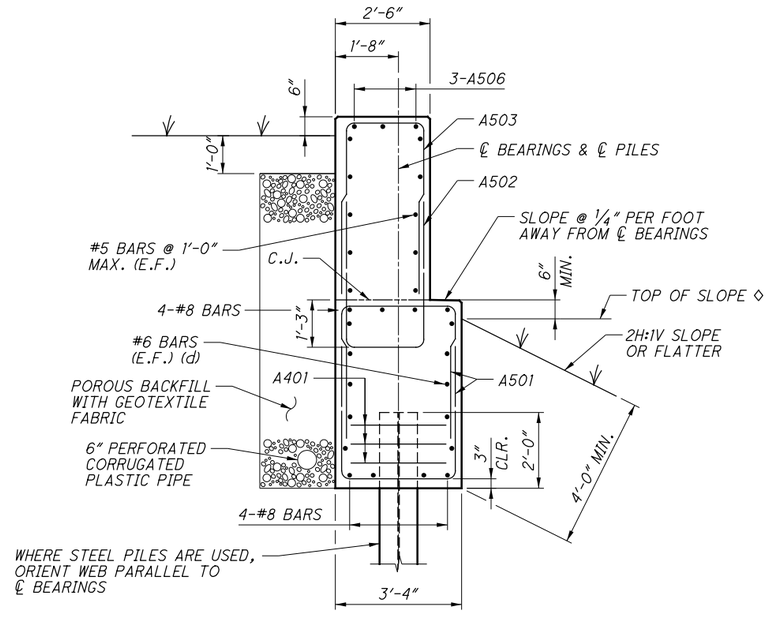


SECTION D-D (DIMENSIONS)

(DIMENSIONS SHOWN ARE FOR NO SKEW, DIMENSIONS WILL VARY WITH SKEW, SEE SHEET 7/9)



SECTION D-D (REINFORCING)



SECTION E-E

(DIMENSIONS SHOWN ARE FOR NO SKEW, DIMENSIONS WILL VARY WITH SKEW, SEE SHEET 7/9)

SHEET 6 NOTES AND LEGEND:

C.J. = CONSTRUCTION JOINT. REFER TO BDM SECTION 304.2.3 FOR DESIGN REQUIREMENTS.

PEJF = PREFORMED EXPANSION JOINT FILLER

E.F. = EACH FACE

N.F. = NEAR FACE

F.F. = FAR FACE

S.O. = SERIES OF

(a) = #8 BARS @ 1'-0" MAX. (N.F.) (TYP. BETWEEN BEAMS)

(b) = #5 BARS @ 1'-0" MAX. (N.F.) (TYP. @ FASCIAS)

(c) = 2-S401 & S402 BARS FOR BEAMS 54" OR LESS IN HEIGHT. 3-S401 & S402 BARS FOR BEAMS 60" OR GREATER IN HEIGHT. S401 & S402 BARS MAY BE MOVED TO ACCOMMODATE DRAPED STRANDS.

(d) = A MINIMUM OF 5-#6 BARS SHALL BE PLACED IN EACH SIDE FACE OF THE PILE CAP. THE BAR SPACING SHALL NOT EXCEED 1'-0".

◇ = TOP OF SLOPE: ON SUPERELEVATED STRUCTURES, A LATERALLY SLOPING "TOP OF SLOPE" MAY BE USED TO AVOID EXCESSIVELY LONG WINGWALLS.

◒ = SEE SHEET 8/9 FOR ELASTOMERIC BEARING ASSEMBLY DETAILS.

REINFORCING STEEL SHOWN IS MINIMUM. DESIGNER SHALL PROVIDE THE REINFORCEMENT REQUIRED FOR THE INDIVIDUAL STRUCTURE. REFER TO THE SUPPLEMENT FOR THIS DESIGN DATA SHEET FOR DESIGN METHODOLOGY AND EXAMPLE CALCULATIONS.

MINIMUM LAP LENGTHS FOR #5 VERTICAL BARS IN DIAPHRAGM AND PILE CAP SHALL BE 2'-5".

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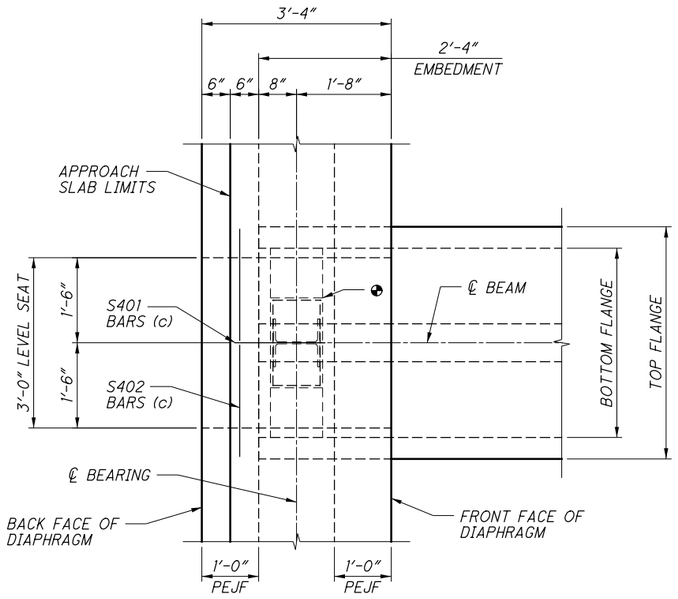
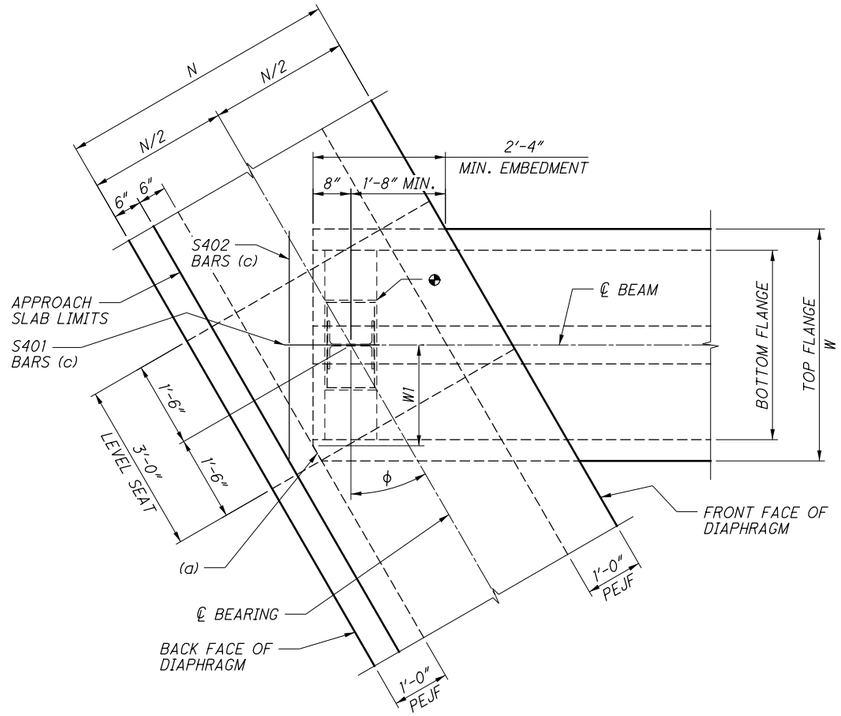
STANDARD DRAWING
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS



INTEGRAL ABUTMENT PARTIAL PLAN

(NO SKEW)
(WF BEAM SHOWN, OTHER BEAMS SIMILAR)



INTEGRAL ABUTMENT PARTIAL PLAN

(AT SKEWED ABUTMENT)
(WF BEAM SHOWN, MODIFIED AASHTO TYPE 4 BEAMS SIMILAR)

SHEET 7 NOTES AND LEGEND:

(a) = FOR WF BEAMS AND MODIFIED AASHTO TYPE 4 BEAMS, THE TOP FLANGE MAY BE CLIPPED. THE MAXIMUM CLIP DIMENSION, NORMAL TO ℄ BEAM, SHALL BE 6". DO NOT CLIP THE BOTTOM FLANGE.

(b) = FOR AASHTO TYPE 2, 3 & 4 BEAMS, DO NOT CLIP THE TOP AND BOTTOM FLANGES.

(c) = 2-S401 & S402 BARS FOR BEAMS 54" OR LESS IN HEIGHT. 3-S401 & S402 BARS FOR BEAMS 60" OR GREATER IN HEIGHT. S401 & S402 BARS MAY BE MOVED TO ACCOMMODATE DRAPED STRANDS. ROTATE S402 BARS AS NEEDED TO PROVIDE 2" MINIMUM CLEAR TO BACK FACE OF DIAPHRAGM.

N = DIAPHRAGM WIDTH FOR SKEWED BRIDGES

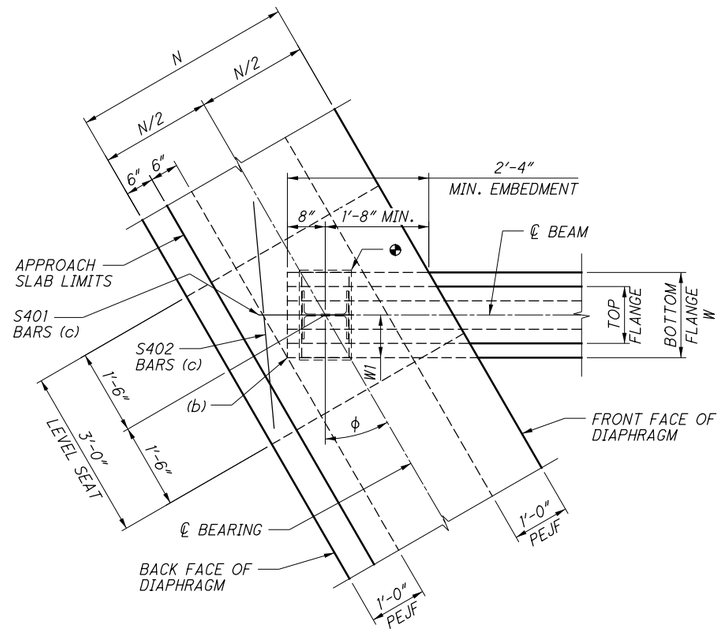
N/2 = LARGER OF [1'-8" + (W/2) x (TAN ϕ)] x COS ϕ
(8") x (COS ϕ) + (W1) x (SIN ϕ) + 1'-0"

W = TOP FLANGE WIDTH FOR WF BEAMS AND MODIFIED AASHTO TYPE 4 BEAMS; BOTTOM FLANGE WIDTH FOR AASHTO TYPE 2, 3 & 4 BEAMS

W1 = DISTANCE FROM ℄ BEAM TO EDGE OF TOP FLANGE, ACCOUNTING FOR CLIP, FOR WF BEAMS AND MODIFIED AASHTO TYPE 4 BEAMS; DISTANCE FROM ℄ BEAM TO EDGE OF BOTTOM FLANGE FOR AASHTO TYPE 2, 3 & 4 BEAMS

ϕ = SKEW ANGLE (TAKEN AS POSITIVE FOR LEFT FORWARD AND RIGHT FORWARD SKEWS)

◕ = SEE SHEET 8/9 FOR ELASTOMERIC BEARING ASSEMBLY DETAILS.



INTEGRAL ABUTMENT PARTIAL PLAN

(AT SKEWED ABUTMENT)
(AASHTO TYPE 2 BEAM SHOWN, AASHTO TYPE 3 & 4 BEAMS SIMILAR)

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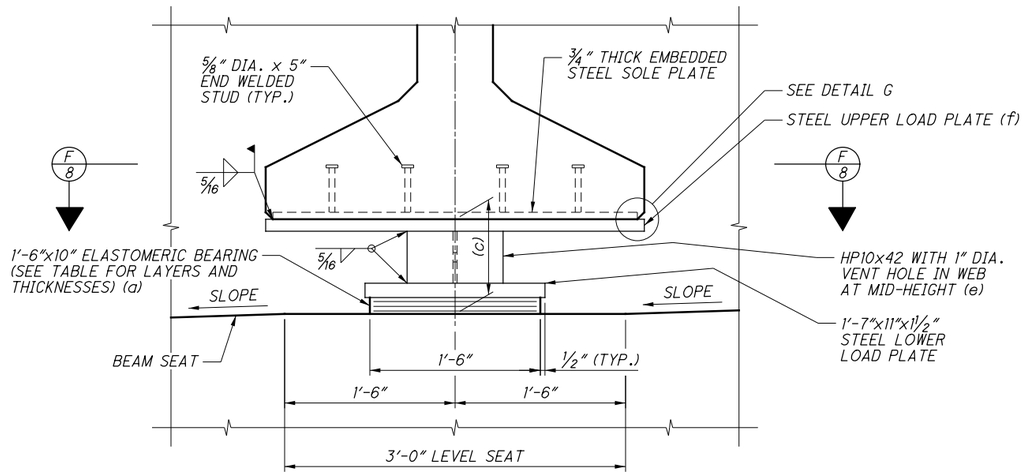
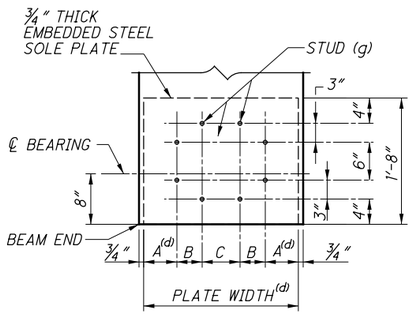
STANDARD DRAWING
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS



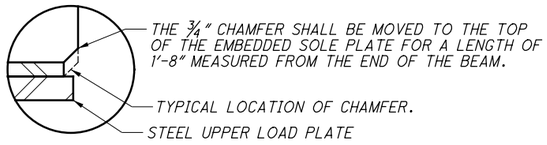
BEARING & SEAT DETAIL

(PEJF NOT SHOWN)



SECTION F-F

(EMBEDDED STEEL SOLE PLATE DETAILS)
(REMAINDER OF BEARING ASSEMBLY NOT SHOWN)



DETAIL G

BOTTOM FLANGE WIDTH	PLATE WIDTH	PLATE LENGTH
1'-6"	1'-6"	11"
1'-10"	1'-10"	11"
2'-2"	2'-2"	11"
3'-4"	3'-4"	11"

UPPER LOAD PLATE DIMENSIONS (f)

BOTTOM FLANGE WIDTH	PLATE WIDTH (d)	A(d)	B	C
1'-6"	1'-4 1/2"	3 1/4"	2"	6"
1'-10"	1'-8 1/2"	4 1/4"	4"	4"
2'-2"	2'-0 1/2"	5 1/4"	4"	6"
3'-4"	3'-2 1/2"	6 1/4"	8"	10"

SOLE PLATE DIMENSIONS

TOTAL STRUCTURE LENGTH (c/c ABUT. BRGS.)	INTERNAL ELASTOMER LAYER THICKNESS	EXTERNAL ELASTOMER LAYER THICKNESS	STEEL LAMINATE THICKNESS	NO. OF INTERNAL ELASTOMER LAYERS	NO. OF EXTERNAL ELASTOMER LAYERS	NO. OF STEEL LAMINATES	TOTAL BEARING THICKNESS
L <= 290'	0.412"	0.288"	0.0747"	3	1	3	1 3/4"
290' < L <= 400'	0.373"	0.261"	0.0747"	5	1	5	2 1/2"
400' < L <= 500'	0.400"	0.280"	0.0747"	6	1	6	3 1/8"

ELASTOMERIC BEARING DIMENSIONS (b)

SHEET 8 NOTES AND LEGEND:

(a) = THE BEARING SIZES SHOWN ON THIS DRAWING ARE BASED ON A MAXIMUM SERVICE DEAD LOAD REACTION OF 200 KIPS PER BEARING. THE DESIGNER SHALL CALCULATE THE ACTUAL DEAD LOAD REACTION, NOT INCLUDING FUTURE WEARING SURFACE. IF THE ACTUAL DEAD LOAD REACTION EXCEEDS 200 KIPS, THEN PROVIDE A SPECIAL DESIGN FOR THE ELASTOMERIC BEARINGS.

(b) = USE THE ELASTOMERIC BEARING DIMENSIONS FOR L <= 290', REGARDLESS OF ACTUAL TOTAL STRUCTURE LENGTH, IF ABUTMENT DIAPHRAGMS ARE PLACED BEFORE PIER DIAPHRAGMS. REFER TO BDM SECTION 702.6.1 FOR GUIDANCE REGARDING PLACEMENT OF ABUTMENT DIAPHRAGMS AND STANDARD DRAWING PSID-1-13, SHEET 10/10, FOR GUIDANCE REGARDING PLACEMENT OF PIER DIAPHRAGMS.

(c) = 10" MIN. @ ℄ BEARING

(d) = IN ORDER TO ALLOW FOR FIT-UP, THE PLATE WIDTH MAY BE DECREASED BY 3/8". DIMENSION "A" SHALL BE ADJUSTED ACCORDINGLY.

(e) = CUT THE TOP OF THE HP10x42 ON A SLOPE. THE SLOPE SHALL MATCH THE LOCAL TANGENT OF THE BEAM AT THE ℄ BEARING PRIOR TO PLACEMENT OF THE DECK.

(f) = THICKNESS (T) OF UPPER LOAD PLATE SHALL BE CALCULATED AS FOLLOWS (ROUND UP TO NEAREST 1/8"):

$T = [0.5*(B-0.8*bf)*\sqrt{2*Pu/(Fy*B*N)}\,] - 3/4" >= 3/4"$

WHERE

B = UPPER LOAD PLATE WIDTH (NORMAL TO ℄ BEAM) (IN.)
N = UPPER LOAD PLATE LENGTH (PARALLEL TO ℄ BEAM) (IN.)
bf = FLANGE WIDTH OF HP SHAPE (IN.)
Pu = FACTORED DEAD LOAD REACTION (KIPS) (WITHOUT FWS)
Fy = YIELD STRENGTH (KSI)

(g) = END WELDED STUDS MAY BE RELOCATED IN ORDER TO AVOID INTERFERING WITH REINFORCING STEEL AND PRESTRESSING STRANDS. THE DESIGNER SHALL SHOW THE EXACT LOCATION OF THE STUDS ON THE PLANS.

ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 60 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.

VULCANIZE THE STEEL LOWER LOAD PLATE TO THE ELASTOMER DURING THE MOLDING PROCESS.

PER CMS 516.03, GALVANIZE STEEL COMPONENTS OF BEARING ASSEMBLIES (UPPER & LOWER LOAD PLATES AND HP SHAPES).

UPPER & LOWER LOAD PLATES AND HP SHAPES SHALL BE CONSIDERED COMPONENTS OF THE ELASTOMERIC BEARING ASSEMBLY FOR PAYMENT. THE 3/4" THICK EMBEDDED STEEL SOLE PLATE IS INCIDENTAL TO THE COST OF THE I-BEAMS.

DESIGN SPECIFICATIONS:

THE ELASTMERIC ASSEMBLY CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

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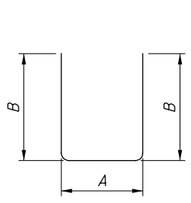
STANDARD DRAWING
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS

REINFORCING STEEL LIST					
MARK	LENGTH	TYPE	A	B	C
A401	9'-6"	3	2'-6"	2'-0"	
A501	*	1	3'-0" (NO SKEW) (N-4")/COS ϕ (SKEWED)	*	
A502	*	1	2'-2"	*	
A503	SERIES *	1	2'-2"	SERIES *	
A504	*	1	2'-2"	*	
A505	*	3	2'-2"	*	
A506	*	19	*	*	*
S401	4'-1"	24	4½"	1'-8"	
S402	4'-0"	STR			
S403	*	1	*	8"	
S501	*	1	3'-0" (NO SKEW) (N-4")/COS ϕ (SKEWED)	*	
S502	*	1	2'-6" (NO SKEW) (N-10")/COS ϕ (SKEWED)	*	
S601	*	26	3'-0" (NO SKEW) (N-4")/COS ϕ (SKEWED)		
S801	*	18			

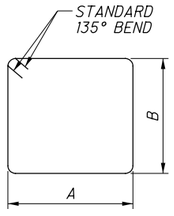
* = DIMENSION VARIES

N = DIAPHRAGM WIDTH FOR SKEWED BRIDGES.
SEE SHEET 7/9.

ϕ = SKEW ANGLE



TYPE-1



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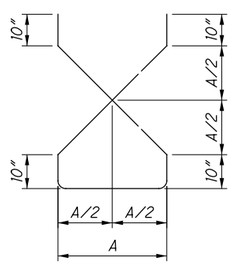
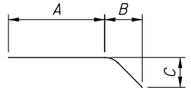
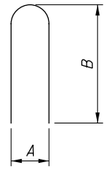


TYPE-26

TYPE-18



TYPE-19



TYPE-24

GENERAL NOTES:

LIMITATIONS:

THIS STANDARD DRAWING PROVIDES PREFERRED AND/ OR TYPICAL DETAILS FOR INTEGRAL ABUTMENTS. TREAT THE ABUTMENT DIMENSIONS, CONSTRUCTION JOINTS AND REINFORCING SHOWN IN THIS DRAWING AS MINIMUM VALUES AND A PERFORM A COMPLETE DESIGN FOR THE ABUTMENT. DO NOT REFERENCE THESE DRAWINGS IN THE CONTRACT PLANS AND DO NOT USE AS STANDALONE CONSTRUCTION DRAWINGS.

PROVIDE ALL INFORMATION REQUIRED TO CONSTRUCT THE ABUTMENT IN THE PROJECT PLANS.

INTEGRAL ABUTMENT DETAILS ARE INTENDED FOR USE ON STRAIGHT OR CURVED ALIGNMENT WITH TANGENT SUPERSTRUCTURES WITH A MAXIMUM SKEW OF 30°. AT 0° SKEW, THE MAXIMUM PERMISSIBLE EXPANSION LENGTH FOR INTEGRAL PRESTRESSED CONCRETE I-BEAM BRIDGES IS 333' (500' TOTAL STRUCTURE LENGTH, ASSUMING 2/3 MOVEMENT COULD OCCUR IN ONE DIRECTION). AT 30° SKEW, THE MAXIMUM PERMISSIBLE EXPANSION LENGTH FOR INTEGRAL PRESTRESSED CONCRETE I-BEAM BRIDGES IS 167' (250' TOTAL STRUCTURE LENGTH, ASSUMING 2/3 MOVEMENT COULD OCCUR IN ONE DIRECTION). FOR SKEWS BETWEEN 0° AND 30°, STRAIGHT LINE INTERPOLATION SHALL BE USED TO DETERMINE THE MAXIMUM PERMISSIBLE EXPANSION LENGTH.

INTEGRAL ABUTMENTS SHALL BE SUPPORTED ON A SINGLE ROW OF PILES. ALLOWABLE PILE TYPES AND SIZES, ALONG WITH MINIMUM FRICTION PILE LENGTHS, ARE SHOWN IN THE TABLE BELOW.

PILE SIZE	MINIMUM LENGTH, FT.	
	CLAY	SAND
HP10x42	30	25
HP12x53	35	25
HP14x73	40	30
12" CIP	45	30
14" CIP	50	35

IF THE MINIMUM LENGTH SHOWN IN THE TABLE ABOVE CANNOT BE OBTAINED, THEN THE DESIGNER SHALL PROVIDE CALCULATIONS TO SUPPORT THE USE OF A SHORTER LENGTH, AND, IN THE CASE OF PILES DRIVEN TO REFUSAL ON BEDROCK, REFER TO BDM SECTION 305.3.5.7. THE CALCULATIONS SHALL DEMONSTRATE THAT ADEQUATE LATERAL RESISTANCE IS AVAILABLE, THAT NO LATERAL DEFLECTION OCCURS AT THE BOTTOM OF THE PILES, AND THAT THE COMBINED AXIAL COMPRESSION AND FLEXURE IN THE PILES SATISFIES THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

PILE TYPES AND SIZES OTHER THAN THOSE SHOWN IN THE TABLE ABOVE SHALL NOT BE USED UNLESS APPROVED BY THE DEPARTMENT. THE MAXIMUM ALLOWABLE PILE SPACING IS 8'. THE MINIMUM ALLOWABLE PILE SPACING IS 3 PILE DIAMETERS. THE PILE DIAMETER FOR AN HP SHAPE SHALL BE TAKEN AS THE DIAGONAL DISTANCE BETWEEN FLANGE TIPS.

THE HEIGHT OF THE PILE CAP SHALL NOT EXCEED 7'-6".

INTEGRAL ABUTMENTS SHALL BE SUPPORTED ON AT LEAST 4 PILES. FOR PHASED CONSTRUCTION PROJECTS, EACH PHASE SHALL BE SUPPORTED ON AT LEAST 4 PILES.

INTEGRAL ABUTMENTS SHALL NOT BE USED WHERE THERE ARE CONCERNS ABOUT SETTLEMENT OR DIFFERENTIAL SETTLEMENT.

DESIGN SPECIFICATIONS:

THIS STRUCTURE SHALL CONFORM TO THE LATEST "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93 LIVE LOAD
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 36 OR 50 - YIELD STRENGTH 36 OR 50 KSI (THE DESIGNER SHALL SPECIFY THE REQUIRED STEEL GRADE AND YIELD STRENGTH IN THE BRIDGE GENERAL NOTES)
STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

TEMPORARY STABILITY FOR DECK PLACEMENT:

REFER TO STANDARD DRAWING PSID-1-13, SHEET 10/10, FOR CONTRACTOR REQUIREMENTS.

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
07-20-18
DATE
ADMINISTRATOR

REVISIONS

ICD-2-18

STANDARD DRAWING
INTEGRAL CONSTRUCTION DETAILS FOR PRESTRESSED CONCRETE I-BEAM BRIDGES ON FLEXIBLE ABUTMENTS