

Melinda L. McGrath
Deputy Executive Director/
Chief Engineer

Brenda Znachko
Deputy Executive Director/
Administration



Steven K. Edwards
Director
Office of Intermodal Planning

Willie Huff
Director
Office of Enforcement

Larry L. "Butch" Brown
Executive Director

P. O. Box 1850 / Jackson, Mississippi 39215-1850 / Telephone (601) 359-7001 / FAX (601) 359-7110 / GoMDOT.com

Inter-Departmental Memorandum

Date: April 30, 2010
To: Design Team Leaders
From: Assistant Roadway Design Division Engineer
Amy Mood
Subject: Bridge End Pavement

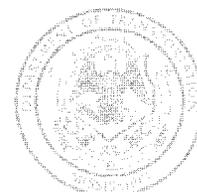
Attached are new special design sheets for bridge end slabs showing a 1.5" overlay on the bridge end slab. These special design sheets should be used in all plans printed in the future. It is not necessary to revise printed plans except when requested by the district. All pay items required for bridge end slabs are listed below. Two new pay items have been set up for the railing. A pay item for saw cut is required with the new bridge end pavement as well as the transverse grooving pay item. The quantity for sawing and sealing will be the length of the transverse joint between the bridge end slab and the full depth asphalt pavement.

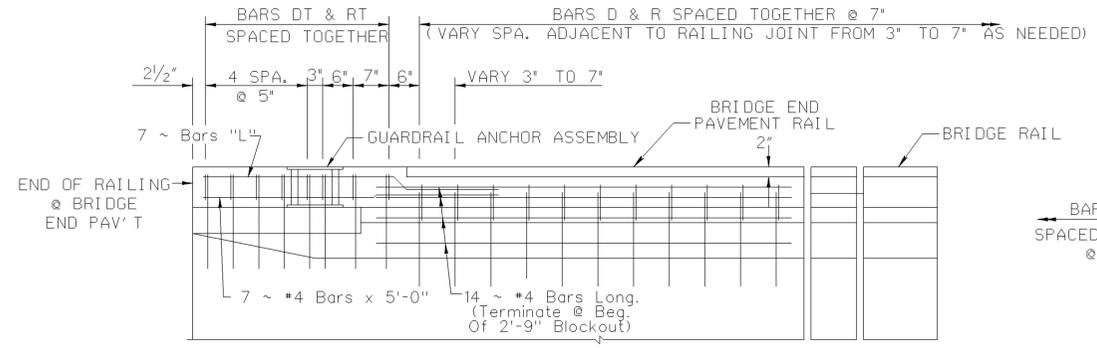
907-413-E001	Sawing and Sealing Transverse Joints in Asphalt Pavement LF
501-E001	Expansion Joints, Without Dowels LF
501-K001	Transverse Grooving SY
502-A001	Reinforced Cement Concrete Bridge End Pavement SY
615-A018	Concrete Bridge End Barrier, 33.5" LF
615-A019	Concrete Bridge End Barrier, 43.5" LF

If the top lift of asphalt is anything other than 1.5", the lift shall be transitioned to 1.5" across the bridge end slab.

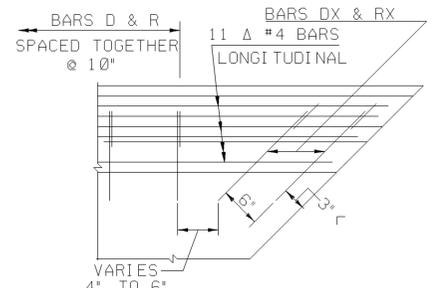
Attachments

pc: Roadway Design Division Engineer (Reese)
Special Projects Engineer (Boteler)
Quality Control Engineer (Reeves)
Roadway Design Section Engineers
Construction Division (Funchess)
Assistant District Engineers-Preconstruction
Active Consultants



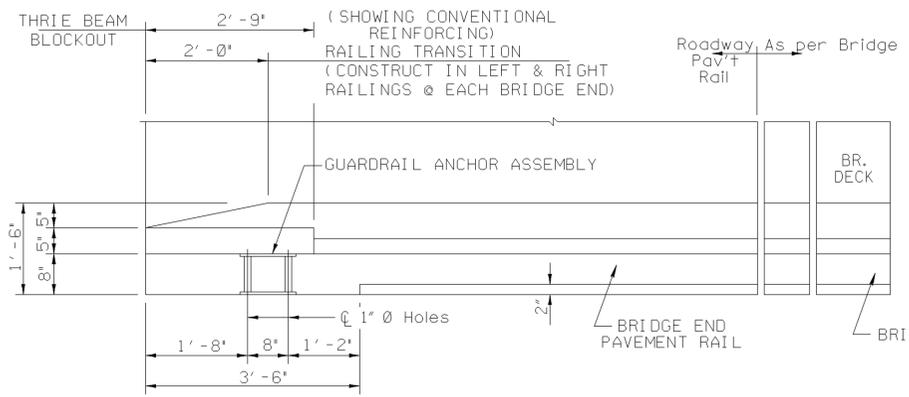


PART PLAN OF LEFT RAILING



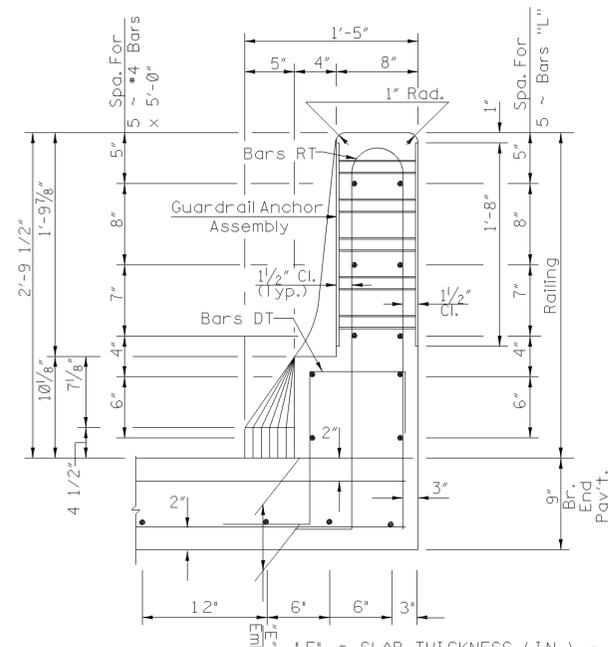
SKEWED PART PLAN OF LEFT RAILING AT BRIDGE END WALL

(SHOWING CONVENTIONAL REINFORCING. SEE CONSTRUCTION NOTES FOR DETAILS OF OPTIONAL WELDED WIRE FABRIC.)

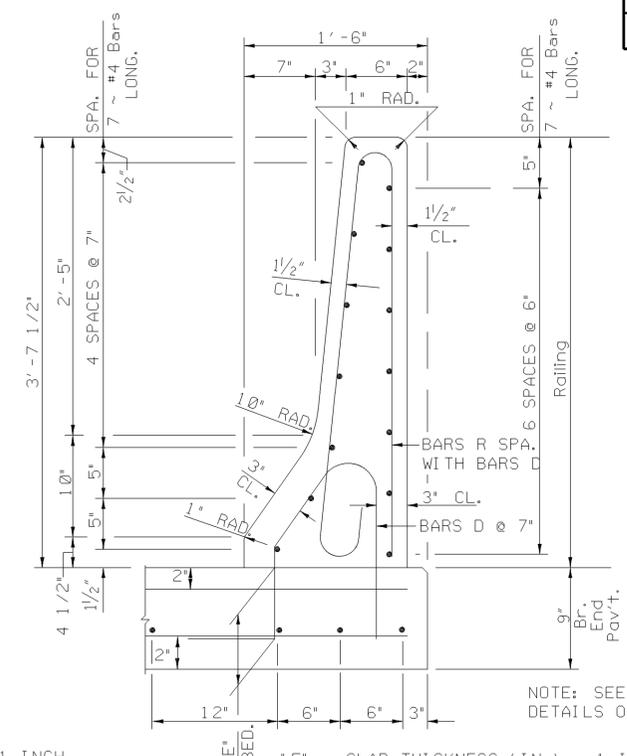


PART PLAN OF RIGHT RAILING

(SHOWING CONCRETE DIMENSIONS)

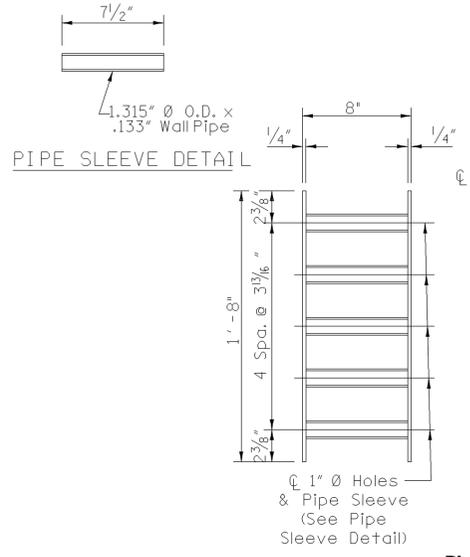


END ELEVATION OF RAILING



TYPICAL SECTION OF RAILING

NOTE: SEE SHEET BE-1 FOR STEEL DETAILS OF BRIDGE END PAVEMENT



PIPE SLEEVE DETAIL

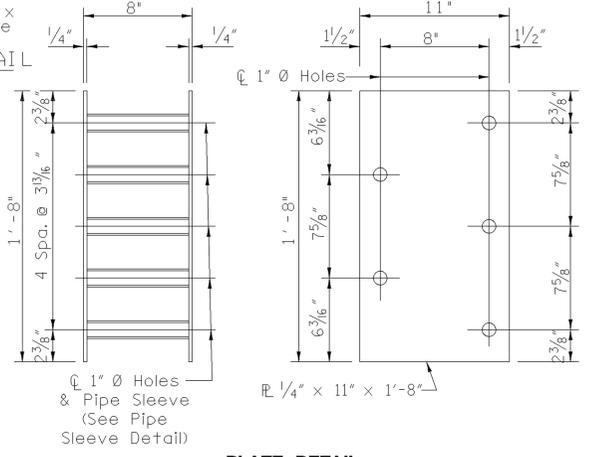
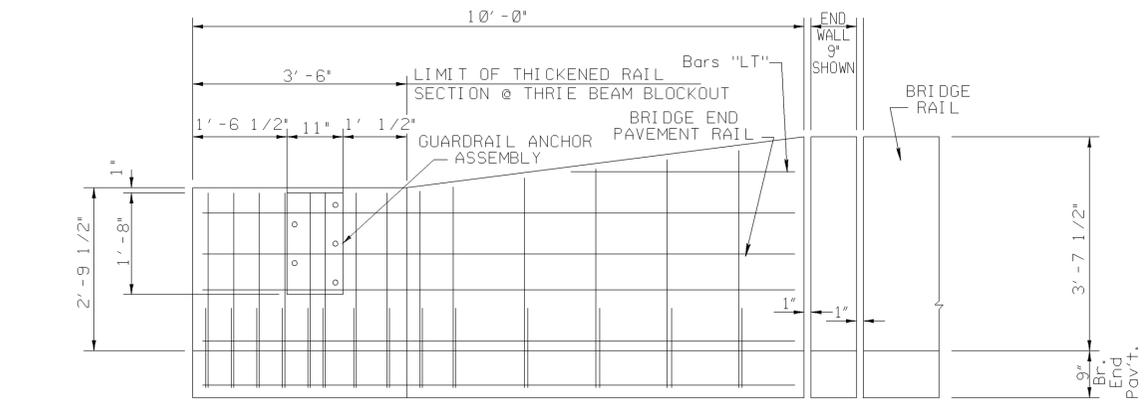


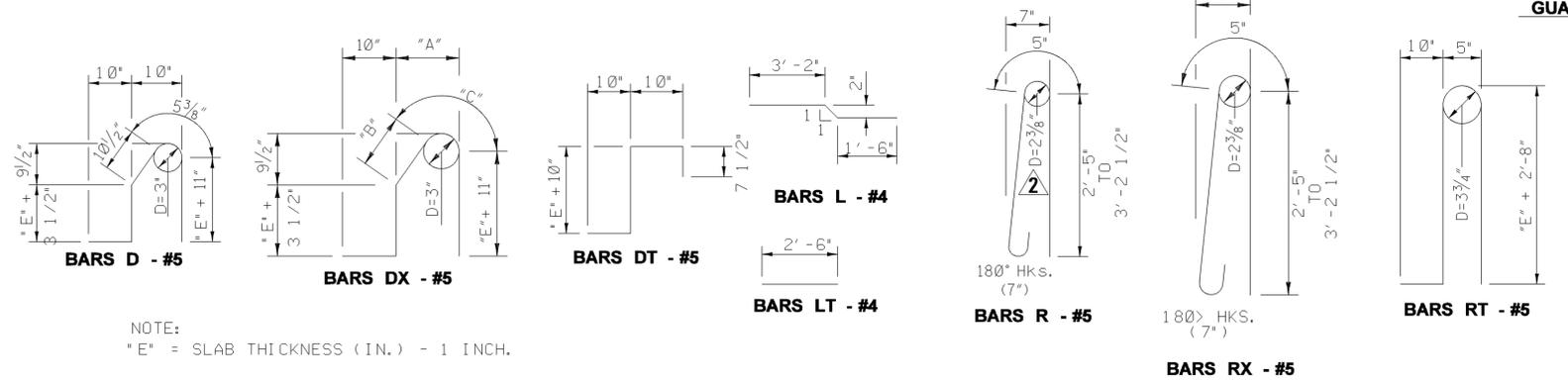
PLATE DETAIL

GUARDRAIL ANCHOR ASSEMBLY

SKEW (DEG)	BARS DX ~ #5			BARS RX ~ #5
	"A"	"B"	"C"	"F"
0	10"	10 1/2"	5 3/8"	7"
5	10"	10 1/2"	5 3/8"	7"
10	10"	10 1/2"	5 3/8"	7"
15	10 1/4"	10 1/2"	5 1/4"	7 1/4"
20	10 1/2"	10 3/4"	5 1/4"	7 1/2"
25	11"	11 1/4"	5 3/8"	7 3/4"
30	11 1/2"	11 1/2"	5 1/8"	8"
35	1' - 0 1/4"	1' - 0 1/4"	5"	8 1/2"
40	1' - 1"	1' - 0 3/4"	4 7/8"	9"
45	1' - 2"	1' - 1 3/4"	4 13/16"	9 3/4"
50	1' - 3 1/2"	1' - 3"	4 5/8"	10 3/4"
55	1' - 5 1/2"	1' - 4 3/4"	4 1/2"	1 - 0 1/4"



PART ELEVATION OF OUTSIDE FACE OF RAILING



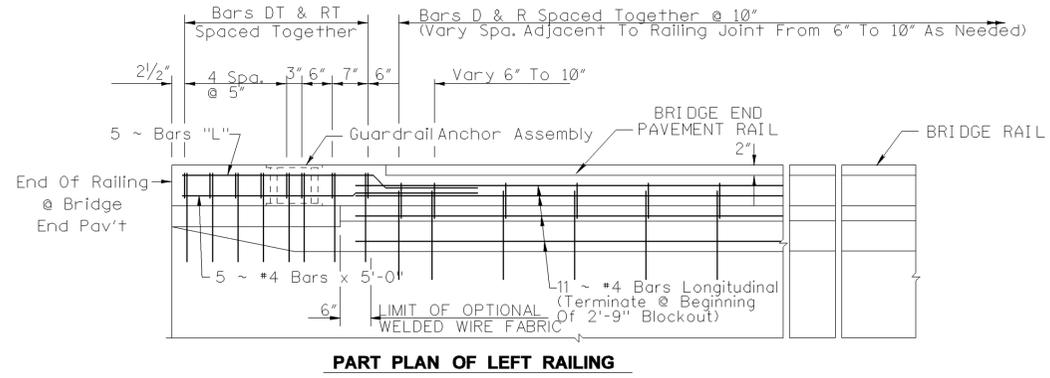
BAR BENDING DETAILS
Dimensions Are Out To Out

CONSTRUCTION NOTES:
FABRICATE GUARDRAIL ANCHOR ASSEMBLIES BY TACK WELDING EACH END OF PIPE SLEEVES TO PLATES. PLATES SHALL BE ASTM A 36 STEEL. PIPES SHALL BE ASTM A 120. GALVANIZE COMPLETE ASSEMBLIES AFTER FABRICATION PER ASTM A153.
ATTACH ASSEMBLIES SECURELY TO FORMS PRIOR TO POURING RAILING CONCRETE TO ASSURE THAT EXPOSED SURFACES OF THE ASSEMBLIES WILL BE FLUSH WITH CONCRETE SURFACES. GUARDRAIL ANCHOR ASSEMBLIES SHALL BE INSTALLED IN BOTH LEFT AND RIGHT RAILINGS AT EACH END OF ALL BRIDGES.
BRIDGE END PAVEMENT RAIL SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH SECTION 813 OF THE STANDARD SPECIFICATIONS. 4" DIAMETER WEEP HOLE TO BE PLACED IN BRIDGE END PAVEMENT RAIL WHERE REQUIRED TO REDUCE PONDING.
IF TOP LIFT IS ANYTHING OTHER THAN 1.5", THE LIFT SHALL BE TRANSITIONED TO 1.5" ACROSS THE LENGTH OF THE BRIDGE END SLAB.

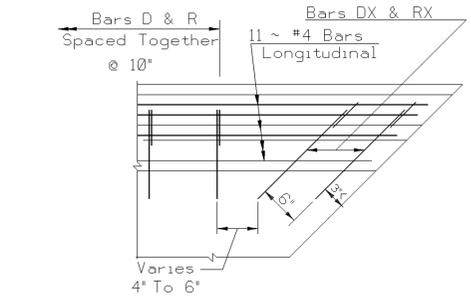
DESIGN DATA
SPECIFICATIONS..... A. A. S. H. T. O. 1992 & INT. THRU 1995
CONCRETE..... CLASS "AA" (4,000 PSI)
REINFORCING..... ASTM A 615 GRADE 60 (FY = 60 KSI)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION			
43.5" BRIDGE END PAVEMENT RAIL			
DATE	DESIGN TEAM	spell	CHECKED reeves DATE 3-17-10
BY	REVISION	FILENAME:	BE-PR-1C.dgn
WORKING NUMBER	BE-PR-1C	SHEET NUMBER	

4/12/2010 1:20 PM BE-PR-1C.DGN PLAN DIVISION MISSISSIPPI DEPARTMENT OF TRANSPORTATION

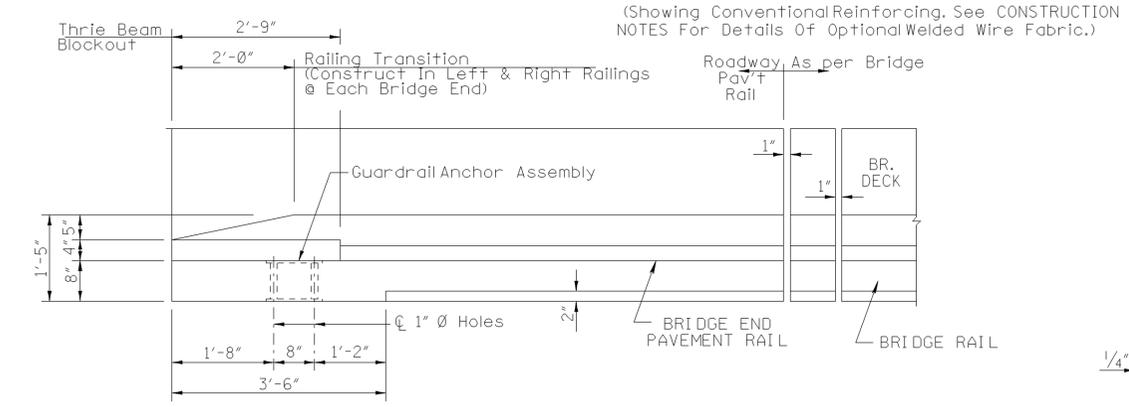


PART PLAN OF LEFT RAILING



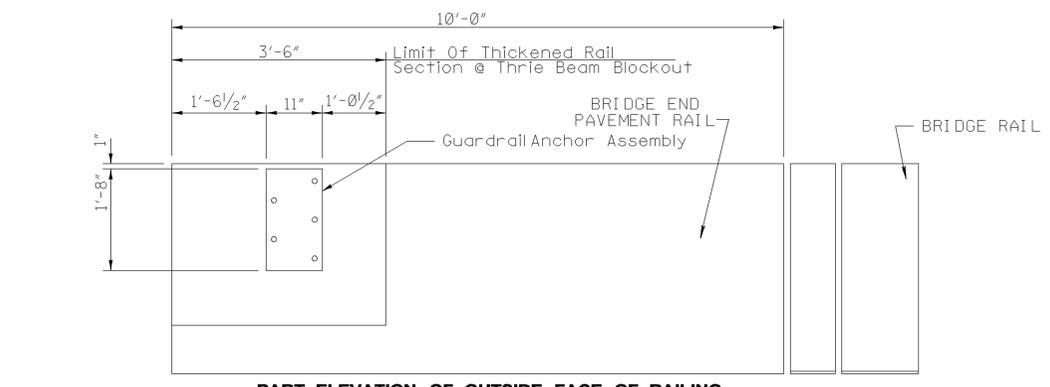
SKEWED PART PLAN OF LEFT RAILING AT BRIDGE END WALL

(Showing Conventional Reinforcing. See CONSTRUCTION NOTES For Details Of Optional Welded Wire Fabric.)

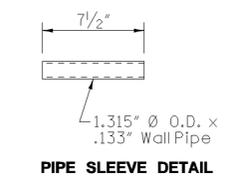


PART PLAN OF RIGHT RAILING

(Showing Concrete Dimensions)



PART ELEVATION OF OUTSIDE FACE OF RAILING



PIPE SLEEVE DETAIL

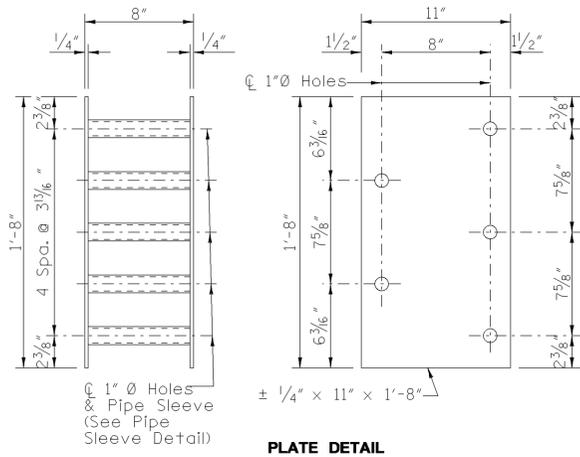
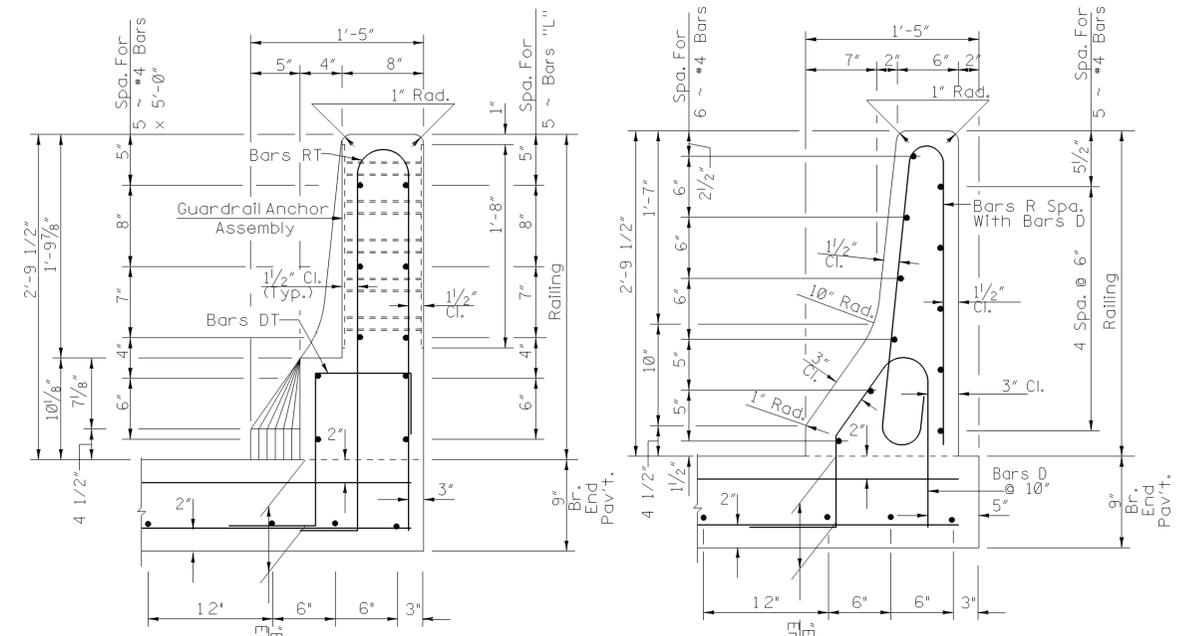


PLATE DETAIL

GUARDRAIL ANCHOR ASSEMBLY



END ELEVATION OF RAILING

TYPICAL SECTION OF RAILING

NOTE: SEE SHEET BE-1 FOR STEEL DETAILS OF BRIDGE END PAVEMENT

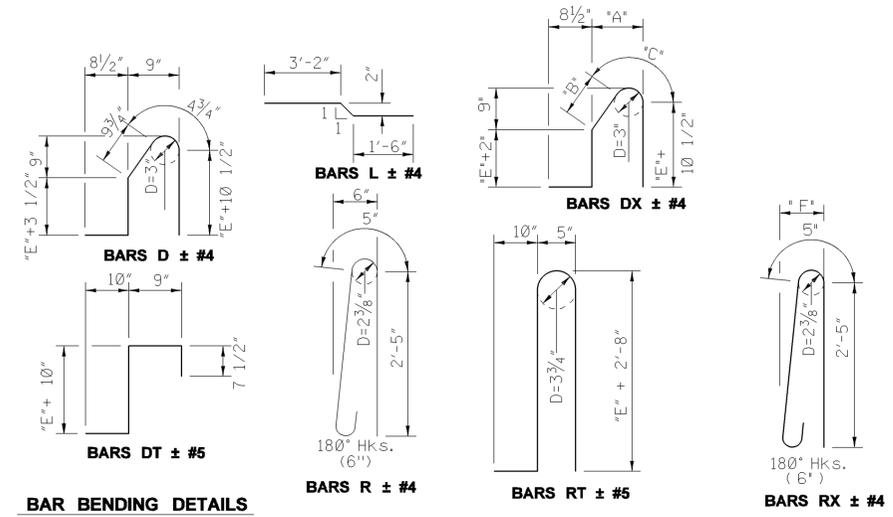
NOTE: "E" = Slab Thickness (In.) - 1 Inch.

CONSTRUCTION NOTES:

- Fabricate Guardrail Anchor Assemblies By Tack Welding
- Each End Of Pipe Sleeves To Plates. Plates Shall Be ASTM A 36 Steel. Pipes Shall Be ASTM A 120. Galvanize Complete Assemblies After Fabrication Per ASTM A 153.
- Attach Assemblies Securely To Forms Prior To Pouring Railing Concrete To Assure That Exposed Surfaces Of The Assemblies Will Be Flush With Concrete Surfaces.
- GUARDRAIL ANCHOR ASSEMBLIES SHALL BE INSTALLED IN BOTH LEFT AND RIGHT RAILINGS AT EACH END OF ALL BRIDGES.
- Welded Wire Fabric Meeting The Requirements Of ASTM A 497 And Details Shown On This Sheet May Be Used As An Option To Conventional Railing Reinforcing. Longitudinal Wires Shall Be D8 Spaced As Shown In The BAR BENDING DETAILS And Vertical Wires Shall Be D8 Spaced At 4".
- Welded Wire Fabric Shall Not Be Used In The 2'-9" Thrie Beam Blockout Reinforcement For The 2'-9" Thrie Beam Blockout Shall Consist Of Conventional Reinforcing As Shown In Details On This Sheet. The Longitudinal Bars Of The Conventional Reinforcing Shall Extend Beyond The 2'-9" Thrie Beam Blockout Into The Welded Wire Fabric A Minimum Distance Of 1'-6".
- Bridge End Pavement Rail Shall Be Constructed And Paid For In Accordance With Section 813 Of The Standard Specifications.
- 4" DIAMETER WEEP HOLE TO BE PLACED IN BRIDGE END PAVEMENT RAIL WHERE REQUIRED TO REDUCE PONDING.

DESIGN DATA

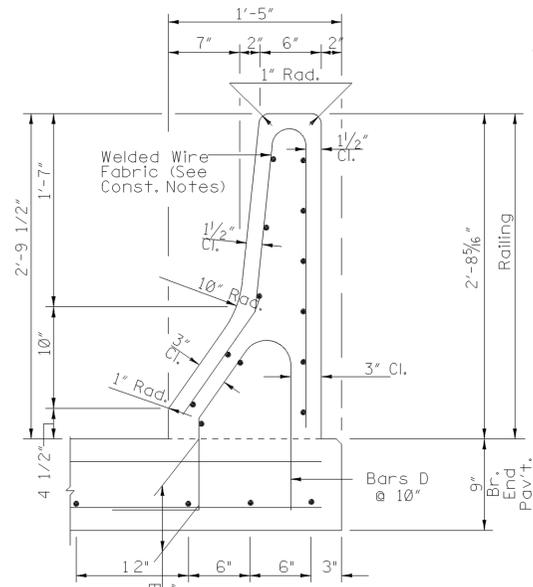
Specifications.....A.A.S.H.T.O. 1992 & Int. Thru 1995
Concrete.....Class "AA"(4,000 psi)
Reinforcing.....ASTM A 615 Grade 60 (Fy = 60 ksi)



BAR BENDING DETAILS

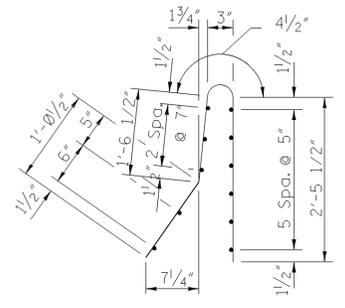
Dimensions Are Out To Out NOTE: "E" = Slab Thickness (In.) - 1 Inch.

SKEW (DEG)	BARS DX ~ #4			BARS RX ~ #4	
	"A"	"B"	"C"	"E"	"F"
0	9"	9 3/4"	5"	6"	
5	9"	9 3/4"	5"	6"	
10	9"	9 3/4"	5"	6"	
15	9 1/4"	10"	5"	6 1/4"	
20	9 1/2"	10"	5"	6 1/4"	
25	10"	10 1/2"	5"	6 1/2"	
30	10 1/4"	10 1/2"	5"	7"	
35	11"	11 1/4"	4 3/4"	7 1/4"	
40	11 3/4"	11 3/4"	4 3/4"	7 3/4"	
45	1'-0 1/4"	1'-0 3/4"	4 1/2"	8 1/2"	
50	1'-2"	1'-1 3/4"	4 1/2"	9 1/4"	
55	1'-3 3/4"	1'-2 1/2"	4 1/2"	10 1/2"	



TYPICAL SECTION OF RAILING

Showing Optional Welded Wire Fabric



WELDED WIRE FABRIC

(Optional - See CONSTRUCTION NOTES)

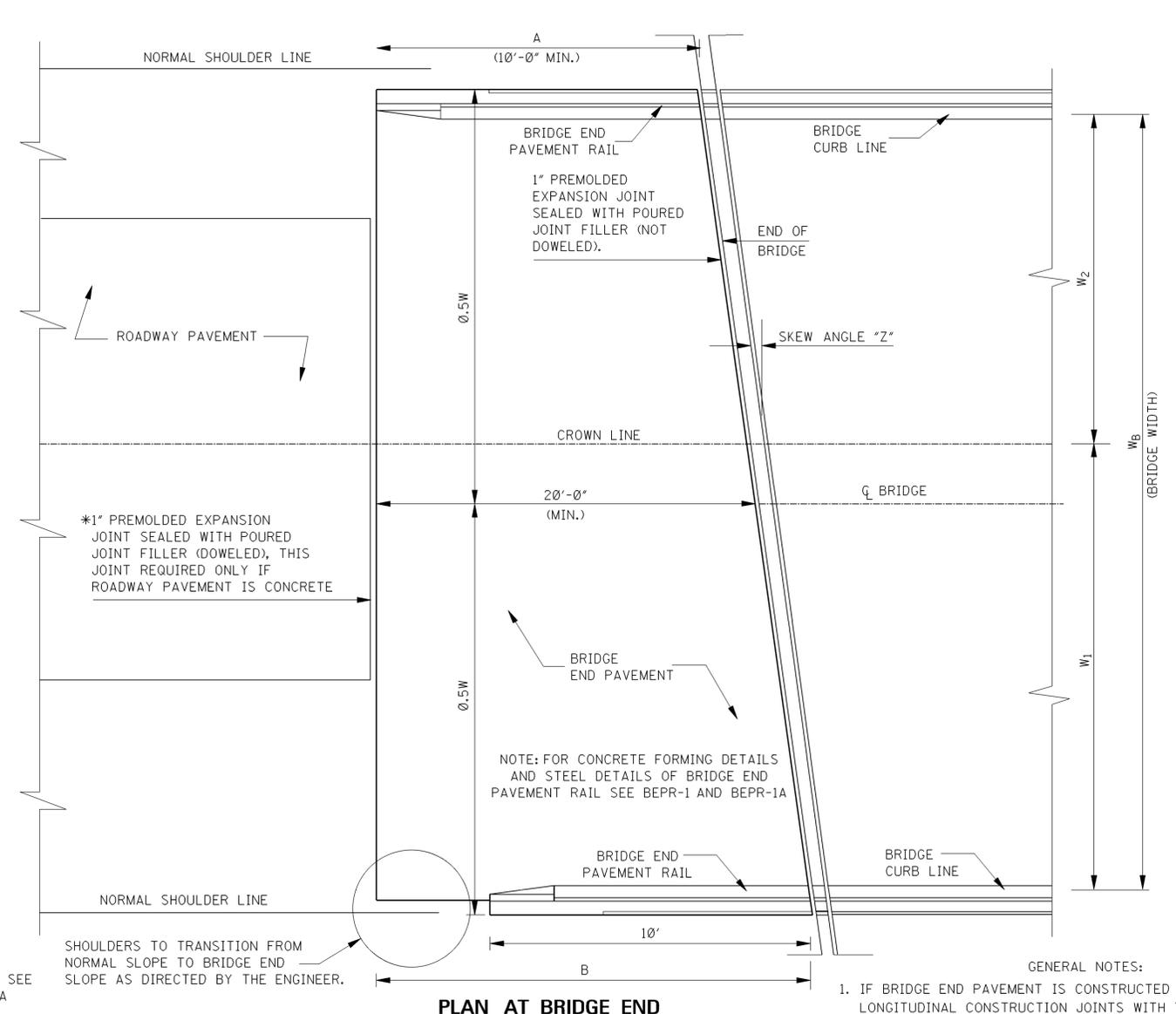
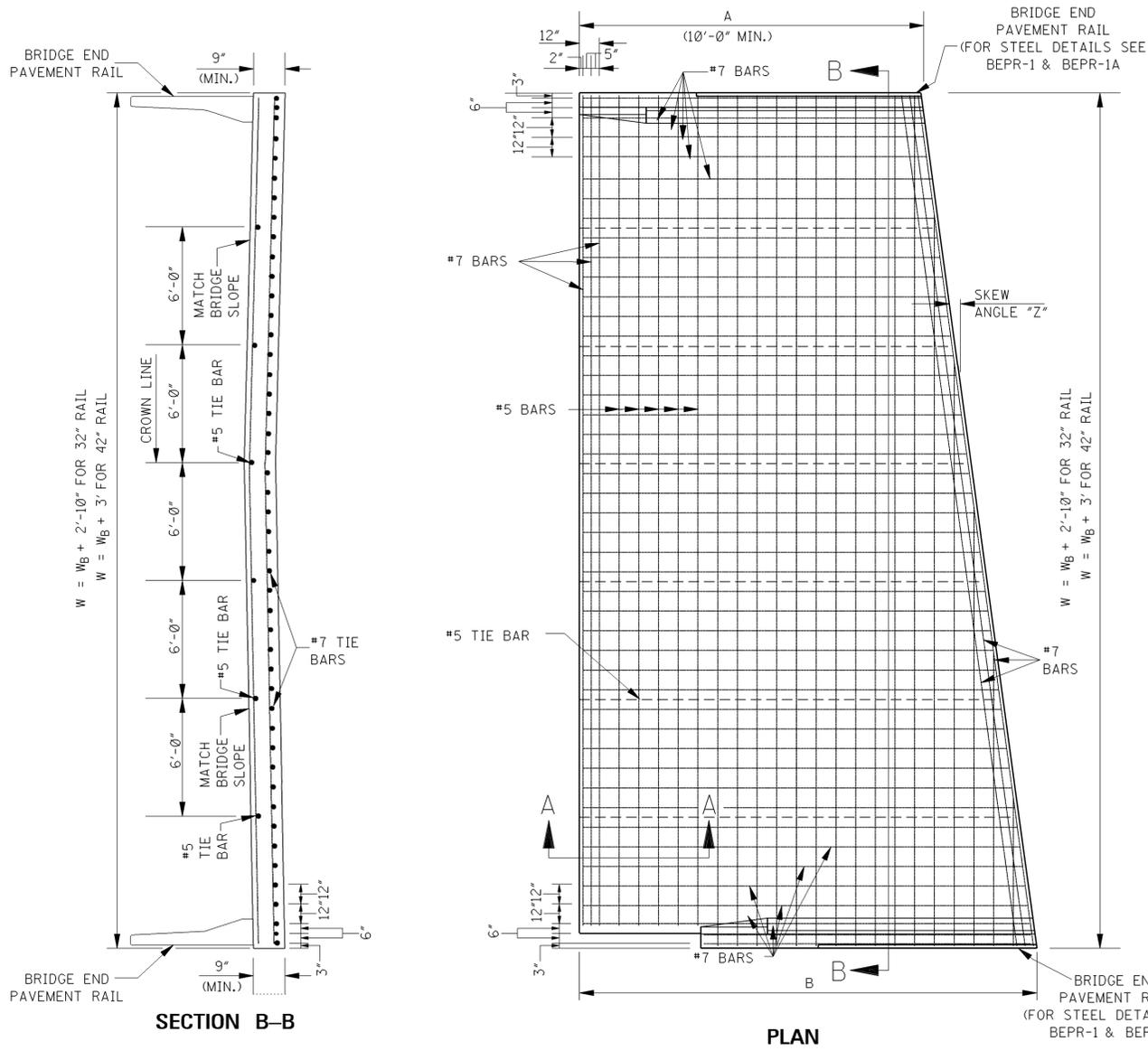
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

33.5" BRIDGE END PAVEMENT RAIL

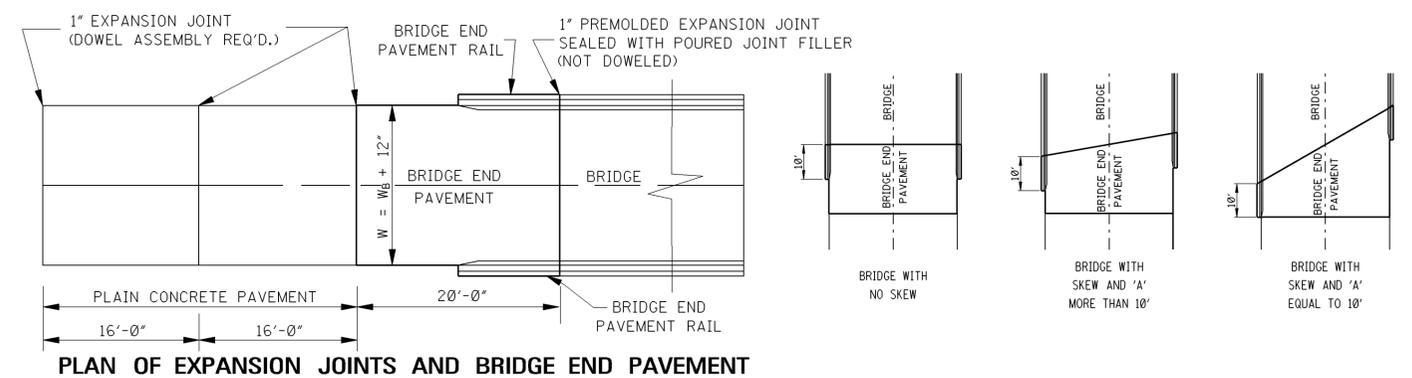
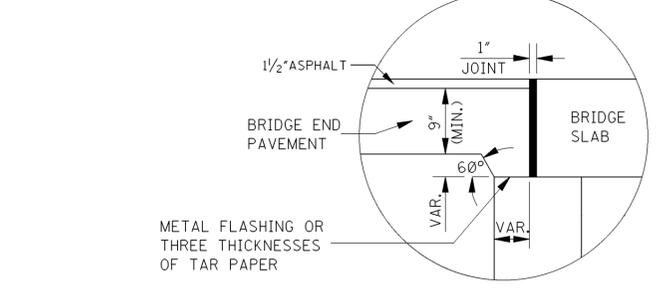
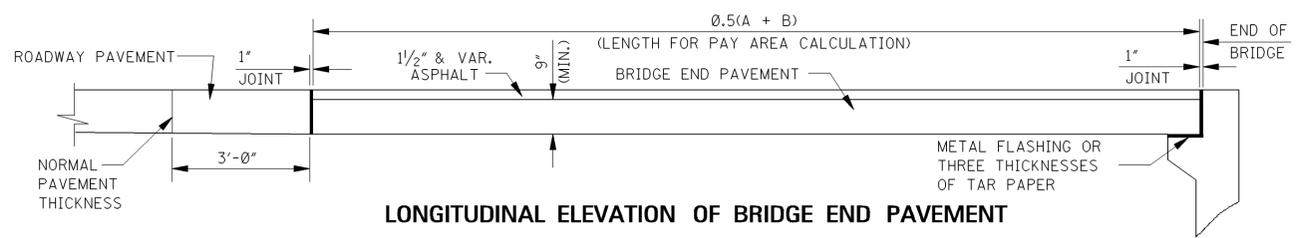
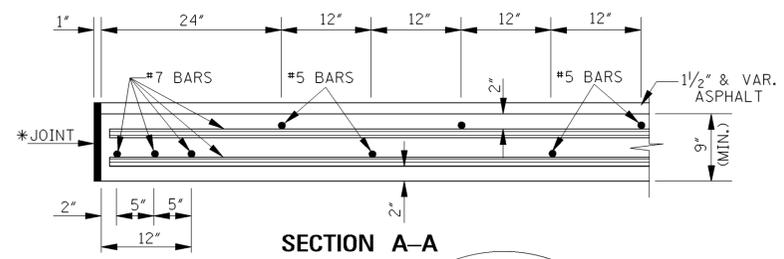
WORKING NUMBER	BE-PR-1B
SHEET NUMBER	

DATE: _____ BY: _____

DESIGN TEAM: spell CHECKED: reeves DATE: 03-17-10



- GENERAL NOTES:
- IF BRIDGE END PAVEMENT IS CONSTRUCTED IN MORE THAN ONE SECTION, LONGITUDINAL CONSTRUCTION JOINTS WITH TIE BARS WILL BE USED. TIE BARS WILL BE #5 BARS, 30" LONG AND SPACED 30" O.C. SUCH CONSTRUCTION WILL BE USED WHERE INDICATED ON PLANS.
 - DIMENSIONS "A" & "B" ARE BASED ON A MID-LENGTH OF 20'-0". EXCEPT IN NO CASE SHALL "A" BE LESS THAN 10'-0".
 - SEE QUANTITY SECTION OF PLANS FOR DIMENSIONS "W", "W ", "W ", "A", "B", SKEW ANGLE "Z" AND QUANTITIES.
 - SPACING OF OUTER LONGITUDINAL EDGE BARS AND TIE BARS MAY BE ADJUSTED TO MEET VARIOUS WIDTHS ("W") OF BRIDGE END PAVEMENT. SPACINGS SHOWN ARE FOR A BRIDGE WIDTH OF 40'-0".
 - REINFORCEMENT (DEFORMED) MAY BE FURNISHED FULL LENGTH OR MAY BE LAPPED. IF BARS ARE LAPPED THEY SHALL BE LAPPED NOT LESS THAN 30 DIAMETERS.
 - IF TOP LIFT IS ANYTHING OTHER THAN 1.5", THE LIFT SHALL BE TRANSITIONED TO 1.5" ACROSS THE LENGTH OF THE BRIDGE END SLAB.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
BRIDGE END PAVEMENT WITH RAIL AND OVERLAY	
WORKING NUMBER	BE-1C
DATE	FILENAME: BE-1C.DGN
DESIGN TEAM	SPELL CHECKED REEVES DATE 03/17/10

4/12/2010 2:26 PM BE-1C.DGN