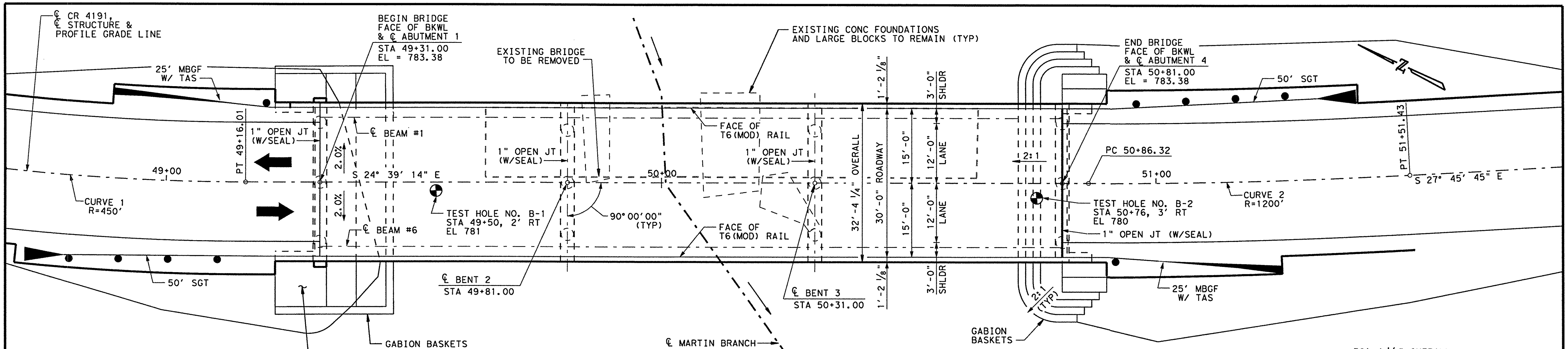


PLAN

CURVE DATA

CR 4191 CURVE 1
PI = 48+91.63   E = 9,978.70   N = 9,806.56
DELTA = 6° 12' 49.31" (LT)
T = 24.43
L = 48.80
R = 450.00
PC = 48+67.20   E = 9,970.97   N = 9,829.73
PT = 49+16.01   E = 9,988.88   N = 9,784.36

CURVE DATA

CR 4191 CURVE 2
PI = 51+18.88   E = 10,073.51   N = 9,599.98
DELTA = 3° 06' 30.39" (LT)
T = 32.56
L = 65.10
R = 1,200.00
PC = 50+86.32   E = 10,059.93   N = 9,629.57
PT = 51+51.42   E = 10,088.68   N = 9,571.16

HYDRAULIC DATA

10 YEAR DESIGN FREQUENCY
DRAINAGE AREA = 7.67 SQ MI

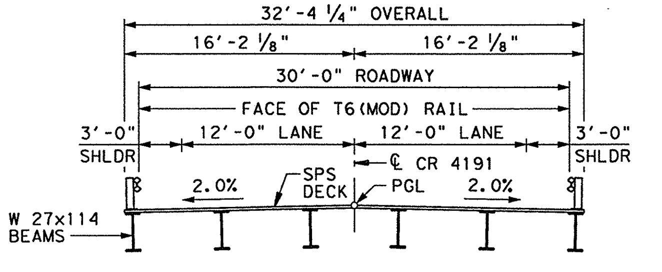
Q_{10} = 2,780 CFS Q_{100} = 5,740 CFS
V_{10} = 5.0 FT/SEC V_{100} = 6.3 FT/SEC
HW_{10} = 776.27 FT HW_{100} = 779.88 FT

MARK A. STEVES
66862

9-7-06

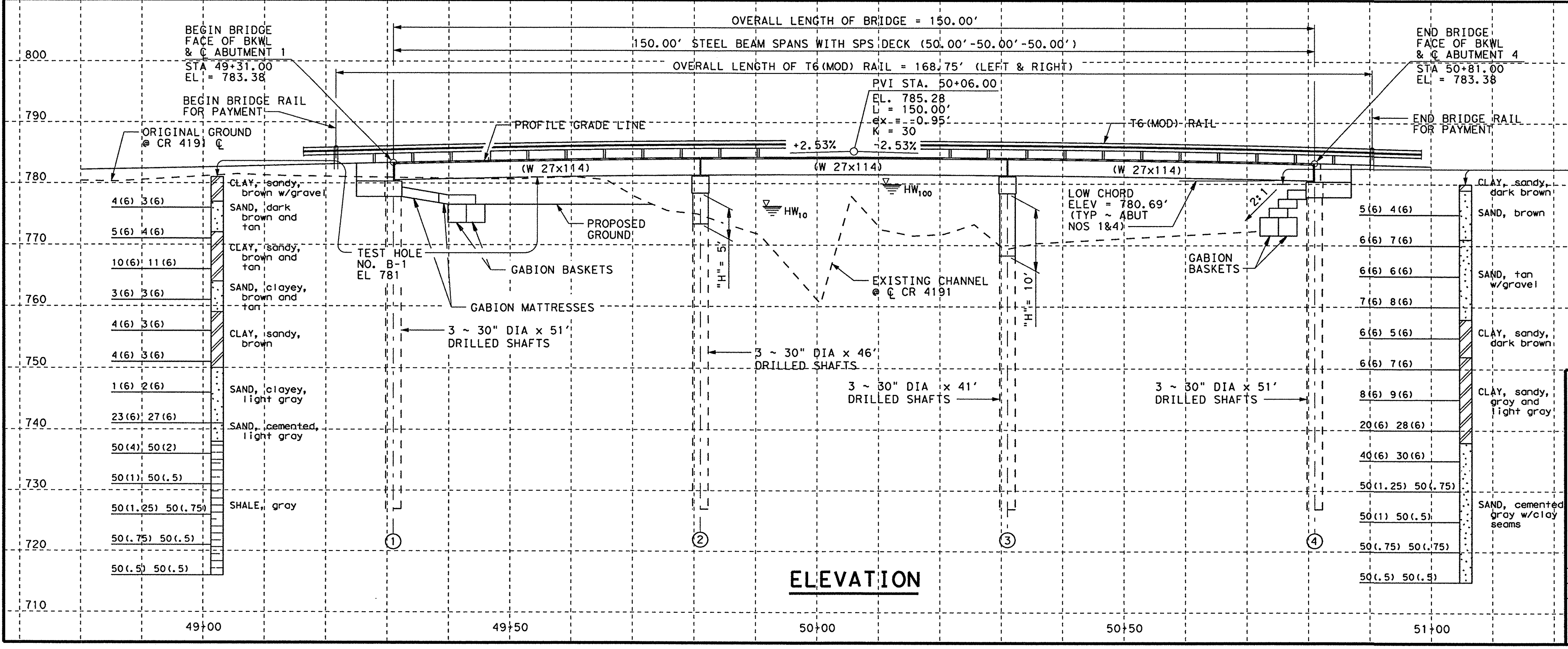
RACHEL C. RUPERTO
95872

9/7/06



TYPICAL SECTION

NBI NO. 02-249-0-AA03-10-001
DESIGN SPEED = N/A
ADT(1999) = 270 VPD
ADT(2019) = 320 VPD
RDWY FUNCT CLS = RURAL LOCAL



ELEVATION

SEE "GABION / ROCK RIPRAP LAYOUT & DETAILS" SHEET FOR DETAILS NOT SHOWN.

HL93 LOADING

Texas Department of Transportation
Bridge Division
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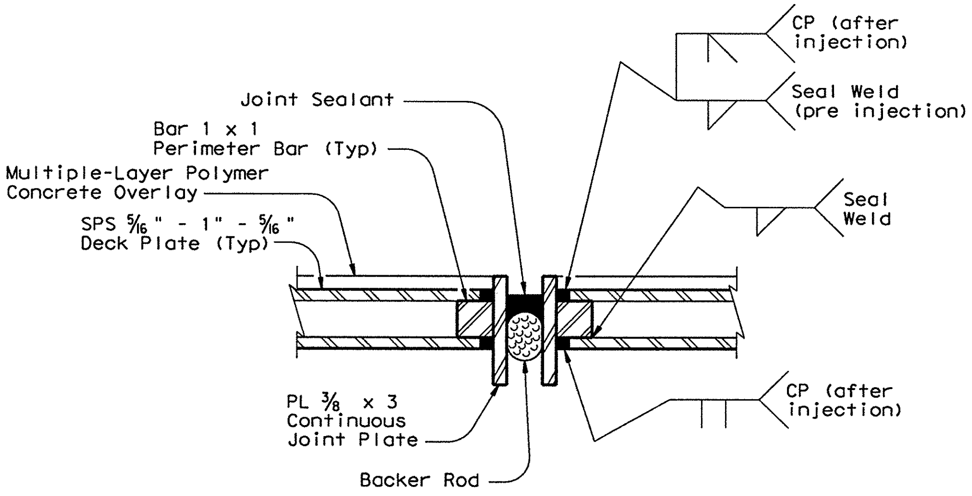
BRIDGE LAYOUT

MARTIN BRANCH BRIDGE

SCALE: 1"=20'

FILE: 6689ly01.dgn	DN: TJR	CK: LCP	DW: PMS	CK: LCP
ORIG DATE: JAN 2006	DIST	FED REG	FEDERAL AID PROJECT ●	SHEET
REVISIONS	FW	6	BR 2002 (843)	X34
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	WISE	0902	20	072	CR 4191

DN: CK: DW: MAS CK: MAS
DATE: 7/2006 NODE:
PATH: 6689LY01.DGN
ACTIVE FILE LEVEL DISPLAYED



SEALED JOINT NOTES:

Blast clean entire contact area between sealant and plate (SSPC-SP10) before installing sealant. Light brush blast and thoroughly clean all dust and debris from concrete surfaces in contact with joint sealant before application of Silicone Seal.

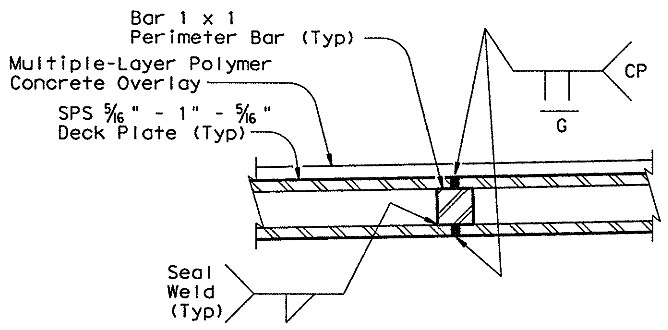
Set top of backer rod 1" below top of Joint Plate or Abutment Backwall. Backer rod must be compatible with joint sealant. Use of multiple pieces to create a backer rod cross section is not permitted. Top of backer rod must be convex as shown.

Use Class 7 joint sealant that conforms to DMS-6310. Install sealant in accordance with the Manufacturer's recommendations. Sealant will be placed while ambient temperature is between 55° and 80° and is rising.

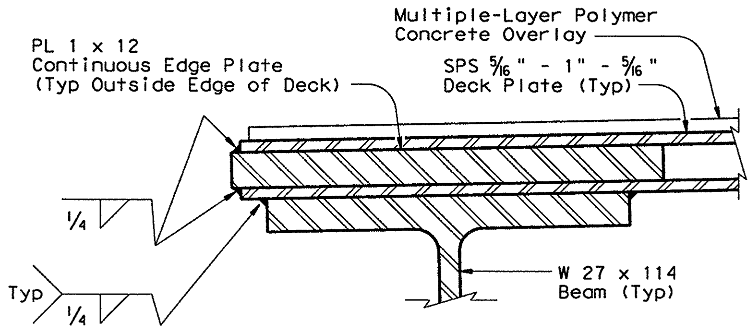
Extend backer rod and sealant to within 3" of outside edge of bridge deck.

TYPICAL SECTION THRU SEALED JOINT

(Showing typical Sealed Joint at Interior Bents. Sealed Joint at Abutments shall be similar.)

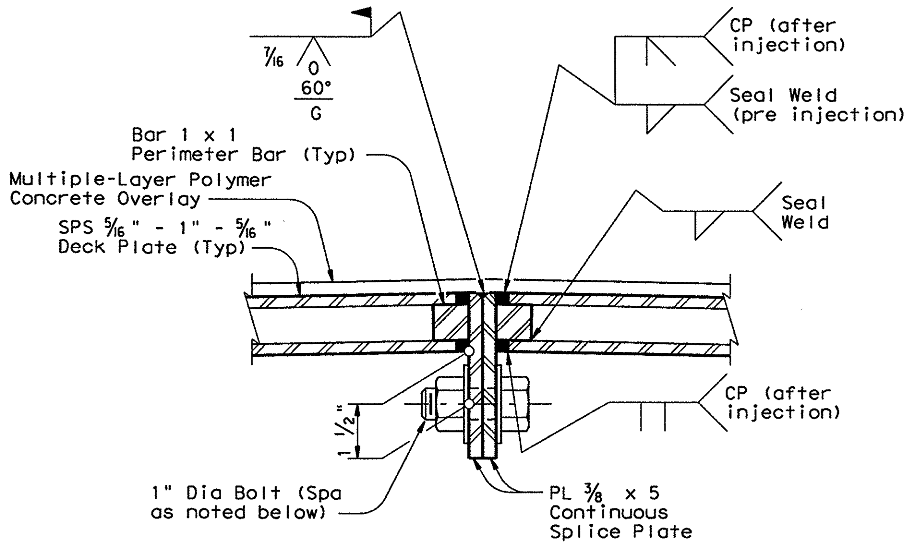


TYPICAL TRANSVERSE SECTION THRU SHOP SPLICE

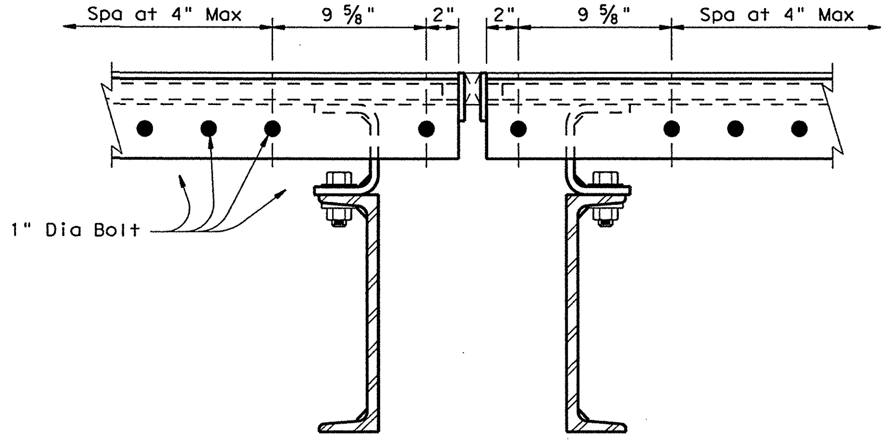


TYPICAL TRANSVERSE SECTION THRU BEAM TO DECK CONNECTION

Outside Beam shown. Beam to Deck Plate weld typical at all locations.

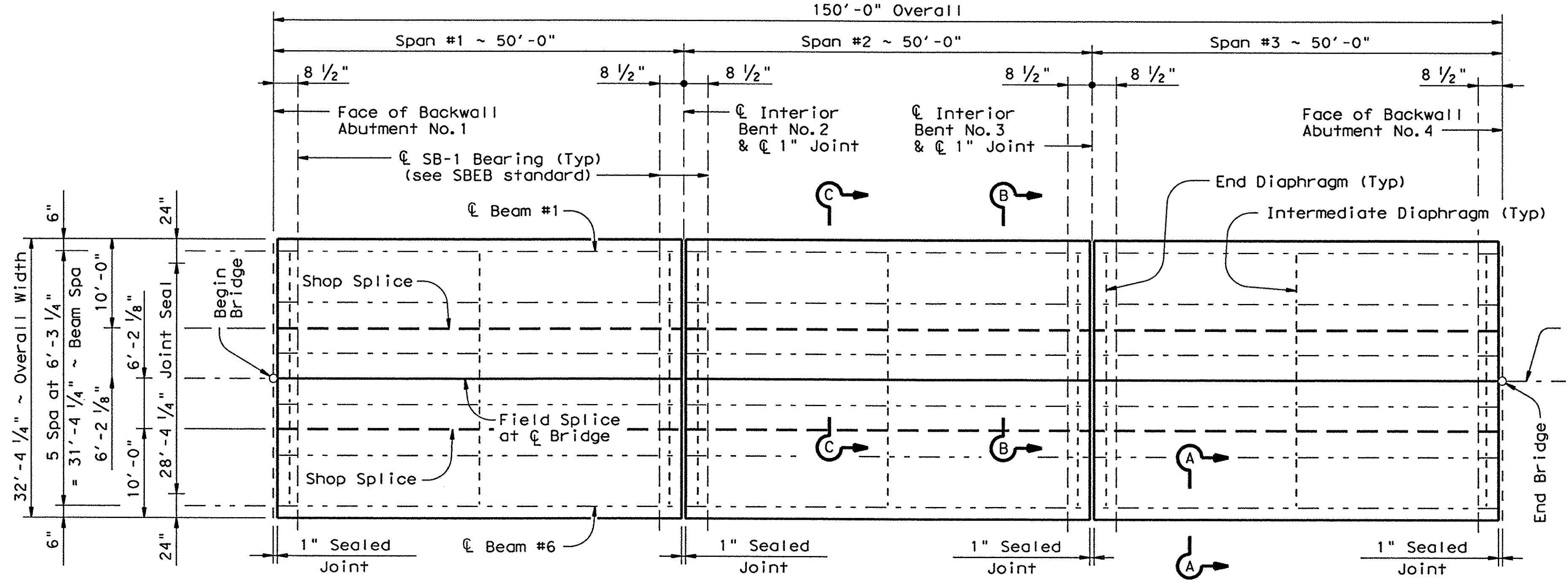


TYPICAL TRANSVERSE SECTION



TYPICAL LONGITUDINAL SECTION AT END DIAPHRAGMS

TYPICAL DETAILS OF FIELD SPLICE



PLAN

LEVELS DISPLAYED

COMMENTS:

JOHN M. HOLT
68237

9-7-06

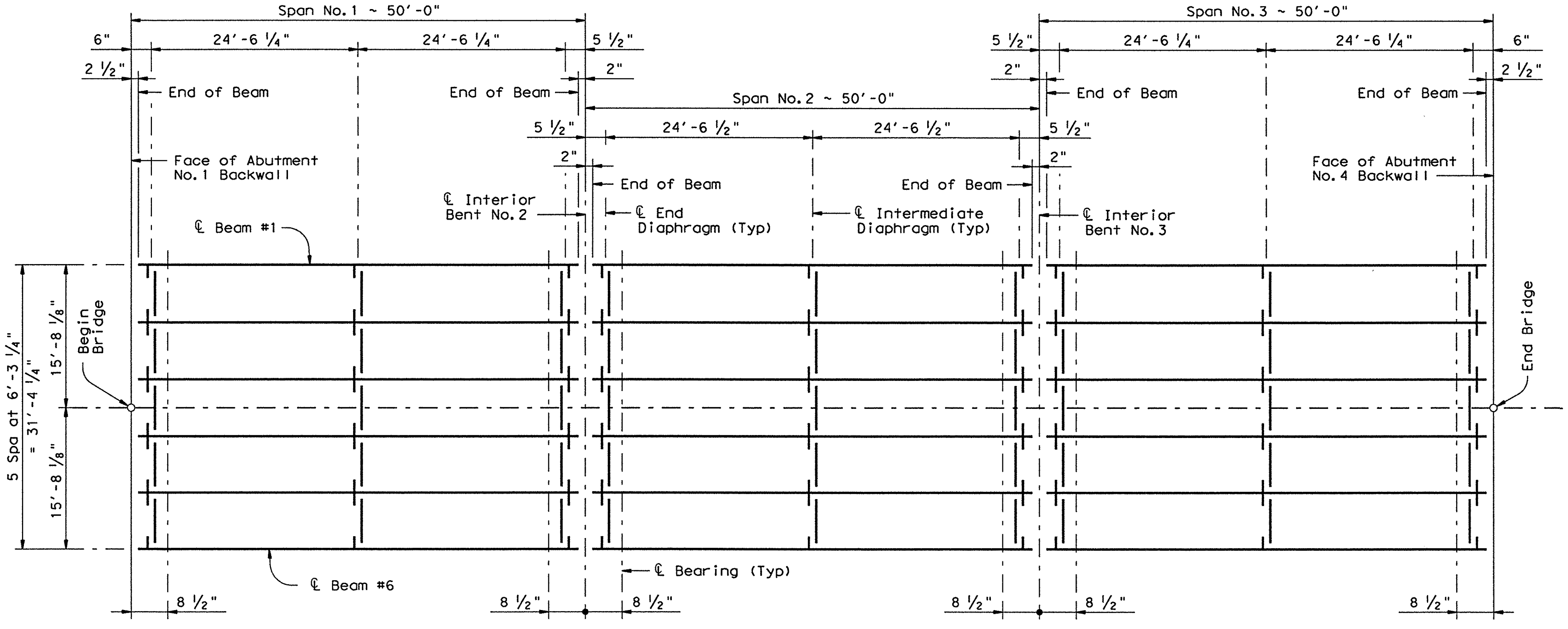
HL 93 LOADING SHEET 1 OF 4

Texas Department of Transportation
Bridge Division

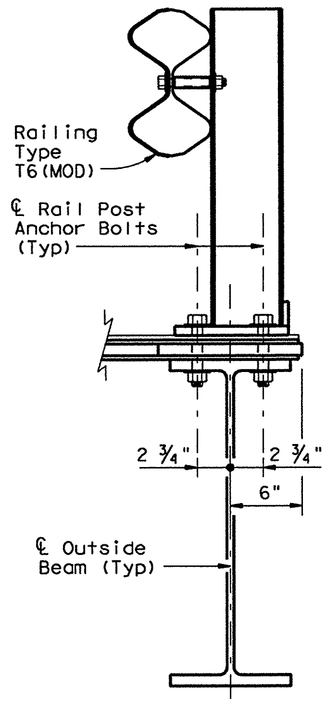
50.00' STEEL BEAM SPANS W/ SPS DECK

MARTIN BRANCH BRIDGE

FILE: 6689os01.dgn	DN: AD		CK: JMH	DW: TxDOT		CK: MAS
© TxDOT JULY 2006	DISTRICT	FEDERAL AID PROJECT				SHEET
REVISIONS	02	BR 2002(843)				3B
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	WISE		0902	20	072	CR4191

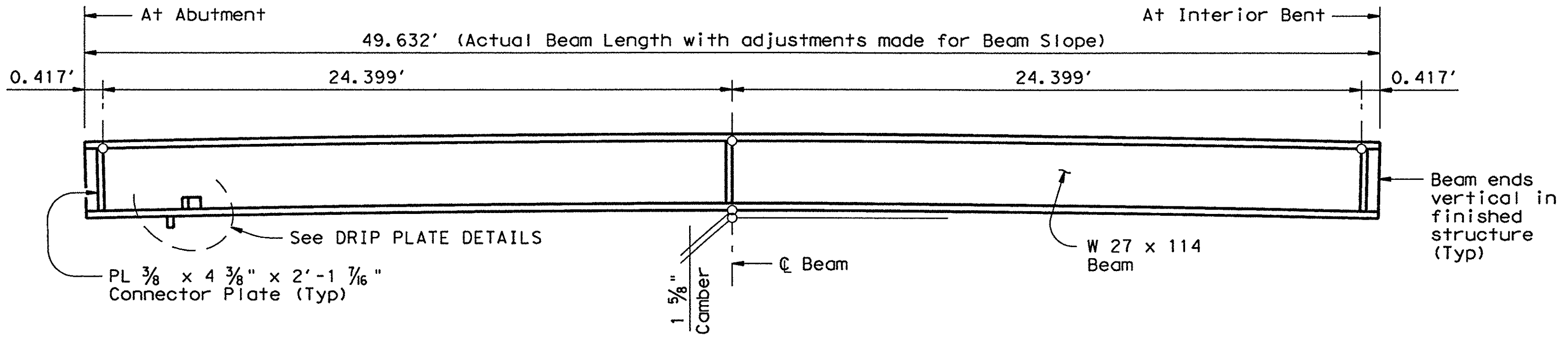


FRAMING PLAN

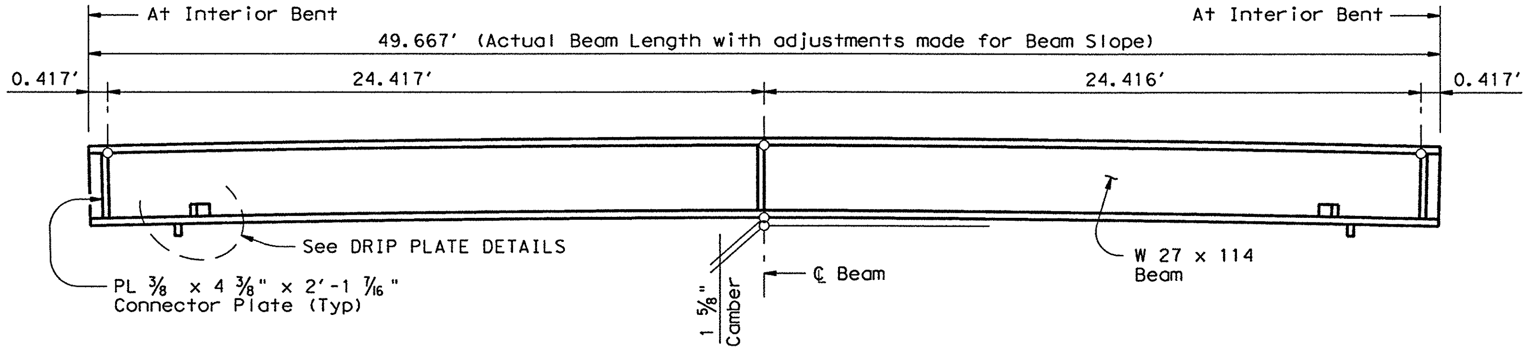


SECTION A-A

(Showing Railing installation)

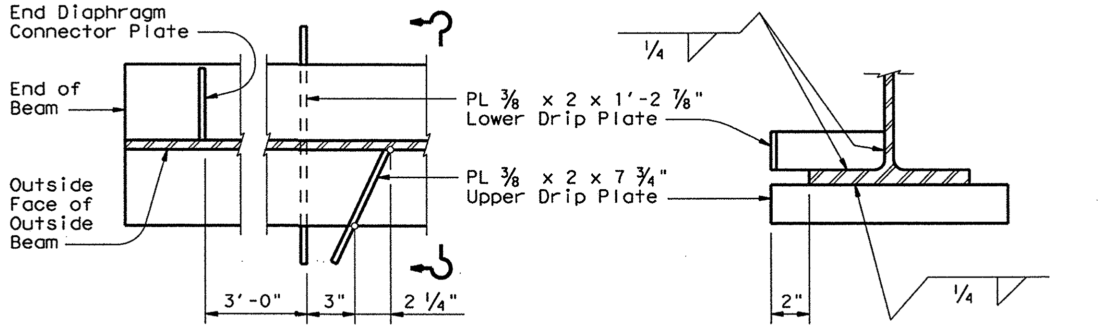


AT SPANS NOS. 1 & 3



AT SPAN NO. 2

BEAM ELEVATIONS



PARTIAL PLAN SECTION

TYPICAL TRANSVERSE SECTION

Drip plates are required on outside beams, at the abutment ends only of Spans #1 and #3, and at both ends of Span #2. Cut Upper Drip Plate to fit snugly against fillet of web flange prior to welding.

DRIP PLATE DETAILS

JOHN M. HOLT
68237

9-7-06

HL 93 LOADING

SHEET 2 OF 4

Texas Department of Transportation
Bridge Division

50.00' STEEL BEAM SPANS W/ SPS DECK

MARTIN BRANCH BRIDGE

FILE: 6689os01.dgn		DN: AD		CK: JMH		DW: TxDOT		CK: MAS	
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REVISIONS		02	BR 2002 (843)					39	
		COUNTY			CONTROL	SECT	JOB	HIGHWAY	
		WISE			0902	20	072	CR4191	

LEVELS DISPLAYED

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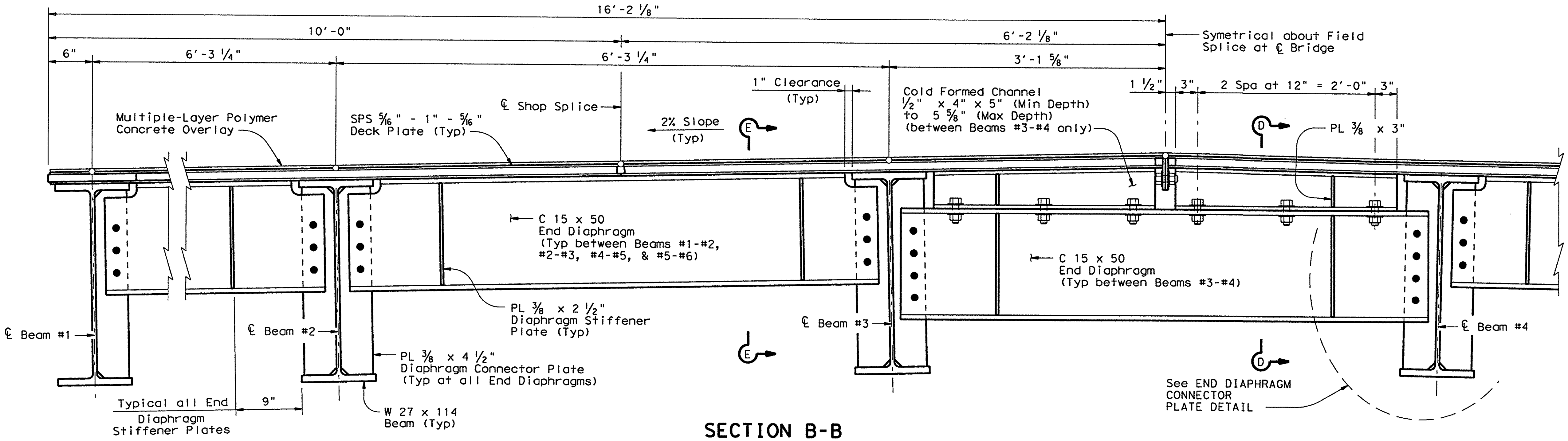
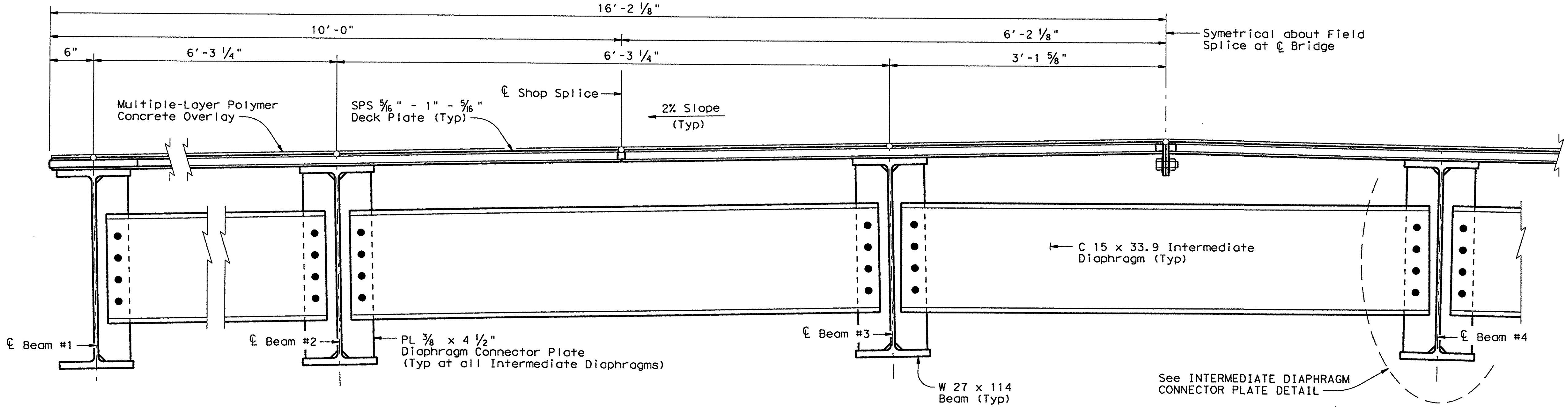
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

COMMENTS:



SECTION B-B

(Showing End Diaphragm installation)



SECTION C-C

(Showing Intermediate Diaphragm installation)

JOHN M. HOLT
68237

9-7-06

HL 93 LOADING

SHEET 3 OF 4

Texas Department of Transportation
Bridge Division

50.00' STEEL BEAM SPANS W/ SPS DECK

MARTIN BRANCH BRIDGE

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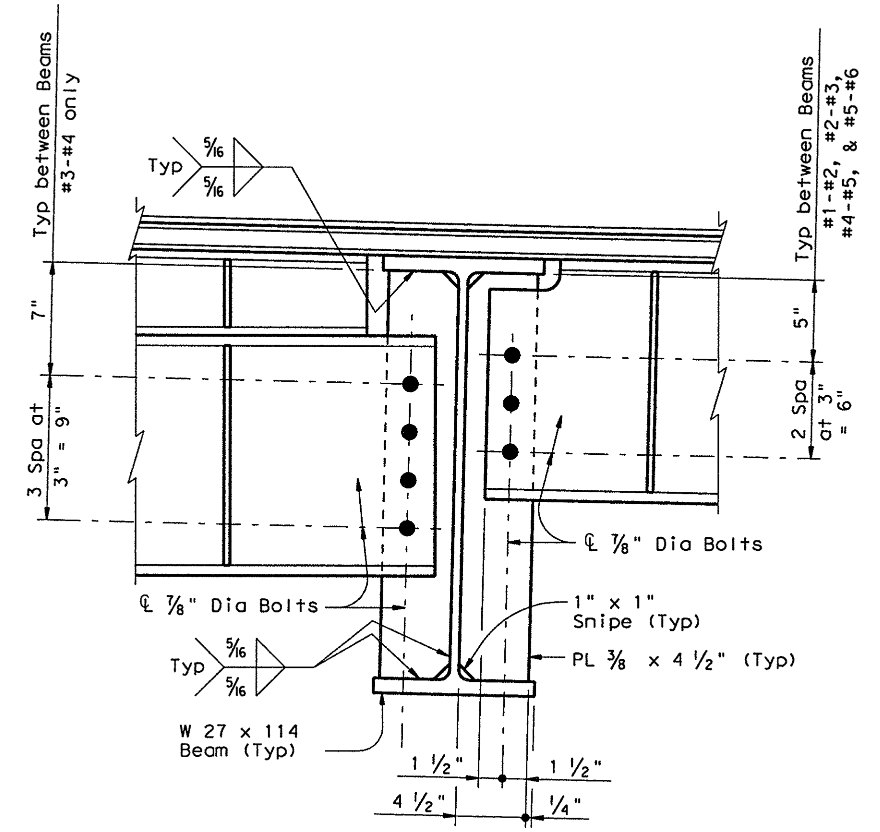
REVISIONS	02	BR 2002(843)					40
	COUNTY		CONTROL	SECT	JOB		HIGHWAY
	WISE		0902	20	072		CR4191

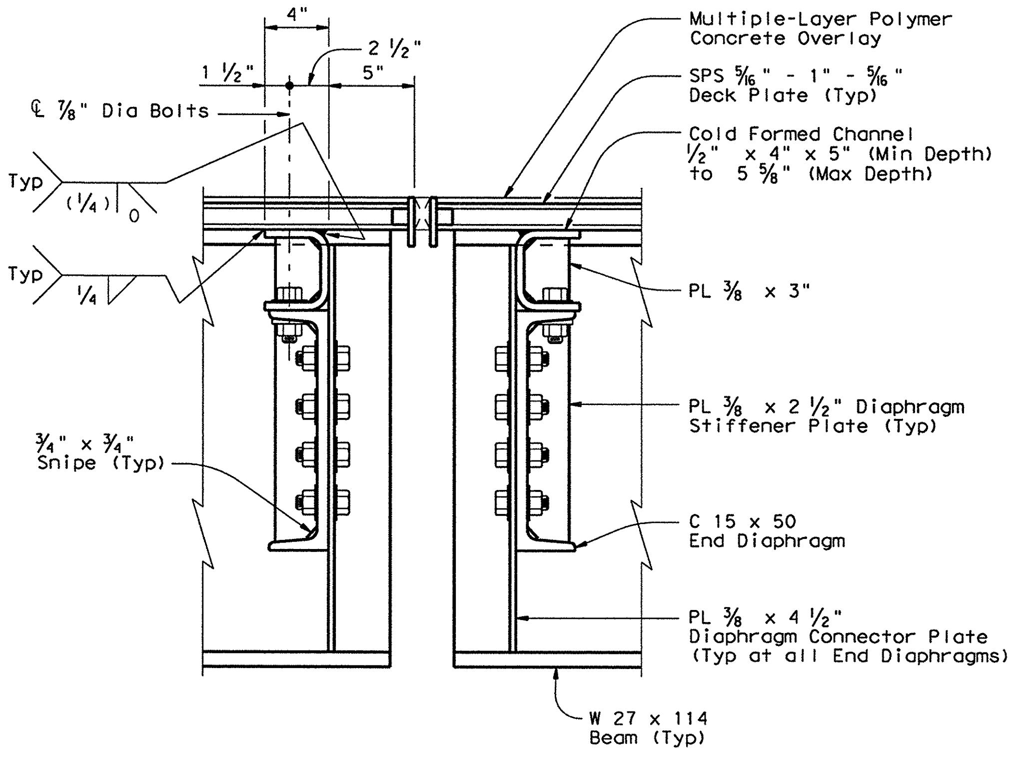
LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

COMMENTS:

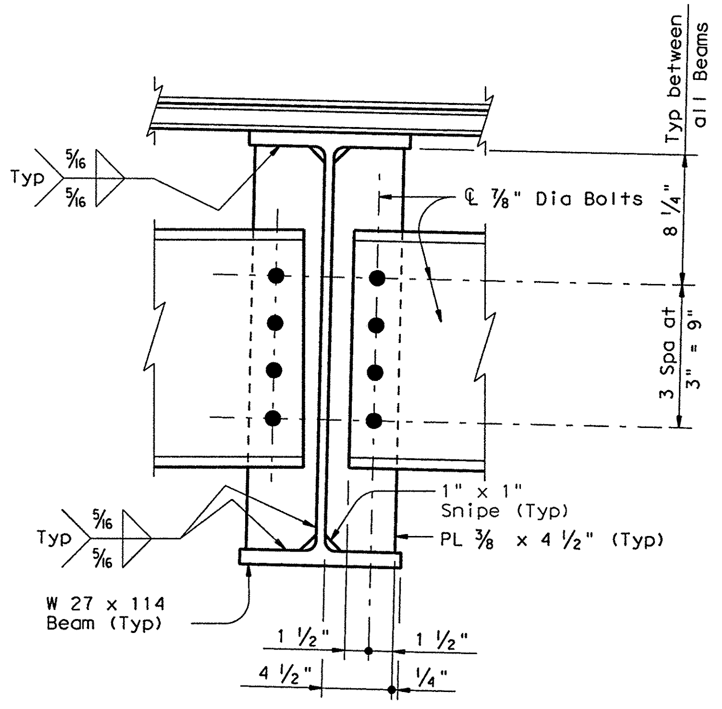


END DIAPHRAGM CONNECTOR PLATE DETAIL

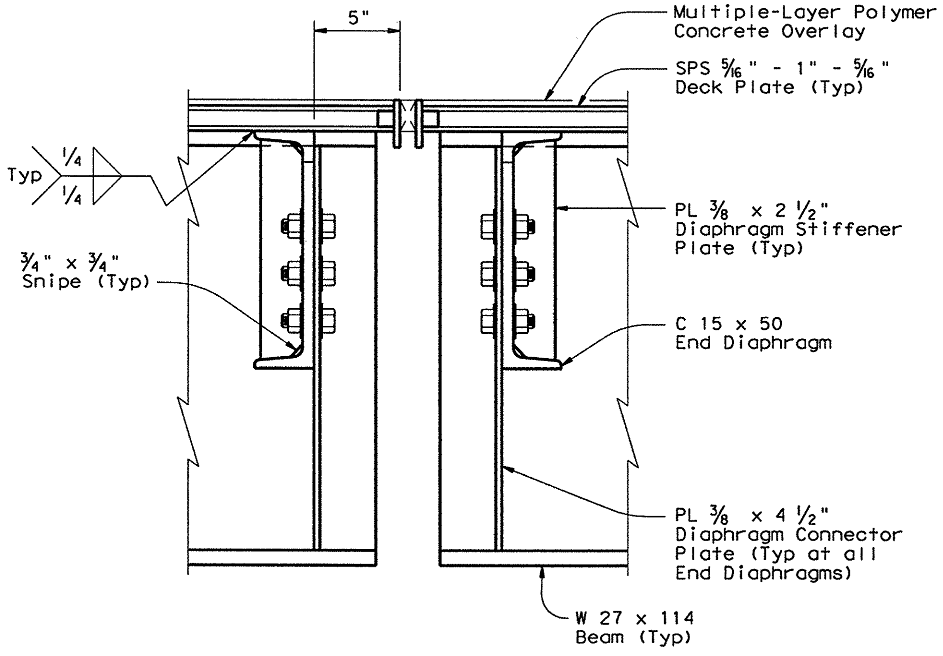


SECTION D-D

(Showing End Diaphragm installation between Beams #3-#4)



INTERMEDIATE DIAPHRAGM CONNECTOR PLATE DETAIL



SECTION E-E

(Showing End Diaphragm installation between Beams #1-#2, #2-#3, #4-#5, & #5-#6)

GENERAL NOTES:

All steel shall be A709 Grade 50W.

Beam bottom flanges and webs are classified as tension components and are subject to the impact testing requirements of Item 442, "Metal for Structures". Beam splices are not permitted.

Camber beams for total dead load deflection. Produce camber using heat, pressure, or a combination of heat and pressure.

All bolts must be 7/8" Dia, unless otherwise noted, A325 Ty 3 with one hardened washer each. All bolt holes are standard sized.

Shop assembly is required.

Furnishing and installing of sealed joint shall be subsidiary to other bid items.

See Special Specification 4190 for information on Multiple-Layer Polymer Concrete Overlay.

Total weight of structural steel (not including SPS deck, railing, or rail anchor bolts, but does include field splice plates, joint plates at sealed joints, beams, diaphragms, connectors, stiffeners, bolts)
= 117,960 Lbs.

Total area of SPS bridge deck (not including field splice plates and joint plates at sealed joints)
= 1610 SF per span
= 4830 SF total (3 Spans)

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

COMMENTS:

STATE OF TEXAS
JOHN M. HOLT
68237
REGISTERED PROFESSIONAL ENGINEER

9-7-06

HL 93 LOADING SHEET 4 OF 4

Texas Department of Transportation
Bridge Division

50.00' STEEL BEAM SPANS W/ SPS DECK

MARTIN BRANCH BRIDGE

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©TxDOT JULY 2006	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	02	BR 2002(843)		41
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	WISE	0902	20	072	CR4191