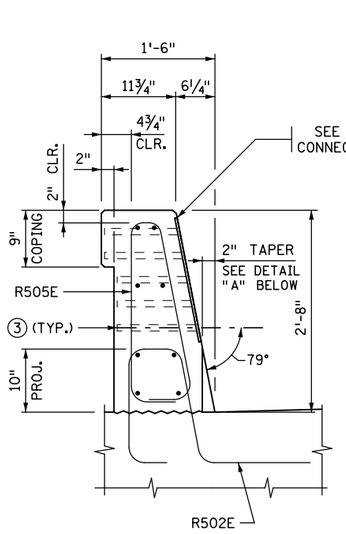
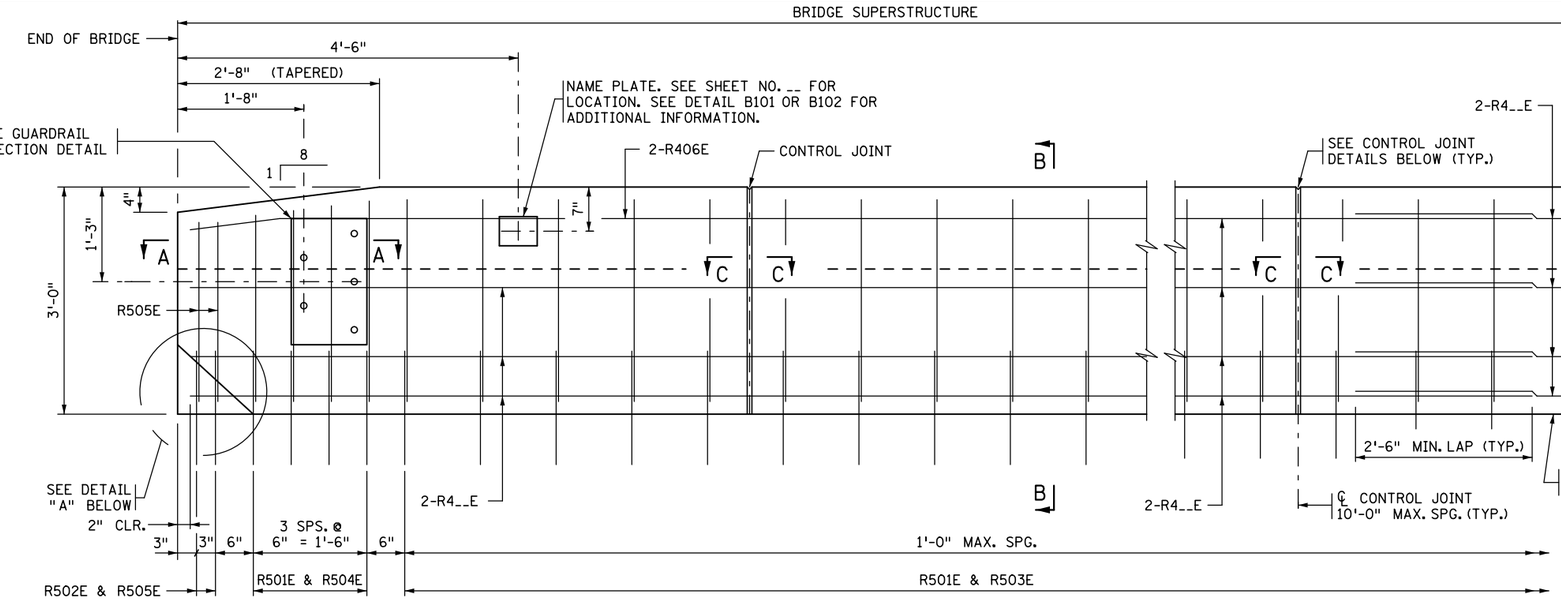
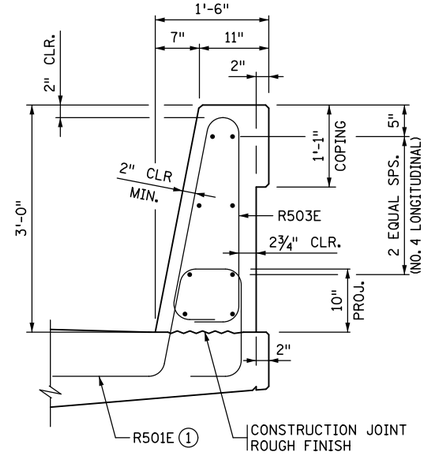


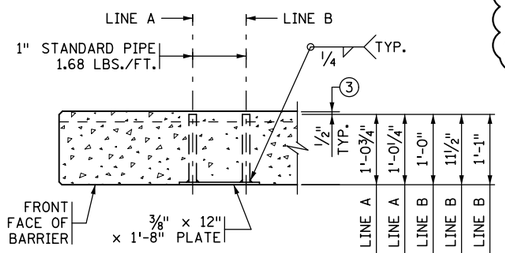
END VIEW



INSIDE ELEVATION OF BARRIER



SECTION B-B



SECTION A-A

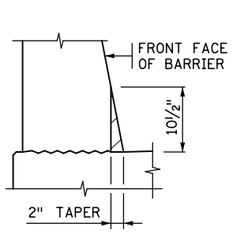
(REINFORCEMENT NOT SHOWN)

TRIM GUARDRAIL BOLTS SUCH THAT NO MORE THAN 1½" PROTRUDES FROM BACK FACE OF BARRIER.

☆ DIMENSIONS INCLUDE ⅜" PLATE

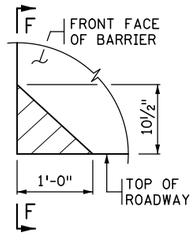
DESIGNER NOTE
(REMOVE PRIOR TO PLOTTING FINAL PLAN):
REFER TO MEMO TO DESIGNERS (2016-01) FOR ADDITIONAL REQUIREMENTS REGARDING BARRIER PLACEMENT.

BARRIER MEETS TL-4 REQUIREMENTS OF NCHRP REPORT 350



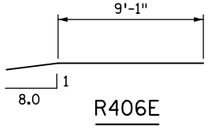
VIEW F-F

AT BARRIER END

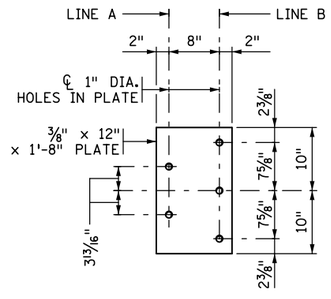


DETAIL "A"

ELEVATION VIEW

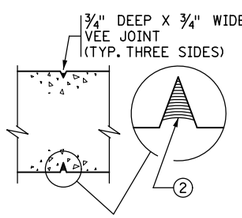


R406E



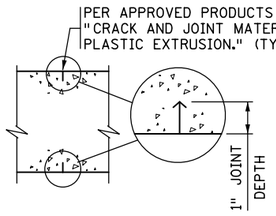
GUARDRAIL CONNECTION DETAIL

GALVANIZE AFTER FABRICATION PER SPEC. 3394
ESTIMATED WEIGHT = 34 LBS.



SECTION C-C

CAST-IN-PLACE CONSTRUCTION



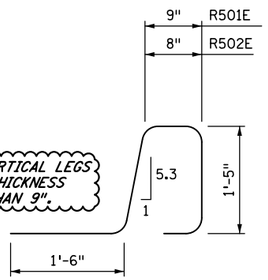
SECTION C-C

SLIPFORM CONSTRUCTION

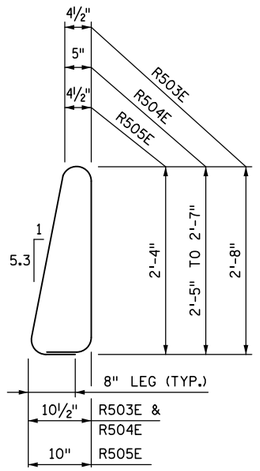
CONTROL JOINT DETAILS

FOR SLIPFORM CONSTRUCTION: IMMEDIATELY AFTER CONCRETE IS PLACED AND WHILE IT IS STILL WET, CREATE A ONE INCH STRAIGHT GROOVE USING A TROWEL. INSERT RIGID PLASTIC EXTRUSION INTO GROOVE TO A DEPTH ⅛" BELOW THE SURFACE; FINISH OVER GROOVE COMPLETELY HIDING THE EXTRUSION.

INCREASE R501E VERTICAL LEGS IF DECK SLAB THICKNESS IS GREATER THAN 9".



R501E, R502E



R503E, R504E, R505E

BILL OF REINFORCEMENT FOR BARRIER

BAR	NO.	LENGTH	SHAPE	LOCATION
R501E		5'-8"		BARRIER DOWEL
R502E		5'-7"		BARRIER DOWEL
R503E		7'-1"		BARRIER VERTICAL
R504E	4 SER. OF 4	6'-7" TO 6'-11"		BARRIER VERTICAL
R505E		6'-5"		BARRIER VERTICAL
R406E		10'-3"		BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.
R4__E				BARRIER LONGIT.

GENERAL NOTES

MEASURE PAYMENT LENGTH BETWEEN THE OUTSIDE ENDS OF THE BARRIER.

CONCRETE BARRIER = 496 LBS./FT. (0.123 CU. YDS./FT.)

FINISH ALL EDGES OF BARRIER WITH ½" CHAMFER, EXCEPT WHERE OTHERWISE NOTED.

SPACE CONTROL JOINTS AT 10 FT. MAXIMUM. REFER TO SUPERSTRUCTURE SHEET FOR SPECIFIC SPACING INFORMATION.

GUARDRAIL CONNECTION TO BE STRUCTURAL STEEL, SPEC. 3306.

GUARDRAIL CONNECTION AND NAME PLATE TO BE CONSIDERED INCIDENTAL TO BARRIER.

BARRIER QUANTITIES ARE LISTED IN SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE.

① PLACE BAR ON TOP OF BOTTOM REINFORCEMENT MAT IN DECK.

② JOINT SEALANT PER MnDOT APPROVED/QUALIFIED PRODUCTS LIST - CRACK AND JOINT MATERIALS - SILICONE JOINT SEALERS.

③ REMOVE CONCRETE FROM PIPE ENDS AFTER SLIPFORMING OR FORM REMOVAL.

REVISION:

APPROVED: MAY 10, 2017
Kevin Western
STATE BRIDGE ENGINEER

CERTIFIED BY _____ LICENSED PROFESSIONAL ENGINEER _____ DATE
NAME: LIC. NO.

TITLE: CONCRETE BARRIER 36" (TYPE S, TL-4)
INTEGRAL OR SEMI-INTEGRAL ABUTMENT, (WITHOUT CONCRETE WEARING COURSE) NO APPROACH PANEL

FIG. 5-397.138(E)

DES:	DR:	APPROVED:	BRIDGE NO.
CHK:	CHK:		
SHEET NO. OF SHEETS			