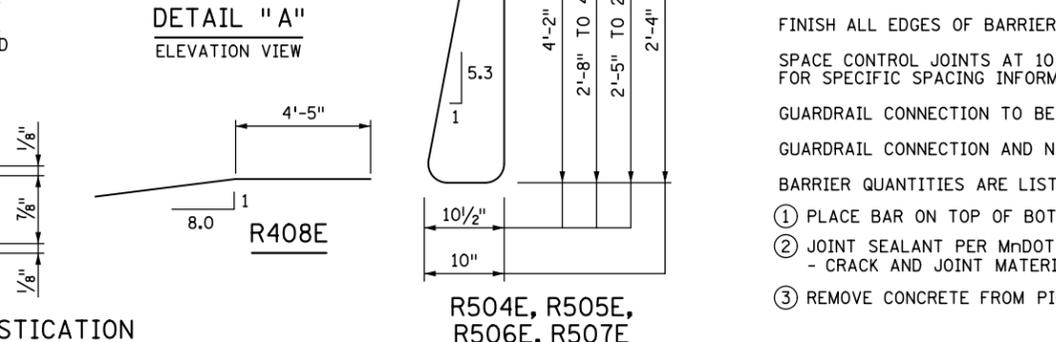
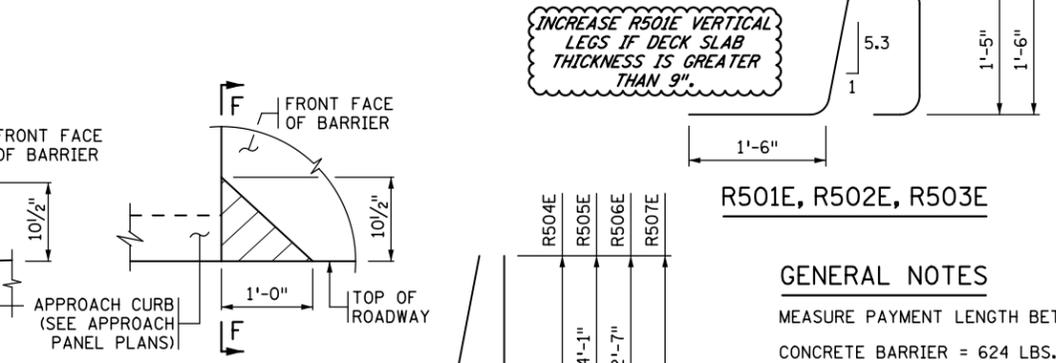
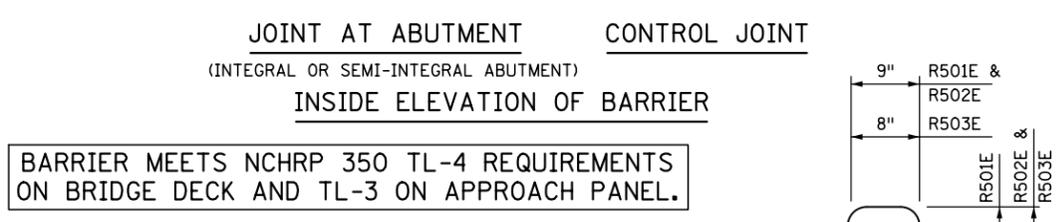
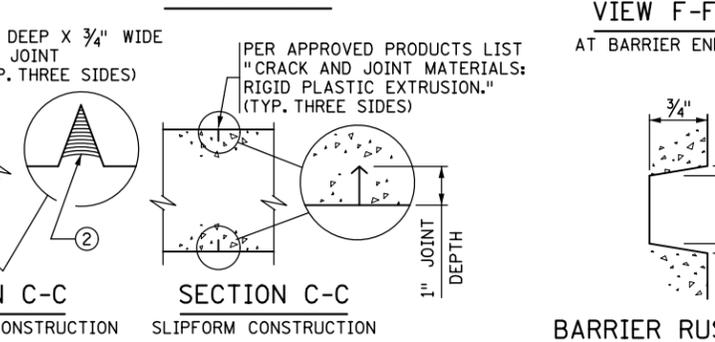
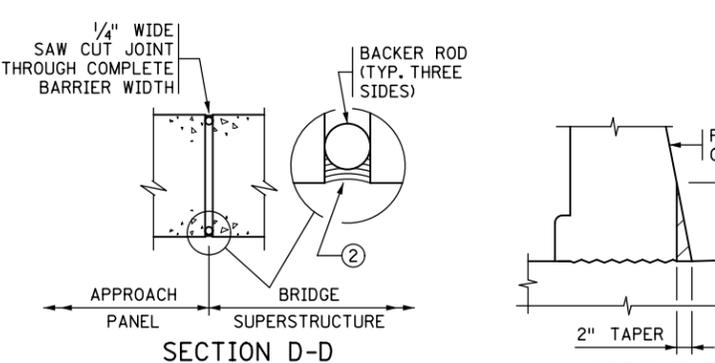


DESIGNER NOTE
(REMOVE PRIOR TO PLOTTING FINAL PLAN):
MINIMUM BARRIER LENGTH ON APPROACH PANEL IS 16'-8" WITH MINIMUM OF 22 R502E AND R503E DOWELS WITH ACCOMPANYING APPROPRIATE BARRIER VERTICAL BARS, 12" MAX. SPACING. VERIFY APPROACH BARRIER LENGTH, NEED FOR A GUARDRAIL CONNECTION, AND VERTICAL TAPER WITH ROADWAY DESIGNER. REFER TO MEMO TO DESIGNERS (2016-01) FOR ADDITIONAL REQUIREMENTS REGARDING BARRIER PLACEMENT.



BAR	NO.	LENGTH	SHAPE	LOCATION
R501E		5'-7"	[Symbol]	BARRIER DOWEL
R502E		5'-9"	[Symbol]	BARRIER DOWEL
R503E		5'-8"	[Symbol]	BARRIER DOWEL
R504E		9'-2"	[Symbol]	BARRIER VERTICAL
R505E	-- SER. OF 12	6'-3" TO 9'-1"	[Symbol]	BARRIER VERTICAL
R506E	-- SER. OF 4	5'-9" TO 6'-1"	[Symbol]	BARRIER VERTICAL
R507E		5'-6"	[Symbol]	BARRIER VERTICAL
R408E		11'-8"	[Symbol]	BARRIER LONGIT.
R409E		7'-7"	[Symbol]	BARRIER LONGIT.
R4__E			[Symbol]	BARRIER LONGIT.
R4__E			[Symbol]	BARRIER LONGIT.
R4__E			[Symbol]	BARRIER LONGIT.
R4__E			[Symbol]	BARRIER LONGIT.

GENERAL NOTES

MEASURE PAYMENT LENGTH BETWEEN THE OUTSIDE ENDS OF THE BARRIER.
CONCRETE BARRIER = 624 LBS./FT. (0.154 CU. YDS./FT.)
FINISH ALL EDGES OF BARRIER WITH 1/2" 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: MAY 10, 2017
APPROVED: AUGUST 24, 2016
Kevin Weston
STATE BRIDGE ENGINEER

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 1/8" BELOW THE SURFACE; FINISH OVER GROOVE COMPLETELY HIDING THE EXTRUSION.

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

TITLE: CONCRETE BARRIER 54" (TYPE S, TL-4)
INTEGRAL OR SEMI-INTEGRAL ABUTMENT WITH BRIDGE SLAB SIDEWALK AND GUARDRAIL CONNECTION (WITHOUT CONCRETE WEARING COURSE)

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

FIG. 5-397.142(C)