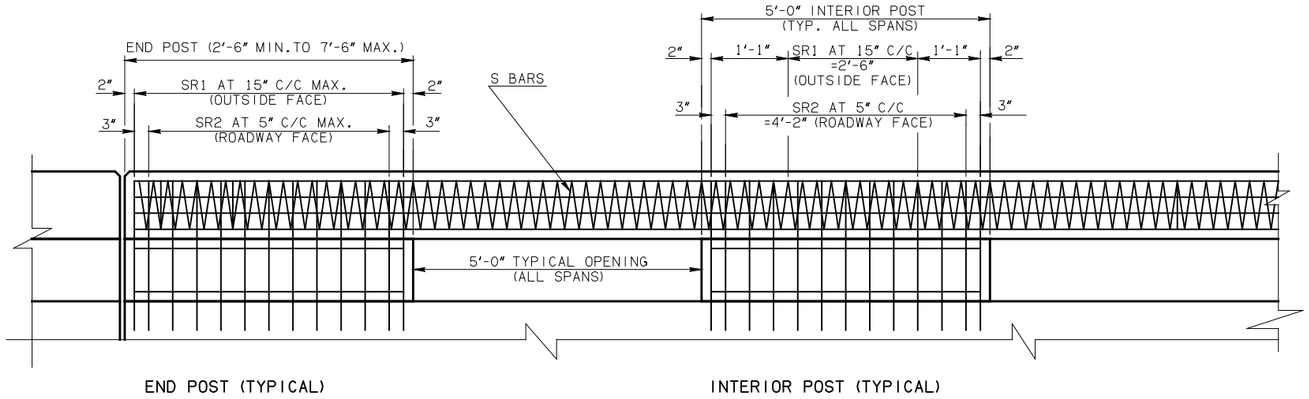
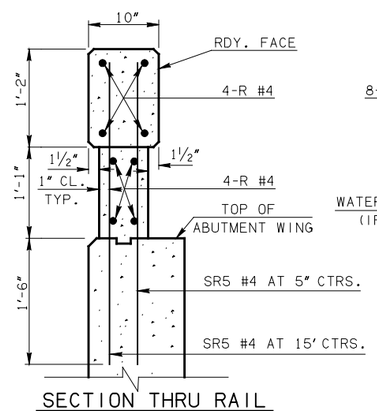
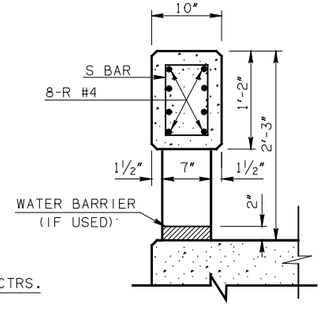


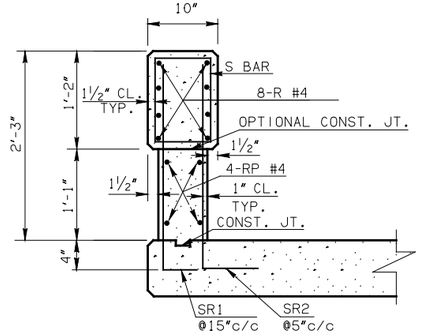
ELEVATION OF TRAFFIC RAIL REINFORCING



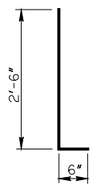
SECTION THRU RAIL AT ABUTMENT WING



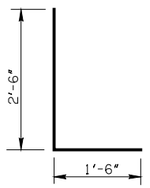
SECTION THRU RAIL AT OPENING



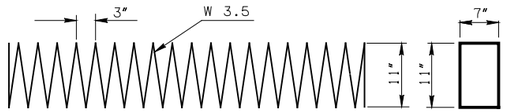
SECTION THRU RAIL AT POST



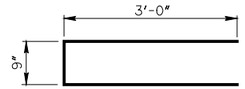
SR1 #4 X 3'-0"



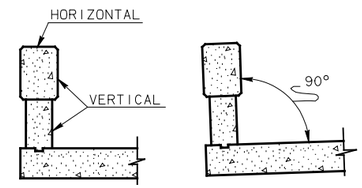
SR2 #4 X 4'-0"



S BAR



T #4 X 6'-9"

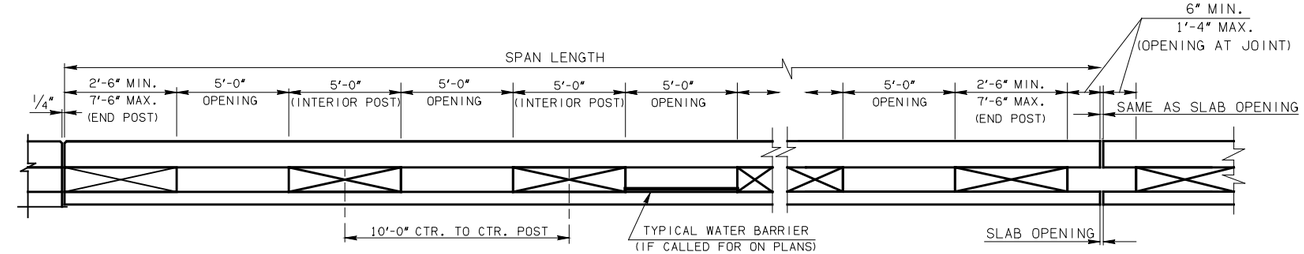


NORMAL CROWN
OR CROSS SLOPE

SUPERELEVATED

NOTE: WHERE ROADWAY SURFACE TRANSITIONS FROM NORMAL CROWN SLOPE TO FULL SUPERELEVATION. THE ANGLE FORMED BY THE FACE OF THE RAILING AND THE ROADWAY SHALL VARY UNIFORMLY BETWEEN THE LIMITS SHOWN ABOVE.

RAILING PLACEMENT DETAILS



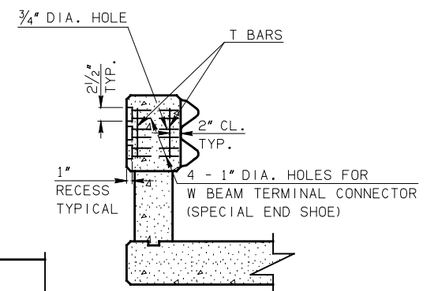
AT FIXED PIERS & ABUTMENTS

AT SLAB EXPANSION JOINTS

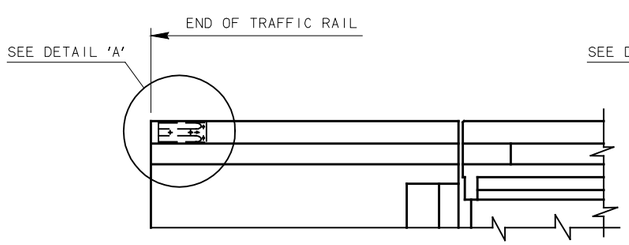
NOTE: THE TRAFFIC RAIL POST OPENING AT THE JOINT SHALL BE AS SHOWN ON THE PLANS.

ROADWAY ELEVATION OF RAIL

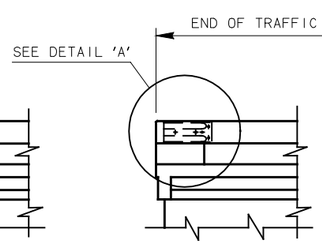
NOTE: HOLES IN END OF RAIL FOR CONNECTION OF GUARDRAIL TERMINAL CONNECTOR (SPECIAL END SHOE) SHALL BE FORMED OR DRILLED BY THE BRIDGE CONTRACTOR.



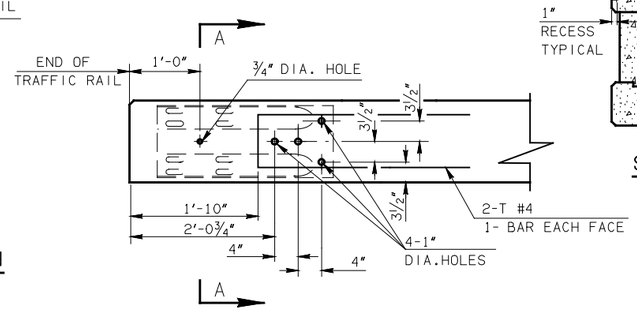
SECTION A-A



GUARDRAIL CONNECTION AT ABUTMENT WING



GUARDRAIL CONNECTION AT BRIDGE RAIL



DETAIL "A"

BRIDGE CONCRETE TRAFFIC RAIL

CONCRETE: ALL CONCRETE IN RAIL AND POSTS SHALL BE CLASS AA.
ALL EXPOSED EDGES SHALL HAVE A ¾" CHAMFER.
ALL SURFACES OF RAIL SHALL BE FINISHED IN ACCORDANCE WITH SECTION 509.04(g) OF THE STD. SPECIFICATIONS.

ALL REINFORCING STEEL IN CONCRETE RAIL SHALL BE GRADE 60. EXCEPT SPIRAL BARS.
S BARS (SPIRAL BARS): SPIRAL BARS SHALL CONFORM TO ASTM A-82. IF TWO OR MORE S BARS ARE USED IN A CONTINUOUS RAIL SECTION, THEY SHALL BE BUTTED WITHIN THE CENTER 3'-0" OF A RAIL POST.
SR BARS (VERTICAL POST BARS): ALL SR BARS SHALL BE IN PLACE AND TIED BEFORE THE BRIDGE DECK IS POURED. SR BARS SHALL BE EPOXY COATED IF EPOXY COATED REINFORCING IS CALLED FOR IN THE BRIDGE DECK. THE WEIGHT OF SR BARS SHALL BE MEASURED AND PAID FOR AS "REINFORCING STEEL" OR "EPOXY COATED REINFORCING STEEL".

WATER BARRIER: WATER BARRIERS AS SHOWN SHALL BE PROVIDED AT OPENINGS DRAINING ONTO UNDERCROSSING ROADWAYS AND SIDEWALKS. THE WATER BARRIER SHALL BE PLACED AT LOCATIONS NOTED ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER. THE BARRIER SHALL BE CAST IN PLACE WITH THE CONCRETE RAIL POSTS.

CONCRETE RAIL CONSTRUCTION: RAILING SHALL BE CONSTRUCTED WITHIN THE GUIDELINES AS SHOWN IN PLACEMENT DETAIL. OPENINGS SHALL BE MADE WITH THE POST END FACES PERPENDICULAR TO THE ROADWAY PROFILE GRADE. FOR RAILS ON HORIZONTAL CURVE, THE RAIL SHALL BE CONSTRUCTED TO THE REQUIRED RADIUS.

RAIL JOINTS: A CONSTRUCTION JOINT IN THE CONCRETE TRAFFIC RAIL SHALL BE PLACED AT EACH ABUTMENT AND PIER. AT EXPANSION JOINTS, THE OPENING BETWEEN THE ENDS OF RAILING SHALL CORRESPOND TO THE OPENING OF THE JOINT. THE OPENING BETWEEN THE END POSTS AT THE EXPANSION JOINTS SHALL BE AS SHOWN ON THE PLANS WITH A MAXIMUM AND MINIMUM DIMENSION AS SHOWN ON THIS SHEET. AT ALL OTHER PIER AND ABUTMENT LOCATIONS, A CONSTRUCTION JOINT WITH ¼" PREFORMED EXPANSION JOINT FILLER SEC. 701.08(b) SHALL BE PLACED BETWEEN THE ENDS OF THE POSTS AND RAILING.

GUARDRAIL CONNECTION HOLES: THE BRIDGE CONTRACTOR SHALL PROVIDE HOLES AS SHOWN FOR CONNECTIONS OF W BEAM TERMINAL CONNECTOR (SPECIAL END SHOE) AT LOCATIONS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. HOLES MAY BE EITHER FORMED OR DRILLED.

BASIS OF PAYMENT: CONCRETE TRAFFIC RAIL FOR BRIDGES WITH NO TRAFFIC RAIL ON ABUTMENT WINGS WILL BE MEASURED FOR PAYMENT BY THE LINEAR FOOT FROM END TO END OF BRIDGE ON EACH SIDE OF BRIDGE, WITH NO DEDUCTION FOR EXPANSION JOINT GAPS. CONCRETE TRAFFIC RAIL FOR BRIDGES WITH RAILING ON THE ABUTMENT WINGS WILL BE MEASURED FOR PAYMENT BY THE LINEAR FOOT FROM END OF ABUTMENT WING TO END OF ABUTMENT WING ON EACH SIDE OF BRIDGE, WITH NO DEDUCTION FOR EXPANSION JOINT GAPS. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR:

504(E)	CONCRETE RAIL	LINEAR FOOT

WHICH PRICE SHALL INCLUDE ALL COST OF CLASS AA CONCRETE, FINISH, REINFORCING STEEL (EXCEPT SR BARS), WATER BARRIER, GUARDRAIL CONNECTION HOLES, JOINTS, TOOLS, FORMS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN AND SPECIFIED.

APPROVED BY BRIDGE ENGINEER: DATE:

OKLAHOMA DEPT. OF TRANSPORTATION
COUNTY BRIDGE STANDARD (ENGLISH)

CONCRETE TRAFFIC RAIL

1999 SPECIFICATIONS	TR1-2	00E
		CB-33E