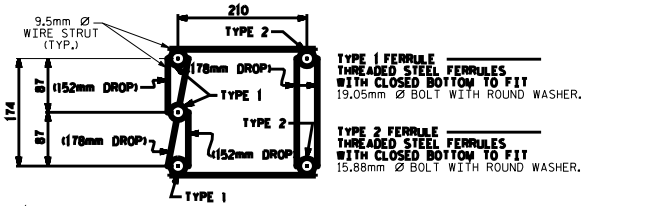
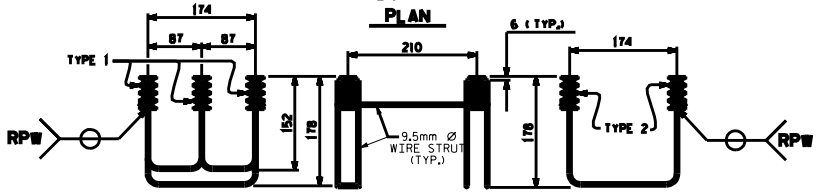


PLAN



LEFT SIDE VIEW ELEVATION RIGHT SIDE VIEW

5-BOLT METAL RAIL ANCHOR ASSEMBLY

(___ ASSEMBLIES REQUIRED)

NOTES

STRUCTURAL CONCRETE ANCHOR ASSEMBLY

THE STRUCTURAL CONCRETE ANCHOR ASSEMBLY SHALL CONSIST OF THE FOLLOWING COMPONENTS:

A. FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF AASHTO M169, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 51mm FOR 19.05mm FERRULES AND 45mm FOR 15.88mm FERRULES.

B. 3 -19.05mm Ø x 64mm BOLTS WITH WASHERS. BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 19.05mm Ø x 64mm GALVANIZED BOLTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.

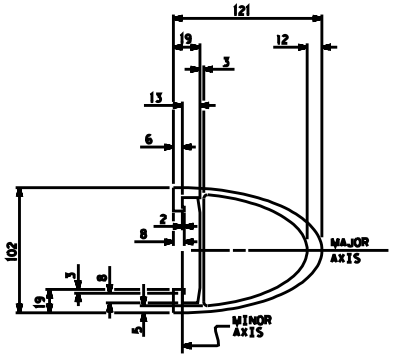
C. 2 -15.88mm Ø x 57mm BOLTS WITH WASHERS. BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 15.88mm Ø x 57mm GALVANIZED BOLTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.

D. WIRE STRUT SHOWN IN THE CONCRETE ANCHOR ASSEMBLY DETAIL IS THE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 689 MPa. AS AN OPTION, A 11mm Ø WIRE STRUT WITH A MINIMUM TENSILE STRENGTH OF 620 MPa. IS ACCEPTABLE.

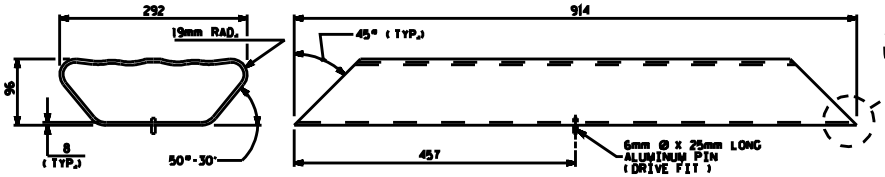
E. THE METAL RAIL ANCHOR ASSEMBLIES TO BE HOT DIPPED GALVANIZED TO CONFORM TO REQUIREMENTS OF AASHTO M111.

F. THE COST OF THE METAL RAIL ANCHOR ASSEMBLY WITH BOLTS AND WASHERS COMPLETE IN PLACE SHALL BE INCLUDED IN THE PRICE BID FOR METERS OF METAL RAIL.

G. BOLTS TO BE TIGHTENED ONE-HALF TURN WITH A WRENCH FROM A FINGER-TIGHT POSITION.

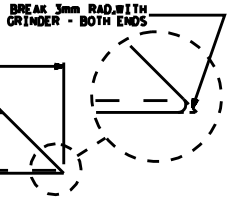


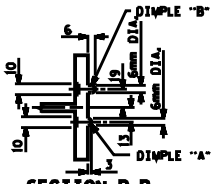
TOP & MIDDLE RAIL SECTION



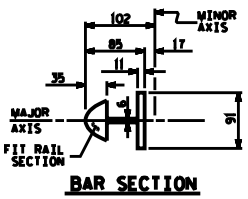
END VIEW PLAN VIEW

BOTTOM RAIL EXPANSION BAR

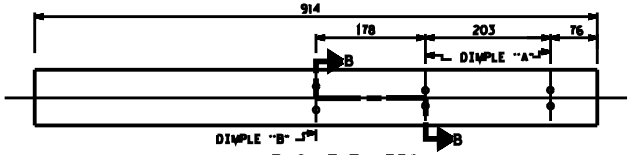




SECTION B-B

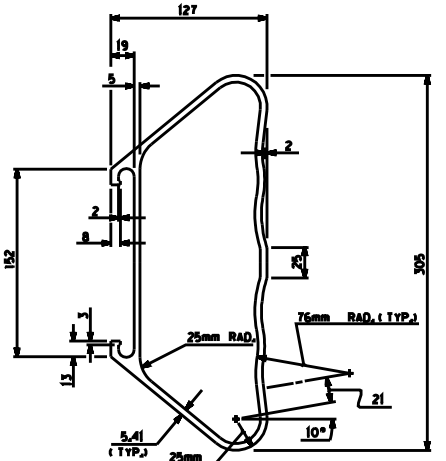


BAR SECTION

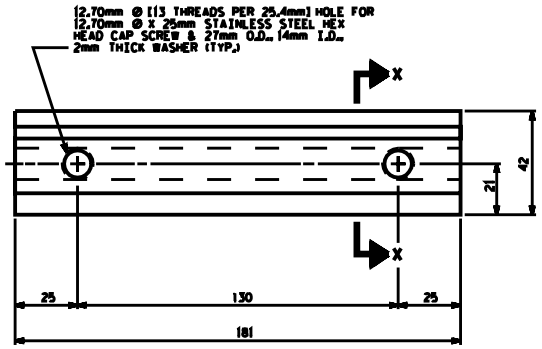


BACK ELEVATION

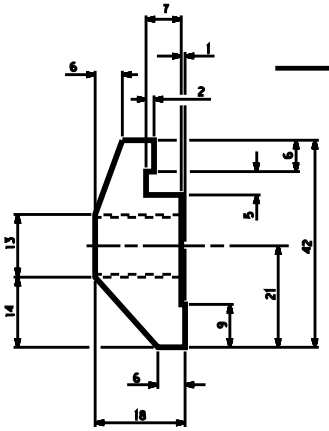
TOP & MIDDLE RAIL EXPANSION BAR



BOTTOM RAIL SECTION



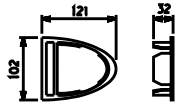
ELEVATION



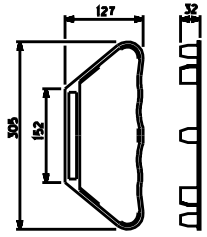
SECTION X-X

CLAMP BAR DETAIL

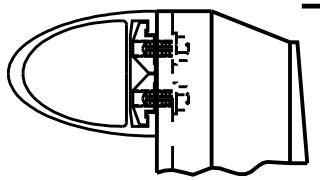
(6 REQUIRED PER POST)



TOP & MIDDLE RAIL CAP



BOTTOM RAIL CAP



CLAMP ASSEMBLY

TOP RAIL SHOWN
(MIDDLE & BOTTOM RAIL ARE SIMILAR)

PROJECT NO. _____

_____ COUNTY

STATION: _____

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

3 BAR METAL RAIL

ASSEMBLED BY :		DATE :
CHECKED BY :		DATE :
DRAWN BY : JAB 1/88	REV. 7/10/01	REVISIONS
CHECKED BY : GCH 1/88	REV. 5/7/03	
	REV. 5/21/08	

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
						TOTAL SHEETS

STD. NO. BMR6SM