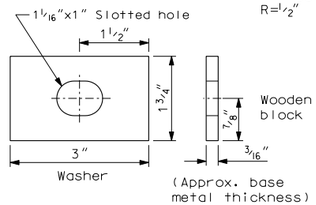
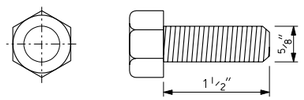
BEAM GUARDRAIL GENERAL DETAILS

D-764-1



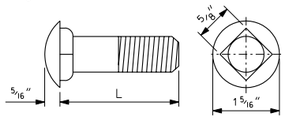
RECTANGULAR PLATE WASHER



5/8" -11 Hex bolt

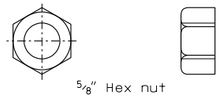
5/8" -11 Hex nut

5/8" HEX BOLT & NUT



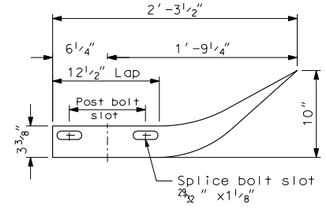
5/8" Dia. carriage bolt

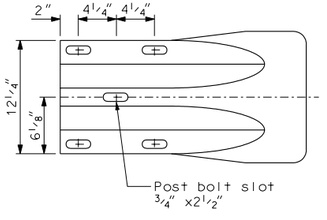
L	THREAD LENGTH
1 1/2"	Full length thread
3"	1 1/2" Min thread length
11"	1 3/4" Min thread length
13"	1 3/4" Min thread length



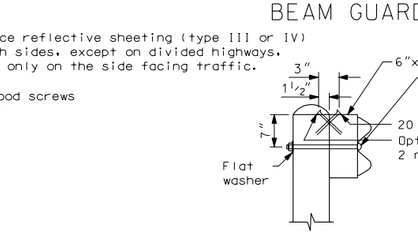
5/8" Hex nut

5/8" CARRIAGE BOLT & NUT



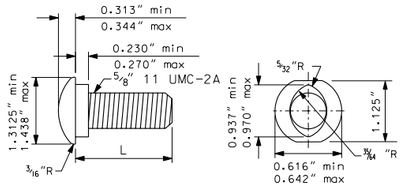


W BEAM END SECTION (FLARED)



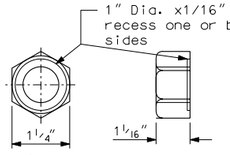
REFLECTORIZED PLATE DETAIL

2 additional reflectors are added to the w-beam guardrail quantities for placement on end treatment.



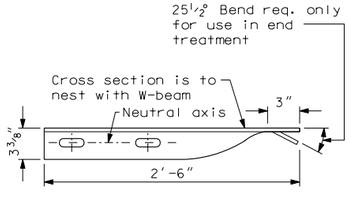
5/8" Dia. guardrail bolt

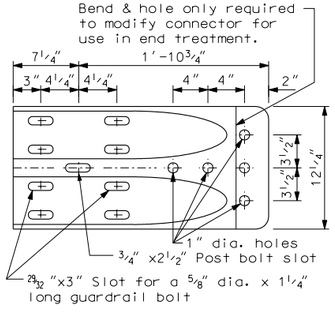
L	THREAD LENGTH
1 1/4"	Full length thread
2"	1 3/4" Min thread length
9 1/2"	4" Min thread length
18"	4" Min thread length
20"	4" Min thread length
22"	4" Min thread length
25"	4" Min thread length



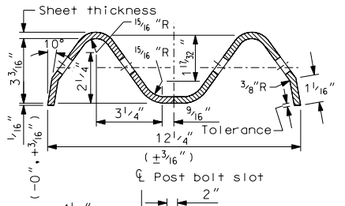
5/8" Dia. recess nut

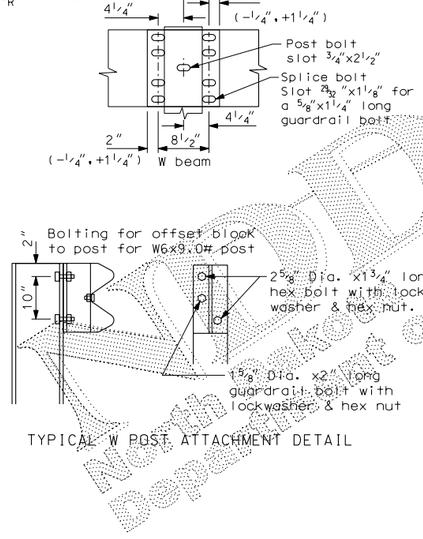
5/8" GUARDRAIL BOLT & RECESS NUT



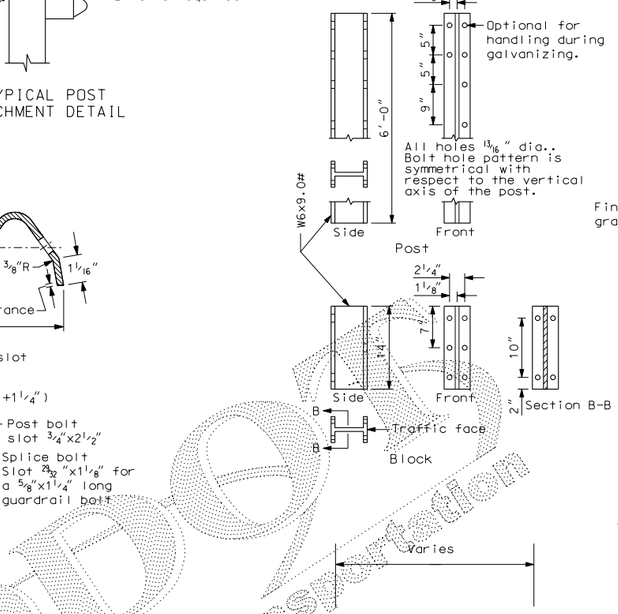


W BEAM TERMINAL CONNECTOR



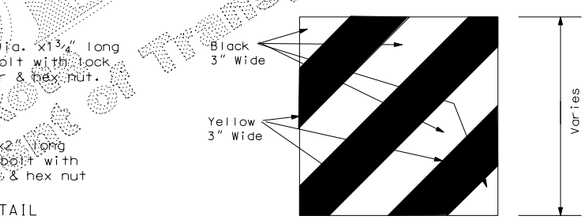


TYPICAL W POST ATTACHMENT DETAIL

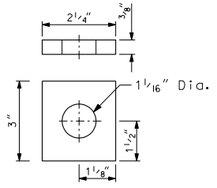


6x8 TIMBER POST & BLOCK

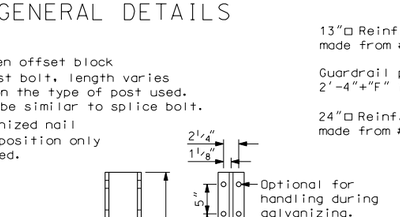
BCT ANCHOR PLATE

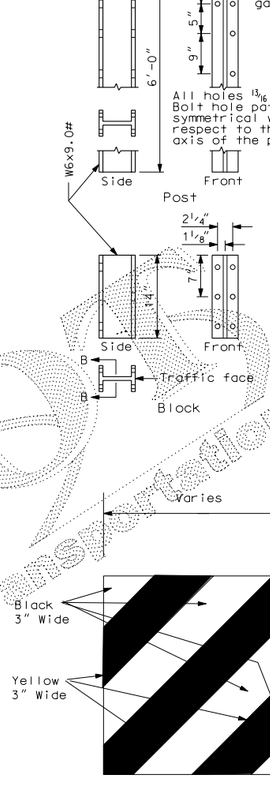


BCT CABLE ASSEMBLY

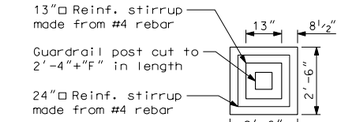


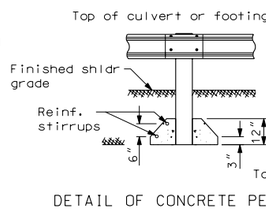
BCT CABLE END PLATE



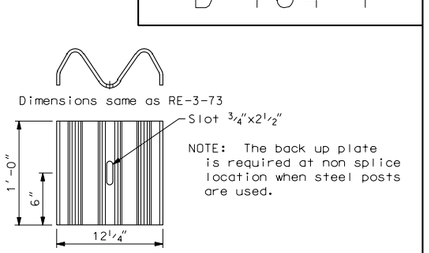


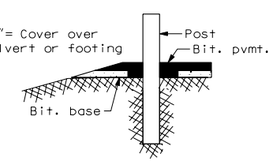
IMPACT HEAD OBJECT MARKER



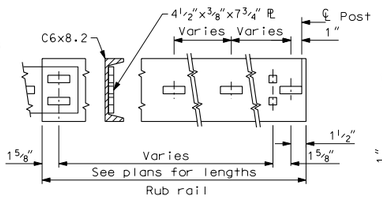


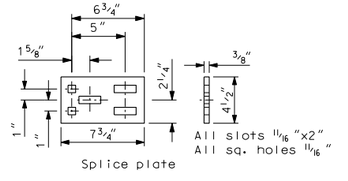
DETAIL OF CONCRETE PEDESTAL FOR POSTS





REPLACEMENT OF SURFACING





C6x8 RUB RAIL AND SPLICE PLATE

NOTES:

Reflectorized plates: Reflector plates shall begin at first post and be spaced at 25' centers on guardrail less than 250' in length and at 50' centers for guardrail over 250' in length. The reflector shall be the same color as the pavement marking adjacent to that reflector unless noted otherwise on the plans.

Detail of concrete pedestal for posts: To be used over culverts or footings when dimension "F" is less than 3'-8". When round posts are used and the pedestal required, the post hole in the pedestal shall be varied as required by the post shape.

Manner of replacing bit. material at guardrail post: All excess earth from excavations for guard posts shall be disposed of as directed by the engineer. Replace bit. material wherever guardrail is installed after mat has been laid. Cost of excavation and replacing of bit. material to be included in the price bid for other items.

The Object Marker shall fit within the vertical edges of the Impact Plate . The retroreflective sheeting shall be type IIIA sheeting meeting the reqirements of Section 894.02.b of the standard specifications. The sheeting shall be applied to .100 Aluminum sheeting meeting the requirements Section 894.01.a. The Object Marker shall attached to the Impact Head plate with rivets or some other attachment device. The rivets or attachment device shall be non-rust. The Stripes shall slope dounward toward the roadway side.

9-1-98	
REVISIONS	
DATE	CHANGE
11-22-02	Deleted Z post, rev. note

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

APPROVED: _____
DESIGN ENGINEER

North Dakota Department of Transportation