

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
709	104BR-1	CHAMPAIGN	24	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

80% FEDERAL 20% STATE  
CONSTRUCTION CODE X080-2A

ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	81
20400800	FURNISHED EXCAVATION	CU YD	4
25000200	SEEDING, CLASS 2	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23
25100115	MULCH, METHOD 2	ACRE	0.25
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	25
28000300	TEMPORARY DITCH CHECKS	EACH	4
28000400	PERIMETER EROSION BARRIER	FOOT	951
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	21
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	262.8
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	22.1
44004250	PAVED SHOULDER REMOVAL	SQ YD	326
48101200	AGGREGATE SHOULDERS, TYPE B	TON	27
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50102400	CONCRETE REMOVAL	CU YD	1.1
50300225	CONCRETE STRUCTURES	CU YD	3.4
50300260	BRIDGE DECK GROOVING	SQ YD	150
50300300	PROTECTIVE COAT	SQ YD	150
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1344
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2020
50800515	BAR SPLICERS	EACH	42
50901050	STEEL RAILING, TYPE SM	FOOT	85
51500100	NAME PLATES	EACH	1
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	300
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
63200305	STEEL PLATE BEAM GUARD RAIL REMOVAL	FOOT	303
63301210	REMOVAL AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	250
63300440	REMOVAL AND REINSTALLATION OF EXISTING TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	4
63304390	TRAFFIC BARRIER TERMINAL REMOVAL, TYPE 1A	EACH	4
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	144



⚠ REVISION 1/4/07

80% FEDERAL 20% STATE  
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ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1808
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1770
70400100	TEMPORARY CONCRETE BARRIER	FOOT	425
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	350
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1808
78200410	GUARDRAIL MARKERS, TYPE A	EACH	10
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	664
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	150
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1
XX003412	REMOVAL AND REINSTALLATION OF EXISTING TRAFFIC BARRIER TERMINAL, SPECIAL	EACH	4
Z0002900	BASE COURSE (OPTION)	SQ YD	391
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0038700	PERMANENT BENCH MARKS	EACH	1

- SPECIALTY ITEM
- SFTY-3N

PLOT DATE : 18/23/2006  
 FILE NAME : c:\projects\060602\submt\_18\_13\_06\summary\_of\_quantities.dgn  
 USER : hsp  
 USER NAME : hsp

**COOMBE-BLOXDORF P.C.**  
 Engineers / Land Surveyors  
 Springfield, Illinois  
 Design Firm License No. 184-002708

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

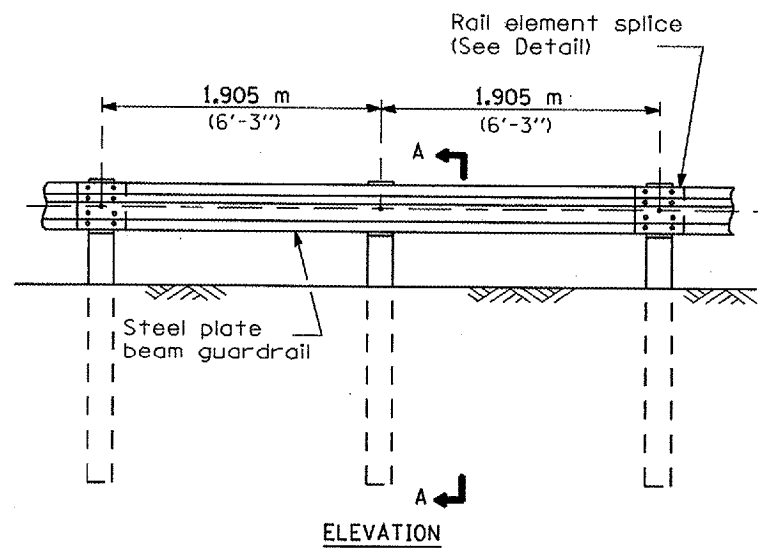
SUMMARY OF QUANTITIES  
 US 136 OVER LONE TREE CREEK  
 FAP ROUTE 709, SECTION 104BR-1  
 CHAMPAIGN COUNTY

SCALE: \_\_\_\_\_  
 DATE: 04/19/06

DRAWN BY CFC  
 CHECKED BY \_\_\_\_\_

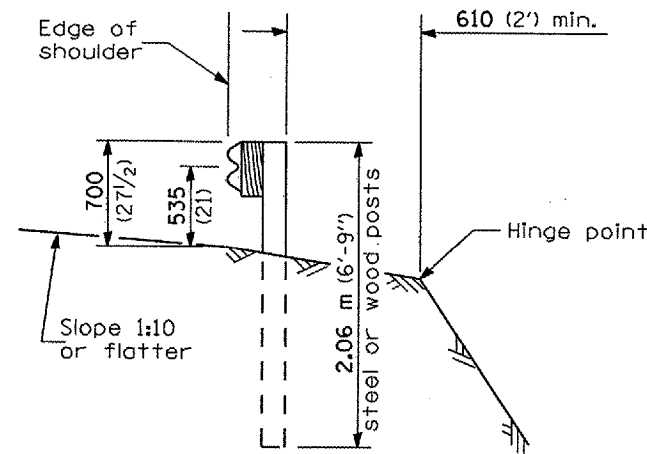
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				8A
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

70262

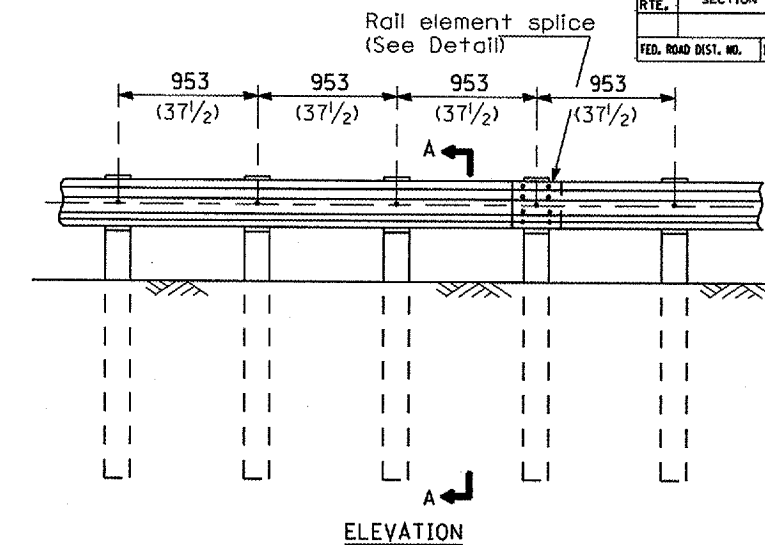


**TYPE A**

1.905 m (6'-3") Typical post spacing

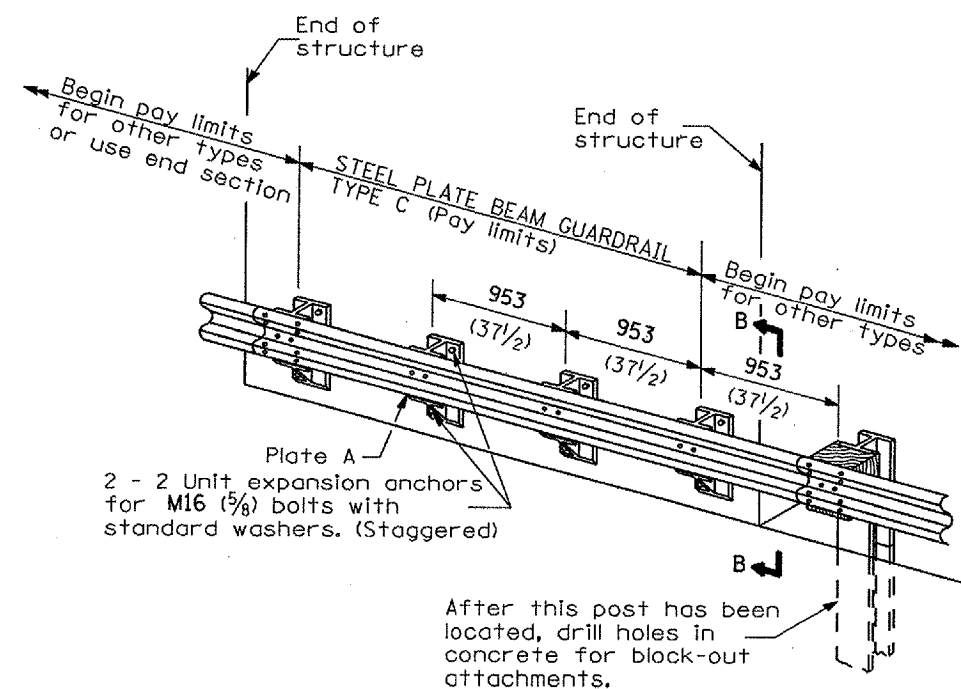


**SECTION A-A**



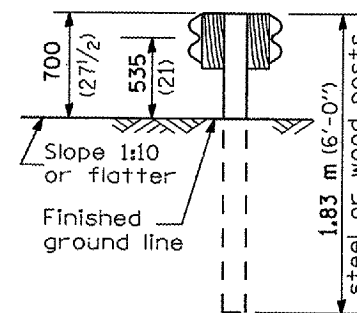
**TYPE B**

953 (37 1/2) Closed post spacing

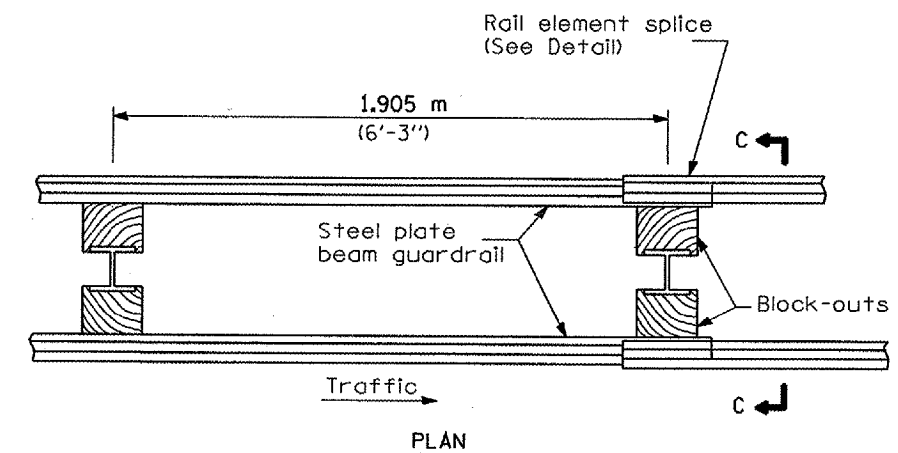


**TYPE C**

953 (37 1/2) Block-out spacing



**SECTION C-C**



**TYPE D**

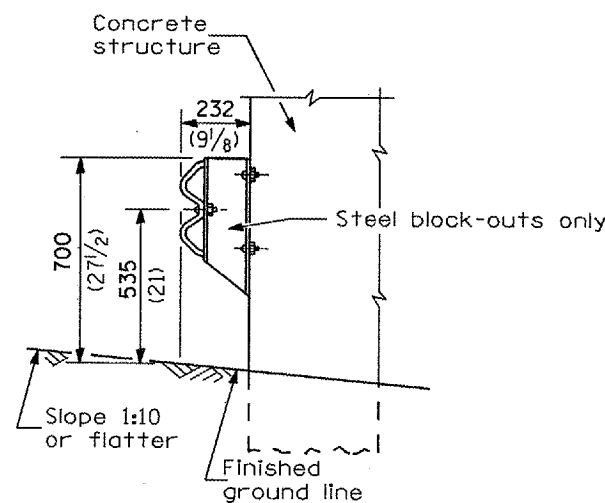
Double steel plate beam guardrail  
1.905 m (6'-3") typical post spacing

**GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.



**SECTION B-B**

△ ADDED 11/4/07

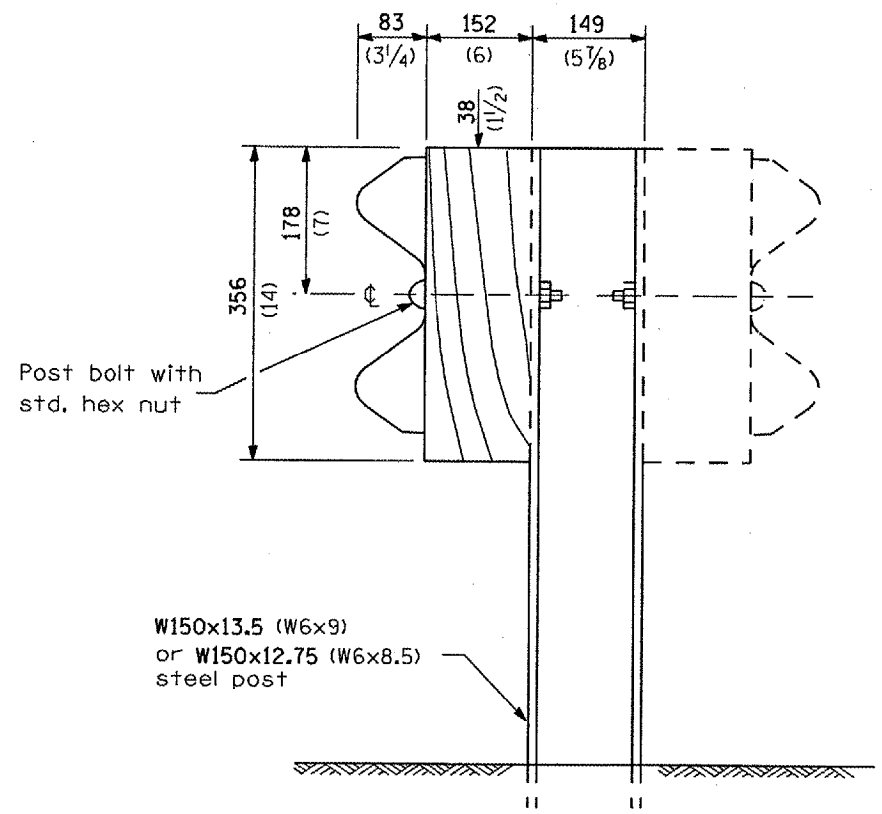
**REMOVE AND REERECT  
STEEL PLATE BEAM GUARDRAIL**

(Sheet 1 of 4)

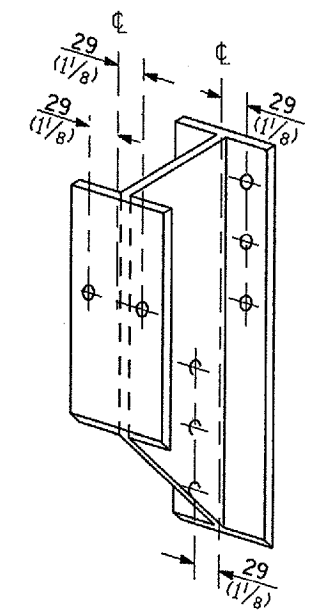
**DETAIL**

70262

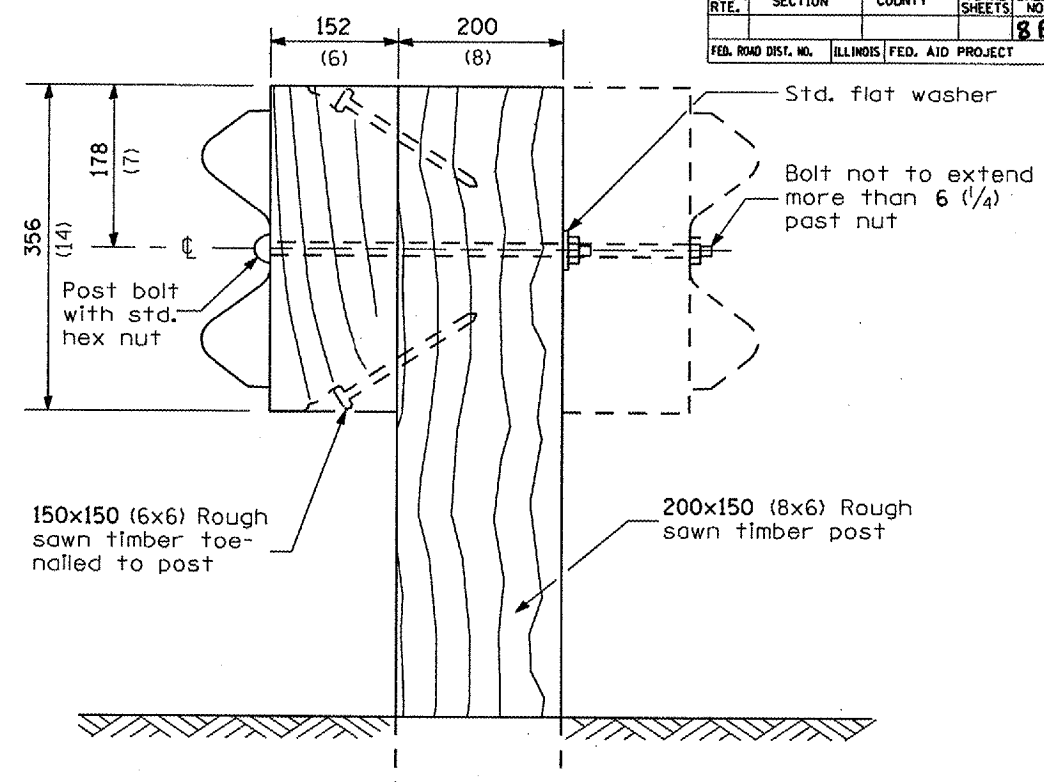
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
				88
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



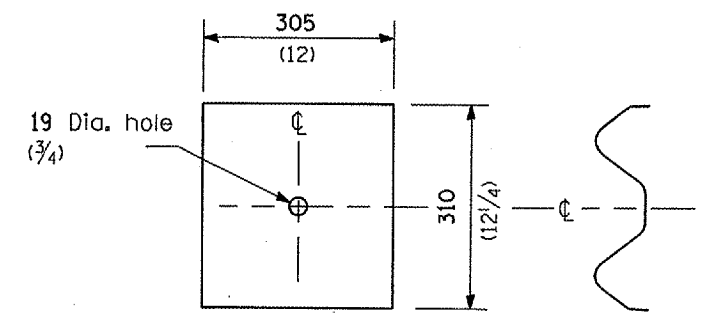
**STEEL POST CONSTRUCTION**



**STEEL BLOCK-OUT DETAIL**



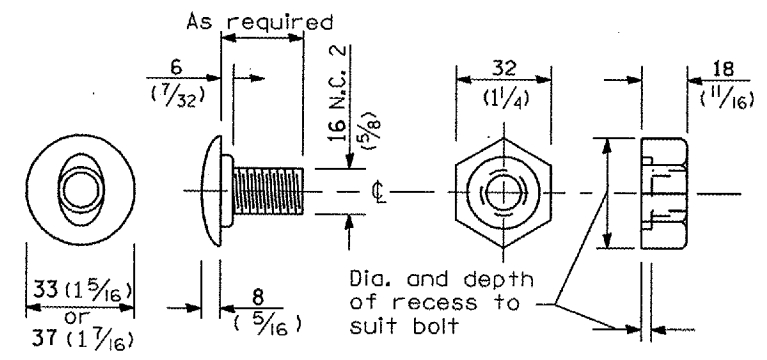
**WOOD POST CONSTRUCTION**



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

**PLATE A**



**POST OR SPLICE BOLT & NUT**

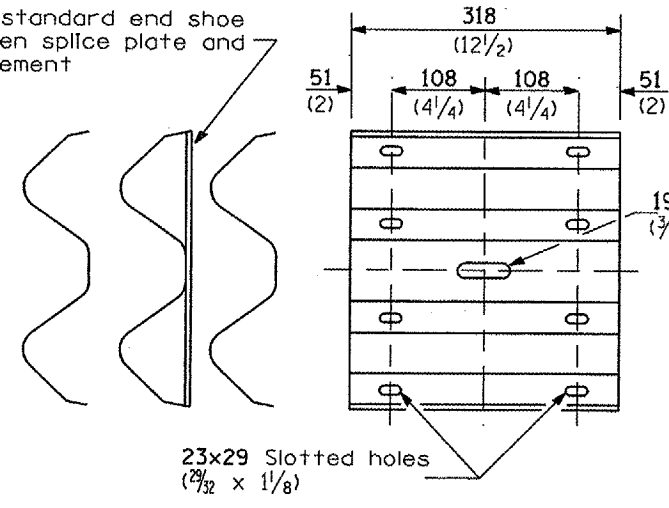
**REMOVE AND REERECT  
STEEL PLATE BEAM GUARDRAIL**

(Sheet 2 of 4)

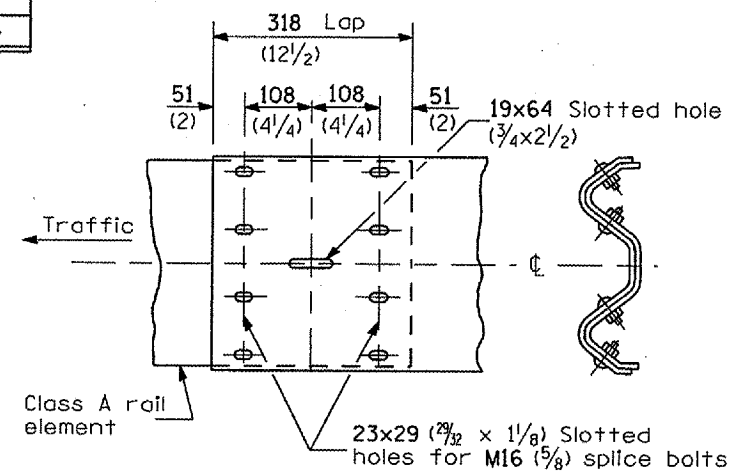
**DETAIL**

▲ ADDED 1/4/07

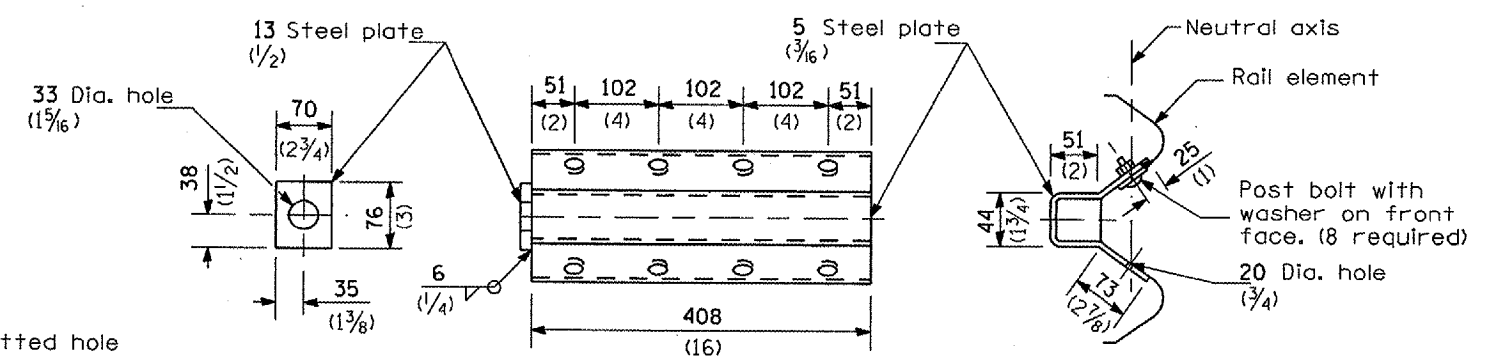
Place standard end shoe between splice plate and rail element



**SPLICE PLATE**

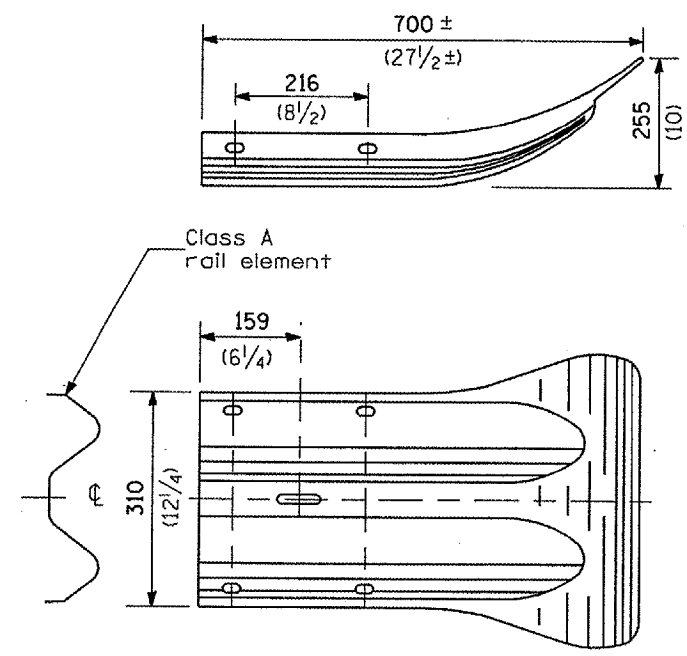


**RAIL ELEMENT SPLICE**

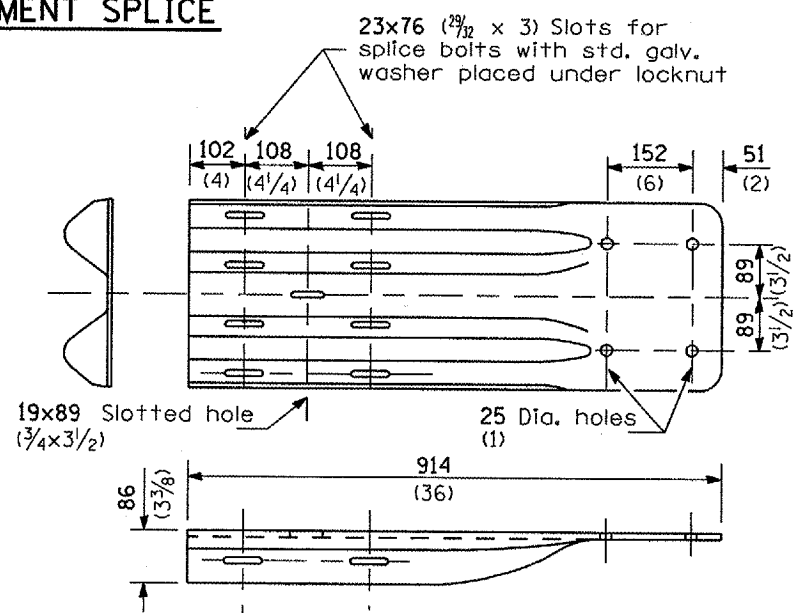


**NOTE**  
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

**ANCHOR PLATE T DETAILS**



**END SECTION**



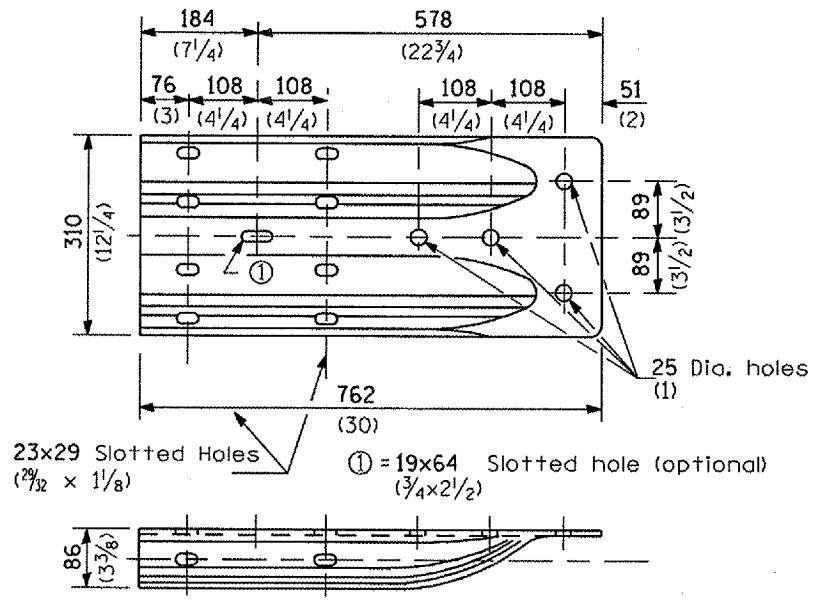
**NOTE**

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

**END SHOE**



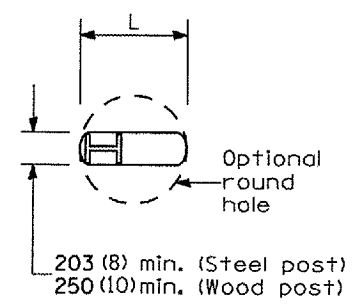
**ALTERNATE END SHOE**

**REMOVE AND REERECT  
STEEL PLATE BEAM GUARDRAIL**

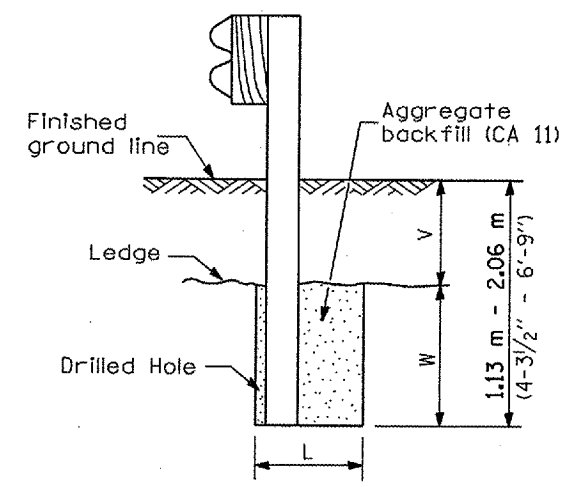
(Sheet 3 of 4)

**DETAIL**

▲ ADDED 1/4/07



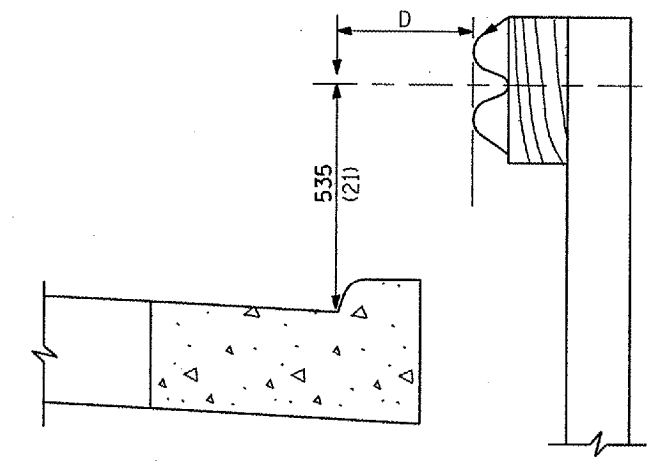
**PLAN**



Note:  
Ledge line is top of rock ledge or hard slog fill.

**ELEVATION**

**FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED**

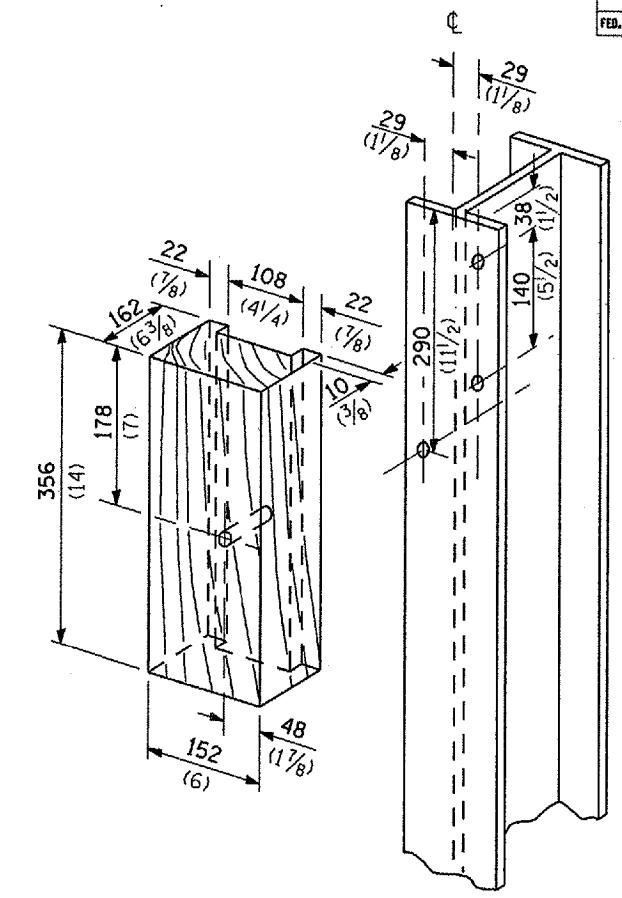


Note:  
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

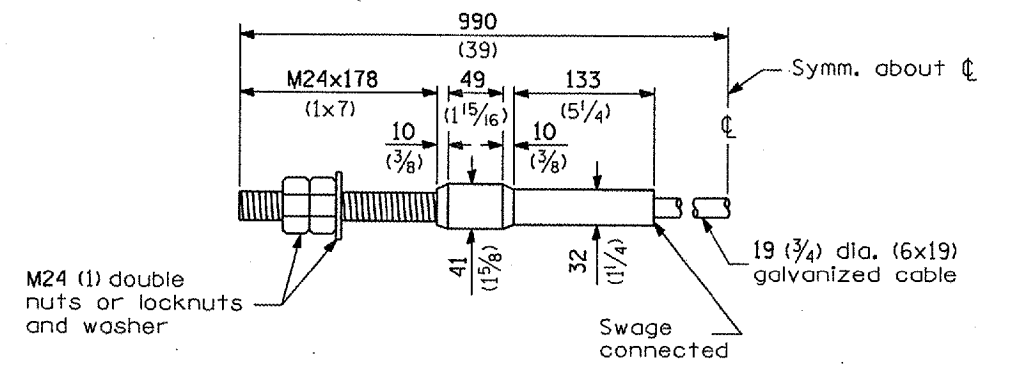
**GUARDRAIL PLACED BEHIND CURB**

(D = 0 desirable to 300 (12) maximum)

V	W	L	
		Steel Post	Wood Post
0 - 460 (0 - 18)	610 (24)	530 (21)	580 (23)
>460 - 825 (>18 - 41.5)	305 (12)	203 (8)	250 (10)
>825 - 1.13 m (>41.5 - 53.5)	305 - 0 (12 - 0)	203 (8)	250 (10)



**WOOD BLOCK-OUT AND STEEL POST DETAILS**



**CABLE ASSEMBLY**

(18,100 kg (40,000 lbs.) min. breaking strength)  
Tighten to taut tension.

**REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL**  
(Sheet 4 of 4)

**DETAIL**

△ ADDED 1/4/07