

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	VARIOUS	19	1
		ILLINOIS	CONTRACT NO. 66F73	
* DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18				

D-93-006-17

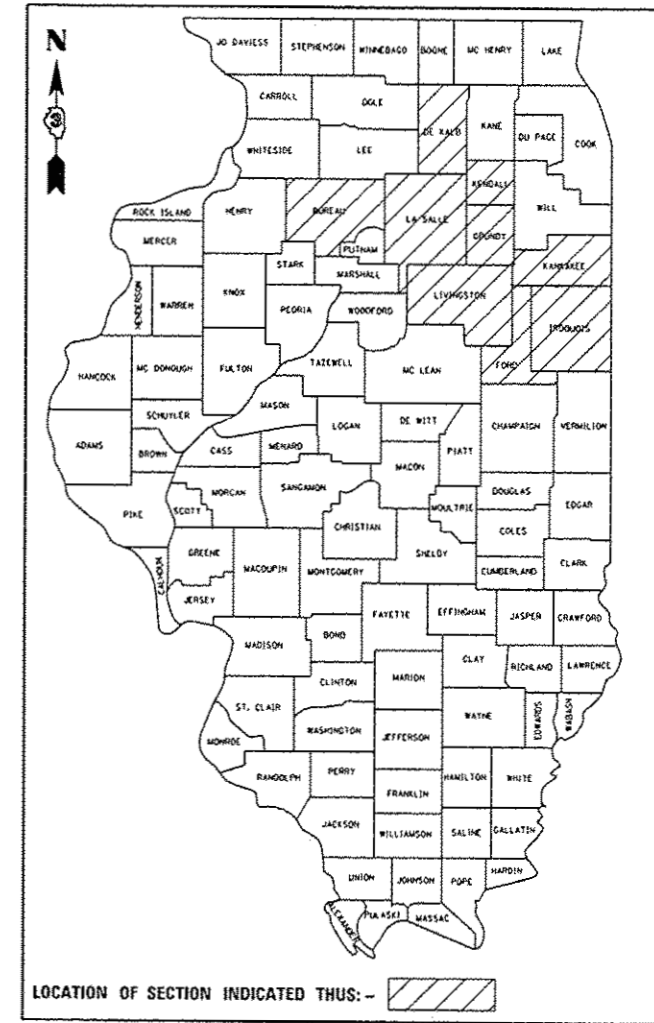
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**PROPOSED  
HIGHWAY PLANS**

**VARIOUS ROUTES  
D3 HWY DAMAGE REPAIR FY 18  
VARIOUS COUNTIES**

C-93-059-17

**REPAIRING MOTORIST CAUSED DAMAGE TO HIGHWAY FACILITIES**



INDEX OF SHEETS

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- 13 TRAFFIC BARRIER TERMINAL, TYPE 8
- 14 TRAFFIC BARRIER TERMINAL, TYPE 9
- 15 TRAFFIC BARRIER TERMINAL, TYPE 12
- 16 - 19 PRE-MGS GUARDRAIL STANDARDS EFFECTIVE APRIL 01, 2006

HIGHWAY STANDARDS

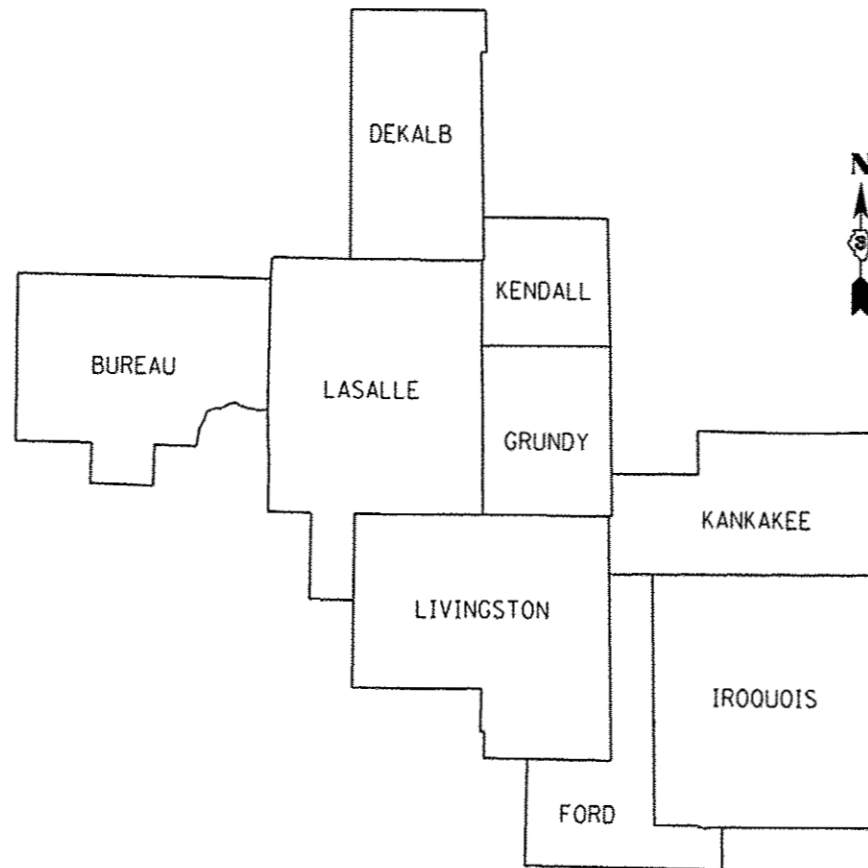
SEE PAGE 2 FOR LIST OF HIGHWAY STANDARDS

MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS \_\_\_\_\_

J.U.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

**PROJECT ENGINEER : DAVE ALEXANDER, P.E.**  
**UNIT CHIEF : PAT BRABOY, P.E.**

DISTRICT 3 NO. (815) 434-6131  
CONTRACT NO. 66F73



**DISTRICT 3**

LOCATION MAP  
NOT TO SCALE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED 03/30 20 17  
*Karin Merscher (w)*  
REGIONAL ENGINEER

May 12 20 17  
*Margaret M. Addis PE*  
ENGINEER OF DESIGN AND ENVIRONMENT

May 12 20 17  
*David J. Allen*  
DIRECTOR OF PROGRAM DEVELOPMENT

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

PLOT DATE = 3/29/2017  
 FILE NAME = p:\11\084EBIDINTEG\Illinois.gov\FWIDOT\Documents\DOT Offices\District 3\Projects\0366F73\CADDData\CADsheets\03xxxxx-sht-cover.dgn  
 PLOT SCALE = 100,0000' / in.  
 USER NAME = woodger.jp

**LIST OF ILLINOIS DOT HIGHWAY STANDARDS**

630001-11	STEEL PLATE BEAM GUARDRAIL
630006	NON-BLOCKED STEEL PLATE BEAM GUARDRAIL
630101-10	STRONG POST GUARDRAIL ATTACHED TO CULVERT
630106-02	LONG-SPAN GUARDRAIL OVER CULVERT
630111	WEAK POST GUARDRAIL ATTACHED TO CULVERT
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-07	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631006-08	TRAFFIC BARRIER TERMINAL, TYPE 1B
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
631033-07	TRAFFIC BARRIER TERMINAL, TYPE 6B
631046-04	TRAFFIC BARRIER TERMINAL, TYPE 10
643001-02	SAND MODULE IMPACT ATTENUATORS
664001-02	CHAIN LINK FENCE
665001-02	WOVEN WIRE FENCE
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-10	LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP FOR SPEEDS ≥ 45 MPH
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701422-09	LANE CLOSURE, MULTILANE, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701423-10	LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701426-09	LANE CLOSURE, MULTILANE INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≥ 45 MPH
701427-05	LANE CLOSURE, MULTILANE INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≤ 40 MPH
701428-01	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/EXPRESSWAY
701451-04	RAMP CLOSURE FREEWAY/EXPRESSWAY
701456-04	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-07	URBAN LANE CLOSURE 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-08	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-06	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

**GENERAL NOTES**

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE CONTRACTOR IS ADVISED THAT THERE MAY BE PRESENCE OF DEPARTMENT-OWNED UNDERGROUND ELECTRICAL CABLE WITHIN THE LIMITS OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR SHALL REQUEST THE ILLINOIS DEPARTMENT OF TRANSPORTATION IN OTTAWA (815-434-8417) TO LOCATE THE UNDERGROUND FACILITIES, PROVIDING A MINIMUM OF 72 HOURS NOTICE. THE DEPARTMENT IS NOT A MEMBER OF THE JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS (JULIE) SYSTEM.

ALL DAMAGE TO DEPARTMENT OWNED UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE. THIS SHALL INCLUDE ALL TEMPORARY REPAIRS REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS. SPLICING OF ELECTRIC CABLE SHALL NOT BE ALLOWED. ELECTRIC CABLE SHALL BE REPLACED FROM POLE TO POLE OR CONTROLLER.

THE CONTRACTOR IS REMINDED TO CAREFULLY EXAMINE THIS CONTRACT FOR NEW OR CHANGED CONDITIONS FROM ANY PREVIOUS VERSION HE MAY HAVE EXAMINED.

THE REMOVAL OF DAMAGED GUARDRAIL, DAMAGED HIGH-TENSION CABLE, AND DAMAGED POSTS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE VARIOUS REPLACEMENT PAY ITEMS.

THE TRAFFIC CONTROL REQUIRED FOR THE REPAIRS OR INSTALLATION OF GUARDRAIL, HIGH-TENSION CABLE, OR FENCE SHALL BE INCLUDED IN THE CALLOUT TRAFFIC CONTROL PAY ITEMS AS DESCRIBED IN THE SPECIAL PROVISIONS, AND SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL STANDARDS INCLUDED HEREIN.

ALL HARDWARE (NUTS, BOLTS, WASHERS, STAPLES, WIRES, TIES, ETC.) REQUIRED FOR THE REPAIRS TO OR INSTALLATION OF GUARDRAIL, HIGH-TENSION CABLE, AND FENCE SHALL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS OF WORK IN THIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 1-800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT THREE  
AS BUILT INFORMATION

SUPERVISING CONSTRUCTION FIELD ENGINEER

RESIDENT ENGINEER / TECHNICIAN

START & END DATES  
OF CONSTRUCTION:

INSPECTORS:

**HIGH TENSION CABLE BARRIER SYSTEM REPAIR SCHEDULE**

LOCATION / COUNTY / SYSTEM	SYSTEM TYPE	REPAIR	REPAIR HTC	REPLACE	HTC SYSTEM	REMOVE &	REMOVE &	FURNISH & DRIVE	CONTACT PERSON
		HTC	BARRIER	HTC	MAINTENANCE	REPLACE	REPLACE	METAL SOCKET	
			TERMINAL	END SECTION		HTC POST	HTC POST (HD)	with POST	
I-55, MP 227-233 / GRUNDY / BRIFEN	SOCKETED	1	2	3	4	5		7	Richard Butler (904)707-2728
I-55, MP 227-216 / GRUDY & LIVINGSTON / GIBLALTAR	DRIVEN	1	2	3	4	5			Mike Winters (888)447-7263
I-55, MP 207-210.5 / GRUDY / GIBLALTAR	DRIVEN	1	2	3	4	5			Mike Winters (888)447-7263
I-57, MP 324-316 / KANKAKEE / GIBLALTAR	DRIVEN	1	2	3	4	5			Mike Winters (888)447-7263
I-57, MP 286-277 / IROQUOIS / NUCOR	DRIVEN	1	2	3	4	5			Jeremy Knerndchield (913)744-8054
I-57, MP 292-286 / IROQUOIS / TRINITY	DRIVEN ( HD )	1	2	3	4		6		Richard Flegiewicz (847)392-4611
I-80, MP 105-97 / LASALLE & GRUNDY / TRINITY	DRIVEN ( HD )	1	2	3	4		6		Richard Flegiewicz (847)392-4611
I-80, MP 92-81 / LASALLE / TRINITY	DRIVEN ( HD )	1	2	3	4		6		David Kelly (800)527-6050 ext 88849

TABLE SHOWS EACH SYSTEM AND ITS CORRESPONDING PAY ITEMS

**REPAIR PAY ITEMS**

- 1 = REPAIR HIGH TENSION CABLE
- 2 = REPAIR HIGH TENSION BARRIER TERMINAL
- 3 = REPLACE HIGH TENSION CABLE END SECTION
- 4 = HIGH TENSION CABLE SYSTEM MAINTENANCE
- 5 = REMOVE AND REPLACE HIGH TENSION CABLE POST
- 6 = REMOVE AND REPLACE HIGH TENSION CABLE POST (HEAVY DUTY)
- 7 = FURNISH AND DRIVE METAL SOCKET WITH POST

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DISTRICT THREE

PREPARED BY: *Dr. Beauvil*  
DISTRICT STUDIES & PLANS ENGINEER

DATE: 3-30-17

EXAMINED BY: *[Signature]*  
DISTRICT CONSTRUCTION ENGINEER

*Michael Ash*  
DISTRICT MATERIALS ENGINEER

*[Signature]*  
DISTRICT OPERATIONS ENGINEER

• DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

FILE NAME *	USER NAME * woodger.jp	DESIGNED -	REVISED -	SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____
PROJECT #	PROJECT NAME	DRAWN	REVISED	
PLOT SCALE *	CHECKED -	REVISED -	REVISED -	
PLOT DATE *	DATE -	REVISED -	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.		VARIOUS	19	2
CONTRACT NO. 66F73			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				MCHD 100% MCHD ROADWAY	CONST. MAIN. 100% STATE ROADWAY	HTC BARRIER 100% STATE ROADWAY
				0021 ✓	0021 ✓	0021 ✓
				07MO	07EO	07AO
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2		
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1	1		
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	1	1		
63100089	TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	1	1		
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	35	20	15	
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	4	2	2	
63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	100		100	
63301215	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	25		25	
63400105	GUARD POSTS	EACH	15	15		
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1	1		
66400105	CHAIN LINK FENCE, 4'	FOOT	100	100		
66400305	CHAIN LINK FENCE, 6'	FOOT	100	100		
66500105	WOVEN WIRE FENCE, 4'	FOOT	10000	5000	5000	
67100100	MOBILIZATION	LSUM	1	0.5	0.5	

RURAL

REV

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				MCHD 100% MCHD ROADWAY	CONST. MAIN. 100% STATE ROADWAY	HTC BARRIER 100% STATE ROADWAY
				0021 07M0	0021 07E0	0021 07A0
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	200	100	100	
X0321563	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL	EACH	50	20	30	
X0322878	TIMBER CURB	FOOT	32	32		
X0326126	WOOD TERMINAL POST	EACH	2	1	1	
X0327278	REPAIR HIGH TENSION CABLE	FOOT	1000	500		500
X0327279	REPLACE HIGH TENSION CABLE END SECTION	EACH	2	1		1
X0327281	REMOVE AND REPLACE HIGH TENSION CABLE POST	EACH	600	300		300
X0327282	REMOVE AND REPLACE HTC POST (HEAVY DUTY)	EACH	500	200		300
X0327307	REPAIR HIGH TENSION BARRIER TERMINAL	EACH	25	10		15
X6300215	RAIL ELEMENT PLATES	EACH	400	200	200	
X6300230	STEEL POSTS	EACH	500	250	250	
X6331101	TUBULAR THRIE BEAM	FOOT	50	25	25	
X6331105	STEEL POSTS, MODIFIED	EACH	4	2	2	
X6331110	STEEL POSTS, SPECIAL	EACH	10	5	5	

RURAL

\*

M

\* SPECIALTY ITEM

FILE NAME *	USER NAME = woodger.jp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Default		CHECKED -	REVISED -		SCALE: _____	SHEET _____	OF _____	SHEETS	STA. _____	TO STA. _____	VARIOUS	19	4
		DATE -	REVISED -						CONTRACT NO. 66F73				
									ILLINOIS FED. AID PROJECT				

\* DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

REV

10/10/17

RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				MCHD 100% MCHD ROADWAY	CONST. MAIN. 100% STATE ROADWAY	HTC BARRIER 100% STATE ROADWAY
				0021 07MO	0021 07EO	0021 07AO
X6432110	REPLACE IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	110	70	40	
X6610200	HOT-MIX ASPHALT CURB REPAIR	FOOT	50	50		
X6640502	CHAIN LINK FENCE POST	EACH	15	10	5	
X7011834	TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	EACH	40	20	20	
X7011836	TRAFFIC CONTROL AND PROTECTION, FREEWAY/EXPRESSWAY, CALL OUT WORK	EACH	125	50	15	60
Z0008760	EMERGENCY WORK CALL OUT	EACH	200	100	50	50
Z0012752	CONCRETE STRUCTURE REPAIR	CU FT	15	15		
Z0020210	PULL POST ARRANGEMENT	EACH	20	10	10	
Z0029657	HIGH TENSION CABLE SYSTEM MAINTENANCE	EACH	700	300		400
Z0029660	FURNISH AND DRIVE METAL SOCKET WITH POST	EACH	20	10		10
Z0029665	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - RAIL ELEMENT PLATE	FOOT	25		25	
Z0052600	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1	1		
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2		
Z0053210	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	2	2		
Z0053220	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	2	2		

15

\* DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

FILE NAME *	USER NAME = woodyer.jp	DESIGNED - _____	REVISED - _____
p:\11004EBIDINTE\Illinois.gov\PI001\Documents\100T Offices\District 3\Projects\036		CHECKED - _____	REVISED - _____
Default	PLOT DATE = 3/27/2017	DATE - _____	REVISED - _____

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
SCALE: \_\_\_\_\_ SHEET \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	VARIOUS	19	5
CONTRACT NO. 66F73			ILLINOIS FED. AID PROJECT	

TRINITY CABLE TENSIONS		
TEMPERATURE	PRE-STRETCHED CABLE TENSION	STANDARD CABLE TENSION
°F	LBS	LBS
-15	7500	8800
-10	7300	8600
-5	7100	8400
0	7000	8200
5	6800	8000
10	6600	7800
15	6500	7600
20	6300	7400
25	6100	7200
30	6000	7000
35	5800	6800
40	5600	6600
45	5500	6400
50	5300	6200
55	5100	6000
60	5000	5800
65	4800	5600
70	4600	5400
75	4500	5200
80	4300	5000
85	4100	4800
90	4000	4600
95	3800	4400
100	3600	4200
105	3500	4000
110	3300	3800

TOLERANCE: -200 TO +800 POUNDS

NUCOR CABLE TENSION		
CABLE TEMPERATURE	INITIAL TENSION	EXPECTED TENSION
°F	W/15%	
-30	13706	11918
-20	12979	11286
-10	12252	10654
0	11525	10022
10	10800	9391
20	10073	8759
30	9346	8127
40	8619	7495
50	7894	6864
60	7167	6232
70	6440	5600
80	6077	5284
90	5713	4968
100	5350	4652
110	4986	4336
120	4624	4021

TENSION CHECK REQUIREMENTS

CHECKING AND CORRECTING THE TENSION IN EACH CABLE SHALL BE PERFORMED EACH TIME A CABLE IS SPICED AND HTC SYSTEM MAINTENANCE IS SPECIFIED. THE RECOMMENDED TENSIONS FOR EACH SYSTEM ARE SHOWN IN THE CHARTS. THE RESULT OF EACH CHECK SHALL BE RECORDED ON A COPY OF THE TENSION LOG SHEET SHOWN ON THIS SHEET. THE COMPLETED LOG SHALL BE SUBMITTED ALONG WITH WORK ORDER BILLINGS.

GIBRALTAR CABLE TENSIONS	
CABLE TEMPERATURE	CABLE TENSION
°F	LBS
-30	
-20	
-10	8000
0	7600
10	7200
20	6800
30	6400
40	6000
50	5600
60	5200
70	4800
80	4400
90	4000
100	3600
110	3200

BRIFEN CABLE TENSIONS	
ROPE TEMPERATURE	TENSION
F°	LBS
0	7300
8	7000
16	6700
24	6400
32	6100
40	5800
48	5500
56	5200
64	4800
72	4500
76	4400
80	4200
88	3900
96	3600
100	3500
104	3300
108	3200
112	3000



Illinois Department of Transportation

TENSION LOG SHEET  
FOR  
High Tension Cable Barrier

System
Brifen
USHTCS (Nucor)
Gibraltar
Trinity (CASS)

Date / Time: \_\_\_\_\_

Contract / Work Order No. \_\_\_\_\_

County: \_\_\_\_\_

Route: \_\_\_\_\_

Milepost/ GPS: \_\_\_\_\_

Ambient Temp: \_\_\_\_\_

Rope Temp: \_\_\_\_\_

3 or 4 Cable System	Location 1 Actual Load kN/LB	Location 2 Actual Load kN/LB	Location 3 Actual Load kN/LB	Average Load (L1+L2+L3/3) kN/LB	Design Load kN/LB (see charts)
Top Cable					
Cable 2					
Cable 3 (If Applicable)					
Bottom Cable					

Note: Readings should be taken at 3 separate places along each cable, moving the tension meter at least 4" between readings. The average load is compared to design load for tolerance.

Number of splices made to the cable: \_\_\_\_\_

Were tensioning adjustments made to the cable: \_\_\_\_\_

Is 1" (minimum) of thread exposed in all turnbuckle windows: \_\_\_\_\_

Splice Type & Location (s): \_\_\_\_\_

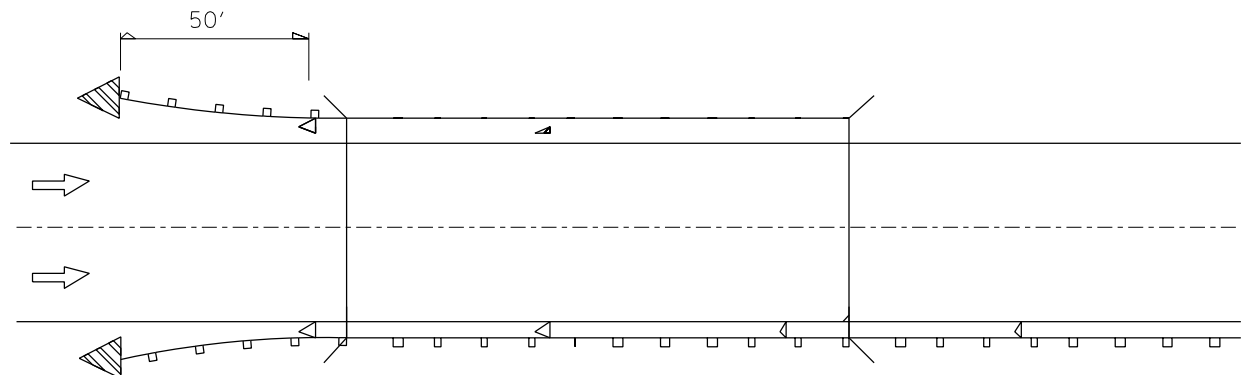
Testing Equipment Used: \_\_\_\_\_

Printed Name & Signature of Tester: \_\_\_\_\_

Other Notes: \_\_\_\_\_

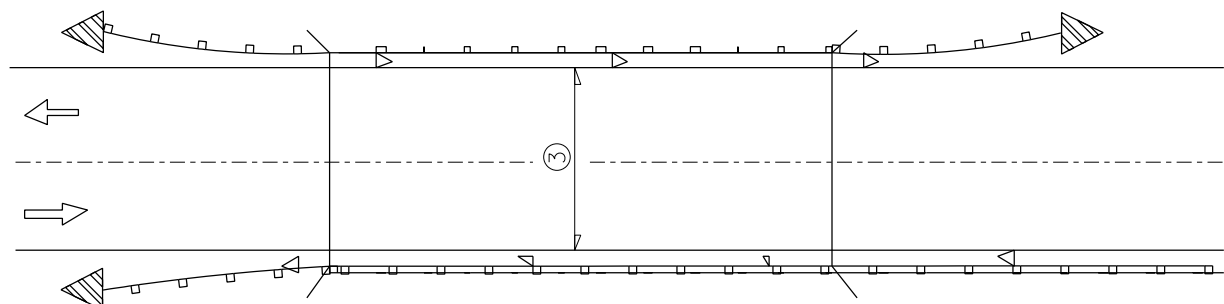
IDOT Inspector Initials (if Present): \_\_\_\_\_

\* DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18






Reflectors are not to be placed on Terminal End Sections.  
(min. 3 reflectors regardless of length).  
After 400 ft transition, match existing delineator spacing.

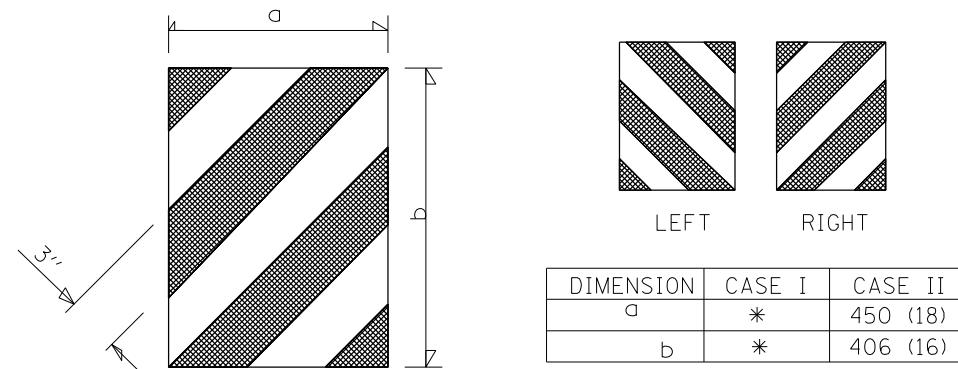
ONE-WAY TRAFFIC



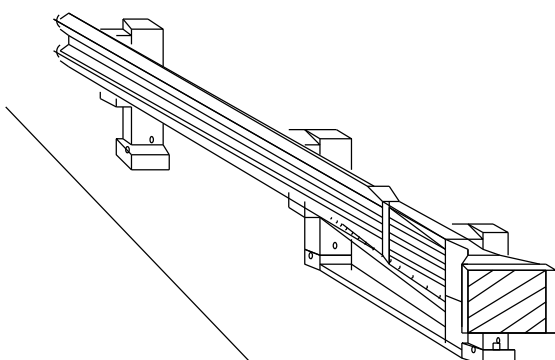
③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the pavement is less than 24' wider than the pavement approaching the bridge.

-  Monodirectional silver
-  Monodirectional amber
-  Terminal Marker - Black/Yellow  
Left or Right as appropriate

TWO-WAY TRAFFIC



\* The width and height (a, b) of the terminal marker shall be within approximately 25 mm (1 inch) of the outer edge of the terminal end, with a minimum reflective area of 0.18 m<sup>2</sup> (288 sq. in.)



TERMINAL MARKER DETAILS  
Color: Black / Yellow reflectorized

REFLECTOR AND  
TERMINAL MARKER PLACEMENT

• DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

FILE NAME =	USER NAME = woodger.jp	DESIGNED -	REVISED -
pw:\IL\084EBIDINTEG.illinois.gov\PWIDOT\Documents\DOT Offices\District 3\Projects\0366\Drawings\0366\0366-D3xxxx-shr-cover.dwg		CHECKED -	REVISED -
		DATE -	REVISED -

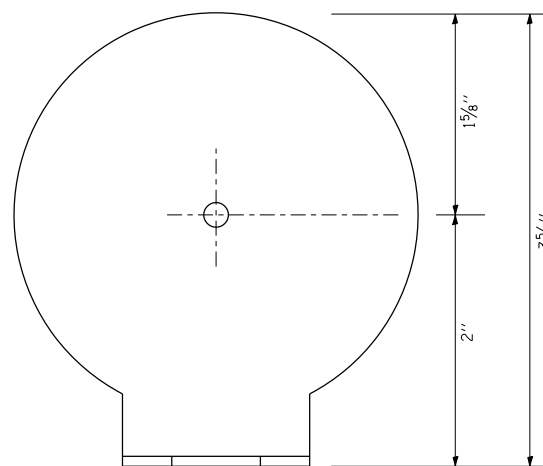
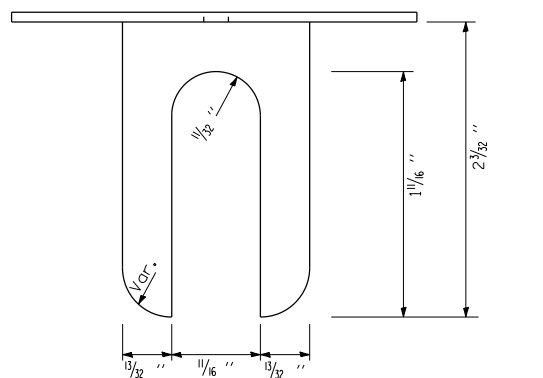
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

REFLECTOR AND TERMINAL MARKER PLACEMENT DETAIL

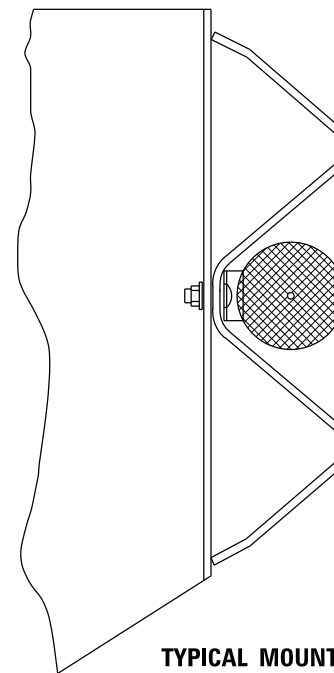
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		VARIOUS	19	7
CONTRACT NO. 66F73				

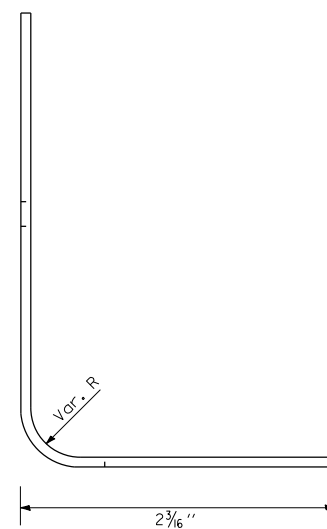
ILLINOIS FED. AID PROJECT



**REFLECTOR MARKER TYPE A**



**TYPICAL MOUNTING WITH REFLECTOR**



**NOTES:**

1. BRACKET IS TO BE FABRICATED FROM 12 GA. (MIN) STEEL GALVANIZED IN ACCORDANCE WITH AASHTO M III.
2. MIN. 3 REFLECTORS PER SIDE.
3. BRACKET "FOOT" SHALL BE PLACED BETWEEN THE BOLT HEAD AND THE PLATE WASHER (IF PRESENT).
4. ON THRIE BEAM RAIL, THE BRACKETS SHALL BE ATTACHED TO THE UPPER SPLICE BOLTS.
5. USE CRYSTAL COLOR, BI-DIRECTIONAL REFLECTORS USE AMBER (LEFT) AND CRYSTAL (RIGHT), MONODIRECTIONAL REFLECTORS ON INTERSTATES
6. ALL DIMENSIONS SHOWN ARE MINIMUM

**REFLECTOR DETAIL**

• DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

FILE NAME =	USER NAME = woodger.jp	DESIGNED -	REVISOR -
pw:\IL\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 3\Projects\0366\DRAWING\DATA\AD\shets\03xxxx-shr-cover.dwg		CHECKED -	REVISOR -
		DATE -	REVISOR -

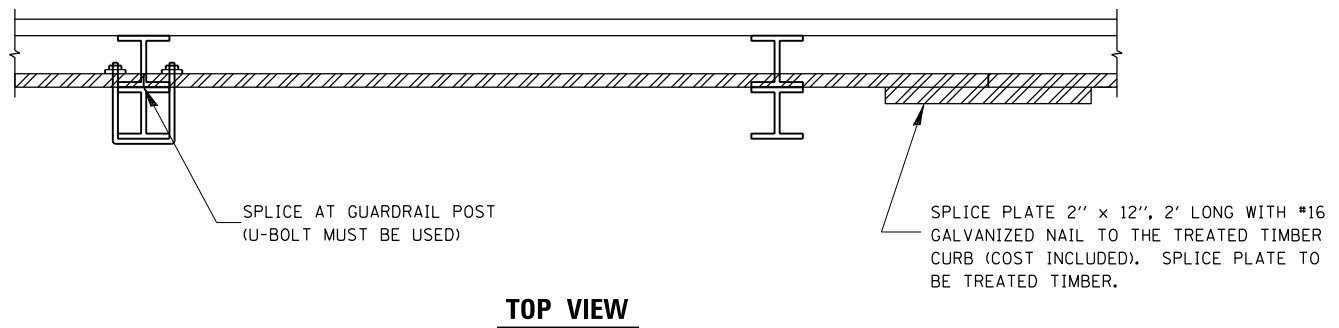
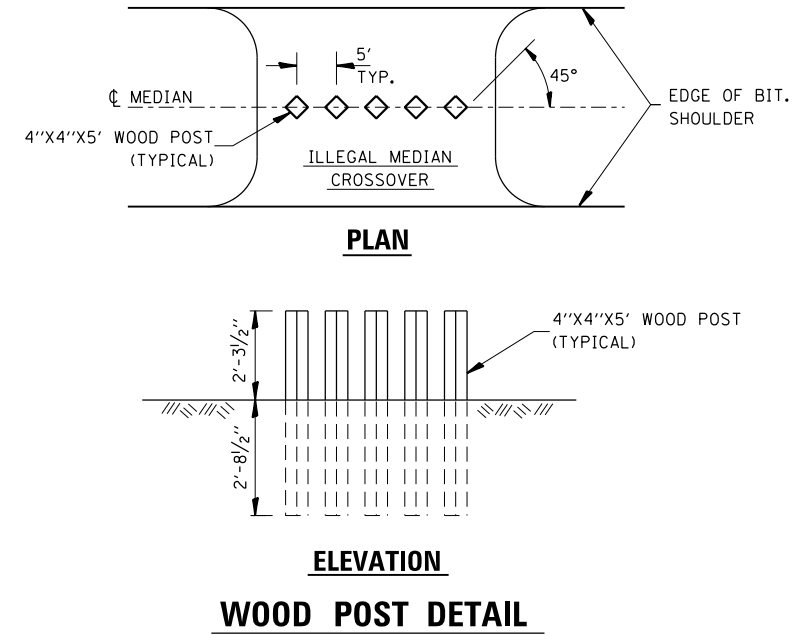
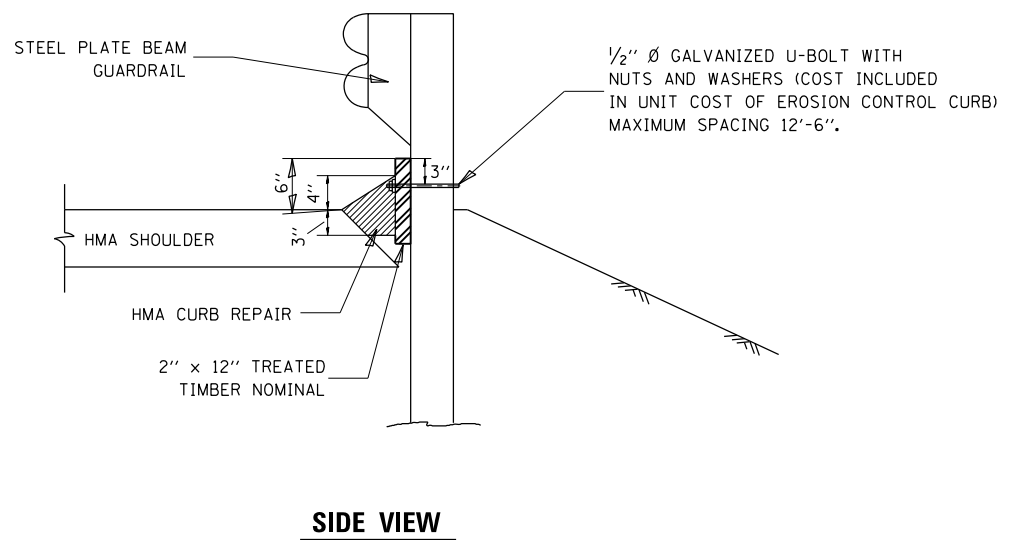
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**REFLECTOR DETAIL**

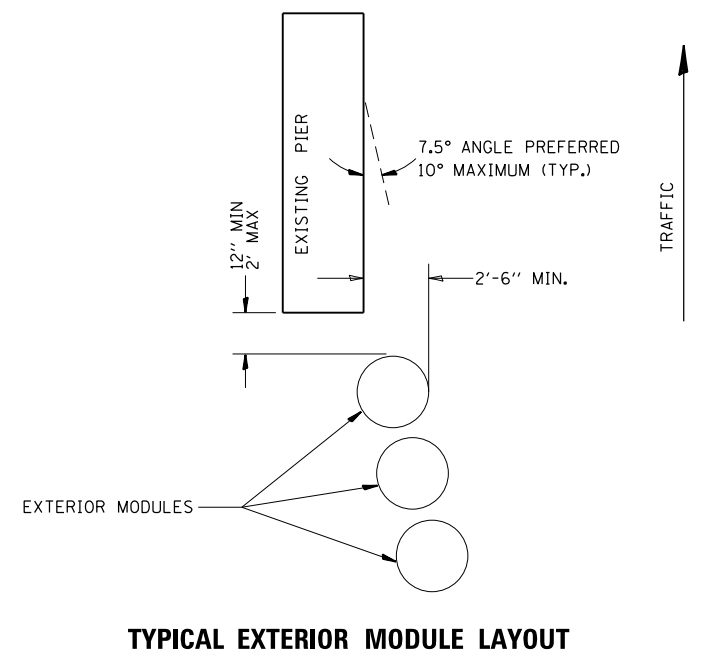
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*	VARIOUS	19	8
			CONTRACT NO. 66F73	
ILLINOIS FED. AID PROJECT				





**IMPACT ATTENUATOR LAYOUT PLAN**



- NOTES:**
1. THE PAY ITEM "REPLACE IMPACT ATTENUATORS, (NON-REDIRECTIVE), TEST LEVEL 3" HAS BEEN INCLUDED TO REPLACE INDIVIDUAL DAMAGED SAND MODULES.
  2. REPLACEMENT MODULES SHALL MATCH THE KIND OF MODULES THAT ARE REMAINING.
  3. IMPACT ATTENUATORS SHALL BE IN ACCORDANCE WITH SECTION 643 FOR IMPACT ATTENUATORS, AND WITH STANDARD 643001.
  4. THIS SHEET SHOWS THE LAYOUT INFORMATION FOR REPLACEMENT OF SAND MODULES (IMPACT ATTENUATORS) AT A TYPICAL INTERSTATE LOCATION.
  5. ADJACENT SAND MODULE IMPACT ATTENUATORS THAT ARE NOT DAMAGED, BUT HAVE BEEN SHIFTED LATERALLY FROM THEIR ORIGINAL POSITION SHALL BE REALIGNED OR MOVED BACK TO THEIR ORIGINAL POSITION, AS DIRECTED BY THE ENGINEER. REALIGNMENT OR MOVING OF ADJACENT UNDAMAGED MODULES SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF REPLACEMENT. THE WORK TO REALIGN OR SHIFT UP TO 2 MODULES SHALL BE INCLUDED WITH EACH REPLACED SAND MODULE IMPACT ATTENUATOR.

NOTE:  
THE TREATED TIMBER SHALL BUTT TOGETHER AT THE GUARDRAIL POST OR SPLICED AS SHOWN ON THE DETAIL.

THE TREATED TIMBER SHALL BE TREATED IN ACCORDANCE TO ARTICLE 1007.12 AND ALL PRESERVATIVES SPECIFIED IN THE ARTICLE WILL BE ALLOWED.

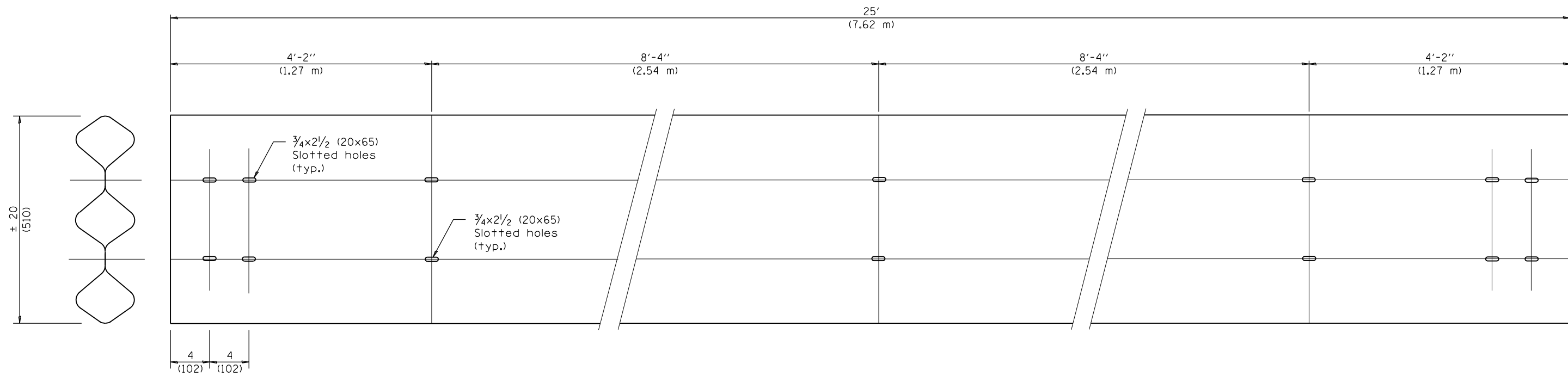
THE PRICE FOR EROSION CONTROL CURB SHALL INCLUDE THE U-BOLTS ATTACHING THE TREATED TIMBER TO THE GUARDRAIL POSTS, TREATED TIMBER, AND THE NECESSARY GRADING TO COMPLETE THIS WORK.

HMA CURB REPAIR SHALL BE MEASURED AND PAID FOR AT CONTRACT UNIT PRICE PER TON.

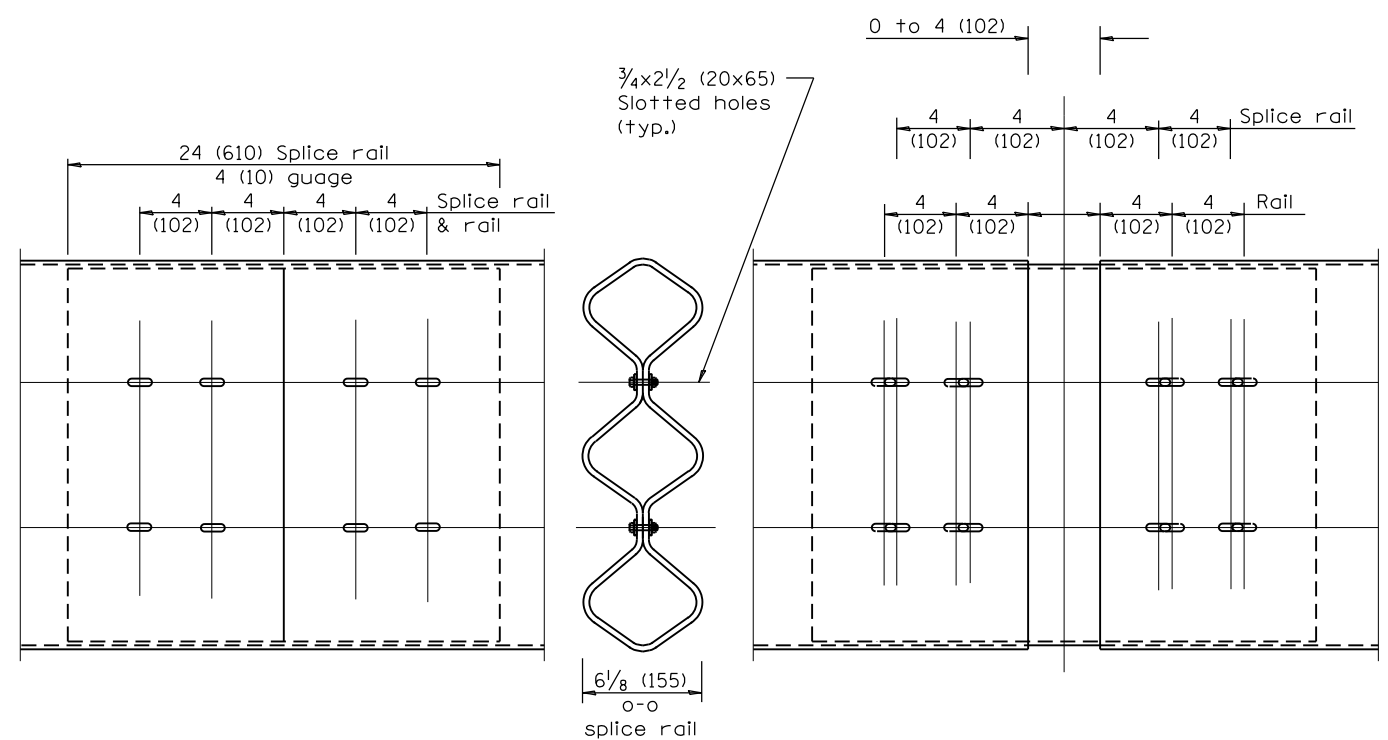
HMA CURB REPAIR SHALL BE IN ACCORDANCE WITH SECTION 408 OF THE STANDARD SPECIFICATIONS.

**TIMBER CURB & HMA CURB REPAIR**

FILE NAME =	USER NAME = woodger.jp	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TIMBER CURB &amp; BITUMINOUS CURB REPAIR &amp; GUARD POST DETAIL &amp; IMPACT ATTENUATOR PLAN</b>	F.A.P. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\IL\084EBIDINTEG.illinois.gov\PIDOT\Documents\DOT Offices\District 3\Projects\0366\Drawings\EA\Drawings\03xxxx-shr-cover.dwg		CHECKED -	REVISED -			VAR.	*	VARIOUS	19	9	
PLOT SCALE = 100.0000' / in.		DATE -	REVISED -			CONTRACT NO. 66F73					
PLOT DATE = 3/27/2017						ILLINOIS FED. AID PROJECT					

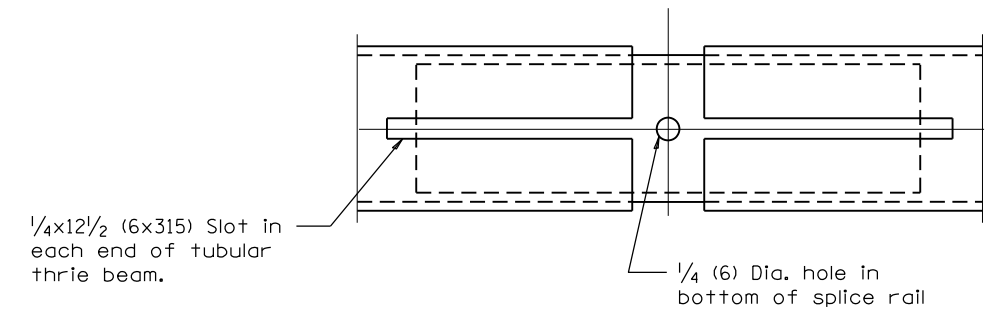


**TUBULAR THRIE BEAM FOR INTERNAL SPLICE JOINT**



**INTERNAL SPLICE JOINT**

**INTERNAL EXPANSION SPLICE JOINT**



**BOTTOM VIEW OF INTERNAL EXPANSION SPLICE JOINT**

**GENERAL NOTES**

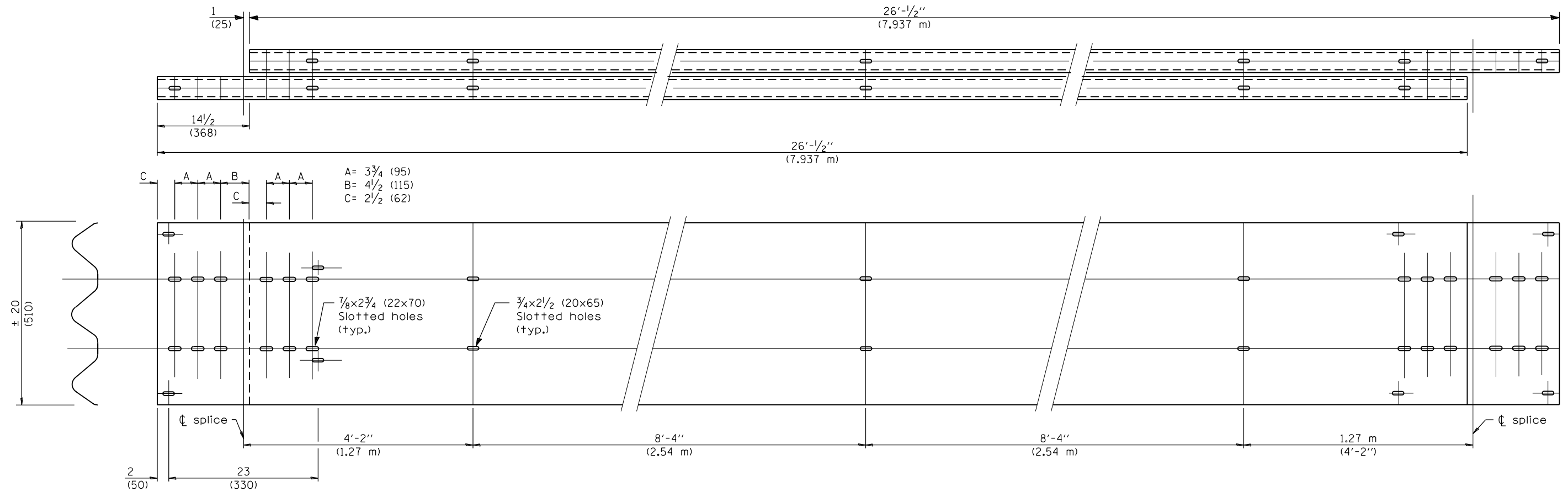
Plate Washers B are to be placed under both heads and nuts of splicing bolts for internal splice and internal expansion splice joint.

Plate Washers C are to be placed under both heads and nuts of splicing bolts for lap expansion and internal lap splice joint.

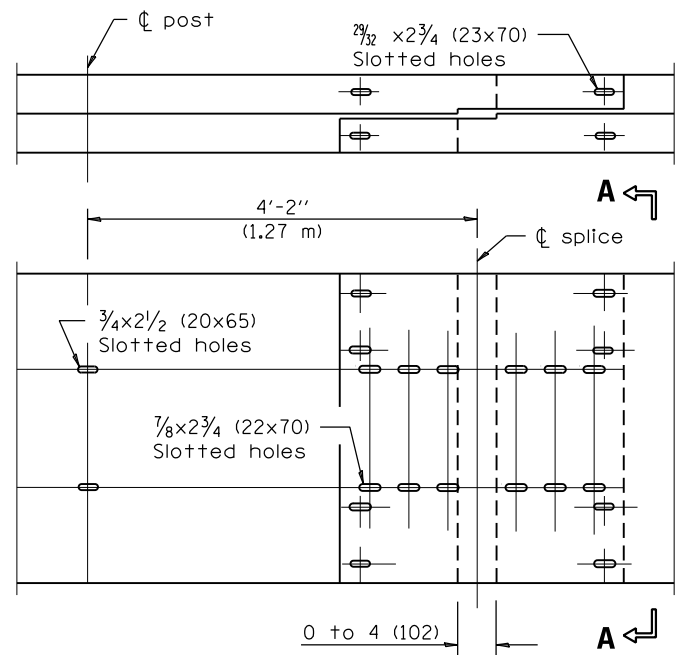
See Standard 630001 for details of guardrail not shown.

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

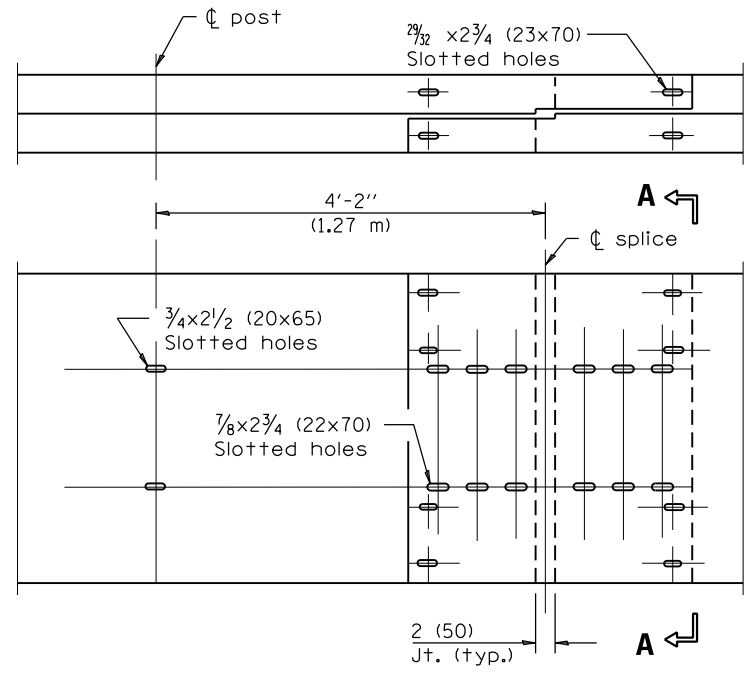
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Default	PLOT DATE = 3/27/2017	DATE -	REVISED -			SCALE: _____ SHEET 1 OF 3 SHEETS STA. _____ TO STA. _____		CONTRACT NO. 66F73		ILLINOIS FED. AID PROJECT		



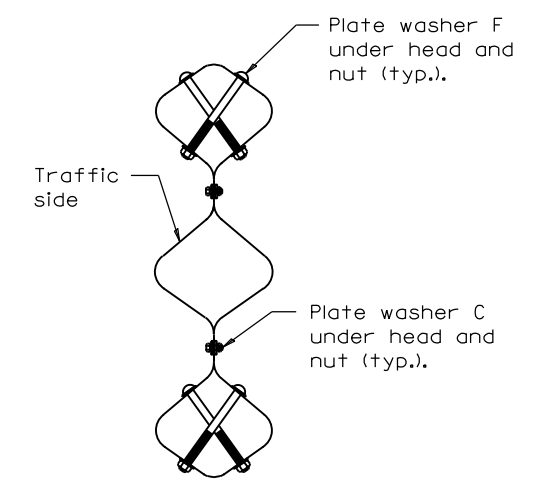
**TUBULAR THRIE BEAM FOR LAP SPLICE JOINT**



**LAP EXPANSION SPLICE JOINT**

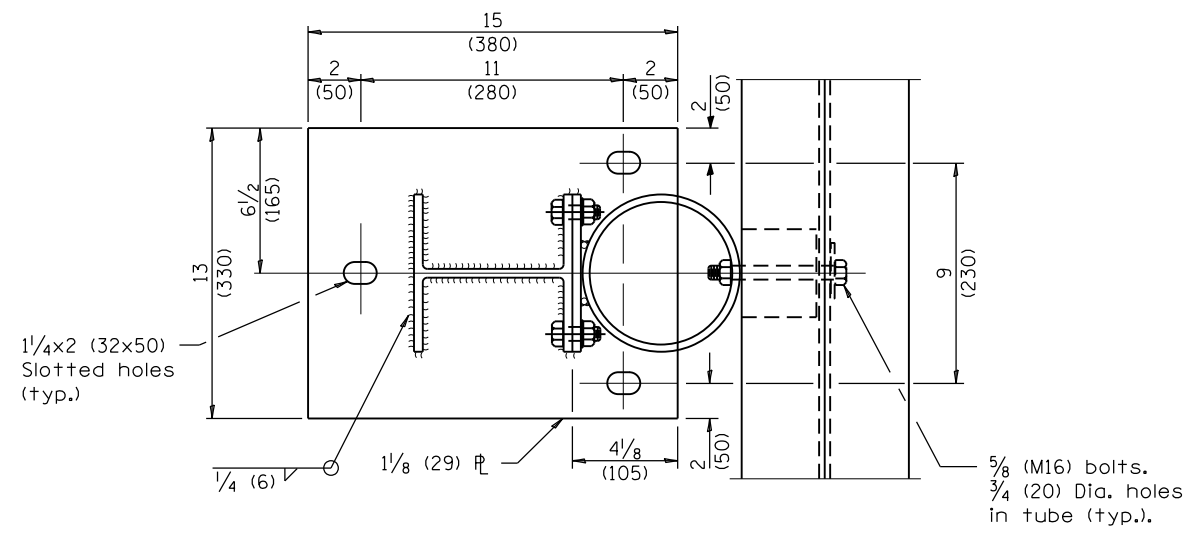


**LAP SPLICE JOINT**

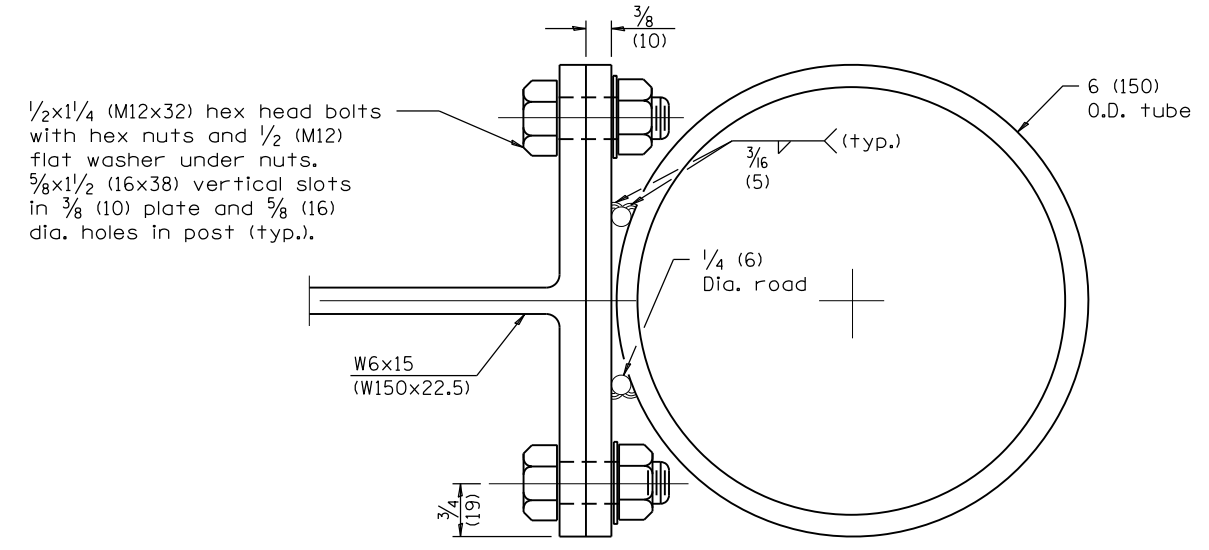


**SECTION A-A**

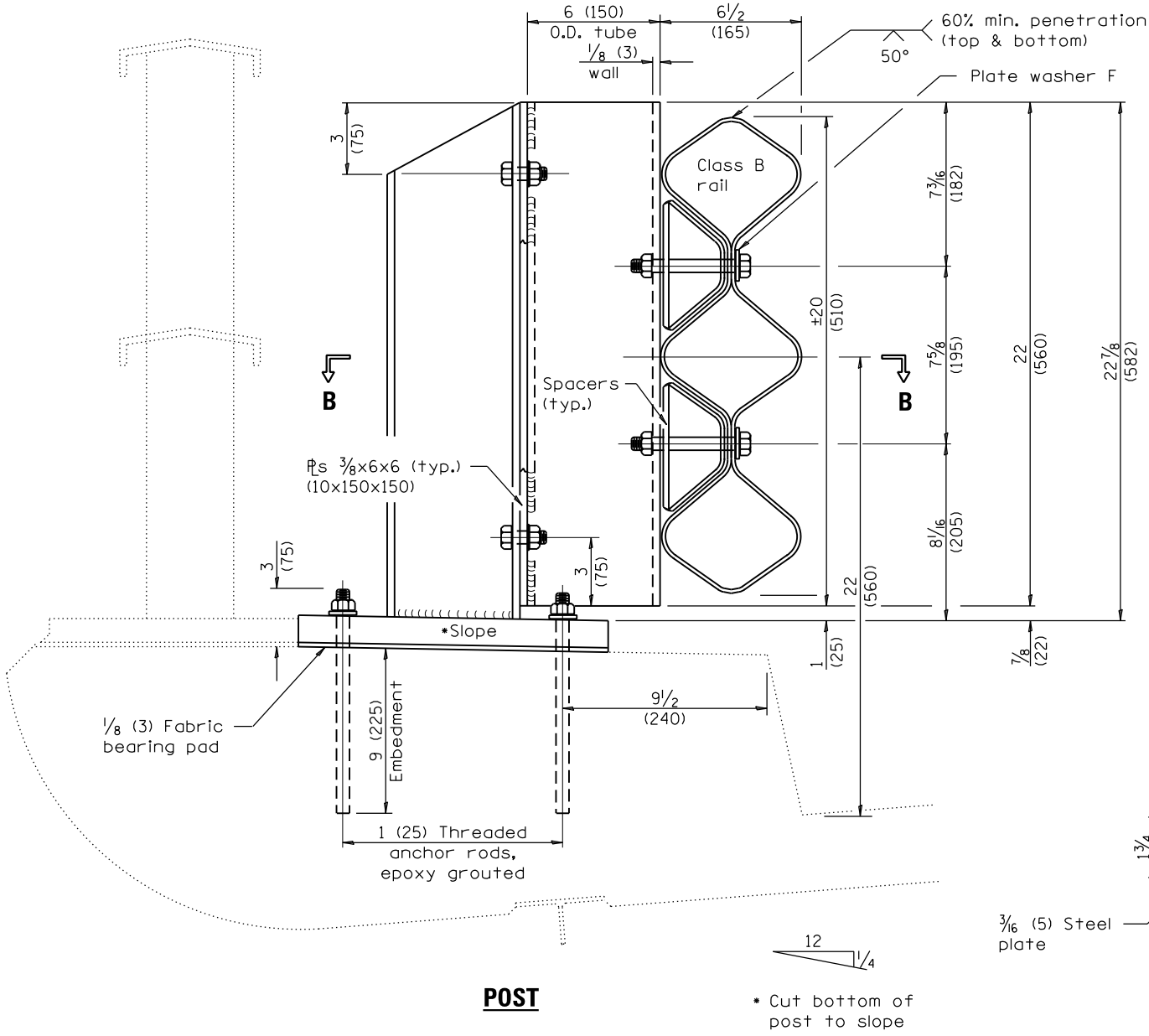
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Default		CHECKED -	REVISED -			VAR. * VARIOUS 19 11		CONTRACT NO. 66F73	
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT			



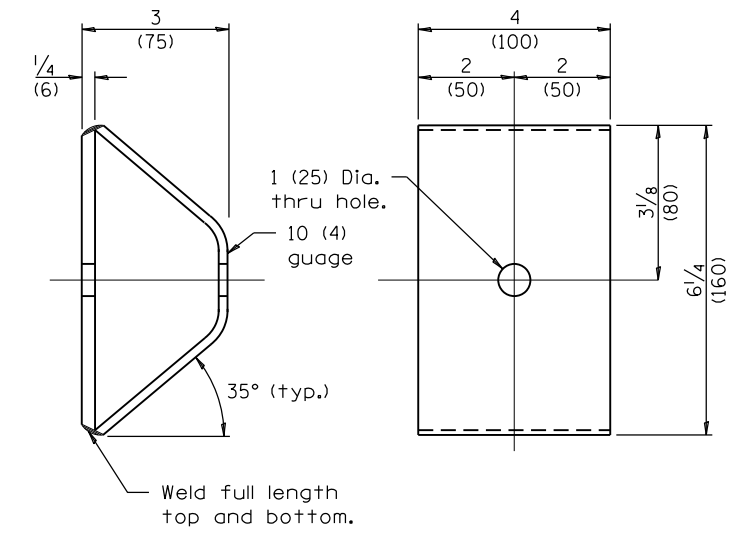
**SECTION B-B**



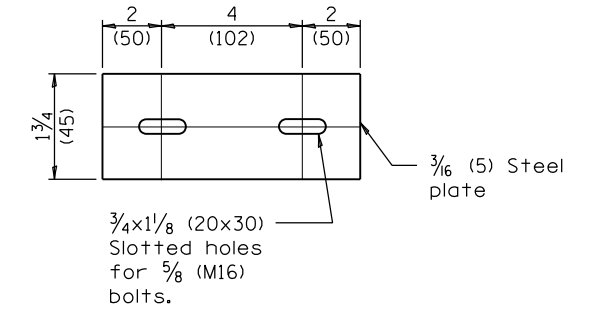
**TUBE TO POST ATTACHMENT**



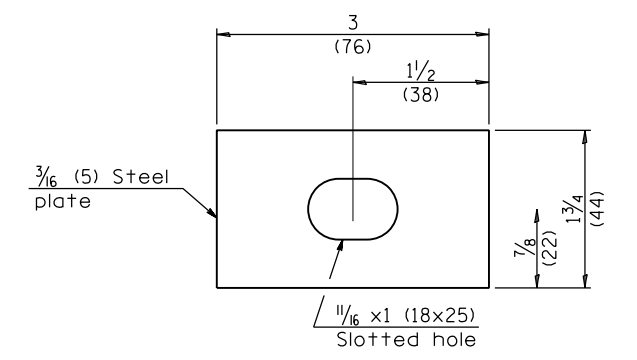
**POST**



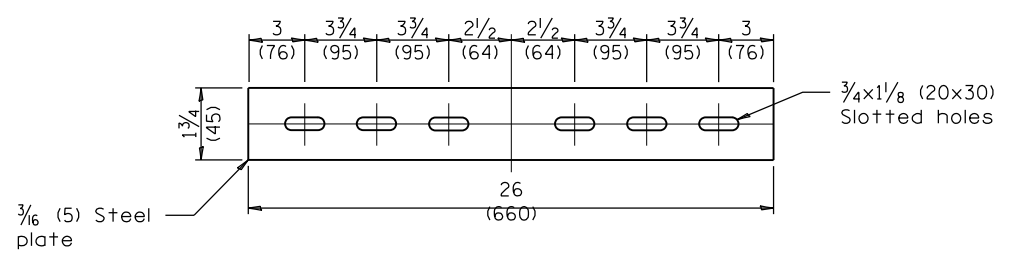
**SPACER**



**PLATE WASHER B**



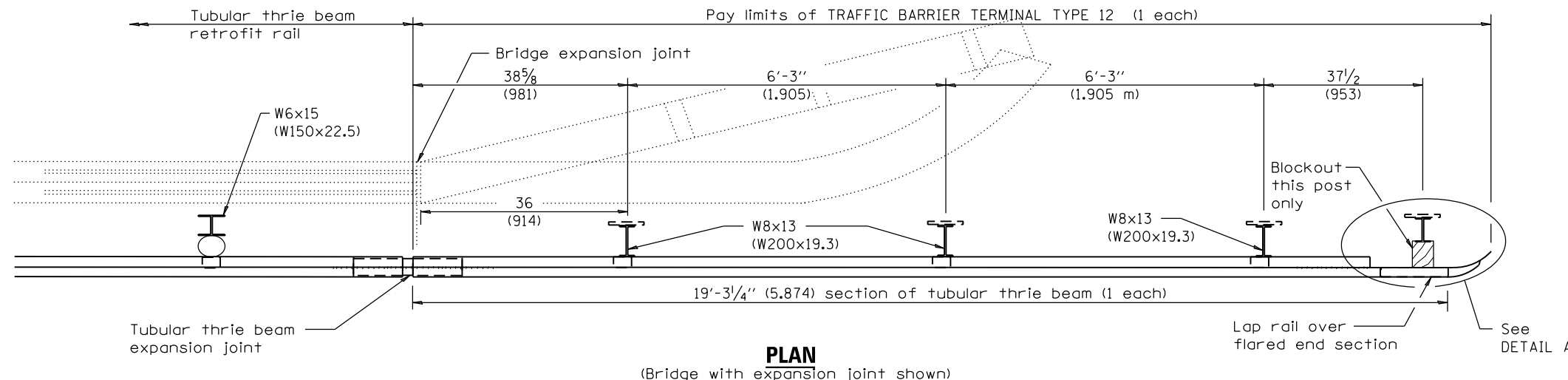
**PLATE WASHER F**



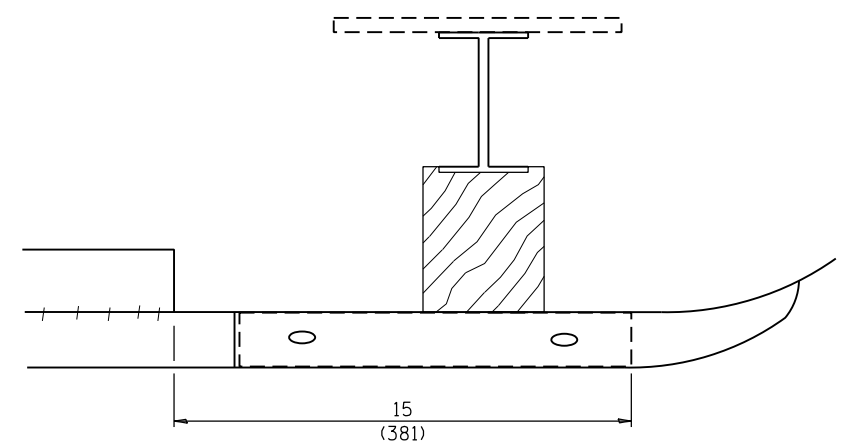
**PLATE WASHER C**



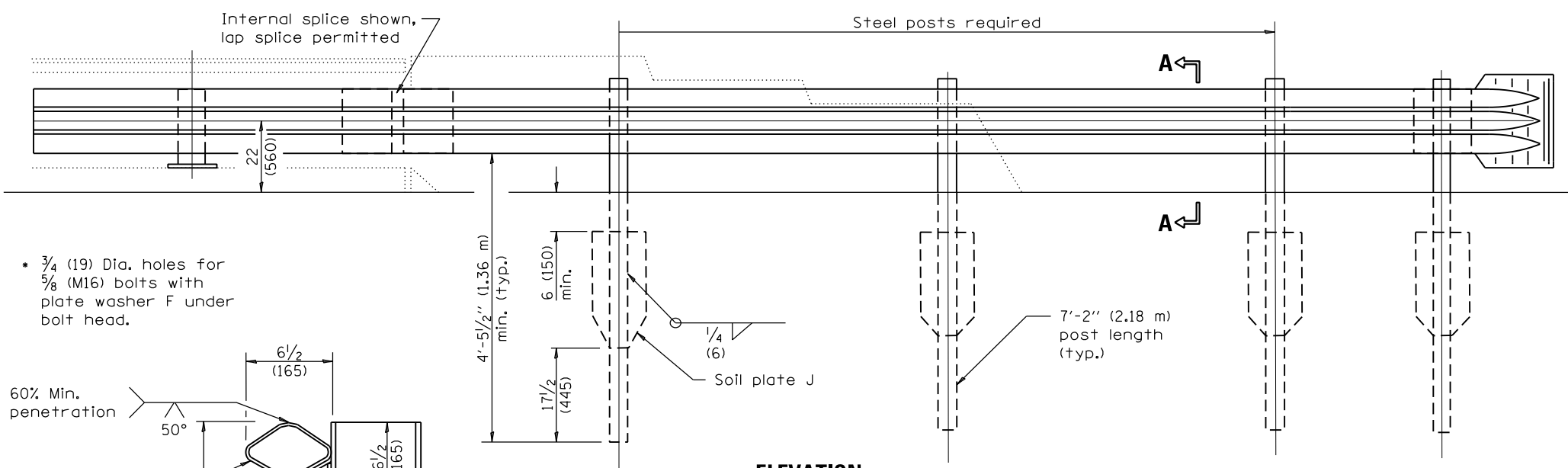




**PLAN**  
(Bridge with expansion joint shown)

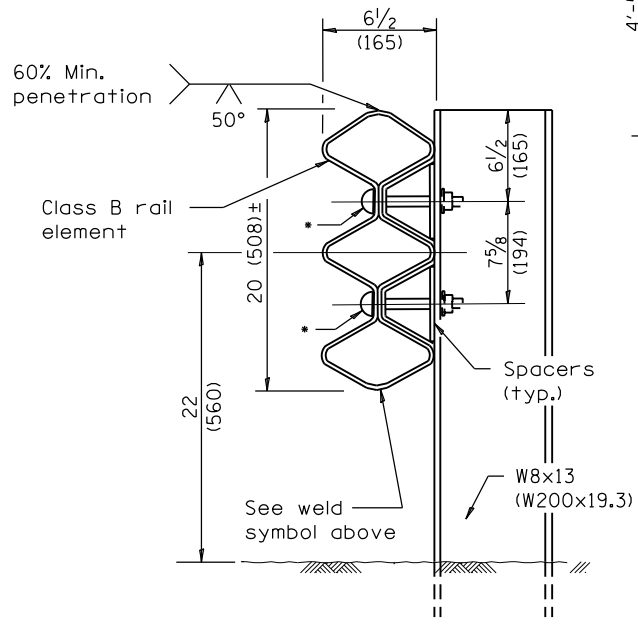


**DETAIL A**

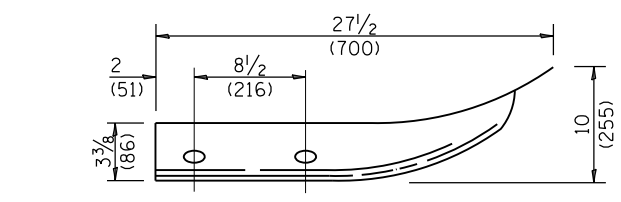


**ELEVATION**

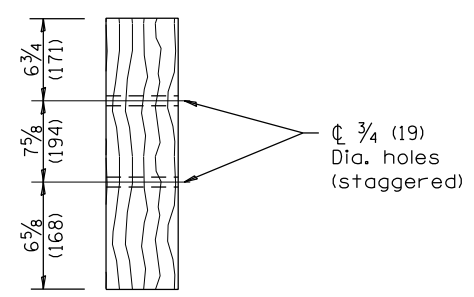
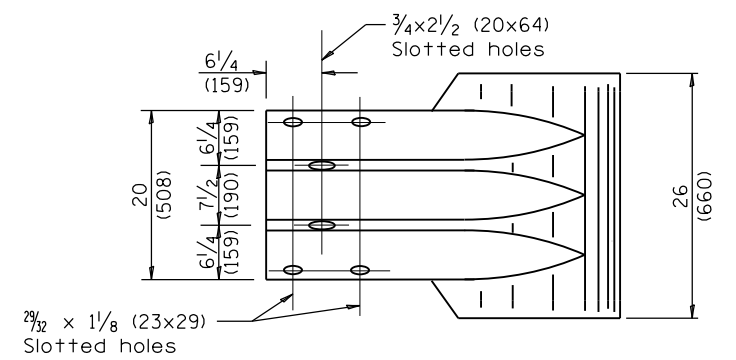
- $\frac{3}{4}$  (19) Dia. holes for  $\frac{5}{8}$  (M16) bolts with plate washer F under bolt head.



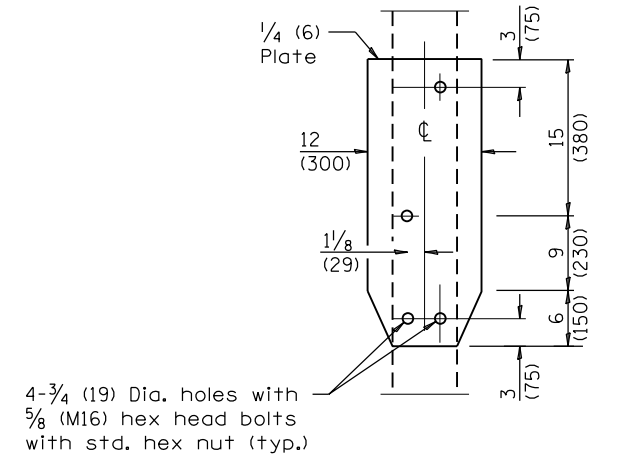
**SECTION A-A**



**THRIE BEAM FLARED END SECTION**



**DETAIL of BLOCK-OUT**  
(1 each)



**SOIL PLATE J & ALTERNATE CONNECTION DETAILS**

**FOR INFORMATION ONLY**

**GENERAL NOTES**

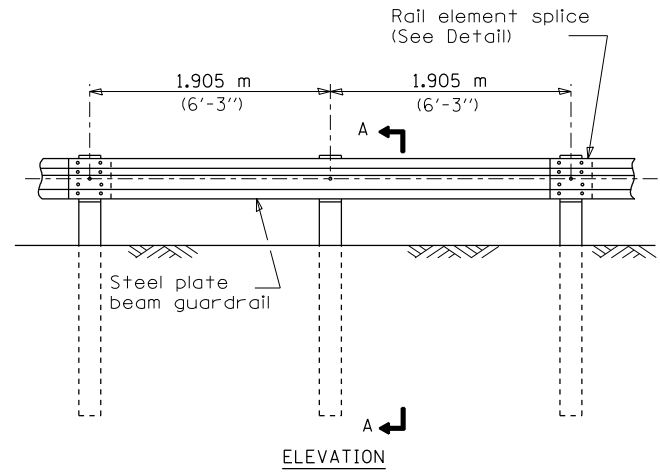
See Standard 509001 and 630001 for details of guardrail elements not shown.

The Type 12 terminal shall be installed after the posts for the bridge retrofit rail have been located as shown on Standard 509001.

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

• DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

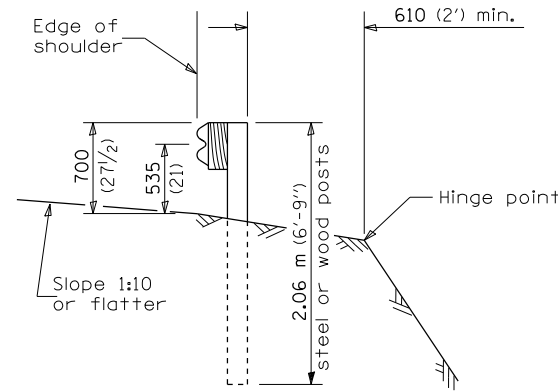
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PLOT SCALE = 100.0000' / in.		DATE -	REVISED -			CONTRACT NO. 66F73					
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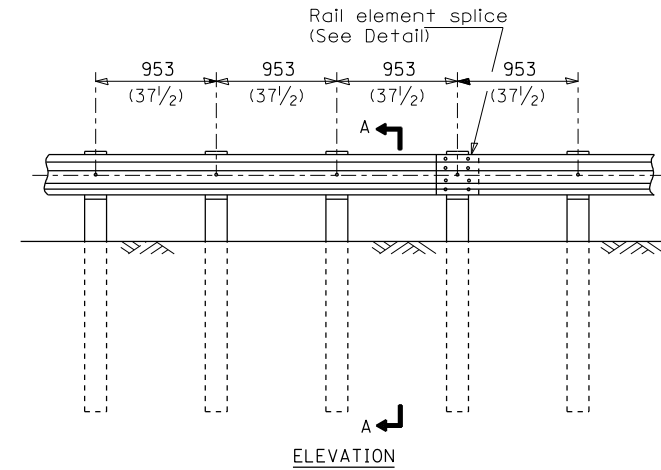
ELEVATION

**TYPE A**

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



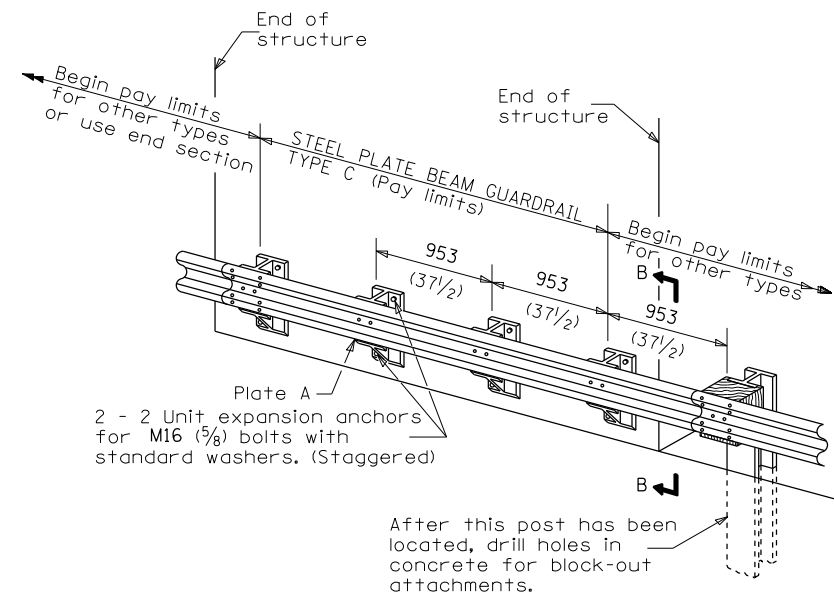
SECTION A-A



ELEVATION

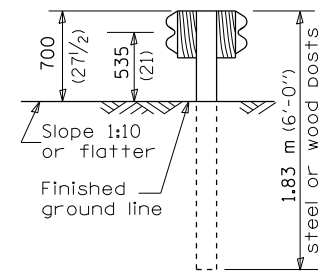
**TYPE B**

953 (37 1/2) Closed post spacing

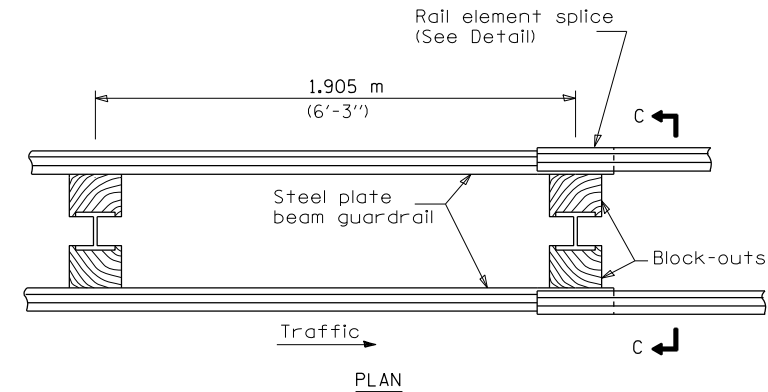


**TYPE C**

953 (37 1/2) Block-out spacing



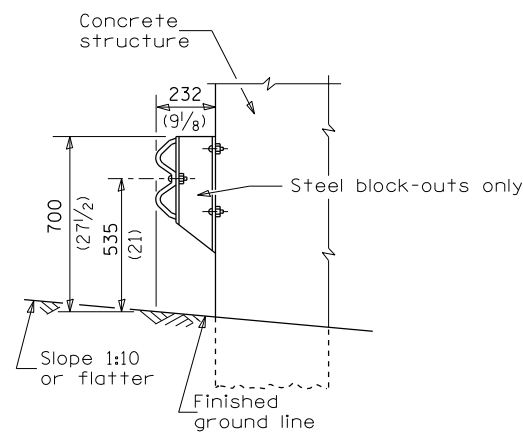
SECTION C-C



PLAN

**TYPE D**

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



SECTION B-B

**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.

FILE NAME =	USER NAME = woodger_jp	DESIGNED -	REVISED -
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		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PRE-MGS EFFECTIVE 4-1-06  
STEEL PLATE BEAM GUARDRAIL  
STANDARD 630001-06**

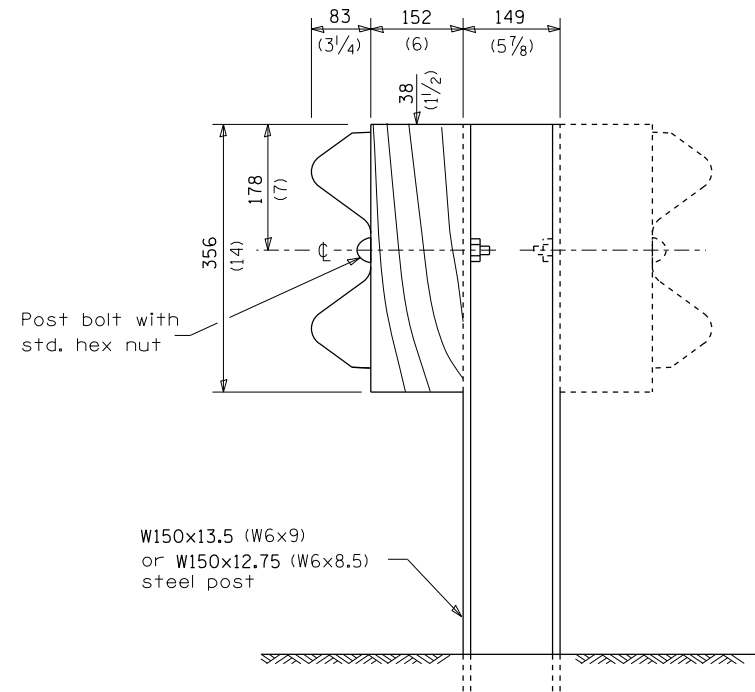
(Sheet 1 of 4)

SCALE: \_\_\_\_\_ SHEET NO. \_\_\_\_ OF \_\_\_\_ SHEETS STA. \_\_\_\_\_ TO STA. \_\_\_\_\_

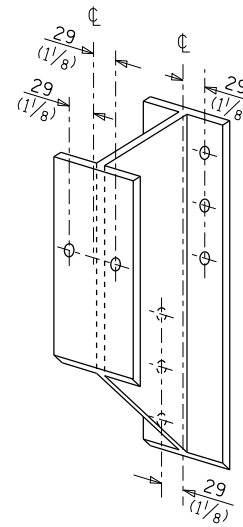
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	VARIOUS	19	16
CONTRACT NO. 66F73				
ILLINOIS FED. AID PROJECT				

• DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

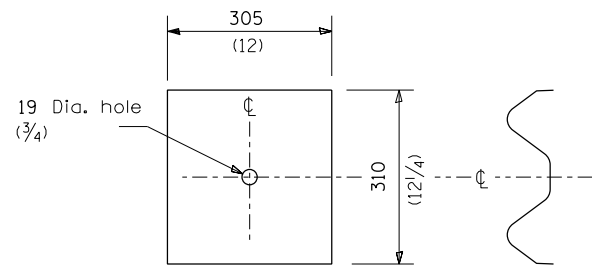




**STEEL POST CONSTRUCTION**



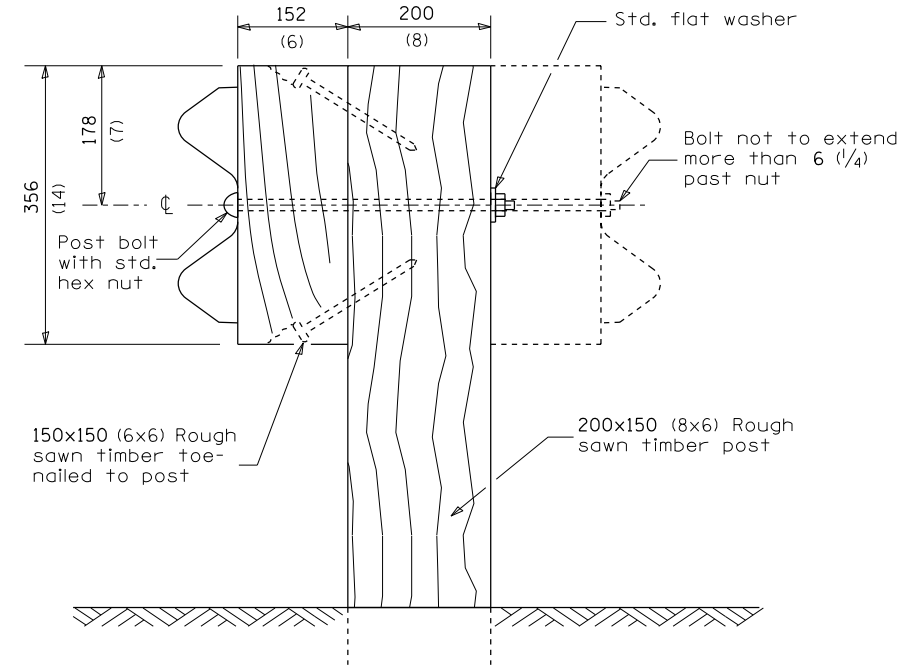
**STEEL BLOCK-OUT DETAIL**



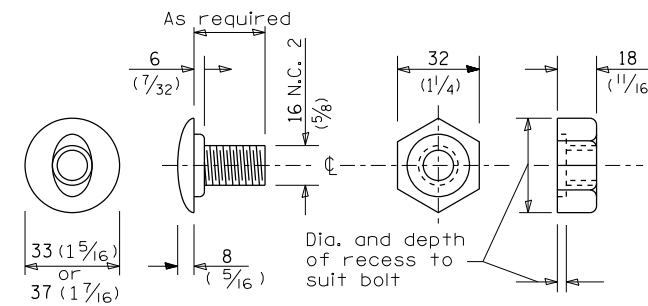
NOTE

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**



**WOOD POST CONSTRUCTION**



**POST OR SPLICE BOLT & NUT**

FILE NAME =	USER NAME = woodger.jp	DESIGNED -	REVISED -
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		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PRE-MGS EFFECTIVE 4-1-06  
STEEL PLATE BEAM GUARDRAIL  
STANDARD 630001-06**

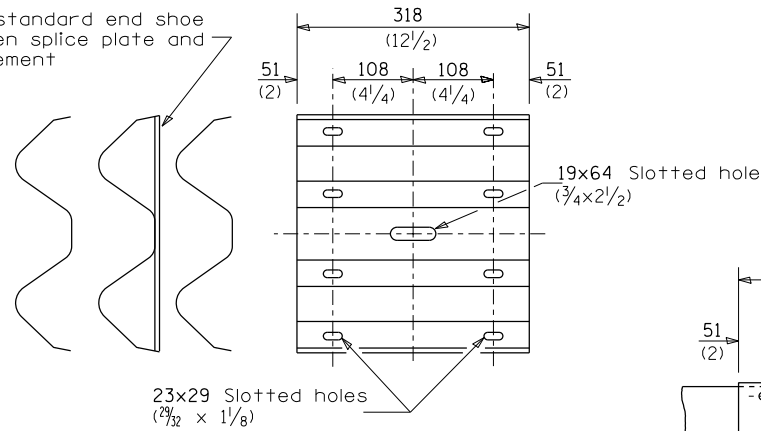
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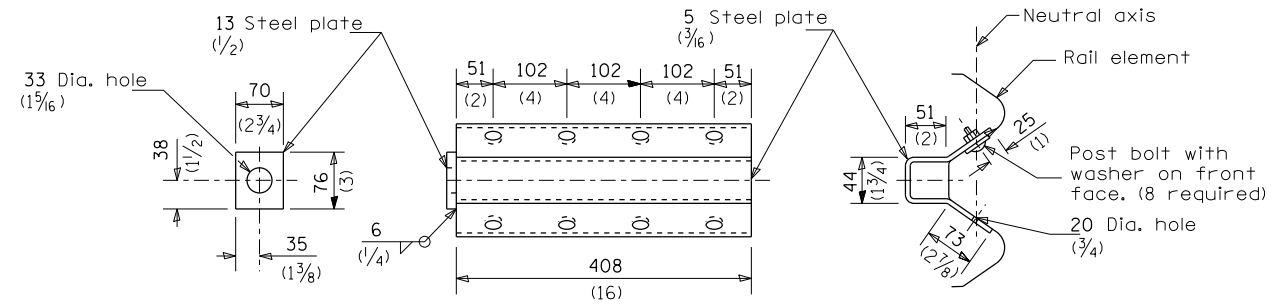
• DISTRICT 3 HIGHWAY DAMAGE REPAIR FY 18

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	*	VARIOUS	19	17
			CONTRACT NO. 66F73	
ILLINOIS FED. AID PROJECT				

Place standard end shoe between splice plate and rail element

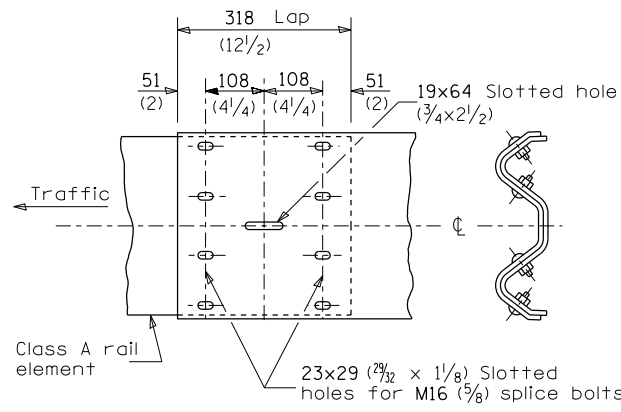


**SPLICE PLATE**

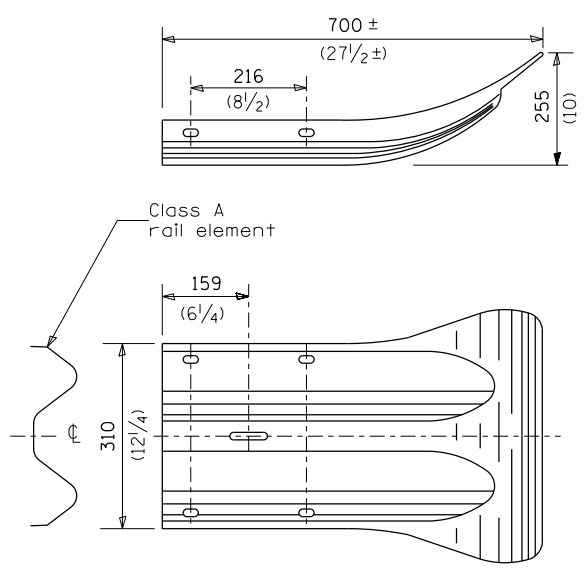


**NOTE**  
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

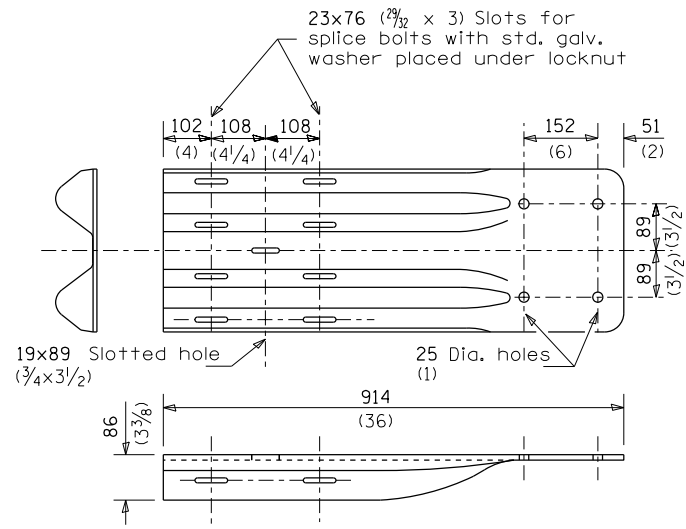
**ANCHOR PLATE T DETAILS**



**RAIL ELEMENT SPLICE**

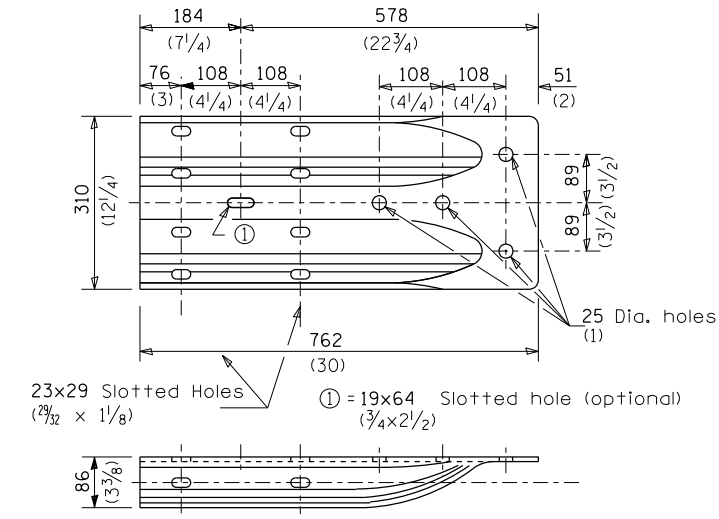


**END SECTION**

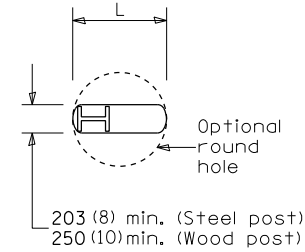


**NOTE**  
When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.  
The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling 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.

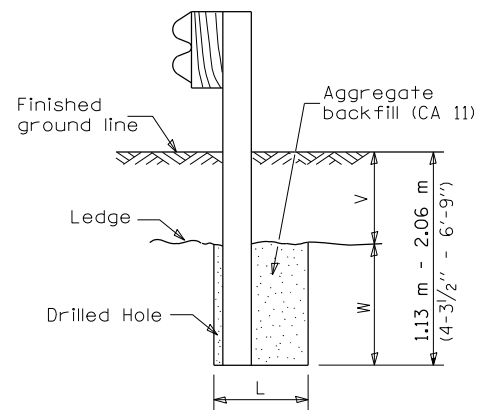
**END SHOE**



**ALTERNATE END SHOE**



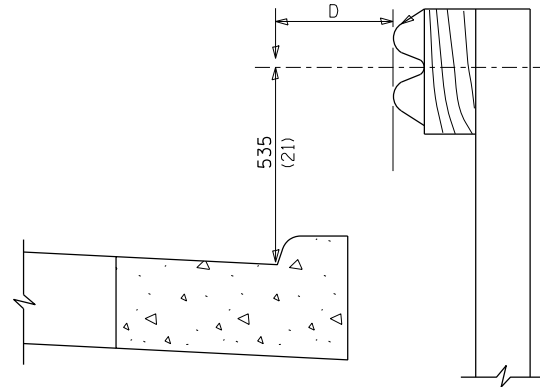
**PLAN**



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

**ELEVATION**

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

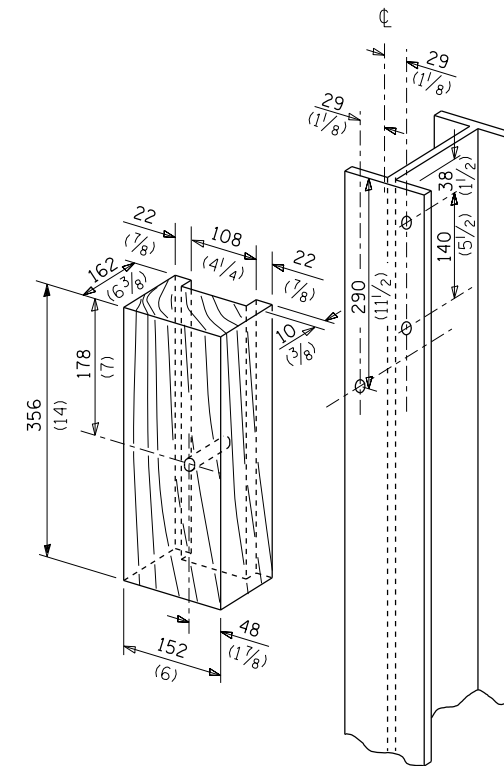


Note:  
 If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

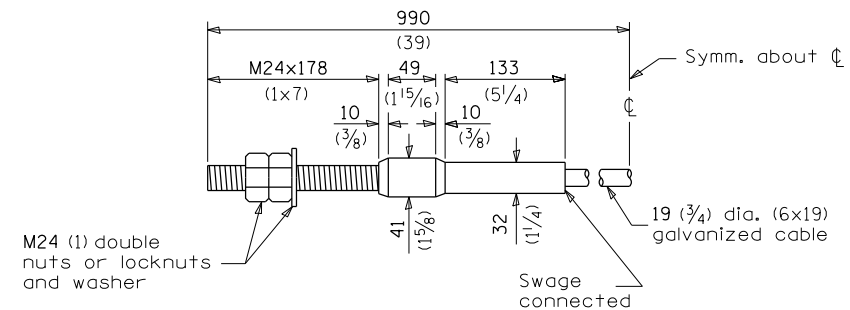
**GUARDRAIL PLACED BEHIND CURB**

(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.