

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	1
		ILLINOIS	CONTRACT NO. 78B39	

D-99-049-25



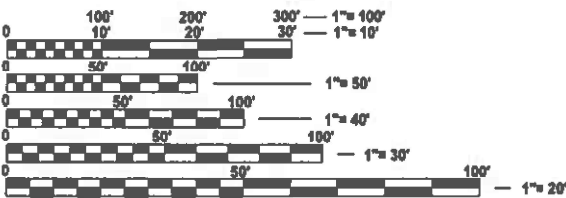
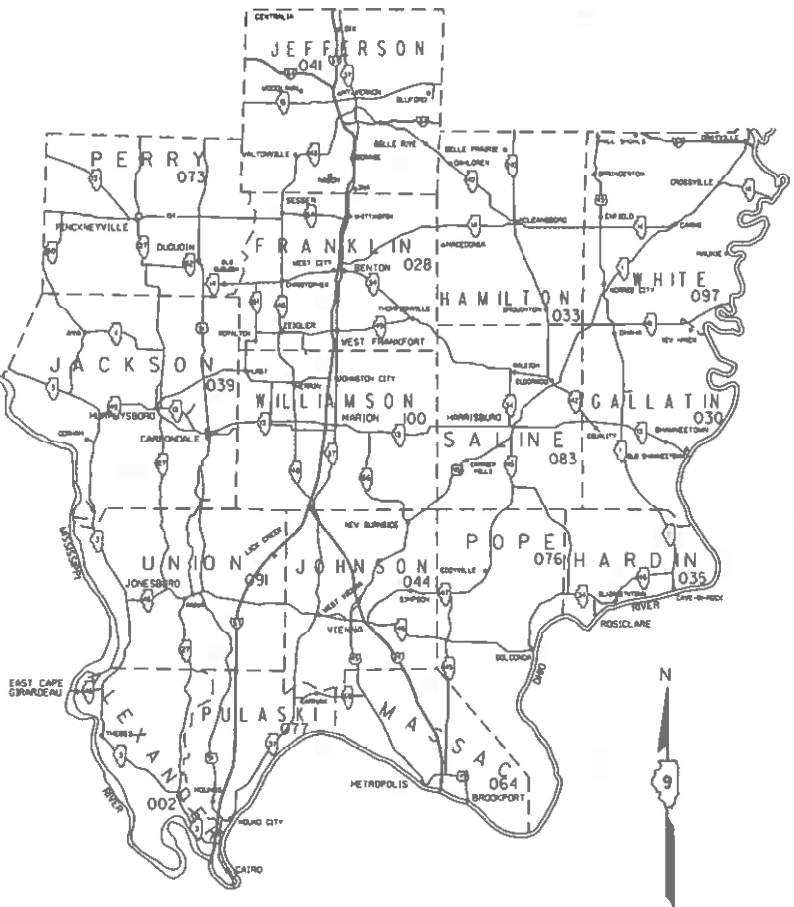
FOR INDEX OF SHEETS, SEE SHEET NO. 3

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
SECTION D9 GUARDRAIL REPAIR FY26-1

GUARDRAIL REPAIR
VARIOUS COUNTIES

C-99-082-25



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: SEAN GREENLEE
PROJECT DESIGNER: TRISTEN REID

CONTRACT NO. 78B39

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED April 25 20 25
Rosa S. Renshaw
REGIONAL ENGINEER

June 27 20 25
Sean Greenlee
ENGINEER OF DESIGN AND ENVIRONMENT

June 27 20 25
Tristen Reid
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

[illegible]

Examined By: Aam Hays
DISTRICT MATERIALS ENGINEER

USER NAME = Alicia.fowler-steves	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = \$\$\$	CHECKED -	REVISED -
PLOT DATE = 3/26/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

SCALE:	SHEET 2	OF 3	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY28-1	VARIOUS	20	2
CONTRACT NO. 78B39				
ILLINOIS		FED. AID PROJECT		

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SIGNATURE SHEET
3	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, COMMITMENTS
4-6	SUMMARY OF QUANTITIES
7-10	STEEL PLATE BEAM GUARDRAIL STANDARD
11-14	TRAFFIC BARRIER TERMINAL, TYPE 6
15-17	TRAFFIC BARRIER TERMINAL, TYPE 6A
18-19	TRAFFIC BARRIER TERMINAL, TYPE 6B
20	CRASH-CUSHION ATTENUATING TERMINAL (C-A-T)

HIGHWAY STANDARDS

001006 DECIMAL OF AN INCH AND OF A FOOT
630006-01 NON-BLOCKED STEEL PLATE BEAM GUARDRAIL
630101-11 STRONG POST GUARDRAIL ATTACHED TO CULVERT
630116 BACK SIDE PROTECTION OF GUARDRAIL
630301-09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10 TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06 TRAFFIC BARRIER TERMINAL, TYPE 5
636001-02 CABLE ROAD GUARD SINGLE STRAND
643001-03 SAND MODULE IMPACT ATTENUATORS
664001-02 CHAIN LINK FENCE
665001-02 WOVEN WIRE FENCE
701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15 FT AWAY
701006-05 OFF-ROAD OPERATIONS, 2L, 2W, 15 FT TO 24 IN FROM PAVEMENT EDGE
701011-04 OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15 FT TO 24 IN FROM PAVEMENT EDGE
701106-02 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15 FT AWAY
701201-05 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS 45 MPH OR MORE
701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701400-12 APPROACH TO LANE CLOSURE, FREEWAY_EXPRESSWAY
701401-13 LANE CLOSURE, FREEWAY_EXPRESSWAY
701406-13 LANE CLOSURE, FREEWAY_EXPRESSWAY, DAY OPERATIONS ONLY
701421-08 LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS 45 TO 55 MPH
701422-10 LANE CLOSURE, MULTILANE, FOR SPEEDS 45 TO 55 MPH
701428-01 TRAFFIC CONTROL SETUP & REMOVAL FREEWAY_EXPRESSWAY
701451-05 RAMP CLOSURE FREEWAY_EXPRESSWAY
701456-05 PARTIAL EXIT RAMP CLOSURE FREEWAY_EXPRESSWAY
701501-06 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-09 URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-10 URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701606-10 URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10 URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901-10 TRAFFIC CONTROL DEVICES
725001-01 OBJECT AND TERMINAL MARKERS
782006-01 GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
630001-13 STEEL PLATE BEAM GUARDRAIL
631031-18 TRAFFIC BARRIER TERMINAL, TYPE 6
631032-10 TRAFFIC BARRIER TERMINAL, TYPE 6A
631033-09 TRAFFIC BARRIER TERMINAL, TYPE 6B

GENERAL NOTES

BEFORE ORDERING THE IMPACT ATTENUATORS, THE CONTRACTOR MUST CONTACT THE RESIDENT ENGINEER TO RECEIVE APPROVAL OF THE PROPOSED INSTALLATION

ALL WORK IS TO BE REPLACED IN KIND OR AS INDICATED ON THE CONTRACT PLANS OR SPECIAL PROVISIONS.

THE LOCATIONS OF THE REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER.

GUARDRAIL WORK WILL INCLUDE ALIGNMENT AS NECESSARY TO RESTORE THE RAIL TO THE ORIGINAL CONDITIONS.

REMOVAL OF DAMAGED MATERIALS WILL INCLUDE DISMANTLING, LOADING, HAULING AND DISPOSAL. THE WORK SITE WILL BE LEFT IN A SAFE AND ORDERLY CONDITION.

THE LIMITS OF THE DAMAGED GUARDRAIL WILL BE MARKED WITH PAINT. THE REPLACEMENT PARTS AND THE QUANTITIES INDICATED ARE WITHIN THESE LIMITS AS MARKED.

REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS WILL BE LEFT WITHOUT EITHER LIGHTED BARRICADES OR RESTORED GUARDRAIL AT ANY TIME.

ILLINOIS STATE LAW ENFORCES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. (PHONE:800-892-0123) OR FOR NON-MEMBER, THE UTILITY COMPANY DIRECTLY.

THE CONTRACTOR SHALL BE ADVISED THAT THE GUARDRAIL PAY ITEMS INCLUDED IN THE PLANS MAY BE USED TO REPLACE/REPAIR SPBGR AND TRAFFIC BARRIER TERMINAL INSTALLED PRIOR TO JAN.1, 2007 AS SHOWN IN THE PLAN DETAILS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR UTILIZING THE CURRENT MIDWEST STANDARDS.

COMMITMENTS

NONE

REV - MS

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		DRAWN -	REVISED -					VAR	D8 GUARDRAIL REPAIR FY26-1	VARIOUS	20	3
	PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -					CONTRACT NO. 78B39				
	PLOT DATE = 3/26/2025	DATE -	REVISED -		SCALE:	SHEET 3	OF 3 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	VARIOUS	VARIOUS	VARIOUS
				ROUTE:	VARIOUS	VARIOUS	VARIOUS
				FUNDING:	100% STATE	100% STATE	100% STATE
				LOCATION:	RURAL/URBAN	RURAL/URBAN	RURAL/URBAN
					MCHD	HIT AND RUN	HIGH TENSION CABLE
					0021	0021	0021
25000100	SEEDING, CLASS 1	ACRE	20		8	4	8
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	90		77	13	
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	20		11	9	
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	10		6	4	
64401300	HIGH TENSION CABLE MEDIAN BARRIER TERMINALS	EACH	75		10	12	53
67100100	MOBILIZATION	L SUM	1		1		
X6300210	GUARDRAIL BLOCKS	EACH	625		460	165	
X6300215	RAIL ELEMENT PLATES	EACH	300		245	55	
X6300217	RAIL ELEMENT PLATES (RADIUS)	EACH	20		13	7	
X6300220	EXTRUDER HEAD	EACH	15		5	10	
X6300230	STEEL POSTS	EACH	285		179	106	
X6300231	STEEL POST, ATTACHED TO STRUCTURES	EACH	5		5		
X6300235	WOOD POSTS	EACH	50		18	32	

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SUMMARY OF QUANTITIES - CONT

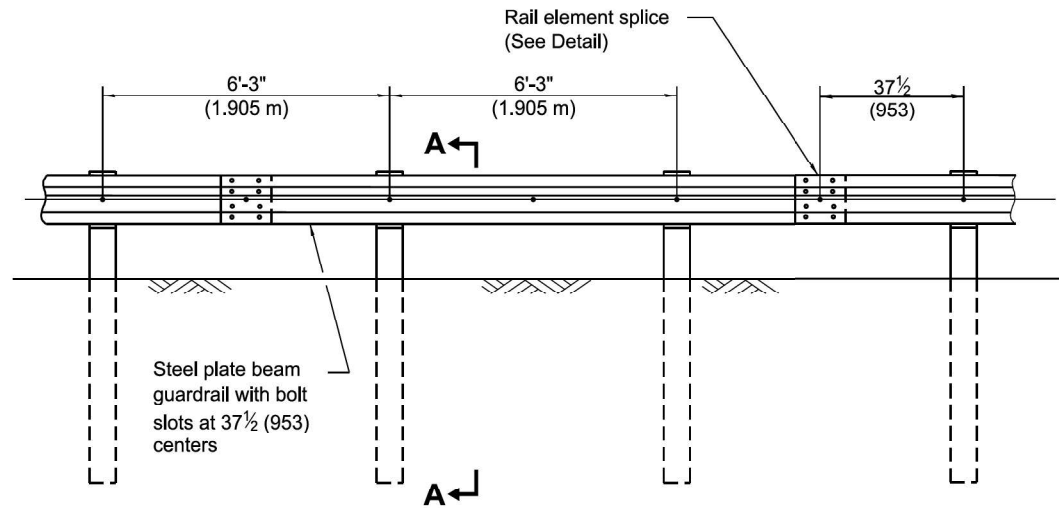
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				ROUTE:	VARIOUS	VARIOUS	VARIOUS
				FUNDING:	100% STATE	100% STATE	100% STATE
				LOCATION:	RURAL/URBAN	RURAL/URBAN	RURAL/URBAN
					MCHD	HIT AND RUN	HIGH TENSION CABLE
					0021	0021	0021
X6310088	TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)	EACH	10		10		
X6310176	TRAFFIC BARRIER TERMINAL, TYPE 2 (SPECIAL)	EACH	10		10		
X6310179	TRAFFIC BARRIER TERMINAL, TYPE 5 (SPECIAL)	EACH	5		5		
X6310214	TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)	EACH	10		10		
X6310302	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	30		12	18	
X6310304	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)	EACH	15		6	9	
X6310330	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	15		5	10	
X6310332	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	10		10		
X6310334	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6B	EACH	10		10		
X6311215	TRAFFIC BARRIER TERMINAL (C-A-T)	EACH	15		6	9	
X6311217	TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL)	EACH	10		10		
X6331110	STEEL POSTS (SPECIAL)	EACH	10		10		
X6430210	REMOVE AND REINSTALL IMPACT ATTENUATORS	EACH	40		23	17	

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SUMMARY OF QUANTITIES - CONT

SUMMARY OF QUANTITIES - CONT			COUNTY:	VARIOUS	VARIOUS	VARIOUS
			ROUTE:	VARIOUS	VARIOUS	VARIOUS
			FUNDING:	100% STATE	100% STATE	100% STATE
			LOCATION:	RURAL/URBAN	RURAL/URBAN	RURAL/URBAN
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	MCHD	HIT AND RUN	HIGH TENSION CABLE
				0021	0021	0021
X6440130	REPAIR HIGH TENSION CABLE (GIBALTAR)	FOOT	2,170	200	770	1,200
X6440131	REPAIR HIGH TENSION BARRIER TERMINAL (GIBALTAR)	EACH	75	7	27	41
X6440134	REMOVE AND REPLACE POSTS (GIBALTAR)	EACH	560	38	192	330
X6440160	REPAIR HIGH TENSION CABLE (TRINITY)	FOOT	1,870	194	676	1,000
X6440163	REPAIR POSTS (TRINITY)	EACH	255	34	99	122
X6440166	REPAIR HIGH TENSION CABLE SYSTEM END SECTION (TRINITY)	EACH	80	6	29	45
X6640298	CHAIN LINK FENCE (SPECIAL)	FOOT	255	112	143	
X6650208	WOVEN WIRE FENCE REMOVAL AND REPLACEMENT	FOOT	160	160		
X7010102	NIGHTTIME WORK ZONE LIGHTING	EACH	65	25	40	
X7011834	TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	EACH	60	30	30	
X7011836	TRAFFIC CONTROL AND PROTECTION, FREEWAY/EXPRESSWAY, CALL OUT WORK	EACH	75	30	33	12

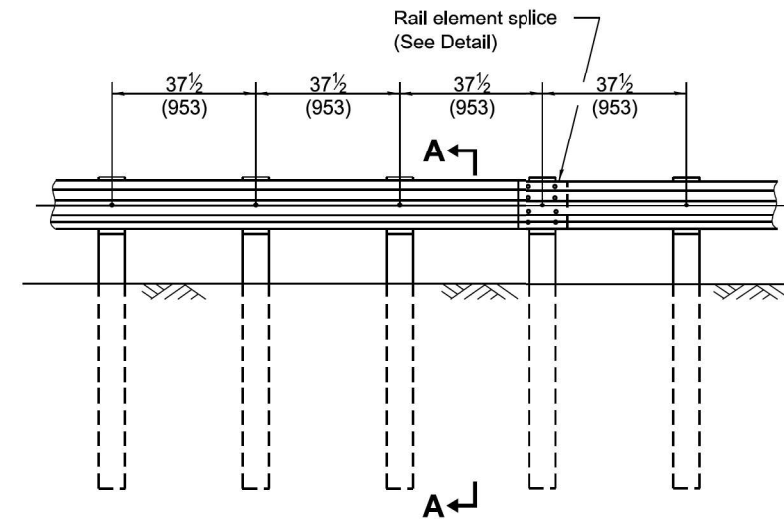
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ELEVATION

TYPE A

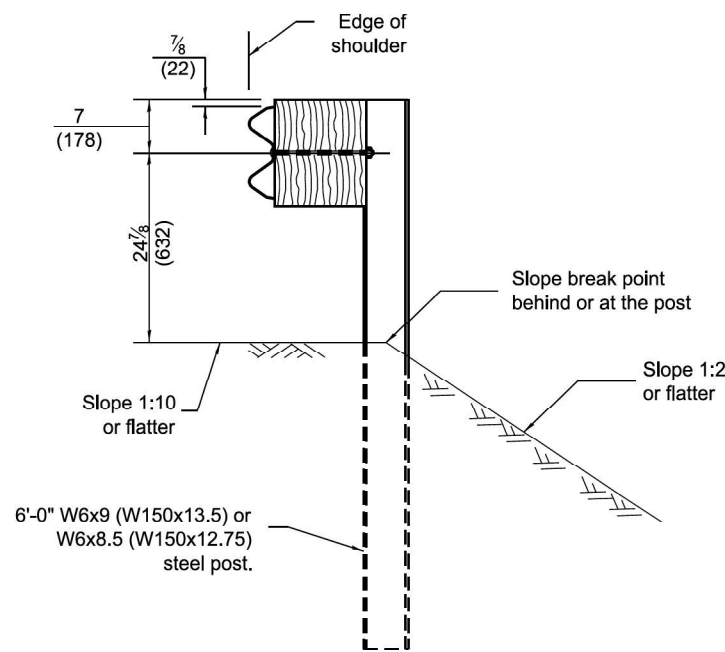
6'-3" (1.905 m) Typical post spacing



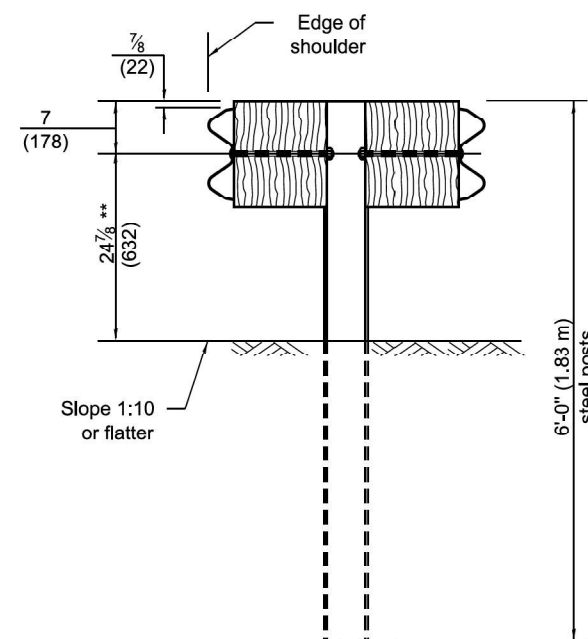
ELEVATION

TYPE B

37 1/2 (953) Closed post spacing

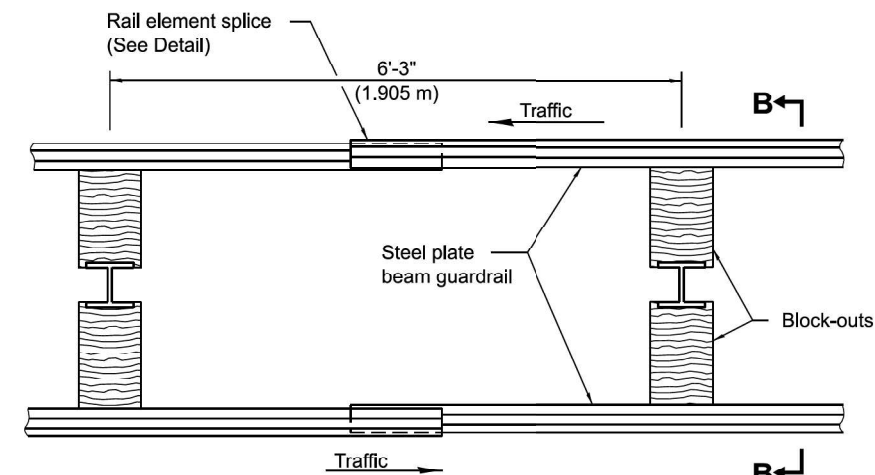


SECTION A-A



SECTION B-B

** When connecting Type D guardrail to an impact attenuator, adjust this dimension to match over a distance of 25'-0" (7.62 m) from point of connection if necessary.



PLAN

TYPE D

Double steel plate beam guardrail
6'-3" (1.905 m) 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 inches (millimeters) unless otherwise shown.

Illinois Department of Transportation	
APPROVED January 1, 2024	ISSUED 1-1-97
ENGINEER OF POLICY AND PROCEDURES	
APPROVED January 1, 2024	
ENGINEER OF DESIGN AND ENVIRONMENT	

DATE	REVISIONS
1-1-24	Revised Section A-A to allow 6' posts at or behind the slope break point.
1-1-18	Revised steel post to have four holes in each flange.

STEEL PLATE BEAM GUARDRAIL

(Sheet 1 of 4)

STANDARD 630001-13

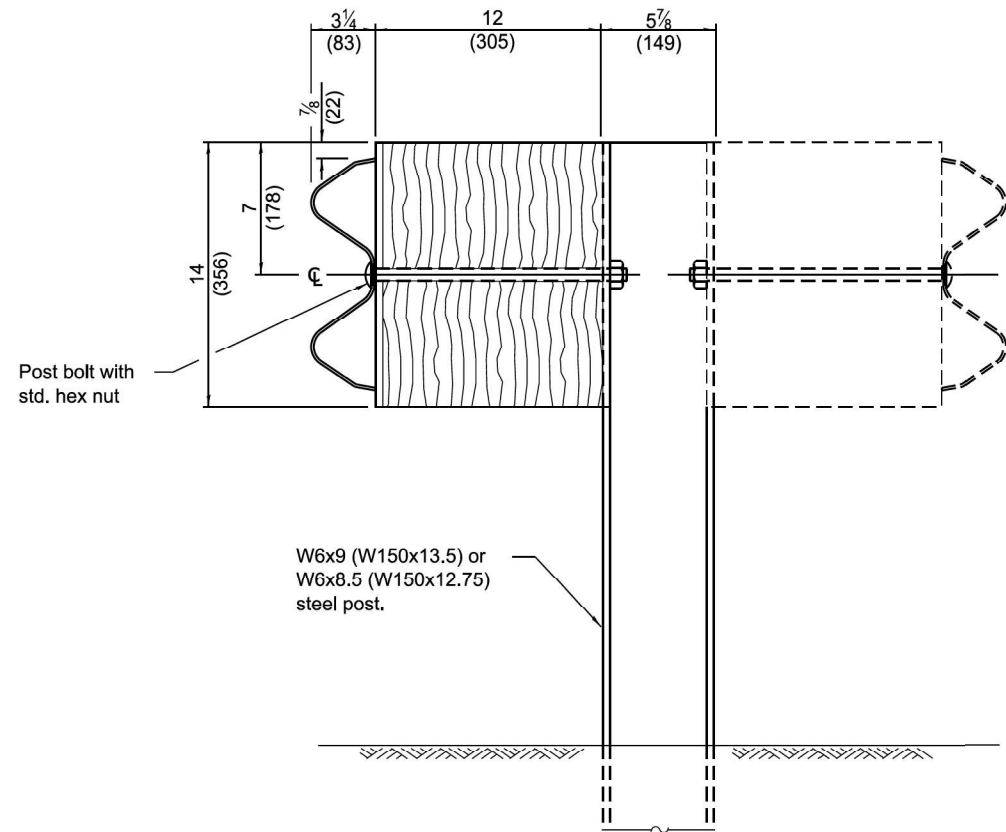
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL PLATE BEAM
GUARDRAIL STANDARD

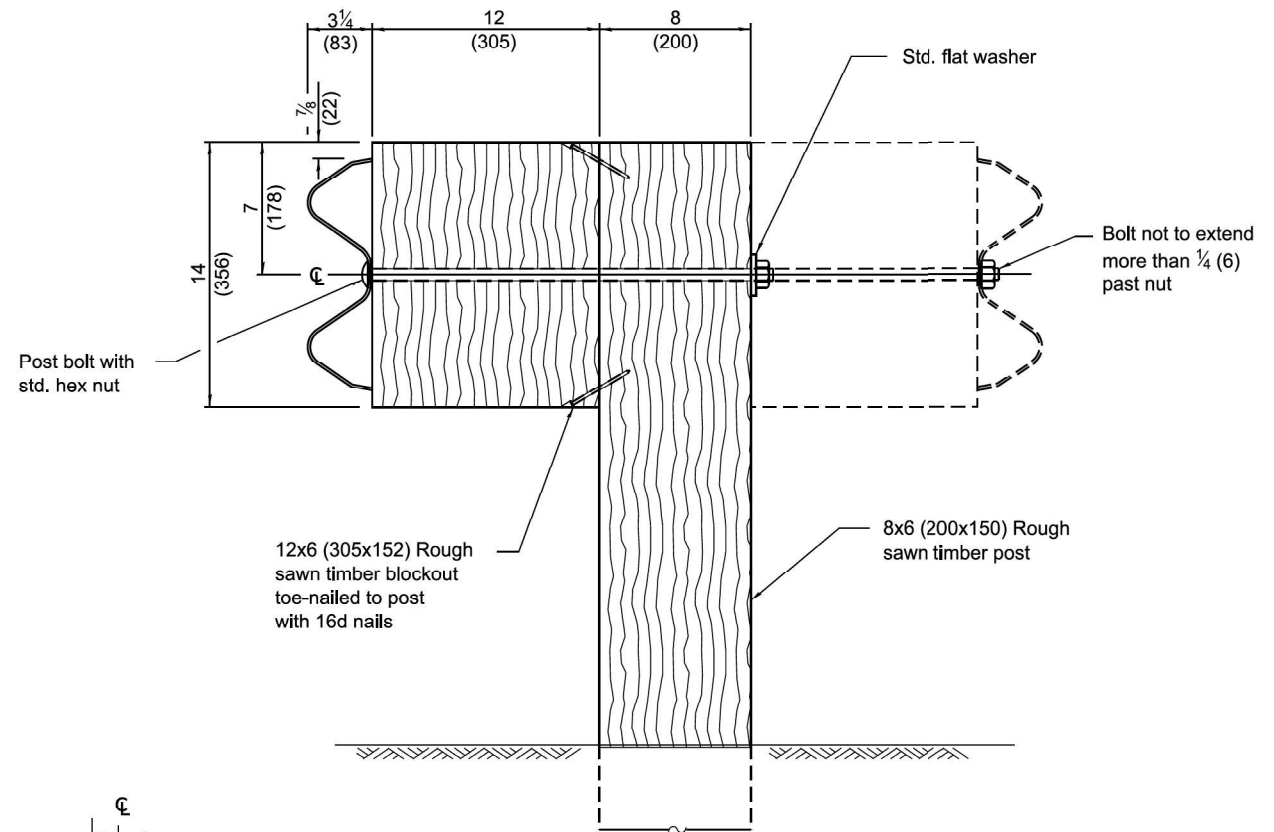
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F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	7
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

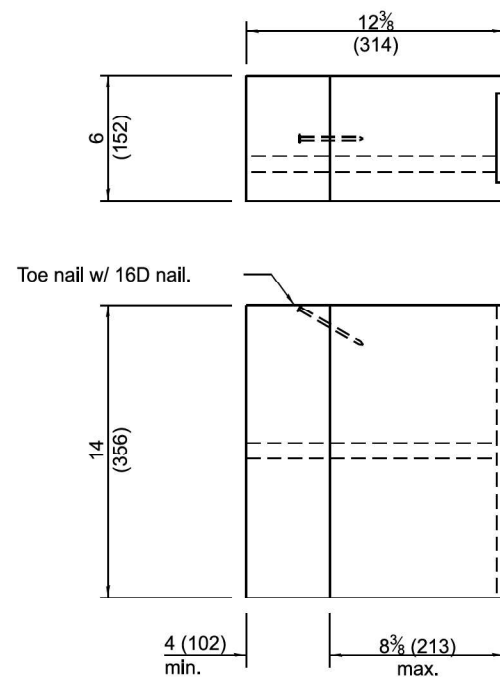
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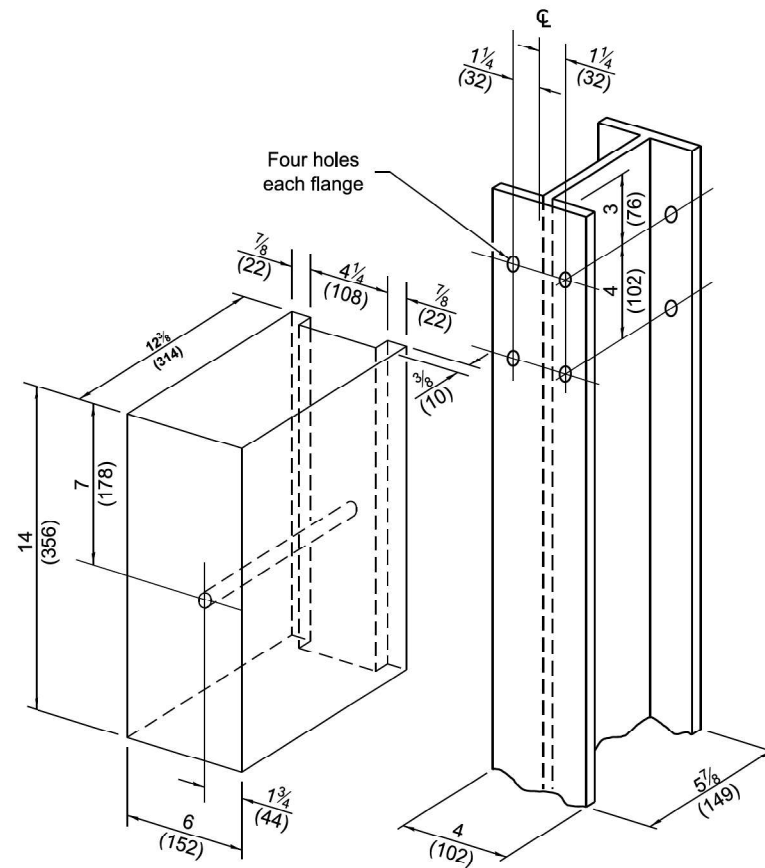
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION

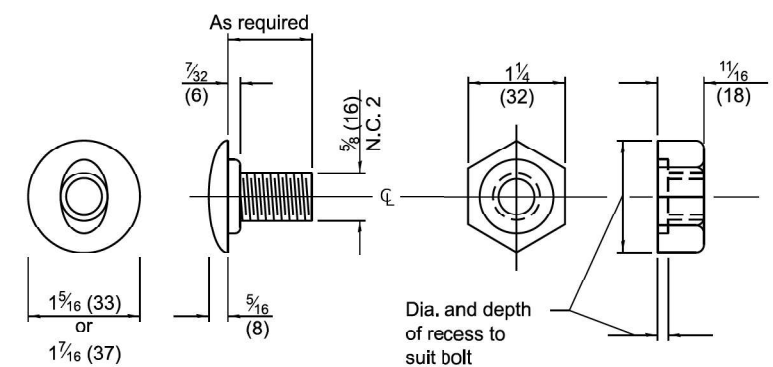


TWO-PIECE WOOD BLOCKOUT OPTION



Note:
All holes 3/4 (20) dia.

WOOD BLOCK-OUT AND STEEL POST DETAILS



POST OR SPLICE BOLT & NUT

STEEL PLATE BEAM GUARDRAIL

(Sheet 2 of 4)

STANDARD 630001-13

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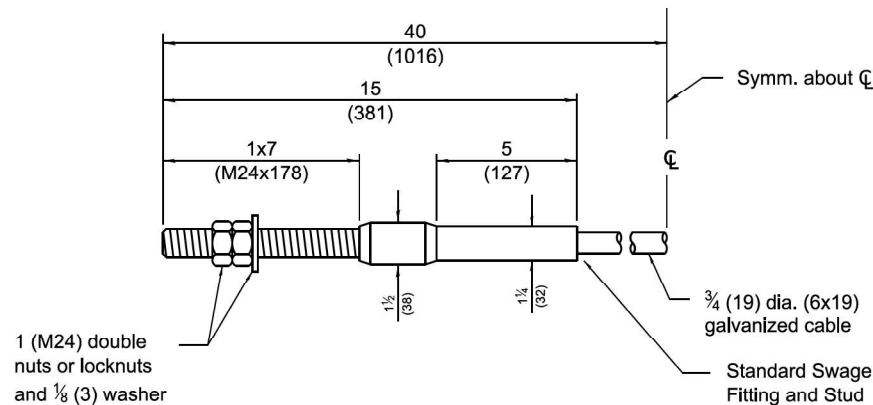
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STEEL PLATE BEAM
GUARDRAIL STANDARD**

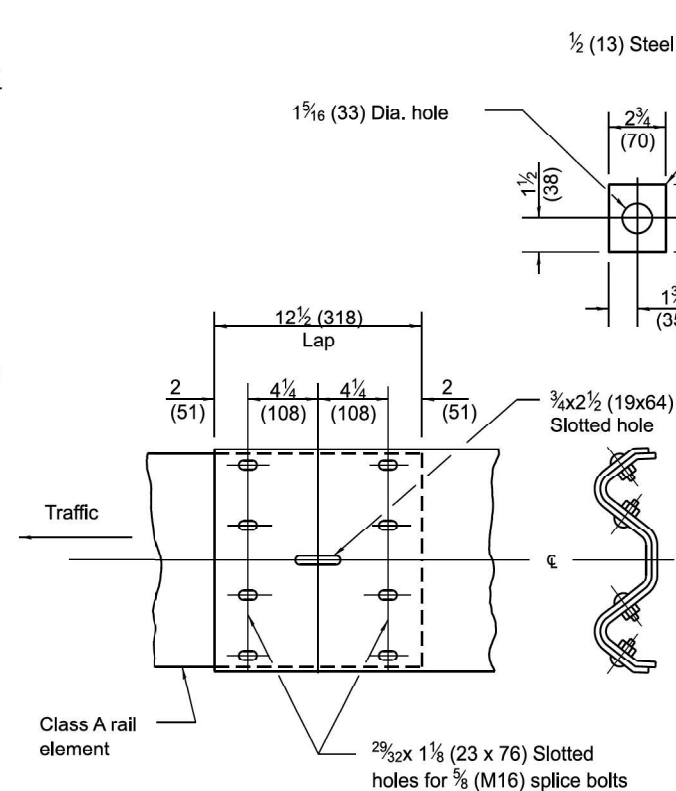
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F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	8
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

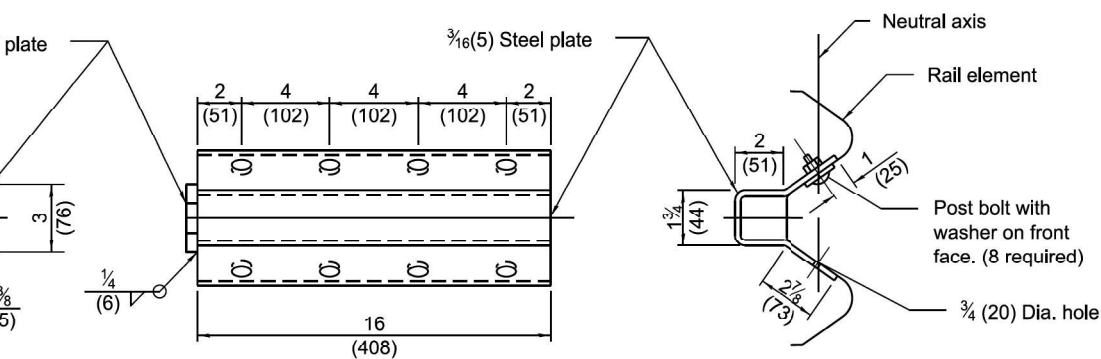


CABLE ASSEMBLY

(42,800 lbs. (190 kN) min. breaking strength)
Tighten to taut tension.



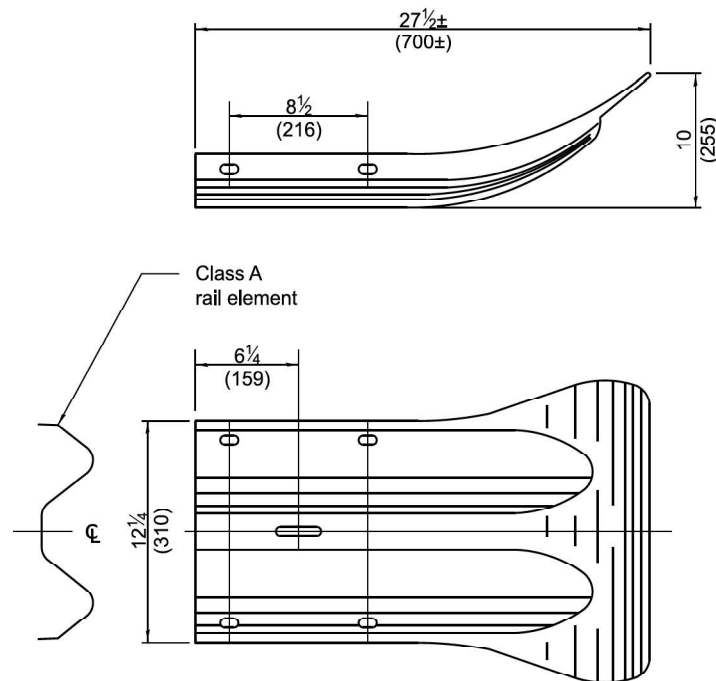
RAIL ELEMENT SPLICE



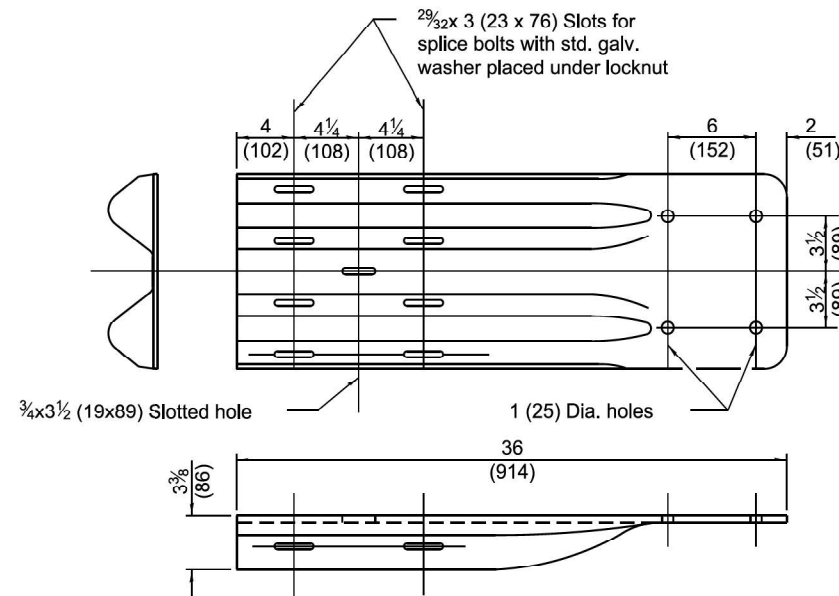
NOTE

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

ANCHOR PLATE T DETAILS



END SECTION



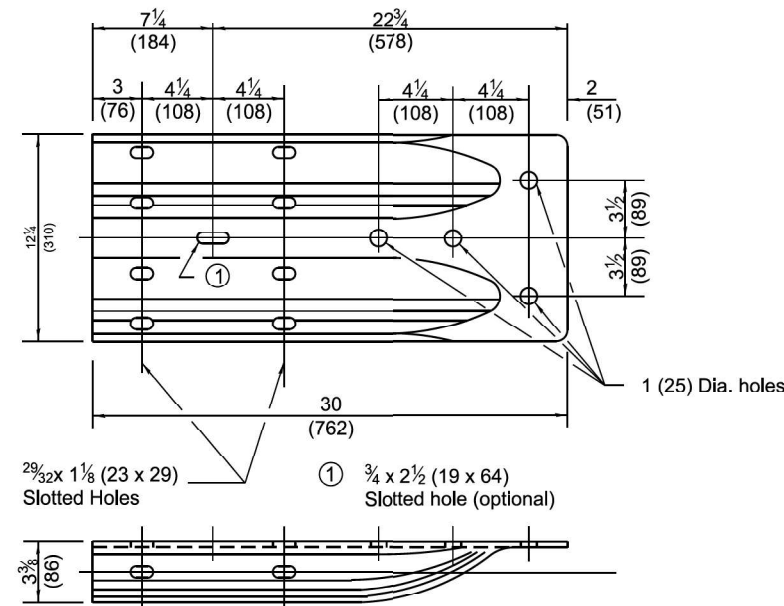
NOTE

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

STEEL PLATE BEAM GUARDRAIL

(Sheet 3 of 4)

STANDARD 630001-13

Illinois Department of Transportation

APPROVED January 1, 2024
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2024
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

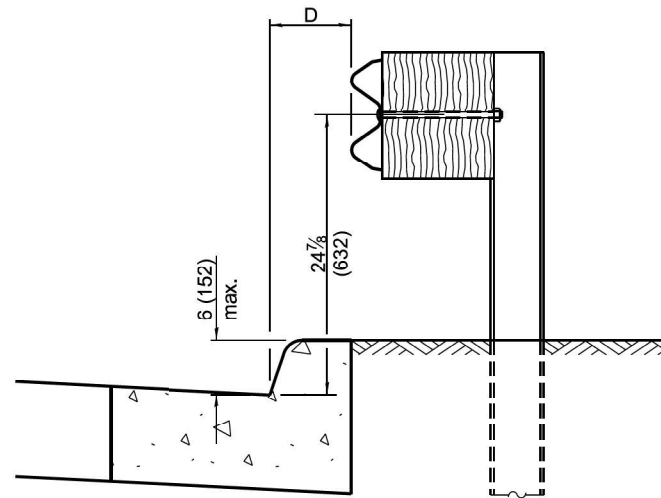
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	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

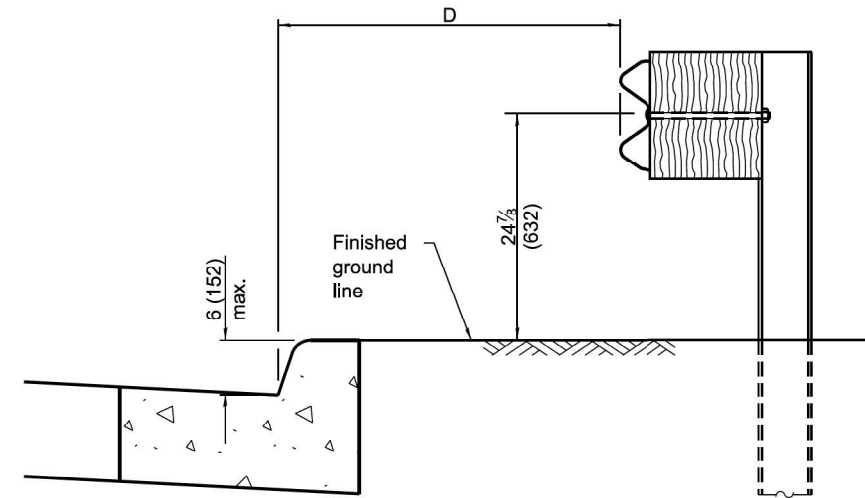
STEEL PLATE BEAM
GUARDRAIL STANDARD

SCALE: SHEET 3 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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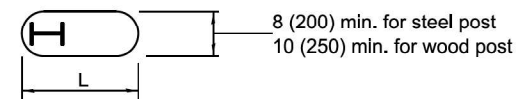
$0 \leq D < 6$ (150 m)



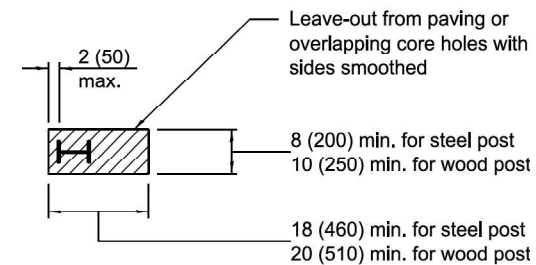
$4\text{'-}0''$ (1.2 m) $\leq D \leq 12\text{'-}0''$ (3.7 m)

GUARDRAIL PLACED BEHIND CURB

Note: 'D' shall not exceed 6 (152) for design speeds greater than 45 mph.

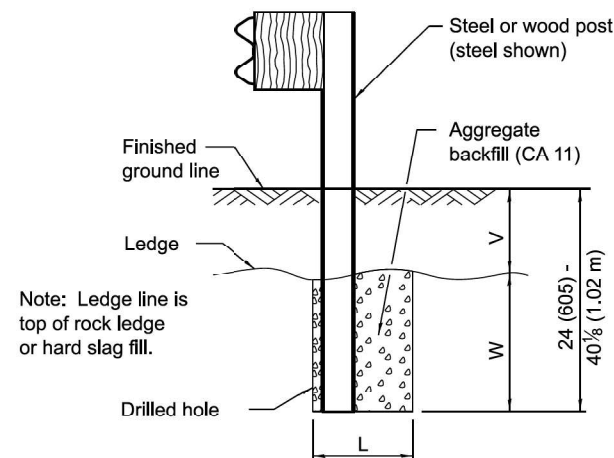


PLAN



PLAN

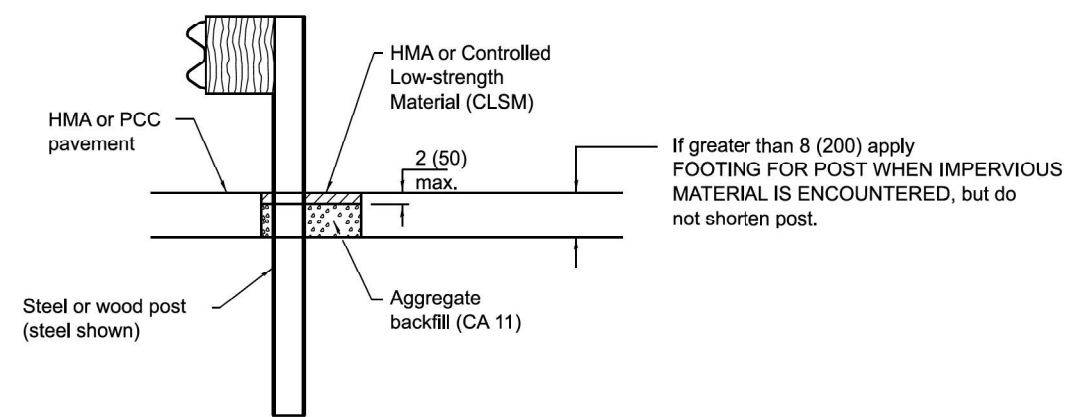
V	W	L	
		Steel Post	Wood Post
0 - 6 (0 - 152)	24 (610)	21 (530)	23 (580)
> 6 - 18 (> 152 - 458)	18 (458)	14 1/2 (368)	16 1/2 (419)
> 18 - 31 (> 458 - 787)	12 (305)	8 (203)	10 (250)
> 31 - 40 1/2 (> 787 - 1.02 m)	12 - 0 (305 - 0)	8 (203)	10 (250)



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

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED



If greater than 8 (200) apply FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED, but do not shorten post.

ELEVATION

LEAVE-OUT FOR POST WHEN PAVED MATERIAL IS ENCOUNTERED

STEEL PLATE BEAM GUARDRAIL

(Sheet 4 of 4)

STANDARD 630001-13

Illinois Department of Transportation	
APPROVED January 1, 2024	ISSUED 1-1-97
ENGINEER OF POLICY AND PROCEDURES	
APPROVED January 1, 2024	
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USER NAME = tristen.reid	DESIGNED -	REVISED -
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	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

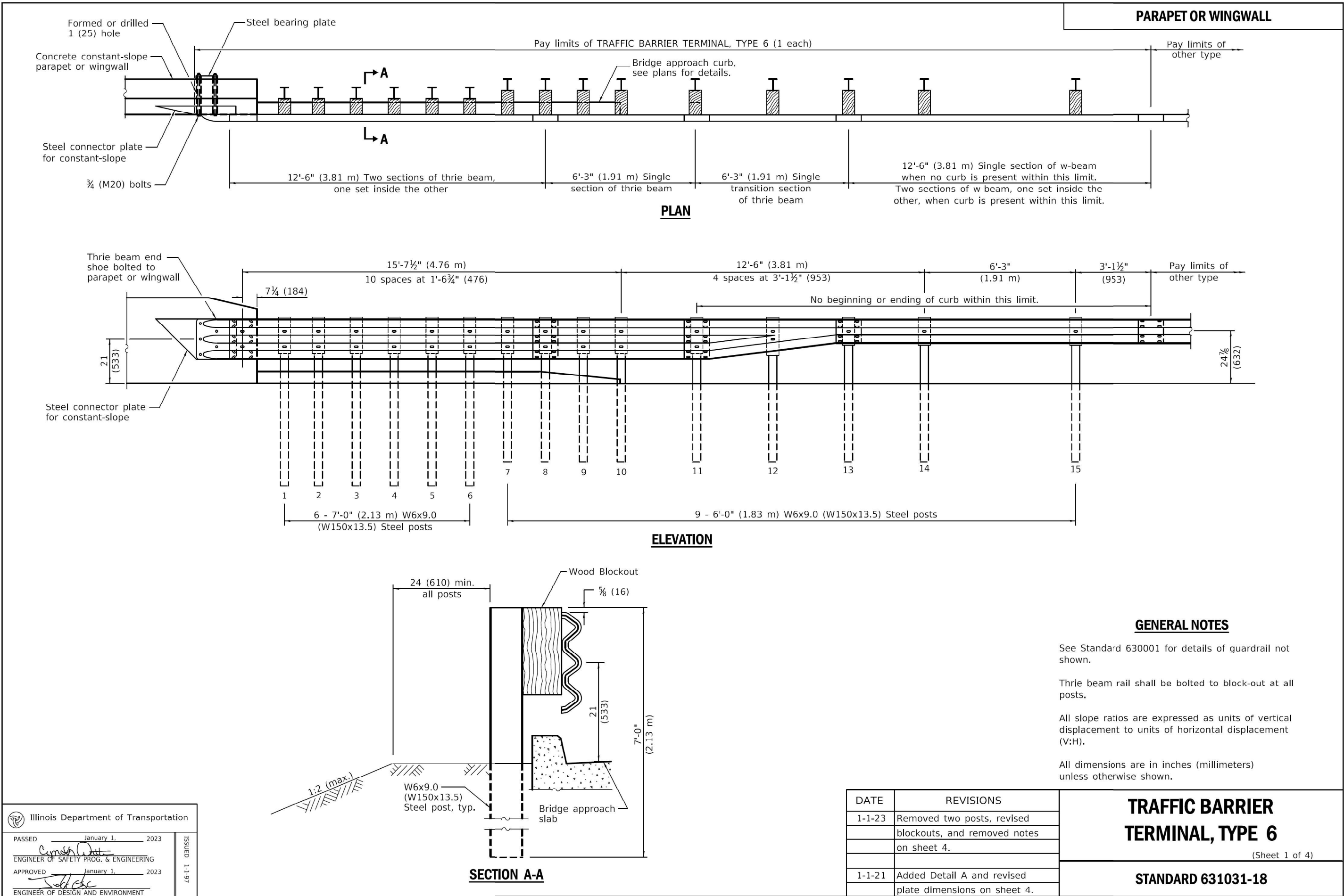
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL PLATE BEAM
GUARDRAIL STANDARD

SCALE: SHEET 4 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	10
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

MODEL: 11-Standard (Sheet)
FILE NAME: c:\paw_work\paw\illinois.gov\tristen.reid@illinois.gov\096864\1978839-SHC-SoQ.dgn



Illinois Department of Transportation	
PASSED January 1, 2023	ISSUED 1-1-97
ENGINEER OF SAFETY PROG. & ENGINEERING	
APPROVED January 1, 2023	
ENGINEER OF DESIGN AND ENVIRONMENT	

USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

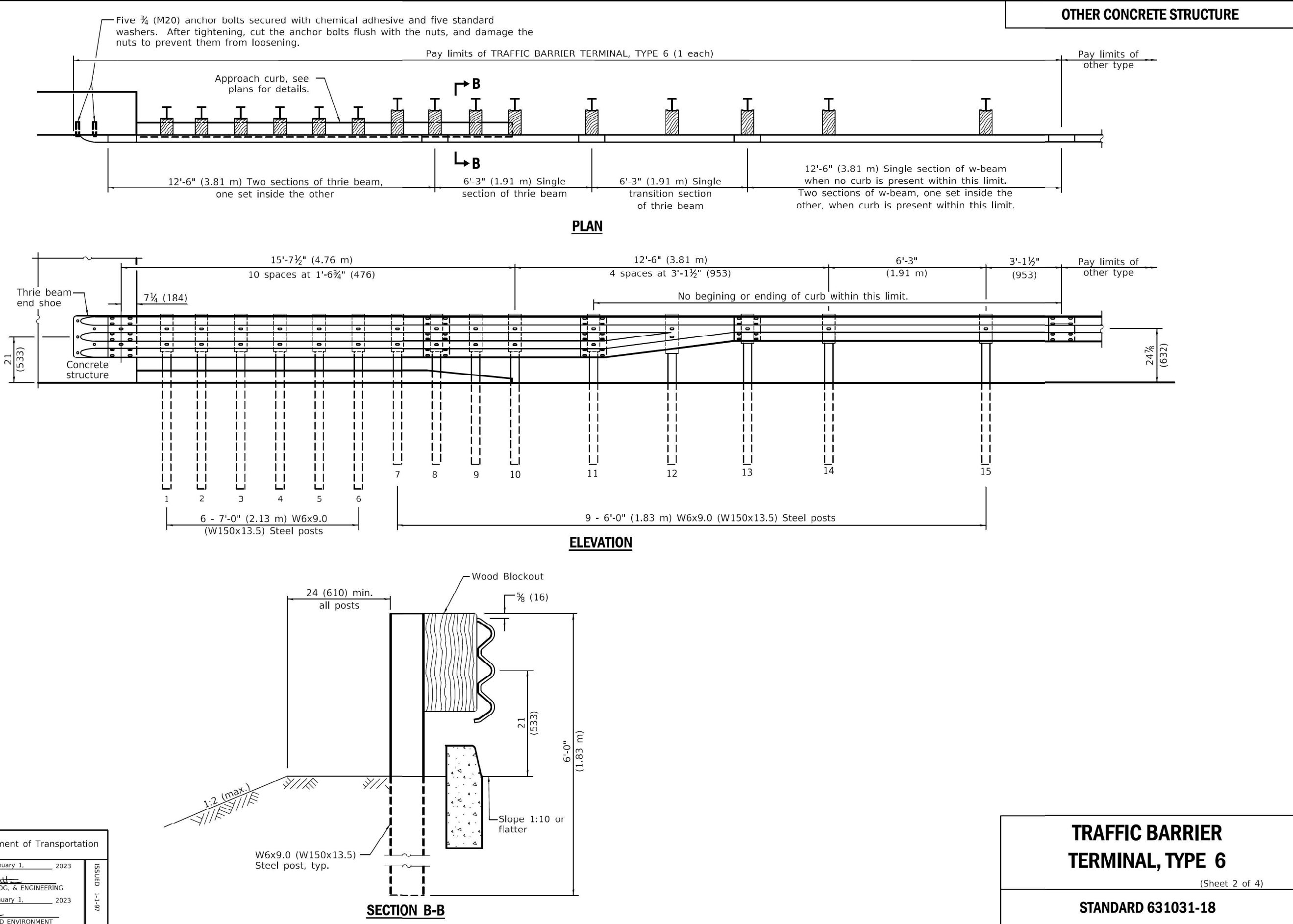
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC BARRIER TERMINAL
TYPE 6 STANDARD

SCALE: SHEET 5 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	11
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

MODEL: 13-Standards (Sheet)
FILE NAME: c:\pwworking\illinois.gov\tristen.reid\096864\U978B39-SHC-SoQ.dgn



Illinois Department of Transportation	
PASSED January 1, 2023	ISSUED 1/1/2023
ENGINEER OF SAFETY PROG. & ENGINEERING	
APPROVED January 1, 2023	
ENGINEER OF DESIGN AND ENVIRONMENT	

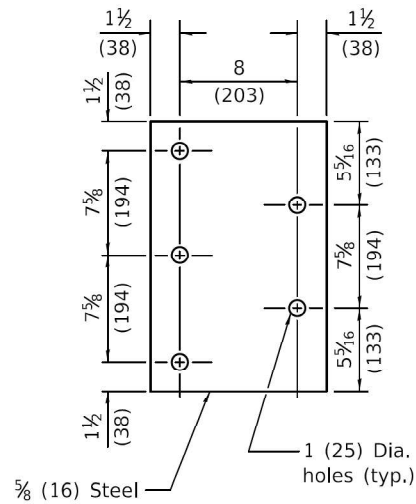
USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC BARRIER TERMINAL
TYPE 6 STANDARD

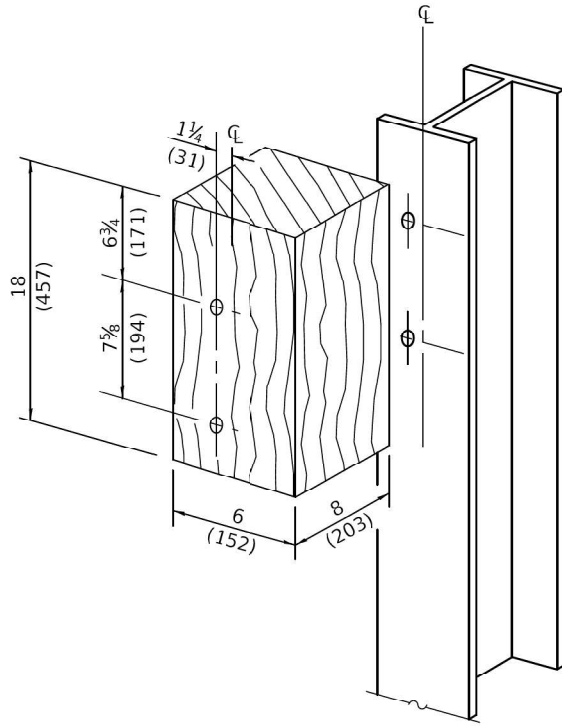
SCALE: SHEET 6 OF 14 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	12
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

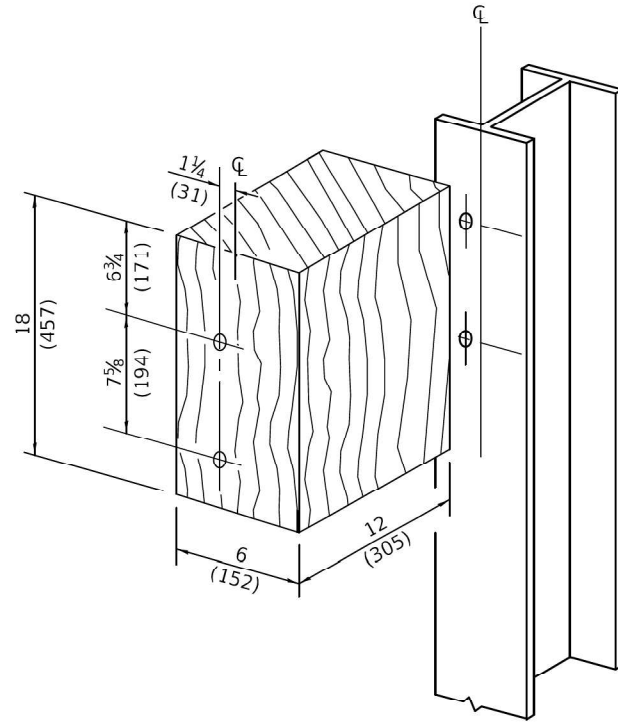


STEEL BEARING PLATE FOR F-SHAPE PARAPET

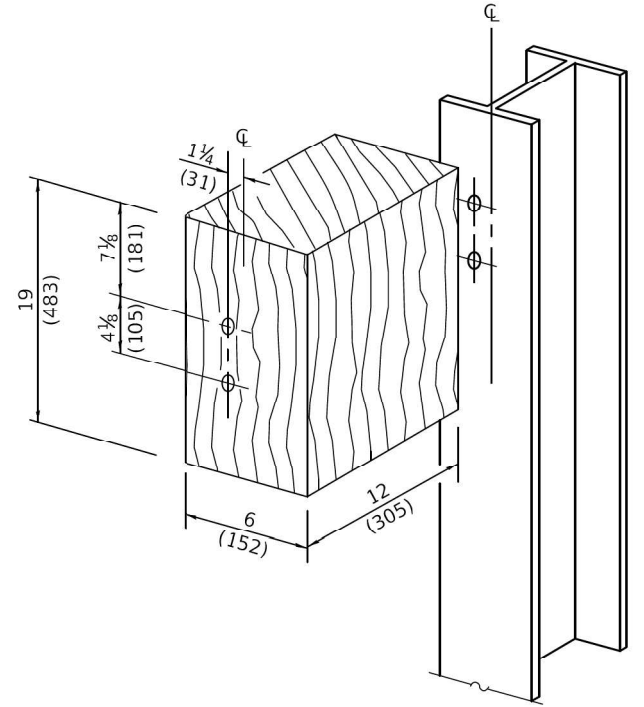
(5 each individual 5x5x5/8 (125x125x16) steel plates with centered 1 (25) holes may be substituted for the plate shown.)



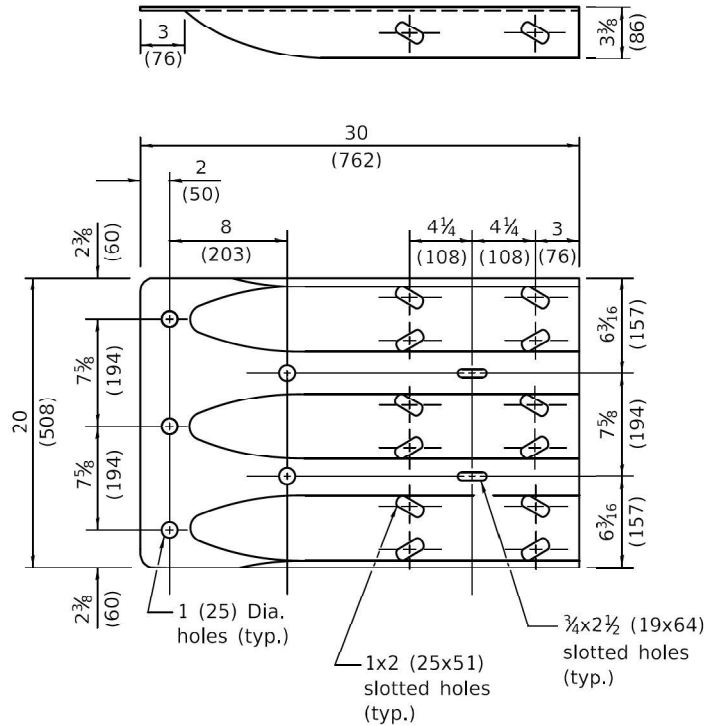
POSTS 1-6 WOOD BLOCKOUT DETAIL



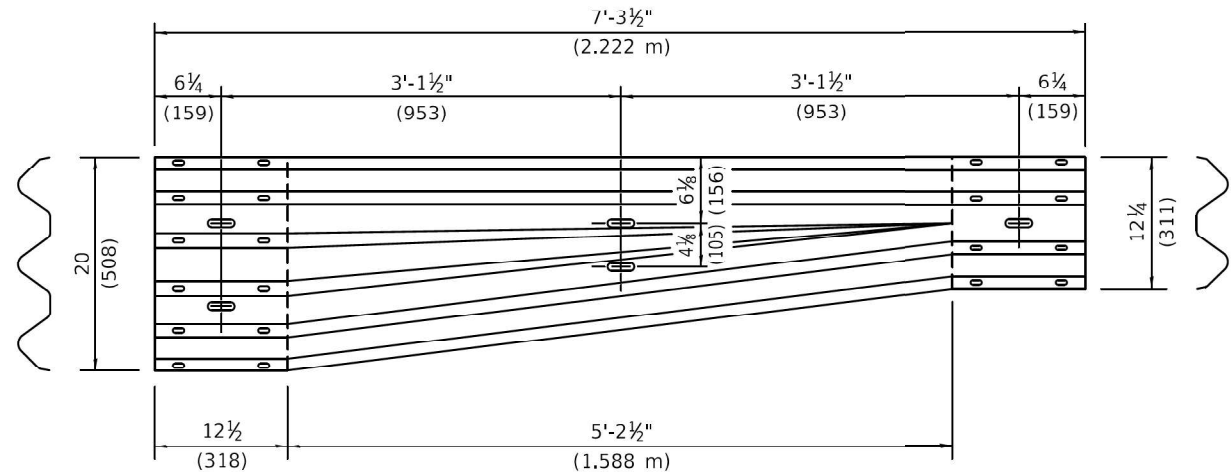
POSTS 7-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



THRIE BEAM END SHOE DETAIL



TRANSITION SECTION
(10 gauge (3.4) rail element)

**TRAFFIC BARRIER
TERMINAL, TYPE 6**

(Sheet 3 of 4)

STANDARD 631031-18

Illinois Department of Transportation

PASSED January 1, 2023
ENGINEER OF SAFETY PROG. & ENGINEERING

APPROVED January 1, 2023
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 11-1-97

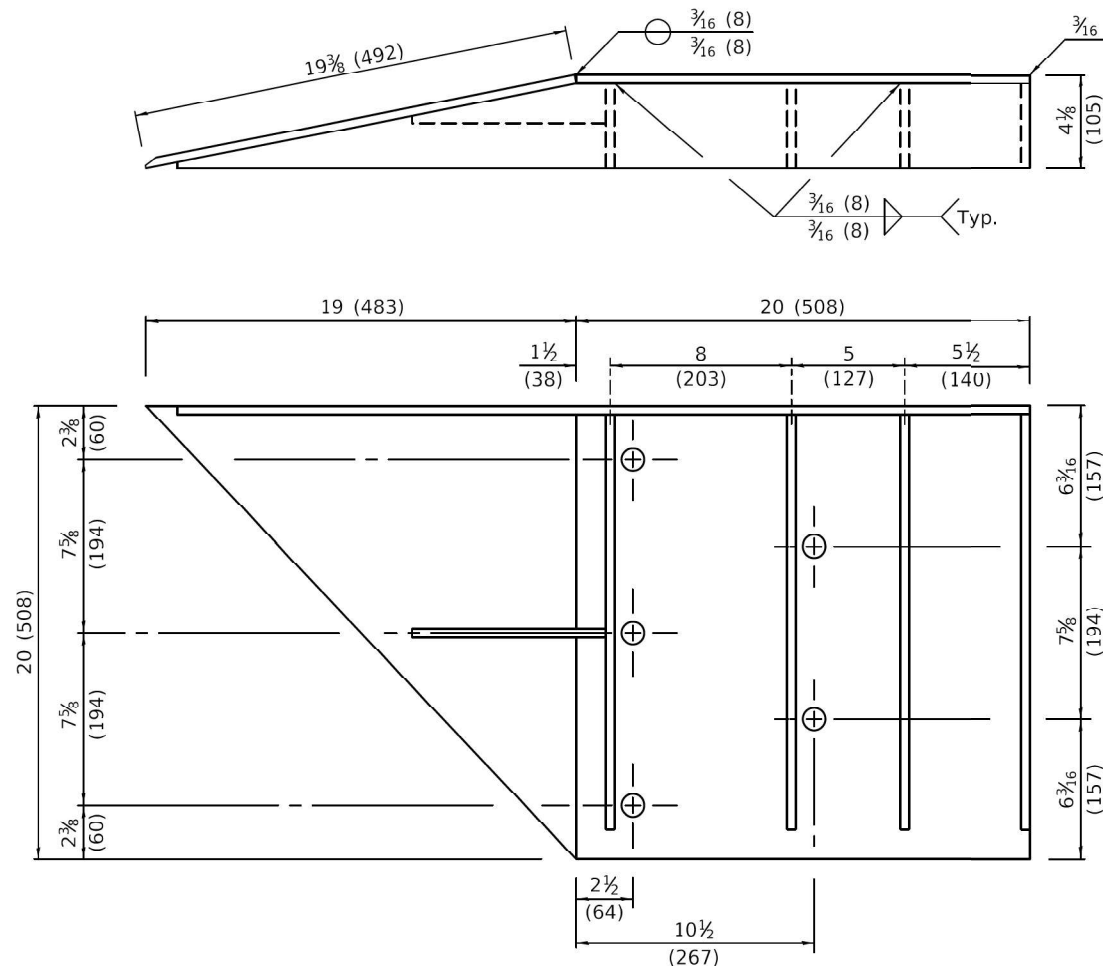
USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC BARRIER TERMINAL
TYPE 6 STANDARD**

SCALE: SHEET 7 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	13
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				



WELDING INSTRUCTION
(Back side of plate shown)

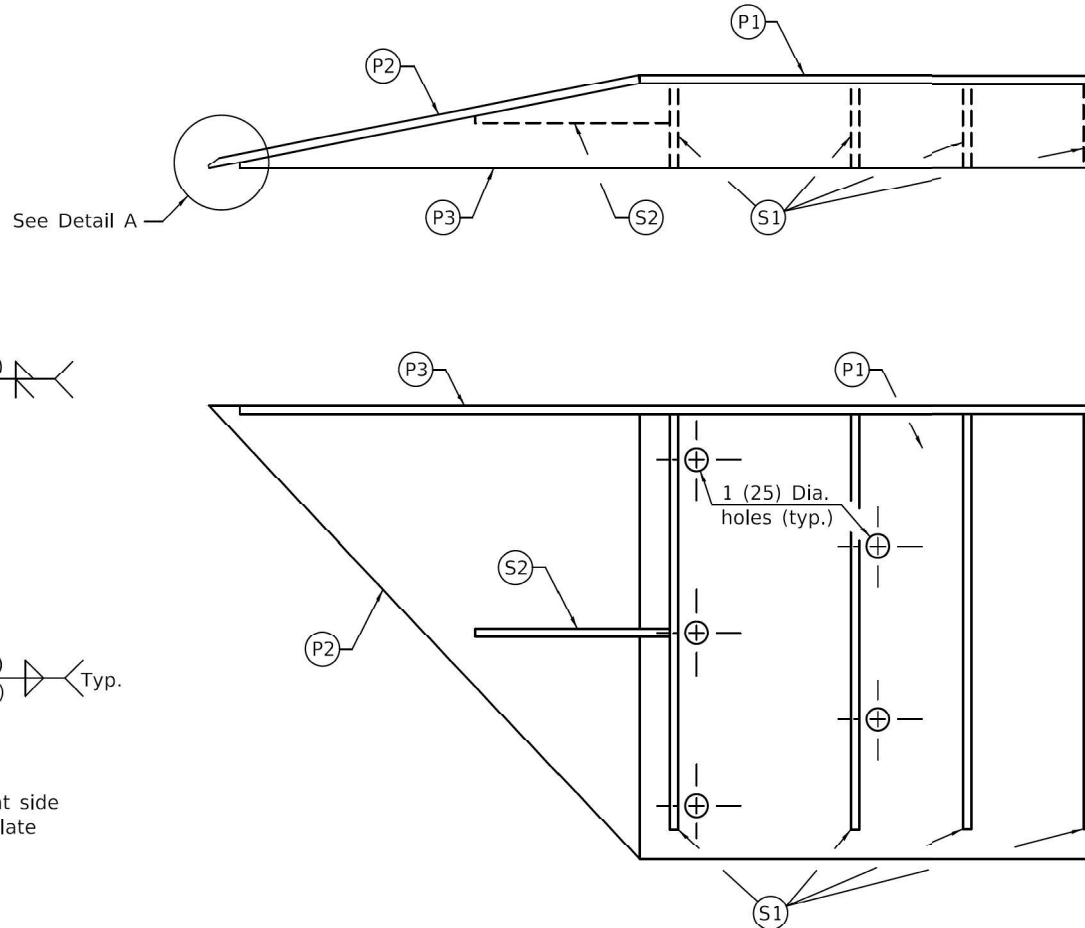
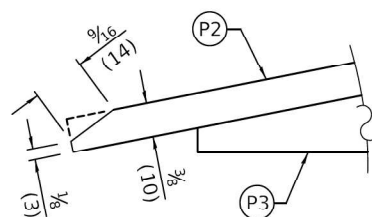


PLATE AND STIFFENER IDENTIFICATION
(Back side of plate shown)



DETAIL A
(Bevel front corner of plate P2
as shown for handling purposes.)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE A x B x C x D x E	THICKNESS
P1	1		20 x 20 (508 x 508)	3/8 (10)
P2	1		19 3/8 x 20 x 27 13/16 (492 x 508 x 706)	3/8 (10)
P3	1		20 x 3 3/4 x 37 5/8 x 1/4 x 17 15/16 (508 x 95 x 956 x 6 x 456)	3/8 (10)
S1	4		18 5/16 x 1/4 x 18 5/8 x 3 3/4 (465 x 6 x 473 x 95)	3/8 (10)
S2	1		1 5/16 x 1 3/4 x 8 1/16 x 3/8 x 6 7/8 (33 x 44 x 205 x 10 x 175)	3/8 (10)

STEEL CONNECTOR PLATE FOR CONSTANT SLOPE PARAPET

**TRAFFIC BARRIER
TERMINAL, TYPE 6**

(Sheet 4 of 4)

STANDARD 631031-18

Illinois Department of Transportation	
PASSED January 1, 2023	ISSUED 1-1-97
ENGINEER OF SAFETY PROG. & ENGINEERING	
APPROVED January 1, 2023	
ENGINEER OF DESIGN AND ENVIRONMENT	

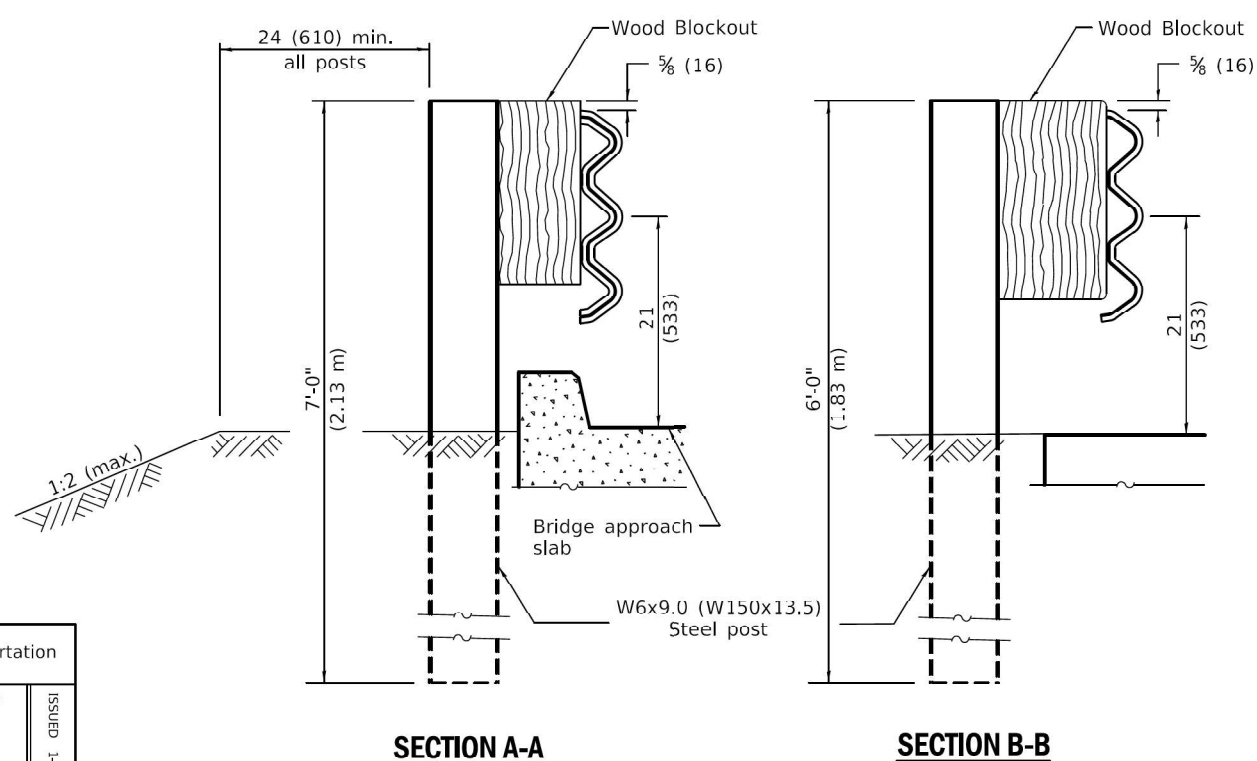
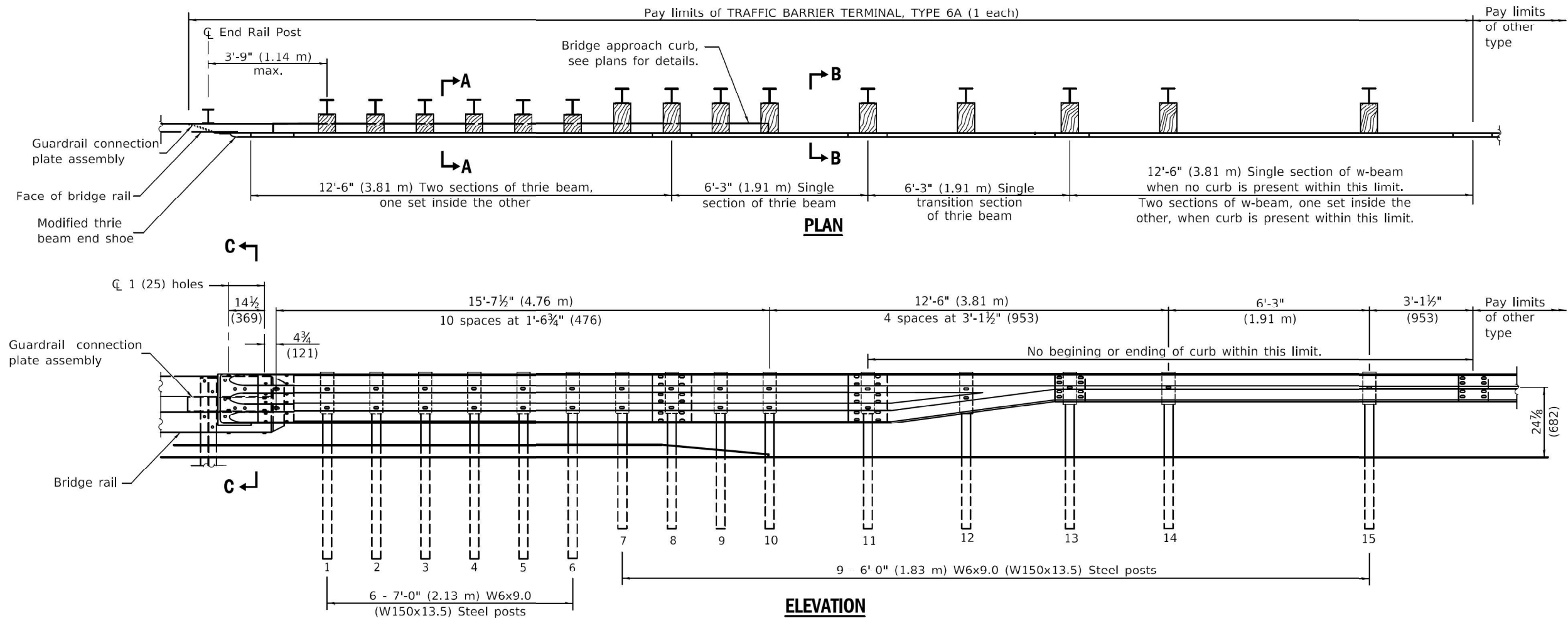
USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC BARRIER TERMINAL
TYPE 6 STANDARD**

SCALE: SHEET 8 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	14
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				



GENERAL NOTES

This standard shows attachment to side mounted bridge rail, Type SMX. Side mounted bridge rail, Type SM is similar.

See Standard 630001 for details of guardrail not shown.

Thrie beam rail shall be bolted to block-out at all posts.

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

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

PASSED January 1, 2023

ENGINEER OF SAFETY PROG. & ENGINEERING

APPROVED January 1, 2023

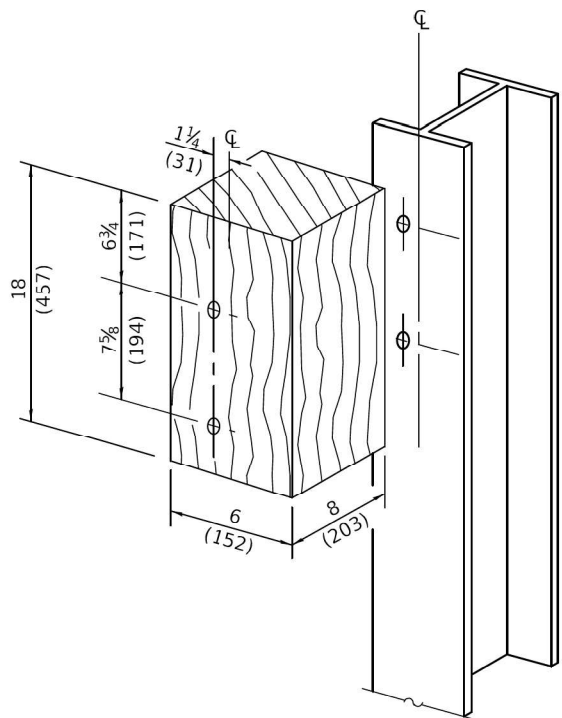
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2003

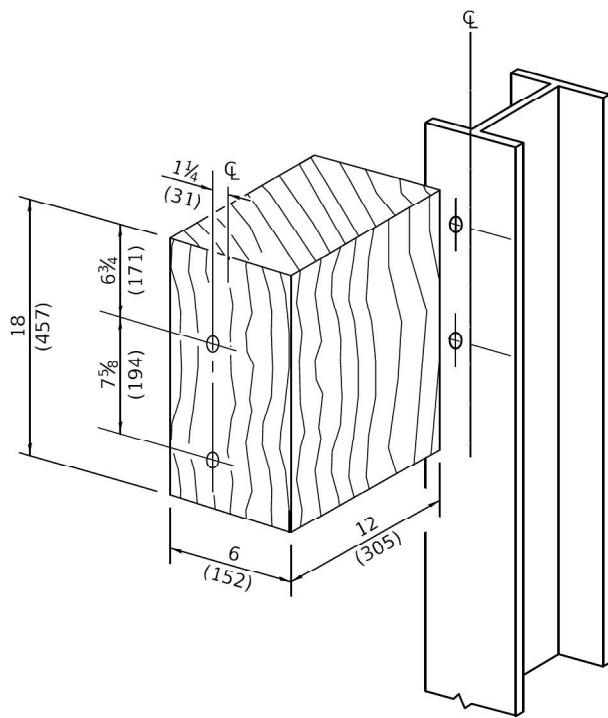
DATE		REVISIONS		TRAFFIC BARRIER TERMINAL, TYPE 6A	
1-1-23		Updated bridge rail connection		(Sheet 1 of 3)	
		to match the new Type SMX.			
		Revised post spacing, blockouts,		STANDARD 631032-10	
		and details to match other TBTs.			
1-1-17		Revised length of thrie beam.			
		Revised length of posts.			

USER NAME = tristen.reid		DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TRAFFIC BARRIER TERMINAL TYPE 6A STANDARD		F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	15
		CHECKED -	REVISED -					CONTRACT NO. 78B39				
		DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
PLOT DATE = 5/1/2025						SCALE:	SHEET 9 OF 14 SHEETS	STA.	TO STA.			

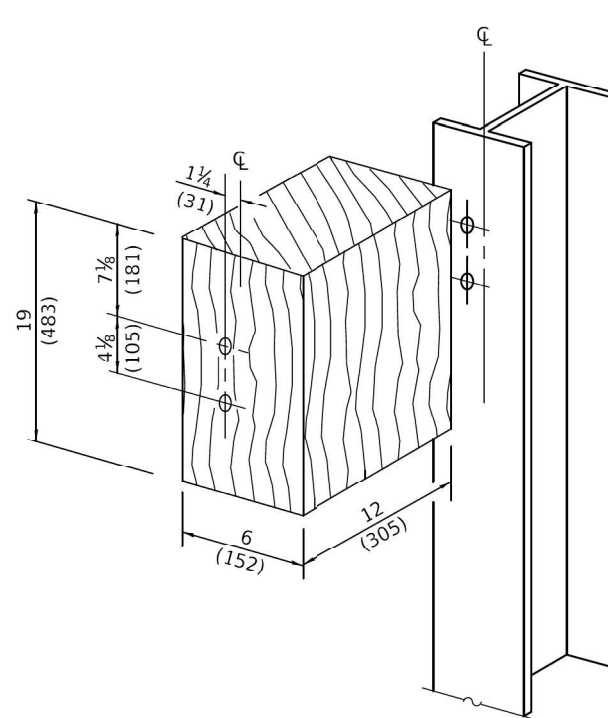
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FILE NAME: c:\p\work\p\std\illinois.gov\tristen.reid\0506864\U978B39-S\TIC-SoQ.dgn



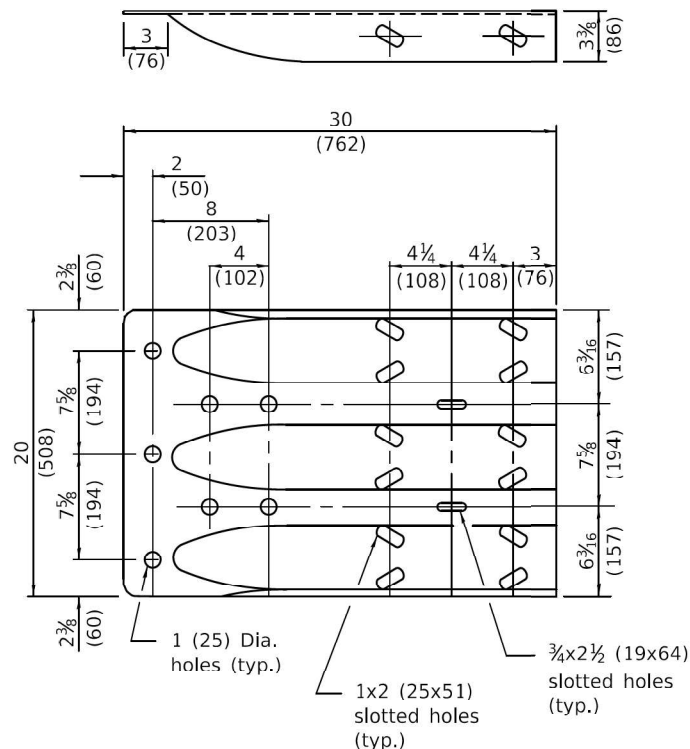
POSTS 1-6 WOOD BLOCKOUT DETAIL



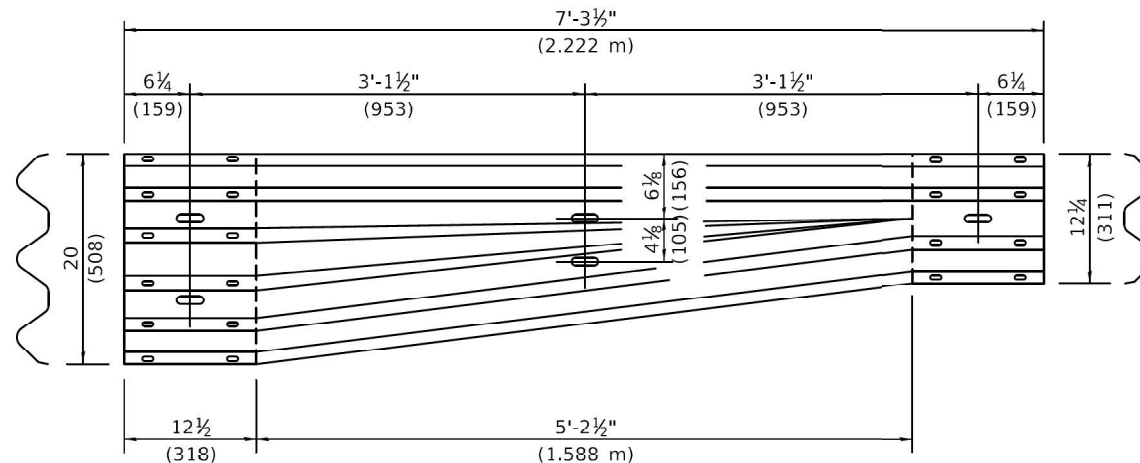
POSTS 7-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



MODIFIED THRIE BEAM END SHOE DETAIL



TRANSITION SECTION
(10 gauge (3.4) rail element)

TRAFFIC BARRIER
TERMINAL, TYPE 6A

(Sheet 2 of 3)

STANDARD 631032-10

Illinois Department of Transportation	
PASSED January 1, 2023	ISSUED 1-1-2003
ENGINEER OF SAFETY PROG. & ENGINEERING	
APPROVED January 1, 2023	
ENGINEER OF DESIGN AND ENVIRONMENT	

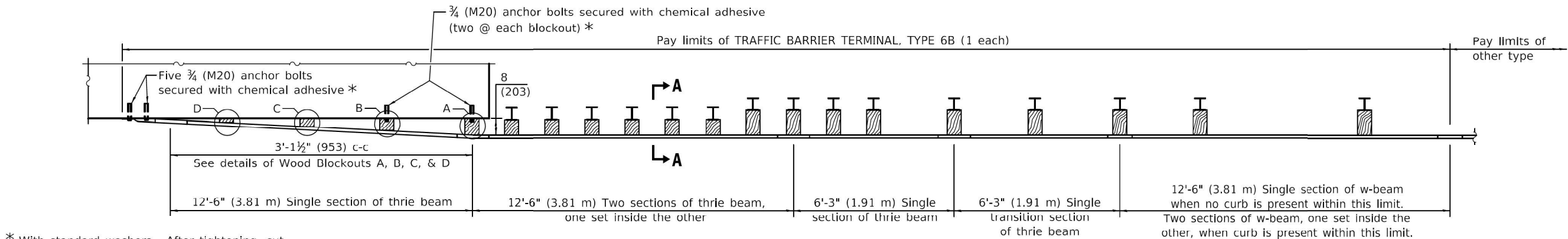
USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC BARRIER TERMINAL
TYPE 6A STANDARD

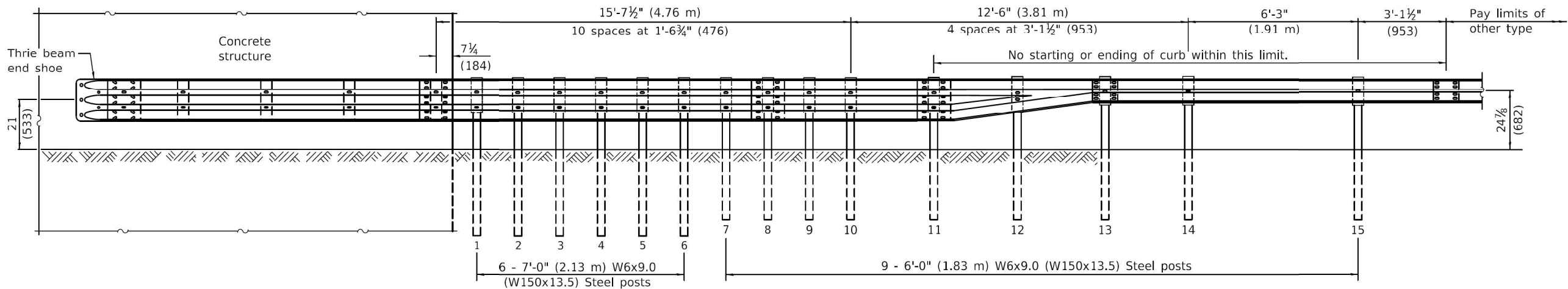
SCALE: SHEET 10 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	16
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

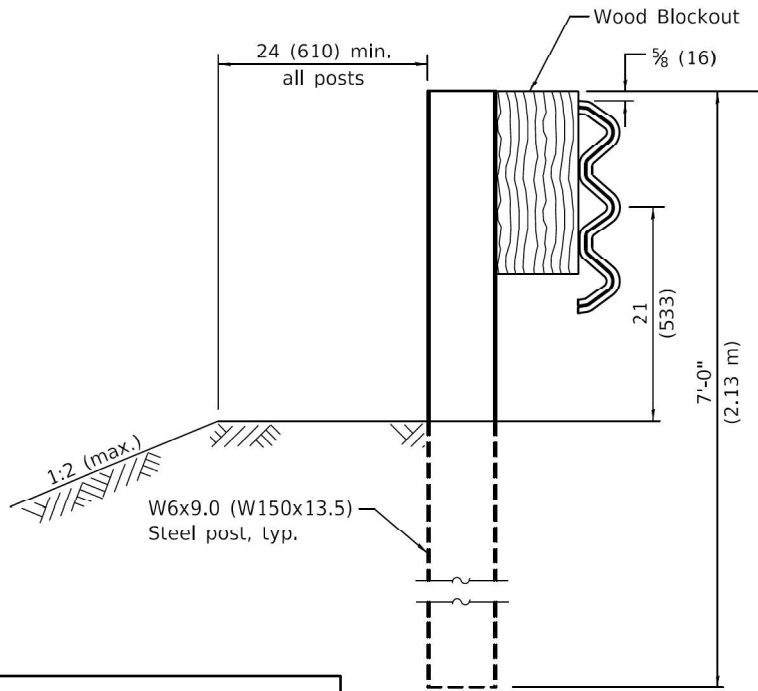


* With standard washers. After tightening, cut the anchor bolts flush with the nuts and damage the nuts to prevent them from loosening.

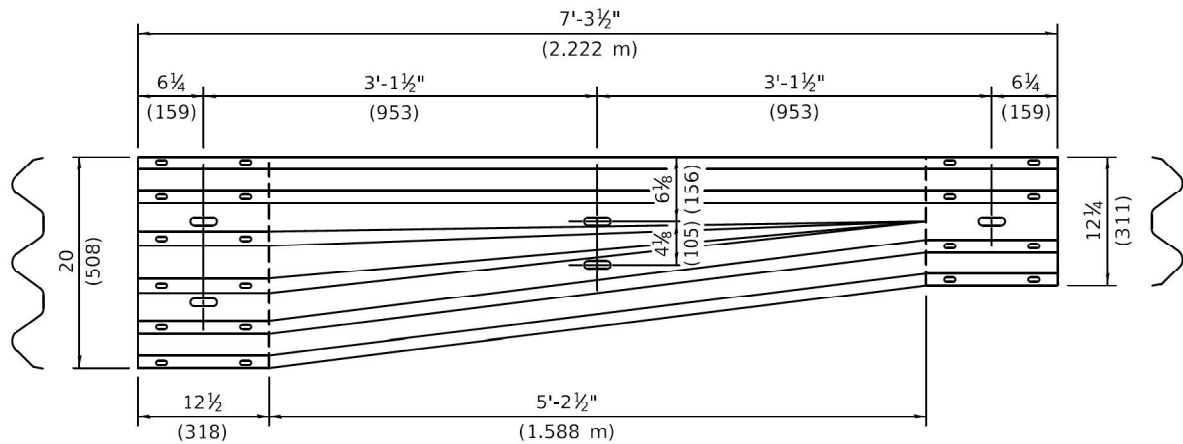
PLAN



ELEVATION



SECTION A-A



TRANSITION SECTION

(10 gauge (3.4) rail element)

GENERAL NOTES

See Standard 630001 for details of guardrail not shown.

Thrie beam rail shall be bolted to block-out at all posts.

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

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

Illinois Department of Transportation

PASSED January 1, 2023

ENGINEER OF SAFETY PROG. & ENGINEERING

APPROVED January 1, 2023

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2003

TRAFFIC BARRIER
TERMINAL, TYPE 6B

(Sheet 1 of 2)

STANDARD 631033-09

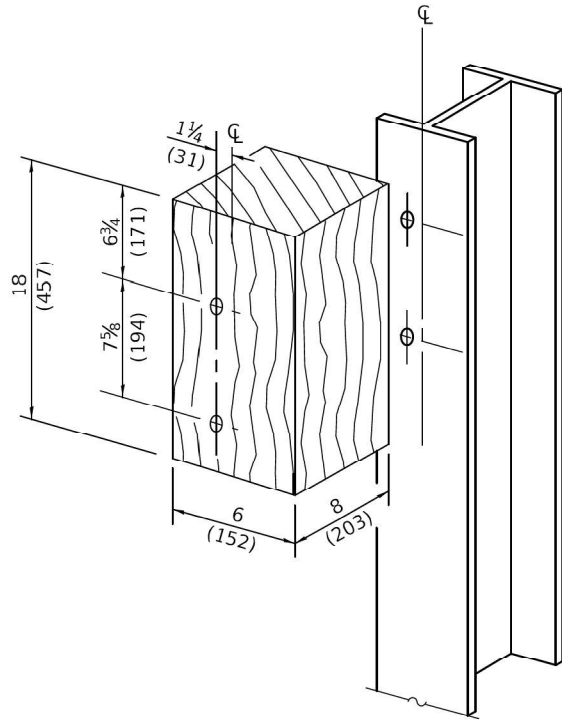
USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

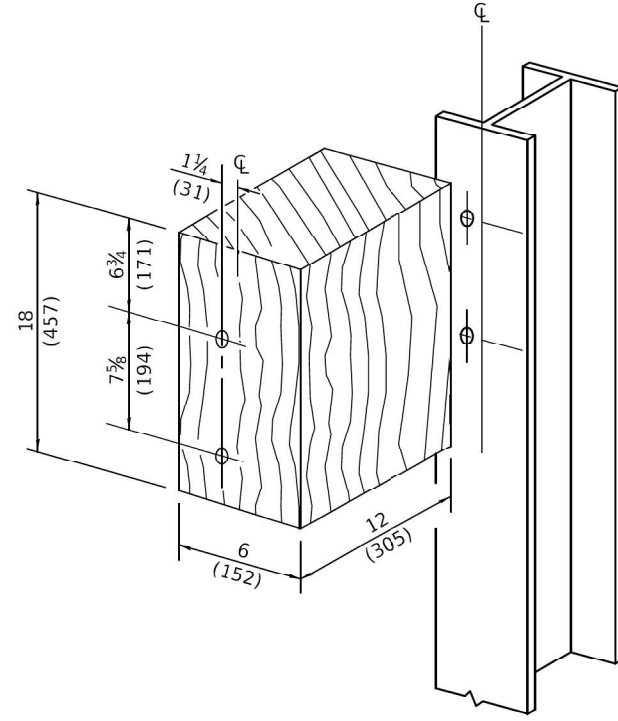
TRAFFIC BARRIER TERMINAL
TYPE 6B STANDARD

SCALE: SHEET 12 OF 14 SHEETS STA. TO STA.

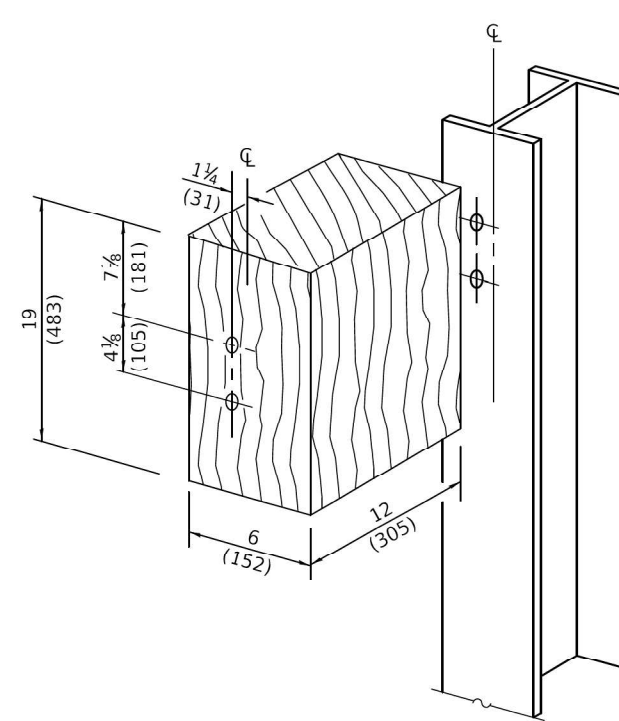
F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	18
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				



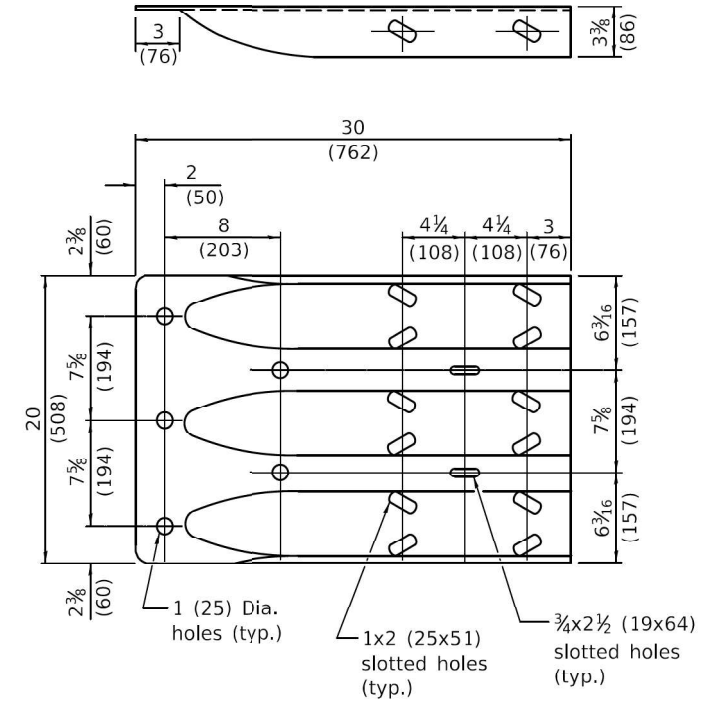
POSTS 1-6 WOOD BLOCKOUT DETAIL



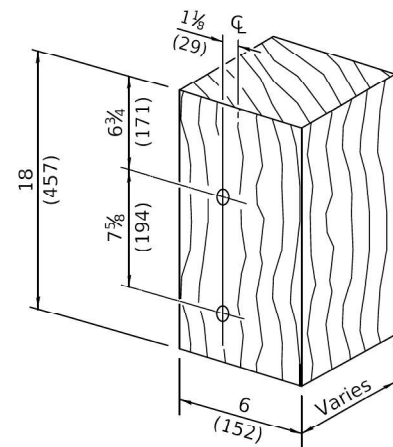
POSTS 7-11 WOOD BLOCKOUT DETAIL



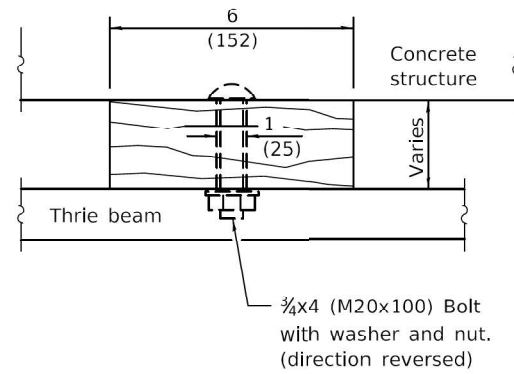
POSTS 12 WOOD BLOCKOUT DETAIL



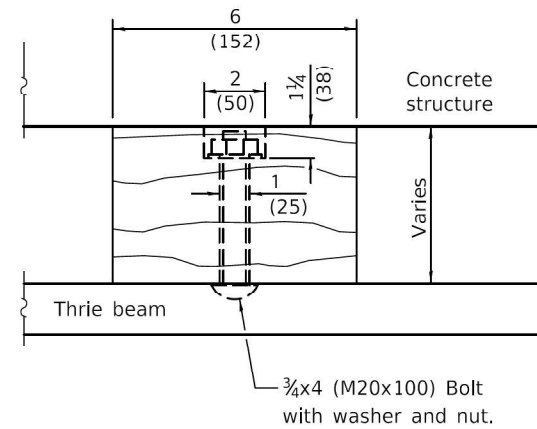
THRIE BEAM END SHOE DETAIL



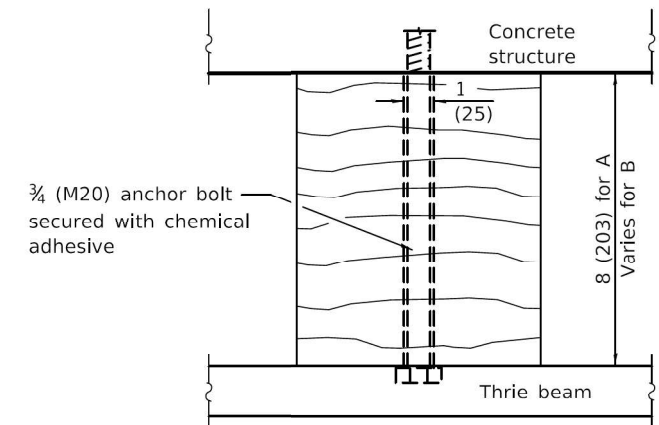
**MODIFIED THICKNESS DETAIL
WOOD BLOCKOUTS A, B, C, & D**



WOOD BLOCKOUT D



WOOD BLOCKOUT C



WOOD BLOCKOUT A & B

**TRAFFIC BARRIER
TERMINAL, TYPE 6B**

(Sheet 2 of 2)

STANDARD 631033-09

Illinois Department of Transportation	
PASSED January 1, 2023	ISSUED 1-1-2003
ENGINEER OF SAFETY PROG. & ENGINEERING	
APPROVED January 1, 2023	
ENGINEER OF DESIGN AND ENVIRONMENT	

USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

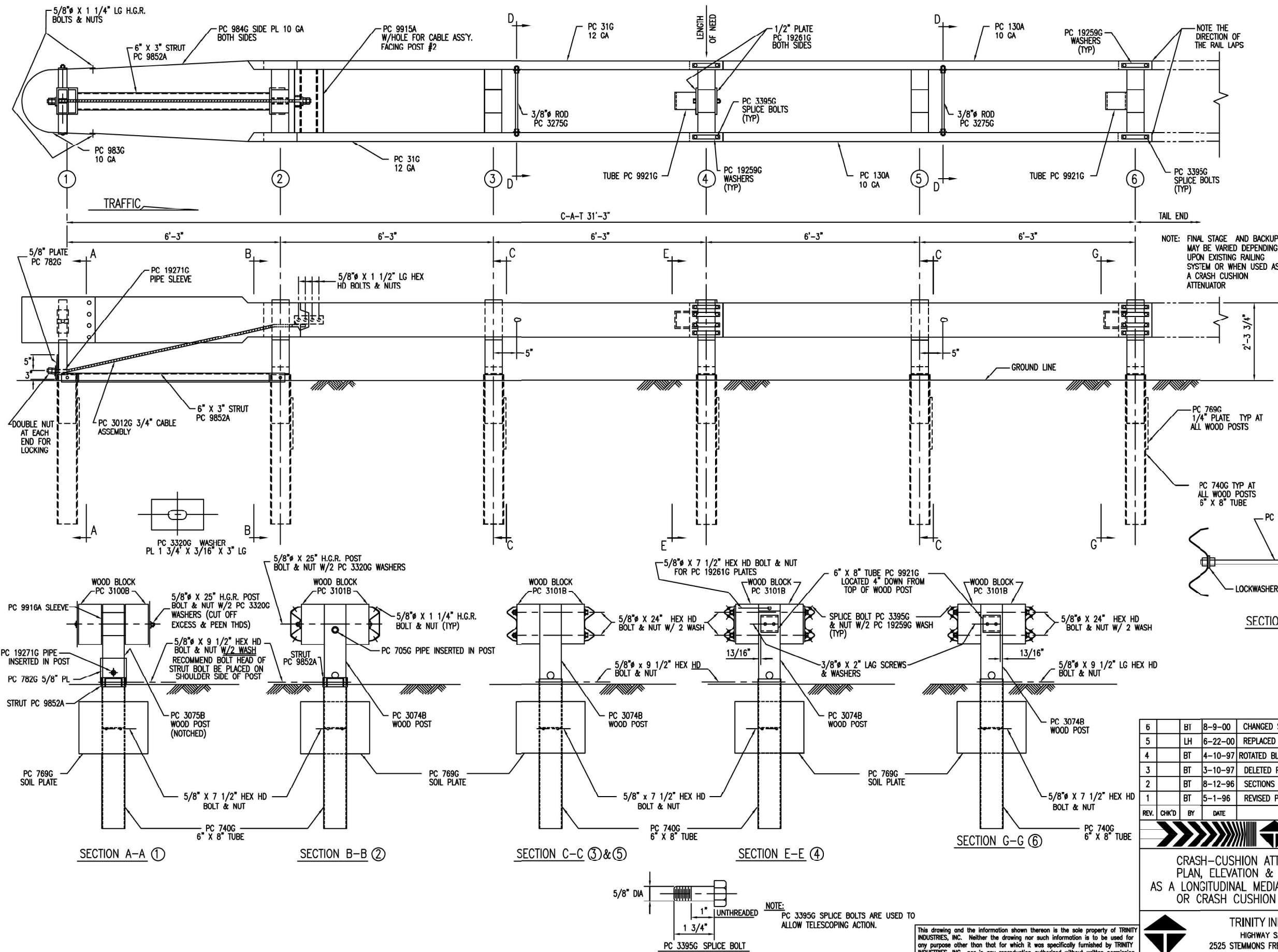
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC BARRIER TERMINAL
TYPE 6B STANDARD**



SCALE: SHEET 13 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	19
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				

MODEL: 21-Standard (Sheet)
FILE NAME: c:\pawork\idm\illinois.gov\098664\U978839-SHC-SoQ.dgn



C-A-T BILL OF MATERIAL		
PRODUCT CODE	QTY	DESCRIPTION
31G	2	12/12'6/0 CAT (GUARDRAIL)
130A	2	10/12'6/5'10'6/8/SP CAT (GUARDRAIL)
705G	1	2" x 5 1/2" PIPE
740G	6	4'6" TUBE SLEEVE
769G	6	1/4 x 18 x 24 SOIL PLATE
782G	1	5/8" x 8" x 8" BEARING PLATE
983G	1	10/NOSE PLATE/CAT/ROLLED
984G	2	10/SIDE PLATE CAT
3012G	1	CABLE 3/4 x 8'0/DBL SWG
3074B	5	WD 3'6 POST #2, 3, 4, 5, 6 CAT
3075B	1	WD 3'6 POST #1 CAT
3100B	2	WD BLOCK 1'2 #1 CAT
3101B	10	WD BLOCK 1'2 #2-6 CAT
3255G	4	3/8" FLAT WASHER
3263G	4	3/8" x 2" LAG SCREW
3275G	2	3/8" x 24 1/2" RESTRAINT ROD
3300G	20	5/8" FLAT WASHER
3320G	4	3/16" x 1 3/4" x 3" RECT WASHER
3340G	85	5/8" G.R. NUT
3360G	16	5/8" x 1 1/4" G.R. BOLT
3380G	8	5/8" x 1 1/2" HEX BOLT
3395G	32	5/8" x 1 3/4" HEX BOLT CAT
3478G	13	5/8" x 7 1/2" HEX BOLT
3497G	6	5/8" x 9 1/2" HEX BOLT
3650G	2	5/8" x 25" G.R. BOLT
3900G	2	1" FLAT WASHER
3910G	4	1" HEX NUT
4252G	8	3/8" HEX NUT
4258G	4	3/8" LOCK WASHER
4640G	8	5/8" x 24" HEX BOLT
9852A	1	CHANNEL STRUT x 6'-6"
9915A	1	SPACER CHANNEL CAT
9916A	1	10/BENT PLATE SLEEVE
9921G	2	6" SLEEVE 6 x 8
19259G	32	3/16" x 2" x 10" PLATE WASHER
19261G	2	1/2 x 3 x 7 POST PLATE
19271G	1	1" x 2 1/2" PIPE SLEEVE CAT

6	BT	8-9-00	CHANGED SYSTEM HEIGHT, WAS 2'-3"		
5	LH	6-22-00	REPLACED PC 766 WITH PC 769, CHANGED TITLE BLOCK		
4	BT	4-10-97	ROTATED BLOCK PC 9921 90° AT POST 4 & 6		
3	BT	3-10-97	DELETED PC 3072, 3073, 4470, CHG QTY 3074 & 3478		
2	BT	8-12-96	SECTIONS A-A & B-B, CORRECTED PIPE SLEEVE PC No		
1	BT	5-1-96	REVISED PC No 31G & 130A		
REV.	CHK'D	BY	DATE	REMARKS	
					
CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR				DRAWN	BT
				CHECKED	EN
				SCALE	N.T.S.
				DATE	7-15-94
				ENG. FILE #	SS245-01E
 TRINITY INDUSTRIES, INC. HIGHWAY SAFETY PRODUCTS 2525 STEMMONS FREEWAY, DALLAS, TX 75207				SHT.No.	E1 OF 1
				DRAWING NO.	SS-245
				REV.	6

TERMINAL	F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHE NO.
	VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	20
CONTRACT NO. 78B39					

USER NAME = tristen.reid	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 5/1/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CRASH-CUSHION ATTENUATING TERMINAL
(C-A-T)

SCALE: SHEET 14 OF 14 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 GUARDRAIL REPAIR FY26-1	VARIOUS	20	20
CONTRACT NO. 78B39				
ILLINOIS FED. AID PROJECT				