

06-17-2022 LETTING ITEM 087

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DIST 8 GUARDRAIL 2023-1	VARIOUS	12	1
		ILLINOIS	CONTRACT NO. 76R03	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
SECTION DIST 8 GUARDRAIL 2023-1

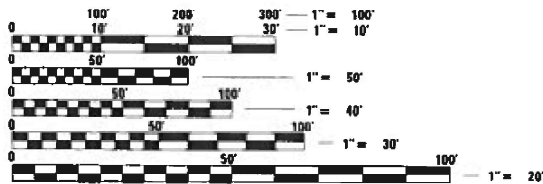
GUARDRAIL & CABLE MEDIAN REPAIR
VARIOUS COUNTIES

C-98-078-22

D-98-048-22



NOT TO SCALE



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 EXCAVATORS
1-800-892-0123
OR 811

PROJECT ENGINEER: CHERYL KEPLAR
SQUAD CONTACT: TONI MANN

CONTRACT NO. 76R03

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 14, 2022
Stephen Travin
REGIONAL ENGINEER

May 13, 2022 [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

May 13, 2022 [Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1. COVER SHEET
- 2. INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS
- 3.-5. SUMMARY OF QUANTITIES
- 6. HIGH TENSION CABLE LOCATION MAP
- 7.-12. GUARDRAIL DETAILS

HIGHWAY STANDARDS

000001-08	701201-05
630001-12	701301-04
630101-10	701400-11
630301-09	701401-13
631006-08	701406-13
631011-10	701421-08
631026-06	701426-09
631031-17	701428-01
635001-02	701456-05
636001-02	701501-06
701001-02	701502-09
701006-05	701601-09
701011-04	701602-10
701101-05	701606-10
701106-02	701701-10
	701901-08

GENERAL NOTES

- 1. BEFORE ORDERING THE IMPACT ATTENUATORS, THE CONTRACTOR MUST CONTACT THE OPERATIONS FIELD ENGINEER AT (618) 346-3279 OR (618) 346-3233 TO RECEIVE APPROVAL OF THE PROPOSED INSTALLATION.
- 2. ALL WORK IS TO BE REPLACED IN KIND OR AS INDICATED ON THE CONTRACT PLANS AND PROVISIONS.
- 3. NO MATERIAL SHALL BE LEFT ON OR NEAR THE ROADWAY DURING NON-WORKING HOURS.
- 4. ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE LISTED IN THE PLANS AND CONTRACT DOCUMENTS.
- 5. ALL REFLECTORS SHALL BE PLACED AT THE DISCRETION OF THE ENGINEER. COST OF REFLECTORS TO BE INCLUDED IN THE GUARDRAIL PAY ITEMS.
- 6. ILLINOIS STATE LAW REQUIRES 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-MEMBERS, THE UTILITY COMPANY DIRECTLY.
- 7. WHEN NO WORK IS BEING PERFORMED, THE FLAGGERS WILL NOT BE REQUIRED. IF THE FLAGGERS ARE NOT PRESENT, THE FLAGGER SIGNS SHALL BE REMOVED OR COVERED.
- 8. PRIOR TO ORDERING ANY MATERIALS, THE CONTRACTOR SHALL CONFIRM THE TYPES AND SPECIFIC MANUFACTURER FOR THE GUARDRAIL AND CABLE REPAIRS REQUIRED.
- 9. 45 AND 55 MPH SIGNS ARE INCLUDED IN ALL INTERSTATE LANE CLOSURES. IF THE LANE CLOSURE DURATION IS LESS THAN 4 HOURS, THE 45 AND 55 MPH SIGNS ARE NOT REQUIRED.
- 10. NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.
- 11. ARTICLE 701.20 OF THE STANDARD SPECIFICATIONS DISCUSSES AN ADJUSTED UNIT PRICE. NO ADJUSTMENTS SHALL BE MADE TO THE TRAFFIC CONTROL PAY ITEMS FOR THIS CONTRACT.
- 12. THE CONTRACTOR SHALL BE ADVISED THAT THE GUARDRAIL PAY ITEMS INCLUDED IN THE PLANS MAY BE USED TO REPLACE/REPAIR SPBGR AND TRAFFIC BARRIER TERMINALS FOR EITHER THE CURRENT MIDWEST STYLES AS SHOWN IN THE HIGHWAY STANDARDS OR SPBGR AND TRAFFIC BARRIER TERMINALS INSTALLED PRIOR TO JANUARY 1, 2007 AS SHOWN IN THE PLAN DETAILS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR UTILIZING THE CURRENT MIDWEST STANDARDS.
- 13. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT EEO OFFICE AT 618-346-3360 AND OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

COMMITMENTS
NONE

FILE NAME :	USER NAME = lewisko	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS GENERAL NOTES AND COMMITMENTS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw\idot-pw.bentley.com\PIWIDOT\Documents\IDOT Offices\District 8\Projects\0876R03\CAD\DRAWINGS\Drawings\0876R03-sht-gennote.dgn		CHECKED -	REVISED -			VARIOUS	DIST 8 GUARDRAIL 2023-1	VARIOUS	12	2
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -			CONTRACT NO. 76R03				
	PLOT DATE = 3/15/2022					SCALE: NONE	SHEET 1	OF 1	SHEETS	STA.

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				100% STATE CONT. MAINT	100% STATE MCHDF	100% STATE HTMCB
				NONE	NONE	NONE
				0021	0021	0021
NONE	NONE	NONE				
63000350	LONG-SPAN GUARDRAIL OVER CULVERT, 12 FT 6 IN SPAN	FOOT	162.5	162.5		
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	6	4	2	
63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	5	4	1	
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	9	8	1	
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	83	65	18	
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	25	5	20	
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	5	3	2	
64300370	IMPACT ATTENUATORS (FULLY REDIRECTIVE, WIDE), TEST LEVEL 3	EACH	5	3	2	
67100100	MOBILIZATION	L SUM	1	0.33	0.34	0.33
X0325972	CABLE GUARD POST	EACH	340			340
X0326466	HIGH TENSION CABLE POST REPAIR	EACH	80			80
X0326468	MEDIAN CABLE	FOOT	300			300
X6300210	GUARDRAIL BLOCKS	EACH	785	400	385	
X6300215	RAIL ELEMENT PLATES	EACH	510	200	310	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
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				0021	0021	0021
				NONE	NONE	NONE
X6300217	RAIL ELEMENT PLATES (RADIUS)	EACH	50	25	25	
X6300220	EXTRUDER HEAD	EACH	15	10	5	
X6300225	SINGLE END SECTION	EACH	3	2	1	
X6300231	STEEL POST, ATTACHED TO STRUCTURES	EACH	7	3	4	
X6300236	STEEL POSTS 6'	EACH	625	300	325	
X6300239	STEEL POSTS 9'	EACH	250	100	150	
X6331110	STEEL POSTS, SPECIAL	EACH	12	10	2	
X6430210	REMOVE AND REINSTALL IMPACT ATTENUATORS	EACH	85	20	65	
X7011834	TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	EACH	296	176	120	
X/011836	TRAFFIC CONTROL AND PROTECTION, FREEWAY/EXPRESSWAY, CALL OUT WORK	EACH	3/5	1/5	100	100
X8030110	LOCATING UNDERGROUND CABLE, SPECIAL	EACH	7	5	2	
Z0029655	HIGH TENSION CABLE ROAD GUARDPOST	EACH	825			825
Z0029657	HIGH TENSION CABLE SYSTEM MAINTENANCE	EACH	35			35
Z0029658	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - POST	EACH	79	14	65	

FILE NAME =	USER NAME = lewisko	DESIGNED -	REVISED -
pw\idot-pw.bentley.com\PWIDOT\Documents\IDOT Offices\District 8\Projects\0876R03\CAD\DRAWINGS\0876R03-sht-500.dgn		CHECKED -	REVISED -
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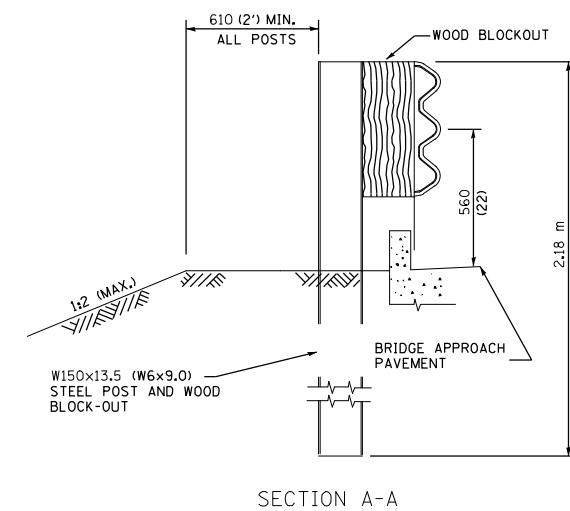
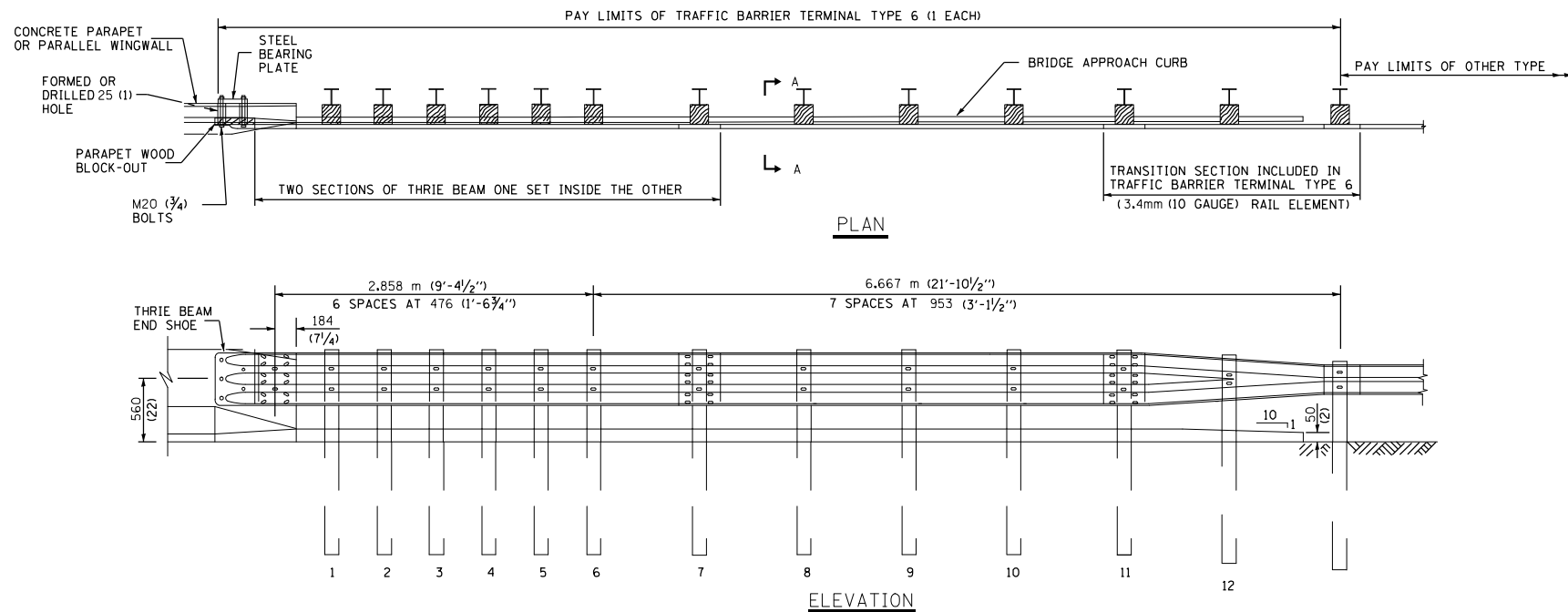
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

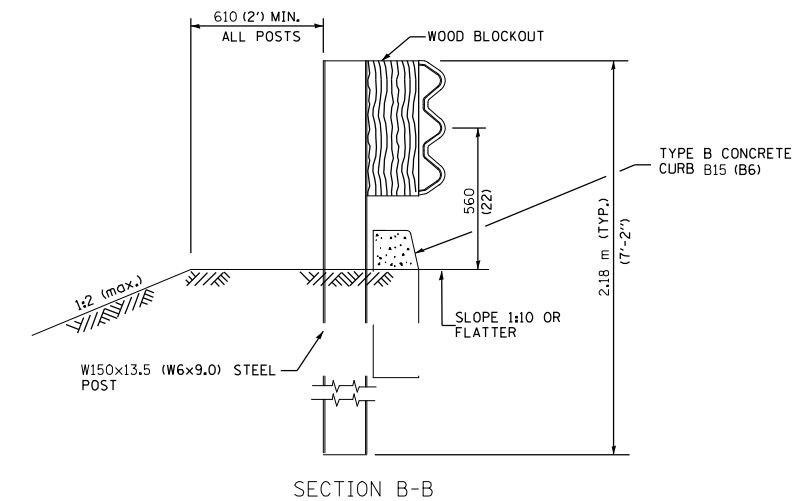
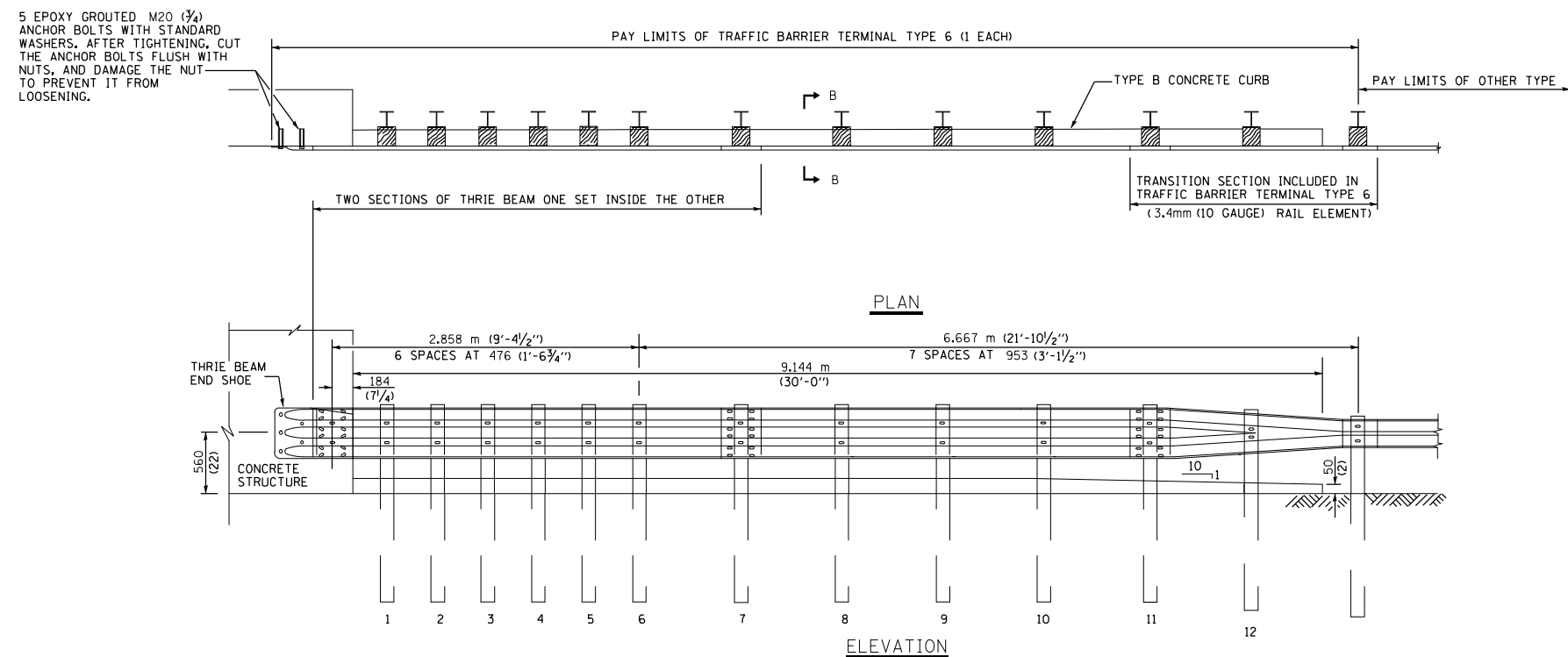
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VARIOUS	DIST 8 GUARDRAIL 2023-1	VARIOUS	12	4
			CONTRACT NO. 76R03	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
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				0021	0021	0021
				NONE	NONE	NONE
Z0029662	REPLACE HIGH TENSION CABLE GUARDPOST FOUNDATION	EACH	75			75
Z0052410	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	84	44	40	
Z0052415	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)	EACH	12	10	2	
Z0052600	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	9	5	4	
Z0052800	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 3A	EACH	7	5	2	
Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	4	2	2	
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	7	5	2	
Z0059660	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - RAIL ELEMENT PLATE	EACH	27	7	20	



OTHER CONCRETE STRUCTURE

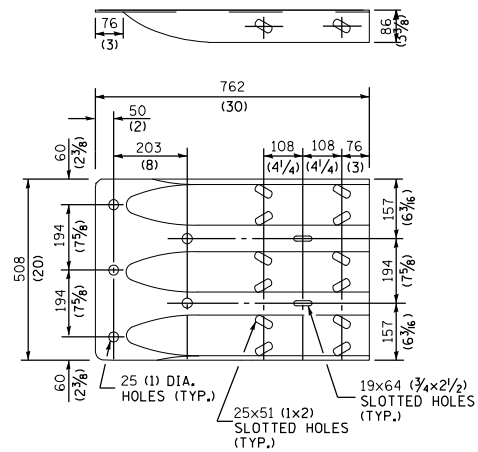


GENERAL NOTES

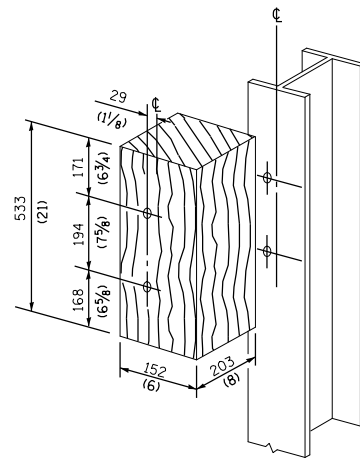
- THRIE BEAM RAIL SHALL BE BOLTED TO BLOCK-OUT AT ALL POSTS.
- ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
- ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.

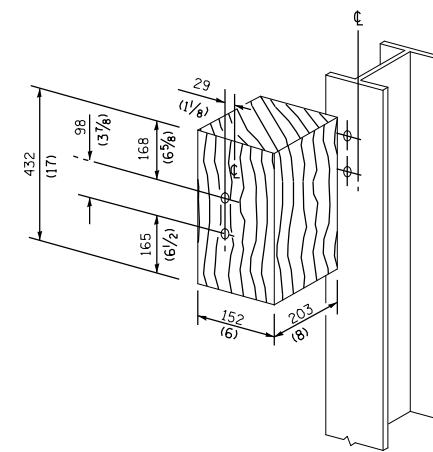
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Default		DATE -	REVISED -			CONTRACT NO. 76R03			ILLINOIS FED. AID PROJECT	



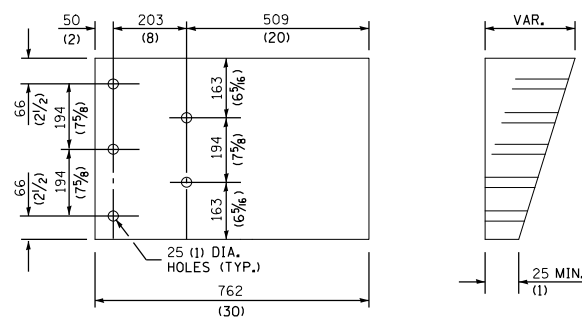
THRIE BEAM END SHOE DETAIL



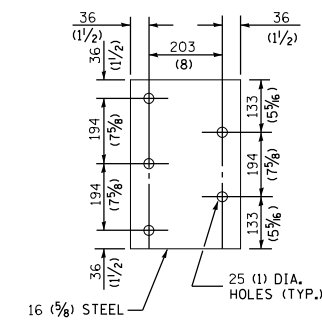
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



PARAPET WOOD BLOCK-OUT DETAIL

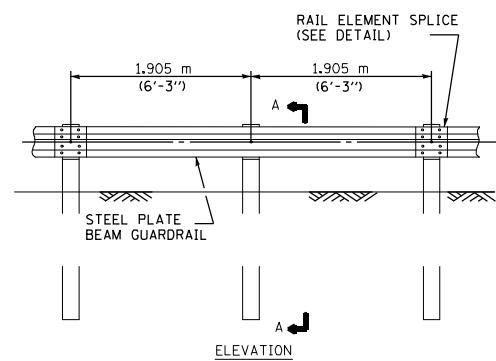


PARAPET STEEL BEARING PLATE DETAIL

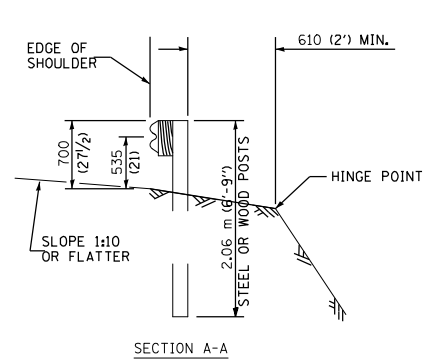
(5 EACH INDIVIDUAL 125x125x16 (5x5x5/8) STEEL PLATES WITH CENTERED 25 (1) HOLES MAY BE SUBSTITUTED FOR THE PLATE SHOWN.)

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.

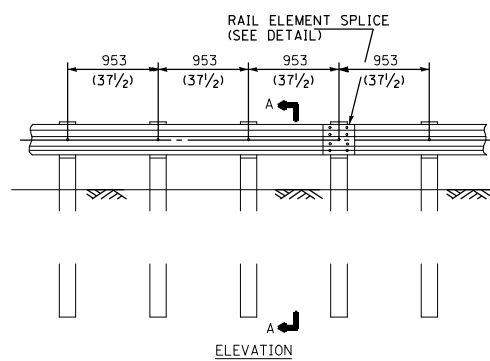
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Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -					CONTRACT NO. 76R03			ILLINOIS FED. AID PROJECT	
	PLOT DATE = 3/15/2022							SCALE: NONE	SHEET 2	OF 2 SHEETS	STA.	TO STA.



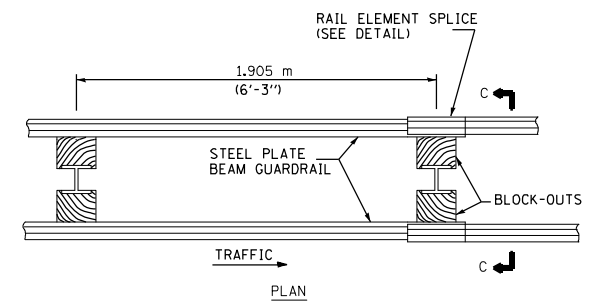
TYPE A
1.905 m (6'-3") TYPICAL POST SPACING



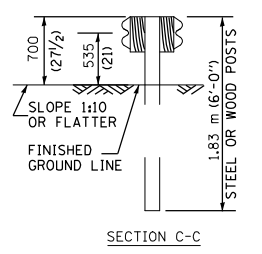
SECTION A-A



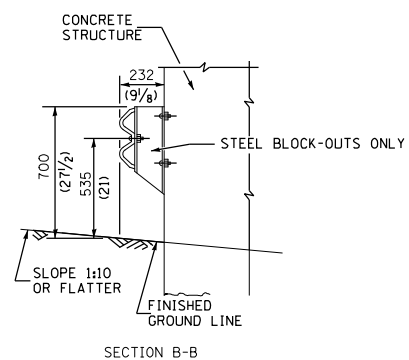
TYPE B
953 (37 1/2) CLOSED POST SPACING



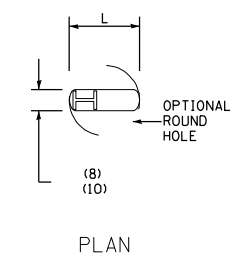
TYPE D
DOUBLE STEEL PLATE BEAM GUARDRAIL
1.905 m (6'-3") TYPICAL POST SPACING



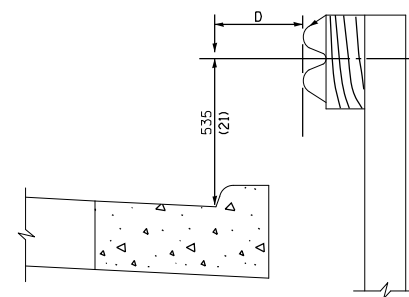
SECTION C-C



SECTION B-B

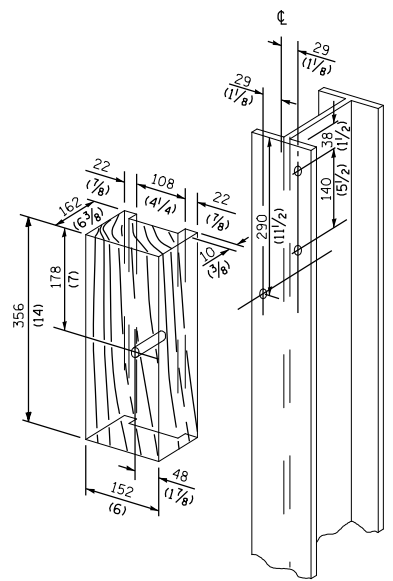


PLAN

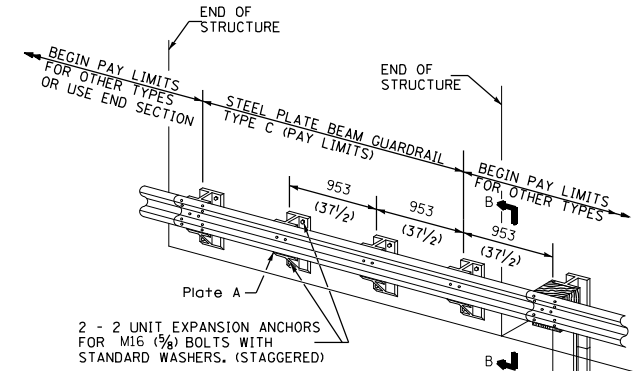


Note:
IF IT IS NECESSARY FOR D TO BE MORE THAN 300 (12) AND LESS THAN 3.0 m (10'-0") TYPE M-5 (M-2) CURB AND GUTTER (STD. 606001) SHALL BE USED IN FRONT OF AND IN ADVANCE OF THE GUARDRAIL.

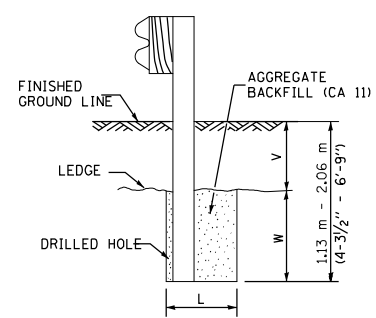
GUARDRAIL PLACED BEHIND CURB
(D = 0 DESIRABLE TO 300 (12) MAXIMUM)



WOOD BLOCK-OUT AND STEEL POST DETAILS



TYPE C
953 (37 1/2) BLOCK-OUT SPACING



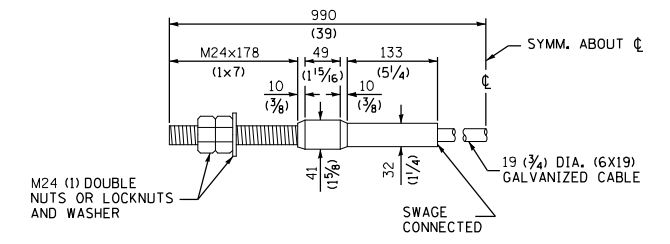
ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

GENERAL NOTES

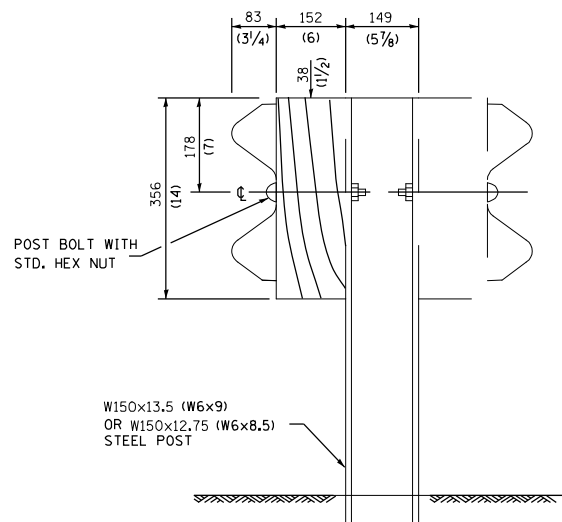
ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
THE EXISTING STEEL POSTS MAY BE DRILLED TO MATCH THE BOLT PATTERN SHOWN HEREIN FOR THE WOOD BLOCK-OUT, OR A NEW STEEL POST SHALL BE PROVIDED.

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)

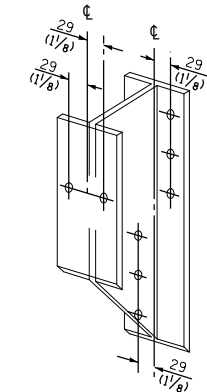


CABLE ASSEMBLY
(18,100 kg (40,000 LBS.) MIN. BREAKING STRENGTH)
TIGHTEN TO TAUT TENSION.

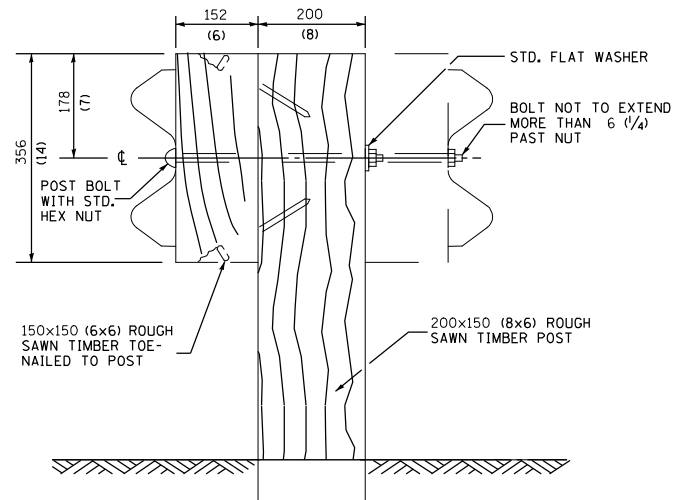
THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.



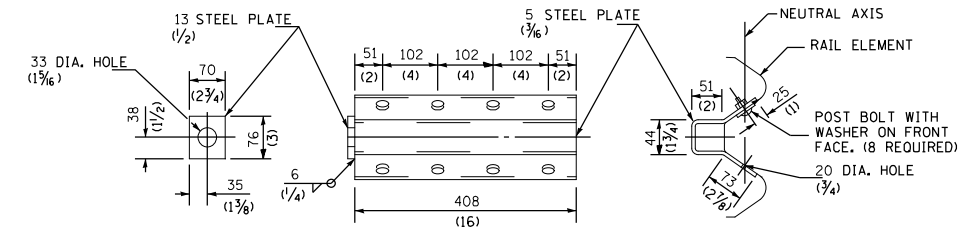
STEEL POST CONSTRUCTION



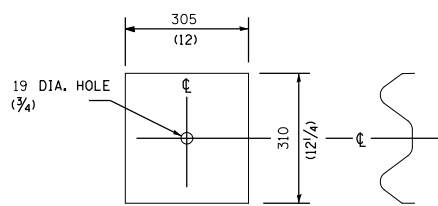
STEEL BLOCK-OUT DETAIL



WOOD POST CONSTRUCTION

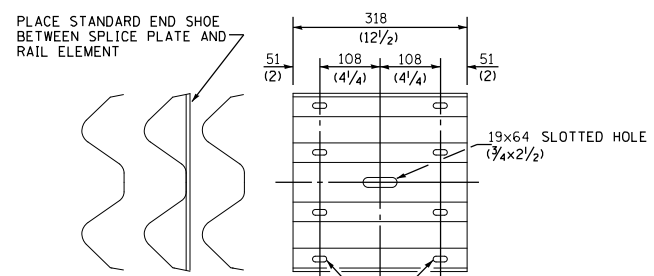


ANCHOR PLATE T DETAILS

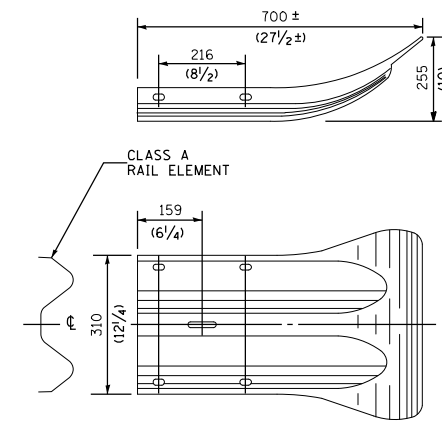


NOTE
PLATE A SHALL BE PLACED BETWEEN RAIL ELEMENT AND BLOCK-OUT AT NON-SPLICE MOUNTING POINTS ONLY WHEN STEEL BLOCK-OUTS ARE USED.

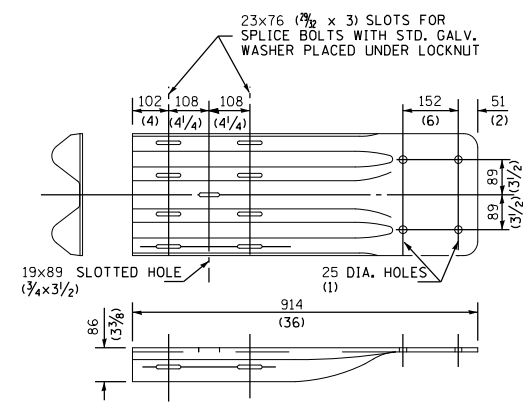
PLATE A



SPLICE PLATE

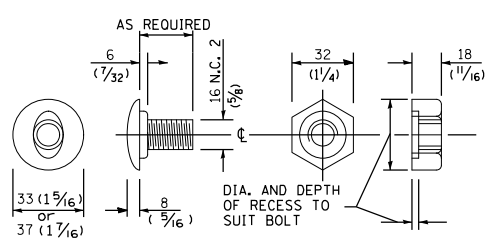


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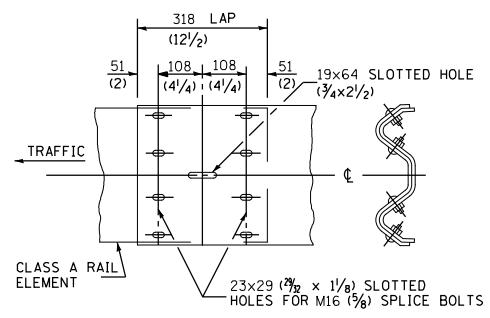


NOTE
WHEN END SHOE IS ATTACHED TO A BRIDGE PARAPET WHICH HAS AN EXPANSION JOINT, THE BOLTS SHALL BE PROVIDED WITH A LOCKNUT OR DOUBLE NUT AND SHALL BE TIGHTENED ONLY TO A POINT THAT WILL ALLOW GUARDRAIL MOVEMENT.
THE STANDARD END SHOE SHALL BE ATTACHED TO THE CONCRETE WITH PRE-DRILLED OR SELF-DRILLING 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.

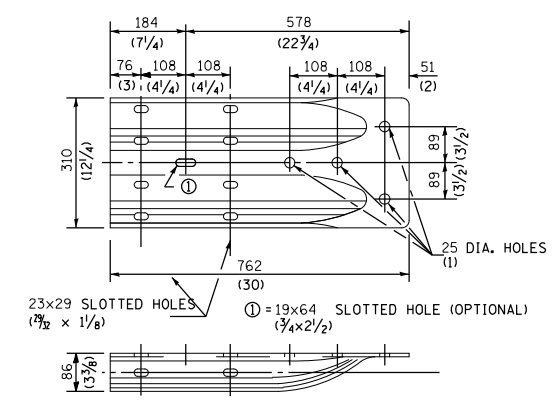
END SHOE



POST OR SPLICE BOLT & NUT



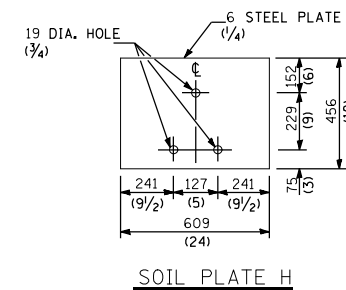
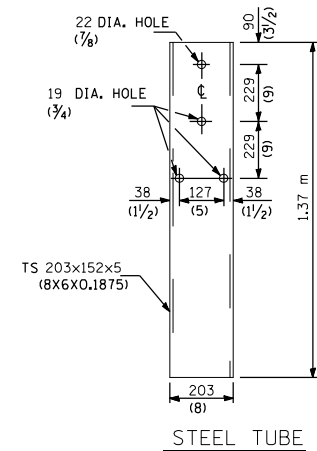
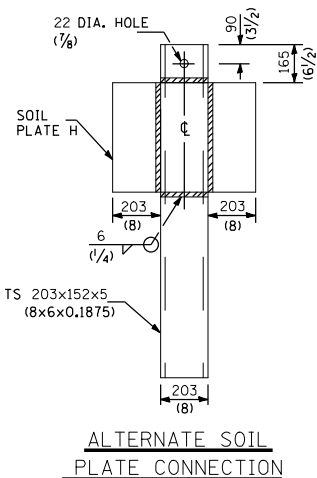
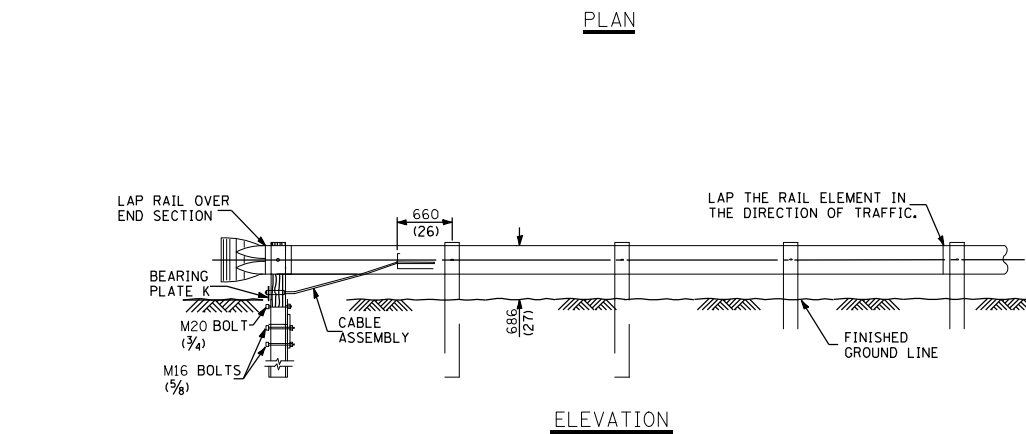
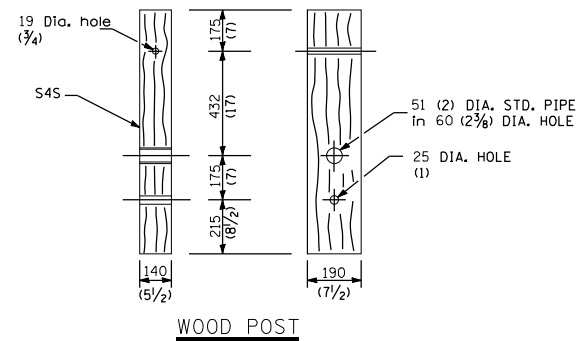
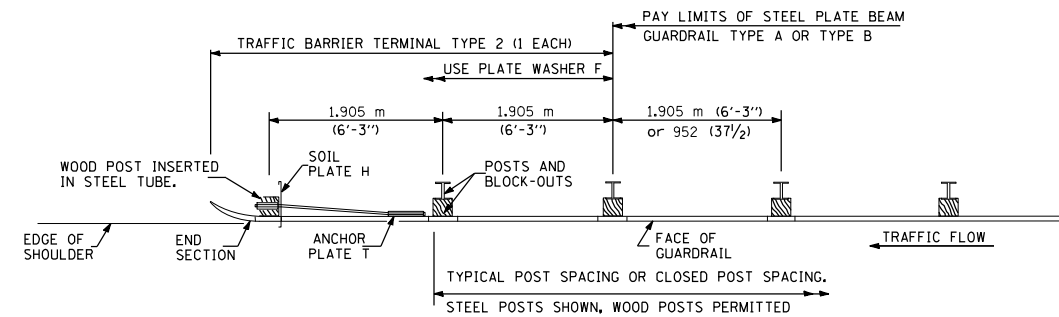
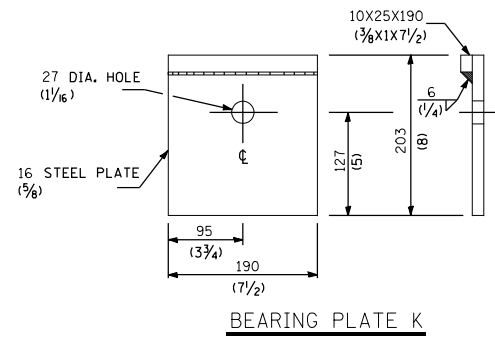
RAIL ELEMENT SPLICE



ALTERNATE END SHOE

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.

FILE NAME =	USER NAME = lewisko	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL PLATE BEAM GUARDRAIL			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
p:\dot-pw.bentley.com\PIWIDOT\Documents\DOT Offices\District 8\Projects\0876R03\CAD\DRAWINGS\0876R03-sht-pln.dgn	DOT OFFICES\DISTRICT 8\PROJECTS\0876R03\CAD\DRAWINGS\0876R03-sht-pln.dgn	CHECKED -	REVISED -		VARIOUS	DIST 8 GUARDRAIL 2023-1	VARIOUS	12	11			
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -		SCALE: NONE SHEET 2 OF 2 SHEETS STA. TO STA.			CONTRACT NO. 76R03				
	PLOT DATE = 3/15/2022							ILLINOIS FED. AID PROJECT				



GENERAL NOTES

USE PLATE WASHER F AT ALL POSTS.

THE BEARING PLATE K SHALL BE HELD IN POSITION BY (2) TWO EIGHT PENNY NAILS DRIVEN INTO THE POST AND BENT OVER THE TOP OF THE PLATE.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.

FILE NAME =	USER NAME = lewisko	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC BARRIER TERMINAL TYPE 2			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\idot-pw.bentley.com\PWIDOT\Documents\IDOT Offices\District 8\Projects\0876R03\CAD\Drawings\0876R03-sht-plan.dgn		CHECKED -	REVISED -					VARIOUS	DIST 8 GUARDRAIL 2023-1	VARIOUS	12	12
Default	PLOT SCALE = 100.0000' / in.	DATE -	REVISED -					CONTRACT NO. 76R03			ILLINOIS FED. AID PROJECT	
	PLOT DATE = 3/15/2022							SCALE: NONE	SHEET 1	OF 1 SHEETS	STA.	TO STA.