06-15-2018 LETTING ITEM 138

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
SECTION D6 CABLE/GUARDRAIL 2017-4
CABLE & GUARDRAIL REPAIR
VARIOUS COUNTIES IN D6
C-96-060-17

INDEX OF SHEETS

0

0

0

0

1 COVER SHEET

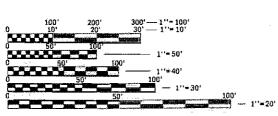
GENERAL NOTES

3-5 SUMMARY OF QUANTITIES

FOR INDEX OF SHEETS, SEE SHEET NO. 2

6-16 PRE-MGS HIGHWAY STANDARDS 17 CABLE GUARD MARKER DETAIL

FOR LIST OF STANDARDS, SEE SHEET 2

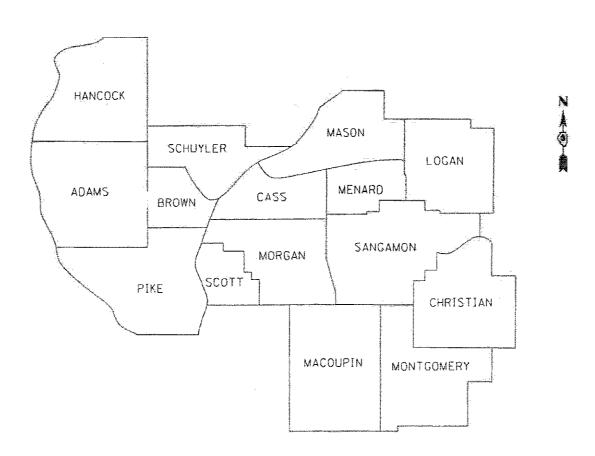


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: JAY EDWARDS 217–785–0597 TEAM MANAGER: JONATHAN COX 217–782–1378

CONTRACT NO. 72J96



FA SECTION COUNTY TOTAL SHEETS NO TOTAL SHEETS

D-96-060-1



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLIRMHITED

26

REGIONAL ENGINEER

ENGINEER OF DESIGNAND SWIRDINGER

DIRECTOR OF HIGHWAYS PROJECT MIPLEMENTATIONS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS

STANDARD NO.	TITLE
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-08	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
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
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
	OFF-ROAD OPERATIONS. MULTILANE, MORE THAN 15' (4.5 M) AWAY
	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-11	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH
	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS > 45 MPH TO 55 MPH
	LANE CLOSURE. MULTILANE. FOR SPEEDS > 45 MPH TO 55 MPH
	LANE CLOSURE. MULTILANE. INTERMITTENT OR MOVING OPERATION. FOR SPEEDS 2 45 MPH
	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS < 40 MPH
701428-01	TRAFFIC CONTROL SET UP AND REMOVAL FREEWAY/EXPRESSWAY
701456-04	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-08	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-09	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
701901-07	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
630101-10	STRONG POST GUARDRAIL ATTACHED TO CULVERT
630111	WEAK POST GUARDRAIL ATTACHED TO CULVERT

GENERAL NOTES

ALL DISTURBED AREAS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE GRADED AND SEEDED WITH CLASS 2 ROADSIDE MIXTURE AND FERTILIZED AS STATED IN SECTION 250 OF THE STANDARD SPECIFICATIONS. COST SHALL BE CONSIDERED INCLUDED IN THE UNIT COST OF THE WORK BEING PERFORMED.

REMOVAL OF DAMAGED IMPACT ATTENUATORS SHALL BE INCLUDED IN THE COST OF THE IMPACT ATTENUATOR BEING INSTALLED.

REMOVAL AND DISPOSAL OF DAMAGED FENCE SHALL BE INCLUDED IN THE COST OF THE FENCE BEING INSTALLED.

DISTRICT SIX

EXAMINED Feb. 5th 20 18

OPERATIONS ENGINEER ()

EXAMINED February 5th 20 18
Susan O Chaham
PROJECT IMPLEMENTATION ENGINEER

EXAMINED February 15 20 18

PROGRAM DEVELOPMENT ENGINEER

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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SHEET 1 OF 1 SHEETS STA.

SECTION COUNTY TOTAL SHEETS NO.

VARIOUS 17 2
CONTRACT NO. 72J96

**D6 CABLE/GUANDRAIL 2017-4

				6-00664-0700 VARIOUS GR 100% STATE	6-00664-9990 MCHD 100% MCHD	0-01857-6001 MED CBL BAR 100% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ROADWAY 0021 RURAL	ROADWAY 0021 RURAL	ROADWAY 0021 RURAL
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	550	150	400	
63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	450	150	300	
63000030	STRONG POST GUARDRAIL ATTACHED TO CULVERT	FOOT	425	125	300	
x6300155	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURE (SPECIAL)	FOOT	425	125	300	
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	10	4	6	
63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	10	4	6	
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	10	4	6	
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	44	14	30	
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	8	2	6	
		The state of the s				·
63200310	GUARDRAIL REMOVAL	FOOT	850	400	450	
64300450	IMPACT ATTENUATORS (NON-REDIRECTIVE), TEST LEVEL 3	EACH	5	2	3	
64401300	HIGH TENSION CABLE MEDIAN BARRIER TERMINALS	EACH	5		3	2
66400105	CHAIN LINK FENCE, 4'	FOOT	550	200	350	
66500105	WOVEN WIRE FENCE, 4'	FOOT	450	100	350	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

		SUMMAR	Y OF QUANTITIES	
SCALE:	SHEET 1	OF 3	SHEETS STA.	TO 5

CODE NO. 7100100 MC	· FTEM	UNIT	TOTAL	100% STATE ROADWAY	100% MCHD ROADWAY	100% STATE ROADWAY
NO.	TEM	LIAUT	TOTAL			ROADWAY
NO.	TEM	1 I I I I	TOTAL			
	TEM	i limat		0021	0021	0021
7100100 MC		UNII	QUANTITY	RURAL	RURAL	RURAL
/100100 MC		-				
	OBILIZATION	LSUM	1	0.3	0.6	0.1
0100420 TB	RAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4	1	3	<u> </u>
7100420 110	WE'RE CONTROL AND I ROLLETING STANDARD 701-711	EAGI				
2501000 TE	erminal Marker – Direct applied	EACH	170	20	150	
8200005 GL	UARDRAIL REFLECTORS, TYPE A	EACH	375	125	250	
0325231 CA	ABLE GUARD MARKER	EACH	500		300	200
0325899 RE	EPAIR HIGH TENSION CABLE (GIBRALTAR)	F00T	750		350	400
					_	
0325900 RE	EPAIR HIGH TENSION BARRIER TERMINAL (GIBRALTAR)	ЕАСН	10		5	5
0325901 RE	EPAIR POSTS (GIBRALTAR)	EACH	250		150	100
0325902 RE	EMOVE AND REPLACE POSTS (GIBRALTAR)	EACH	150		50	100
0327490 RE	REPAIR HIGH TENSION CABLE (NU-CABLE)	FOOT	350		250	100
(0327491 RE	REPAIR POSTS (NU-CABLE)	EACH	75		25	50
					-	P.0
0327492 RI	REMOVE AND REPLACE POSTS (NU-CABLE)	EACH	75		25	50
(0327493 RI	REPAIR HIGH, TENSION BARRIER TERMINAL (NU-CABLE)	EACH	9		5	4
(6431220 RI	REMOVE AND REPLACE IMPACT ATTENUATOR SAND MODULE	EACH	45	10	35	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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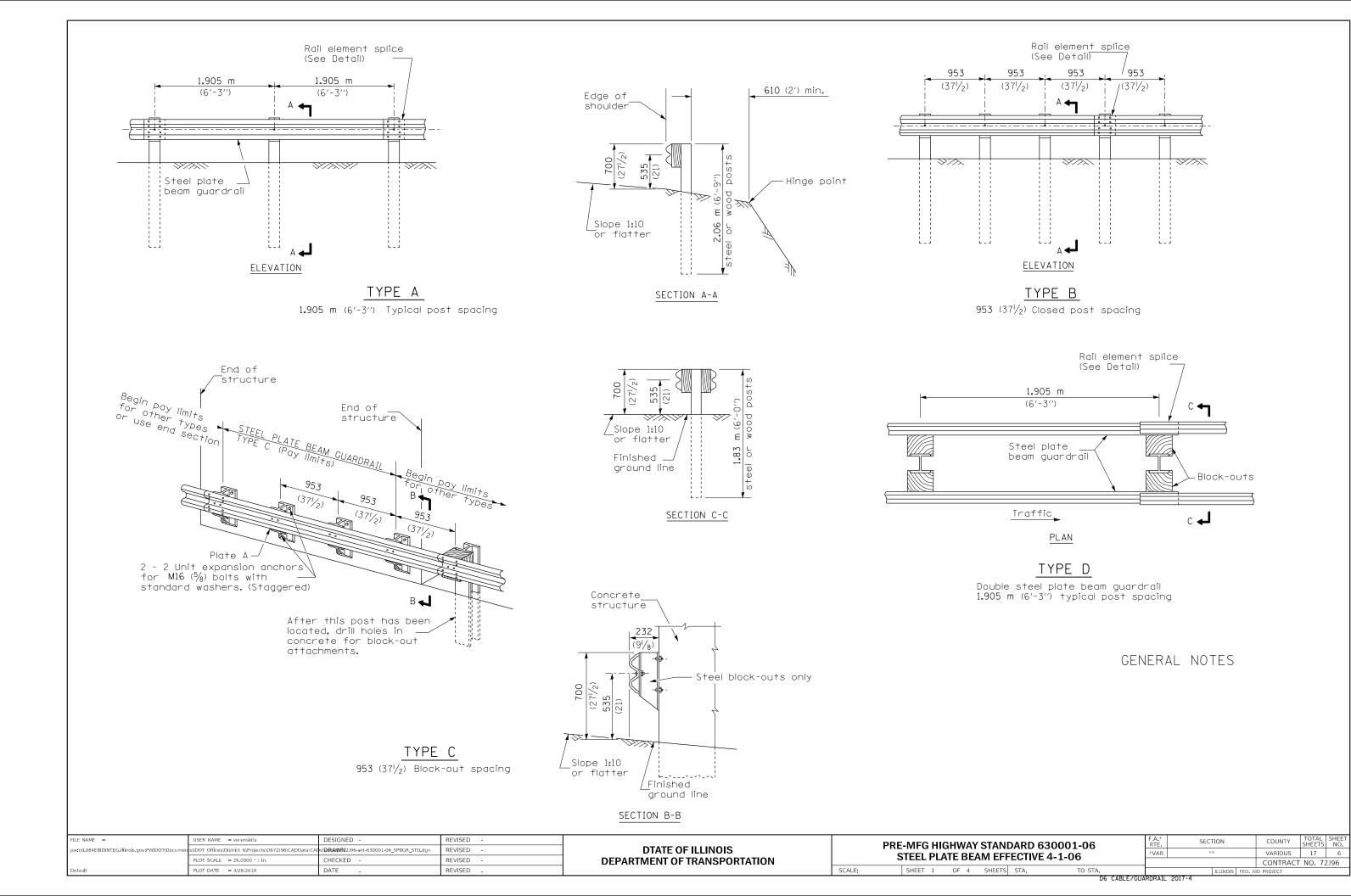
6-00664-0700 6-00664-9990 0-01857-6001

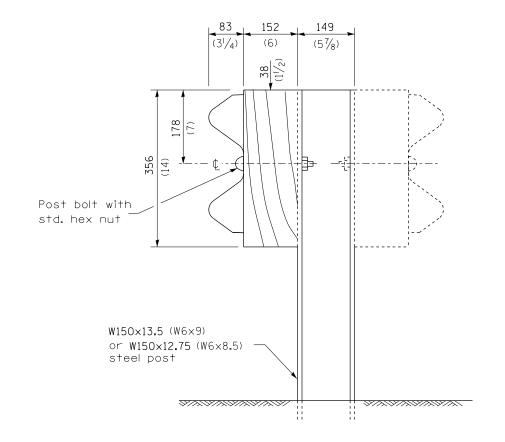
**D6 CABLE/GUARDRAIL 2017-4

				6-00664-0700 VARIOUS GR	6-00664-9990 MCHD	0-01857-6001 MED CBL BAR
			T	100% STATE	100% MCHD	100% STATE
CODE			TOTAL	ROADWAY 0021	ROADWAY 0021	ROADWAY 0021
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL	RURAL
X7011834	TRAFFIC CONTROL AND PROTECTION, CALL OUT WORK	EACH	40	10	30	
X7011836	TRAFFIC CONTROL AND PROTECTION, FREEWAY/EXPRESSWAY, CALL OUT WORK	EACH	44	10	30	4
Z0008759	CALL OUT	EACH	28	10	15	3
Z0008760	EMERGENCY WORK CALL OUT	EACH	43	10	30	3
Z0052000	REPAIR STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	600	300	300	
Z0052410	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	44	14	30	1770
						100000000000000000000000000000000000000
Z0052415	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (FLARED)	EACH	4	2	2	The state of the s
Z0052600	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4	2	2	
Z005,3000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	6	2	4	

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STEEL POST CONSTRUCTION

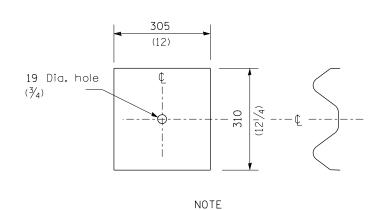
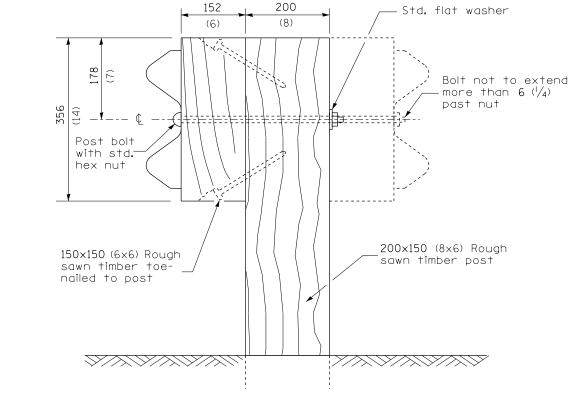
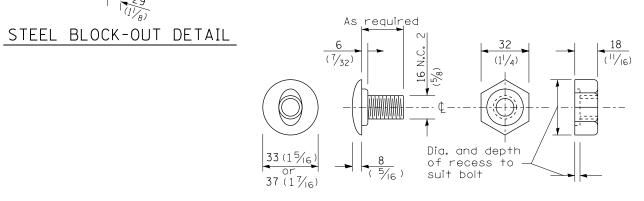


Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



WOOD POST CONSTRUCTION



POST OR SPLICE BOLT & NUT

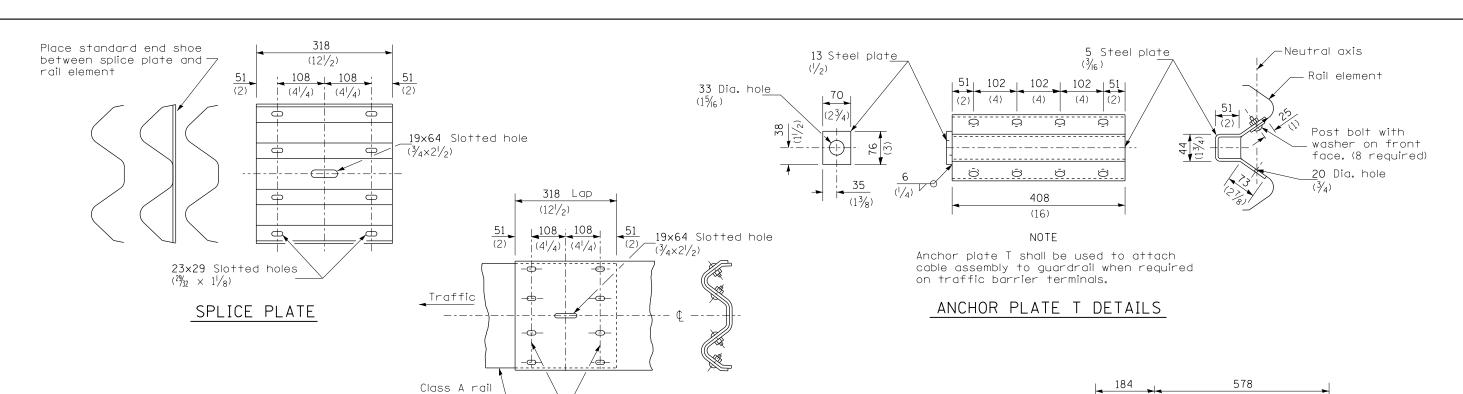
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STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

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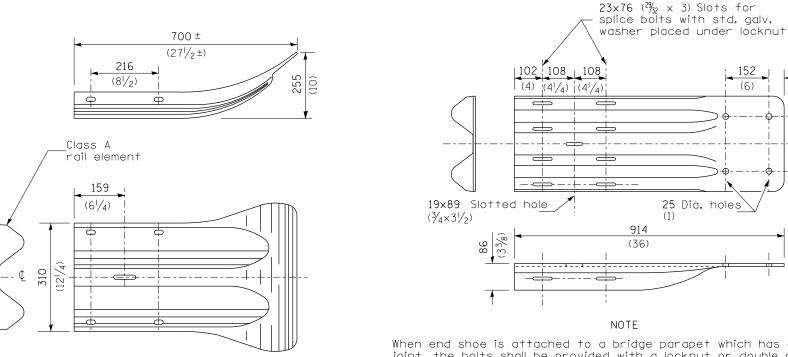
PRE-MFG HIGHWAY STAN	DARD 6300	001-06	F.A.* RTE	SECTION	COUNTY	TOTAL SHEETS	SHEI
STEEL PLATE BEAM EFFECTIVE 4-1-06		*VAR	**	VARIOUS	17	7	
SILLET LATE BLANTE	I LOTIVE 4-3	1-00			CONTRACT	T NO. 72	2J96
Leneer 5 Oc 4 end	TS STA	TO STA		WALKINGTON SECOND	ID DOOLEGE		

D6 CABLE/GUARDRAIL 2017-3



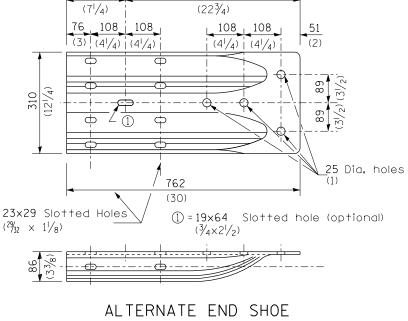
 23×29 ($^{29}\!\!/_{32}$ \times $1^{1}\!/_{8}$) Slotted Tholes for M16 ($^{5}\!\!/_{8}$) splice bolts

RAIL ELEMENT SPLICE



element

END SECTION



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.

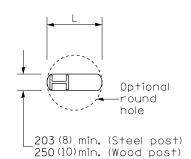
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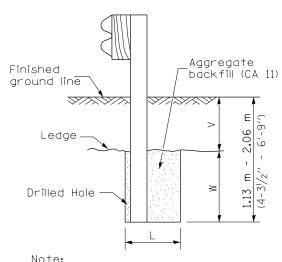
Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE

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	PLOT SCALE = 26.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	STEEL FEATE DEAW EITECHVE 4-1-00				CONTRACT	NO. 72J96
Default	PLOT DATE = 3/28/2018	DATE -	REVISED -		SCALE:	SHEET 3 OF 4 SHEETS STA. TO STA.		ILLINOIS FED. A	ID PROJECT	
					D6 CABLE/GUARDRAIL 2017-4					



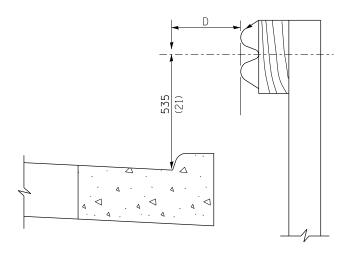
PLAN



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

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED



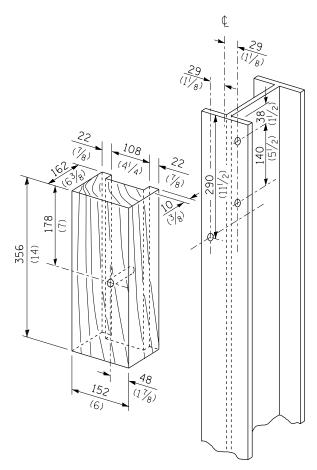
Note:

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.

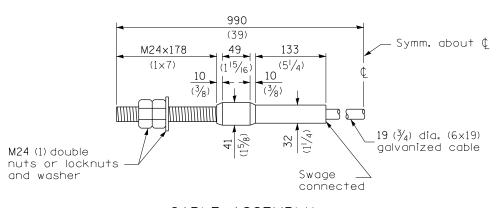
GUARDRAIL PLACED BEHIND CURB

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

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



WOOD BLOCK-OUT AND STEEL POST DETAILS



CABLE ASSEMBLY

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

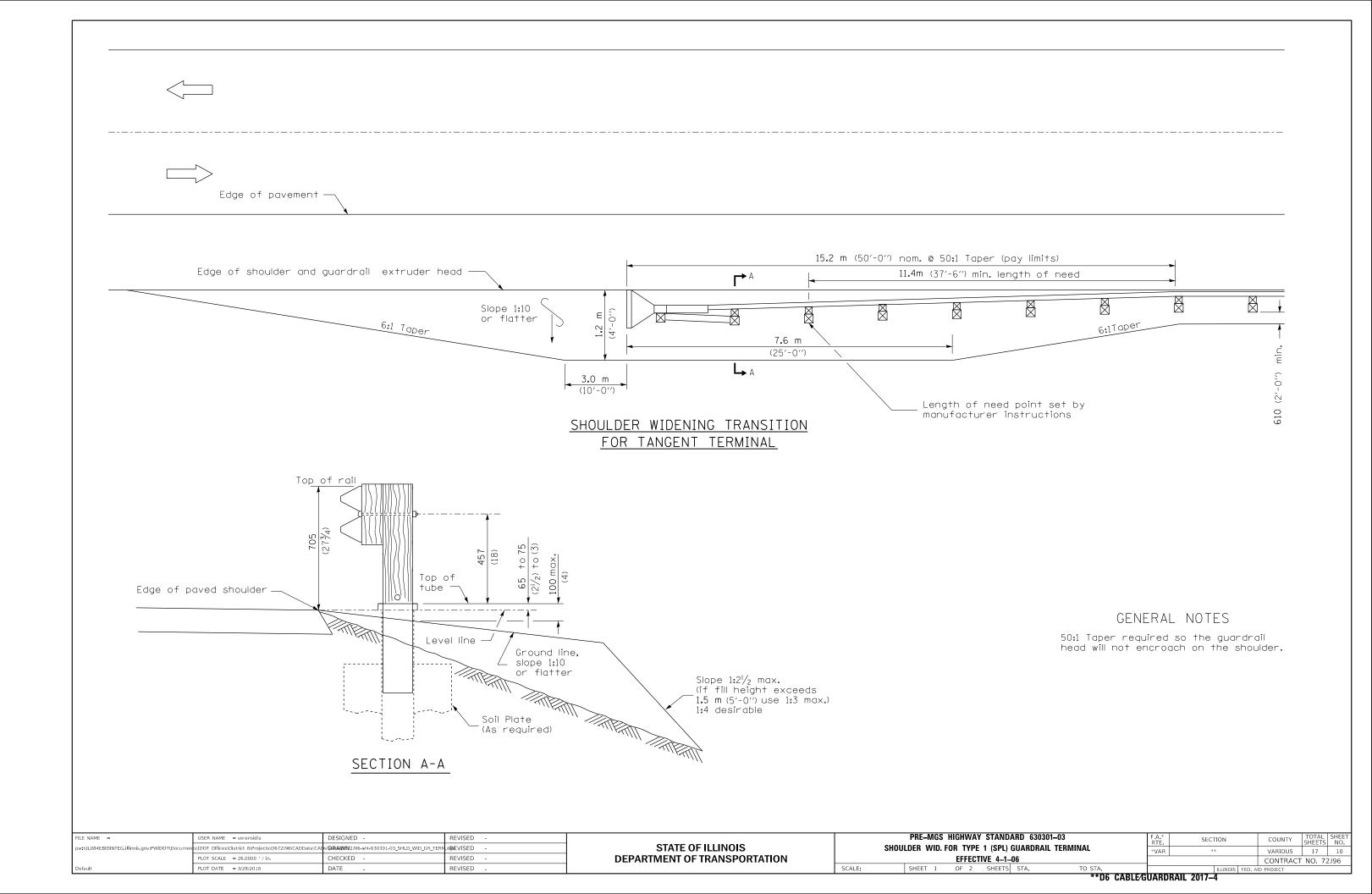
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ı	Default	PLOT DATE = 3/28/2018	DATE -	REVISED -	l

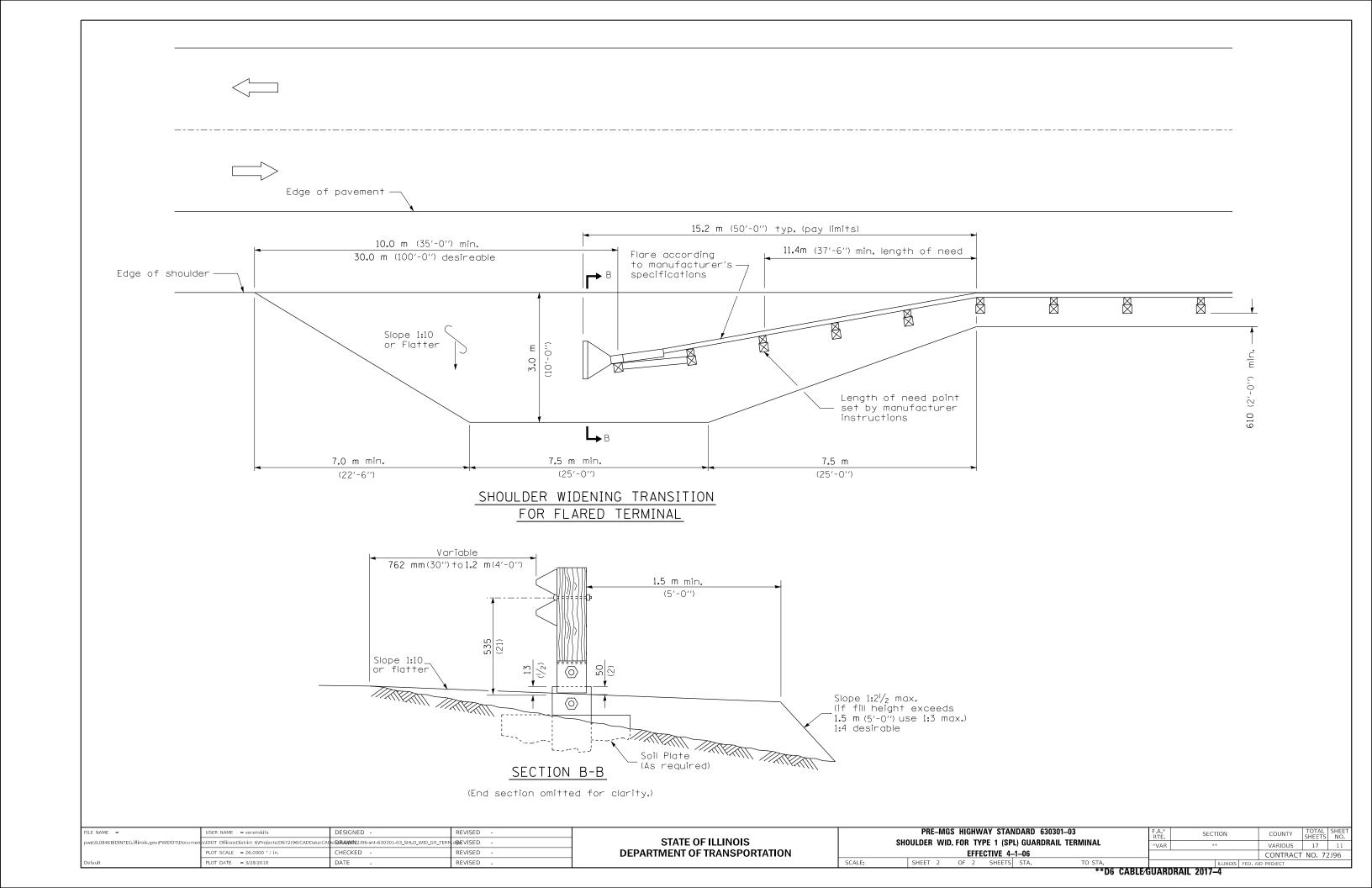
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

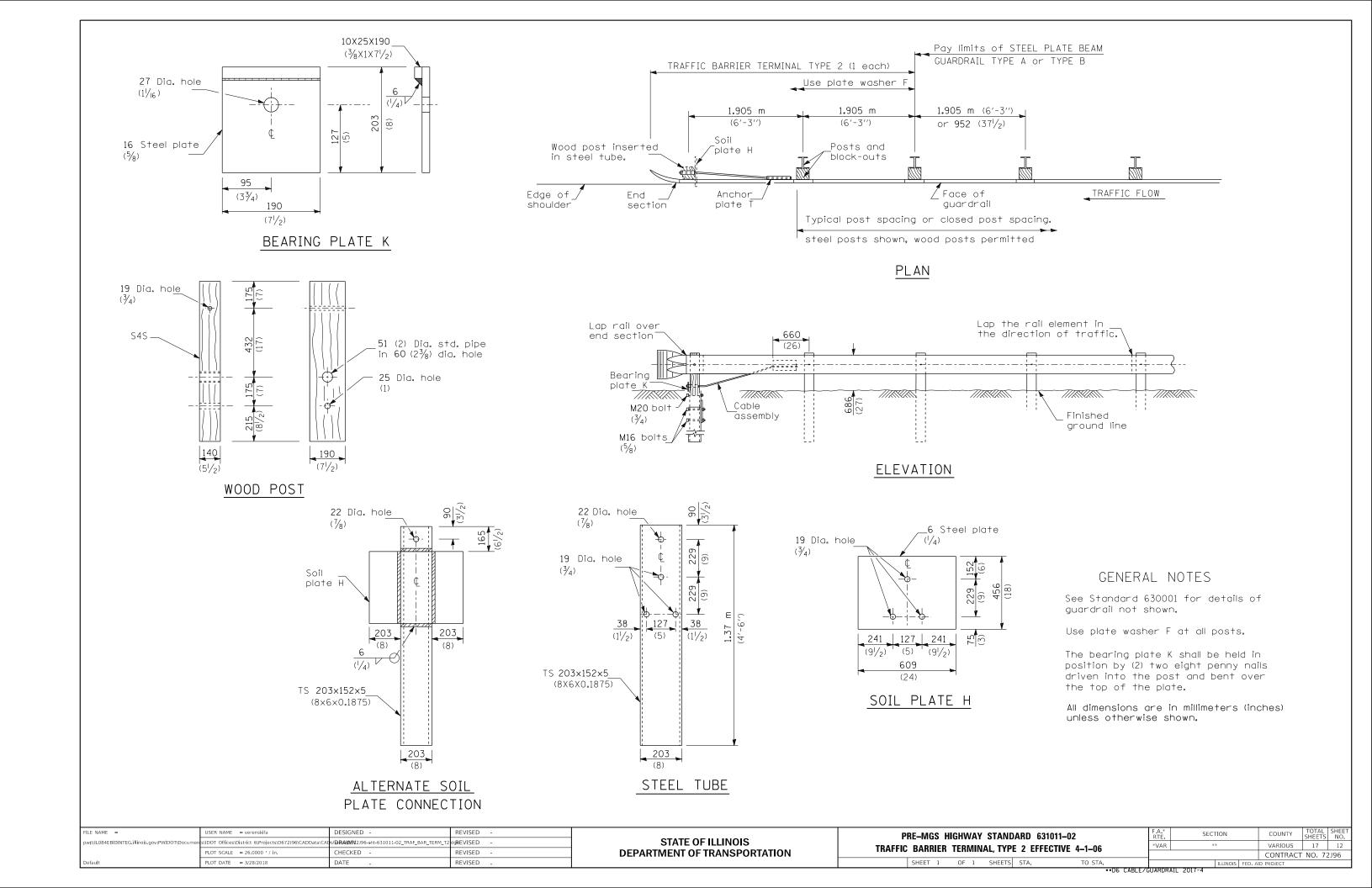
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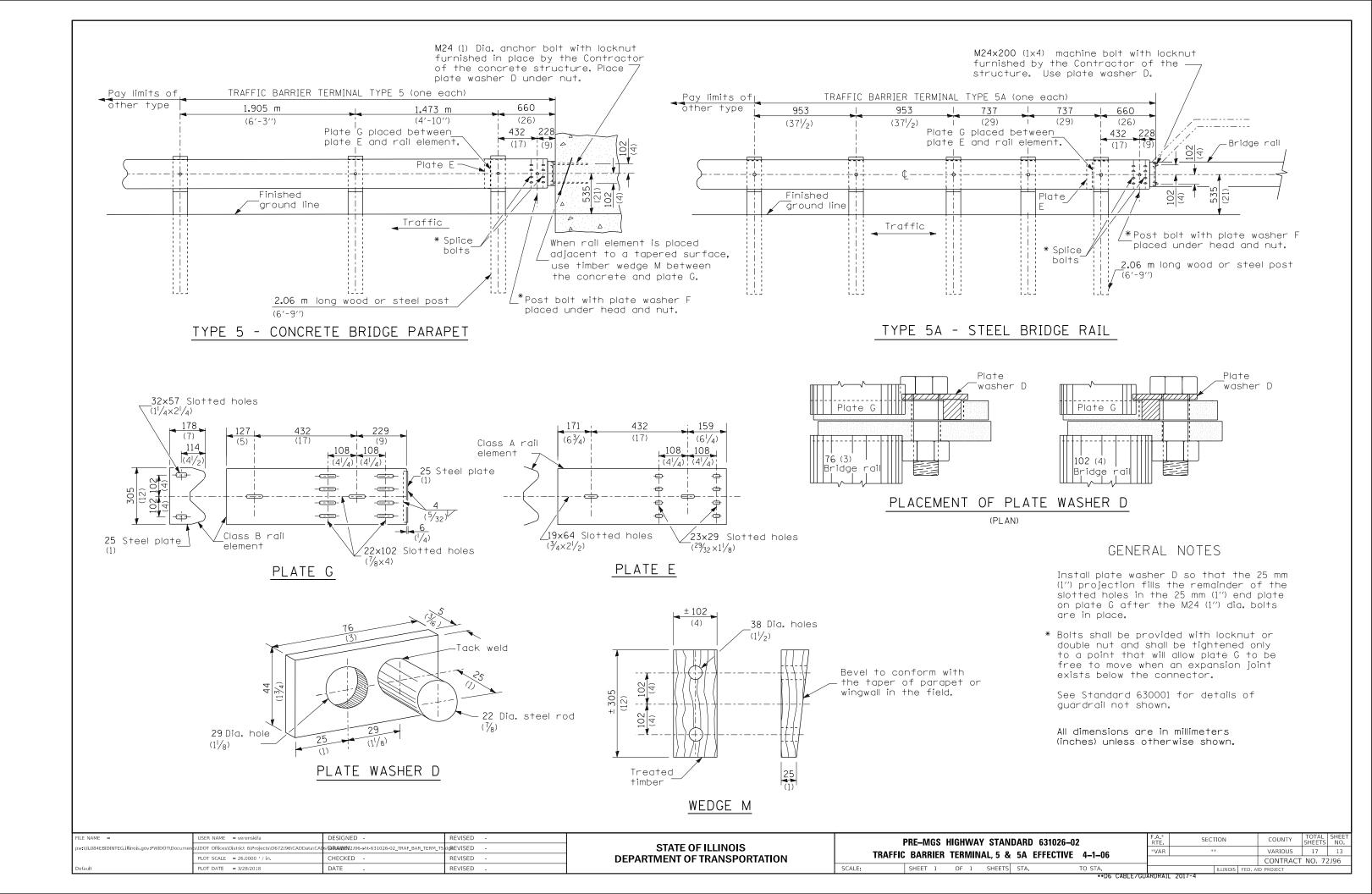
PRE-MFG HIGHWAY STANDARD 630001-06 STEEL PLATE BEAM EFFECTIVE 4-1-06								
	SHEET	4	OF	4	SHEETS	STA.	TO STA.	

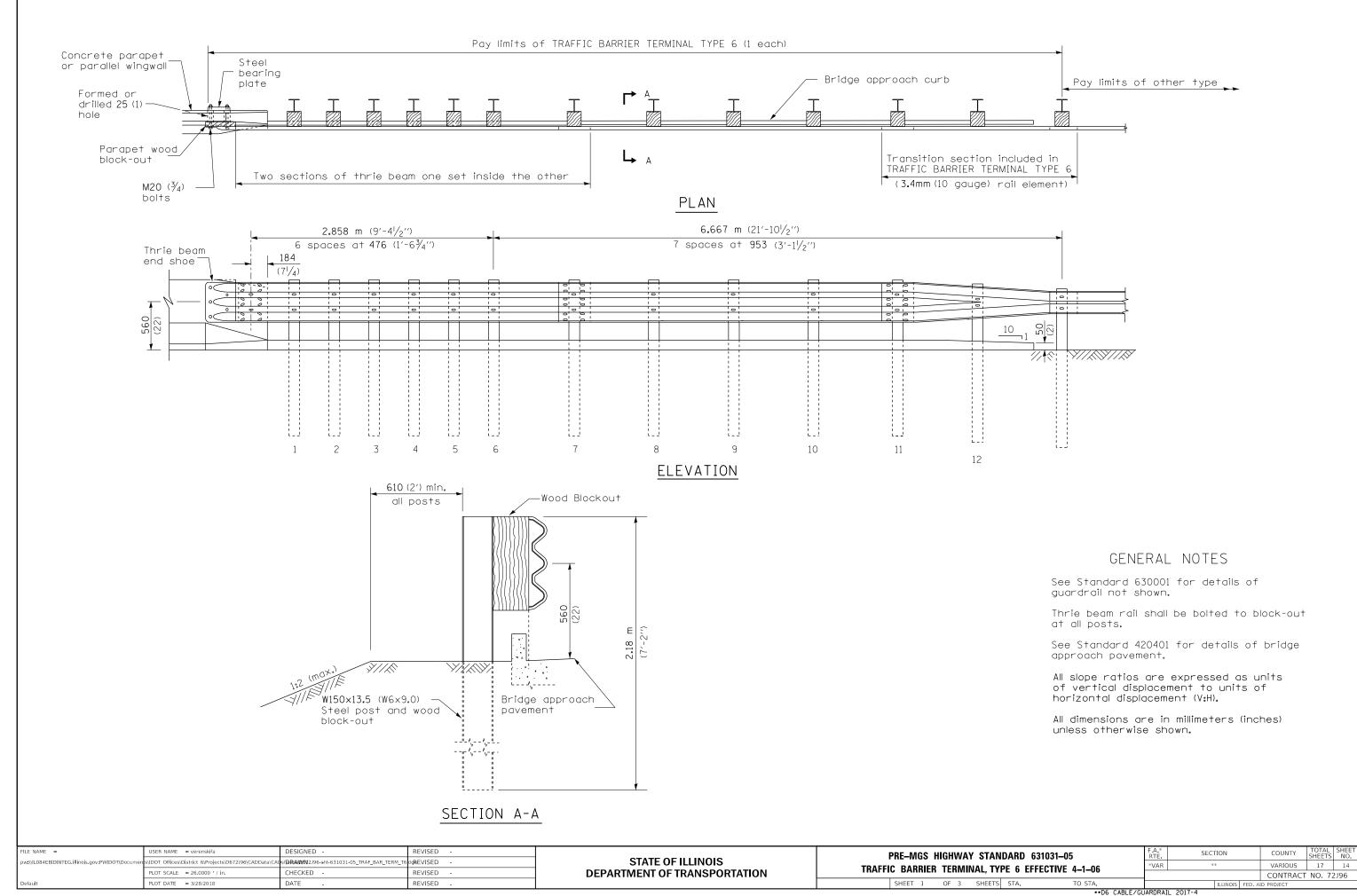
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*VAR	**		VARIOUS	17	9
•			CONTRACT	NO. 72	2J96

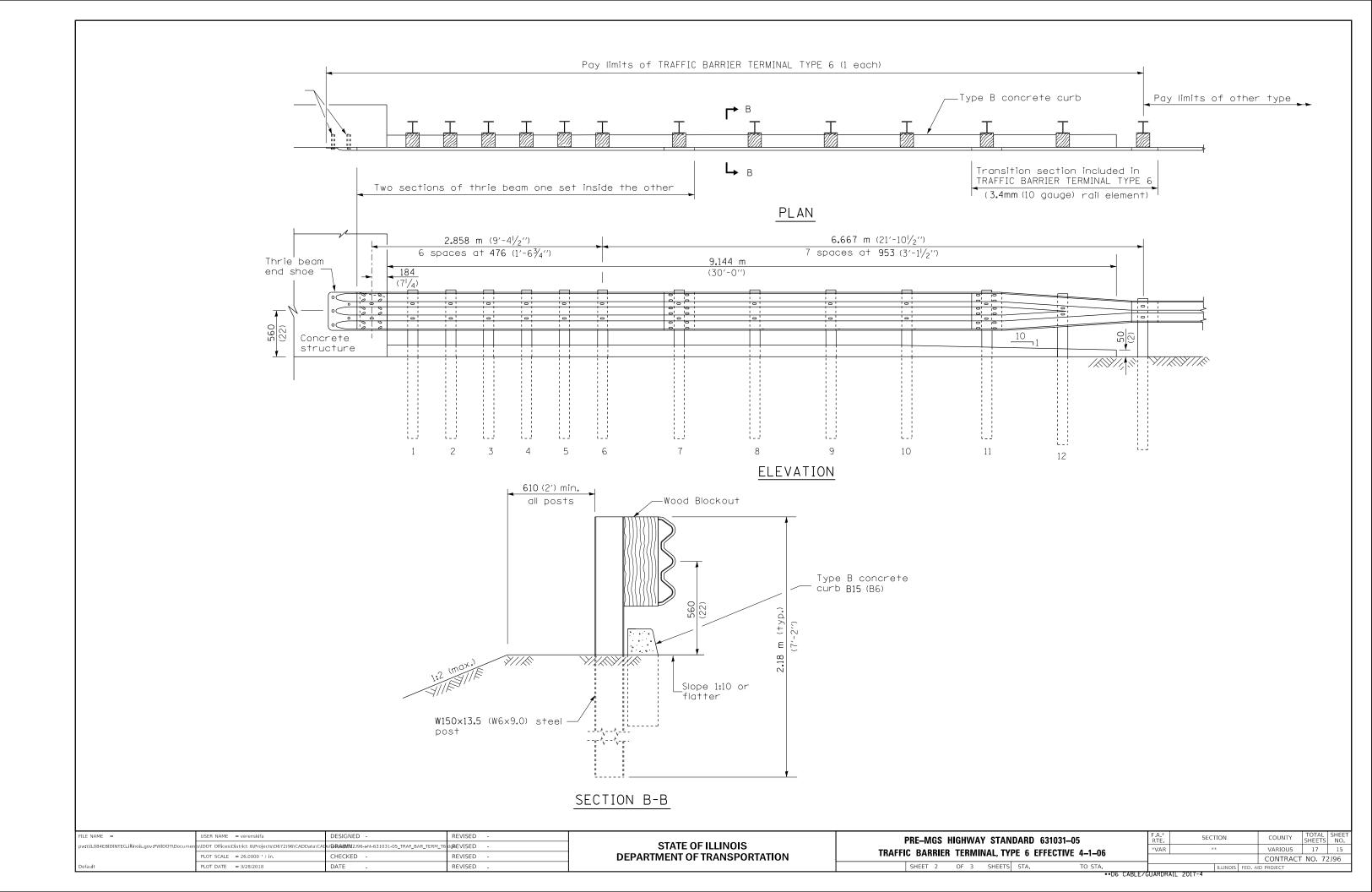


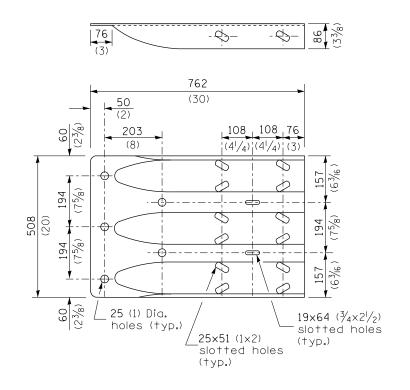




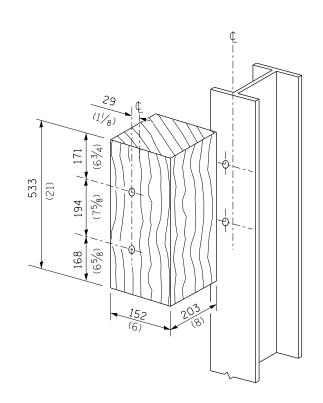




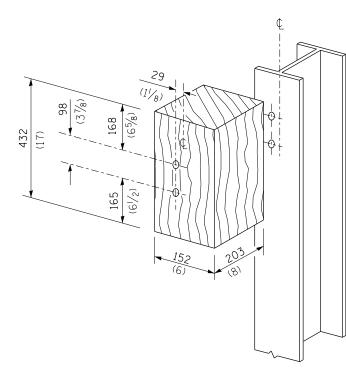




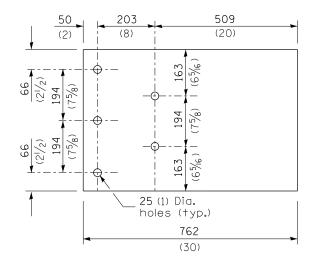
THRIE BEAM END SHOE DETAIL

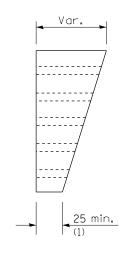


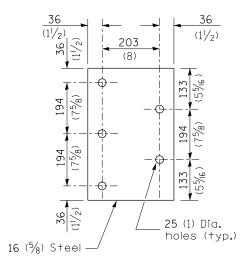
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL







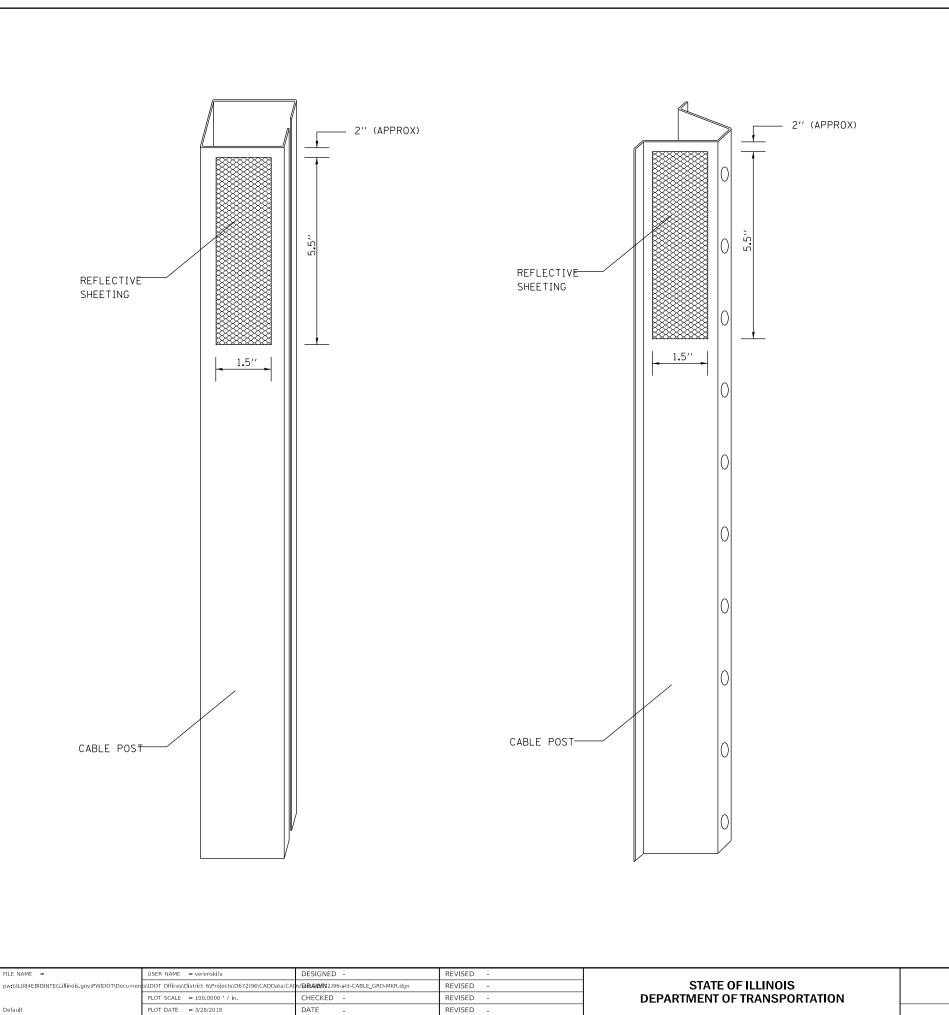
PARAPET WOOD BLOCK-OUT DETAIL

PARAPET STEEL BEARING PLATE DETAIL

(5 each individual $125 \times 125 \times 16$ ($5 \times 5 \times 5\%$) steel plates with centered 25 (1) holes may be substituted for the plate shown.)

FIL	LE NAME =	USER NAME = verenskifa	DESIGNED -	REVISED -		PRE-MGS HIGHWAY STANDARD 631031-05	F.A.*	SECTION	COUNTY TO	TAL SHEET
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		PLOT SCALE = 26.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	INAFFIC DANNIER TENIVITIVAL, TIPE O EFFECTIVE 4-1-00			CONTRACT NO	O. 72J96
De	efault	PLOT DATE = 3/28/2018	DATE -	REVISED -		SHEET 3 OF 3 SHEETS STA. TO STA.		ILLINOIS FED. AI	D PROJECT	

••D6 CABLE/GUARDRAIL 2017-4



NOTES:

MATERIAL: THE MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 1090 AND 1091 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION REQUIREMENTS: THE REFLECTIVE SHEETING SHALL
BE INSTALLED DIRECTLY ON THE CABLE POSTS. THE REFLECTIVE
SHEETING SHALL BE INSTALLED AS SHOWN IN THE PLANS, ON EVERY
OTHER POST (IN ORDER TO PROVIDE A SPACING OF 40'). THE SURFACE
OF THE POST SHALL BE CLEANED OF ALL CONTAMINANTS PRIOR TO THE
INSTALLATION OF THE REFLECTIVE SHEETING. THE SURFACE SHALL BE
CLEANED USING A 5-8 PERCENT PHOSPHORIC ACID SOLUTION AND RINSED
WITH CLEAN WATER OR AS RECOMMENDED BY THE MANUFACTURER OF
THE REFLECTIVE SHEETING AND AS APPROVED BY THE ENGINEER.

BASIS OF PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR CABLE GUARD MARKER.