

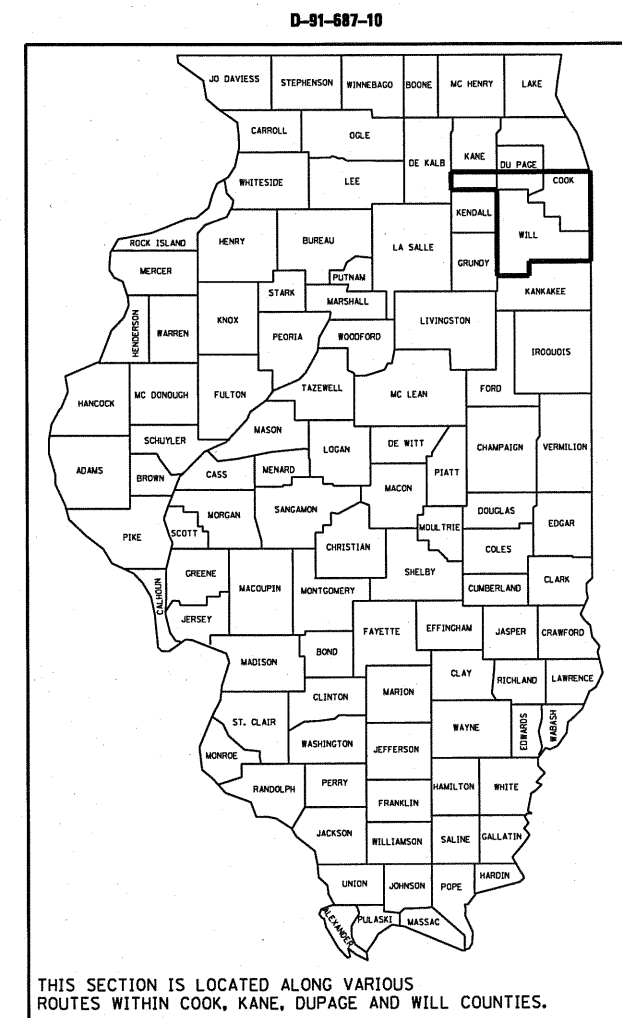
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2010-058 GRR	VARIOUS	21	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60L36		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

**ROUTE: VARIOUS EXPRESSWAYS AND ARTERIAL
HIGHWAYS – SOUTHERN PART, DISTRICT ONE
GUARDRAIL REPAIR
SECTION: 2010-058 GRR
COUNTY: VARIOUS
C-91-687-10**



**SEE LOCATION MAPS
SHEETS 4 THRU 7**

C.U.A.N.
CHICAGO UTILITY ALERT NETWORK
1-312-744-7000

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

PROJECT ENGINEER: ROBERT BORO (847) 705-4178
PROJECT MANAGER: ISSAM RAYYAN

CONTRACT NO. 60L36

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED AUGUST 25, 2010
Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 1, 2010
Scott E. Still P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

October 1, 2010
Christine M. Reedler
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

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- 18-20. T6 TERMINAL FOR USE WITH 21" HIGH SPBGR
21. TRAFFIC CONTROL DETAIL FOR SHOULDER CLOSURE AND PARTIAL RAMP CLOSURE

LIST OF STATE STANDARDS

- | | |
|-----------|---|
| 630001-08 | STEEL PLATE BEAM GUARDRAIL |
| 630301-05 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631006-07 | TRAFFIC BARRIER TERMINAL, TYPE 1B |
| 631011-06 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 631026-05 | TRAFFIC BARRIER TERMINAL, TYPE 5 |
| 631031-08 | TRAFFIC BARRIER TERMINAL, TYPE 6 |
| 631036-05 | TRAFFIC BARRIER TERMINAL, TYPE 8 |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT |
| 635011-02 | REFLECTOR MARKER AND MOUNTING DETAILS |
| 701006-03 | OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE |
| 701011-02 | OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY |
| 701101-02 | OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE |
| 701201-03 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH |
| 701301-03 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701400-04 | APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701401-05 | LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701406-05 | LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY |
| 701411-06 | LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEED ≥ 45 MPH |
| 701501-05 | URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED |
| 701606-06 | URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN |
| 701701-06 | URBAN LANE CLOSURE, MULTILANE INTERSECTION |
| 701801-04 | LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 720011-01 | METAL POSTS FOR SIGNS, MARKERS & DELINEATORS |

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 OR "CUAN" AT (312) 744-700 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED

ALL WORK IS TO BE REPLACED IN KIND OR AS INDICATED ON THE CONTRACT QUANTITY SHEET.

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.

NO MATERIAL SHOULD BE LEFT ON OR NEAR THE ROADWAY DURING NON-WORKING HOURS.

ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE HEREWITH ATTACHED.

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.

GUARDRAIL MARKERS SHALL NOT BE ATTACHED TO TERMINAL SECTIONS.

REMOVAL OF EXISTING TERMINAL SECTIONS INCLUDED IN THE COST OF NEW TERMINAL SECTIONS.

Rev.

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwi\d0213106\Design	Egn	DRAWN -	REVISED -			VAR	2010-058 GRR	VARIIOUS	21	2
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		DATE -	REVISED -							
						CONTRACT NO. 60L36				
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE: 0021						SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE: 0021							
CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	100% STATE CONTRACT MAINTENANCE	100% MCHD					CODE NO	ITEM	UNIT	URBAN TOTAL QUANTITIES	100% STATE CONTRACT MAINTENANCE	100% MCHD				
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	100	80	20					Z0051400	REMOVING AND RESETTING POSTS	EACH	50	40	10				
63001105	FURNISHING AND INSTALLING GUARD RAIL BLOCKS	EACH	1200	1020	180					Z0052100	REPAIR STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	130	104	26				
63001205	FURNISHING AND INSTALLING GUARD RAIL CHANNEL	EACH	60	48	12					Z0052200	REPAIR STEEL PLATE BEAM GUARD RAIL, TYPE C	FOOT	50	40	10				
63001305	FURNISHING AND INSTALLING RAIL ELEMENT PLATES	EACH	1500	1200	300					Z0052400	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2	1	1				
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	6	4	2					Z0052550	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	2	1	1				
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	38	30	8					Z0052600	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	30	24	6				
63300800	GUARD RAIL POST VERTICAL ADJUSTMENT	EACH	20	16	4					Z0052900	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 4	EACH	3	2	1				
78200410	GUARDRAIL MARKERS, TYPE A	EACH	400	320	80					Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	3	2	1				
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	10	8	2					Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	3	2	1				
X0300501	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 1 - NOSE	EACH	6	5	1					Z0053400	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 8	EACH	3	2	1				
X0320619	FURNISHING AND INSTALLING THRIE BEAM GUARD RAIL ELEMENT PLATES	EACH	4	3	1					Z0059660	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - RAIL ELEMENT PLATE	EACH	100	80	20				
X0321563	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL	EACH	250	200	50				Z0007124	STEEL RAILING (SPECIAL)	FOOT	50	40	10					
X0322240	FURNISHING AND SETTING THRIE-BEAM POSTS	EACH	3	2	1				63100041	TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	2	1	1					
X0322241	FURNISHING AND INSTALLING THRIE BEAM RADIUS ELEMENT PLATES	EACH	3	2	1														
X0322242	FURNISHING AND SETTING THRIE-BEAM MODIFIED BLOCKS	EACH	3	2	1				63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	6	5	1					
X0322603	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 3 SPECIAL, NOSE	EACH	2	1	1				X6310177	TRAFFIC BARRIER TERMINAL, TYPE 3(SPECIAL)	EACH	3	2	1					
X4402302	CURB REMOVAL (PARTIAL)	FOOT	100	80	20				63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	1	1					
Z0025200	FURNISHING AND INSTALLING CONNECTING END SECTION	EACH	2	1	1				63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	1	1					
Z0025548	FURNISHING AND INSTALLING RADIUS RAIL ELEMENT PLATES	EACH	100	80	20														
Z0025600	FURNISHING AND INSTALLING RETURN END SECTION	EACH	2	1	1														
Z0025800	FURNISHING AND INSTALLING SINGLE END SECTION	EACH	8	7	1														
Z0026700	FURNISHING AND SETTING STEEL POSTS	EACH	1000	850	150														
Z0026800	FURNISHING AND SETTING STEEL POSTS (MODIFIED)	EACH	15	13	2														
Z0026900	FURNISHING AND SETTING STEEL POSTS (SPECIAL)	EACH	15	12	3														
Z0029656	REPAIR TRAFFIC BARRIER TERMINAL TYPE 3 SPECIAL	EACH	7	6	1														
Z0029658	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - POST	EACH	340	272	68														

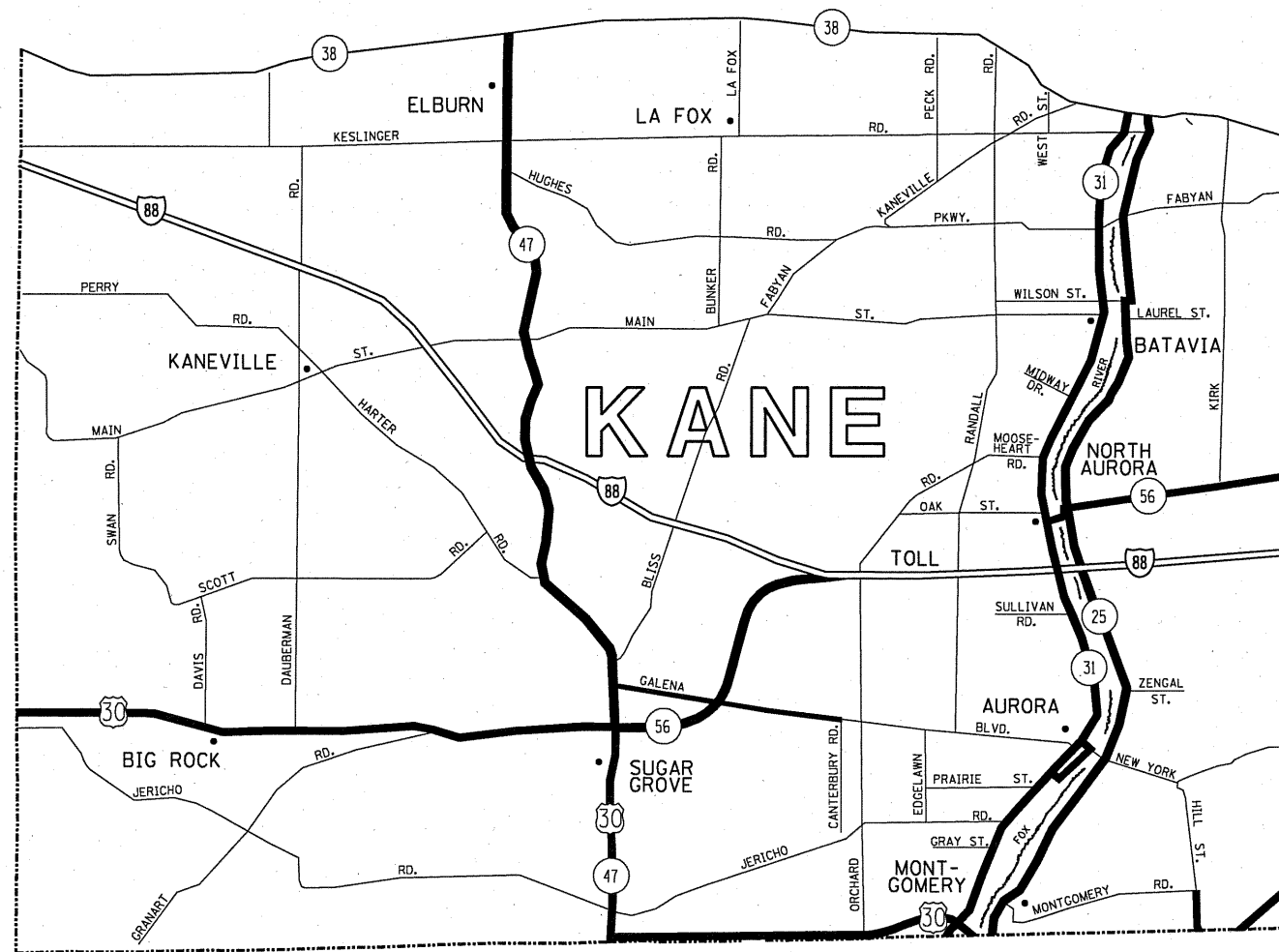
Rev.



DISTRICT NO. 1

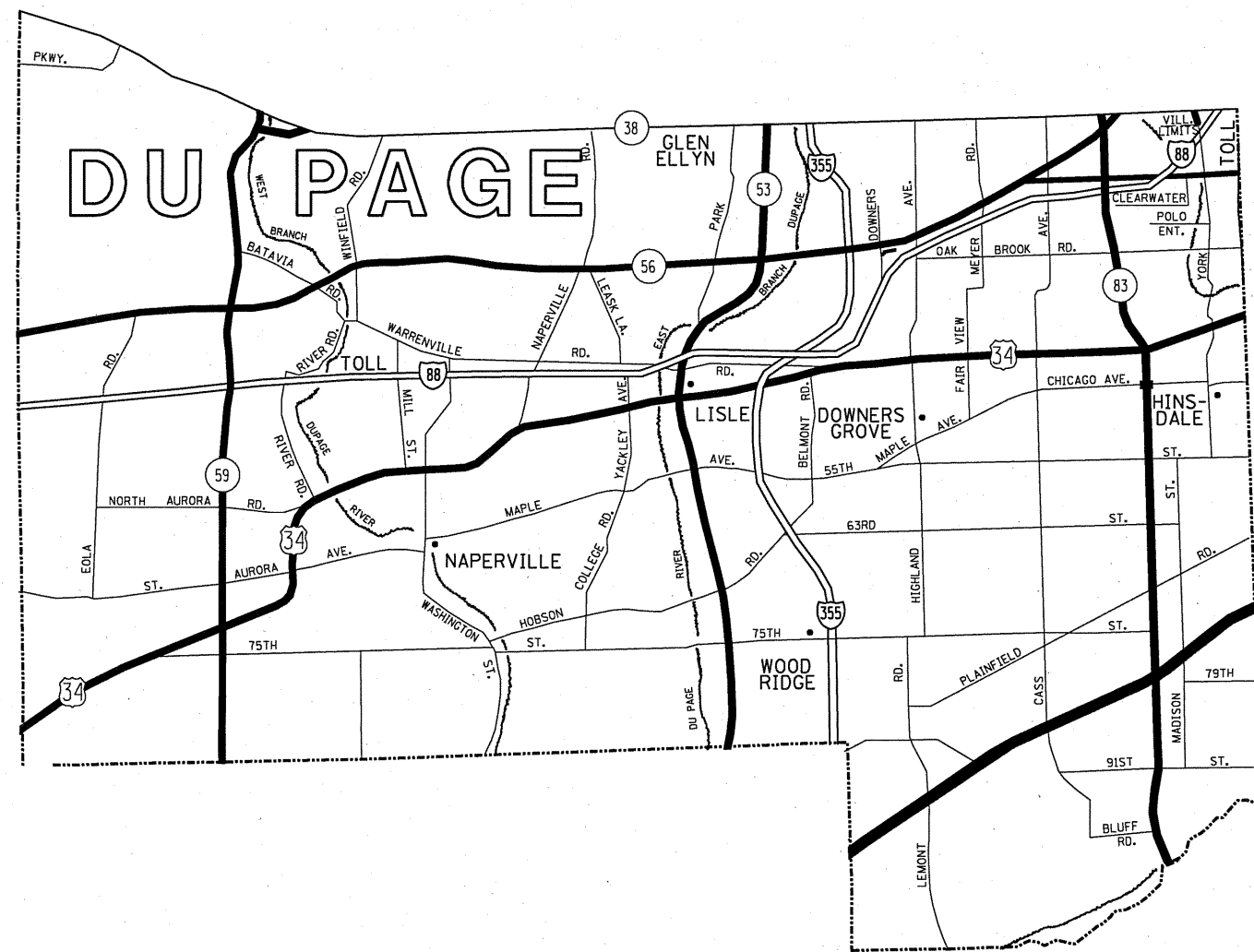
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- FUTURE HIGHWAYS
- VARIOUS AGENCIES HIGHWAYS

FILE NAME *	USER NAME = mdyje	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL REPAIR LOCATION MAP COOK COUNTY SOUTH OF IL RTE 38	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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PLOT DATE = 8/27/2010						DATE	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
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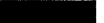




- DISTRICT NO. 1**
- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
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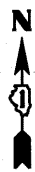
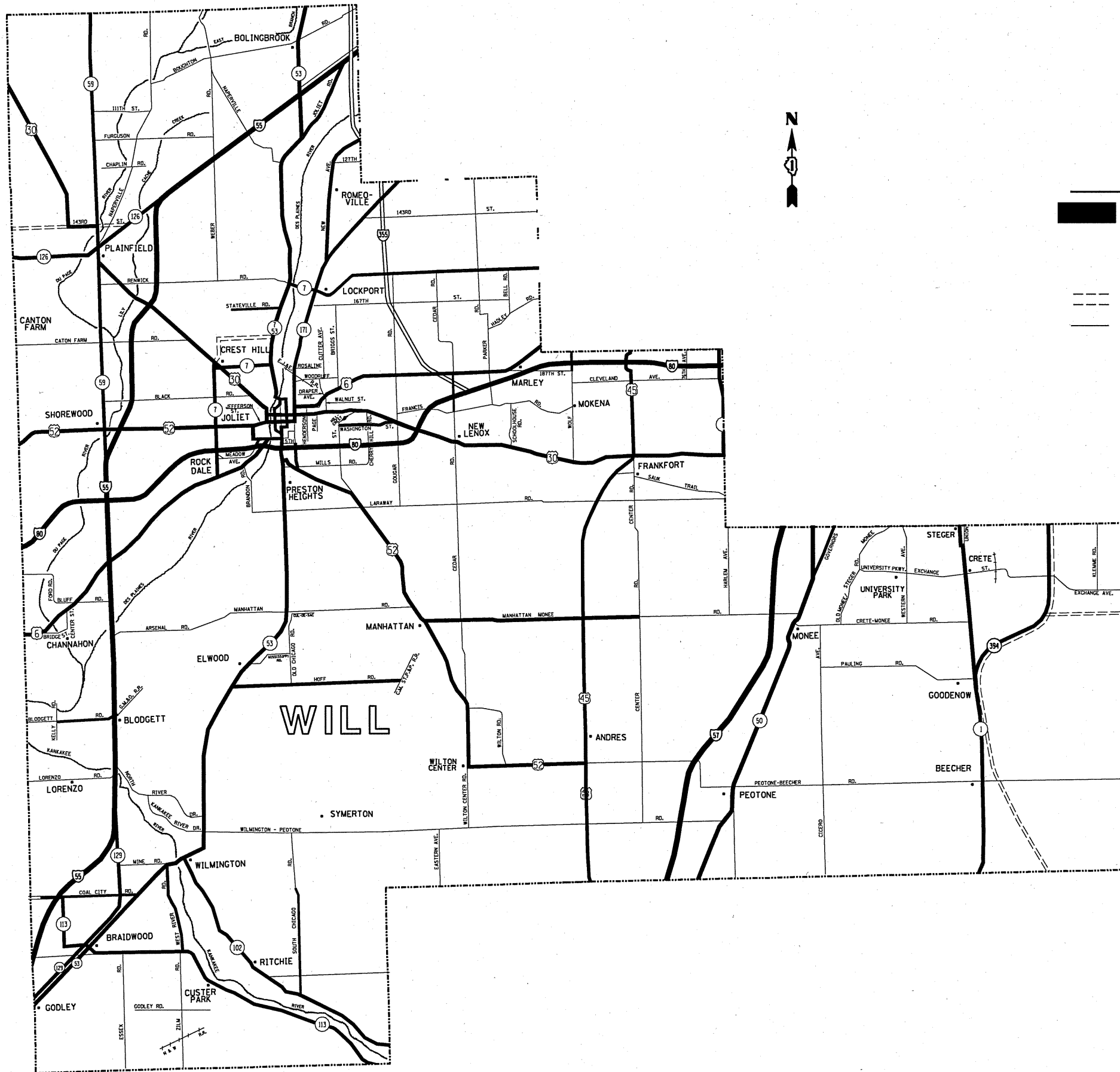
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		CHECKED -	REVISED -						CONTRACT NO. 60L36						
		DATE -	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT						



DISTRICT NO. 1

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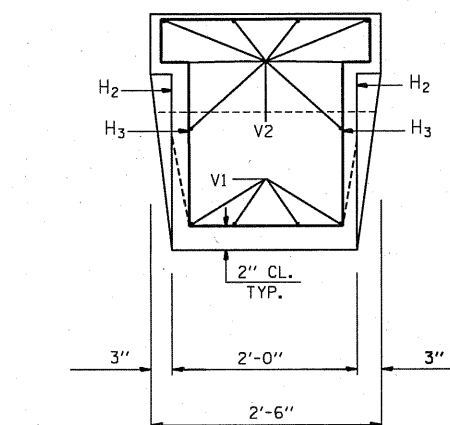
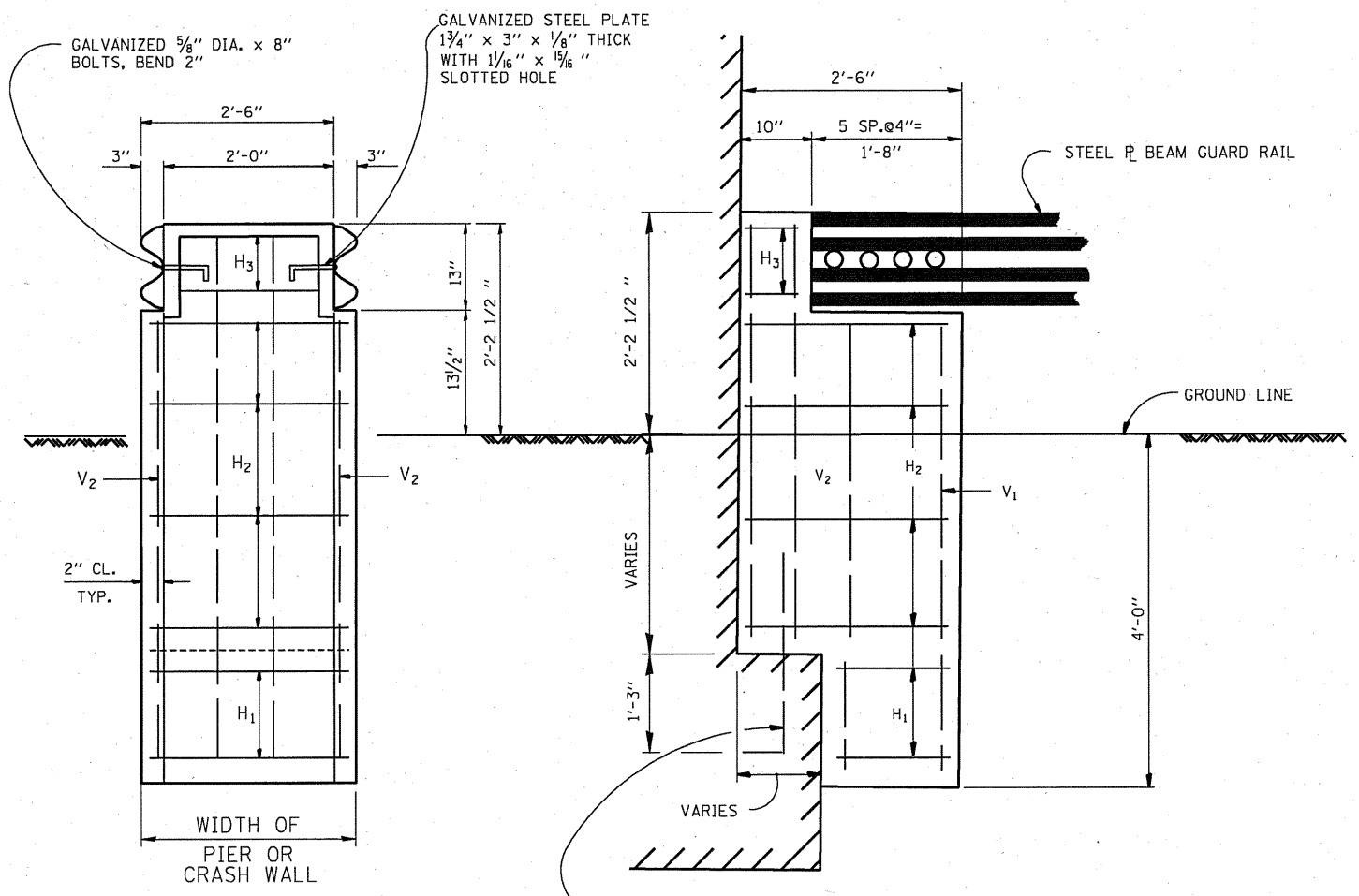
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										CONTRACT NO. 60L36					
										ILLINOIS FED. AID PROJECT					



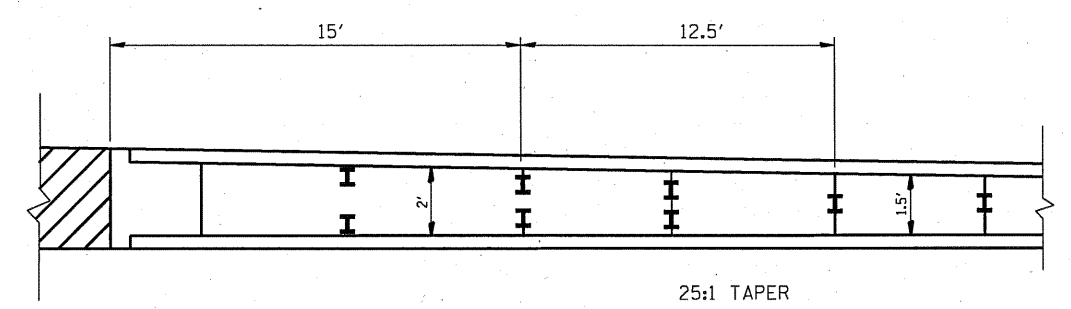
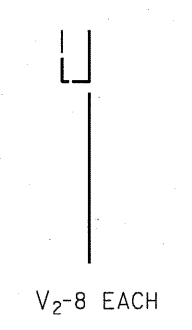
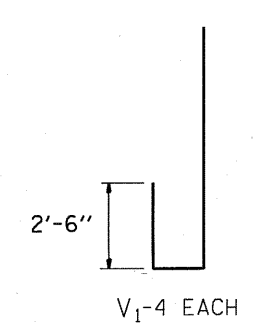
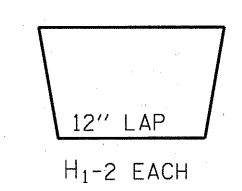
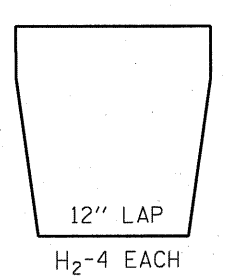
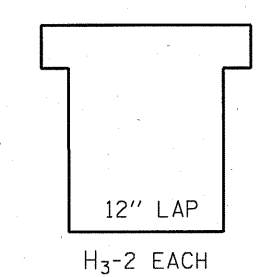
DISTRICT NO. 1

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(EXCEPT TOLLWAYS) AND
CITY MAINTENANCE AGREEMENTS
UNDER STATE JURISDICTION**
- FUTURE HIGHWAYS**
- VARIOUS AGENCIES HIGHWAYS**

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL REPAIR LOCATION MAP WILL COUNTY				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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								FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			
										CONTRACT NO. 60L36			



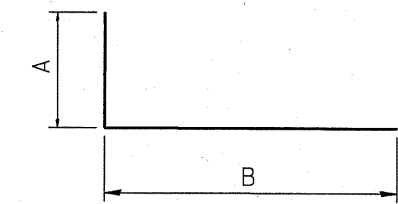
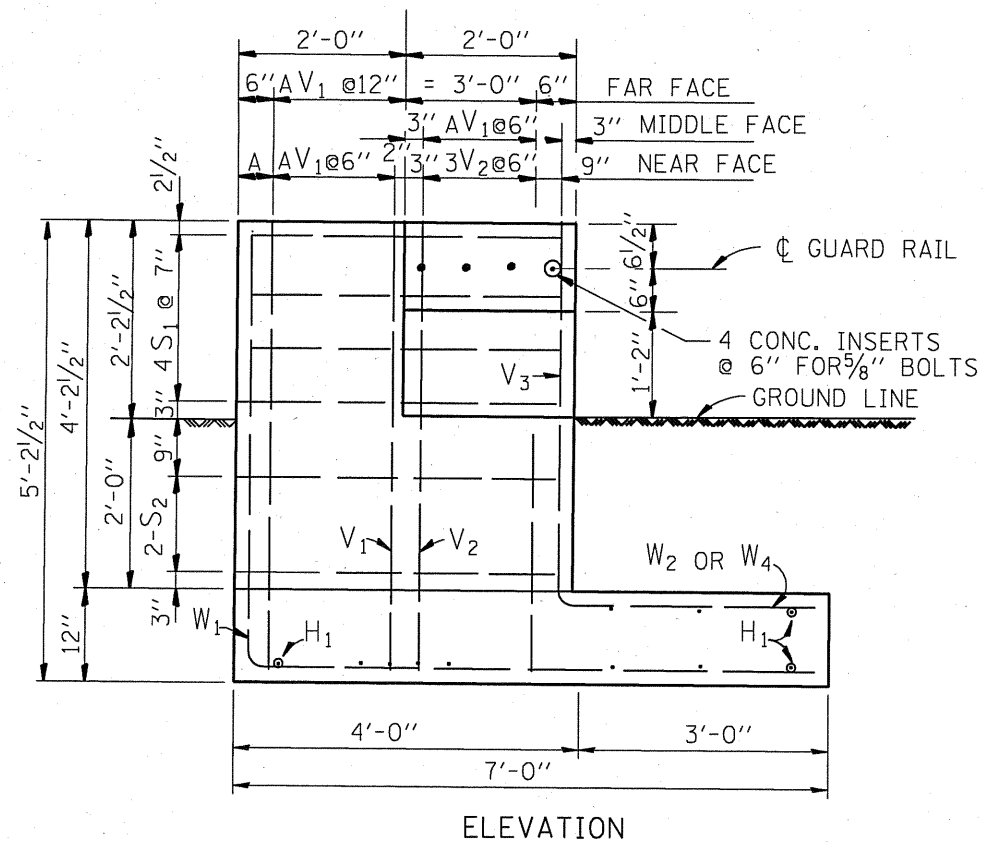
#6 DOWEL BARS
DRILL AND GROUT ON ROW OF THREE BARS



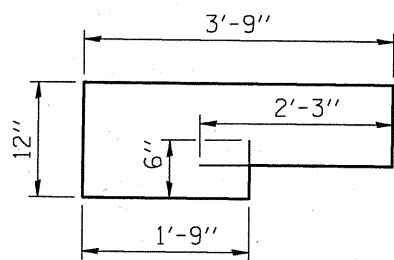
GUARD RAIL TRANSITIONS

NOTES: CLASS SI CONCRETE SHALL BE USED THROUGHOUT
REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE
NOTED

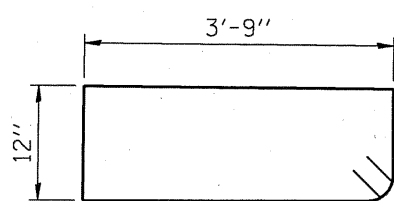
FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL DETAILS FOR STEEL PLATE BEAM GUARDRAIL ANCHORAGE REPAIR	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Plot SCALE = 1/8" = 1'-0"	CHECKED -	REVISED -	VAR			2010-058 GRR	VARIOUS	21	8	
Plot DATE = 8/27/2018	DATE -	REVISED -	CONTRACT NO. 60L36							
			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							
		SCALE: SHEET NO. OF SHEETS STA. TO STA.								



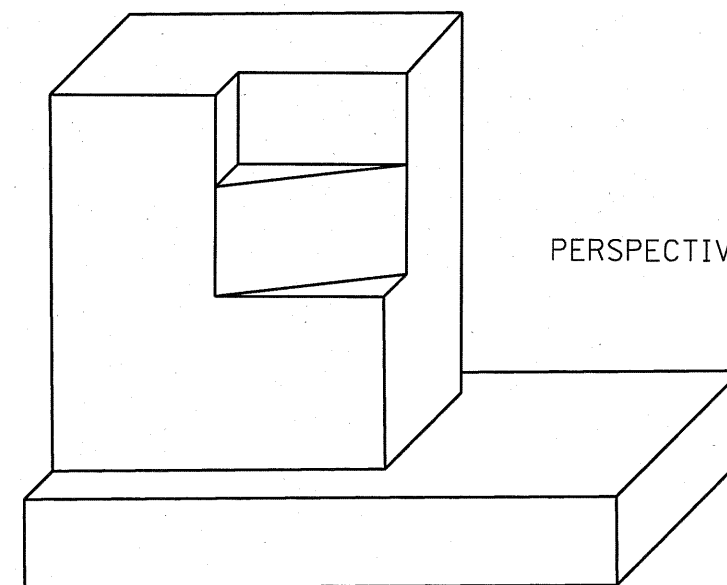
BAR	A	B	A+B
V ₁	4'-8"	6"	5'-2"
V ₂	2'-6"	6"	3'-0"
W ₁	4'-8"	6'-6"	11'-2"
W ₂	2'-0"	3'-0"	5'-0"
W ₄	4'-2"	3'-0"	7'-2"



S₁ BAR



S₂ BAR



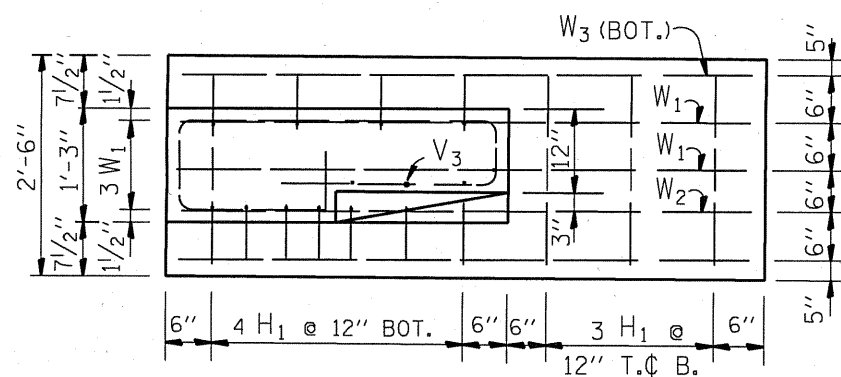
PERSPECTIVE VIEW

NOTES: CLASS SI CONCRETE SHALL BE USED THROUGHOUT
REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE NOTED

ELEVATION

BAR SCHEDULE

BAR	NO.	LENGTH
V ₁	8	5'-2"
V ₂	3	3'-0"
V ₃	4	3'-0"
W ₁	3	11'-2"
W ₂	1	5'-0"
W ₃	2	6'-6"
W ₄	2	7'-2"
S ₁	4	10'-0"
S ₂	2	10'-0"
H ₁	1	2'-3"



FOOTING PLAN

THIS SHEET IS FOR INFORMATION ONLY

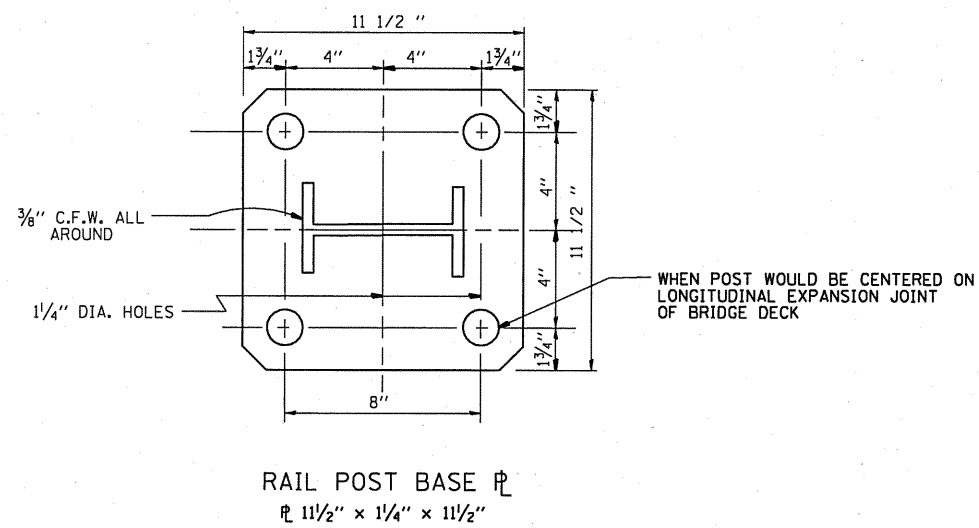
NOTE:
FOR DETAILS OF RAIL ELEMENTS, RAIL SPLICING, NUT, BOLT AND SIDE VIEW OF RAIL, SEE STANDARD 630001

ALL WELDS SHALL BE GROUND SMOOTH

POSTS SHALL BE CUT AND WELDED TO THE BASE PLATE SO THAT THE POST WILL BE PLUMB WHEN ERECTED.

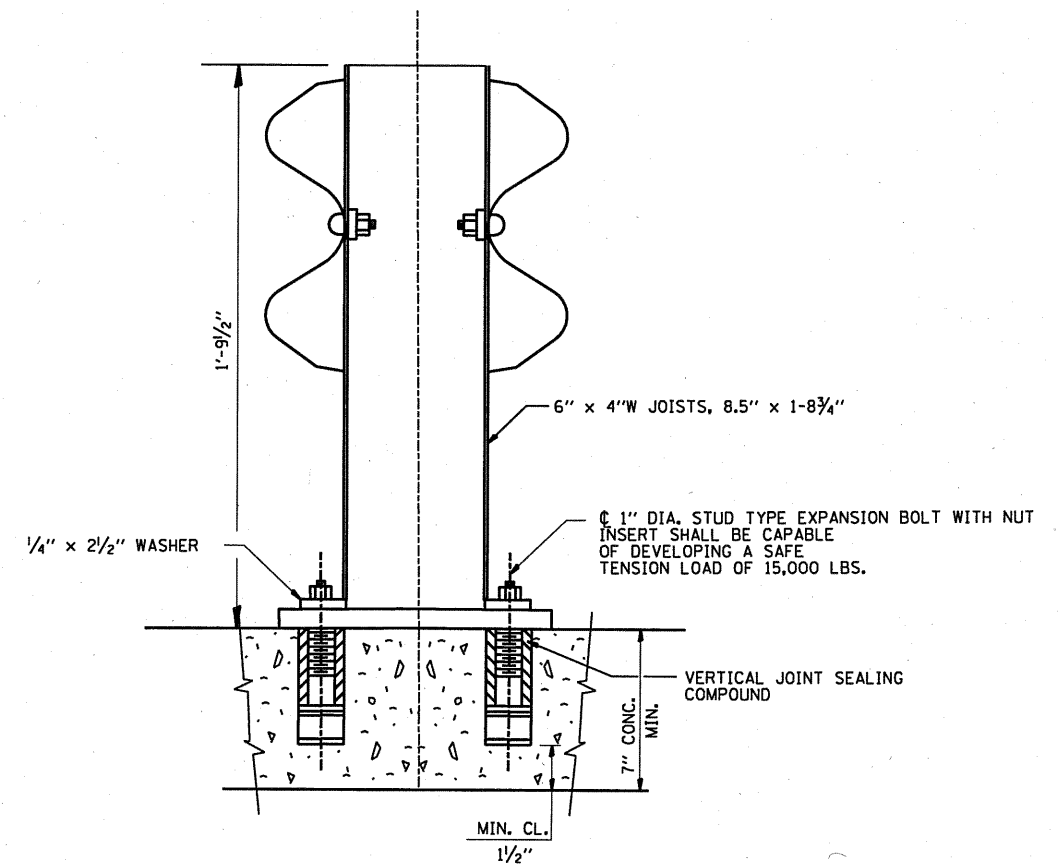
TWO PERCENT (2%) OF ALL ANCHOR BOLTS SHALL BE TEST LOADED IN PLACE. MINIMUM TEST LOAD=8 KIPS. IF ONE ANCHOR BOLT FAILS DURING THE TEST, TWO OTHER ANCHOR BOLTS SHALL BE TESTED. TESTING EQUIPMENT SHALL BE BOLT COMPANIES.

PROVIDE 1/8" AND 2/16" GALVANIZED SHIMS FOR 25% OF THE POSTS.

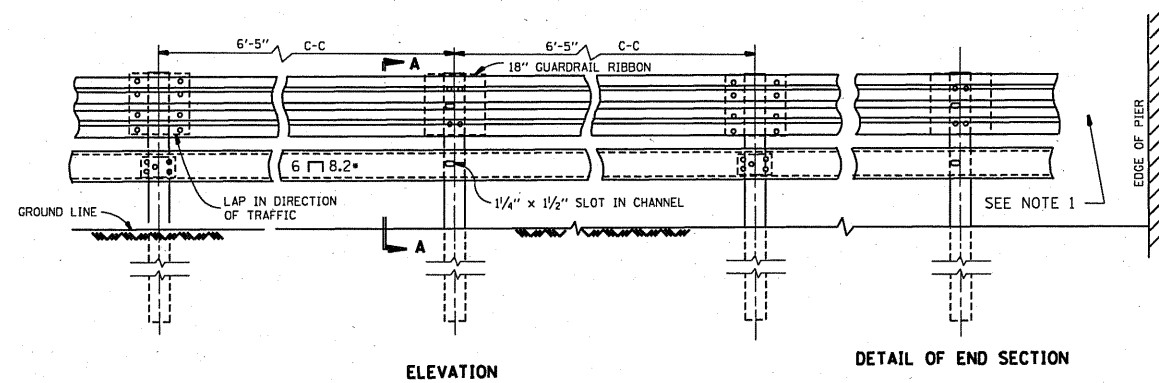


NOTE:

ALL WELDS SHALL BE GROUND SMOOTH. POSTS SHALL BE CUT AND WELDED TO THE TO THE BASE PLATE SO THAT THE POSTS WILL BE PLUMB WHEN ERECTED.



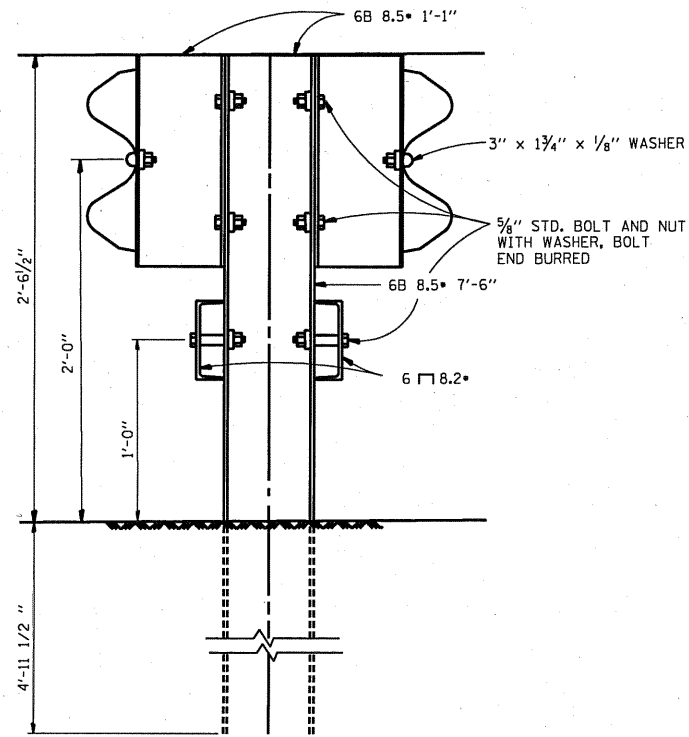
FILE NAME =	USER NAME = msdyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ANCHOR DETAIL FOR STEEL PLATE BEAM RAIL ON CONCRETE	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pwwork\pwwork\msdyja\0213106\Design.dgn	PLOT SCALE = 1/8" = 1'-0" / IN.	DRAWN -	REVISED -			VAR	2010-058 GRR	VARIOUS	21	10
PLOT DATE = 8/27/2010	DATE -	CHECKED -	REVISED -			CONTRACT NO. 60L36				
		DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
					SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.



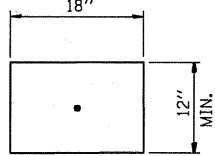
ELEVATION

DETAIL OF END SECTION

NOTE 1:
FOR DETAILS OF GUARDRAIL END ANCHORAGE
AT PIERS, SEE SHEET NO. _____

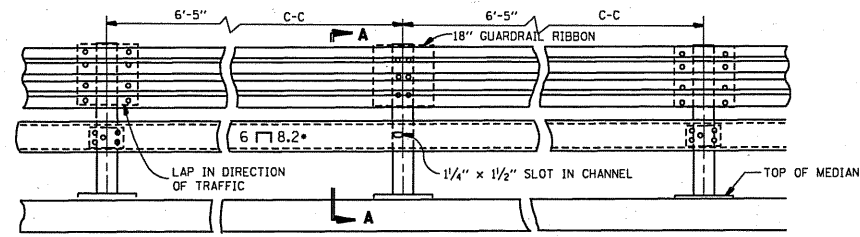


SECTION A-A

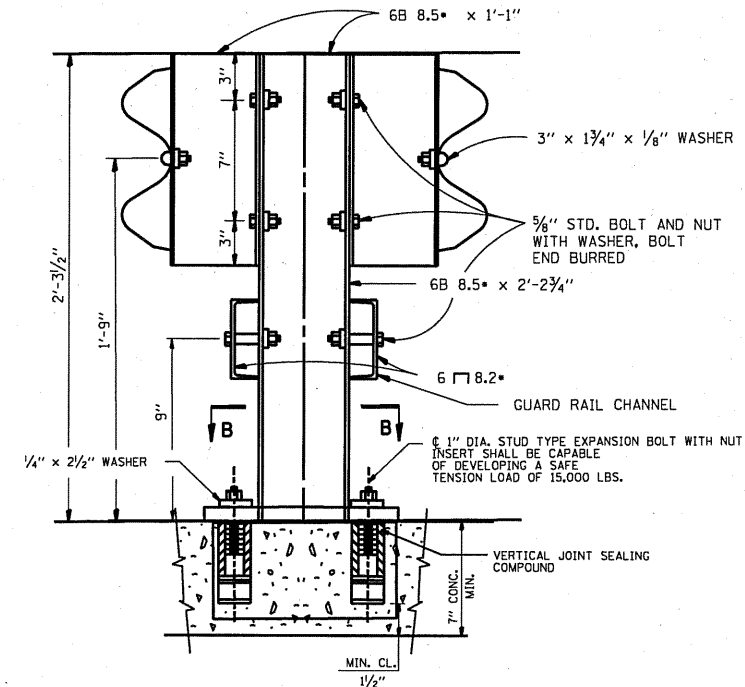


18" GUARDRAIL ELEMENT SPLICE

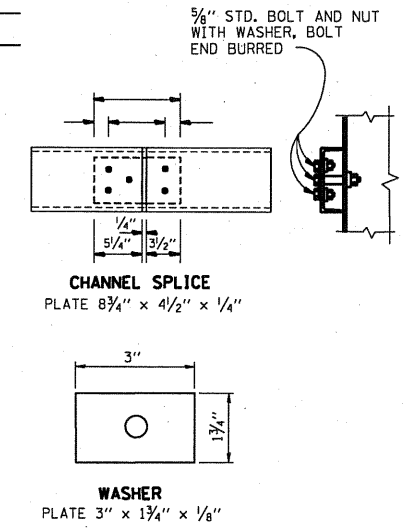
NOTE:
FOR DETAIL OF RAIL ELEMENT, RAIL SPLICING, BOLT,
AND NUT, SEE STATE STANDARD 630001.
A 1 3/4" x 3" x 1/8" STEEL PLATE WASHER AS SHOWN ON THIS
DRAWING SHALL BE PLACED BETWEEN THE BOLT HEAD
AND THE GUARDRAIL RIBBON AT ALL MOUNTING POINTS.
AN 18" PIECE OF GUARDRAIL RIBBON SHALL BE INSERTED
BETWEEN THE CONTINUOUS RIBBON AND THE POST AT
NON-SLICE MOUNTING POINTS.
RAIL, CHANNELS, POSTS, BASE PLATES, FASTENINGS,
AND ALL OTHER EXPOSED ACCESSORIES SHALL BE
GALVANIZED.



ELEVATION



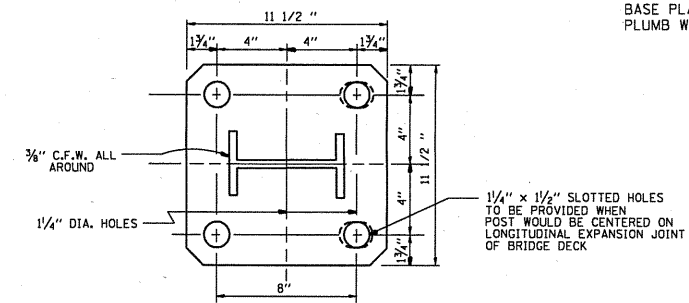
SECTION A-A
ANCHORAGE DETAIL



CHANNEL SPLICE
PLATE 8 3/4" x 4 1/2" x 1/4"

WASHER
PLATE 3" x 1 3/4" x 1/8"

NOTE:
ALL WELDS SHALL BE GROUND SMOOTH.
POSTS SHALL BE CUT AND WELDED TO THE
BASE PLATE SO THAT THE POSTS WILL BE
PLUMB WHEN ERECTED.

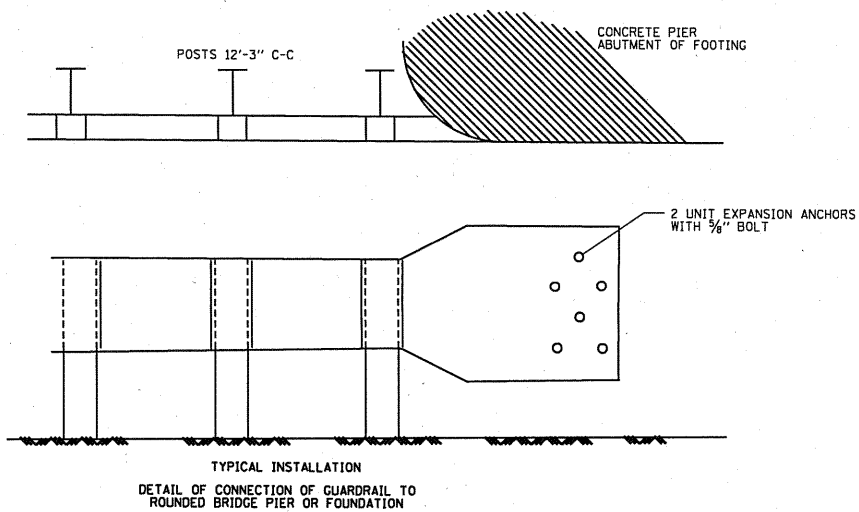
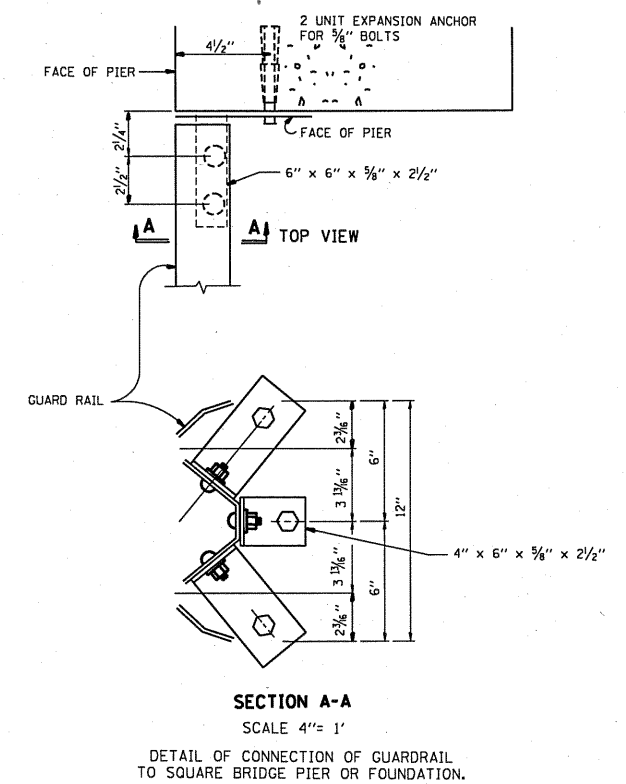
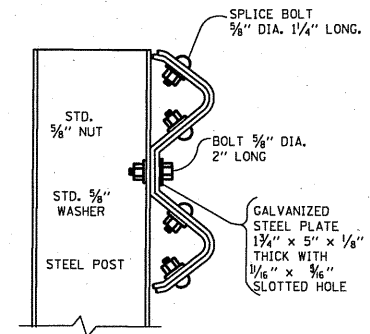
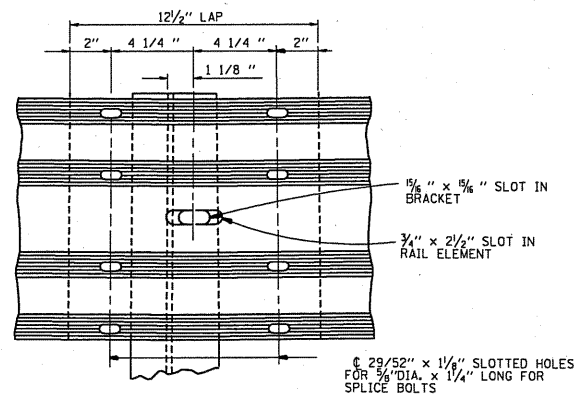
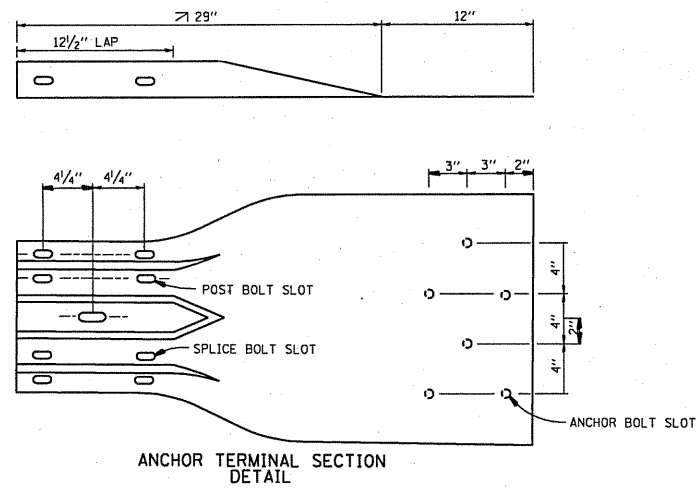


RAIL POST BASE PLATE
R 11 1/2" x 1/4" x 11 1/2"

SECTION B-B

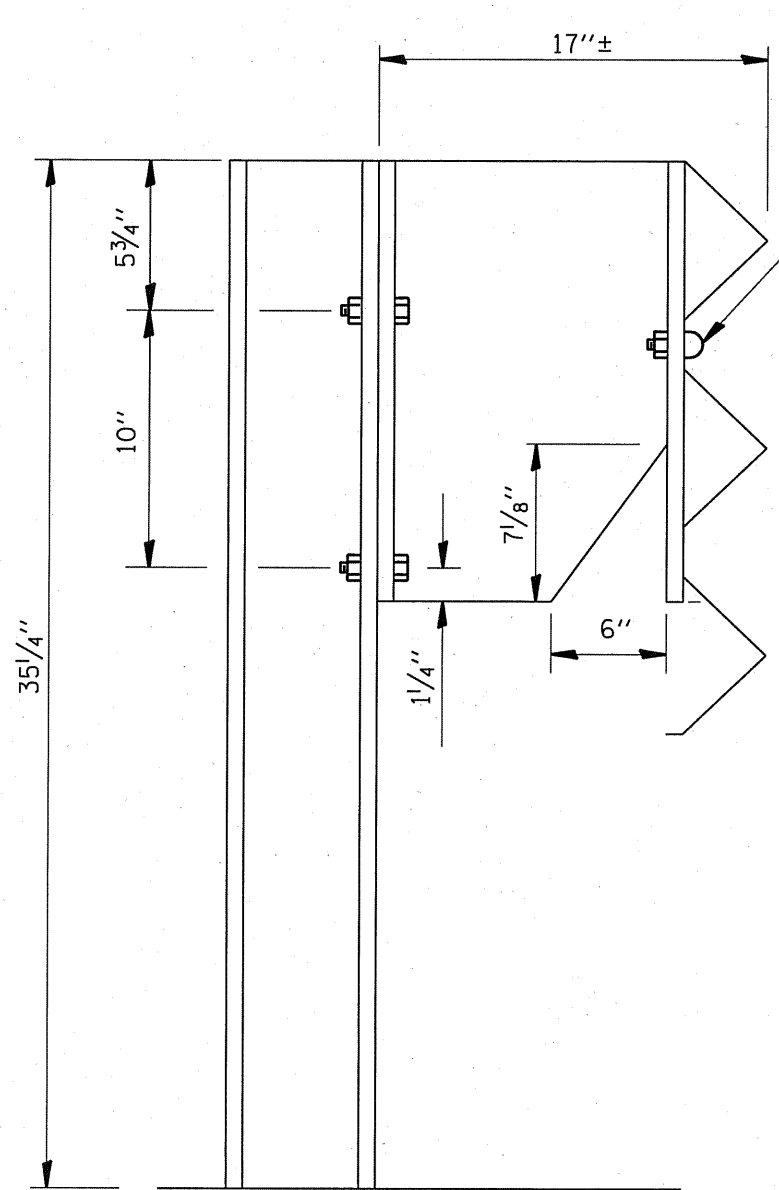
THIS SHEET IS FOR INFORMATION ONLY

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL PLATE BEAM GUARDRAIL SPECIAL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
cr:\pwork\pwork\midyja\0213106\Design\gdn		DRAWN -	REVISED -			VAR	2010-05B GRR	VARIOUS	21	12
PLOT SCALE = 1/8" = 1' IN.		CHECKED -	REVISED -			CONTRACT NO. 60L36				
PLOT DATE = 8/27/2010		DATE -	REVISED -			FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
				SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.			

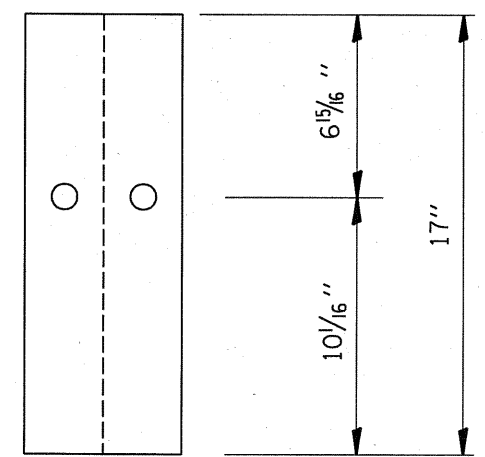
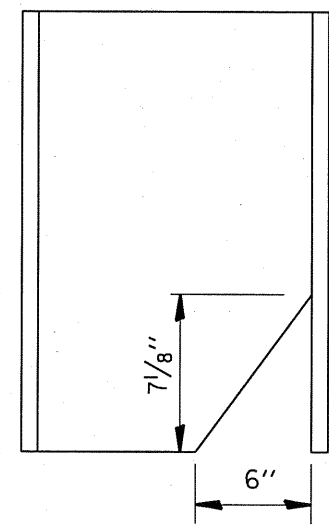
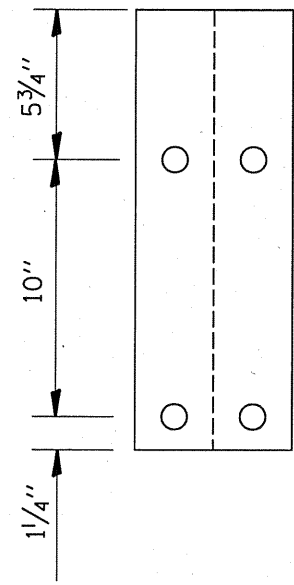


THIS SHEET IS FOR INFORMATION ONLY

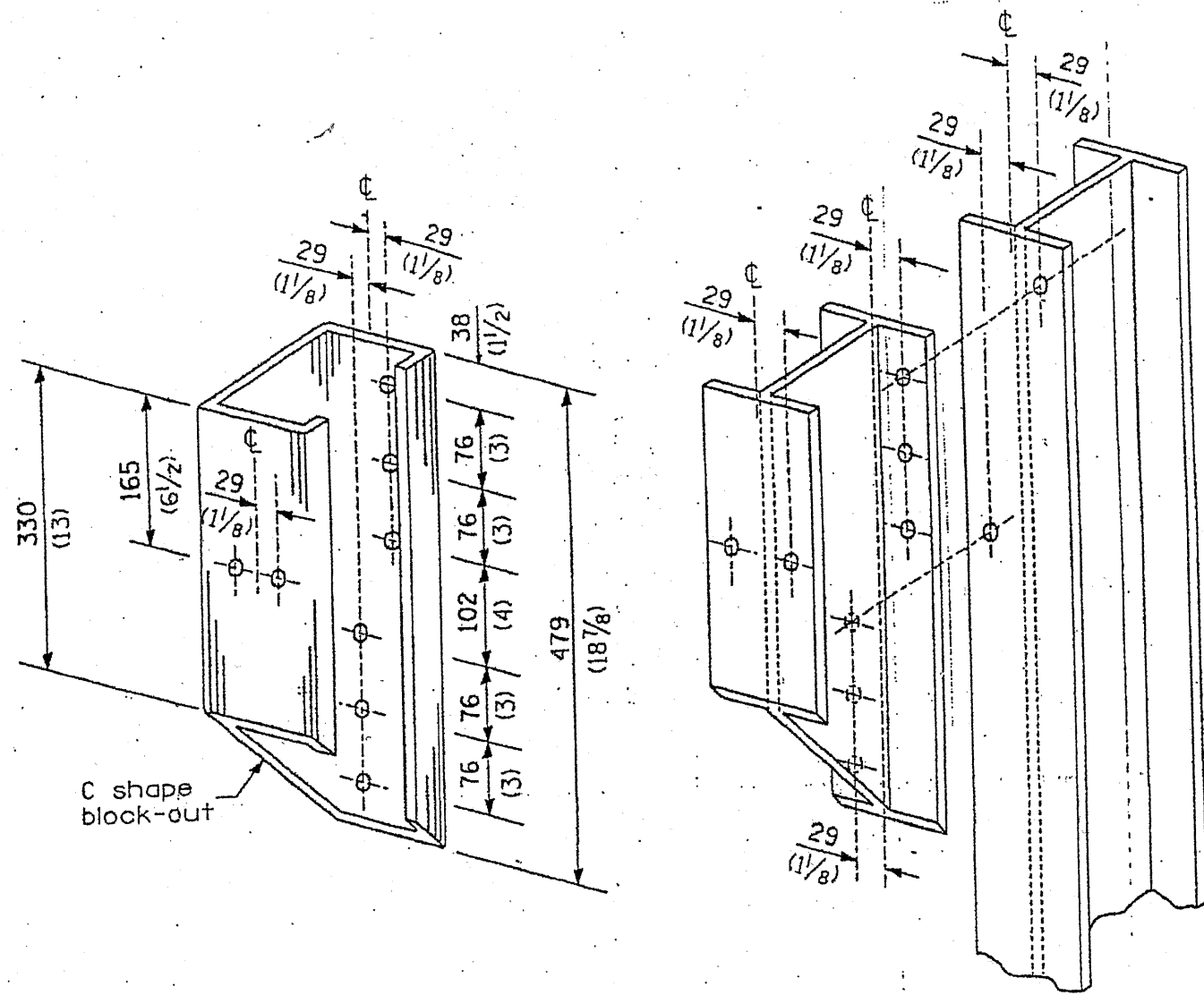
FILE NAME =	USER NAME = midjje	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF GUARDRAIL SUPPORT AND END ANCHORAGE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwwork\pwwork\midjje\08213106\Design\		DRAWN -	REVISED -					VAR	2010-058 GRR	VARIOUS	21	13
PLOT SCALE = 1/8" = 1' / IN.		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
PLOT DATE = 8/27/2010		DATE -	REVISED -		CONTRACT NO. 60L36							



5/8" Ø BUTTON HEAD BOLT WITH NO WASHER



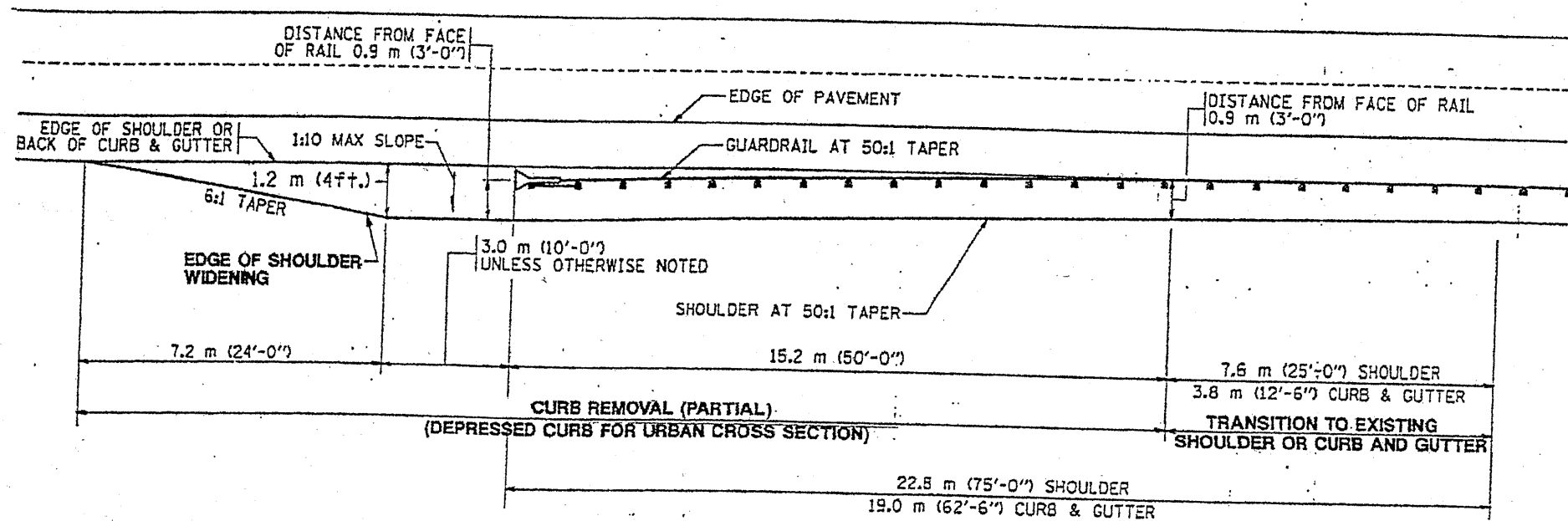
FILE NAME = c:\pw_work\pwork\midyja\0213106\Design.dgn	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL THRIE BEAM GUARDRAIL WITH MODIFIED OFFSET BLOCK			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					VAR	2010-058 GRR	VARIOUS	21	14
		CHECKED -	REVISED -		CONTRACT NO. 60L36							
		DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	



C shape
block-out

STEEL BLOCK-OUT AND
STEEL POST DETAILS

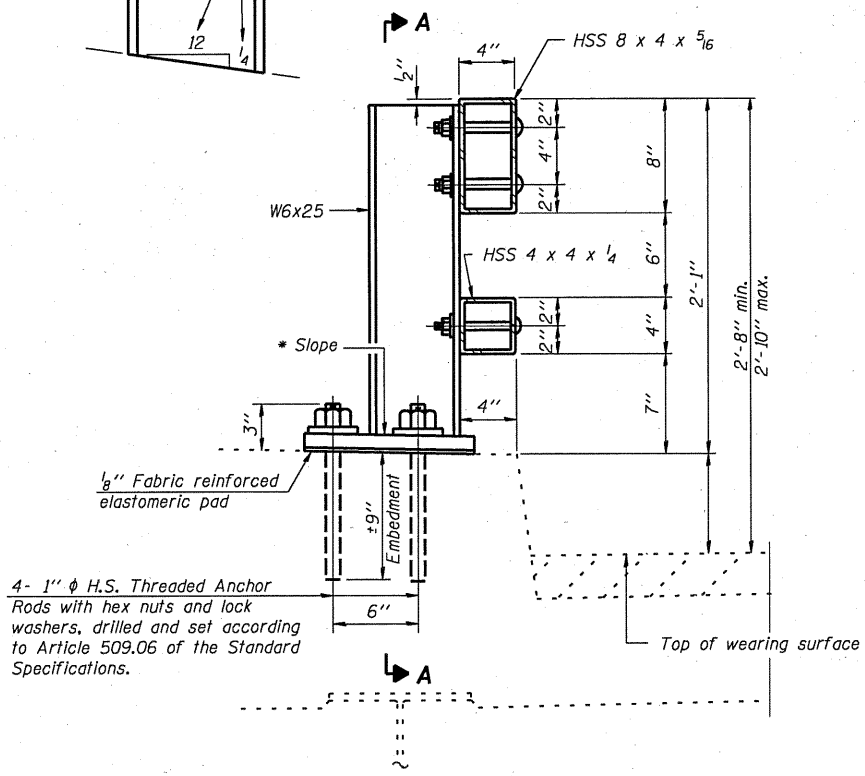
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	PLOT SCALE = 99.9998 ' / IN.	CHECKED -	REVISED -				VAR	2010-058 GRR	VARIOUS	21	15	
PLOT DATE = 7/21/2018	DATE -	REVISED -	SCALE:		SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60L36	



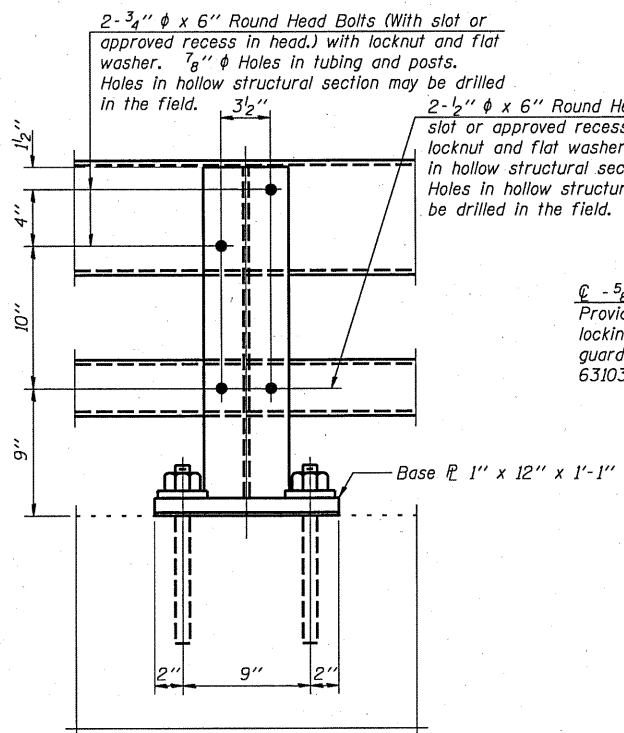
NOTE: SHOULDER WIDENING SHALL BE IN ACCORDANCE WITH STATE STANDARD 630301

FILE NAME *	USER NAME = midyja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CURB REMOVAL (PARTIAL) FOR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pwork\pwork\midyja\0213082\Design.dgn	DRAWN -	REVISED -	VAR			2010-058 GRR	VARIOUS	21	16	
PLOT SCALE = 99.9998' / IN.	CHECKED -	REVISED -	CONTRACT NO. 60L36							
PLOT DATE = 7/21/2010	DATE -	REVISED -	SCALE:			SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

* Cut bottom end of post to curb slope.

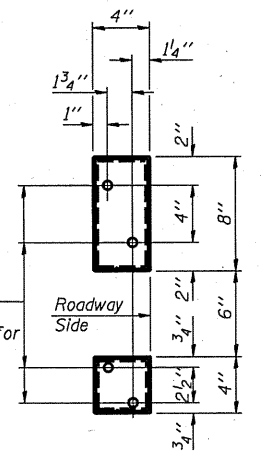


SECTION AT RAIL POST

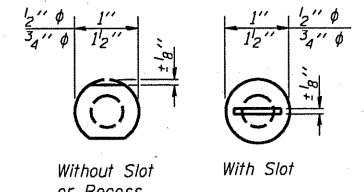


SECTION A-A

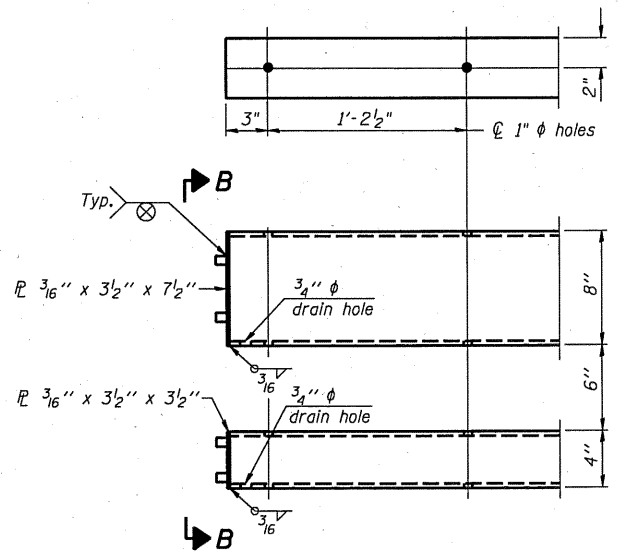
Ø - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



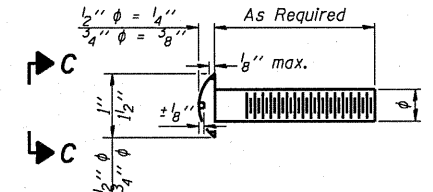
VIEW B-B



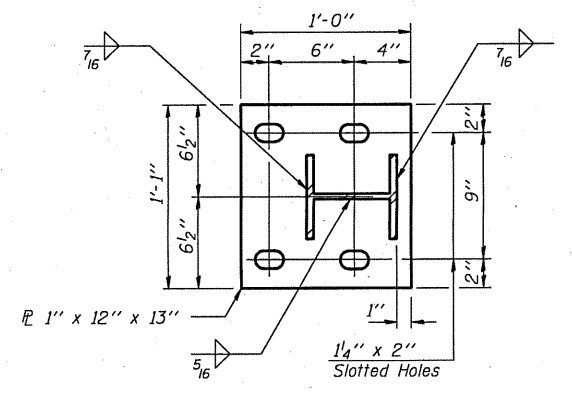
VIEW C-C



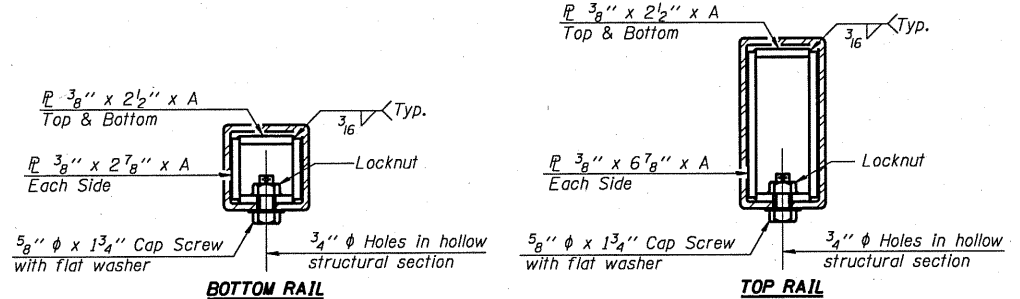
END OF RAIL DETAILS



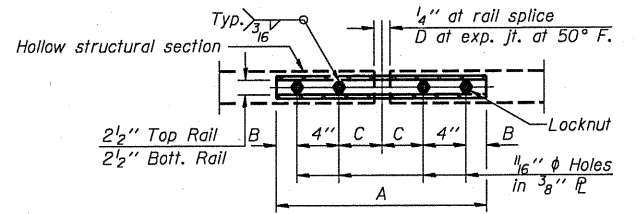
DETAIL OF 1/2" Ø & 3/4" Ø ROUND HEAD BOLTS



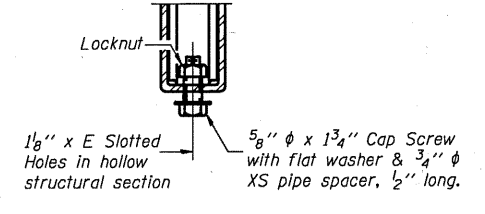
BASE PLATE DETAIL



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	

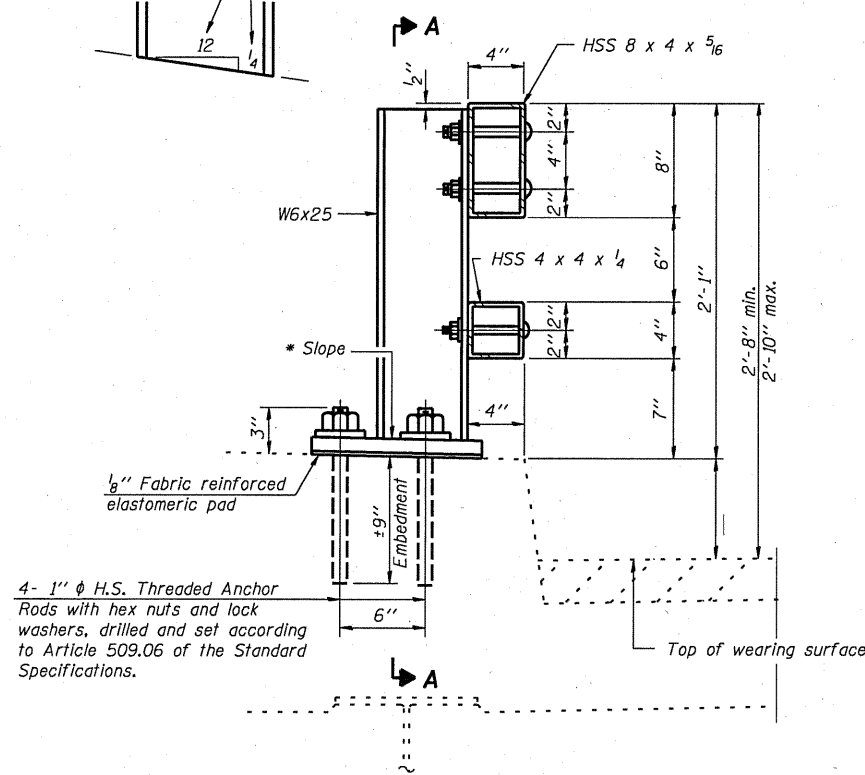
R-31

7-1-10

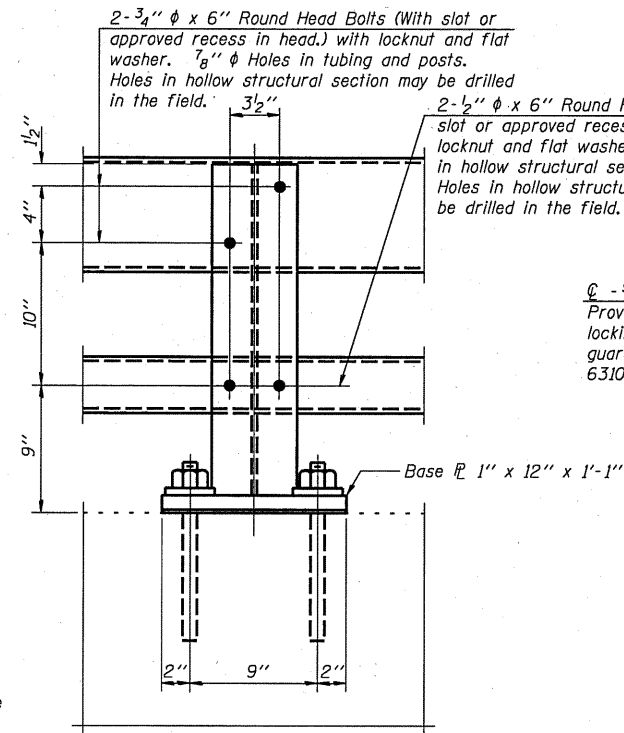
(6'-3" Maximum Post Spacing)

**STEEL RAILING, TYPE 2399
 STRUCTURE NO.**

* Cut bottom end of post to curb slope.



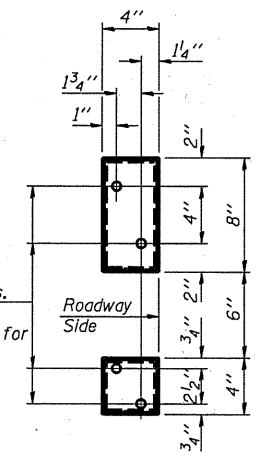
SECTION AT RAIL POST



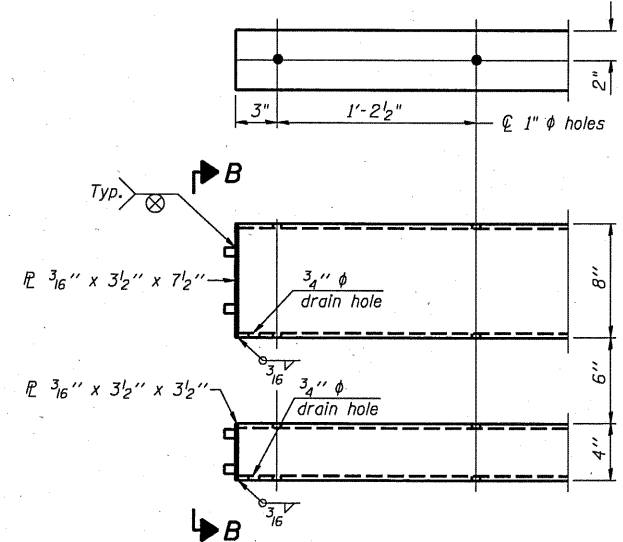
SECTION A-A

2 - 1/2" x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer. 5/8" Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.

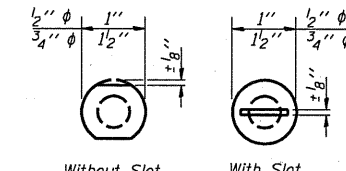
4 - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



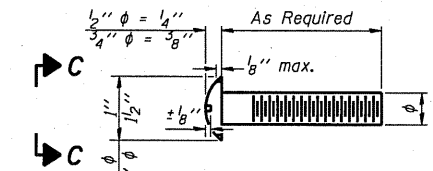
VIEW B-B



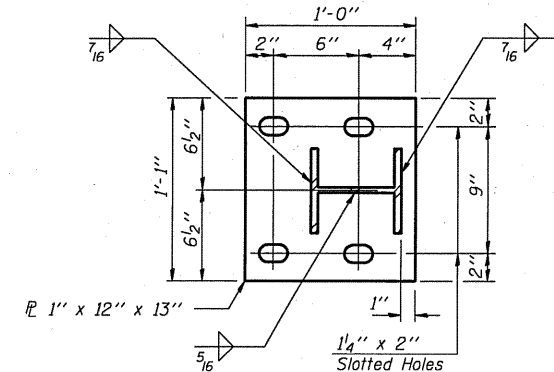
END OF RAIL DETAILS



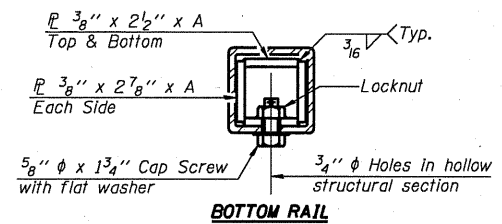
VIEW C-C



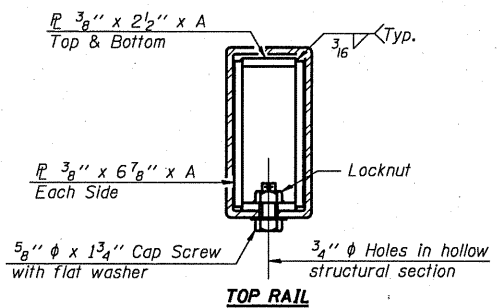
DETAIL OF 1/2" & 3/4" ROUND HEAD BOLTS



BASE PLATE DETAIL

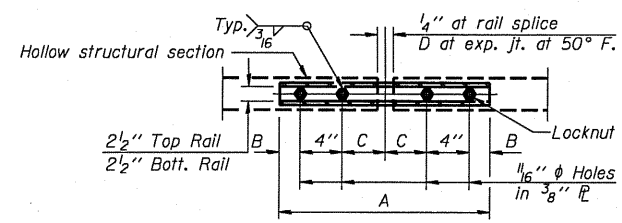


BOTTOM RAIL

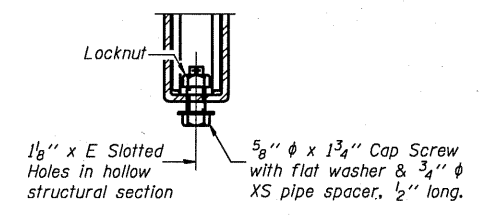


TOP RAIL

SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow ralling movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4" ≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2" ≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9" ≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	

R-31

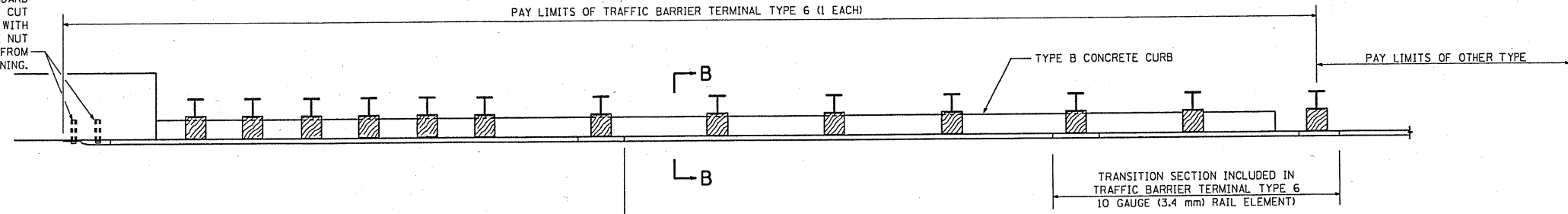
7-1-10

(6'-3" Maximum Post Spacing)

**STEEL RAILING, TYPE 2399
 STRUCTURE NO.**

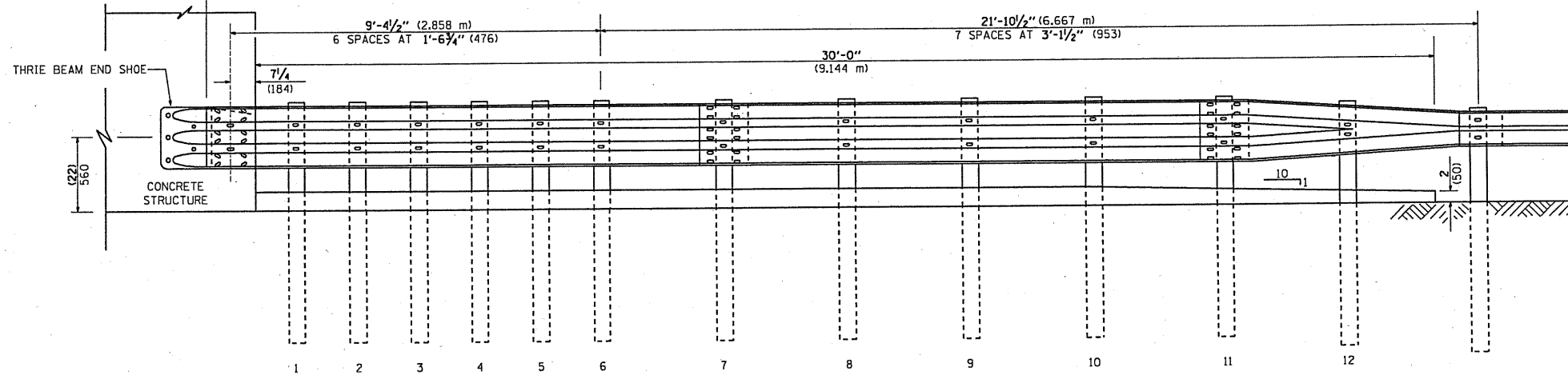
OTHER CONCRETE STRUCTURE

5 EPOXY GROUTED 3/4" (M20) ANCHOR BOLTS WITH STANDARD WASHERS. AFTER TIGHTENING, CUT THE ANCHOR BOLTS FLUSH WITH NUTS, AND DAMAGE THE NUT TO PREVENT IT FROM LOOSENING.

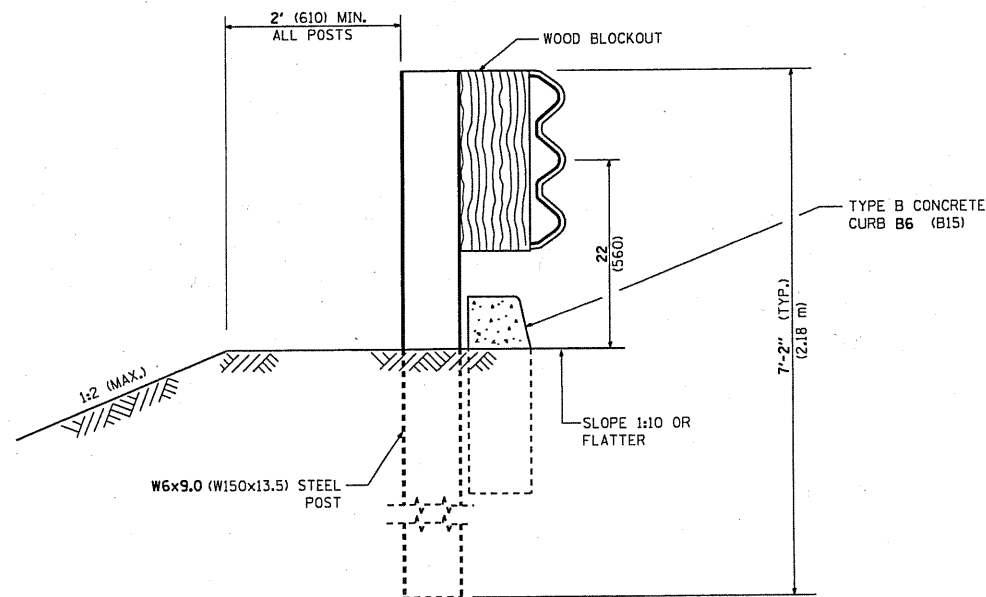


TWO SECTIONS OF THRIE BEAM ONE SET INSIDE THE OTHER

PLAN



ELEVATION



SECTION B-B

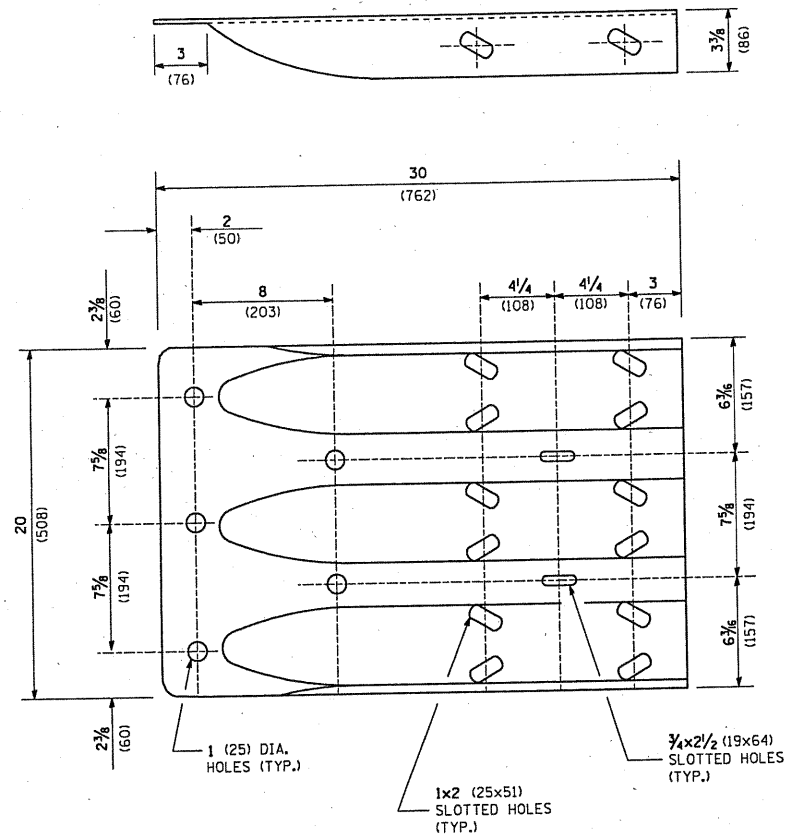
FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED - STATE STANDARD
c:\pwork\pwork\midyja\d213106\DistStd.dgn		DRAWN -	631031-05 - 02/19/2008
	PLOT SCALE = 100.0000 / IN.	CHECKED -	REVISED -
	PLOT DATE = 7/23/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

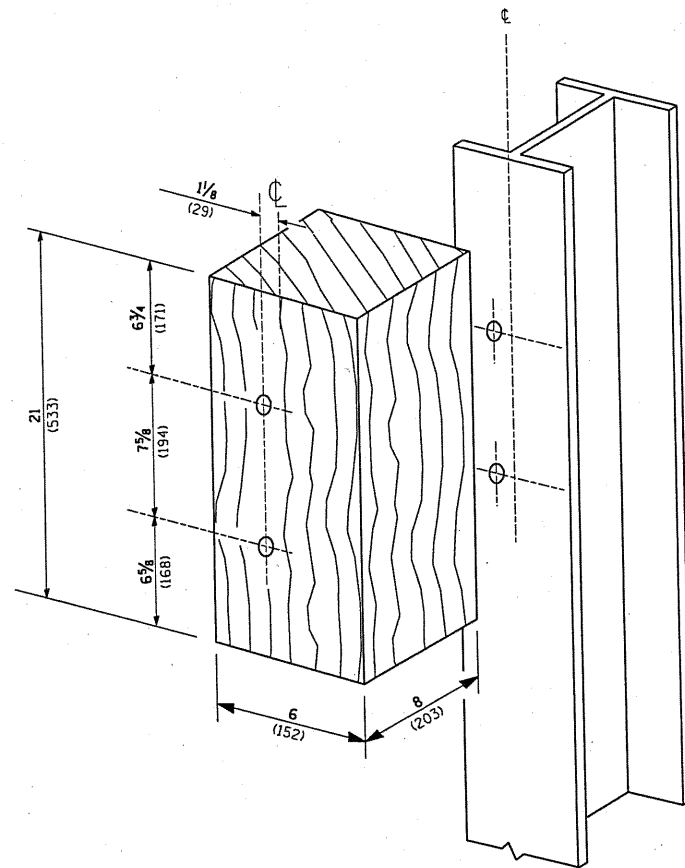
**TYPE 6 TERMINAL
FOR USE WITH 21" HIGH SPBGR**

SCALE: NONE SHEET NO. 2 OF 3 SHEETS STA. TO STA.

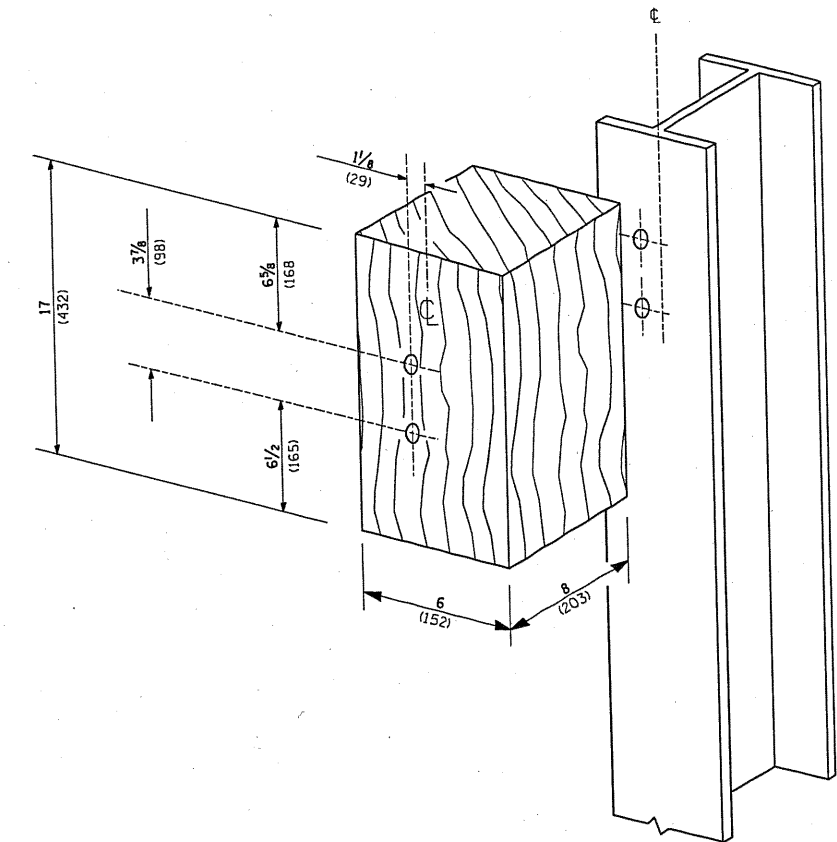
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2010-058 GRR	VARIOUS	21	19
BM 22		CONTRACT NO. 60L36		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



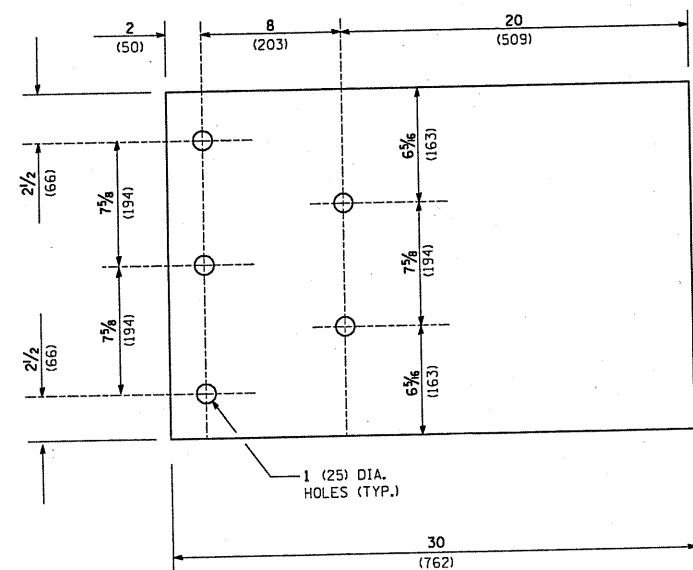
THRIE BEAM END SHOE DETAIL



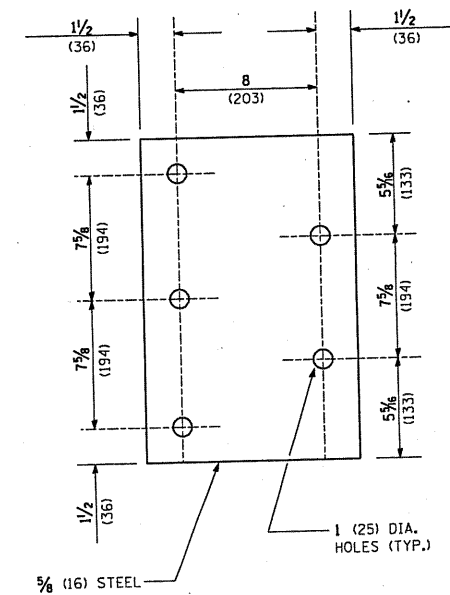
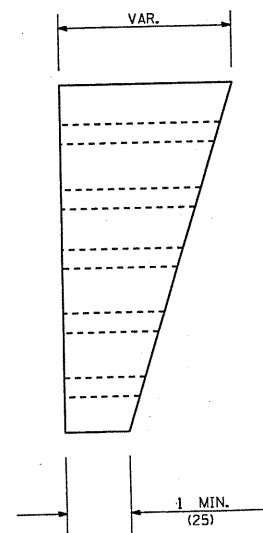
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



PARAPET WOOD BLOCK-OUT DETAIL



PARAPET STEEL BEARING PLATE DETAIL

(5 EACH INDIVIDUAL 5x5x3/8 (125x125x16) STEEL PLATES WITH CENTERED 1 (25) HOLES MAY BE SUBSTITUTED FOR THE PLATE SHOWN.)

FILE NAME =
 USER NAME = midyja
 PLOT SCALE = 100.0000 * / IN.
 PLOT DATE = 7/23/2010

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISIONS
 REVISION - STATE STANDARD:
 631031-05 - 02/19/2008
 REVISION -
 REVISION -

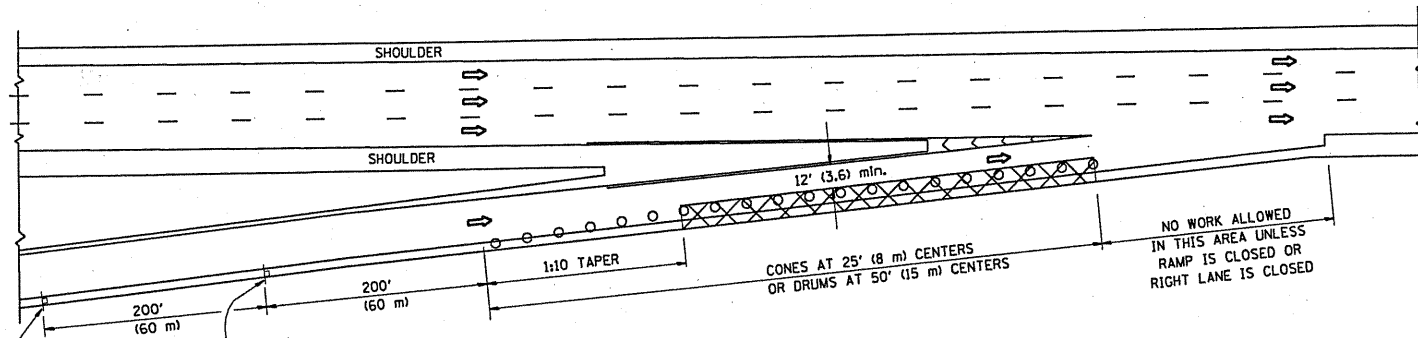
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

**TYPE 6 TERMINAL
 FOR USE WITH 21' HIGH SPBGR**

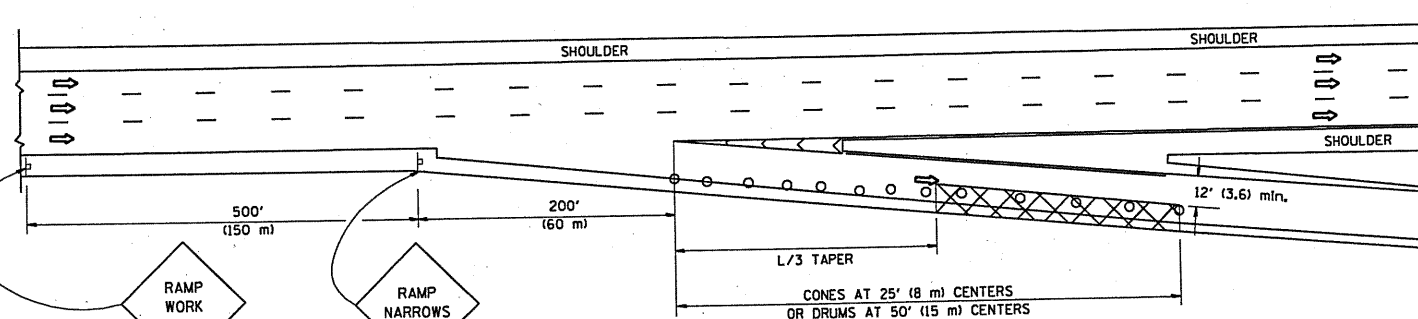
SCALE: NONE SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2010-058 GRR	VARIOUS	21	20
BM 22			CONTRACT NO. 60L36	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

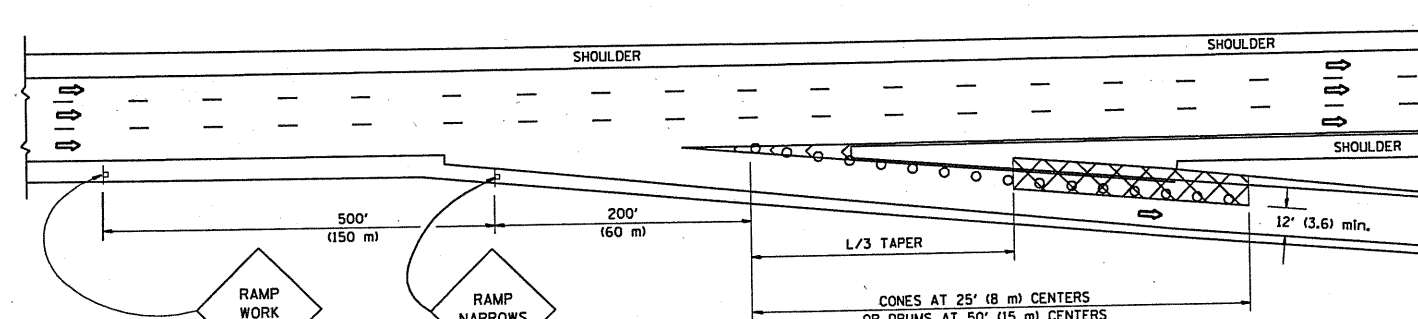
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

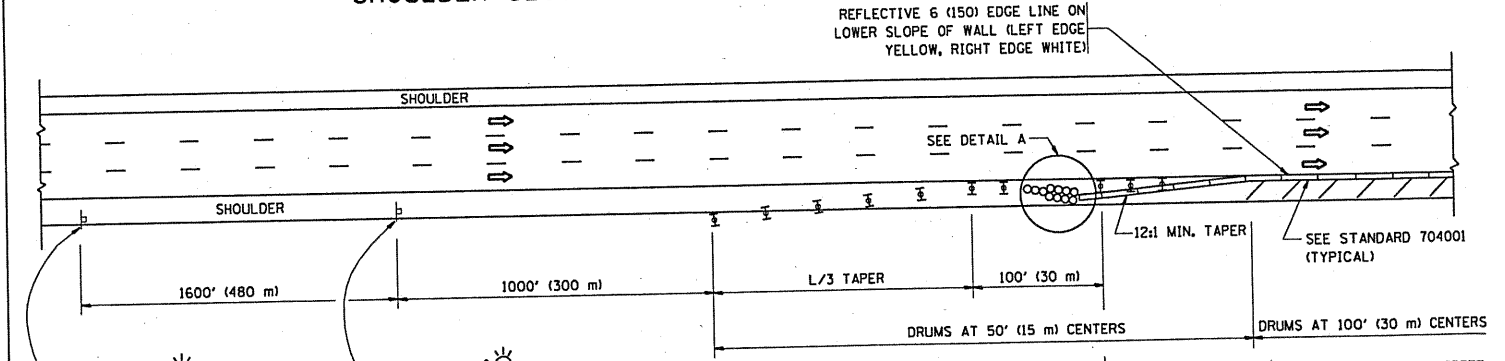
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

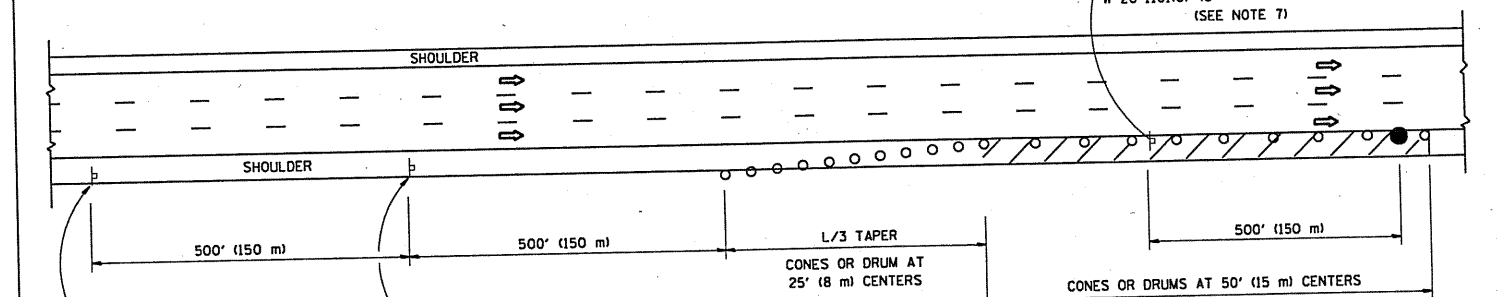
1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC: $L = 0.65(W)(S)$ ENGLISH: $L = (W)(S)$
W = WIDTH OF OFFSET IN FEET (METERS)	S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

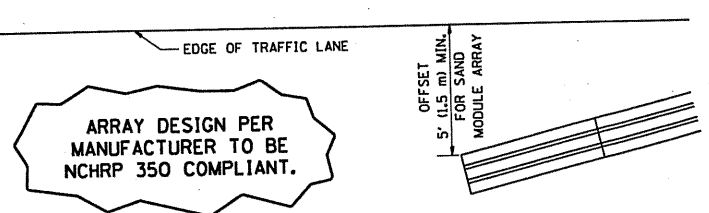


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
 1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRUSH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT.

DETAIL "A" IMPACT ATTENUATOR, TEMPORARY (SEE NOTE 5)

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

FILE NAME =	USER NAME = midyja	DESIGNED -	REVISED - 04-03
ca\pw_work\pwidot\midyja\d213105\01st5td.dgn		DRAWN - D.W.S.	REVISED - J.A.F. 12-06
		CHECKED -	REVISED - S.P.B. 01-07
		DATE - 11-96	REVISED - S.P.B. 12-09

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL DETAILS FOR FREEWAY
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2010-058 GRR	VARIOUS	21	21
	TC-17		CONTRACT NO. 60L36	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				