

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: 2008-058 GRR
 COUNTY: VARIOUS
 C-91-039-09**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2008-058 GRR	VARIOUS	21	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60F16		

D-91-039-09



THIS SECTION IS LOCATED ALONG VARIOUS ROUTES WITHIN COOK, KANE, DUPAGE AND WILL COUNTIES.

**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: KEN ENG

CONTRACT NO. 60F16

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED August 25 2008

Diana M. O'Keefe DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
October 3, 20 08

Eric E. Horn INTERIM ENGINEER OF DESIGN AND ENVIRONMENT
October 3, 20 08

Christine M. Reed DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

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21. TRAFFIC CONTROL DETAIL FOR SHOULDER CLOSURE AND PARTIAL RAMP CLOSURE

LIST OF STATE STANDARDS

- | | |
|-----------|---|
| 630001-07 | STEEL PLATE BEAM GUARDRAIL |
| 630301-04 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631006-05 | TRAFFIC BARRIER TERMINAL, TYPE 1B |
| 631011-04 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 631026-04 | TRAFFIC BARRIER TERMINAL, TYPE 5 |
| 631031-00 | TRAFFIC BARRIER TERMINAL, TYPE 6 |
| 631036-04 | TRAFFIC BARRIER TERMINAL, TYPE 8 |
| 635006-02 | REFLECTOR AND TERMINAL MARKER PLACEMENT |
| 635011-01 | REFLECTOR MARKER AND MOUNTING DETAILS |
| 701006-02 | OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE |
| 701011-01 | OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY |
| 701101-01 | OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE |
| 701201-02 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH |
| 701301-02 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701400-02 | APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701401-04 | LANE CLOSURE, FREEWAY/EXPRESSWAY |
| 701406-04 | LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY |
| 701411-04 | LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEED ≥ 45 MPH |
| 701501-04 | URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED |
| 701606-05 | URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN |
| 701701-05 | URBAN LANE CLOSURE, MULTILANE INTERSECTION |
| 701801-03 | LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE |
| 701901 | TRAFFIC CONTROL DEVICES |
| 720011 | 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 (SEE COVER SHEET).

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.

FILE NAME = c:\projects\ml26188\maint.bb.dgn	USER NAME = midyjo	DESIGNED - DRAWN -	REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 8/28/2008	DATE -	REVISED -			CONTRACT NO. 60F16					
						SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2008-058 GRR	VARIOUS	21	3
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT NO. 60F16

SUMMARY OF QUANTITIES			URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: SFTY-3J				
CODE NO	ITEM	UNIT		CONTRACT MAINTENANCE 100% STATE	MCHD 100% STATE			
44002300	CURB REMOVAL (PARTIAL)	FOOT	100	80	20			
50900200	STEEL RAILING, TYPE 2399	FOOT	50	40	10			
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	100	80	20			
63001105	FURNISHING AND INSTALLING GUARD RAIL BLOCKS	EACH	1200	1020	180			
63001205	FURNISHING AND INSTALLING GUARD RAIL CHANNEL	EACH	60	48	12			
63001305	FURNISHING AND INSTALLING RAIL ELEMENT PLATES	EACH	1500	1200	300			
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	1	1			
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	1	1			
63300800	GUARD RAIL POST VERTICAL ADJUSTMENT	EACH	20	16	4			
78200405	GUARDRAIL MARKERS	EACH	400	320	80			
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	10	8	2			
X0300501	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 1 - NOSE	EACH	6	5	1			
X0301763	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	2	1	1			
X0301849	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	36	29	7			
X0301850	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (FLARED)	EACH	6	5	1			
X0320619	FURNISHING AND INSTALLING THRIE BEAM GUARD RAIL ELEMENT PLATES	EACH	4	3	1			
X0321152	FURNISHING AND INSTALLING RADIUS RAIL ELEMENT PLATES	EACH	100	80	20			
X0321562	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 3 SPECIAL	EACH	3	2	1			
X0321563	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL	EACH	250	200	50			
X0324559	REPAIR TRAFFIC BARRIER TERMINAL TYPE 3 SPECIAL	EACH	7	6	1			
X0322240	FURNISHING AND SETTING THRIE-BEAM POSTS	EACH	3	2	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			




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X0322451	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - POST	EACH	340	272	68			
X0322452	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - RAIL ELEMENT PLATE	EACH	100	80	20			
X0322603	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 3 SPECIAL, NOSE	EACH	2	1	1			
XZ190500	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	1	1			
XZ190600	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	1	1			
Z0025200	FURNISHING AND INSTALLING CONNECTING END SECTION	EACH	2	1	1			
Z0025600	FURNISHING AND INSTALLING RETURN END SECTION	EACH	2	1	1			
Z0025800	FURNISHING AND INSTALLING SINGLE END SECTION	EACH	8	7	1			
Z0026200	FURNISHING AND INSTALLING TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4	3	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			
Z0051400	REMOVING AND RESETTING POSTS	EACH	50	40	10			
Z0052100	REPAIR STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	130	104	26			
Z0052200	REPAIR STEEL PLATE BEAM GUARD RAIL, TYPE C	FOOT	50	40	10			
Z0052400	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2	1	1			
Z0052550	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	2	1	1			
Z0052600	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	30	24	6			
Z0052900	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 4	EACH	3	2	1			
Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	3	2	1			
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	3	2	1			
Z0053400	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 8	EACH	3	2	1			

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	NAME	DATE	

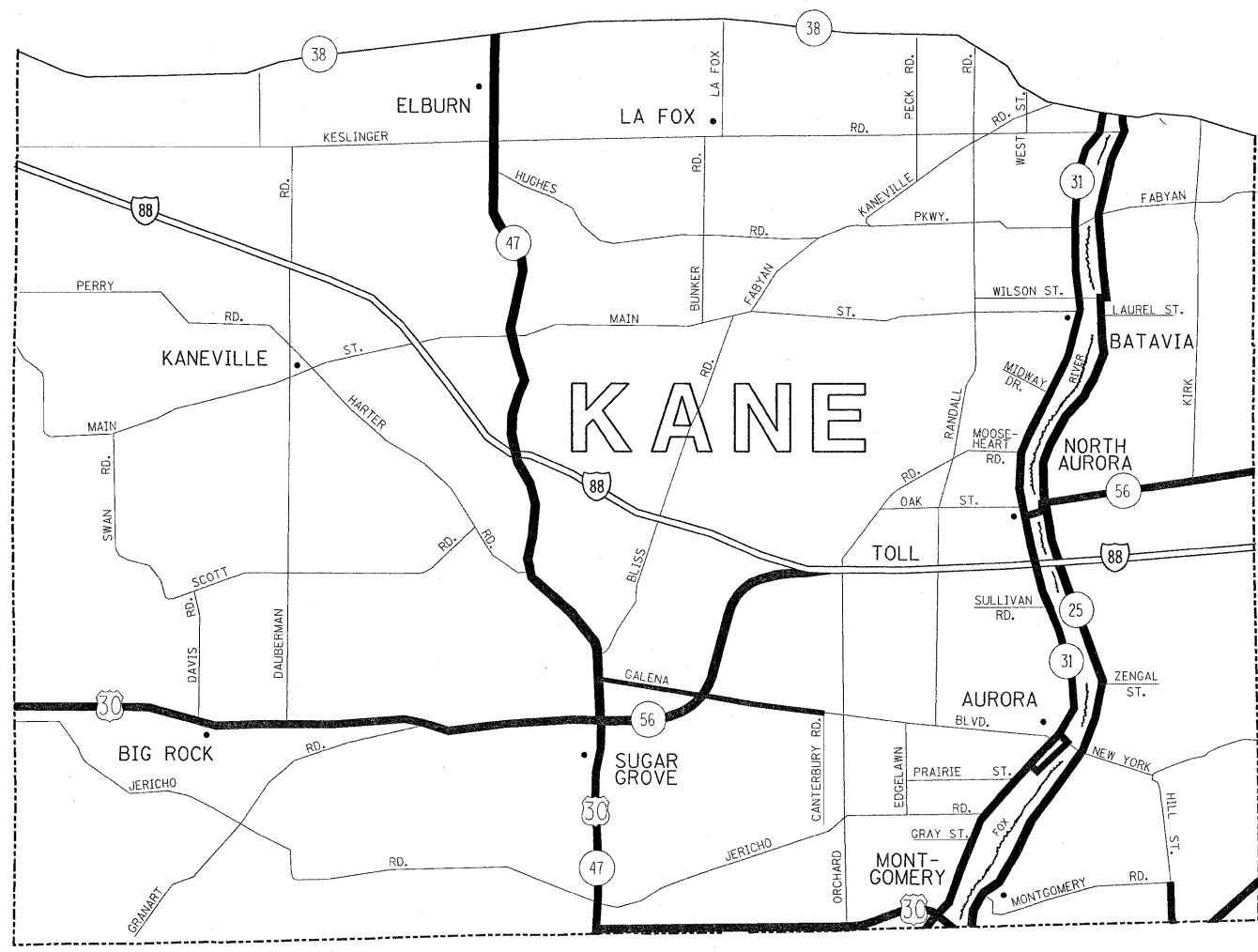
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



DISTRICT NO. 1

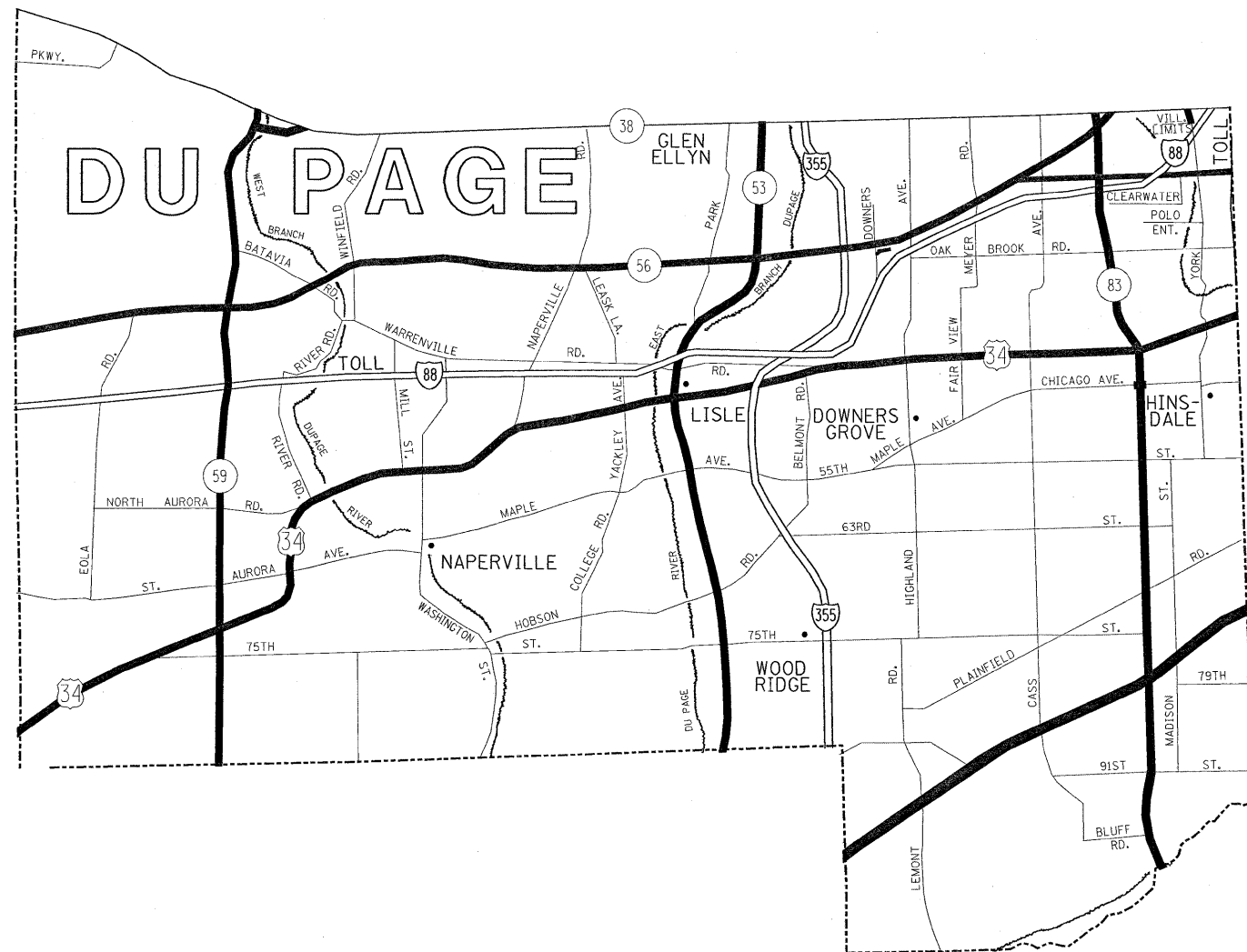
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-  FUTURE HIGHWAYS
-  VARIOUS AGENCIES HIGHWAYS

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		DATE -	REVISED -						ILLINOIS FED. AID PROJECT				



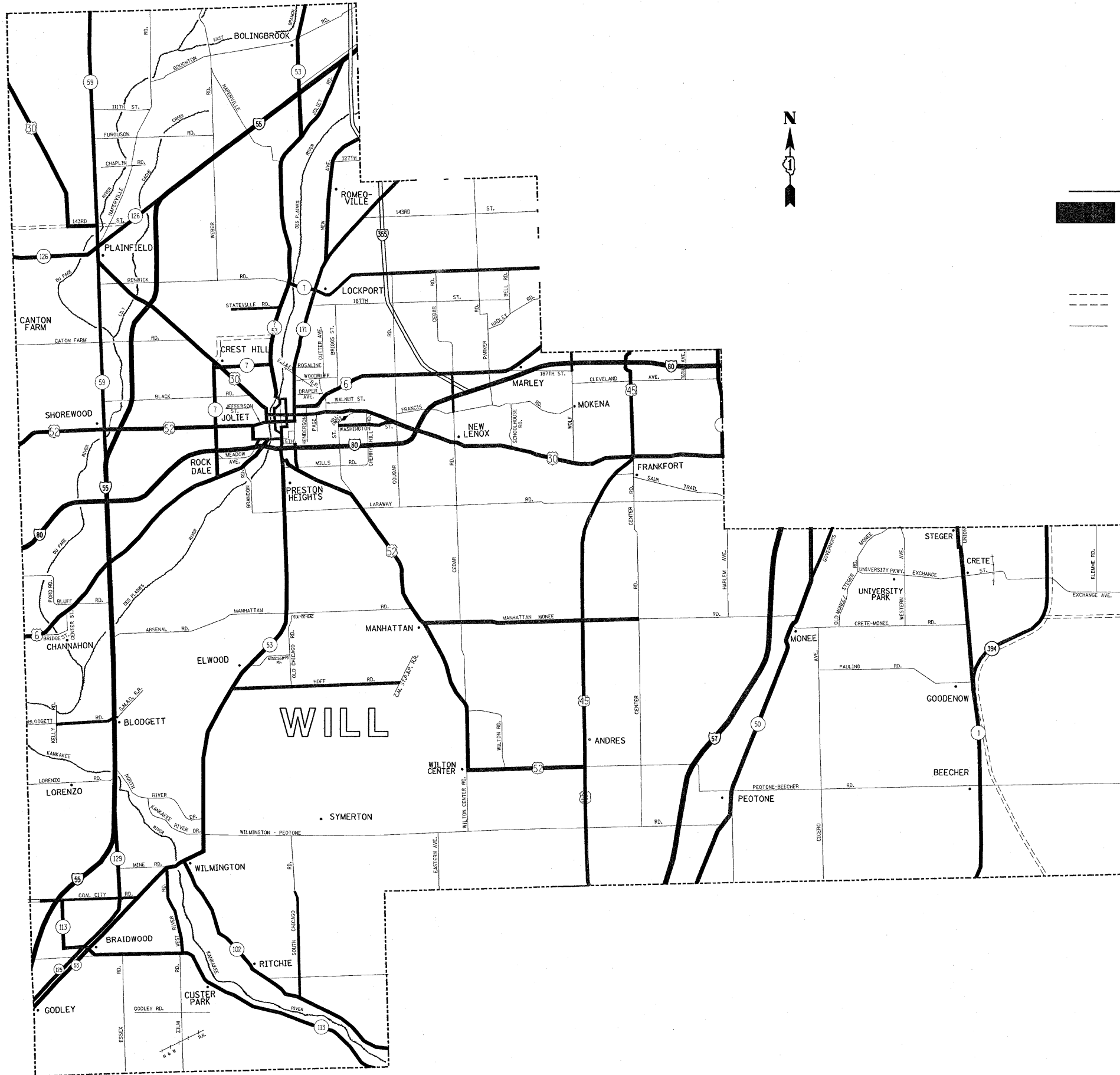
- DISTRICT NO. 1**
-  STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURIDICITION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURIDICITION
 -  FUTURE HIGHWAYS
 -  VARIOUS AGENCIES HIGHWAYS

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	DATE -	REVISED -						FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT					






- DISTRICT NO. 1**
- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
 - FUTURE HIGHWAYS
 - VARIOUS AGENCIES HIGHWAYS

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		DATE -	REVISED -								ILLINOIS FED. AID PROJECT				



DISTRICT NO. 1

-  STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
-  FUTURE HIGHWAYS
-  VARIOUS AGENCIES HIGHWAYS

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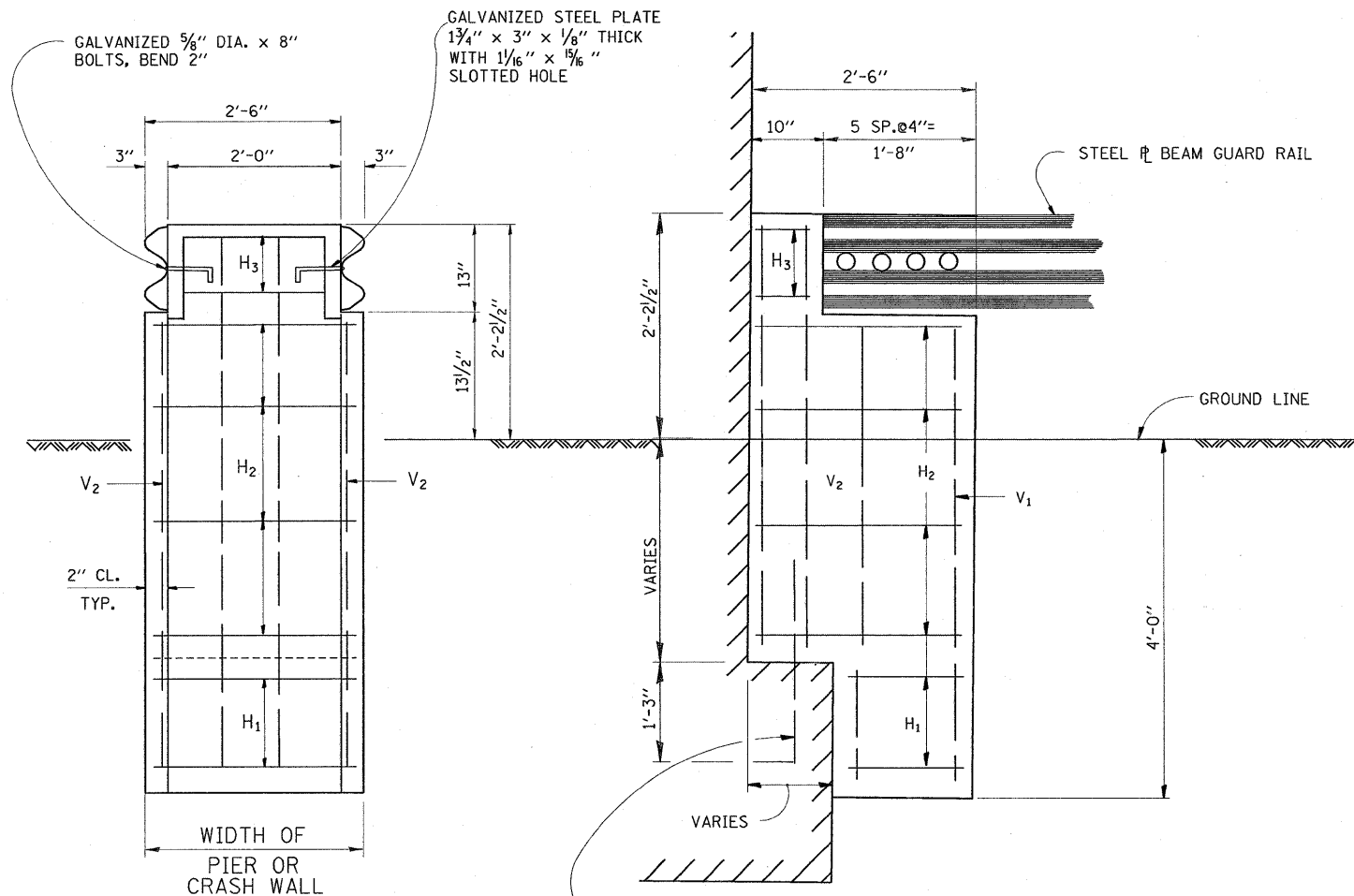
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP
WILL COUNTY**

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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2008-058 GRR	VARIOUS	21	7
CONTRACT NO. 60F16				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



GALVANIZED $\frac{5}{8}$ " DIA. x 8" BOLTS, BEND 2"

GALVANIZED STEEL PLATE $1\frac{3}{4}$ " x 3" x $\frac{1}{8}$ " THICK WITH $1\frac{1}{16}$ " x $\frac{19}{16}$ " SLOTTED HOLE

STEEL I BEAM GUARD RAIL

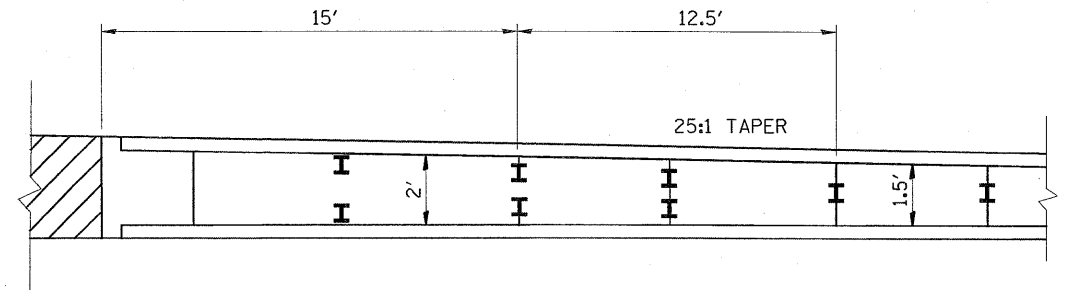
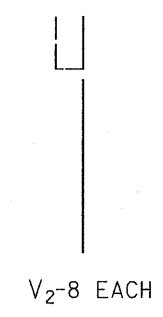
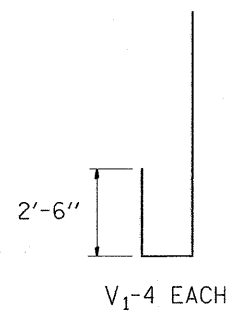
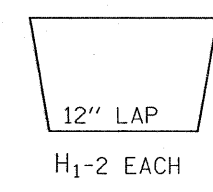
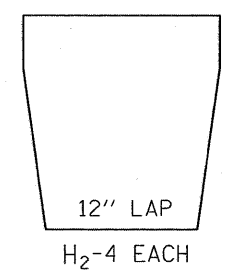
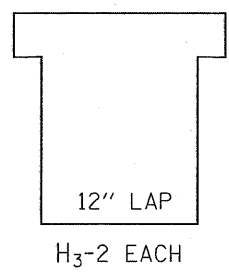
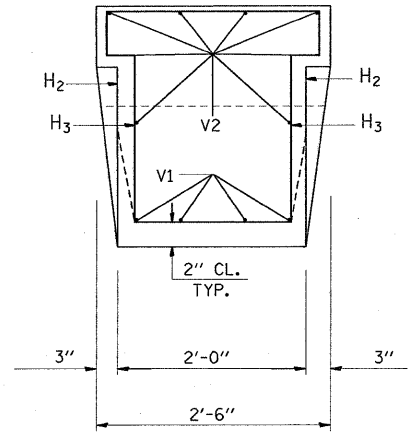
GROUND LINE

V₂

2" CL. TYP.

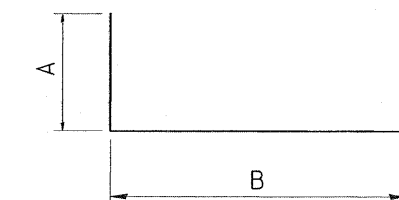
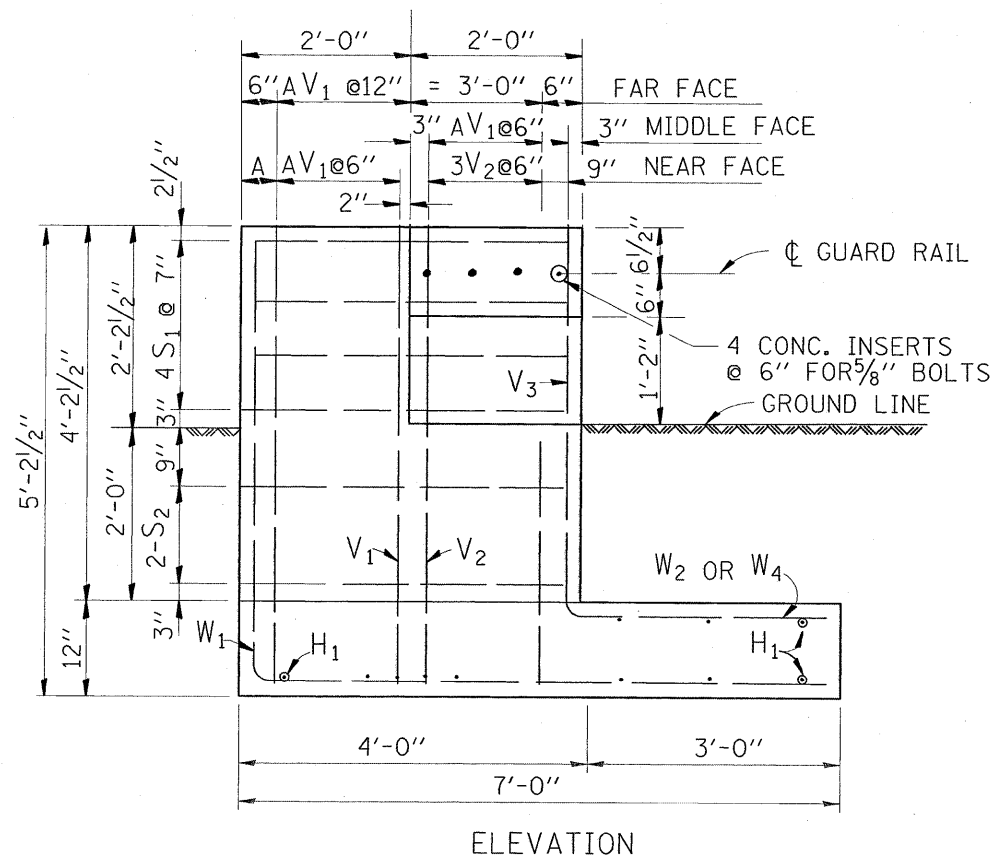
WIDTH OF PIER OR CRASH WALL

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

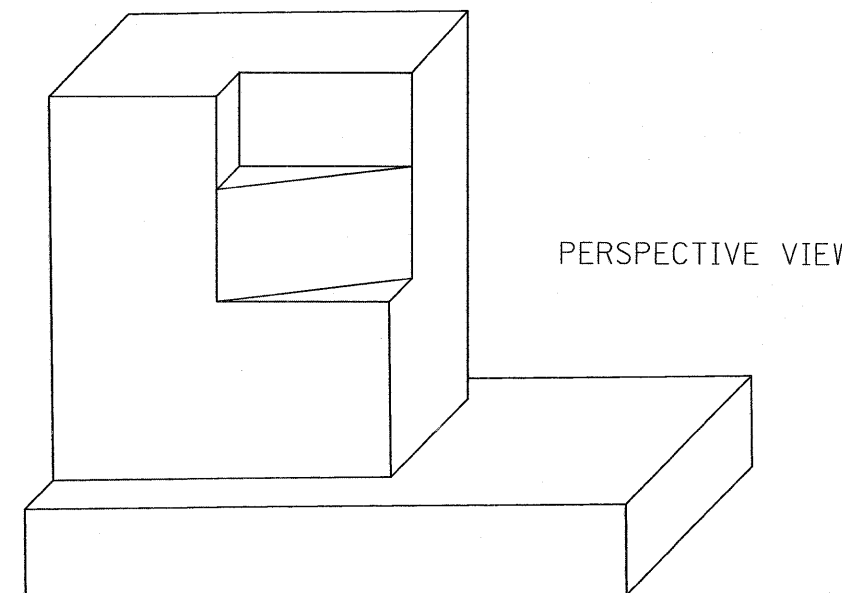
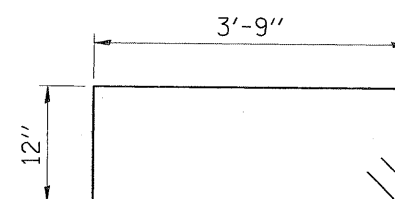
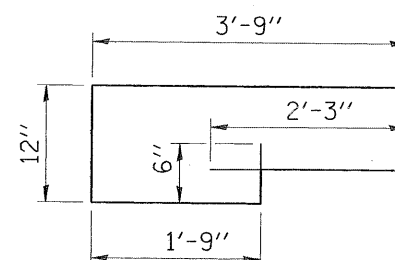


NOTES: CLASS X CONCRETE SHALL BE USED THROUGHOUT REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE NOTED

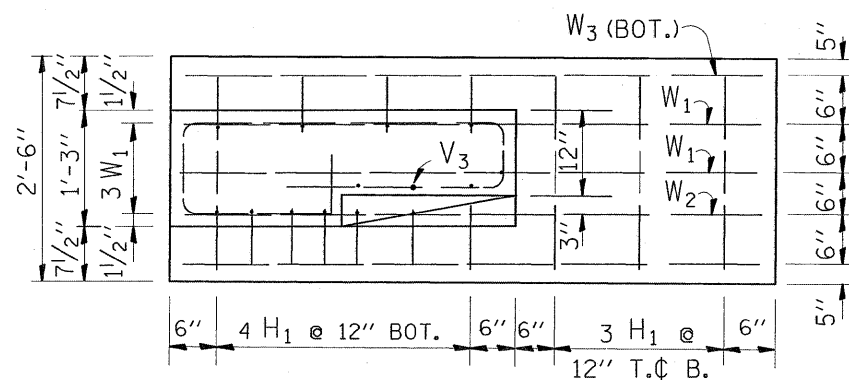
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		DRAWN - RFL	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR.	2008-058 GRR	VARIOUS	21	8
		CHECKED -	REVISED -							BM-04			
		PLOT DATE = 8/27/2008	DATE - 10-31-88										CONTRACT NO. 60F16
								FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



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"



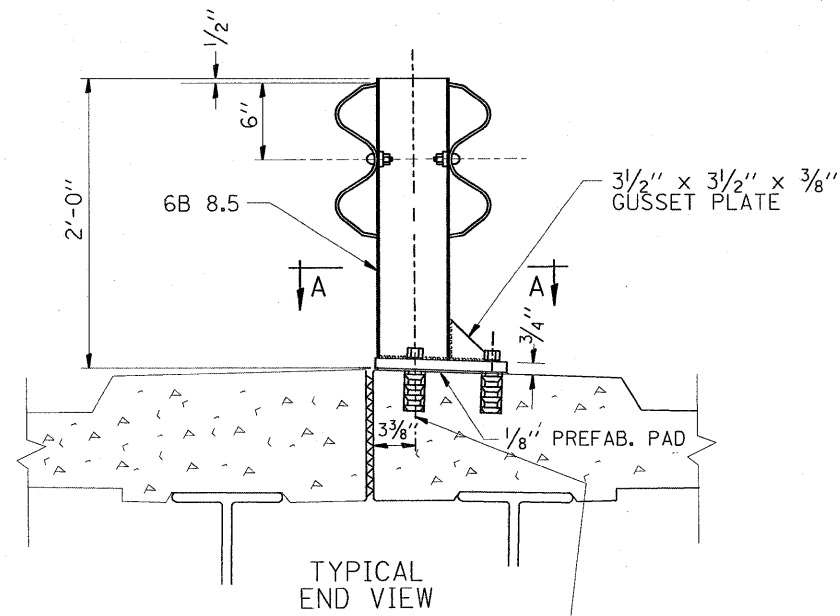
NOTES: CLASS X CONCRETE SHALL BE USED THROUGHOUT
REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE NOTED



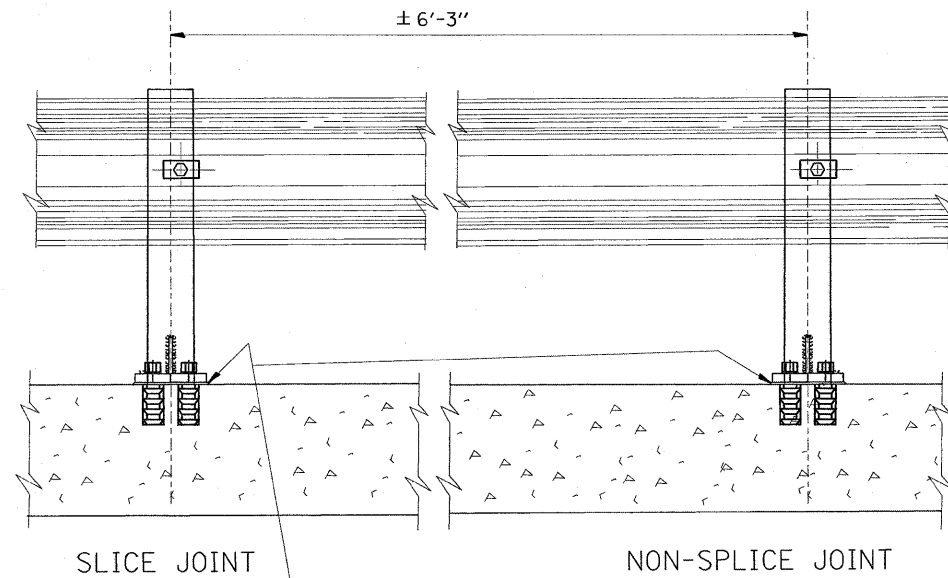
BAR SCHEDULE

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"

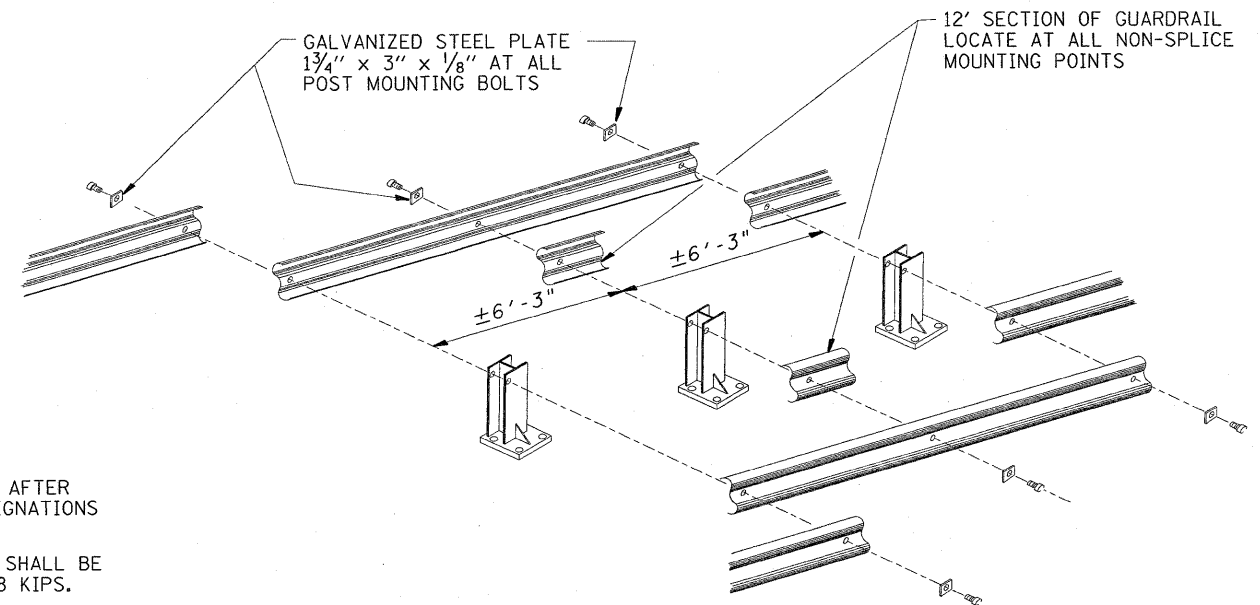
THIS SHEET IS FOR INFORMATION ONLY



7/8" GALVANIZED ANCHOR BOLTS AND SELF DRILLING EXPANSION SHELLS OR MULTI UNIT TYPE ANCHORS
1/8" HOLES THRU BASE PLATE

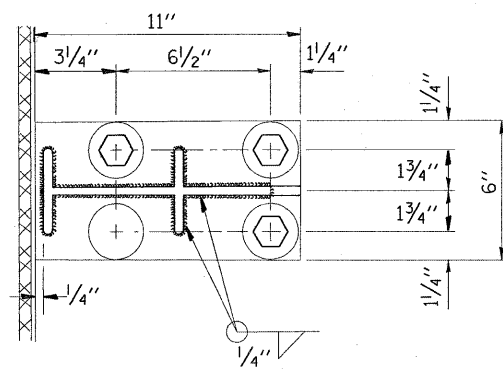


SEAL PERIMETER OF BASE OF POST TO MEDIAN WITH TWO COMPONENT NON-STAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMERS - GUN GRADE WITH PRIMER



NOTE:

DIAMOND TIPPED DRILL SHALL BE USED TO DRILL THRU REINFORCEMENT BARS



SEC. A-A

NOTE:

POSTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM DESIGNATIONS A-123 AND A-385.

TWO PERCENT (2%) OF ALL ANCHOR BOLTS SHALL BE TEST LOADED IN PLACE. MIN. TEST LOAD = 8 KIPS.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION A-153.

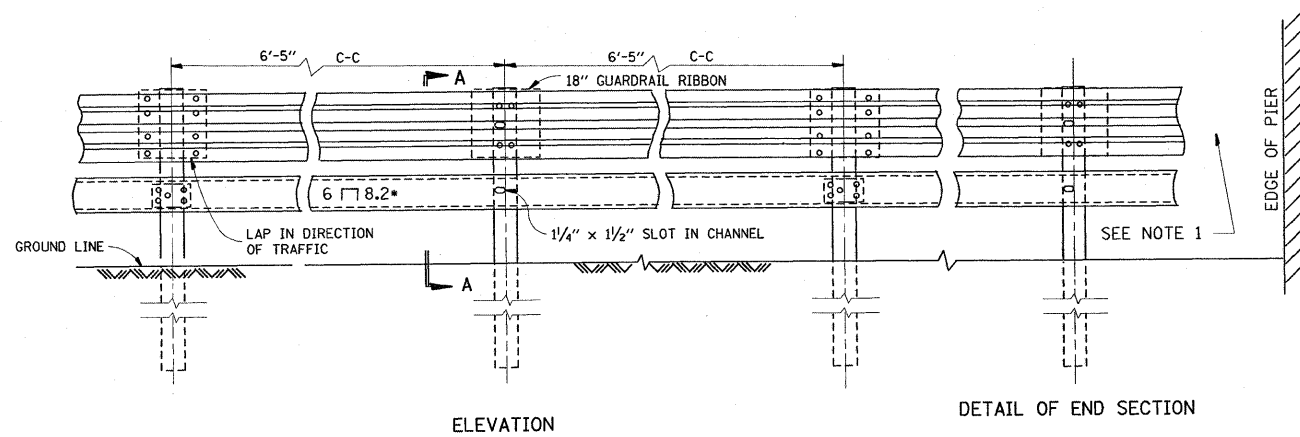
FOR MATERIAL COMPOSITION OF PREFABRICATED PAD, SEE ARTICLE 54.9(F), (BEARING AND ANCHORAGE), OF THE STANDARD SPECIFICATIONS.

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

IF ONE ANCHOR BOLT FAILS DURING TEST, TWO OTHER ANCHOR BOLTS SHALL BE TESTED. TESTING EQUIPMENT CAN BE OBTAINED FROM BOLT COMPANIES.

THIS SHEET IS FOR INFORMATION ONLY

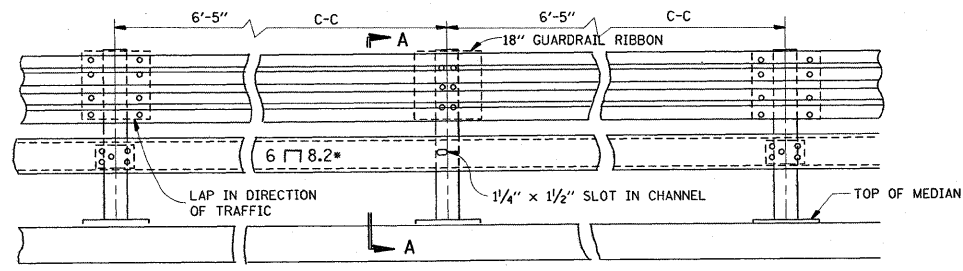
FILE NAME = W:\diststa\22x34\bm05.dgn	USER NAME = mdyje	DESIGNED - DRAWN - RFL	REVISED - R. RITCHIE 05-02-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL DETAIL FOR CENTER LONGITUDINAL JOINT GUARDRAIL JOINT			F.A. . RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
	PLOT SCALE = 50,000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	VAR.	2008-058 GRR	VARIOUS	21	11
	PLOT DATE = 8/27/2008	DATE - 10-31-88	REVISED -									BM-05	CONTRACT NO. 60F16		
												FED. ROAD DIST. NO. 1	ILLINOIS/FED. AID PROJECT		



ELEVATION

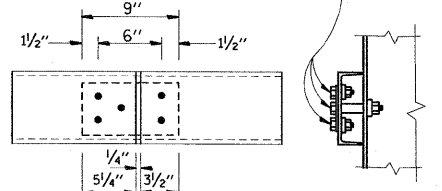
DETAIL OF END SECTION

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

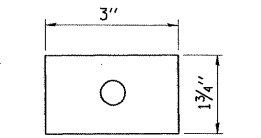


ELEVATION

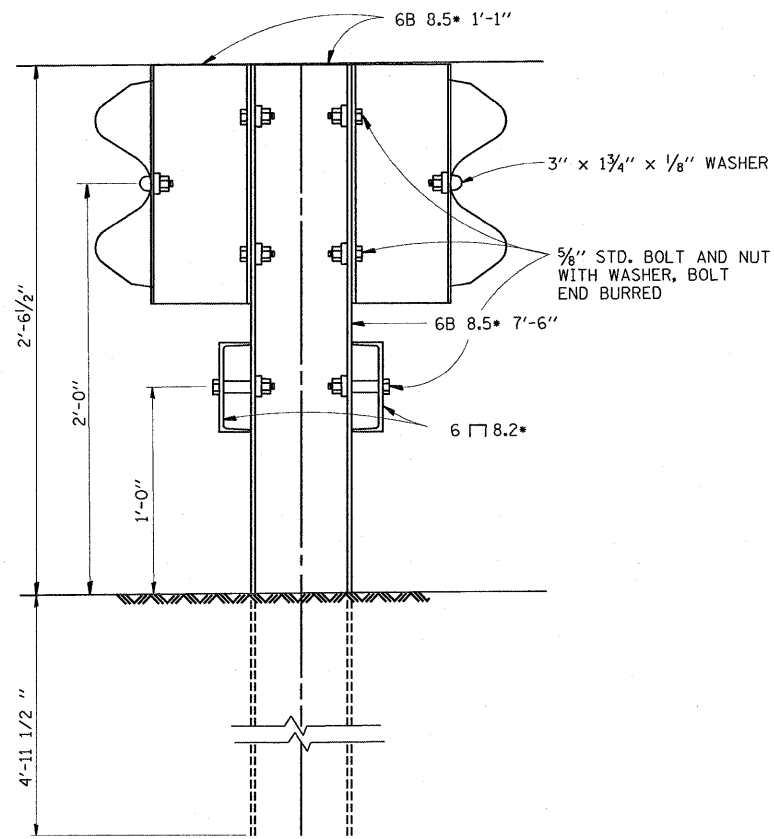
5/8" STD. BOLT AND NUT
WITH WASHER, BOLT
END BURRED



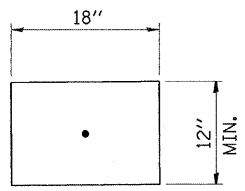
CHANNEL SPLICE
PLATE 8 3/4" x 4 1/2" x 1/4"



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

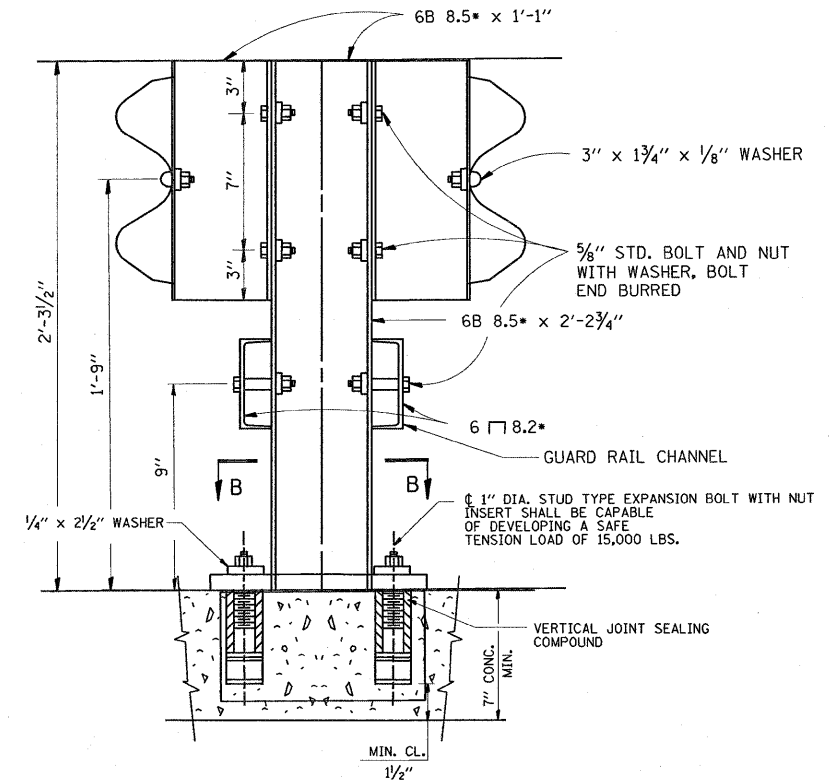


SECTION A-A



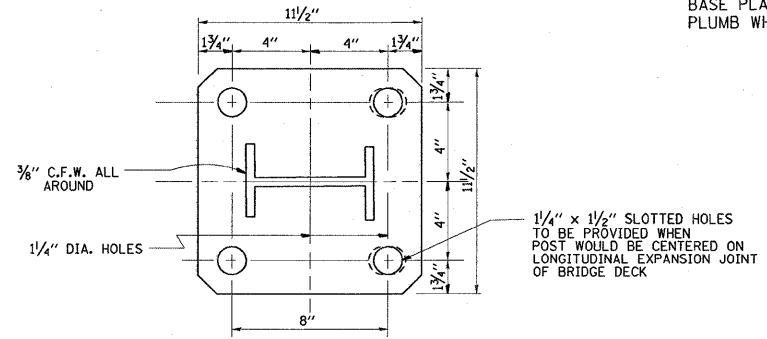
18" GUARDRAIL ELEMENT SPLICE

NOTE:
FOR DETAIL OF RAIL ELEMENT, RAIL SPLICING, BOLT,
AND NUT, SEE STATE STANDARD 2230.
A 1 3/8" 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.



SECTION A-A
ANCHORAGE DETAIL

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.

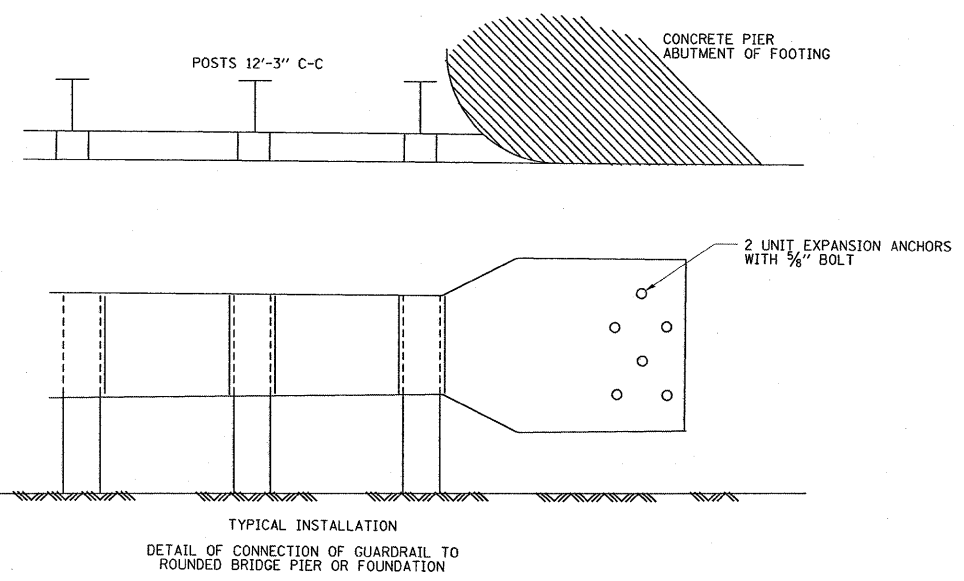
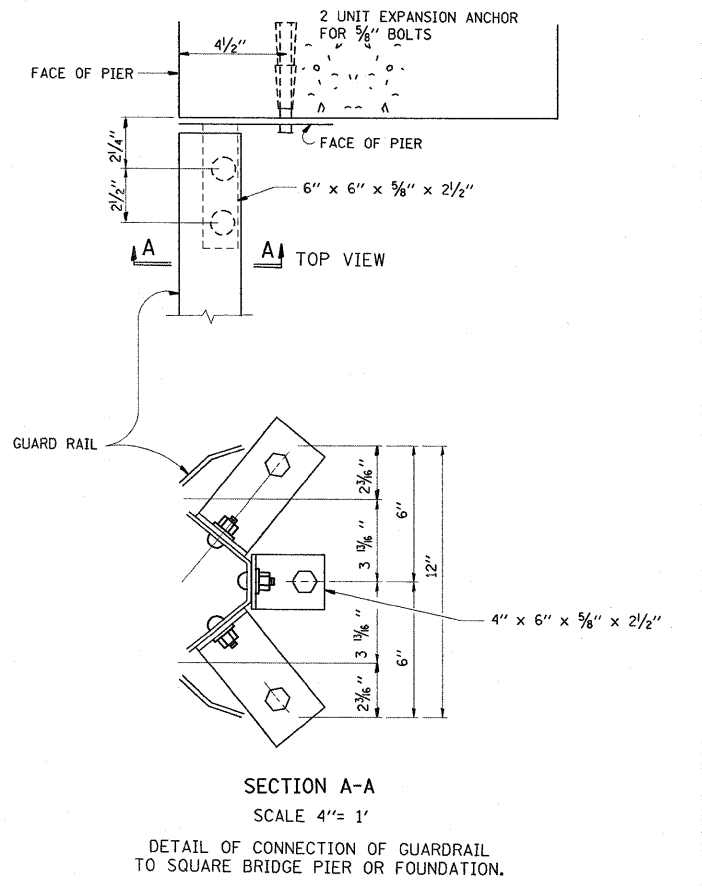
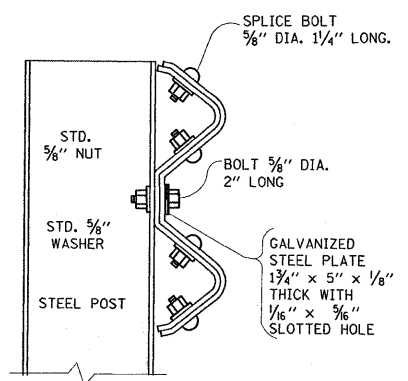
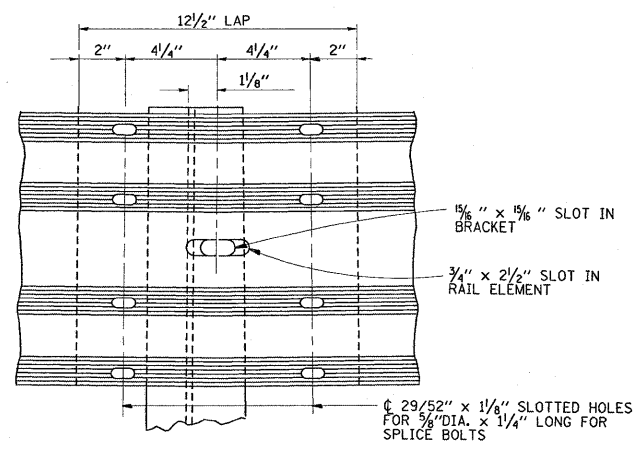
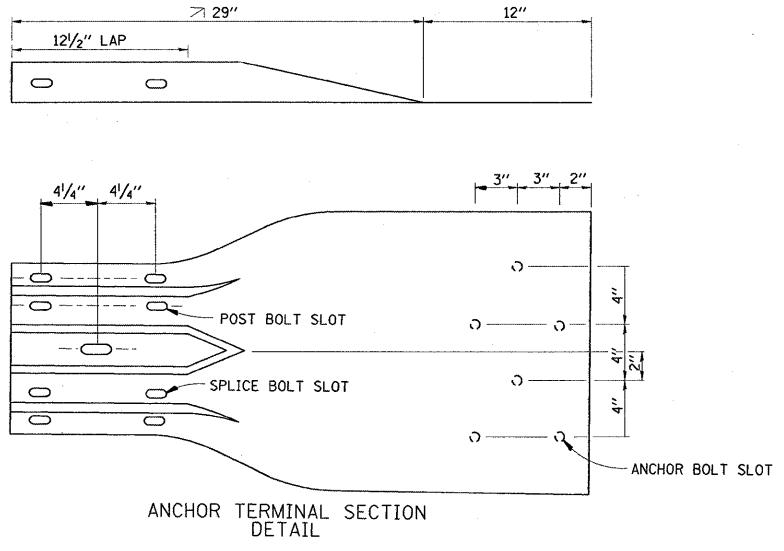


RAIL POST BASE PLATE
R 11 1/2" x 1 1/4" x 1 1/2"

SECTION B-B

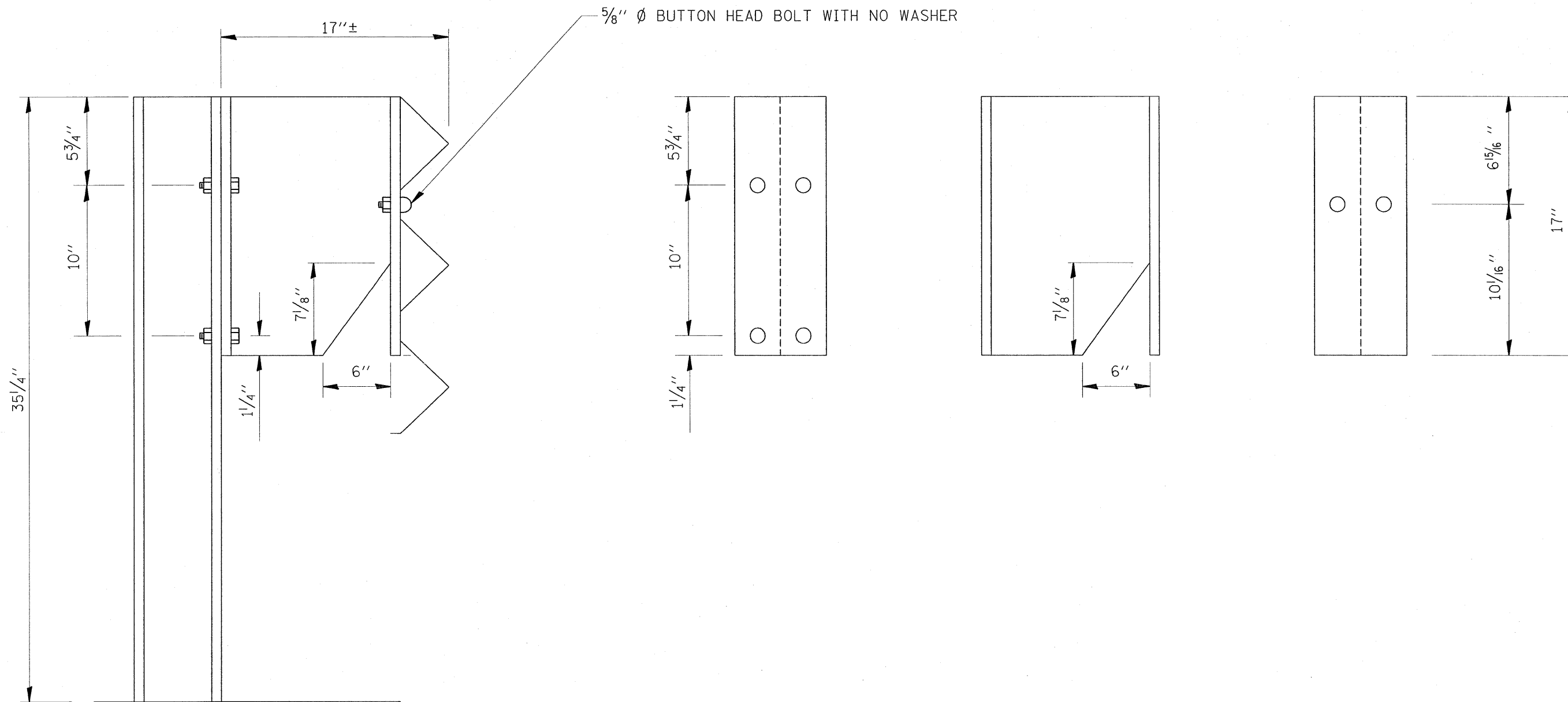
THIS SHEET IS FOR INFORMATION ONLY

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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR. 2008-058 GRR	VARIOUS	21	12	
	PLOT DATE = 8/27/2008	DATE -	REVISED -						BM-06				CONTRACT NO. 60F16
									FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



THIS SHEET IS FOR INFORMATION ONLY

FILE NAME = W:\diststd\22x34\bm07.dgn	USER NAME = midyjo	DESIGNED - DRAWN - RFL	REVISED - R. RITCHIE 05-02-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF GUARDRAIL SUPPORT AND END ANCHORAGE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 50,000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR	2008-058 GRR	VARIOUS	21	13
	PLOT DATE = 8/27/2008	DATE - 10-31-88	REVISED -						BM-07				CONTRACT NO. 60F16
									FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT			



FILE NAME = c:\projects\m06188\main_t.bb.dgn	USER NAME = midyja	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
	PLOT SCALE = 48,9999' / IN.		
	PLOT DATE = 8/27/2008		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

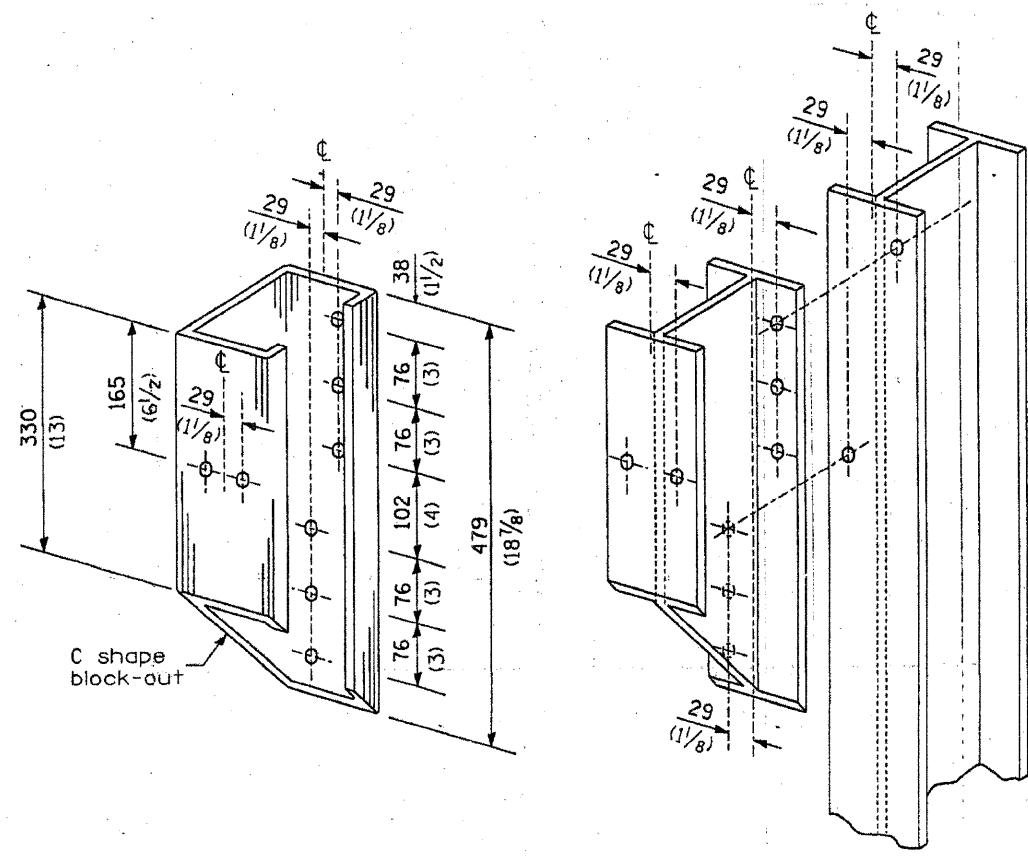
**DETAIL THREE BEAM GUARDRAIL
WITH MODIFIED OFFSET BLOCK**

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

F.A. RTE. VAR	SECTION 2008-058 GRR	COUNTY VARIOUS	TOTAL SHEETS 21	SHEET NO. 14
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60F16	

F. A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VHR 2008-0580	VAE		21	15
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract 60F16



STEEL BLOCK-OUT AND
STEEL POST DETAILS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STEEL PLATE BEAM GUARDRAIL
STEEL BLOCK-OUT DETAIL

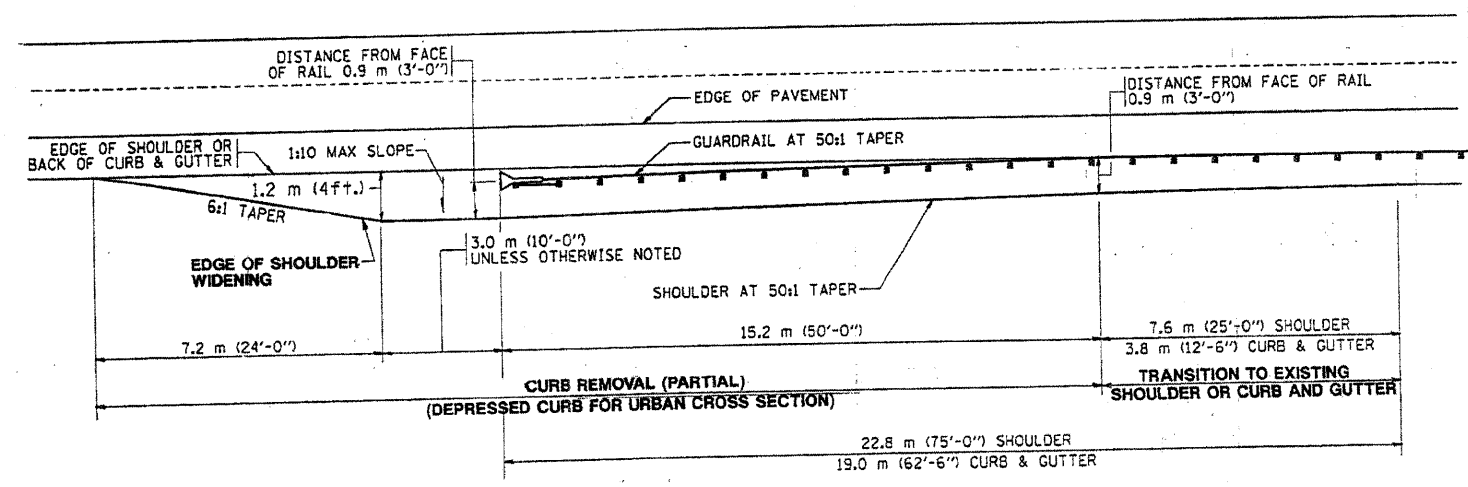
SCALE: VERT. _____
HORIZ. _____

DATE _____

DRAWN BY _____
DESIGNED BY _____
CHECKED BY _____

F. & A. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VHR 2108-059 CURB	VARIOUS		21	16
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract 60F16



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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CURB REMOVAL (PARTIAL) FOR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL

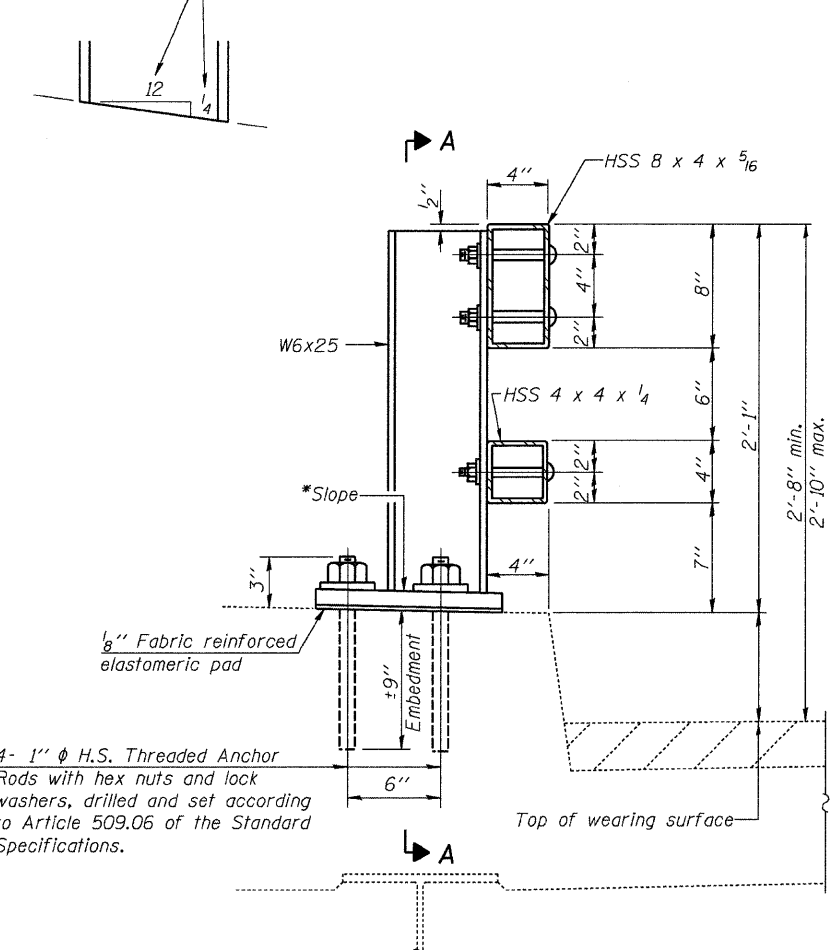
SCALE: VERT. _____
 HORIZ. _____
 DATE _____

DRAWN BY _____
 DESIGNED BY _____
 CHECKED BY _____

S. A. H. INDUSTRIES, INCORPORATED

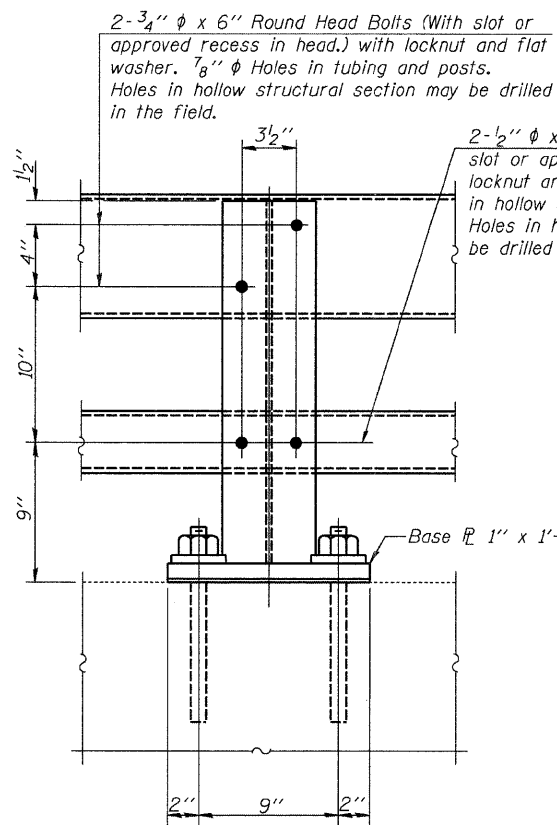
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*Cut bottom end of post to curb slope.



4- 1" ϕ H.S. Threaded Anchor Rods with hex nuts and lock washers, drilled and set according to Article 509.06 of the Standard Specifications.

SECTION AT RAIL POST

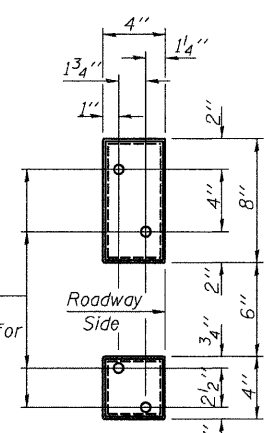


2-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer. 7/8" ϕ Holes in tubing and posts. Holes in hollow structural section may be drilled in the field.

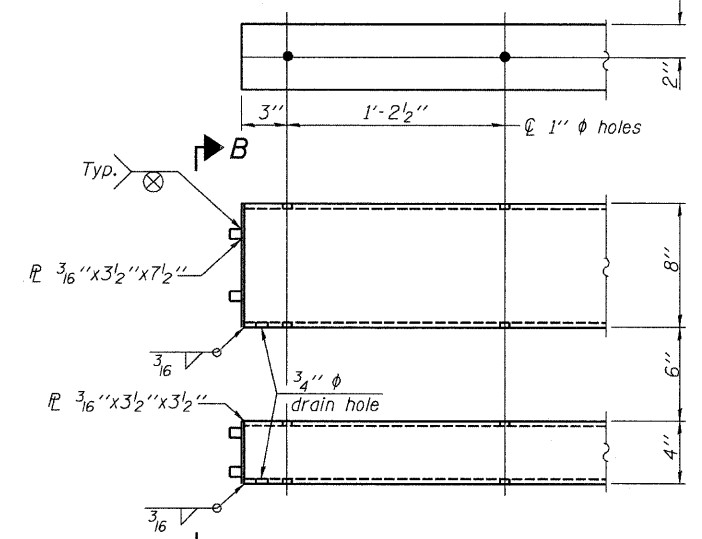
2-1/2" ϕ x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer. 5/8" ϕ Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.

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.

SECTION A-A



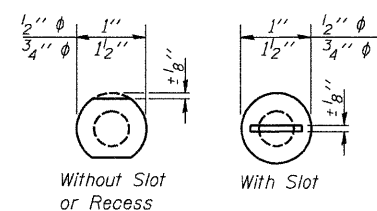
VIEW B-B



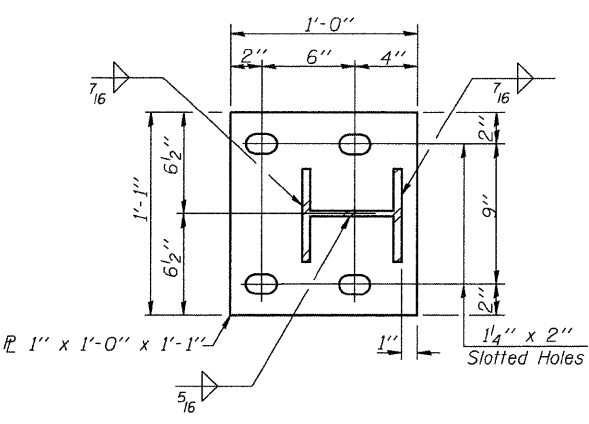
END OF RAIL DETAILS

Notes:

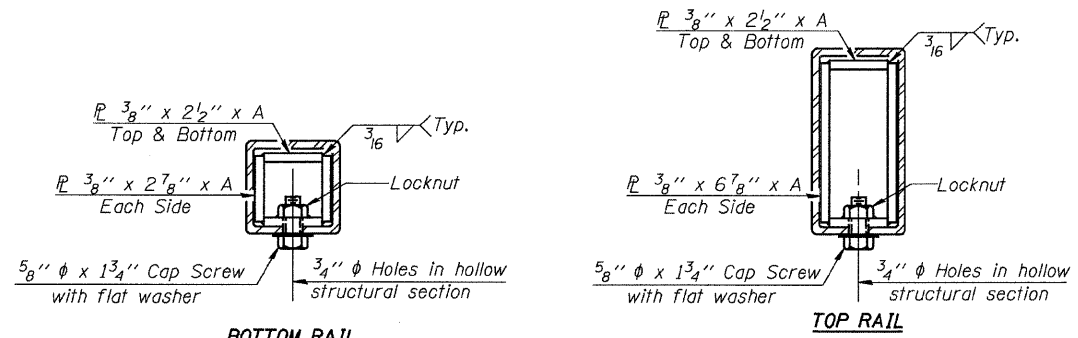
All field drilled holes shall be coated with an approved zinc rich paint before erection.
Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. 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.



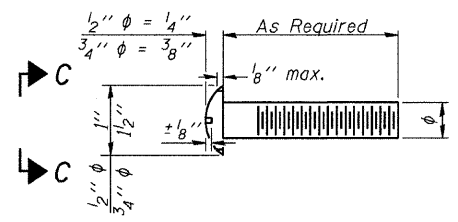
VIEW C-C



BASE PLATE DETAIL



SECTIONS AT RAIL SPLICE



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

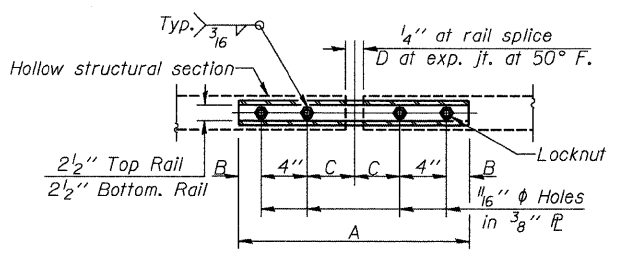
SPLICE DIMENSIONS

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"	—

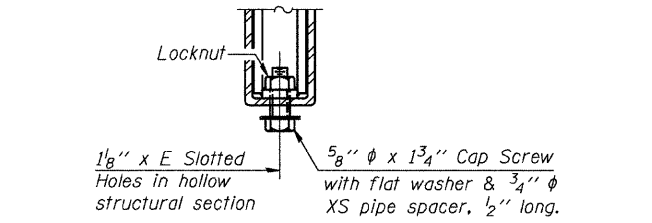
T=Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	



PLAN-BOTTOM SPLICE TYPICAL



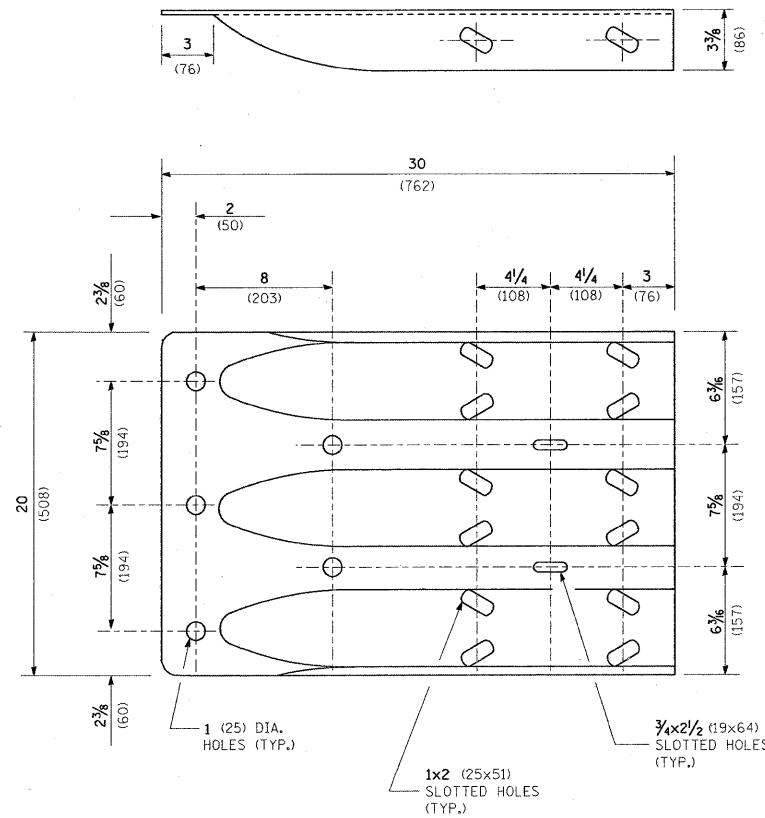
RAIL SPLICE CONNECTION AT EXPANSION JT.

DESIGNED	200
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	ENGINEER OF BRIDGES AND STRUCTURES

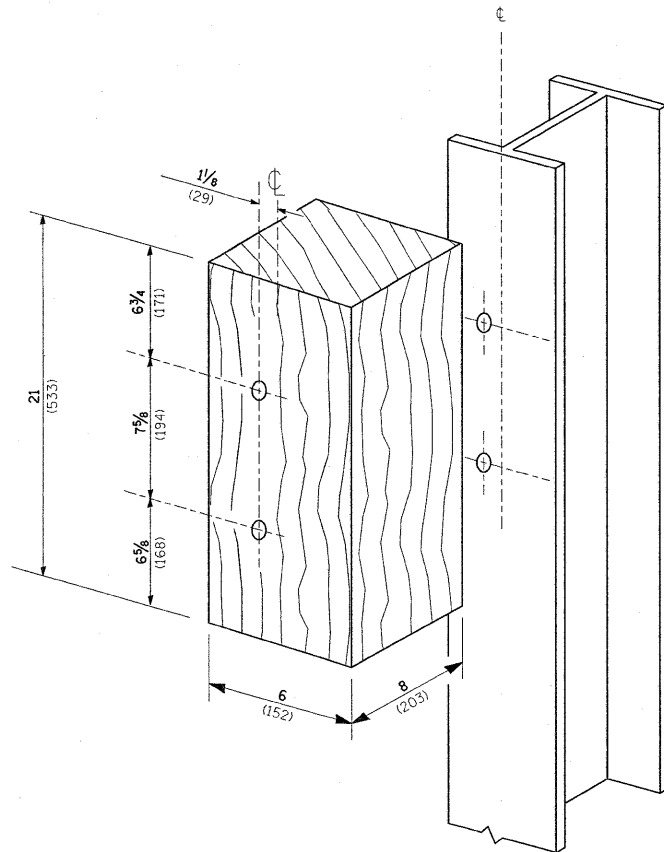
R-31 5-16-08 (6'-3" Maximum Post Spacing)

STEEL RAILING, TYPE 2399
STRUCTURE NO.

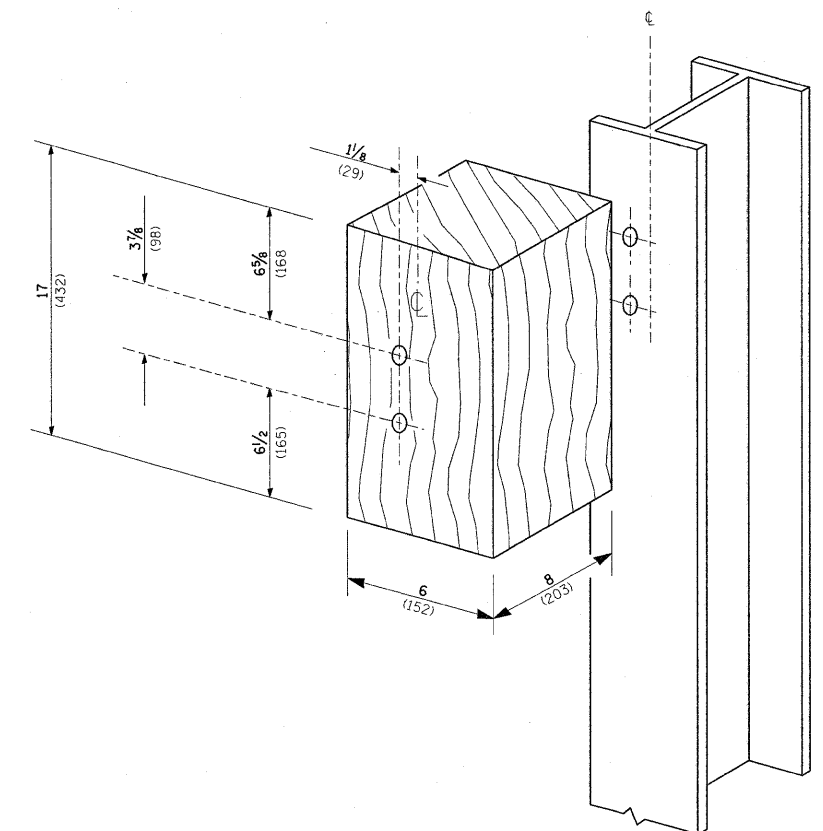
SHEET NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	VAR	2008-058 GRR	VARIOUS	21	17
SHEETS			CONTRACT NO. 60F16		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			



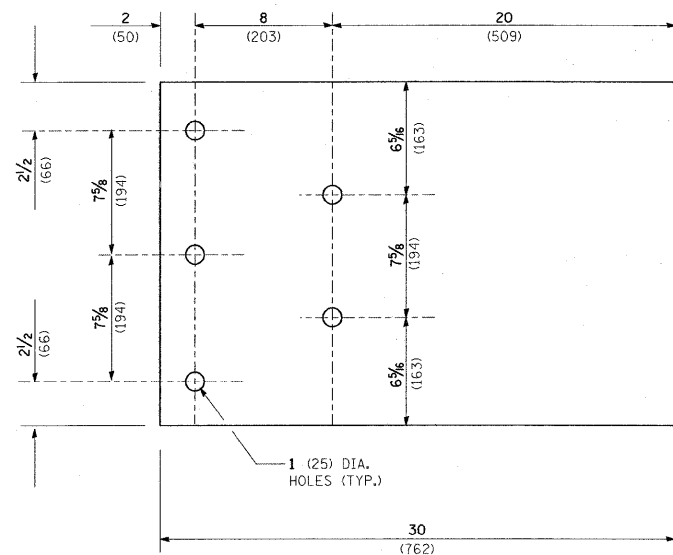
THRIE BEAM END SHOE DETAIL



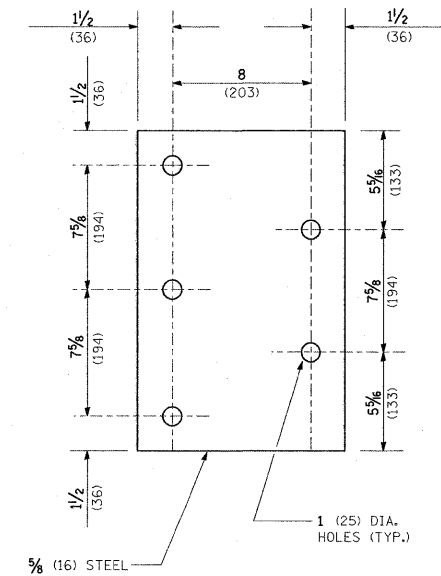
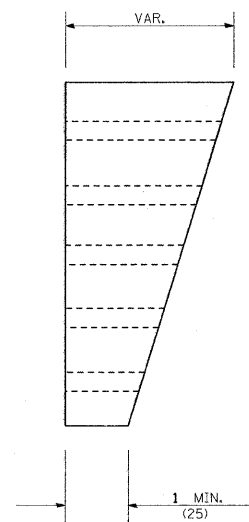
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



PARAPET WOOD BLOCK-OUT DETAIL

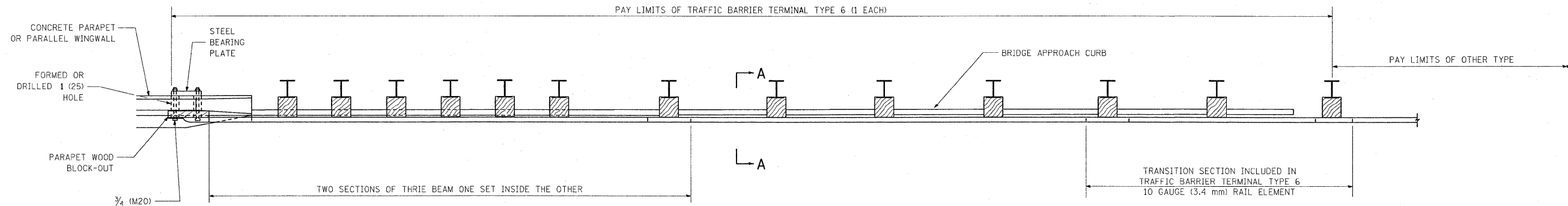


PARAPET STEEL BEARING PLATE DETAIL

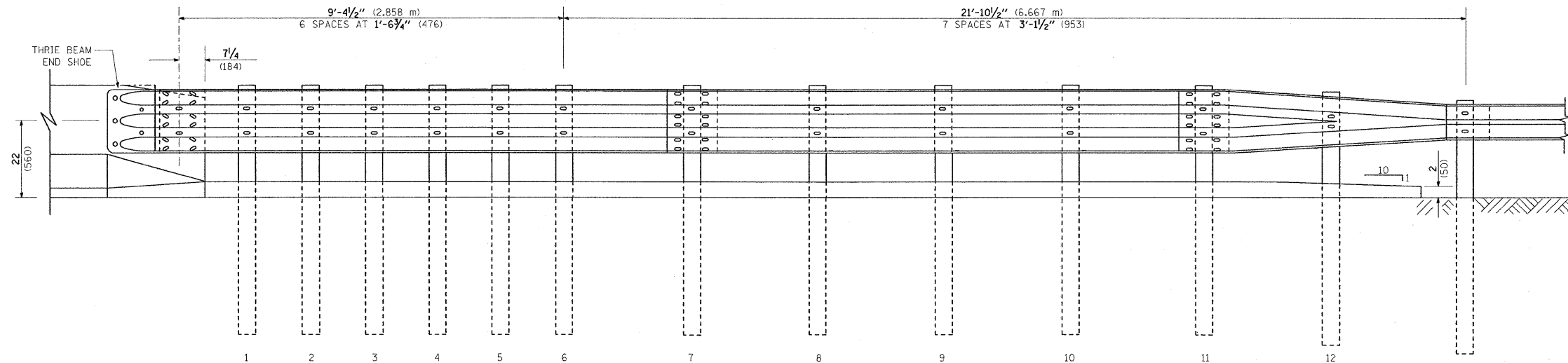
(5 EACH INDIVIDUAL 5x5x5/8 (125x125x16) STEEL PLATES WITH CENTERED 1 (25) HOLES MAY BE SUBSTITUTED FOR THE PLATE SHOWN.)

FILE NAME = W:\distsstd\22x34\bm22.dgn	USER NAME = mcdjja	DESIGNED -	REVISED - STATE STANDARD:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPE 6 TERMINAL FOR USE WITH 21" HIGH SPBGR		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	631031-05 - 02/19/2008				VAR.	2008-058 GRR	VARIOUS	21	18
		CHECKED -	REVISED -					BM 22			
		DATE -	REVISED -								
					SCALE: NONE	SHEET NO. 3 OF 3 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

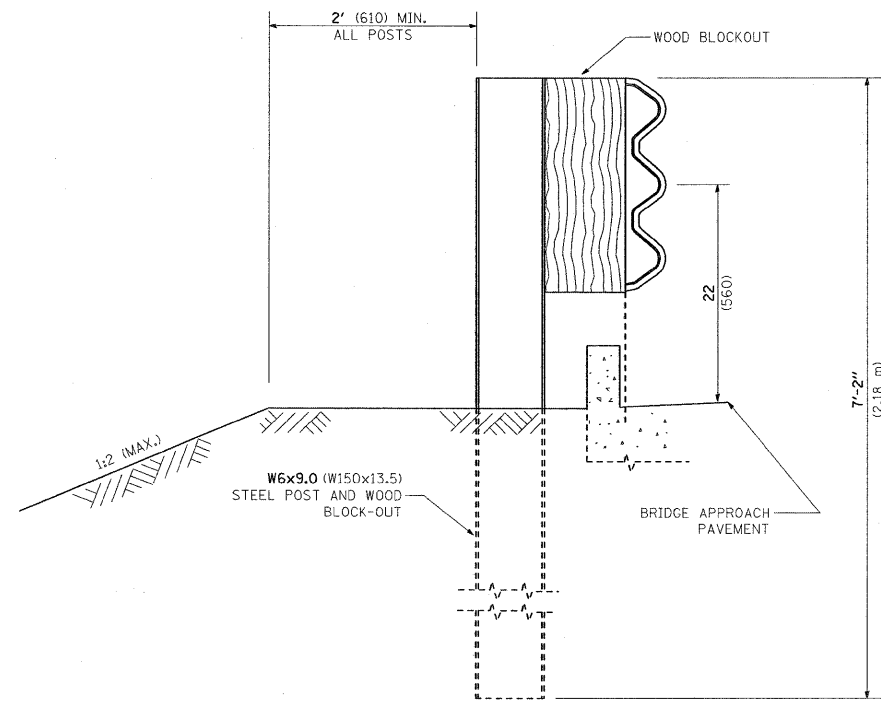
PARAPET OR WINGWALL



PLAN



ELEVATION



SECTION A-A

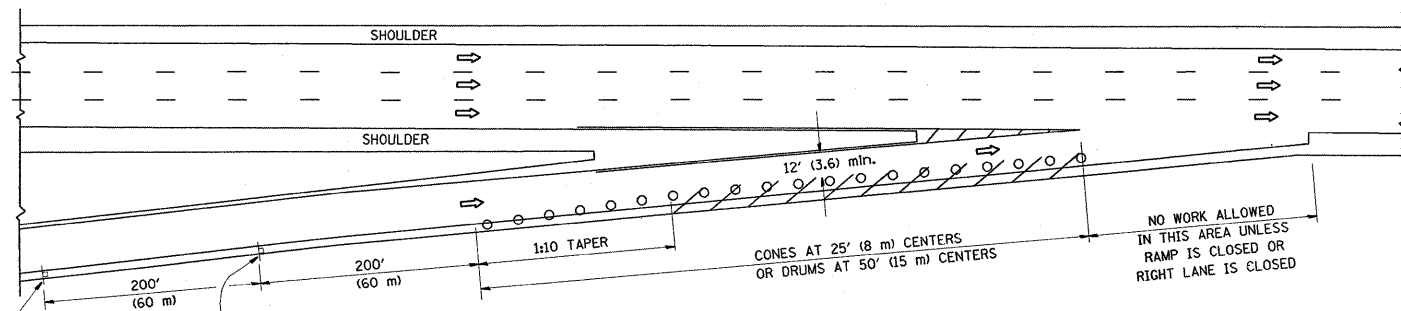
GENERAL NOTES

- TO BE USED WHEN CONNECTING TO EXISTING GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
- SEE STANDARD 630001 FOR DETAILS OF GUARDRAIL NOT SHOWN.
- THRIE BEAM RAIL SHALL BE BOLTED TO BLOCK-OUT AT ALL POSTS.
- SEE STANDARD 420401 FOR DETAILS OF BRIDGE APPROACH PAVEMENT.
- 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.

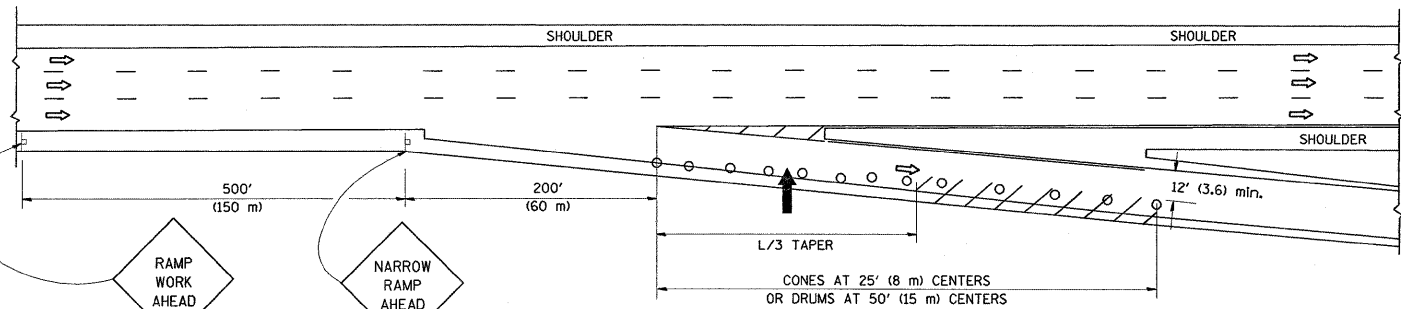
FILE NAME = W:\diststd\22x34\bm22.dgn	USER NAME = msdyje	DESIGNED -	REVISED - STATE STANDARD:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPE 6 TERMINAL FOR USE WITH 21" HIGH SPBGR		F.A. -	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN -	631031-05 - 02/19/2008				VAR.	2008-058 GRR	VARIOUS	21	20
PLOT DATE = 8/27/2008	CHECKED -	REVISED -	REVISED -	SCALE: NONE		SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		
DATE -	REVISI	REVISI	REVISI						CONTRACT NO.		

PARTIAL RAMP CLOSURE DETAILS

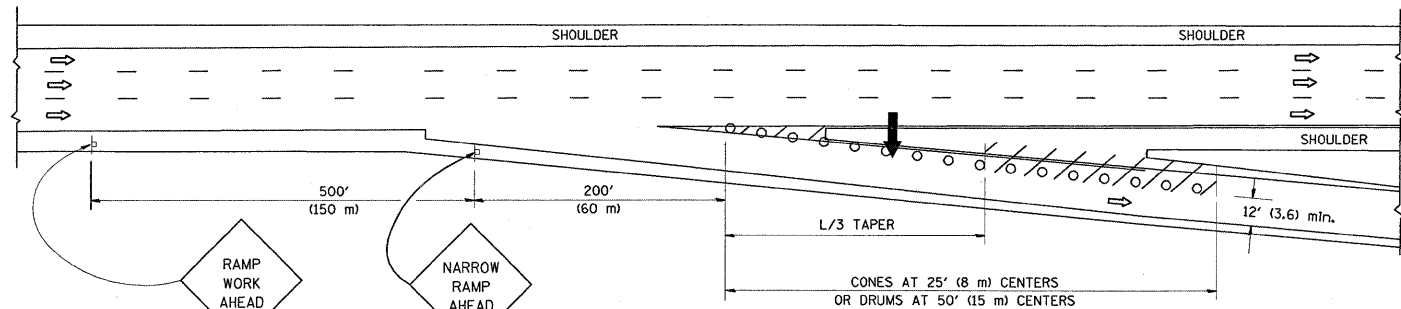
SHOULDER CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

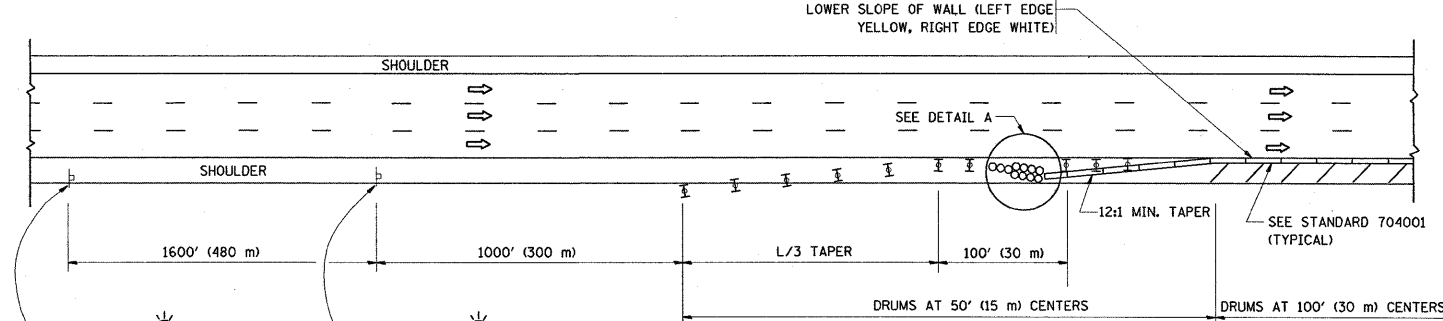
SYMBOLS

- ARROWBOARD
- 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

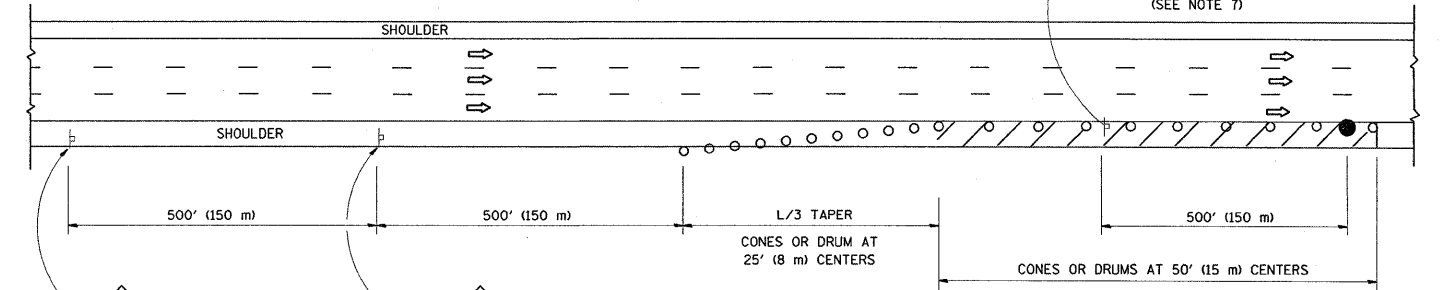
GENERAL NOTES

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.

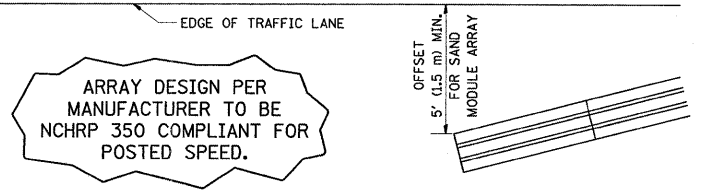


PERMANENT SHOULDER CLOSURE



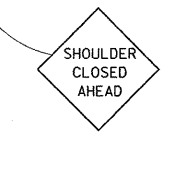
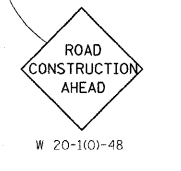
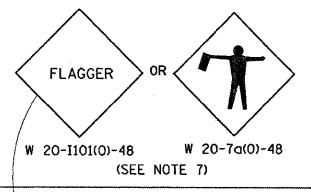
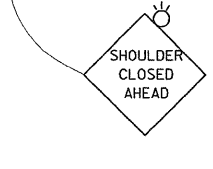
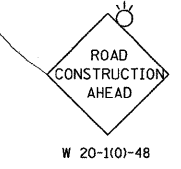
DAYTIME SHOULDER CLOSURE

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



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

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



FILE NAME = W:\disttd\22x34\1017.dgn	USER NAME = mcdjja	DESIGNED - DRAWN - D.W.S.	REVISED - J.A.F. 12-02 REVISED - 04-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES	F.A. RTE. VAR	SECTION 2008-058 GRR TC-17	COUNTY VARIOUS	TOTAL SHEETS 21	SHEET NO. 21	
PLOT SCALE = 50,0000' / IN.		CHECKED -	REVISED - J.A.F. 12-06		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 60F16		
PLOT DATE = 8/28/2008		DATE - 11-96	REVISED - S.P.B. 01-07		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						