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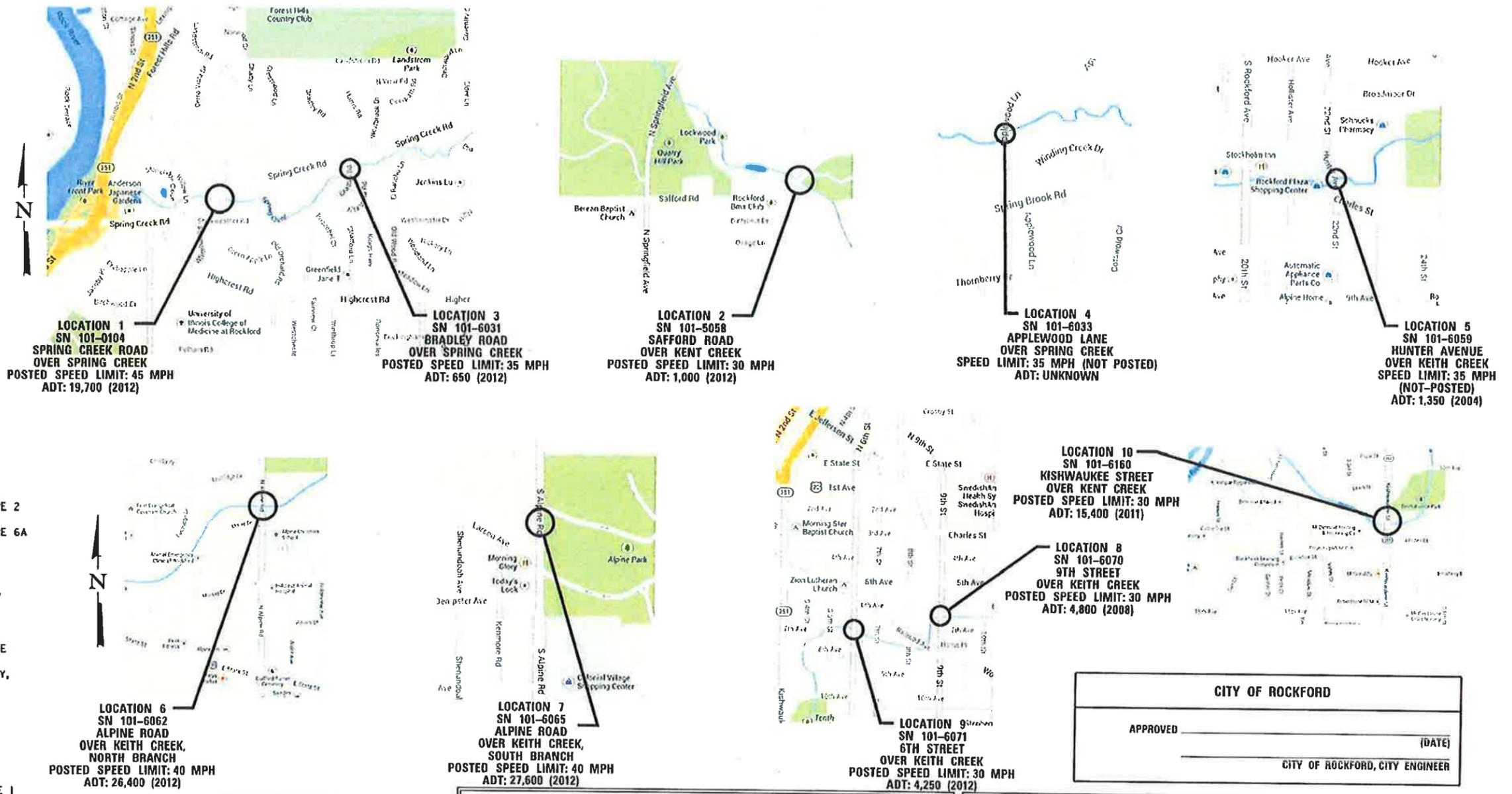
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LIST OF STATE STANDARDS

- | | |
|-----------|---|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 606001-05 | CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER |
| 630001-10 | STEEL PLATE BEAM GUARDRAIL |
| 630101-09 | GUARDRAIL MOUNTED ON EXISTING CULVERTS |
| 630301-06 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631011-09 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 63103208 | TRAFFIC BARRIER TERMINAL, TYPE 6A |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT |
| 701006-05 | OFF-RD OPERATIONS, 2L, 2W, 15" TO 24" FROM PAVEMENT EDGE |
| 701101-04 | OFF-RD OPERATIONS, MULTILANE, 15" TO 24" FROM PAVEMENT EDGE |
| 701201-04 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >45 MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701801-05 | SIDEWALK, CORNER OR CROSSWALK CLOSURE |
| BLR 23-4 | TRAFFIC BARRIER TERMINAL TYPE 1 |

CITY OF ROCKFORD

VARIOUS BRIDGE RAILING REPAIRS, VARIOUS LOCATIONS



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STRUCTURAL ENGINEER'S SIGN & SEAL

Robert G. Davies

ROBERT G. DAVIES, S.E., P.E.

12/17/2013
DATE

11/30/2014
EXPIRES

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PROFESSIONAL ENGINEER'S SIGN & SEAL

Kevin M. Arft

KEVIN M. ARFT, P.E.

12/17/2013
DATE

11/30/2015
EXPIRES

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CITY OF ROCKFORD

APPROVED _____ (DATE)

CITY OF ROCKFORD, CITY ENGINEER

GENERAL NOTES AND SPECIAL PROVISIONS:

- UNLESS NOTED OTHERWISE HEREIN, THE MOST RECENT VERSION OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, INCLUDING THE MOST RECENT VERSION OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS SHALL GOVERN EXECUTION OF THIS PROJECT, INCLUDING THE GENERAL REQUIREMENTS IN DIVISION 100.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM FIELD OBSERVATIONS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE PLANS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTIONS, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
- DISPOSAL OF ALL SURPLUS AND EXCAVATED MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO EXTRA COMPENSATION SHALL BE ALLOWED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MIGHT NOT BE SHOWN ON THE PLANS. ANY UTILITY PROPERTY DAMAGED DURING THE CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- ANY TEMPORARY EROSION CONTROL ITEMS REQUIRED, AS DETERMINED BY THE ENGINEER, SHALL CONFORM TO HIGHWAY STANDARD 280001-06. THE COST WILL BE INCLUDED IN THE UNIT BID PRICES OF THE ITEMS IN THE CONTRACT.
- GUARDRAIL REMOVAL:
THE EXECUTION, MEASUREMENT AND PAYMENT OF GUARDRAIL REMOVAL WILL CONFORM TO SECTION 632 OF THE STANDARD SPECIFICATIONS AND THE DETAILS IN THE PLANS. THE REMOVAL OF EXISTING GUARDRAIL TERMINALS IS INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR THIS ITEM.
- STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS:
THE EXECUTION, MEASUREMENT AND PAYMENT OF STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS WILL CONFORM TO SECTION 630 OF THE STANDARD SPECIFICATIONS, THE DETAILS IN THE PLANS AND HIGHWAY STANDARD 630001-10.
- ALUMINUM RAILING, TYPE L:
THE EXECUTION, MEASUREMENT AND PAYMENT OF ALUMINUM RAILING, TYPE L WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 509 OF THE STANDARD SPECIFICATIONS AND THE DETAILS IN THE PLANS. LOCATIONS ONLY REQUIRING REPLACEMENT OF THE TOP AN/OR BOTTOM RAIL ON EXISTING POSTS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER FOOT FOR ALUMINUM RAILING, TYPE L, WHICH PRICE WILL INCLUDE THE WORK TO FURNISH AND INSTALL THE RAIL ELEMENT INDICATED, REGARDLESS OF THE NUMBER OF ELEMENTS REQUIRED ON THE SAME RAIL. FOR LOCATIONS REQUIRING NEW POSTS, THE ANCHOR LOCATIONS SHALL BE SHIFTED ON THE EXISTING WING WALL AS NEEDED IF THE EXISTING ANCHOR ASSEMBLIES ARE DAMAGED OR DETERMINED BY THE ENGINEER TO NOT BE REUSABLE. THE NEW DRILLED ANCHOR ROD LOCATIONS SHALL BE PLACED A MINIMUM OF 2" CLEAR OF THE EXISTING ANCHOR LOCATIONS. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ALUMINUM RAILING, TYPE L.
- BICYCLE RAILING:
THE EXECUTION, MEASUREMENT AND PAYMENT OF BICYCLE RAILING WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 509 OF THE STANDARD SPECIFICATIONS AND THE DETAILS IN THE PLANS. USE THE SAME ANCHOR LOCATIONS AS EXISTING. IF THE EXISTING ANCHORS ARE DAMAGED, OR DETERMINED BY THE ENGINEER TO NOT BE REUSABLE, THEY SHALL BE REPLACED IN ACCORDANCE WITH THE DETAILS IN THE PLANS AND THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR BICYCLE RAILING.
- BRIDGE RAIL REMOVAL:
THE EXECUTION, MEASUREMENT AND PAYMENT OF BRIDGE RAIL REMOVAL WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 501 OF THE STANDARD SPECIFICATIONS AND THE DETAILS IN THE PLANS.
- SIDEWALK REMOVAL:
THE EXECUTION, MEASUREMENT AND PAYMENT OF SIDEWALK REMOVAL WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 440 OF THE STANDARD SPECIFICATIONS AND THE DETAILS IN THE PLANS.

- PORTLAND CEMENT CONCRETE SIDEWALK, 5":
THE EXECUTION, MEASUREMENT AND PAYMENT OF PORTLAND CEMENT CONCRETE SIDEWALK, 5" WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 424 OF THE STANDARD SPECIFICATIONS AND THE DETAILS IN THE PLANS.
- COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18:
THE EXECUTION, MEASUREMENT AND PAYMENT OF COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 606 OF THE STANDARD SPECIFICATIONS, HIGHWAY STANDARD 606001 AND THE DETAILS IN THE PLANS.
- STRUCTURAL REPAIR OF CONCRETE, DEPTH >5":
THE EXECUTION, MEASUREMENT AND PAYMENT OF STRUCTURAL REPAIR OF CONCRETE, DEPTH >5" WILL CONFORM TO THE GUIDE BRIDGE SPECIAL PROVISION FOR STRUCTURAL REPAIR OF CONCRETE AND THE DETAILS IN THE PLANS.
- STEEL PLATE BEAM GUARDRAIL ATTACHED TO STRUCTURES:
THE EXECUTION, MEASUREMENT AND PAYMENT OF STEEL PLATE BEAM GUARDRAIL ATTACHED TO STRUCTURES WILL CONFORM TO THE APPLICABLE PORTIONS OF SECTION 630 OF THE STANDARD SPECIFICATIONS, HIGHWAY STANDARD 630101 AND THE DETAILS IN THE PLANS.
- INCIDENTAL EARTHWORK, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND RESTORATION REQUIRED DUE TO PERFORM THE WORK AS SHOWN WILL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTIONS 202, 211 AND 250 OF THE STANDARD SPECIFICATIONS, RESPECTIVELY, AND TO THE SATISFACTION OF THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE CONTRACT UNIT BID PRICES OF THE ITEMS IN THE CONTRACT.
- TRAFFIC CONTROL REQUIRED WILL BE PERFORMED IN ACCORDANCE WITH THE LISTED APPLICABLE HIGHWAY STANDARDS AND THE APPLICABLE PORTIONS OF SECTION 701 OF THE STANDARD SPECIFICATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE CONTRACT UNIT BID PRICES OF THE ITEMS IN THE CONTRACT.
- PORTLAND CEMENT CONCRETE SIDEWALK (SPECIAL):
PORTLAND CEMENT CONCRETE SIDEWALK, (SPECIAL) SHALL BE INSTALLED AT THE LOCATIONS INDICATED IN THE CONTRACT DOCUMENTS IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTIONS 424 AND 503 OF THE STANDARD SPECIFICATIONS, AND AS DETAILED ON THE CONTRACT PLANS.
PORTLAND CEMENT CONCRETE SIDEWALK (SPECIAL) SHALL INCLUDE REINFORCEMENT BARS, EPOXY COATED IN ACCORDANCE WITH SECTION 508 OF THE STANDARD SPECIFICATIONS AND AS SHOWN ON THE CONTRACT PLANS. APPROXIMATELY 5.1 POUNDS PER SQUARE FOOT IS INCLUDED, AS SHOWN IN THE PLANS. THE REINFORCEMENT SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED ON THE UNIT PRICE BID FOR PORTLAND CEMENT CONCRETE SIDEWALK (SPECIAL).
THIS ITEM SHALL BE MEASURED IN PLACE AND MEASURED PER SQUARE FOOT OF SURFACE AREA AS MEASURED IN PLAN (VERTICAL SURFACES NOT INCLUDED IN MEASURED SURFACE AREA). THE PLAN SURFACE AREA SHALL INCLUDE RAISED HORIZONTAL SURFACES.
THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PORTLAND CEMENT CONCRETE SIDEWALK (SPECIAL), WHICH PRICE SHALL INCLUDE ALL FORMWORK, MATERIALS, REINFORCEMENT BARS, LABOR, GRADING, BACKFILL AND EQUIPMENT NECESSARY TO PERFORM THE WORK AS SHOWN IN THE PLANS AND DESCRIBED HEREIN.

- GUARDRAIL MARKERS, TYPE A:
THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH HIGHWAY STANDARD 635006-03, CHECK SHEET #20 IN THE SUPPLEMENTAL SPECIAL AND RECURRING SPECIAL PROVISIONS AND THE DETAILS IN THE PLANS. THIS ITEM SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR GUARDRAIL MARKERS, TYPE B.
- TERMINAL MARKERS DIRECT APPLIED:
THIS ITEM SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH HIGHWAY STANDARD 635006-03, CHECK SHEET #20 IN THE SUPPLEMENTAL SPECIAL AND RECURRING SPECIAL PROVISIONS AND THE DETAILS IN THE PLANS. THIS ITEM SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR TERMINAL MARKERS DIRECT APPLIED.
- TRAFFIC BARRIER TERMINAL, TYPE 1:
THE EXECUTION, MEASUREMENT AND PAYMENT OF TRAFFIC BARRIER TERMINAL, TYPE 1 WILL CONFORM TO SECTION 630 OF THE STANDARD SPECIFICATIONS, THE DETAILS IN THE PLANS AND HIGHWAY STANDARD BLR 23-4.
- TRAFFIC BARRIER TERMINAL, TYPE 2:
THE EXECUTION, MEASUREMENT AND PAYMENT OF TRAFFIC BARRIER TERMINAL, TYPE 2 WILL CONFORM TO SECTION 630 OF THE STANDARD SPECIFICATIONS, THE DETAILS IN THE PLANS AND HIGHWAY STANDARD 631011-09.
- TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT:
THE EXECUTION, MEASUREMENT AND PAYMENT OF TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT WILL CONFORM TO SECTION 630 OF THE STANDARD SPECIFICATIONS, THE DETAILS IN THE PLANS AND HIGHWAY STANDARD 630301-06. IF SHOULDER MODIFICATIONS IN ACCORDANCE WITH HIGHWAY STANDARD 630301-06 ARE DETERMINED NECESSARY BY THE ENGINEER, THAT WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTIONS 204 AND 205 OF THE STANDARD SPECIFICATIONS. THE COST FOR SHOULDER MODIFICATIONS SHALL BE INCLUDED IN THE COST OF THE ITEM.
- BICYCLE RAILING, SPECIAL: SEE SPECIAL PROVISIONS,

PROJECT CONTACTS

CITY OF ROCKFORD PUBLIC WORKS - ENGINEERING	MATTHEW VITNER	(815) 967-6748
CITY OF ROCKFORD WATER DIVISION	GREG CASSARO	(815) 987-3084
ROCK RIVER WATER RECLAMATION DISTRICT	DANA L. CARROL	(815) 387-7663
COMCAST	DONNA ZIES	(815) 395-8977
COMED	NORA FERNANDEZ	(815) 490-2335
AT&T	DAVID SAINT GERMAIN	(815) 394-7297
NICOR	SCOTT PUFFER	(815) 873-4914
WINDSTREAM	KENNETH BAUMANN	(630) 925-4751

TOTAL BILL OF MATERIAL

ITEM NO.	ITEM	UNIT	LOCATION 1 SN 101-0104	LOCATION 2 SN 101-5058	LOCATION 3 SN 101-6031	LOCATION 4 SN 101-6033	LOCATION 5 SN 101-6059	LOCATION 6 SN 101-6062	LOCATION 7 SN 101-6065	LOCATION 8 SN 101-6070	LOCATION 9 SN 101-6071	LOCATION 10 SN 101-6160	TOTAL QUANTITY
1	GUARDRAIL REMOVAL	FOOT		100									100
2	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	25	50		12.5							88
3	ALUMINUM RAILING, TYPE L	FOOT			9					31	88		128
4	BICYCLE RAILING	FOOT				34	62	37					133
5	BRIDGE RAIL REMOVAL	FOOT	88	102		42	62	105		26			425
6	SIDEWALK REMOVAL	SO. FT.				228				39			267
7	PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SO. FT.								39			39
8	COMBINATION CONCRETE CURB AND GUTTER, TYPE B.6-18	FOOT						8					8
9	STRUCTURAL REPAIR OF CONCRETE, DEPTH >5"	SO. FT.						136	52				188
10	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	88	102		19							209
11	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH		2		1							3
12	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2	2		1							5
13	PORTLAND CEMENT CONCRETE SIDEWALK (SPECIAL)	SO. FT.				298							298
14	GUARDRAIL MARKERS, TYPE A	EACH	8	8		4							20
15	TERMINAL MARKERS - DIRECT APPLIED	EACH	4	4		2							10
16	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2										2
17	BICYCLE RAILING, SPECIAL	FOOT										71	71
18	INCIDENTAL ASPHALT SURFACE COURSE	TON	2	5	3	3	3	2	2				20

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CAD DATE: <u>1/17/2014</u>	<u>12:38:58 PM</u>
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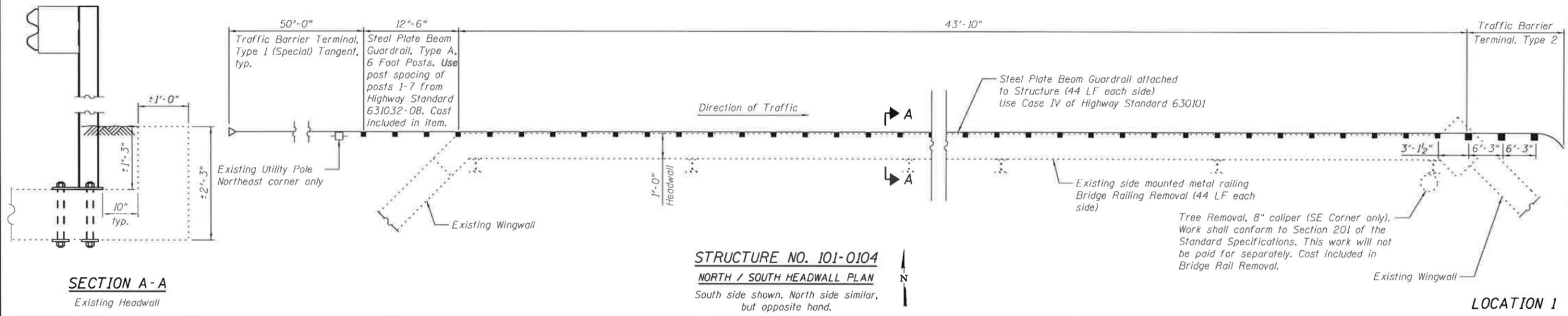


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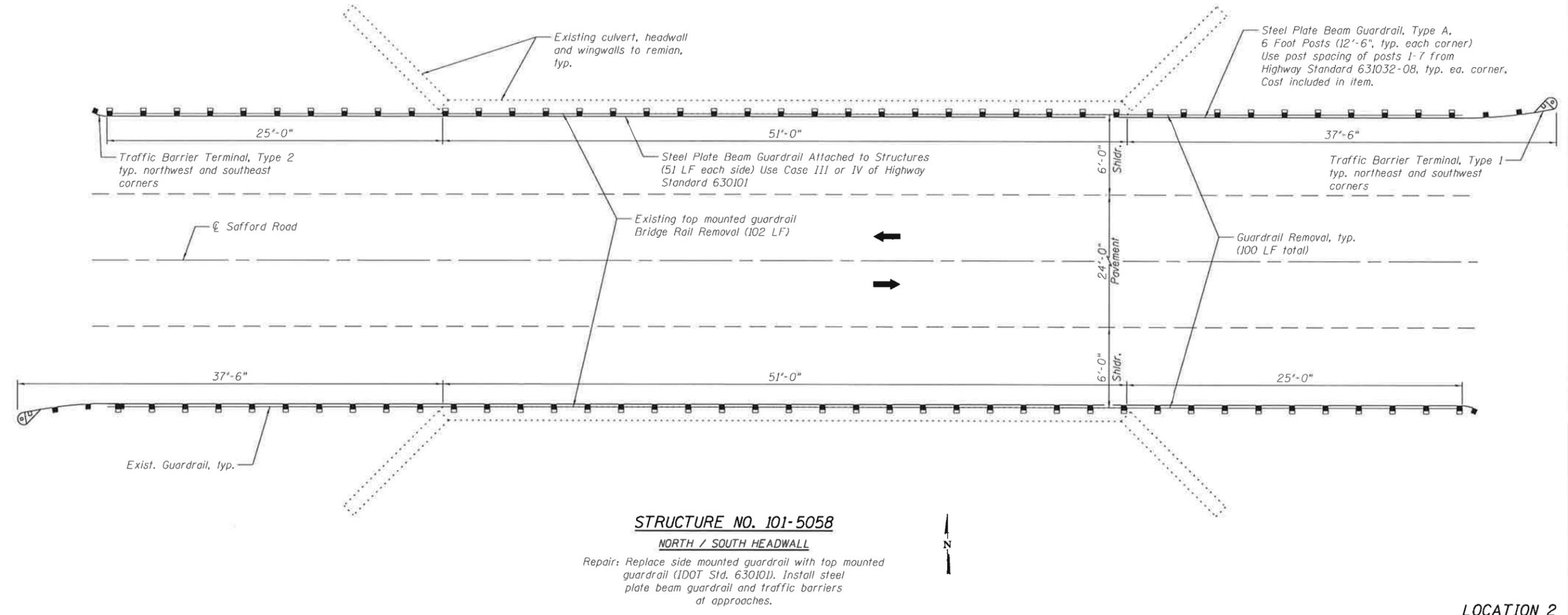
BRIDGE RAILING / GUARDRAIL REPAIRS
CITY OF ROCKFORD

RAILING REPAIR DETAILS
GENERAL NOTES AND SPECIAL PROVISIONS

SHEET NO.
2



LOCATION 1



LOCATION 2

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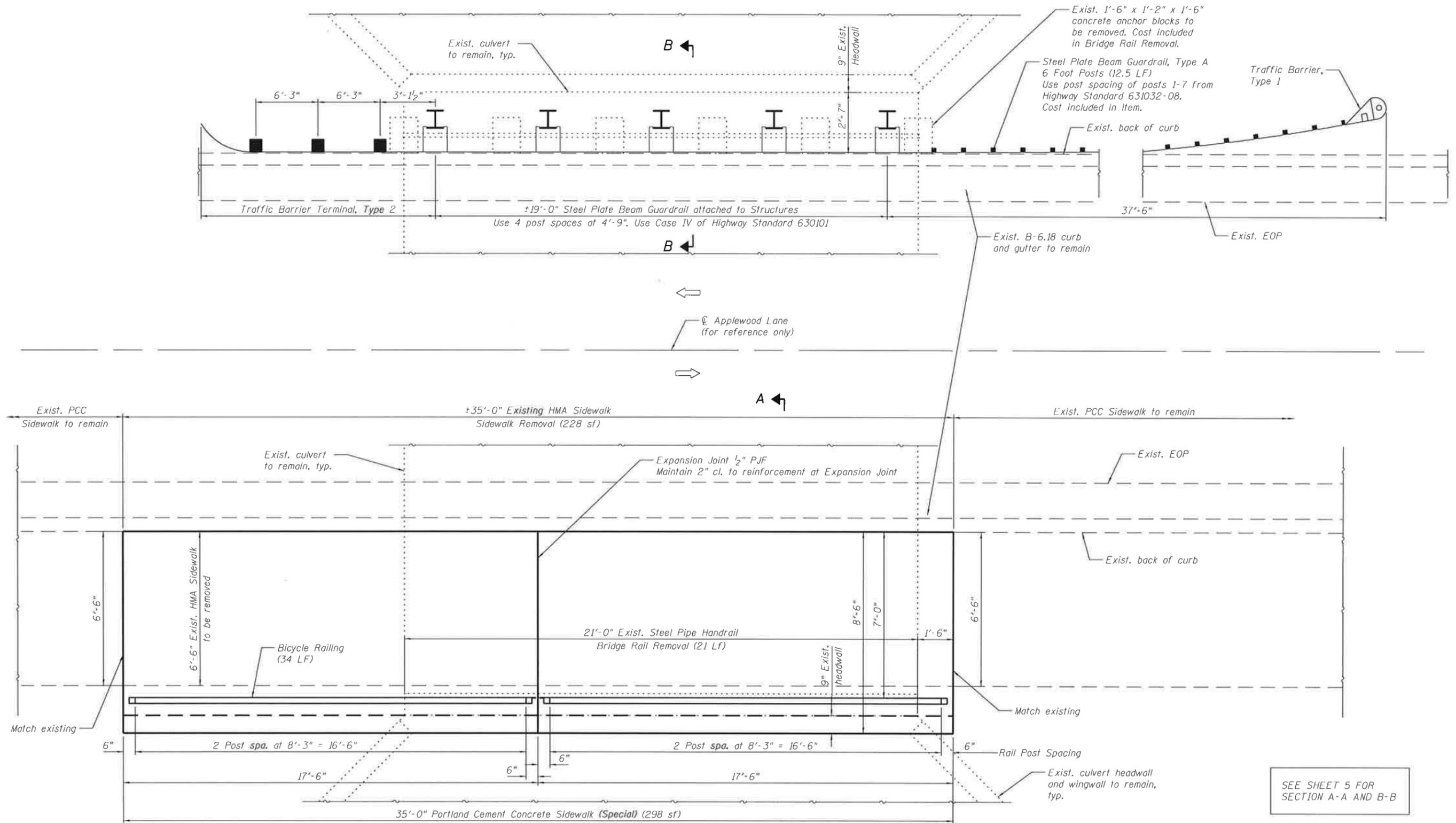
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BRIDGE RAILING / GUARDRAIL REPAIRS
CITY OF ROCKFORD

RAILING REPAIR DETAILS
LOCATIONS 1 & 2

SHEET NO.
3



PLAN

A

LOCATION 4

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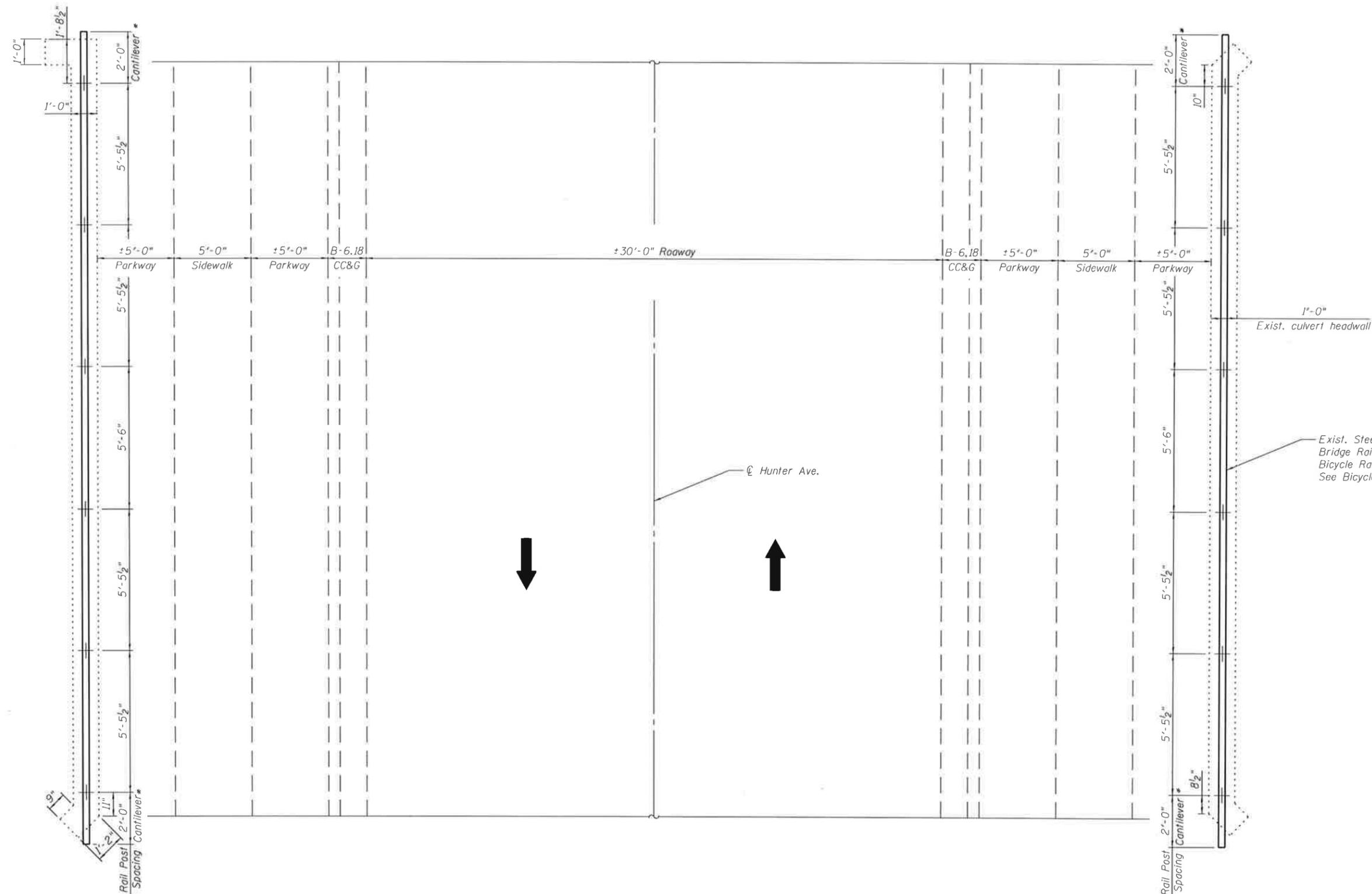
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BRIDGE RAILING / GUARDRAIL REPAIRS
 CITY OF ROCKFORD

RAILING REPAIR DETAILS
 LOCATION 4

SHEET NO.
 4



STRUCTURE NO. 101-6059

PLAN VIEW (WEST SIDE)

Repair: Remove damaged pipe handrail pedestrian railing
Place IDOT Standard Bicycle Railing

STRUCTURE NO. 101-6059

PLAN VIEW (EAST SIDE)

* See Cantilever Detail on Bicycle Railing Detail Sheet

LOCATION 5

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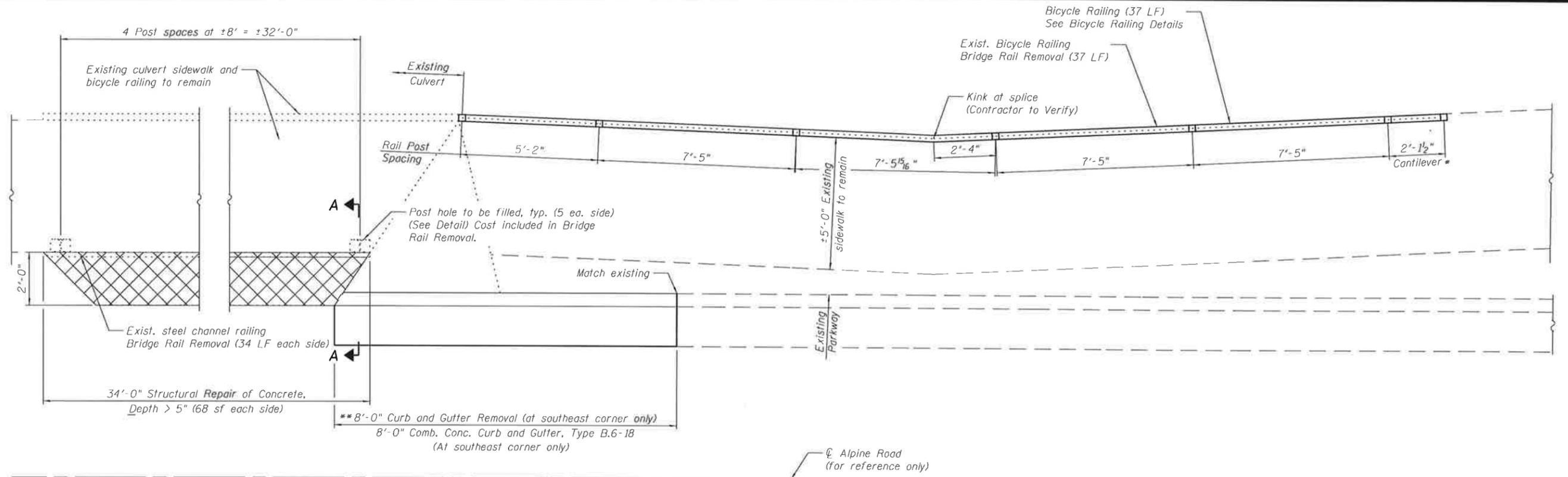
BRIDGE RAILING / GUARDRAIL REPAIRS

CITY OF ROCKFORD

**RAILING REPAIR DETAILS
LOCATION 5**

SHEET NO.

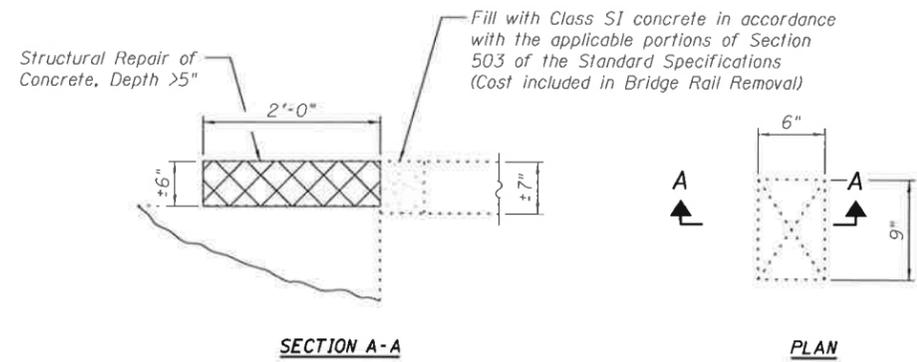
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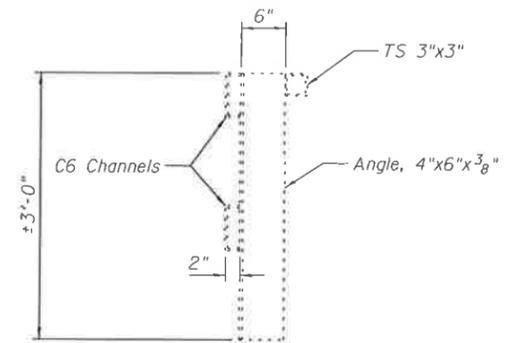
* See Cantilever Detail on Bicycle Railing Detail Sheet

STRUCTURE NO. 101-6062
SOUTHEAST APPROACH
BICYCLE RAILING AND TYPICAL SIDEWALK PLAN

Repair: Remove and replace damaged portion of Bicycle Railing at southeast corner
 East side sidewalk shown. West side similar, but opposite hand
 Repair: Remove interior traffic railing and patch sidewalk slab
 ** Perform in accordance with Section 440 of the Standard Specifications. Cost included in Comb. Conc. Curb and Gutter, Type B.6-18



TYPICAL POST HOLE FILLING DETAIL
 10 Locations



EXISTING RAIL SECTION
 Railing to be removed (Bridge Rail Removal)

LEGEND

Structural Repair of Concrete, Depth > 5"

LOCATION 6

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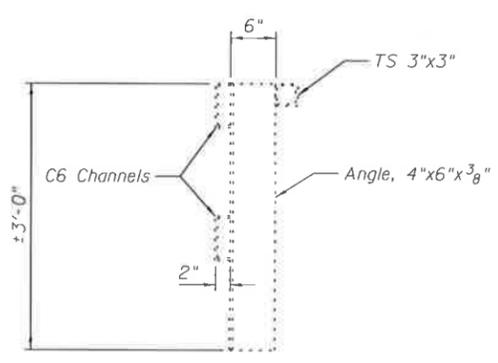
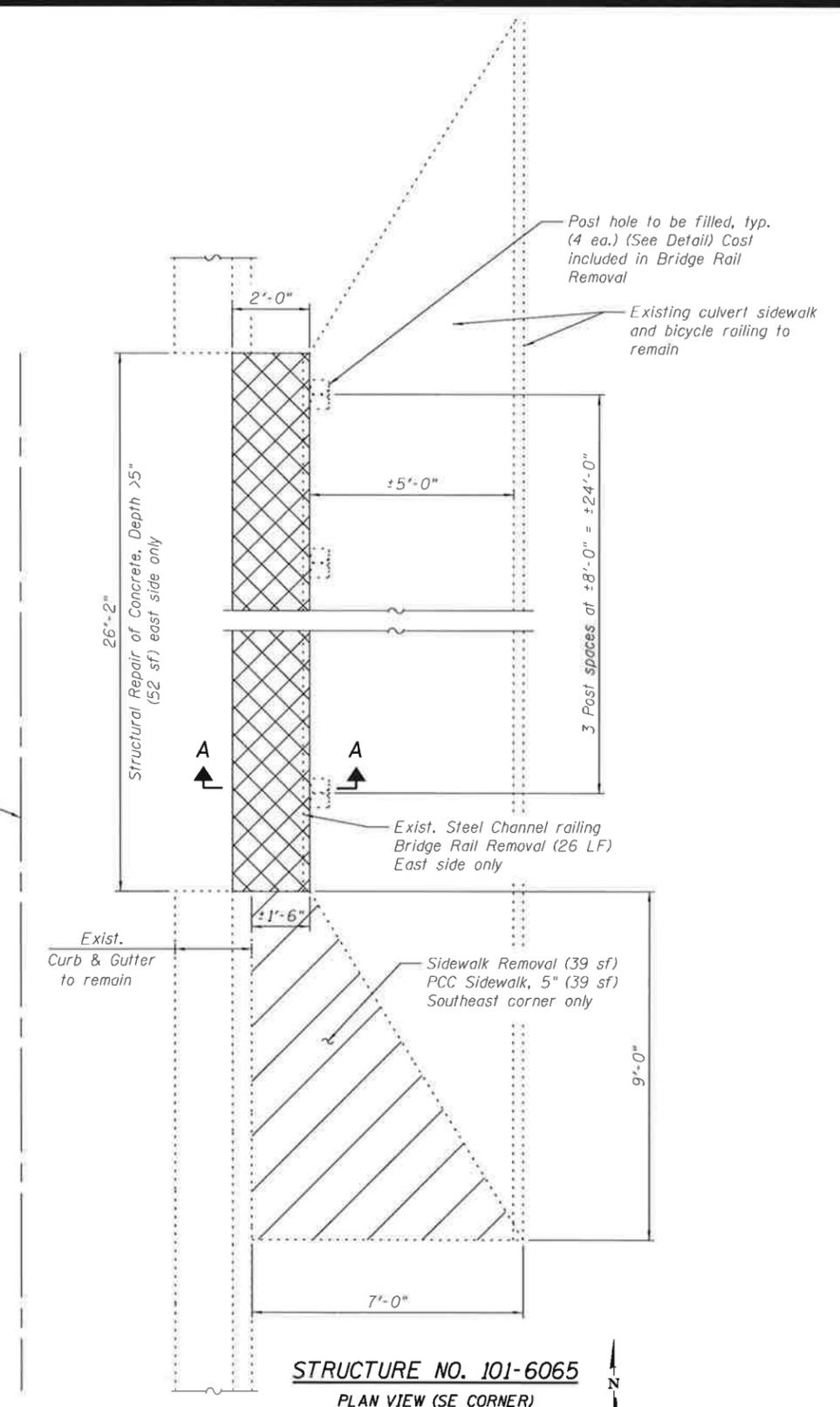
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BRIDGE RAILING / GUARDRAIL REPAIRS
 CITY OF ROCKFORD

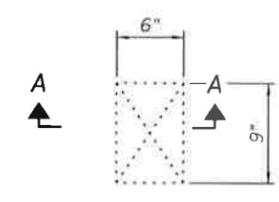
RAILING REPAIR DETAILS
 LOCATION 6

SHEET NO.
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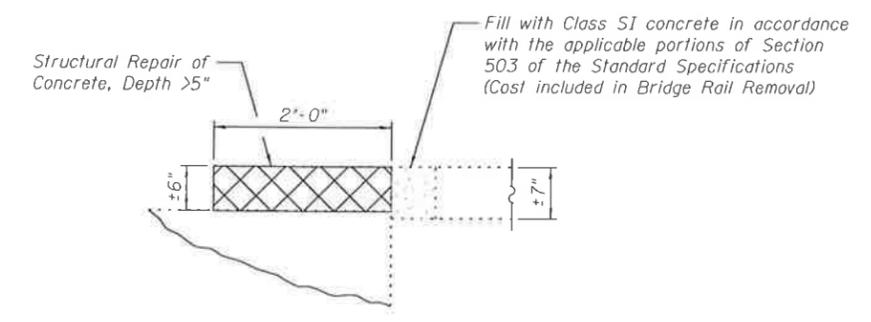
☉ Alpine Road
(for reference only)



EXISTING RAIL SECTION
Railing to be removed



PLAN



SECTION A-A

POST HOLE FILLING DETAIL
4 Locations



LOCATION 7

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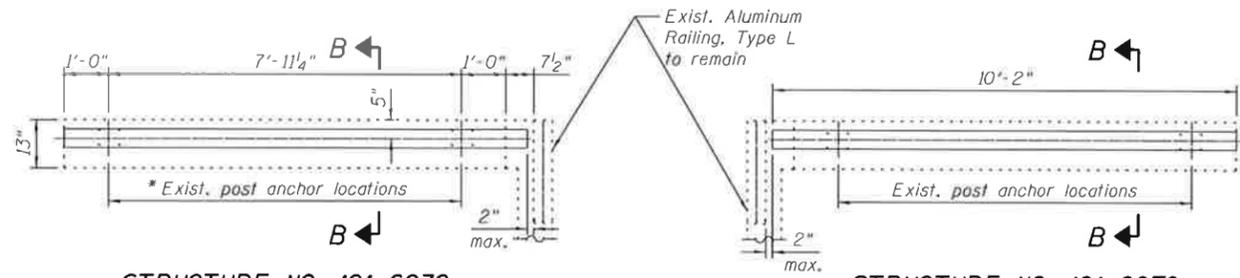
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BRIDGE RAILING / GUARDRAIL REPAIRS
CITY OF ROCKFORD

RAILING REPAIR DETAILS
LOCATION 7

SHEET NO.
8



STRUCTURE NO. 101-6070

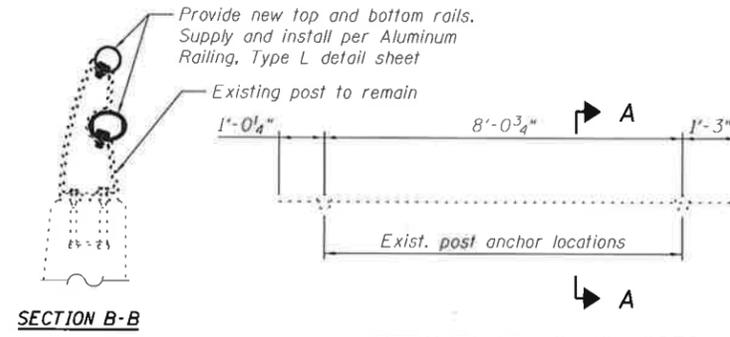
NW WING WALL PLAN

Repair: Place complete Aluminum Railing, Type L assembly
See Aluminum Railing, Type L detail sheet

STRUCTURE NO. 101-6070

NE WING WALL PLAN

Repair: Provide new top and bottom rails (10'-2" Long)

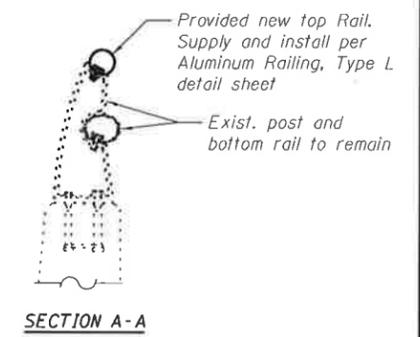


SECTION B-B

STRUCTURE NO. 101-6070

SW WING WALL PLAN

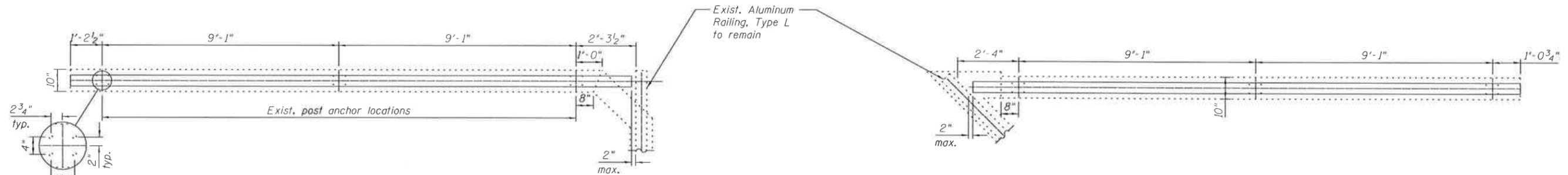
Repair: Provide new top rail (10'-4" Long)



SECTION A-A

* Shift as needed for new drilled anchor rods.

LOCATION 8



STRUCTURE NO. 101-6071

SE WING WALL PLAN

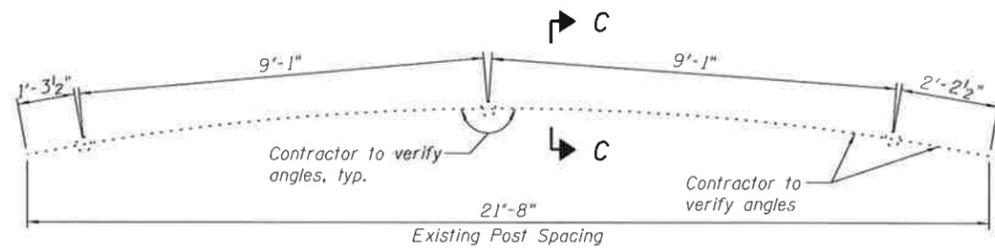
Repair: Place complete Aluminum Railing, Type L assembly
See Aluminum Railing, Type L detail sheet

STRUCTURE NO. 101-6071

SW WING WALL PLAN

Repair: Place complete Aluminum Railing, Type L assembly
See Aluminum Railing, Type L detail sheet

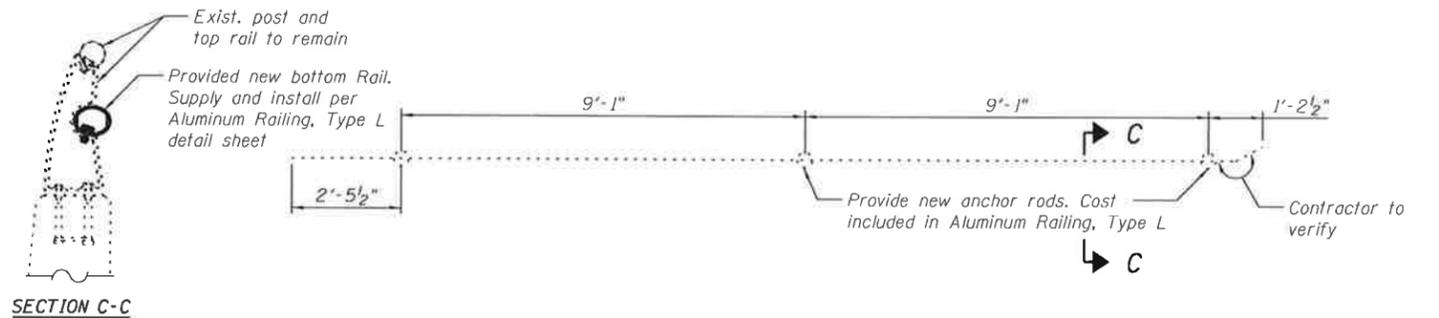
EXIST. TYPICAL ANCHOR ROD CONFIGURATION



STRUCTURE NO. 101-6071

NE WING WALL PLAN

Repair: Provide new bottom rail (21'-8" Long)



SECTION C-C

STRUCTURE NO. 101-6071

NW WING WALL PLAN

Repair: Provide new bottom rail (21'-10" Long)

LOCATION 9

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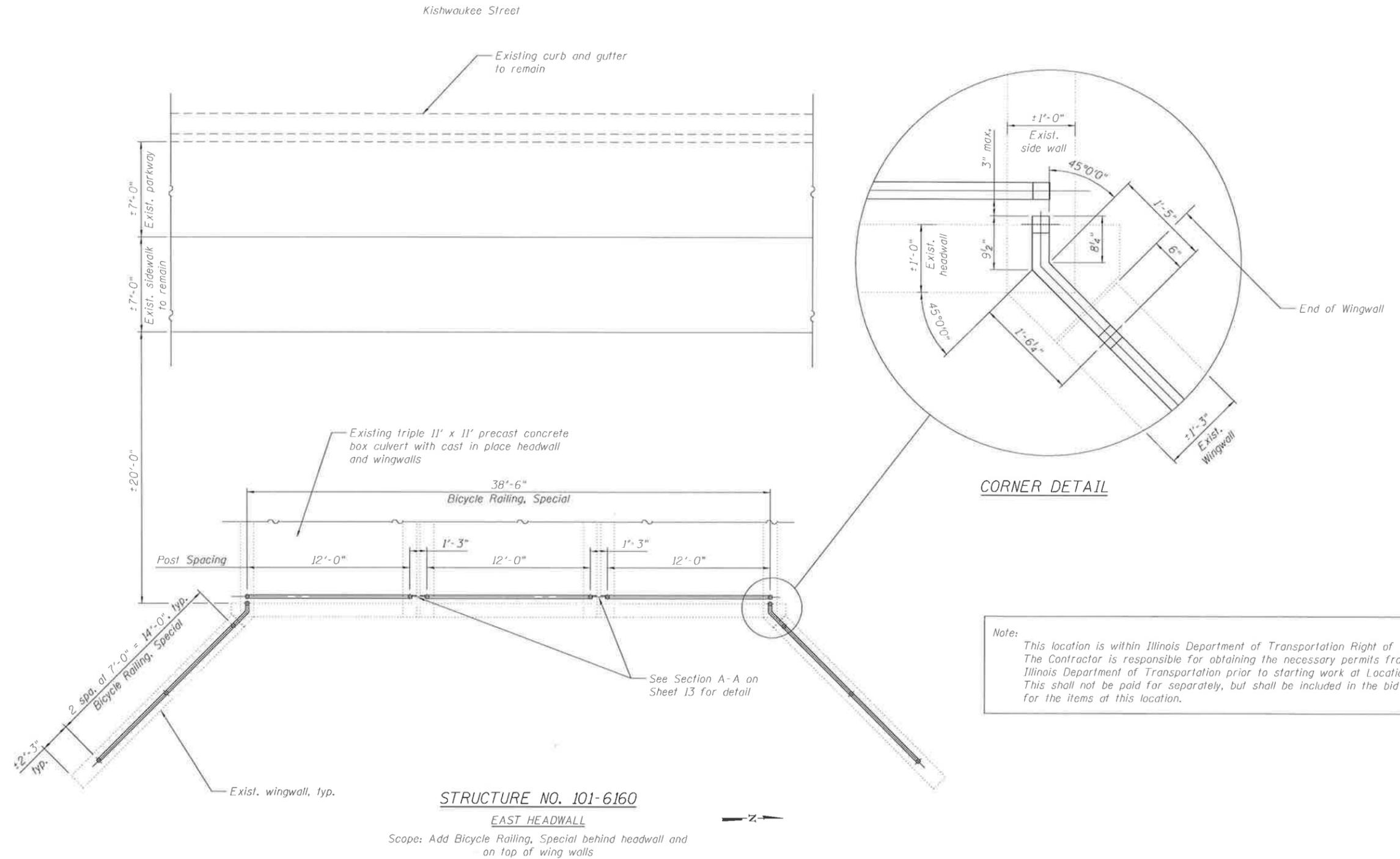
NO.	DATE	BY	REVISION DESCRIPTION



BRIDGE RAILING / GUARDRAIL REPAIRS
 CITY OF ROCKFORD

RAILING REPAIR DETAILS
 LOCATIONS 8 & 9

SHEET NO.
 9



STRUCTURE NO. 101-6160

EAST HEADWALL

Scope: Add Bicycle Railing, Special behind headwall and on top of wing walls

LOCATION 10

DRAWN BY: WJH JOB DATE:
 APPROVED: KMA JOB NUMBER: 86120382.07
 CAD DATE: 1/17/2014 12:43:04 PM
 CAD FILE: 86120382.07-S10.dgn

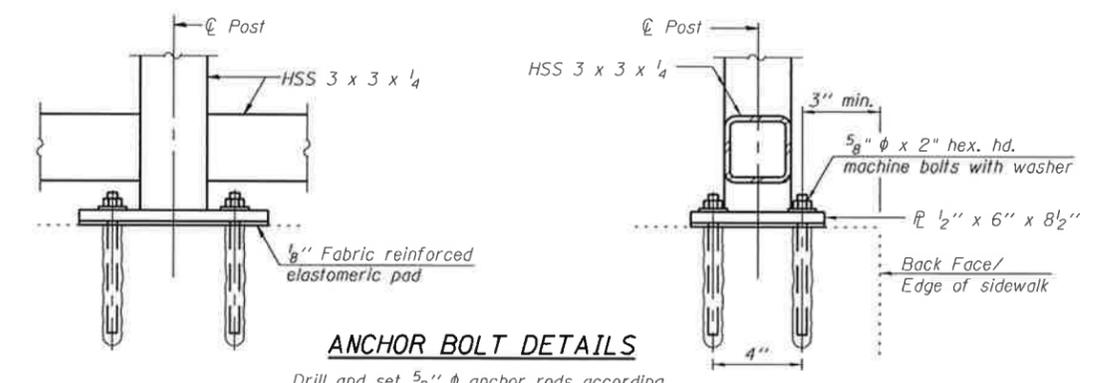
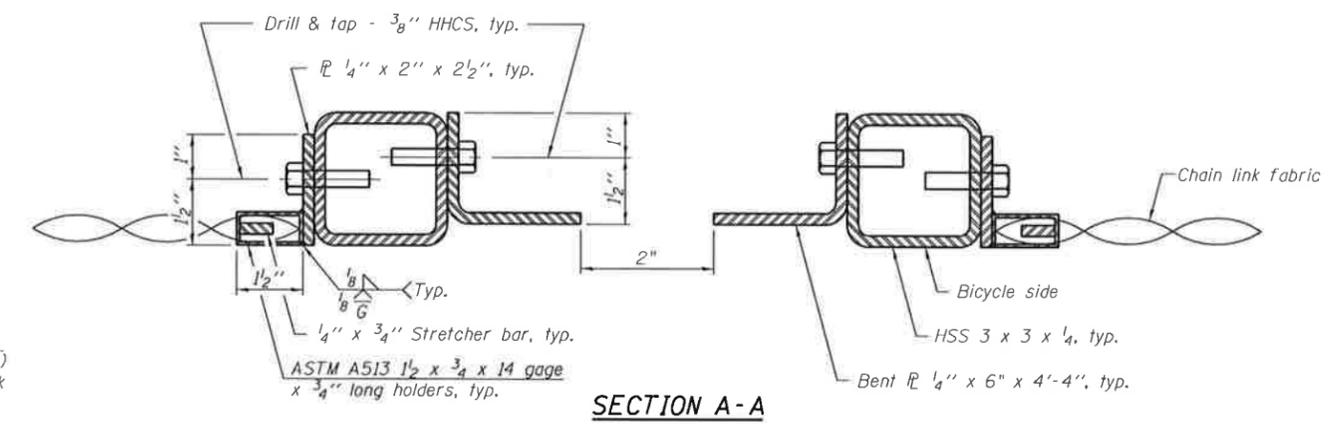
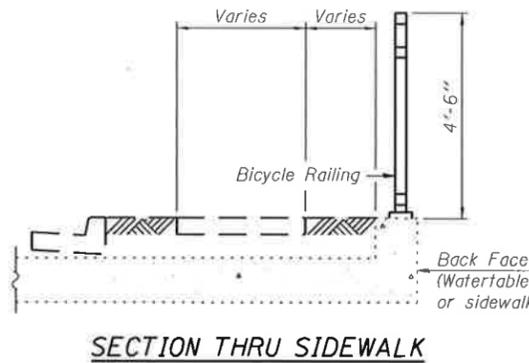
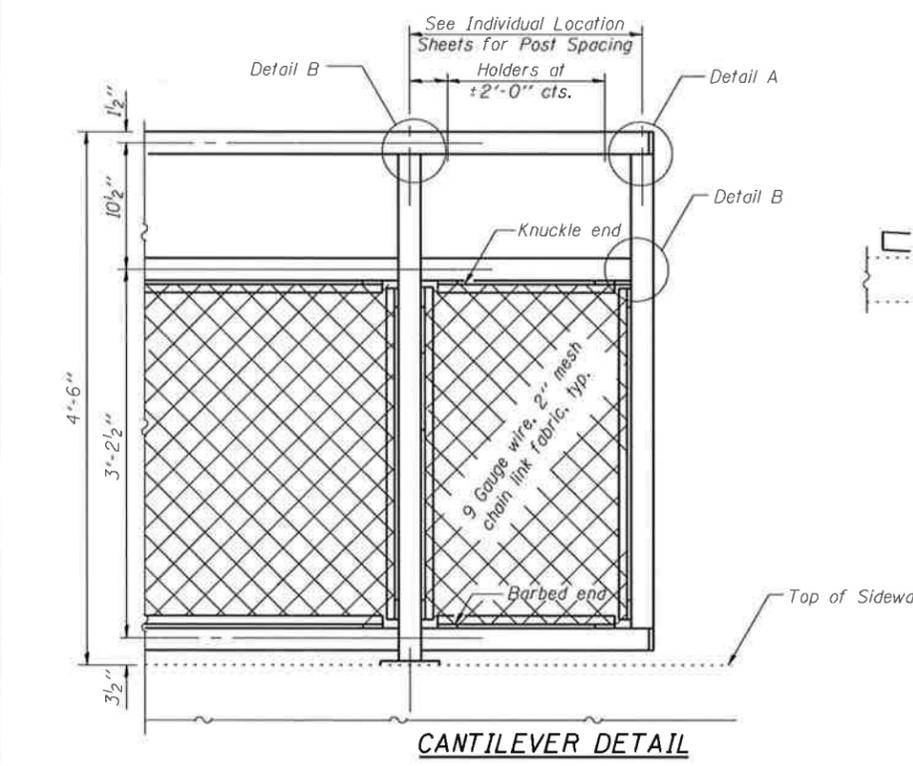
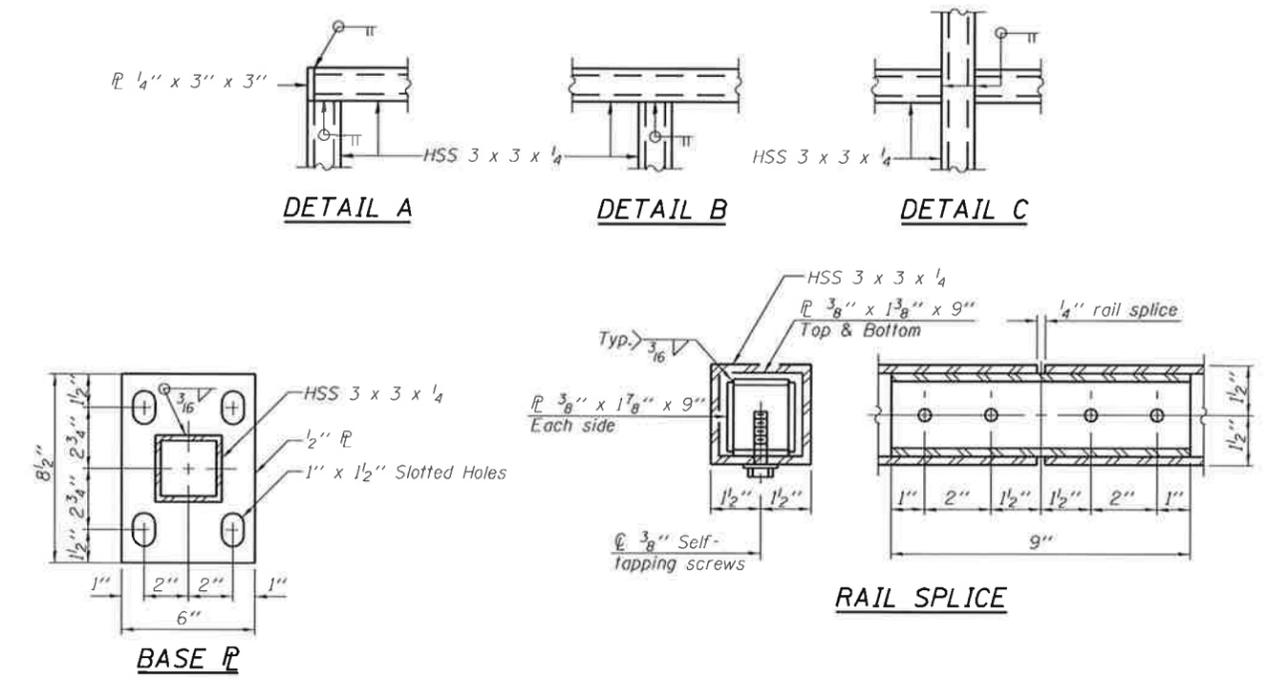
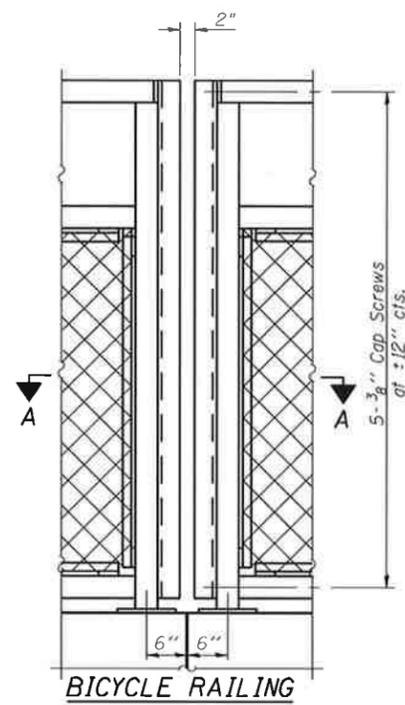
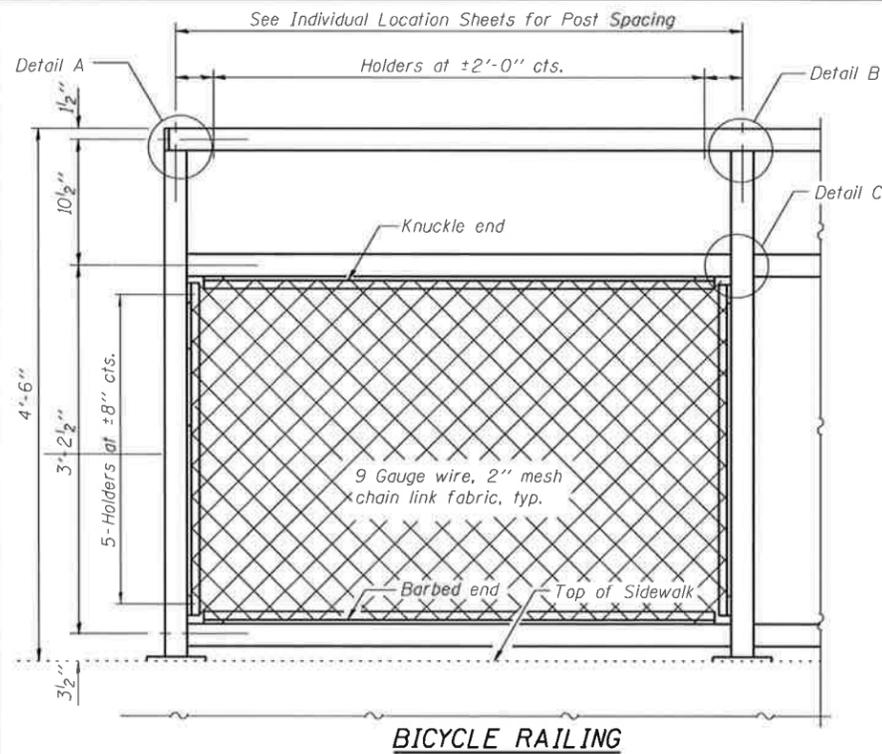
NO.	DATE	BY	REVISION DESCRIPTION



BRIDGE RAILING / GUARDRAIL REPAIRS
 CITY OF ROCKFORD

RAILING REPAIR DETAILS
LOCATION 10

SHEET NO.
10



Drill and set 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications. (See General Notes Sheet 2)

(10'-0" Maximum Post Spacing)

DRAWN BY: WJH	JOB DATE:
APPROVED: KMA	JOB NUMBER: 86120382.07
CAD DATE: 12/17/2013	7:41:02 AM
CAD FILE: 86120382.07-DET02.dwg	

NO.	DATE	BY	REVISION DESCRIPTION

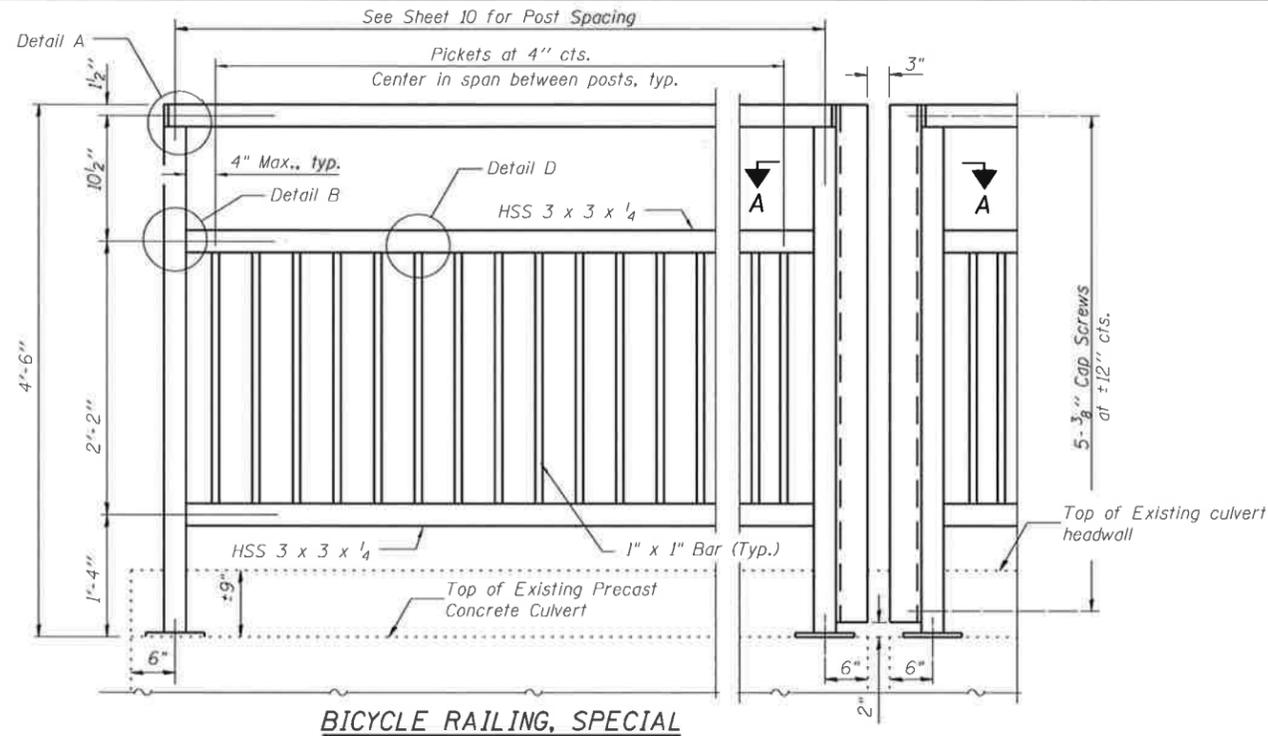


BRIDGE RAILING / GUARDRAIL REPAIRS

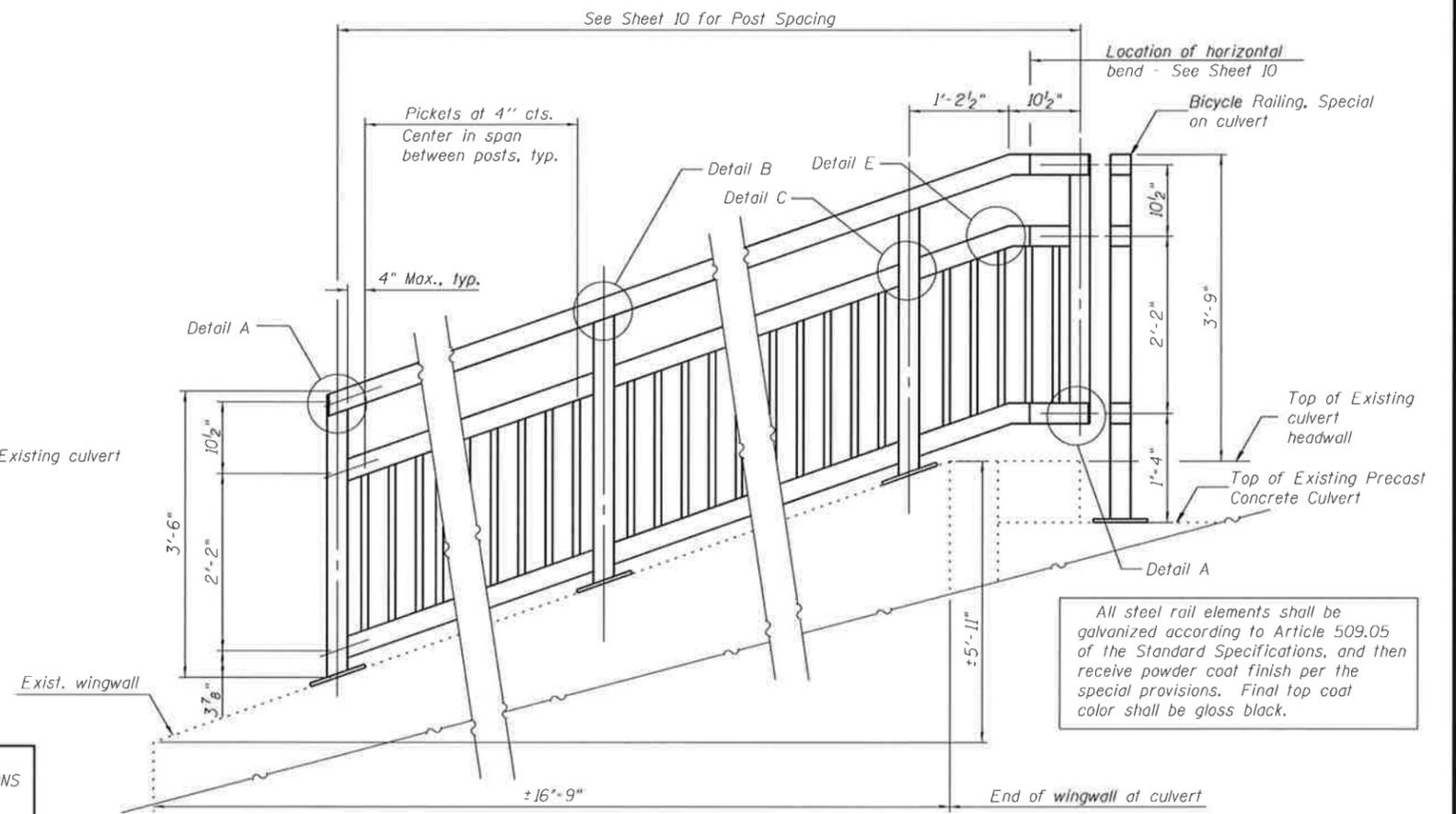
CITY OF ROCKFORD

BICYCLE RAILING

SHEET NO. 12



BICYCLE RAILING, SPECIAL
Railing on Culvert Segments
Looking at west face of railing from sidewalk

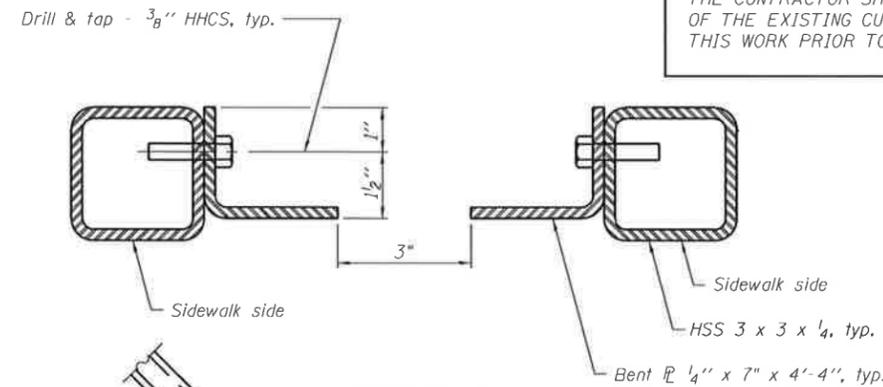


All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications, and then receive powder coat finish per the special provisions. Final top coat color shall be gloss black.

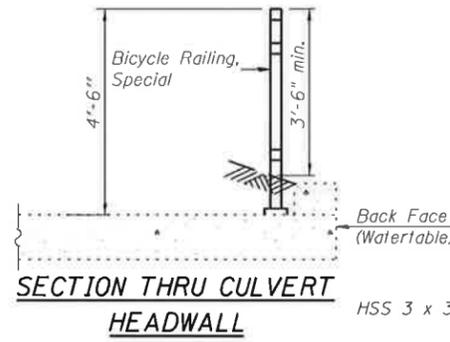
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF THE EXISTING CULVERT THAT MAY IMPACT THIS WORK PRIOR TO ORDERING MATERIALS

BICYCLE RAILING, SPECIAL

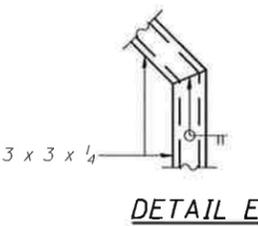
Railing Elevation on Wingwalls



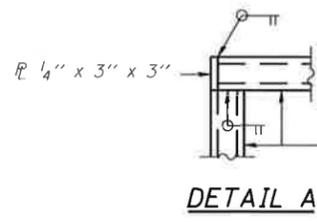
SECTION A-A



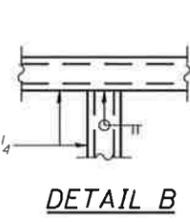
SECTION THRU CULVERT HEADWALL



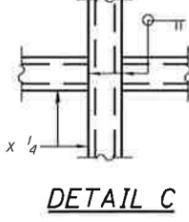
DETAIL E



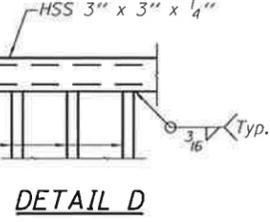
DETAIL A



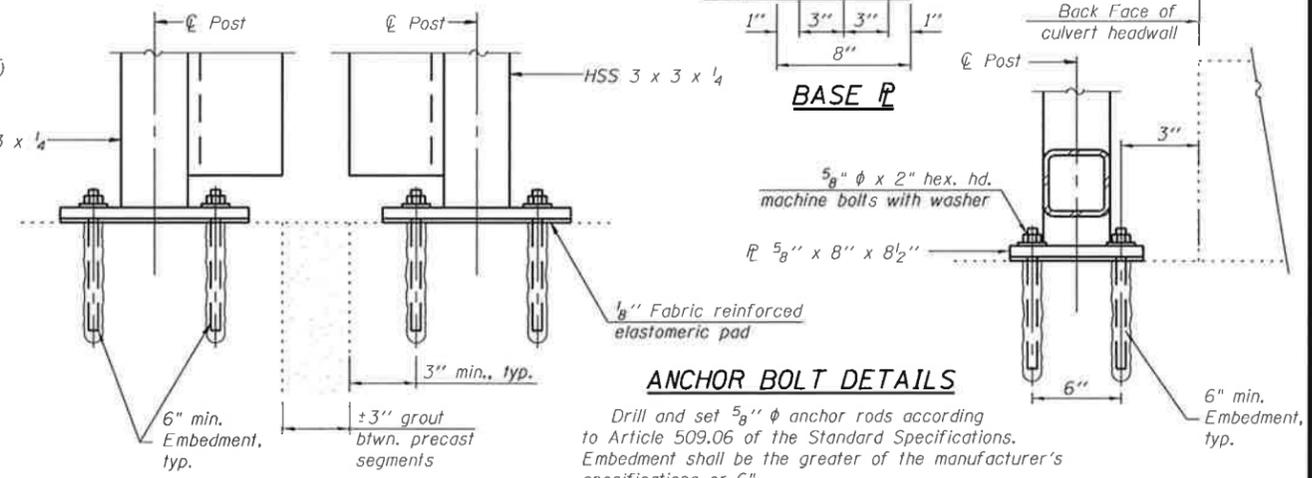
DETAIL B



DETAIL C



DETAIL D



ANCHOR BOLT DETAILS

Drill and set 5/8 inch diameter anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be the greater of the manufacturer's specifications or 6 inches.

DRAWN BY: WJH	JOB DATE:
APPROVED: KMA	JOB NUMBER: 86120382.07
CAD DATE: 12/17/2013 7:41:50 AM	
CAD FILE: 86120382.07-DET03.dgn	

NO.	DATE	BY	REVISION DESCRIPTION



BRIDGE RAILING / GUARDRAIL REPAIRS
CITY OF ROCKFORD

BICYCLE RAILING, SPECIAL

SHEET NO.
13

ABV	ABOVE	CU YD	CUBIC YARD	HD	HEAD	PED	PEDESTAL	STD	STANDARD
A/C	ACCESS CONTROL	CULV	CULVERT	HDW	HEADWALL	PNT	POINT	SBI	STATE BOND ISSUE
AC	ACRE	C&G	CURB & GUTTER	HDTY	HEAVY DUTY	PC	POINT OF CURVATURE	SR	STATE ROUTE
ADJ	ADJUST	D	DEGREE OF CURVE	ha	HECTARE	PI	POINT OF INTERSECTION OF HORIZONTAL CURVE	STA	STATION
AS	AERIAL SURVEYS	DC	DEPRESSED CURVE	HMA	HOT MIX ASPHALT	PRC	POINT OF REVERSE CURVE	SPBGR	STEEL PLATE BEAM GUARDRAIL
AGG	AGGREGATE	DET	DETECTOR	HWY	HIGHWAY	PT	POINT OF TANGENCY	SS	STORM SEWER
AH	AHEAD	DIA	DIAMETER	HORIZ	HORIZONTAL	POT	POINT ON TANGENT	STY	STORY
APT	APARTMENT	DIST	DISTRICT	HSE	HOUSE	POLYETH	POLYETHYLENE	ST	STREET
ASPH	ASPHALT	DOM	DOMESTIC	IL	ILLINOIS	PCC	PORTLAND CEMENT CONCRETE	STR	STRUCTURE
AUX	AUXILIARY	DBL	DOUBLE	IMP	IMPROVEMENT	PP	POWER POLE OR PRINCIPAL POINT	e	SUPERELEVATION RATE
AGS	AUXILIARY GAS VALVE (SERVICE)	DSEL	DOWNSTREAM ELEVATION	IN DIA	INCH DIAMETER	PRM	PRIME	S.E. RUN,	SUPERELEVATION RUNOFF LENGTH
AVE	AVENUE	DSFL	DOWNSTREAM FLOWLINE	INL	INLET	PE	PRIVATE ENTRANCE	SURF	SURFACE
AX	AXIS OF ROTATION	DR	DRAINAGE OR DRIVE	INST	INSTALLATION	PGL	PROFILE GRADELINE	SMK	SURVEY MARKER
BK	BACK	DI	DRAINAGE INLET OR DROP INLET	IDS	INTERSECTION DESIGN STUDY	PROJ	PROJECT	T	TANGENT DISTANCE
B-B	BACK TO BACK	DRV	DRIVEWAY	INV	INVERT	P.C.	PROPERTY CORNER	T.R.	TANGENT RUNOUT DISTANCE
BKPL	BACKPLATE	DCT	DUCT	IP	IRON PIPE	PL	PROPERTY LINE	TEL	TELEPHONE
B	BARN	EA	EACH	IR	IRON ROD	PR	PROPOSED	TB	TELEPHONE BOX
BARR	BARRICADE	EB	EASTBOUND	JT	JOINT	R	RADIUS	TP	TELEPHONE POLE
BGN	BEGIN	EOP	EDGE OF PAVEMENT	Kg	KILOGRAM	RR	RAILROAD	TEMP	TEMPORARY
BM	BENCHMARK	E-CL	EDGE TO CENTERLINE	km	KILOMETER	RRS	RAILROAD SPIKE	TBM	TEMPORARY BENCH MARK
BIND	BINDER	E-E	EDGE TO EDGE	LS	LANDSCAPING	RPS	REFERENCE POINT STAKE	TD	TILE DRAIN
BIT	BITUMINOUS	EL	ELEVATION	LN	LANE	REF	REFLECTIVE	TBE	TO BE EXTENDED
BTM	BOTTOM	ENTR	ENTRANCE	LT	LEFT	RCCP	REINFORCED CONCRETE CULVERT PIPE	TBR	TO BE REMOVED
BLVD	BOULEVARD	EXC	EXCAVATION	LP	LIGHT POLE	REINF	REINFORCEMENT	TBS	TO BE SAVED
BRK	BRICK	EX	EXISTING	LGT	LIGHTING	REM	REMOVAL	TWP	TOWNSHIP
BBOX	BUFFALO BOX	EXPWAY	EXPRESSWAY	LF	LINEAL FEET OR LINEAR FEET	RC	REMOVE CROWN	TR	TOWNSHIP ROAD
BLDG	BUILDING	E	EXTERNAL DISTANCE OF HORIZONTAL CURVE	L	LITER OR CURVE LENGTH	REP	REPLACEMENT	TS	TRAFFIC SIGNAL
CIP	CAST IRON PIPE	E	OFFSET DISTANCE TO VERTICAL CURVE	LC	LONG CHORD	REST	RESTAURANT	TSCB	TRAFFIC SIGNAL CONTROL BOX
CB	CATCH BASIN	F-F	FACE TO FACE	LNG	LONGITUDINAL	RESURF	RESURFACING	TSC	TRAFFIC SYSTEMS CENTER
C-C	CENTER TO CENTER	FA	FEDERAL AID	L SUM	LUMP SUM	RET	RETAINING	TRVS	TRANSVERSE
CL	CENTERLINE OR CLEARANCE	FAI	FEDERAL AID INTERSTATE	MACH	MACHINE	RT	RIGHT	TRVL	TRAVEL
CL-E	CENTERLINE TO EDGE	FAP	FEDERAL AID PRIMARY	MB	MAIL BOX	ROW	RIGHT-OF-WAY	TRN	TURN
CL-F	CENTERLINE TO FACE	FAS	FEDERAL AID SECONDARY	MH	MANHOLE	RD	ROAD	TY	TYPE
CTS	CENTERS	FAUS	FEDERAL AID URBAN SECONDARY	MATL	MATERIAL	RDWY	ROADWAY	T-A	TYPE A
CERT	CERTIFIED	FP	FENCE POST	MED	MEDIAN	RTE	ROUTE	TYP	TYPICAL
CHSLD	CHISELED	FE	FIELD ENTRANCE	m	METER	SAN	SANITARY	UNDGND	UNDERGROUND
CS	CITY STREET	FH	FIRE HYDRANT	METH	METHOD	SANS	SANITARY SEWER	USGS	U.S. GEOLOGICAL SURVEY
CP	CLAY PIPE	FL	FLOW LINE	M	MID-ORDINATE	SEC	SECTION	USEL	UPSTREAM ELEVATION
CLSD	CLOSED	FB	FOOT BRIDGE	mm	MILLIMETER	SEED	SEEDING	USFL	UPSTREAM FLOWLINE
CLID	CLOSED LID	FDN	FOUNDATION	mm DIA	MILLIMETER DIAMETER	SHAP	SHAPING	UTIL	UTILITY
CT	COAT OR COURT	FR	FRAME	MIX	MIXTURE	S	SHED	VBOX	VALVE BOX
COMB	COMBINATION	F&G	FRAME & GRATE	MBH	MOBILE HOME	SH	SHEET	VV	VALVE VAULT
C	COMMERCIAL BUILDING	FRWAY	FREEWAY	MOD	MODIFIED	SHLD	SHOULDER	VL	VAULT
CE	COMMERCIAL ENTRANCE	GAL	GALLON	MFT	MOTOR FUEL TAX	SW	SIDEWALK OR SOUTHWEST	VEH	VEHICLE
CONC	CONCRETE	GALV	GALVANIZED	N & BC	NAIL & BOTTLE CAP	SIG	SIGNAL	VP	VENT PIPE
CONST	CONSTRUCT	G	GARAGE	N & C	NAIL & CAP	SOD	SODDING	VERT	VERTICAL
CONTD	CONTINUED	GM	GAS METER	N & W	NAIL & WASHER	SM	SOLID MEDIAN	VC	VERTICAL CURVE
CONT	CONTINUOUS	GV	GAS VALVE	NOAA	NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION	SB	SOUTHBOUND	VPC	VERTICAL POINT OF CURVATURE
COR	CORNER	GRAN	GRANULAR	NC	NORMAL CROWN	SE	SOUTHEAST	VPI	VERTICAL POINT OF INTERSECTION
CORR	CORRUGATED	GR	GRATE	NB	NORTHBOUND	SPL	SPECIAL	VPT	VERTICAL POINT OF TANGENCY
CMP	CORRUGATED METAL PIPE	GRVL	GRAVEL	NE	NORTHEAST	SD	SPECIAL DITCH	WM	WATER METER
CNTY	COUNTY	GND	GROUND	NW	NORTHWEST	SQ FT	SQUARE FEET	WV	WATER VALVE
CH	COUNTY HIGHWAY	GUT	GUTTER	OLID	OPEN LID	m ²	SQUARE METER	WMAIN	WATER MAIN
CSE	COURSE	GP	GUY POLE	PAT	PATTERN	mm ²	SQUARE MILLIMETER	WB	WESTBOUND
XSECT	CROSS SECTION	GW	GUY WIRE	PVD	PAVED	SQ YD	SQUARE YARD	WILDFL	WILDFLOWERS
m ³	CUBIC METER	HH	HANDHOLE	PVMT	PAVEMENT	STB	STABILIZED	W	WITH
mm ³	CUBIC MILLIMETER	HATCH	HATCHING	PM	PAVEMENT MARKING			WO	WITHOUT

Illinois Department of Transportation	
PASSED	January 1, 2011
<i>Michael Beard</i>	
ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2011
<i>Scott Smith</i>	
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-97

DATE	REVISIONS
1-1-11	Updated abbreviations and symbols.
1-1-08	Updated abbreviations and symbols.

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 1 of 8)

STANDARD 00001-06

<u>ADJUSTMENT ITEMS</u>		<u>EX</u>	<u>PR</u>	<u>ALIGNMENT ITEMS</u>		<u>EX</u>	<u>PR</u>	<u>CONTOUR ITEMS</u>		<u>EX</u>	<u>PR</u>
Structure To Be Adjusted			ADJ	Baseline				Approx. Index Line			
Structure To Be Cleaned			C	Centerline				Approx. Intermediate Line			
Main Structure To Be Filled			FM	Centerline Break Circle				Index Contour			
Structure To Be Filled			F	Baseline Symbol				Intermediate Contour			
Structure To Be Filled Special			FSP	Centerline Symbol				<u>DRAINAGE ITEMS</u>			
Structure To Be Removed			R	PI Indicator							Channel or Stream Line
Structure To Be Reconstructed			REC	Point Indicator				Culvert Line			
Structure To Be Reconstructed Special			RSP	Horizontal Curve Data (Half Size)	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=	CURVE P.I. STA= Δ= D= R= T= L= E= e= T.R.= S.E. RUN= P.C. STA= P.T. STA=		Grading & Shaping Ditches			
Frame and Grate To Be Adjusted			A	<u>BOUNDARIES ITEMS</u>			<u>EX</u>	<u>PR</u>	Drainage Boundary Line		
Frame and Lid To Be Adjusted			A	Dashed Property Line				Paved Ditch			
Domestic Service Box To Be Adjusted			A	Solid Property/Lot Line				Aggregate Ditch			
Valve Vault To Be Adjusted			A	Section/Grant Line				Pipe Underdrain			
Special Adjustment			SP	Quarter Section Line				Storm Sewer			
Item To Be Abandoned			AB	Quarter/Quarter Section Line				Flowline			
Item To Be Moved			M	County/Township Line				Ditch Check			
Item To Be Relocated			REL	State Line				Headwall			
Pavement Removal and Replacement				Iron Pipe Found				Inlet			
				Iron Pipe Set				Manhole			
				Survey Marker				Summit			
				Property Line Symbol				Roadway Ditch Flow			
				Same Ownership Symbol (Half Size)				Swale			
				Northwest Quarter Corner (Half Size)				Catch Basin			
				Section Corner (Half Size)				Culvert End Section			
				Southeast Quarter Corner (Half Size)				Water Surface Indicator			
								Riprap			

Illinois Department of Transportation
 PASSED January 1, 2011
 Michael Brand
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED January 1, 2011
 ENGINEER OF DESIGN AND ENVIRONMENT
 ISSUED 1-1-97

**STANDARD SYMBOLS,
 ABBREVIATIONS
 AND PATTERNS**
 (Sheet 2 of 8)
STANDARD 000001-06

EROSION & SEDIMENT CONTROL ITEMS

EX

PR

Cleaning & Grading Limits



Dike



Erosion Control Fence



Perimeter Erosion Barrier



Temporary Fence



Ditch Check Temporary



Ditch Check Permanent



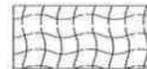
Inlet & Pipe Protection



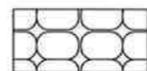
Sediment Basin



Erosion Control Blanket



Fabric Formed Concrete Revetment Mat



Turf Reinforcement Mat



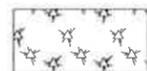
Mulch Temporary



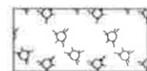
Mulch Method 1



Mulch Method 2 Stabilized



Mulch Method 3 Hydraulic

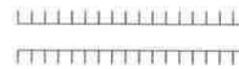


NON-HIGHWAY IMPROVEMENT ITEMS

EX

PR

Noise Attn./Levee



Field Line



Fence



Base of Levee



Mailbox



Multiple Mailboxes



Pay Telephone



Advertising Sign



LANDSCAPING ITEMS

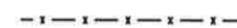
EX

PR

Contour Mounding Line



Fence



Fence Post



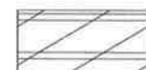
Shrubs



Mowline



Perennial Plants



Seeding Class 2



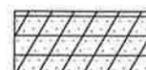
Seeding Class 2A



Seeding Class 4



Seeding Class 4 & 5 Combined

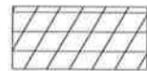


EXISTING LANDSCAPING ITEMS (contd.)

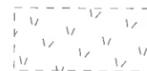
EX

PR

Seeding Class 5



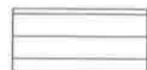
Seeding Class 7



Seedlings Type 1



Seedlings Type 2



Sodding



Mowstake w/Sign



Tree Trunk Protection



Evergreen Tree



Shade Tree



LIGHTING

EX

PR

Duct



Conduit



Electrical Aerial Cable



Electrical Buried Cable



Controller



Underpass Luminaire



Power Pole



Illinois Department of Transportation

PASSED January 1, 2011

Michael Beard
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

Scott Schick
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

(Sheet 3 of 8)

STANDARD 000001-06

LIGHTING
(contd.)

Pull Point

EX



PR



Handhole



Heavy Duty Handhole



Junction Box



Light Unit Comb.



Electrical Ground



Traffic Flow Arrow



High Mast Pole
(Half Size)



Light Unit-1



PAVEMENT (MISC.)

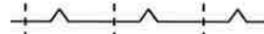
EX

PR

Keyed Long. Joint



Keyed Long. Joint w/Tie Bars



Sawed Long. Joint w/Tie Bars



Bituminous Shoulder



Bituminous Taper



Stabilized Driveway



Widening



PAVEMENT MARKINGS

EX

Bike Lane Symbol

Bike Lane Text

Handicap Symbol

RR Crossing

Raised Marker Amber 1 Way

Raised Marker Amber 2 Way

Raised Marker Crystal 1 Way

Two Way Turn Left

Shoulder Diag. Pattern

Skip-Dash White

Skip-Dash Yellow

Stop Line

Solid Line

Double Centerline

Dotted Lines

CL 2Ln 2Way
RRPM 12.2 m (40') o.c.

CL 2Ln 2Way
RRPM 80' (24.4 m) o.c.

CL Multilane Div.
RRPM 40' (12.2 m) o.c.

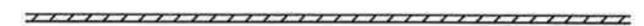
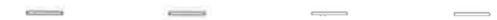
CL Multilane Div.
RRPM 80' (24.4 m) o.c.

CL Multilane Div. Dbl.
RRPM 80' (24.4 m) o.c.

CL Multilane Undiv.

Two Way Turn Left Line

PR



Illinois Department of Transportation

PASSED January 1, 2011

Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

Scott Schick
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**STANDARD SYMBOLS,
ABBREVIATIONS
AND PATTERNS**

(Sheet 4 of 8)

STANDARD 000001-06

PAVEMENT MARKINGS
(contd.)

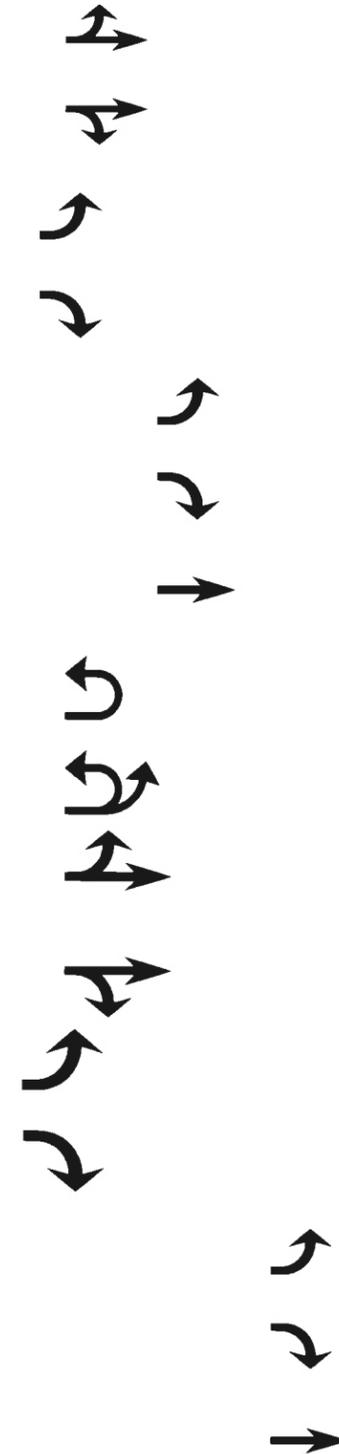
- Urban Combination Left
- Urban Combination Right
- Urban Left Turn Arrow
- Urban Right Turn Arrow
- Urban Left Turn Only
- Urban Right Turn Only
- Urban Thru Only
- Urban U-Turn
- Urban Combined U-Turn
- Rural Combination Left
- Rural Combination Right
- Rural Left Turn Arrow
- Rural Right Turn Arrow
- Rural Left Turn Only
- Rural Right Turn Only
- Rural Thru Only

EX

PR

ONLY ONLY ONLY

ONLY ONLY ONLY

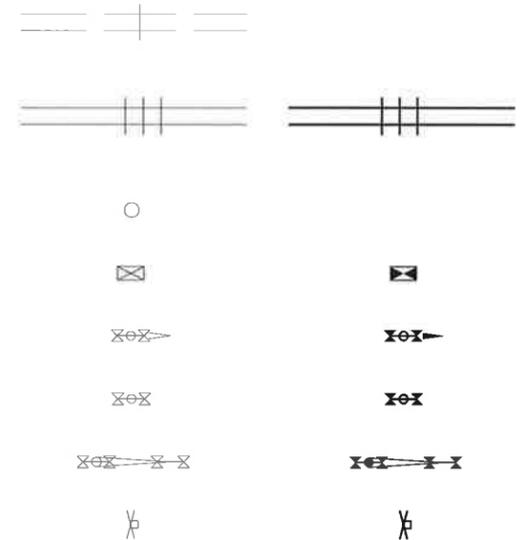


RAILROAD ITEMS

EX

PR

- Abandoned Railroad
- Railroad
- Railroad Point
- Control Box
- Crossing Gate
- Flashing Signal
- Railroad Cant. Mast Arm
- Crossbuck



REMOVAL ITEMS

EX

PR

- Removal Tic



- Bituminous Removal



- Hatch Pattern



- Tree Removal Single

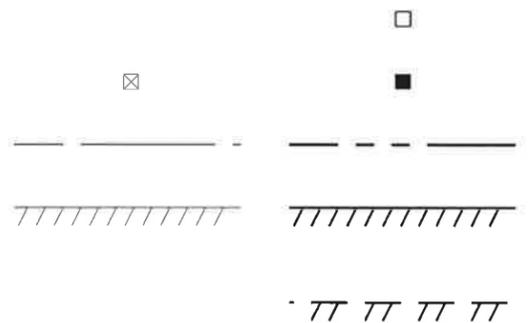


RIGHT OF WAY ITEMS

EX

PR

- Future ROW Corner Monument
- ROW Marker
- ROW Line
- Easement
- Temporary Easement



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 ENGINEER OF DESIGN AND ENVIRONMENT

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**STANDARD SYMBOLS,
ABBREVIATIONS
AND PATTERNS**

(Sheet 5 of 8)

STANDARD 000001-06

RIGHT OF WAY ITEMS
(contd.)

	EX	PR
Access Control Line	— AC —	— AC —
Access Control Line & ROW	— AC —	— AC —
Access Control Line & ROW with Fence	— x — AR —	— x — AC —
Excess ROW Line		— XS —

ROADWAY PLAN ITEMS

	EX	PR
Cable Barrier		
Concrete Barrier		
Edge of Pavement		
Bit Shoulders, Medians and C&G Line		
Aggregate Shoulder		
Sidewalks, Driveways		
Guardrail		
Guardrail Post		
Traffic Sign		
Corrugated Median		
Impact Attenuator		
North Arrow with District Office (Half Size)		
Match Line		STA. 45+00
Slope Limit Line		
Typical Cross-Section Line		

ROADWAY PROFILES

	EX	PR
P.I. Indicator	▲	▲
Point Indicator	○	○
Earthworks Balance Point		
Begin Point		
Vert. Curve Data	VPI = ELEV = L E =	VPI = ELEV = L E =
Ditch Profile Left Side		
Ditch Profile Right Side		
Roadway Profile Line		
Storm Sewer Profile Left Side		
Storm Sewer Profile Right Side		

SIGNING ITEMS

	EX	PR
Cone, Drum or Barricade		○
Barricade Type II		
Barricade Type III		
Barricade With Edge Line		
Flashing Light Sign		○
Panels I		
Panels II		
Direction of Traffic		
Sign Flag (Half Size)		

SIGNING ITEMS
(contd.)

	EX	PR
Reverse Left W1-4L (Half Size)		
Reverse Right W1-4R (Half Size)		
Two Way Traffic Sign W6-3 (Half Size)		
Detour Ahead W20-2(O) (Half Size)		
Left Lane Closed Ahead W20-5L(O) (Half Size)		
Right Lane Closed Ahead W20-5R(O) (Half Size)		
Road Closed Ahead W20-3(O) (Half Size)		
Road Construction Ahead W20-1(O) (Half Size)		
Single Lane Ahead (Half Size)		
Transition Left W4-2L (Half Size)		
Transition Right W4-2R (Half Size)		

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STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
(Sheet 6 of 8)

STANDARD 000001-06

SIGNING ITEMS
(contd.)

EX

PR

One Way Arrow Lrg. W1-6-(0)
(Half Size)



Two Way Arrow Large W1-7-(0)
(Half Size)



Detour M4-10L-(0)
(Half Size)



Detour M4-10R-(0)
(Half Size)



One Way Left R6-1L
(Half Size)



One Way Right R6-1R
(Half Size)



Left Turn Lane R3-I100L
(Half Size)



Keep Left R4-7AL
(Half Size)



Keep Left R4-7BL
(Half Size)



Keep Right R4-7AR
(Half Size)



Keep Right R4-7BR
(Half Size)



Stop Here On Red R10-6-AL
(Half Size)



Stop Here On Red R10-6-AR
(Half Size)



No Left Turn R3-2
(Half Size)



No Right Turn R3-1
(Half Size)



Road Closed R11-2
(Half Size)



Road Closed Thru Traffic R11-2
(Half Size)



STRUCTURES ITEMS

EX

PR

Box Culvert Barrel



Box Culvert Headwall



Bridge Pier



Bridge



Retaining Wall



Temporary Sheet Piling



TRAFFIC SHEET ITEMS

EX

PR

Cable Number



Left Turn Green



Left Turn Yellow



Signal Backplate



Signal Section 8" (200 mm)



Signal Section 12" (300 mm)



Walk/Don't Walk Letters



Walk/Don't Walk Symbols



TRAFFIC SIGNAL ITEMS

EX

PR

Galv. Steel Conduit



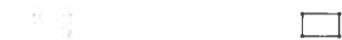
Underground Cable



Detector Loop Line



Detector Loop Large



Detector Loop Small



Detector Loop Quadrapole



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**STANDARD SYMBOLS,
ABBREVIATIONS
AND PATTERNS**

(Sheet 7 of 8)

STANDARD 000001-06

**TRAFFIC SIGNAL
ITEMS (contd.)**

EX

PR

Detector Raceway



Aluminum Mast Arm



Steel Mast Arm



Veh. Detector Magnetic



Conduit Splice



Controller



Gulfbox Junction



Wood Pole



Temp. Signal Head



Handhole



Double Handhole



Heavy Duty Handhole



Junction Box



Ped. Pushbutton Detector



Ped. Signal Head



Power Pole Service



Priority Veh. Detector



Signal Head



Signal Head w/Backplate



Signal Post



Closed Circuit TV



Video Detector System



**UNDERGROUND
UTILITY ITEMS**

EX

PR

ABANDONED

Cable TV



Electric Cable



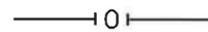
Fiber Optic



Gas Pipe



Oil Pipe



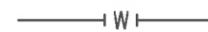
Sanitary Sewer



Telephone Cable



Water Pipe



UTILITIES ITEMS

EX

PR

Controller



Double Handhole



Fire Hydrant



GuyWire or Deadman Anchor



Handhole



Heavy Duty Handhole



Junction Box



Light Pole



Manhole



Pipeline Warning Sign



Power Pole



Power Pole with Light



Sanitary Sewer Cleanout



Splice Box Above Ground



Telephone Splice Box
Above Ground



Telephone Pole



**UTILITY ITEMS
(contd.)**

EX

PR

Traffic Signal



Traffic Signal Control Box



Water Meter



Water Meter Valve Box



Profile Line



Aerial Power Line



VEGETATION ITEMS

EX

PR

Deciduous Tree



Bush or Shrub



Evergreen Tree



Stump



Orchard/Nursery Line



Vegetation Line



Woods & Bush Line



**WATER FEATURE
ITEMS**

EX

PR

Stream or Drainage Ditch



Waters Edge



Water Surface Indicator



Water Point



Disappearing Ditch



Marsh



Marsh/Swamp Boundary



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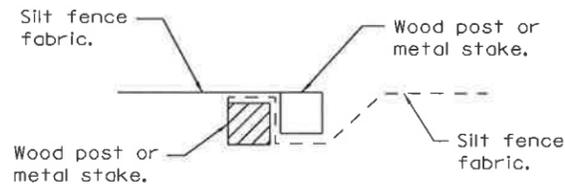
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**STANDARD SYMBOLS,
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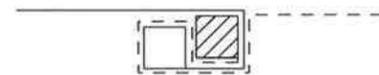
(Sheet 8 of 8)

STANDARD 000001-06



Place end-post (stake) of first silt fence adjacent to end-post (stake) of second silt fence with fabric positioned as shown.

STEP 1

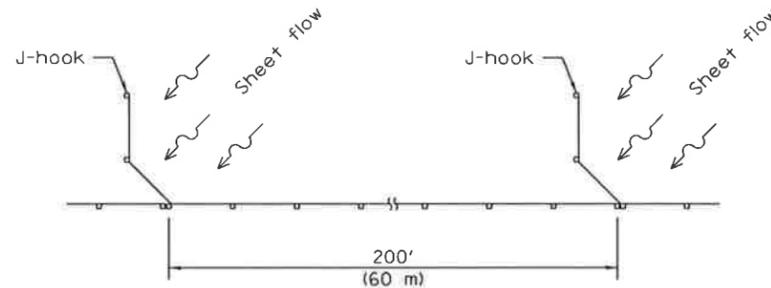


Rotate posts (stakes) together 180° clockwise and drive both posts (stakes) 18 (450) into ground.

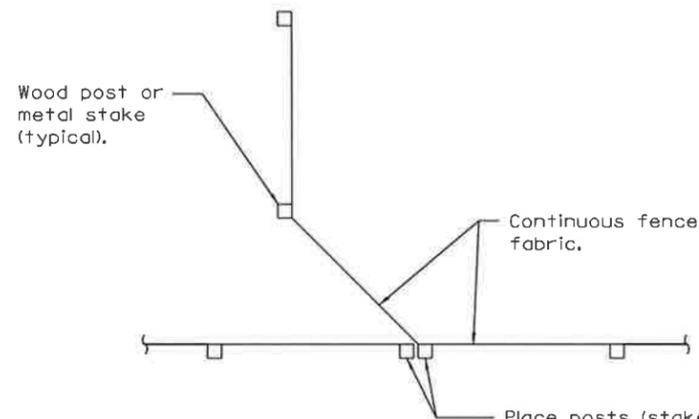
STEP 2

ATTACHING TWO SILT FILTER FENCES

(Not applicable for J-hooks)

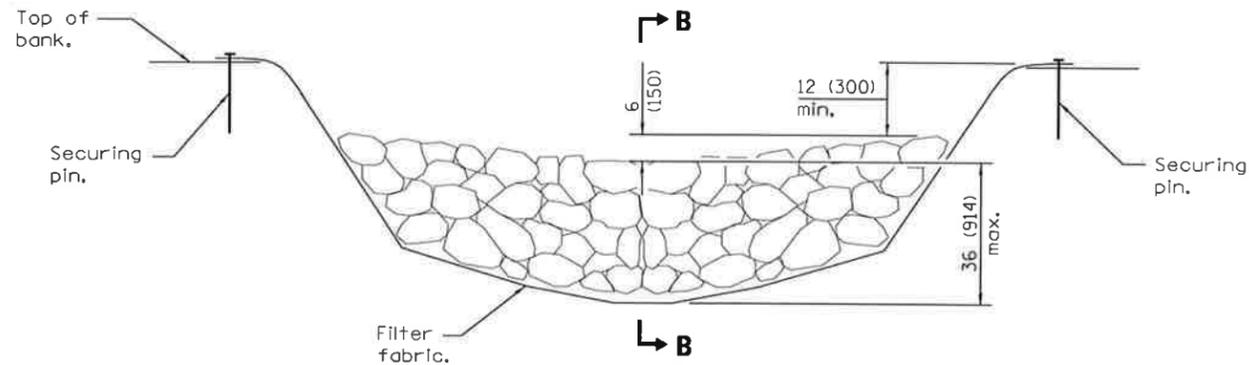


SILT FILTER J-HOOK PLACEMENT



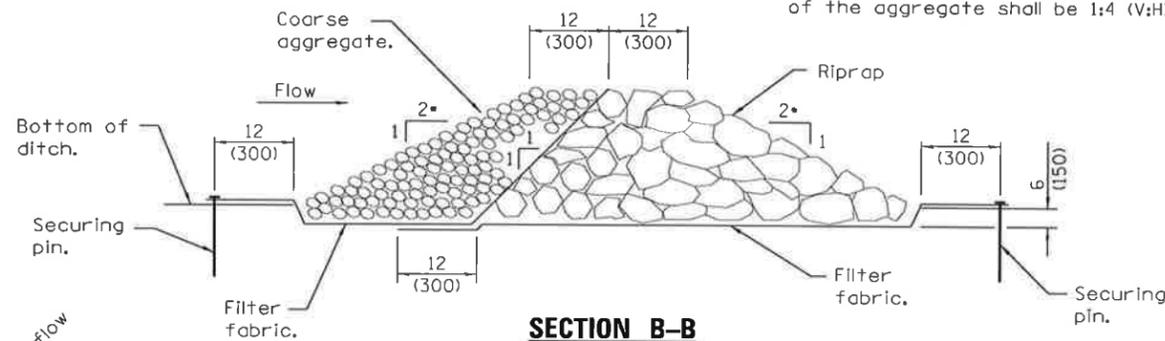
Place posts (stakes) adjacently and bind at top with wire.

J-HOOK



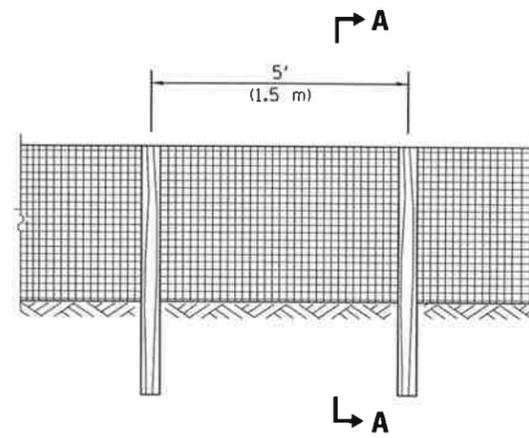
ELEVATION

• When the ditch check is within the clear zone and the road is open to traffic, the traffic approach slope of the aggregate shall be 1:4 (V:H).



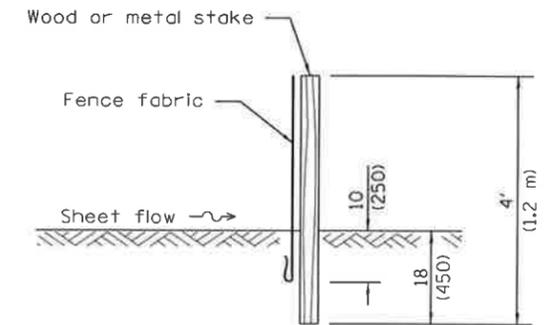
SECTION B-B

AGGREGATE DITCH CHECK

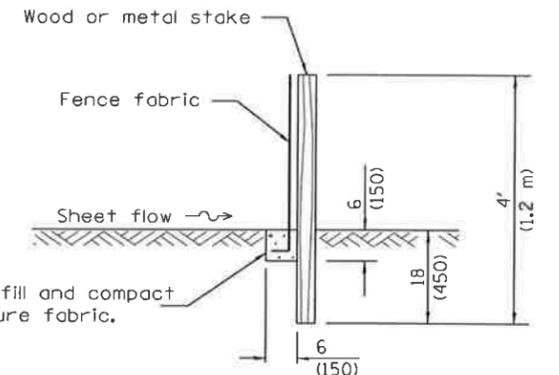


ELEVATION

SILT FILTER FENCE AS A PERIMETER EROSION BARRIER



SLICE METHOD



TRENCH METHOD

SECTION A-A

Excavate, backfill and compact trench to secure fabric.

GENERAL NOTES

The installation details and dimensions shown for perimeter erosion barriers shall also apply for inlet and pipe protection.

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

DATE	REVISIONS
1-1-13	Corrected notation for flowline (¶) on SEDIMENT BASIN ELEVATION.
1-1-12	Omitted hay/straw perimeter barrier. Added SLICE METHOD to SECTION A-A.

TEMPORARY EROSION CONTROL SYSTEMS

(Sheet 1 of 2)

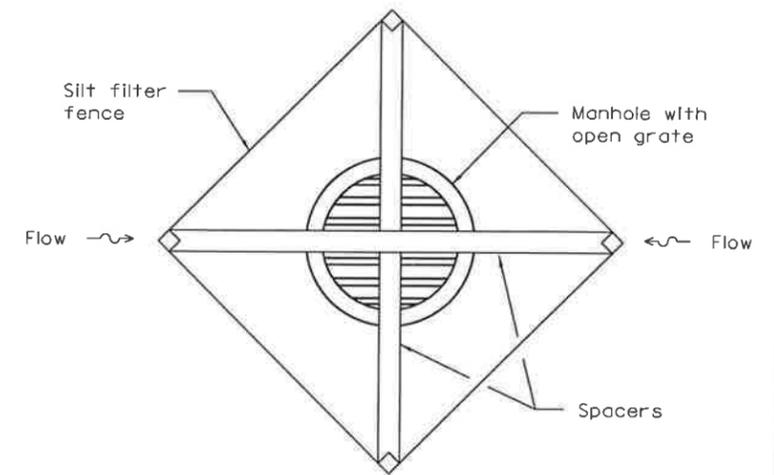
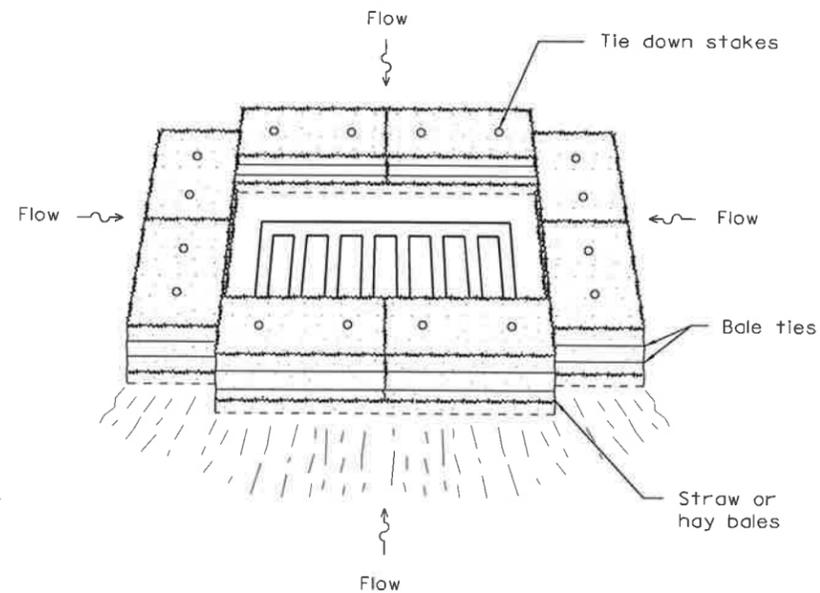
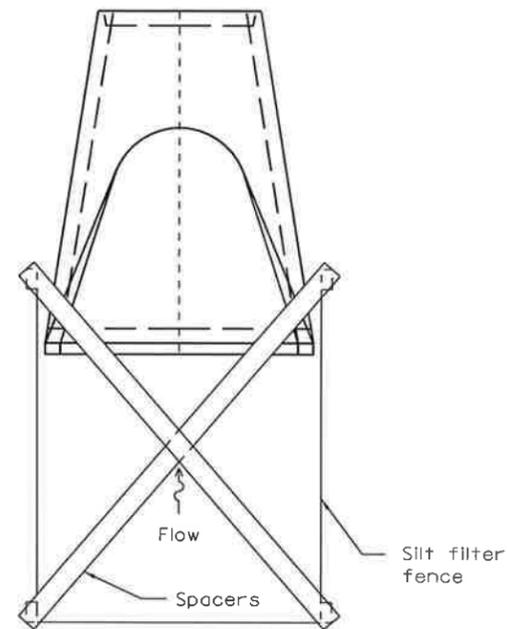
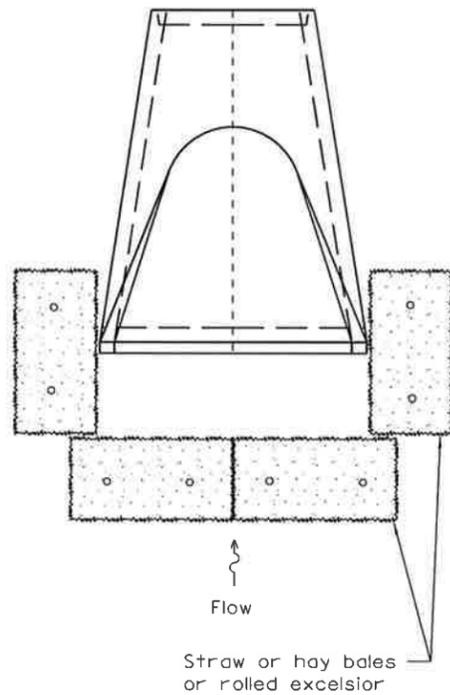
STANDARD 280001-07

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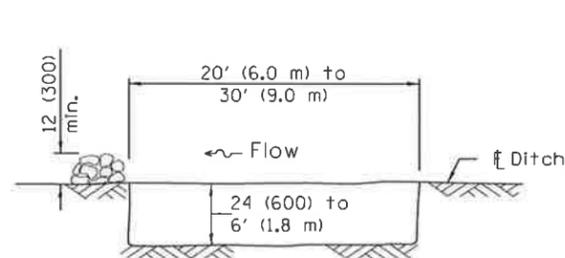
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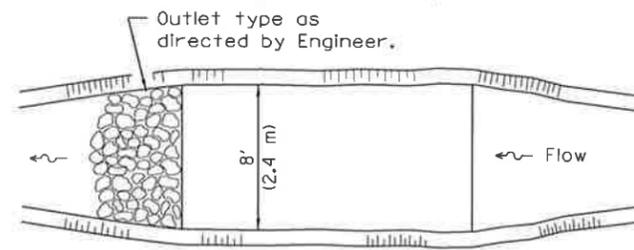


INLET AND PIPE PROTECTION



The performance of the basin will improve if put into a series.

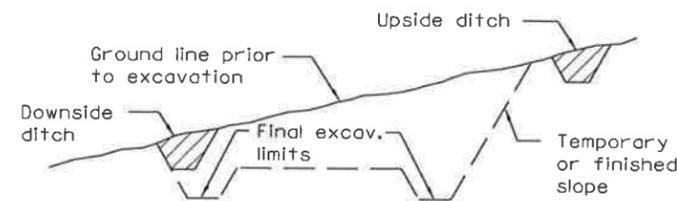
ELEVATION



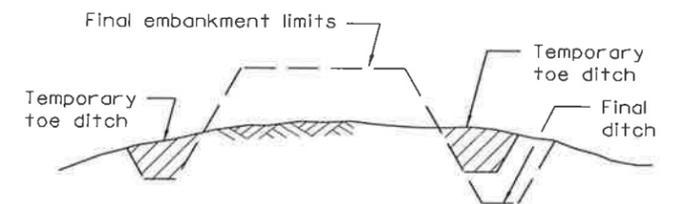
The long dimension should be parallel with the direction of the flow. Accumulated silt shall be removed anytime the basins become 75% filled.

PLAN

SEDIMENT BASIN



TYPICAL CUT CROSS-SECTION



TYPICAL FILL CROSS-SECTION

TEMPORARY DITCHES FOR CUT & FILL SECTIONS

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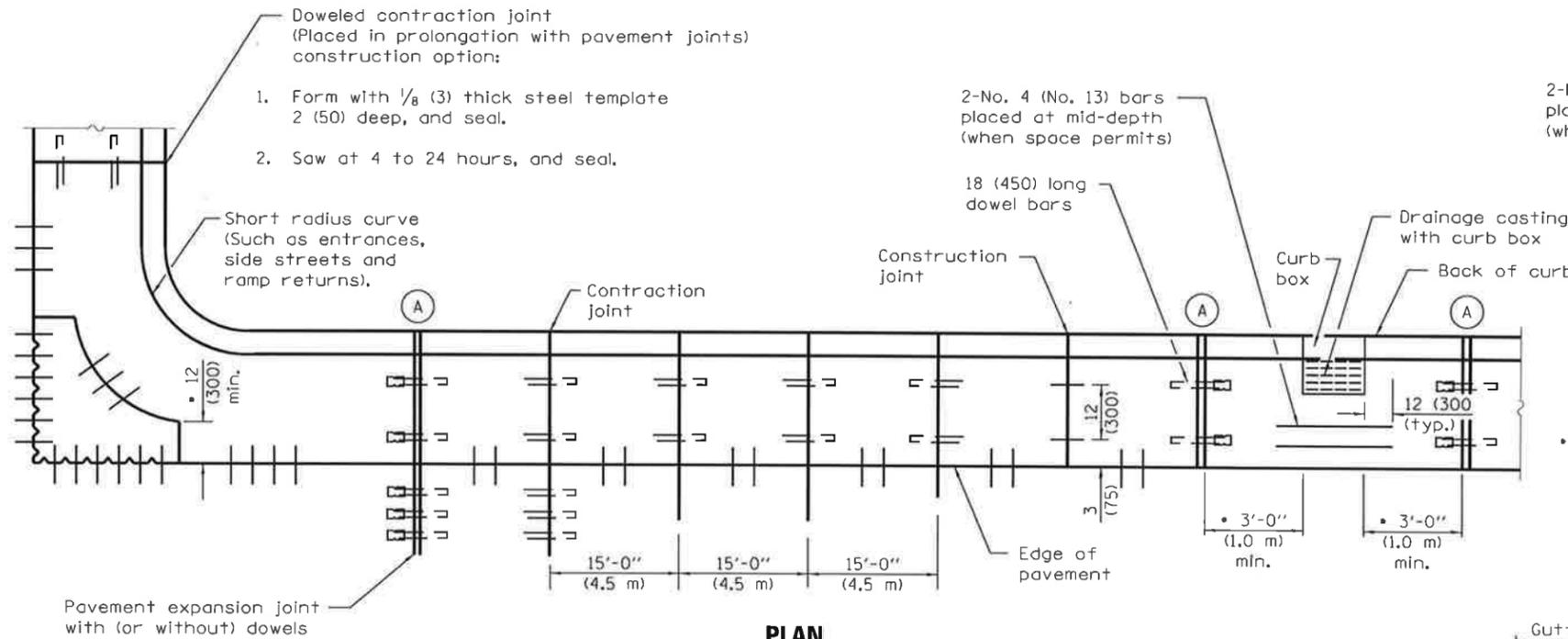
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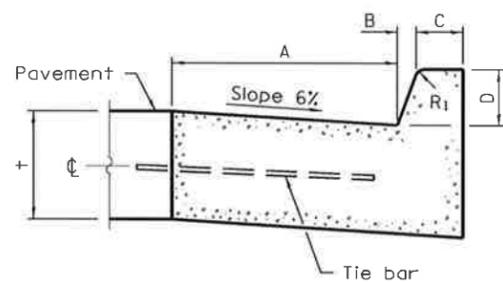
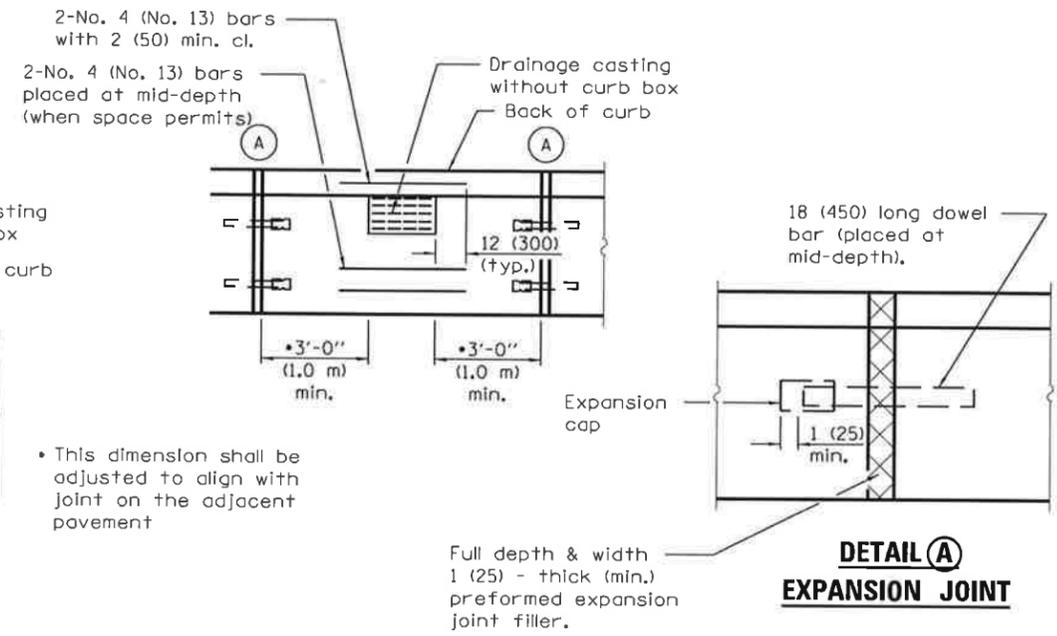
TEMPORARY EROSION CONTROL SYSTEMS

(Sheet 2 of 2)

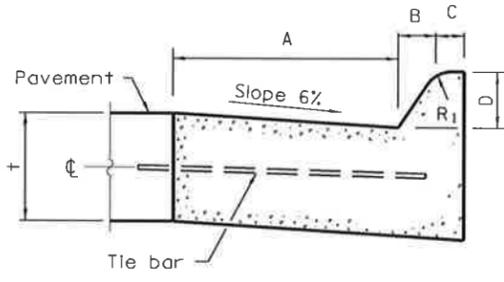
STANDARD 280001-07



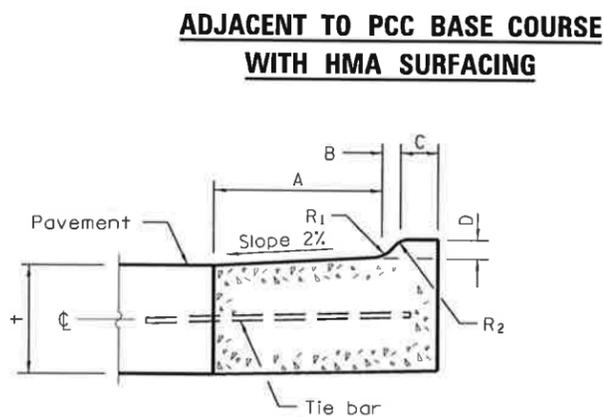
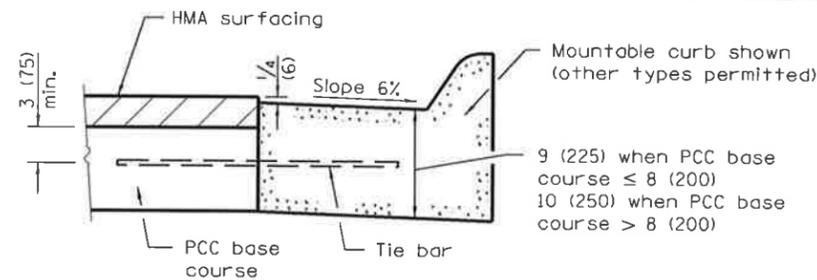
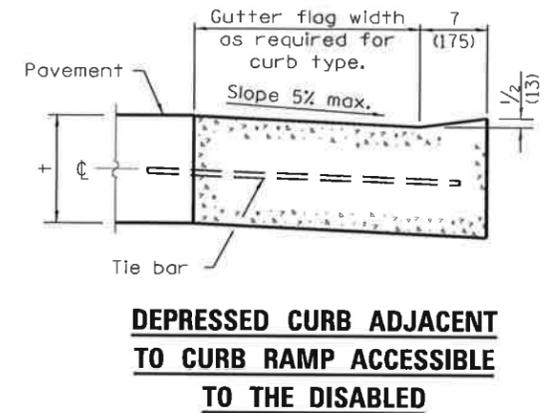
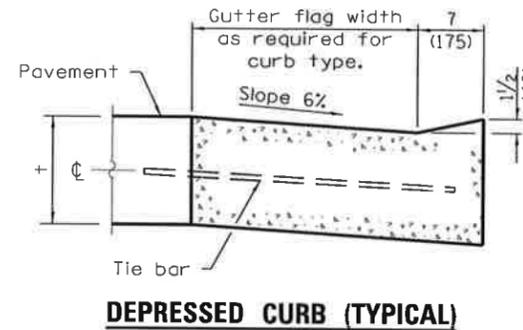
PLAN
ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE



BARRIER CURB



MOUNTABLE CURB



M-2.06 (M-5.15) and M-2.12 (M-5.30)

TYPE	A	B	C	D	R ₁
B-6.12	12	1	6	6	1
(B-15.3)	(300)	(25)	(150)	(150)	(25)
B-6.18	18	1	6	6	1
(B-15.45)	(450)	(25)	(150)	(150)	(25)
B-6.24	24	1	6	6	1
(B-15.60)	(600)	(25)	(150)	(150)	(25)
B-9.12	12	2	5	9	1
(B-22.30)	(300)	(50)	(125)	(225)	(25)
B-9.18	18	2	5	9	1
(B-22.45)	(450)	(50)	(125)	(225)	(25)
B-9.24	24	2	5	9	1
(B-22.60)	(600)	(50)	(125)	(225)	(25)

TYPE	A	B	C	D	R ₁	R ₂
M-2.06	6	2	4	2	3	2
(M-5.15)	(150)	(50)	(100)	(50)	(75)	(50)
M-2.12	12	2	4	2	3	2
(M-5.30)	(300)	(50)	(100)	(50)	(75)	(50)
M-4.06	6	4	3	4	3	NA
(M-10.15)	(150)	(100)	(75)	(100)	(75)	NA
M-4.12	12	4	3	4	3	NA
(M-10.30)	(300)	(100)	(75)	(100)	(75)	NA
M-4.18	18	4	3	4	3	NA
(M-10.45)	(450)	(100)	(75)	(100)	(75)	NA
M-4.24	24	4	3	4	3	NA
(M-10.60)	(600)	(100)	(75)	(100)	(75)	NA
M-6.06	6	6	2	6	2	NA
(M-15.15)	(150)	(150)	(50)	(150)	(50)	NA
M-6.12	12	6	2	6	2	NA
(M-15.30)	(300)	(150)	(50)	(150)	(50)	NA
M-6.18	18	6	2	6	2	NA
(M-15.45)	(450)	(150)	(50)	(150)	(50)	NA
M-6.24	24	6	2	6	2	NA
(M-15.60)	(600)	(150)	(50)	(150)	(50)	NA

GENERAL NOTES

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 24 (600) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

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

DATE	REVISIONS
1-1-13	Added general note regarding requirement for dowel bars.
1-1-09	Switched units to English (metric).

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
(Sheet 1 of 2)

STANDARD 606001-05

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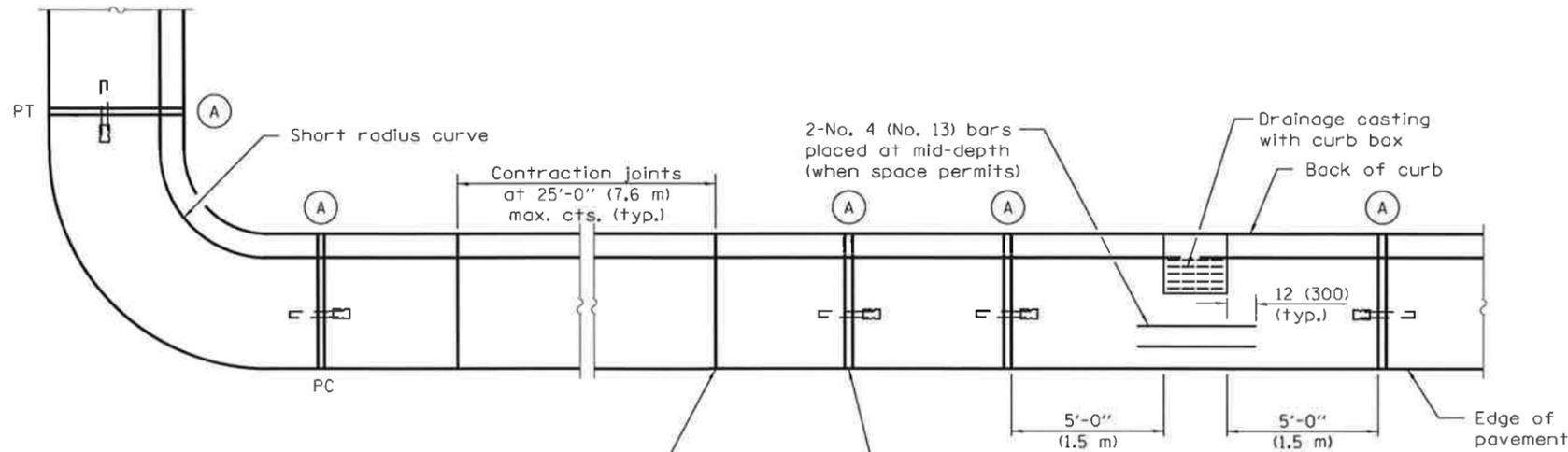
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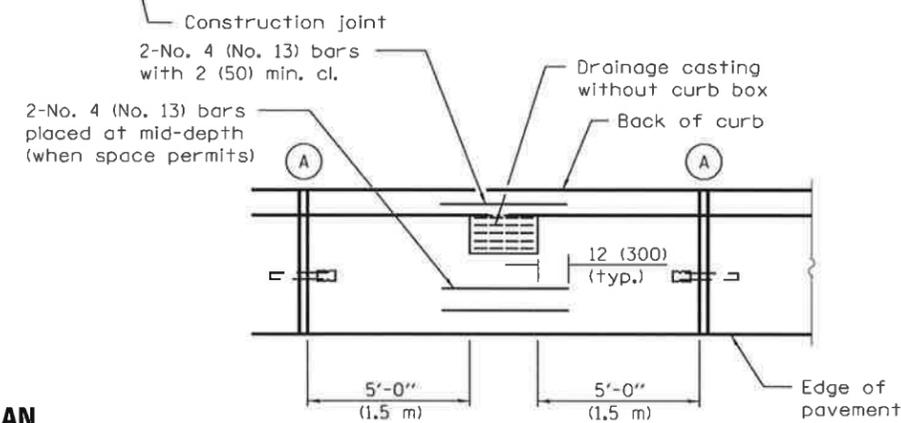
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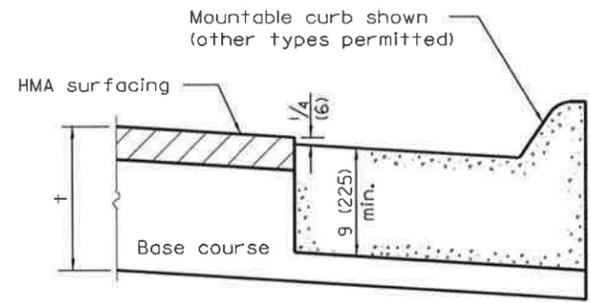
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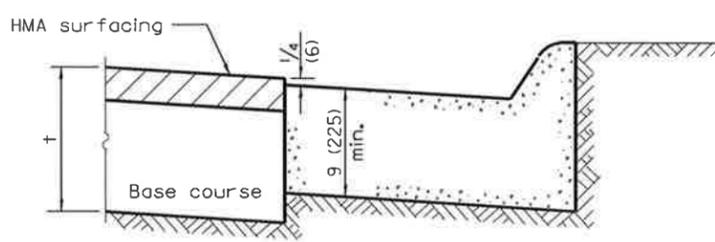
- Undoweled contraction joint (typ.) construction options:
1. Form with 1/8 (3) thick steel template 2 (50) deep, and seal.
 2. Saw 2 (50) deep at 4 to 24 hours, and seal.
 3. Insert 3/4 (20) thick preformed joint filler full depth and width.



PLAN

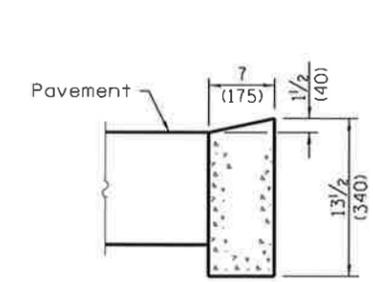


ON DISTURBED SUBGRADE

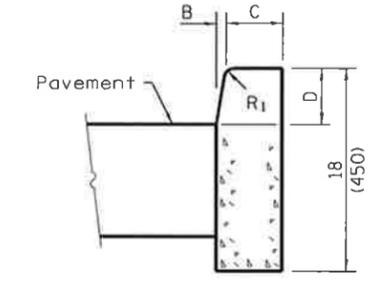


ON UNDISTURBED SUBGRADE

ADJACENT TO FLEXIBLE PAVEMENT

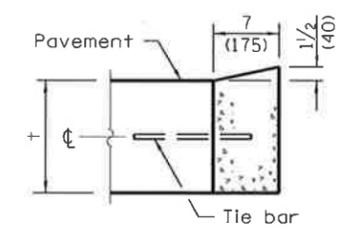


DEPRESSED CURB

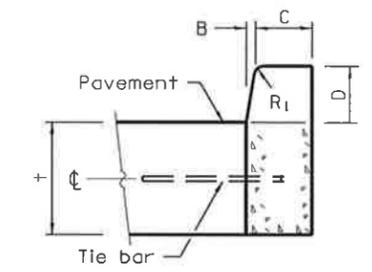


BARRIER CURB

ADJACENT TO FLEXIBLE PAVEMENT



DEPRESSED CURB



BARRIER CURB

ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

CONCRETE CURB TYPE B

Illinois Department of Transportation

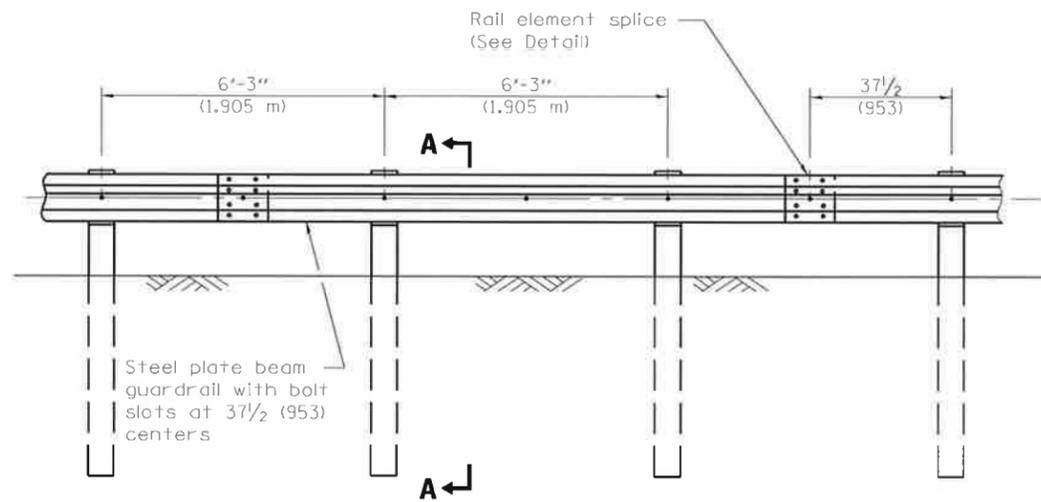
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**CONCRETE CURB TYPE B
 AND COMBINATION
 CONCRETE CURB AND GUTTER**
 (Sheet 2 of 2)

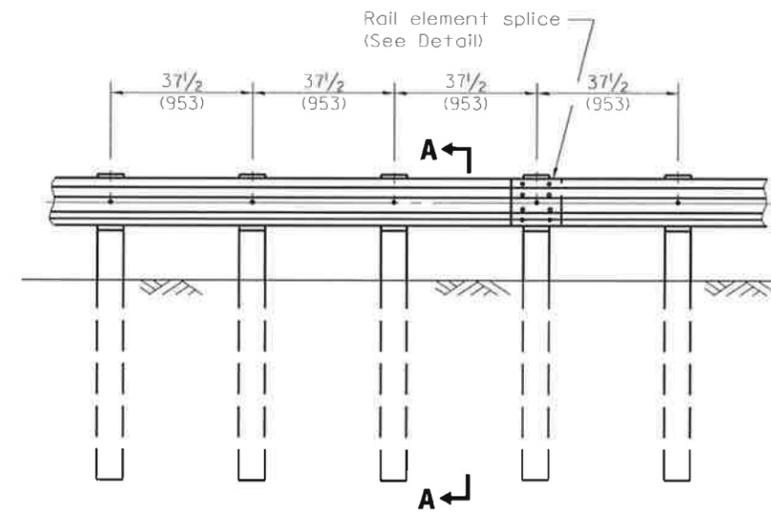
STANDARD 606001-05



ELEVATION

TYPE A

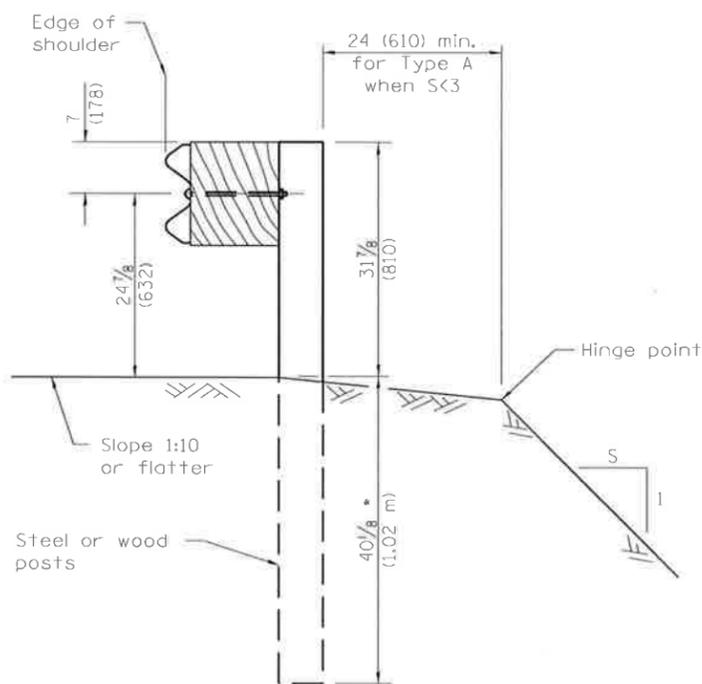
6'-3" (1.905 m) Typical post spacing



ELEVATION

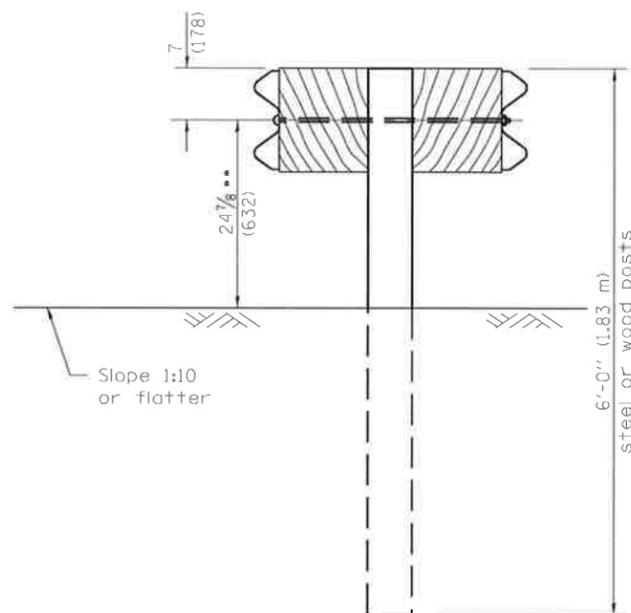
TYPE B

37 1/2 (953) Closed post spacing



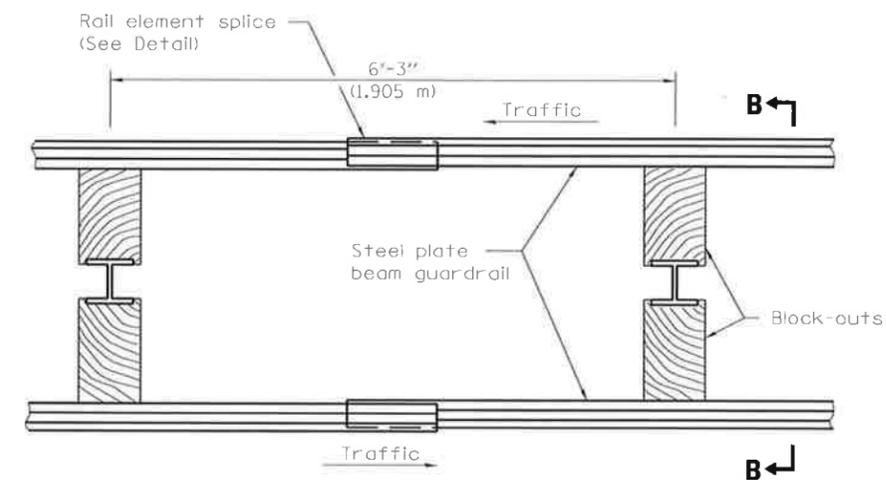
SECTION A-A

- When "S" is less than 3 and the distance from the back of post is less than 24 (610), the post shall be steel and the embedment shall be 76 1/8 (1934).



SECTION B-B

- When connecting Type D guardrail to an impact attenuator, adjust this dimension to 21 7/8 (556) over a distance of 25'-0" (7.62 m) from point of connection.



PLAN

TYPE D

Double steel plate beam guardrail
6'-3" (1.905 m) typical post spacing

GENERAL NOTES

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

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

DATE	REVISIONS
1-1-12	Added req. for 9 ft. posts to be steel. Modified set back of g'rail behind curb.
1-1-11	Added note to Section B-B for conn. to impact att.
	Revised table on Sheet 4.

STEEL PLATE BEAM GUARDRAIL

(Sheet 1 of 4)

STANDARD 630001-10

Illinois Department of Transportation

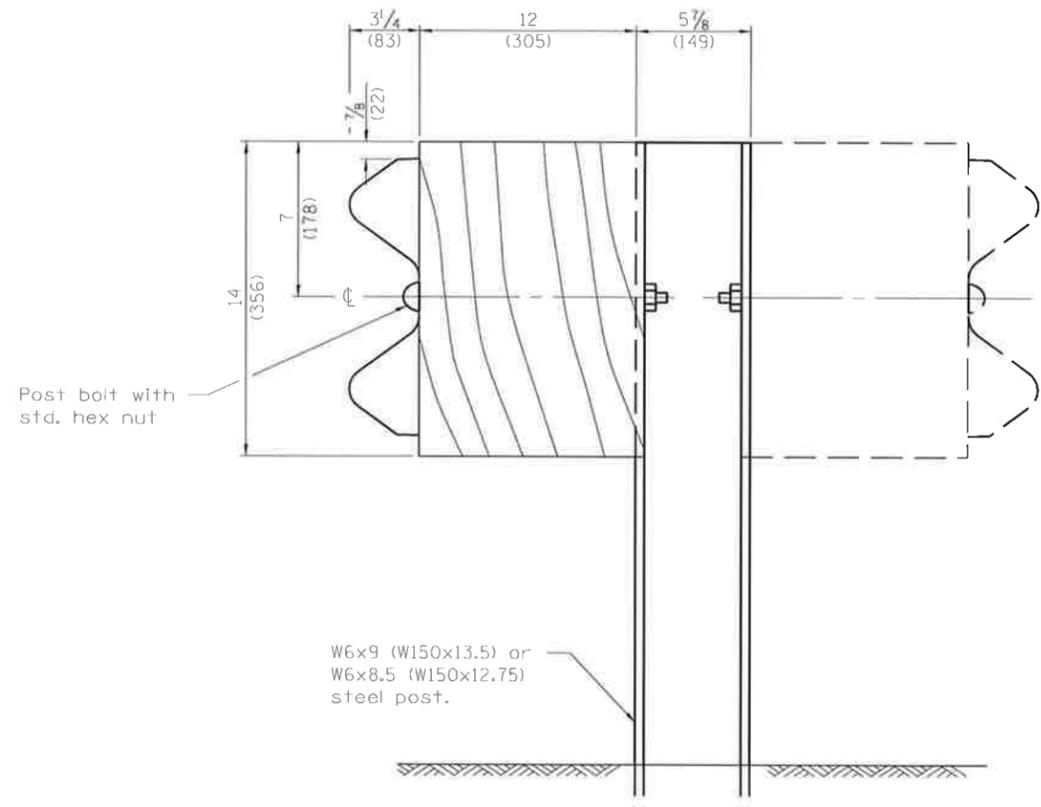
PASSED January 1, 2012

Michael Beard
ENGINEER OF POLICY AND PROCEDURES

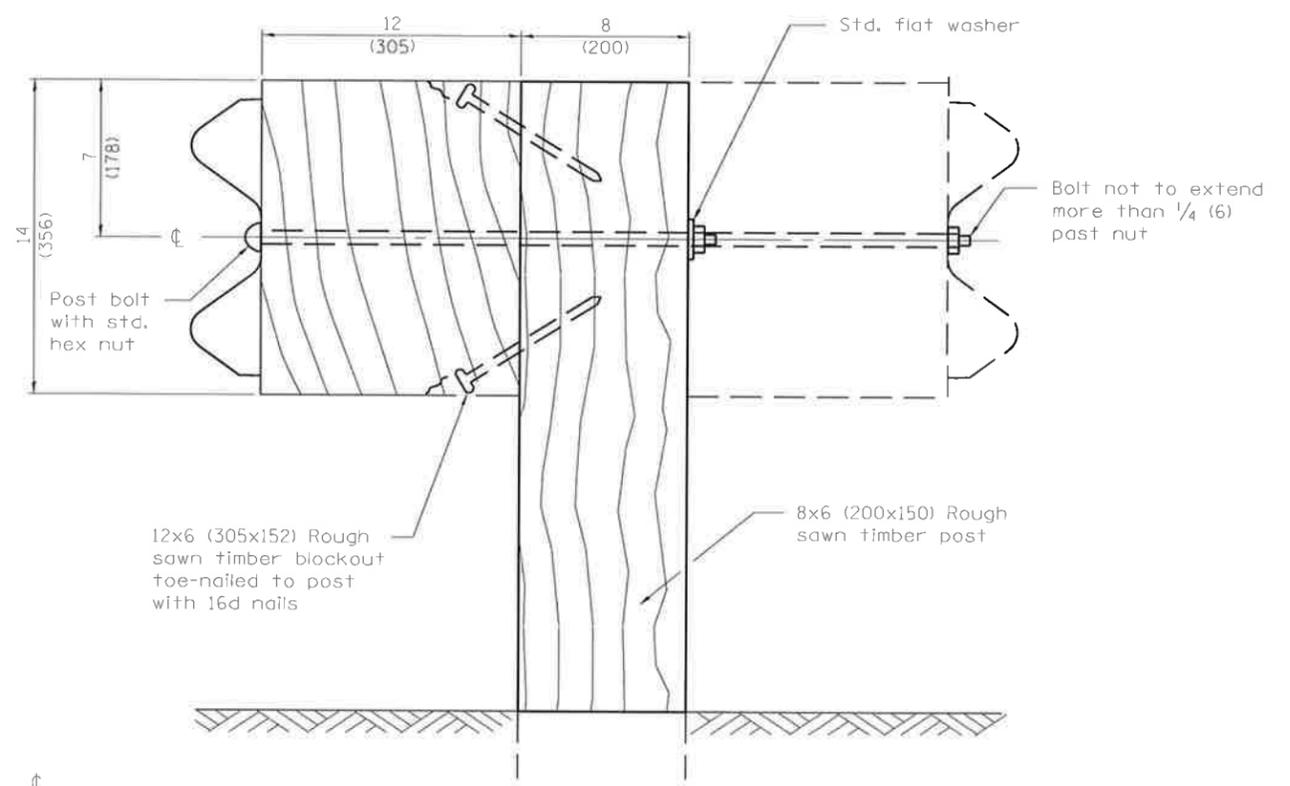
APPROVED January 1, 2012

Scott Sisk
ENGINEER OF DESIGN AND ENVIRONMENT

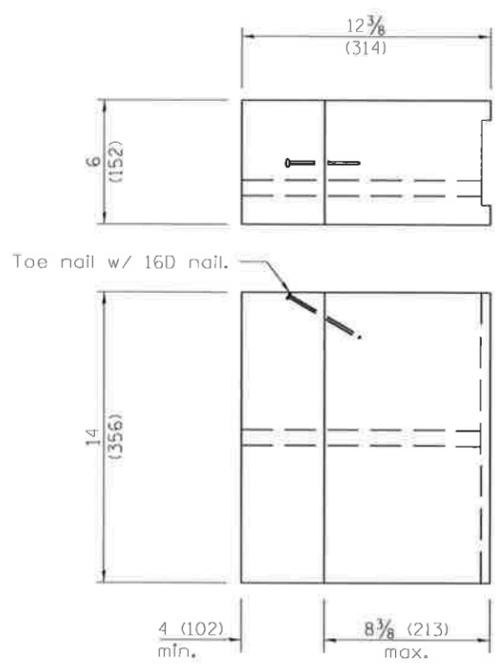
ISSUED 1-1-97



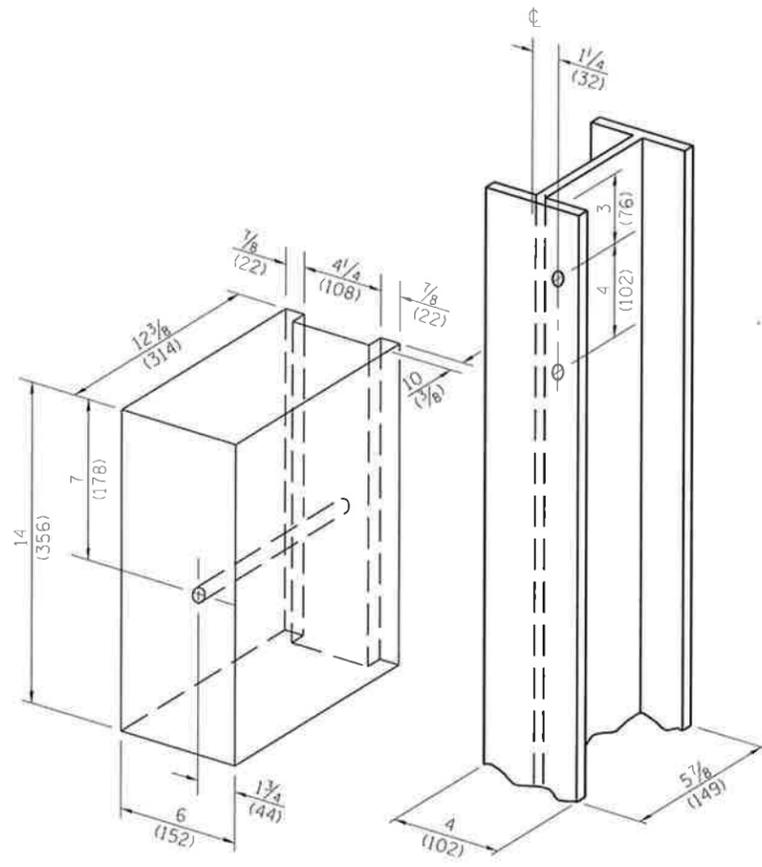
STEEL POST CONSTRUCTION



WOOD POST CONSTRUCTION

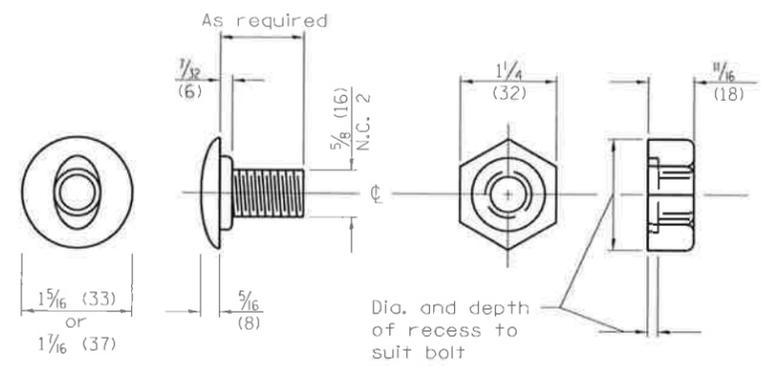


TWO-PIECE WOOD BLOCKOUT OPTION



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

WOOD BLOCK-OUT AND STEEL POST DETAILS



POST OR SPLICE BOLT & NUT

Illinois Department of Transportation

PASSED January 1, 2012
Michael Brand
ENGINEER OF POLICY AND PROCEDURES

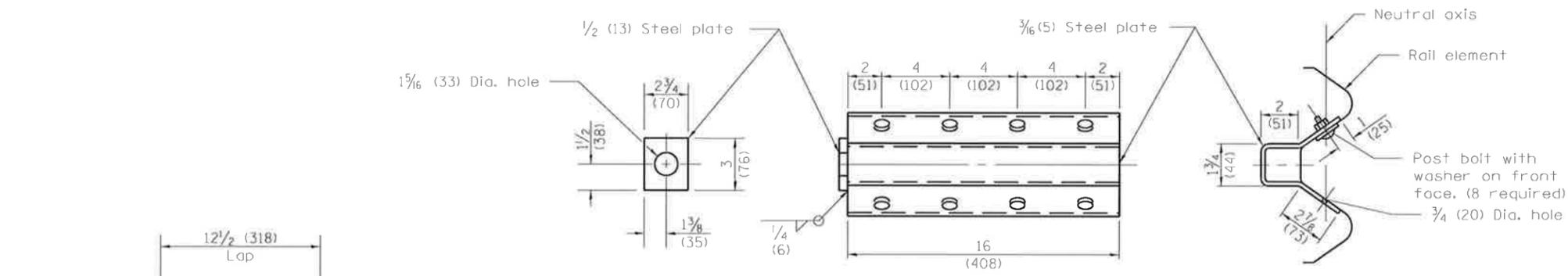
APPROVED January 1, 2012
Scott Smith
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

STEEL PLATE BEAM GUARDRAIL

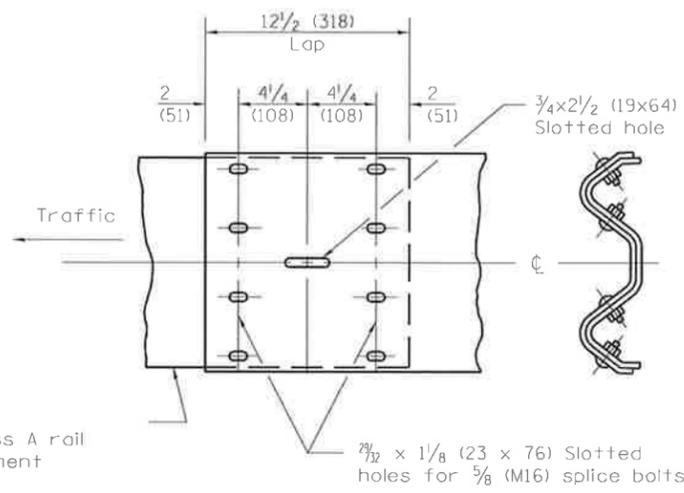
(Sheet 2 of 4)

STANDARD 630001-10

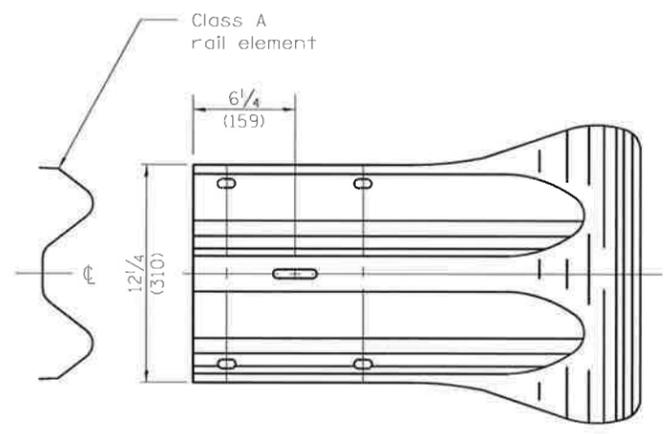
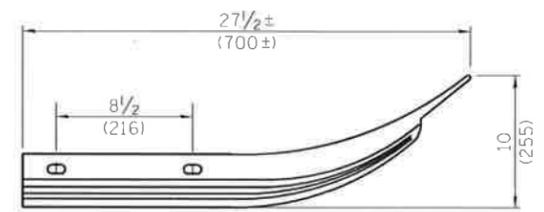


NOTE
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

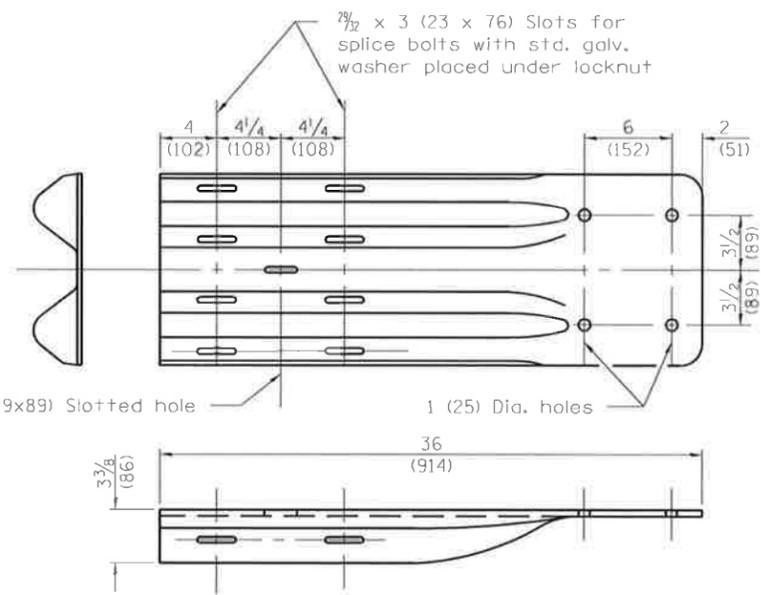
ANCHOR PLATE T DETAILS



RAIL ELEMENT SPLICE



END SECTION

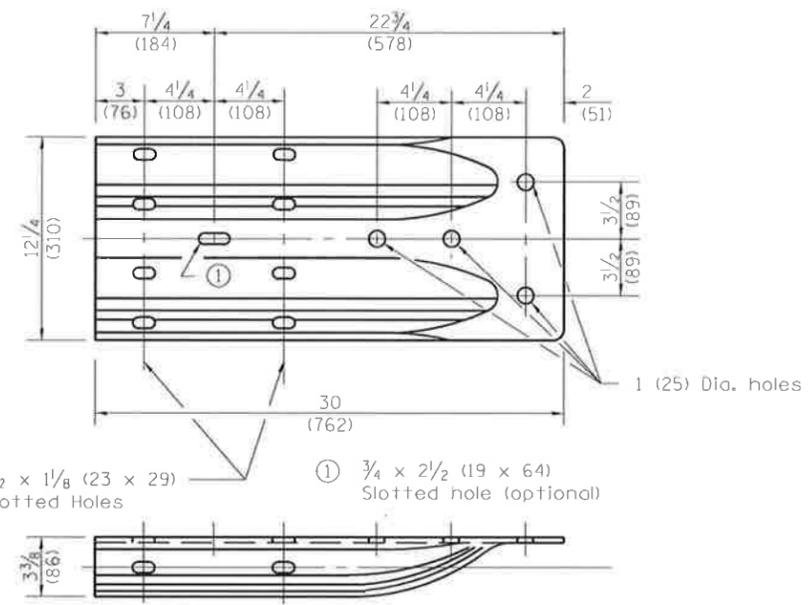


NOTE
When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

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

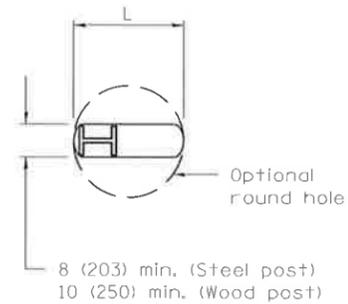
END SHOE



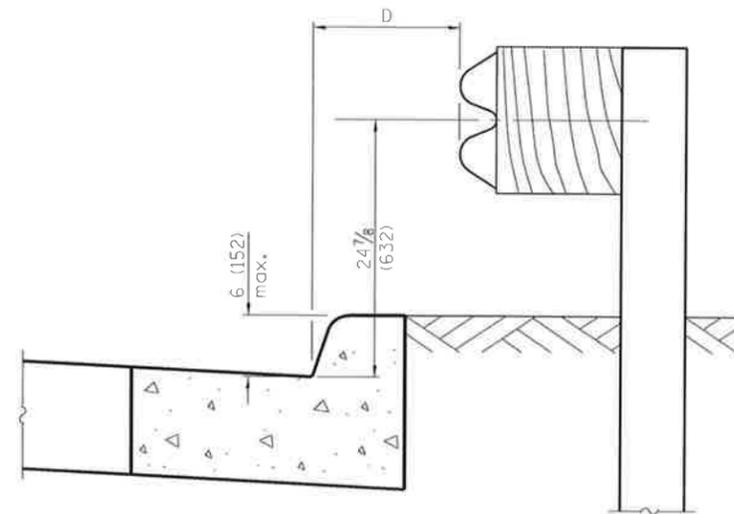
ALTERNATE END SHOE

Illinois Department of Transportation
 PASSED January 1, 2012
 Michael Brand
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED January 1, 2012
 Scott Smith
 ENGINEER OF DESIGN AND ENVIRONMENT
 ISSUED 48-1-1-87

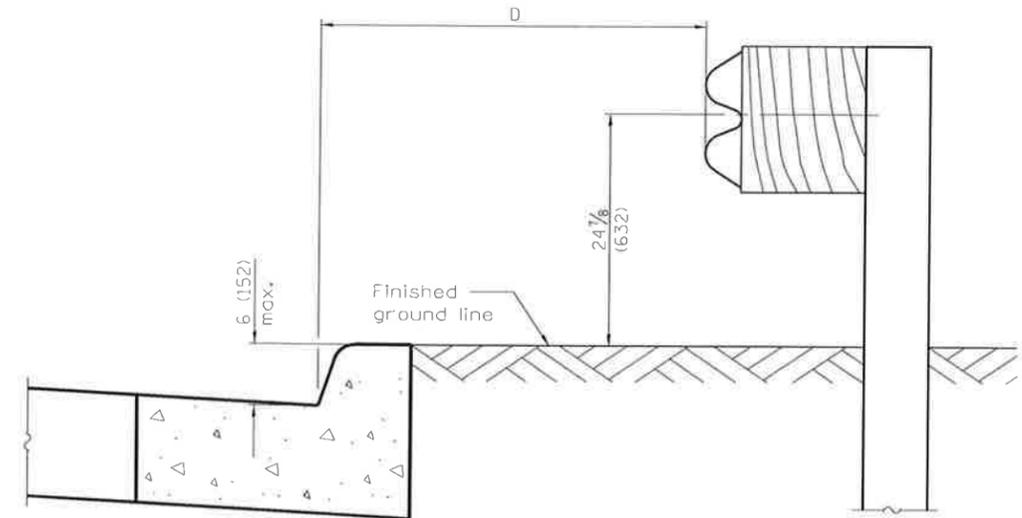
STEEL PLATE BEAM GUARDRAIL
 (Sheet 3 of 4)
STANDARD 630001-10



PLAN



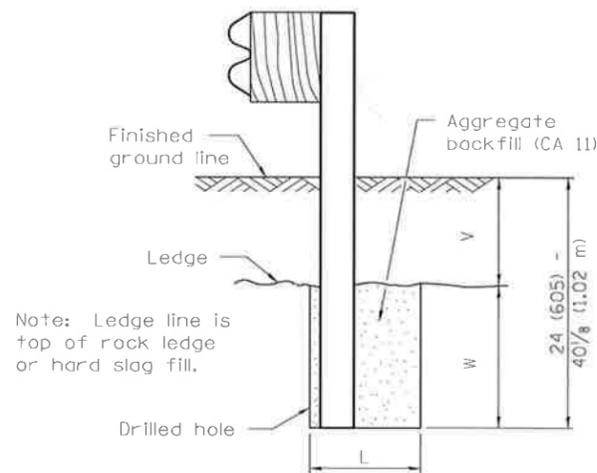
0 ≤ D < 4'-0" (1.2 m)



4'-0" (1.2 m) ≤ D ≤ 12'-0" (3.7 m)

GUARDRAIL PLACED BEHIND CURB

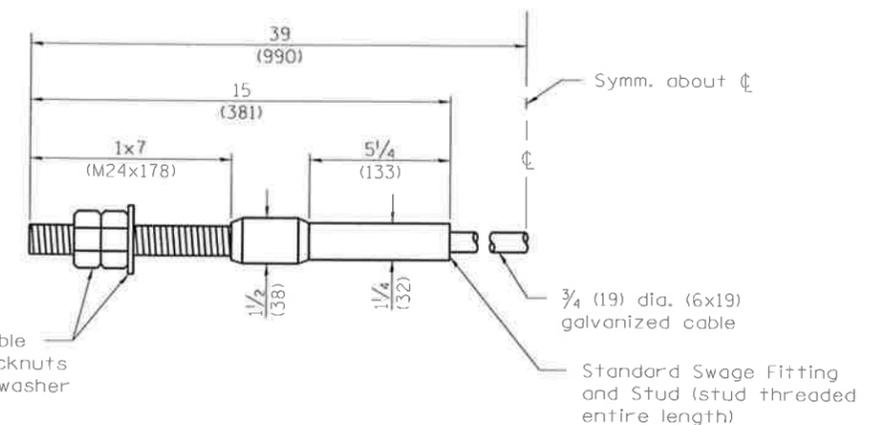
Note: 'D' shall not exceed 6 (152) for design speeds greater than 45 mph.



ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

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



CABLE ASSEMBLY

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

Illinois Department of Transportation

PASSED January 1, 2012

Michael Brand
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2012

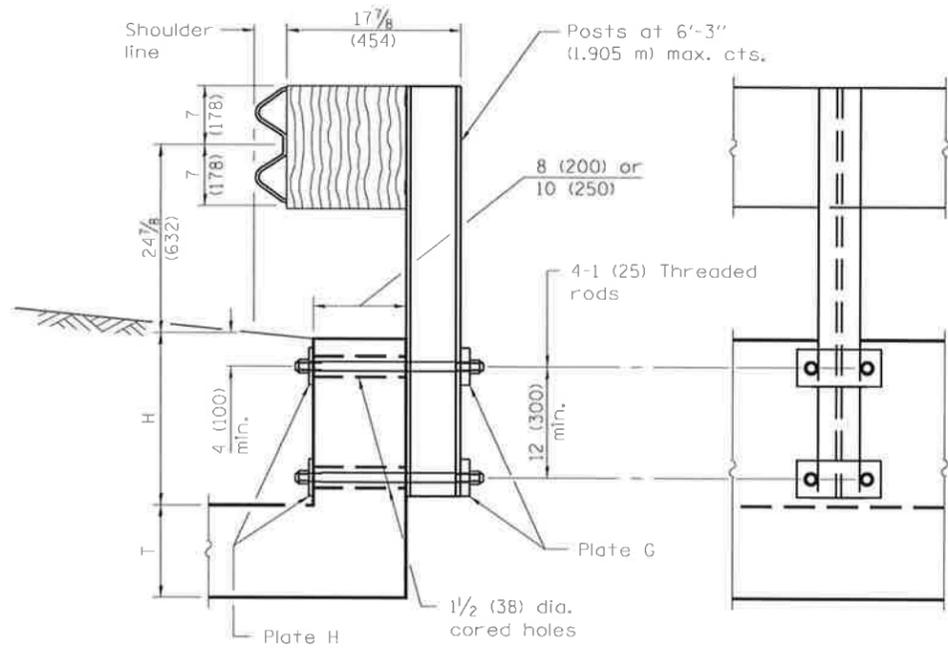
Scott Schick
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

**STEEL PLATE BEAM
GUARDRAIL**

(Sheet 4 of 4)

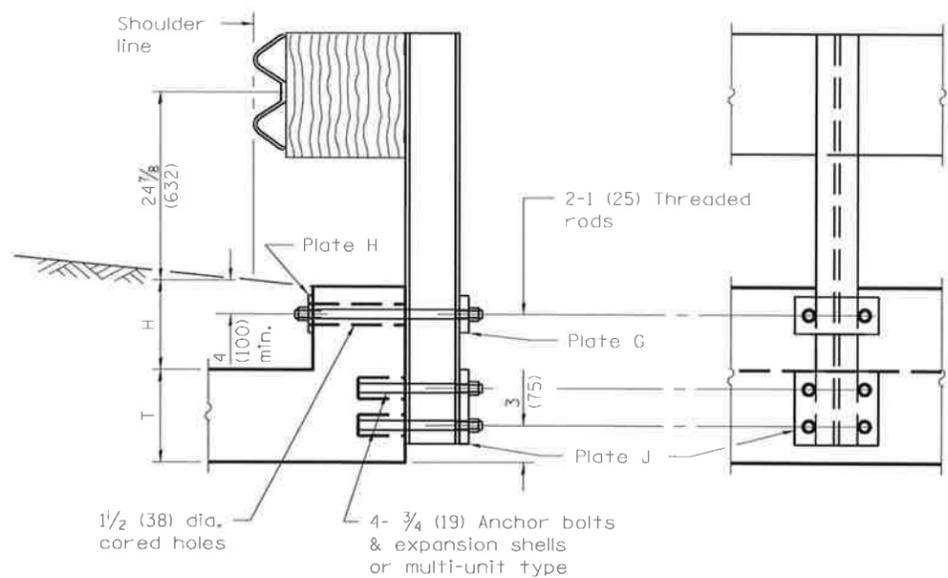
STANDARD 630001-10



CROSS SECTION

ELEVATION

CONDITION H > 18 (450)

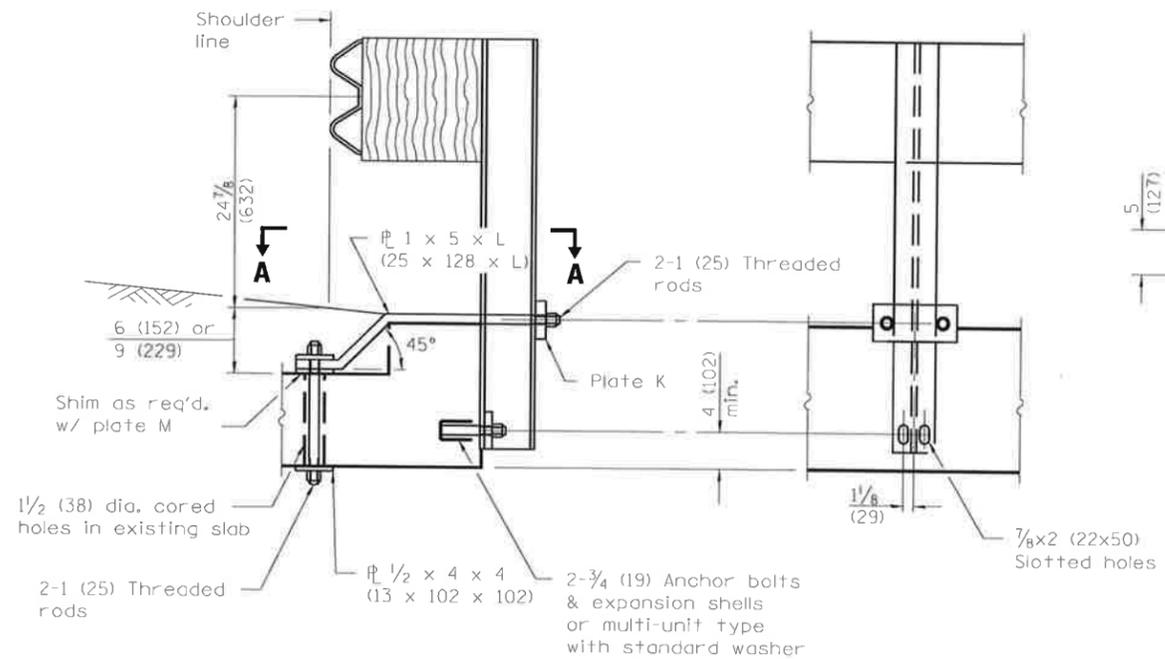


CROSS SECTION

ELEVATION

CONDITION H < 18 (450) & H+T ≥ 20 (510)

**CASE I
MOUNTED ON
RAISED HEADWALL**

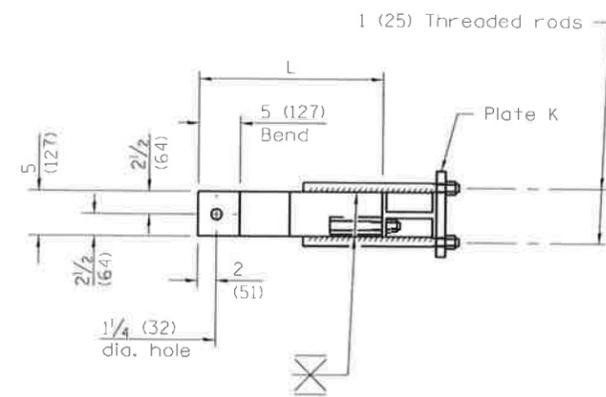


CROSS SECTION

ELEVATION

**CASE II
MOUNTED ON TOP HEADWALL
WITH SQUARE TIP**

PLATE DIMENSIONS								
Type	A	B	C	D	E	F	Hole Dia.	Thick-ness
G	9 (230)	4 (100)	1/2 (40)	6 (150)	3 (75)	2 (50)	1/8 (29)	1 (25)
H	9 (230)	4 (100)	1/2 (40)	6 (150)	3 (75)	2 (50)	1/8 (29)	1/2 (13)
J	9 (230)	5 (127)	1/2 (40)	6 (150)	3 (75)	1/4 (32)	7/8 (22)	1 (25)
K	9 (230)	4 (100)	1/2 (40)	6 (150)	3 (75)	2 (50)	1/8 (29)	1/4 (32)
M	4 (100)	4 (100)	2 (50)	N/A	N/A	2 (50)	1/4 (32)	1/2 (13)



SECTION A-A

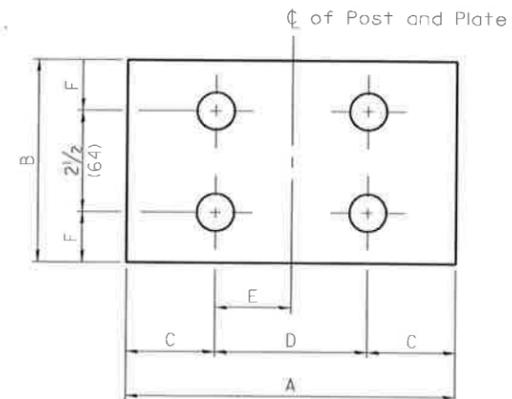
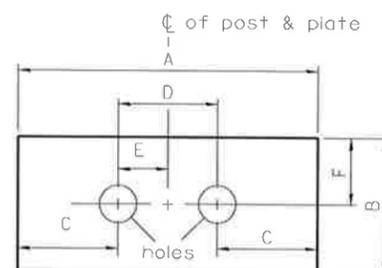


PLATE J



PLATES G, H & K

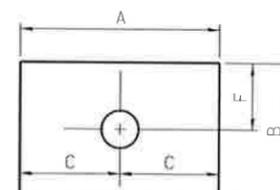


PLATE M

GENERAL NOTES

Except as noted, dimensions and notes specified for cases II, III, and IV are the same as specified for case I.

For details of guardrail elements not shown, see Standard 630001.

All threaded rods shall be installed with heavy hex nuts and standard washers.

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

DATE	REVISIONS
1-1-11	Revised weld detail for Case IV.
1-1-09	Switched units to English (metric). Added fillet weld to Case IV.

GUARDRAIL MOUNTED ON EXISTING CULVERTS

(Sheet 1 of 2)

STANDARD 630101-09

Illinois Department of Transportation

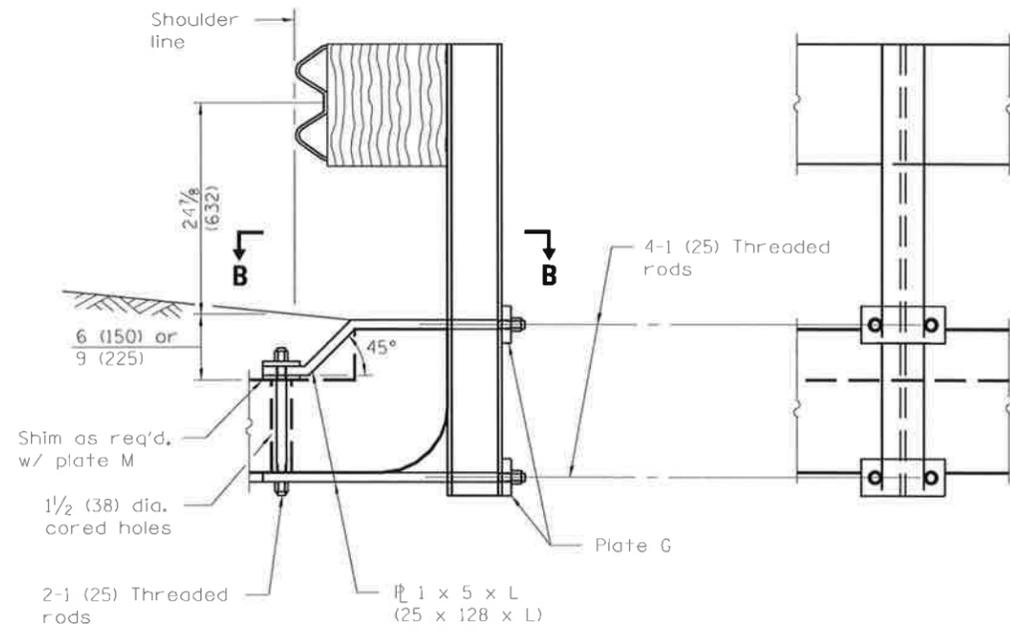
PASSED January 1, 2011

Michael Beard
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

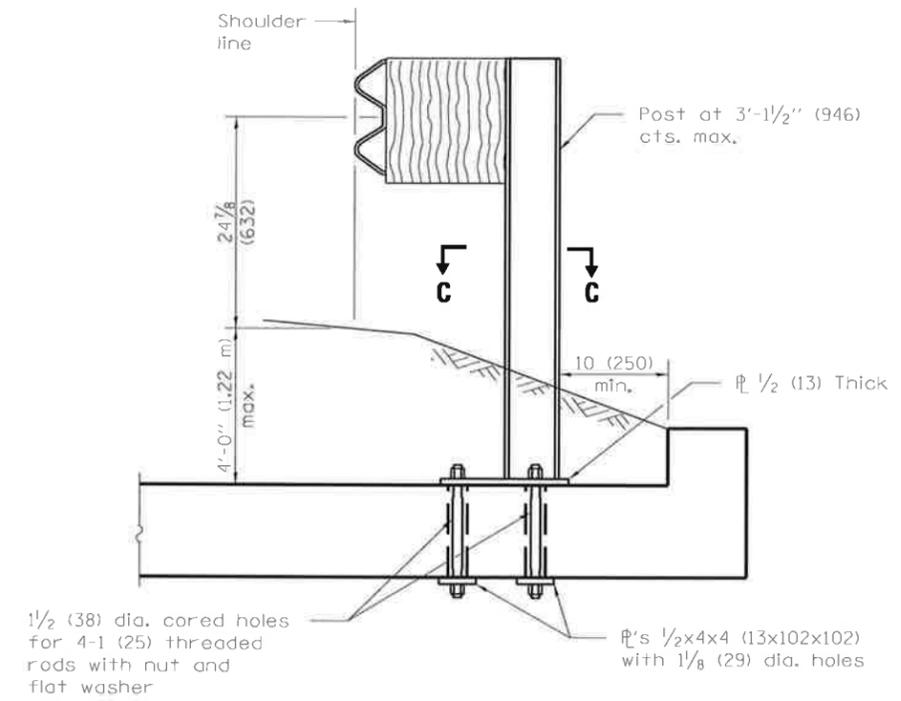
Scott Smith
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-11

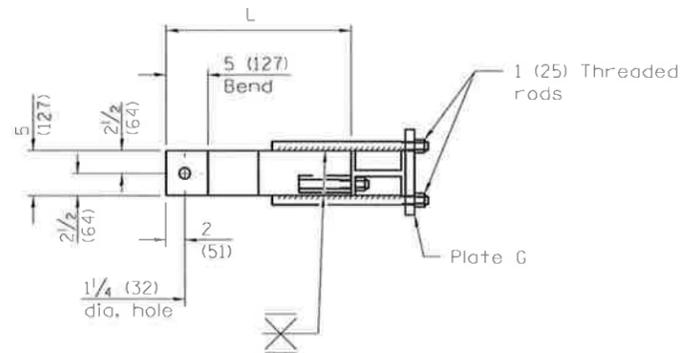


CROSS SECTION

ELEVATION

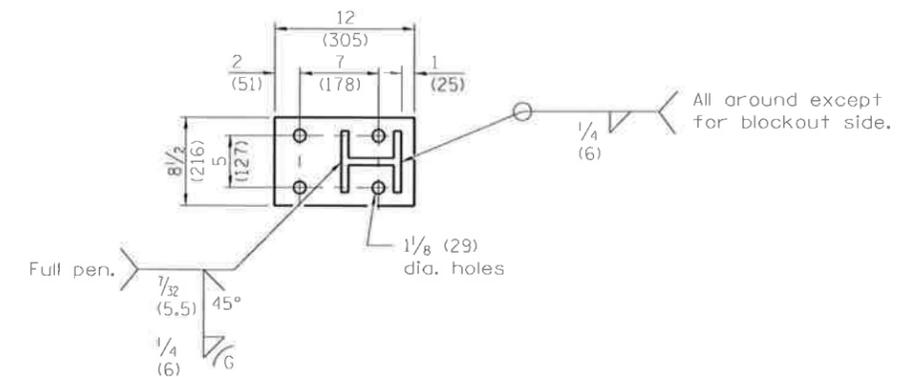


CROSS SECTION



SECTION B-B

**CASE III
MOUNTED ON HEADWALL
WITH CURVED OR DEMOLISHED TIP**

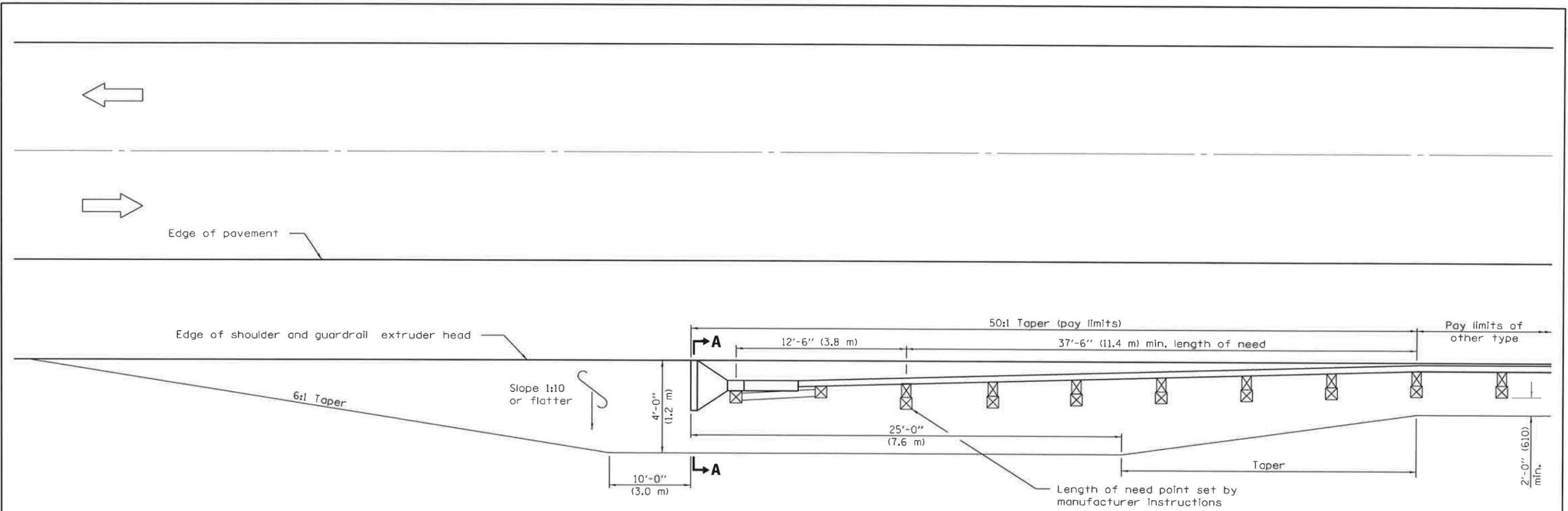


SECTION C-C

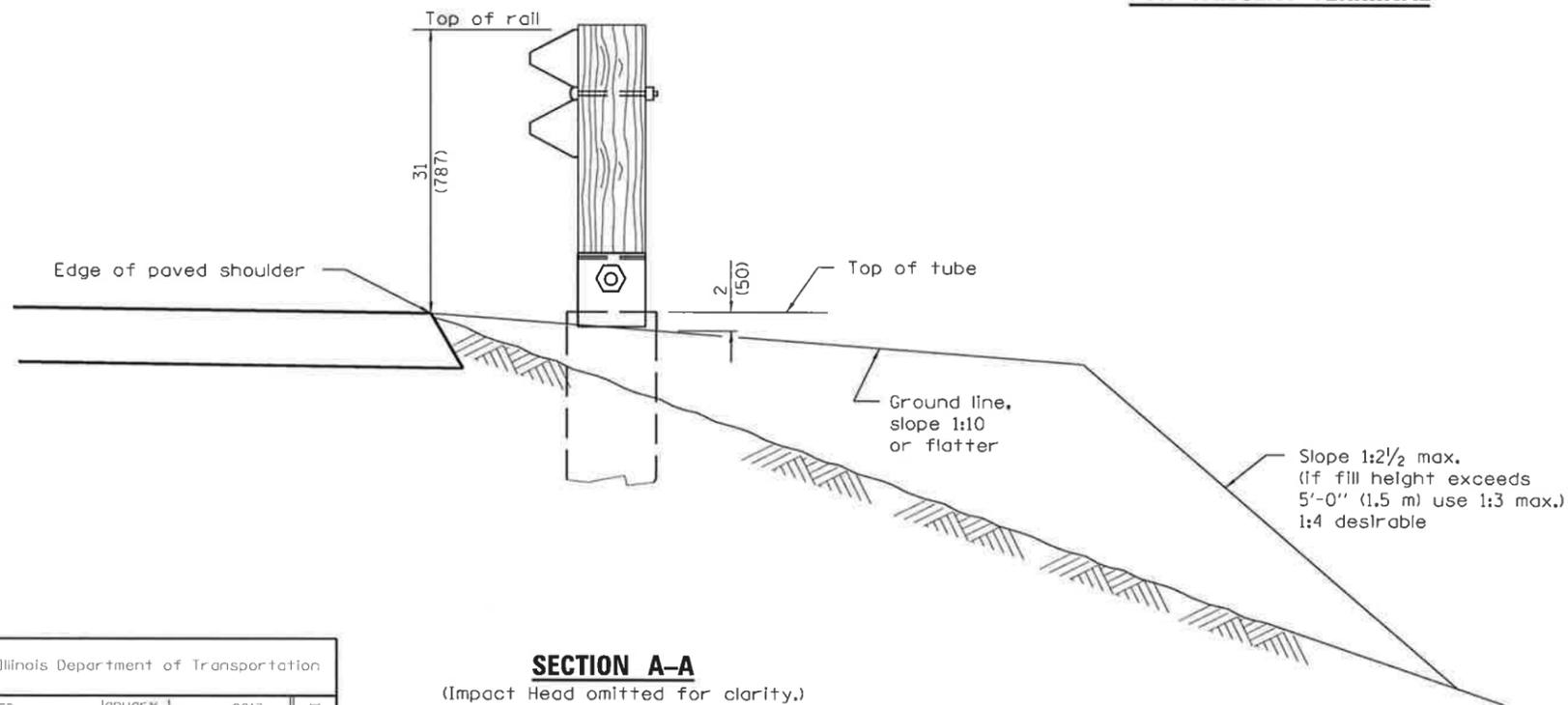
**CASE IV
MOUNTED ON SLAB**

Illinois Department of Transportation
 PASSED January 1, 2011
 Michael Beard
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED January 1, 2011
 ENGINEER OF DESIGN AND ENVIRONMENT
 ISSUED 1-1-97

**GUARDRAIL MOUNTED
ON EXISTING CULVERTS**
 (Sheet 2 of 2)
STANDARD 630101-09



**SHOULDER WIDENING TRANSITION
FOR TANGENT TERMINAL**



SECTION A-A
(Impact Head omitted for clarity.)

GENERAL NOTES

50:1 Taper required so the guardrail head will not encroach on the shoulder.

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.

DATE	REVISIONS
1-1-13	Modified dimensioning of terminal.
1-1-09	Switched units to English (metric).

**SHOULDER WIDENING FOR
TYPE 1 (SPECIAL)
GUARDRAIL TERMINALS**

(Sheet 1 of 2)

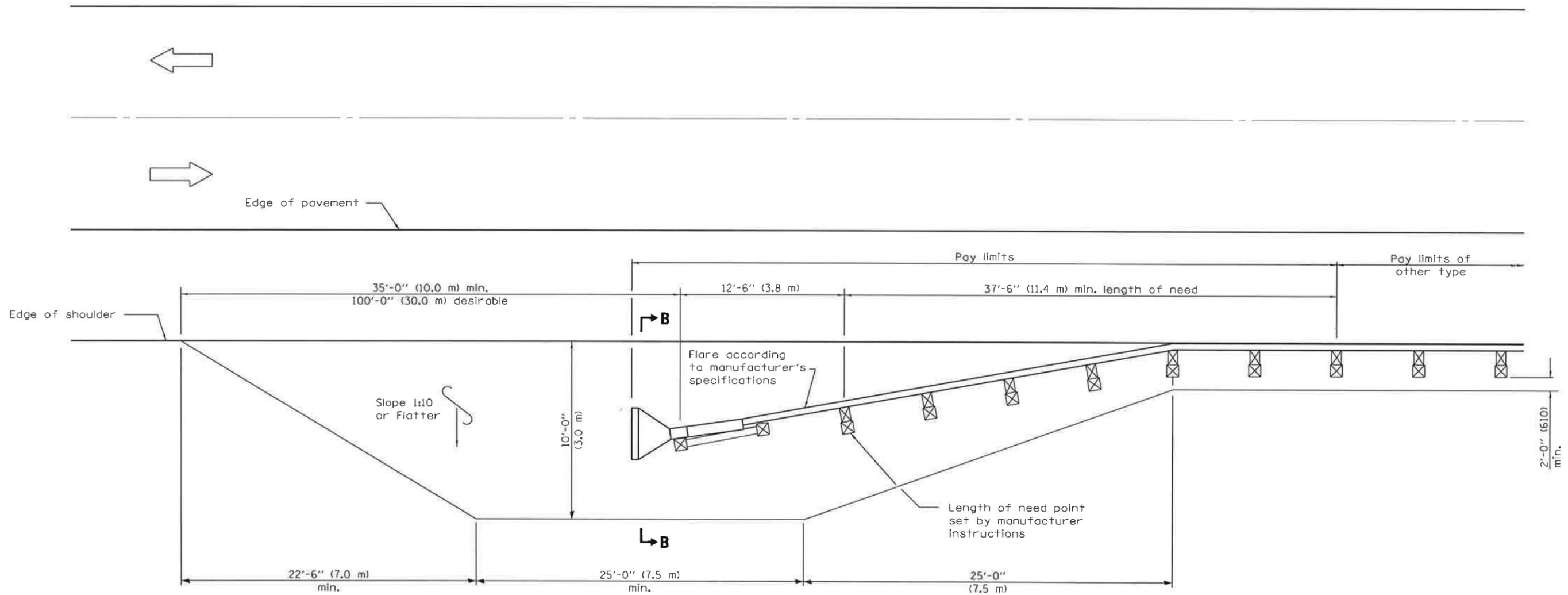
STANDARD 630301-06

Illinois Department of Transportation

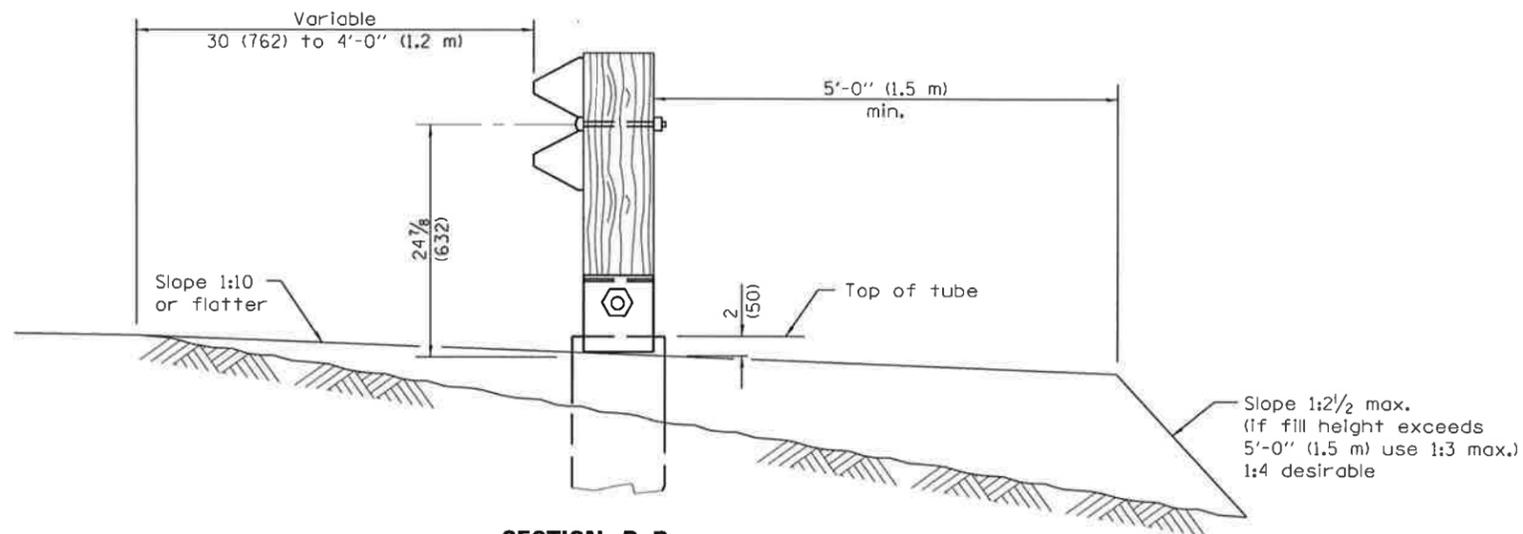
PASSED January 1, 2013
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APPROVED January 1, 2013
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-00



**SHOULDER WIDENING TRANSITION
FOR FLARED TERMINAL**



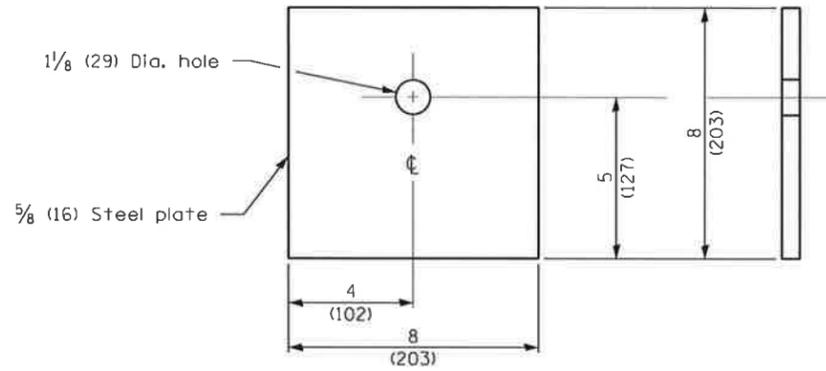
SECTION B-B
(Impact Head omitted for clarity.)

**SHOULDER WIDENING FOR
TYPE 1 (SPECIAL)
GUARDRAIL TERMINALS**

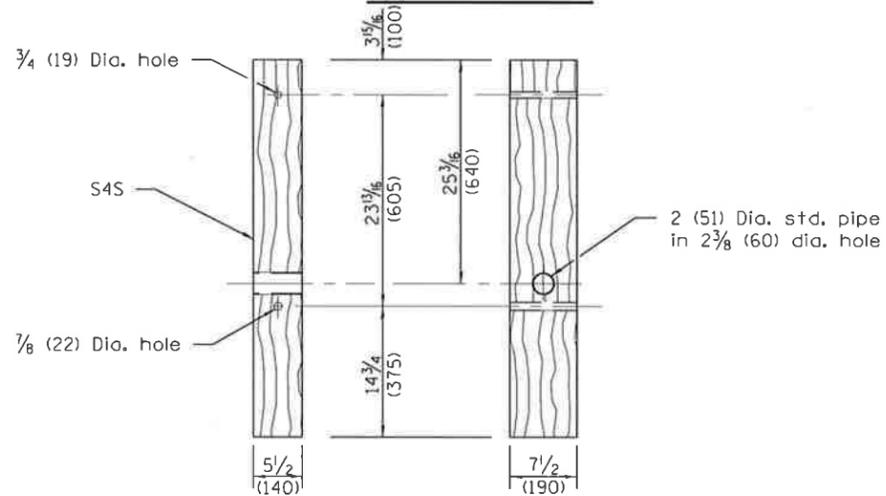
(Sheet 2 of 2)

STANDARD 630301-06

Illinois Department of Transportation	
PASSED <u>January 1, 2013</u> <i>Michael Beard</i> ENGINEER OF POLICY AND PROCEDURES	ISSUED 1-1-00
APPROVED <u>January 1, 2013</u> ENGINEER OF DESIGN AND ENVIRONMENT	



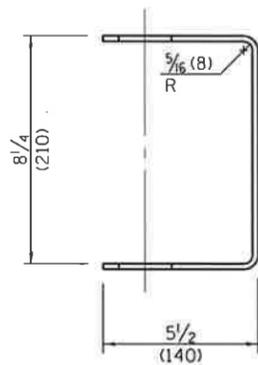
BEARING PLATE K



FRONT

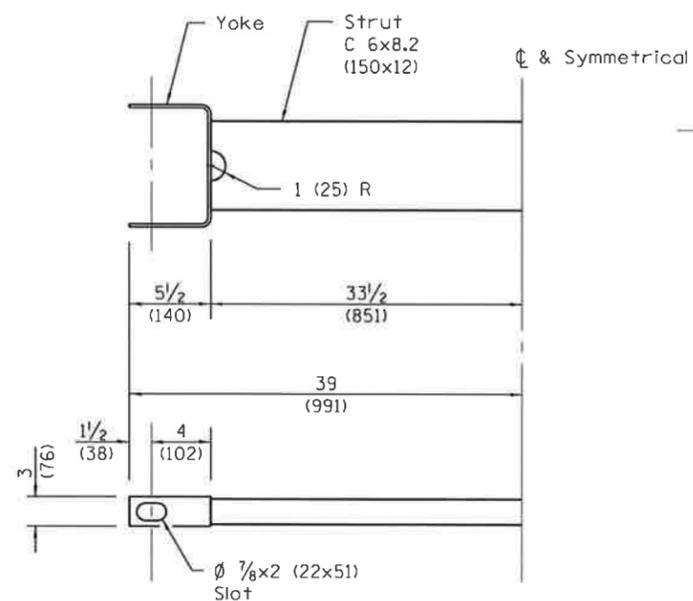
SIDE

WOOD POST

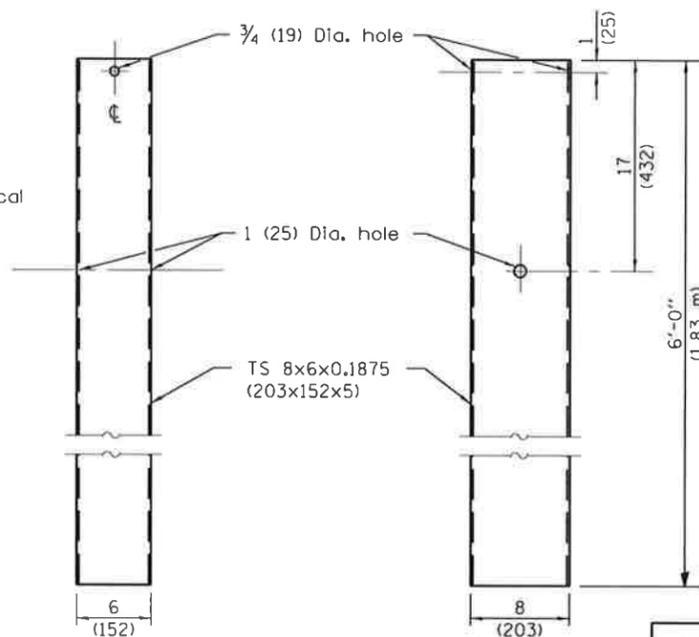


YOKE

3/16 (5) thick steel



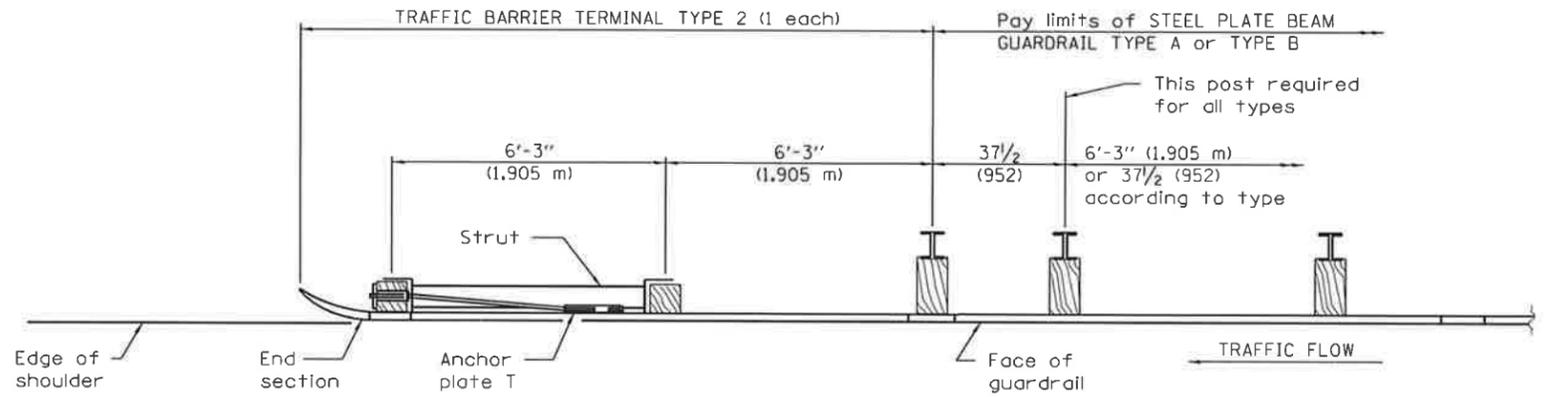
CABLE STRUT



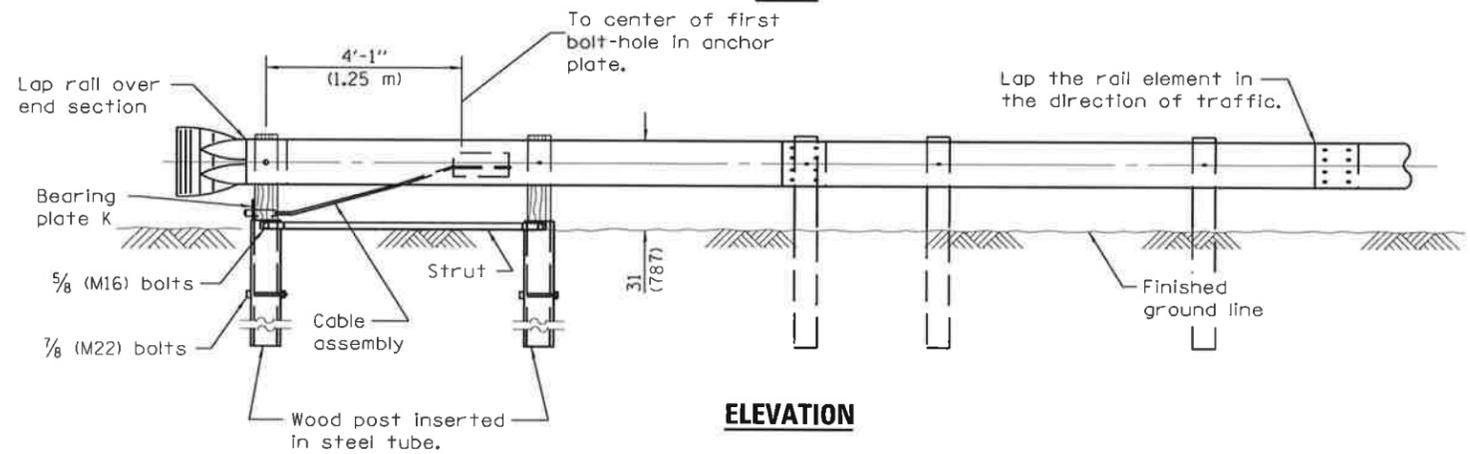
FRONT

SIDE

STEEL TUBE



PLAN



ELEVATION

GENERAL NOTES

See Standard 630001 for details of guardrail not shown.

The bearing plate K shall be held in position by two eight penny nails driven into the post and bent over the top of the plate.

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

DATE	REVISIONS
1-1-13	Corrected metric dimension for BEARING PLATE K. Changed pipe dia. in wood post.
1-1-12	Revised dimensions for post, bearing plate, cable strut, tube and cable connection.

TRAFFIC BARRIER TERMINAL, TYPE 2

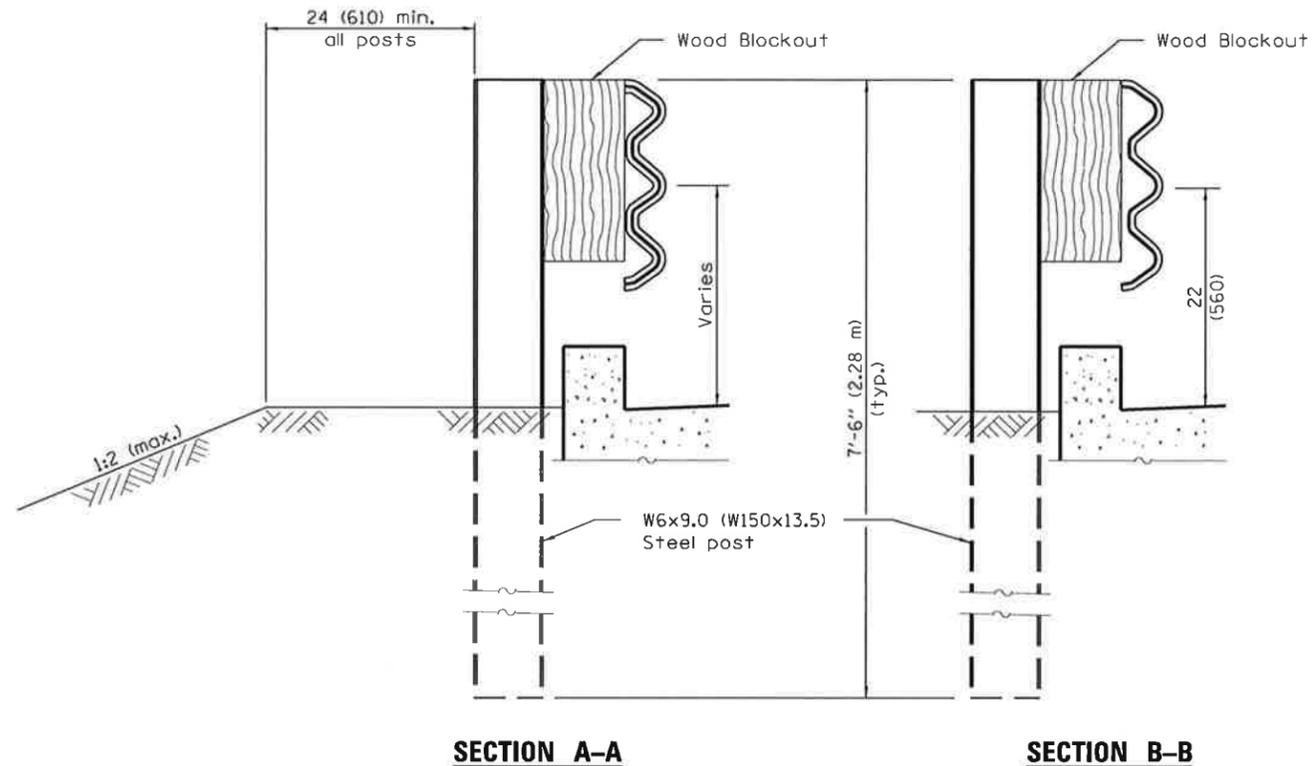
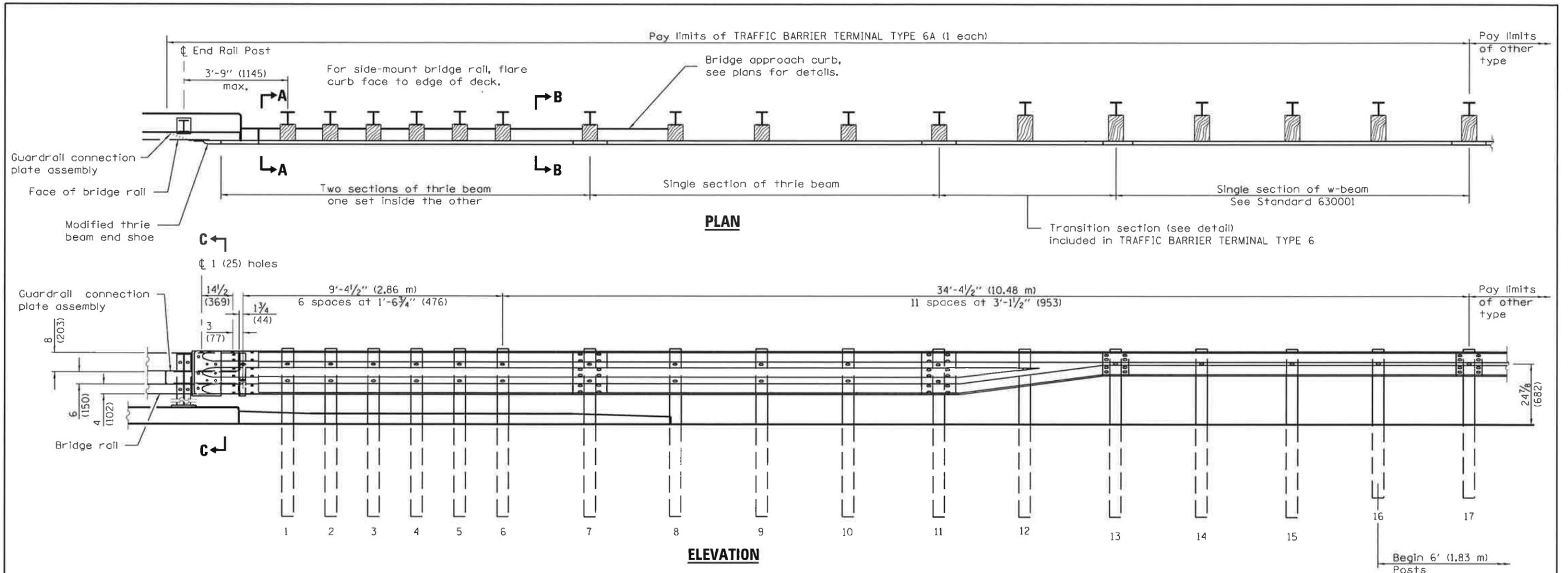
STANDARD 631011-09

Illinois Department of Transportation

PASSED January 1, 2013
Michael Beard
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ISSUED 1-1-97



GENERAL NOTES

This standard shows attachment to curb mounted bridge rail. Attachment to side mounted bridge rail is similar.

See Standard 630001 for details of guardrail not shown.

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

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

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

DATE	REVISIONS
1-1-13	Added note to see plans for bridge approach curb details.
1-1-12	Corrected curb length.

**TRAFFIC BARRIER
TERMINAL, TYPE 6A**

(Sheet 1 of 3)

STANDARD 631032-08

Illinois Department of Transportation

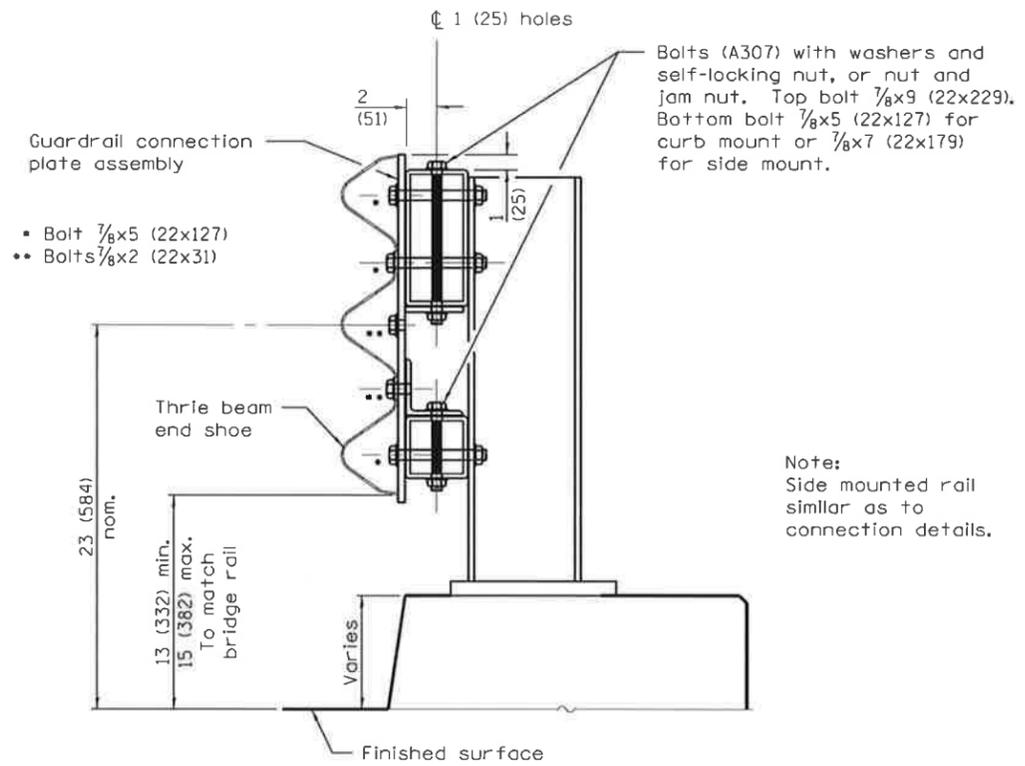
PASSED January 1, 2013

Michael Beard
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2013

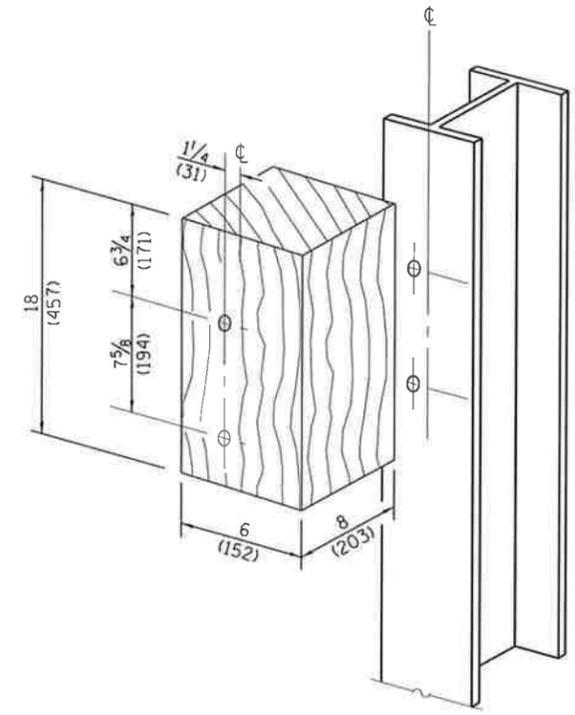
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2003

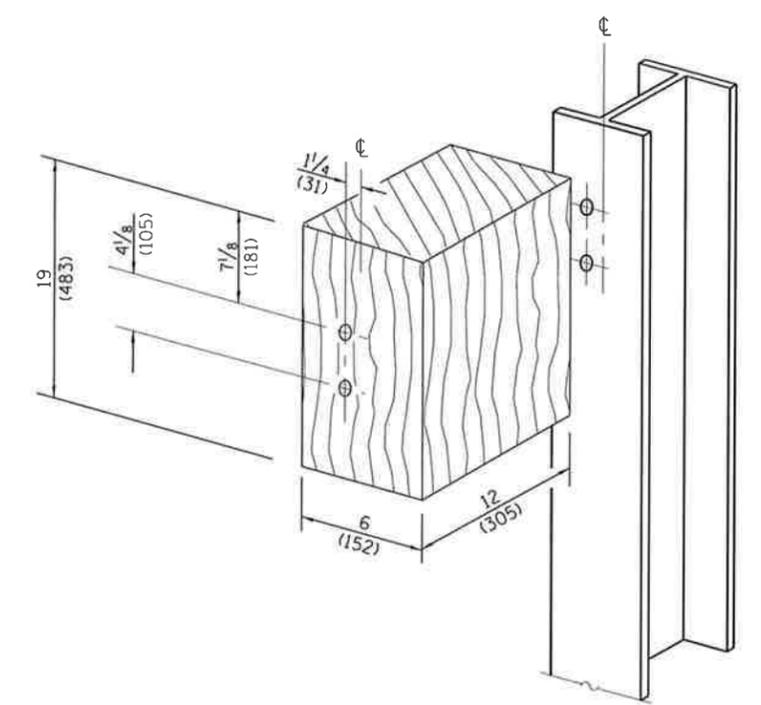


SECTION C-C

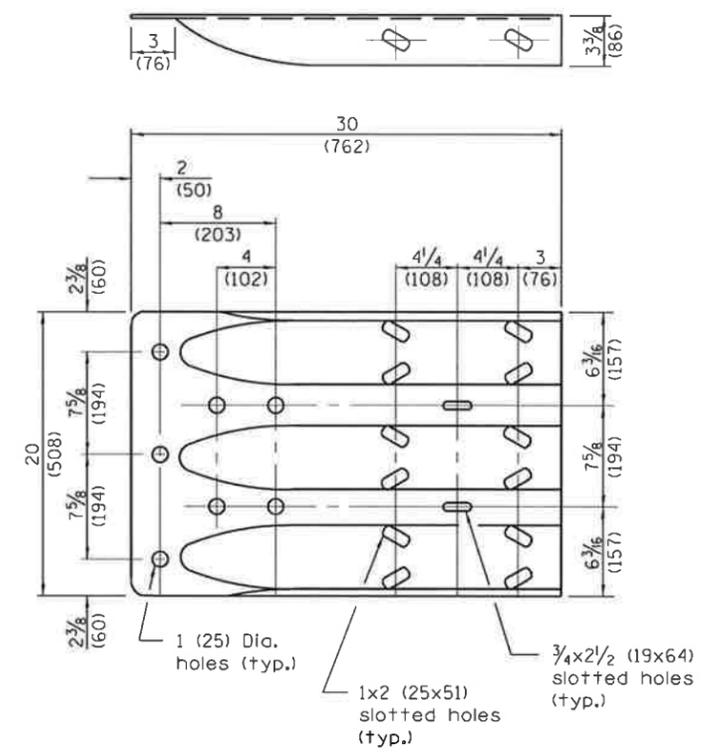
Note:
Side mounted rail similar as to connection details.



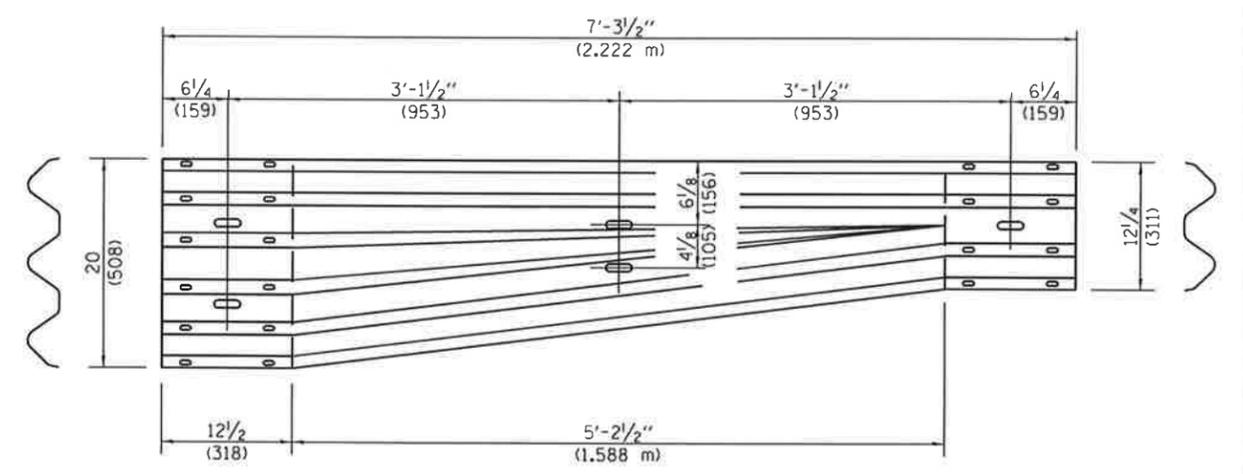
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL
(See Standard 630001 for post 13-17 blockouts.)



MODIFIED THRIE BEAM END SHOE DETAIL



TRANSITION SECTION
(10 gauge (3.4) rail element)

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APPROVED January 1, 2013

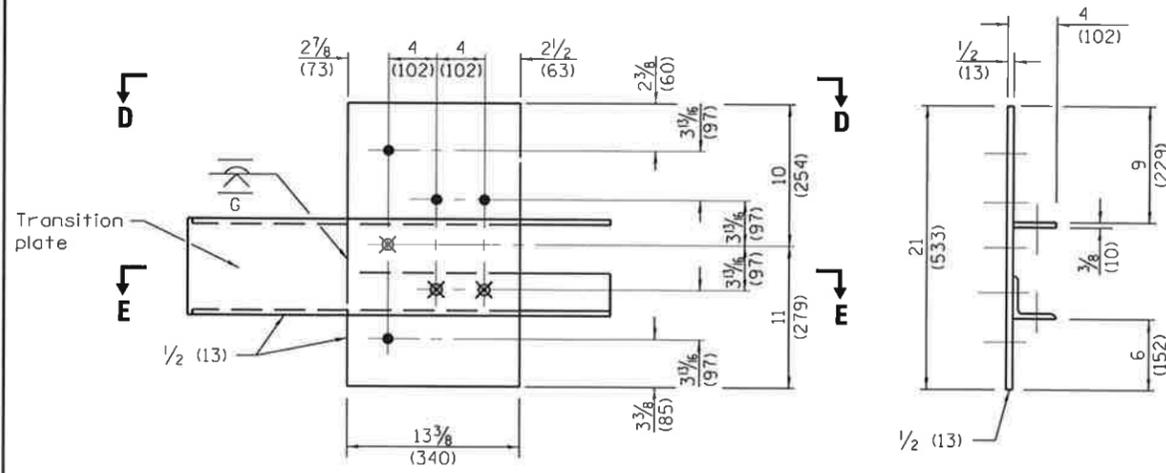
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2003

**TRAFFIC BARRIER
TERMINAL, TYPE 6A**

(Sheet 2 of 3)

STANDARD 631032-08

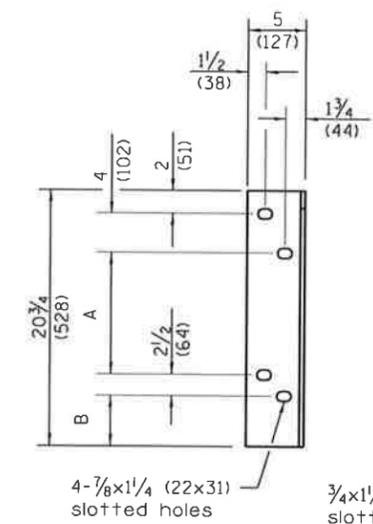
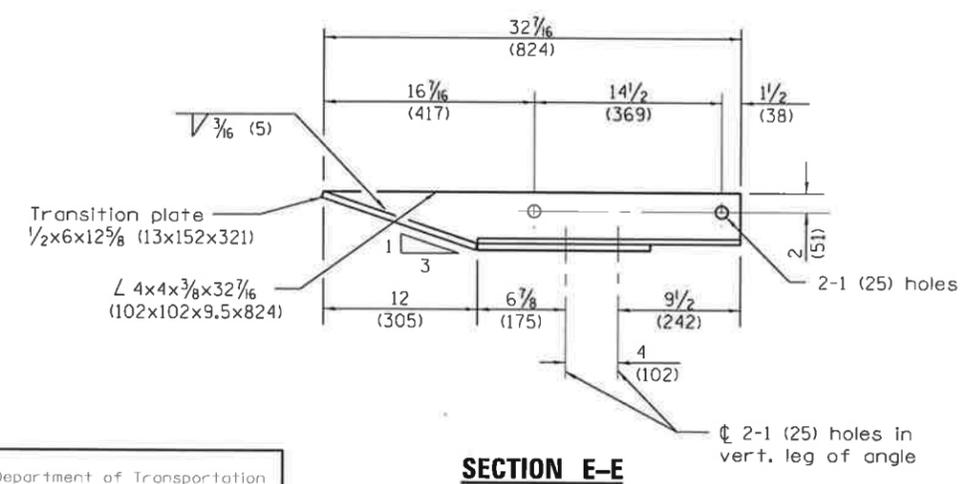
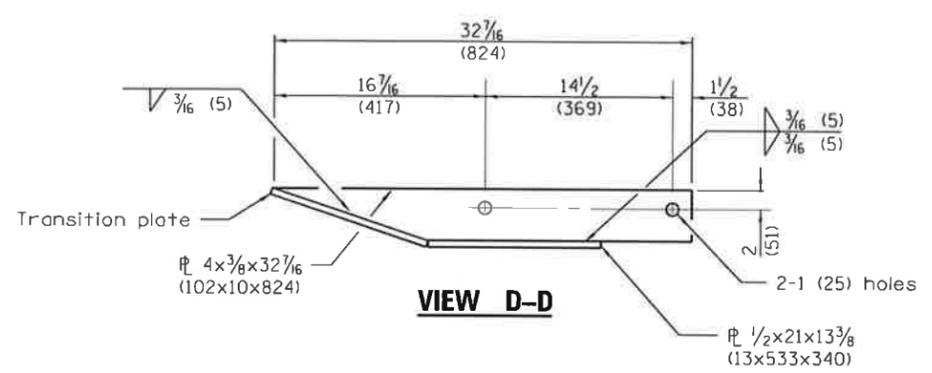


LEGEND

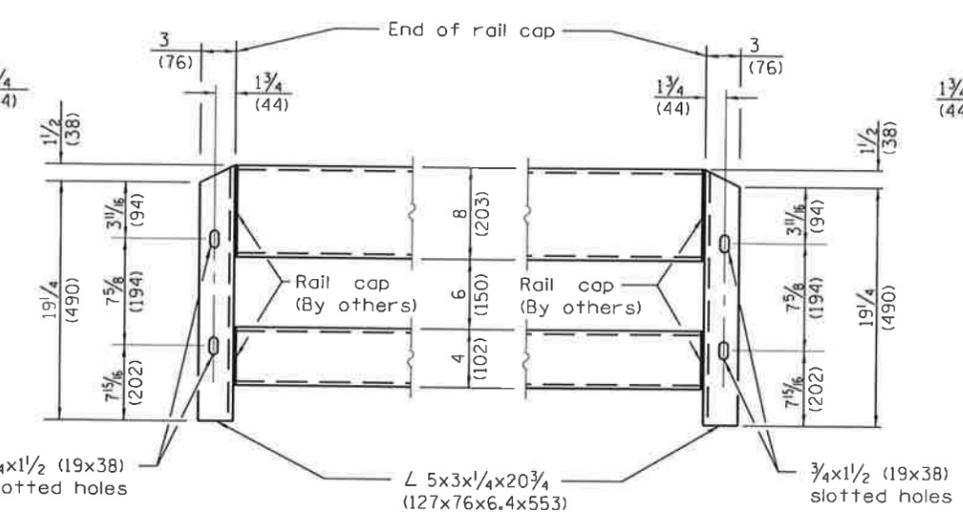
- \varnothing 4-1 (25) holes for $\frac{7}{8}$ (22) H.S. bolts and nuts
- ⊗ Drill and tap 3 holes for $\frac{7}{8}$ (22) H.S. bolts.

Dimensions	A	B
For Curb Mounted Rail	8 $\frac{3}{4}$ (222)	3 $\frac{1}{2}$ (89)
For Side Mounted Rail	9 $\frac{3}{4}$ (247)	2 $\frac{1}{2}$ (64)

GUARDRAIL CONNECTION PLATE ASSEMBLY DETAILS
(Mirror for opposite end)

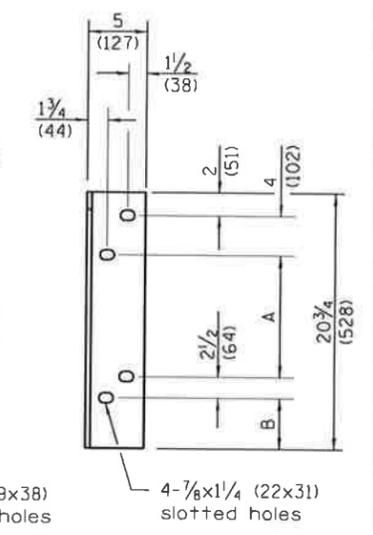


DEPARTURE END VIEW



CONNECTION ANGLES

(Install angles to rail caps using $\frac{5}{8}$ (19) washers and self-locking nuts or nuts and jam nuts, to be provided by others)



APPROACH END VIEW

Illinois Department of Transportation

PASSED January 1, 2013
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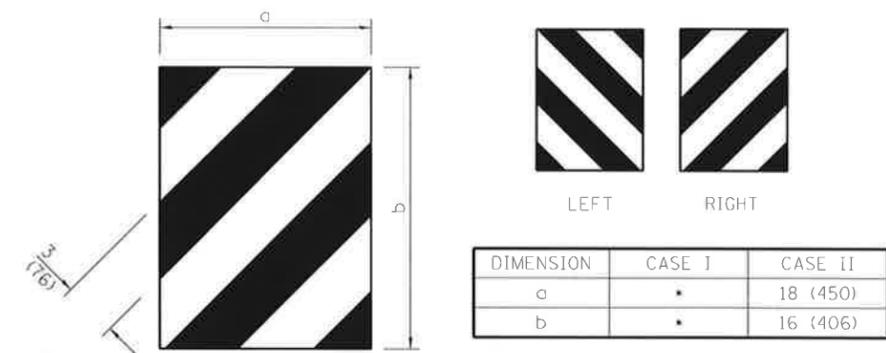
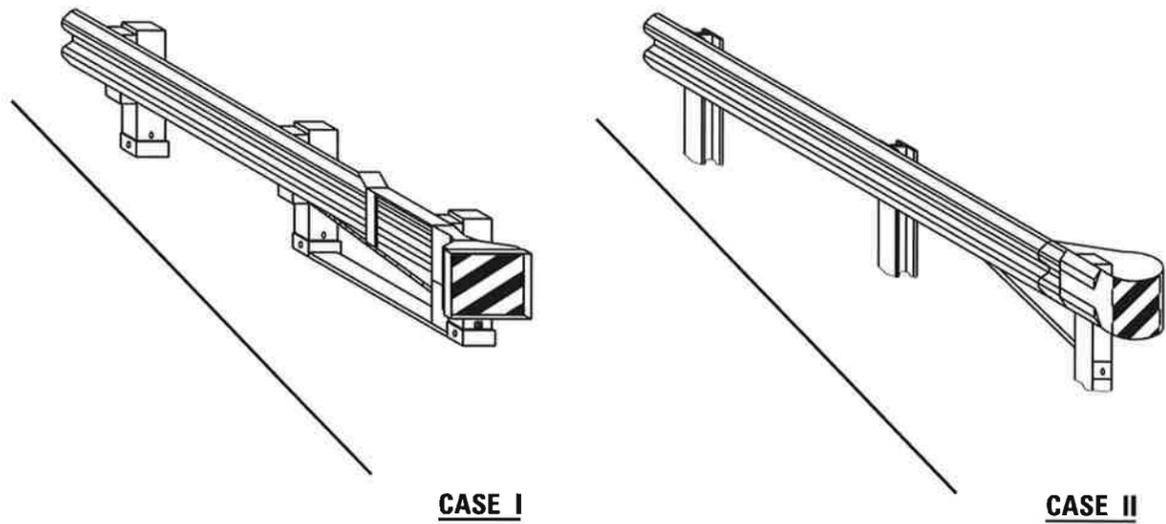
APPROVED January 1, 2013
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2003

**TRAFFIC BARRIER
TERMINAL, TYPE 6A**

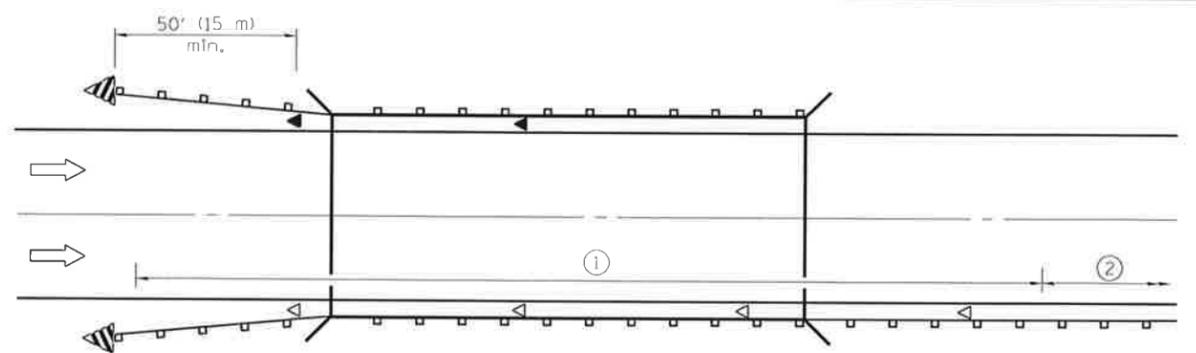
(Sheet 3 of 3)

STANDARD 631032-08



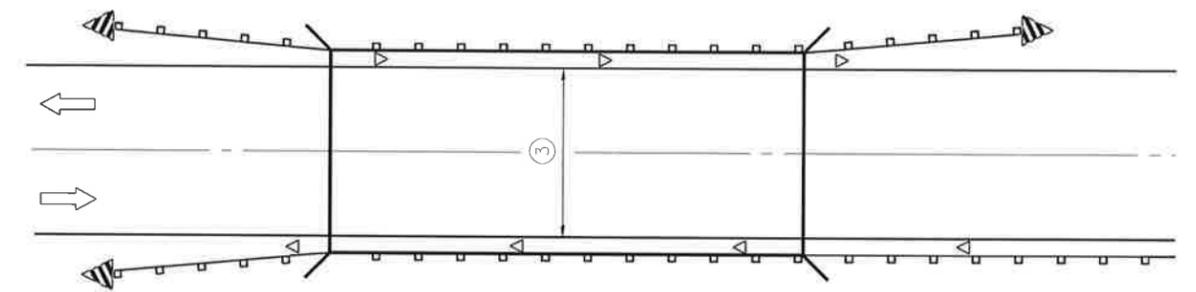
• The width and height (a, b) of the terminal marker shall be within approximately 1 (25) of the outer edge of the terminal end, with a minimum reflective area of 288 sq. in. (0.18 m²).

TERMINAL MARKER DETAILS
Color: Black / Yellow reflectorized



- ① Spacing 80 ft. (24 m) max. for first 400 ft. (122 m) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).
- ② After 400 ft. (122 m), transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC

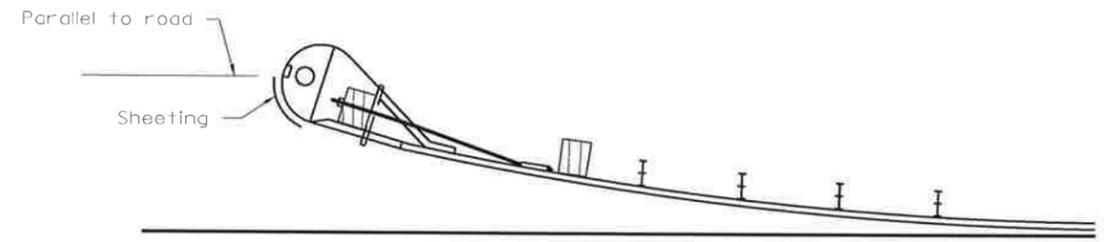


- ③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the pavement is less than 24 (610) wider than the pavement approaching the bridge.

- ◁ Monodirectional crystal
- ◄ Monodirectional amber
- ◄◄ Terminal Marker - Black/Yellow Left or Right as appropriate

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS



SHEETING POSITION: CASE II

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

DATE	REVISIONS
1-1-09	Switched units to English (metric). Changed 'white' to 'crystal' ref.
1-1-02	Revise Case I Dimension and removed alternate detail.

REFLECTOR AND TERMINAL MARKER PLACEMENT

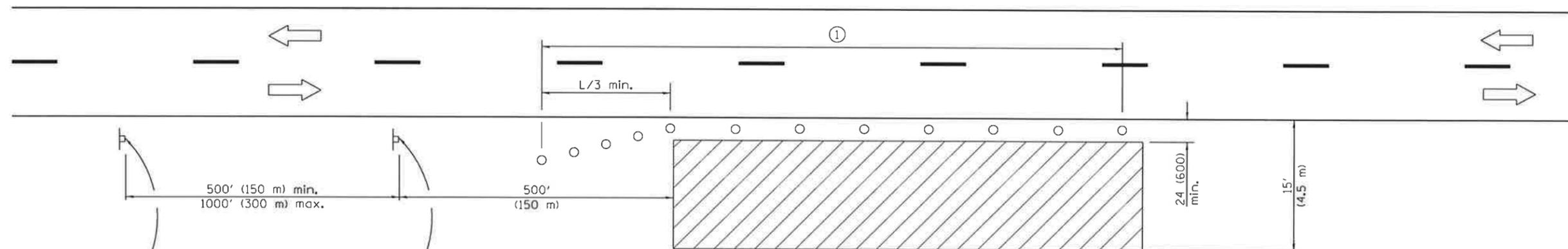
STANDARD 635006-03

Illinois Department of Transportation

APPROVED January 1, 2009
[Signature]
ENGINEER OF OPERATIONS

APPROVED January 1, 2009
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-2000



For contract construction projects



W20-I103(O)-48



W21-1(O)-48

For maintenance and utility projects



W20-1(O)-48

TYPICAL APPLICATIONS

- Utility operations
- Culvert extensions
- Side slope changes
- Guardrail installation and maintenance
- Delineator installation
- Landscaping operations
- Shoulder repair
- Sign installation and maintenance

SYMBOLS

- Work area
- Sign
- Cone, drum or barricade

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24' (600 mm) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	English	(Metric)
40 mph (70 km/h) or less:	$L = \frac{WS^2}{60}$	$L = \frac{WS^2}{150}$
45 mph (80 km/h) or greater:	$L = (W)(S)$	$L = 0.65(W)(S)$

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

**OFF-RD OPERATIONS, 2L, 2W,
15' (4.5 m) TO 24" (600 mm)
FROM PAVEMENT EDGE**

STANDARD 701006-05

Illinois Department of Transportation

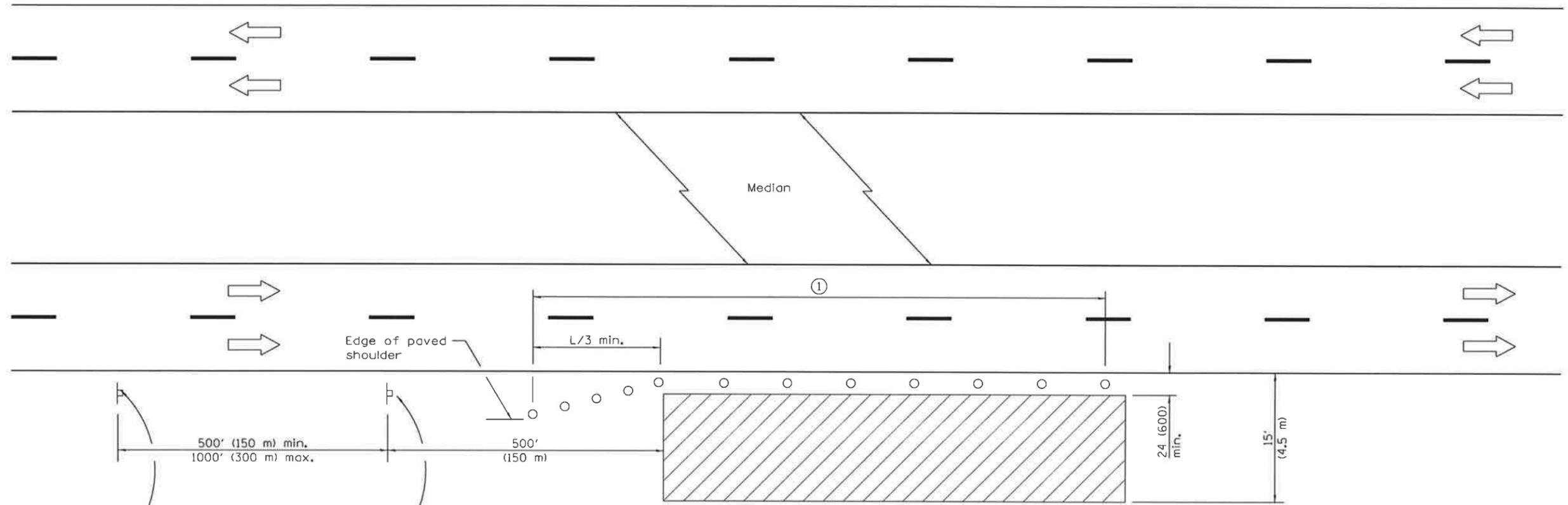
APPROVED January 1, 2014

 ENGINEER OF SAFETY ENGINEERING

ISSUED 1-1-97

APPROVED January 1, 2014

 ENGINEER OF DESIGN AND ENVIRONMENT



For contract construction projects



W20-1103(0)-48



W21-1(0)-48

For maintenance and utility projects



W20-1(0)-48

TYPICAL APPLICATIONS

- Utility operations
- Culvert extensions
- Side slope changes
- Guardrail installation and maintenance
- Delineator installation
- Landscaping operations
- Shoulder repair
- Sign installation and maintenance

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

SYMBOLS

- Work area
- Sign
- Cone, drum or barricade

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24' (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	English	(Metric)
40 mph (70 km/h) or less:	$L = \frac{WS^2}{60}$	$L = \frac{WS^2}{150}$
45 mph (80 km/h) or greater:	$L = (W)(S)$	$L = 0.65(W)(S)$

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

**OFF-ROAD OPERATIONS, MULTILANE,
15' (4.5 m) TO 24' (600 mm)
FROM PAVEMENT EDGE**

STANDARD 701101-04

Illinois Department of Transportation

APPROVED January 1, 2014

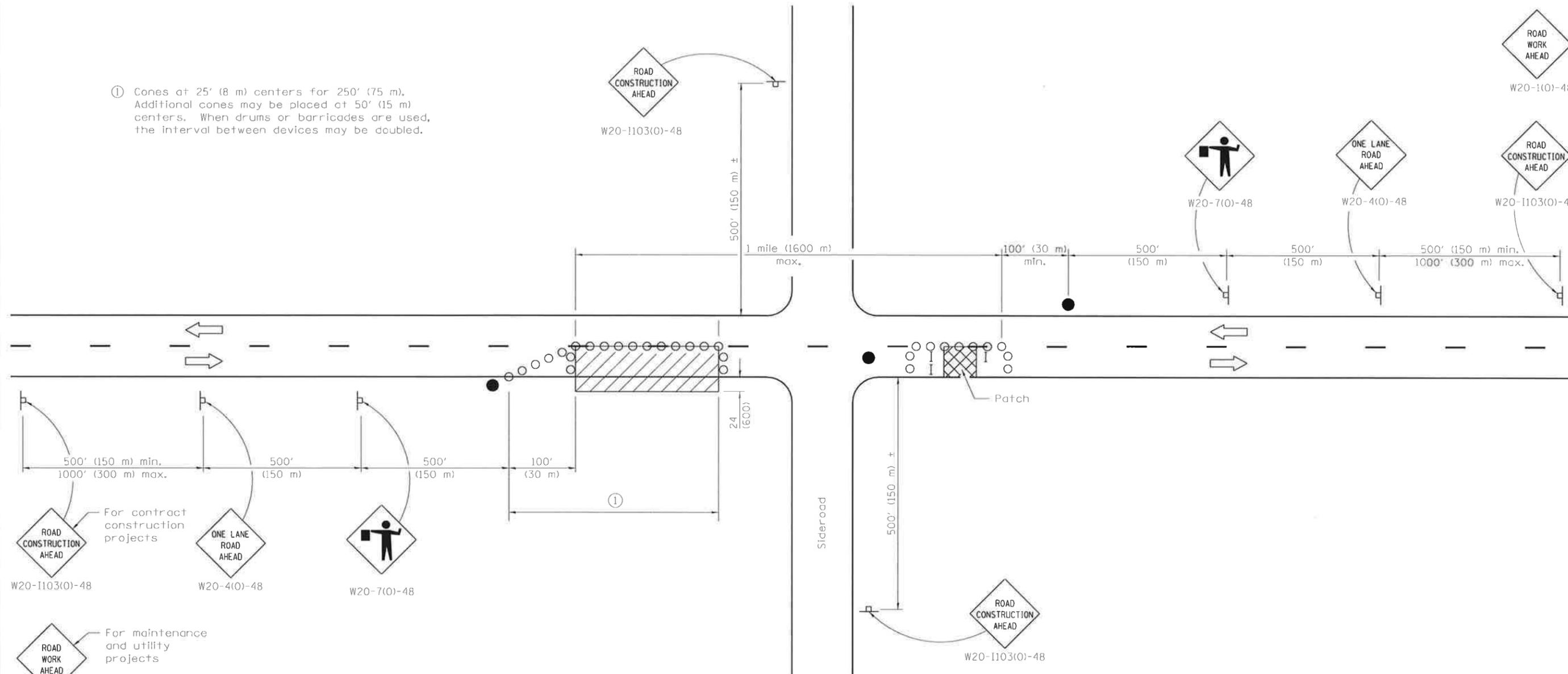
 ENGINEER OF SAFETY ENGINEERING

ISSUED 1-1-97

APPROVED January 1, 2014

 ENGINEER OF DESIGN AND ENVIRONMENT

① Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or barricades are used, the interval between devices may be doubled.



For contract construction projects:
 ROAD CONSTRUCTION AHEAD (W20-1103(O)-48)
 ONE LANE ROAD AHEAD (W20-4(O)-48)
 ROAD WORK AHEAD (W20-7(O)-48)

For maintenance and utility projects:
 ROAD WORK AHEAD (W20-1(O)-48)

TYPICAL APPLICATIONS

- Isolated patching
- Utility operations
- Storm sewer
- Culverts
- Cable placement

SYMBOLS

- Work area
- Sign
- Barricade or drum
- Cone, drum or barricade
- Flagger with traffic control sign

GENERAL NOTES

This Standard is used where at any time, any vehicles, equipment, workers or their activities will encroach in the area between the center line and a line 24 (600) outside the edge of pavement for daylight operation.

When the distance between successive work areas exceeds 2000' (600 m), additional warning signs, flaggers, and taper shall be placed as shown.

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

Illinois Department of Transportation

APPROVED January 1, 2011
 ENGINEER OF SAFETY ENGINEERING

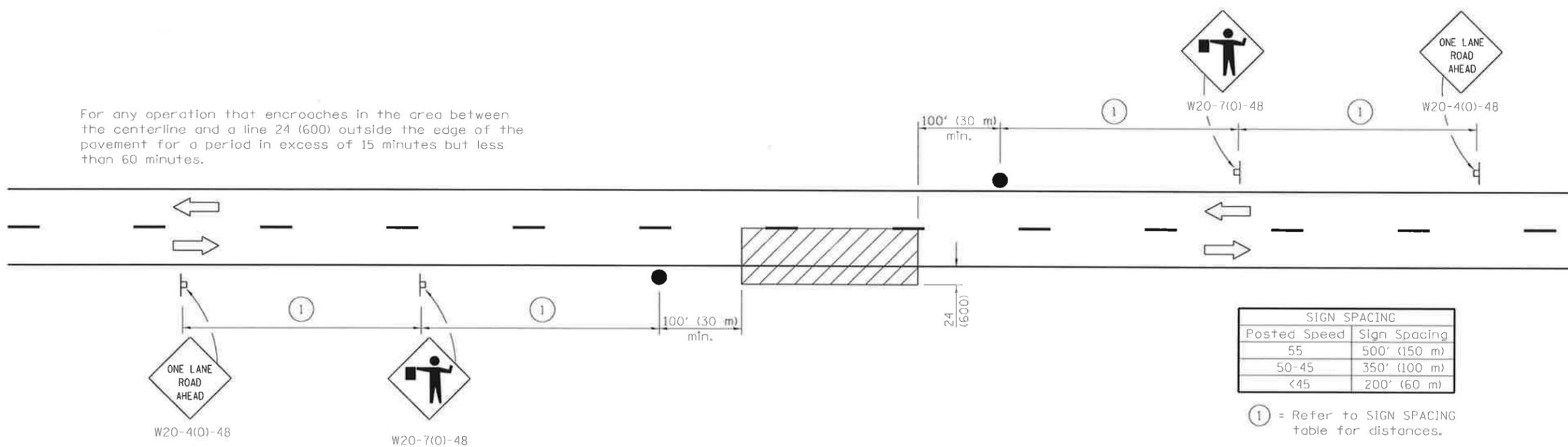
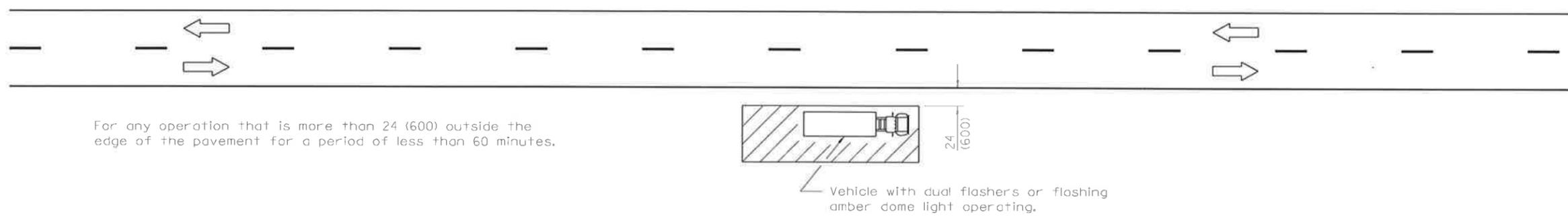
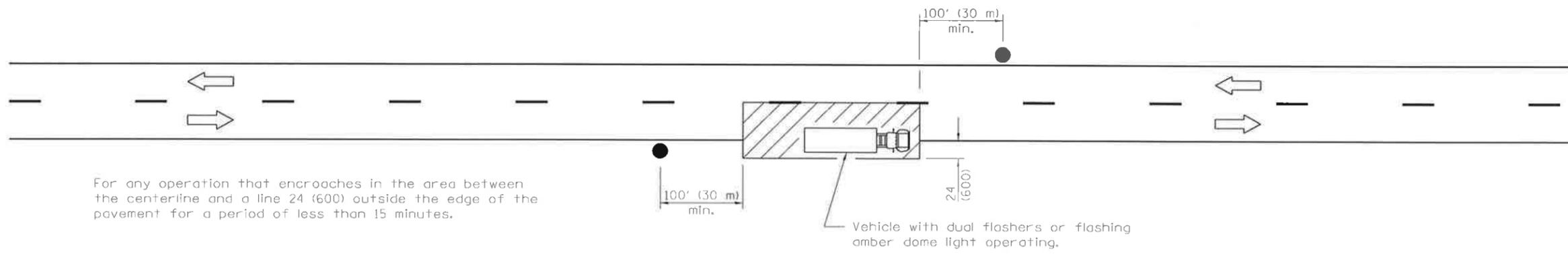
APPROVED January 1, 2011
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to English (metric).
	Corrected sign No.'s.

**LANE CLOSURE, 2L, 2W,
 DAY ONLY,
 FOR SPEEDS ≥ 45 MPH**

STANDARD 701201-04



TYPICAL APPLICATIONS

- Marking patches
- Field survey
- String line
- Utility operations
- Cleaning up debris on pavement

SYMBOLS

- Work area
- Sign on portable or permanent support
- Flagger with traffic control sign

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

DATE	REVISIONS
1-1-11	Revised flagger sign.
1-1-09	Switched units to English (metric).

**LANE CLOSURE, 2L, 2W,
SHORT TIME OPERATIONS**

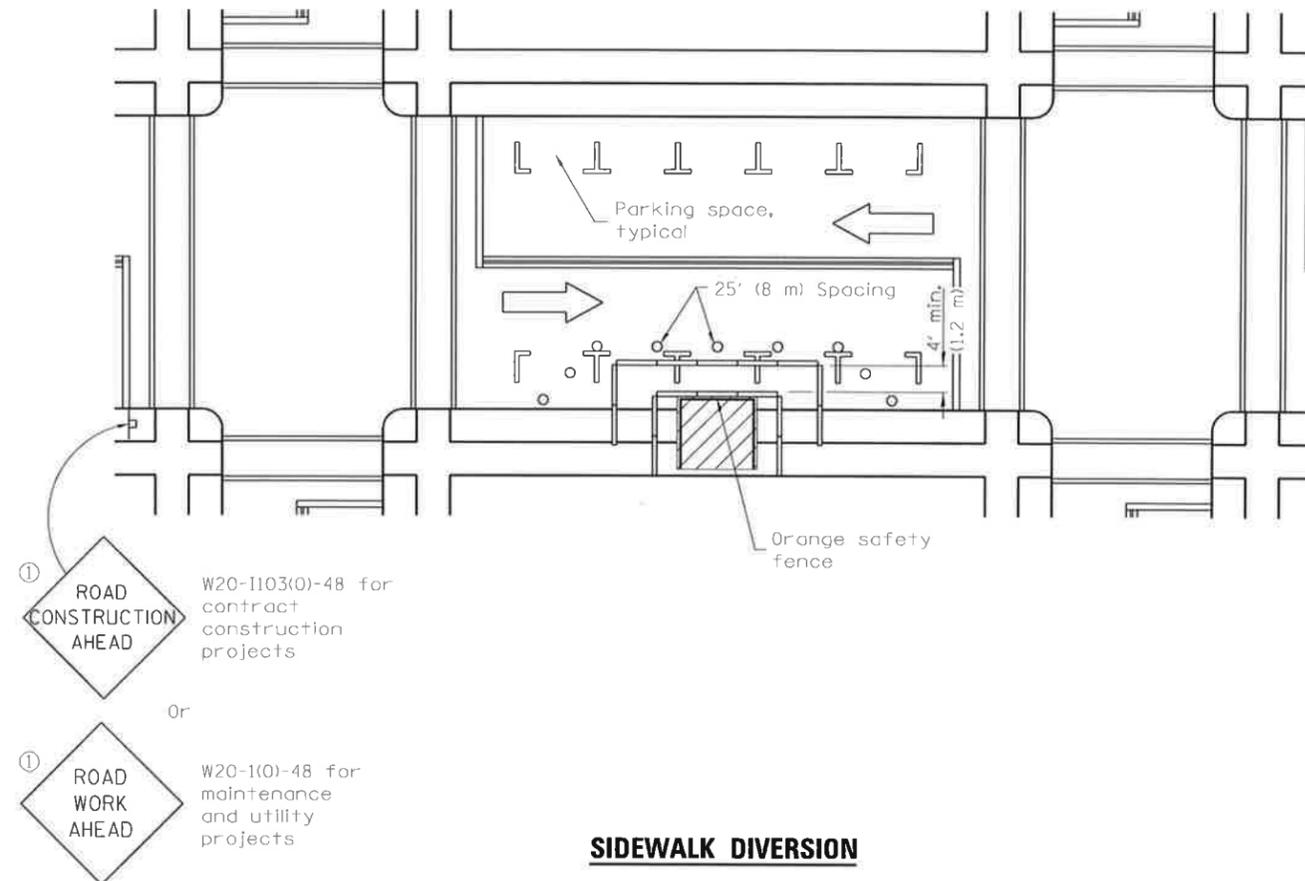
STANDARD 701301-04

Illinois Department of Transportation

APPROVED *January 1, 2011*
Amber Adams
 ENGINEER OF SAFETY ENGINEERING

APPROVED *January 1, 2011*
Scott Smith
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



① Omit whenever duplicated by road work traffic control.

GENERAL NOTES

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.

Temporary facilities shall be detectable and accessible.

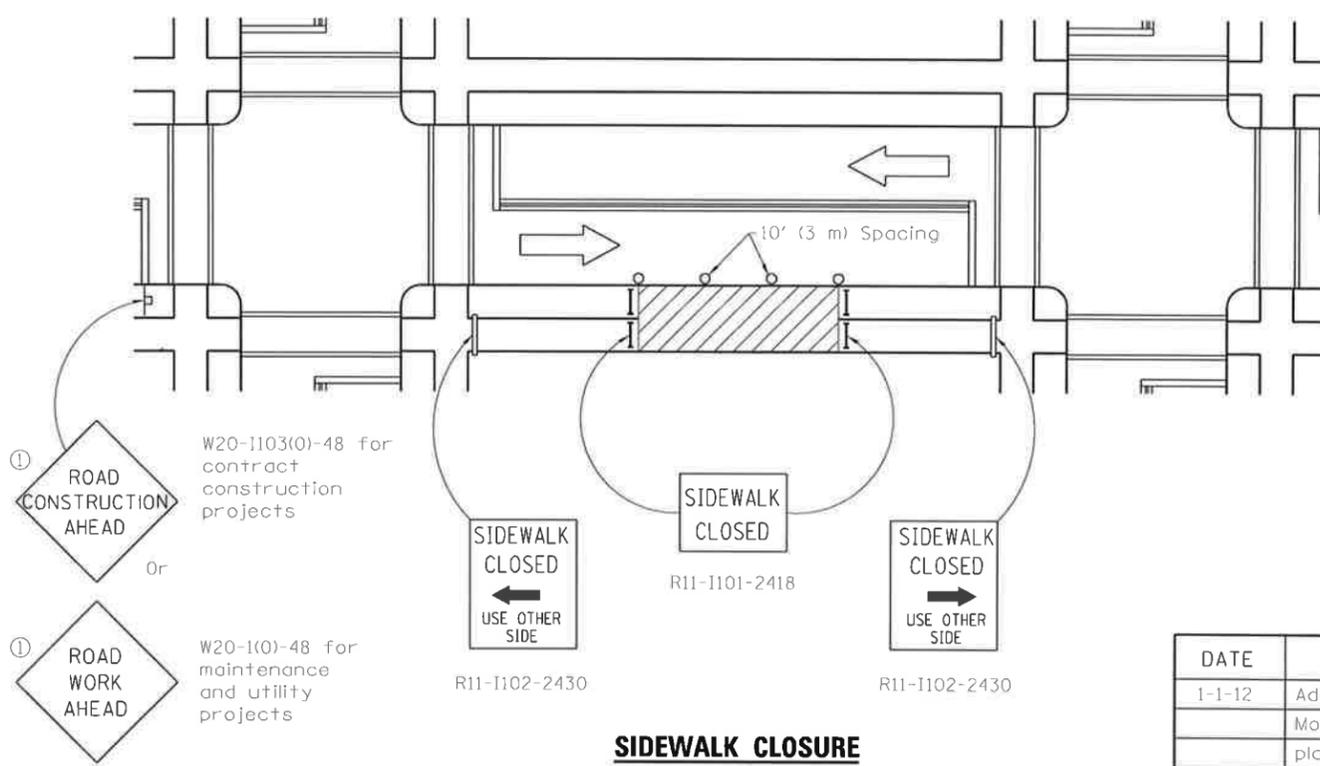
The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

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

- SYMBOLS**
- Work area
 - Sign on portable or permanent support
 - Barricade or drum
 - Cone, drum or barricade
 - Type III barricade
 - Detectable pedestrian channellizing barricade



DATE	REVISIONS
1-1-12	Added SIDEWALK DIVERSION.
	Modified appearance of plan views. Renamed Std.
1-1-09	Switched units to English (metric), 702001 to 701901.

Illinois Department of Transportation

APPROVED January 1, 2012

 ENGINEER OF SAFETY ENGINEERING

ISSUED 1-1-97

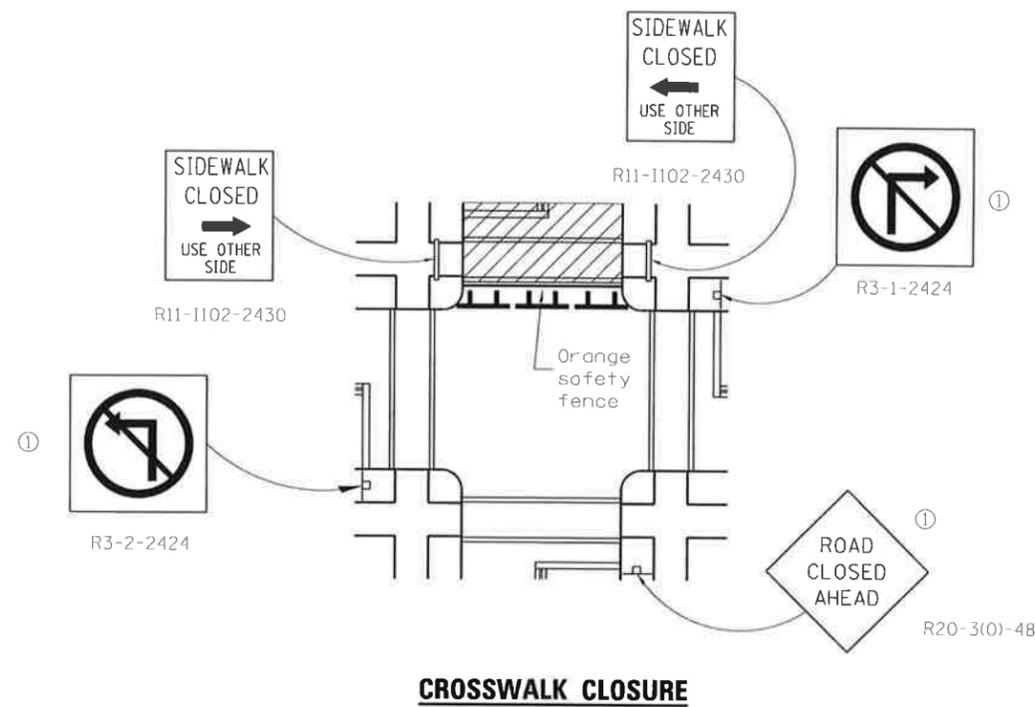
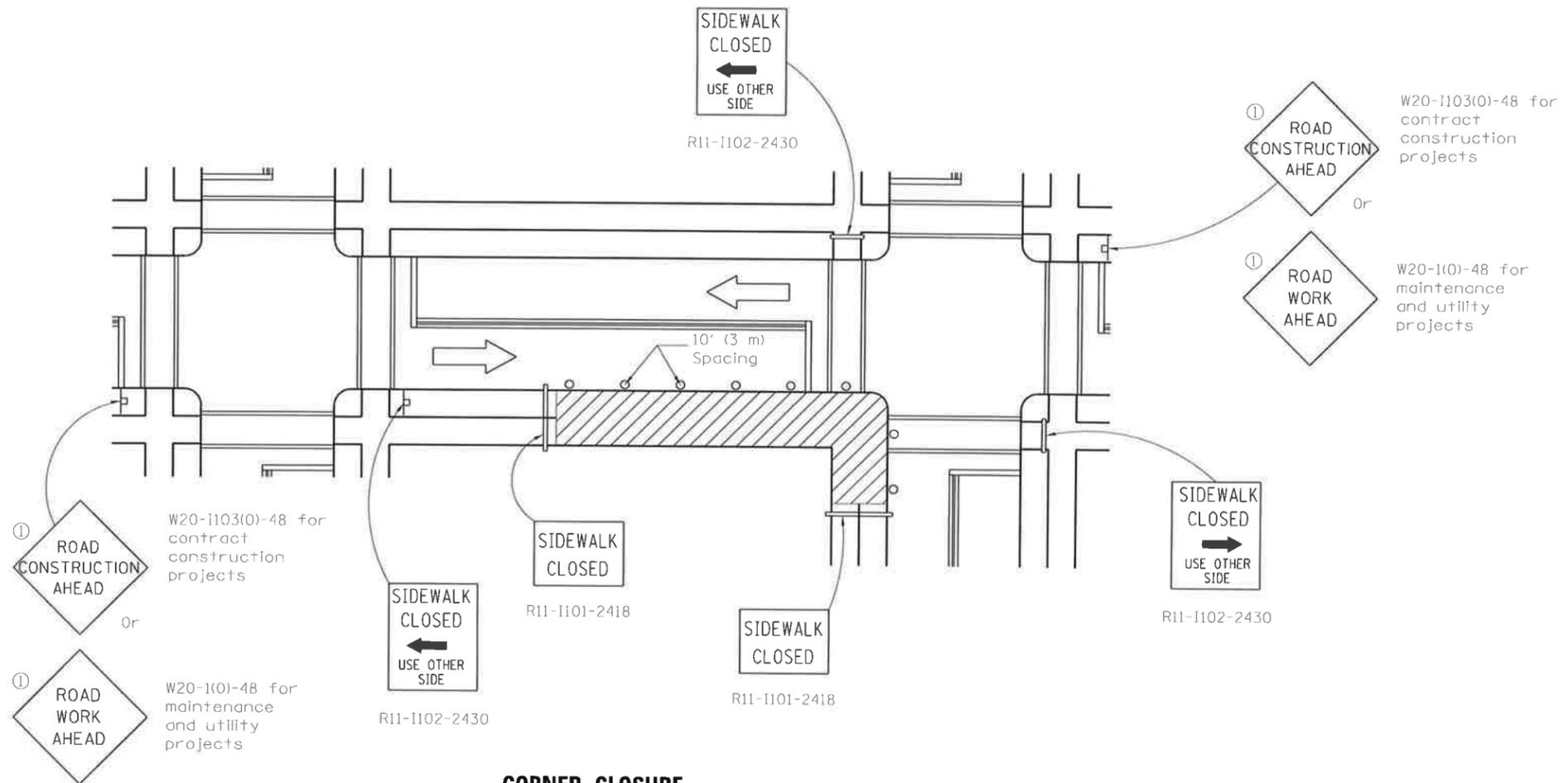
APPROVED January 1, 2012

 ENGINEER OF DESIGN AND ENVIRONMENT

SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 1 of 2)

STANDARD 701801-05



SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 2 of 2)

STANDARD 701801-05

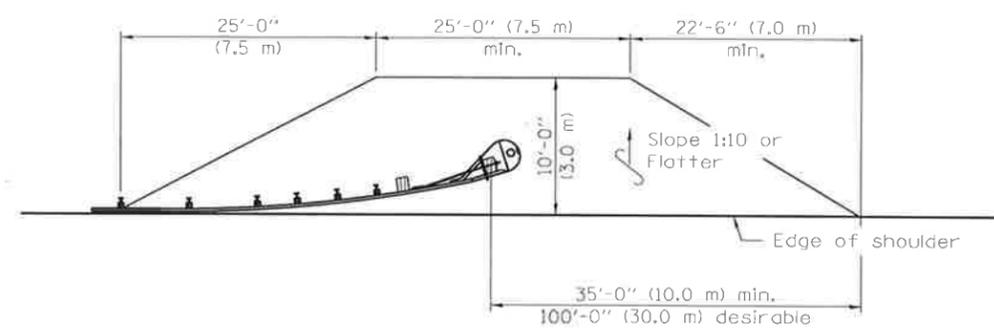
Illinois Department of Transportation

APPROVED January 1, 2012
Amber O'Brien
 ENGINEER OF SAFETY ENGINEERING

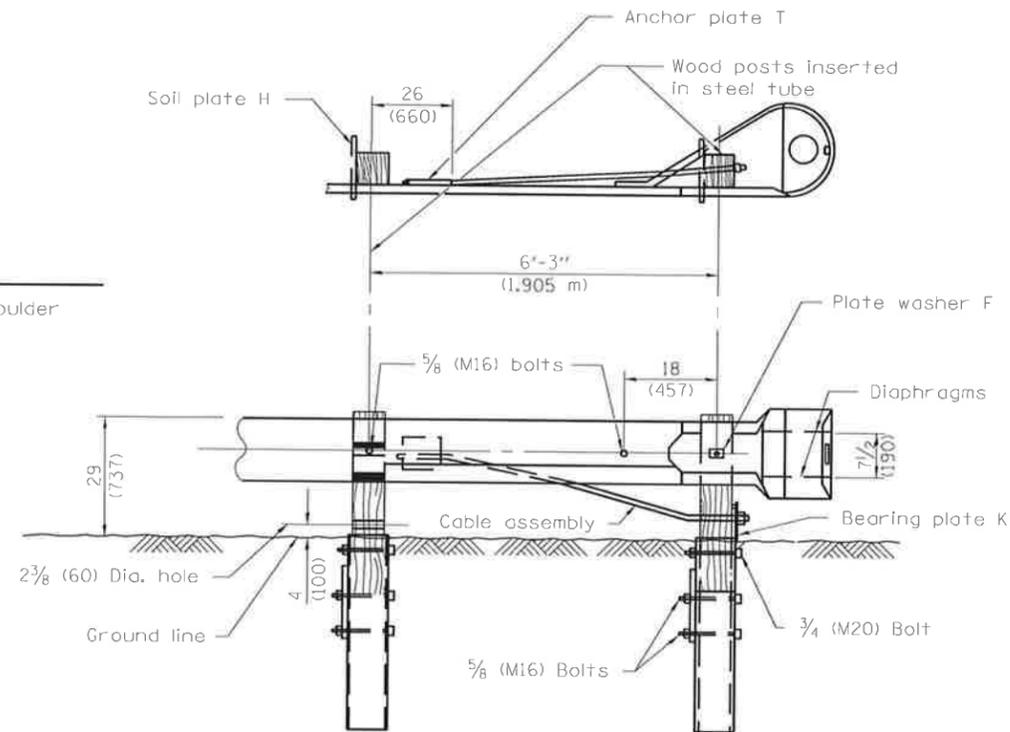
APPROVED January 1, 2012
Scott Smith
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

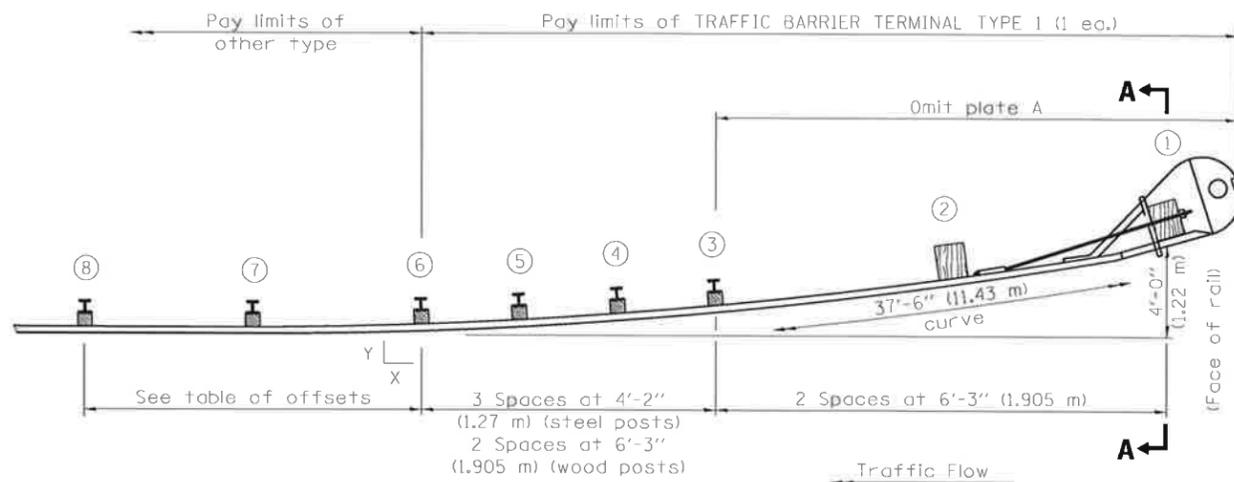
OFFSETS TO FACE OF RAIL		
Post	X ft (m)	Y ft (m)
①	37.22 (11.345)	4.0 (1.22)
②	31.09 (9.475)	2.79 (0.850)
③	24.92 (7.595)	1.79 (0.545)
④	20.79 (6.335)	1.25 (0.380)
⑤	16.64 (5.070)	0.80 (0.245)
⑥	12.49 (3.805)	0.45 (0.135)
⑦	6.25 (1.905)	0.11 (0.035)
⑧	0.00 (0.00)	0.00 (0.00)



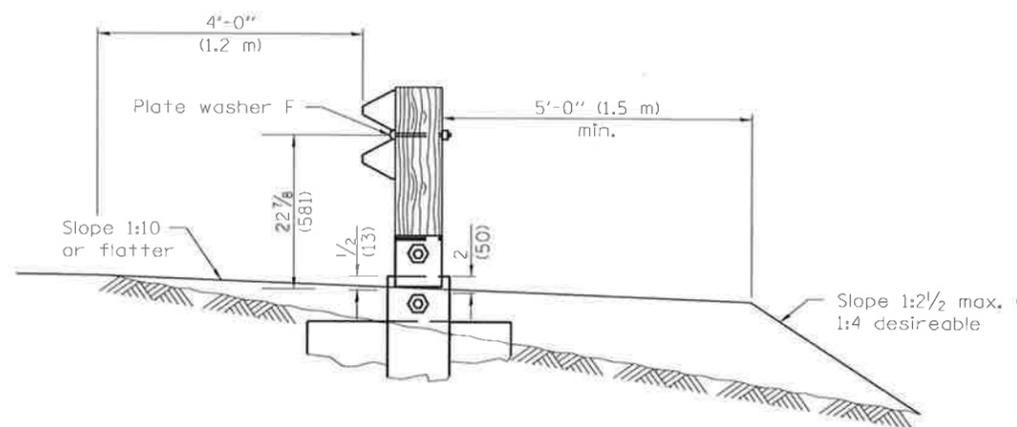
SHOULDER WIDENING TRANSITION



**WOOD BREAKAWAY POSTS
TUBULAR STEEL FOUNDATIONS**



PLAN



SECTION A-A

* If fill height exceeds 5'-0" (1.5 m) use 1:3 max.

GENERAL NOTES

See Standard B.L.R. 26 for details of guardrail not shown.

Posts at location 1 & 2 shall be wood breakaway posts. Posts other than 1 & 2 may be either standard wood posts or steel posts, at the option of the Contractor. If standard wood posts are used, one post shall be located midway between and in lieu of posts 4 & 5. The offset (Y) for this post shall be 12 (300).

A two-piece assembly may be substituted for the one piece nose shown above.

The bearing plate K shall be held in position by (2) two eightpenny nails driven into the post and bent over the top of the plate.

When this terminal is used with Standard 630001, the guardrail shall transition down to the height of the terminal prior to post 8.

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.

DATE	REVISIONS
1-1-12	Revised barrier terminal height and wood breakaway post.
1-1-09	Switched units to English (metric).

**TRAFFIC BARRIER
TERMINAL TYPE 1**

(Sheet 1 of 2)

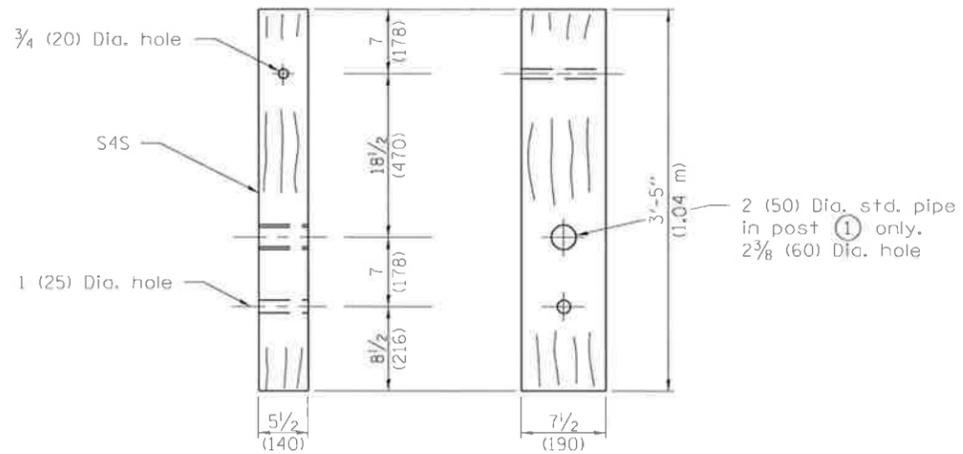
STANDARD B.L.R. 23-4

Illinois Department of Transportation

APPROVED January 1, 2012
Darrell Lewis
 ENGINEER OF LOCAL ROADS AND STREETS

APPROVED January 1, 2012
Scott Smith
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1-1-09



WOOD BREAKAWAY POST
(2 ea.)

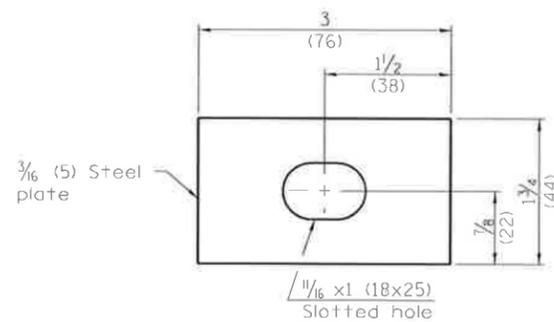
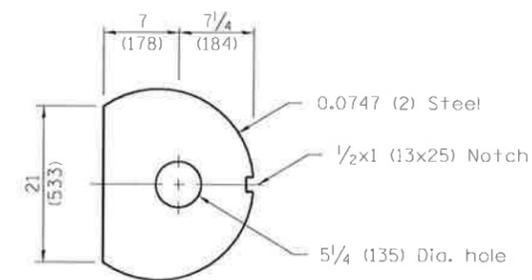
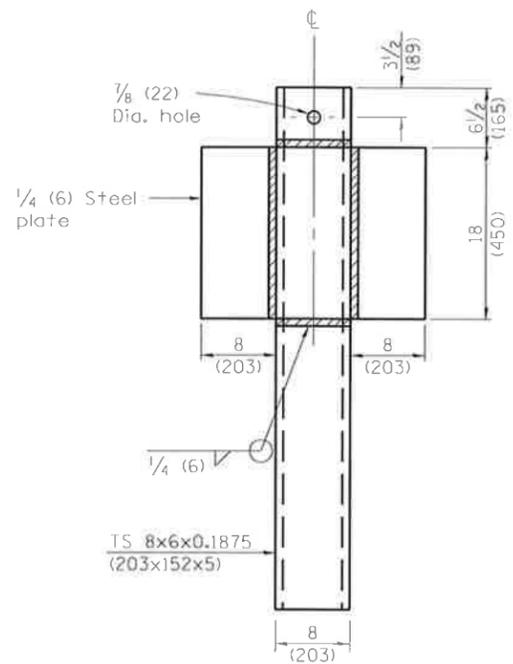


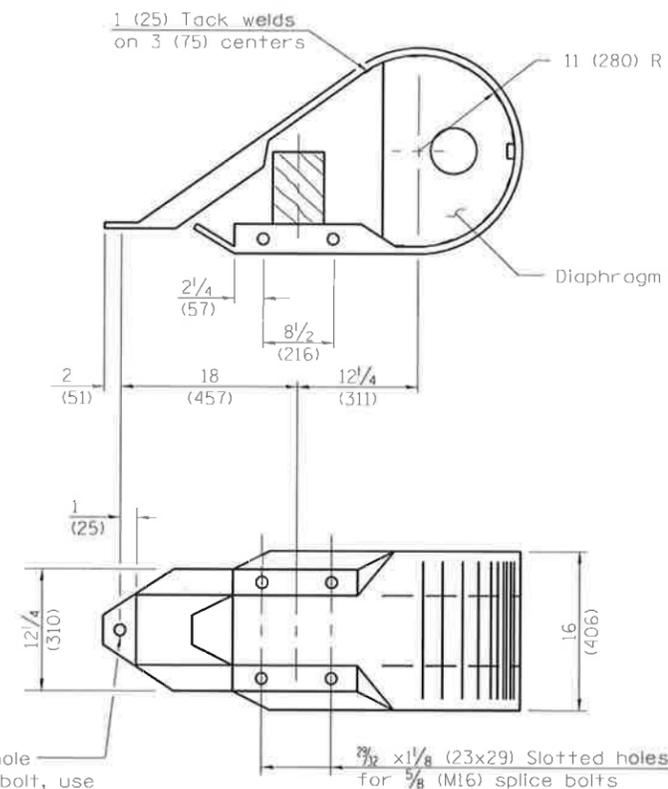
PLATE WASHER F
(1 ea.)



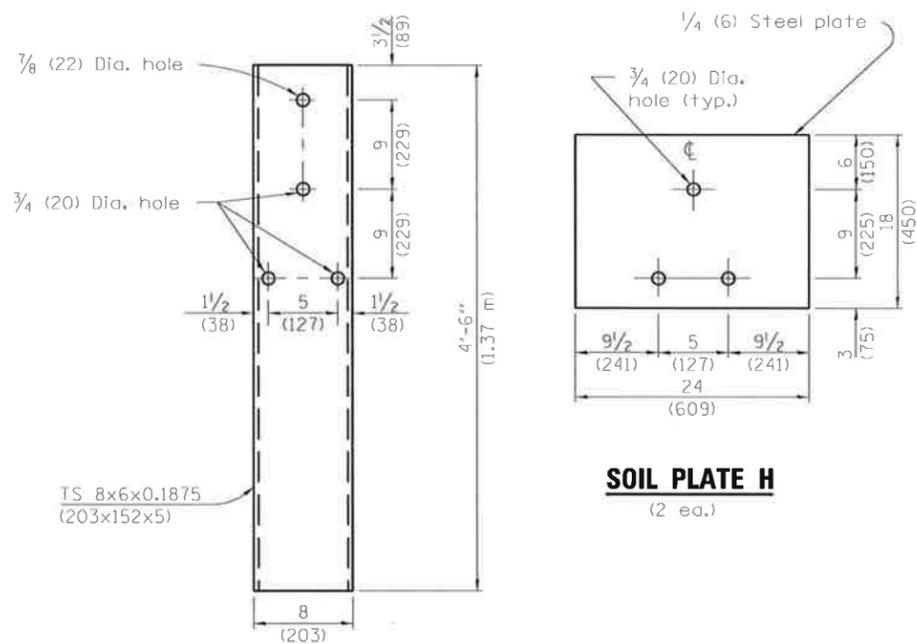
DIAPHRAGM
(2 ea.)



ALTERNATE SOIL PLATE CONNECTION

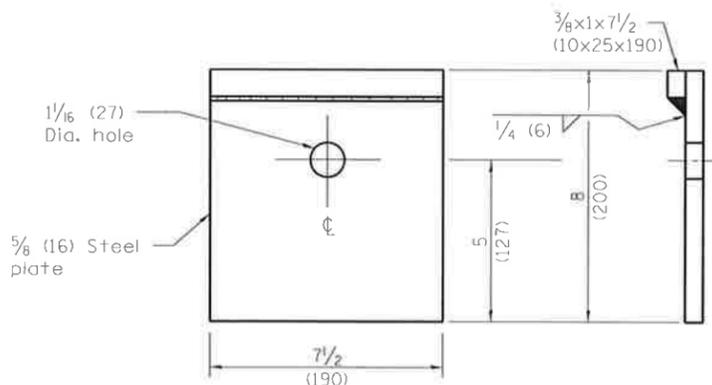


NOSE
(1 ea.)



STEEL TUBE
(2 ea.)

SOIL PLATE H
(2 ea.)



BEARING PLATE K
(1 ea.)

Illinois Department of Transportation

APPROVED January 1, 2012

Darrell Lewis
ENGINEER OF LOCAL ROADS AND STREETS

APPROVED January 1, 2012

Scott Smith
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 80-1-1 CEMISS

**TRAFFIC BARRIER
TERMINAL TYPE 1**

STANDARD B.L.R. 23-4

(Sheet 2 of 2)