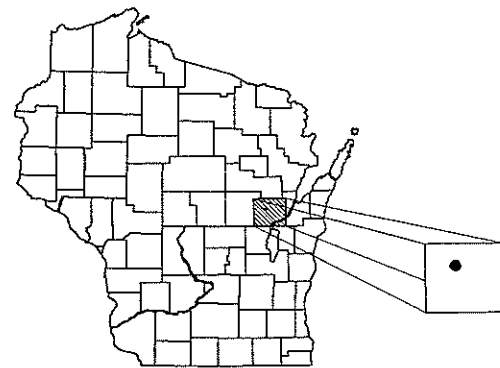


INDEX OF SHEETS

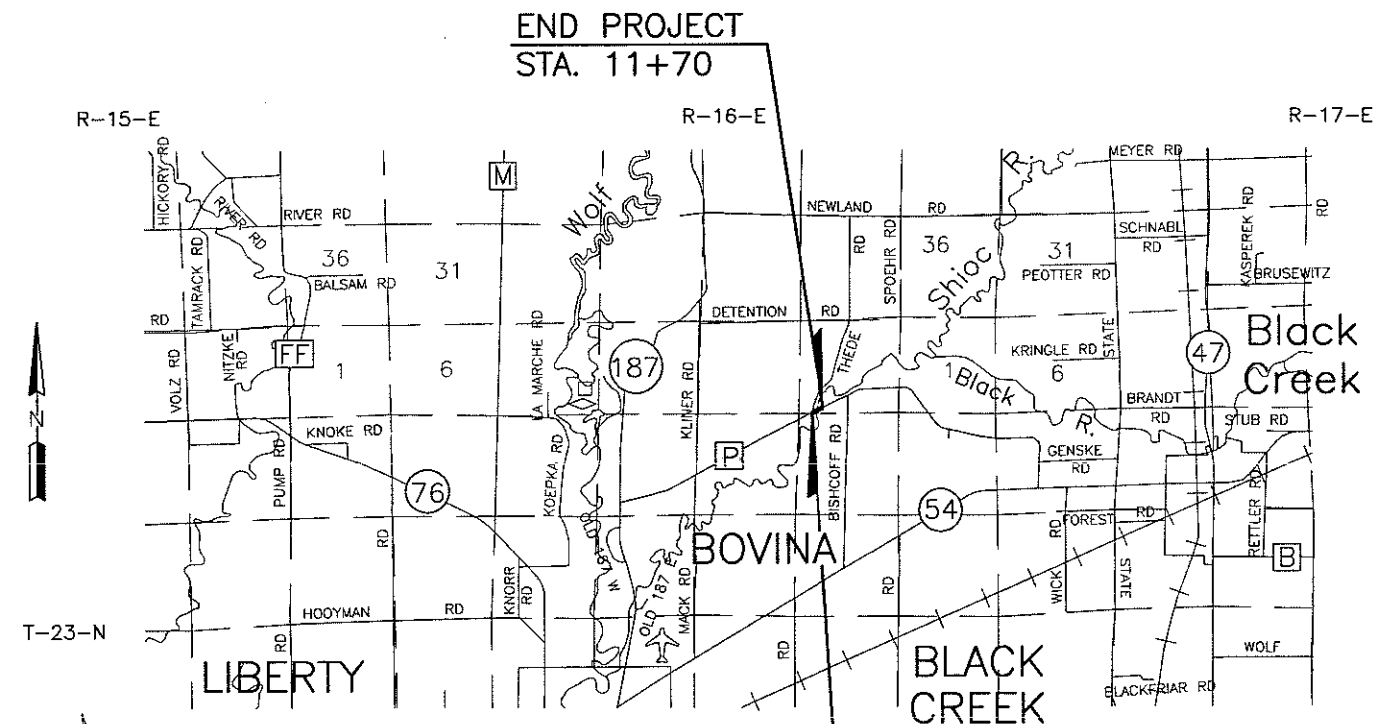
Sheet No.	1	Title
Sheet No.		Typical Sections and Details
Sheet No.		Estimate of Quantities
Sheet No.		Miscellaneous Quantities
Sheet No.		Plan and Profile
Sheet No.		Standard Detail Drawings
Sheet No.		Sign Plates
Sheet No.		Structure Plans

TOTAL SHEETS =



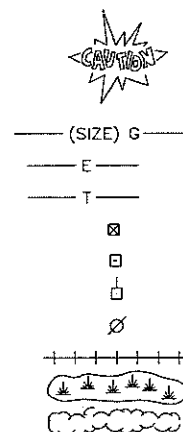
OUTAGAMIE COUNTY HIGHWAY DEPARTMENT REHABILITATION - MAINTENANCE PROJECT STH 187 TO STH 54 ROAD (SHIOC RIVER BRIDGE AND APPROACHES) CTH P OUTAGAMIE COUNTY

RECEIVED
MAY 22 2001
COUNTY ENGINEER



CONVENTIONAL SIGNS

COUNTY LINE	---	COMBUSTIBLE FLUIDS (UNDER PRESSURE)
CORPORATE LIMITS	///	UNDERGROUND UTILITIES
PROPERTY LINE	---	GAS
LOT LINE	---	ELECTRIC
LIMITED HIGHWAY EASEMENT	---	TELEPHONE
EXISTING RIGHT OF WAY	---	SERVICE PEDESTAL
NEW RIGHT OF WAY	---	CABLE MARKER
REFERENCE LINE	---	POWER POLE
SLOPE INTERCEPT	---	TELEPHONE POLE
ORIGINAL GROUND	---	RAILROADS
MARSH OR ROCK PROFILE	---	MARSH(WETLANDS)
CULVERT IN PLACE	---	WOODED AREA
CULVERT REQUIRED	---	
CULVERT REQUIRED (Profile)	---	



SCALE 0 1 2 MILES

TOTAL NET LENGTH OF CENTERLINE = 0.036 MI. (RURAL)

ROMENESKO ENGINEERING, LLC

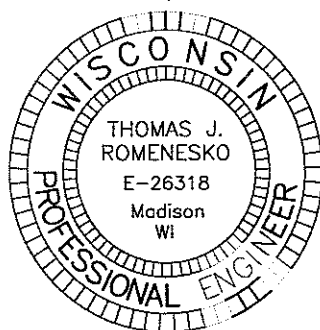
213 JACKSON STREET (608) 644-1502
SAUK CITY, WI. 53583 FAX (608) 644-1602
romenesko@charter.net

ACCEPTED FOR

COUNTY of OUTAGAMIE

DATE: 5/23/01 *Alvin Gault*
(Commissioner)

ORIGINAL PLANS PREPARED
BY
ROMENESKO ENGINEERING
MADISON, WISCONSIN



DATE: 5/17/01 *Tom Romnesko*
(Signature)

PREPARED BY
Surveyor
Designer
MOORE SURVEYING
ROMENESKO ENGINEERING

ALNS-4

COORDINATES ON THIS PLAN ARE ASSUMED.

DETAIL SUMMARY OF MISCELLANEOUS QUANTITIES

STEEL THRIE BEAM STRUCTURE APPROACH

STA. TO STA.	LOCATION	L.F.
9+54 - 9+87	RT.	33
11+32 - 11+65	RT.	33
11+42 - 11+75	LT.	33
TOTAL		99

STEEL PLATE BEAM GUARD, CLASS A

STA. TO STA.	LOCATION	L.F.
9+70 - 9+97	LT.	37.5
11+65 - 11+77	RT.	12.0
11+75 - 12+12.5	LT.	37.5
TOTAL		87.0

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STA. TO STA.	LOCATION	EACH
9+04 - 9+54	RT.	1
11+77 - 12+27	RT.	1
12+12.5 - 12+62.5	LT.	1
TOTAL		3

REMOVING GUARDRAIL

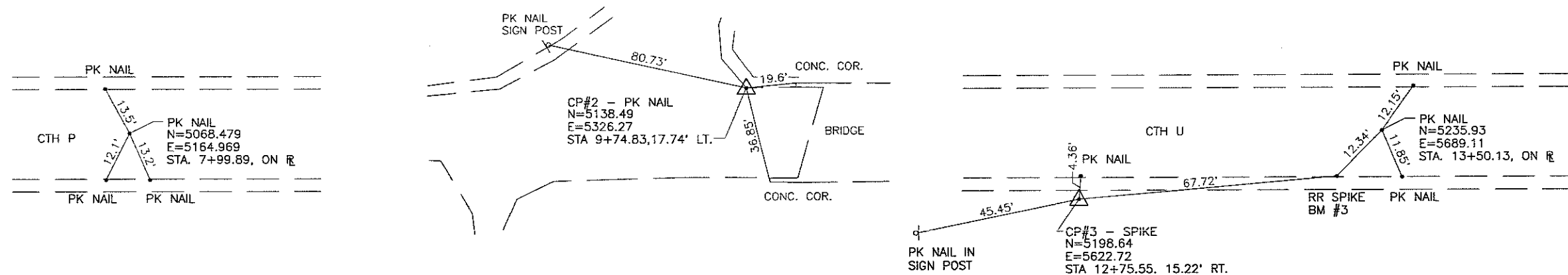
STA. TO STA.	LOCATION	L.F.
9+07 - 9+83	RT.	76
11+33 - 12+32	RT.	99
11+43 - 12+65	LT.	122
TOTAL		297

ANCHORAGES FOR STEEL PLATE BEAM GUARD, TYPE 2

STATION	LOCATION	EACH
9+70	LT.	1
TOTAL		1

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

WHEN PORTIONS OF EXISTING PAVEMENTS ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAWCUT JOINT THROUGH THE ASPHALT SO THAT REMOVAL OF THE PAVEMENT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS.



CONTROL POINT TIES

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	PE	PRIVATE ENTRANCE
ASPH	ASPHALT	PVC	POINT OF VERTICAL CURVATURE
BLDG	BUILDING	PVI	POINT OF VERTICAL INTERSECTION
CE	COMMERCIAL ENTRANCE	PVT	POINT OF VERTICAL TANGENCY
CL	CENTER LINE	R	RANGE
CONC	CONCRETE	RT	RIGHT
CP	CULVERT PIPE	R/W	RIGHT OF WAY
CWT	HUNDREDWEIGHT	REQ'D	REQUIRED
CY	CUBIC YARD	SHLDR	SHOULDER
E	EAST	S	SOUTH
ELEV	ELEVATION	SY	SQUARE YARD
FE	FIELD ENTRANCE	SF	SQUARE FOOT
FT	FOOT	STA	STATION
GRAV	GRAVEL	SE	SUPERELEVATION
HW 100	HUNDRED YEAR HIGH WATER	TYP	TYPICAL
LF	LINEAR FOOT	UNCL	UNCLASSIFIED
LT	LEFT	VAR	VARIABLE
MAX	MAXIMUM	VC	VERTICAL CURVE
MI	MILE	W	WEST
MIN	MINIMUM	X	EAST GRID COORDINATE
N	NORTH	Y	NORTH GRID COORDINATE
NOR	NORMAL		

MEMBER
ONE CALL SYSTEMS INTERNATIONAL

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGER'S HOTLINE
1-800-242-8511
TOLL FREE

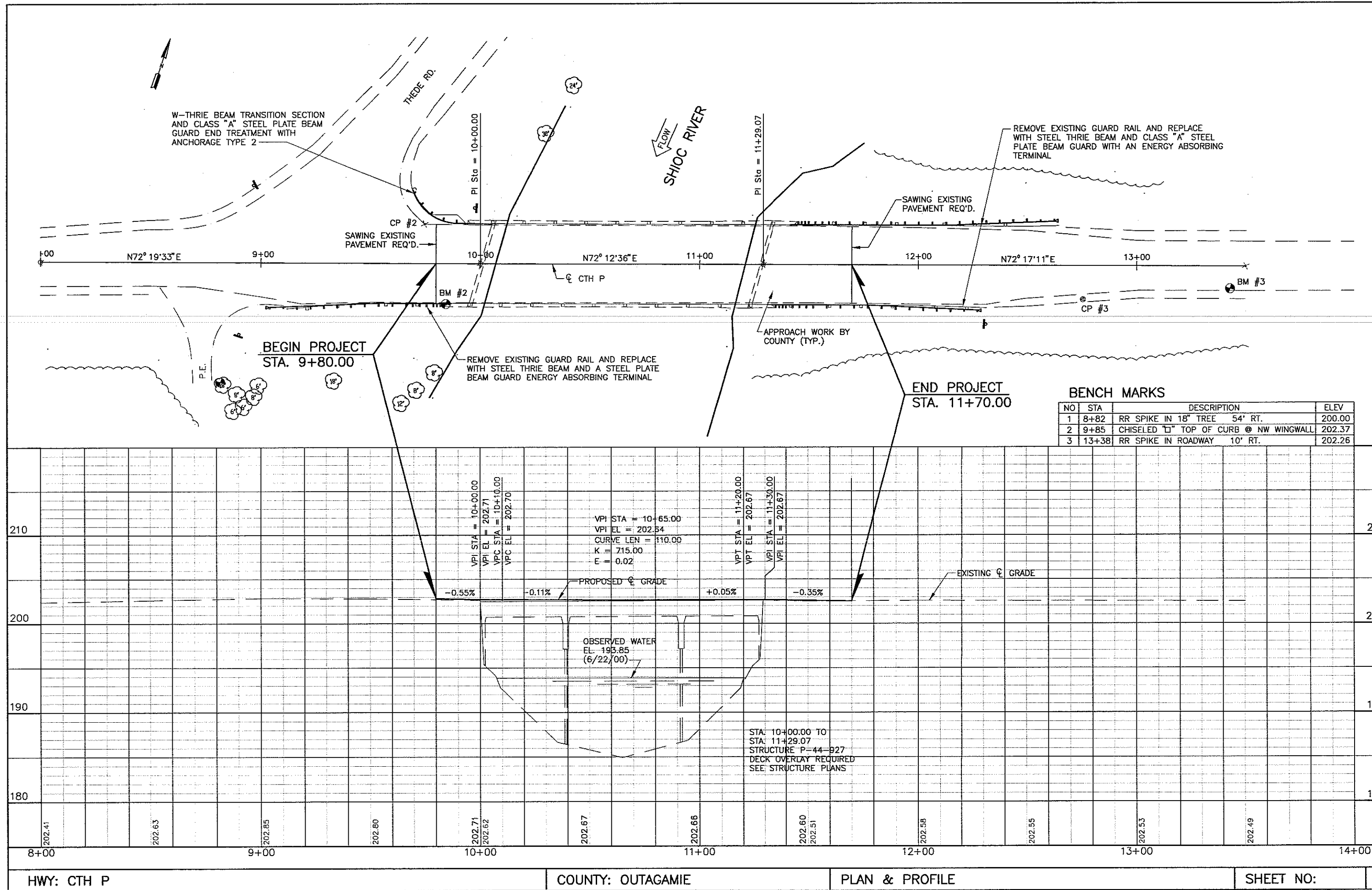
FAX-A-LOCATE 1-800-338-3860
TDD (FOR HEARING IMPAIRED) 1-800-542-2289

WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORKING DAYS
NOTICE BEFORE YOU EXCAVATE.

DESIGN CONTACTS

ROMENESKO ENGINEERING, LLC
213 JACKSON ST.
SAUK CITY, WI 53583

ATTN: VICKI ROMENESKO
(608) 644-1502
FAX (608) 644-1602
romenesko@charter.net



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

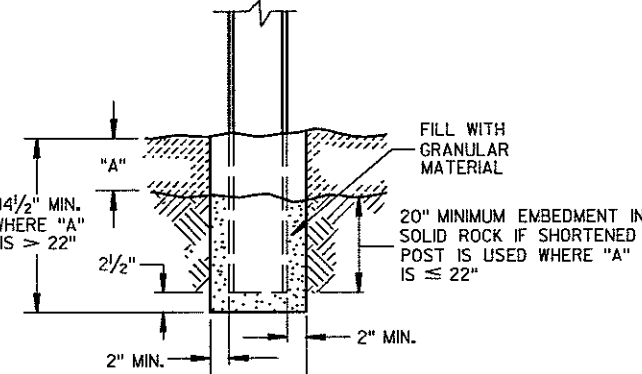
- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO AASHTO M183. GALVANIZE ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ WHEN SPECIFIED IN THE PLANS, THE 2-FOOT MINIMUM TO HINGE POINT MAY BE REDUCED OR ELIMINATED IF EXISTING CONDITIONS DO NOT PERMIT THE DESIRABLE EARTHWORK.

INCREASE POST LENGTH TO PROVIDE A MINIMUM EMBEDMENT OF 3'-6" IF THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.

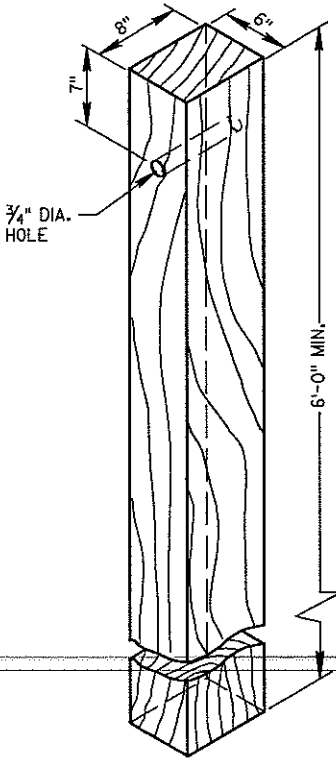
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

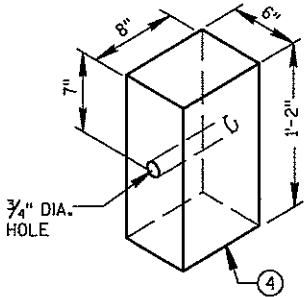
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



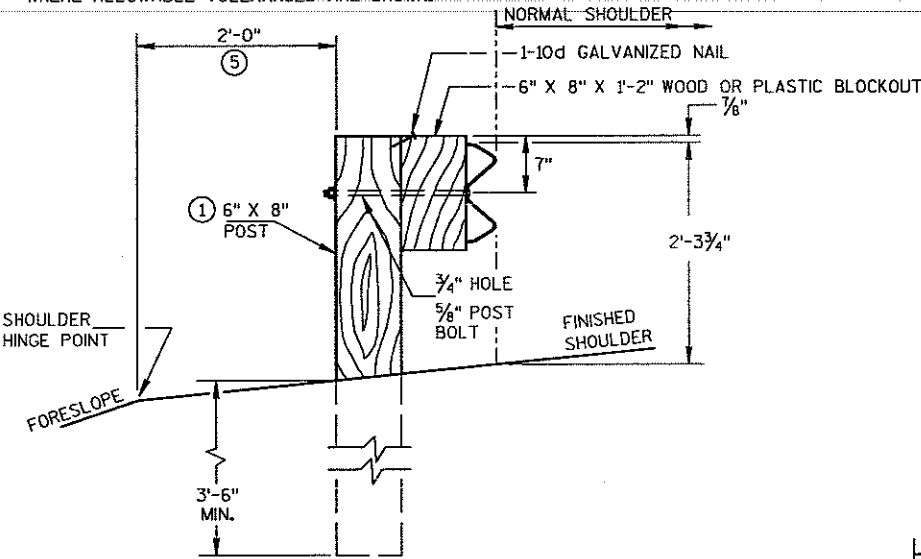
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



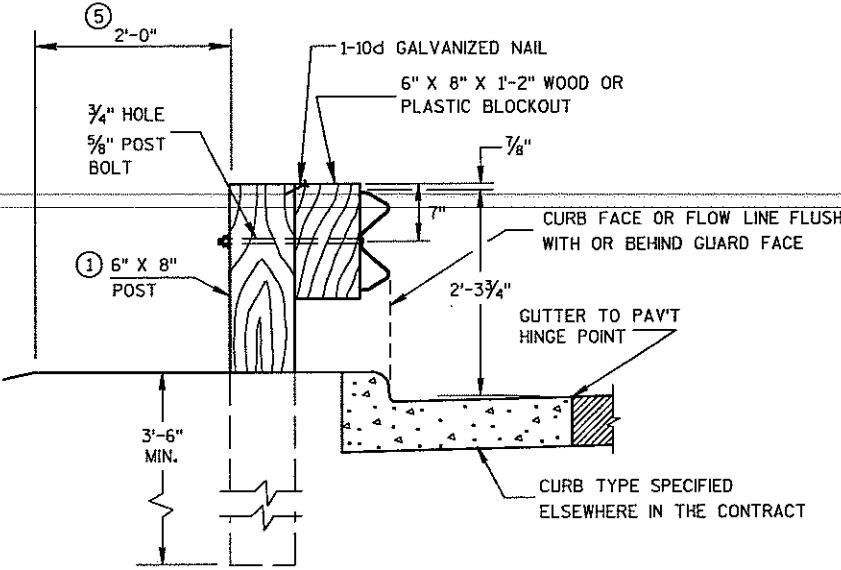
WOOD POST
(6"X8") NOMINAL



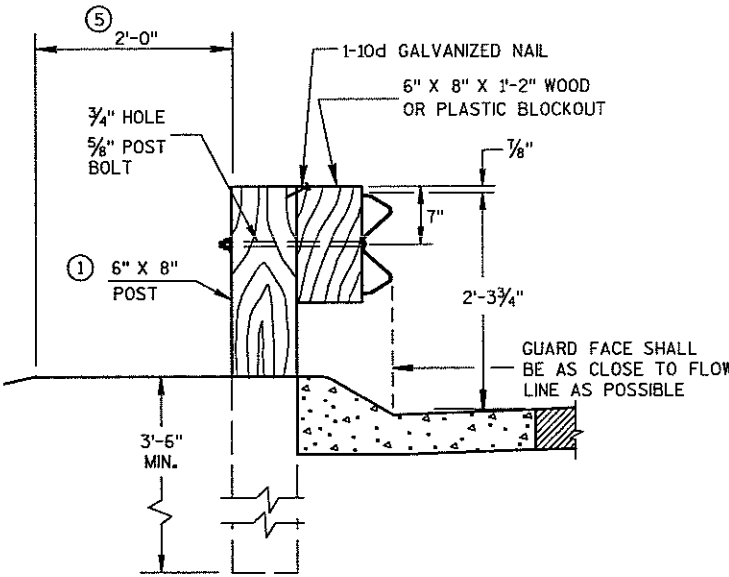
WOOD OR PLASTIC
BLOCKOUT FOR WOOD POSTS



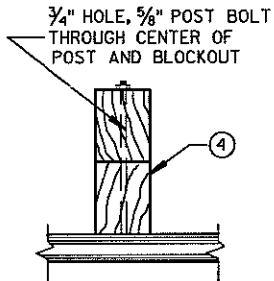
END VIEW
LOCATED ALONG A ROADWAY SHOULDER



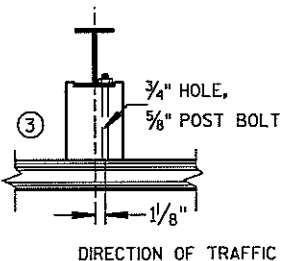
END VIEW
LOCATED ALONG A CURBED ROADWAY



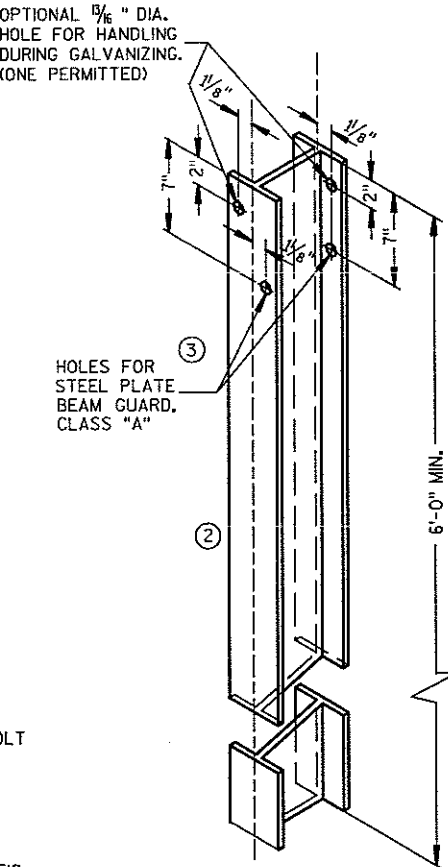
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM

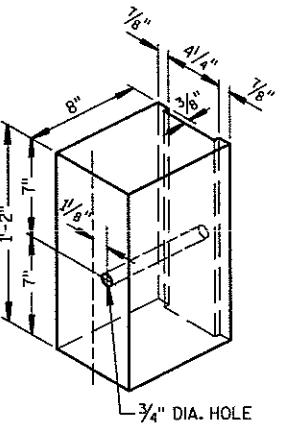


PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①

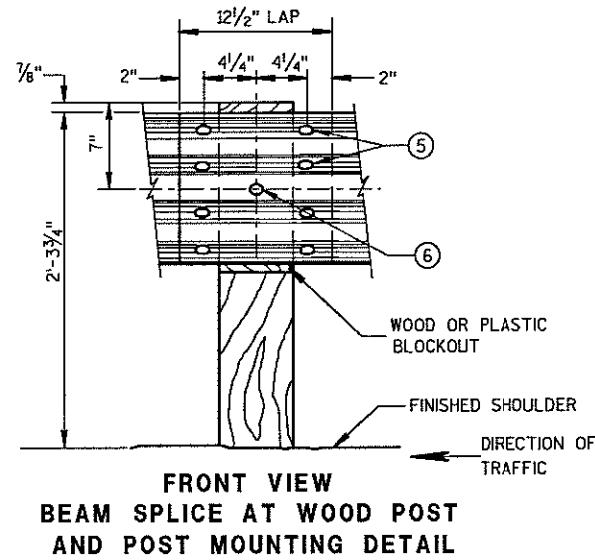
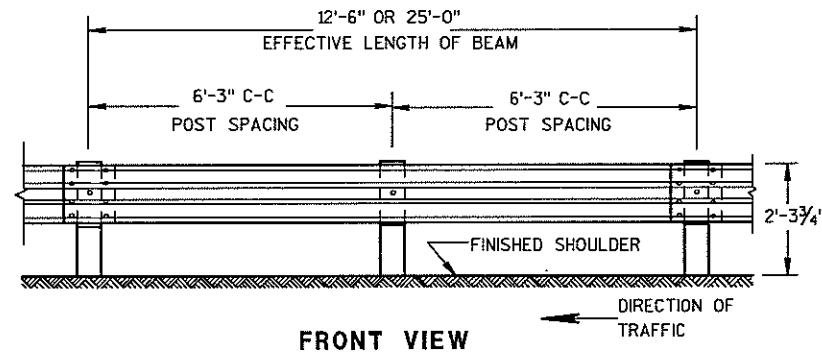
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED



NOTCHED PLASTIC BLOCKOUT
FOR STEEL POSTS

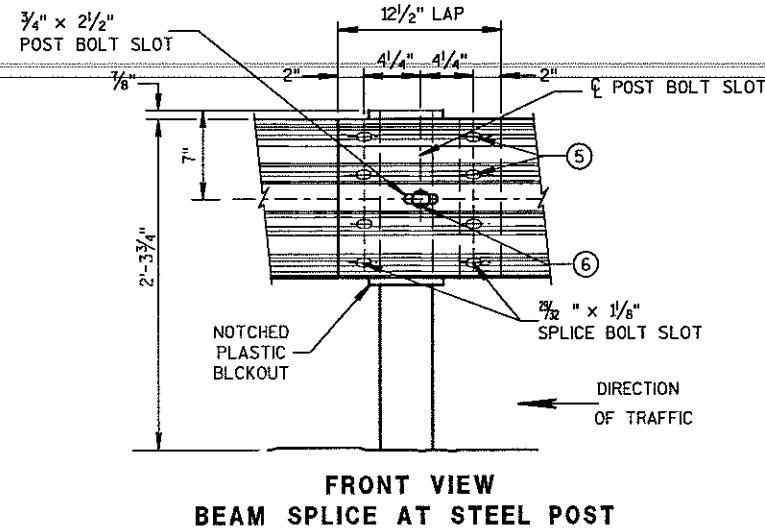
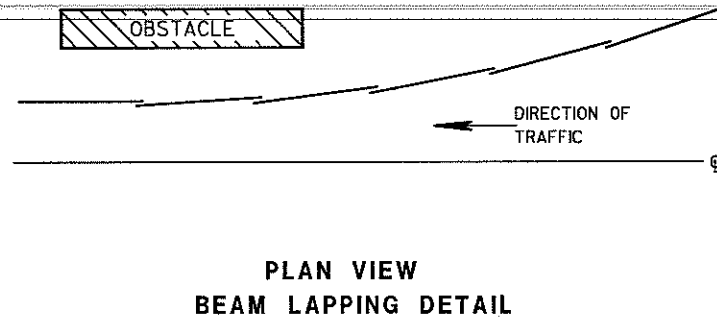
STEEL PLATE BEAM GUARD,
CLASS 'A'
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

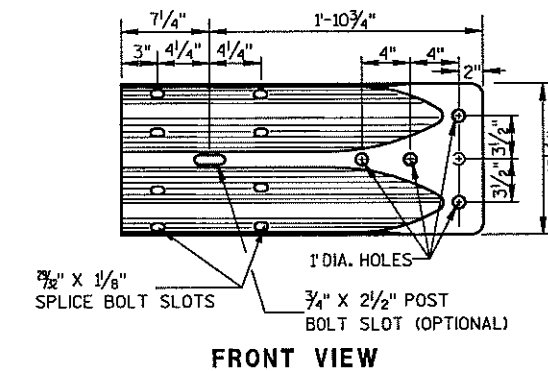
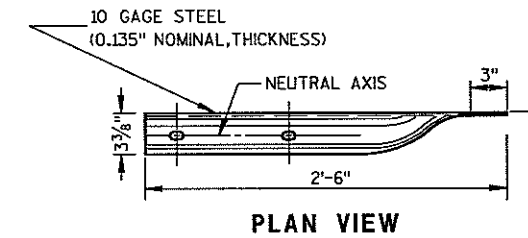
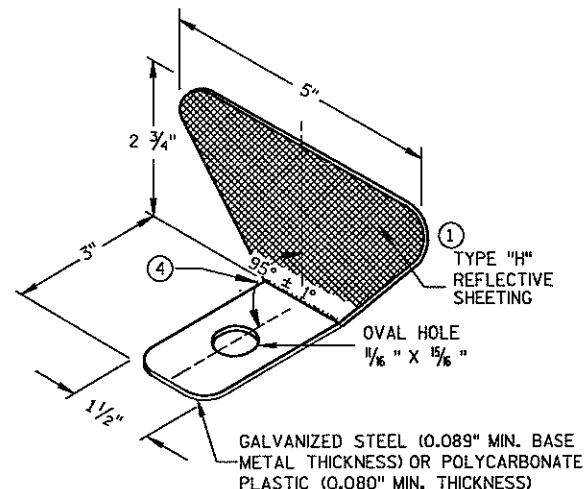
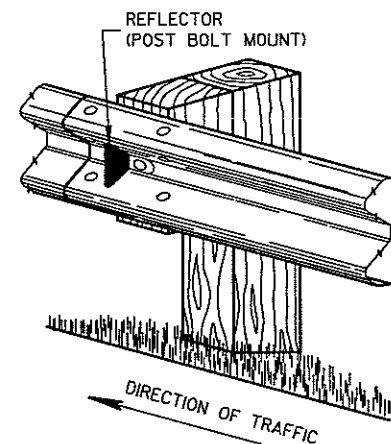
- ① PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
- ② DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- ③ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- ④ PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- ⑤ 8 $\frac{5}{8}$ " ϕ X $1\frac{1}{4}$ " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑥ $\frac{5}{8}$ " ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

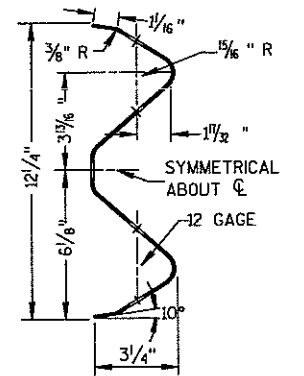
REFLECTOR SPACING ②

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1 ③	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ④	3
	> 200'	100' C-C	2 ④	



W BEAM TERMINAL CONNECTOR

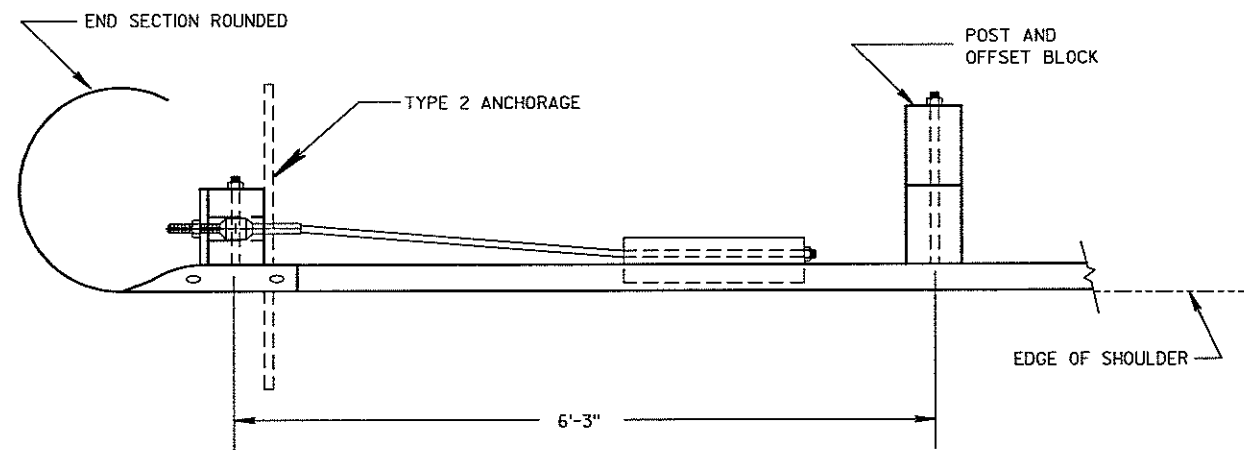
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



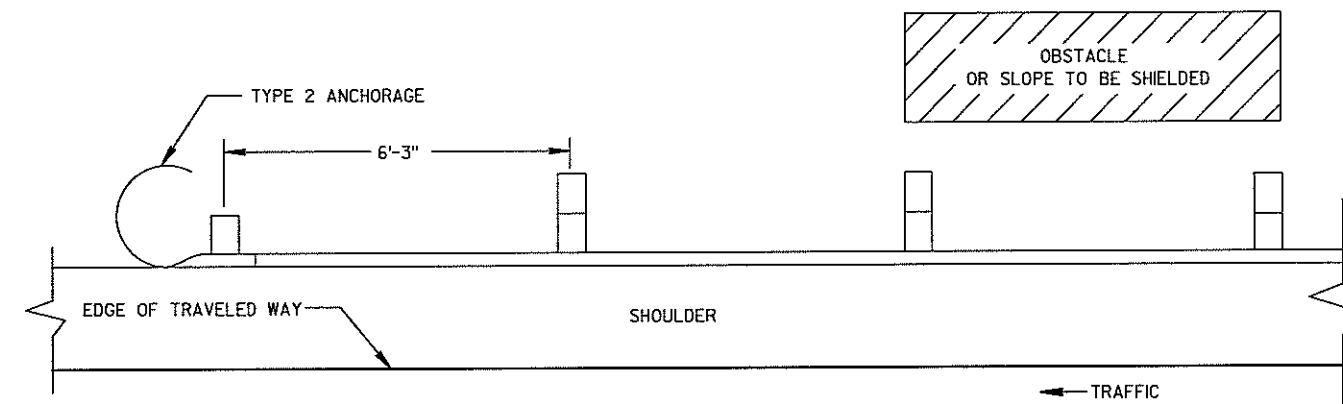
STEEL PLATE BEAM GUARD, CLASS 'A', INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

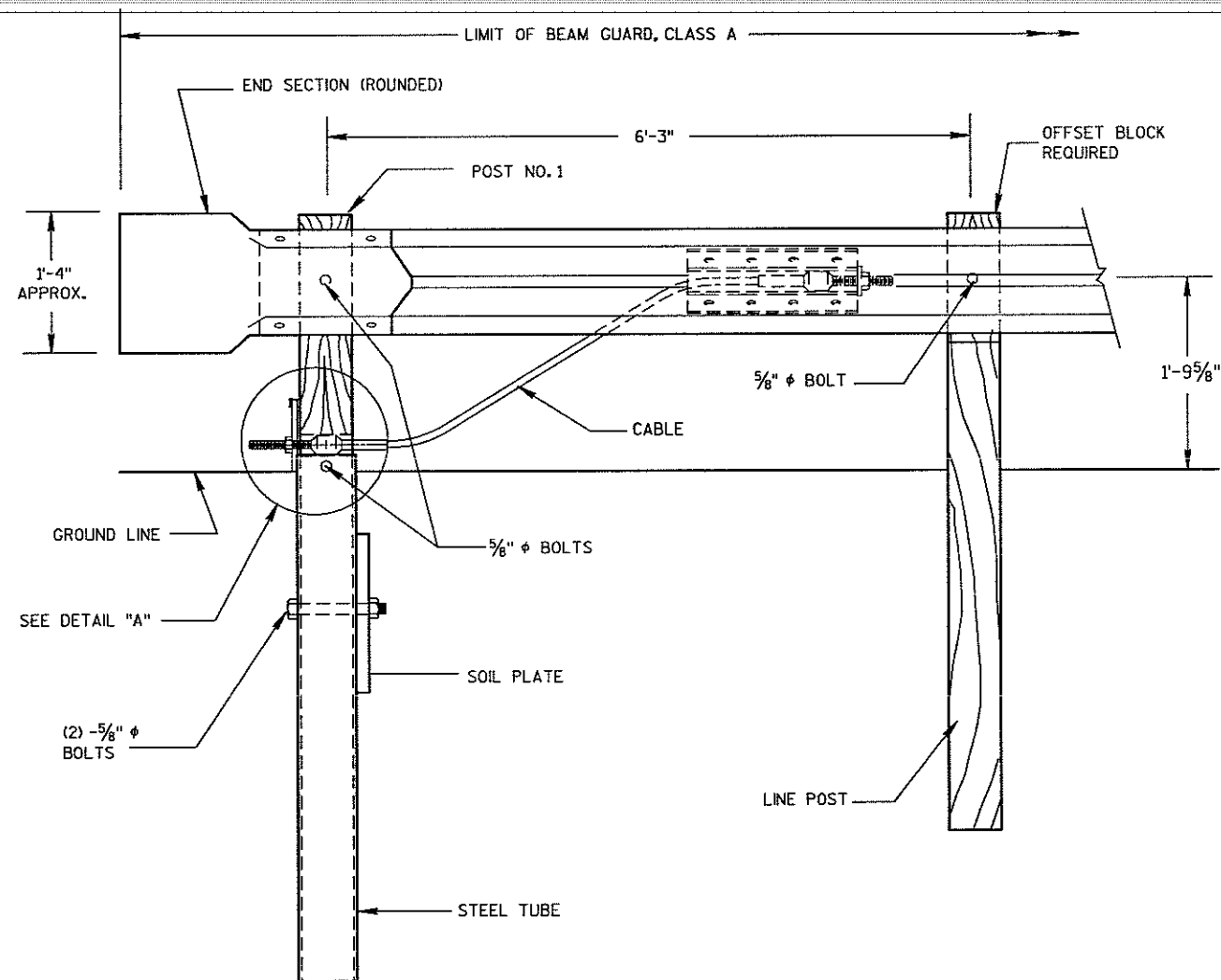
APPROVED
DATE _____ CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



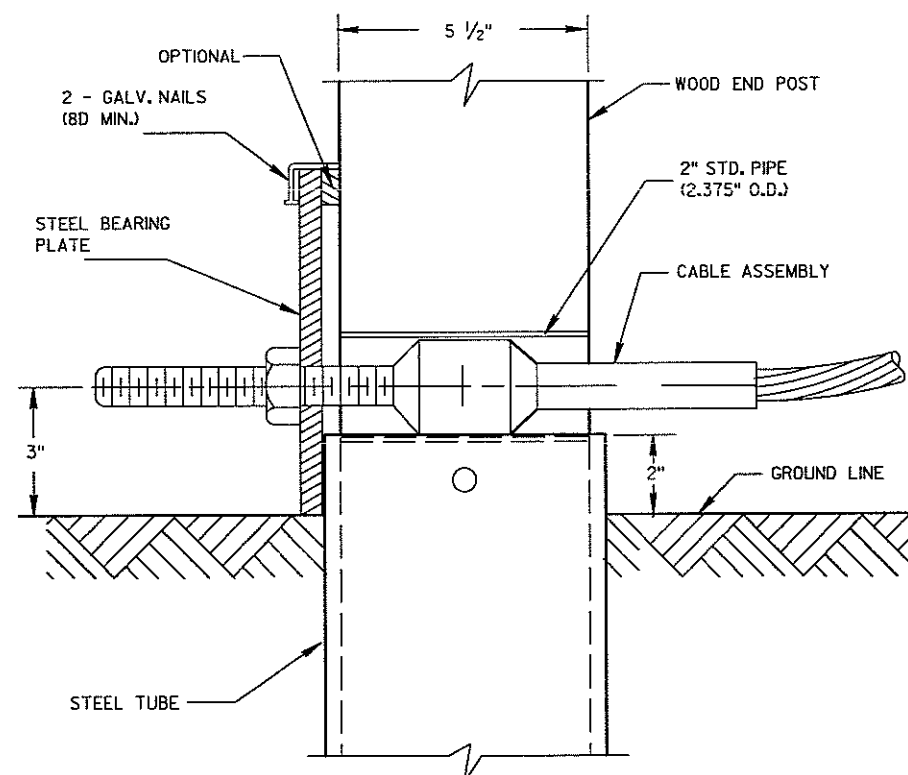
PLAN VIEW



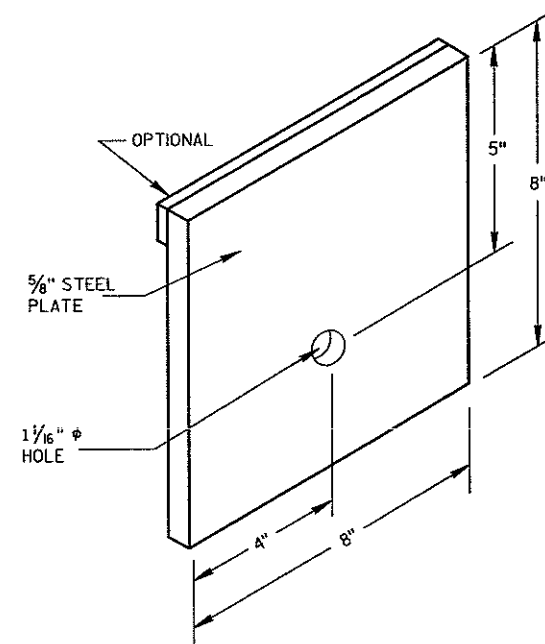
PLAN VIEW
BEAM GUARD WITH TYPE 2 ANCHORAGE
EXIT END - ONE WAY TRAFFIC



FRONT VIEW
END TREATMENT WITH TYPE 2 ANCHORAGE
(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



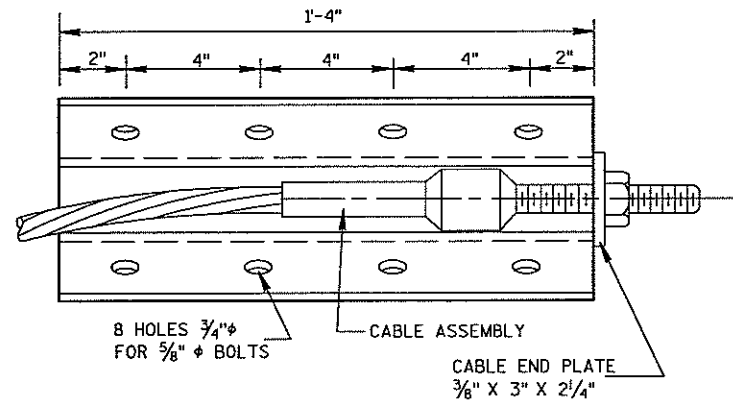
DETAIL "A"
POST NO. 1



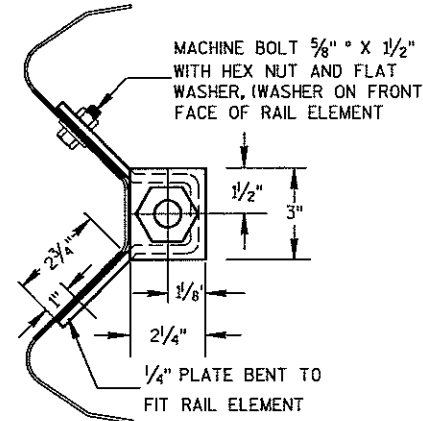
STEEL BEARING PLATE

CLASS 'A' STEEL PLATE BEAM GUARD
END TREATMENT WITH ANCHORAGE
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

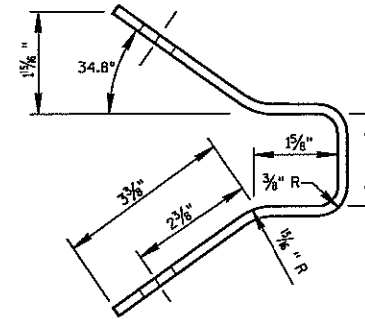


FRONT VIEW

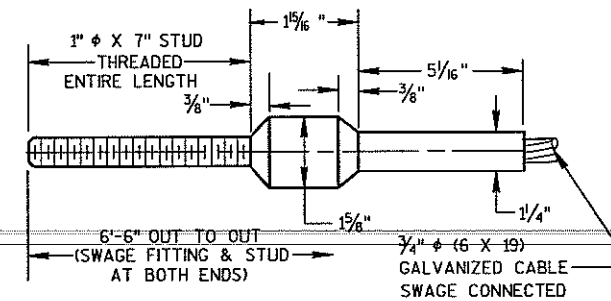


END VIEW

ANCHOR PLATE DETAIL

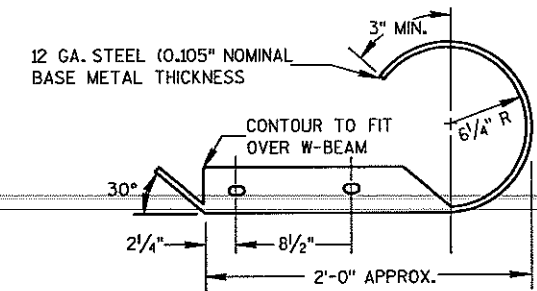


END VIEW OF BRACKET

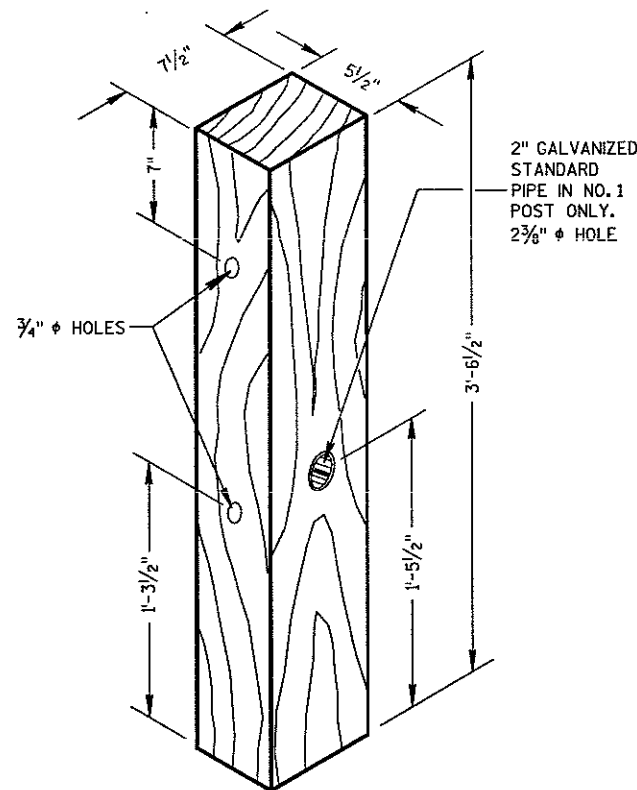


CABLE ASSEMBLY

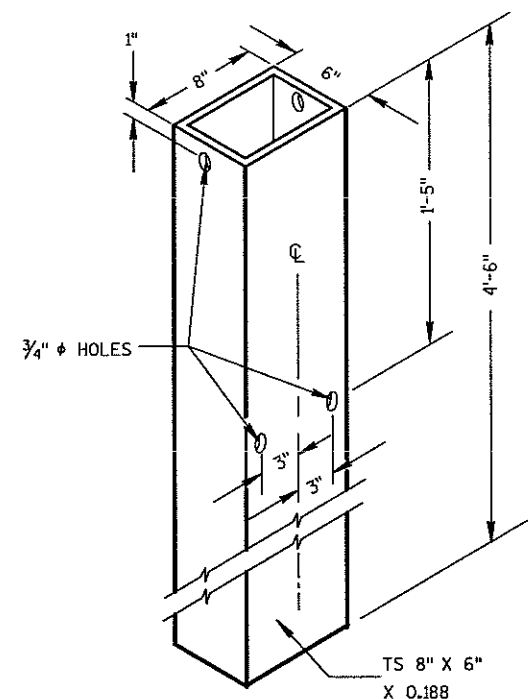
CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP A MINIMUM BREAKING STRENGTH OF 40,000 LB (TIGHTEN UNTIL TAUT)



PLAN VIEW

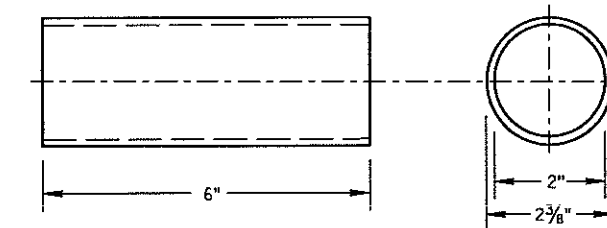


WOOD BREAKAWAY POST



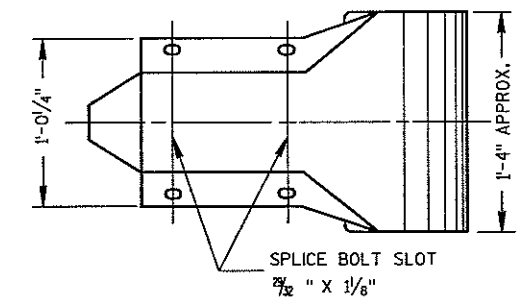
STEEL TUBE

STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A500



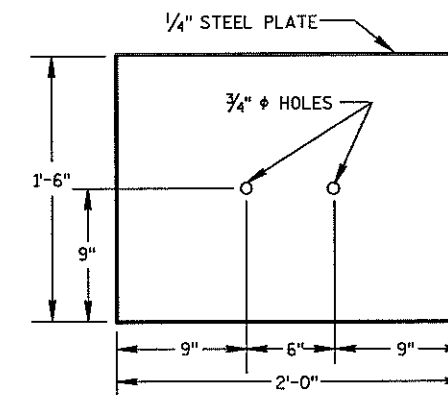
BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW

W BEAM END SECTION ROUNDED



SOIL PLATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO.1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

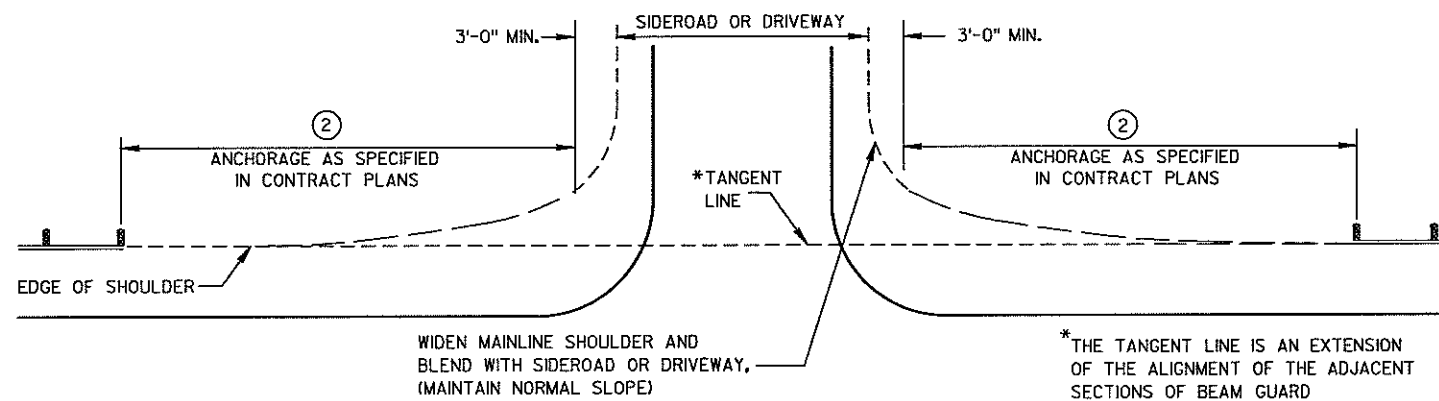
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE, WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.

CLASS 'A' STEEL PLATE BEAM GUARDRAIL
END TREATMENT WITH ANCHORAGE
TYPE 2

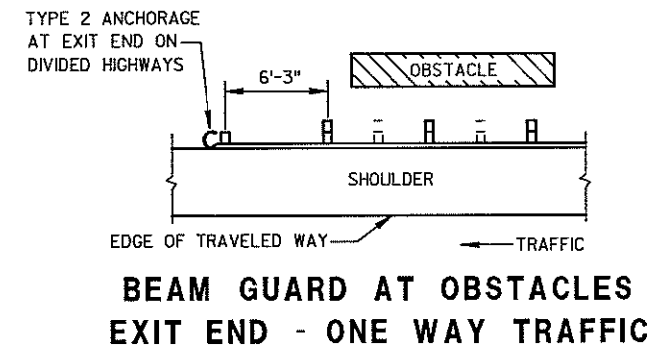
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

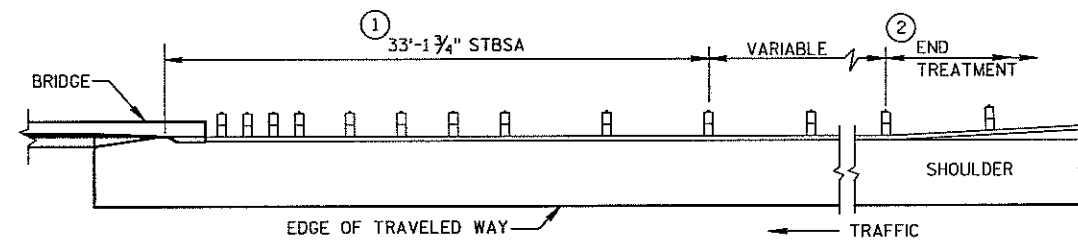
W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

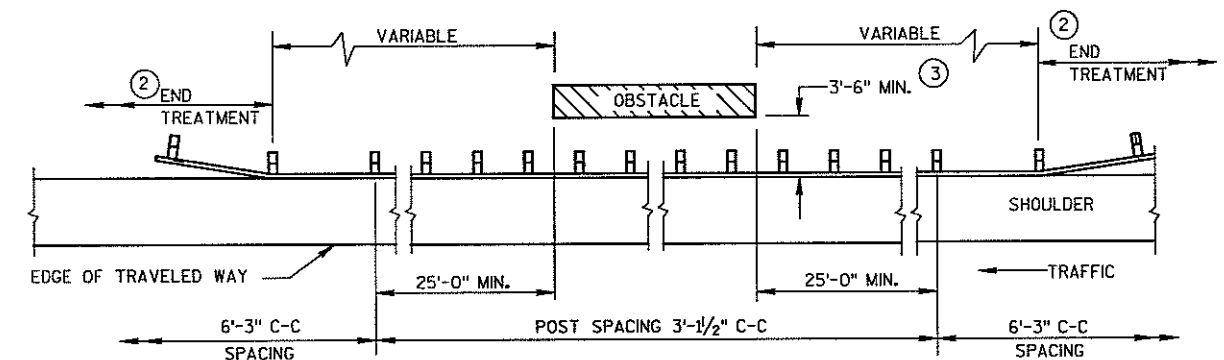
- ① USE STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA).
- ② USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

③ DESIGN DEFLECTION OF W-BEAM BARRIER SYSTEM

LATERAL DISTANCE TO FIXED OBJECT	POST SPACING
3'-6" TO 4'-6"	3' - 1 1/2"
4'-6" AND OVER	6' - 3"

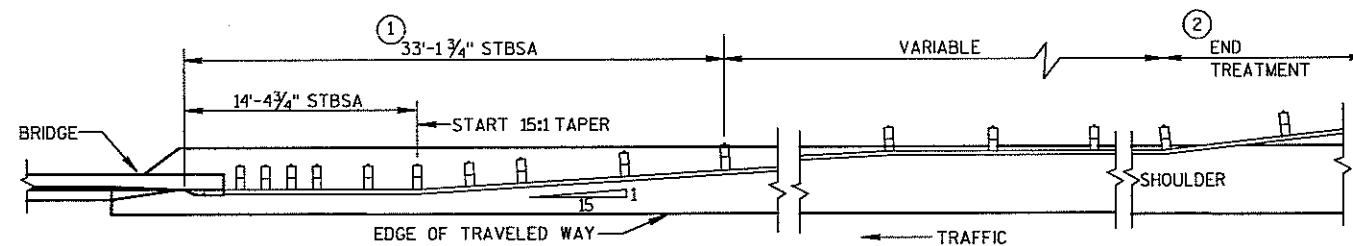


BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OSBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")



BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

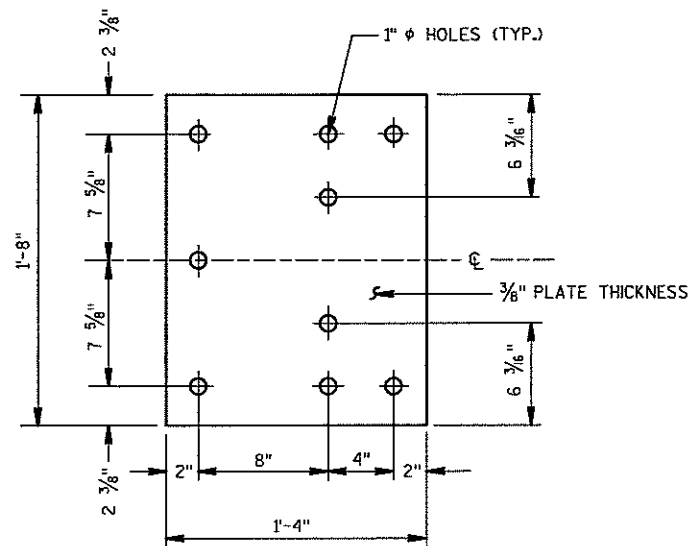
STEEL PLATE BEAM GUARD, CLASS "A"
(AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

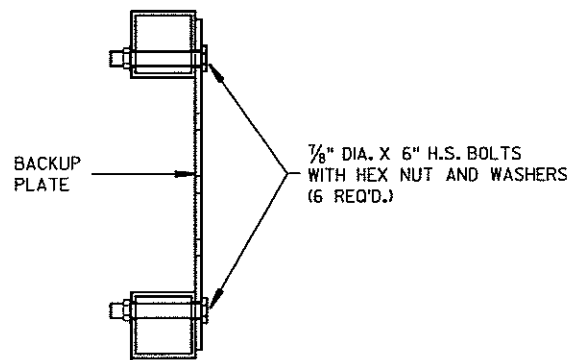
APPROVED

DATE CHIEF ROADWAY DEVELOPMENT ENGINE

FHWA



BACK-UP PLATE DETAIL

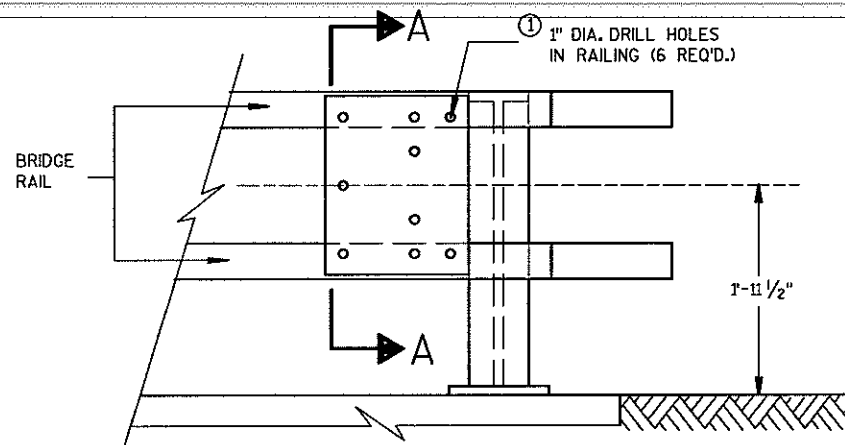


SECTION A-A

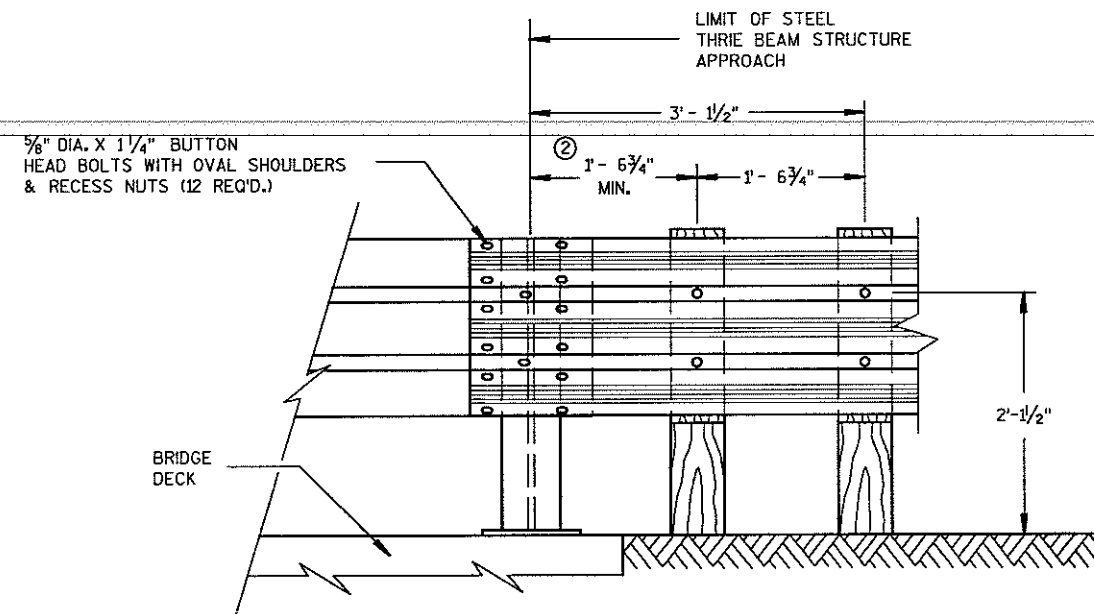
GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

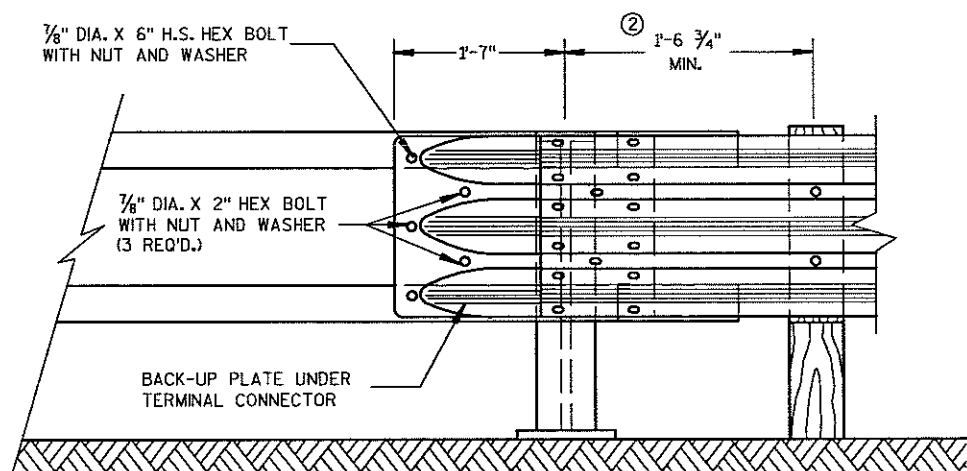
- ① INCLUDE THE PAYMENT FOR DRILLING HOLES IN RAILING IN THE ITEM "STEEL THRIE BEAM STRUCTURE APPROACH".
- ② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW. PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

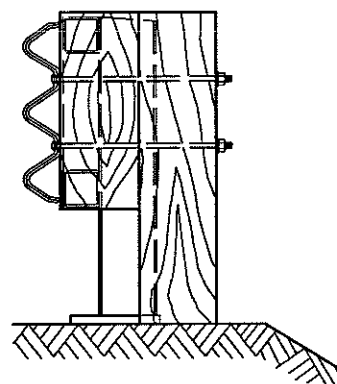


FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"



FRONT VIEW

THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"



END VIEW

STEEL THRIE BEAM STRUCTURE
APPROACH, CONNECTION TO BRIDGE
RAILING TYPES "F" AND "W"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

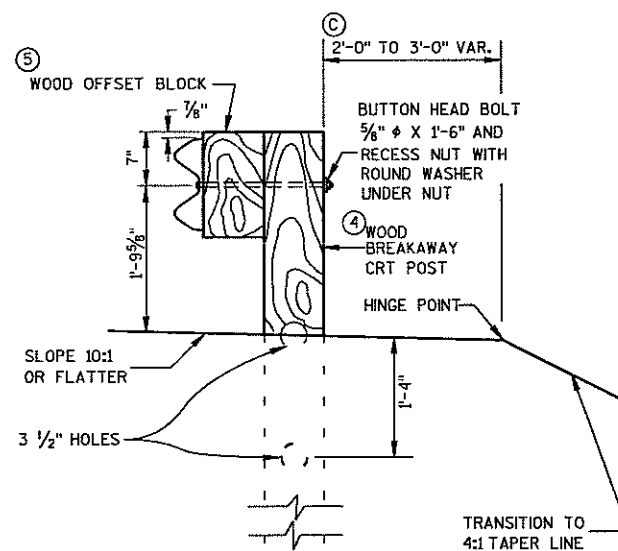
APPROVED

DATE

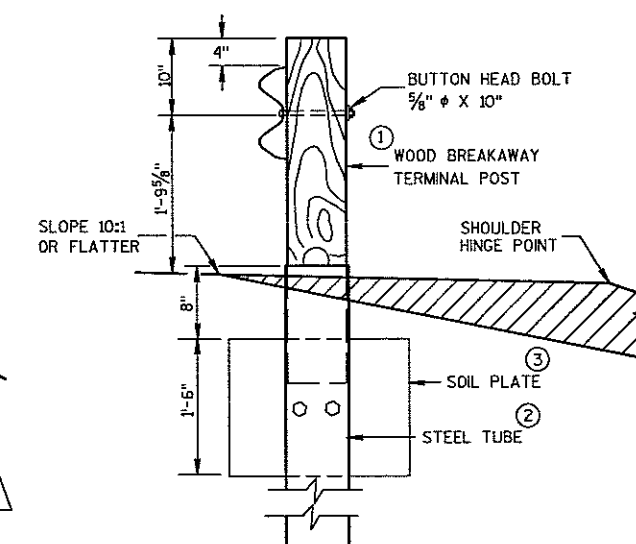
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

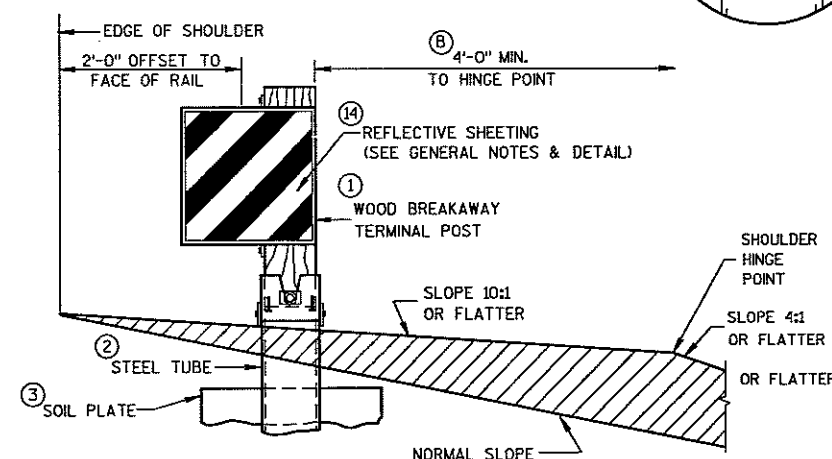
NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5/2" X 7/2" X 3'-9"
②	4	STEEL TUBE: TS 8" X 6" X 0.388, 4'-6" LONG
③	4	SOIL PLATE: 2'-0" X 1'-6" X 1/4"
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6" X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6 1/2" LONG FOR SKT-350 & ET-2000
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6 1/2"
⑬	1	ET-2000 GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	REFLECTIVE SHEETING: 18" X 18"



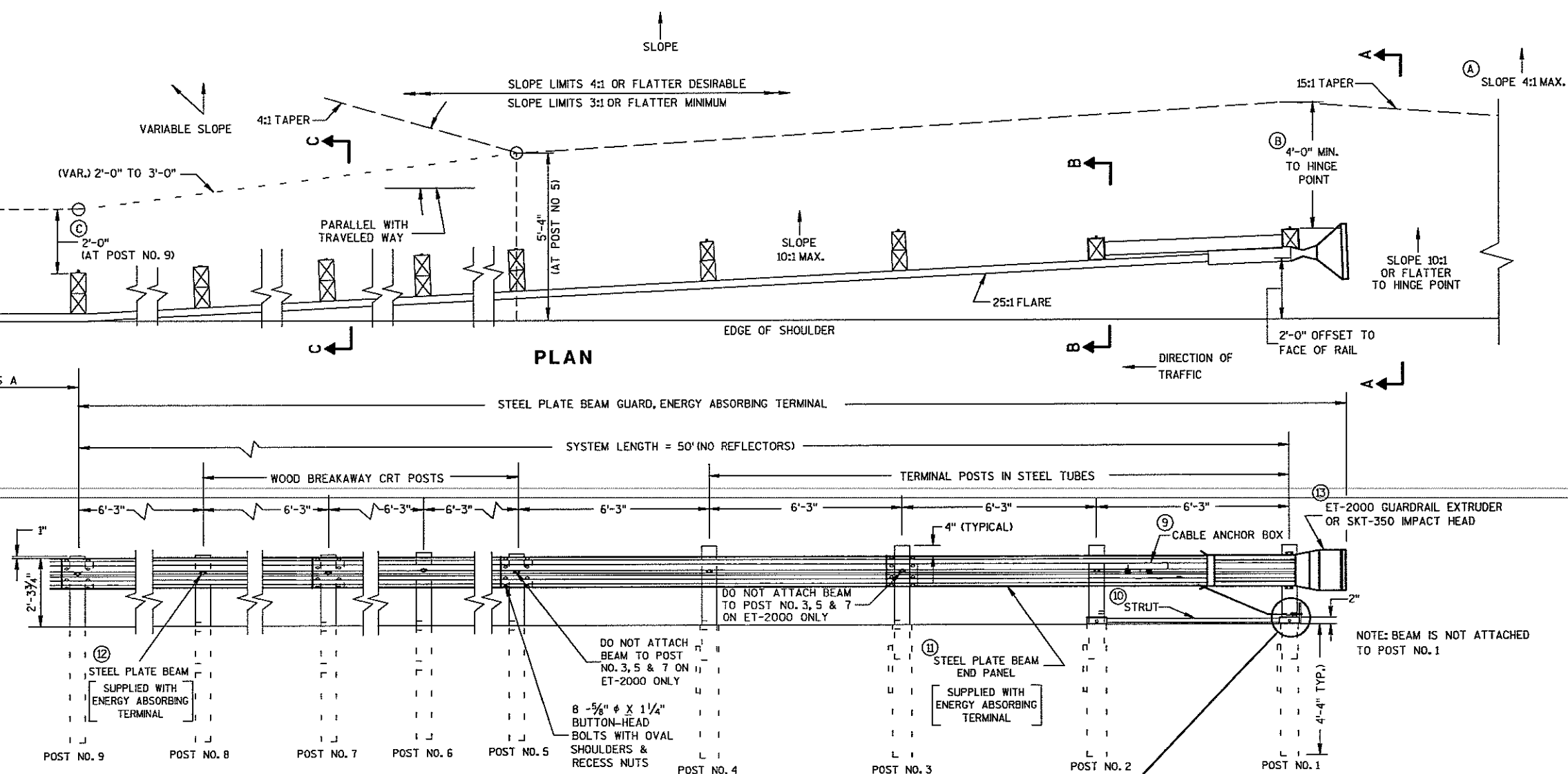
SECTION C-C
TYPICAL AT POST NOS. 5-8 INC.



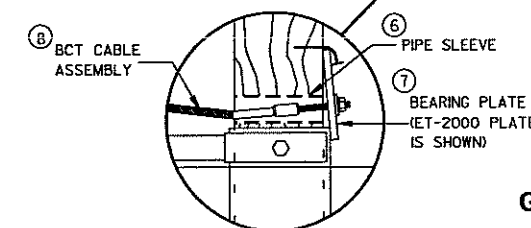
SECTION B-B
TYPICAL AT POST NO. 2
(ADD WOOD OFFSET BLOCK AT POST 3 & 4)



SECTION A-A
TYPICAL AT POST NO. 1



ELEVATION

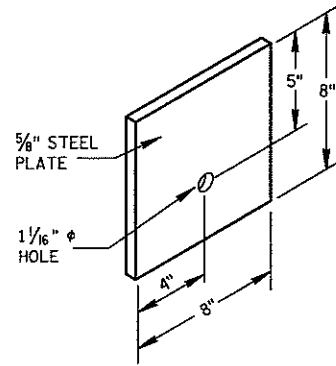


GENERAL NOTES

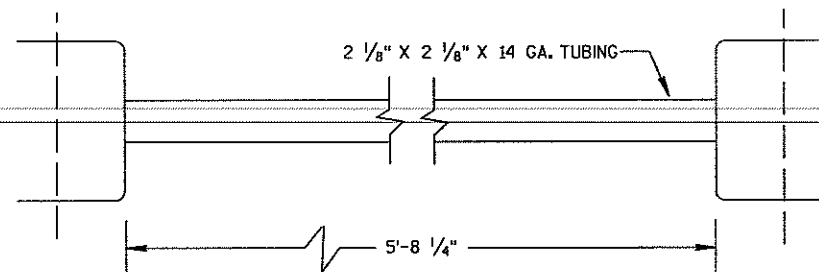
- (A) A 3:1 OR FLATTER SLOPE MAY BE USED FOR INSTALLATION ON EXISTING HIGHWAYS.
- (B) WHEN SPECIFIED ELSEWHERE IN THE CONTRACT THE 4-FOOT MINIMUM TO HINGE POINT, MAY BE REDUCED OR ELIMINATED WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE EARTHWORK. SIMILARLY THE 15:1 TAPER MAY BE REDUCED TO 4:1.
- (C) WHEN SPECIFIED ELSEWHERE IN THE CONTRACT THE 2-FOOT MINIMUM TO HINGE POINT, MAY BE REDUCED OR ELIMINATED WHERE EXISTING CONDITIONS WILL NOT PERMIT THE DESIRABLE EARTHWORK.
- STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

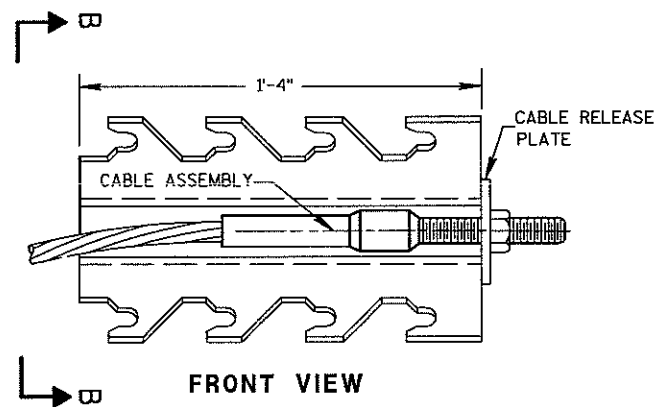
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



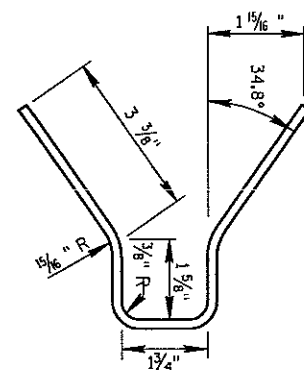
STEEL BEARING PLATE (SKT-350)



STRUT DETAIL (SKT-350)



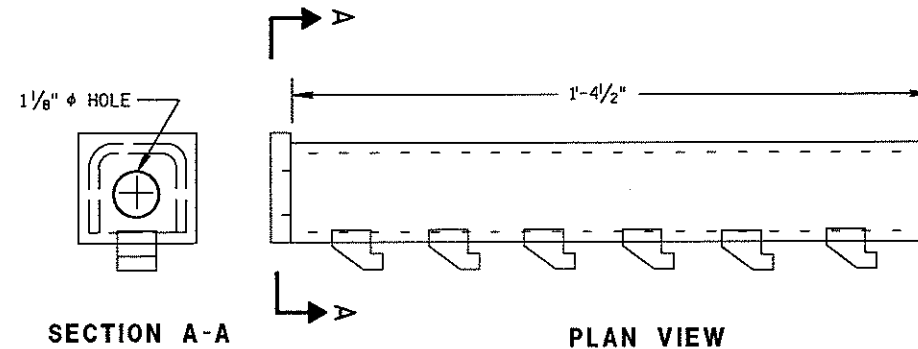
FRONT VIEW



SECTION B-B

CABLE ANCHOR BOX (SKT-350)

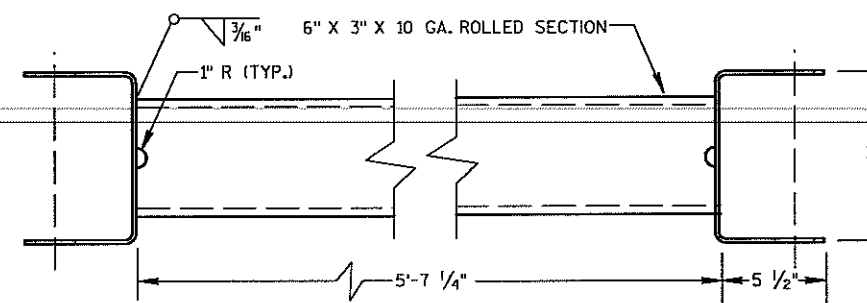
(SKT-350)



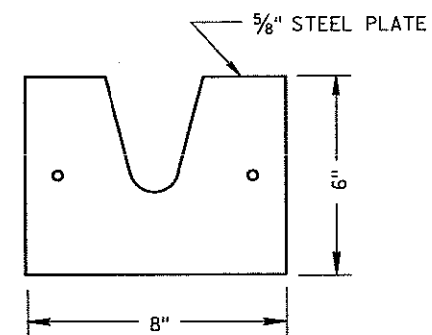
SECTION A-A

PLAN VIEW

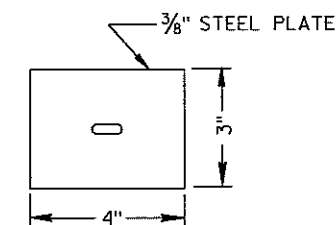
CABLE ANCHOR BOX (ET-2000)



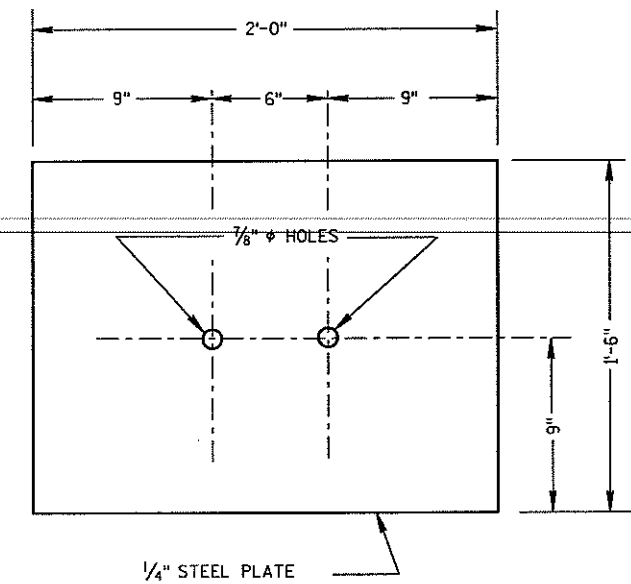
STRUT DETAIL (ET-2000)



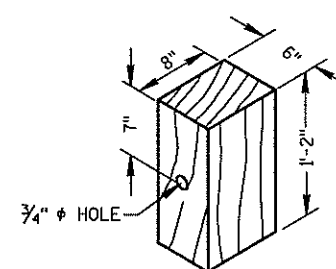
STEEL BEARING PLATE (ET-2000)



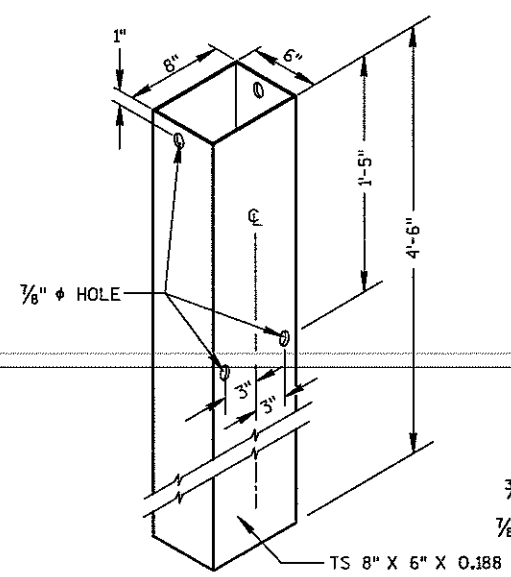
BEARING PLATE WASHER (ET-2000)
(ET-2000)



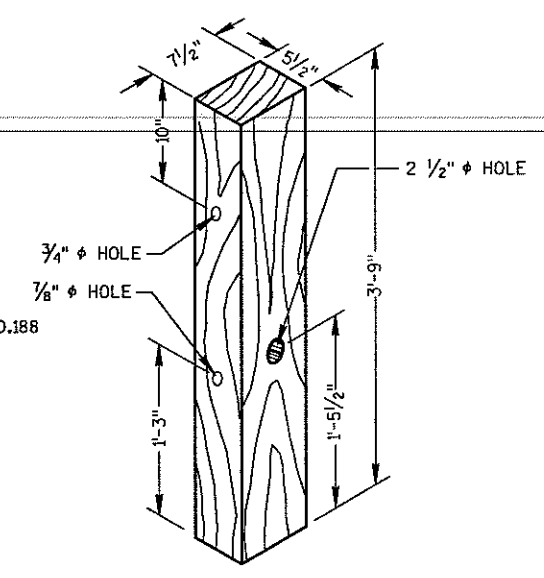
SOIL PLATE (SKT-350 & ET-2000)



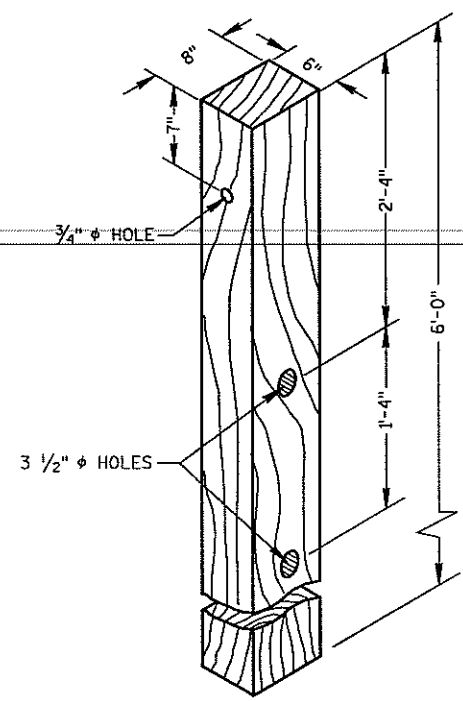
WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



STEEL TUBE
(POSTS NO. 1-4)
THE STEEL TUBE SHALL CONFORM
TO REQUIREMENTS OF ASTM A500



TERMINAL POST
(POSTS NO. 1-4)



CRT POST
(POSTS NO'S 5-8)

WOOD BREAKAWAY POSTS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND MANUFACTURERS INSTRUCTIONS.

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL SHALL BE EITHER THE EXTRUDER TERMINAL (ET-2000), OR THE SEQUENTIAL KINKING TERMINAL (SKT-350). THE CONTRACTOR SHALL NOT INTERMIX PROPRIATERY PRODUCT MATERIALS.

THE "ET-2000" IS AVAILABLE FROM SYRO, INC., 2524 N. STEMMONS FREEWAY, DALLAS TEXAS 75207. TELEPHONE 1-800-835-6086 OR 1-800-644-7976

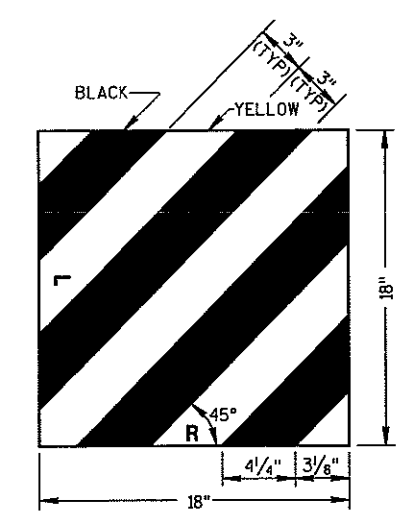
THE "SKT-350" IS AVAILABLE FROM ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, ILLINOIS 60423. TELEPHONE (815) 464-5917

THE ET-2000, AND SKT-350 END TERMINALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

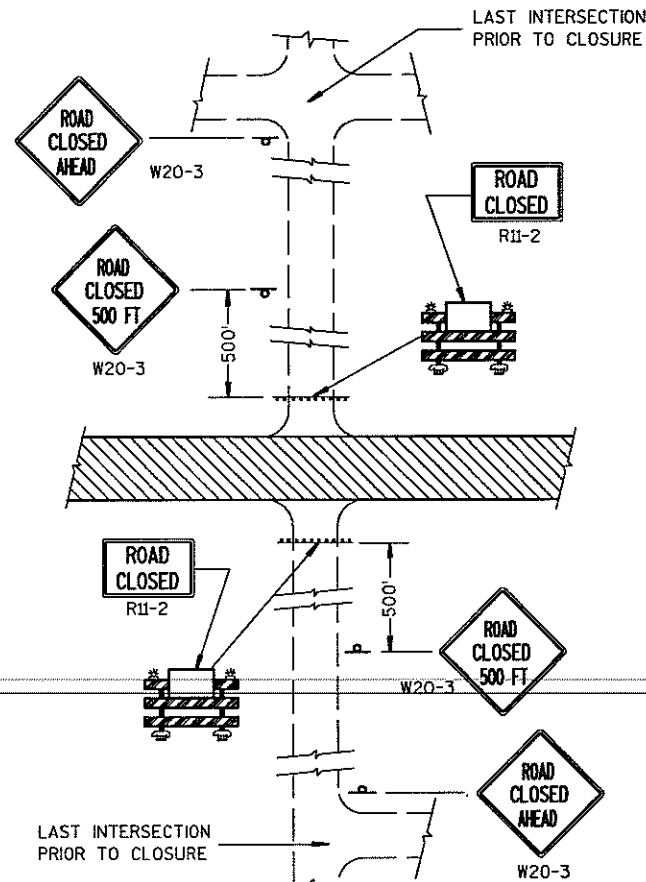
REFLECTIVE SHEETING - SHALL CONFORM TO ASTM SPECIFICATION D4956-93b, REFLECTIVE SHEETING TYPE III, BACKING CLASS 4, PERFORMANCE REQUIREMENT TYPE III. THE MESSAGE AND LINES SHALL BE APPLIED TO THE SIGNS BY THE SILK SCREEN STENCIL PROCESS USING A BLACK OR DARK STENCIL PASTE AS A TYPE APPROVED BY THE MANUFACTURER OF THE FACE MATERIAL TO WHICH IT IS TO BE APPLIED. MESSAGE UNITS CUT FROM NONREFLECTIVE SHEETING AND APPLIED TO THE SIGN FACE ARE NOT ACCEPTABLE. AFTER THE APPROACH END OF THE STEEL PLATE BEAM GUARD INSTALLATION IS COMPLETE, CLEAN THE AREA WHERE THE REFLECTIVE SHEETING WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION. ONCE CLEAN, APPLY REFLECTIVE SHEETING DIRECTLY TO THE STEEL PLATE BEAM GUARD AS SHOWN. THE CONTRACTOR SHALL TURN OVER THE MANUFACTURERS WARRANTY FOR THE REFLECTIVE SHEETING TO THE DEPARTMENT FOR POTENTIAL DEALING WITH THE MANUFACTURER. PAYMENT OF REFLECTIVE SHEETING IS INCIDENTAL TO STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL.

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

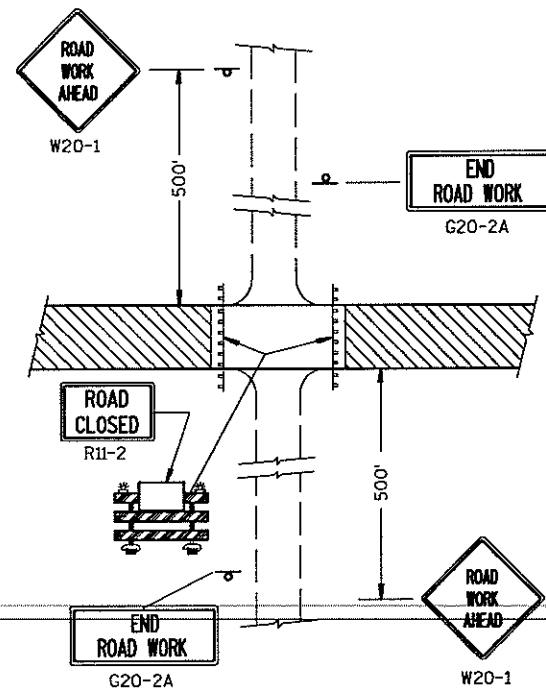


REFLECTIVE SHEETING DETAIL

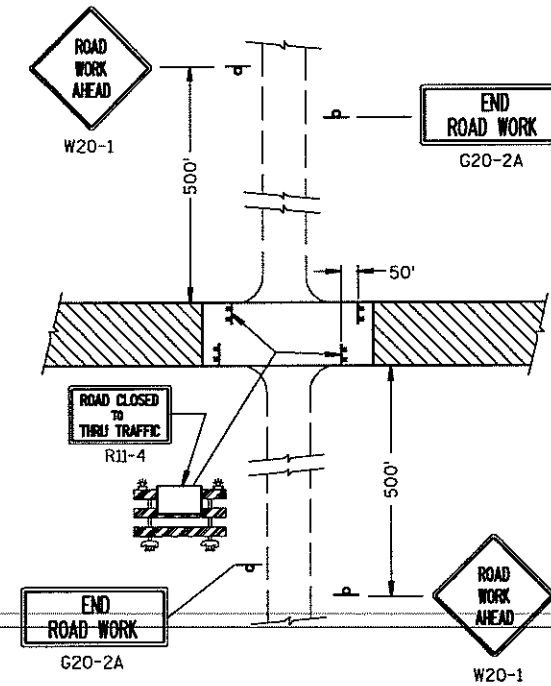
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
DATE	CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



DETAIL 1
(NO ACCESS TO PROJECT)

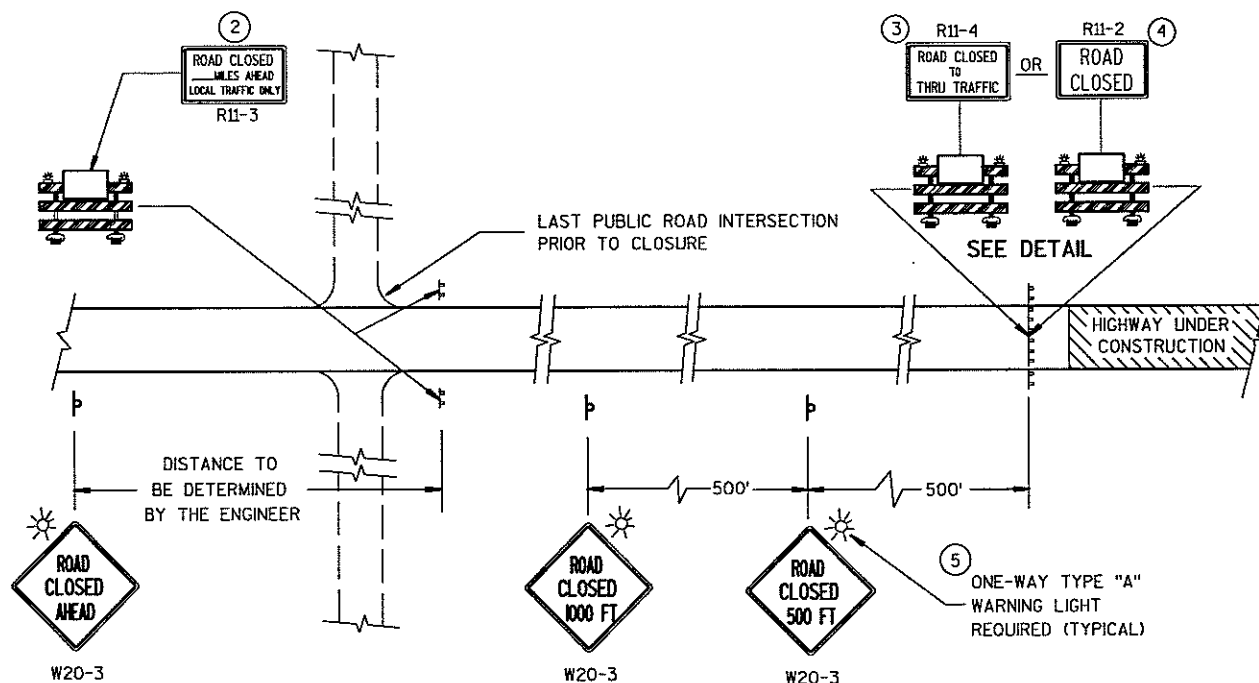


DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).

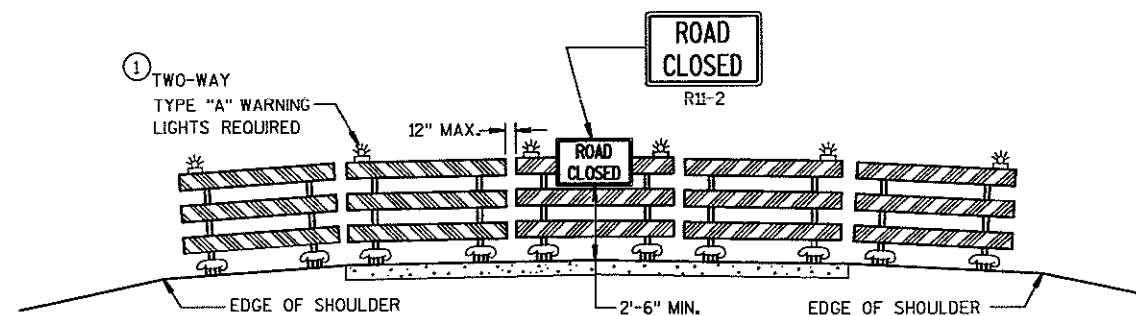


DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).

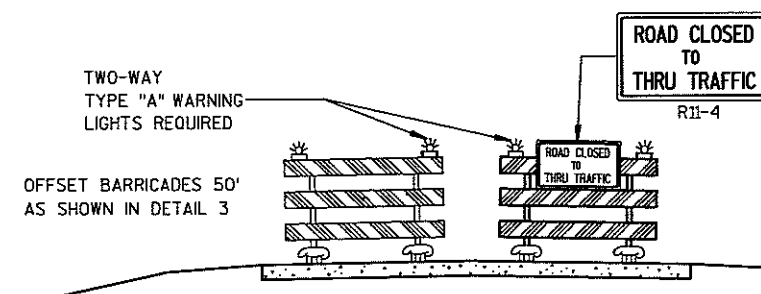
SIDEROAD CLOSURES



MAINLINE CLOSURE



APPROACH VIEW
ROAD CLOSURE BARRICADE DETAIL



APPROACH VIEW
LANE CLOSURE BARRICADE DETAIL

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY REESTABLISHED.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL FOR FULL ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED _____ MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (R11-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III, AND ON ALL R11-2, R11-3 AND R11-4 SIGNS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2, "ROAD CLOSED" SIGNS SHALL BE 48" X 30".

R11-3, AND R11-4 SIGNS SHALL BE 60" X 30".

G20-2A SIGNS SHALL BE 48" X 24".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN.
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT. SEE LANE CLOSURE BARRICADE DETAIL.
- 4 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT. SEE ROAD CLOSURE BARRICADE DETAIL.
- 5 ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES WITH TYPE "H" REFLECTIVE SHEETING
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

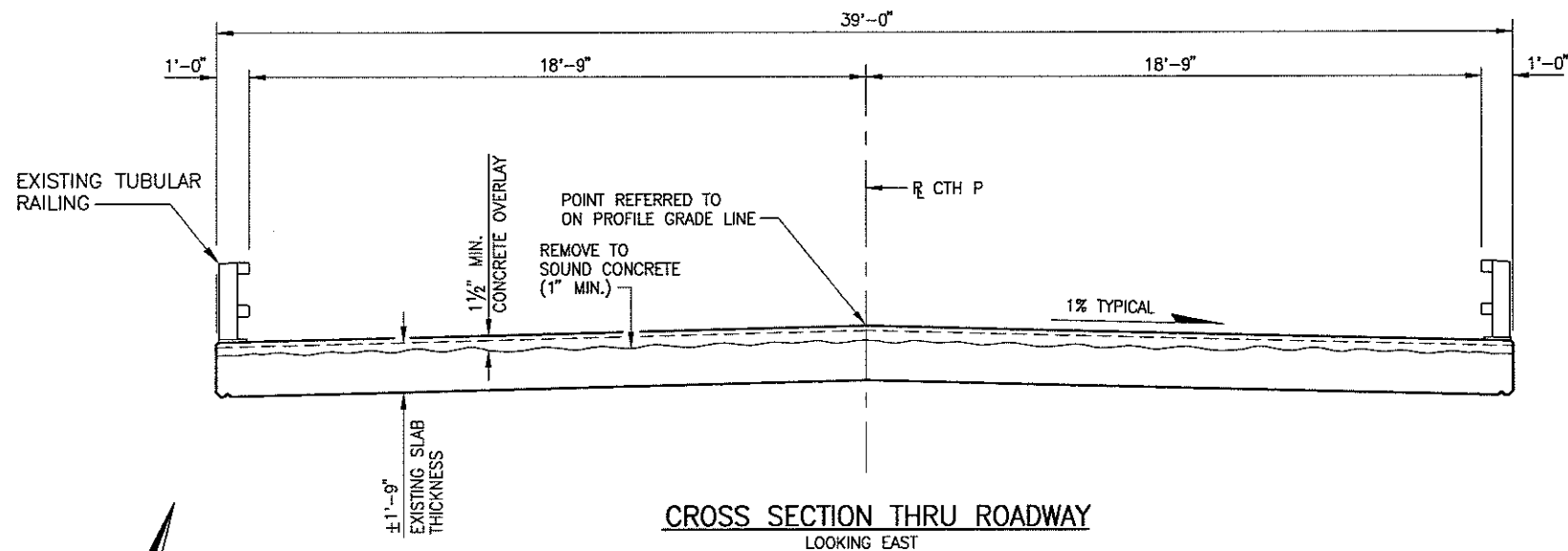
BARRICADES AND SIGNS
FOR
ROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE DIRECTOR, OFFICE OF TRAFFIC

FHWA



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON FIELD MEASUREMENTS.

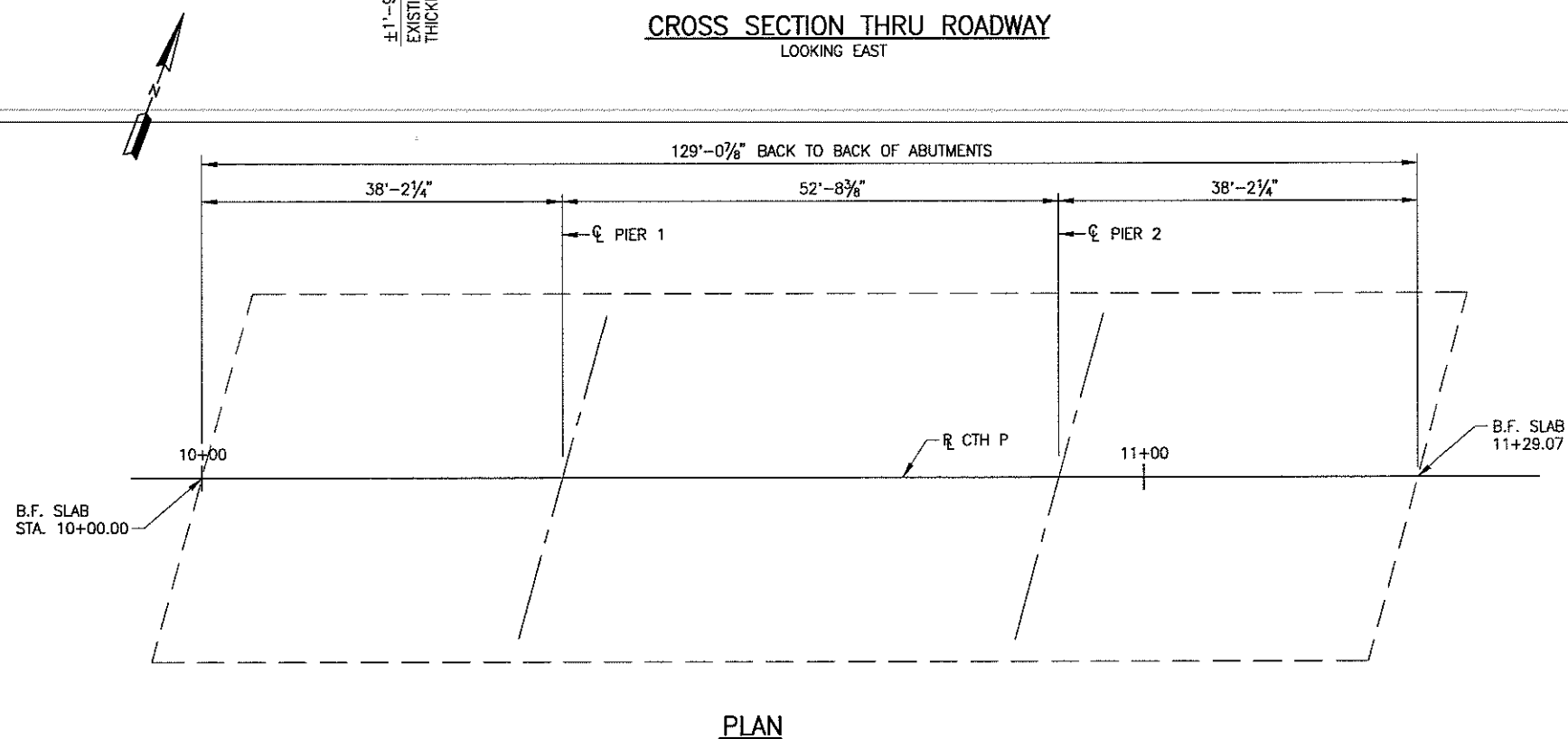
THE CONCRETE OVERLAY THICKNESS SHALL BE 1 1/2" MINIMUM AND 3 1/2" MAXIMUM. ADJUST 1% CROSS SLOPE TO MAINTAIN THIS RANGE OF DEPTH IF NECESSARY.

ALL CONCRETE REMOVAL NOT COVERED BY CONCRETE OVERLAY SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT.

DESIGN DATA

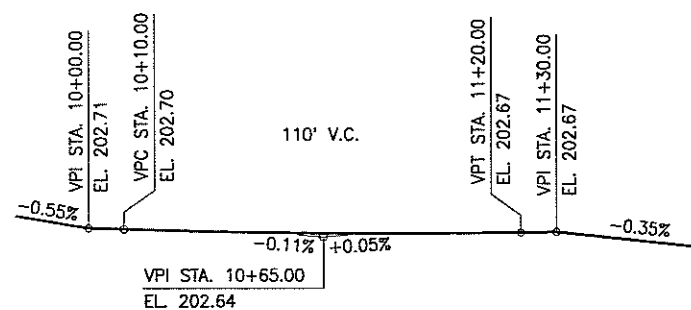
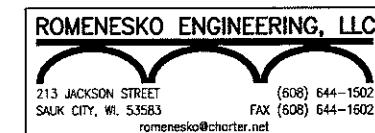
ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SUPERSTRUCTURE $f'_c = 4,000$ P.S.I.



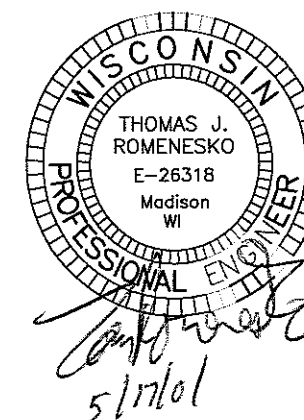
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	TOTAL
CONCRETE MASONRY, OVERLAY, DECKS	C.Y.	32
CLEANING, DECKS	S.Y.	560
PREPARATION, DECKS, TYPE 1	S.Y.	125
PREPARATION, DECKS, TYPE 2	S.Y.	42
PROTECTIVE SURFACE TREATMENT	S.Y.	560
CONCRETE SURFACE REPAIR	S.F.	500
PAINTING, EPOXY SYSTEM, STRUCTURE P-44-927	L.S.	1

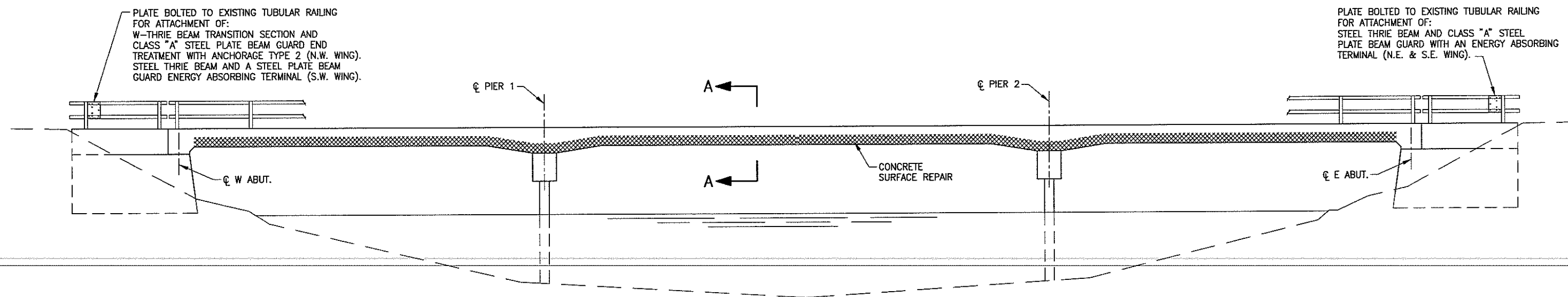


BENCH MARKS

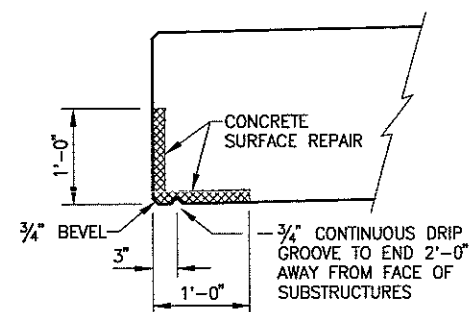
NO	STA	DESCRIPTION	ELEV
1	8+82	RR SPIKE IN 18" TREE 54' RT.	200.00
2	9+85	CHISELED "T" TOP OF CURB @ NW WINGWALL	202.37
3	13+38	RR SPIKE IN ROADWAY 10' RT.	202.26



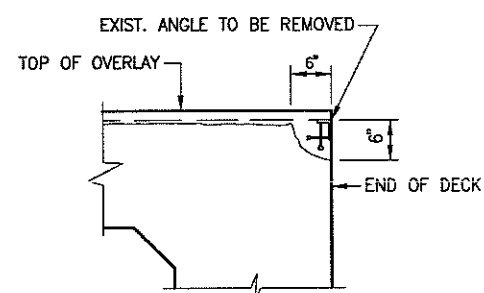
No.	Date.	Revision	By
Designed By	TR	Design Ck'd. VR	Drawn By TL
Plans Checked	TR		
GENERAL PLAN			
SHEET 1 OF 2			



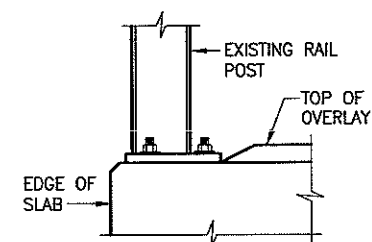
ELEVATION



PARTIAL VIEW A-A
(TYPICAL EACH SIDE OF DECK)



SECTION AT END OF SLAB
CONCRETE OVERLAY



SECTION THROUGH RAILING

No.	Date.	Revision		B
Designed By	TR	Design Ck'd.	VR	Drawn By
				TL
Plans Checked				TL
DETAILS				SHEET 2 OF 2