
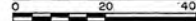





ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
576	26B	MENARD	12	1

FED. ROAD DIST. NO. 7 ILLINOIS PROJECT RSG-576 (102)

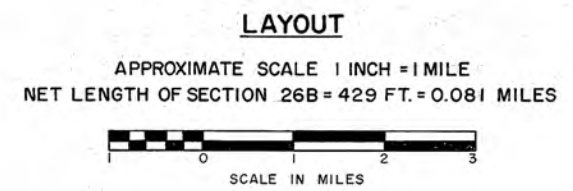
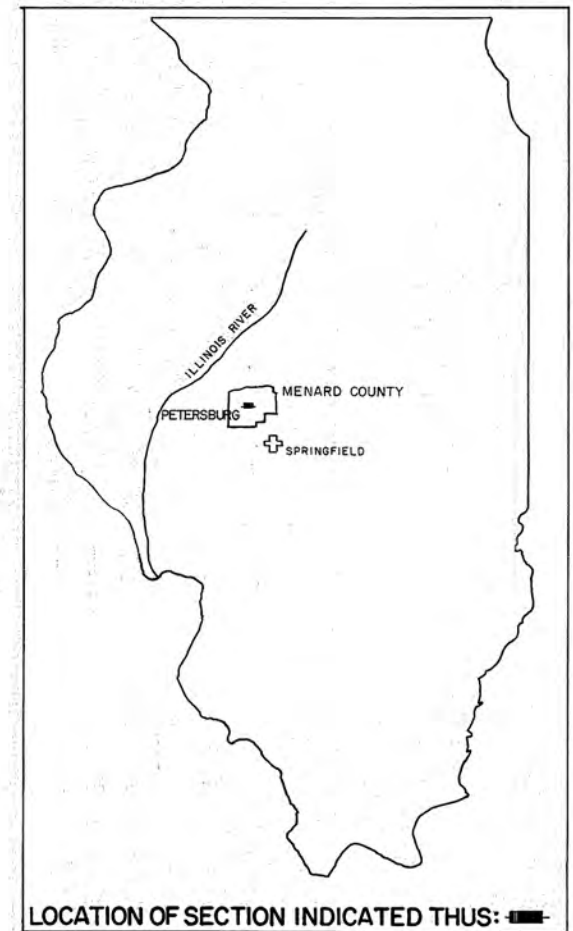
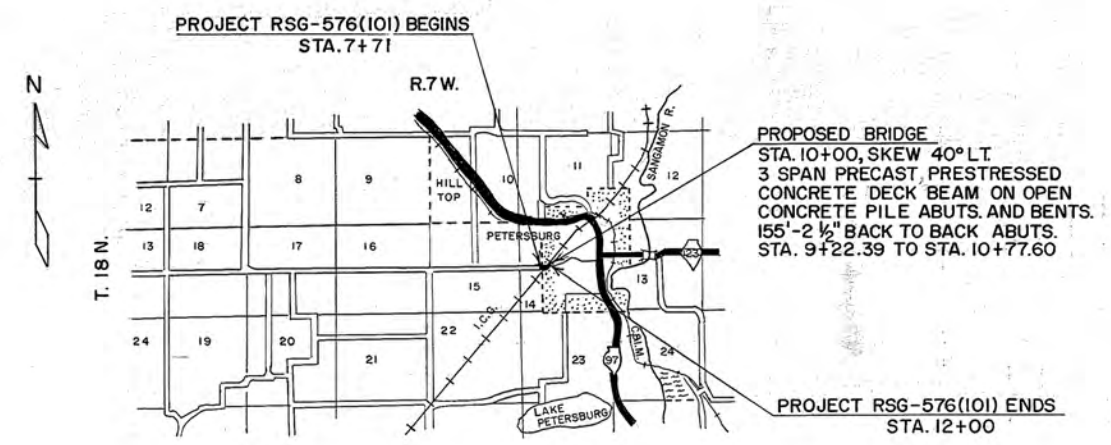
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
FEDERAL-AID SECONDARY PROJECT**

SCALES	PLAN	1 INCH = 20 FEET	
	PROFILE (HOR.)	1 INCH = 20 FEET	
	PROFILE (VERT.)	1 INCH = 10 FEET	
	X-SEC. (HOR.)	1 INCH = 5 FEET	
	X-SEC. (VERT.)	1 INCH = 2 FEET	

F.A.S. ROUTE 576      SECTION 26B      MENARD COUNTY  
PROJECT RSG-576 (102)  
JOB NO. C-96-060-75

**INDEX OF SHEETS**

SHEET NO.	TITLE
1	COVER SHEET
2	DETAIL SHEET
3	ROADWAY PLAN AND PROFILE
4,5	ROADWAY CROSS SECTIONS
6	BRIDGE GENERAL PLAN & ELEV.
7,8	RAILING
9	BEAM DETAILS
10	ABUTMENT DETAILS
11	PIER DETAILS
12	PILE DETAILS
STANDARDS: 2113-1	
2130-4	
2230-9	
2298-4	
2299-6	
2300-1	
BLR-19	



CONTRACT NO. 27821    REVIEWED BY: *GEN'L RFS 9-8-75*  
*DETAIL GS 9-4-1975*

PLANS SUBMITTED BY: *John W. Smith*

MENARD COUNTY SUPT. OF HIGHWAYS



*S. J. Trapani*  
TRAPANI ENGINEERING CO.  
CONSULTING ENGINEERS  
1410 S. MACARTHUR BLVD.  
SPRINGFIELD, ILLINOIS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *Aug. 26, 75*  
*W. C. Burns* DISTRICT ENGINEER

PASSED *Sept. 9, 1975*  
*Ernest B. Hansen* ENGINEER OF LOCAL ROADS AND STREETS

APPROVED *Sept. 9, 1975*  
*W. C. Burns* DIRECTOR OF HIGHWAYS

**GENERAL NOTES**

WHERE SECTION OR SUBSECTION STONES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH STONES ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR REFERENCED THEIR LOCATION.

THE CONTRACTOR SHALL EXCAVATE A DITCH AT THE TOE OF SLOPE OF FILLS AND AT THE TOP OF SLOPE OF CUTS AT SUCH LOCATIONS AS THE ENGINEER MAY DESIGNATE DURING TIME OF CONSTRUCTION. EXCAVATION WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CU.YD. FOR EARTH EXCAVATION.

CONSTRUCT APPROACH GRADES AS SHOWN ON THE CROSS SECTIONS. EXCAVATION IS INCLUDED IN THE QUANTITIES SHOWN.

ALL SALVABLE MATERIAL IS TO BE STORED INSIDE THE R.O.W. FOR LATER REMOVAL BY COUNTY FORCES.

THE FOLLOWING TERMINATION DATES SHALL APPLY TO CLASS I SEEDING:  
 SPRING SEEDING - JANUARY 1 - JUNE 30  
 FALL SEEDING - JULY 1 - DECEMBER 31

MULCH, METHOD I, SHALL BE AT THE RATE OF 2 TONS PER ACRE

FERTILIZER RATIO 2:1:1 SHALL BE AT THE FOLLOWING RATES:  
 NITROGEN 100 LBS/ACRE  
 PHOSPHORUS 50 LBS/ACRE  
 POTASSIUM 50 LBS/ACRE

AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE OF 2 TONS/ACRE

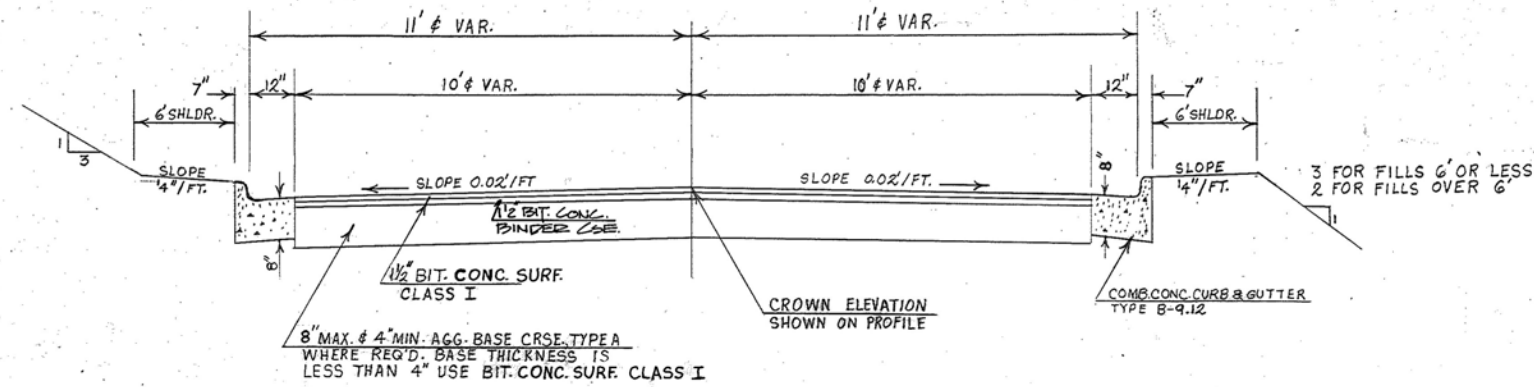
NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN, EXCESSIVELY WET OR MUDDY. THE CONDITION OF THE GROUND AT THE TIME OF SEEDING SHALL MEET THE APPROVAL OF THE ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

AT THE EAST END OF SECTION, STA. 12+00, THE CONTRACTOR IS REQUIRED TO CUT A SAWED JOINT 2" DEEP INTO THE EXIST. SURFACE AND REMOVE A WEDGE SHAPED AREA 4 FEET WIDE TO PERMIT A SMOOTH TRANSITION BETWEEN PROP. AND EXIST. SURFACES.

**SUMMARY OF QUANTITIES**

QUANTITY	UNIT	ITEM	CODE NO.
17	IN. DIA.	TREE REMOVAL (OVER 15 INCH DIAMETER)	201002
2,669	CU.YD.	EARTH EXCAVATION	202001
290.7	TON	AGGREGATE BASE COURSE, TYPE A	301001
342.0	GALLON	BITUMINOUS MATERIALS (PRIME COAT)	406001
204.2	TON	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I	X40615
1	EACH	REMOVAL OF EXISTING STRUCTURES	501001
95	SQ.YD.	PROTECTIVE COAT	503004
229.3	CU.YD.	CLASS X CONCRETE	504003
6436	SQ.FT.	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	505005
163.4	TON	BITUMINOUS CONCRETE BINDER COURSE	A06007
8	LIN.FT.	PIPE CULVERTS, TYPE 1, 18"	511026
23,841	POUND	REINFORCEMENT BARS	512001
1,235	LIN.FT.	FURNISHING CONCRETE PILES	513021
1,235	LIN.FT.	DRIVING CONCRETE PILES	513027
2	EACH	TEST PILES CONCRETE	513041
1	EACH	NAME PLATES	514001
551	LIN.FT.	COMBINATION CONCRETE CURB AND GUTTER TYPE B-9.12	616047
420.5	SQ.YD.	SLOPE WALL 4 INCH	618001
275	LIN.FT.	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	628001
0.4	ACRE	SEEDING, CLASS I	642001
40	POUND	NITROGEN FERTILIZER NUTRIENT	642004
20	POUND	PHOSPHOROUS FERTILIZER NUTRIENT	642005
20	POUND	POTASSIUM FERTILIZER NUTRIENT	642006
0.8	TON	AGRICULTURAL GROUND LIMESTONE	642007
0.8	TON	MULCH	643001
1	EACH	ENGINEER'S FIELD OFFICE, TYPE B	646002
512	SQ.YD.	WATER PROOFING MEMBRANE SYSTEM	X04941
500	LIN.FT.	PORTLAND CEMENT MORTAR FAIRING COURSE	X05194
		ALTERNATE A	
302	LIN.FT.	ALUMINUM BAILING, TYPE L	508006
		ALTERNATE B	
302	LIN.FT.	STEEL BAILING, TYPE M	508007



TYPICAL SECTION  
 STATION 7+71 TO STATION 9+05.64  
 STATION 10+94.35 TO STATION 12+00

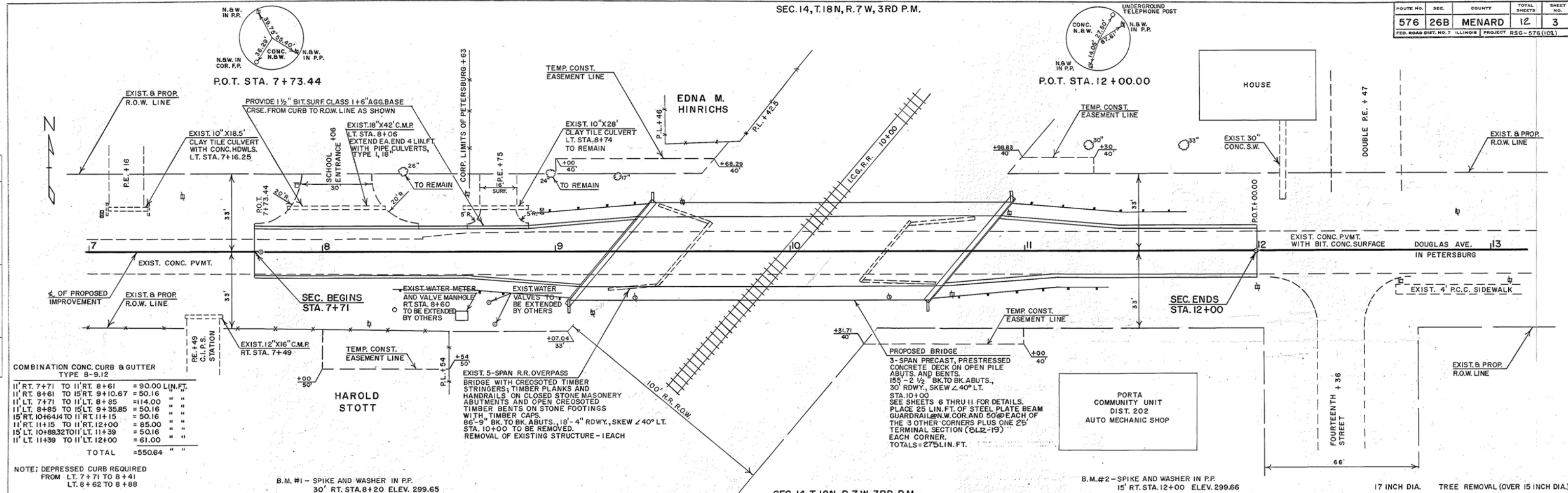
**LEGEND**

⊕	EXIST. POWER POLE
⊕	EXIST. TRAFFIC SIGN
⊕	EXIST. MAIL BOX
○	EXIST. TREE
○	EXIST. UNDERGROUND TELEPHONE SPLICE CASE
○	EXIST. WATER VALVE
⊕	EXIST. TELEPHONE POLE
↔	SUMMIT
→	FLOW ARROW
—x—x—	FENCED PROPERTY LINE
—x—x—	FENCE LINE
— — —	EXIST. CULVERT

**QUANTITIES NOT SHOWN ELSEWHERE**

	BASE THICKNESS	AGGREGATE BASE COURSE, TYPE A (TONS)	BITUMINOUS MATERIALS (PRIME COAT) (GALS.)	BIT. CONC. SURF. COURSE, CLASS I (TONS)
7+71.00 TO 8+60.67	4" TO 8"	31.5	59.2	85.3
8+60.67 TO 9+35.85	8"	116.1	65.2	17.6
9+35.85 TO 10+64.14	0"	0.0	64.2	17.3
10+64.14 TO 11+39.32	8"	116.1	65.2	17.6
11+39.32 TO 12+00	8" TO 4"	31.5	44.5	31.8
P.E. LT. 8+06	6"	35.5	30.5	24.7
P.E. LT. 8+75	6"	15.4	13.2	10.7
TOTAL PAY QUANTITY		346.1	342.0	204.8

DATE  
BY  
SURVEYED  
PLOTTED  
CHECKED  
NOTE BOOK  
NO.



DATE  
BY  
SURVEYED  
PLOTTED  
CHECKED  
NOTE BOOK  
NO.

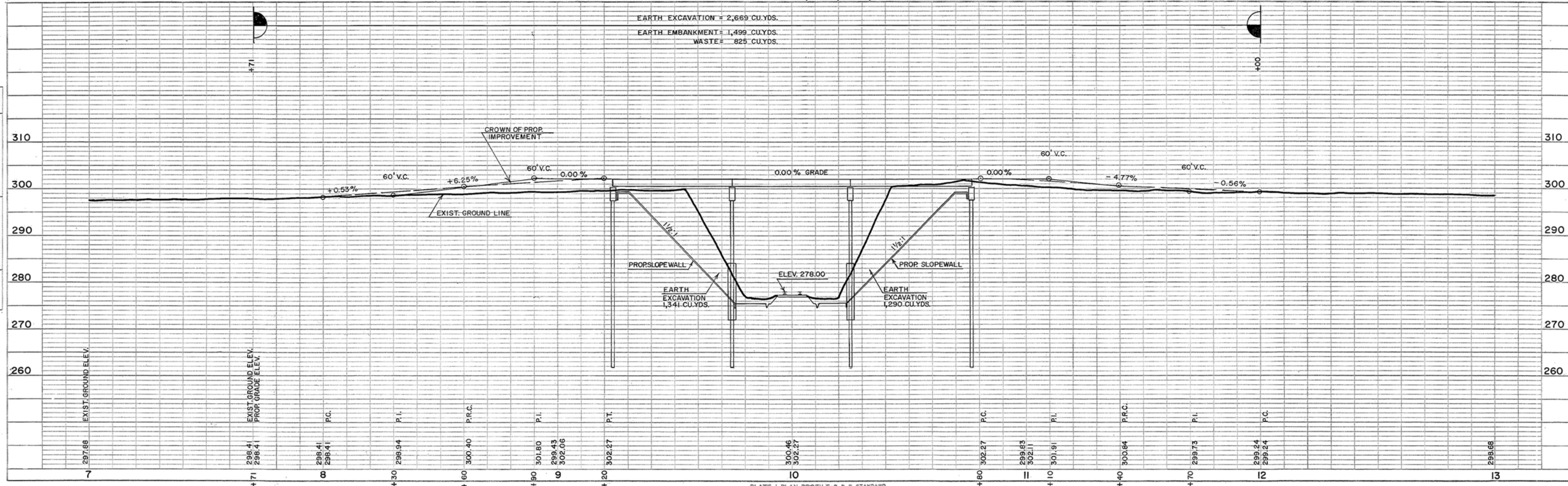
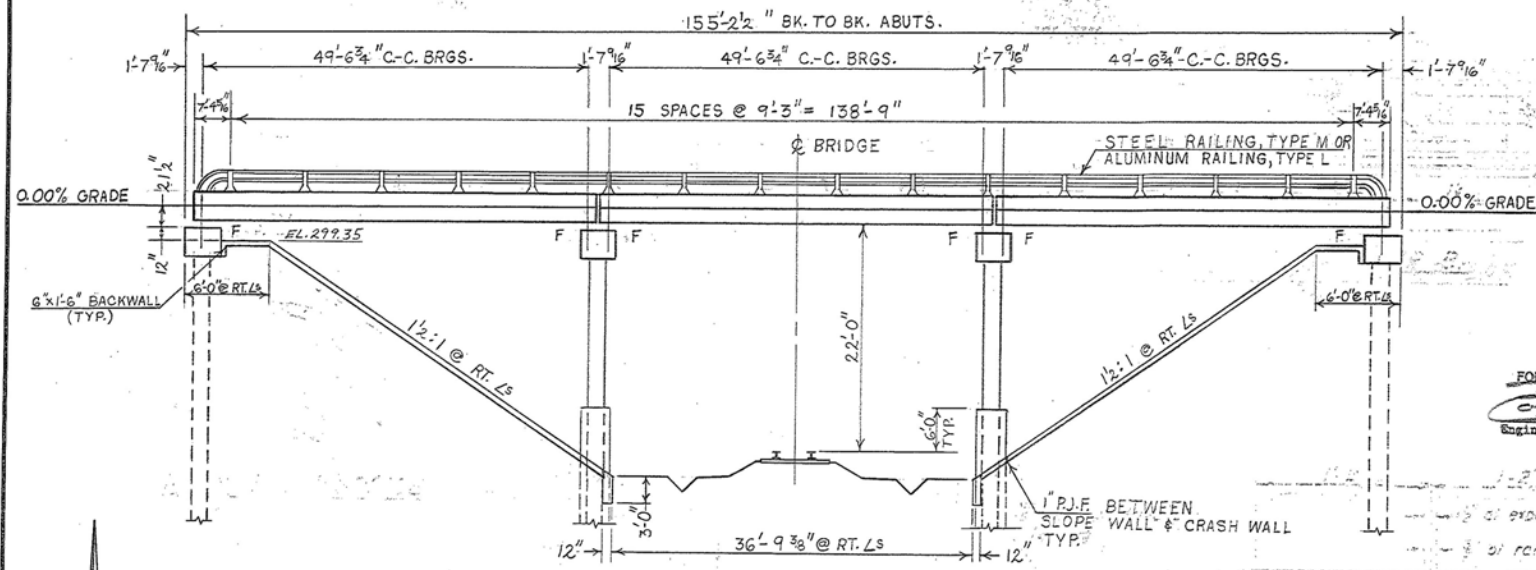


PLATE 1-PLAN-PROFILE, R. P. R. STANDARD  
EUGENE DITZGEN CO., Chicago-New York

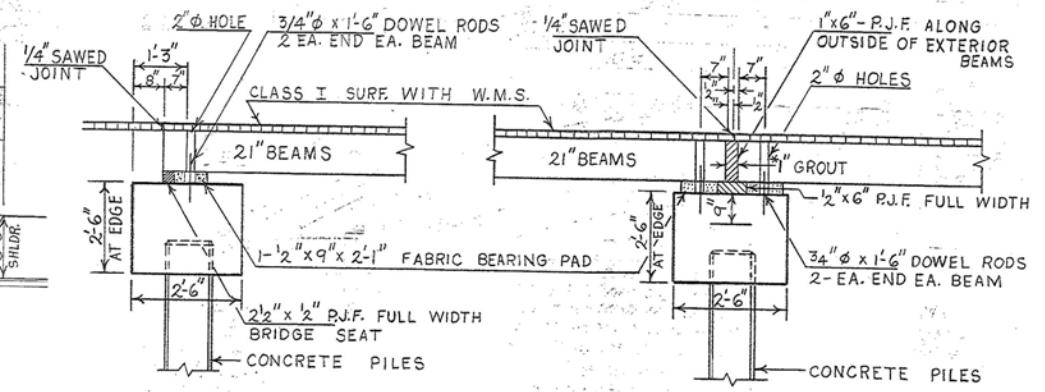
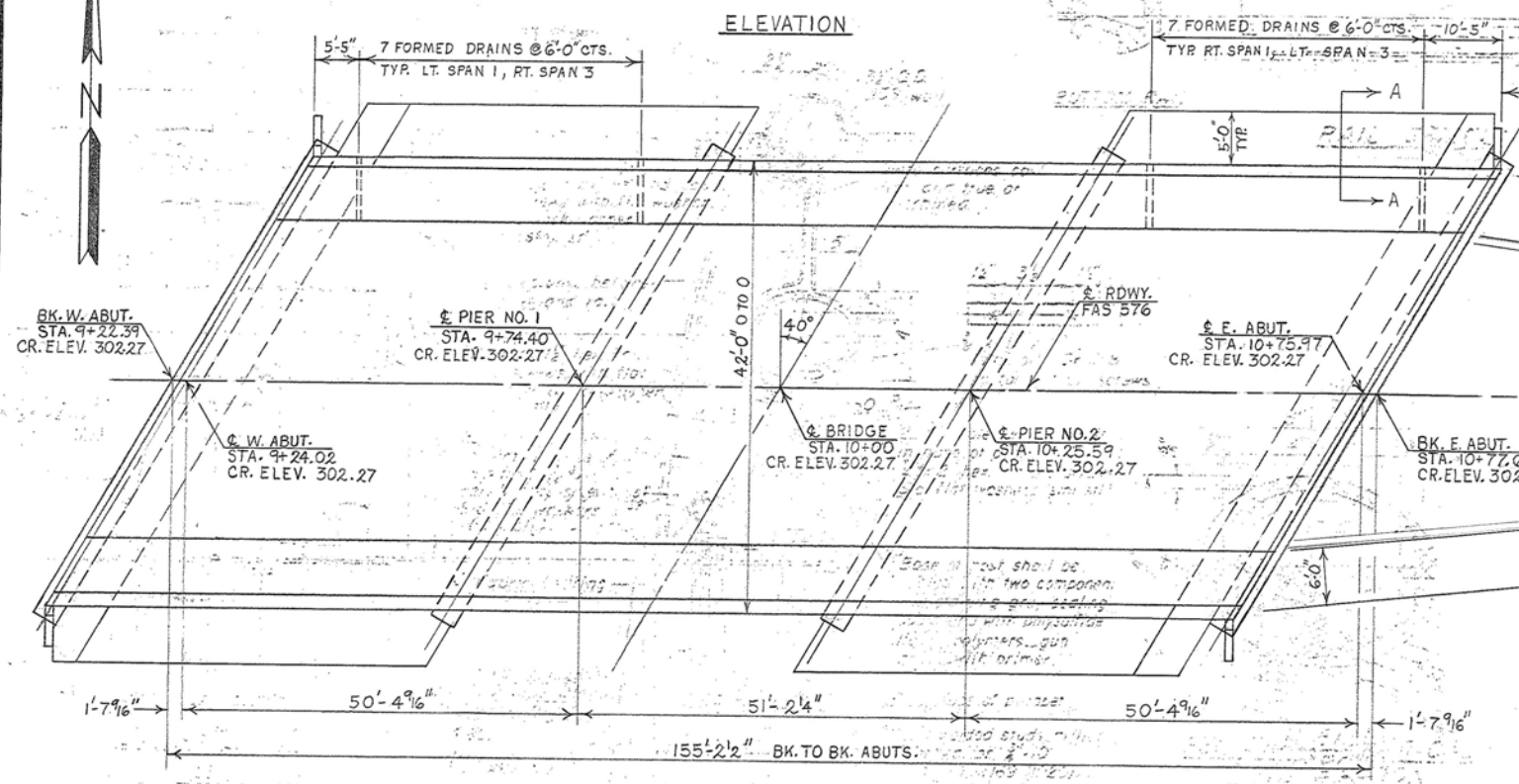
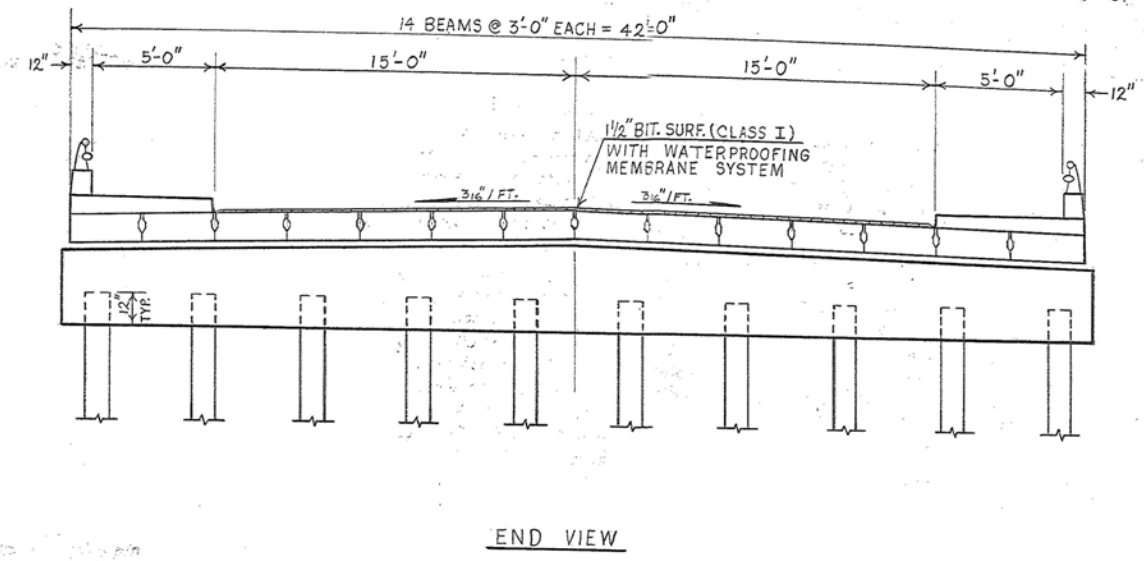
B.M. #1- SPIKE & WASHER IN PP  
30' RT. STA. 8+20 ELEV. 299.65

B.M. #2- SPIKE & WASHER IN PP  
15' RT. STA. 12+00 ELEV. 299.66

EXIST. STRUCTURE - STA. 10+00



**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
Engineer of Bridge & Traffic Structures



\* 1" JOINT SHALL BE PACKED WITH A VERY DRY MIX OF 2:1 SAND AND P.C. MORTAR. 1" DIMENSION MAY VARY PLUS OR MINUS TO ACCOMMODATE TOLERANCE - IN BEAM LENGTHS.

TOTAL BILL OF MATERIALS

ITEMS	UNITS	SUPER	SUB	TOTAL
REMOVAL OF EXISTING STRUCTURE	EACH	-	-	1
PROTECTIVE COAT	SQ. YD.	95	-	95
CLASS X CONCRETE	CU. YD.	73.0	156.3	229.3
PRECAST PRESTRESSED CONCRETE				
DECK BEAMS (21" DEPTH)	SQ. FT.	6,436	-	6,436
RAILING	LIN. FT.	302	-	302
REINFORCEMENT BARS	POUND	9,041	14,800	23,841
FURNISHING CONCRETE PILES	LIN. FT.	-	1,235	1,235
DRIVING CONCRETE PILES	LIN. FT.	-	1,235	1,235
TEST PILES (CONCRETE)	EACH	-	2	2
NAME PLATES	EACH	1	-	1
SLOPE WALL 4 INCH	SQ. YD.	-	835.3	835.3
WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	512	-	512
PORTLAND CEMENT MORTAR FAIRING COURSE	LIN. FT.	500	-	500
BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I	TON.	41.4	-	41.4

GENERAL NOTES

CLASS X CONCRETE SHALL BE USED THROUGHOUT.  
ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE NOTED.  
EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.  
CROWN ELEVATIONS SHOWN ARE TO TOP OF WEARING SURFACE. SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" x 6" MESH, WEIGHING 58# PER 100 SQ. FT.  
THE CONTRACTOR SHALL DRIVE 1 CONCRETE TEST PILE IN A PERMANENT LOCATION AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.  
THE TOP SURFACE OF THE BEAMS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 505.06 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE SURFACE SHALL NOT BE ROUGHENED BY BROOMING. THE FINISHED SURFACE SHALL BE FREE OF DEPRESSIONS OR HIGH SPOTS WITH SHARP CORNERS.  
THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.

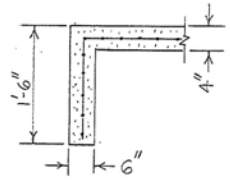
DESIGN STRESSES

PRESTRESSED UNITS  
f<sub>c</sub> = 5,000 PSI.  
f<sub>t</sub> = 4,000 PSI.  
f<sub>si</sub> = 270,000 PSI. (7/16" φ STRANDS)  
f<sub>si</sub> = 189,000 PSI. (7/16" φ STRANDS)  
f<sub>s</sub> = 20,000 PSI. (REINF.)

FIELD UNITS  
f<sub>c</sub> = 3,500 PSI.  
f<sub>t</sub> = 1,400 PSI.  
f<sub>s</sub> = 20,000 PSI. (REINF.)  
n = 10

STATION 10+00  
BUILT 197  
F.A.S. RT. 576 SEC. 26B  
F.A. PROJ. RSG-576(102)  
LOADING HS20 BR. NO. 065-6000

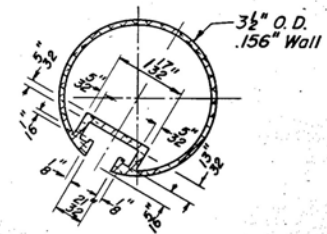
PLAN



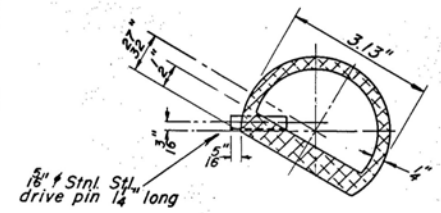
LETTERING FOR NAME PLATE  
(STD. 2113)

LOADING HS20-44

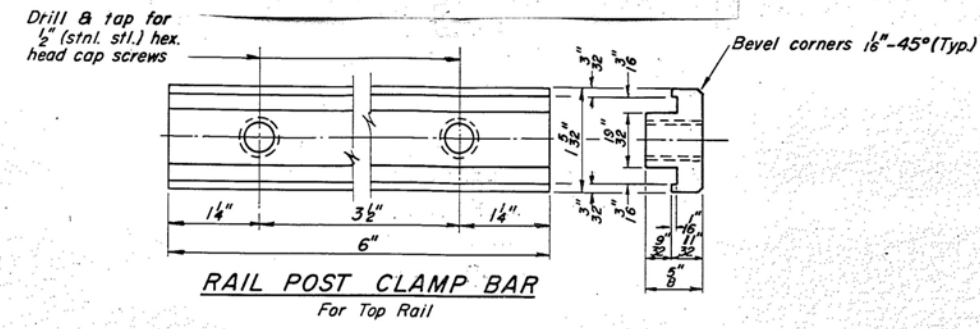
GENERAL PLAN & ELEVATION  
F.A.S. RT. 576~SEC. 26B  
MENARD COUNTY  
STA. 10+00



SECTION THRU TOP RAIL



SECTION THRU SPLICE  
TOP RAIL



RAIL POST CLAMP BAR  
For Top Rail

**NOTES:**

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

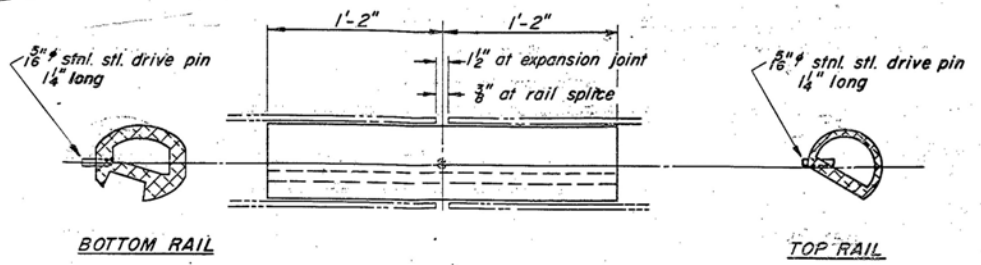
All joints in rail shall be spliced per detail.

Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade - high spots shall be ground and low spots shimmed.

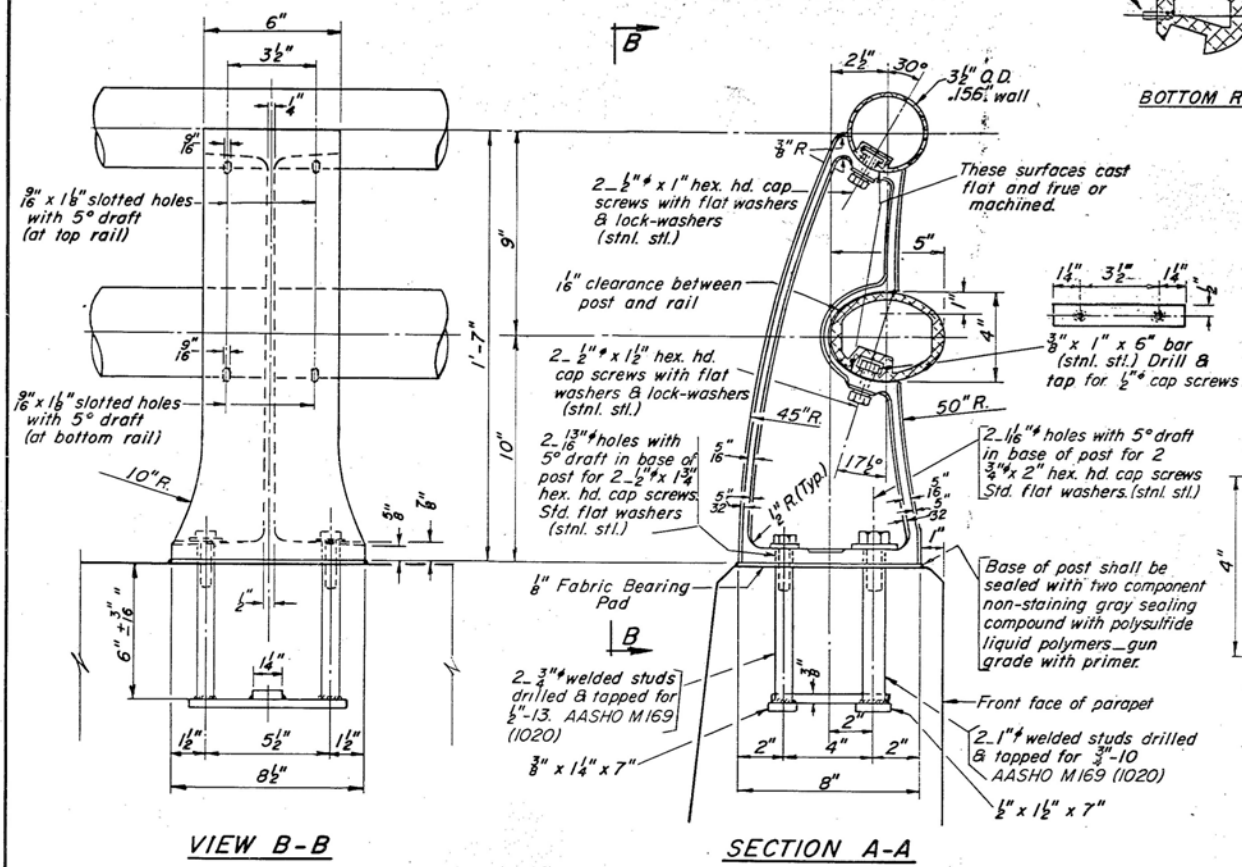
Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for ALUMINUM RAILING, TYPE L.

Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

Stainless steel machine bolts or cap screws shall be in accordance with Art. 710.37(a) of the Standard Specifications except Grade B8 or B8M may be furnished.



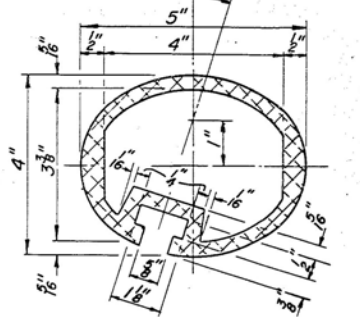
RAIL SPLICE



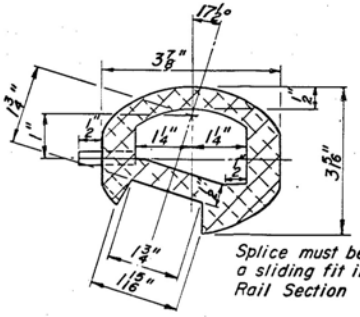
VIEW B-B

RAIL POST DETAILS

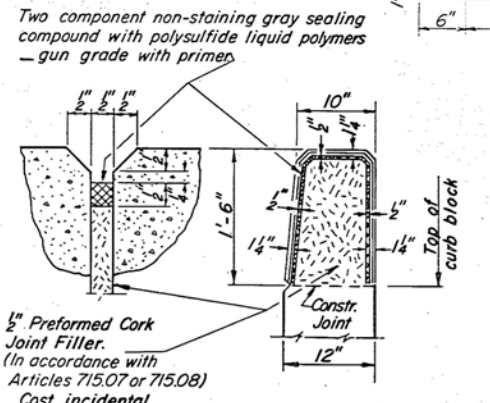
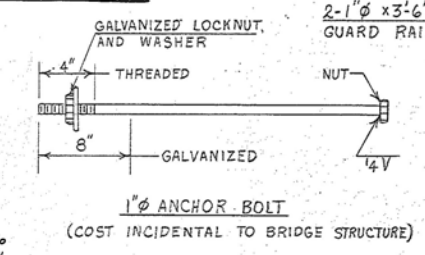
SECTION A-A



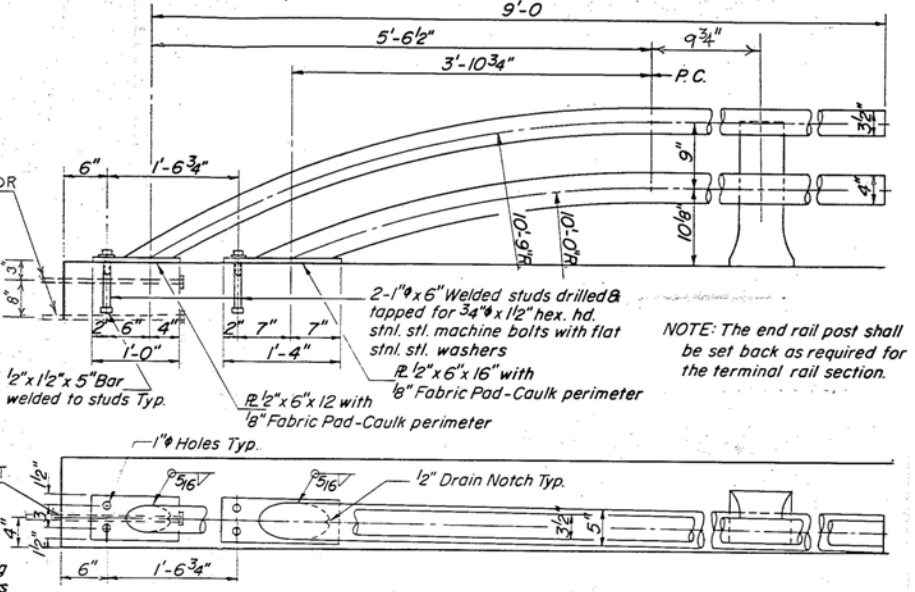
SEC THRU ELLIPTICAL RAIL SECTION



SEC THRU SPLICE



PARAPET JOINT DETAIL



RAIL TERMINAL SECTION

**BILL of MATERIALS**

Item	Unit	Quantity
ALUMINUM RAILING, TYPE L	Lin. Ft.	302

NOTE: PARAPET QUANTITIES INCLUDED ON SHEET NO. 9

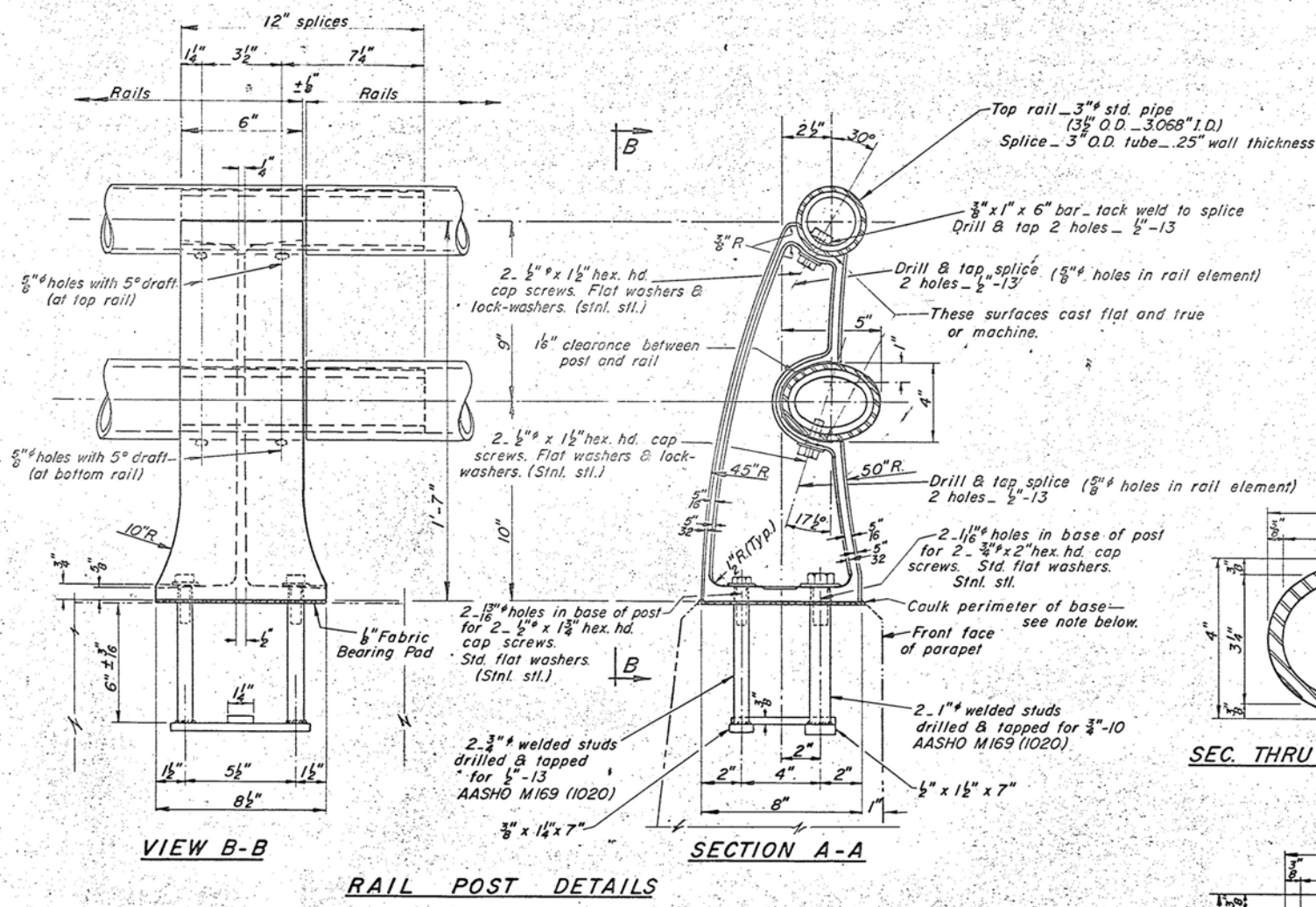
**ALTERNATE A  
TYPE L  
ALUMINUM RAILING**

F.A.S. RT. 576~SEC. 26B  
MENARD COUNTY  
STA. 10+00

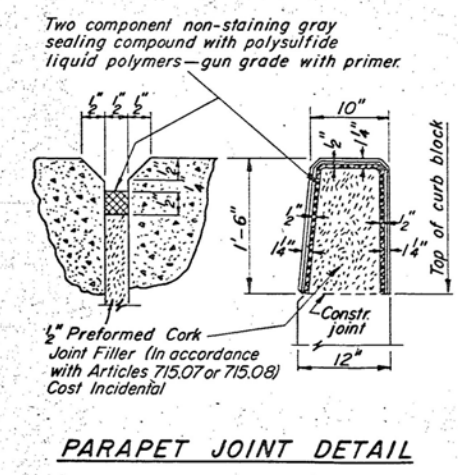
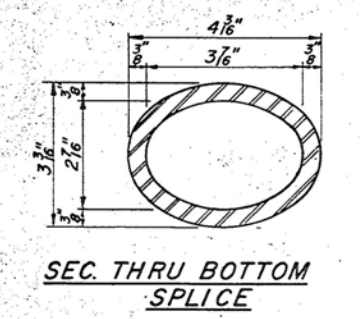
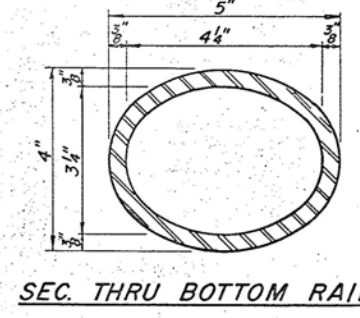
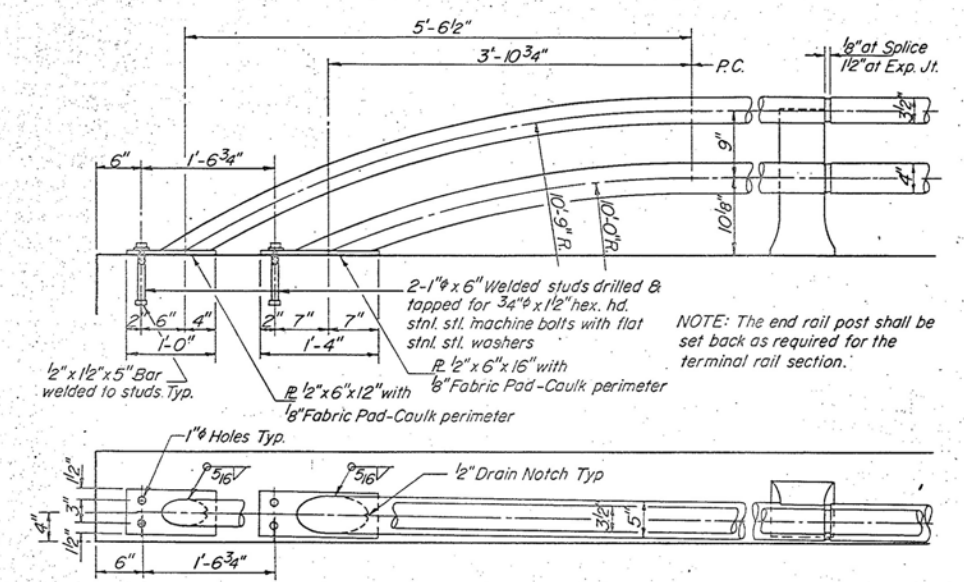
**NOTES:**

All Posts shall be normal to parapet.  
 All Posts shall be malleable cast iron conforming to Article 710.19 of the Standard Specifications, galvanized to AASHO M 232.  
 All Rail Tubing shall conform to applicable requirements of ASTM A-53, Grade B, (pipe or tube) galvanized to ASTM A-120.

Provide 1- $\frac{1}{8}$ " and 2- $\frac{1}{8}$ " galvanized sheet steel shims for 25% of the Posts. Rail element shall be parallel to Grade—high spots shall be ground and low spots shimmed.  
 If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type 1, air-dry cure.  
 Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE M.  
 Stainless steel machine bolts or cap screws shall be in accordance with Art. 710.37(a) of the Standard Specifications except Grade B or B & M may be furnished.



~ NOTE ~  
 SEE SHEET 7 FOR GUARD RAIL ANCHOR BOLT DETAILS. TWO REQUIRED AT EACH CORNER.



**BILL of MATERIAL**

Item	Unit	Quantity
ALT. STEEL RAILING, TYPE M	Lin. Ft.	302

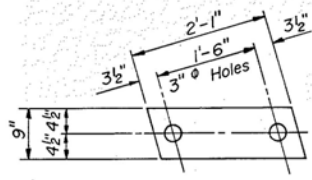
NOTE: PARAPET QUANTITIES INCLUDED ON SHEET NO. 9

ALTERNATE B  
 TYPE M  
 STEEL RAILING

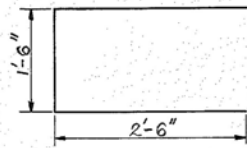
F.A.S. RT. 576~SEC. 26B  
 MENARD COUNTY  
 STA. 10+00

Note! Seal base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers—gun grade with primer.

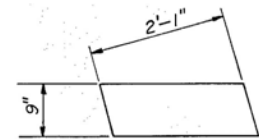
Note! Splice must be sliding fit in Rail Section.



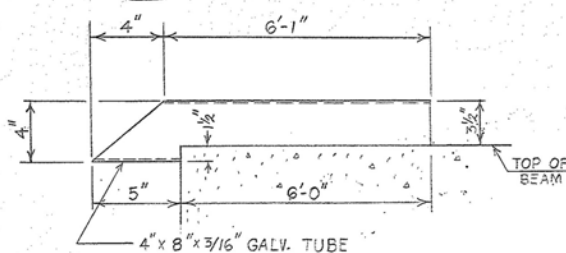
FABRIC BEARING PAD



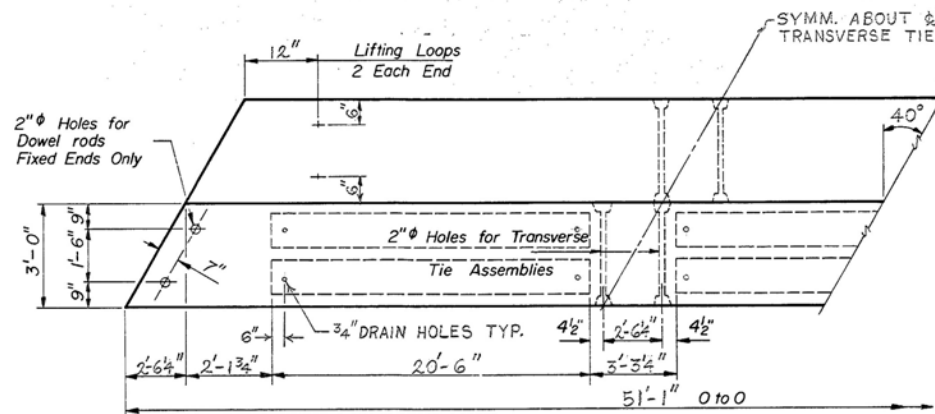
U<sub>1</sub> BAR



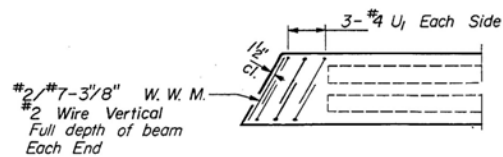
GRAPHITED ASBESTOS BEARING PAD



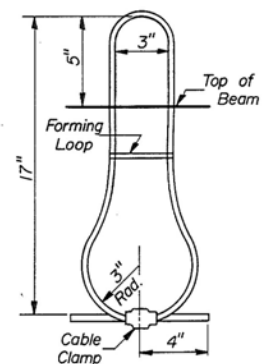
DRAIN DETAIL



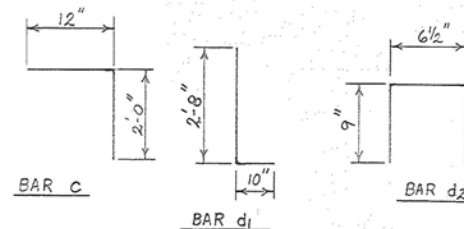
PLAN



END PLAN



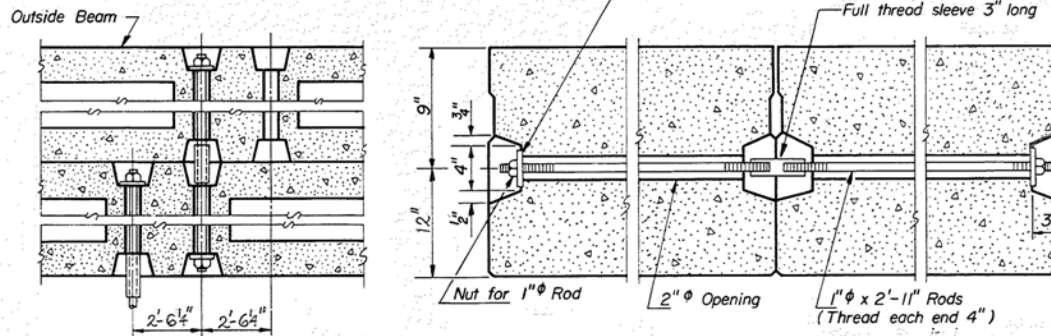
LIFTING LOOP DETAIL



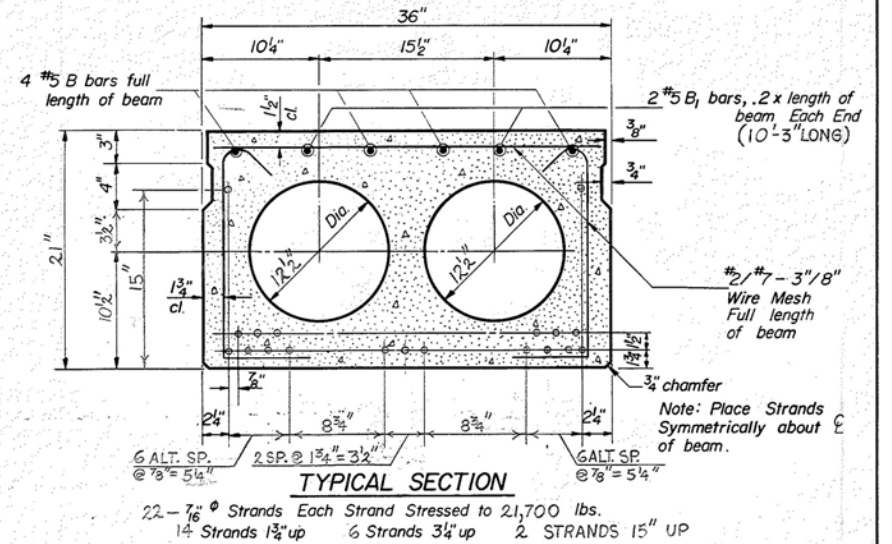
BAR C

BAR d<sub>1</sub>

BAR d<sub>2</sub>

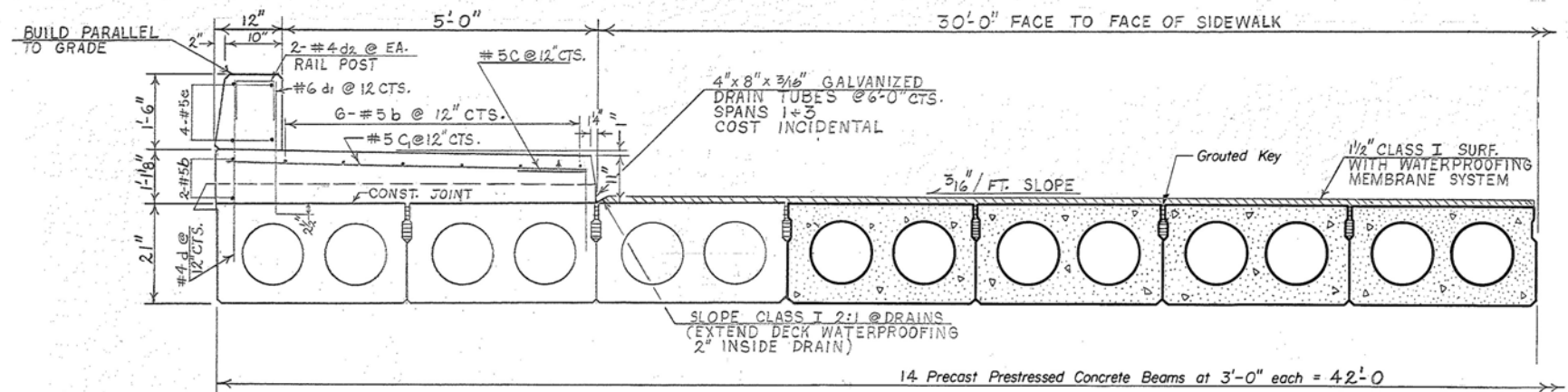


TYPICAL TRANSVERSE TIE ASSEMBLY



TYPICAL SECTION

22-7/16" Strands Each Strand Stressed to 21,700 lbs.  
14 Strands 1 3/4" up 6 Strands 3/4" up 2 STRANDS 15" UP



PARAPET JOINT SPACING

HALF CROSS SECTION

~ NOTE ~  
SEE SHEET 7 FOR PARAPET JOINT DETAILS AND GUARD RAIL ANCHOR BOLT DETAILS.

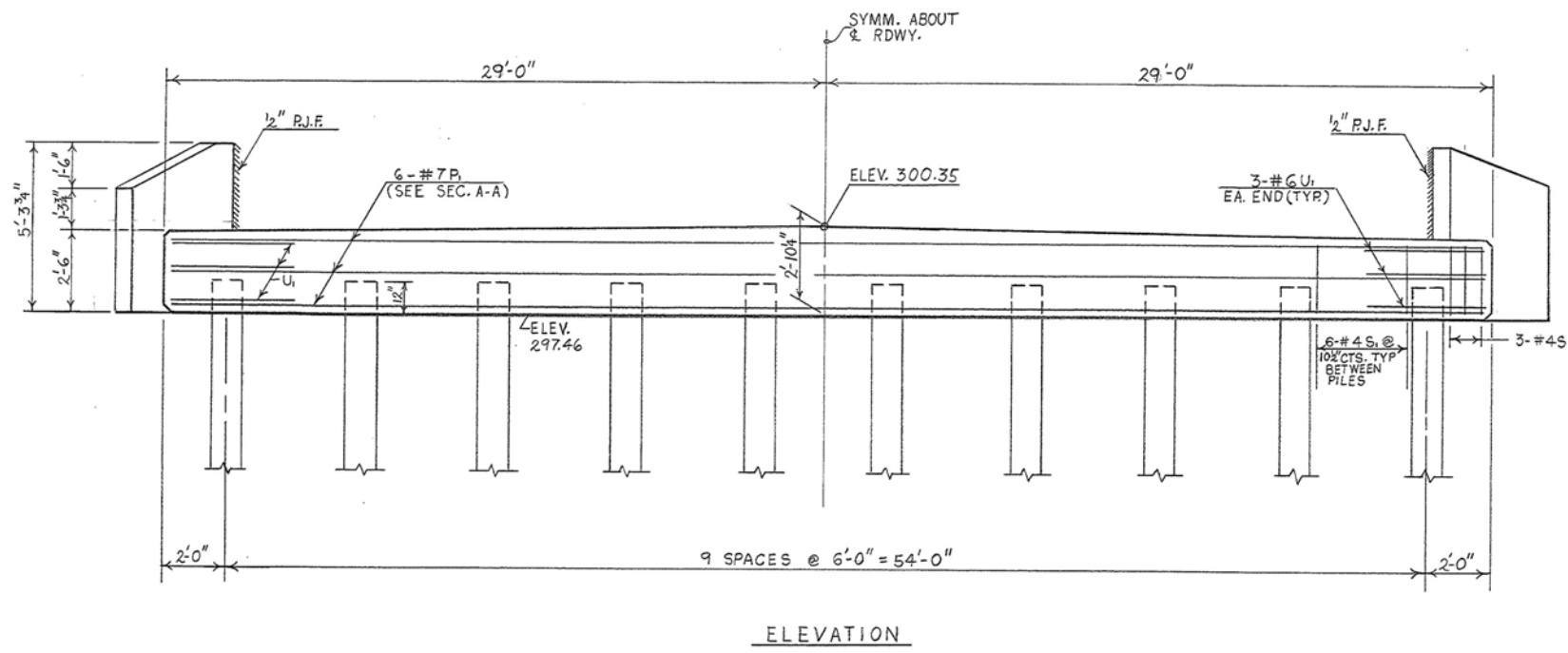
GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, GRADE 270. The nominal diameter shall be 7/16" and the nominal cross-sectional area shall be 0.115 sq. in. Lifting loops shall be 3/8" diameter, 6x25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 33,000 lbs. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and P.C. mortar. After beams have been erected, holes for the dowel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place. DOWEL RODS SHALL BE A.A.S.H.O. M227 OR M31. TRANSVERSE TIE RODS SHALL BE A.A.S.H.O. M227 GRADE 70-80. After fabrication the transverse tie assemblies (tie rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation: A153. Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams." EACH BEAM SHALL HAVE FOUR LIFTING LOOPS, TWO CAST IN EACH END AS SHOWN IN PLAN VIEW. LOOPS SHALL BE BURNED OFF AFTER BEAMS HAVE BEEN ERRECTED.

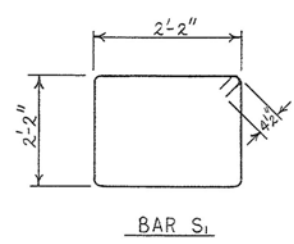
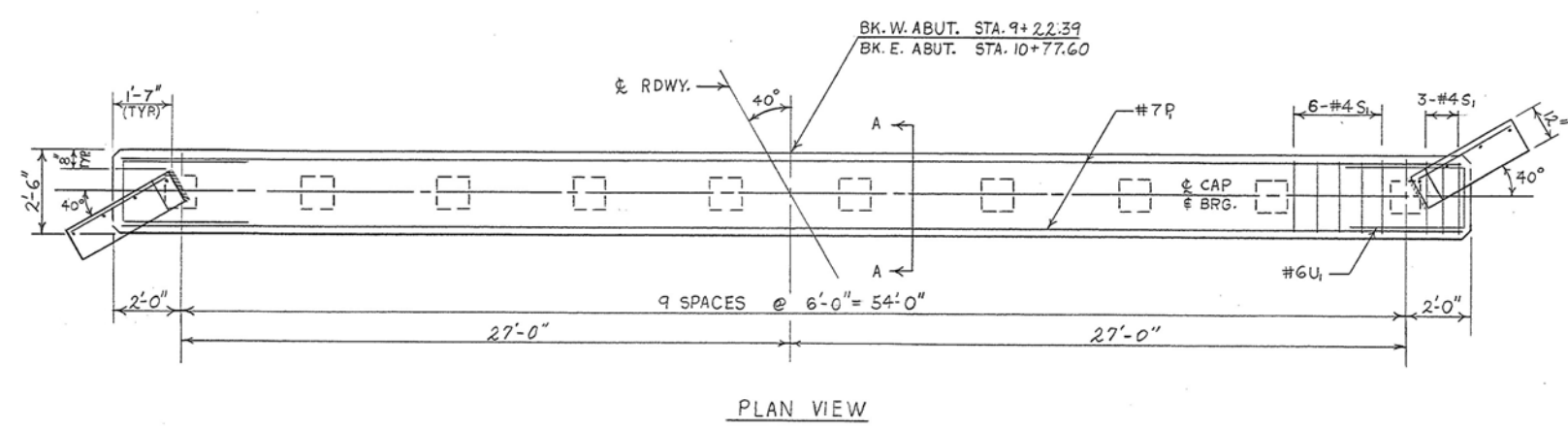
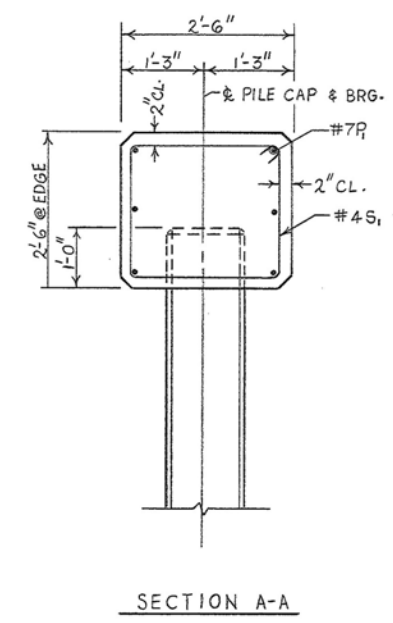
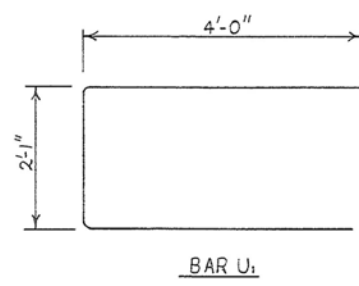
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
b	96	#5	26'-9"	—	
c	300	#5	3'-0"	—	
c <sub>1</sub>	300	#5	5'-8"	—	
d	300	#4	3'-9"	—	
d <sub>1</sub>	300	#6	3'-6"	L	
d <sub>2</sub>	52	#4	1'-10"	□	
e	72	#5	16'-9"	—	
Precast Prestressed Concrete DECK BEAMS (21" x 36")				Sq. Ft.	6,436
CLASS X CONCRETE				CU. YD.	72.9
REINFORCEMENT BARS				POUND	9,041

SIDEWALK, PARAPET & BEAM DETAILS  
F.A.S. RT. 576-SEC. 268  
MENARD COUNTY  
STA. 10+00



NOTE: WINGWALLS TO BE POURED AFTER BEAMS ARE SET IN PLACE.

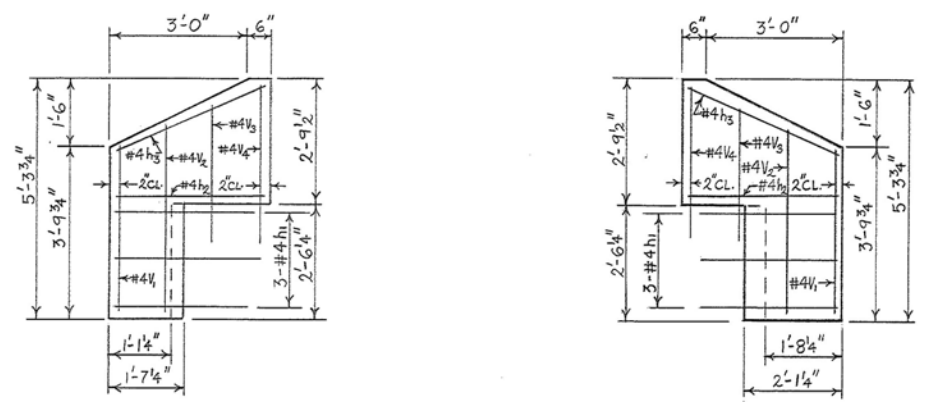


**PILE DATA**

TYPE	CONCRETE
CAPACITY	22 TONS
EST. LENGTH	25 FT.
NO. REQUIRED	20

**BILL OF MATERIALS - 2 ABUTS.**

BARS	NO.	SIZE	LENGTH	SHAPE
P	24	#7	29'-9"	—
S1	120	#4	9'-5"	□
U	12	#6	10'-1"	U
V1	4	#4	3'-7"	—
V2	4	#4	4'-1"	—
V3	4	#4	3'-8"	—
V4	4	#4	4'-0"	—
h1	12	#4	2'-9"	—
h2	4	#4	3'-3"	—
h3	4	#4	3'-6"	—
ITEM		UNIT	QUANTITY	
CLASS X CONCRETE		CU. YD.	29.6	
REINFORCEMENT BARS		POUND	2477	
CONCRETE PILES		LIN. FT.	475	
TEST PILE CONCRETE		EA.	1	

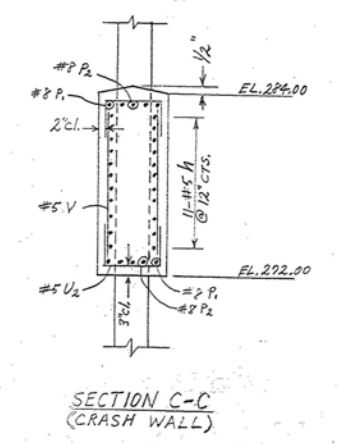
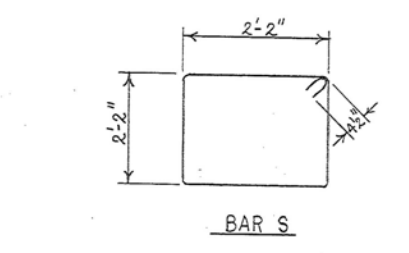
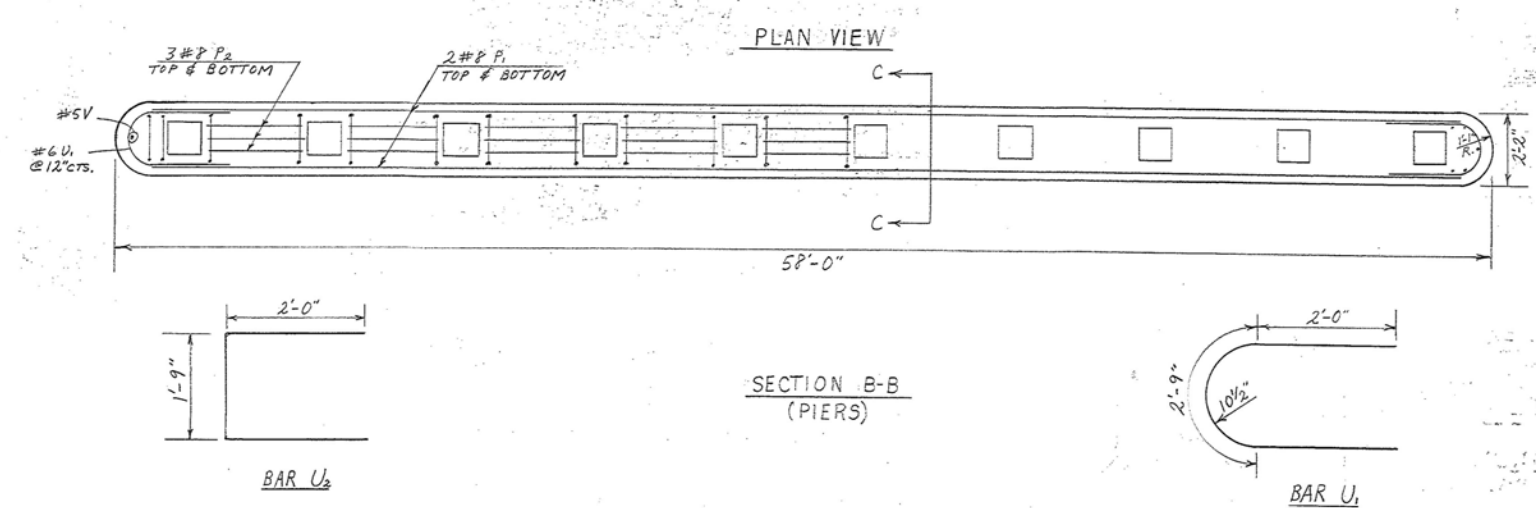
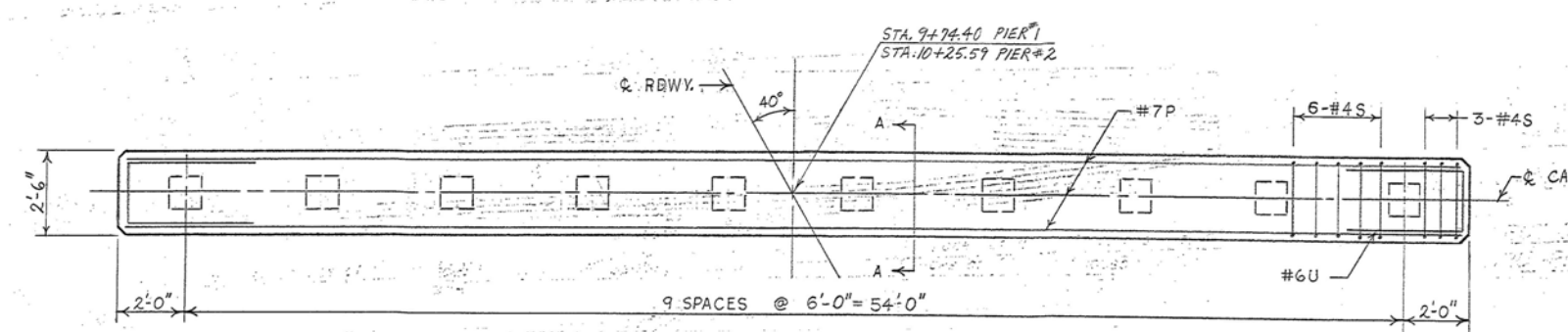
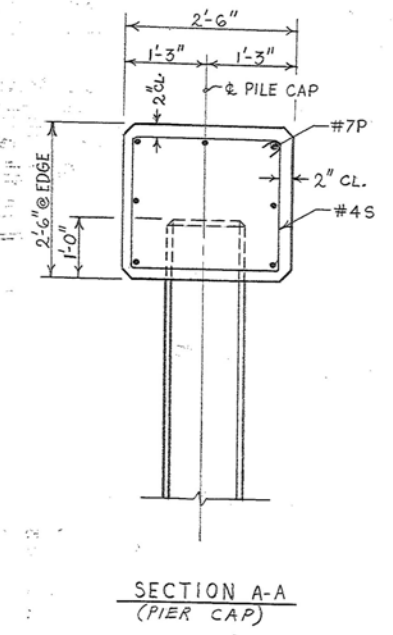
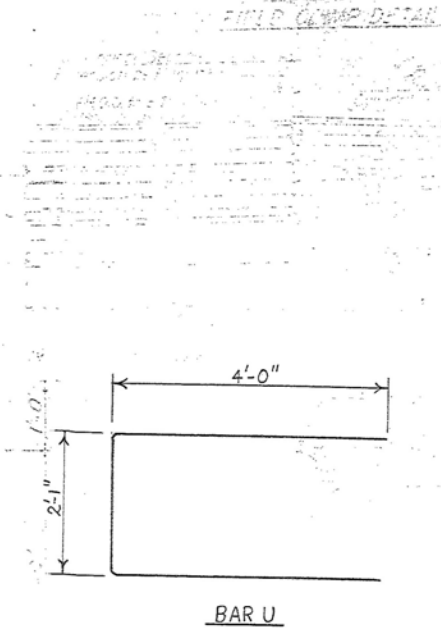
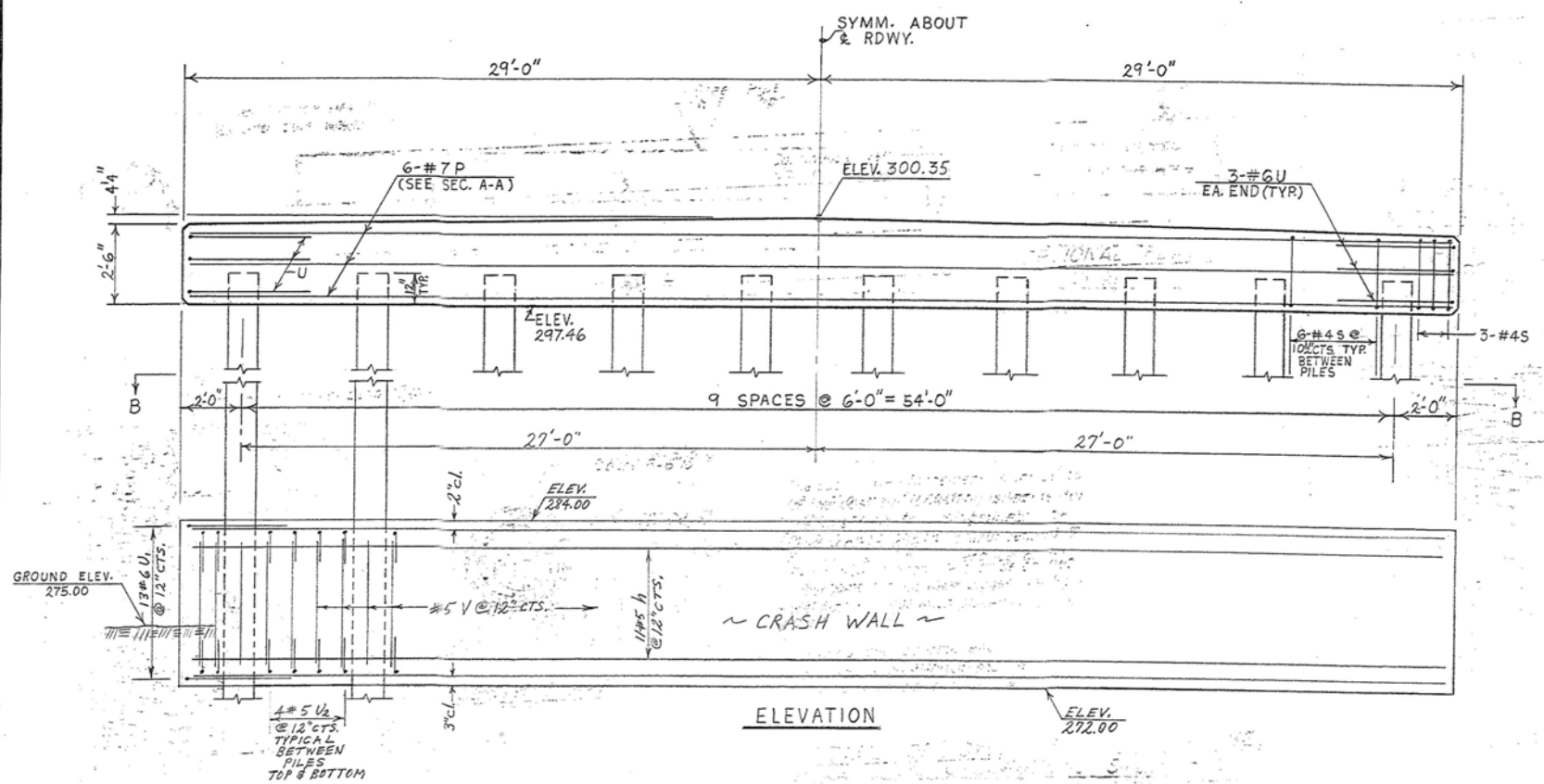


ABUTMENT CAP & WINGWALLS  
 F.A.S. RT. 576~ SEC.26B  
 MENARD COUNTY  
 STA. 10+00



ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
576	26B	MENARD	12	11
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT R56-576 (102)				

SHEET 5 OF 6



PILE DATA

TYPE	CONCRETE
CAPACITY	35 TONS
EST. LENGTH	40 FT.
NO. REQUIRED	20*
* INCLUDES ONE TEST PILE	

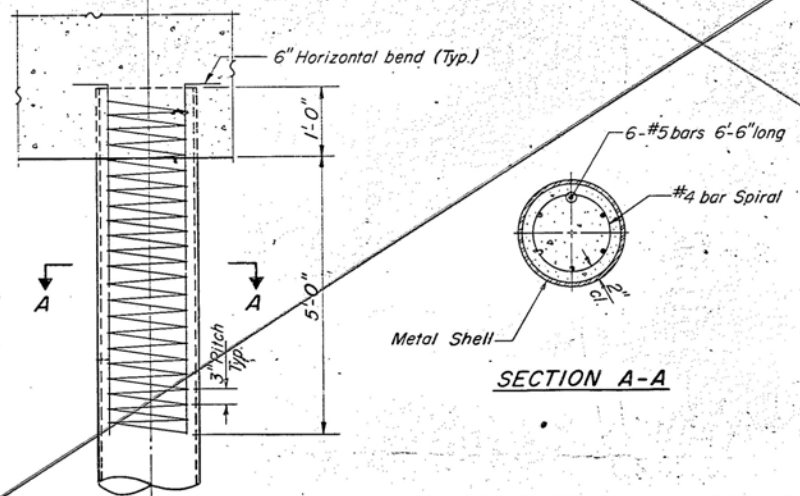
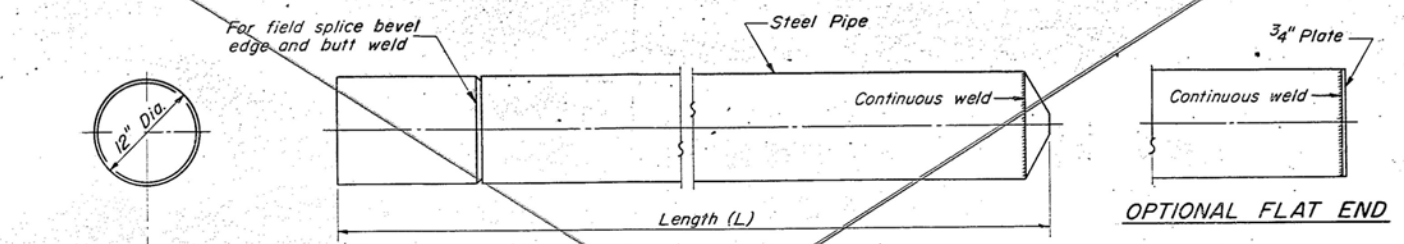
BILL OF MATERIALS - 2 PIERS

BARS	NO.	SIZE	LENGTH	SHAPE
h	88	#5	29'-0"	—
P	28	#7	29'-9"	—
P <sub>1</sub>	16	#8	29'-0"	—
P <sub>2</sub>	108	#8	4'-6"	—
V	232	#5	11'-6"	—
S	120	#4	9'-5"	□
U	12	#6	10'-1"	—
U <sub>1</sub>	52	#6	6'-9"	—
U <sub>2</sub>	196	#5	5'-9"	—
ITEM		UNIT	QUANTITY	
CLASS X CONCRETE		CU. YD.	126.8	
REINFORCEMENT BARS		POUND	12,323	
CONCRETE PILES		LIN. FT.	760	
TEST PILES		EACH	1	

PIER DETAILS  
FAS. RT. 576 ~ SEC. 2/B  
MENARD COUNTY  
STA. 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 576	268	MENARD	12	12
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT: R56-576(102)	

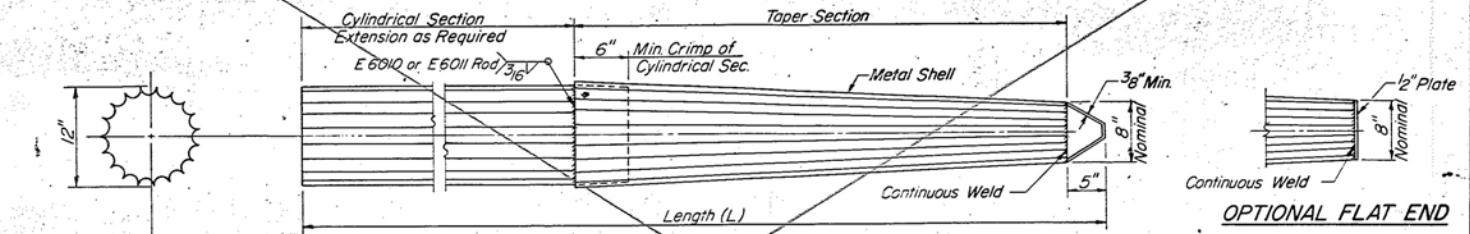
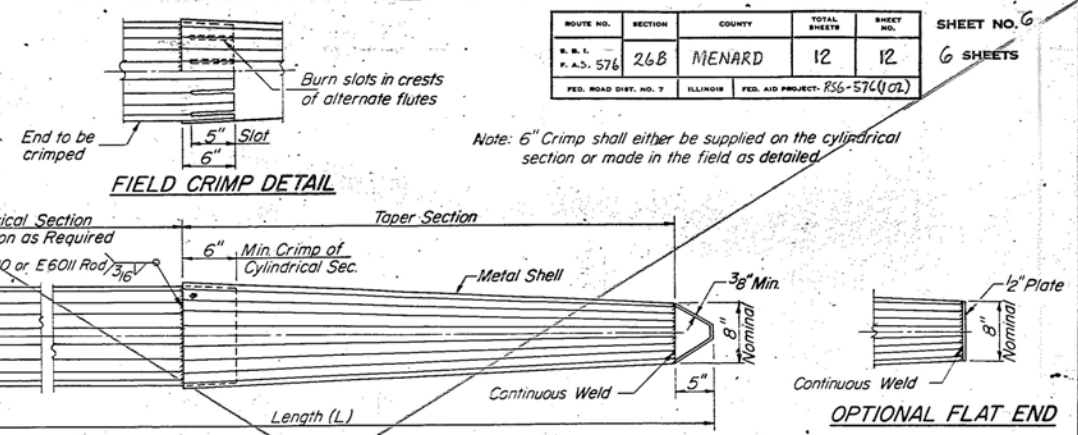
SHEET NO. 6  
6 SHEETS



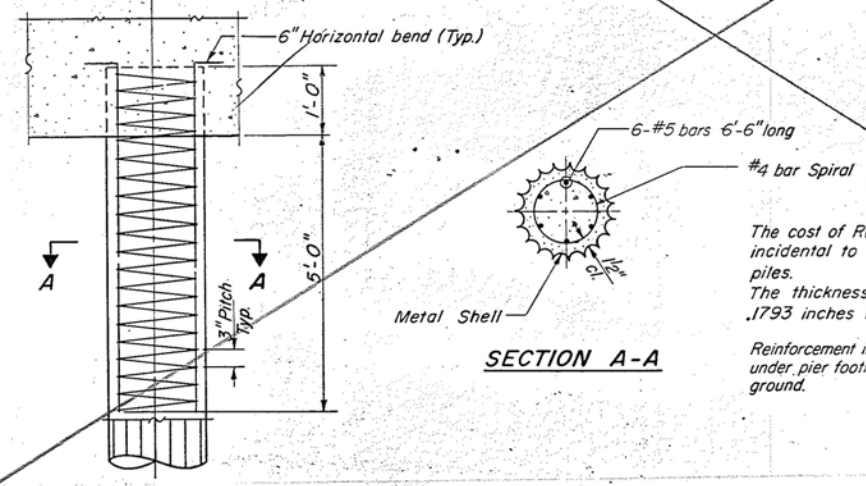
The cost of Reinforcement is incidental to the cost of furnishing piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%. Reinforcement in top pile shall be omitted under pier footings when placed in natural ground.

Note: Driving and bearing ends of pipe shall be cut square.

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

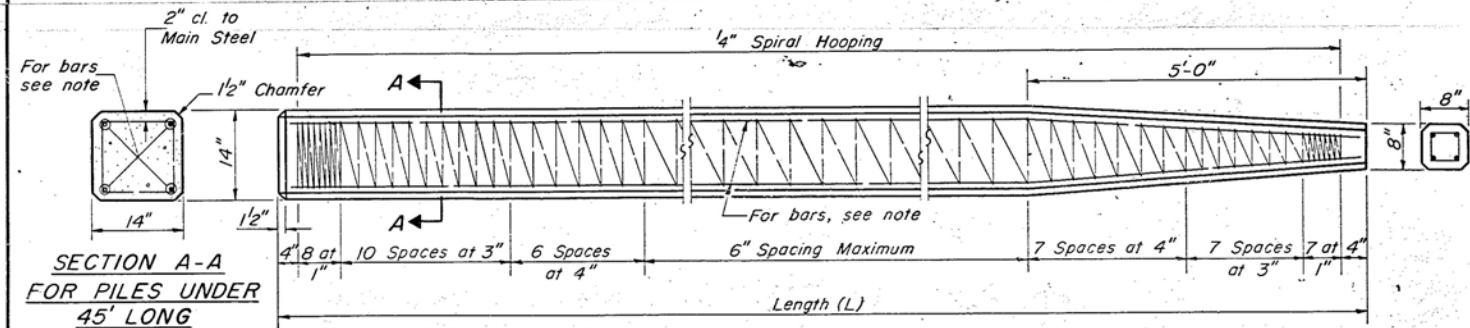


ALLOWABLE TAPER SECTIONS  
 10' Length - Taper 1" in 2'-6"  
 17' Length - Taper 1" in 4'-0"  
 25' Length - Taper 1" in 7'-0"  
 30' Length - Taper 1" in 7'-0"



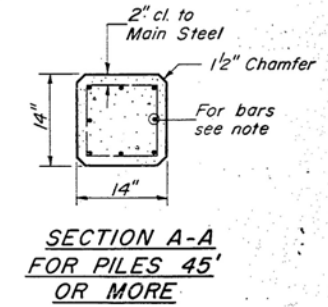
The cost of Reinforcement is incidental to the cost of furnishing piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%. Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES

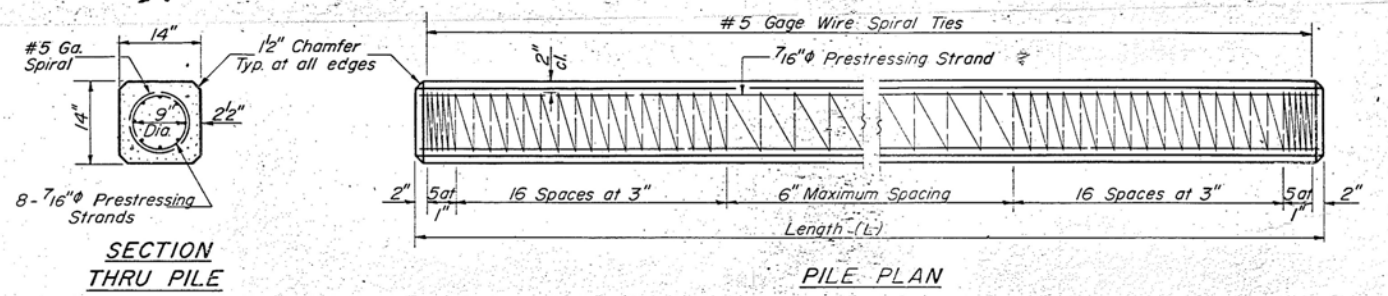


Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.

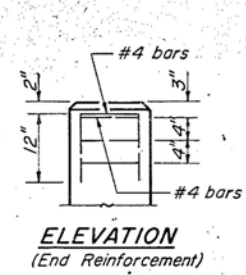


DETAIL OF PRECAST CONCRETE PILES

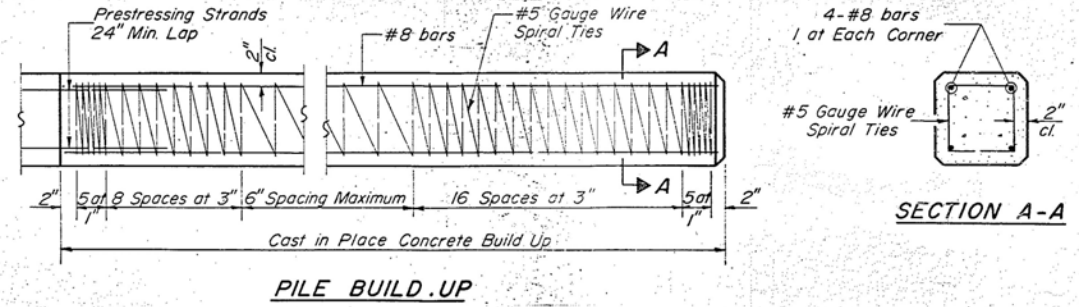


SECTION THRU PILE

PILE PLAN

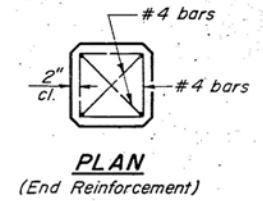


ELEVATION (End Reinforcement)



PILE BUILD UP

SECTION A-A



PLAN (End Reinforcement)

DESIGN STRESSES  
 $f'_c = 5,000$  psi.  
 $f'_{ci} = 4,000$  psi.  
 $f_s \geq 268,000$  psi. (31,000 lbs.)  
 $f_{s'i} = 188,000$  psi. (21,700 lbs.)

Note: Prestressing steel shall be non-galvanized extra high strength stress-relieved 7 wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

Handling: For pile lengths up to 65', use two slings placed at a distance of 0.21 L from each end. For piles longer than 65', use three slings placed at a distance of 0.12 L from each end at midpoint of pile.

PILE DETAILS  
 F.A.S. RT. 576~ SEC. 268  
 MENARD COUNTY  
 STA. 10+00

DETAIL OF PRECAST PRESTRESSED CONCRETE PILES