

DEC 10 1957

STATE OF IOWA
 STATE HIGHWAY COMMISSION
 DESIGN FOR
 55' x 20' PRE-STRESSED CONCRETE BEAM BRIDGE
 SECONDARY ROAD SYSTEM PROJ. S-2671(1)
 CRAWFORD COUNTY
 AUGUST 1957.

MILEAGE SUMMARY: = 57'-0" = 0.01079 MILES.

SPECIFICATIONS:
 Design: A.A.S.H.O. Series of 1953.
 Construction: Standard Specifications of the Iowa State Highway Commission, Series of 1956, plus current Special Provisions except as noted.

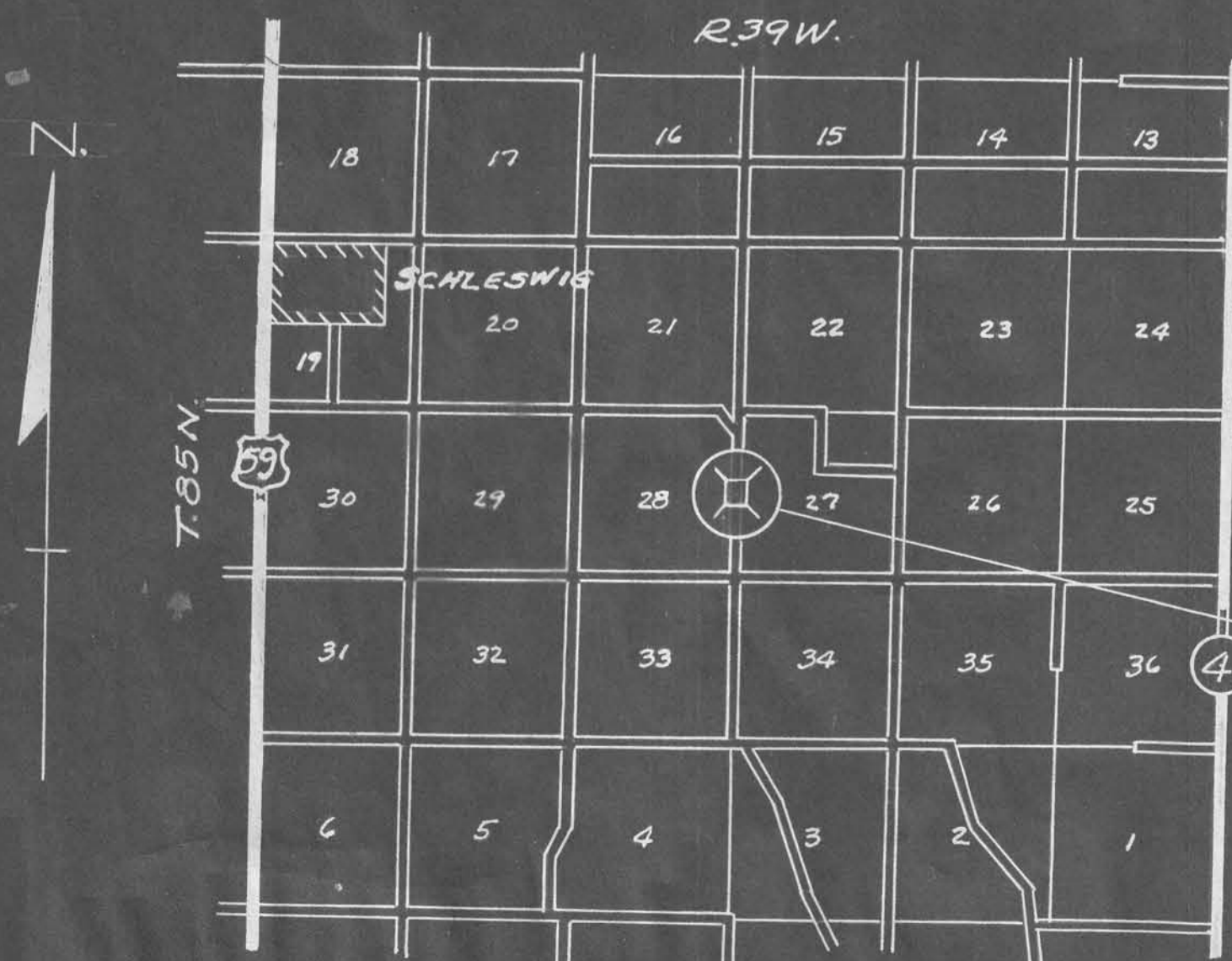
**DESIGN-657, OTTER CREEK TWP. CRAWFORD COUNTY
 SEC. 27-28, STA. 277+40.5 OVER LOCAL CREEK.
 55' x 20' PRESTRESSED CONCRETE BEAM BRIDGE**

DESCRIPTION	ABUTMENTS		SUPERSTRUCT.		TOTAL	
CONCRETE CLASS - "A"	10.84	C.Y.	29.70	C.Y.	40.54	C.Y.
REIN. STEEL	1138	LBS.	6253	LBS.	7391	LBS.
STRUCT. STEEL	2540	"	1052	"	3592	"
PRE-STRESSED CONG. BEAMS			5 @ 55'-0" (A)		5 @ 55'-0" (A)	
HANDRAIL			130'-0" L.F.		130'-0" L.F.	
CRESOTED WOOD RAIL POSTS 8"x6'			4		4	
TREATED WOOD PILING	* 720	L.F.			720	L.F.
TREATED LUMBER	4872	F.B.M.			4872	F.B.M.
GALVANIZED HARDWARE	146	LBS.			146	LBS.
EXCAVATION Class # 20	365	C.Y.			365	C.Y.
" Class # 10	477	C.Y.			477	C.Y.
REMOVAL OF OLD STRUCTURE					LUMP SUM.	
EXCAVATION Class # 21	12.5	C.Y.			12.5	C.Y.

In Letting of Dec. 10, 1957

* 12 @ 35' (OVERSIZE)
 12 @ 25'

NOTE: Crawford County will furnish & place Bridge Sign Assemblies as specified in S&T Instruction No. 11, Revised March 1, 1957.



DESIGN No. -657
 PROJECT No. S-2671(1)

LOCATION MAP
 SCALE 1" = 1 MILE.

APPROVED

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BOARD OF SUPERVISORS DATE

APPROVED

CHIEF ENGINEER DATE
 IOWA HIGHWAY COMMISSION

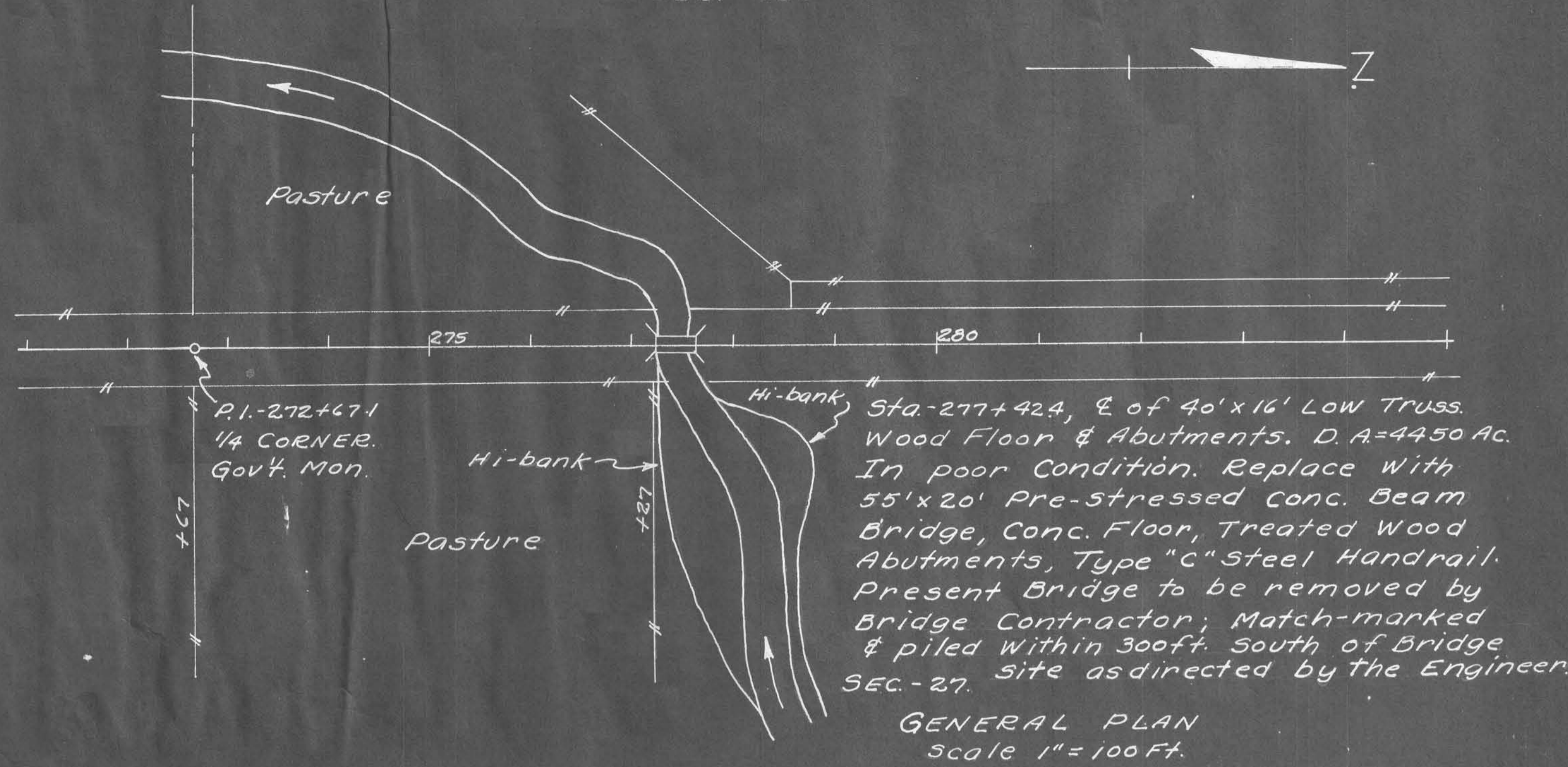
DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS.
 RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER DATE

APPROVED

DIVISION ENGINEER DATE

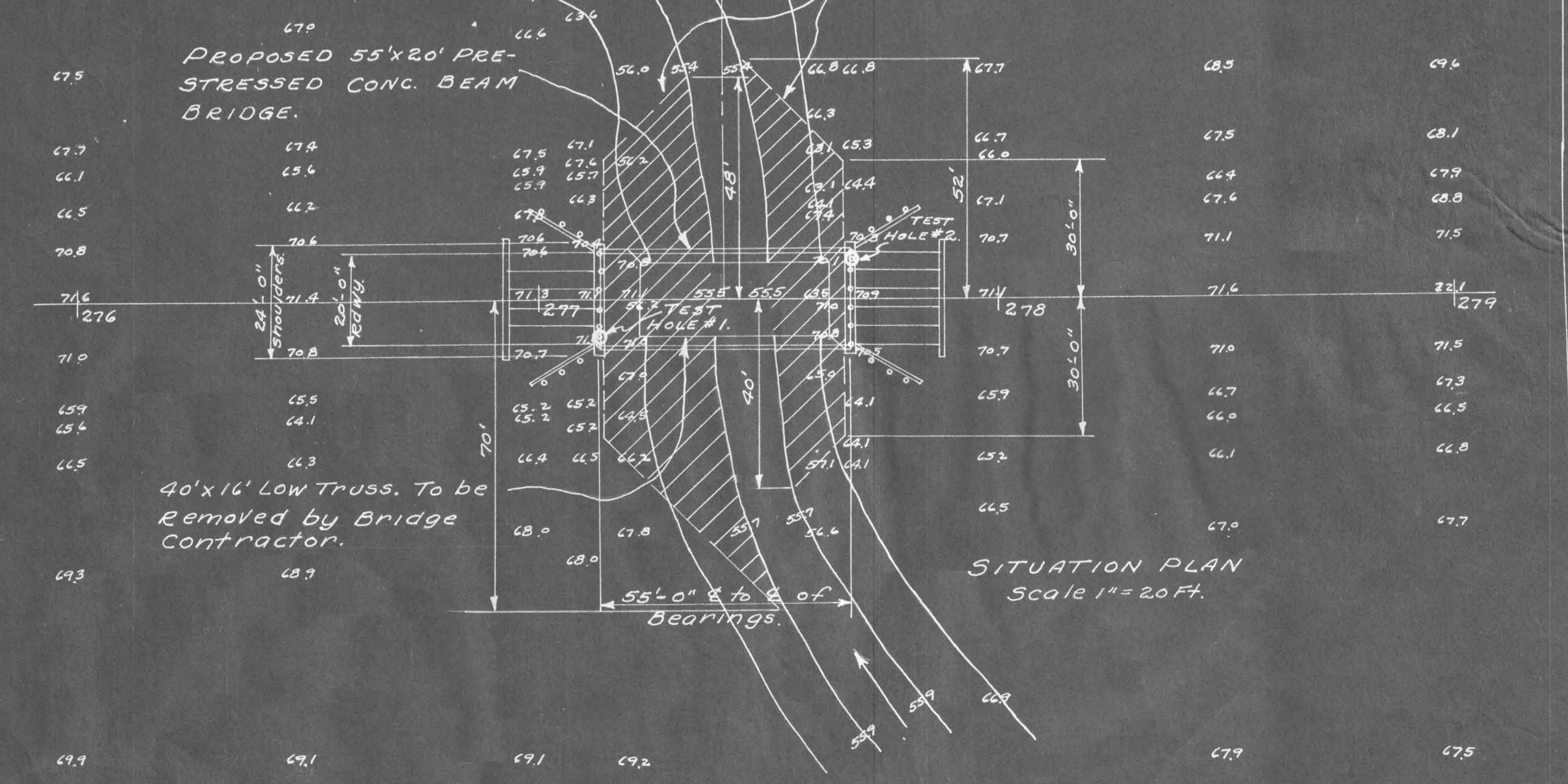
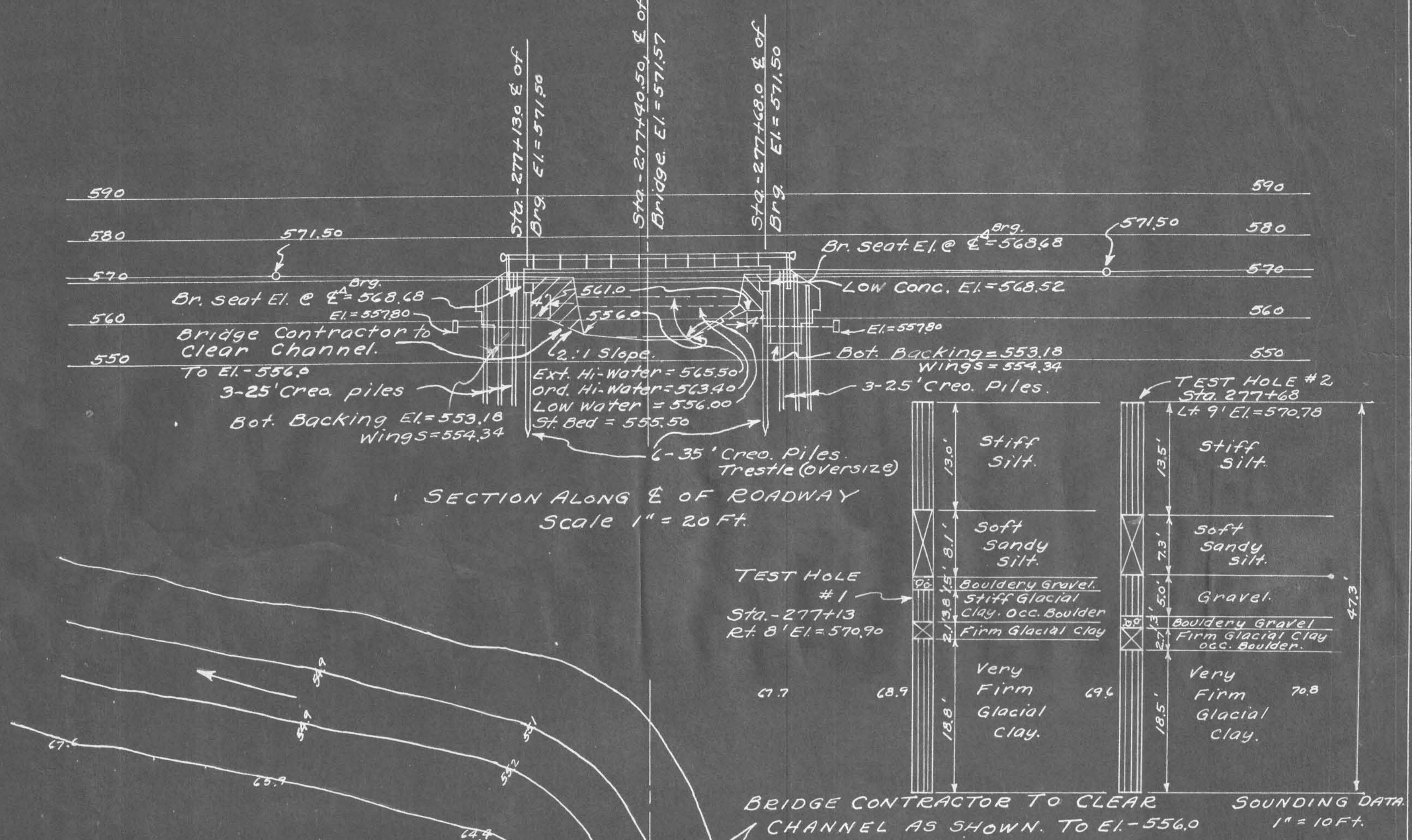
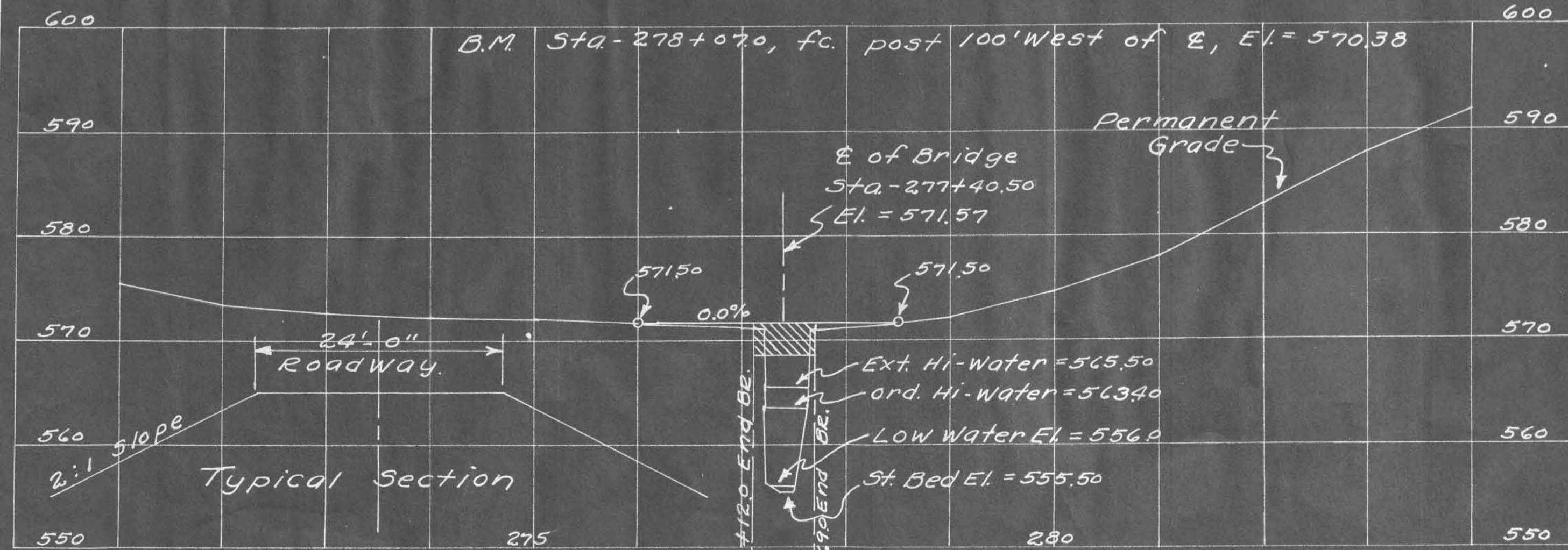
4-11 Dec 10 1957



Sta-277+424, E of 40'x16' Low Truss. Wood Floor & Abutments. D.A=4450 Ac. In poor Condition. Replace With 55'x20' Pre-stressed Conc. Beam Bridge, Conc. Floor, Treated Wood Abutments, Type "c" Steel Handrail. Present Bridge to be removed by Bridge Contractor; Match-marked & piled Within 300ft. South of Bridge SEC. 27. Site as directed by the Engineer.

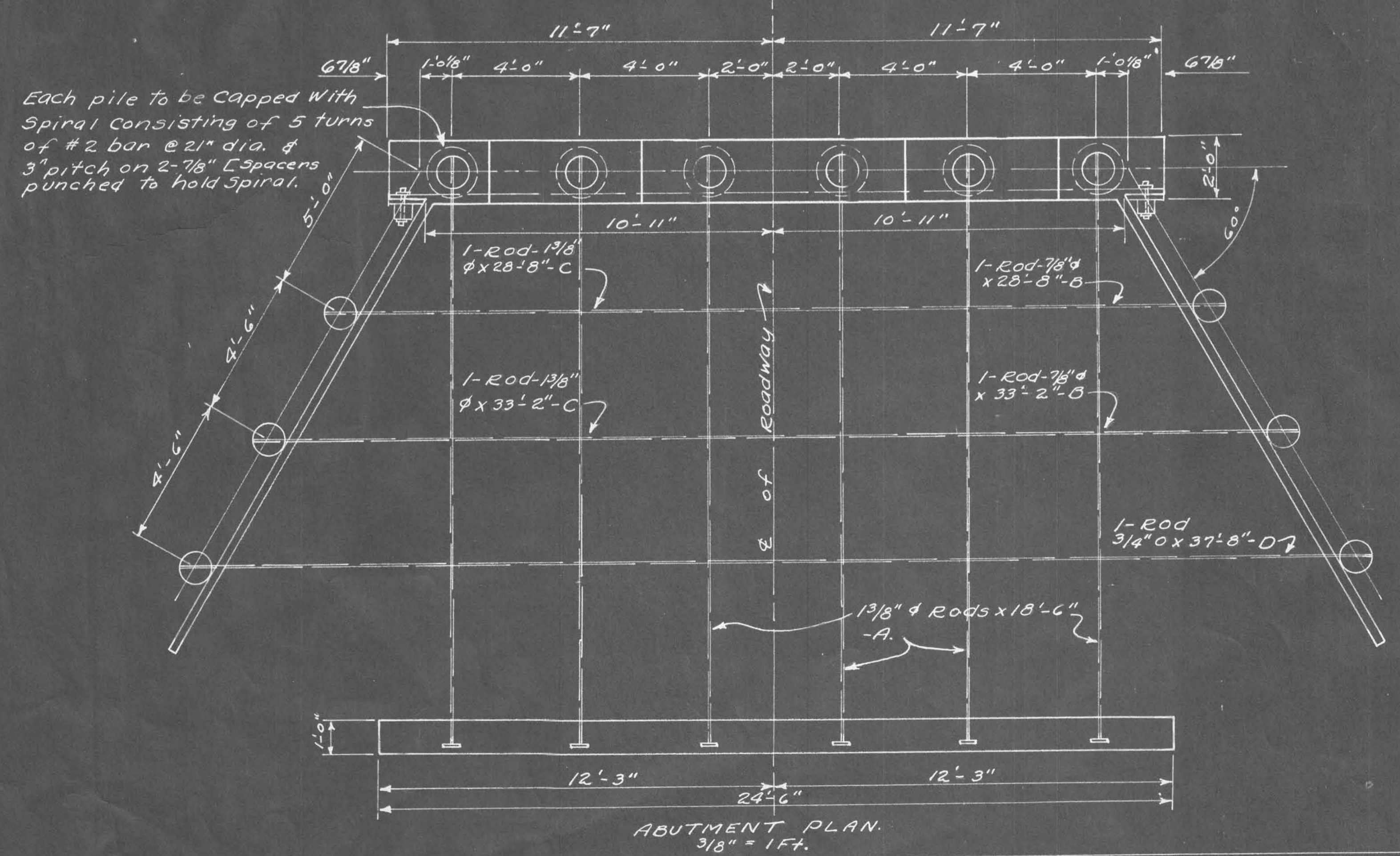
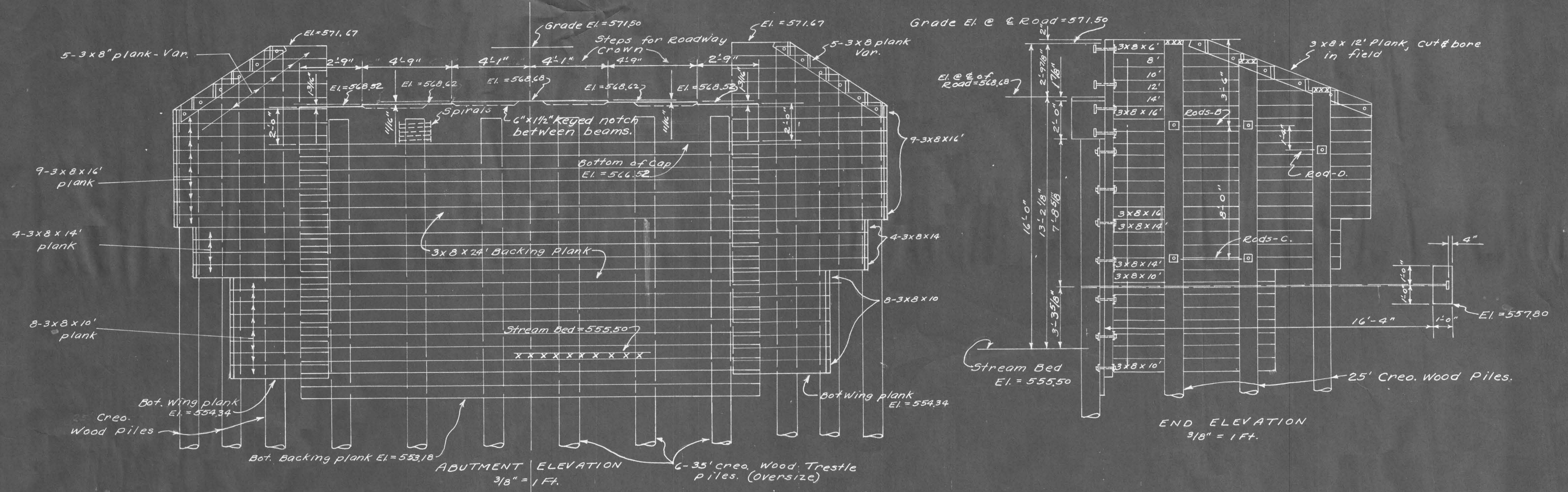
GENERAL NOTES:

All Lumber is to be Creosoted. Backing & Wing plank in 10" & 12" widths may be substituted for 8" plank shown but payment will be made on basis of quantities shown. All piling are to be Creosoted & are to comply with the specifications for Treated Timber Trestle Piles. All hardware is to be galvanized. C.I. Ogee or malleable Washers are to be used under all heads & nuts bearing on wood. All bolts to have square heads & nuts. For details of Super-structure refer to Iowa Highway Commission Standard PC-5 and for details of Abutments refer to Standard H10-2. With further details on sheet #4 of these plans. All materials & construction to conform with the Iowa Highway Commission Standard Specifications, Series of 1956.



DESIGN FOR
55'x20' PRE-STRESSED CONCRETE BEAM BRIDGE
CONCRETE FLOOR - STEEL HANDRAIL TYPE "C"

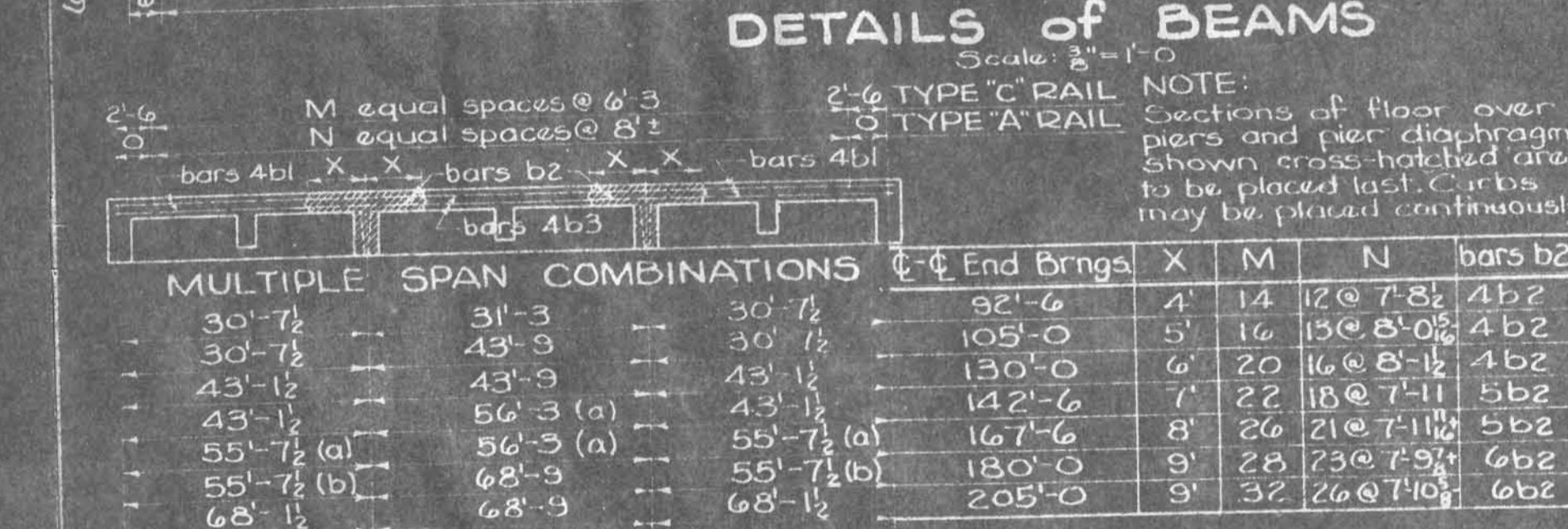
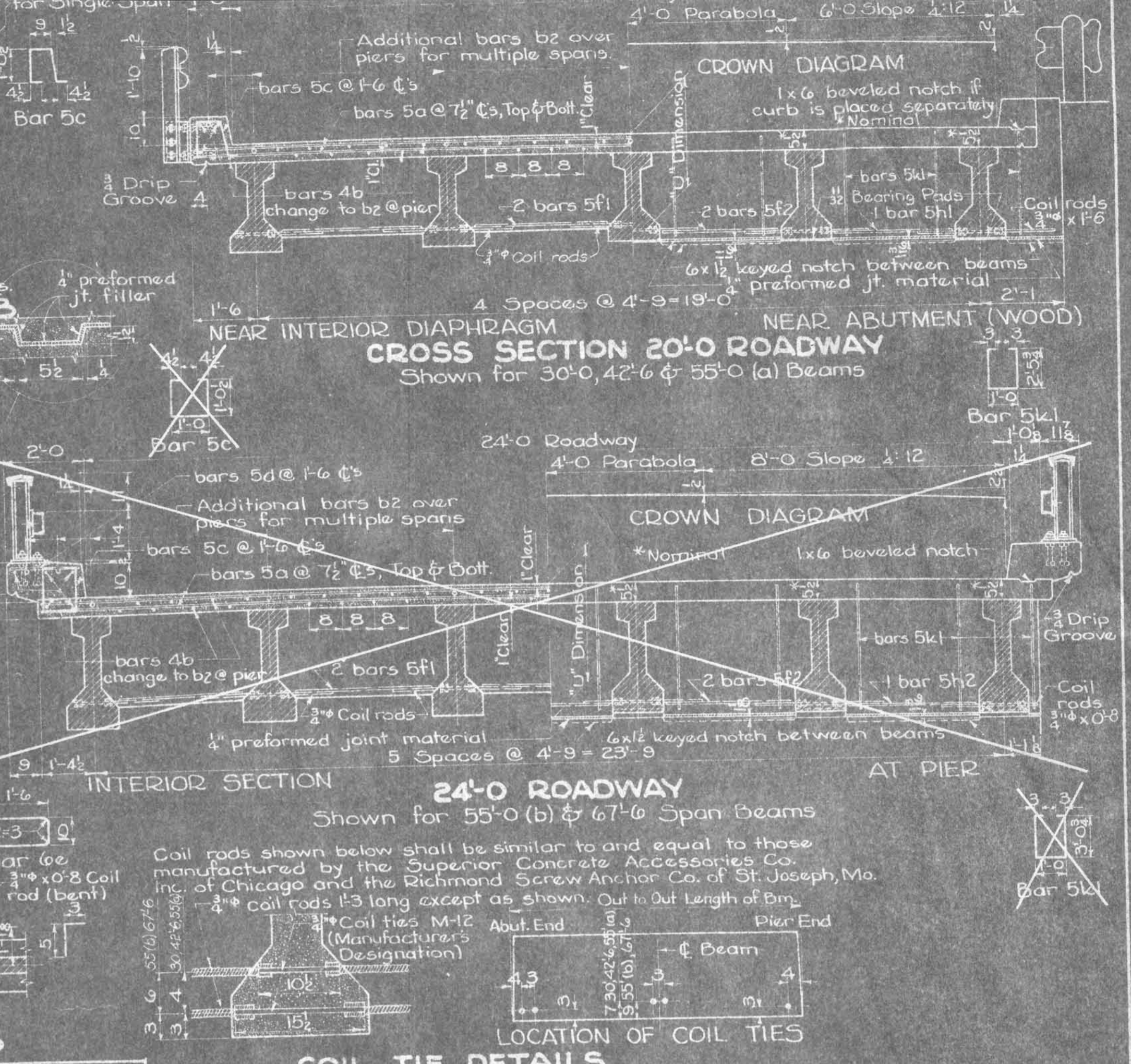
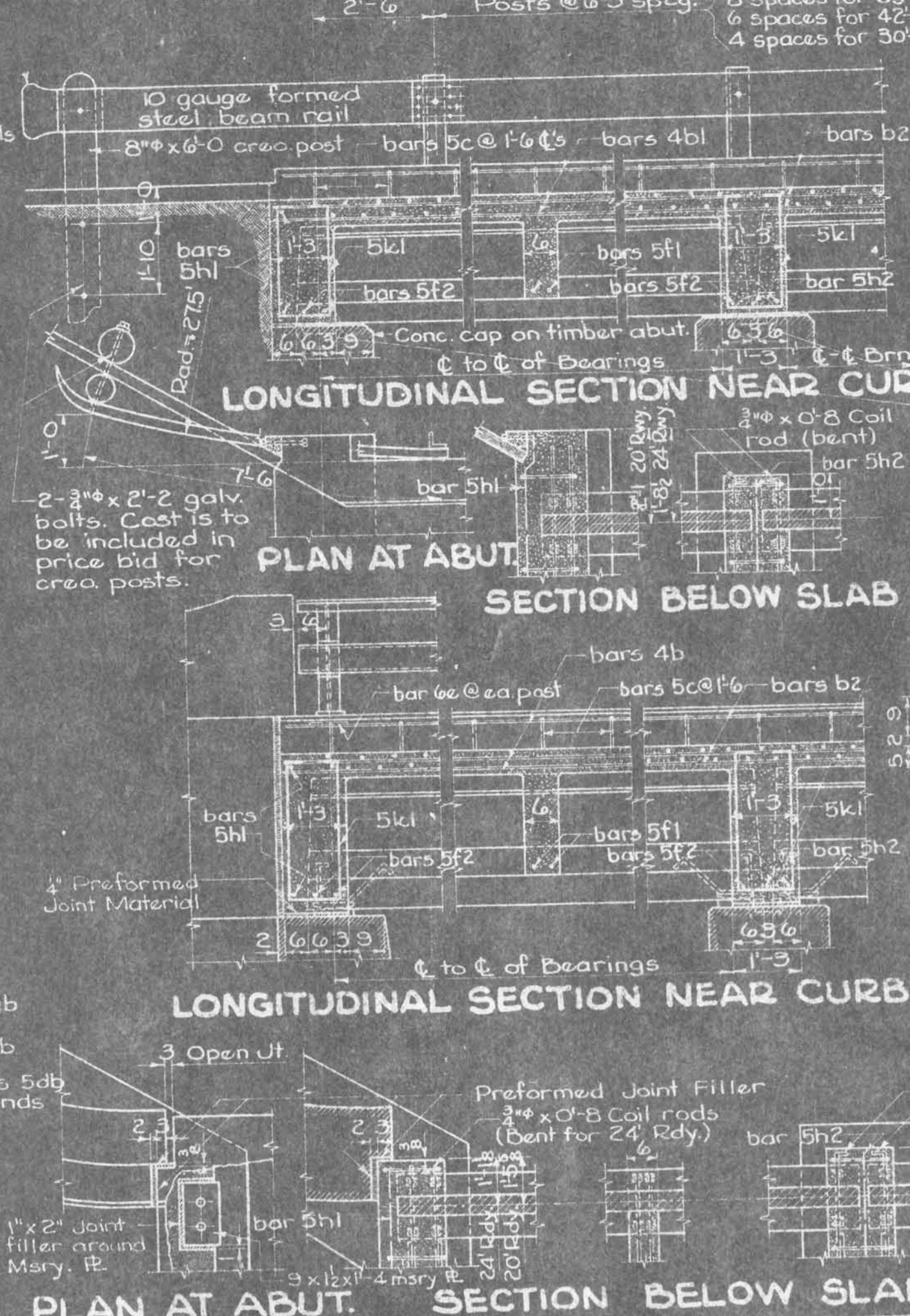
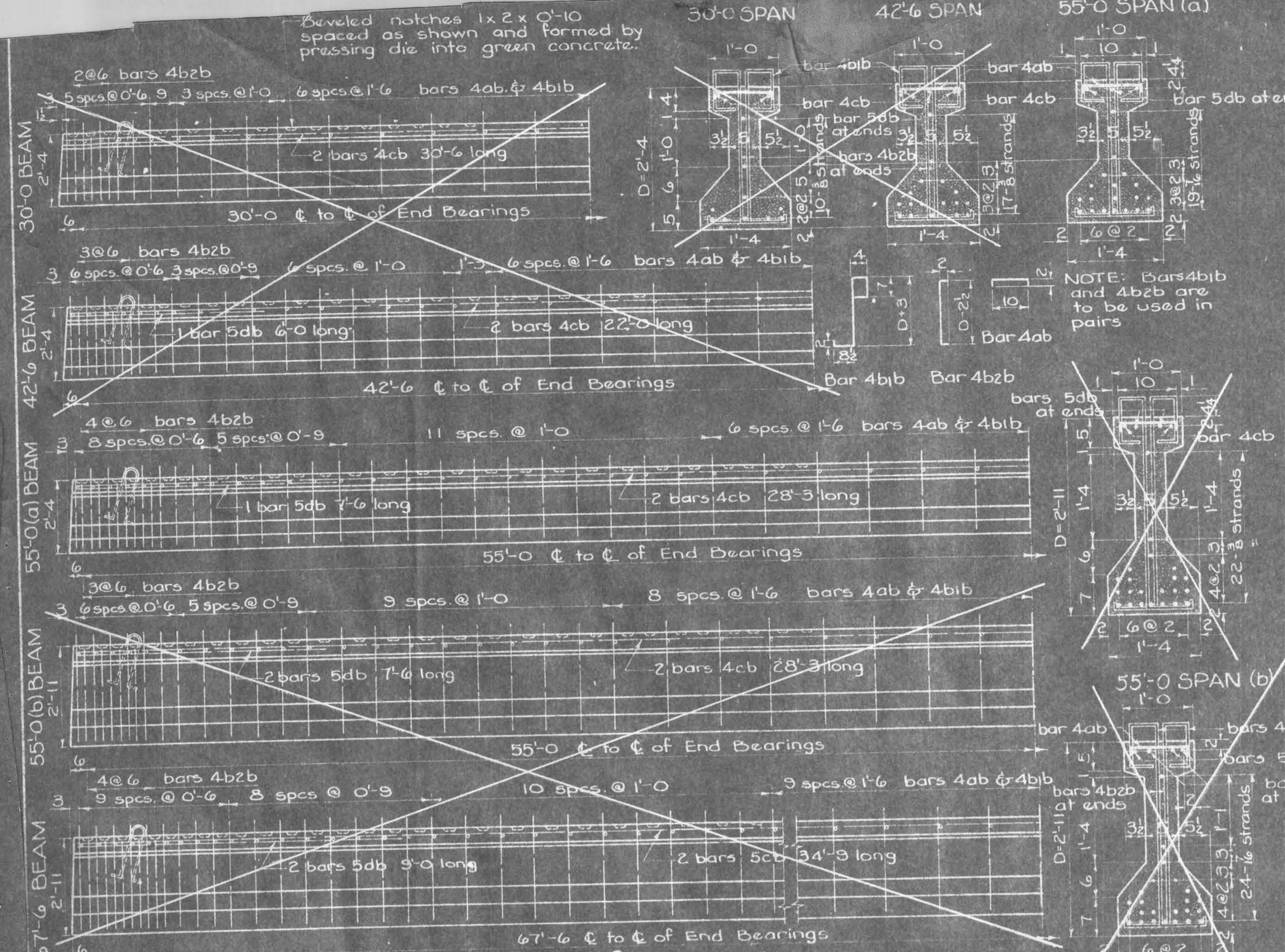
Location:
Section: 27-28
Otter Creek Twp.
T. 85 N. R. 39 W.
CRAWFORD COUNTY, IOWA.
PROJECT No. S-2671 (I)
Sheet # 2 of 4



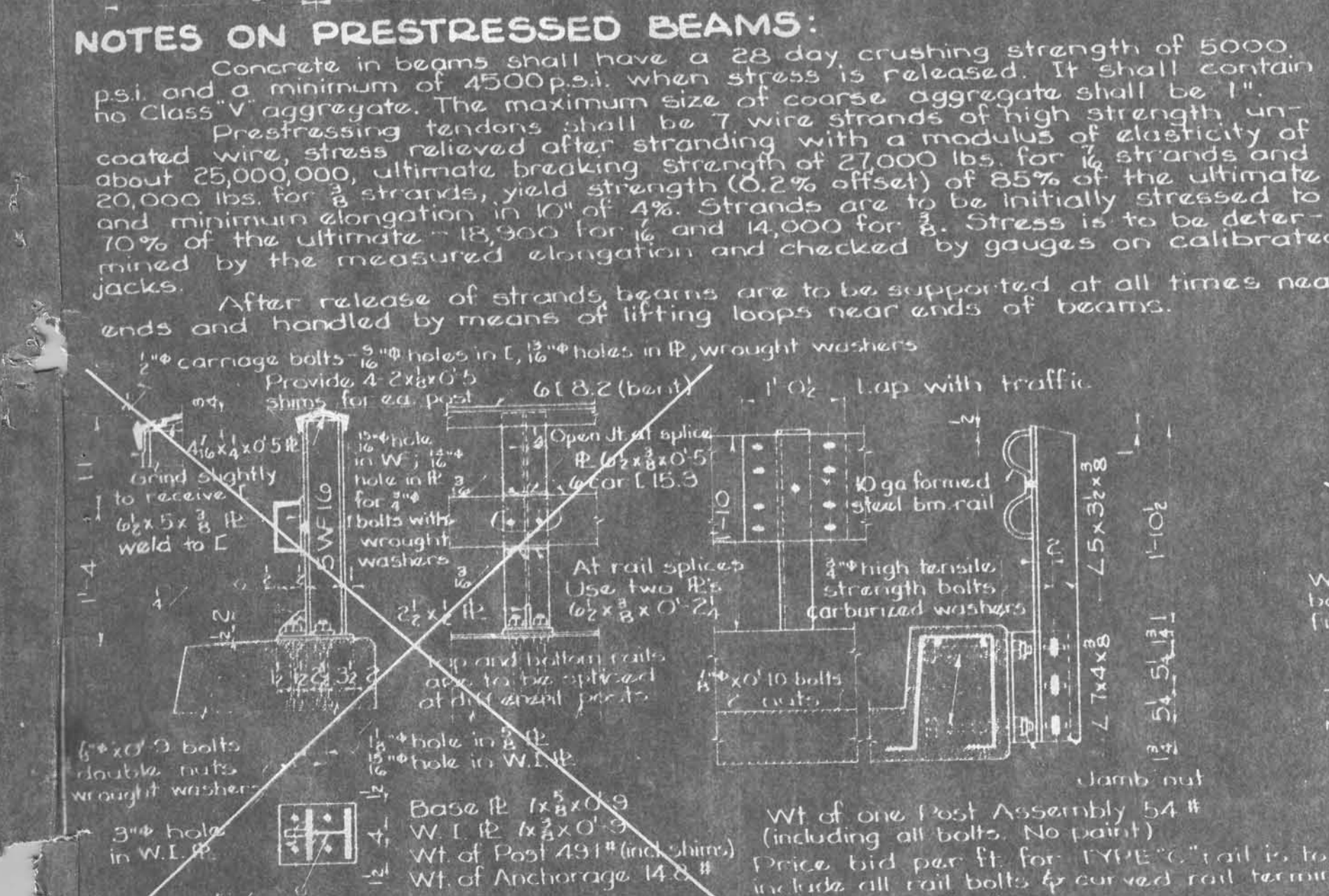
QUANTITIES - ONE ABUTMENT						
Mark	Description	Shape	Size	Length	No.	Quant.
	Wing Piles.		25'-0"	6	150	LF
	Brg. Piles (oversize)		35'-0"	6	210	"
					Total Piling =	360 LF
	Backing Plank	3x8	10'-0"	20	400	FBM
	"	"	14'-0"	20	560	"
	Wing plank	"	6'-0"	2	24	"
	"	"	8'-0"	2	32	"
	"	"	10'-0"	18	360	"
	"	"	12'-0"	2	48	"
	"	"	14'-0"	10	280	"
	"	"	16'-0"	18	576	"
	" Slope	"	12'-0"	2	48	"
	Nailers	6x6	18'-0"	2	108	"
					Total Creosoted Lumber =	2436 FBM
					Struct. Steel	1270 LBS.
					Concrete - Deadman	1.82 C.Y.
					" Abutment Cap.	3.60 "
					Total Concrete	5.42 C.Y.
					Rein. Steel - Deadman	190 LBS.
					" " Abutment Cap.	379 "
					Total Rein. Steel =	569 LBS.
					Galvanized Hardware =	73 LBS.

GENERAL NOTE:
For construction details not shown hereon refer to Iowa Highway Commission Standard H10-2.

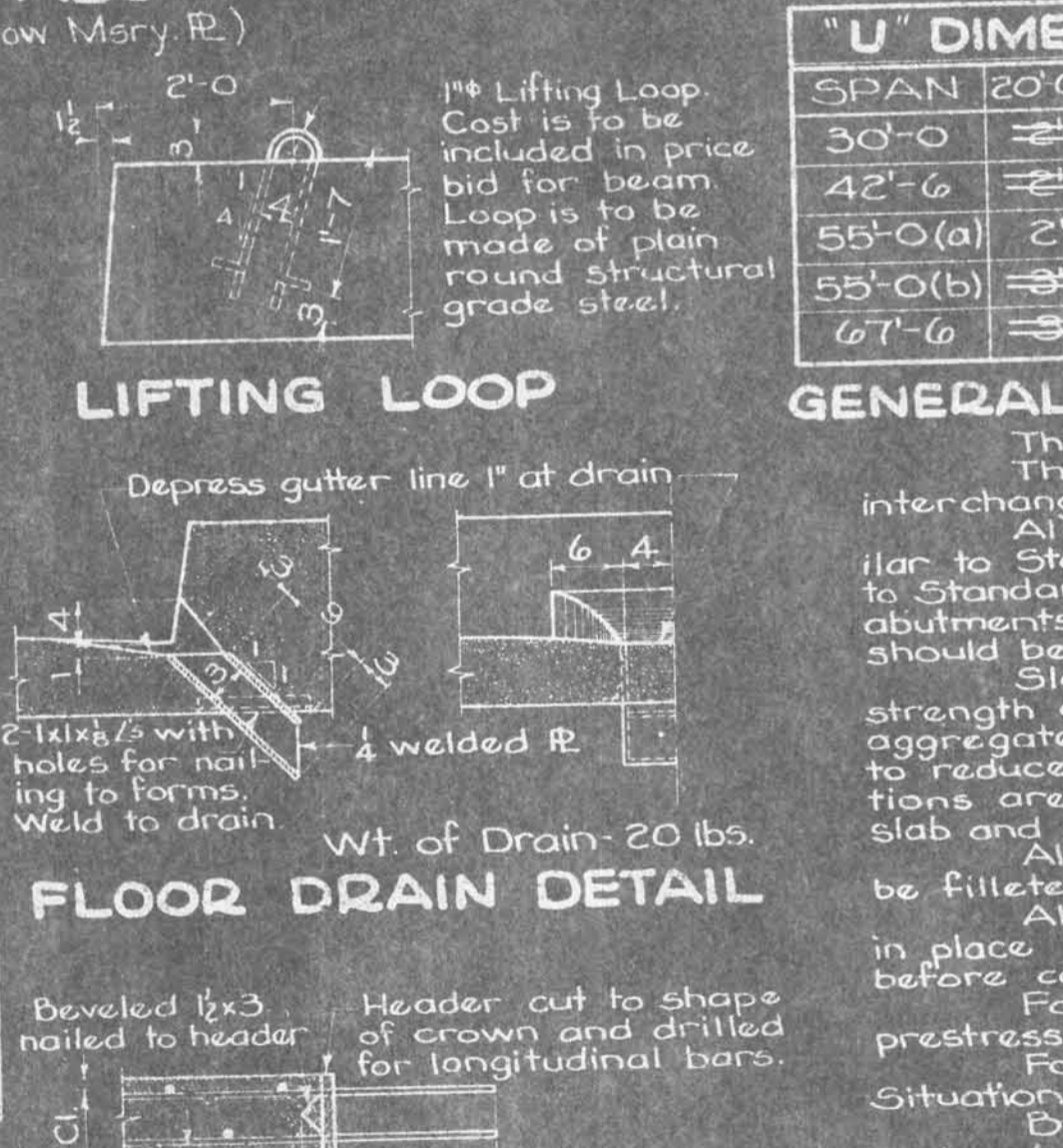
DESIGN FOR
55' x 20' PRE-STRESSED CONCRETE BEAM BRIDGE
CONCRETE FLOOR - STEEL HANDRAIL
Location: Section: 27-28
Sta: 277+40.50
Officer Creek Twp.
7.85 N. E. 39 W.
PROJECT No. 5-2671(1)
CRAWFORD COUNTY, IOWA.
Sheet # 3 of 4.



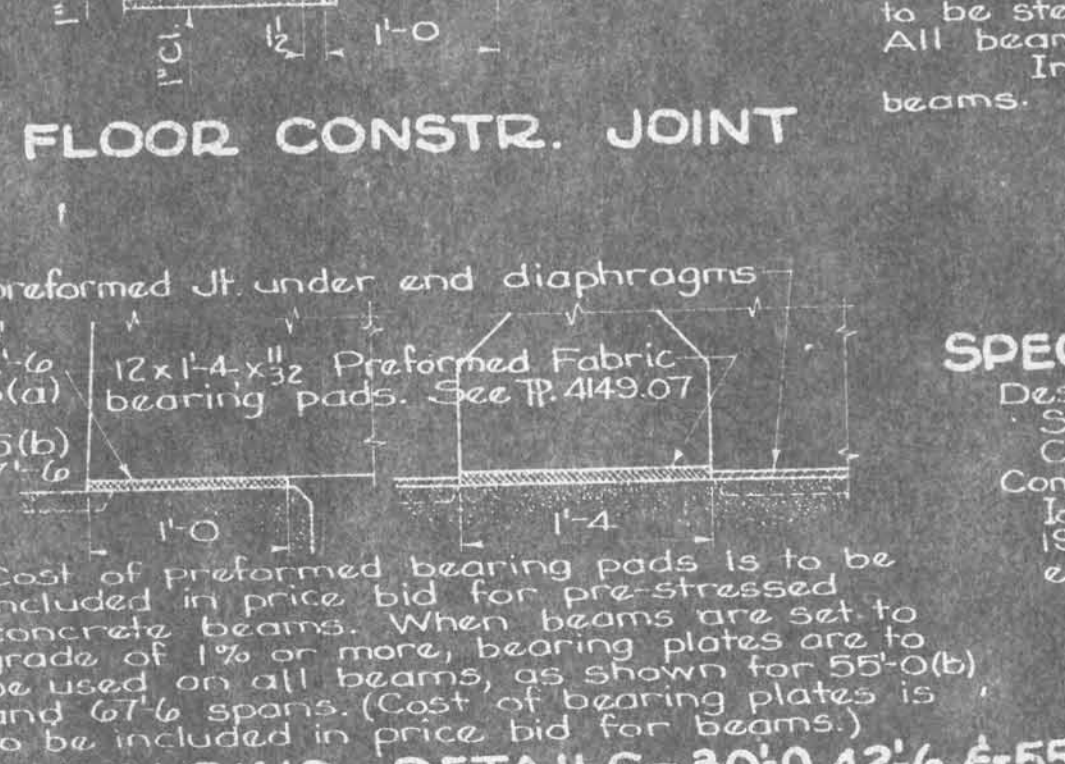
SPAN	DEPTH	STRANDS	CONC. CY	DEINF. STEEL lbs.	STRUCT. STEEL lbs.	INITIAL PRE-STRESS	CAMBER AS SLAB IN PLACE
30'-0	2'-4	10-3/8	2.06	262	*217	140 k	3/8
42'-6	2'-4	17-3/8	2.90	393	*217	238 k	1/2
55'-0(a)	2'-4	19-1/8	3.73	524	*217	360 k	1/2
55'-0(b)	2'-11	22-3/8	4.66	557	217	308 k	3/8
67'-6	2'-11	24-1/8	5.70	759	217	453 k	1/2



BAR SHAPE	30'-0	42'-6	55'-0(a)	55'-0(b)	67'-6
4ab	31 1'-2	45 1'-2	61 1'-2	57 1'-2	73 1'-2
4b1b	62 4'-4	90 4'-4	122 4'-4	114 4'-11	146 4'-11
4b2b	12 2'-5	16 2'-5	20 2'-5	16 3'-0	20 3'-0
cb	4 2'-3	4 2'-0	4 2'-3	4 2'-3	5 3'-4
5db	2 6'-0	2 7'-6	4 7'-6	4 7'-6	4 9'-0
TOTAL WT.	262	393	524	557	759



BAR	LOCATION	SHAPE NO.	LENGTH	WEIGHT
5a	Slab Transverse	177	21'-8"	4000
4b1	Slab Longitudinal	32	72'-2"	1691
b2	Slab Long. Over Piers			
4b3	Slab Longitudinal			
5c	Curb Dowels	76	3'-3"	258
5d	Curb Transv. (Type A Rail)			
6e	Rail Post Anchor (Type A Rail)			
5f1	Intermediate Diaphragms	8	3'-5"	28
5f2	Abut. & Pier Diaphragms Short	16	3'-3"	54
5h1	Abutment Diaphragms Long	4	22'-10"	95
5h2	Pier Diaphragms Long			
5k1	Abutment & Pier Hoops	20	6'-1"	127
TOTAL =				6253



ITEM	UNIT	QUANTITY
Concrete	cuyd	29.70
Reinforcing Steel	lbs.	6253
Structural Steel	lbs.	1052
Pre-stressed Conc. Beams	Beam	5 @ 55'-0" (a)
Pre-stressed Conc. Beams	Beam	
Formed Steel Beam Rail	L.F.	130'-0"
Crescoted Wood Rail Posts	8"x10'-0" Post	4

TYPE 'A' RAIL DETAILS **TYPE 'C' RAIL DETAILS** **BEARING PLATES FOR 55'-0(b) & 67'-6** **BEARING DETAILS-30'-0, 42'-6 & 55'-0(a)**

Design for **PRE-TENSIONED CONCRETE BEAM BRIDGES**
 30'-0, 42'-6, 55'-0 & 67'-6 SPANS
 20'-0 AND 24'-0 ROADWAYS
 I-15-44 LOADING
55'-0"x20' CONCRETE BEAM BRIDGE
 STA-27740.5 PROJ. No. 5-267(11)
 Iowa State Highway Commission
 Rev. 4-23-57 - Strands revised December 1956 Sheet PC-5