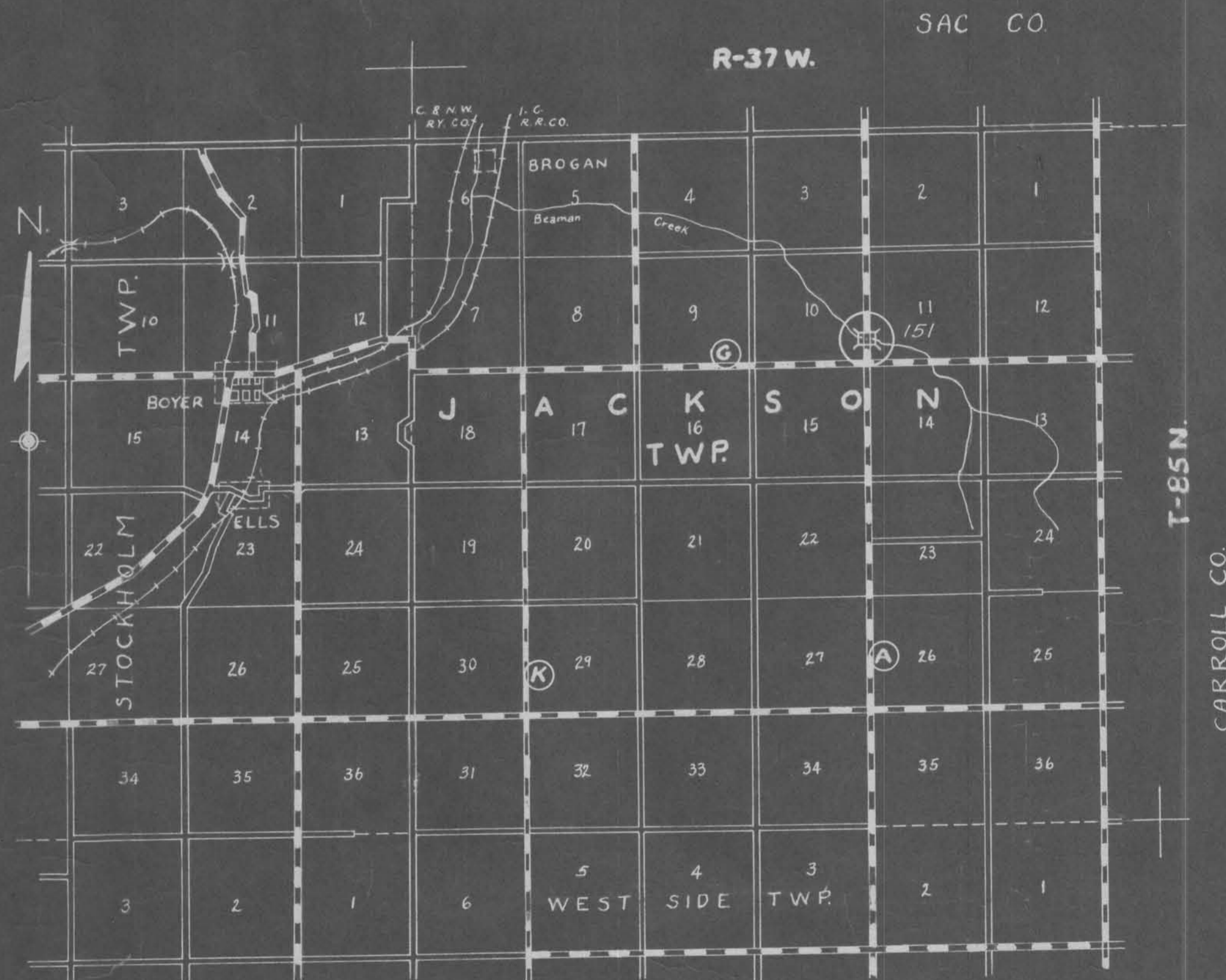


STATE OF IOWA  
 STATE HIGHWAY COMMISSION  
 DESIGN FOR  
 36' x 18' I-BEAM BRIDGE  
 SECONDARY ROAD SYSTEM S.N. PROJECT No. 1398  
 CRAWFORD COUNTY  
 JULY - 1950.



DESIGN	LOCATION		DESCRIPTION	ESTIMATED QUANTITIES						EXCAVATION CU.YDS.			REMOVAL		
	STA.	TOWNSHIP		SEC.	SIZE & TYPE	CONC. CU.YDS.	REIN. STEEL LBS.	STRUCT. STEEL LBS.	TREATED LUMBER F.B.M.	TREATED LUMBER LBS.	HARDWARE LBS.	CLASS 10		CLASS 20	CLASS 21
151	15+70	JACKSON	10-11	36' x 18' I-Beam Br.	28.8	4083	23,118	4686	12-25' 16-35'	650	218	175	130	19	34' x 16' Wood Bridge.

Mileage Summary:  
 39.75' = 0.00752 mile

Specifications:  
 Class-"B" Loading. Construction: Standard Specification of the Iowa Highway Commission Series of 1948, except on rail surfaces visible from the roadway the two field coats of paint shall be white conforming with Par. 4135.04 A.

APPROVED

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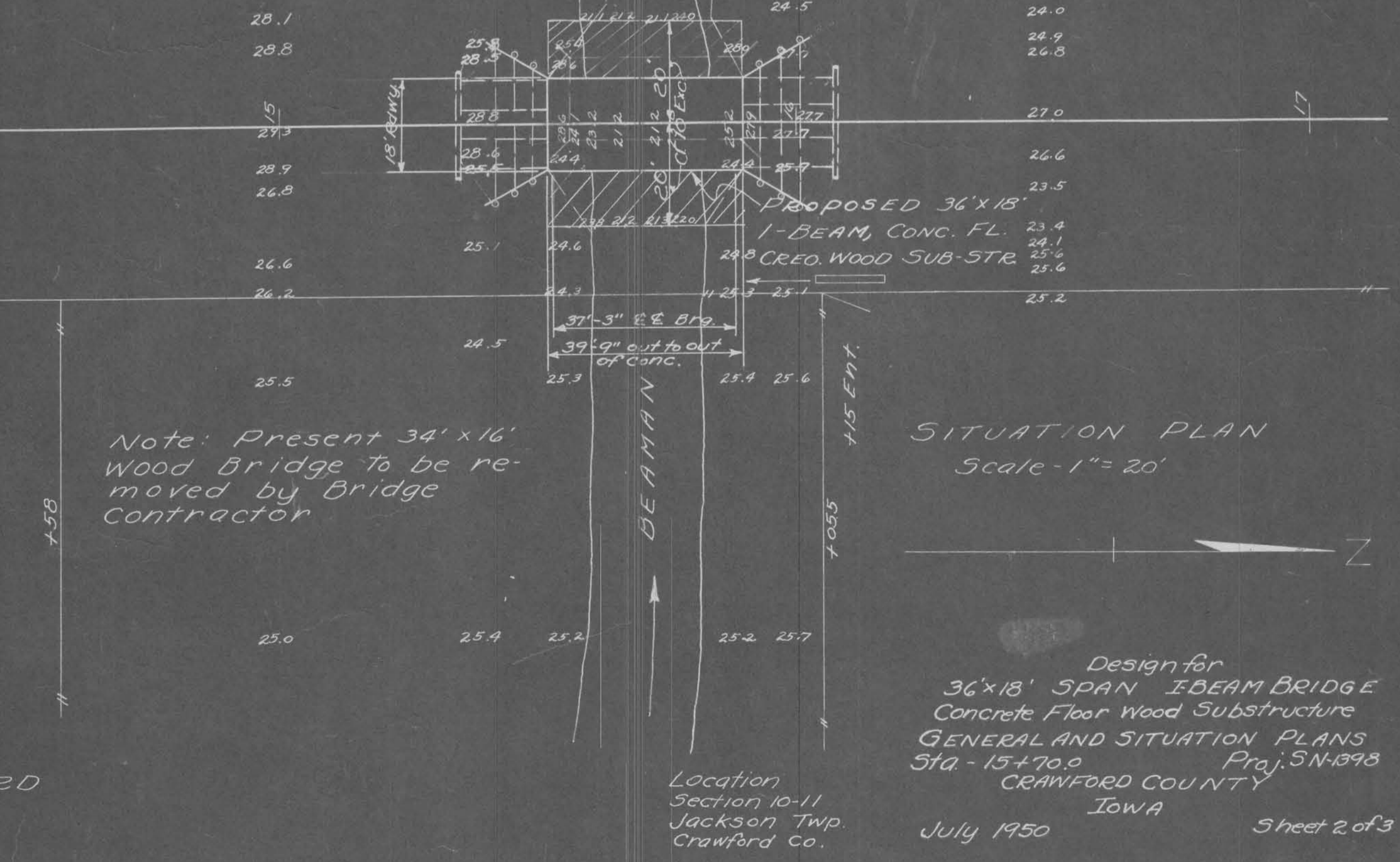
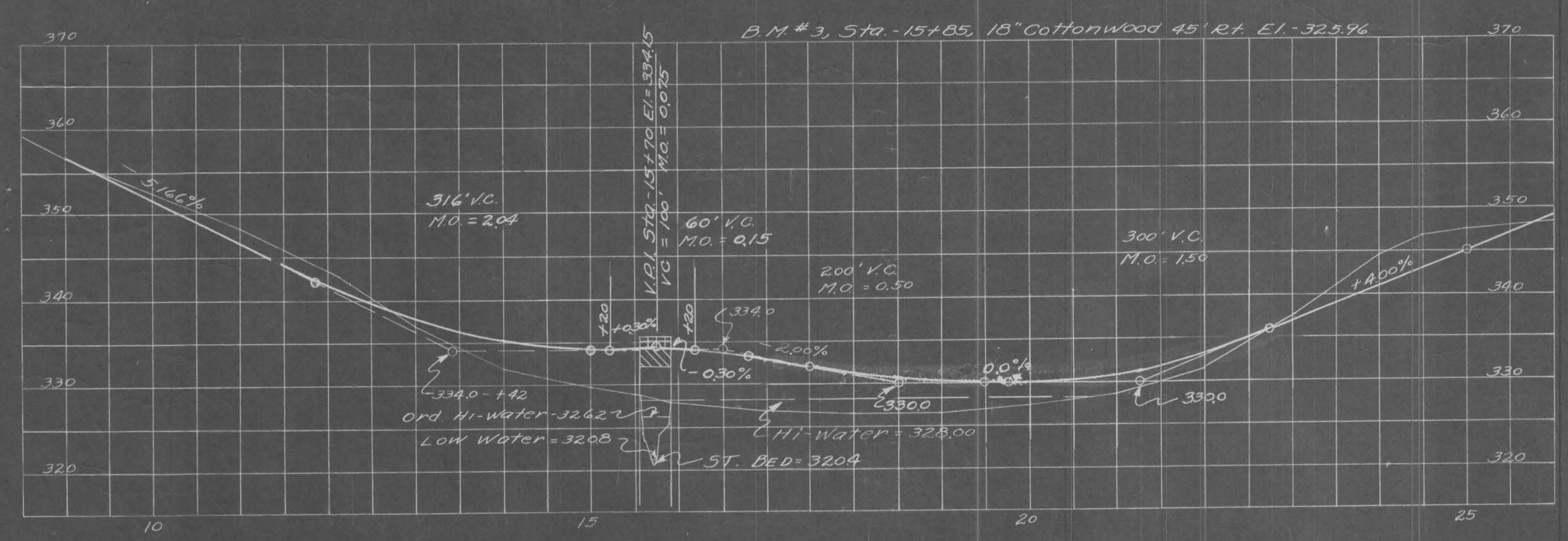
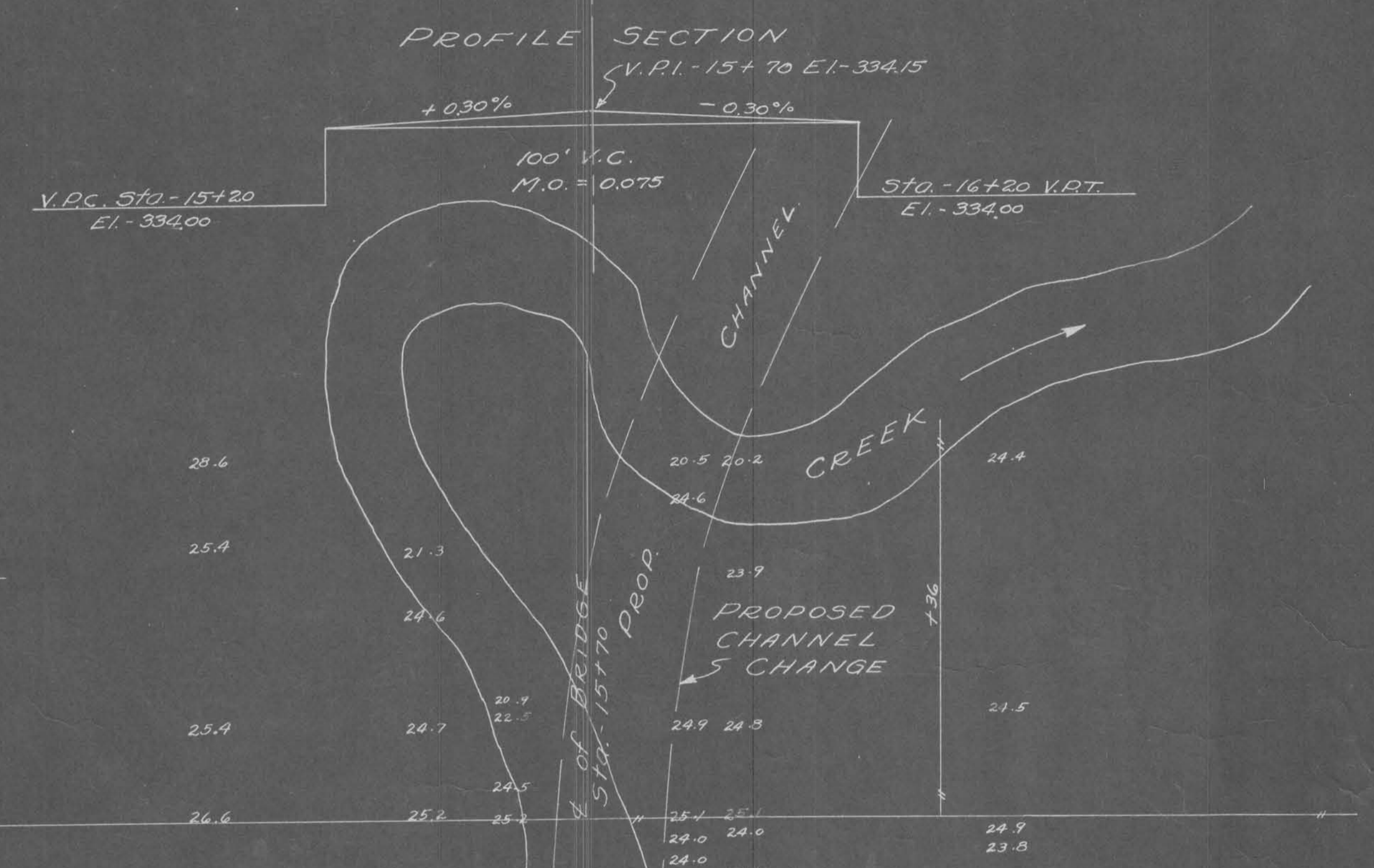
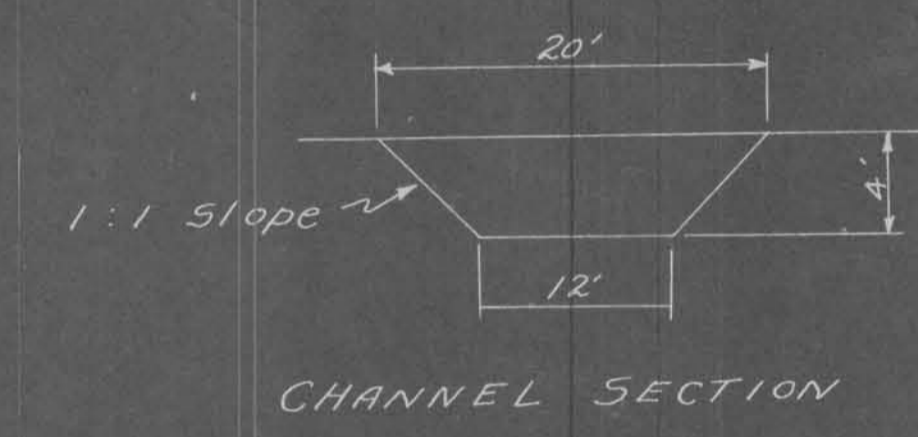
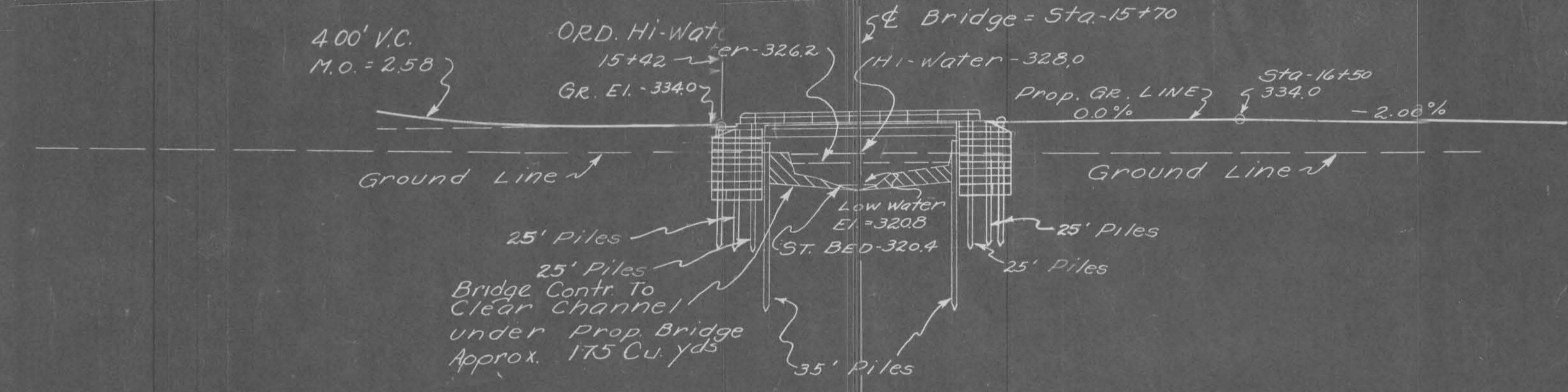
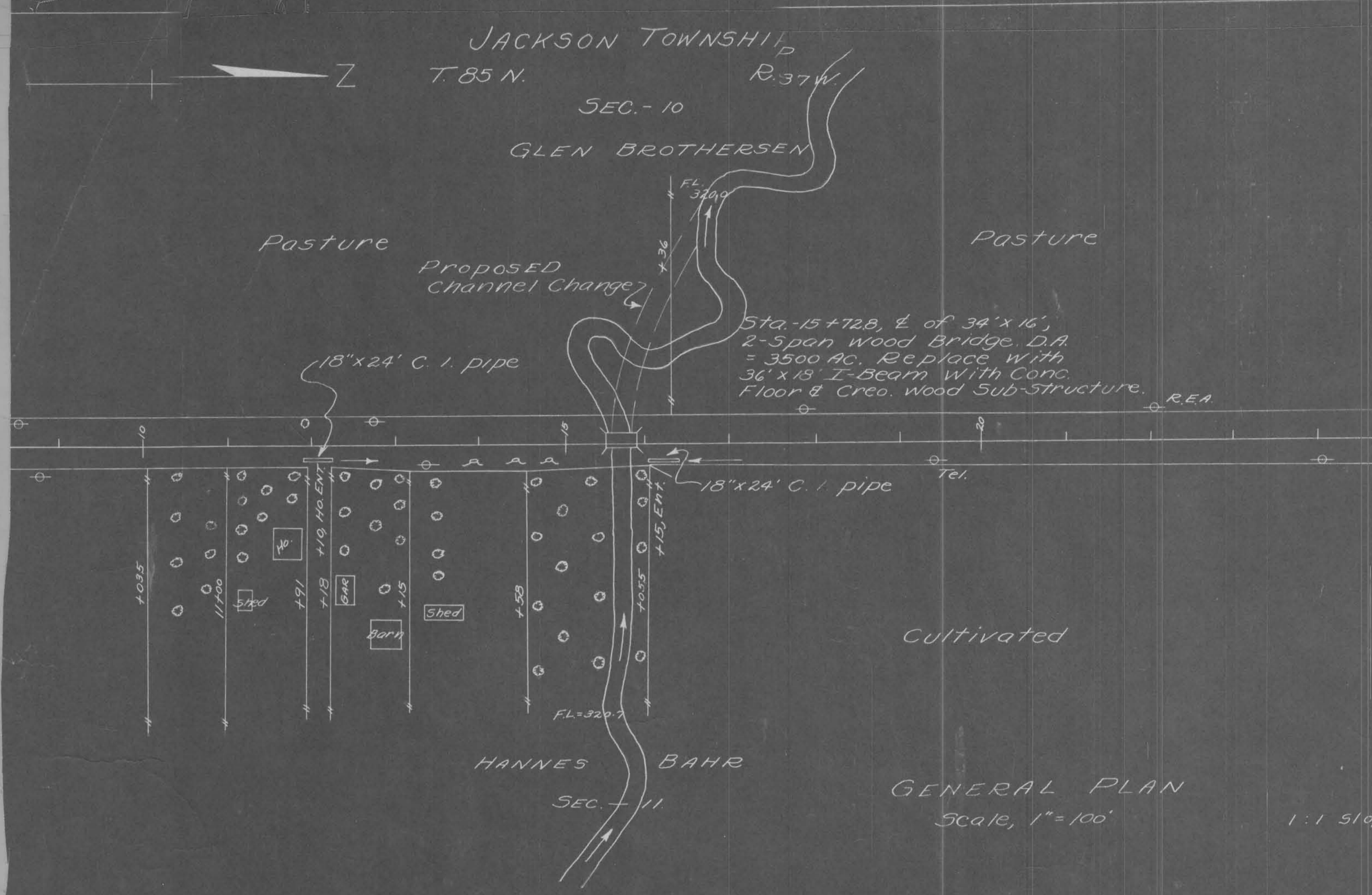
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BOARD OF SUPERVISORS

APPROVED

[Signature box]

CHIEF ENGINEER  
 IOWA HIGHWAY COMM.



PROFILE ON & OF ROADWAY  
SCALE 1"=100'

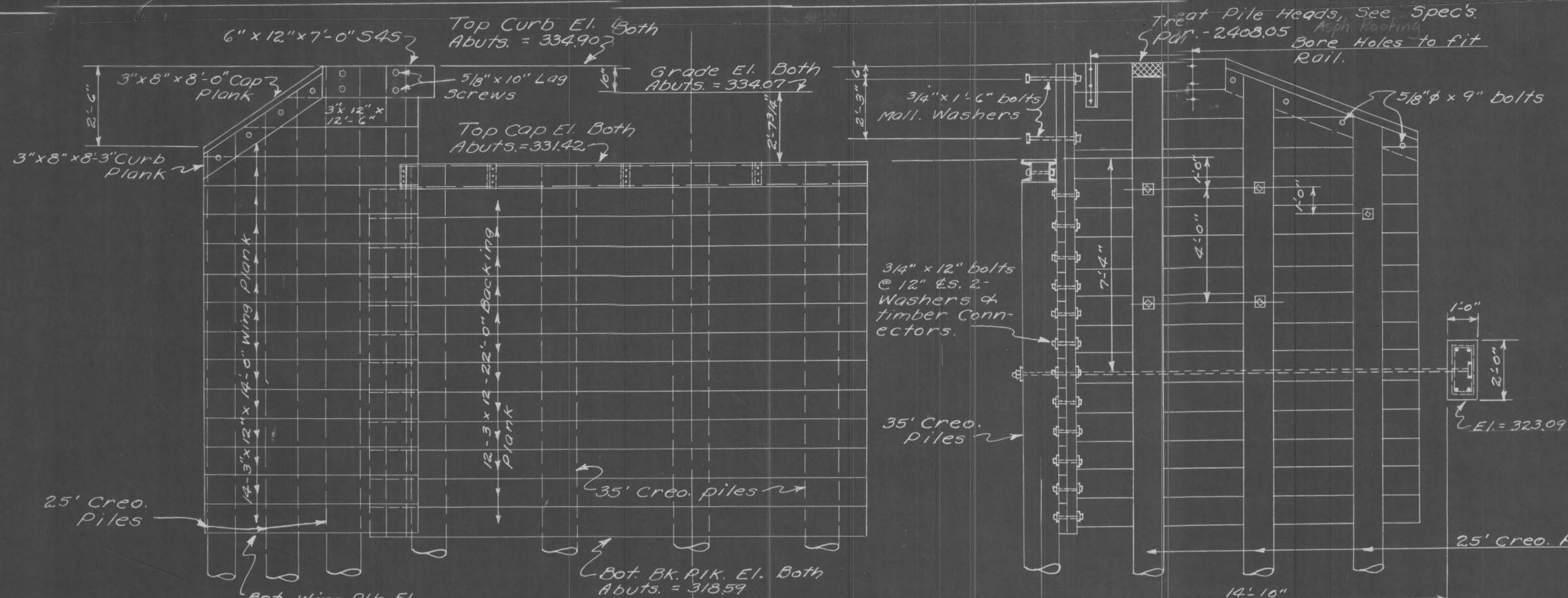
GENERAL DATA FOR PROPOSED  
36' x 18' I-BEAM, CONCRETE FLOOR  
& CREO. WOOD SUB-STRUCTURE.  
SEC. 10 & 11, T.85 N. R.37 W. CRAWFORD  
COUNTY, IOWA. PROJ. # 5N-1398

SITUATION PLAN  
Scale -1"=20'

Design for  
36' x 18' SPAN I-BEAM BRIDGE  
Concrete Floor Wood Substructure  
GENERAL AND SITUATION PLANS  
Sta. -15+70.0 Proj. 5N-1398  
CRAWFORD COUNTY  
IOWA

Location  
Section 10-11  
Jackson Twp.  
Crawford Co.

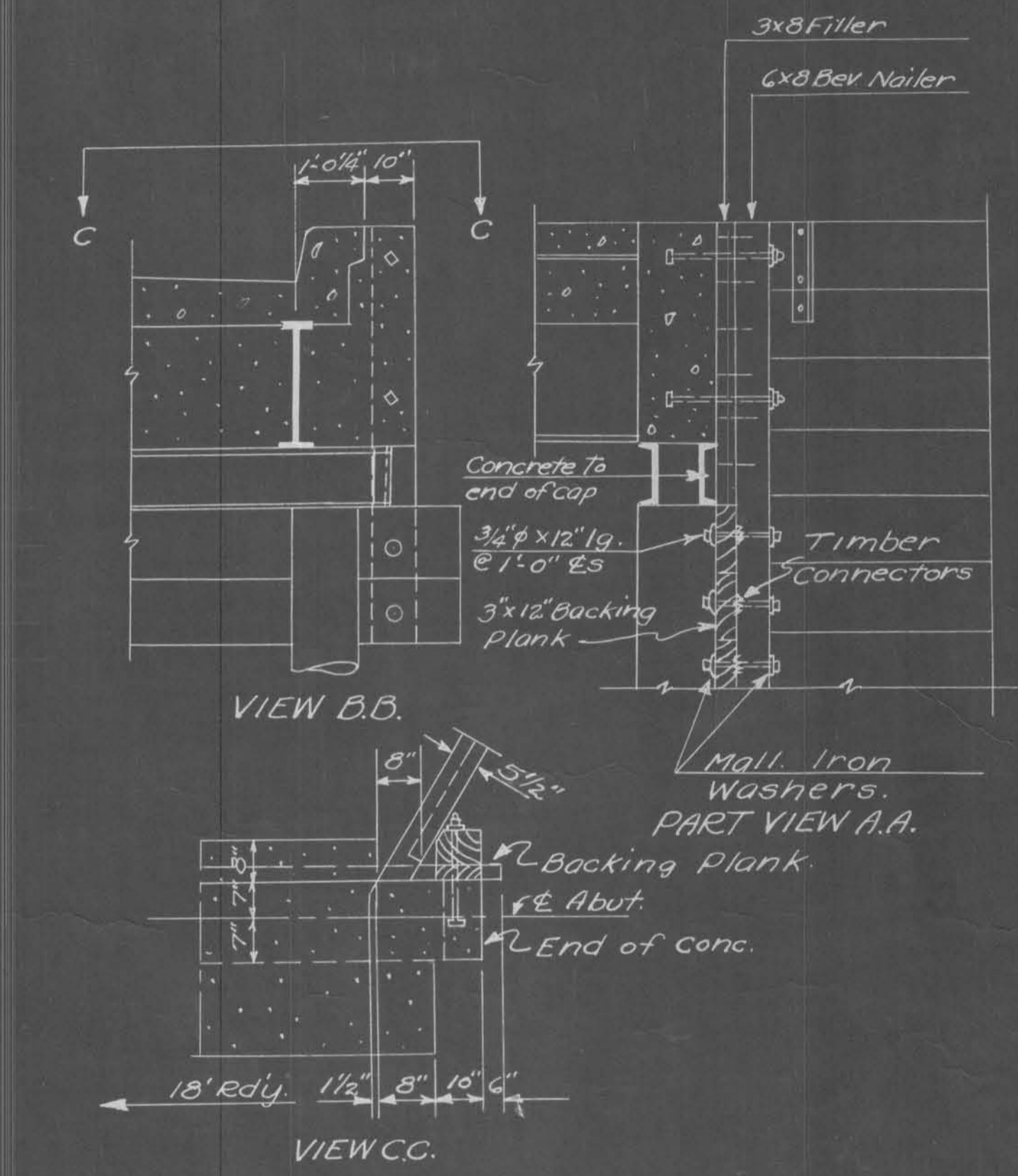
July 1950 Sheet 2 of 3



PART ELEVATION.

WING ELEVATION.

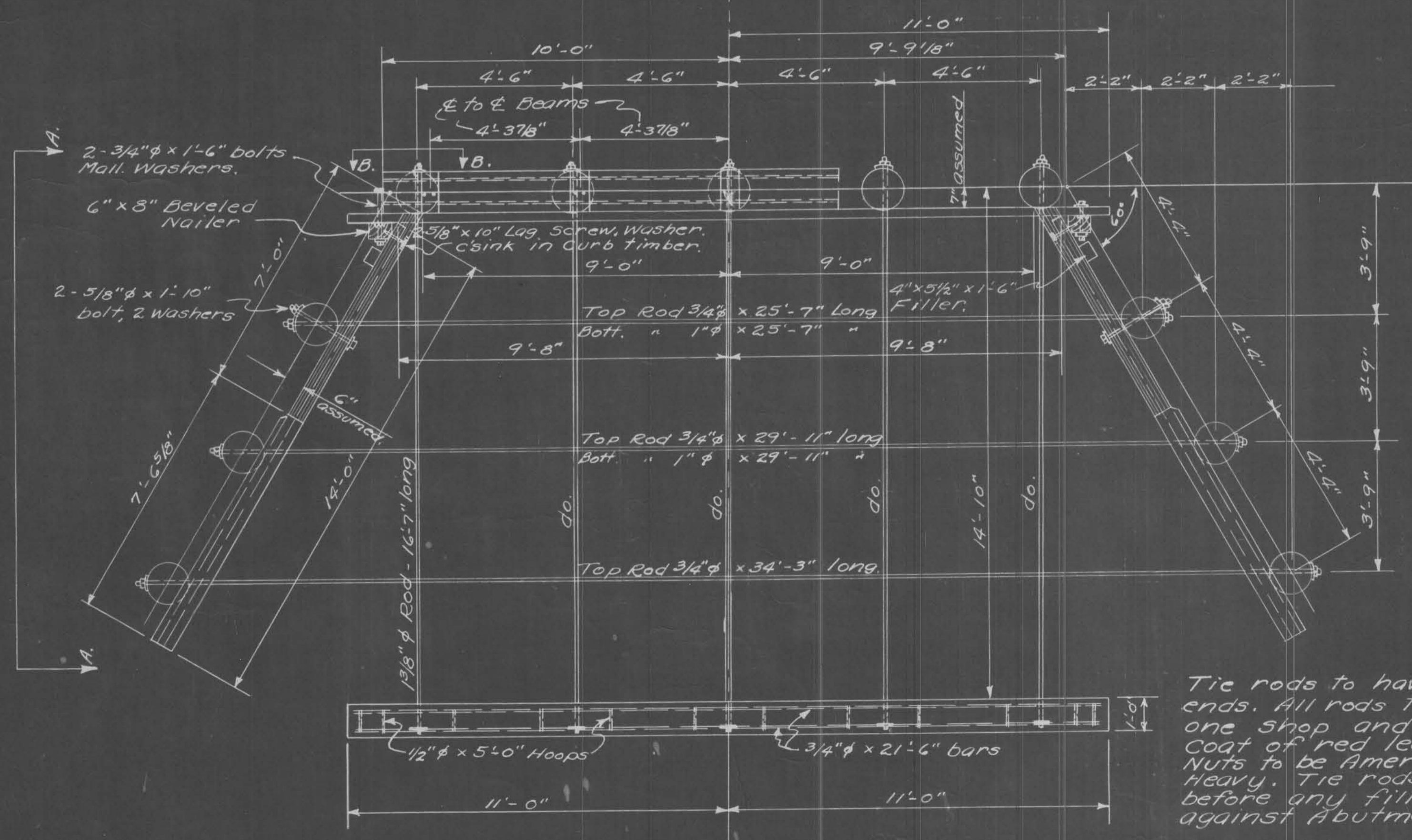
BILL OF CREO. LBR. ONE ABUTMENT				
PART	No	SIZE	LENGTH	F.B.M.
Backing Plank	12	3"x12"	22'-0"	792
Wing "	28	"	14'-0"	1176
" "	2	"	12'-6"	75
Curb timber	2	6"x12"	7'-0"	84
Bev. Nailer	2	6"x8"	16'-0"	128
Filler "	2	3"x8"	4'-2"	17
" Rail	2	4"x5 1/2"	1'-6"	6
Cap Plank	2	3"x8"	8'-0"	32
Curb "	2	3"x8"	8'-3"	33
All Creo. Lbr. Class "D"	TOTAL			2343



Washers for tie rods.  
 3/4" rods - 5" x 12" x 0'-5" Bend to 6"  
 1" " - 5" x 5/8" x 0'-5" " " " " "  
 1 3/8" " - 7" x 1/8" x 0'-7" " " " " "

Abutment Cap Material  
 1- 14 x 3/8 x 20'-0" Cov. Pl.  
 2- 10" x 20" B x 20'-0"  
 6- 8" x 11.5" B x 0'-10"  
 5- 3/4" mach. bolts x 10" Lg.  
 Rivets - 3/4" φ

NOTE:  
 For Superstructure details refer to Iowa Highway Comm. Standard V5B with revisions of Dec. 18, 1939 and Mar. 25, 1947.



ABUTMENT PLAN  
 Scale 3/16" = 1 Ft.

Approved Timber Connectors.  
 Bulldog # 16 ga. 4" □  
 Teco toothed ring, 16 ga. 3 3/8" φ  
 Teco spiked grid 4" Cast.

Tie rods to have 6" threaded ends. All rods to be given one shop and one field coat of red lead paint. Nuts to be American Standard Heavy. Tie rods to be tightened before any fill is placed against abutment.

GENERAL NOTES

All piles to be driven to full penetration if practicable. Required bearing value of main abutment piles equals 15 tons. In place of 3"x12" planks shown 3"x8" or 3"x10" planks may be substituted provided that the wall height shown is maintained. Section 4142 of Standard Specifications applies to all piles. All lumber and piles to be creosoted. For details of Superstructure refer to Standard V5B with revisions of Dec. 18, 1939 and Mar. 25, 1947. For abutments refer to Standard V8 with modifications as shown hereon. Wing rails to be steel. Curb timbers to be given two coats of aluminum paint. Hardware includes all bolts, M.I. Washers, nuts, lag screws and timber connectors. All hardware to be galvanized. Tie rods, plate washers and nuts for tie rods are included in Structural Steel estimate. Standard Specifications Iowa State Highway Commission Series of 1948 shall apply to all work. Each wing & backing pl. to be nailed to contact piling with 2-5d galvanized nails, Nails to be included in price bid for lumber.

Backfill Note:  
 Bridge contractor to backfill all material excavated in building abutments and anchorages. All backfilling to be thoroughly compacted by mechanical tamping except area within 6' distance from backwall and wings to be hand tamped.

ESTIMATED QUANTITIES		
PART	2 ABUT.	SUPER-S.
Concrete	3.30 CY	2.55
Reinf. Steel	338 lbs	3745
Structural Steel	4208 lbs	18910
Creosoted Lumber	4486 FBM	
Creosoted Piles (Trestle)	12 @ 25'	
"	10 @ 35'	
Hardware	218 lbs.	
Excav. Cl. 20	130 cy	
" Cl. 21	19 cy	
Excav. & 10	175 cy	

Location  
 Section 10, 10-11  
 Jackson Twp.  
 Crawford Co.

Design for  
 36'x18' SPAN I-BEAM BRIDGE  
 Concrete Floor Wood Substructure  
 SUBSTRUCTURE DETAILS  
 Sta. - 15+70.0 Proj. 51N-1398  
 CRAWFORD COUNTY  
 IOWA

July 1950 Sheet 3 of 3