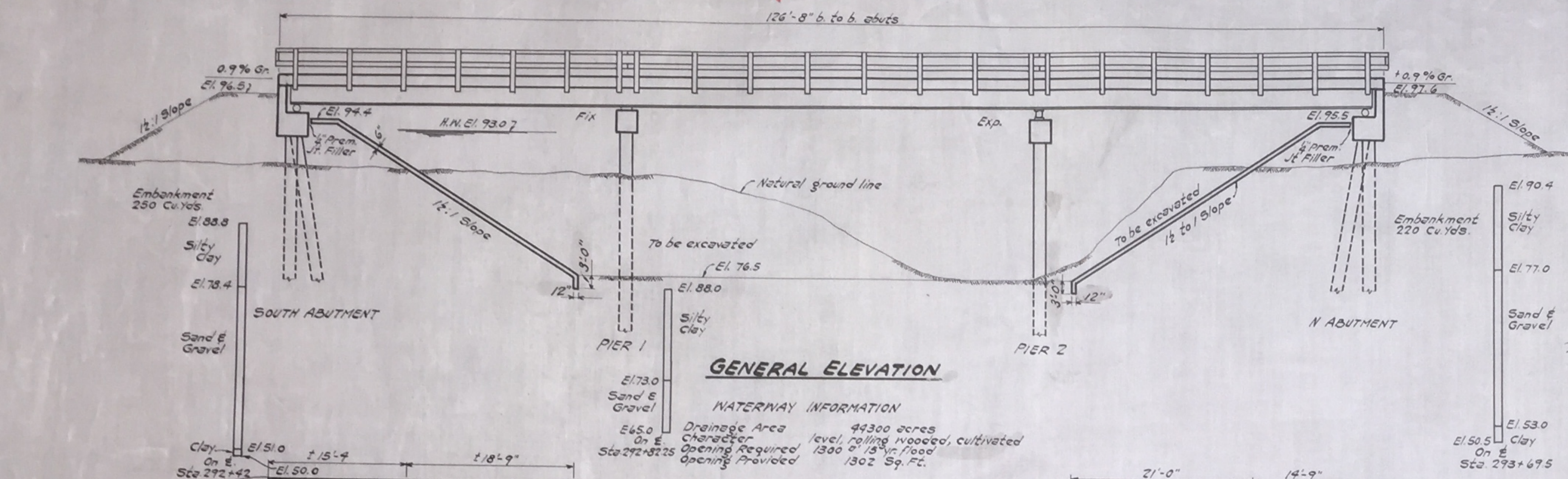


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
410	9B	Warren	13	10
STA. 293+05		TO STA.		
PUB. ROAD DIST. NO. 1		PROJECT		5607(1)

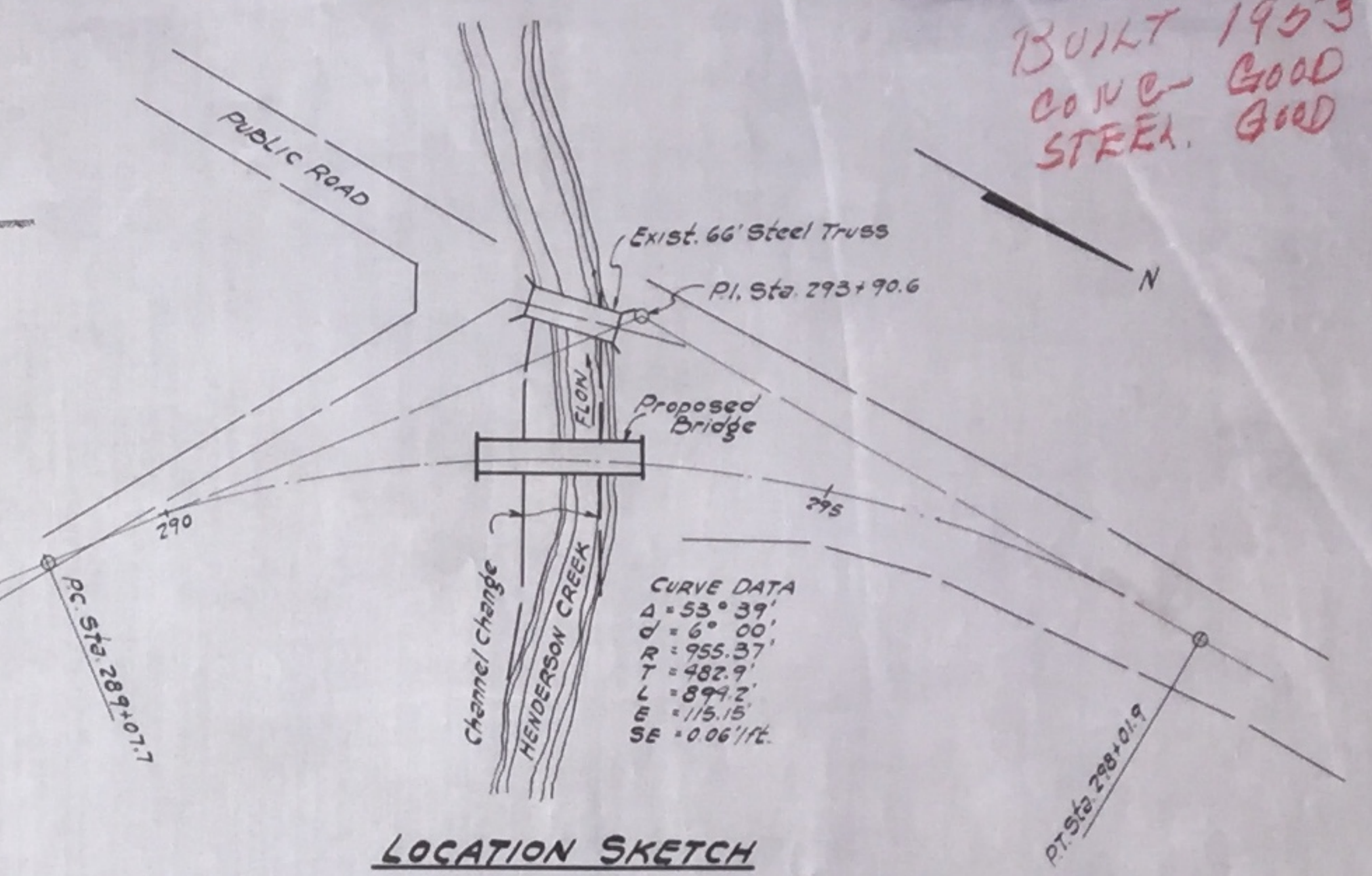
Span in abutment tube on old Bridge Lt. Sta. 293+00 El. 92.44
Exist. Bridge's Span Steel Truss 14' Roadway
Steel Tube Substructure To be removed by Contractor
Not to be Salvaged (Except Plank Floor)



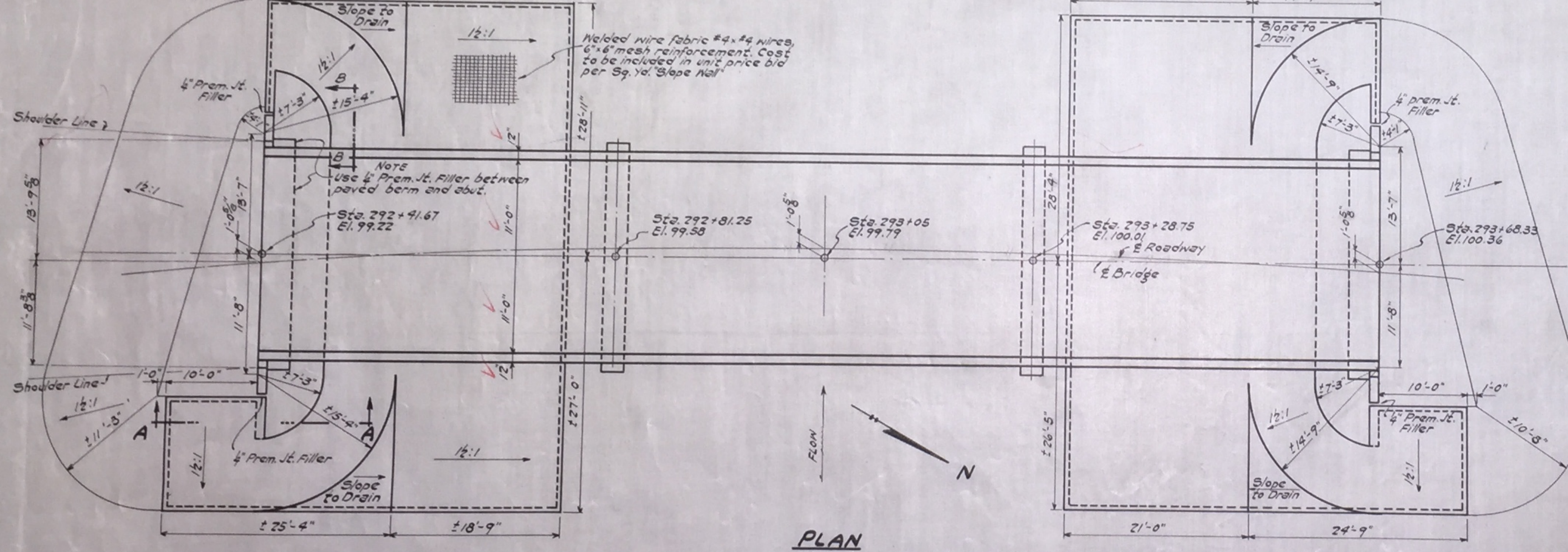
GENERAL ELEVATION

WATERWAY INFORMATION

Drainage Area: 49300 acres
Character: level, rolling wooded, cultivated
Opening Required: 1300' x 13' in Floor
Opening Provided: 1302' Sq. Ft.



LOCATION SKETCH

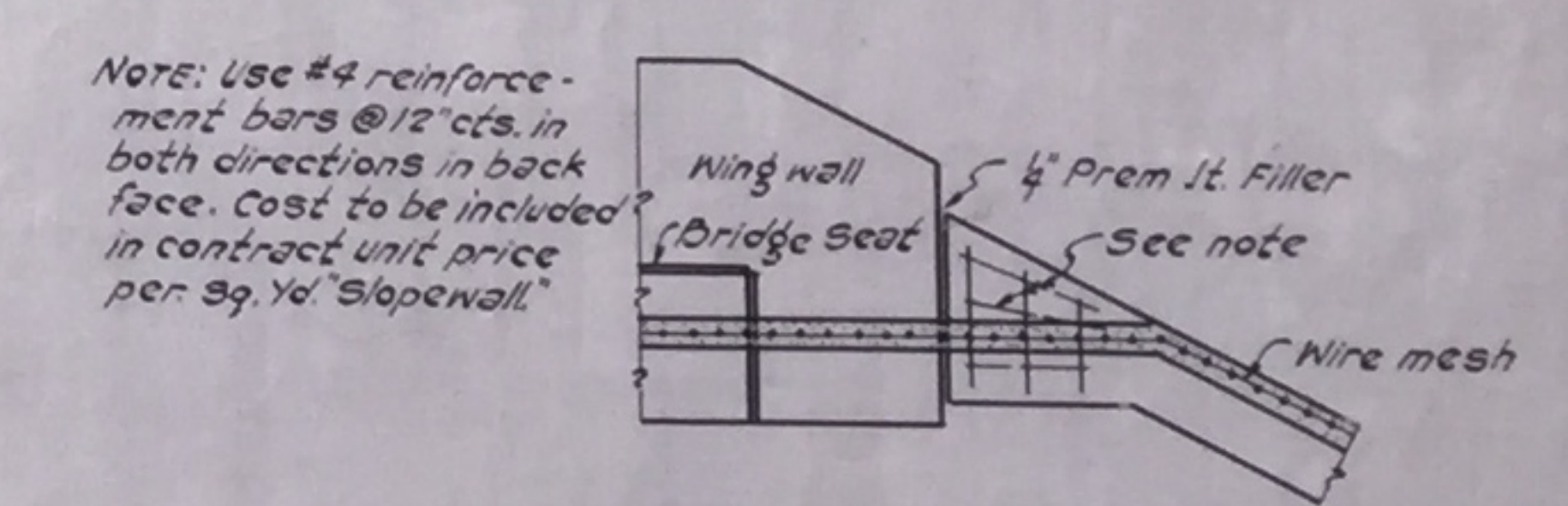


PLAN

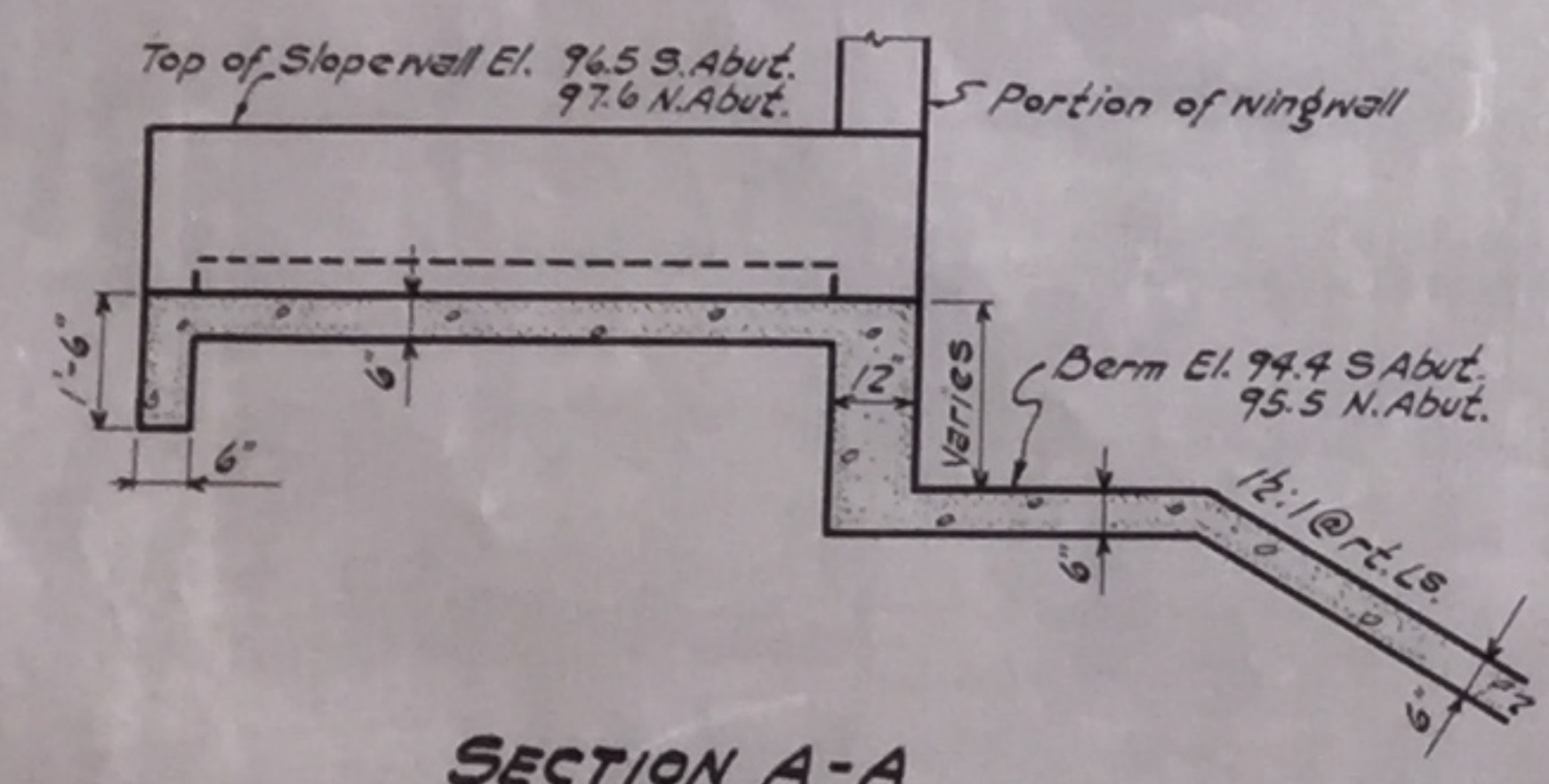
GENERAL NOTES

The "Standard Specifications for Road & Bridge Construction" of the State of Illinois shall govern.
Class X Concrete shall be used through-out.
All rivets shall be 3/8" and open holes 13/16" except as noted.

All holes for splice shall be punched 1/8" and reamed to proper size (13/16" in the web and 15/16" in flange) with stringers assembled in shop in proper position with or without diaphragms in place. Leave assembled for shop inspection by State of Illinois.
Structural Steel shall receive one shop coat of red lead paint after inspection and two field coats of aluminum paint. All paint to be furnished by the Contractor.
All rollers, rockers, bearing plates, lead plates and anchor bolts shall be furnished painted and set in accordance with Art. 51.14 of the Specifications and are included for payment as Structural Steel.
Anchor bolts shall be set before diaphragms are in place at the abuts & piers.
One conc. test pile shall be driven in permanent pile location at a pier as directed by the Engineer before ordering or casting the remainder of piles.
Concrete floor slab shall be finished in accordance with Art 51.18a of the Specifications and shall be poured in one continuous operation between Constr. joints shown.
Embankments are to be constructed from channel excavation in accordance with section 12 and 16 of the specifications before the superstructure is erected.
The layout of the slope walls may be altered to conform to ground surface if necessary after the embankment is constructed if so ordered by the Engineer.
One timber test pile shall be driven as directed by the Engineer before ordering remainder of piles.
The unit price bid for slopewall shall include all excavation necessary for the construction of the slopewall as shown.



SECTION B-B



SECTION A-A

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
Class X Concrete	Cu.Yds	74.2	46.8	121.0
Reinforcement Bars	Lbs.	13,900	3,770	17,670
Structural Steel	Lbs.	82240		82240
Name Plate	Each			1
Crested Piles (24' Long)	Lin.Ft.		240	240
Precast Concrete Piles (40' Long)	Lin.Ft.		360	360
Test Piles (Concrete)	Each		1	1
Slope Wall	Sq. Yds.		621	621
Channel Excavation	Cu.Yds.			3880
Remove Exist. Structures	Each			1
Test Piles (Timber)	Each		1	1

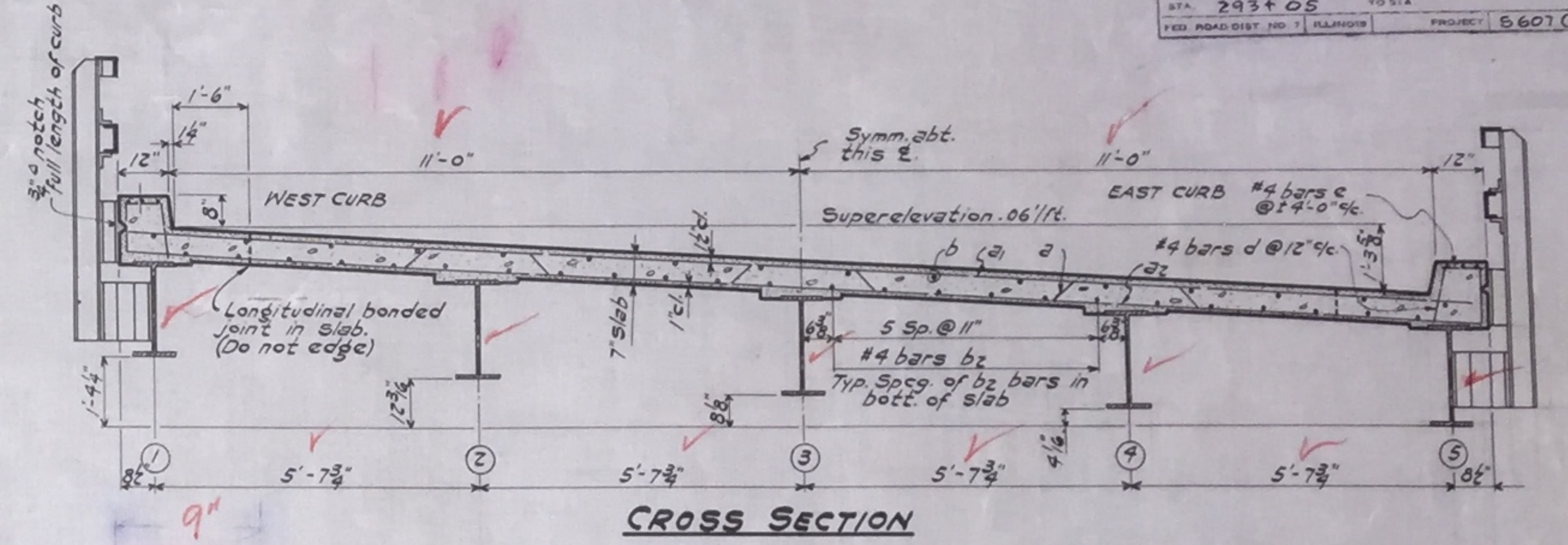
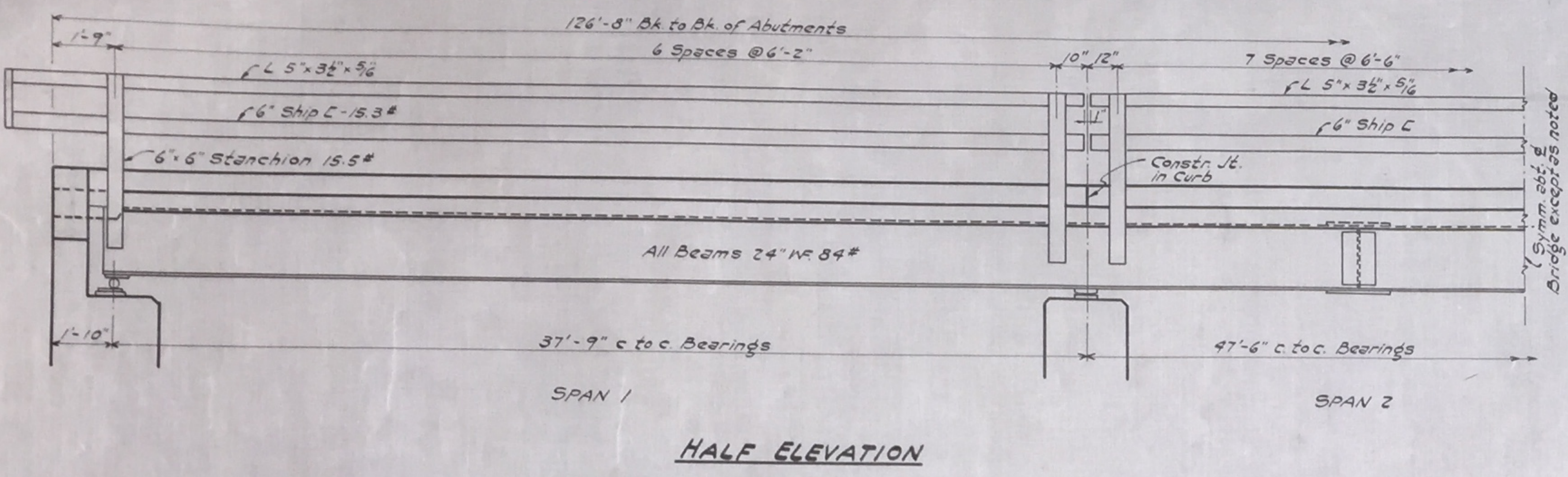
DESIGN STRESSES

$f_s = 20,000$ #6" reinf.
 $f_c = 1200$ #6"
 $f_s = 13000$ #6" Struct.
 $n = 10$

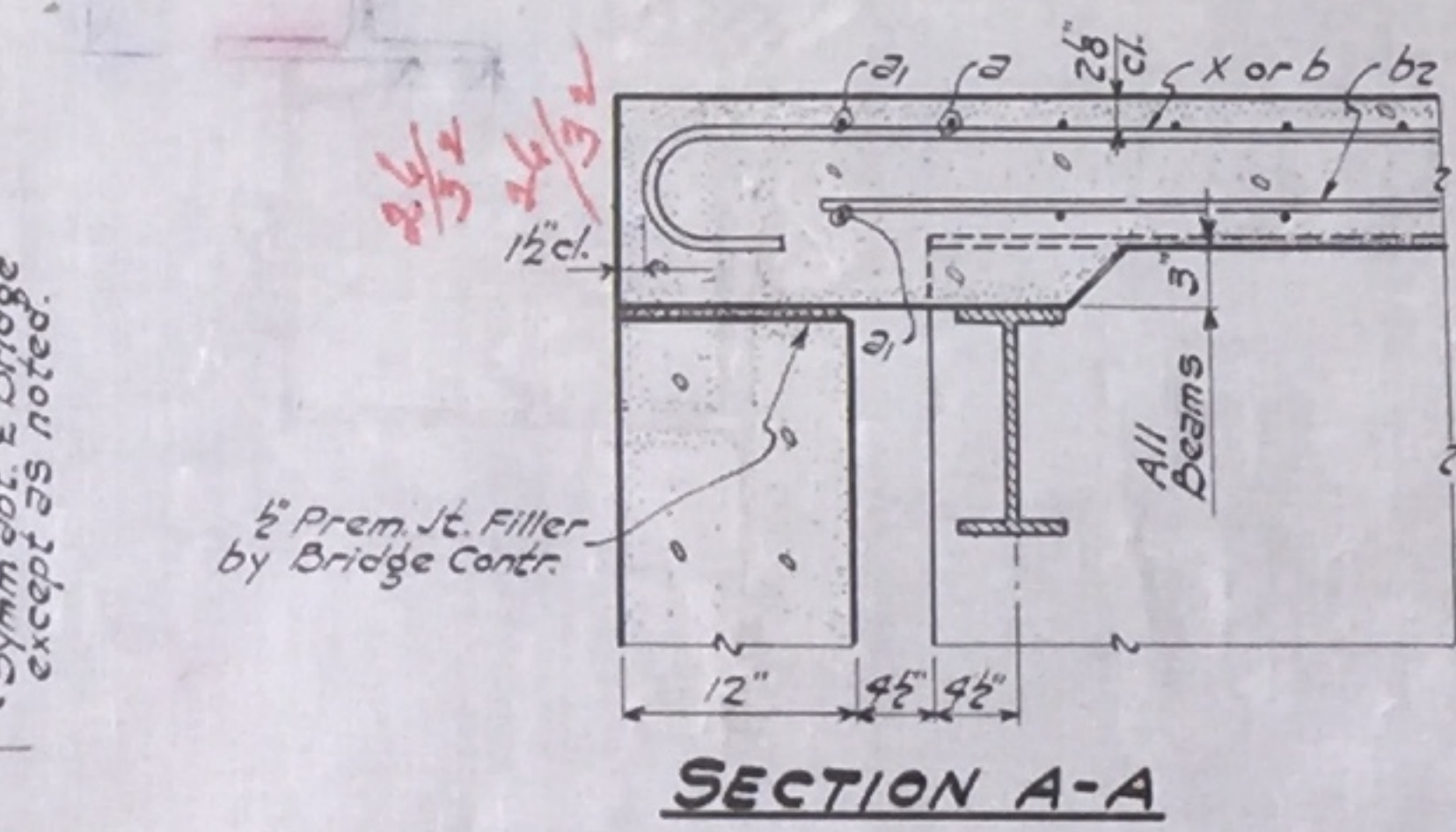
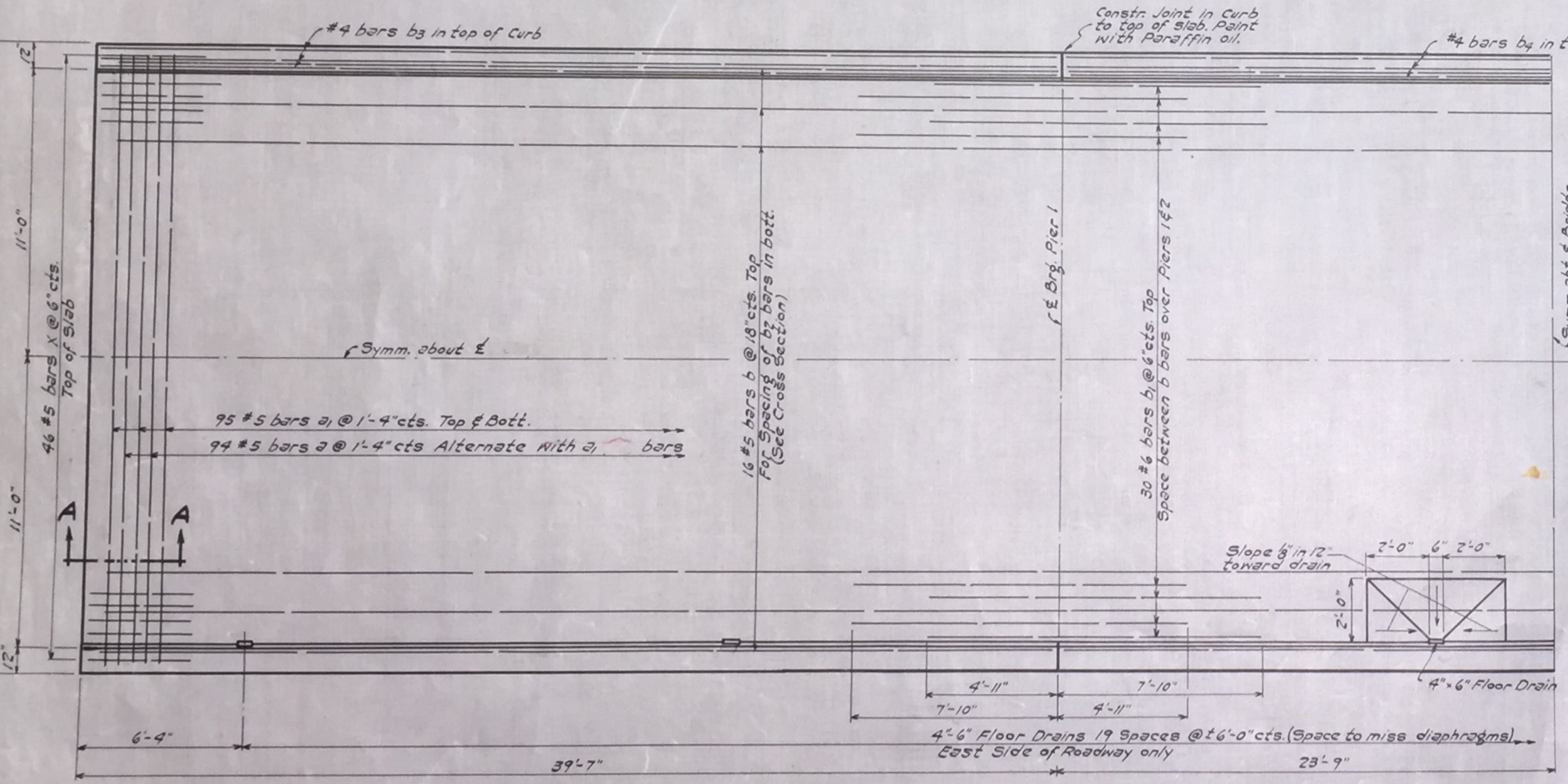
LOADING H-20

F.A.S. RT. 410 SEC. 9 B
PROJECT S607(1)
WARREN COUNTY
STA. 293+05

ROUTE NO.	SECTION	CURVE	TOTAL PAGES	SHEET NO.
410	9B	Warren	13	11
STA. 293+05		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS		PROJECT 5607(1)



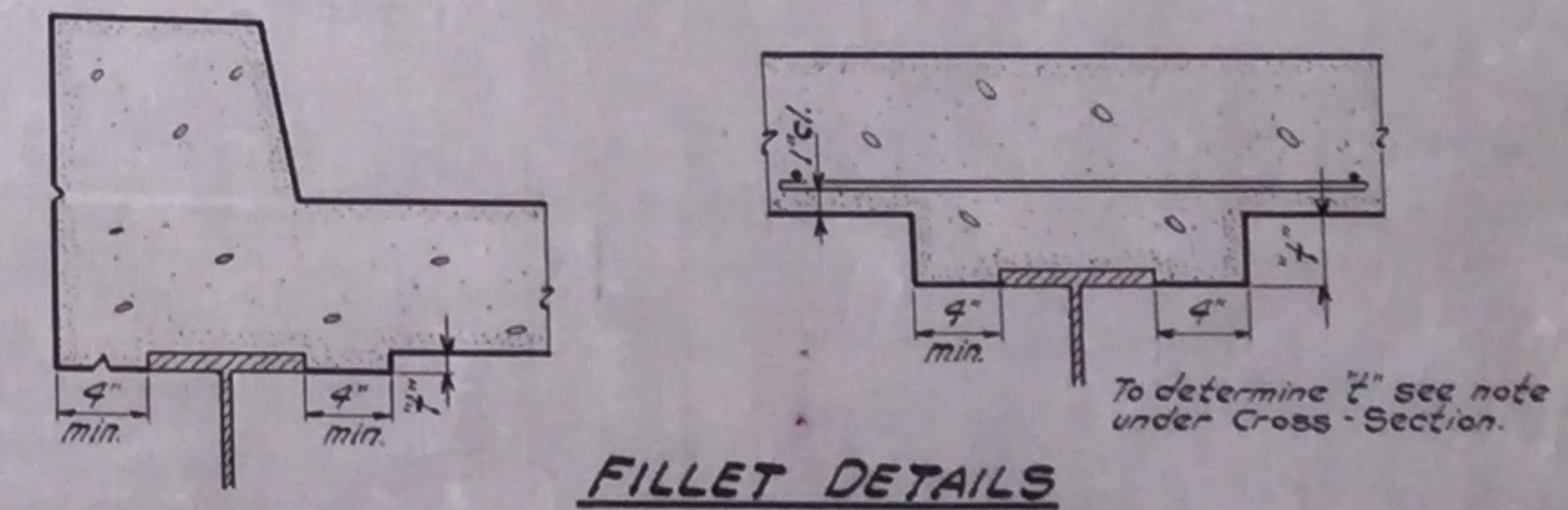
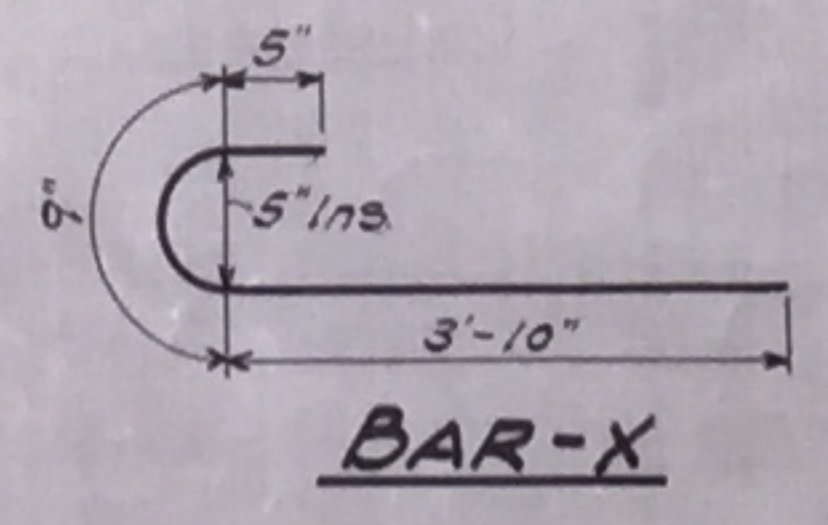
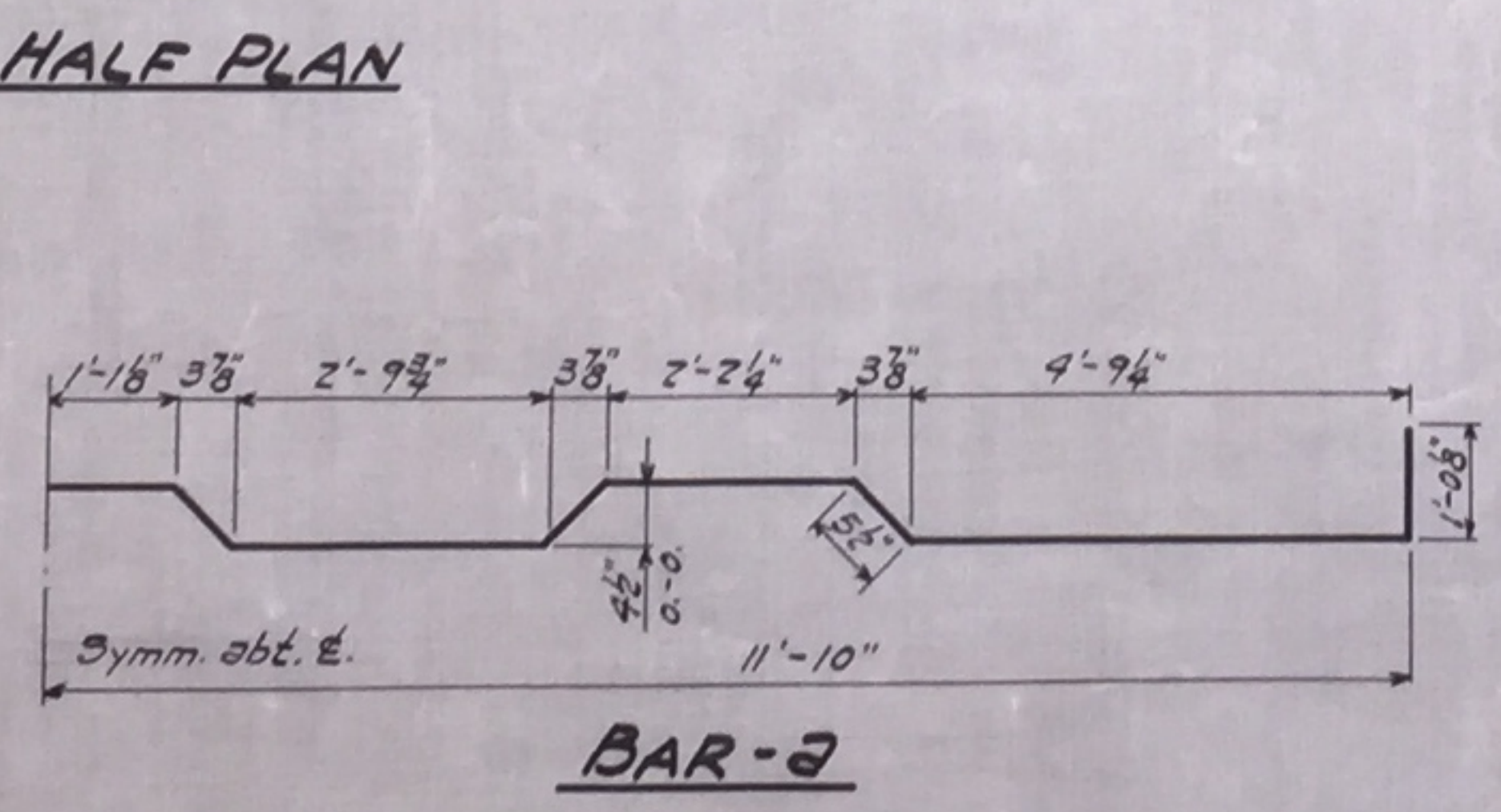
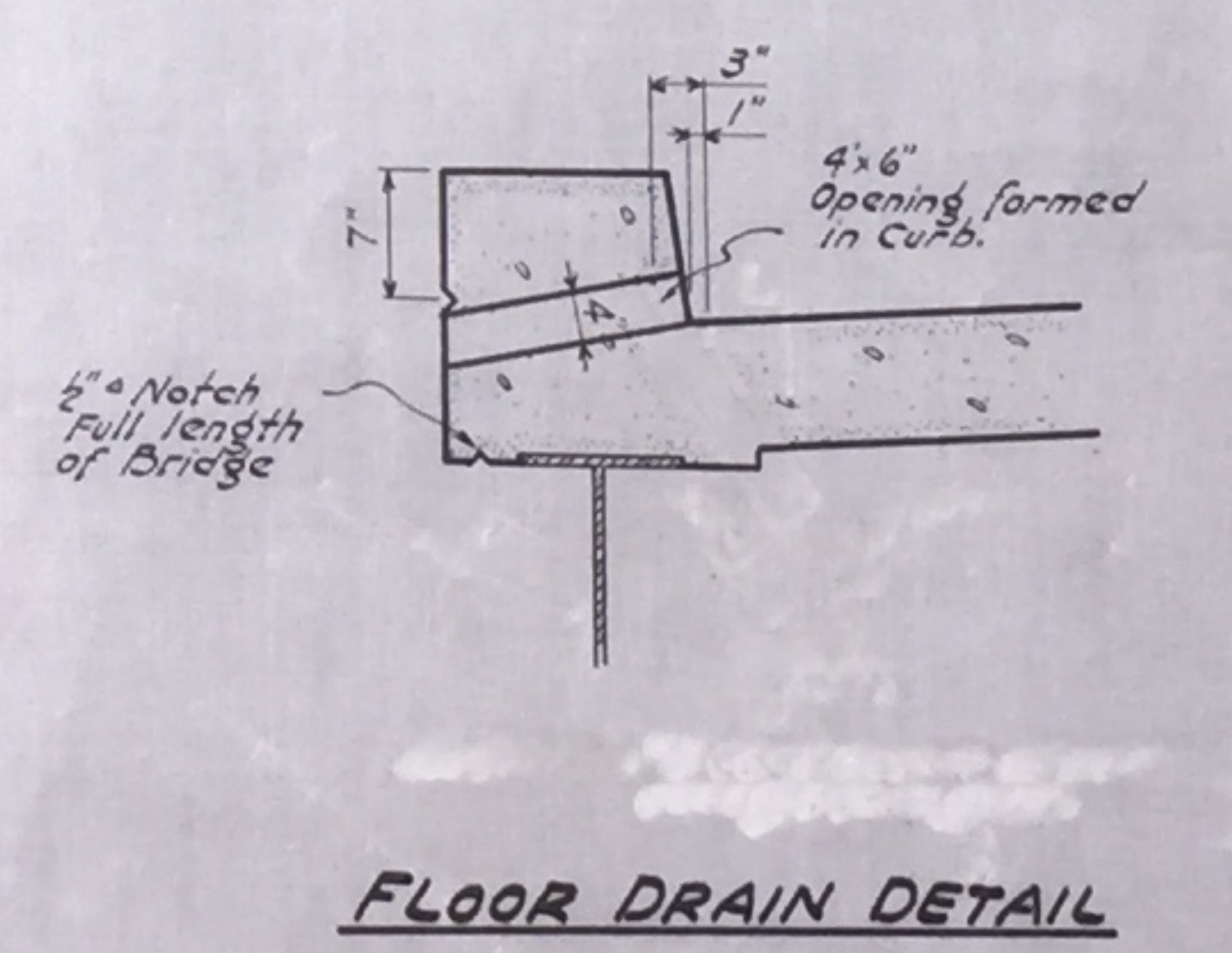
After all Structural Steel has been erected, elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 feet. From these elevations subtract the increment of deflection for these points, determined from the dead load deflection diagram. The elevations so obtained, subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet height above top of flange.



BILL OF MATERIAL

BAR	No	SIZE	LENGTH	SHAPE
a	94	#5	26'-6"	
a1	190	#5	23'-9"	
b	80	#5	26'-0"	
b1	60	#6	12'-9"	
b2	120	#4	26'-0"	
b3	24	#4	20'-0"	
b4	12	#4	24'-0"	
d	252	#4	1'-0"	
c	64	#4	0'-9"	
X	92	#5	5'-0"	
Class X Concrete			Cu yds.	79.2
Reinforcement Bars			Lbs.	13,900
Structural Steel			Lbs.	82,240
Name Plate			Ea.	1

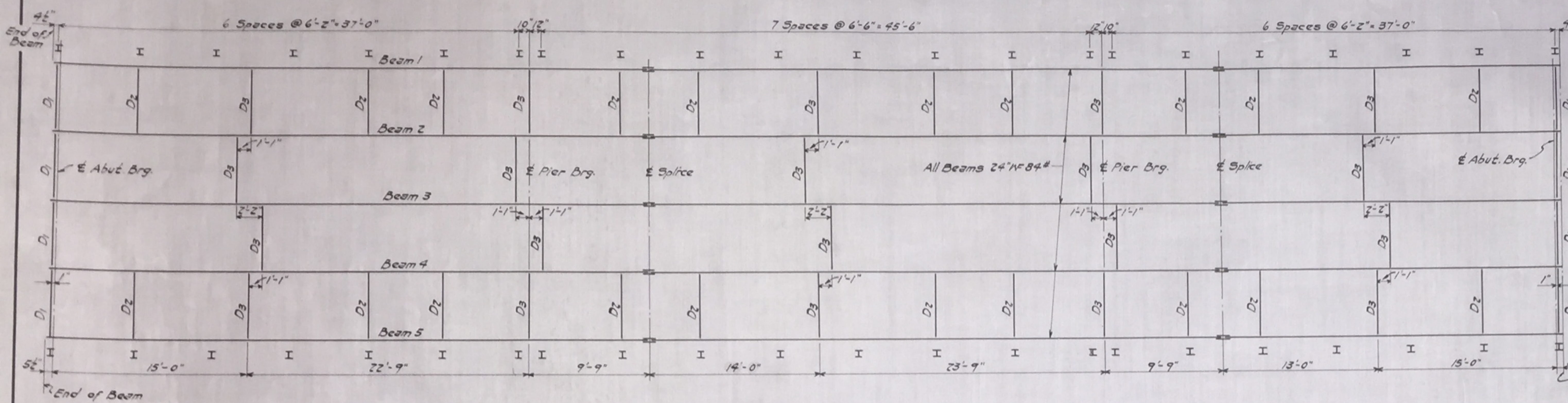
Note: All bars shall be round A.S.T.M. A-305-49. The size number is the number of 8 in the nominal diameter.



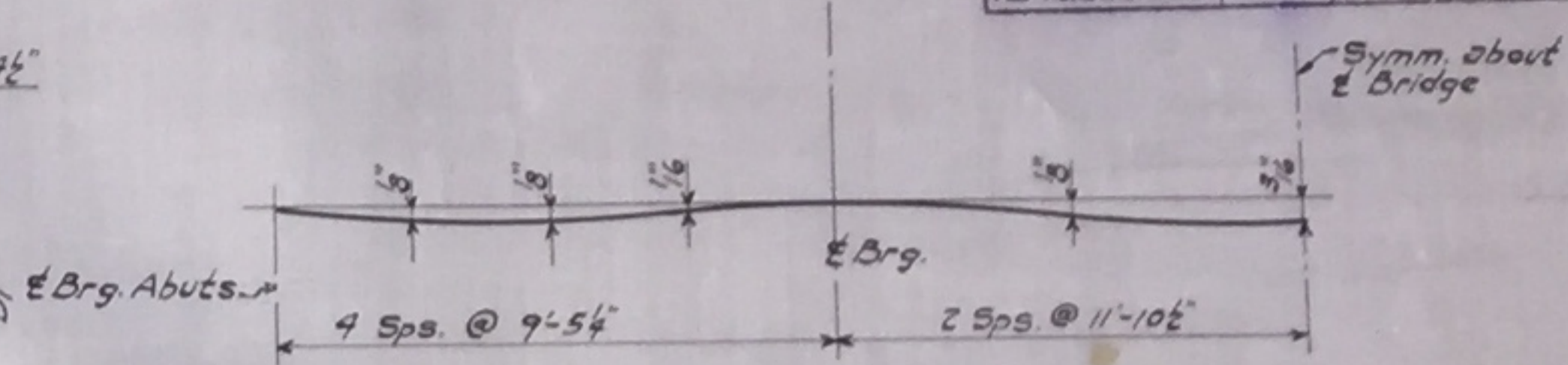
Stresses
 fs = 18000 Struct.
 fs = 20000 Reinf.
 fc = 1200 Super
 n = 10

F.A.S.R.T.E. 410 SEC. 9B
PROJ. 5607(1)
WARREN COUNTY
STA. 293+05

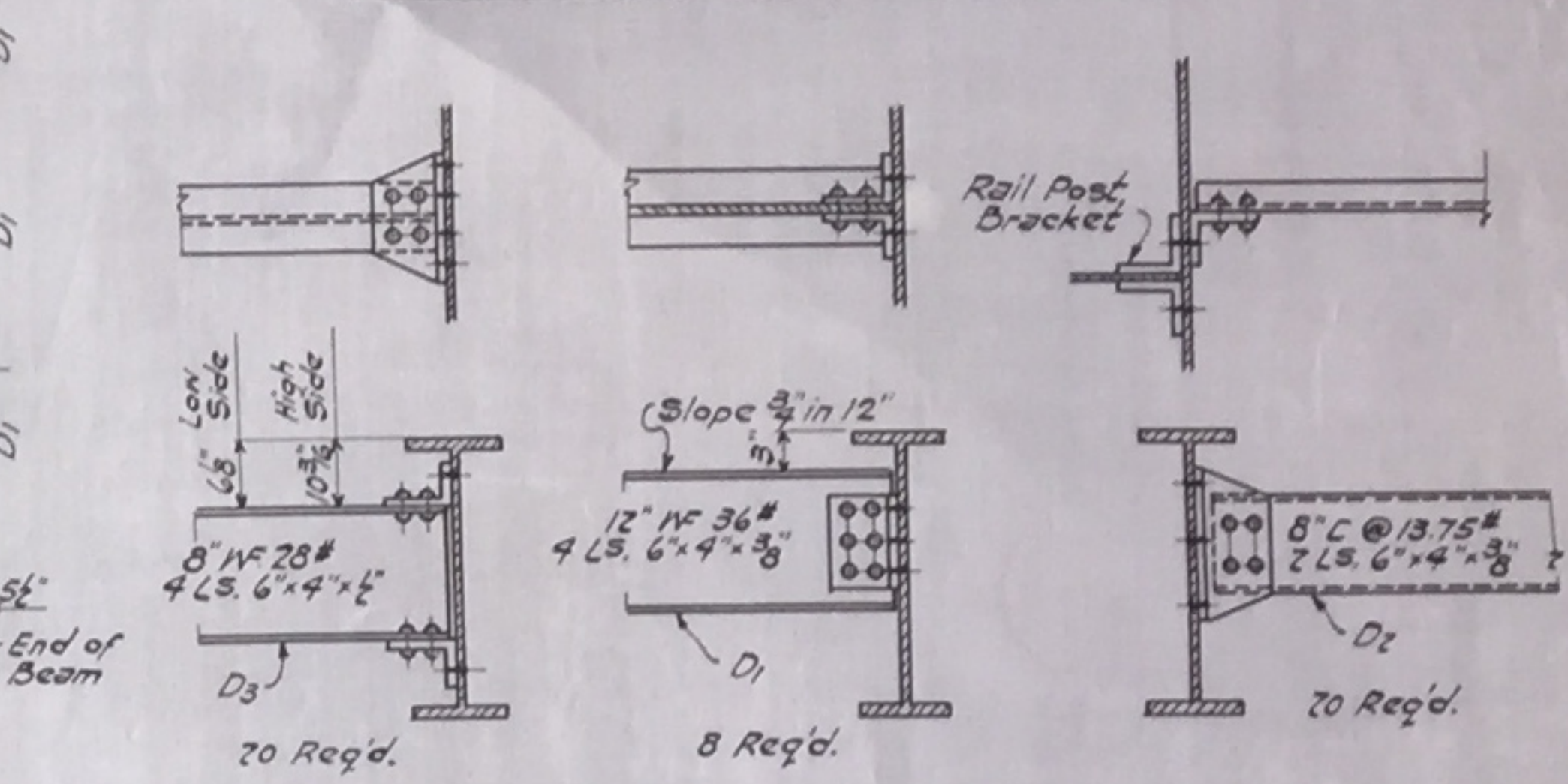
ROUTE NO.	SECTION	COUNTY	NO. SHEETS	SHEET NO.
410	9B	Warren	13	12
BYA 293+05		TO STA	PROJECT 5607(1)	
FED. ROAD DIST. NO. 7		PLAN	PROJECT 5607(1)	



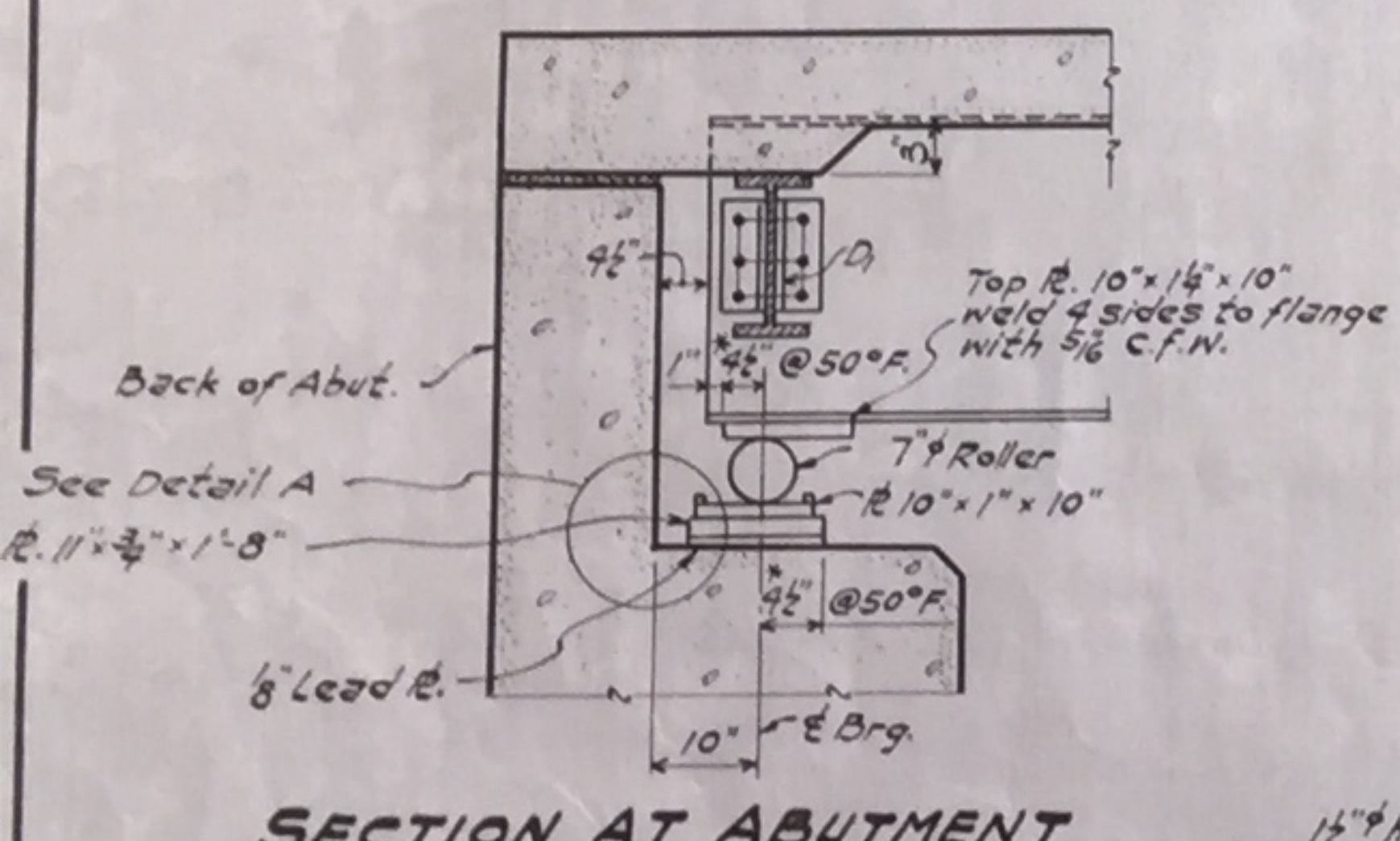
LAYOUT OF STRUCTURAL STEEL



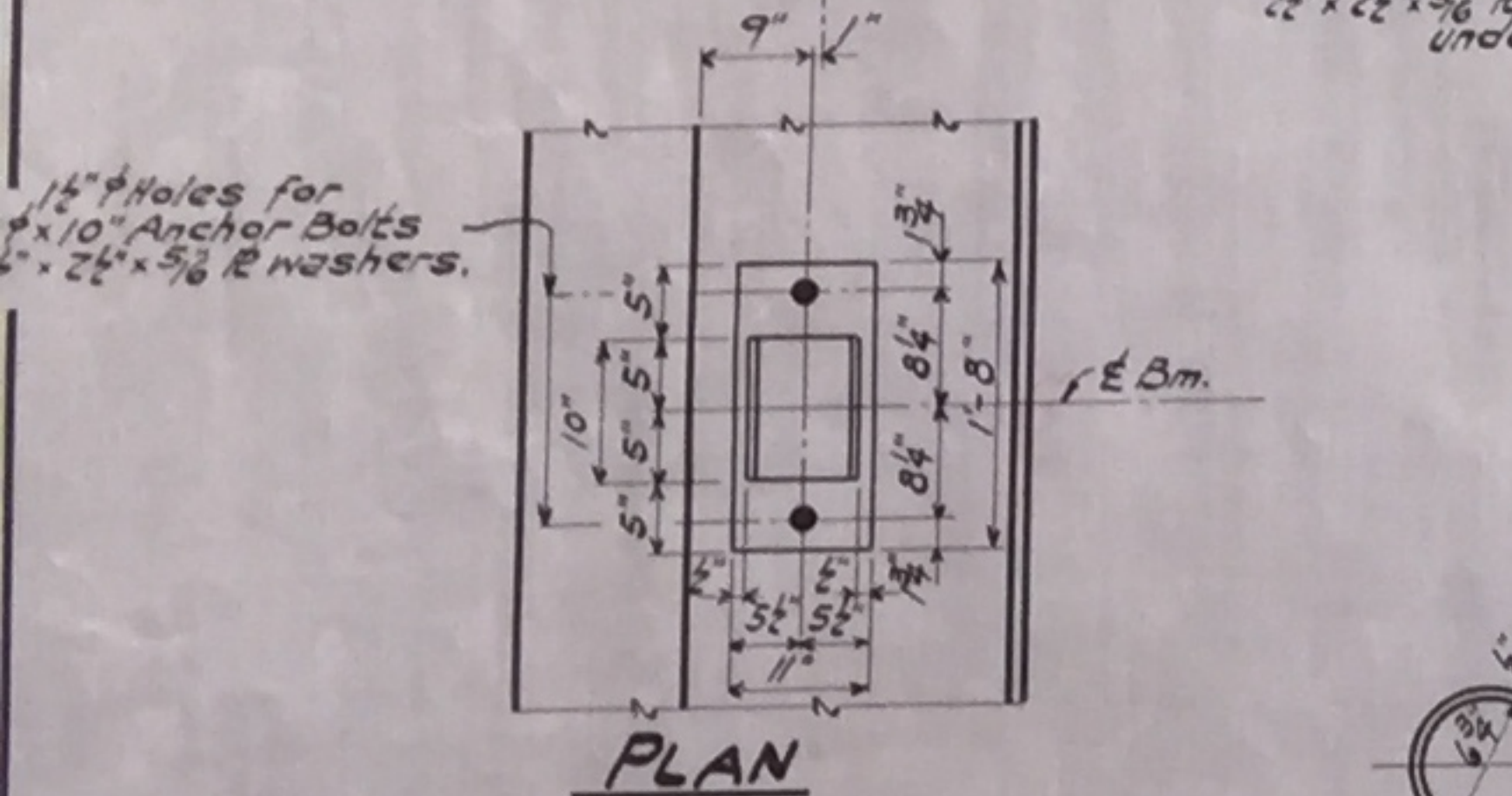
D.L. DEFLECTION AT 4 POINTS



DIAPHRAGM DETAILS

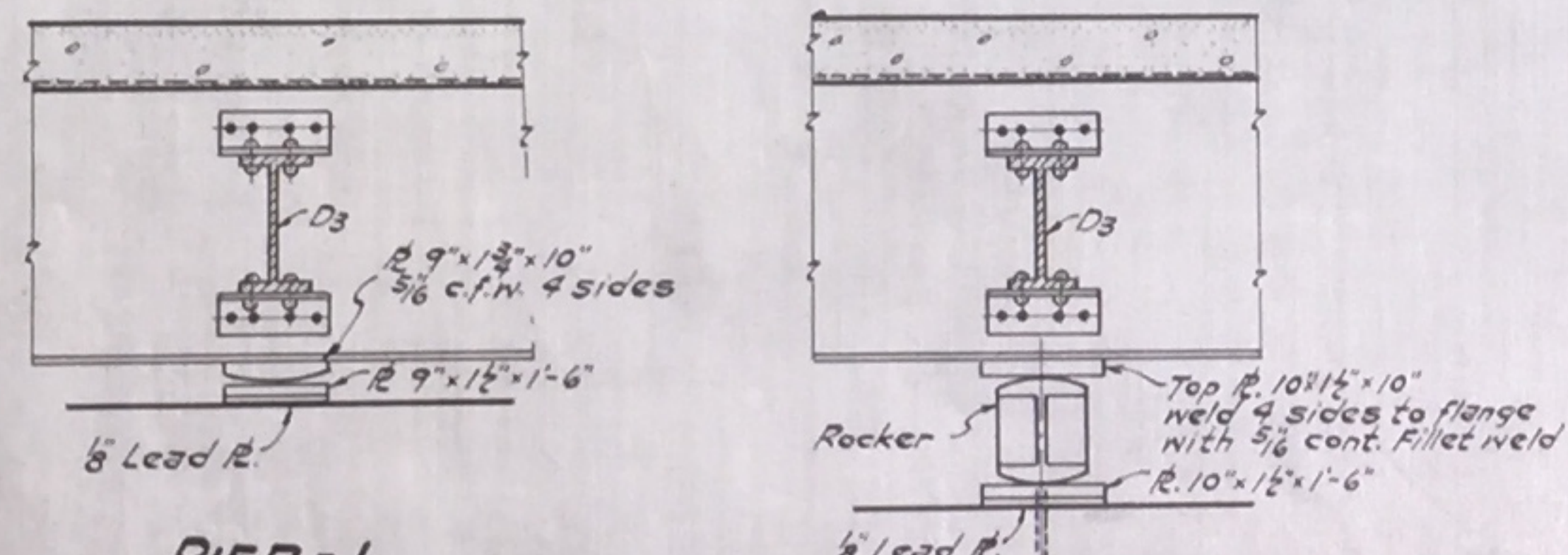


SECTION AT ABUTMENT



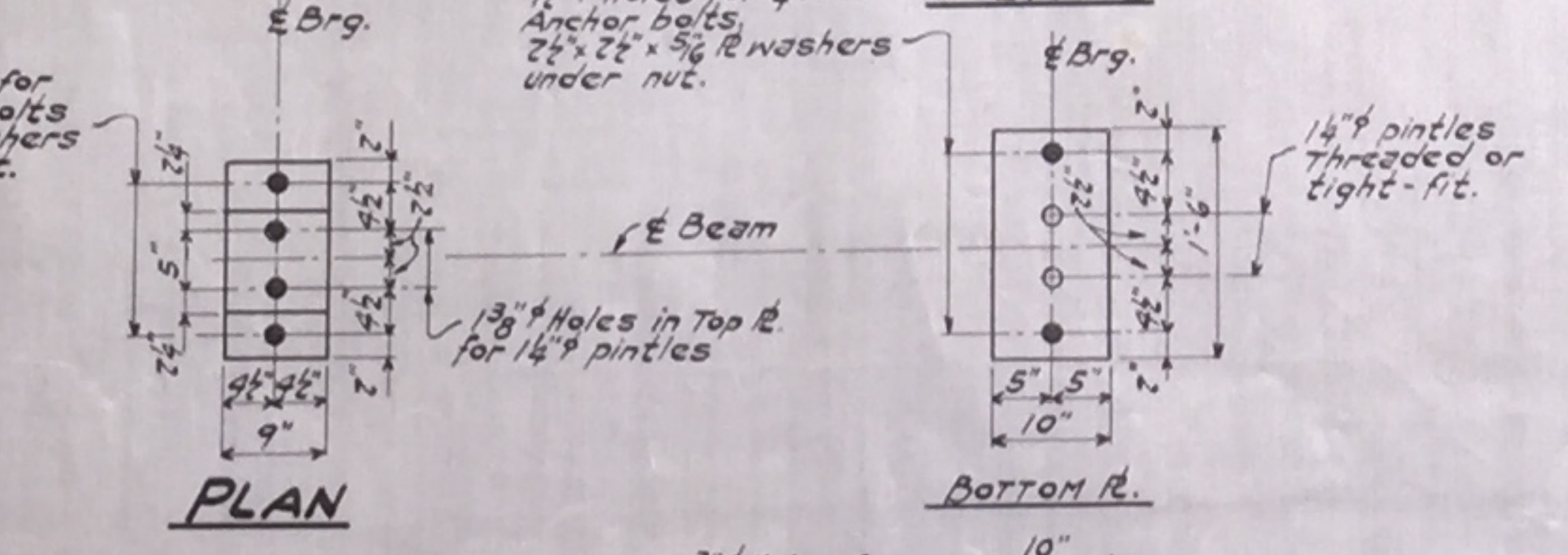
PLAN

* NOTE TO ERECTOR: Increase each dimension by the same amount if Abutment has moved or if Temp. is over 50°F. Decrease each by the same amount if Temp. is below 50°F.



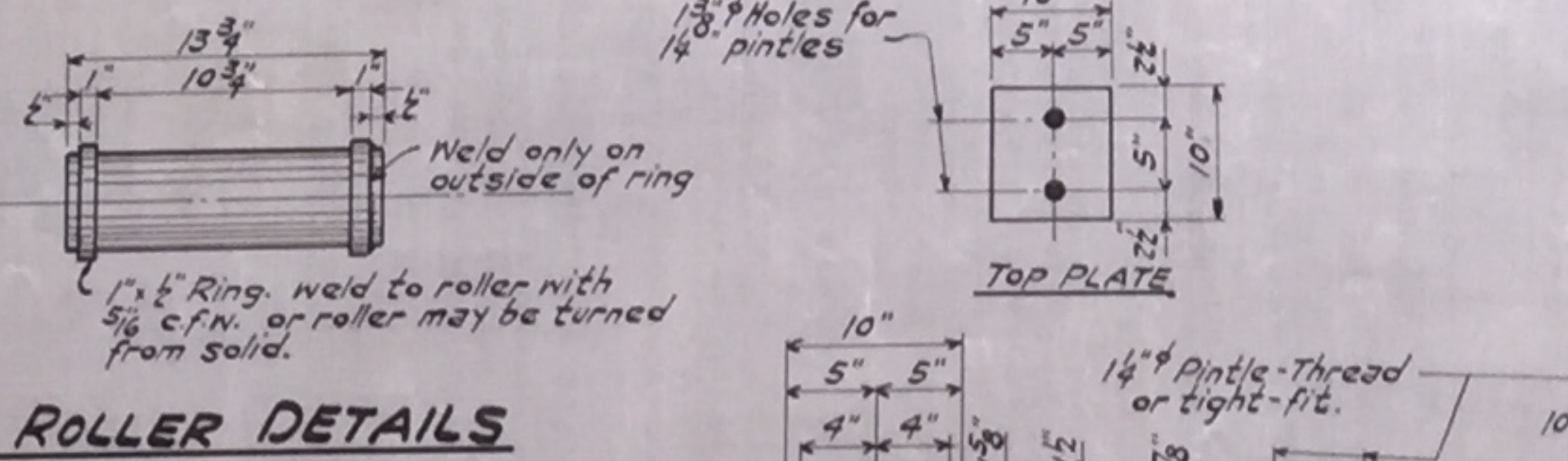
PIER-1

PIER-2

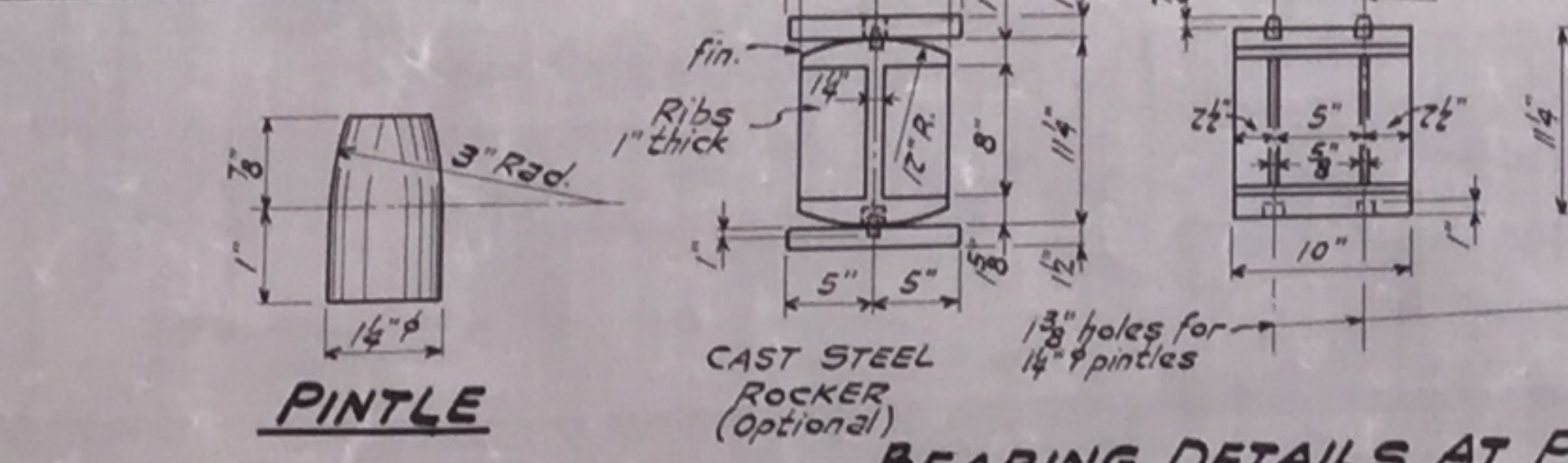


PLAN

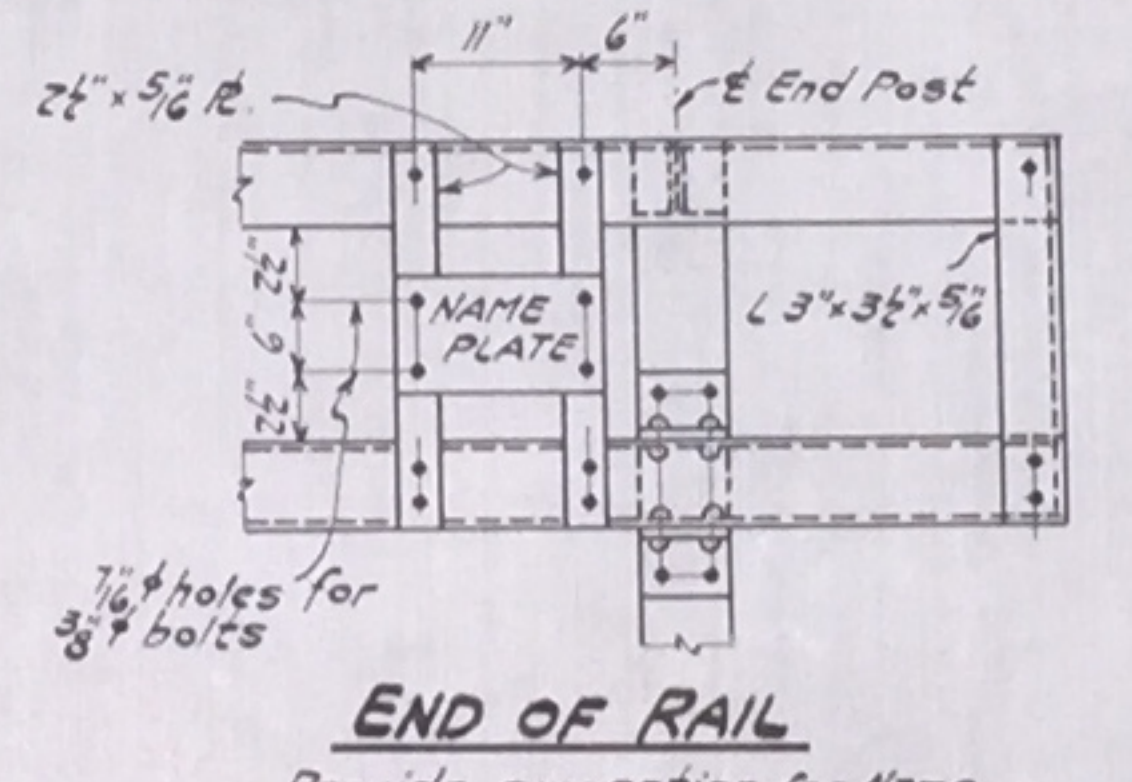
PLAN



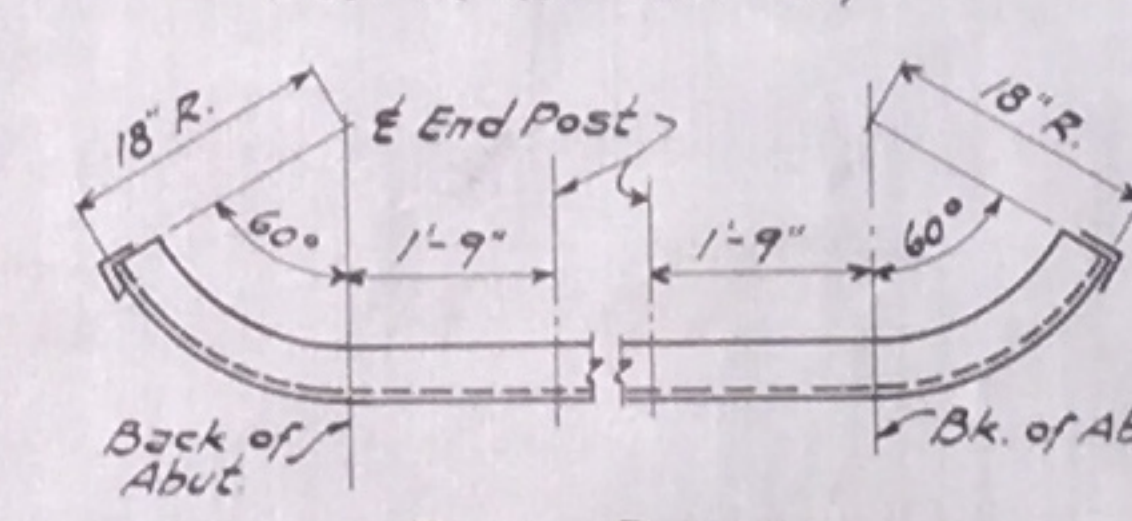
ROLLER DETAILS



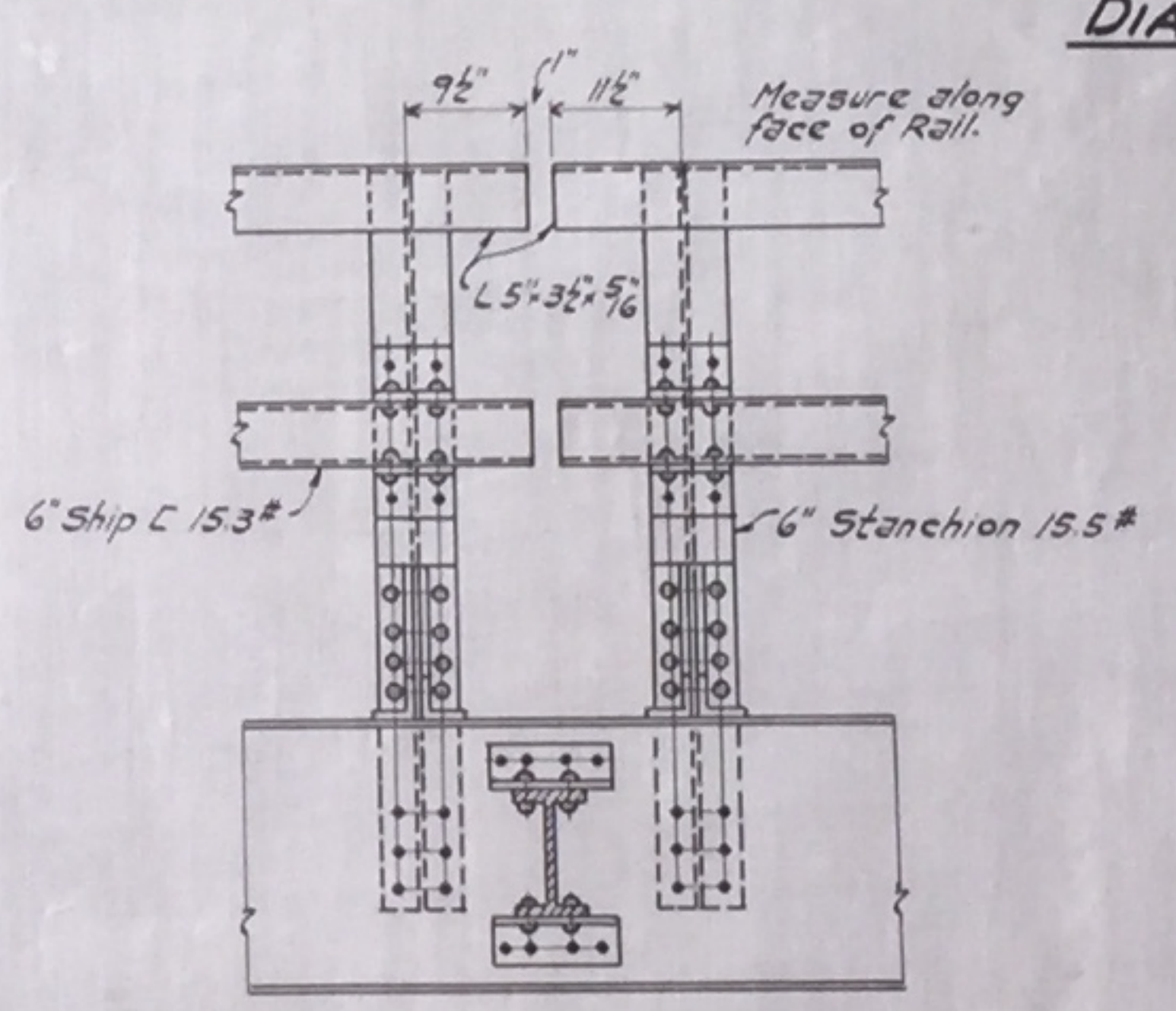
BEARING DETAILS AT PIER-2



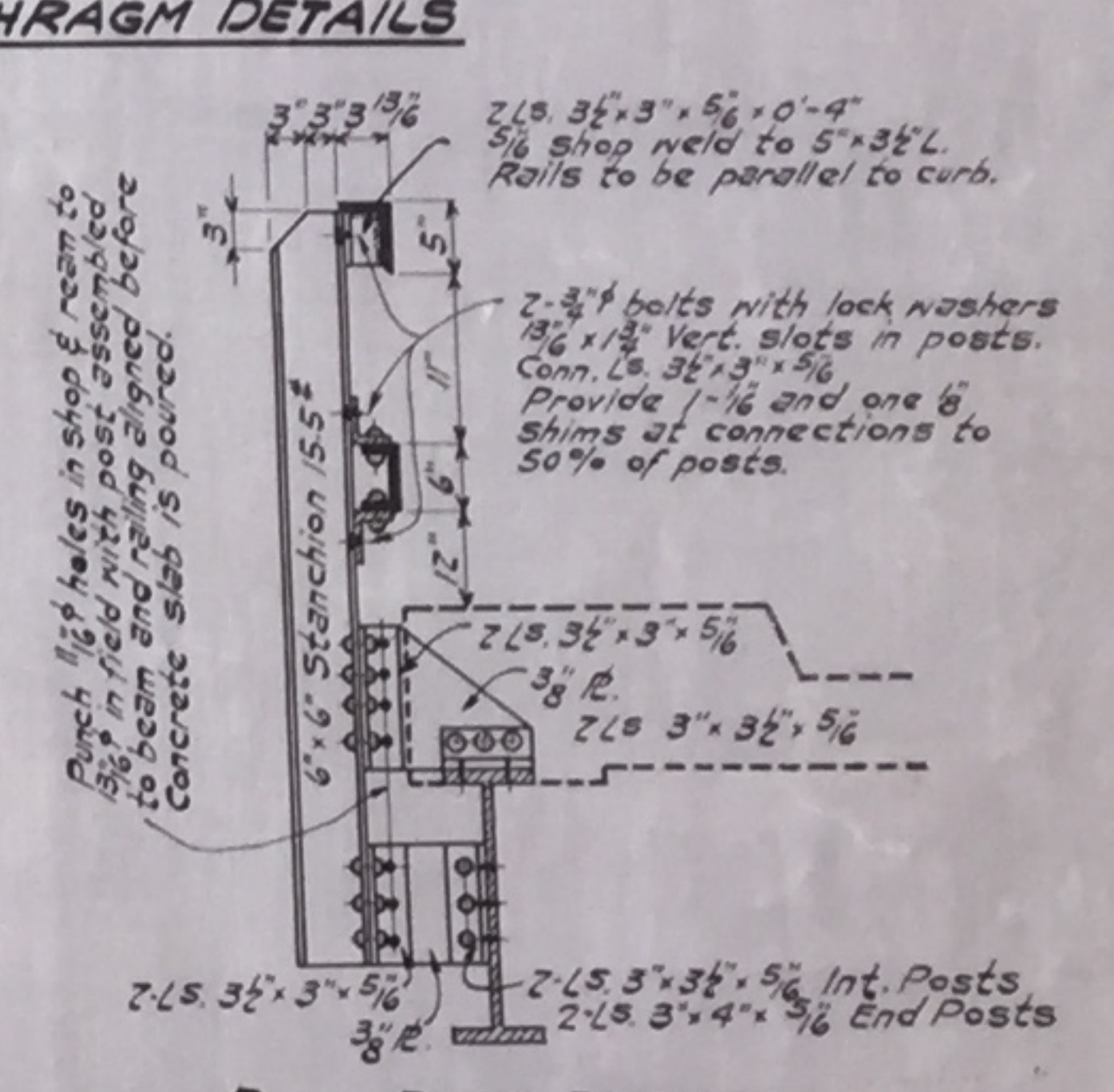
END OF RAIL



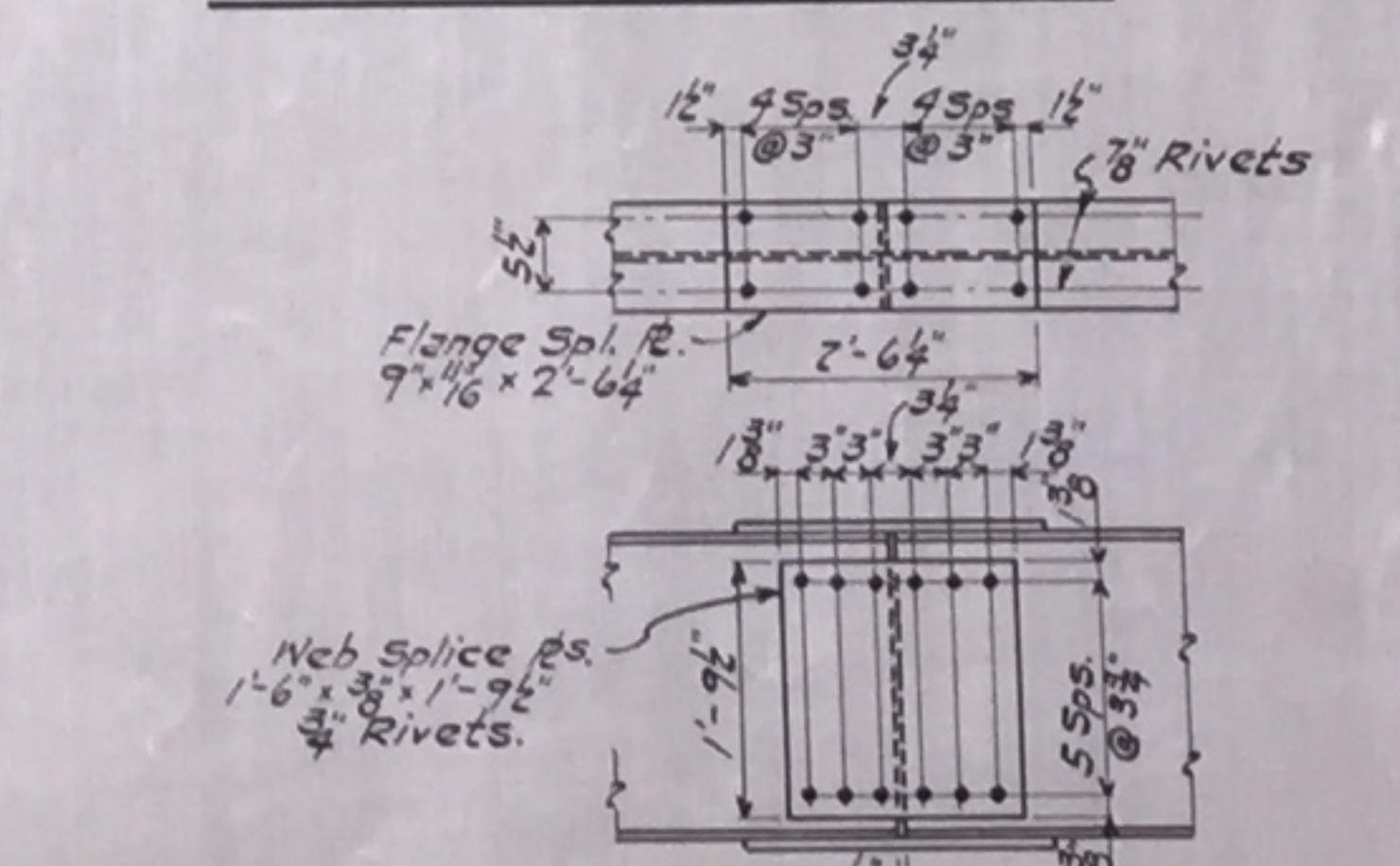
RAIL BEND



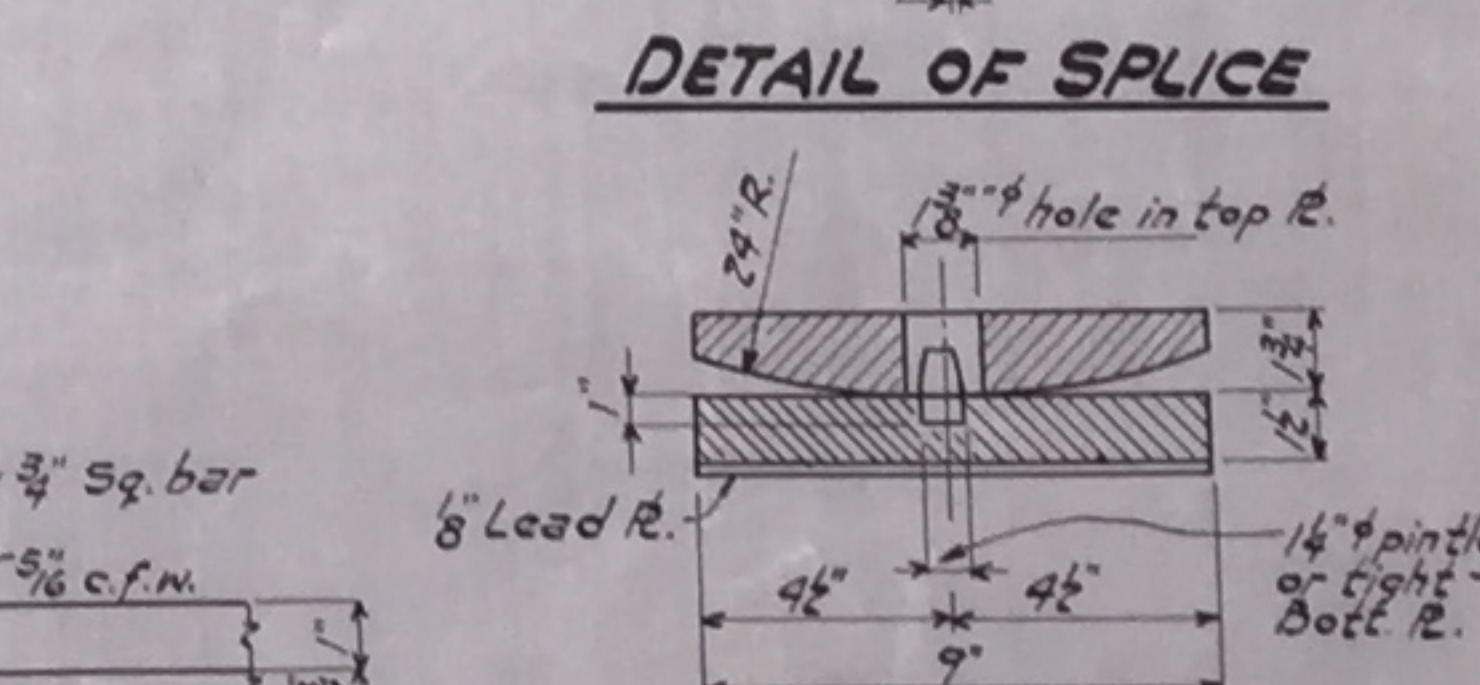
DETAIL OF RAIL AT PIERS



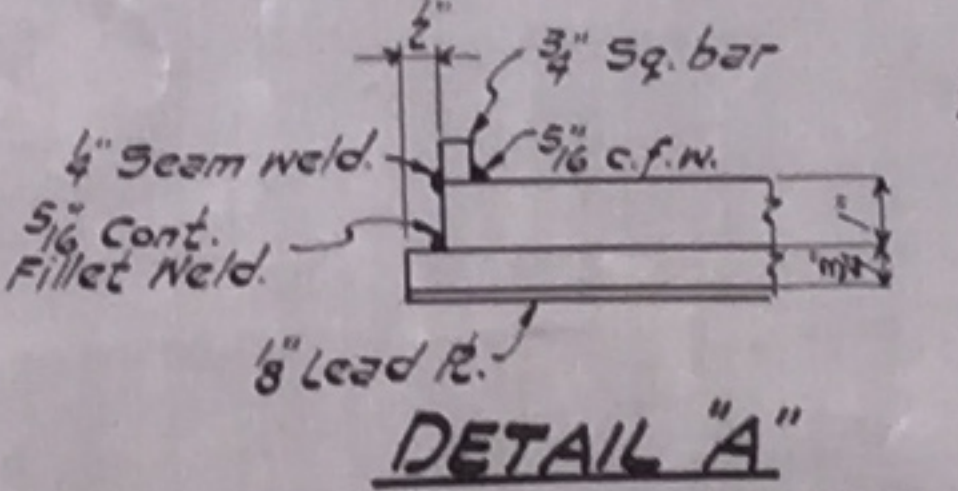
RAIL POST DETAILS



DETAIL OF SPLICE



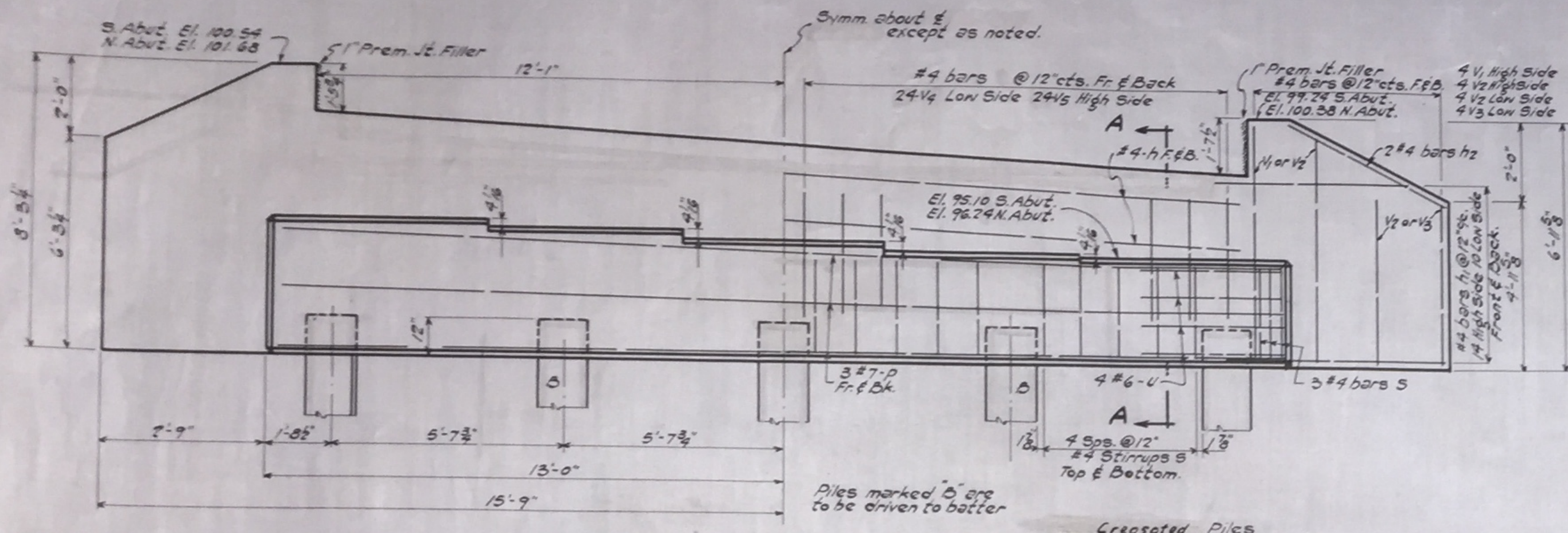
BEARING DETAIL AT PIER 1



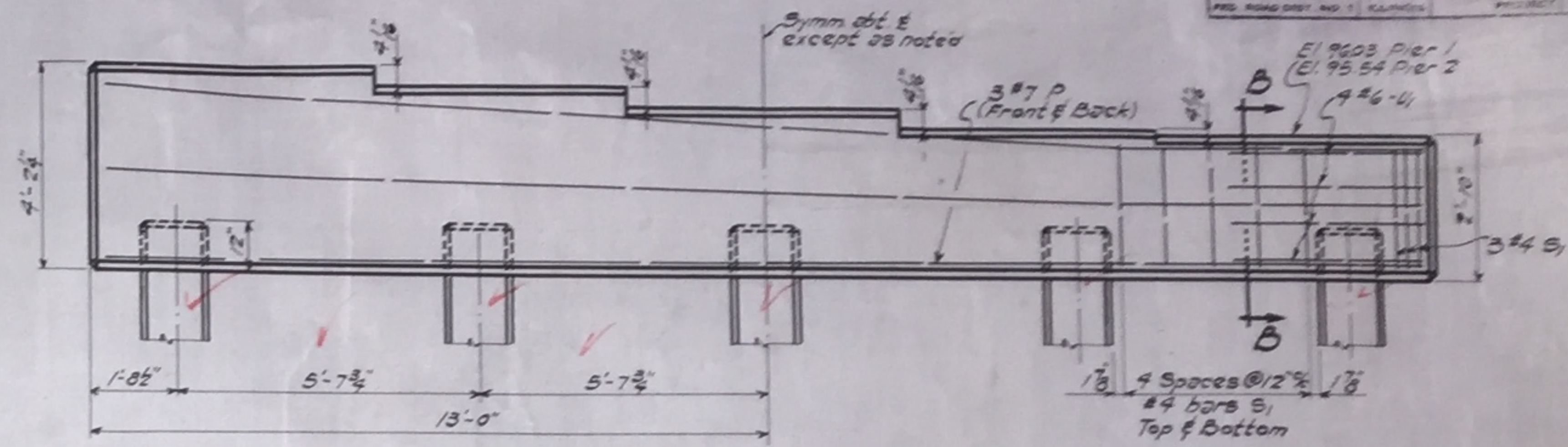
DETAIL 'A'

F.A.S. ROUTE 410 SEC. 9-B
PROJECT 5607(1)
WARREN COUNTY
STA 293+05

PROJECT NO.	SECTION	COUNTY	TOWNSHIP	SHEET NO.
410	9B	Warren	13	13
STA. 293+05		PROJECT: S 607-05		

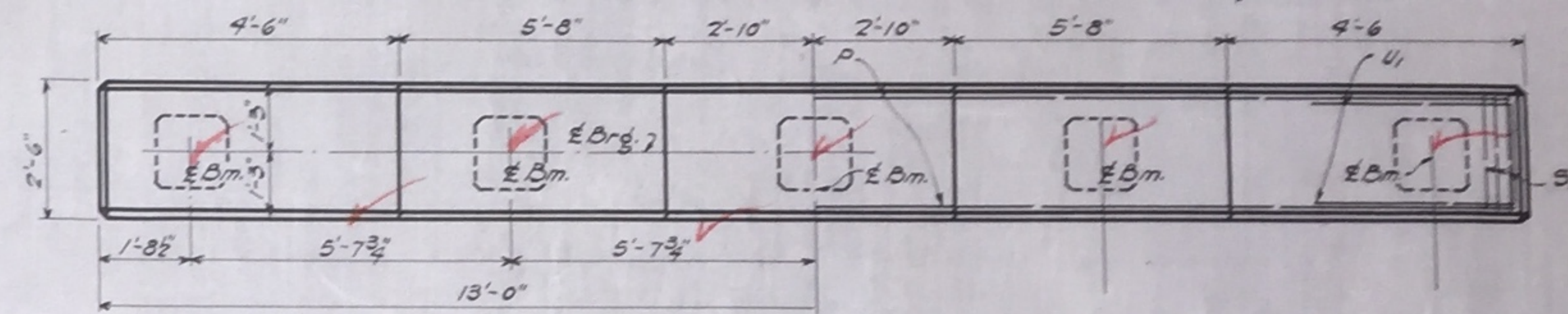


ELEVATION ABUTMENT
(N. Abut. Shown - S. Abut. Opposite hand)

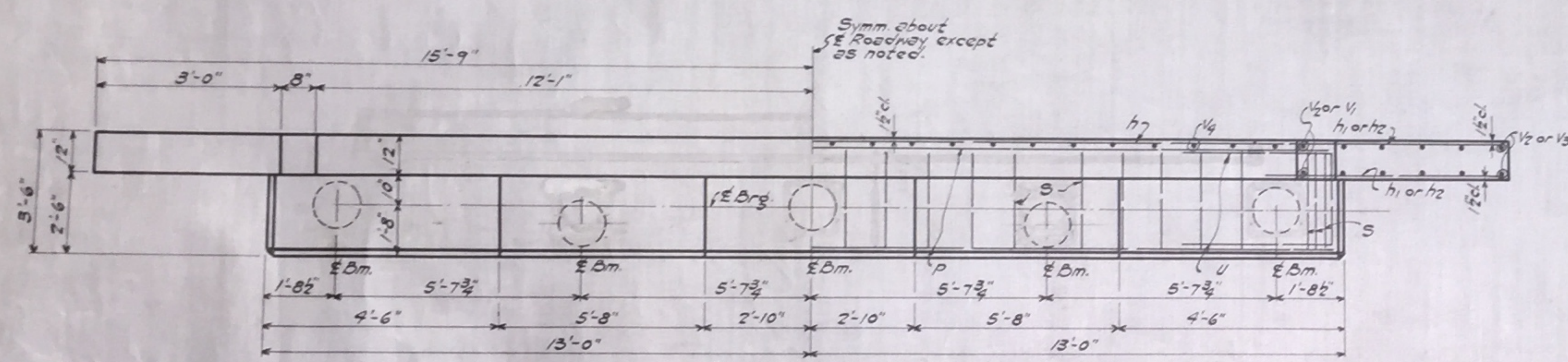


ELEVATION PIER 1 OR 2

Precast Concrete Piles
Capacity 28 Tons
Est. Length 40 Ft.
No. Reqd. 2 Piers 10

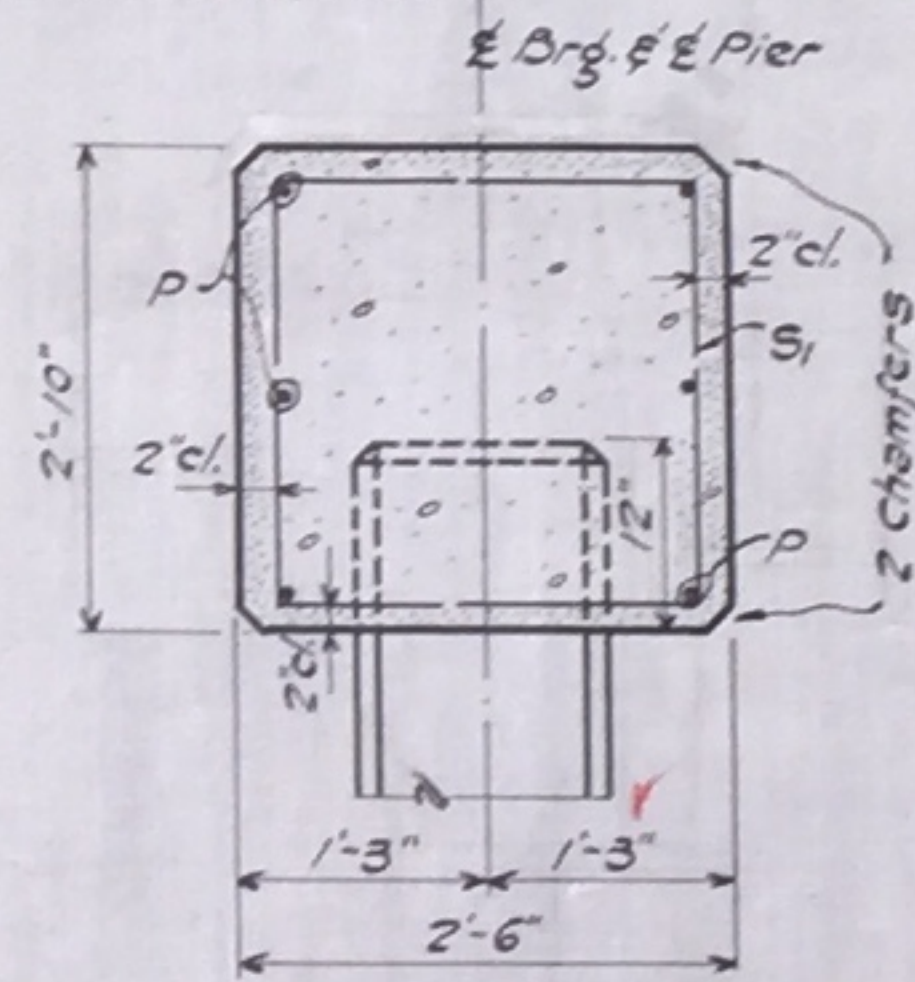


PLAN PIER 1 OR 2

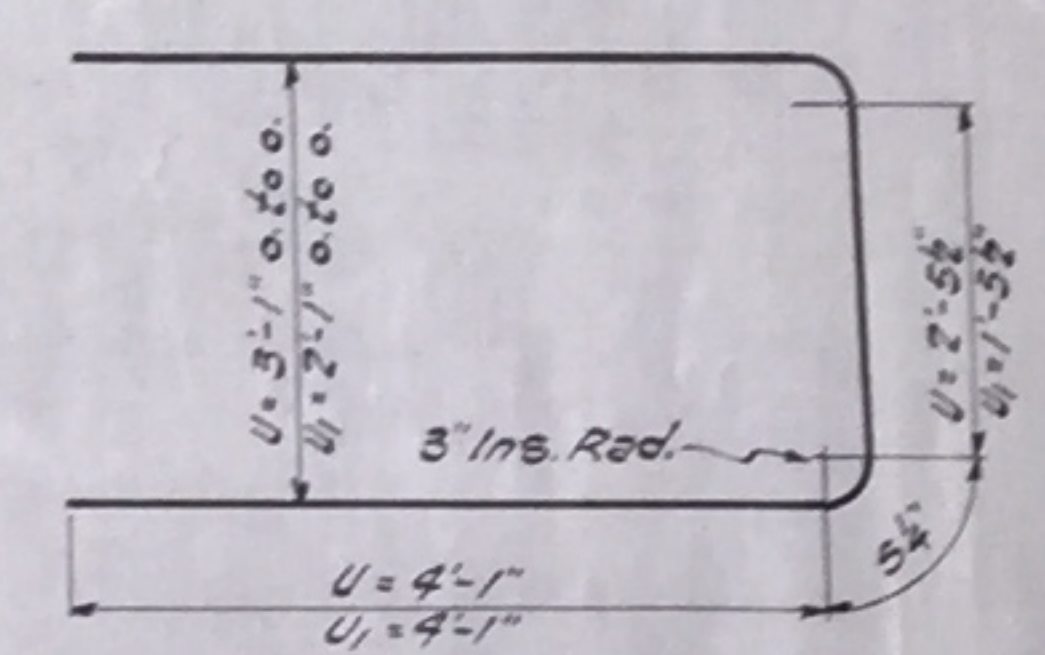


PLAN ABUTMENT

• El. 99.58 Pier 1 Sta. 292+81.25
• El. 100.01 Pier 2 Sta. 293+28.75



SECTION B-B

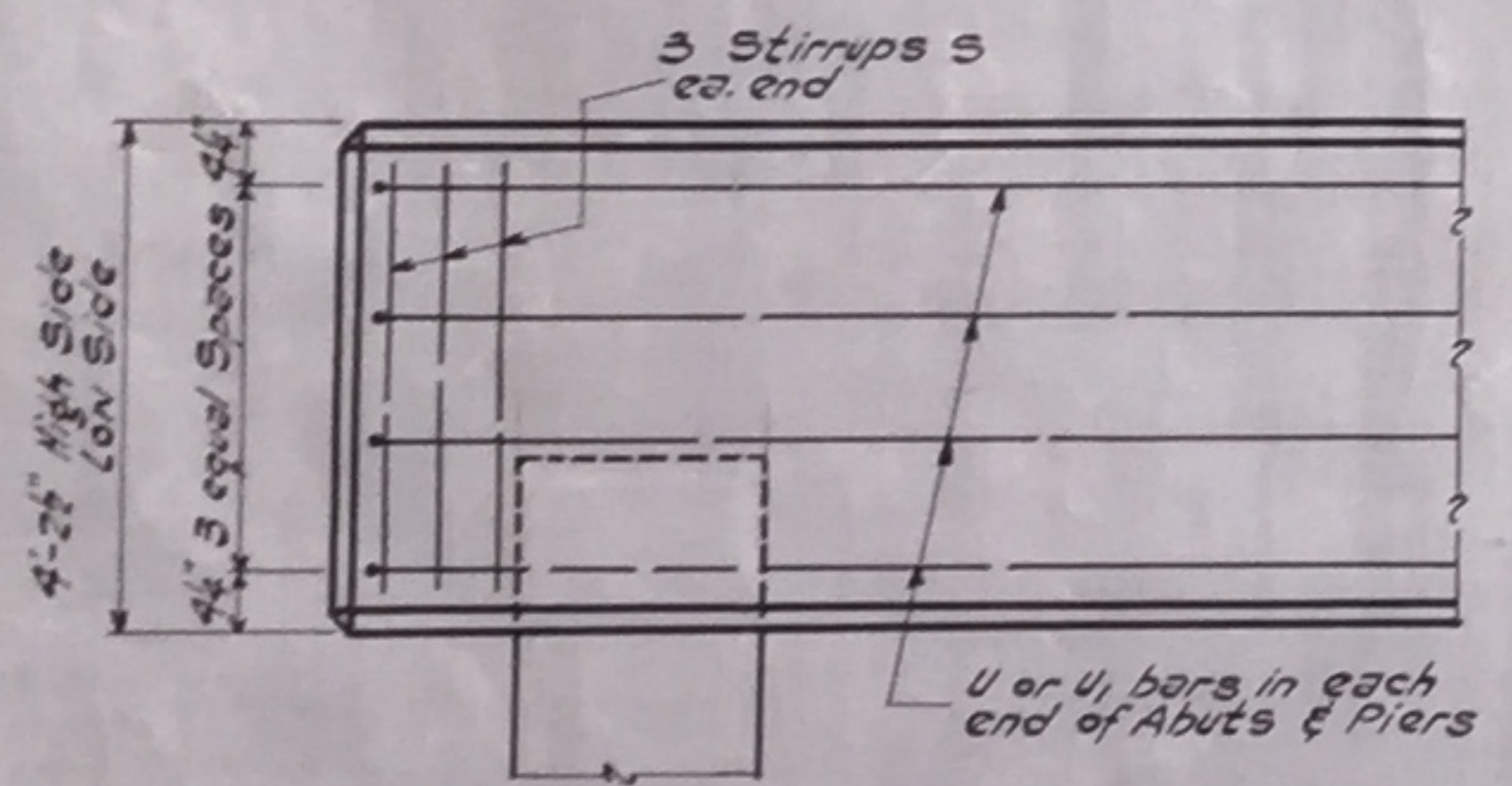


BARS U & U₁

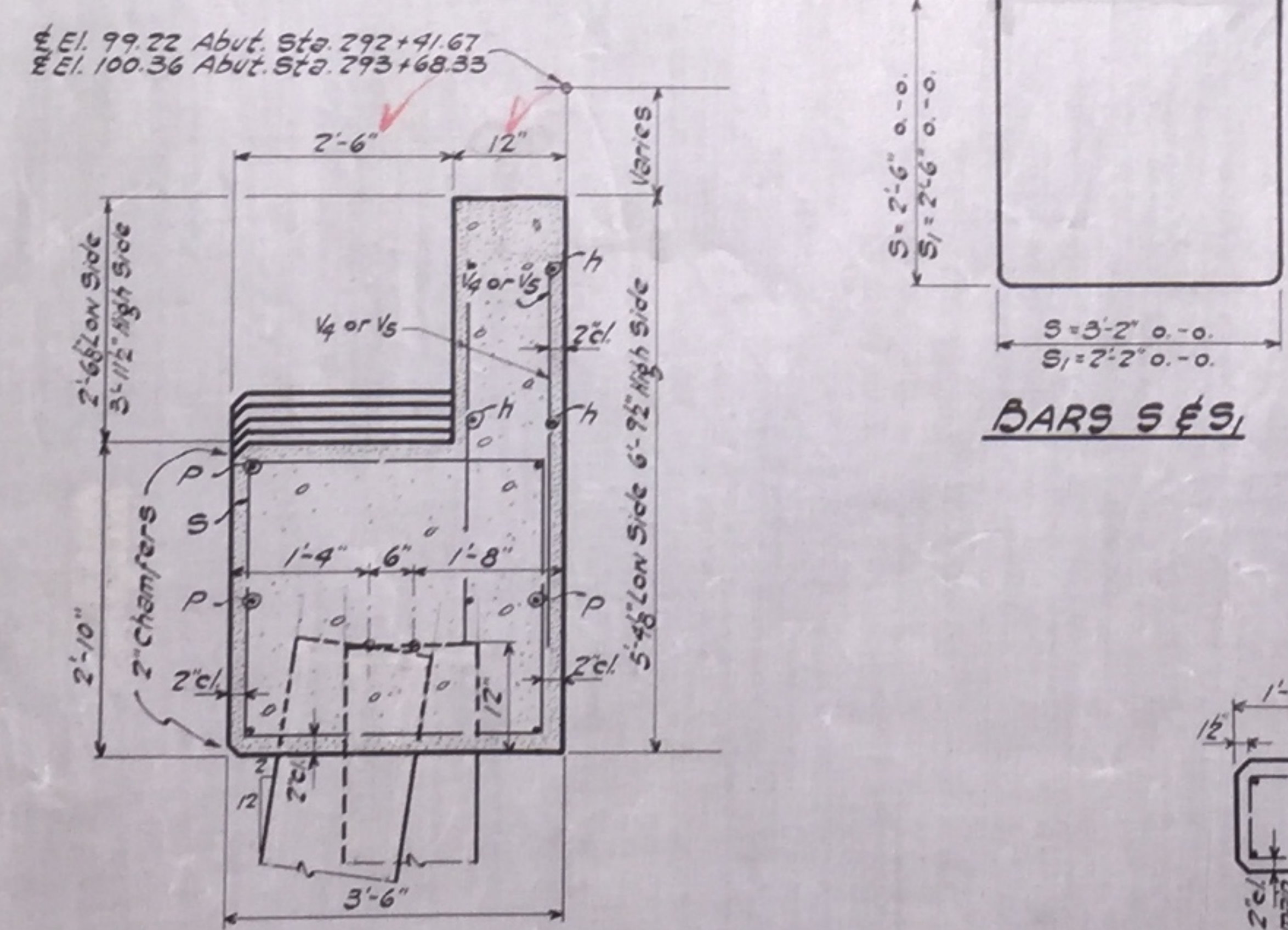
**BILL OF MATERIAL
TWO ABUTS & TWO PIERS**

BAR	NO	SIZE	LENGTH	SHAPE
h	8	#4	24'-3"	—
h ₁	48	#4	4'-6"	—
h ₂	8	#4	3'-6"	—
P	24	#7	25'-9"	—
S	104	#4	8'-3"	U
S ₁	104	#4	7'-3"	U
U	16	#6	11'-6"	—
U ₁	16	#6	10'-6"	—
V ₁	8	#4	7'-6"	—
V ₂	16	#4	6'-3"	—
V ₃	8	#4	5'-0"	—
V ₄	48	#4	4'-9"	—
V ₅	48	#4	5'-6"	—
Class X Concrete			Cu yds	468
Reinforcement Bars			Lbs.	3770
Creosoted Piles 24' Lin Ft.				240
Precast Concrete Piles 40' Lin Ft.				360
Test Piles - Timber			Each	One
Test Piles - Concrete			Each	One

All bars shall be round A.S.T.M. A 305-49. The size number is the number of 1/8 inches in the nominal diameter.

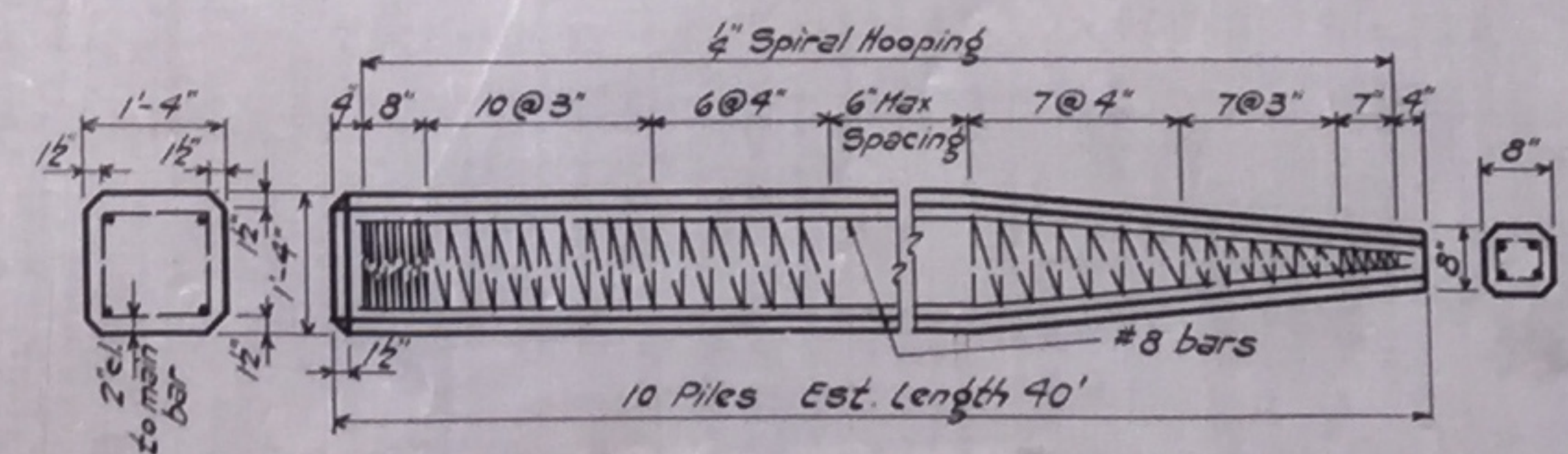


**PART ELEVATION OF ABUT. OR PIER
SHOWING U OR U₁ BARS**



SECTION A-A

BARS S & S₁



DETAIL OF PRECAST CONCRETE PILE

**F.A.S. RTE. 910 SEC. 9-B
PROJECT S607 (1)
WARREN COUNTY
STA 293+05**