

GENERAL NOTES

FOUNDATION:
FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO
SUIT CONDITIONS ENCOUNTERED IN CONSTRUCTION.

DESIGN:
IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS
OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY
OFFICIALS FOR H-20-44 LOADING.

BENCH MARK:
STA. 23+91± LT. 292'± RELOC. LOWELL ST. ④
VERT. SPIKE IN 18" PINE EL. 86.720
SEA LEVEL DATUM OF 1929.

REINFORCEMENT:
ALL REINFORCING STEEL BARS SHALL BE INTERMEDIATE GRADE CONFORMING TO A.S.T.M. SPECIFICATION A305-49, UNLESS OTHERWISE SHOWN ON THE PLANS. REINFORCING BARS SHALL BE LAPPED 20 DIAMETERS TO MAKE A SPLICE, EXCEPT THAT MAIN REINFORCING BARS NEAR THE TOP OF SLABS AND BEAMS HAVING MORE THAN 6 INCHES OF CONCRETE UNDER THE BARS SHALL BE LAPPED 35 DIAMETERS TO MAKE A SPLICE.

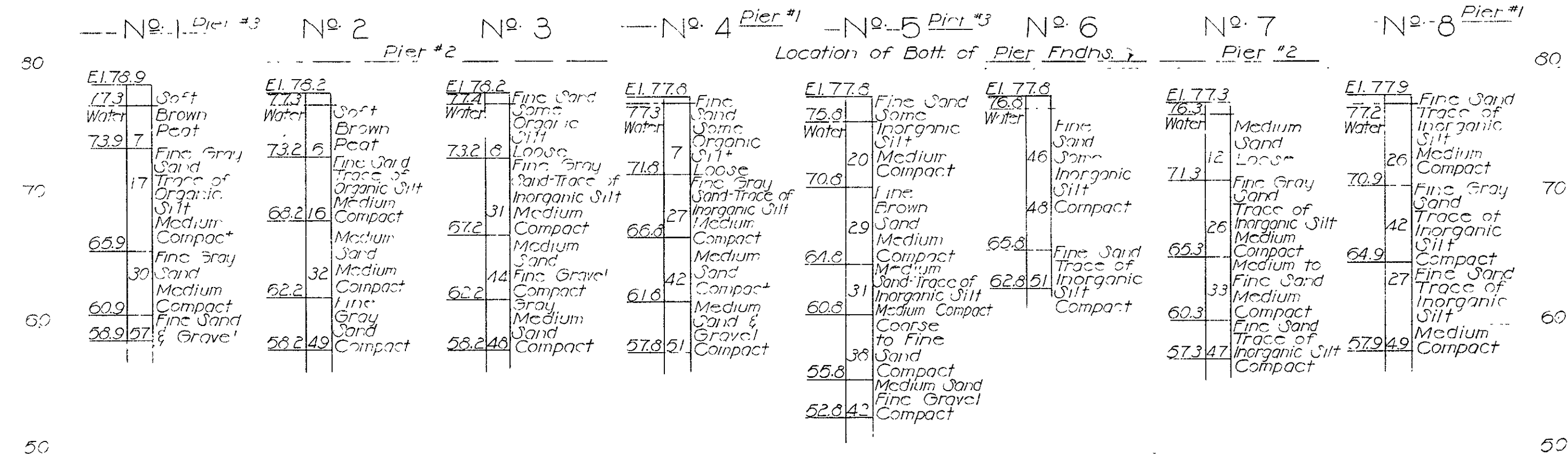
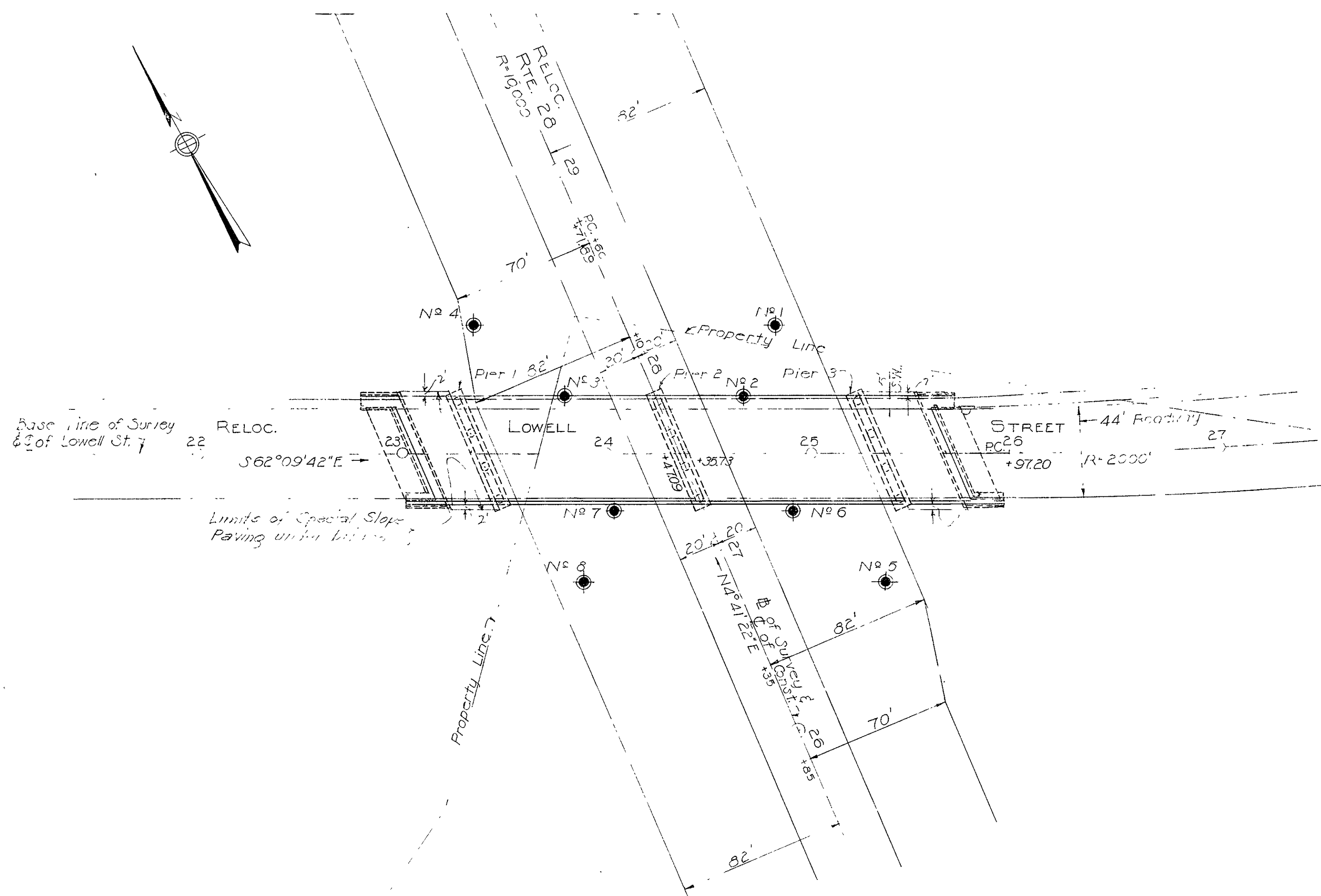
DATE & SEAL:
DATE AND SEAL TO BE PLACED ON THE INSIDE
FACES OF THE NORTHEASTERLY AND
SOUTHWESTERLY END POSTS AS SHOWN IN
DETAIL ON SHEET 7
SIZE AND CHARACTER OF NUMERALS WILL
BE FURNISHED. SEAL WILL BE FURNISHED
BY THE COMMONWEALTH.

ESTIMATED QUANTITIES

(NOT GUARANTEED)

ROADWAY EARTH EXCAVATION	1,177.0 Cu.
CLASS A ROCK EXCAVATION	5 Cu.
BRIDGE EXCAVATION (W-38-29)	240 Cu.
CLASS B ROCK EXCAVATION	5 Cu.
GRAVEL BORROW	200 Cu.
GRAVEL BORROW FOR BRIDGE FOUNDATIONS	1,150 Cu.
BRIDGE STRUCTURE (W-38-29)	1 L.

~~DELETE~~
Revision
4-17-58



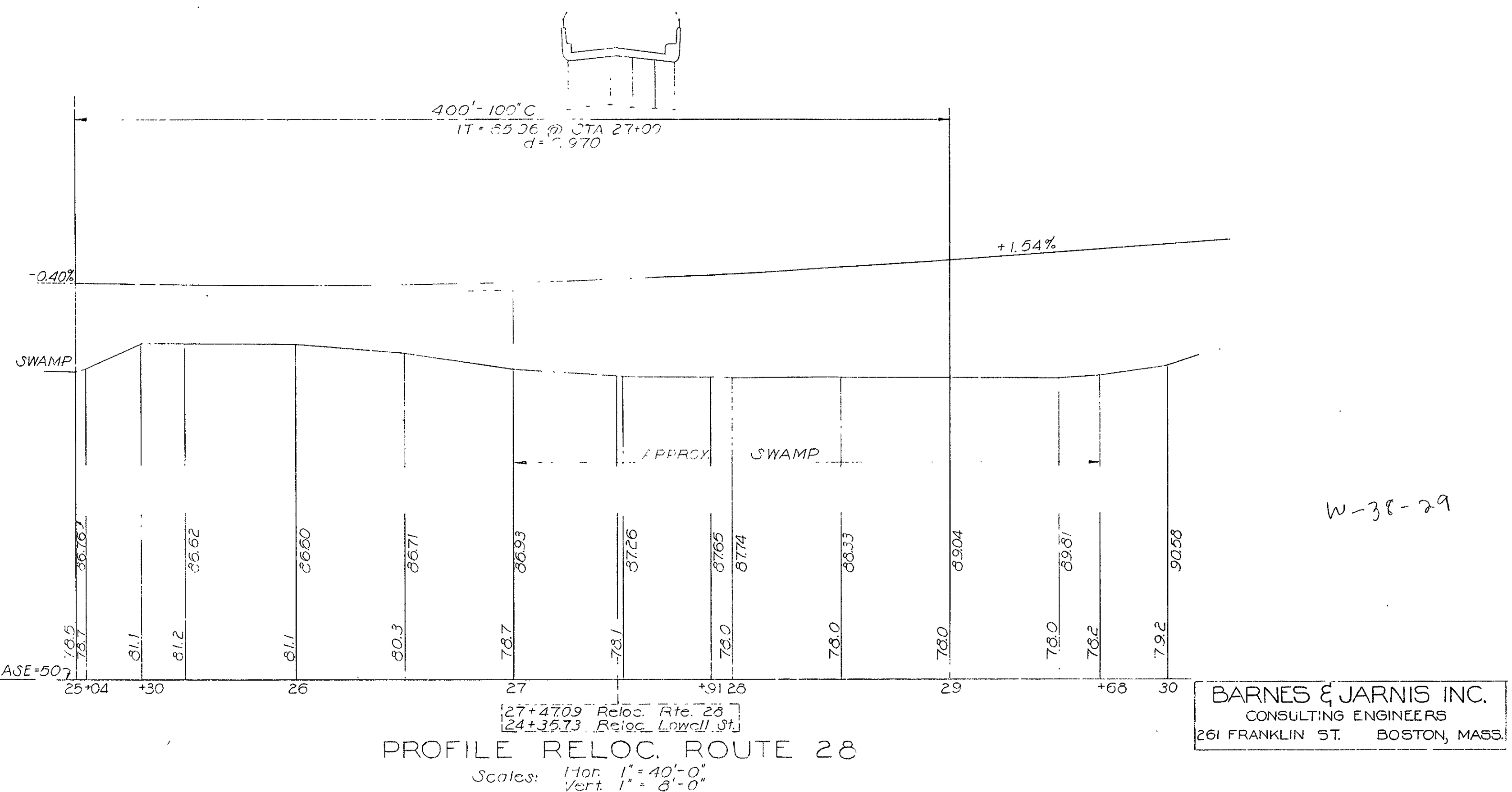
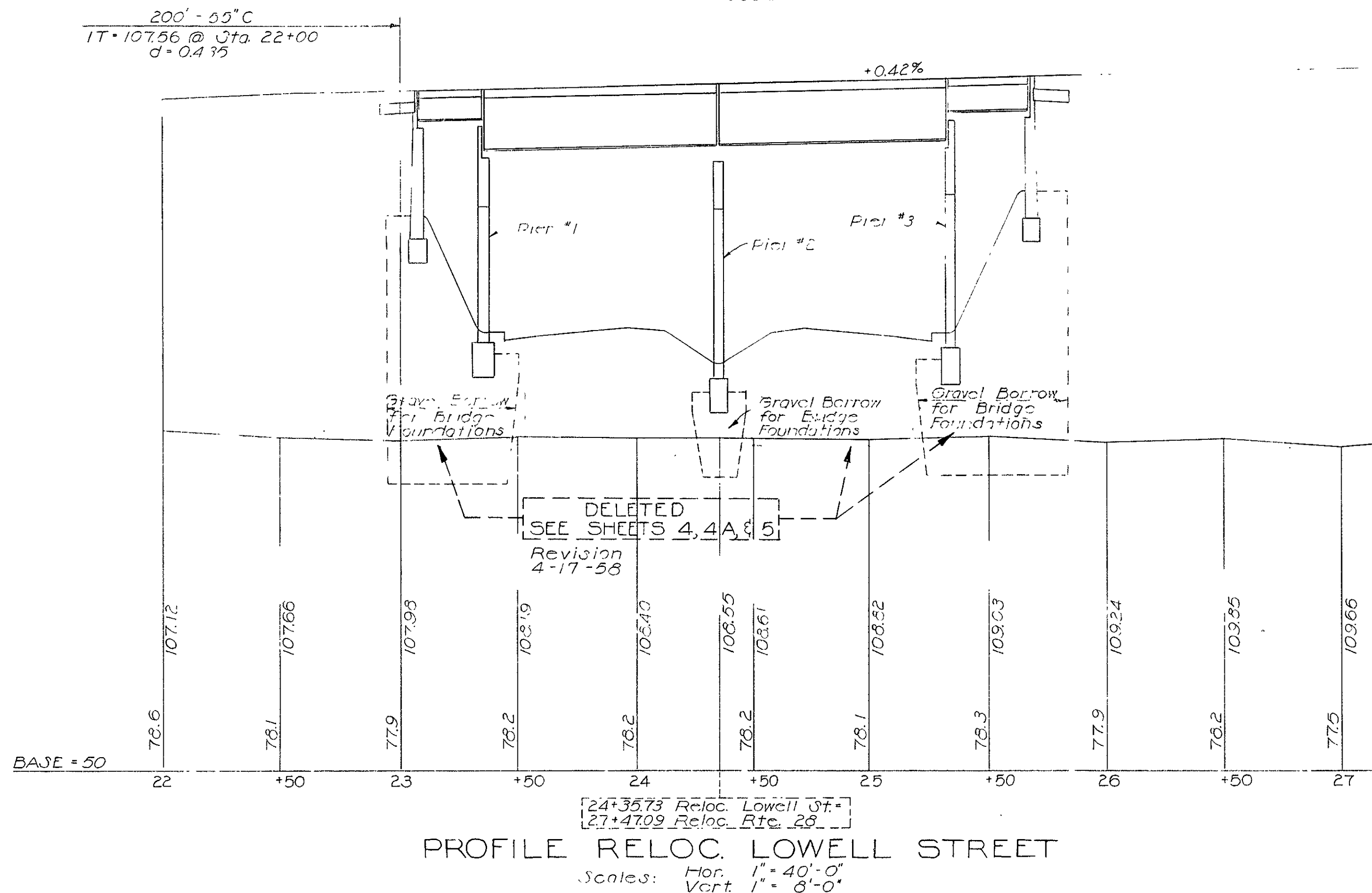
BORING DATA

Scale: 1" = 8'-0"

Spring taken June 1955 by
American Drilling Co. of East Providence, R.I.

BORING NOTES:

Location of Borings shown on Key Plan thus $\bullet$ No. 1.
Borings taken for purpose of design and show conditions
at Boring points only, but do not necessarily show nature
of materials to be encountered during the construction of
the bridge.
Figures in columns indicate blows per foot on 1" pipe
produced by 30" fall of 140" hammer.
Samples from Borings may be seen at the Department
of Transportation, Tennessee Division, Route 9, Nashville,
Tennessee 37203.



4-17-58	A REVISION SHEET 1 PIER & ABUTMENT FOUNDATIONS REVISED SHEET 2 PIER & ABUTMENT FOUNDATIONS REVISED SHEET 4 ABUTMENT FOUNDATIONS REVISED SHEET 4A ADDED PIER & ABUTMENT PILE PLANS SHEET 5 PIER FOUNDATIONS & FOOTINGS REVISED
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JUNE 22, 1957 ISSUED FOR CONSTRUCTION

THE COMMONWEALTH OF MASSACHUSETTS
PROPOSED BRIDGE

WILMINGTON

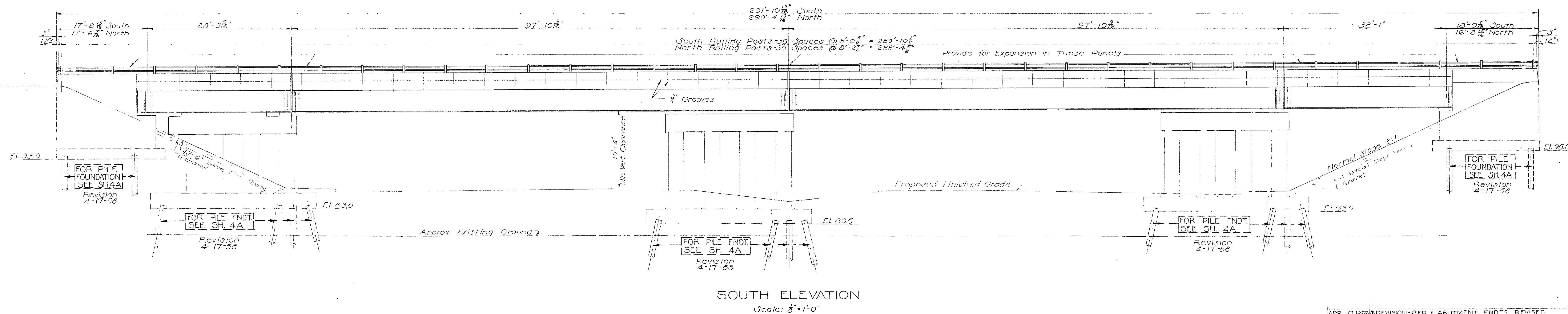
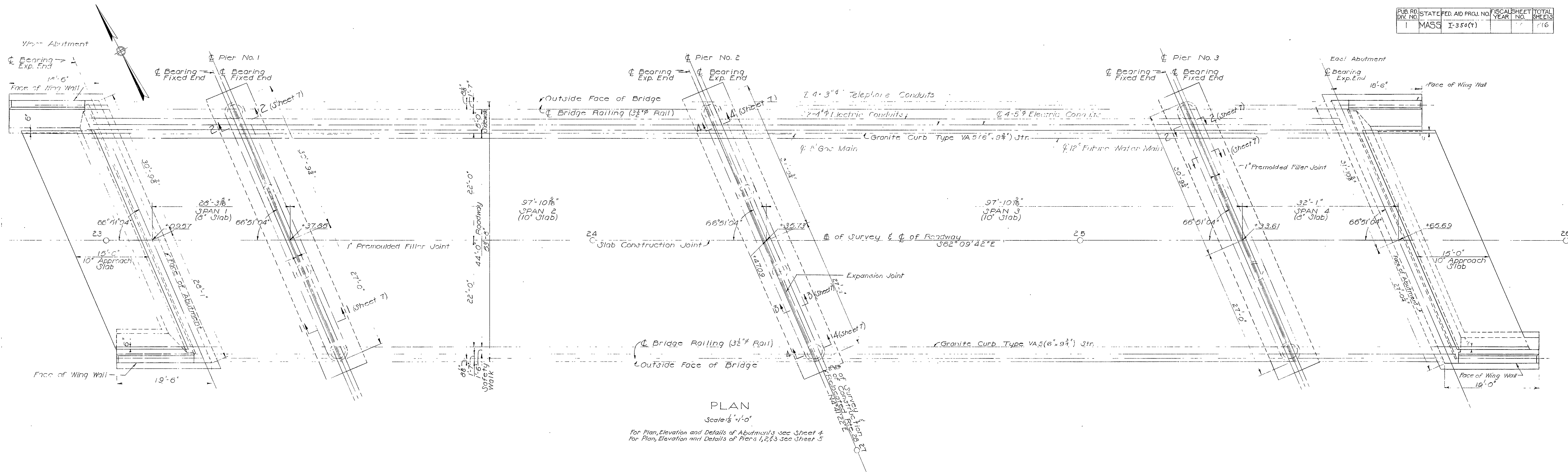
RELOC. RTE. 28 UNDER
RELOC. LOWELL ST. (RTE. 129)

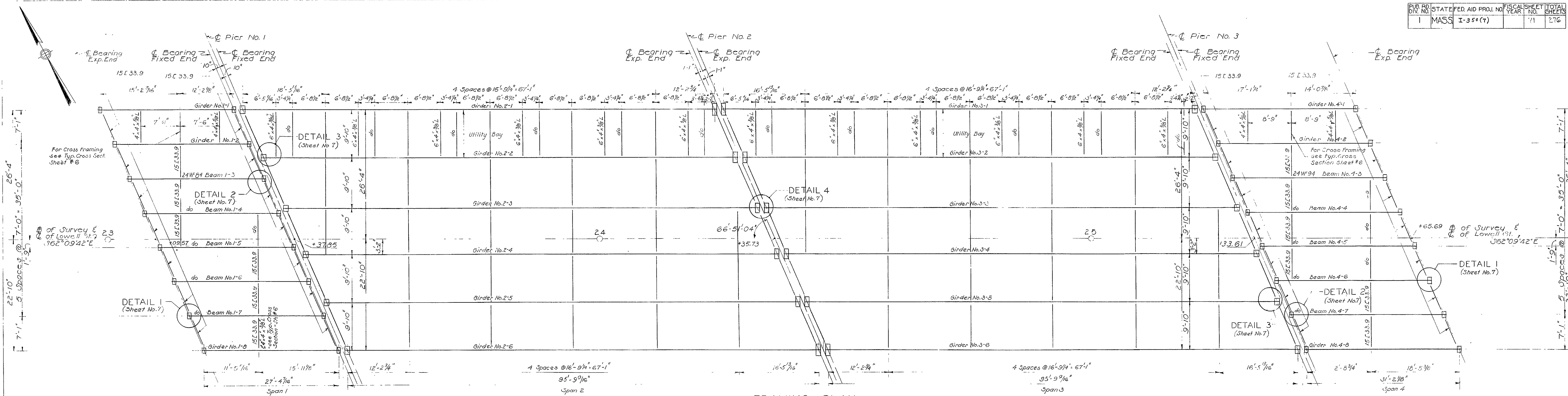
SCALES AS NOTED

OFFICE OF
DEPARTMENT OF PUBLIC WORKS
100 NASHUA ST. BOSTON, MASS
JUNE 1957



 BRIDGE ENGINEER CHIEF ENGINEER

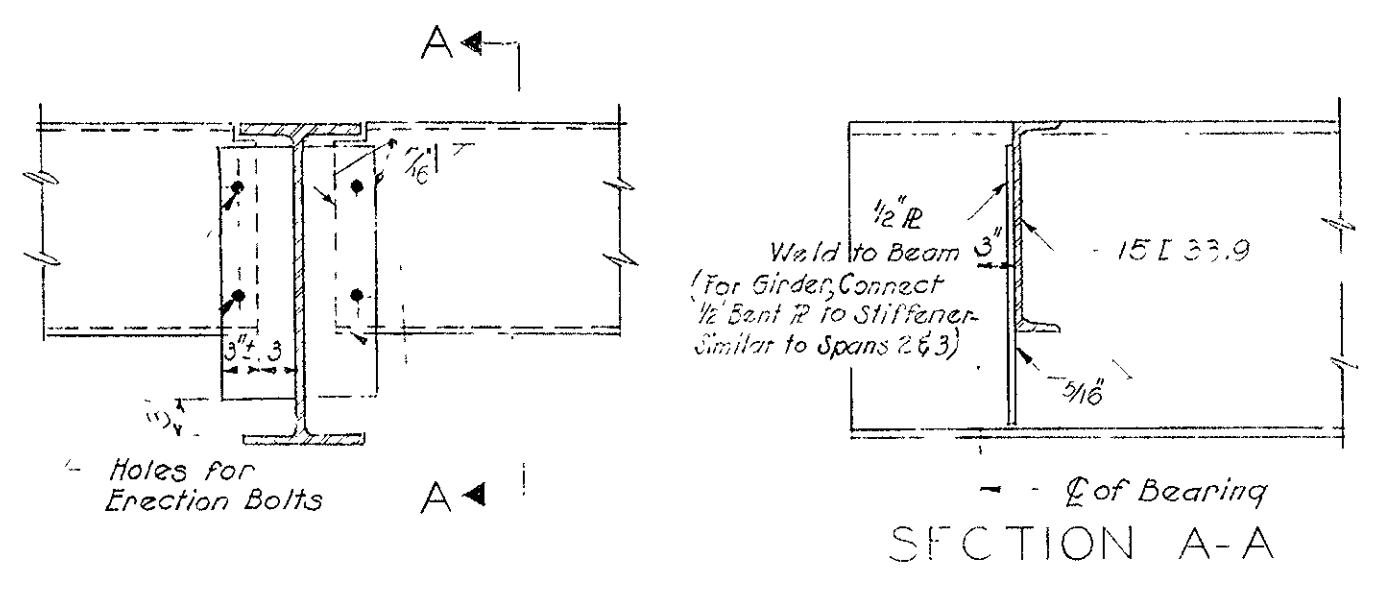




FRAMING PLAN

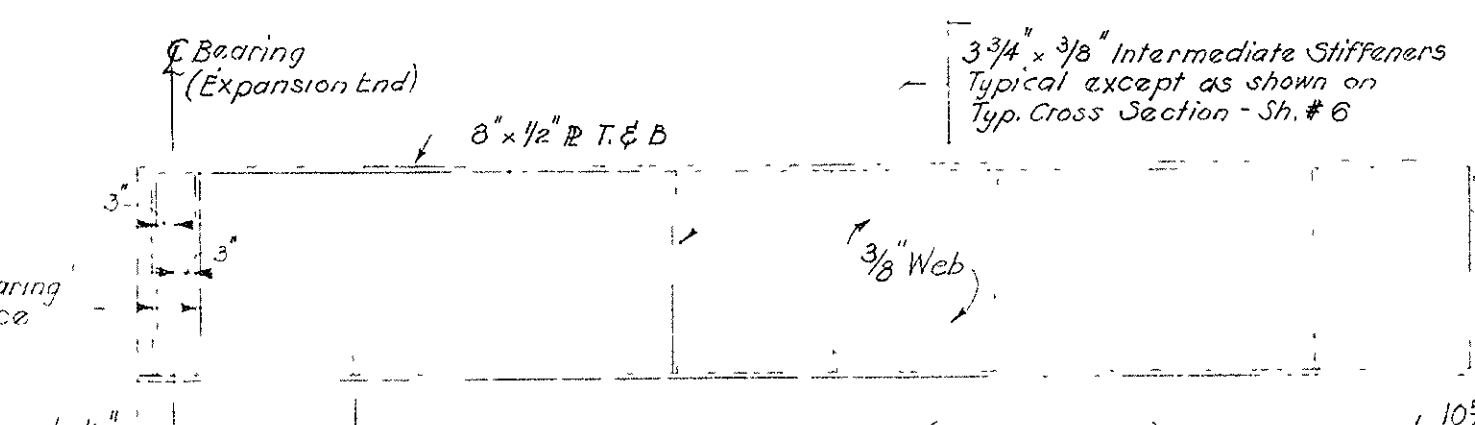
Scale: 1/8" = 1'-0"

NOTE: For Cross-Framing of End Diaphragms of Spans 2 & 3 not shown on this Plan, see Sheet #6



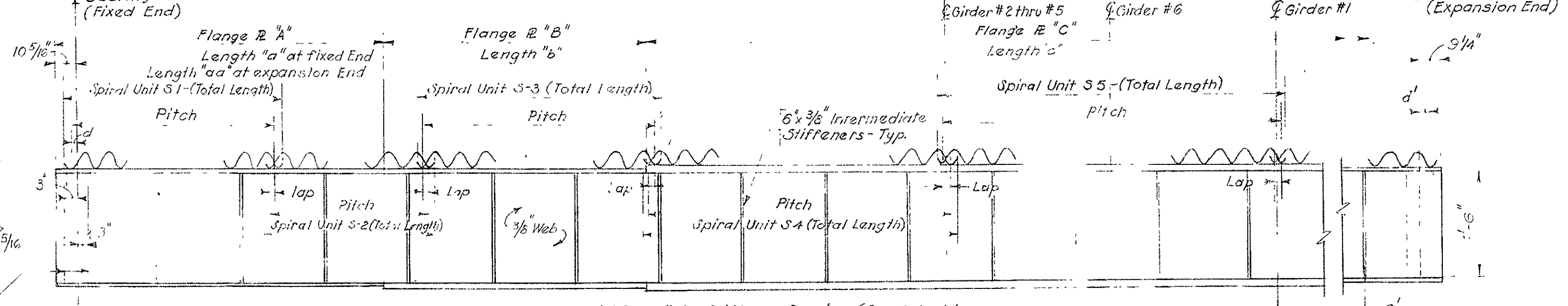
WELDED END DIAHRAGM CONNECTION SPANS 1 & 4

Scale: 3/4" = 1'-0"



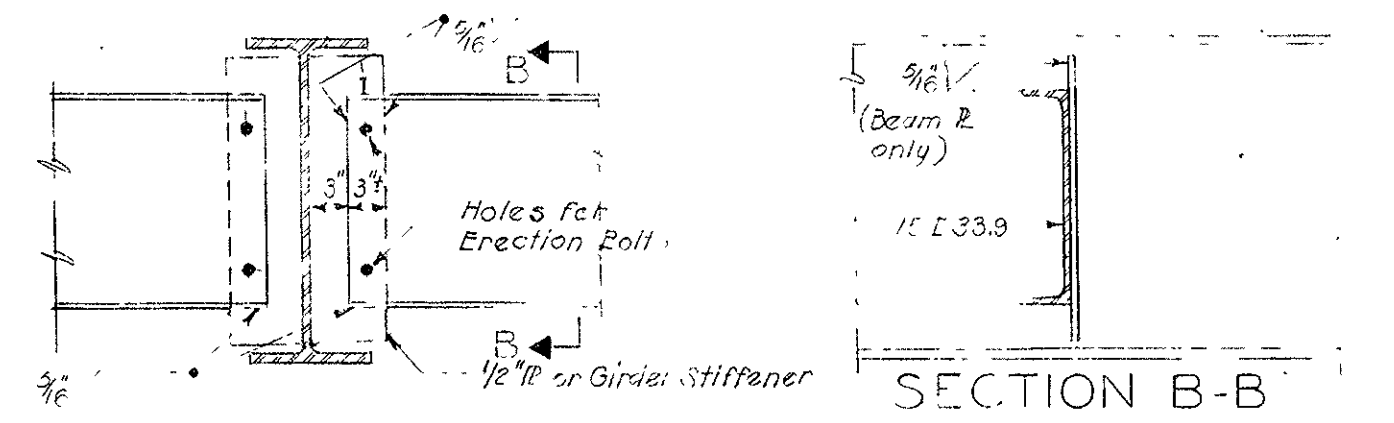
ELEVATION OF GIRDERS - SPAN 1 & SPAN 4

No Scale



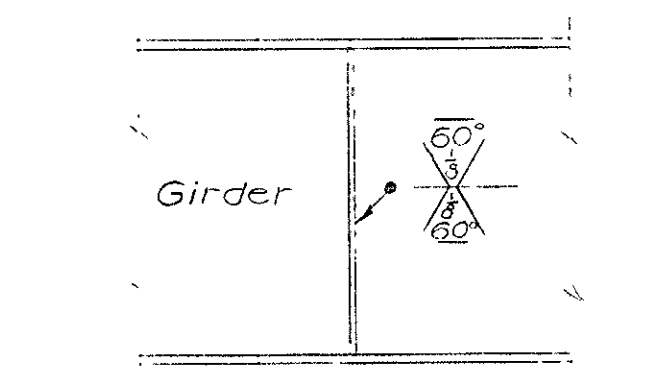
ELEVATION OF GIRDERS - SPAN 2 & SPAN 3

No Scale



WELDED DIAHRAGM CONNECTION SPANS 1 & 4

Scale: 3/4" = 1'-0"



WEB SPLICE DETAIL

No Scale

FLANGE PLATES									
Girder No.	A		B		C		d	d'	Lap
	Size	Length	Size	Length	Size	Length			
2-1 & 3-1	16 x 3/4	15'-3 3/4"	16 x 3/4	15'-0"	16 x 3/4	15'-0"	1 1/2"	1 1/2"	2 1/2"
2-2 thru 2-5	16 x 3/4	15'-3 3/4"	16 x 3/4	15'-0"	16 x 3/4	15'-0"	2 1/2"	1 1/2"	3 1/2"
2-6 & 3-6	16 x 3/4	15'-3 3/4"	16 x 3/4	15'-0"	16 x 3/4	15'-0"	1 1/2"	2 1/2"	3 1/2"

SPIRAL REINFORCEMENT																		
length '-"	d	d'	lap	Spiral Units														
				S1			S2			S3			S4			S5		
				Size	Pitch	Total Lgth.	Size	Pitch	Total Lgth.	Size	Pitch	Total Lgth.	Size	Pitch	Total Lgth.	Size	Pitch	Total Lgth.
50'-6"	1 5/8"	1 3/4"	2 1/2"	3/8"	20 spaces @ 5'-0" to 6'-0"	6'-7"	3/8"	13 spaces @ 6'-0" to 6'-6"	6'-9"	3/8"	13 spaces @ 7'-0" to 7'-6"	8'-0"	3/8"	14 spaces @ 10'-0" to 12'-0"	12'-7"	3/8"	10 spaces @ 15'-0" to 15'-6"	12'-11"
43'-0"	2 1/2"	1 3/4"	3 3/8"	3/4"	42 spaces @ 4'-13'-4"	13'-7"	3/8"	25 spaces @ 6'-6" to 6'-12"	12'-9"	3/8"	16 spaces @ 9'-12" to 12'-3"	12'-3"	3/8"	9 spaces @ 15'-11" to 15'-8"				
46'-0"	1 1/8"	2 1/8"	3 1/2"	3/8"	17 spaces @ 6'-0" to 6'-6"	6'-9"	3/8"	17 spaces @ 6'-0" to 6'-6"	6'-9"	3/8"	17 spaces @ 9'-12" to 13'-0"	13'-0"	3/8"	12 spaces @ 13'-0" to 15'-6"	15'-10"	3/8"	10 spaces @ 15'-12" to 16'-11"	12'-11"

GIRDER STIFFENER SCHEDULE			
Girder No.	Stiffener	Size	Length
2-1 & 3-1	2-1	3'-0"	27' Spaces @ 3'-4 1/2" = 90'-6 3/4"
2-2 thru 2-5	2-2	3'-0"	do
2-6 & 3-6	2-3	3'-0"	do
2-1 & 3-1	2-4	3'-0"	do
2-2 thru 2-5	2-5	3'-0"	do
2-6 & 3-6	2-6	3'-0"	do
2-1 & 3-1	2-7	3'-0"	do
2-2 thru 2-5	2-8	3'-0"	do
2-6 & 3-6	2-9	3'-0"	do
2-1 & 3-1	2-10	3'-0"	do
2-2 thru 2-5	2-11	3'-0"	do
2-6 & 3-6	2-12	3'-0"	do

GIRDER NOTES:

Note: Length "a" = Length "c" - 1/2"

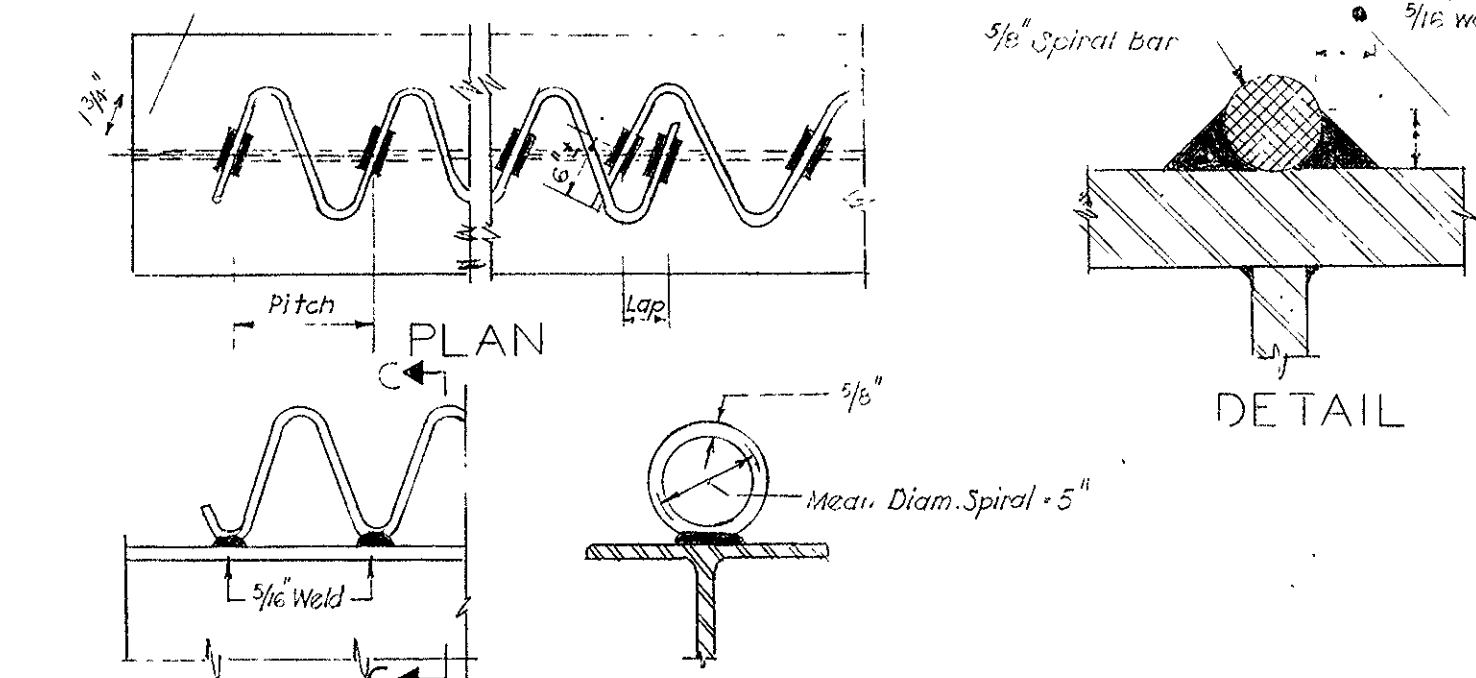
All Girders of Spans 2 & 3 are to be cambered to the extent that the bridge deck under full dead load will follow as nearly as practicable the design profile, and in no case with less camber than is likely to remain permanent. Bearing stiffeners are to be welded to web and top and bottom flanges with a continuous 5/16" fillet weld. Intermediate vertical stiffeners are to be omitted on outside face of exterior girders. Intermediate stiffeners are to be welded to web and top flange with a continuous 5/16" fillet weld and then on bottom flange. Length of flange plates is measured along the centerline of girders.

Girders are symmetrical about corresponding E's except as otherwise shown. Web splices, if used, shall be located, subject to approval of the Engineer, to suit the Contractor's method of erection, but shall not be at the point of maximum moment. No more than five splices will be permitted per girder. All welds are shop welds unless noted as field welds on the drawings.

CAMBER DIAGRAM SPANS 2 & 3

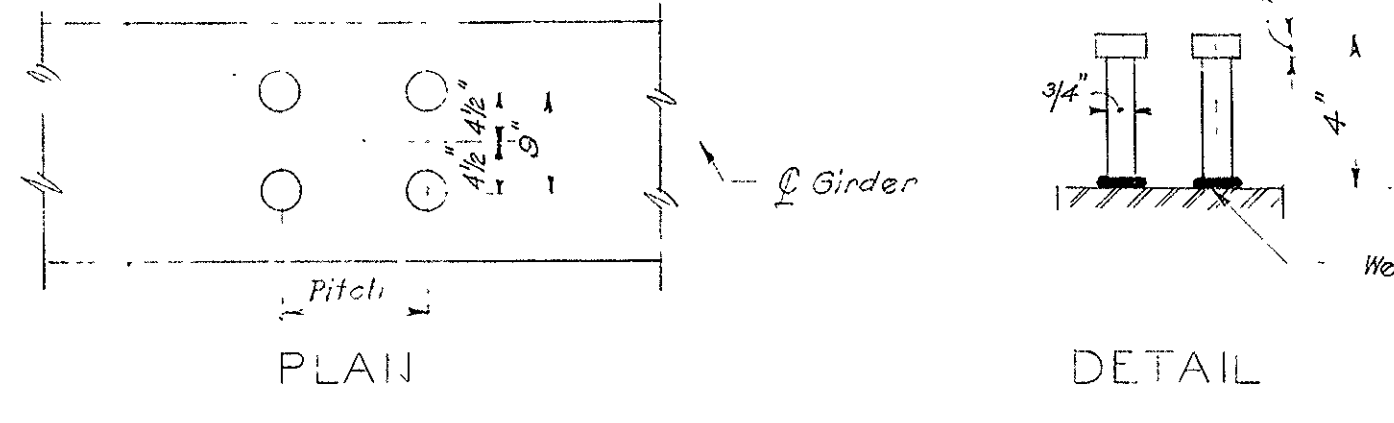
CAMBER DIAGRAM SPANS 2 & 3			
Girder	Dead Load	Superimposed Total	Grade
2-1 & 3-1	1.17"	2.92"	2 1/2"
2-2 thru 2-5	1.63"	0.11"	1 1/2"
2-6 & 3-6	1.34"	2.16"	1 1/2"

* Weight of 2-1 thru 2-5 Girders complete with diaphragms and connections not included.



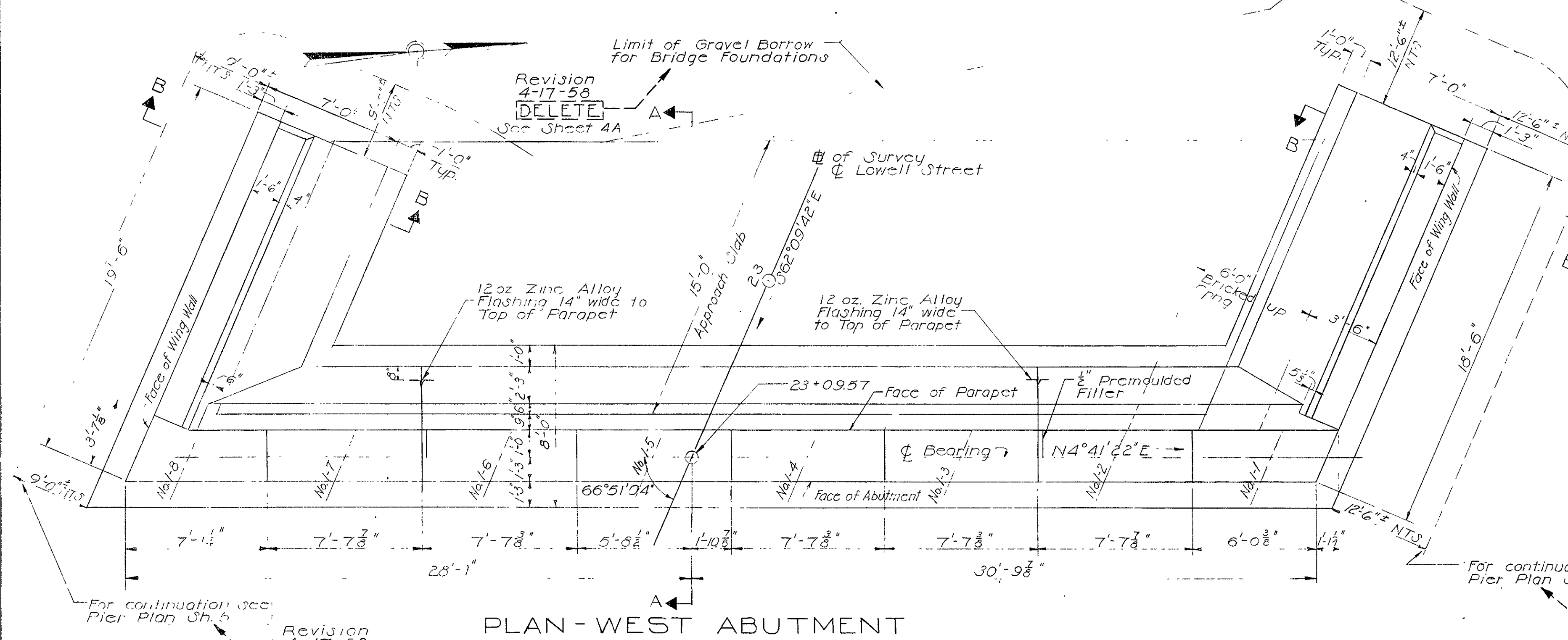
DETAILS OF SPIRAL REINFORCEMENT

No Scale



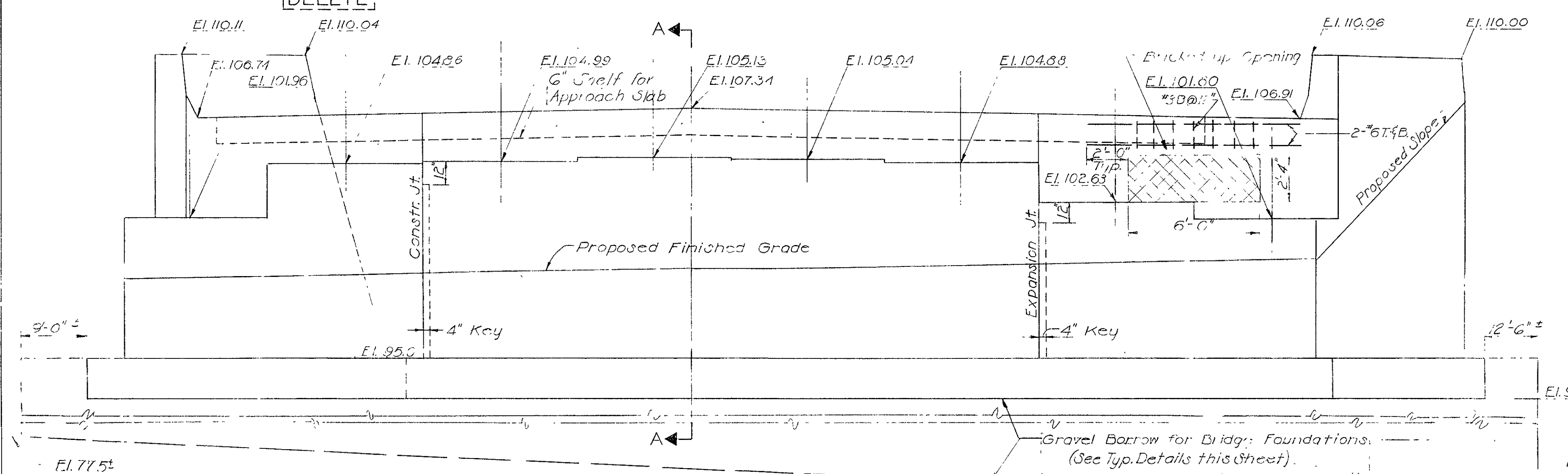
ALTERNATE SHEAR CONNECTOR

No Scale



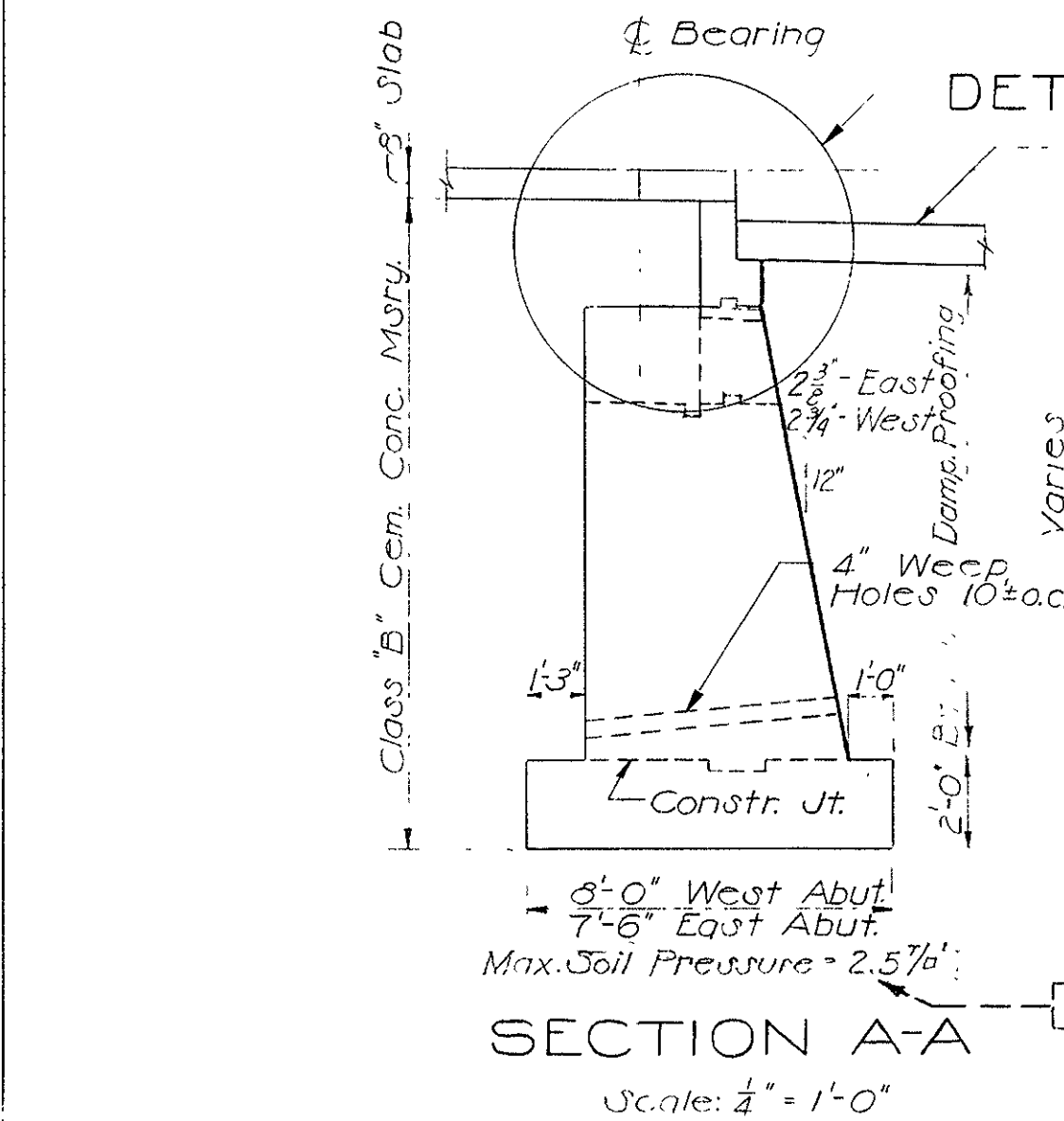
PLAN - WEST ABUTMENT

Scale: 1/4" = 1'-0"



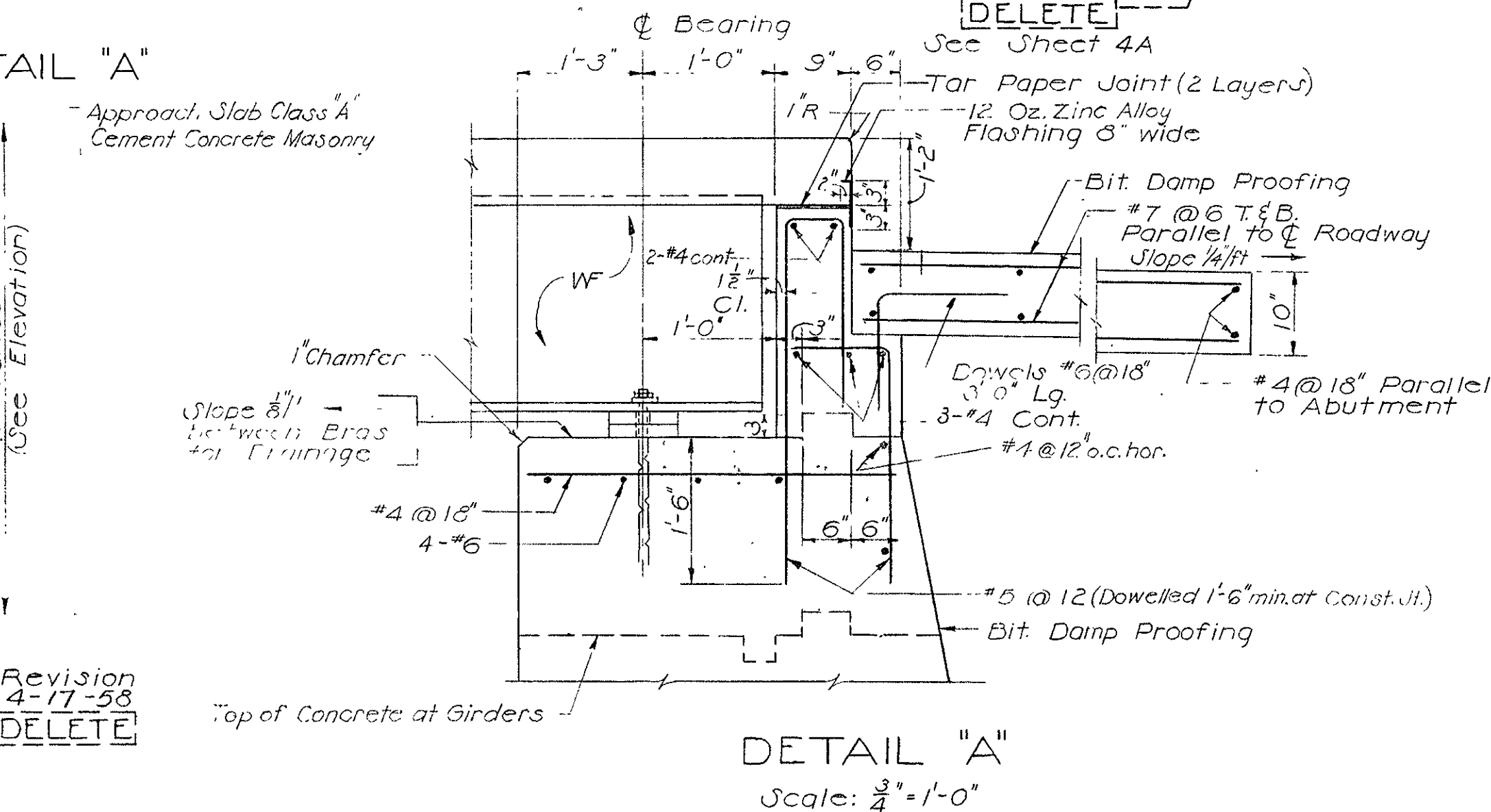
ELEVATION - WEST ABUTMENT

Scale: 1/4" = 1'-0"



SECTION A-A

Scale: 1/4" = 1'-0"

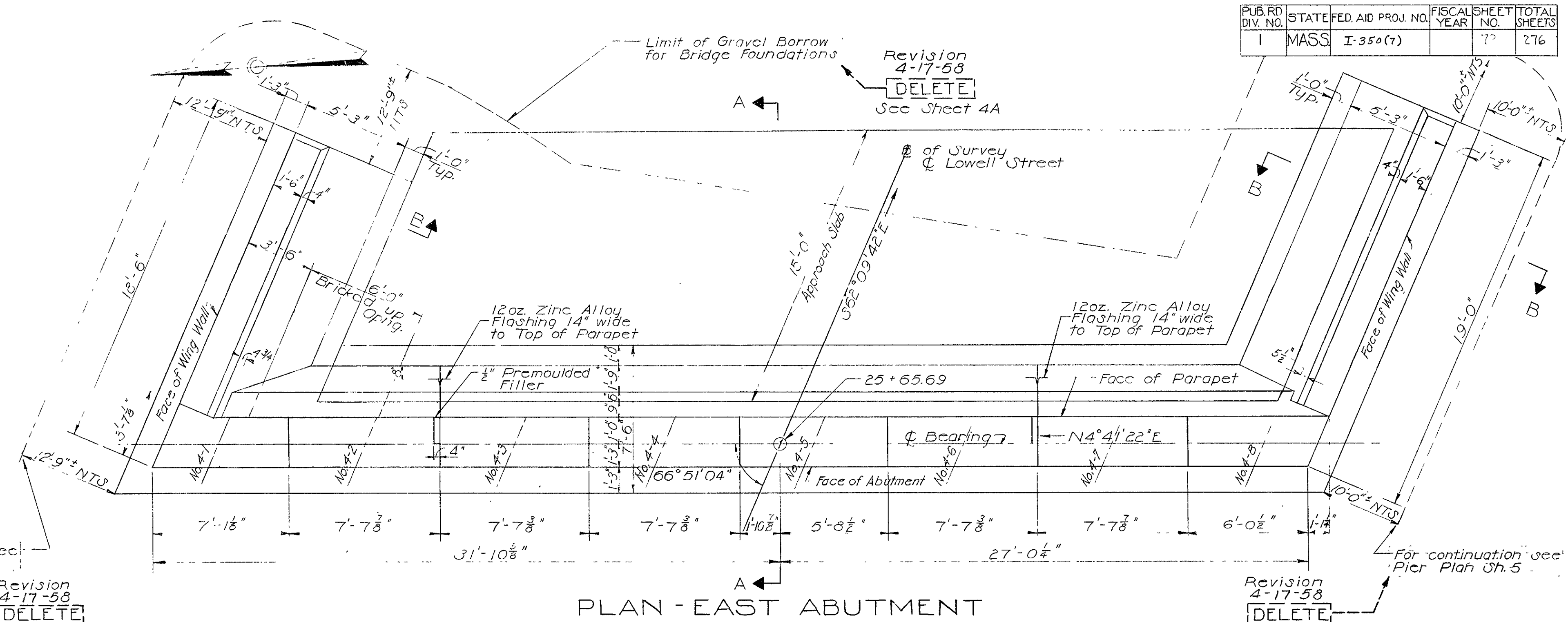


DETAIL "A"

Scale: 1/4" = 1'-0"

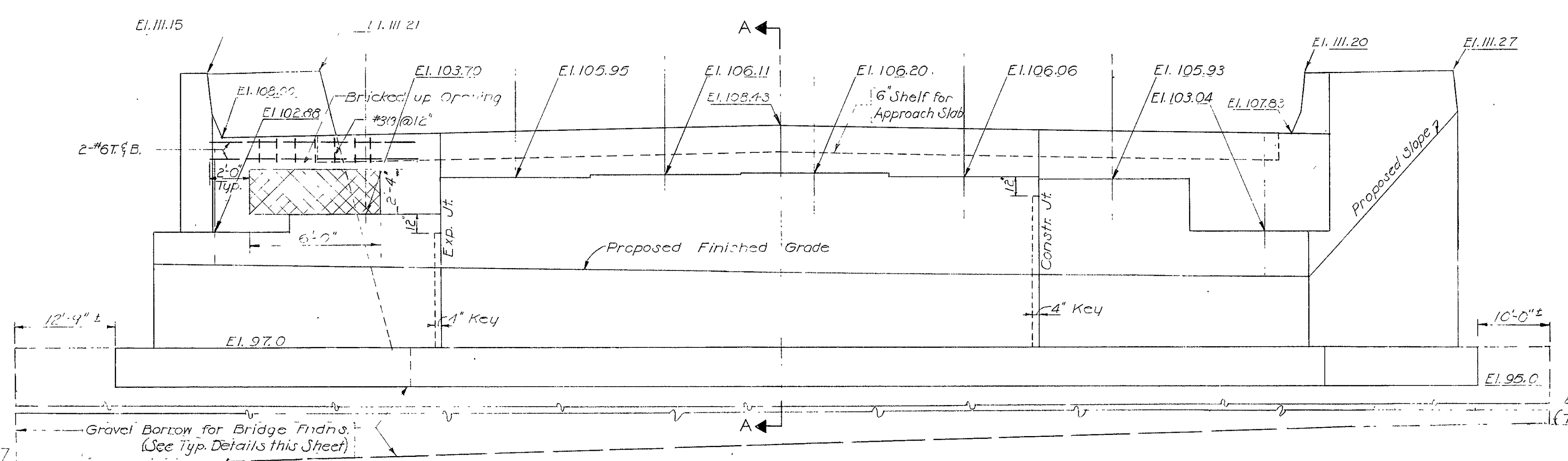
CONSTRUCTION JOINT IN ABUTMENT

Scale: 1/4" = 1'-0"



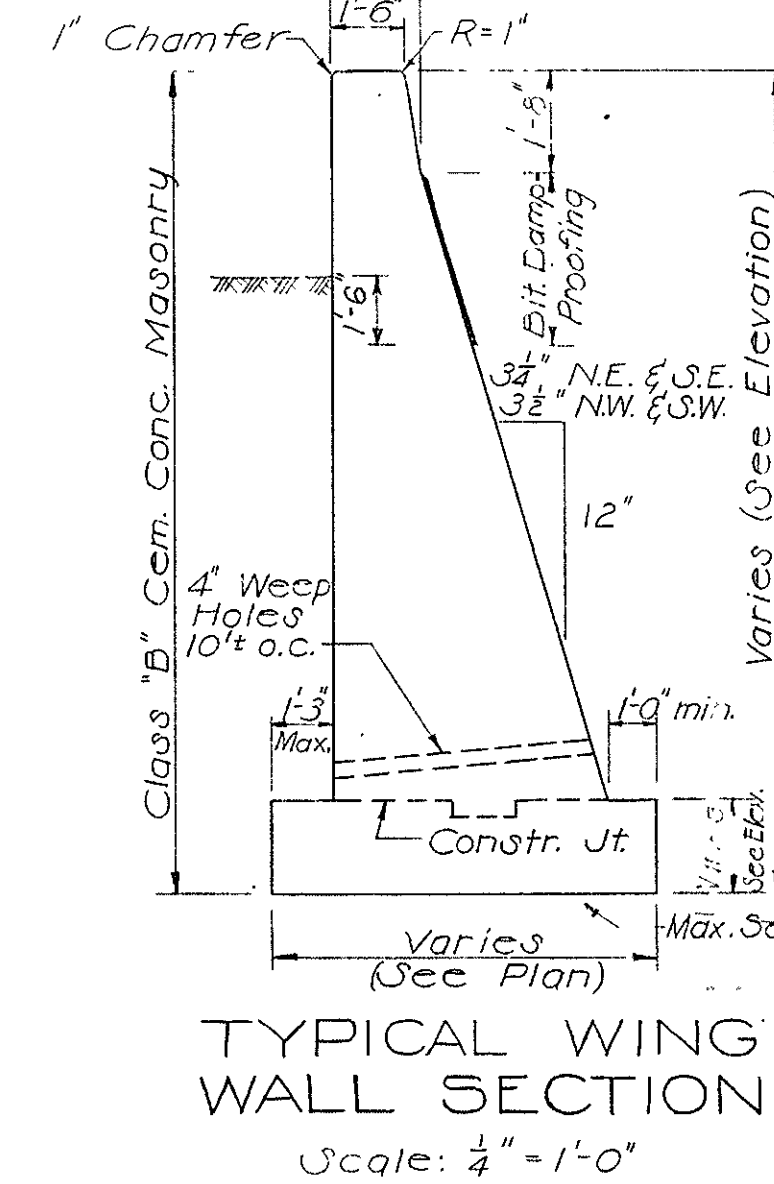
PLAN - EAST ABUTMENT

Scale: 1/4" = 1'-0"



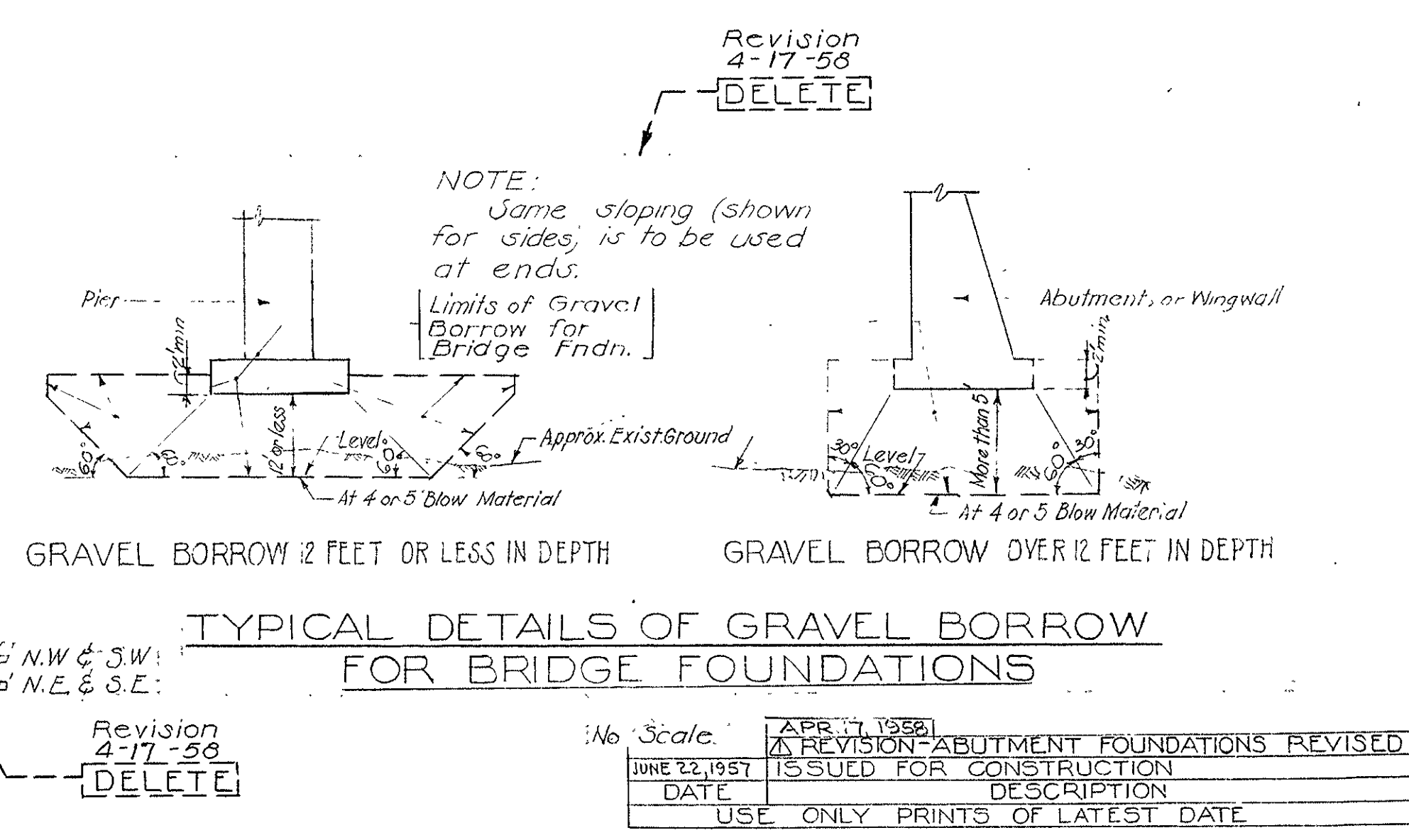
ELEVATION - EAST ABUTMENT

Scale: 1/4" = 1'-0"



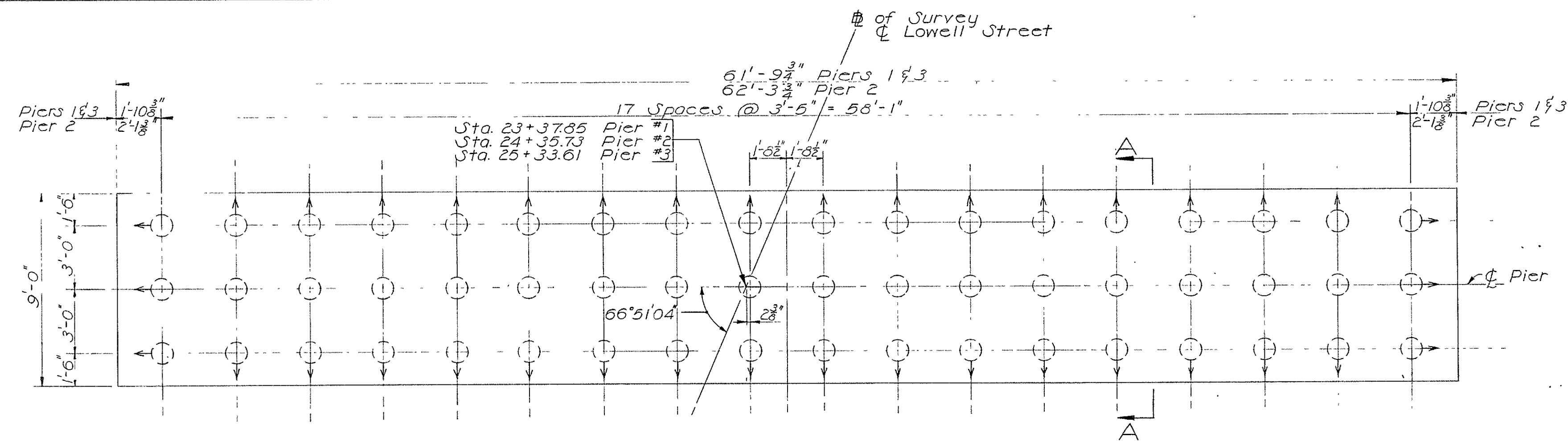
TYPICAL WING WALL SECTION B-B

Scale: 1/4" = 1'-0"



TYPICAL DETAILS OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS

Scale: 1/4" = 1'-0"

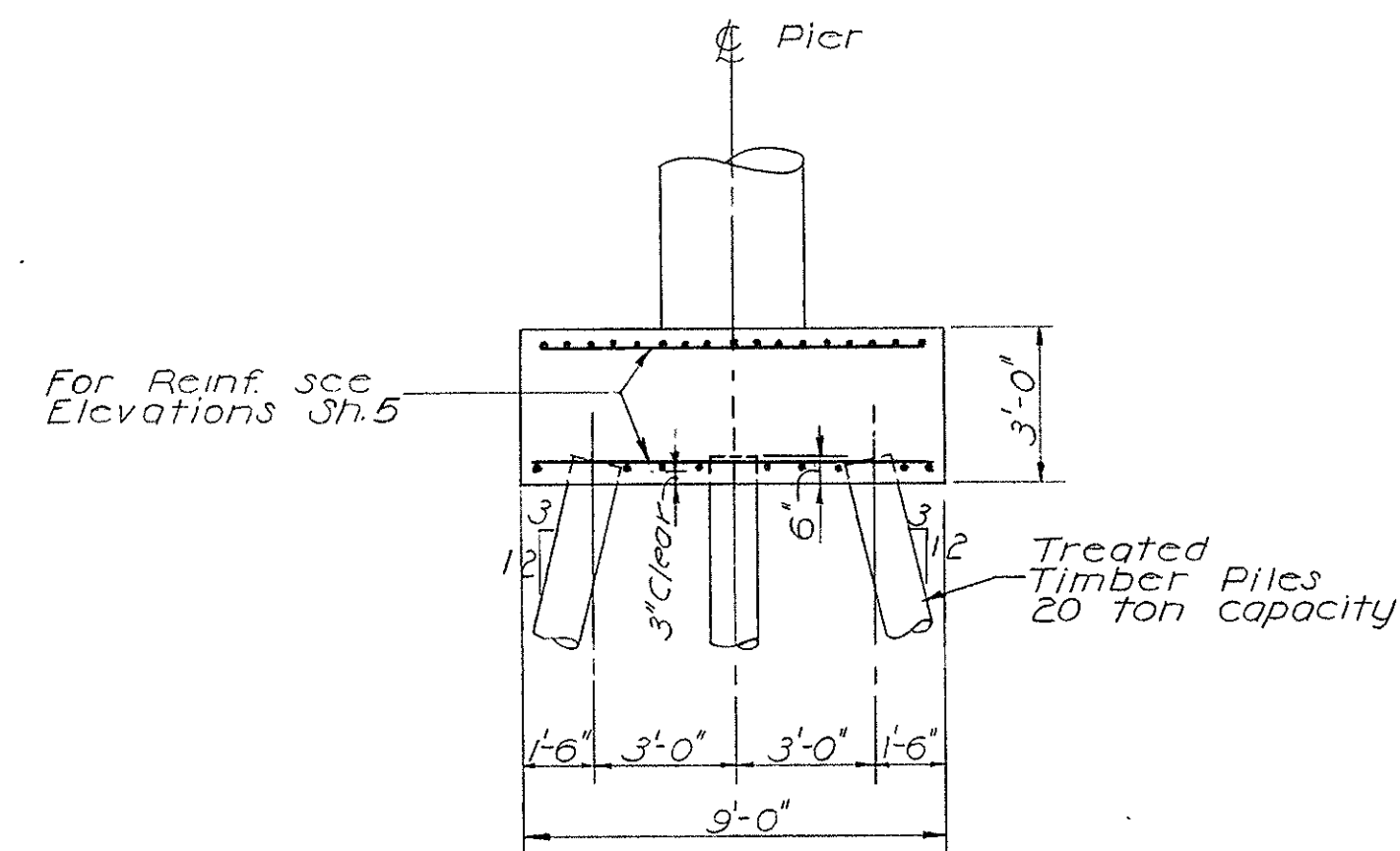


PILE PLAN
PIER #2

PIERS #1 & #3 SIMILAR
EXCEPT AS NOTED

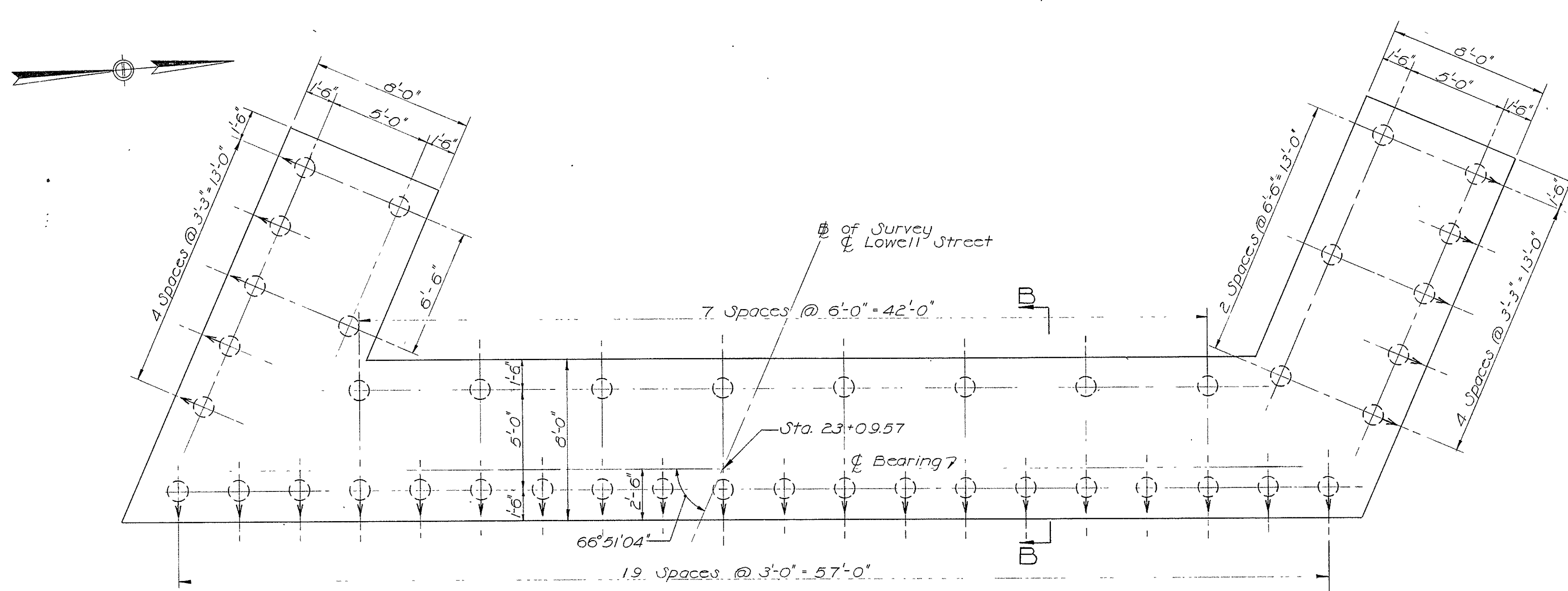
Scale: $\frac{1}{4}'' = 1'-0''$

NOTE: Vertical Piles indicated thus $\odot$
Battered Piles (3" Hor. to 12" Vert.) indicated thus $\odot$



SECTION A-A

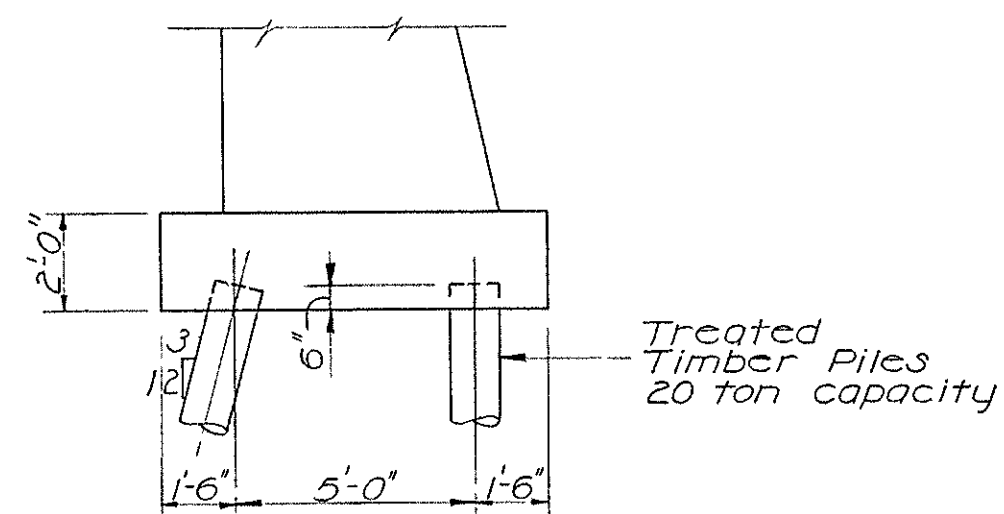
Scale: $\frac{1}{4}'' = 1'-0''$



PILE PLAN - WEST ABUTMENT

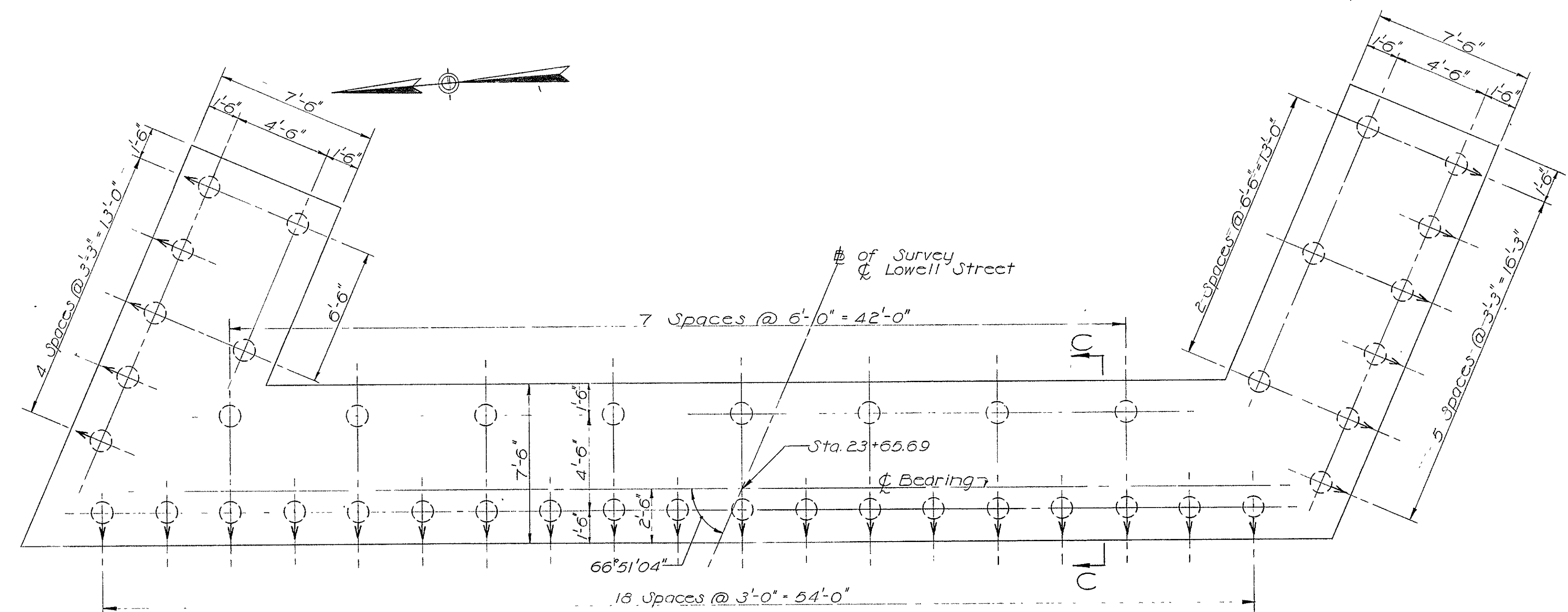
Scale: $\frac{1}{4}'' = 1'-0''$

NOTE: Vertical Piles indicated thus $\odot$
Battered Piles (3" Hor. to 12" Vert.) indicated thus $\odot$



SECTION B-B

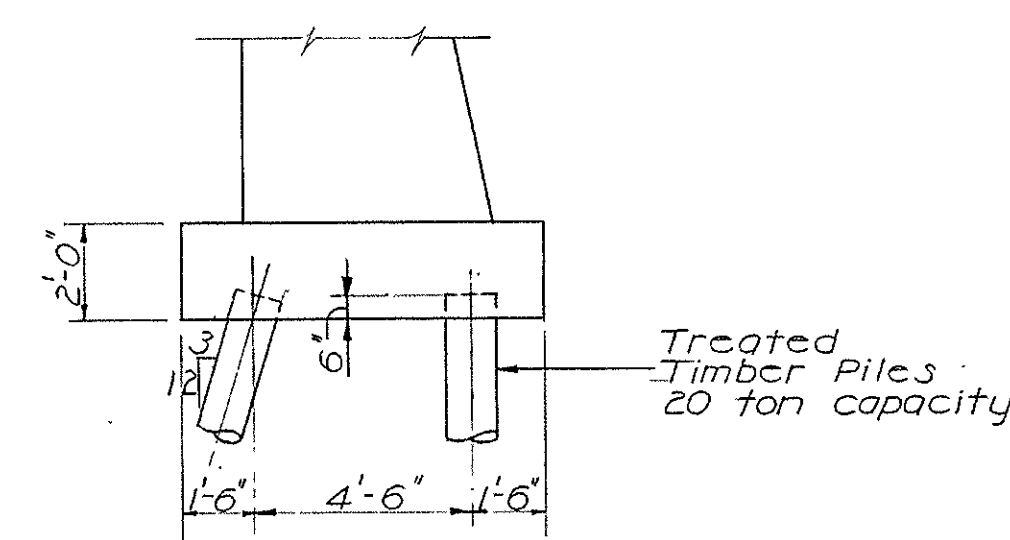
Scale: $\frac{1}{4}'' = 1'-0''$



PILE PLAN - EAST ABUTMENT

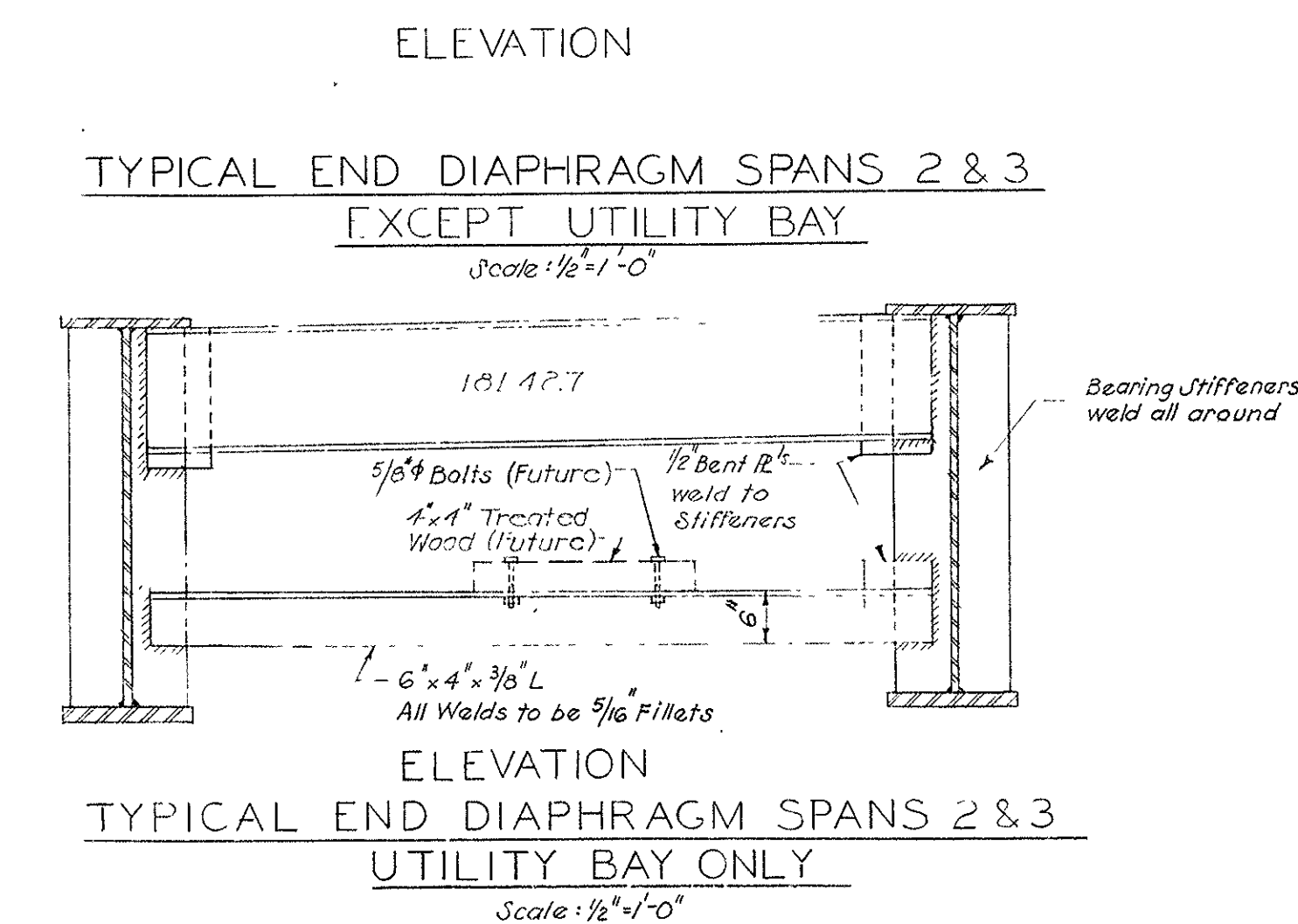
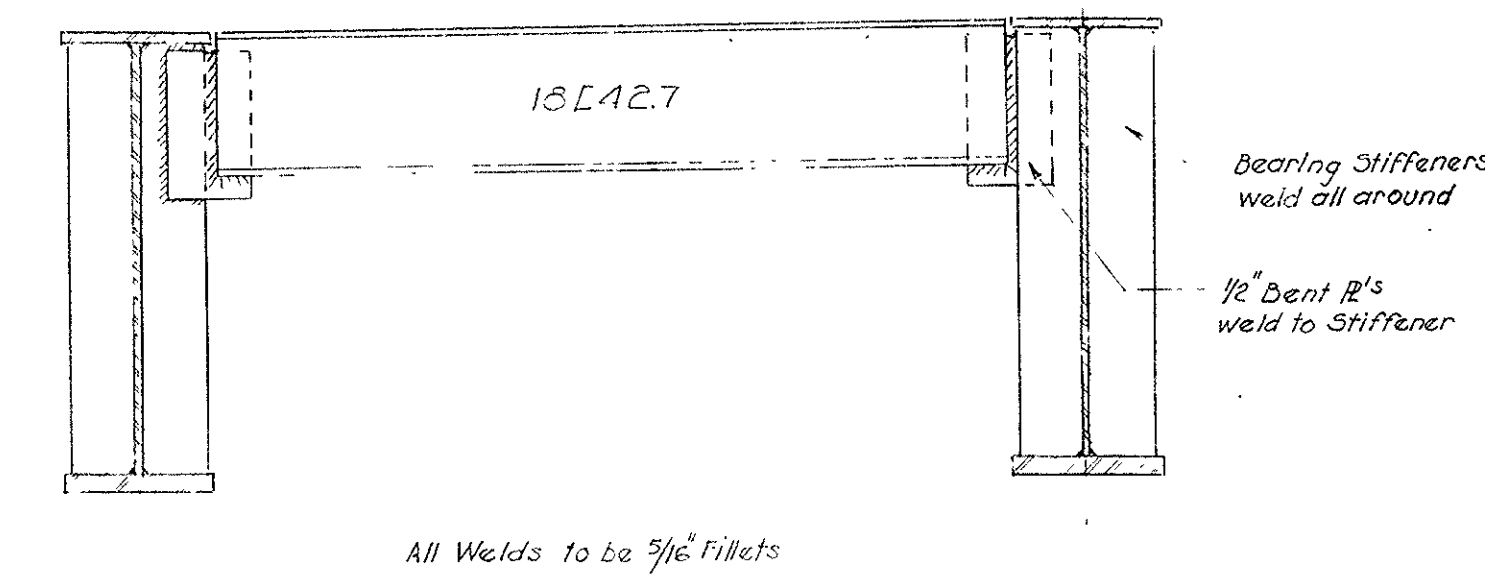
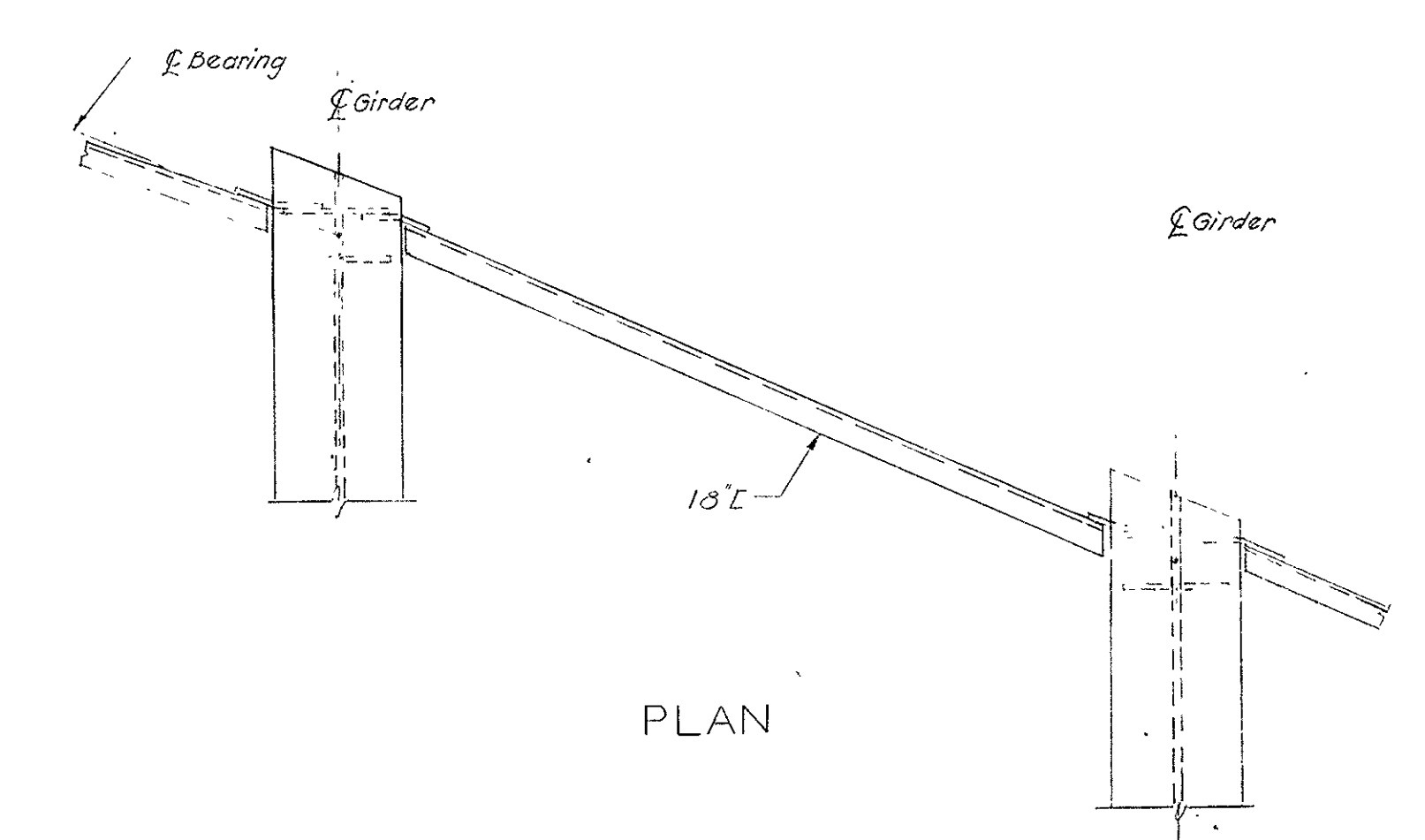
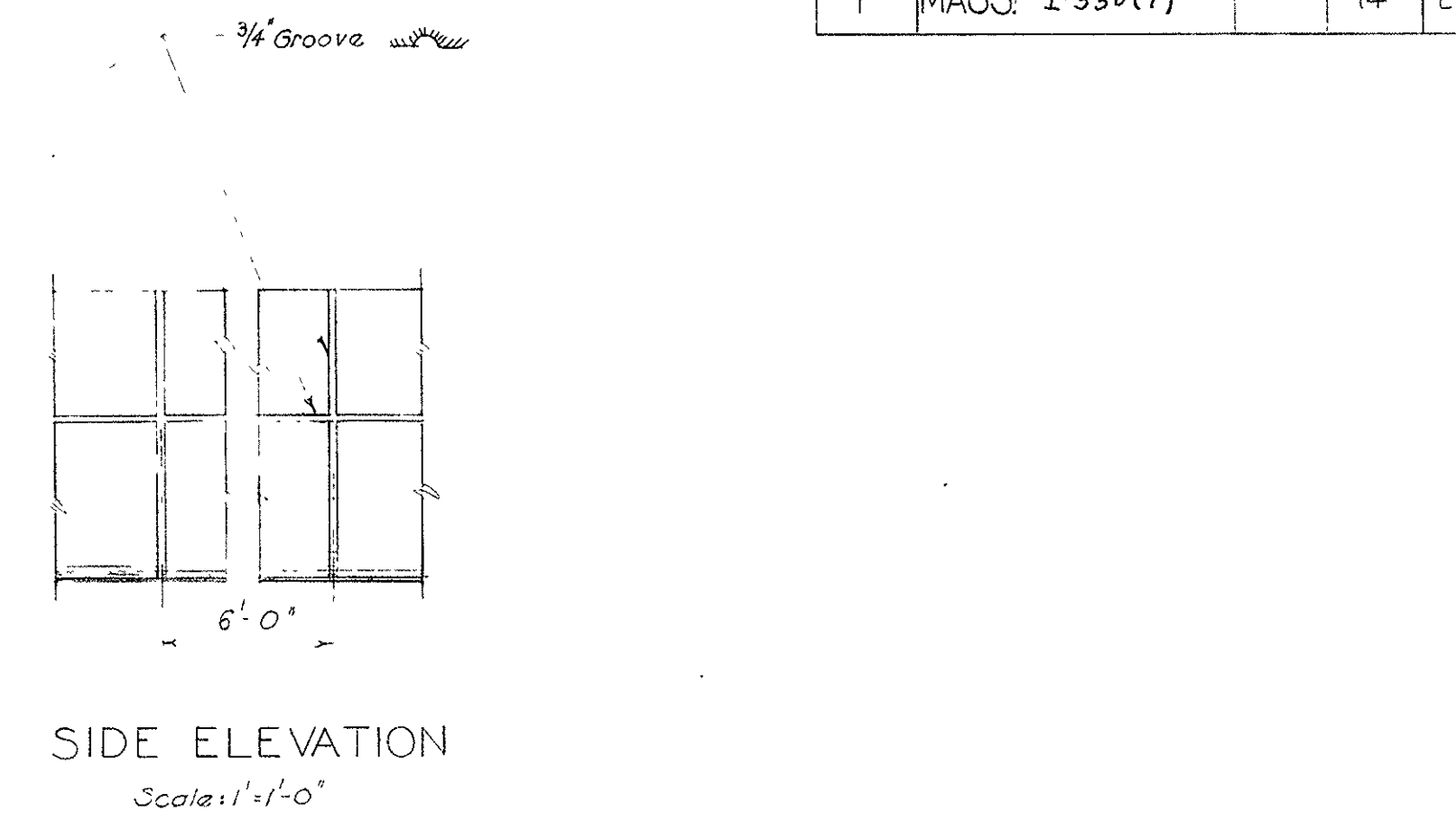
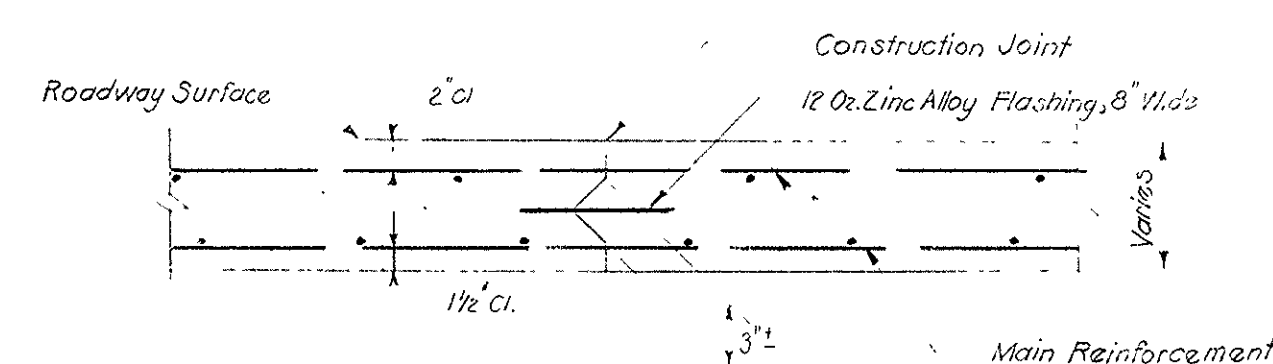
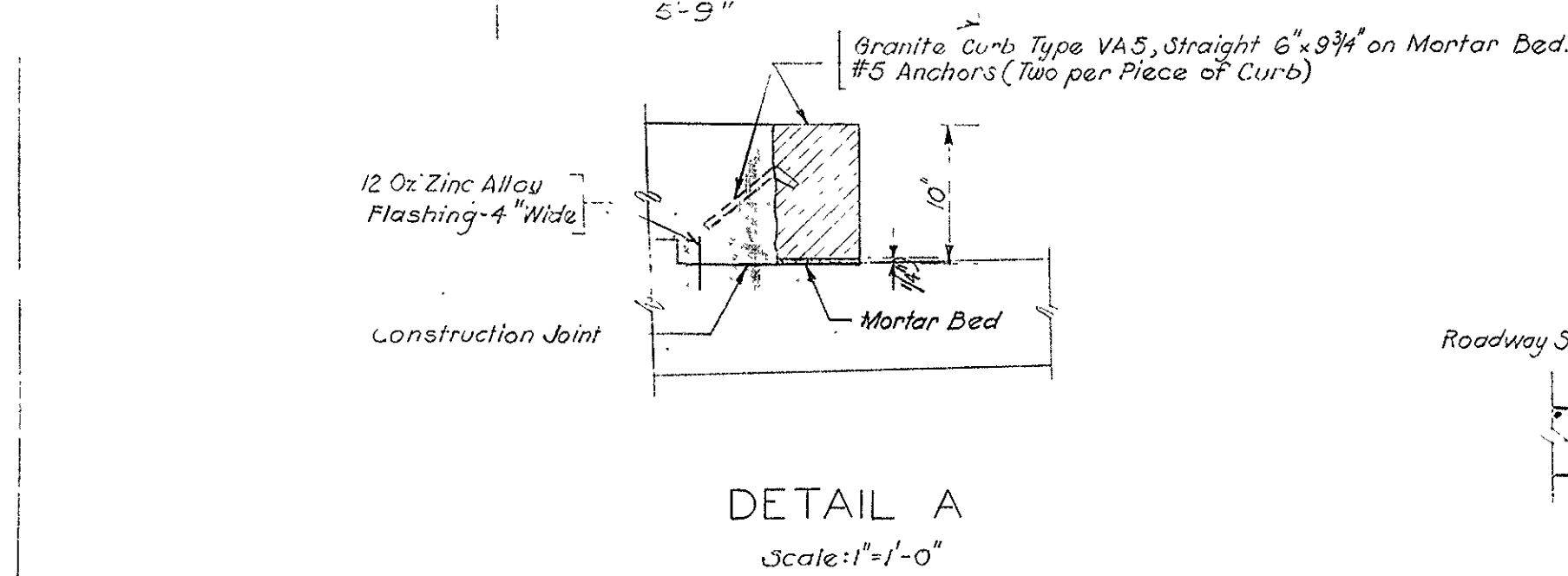
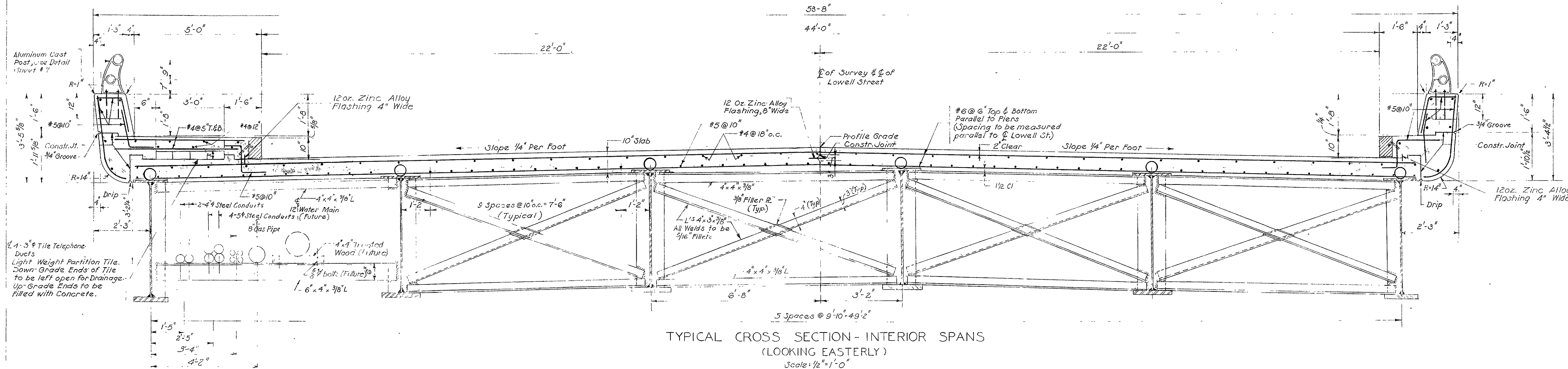
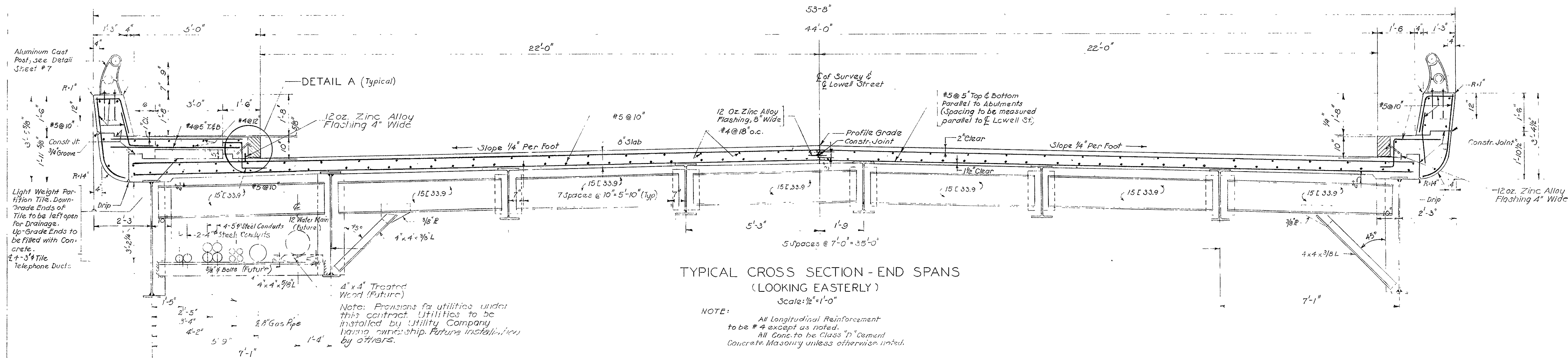
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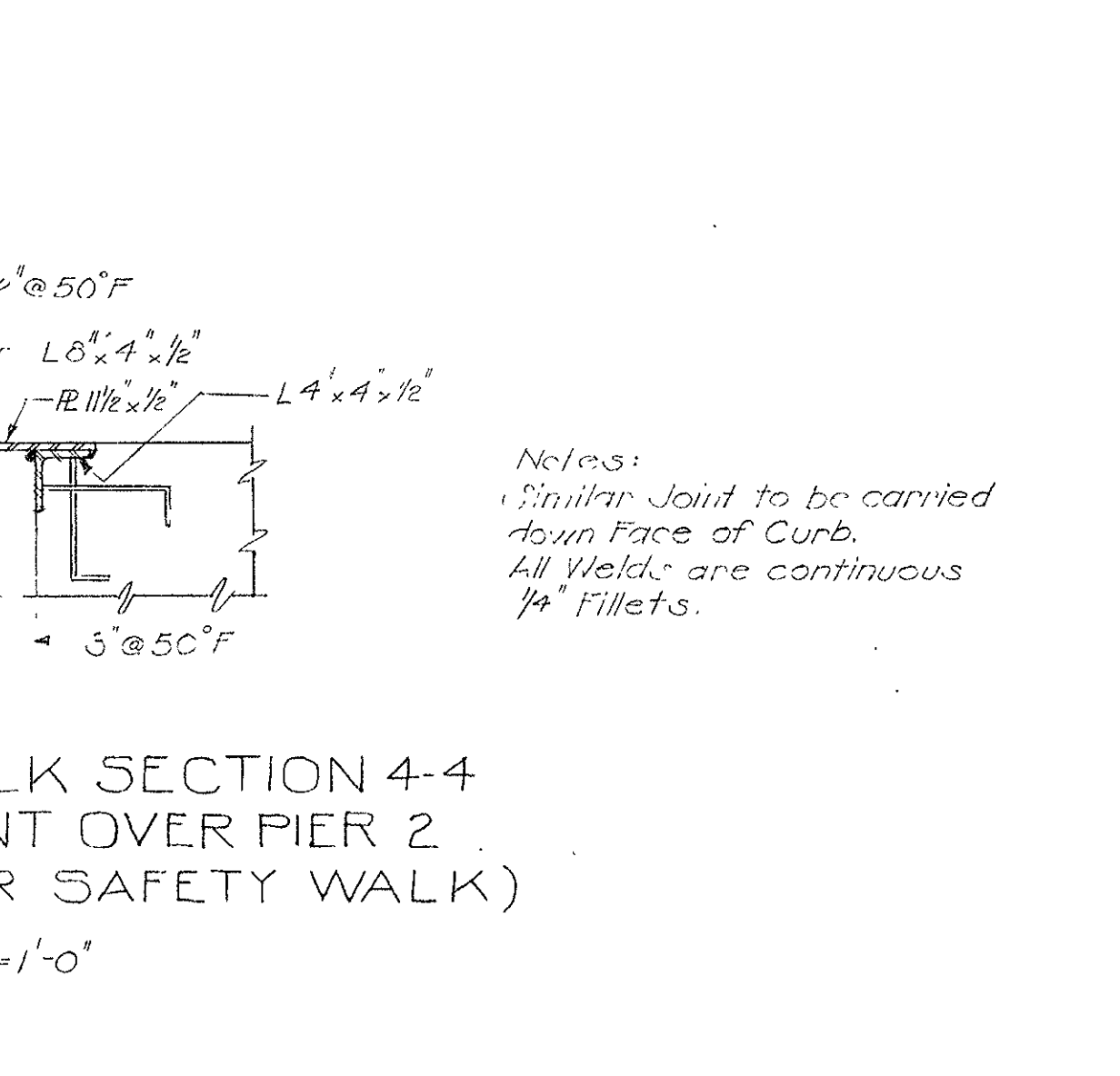
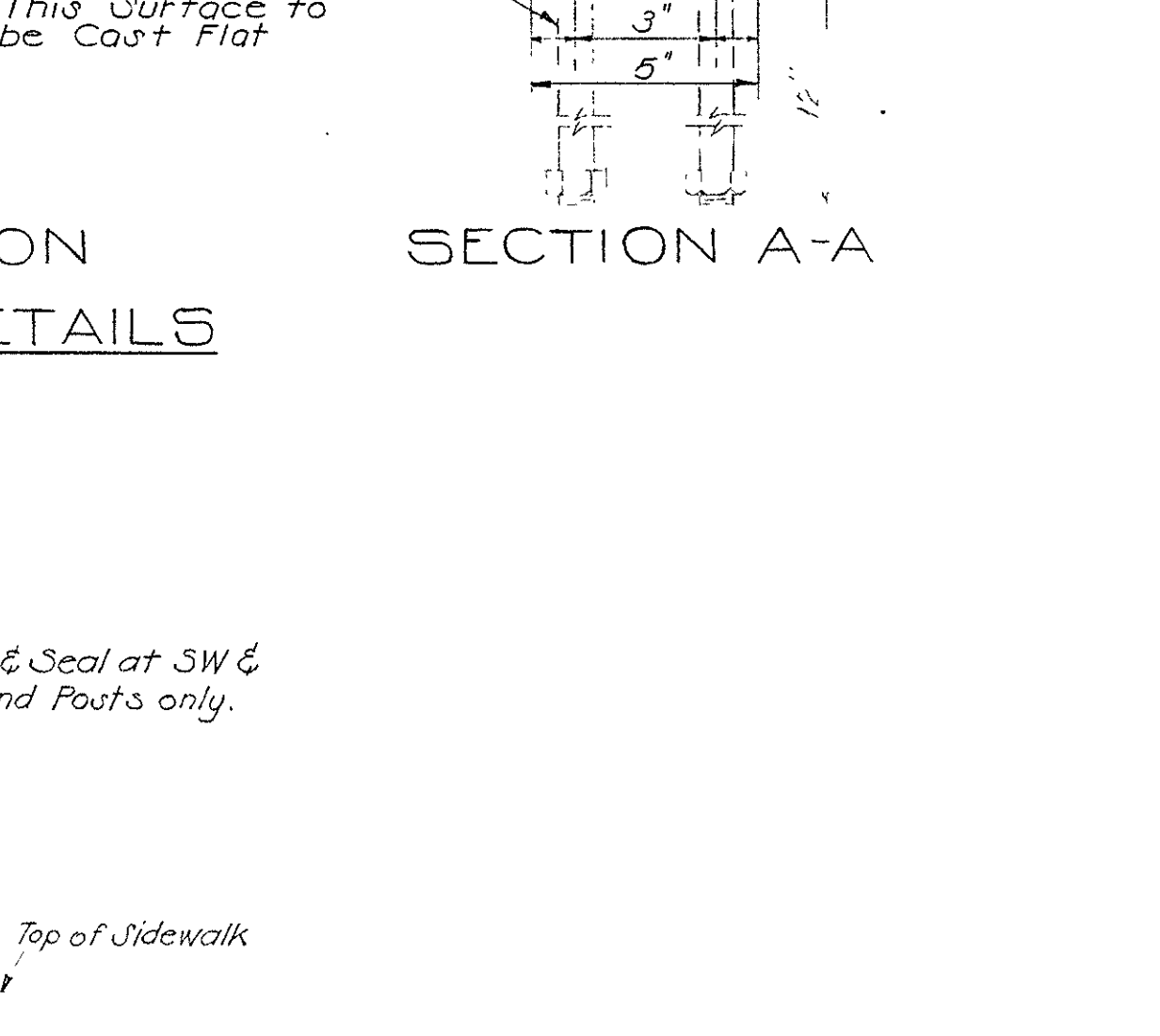
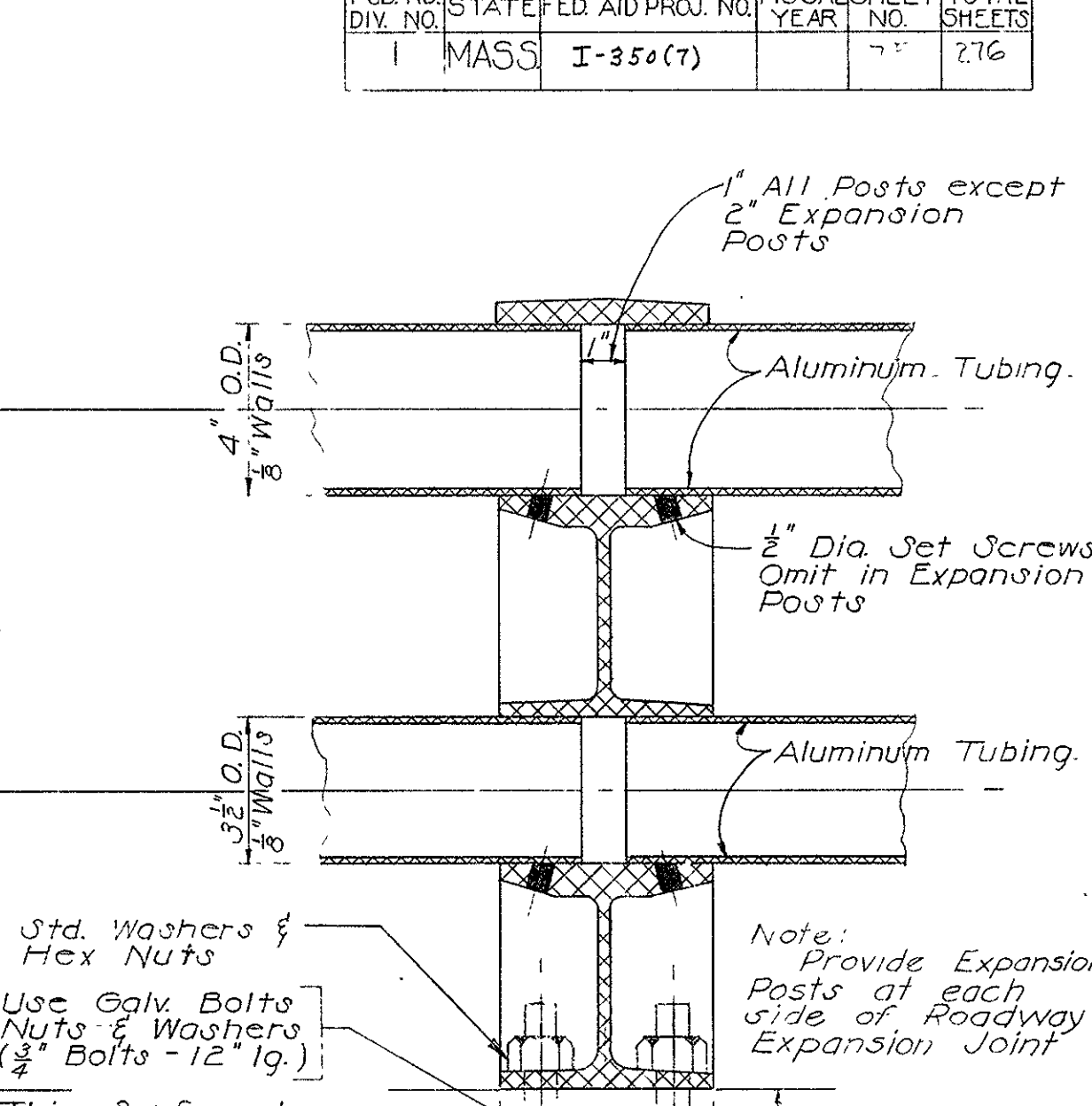
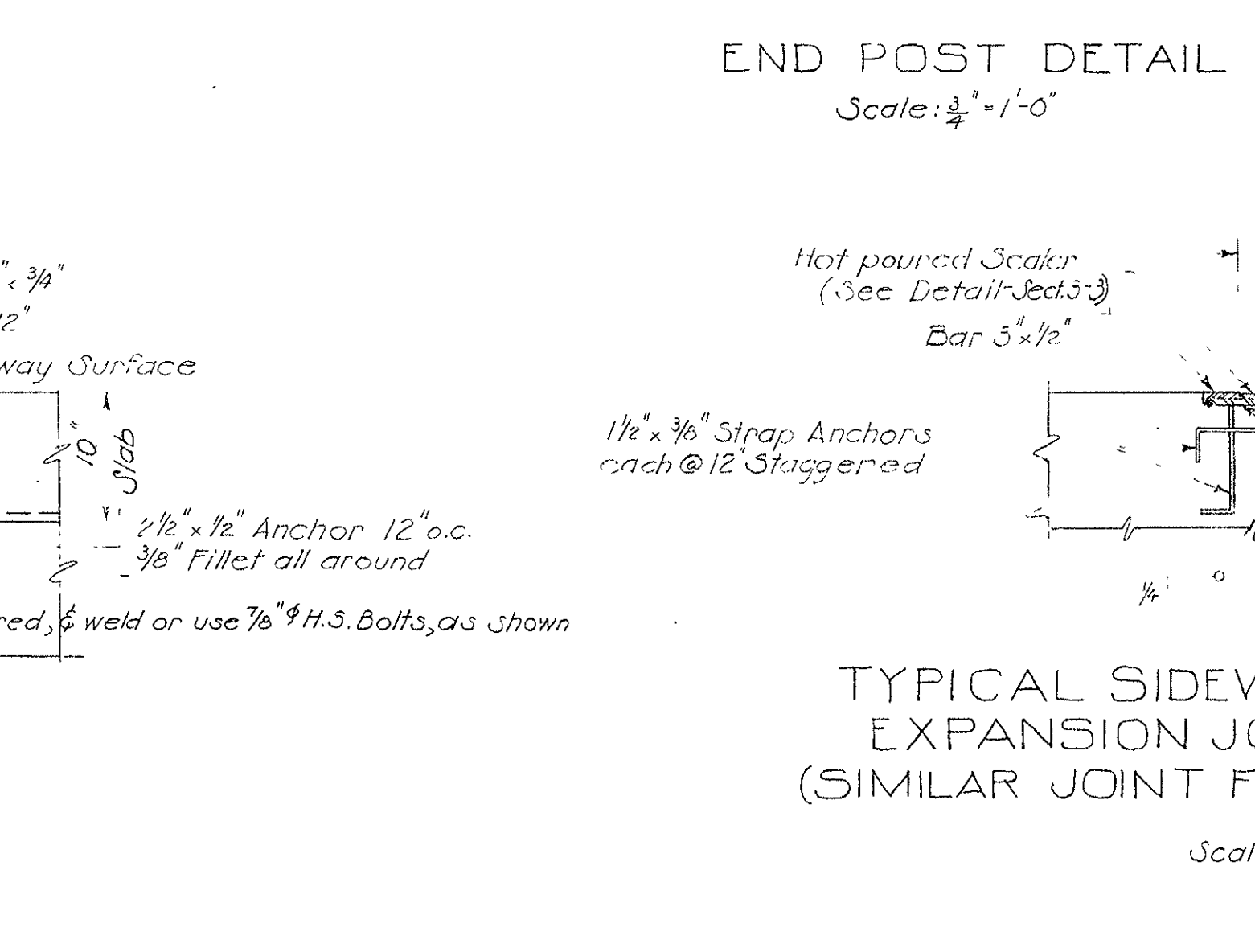
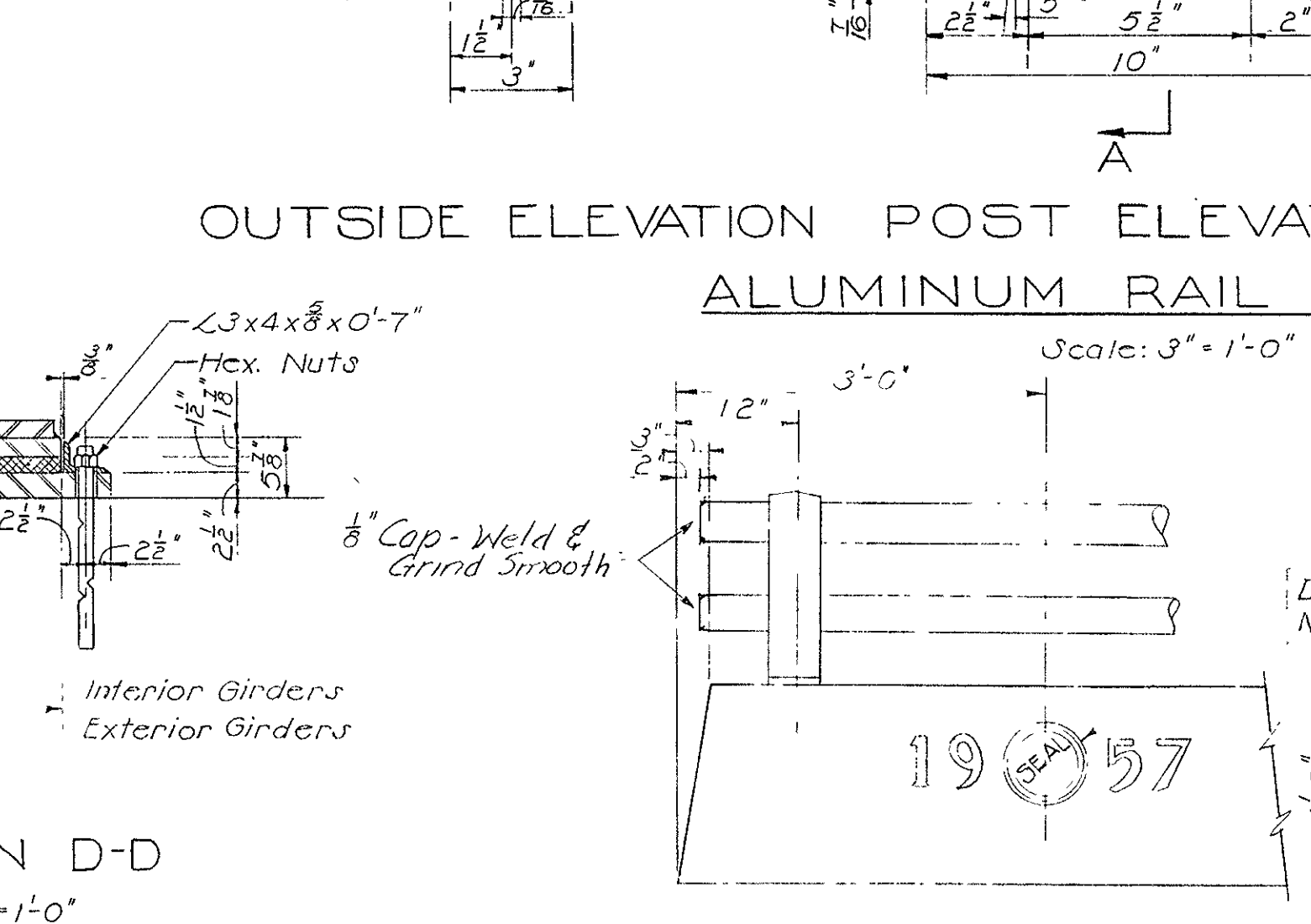
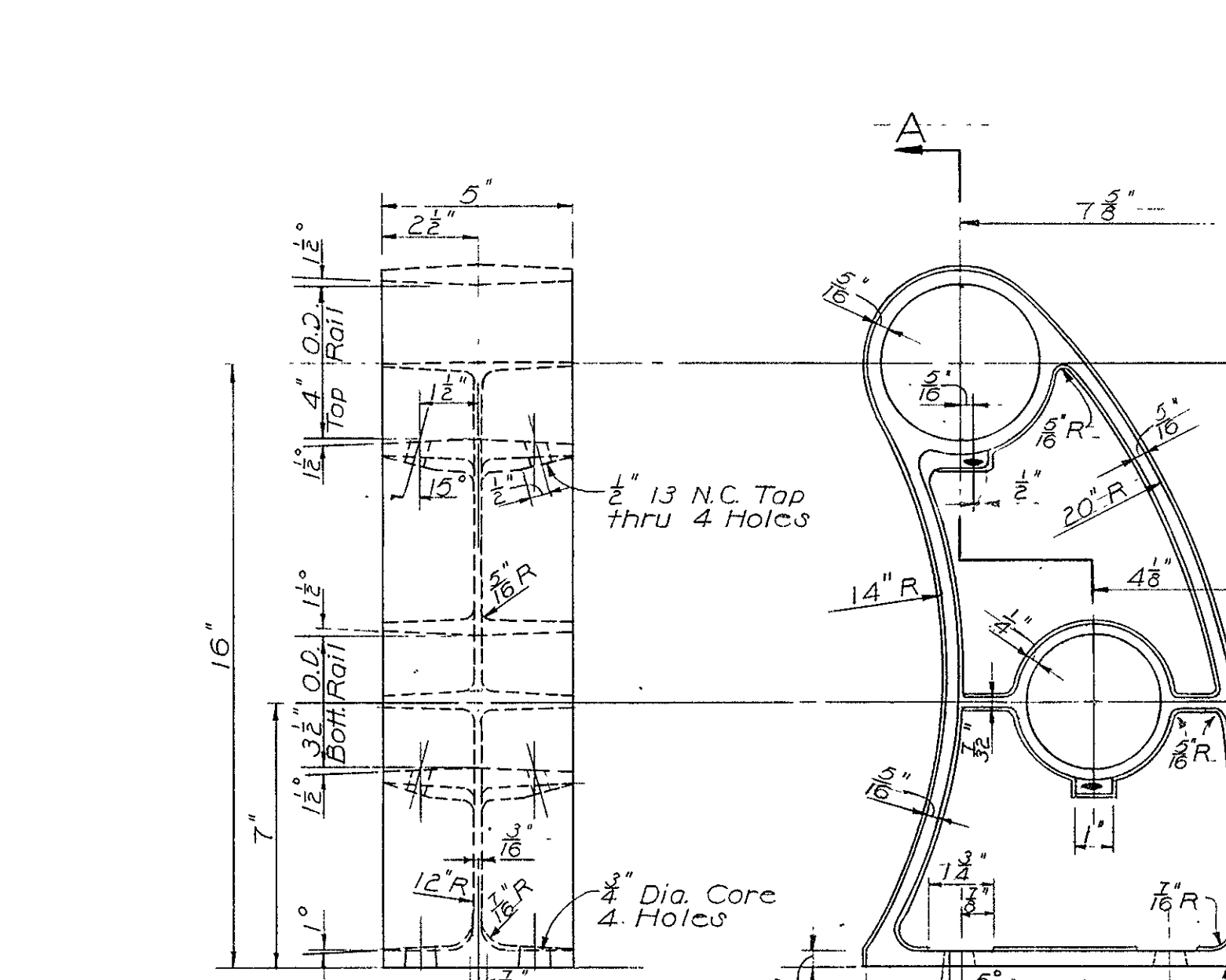
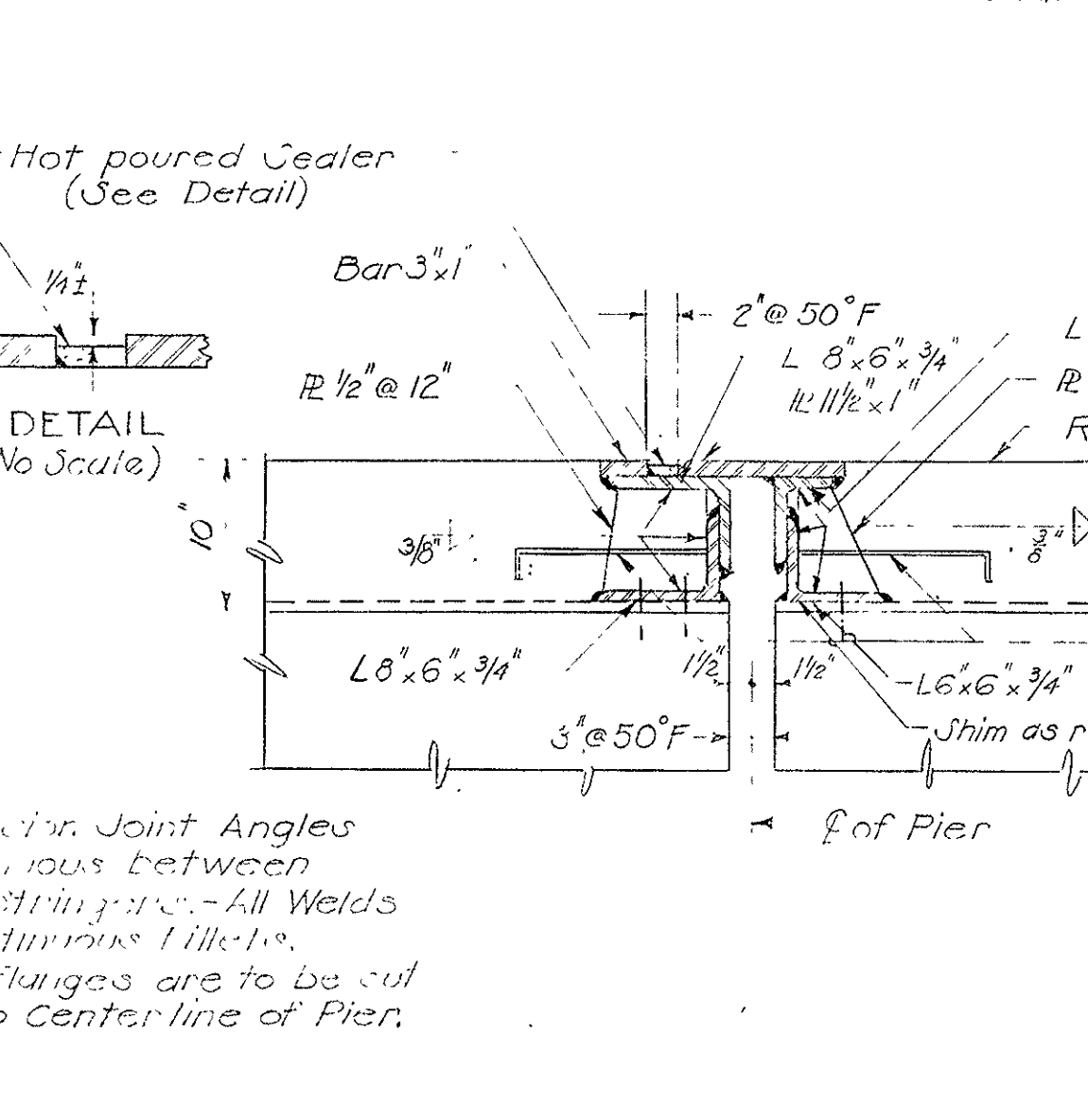
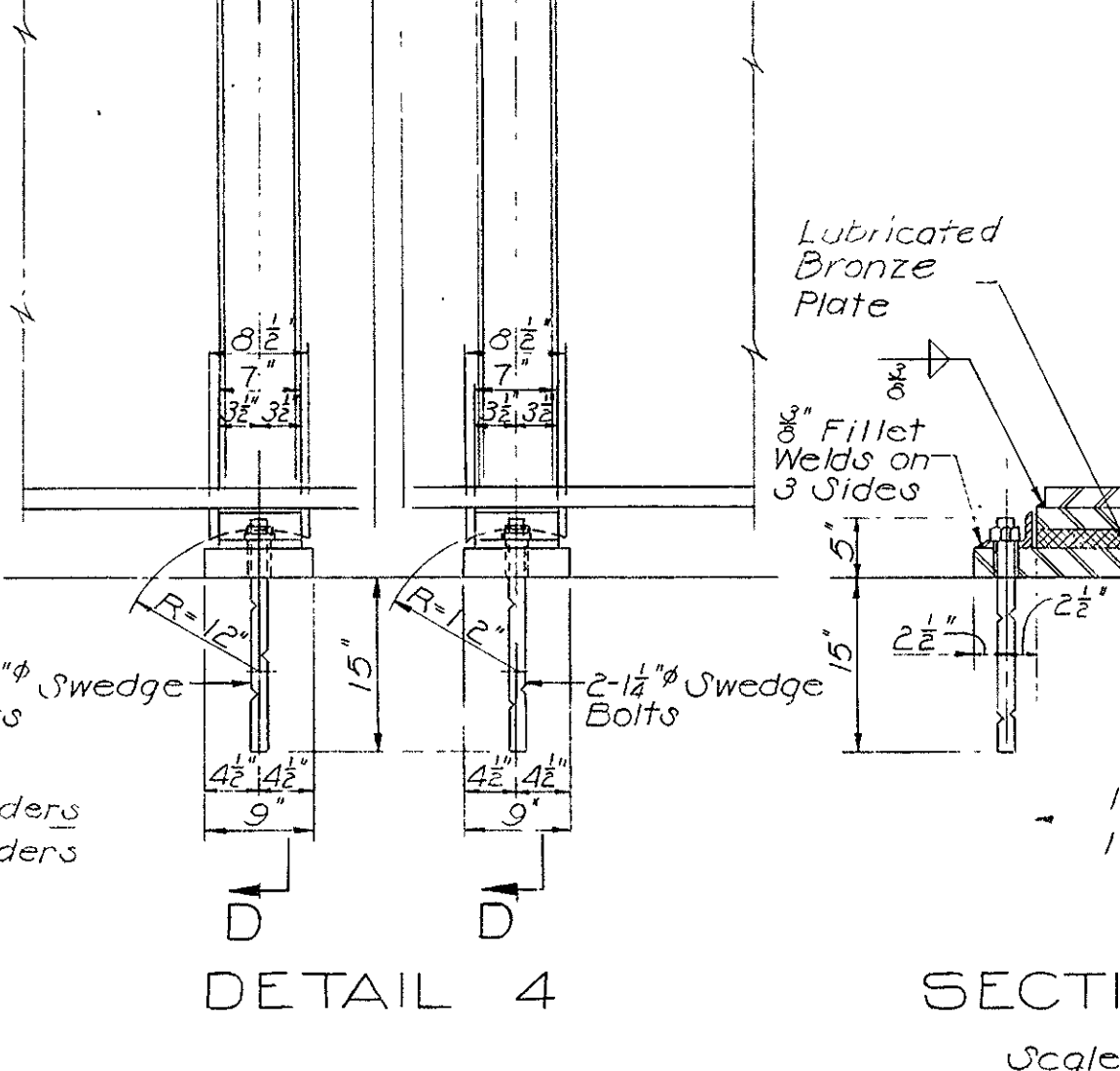
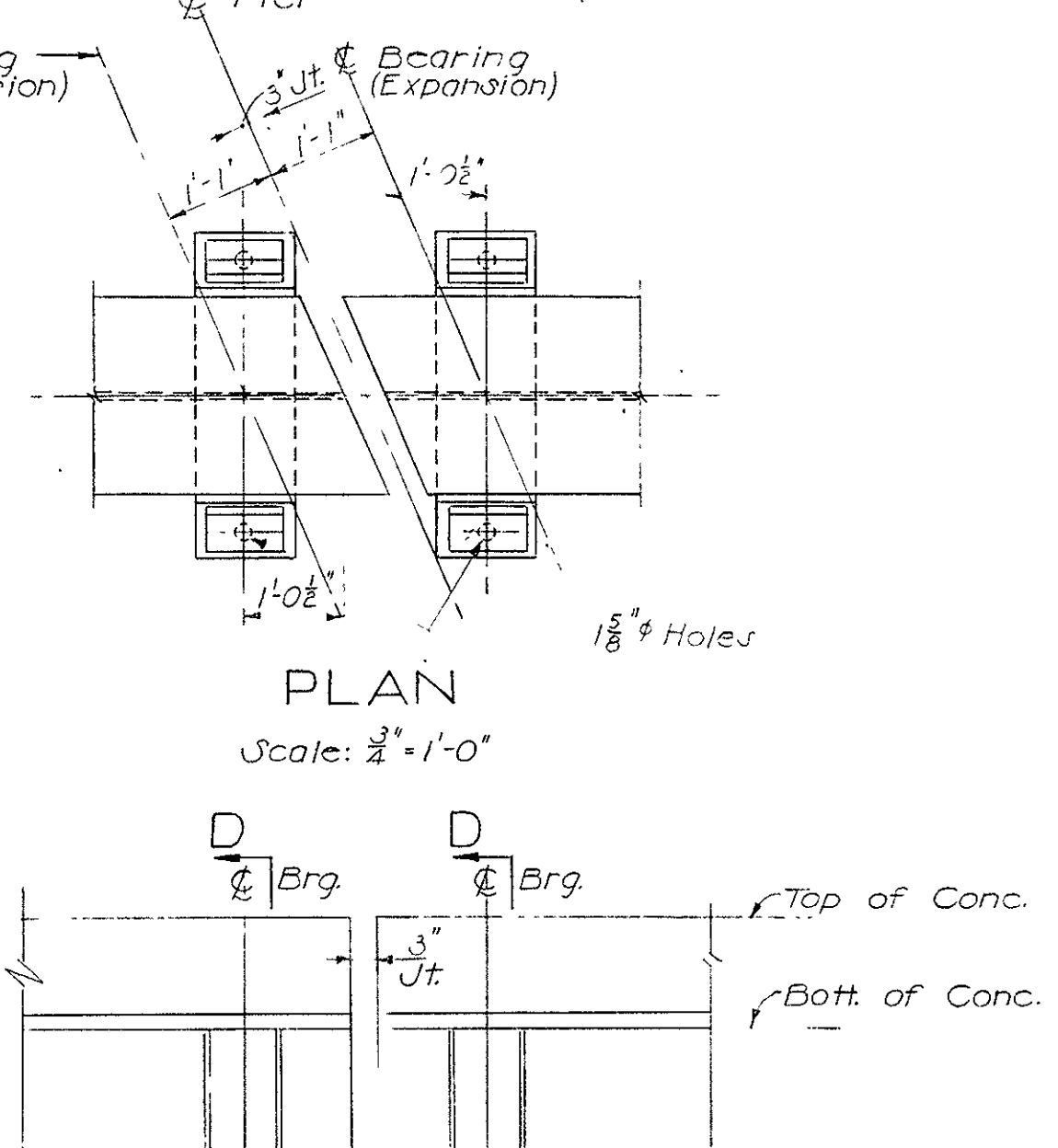
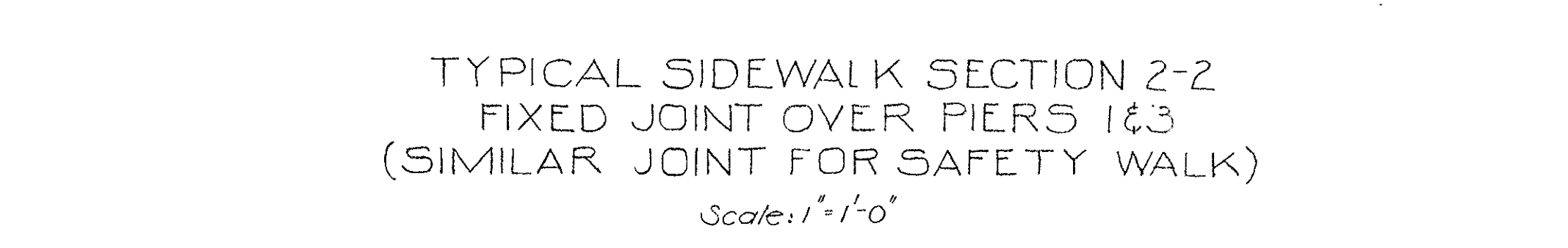
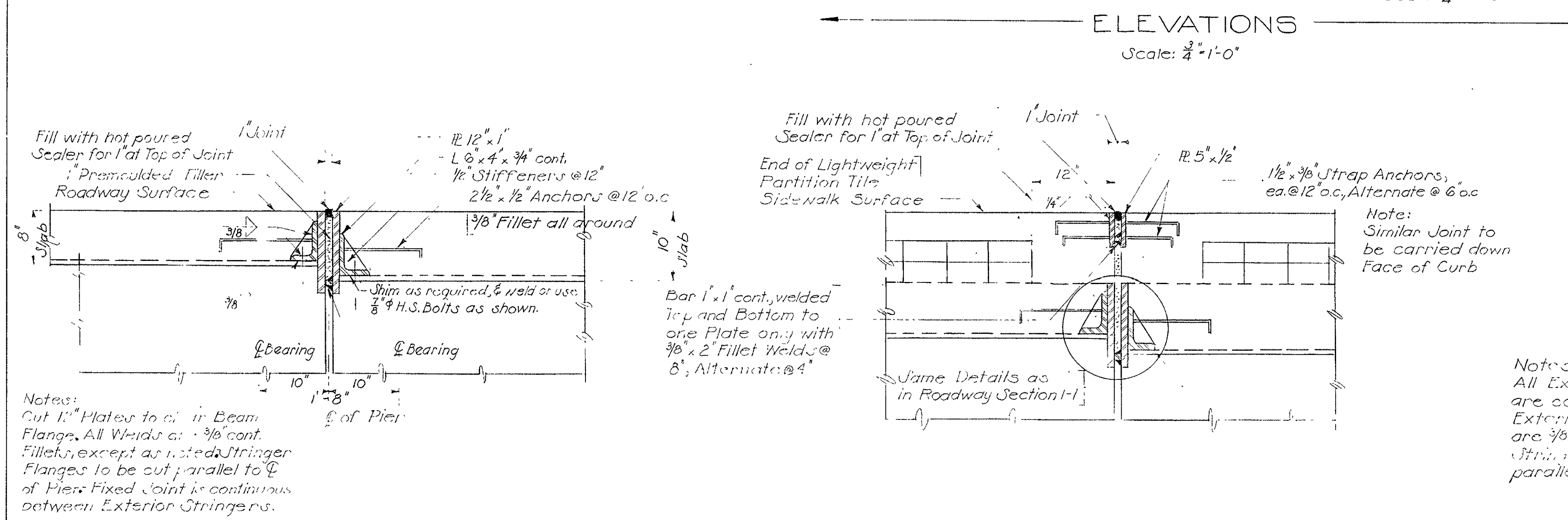
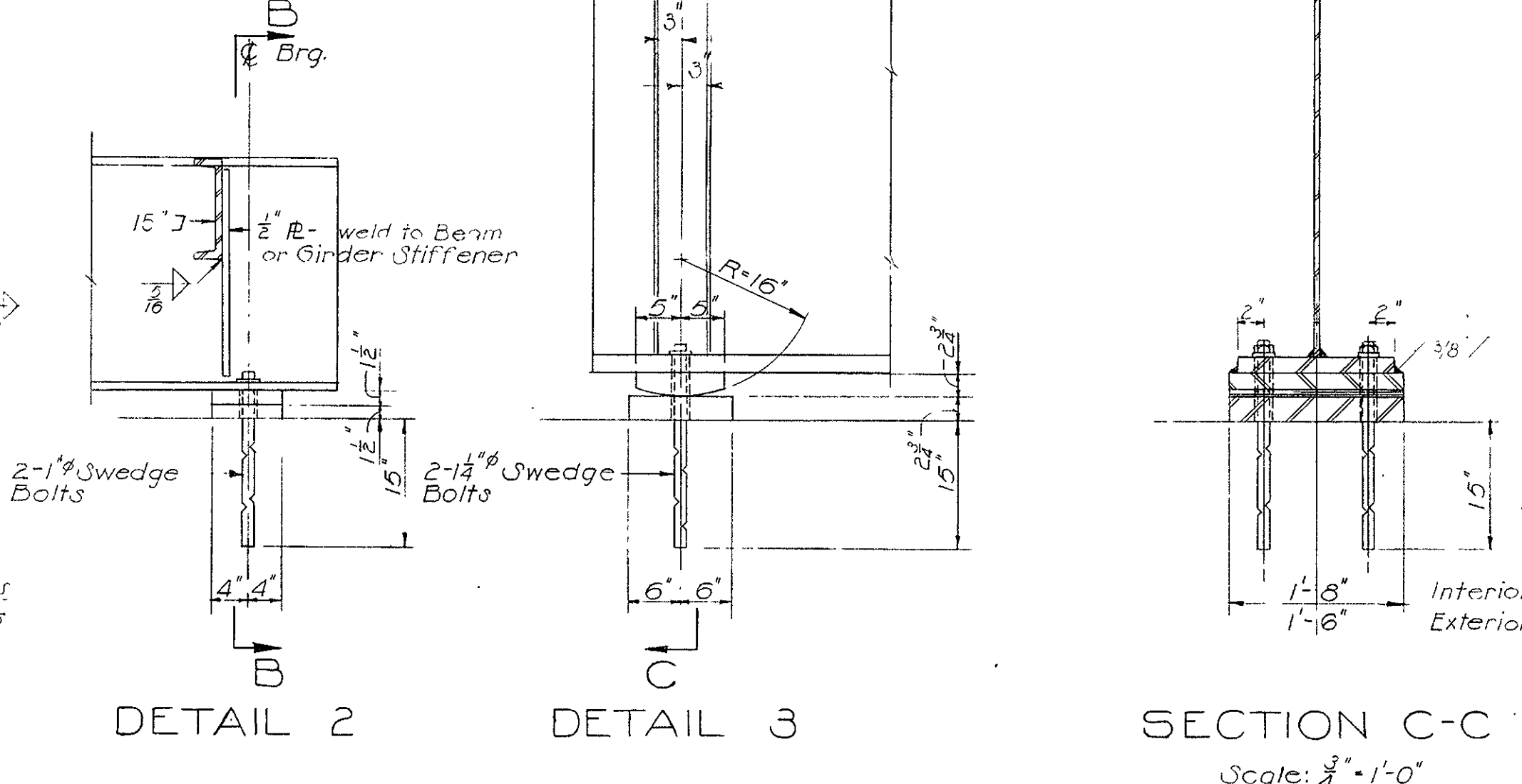
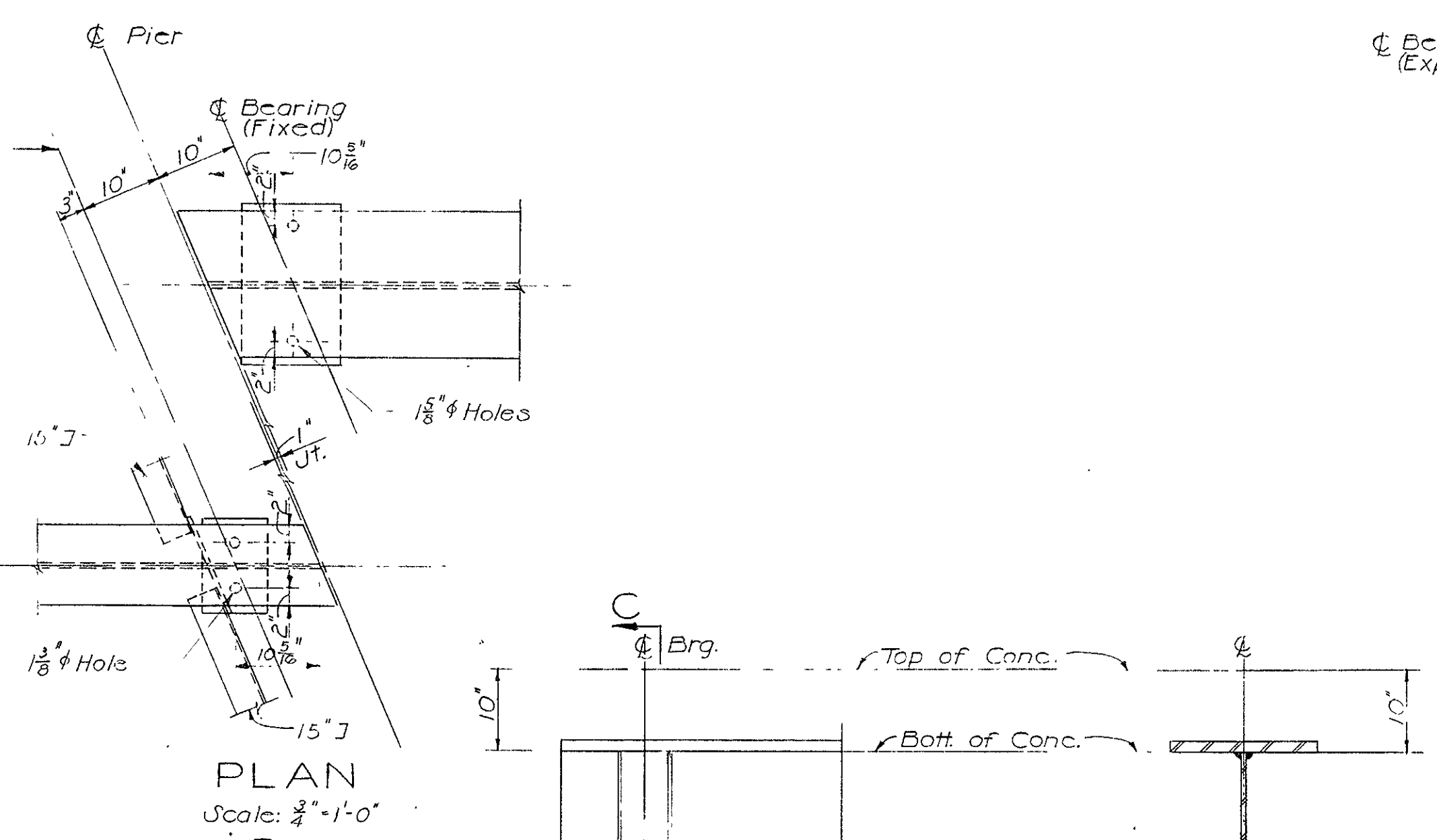
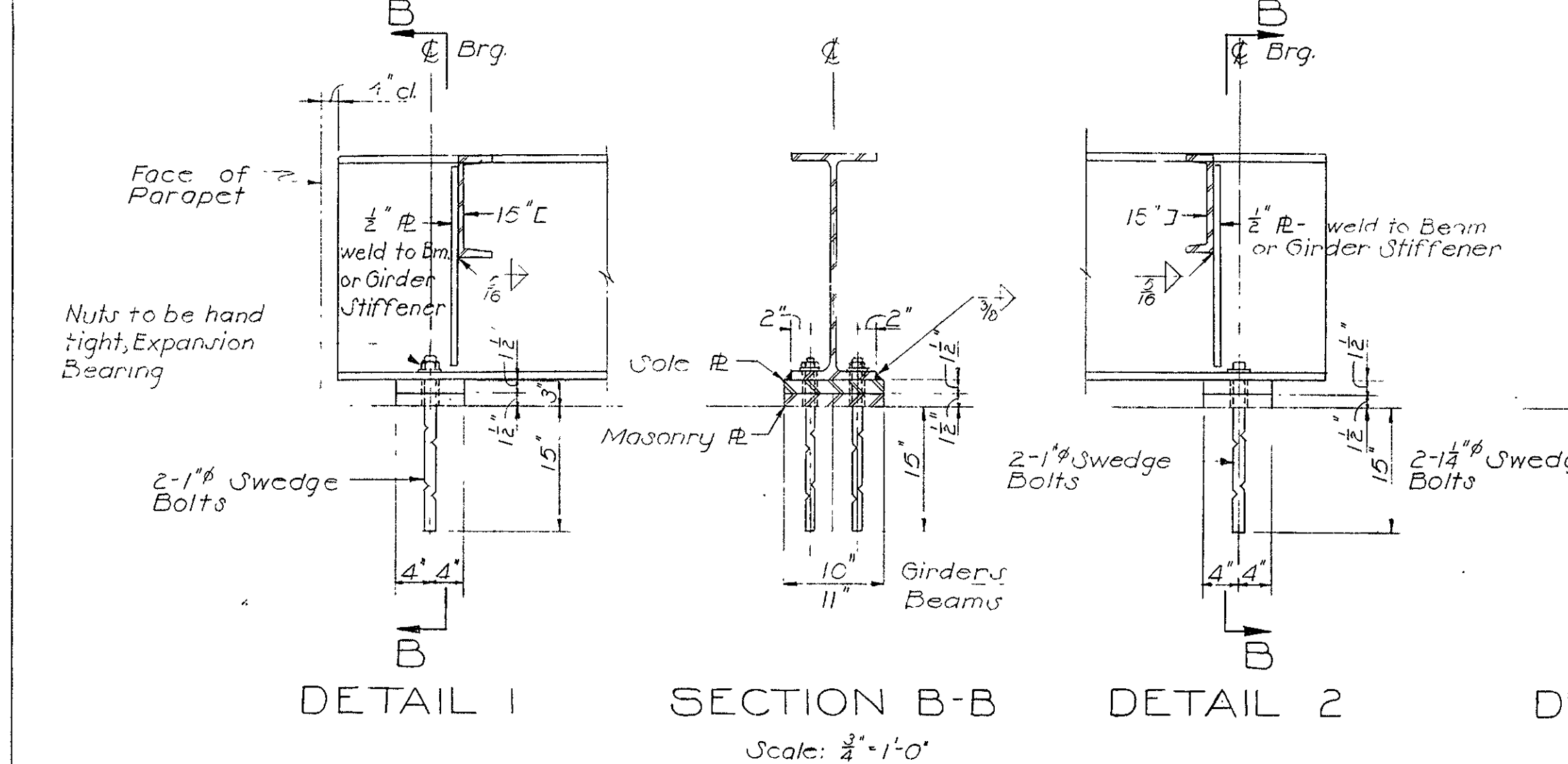
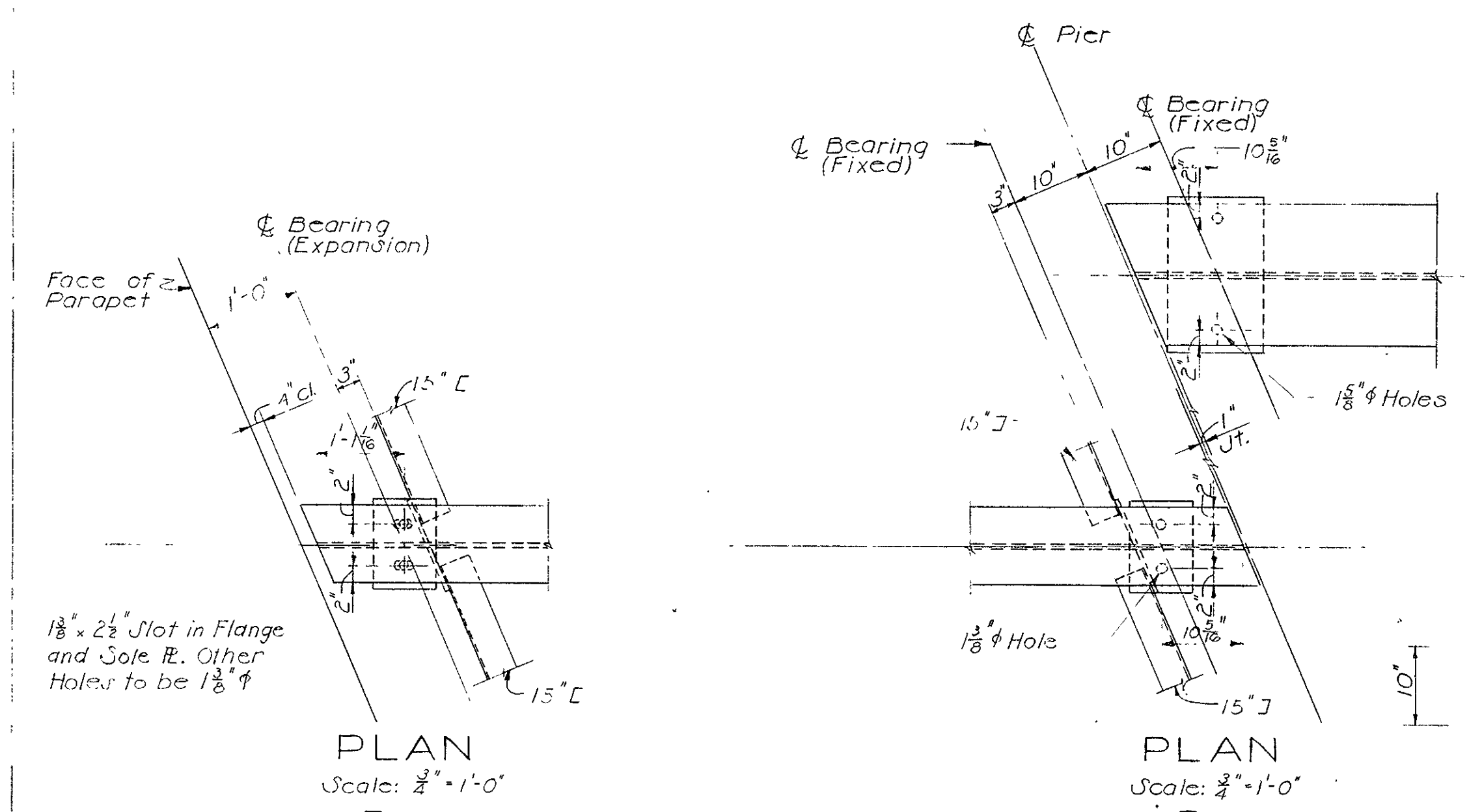
NOTE: Vertical Piles indicated thus $\odot$
Battered Piles (3" Hor. to 12" Vert.) indicated thus $\odot$



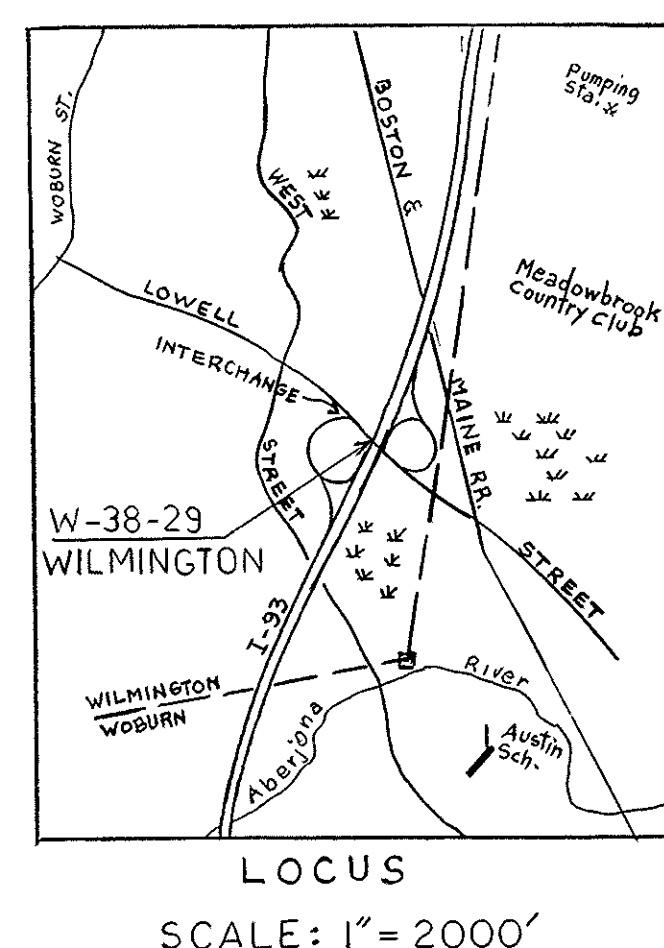
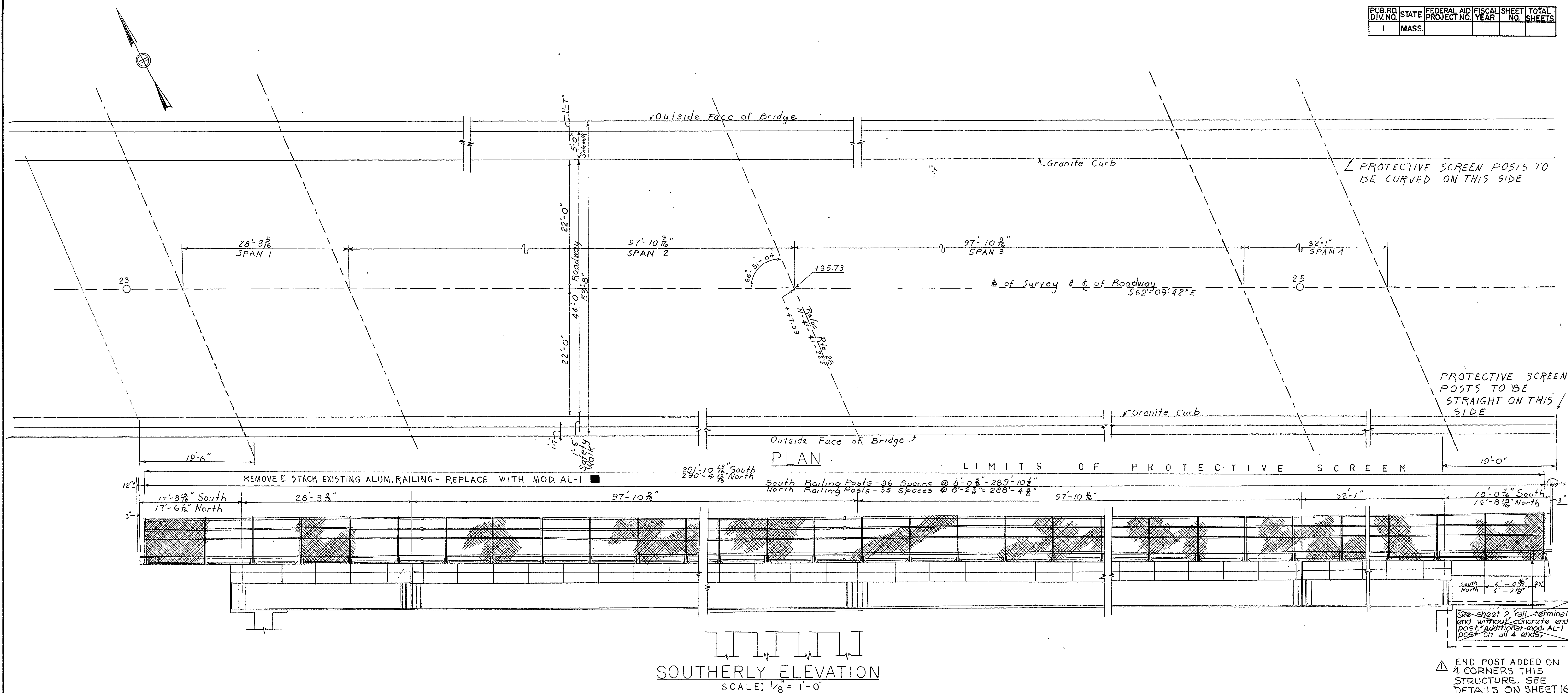
SECTION C-C

Scale: $\frac{1}{4}'' = 1'-0''$





PUB. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS.				



ESTIMATED QUANTITIES (NOT GUARANTEED)

CUTTING AND GRINDING BOLTS	73 EA.
PROTECTIVE SCREEN (CHAIN LINK)	583 L.F.
DRILLING & GROUTING ANCHOR BOLTS	165 EA.
METAL BRIDGE RAIL (REMOVED AND STACKED)	589 L.F.
METAL BRIDGE RAILING (1 RAIL) TYPE AL-1-MOD.	589 L.F.

FOR INSTALLATION OF MOD. AL-1 RAILING AND PROTECTIVE SCREENING SEE SHEETS 1,2,3,4 & 9

DESIGNED BY VIOLA	OCT. 27, 1977	END POST ADDED
DRAWN BY VIOLA	SEPT. 3, 1977	ISSUED FOR CONSTRUCTION
CHECKED BY LOMOTY	THE COMMONWEALTH OF MASSACHUSETTS	
APPROVED FOR DESIGN	PROPOSED ALTERATION	
PERNA	— WILMINGTON —	
SPECS. SIMON	INSTALLATION OF RAILING AND STANDARD PROTECTIVE SCREEN	
	LOWELL ST. (ROUTE 129) OVER I-93	
	SCALES AS NOTED	
	OFFICE OF	
	DEPARTMENT OF PUBLIC WORKS	
	100 NASHUA ST. BOSTON, MASS.	