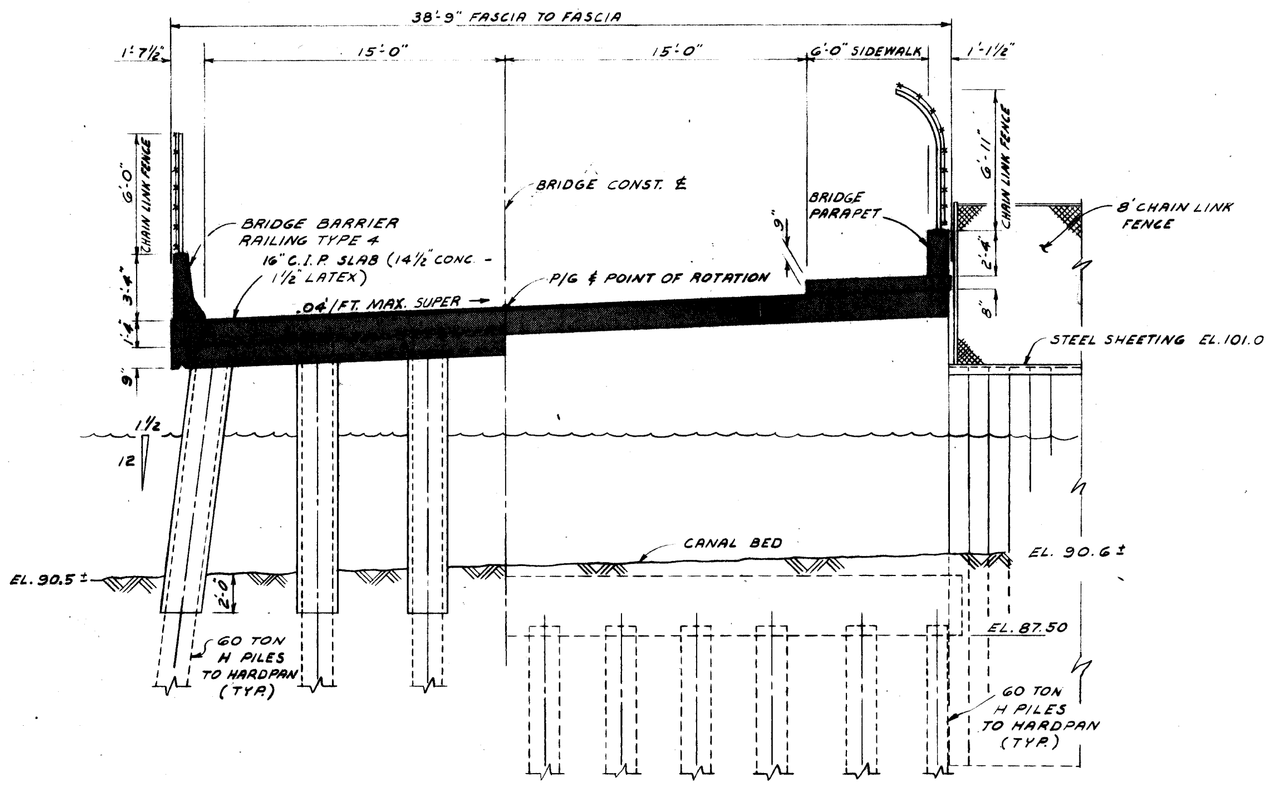
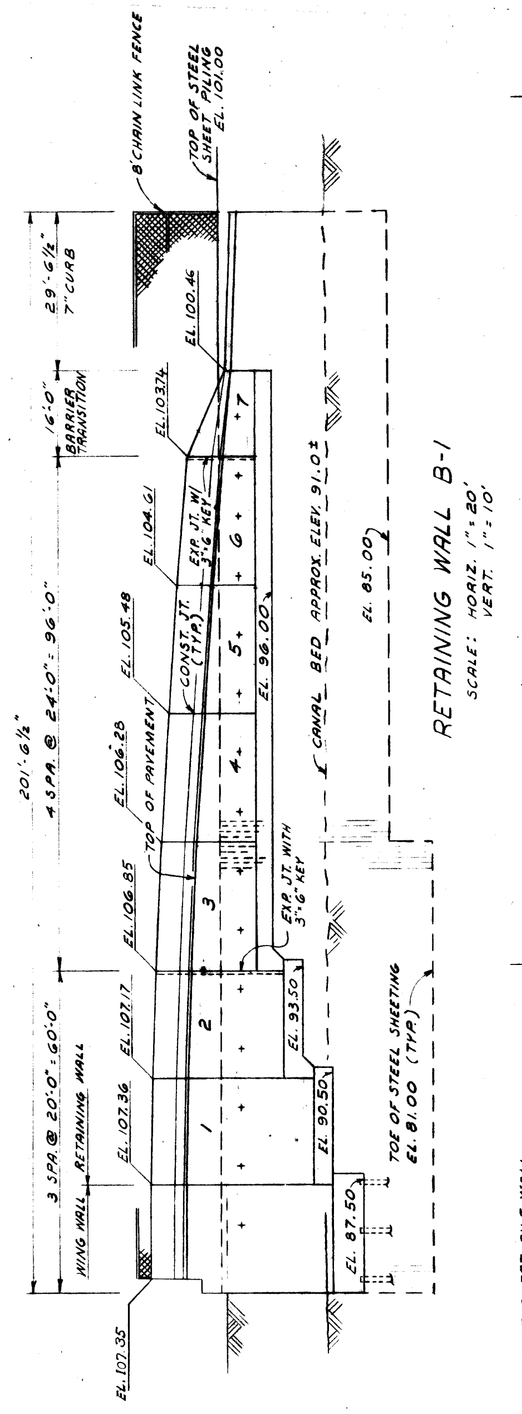
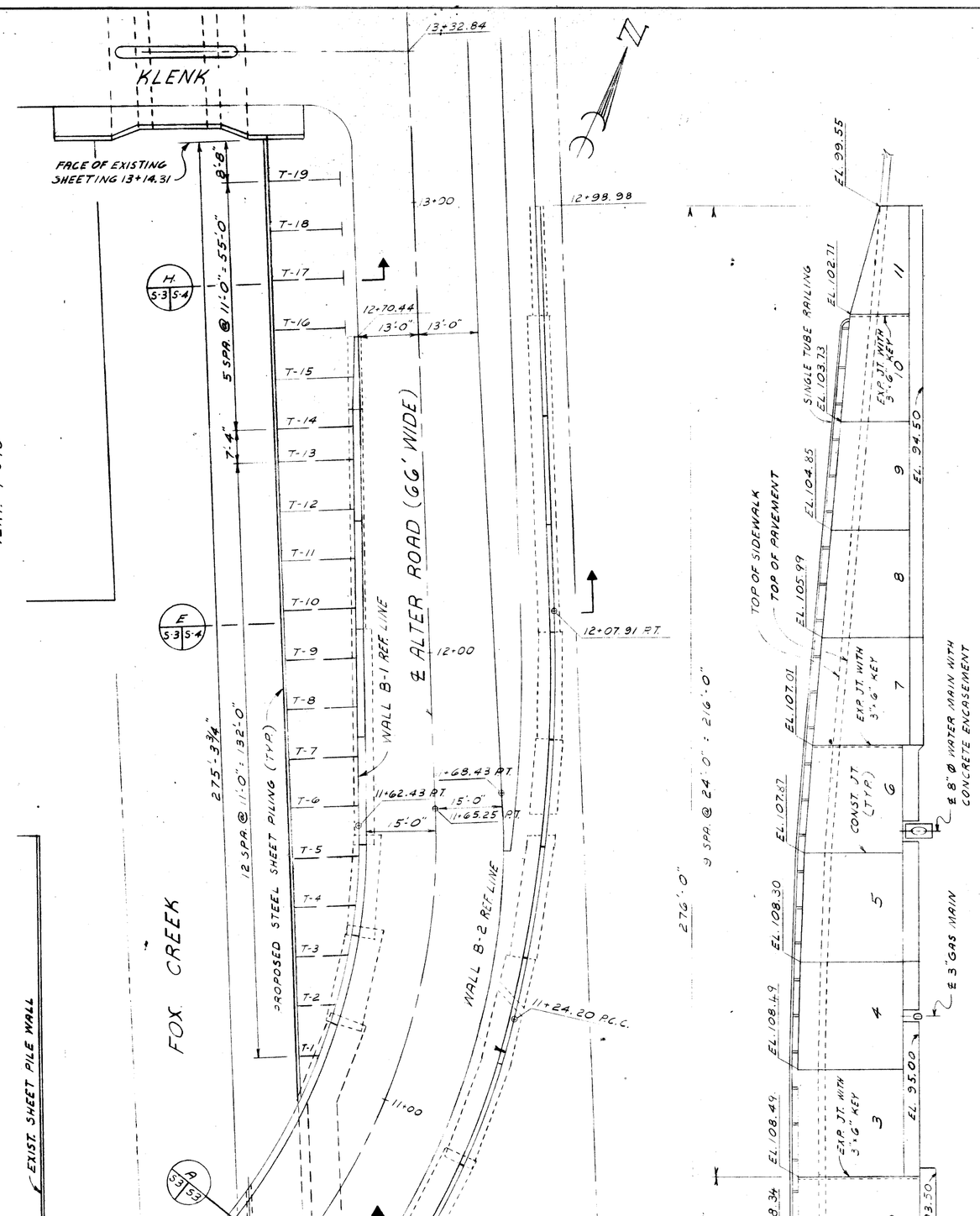


SECTION (A / S3 / S3)
SCALE 3/16" = 1'-0"



RETAINING WALL B-1
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

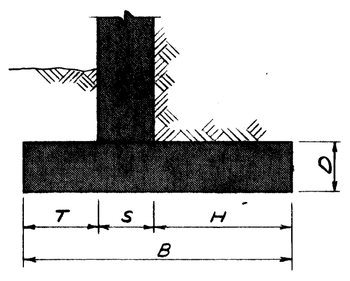


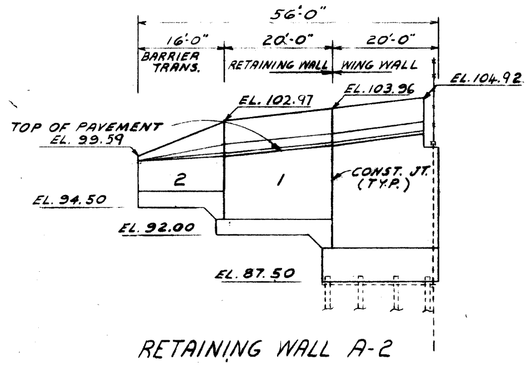
RETAINING WALL B-2
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

RETAINING WALL DIMENSIONS

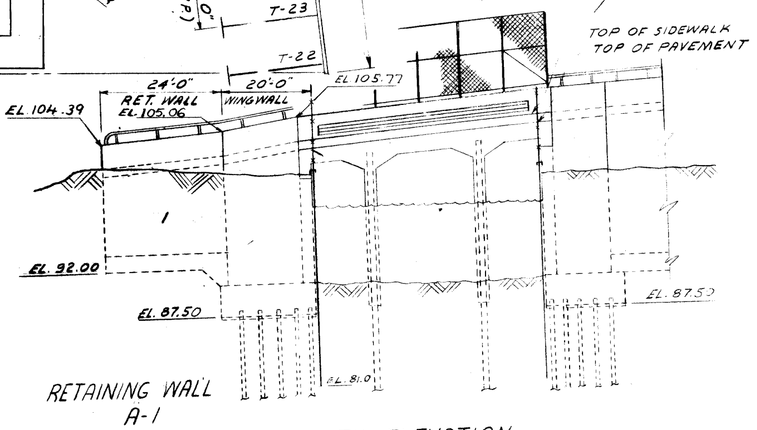
		B	T	S	H	D
A-1	1	7'-6"	1'-8"	1'-1½"	4'-8½"	1'-6"
A-2	1	5'-6"	1'-6"	1'-7½"	2'-4½"	1'-6"
	*2	3'-0"	8"	1'-7½"	8½"	1'-6"
B-1	1	8'-0"	2'-0"	1'-7½"	4'-4½"	1'-6"
	2	6'-0"	1'-6"	1'-7½"	2'-10½"	1'-6"
	3,4	4'-6"	1'-0"	1'-7½"	1'-10½"	1'-6"
	5,6,*7	3'-0"	8"	1'-7½"	8½"	1'-6"
B-2	1	9'-9"	2'-9"	1'-1½"	5'-10½"	1'-6"
	2	7'-6"	1'-10½"	1'-1½"	4'-6"	1'-6"
	3,4	6'-9"	1'-5½"	1'-1½"	3'-10"	1'-6"
	5,6	6'-0"	1'-8"	1'-1½"	3'-2½"	1'-6"
	7	5'-6"	1'-6"	1'-1½"	2'-10½"	1'-6"
	8,9,10	5'-0"	1'-3"	1'-1½"	2'-7½"	1'-6"
	11	3'-0"	9"	1'-1½"	1'-1½"	1'-6"

* NOTE: RETAINING WALLS A2-2 & B1-7 DIMENSIONS "T" & "S" VARIES, SEE DETAIL SHEET





RETAINING WALL A-2
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'



RETAINING WALL A-1
SOUTH ELEVATION
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

GENERAL NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THIS STRUCTURE SHEET OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 1984 EDITION.

THE TOP OF ROADWAY SLAB AND TOPS OF CURBS AND SIDEWALKS ARE PARALLEL TO THE VERTICAL CURVE AND TANGENTS EXCEPT AS MODIFIED BY SUPERELEVATION TRANSITION AND DETAIL GRADE REQ'DNS.

THIS STRUCTURE IS ON A HORIZONTAL CURVE. THE FASCIA LINES AND CURB LINES ARE CONCENTRIC WITH THE CONSTRUCTION CENTERLINE.

THE DESIGN IS BASED ON THE FOLLOWING MAXIMUM FOUNDATION PRESSURES:
AVG. D.L.+L.L.
RETAINING WALL 2500 psf.

MWP DENOTES MEMBRANE WATERPROOFING
JWP DENOTES JOINT WATERPROOFING
NS DENOTES NEAR SIDE
FS DENOTES FAR SIDE
ES DENOTES EACH SIDE

FOR RAILING POST, BEVEL AND MOLDING DETAILS, SEE STANDARD PLANS X 18c AND XI 103c.

SECTION

SHEET SECTION CUT	SHEET SECTION SHOWN

revisions

designed by AJC
drawn by D.L.N.
checked by JK
approved:

STRUCTURAL ENGINEER

CITY OF DETROIT
city engineering department
for DEPARTMENT OF PUBLIC WORKS

BRIDGE RECONSTRUCTION

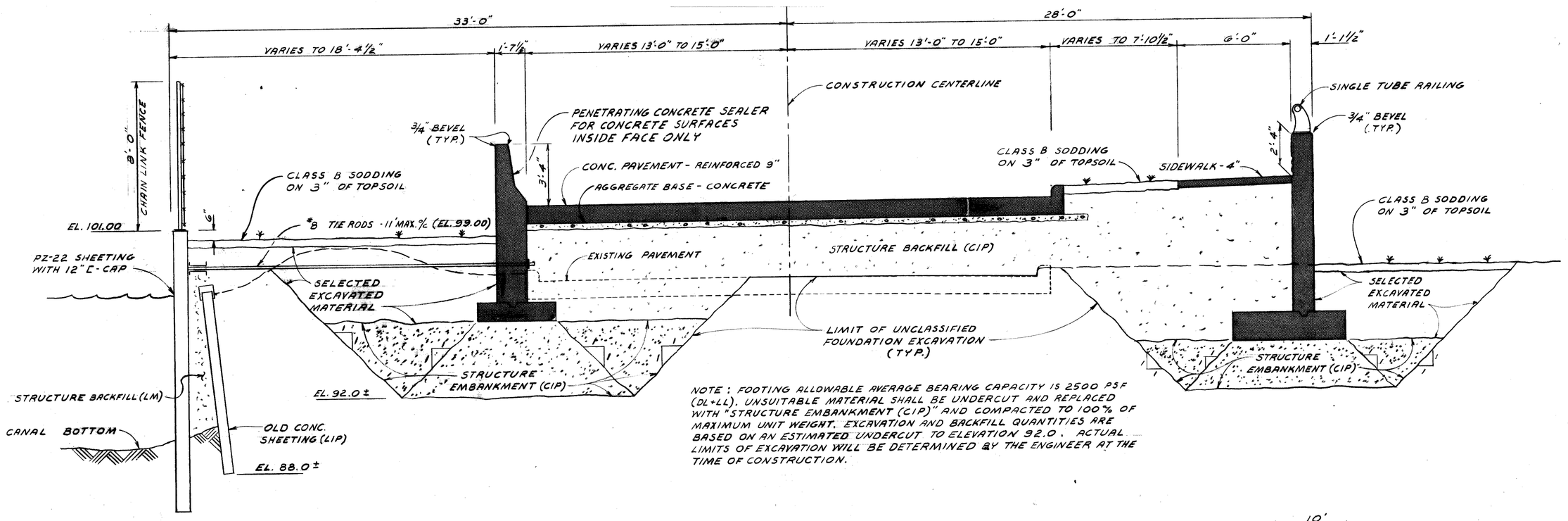
RIVERSIDE AVENUE OVER FOX CREEK BW-246

GENERAL PLAN OF STRUCTURE

a.o. 87-22-12
contract no.
sheet of
drawing no. S-3
date NOV. 89

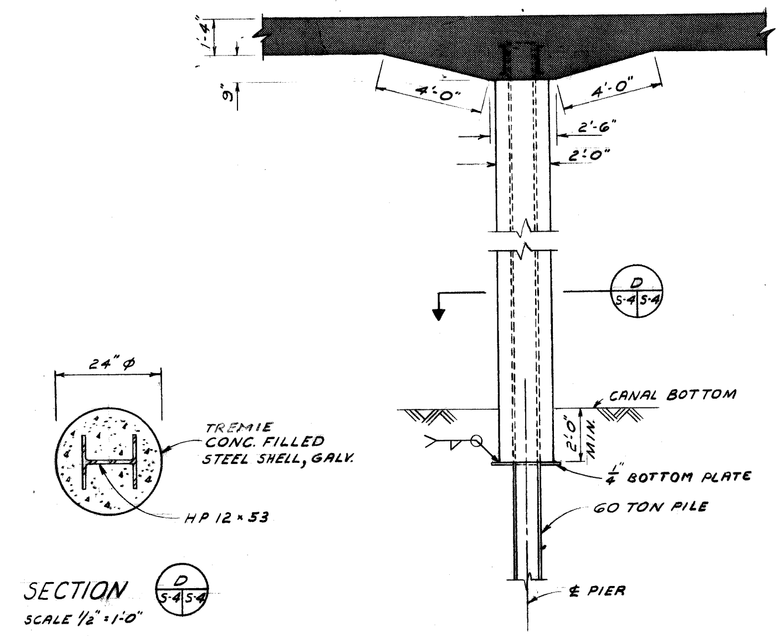
JOB NO. 30288A

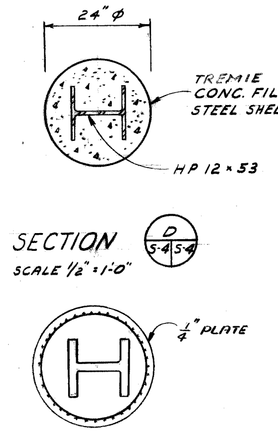
BRUNING 44-131 68960



NOTE: FOOTING ALLOWABLE AVERAGE BEARING CAPACITY IS 2500 PSF (DL+LL). UNSUITABLE MATERIAL SHALL BE UNDERCUT AND REPLACED WITH "STRUCTURE EMBANKMENT (CIP)" AND COMPACTED TO 100% OF MAXIMUM UNIT WEIGHT. EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON AN ESTIMATED UNDERCUT TO ELEVATION 92.0. ACTUAL LIMITS OF EXCAVATION WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

SECTION E S-3 S-4
SCALE 1/4" = 1'-0"

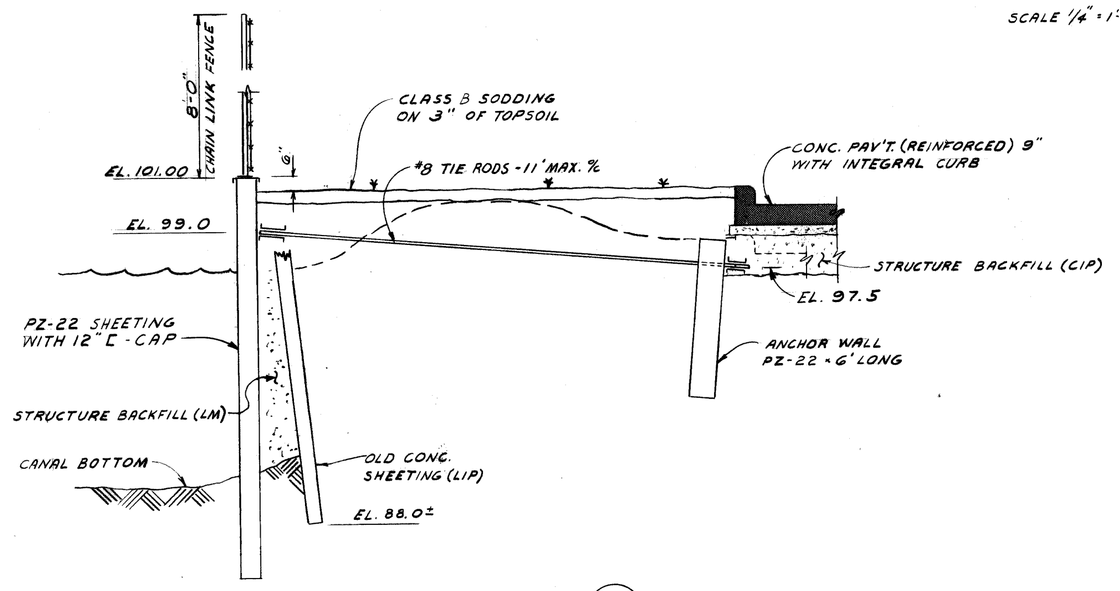




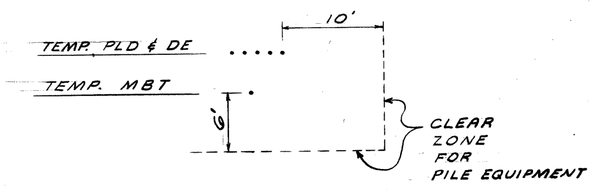
SECTION D S-4 S-4
SCALE 1/2" = 1'-0"

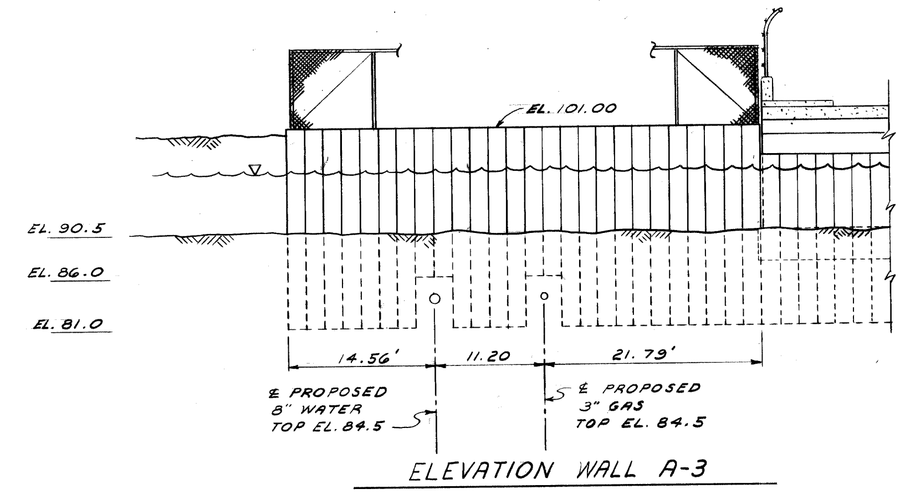
BOTTOM PLATE DETAIL

SECTION G S-3 S-4
SCALE 1/4" = 1'-0"

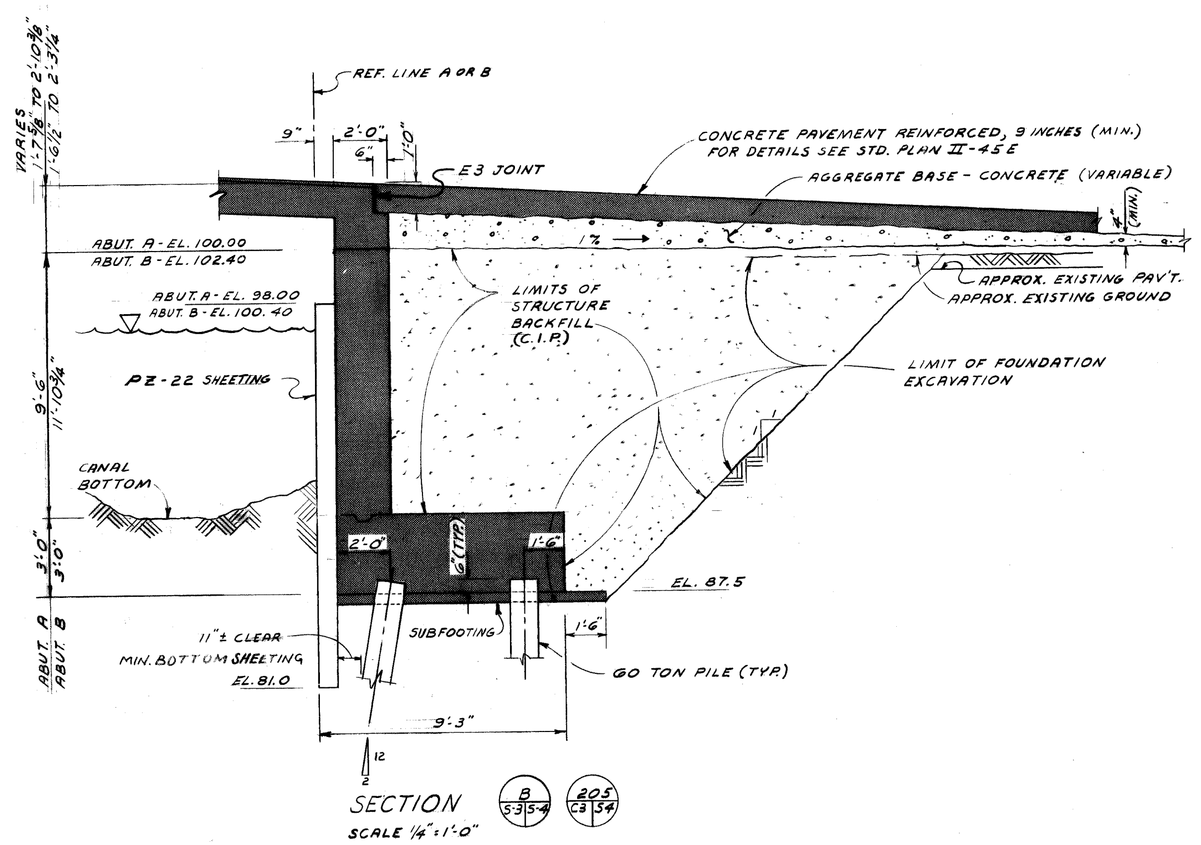


SECTION H S-3 S-4
SCALE 1/4" = 1'-0"

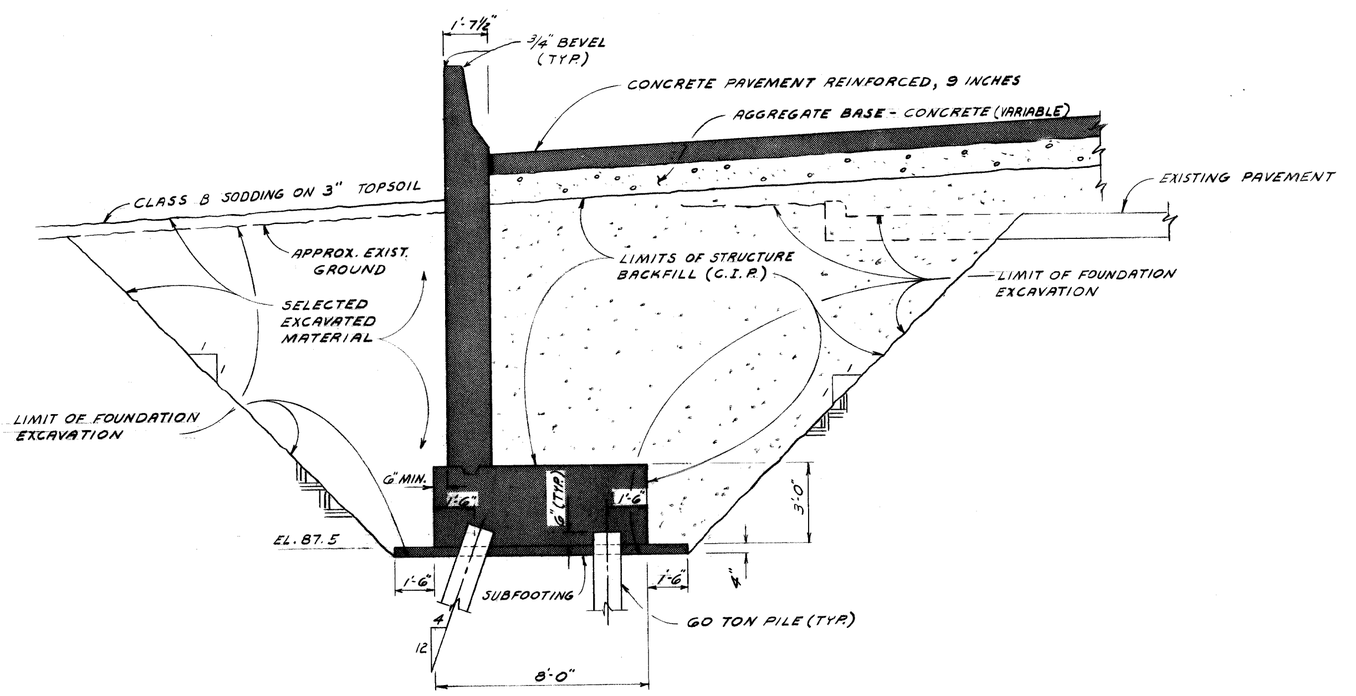




ELEVATION WALL A-3



SECTION B S-3 S-4 805 S-3 S-4
SCALE 1/4" = 1'-0"



SECTION G S-3 S-4
SCALE 1/4" = 1'-0"

PAY ITEM	UNIT	AMOUNT	INFORMATIONAL QUANTITIES
COFFERDAMS	LS	1	
UNCLASSIFIED FOUNDATION EXCAVATION	LS	1	4721 C.Y.
STRUCTURE BACKFILL (CIP)	LS	1	2531 C.Y.
STRUCTURE BACKFILL (LM)	LS	1	60 C.Y.
CHANNEL EXCAVATION (LM)	LS	1	30 C.Y.
BRIDGE RAILING, 1 TUBE	L.F.	287	
FIELD OFFICE	MO.	6	
MOBILIZATION	LS	1	
PROJECT CLEANUP	LS	1	

revisions | dr'n. | ck'd | ap'vd | date

designed by M.C.
drawn by D.L.N.
checked by B.K.C. J.K.
approved:
STRUCTURAL ENGINEER

CITY OF DETROIT
city engineering department
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BRIDGE RECONSTRUCTION

RIVERSIDE AVENUE OVER FOX CREEK BW-246

GENERAL PLAN OF STRUCTURE DETAILS

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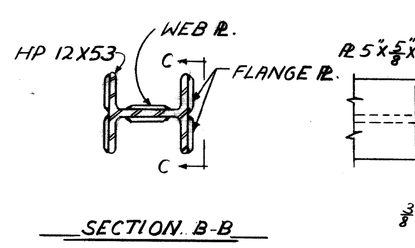
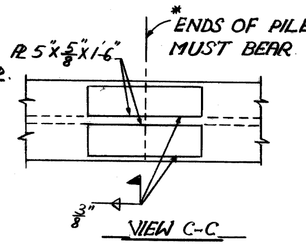
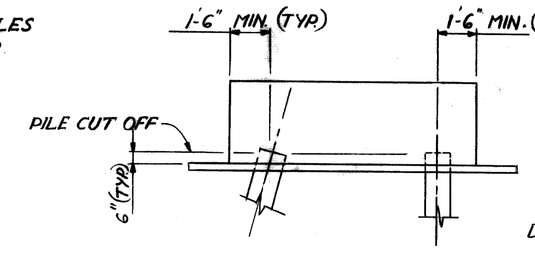
BRUNING 44-131 68960



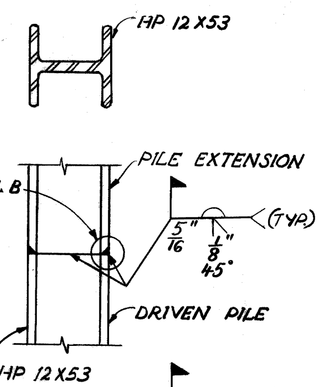
SECTION B-B

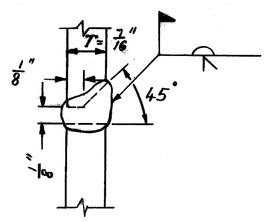


VIEW C-C

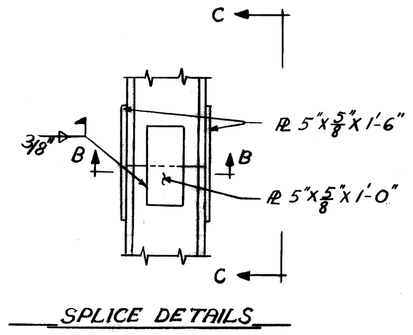


PILE CUT OFF DETAIL

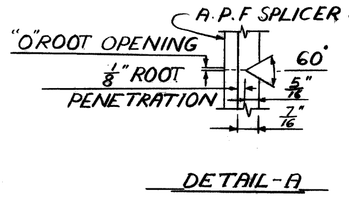




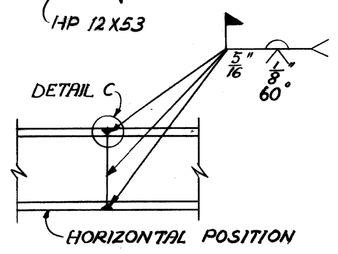
DETAIL B

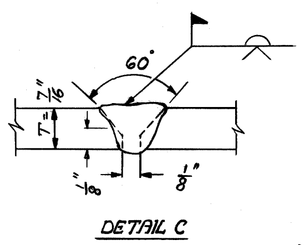


SPLICE DETAILS



DETAIL-A



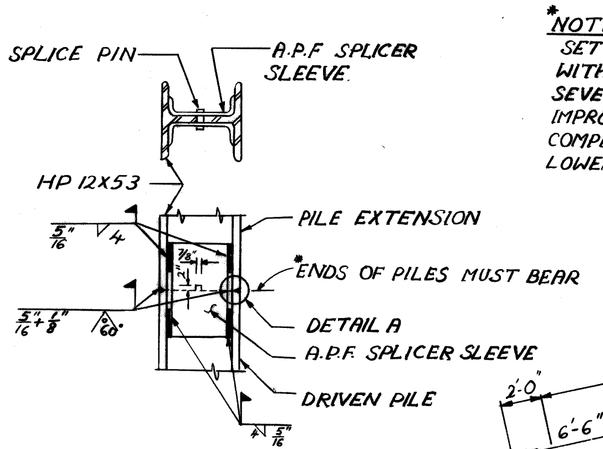


DETAIL C

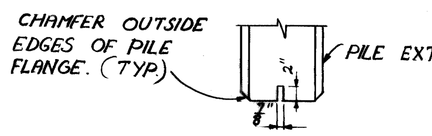
BUTT WELD SPLICE DETAIL

*NOTE:
SET UPPER SPLICE SECTION IN PLACE WITH SPLICE ℄'S ATTACHED. TAP SEVERAL TIMES WITH THE HAMMER TO IMPROVE BEARING CONTACT, THEN COMPLETE WELDING OF ℄'S TO THE LOWER SECTION

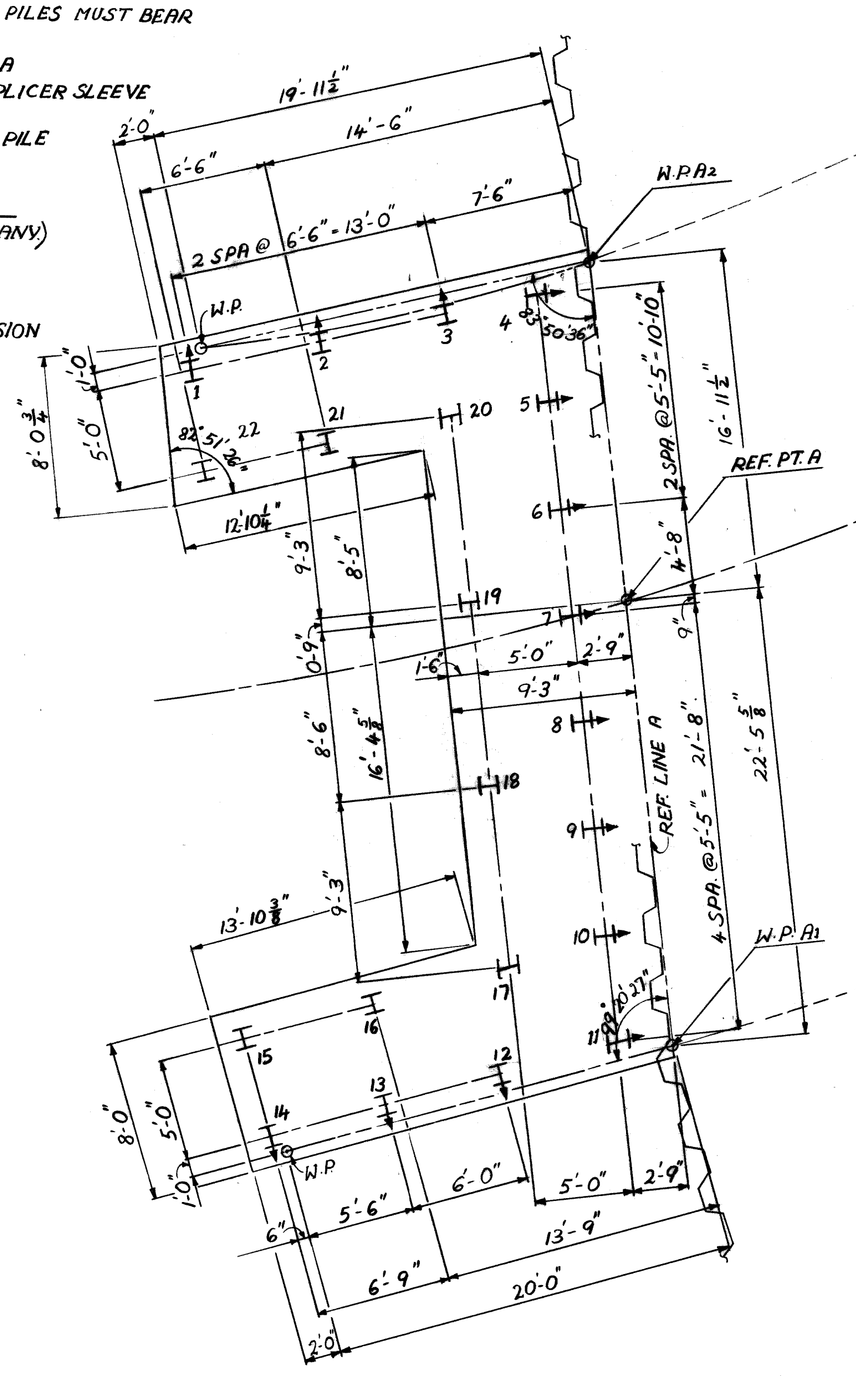
NOTE:
1. USE DETAIL-B WHEN WELDING PILES IN PLACE (HORIZONTAL JOINT).
2. USE DETAIL-C FOR WELDING WHEN PILE IS IN HORIZONTAL POSITION

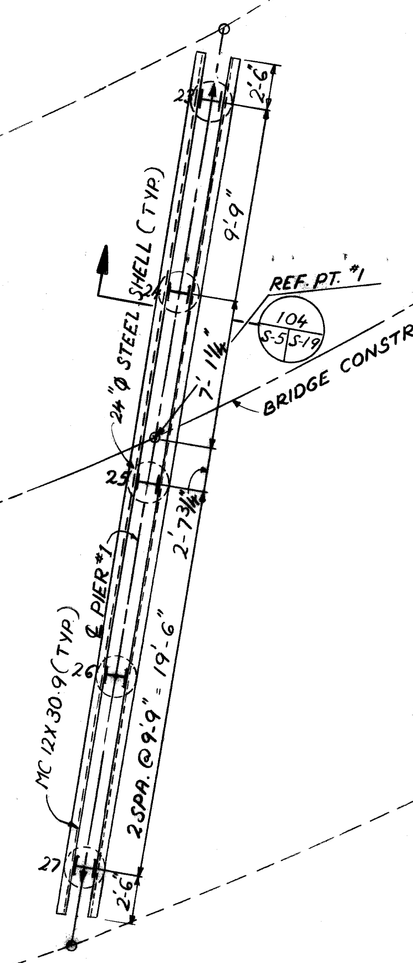


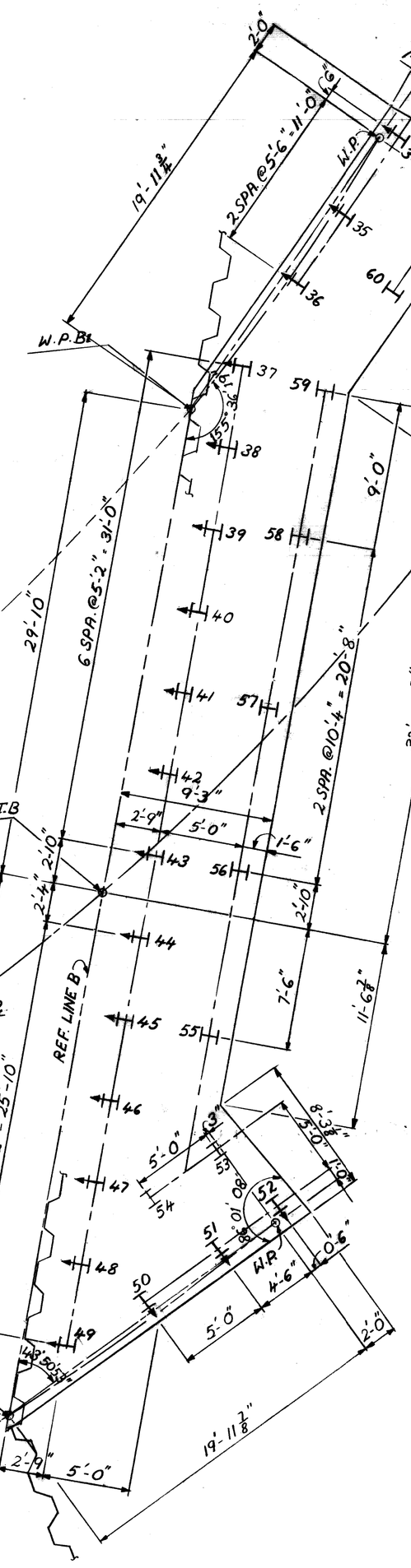
ALTERNATE SPLICE DETAILS
(A.P.F. ASSOCIATED PIPE & FITTING COMPANY)



NOTCH DETAIL







PILING PLAN
SCALE: 3/16" = 1'-0"

PAY QUANTITIES		
ITEM	UNIT	AMOUNT
STRUCTURAL STEEL FURNISHING AND FABRICATION (ROLLED)	LBS	6134
STRUCTURAL STEEL ERECTION (ROLLED)	LBS	6134
STEEL SHELL (24")	LS	1
FURNISHING EQUIPMENT FOR DRIVING PILES	LS	1
STEEL PILES FURNISHED AND DRIVEN (12")	L F	6735
SPLICES, STEEL PILES (12")	EA	169

60 TON PILES						
LOCATION	TYPE	SLOPE	PILE NUMBER	NUMBER OF PILES	EST. LENGTH (L.F) FURN. & DRN. EACH	EST. LENGTH (L.F) FURN. & DRN. TOTAL
ABUT A	VERTICAL		1-22	8	105	840
	BATTER	4:12	1-3, 12-14	6	110	660
		2:12	4-11	8	110	880
PIER #1	VERTICAL		24-26	3	120	360
	BATTER	1½:12	23, 27	2	120	240
PIER #2	VERTICAL		29-32	4	120	480
	BATTER	1½:12	28, 33	2	120	240
ABUT B	VERTICAL		53-61	9	105	945
	BATTER	4:12	34-36, 50-52	6	110	660
		2:12	37-49	13	110	1430
TOTAL				61		6735

TOTAL NUMBER OF SPLICES = 169

LOCATION	PILE NUMBER	CUT OFF EL.
ABUT A	1-22	88.00
PIER #1	23	102.37
	24	102.48
	25	102.60
	26	102.72
	27	102.83
PIER #2	28	103.17
	29	103.27
	30	103.37
	31	103.47
	32	103.56
	33	103.66
ABUT B	34-61	88.00

NOTES

PILE SHELLS SHALL BE CONFORMING TO ASTM A 252 GRADE #1 OR #2, #7 GAUGE, GALVANIZED IN ACCORDANCE WITH ASTM A 123

ALL PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 60 TONS.

STEEL PILES SHALL BE HP 12X53.

PILES ARE TO BE DRIVEN TO SUCH ACCURACY THAT THE ENDS OF THE PILES TO BE EMBEDDED IN THE CONCRETE ARE WITHIN 3" OF THE LOCATION SHOWN ON THE PLANS.

PILES SHALL BE DRIVEN IN ACCORDANCE WITH M.D.O.T STANDARD SPECIFICATIONS.

TEST PILES WILL NOT BE REQUIRED ON THIS PROJECT.

MINIMUM PILE PENETRATION EL. 60.00

I DENOTES VERTICAL H PILE.

⊣, ⊢ DENOTES BATTER H PILE

revisions | dr'n | ck'd | ap'vd | date

designed by
drawn by J.K.
checked by
approved:

CITY OF DETROIT
city engineering department
for DEPARTMENT OF PUBLIC WORKS

BRIDGE RECONSTRUCTION

RIVERSIDE AVENUE OVER FOX CREEK BW-246

PILING PLAN AND DETAILS

a.o.
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sheet of
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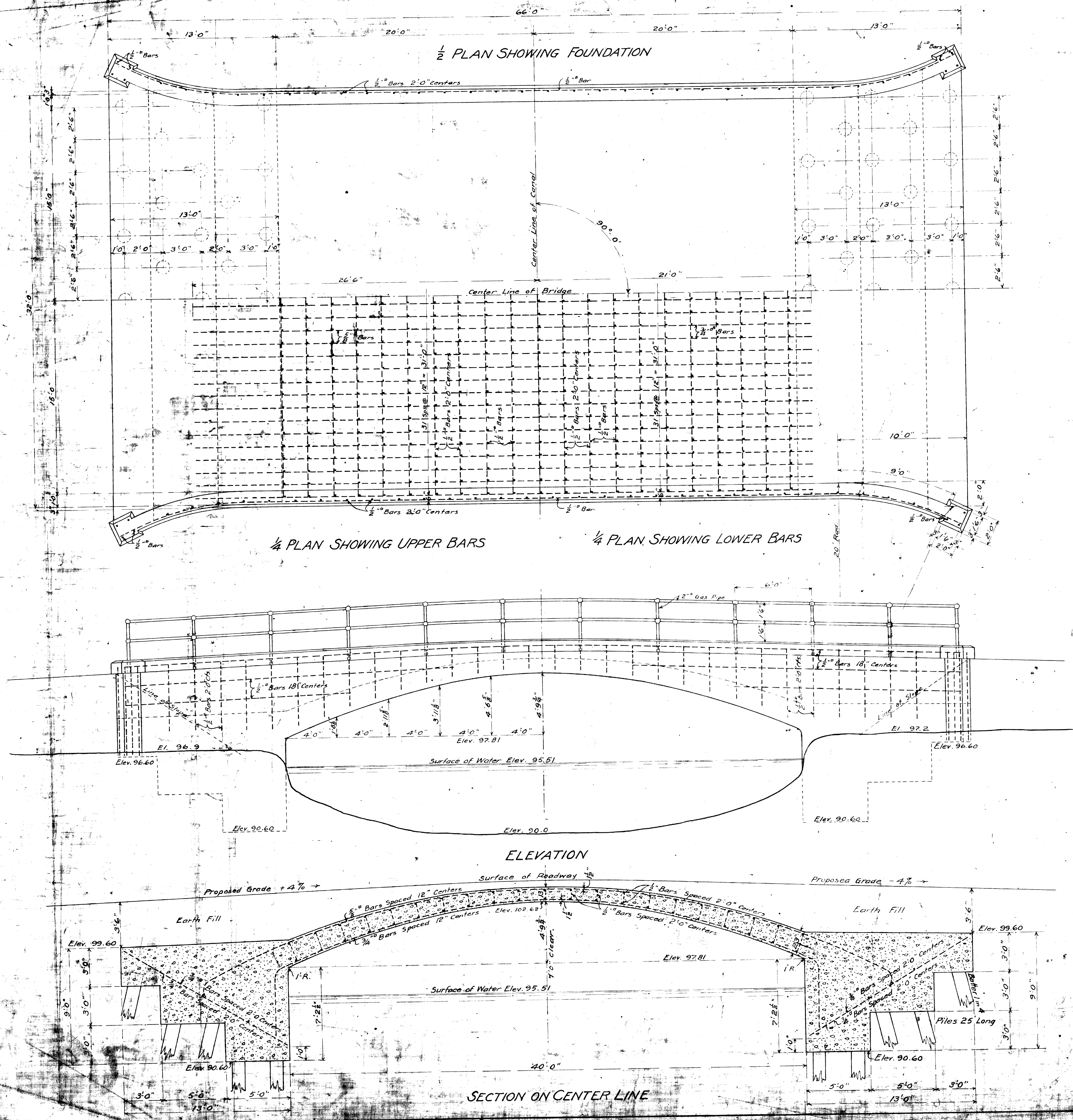
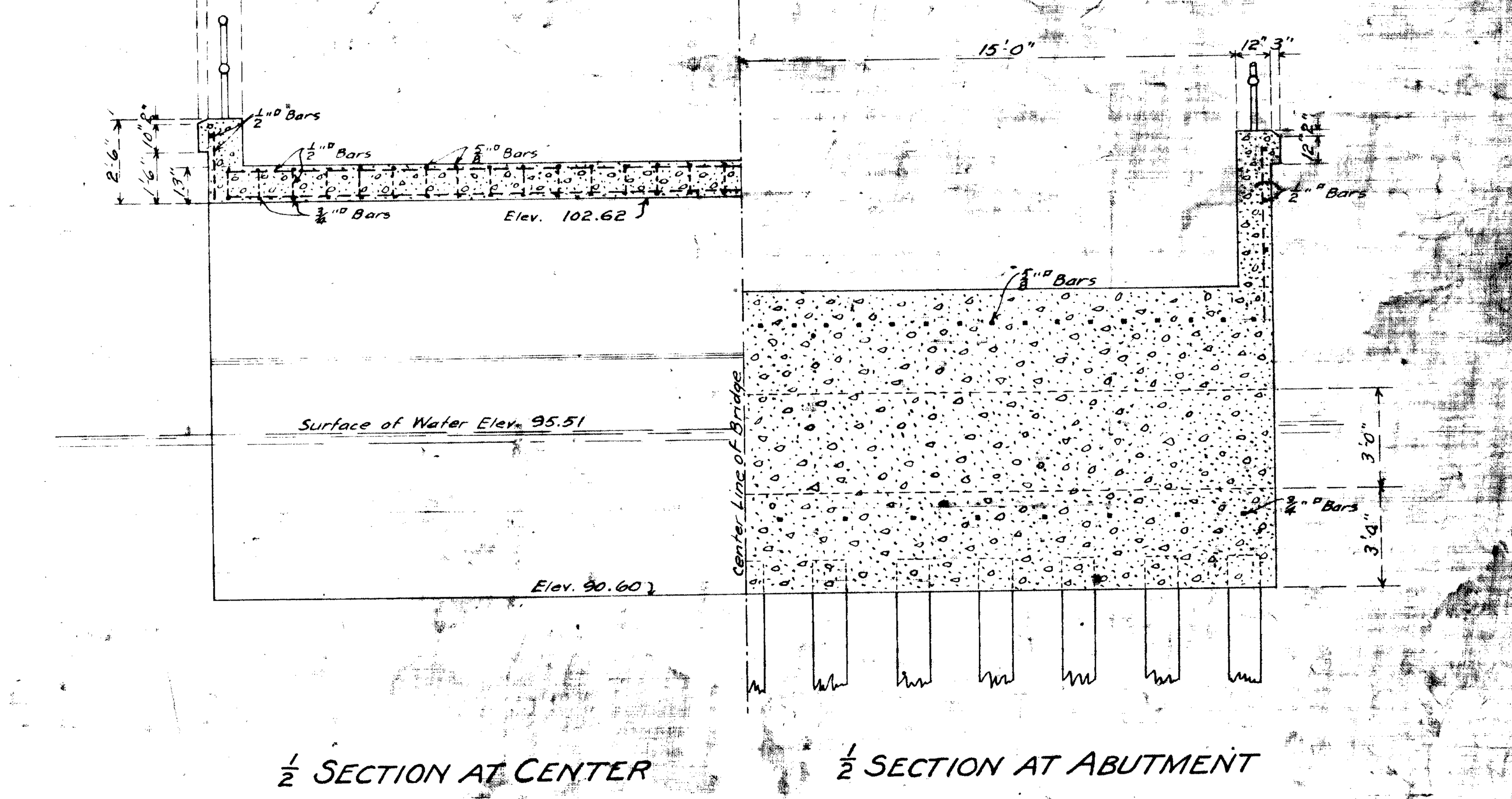
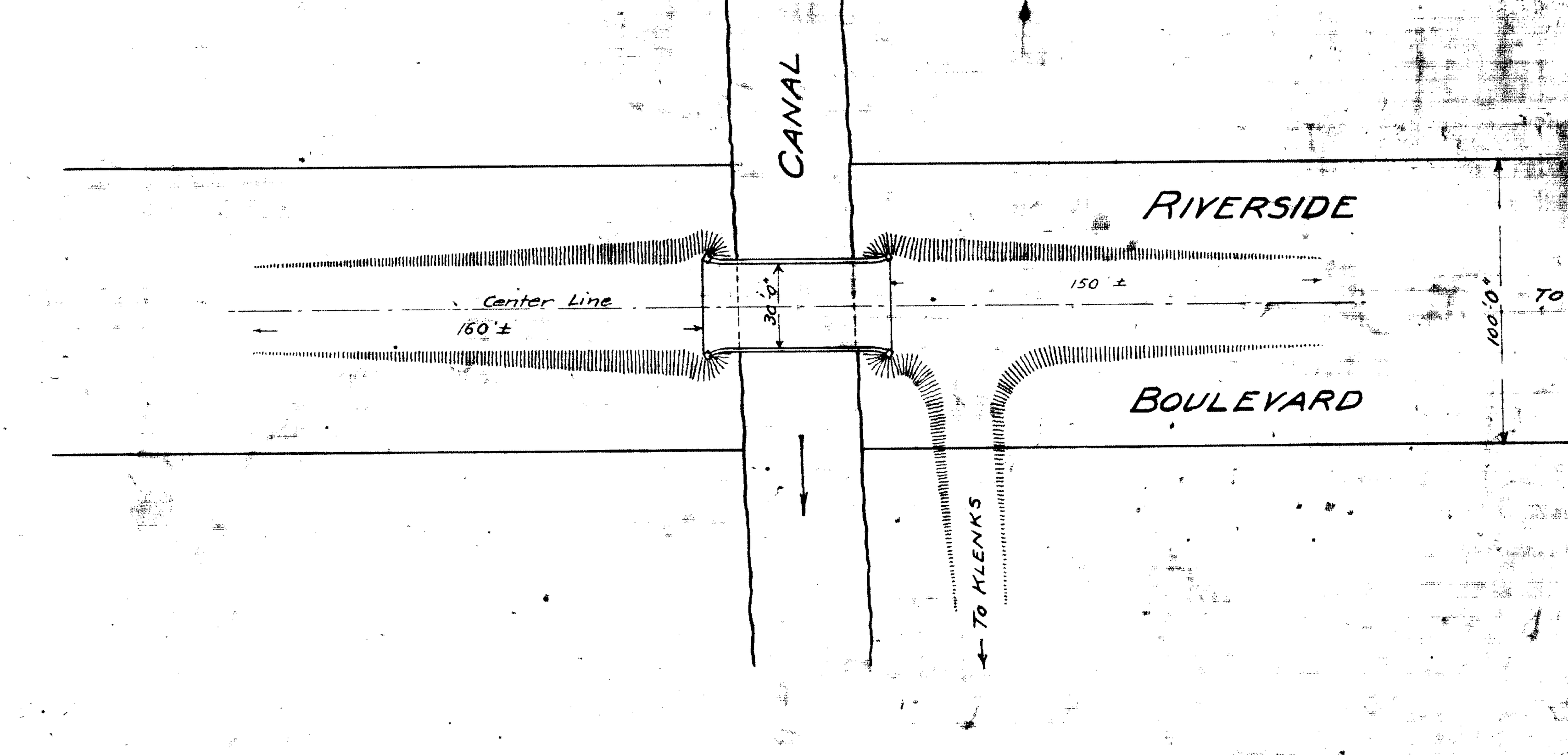
date NOV. 89

JOB NO. 30288A

BRUNING 44-131 68960







Plan Showing Location of Bridge
Scale: 1 in. = 50 ft.

Copings to be 1:1:2 Concrete
Arch Ring and Walls, 1:2:4 Concrete
Foundations, 1:3:6 Concrete
Reinforcing to be Corrugated or Twisted Steel Bars
All material from excavations to be so placed that the surplus after back filling will be within the limits of fill for approaches.

A 13 I-5a

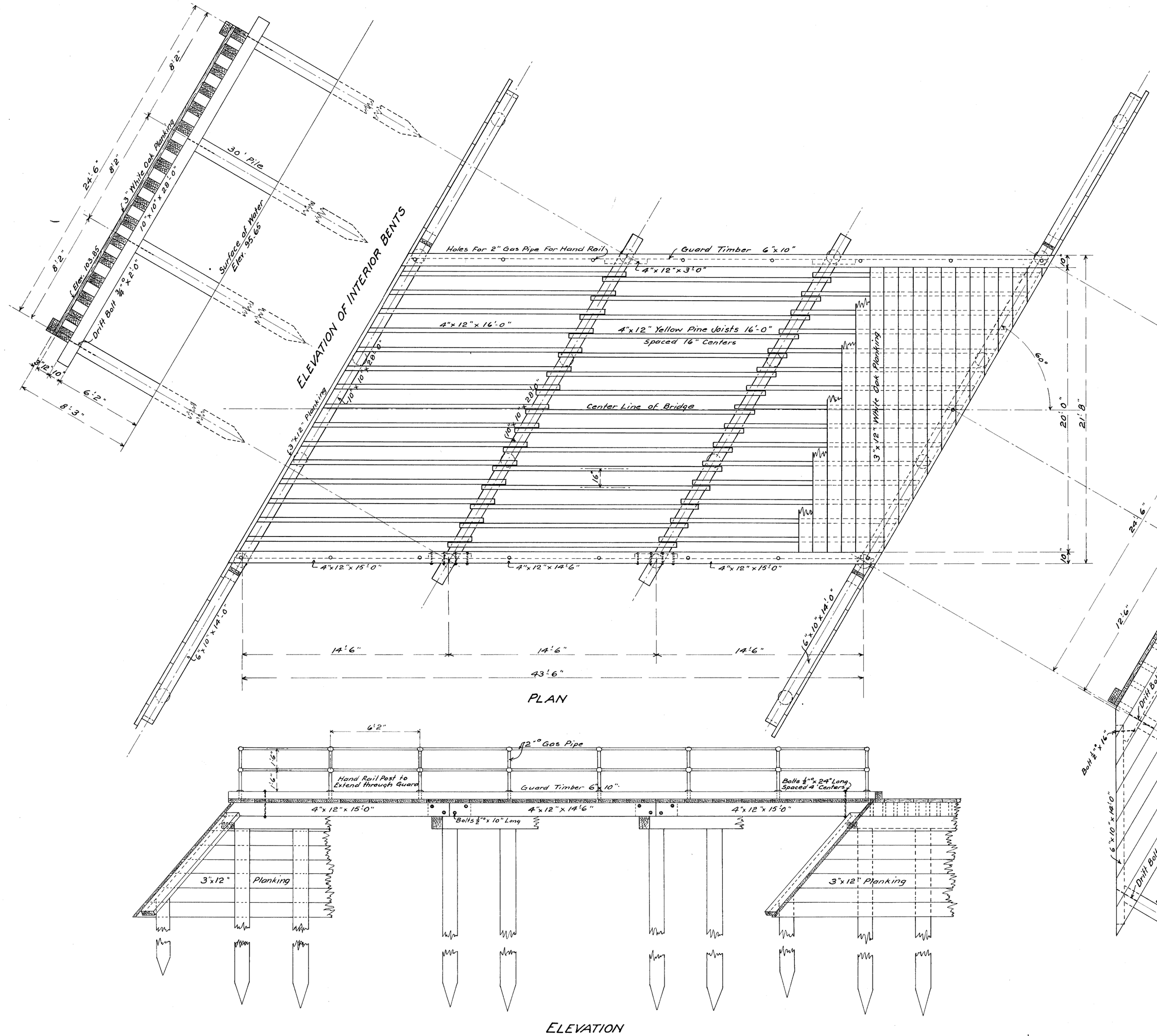
Plan of 40'-0" Reinforced Concrete Arch over Canal on Riverside Boulevard

Scale: ¼ in. = 1 ft. Except Where Noted

City Engineer's Office Detroit, Mich.

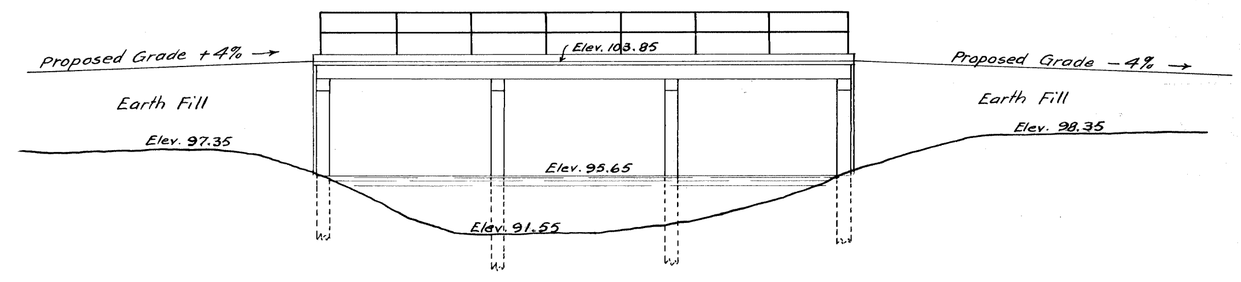
B. 158 P. 59

BW 1465

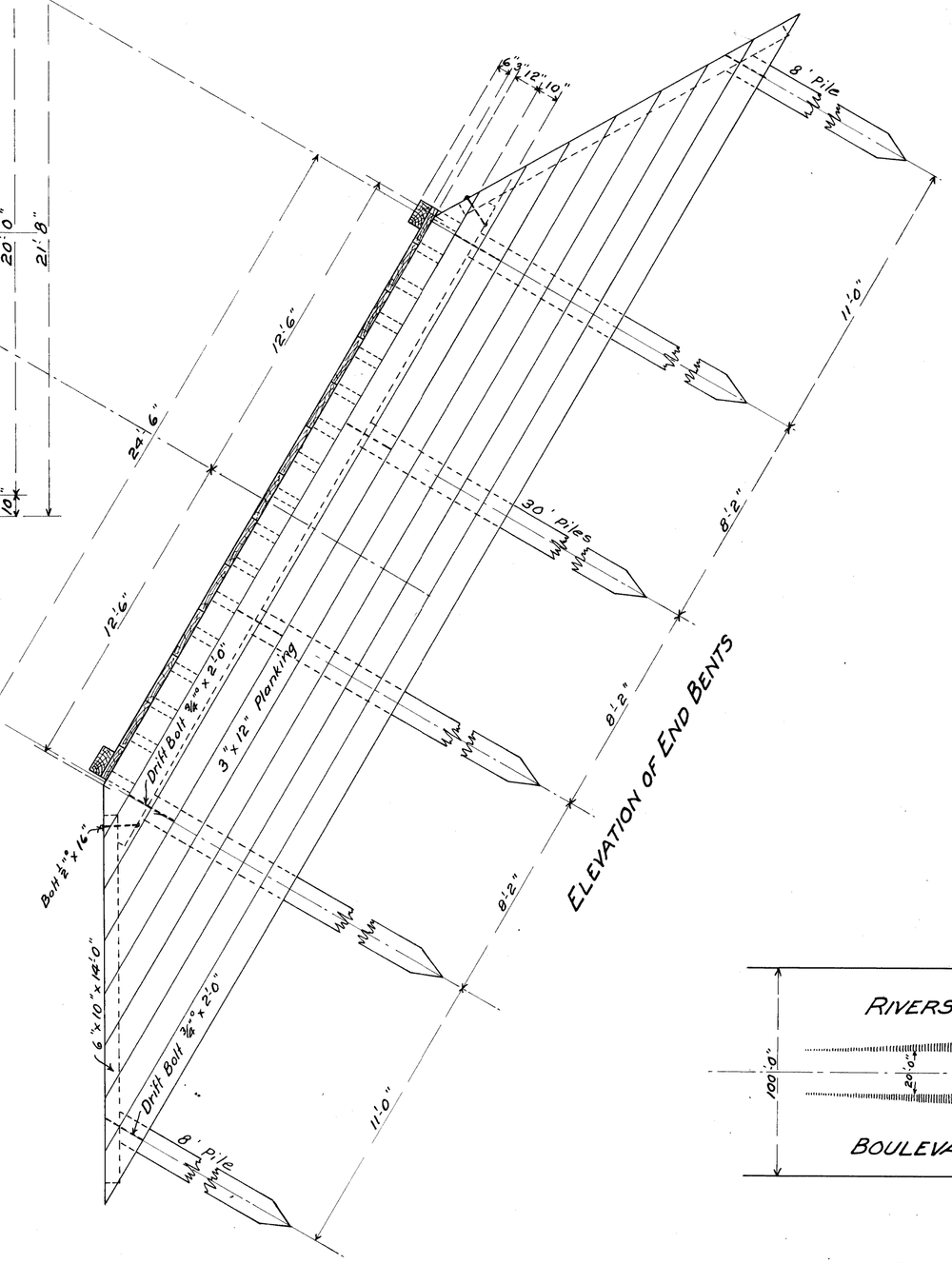


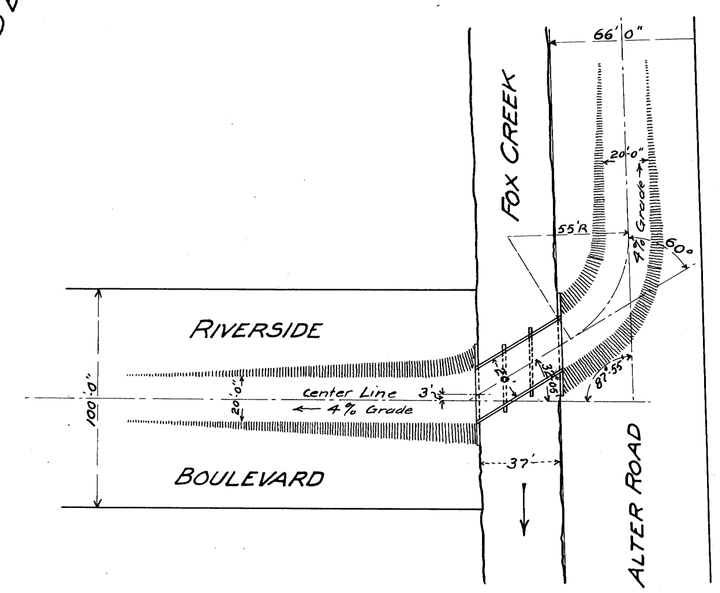
PLAN

ELEVATION



PROFILE OF BRIDGE
Scale: ⅛ in. = 1 ft.





PLAN SHOWING LOCATION OF BRIDGE
Scale: 1 in. = 50 ft.

Bill of Timber			
Bulkhead	3"x12"	1920 Ft. B.M.	
Flooring	3"x12"	2970	"
Stringers	4"x12"	3312	"
Guard	6"x10"	460	"
Braces	6"x10"	280	"
Caps	10"x10"	932	"
	Total	9874	"
Piles	16 - 30 ft. long		
"	4 - 8 "	"	

Bill of Iron
232 lin. ft. 2"° Gas Pipe
16 Flanges
12 Crosses
16 Tees
4 Elbows
16 Bolts ⅝"° x 10" Under Head
4 " ⅝"° x 16" " "
22 " ⅝"° x 24" " "
20 Drift Bolts ¾"° x 24"
Spike 300 lbs.
84 C.I. Washers 2½"° for ⅝" Bolts

PLAN OF PROPOSED WOODEN BRIDGE 43'-6" LONG OVER FOX CREEK ON RIVERSIDE BOULEVARD

Scale ¼ in. = 1 ft. Except Where Noted

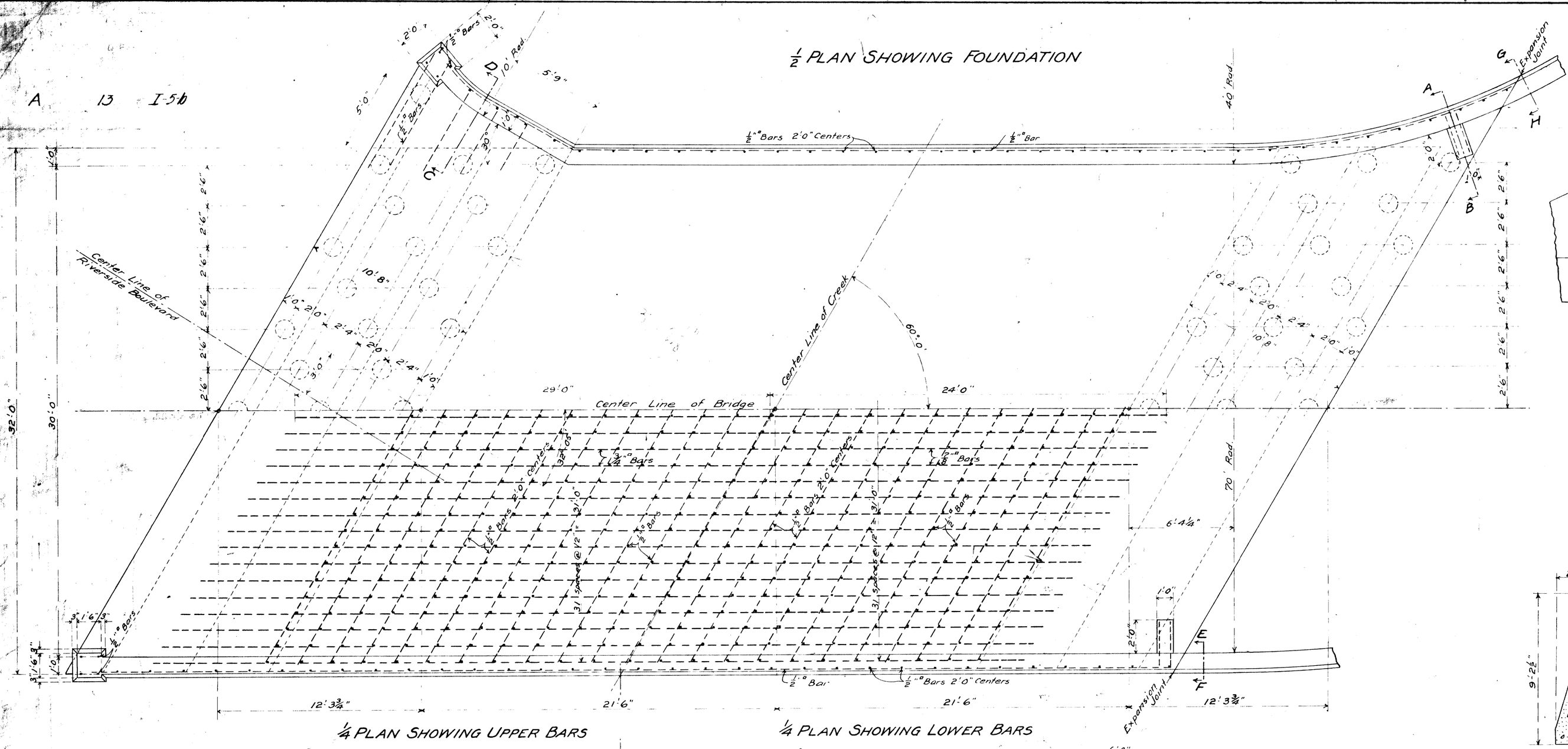
CITY ENGINEER'S OFFICE DETROIT, MICHIGAN

Oct. 20th. 1908

J.A.S.

A 13 I-5-R

File **BW246-3**



PLAN SHOWING LOCATION OF BRIDGE
Scale: 1 in. = 50 ft.

All Copings to be 1:1:2 Concrete
Arch Ring and Walls-1:2:4 Concrete
Foundations and Retaining Walls- 1:3:6 Concrete
Reinforcing to be Corrugated or Twisted Steel Bars

All material from excavations to be so placed that the surplus after back filling will be within the limits of fill for approaches, which are to be made by the contractor.

PLAN OF 43'-0"

REINFORCED CONCRETE SKEW-ARCH
OVER FOX CREEK
ON RIVERSIDE BOULEVARD

Scale: ¼ in. = 1 ft. Except Where Noted

CITY ENGINEER'S OFFICE DETROIT, MICHIGAN
May, 26th, 1909
J.A.S.