

UTILITY LEGEND

- Sewer Manhole
- Sewer Inlet or Catch Basin
- ⊗ Water Gate Well and Valve
- R.L.C. Manhole or Handhole
- Detroit Edison Co. Manhole
- ⊕ M.B.T. Pole
- ⊕ D.E. Co. Pole
- ⊕ R.L.C. Pole (Without Light)
- ⊕ R.L.C. Pole (With Light)
- Fire Hydrant
- ⊕ D.F.D. Alarm Box
- ⊕ Police Box
- Test Hole for Soil Profile
- ⊗ 12" Tree (Size)
- x- Fence

GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge and placing slope protection to the limits shown. All other work is included in the Road Plans which are a part of this contract.

Removal of fences and buildings is not part of this contract.

The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.

Warren Ave traffic is to be detoured over the temporary road for Stage I. (See Road Plans)

Datum refers to City of Detroit datum.

Topography shown hereon represents conditions existing at the time the field survey was made. However, these conditions may have been materially altered by the operations of others before the work has been started.

SURVEY PLAN
Scale: 1"=40'

Work this sheet with sheet No's 3 thru 7

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Carver*
STRUCTURAL ENGINEER

JOB No.
000001

NO.	DESCRIPTION	DATE	BY

MICHIGAN STATE HIGHWAY DEPARTMENT

WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

CITY OF DETROIT

GENERAL PLAN OF SITE

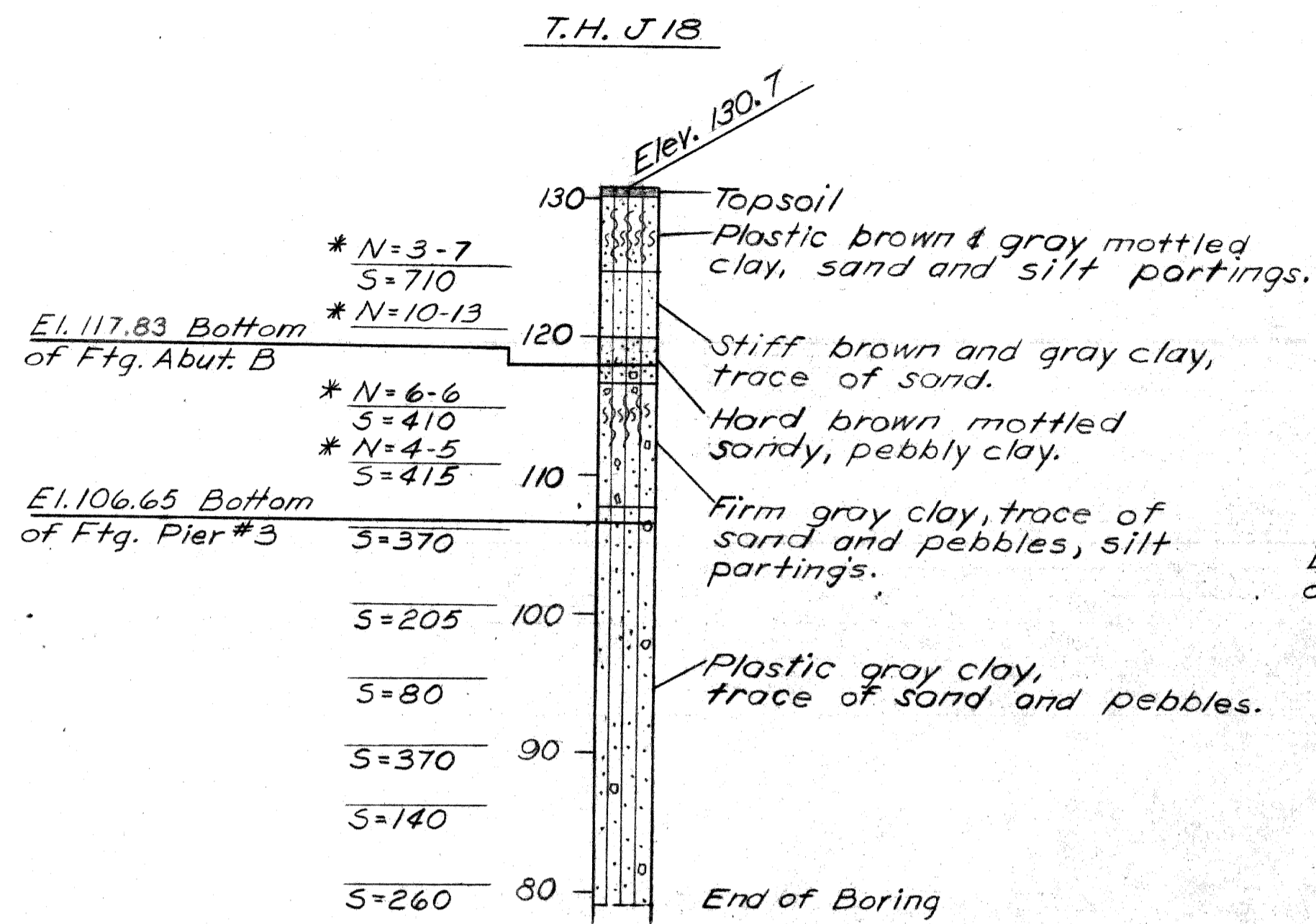
APPROVED: _____ DESIGN SUPERVISING ENGINEER

APPROVED: _____ ASST. ENGINEER OF DESIGN

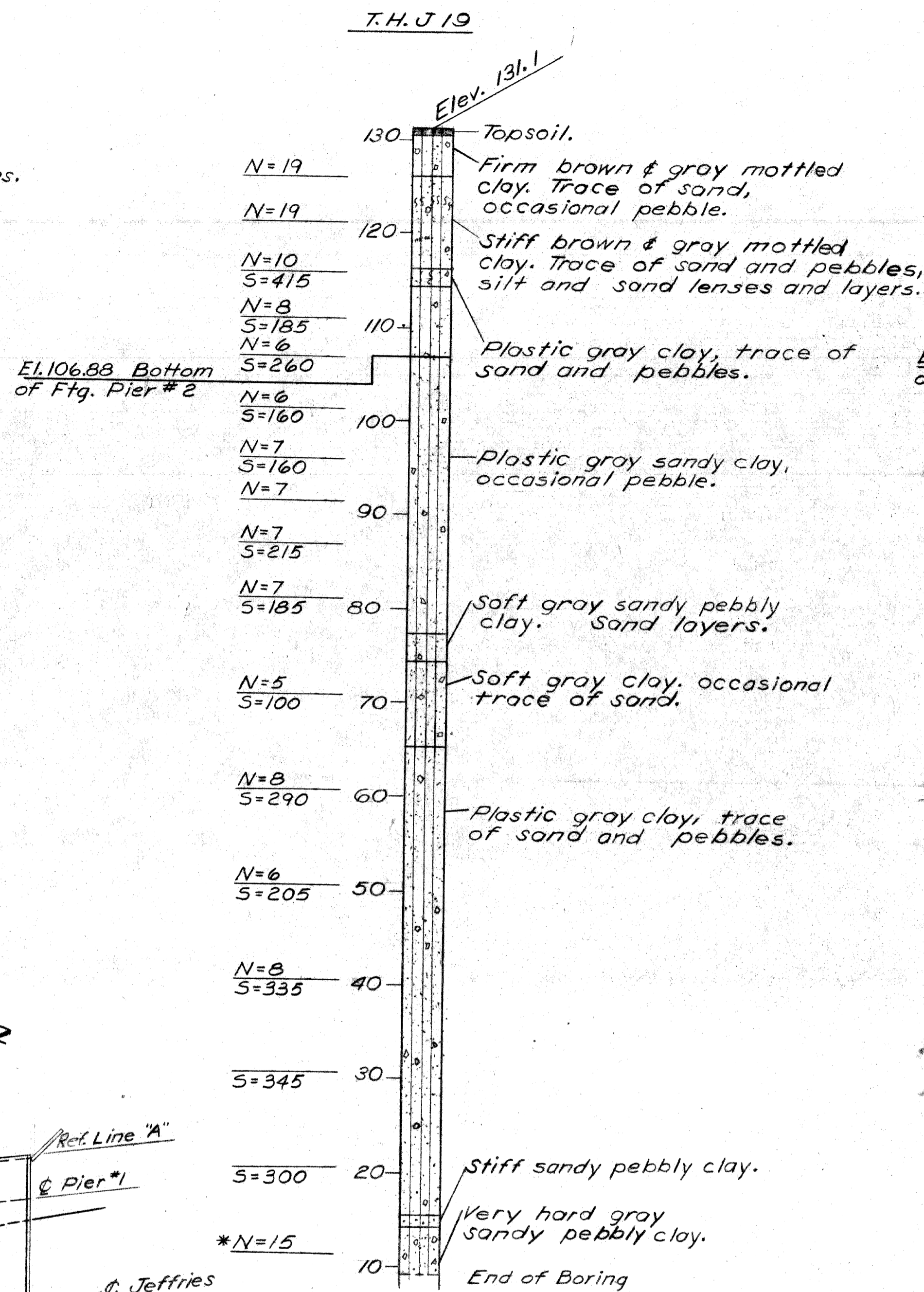
SQUAD BOSS	<i>A. A. S.</i>	3-66
DRAWN BY	<i>A. H.</i>	3-66
TRACED BY	<i>D. J. R.</i>	3-66
CHECKED BY	<i>D. J. R.</i>	3-66
SHEET	2	OF 28

SO1 of 82124 A

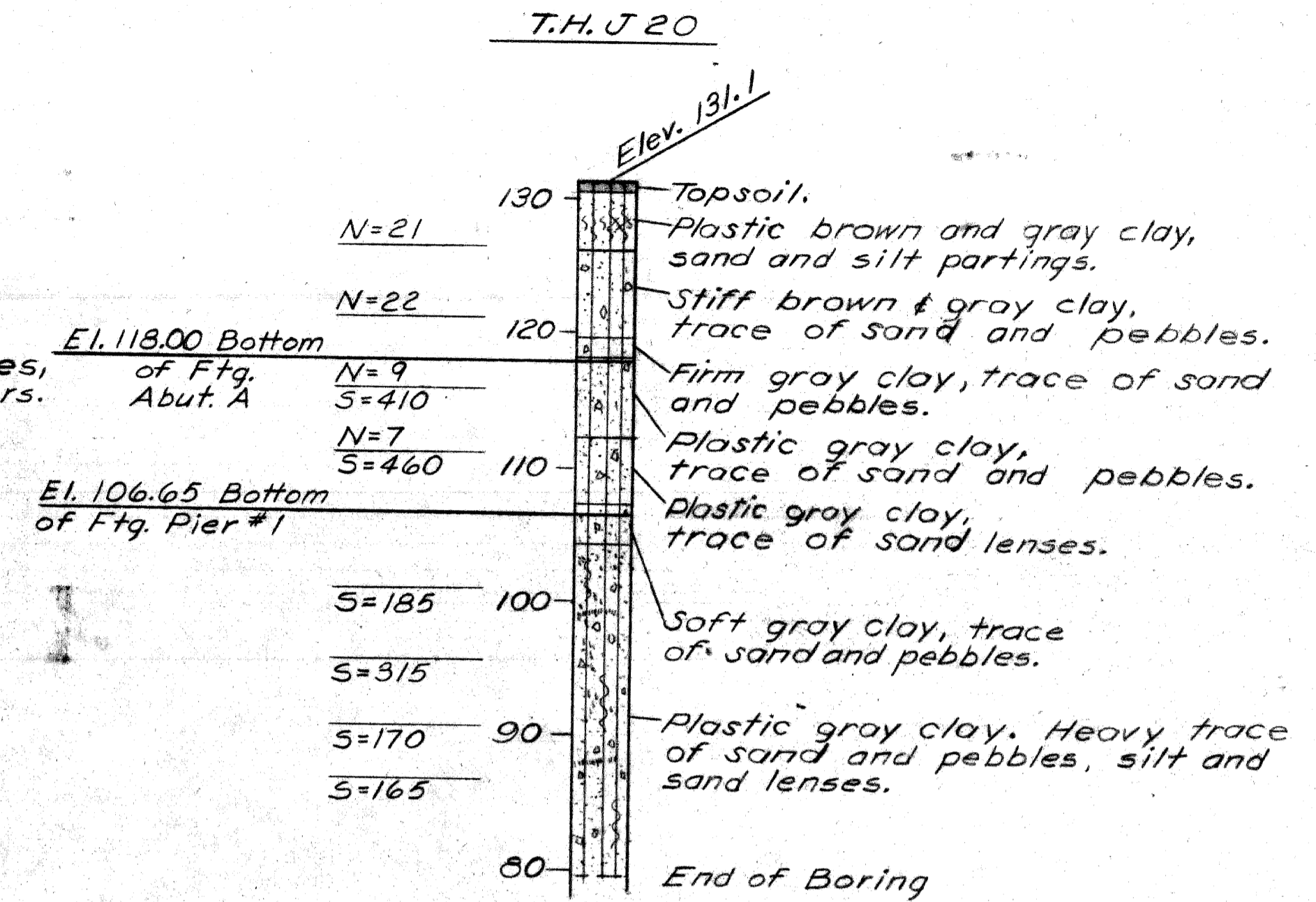
LOG OF SOIL BORINGS



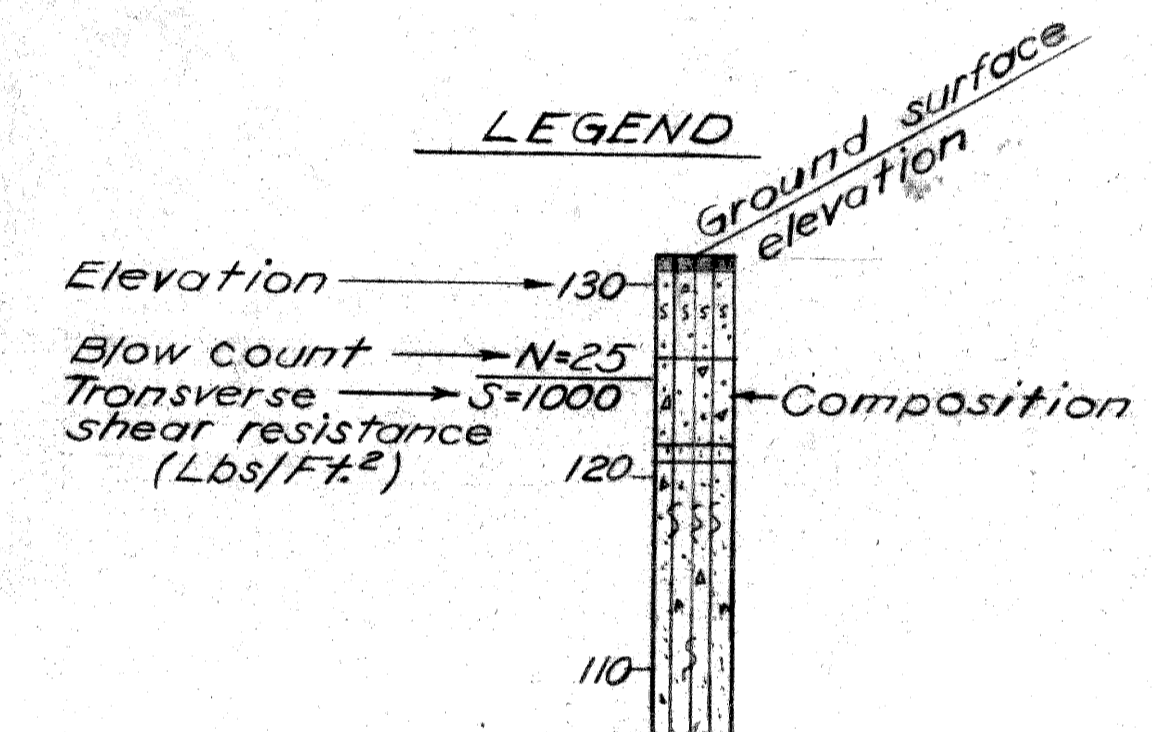
* Core Sampler driven 6"-6".



* Core Sampler driven 4".

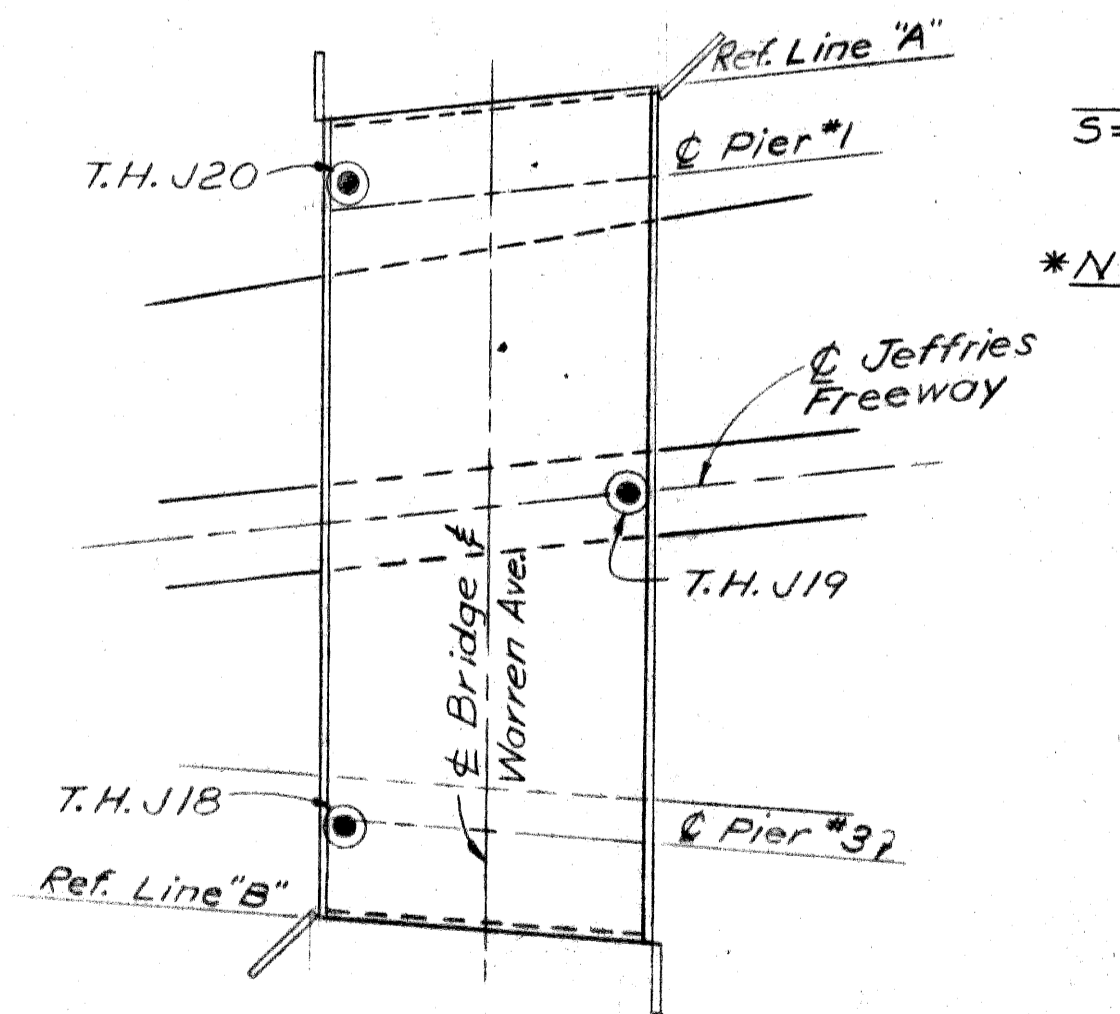
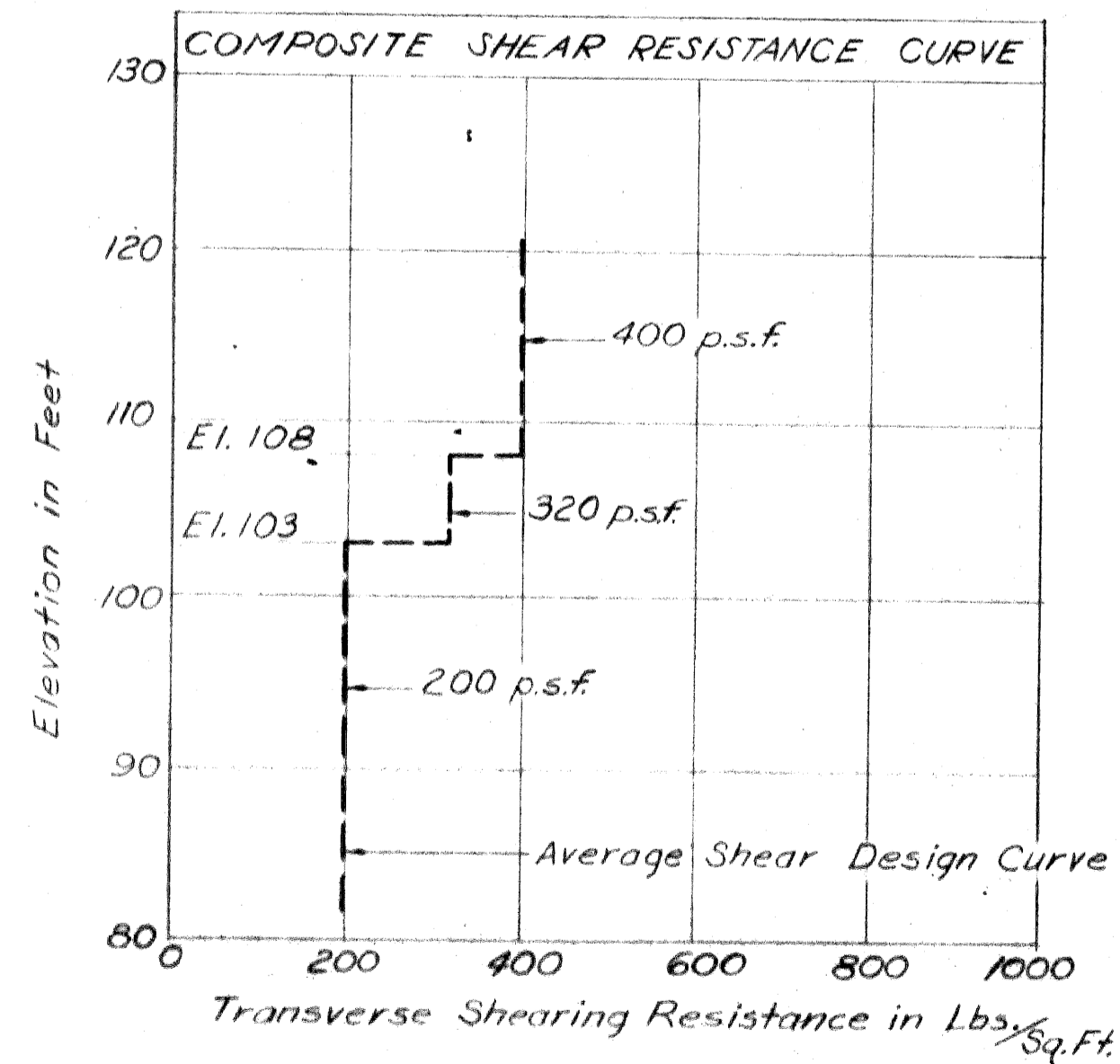


LEGEND



NOTES:

N Indicates the number of blows required to drive a sampler 12" (or as indicated) using a 140# hammer falling 30". Where blow count is not shown sampler was either pushed, hand driven, or levered.
S Indicates Transverse Shearing Resistance in Lbs. per sq. ft. as determined by M.S.H.D. Standard Test.
All elevations are based on City of Detroit Datum.



PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Covert*
CIVIL ENGINEER

JOB No. PW 990(1)

NO.	DESCRIPTION	DATE	BY

MICHIGAN STATE HIGHWAY DEPARTMENT

WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

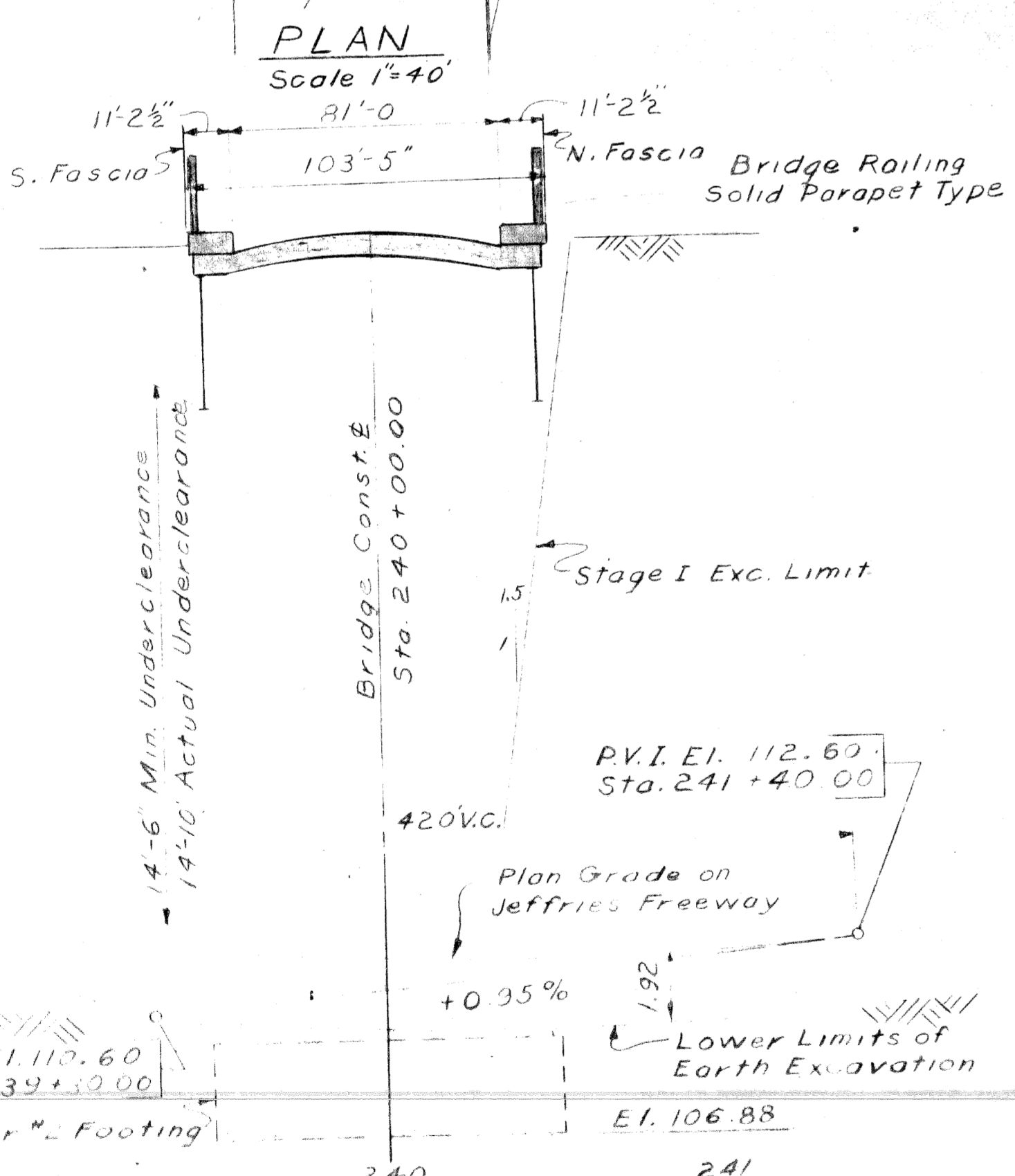
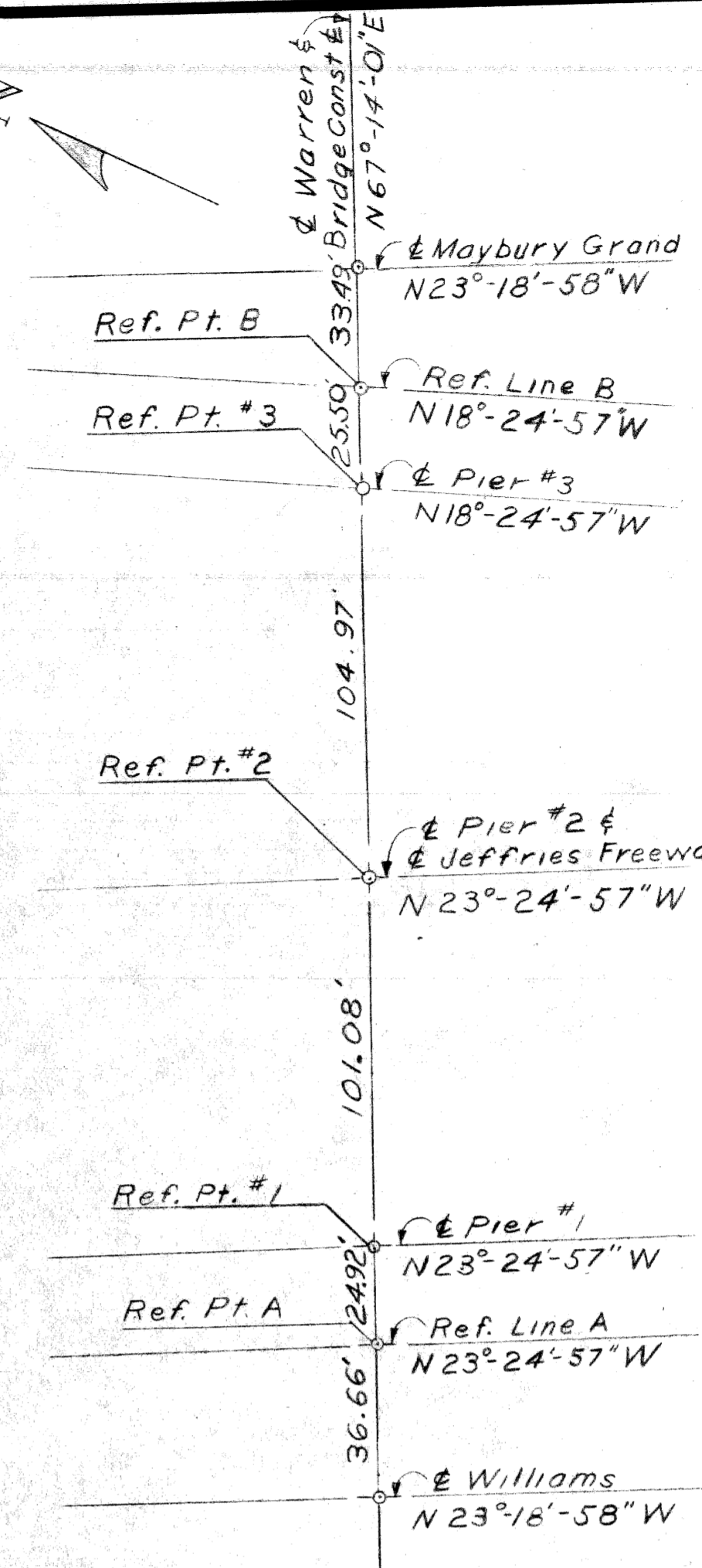
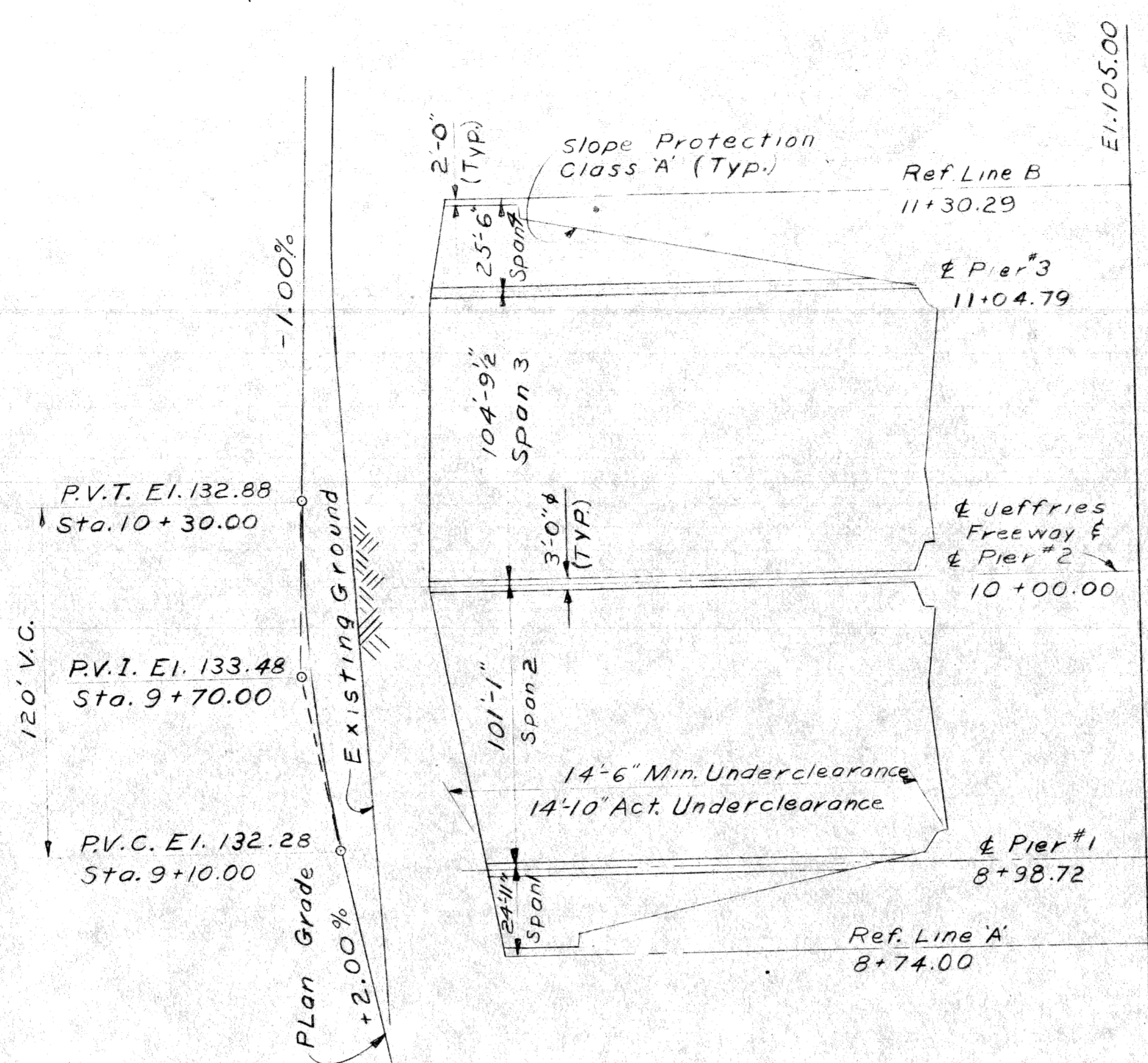
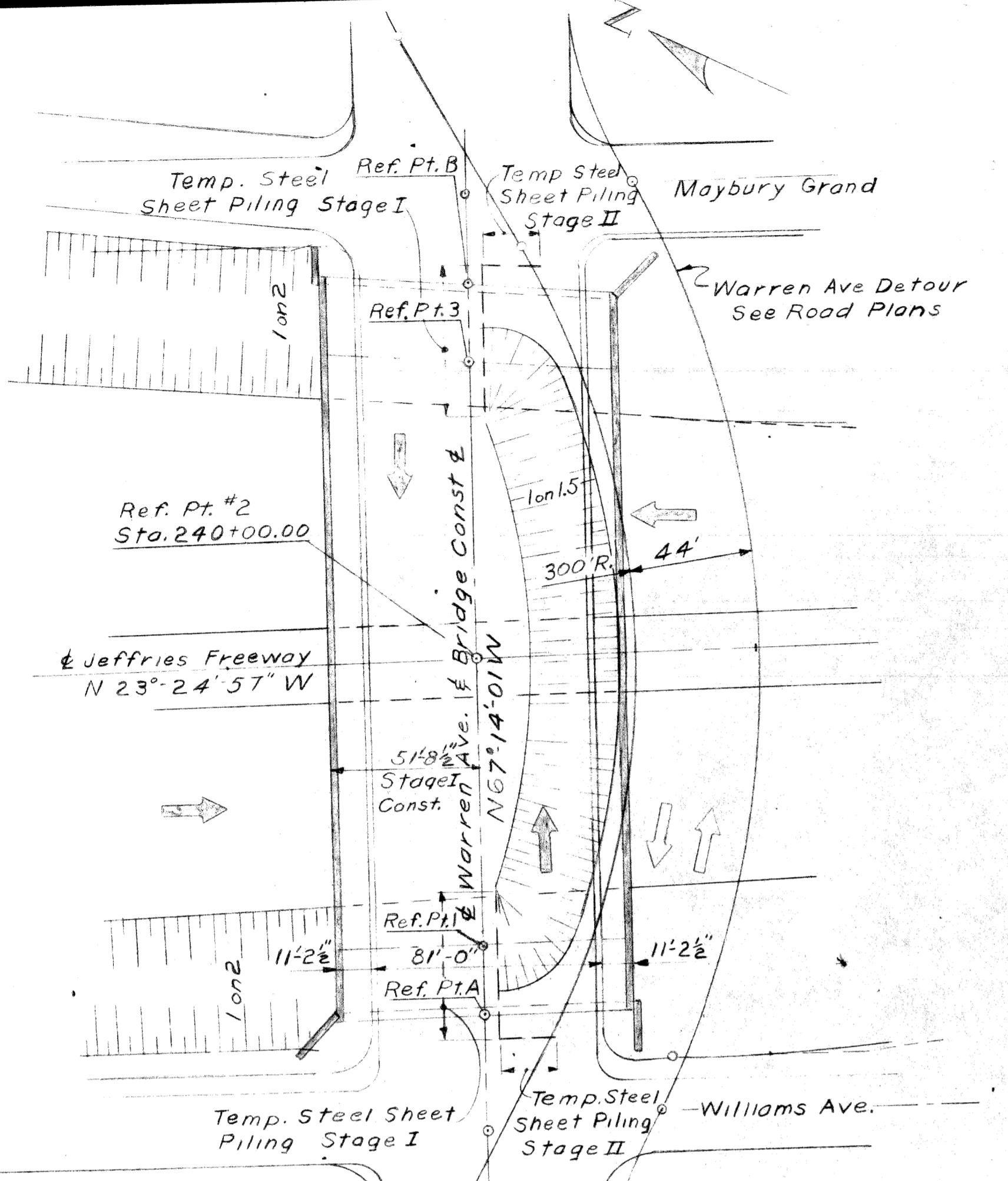
LOG OF BORINGS

APPROVED: _____ DESIGN SUPERVISING ENGINEER

APPROVED: _____ ASST. ENGINEER OF DESIGN

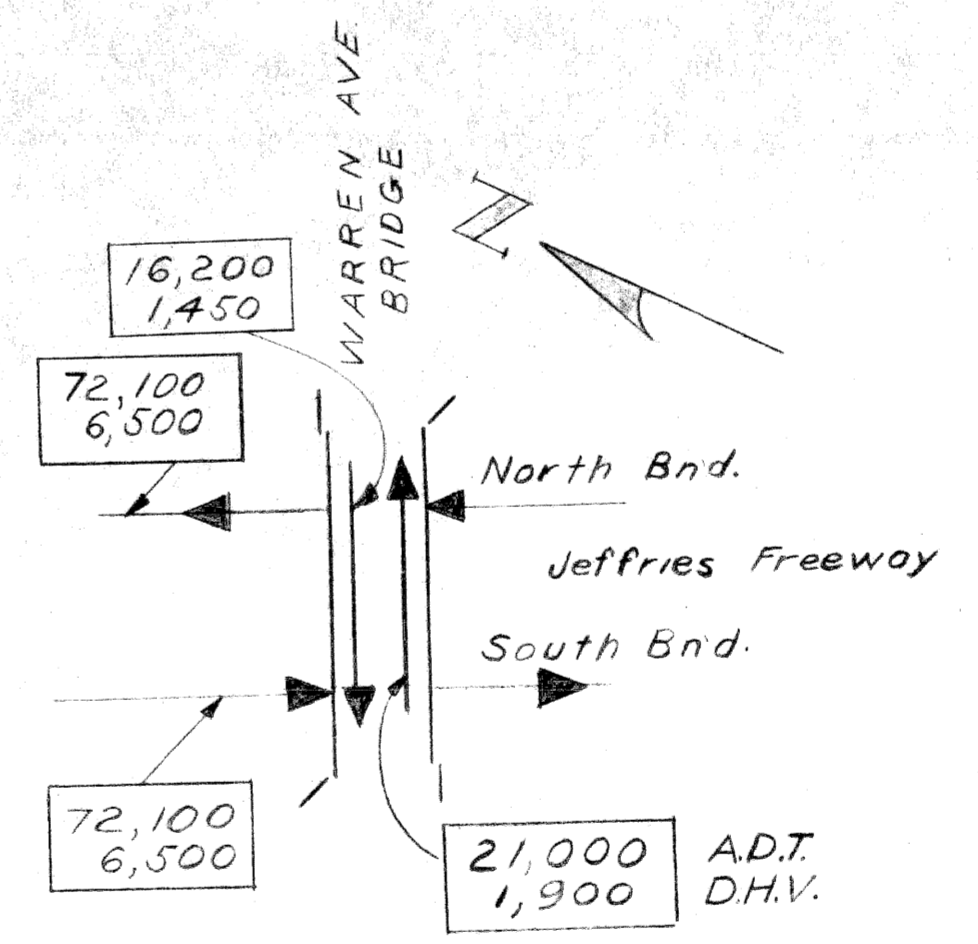
NO.	DESCRIPTION	DATE	BY

SHEET 3 OF 25
SOI of 82124A



CURVE DATA

CURVE IN W	WARREN ENT. RAMP
$\Delta = 5^{\circ}00'00''$	$\Delta = 7^{\circ}00'00''$
$D = 2^{\circ}00'00''$	$D = 5^{\circ}00'00''$
$R = 2864.79'$	$R = 1145.92'$
$T = 125.08'$	$T = 70.09'$
$L = 250.00'$	$L = 140.00'$
$E = 2.73'$	$E = 2.14'$
$P.C. = 4+28.85$	$P.C. = 240+61.81$
$P.I. = 5+53.93$	$P.I. = 241+31.90$
$P.T. = 6+78.85$	$P.T. = 242+01.81$



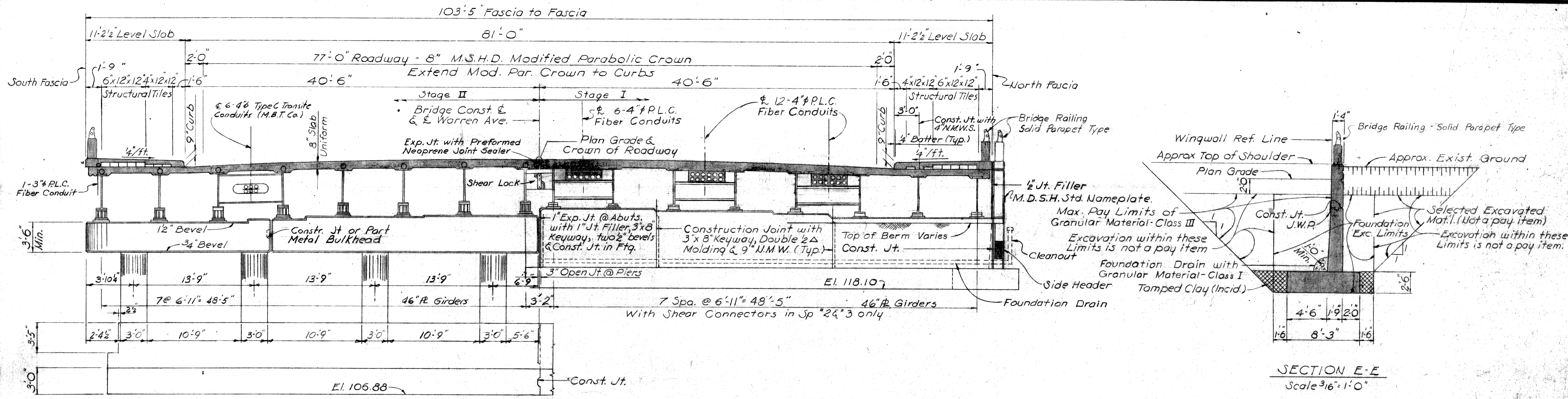
ALIGNMENT DIAGRAM
No Scale

- CONSTRUCTION BENCH MARKS:**
- C.B.M. 21 Stem on top hydrant E. Side of Maybury Grand, 78' south of Hancock, El. 132.04
 - C.B.M. 22 Arrow on hydrant S.E. corner Tilman and Warren, El. 131.78
 - C.B.M. 23 Arrow on hydrant S.E. Corner Warren and Maybury Grand, El. 134.29
- NOTES:**
- C.B.M. Denotes construction bench mark.
 - o Denotes Reference Point or point of intersection.

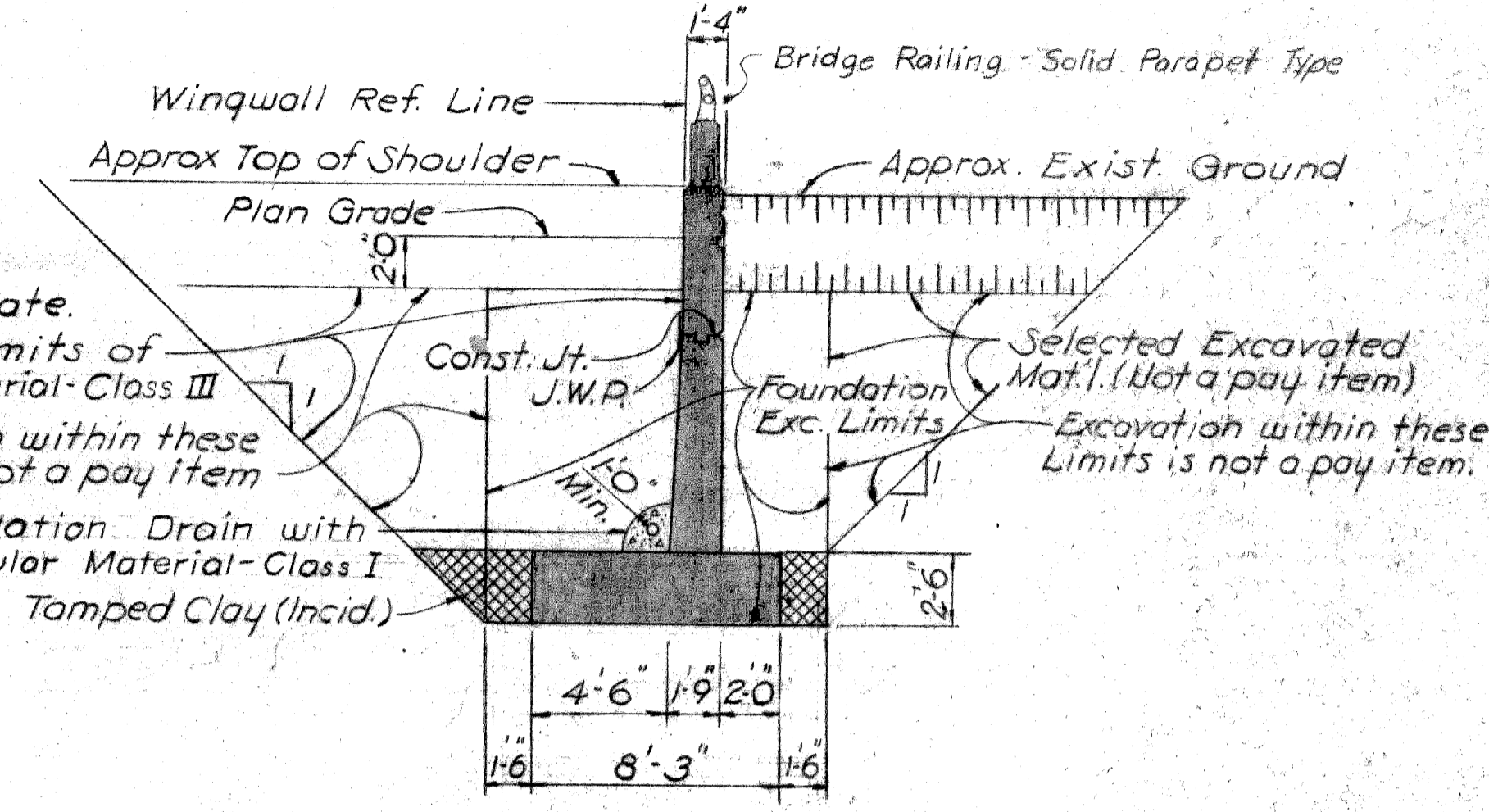
Work this sheet with sheet #5.

PROFILE ALONG & JEFFRIES FREEWAY
Scale: Horiz. 1"=40' Vert. 1"=4'

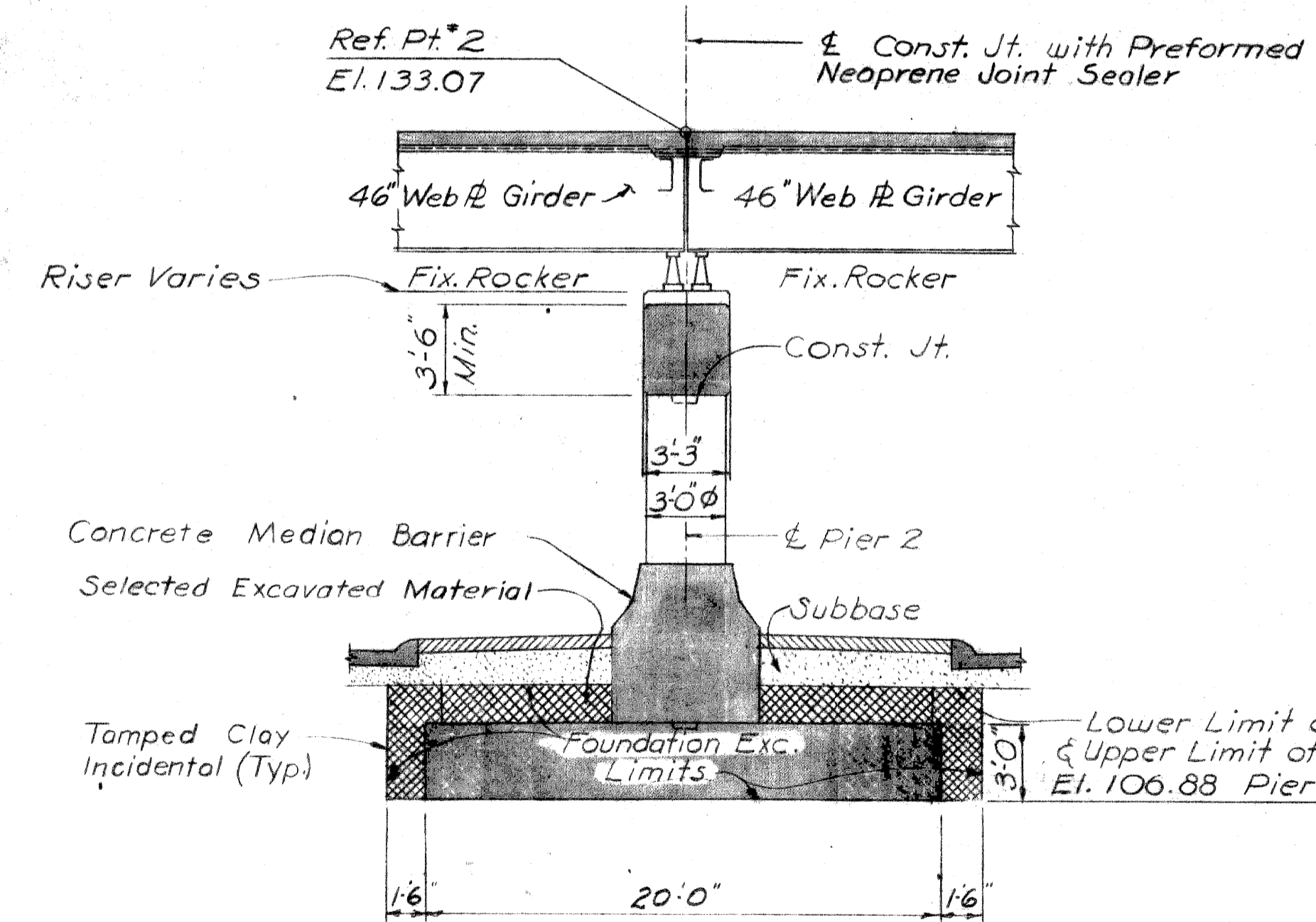
PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN STATE HIGHWAY DEPARTMENT WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT GENERAL DRAWING	
APPROVED: <i>[Signature]</i> STRUCTURAL ENGINEER		JOB No. PW 990(1) REVISIONS:	
NO. DESCRIPTION DATE BY		APPROVED: _____ DESIGN SUPERVISING ENGINEER APPROVED: _____ ASST. ENGINEER OF DESIGN	
		SQUAD BOSS: A. Freedy 3/66 DRAWN BY: J. A. S. 3/66 TRACED BY: Spurgeon 9/68 CHECKED BY: D. W. J. 3/68 SHEET 7 OF 28	
		SOI of 82124A	



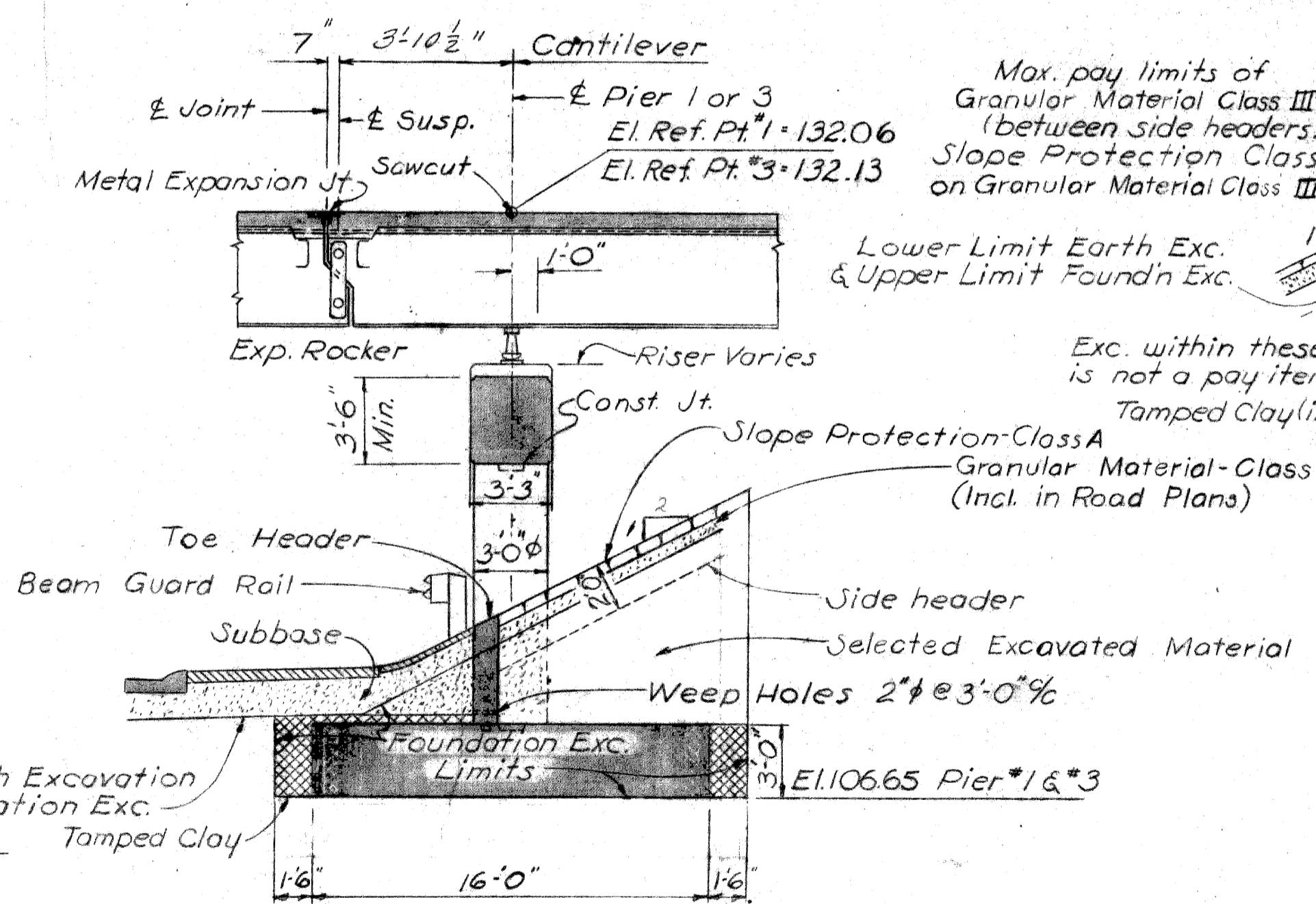
SECTION A-A
Scale 3/16" = 1'-0"



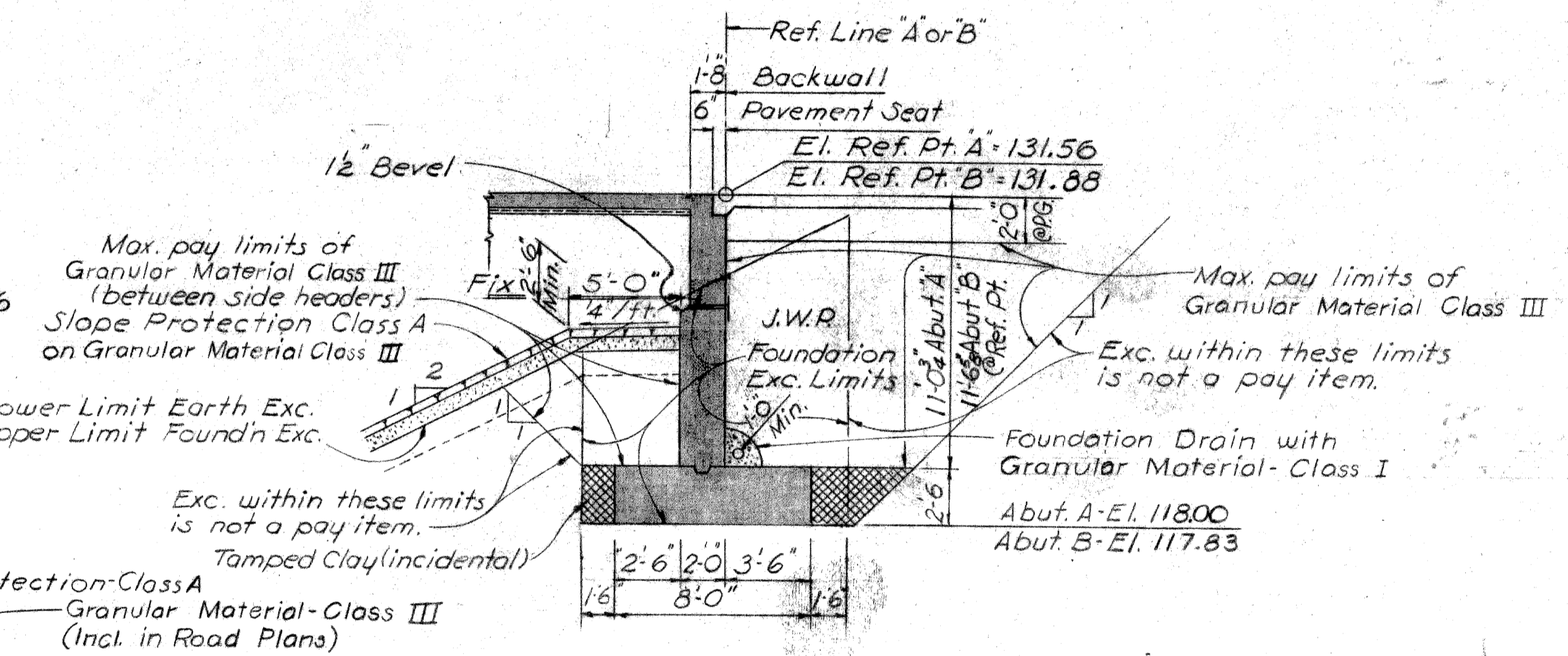
SECTION E-E
Scale 3/16" = 1'-0"



SECTION D-D
Scale 3/16" = 1'-0"



SECTION C-C
Scale 3/16" = 1'-0"

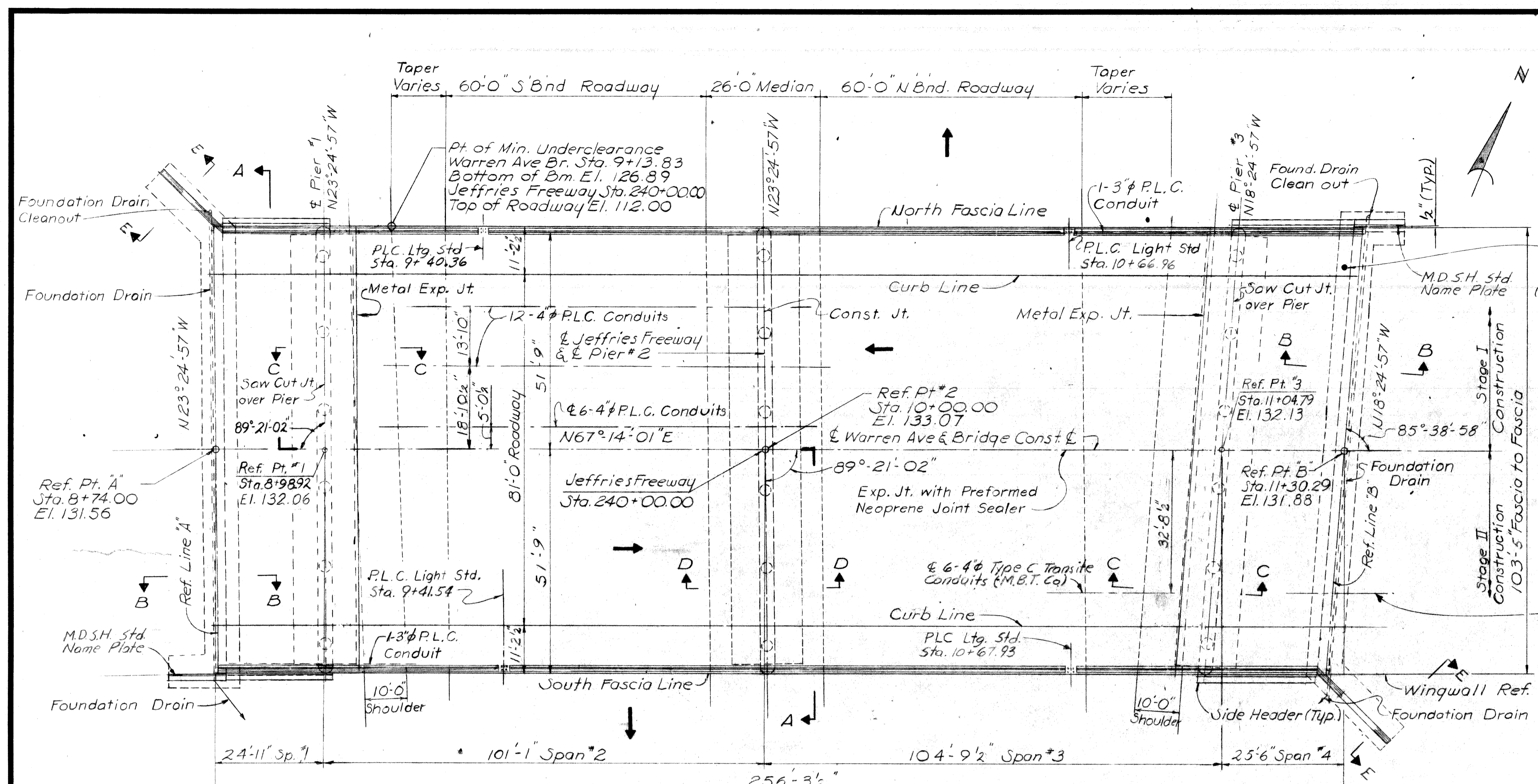


SECTION B-B
Scale 3/16" = 1'-0"

Notes:
Tamped Clay and Selected Excavation Material are incidental to Unclassified Excavation.
Granular Material Class I incidental to Foundation Drain.
Granular Material Class III is billed on Road Plans. Quantity = 1260 Cu. Yds. Compacted in place.

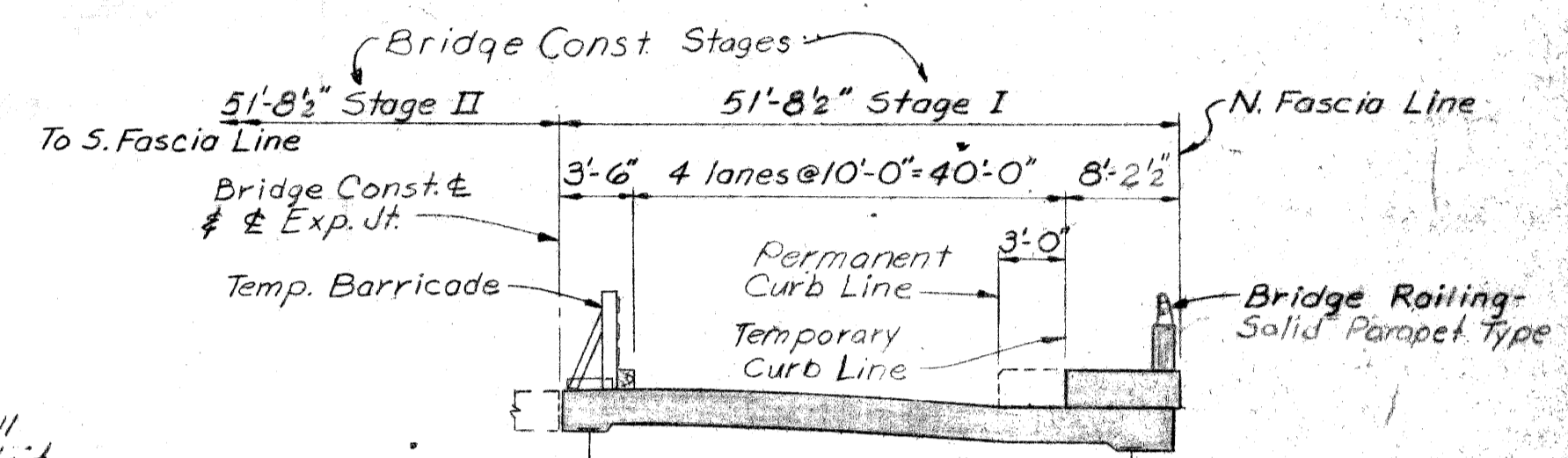
Work this sheet with sheet No. 5

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN STATE HIGHWAY DEPARTMENT	
APPROVED: <i>[Signature]</i> STRUCTURAL ENGINEER		JOB No. PW 990(1)	
REVISIONS NO. DESCRIPTION DATE BY		WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT GENERAL PLAN OF STRUCTURE	
APPROVED: _____ DESIGN SUPERVISING ENGINEER		CITY OF DETROIT SQUAD BOSS: <i>A. Prehoda</i> 3/66 DRAWN BY: <i>Robert's</i> 2/66 CHECKED BY: <i>A. Prehoda</i> 2/66 SHEET 6 OF 25	
APPROVED: _____ ASST. ENGINEER OF DESIGN		SOI of 82124A	



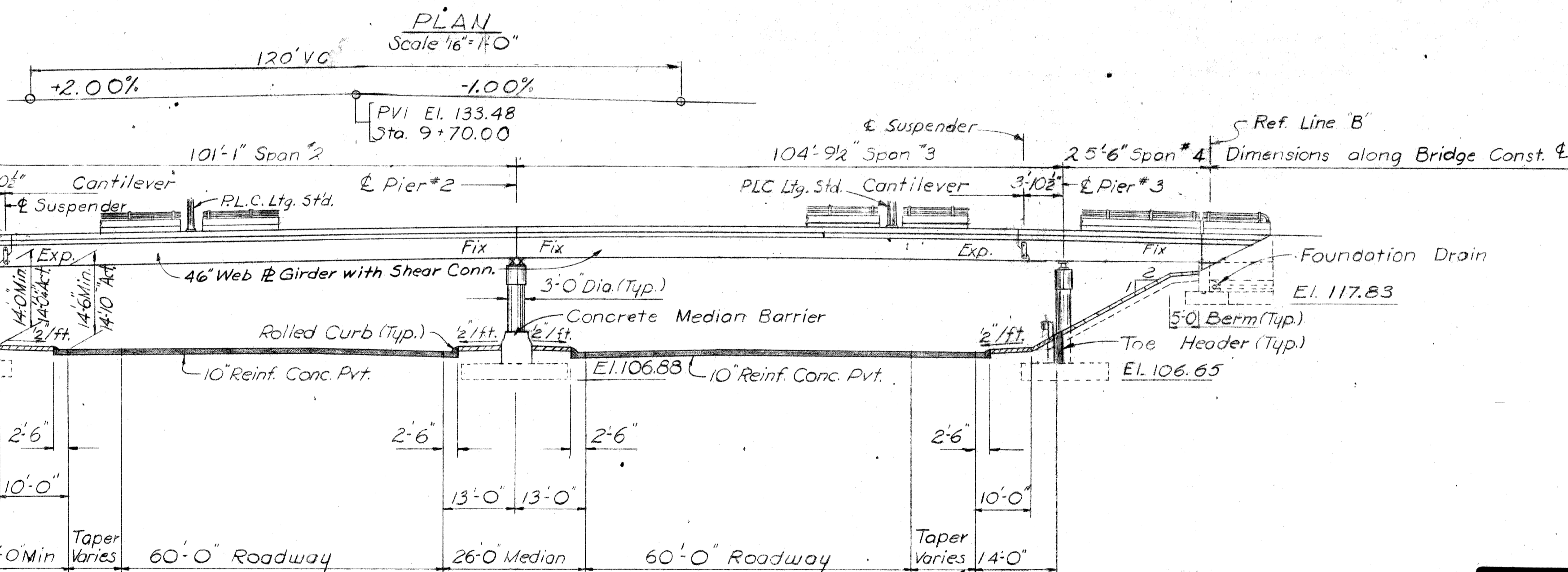
FOOTING PRESSURE p.s.f.				
	Average D.L.	Allowable R=1.0	Maximum D.L.+L.L.	Allowable R=1.5
Abutments	1250	3250	2450	4550
Piers	2000	2100	2500	2800
Wingwalls	1550	3250	3100	4550

MISCELLANEOUS QUANTITIES		
Item	Amount	Unit
Slope Protection - Class A	593	Sq. Yds.
Slope Protection - Header	312	Lin. Ft.
Foundation Drain	160	Lin. Ft.
Temporary steel sheet Piling	1950	Sq. Ft.



GENERAL NOTES:

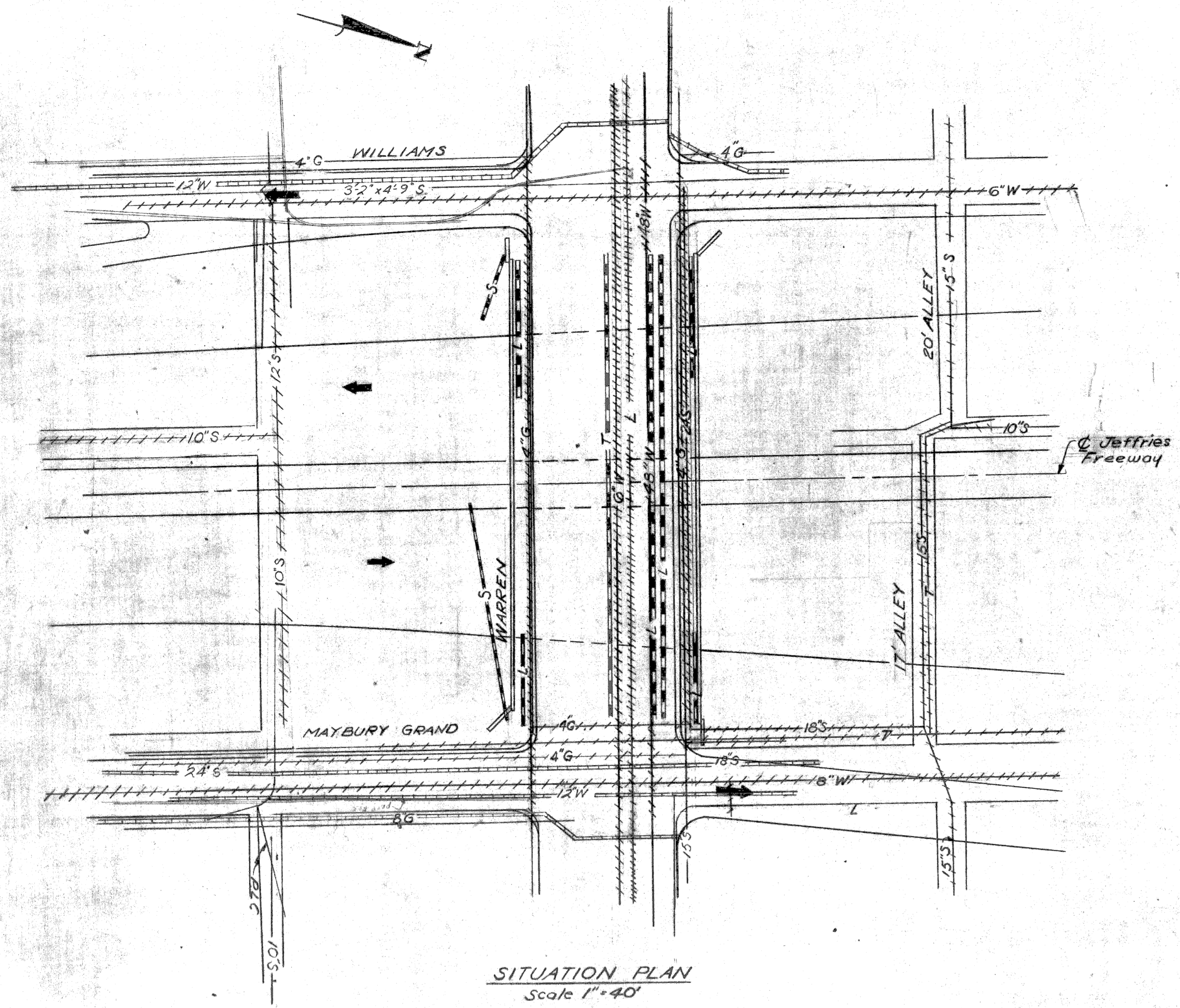
- The design of this structure is based on M.S.H.D. specifications for the design of Highway Bridges, 1958 edition and current AASHTO standard specifications for Highway Bridges 4520-44 loading.
- Live load plus impact deflection = 1/400 of span length.
- The top of roadway slab and tops of curbs are parallel to the vertical curve and tangents.
- For details of Slope Protection - Class A, see Std. Sh. 5P2.
- Tamped Clay is incidental to Unclassified Excavation.
- The vertical pay limits of temporary steel sheet piling are the top of retained earth and the bottom of footing.
- The lateral pay limits of temporary steel sheet piling are as required and determined by the Engineer.
- Temporary steel sheet piling is to be adequately supported to prevent bowing and tipping. Method and adequacy of support are subject to the approval of the Engineer.
- Temporary steel sheet piling shall be of the continuous interlock type, either new or used in good condition, weighing not less than 22 pounds per square foot of wall and shall be furnished with suitable connecting and corner pieces. Load analysis and mill reports are not required for steel used in Sheet Piling.



Work this sheet with sheet Nos. 4, 6 & 7

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN STATE HIGHWAY DEPARTMENT WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT	
APPROVED: <i>H. Cant</i> STRUCTURAL ENGINEER	JOB No. PW 990(1)	GENERAL PLAN OF STRUCTURE CITY OF DETROIT	
REVISIONS NO. DESCRIPTION DATE BY		SQUAD BOSS: <i>A. Friberg</i> 3/66 DRAWN BY: <i>Roberts</i> 2/66 CHECKED BY: <i>D.R.A.F.</i> 2/66 SHEET 5 OF 28	
APPROVED _____ DESIGN SUPERVISING ENGINEER		APPROVED _____ ASST. ENGINEER OF DESIGN	

ELEVATION
Scale 1/16" = 1'-0"



SITUATION PLAN
Scale 1"=40'

UTILITY

LEGEND

DESIGNATION

UTILITY	EXISTING	DELETE OR ABANDON	NEW WORK BY OTHERS	NEW WORK BY CONTRACTOR
PUBLIC LIGHTING COMMISSION	—L—	++L++	L	---L---
DETROIT WATER DEPT.	—W—	++W++	W	---W---
EXPWY & CITY OF DETROIT SEWERS	—S—	++S++	S	---S---
MICH. CONSOL. GAS CO.	—G—	++G++	G	---G---
MICH. BELL TELEPHONE CO.	—T—	++T++	T	---T---
DETROIT EDISON CO.	—E—	++E++	E	---E---
DETROIT FIRE DEPT.	—F—	++F++	F	---F---

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Paul*
STRUCTURAL ENGINEER

JOB No.
FW 990(1)

MICHIGAN STATE HIGHWAY DEPARTMENT

WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

**EXISTING UTILITIES AND
PROPOSED ALTERATIONS**

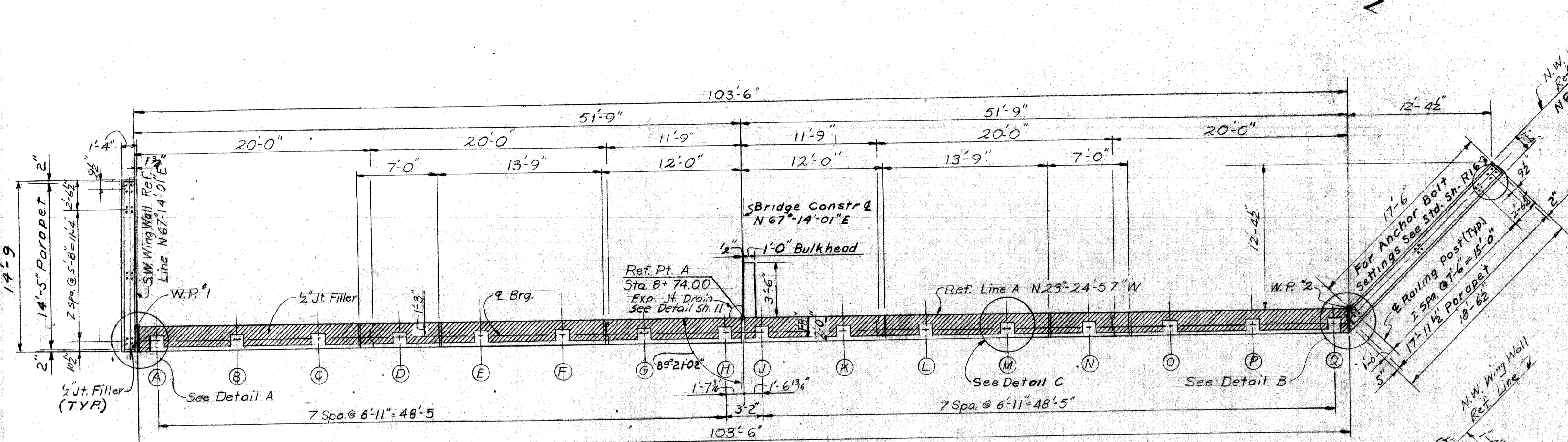
REVISIONS

NO.	DESCRIPTION	DATE	BY

DRAWN BY: *R.A.S.*
CHECKED BY: *AE*
SHEET 7 OF 28

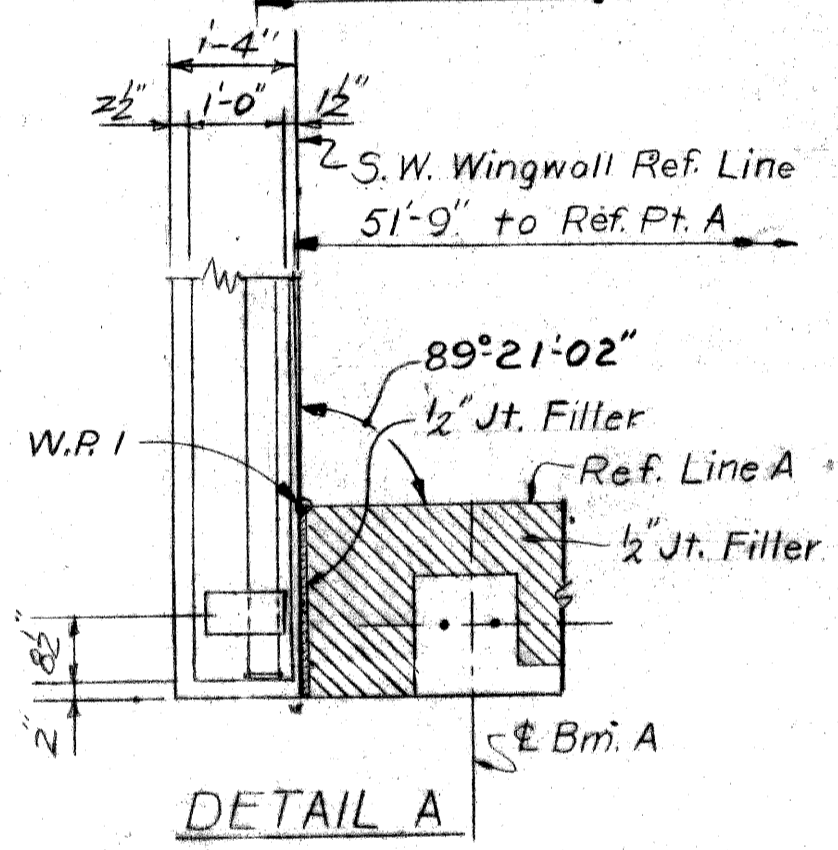
SQUAD BOSS: *R. E. ...*
CITY OF DETROIT

SOI of 82124A

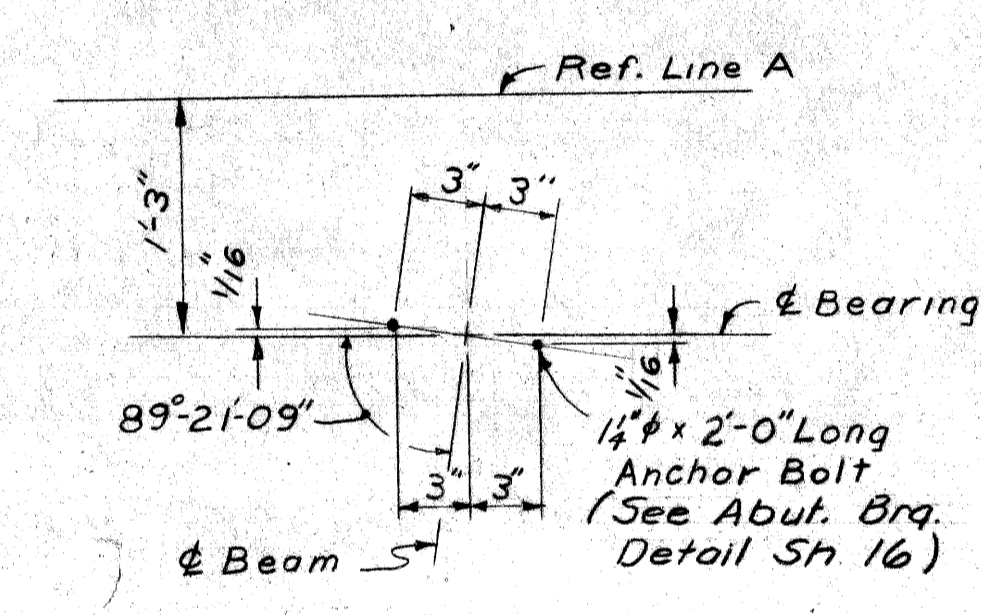


PLAN OF TOP

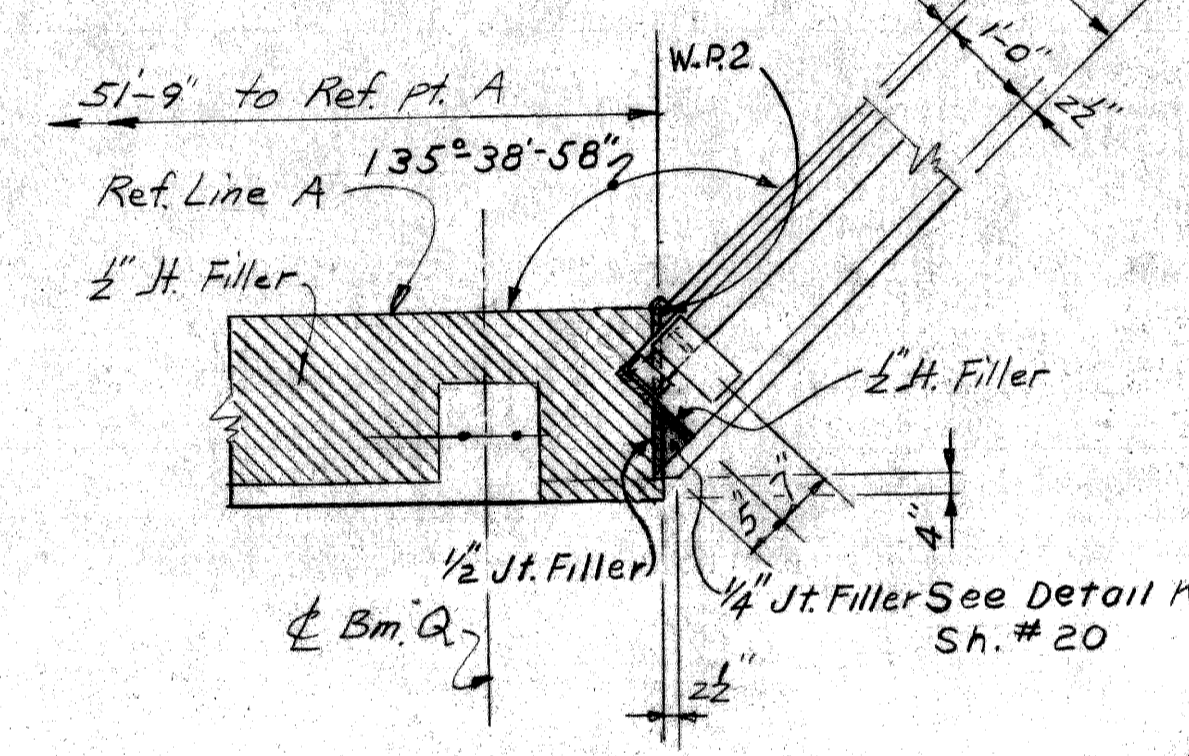
Beams	Projection
A, B, E & M	5"
C & D	6 1/2"
D & N	5 1/2"
F & L	6 1/2"
G, K, P & Q	4 3/4"
H & J	5 1/2"



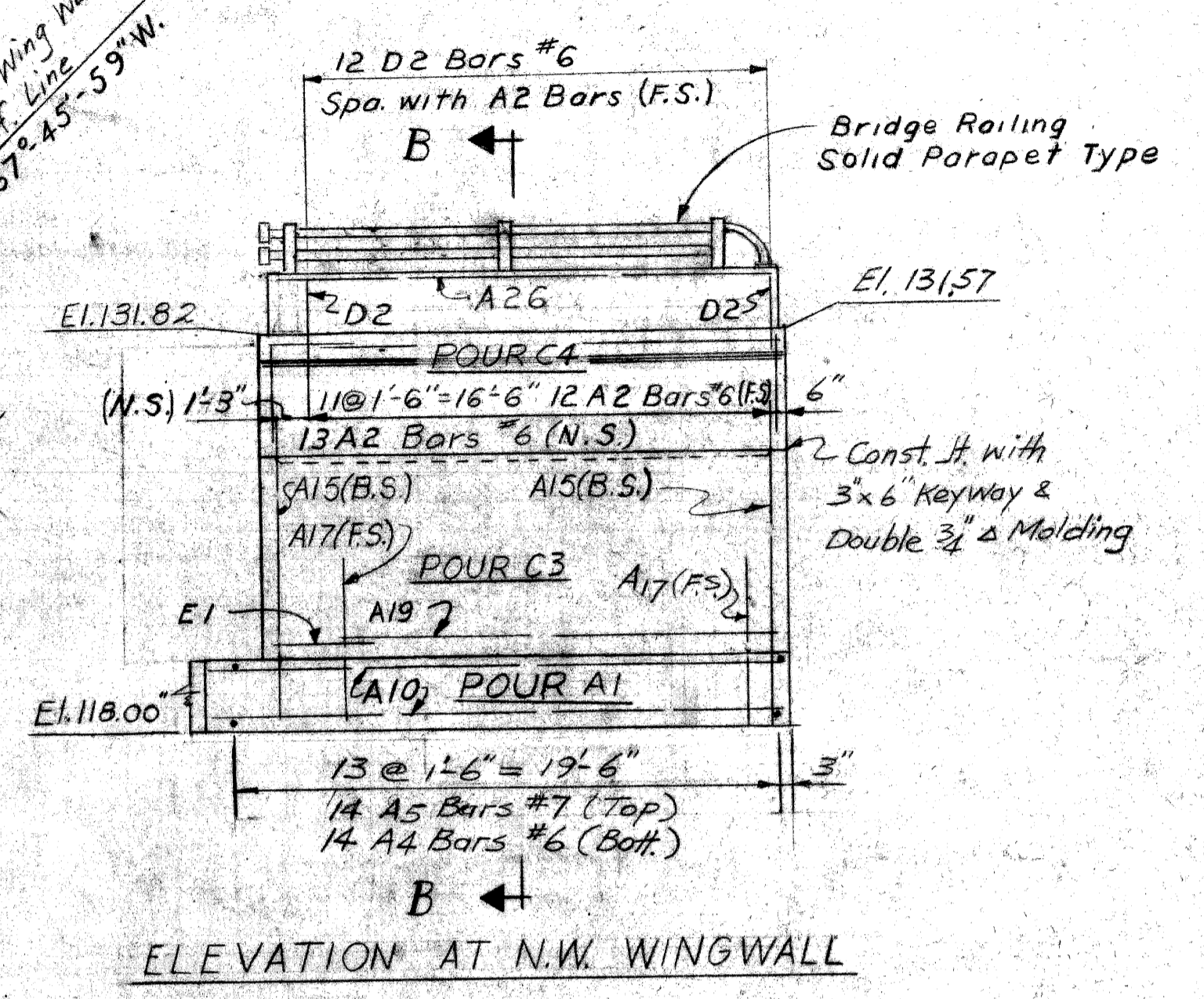
DETAIL A



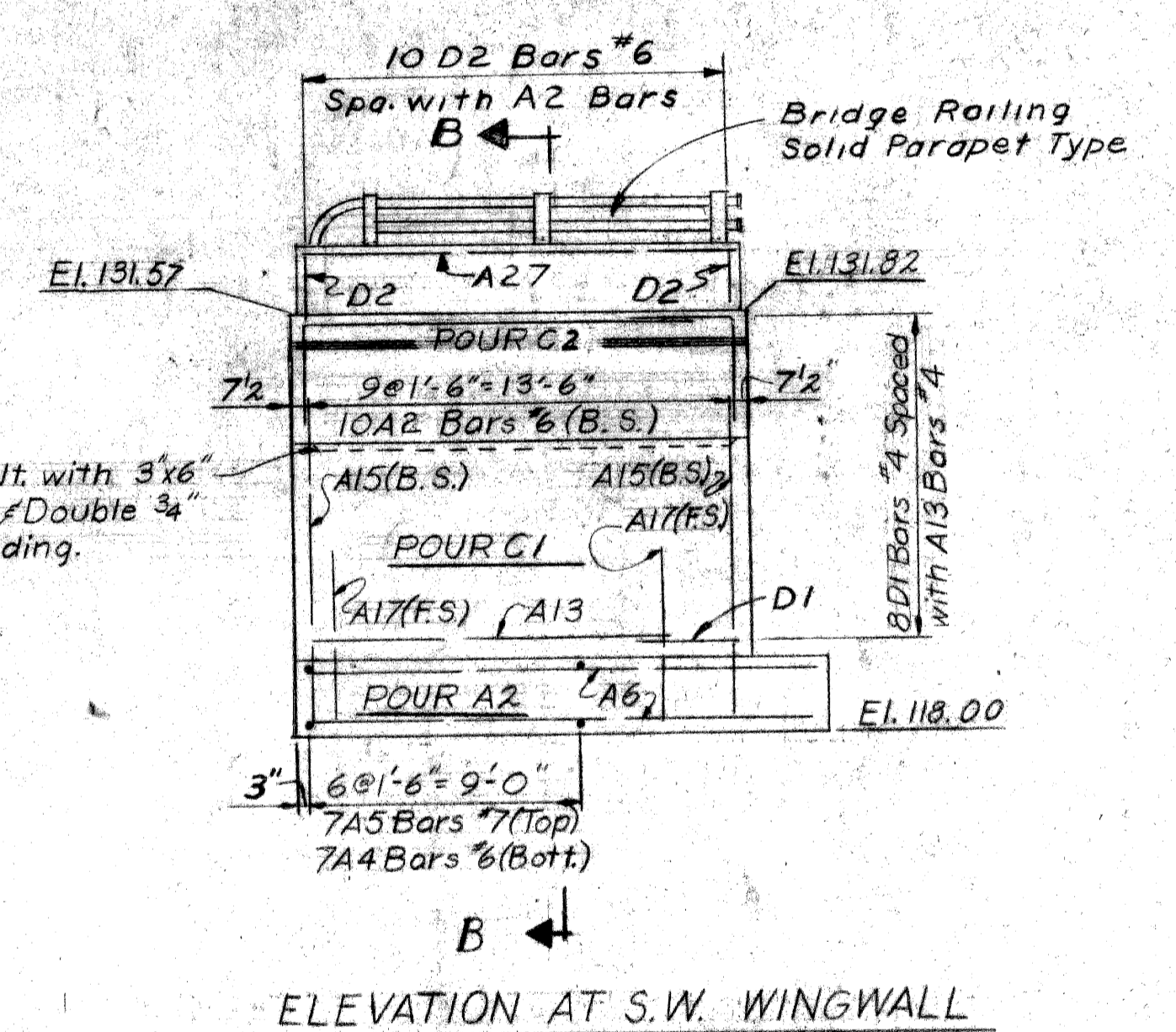
DETAIL C



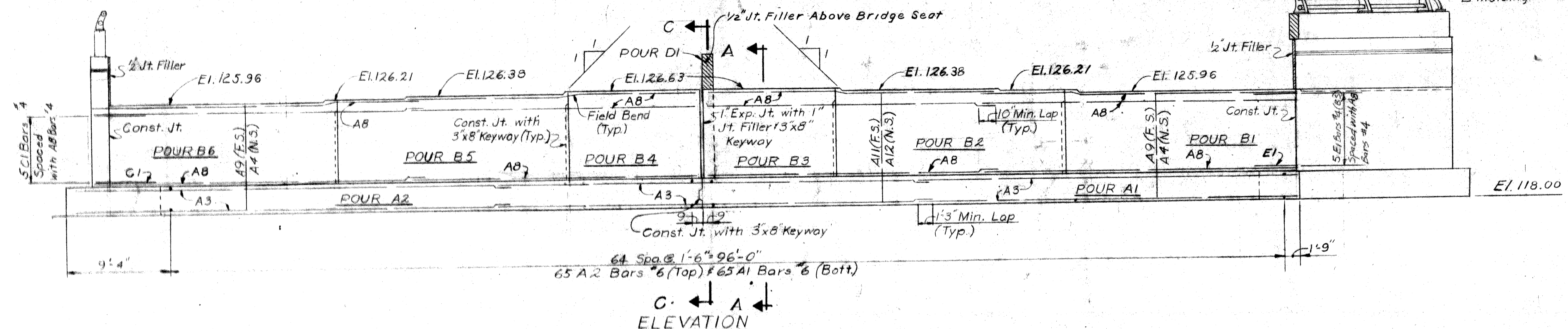
DETAIL B



ELEVATION AT N.W. WINGWALL



ELEVATION AT S.W. WINGWALL



ELEVATION

Work this sheet with sheet Nos. 9 thru 11

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
WARREN AVE CROSSING THE
JEFFRIES FREEWAY IN DETROIT

ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

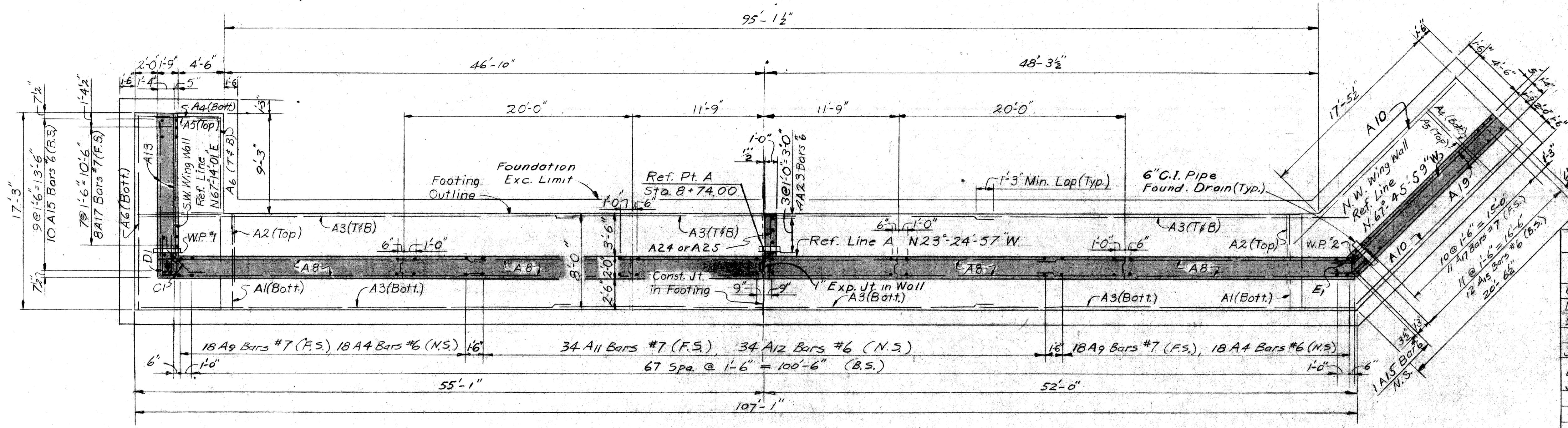
CITY OF DETROIT
SQUAD BOSS: Zander 8-68
DRAWN BY: L.G. 5-68
TRACED BY: L.G. 9-68
CHECKED BY: D.J.R. 8-68
SHEET 8 OF 8
SOI of 82124A

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB NO.
PW 990(11)

Abut. A



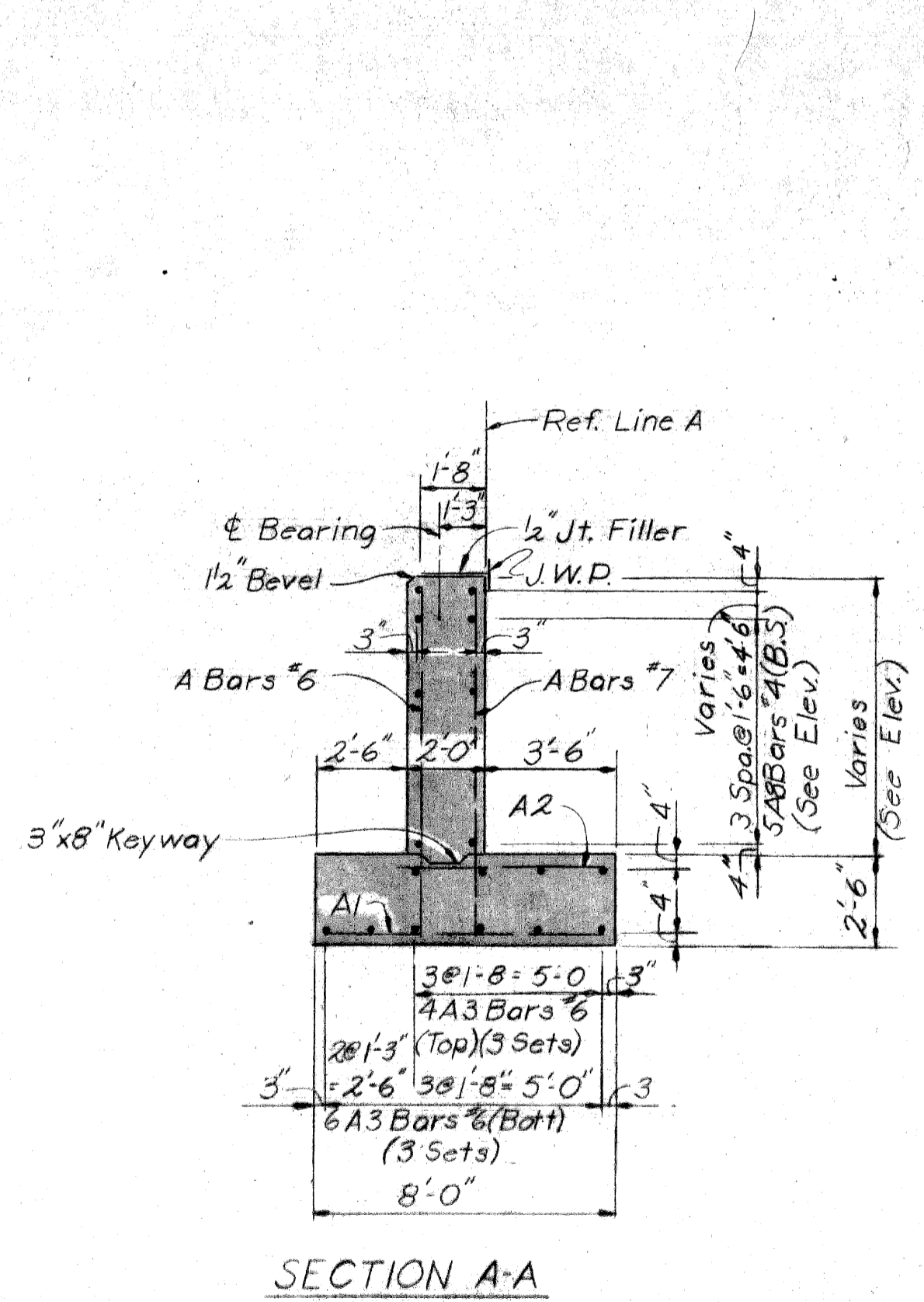
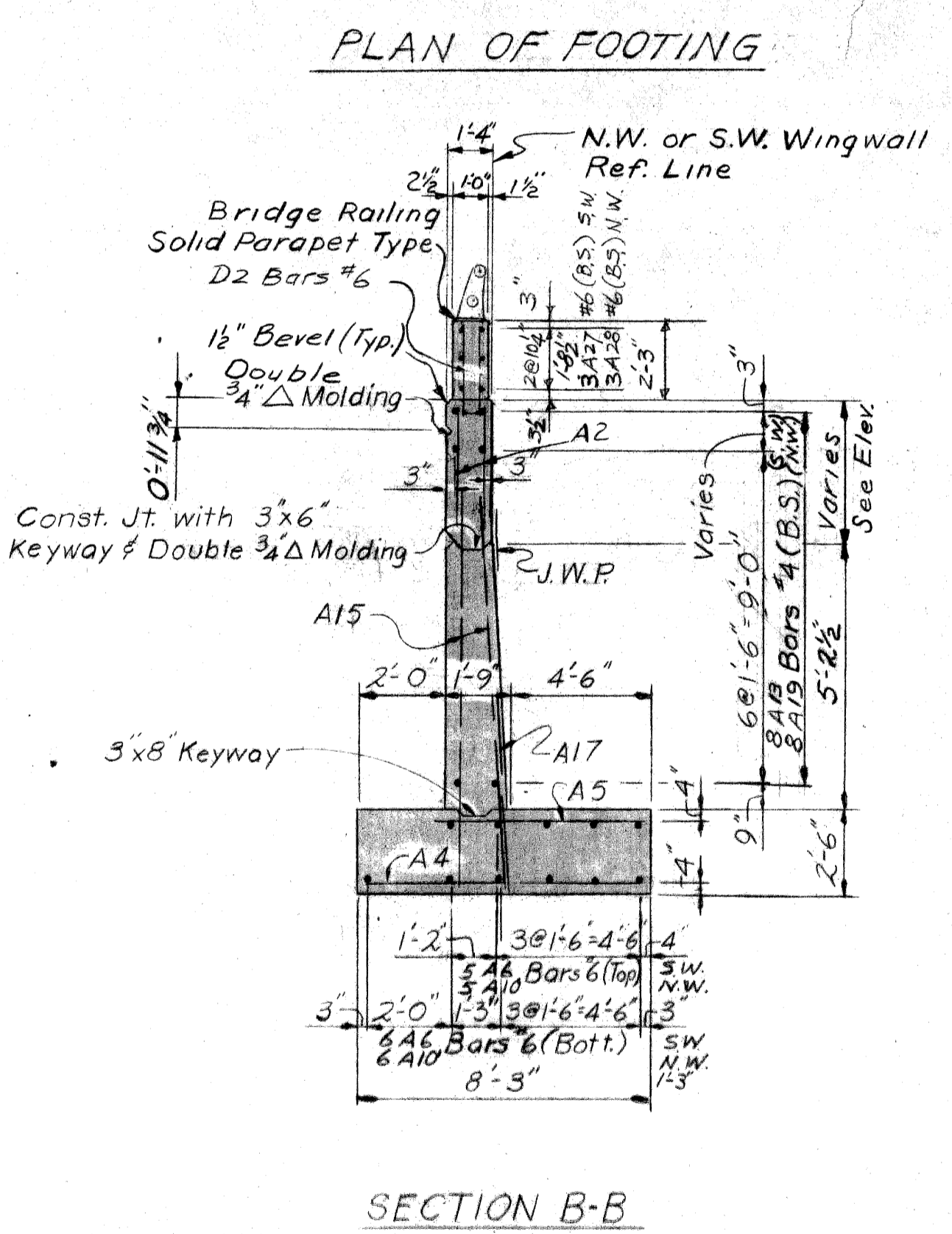
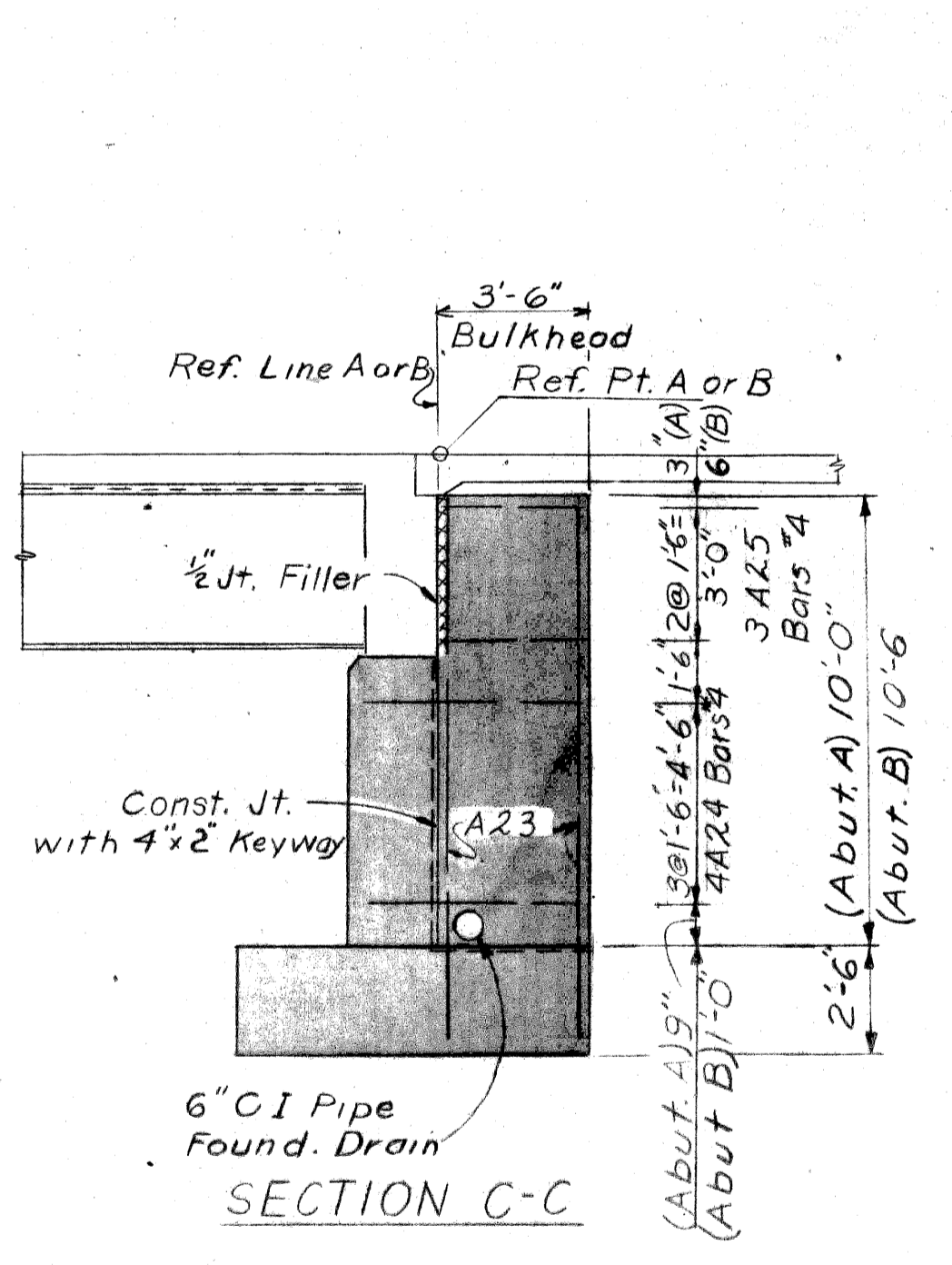
CONCRETE QUANTITIES					
Pour	Location	Abutment A		Abutment B	
		A6A	A6AA	A6A	A6AA
A1	Footng	51.7		49.0	
A2	Footng	47.9		53.7	
B1	Abut. Wall		8.1		8.7
B2	Abut. Wall		8.6		9.3
B3	Abut. Wall		5.3		5.8
B4	Abut. Wall		5.3		5.8
B5	Abut. Wall		8.6		9.4
B6	Abut. Wall		8.1		8.8
C1	Wing Wall		4.5		5.3
C2	Wing Wall		4.1		4.5
C3	Wing Wall		5.6		7.0
C4	Wing Wall		5.1		5.9
D1	Bulkhead		1.3		1.4
Total		99.6	64.6	102.7	71.9
Gr. A (6A) Concrete — Substructure		202.3 Cu. Yds.			
Gr. A (6AA) Concrete — Substructure		136.5 Cu. Yds.			

MISCELLANEOUS QUANTITIES				
Item	Unit	Amount		
		Abut. A	Abut. B	Total
Unclassified Excavation	Cu. Yds.	500	520	1020
Low Temp. Protection-Substr.	Cu. Yds.	165	175	340
1/2" Joint Filler	Sq. Ft.	181	181	362
1" Joint Filler	Sq. Ft.	12	13	25
Joint Waterproofing	Sq. Ft.	4.6	5.6	9.7
Bridge Railing	Lin. Ft.	32.4	36.1	68.5
Solid Parapet Type				
Non-Metallic Waterstop	Sq. Ft.	22	24	46
Foundation Drain	Lin. Ft.	138	142	280
Expansion Joint Drain	Each	1	1	2

NOTE
Parapet Concrete = 5.7 Cu. Yds. Grade A(6AA) Incidental to Bridge Railing - Solid Parapet Type and not a pay item.

GENERAL NOTES:
J.W.P. denotes Joint Waterproofing.
N. S., F.S., and B.S. denotes Near Side, Far Side, and Both Sides respectively.
For bevel and molding details, See standard sheet R16.
Anchor bolts shall be set accurately to a template.
Field bend reinforcement to clear drain holes.
Bridge railing is to be solid parapet type. See railing standard sheet R16 for details.
Anchor Bolts to be furnished with Structural Steel.
For location of name plates, See standard Sheet R16.

Max. average foundation pressure D.L. only = 1850 psf.
Max. foundation pressure D.L. & L.L. = 3350 p.s.f.
Field Bend Reinforcement to clear drain holes.



Work this sheet with sheet nos. 8 thru 11

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

ABUTMENT DETAILS

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS & BRIDGES

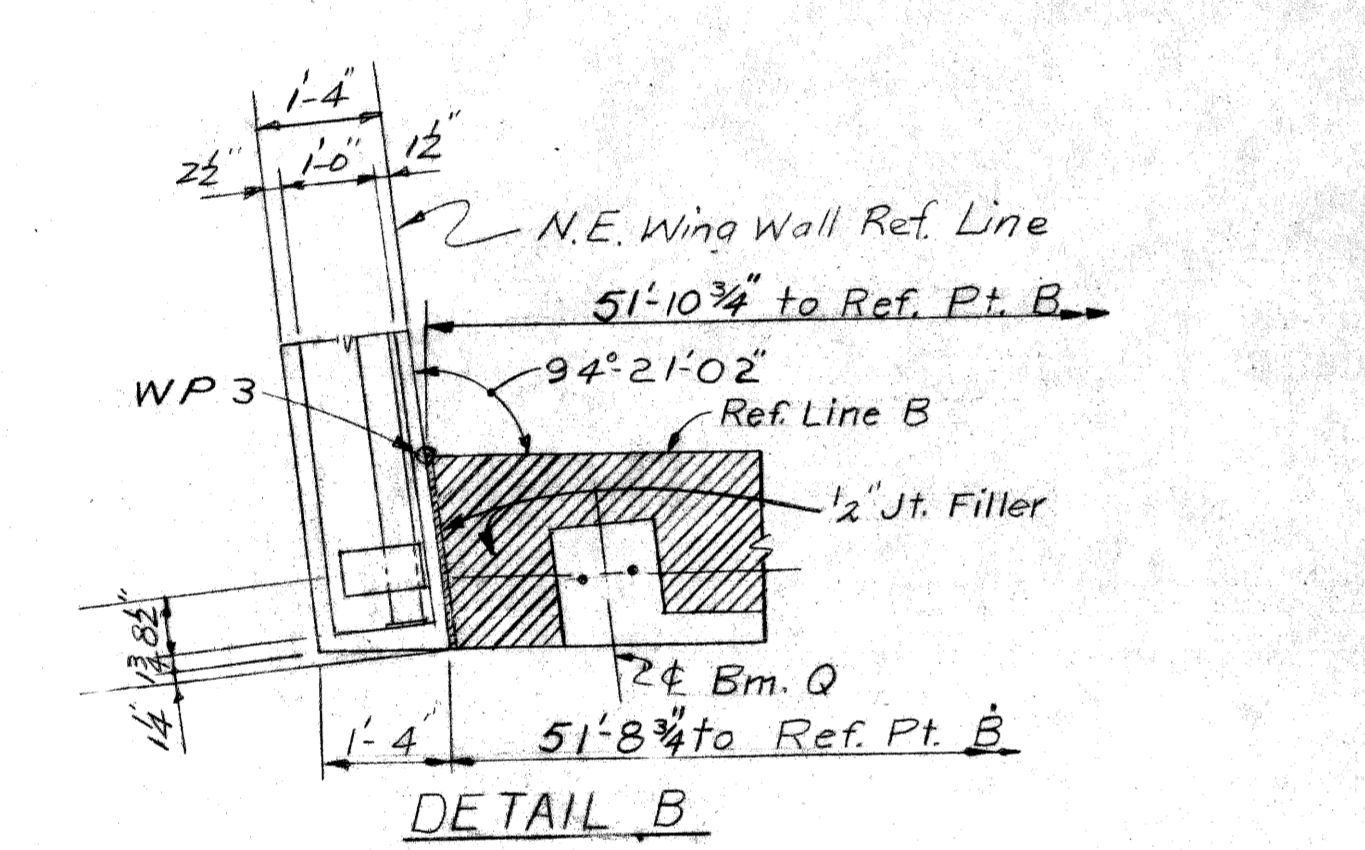
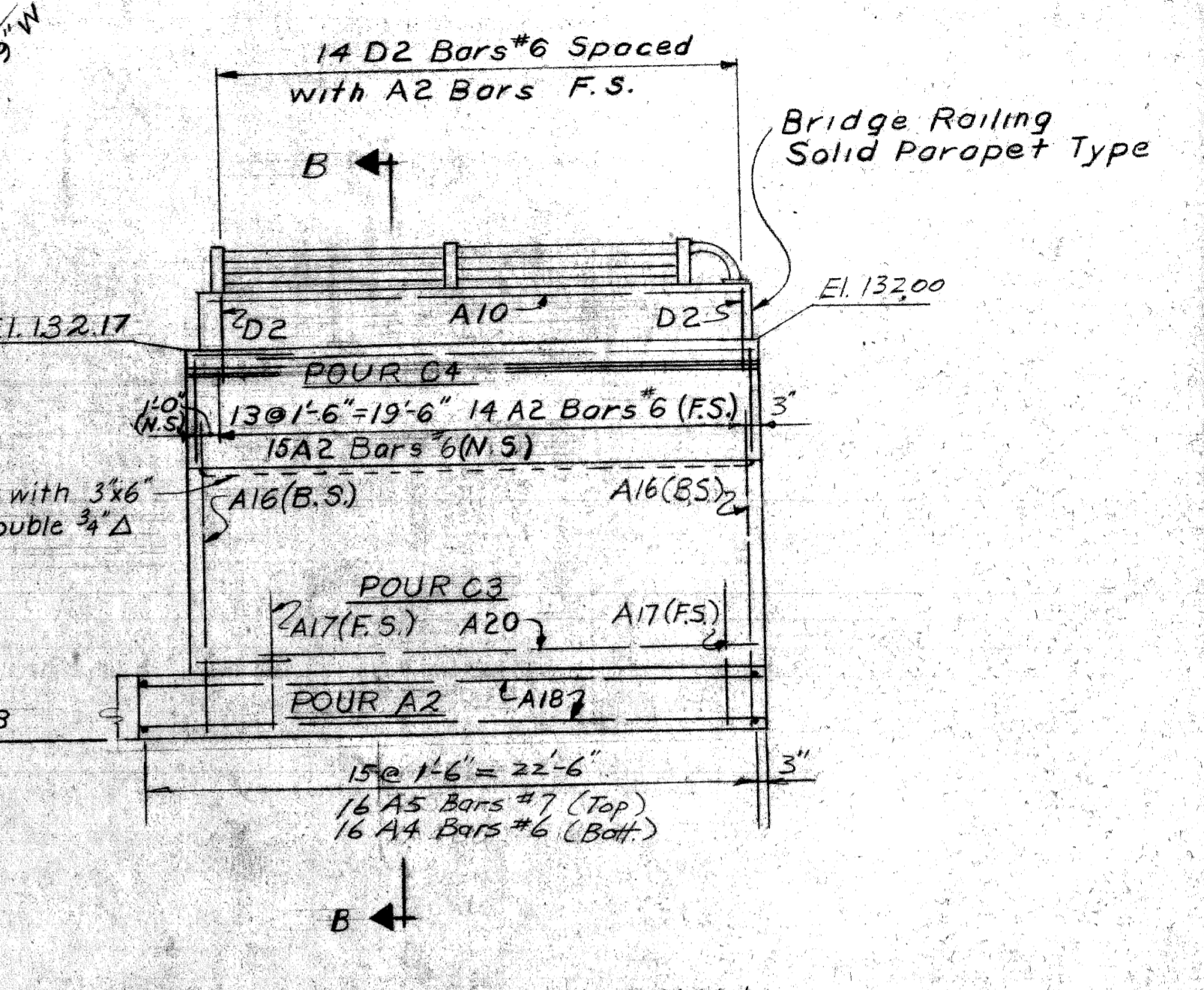
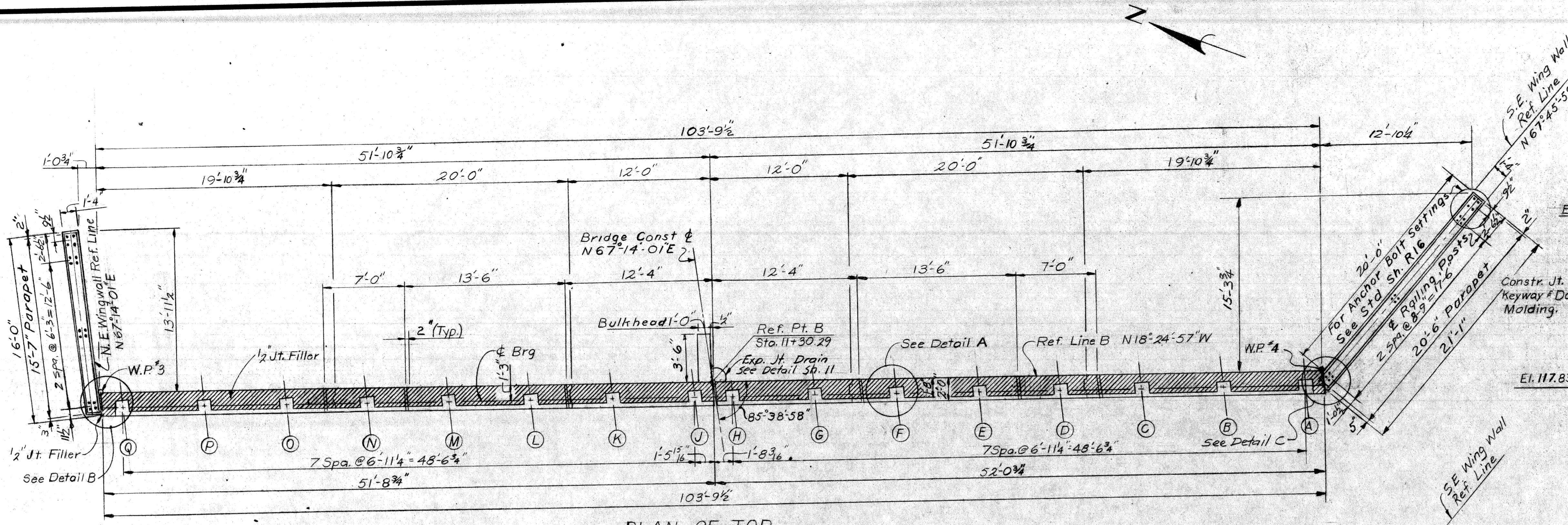
APPROVED: *J. J. Conrad*
STRUCTURAL ENGINEER

JOB No. _____
PW 91001

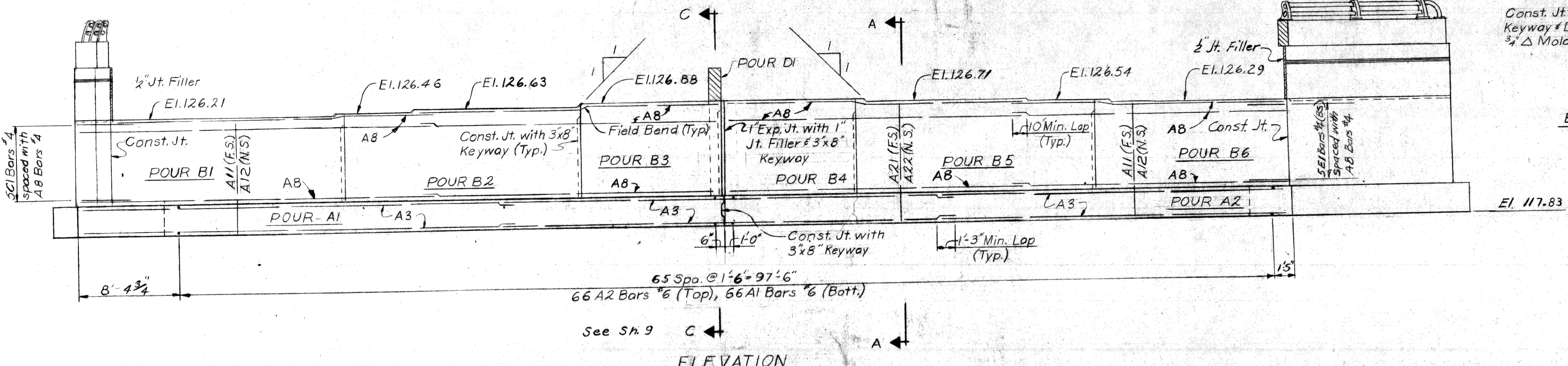
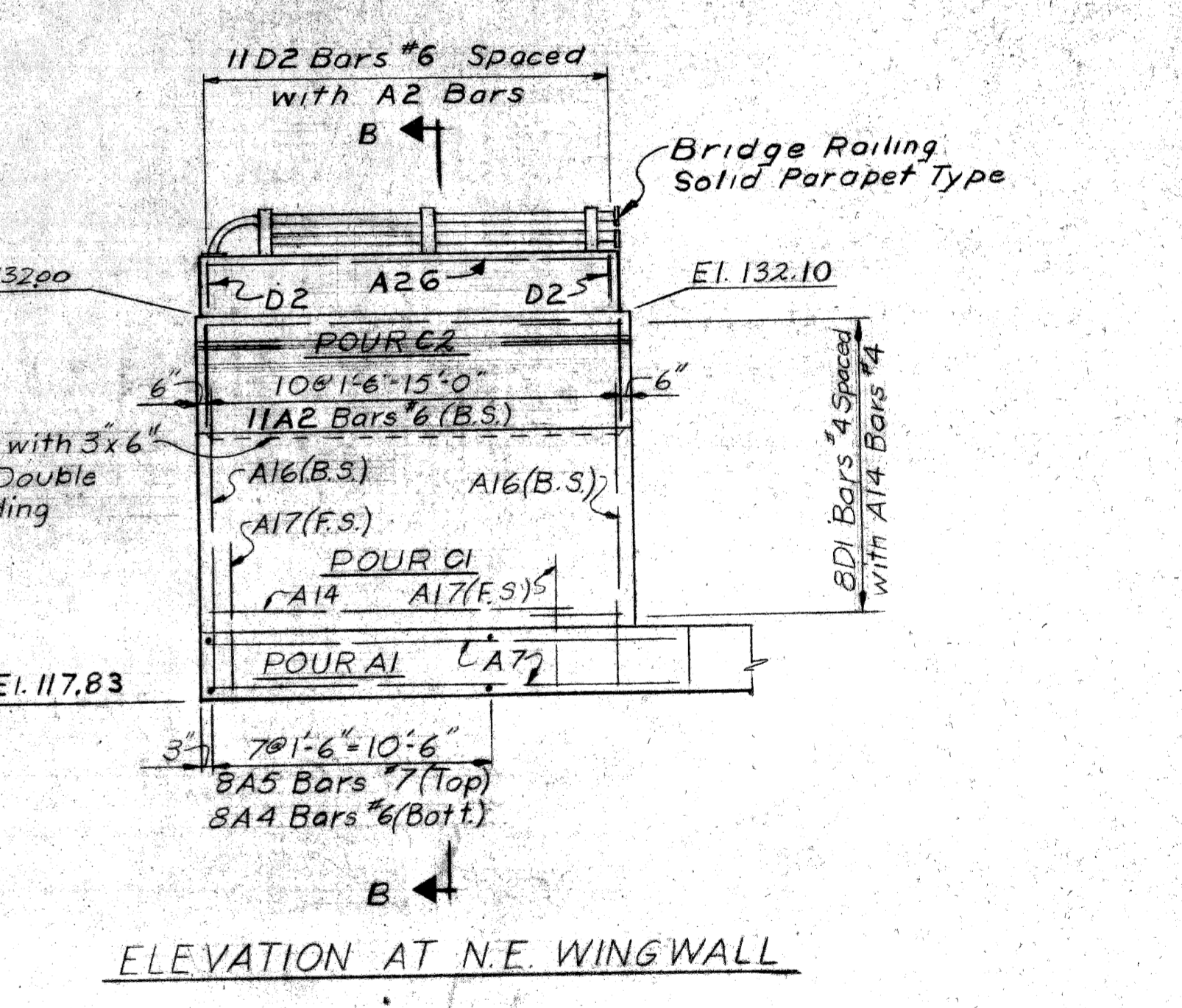
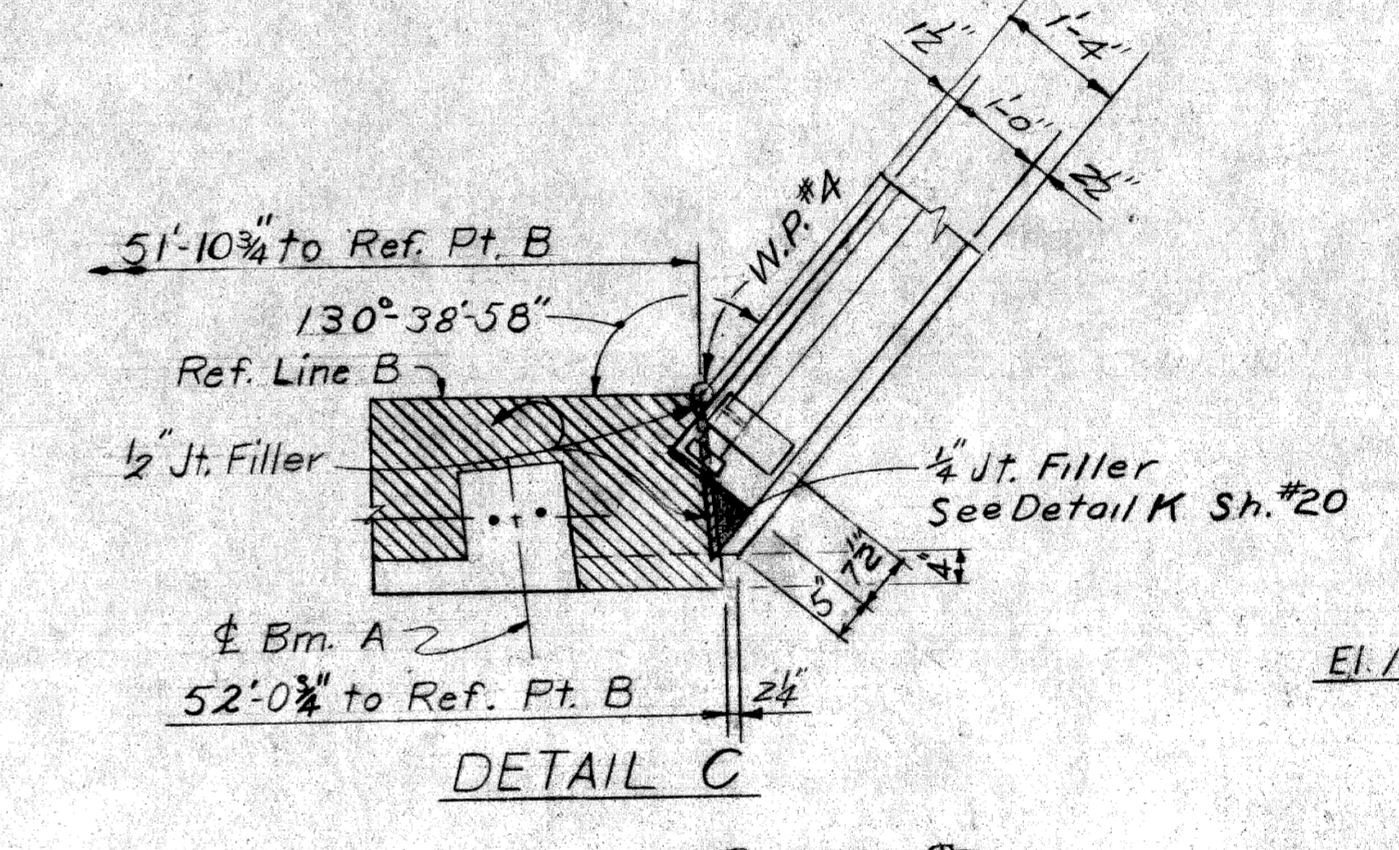
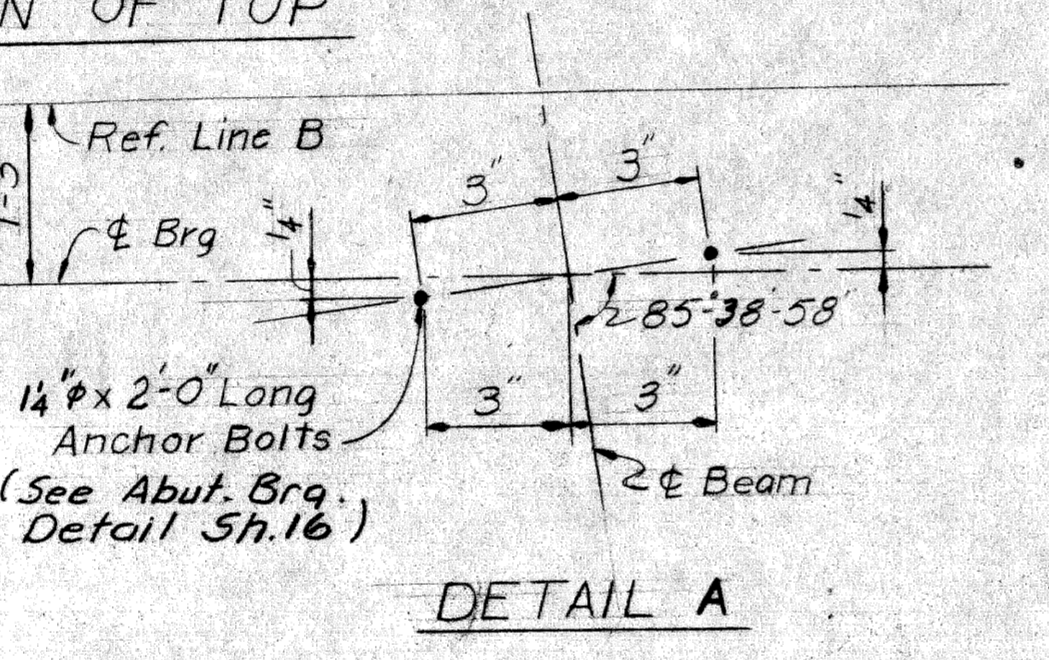
REVISIONS			
NO.	DESCRIPTION	DATE	BY

ROAD BOSS: *Locher* B-28
DRAWN BY: *LD* 1-28
CHECKED BY: *DJR* 8-28
SHEET 9 OF 28

SOI of 82124A



ANCHOR BOLT PROJECTION	Beam	Projection
A, B & Q		5"
C & F		6 1/4"
D, K & P		5 1/4"
E		4 3/4"
G, M & N		5 1/2"
H & J		6"
L		7"
O		6 1/2"



Work this sheet with sheet nos. 8 thru 11

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE. CROSSING THE
 JEFFRIES FREEWAY IN DETROIT

ABUTMENT DETAILS

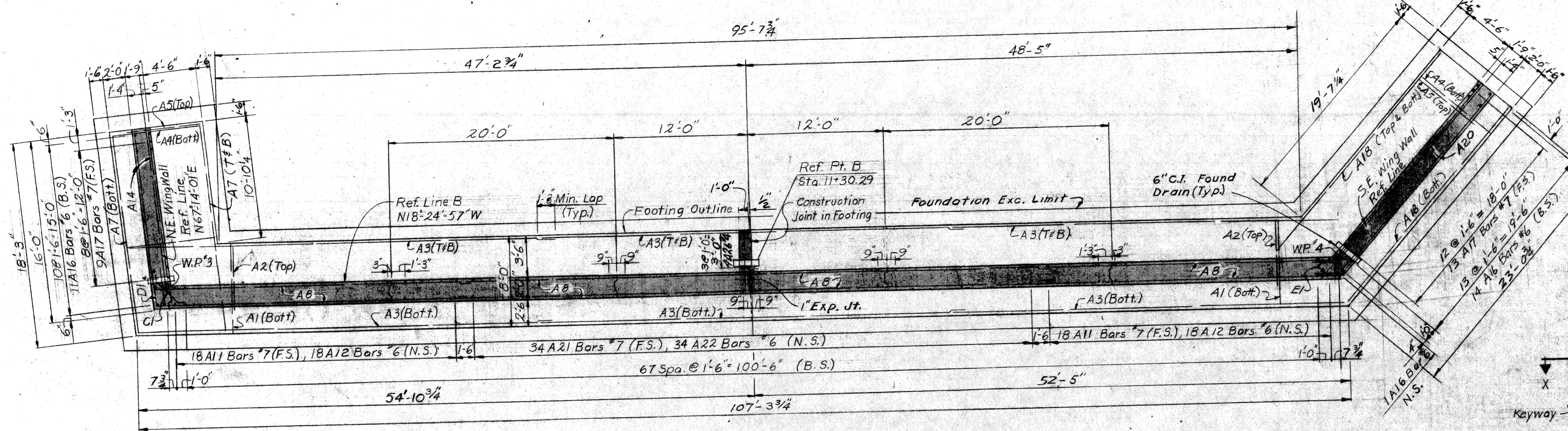
CITY OF DETROIT
 SQUAD BOSS: Lecher 8/68
 DRAWN BY: L. B. 3-68
 CHECKED BY: DJR 8-68
 SHEET 10 OF 28
 SOI of 82124 A

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

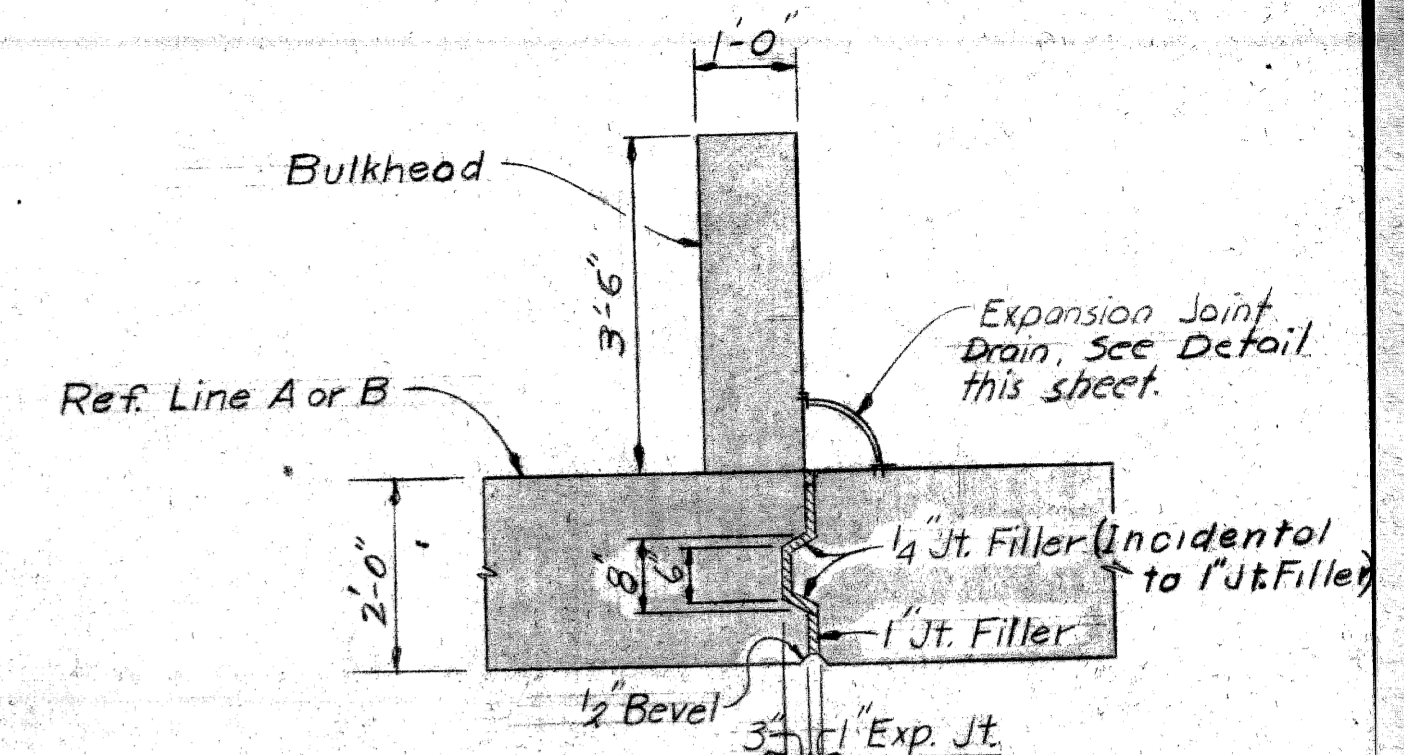
APPROVED: J. J. Conrad
 CIVIL ENGINEER

DATE: JUL 1968
 PW 90011

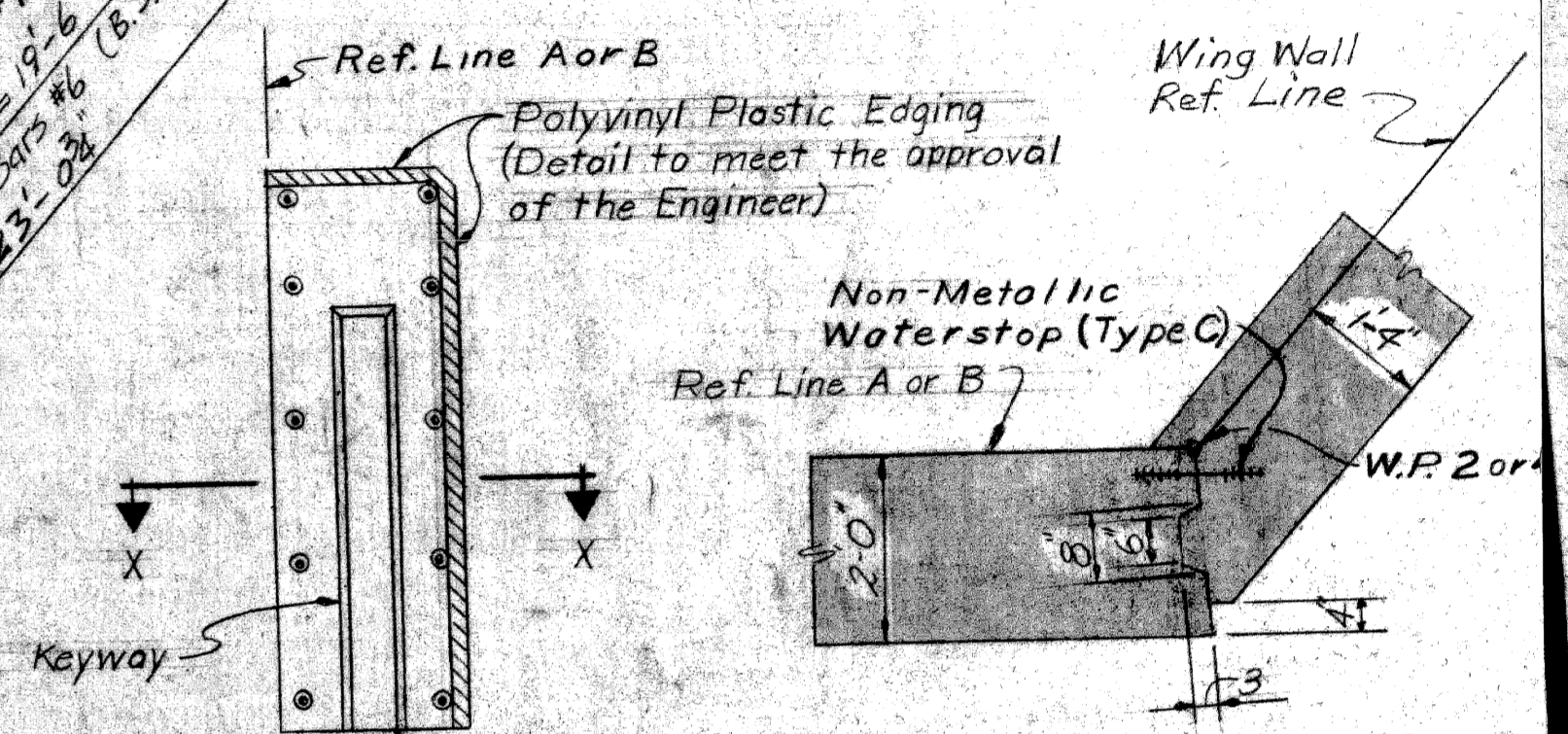
NO.	DESCRIPTION	DATE	BY



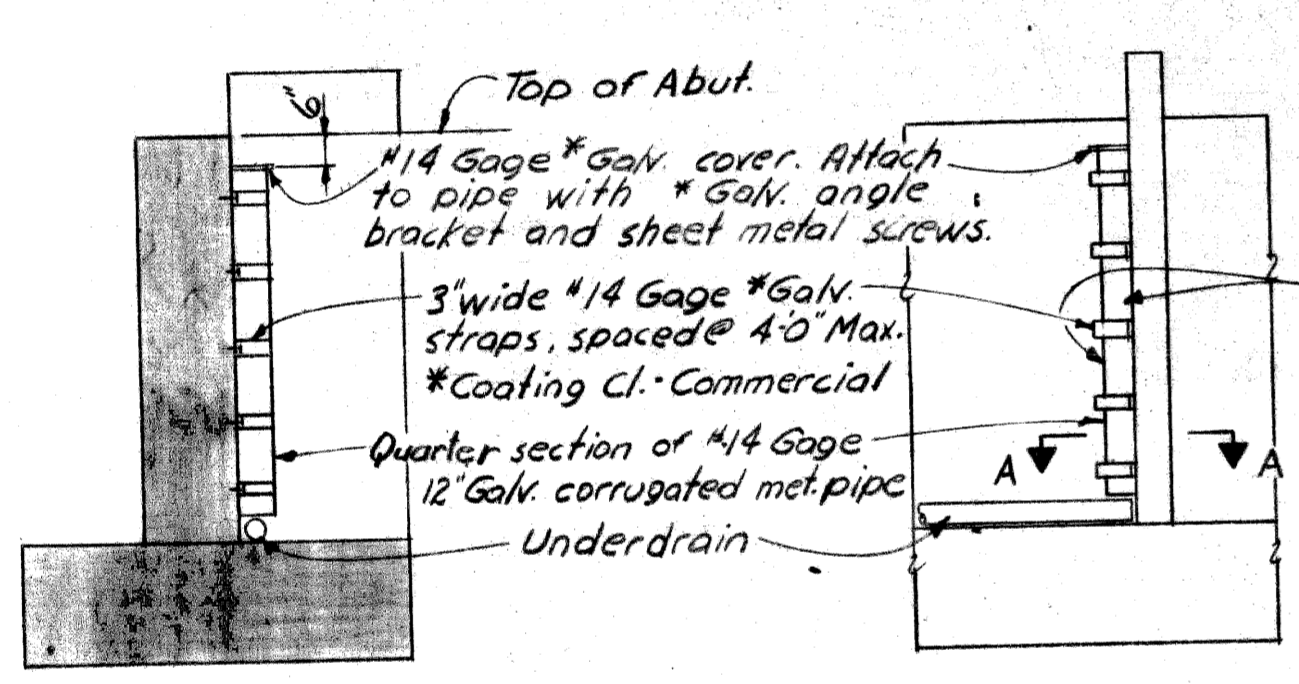
PLAN OF FOOTING



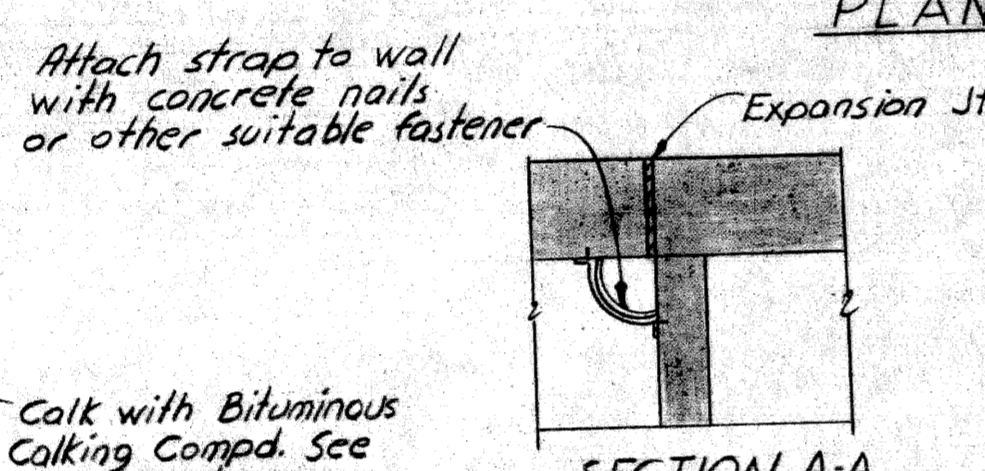
EXPANSION JOINT DETAIL



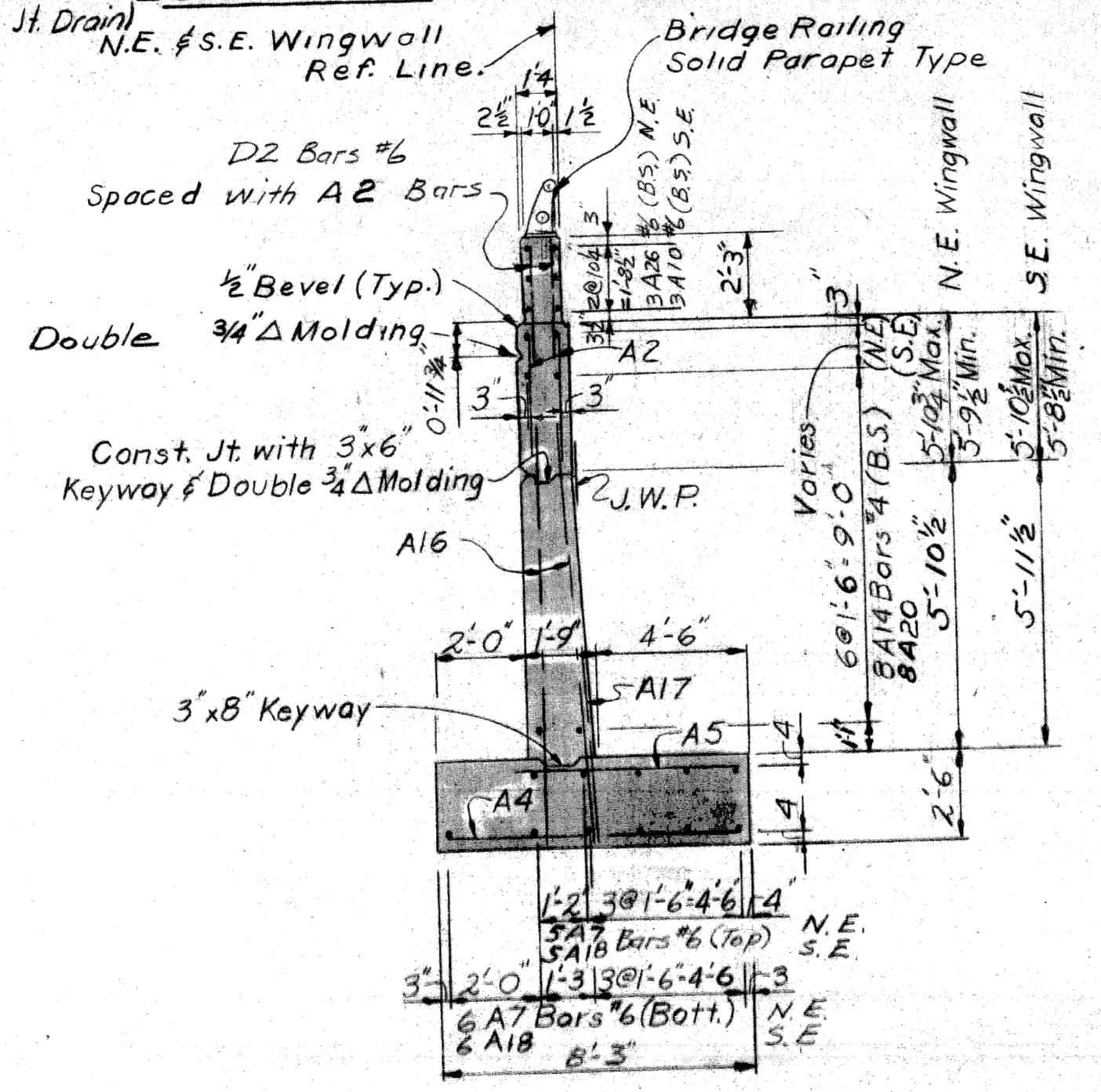
CONST. JT. AT WINGWALL



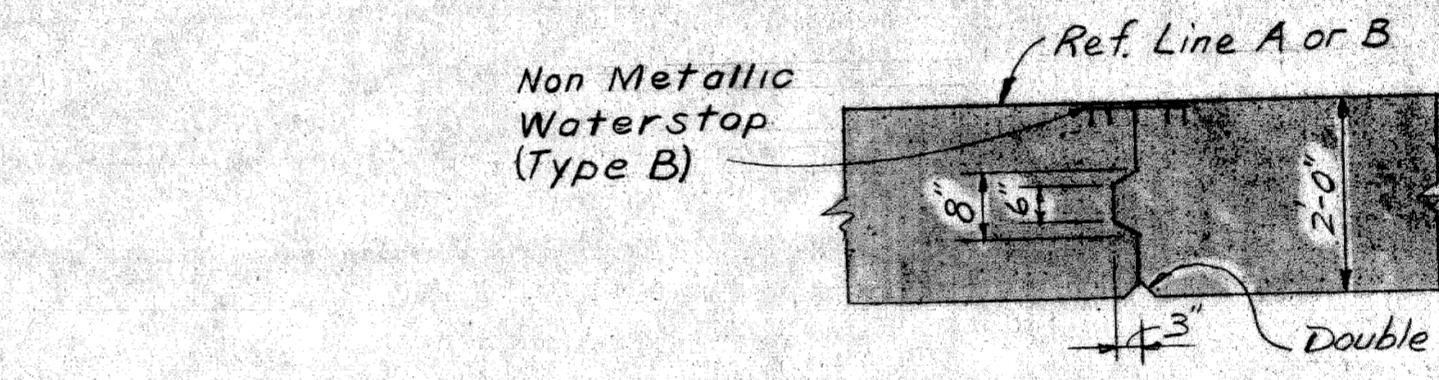
WALL SECTION and ELEVATION



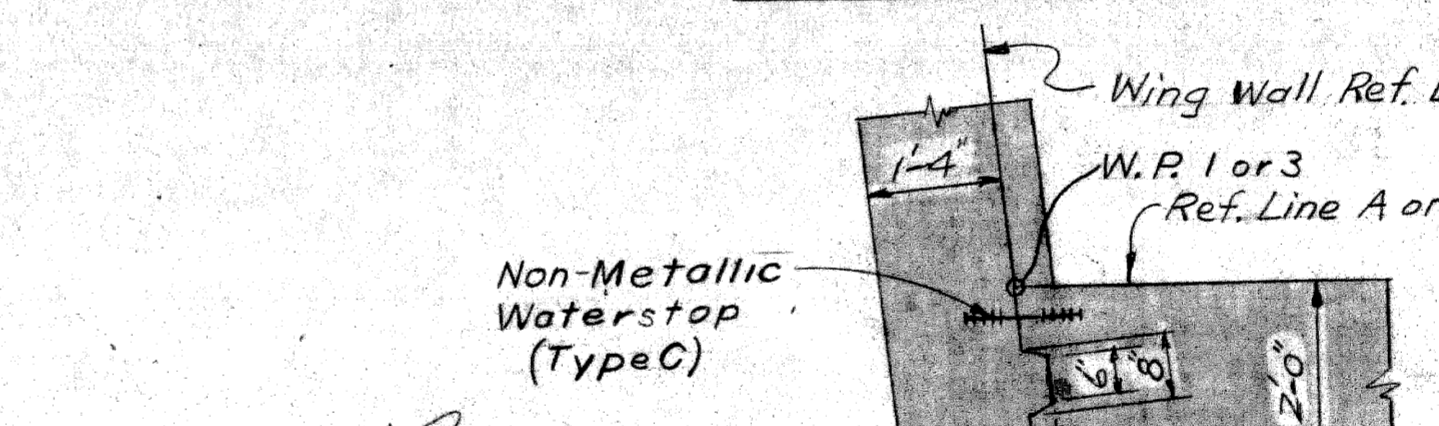
SECTION A-A



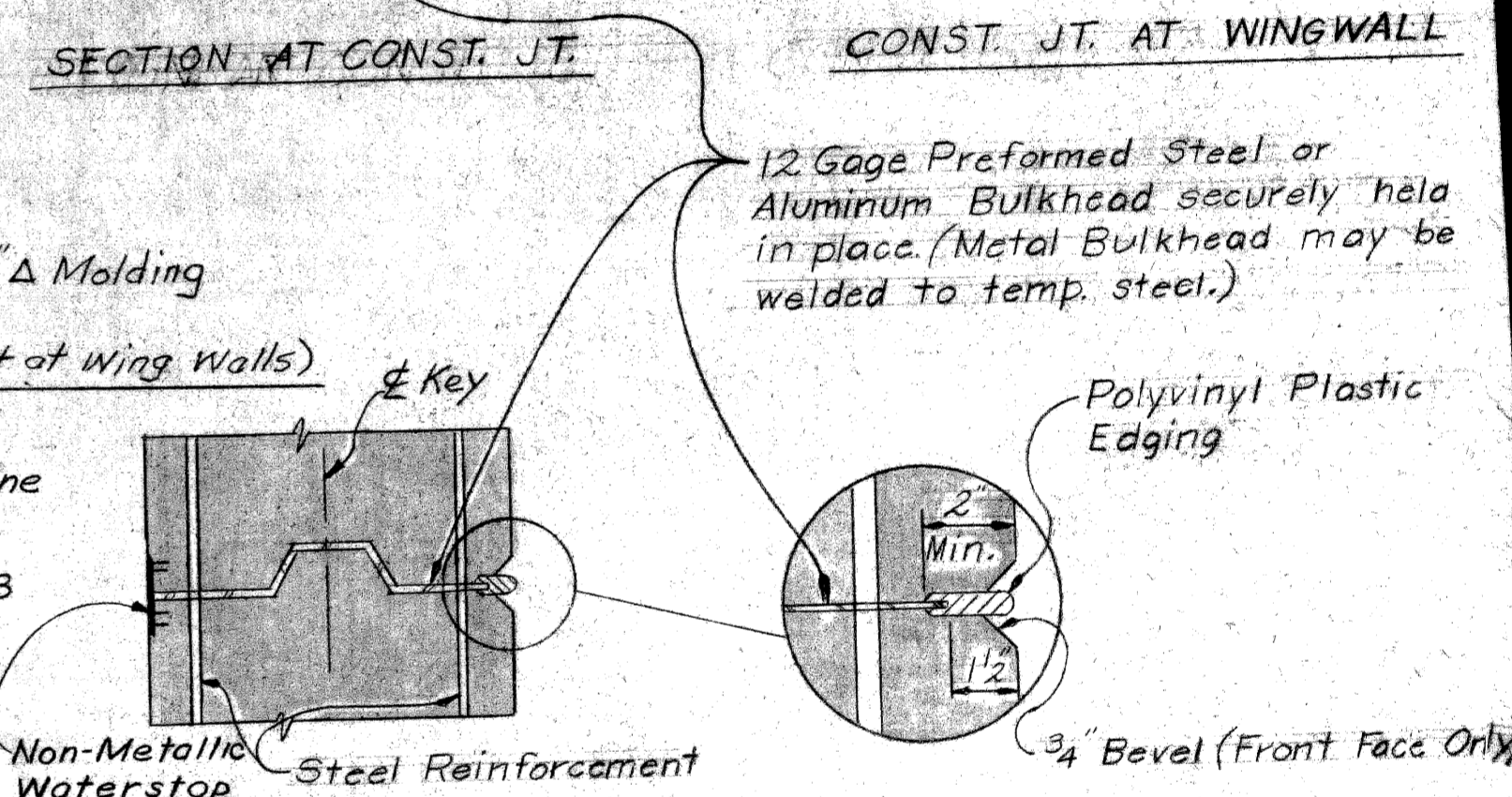
SECTION B-B



CONSTRUCTION JT. (Typ except at wing walls)

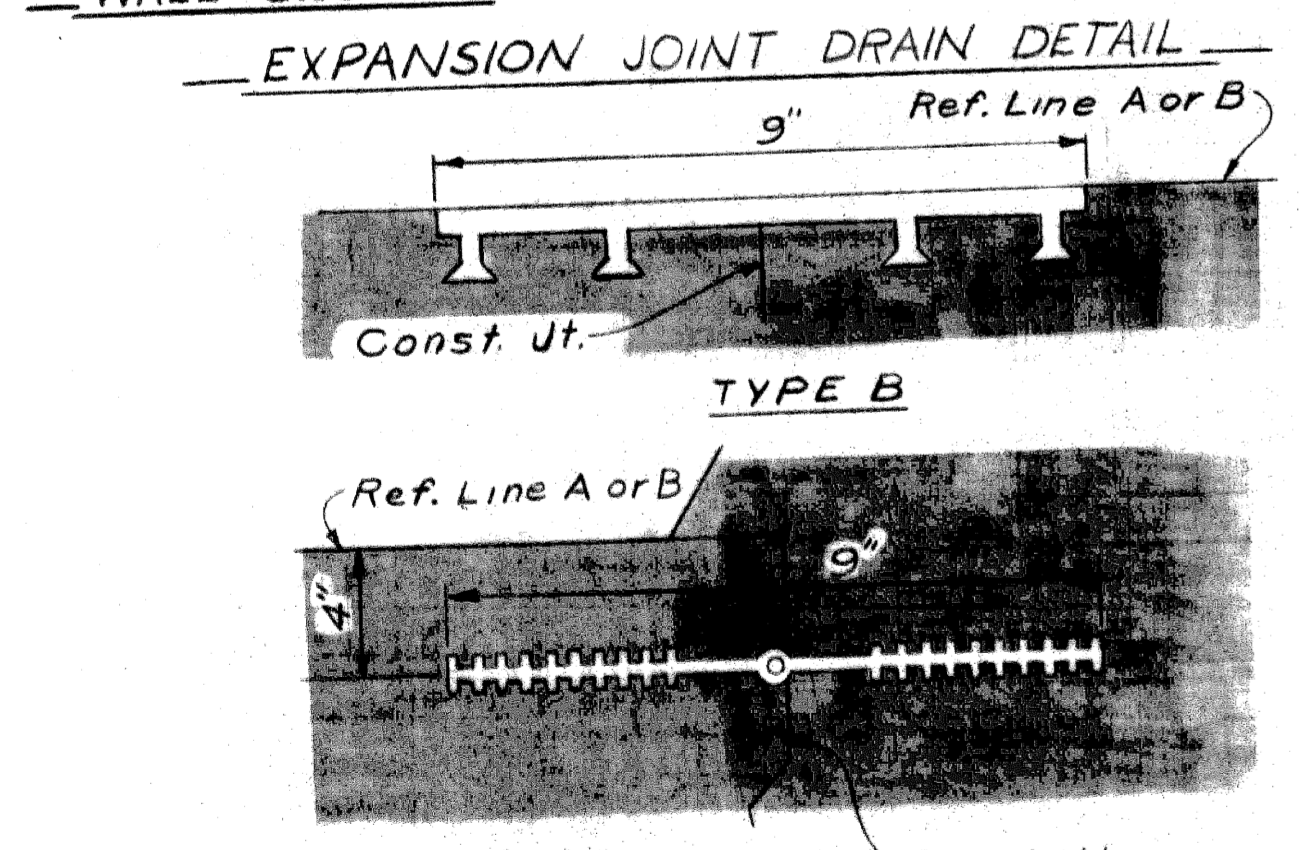


CONSTRUCTION JT. AT WING WALL



METAL BULKHEAD FOR ABUTMENT CONSTRUCTION JOINT

Notes:
 The metal bulkhead may be used as alternate construction joint at contractor's expense.
 Care is to be used in casting concrete around bulkhead to prevent dislocation or misalignment of the bulkhead.
 Cut holes in metal bulkhead for reinforcing steel.



NON METALLIC WATERSTOP DETAILS

NOTE: Stop all keyways & non-metallic waterstops 1\"/>

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPANSION

Work this sheet with sheet no. 8 thru 10
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

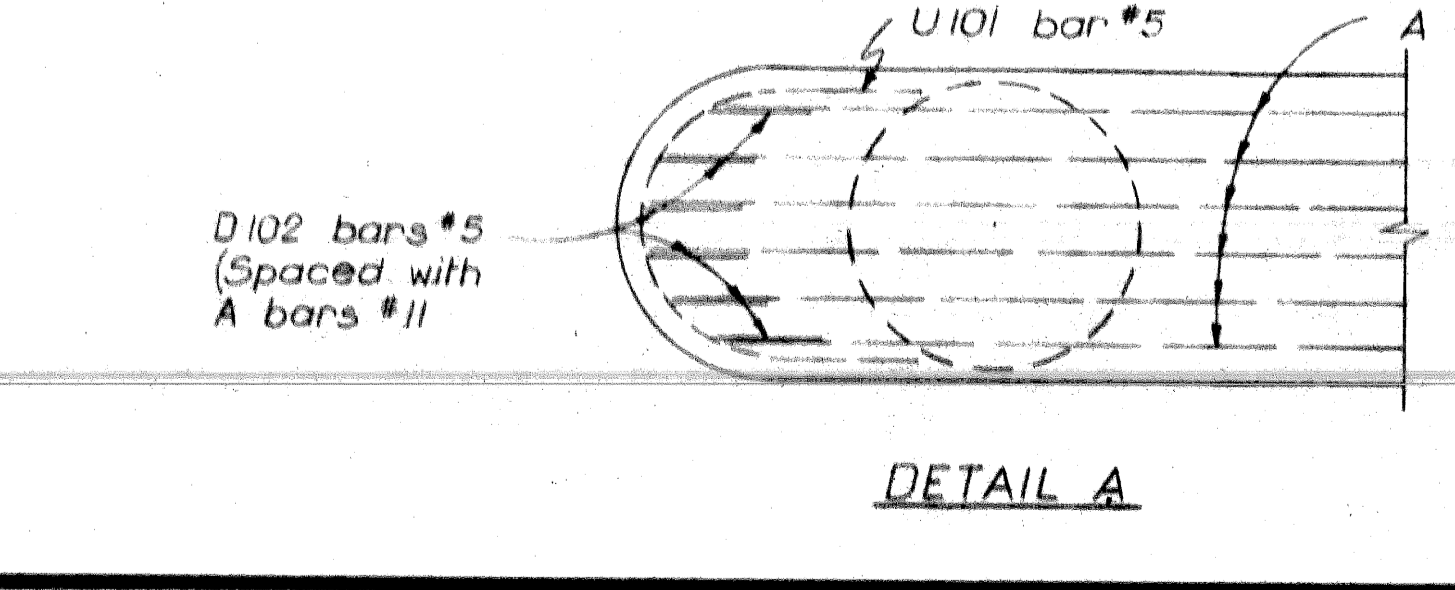
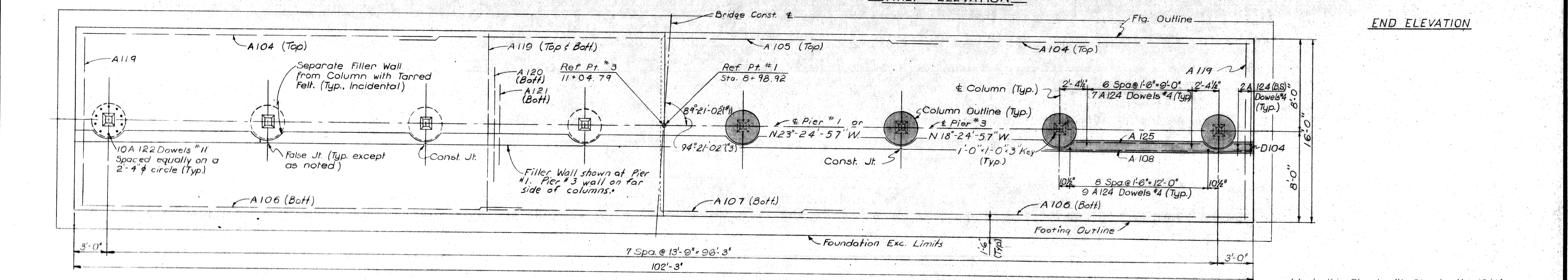
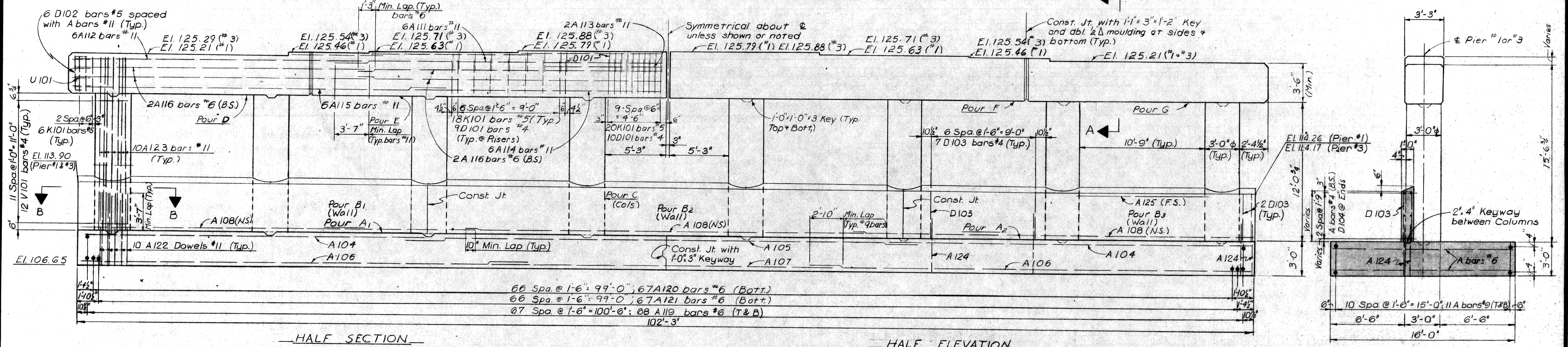
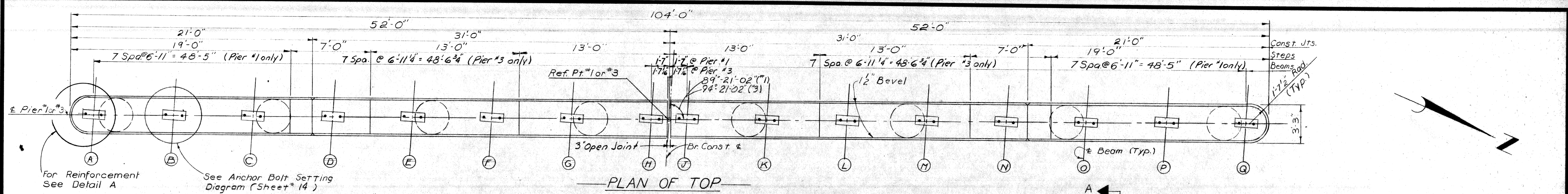
WARREN AVE. CROSSING THE
 JEFFRIES FREEWAY IN DETROIT

ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	DATE

SOI of 82124 A



Work this Sheet with Sheets No. 13 & 14

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE CROSSING THE JEFFRIES FREEWAY IN DETROIT

PIER No. 1 & 3 DETAILS

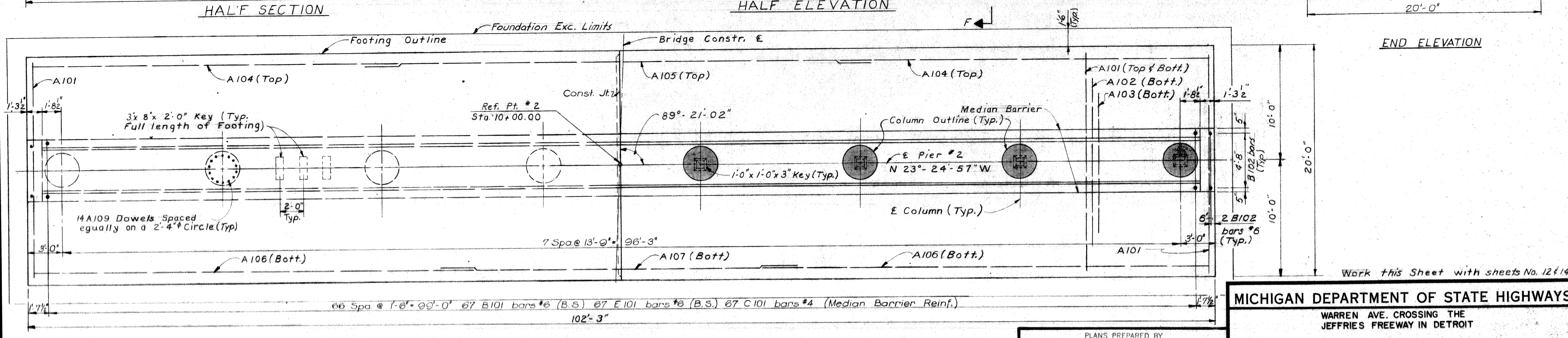
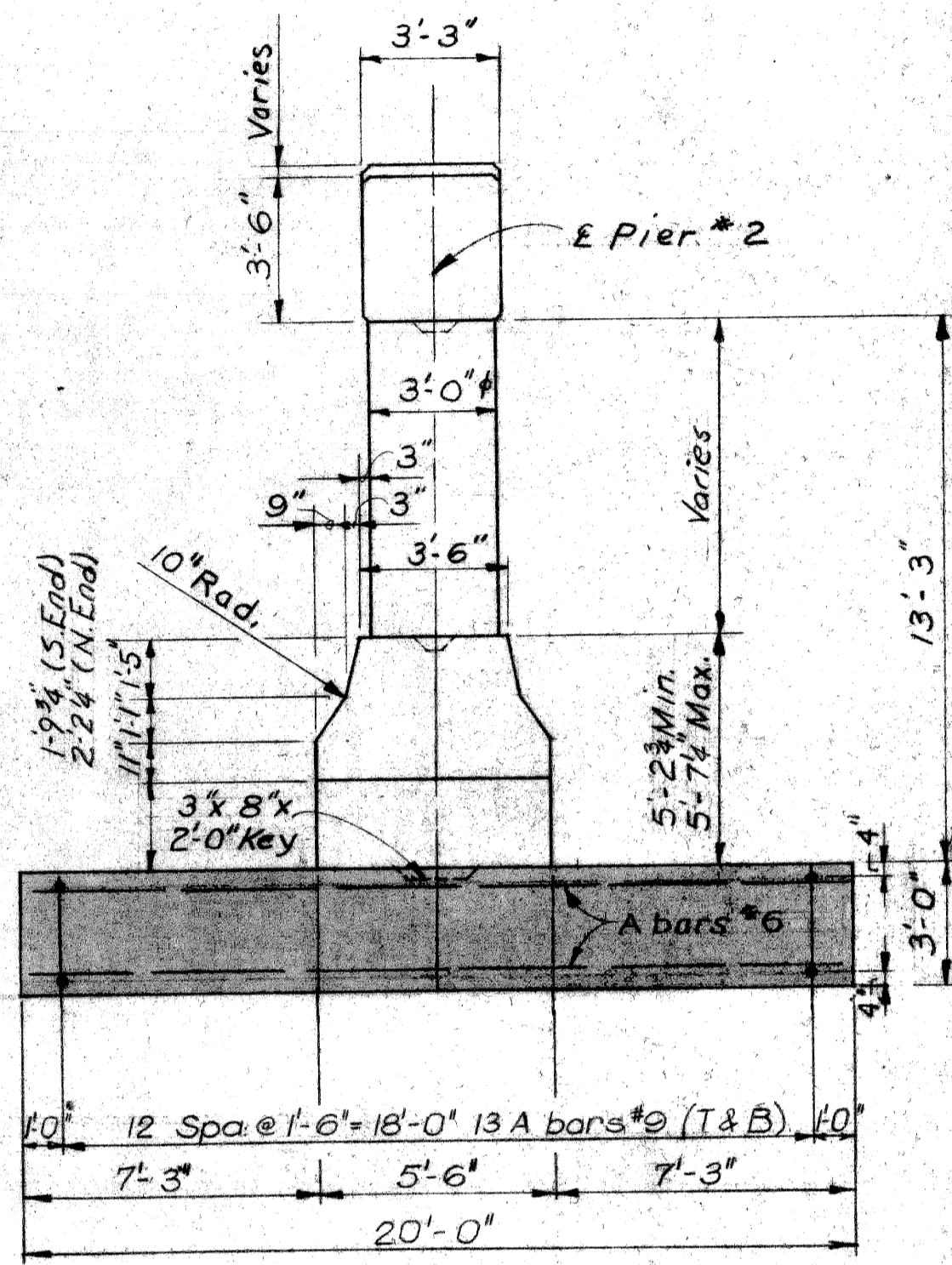
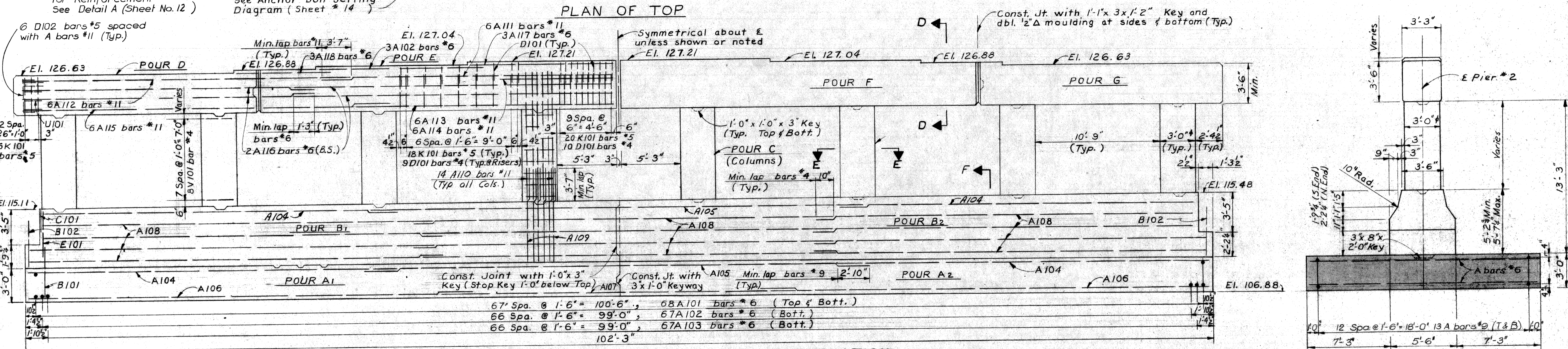
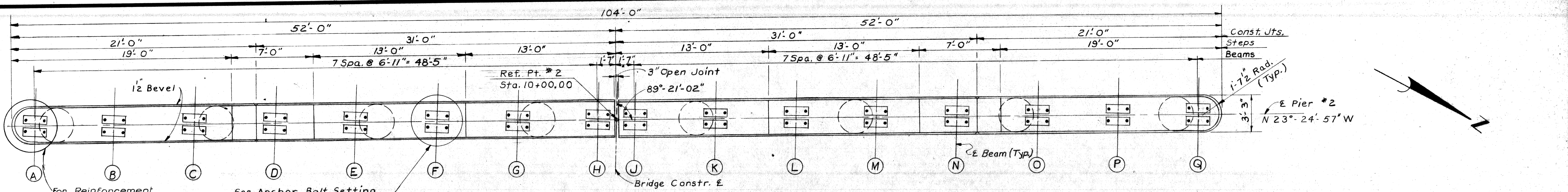
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Cant*
 STRUCTURAL ENGINEER

JOB No. PW 990(11)

NO.	REVISIONS	DATE	BY

DRAWN BY: G. Molnar 6-10-68
 TRACED BY: A. H. 7-68
 CHECKED BY: D. J. R. 8-68
 SHEET 12 OF 28
SO1 of 82124 A



MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE. CROSSING THE
 JEFFRIES FREEWAY IN DETROIT

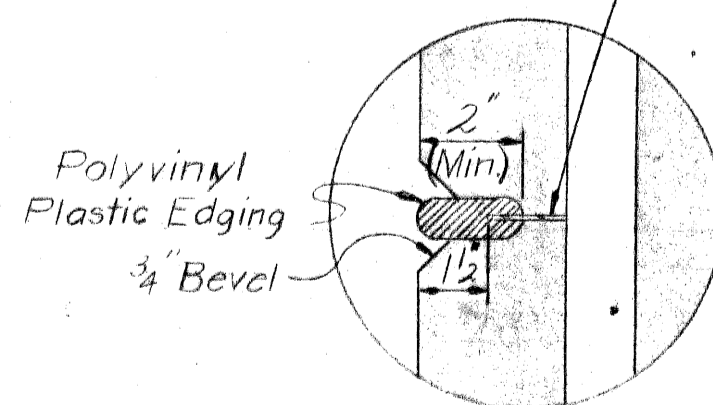
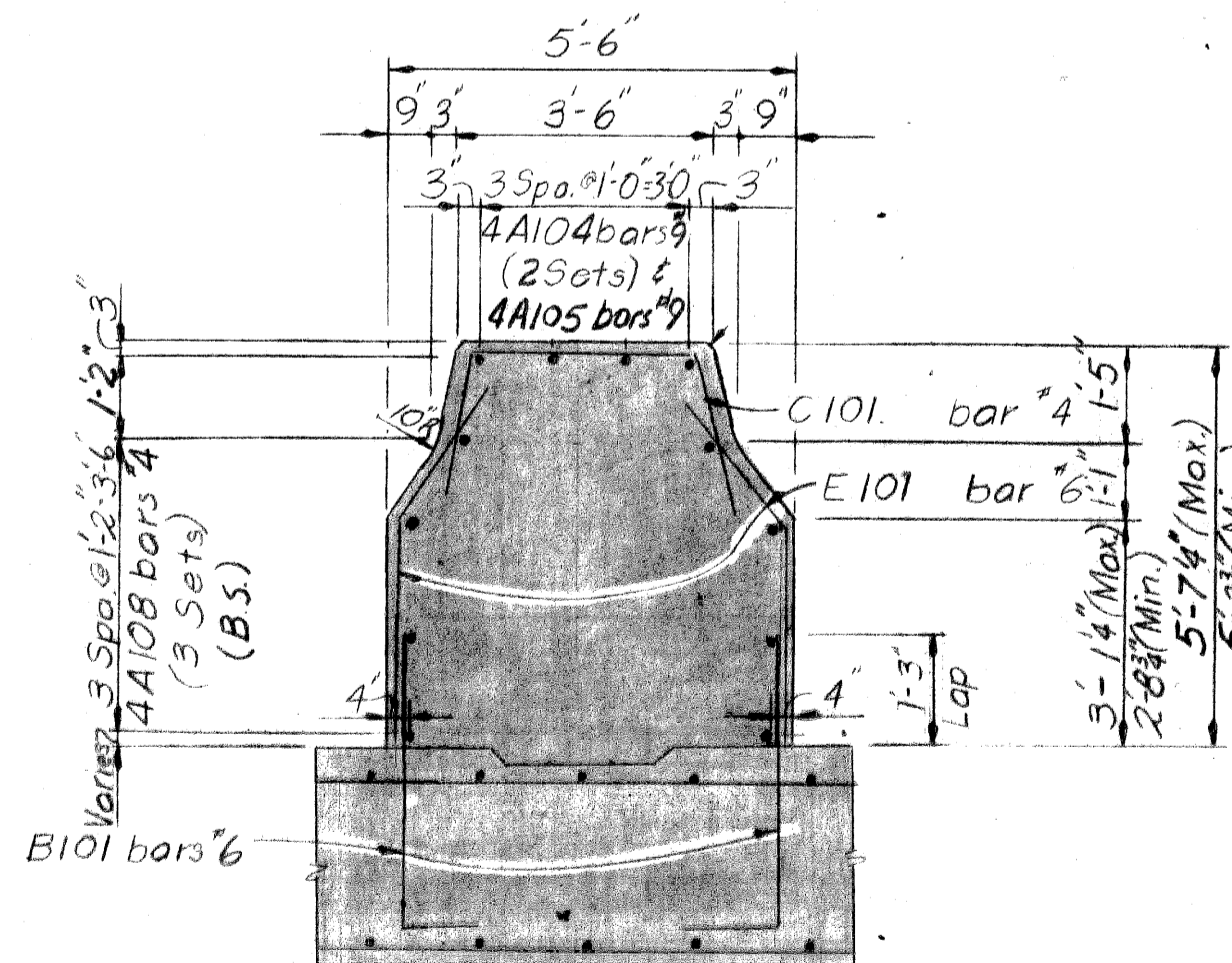
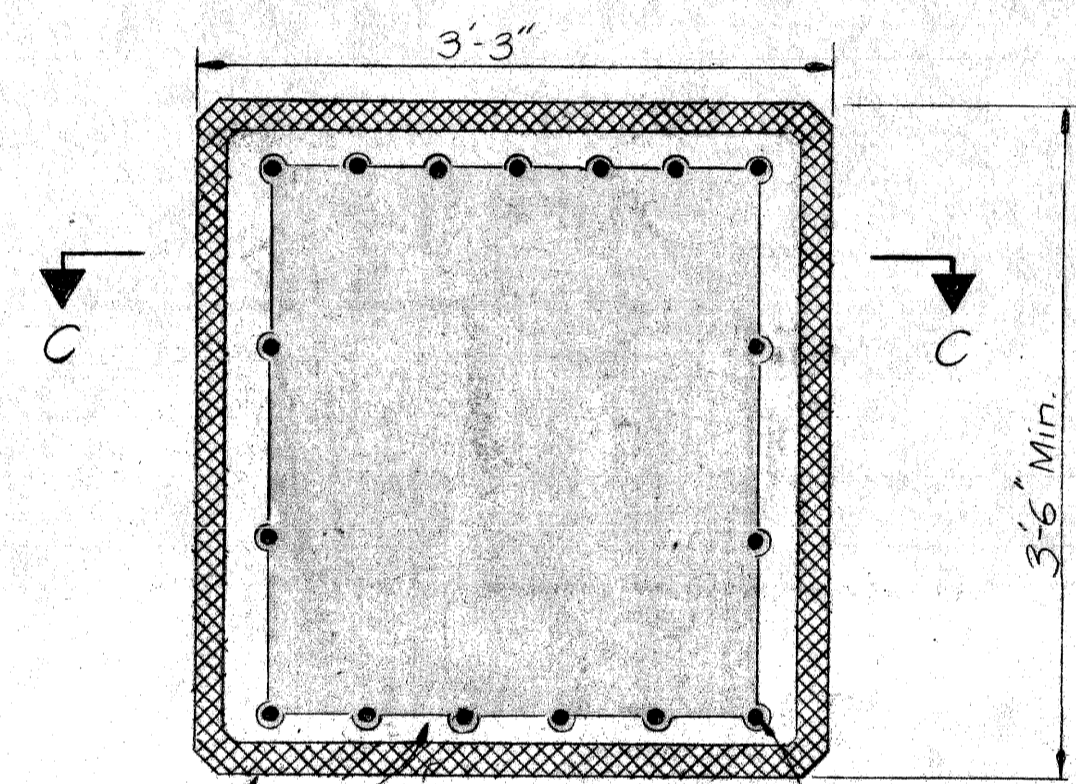
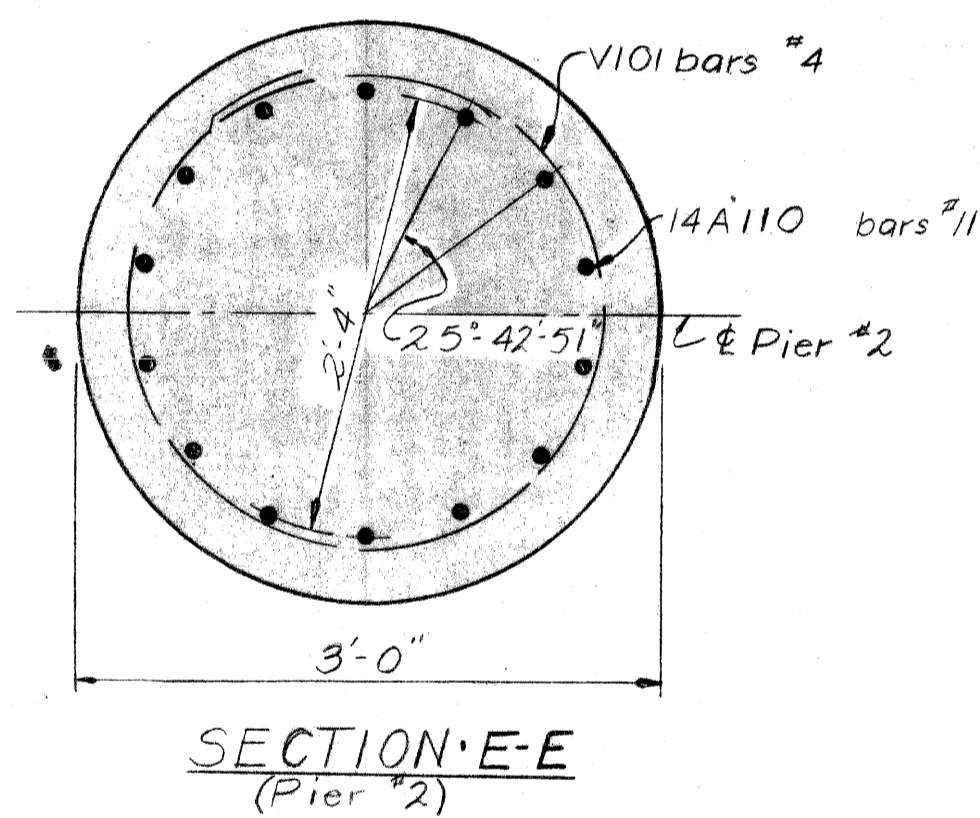
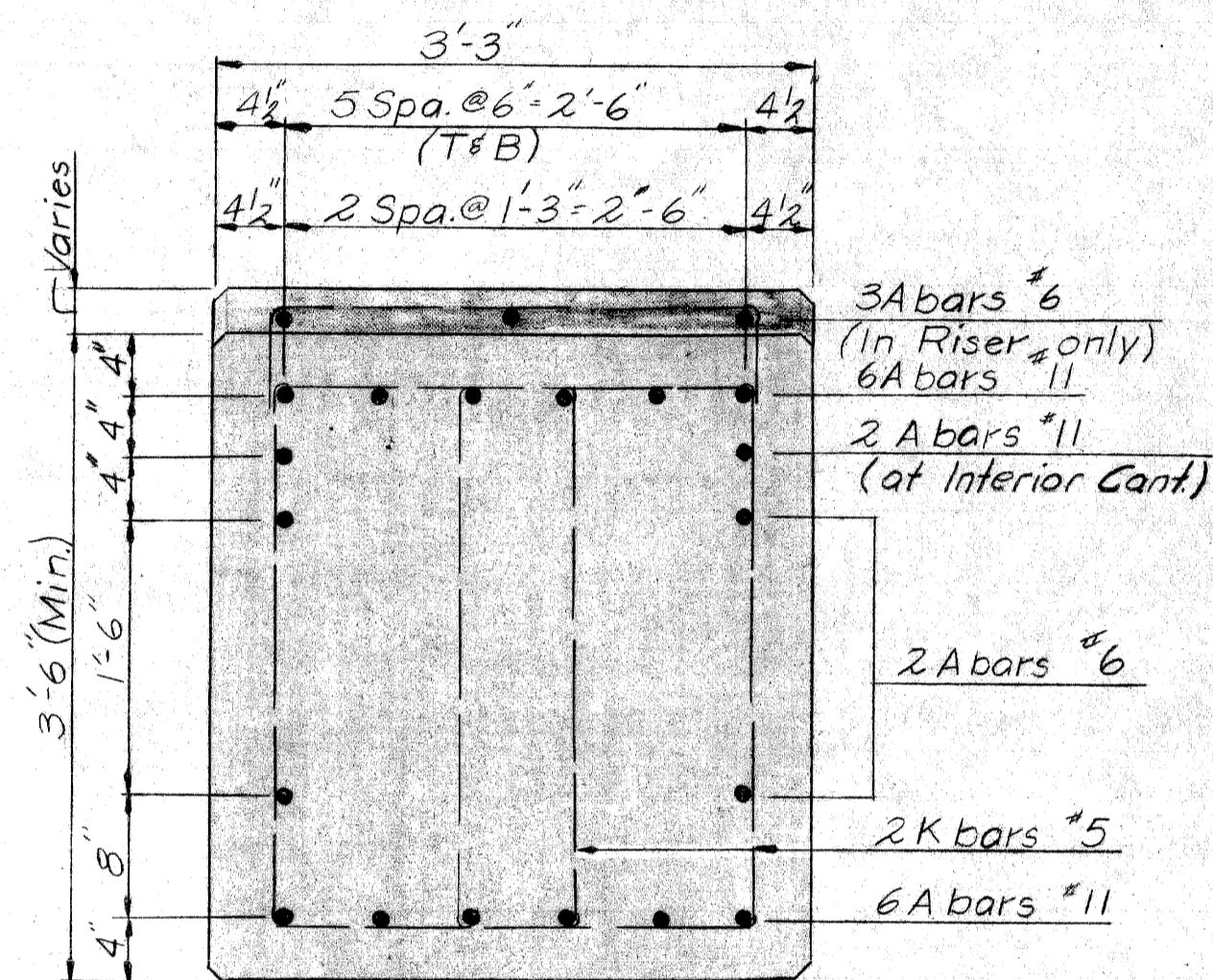
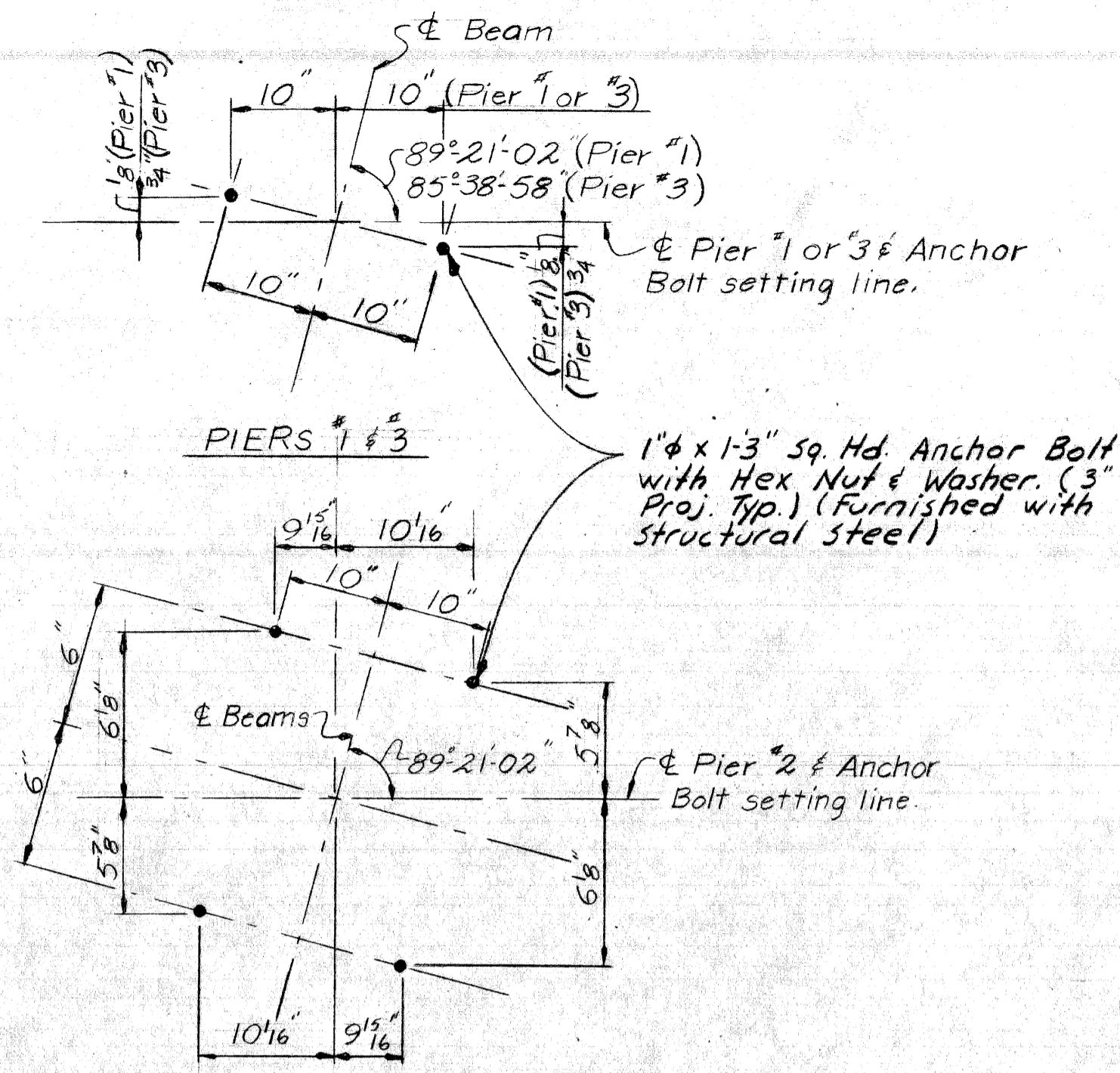
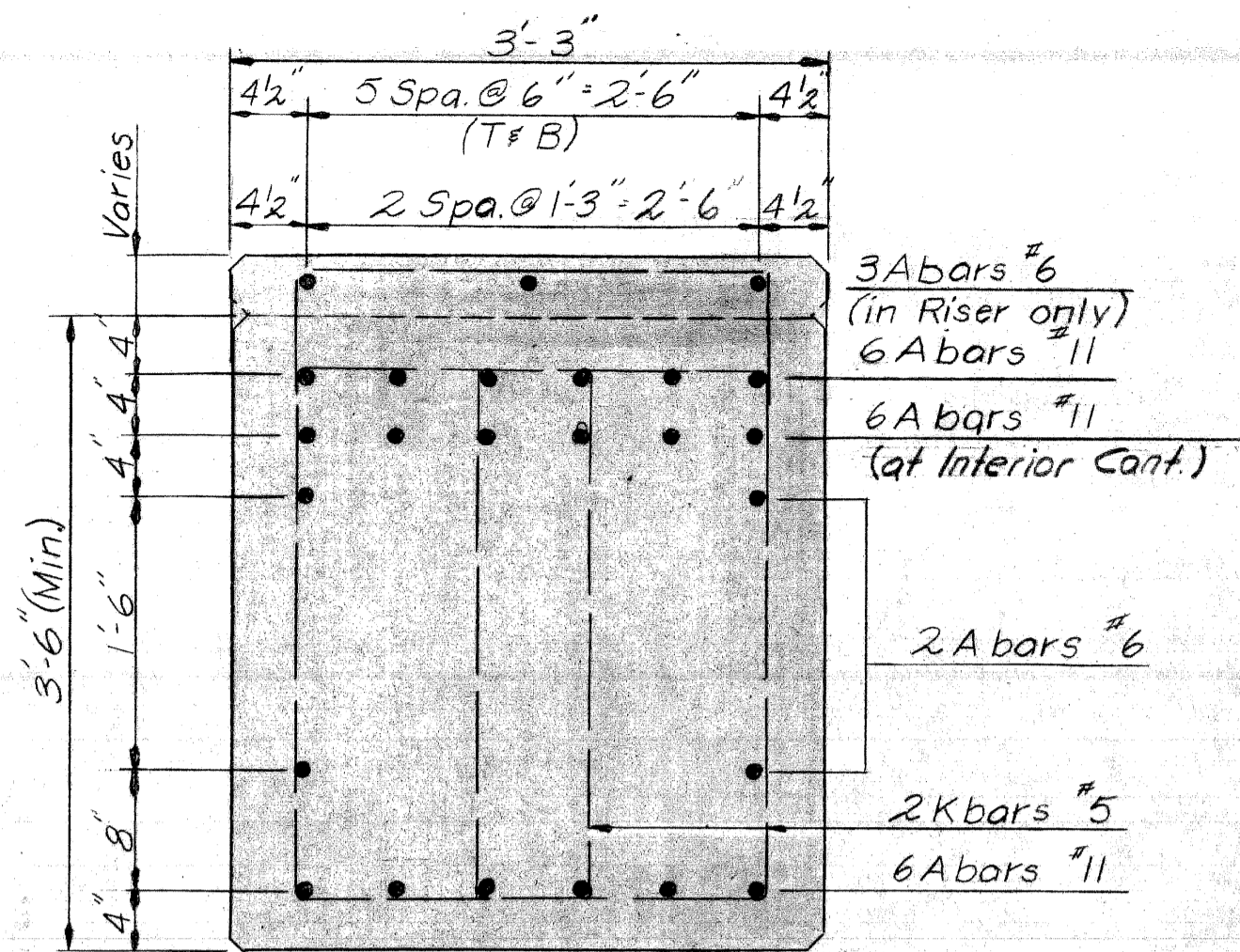
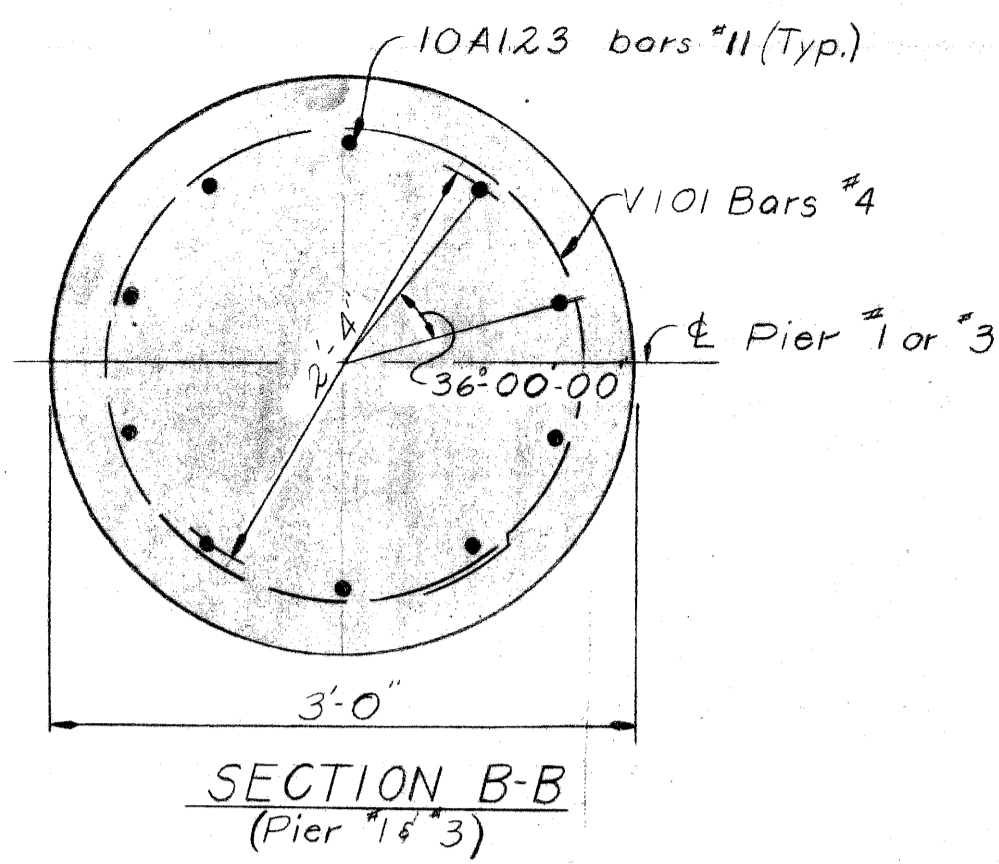
PIER No. 2 DETAILS

NO.	DESCRIPTION	DATE	BY

APPROVED: *H. Conrad*
 STRUCTURAL ENGINEER

JOB No. PW 59(11)

SOI of 82124 A



DETAIL-A
PARTIAL METAL BULKHEAD FOR PIER CAP CONSTRUCTION JOINT

Polyvinyl Plastic Edging
(Detail to meet approval
of the engineer)

Steel or Aluminum Strip (16 gage to
10 gage) Securely held in place. (No
tack welding to reinforcing steel.)

Steel Reinforcement
See Section A-A or
D-D for Details.

Notes:
Partial Metal Bulkhead may be used as
alternate construction joint at
Contractor's expense.
Care is to be used in casting concrete
around bulkhead to prevent dislocation
or misalignment of the bulkhead.
Notch Metal Strip to fit around reinforcing
Steel.

CONCRETE QUANTITIES

Pour	Location	A(6A)			A(6AA)		
		Pier #1	Pier #2	Pier #3	Pier #1	Pier #2	Pier #3
A ₁	Footing	90.9	113.6	90.9			
A ₂	Footing	90.9	113.6	90.9			
B ₁	Median or Wall				4.6	48.4	4.6
B ₂	Median or Wall				6.5	50.4	6.5
B ₃	Median or Wall				4.9		4.8
C	Columns				25.3	16.4	25.3
D	Pier Cap				8.8	8.8	9.0
E	Pier Cap				14.7	14.7	15.0
F	Pier Cap				14.7	14.7	15.0
G	Pier Cap				8.8	8.8	8.8
Total (Cu. Yds.)		181.8	127.2	181.8	88.3	162.2	89.0
Total Gr. A (6A) Concrete Sub-structure =		490.8 Cu. Yds.					
Total Gr. A (6AA) Concrete Sub-structure =		339.5 Cu. Yds.					

MISCELLANEOUS QUANTITIES

ITEM	Pier #1	Pier #2	Pier #3	Total	Unit
Unclassified Excavation	570	360	570	1500	Cu. Yds.
Low temperature Prot. Substructure Concrete	270	389	271	930	Cu. Yds.
Protective Sealant Coating		338		338	Sq. Ft.

GENERAL NOTES

B.S., N.S., F.S. denote Both Sides, Near Side and Far Side respectively.
For bevel and molding details see Std. SH.RIG
Anchor Bolts shall be accurately set to a template.
Anchor Bolts to be furnished with structural steel.
The Project Engineer shall adjust the spacing of the reinforcing steel as required to permit placing of Anchor Bolts.
The top of Pier #2 shall be given an application of protective sealant coating for concrete prior to placing masonry plates.

Maximum average foundation pressure D.L. only = 2200 p.s.f.
Maximum foundation pressure D.L. and L.L. = 2600 p.s.f.

Work this sheet with sheets No. 12 & 13.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

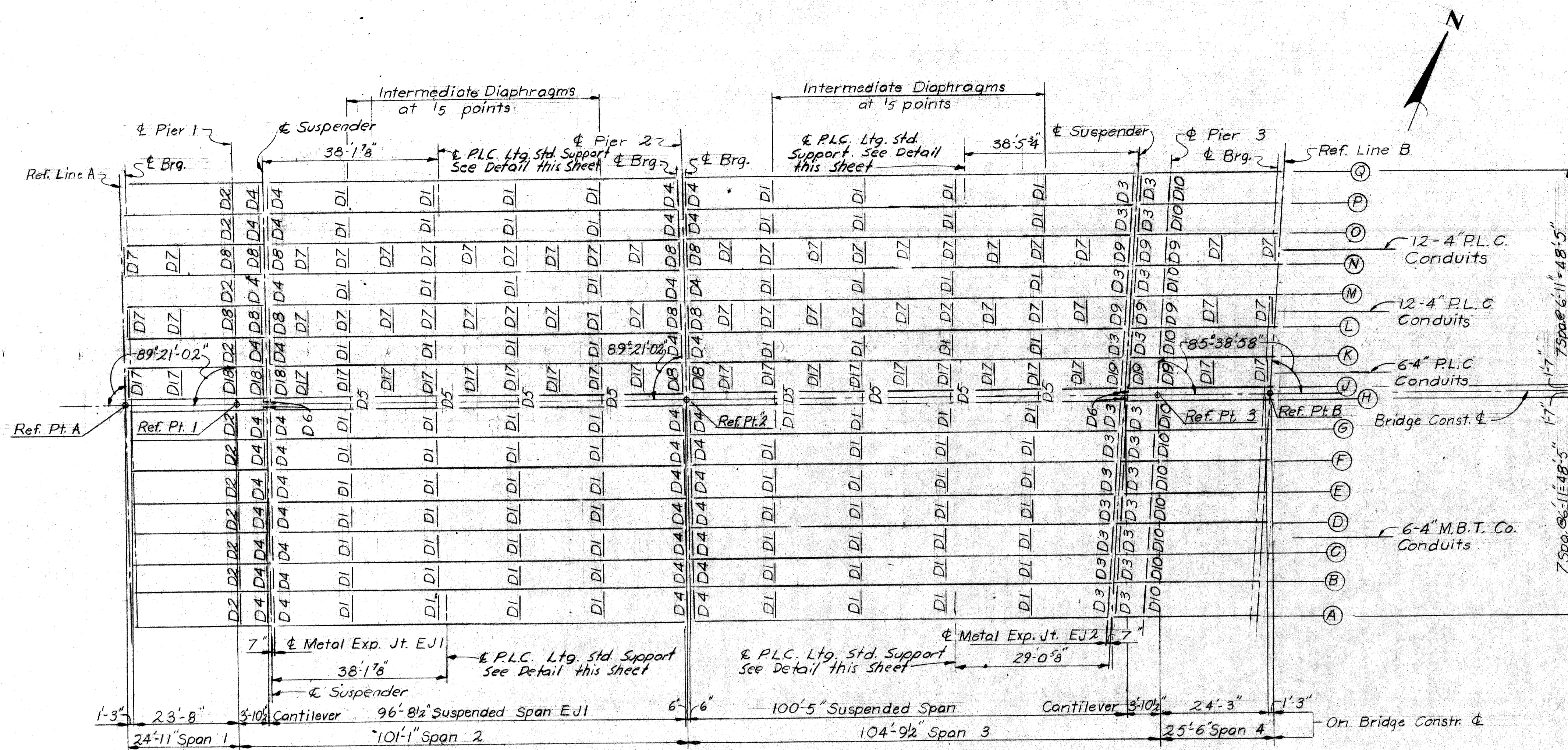
PIER DETAILS

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
APPROVED: *J. J. Conant*
STRUCTURAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOOK	Locker	5-68
DRAWN BY	J.C.	
CHECKED BY	D.J.R.	6-68
SHEET 14 OF 28		

SOI of 82124 A



FRAMING PLAN

GENERAL NOTES

Design: Michigan Department of State Highways Specifications for Design of Highway Bridges - 1958 edition and current AASHTO Standard Specifications for Highway Bridges - HS20-44 Loading.

Fabrication: Michigan Department of State Highways Standard Specifications for Road and Bridge Construction - 1967 edition.

Shop connections shall be welded as shown on the plans.

Field connections shall be bolted with 3/4" high-strength bolts, except as noted.

The girders are to have a camber as shown on the camber diagram. This camber is to be measured with the girder lying on its side. The top and bottom edges of the web plates are to be cut simultaneously to a parabolic camber to minimize distortion. The dead load deflection of the beams alone is shown in the deflection table.

A shop splice will be permitted in flange plates over 50 ft. in length. This splice must be located at a minimum distance of 10 ft. from the center of the plate.

Sole plates 3" or more in thickness may be built up by welding together plates not less than 1/2" in thickness. Edges must be beveled 1/4" and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates.

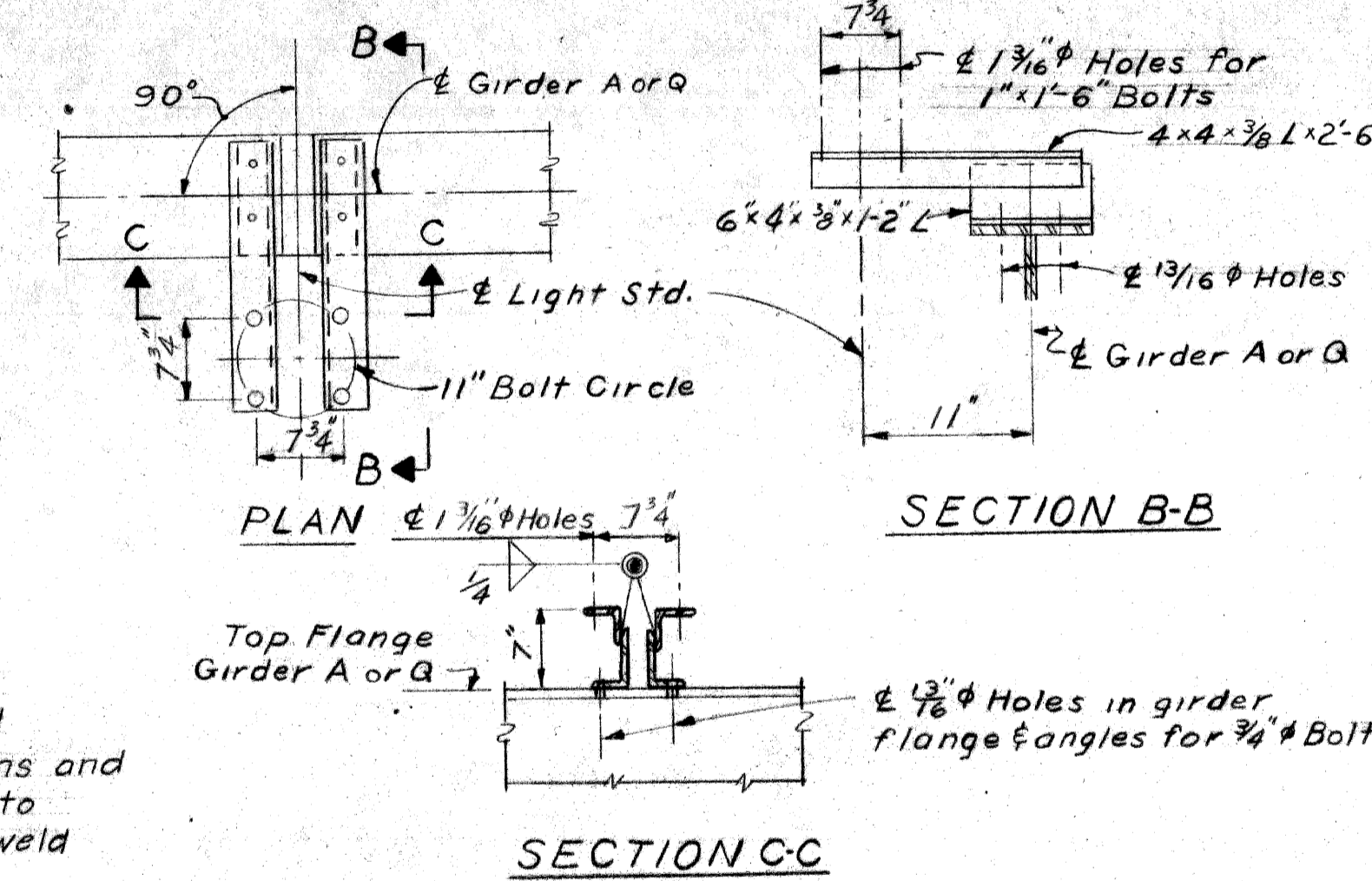
The top surfaces of masonry plates, the bottom surfaces of sole plates, and curved surfaces of rockers and pedestals shall be coated in accordance with the requirements for machine finished surfaces.

Welding on tension flanges of girders will not be permitted unless such welding is shown on the plans or specified. Welding at other locations on the girders, except where shown on plans may be permitted by written authorization providing the welding is to be performed in strict accordance with all specification requirements for structural welding.

Magnetic particle inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random for each ten sections or fractions thereof.

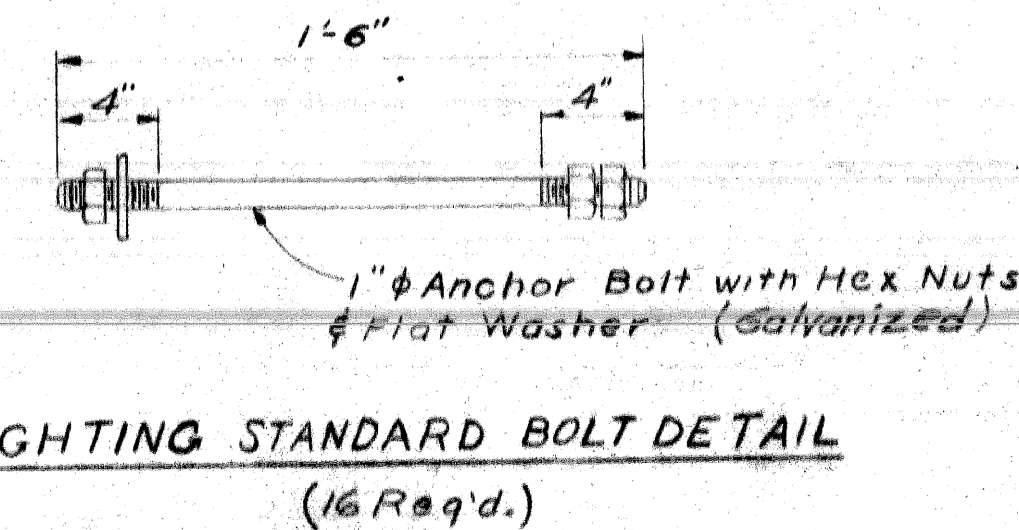
Structural steel shall conform to the requirements of the current specification for structural steel unpainted A.S.T.M. Des. A441 Modified.

Steel for pins may be ASTM A-108 or ASTM A-235 (Class E)



NOTE: For location of Light Standards on Girders A or Q. See Framing Plan, this sheet.

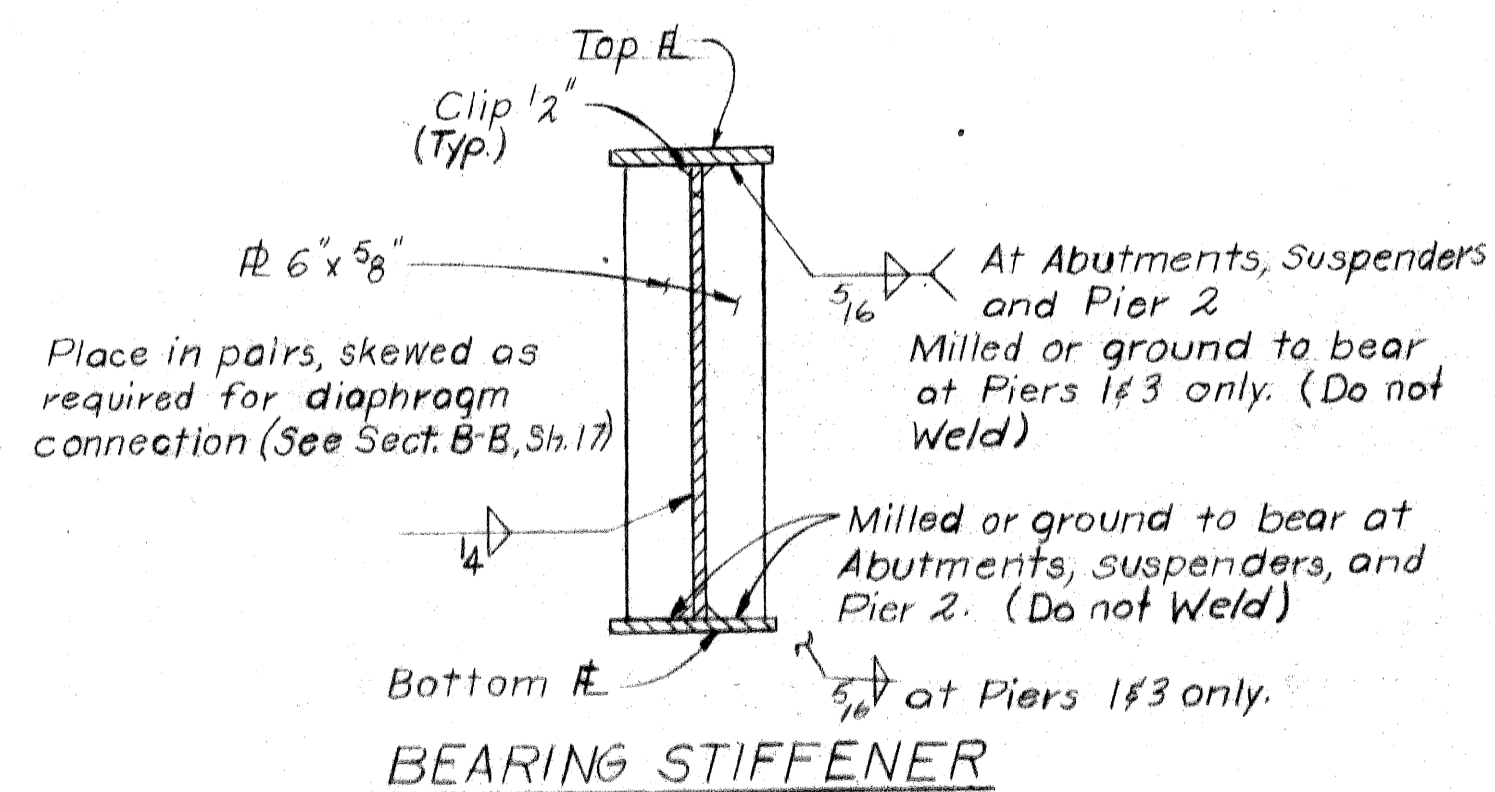
PLC. LIGHTING STANDARD SUPPORT DETAILS



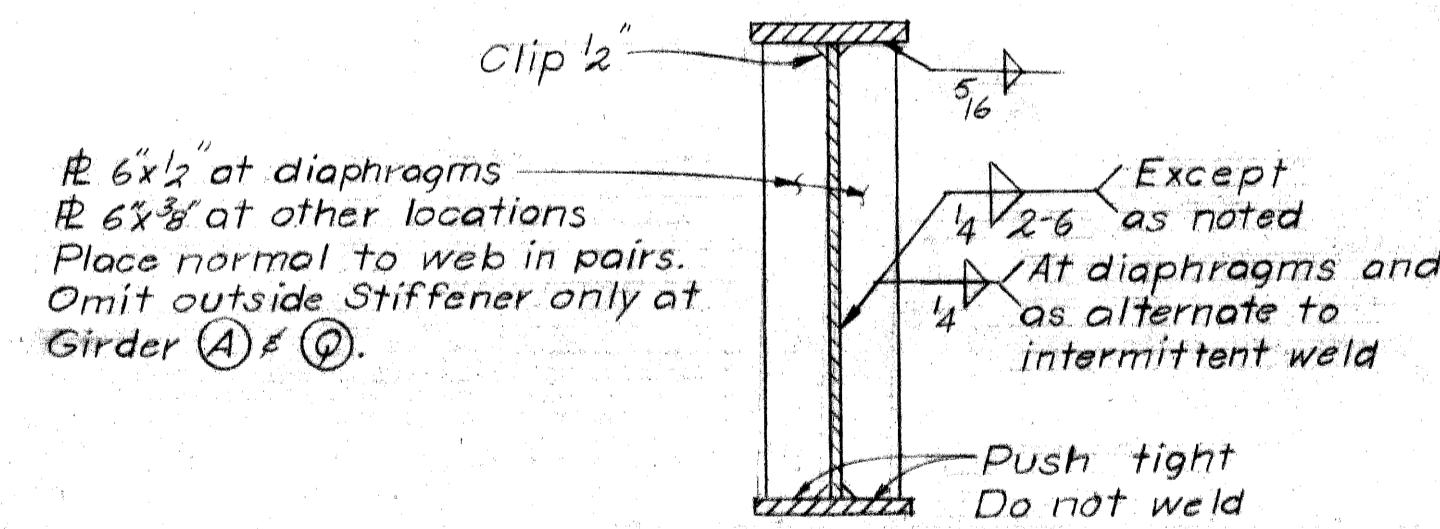
LIGHTING STANDARD BOLT DETAIL (16 Req'd.)

QUANTITIES

Structural Steel-Furnishing and Fabricating*	939,000	Lbs.
Structural Steel-Erection*	939,000	Lbs.
Shear Developers	Lump Sum	
*The quantity "Structural Steel" includes Metal Expansion Joints, P.L.C. ledge angles, and P.L.C. Brackets and Consists of		
Steel	938,120	Lbs.
Lead	880	Lbs.
Total	939,000	Lbs.



BEARING STIFFENER



STIFFENER DETAILS

INTERMEDIATE STIFFENER

Work this Sheet with Sheet 16 of 17.

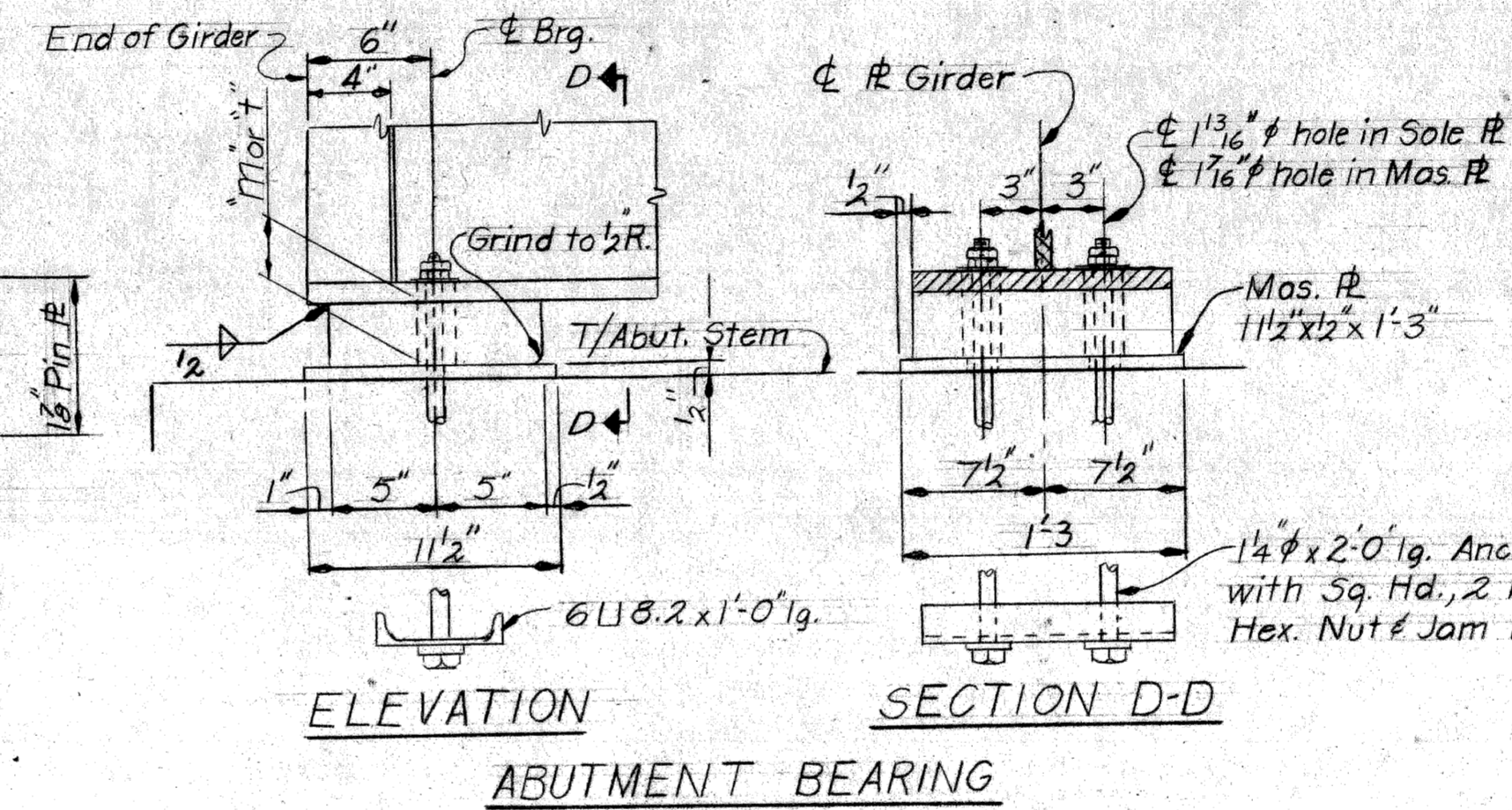
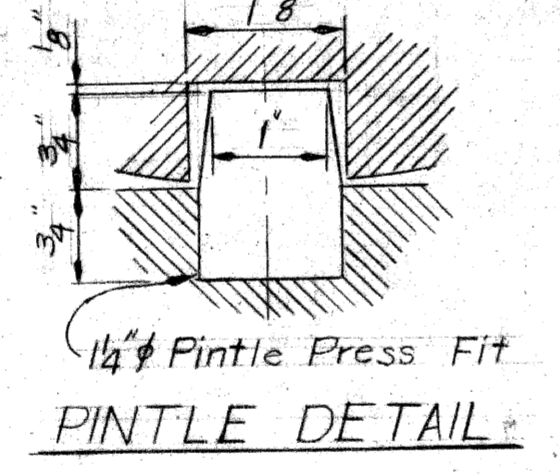
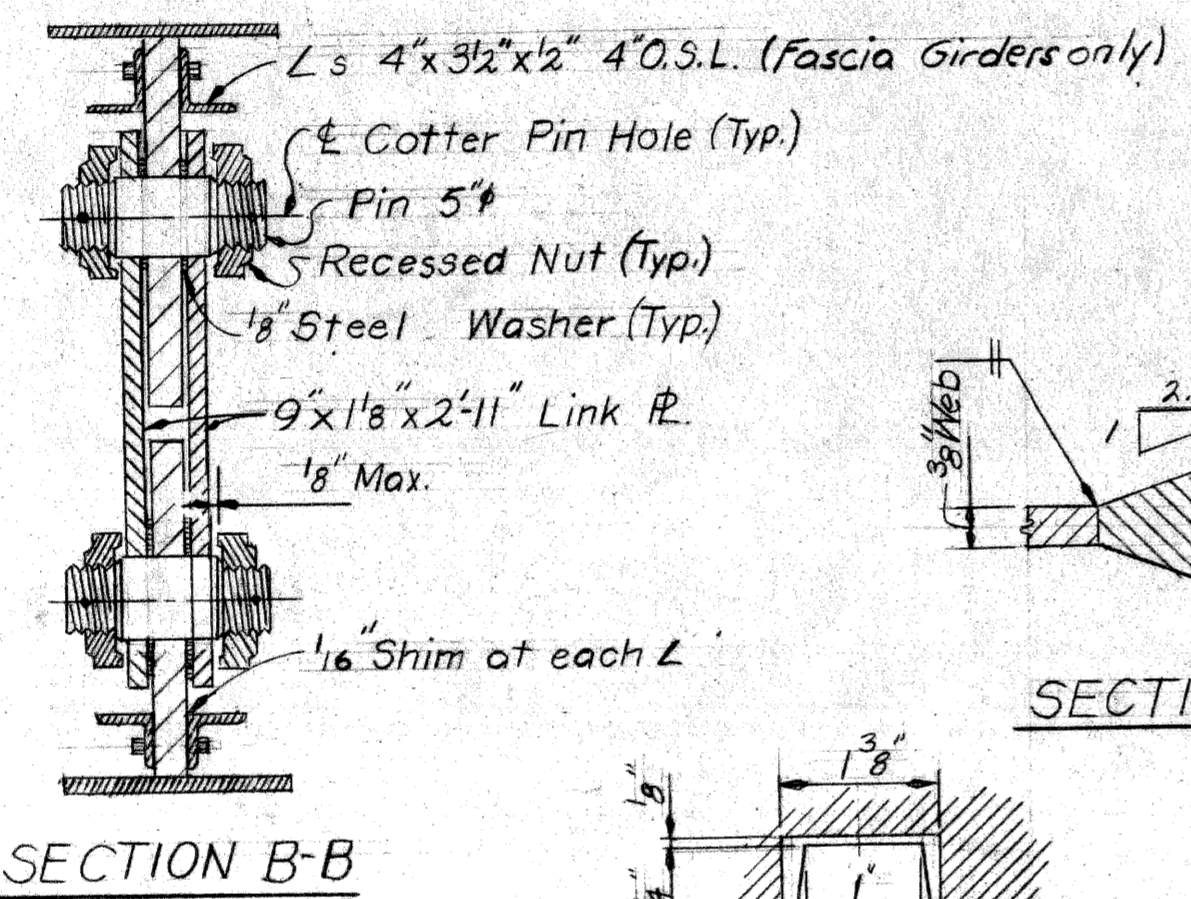
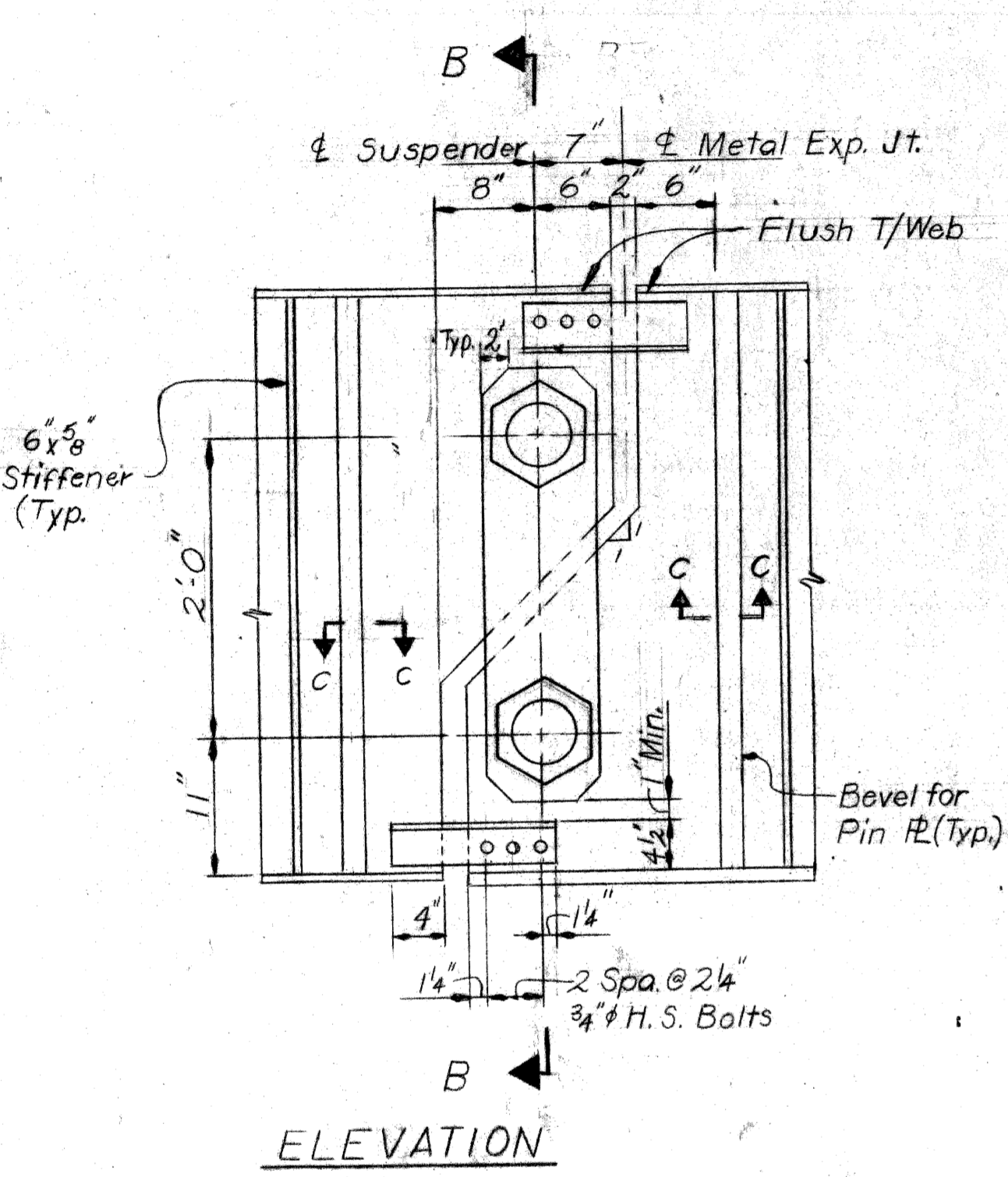
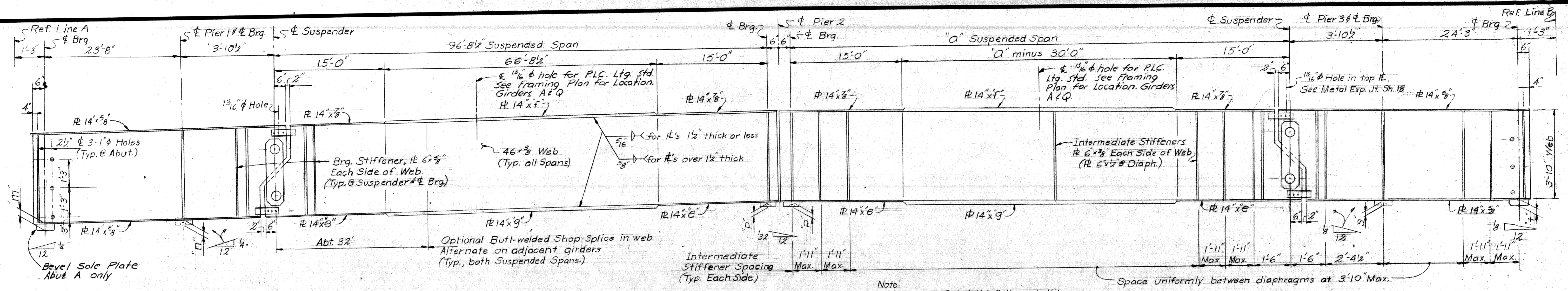
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

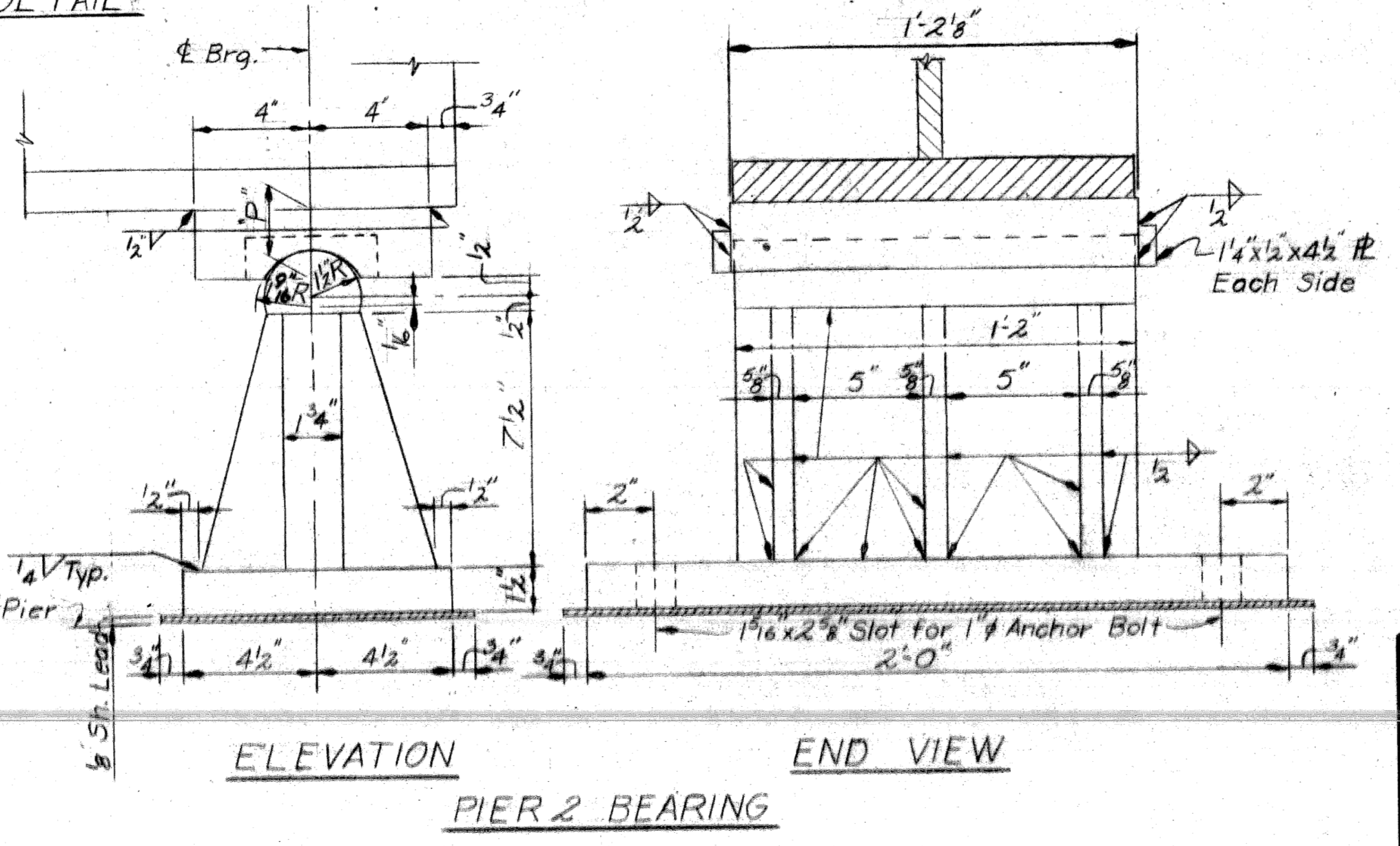
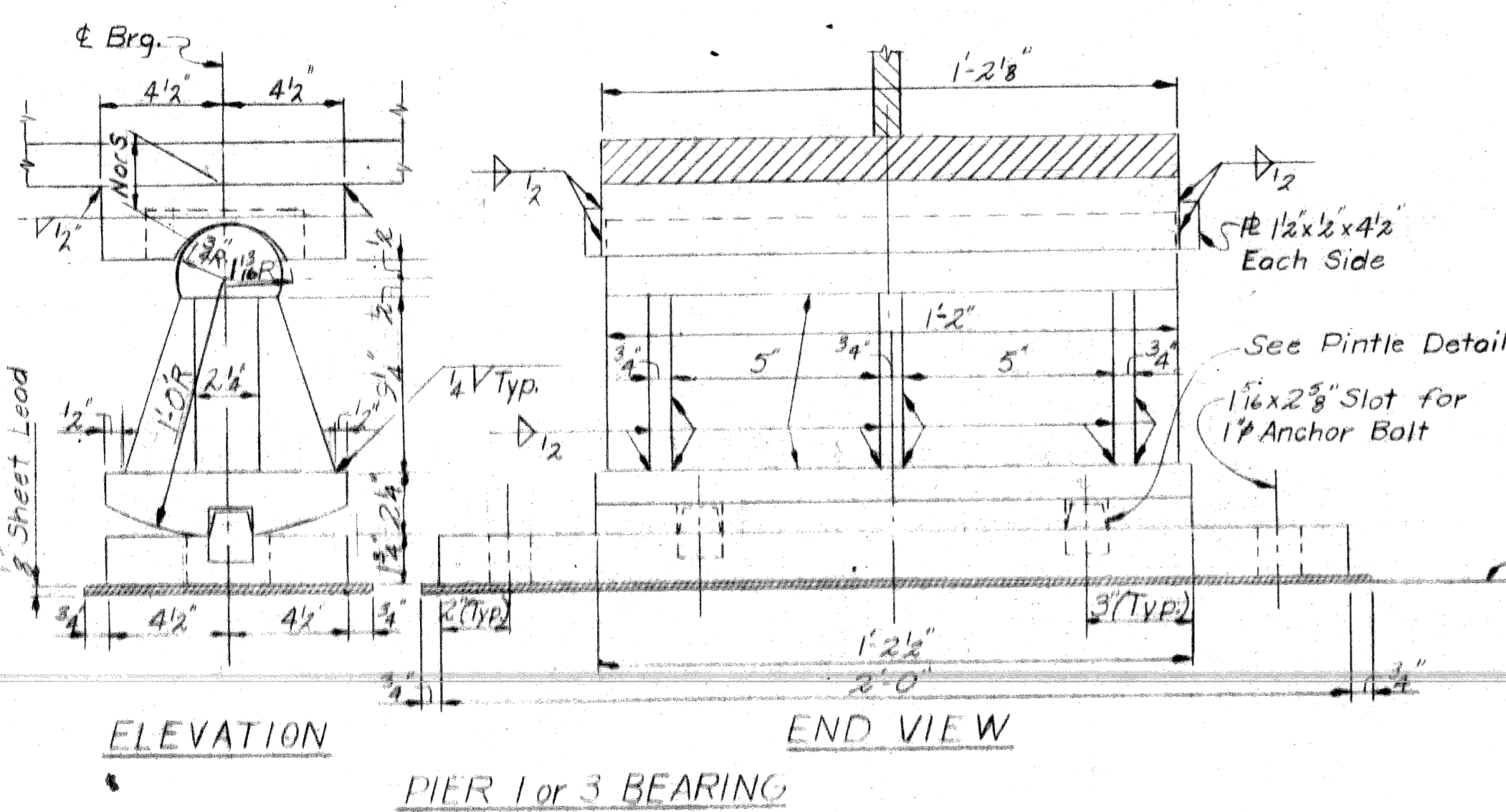
NO.	REVISIONS	DATE	BY

APPROVED: *J. J. Conant* (Professional Engineer)
 JOB No. 174 90001

NO. 16 of 28
 SOI of 82124 A



Beam	VARIABLE DIMENSIONS								
	Span	Flange Thickness			Sole R Thickness				
	Q	e	f	g	m	n	p	s	t
Q	104'-9 1/2"	3/4"	7/8"	1 1/2"	2"	3"	2 1/4"	3 1/4"	2 1/4"
P	104'-2 1/4"	3/4"	7/8"	1 1/2"	2"	3"	2 1/4"	3 1/4"	2 1/4"
PLC	103'-7"	1"	1 1/4"	2"	3 1/2"	4 1/4"	3 1/4"	4 1/4"	3 1/4"
PLC	102'-4 3/8"	1"	1 1/4"	2"	2 1/2"	3"	2"	3"	2 3/4"
PLC	101'-9 3/8"	1"	1 1/4"	2"	3 1/4"	4 1/2"	3 1/2"	4 1/2"	4 1/4"
PLC	101'-1 1/2"	1"	1 1/4"	2"	2"	3 1/4"	2 3/4"	3 1/2"	2 1/2"
Q	100'-6 5/8"	1"	1 1/4"	2"	2 3/4"	4 1/2"	3 1/2"	4 1/2"	3 1/4"
H	100'-3 3/8"	3/4"	7/8"	1 1/2"	2 1/2"	4 1/2"	3 1/4"	4 1/2"	3 1/4"
G	99'-8 3/8"	3/4"	7/8"	1 1/2"	2"	3 1/4"	3"	3 3/4"	2 3/4"
F	99'-0 3/8"	3/4"	7/8"	1 1/2"	3 3/4"	4 1/2"	3 1/4"	4 1/2"	3 1/2"
E	98'-5 3/8"	3/4"	7/8"	1 1/2"	2 1/4"	3"	2 1/4"	3"	2"
D	97'-10 3/8"	1"	1 1/4"	2"	2 1/2"	3 1/4"	2 1/4"	3 1/2"	2 1/2"
MBT	C	97'-3"	1"	1 1/4"	2"	3 1/2"	4 1/2"	3 1/4"	3 1/2"
	B	96'-7 3/4"	3/4"	7/8"	1 1/2"	2 1/4"	3"	2 1/4"	2 1/4"
	A	96'-0 1/2"	3/4"	7/8"	1 1/2"	2 1/4"	3"	2 1/4"	2 1/4"



Work this sheet with Sh. 15 & 17

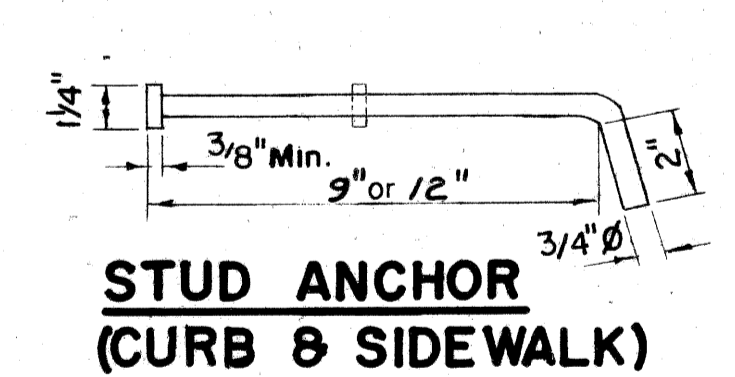
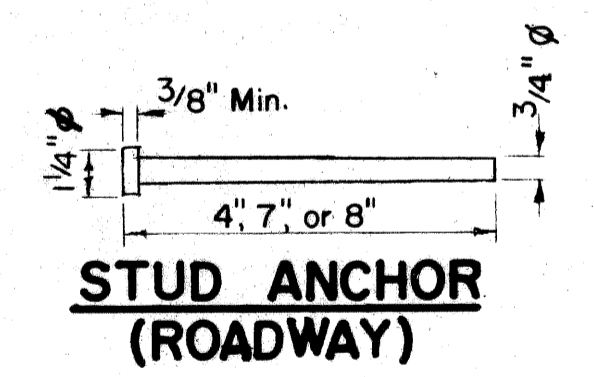
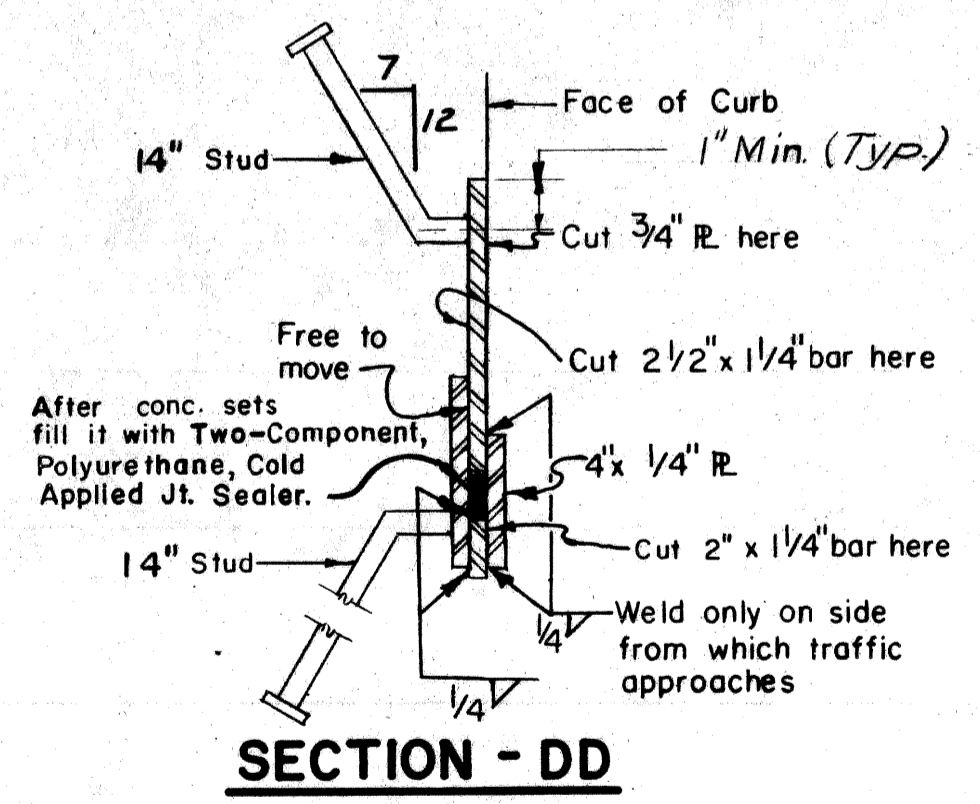
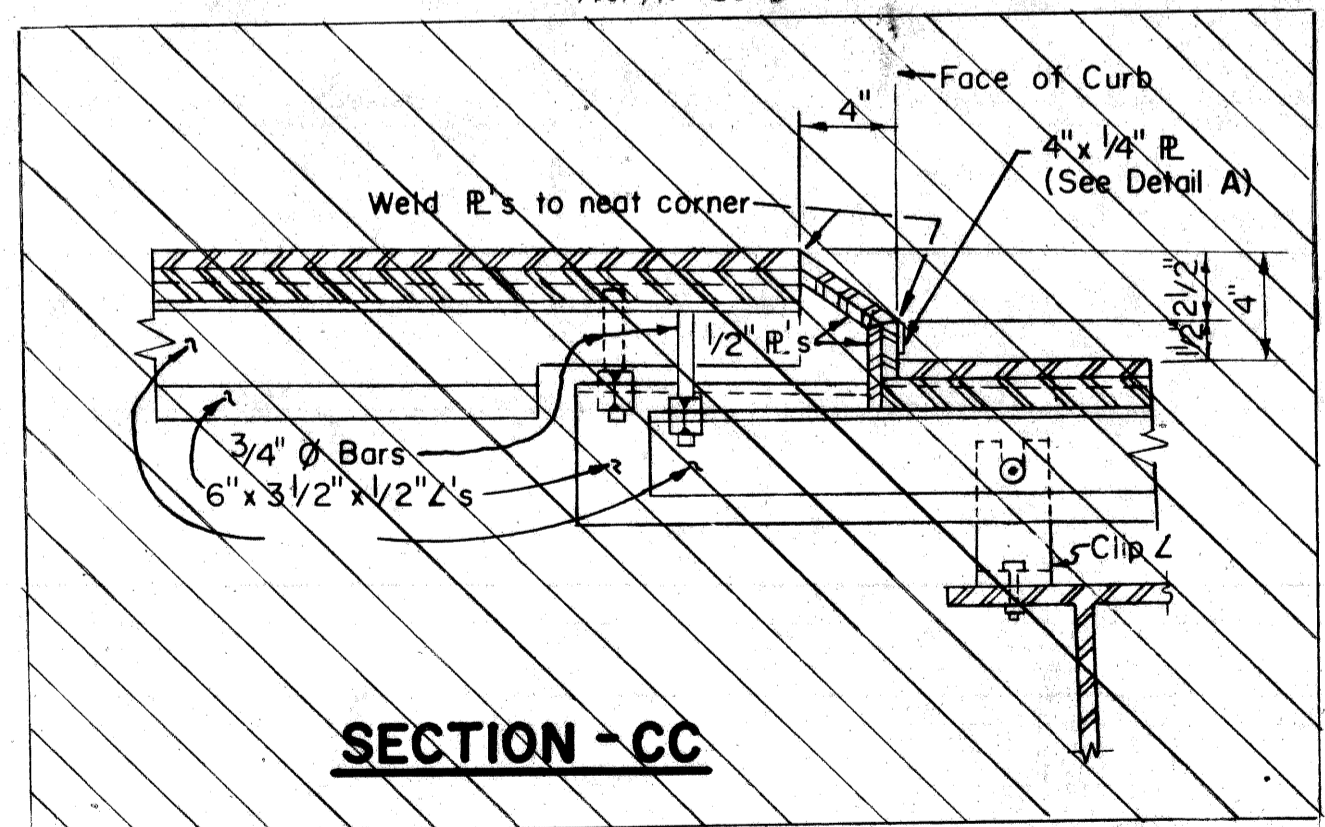
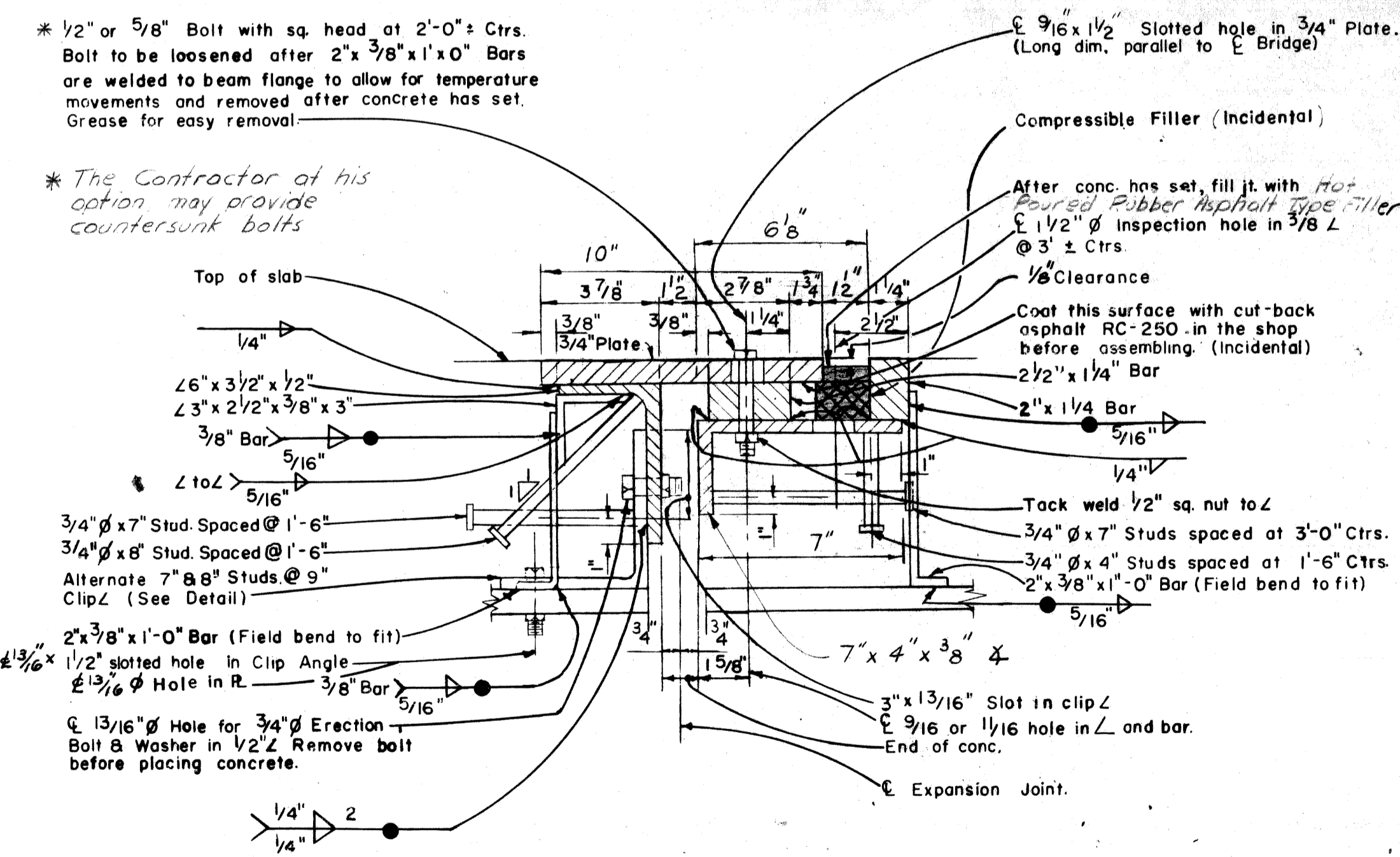
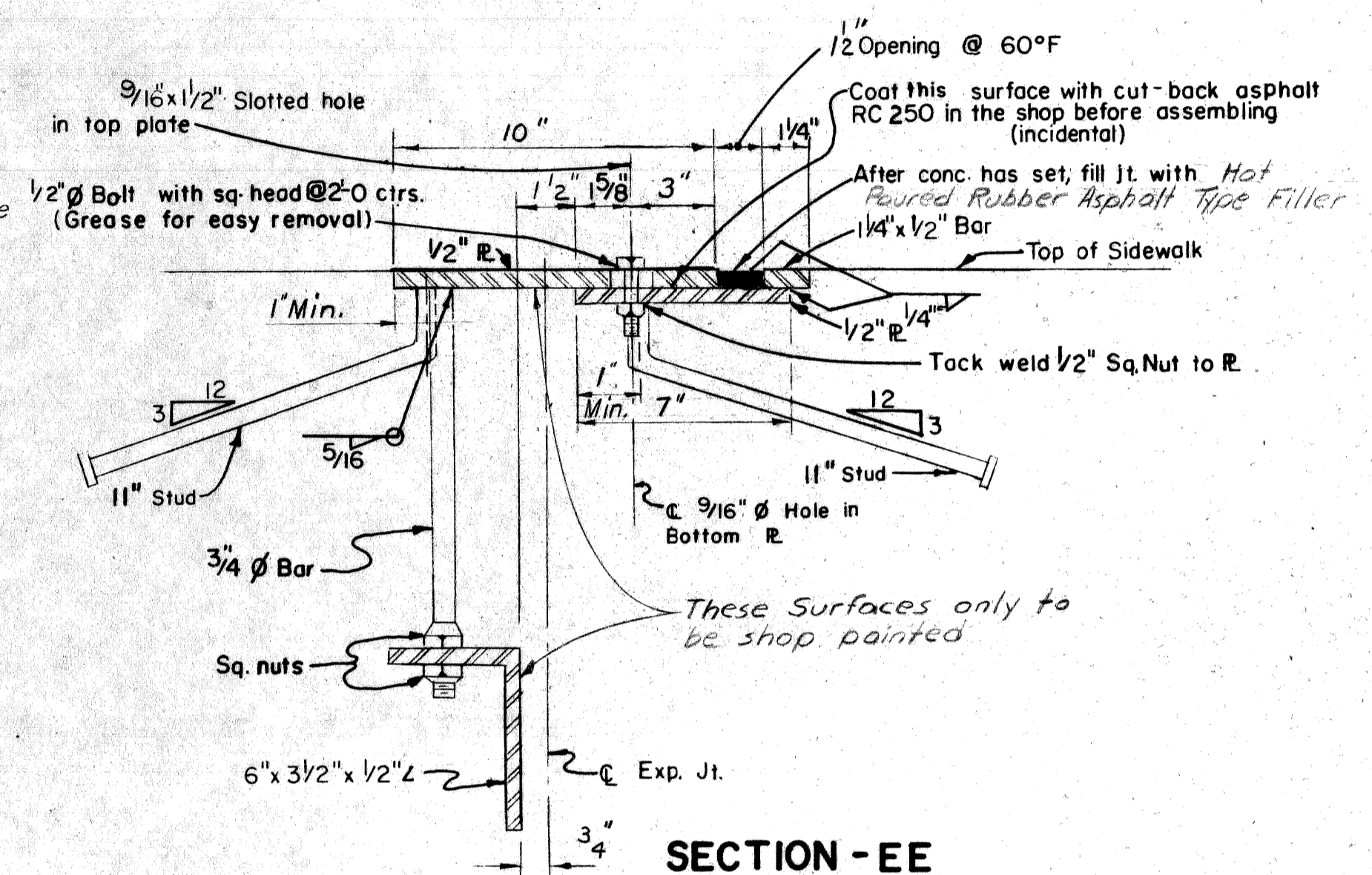
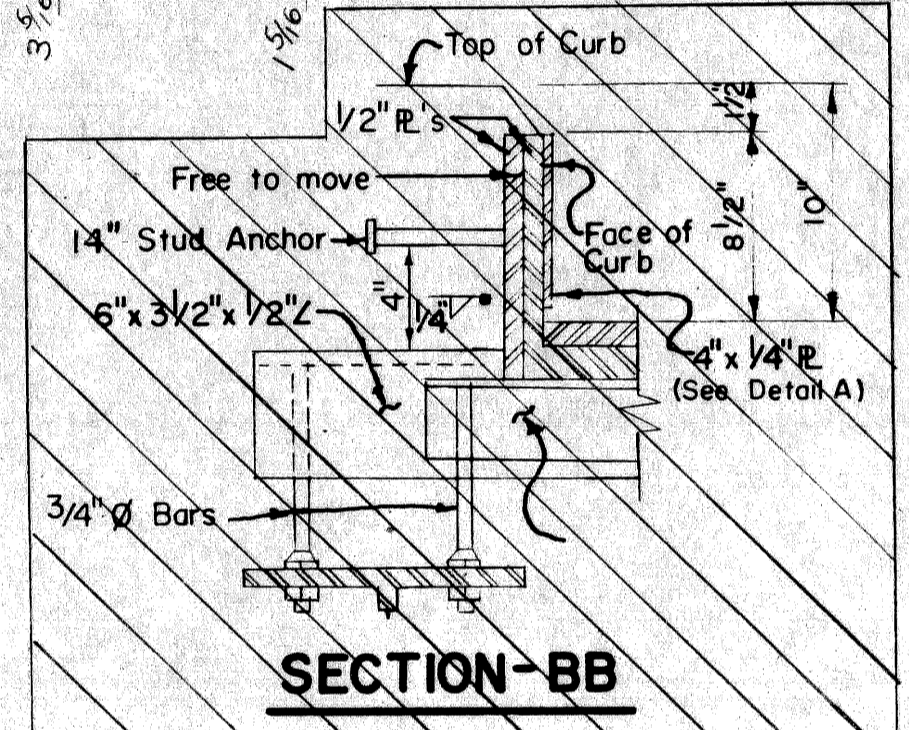
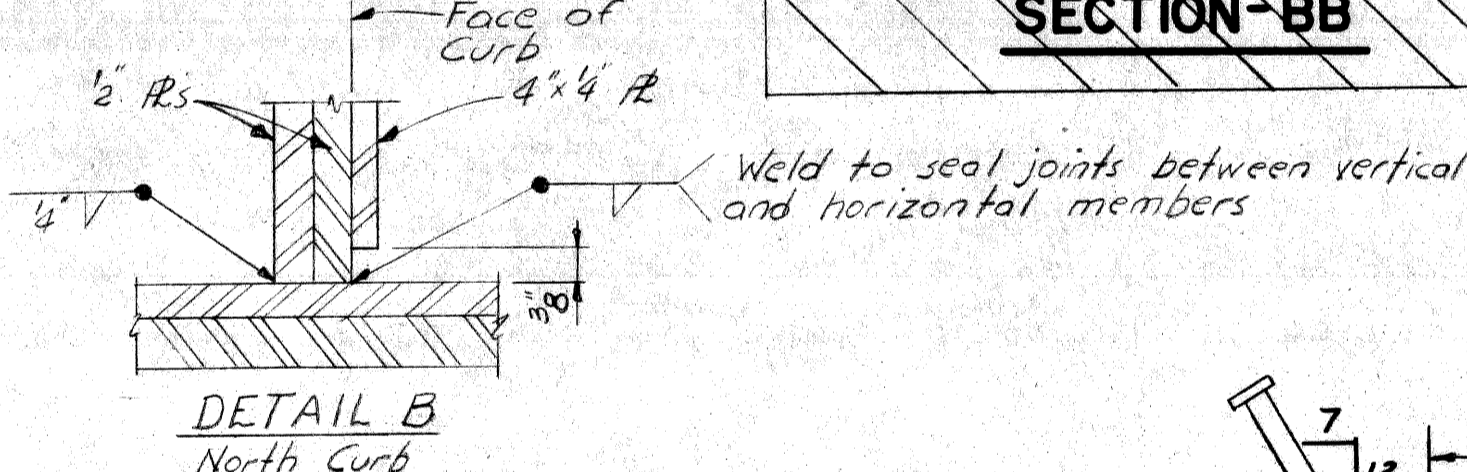
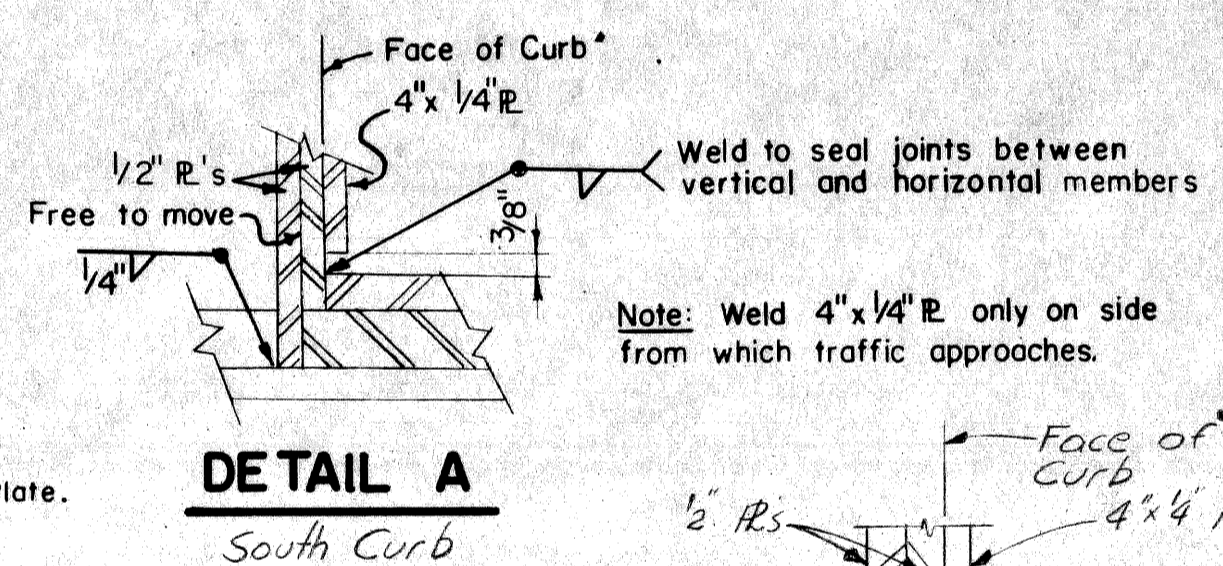
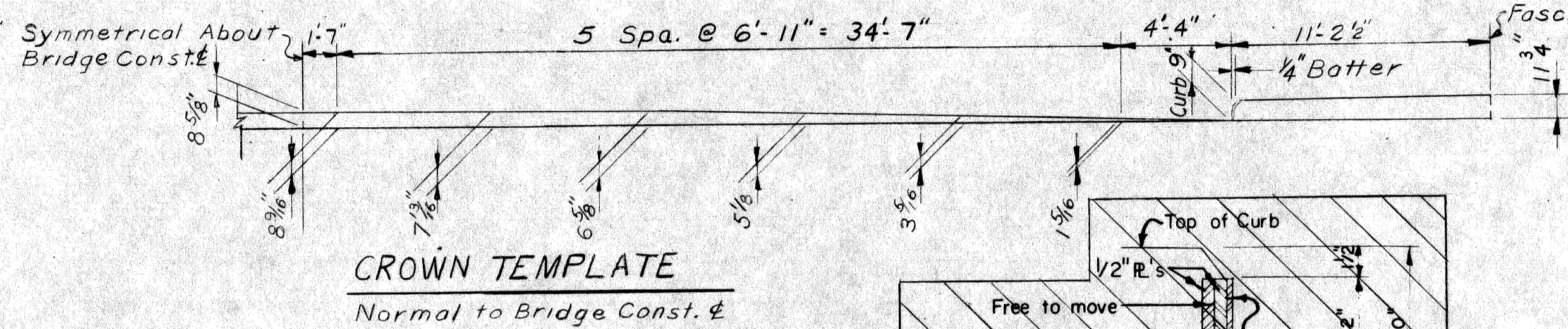
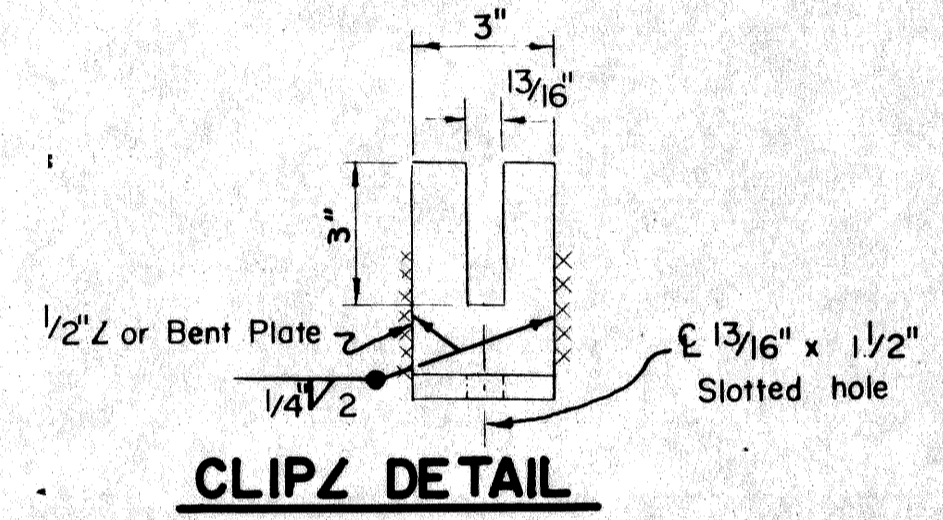
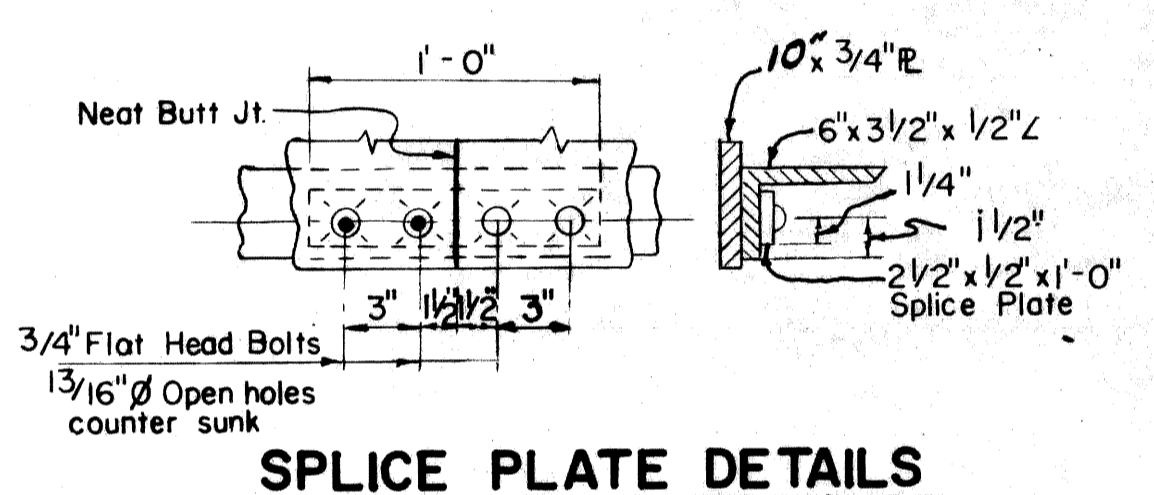
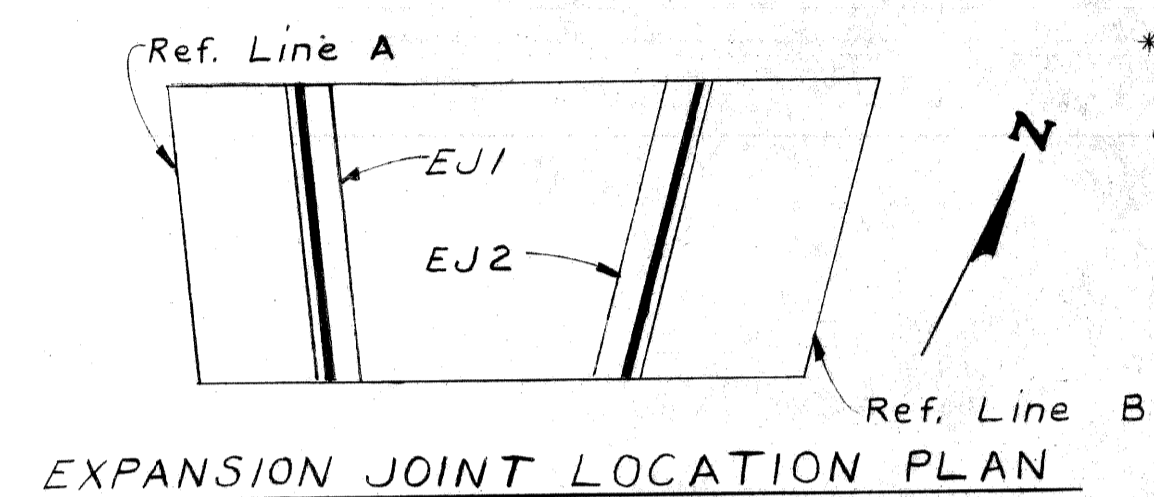
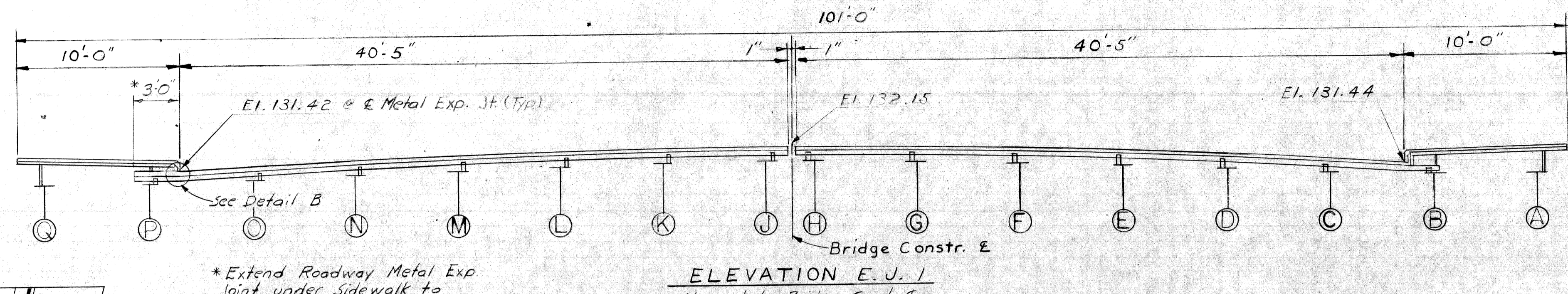
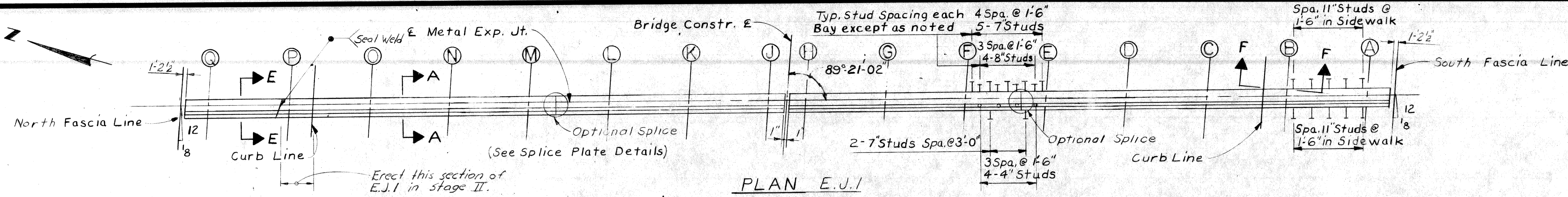
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

DESIGNED BY
CITY OF DETROIT
BUREAU OF HIGHWAYS AND FREEWAYS
11 Const
ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

NO. 106121
DATE 4/68
CHECKED BY JAL
JOB No. PW 99011
SHEET 16 OF 28
SO1 of 8224A



NOTES:
 The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.
 Two-Component, Polyurethane, Cold Applied Jt. Sealer is included in the Superstructure Quantities on sheet #26.
 Weight of Metal Expansion Joints 14,600 lbs.
 Weight of Metal Expansion Joint is included in Structural Steel weight on sheet #15.

Work This Sheet With Sheet # 15, 16 & 19

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

METAL EXPANSION JOINT DETAILS

NO.	DESCRIPTION	DATE	BY

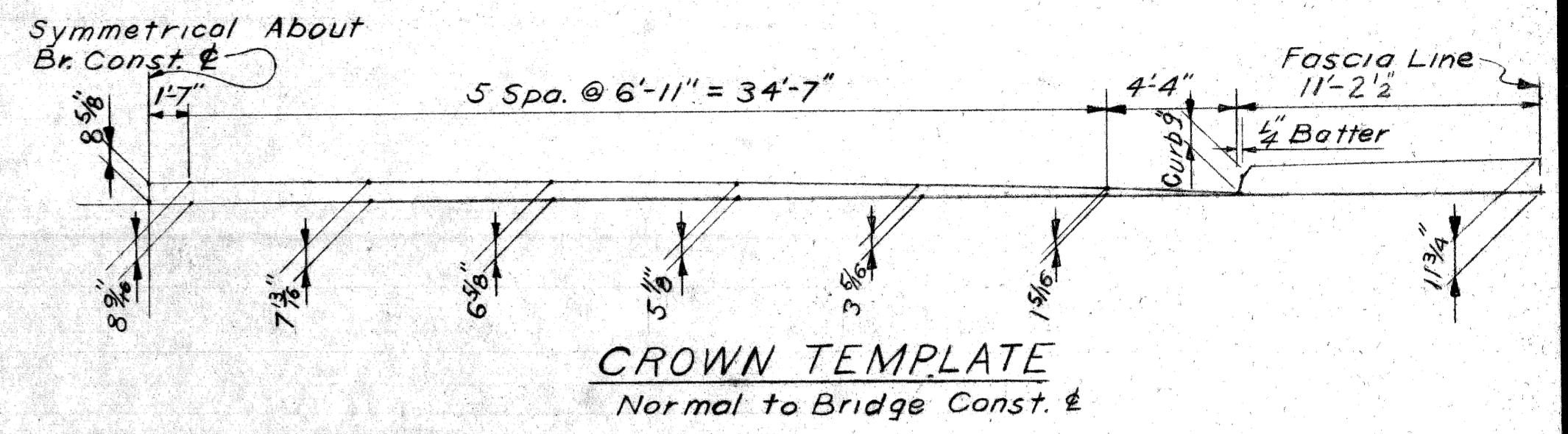
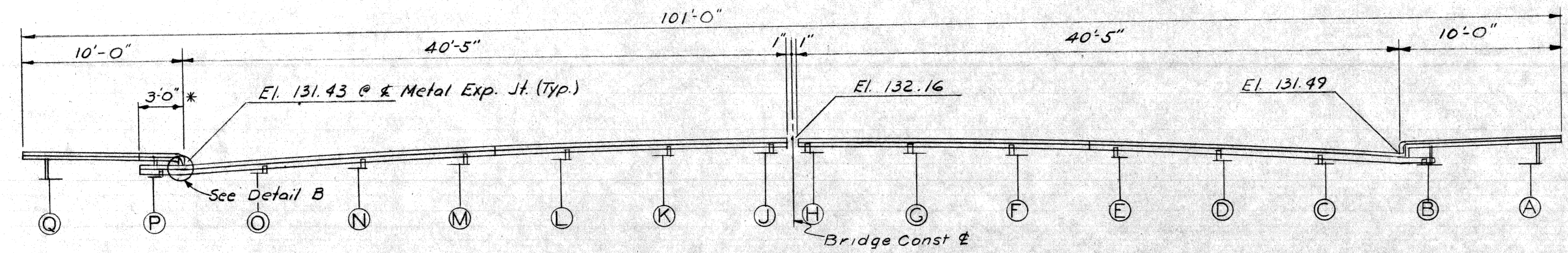
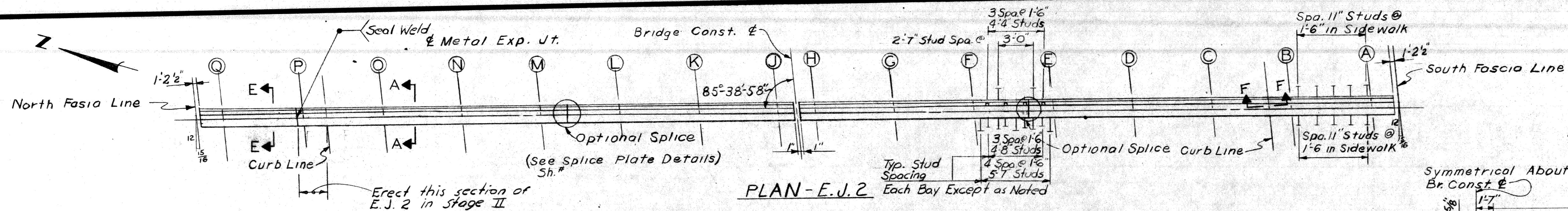
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature]
 STRUCTURAL ENGINEER

JOB NO.
 PW 900(1)

CITY OF DETROIT
 DRAWN BY: Locher 8/68
 TRACED BY: A.H. J.U. 3-22-68
 CHECKED BY: T. Baker 5-69
 SHEET 18 OF 28

SOI of 82124A



*Extend Roadway Metal Exp. Joint under sidewalk to cover Stage I.

Work This Sheet with Sheets 15.16 & 18

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

**METAL EXPANSION
JOINT DETAILS**

CITY OF DETROIT	
SQUAD BOSS	Locher 8-68
DRAWN BY	Spurgson 7-68
TRACED BY	T. Baker 9-68
CHECKED BY	
SHEET 19 OF 28	
SOI of 82124A	

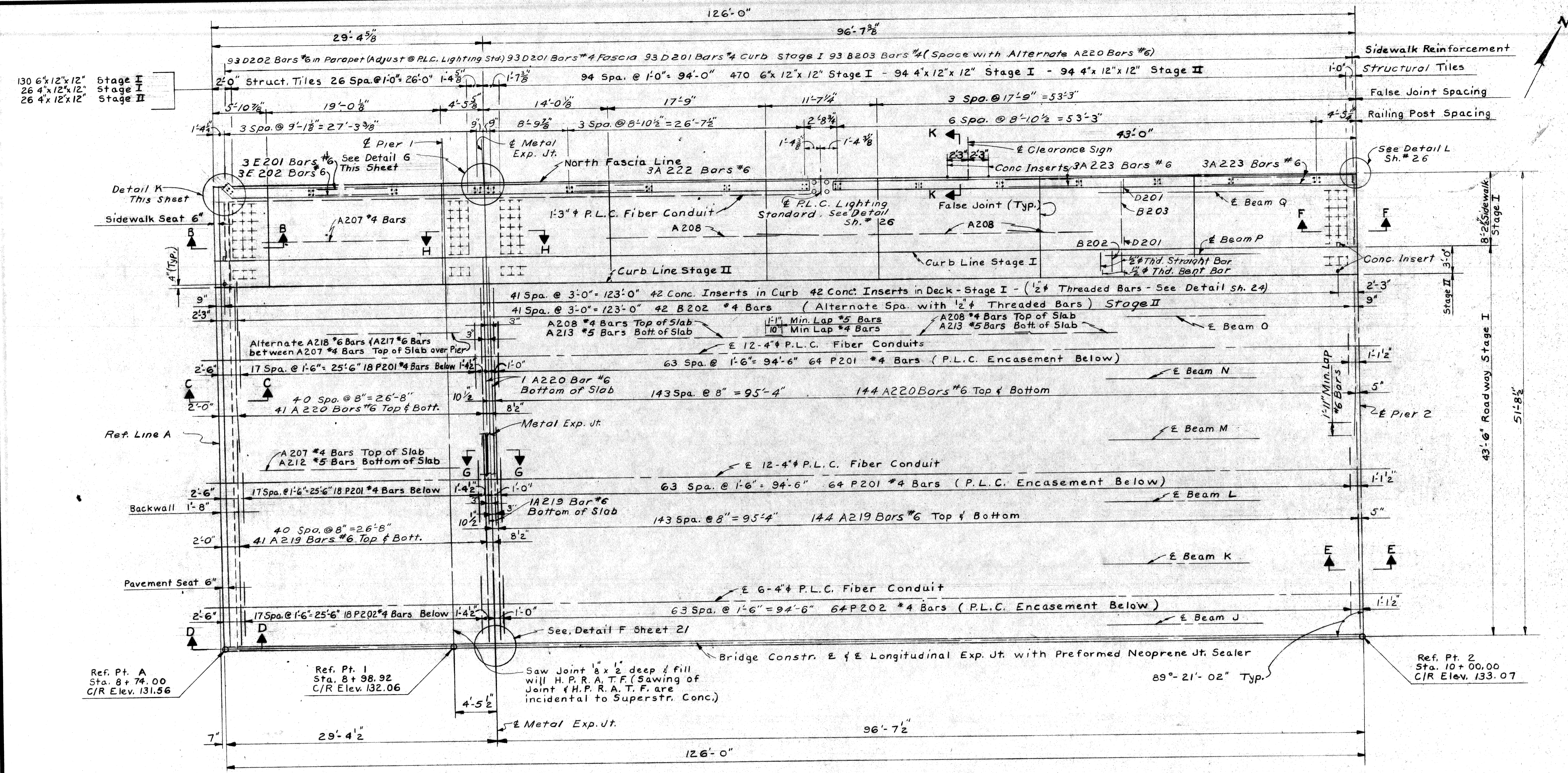
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Conant*
STRUCTURAL ENGINEER

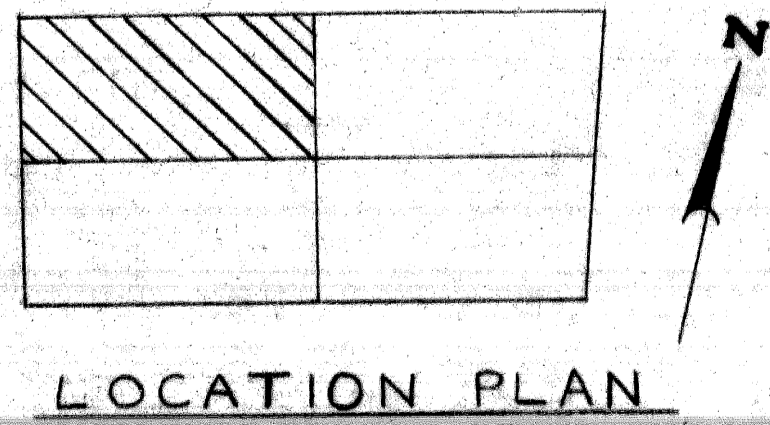
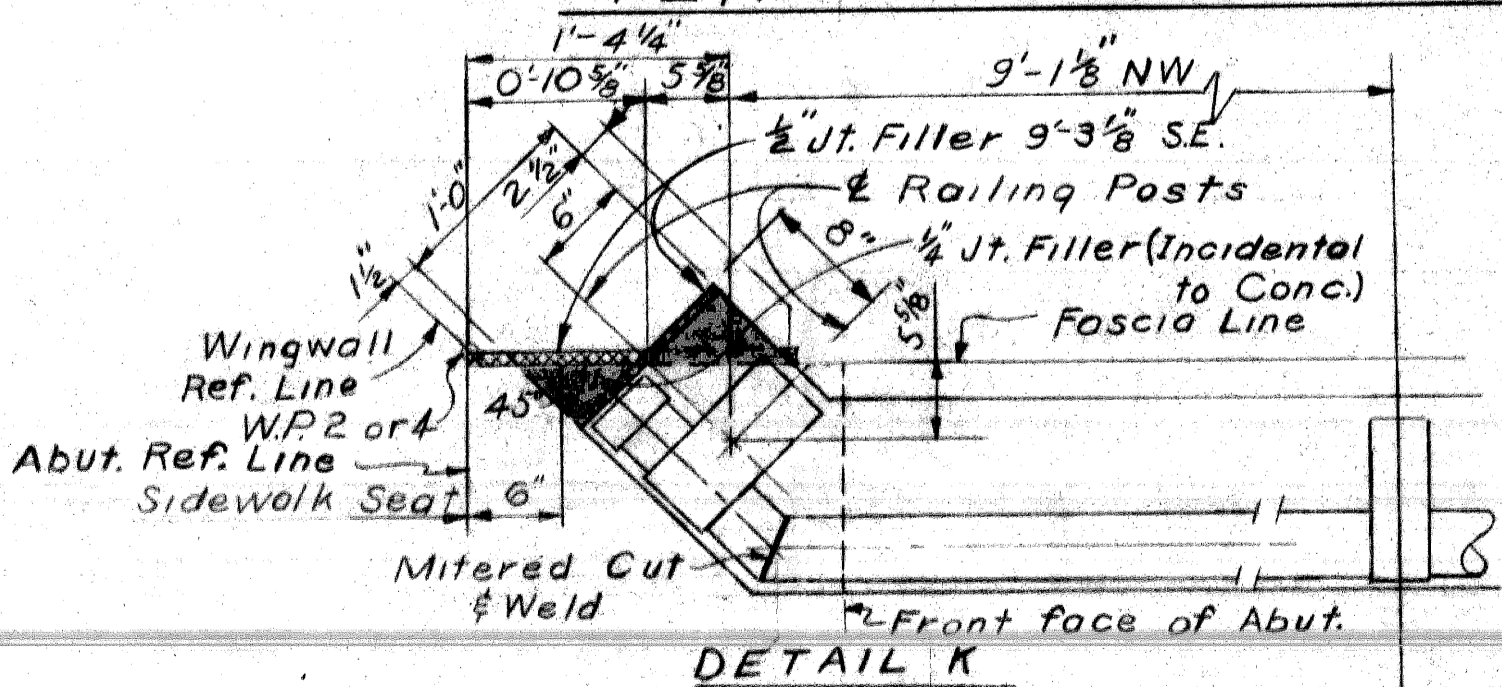
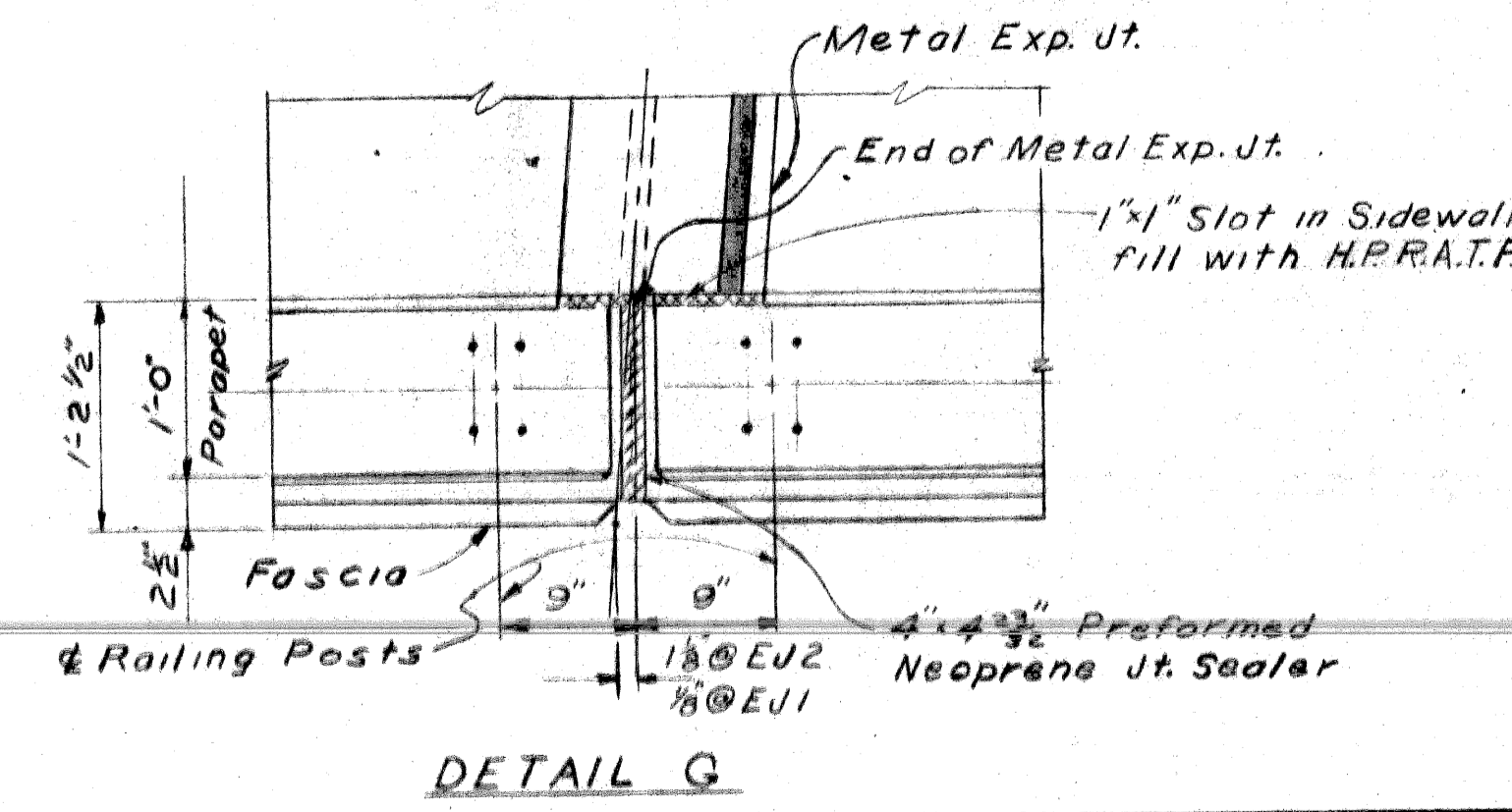
JOB No.
PW 990(1)

NO.	DESCRIPTION	DATE	BY

SOI 990(1) EXP. JT. DETAILS



PLAN - NORTH WEST



NOTE: 1/2" Jt. Filler is below parapet.

Work This Sheet with Sheets 21 thru 27

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE CROSSING THE JEFFRIES FREEWAY IN DETROIT
 SUPERSTRUCTURE DETAILS

NO.	DESCRIPTION	DATE	BY

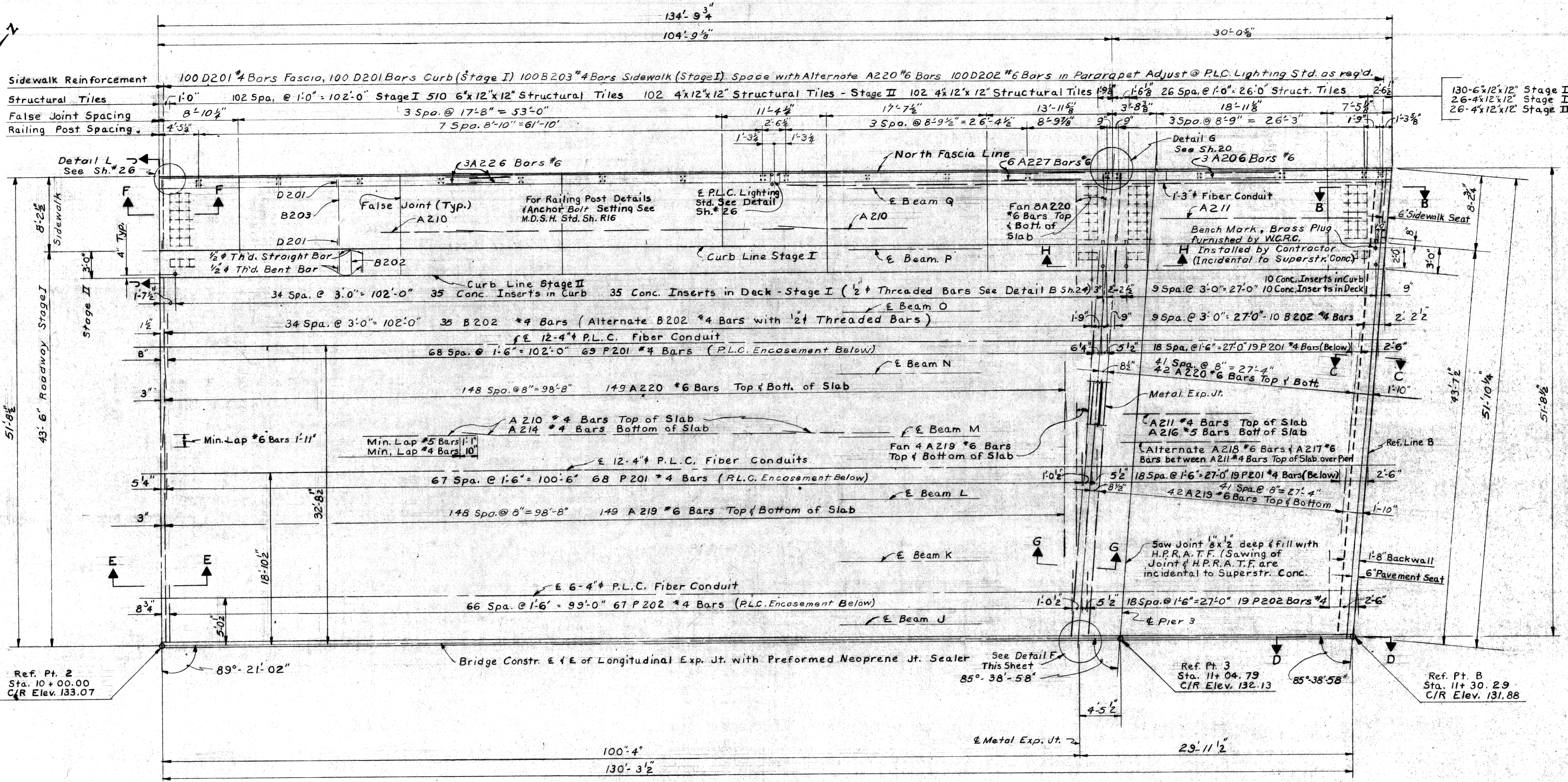
APPROVED: *J. J. Court*
 CIVIL ENGINEER

JOB No. PW 990(1)

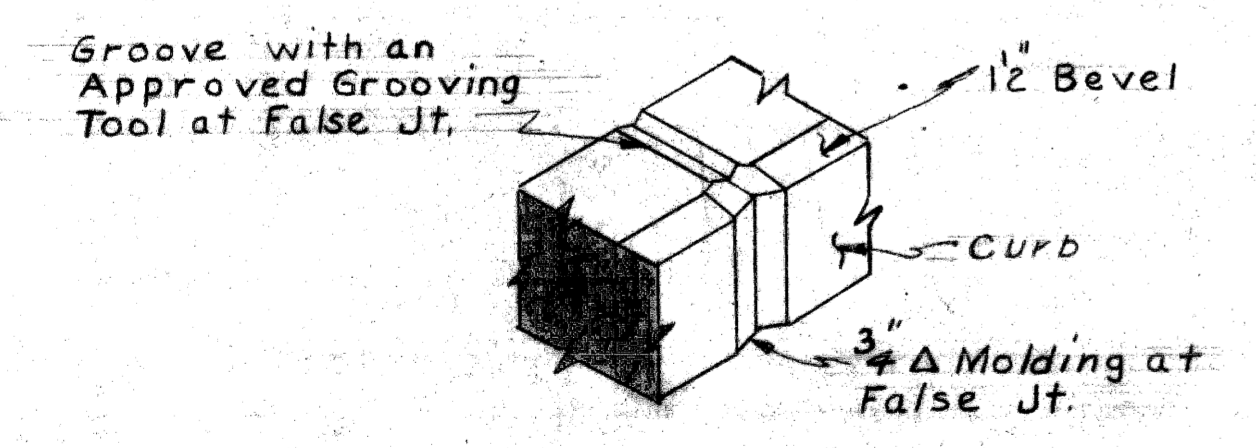
REVISIONS

DRIVEN BY: *Locher* 8-68
 CHECKED BY: *J. J. D. S.* 8-68
 SHEET 20 OF 28

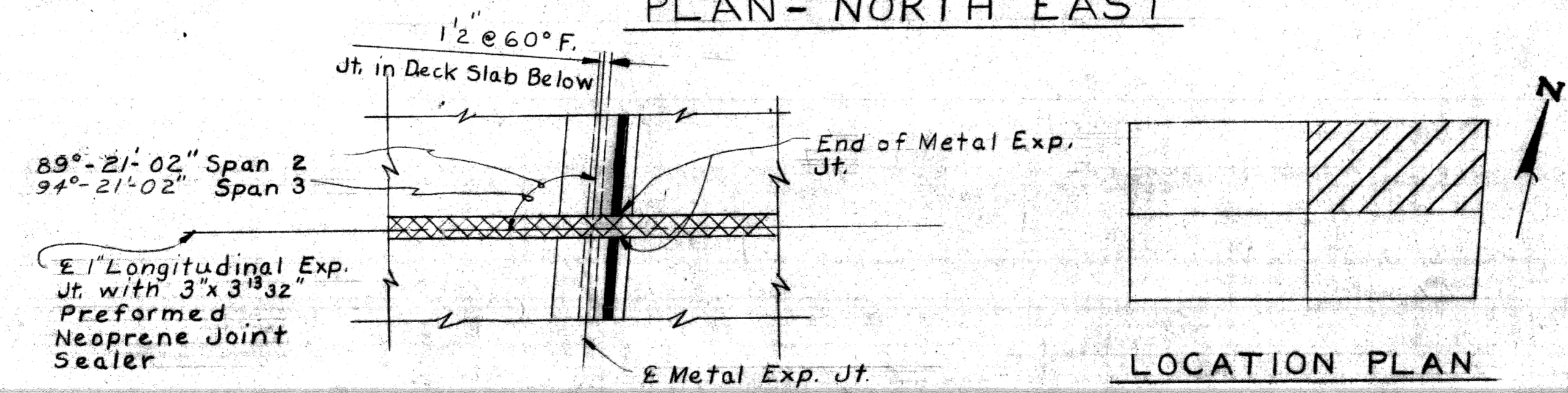
SOI of 82124 A



PLAN - NORTH EAST

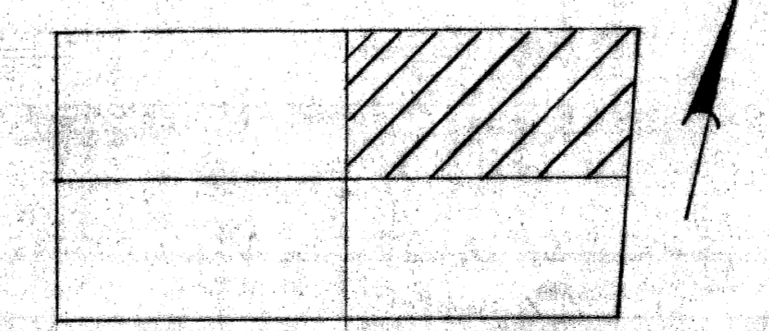


ISOMETRIC OF FALSE JOINT



DETAIL F

NOTE: Metal Exp. Joint at Pier 3.



LOCATION PLAN

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED *H. Cant*
STRUCTURAL ENGINEER

JOB No.
PW 990(1)

Work This Sheet with Sheets 20, 22 thru 27

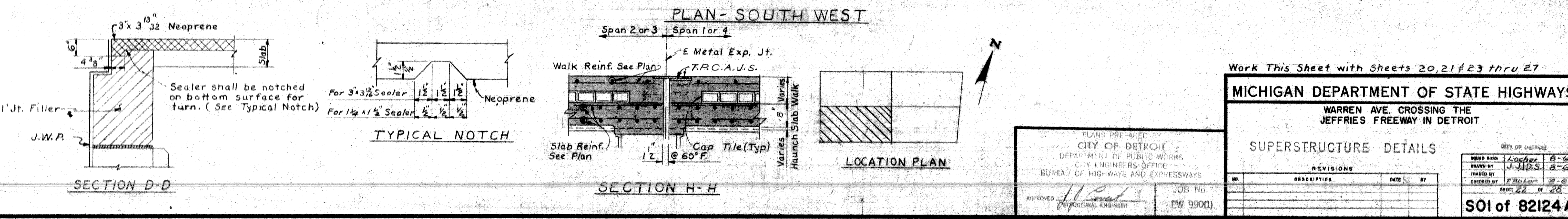
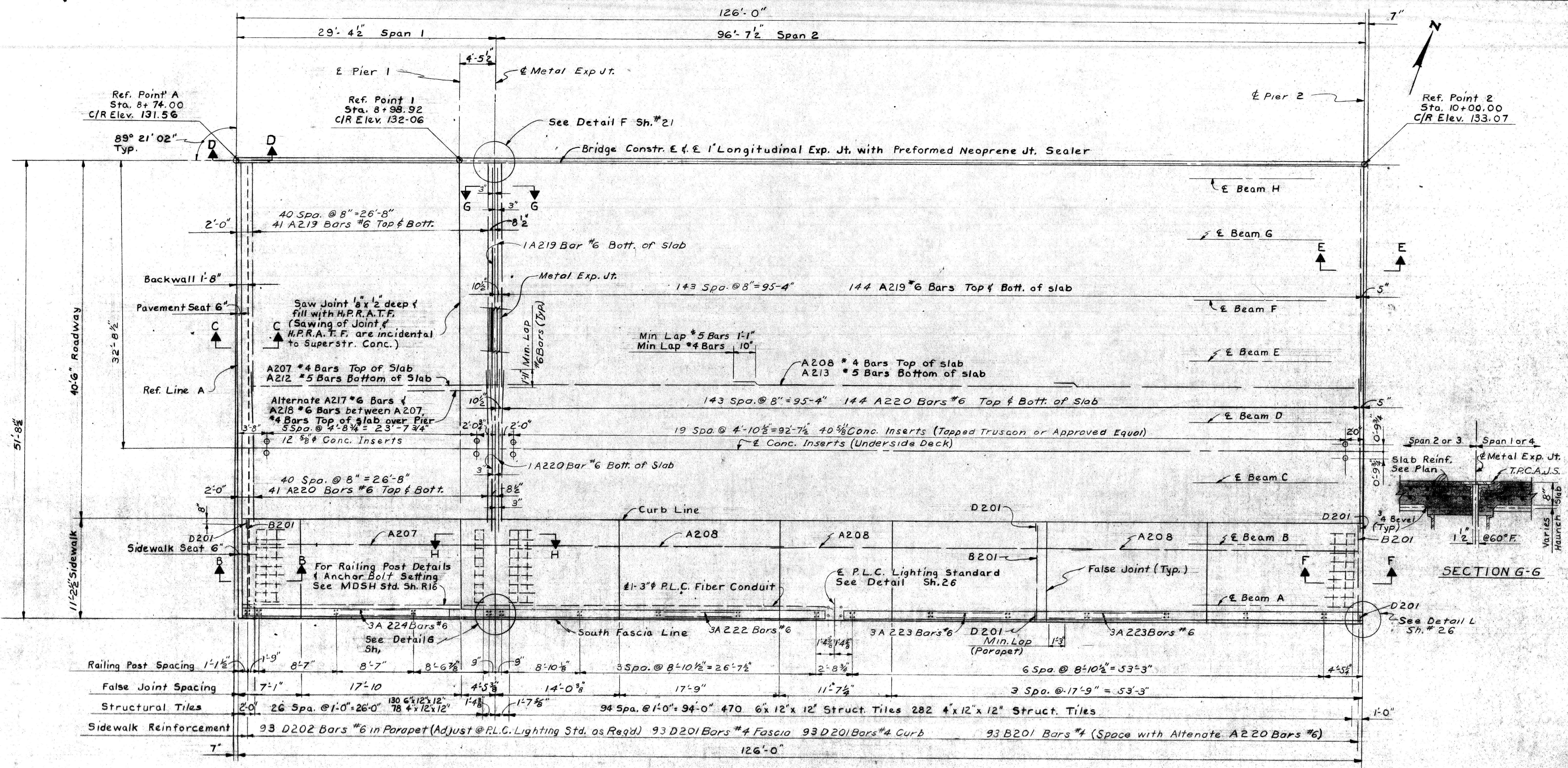
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
WARREN AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT

SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS: *Locher* 8-68
DRAWN BY: *J.V.D.S.* 8-68
CHECKED BY: *T.Baker* 8-68
SHEET 21 OF 28

SOI of 82124 A



Work This Sheet with Sheets 20, 21 & 23 thru 27

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

SUPERSTRUCTURE DETAILS

APPROVED: [Signature] STRUCTURAL ENGINEER

JOB No. PW 990(1)

NO.	DESCRIPTION	DATE	BY

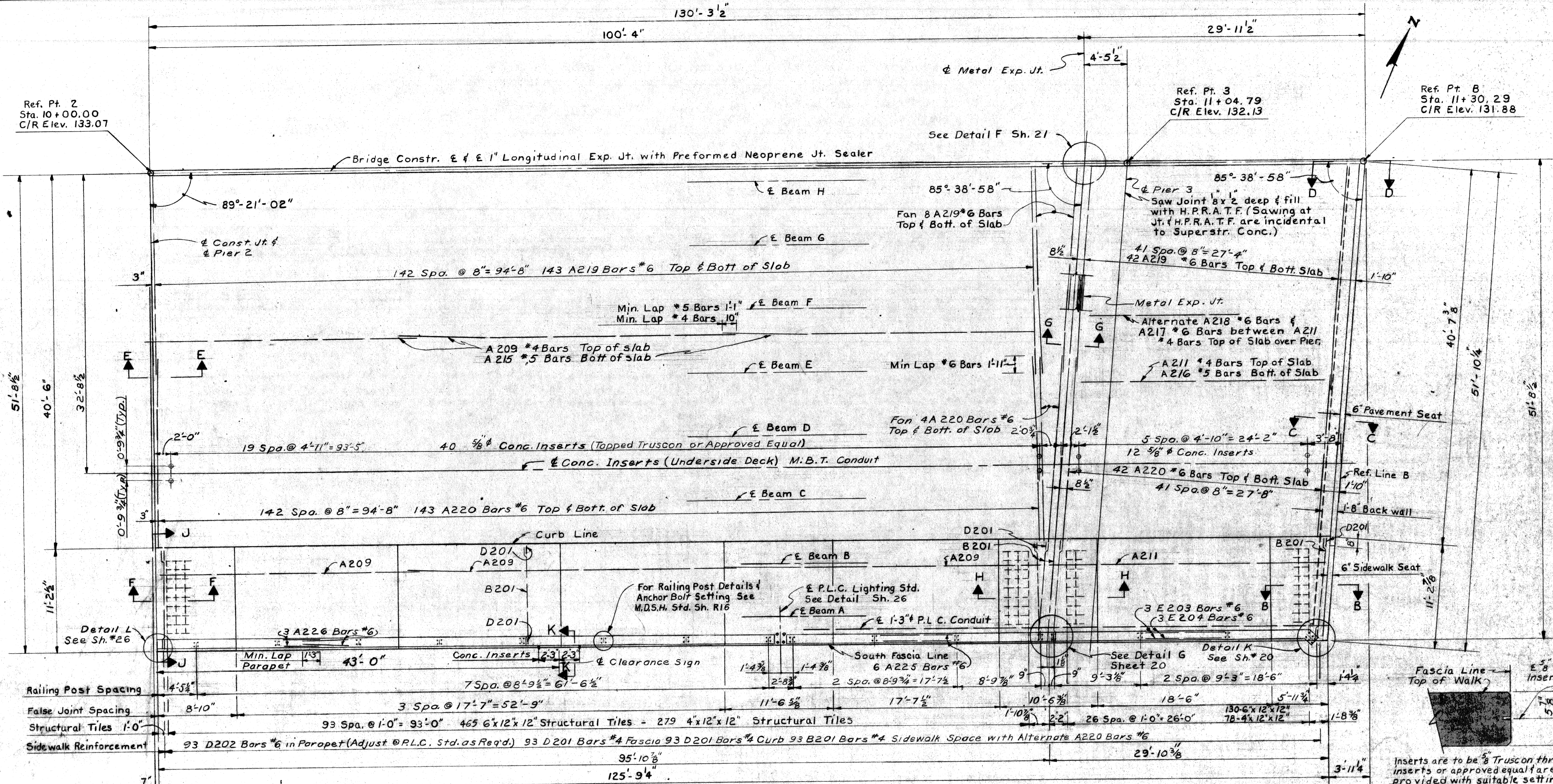
SQUAD BOSS: Lecher 8-68
 DRAWN BY: J. J. P. S. 8-68
 CHECKED BY: P. B. L. 8-68
 SHEET 22 of 28

S01 of 82124 A

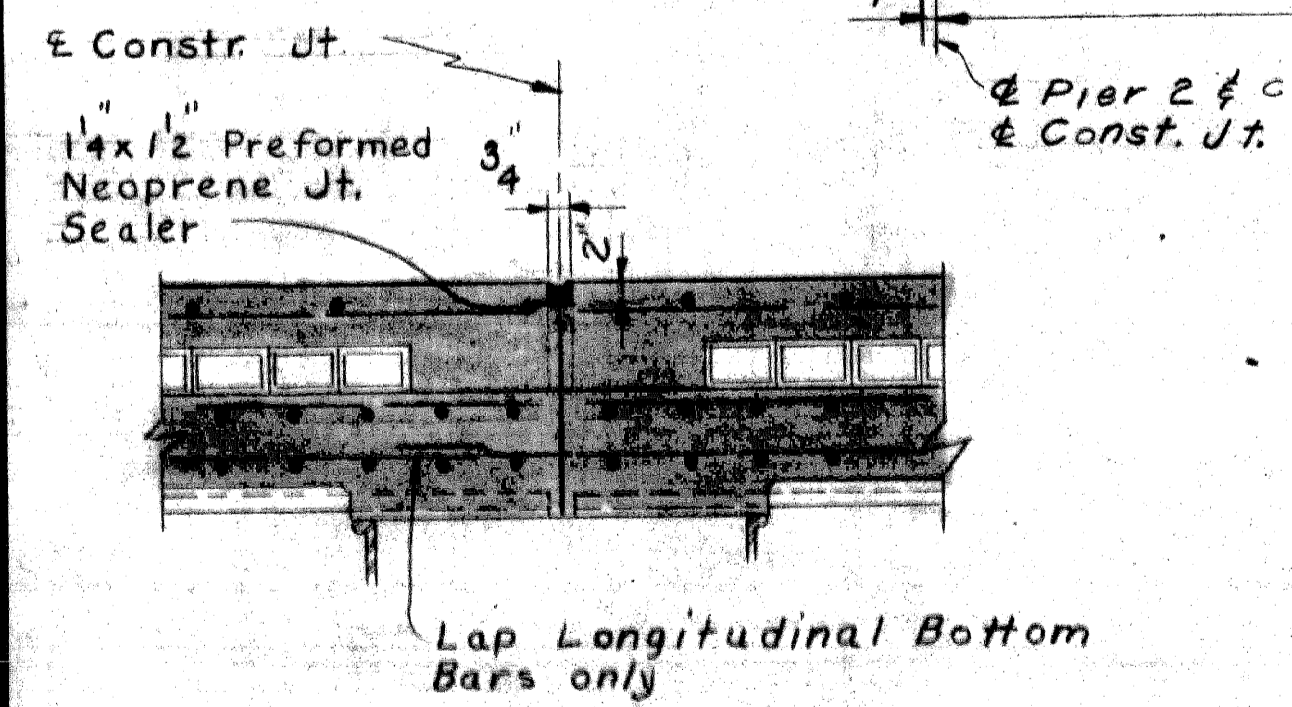
Ref. Pt. 2
Sta. 10+00.00
C/R Elev. 133.07

Ref. Pt. 3
Sta. 11+04.79
C/R Elev. 132.13

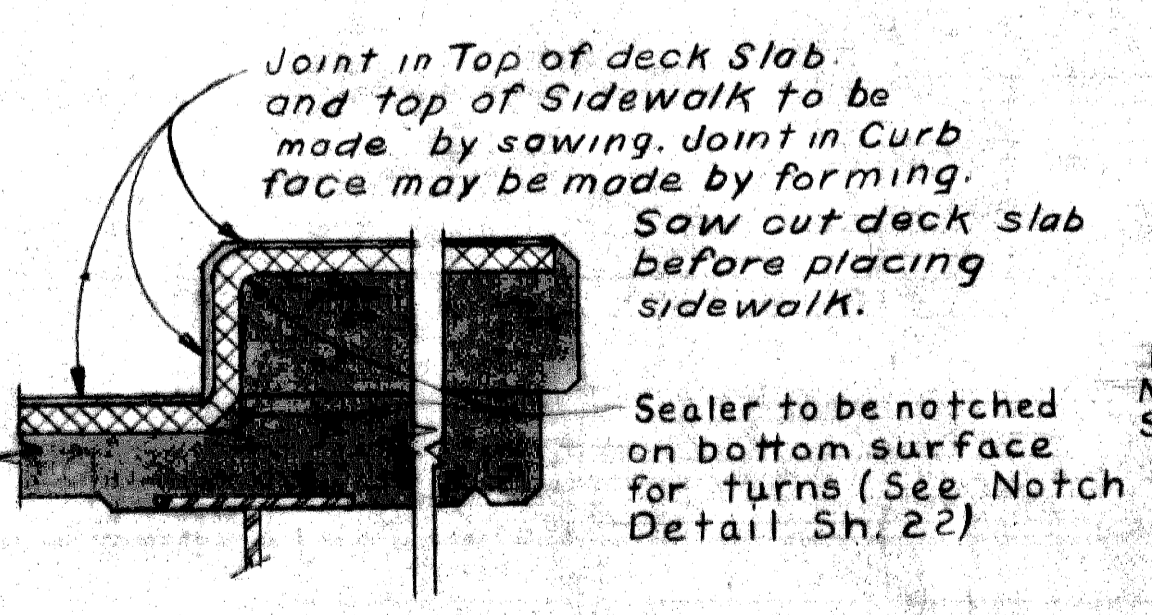
Ref. Pt. 8
Sta. 11+30.29
C/R Elev. 131.88



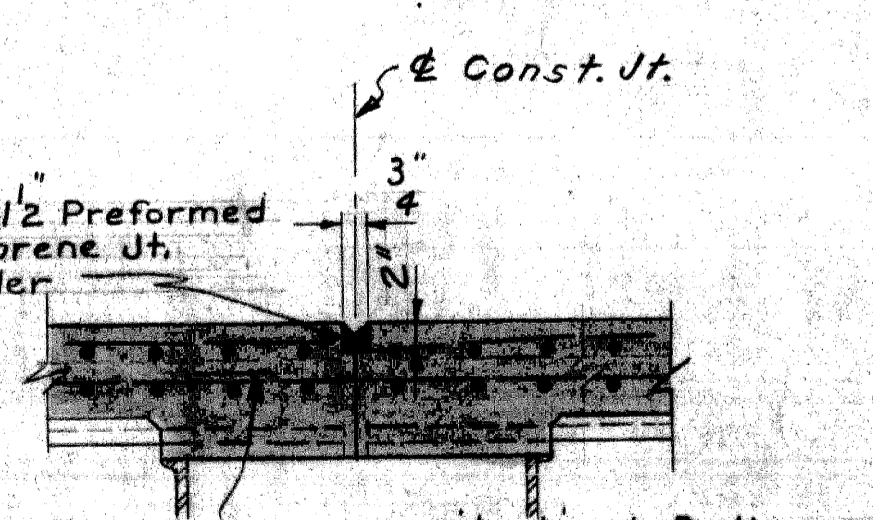
PLAN-SOUTH EAST



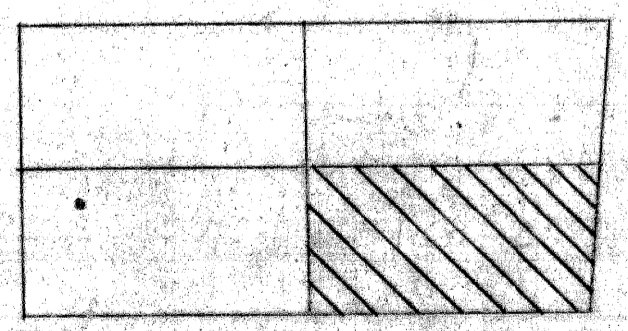
SECTION F-F



SECTION J-J



SECTION E-E



LOCATION PLAN

Inserts are to be 5/8" Truscon thread inserts or approved equal are to be provided with suitable setting plug. Furnishing and placing concrete inserts is incidental to superstructure concrete. Clearance signs and mounting brackets are to be furnished and installed by others.

SECTION K-K

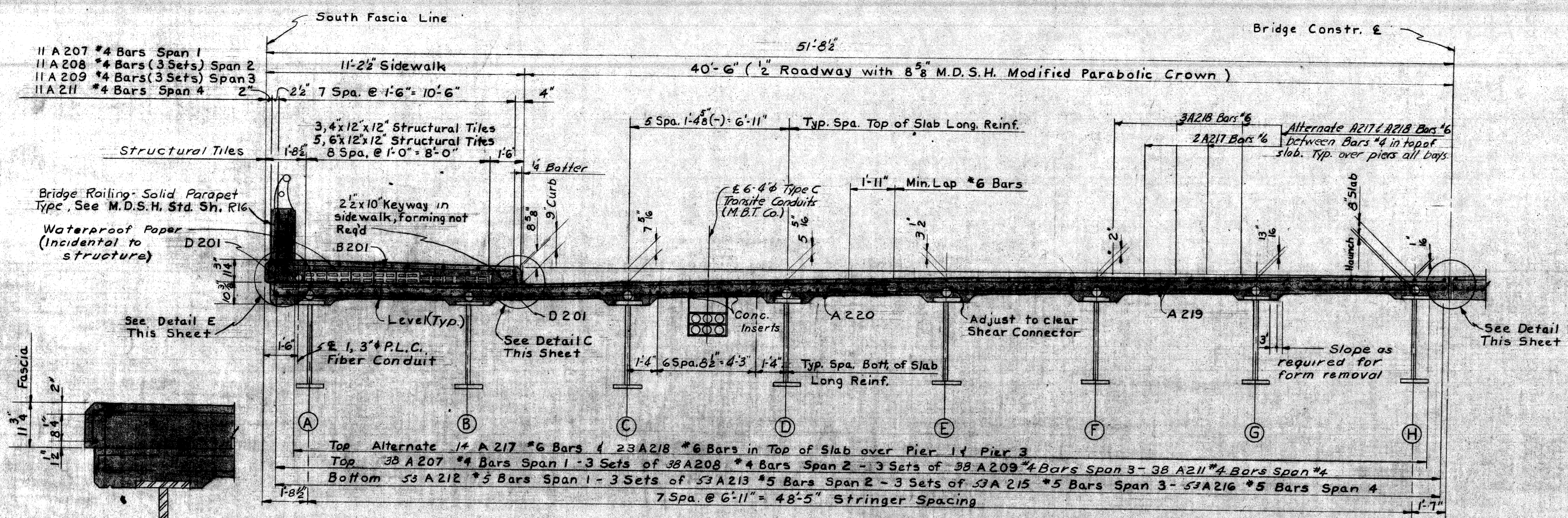
Work This Sheet with Sheets 20, 21, 22 & 24 thru 27

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT
SUPERSTRUCTURE DETAILS

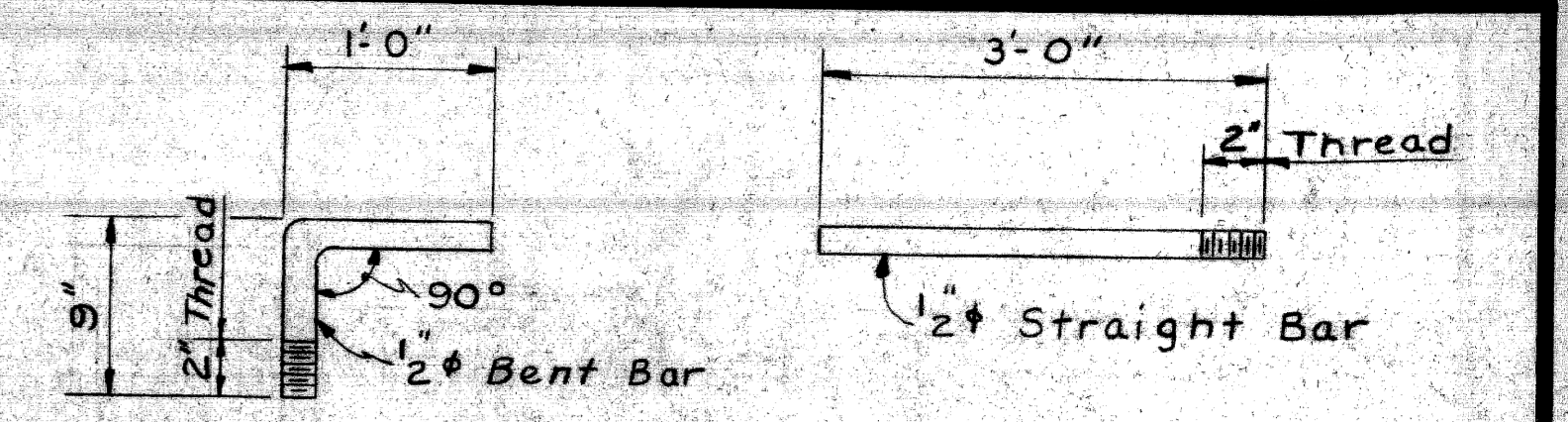
NO.	DESCRIPTION	DATE	BY

APPROVED: *[Signature]* STRUCTURAL ENGINEER
JOB NO. PW 990(1)

CITY OF DETROIT
SQUAD BASIS: Locher, B-68
DRAWN BY: J.V. D.S. B-68
CHECKED BY: T. Baker, G-68
SHEET 23 of 28
SOI of 82124 A

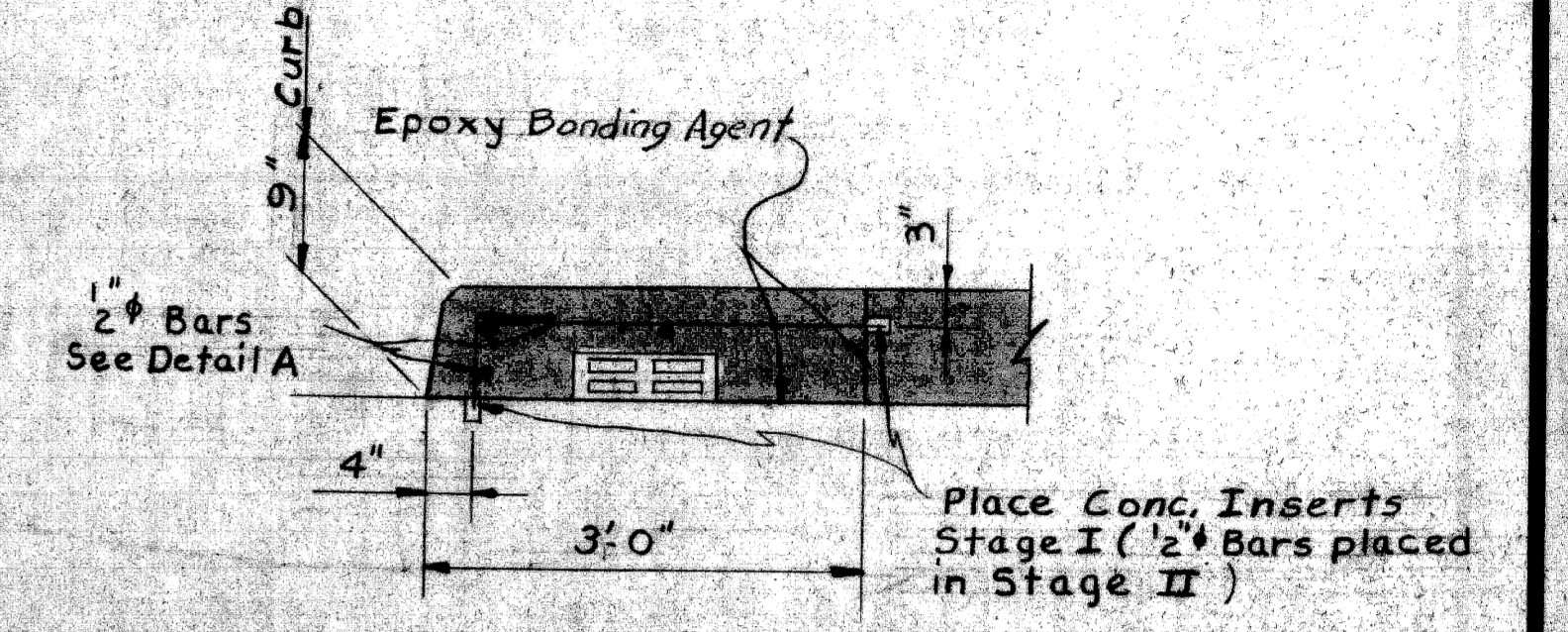


TYPICAL SECTION - SOUTH HALF

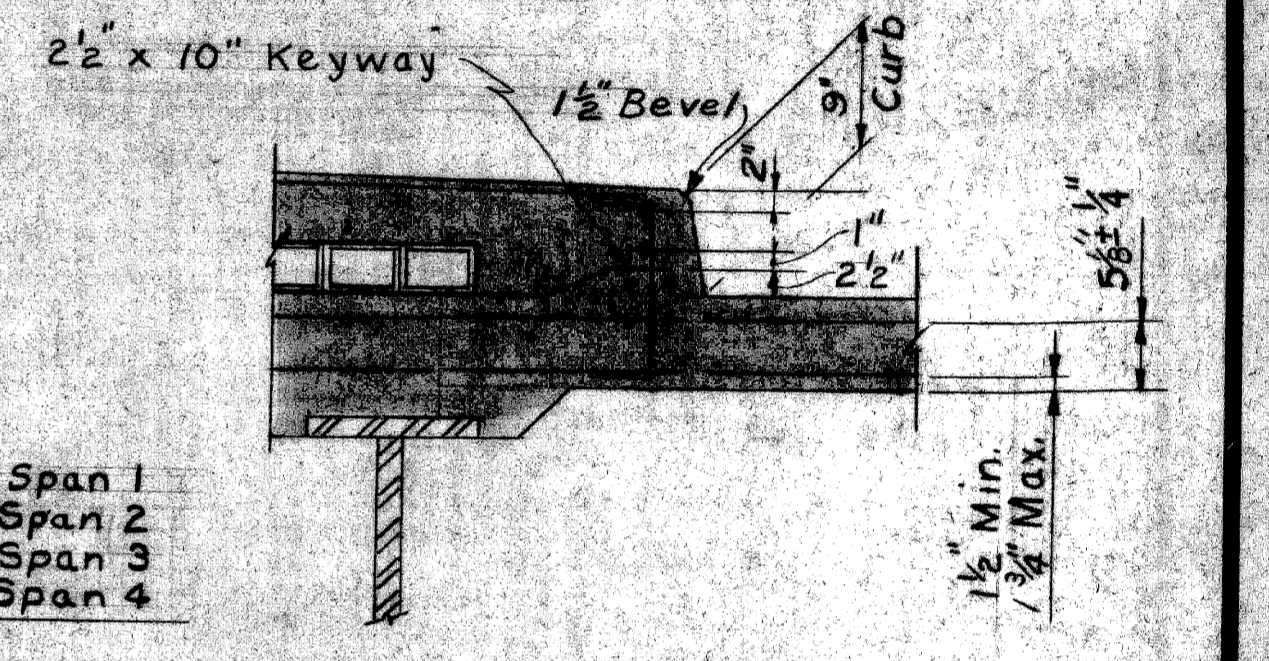


THREADED BARS (Incidental to Conc. Inserts)

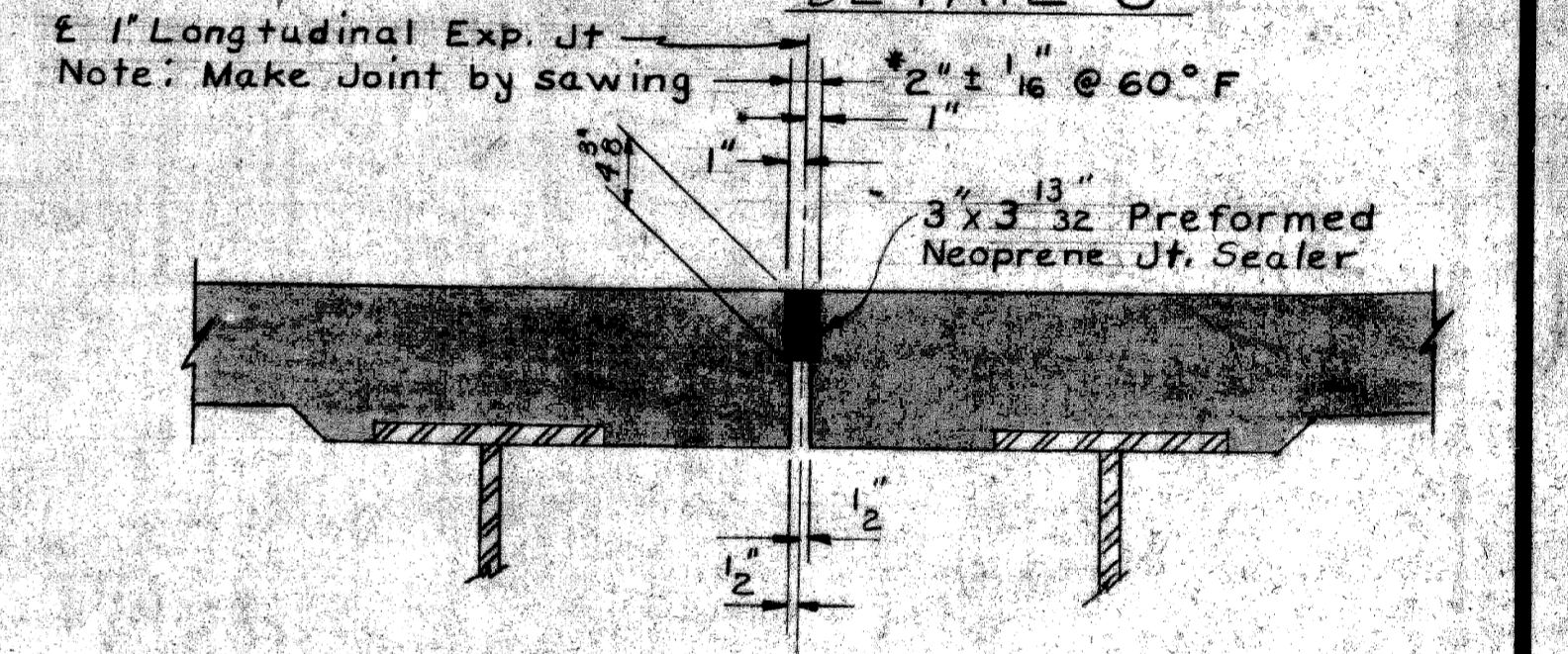
DETAIL A



DETAIL B

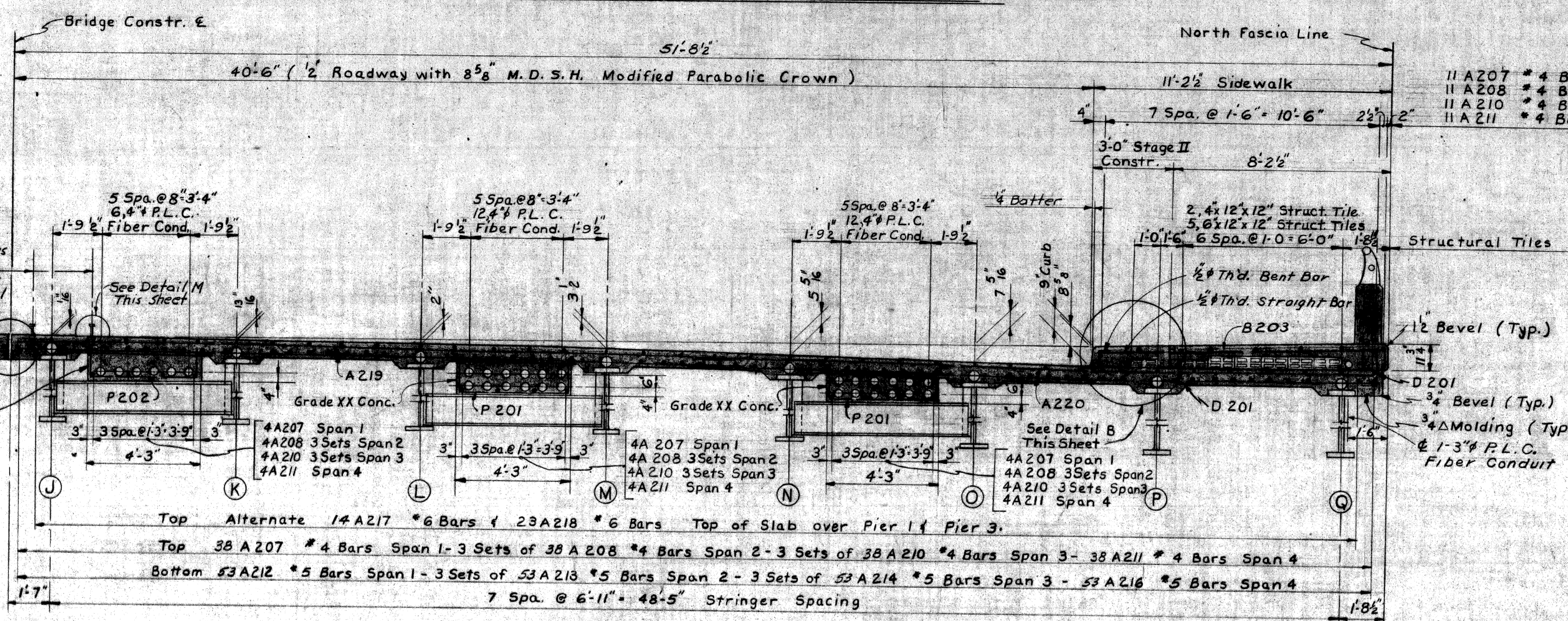
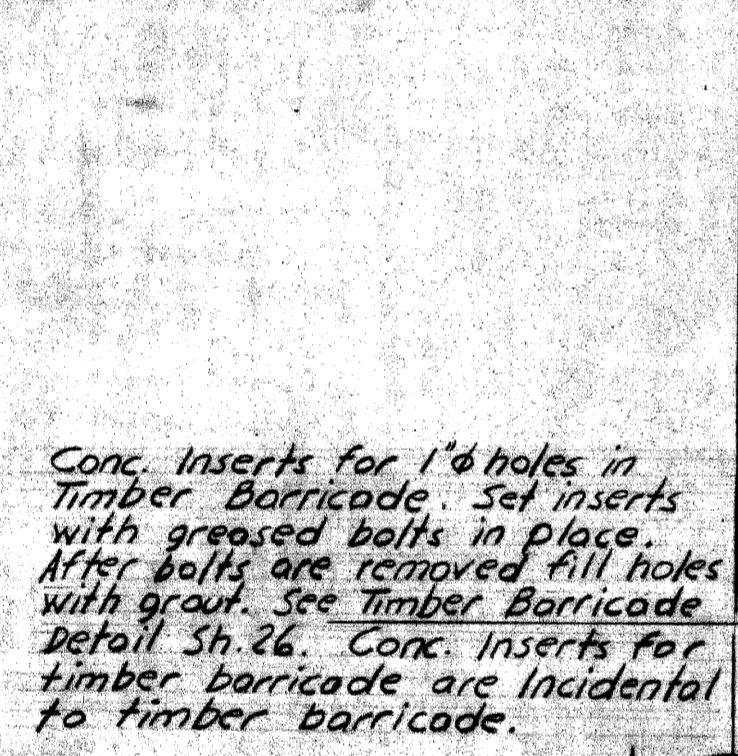


DETAIL C

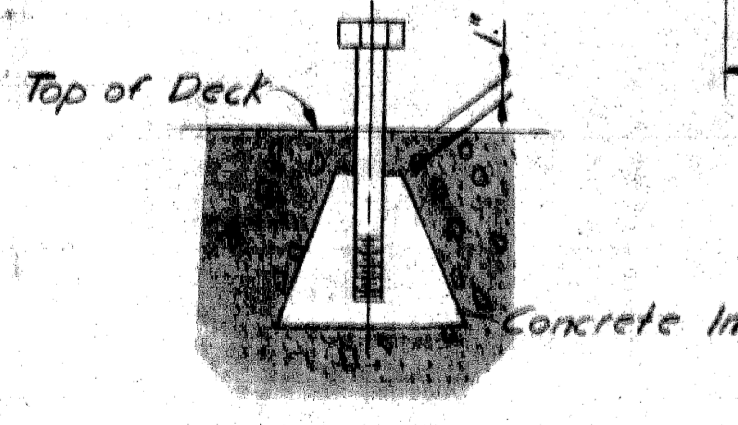


DETAIL D

DETAIL E



TYPICAL SECTION - NORTH HALF



DETAIL M

Work This Sheet with Sheets 20 thru 23 & 25 thru 27

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

WARREN AVE CROSSING THE JEFFRIES FREEWAY IN DETROIT

SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

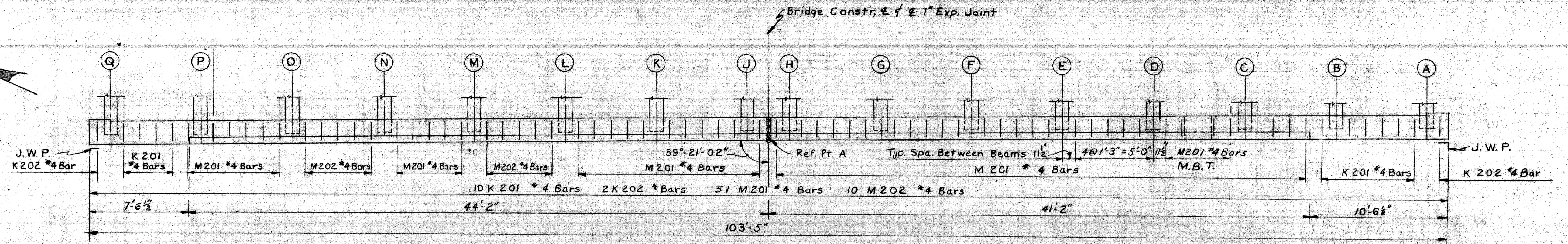
CITY OF DETROIT
 PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS' OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

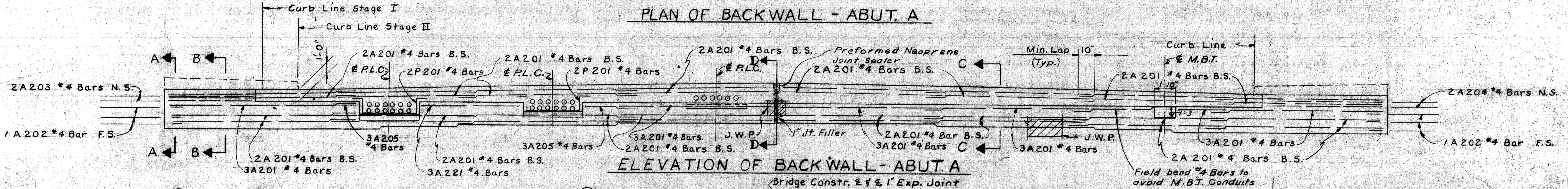
JOB No. PW 990(1)

SQUAD BOOK
 DRAWN BY: Lecher 2-68
 CHECKED BY: Lecher 2-68
 SHEET 24 OF 28

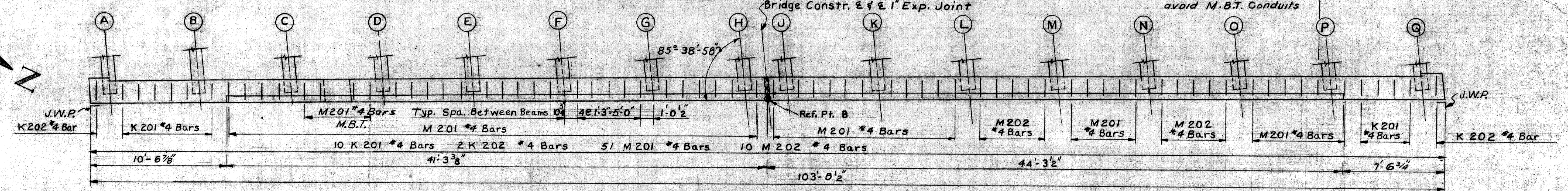
SOI of 82124 A



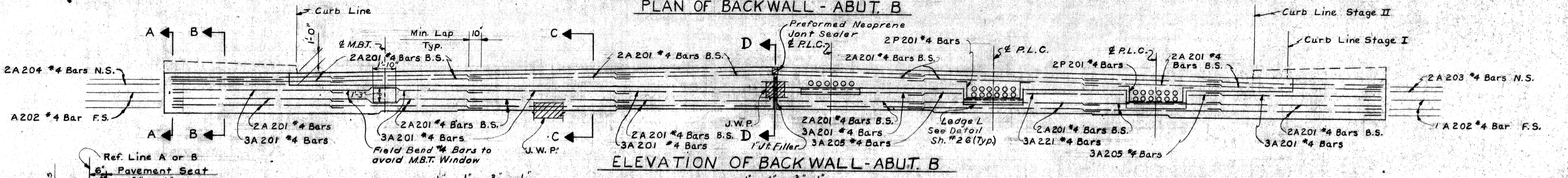
PLAN OF BACK WALL - ABUT. A



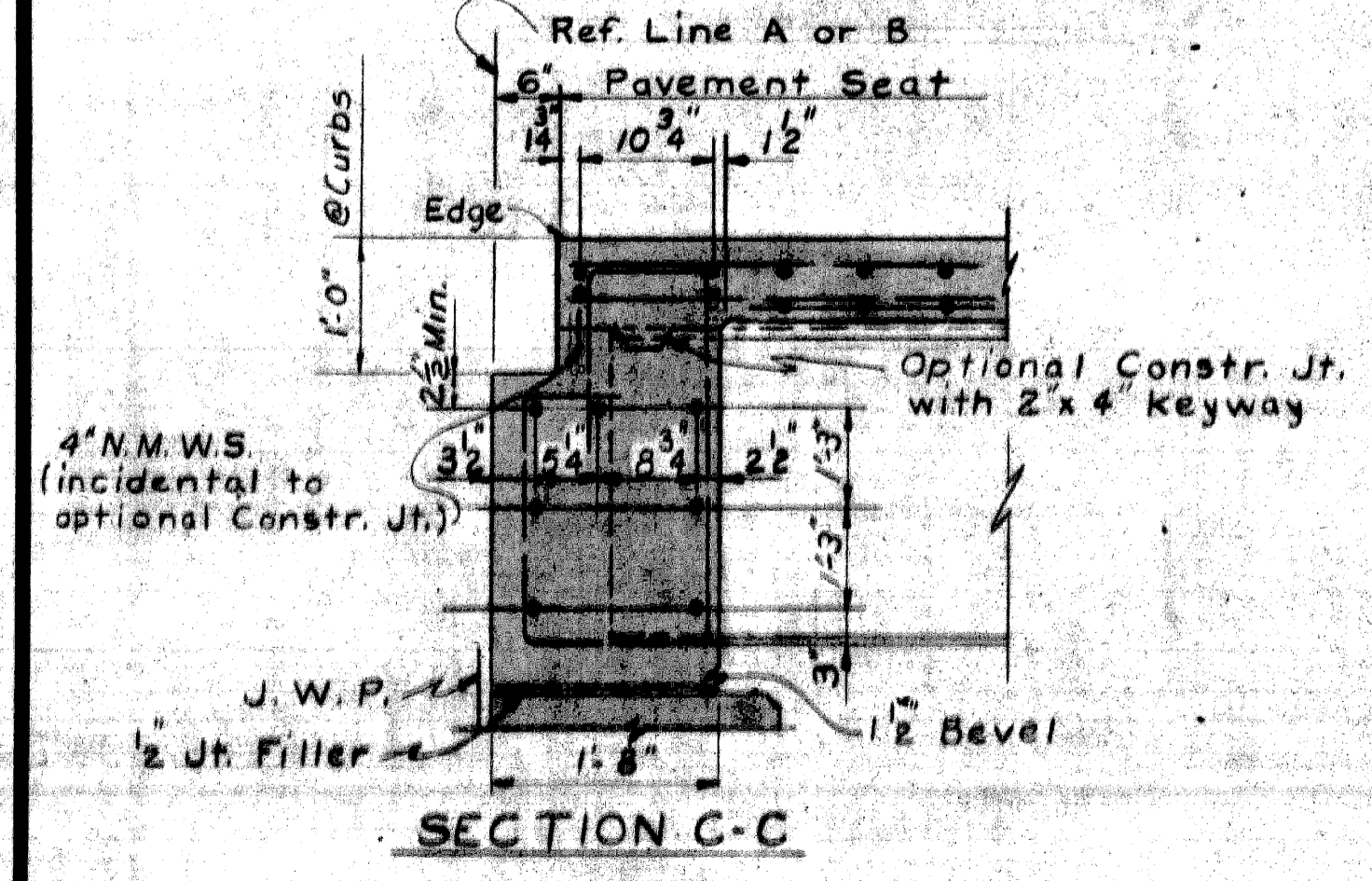
ELEVATION OF BACK WALL - ABUT. A



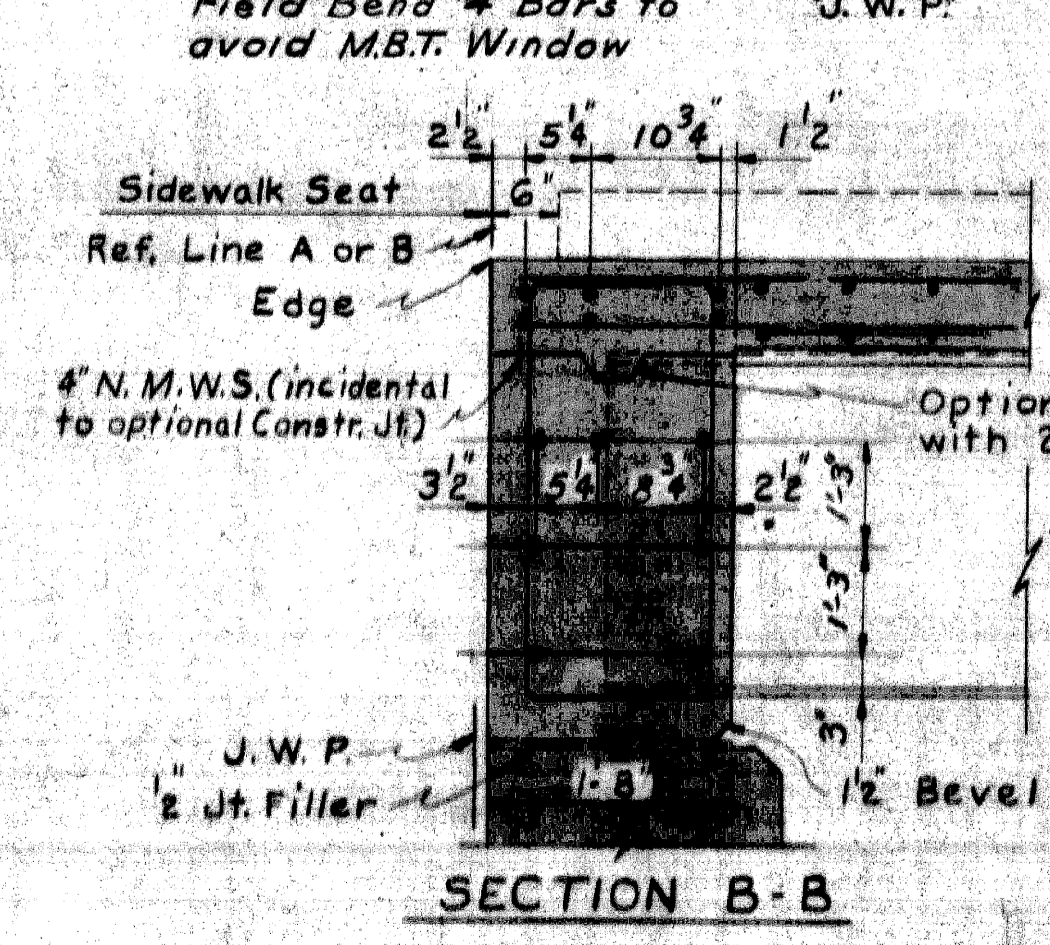
PLAN OF BACK WALL - ABUT. B



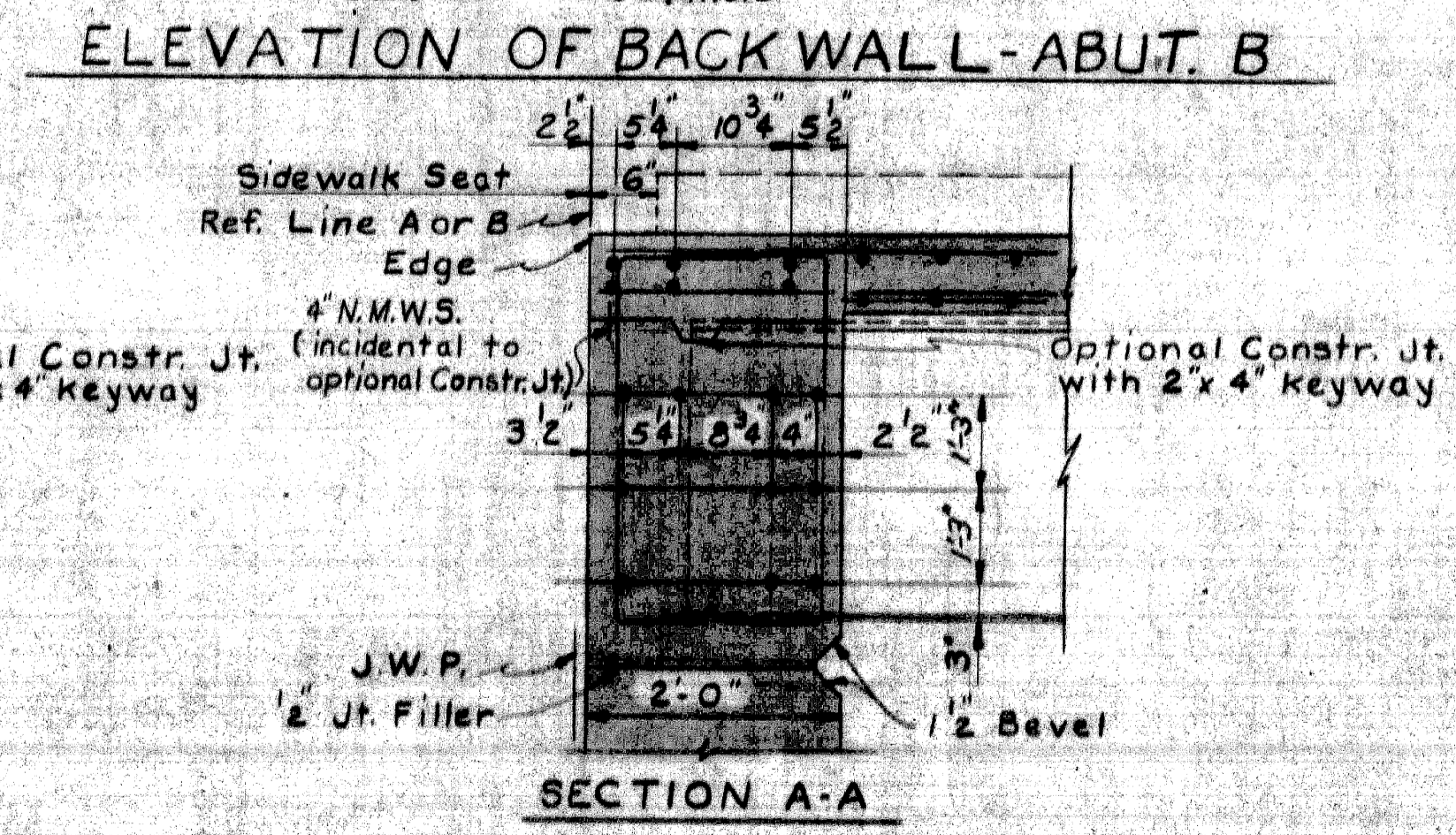
ELEVATION OF BACK WALL - ABUT. B



SECTION C-C



SECTION B-B



SECTION A-A

For Section D-D See Sh. 22
Work This Sheet with Sheets 20 thru 24, 26 & 27

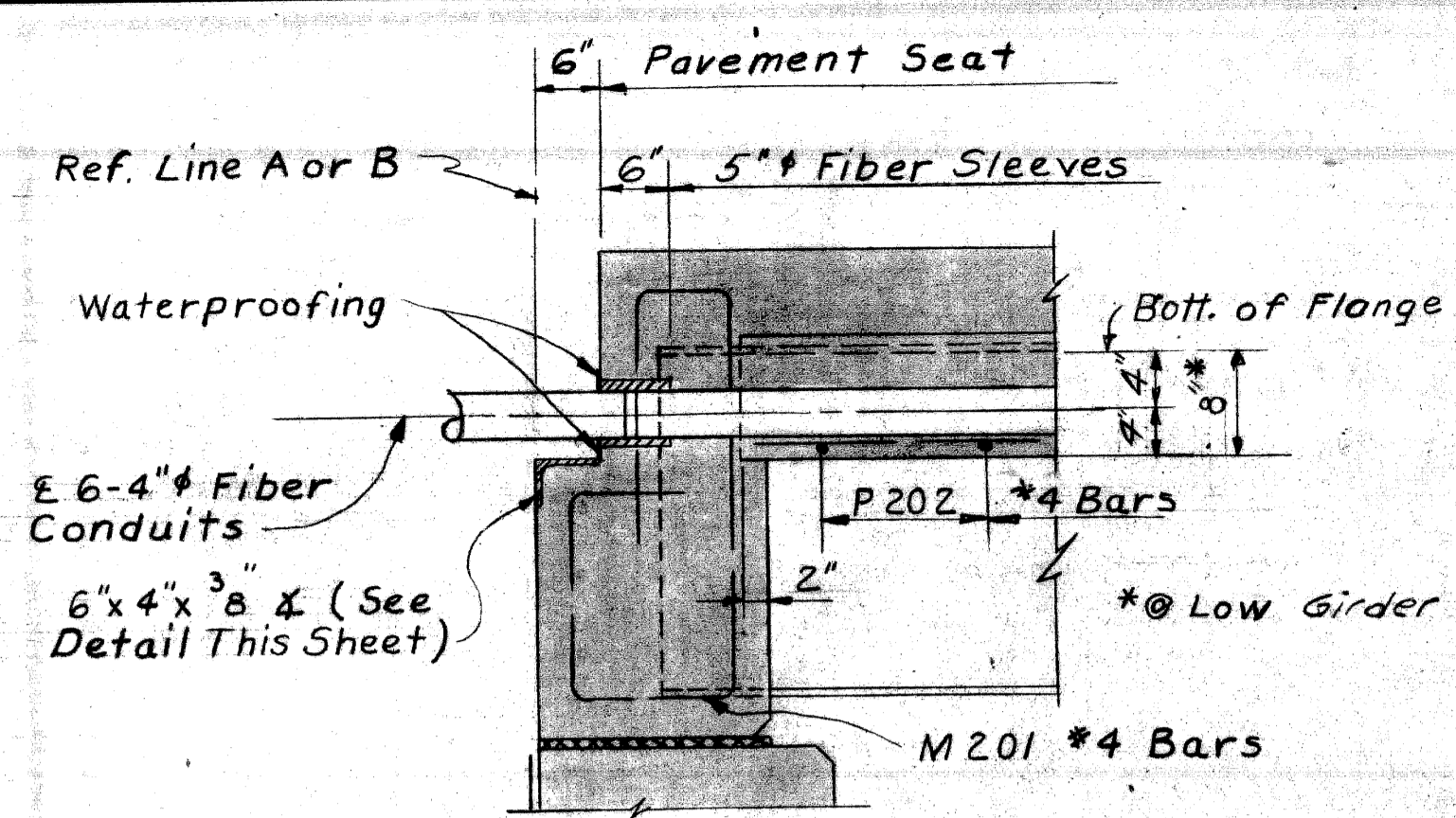
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

SUPERSTRUCTURE DETAILS

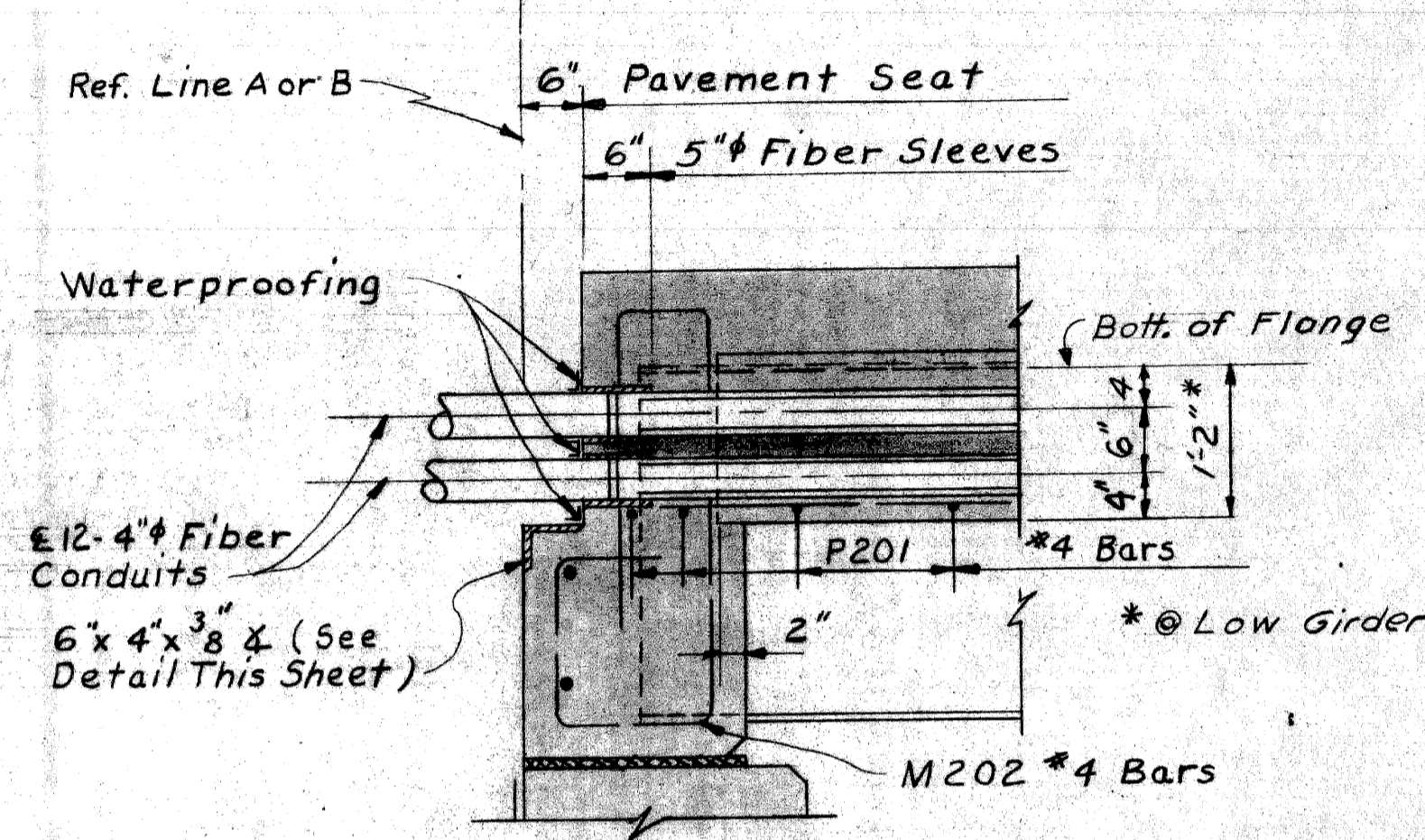
NO.	REVISIONS	DATE	BY

APPROVED: *[Signature]* STRUCTURAL ENGINEER
JOB No. PW 990(1)

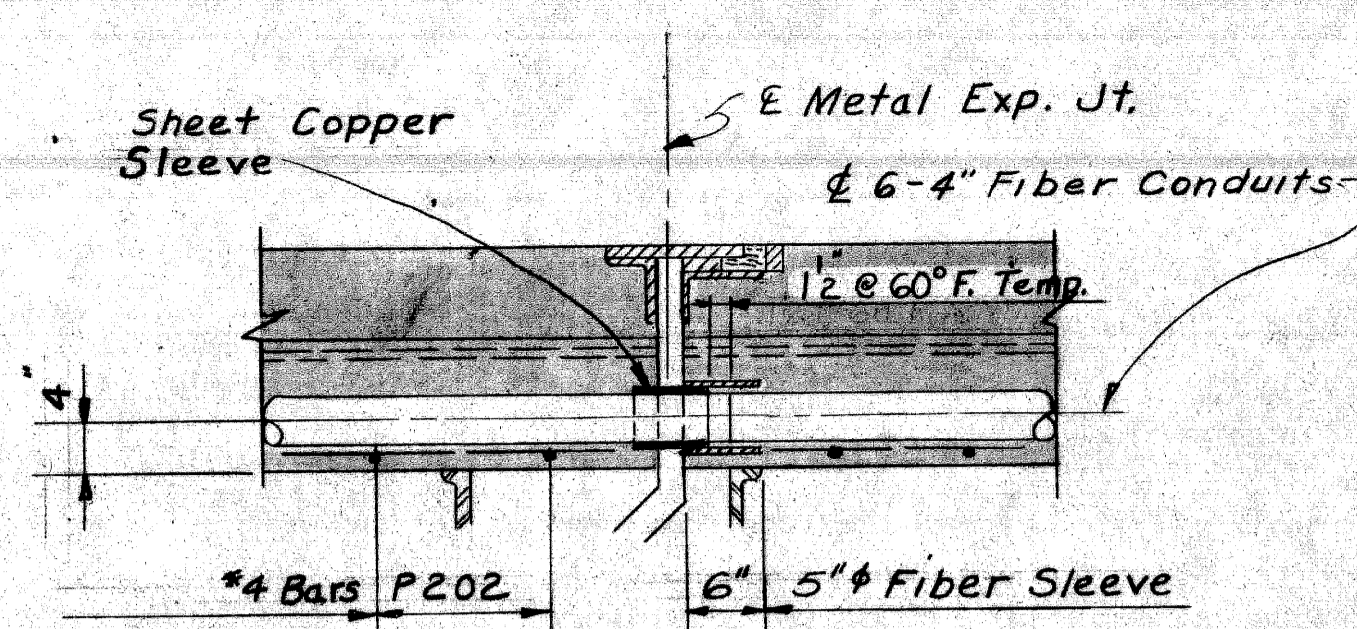
City of Detroit
SQUAD BOSS: *Locher* 8-68
DRAWN BY: *J.L.S.* 8-68
CHECKED BY: *Boyer* 8-68
SHEET 23 OF 28
SOI of 82124 A



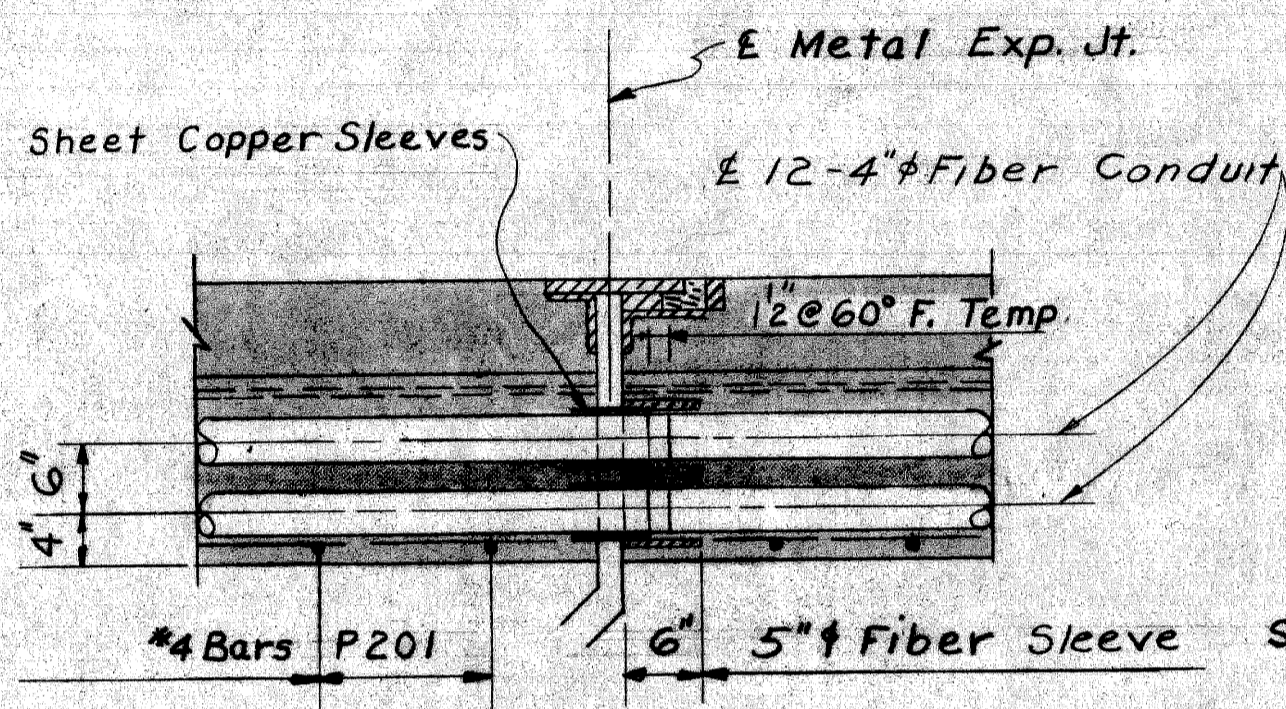
DETAIL AT BACKWALL-6-4 P.L.C.



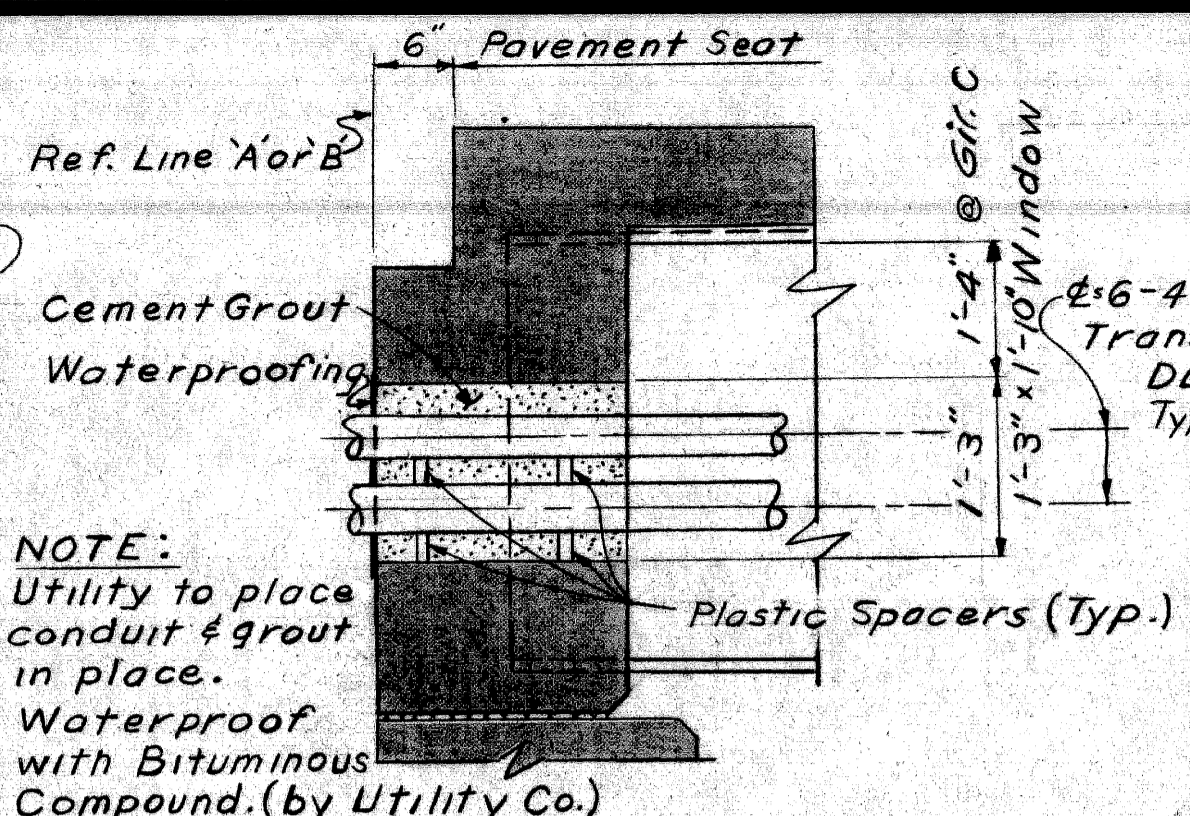
DETAIL AT BACKWALL-12-4 P.L.C.



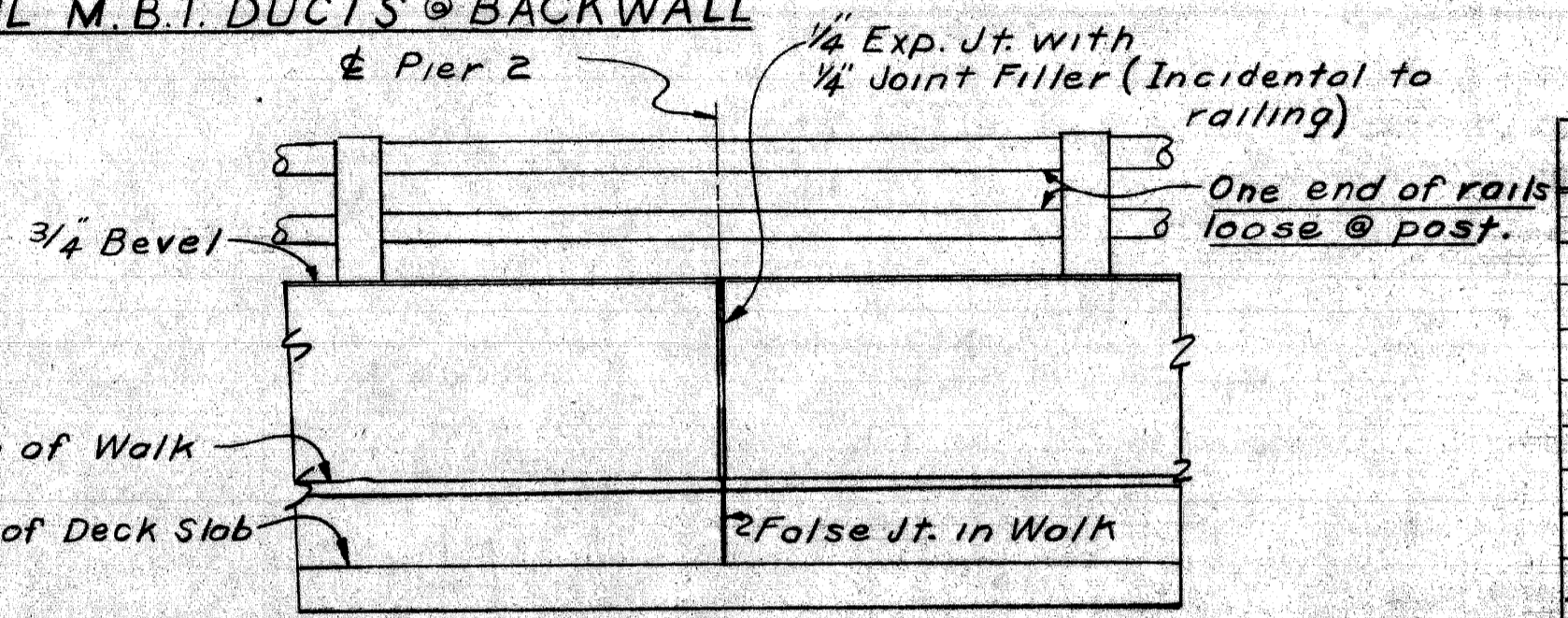
DETAIL AT EXPANSION JOINT-6-4 P.L.C.



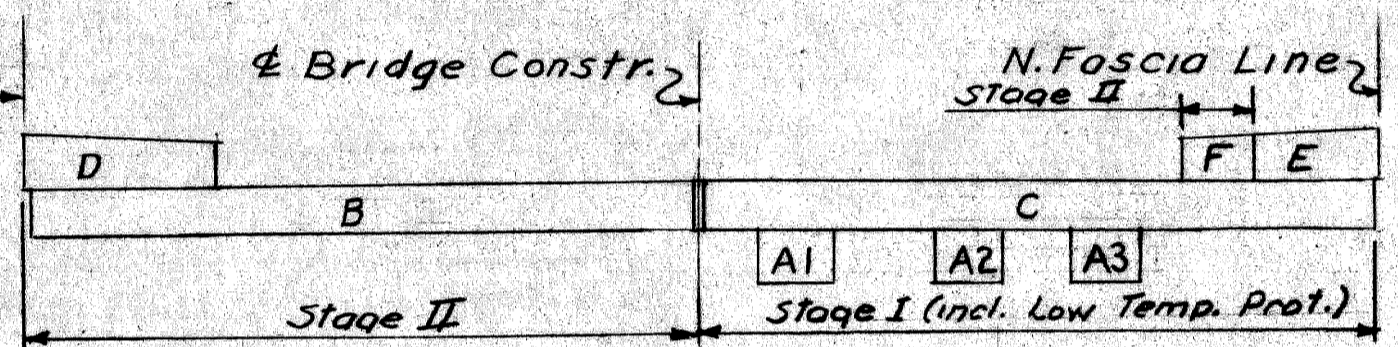
DETAIL AT EXPANSION JOINT-12-4 P.L.C.



DETAIL M.B.T. DUCTS @ BACKWALL



DETAIL L



POUR DIAGRAM

CONCRETE QUANTITIES (Cu. Yds.)						
GRADE	POUR	DESCRIPTION	SPAN			
			1	2	3	4
Grade Concrete	A1	P.L.C. Encasement	3.0	10.3	10.7	3.0
	A2	P.L.C. Encasement	4.3	16.5	17.4	4.4
	A3	P.L.C. Encasement	4.3	16.5	17.6	4.4
	B	Slab	52.1	126.4	128.4	52.9
	C	Slab	52.1	126.4	134.3	52.7
	D	Sidewalk	7.0	22.5	22.5	7.2
Grade A (GAA)	E	Sidewalk (Stage I)	5.1	16.4	17.7	5.3
	F	Sidewalk (Stage II)	2.2	7.2	7.8	2.2
Total Grade A (GAA) Concrete Superstructure			848.4 Cu. Yds.			
Total Grade XX Concrete Superstructure			112.4 Cu. Yds.			

MISCELLANEOUS QUANTITIES		
ITEM	AMOUNT	UNIT
Temporary Barricade	256	Ln. Ft.
Water Reducing Retarding Admixture	120	Gals
1/2" Concrete Inserts	174	Ea.
3/8" Concrete Inserts	104	Ea.
Protective Treat. for Bridge Deck	26,505	Sq. Ft.
Structural Tiles 4x12x12	1,213	Ea.
Structural Tiles 6x12x12	2,435	Ea.
1" Jt. Filler	10	Sq. Ft.
1/4" Preformed Neoprene Jt. Sealer	102.5	Lin. Ft.
3" Preformed Neoprene Jt. Sealer	256.3	Lin. Ft.
4"x4" 3/32" Pref. Neoprene Jt. Sealer	4.8	Lin. Ft.
Joint Waterproofing	356	Sq. Ft.
H. P. R. A. T. F.	205	Lin. Ft.
Low Temp. Protection Superstr. Conc.	544	Cu. Yds.
Bridge Railing-Solid Parapet Type	504.6	Lin. Ft.
3" Fiber Conduit	260	Lin. Ft.
4" Fiber Conduit	774.5	Lin. Ft.
Epoxy Bonding Agent	20	Gals.

NOTE: Parapet Concrete equals 42.0 Cu. Yds. (Gr. A6AA) incidental to bridge railing-solid parapet type and not a pay item.

GENERAL NOTES:

J.W.P. denotes Joint Waterproofing. N.M.W.S. Non Metallic Waterstop.
 H. P. R. A. T. F. denotes Hot Poured Rubber Asphalt Type Filler.
 For Details of bevels, moldings, and Bridge Railing, see standard sheet R16.
 Edge or groove denotes edging or grooving with approved tool.
 Sidewalk Pours shall not be cast until slab Concrete has attained at least 50% of its original design strength as determined by Section 5.01.05 of the Standard Specification.
 The Contractor is to provide a sawed joint 1/2" deep by 1/8" wide (min) in the top of slab over and parallel to the center line of Pier. The joint is to be sawed before casting of sidewalks and is to be filled with H. P. R. A. T. F.

Alphabetical designation of pours is not to be construed as a pour sequence.
 T.R.C.A.J.S. denotes Two component polyurethane cold applied joint sealer.
 N.S. Denotes Near Side
 B.S. Denotes Both Sides
 The pay item Temporary Barricade includes furnishing and assembling all material and fittings, installing, maintaining and removing the barricade units and all incidental work. The barricade units shall become the property of the contractor after completion of the Contract.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

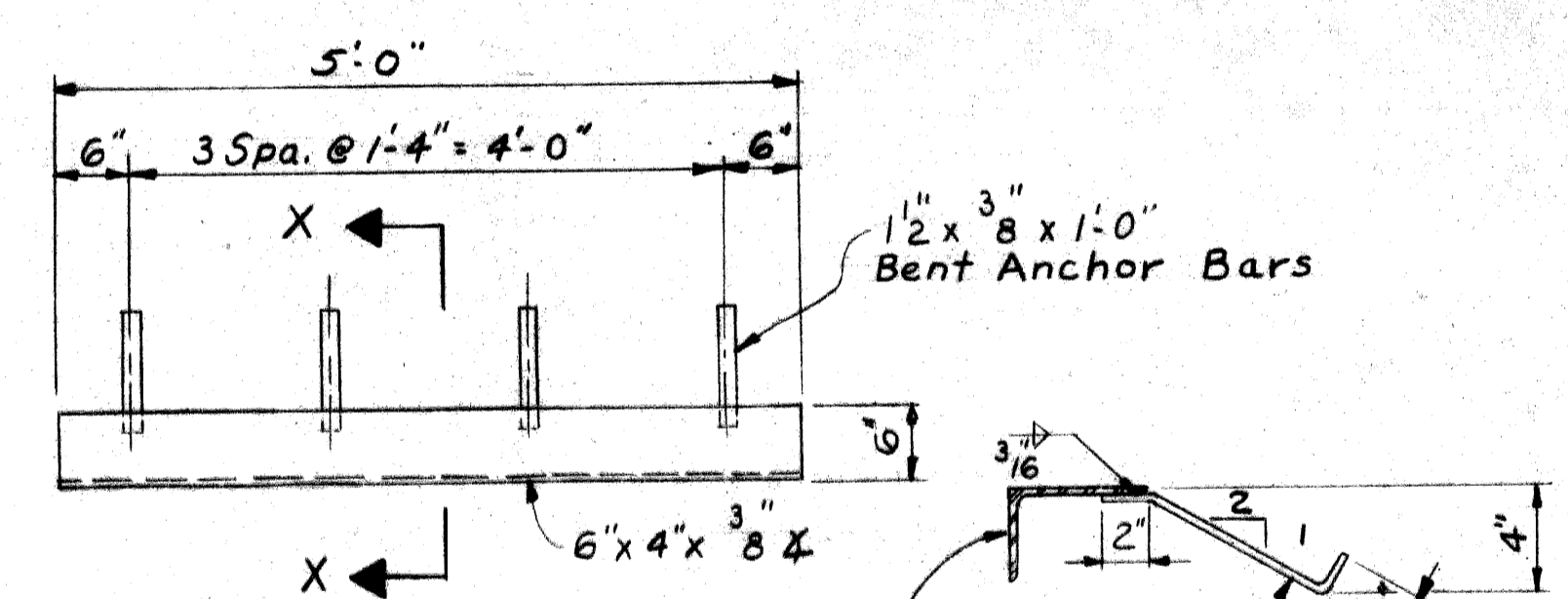
SUPERSTRUCTURE DETAILS

NO.	DESCRIPTION	DATE	BY

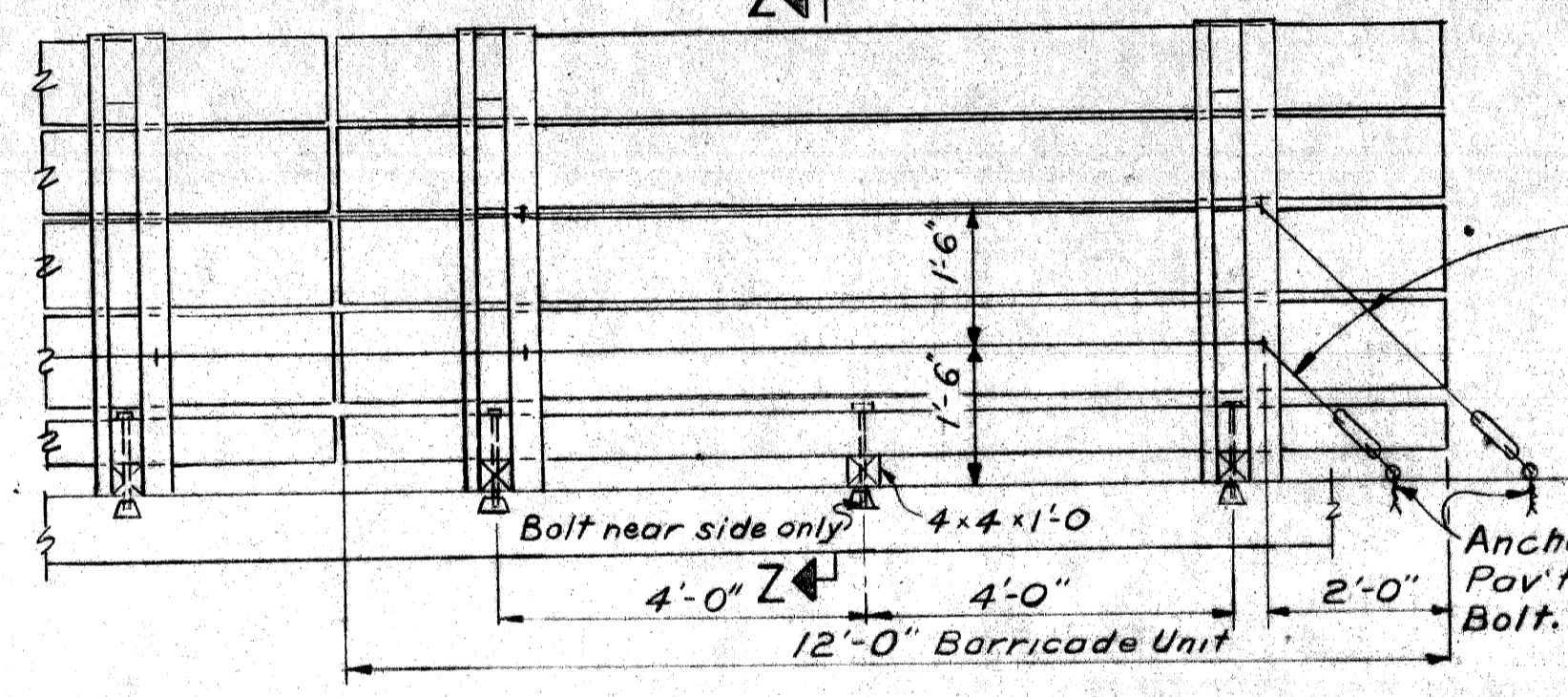
REVISIONS

DESIGNED BY: J. J. B. 8-65
 DRAWN BY: J. J. B. 8-65
 CHECKED BY: J. J. B. 8-65
 SHEET 26 OF 28

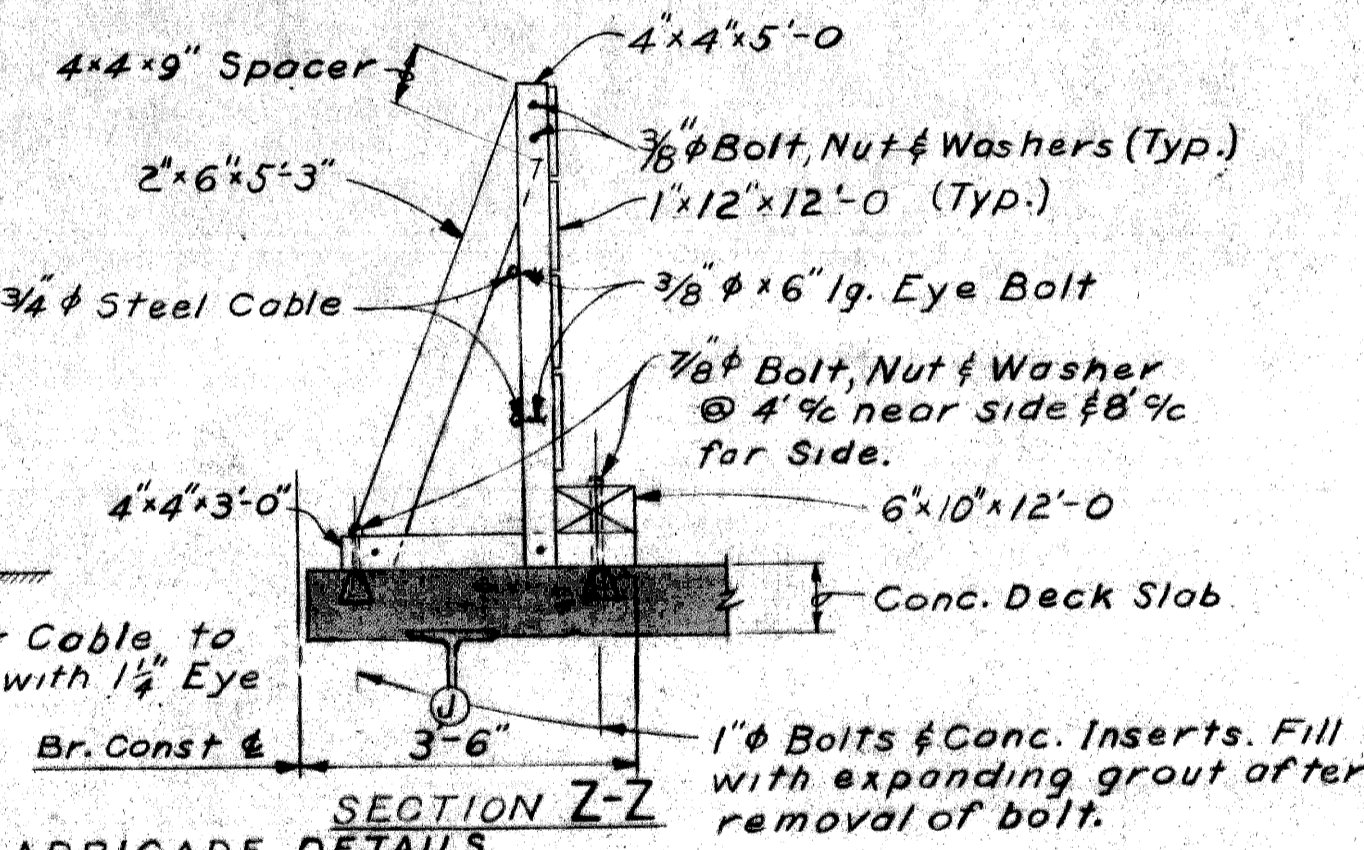
SOI of 82124 A



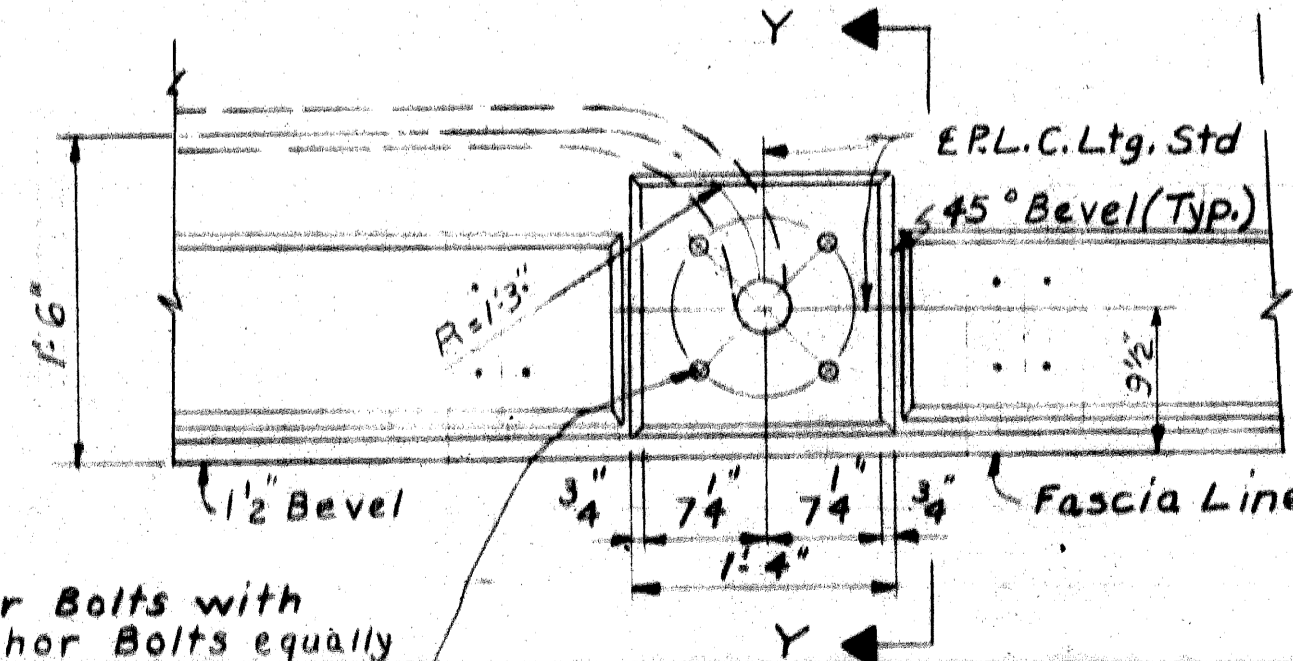
LEDGE ANGLE DETAILS



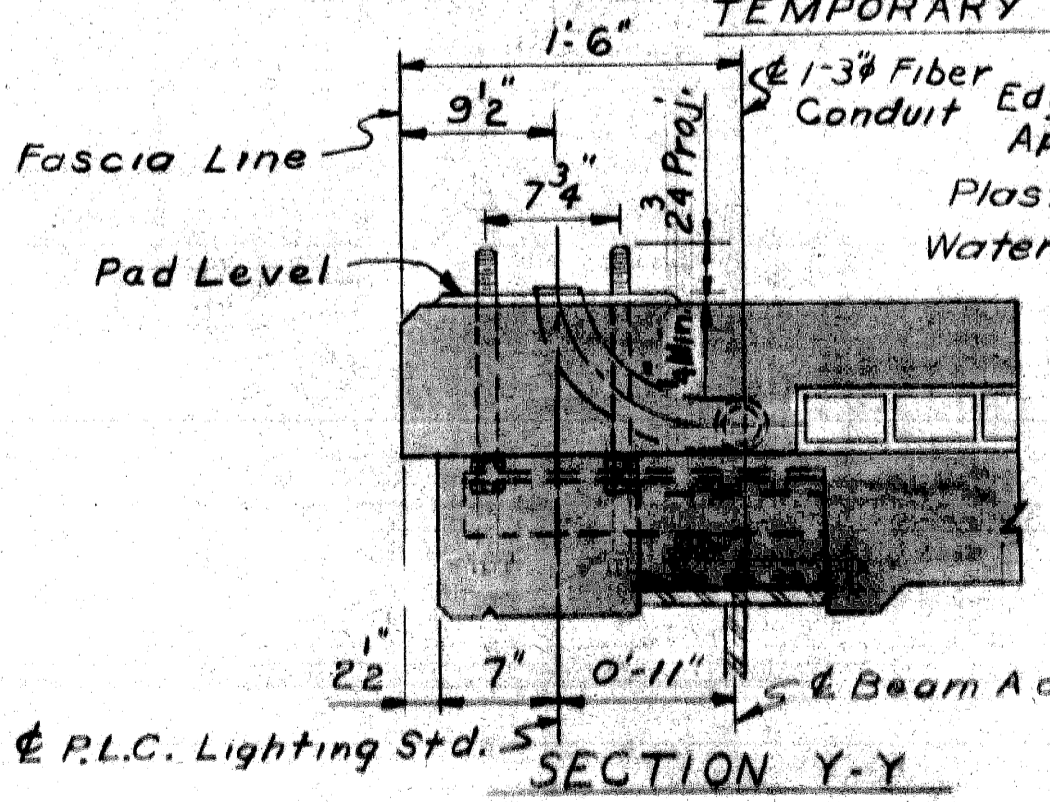
REAR ELEVATION



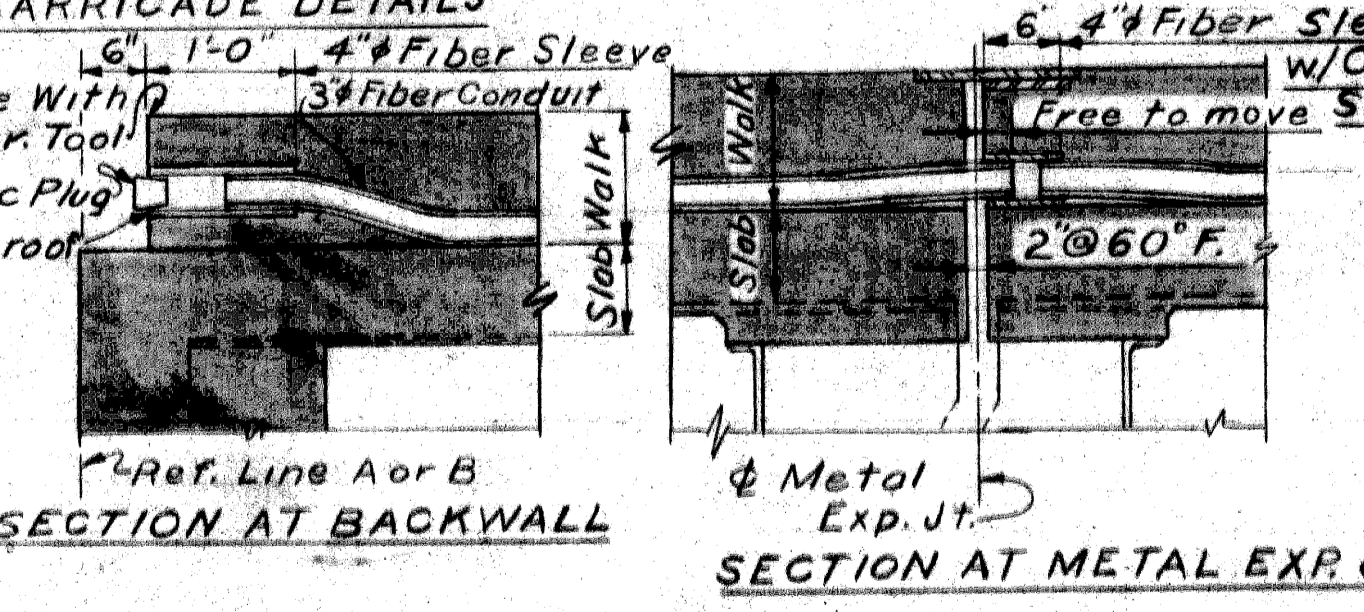
SECTION Z-Z



PLAN OF BRIDGE LIGHTING STD. BASE DETAIL



SECTION Y-Y



DETAILS OF P.L.C. CONDUITS IN SIDEWALK

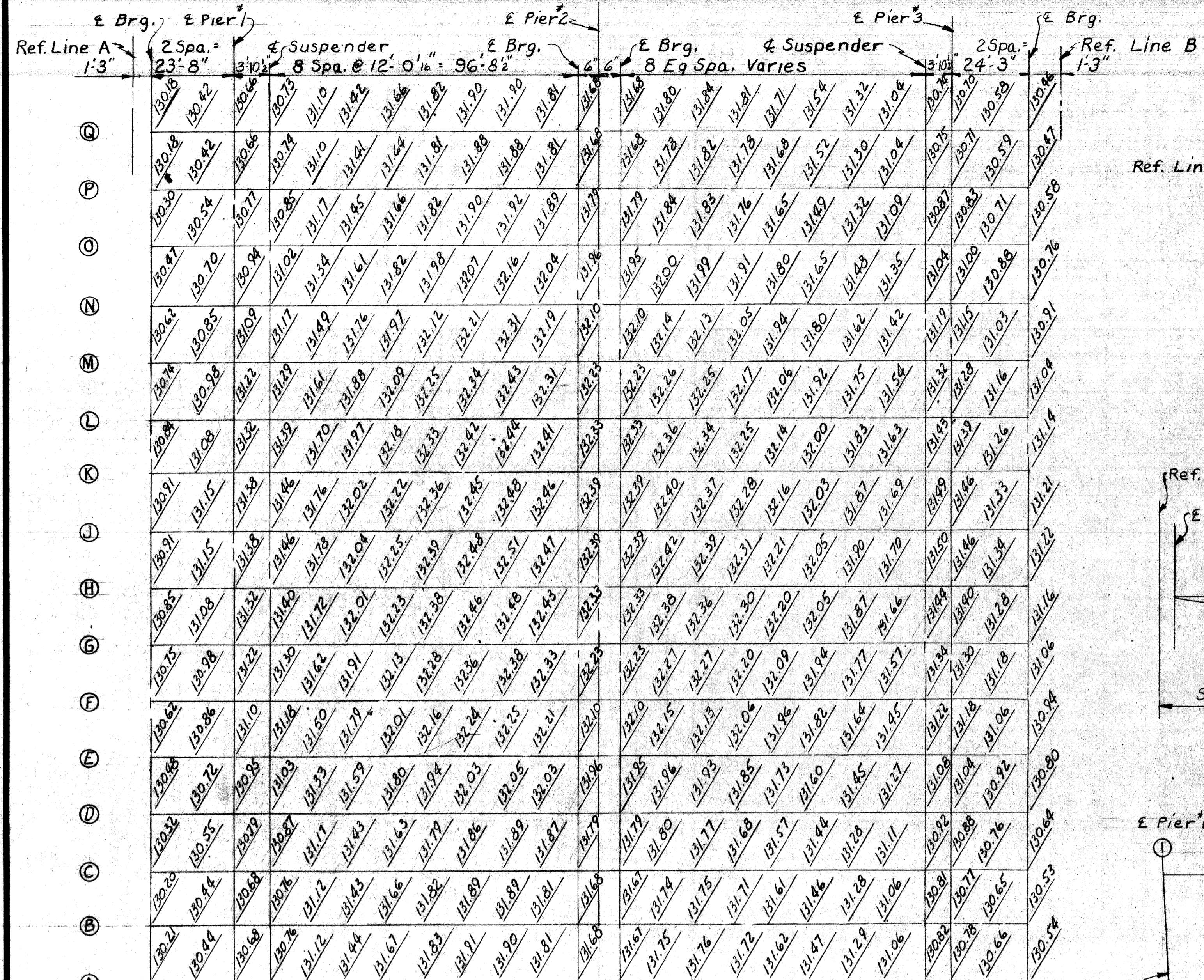
NOTE: Waterproofing sleeves, slip joints and plastic plugs are incidental to conduits.

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

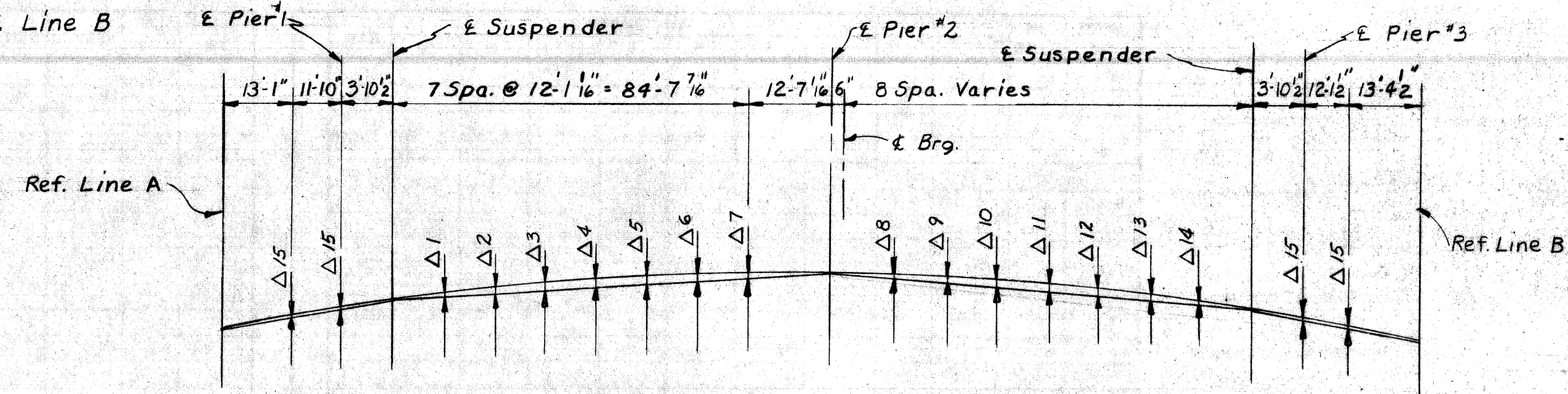
APPROVED: [Signature] CIVIL ENGINEER
 JOB No. PW 990(1)

4-1" x 1-6" Galvanized Anchor Bolts with Hex Nuts & Flat Washers. Anchor Bolts equally spaced on 11" circle. 23 bolts, nuts & washers are included in Structural Steel Weight.

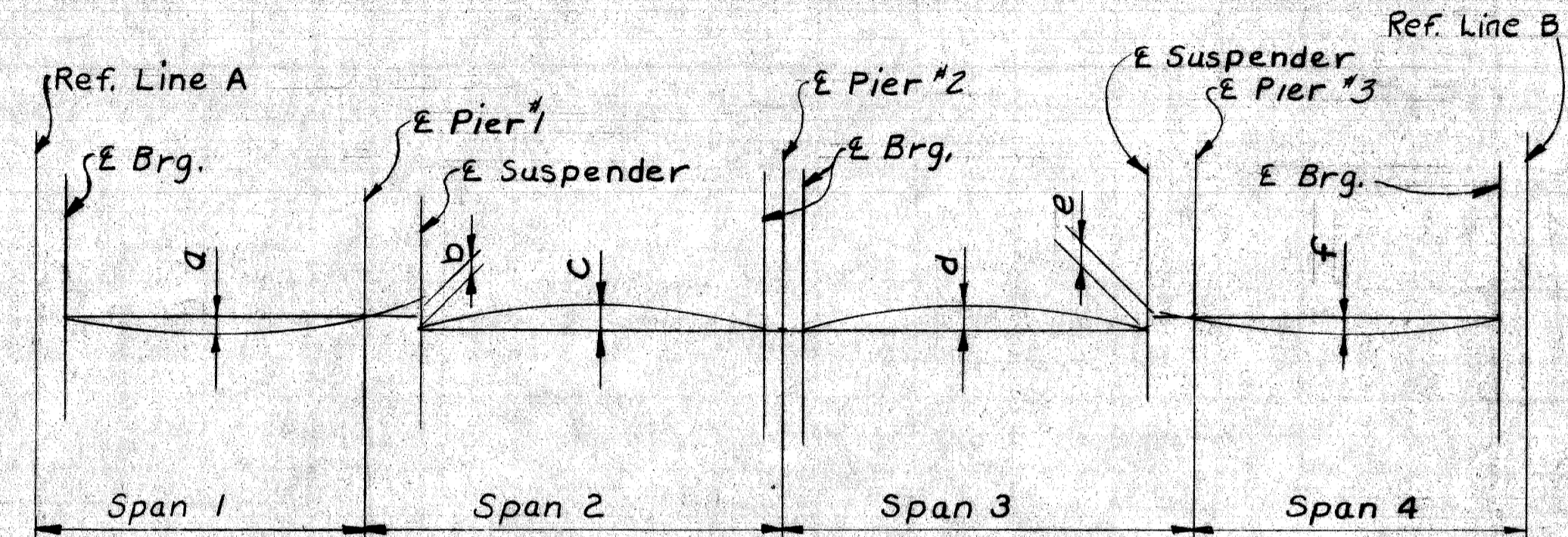
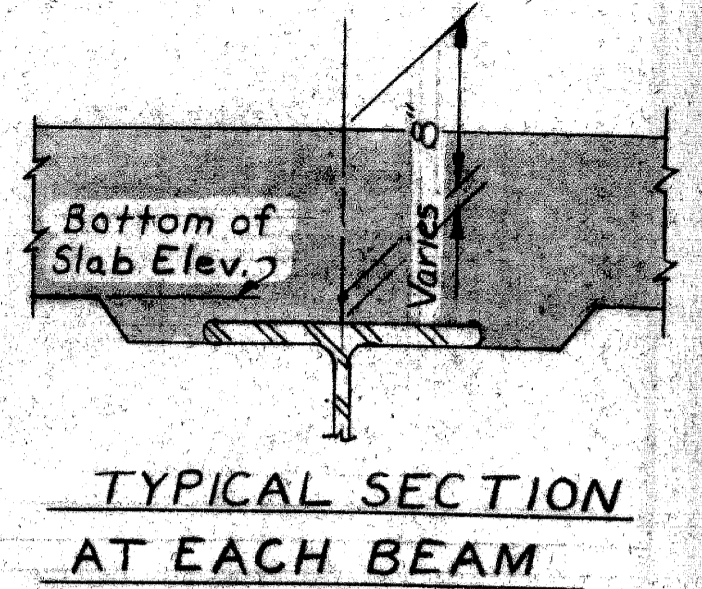
Work this sheet with sheets 20 thru 25th



BOTTOM OF SLAB ELEVATIONS
For Loading Case I



TOP OF SLAB OFFSETS
For Loading Case III



CAMBER DIAGRAM
For Loading Cases Shown in Tables

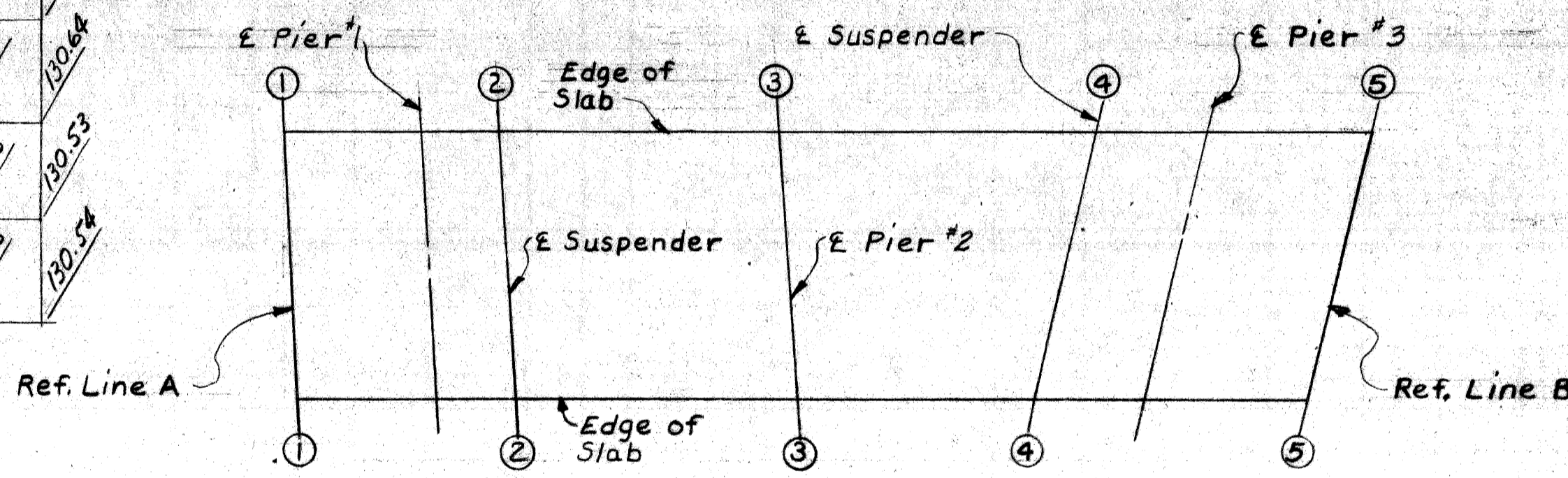
TOP OF SLAB OFFSETS (FEET)															
Beam	Δ1	Δ2	Δ3	Δ4	Δ5	Δ6	Δ7	Δ8	Δ9	Δ10	Δ11	Δ12	Δ13	Δ14	Δ15
A	.18	.32	.42	.44	.41	.32	.18	.11	.18	.20	.20	.17	.13	.07	.00
B	.16	.27	.35	.37	.35	.27	.16	.09	.13	.14	.13	.11	.08	.05	.00
C	.13	.22	.28	.30	.28	.22	.13	.06	.08	.07	.06	.05	.03	.02	.00
D-N	.12	.21	.27	.29	.27	.22	.13	.06	.08	.07	.05	.04	.03	.01	.00
O	.12	.22	.28	.30	.28	.22	.13	.06	.09	.08	.07	.05	.04	.02	.00
P	.16	.29	.37	.40	.37	.29	.17	.10	.16	.17	.16	.14	.11	.06	.00
Q	.18	.32	.42	.44	.41	.32	.18	.11	.23	.26	.26	.23	.18	.09	.00

CAMBER ORDINATES (Inches)																
Beam Case	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
Span I	7 7/8	7 1/4	4 3/8	4 1/2	6 1/4	6 1/4	6 1/4	5 3/4	4 3/8	4 3/8	5	5	5	5 3/8	7 1/4	7 3/8
Span II	6 3/8	6 1/2	4	4	5 3/8	5 3/8	5 3/8	4	4 1/4	4 3/8	4 3/8	4 3/8	4 3/8	4 3/8	6 1/2	6 3/8
Span III	5 3/8	4 1/4	2 3/8	2 3/4	3 1/4	3 1/4	3 1/4	3 1/4	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	4 1/4	5 3/8
Span IV	4 3/8	4 3/8	1 3/4	1 3/4	3 1/8	3 1/8	3 1/8	3 1/8	1 3/4	2 1/4	2 3/8	2 3/8	2 3/8	3	5 3/8	6
Span V	3 3/8	3 3/8	1 1/8	1 1/8	2 3/8	2 3/8	2 3/8	2 3/8	1 1/8	1 3/8	2	2 3/8	2 3/8	2 3/8	4 1/4	5 1/4
Span VI	2 3/8	1 3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	4 1/4	2 3/8
Span VII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

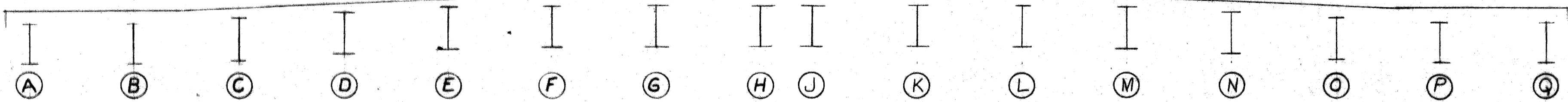
* Sign indicates that ordinates are measured downwards from chordline

Deflections* Due To P.L.C. Encasement (Inches)				
Beam	Span 1	Span 2	Span 3	Span 4
J & K	0	3/8	3/8	0
L & M	0	1/2	3/8	0
N & O	0	1/2	3/4	0

* Deflections given are at mid-span.



PLAN OF SLAB



SCREED TEMPLATE

SCREED TEMPLATE ELEVATIONS (For Loading Case II)																	
Line	Beam	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
1-1		130.85	130.85	130.96	131.12	131.27	131.39	131.49	131.55	131.55	131.49	131.39	131.26	131.11	130.94	130.83	130.83
2-2		131.43	131.43	131.54	131.70	131.85	131.97	132.07	132.13	132.13	132.06	131.96	131.84	131.69	131.52	131.40	131.40
3-3		132.35	132.35	132.46	132.62	132.77	132.90	133.00	133.06	133.06	133.00	132.90	132.77	132.63	132.46	132.35	132.35
4-4		131.49	131.48	131.59	131.75	131.89	132.01	132.11	132.17	132.16	132.10	131.99	131.86	131.71	131.54	131.42	131.41
5-5		131.19	131.19	131.30	131.46	131.60	131.72	131.81	131.87	131.87	131.80	131.70	131.57	131.41	131.24	131.12	131.12

NOTES:

Longitudinal strike-off finishing machine is to be used in placing deck concrete

Screeds affected by loads in other spans are to be set to the elevations shown before casting any concrete. Concrete in the suspended spans is to be cast before the concrete in the anchor spans

CASE I
Bottom of slab elevation are based on the condition that all structural steel has been erected, but no other loads applied. These elevations include allowances for deflections due to forms, steel reinforcement, shear developers in place, deck concrete, railing, utilities and sidewalk

CASE II
Screed elevations are based on the condition that no slab concrete has been cast and that formwork, steel reinforcement and shear developers are in place.

CASE III
Shear developers, steel reinforcement and slab concrete in place on structural steel and no other load applied.

Work This Sheet with Sheets

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

WARREN AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

SUPERSTRUCTURE DETAILS

REVISED BY: [Signature] DATE: [] BY: []

NO. [] DESCRIPTION [] DATE [] BY []

APPROVED: [Signature] CIVIL ENGINEER

JOB # 76 PW 990(1)

REVISIONS

NO.	DESCRIPTION	DATE	BY

SOI of 82124 A

ABUTMENTS & WING WALLS

Table with columns: BAR, DIMENSIONS (a, b, c, d, e, f, g), SIZE, LENGTH, NO. REQ'D, TOTAL WT. Rows A1-A28 and C1-E1.

Total Abutments & Wingwalls 18,484

PIERS

Table with columns: BAR, DIMENSIONS (a, b, c, d, e, f, g), SIZE, LENGTH, NO. REQ'D, TOTAL WT. Rows A101-A125, B101-B102, C101, D101-D104, E101, K101, U101, V101.

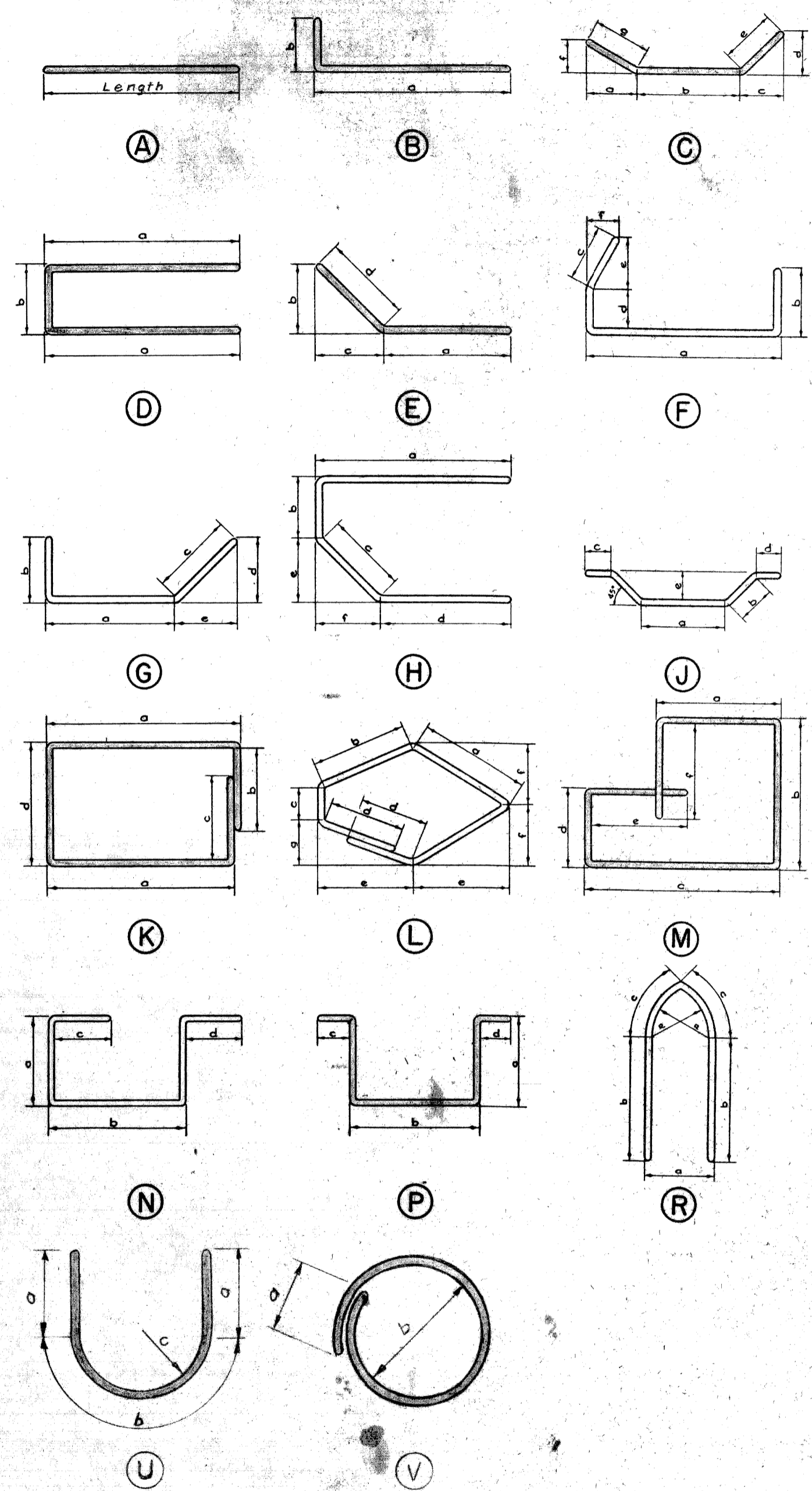
Total Piers 109,821

SUPERSTRUCTURE

Table with columns: BAR, DIMENSIONS (a, b, c, d, e, f, g), SIZE, LENGTH, NO. REQ'D, TOTAL WT. Rows A201-A227, B201-B203, D201-D202, P201-P202, E201-E204, K201-K202, M201-M202.

Total Superstructure 190,053

BAR BENDING DIAGRAM



Note:- All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications. All bar numbers shown on this sheet are to be prefixed S-O1. Steel for reinforcement shall be intermediate or hard grade.

Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute. Grand Total Steel Reinforcement 318,358 #

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS APPROVED [Signature] STRUCTURAL ENGINEER JOB No. PW 990(1)

MICHIGAN STATE HIGHWAY DEPARTMENT STEEL REINFORCEMENT DETAILS. Includes revision table and drawing details like 'SQUAD BOSS', 'DRAWN BY', 'CHECKED BY', and 'SOI of 82124A'.