

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED BRIDGES

MICHIGAN PROJECT I-96-4(71)231
STATE PROJECT BI82123-045

JEFFRIES FREEWAY
WAYNE COUNTY
CITY OF DETROIT

PROJECT BI 82123-045
PART 1: ROADS
PART 2: S48 & S49 OF 82123 K
SOI OF 82124 A
PART 3: W13 OF 82123 K

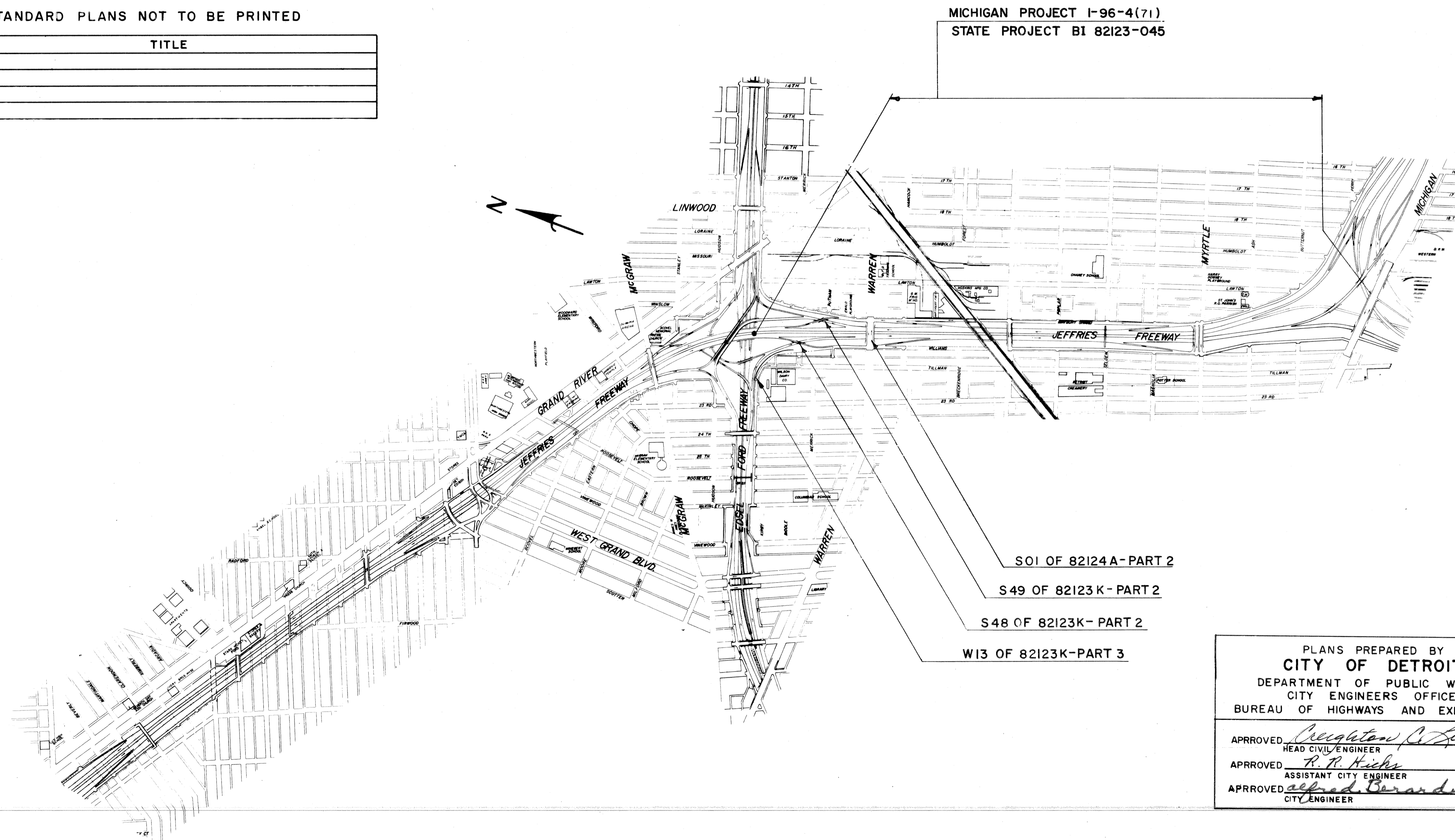
NOTE:
Where the following items are called for on the Plans,
they are to be constructed according to the Standard
Plan given below opposite each item, unless otherwise
indicated.

STANDARD PLANS TO BE PRINTED

SHEET NO.	TITLE
R11 & R12	Bridge Railing, Drain Casting, Bar Chair, Molding & Bevel Details
R16	Bridge Railing, Drain Casting, Bar Chair, Molding & Bevel Details
SP2	Standard Slope Paving Details
DR11 & DR12	Bridge Railing, Drain Casting, Bar Chair, Molding & Bevel Details

STANDARD PLANS NOT TO BE PRINTED

SHEET NO.	TITLE



GENERAL NOTES

Except where otherwise indicated on these Plans or in the Proposal and Supplemental Specifications contained therein, all materials and workmanship shall be in accordance with the Michigan Department of State Highways' Standard Specifications for Road and Bridge Construction, 1967 Edition.

The design of these structures is based on the Michigan Department of State Highways' Specifications for Highway Bridges, MS20-44 Loading, 1958 Edition and current AASHTO Standard Specifications for Highway Bridges, MS20-44 Loading.
Live load plus impact deflection: 1/1000 of span length and 1/350 of cantilever arm.
The character of all materials and the extent thereof as shown by borings has been obtained by methods and from sources believed to be reliable. The exactness of this information is, however, in no case guaranteed. Boring samples are on file in the Design Office at Lansing and are available for inspection.

All exposed concrete corners shown square on the Plans shall be beveled with 1 2" triangular moldings except as otherwise noted.

The stationing as shown on these Plans for the intersection of the centerline of bridge and roadway is believed to be correct. It shall, however, be checked at the time of starting construction and if the stationing shown on the plans is incorrect it shall be reported to the Design Office at Lansing and the structure shall be staked out using the actual intersection of the centerline of bridge and roadway as the control point.

The contractor shall contact all Utility Companies regarding their facilities prior to starting work.

The following items shown in these plans are to be constructed with the road work: Bridge approach curb and gutter, catch basins, inlets, culverts, sewers, C.M.P., temporary detours, earth excavation and any other items not listed in the bill of materials.

The existing structures shall be checked at the time of starting construction to see that its relationship to the proposed work is as shown on these plans and any differences requiring changes in the new work shall be reported to the Design Office.

The grades and stresses of the structural materials used in these structures are as follows:
Concrete, Grade A $f'_c = 3000$ psi.
Steel Reinforcement: Intermediate or Hard Grade $f_y = 20000$ psi.
Structural Steel: A441 $f_y = 27000$ psi, max.
* and as modified by design specifications.

ITEM NO. 1122

CONTRACT FOR STRUCTURES		
APPROVALS		
CHECKED	DESIGN ENGINEER	DATE
RECOMMENDED FOR APPROVAL	TRAFFIC DIVISION	DATE
RECOMMENDED FOR APPROVAL	DESIGN DIVISION	DATE
RECOMMENDED FOR APPROVAL	CONSTRUCTION DIVISION	DATE
RECOMMENDED FOR APPROVAL	CHIEF-BUREAU OF ENGINEERING	DATE

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

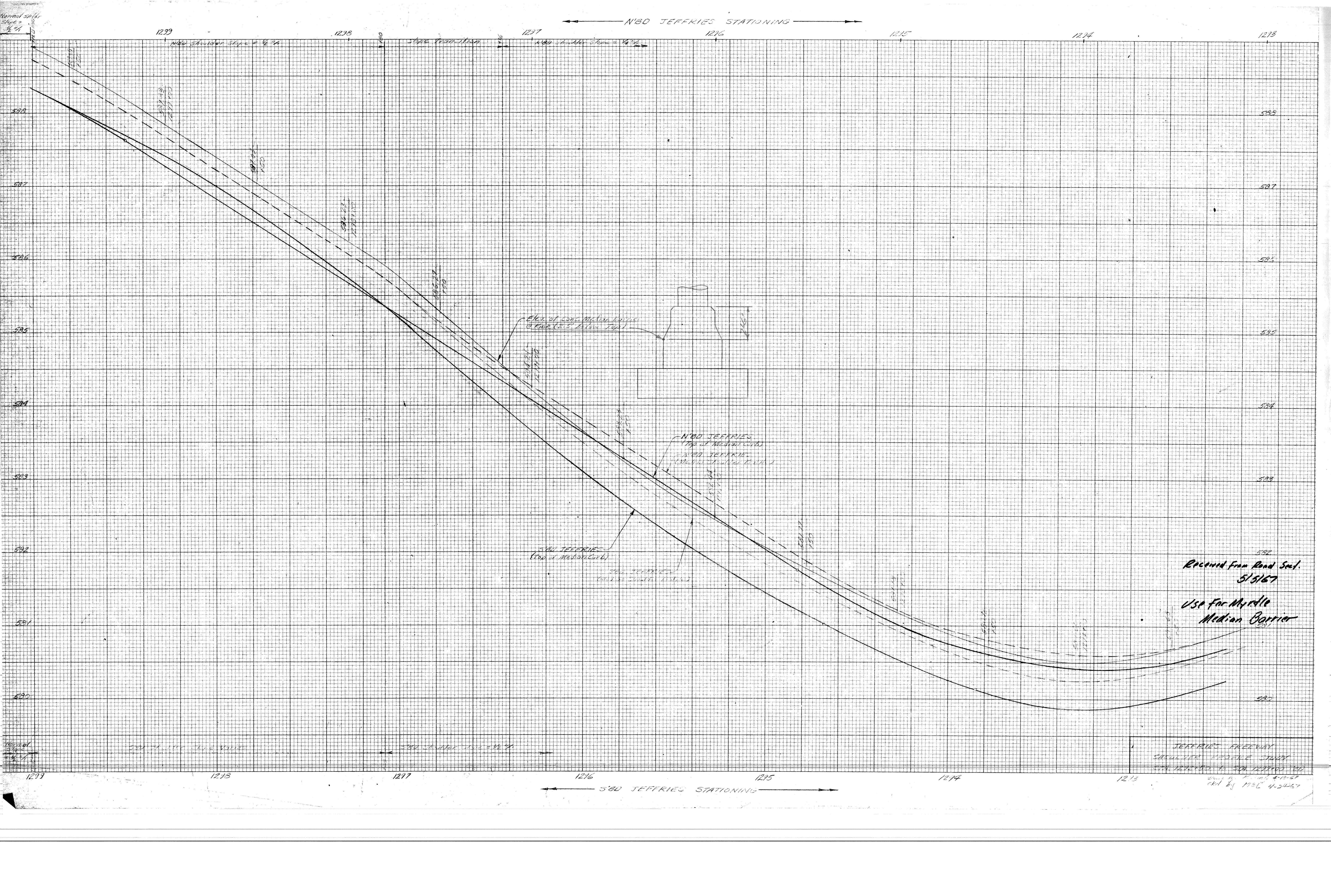
APPROVED: *Creighton C. Starnes*
HEAD CIVIL ENGINEER
APPROVED: *R. R. Hicks*
ASSISTANT CITY ENGINEER
APPROVED: *Edward Baranducci*
CITY ENGINEER

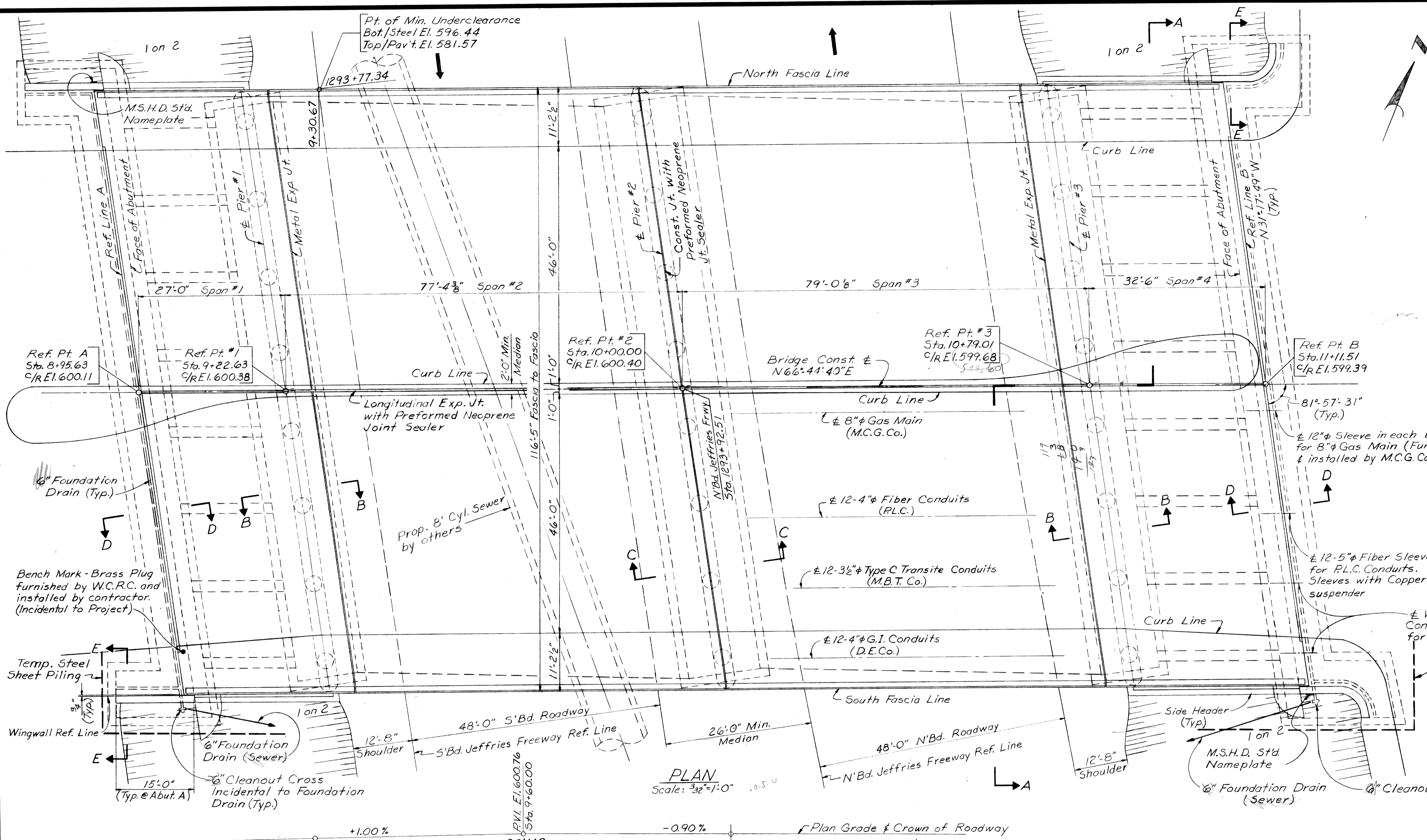
DEPARTMENT OF STATE HIGHWAYS
HENRIK E. STAFSETH-STATE HIGHWAY DIRECTOR
APPROVED BY: _____
DEPUTY STATE HIGHWAY DIRECTOR

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
APPROVED: _____
FOR THE DIVISION ENGINEER

BI 82123-045	STATE PROJECT NO.	FEDERAL PROJECT	SHEET NO.
SOI, S48, S49 W13	BI 82123-045	I-96-4(71)	1

STATE PROJECT NO. BI 82123-045





GENERAL NOTES:

The design of this structure is based on M.S.H.D. Specifications for the design of Highway Bridges, 1958 edition (H520-44) Loading.

Live load plus impact deflection = $\frac{1}{1000}$ of span length and $\frac{1}{300}$ of cantilever arm.

The top of roadway slab and tops of curbs are parallel to the vertical curve and tangents.

Grouted Riprap as Slope Protection-Class A is not to be used on this project.

For details of Slope Protection-Class A, see Std. Sh. SP2.

Tamped Clay and Selected Excavated Material are incidental to Unclassified Excavation.

C/R denotes Crown of Roadway.

The vertical pay limits of temporary steel sheet piling are the top of retained earth and the bottom of subfooting.

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. Ladle analysis and mill reports are not required for steel used in Sheet Piling.

PLAN
Scale: $\frac{3}{32}'' = 1'-0''$

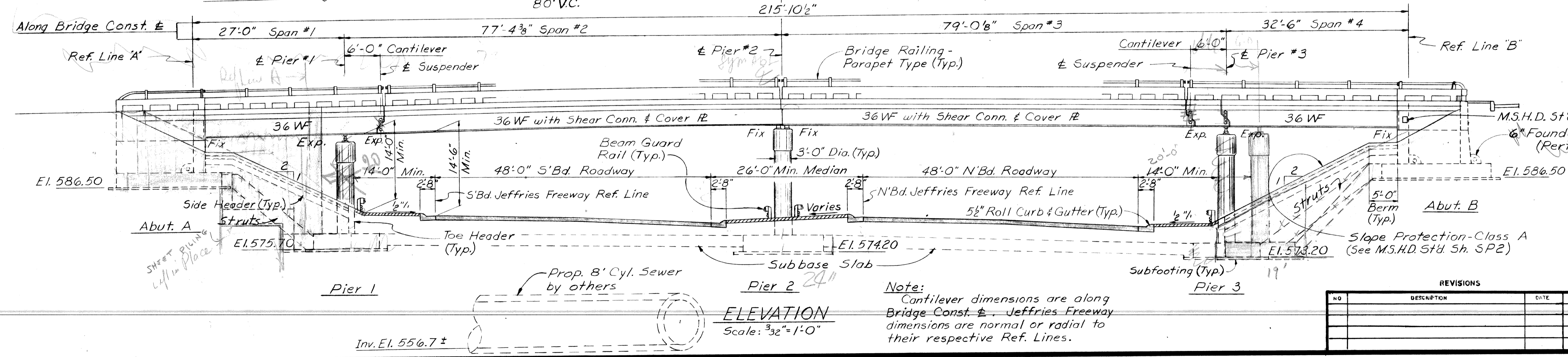
MISCELLANEOUS QUANTITIES		
Item	Unit	Am't.
Foundation Drain	Lin. Ft.	
Slope Protection-Class A	Sq. Yd.	
Sand Gravel Material (C.I.P.)	Cu. Yd.	
Temp. Steel Sheet Piling	Sq. Ft.	

Work this sheet with sheet nos. 2 & 4.

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

APPROVED _____
STRUCTURAL ENGINEER

JOB No.
PW 990(1)



ELEVATION
Scale: $\frac{3}{32}'' = 1'-0''$

Note:
Cantilever dimensions are along Bridge Const. E. Jeffries Freeway dimensions are normal or radial to their respective Ref. Lines.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
MYRTLE ST. CROSSING JEFFRIES FREEWAY
IN DETROIT

GENERAL PLAN OF STRUCTURE

CITY OF DETROIT

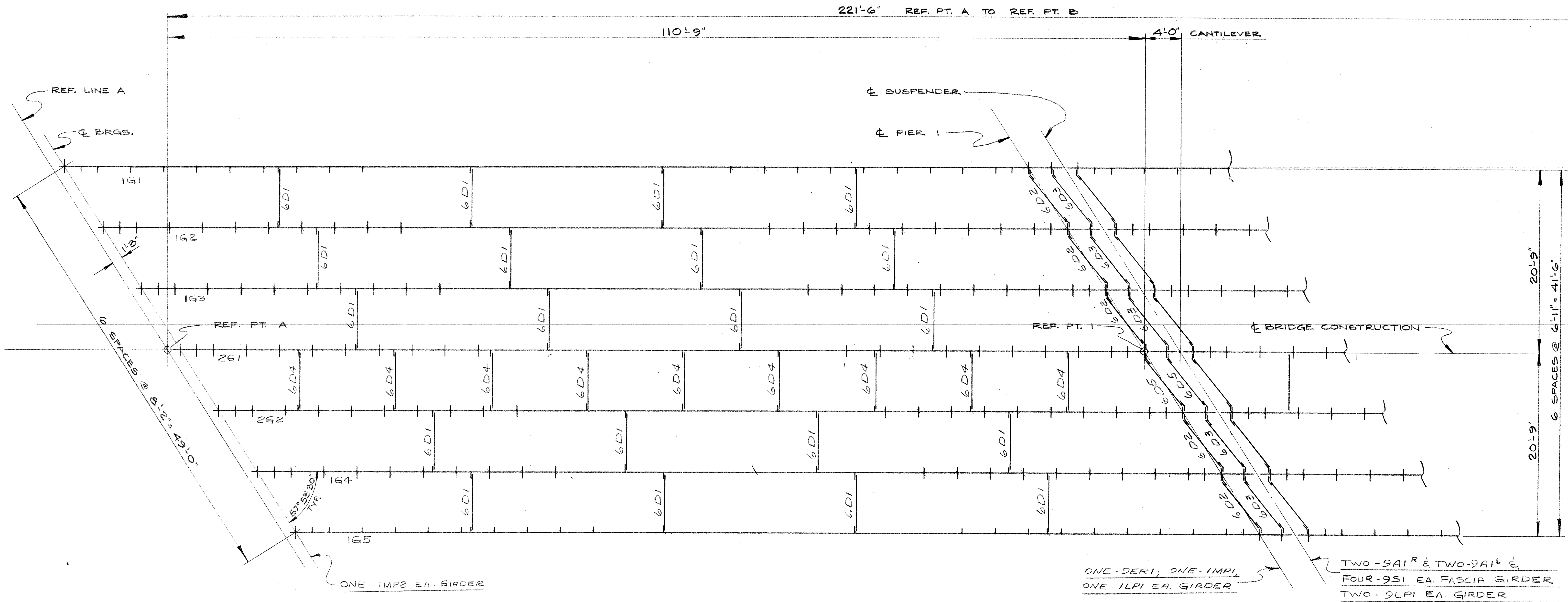
SOUND BOSS A. Freiberg 6-66
DRAWN BY D. Rome 6-66
CHECKED BY A. Freiberg 6-66

APPROVED _____
DESIGN SUPERVISING ENGINEER

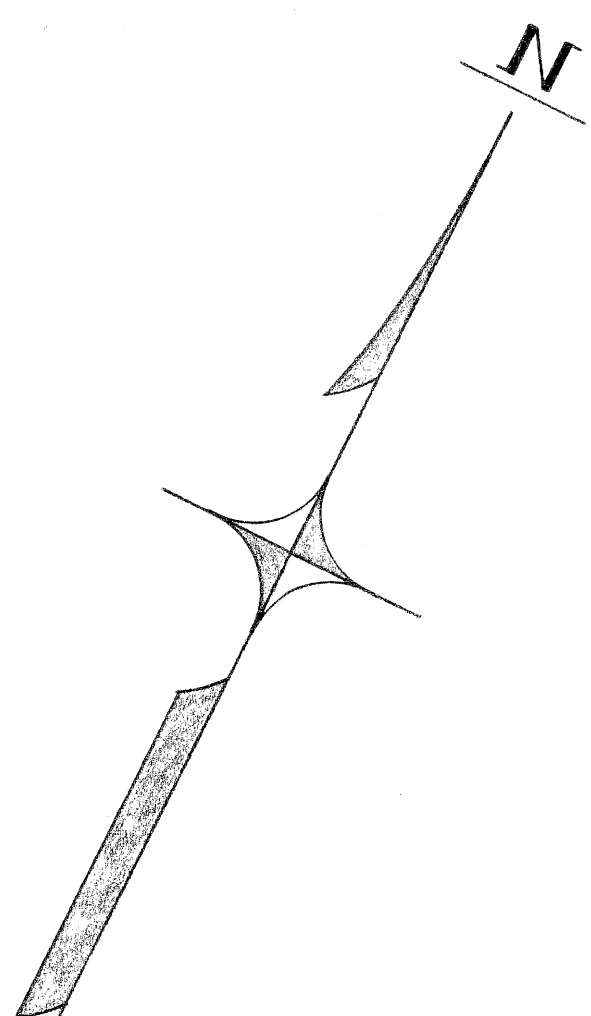
APPROVED _____
ENGINEER OF DESIGN CONSULTANTS

SHEET 3 OF 5

503 of 82124 A



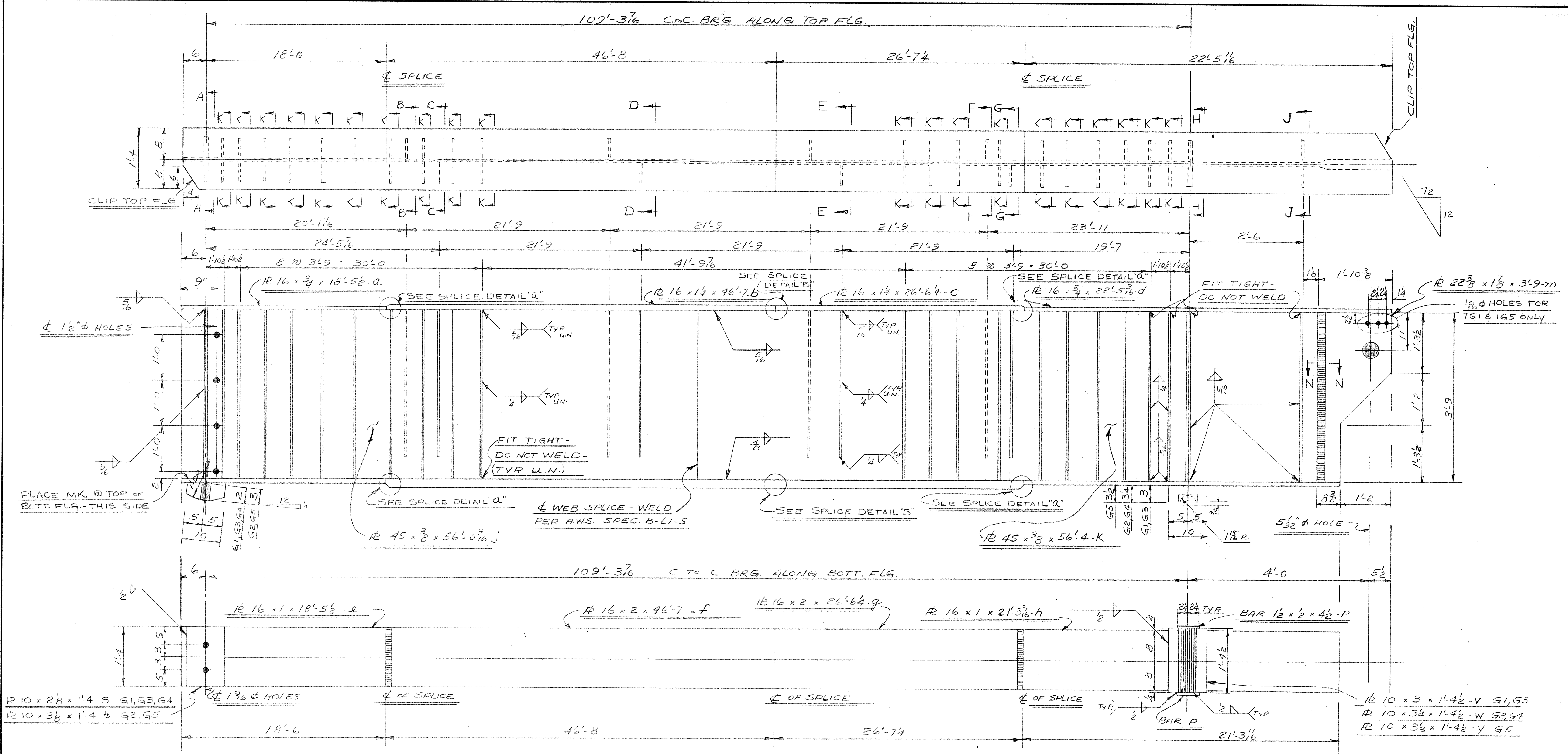
ERECTION DIAGRAM
SPAN 1



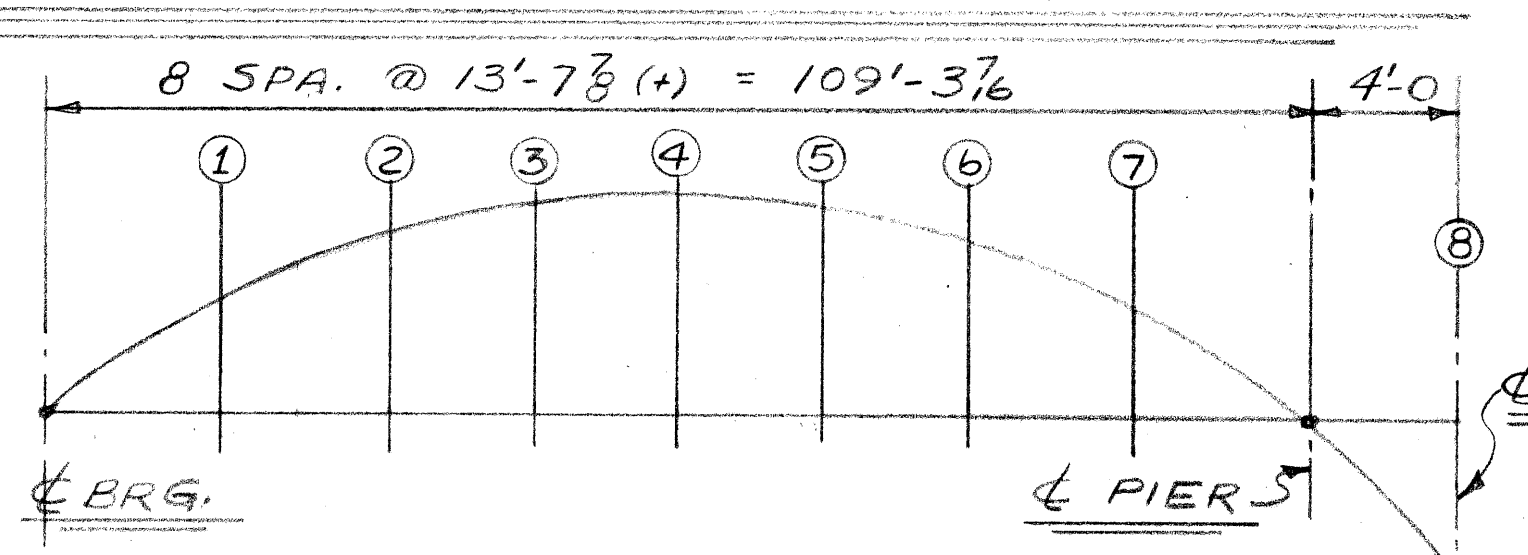
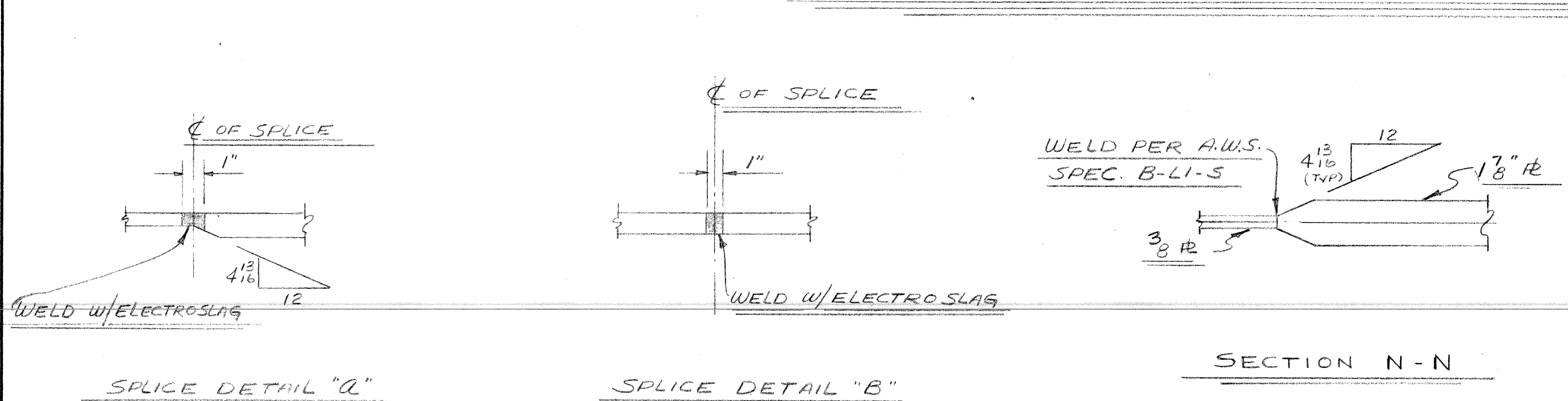
OFFICE COPY
3-24-70 JAB

REVISION			
NO.	DESCRIPTION	DATE	BY

F. YEAGER		
BRIDGE & CULVERT COMPANY		
1701 KEARNEY ST. - PORT HURON, MICH		
BRIDGE 525 OF 82123 J		
PACIFIC AVE. OVER THE JEFFRIES		
FREEWAY IN THE CITY OF DETROIT.		
C.A. HULL CO. INC., CONT'R.		
DATE 3-13-70	JOB NO. 54707	SHEET EI
BY SAW.		



5 - R GIRDERS (SEE CAMB. DETAIL) REQ'D. AS SHOWN & NOTED - MK 1G1 THRU 1G5



CAMBER DIAGRAM

	①	②	③	④	⑤	⑥	⑦	⑧
1G1	2	3 3/4	5	5 3/4	5 3/4	4 3/8	2 3/4	7/8
1G2	2 1/4	4 1/8	5 1/2	6 3/8	6 1/4	5	2 3/8	1
1G3	2 1/4	4 1/4	5 3/4	6 3/4	6 1/2	5 1/4	3	1
1G4	2 5/8	4 3/8	6 3/4	7 1/2	7 1/2	5 5/8	3 1/8	1
1G5	2 5/8	4 3/8	6 5/8	7 3/8	7	5 1/2	3 1/8	1

SEE SHEET 18 FOR SHOP NOTES.

REVISION			
NO.	DESCRIPTION	DATE	BY

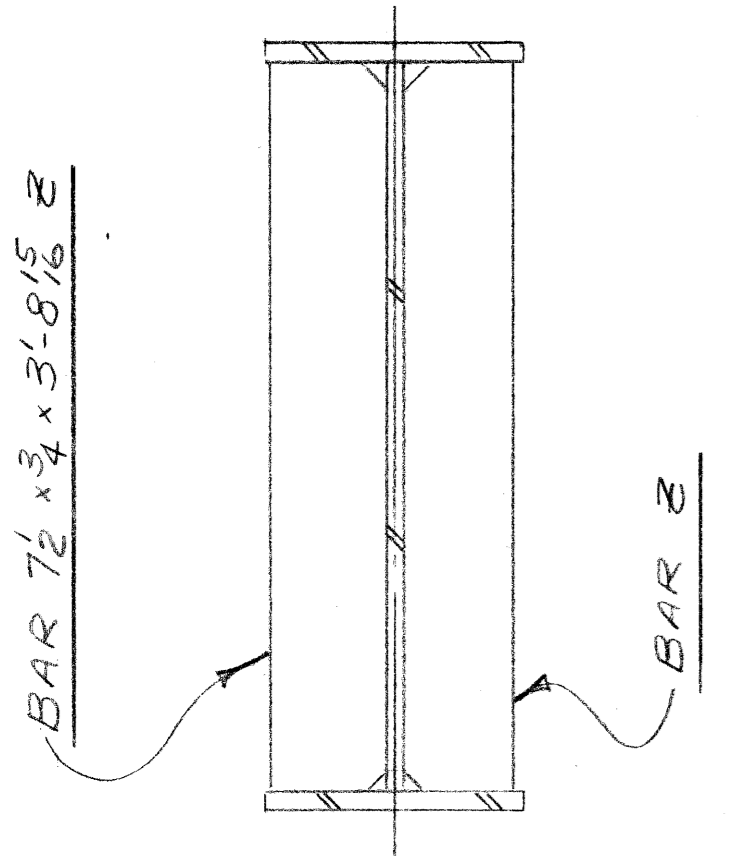
**F. YEAGER
BRIDGE & CULVERT COMPANY**
1701 KEARNEY ST. - PORT HURON, MICH

BRIDGE S35 OF 82123 J
PACIFIC AVE. OVER THE JEFFRIES
FREEWAY IN THE CITY OF DETROIT.
C.A. HULL CO. INC., CONT'R.

DATE: 2-15-70
BY: SAW.

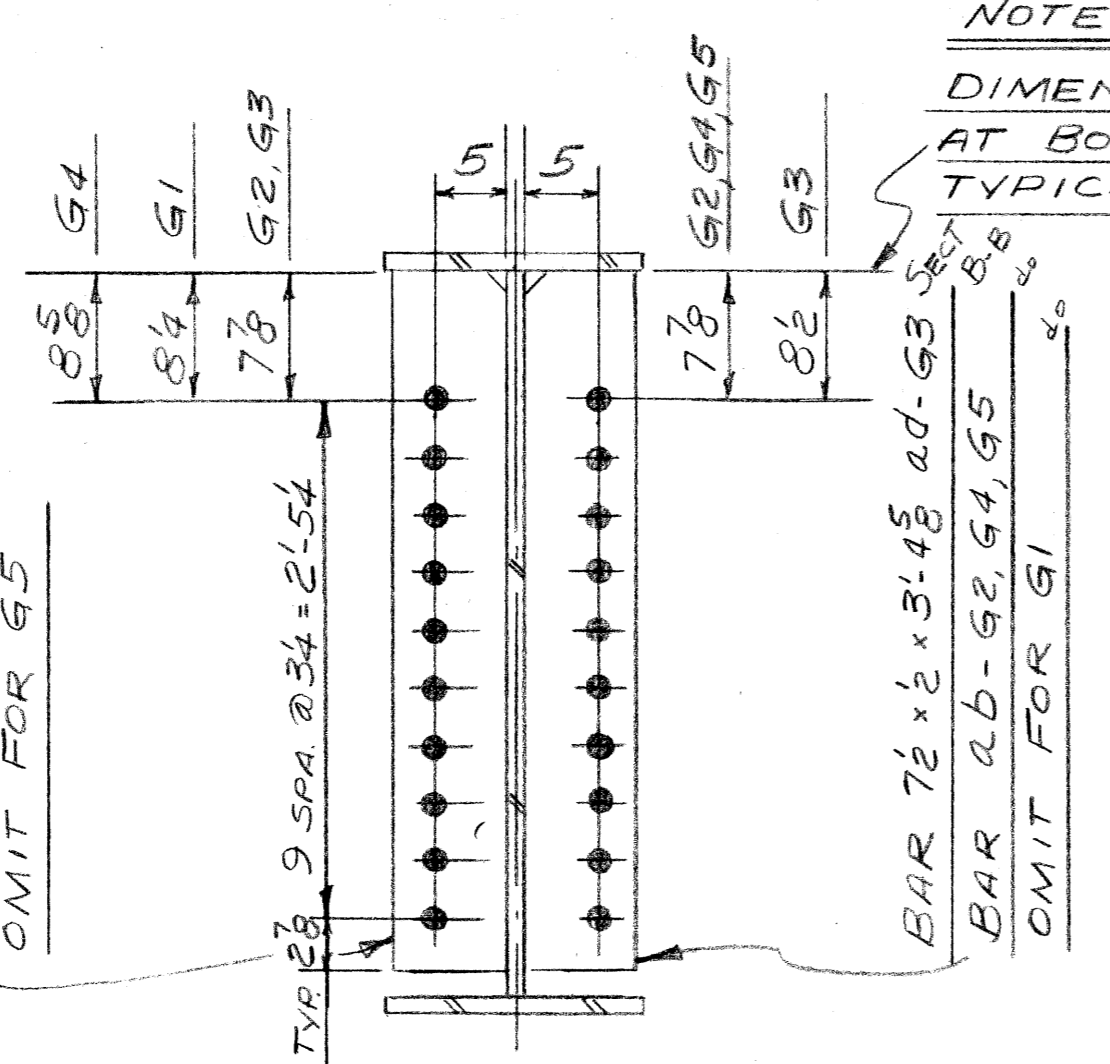
JOB NO.: S4707
SHEET: 10 OF 9

NOTE:
CLIP CORNERS 1x1
TYPICAL ALL SECTIONS.



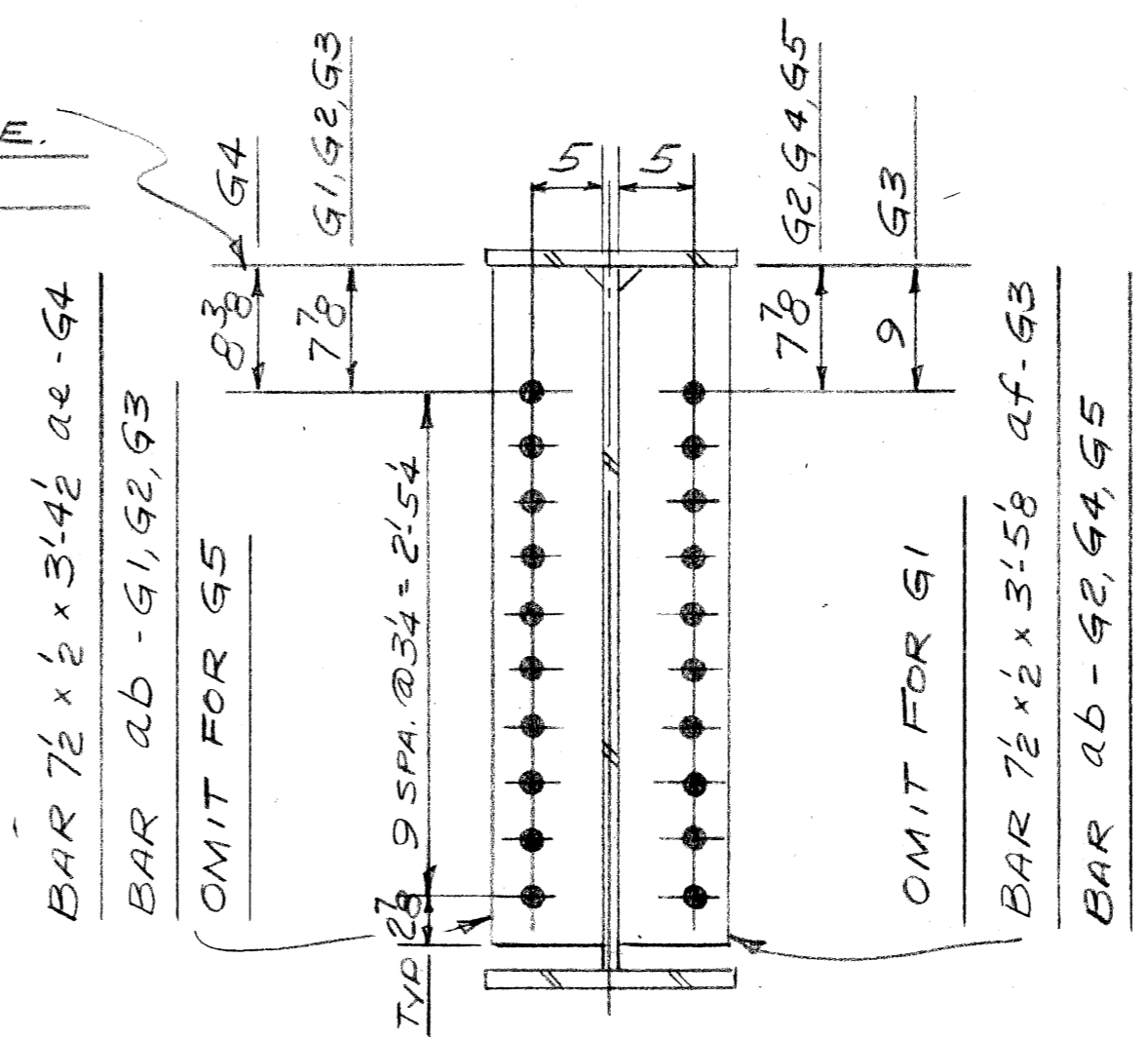
SECTION A-A

BAR 7/2 x 3/4 x 3'-4 1/8 a.a. G1 SECT. C
BAR 40 x 3'-4 a.b. G2, G3 do
BAR 40 x 3'-4 1/4 a.c. G4 do
OMIT FOR G5

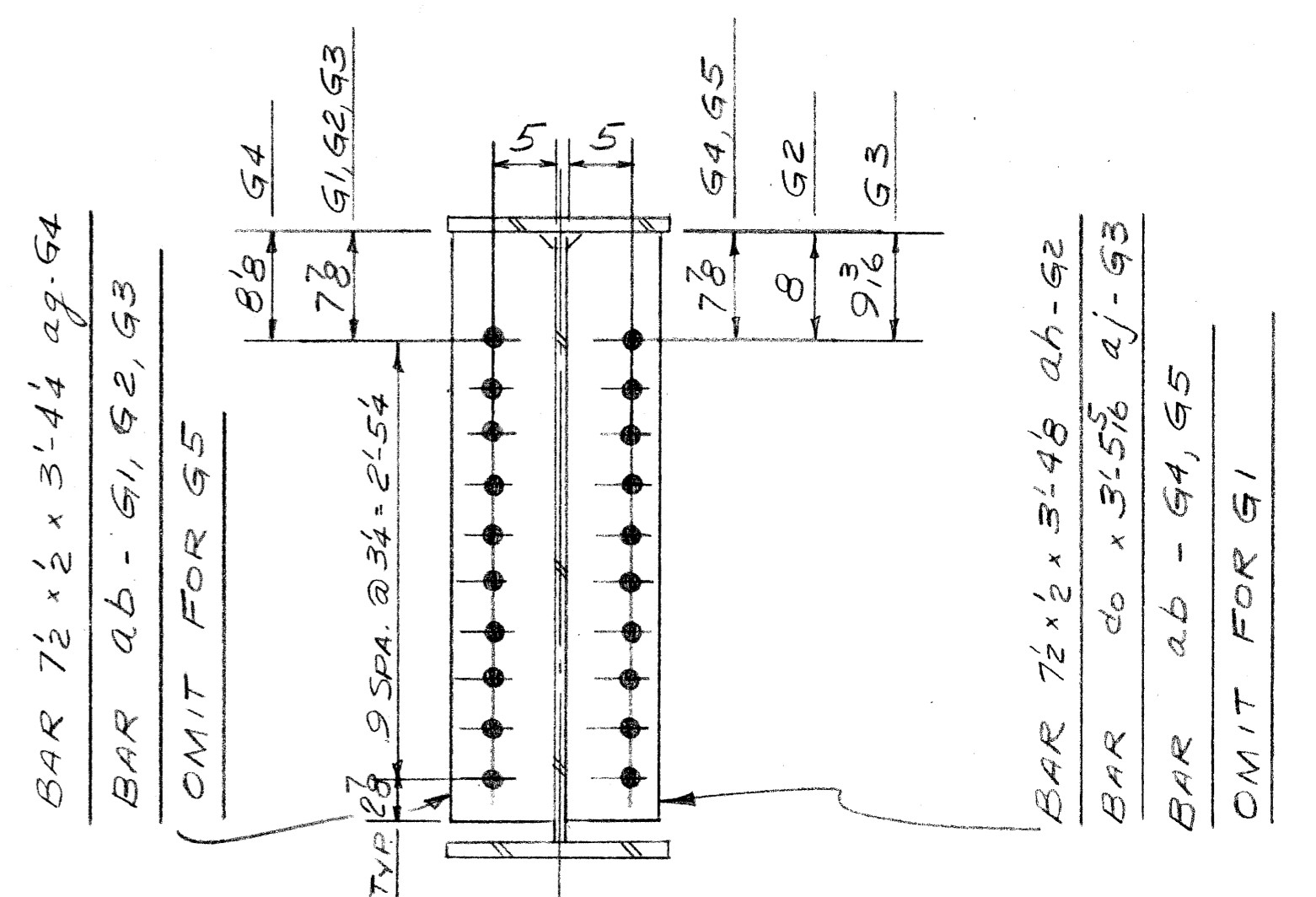


SECTION B-B - F.S. ONLY
SECTION C-C N.S. ONLY

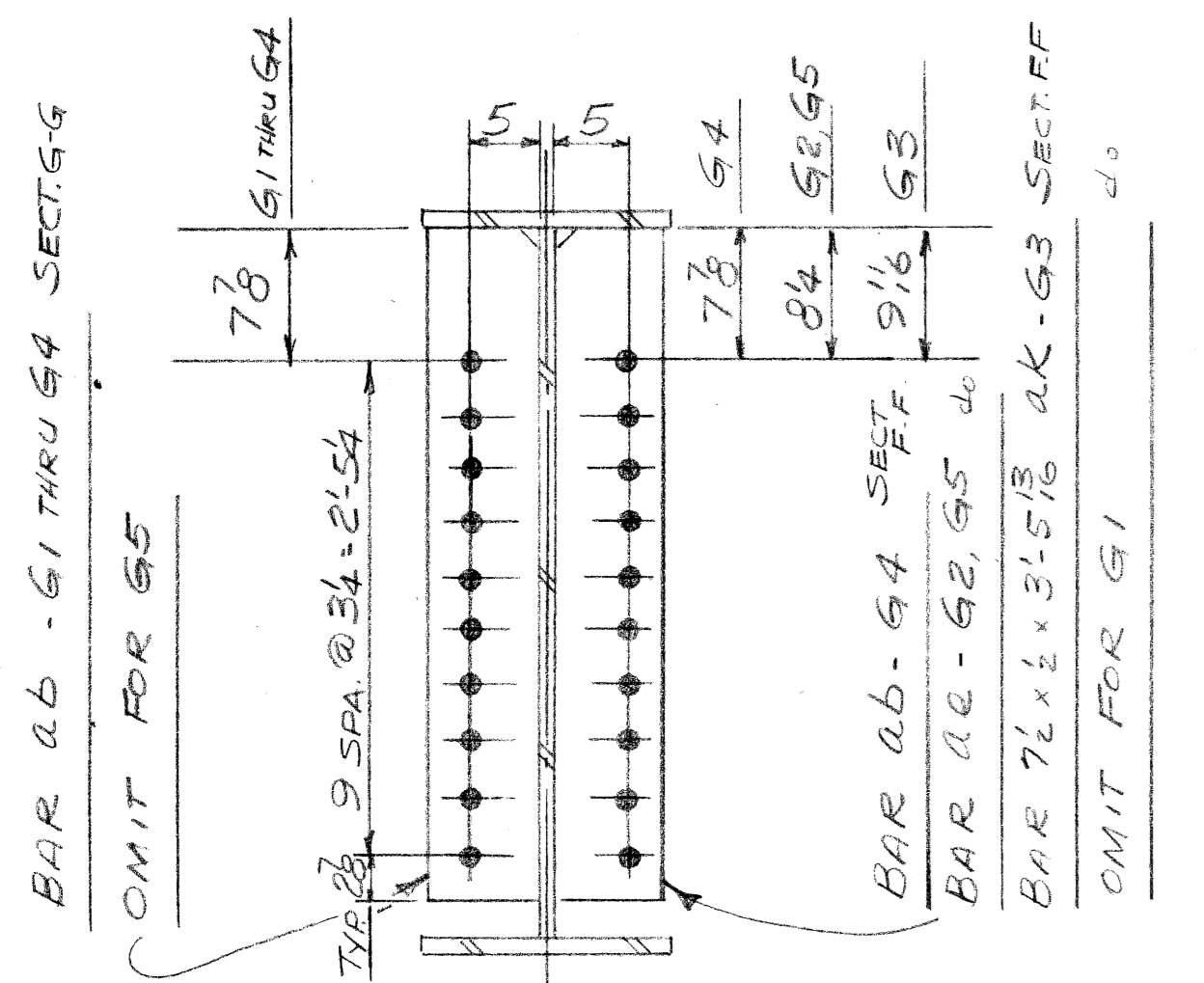
NOTE:
DIMENSION LINE BEGINS
AT BOTTOM OF TOP FLANGE.
TYPICAL ALL SECTIONS.



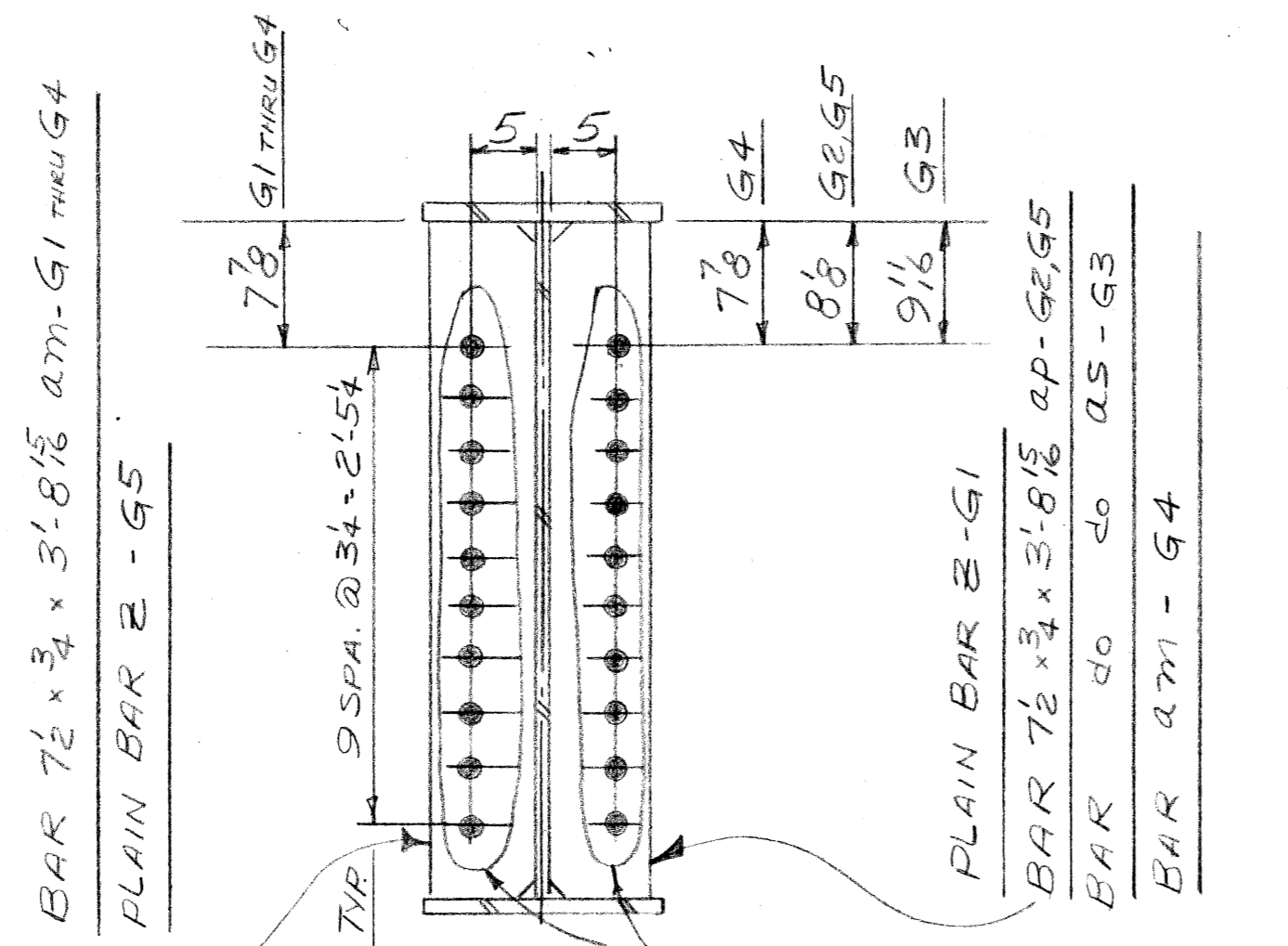
SECTION D-D



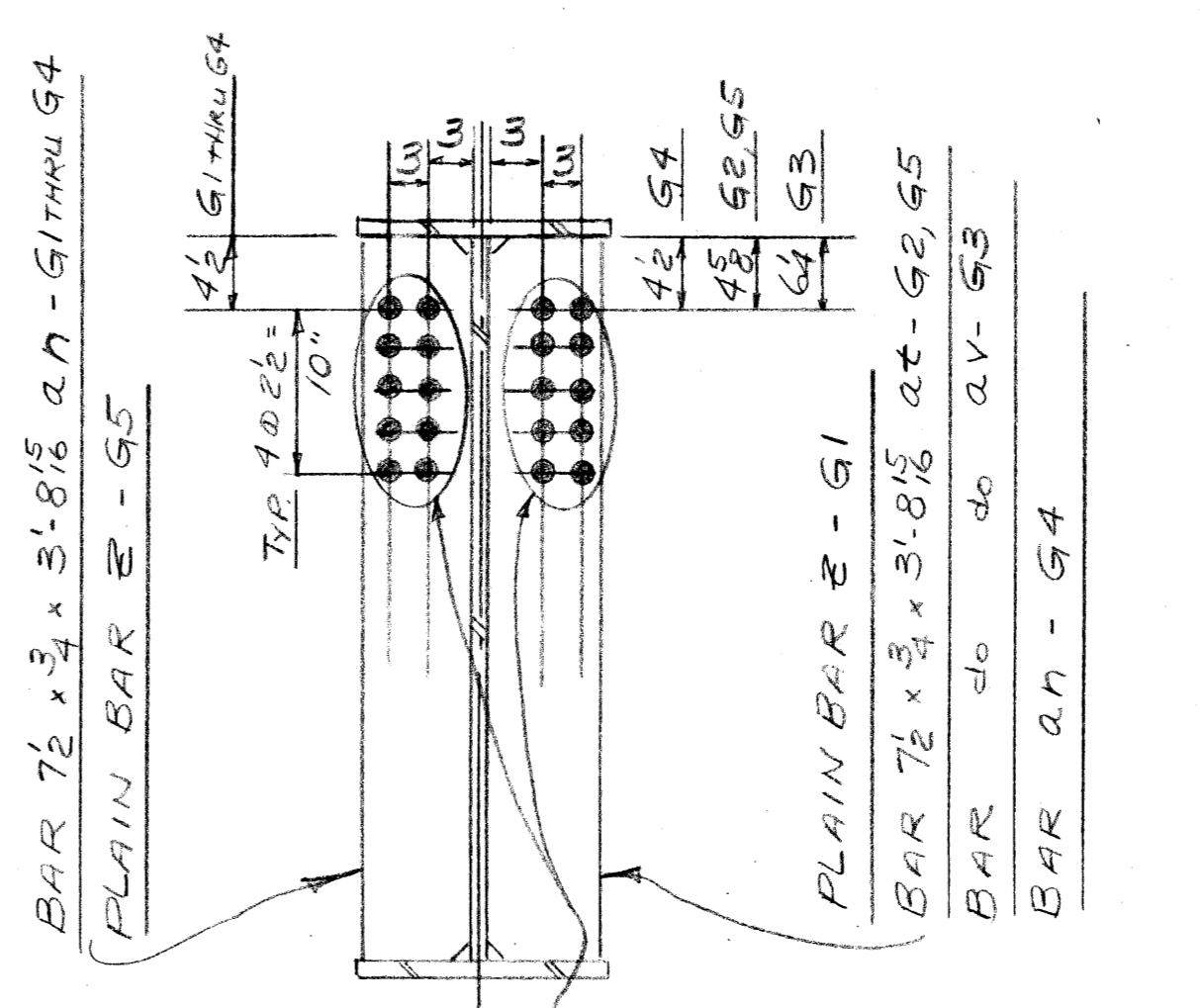
SECTION E-E



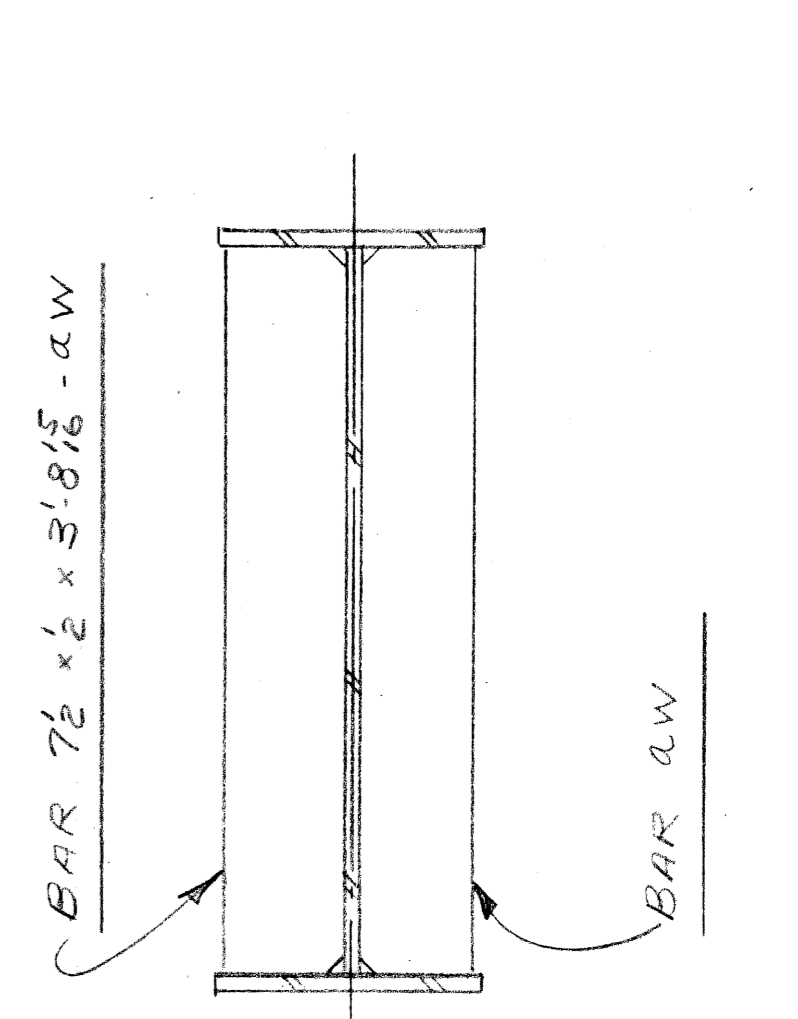
SECTION F-F F.S. ONLY
SECTION G-G N.S. ONLY



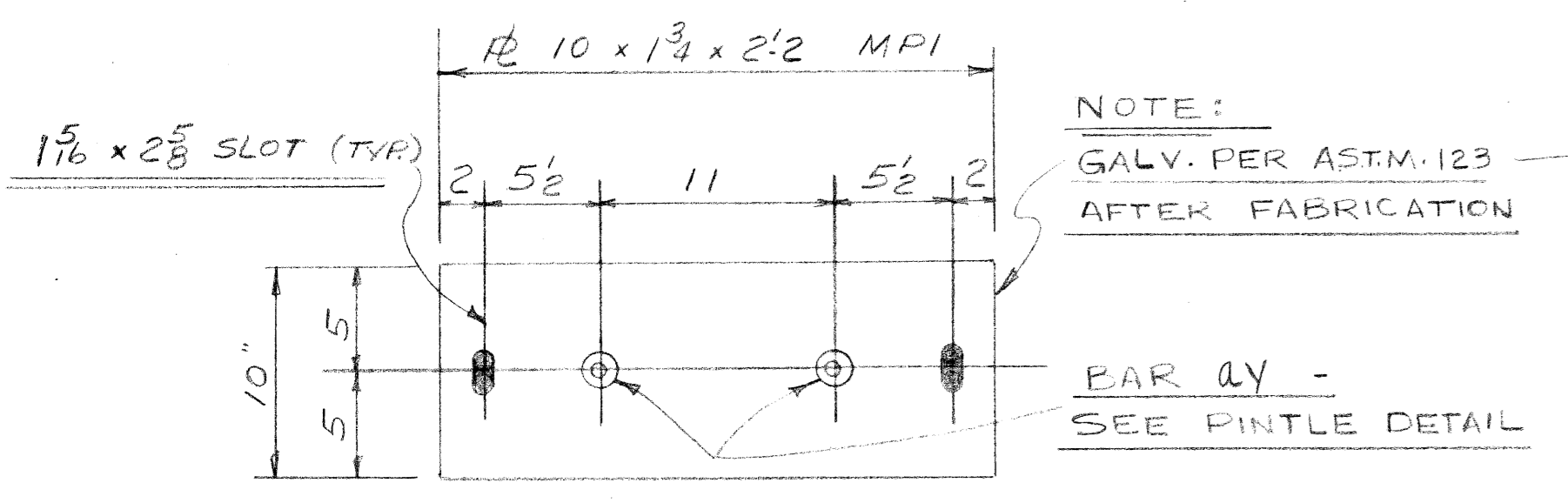
SECTION H-H



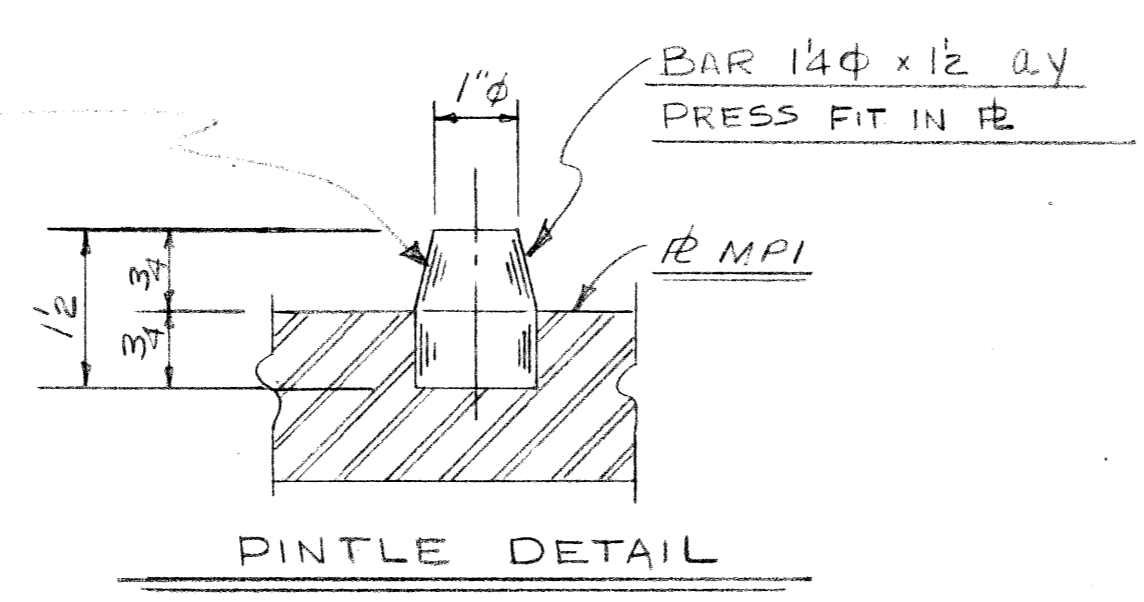
SECTION J-J



SECTION K-K
TYPICAL -160 BARS



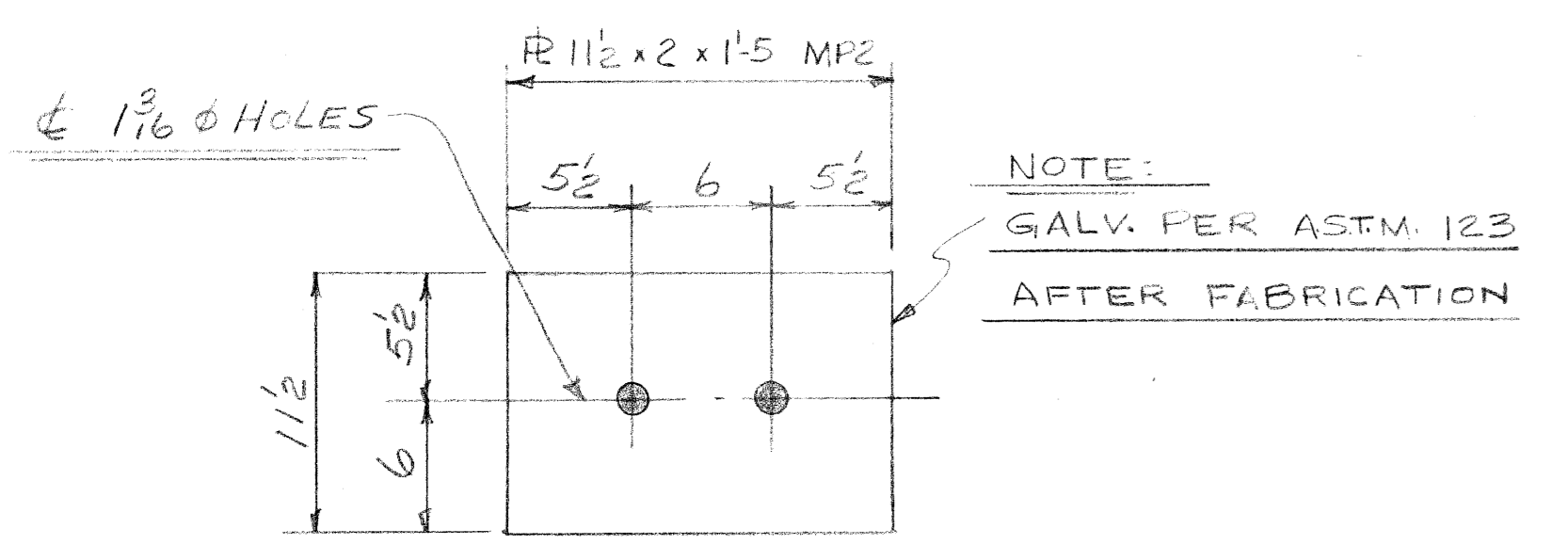
7 - MAS. #5 REQ'D. AS SHOWN & NOTED - MK IMP1



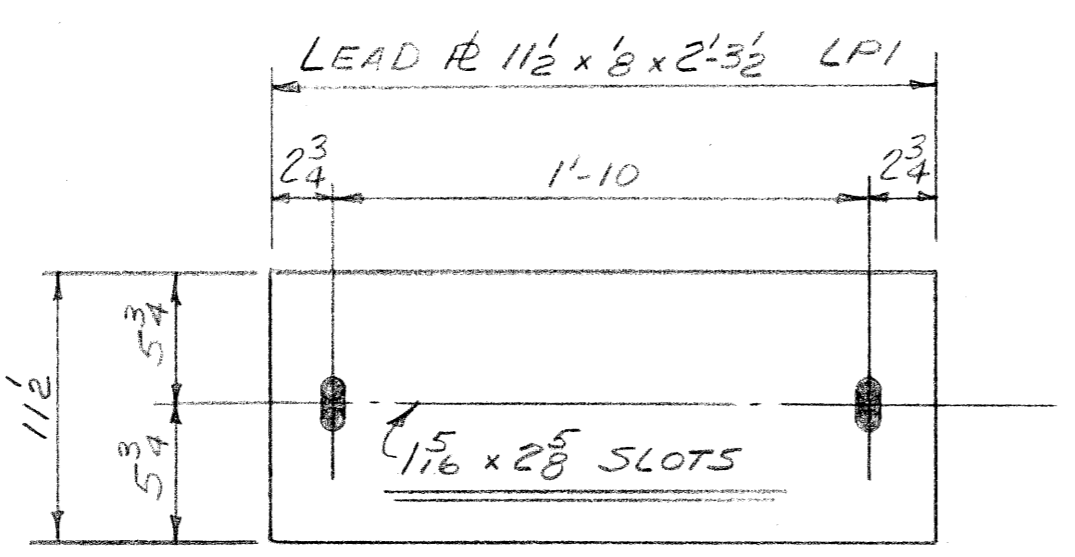
PINTLE DETAIL

GALV. ANCHOR BOLTS & POSITION DOWELS

- 28 - 1" phi x 1'-3 SQ. HD. BOLT, HEX NUT (GALV. A153)
- 14 - 1" phi R WA. BAR 2 1/2 x 4 x 2 1/2 (do do)
- 14 - BAR 1" phi x 1'-2 PLAIN (do do)



14 - MAS #5 REQ'D AS SHOWN & NOTED - MK IMP2



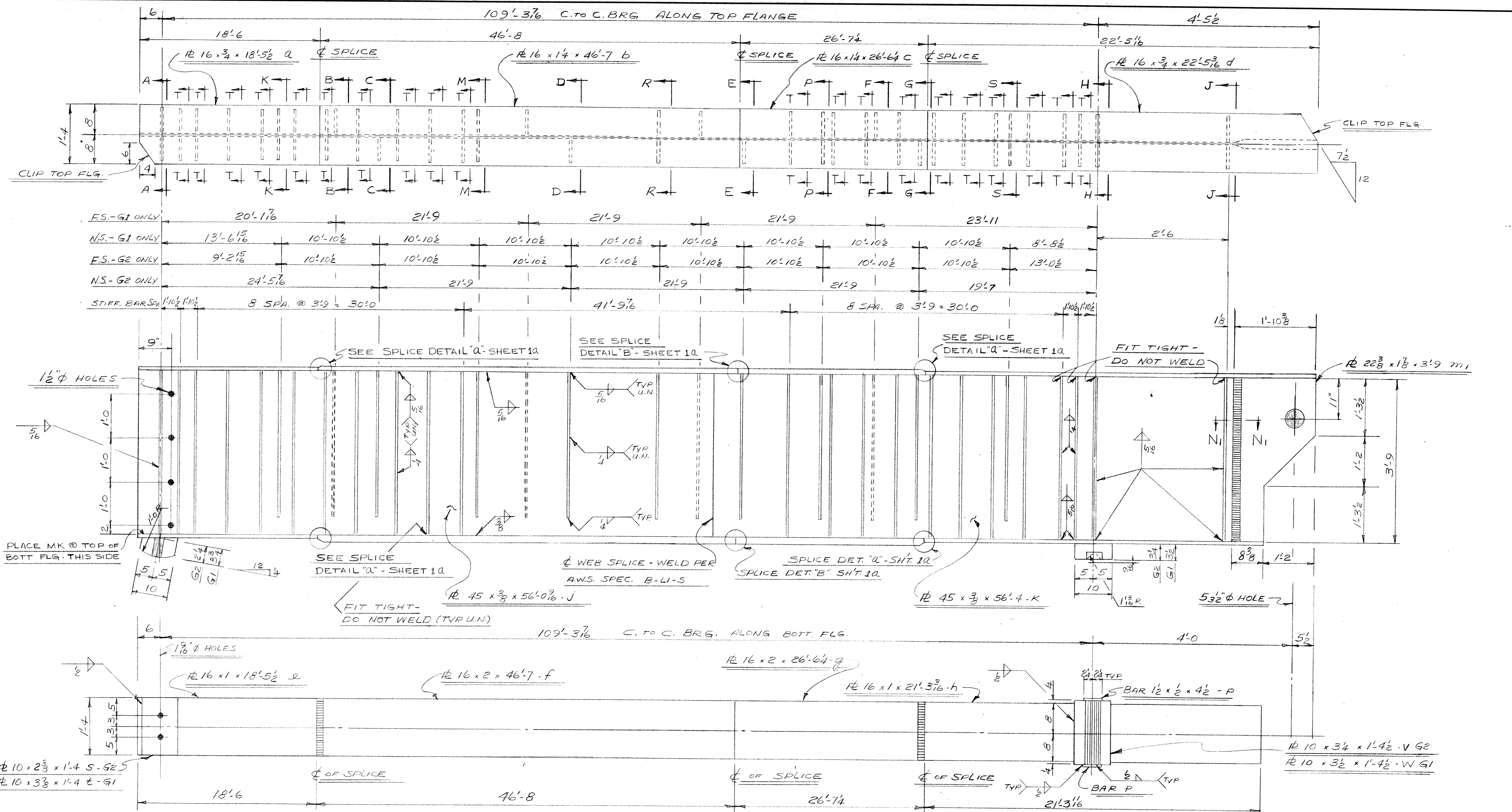
7 - LEAD #5 REQ'D AS SHOWN & NOTED - MK ILPI

SHOP NOTES

FABRICATE PER M.D.S.H. 1967 SPECS.
ALL MATERIAL TO BE UNPAINTED A588 STEEL U.N.
OPEN HOLES TO BE 1/8 phi U.N.
ALL GIRDERS ARE TO BE CAMBERED AS NOTED. CAMBER GIRDERS BY BURNING BOTH EDGES OF WEB #S. SIMULTANEOUSLY. MEASURE CAMBER BETWEEN CENTERS OF BRGS. WITH GIRDER LYING ON ITS SIDE.
RADIOGRAPH & MAGNETIC PARTICLE INSPECTION OF WELDS IS REQ'D.
BLAST CLEANING OF EA. FASCIA GIRDER IS REQ'D.
FASCIA GIRDERS TO BE PROVIDED WITH LIFTING LUGS. SEE SHEET LLI. SEE SHEET PI FOR PIN DWG. DETAIL.
WELDS ARE TO POSSESS A CORROSION RESISTANCE EQUAL TO BASE STEEL - USE RACO WIRE.

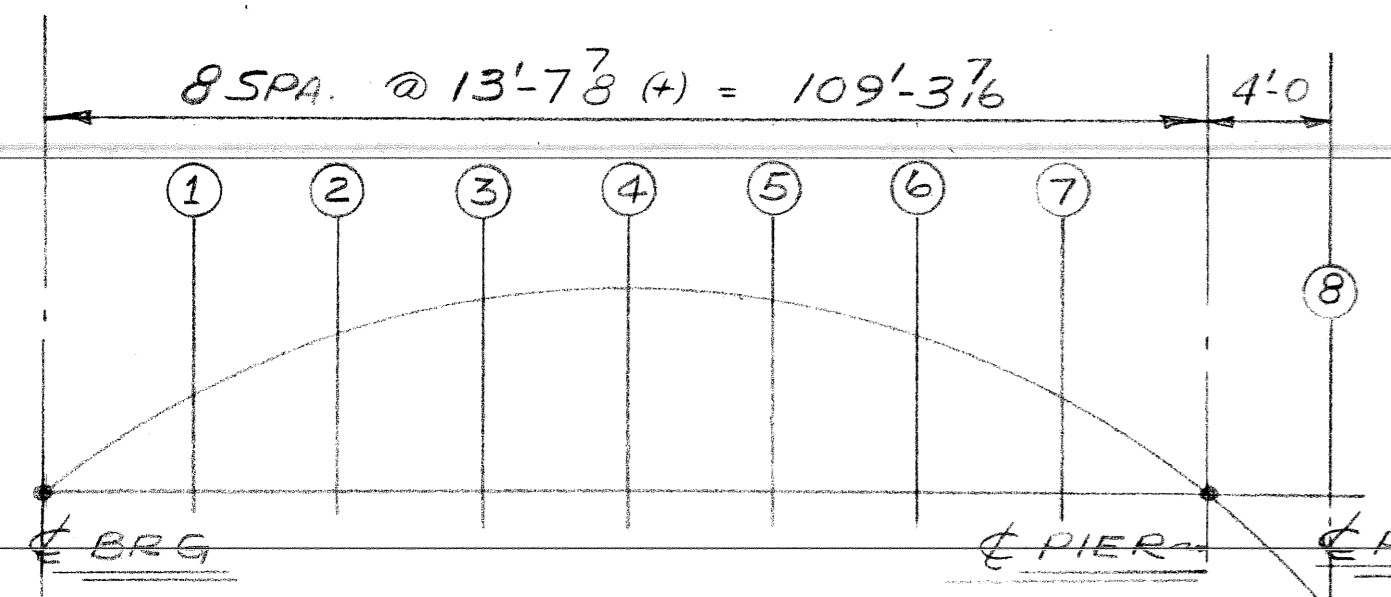
REVISION			
NO.	DESCRIPTION	DATE	BY

F. YEAGER	
BRIDGE & CULVERT COMPANY	
1701 KEARNEY ST.	PORT HURON, MICH
BRIDGE S35 OF 82123J	
PACIFIC AVE. OVER THE JEFFRIES FREEWAY IN THE CITY OF DETROIT. C.A. HULL CO. INC., CONTR.	
DATE 2-17-70	JOB NO. S4707
BY SAW.	SHEET 18 OF 9



2 - $\#16$ GIRDERS (SEE CAMB. DETAIL) REQ'D. AS SHOWN & NOTED - MK. 2G1 & 2G2

SEE SHEET 1B FOR SHOP NOTES.



	①	②	③	④	⑤	⑥	⑦	⑧
2G1	2 5/8	5	6 3/4	7 3/8	7 3/8	5 3/4	3 4	1
2G2	2 3/4	5 3/8	7	7 3/8	7 1/2	6	3 3/8	1 1/8

CAMBER DETAIL

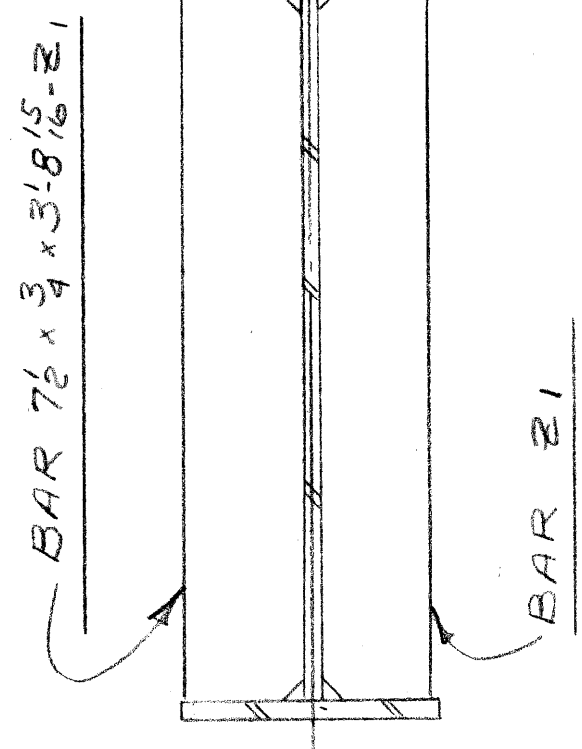
REVISION			
NO.	DESCRIPTION	DATE	BY

F. YEAGER
BRIDGE & CULVERT COMPANY
 1701 KEARNEY ST. - PORT HURON, MICH.
 BRIDGE S-35 OF 82123 J
 PACIFIC AVE. OVER THE JEFFRIES
 FREEWAY IN THE CITY OF DETROIT.
 C.A. HULL CO., INC., CONTR.

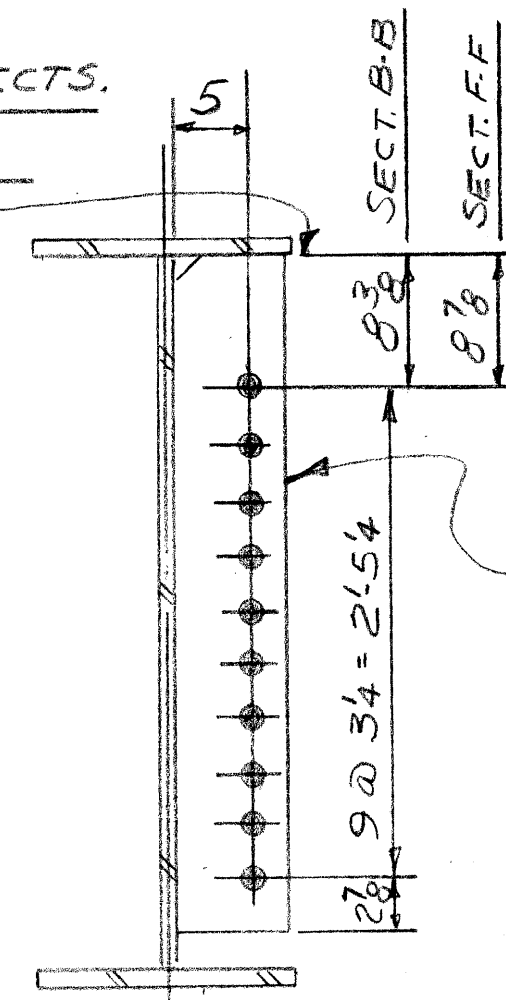
DATE 8-20-70
 BY SAW

JOB NO. S4707
 SHEET 20 OF 9

NOTE:
 CLIP CORNERS 1x1-TYP. ALL SECTS.
 DIMENSION LINE BEGINS AT
 BOTTOM OF TOP FLANGE - TYP.
 ALL SECTIONS.

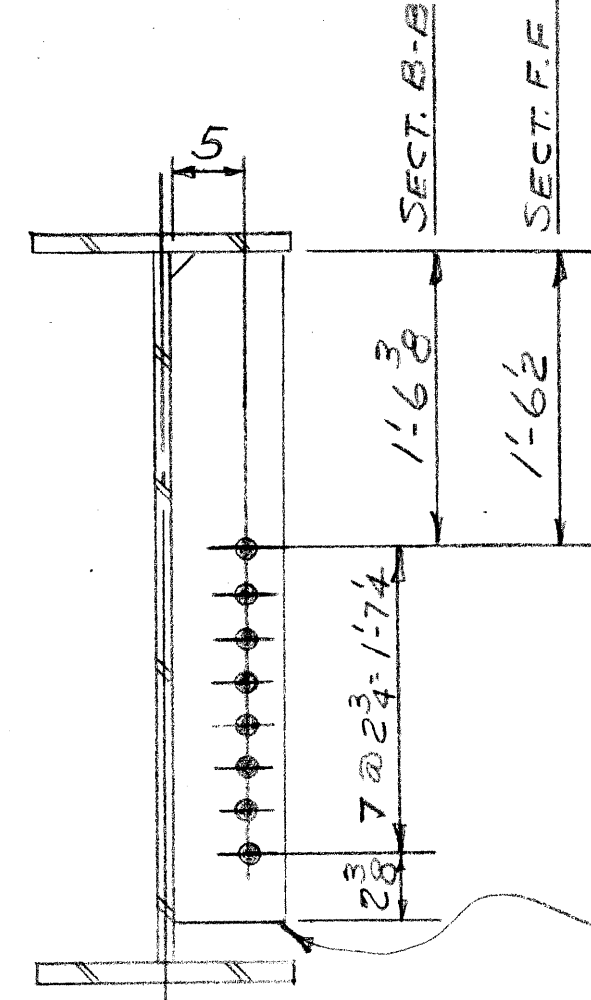


SECTION A-A



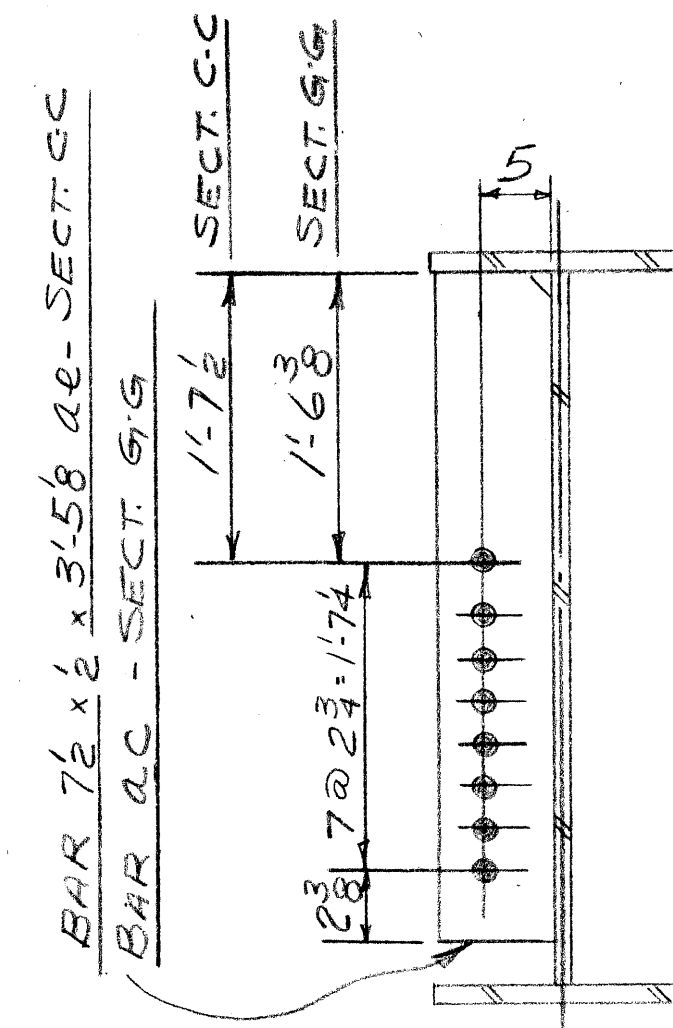
SECTIONS B-B & F-F
FOR G1 ONLY

BAR 7 1/2 x 1/2 x 3'-4 1/2 aa - SECT. B-B
 BAR 7 1/2 x 1/2 x 3'-5 ab - SECT. F-F



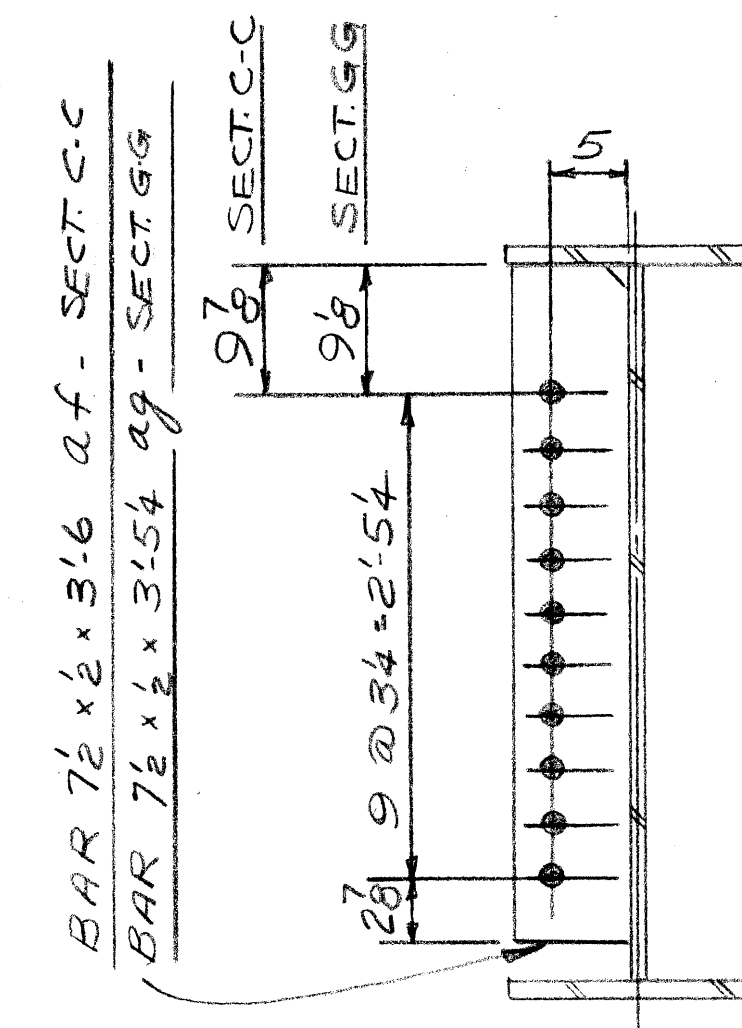
SECTIONS B-B & F-F
FOR G2 ONLY

BAR 7 1/2 x 1/2 x 3'-4 ac - SECT. B-B
 BAR 7 1/2 x 1/2 x 3'-4 b - SECT. F-F



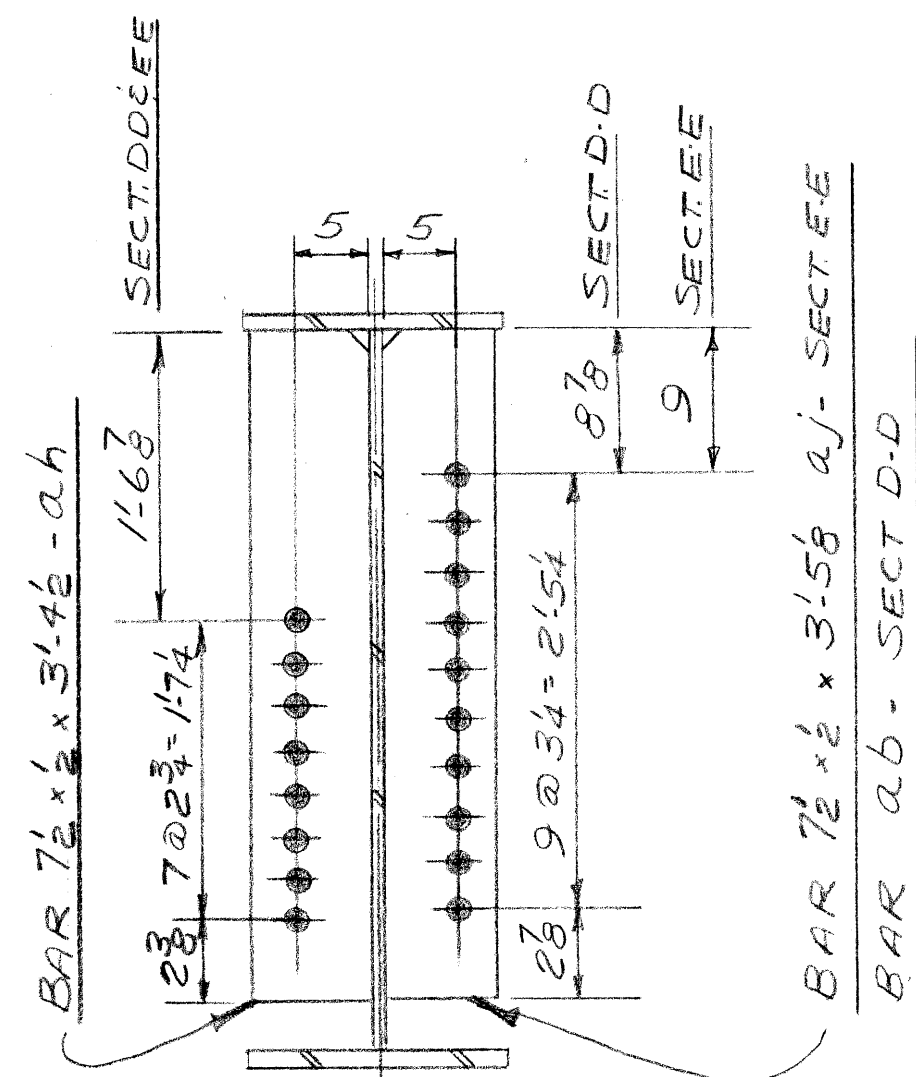
SECTIONS C-C & G-G
FOR G1 ONLY

BAR 7 1/2 x 1/2 x 3'-5 8 ac - SECT. C-C
 BAR ac - SECT. G-G



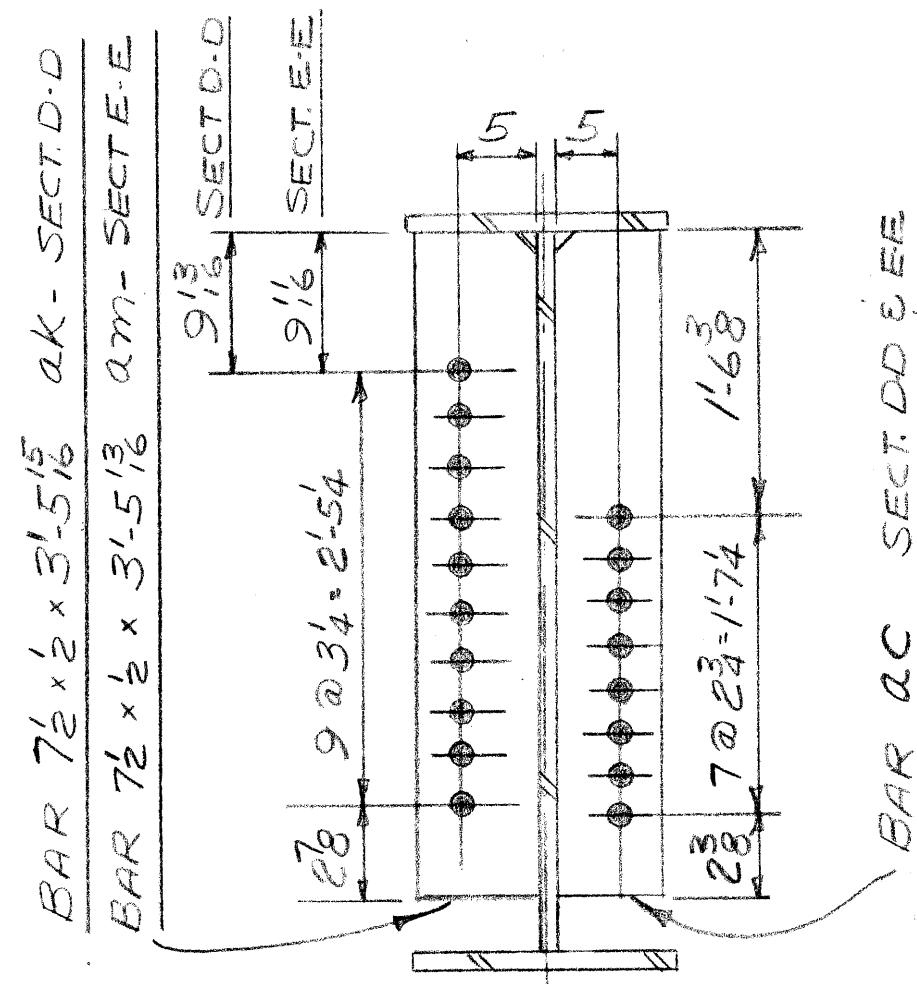
SECTIONS C-C & G-G
FOR G2 ONLY

BAR 7 1/2 x 1/2 x 3'-6 af - SECT. C-C
 BAR 7 1/2 x 1/2 x 3'-5 4 ag - SECT. G-G



SECTIONS D-D & E-E
FOR G1 ONLY

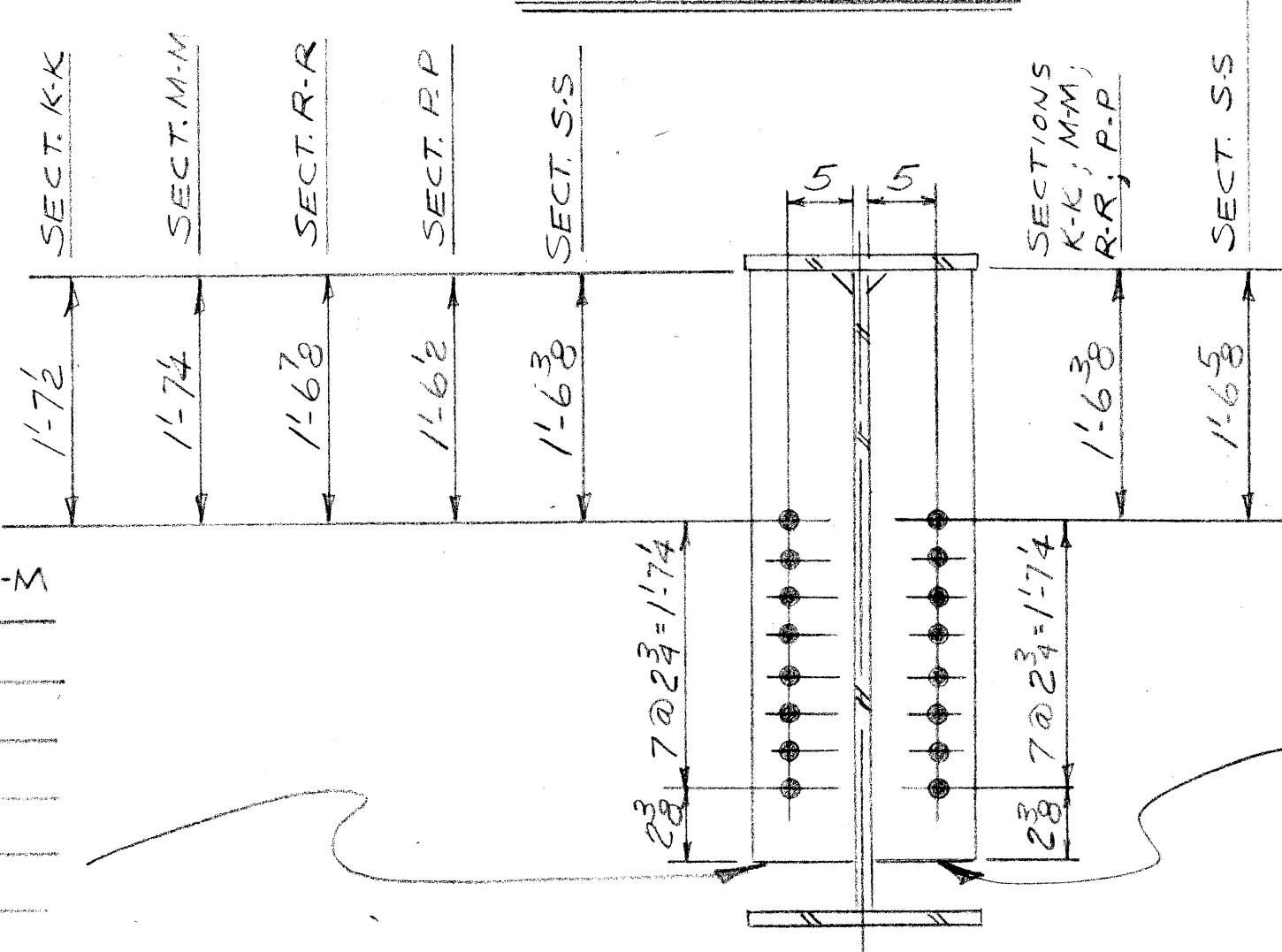
BAR 7 1/2 x 1/2 x 3'-4 2 ah - SECT. D-D
 BAR 7 1/2 x 1/2 x 3'-5 8 aj - SECT. E-E
 BAR ab - SECT. D-D



SECTIONS D-D & E-E
FOR G2 ONLY

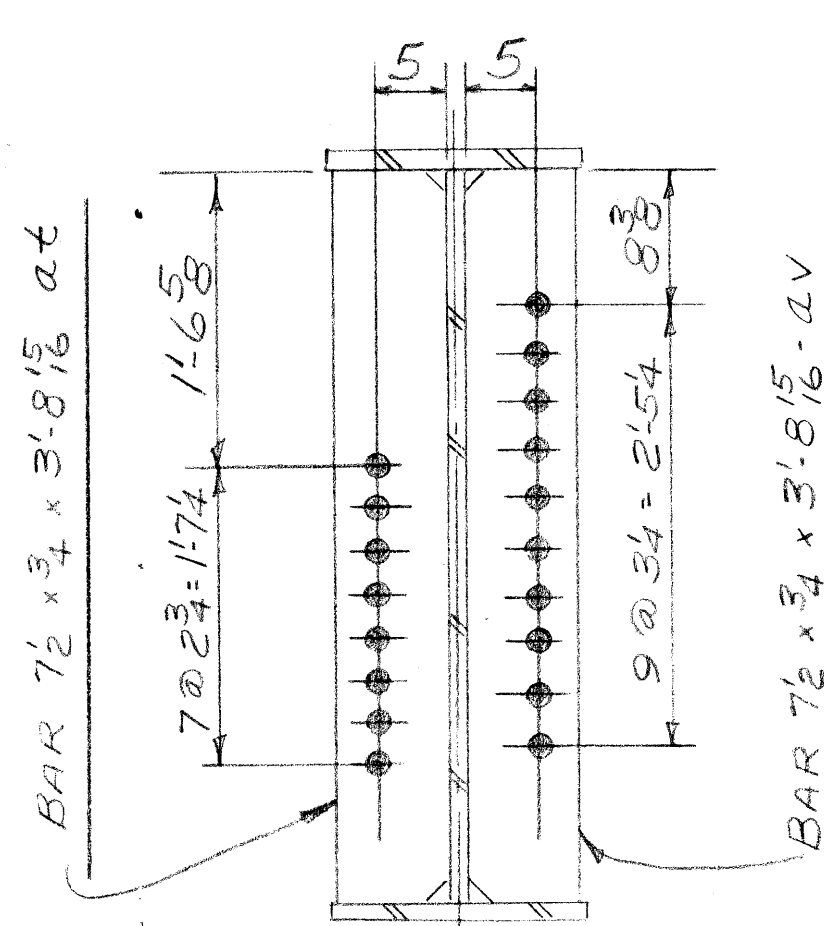
BAR 7 1/2 x 1/2 x 3'-5 1 5 ak - SECT. D-D
 BAR 7 1/2 x 1/2 x 3'-5 1 3 am - SECT. E-E

BAR 7 1/2 x 1/2 x 3'-4 8 ap - G1 - SECT. M-M
 BAR al - G1 SECT. K-K
 BAR ah - G1 SECT. R-R
 BAR ad - G1 SECT. P-P
 BAR ac - G1 SECT. S-S
 OMIT FOR G2



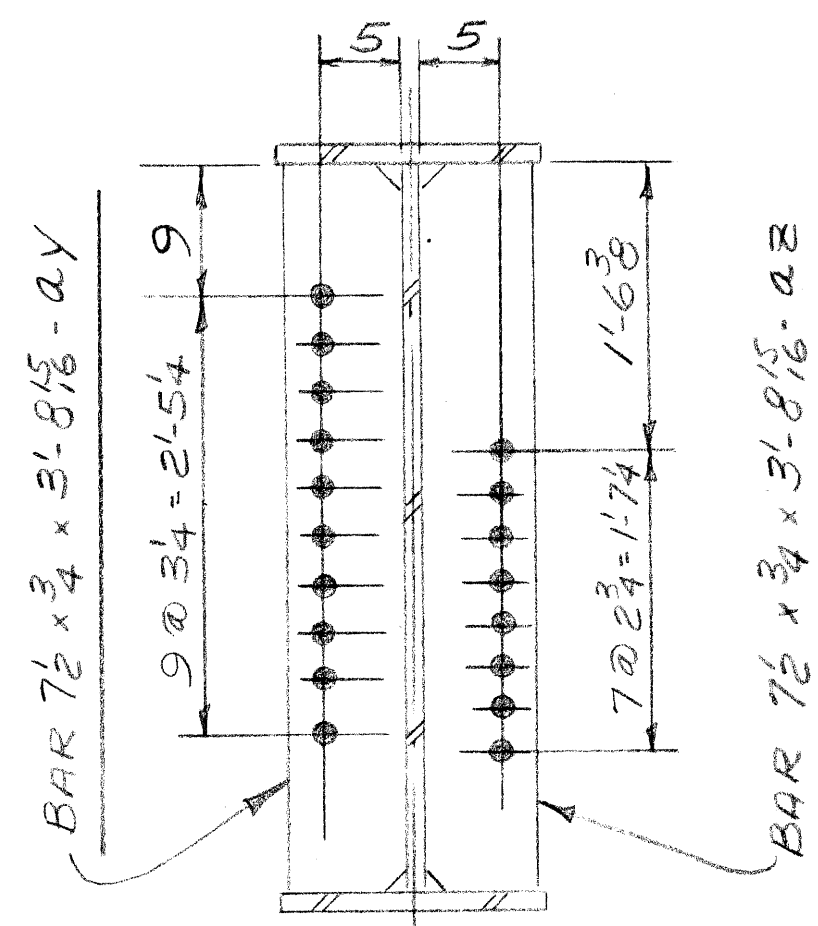
SECTIONS K-K, M-M, R-R, P-P, & S-S
FOR G1 & G2

BAR 7 1/2 x 1/2 x 3'-4 4 as - G2 SECT. S-S
 BAR ac - G2 - SECTS. K-K, M-M, R-R, P-P
 OMIT FOR G1



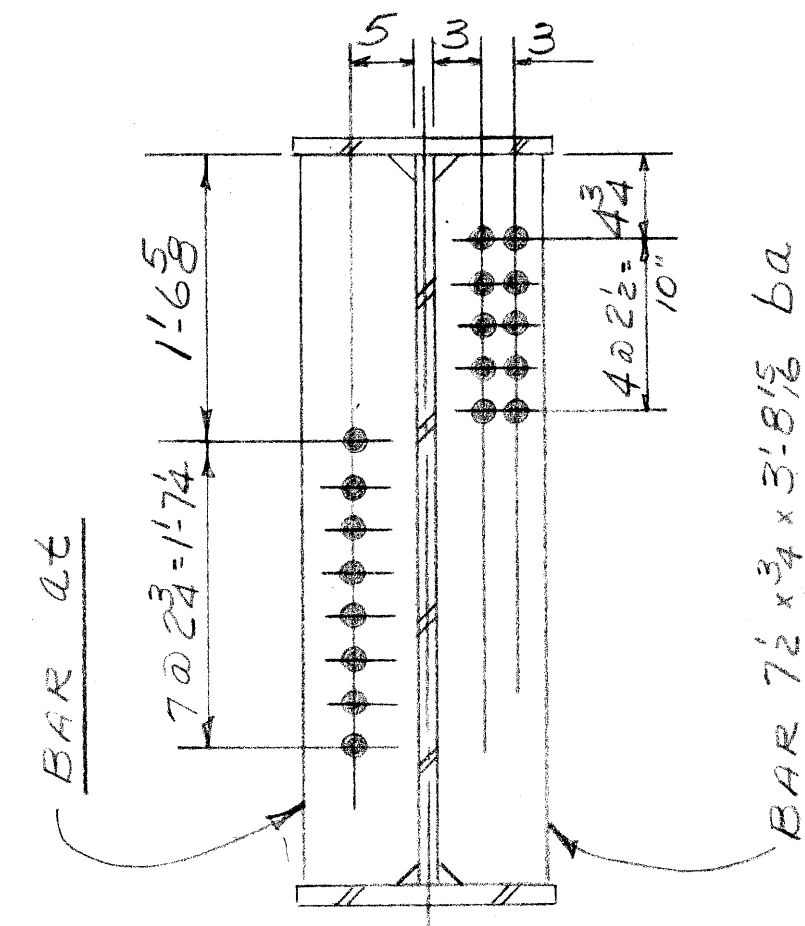
SECTION H-H
FOR G1 ONLY

BAR 7 1/2 x 3/4 x 3'-8 1 5 at



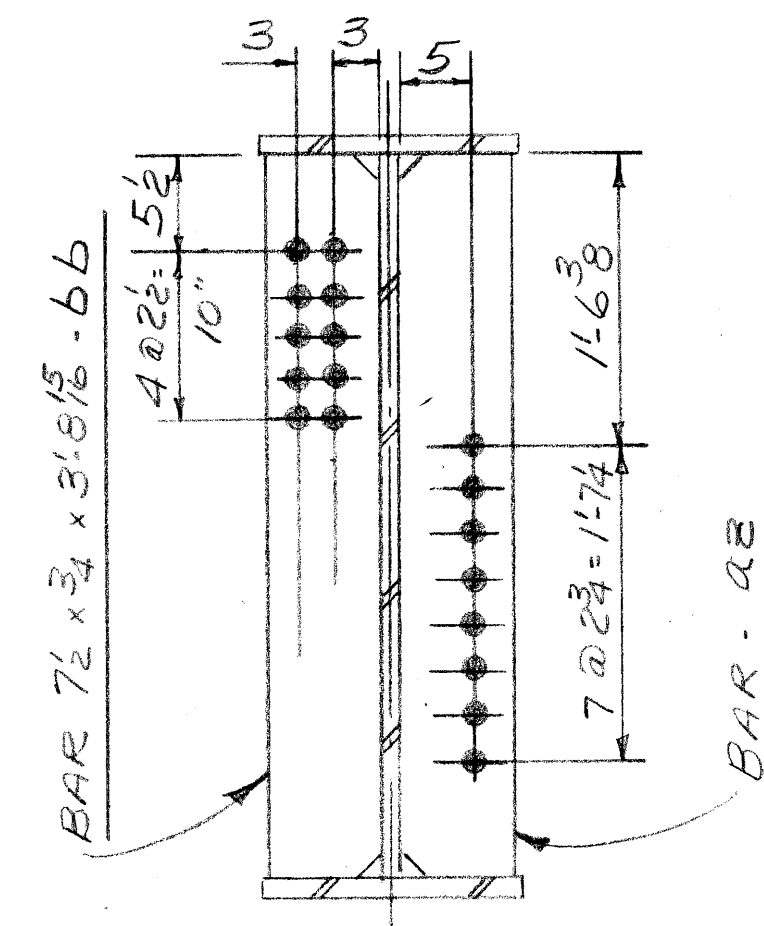
SECTION H-H
FOR G2 ONLY

BAR 7 1/2 x 3/4 x 3'-8 1 5 ay



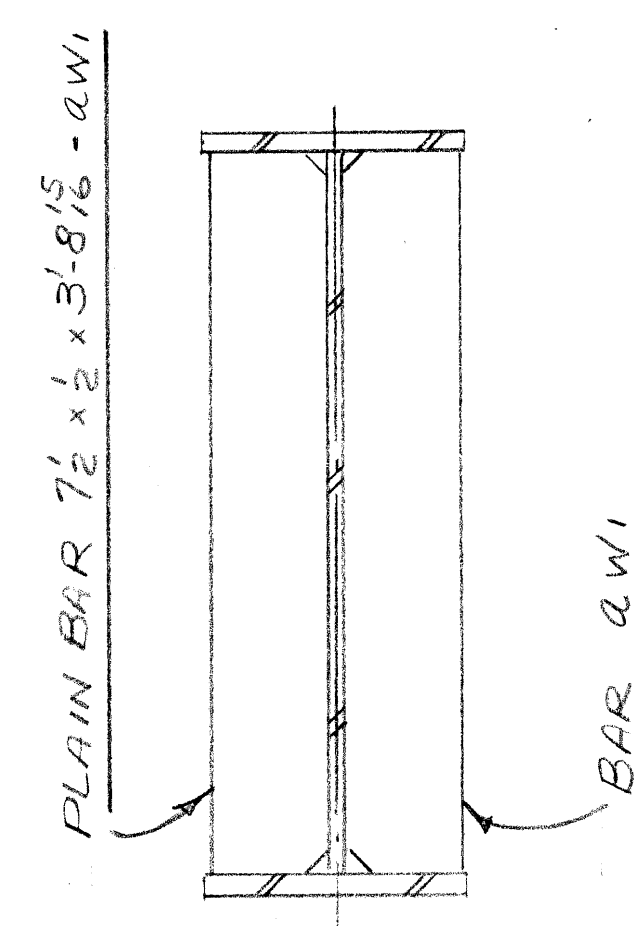
SECTION J-J
FOR G1 ONLY

BAR 7 1/2 x 3/4 x 3'-8 1 5 ba



SECTION J-J
FOR G2 ONLY

BAR 7 1/2 x 3/4 x 3'-8 1 5 bb



SECTION T-T
TYPICAL - 80 BARS

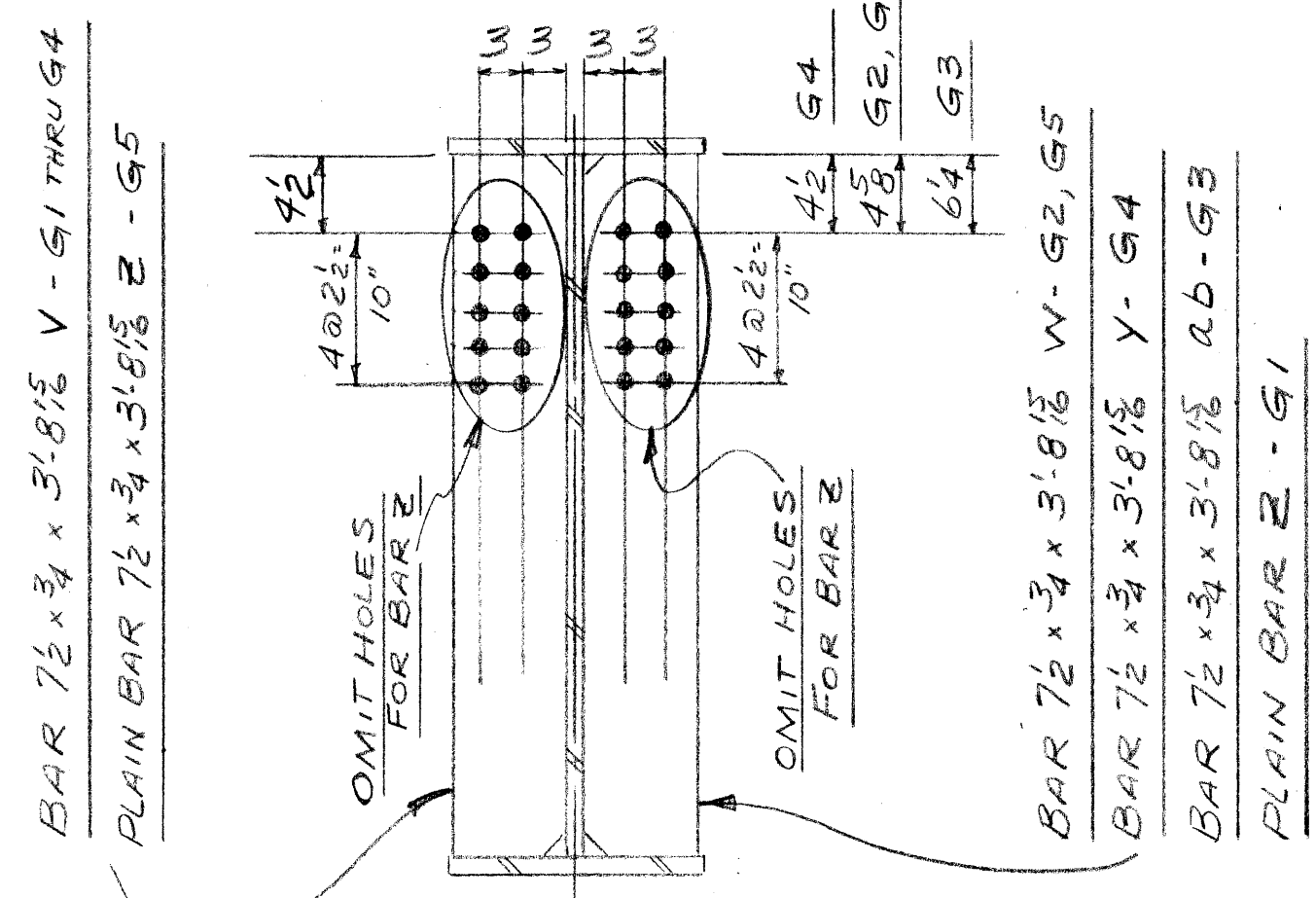
PLAIN BAR 7 1/2 x 1/2 x 3'-8 1 5 - aw1

SEE SHEET 1B FOR SHOP NOTES.

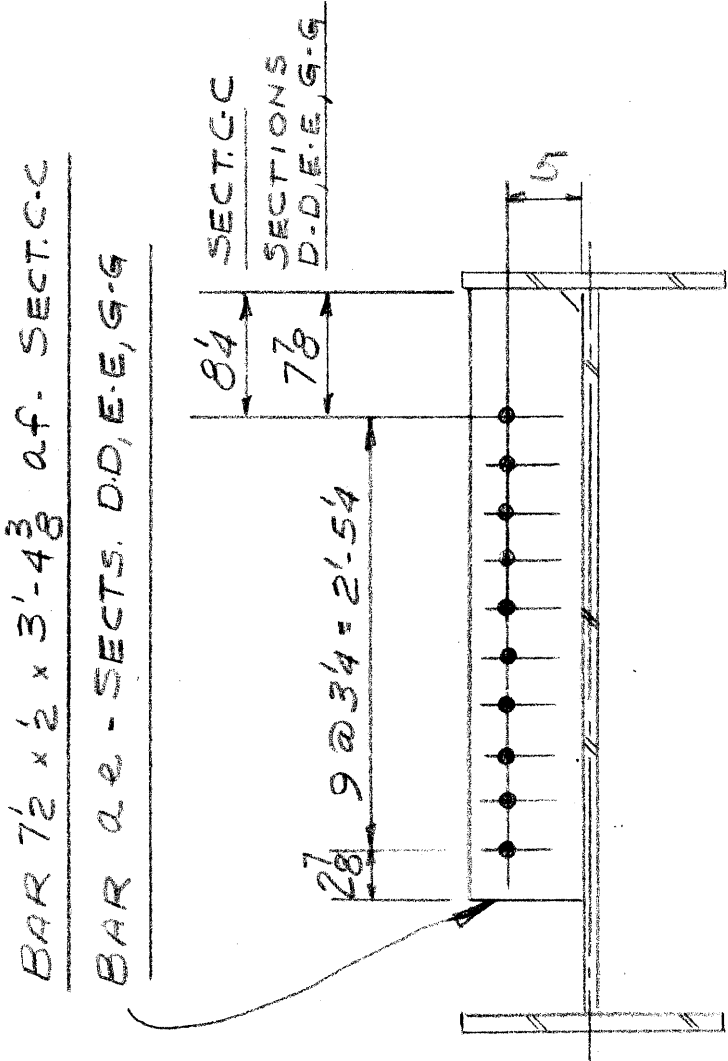
REVISION			
NO.	DESCRIPTION	DATE	BY

F. YEAGER
BRIDGE & CULVERT COMPANY
 1701 KEARNEY ST. - PORT HURON, MICH.
 BRIDGE S35 OF 82123J
 PACIFIC AVE. OVER THE JEFFRIES
 FREEWAY IN THE CITY OF DETROIT.
 C.A. HULL CO. INC., CONTR.

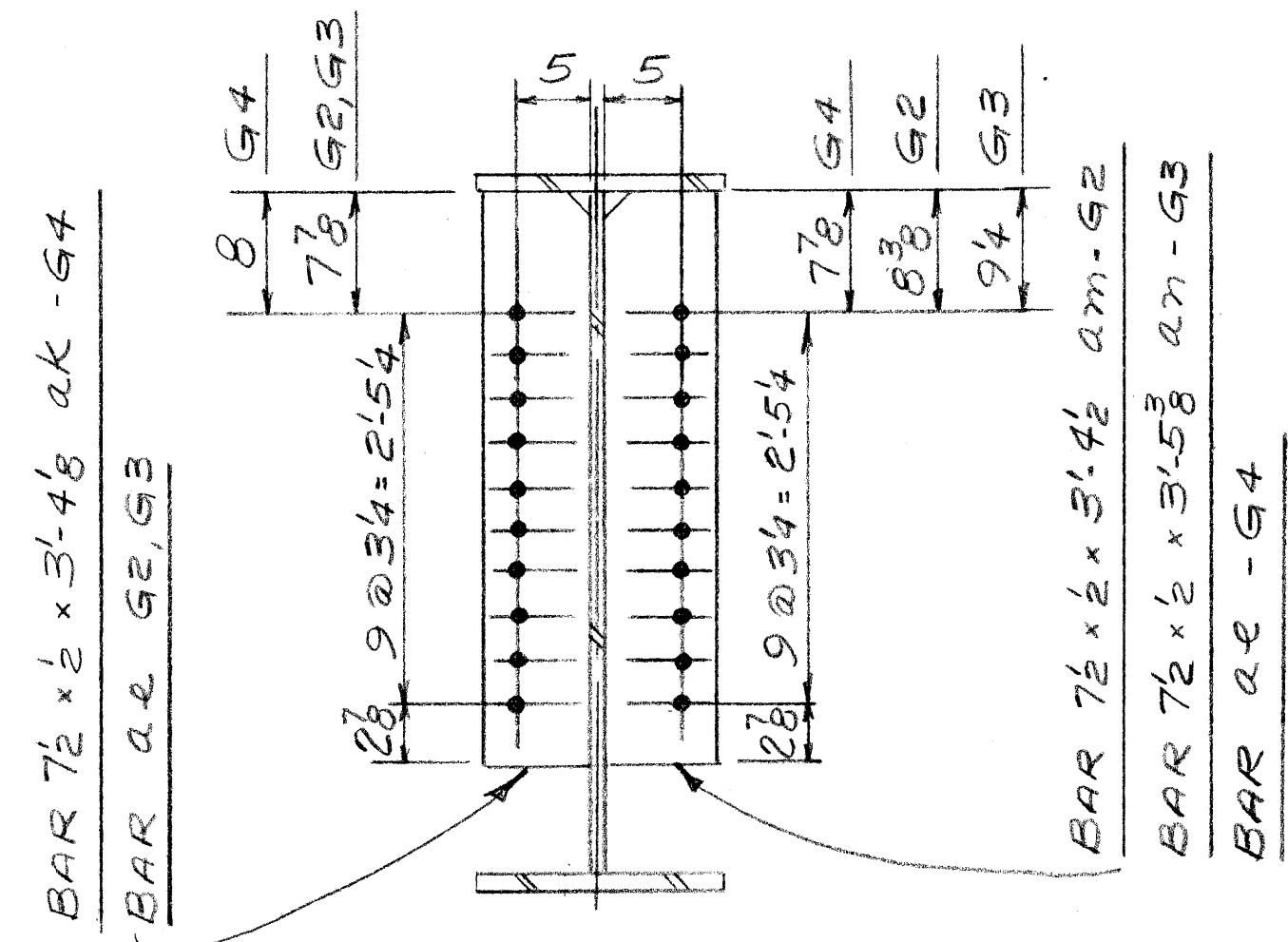
DATE 2-24-70 JOB NO. 54707 SHEET 28 OF 9
 BY SAW.



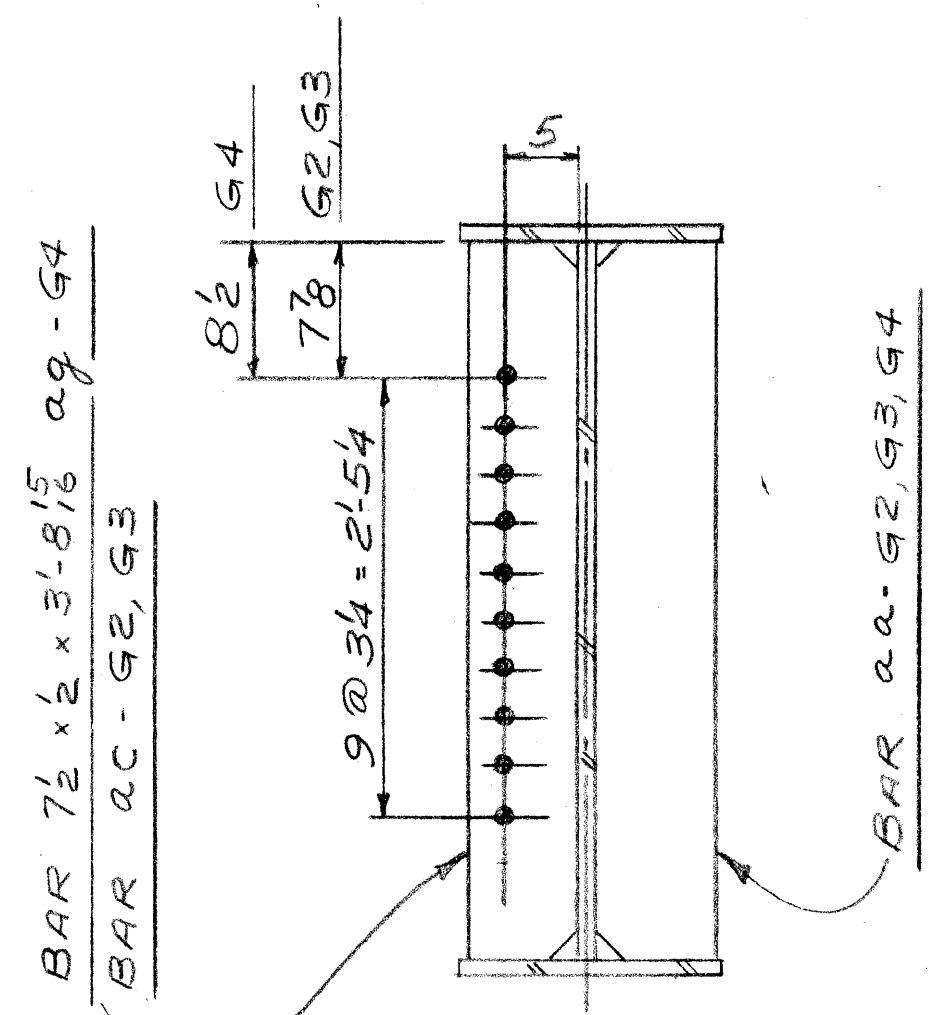
SECTION A-A
FOR 3G1 THRU 3G5



SECTIONS C-C, D-D, E-E, & G-G
FOR 3G1 ONLY

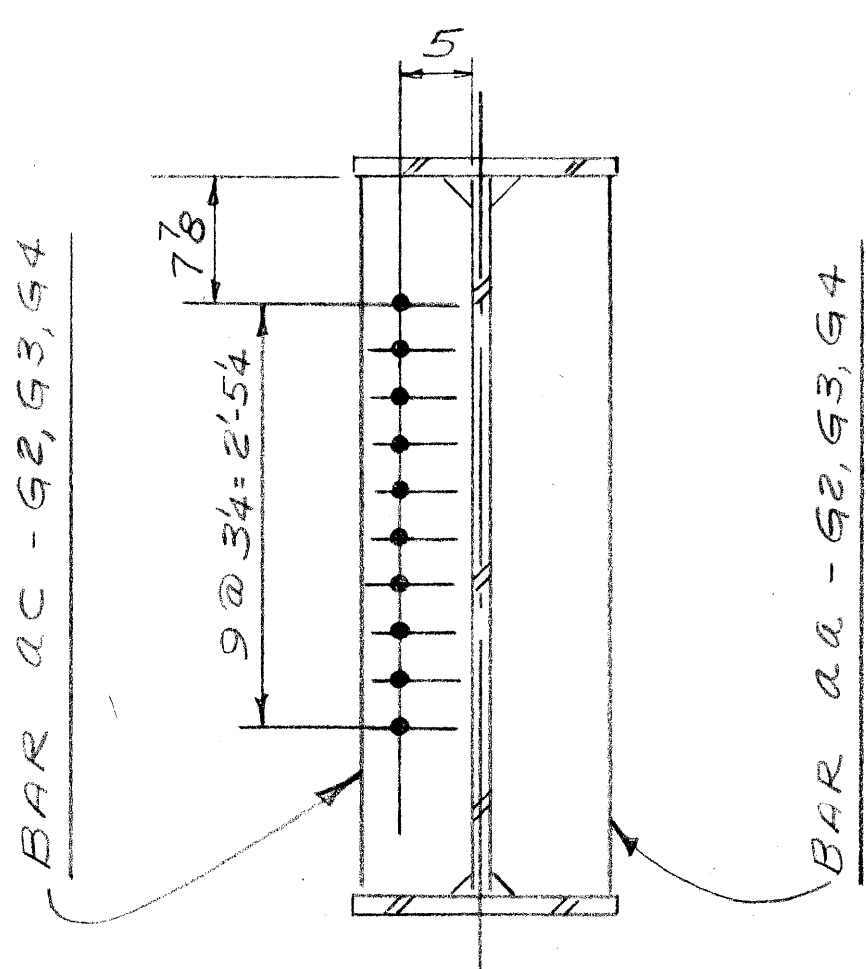


SECTION E-E
FOR 3G2, 3G3 & 3G4



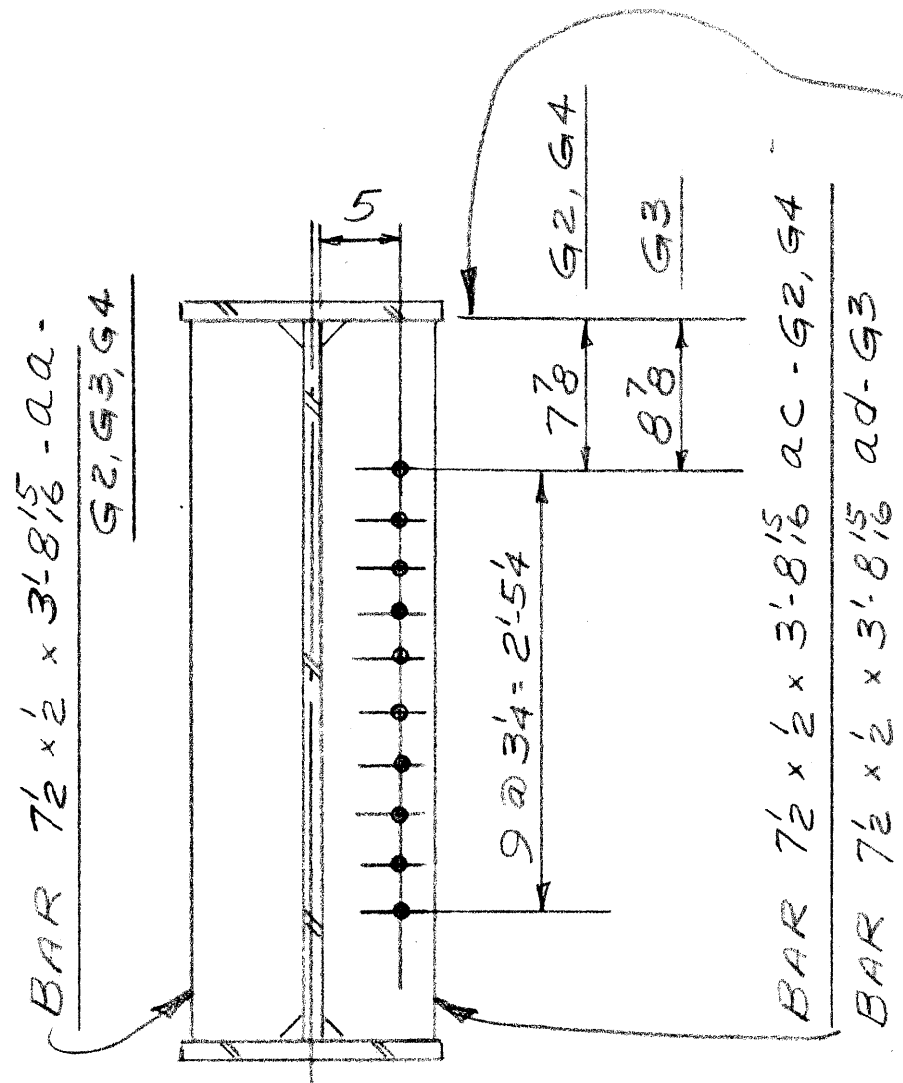
SECTION C-C
FOR 3G2, 3G3, & 3G4

NO SECTION C-C FOR 3G5



SECTION G-G
FOR 3G2, 3G3 & 3G4

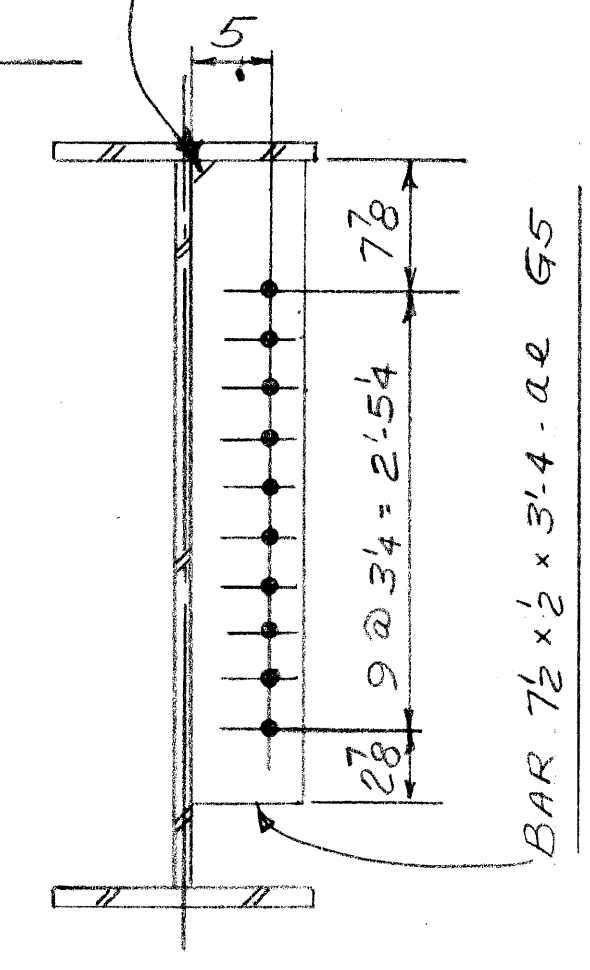
NO SECTION G-G FOR 3G5



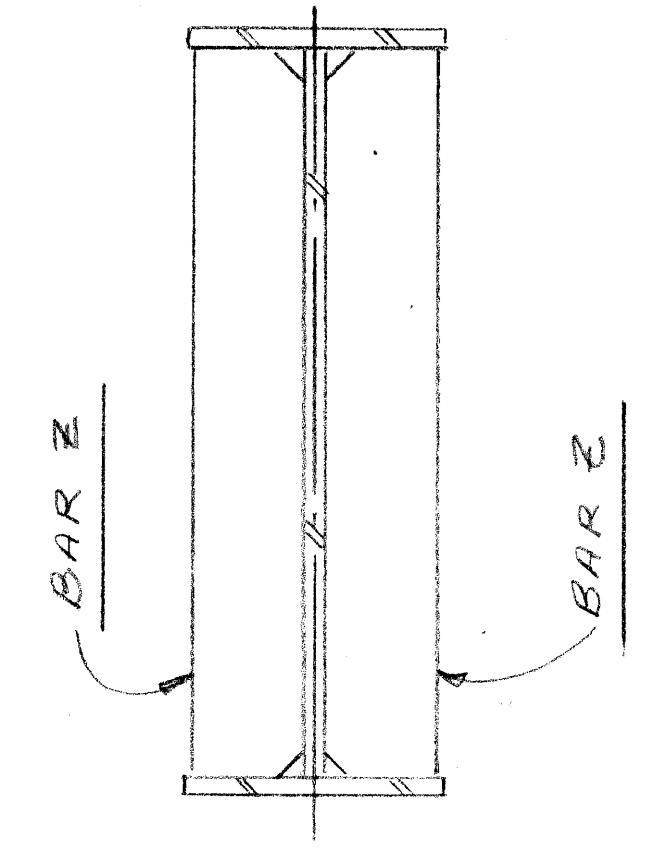
SECTION B-B
FOR 3G2, 3G3 & 3G4

NO SECTION B-B FOR 3G5

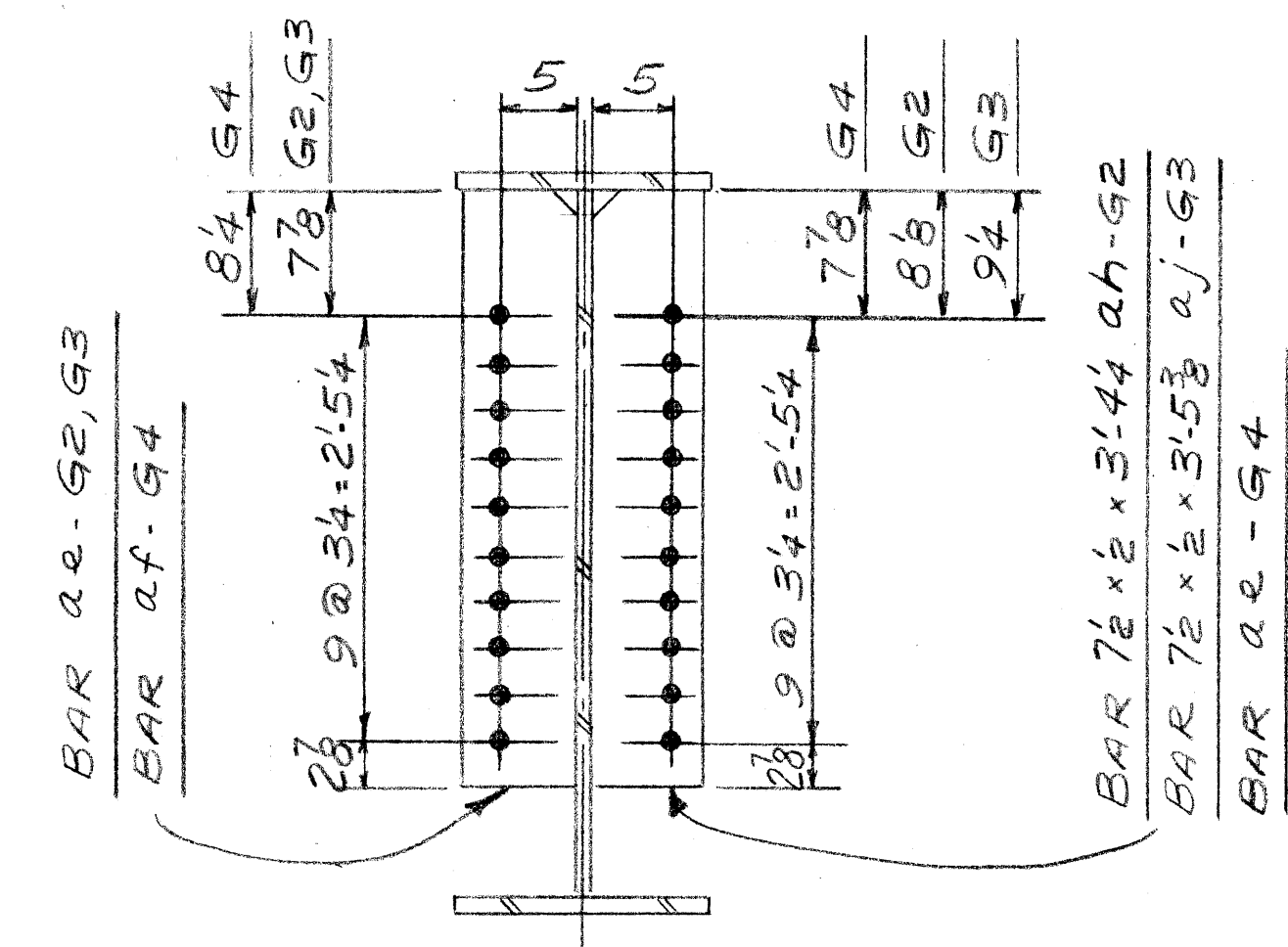
NOTE:
CLIP CORNERS 1x1 (TYP ALL SECTIONS);
DIMENSION LINE BEGINS @ BOTTOM
OF TOP FLG. (TYP ALL SECTIONS).



SECTIONS B-B, D-D & E-E
FOR 3G5 ONLY

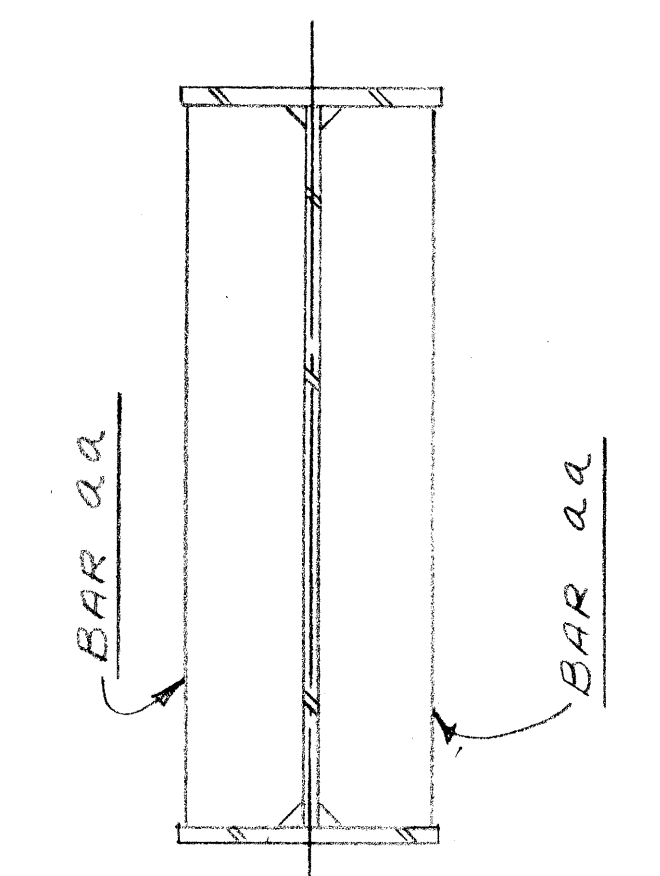


SECTION H-H
FOR 3G1 THRU 3G5

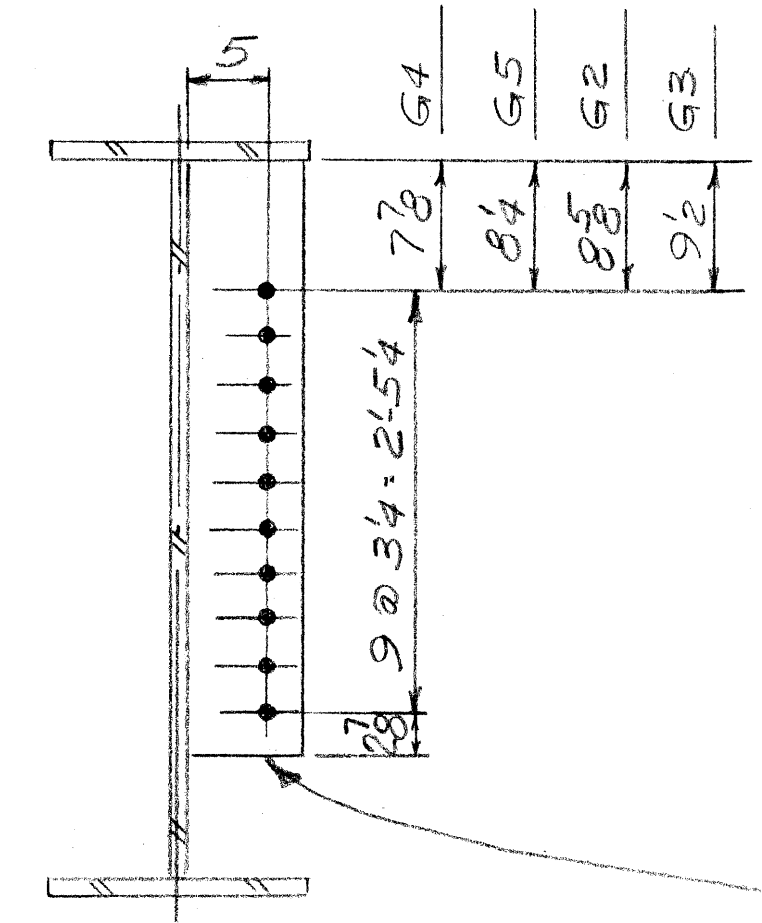


SECTION D-D
FOR 3G2, 3G3, & 3G4

BAR 7 1/2 x 2 x 3.4 3/8 a.h. - G2
BAR 7 1/2 x 2 x 3.5 3/8 a.j. - G3
BAR a.e. - G4



SECTION J-J
FOR 3G1 THRU 3G5



SECTION F-F
FOR 3G2 THRU 3G5

NO SECTION F-F FOR 3G1

BAR a.e. - G4
BAR a.f. - G5

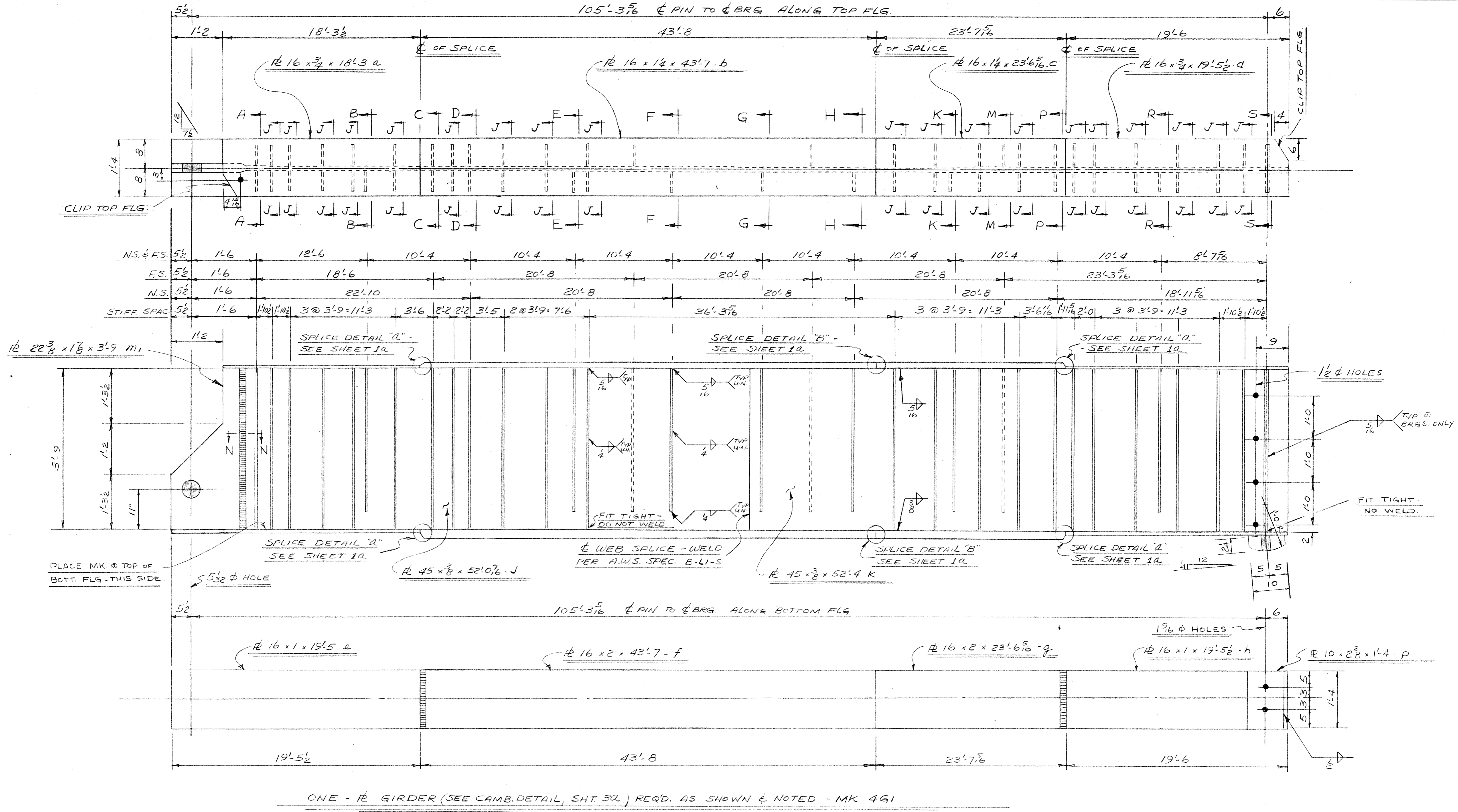
SEE SHEET 1B FOR SHOP NOTES.

REVISION			
NO.	DESCRIPTION	DATE	BY

F. YEAGER
BRIDGE & CULVERT COMPANY
 1701 KEARNEY ST. - PORT HURON, MICH.
 BRIDGE S35 OF 82123 J
 PACIFIC AVENUE OVER THE JEFFRIES
 FREEWAY IN THE CITY OF DETROIT.
 C. A. HULL CO., INC., CONTR.

DATE 3-12-70
 BY SAW.

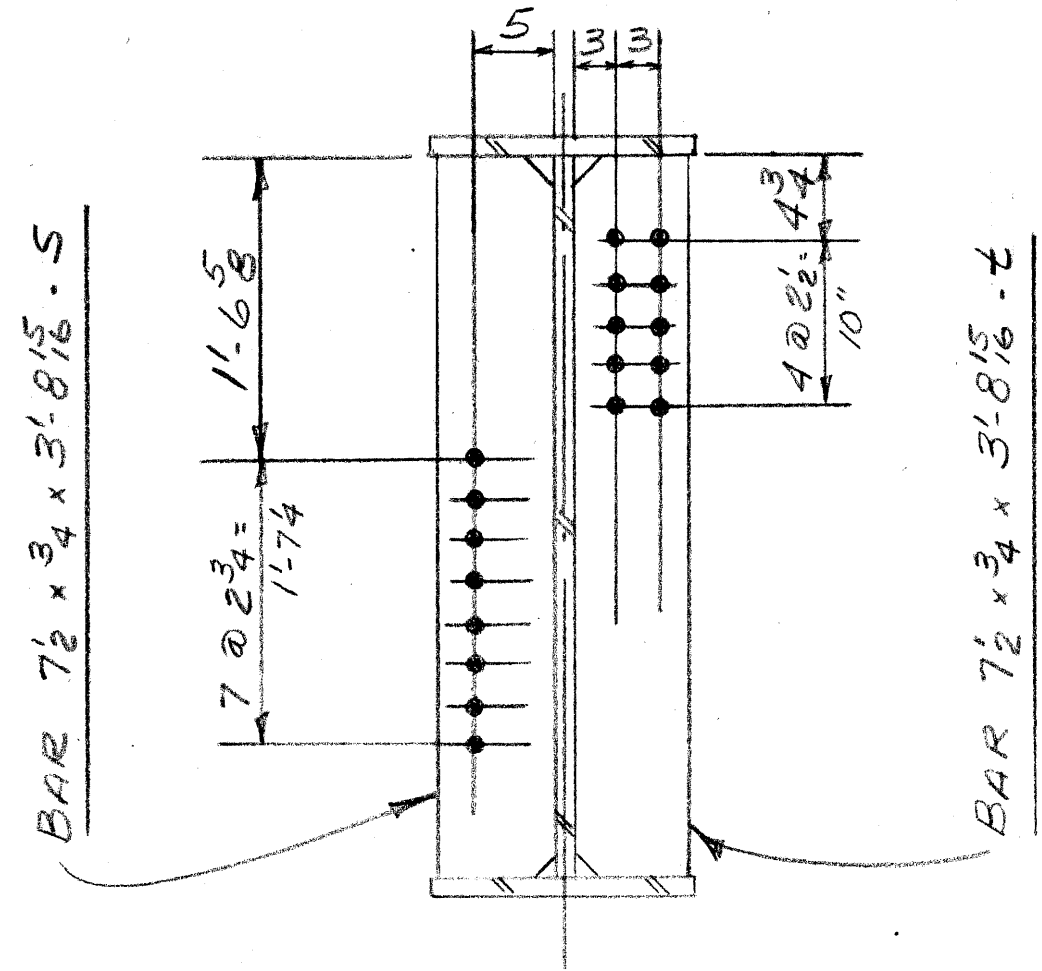
JOB NO. 54707
 SHEET 3B OF 9



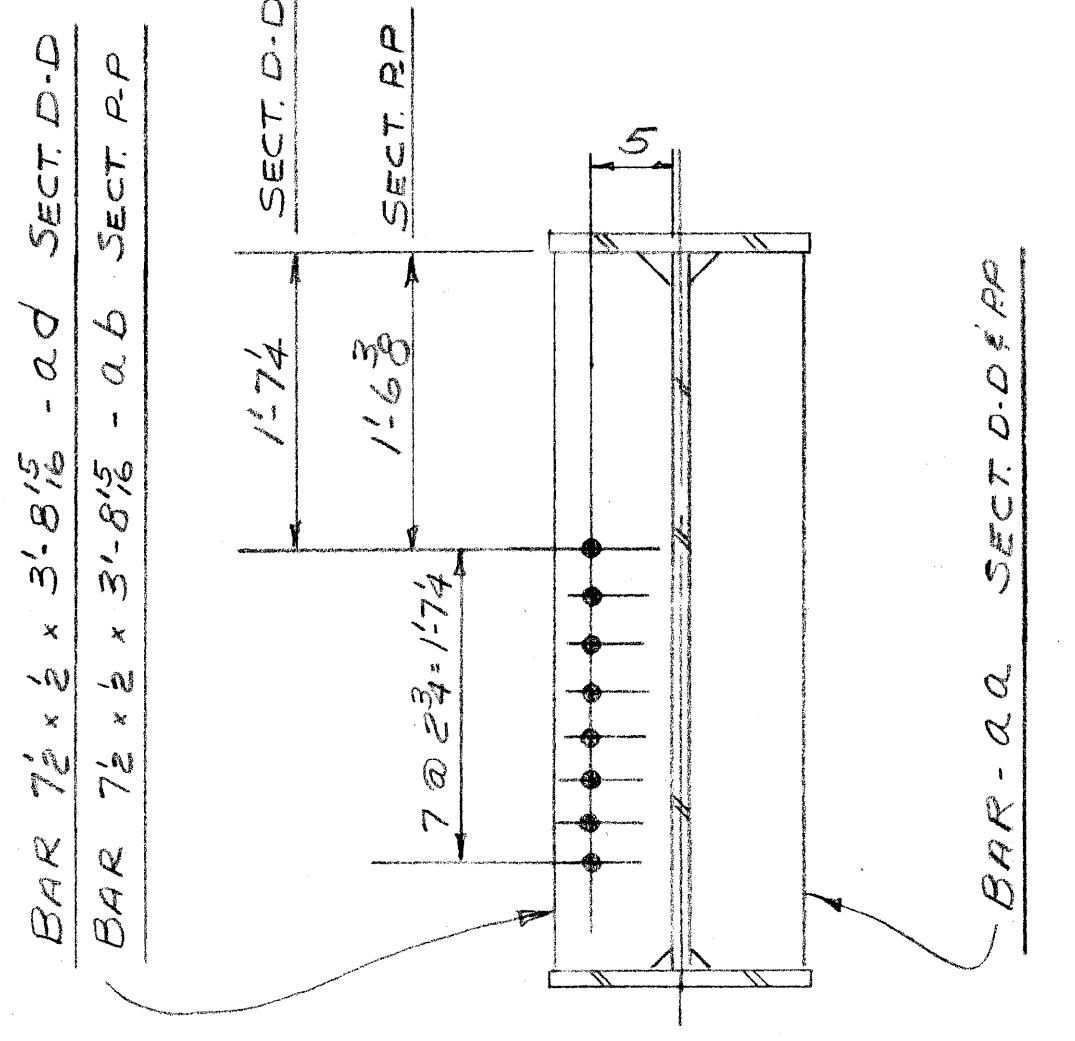
SEE SHEET 18 FOR SHOP NOTES.

REVISION			
NO.	DESCRIPTION	DATE	BY

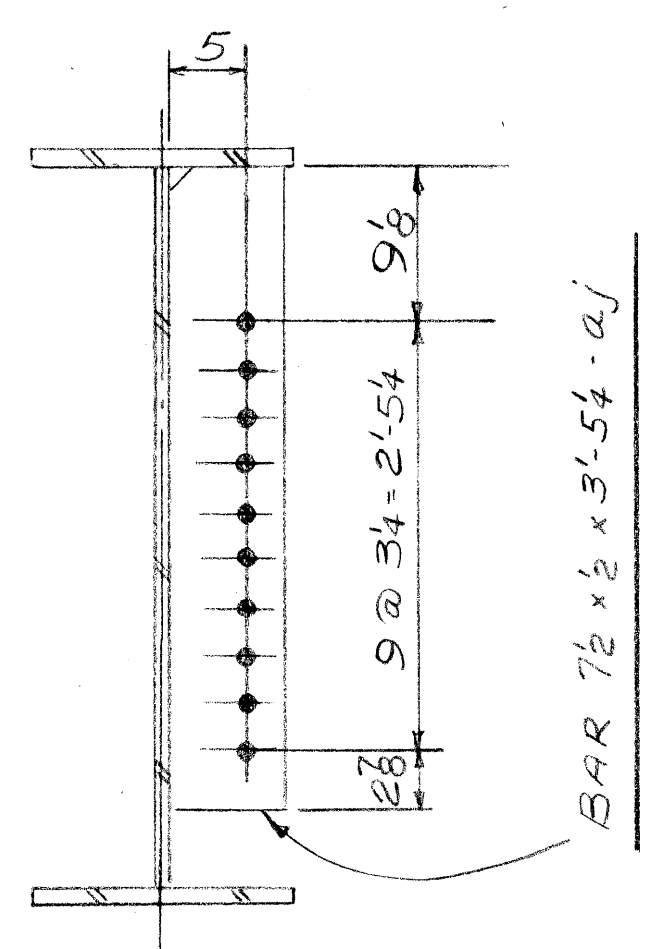
F. YEAGER		
BRIDGE & CULVERT COMPANY		
1701 KEARNEY ST.		PORT HURON, MICH
BRIDGE S35 OF 82123J		
PACIFIC AVENUE OVER THE JEFFRIES		
FREEWAY IN THE CITY OF DETROIT.		
C.A. HULL CO. INC., CONTR.		
DATE 3-2-70	JOB NO. 54707	SHEET 40 OF 9
BY SAW.		



SECTION A-A
FOR 4G1 ONLY

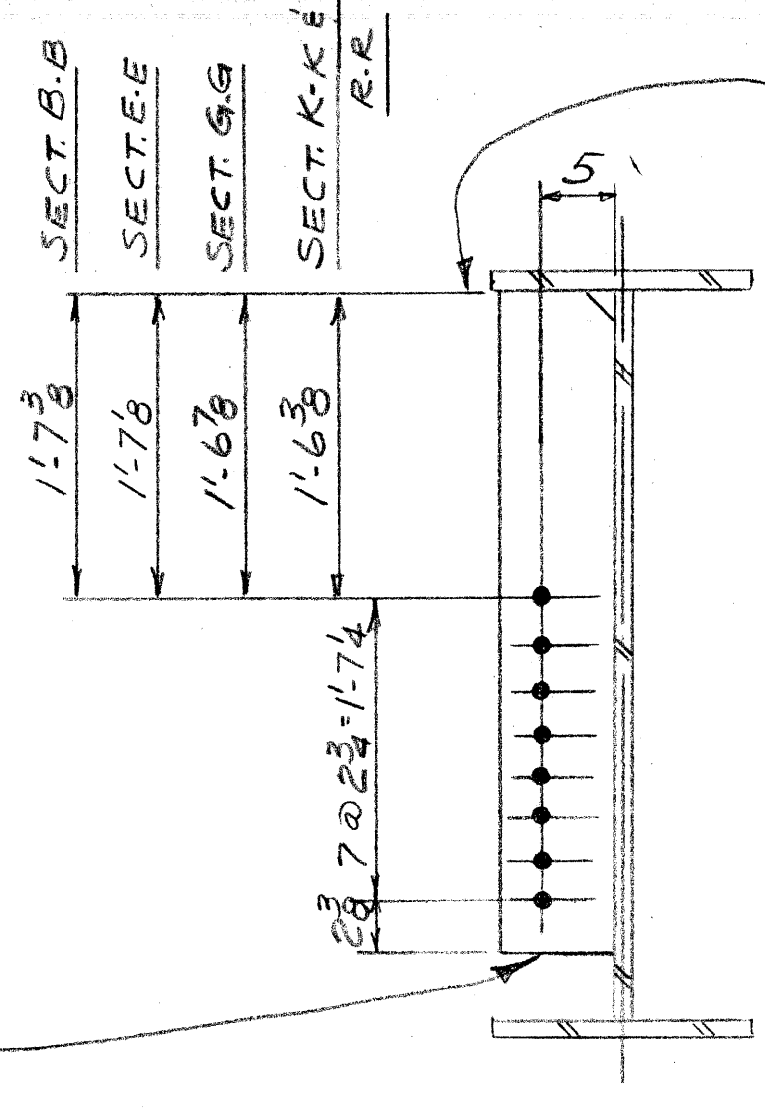


SECTIONS D-D & P-P
FOR 4G1 ONLY

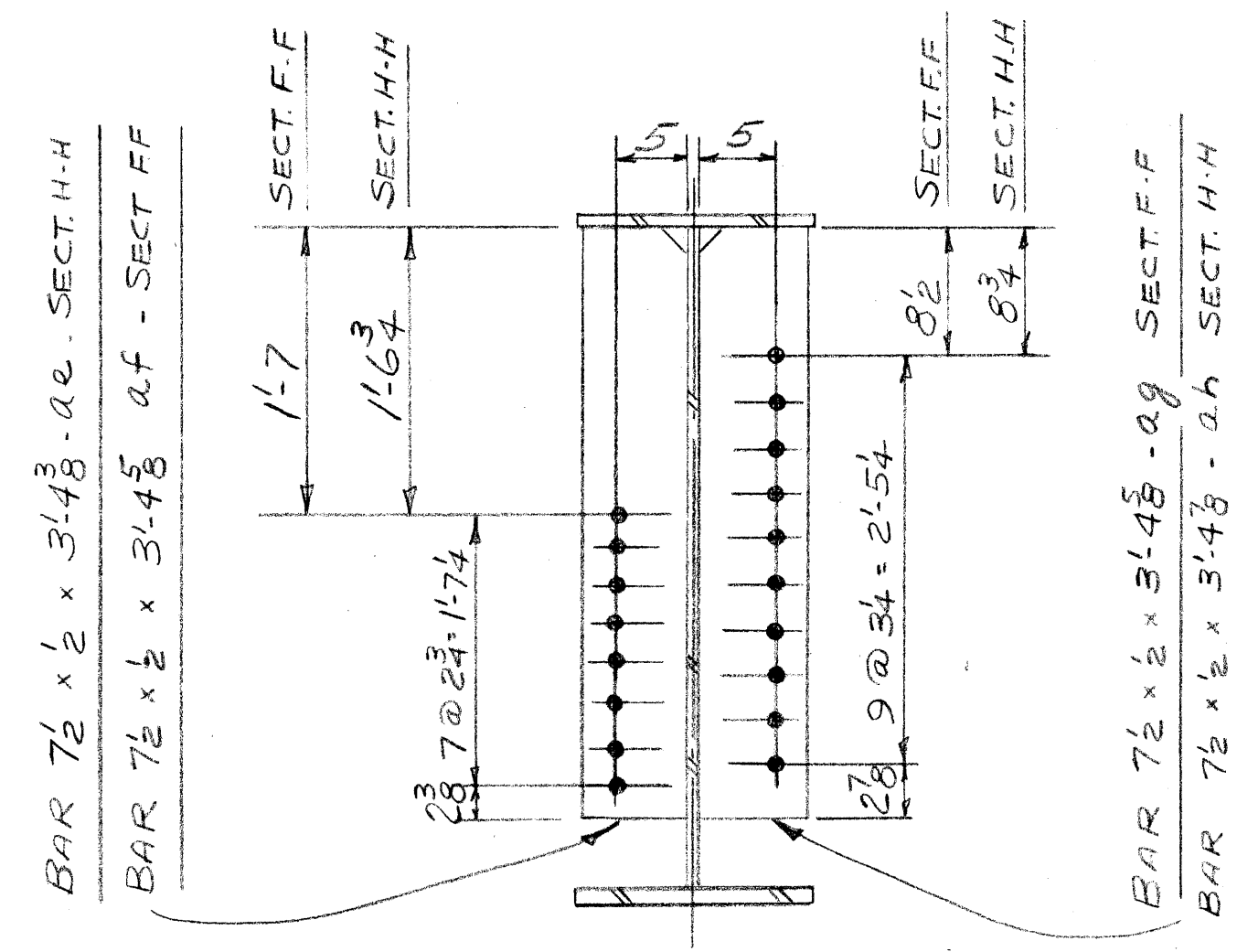


SECTION M-M
FOR 4G1 ONLY

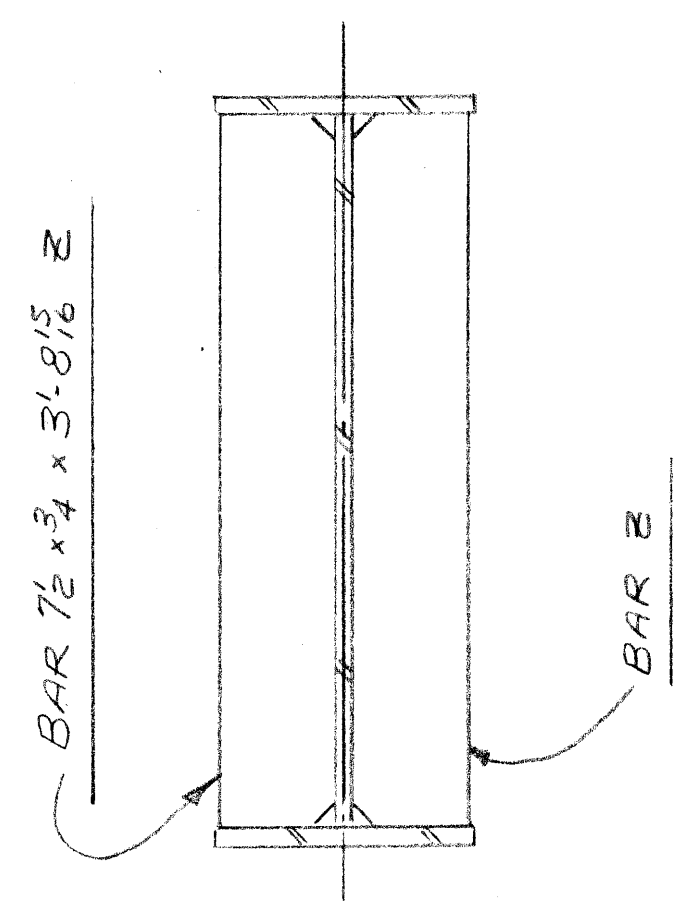
BAR 7/8 x 1/2 x 31.5 V - SECT. B-B
BAR 7/8 x 1/2 x 31.4 3/4 W - SECT. E-E
BAR 7/8 x 1/2 x 31.4 1/2 Y - SECT. G-G
BAR 7/8 x 1/2 x 31.4 0.4 K - SECT. K-K & R-R



SECTIONS B-B, E-E, G-G, K-K, & R-R
FOR 4G1 ONLY

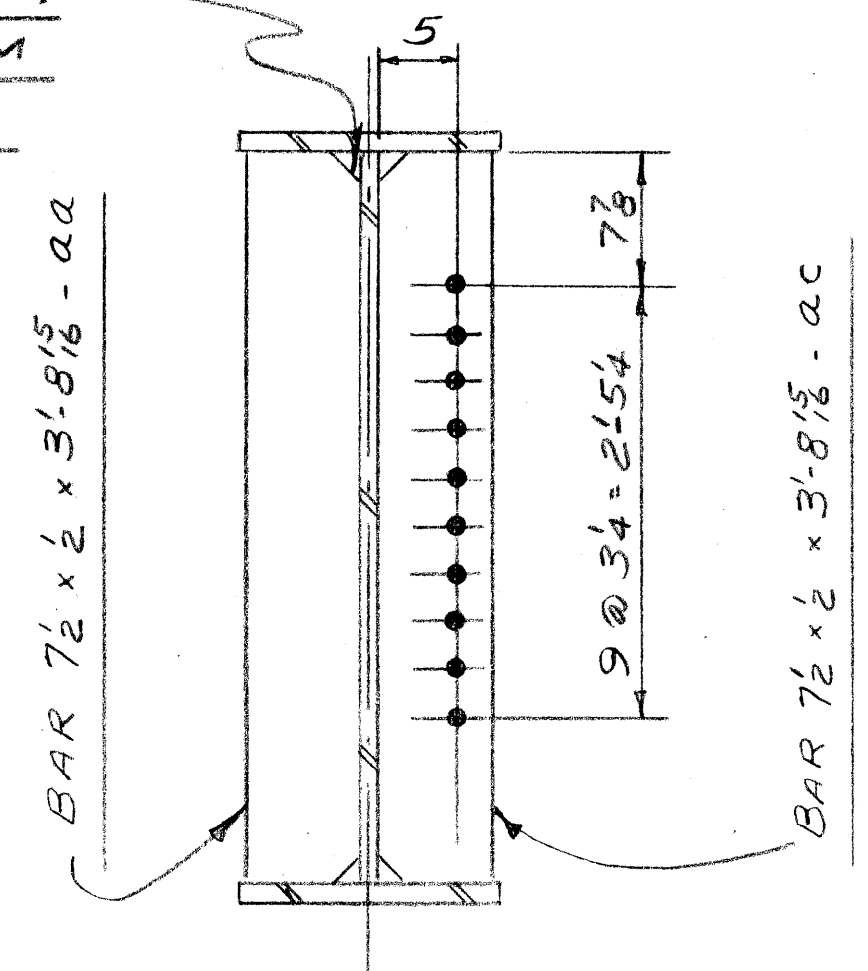


SECTIONS F-F & H-H
FOR 4G1 ONLY

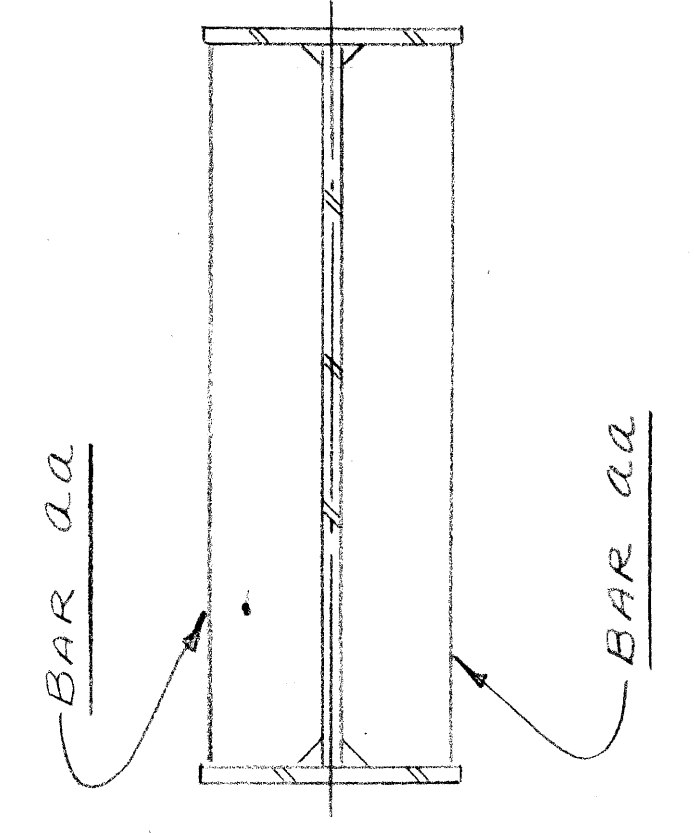


SECTION S-S
FOR 4G1 ONLY

NOTE:
CLIP CORNERS 1x1 (TYP ALL SECTIONS).
DIMENSION LINE BEGINS AT BOTTOM
OF TOP FLANGE (TYP ALL SECTIONS).



SECTION C-C
FOR 4G1 ONLY

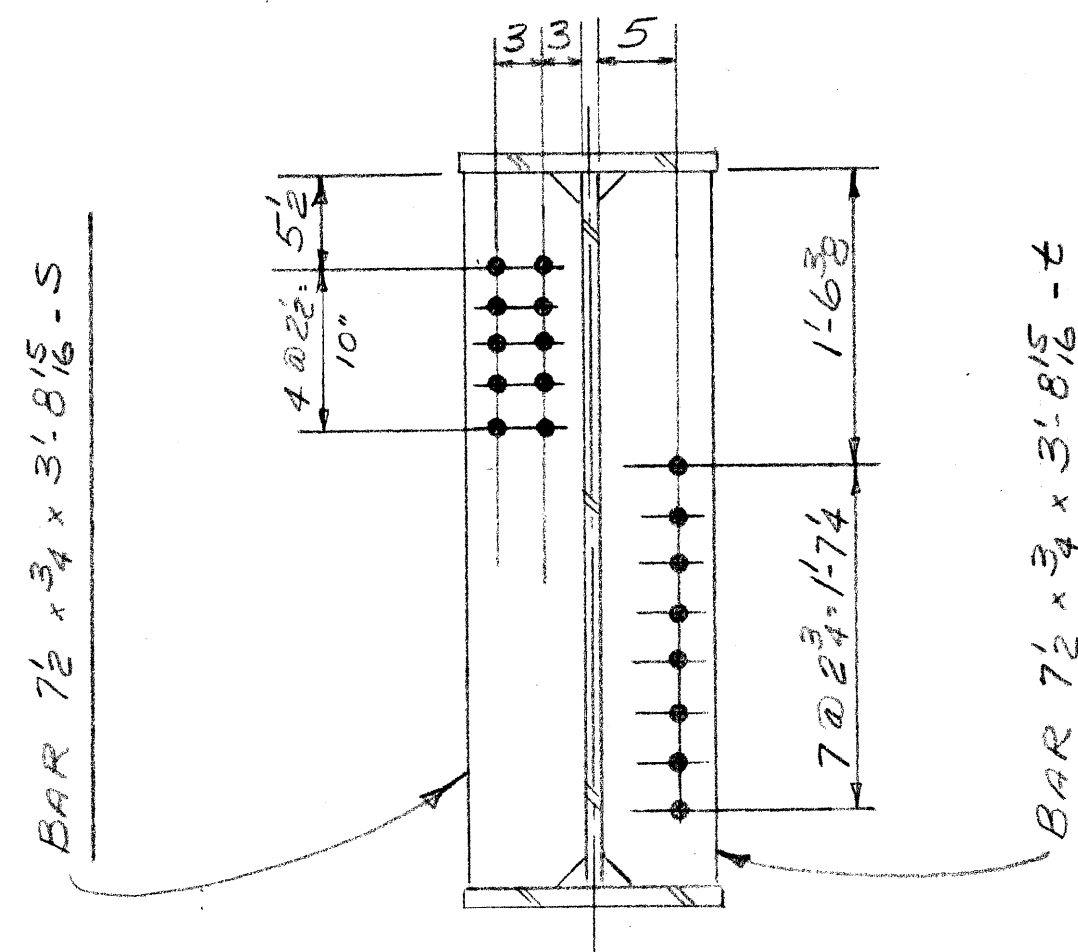


SECTION J-J
FOR 4G1 ONLY

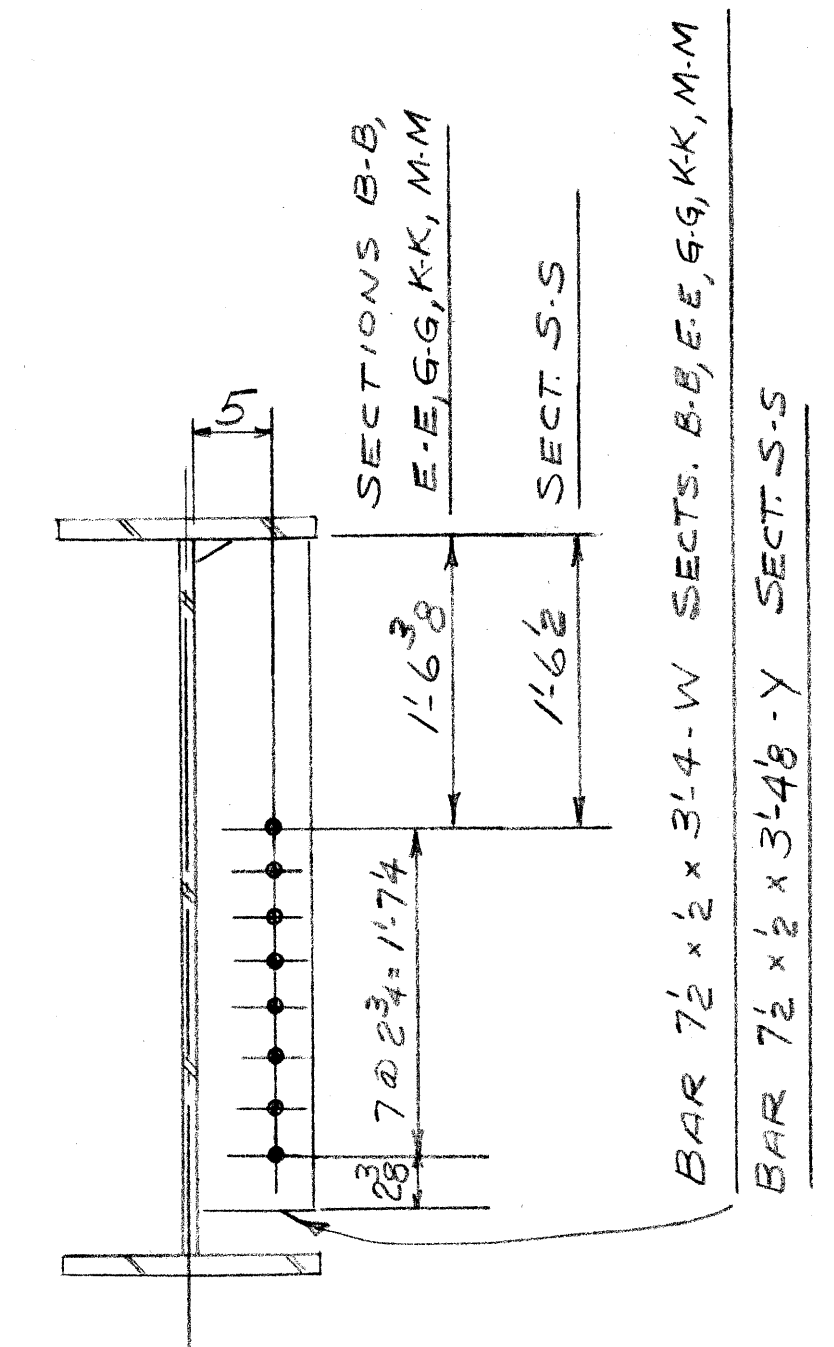
SEE SHEET 1B FOR SHOP NOTES.

REVISION			
NO.	DESCRIPTION	DATE	BY

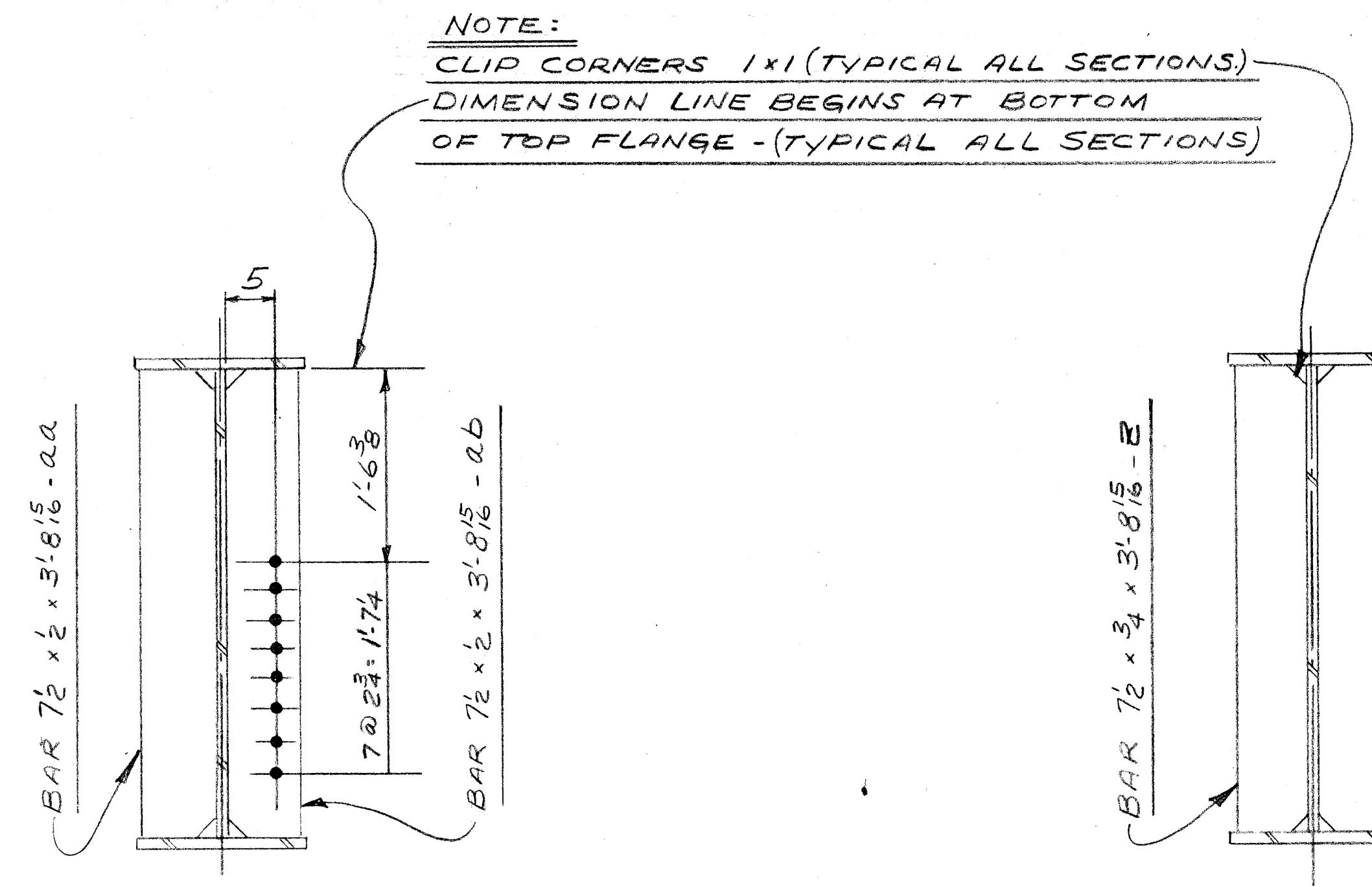
F. YEAGER
BRIDGE & CULVERT COMPANY
 1701 KEARNEY ST. - PORT HURON, MICH
 BRIDGE 535 OF 82123 J
 PACIFIC AVE. OVER THE JEFFRIES
 FREEWAY IN THE CITY OF DETROIT.
 C.A. HULL CO. INC., CONTR
 DATE 3-10-70
 BY SAW.
 JOB NO. 54707
 SHEET 4B OF 9



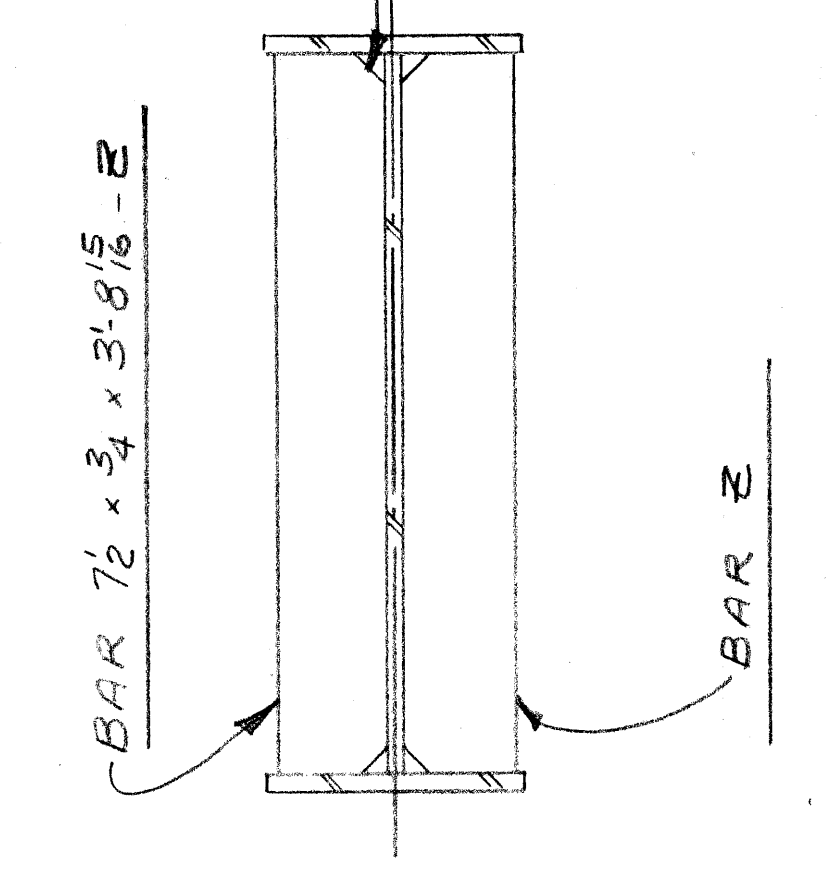
SECTION A-A
FOR 5G1 ONLY



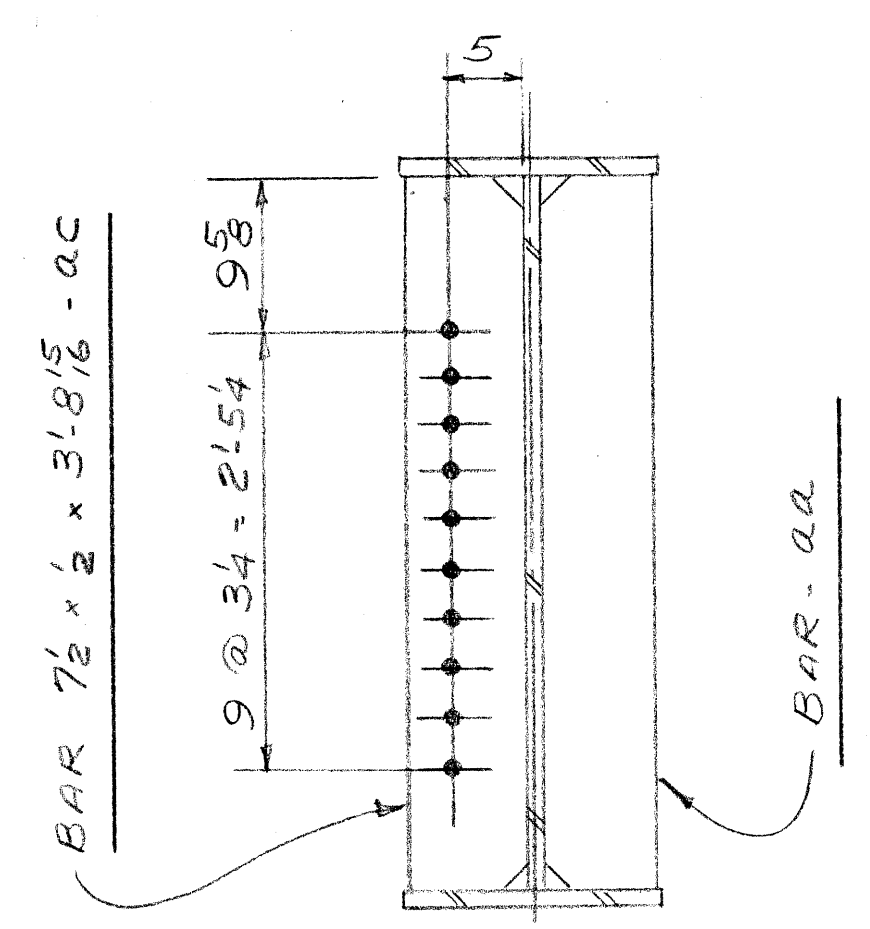
SECTIONS B-B, E-E, G-G, K-K, M-M, & S-S
FOR 5G1 ONLY



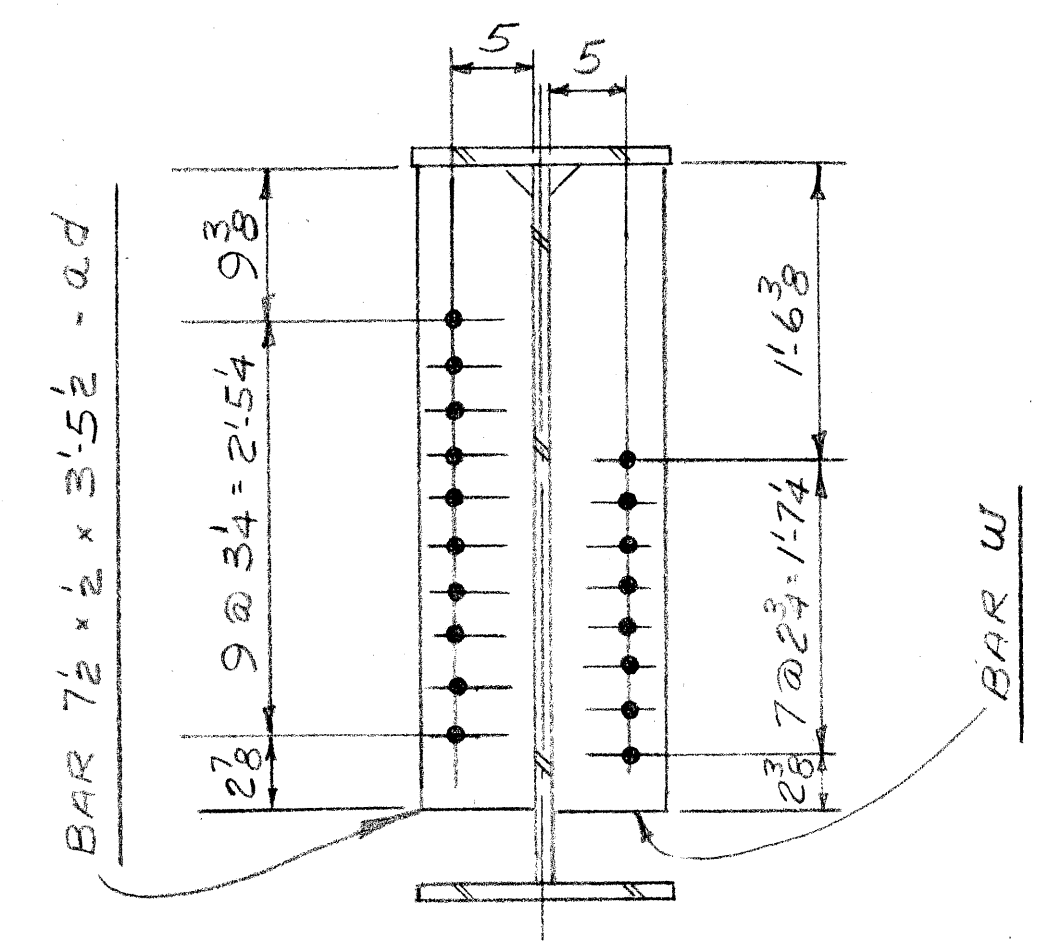
SECTION C-C
FOR 5G1 ONLY



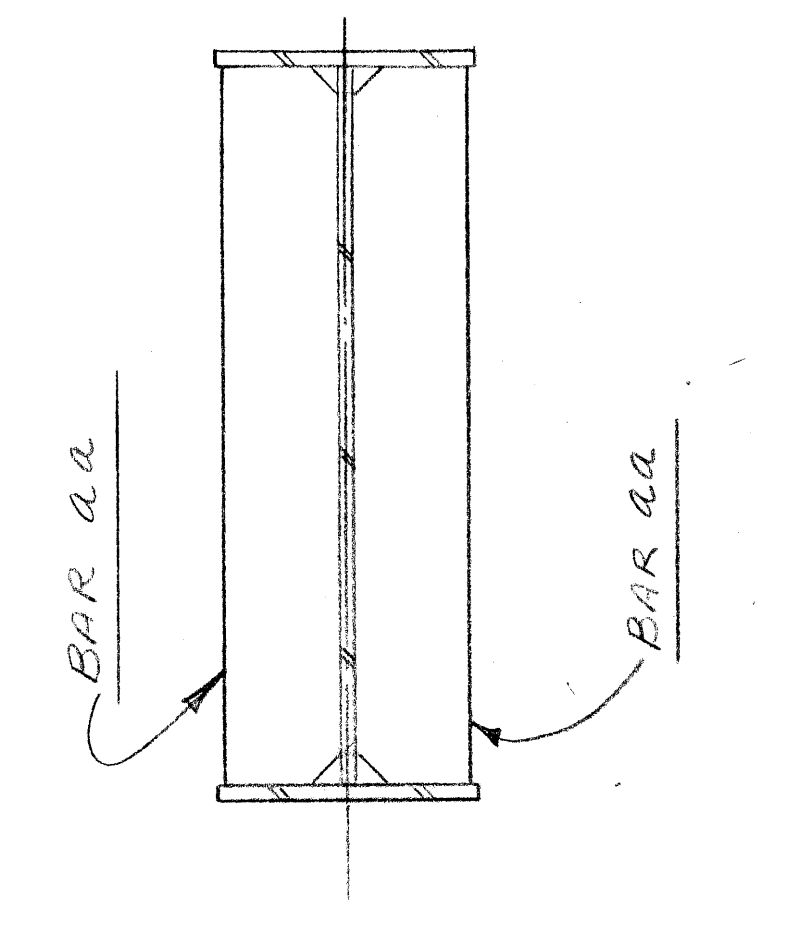
SECTION T-T
FOR 5G1 ONLY



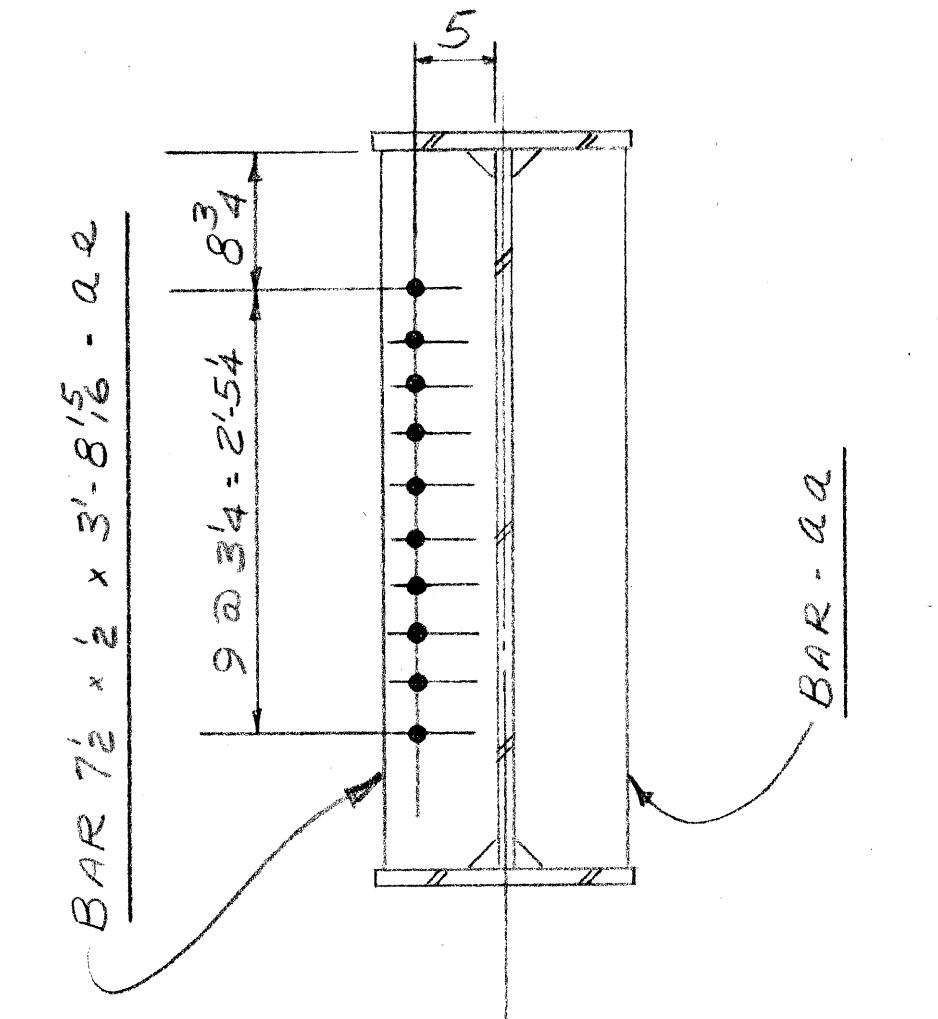
SECTION D-D
FOR 5G1 ONLY



SECTIONS F-F & H-H
FOR 5G1 ONLY



SECTION J-J
FOR 5G1 ONLY



SECTION P-P
FOR 5G1 ONLY

SEE SHEET 1B FOR SHOP NOTES

REVISION			
NO.	DESCRIPTION	DATE	BY

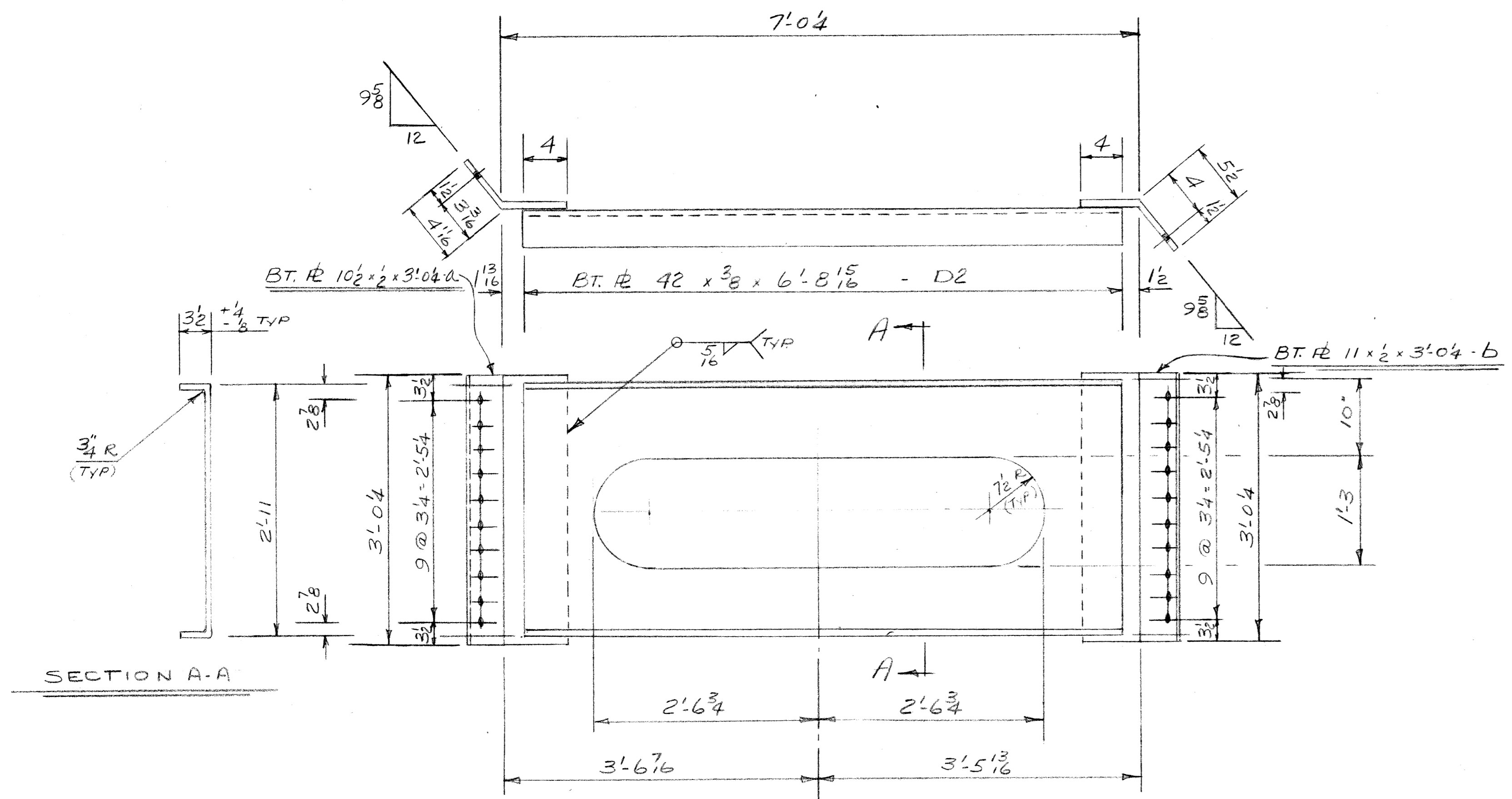
F. YEAGER
BRIDGE & CULVERT COMPANY
 1701 KEARNEY ST. - PORT HURON, MICH

BRIDGE 535 OF 82123 J
 PACIFIC AVE. OVER THE JEFFRIES
 FREEWAY IN THE CITY OF DETROIT.
 C.A. HULL CO. INC., CONT'R.

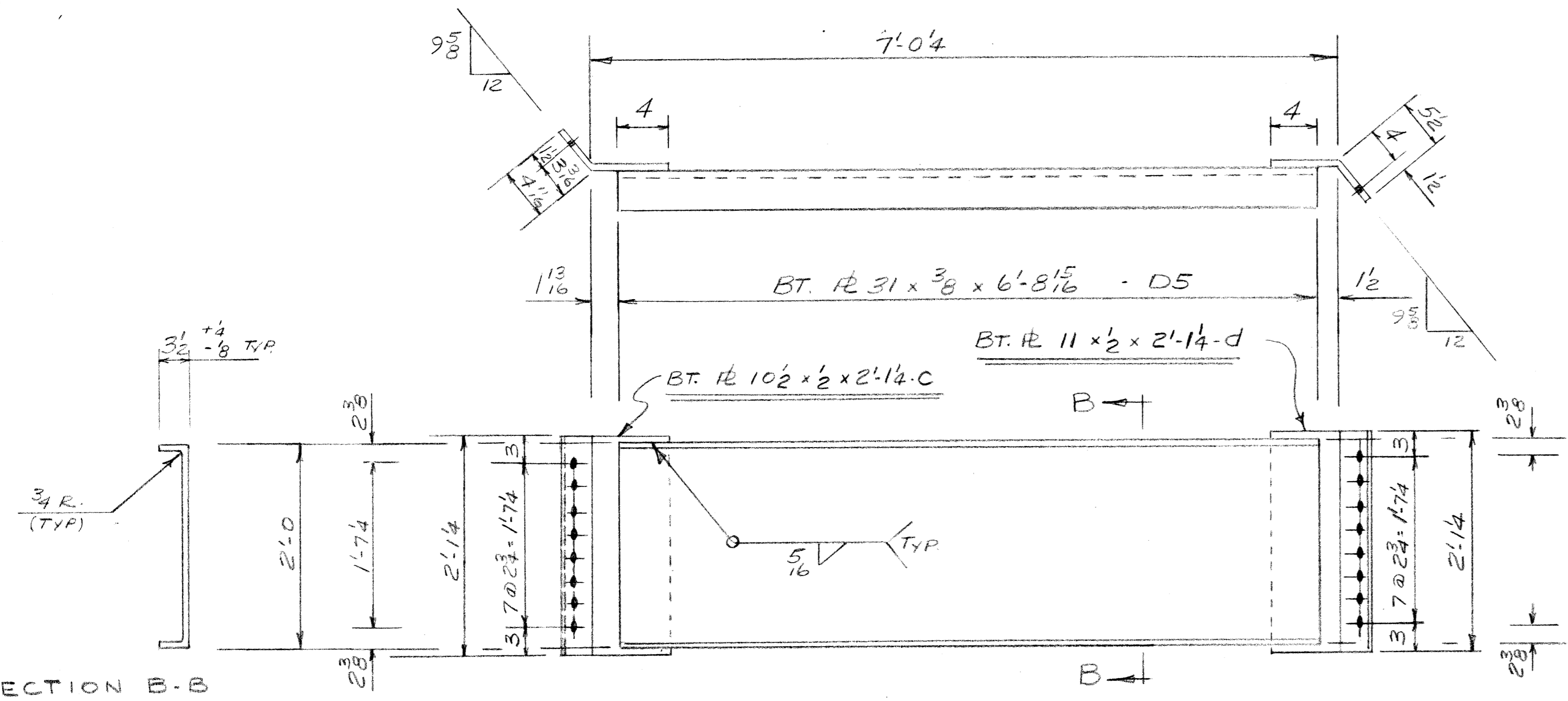
DATE 3-9-70
BY SAW.

JOB NO. 54707

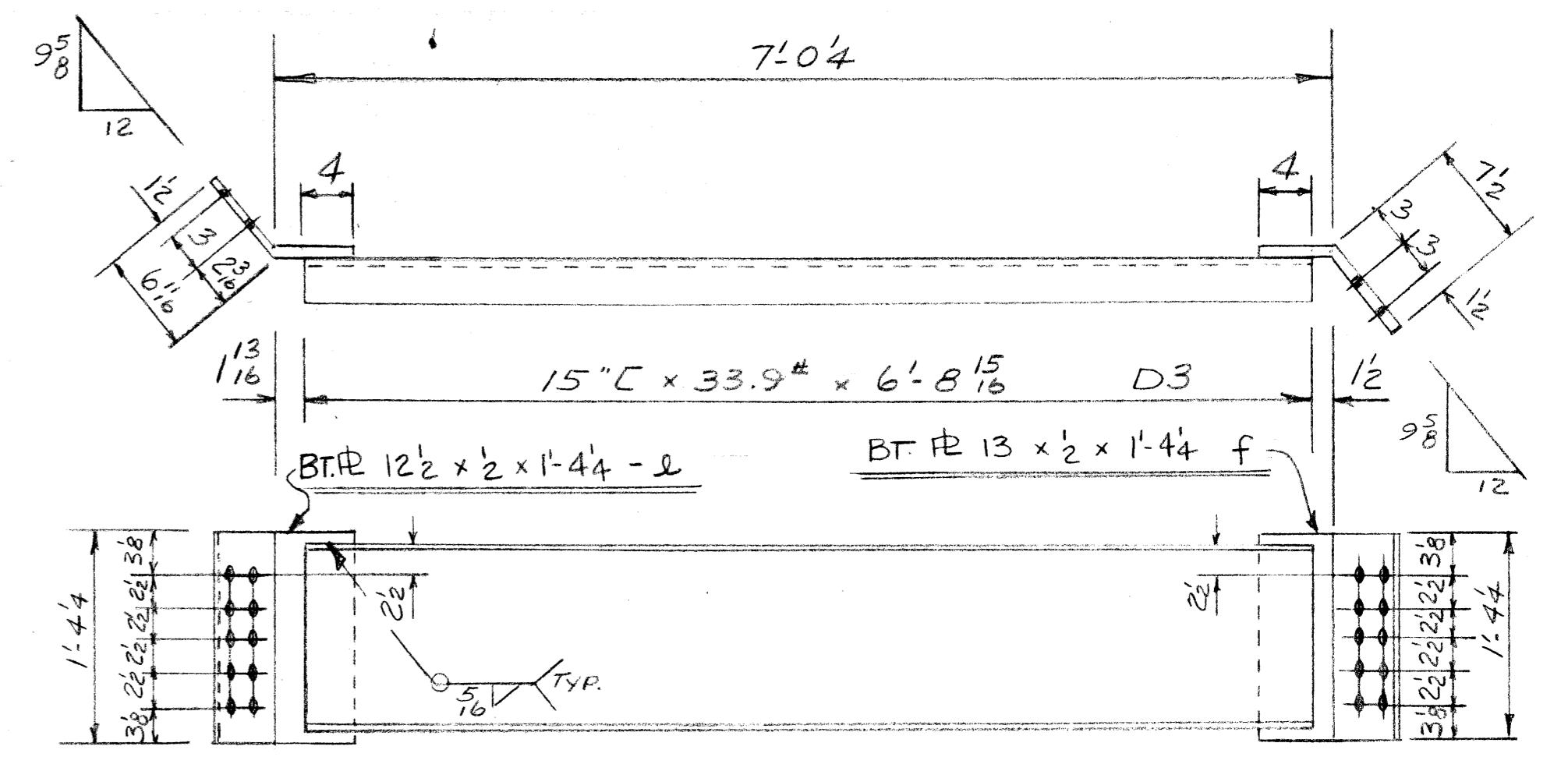
SHEET 5B OF 9



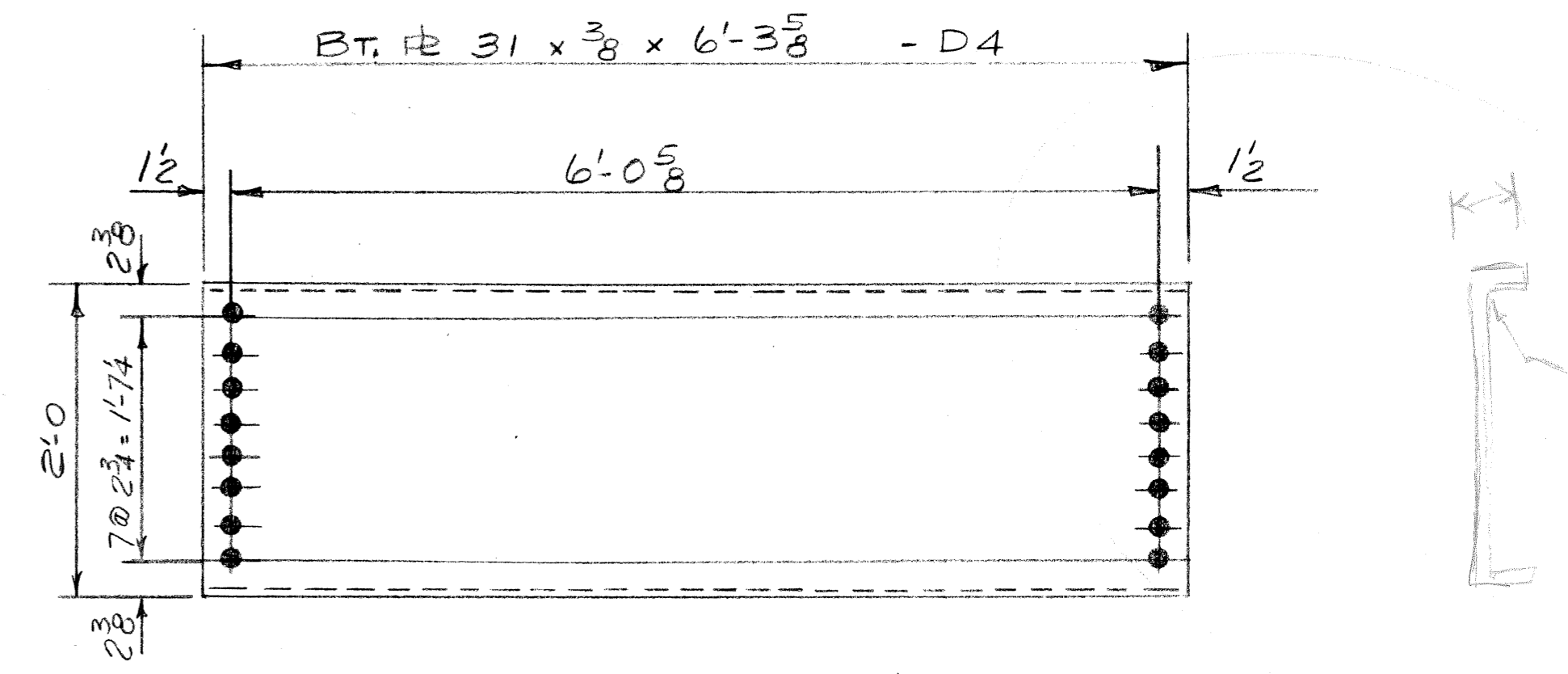
5 - DIAPHRAGMS REQ'D AS SHOWN & NOTED - MK 6D2



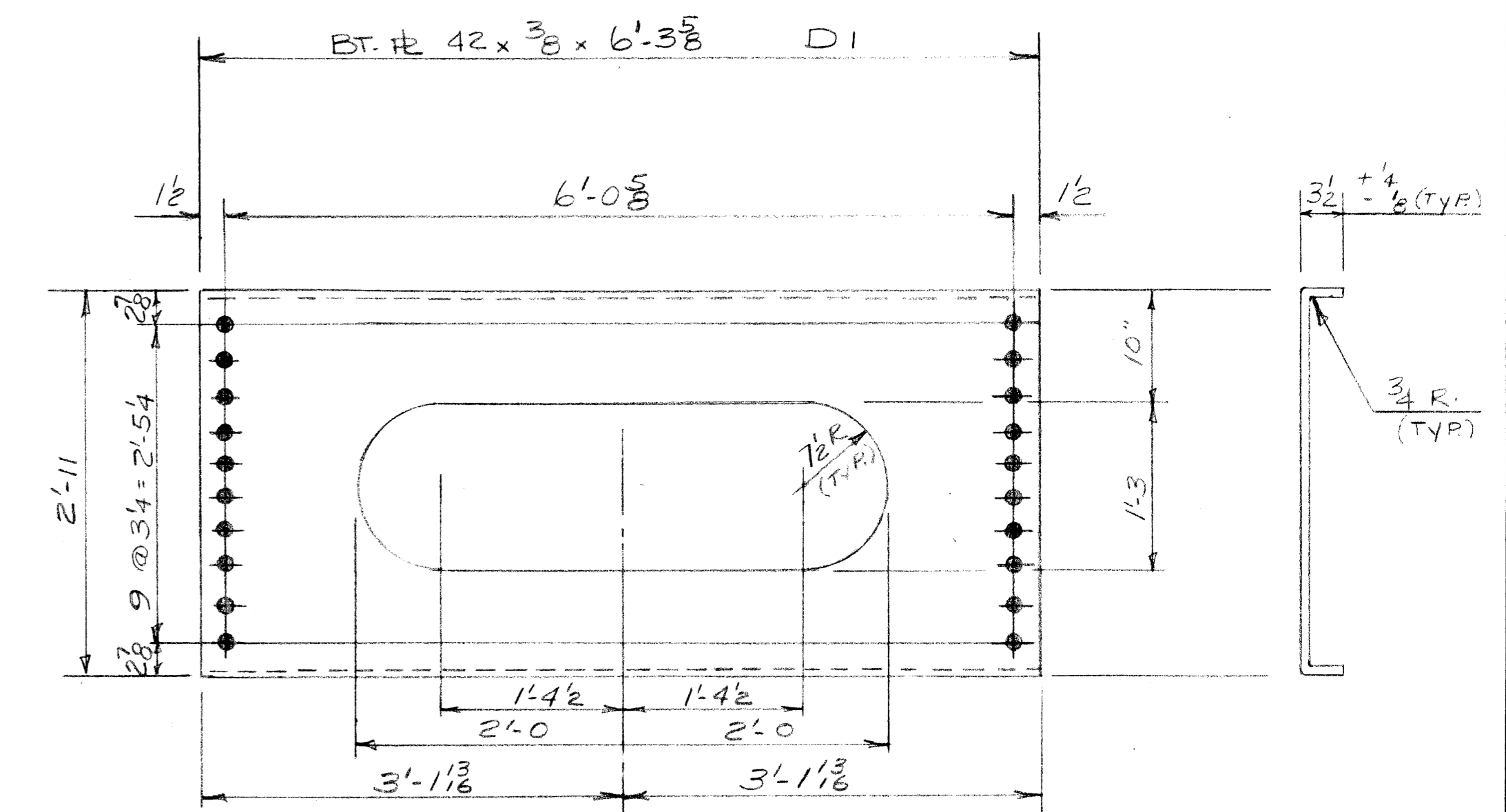
3 - DIAP. REQ'D AS SHOWN & NOTED - MK 6D5



10 - DIAP. REQ'D AS SHOWN & NOTED - MK 6D3



18 - DIAP. REQ'D AS SHOWN & NOTED - MK 6D4

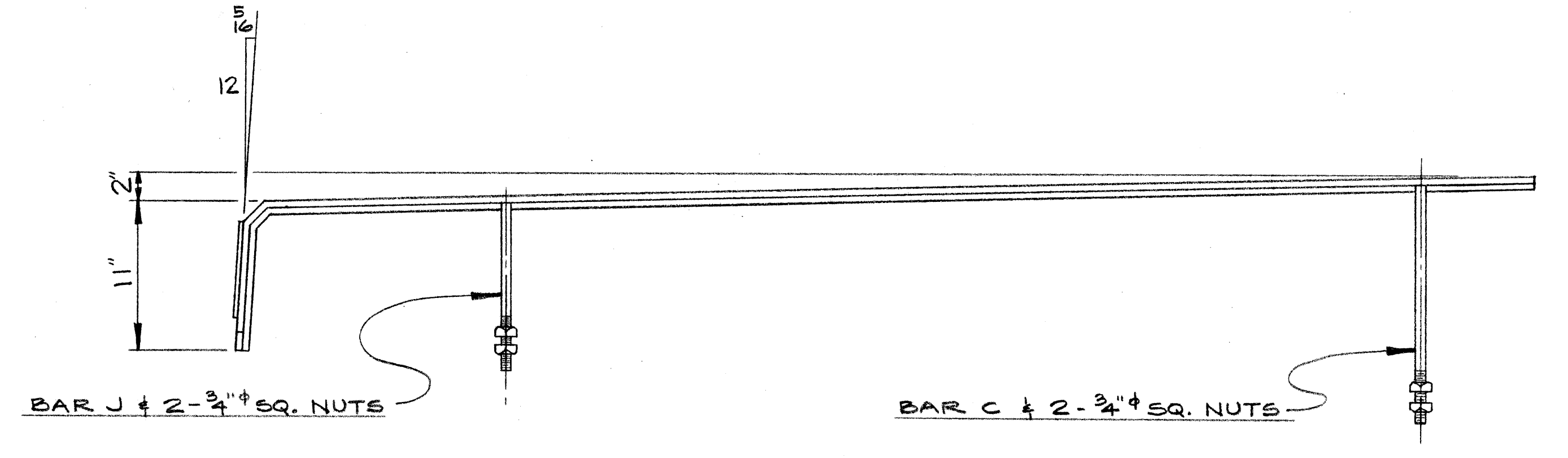
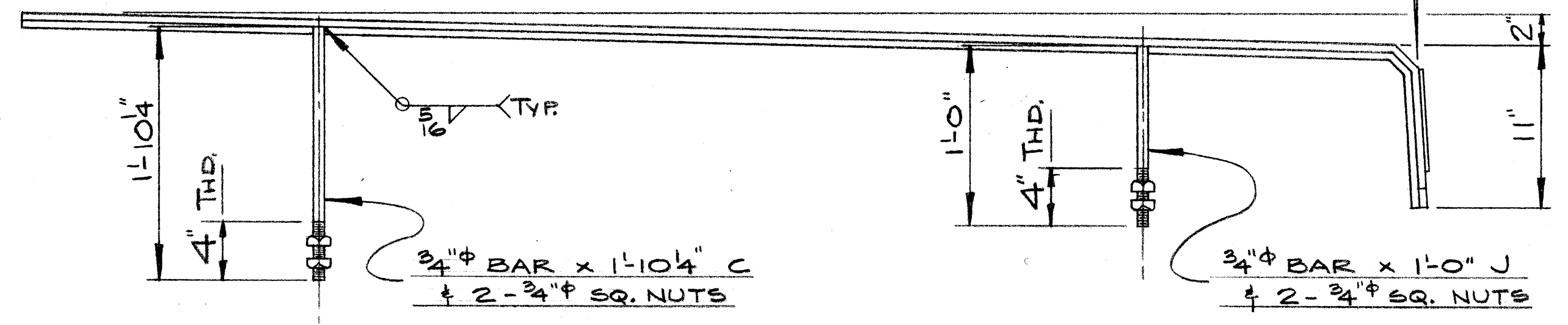
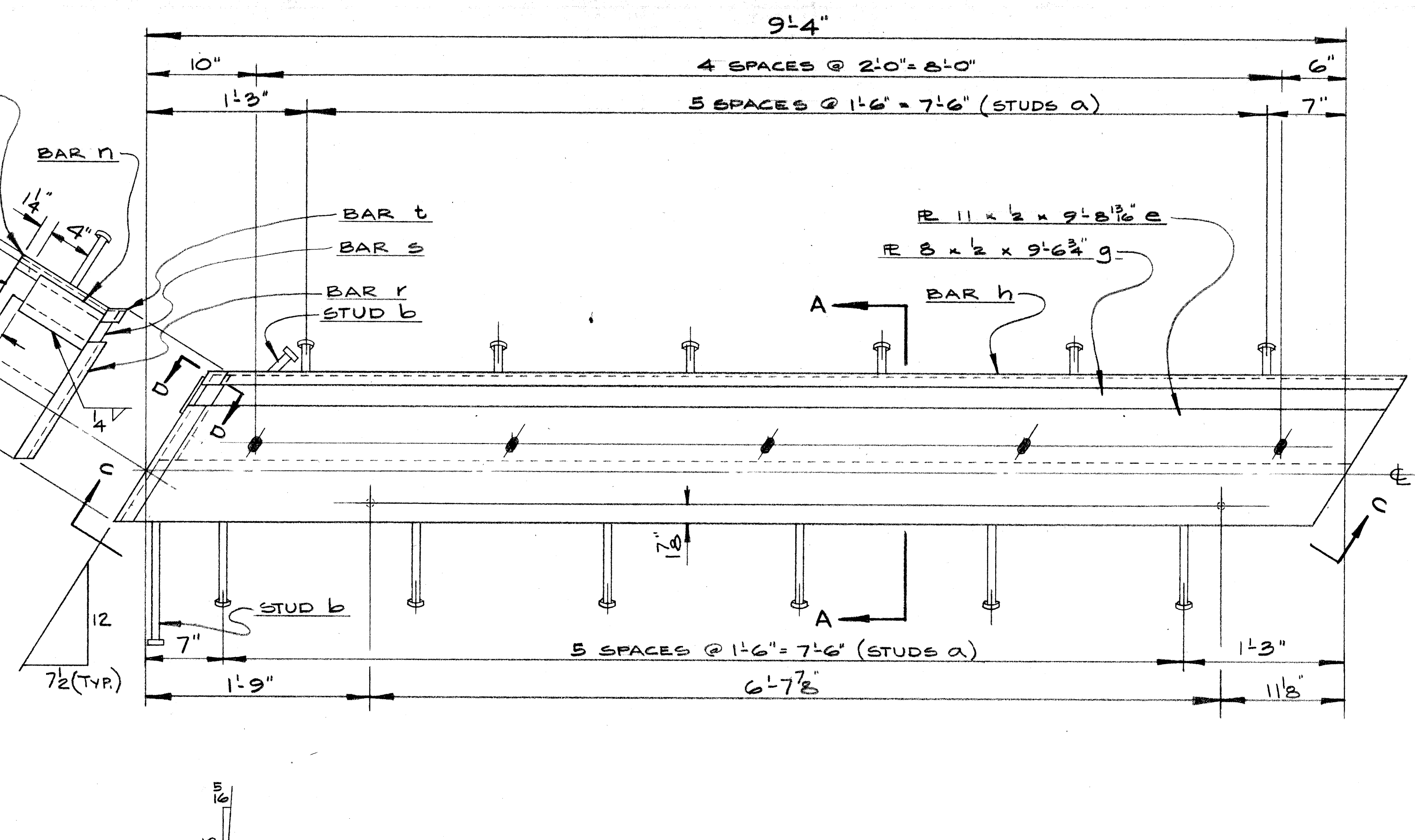
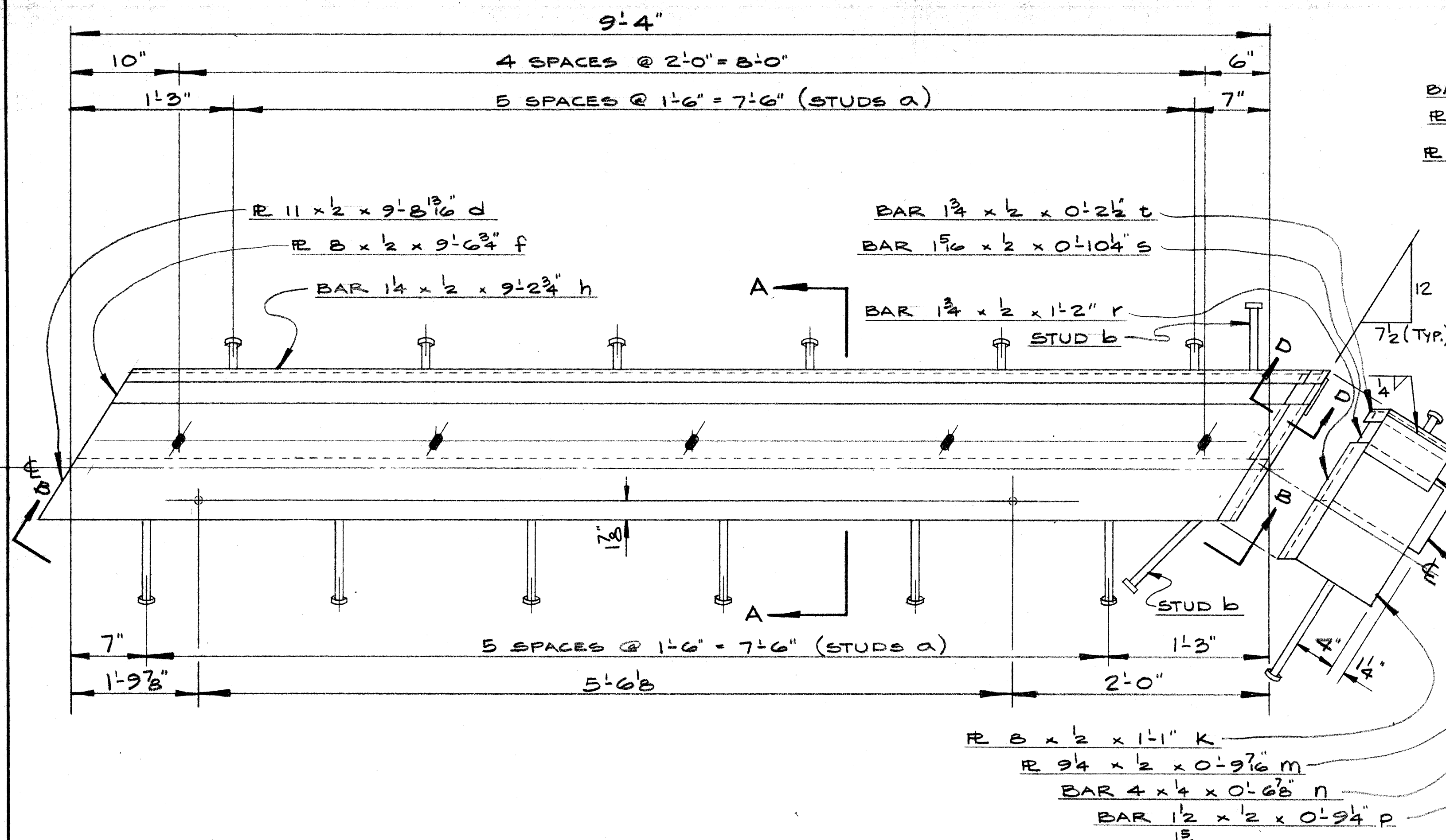


40 - DIAP. REQ'D AS SHOWN & NOTED - MK 6D1

SEE SHEET 1B FOR SHOP NOTES

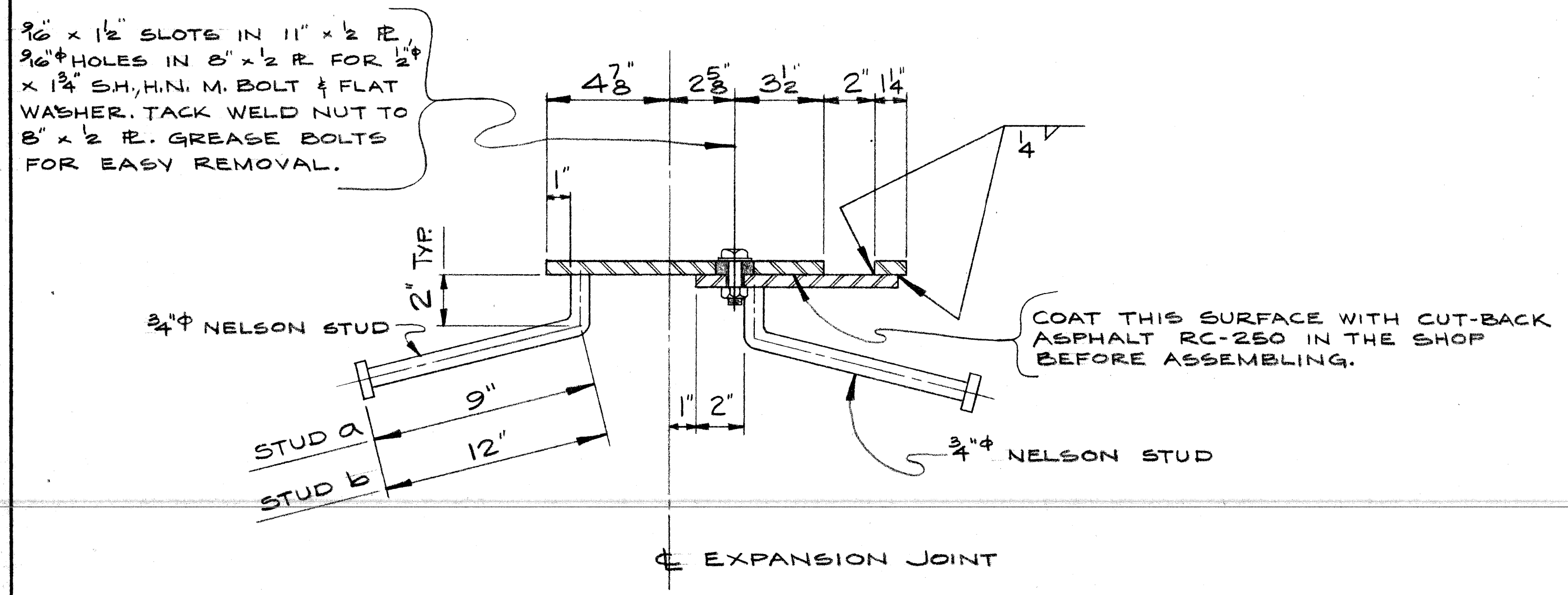
REVISION			
NO.	DESCRIPTION	DATE	BY

F. YEAGER		
BRIDGE & CULVERT COMPANY		
1701 KEARNEY ST.		PORT HURON, MICH
BRIDGE S35 OF 82123J		
PACIFIC AVENUE OVER THE JEFFRIES		
FREEWAY IN THE CITY OF DETROIT		
C.A. HULL CO. INC., CONTR.		
DATE	3-6-70	JOB NO.
BY	SAW.	S 4707
		SHEET
		6 OF 9

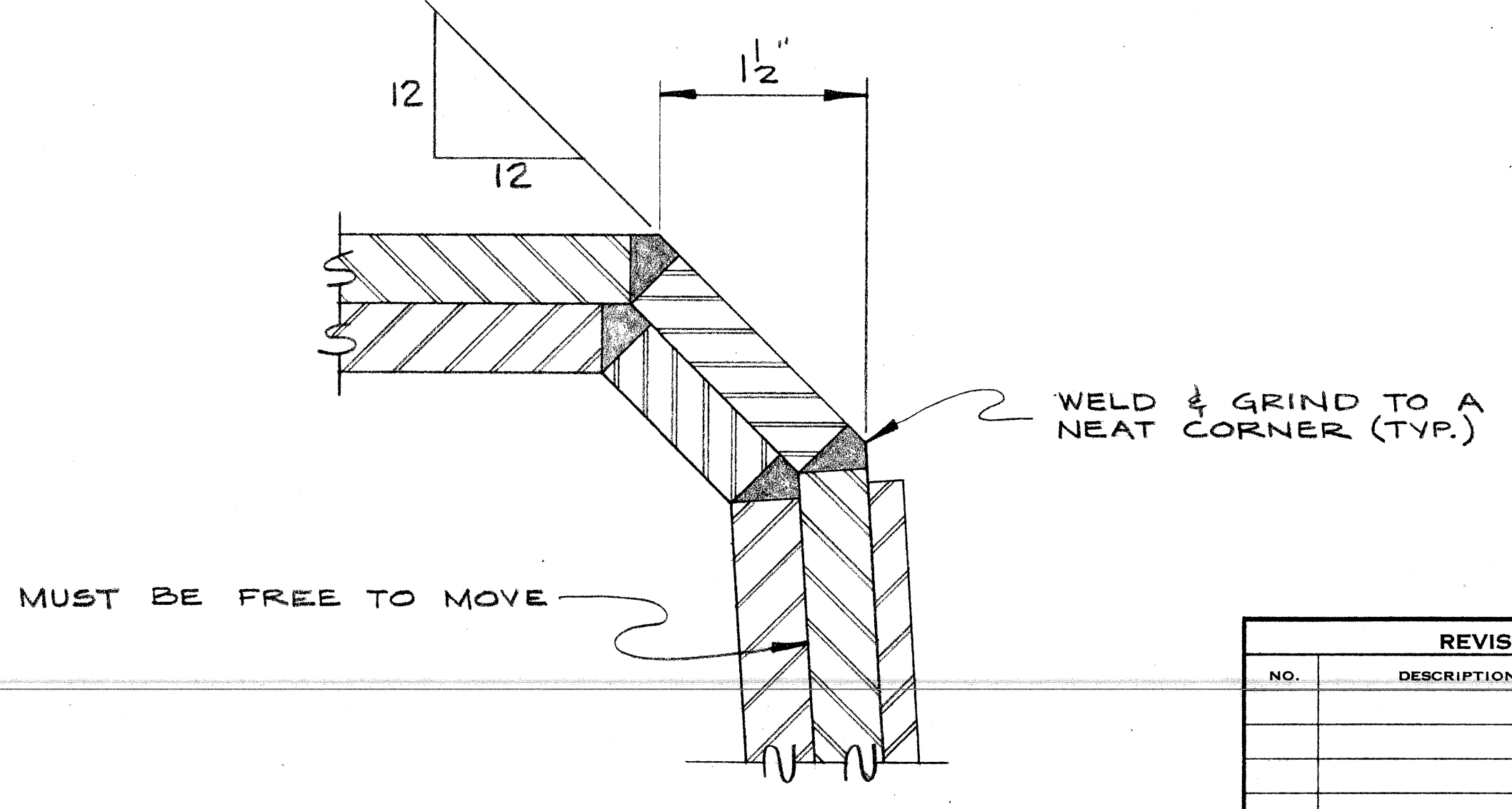


SECTION B-B
ONE EXPANSION JOINT REQ'D. - MARK 7EJ1

SECTION C-C
ONE EXPANSION JOINT REQ'D. - MARK 7EJ2



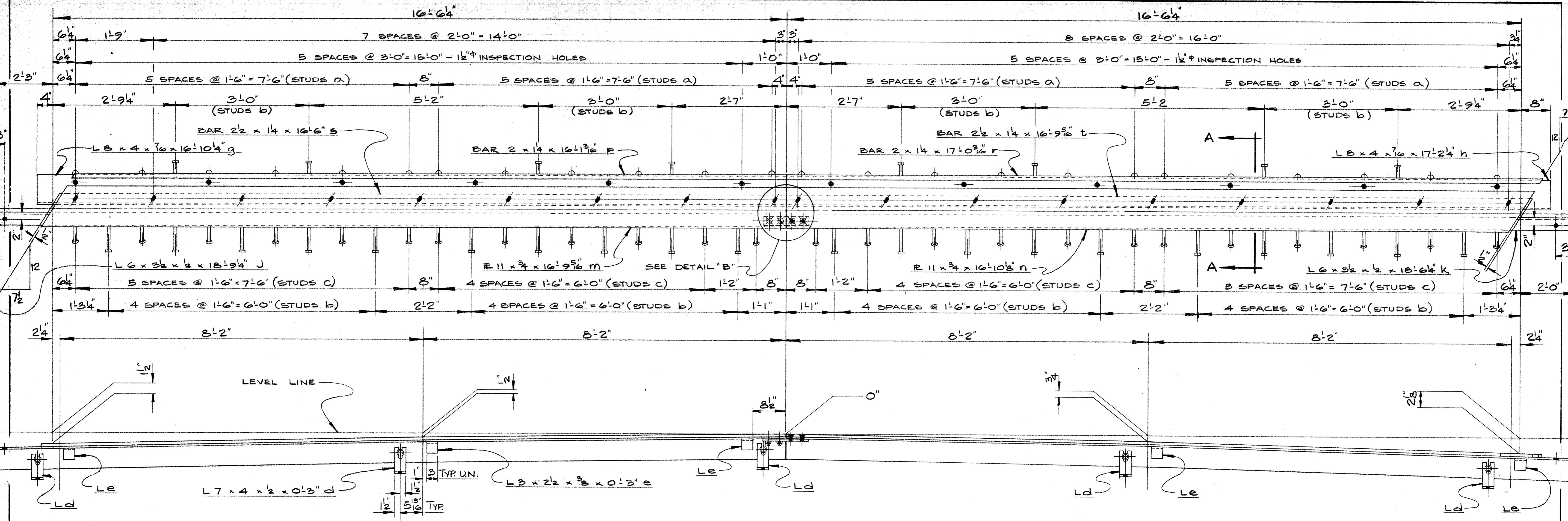
SECTION A-A



SECTION D-D

SEE SHEET 1B FOR SHOP NOTES.

REVISION				F. YEAGER	
NO.	DESCRIPTION	DATE	BY	BRIDGE & CULVERT COMPANY	
				1701 KEARNEY ST. - PORT HURON, MICH	
				BRIDGE S35 OF 82123J	
				PACIFIC AVE. OVER THE JEFFRIES	
				FREEWAY IN THE CITY OF DETROIT.	
				C.A. HULL CO., CONT'R.	
				DATE 3-13-70	JOB NO. S4707
				BY JAM	SHEET 7 OF 9

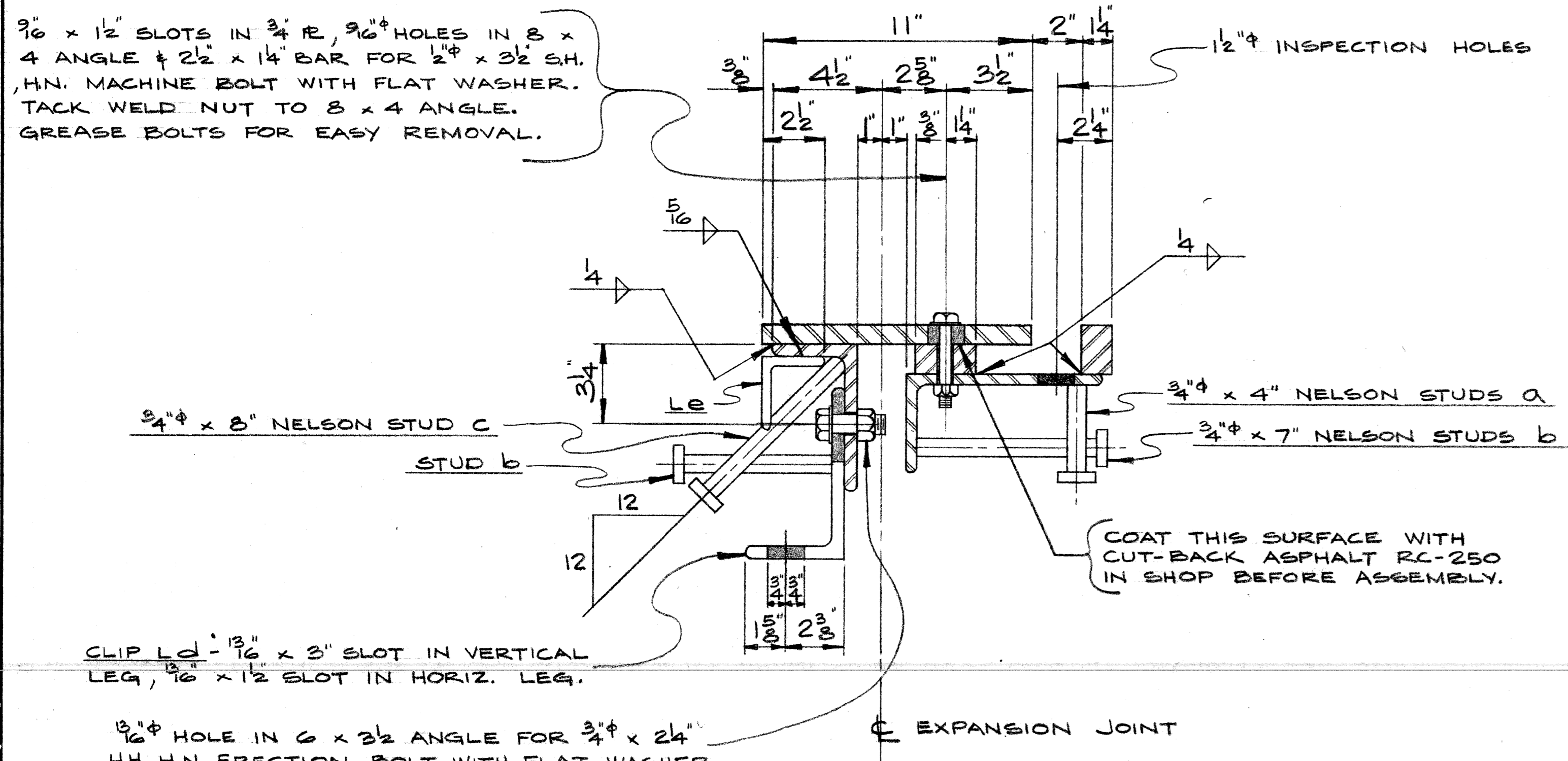


NOTE: ANCHORS NOT SHOWN ON THIS VIEW.

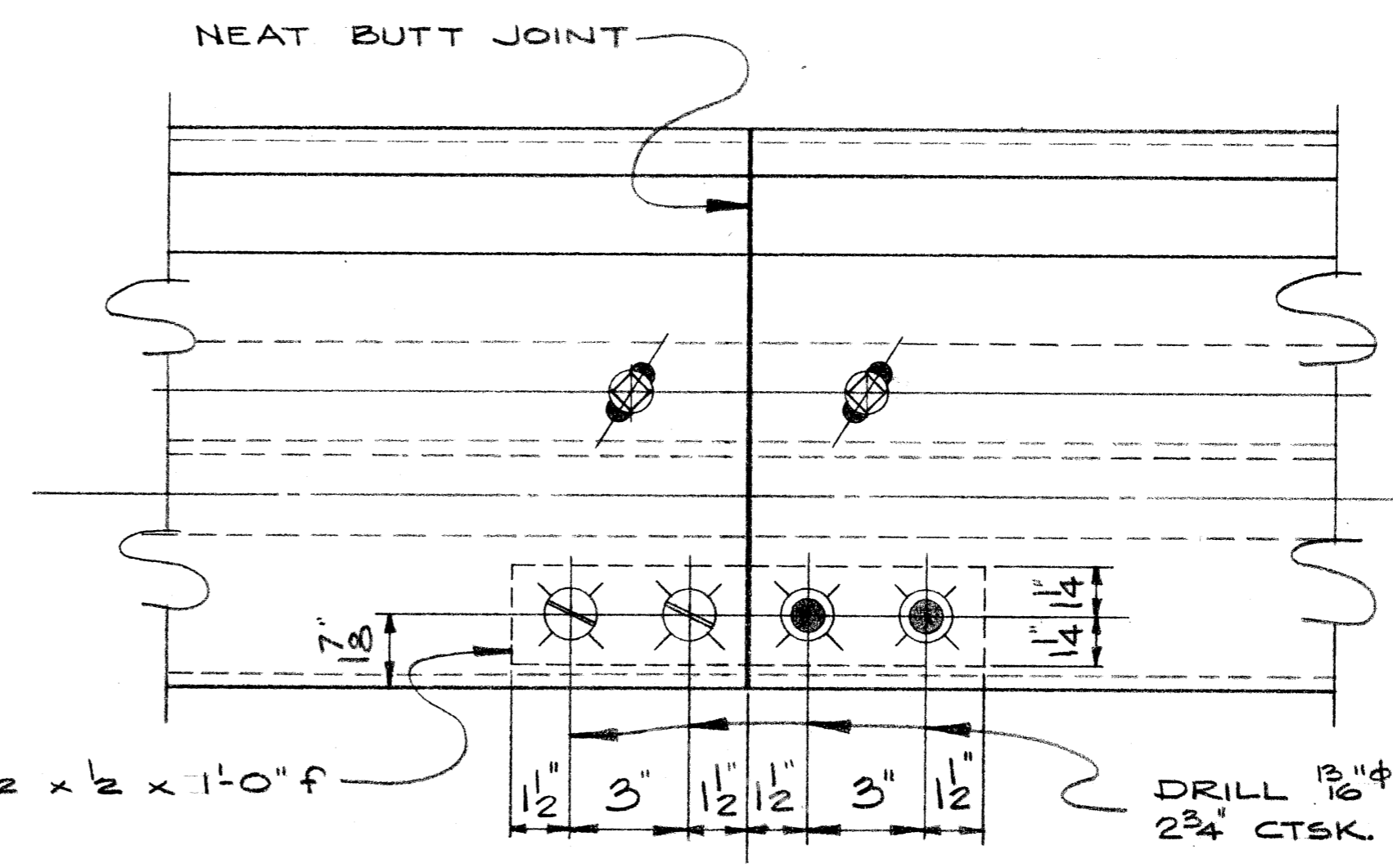
ONE EXPANSION JOINT REQ'D. - MARK BEJ1

ONE EXPANSION JOINT REQ'D. - MARK BEJ2

9/16" x 1/2" SLOTS IN 3/4" R, 9/16" HOLES IN 8 x 4 ANGLE & 2 1/2 x 1 1/4" BAR FOR 3/4" x 3/8" SH. H.N. MACHINE BOLT WITH FLAT WASHER. TACK WELD NUT TO 8 x 4 ANGLE. GREASE BOLTS FOR EASY REMOVAL.



SECTION A-A



DETAIL "B"

PLAIN MATERIAL
10- BAR 2 x 3/8 x 1'-0" MK. 8M1

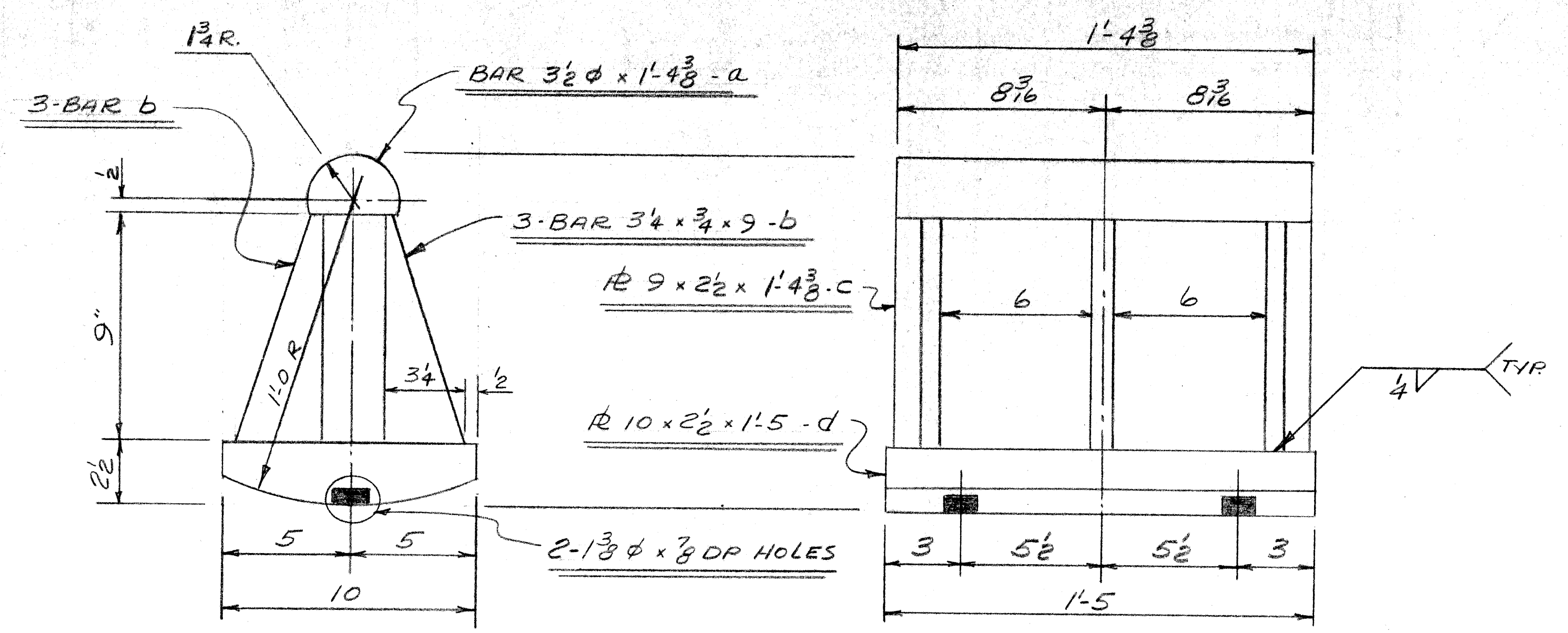
DRILL 1/8" CTSK. N.S. FOR 3/4" x 2 3/4" CTSK. F.H., H.N. MACH. BOLT.

CLIP Ld - 1/8" x 3" SLOT IN VERTICAL LEG, 1/8" x 1/2" SLOT IN HORIZ. LEG.

3/8" HOLE IN 6 x 3/2 ANGLE FOR 3/4" x 2 1/4" H.H., H.N. ERECTION BOLT WITH FLAT WASHER.

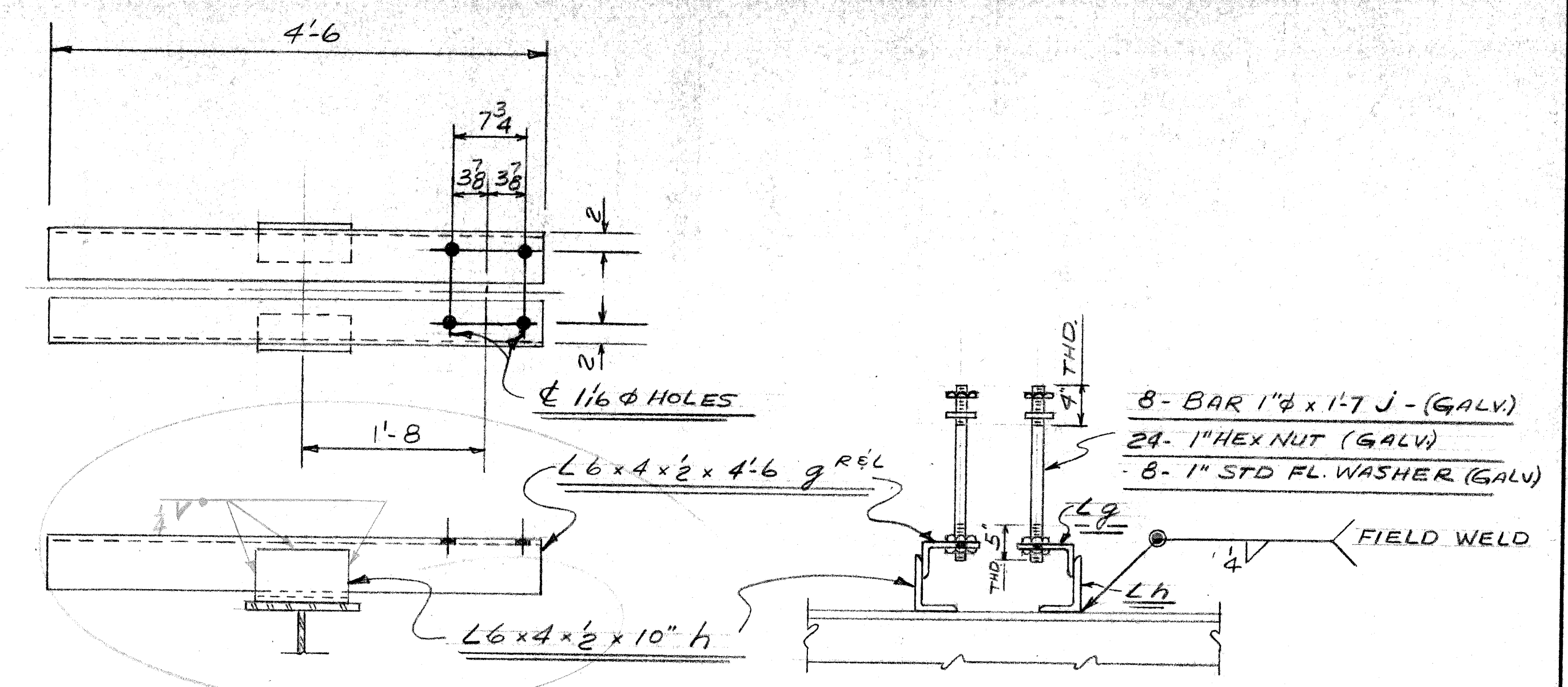
SEE SHEET 1B FOR SHOP NOTES.

REVISION				F. YEAGER	
NO.	DESCRIPTION	DATE	BY	BRIDGE & CULVERT COMPANY	
				1701 KEARNEY ST. - PORT HURON, MICH.	
				BRIDGE 535 OF 82123J	
				PACIFIC AVE. OVER THE JEFFRIES FREEWAY IN THE CITY OF DETROIT.	
				C.A. HULL CO., CONT'R.	
				DATE 3-17-70	JOB NO. 54707
				BY JAM	SHEET 8 OF 9



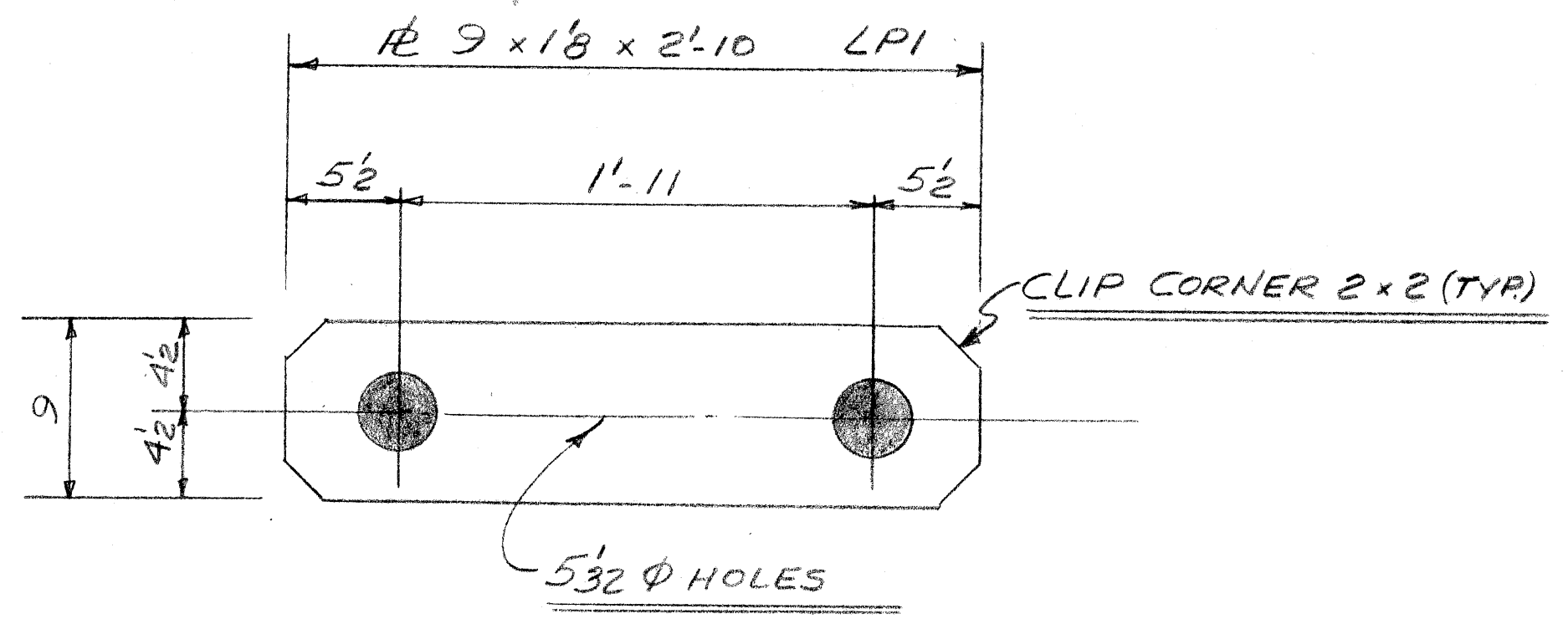
NOTE: WELD ALL JOINTS 1/2" CONT. FILLET U.N.
GALV. AFTER FABRICATION PER A-123

7-EXP. ROCKERS REQ'D. AS SHOWN & NOTED MK 9ERI



NOTE: BUNDLE TO SHIP

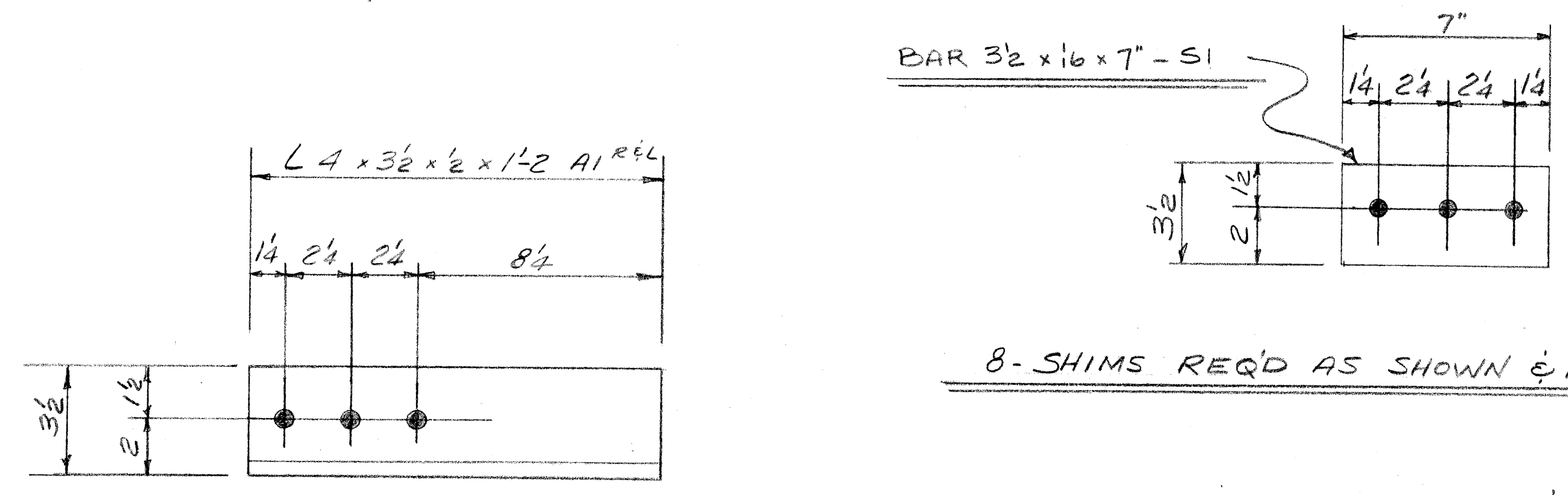
2-PLC. LIGHT STD. ANCHORS REQ'D AS SHOWN & NOTED MK 9SAI



14-LINK RS REQ'D AS SHOWN & NOTED MK 9LPI

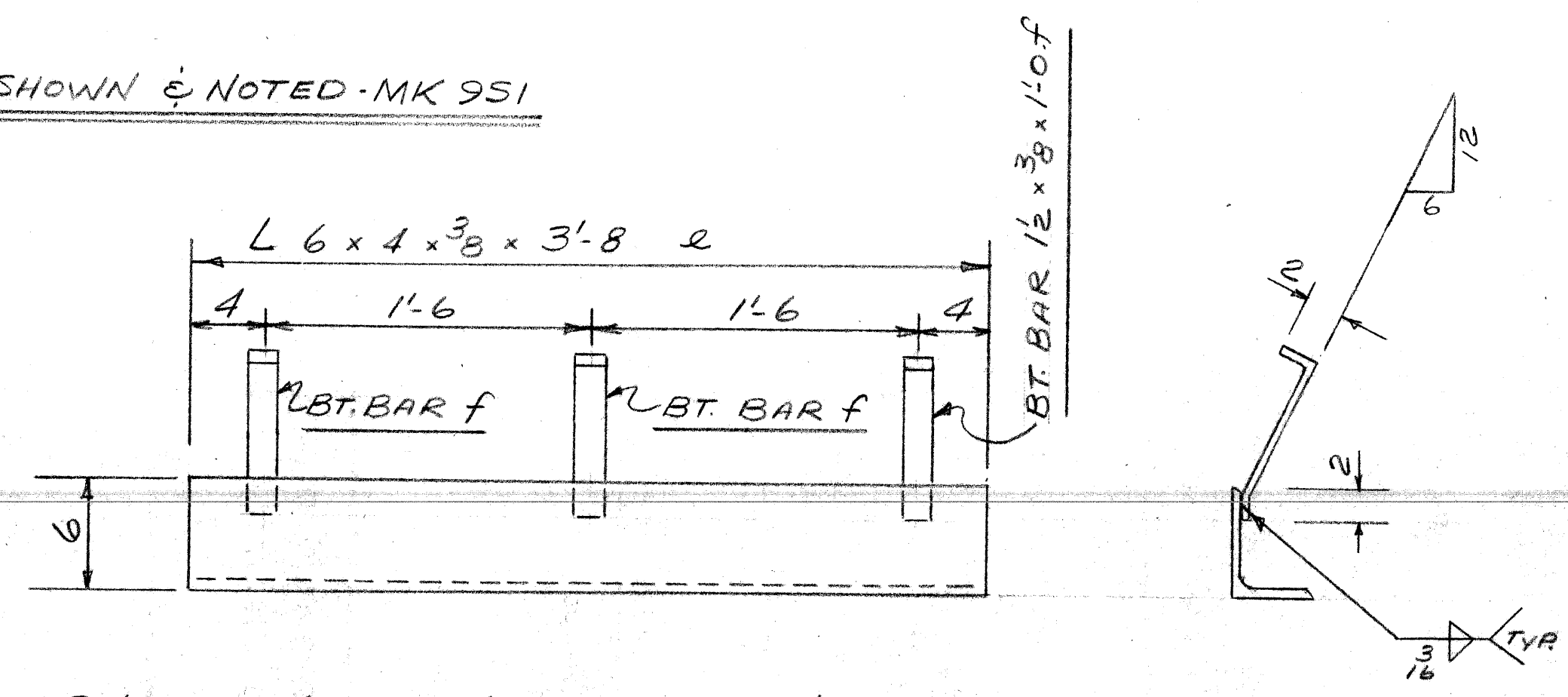
NOTE: BOLTS, NUTS & WASHERS ARE A.S.T.M. A325 WEATH-R

COUNT	SHIP	FIELD BOLTS
1088	1142	3/4" x 2 1/2" H. HEX. HD. H.S. BOLTS, H. HEX NUT
348	365	3/4" x 2" H. HEX HD. H.S. BOLTS, H. HEX NUT
12	13	3/4" x 4" H. HEX HD. H.S. BOLTS, H. HEX NUT
1448	1520	3/4" H. FLAT WASHERS
5	5	3/4" x 2 1/2" Hx. HDM. BOLT, HEX NUT
5	5	3/4" STD. FLAT WASHER
2	2	3/4" x 2 3/4" FL. HD. BOLT, HEX NUT



8-SHIMS REQ'D AS SHOWN & NOTED MK 9SI

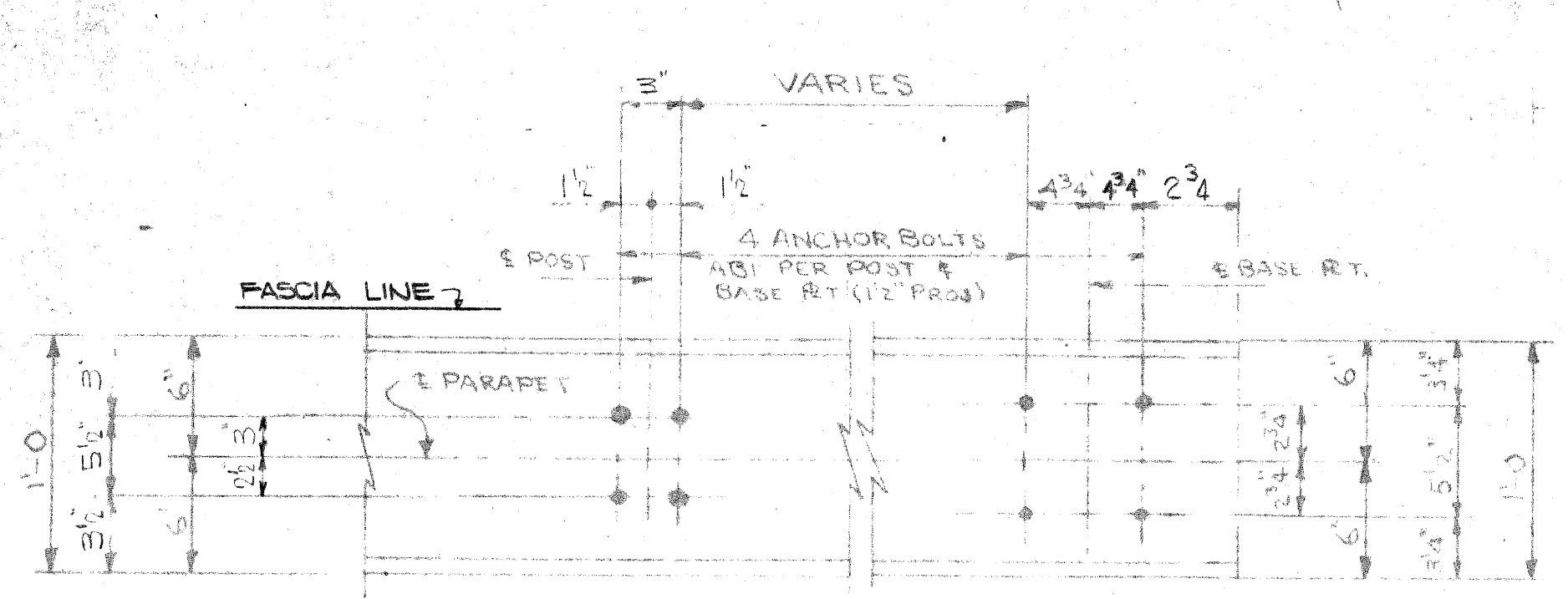
4- ANGLES REQ'D. AS SHOWN & NOTED - MK 9AIR
4- ANGLES REQ'D. AS SHOWN & NOTED - MK 9AII



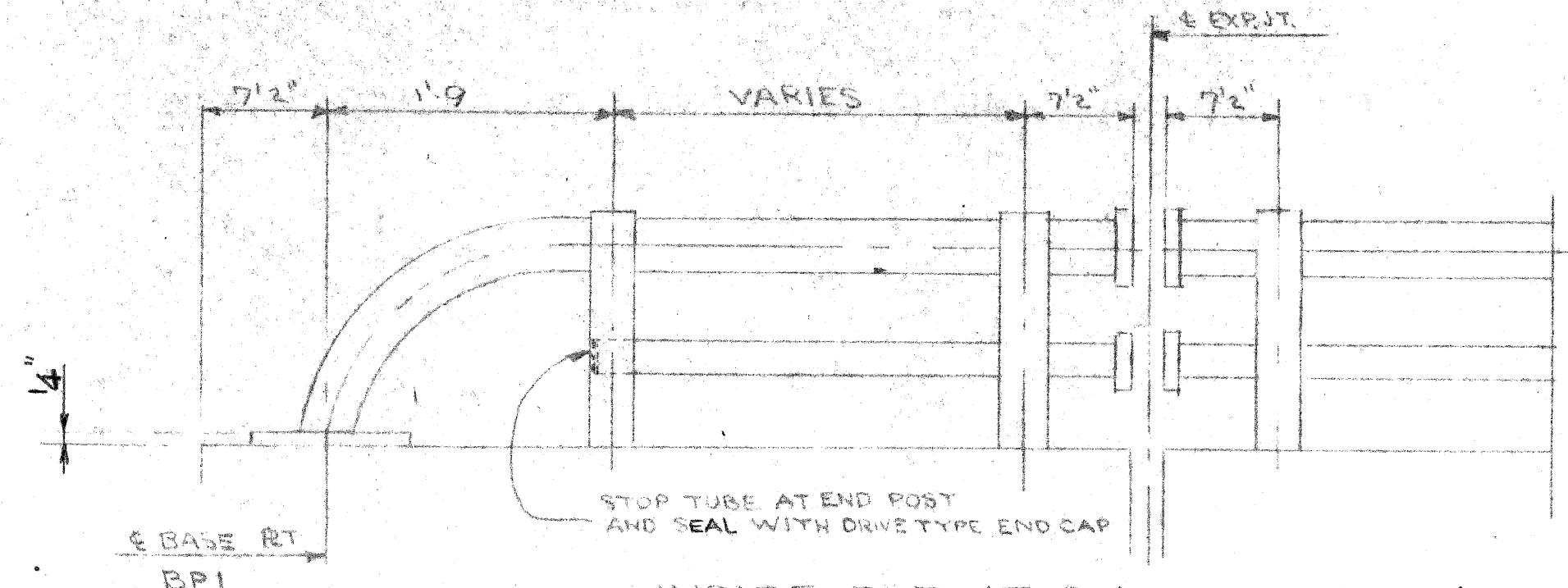
2-LEDGE L'S REQ'D. AS SHOWN & NOTED MK 9LAI

SEE SHEET 18 FOR SHOP NOTES.

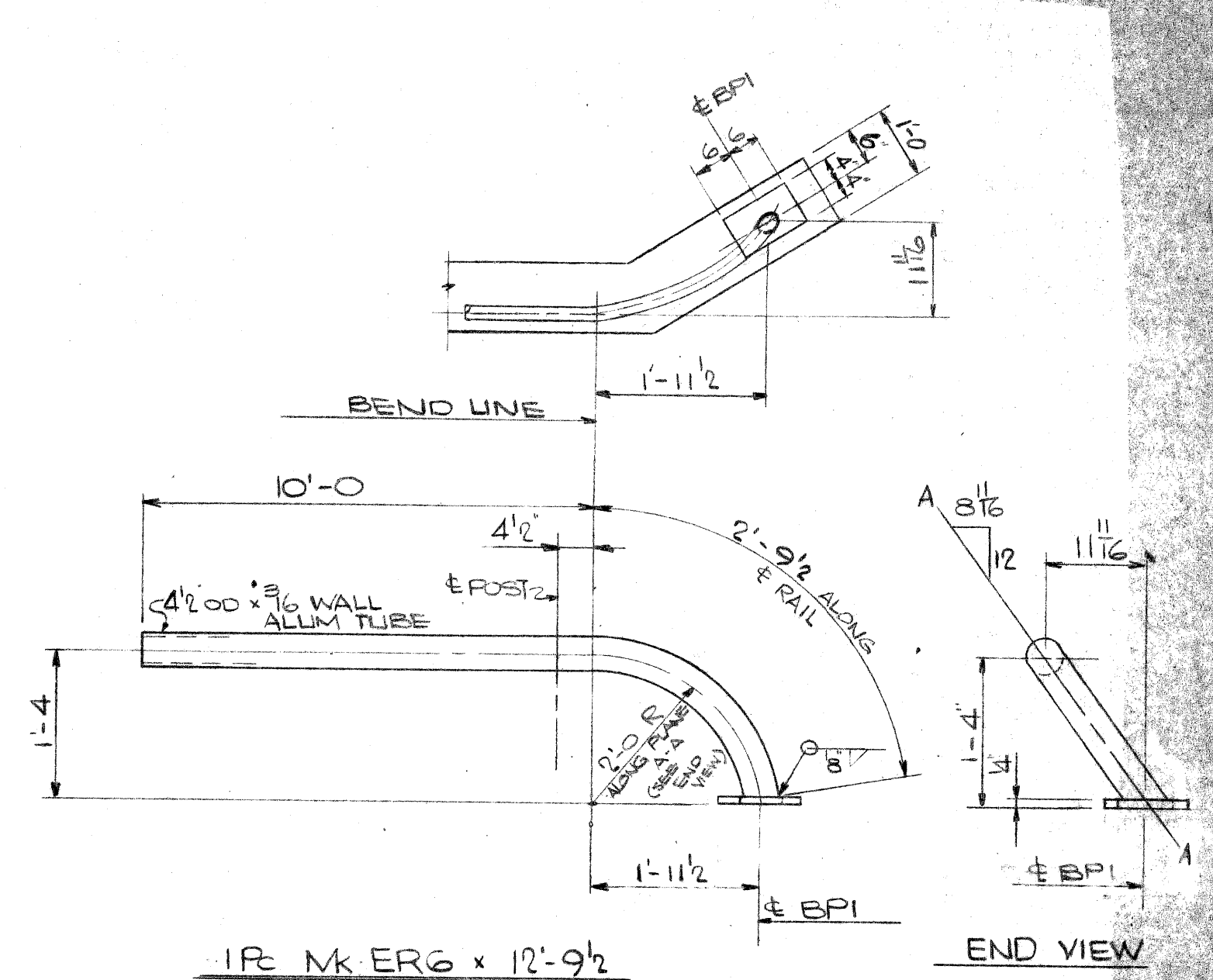
REVISION				F. YEAGER BRIDGE & CULVERT COMPANY		
NO.	DESCRIPTION	DATE	BY	1701 KEARNEY ST. - PORT HURON, MICH.		
				BRIDGE S35 OF 82123 J		
				PACIFIC AVENUE OVER THE JEFFRIES FREEWAY IN THE CITY OF DETROIT.		
				C.A. HULL CO. INC., CONTR.		
				DATE 3-13-70	JOB NO. S4707	SHEET 9 OF 9
				BY SAW		



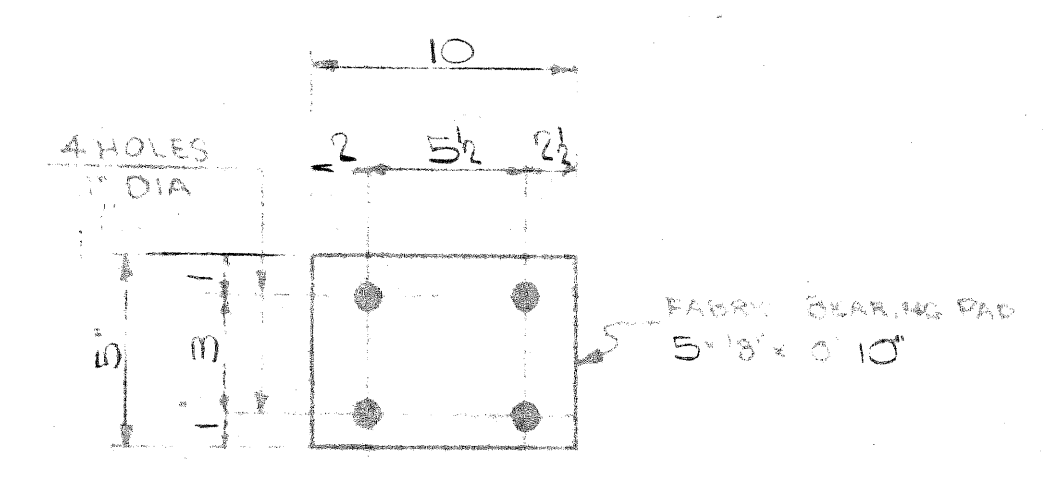
PLAN VIEW OF TOP OF PARAPET



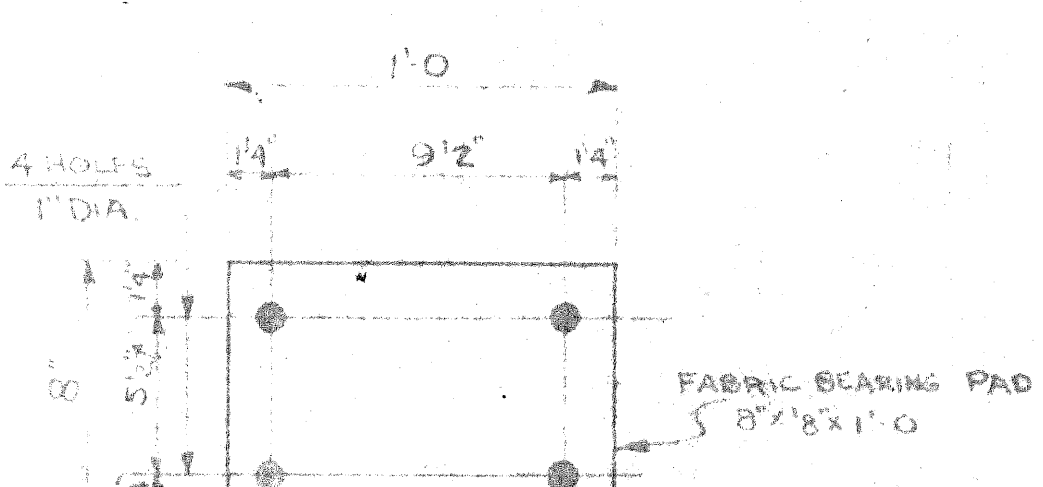
INSIDE ELEVATION



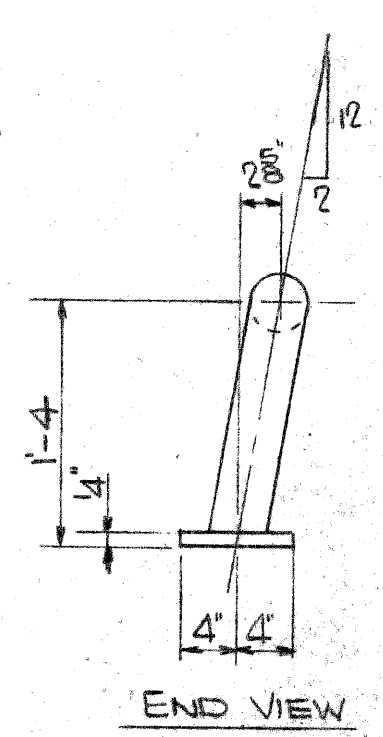
END VIEW



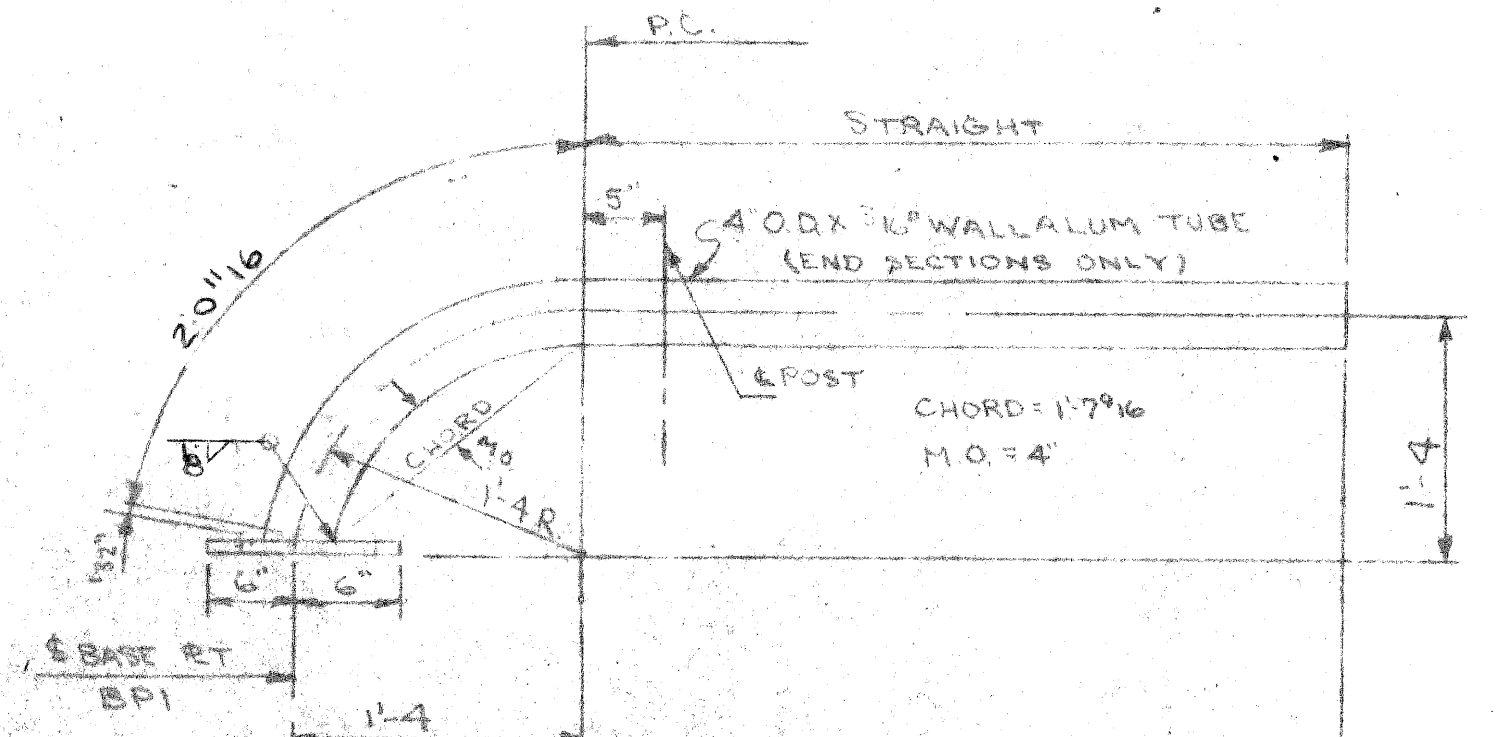
77 ~ FABRIC BEARING PADS (ELASTOMERIC BOUND)



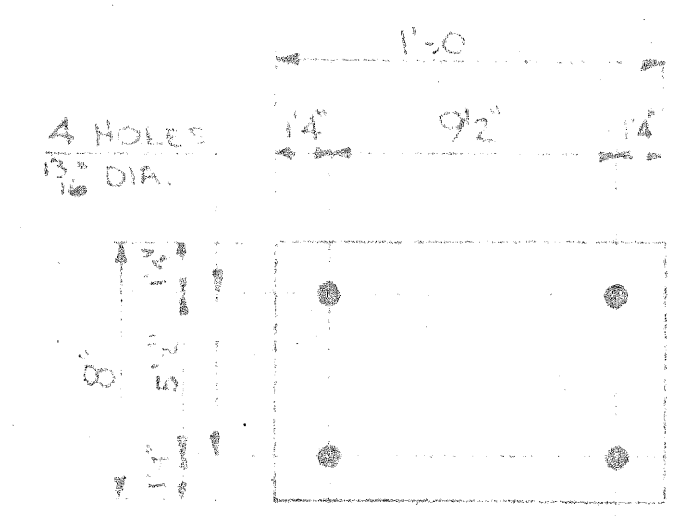
8 ~ FABRIC BEARING PADS (ELASTOMERIC BOUND)



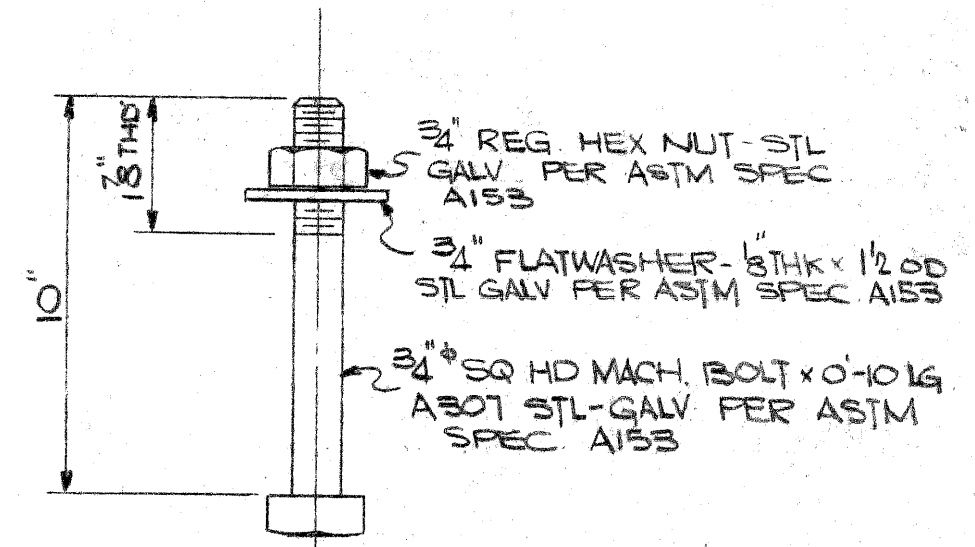
END VIEW



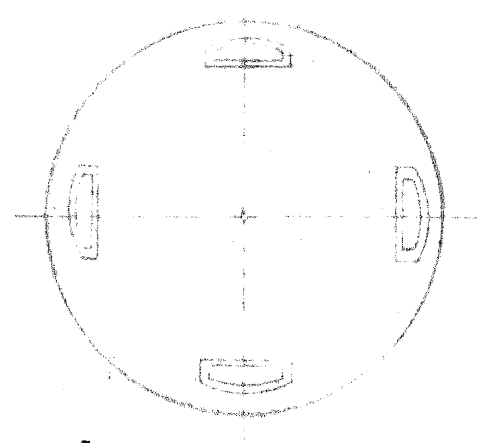
MARK	REQD	ACTUAL LENGTHS	AS SHOWN	OFF HARD	
ERL	2	11'-0 5/16	*	*	9'-0 1/4
ERS	2	11'-0 1/16	*	*	9'-0
ERL	1	11'-0 3/16	*	*	8'-11 1/2
ERL	1	10'-7 1/16	*	*	8'-6 3/4
ERL	2	10'-5 1/16	*	*	8'-1



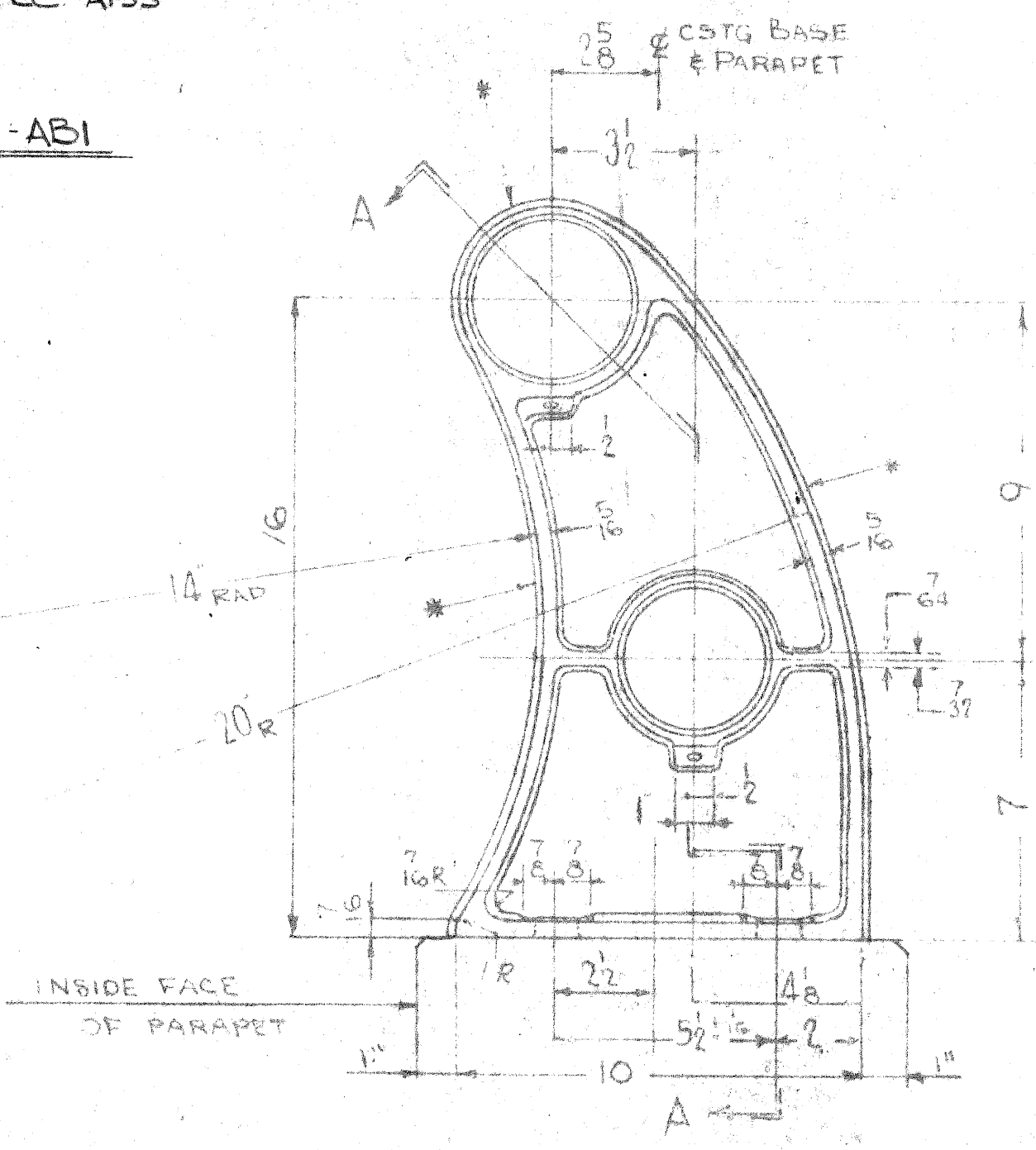
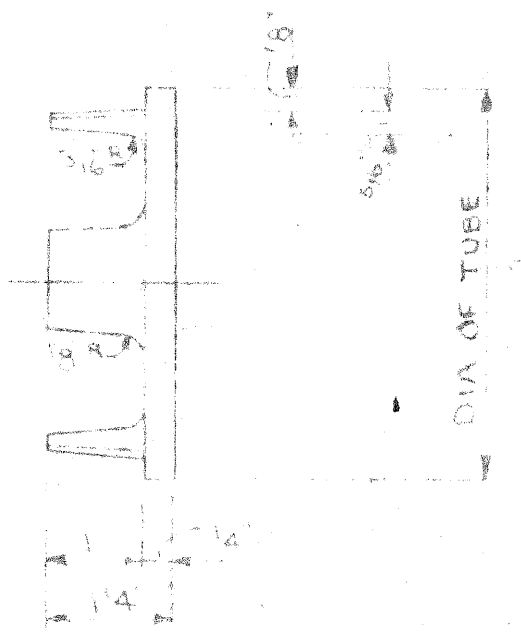
8 ~ BASE PLTS 8" X 4" X 1/4" LG BPI



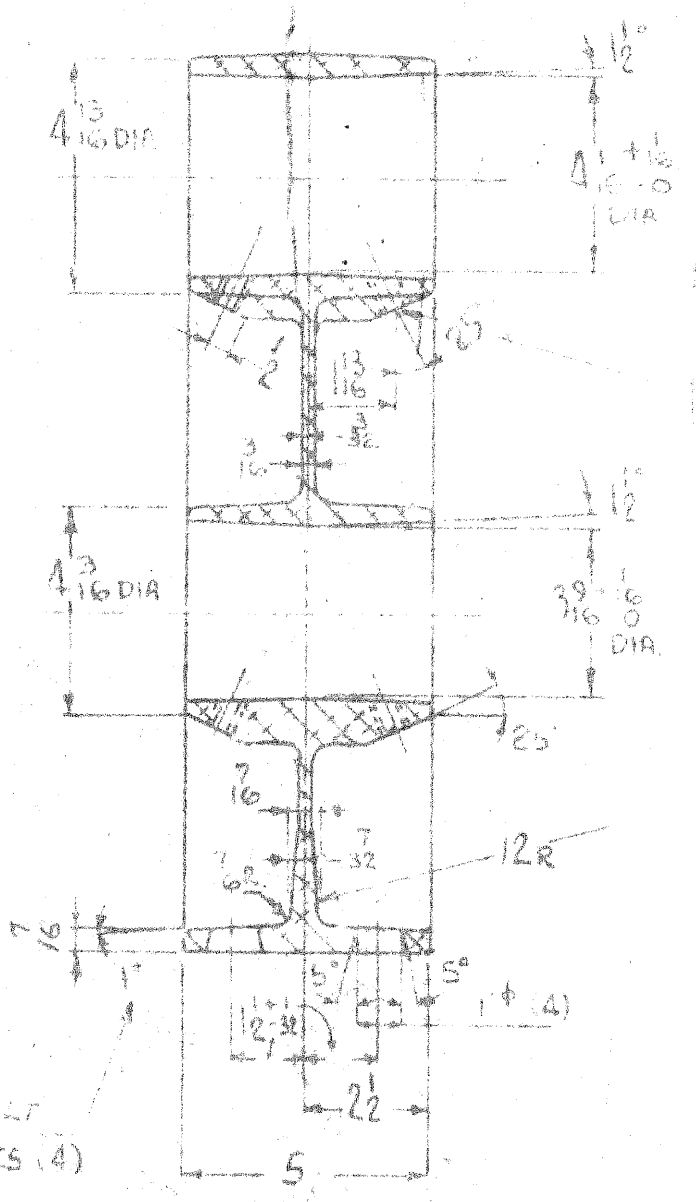
340 ~ ANCHOR BOLTS - AB1



8 ~ END CAPS - E35-125
 12 ~ END CAPS - PART NO. 7172-35
 12 ~ END CAPS - PART NO. 7172-4
 (W/SET SCREWS - 1/2-13NC)



77 ~ RAIL POST ~ FOSTER FF-201 WITH TEST COUPONS

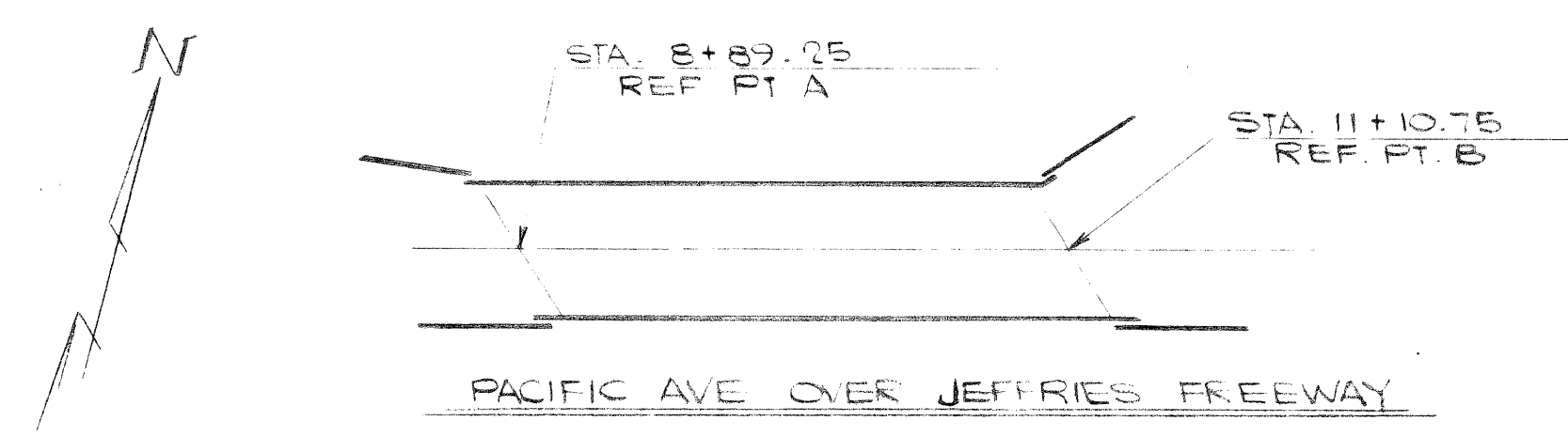
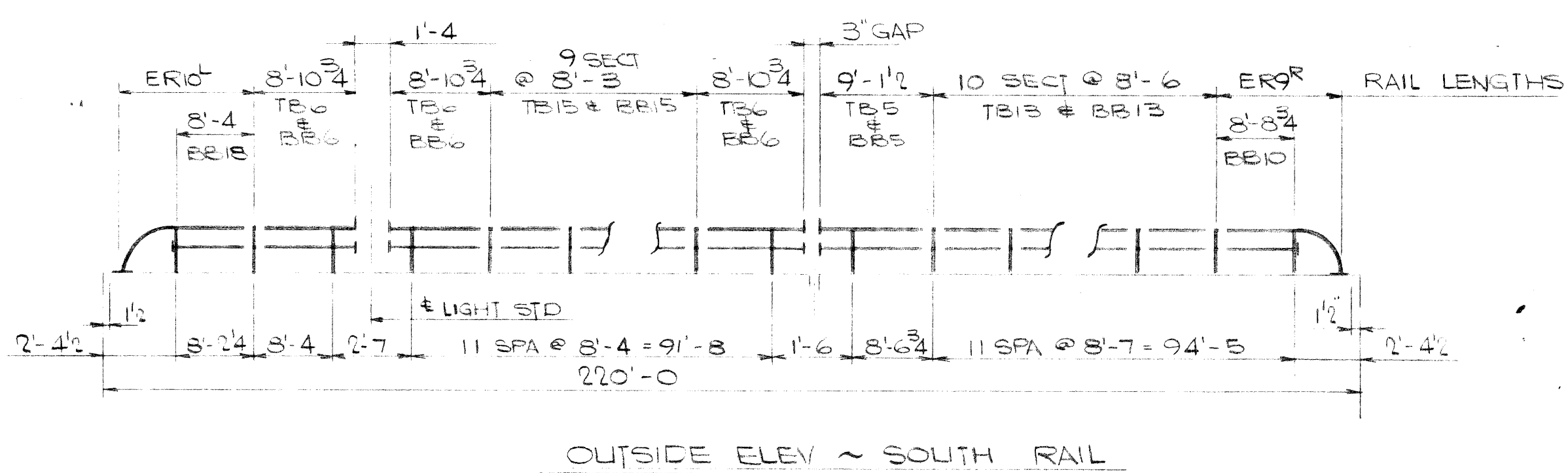
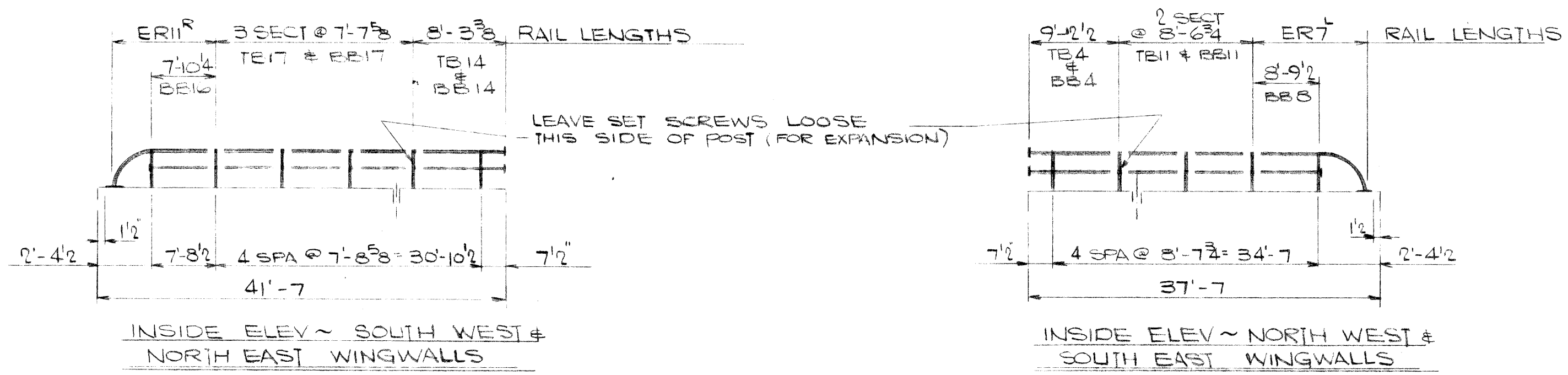
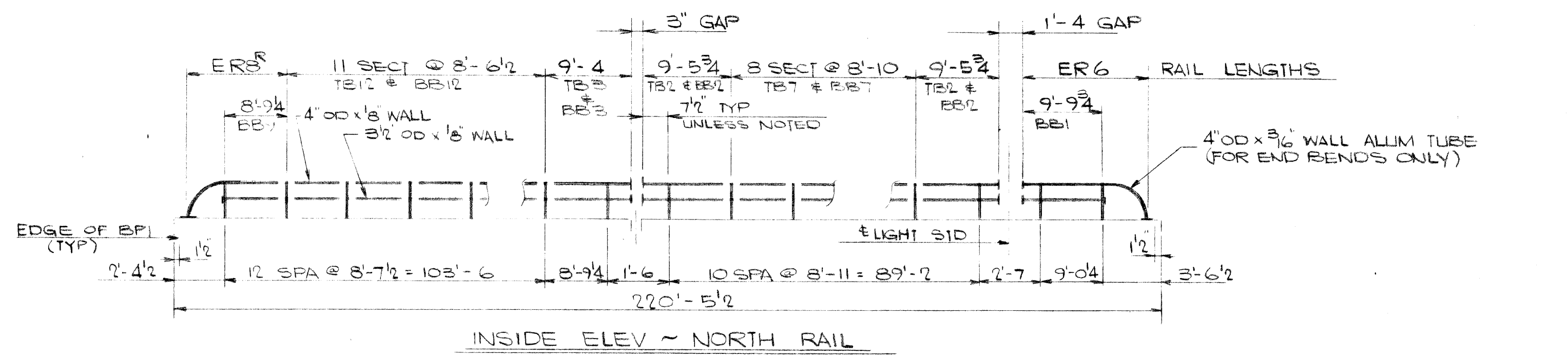


2 13NC TAP THRU FOR SET SCREWS (4) BY MFR.
 UNLESS OTHERWISE SPECIFIED:
 DRAFT ANGLES - 3°
 SPIR. TOL. 1/16 WALL THICKNESS ±.02
 FILLETS - 1/8 R 1/16
 CORNER RADII - 8
 CASTING TO BE NEATLY TRIMMED & ANY PROTRUDING FLASH TO BE BROKEN OFF
 CASTING TO BE SUPPLIED WITH 36 GRIT BELT FINISH ON SURFACES MARKED THUS (*)
 MFR. TO FURNISH (4) 1/2-13NC X 5/8 LG. HEX SOCKET, HEADLESS, OVAL POINT SET SCREWS IN PLACE
 MTL (C61 T4)
 WITH 205 ALUMINIZED FINISH

GENERAL NOTES
 POSTS SHALL BE SET PERPENDICULAR TO TOP OF PARAPET WALL.
 RAILING POSTS SHALL BE ALUMINUM ALLOY PERMANENT MOLD CASTINGS (A366-T6) CONFORMING TO ASTM SPEC B108 ALLOY 6061 COND. T6
 RAIL TUBING TO BE ALUMINUM ALLOY (6061 T6) PER ASTM SPEC B221 ALLOY 6311A COND. T6
 BASE PLATES SHALL CONFORM TO ASTM SPEC B209 (6061-T6)

APPROVED
 OCT 1 1969
 F. J. Cook
 MICH. DEPT. OF STATE HIGHWAYS

STRUCTURE NO. ~ 335 of 82123 J
 APPROVED: 9-16-69 RECD. APPROVAL: F. J. COOK DRAWING: 9-17-69
L. B. FOSTER CO.
 ATLANTA - CHICAGO - HOUSTON - LOS ANGELES - NEW YORK - PITTSBURGH
 FOR: CA. HULL CO. INC
 MICHIGAN STATE HIGHWAY DEPT
 WAYNE COUNTY - PROJ. N° I-96-4(77)230
 ALUMINUM PARAPET RAILING
 GENERAL NOTES & TYPICAL DETAILS
 MADE BY: JWH DATE: 8-27-69 JOB NO.: AL16069 CHECKED BY: C41199
 DRAWN BY: JWR DATE: 8-27-69 DRAWING: LB 3



BILL OF MATERIAL

MARK NO.	PC. NO.	NO. REQD.	DESCRIPTION	LENGTH		REMARKS
				FT.	IN.	
			FOR SPECS SEE DWG L1			
		77	FOSTER FF-201 ALUM POST W/SET SCREWS			W/TEST COUPENS
		77	FABRIC BEARING PADS 5x8	0	10	
		8	FABRIC BEARING PADS 8x8	1	0	
EPI		8	ALUM BASE PETS 8x14	1	0	WELD TO END BENDS
AE1		340	3/4\"/>			
		12	ALUM END CAPS - N° 7172-4			W/SET SCREWS
		12	ALUM END CAPS N° 7172-35			W/SET SCREWS
		8	ALUM END CAPS EB5-125			DRIVE TYPE
ER6		1	4\"/>			
ERT		2		11	0 1/2	END BEND ORDER 11-9 1/2
ERS		1		11	0 1/2	END BEND ORDER 11-9 1/2
ERT		1		11	0 1/2	END BEND ORDER 11-9 1/2
ER11		1		10	7 1/2	END BEND ORDER 11-4 1/2
ER11		2		10	1 1/2	END BEND ORDER 10-10 1/2
TE2		2	4\"/>			
TE3		1		9	4	
TE4		2		9	2 1/2	
TE5		1		9	1 1/2	
TE6		3		8	10 3/4	
TE7		3		8	10	
TE11		4		8	6 3/4	
TE12		11		8	6 1/2	
TE13		10		8	6	
TE14		2		8	2 3/8	
TE15		9		8	3	
TE17		6		7	7 3/8	
BB1		1	3 1/2\"/>			
BB2		2		9	5 3/4	
BB3		1		9	4	
BB4		2		9	2 1/2	
BB5		1		9	1 1/2	
BB6		3		8	10 3/4	
BB7		8		8	10	
BB8		1		8	9 1/2	
BB9		1		8	9 1/4	
BB10		1		8	8 3/4	
BB11		4		8	6 3/4	
BB12		11		8	6 1/2	
BB13		10		8	6	
BB14		2		8	3 3/8	
BB15		9		8	3	
BB16		1		7	10 1/4	
BB17		6		7	7 3/8	
BB8		1		8	4	

NOTE:
 FOR GENERAL NOTES & TYPICAL DETAILS SEE DWG LBI
 THIS DRAWING IS NOT TO SCALE
 LENGTH OF RAILING ON THIS SHEET = 598' PAY LENGTH.
 SPLICE GAP @ POST = 1'

THIS CONTRACT IS BASED UPON THE CONTRACTOR LETTING AND SPRING THE ABOVE
 4815 TO THE DESIGNER'S GROUP FOR THE ABOVE-SHOWN GRANITE
 THE L. B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK ACCENTATED
 BY ANY OTHER SETTING AND SPACING.

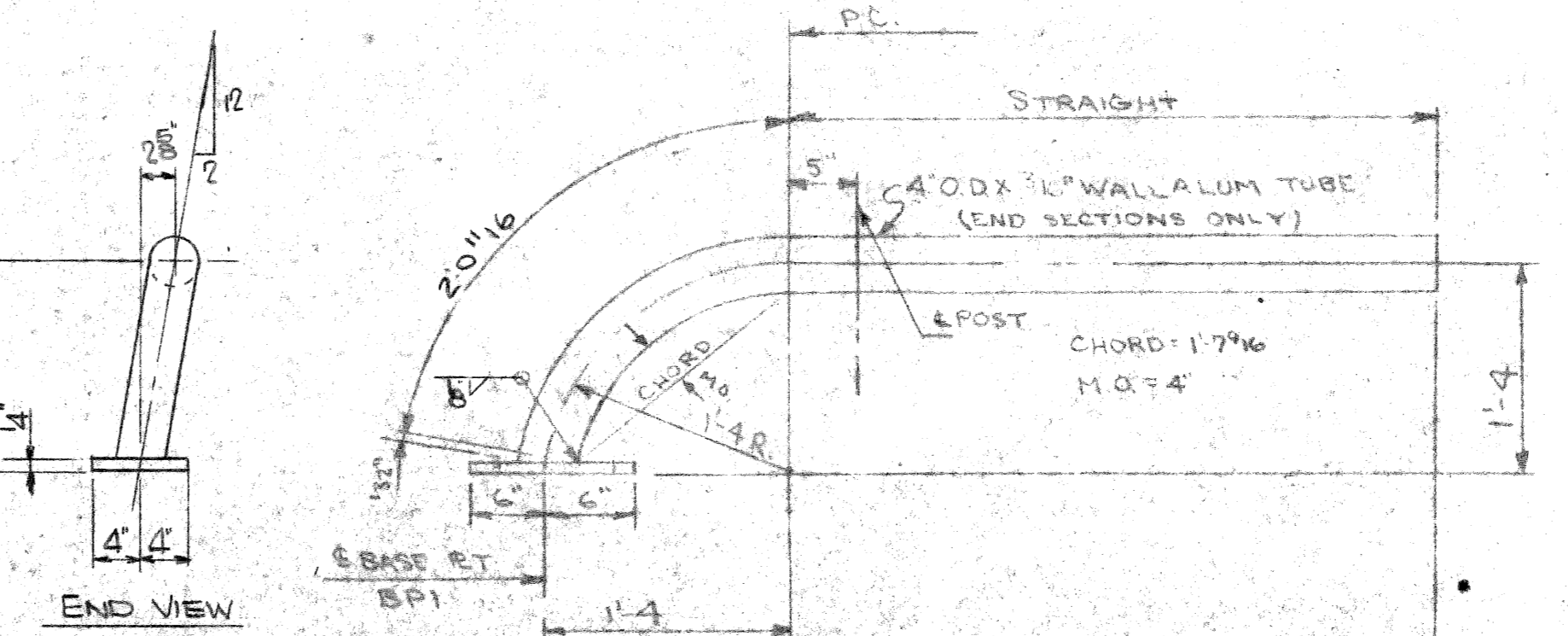
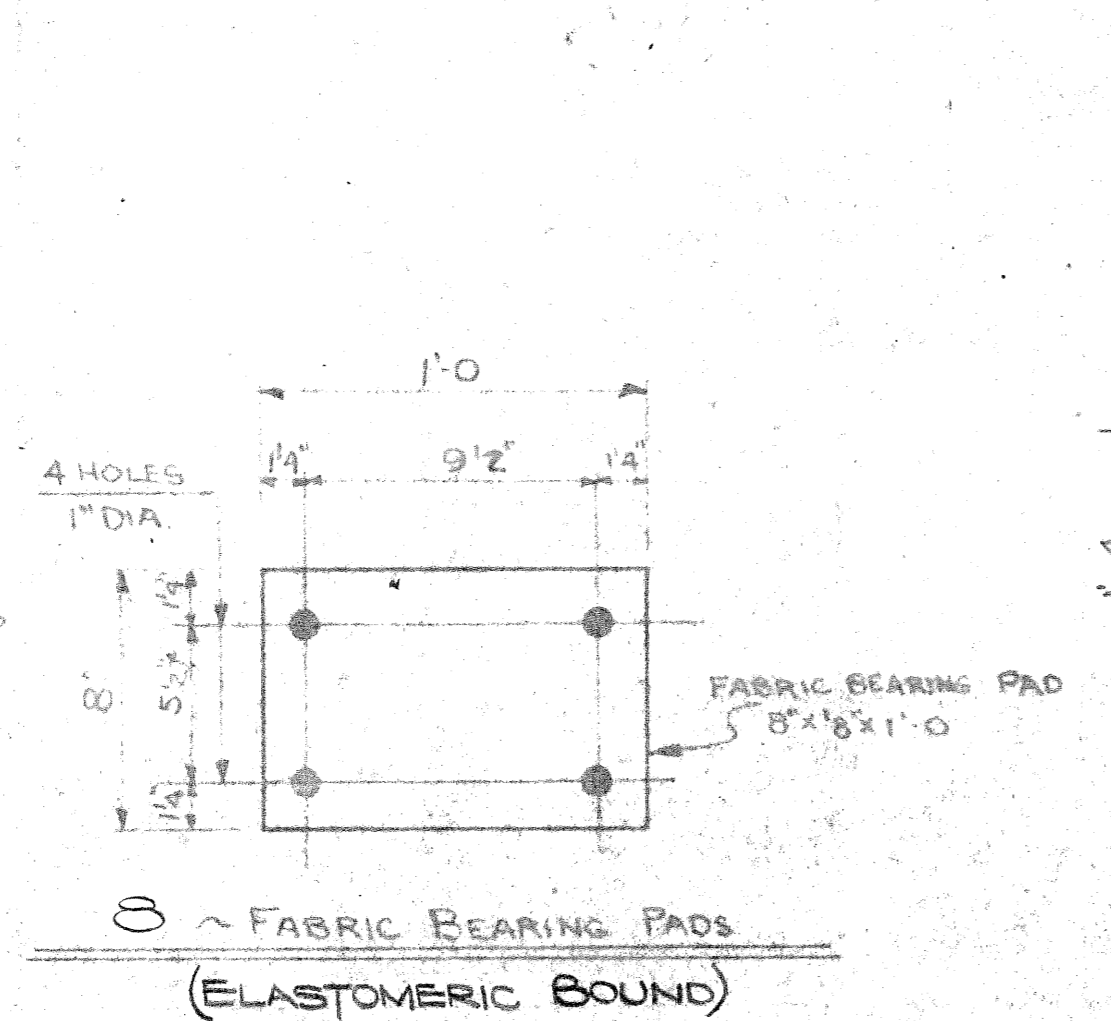
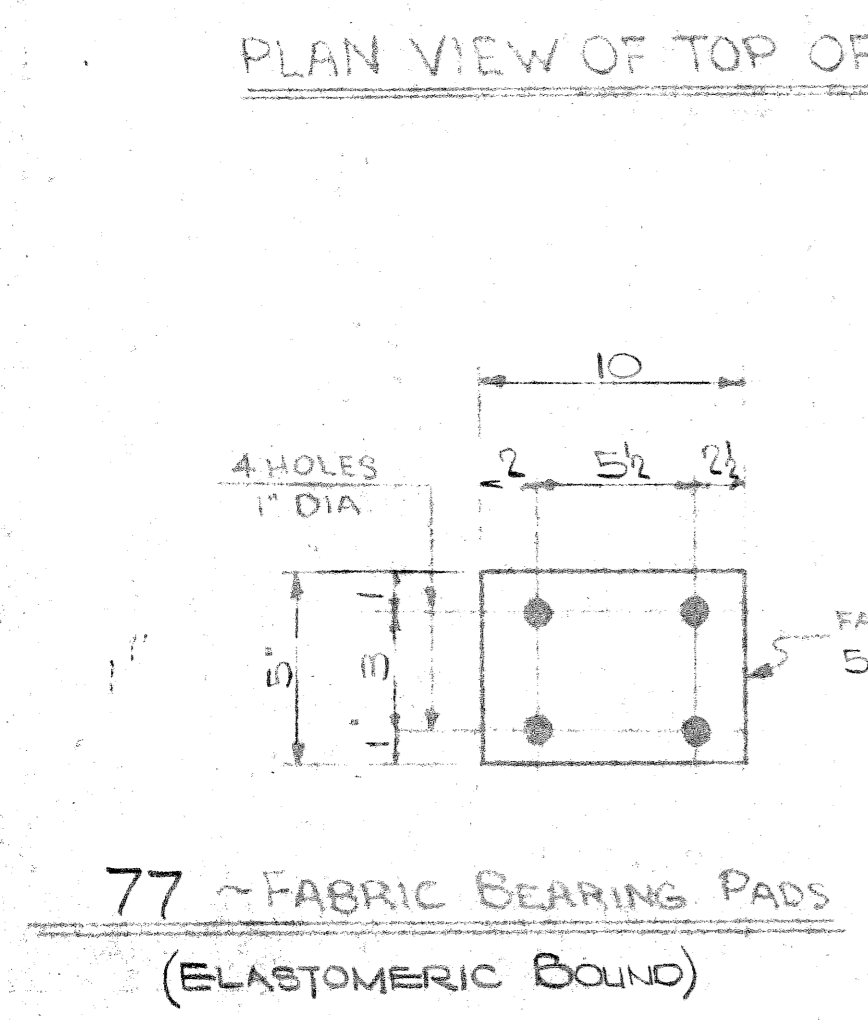
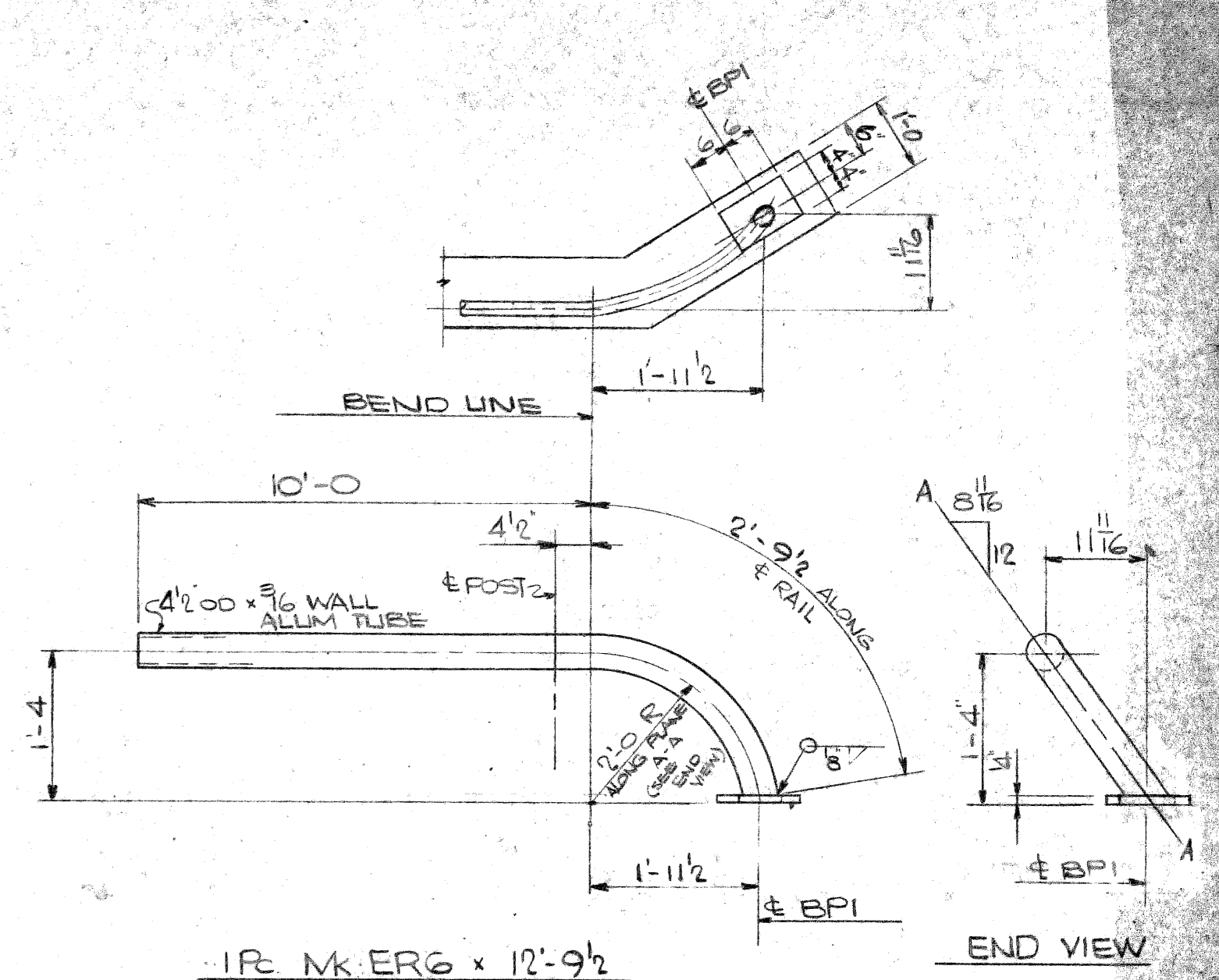
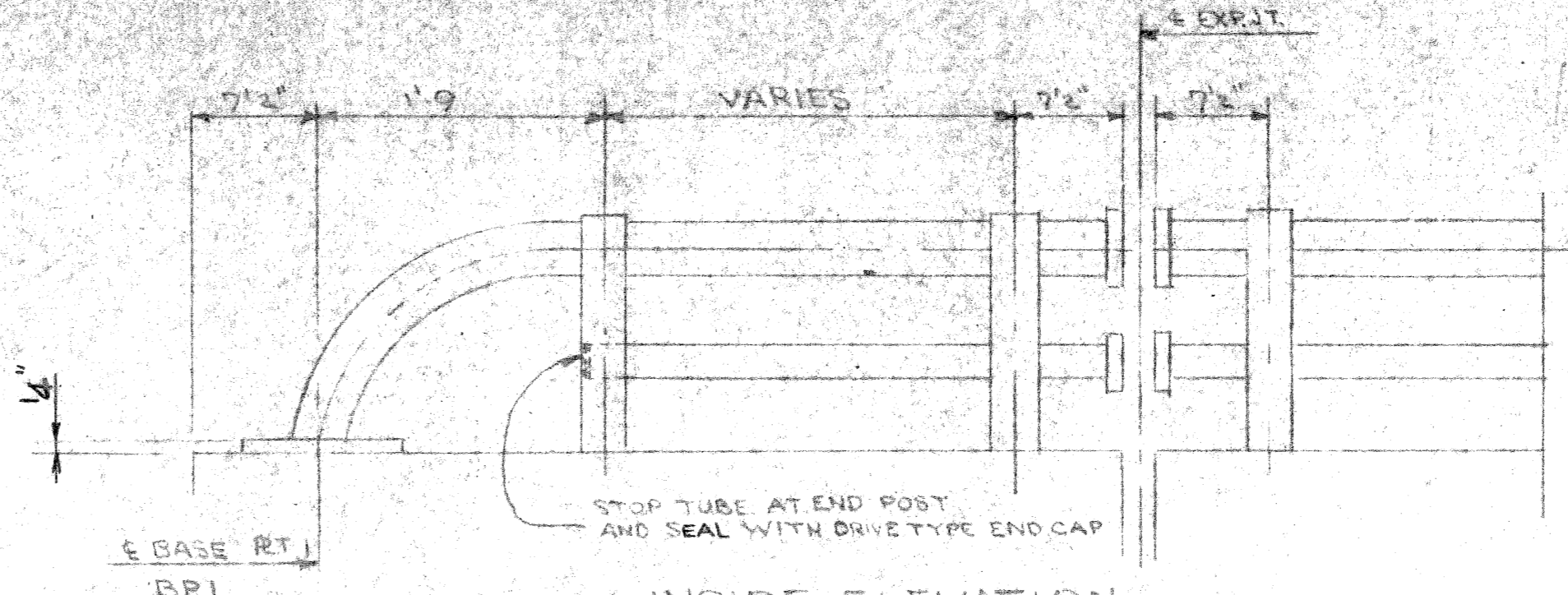
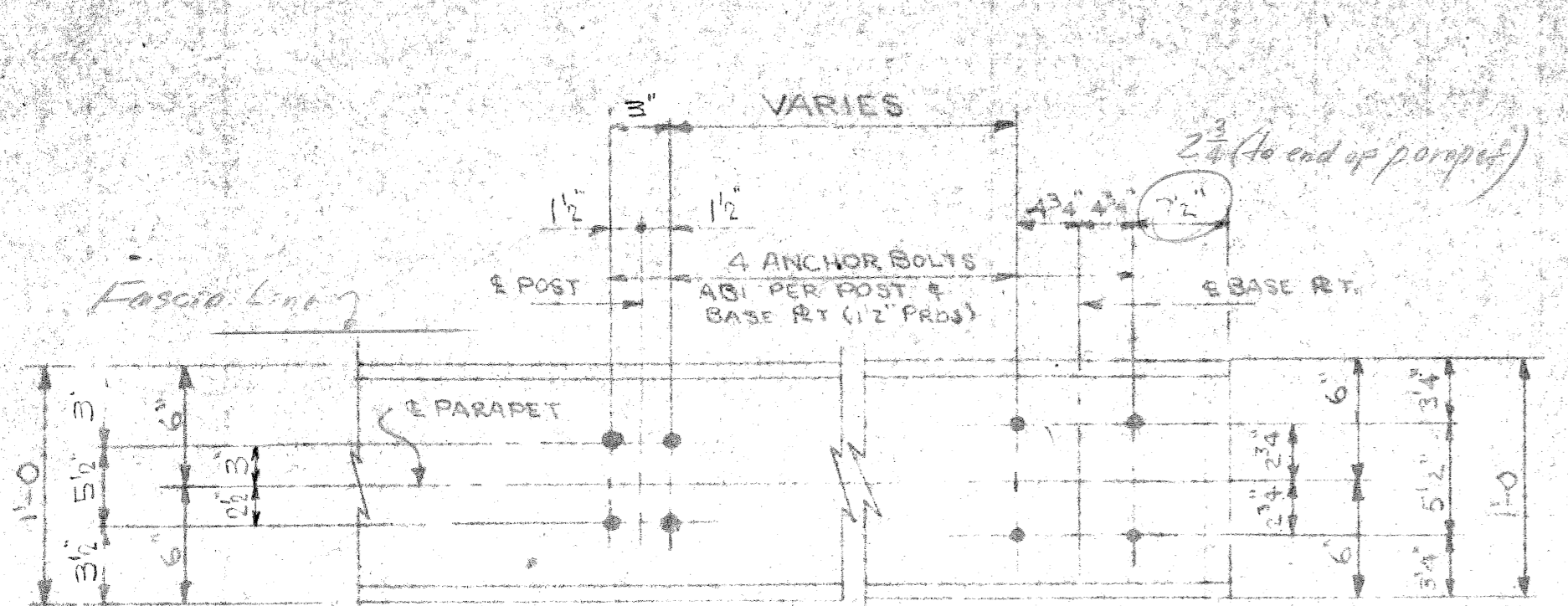
APPROVED

SEP 1 1969
 APPROVED: 9-16-69
 F. J. COOK
 REC'D APPROVAL
 DRAWING - 9-19-69

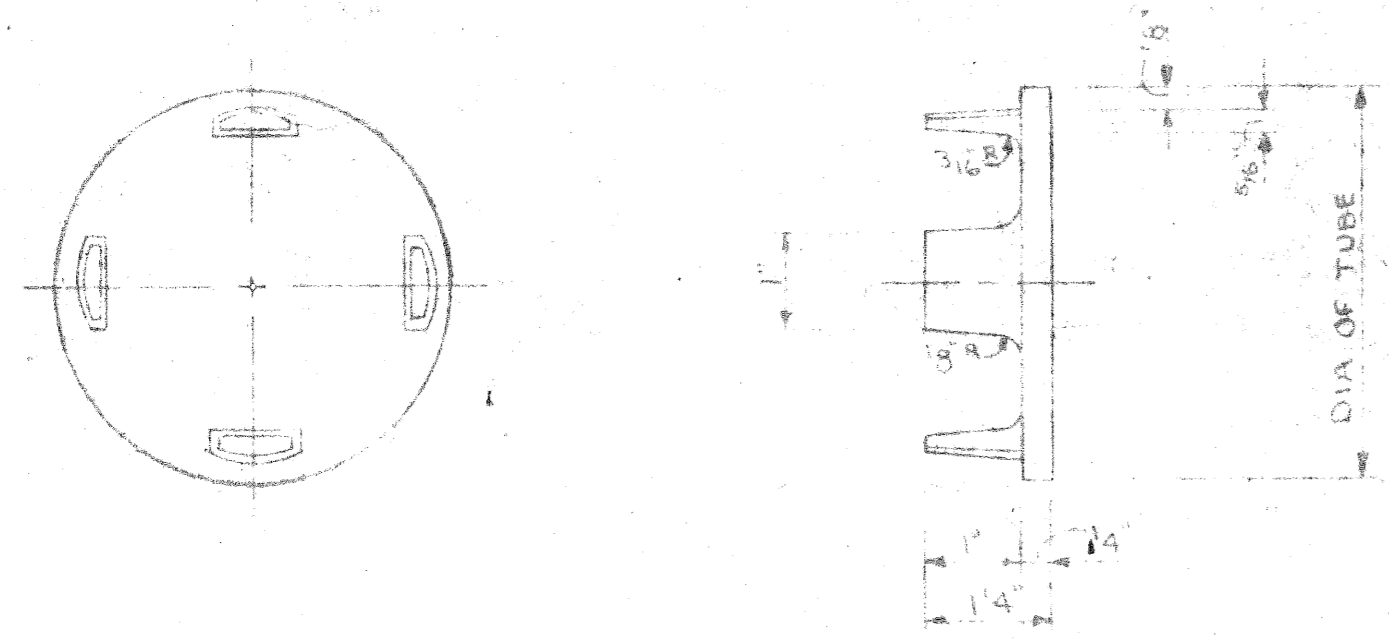
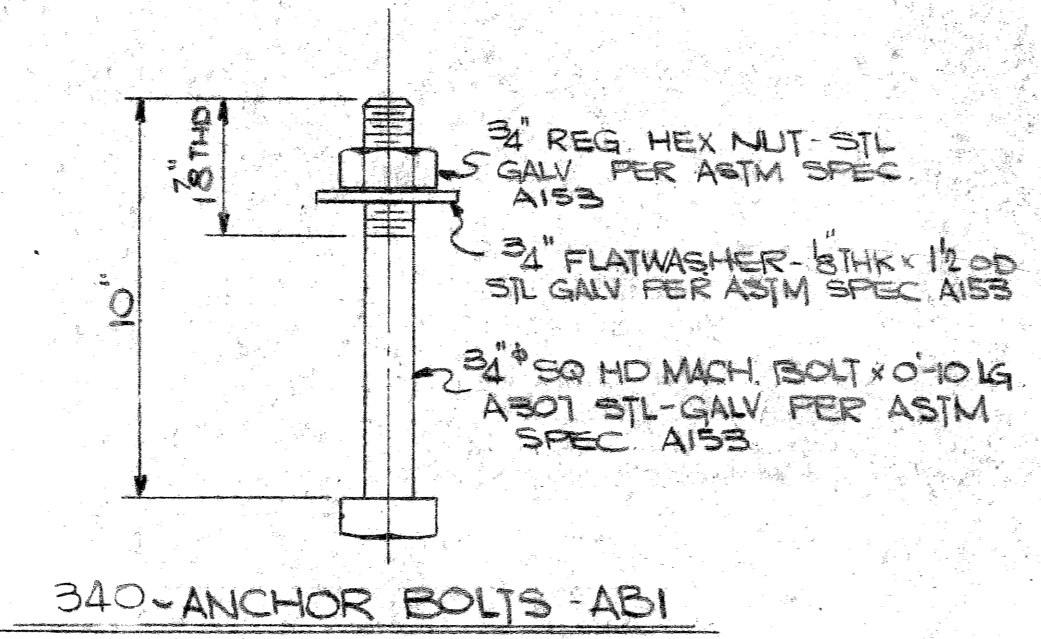
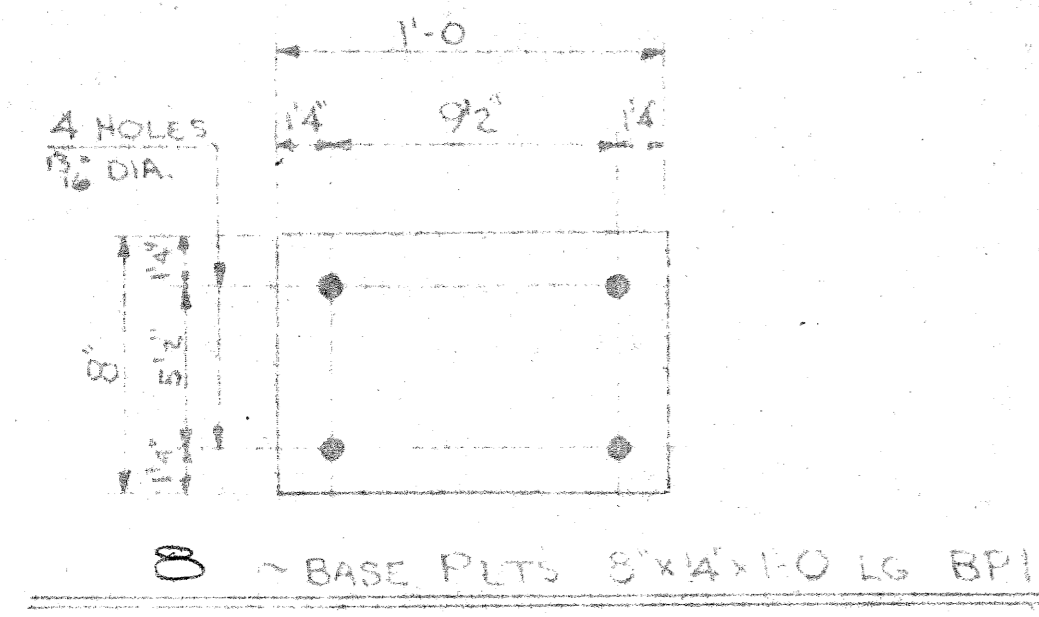
L. B. FOSTER CO.
 GENERAL OFFICES
 SEVEN PARKWAY CENTER
 PITTSBURGH, PENNSYLVANIA 15220

FOR: CA HULL CO INC
 MICHIGAN STATE HIGHWAY DEPT
 WAYNE COUNTY PROJ N° I-96-4(77)230
 2-LINE ALUM RAIL FOR PACIFIC AVE
 OVER JEFFRIES FREEWAY

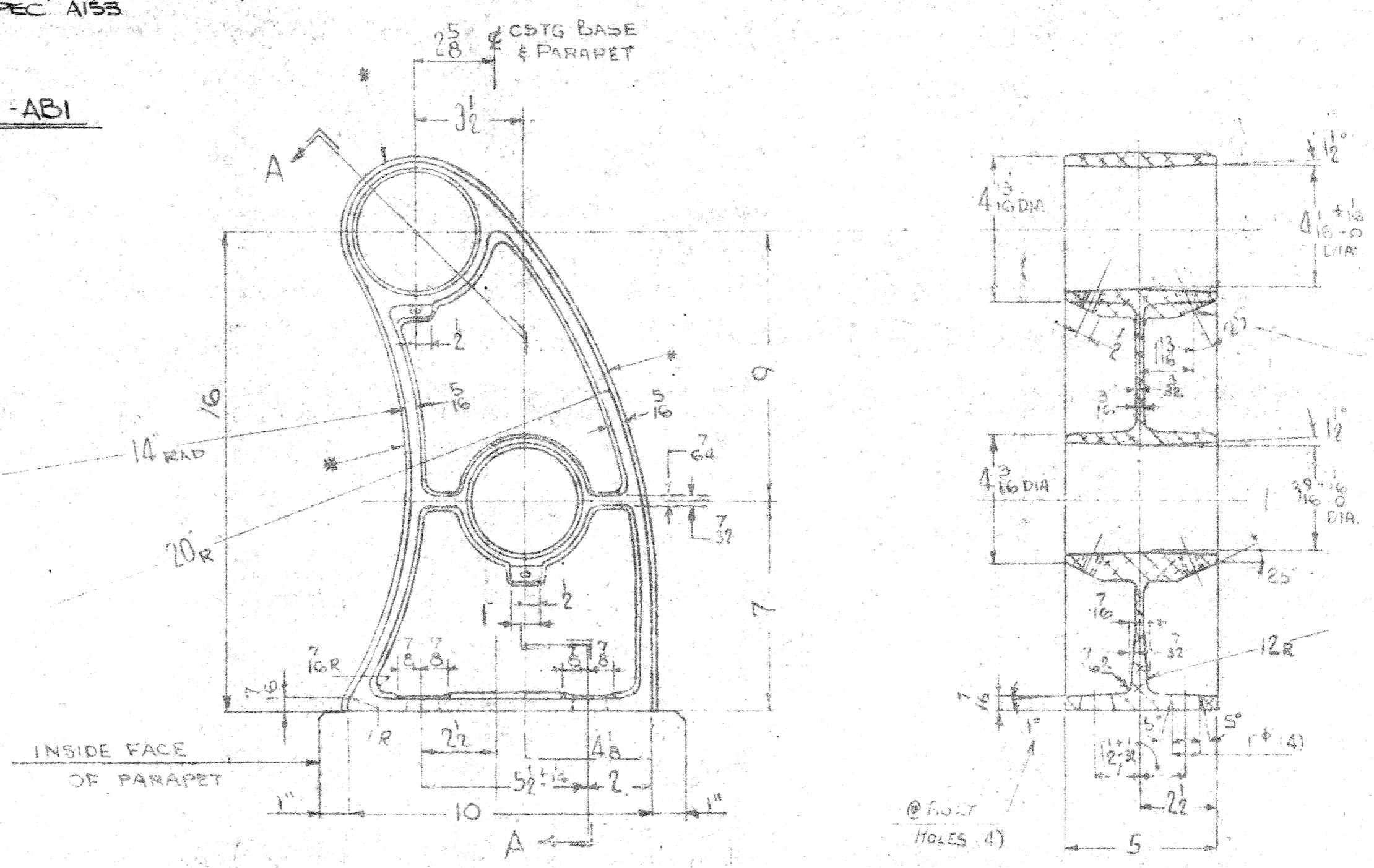
MADE JWH DATE 8-7-69 JOB NO. AL16067 ORDER NO. C41199
 CHECK JNR DATE 8-27-69 DRAWING LB4 CUSTOMER'S NO.
 INSPECTION BY: REVISIONS



MARK	REQD	ACTUAL LENGTHS	AS SHOWN	OFF HAND	
ERTL	2	11'-0 1/16"	*	*	9'-0 1/4"
ER2R	1	11'-0 1/16"	*	*	9'-0"
ER9R	1	11'-0 1/16"	*	*	8'-11 1/2"
ER0L	1	10'-7 7/16"	*	*	8'-6 3/4"
ERT1L	2	10'-1 1/16"	*	*	8'-1"



- 12 ~ END CAPS - PART NO. 7172-35
- 12 ~ END CAPS - PART NO. 7172-4
- (W/SET SCREWS - 2-13NC.)



2-13NC TAP THRU FOR SET SCREWS (4) BY MFR.

UNLESS OTHERWISE SPECIFIED:-
DRAFT ANGLES - 3°
5° ± TOL. 1/16" WALL THICKNESS! 32
FILLETS - 1/8" R 1/16"
CORNER RADII = 8

CASTING TO BE NEATLY TRIMMED & ANY PROTRUDING FLASH TO BE BROKEN OFF

CASTING TO BE SUPPLIED WITH 36 GRIT BELT FINISH ON SURFACES MARKED THUS (*)

MFR TO FURNISH (4) 2-13NC x 5/8 LG HEX SOCKET HEADLESS OVAL POINT SET SCREWS IN PLACE MAIL (EOL - T4) WITH 205 ALUMILATED FINISH

GENERAL NOTES

POSTS SHALL BE SET PERPENDICULAR TO TOP OF PARAPET WALL, RAILING POSTS SHALL BE ALUMINUM ALLOY PERMANENT MOLD CASTINGS (A356-T6) CONFORMING TO ASTM SPEC B108 ALLOY 36708 COND. T6

RAIL TUBING TO BE ALUMINUM ALLOY (6061-T6) PER ASTM SPEC B221 ALLOY 6S11A COND. T6

BASE PLATES SHALL CONFORM TO ASTM SPEC B209 (6061-T6)

Office 6001
535-482103
JLF 7/9/69

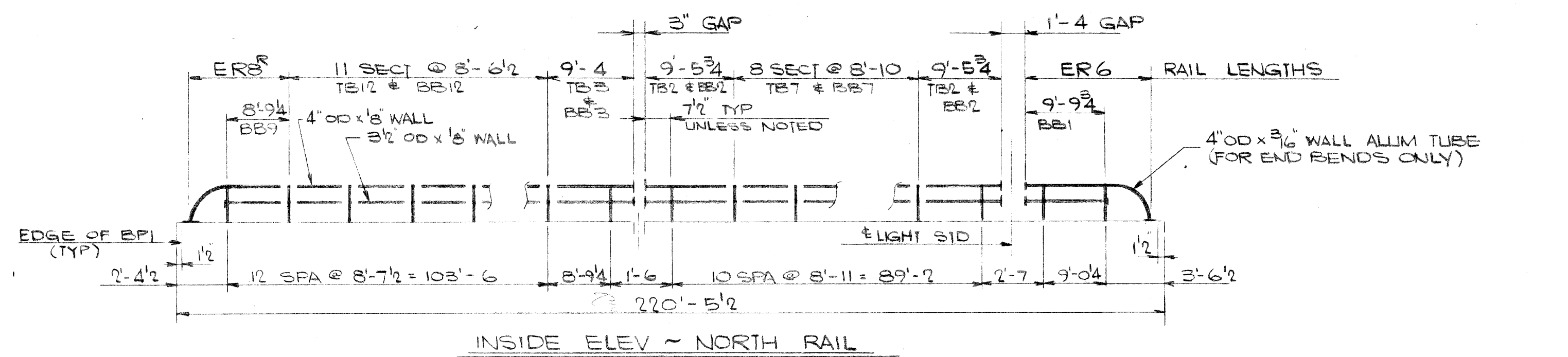
STRUCTURE NO. ~ 535 of 82123 J

APPROVED:

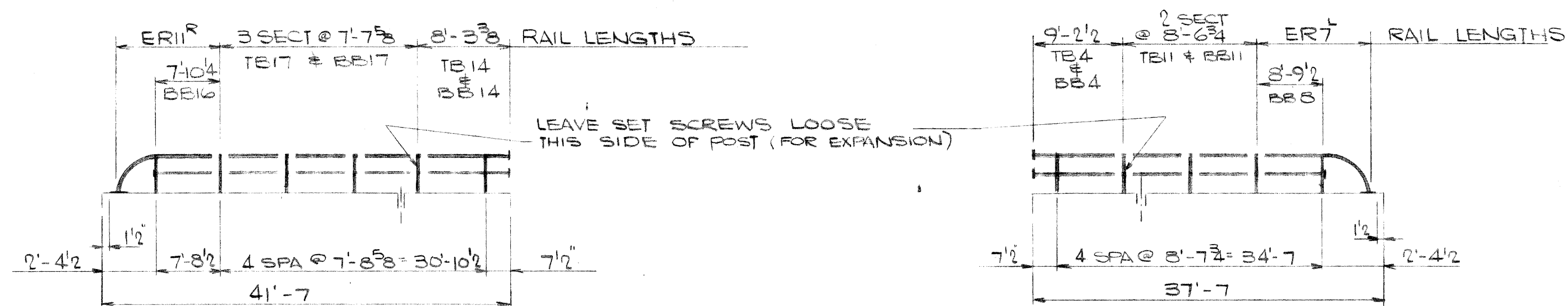
L. B. FOSTER CO.
ATLANTA - CHICAGO - HOUSTON - LOS ANGELES - NEW YORK - PITTSBURGH

FOR: CA. HULL CO. INC.
MICHIGAN STATE HIGHWAY DEPT.
WAYNE COUNTY - PROJ. NO. I-96-4(77)230
ALUMINUM PARAPET RAILING
GENERAL NOTES & TYPICAL DETAILS

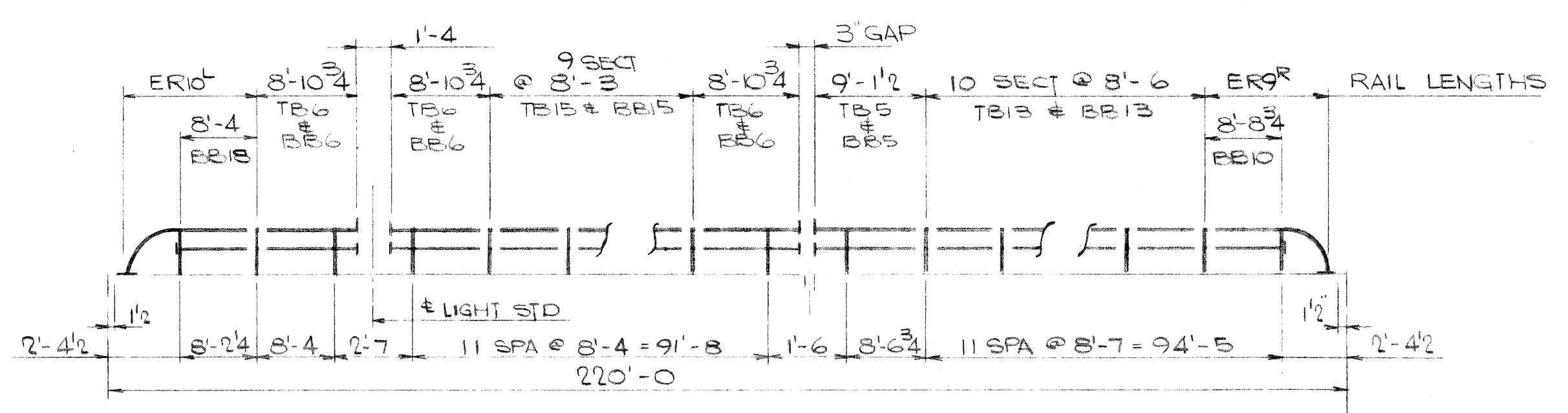
MADE BY JWH DATE 8-27-69 / 100% AL 16069 / 001/100 C41199
CHECKED BY JWR DATE 8-27-69 / 001/100 LBS / 001/100



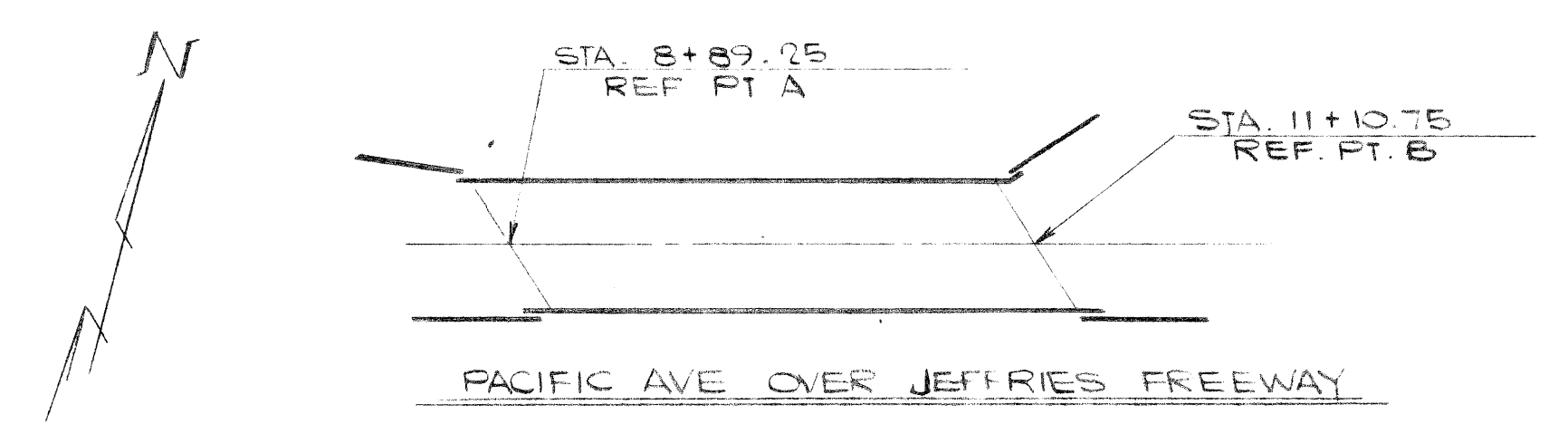
INSIDE ELEV ~ NORTH RAIL



INSIDE ELEV ~ SOUTH WEST & NORTH EAST WINGWALLS



OUTSIDE ELEV ~ SOUTH RAIL



BILL OF MATERIAL

MARK NO.	PC. NO.	NO. REQD.	DESCRIPTION	LENGTH		REMARKS
				FT.	IN.	
			FOR SPECS SEE DWG L1			
		77	POSTER FF-201 ALUM POST W/SET SCREWS			W/TEST COUPENS
		77	FABRIC BEARING PADS 5x8	0	10	
		8	FABRIC BEARING PADS 8x8	1	0	
BPI		8	ALUM BASE PITS 8x4	1	0	WELD TO END BENDS
AB1		340	3/8" SQ HD MACH BOLTS 9/16"	0	10	W/HEX NUT & WASHER
		12	ALUM END CAPS - N° 7172-4			W/SET SCREWS
		12	ALUM END CAPS - N° 7172-25			W/SET SCREWS
		8	ALUM END CAPS E55-125			DRIVE TYPE
ER6		1	4' OD x 3/16 WALL ALUM TUBE	12	9 1/2	END BEND ORDER 11-9 1/2
ERT		2		11	0 1/8	END BEND ORDER 11-9 1/2
ERS		1		11	0 1/8	END BEND ORDER 11-9 1/2
ERT		1		11	0 1/8	END BEND ORDER 11-9 1/2
ER10		1		10	7 1/6	END BEND ORDER 11-4 1/6
ER11		2		10	1 1/6	END BEND ORDER 10-10 1/6
TE2		2	4' OD x 3/16 WALL ALUM TUBE	9	5 3/4	
TE3		1		9	4	
TE4		2		9	2 1/2	
TE5		1		9	1 1/2	
TE6		3		8	10 3/4	
TE7		3		8	10	
TE11		4		8	6 3/4	
TE12		11		8	6 1/2	
TE13		10		8	6	
TE4		2		8	5 3/8	
TE15		9		8	3	
TE17		6		7	7 3/8	
BB1		1	3 1/2' OD x 3/8 WALL ALUM TUBE	9	9 3/4	
BB2		2		9	5 3/4	
BB3		1		9	4	
BB4		2		9	2 1/2	
BB5		1		9	1 1/2	
BB6		3		8	10 3/4	
BB7		5		8	10	
BB8		1		8	9 1/2	
BB9		1		8	9 1/4	
BB10		1		8	8 3/4	
BB11		4		8	6 3/4	
BB12		11		8	6 1/2	
BB13		10		8	6	
BB14		2		8	5 3/8	
BB15		9		8	3	
BB16		1		7	10 1/4	
BB17		6		7	7 3/8	
BB8		1		8	4	

NOTE:
 FOR GENERAL NOTES & TYPICAL DETAILS SEE DWG LBI
 THIS DRAWING IS NOT TO SCALE
 LENGTH OF RAILING ON THIS SHEET = 598' PAY LENGTH.
 SPLICE GAP @ POST = 1"

THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE DIMENSIONS SHOWN ON THE APPROVED AND RECORDED THE L. B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.

STRUCTURE N° 535 OF 82123J

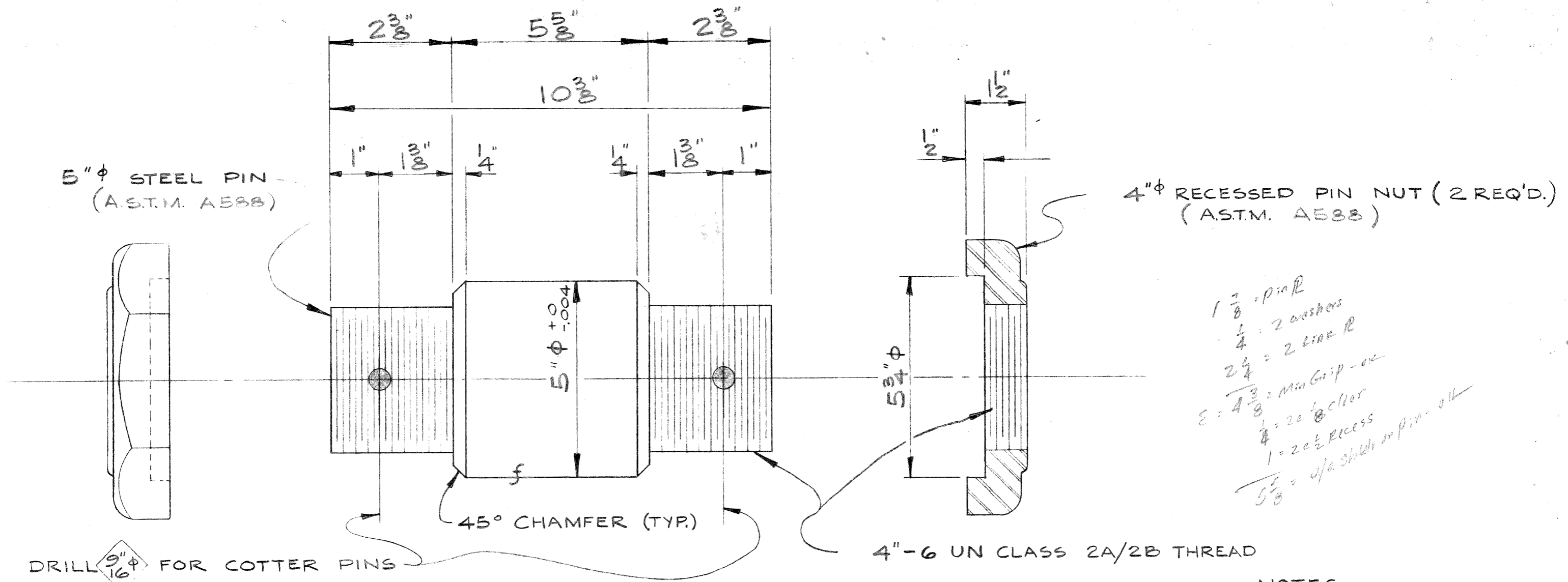
APPROVED: _____ REC'D APPROVAL _____
 DRAWING _____

L. B. FOSTER CO.
 GENERAL OFFICES
 SEVEN PARKWAY CENTER
 PITTSBURGH, PENNSYLVANIA 15220

FOR: CA HULL CO INC
 MICHIGAN STATE HIGHWAY DEPT
 WAYNE COUNTY PROJ N° I-96-4(77)230
 2-LINE ALUM RAIL FOR PACIFIC AVE
 OVER JEFFRIES FREEWAY

MADE JWH DATE 8-7-69 JOB NO. AL16067 ORDER NO. C41199
 CHECKED JWR DATE 8-27-69 DRAWING LB4 CUSTOMER'S NO. _____
 (LAST)

INSPECTION BY _____ REVISIONS _____



5" ϕ STEEL PIN
(A.S.T.M. A588)

4" ϕ RECESSED PIN NUT (2 REQ'D.)
(A.S.T.M. A588)

*1 7/8 = pin R
1/4 = 2 washers
2 1/4 = 2 link R
E = 4 3/8 = min grip - ok
1/4 = 2e 1/8 collar
1 = 2e 1/2 recess
5/8 = d/a shield in pin - ok*

DRILL \diamond 9/16" ϕ FOR COTTER PINS

45° CHAMFER (TYP.)

4"-6 UN CLASS 2A/2B THREAD

NOTES

PIN ASSEMBLIES ARE TO BE UNPAINTED AND SHALL BE FREE OF GREASE OR OTHER FOREIGN MATERIALS.

14 PIN ASSEMBLIES REQ'D. AS SHOWN

SEE M.S.H.D. STD. SPECS. 5.02.06 P & Q
OFFICE COPY 7/25/69 J.L.

28 COTTER PINS REQ'D.
28 - 1/2" ϕ x 0'-6" COTTER PINS

F. YEAGER.
BRIDGE & CULVERT COMPANY
1701 KEARNEY ST. PORT HURON, MICH.

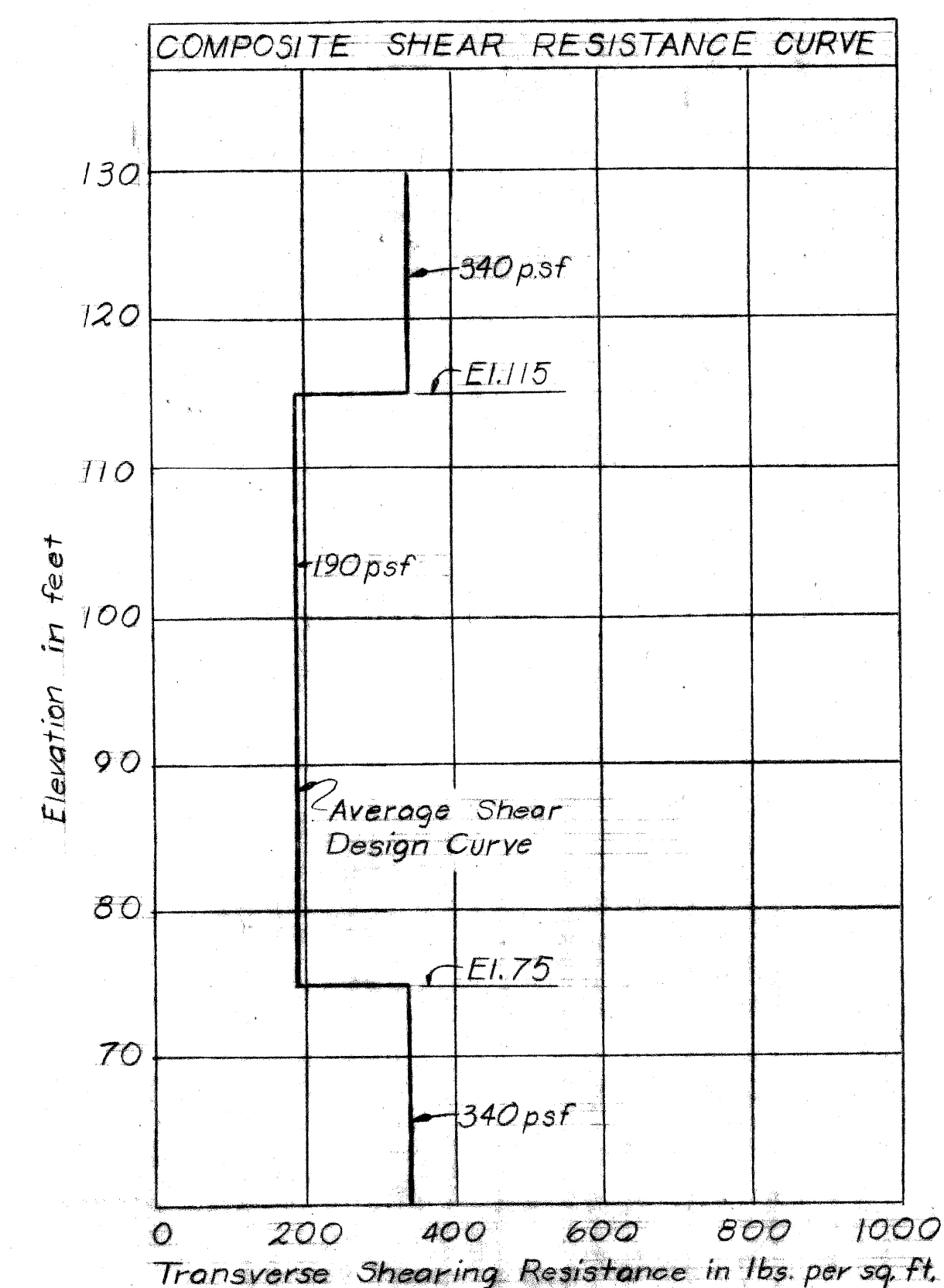
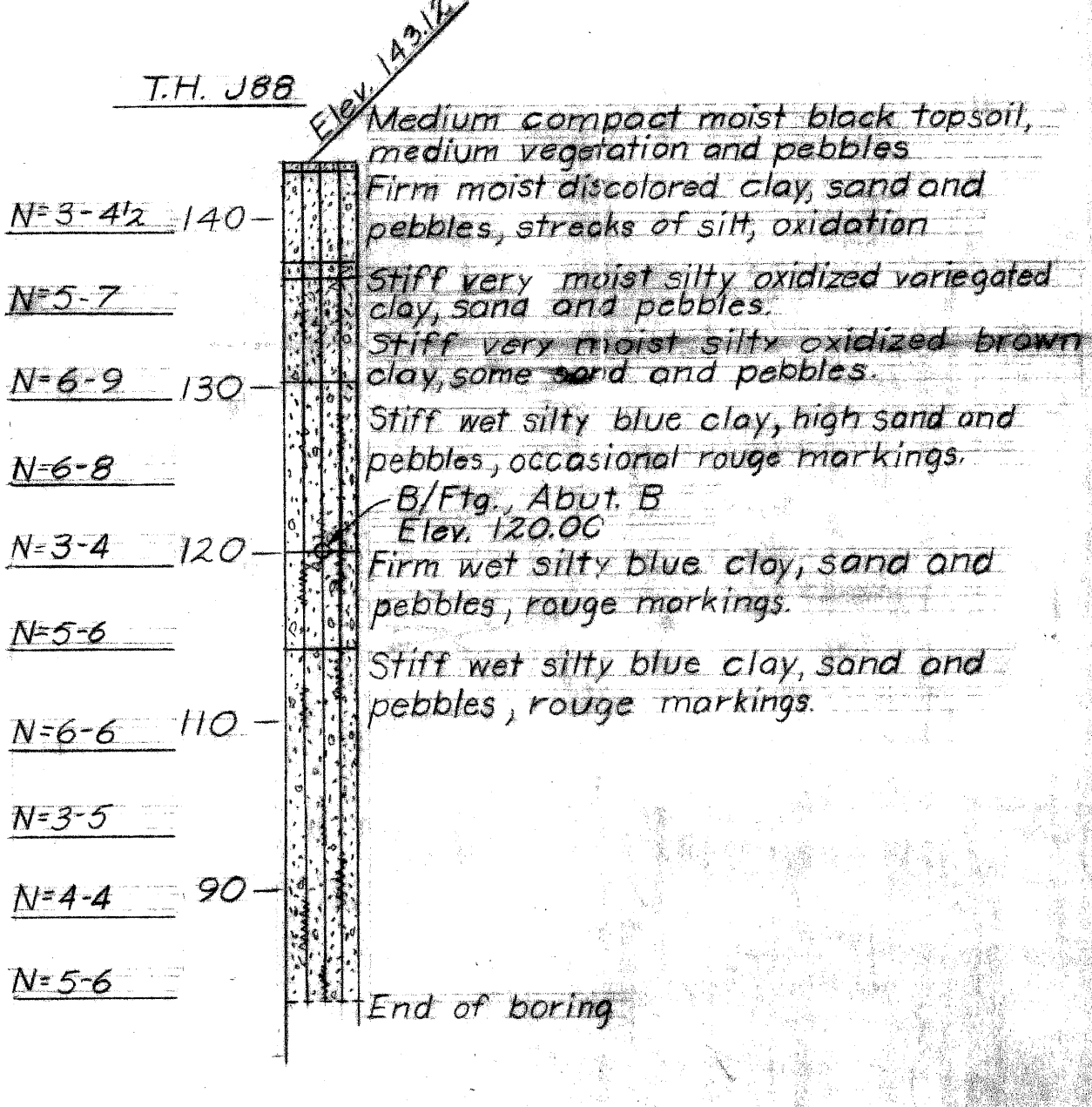
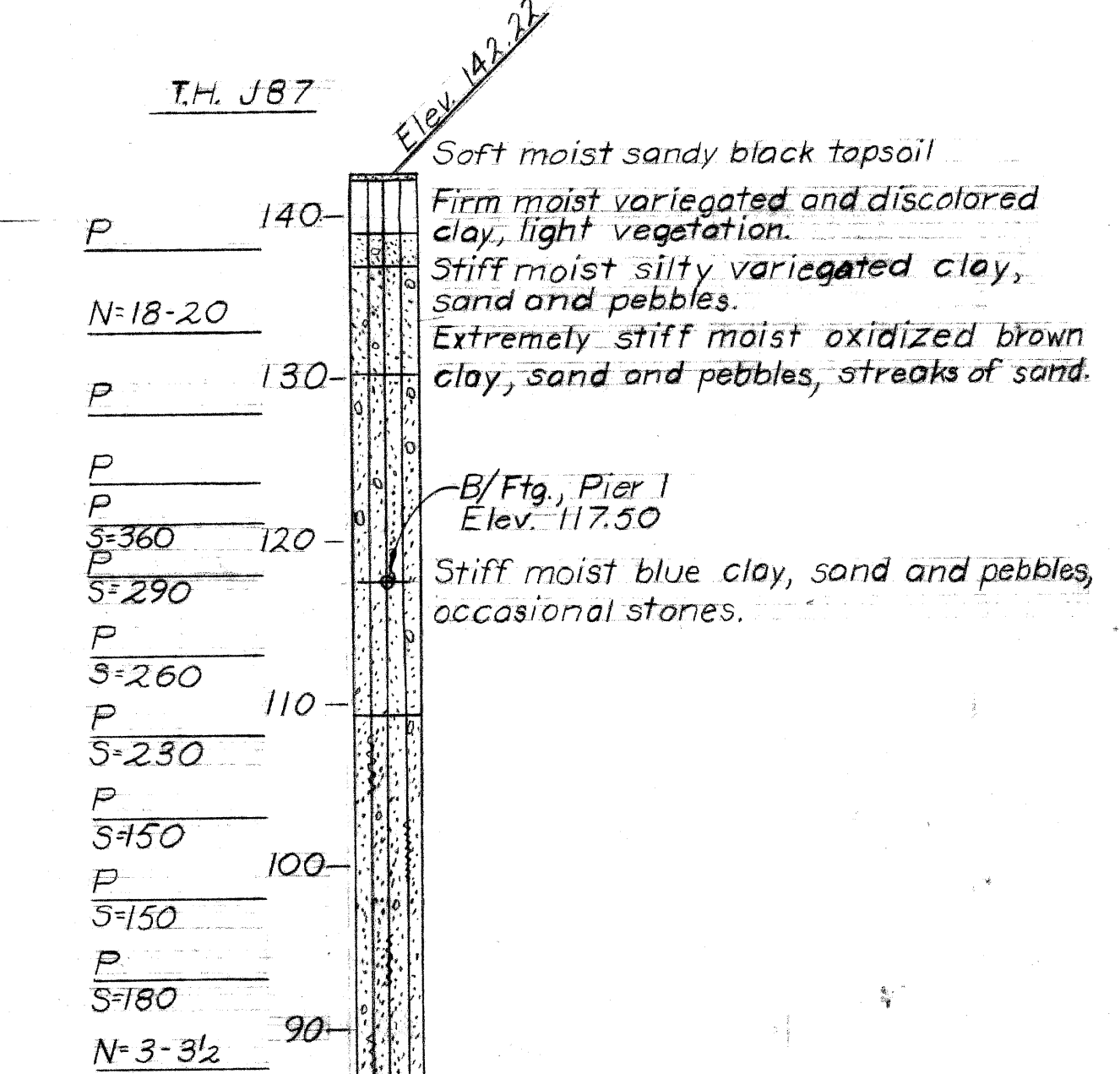
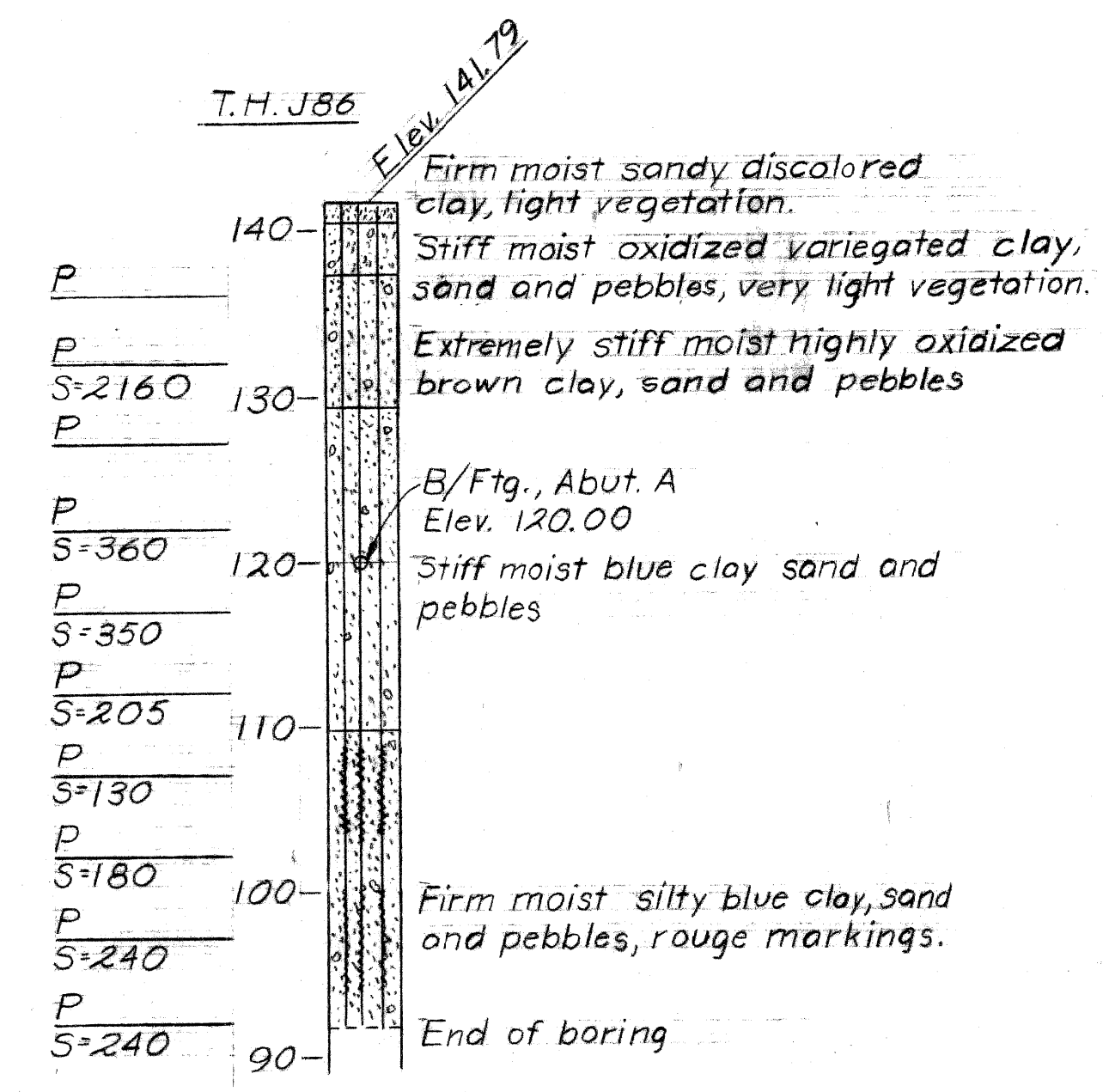
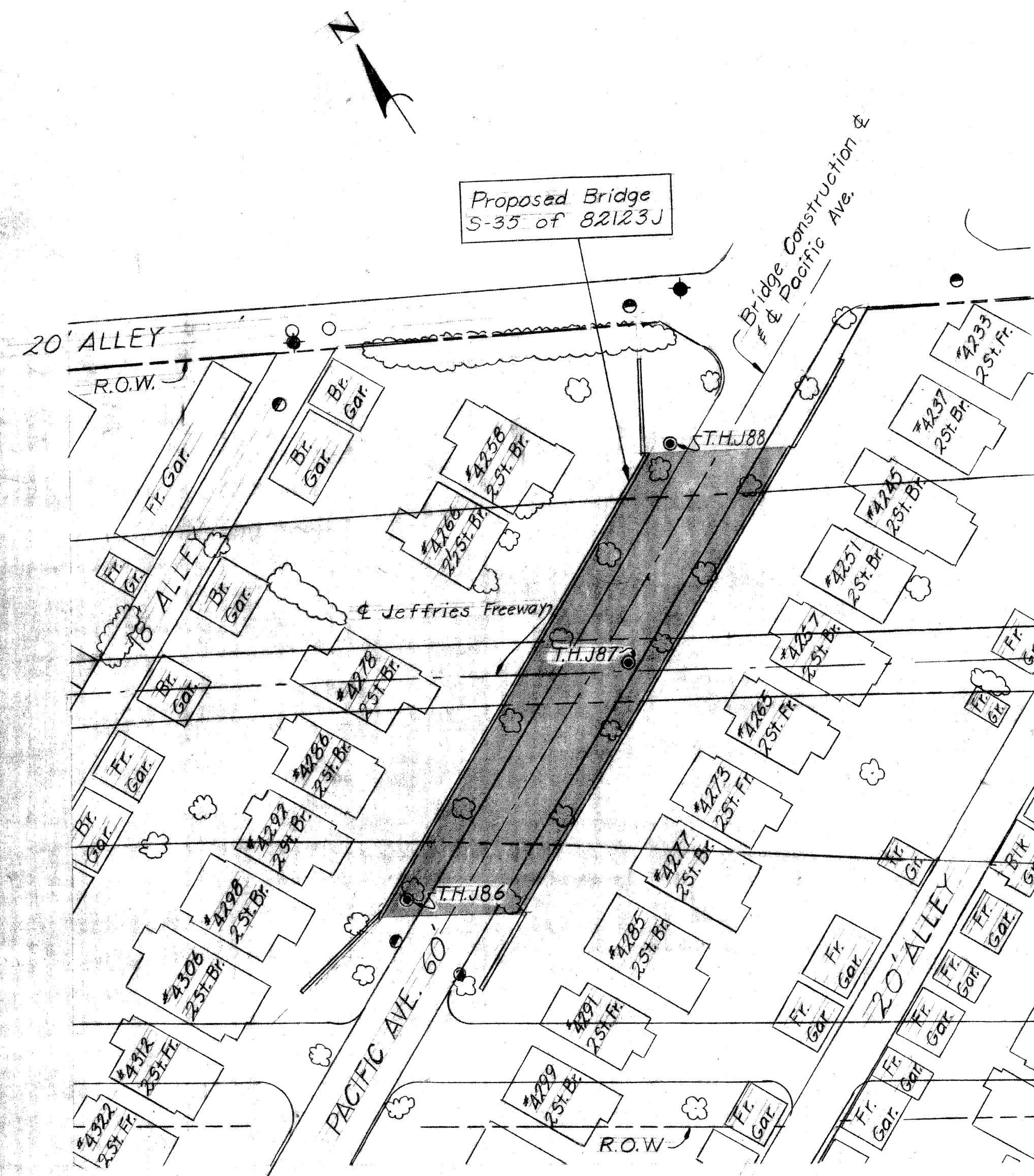
28 BRONZE WASHERS REQ'D.
28 - 7" O.D. x 5 1/16" I.D. x 1/8" THICK BRONZE WASHERS.
(BRONZE FOR WASHERS SHALL BE A.S.T.M. B100, ALLOY NO. 510 OR NO. 635)

BRIDGE S35 of 82123 J
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN THE CITY OF DETROIT.

C.A. HULL CO., CONT'R.

DATE 7-14-69 JOB NO. 54707 SHEET PI
BY JAM

LOG OF SOIL BORINGS



GENERAL NOTES:

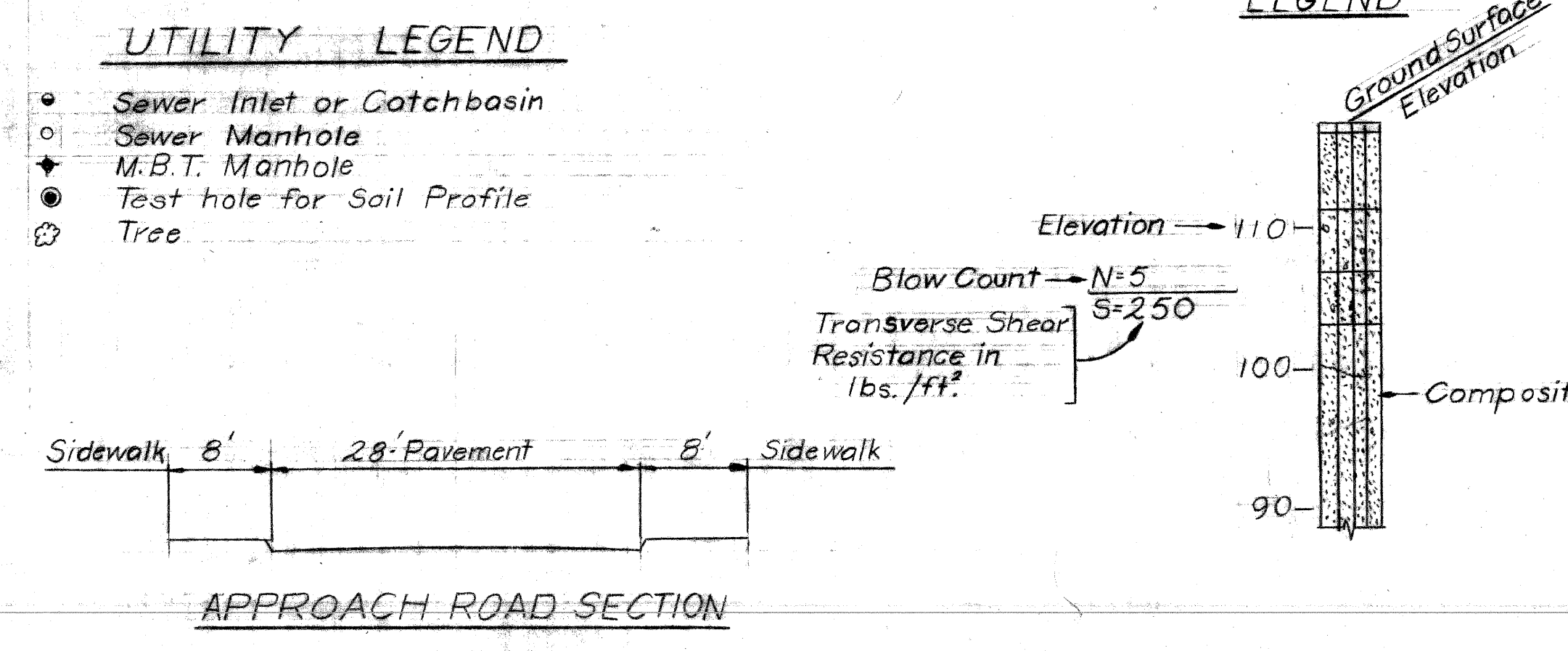
The work covered by these plans includes construction of the proposed bridge and placing slope protection to the limits shown. All other work is included in the Road Plans which are a part of this contract.

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.

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.



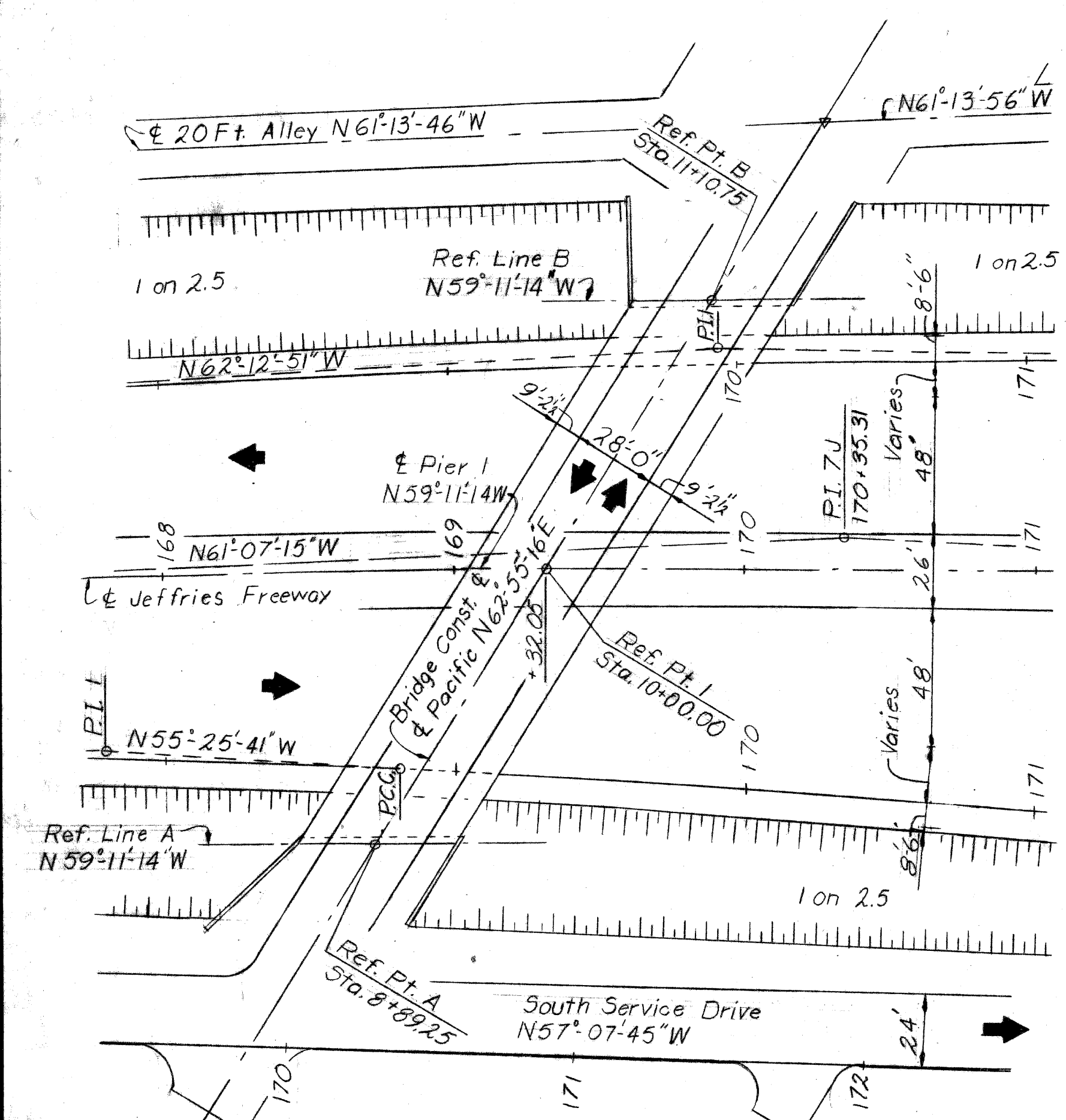
NOTES:

N Indicates number of blows required to drive a sampler 6" (or as noted) using a 140# hammer falling 30".

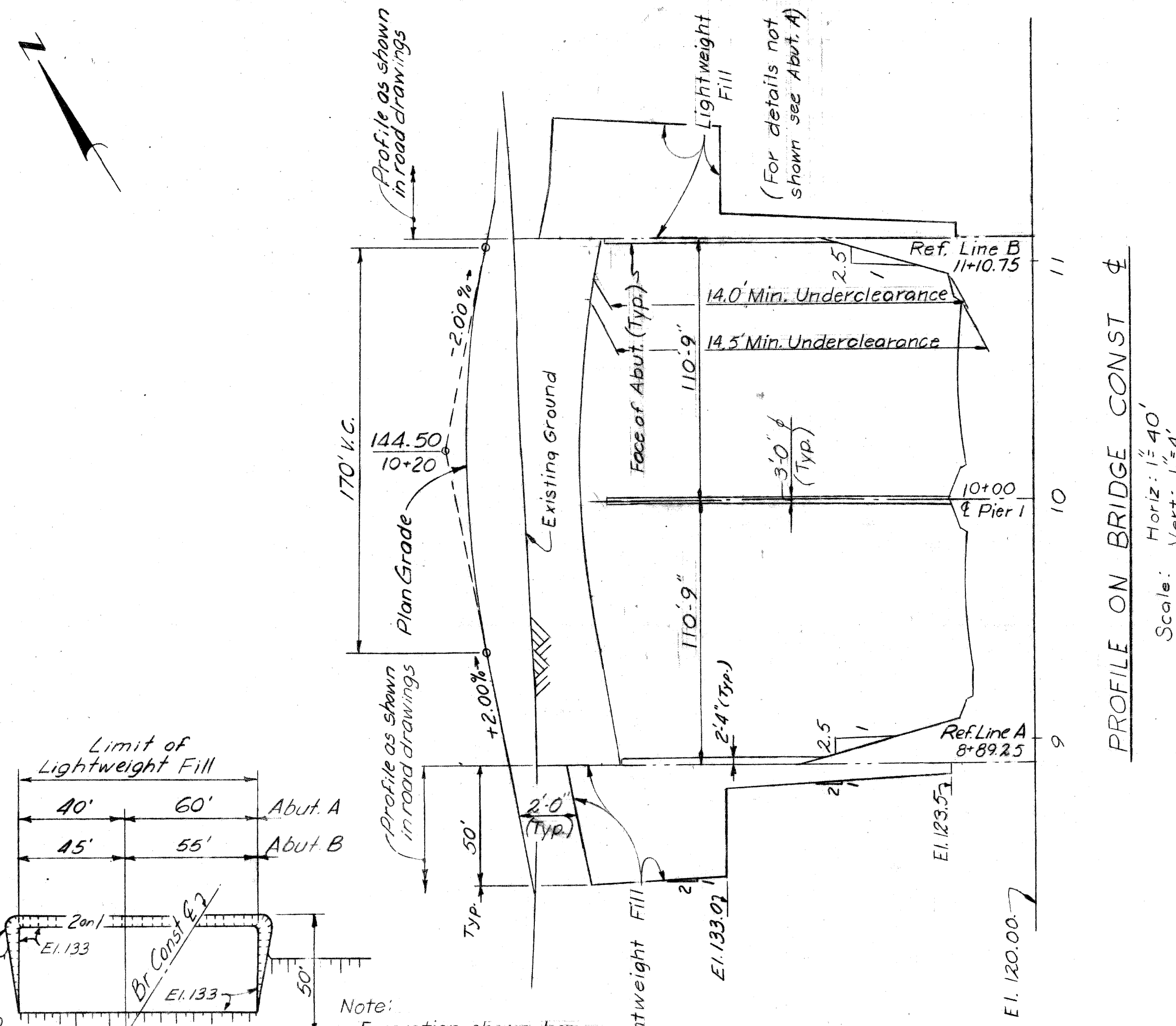
S Indicates Transverse Shearing Resistance in lbs./ft.² as determined by M.S.H.D. Standard Test.

P Indicates sampler was pushed.

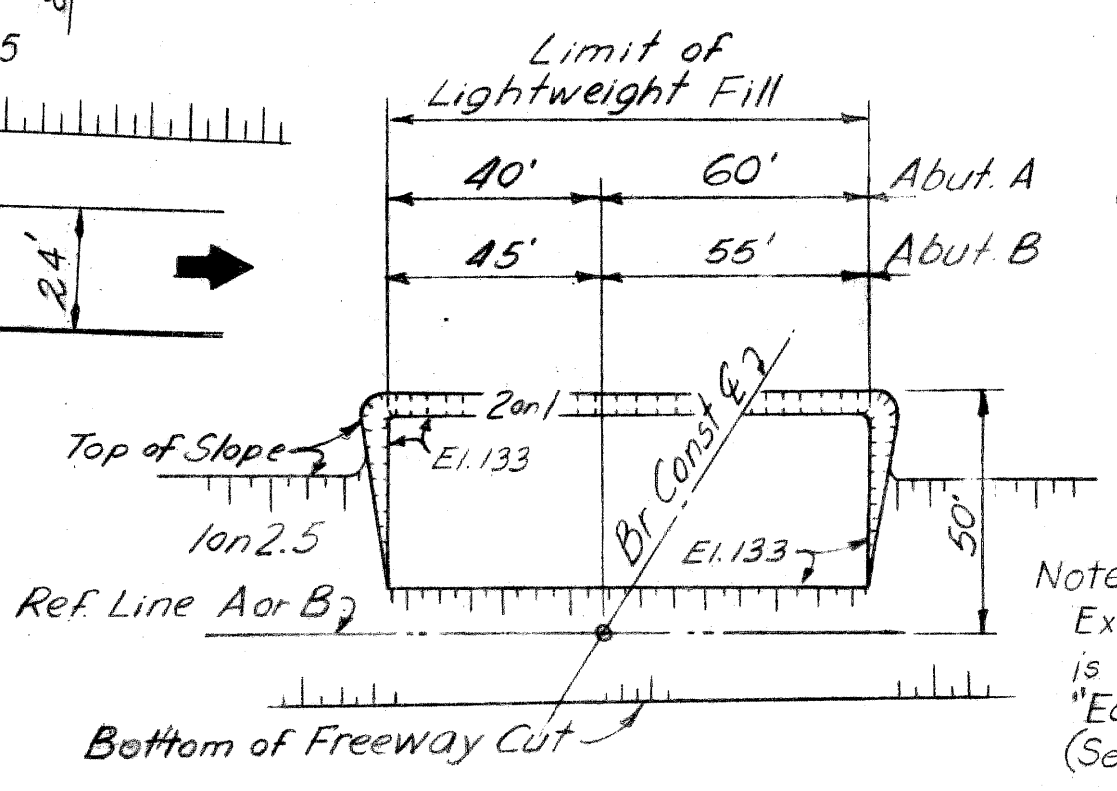
PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN DEPARTMENT OF STATE HIGHWAYS PACIFIC AVE. OVER JEFFRIES FREEWAY IN DETROIT GENERAL PLAN OF SITE	
APPROVED: <i>[Signature]</i> STRUCTURAL ENGINEER		JOB No. PW 990(3)	
REVISIONS			
NO.	DESCRIPTION	DATE	BY
APPROVED: _____ DESIGN SUPERVISING ENGINEER		APPROVED: _____ ASST. ENGINEER OF DESIGN	
SQUAD BOSS: <i>[Signature]</i> 5-68		DRAWN BY: <i>[Signature]</i> 2-68	
TRACKED BY: <i>[Signature]</i> 5-68		CHECKED BY: <i>[Signature]</i> 5-68	
SHEET 2 OF 22		S35 of 82123J	



PLAN
Scale: 1"=40'



PROFILE ON BRIDGE CONST. &
Scale: Horiz: 1"=40'
Vert: 1"=4'

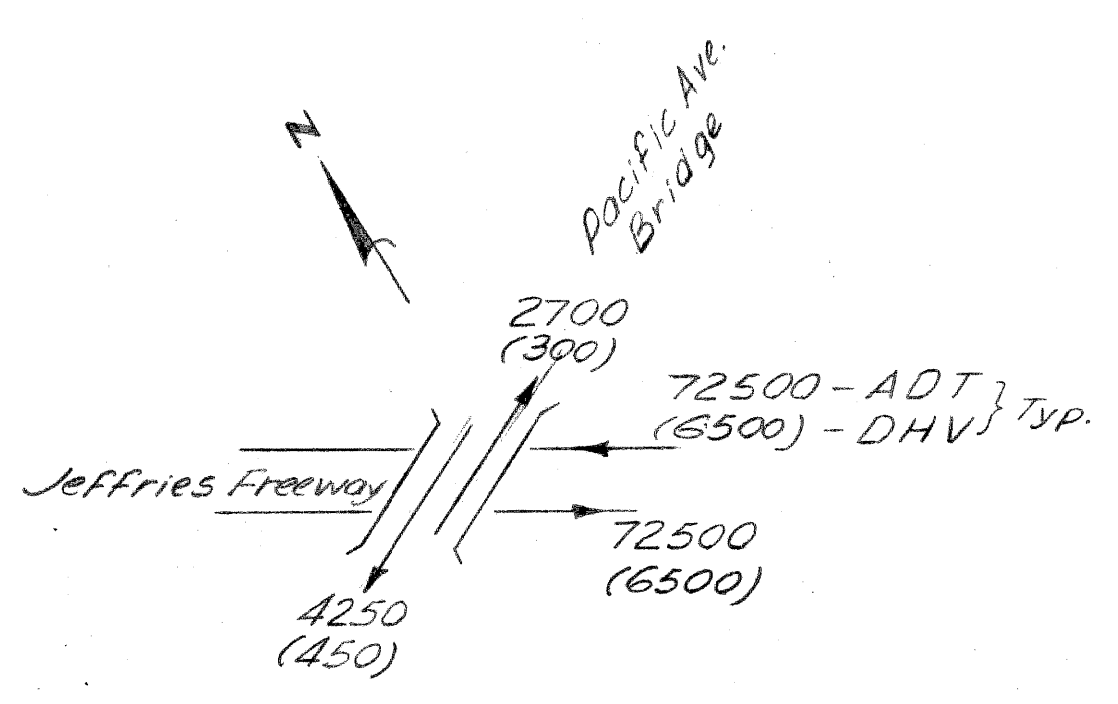


DIGGING PLAN
(Abut. B as shown & noted)
(Abut. A as noted.)

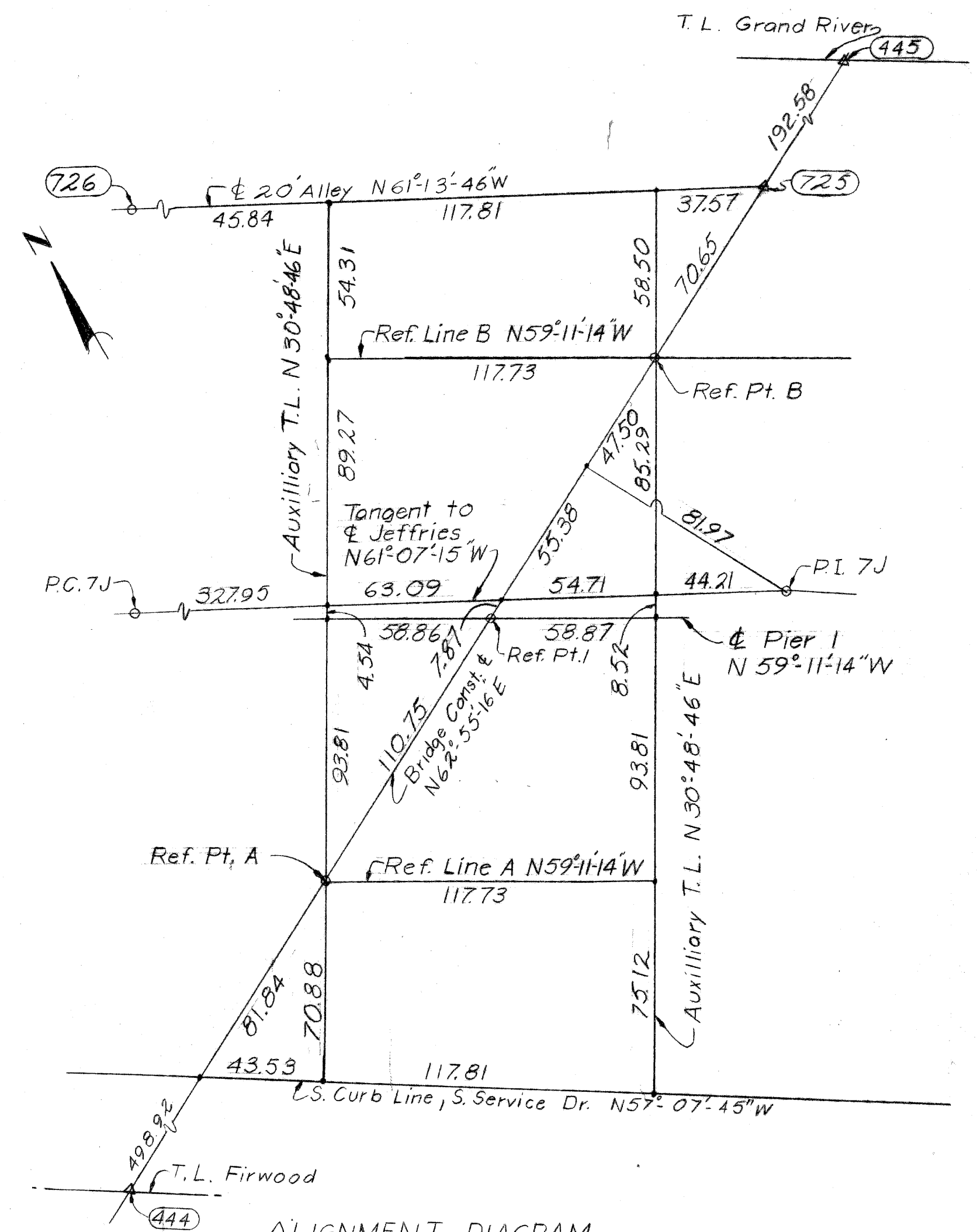
CURVE DATA FOR JEFFRIES FREEWAY

Curve 7J
 $\Delta = 4^\circ 53' 48''$
 $D = 0^\circ 30' 00''$
 $R = 11,459.16'$
 $T = 489.97'$
 $L = 979.33'$
 $E = 10.47'$
 $PC = 165 + 45.34$
 $PI = 170 + 35.31$
 $PT = 175 + 24.68$

For additional curve data see Road Plans



TRAFFIC COUNT
Estimated Traffic 1990



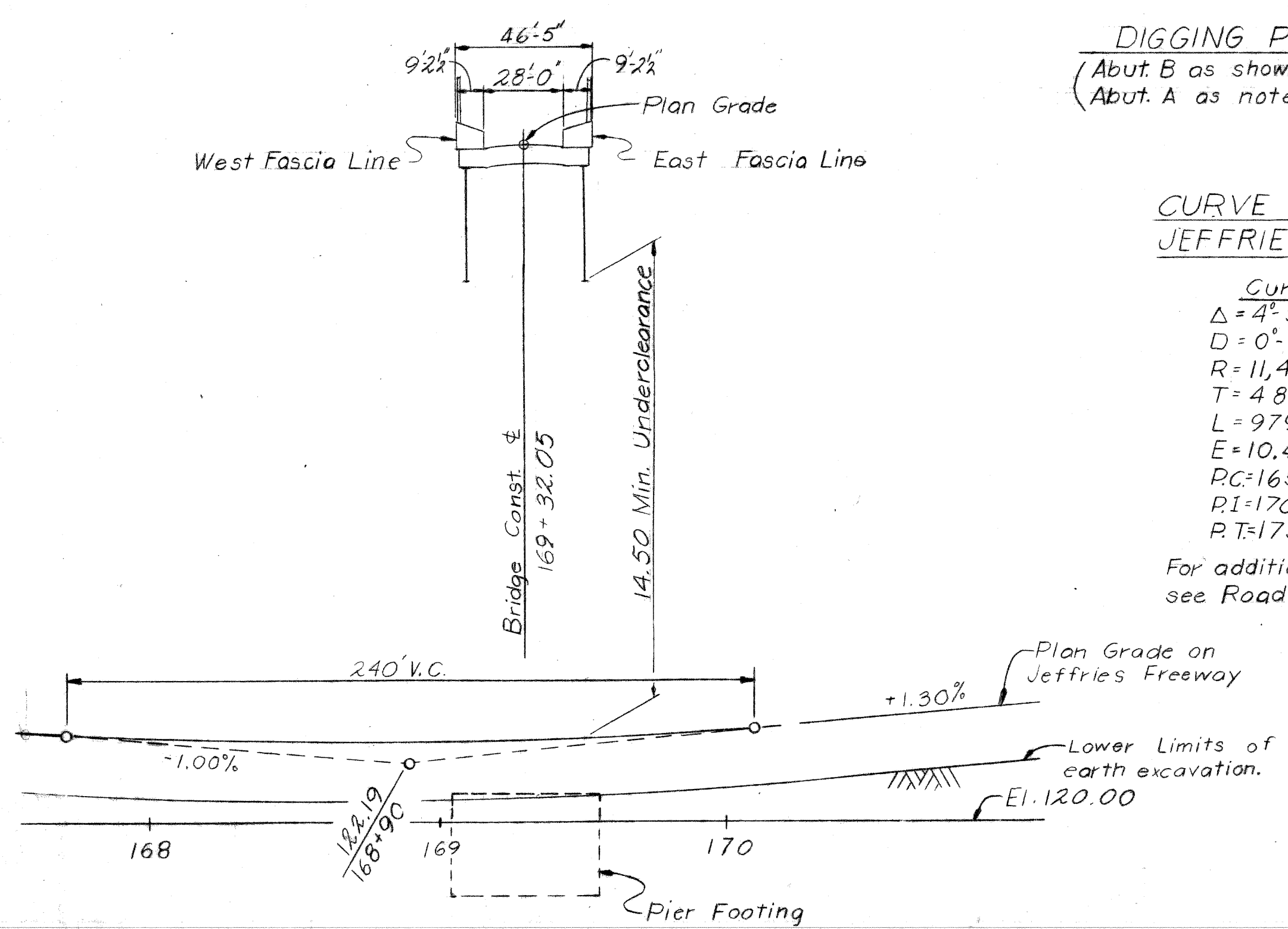
ALIGNMENT DIAGRAM
No Scale

CONSTRUCTION BENCH MARKS

- C.B.M. 87 Arrow on hydrant in front of 4312 Allendale. El. 144.03.
- C.B.M. 88 Arrow on hydrant in front of 4306 Pacific. El. 144.49.
- C.B.M. 89 Arrow on hydrant S.W. corner of Grand River and Pacific. El. 145.81.

NOTES:

- C.B.M. Denotes construction bench mark.
- o Denotes Reference point or point of intersection.
- ⊙ Denotes Survey Traverse Point.
- Elevations are referred to City of Detroit Datum, which is 479.755 Ft. above sea level.
- See General Plan of Structure for additional details of pay limits for Excavation and Lightweight Fill



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

APPROVED: *H. Conant*
 PROFESSIONAL ENGINEER

JOB No.
 PW 990(3)

NO.	DESCRIPTION	DATE	BY

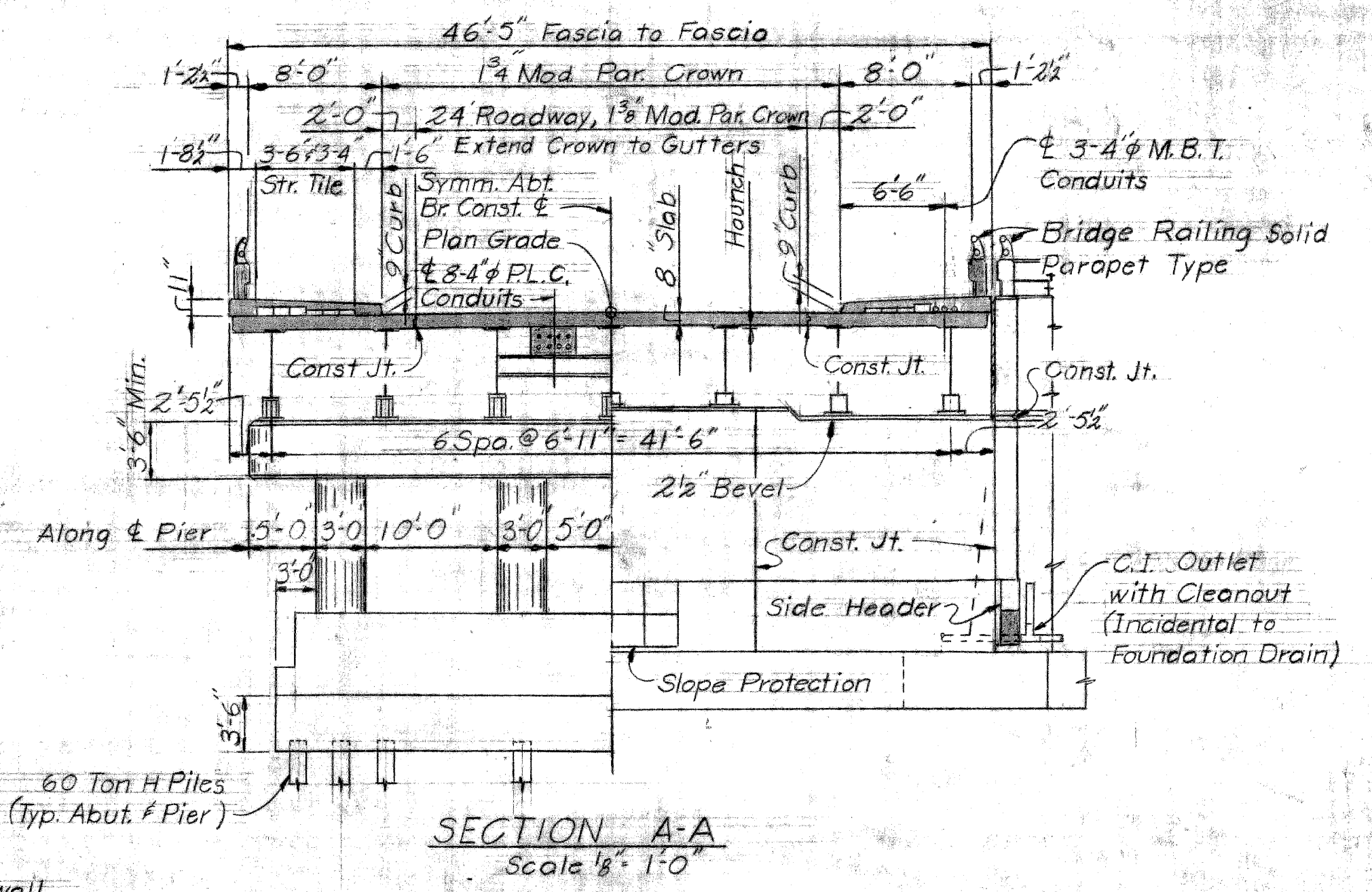
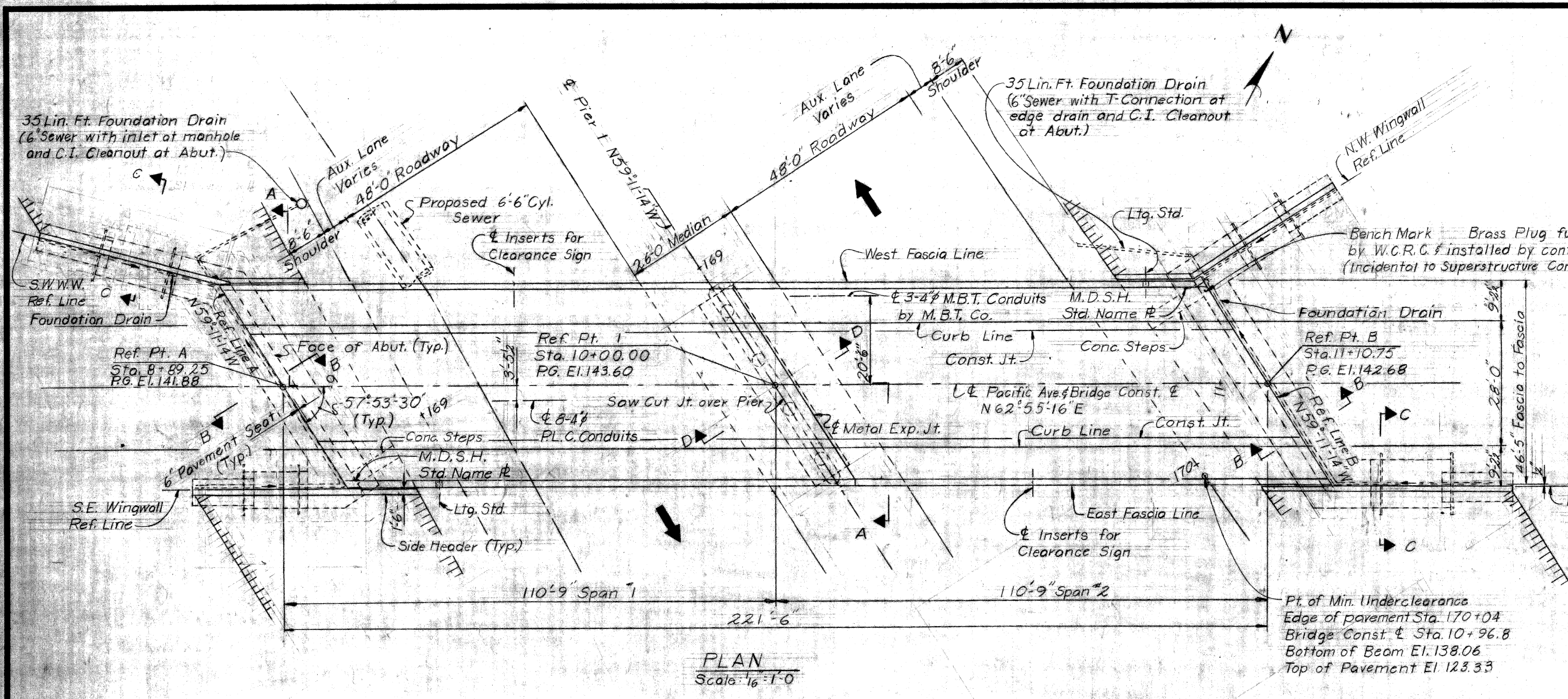
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT

GENERAL DRAWING

APPROVED: _____
 DESIGN SUPERVISING ENGINEER

APPROVED: _____
 ASST. ENGINEER OF DESIGN

SHEET 3 OF 3
 S35 of 82131

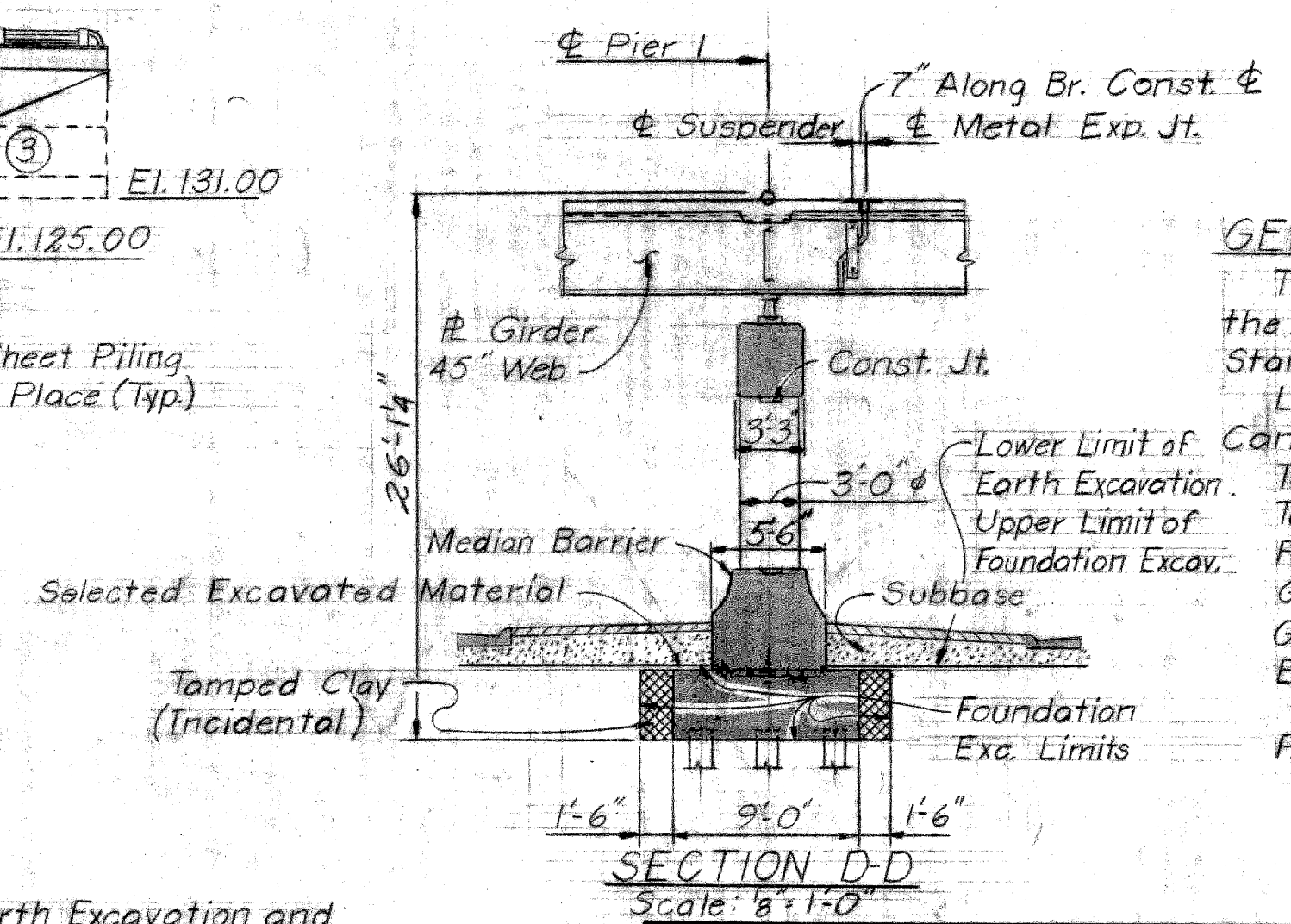
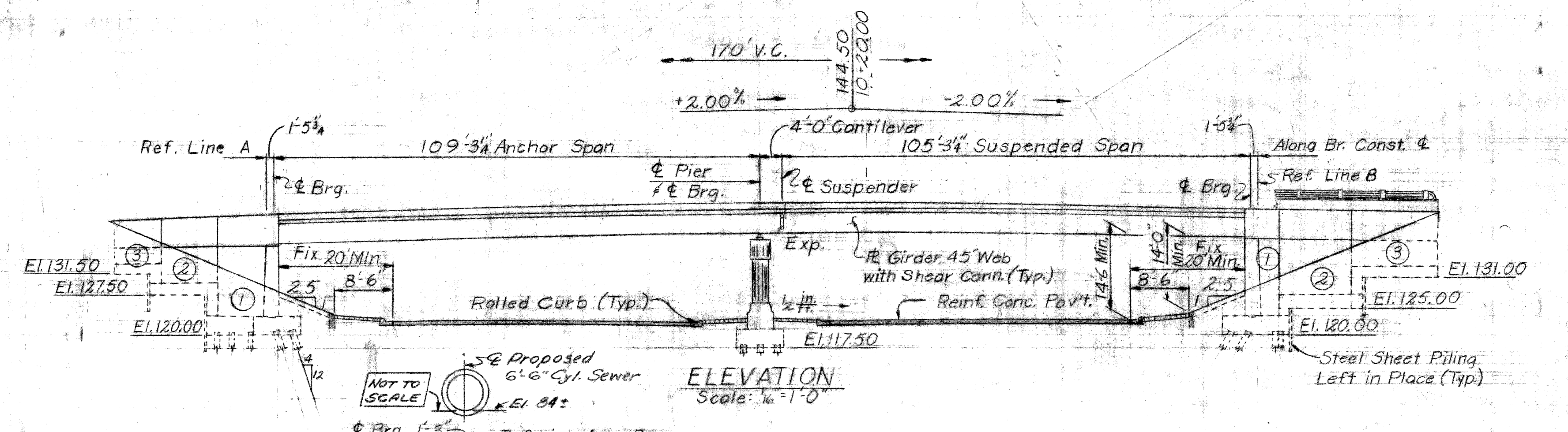


ABUTMENT AND WINGWALL DIMENSIONS

	ABUTMENT		WINGWALL AND SEGMENT									
	A	B	NE		NW		SE			SW		
T	4'-0"	4'-3"	3'-6"	2'-5"	3'-0"	2'-5"	2'-9"	2'-9"	2'-5"	3'-0"	3'-0"	2'-5"
S	3'-0"	3'-0"	2'-6"	1'-4"	2'-6"	1'-4"	2'-6"	2'-0"	1'-4"	2'-6"	2'-2"	1'-4"
H	3'-6"	3'-9"	4'-6"	2'-9"	3'-6"	4'-0"	2'-9"	3'-3"	3'-9"	2'-3"	3'-6"	2'-3"
B	10'-6"	11'-0"	10'-6"	6'-6"	9'-0"	6'-6"	8'-6"	8'-6"	8'-6"	9'-0"	9'-0"	6'-0"
Y	3'-6"	3'-6"	3'-6"	2'-0"	3'-6"	2'-6"	2'-0"	3'-6"	2'-6"	2'-0"	3'-6"	2'-0"

MISCELLANEOUS QUANTITIES

ITEM	UNIT	AMOUNT		
		Abut. A	Abut. B	Total
Lightweight Fill	Cu. Yds.	921	1133	2054
Foundation Drains	Lin. Ft.	35	35	70
Slope Protection - Class A	Sq. Yds.	84	77	161
Slope Protection - Header	Lin. Ft.	80	83	163



GENERAL NOTES

The design of this structure is based on the M.S.H.D. Specifications for the Design of Highway Bridges, 1958 Edition and current AASHTO Standard Specifications for Highway Bridges HS20-44 loading.

Live load plus impact deflection 1/1000 of span length and 1/350 of cantilever arm.

Top of roadway slab and tops of curbs are parallel to the vertical curve.

Tamped clay is incidental to unclassified excavation.

For details of Slope Protection Class A, See Standard Sheet SP2.

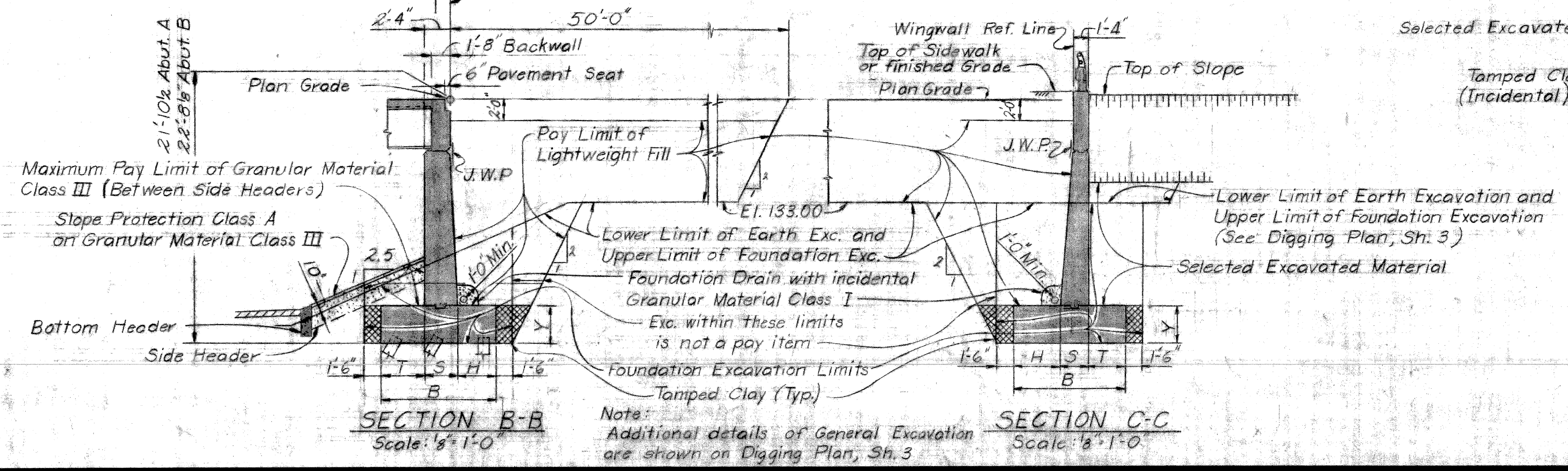
Granular Material Class I incidental to Foundation Drain.

Granular Material Class III is billed on Road Plans.

Estimated Amount is 75 cu. yds. Abutments

25 cu. yds. Slope Protection.

P.G. El. Denotes Plan Grade Elevation.



PLANS PREPARED BY
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT
GENERAL PLAN OF STRUCTURE

APPROVED: [Signature] STRUCTURAL ENGINEER REVISIONS

JOB No. PW 990(3)

NO.	DESCRIPTION	DATE	BY

APPROVED: [Signature] DESIGN SUPERVISING ENGINEER

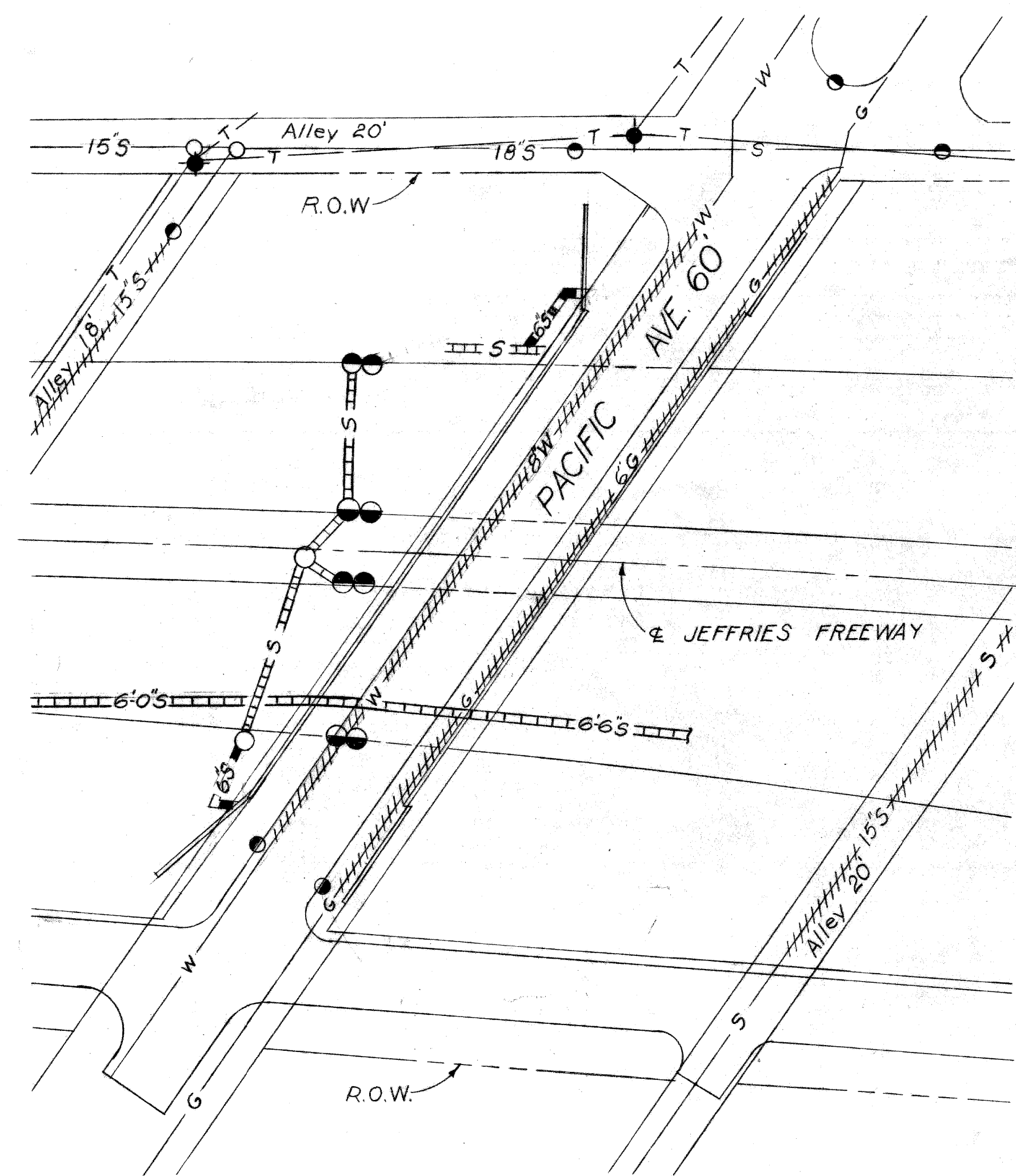
APPROVED: [Signature] ASS'T. ENGINEER OF DESIGN

CITY OF DETROIT

SQUAD BOSS	DATE
J.H.S.	3-68
J.G.	4-68
G.Z.M.	5-68

SHEET 4 OF 22

S35 of 821231



SITUATION PLAN
Scale: 1" = 40'

UTILITY	LEGEND			
	EXISTING	DELETE	NEW WORK BY OTHERS	NEW WORK BY CONTRACTOR
DETROIT WATER DEPARTMENT	— W —	### W ###	— S —	— S —
FREEWAY & CITY OF DETROIT SEWERS	— S —	### S ###	— S —	— S —
MICHIGAN CONSOLIDATED GAS CO.	— G —	### G ###		
MICHIGAN BELL TELEPHONE CO.	— T —			

PLANS PREPARED BY
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Carut*
STRUCTURAL ENGINEER

JOB No.
PW 990(3)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT

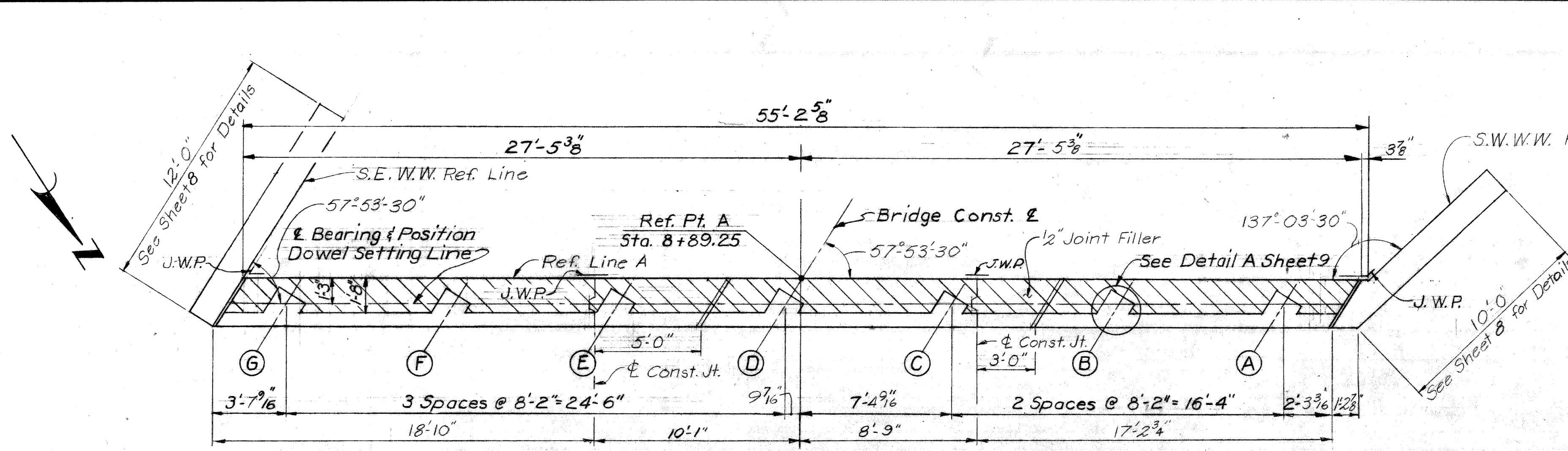
EXISTING UTILITIES AND
PROPOSED ALTERATIONS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

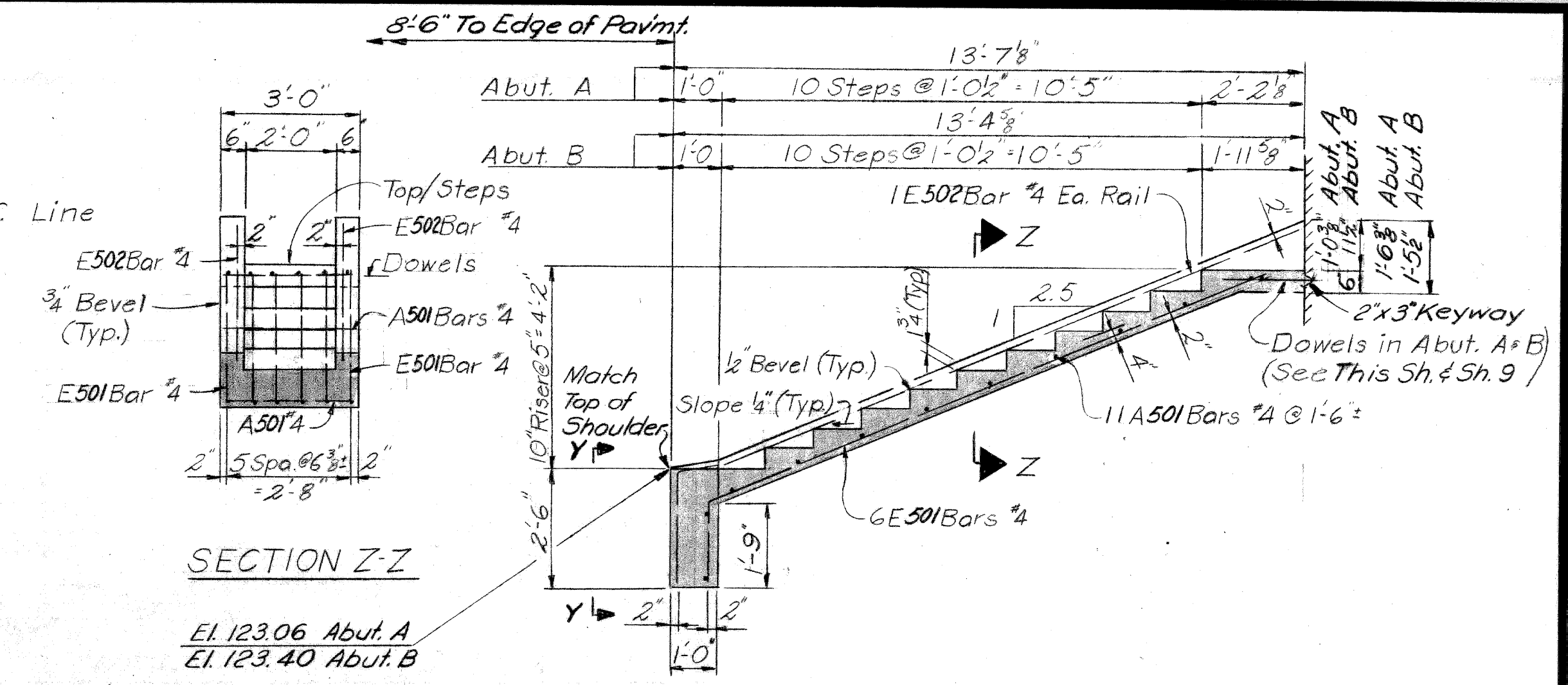
SQUAD BOSS	STUBAN	5-68
DRAWN BY	Hopkins	3-68
CHECKED BY	J. H. K.	5-68
SHEET	5	OF 22

CITY OF DETROIT

S35 of 82123J

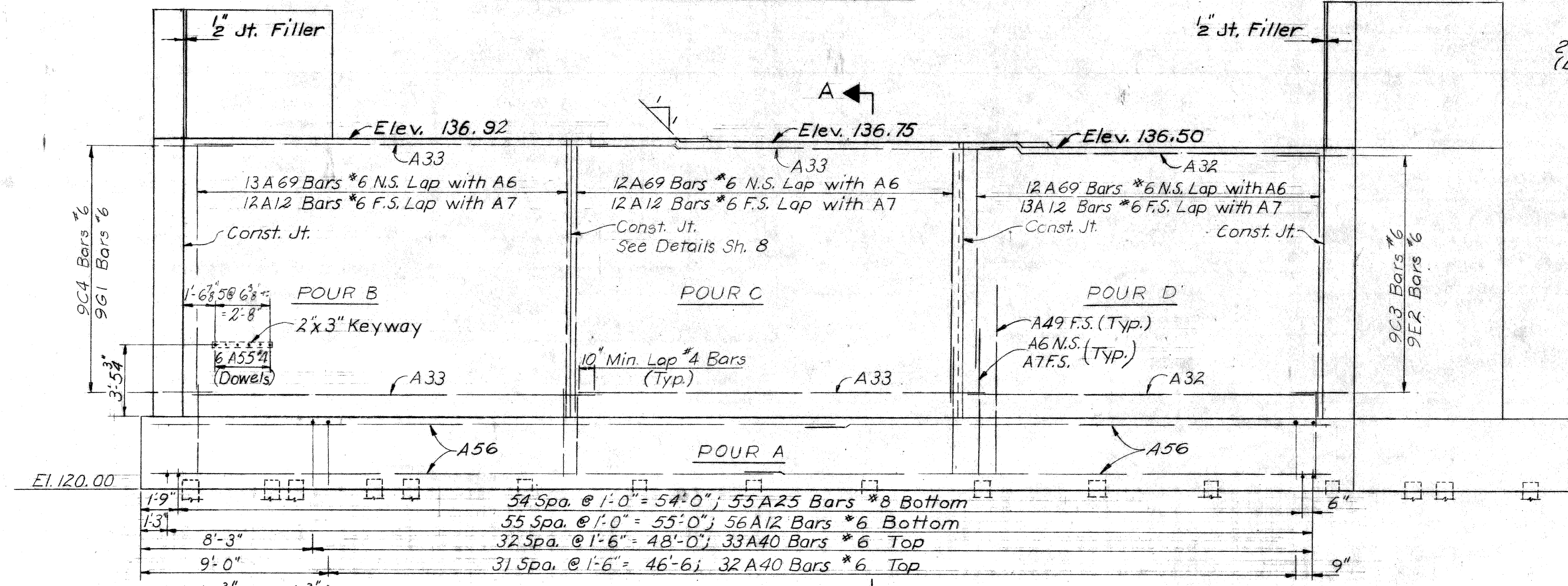


PLAN OF TOP - ABUTMENT A

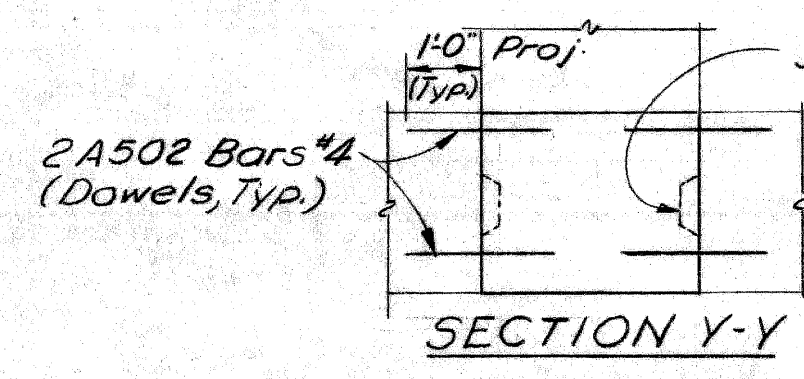


SECTION Z-Z

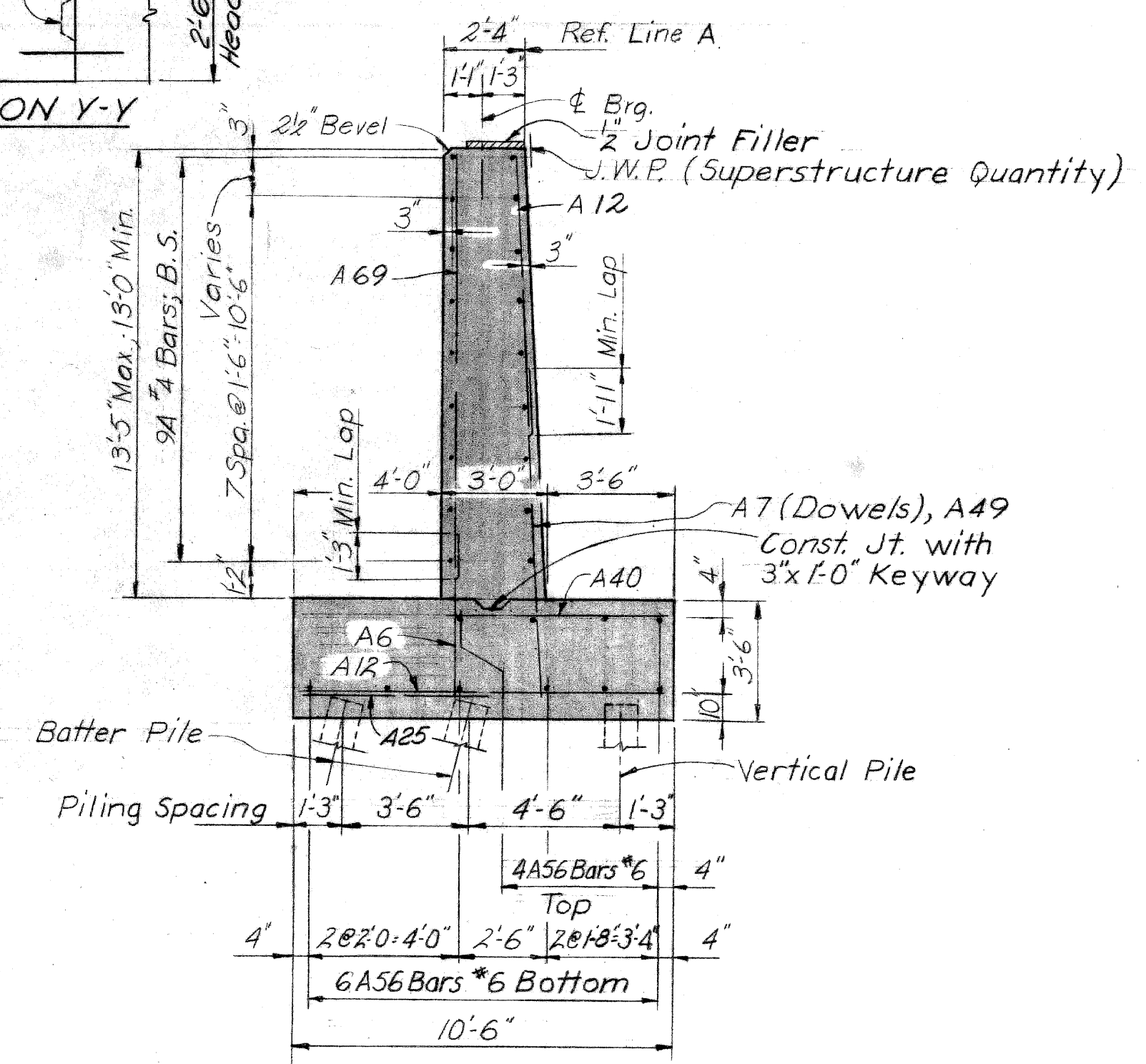
CONCRETE STEP DETAILS



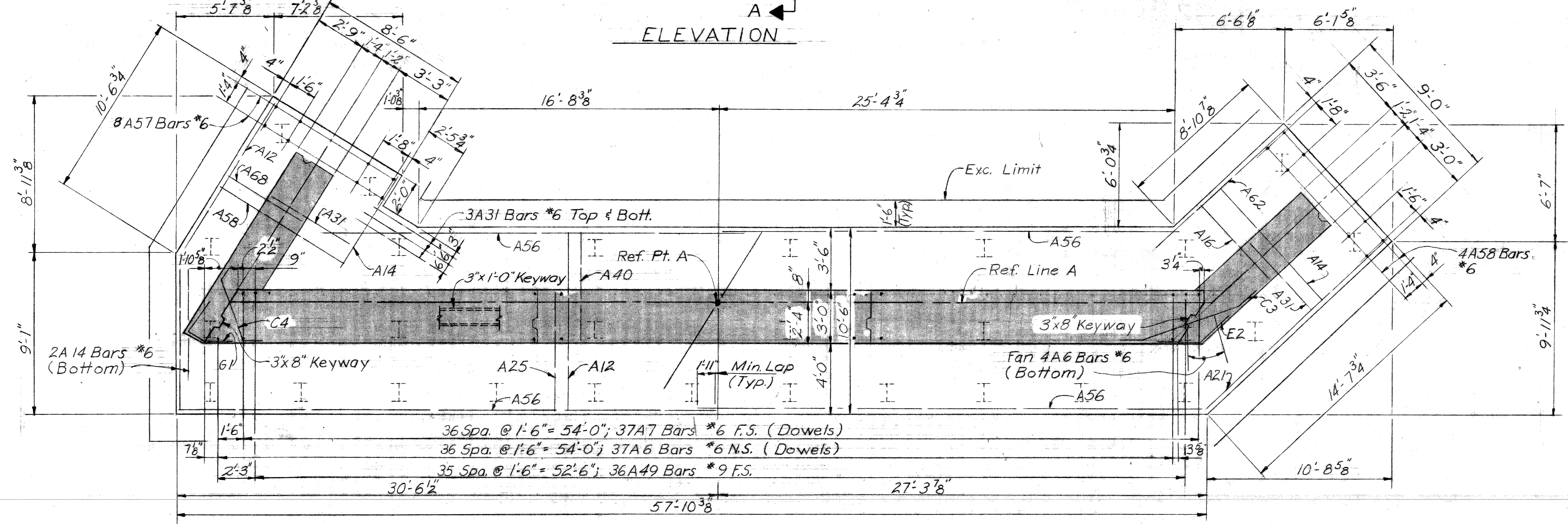
ELEVATION



SECTION Y-Y



SECTION A-A



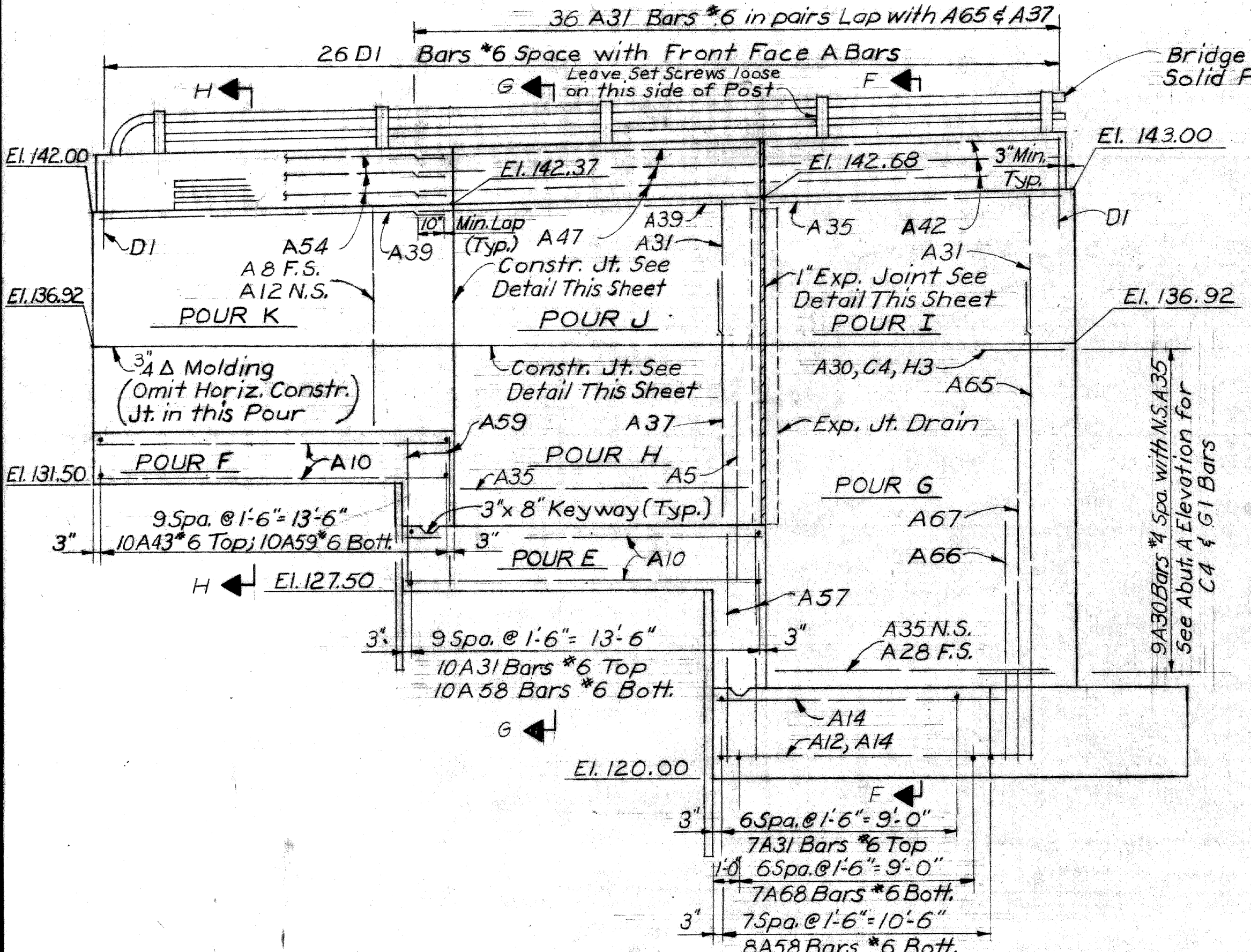
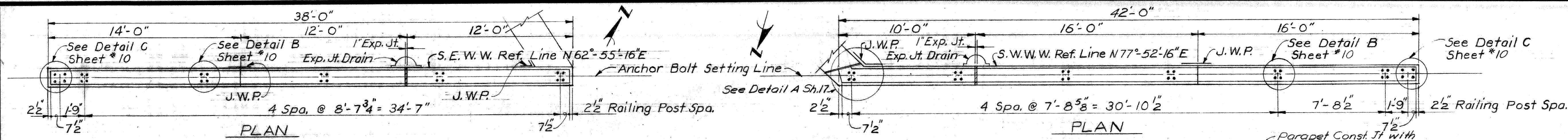
FOUNDATION PLAN

Work sheets 7-11 together
 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(3)

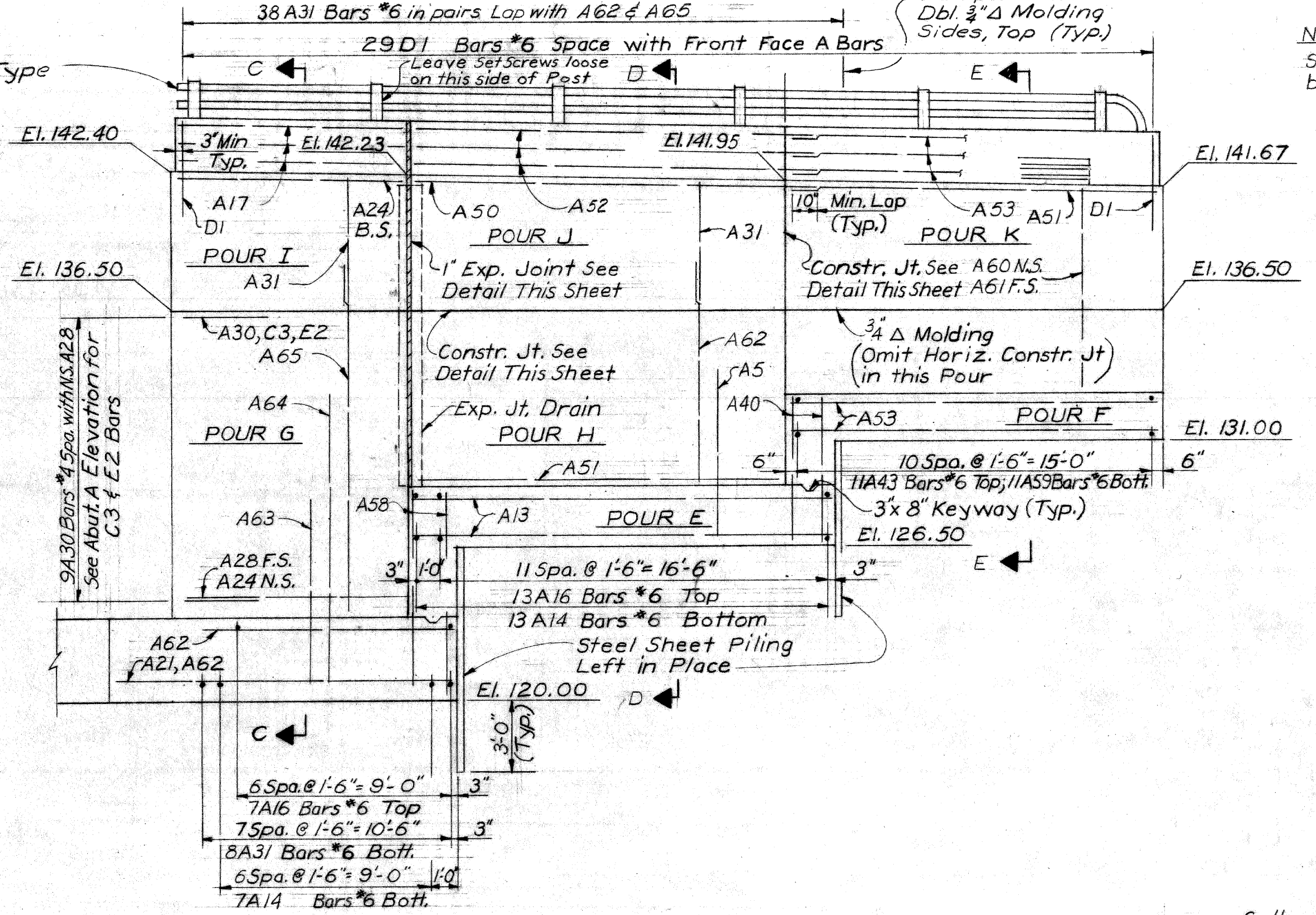
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT
ABUTMENT A DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

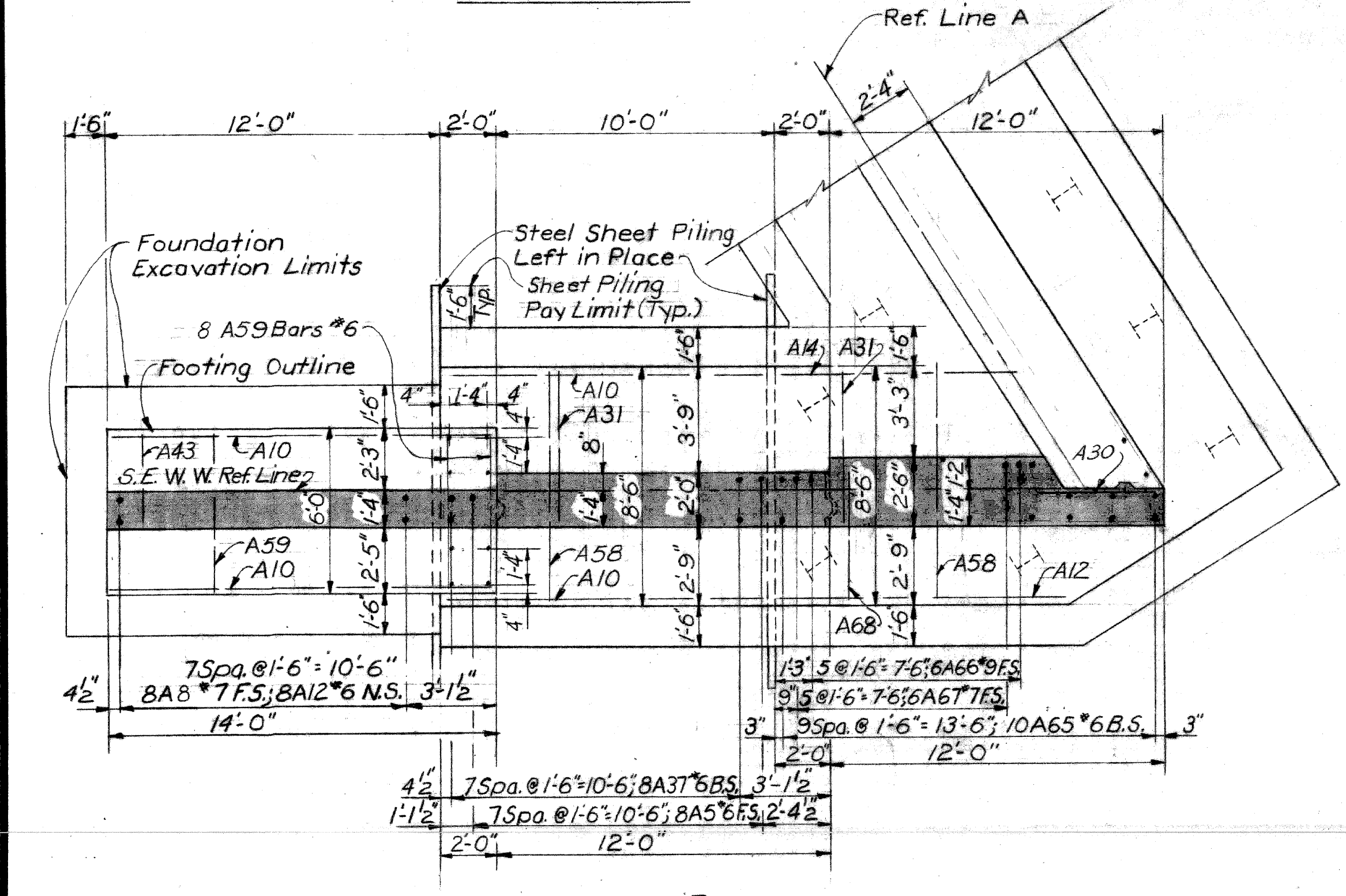
CITY OF DETROIT
 SQUAD BOSS: [Signature] 3-69
 DRAWN BY: [Signature] 1-69
 TRACED BY: [Signature] 2-69
 CHECKED BY: [Signature]
 SHEET 7 OF 22
 S35 of 82123J



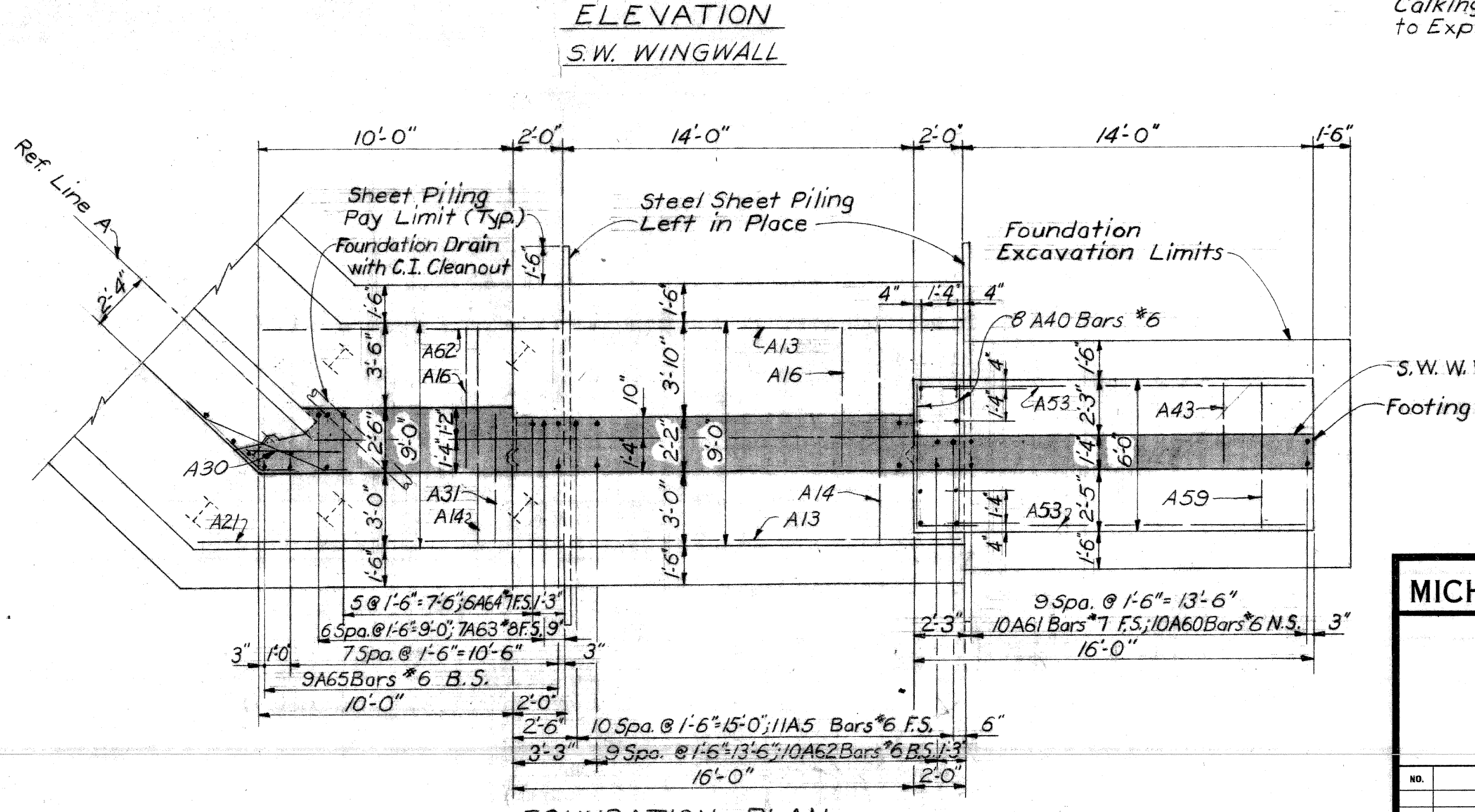
ELEVATION
S.E. WINGWALL



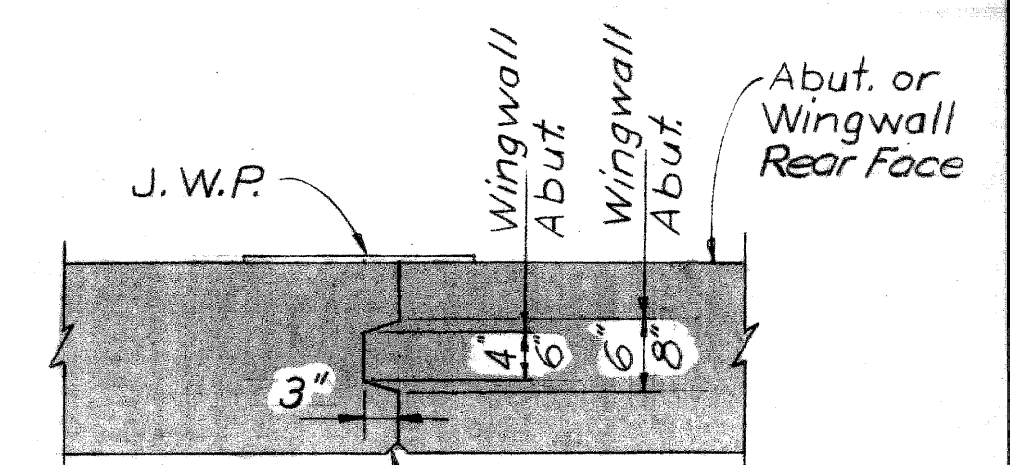
ELEVATION
S.W. WINGWALL



FOUNDATION PLAN



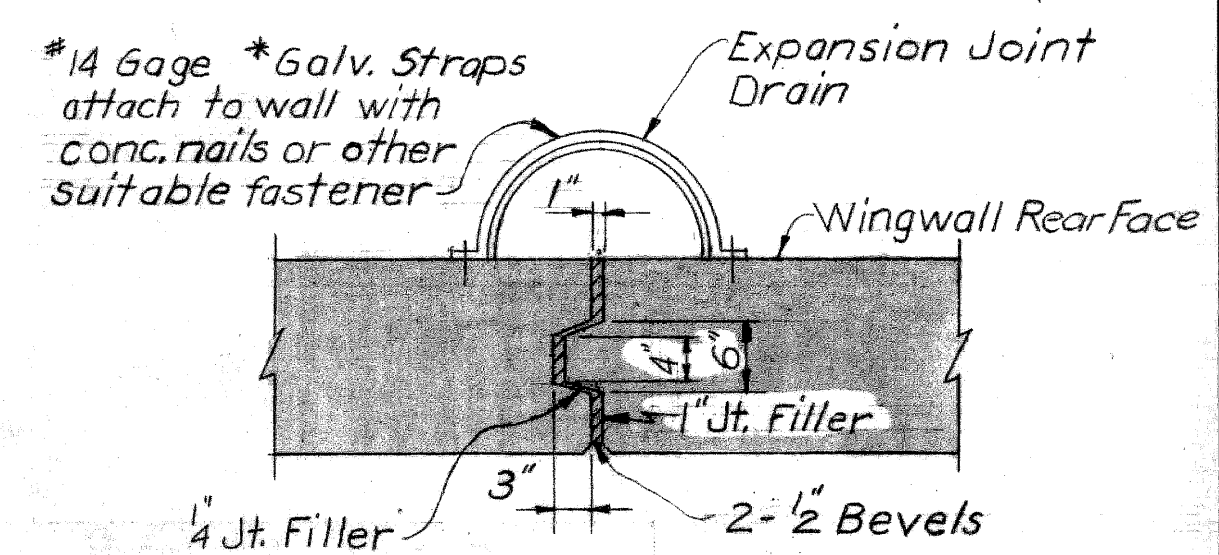
FOUNDATION PLAN



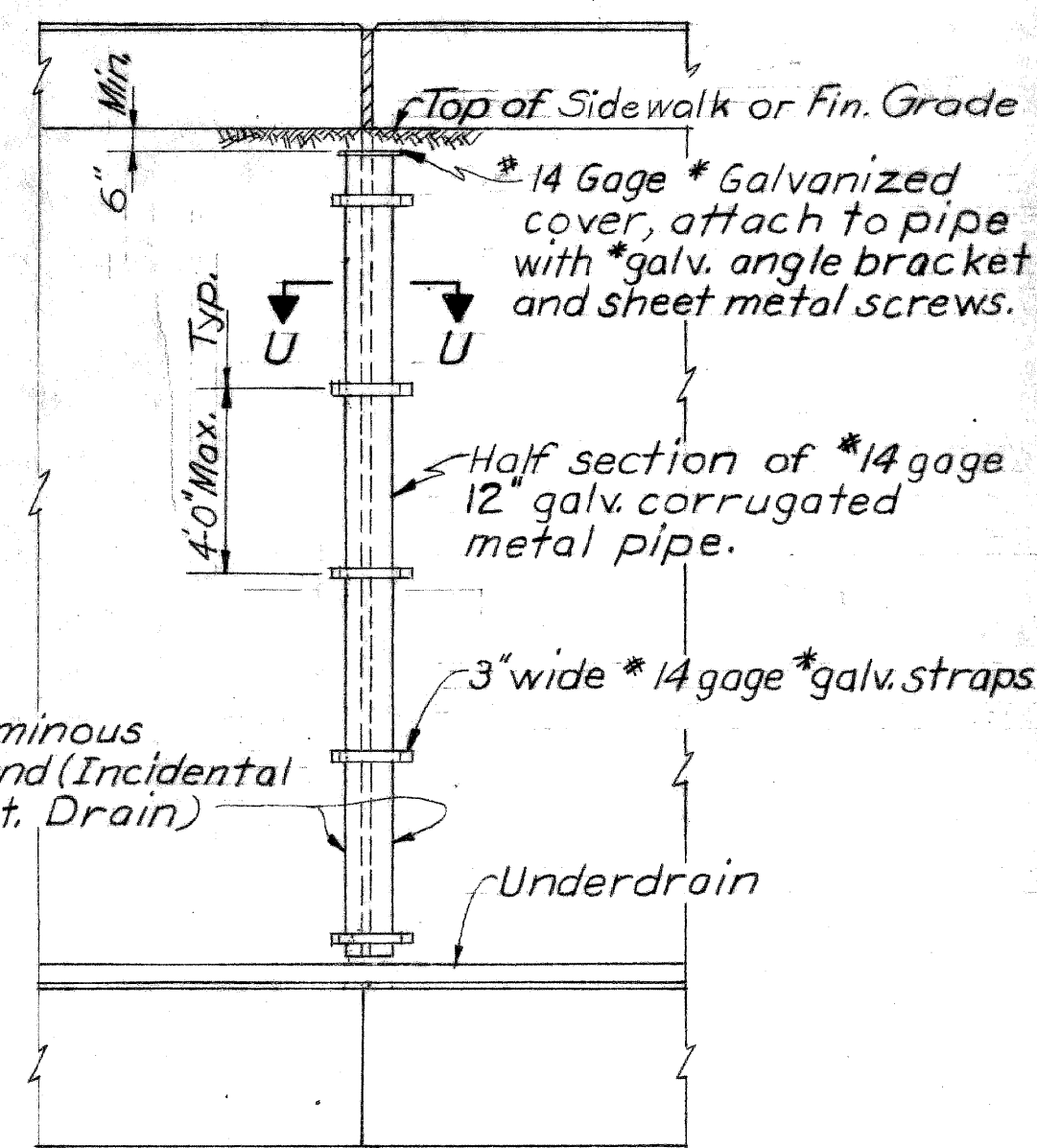
NOTE

Stop vertical keyways 1'-0" below top of wingwalls

CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL AND SECTION U-U



EXPANSION JOINT DRAIN

Work Sheets 7-11 Together
PLANS PREPARED BY
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CITY ENGINEERS OFFICE
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APPROVED: [Signature] STRUCTURAL ENGINEER
JOB No. PW 990(3)

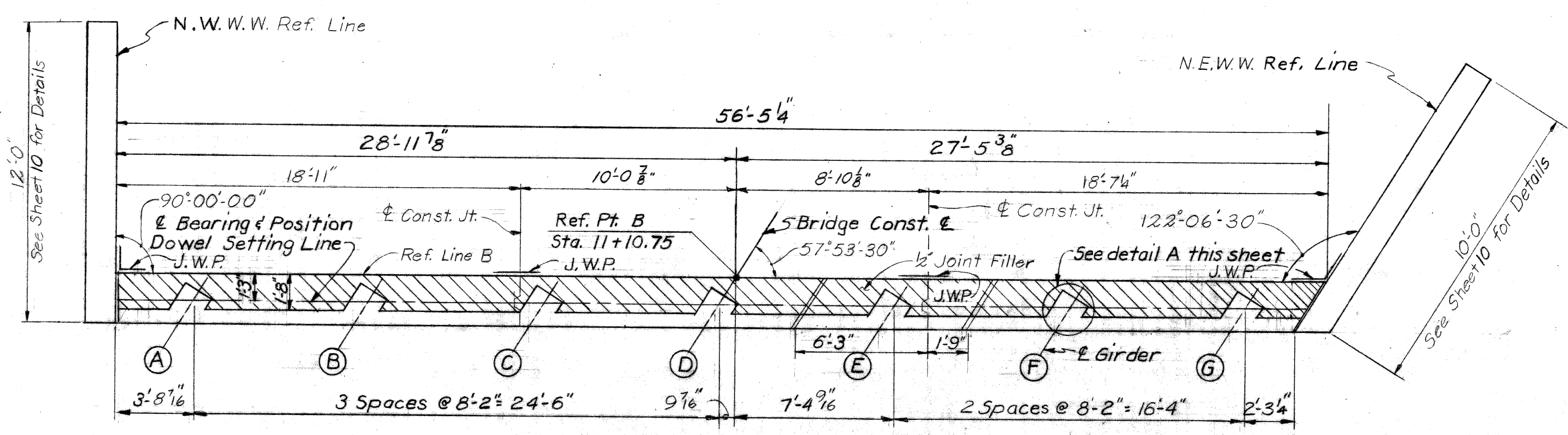
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT
ABUTMENT A DETAILS

NO.	DESCRIPTION	DATE	BY

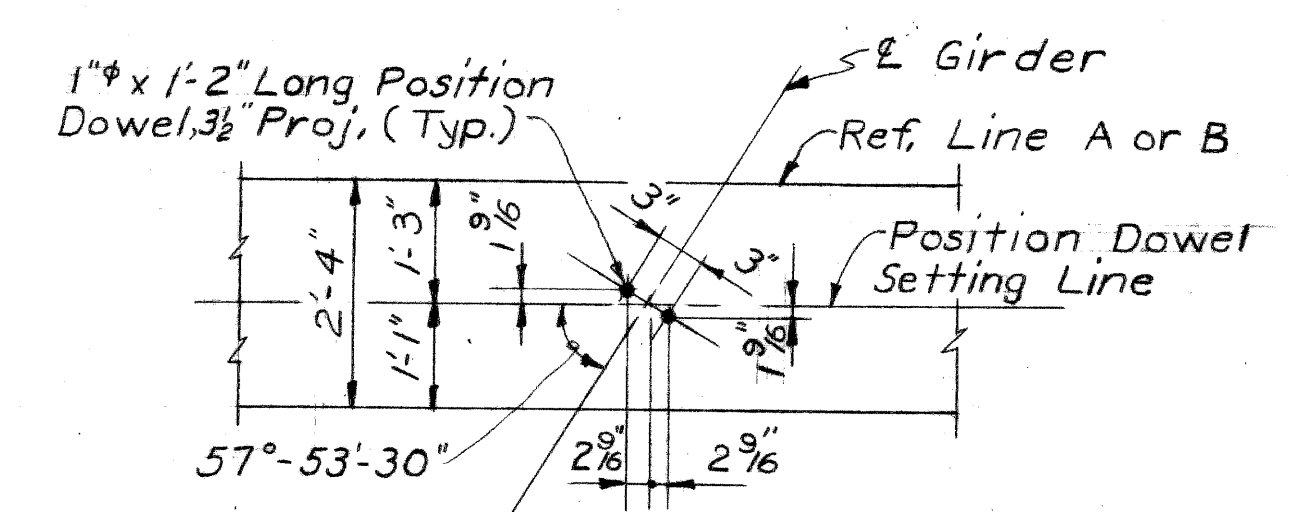
REVISIONS

SQUAD BOSS: STUBBINS 369
DRAWN BY: T. Baker 1-69
TRACED BY: C.O. 2-69
CHECKED BY: I.H.S. 3-69
SHEET 8 OF 22

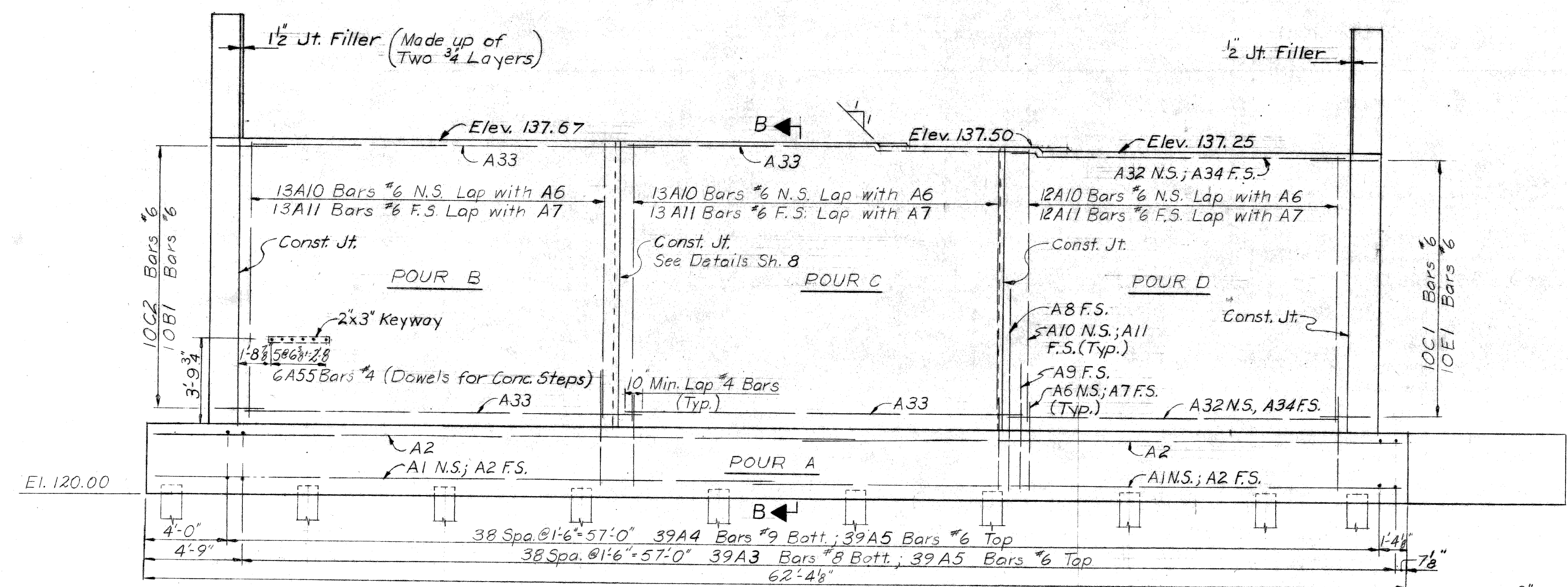
S35 of 82123J



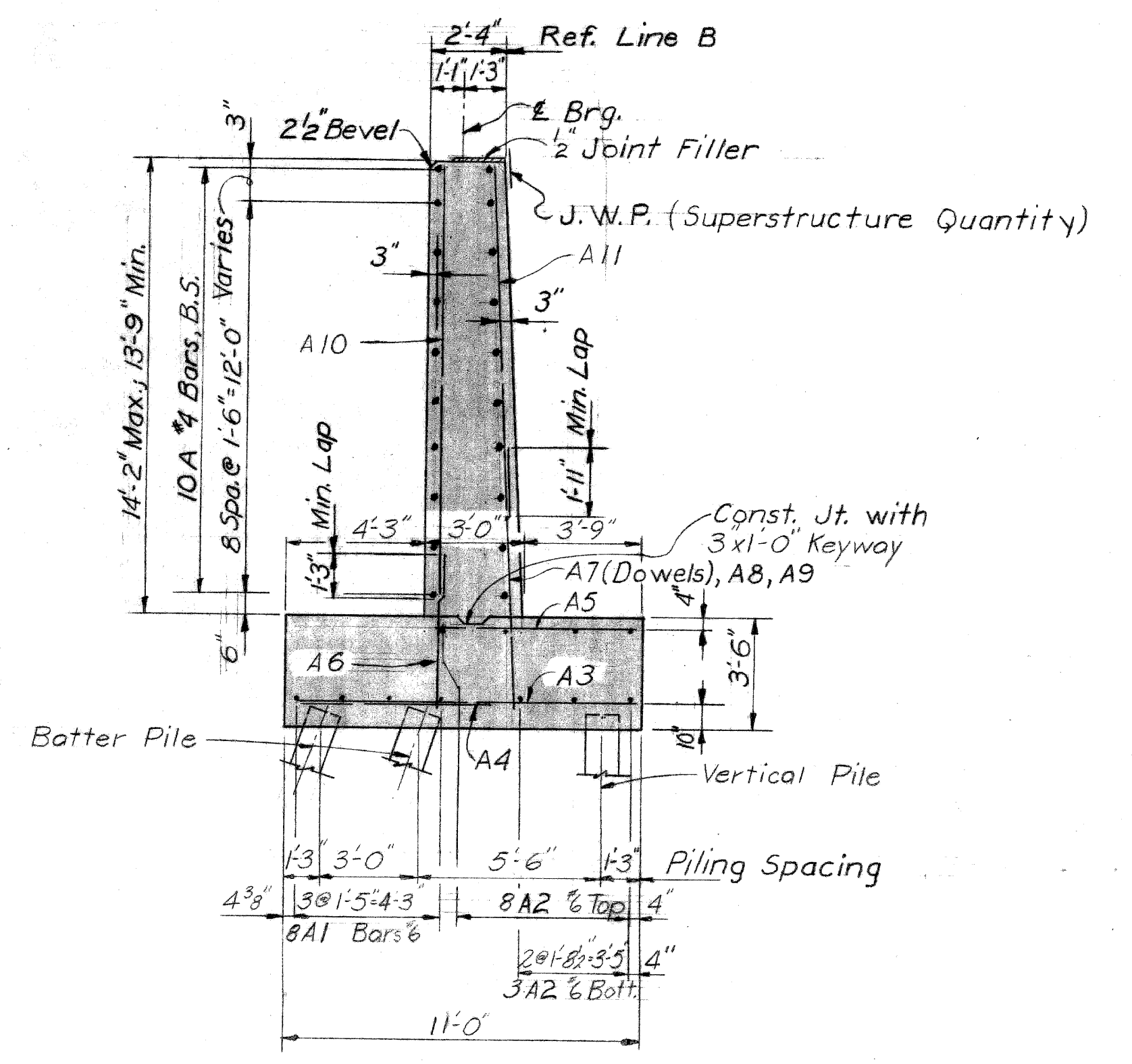
PLAN OF TOP - ABUTMENT B



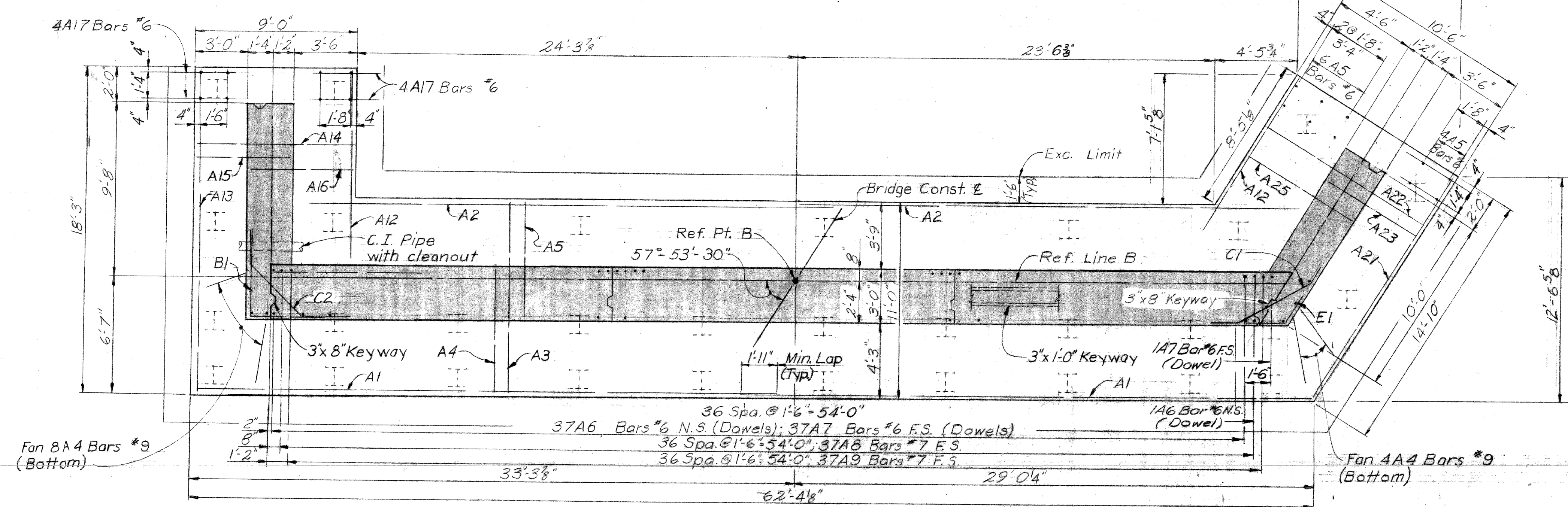
DETAIL A



ELEVATION



SECTION B-B



FOUNDATION PLAN

Work Sheets 7-11 together

PLANS PREPARED BY
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APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No.
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MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT

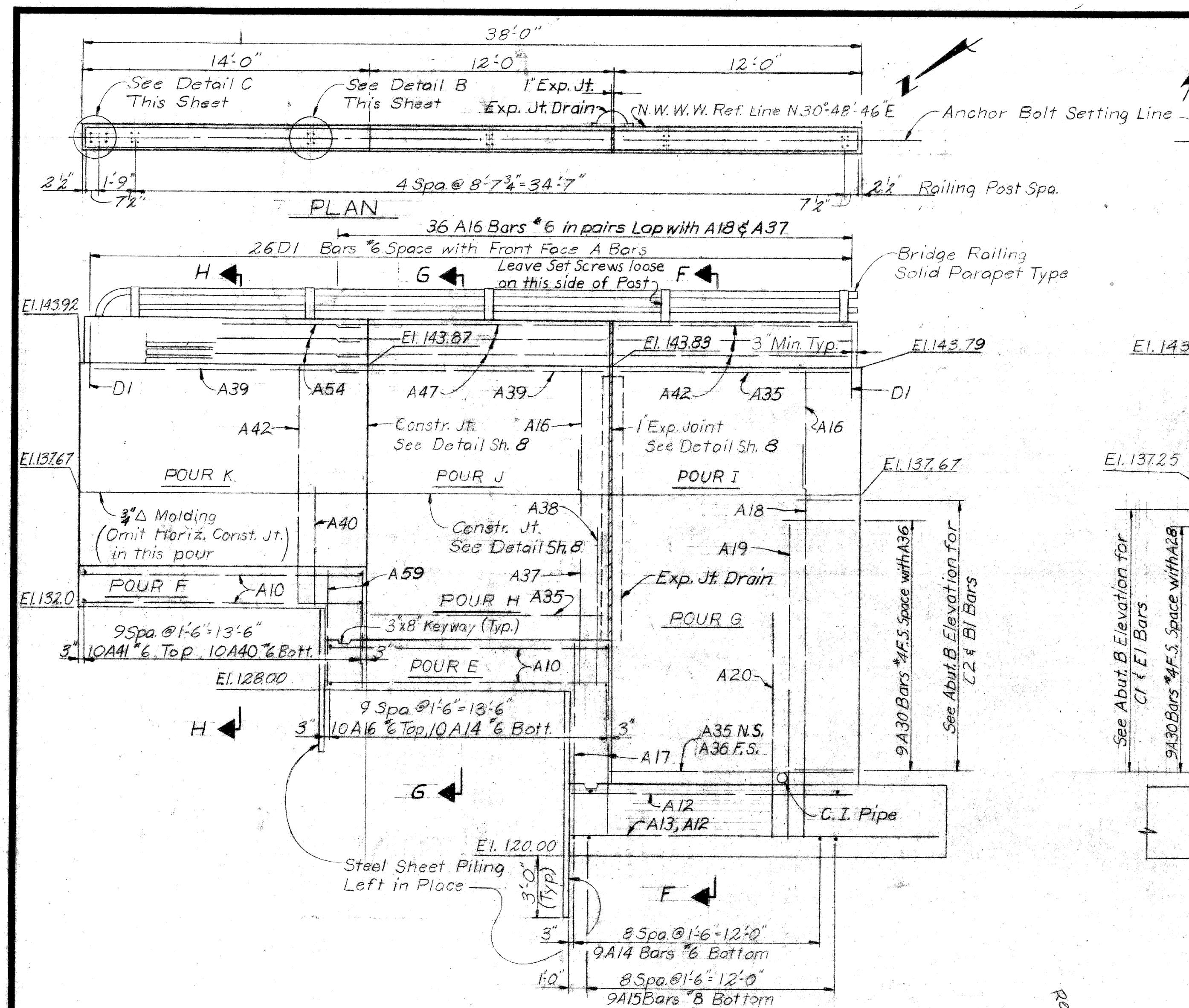
ABUTMENT B DETAILS

REVISIONS

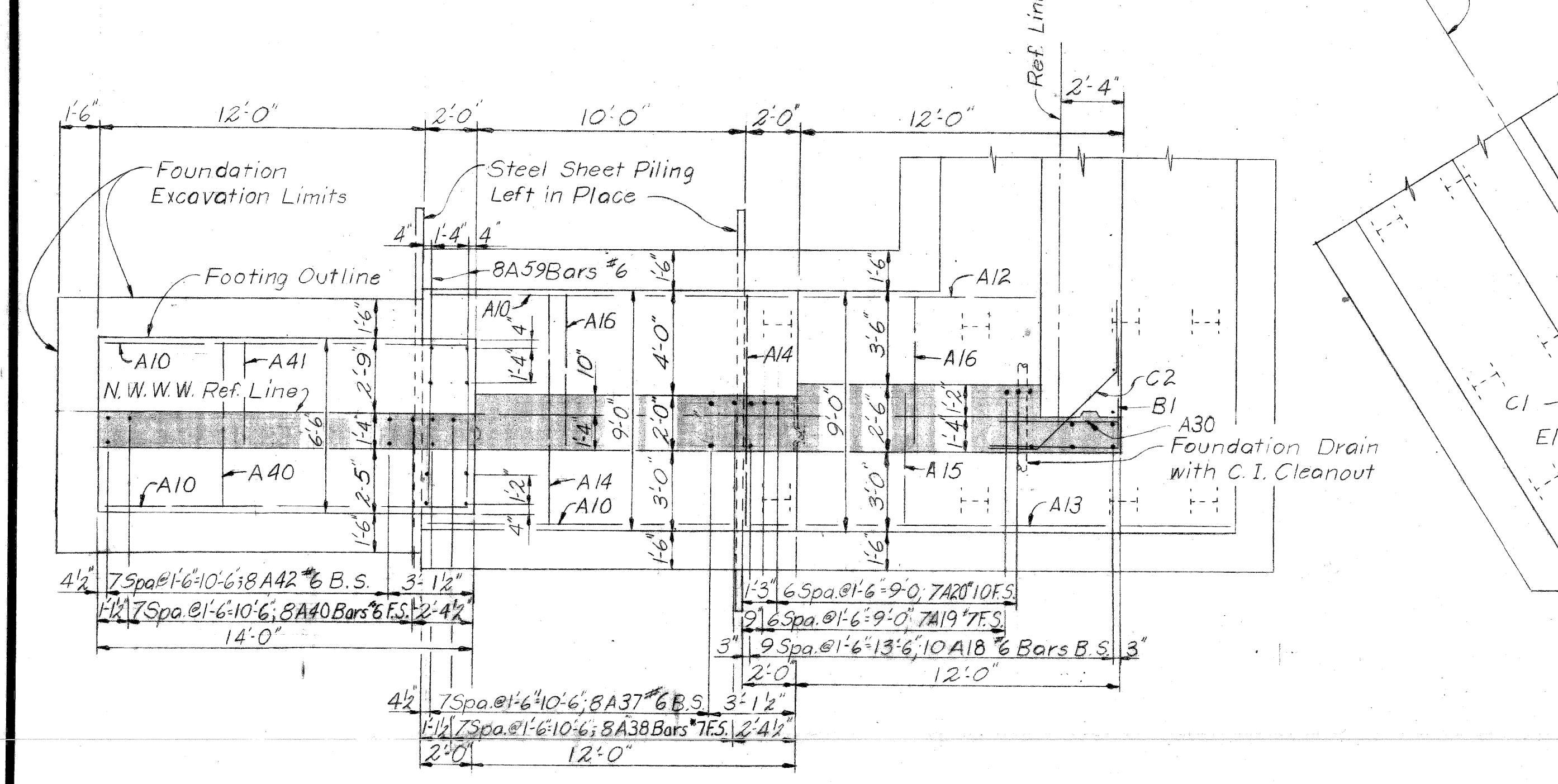
NO.	DESCRIPTION	DATE	BY

NO. 9 OF 22

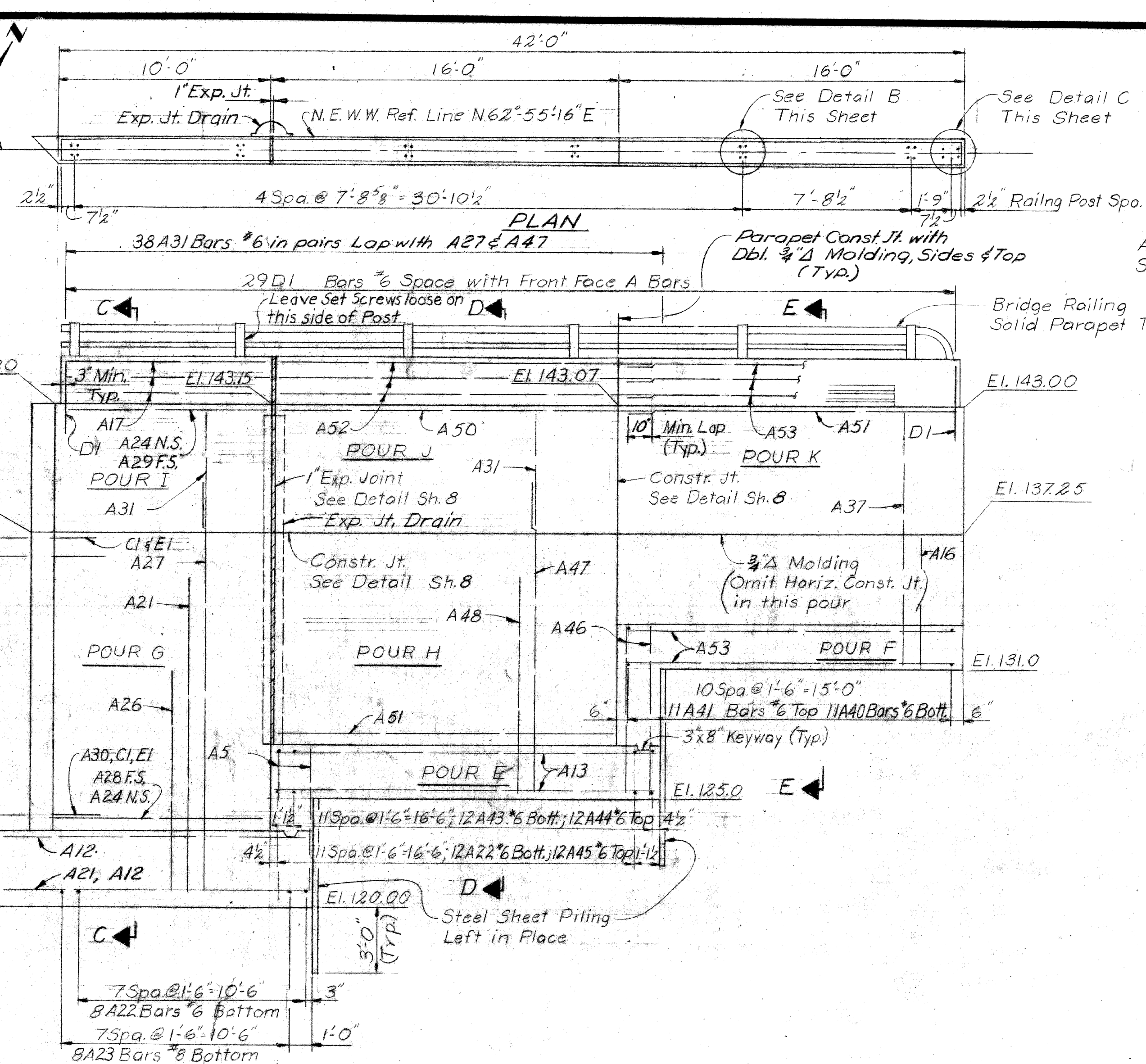
S35 of 82123J



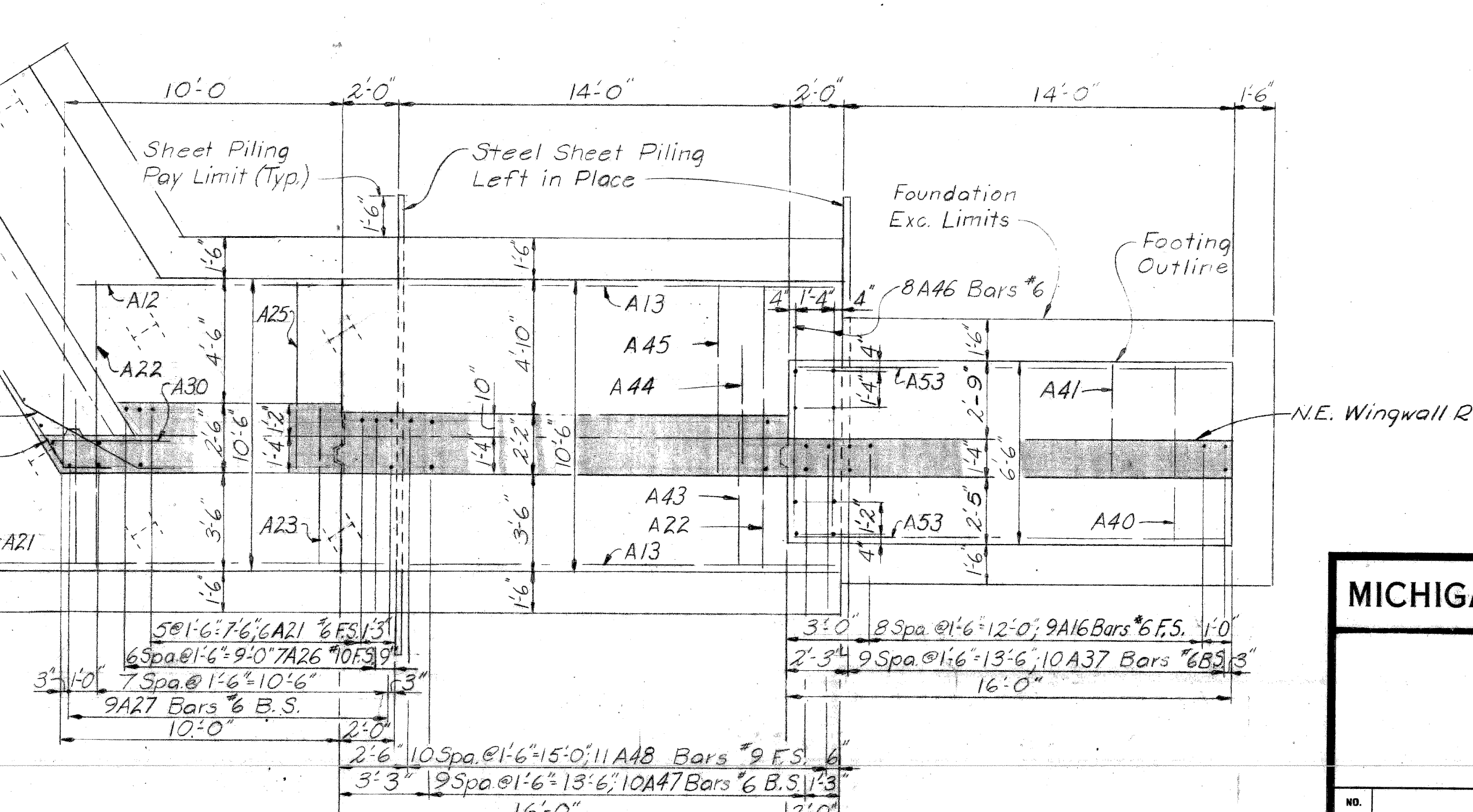
ELEVATION
N.W. WINGWALL



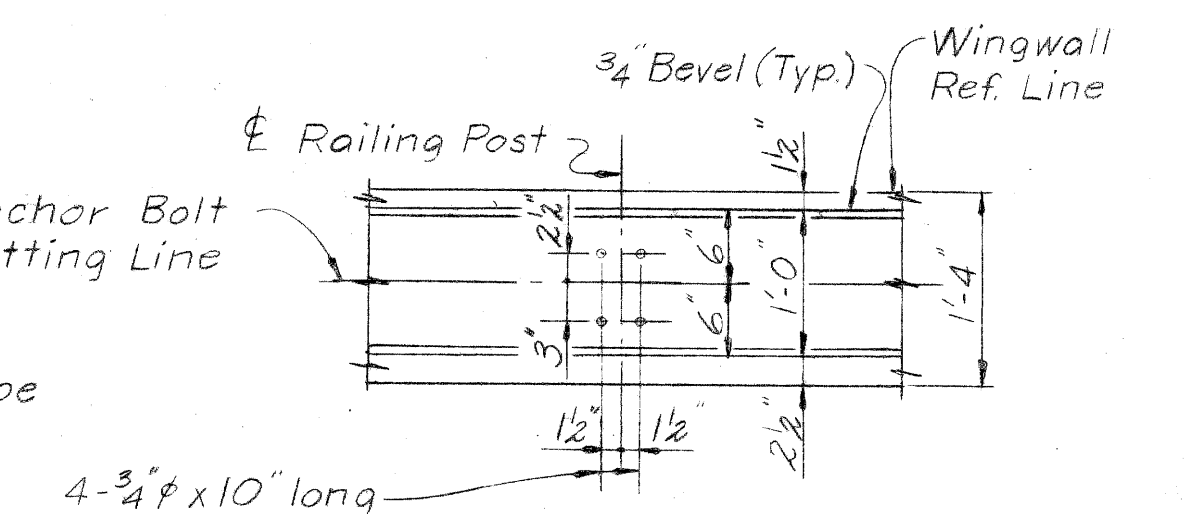
FOUNDATION PLAN



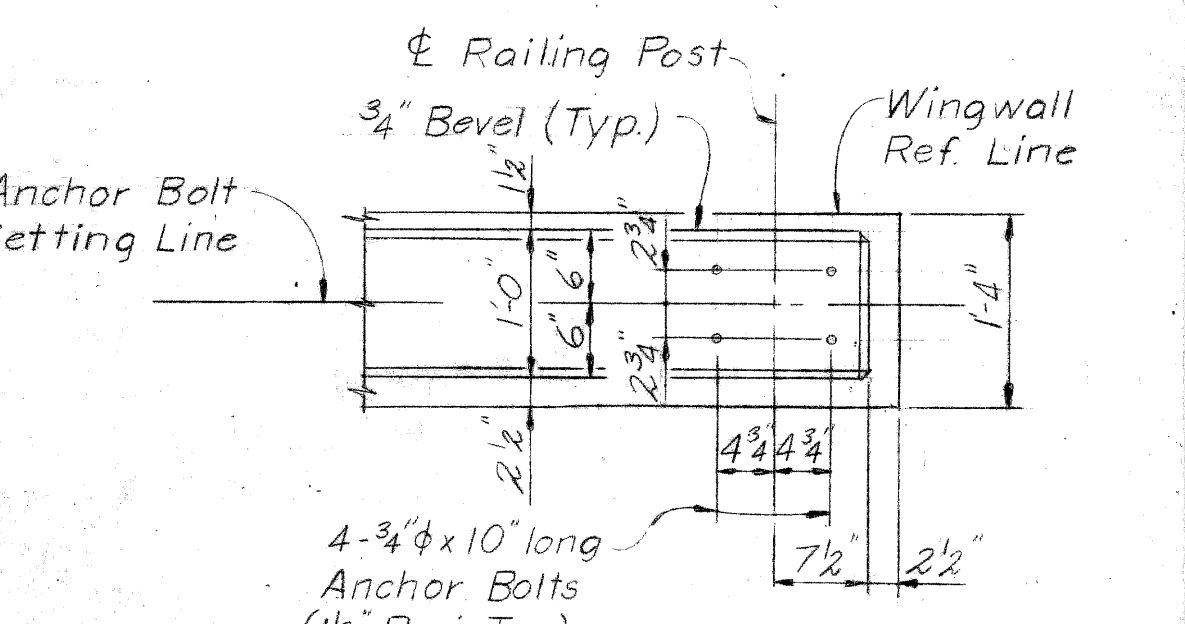
ELEVATION
N.E. WINGWALL



FOUNDATION PLAN



DETAIL B



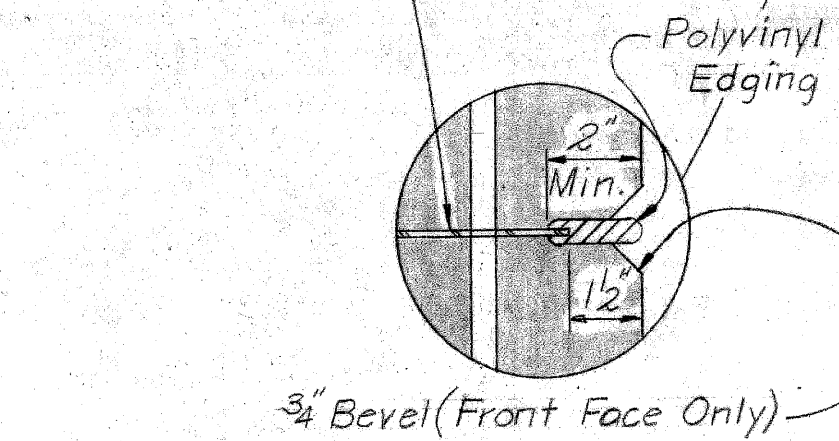
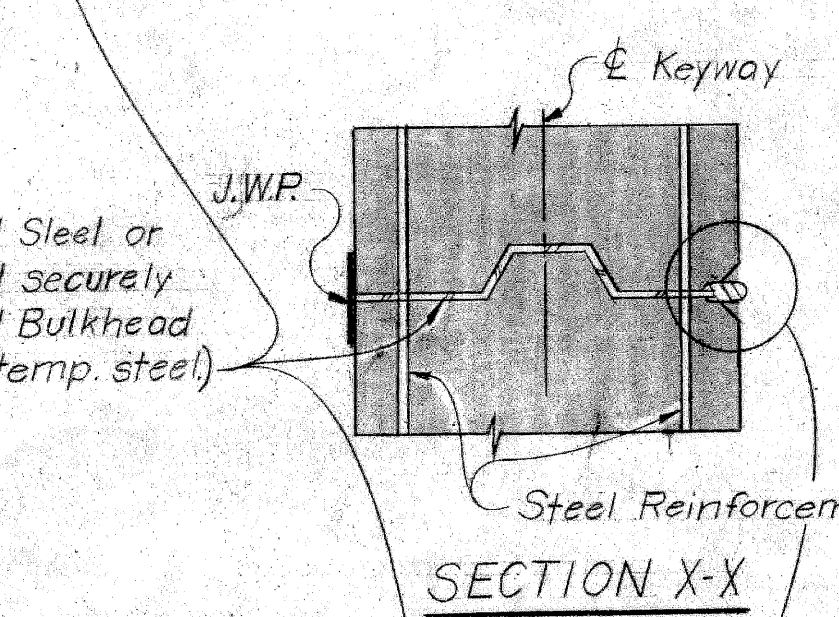
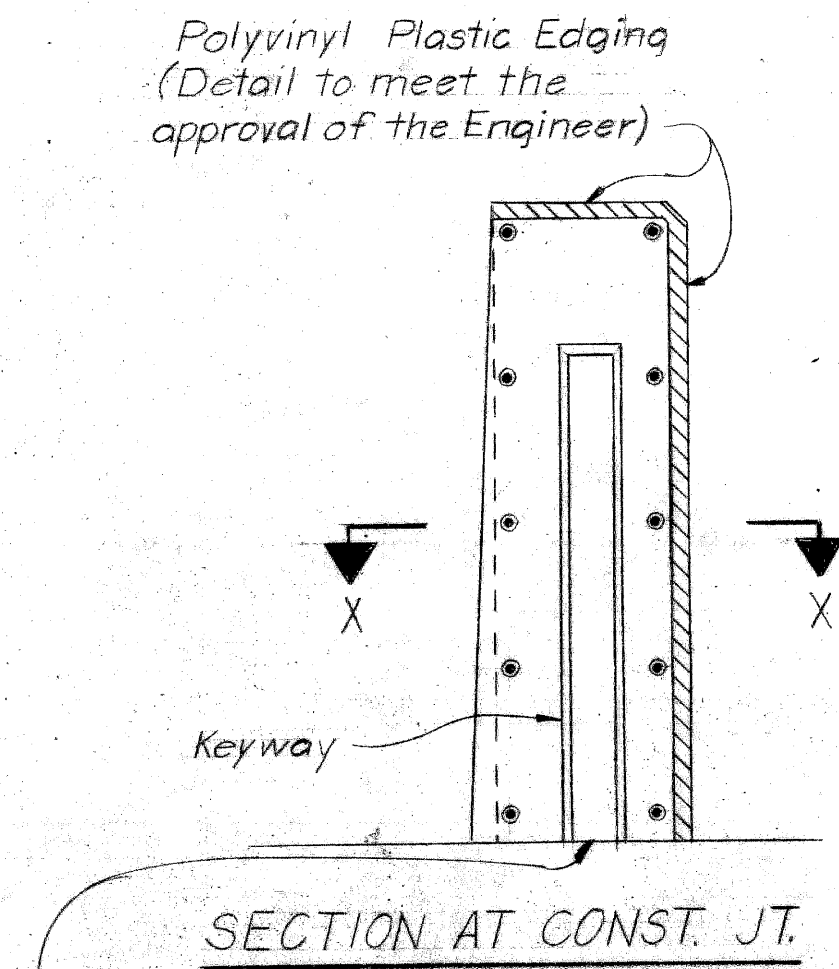
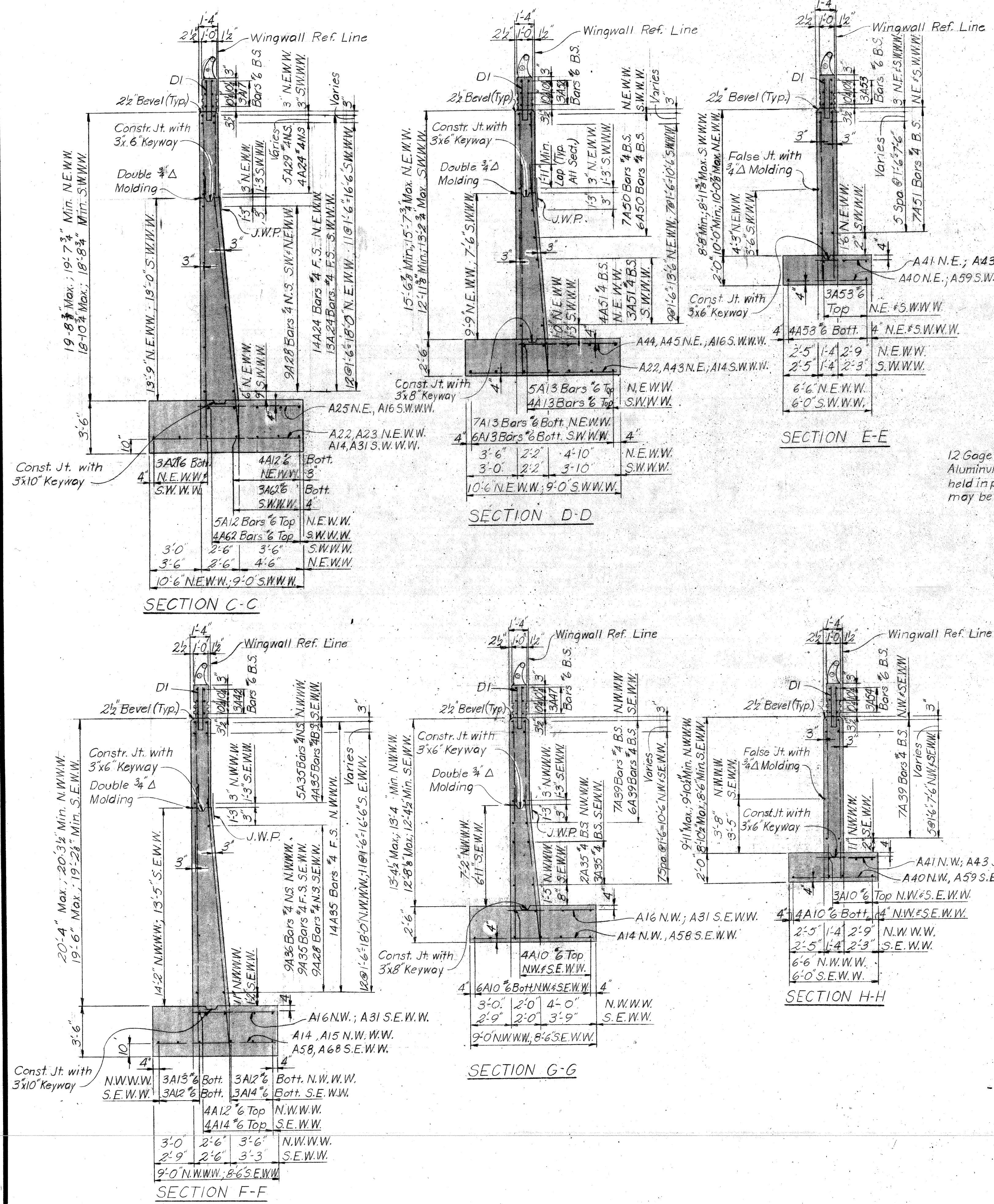
DETAIL C

Work sheets 7-11 together
 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(3)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT
ABUTMENT B DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 DRAWN BY: *S. J. M. 8-69*
 TRACED BY: *L. B. J. 2-69*
 CHECKED BY: *I. H. S. 3-69*
 SHEET 10 OF 22
\$35 of 82123J



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.

CONCRETE QUANTITIES (Cu. Yds)					
Pour	Location	Abutment A		Abutment B	
		A(6A)	A(6AA)	A(6A)	A(6AA)
A	Footing	98.8		1099	
B	Abut. Wall		24.0		26.5
C	Abut. Wall		24.7		26.4
D	Abut. Wall		23.1		24.2
E	Footing (S.E. & N.W.W.W.)	13.7		14.9	
F	Footing (S.W. & N.E.W.W.)	17.2		18.9	
F	Footing (S.E. & N.W.W.W.)	6.9		7.5	
F	Footing (S.W. & N.E.W.W.)	8.0		9.4	
G	Wingwall (S.E. & N.W.)		10.5		11.2
G	Wingwall (S.W. & N.E.)		8.7		9.0
H	Wingwall (S.E. & N.W.)		5.1		5.3
H	Wingwall (S.W. & N.E.)		7.7		10.1
I	Wingwall (S.E. & N.W.)		3.5		3.6
I	Wingwall (S.W. & N.E.)		2.9		3.0
J	Wingwall (S.E. & N.W.)		3.3		3.6
J	Wingwall (S.W. & N.E.)		4.4		4.6
K	Wingwall (S.E. & N.W.)		6.0		6.8
K	Wingwall (S.W. & N.E.)		7.0		7.9
Total		144.6	130.9	160.6	142.2
Grade A(6A) Concrete-Substructure		305.2 Cu. Yds.			
Grade A(6AA) Concrete-Substructure		273.1 Cu. Yds.			

Parapet Concrete - 12.8 Cu. Yds. Grade A(6AA)
Part of Bridge Railing-Solid Parapet Type and not a par item.

MISCELLANEOUS QUANTITIES				
Item	Unit	Amount		
		Abut. A	Abut. B	Total
Unclassified Excavation	Cu. Yds.	411	156	567
Steel Sheet Piling (L.I.P.)	Sq. Ft.	509	551	1060
Clear Protective Coating for Substr. Concrete	Sq. Yds.	89	95	184
Low Temp. Protection-Substr. Conc.	Cu. Yds.	276	303	579
1/2" Joint Filler	Sq. Ft.	104	93	197
3/4" Joint Filler	Sq. Ft.		21	21
1" Joint Filler	Sq. Ft.	41	46	87
Joint Waterproofing	Sq. Ft.	175	183	358
Expansion Joint Drain	Each	2	2	4
Bridge Railing-Solid Parapet Type	Lin. Ft.	77.9	77.9	155.8
Foundation Drains*	Lin. Ft.	151	153	304
Conc. Steps	Each	1	1	2

* Foundation Drains shall be perforated pipe, sloped 1/8" min. continuous per the length of the Abutment and Wingwall Footings, and placed as shown on the General Plan of Structure.

GENERAL NOTES:
J.W.P. denotes Joint Waterproofing; N.S. denotes Near Side; F.S. denotes Far Side; B.S. denotes Both Sides.
For bevel and molding details, see Standard Sheet R16.
Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.
Adjust the spacing of the reinforcing steel as required to permit placing of position dowels and foundation drains.
For pile quantities, pile layout, and notes pertaining to piles see sheet 6.
Footing concrete quantities are computed on the basis of an outline 3/4" outside of the footing outline where the concrete is poured against Steel Sheet Piling Left in Place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.
Steel sheet piling left in place 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. Ladle analysis and mill reports are not required for steel used in Sheet Piling.
Steel Sheet Piling Left in place shall be driven to its final Penetration before adjacent concrete is poured. If it is necessary to lower the top of sheeting after the concrete has been poured the excess shall be removed by cutting.
The bridge seat and front face of abutments above tops of footings between wingwall returns shall be given an application of Clear Protective Coating for Substructure Concrete.
Bridge Railing is to be aluminum tubular railing on solid concrete parapet. See Railing Std. Sh. R16.

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

APPROVED: *H. Carst*
STRUCTURAL ENGINEER

JOB No.
PW 990(3)

Work Sheets 7-11 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT
ABUTMENT DETAILS

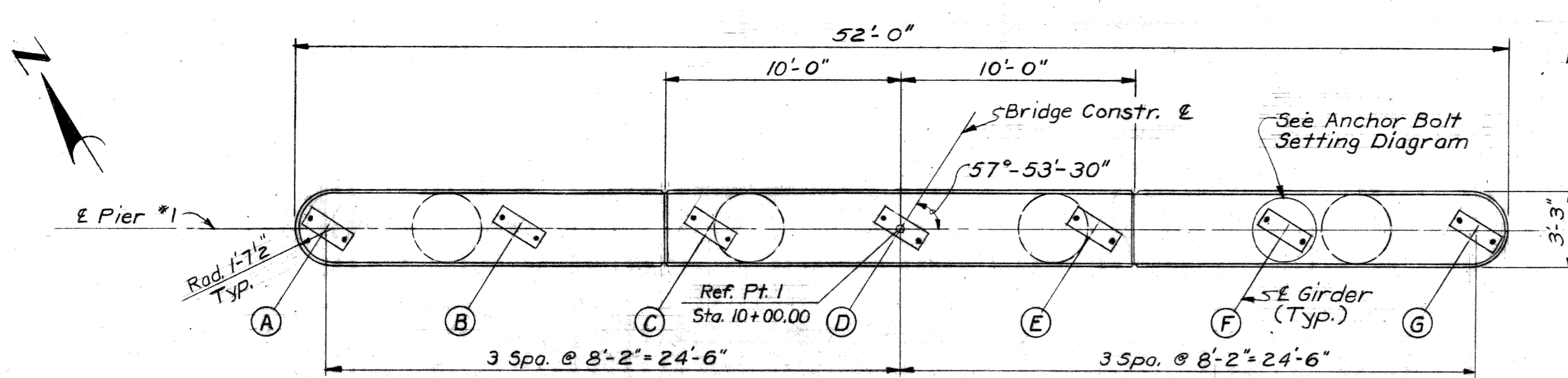
REVISIONS

NO.	DESCRIPTION	DATE	BY

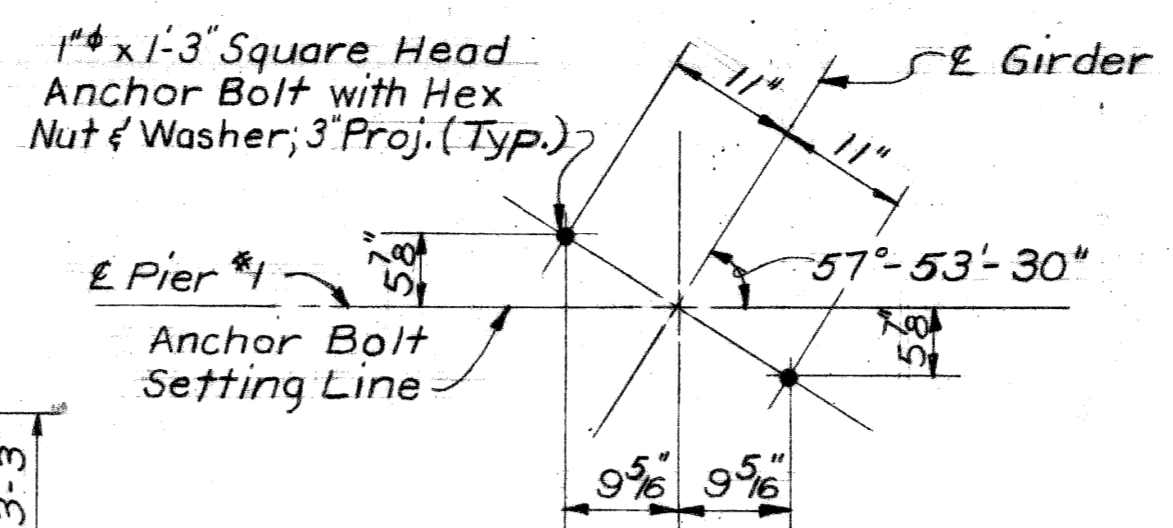
CHIEF OF DETROIT

SQUAD BOSS	STURM	2-69
DRAWN BY	T. Baker	2-69
TRACED BY	C.S.	2-69
CHECKED BY	J.H.S.	3-69
SHEET	11	22

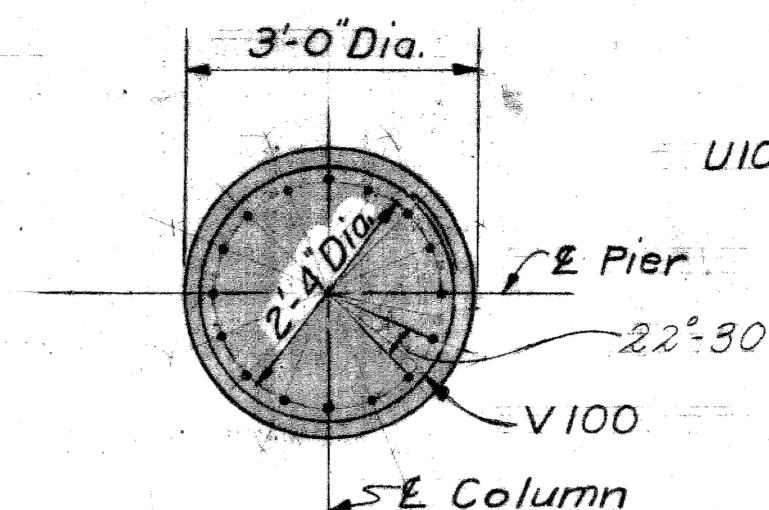
S35 of 82123J



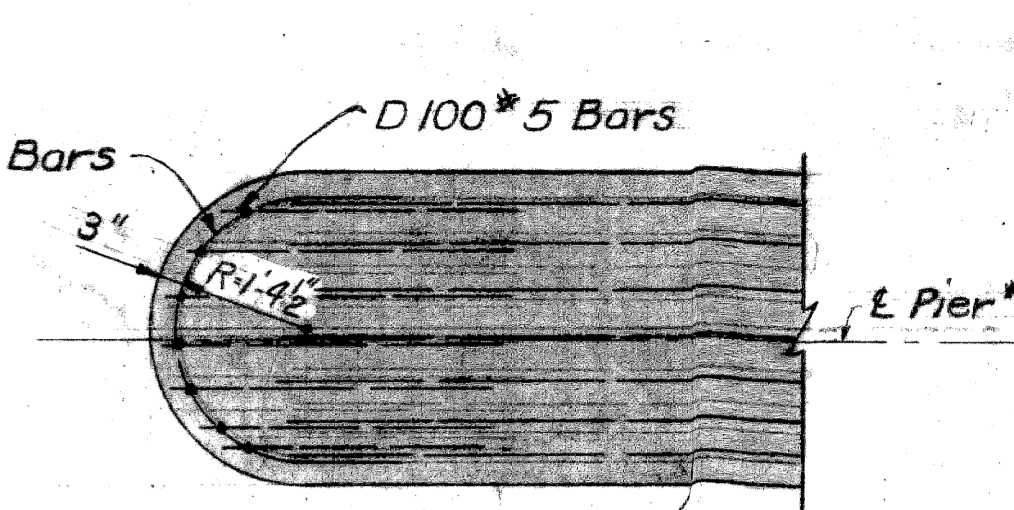
PLAN OF TOP



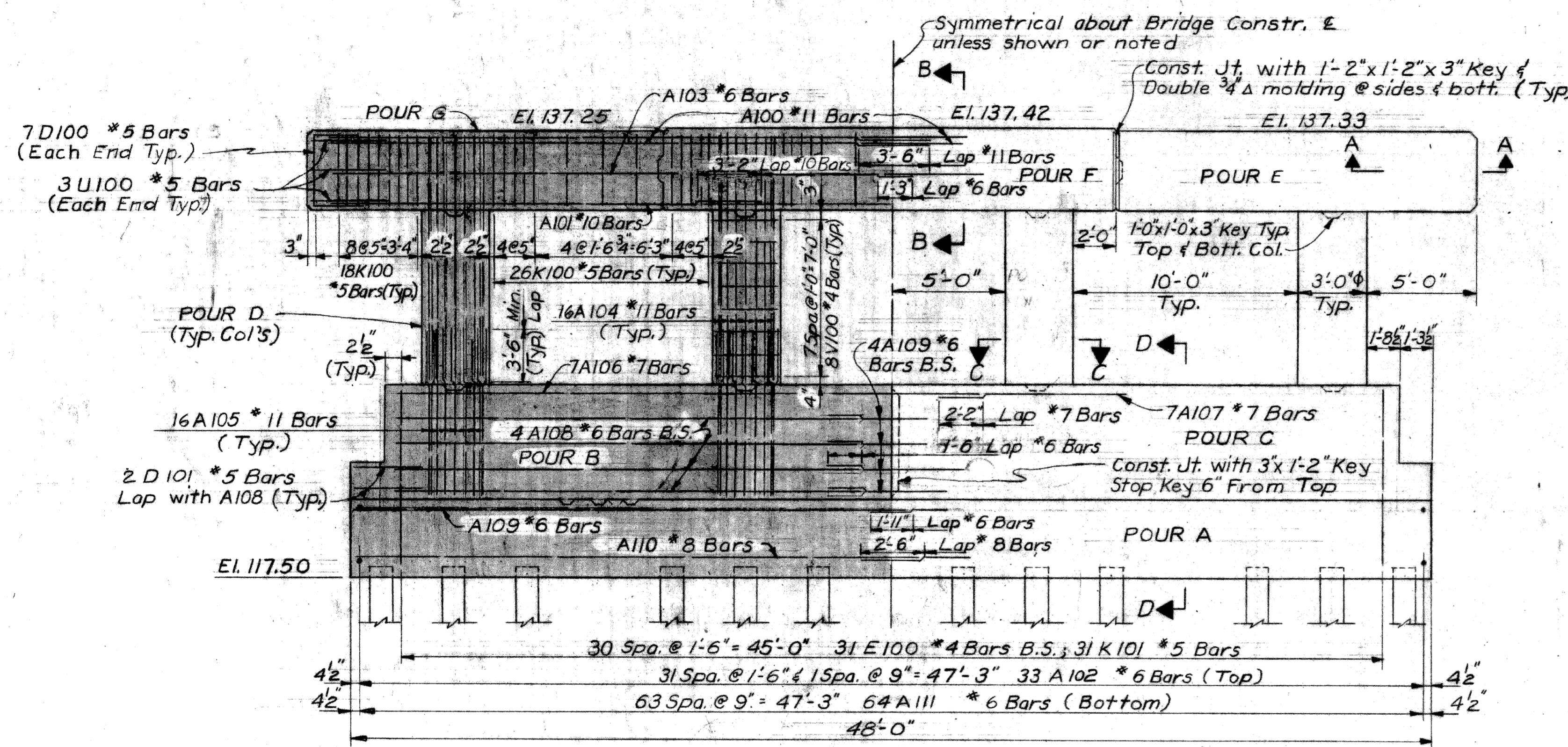
ANCHOR BOLT SETTING DIAGRAM PIER #1



SECTION C-C

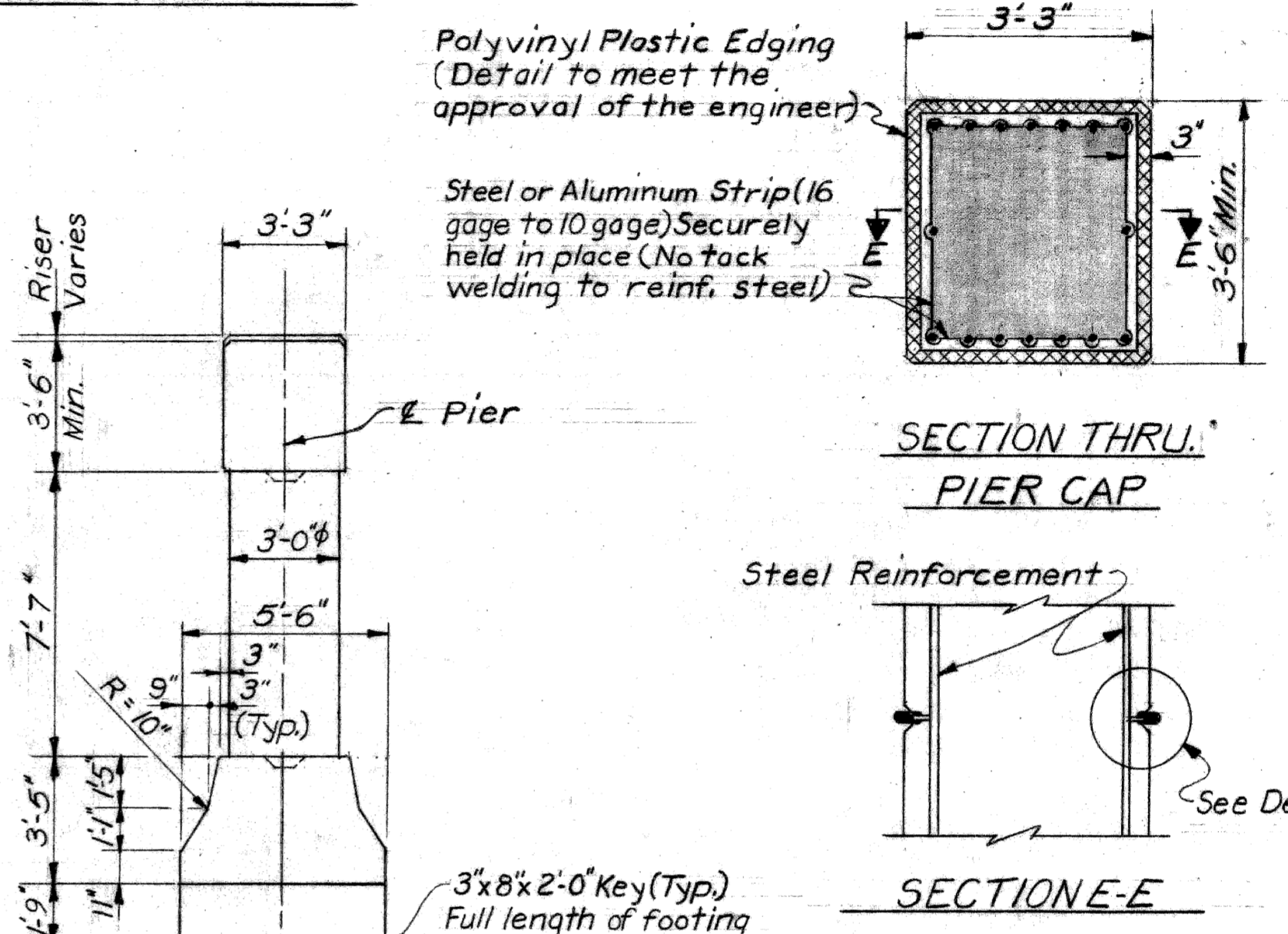


SECTION A-A



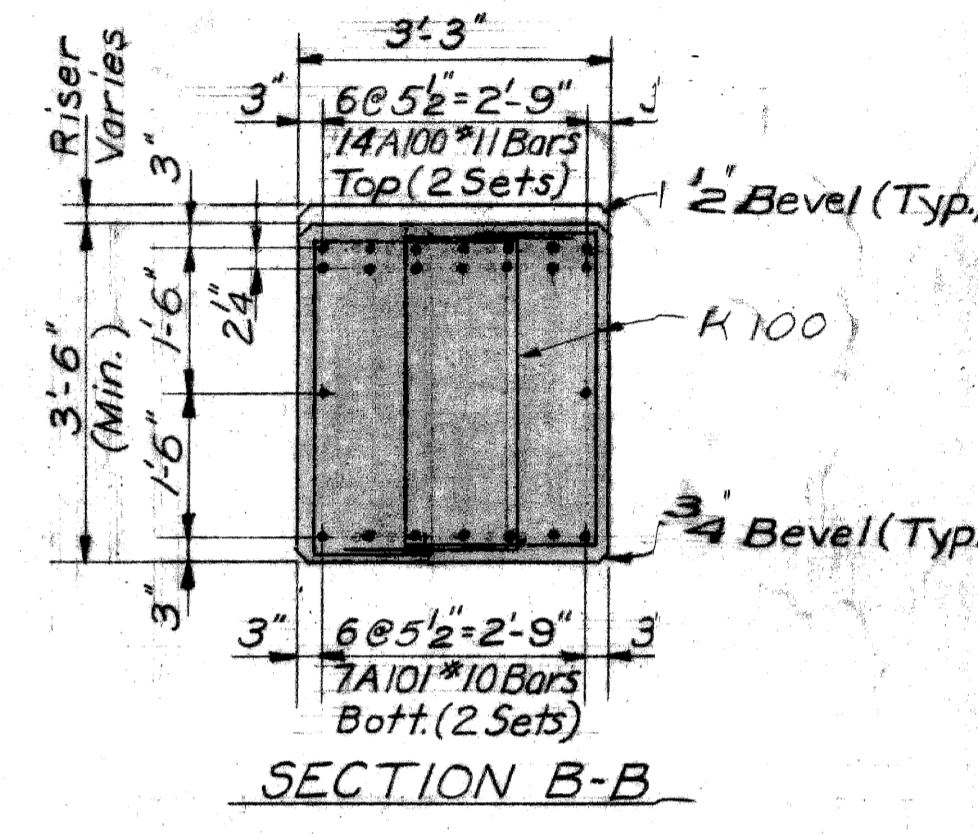
HALF SECTION

HALF ELEVATION

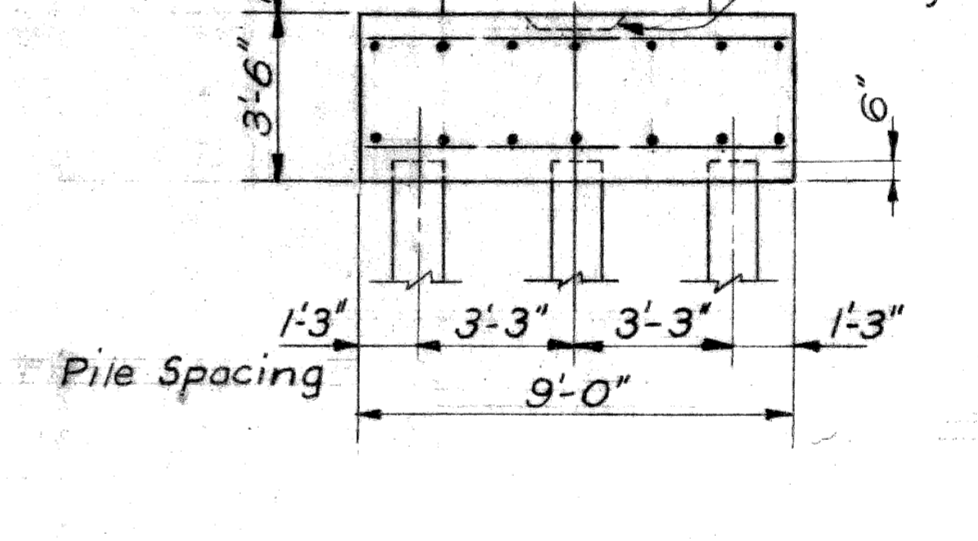


SECTION THRU PIER CAP

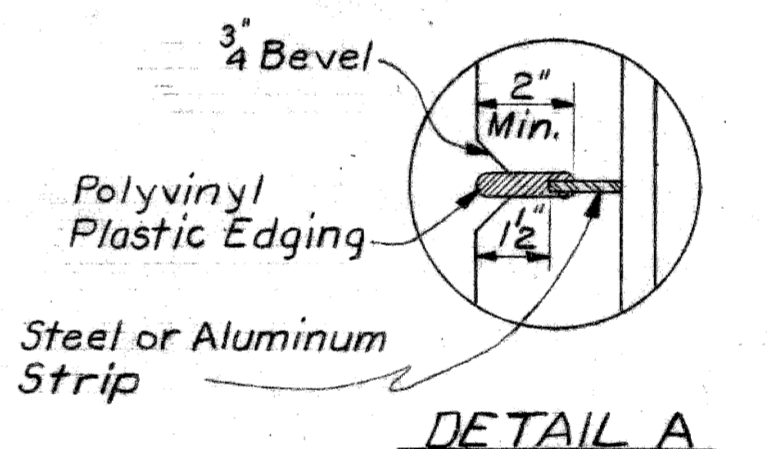
SECTION E-E



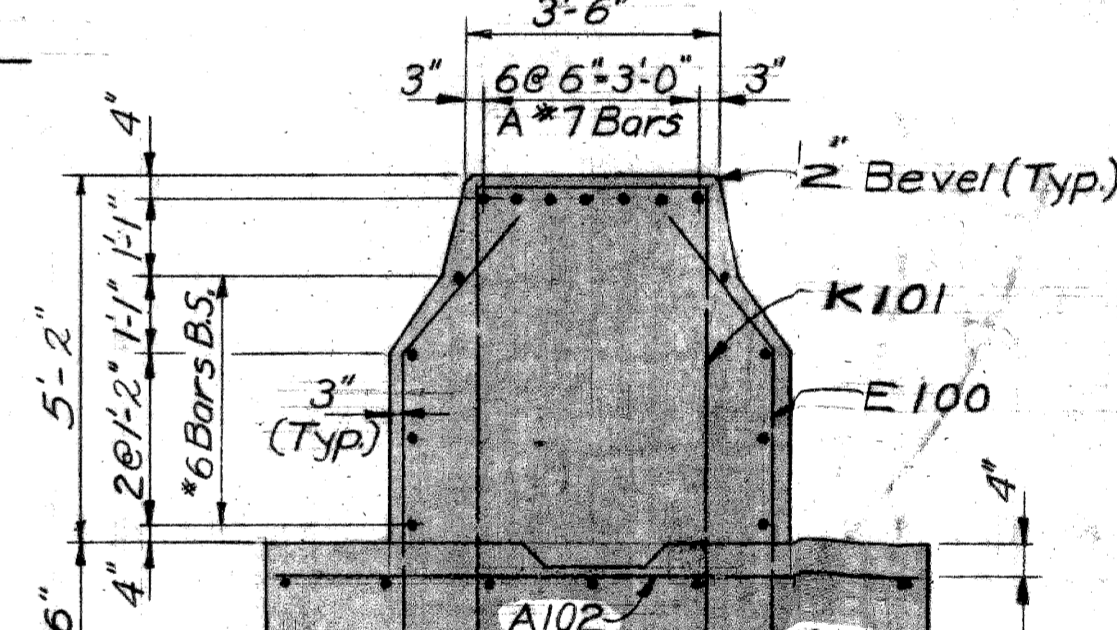
SECTION B-B



END ELEVATION



DETAIL A



SECTION D-D

NOTES:

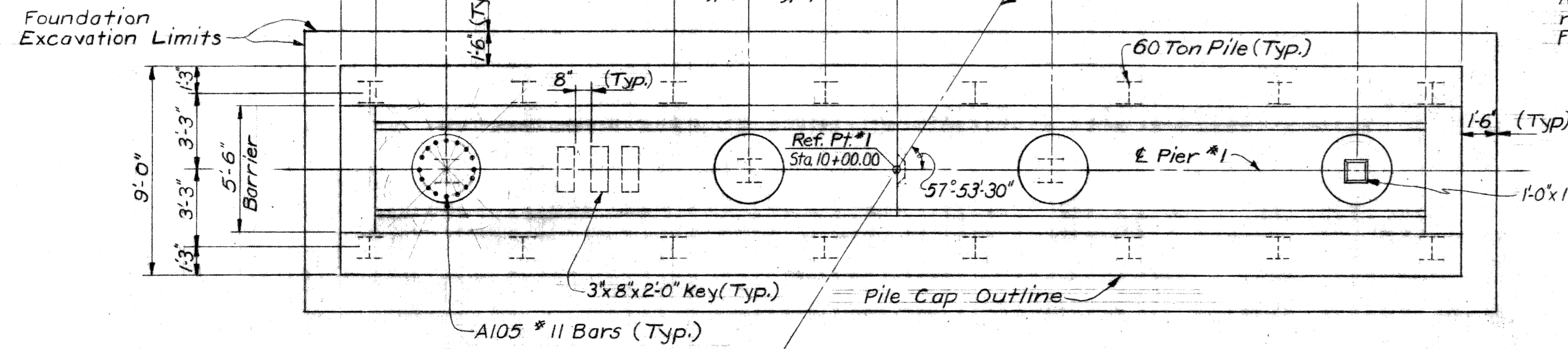
- B.S. denotes Both Sides.
- For bevel and molding details, see standard sheet R.16.
- Anchor bolts shall be accurately set to template. Adjust the spacing of the reinforcing steel as required to permit placing of anchor bolts.
- For pile quantities, layout, and notes see sheet #6.

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 (CU. YDS.)			
POUR	LOCATION	A(6A)	A(6AA)
A	Pile Cap	56.0	—
B	Grade Beam	—	21.6
C	Grade Beam	—	21.6
D	Columns	—	7.9
E	Pier Beam	—	6.7
F	Pier Beam	—	8.8
G	Pier Beam	—	6.6
TOTAL		56.0	73.2

MISCELLANEOUS QUANTITIES		
ITEM	UNITS	TOTAL
Unclassified Excavation	Cu. Yds.	78
Clear Protective Coating for Substr. Conc.	Sq. Yds.	174
Low Temperature Protection Substr.	Cu. Yds.	129



FOOTING PLAN

NOTE:

The complete exposed surface of the pier concrete above top of footing shall be given an application of Clear Protective Coating for Substructure Concrete.

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

APPROVED: *H. Conant*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(3)

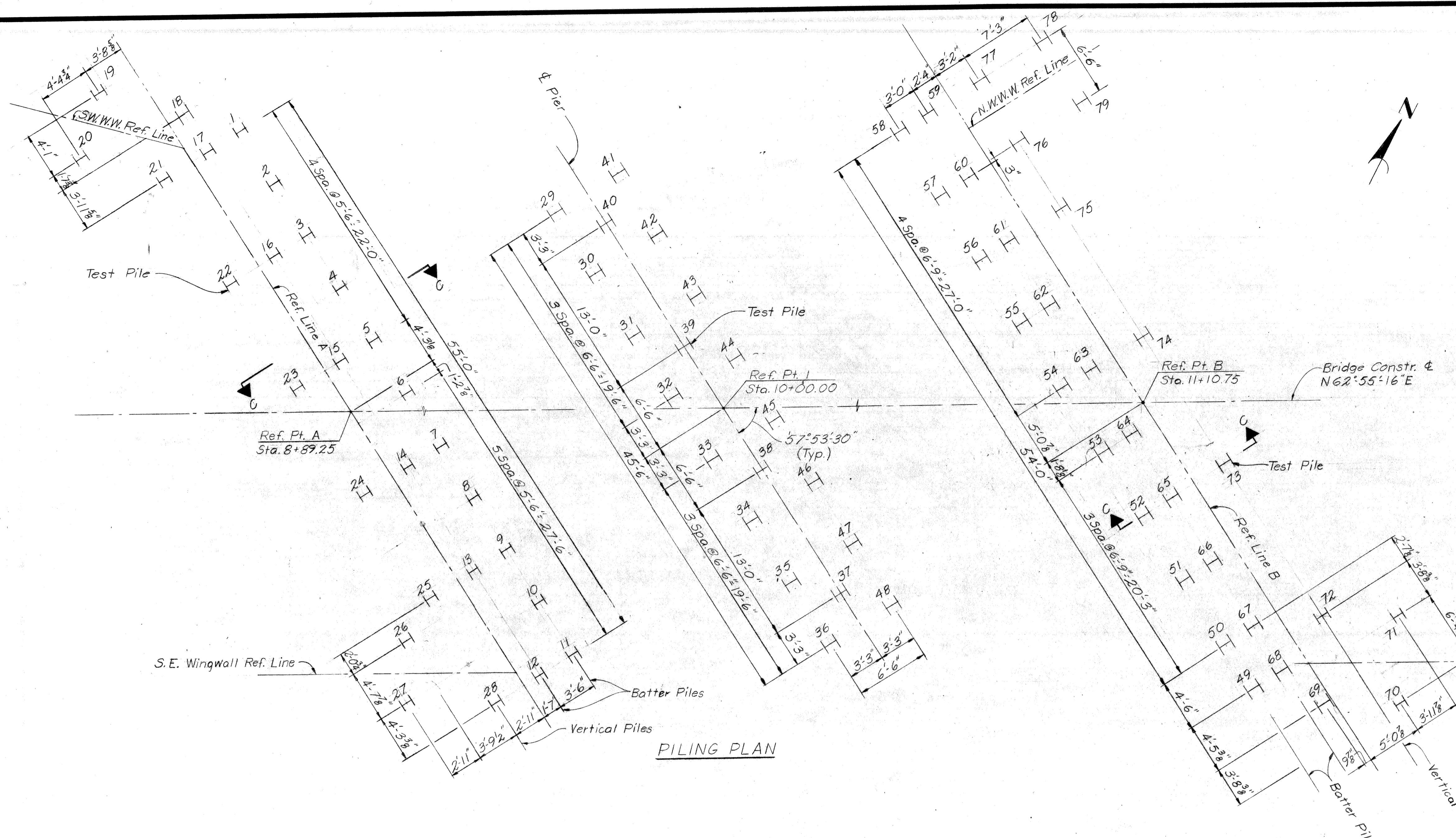
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT

PIER DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY

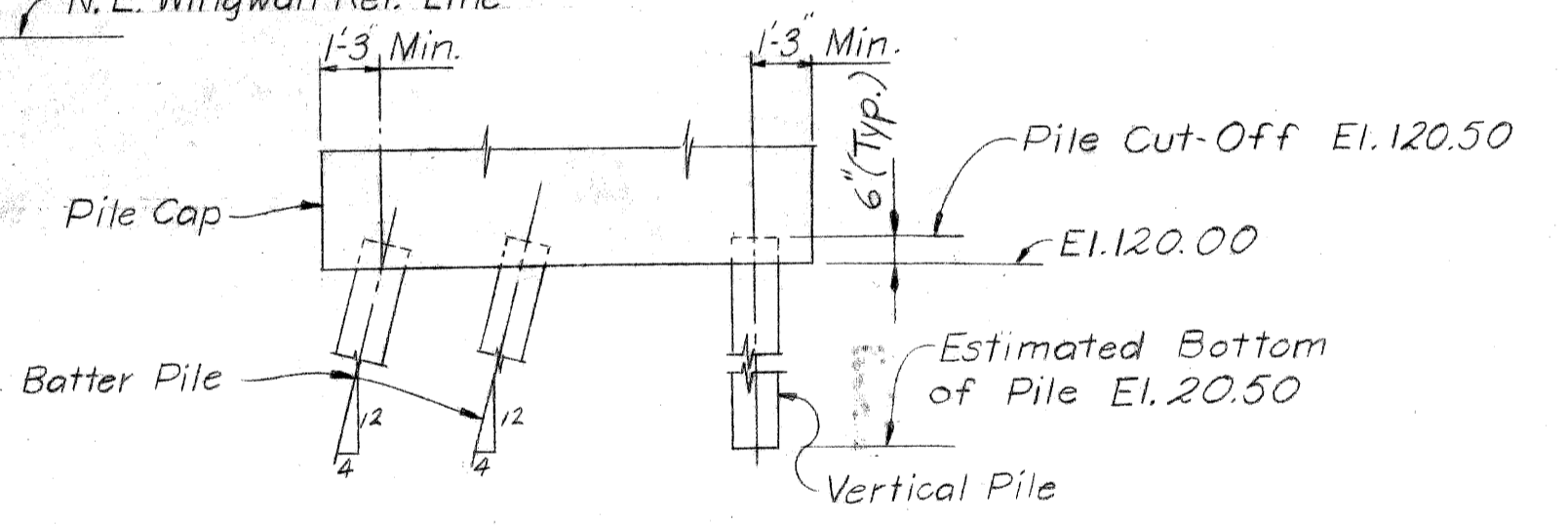
SHIT 12 OF 22
 S35 of 82123J



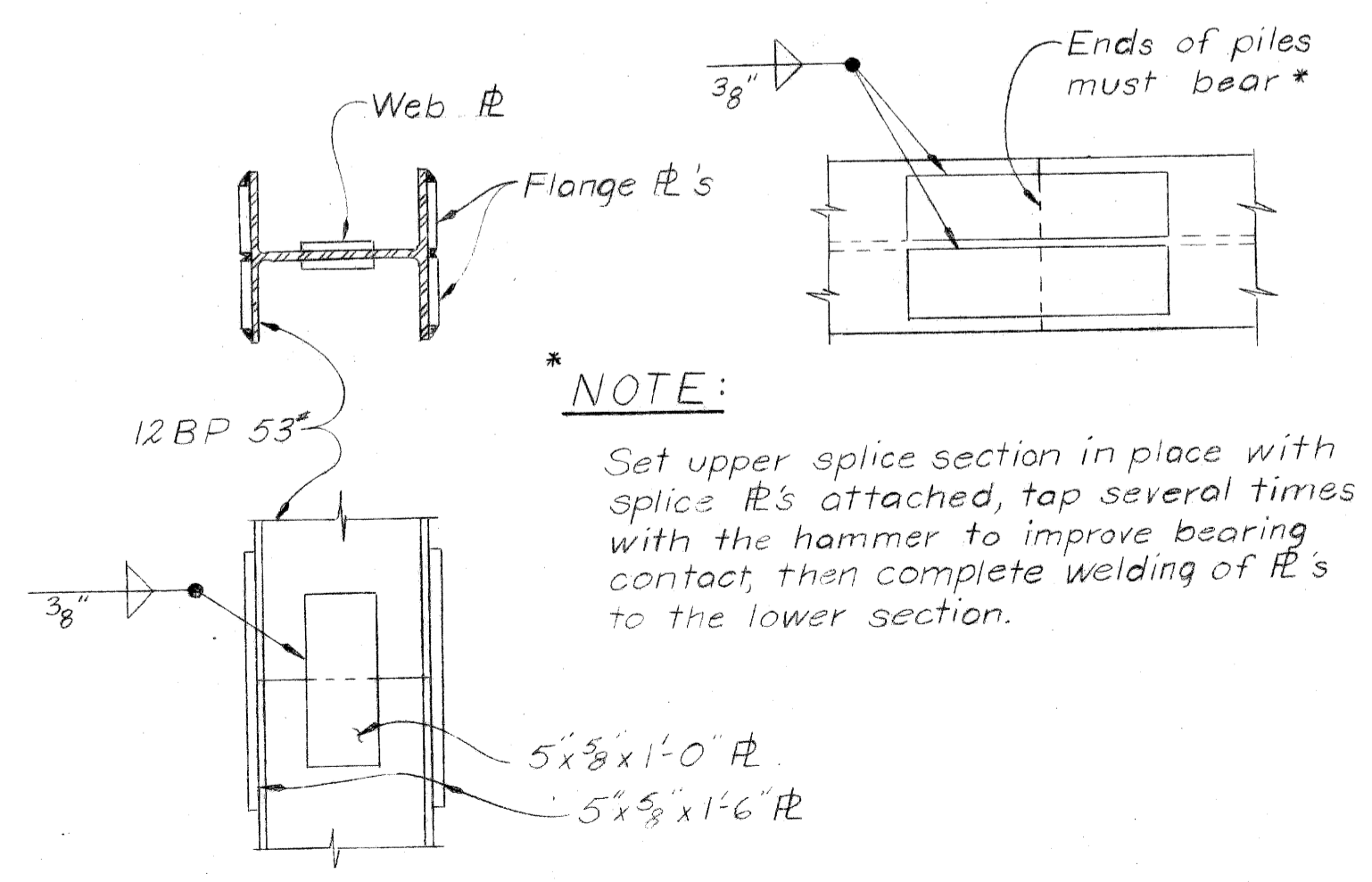
QUANTITIES					
ITEM	UNIT	AMOUNT			
		Abut. A	Pier	Abut. B	
Steel Piles Furnished and Driven	Lin. Ft.	2790	1900	3100	7790
Splices-Steel Piles (12 in.)	Each	70	48	78	196
Steel Test Piles (12in)	Each	1	1	1	3
Furnishing Equipment for Driving Piles	Lump Sum	-	-	-	-

NOTES:
 Estimated length of each vertical pile-furnished and driven - 100 Ft.
 Estimated length of each Batter Pile - 105 Ft.
 Estimated length of each test pile - 110 Ft.

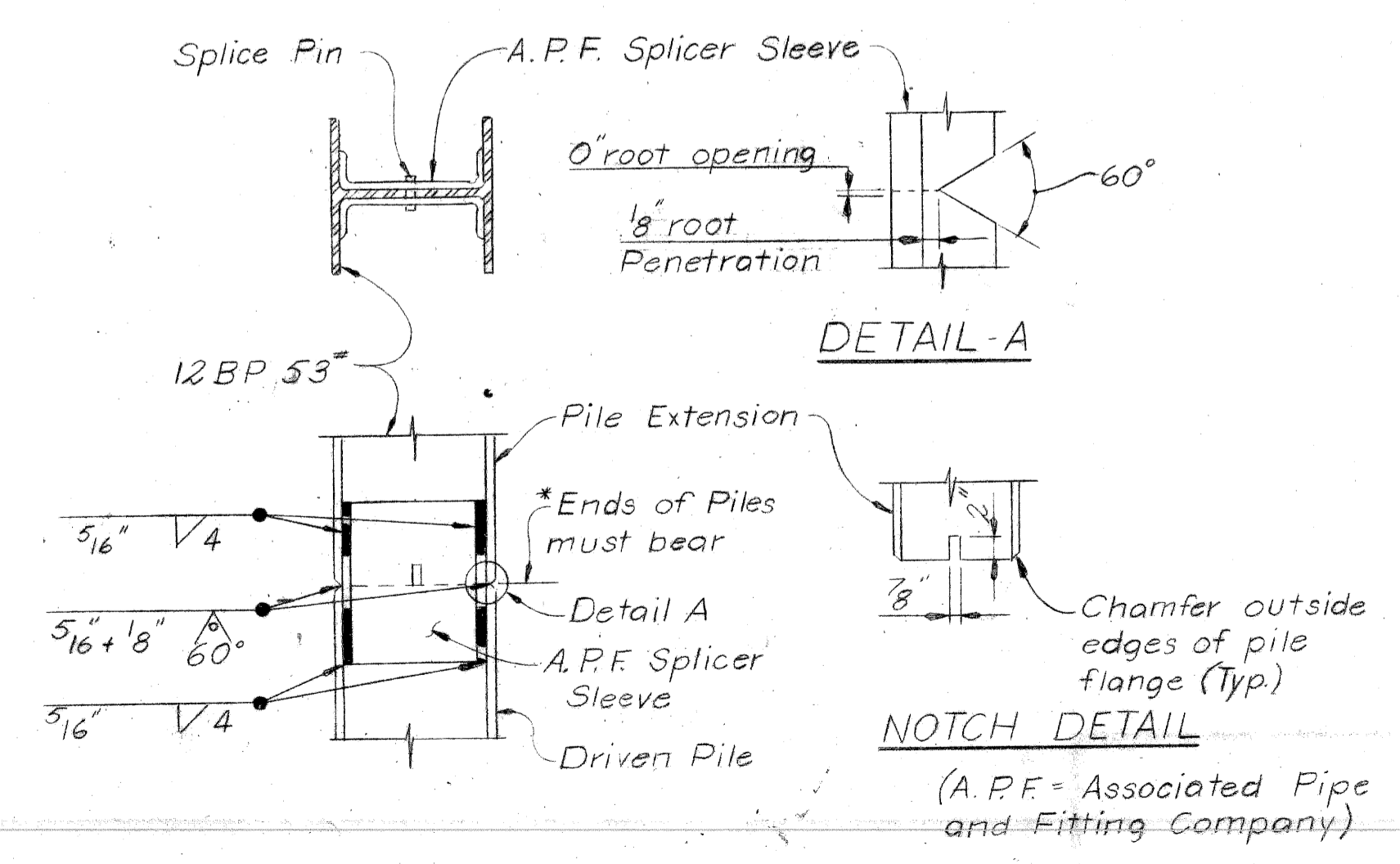
GENERAL NOTES:
 All piles shall be driven to a minimum bearing capacity of 60 Tons.
 Steel Shell Piles shall not be used.
 Piles shall be steel 12" H Section weighing not less than 53 Lbs. per Foot.
 Butt welded splices as described in the Supplemental Specifications will be permitted as an alternate for the splices shown.
 Splices for test piles are incidental to test piles.
 Bridge Contractor shall be responsible for protecting new Freeway Sewer against damage during construction of Pacific Ave. Bridge. See General Plan of Structure for sewer location.
 Piles 1 thru 18 and 49 thru 68 shall be battered.



SECTION C-C AND PILE CUT-OFF DETAIL



SPLICE DETAILS



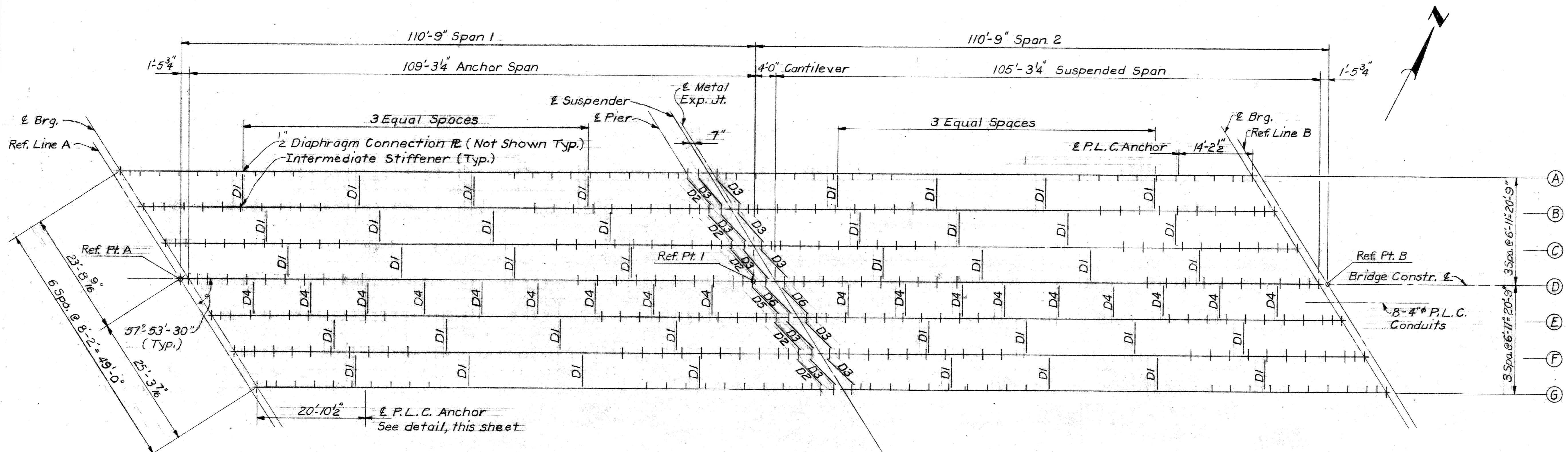
ALTERNATE SPLICE DETAILS

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(3)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT
 FOUNDATION PILING DETAILS

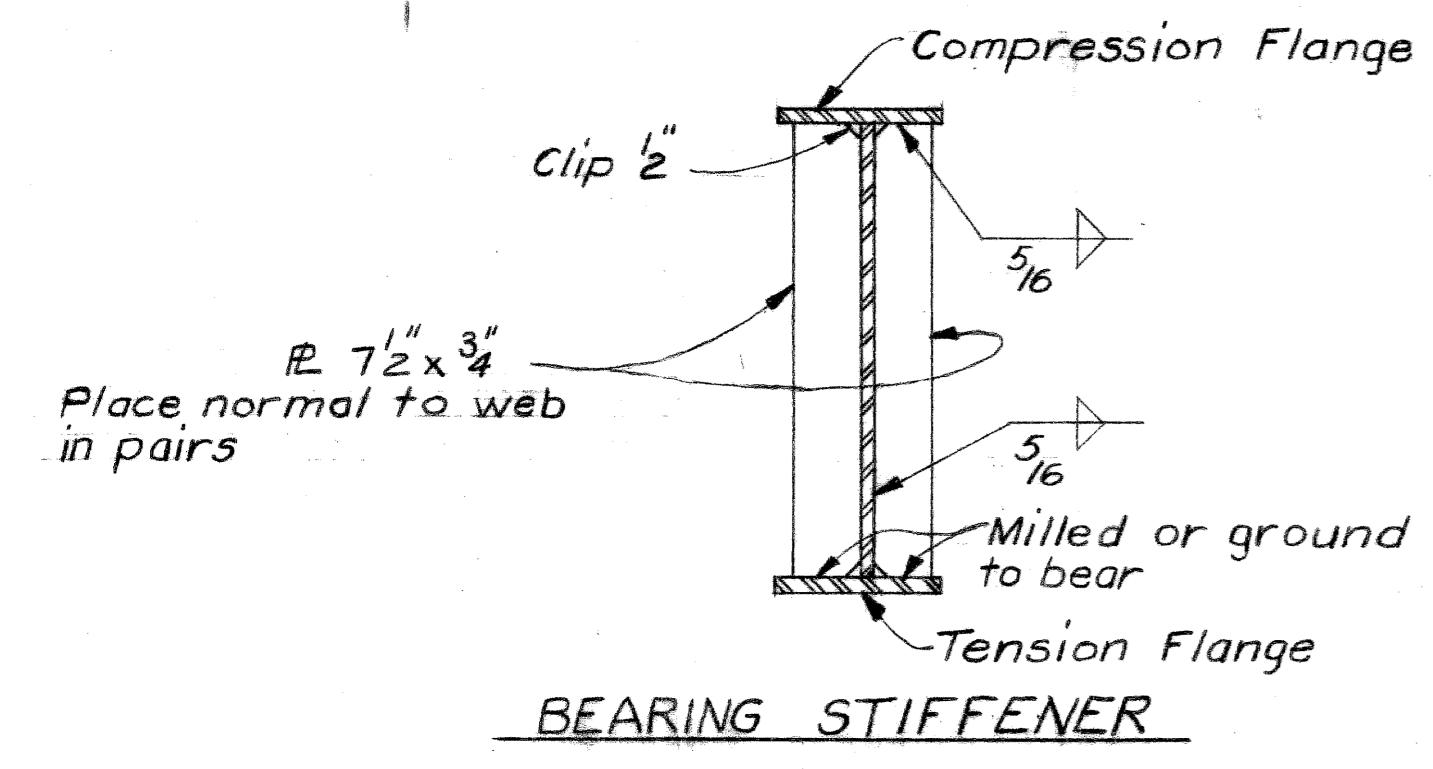
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS STUM 1-69
 DRAWN BY J.S. 1-69
 CHECKED BY J.H.S. 3-69
 SHEET 6 OF 22
S35 of 821231

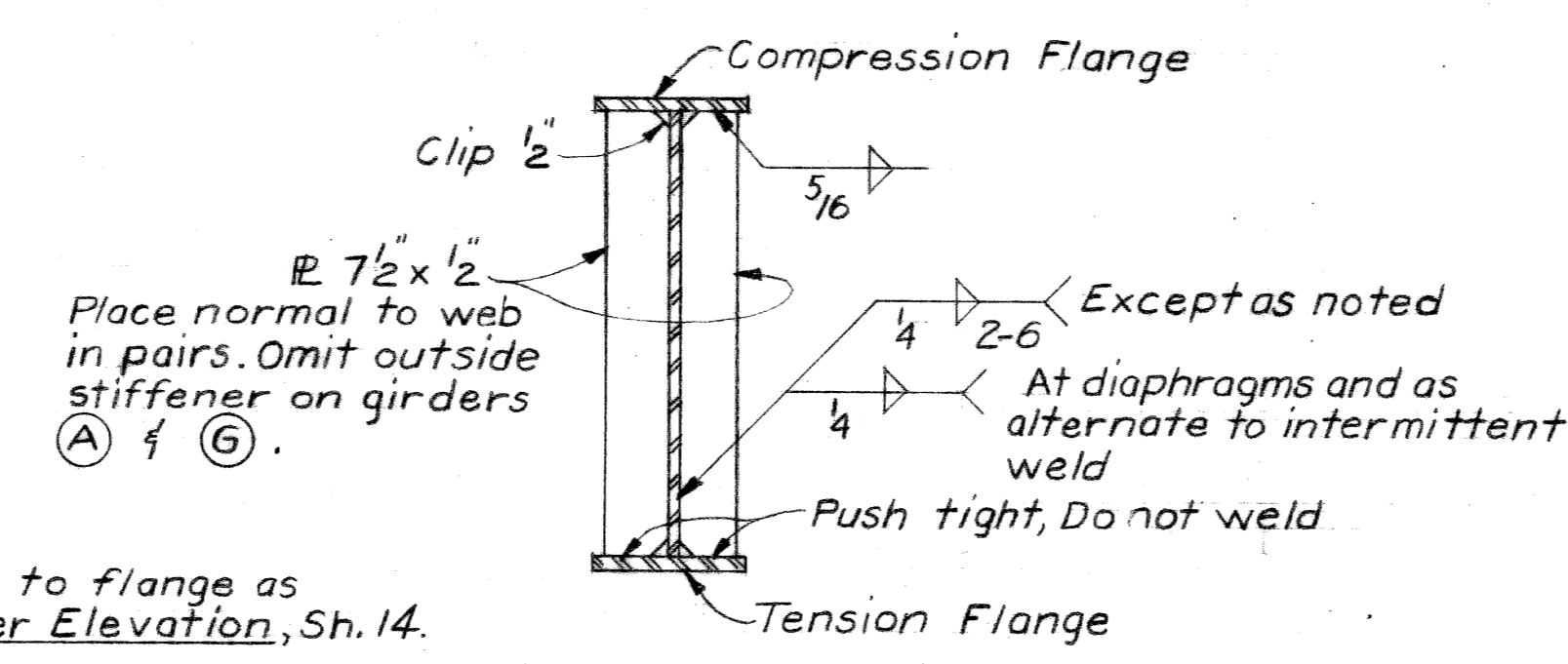


NOTE:
 For intermediate stiffener spacing, see Sh. 14.
 Where proximity of stiffener and diaphragm connection plate restrict welding clearance, reduce stiffener spacing and substitute intermediate stiffener for diaphragm connection plate.

ERECTOR DIAGRAM



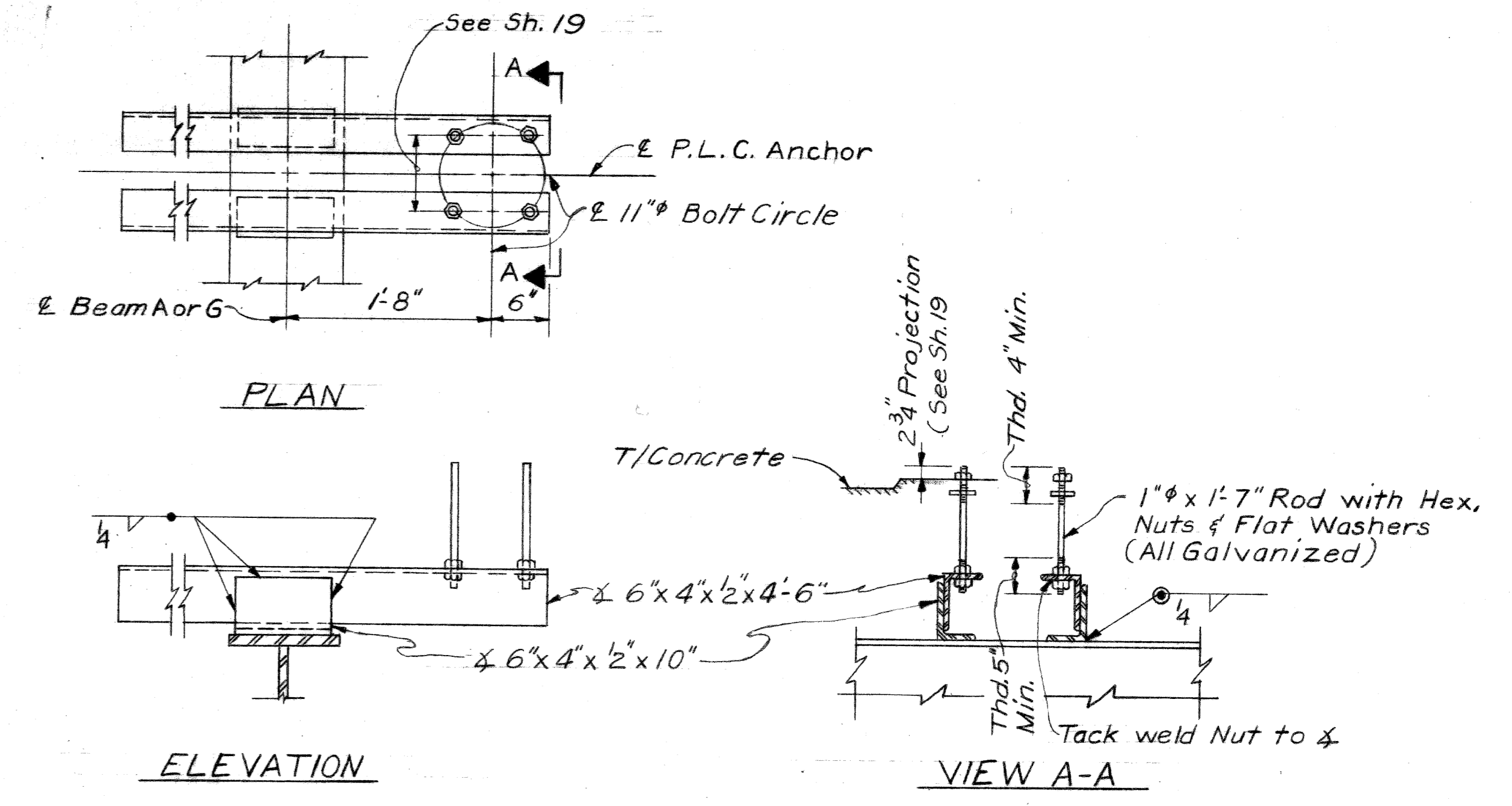
BEARING STIFFENER



INTERMEDIATE STIFFENER

STIFFENER DETAILS

NOTE:
 Weld stiffener to flange as shown in Girder Elevation, Sh. 14.



P.L.C. ANCHOR DETAILS

Work Sheets 13, 14, and 15 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT
STRUCTURAL STEEL DETAILS

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

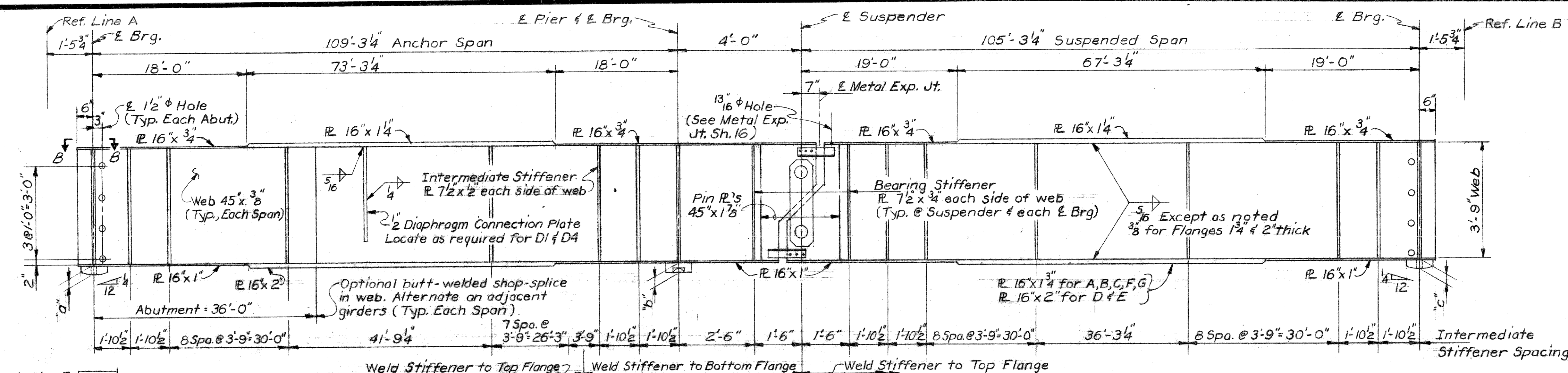
APPROVED: *H. Cant*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(3)

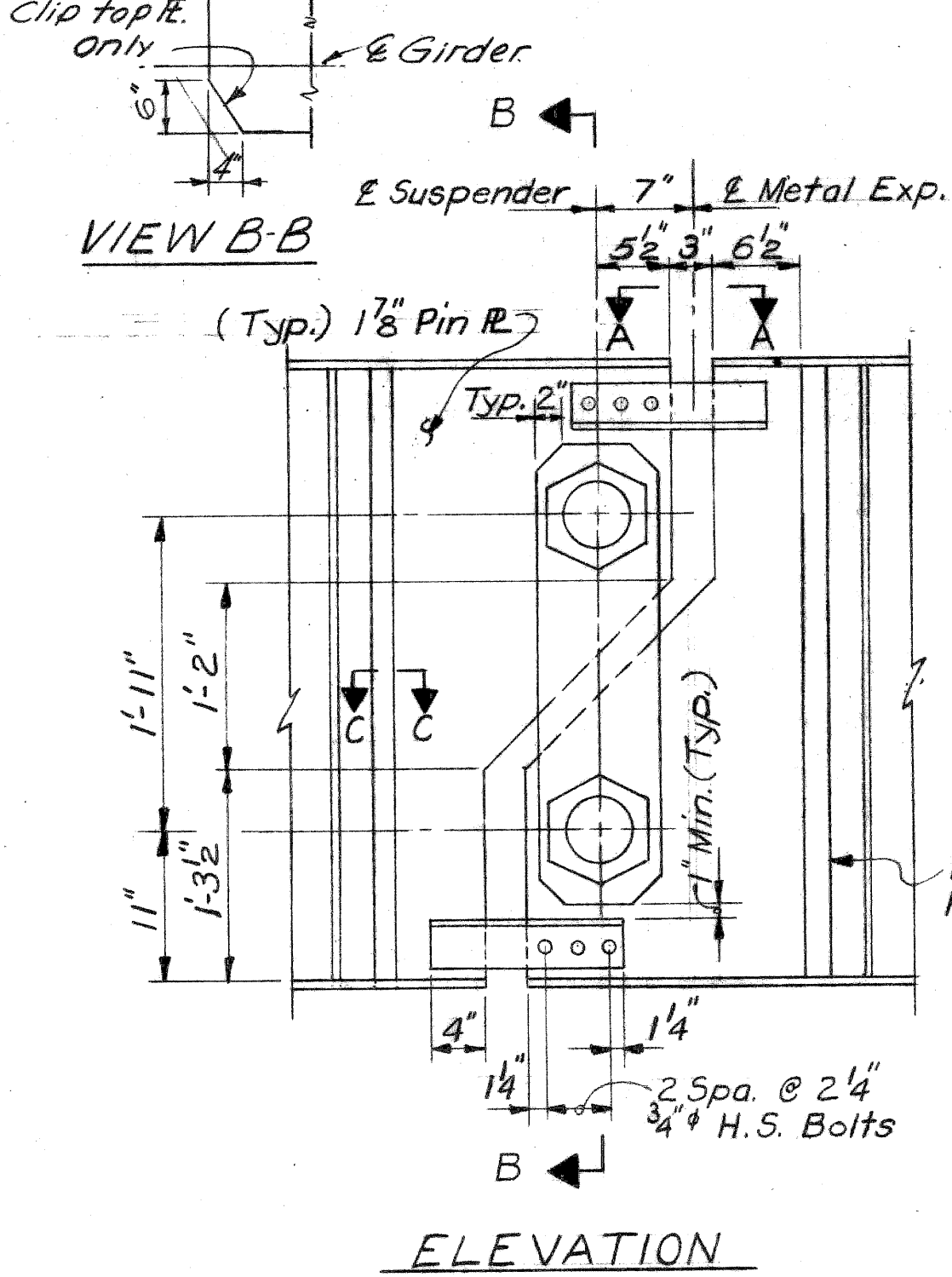
NO.	REVISIONS	DESCRIPTION	DATE	BY

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DRAWN BY	<i>JWS</i>	2-69
TRACED BY	<i>Jones</i>	2-69
CHECKED BY	<i>J.H.K.</i>	2-69
SHEET 13 OF 22		

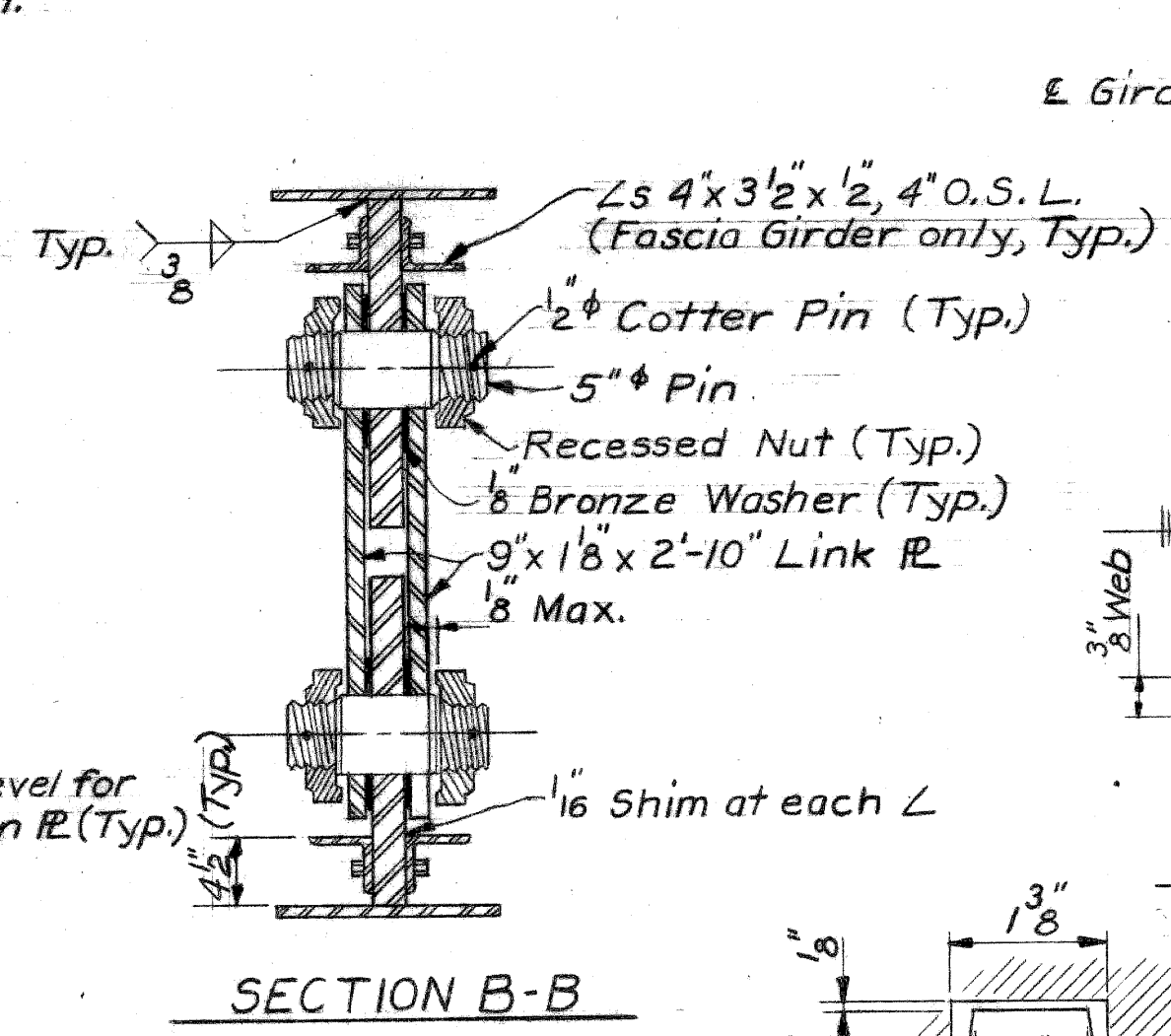
S35 of 82123J



GIRDER ELEVATION

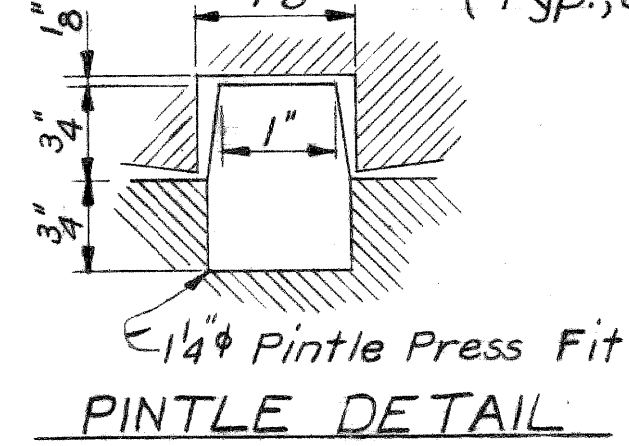


ELEVATION



SECTION B-B

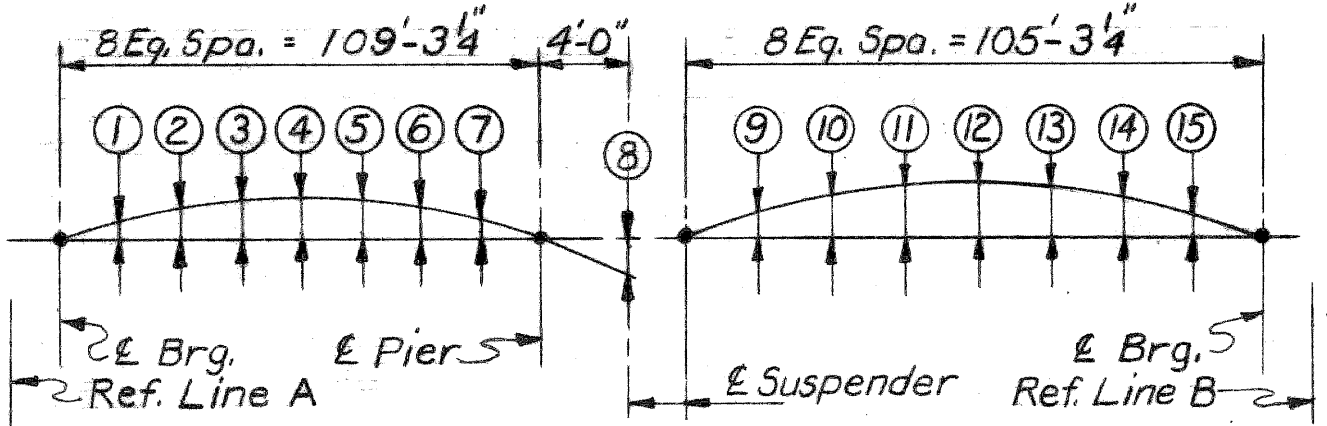
SECTION C-C (Typ, each Pin R)



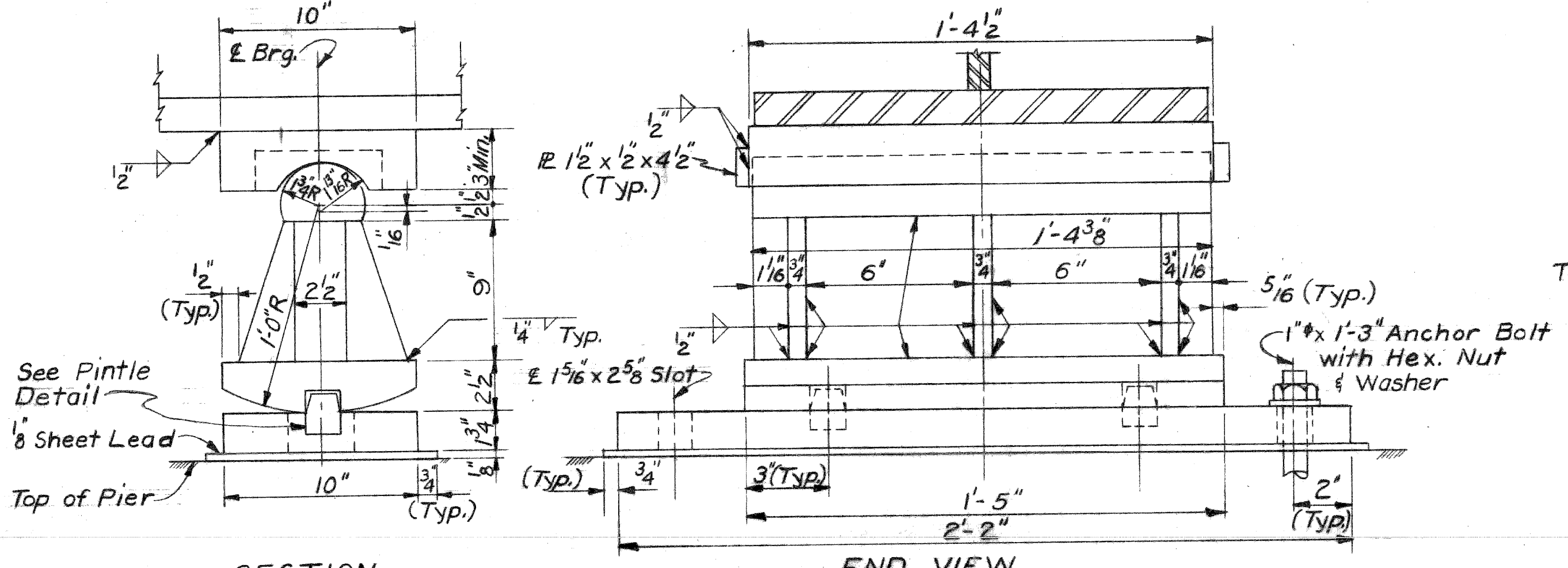
PINTLE DETAIL

SCHEDULE OF VARIABLE DIMENSIONS AND CAMBER (inches)

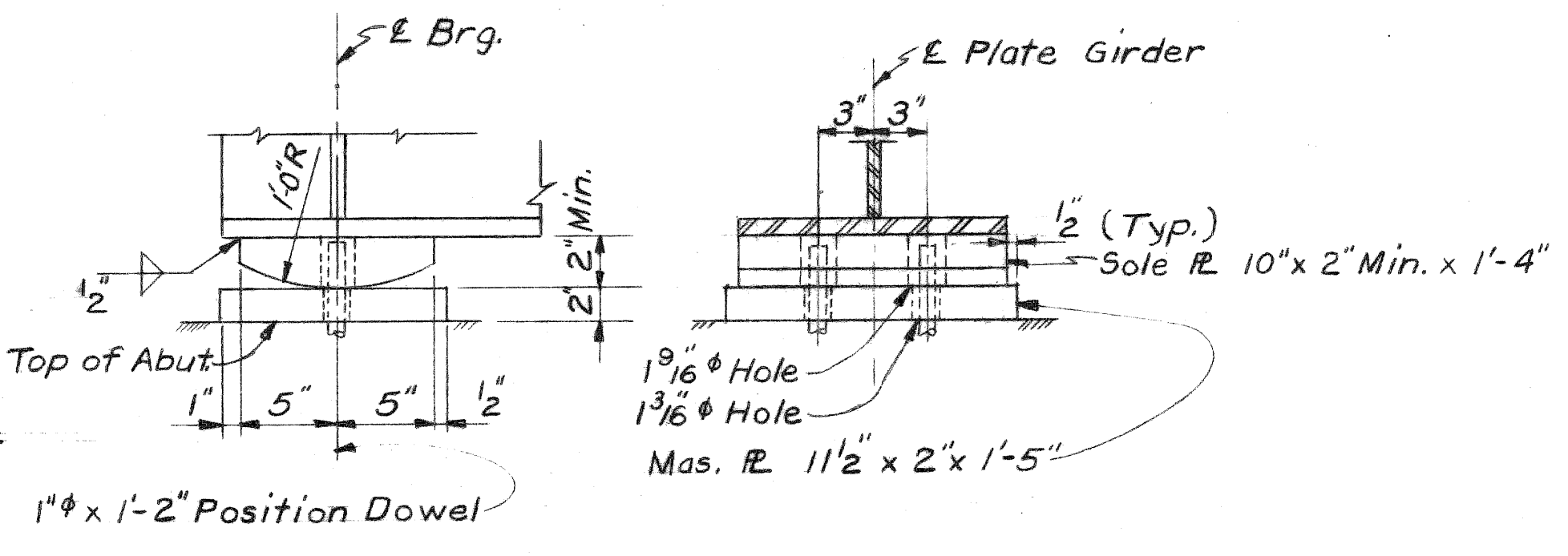
Beam	a	b	c	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	2	3	3 1/2	2	3 1/2	5	5 1/2	5 1/2	4 1/2	2 1/2	3 1/2	5 1/2	7 1/2	7 1/2	7 1/2	5 1/2	3 1/2	
B	3	3 1/2	2 1/2	2 1/2	4 1/2	5 1/2	6 1/2	6 1/2	5	2 1/2	1	3 1/2	5 1/2	7 1/2	8 1/2	7 1/2	5 1/2	3 1/2
C	2	3	2 1/2	2 1/2	4 1/2	5 1/2	6 1/2	6 1/2	5 1/2	3	1	3 1/2	5 1/2	7 1/2	8 1/2	7 1/2	5 1/2	3 1/2
D	3 1/2	3 1/2	2 1/2	2 1/2	5 1/2	6 1/2	7 1/2	7 1/2	5 1/2	3 1/2	1	3 1/2	6 1/2	7 1/2	8 1/2	7 1/2	6 1/2	3 1/2
E	2 1/2	3 1/2	2 1/2	2 1/2	5 1/2	7 1/2	7 1/2	7 1/2	6 1/2	3 1/2	1 1/2	3 1/2	6 1/2	7 1/2	8 1/2	7 1/2	6 1/2	3 1/2
F	2	3 1/2	3 1/2	2 1/2	4 1/2	6 1/2	7 1/2	7 1/2	5 1/2	3 1/2	1	3 1/2	5 1/2	7 1/2	8 1/2	7 1/2	5 1/2	3 1/2
G	3	3 1/2	2 1/2	2 1/2	4 1/2	6 1/2	7 1/2	7 1/2	7 1/2	5 1/2	3 1/2	1	3 1/2	5 1/2	7 1/2	7 1/2	5 1/2	2 1/2



CAMBER DIAGRAM



SECTION END VIEW PIER BEARING DETAILS



ELEVATION SECTION ABUTMENT BEARING DETAILS

STRUCTURAL STEEL NOTES

Design: Michigan State Highway Department Specifications for Design of Highway Bridges-1958 edition and current AASHTO Standard Specifications for Highway Bridges, HS 20 Loading.

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

Shop Connections: Shop connections shall be welded as shown on the plans. All welding shall be in accordance with current AWS Specifications for structural welding.

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

Camber: 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. Heating is to be used if necessary to assure camber permanency within the tolerance specified in AWS Specifications. The top and bottom edges of the web plates are to be cut simultaneously to minimize distortion. The mid-span dead load deflection of the beams alone is calculated to be 1" for the anchor span and 3/8" for the suspended span.

Shop Splice: 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, and two feet from any web splice.

Sole Plates: 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.

Welding Inspection: Magnetic Particle Inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random from each ten sections or fractions thereof.

Anchor Bolts: Steel in anchor bolts may be ASTM A-307. Anchor bolts and position dowels including nuts and washers shall be galvanized in accordance with ASTM Designation A-153.

Steel Pins: Steel for pins may be ASTM A-108 or ASTM A-235 (Class E). Bronze for washers shall be ASTM B-100, Alloy No. 510 or No. 635.

Material: All steel shall be unpainted A 588. All steel material used for bearings, with exception of portion welded to beams, shall be galvanized in accordance with ASTM Designation A-123. Galvanizing shall be applied after fabrication of bearing. Mill scale and foreign material shall be removed prior to galvanizing.

Beams: Beam dimensions are horizontal and along E Beam.

QUANTITIES

Structural Steel - Furnishing and Fabricating*	381,000 Lbs.
Structural Steel - Erection	381,000 Lbs.
Shear Developers	Lump Sum

* Includes weight of Metal Exp. Jt., Sh. 16 and P.L.C. Steel, Sh. 13, 15 and consists of:

ASTM A588 -	380,870 Lbs.
Sheet Lead -	110 Lbs.
Bronze -	20 Lbs.

Work Sheets 13, 14, and 15 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PACIFIC AVE. OVER JEFFRIES FREEWAY IN DETROIT

STRUCTURAL STEEL DETAILS

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

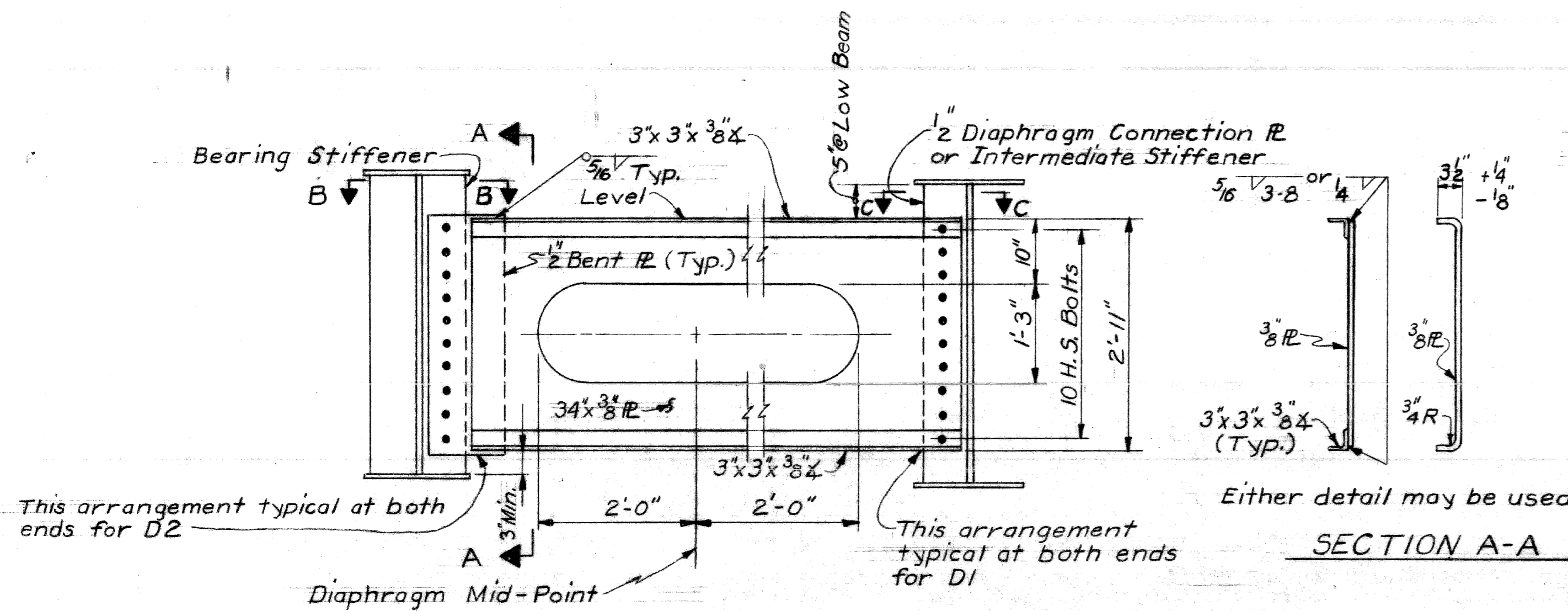
APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No.
PW 990(3)

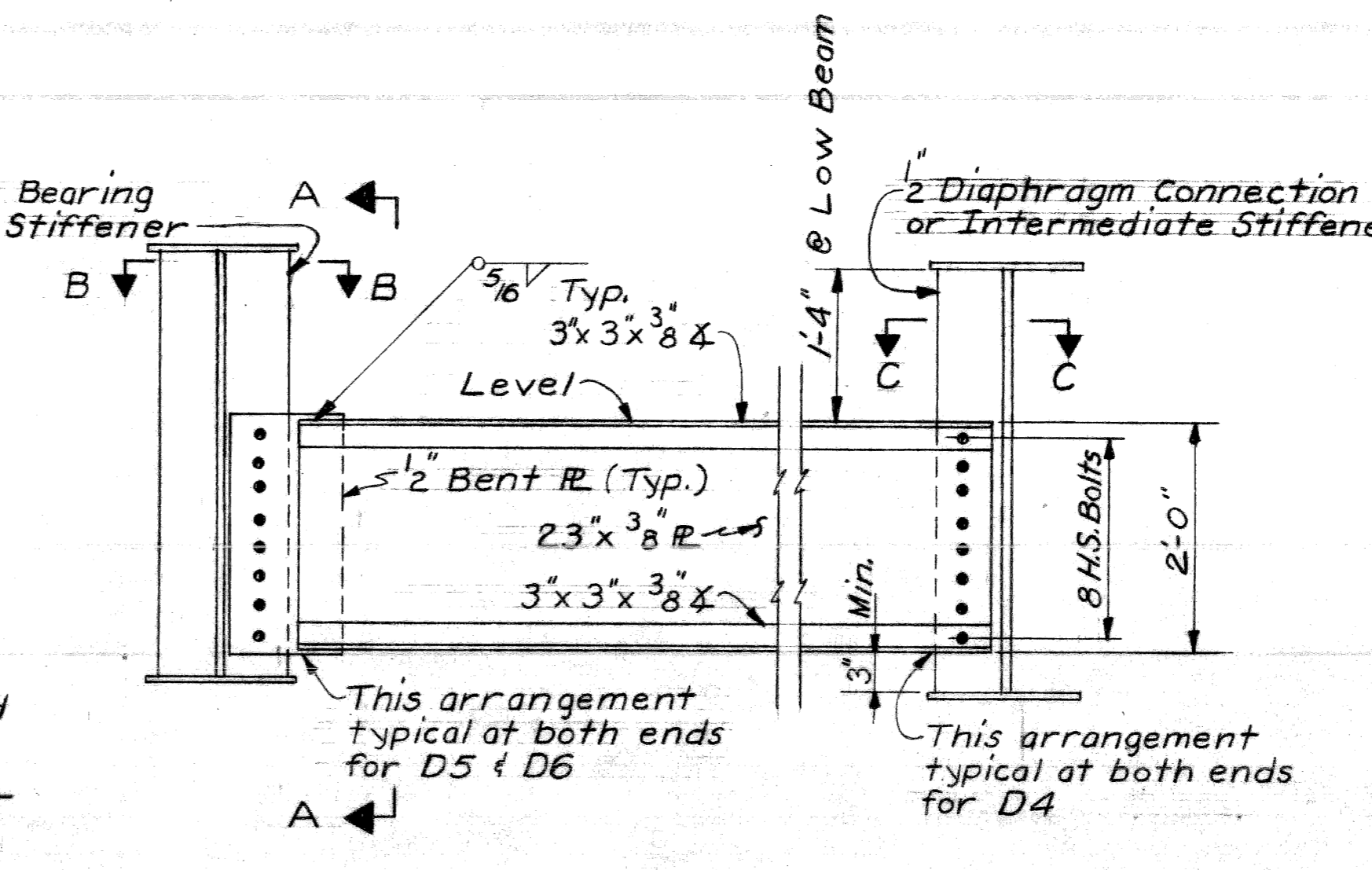
REVISIONS			
NO.	DESCRIPTION	DATE	BY

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DRAWN BY	JHS	2-69
TRACED BY	JONES	2-69
CHECKED BY	J.H.K.	2-69

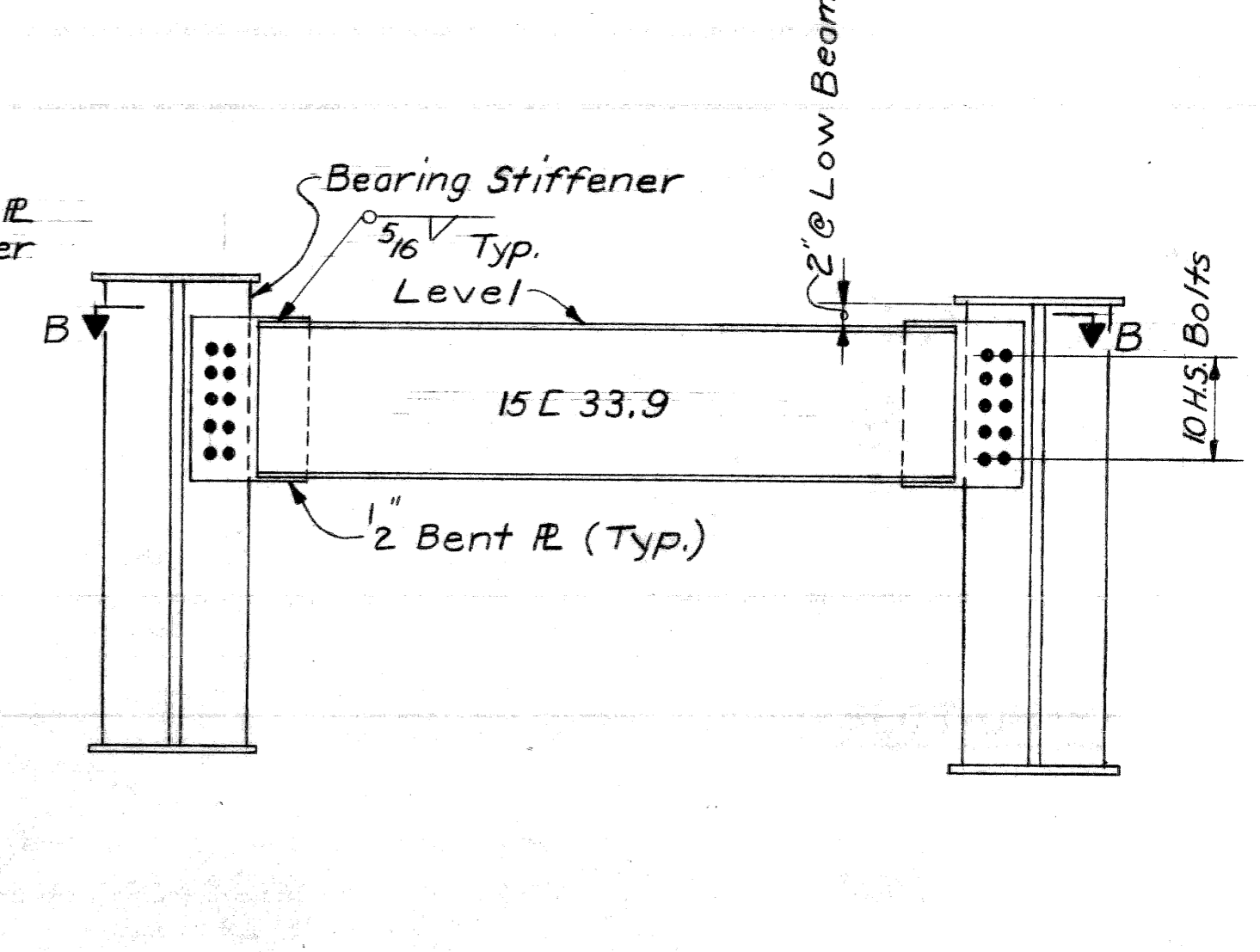
S35 of 82123J



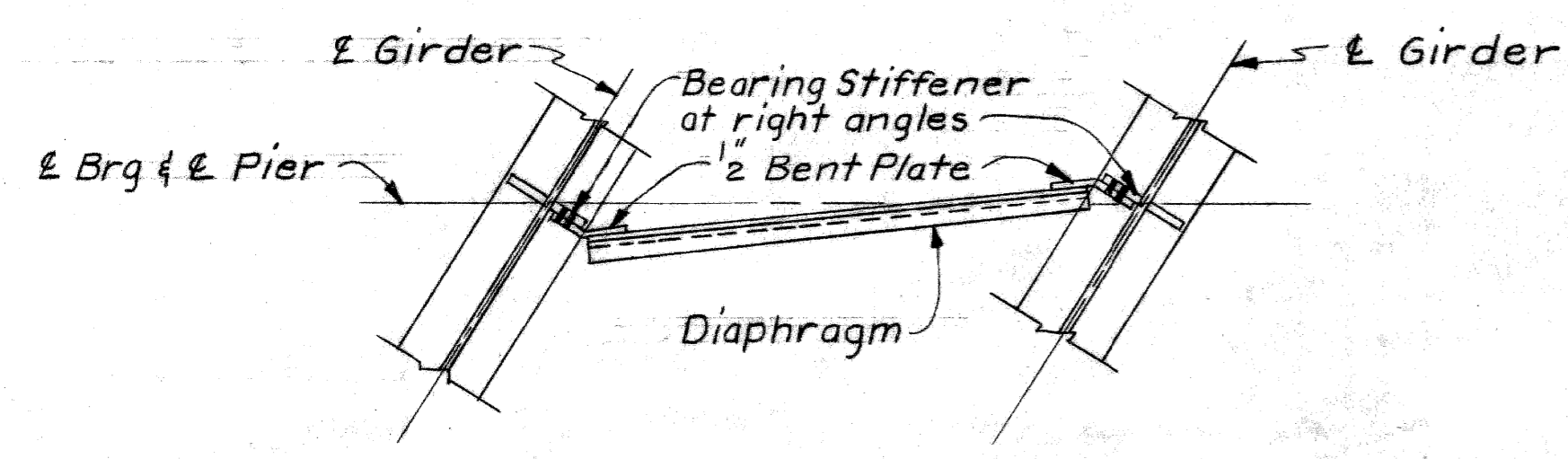
D1 & D2



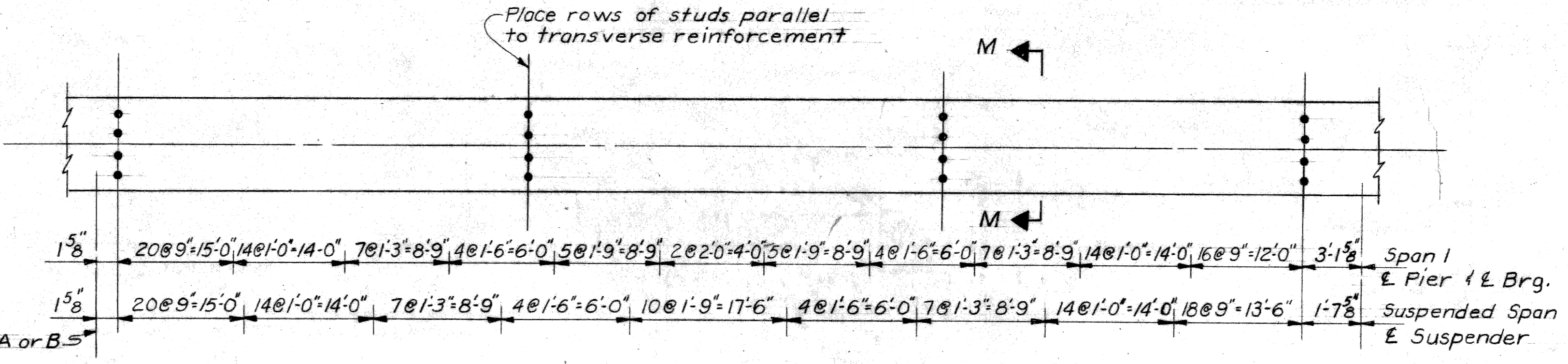
D4, D5 & D6



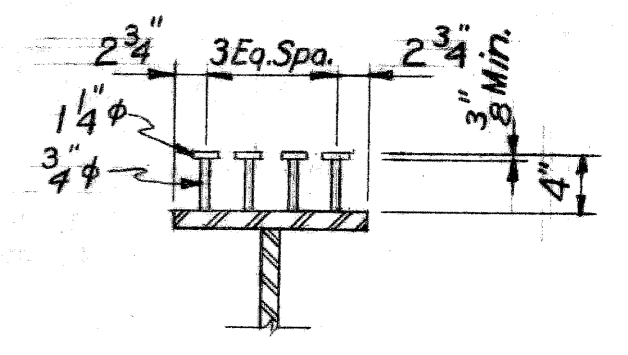
D3



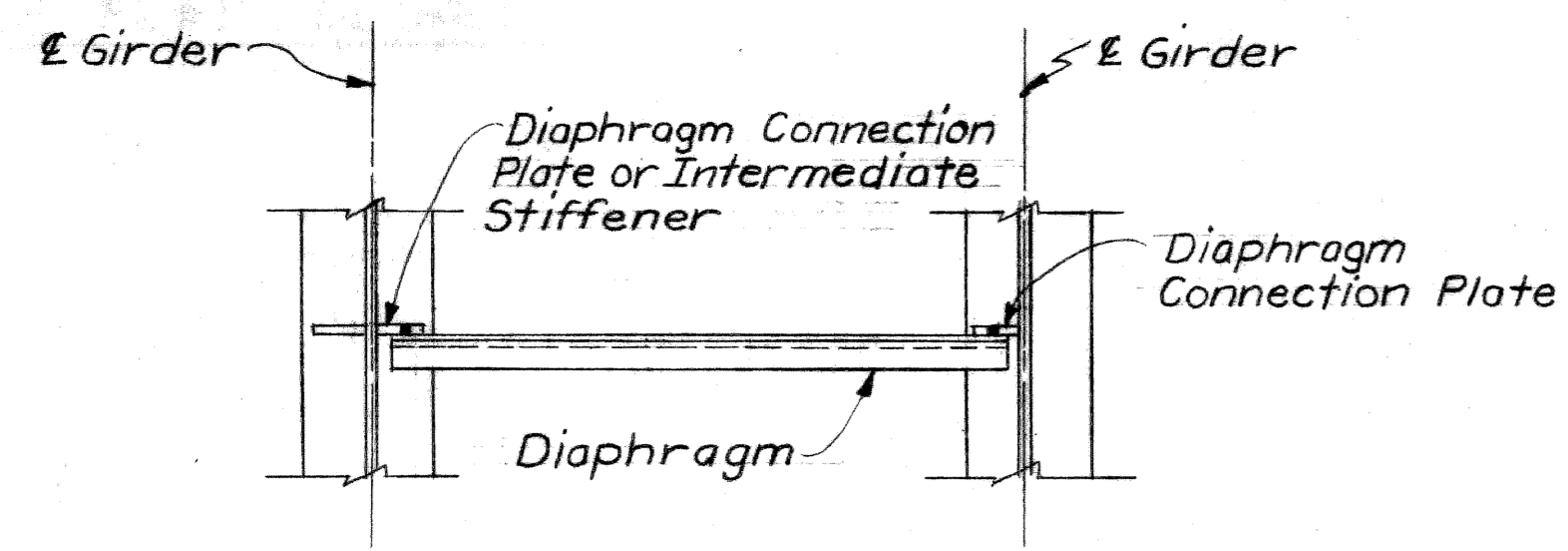
SECTION B-B
(For D2, D3, D5, & D6)



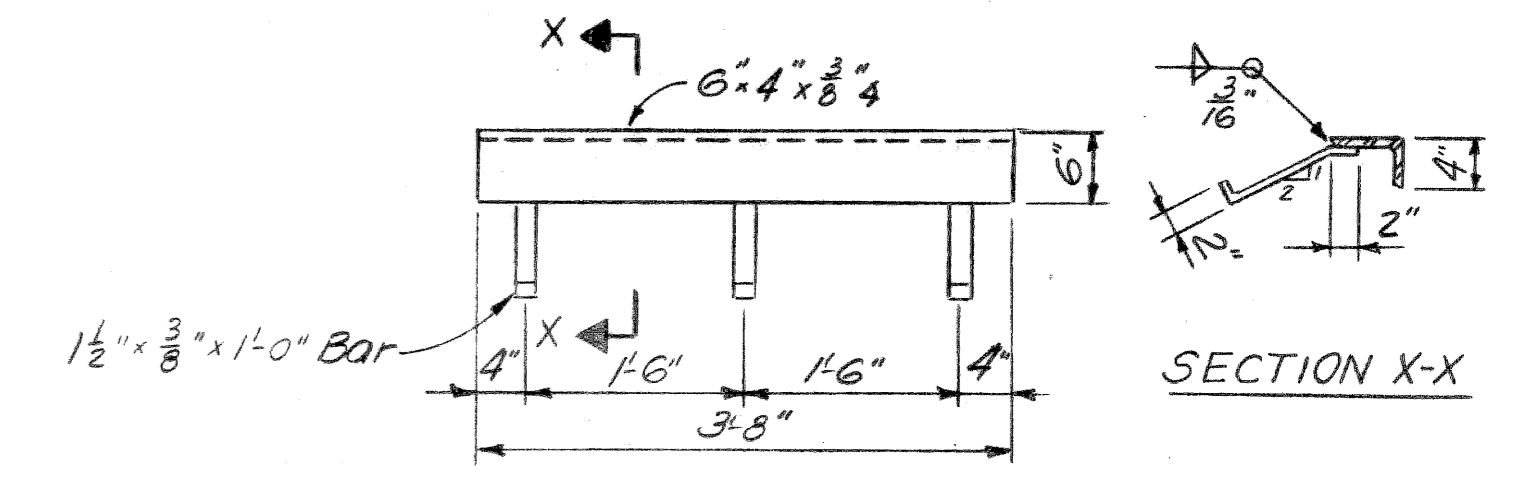
STUD SHEAR DEVELOPERS



SECTION M-M



SECTION C-C
(For D1 & D4)



LEDGE ANGLE DETAIL
(See Sh. 20)

Work Sheets 13, 14, and 15 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PACIFIC AVE OVER JEFFRIES FREEWAY
IN DETROIT
STRUCTURAL STEEL DETAILS

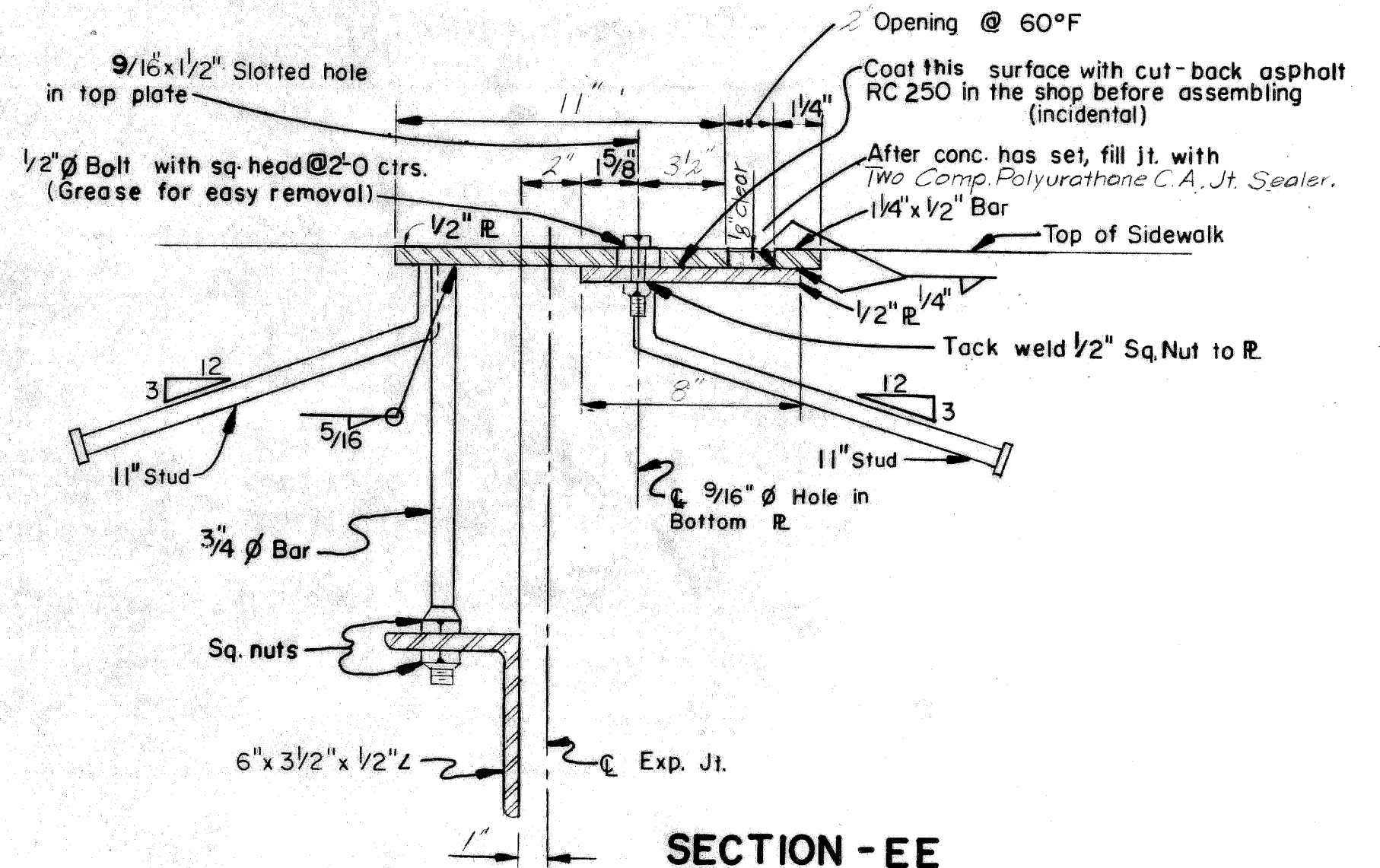
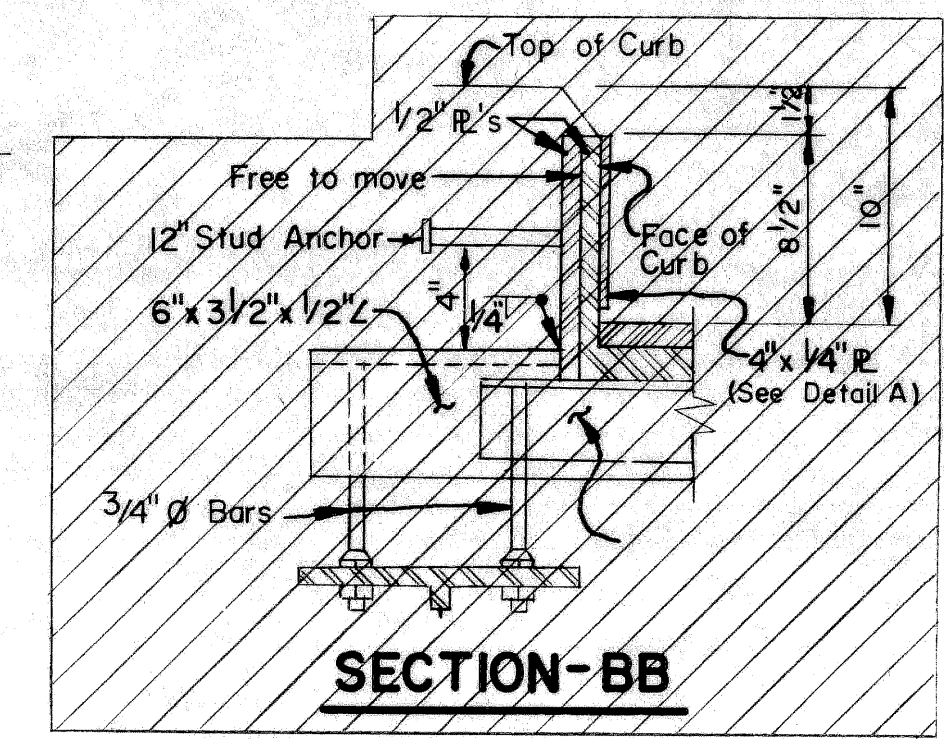
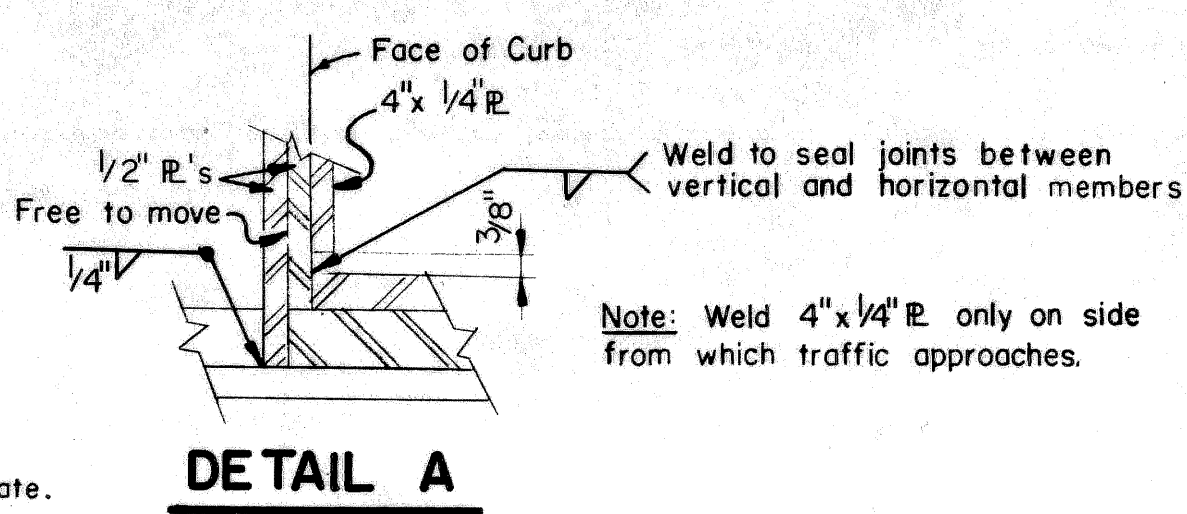
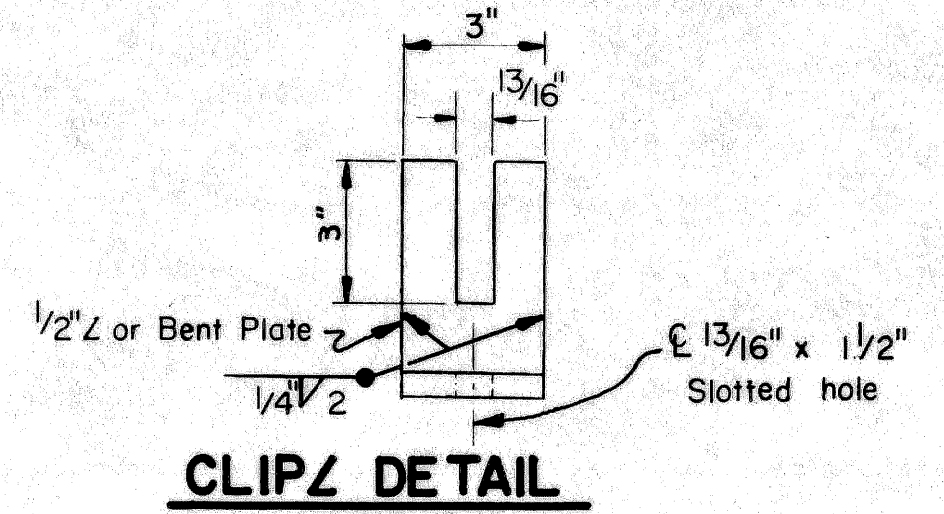
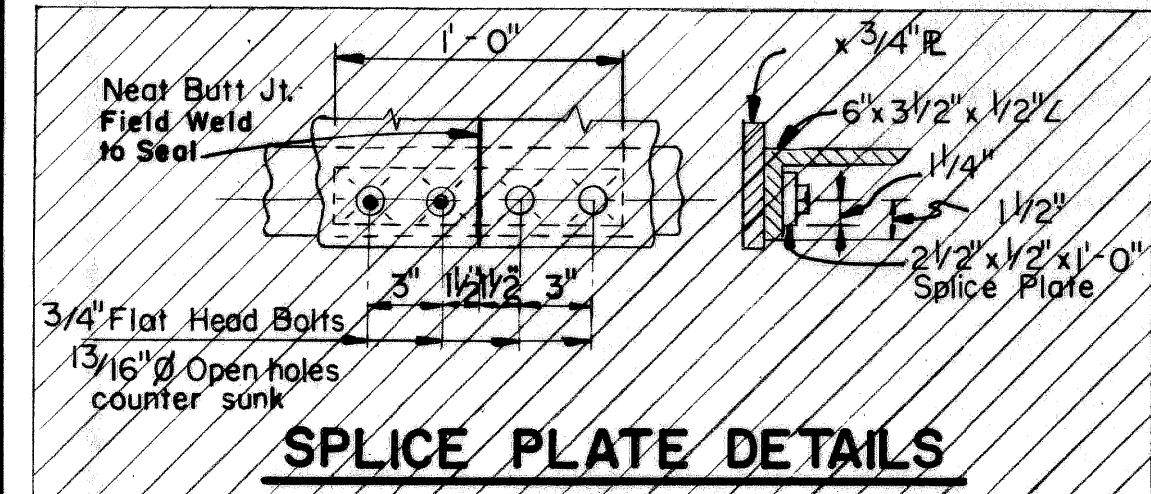
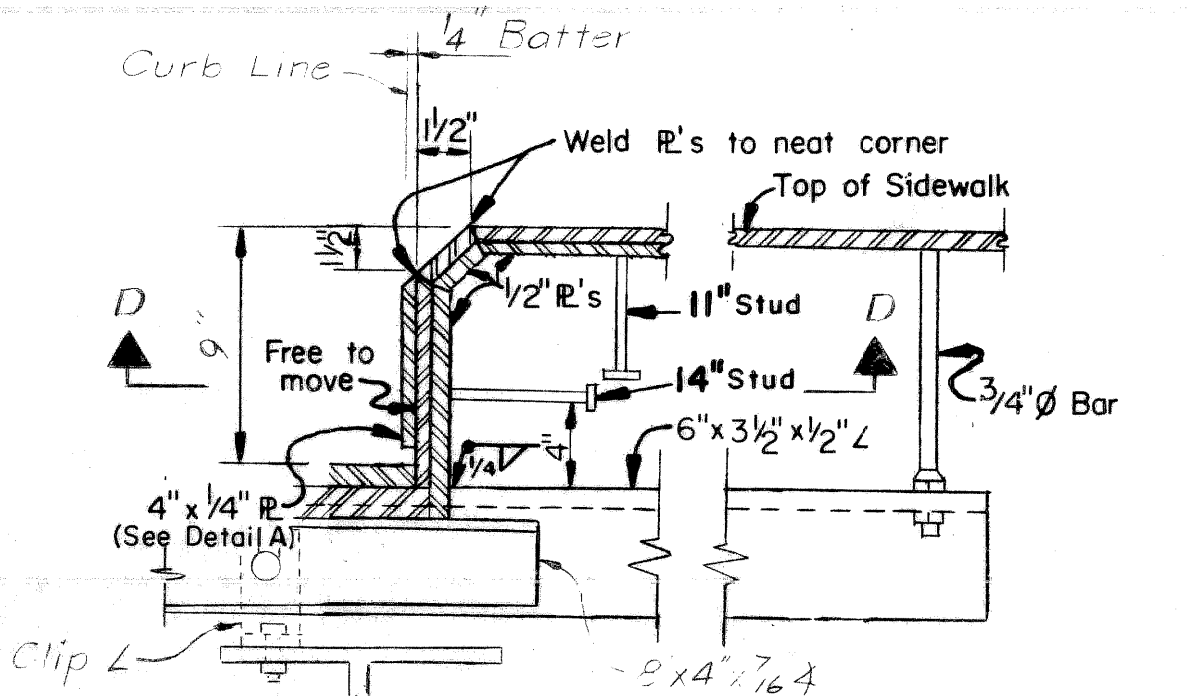
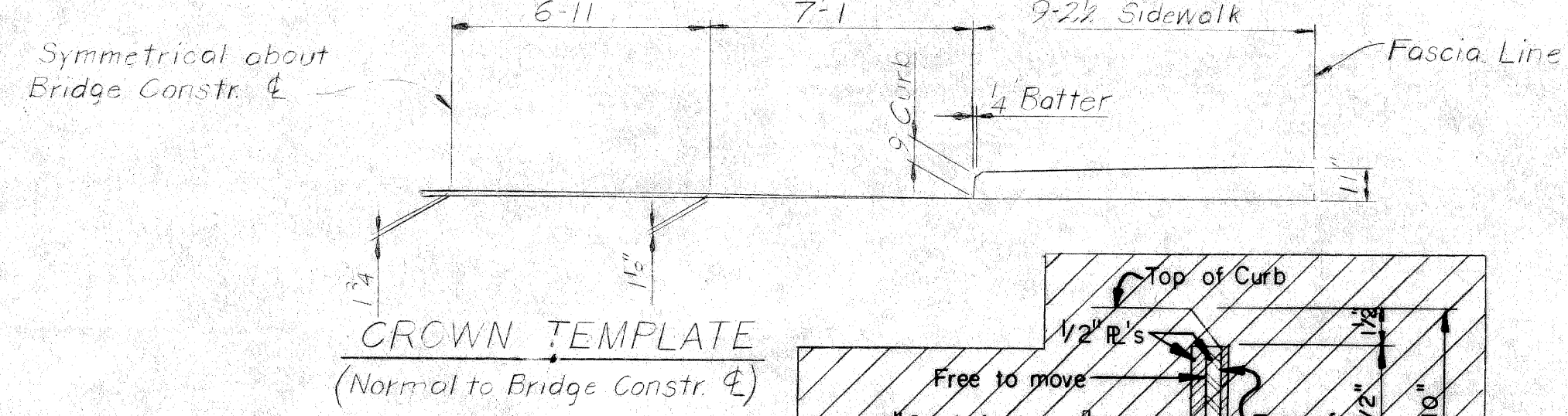
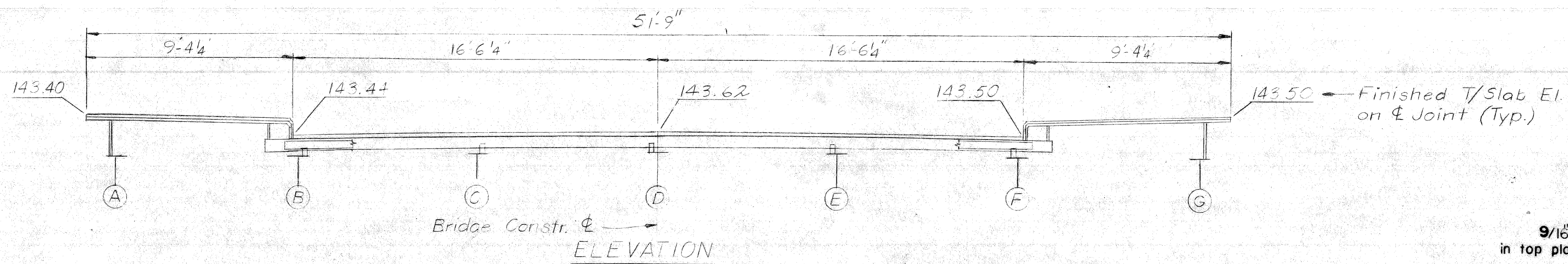
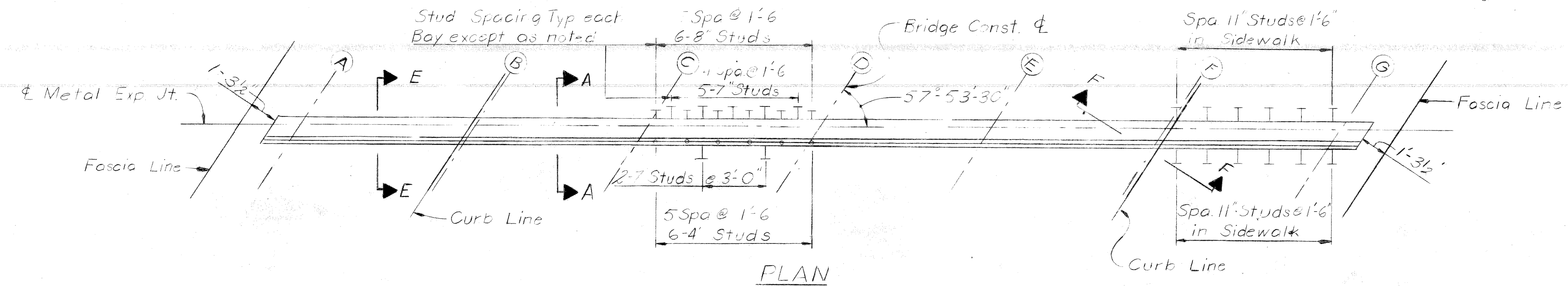
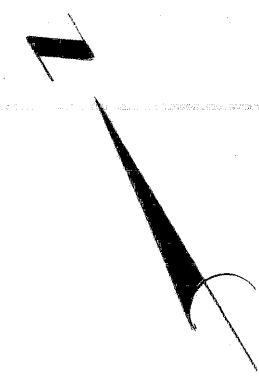
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
SQUAD BOSS: STURM 3-6-69
DRAWN BY: JWS 2-69
CHECKED BY: J.H.K. 2-69
SHEET 15 OF 22
S35 of 82123J

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(3)

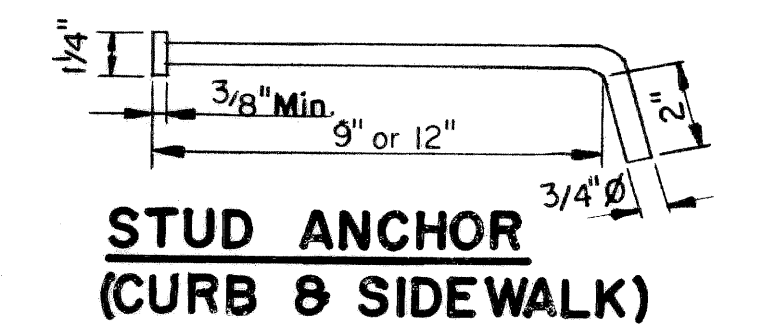
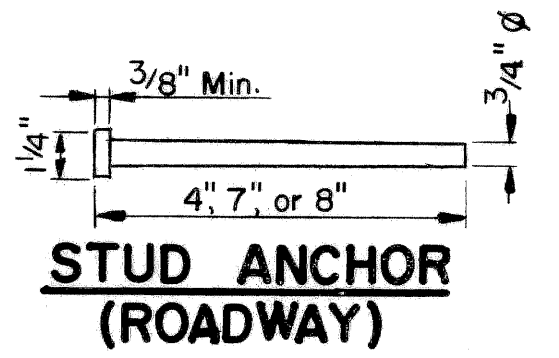
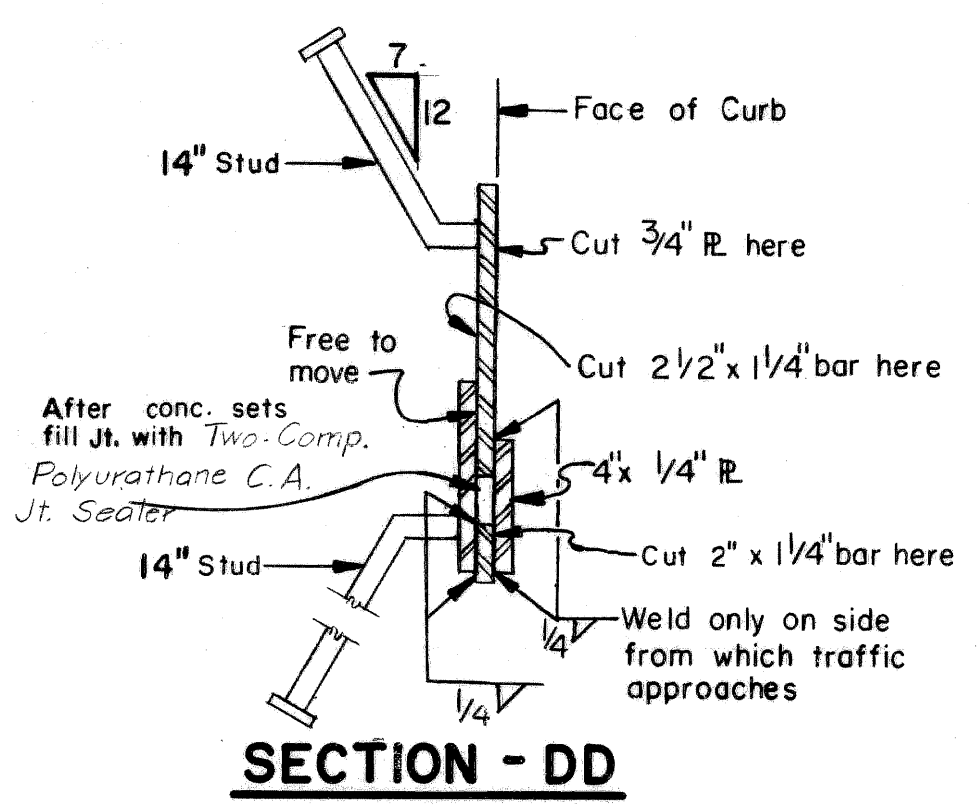
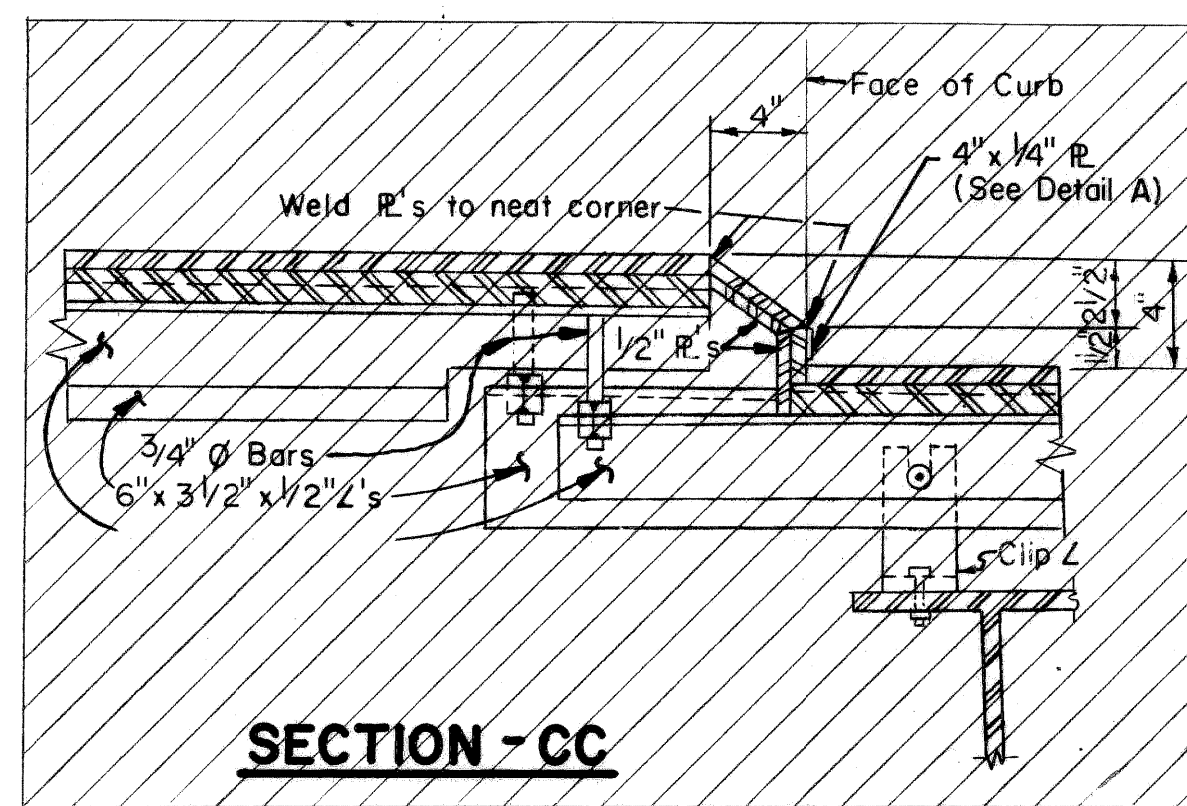
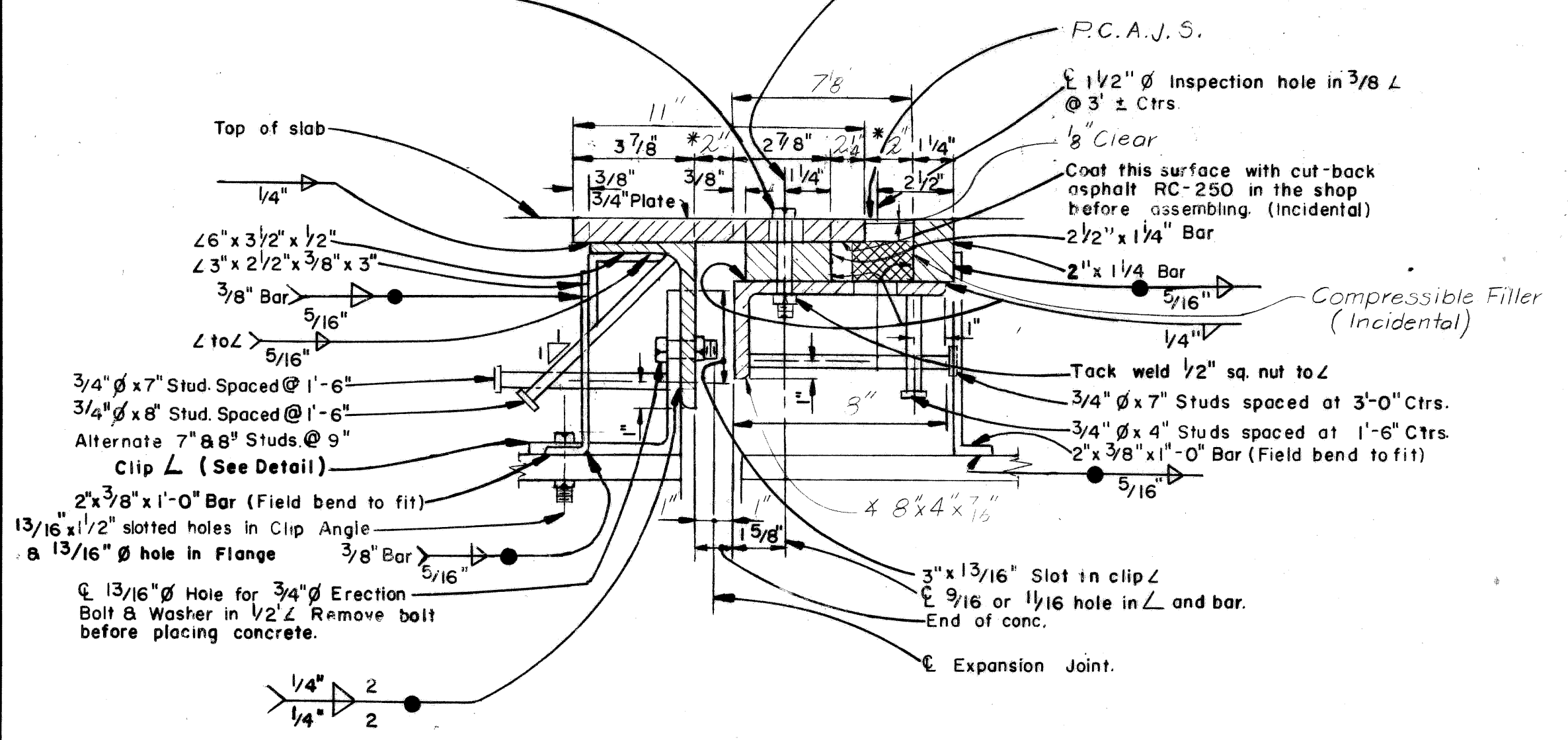


1/2" or 5/8" Bolt with sq head at 2'-0" ± Ctrs. Bolt to be loosened after 2" x 3/8" x 1'-0" Bars are welded to beam flange to allow for temperature movements and removed after concrete has set. Grease for easy removal. Fill open hole with P.C.A.J.S.

1/16" x 1/2" Slotted hole in 3/4" Plate. (Long dim. parallel to & Bridge)

Note: Weld 4" x 1/4" R only on side from which traffic approaches.

NOTES:
The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.
Two Comp. Polyurethane C.A. Jt. Sealer is included in the Superstructure Quantities on sheet #20.
Weight of Metal Expansion Joints 3540 lbs.
Weight of Metal Expansion Joint is included in Structural Steel weight on sheet 14.
P.C.A.J.S. denotes Two-Component, Polyurethane, Cold Applied Joint Sealer.



SECTION - AA
60° F.

SECTION - CC

SECTION - DD

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT

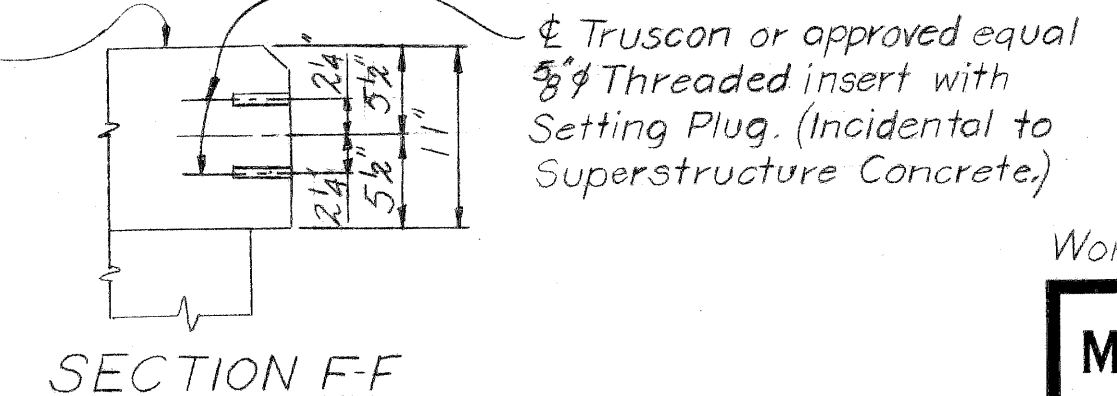
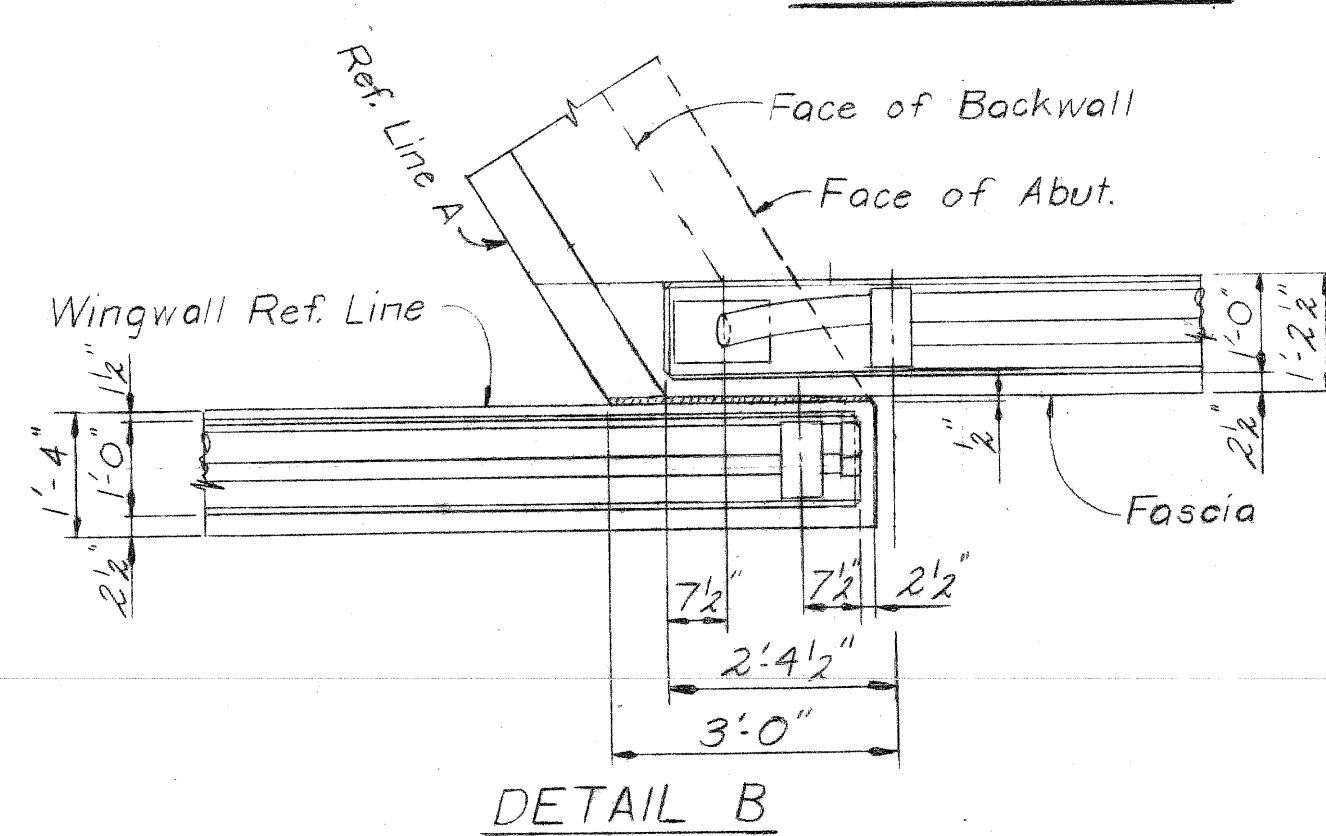
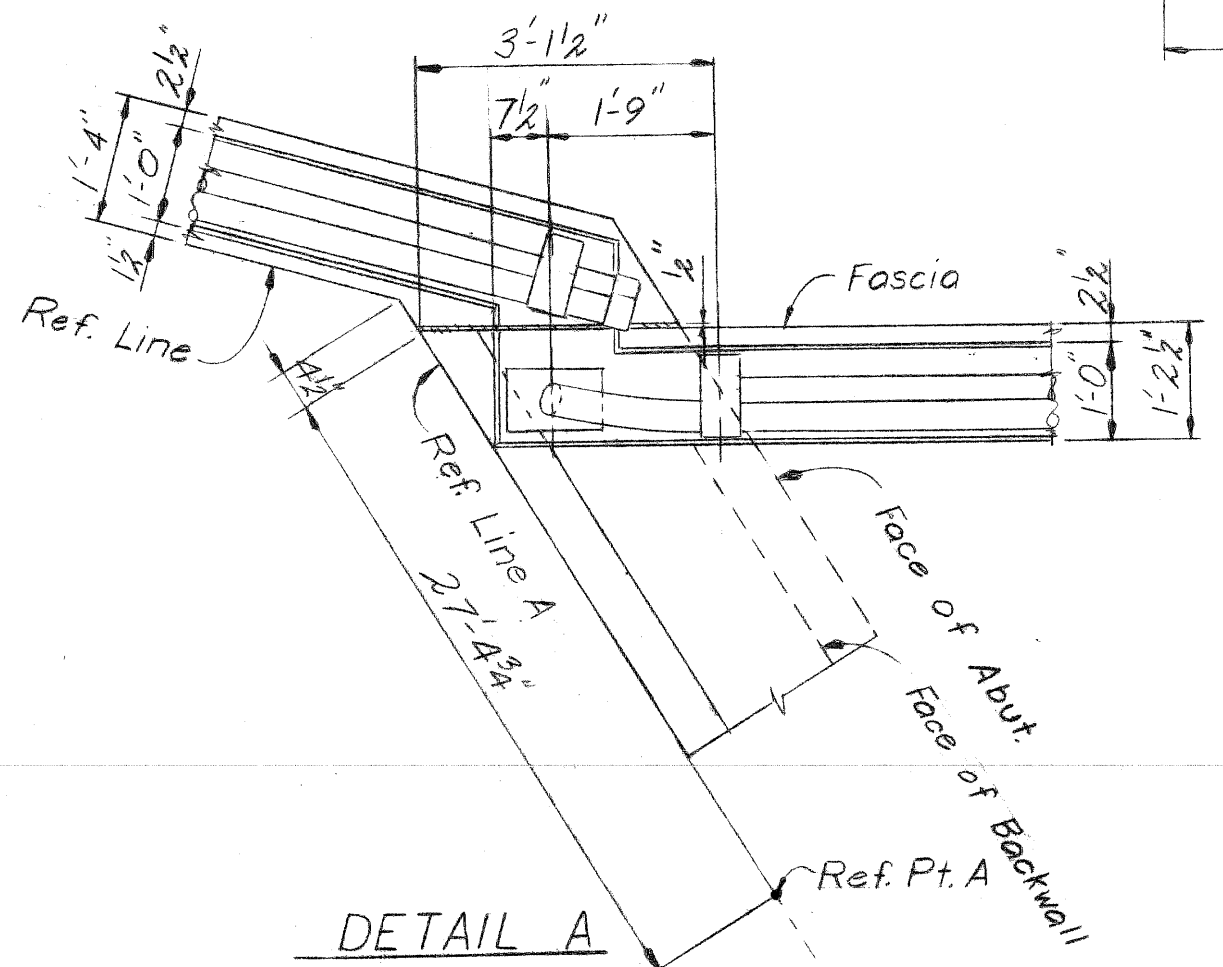
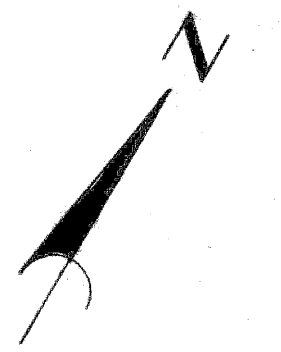
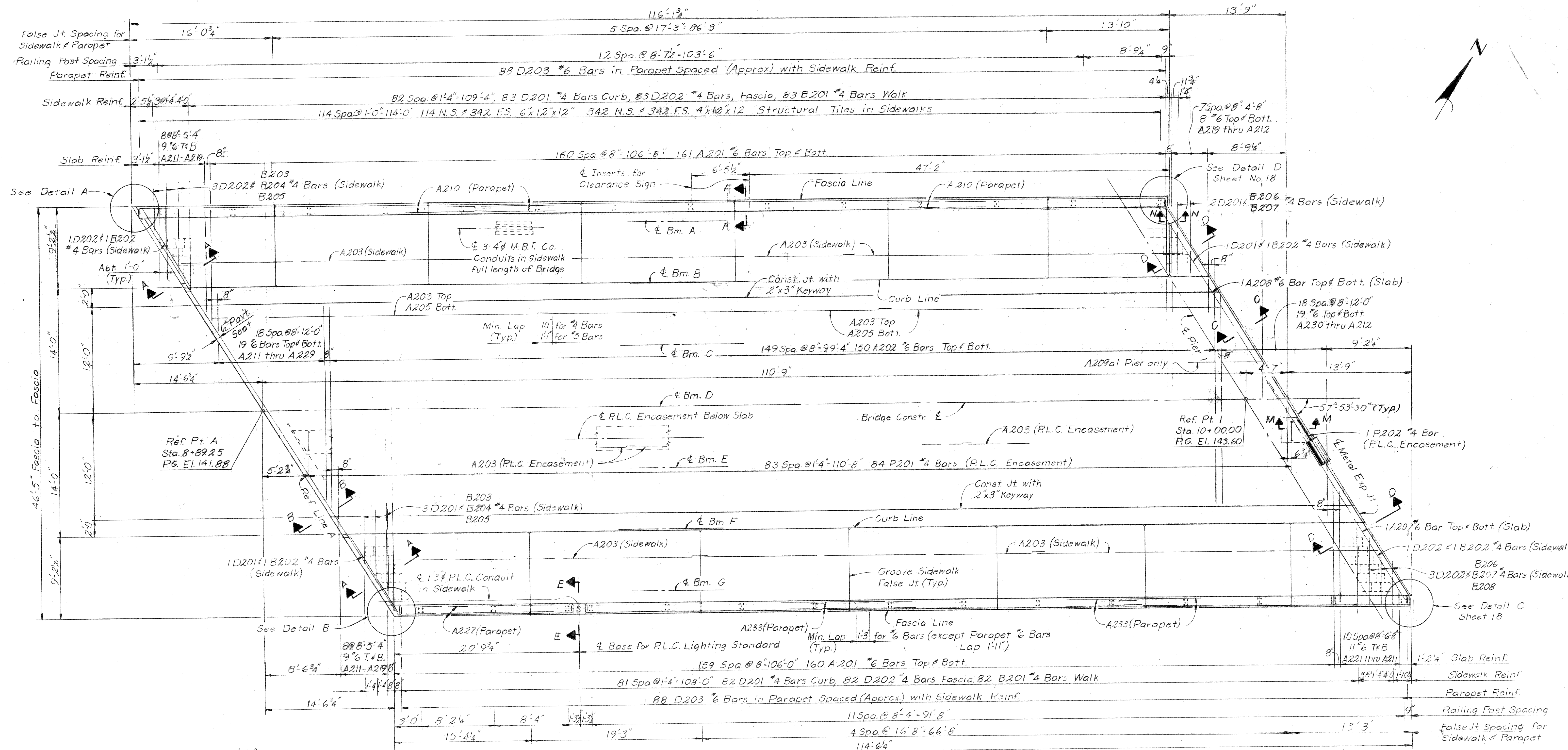
METAL EXPANSION
JOINT DETAILS

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

NO.	DESCRIPTION	DATE	BY

DRWING BY	DATE	NO.
A. Hopkins	1-6-68	12-67
STUB	1-10-67	22

335 of 82125J



PLAN-SPAN I

DETAIL B

DETAIL A

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

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT
SUPERSTRUCTURE DETAILS

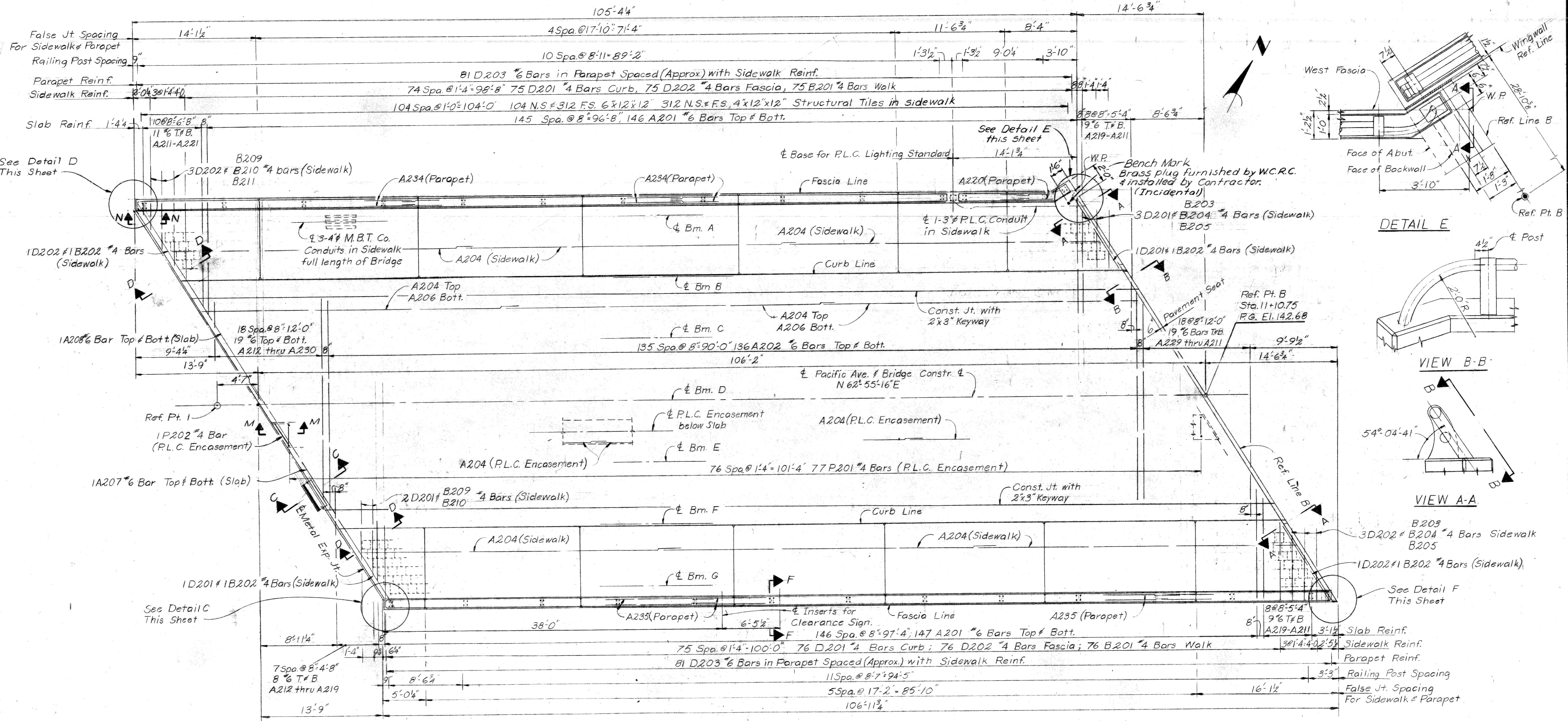
REVISIONS				
NO.	DESCRIPTION	DATE	BY	

JOB No. PW 990(3)

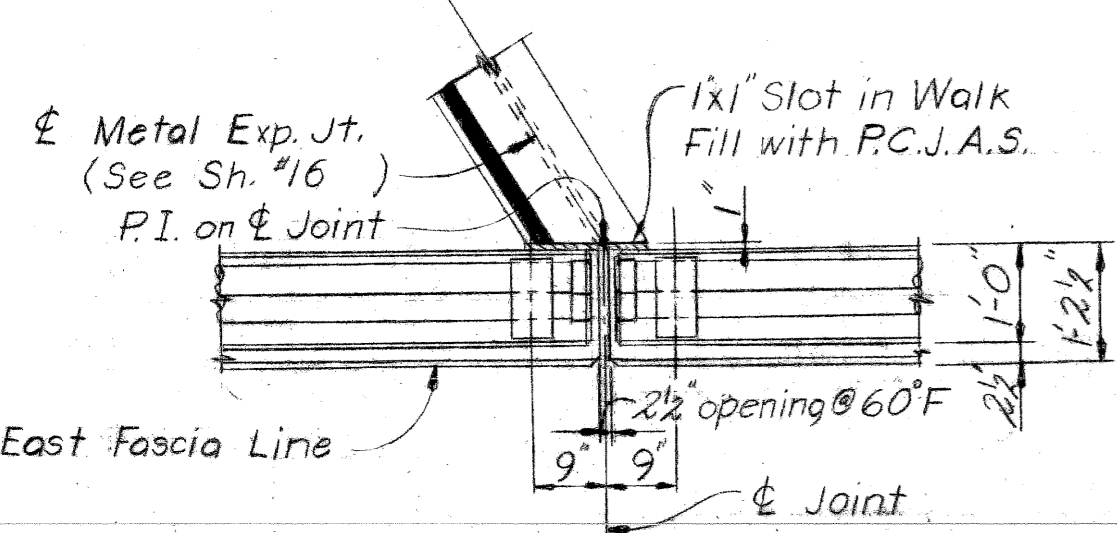
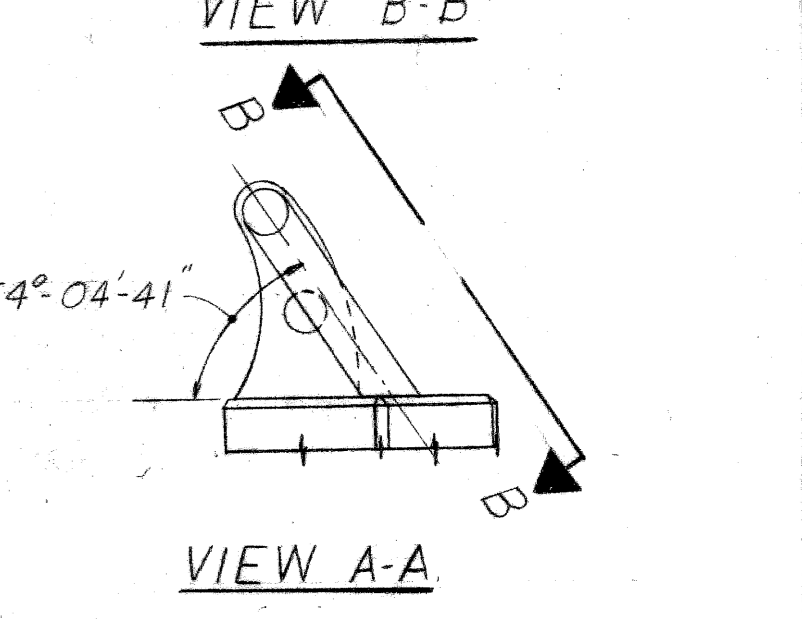
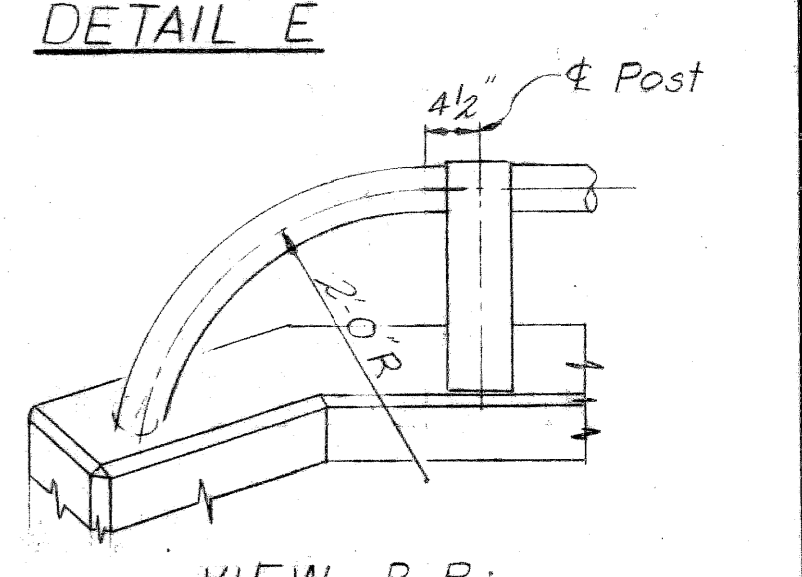
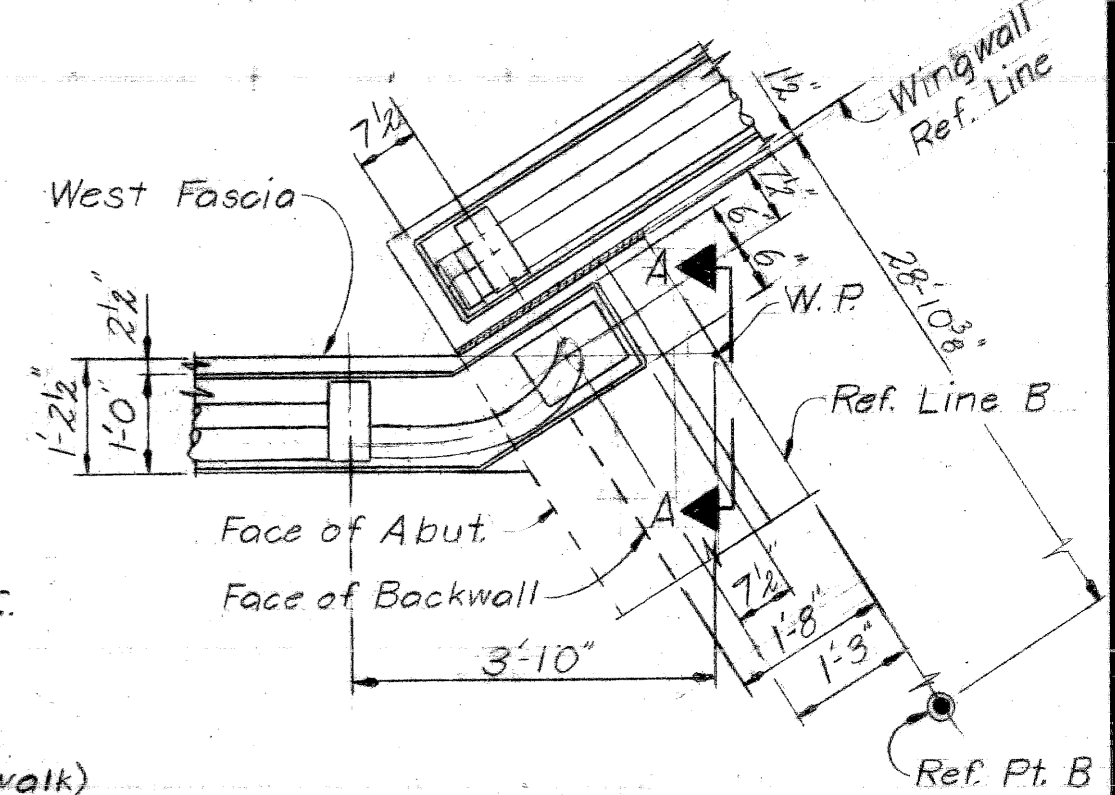
APPROVED: [Signature] STRUCTURAL ENGINEER

Work Sheets 17 thru 21 together

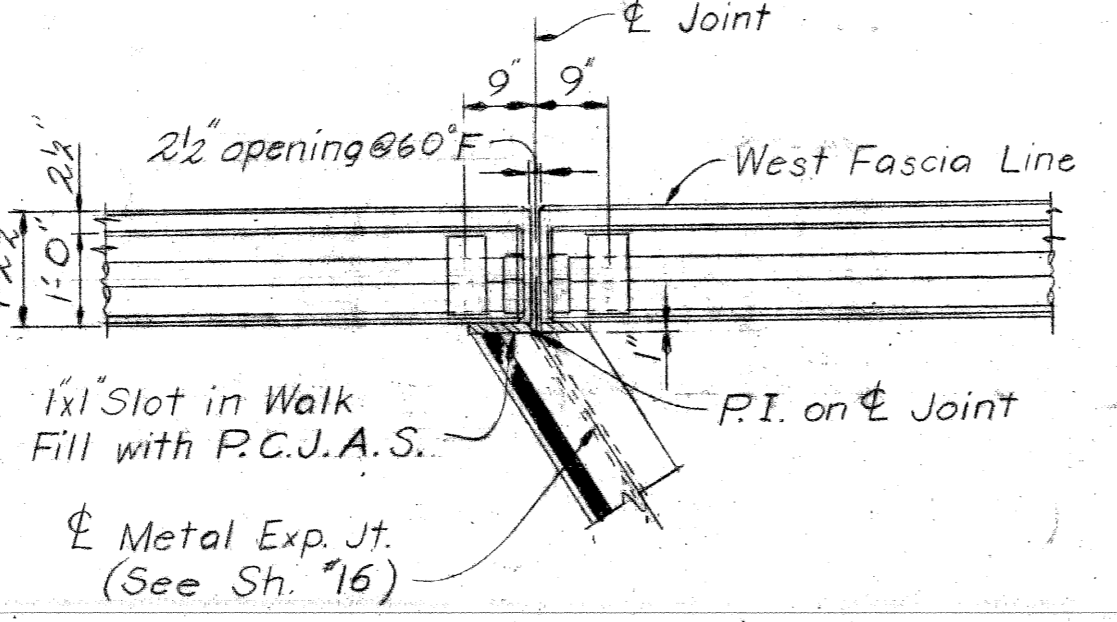
S35 of 82123J



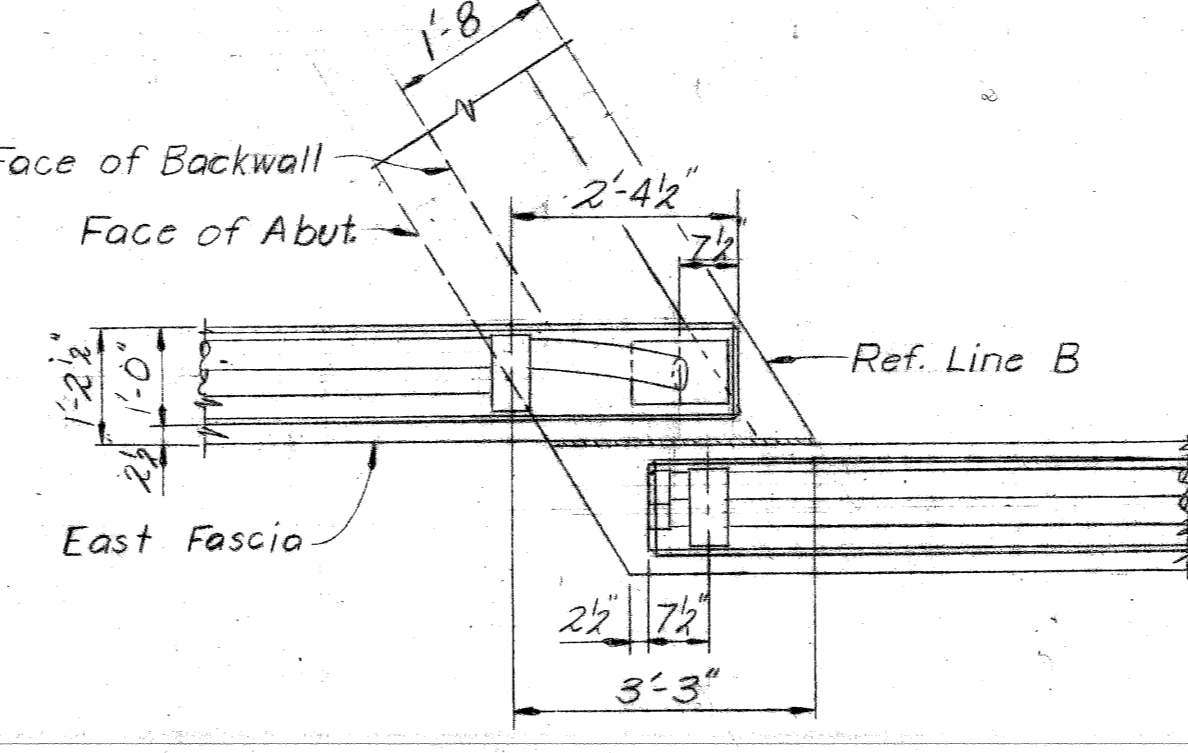
PLAN-SPAN 2



DETAIL C



DETAIL D



DETAIL F

Work Sheets 17 thru 21 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 PACIFIC AVE. OVER JEFFRIES FREEWAY
 IN DETROIT
SUPERSTRUCTURE DETAILS

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

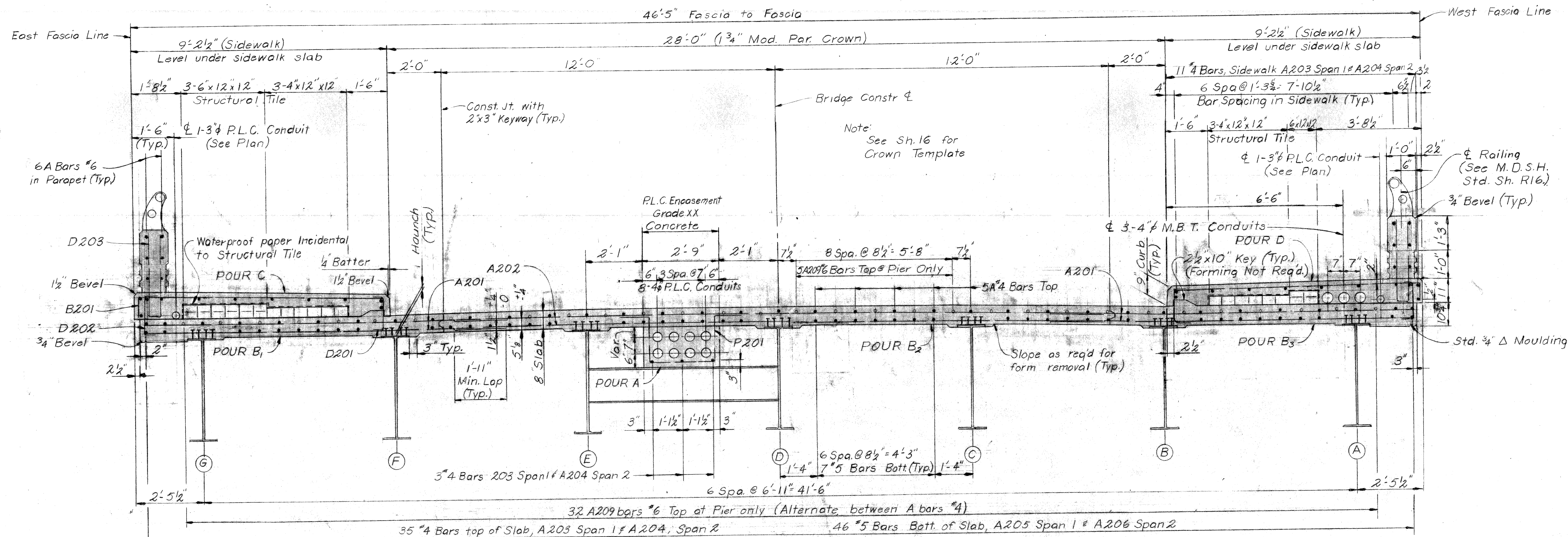
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 STRUCTURAL ENGINEER

JOB No. PW 990(3)

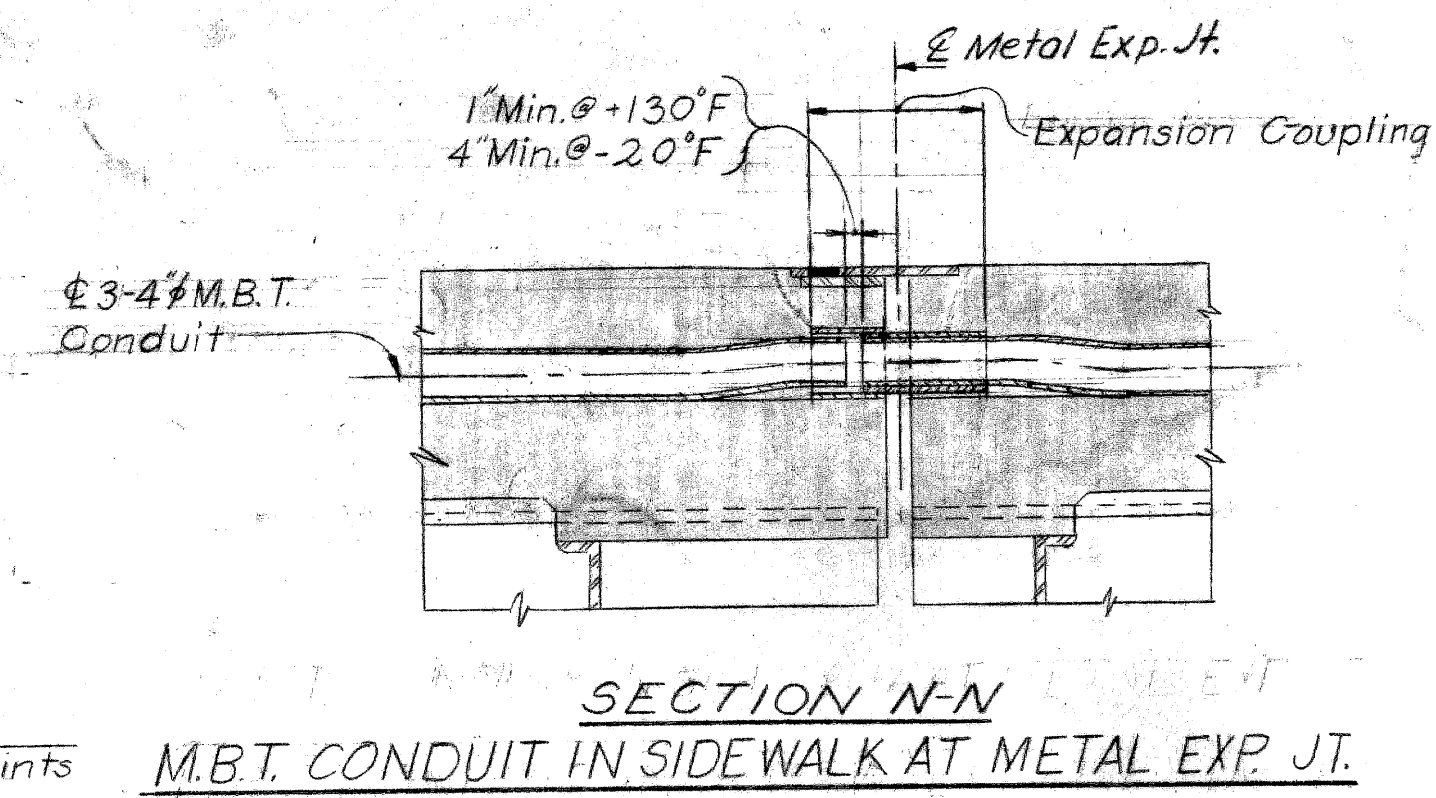
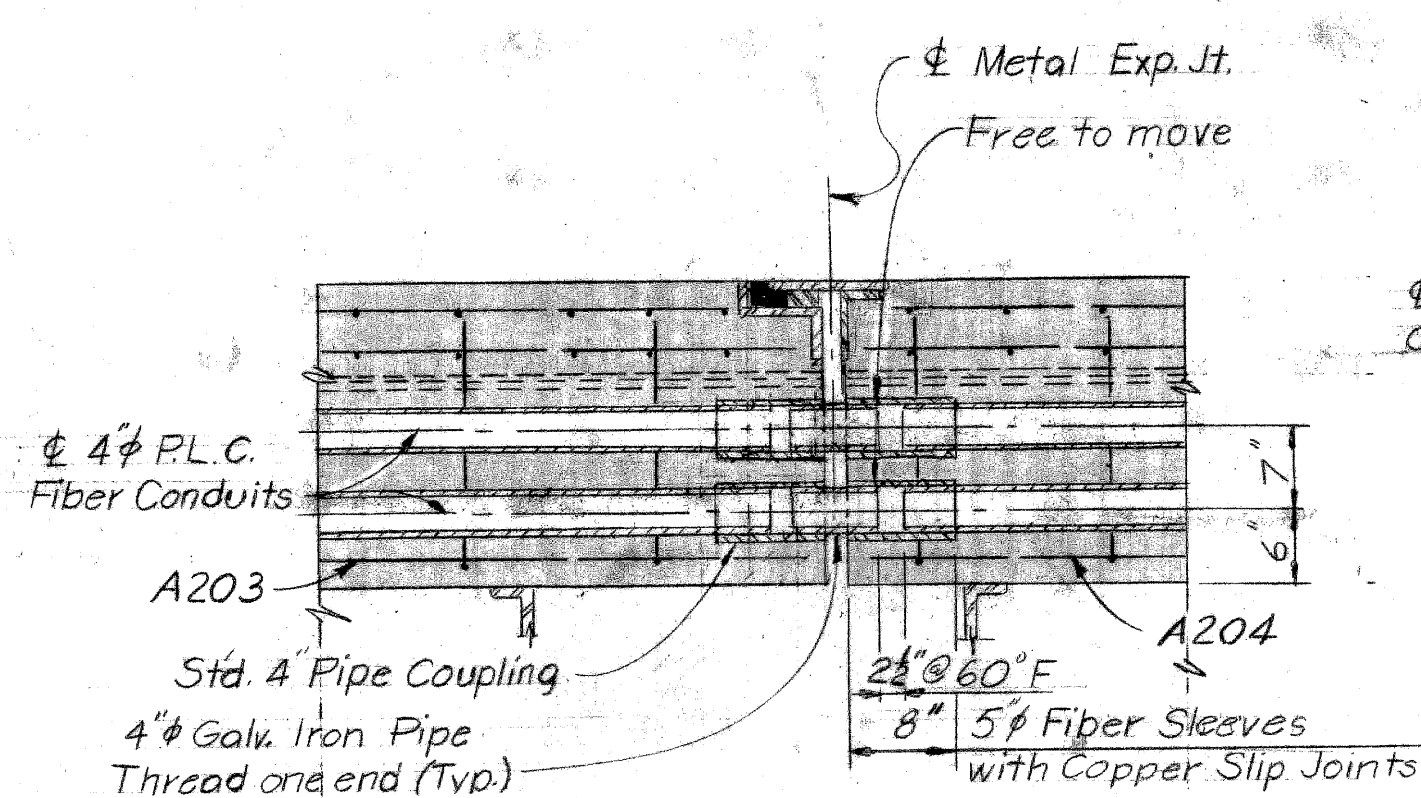
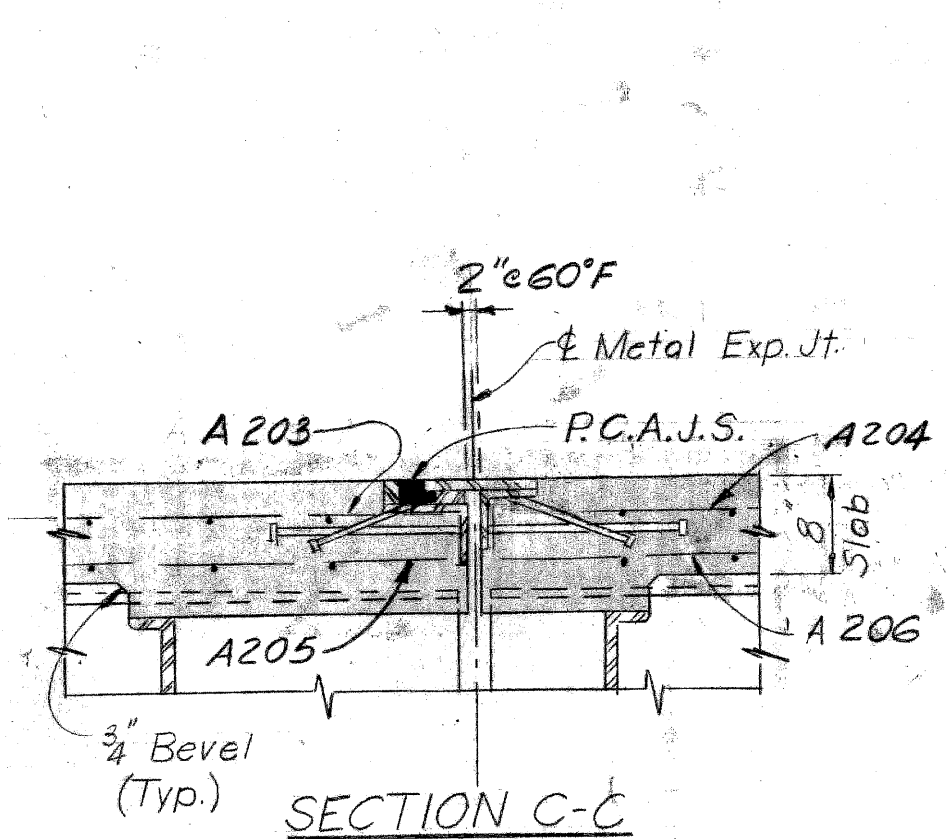
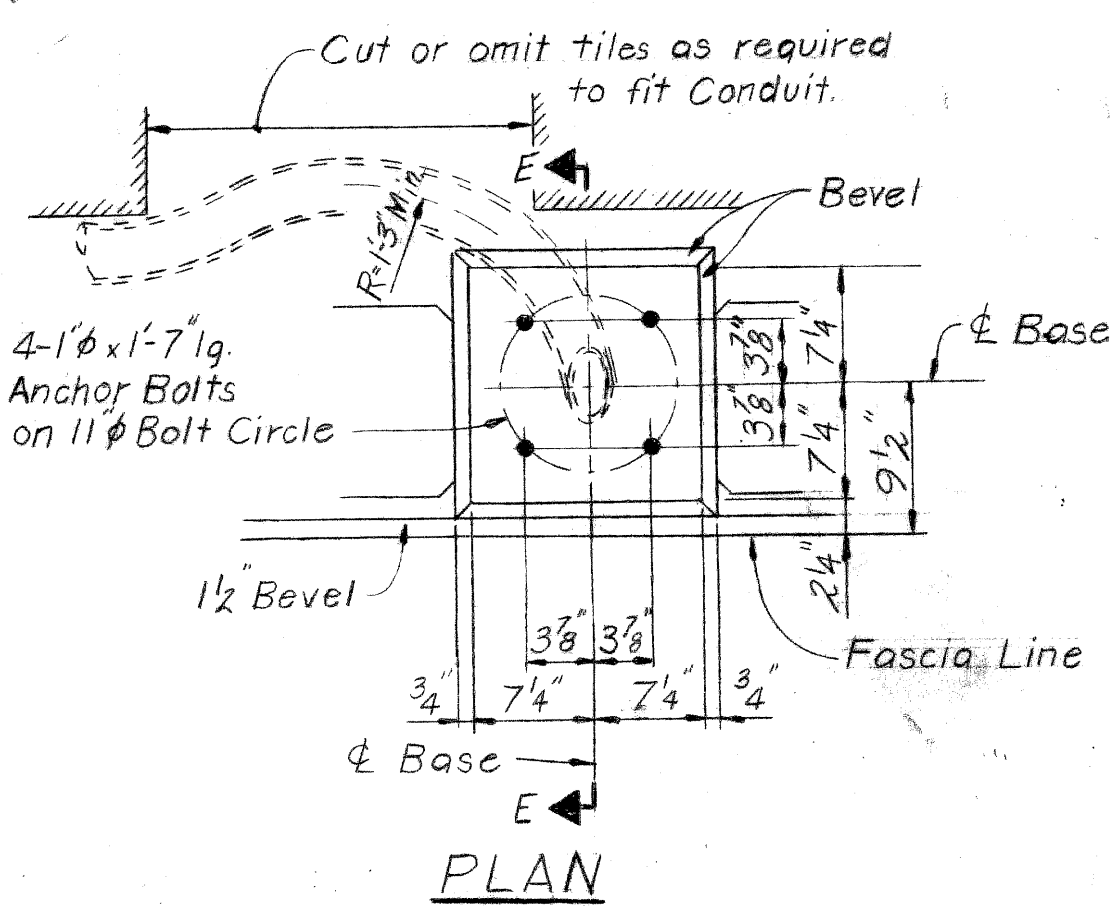
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	STWEN	3-69
DRAWN BY	Z.H.K.	12-68
TRACED BY	Z.H.K.	12-68
CHECKED BY	Z.H.K.	1-69
SHEET	18	OF 22

S35 of 82123J

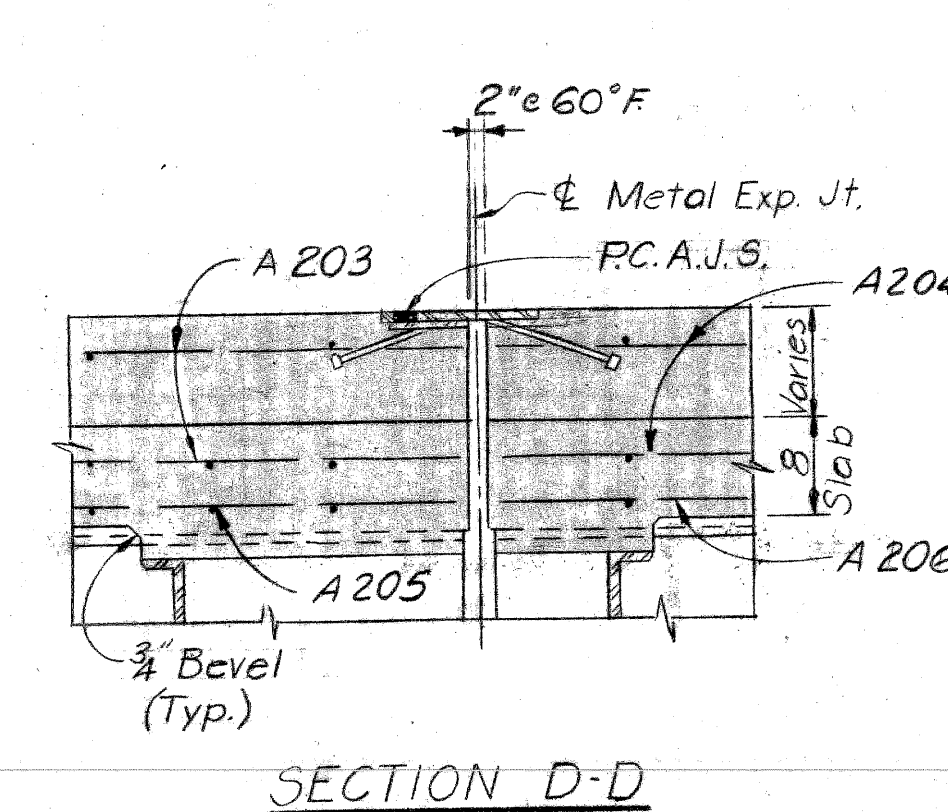
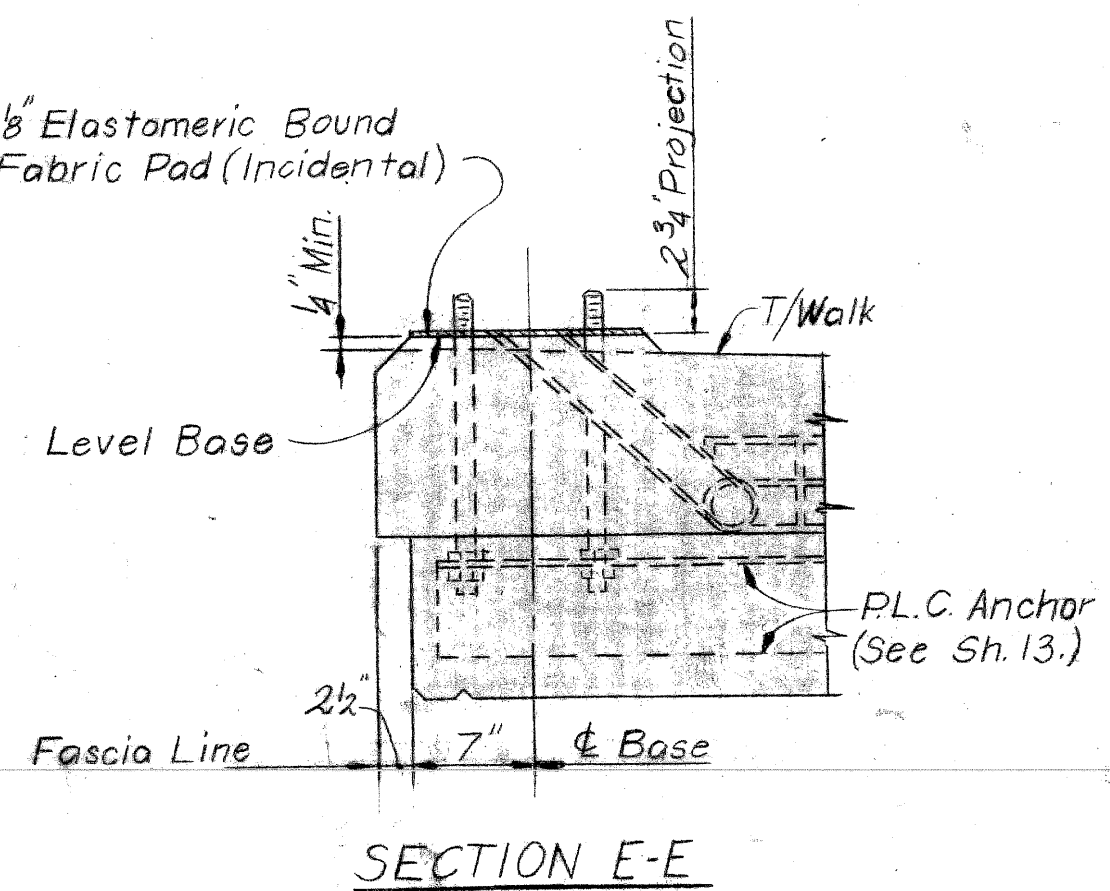


CROSS SECTION



CONCRETE QUANTITIES (Cu. Yds.)				
Pour	Location	Grade	Span 1	Span 2
A	P.L.C. Encasement	XX	14.5	13.3
B ₁	Deck Slab	A(6AA)	37.1	34.4
B ₂	Deck Slab	A(6AA)	81.0	75.1
B ₃	Deck Slab	A(6AA)	37.1	34.4
C	Sidewalk	A(6AA)	21.9	20.2
D	Sidewalk	A(6AA)	25.0	23.0
Total Grade XX Concrete-Superstructure			278	263
Total Grade A(6AA) Concrete-Superstructure			389.2	369.2

NOTES:
Parapet Concrete - 35.0 Cu. Yds. Grade A(6AA), Part of Bridge Railing, Solid Parapet Type and not a pay item.
Alphabetical designation of pours is not to be construed as a pour sequence.
Sidewalk pours shall not be cast until slab concrete has attained at least 50% of its design strength as determined by Section 5.01.05 of the Standard Specifications.



SECTION M-M
P.L.C. CONDUITS BELOW SLAB AT METAL EXP. JT.

Note: Fiber Sleeves, Copper Slip Joints, G.I. Pipe, & pipe couplings are incidental to conduits.

GENERAL NOTES:
J.W.P. denotes Joint Waterproofing.
P.C.A.J.S. denotes Two Component Polyurethane Cold Applied Joint Sealer.
Bridge Railing is to be aluminum tubular railing on solid concrete parapet. For details of bevels, moldings, and Bridge Railing, see Std. Sheet R16.
Edge or groove denotes edging or grooving with an approved tool.
The District Utility Engineer is to be notified five days in advance of the time of installation of the ducts in the sidewalk.
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 centerline of pier. The joint is to be sawed before casting of sidewalk and parapet and is to be filled with Two Comp. Polyurethane C.A. Jt. Sealer (Incidental).
Protective Treatment for Bridge Decks is to be applied to all superstructure concrete surfaces between fascia lines.
For Name Plate location and mounting details see Std. Sheet R16.
P.L.C. denotes Public Lighting Commission.
M.B.T. denotes Michigan Bell Telephone Company.
W.C.R.C. denotes Wayne County Road Commission.

Note: M.B.T. Conduits and Expansion Couplings will be Furnished and Installed by M.B.T. Co.

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

APPROVED: *H. Carver*
STRUCTURAL ENGINEER

JOB No.
PW 990(3)

Work sheets 17-21 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

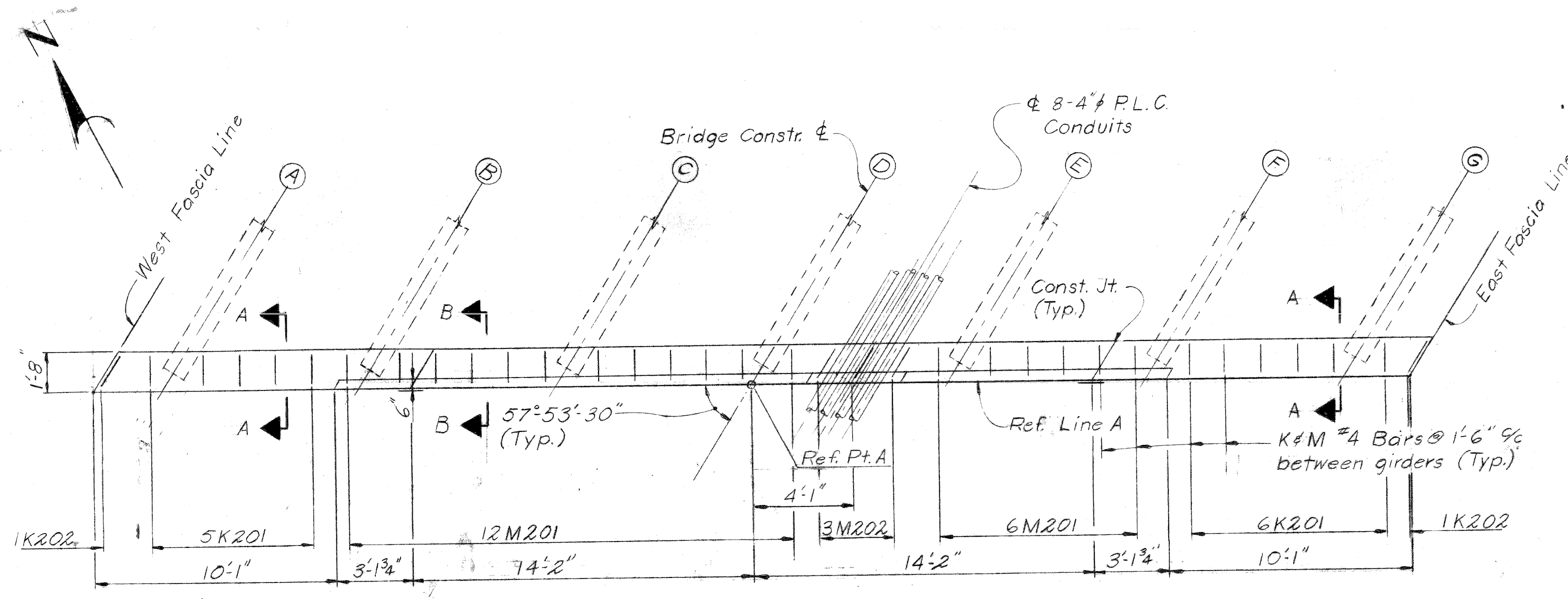
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT

SUPERSTRUCTURE DETAILS

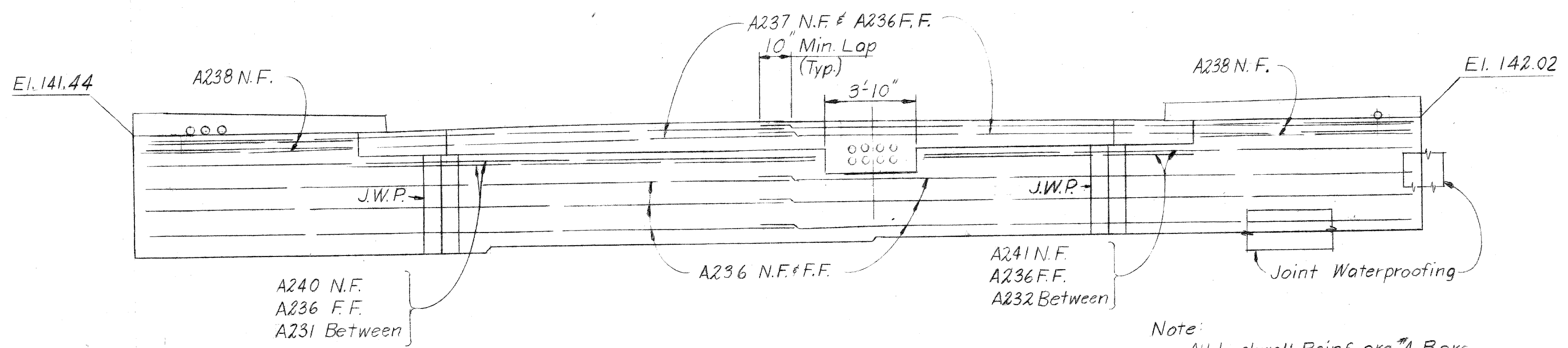
NO.	REVISIONS DESCRIPTION	DATE	BY

CITY OF DETROIT
SQUAD BOSS: *STVEN* 3-6-9
DRAWN BY: *J.H.S.* 12-68
TRACED BY: *E.G.* 12-69
CHECKED BY: *J.H.K.* 1-69
SHEET 19 OF 22

S35 of 82123J

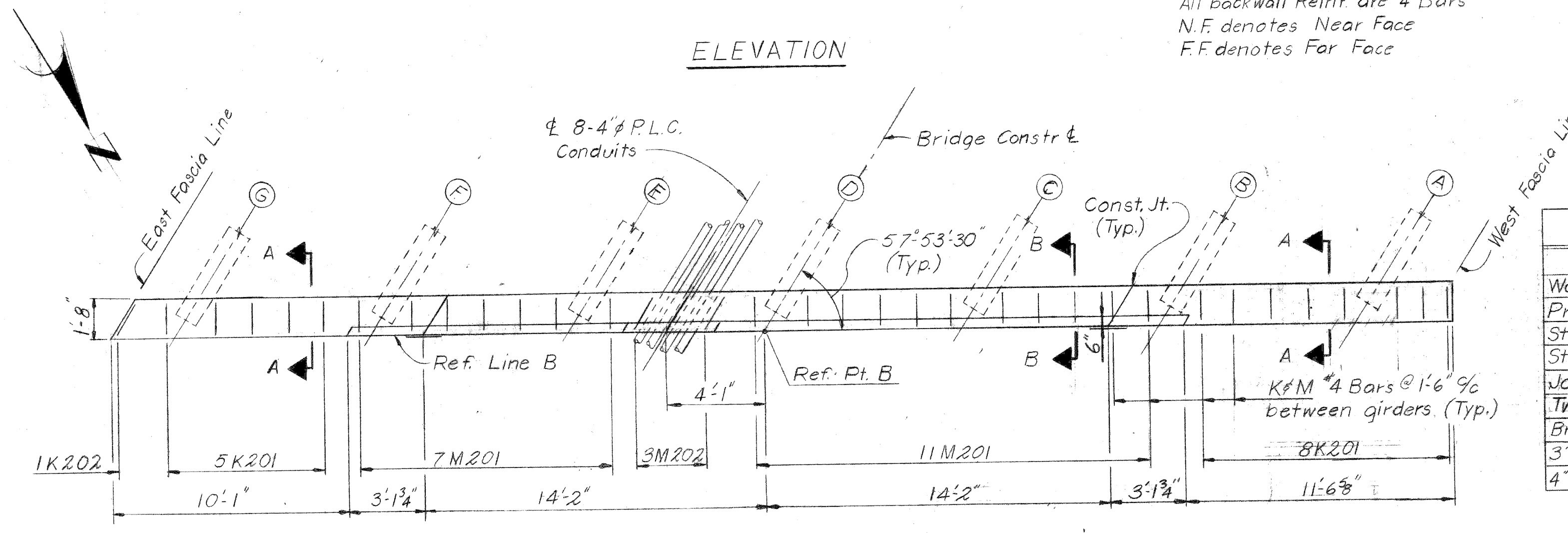


BACKWALL A PLAN

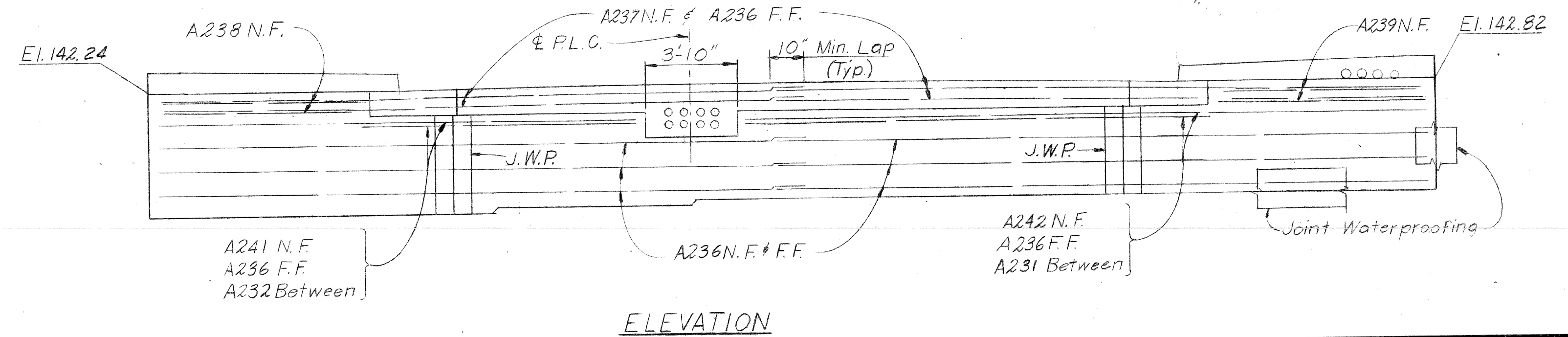


ELEVATION

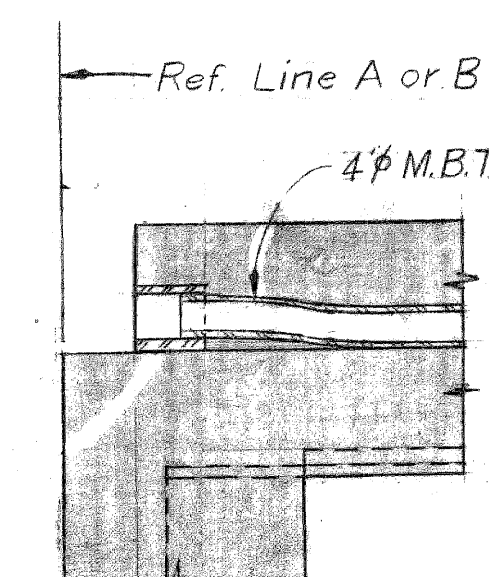
Note:
All backwall Reinf. are #4 Bars
N.F. denotes Near Face
F.F. denotes Far Face



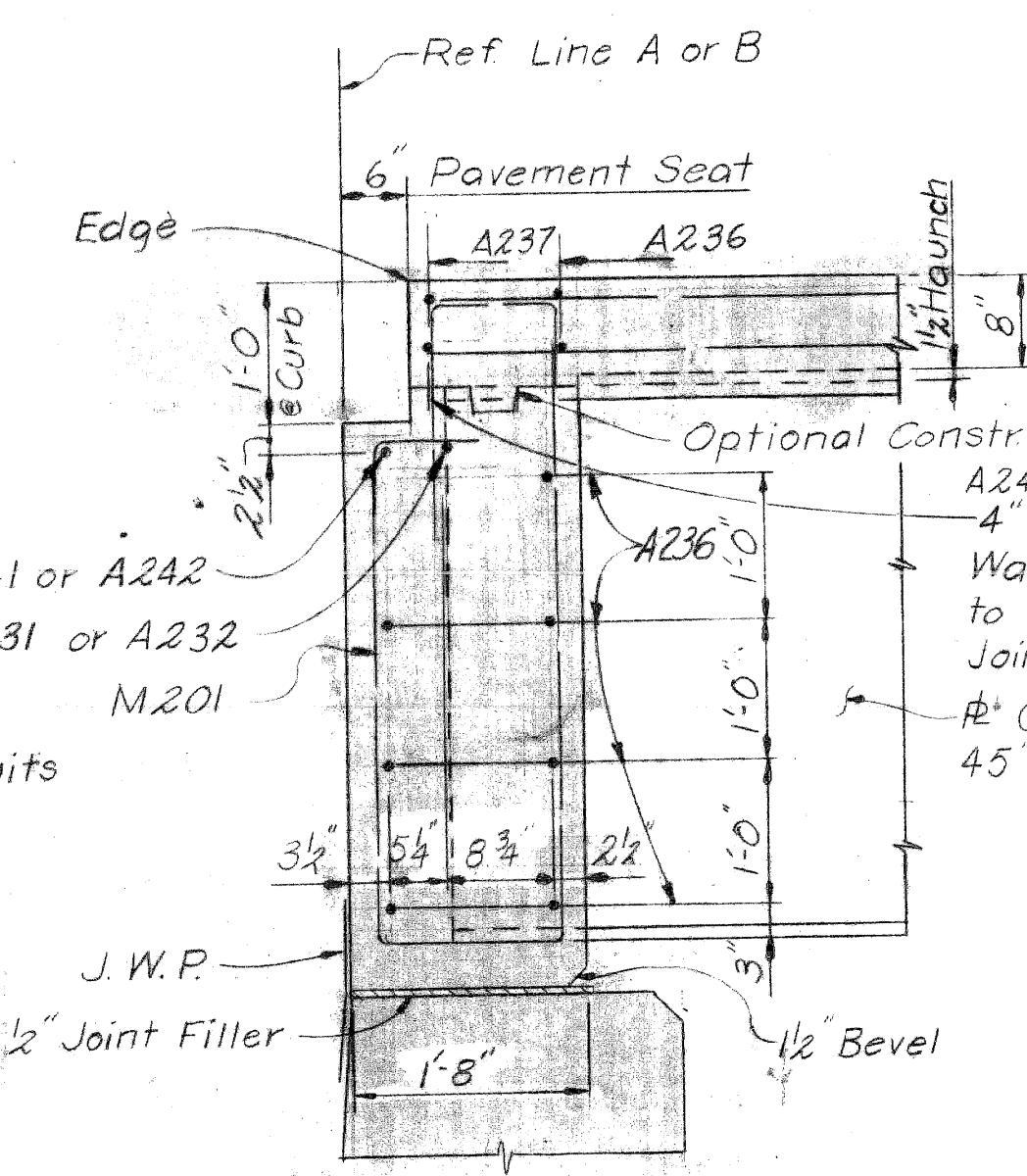
BACKWALL B PLAN



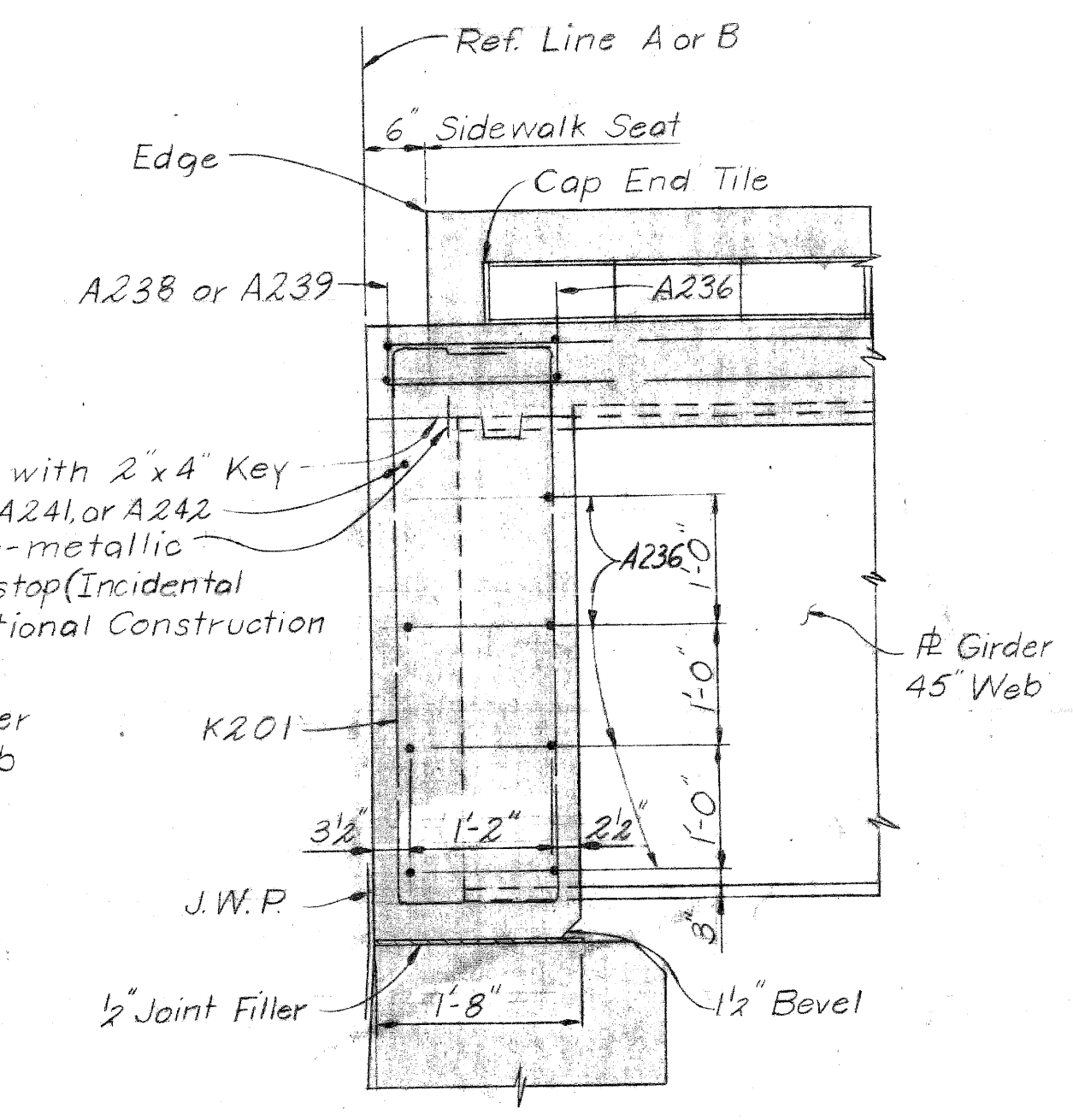
ELEVATION



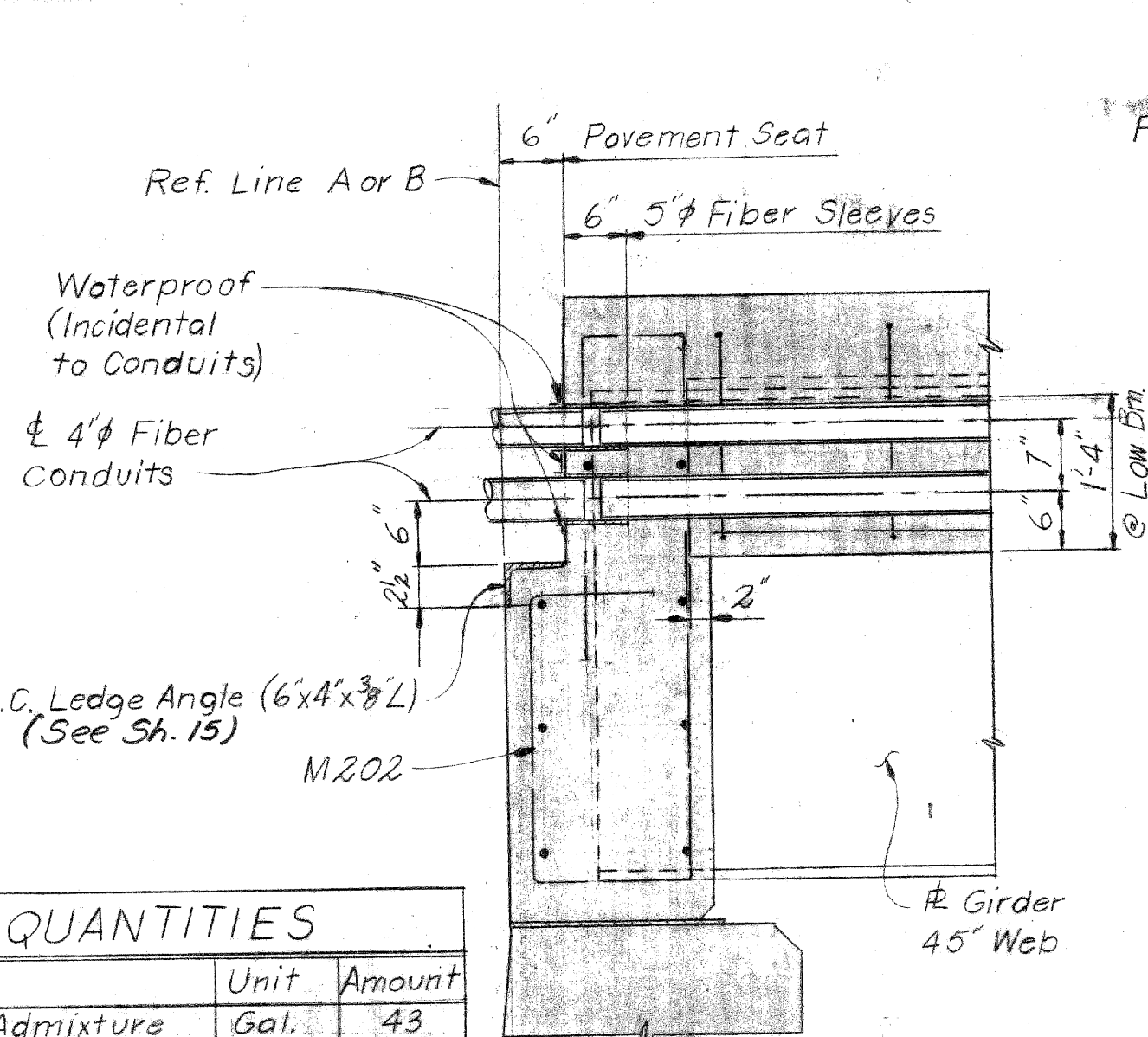
SECTION M.B.T. THRU SIDEWALK



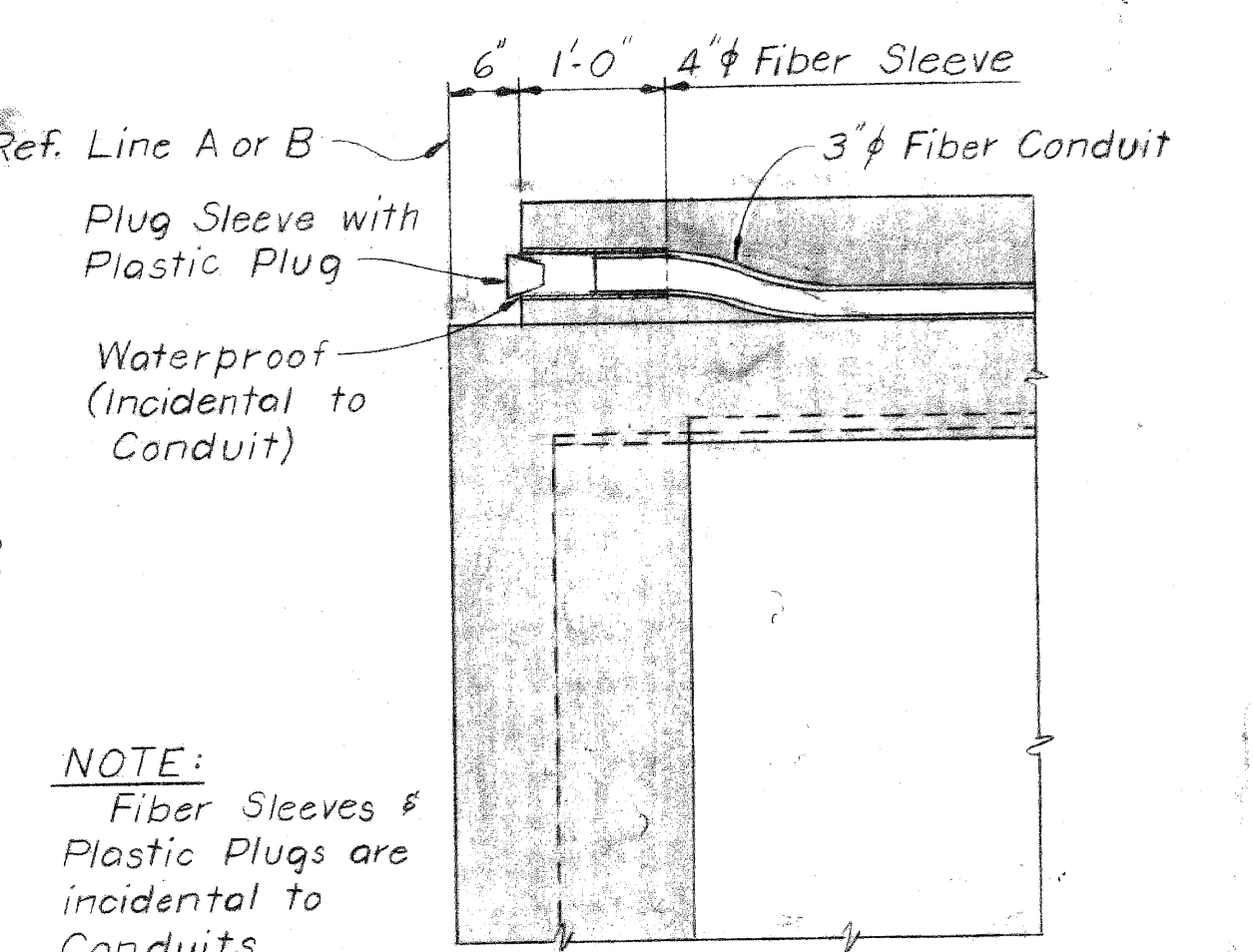
SECTION B-B



SECTION A-A



SECTION P.L.C. BELOW SLAB



SECTION P.L.C. IN SIDEWALK

NOTE:
Fiber Sleeves & Plastic Plugs are incidental to Conduits.

MISCELLANEOUS QUANTITIES		
Item	Unit	Amount
Water-Reducing Retarding Admixture	Gal.	43
Protective Treatment for Bridge Decks	Sq. Ft.	10300
Structural Tile - 4'x12'x12"	Each	1308
Structural Tile - 6'x12'x12"	Each	872
Joint Waterproofing	Sq. Ft.	214
Two Comp. Polyurethane C. A. Jt. Sealer	Lin. Ft.	55
Bridge Railing - Solid Parapet Type	Lin. Ft.	436.6
3" Conduits	Lin. Ft.	36
4" Conduits	Lin. Ft.	1772

Work Sheets 17 thru 21 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT
SUPERSTRUCTURE DETAILS

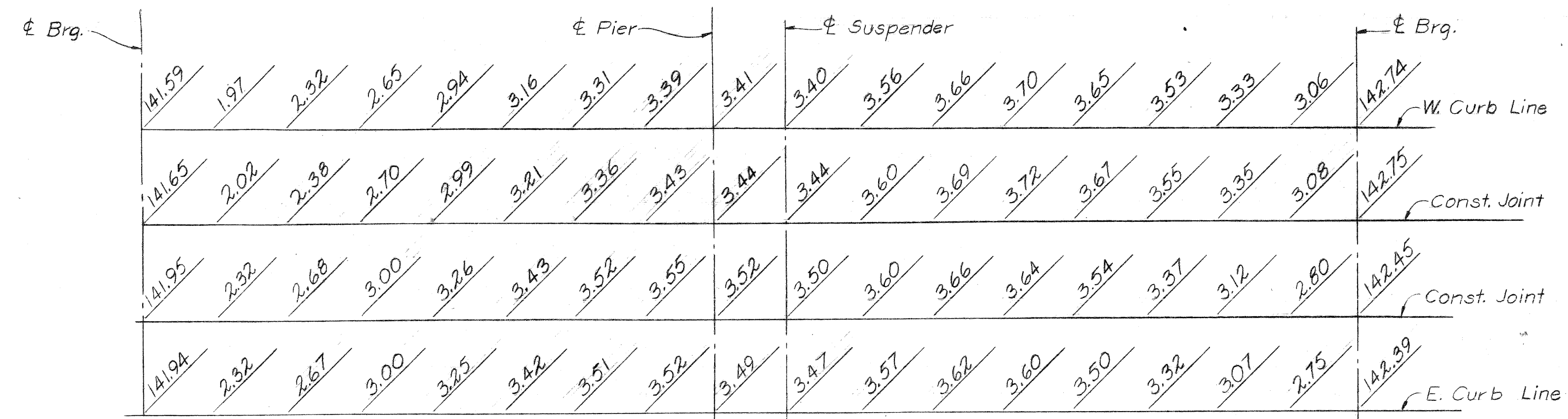
PLANS PREPARED BY
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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

JOB No.
PW 990(3)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS		
NO.	NAME	DATE

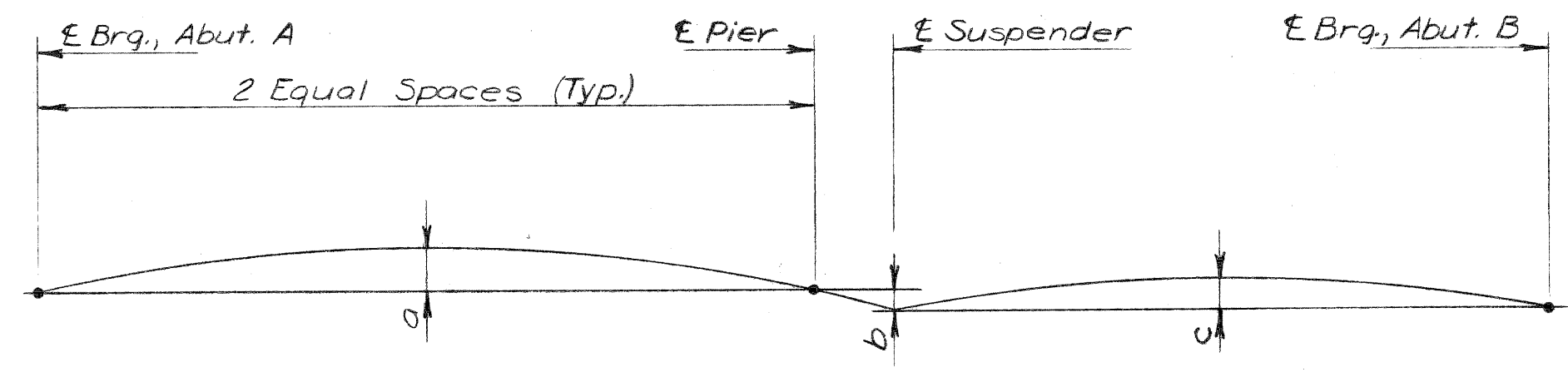
CHECKED BY: J.H.K. 1-69
SHEET 20 OF 22
S35 of 82123J



SCREED ELEVATIONS
For Loading Case II

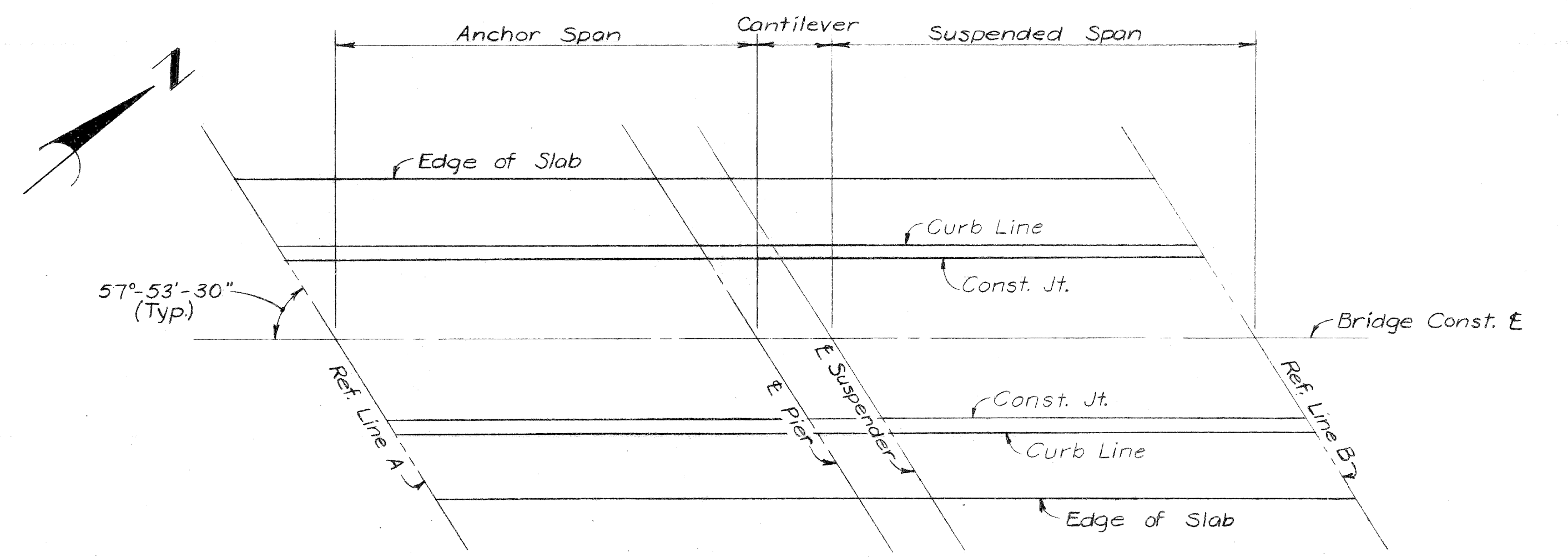


BOTTOM OF SLAB
ELEVATIONS
For Loading Case I

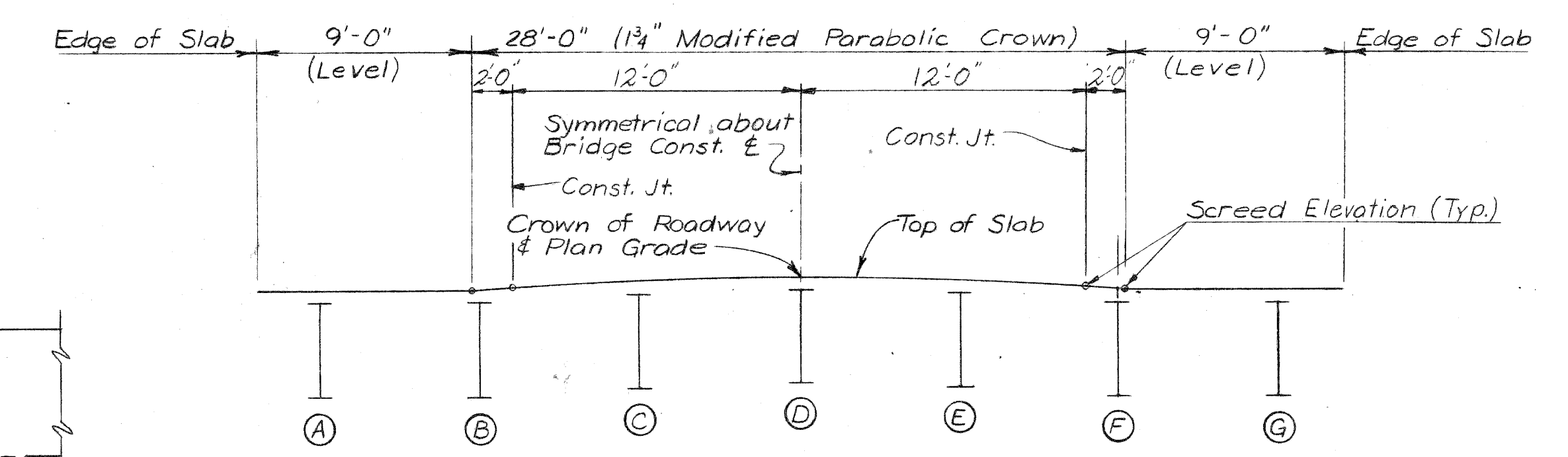


CAMBER DIAGRAM
(For Loading Cases Shown in Table)

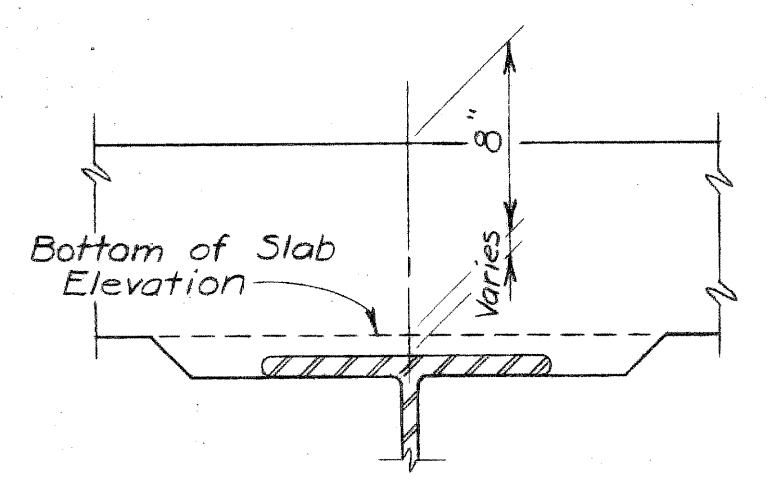
Camber Dim'n	CAMBER ORDINATES (inches)																				
	"a"							"b"							"c"						
	Beam	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F	G	
I	4 7/8	5 1/2	5 3/8	6 1/4	7	6 3/4	6 1/2	3 1/4	3 1/2	3 3/4	4 1/4	4 1/2	4 3/4	1 1/8	1 1/4	1 1/2	1 3/4	2 1/8	2 1/4	2 1/2	
II	4 1/2	5	5 1/8	5 3/4	6 1/2	6 1/4	6 1/8	3 1/4	3 1/2	3 3/4	4 1/4	4 1/2	4 3/4	1 1/8	1 1/4	1 1/2	1 3/4	2 1/8	2 1/4	2 1/2	
III	2 3/4	3	3 1/8	3 3/4	4 1/2	4 1/4	4 1/8	1 1/2	1 3/4	2 1/8	2 1/4	2 1/2	2 3/4	1 1/8	1 1/4	1 1/2	1 3/4	2 1/8	2 1/4	2 1/2	



PLAN OF SLAB



SCREED TEMPLATE



TYPICAL SECTION
AT EACH BEAM

- NOTES:**
- Use Transverse strike-off finishing machine in placing slab concrete.
 - Pour suspended span before pouring anchor span.
 - Screeds affected by loads in other span shall be set to elevations shown before pouring any concrete.
 - Elevations and cambers shown include allowances for deflections due to the weight of the structural steel, weight of forms, steel reinforcement, P.L.C. Encasement, slab concrete, sidewalk and railing. The loading cases are as follows:
 - Case I - All structural steel erected and no other load applied.
 - Case II - Forms, steel reinforcement and P.L.C. encasement in place on structural steel and no other load applied.
 - Case III - Steel reinforcement, P.L.C. encasement and slab concrete in place on structural steel and no other load applied.

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(3)

Work Sheets 17 thru 21 together

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
PACIFIC AVE. OVER JEFFRIES FREEWAY
IN DETROIT

SUPERSTRUCTURE DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
SQUAD BOSS: *SZL* 3-69
DRAWN BY: *A. Marten* 12-68
CHECKED BY: *J.H.K.* 1-69
SHEET 21 OF 22

\$35 of 82123J

ABUTMENTS

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A1								#6	31'-6"	8	379
A2								#6	28'-0"	14	589
A3								#8	10'-6"	39	1093
A4								#9	7'-0"	51	1214
A5								#6	6'-6"	107	1045
A6								#6	4'-6"	79	534
A7								#6	7'-9"	75	873
A8								#7	10'-3"	45	943
A9								#7	6'-3"	37	473
A10								#6	13'-6"	72	1460
A11								#6	10'-9"	38	614
A12								#6	10'-0"	120	1802
A13								#6	17'-6"	25	657
A14								#6	8'-6"	48	613
A15								#8	5'-3"	9	126
A16								#6	5'-9"	84	725
A17								#6	9'-6"	20	285
A18								#6	19'-0"	20	571
A19								#7	15'-3"	7	218
A20								#10	10'-9"	7	324
A21								#6	14'-6"	12	261
A22								#6	10'-0"	20	300
A23								#8	5'-9"	8	123
A24								#4	9'-6"	31	197
A25								#8	6'-9"	63	1135
A26								#10	11'-0"	7	331
A27								#6	18'-9"	18	507
A28								#4	7'-0"	27	126
A29								#4	10'-3"	5	34
A30								#4	4'-6"	36	108
A31								#6	5'-3"	143	1128
A32								#4	16'-6"	28	309
A33								#4	19'-9"	76	1003
A34								#4	18'-0"	10	120
A35								#4	11'-6"	46	353
A36								#4	8'-6"	9	51
A37								#6	11'-6"	52	898
A38								#7	7'-6"	8	123
A39								#4	13'-3"	54	478
A40								#6	6'-0"	102	919
A41								#6	4'-0"	21	126
A42								#6	11'-3"	28	473
A43								#6	3'-9"	33	186
A44								#6	4'-6"	12	81
A45								#6	6'-6"	12	117
A46								#6	7'-6"	5	90
A47								#6	14'-3"	32	685
A48								#9	10'-3"	11	383
A49								#9	9'-0"	36	1193
A50								#4	17'-0"	26	295
A51								#4	15'-6"	42	435
A52								#6	18'-0"	12	324
A53								#6	15'-3"	26	596
A54								#6	13'-0"	12	234
A55								#4	3'-9"	12	30
A56								#6	29'-9"	20	894
A57								#6	9'-0"	8	108
A58								#6	8'-0"	26	312
A59								#6	5'-6"	37	306
A60								#6	10'-6"	10	158
A61								#7	10'-6"	10	215
A62								#6	12'-0"	27	487
A63								#8	8'-3"	7	154
A64								#7	13'-3"	6	162
A65								#6	18'-3"	38	1042
A66								#9	9'-0"	6	184
A67								#7	13'-9"	6	169
A68								#6	5'-0"	7	53
A69								#6	12'-6"	37	695
B1	2'-0"	1'-6"						#6	4'-3"	10	64
C1	1'-7"	4'-10"	1'-6"	10 1/2"	1'-7 1/2"	9 1/2"	1'-9 1/2"	#6	8'-3"	10	124
C2	1'-2"	4'-0 1/2"	1'-1"	1'-2 1/4"	1'-7 1/4"	1'-1 1/4"	1'-7 1/4"	#6	7'-3"	10	109
C3	1'-6 1/2"	5'-0"	1'-6 1/2"	7"	1'-7 1/2"	7"	1'-7 1/2"	#6	8'-3"	9	112
C4	10 1/2"	3'-3 1/2"	7 1/4"	1'-5 1/8"	1'-7 1/4"	1'-4 1/8"	1'-7 1/4"	#6	6'-6"	9	88

Total Abutments 34839 Lbs.

PIER

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A100								#11	26'-3"	28	3905
A101								#10	18'-6"	21	1672
A102								#6	8'-6"	97	1238
A103								#6	25'-0"	4	150
A104								#11	10'-6"	64	3570
A105								#11	9'-0"	64	3080
A106								#7	27'-0"	7	386
A107								#7	20'-6"	7	293
A108								#6	21'-9"	8	261
A109								#6	24'-9"	22	818
A110								#8	25'-0"	14	935
D100	3'-0 1/2"	3'-0"						#5	9'-0"	14	131
E100	5'-6"	1'-5"	2'-0 1/2"	2'-6"				#4	8'-0"	62	331
K100	3'-2 3/8"	1'-6 1/2"	1'-6 3/8"	2'-0 3/8"				#5	11'-6"	114	1367
K101	7'-8 3/8"	2'-1 1/8"	2'-1 1/4"	3'-2 3/8"				#5	22'-9"	31	736
U100	2'-9"	1'-8 1/2"	4'-4"	1'-4 1/2"				#5	7'-9"	6	48
V100	7'-11"	10"						#4	8'-9"	32	187
Total Pier 19083 Lbs.											
A501								#4	2'-6"	22	37
A502								#4	2'-0"	8	11
E501	12'-9"	1'-7 1/2"	7 1/2"	1'-9"				#4	14'-6"	12	116
E502	14'-3"	1'-11"	8"	2'-0"				#4	16'-3"	4	43
Not a pay item Total Steps 207 Lbs.											
D1	2'-6 1/2"	6 1/4"						#6	5'-6"	110	909
E1	2'-3"	2'-9"	1'-9"	3'-3"				#6	5'-6"	10	83
E2	2'-9"	1'-0 1/2"	1'-1"	1'-6 1/2"				#6	4'-3"	9	57
G1	10 1/2"	1'-5"	2'-3"	1'-2"	1'-11"			#6	4'-9"	9	64
Total Abutments 34839 Lbs.											

SUPERSTRUCTURE

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A201								#6	13'-0"	1228	23978
A202								#6	23'-6"	572	20190
A203								#4	38'-9"	180	4659
A204								#4	35'-9"	180	4299
A205								#5	39'-0"	138	5613
A206								#5	36'-0"	138	5182
A207								#6	30'-0"	4	180
A208								#6	26'-6"	4	159
A209								#6	8'-0"	32	385
A210								#6	39'-3"	18	1061
A211								#6	2'-3"	16	54
A212								#6	3'-3"	24	117
A213								#6	4'-4"	24	156
A214								#6	5'-5"	24	195
A215								#6	6'-6"	24	234
A216								#6	7'-6"	24	270
A217								#6	8'-7"	24	309
A218								#6	9'-8"	24	348
A219								#6	10'-9"	24	388
A220								#6	11'-9"	18	318
A221								#6	12'-10"	12	231
A222								#6	13'-11"	8	167
A223								#6	15'-0"	8	180
A224								#6	16'-0"	8	192
A225								#6	17'-1"	8	205
A226								#6	18'-2"	8	218
A227								#6	19'-3"	14	405
A228								#6	20'-3"	8	243
A229								#6	21'-4"	8	256
A230								#6	22'-5"	4	135
A231								#4	20'-3"	2	27
A232								#4	18'-0"	2	16
A233								#6	31'-9"	18	858
A234								#6	31'-0"	18	838
A235								#6	36'-3"	18	980
A236								#4	28'-3"	36	679
A237								#4	19'-8"	8	103
A238								#4	9'-9"	6	39
A239								#4	11'-0"	2	15
A240								#4	29'-3"	1	20
A241								#4	21'-0"	2	28
A242								#4	30'-3"	1	20
B201	8'-10 1/2"	8"						#4	9'-6"	316	2005
B202	10'-4 1/2"	8"						#4	11'-0"	8	59
B203	2'-4 1/2"	8"						#4	3'-0"	4	8
B204	4'-6 1/2"	8"						#4	5'-2"	4	14
B205	6'-7 1/2"	8"						#4	7'-3"	4	19
B206	3'-7 1/2"	8"						#4	4'-3"	2	6
B207	5'-9 1/2"	8"						#4	6'-5"	2	9
B208	7'-10 1/2"	8"						#4	8'-6"	1	6
B209	3'-10 1/2"	8"						#4	4'-6"	2	6
B210	6'-0 1/2"	8"						#4	6'-8"	2	9
B211	8'-1 1/2"	8"						#4	8'-9"	1	6
D201	6"	1'-2"						#4	2'-1"	330	459
D202	6"	1'-4"						#4	2'-3"	332	499
D203	2'-11 1/8"	6 1/4"						#6	6'-3"	338	3173
K201	4'-6"	1'-0"	1'-0 1/2"	1'-3 1/2"				#4	12'-3"	24	196
K202	4'-6"	1'-3"	1'-0 3/8"	1'-6 3/8"				#4	12'-9"</		