

- LEGEND**
- Tree
 - Fence
 - R.L.C. Manhole
 - Sewer Manhole
 - ⊕ Water Gatewell & Valve
 - ⊙ D.E. Manhole
 - ⊗ P.L.C. Lightpole
 - ⊙ Sewer Inlet or Catch Basin

GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge. All other work is included in the Road Plans which are a part of this contract. Any fence existing at time of this contract will be removed as part of this contract. Datum refers to City of Detroit datum. Fullerton traffic is to be maintained over the temporary road. (See Road Plans)

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

Note
 ● THJ - Denotes Test Hole Location.
 See Sheets 2 & 3 for Log of Soil Boring

SURVEY PLAN
 Scale: 1"=40'

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

APPROVED: *H. Coont*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(18)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FULLERTON AVE. CROSSING THE
 JEFFRIES FREEWAY IN DETROIT

CITY OF DETROIT

GENERAL PLAN OF SITE

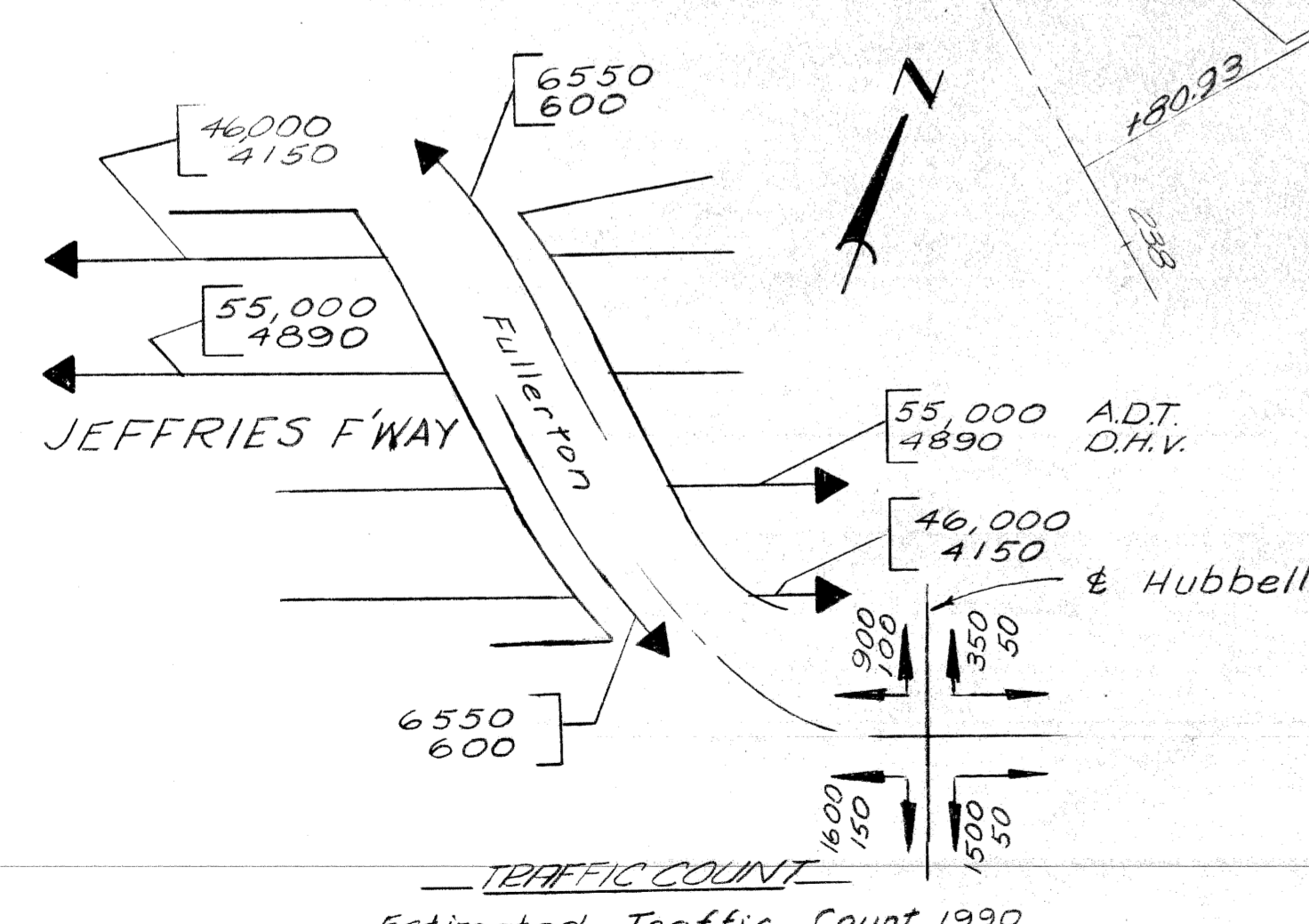
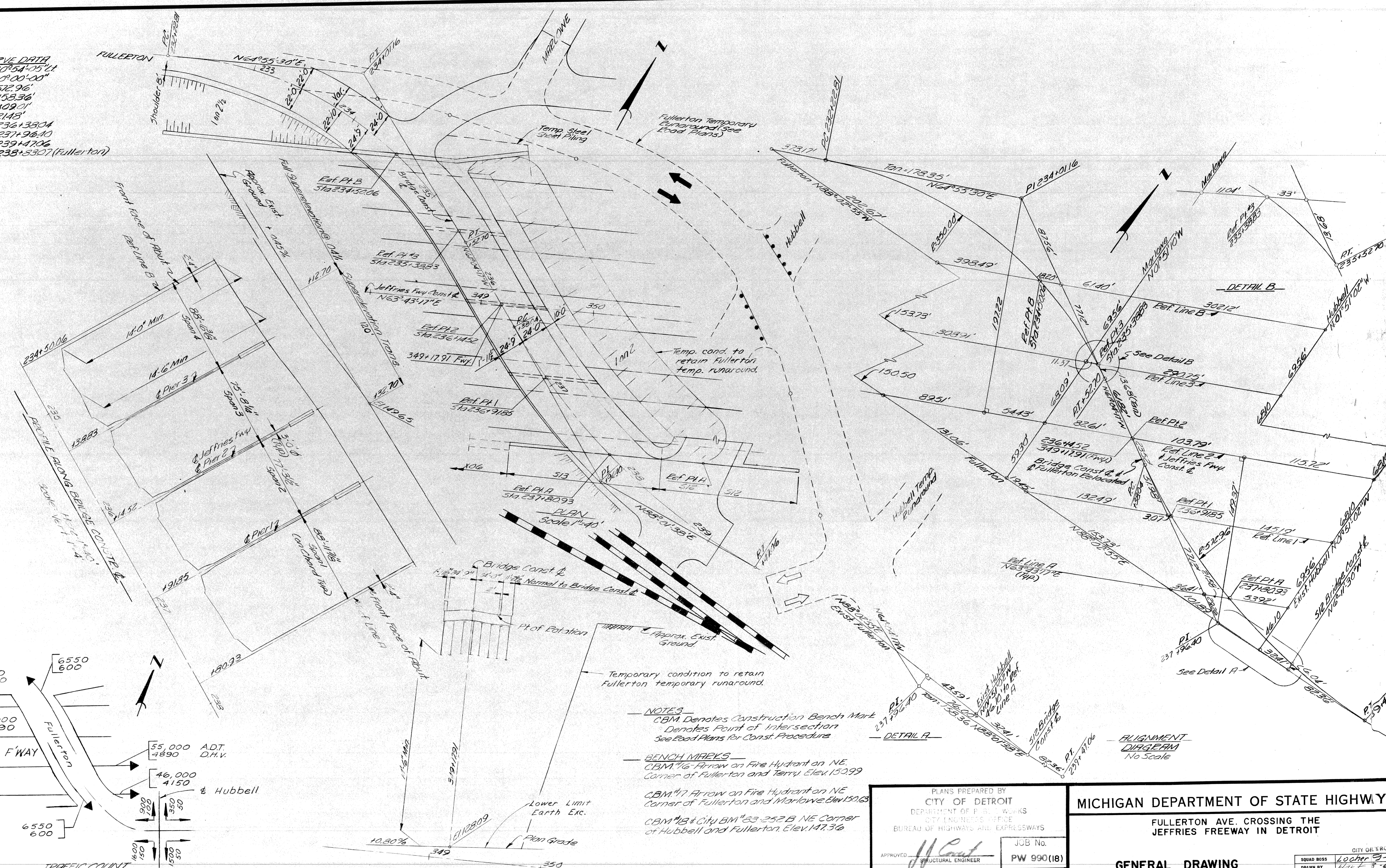
APPROVED: _____ SUPERVISOR: DESIGN

APPROVED: _____ ENGINEER: DESIGN SECTION I

SQUAD BOSS	Locher	9-69
DRAWN BY	Locher	8-69
TRACED BY	A.J.G.	9-69
CHECKED BY	A.J.G.	9-69
SHEET 2 OF 7		

S13 of 82123D

FULLERTON AVE CURVE DATA
 $\Delta = 54^{\circ}00'13''$ $E = 30^{\circ}54'05''$
 $D = 16^{\circ}22'13''$ $D = 10^{\circ}00'00''$
 $E = 350.00'$ $E = 572.96'$
 $T = 175.35'$ $T = 153.36'$
 $L = 329.59'$ $L = 509.01'$
 $E = 42.82'$ $E = 214.8'$
 $PC = 232+22.81$ $PC = 236+39.04$
 $PI = 234+01.16$ $PI = 237+96.10$
 $PT = 235+52.70$ $PT = 239+47.06$
 $= 238+53.07$ (Fullerton)



TRAFFIC COUNT
 Estimated Traffic Count 1990

A.D.T. denotes Average Daily Traffic.
 D.H.V. denotes Design Hourly Volume.

PROFILE ALONG FELEWAY CONST. &
 Horiz 1"=40'
 Scale Vert 1"=4'

NOTES
 CBM Denotes Construction Bench Mark
 Denotes Point of Intersection
 See Road Plans for Const. Procedure

BENCH MARKS
 CBM #7 Arrow on Fire Hydrant on NE Corner of Fullerton and Terry Elev 150.99
 CBM #17 Arrow on Fire Hydrant on NE Corner of Fullerton and Marlowe Elev 150.63
 CBM #18 & City BM #63-252 B NE Corner of Hubbell and Fullerton Elev 147.36

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APPROVED: *[Signature]* STRUCTURAL ENGINEER
 JOB No. PW 990 (18)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FULLERTON AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

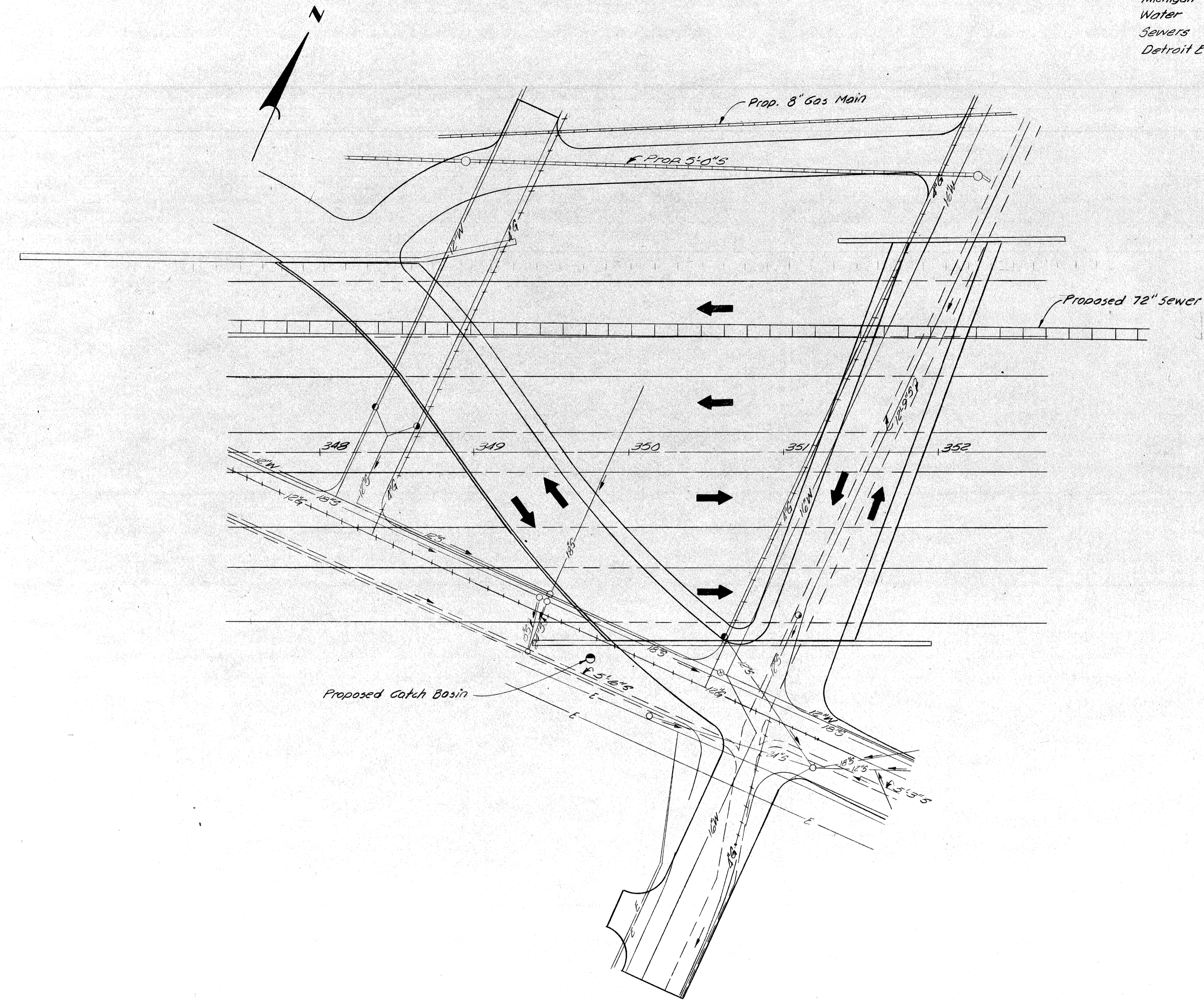
GENERAL DRAWING

APPROVED: _____ SUPERVISOR: DESIGN
 APPROVED: _____ ENGINEER: DESIGN SECTION I

CITY OF DETROIT
 SQUAD BOSS: Locher 9-69
 DRAWN BY: Hurl 8-69
 CHECKED BY: WAL 7-69
 SHEET 4 OF 6
 S13 of 8211 D

LEGEND

UTILITY	Existing	Abandoned or Deleted	New Work by Others
Michigan Consolidated Gas Co.	— G —	+++ G +++	=== G ===
Water	— W —	+++ W +++	=== W ===
Sewers	— E —	+++ S +++	=== S ===
Detroit Edison	— E —	+++ E +++	=== E ===



NOTES:
 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.

SITUATION PLAN
 Scale: 1"=40'

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PLANS PREPARED BY
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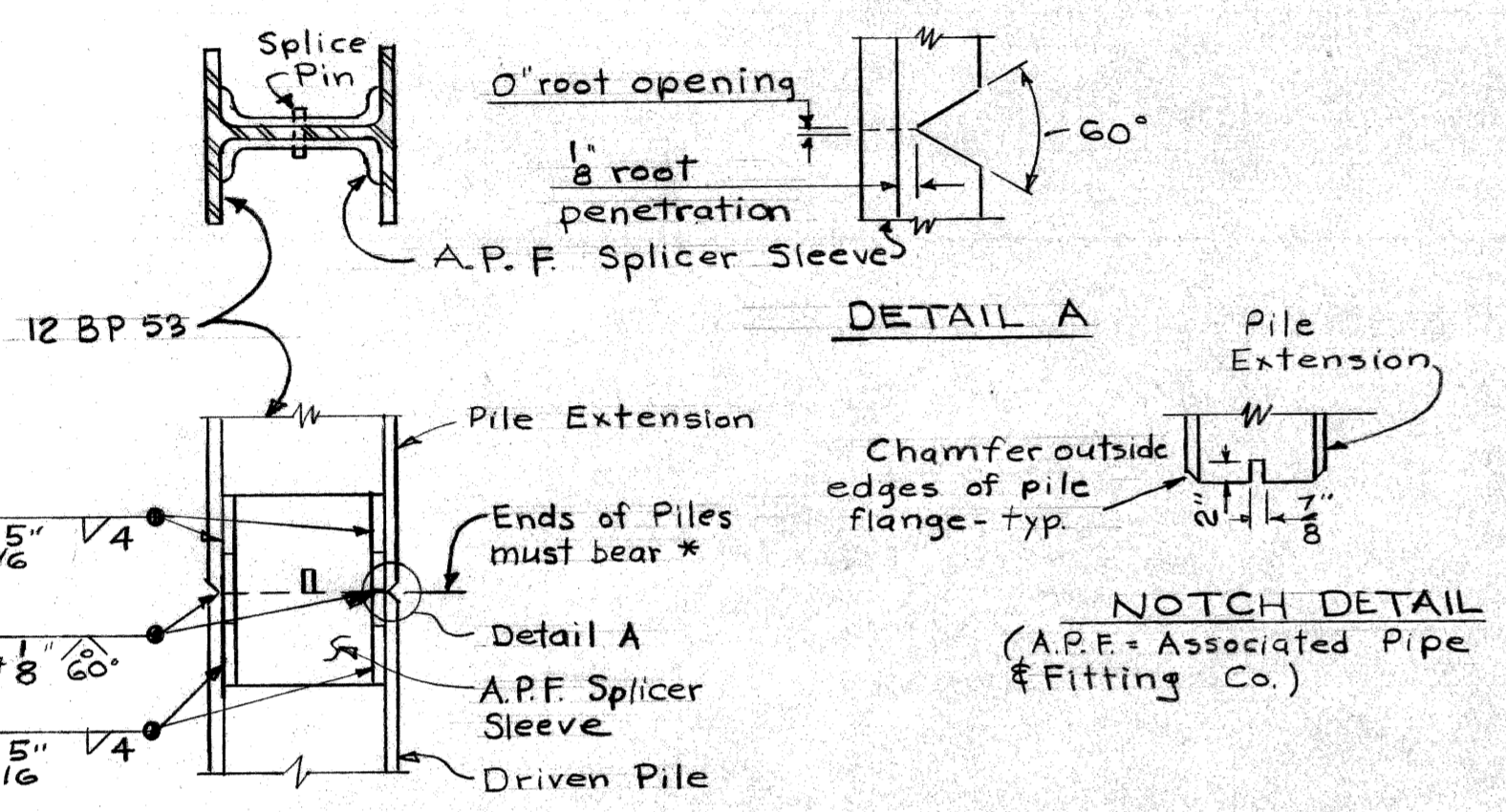
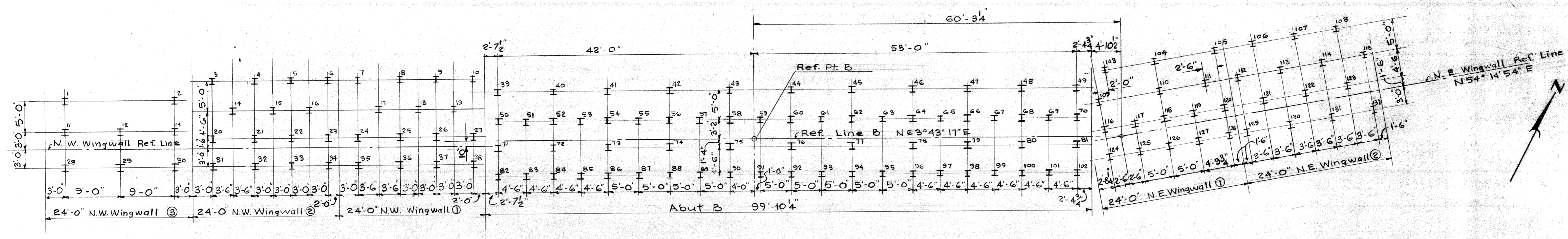
APPROVED: *H. Cant*
 STRUCTURAL ENGINEER

EXISTING UTILITIES AND PROPOSED ALTERATIONS

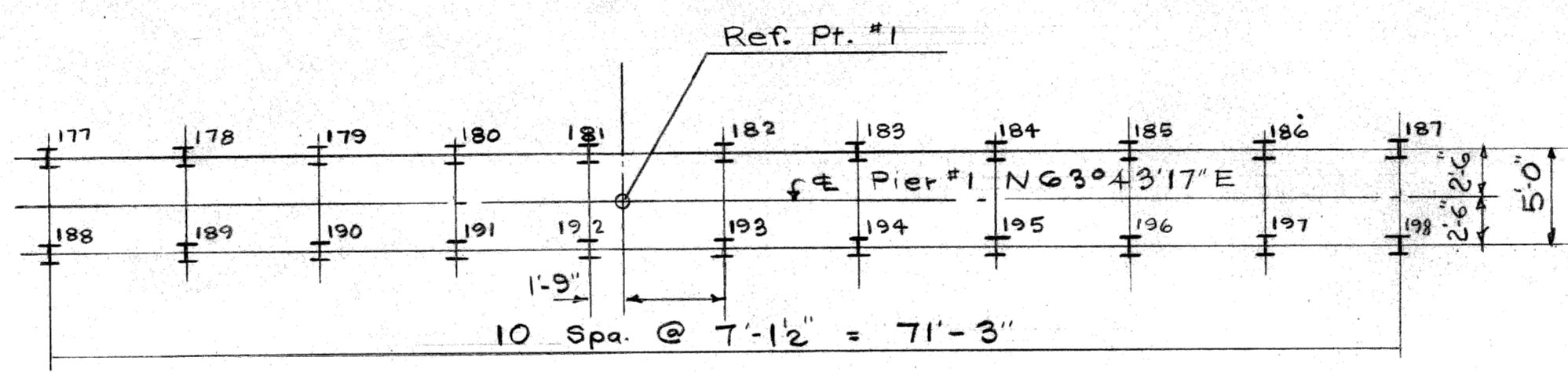
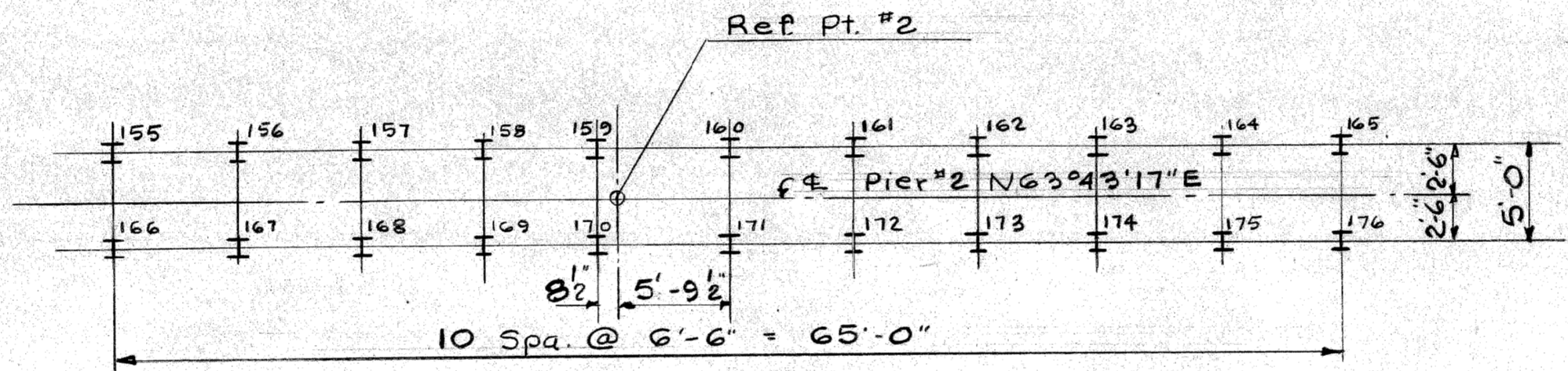
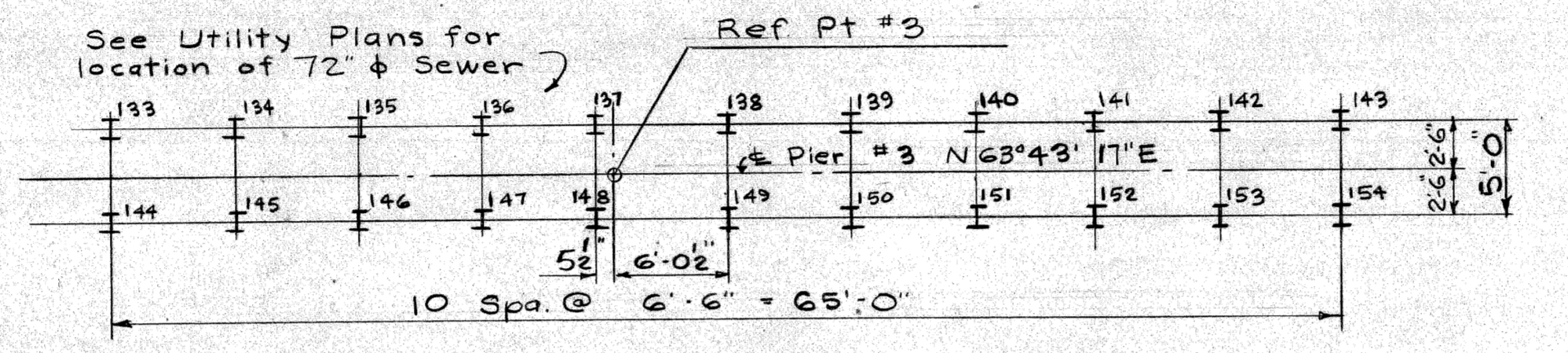
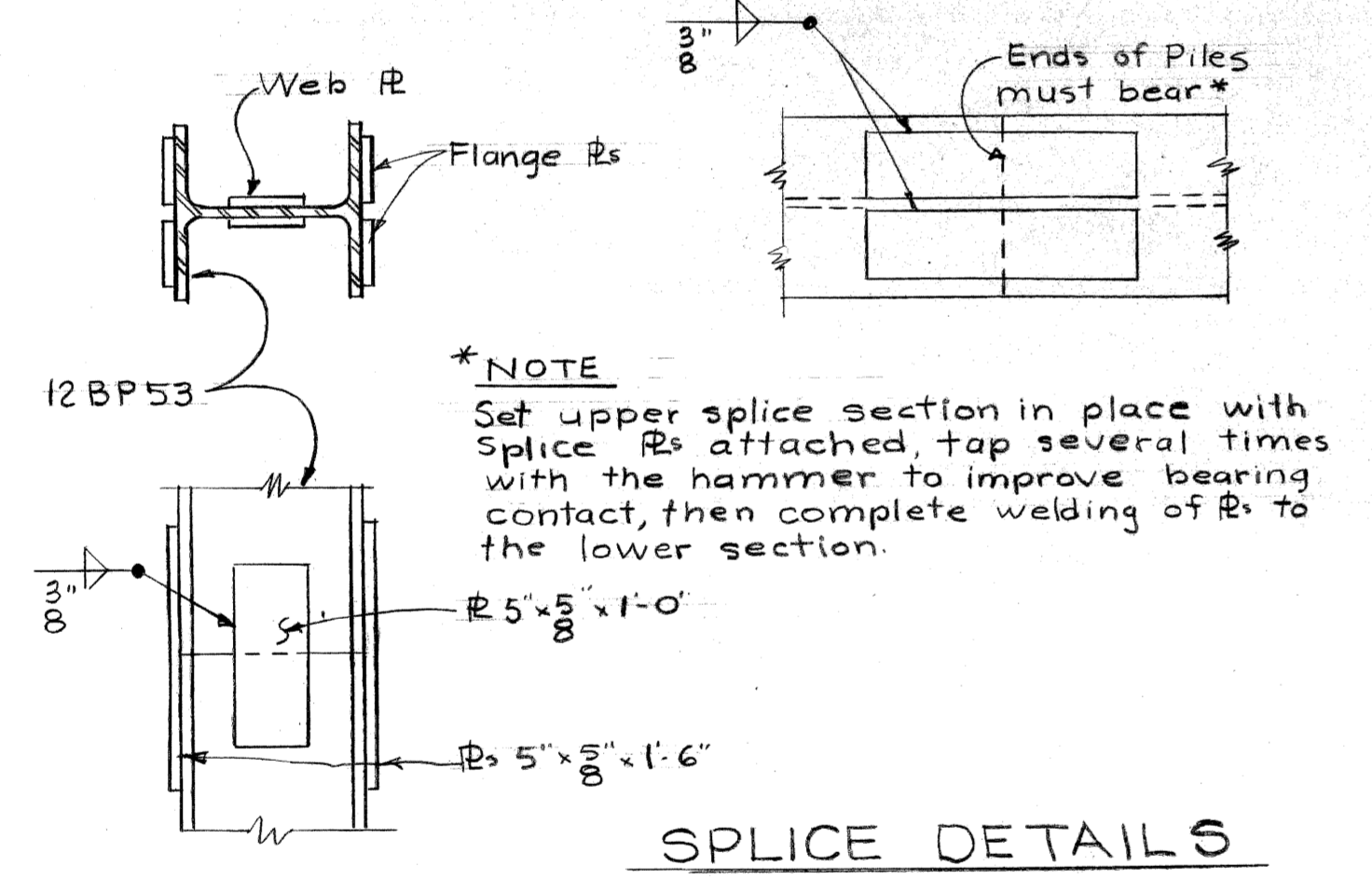
REVISIONS		
NO.	DESCRIPTION	DATE BY

CITY OF DETROIT		
SQUAD BOSS	Locher	9-69
DRAWN BY	Holt	8-68
TRACED BY		
CHECKED BY	Romes	9-69
SHEET	7	of 36

813 of 82123D



ALTERNATE SPLICE DETAILS

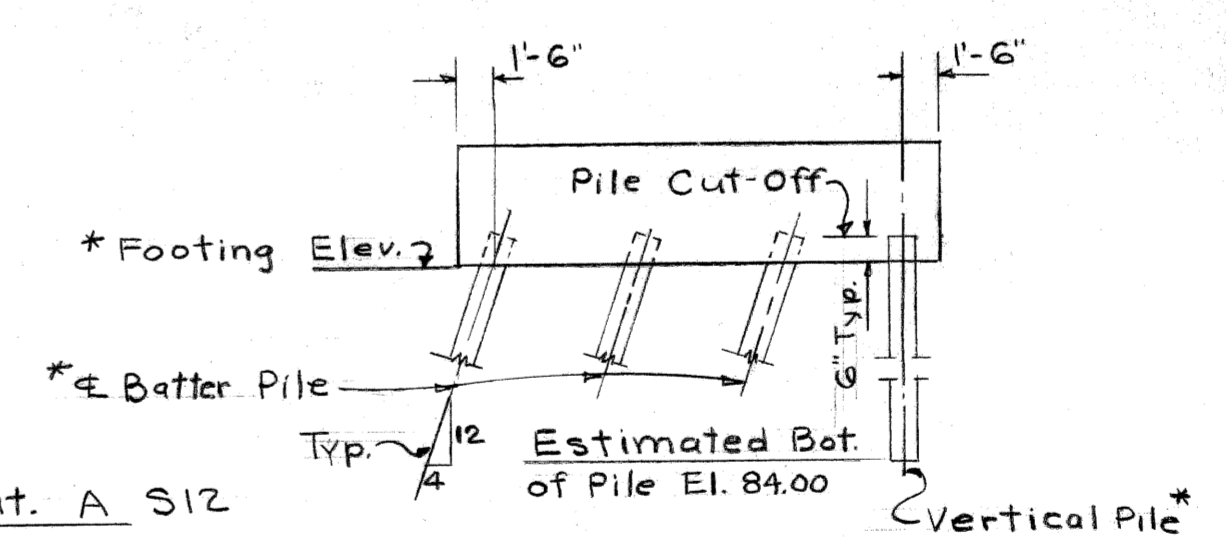


ITEM	UNIT	AMOUNT													
		N.W.W.W.		Abut. B		N.E.W.W.		Pier #3	Pier #2	Pier #1	S.W.W.W.		Abut. A		Total
Length of Each Pile Furnished & Driven	Lin. Ft.	40	40	40	40	40	40	40	40	40	40	40	40	40	—
Steel Piles Furnished & Driven	Each	9	28	9	53	5	24	21	21	21	5	28	8	48	280
*Steel Test Piles	Each	1	—	2	—	1	—	1	1	1	—	—	2	—	10
Splices - Steel Piles	Each	—	—	—	—	—	—	—	—	—	—	—	—	—	280
Furnishing Equipment for Driving Piles	Lump Sum	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Length of Test Piles is equal to length of Furnished & Driven Pile plus 10 ft.

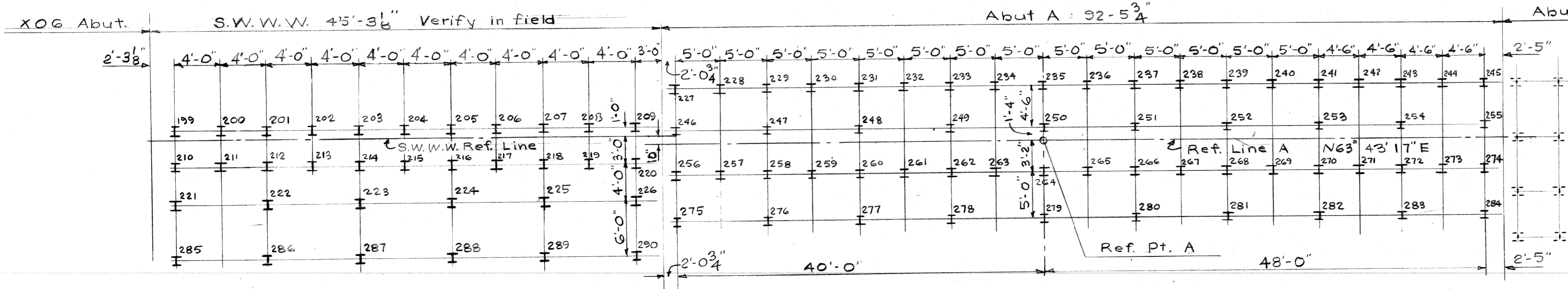
PILE DESIGNATION TABLE (All Numbers Inclusive)									
LOCATION	N.W.W.W.	Abut. B	N.E.W.W.	Pier #3	Pier #2	Pier #1	S.W.W.W.	Abut. A	
Batter Piles	11 → 38	50 → 102	109 → 132	—	—	—	199 → 226	227 → 274	
Vertical Piles	2 → 10	40 → 48	103 → 107	134 → 154	155 → 175	178 → 198	286 → 290	276 → 283	
*Pre-Bored Piles - Vert.	—	—	—	133 → 154	—	—	—	—	
Test Piles - Vert.	1	39 & 49	108	133	176	177	285	275 & 284	
Footing Elevation	121.50	121.50	121.50	122.50	123.00	123.00	123.00	123.00	

* Piles listed as Pre-Bored shall be pre-bored to approx. elev. 92.00 ±.



TYPICAL FOOTING SECTION
PILE CUT-OFF DETAIL

* See Pile Designation Table



GENERAL NOTES
All Piles shall be driven to a minimum bearing capacity of 60 Tons.
Piles shall be steel 12" H Sections weighing not less than 53 lbs. per ft.
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.

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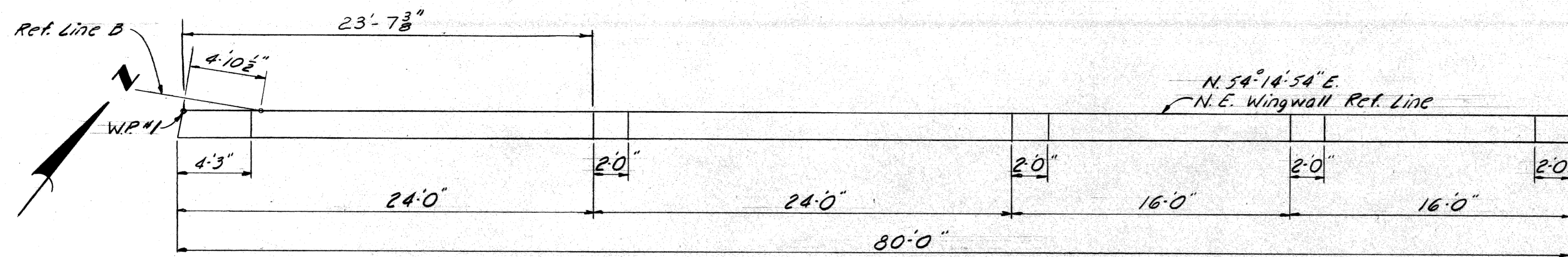
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

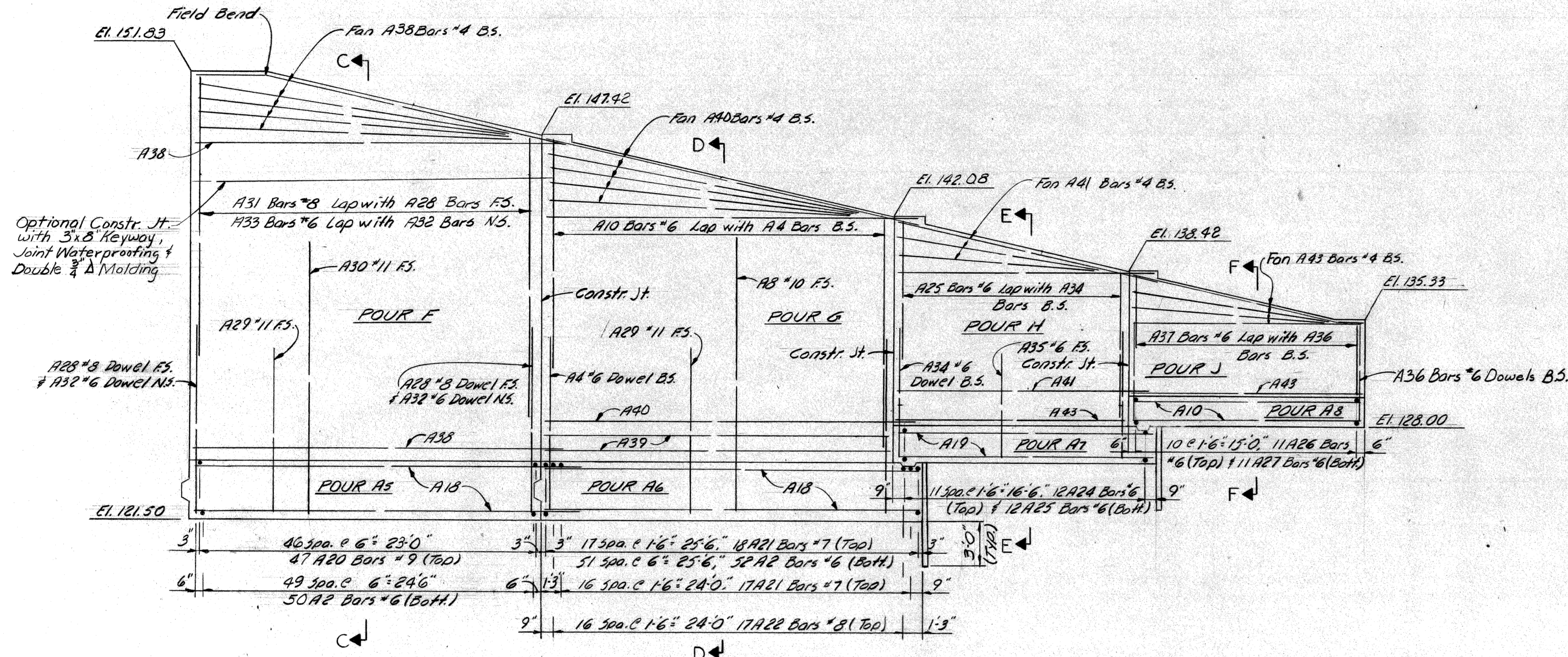
CITY OF DETROIT			
SQUAD BOSS	LOCHER	5-70	

JOB No.
PW 990 (18)

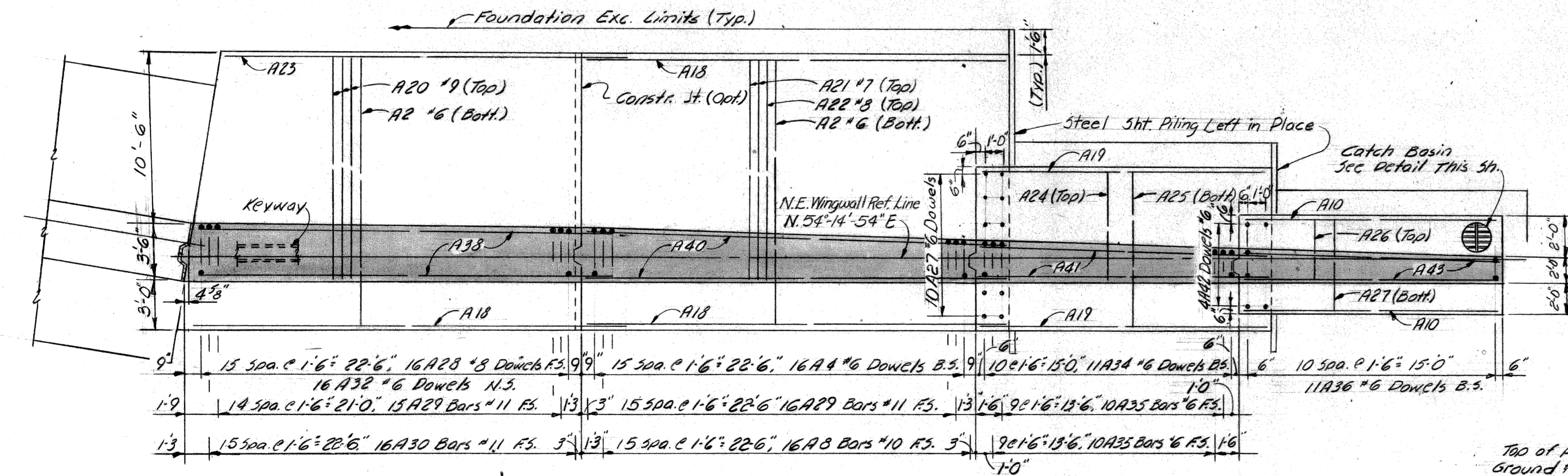
S13 of 82123D



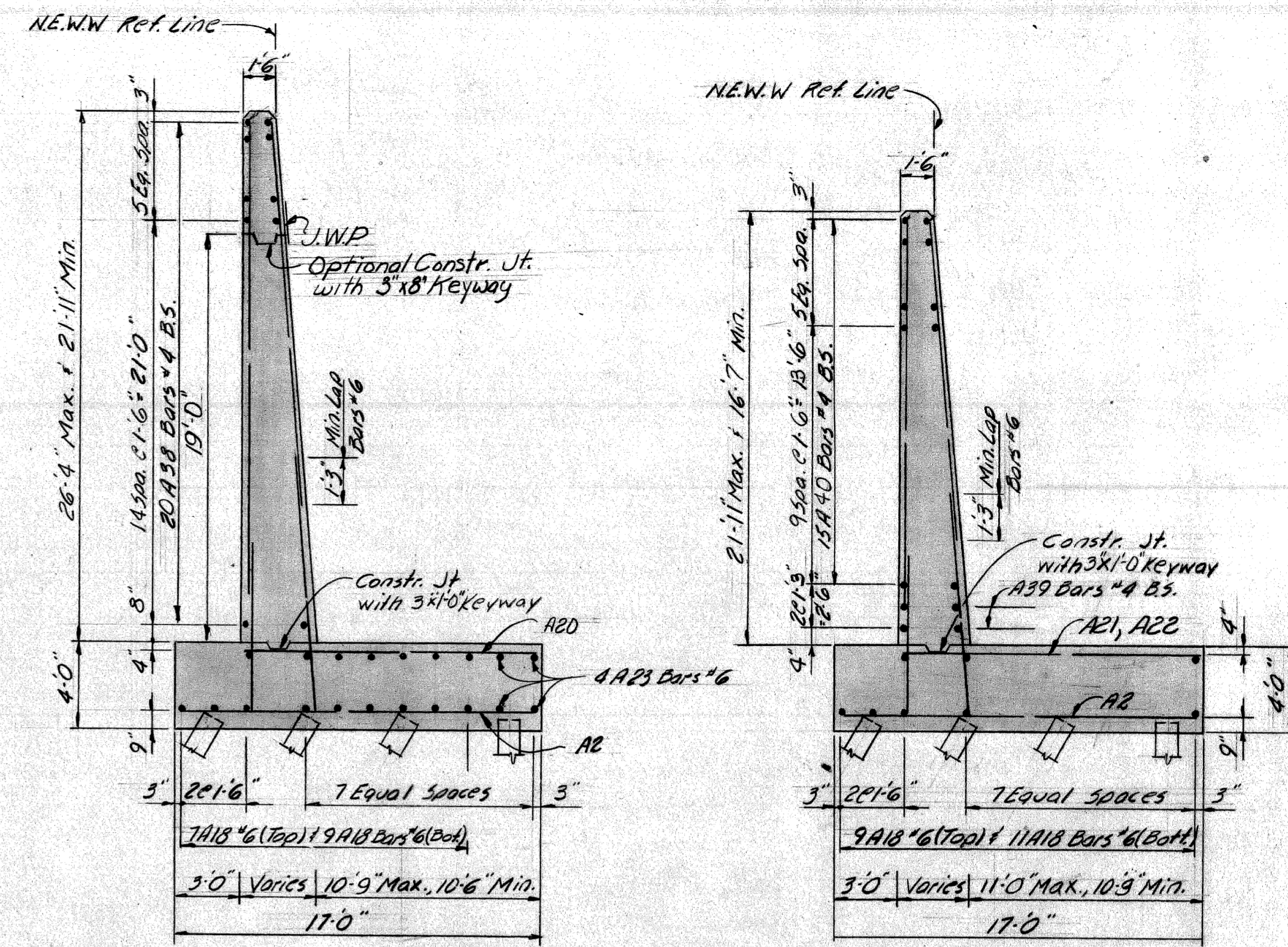
PLAN



ELEVATION

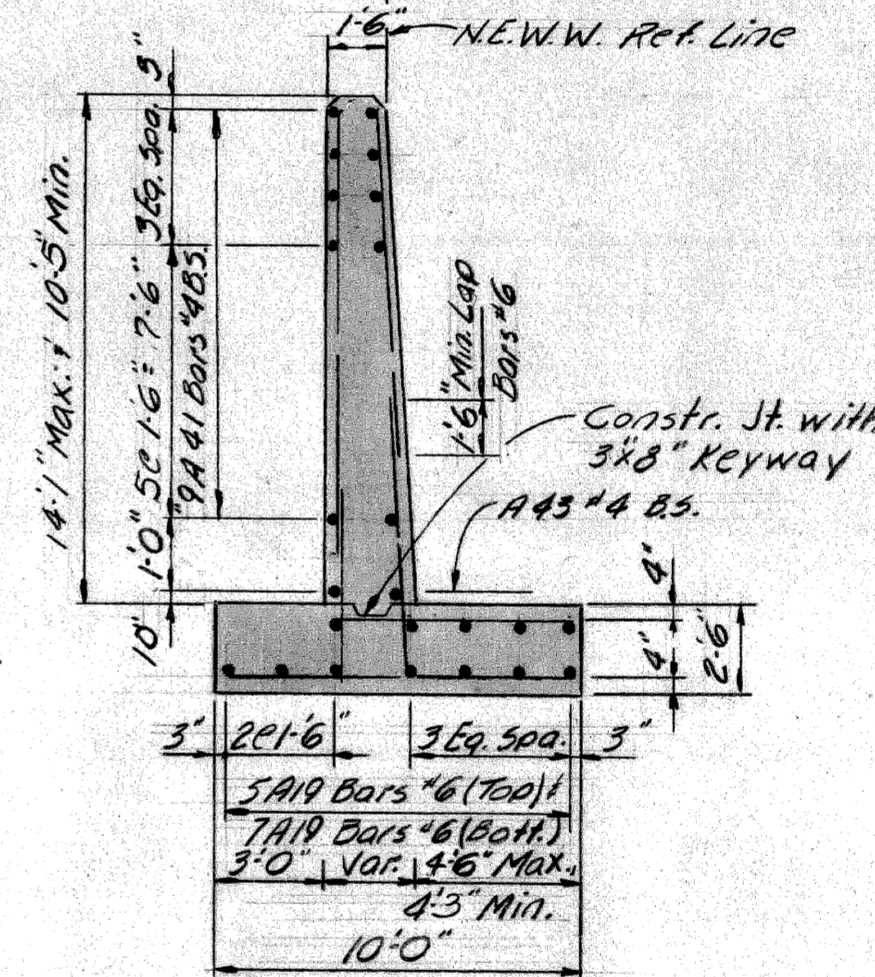


FOUNDATION PLAN
N.E. WINGWALL



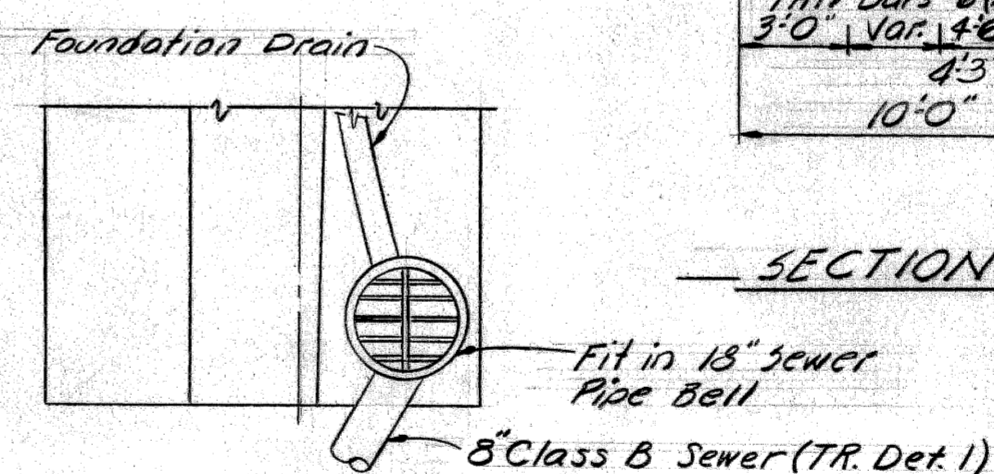
SECTION C-C

SECTION D-D

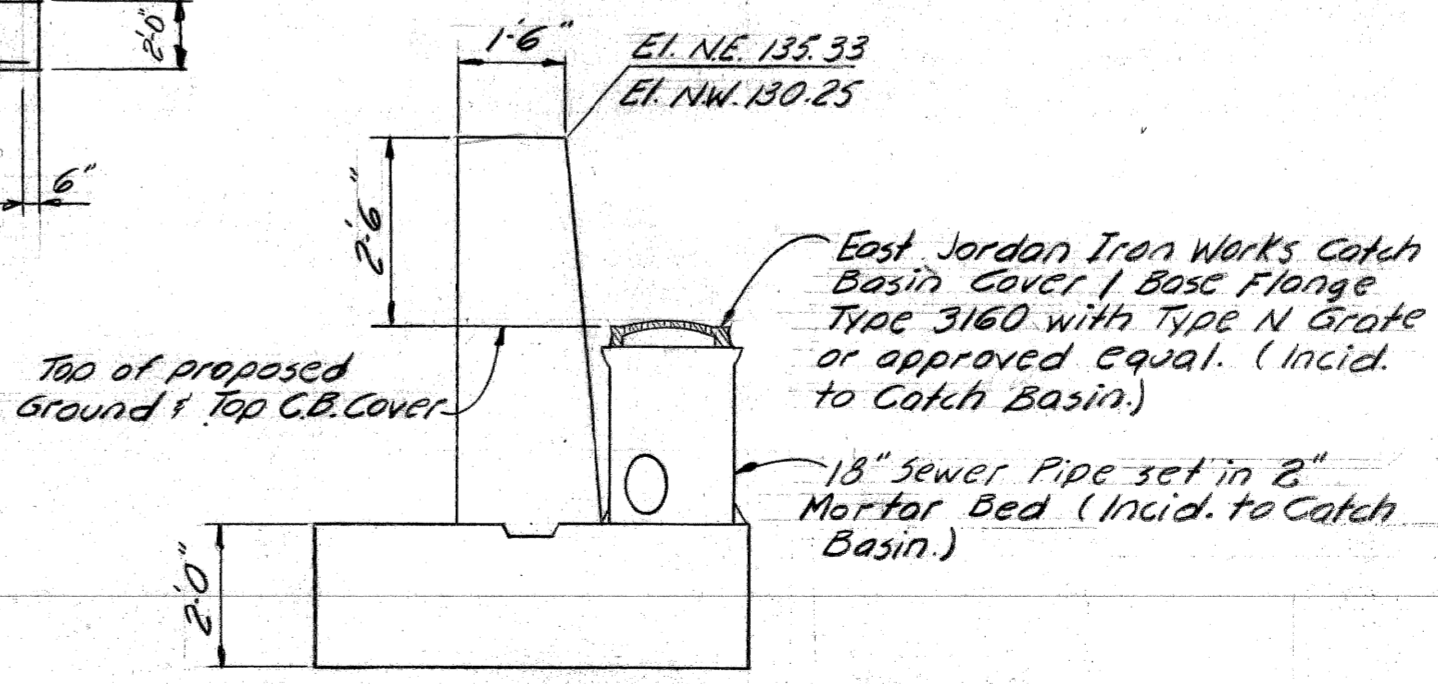


SECTION E-E

SECTION F-F



PLAN



ELEVATION

CATCH BASIN DETAIL

PLANS PREPARED BY
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CITY ENGINEERS' OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature]
STRUCTURAL ENGINEER

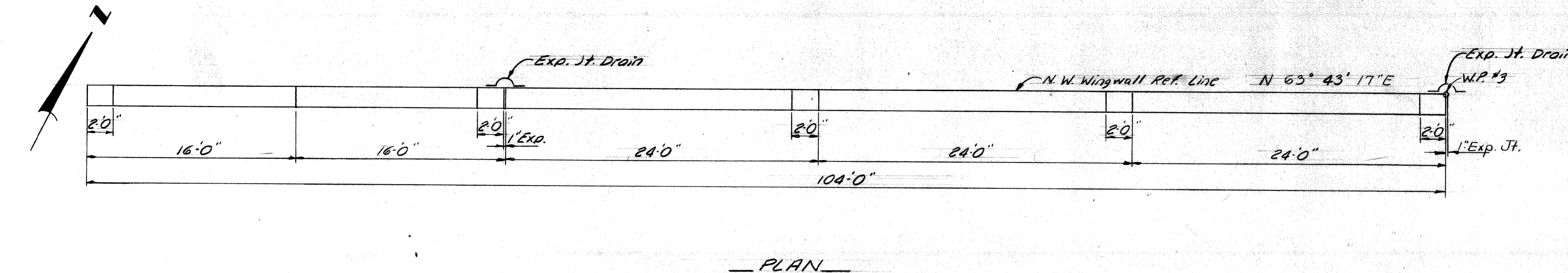
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PW 990 (18)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

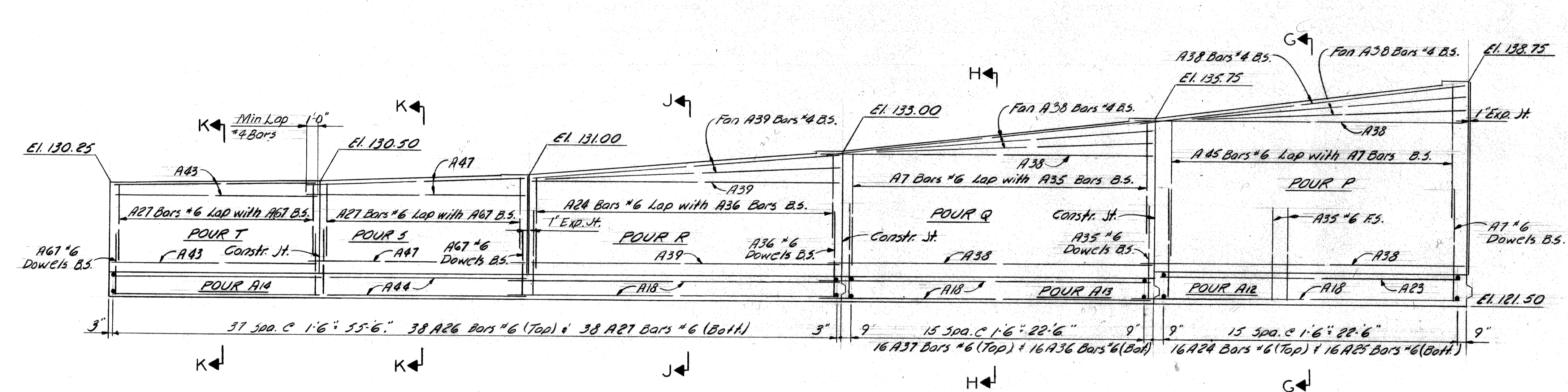
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DRAWN BY	A.G.	5-70
TRACED BY		
CHECKED BY	WAL	7-70
SHEET 11 OF 36		

S13 of 82123D

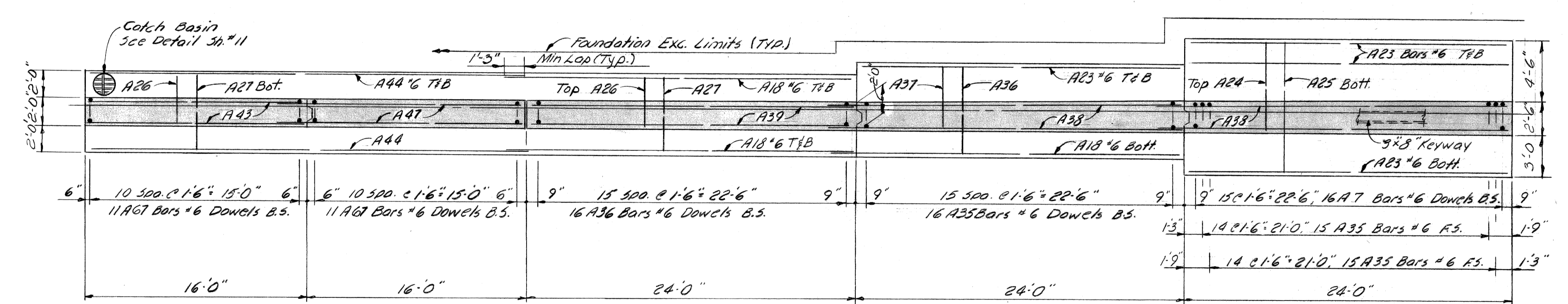
N.E. W. W. F. 2. 2. 2.



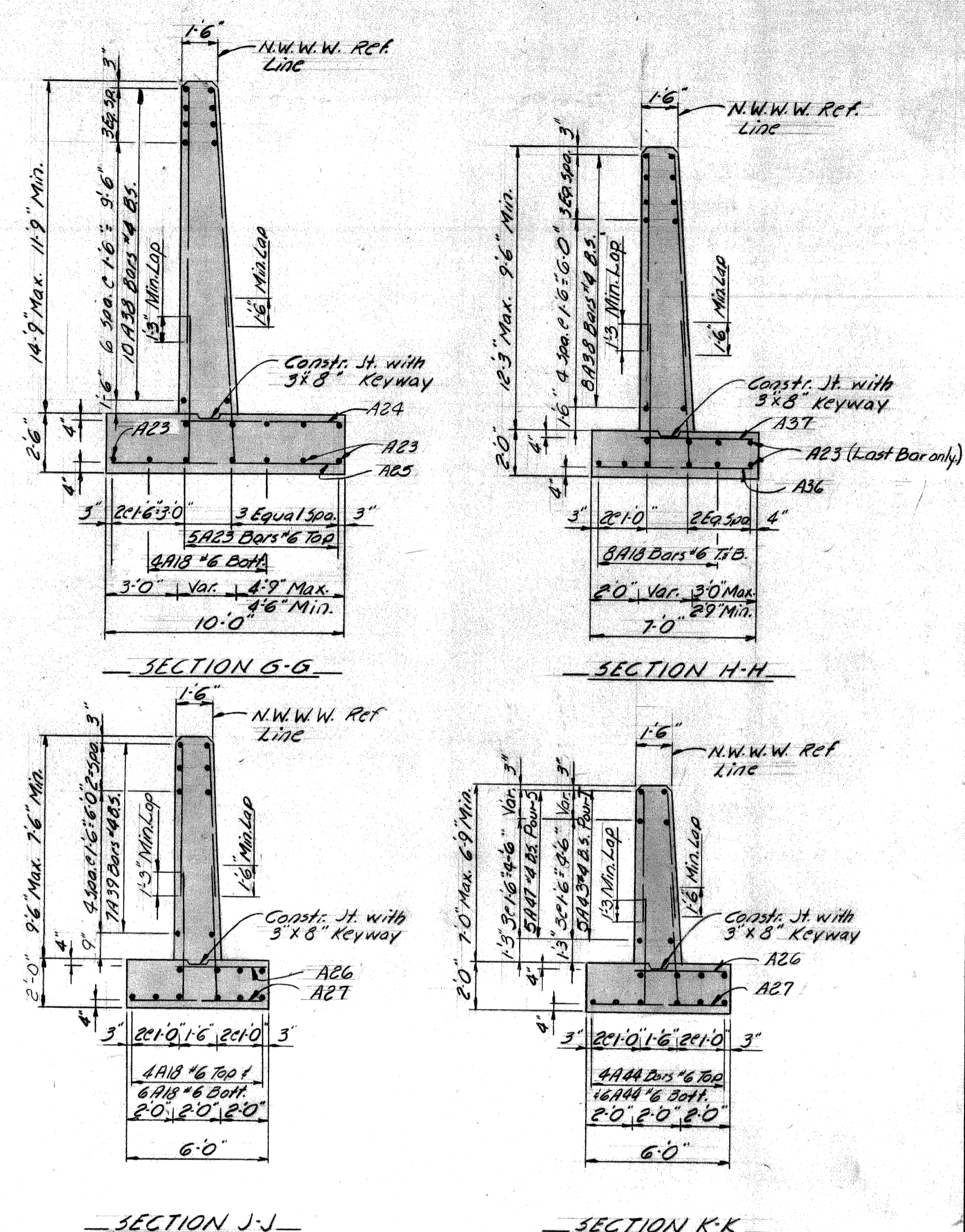
PLAN



ELEVATION



FOUNDATION PLAN
N.W. WINGWALL
50g. *4 to *8



MICHIGAN DEPARTMENT OF STATE HIGHWAYS

RETAINING WALL DETAILS

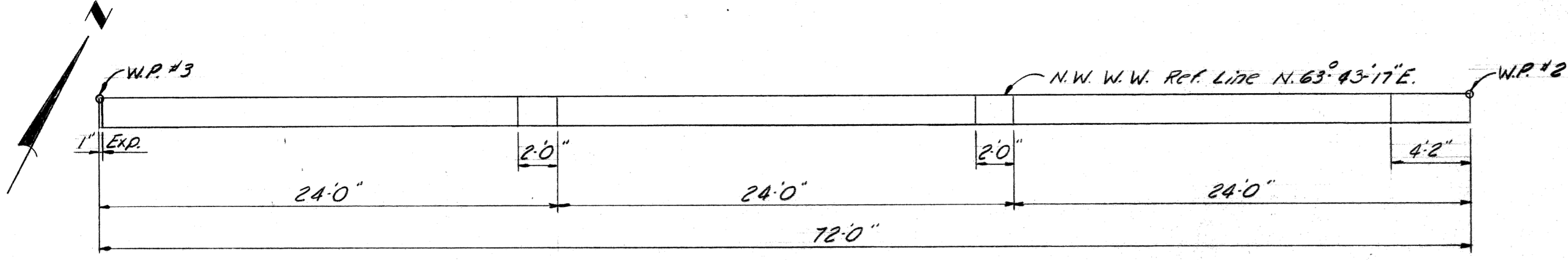
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REVISIONS			
NO.	DESCRIPTION	DATE	BY

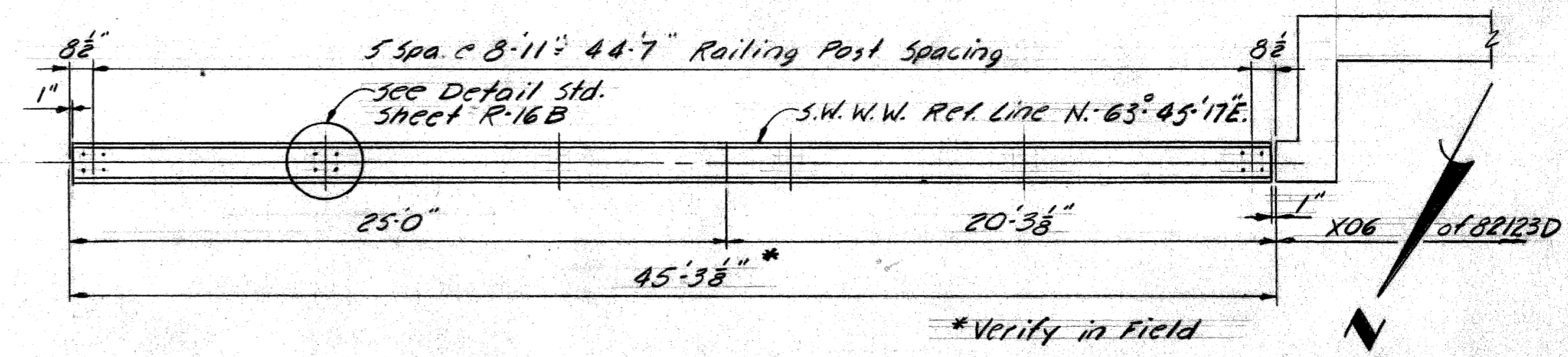
CITY OF DETROIT	
SQUAD BOSS	Locher 7-70
DRAWN BY	A.G. 5-70
TRACED BY	
CHECKED BY	WAL 7-70
SHEET	12 OF 36

S13 of 82123D

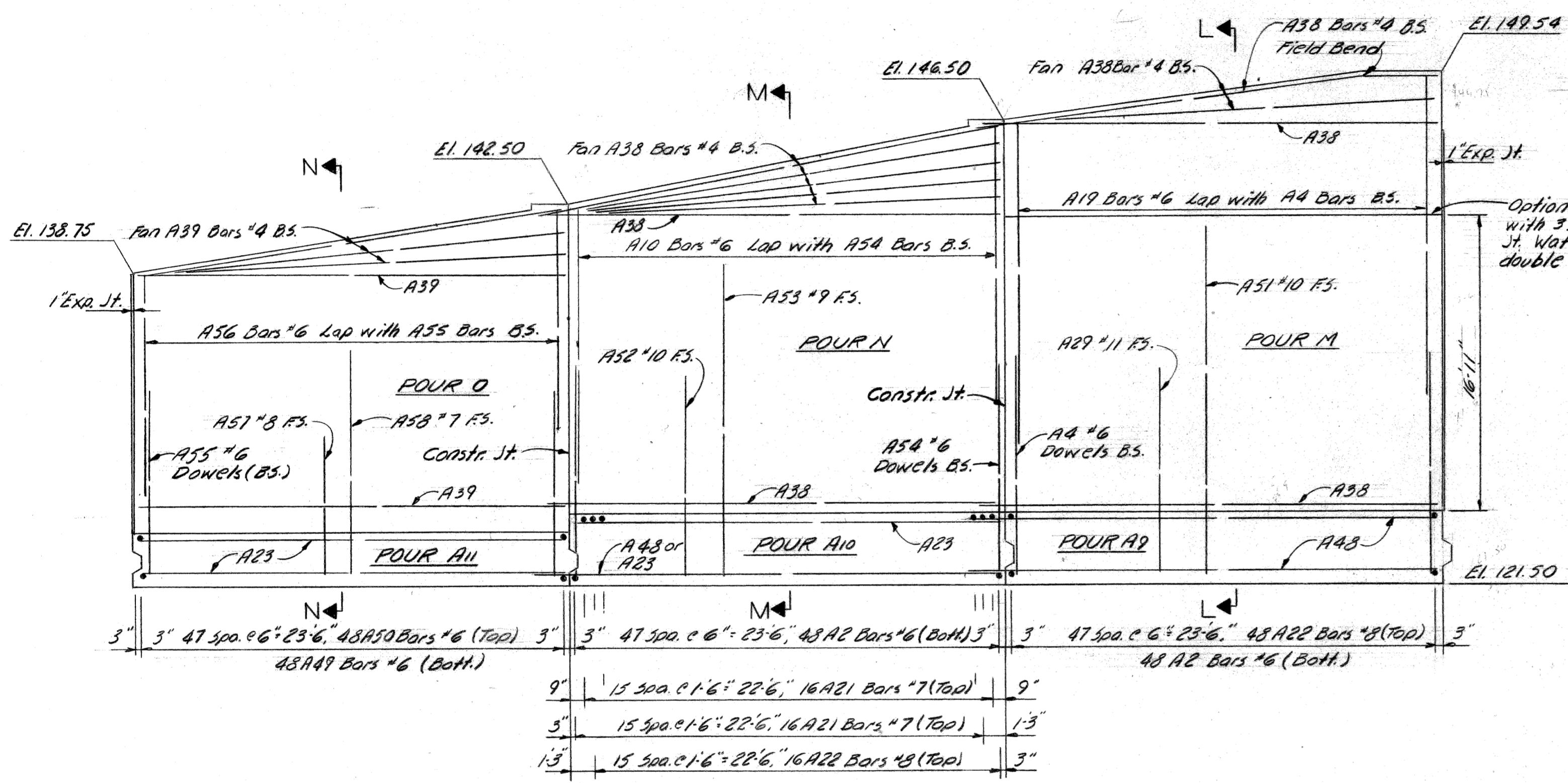
N.W. Wingwall sec 4 to 8



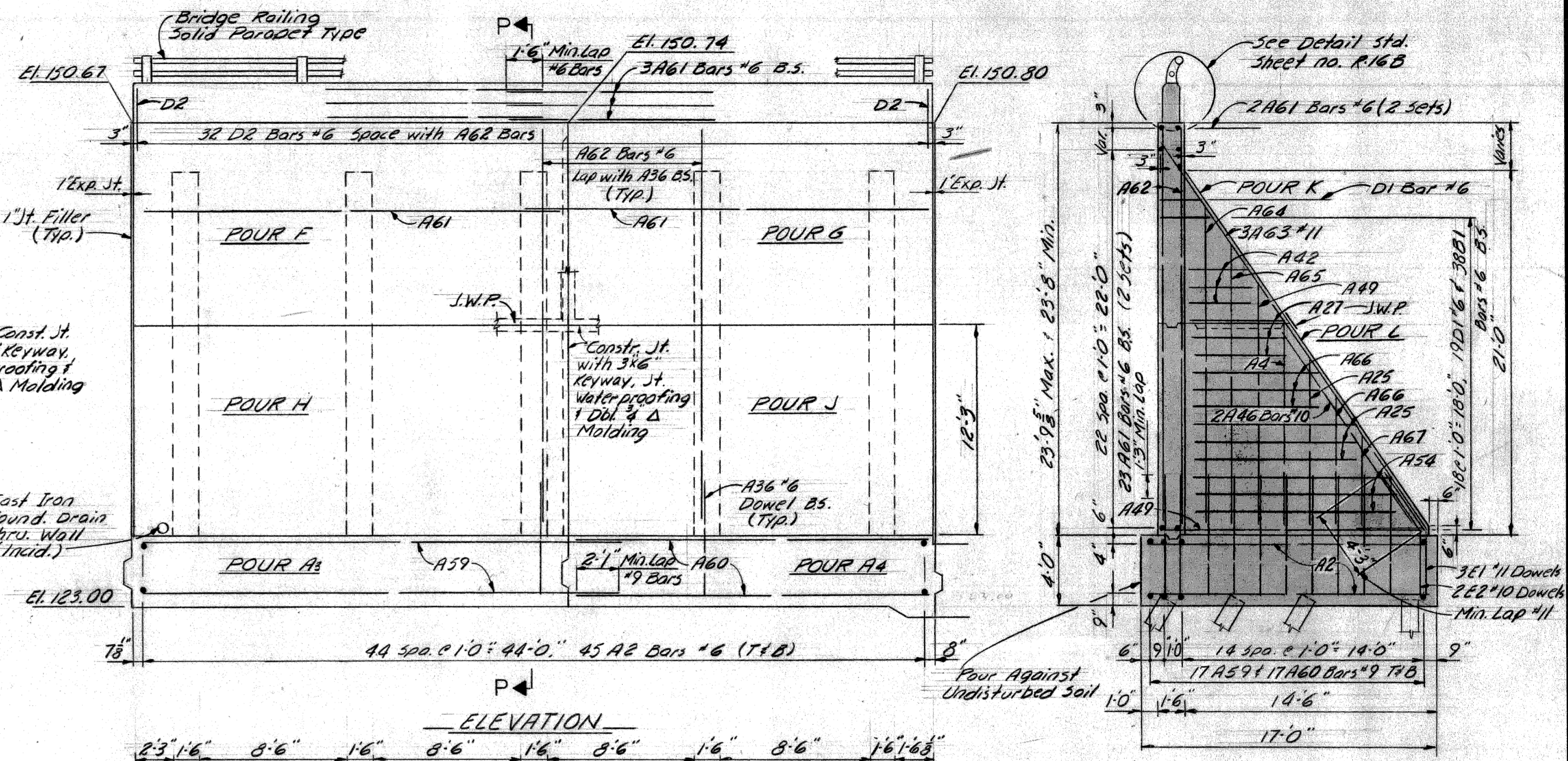
PLAN



PLAN

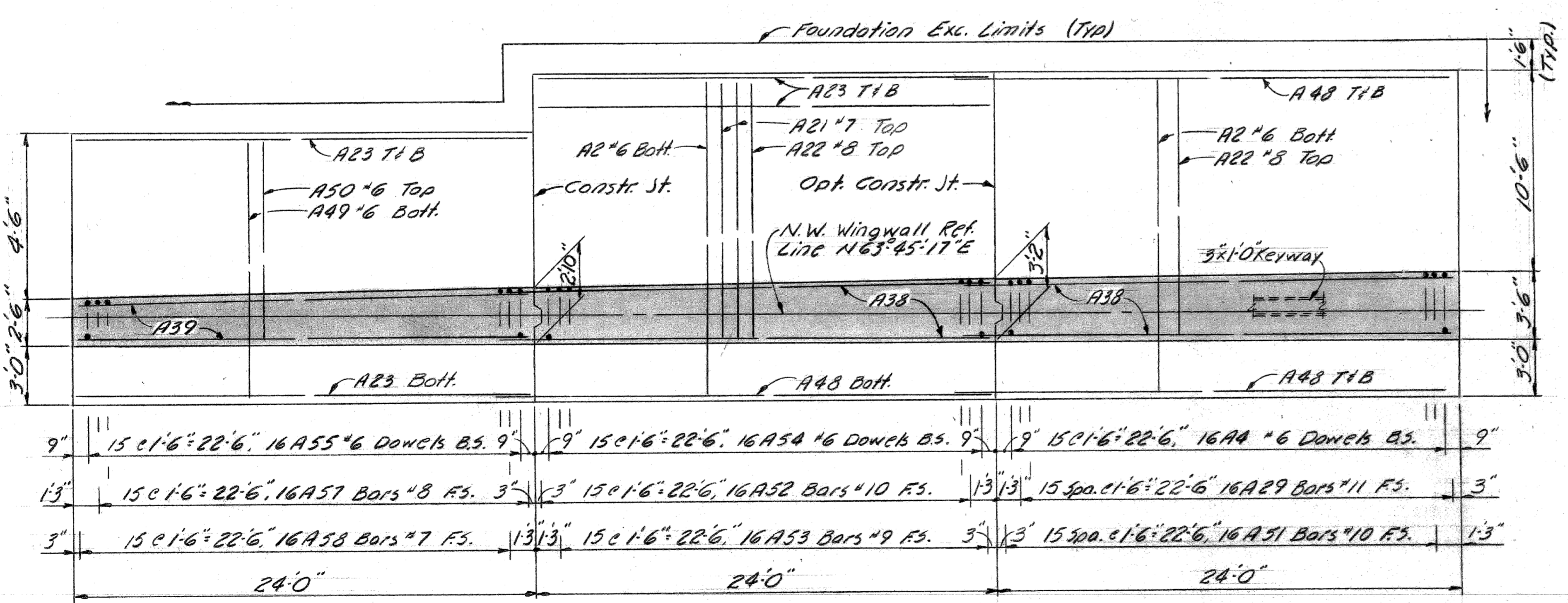


ELEVATION



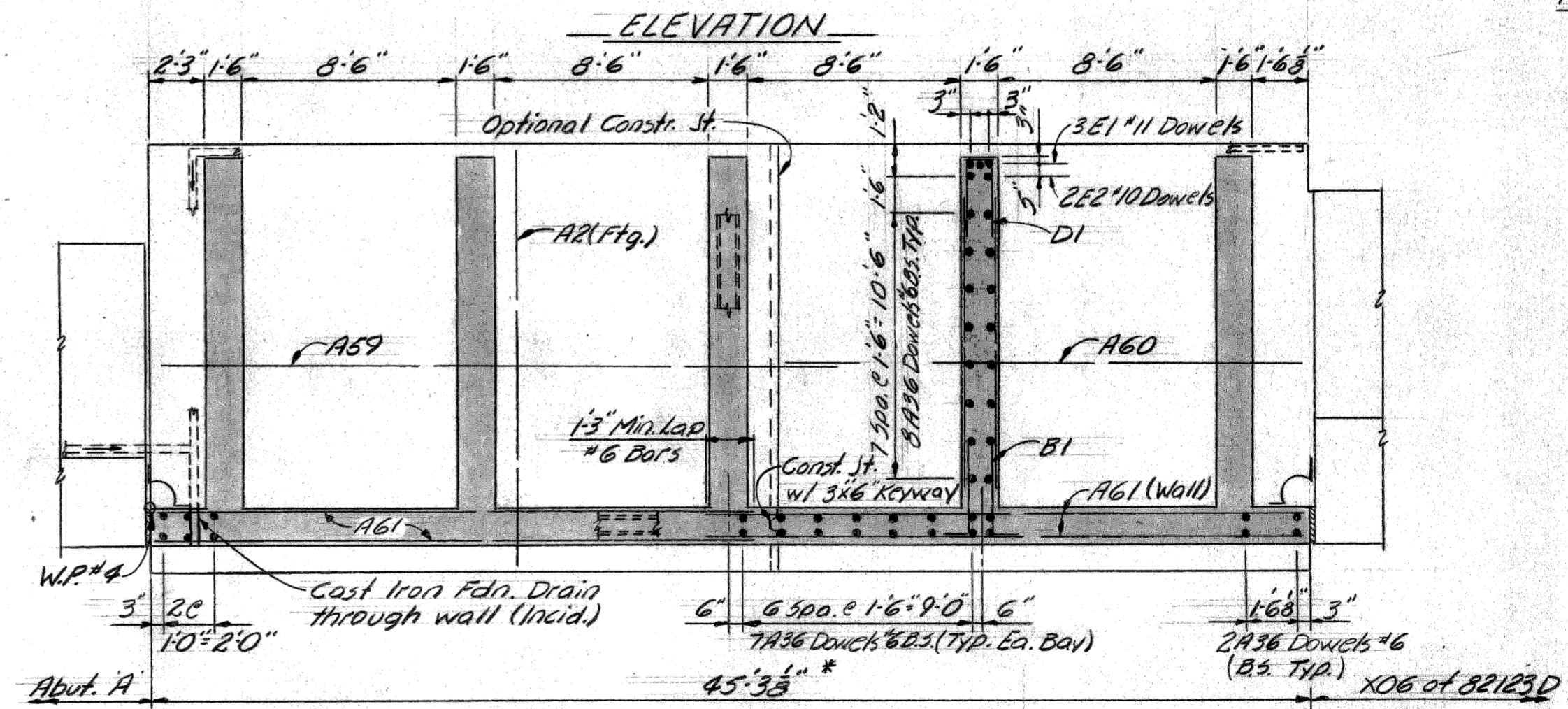
SECTION P-P

Note: Vertical Constr. Jt. between stem & counterforts optional. Jt. Waterproofing to be used at vertical constr. Jts.



FOUNDATION PLAN
N.W. WINGWALL

Fig. 1, 2 & 3



FOUNDATION PLAN
S.W. WINGWALL

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

RETAINING WALL DETAILS

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

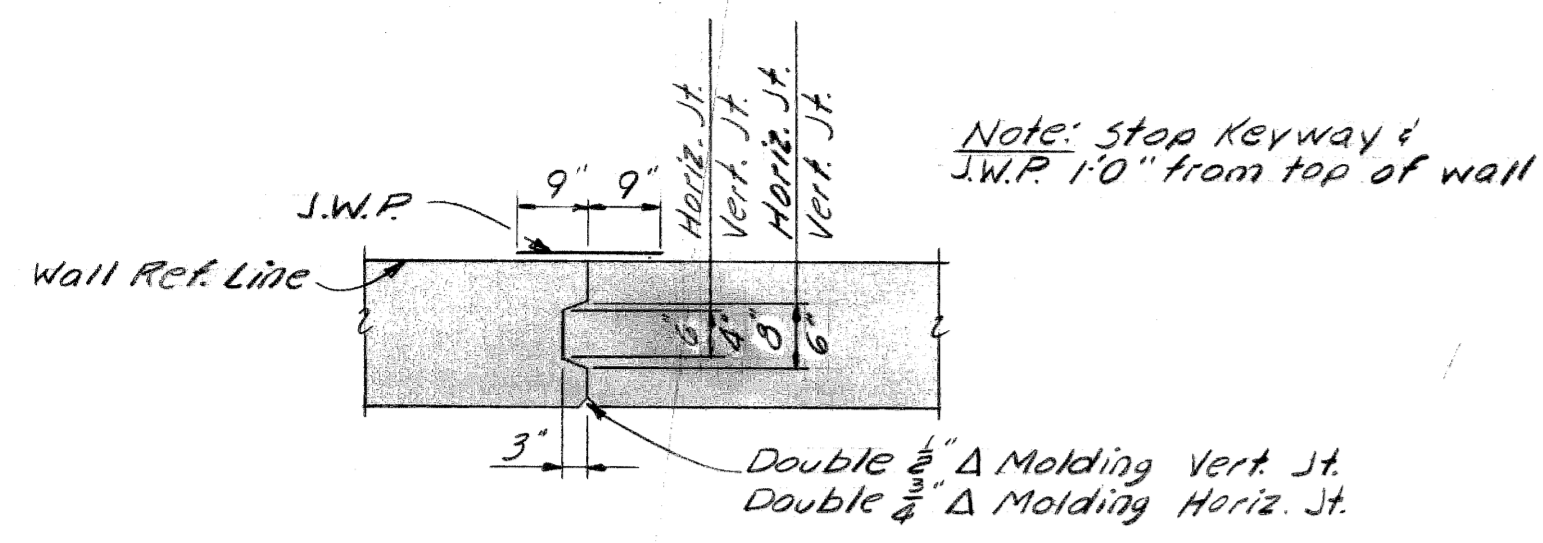
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	DATE
Loeber	7-70
A.G.	5-70
WAL	7-70
SHEET 13 OF 36	

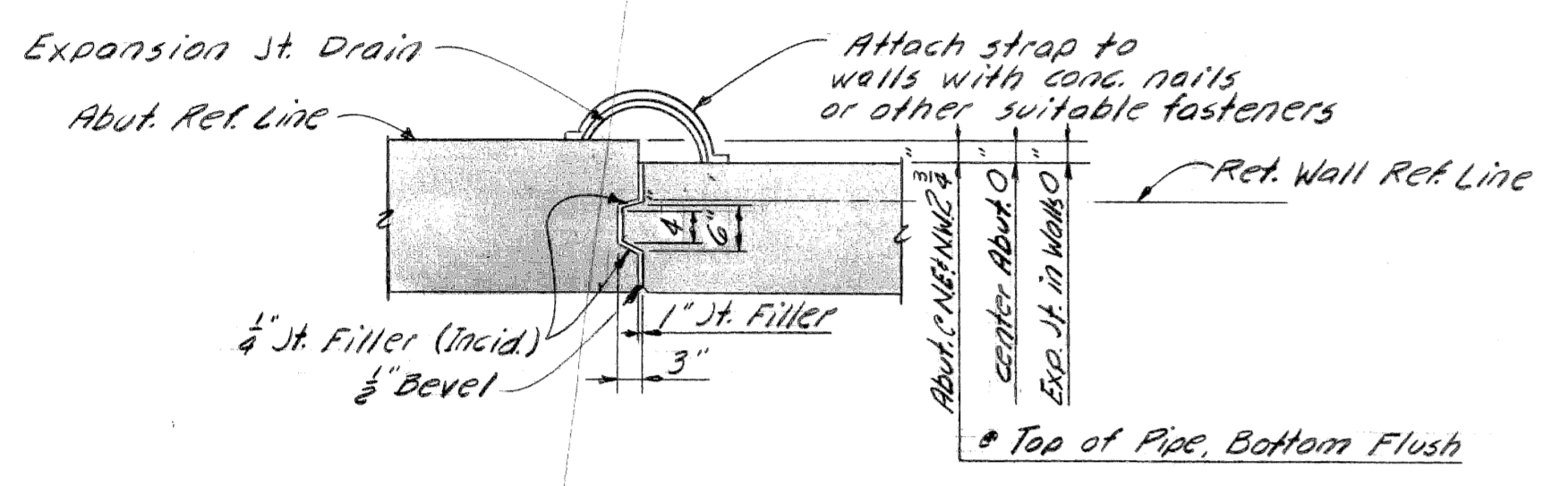
S13 of 82123D

APPROVED: [Signature] STRUCTURAL ENGINEER

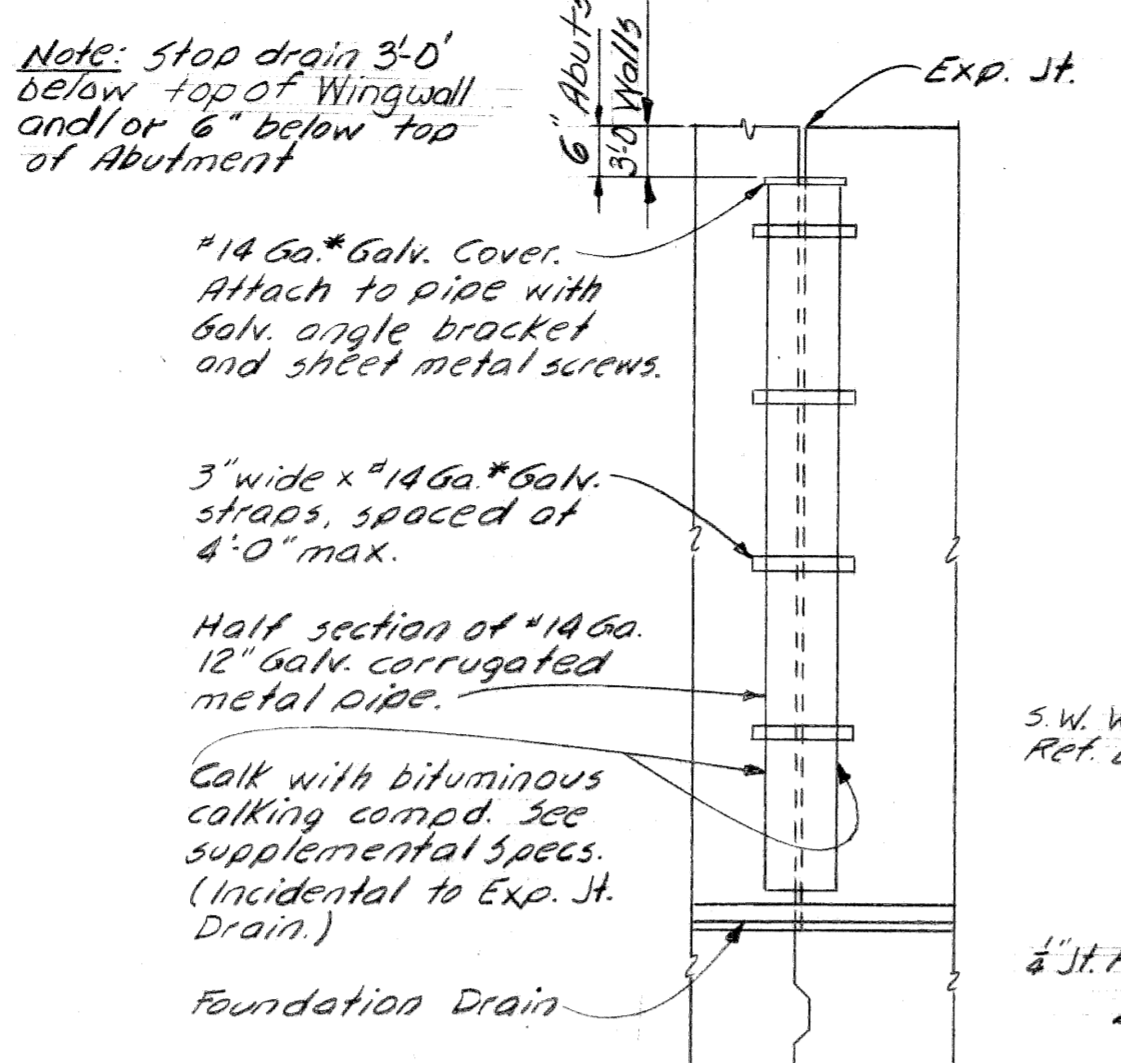
JOB No. PW 990 (18)



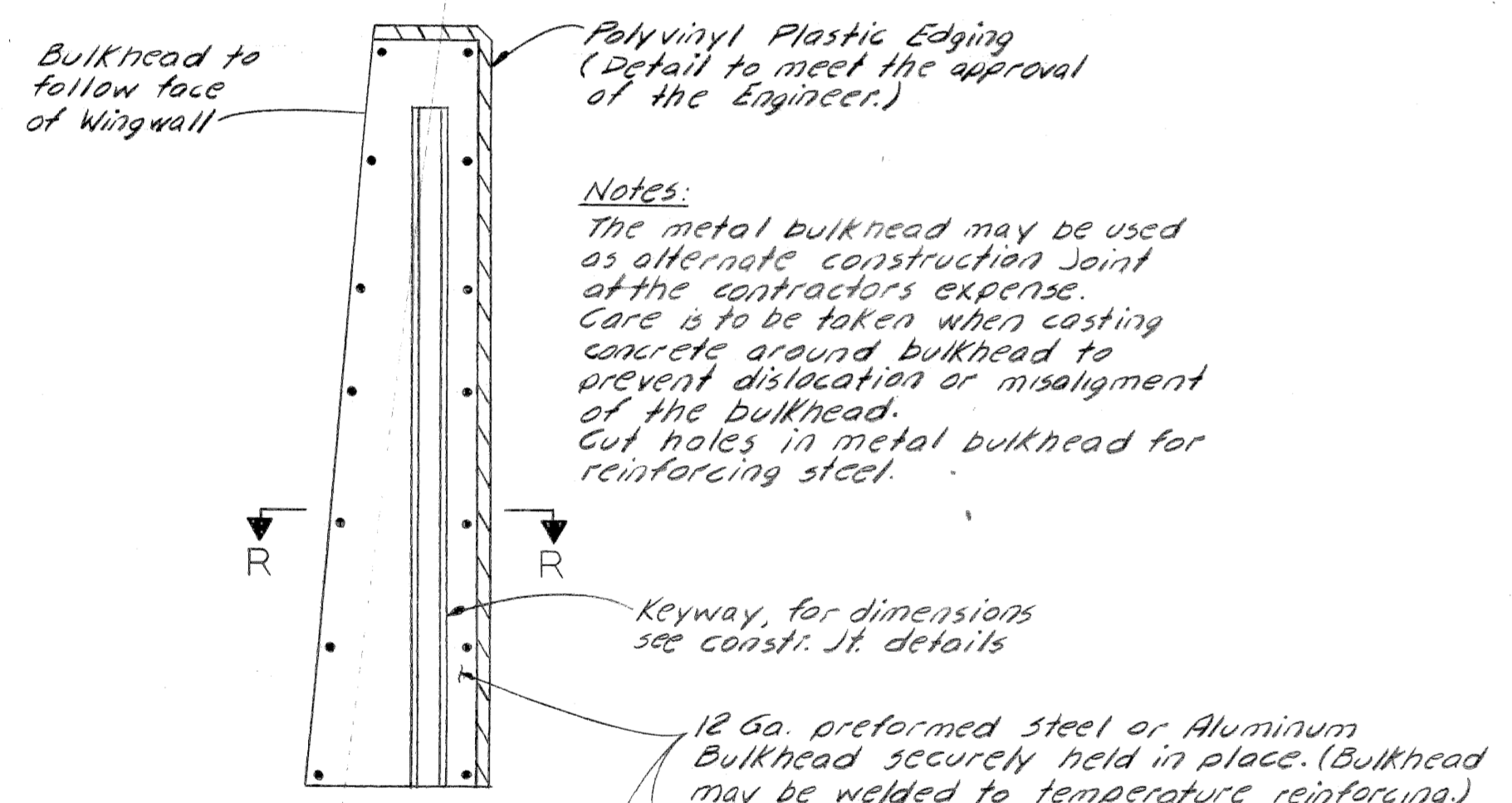
CONSTR. JT. DETAILS



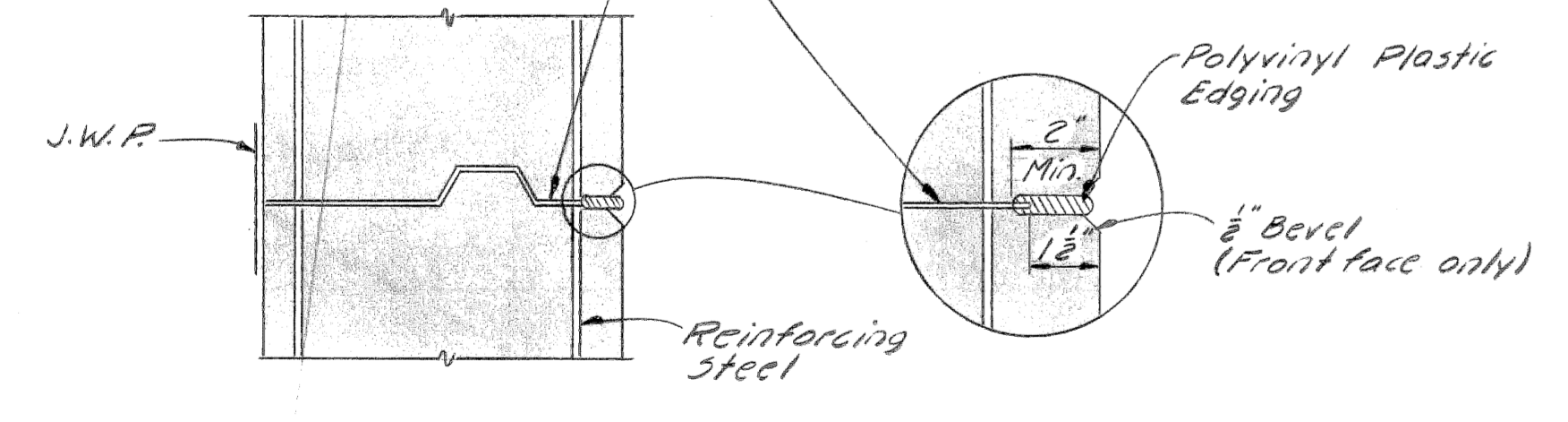
VERTICAL EXPANSION JT. DETAILS
(Except S.W. wall @ Abut. A)



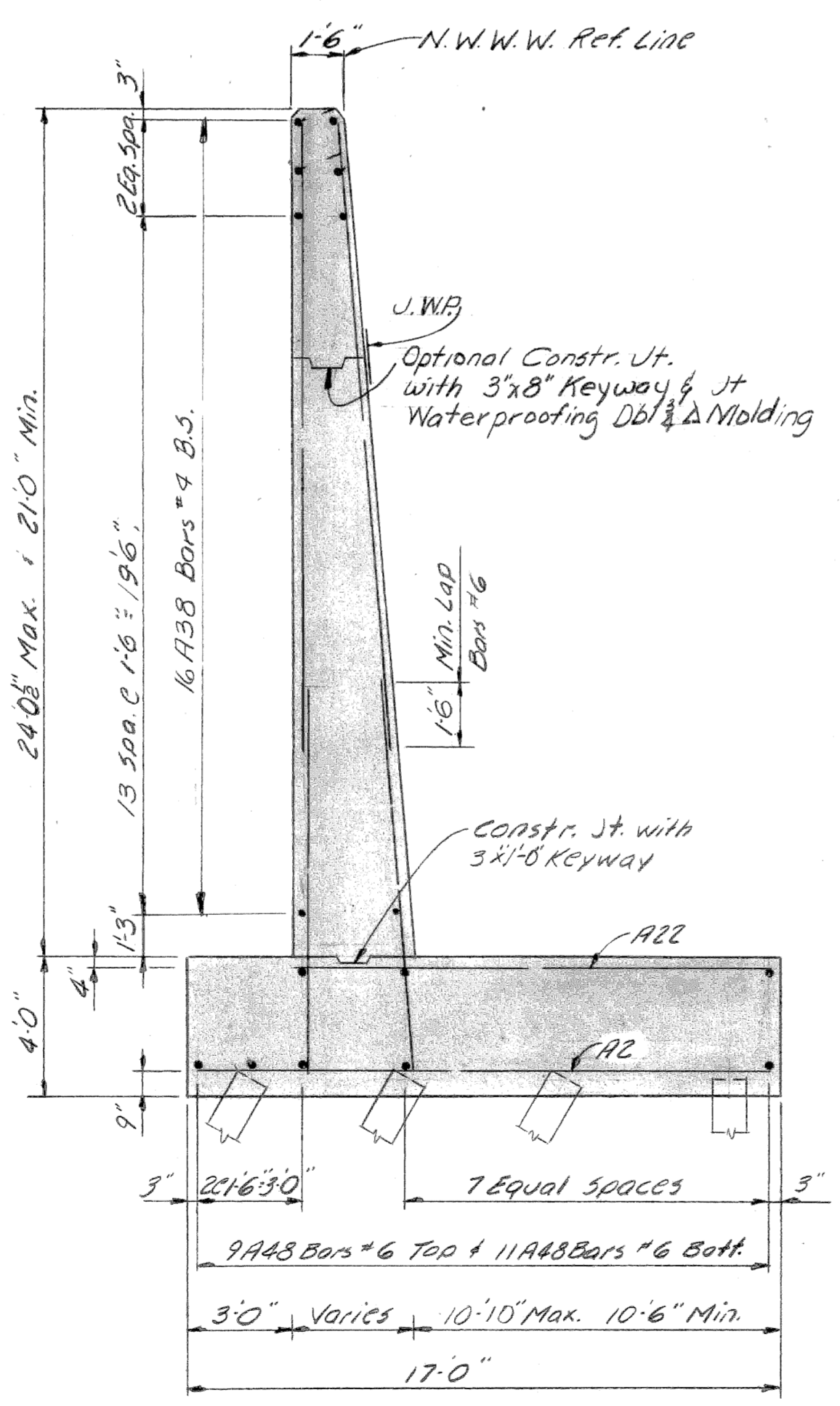
EXPANSION JOINT DRAIN



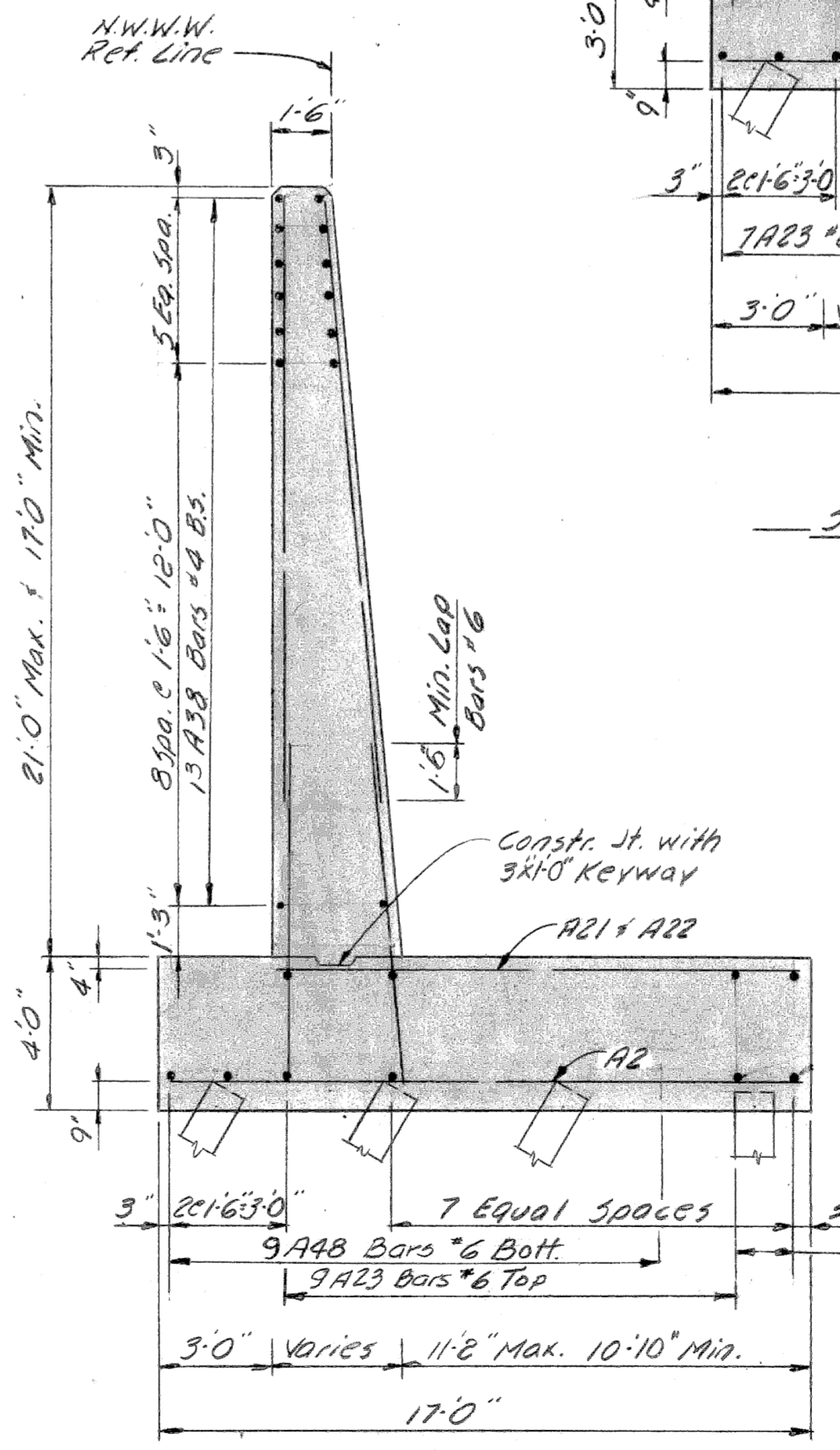
SECTION AT CONSTR. JT.



SECTION R-R
ALTERNATE METAL BULKHEAD FOR CONSTRUCTION JTS.



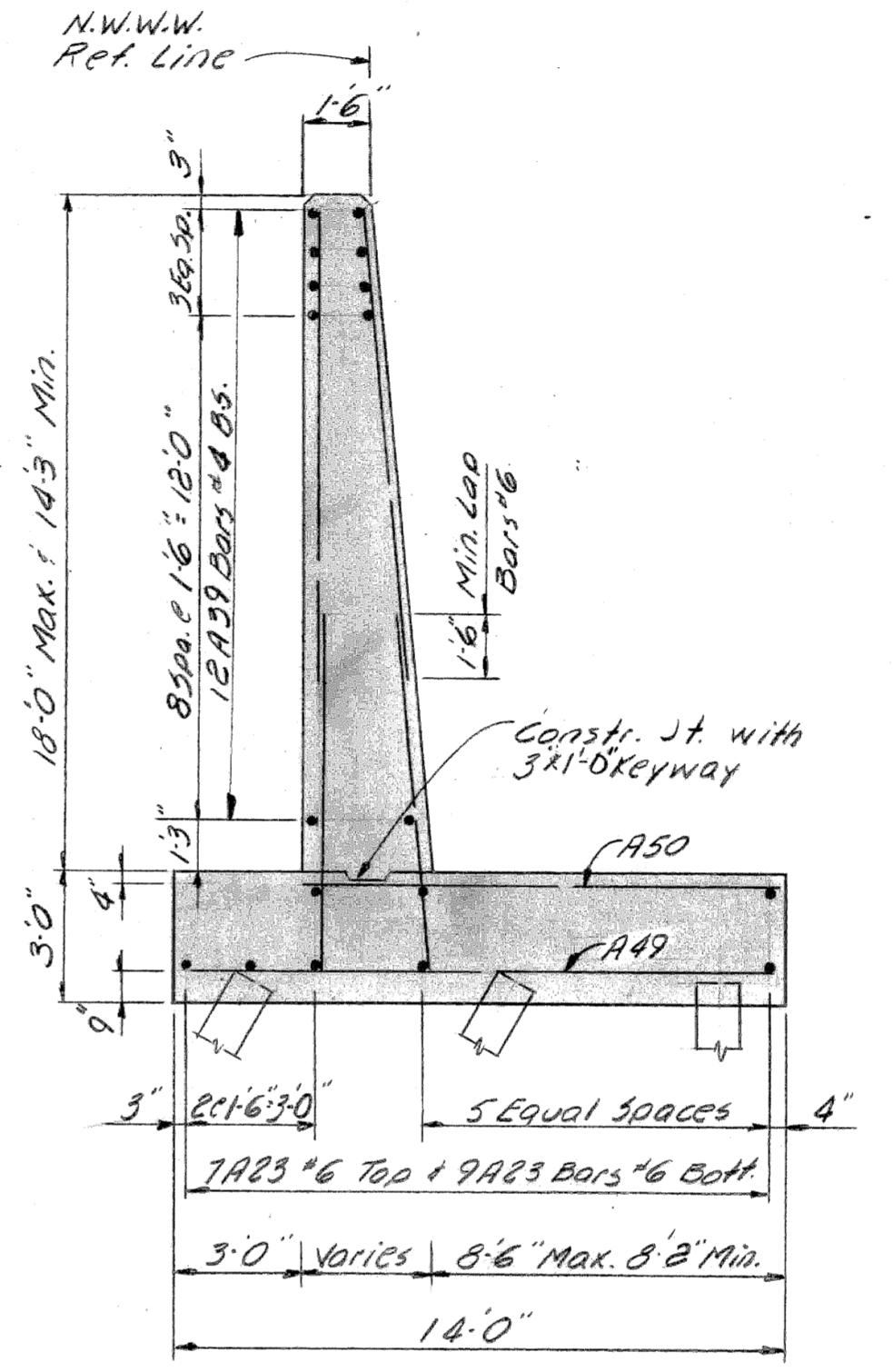
SECTION L-L



SECTION M-M

MISCELLANEOUS QUANTITIES			
Item	Unit	Abut. A	Abut. B
Clear Protective Coating for Substr. Conc.	Sq. Ft.	1948	2037
3/4" Joint Filler	Sq. Ft.	149	161
1" Joint Filler	Sq. Ft.	110	199
Joint Waterproofing	Sq. Ft.	191	194
Expansion Joint Drain	Lin. Ft.	36	66
Foundation Drain	Lin. Ft.	152	355
Unclassified Excavation	Cu. Yds.	810	1630
Catch Basins	Each	-	2
Bridge Railing - Solid Parapet Type	Lin. Ft.	45.3	-
Low Temp. Protect. - Substr. Concrete	Cu. Yds.	637.9	1099.6
Steel Sheet Piling - (Left in Place)	Sq. Ft.	-	212

Unclassified Excavation includes excavation for the N.W., N.E., & S.W. Wingwalls.



SECTION N-N

Pour	Location	CONCRETE QUANTITIES			
		Abut. A	Abut. B	Abut. A	Abut. B
A1	Abut. Ftg.	116.9	-	125.8	-
A2	Abut. Ftg.	116.0	-	125.7	-
A3	Wingwall Ftg.	63.0	-	-	-
A4	"	51.7	-	-	-
A5	"	-	-	58.2	-
A6	"	-	-	60.4	-
A7	"	-	-	14.8	-
A8	"	-	-	7.1	-
A9	"	-	-	60.4	-
A10	"	-	-	60.4	-
A11	"	-	-	37.3	-
A12	"	-	-	22.2	-
A13	"	-	-	12.4	-
A14	Wingwall Ftg.	-	-	24.9	-
B	Abut. Stem	-	48.0	-	46.1
C	"	-	46.8	-	48.4
D	"	-	51.0	-	49.9
E	Abut. Stem	-	42.4	-	50.6
F	Wingwall Stem	-	15.9	-	53.4
G	"	-	13.0	-	39.6
H	"	-	17.0	-	14.6
J	Wingwall stem	-	13.3	-	7.4
K	Counterfort	-	7.3	-	-
L	Counterfort	-	34.6	-	-
M	Wingwall stem	-	-	-	50.0
N	"	-	-	-	38.5
O	"	-	-	-	29.9
P	"	-	-	-	22.8
Q	"	-	-	-	17.5
R	"	-	-	-	13.2
S	"	-	-	-	7.5
T	Wingwall stem	-	-	-	7.1
Total		348.2	289.7	610.8	488.8

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 R 16 B.
 Clear Protective Coating for Substructure Concrete shall be applied to the bridge seat and to the front face of abutment above the footing between fascia lines.
 For pile quantities, see sheet "B".
 For pile layout, see sheet "B".
 For notes pertaining to piles, see sheet "B".
 Abut. A & S.W. wingwall footings are to be poured against undisturbed soil. No allowance will be made in concrete quantities due to excavation outside of the footing neat lines.
 For Bridge Railing Solid Parapet Type Details see standard sheet R 16 B.
 Max. average foundation pressure DL only = 8800 * 1 sq. ft.
 Max. foundation pressure DL and LL = 3650 * 1 sq. ft.
 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.
 Steel sheet piling shall be of the continuous interlock type weighing not less than 22 lbs/sq. ft. of wall and shall be furnished with suitable connecting and corner pieces.

Work this sheet with Sheet Nos. 9 thru 13.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

PLANS PREPARED BY
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APPROVED: [Signature] STRUCTURAL ENGINEER

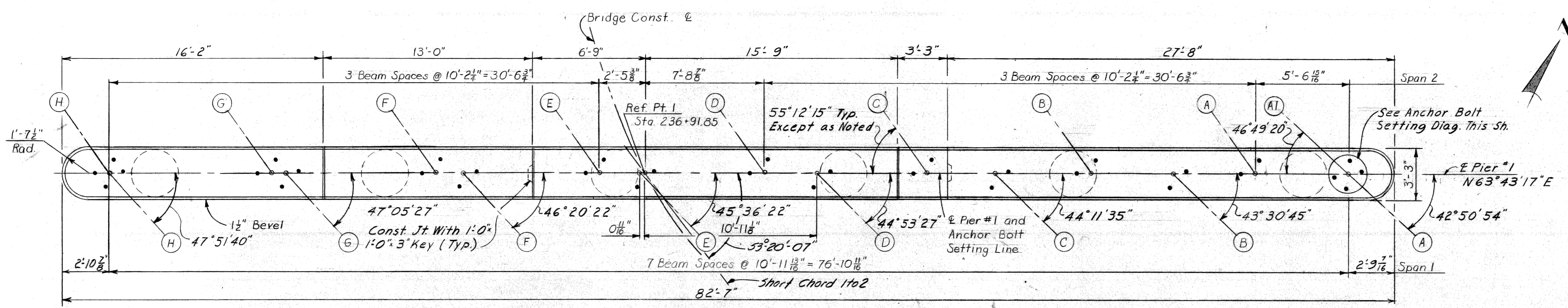
JOB No. PW 990 (18)

NO.	DESCRIPTION	DATE	BY

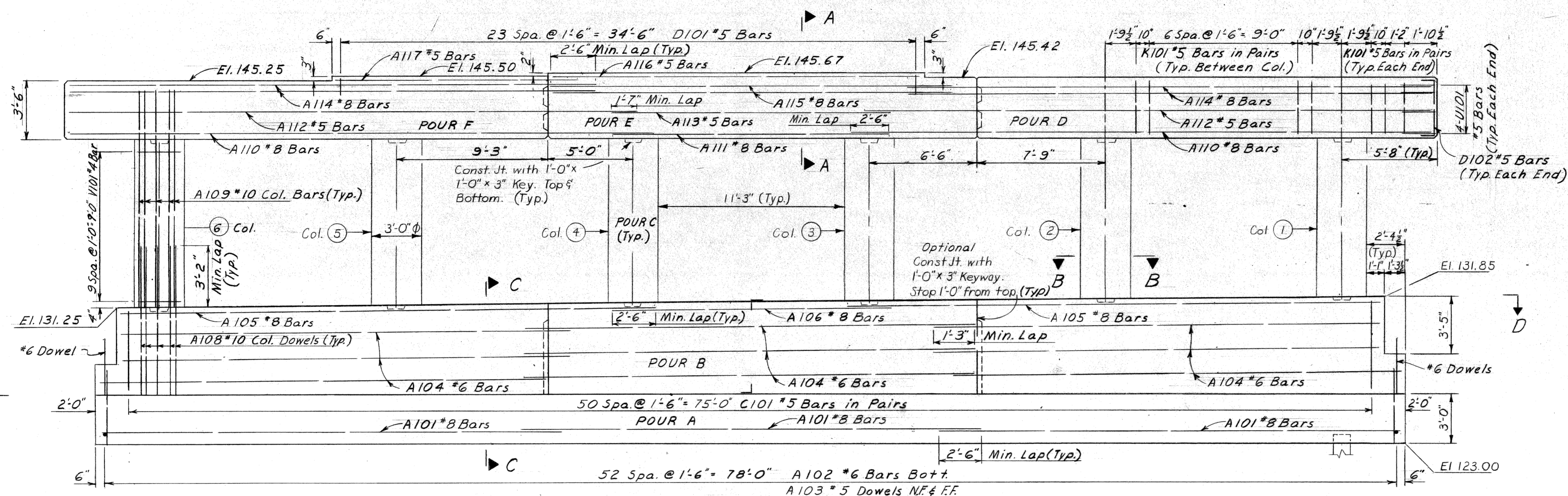
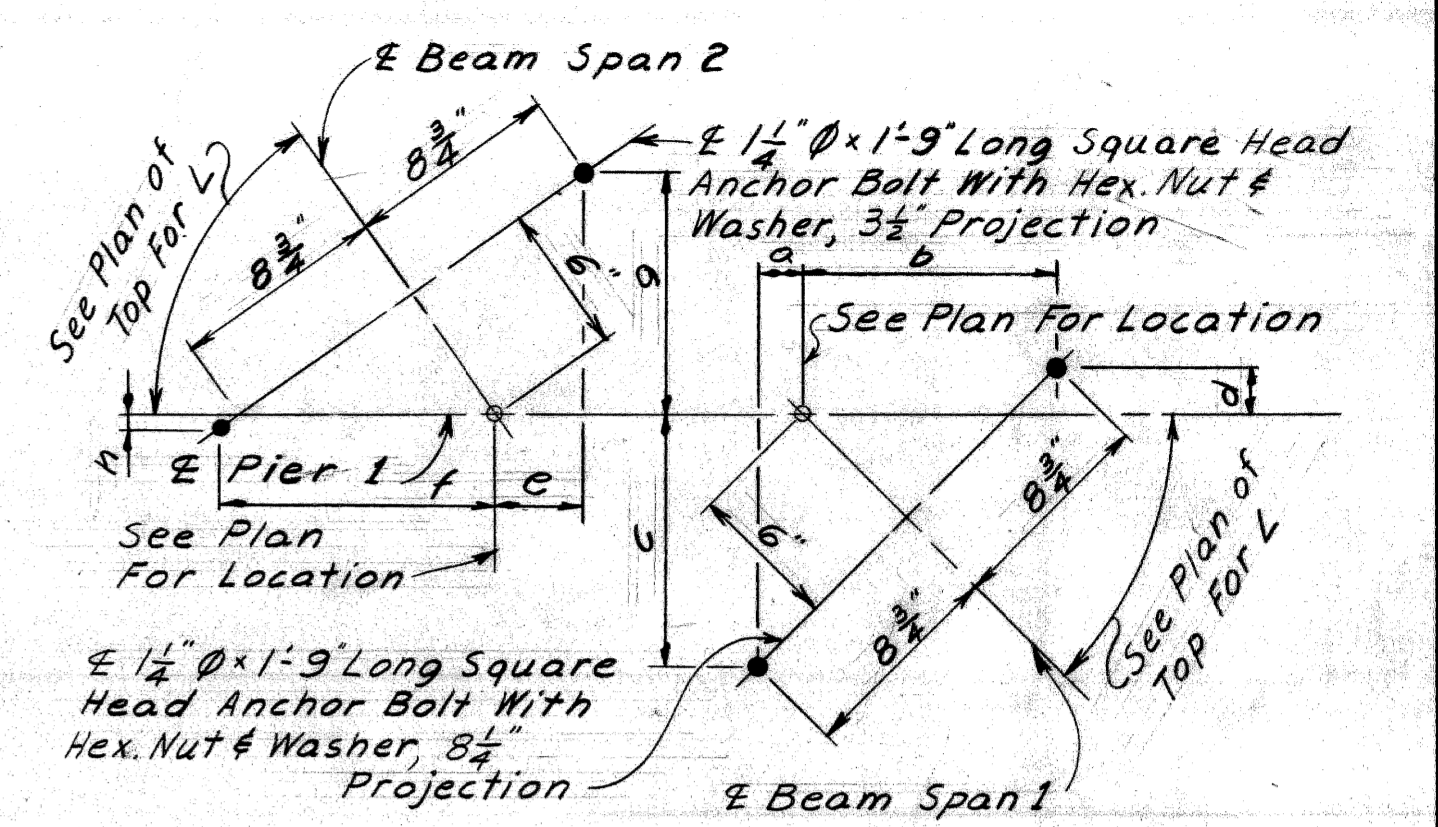
SQUAD BOSS: Locher 7-70
 DRAWN BY: A. B. 7-70
 CHECKED BY: WAL 7-70
 SHEET 12 of 36

CITY OF DETROIT
 513 of 82123D

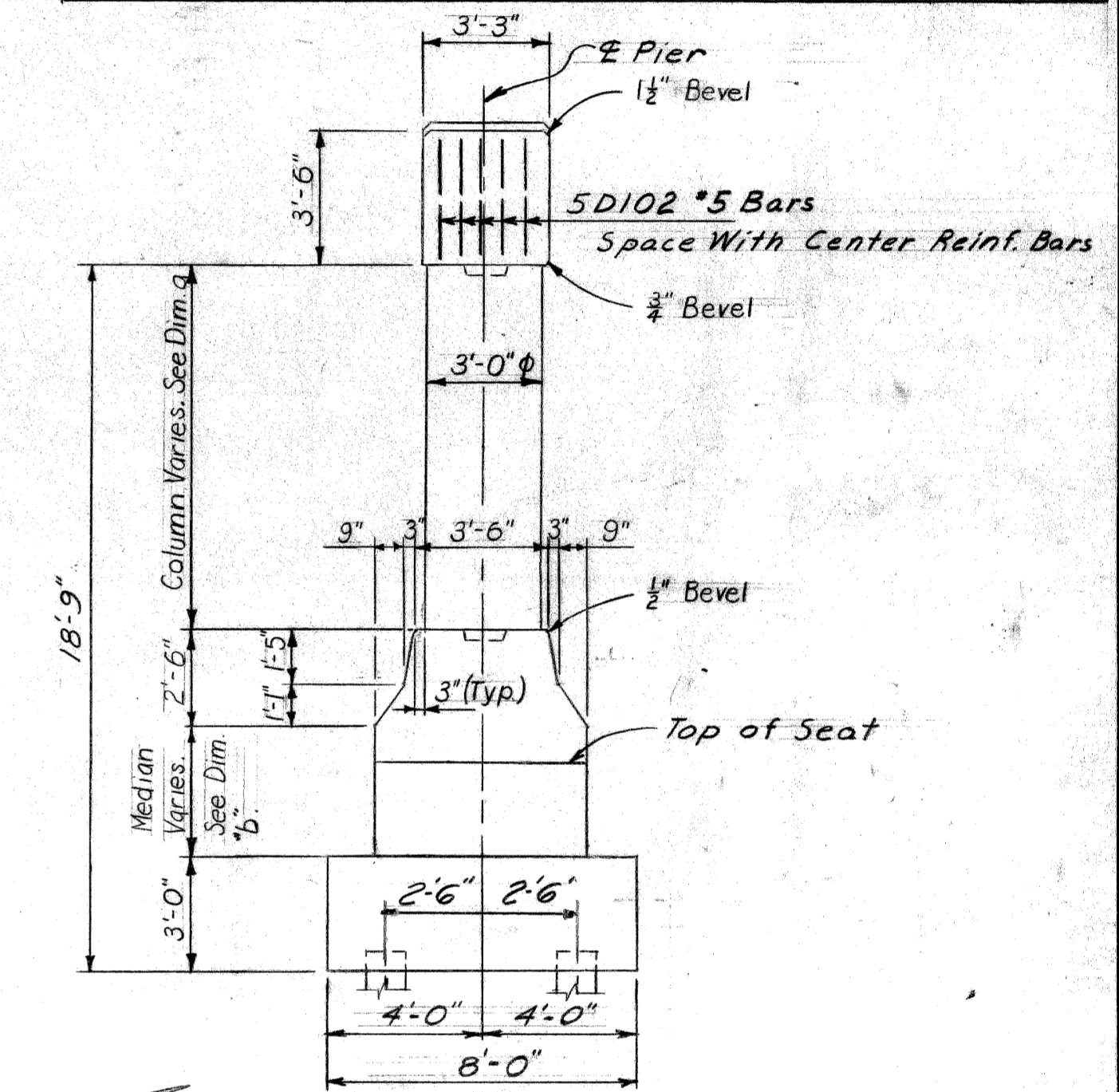
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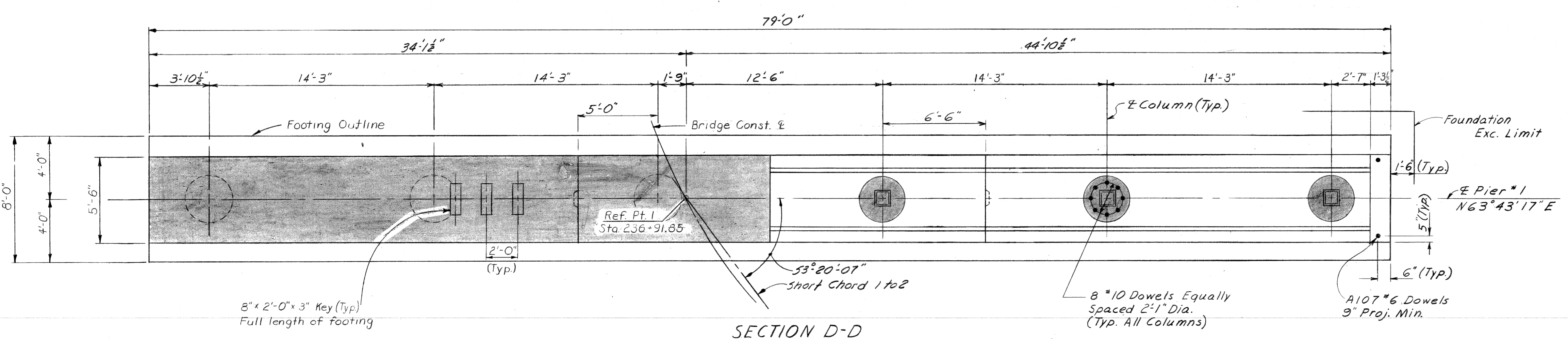
PLAN OF TOP



ELEVATION PIER #1



END VIEW



SECTION D-D

Dimensions a & b @ Col.		
Col.	a	b
1	9'-11"	3'-4"
2	10'-0 1/2"	3'-2 1/2"
3	10'-1 1/4"	3'-1 1/4"
4	10'-3 1/8"	2'-11 1/8"
5	10'-4 1/2"	2'-10 1/2"
6	10'-5 3/4"	2'-9 3/4"

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

APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No.
PW 990 (16)

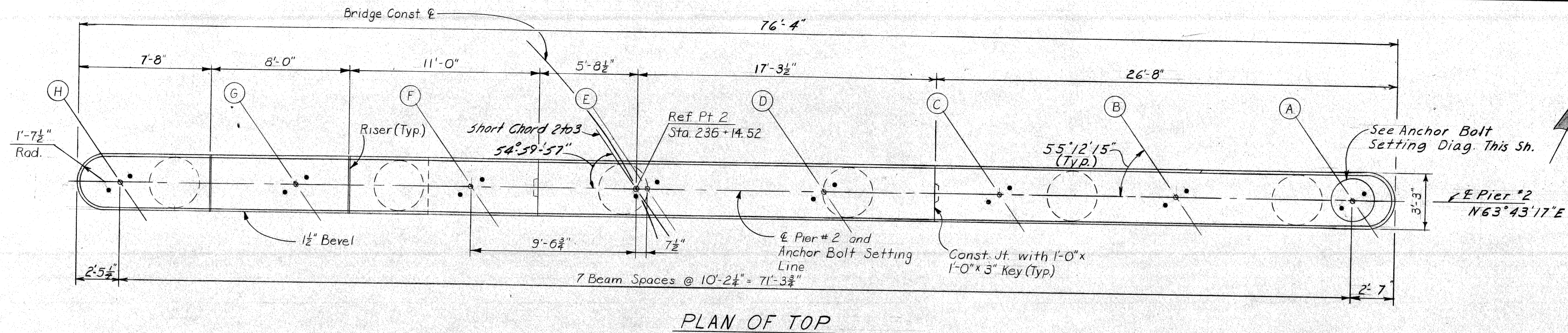
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PIER No. 1 DETAILS

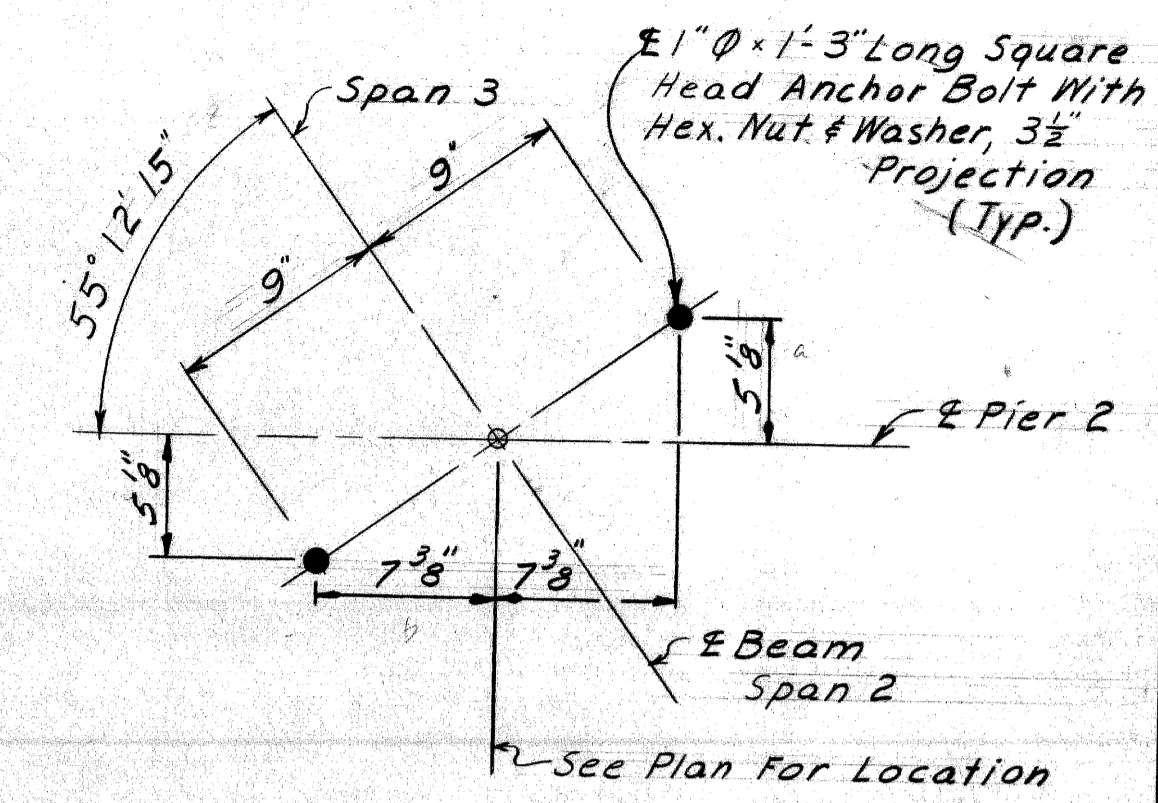
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS: LOCHER, 6-70
 DRAWN BY: B. Bunce, 9-69
 TRACED BY: I.H.K., 6-70
 CHECKED BY: I.H.K., 6-70
 SHEET 15 of 36

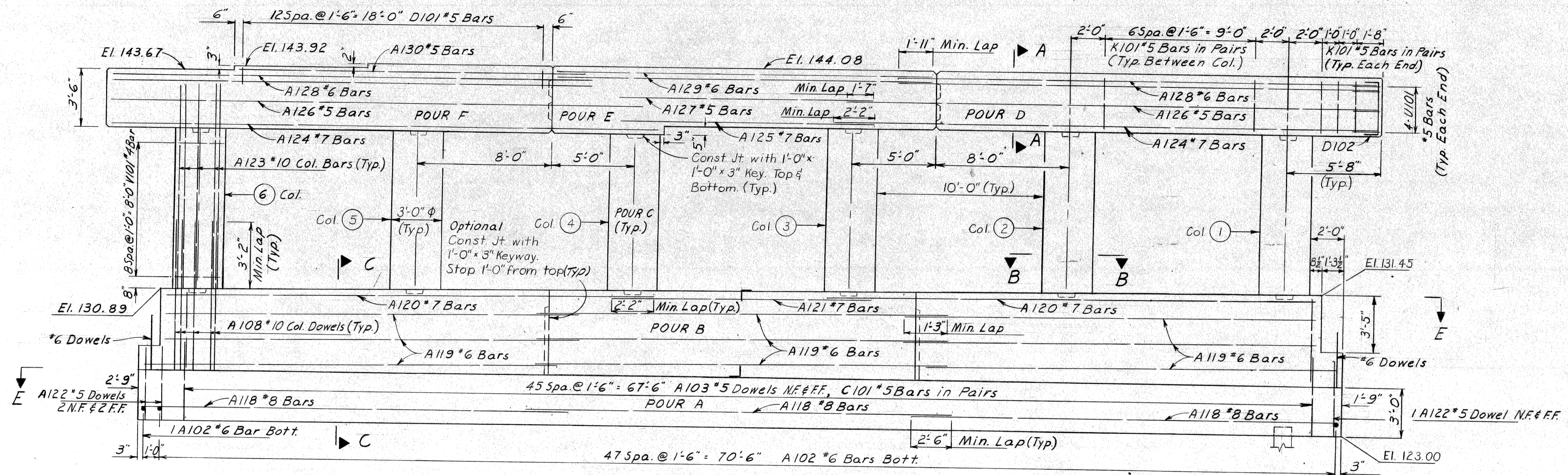
813 of 82123D



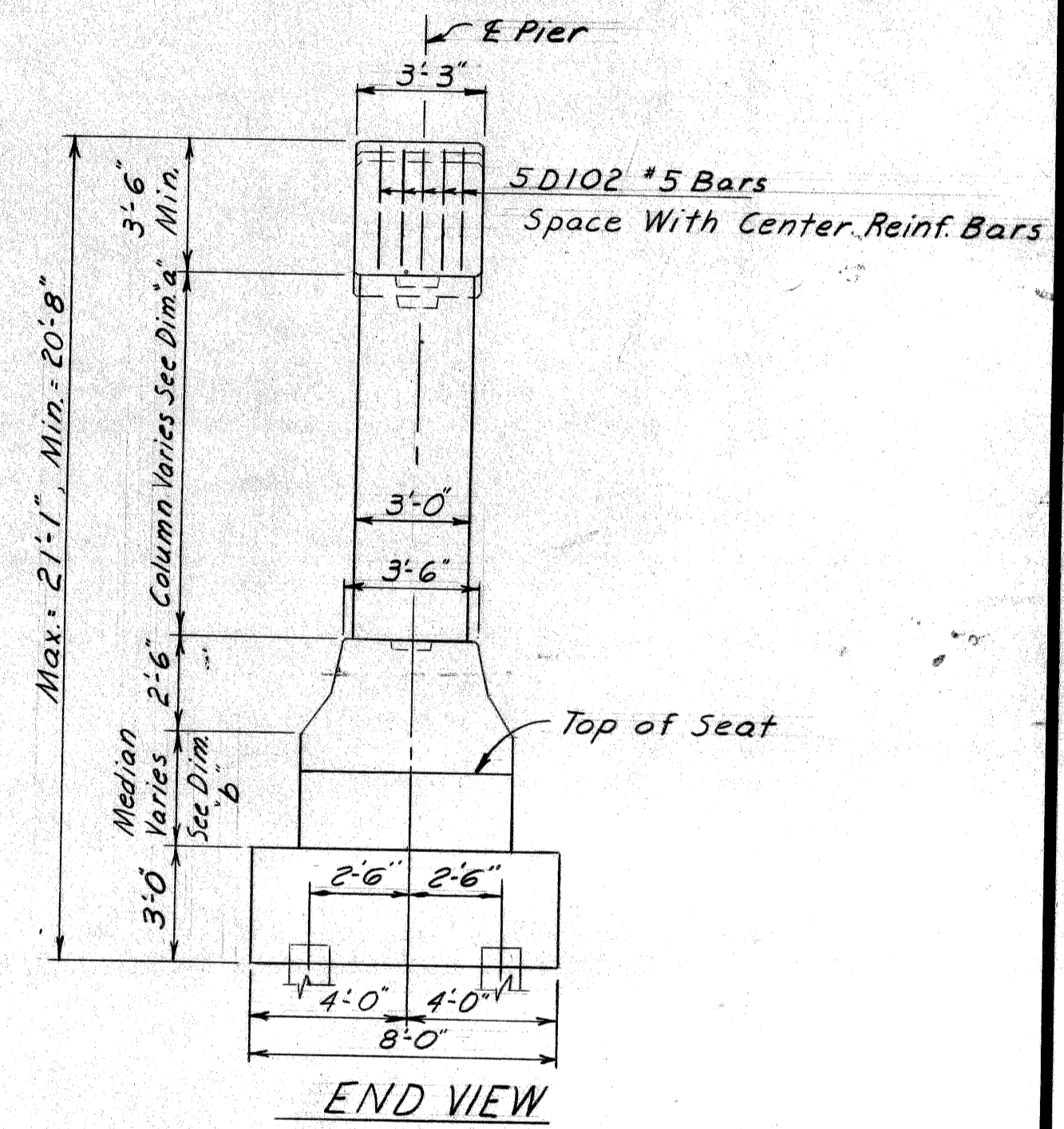
PLAN OF TOP



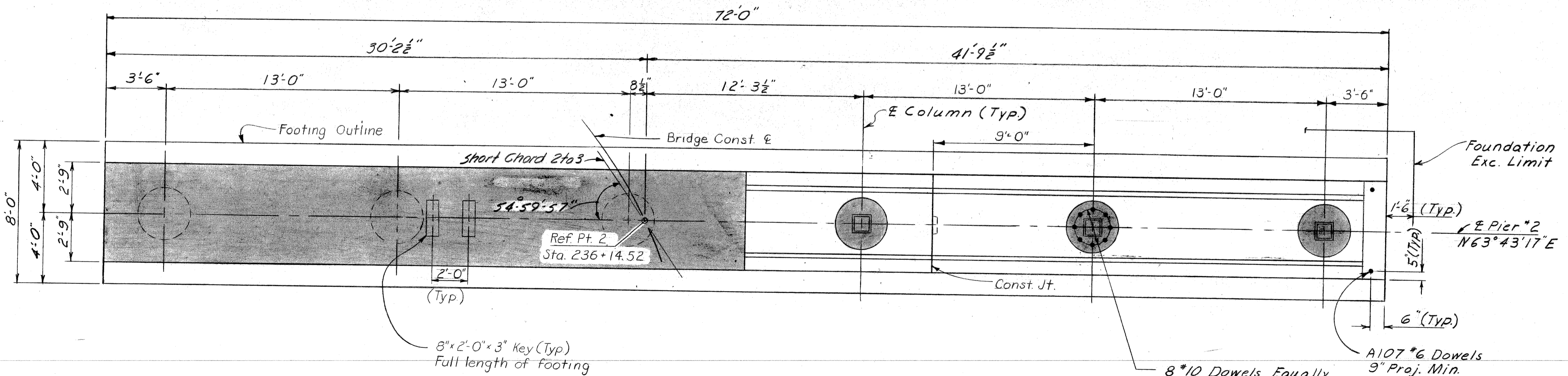
ANCHOR BOLT SETTING DIAG.



ELEVATION PIER 2



END VIEW



SECTION E-E

Col.	a'	b'
1	9'-1 1/8"	2'-11"
2	9'-3 3/8"	2'-9 3/8"
3	9'-4 3/8"	2'-8 5/8"
4	9'-0 3/8"	2'-7 1/2"
5	9'-1 3/8"	2'-6 1/2"
6	9'-3"	2'-5"

PLANS PREPARED BY
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 STRUCTURAL ENGINEER

JOB No.
 PW 990 (16)

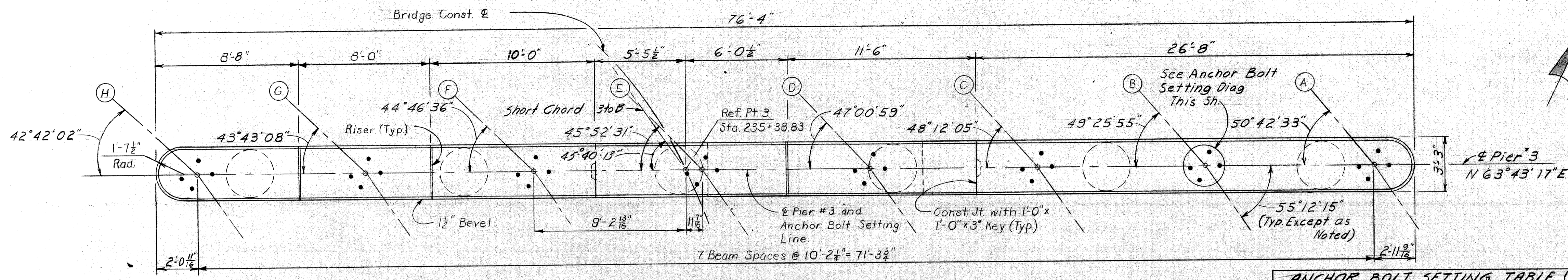
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PIER No. 2 DETAILS

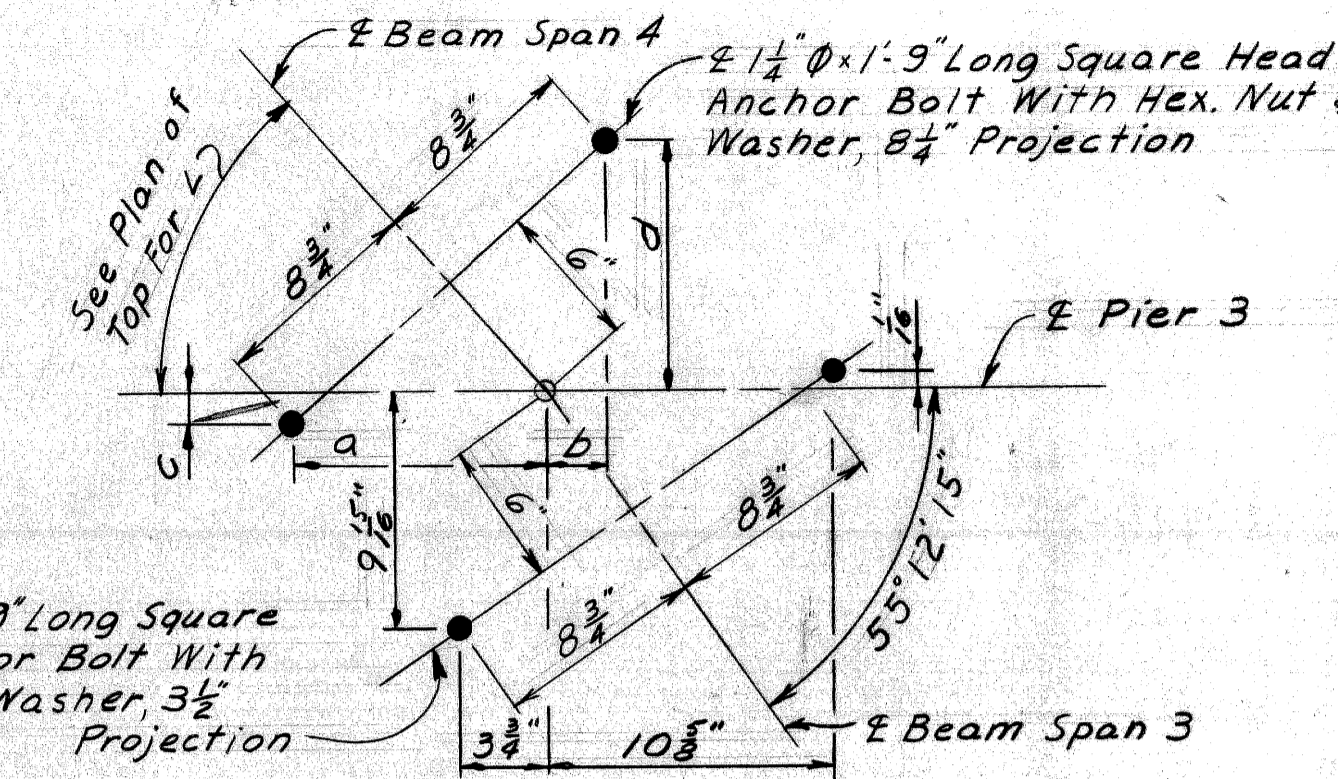
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	LOCHER	6-70
	B. Bounce	9-69

CITY OF DETROIT
 SHEET 16 of 30
 S13 of 82123D

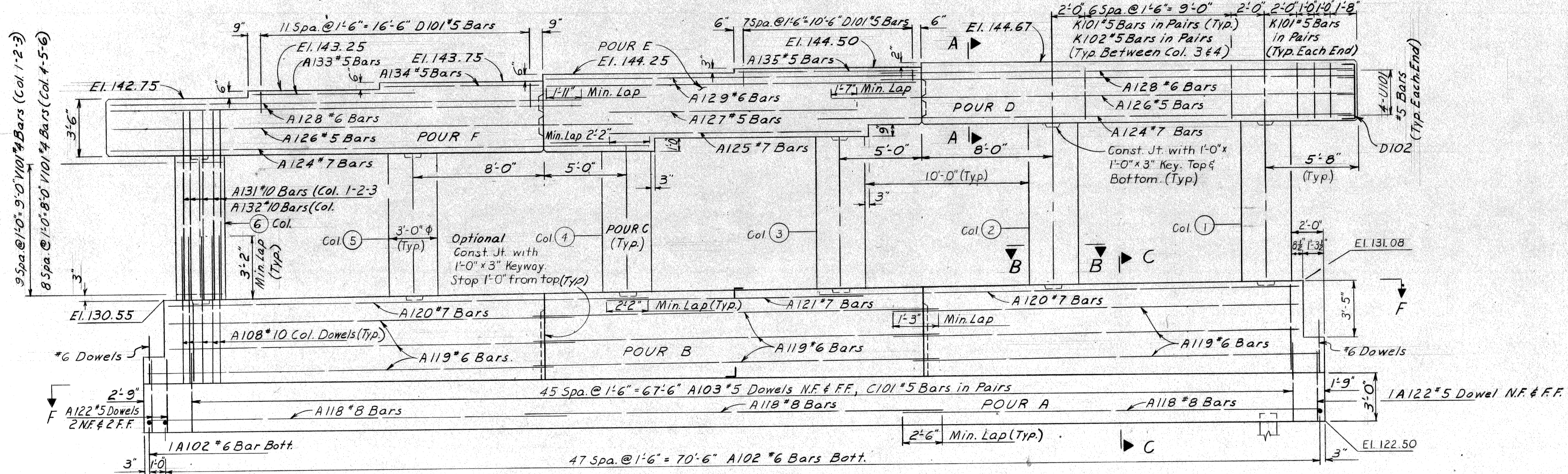


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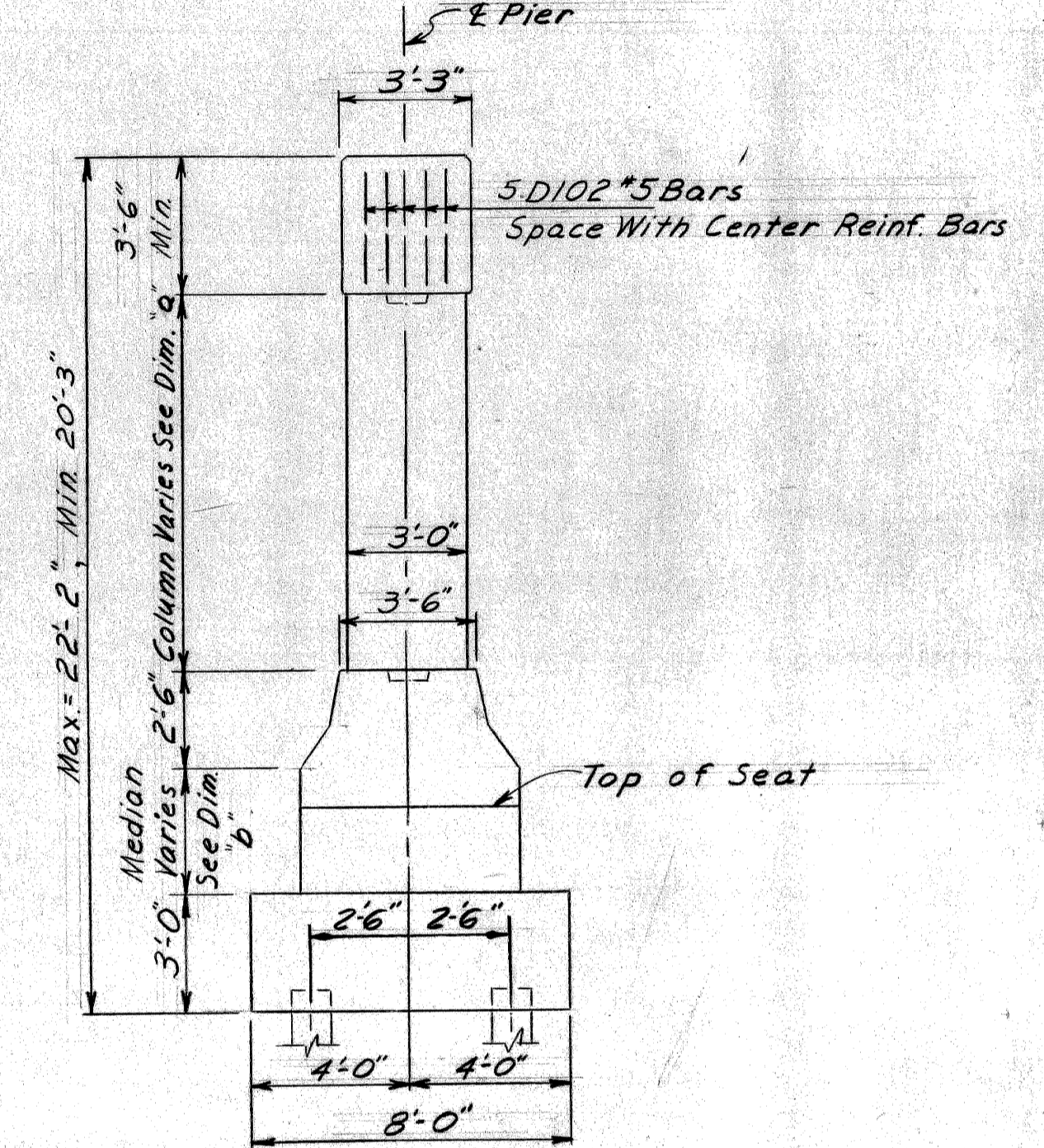


ANCHOR BOLT SETTING DIAG.

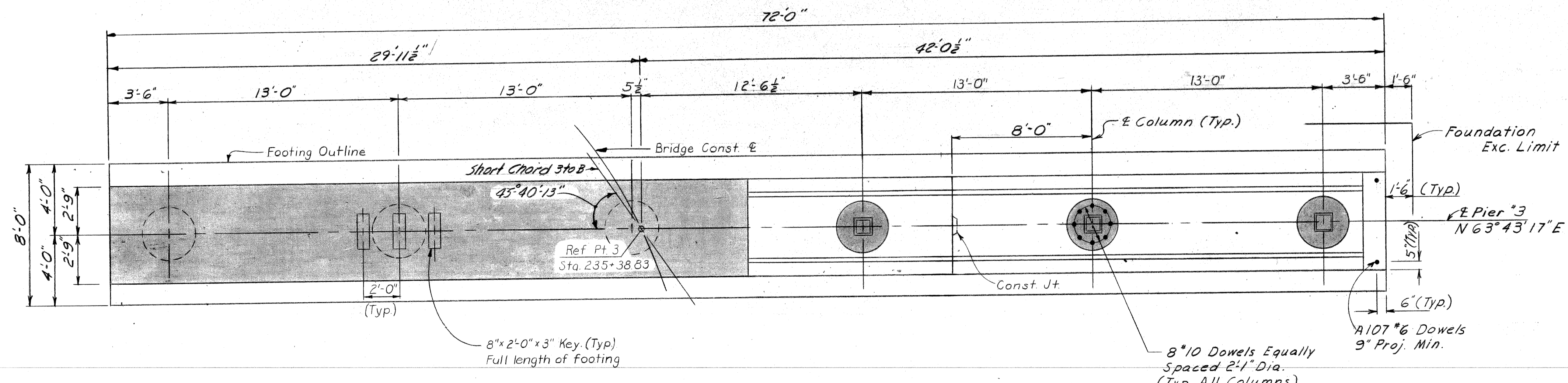
Span #	Bm. A	B	C	D	E	F	G	H
a	10 9/16	10 9/16	10 1/2	10 1/2	10 1/2	10 3/8	10 3/8	10 5/8
b	2 1/4	2 3/4	2 1/2	2 3/4	2 3/8	1 7/8	1 1/2	1 1/2
c	0 3/4	1 1/4	1 3/8	1 3/8	1 13/16	1 1/2	2 3/8	2 3/8
d	10 1/8	10 1/4	10 1/8	10 3/8	10 1/2	10 1/2	10 1/2	10 1/2



ELEVATION PIER #3



END VIEW



SECTION F-F

Col.	a	b
1	9' 11 1/8"	3' 0 1/8"
2	10' 0 3/8"	2' 11 3/8"
3	9' 4 1/2"	2' 10 1/2"
4	8' 5 3/4"	2' 9 1/4"
5	8' 7"	2' 8"
6	8' 8 1/8"	2' 6 3/8"

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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: _____
 STRUCTURAL ENGINEER

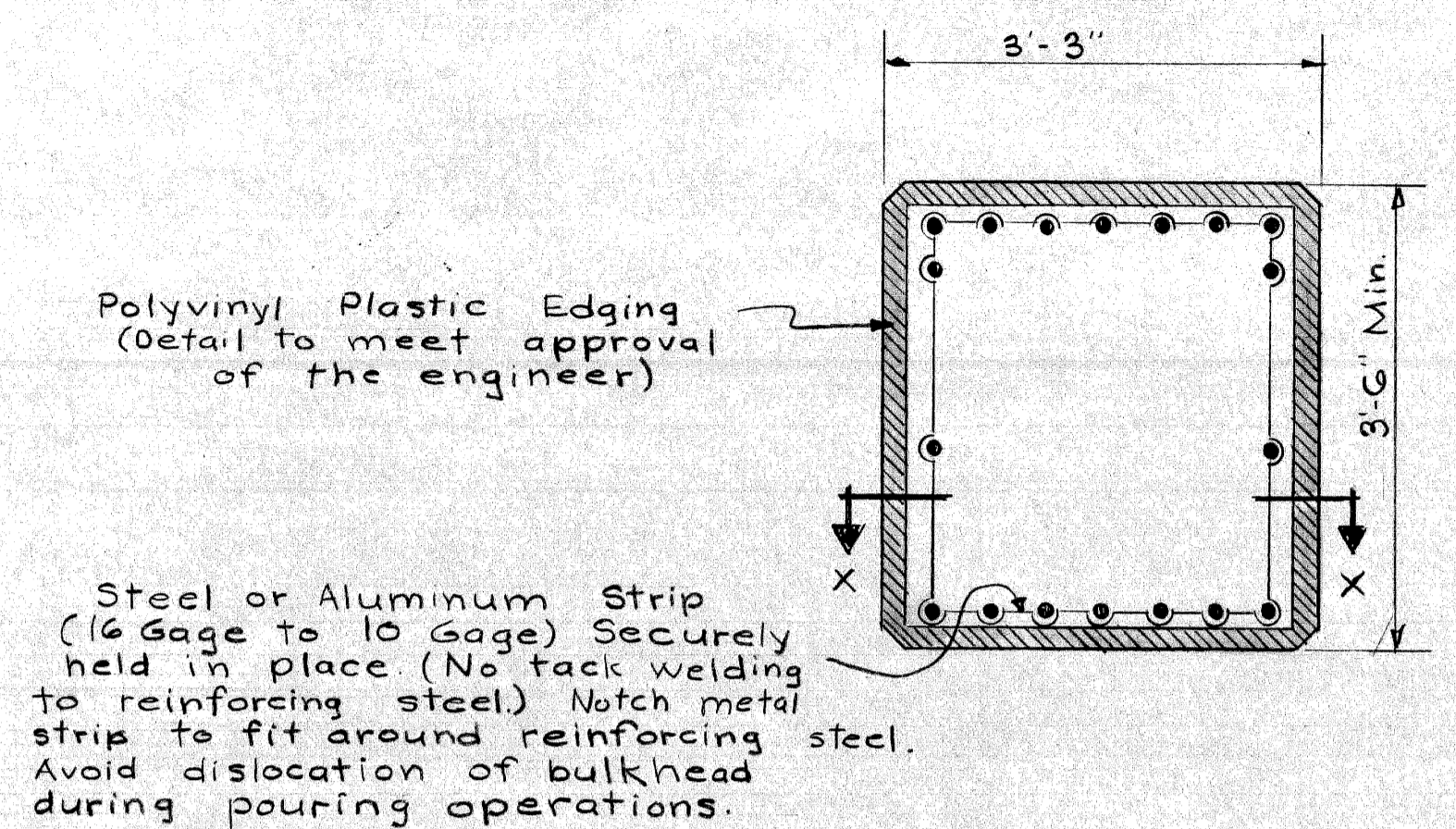
JOB No.
PW 990 (16)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

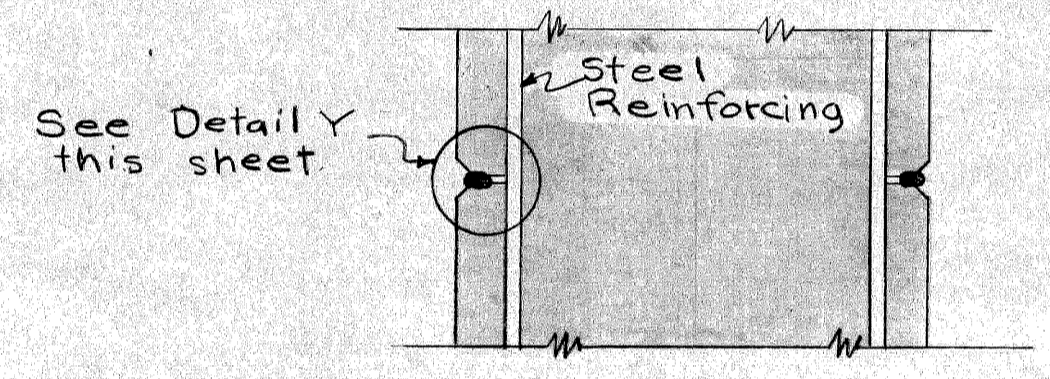
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT			
SQUAD BOSS	LOC. CHIEF	DATE	
	B. Bence	9-69	

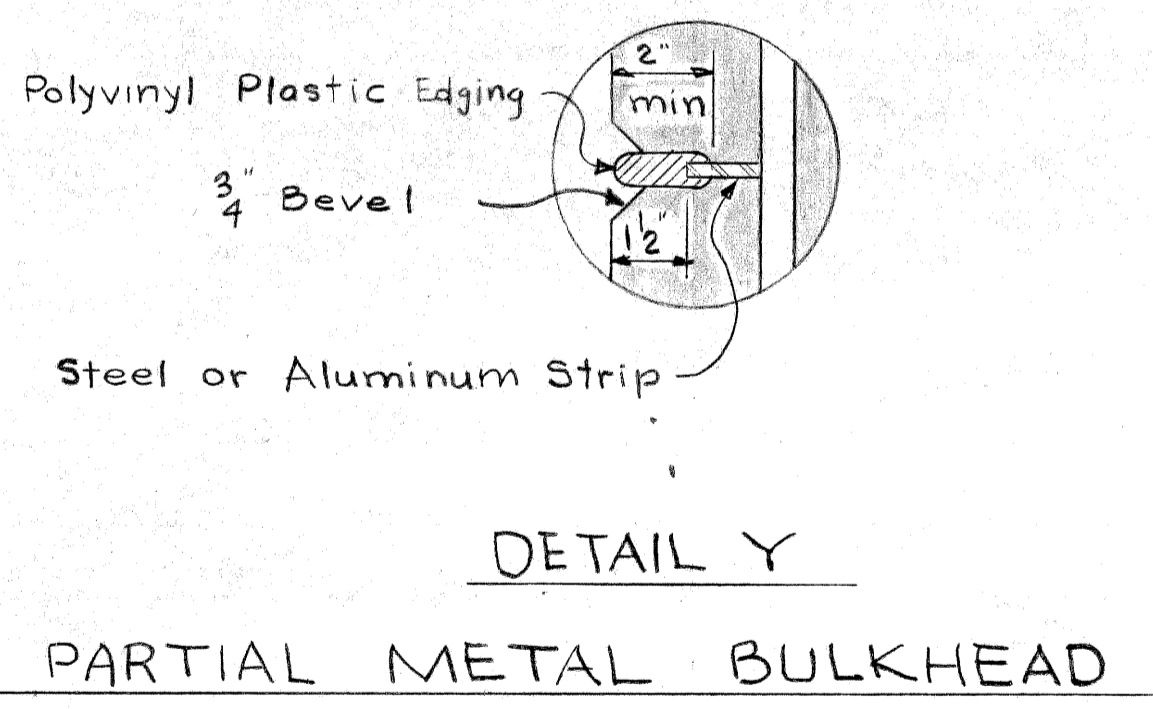
CHECKED BY: J. N. K. 6-70
 SHEET 17 OF 36
 S13 of 82123D



SECTION THRU PIER CAP

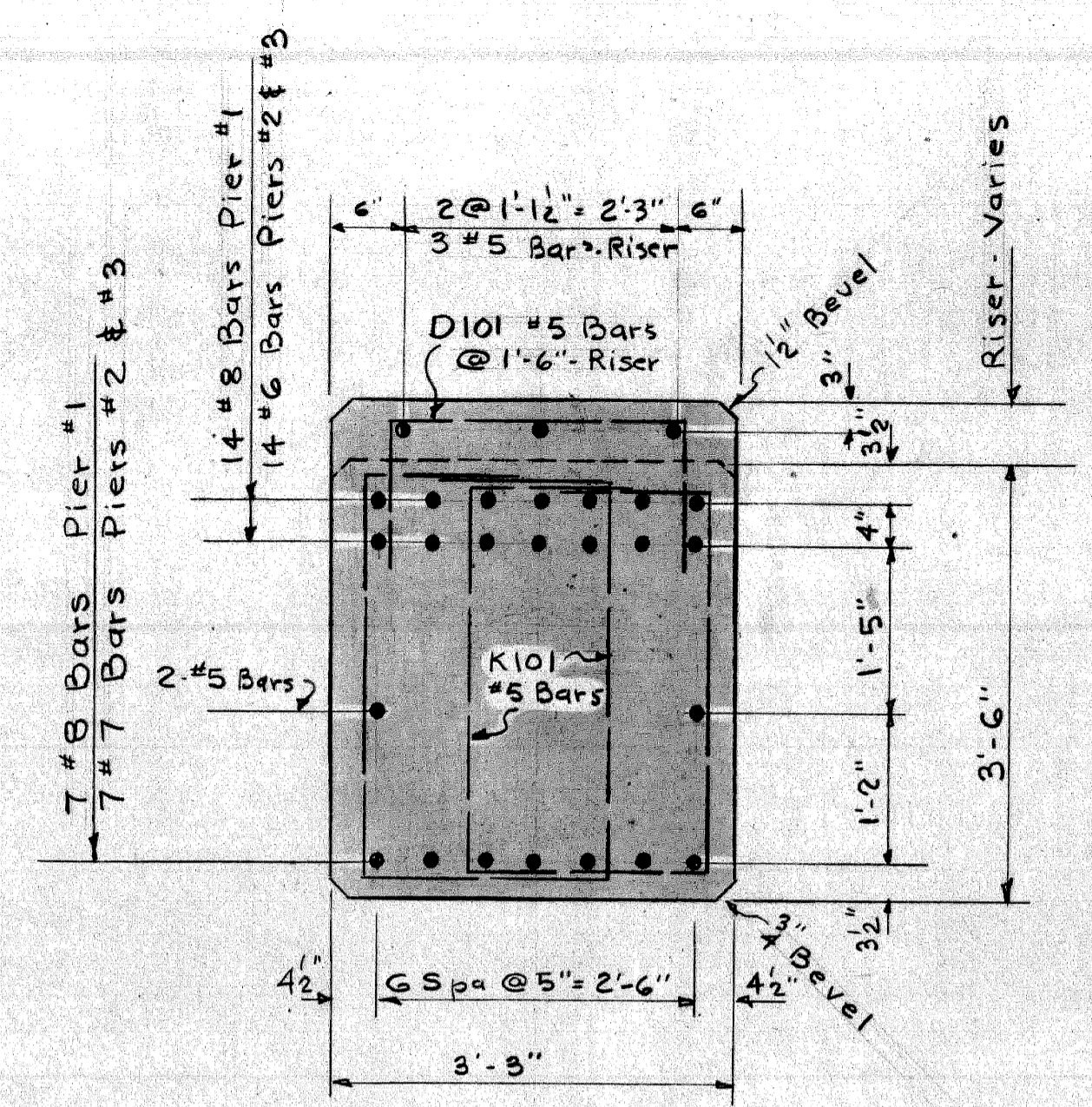


SECTION X-X

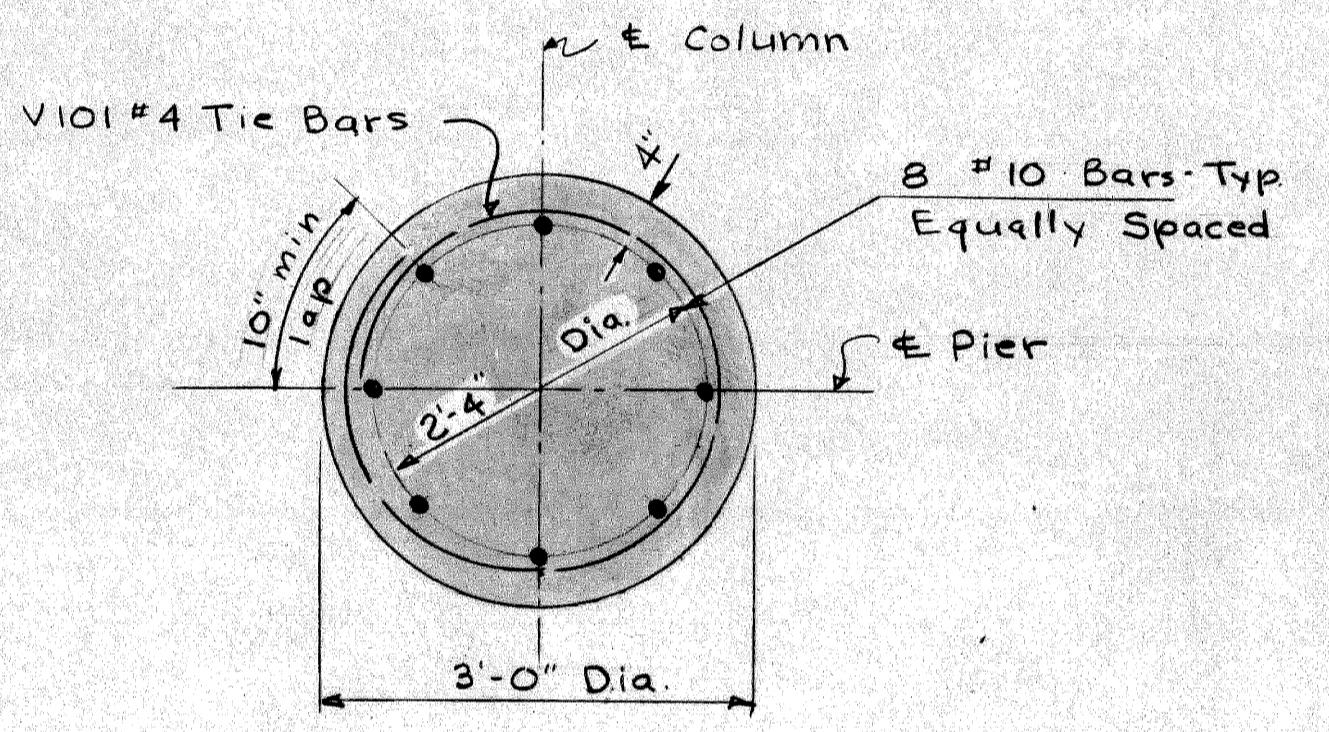


DETAIL Y

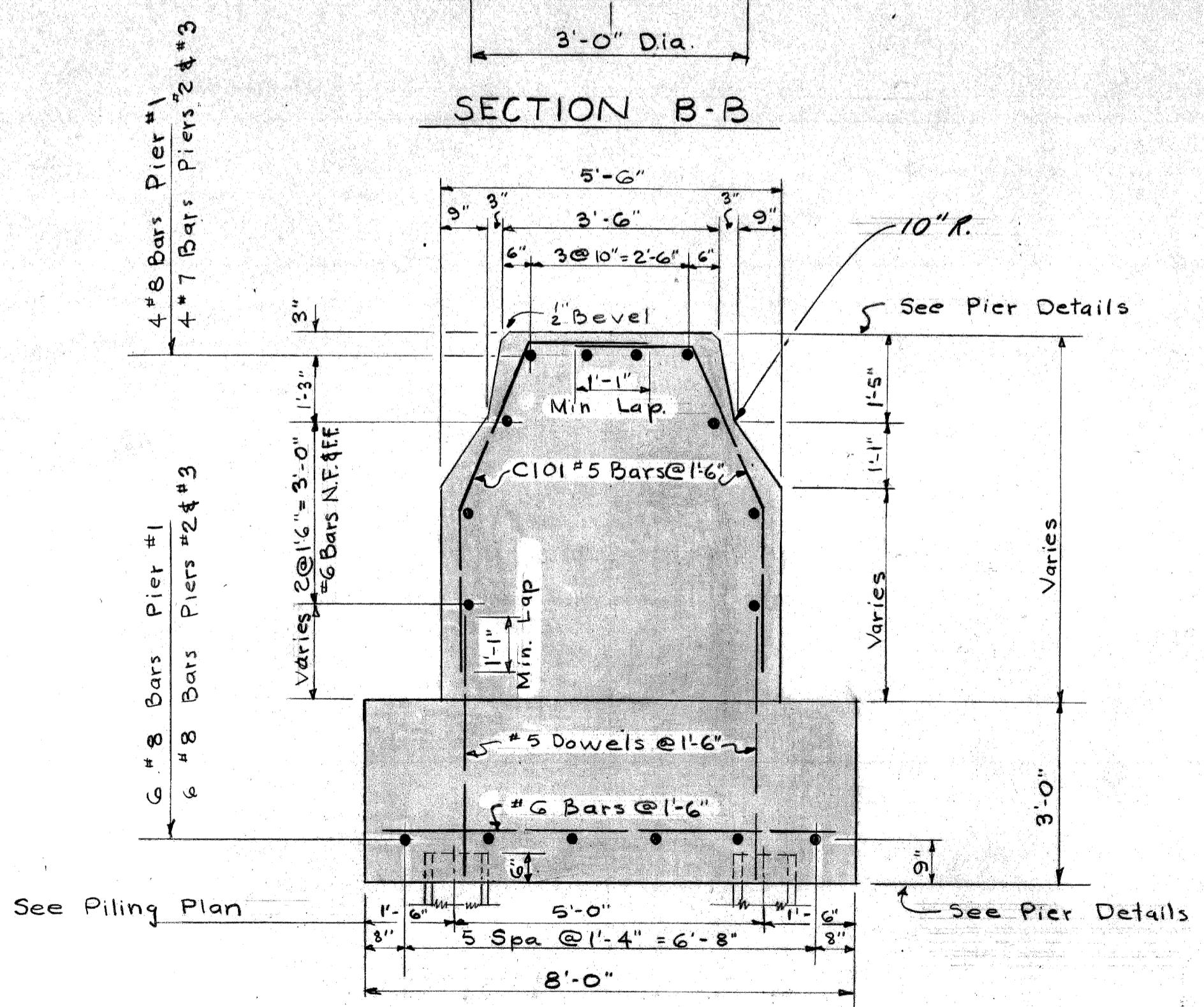
PARTIAL METAL BULKHEAD



SECTION A-A



SECTION B-B



SECTION C-C

CONCRETE QUANTITIES (Cu. Yds.)							
POUR	LOCATION	PIER #1		PIER #2		PIER #3	
		A(GA)	A(GAA)	A(GA)	A(GAA)	A(GA)	A(GAA)
A	Footing	70.3		64.0		64.0	
B	Median Barrier		78.1		65.6		67.7
C	Columns		16.0		14.6		14.4
D	Pier Cap		12.1		11.1		11.7
E	Pier Cap		12.2		9.8		12.4
F	Pier Cap		12.6		11.6		12.8
Grade A(GA) Concrete - Substructure				198.3 Cu. Yds.			
Grade A(GAA) Concrete - Substructure				362.7 Cu. Yds.			

MISCELLANEOUS QUANTITIES					
ITEM	UNIT	PIER #1	PIER #2	PIER #3	TOTAL
Unclassified Excavation	Cu. Yds.	183	156	160	499
Clear Protective Coating for Substructure Concrete	Sq. Ft.	2696	2658	2503	7857
Low Temp. Protection Substructure	Cu. Yds.	200	177	183	560
Protective Sealant Coating for Concrete	Sq. Ft.	268	-	252	520

GENERAL NOTES

For bevel and molding details see standard sheet R16.
 F.F. denotes Far Face.
 N.F. denotes Near Face.

Adjust the spacing of the reinforcing steel as required to permit placing of anchor bolts.

The tops of Piers #1 and #3 shall be given an application of protective sealant coating for concrete prior to placing masonry plates.

For pile layout, quantities, and details see Piling Plan. Clear protective coating for substructure concrete is to be applied to the complete area of the pier concrete above footings except tops of Piers #1 & #3. Drilling for anchor bolts will not be permitted.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

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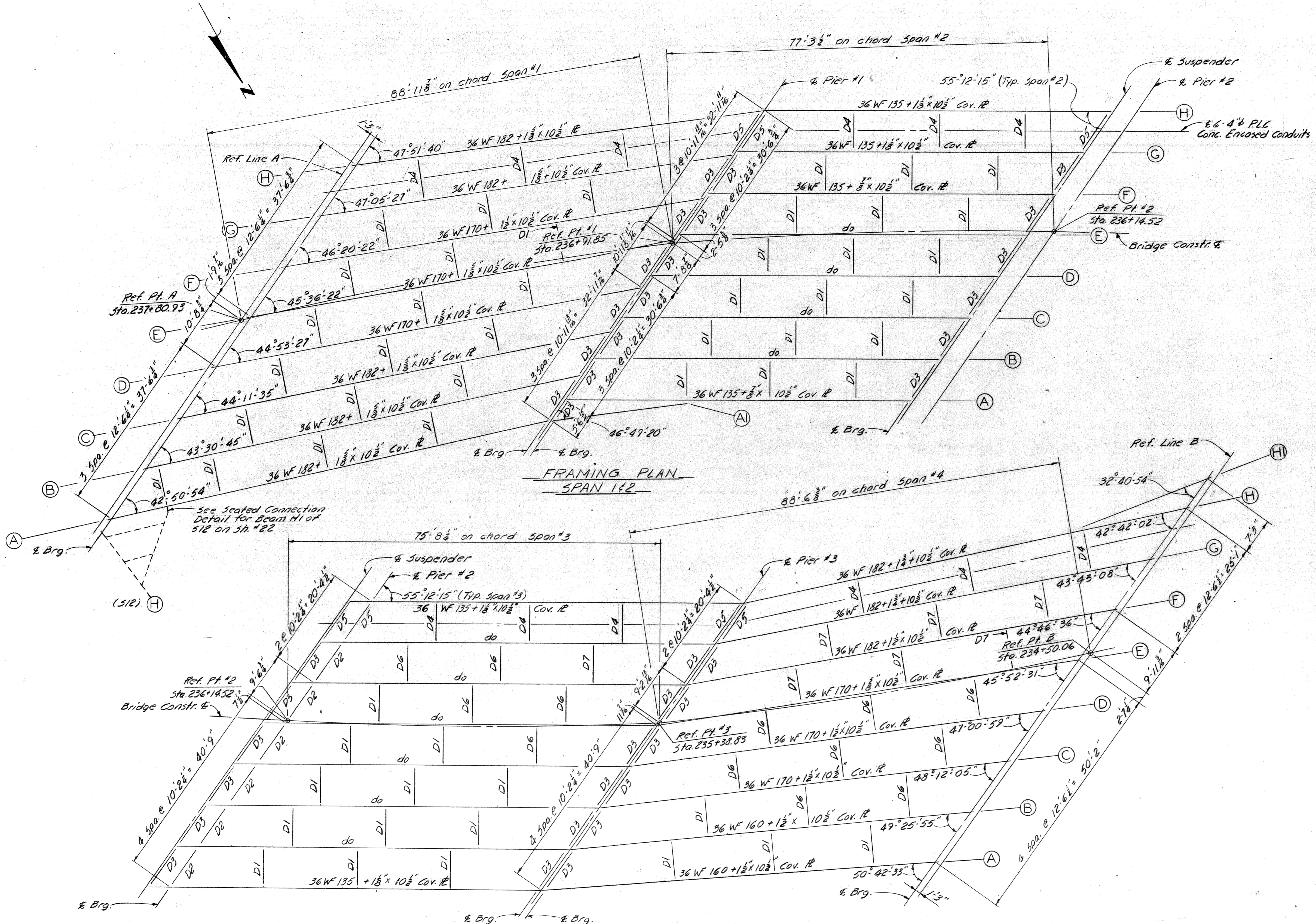
APPROVED: _____
 STRUCTURAL ENGINEER

JOB No.
 PW 990 (16)

PIER DETAILS			
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	LOCHE R 6-70
DRAWN BY	T.M. 5-70
TRACED BY	
CHECKED BY	J.H.K. 6-70
SHEET	18 of 36

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FRAMING PLAN
SPAN #2

FRAMING PLAN
SPAN #4

Note: Space Diaphragms at
approximate 4 pts. Max. Spa. 25'-0\"/>

GENERAL NOTES

Design: Michigan Department of State Highways Specifications for Design of Highway Bridges - 1958 edition and current AASHTO standard specifications for Highway Bridges (H 20 Loading).

Fabrication: Michigan Department of State Highways standard specifications for Highway Construction 1970 edition.

Shop connections shall be welded as shown on the plans.
Field connections shall be bolted with 3/4\"/>

The beams are to have a camber as shown on the camber diagram. This camber is to be measured with the beam lying on its side. Allowable camber tolerance shall be ± 1/4\"/>

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

Sole plates 3\"/>

Steel in Anchor Bolts may be ASTM A-307. Anchor bolts shown on the plans are minimum. Bolts longer than those shown may be furnished at no extra cost. Magnetic particle inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random for each ten sections or fractions thereof.

Anchor bolts (including nuts and washers) shall be galvanized in accordance with A.S.T.M. Designation A 153.

All steel material used for bearings, with exception of portion welded to beams, shall be galvanized in accordance with A.S.T.M. Designation A 123. Galvanizing shall be applied after fabrication of bearing. Mill scale and foreign material shall be removed prior to galvanizing.

Steel for pins in suspender is to be A-588. Bronze for washers shall be A.S.T.M. B100 or A.S.T.M. B22. The quantity Structural Steel includes:
Structural Steel Furnishing & Fabricating (A588 Rolled) 573,500 Lbs.
Structural Steel Erection (A588 Rolled) 573,500 Lbs.
Shear Developers Lump Sum

A.S.T.M. A-588 Steel 573,390 Lbs.
Sheet Lead 110 Lbs.

Work this sheet with sheets # 20 thru 22

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

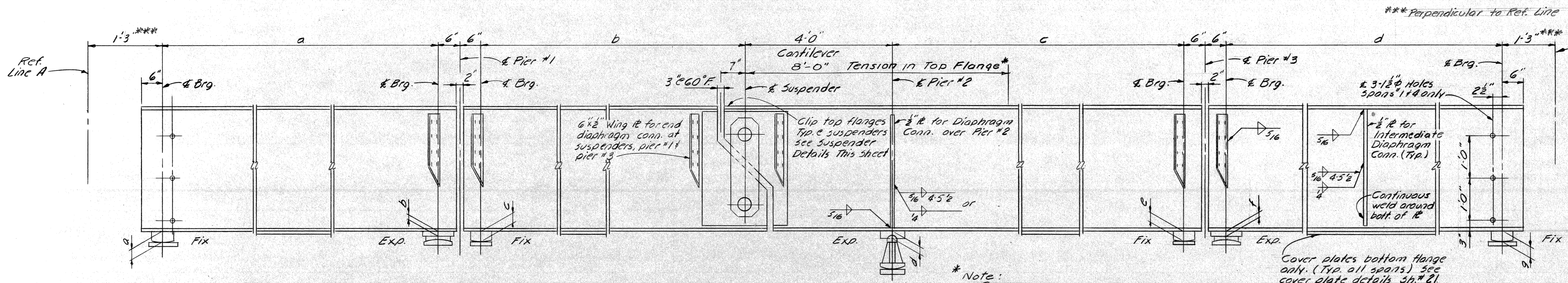
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JOB No.
PW 990 '8

REVISIONS			
NO.	DESCRIPTION	DATE	BY

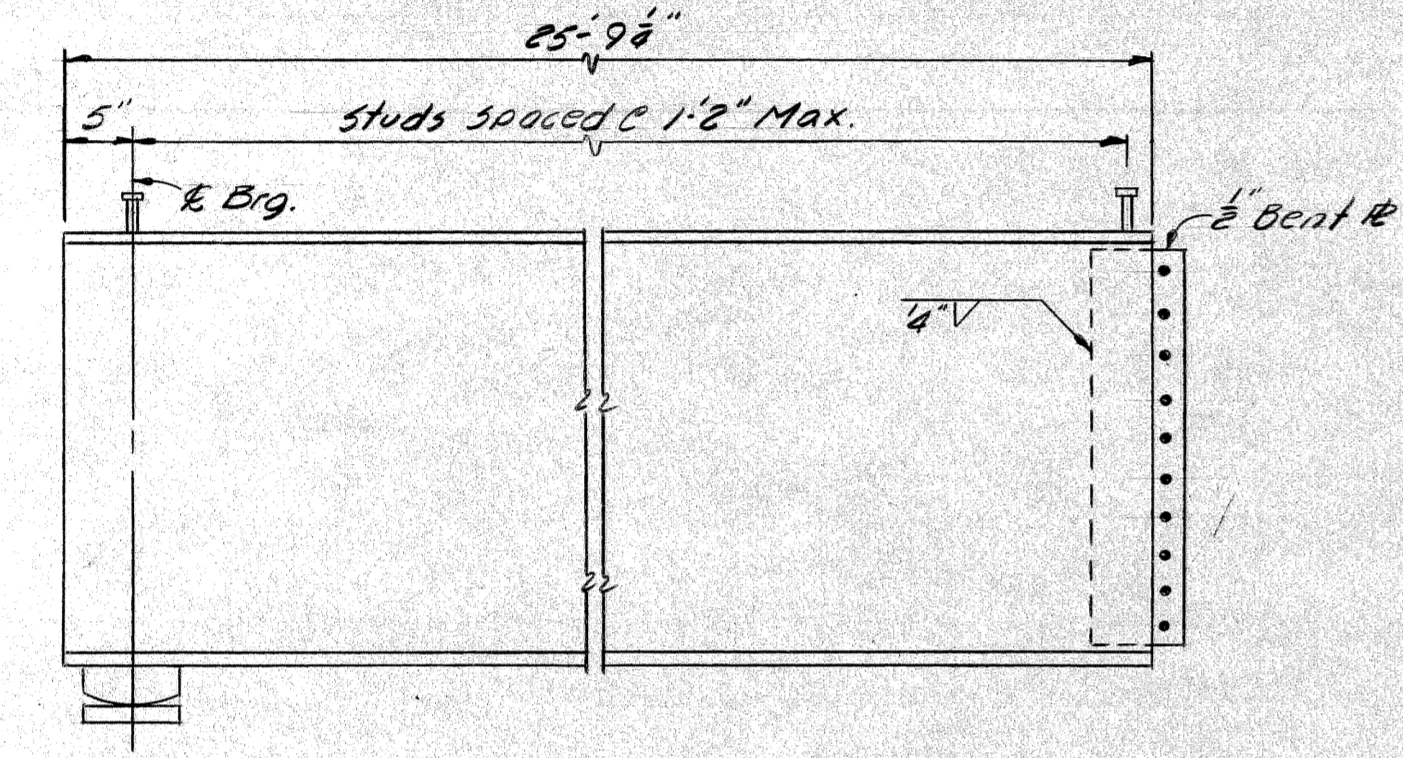
CITY OF DETROIT			
DESIGNED BY	W.L. RARE	7-70	
DRAWN BY			
CHECKED BY	W.L. RARE	7-70	
SHEET 19 OF 36			

S13 of 82123D

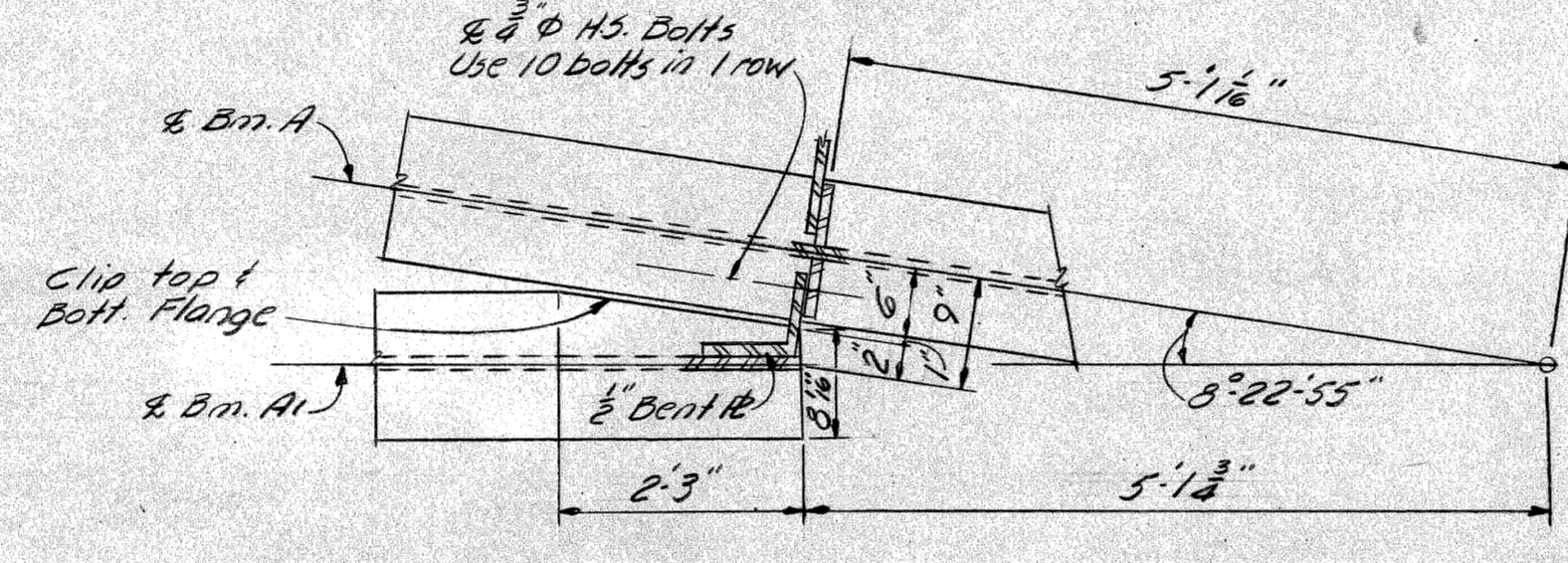


BEAM LENGTHS FT.				
Bm.	a	b	c	d
A	90'-9 3/8"	71'-0"	75'-0"	79'-8 3/8"
B	89'-8"	71'-0"	75'-0"	81'-2 1/8"
C	88'-6 1/2"	71'-0"	75'-0"	82'-9 1/2"
D	87'-5 3/8"	71'-0"	75'-0"	84'-4 3/8"
E	86'-4 3/8"	71'-0"	75'-0"	85'-11 1/8"
F	85'-3 3/8"	71'-0"	75'-0"	87'-7 1/8"
G	84'-3 3/8"	71'-0"	75'-0"	89'-3 3/8"
H	83'-2 3/8"	71'-0"	75'-0"	91'-0 3/8"

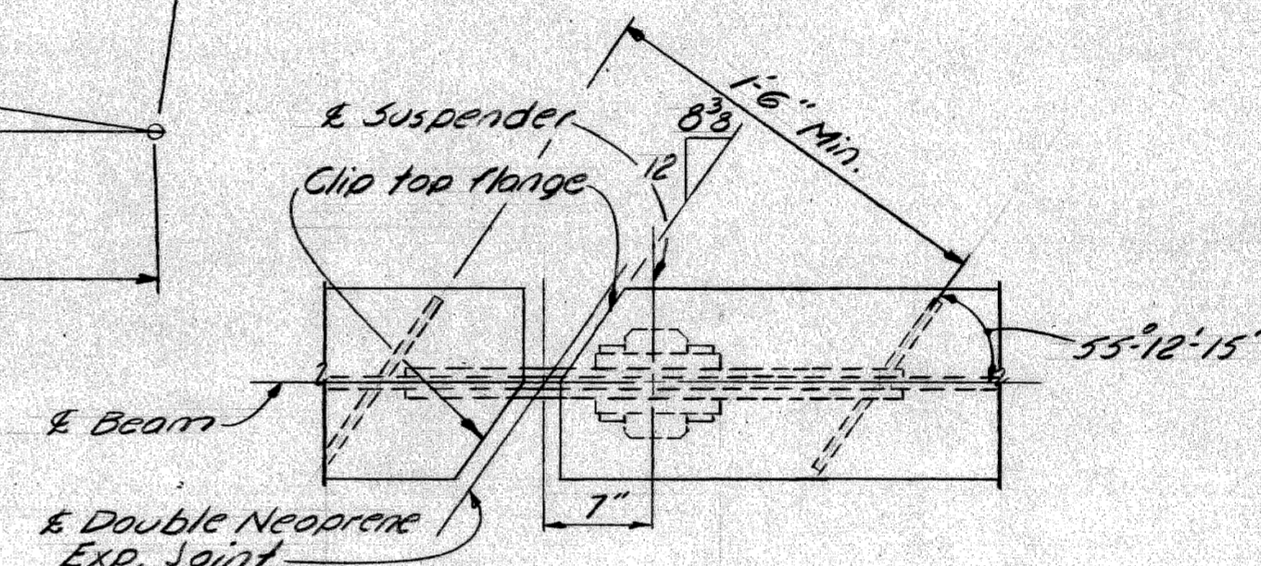
* Note:
Do not weld to top flange, except shear developers. Do not weld to bottom flange elsewhere, except as shown.



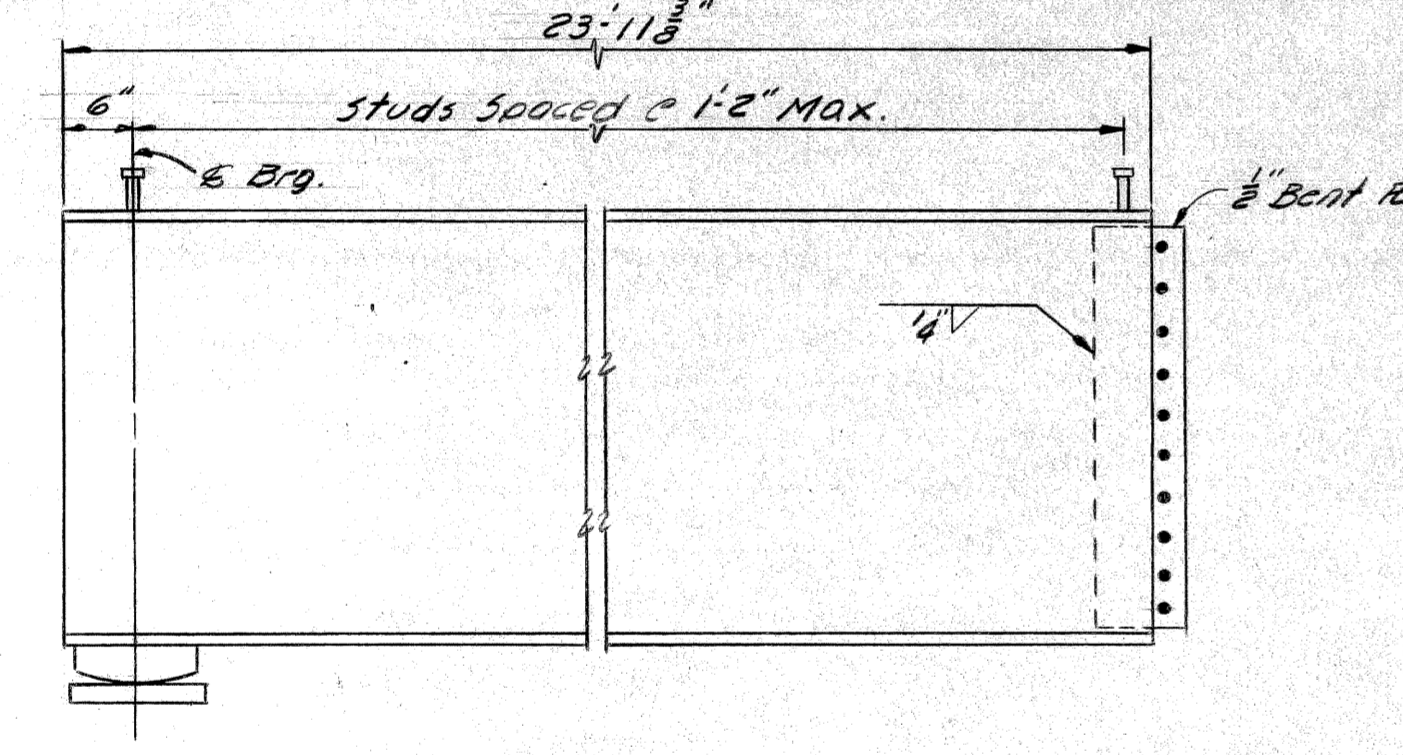
ELEVATION BEAM A1



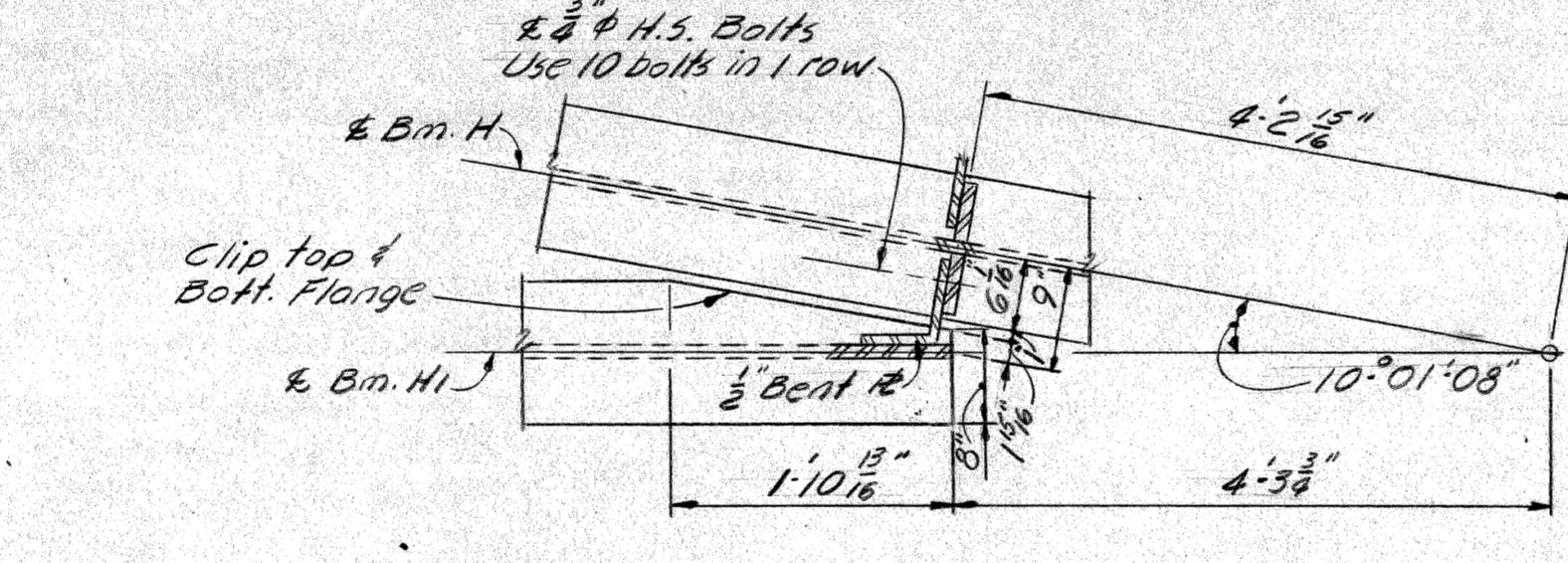
PLAN BEAM A1



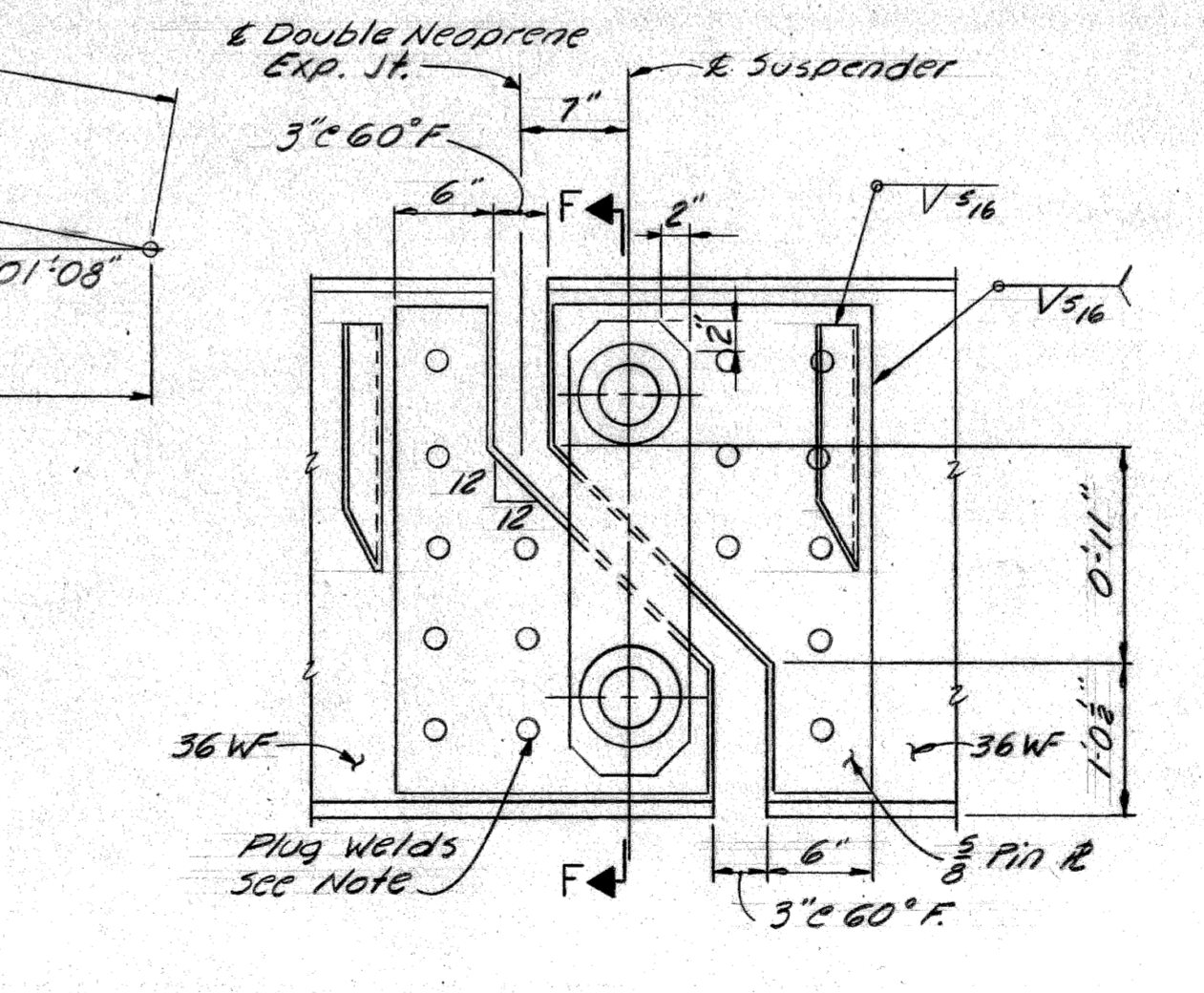
PLAN OF TOP



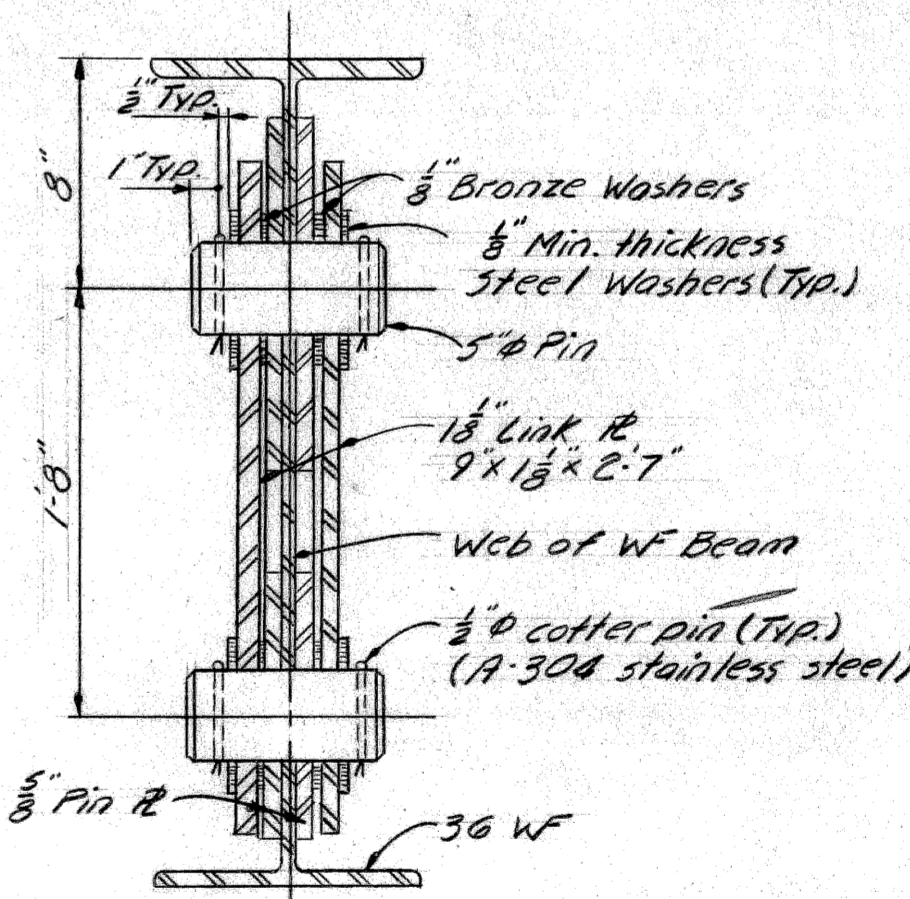
ELEVATION BEAM H1



PLAN BEAM H1



ELEVATION

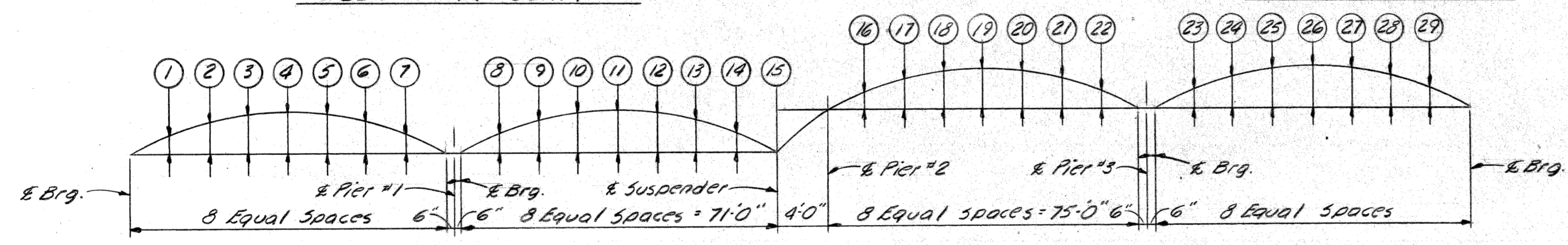


SECTION FF

SCHEDULE OF TOP OF STEEL ELEVATIONS													
Bm. # Brg.	Span #1			Span #2			Span #3			Span #4			
	# Brg.	# pt.	# Brg.	# Brg.	# pt.	# Sus.	# Pier #2	# pt.	# Brg.	# Brg.	# pt.		
A	149.33	149.34	148.91	148.91	148.92	148.96	148.55	148.55	148.27	148.23	148.21	147.92	
B	149.29	149.34	148.86	148.98	148.87	148.52	148.53	148.65	148.25	148.21	148.26	147.88	
C	149.39	149.39	148.96	149.04	148.98	148.63	148.63	148.57	148.14	148.10	148.04	147.70	
D	149.46	149.48	149.05	149.11	149.08	148.74	148.72	148.54	147.95	147.90	147.81	147.45	
E	149.48	149.52	149.09	149.11	149.12	148.77	148.74	148.41	147.68	147.62	147.48	147.15	
F	149.36	149.45	148.99	149.02	149.04	148.65	148.60	148.07	147.26	147.20	147.04	146.75	
G	149.20	149.28	148.83	148.85	148.88	148.42	148.36	147.64	146.77	146.71	146.60	146.30	
H	149.01	149.01	148.65	148.69	148.63	148.06	148.04	147.04	146.25	146.20	146.17	145.84	
HI	-	-	-	-	-	-	-	-	-	-	145.56	145.74	145.63

* Elevation at Connection to Bm. A

** Elevation at Connection to Bm. H



CAMBER & BEAM DEAD LOAD DEFLECTION DIAGRAM

Note: Beam A1 span #2 & Beam H1 span #4 no camber

CAMBER & BEAM DEAD LOAD DEFLECTION ORDINATES (INS) (D.L. Δ from steel wt. only)																																
Bm. Ord.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29			
A	Com.	1.3	2.2	3.3	3.8	3.8	2.6	1.8	1.3	2.4	2.2	2.4	1.4	1.4	5.3	1.7	1.8	1.2	1.8	5.3	3.4	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3		
A	Defl.	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4		
B	Com.	1.3	2.2	3.3	3.8	3.8	2.6	1.8	1.3	2.4	2.2	2.4	1.4	1.4	5.3	1.7	1.8	1.2	1.8	5.3	3.4	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3		
B	Defl.	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
C	Com.	1.3	2.2	3.3	3.8	3.8	2.6	1.8	1.3	2.4	2.2	2.4	1.4	1.4	5.3	1.7	1.8	1.2	1.8	5.3	3.4	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3		
C	Defl.	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
D	Com.	1.3	2.2	3.3	3.8	3.8	2.6	1.8	1.3	2.4	2.2	2.4	1.4	1.4	5.3	1.7	1.8	1.2	1.8	5.3	3.4	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3		
D	Defl.	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4

SUSPENDER DETAILS

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

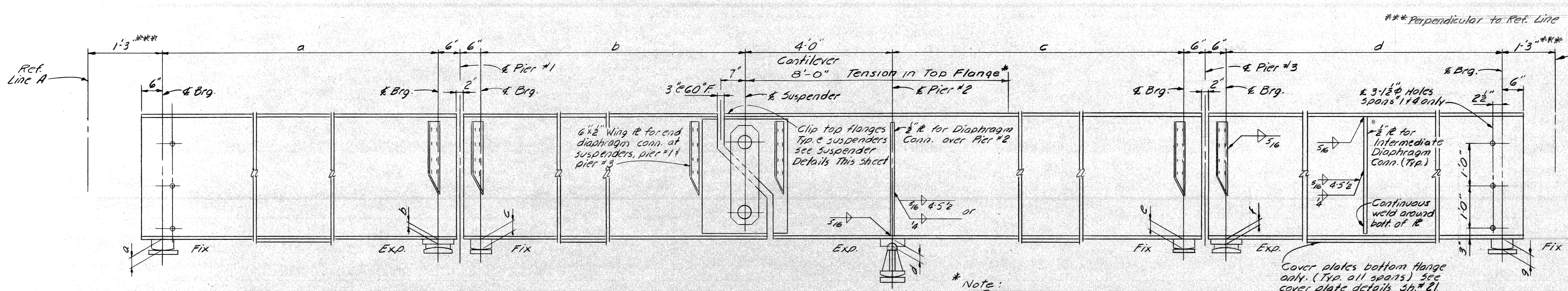
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

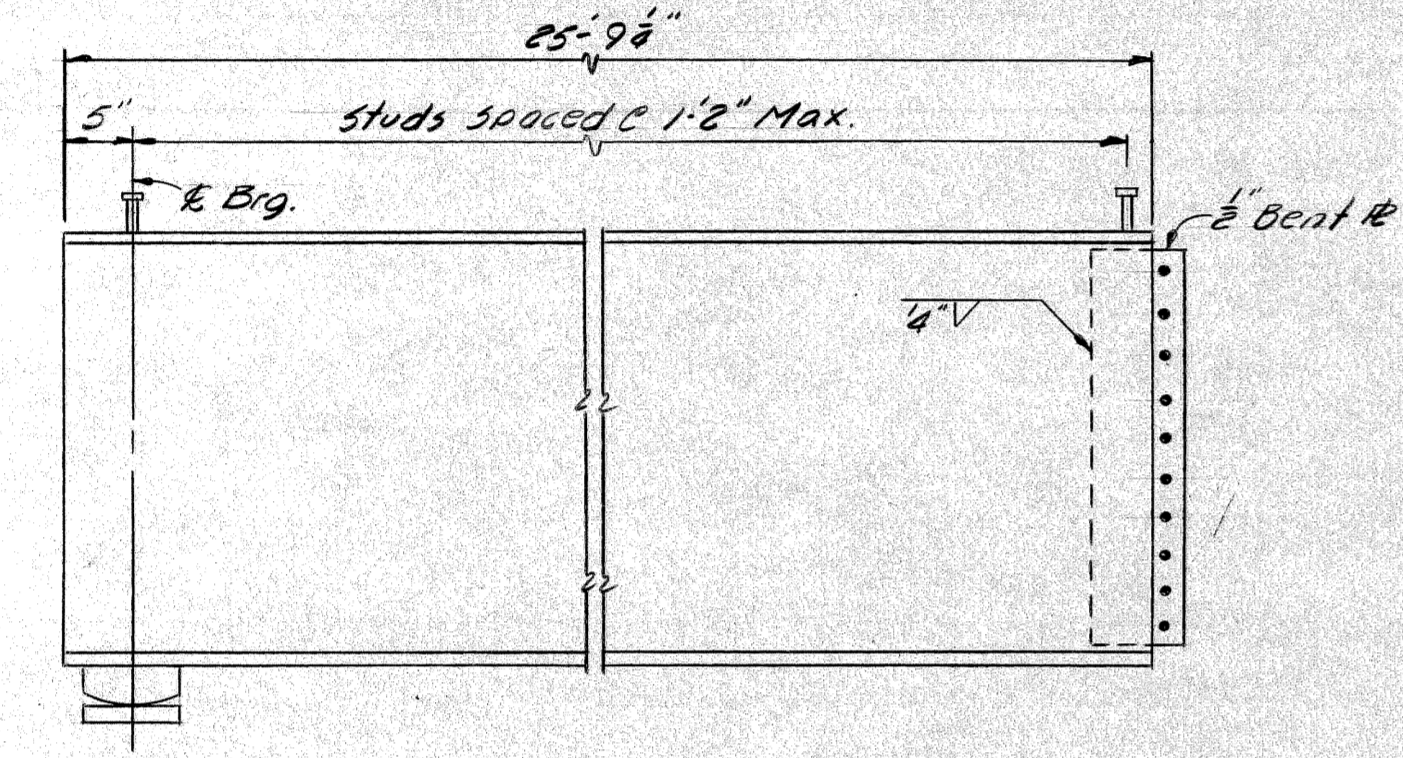
APPROVED: [Signature] STRUCTURAL ENGINEER
JOB No. PW 990 (16)
SHEET 20 OF 36
S13 of 82123D

Work this sheet with sheets # 19, 21 & 22

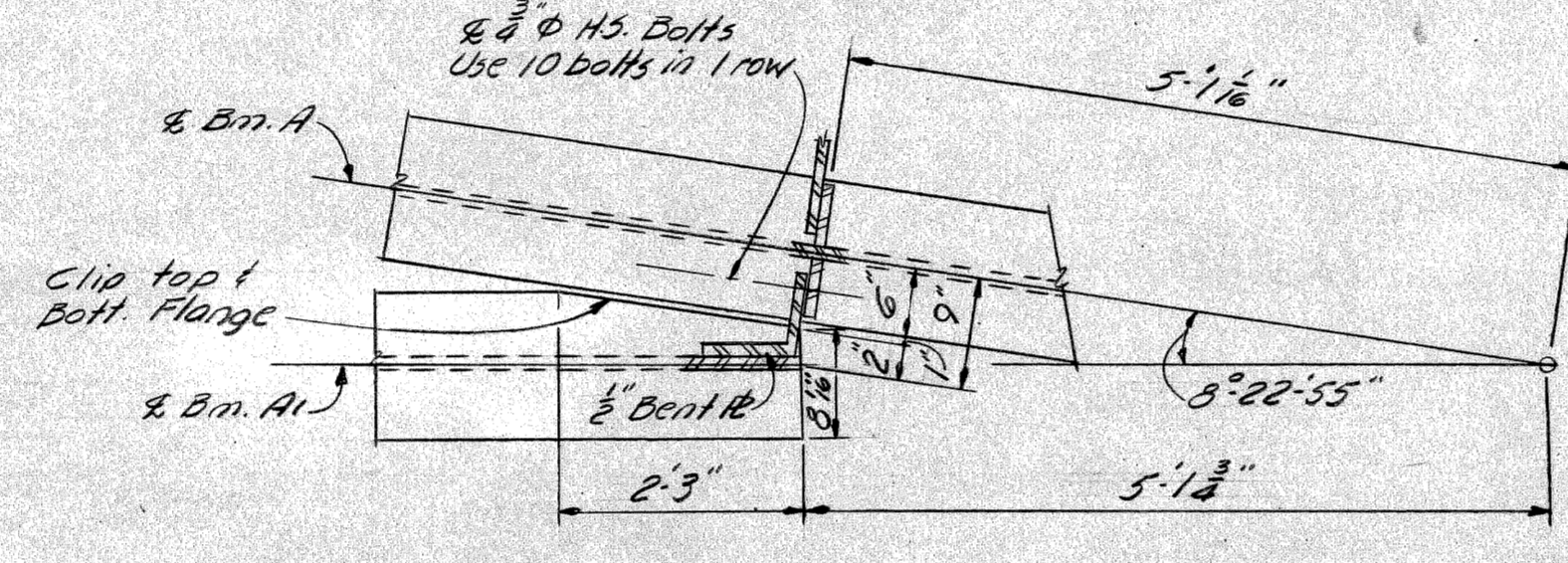


BEAM LENGTHS FT.				
Bm.	a	b	c	d
A	90'-9 3/8"	71'-0"	75'-0"	79'-8 3/8"
B	89'-8"	71'-0"	75'-0"	81'-2 1/8"
C	88'-6 1/2"	71'-0"	75'-0"	82'-9 1/2"
D	87'-5 3/8"	71'-0"	75'-0"	84'-4 3/8"
E	86'-4 3/8"	71'-0"	75'-0"	85'-11 1/8"
F	85'-3 3/8"	71'-0"	75'-0"	87'-7 1/8"
G	84'-3 3/8"	71'-0"	75'-0"	89'-3 3/8"
H	83'-2 3/8"	71'-0"	75'-0"	91'-0 3/8"

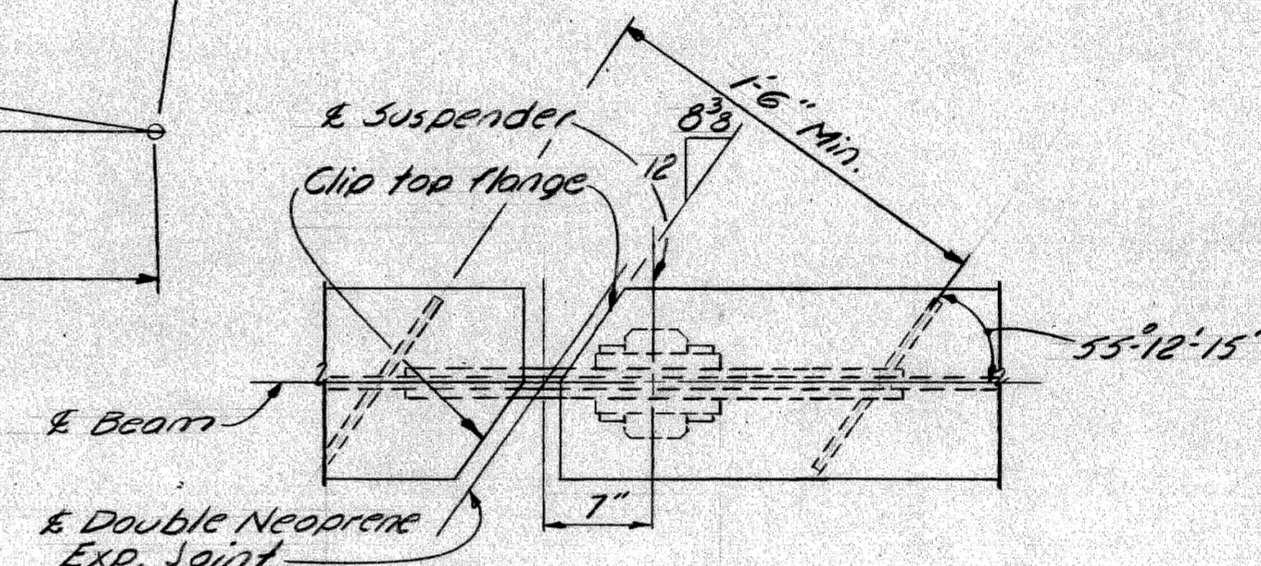
* Note:
Do not weld to top flange, except shear developers. Do not weld to bottom flange elsewhere, except as shown.



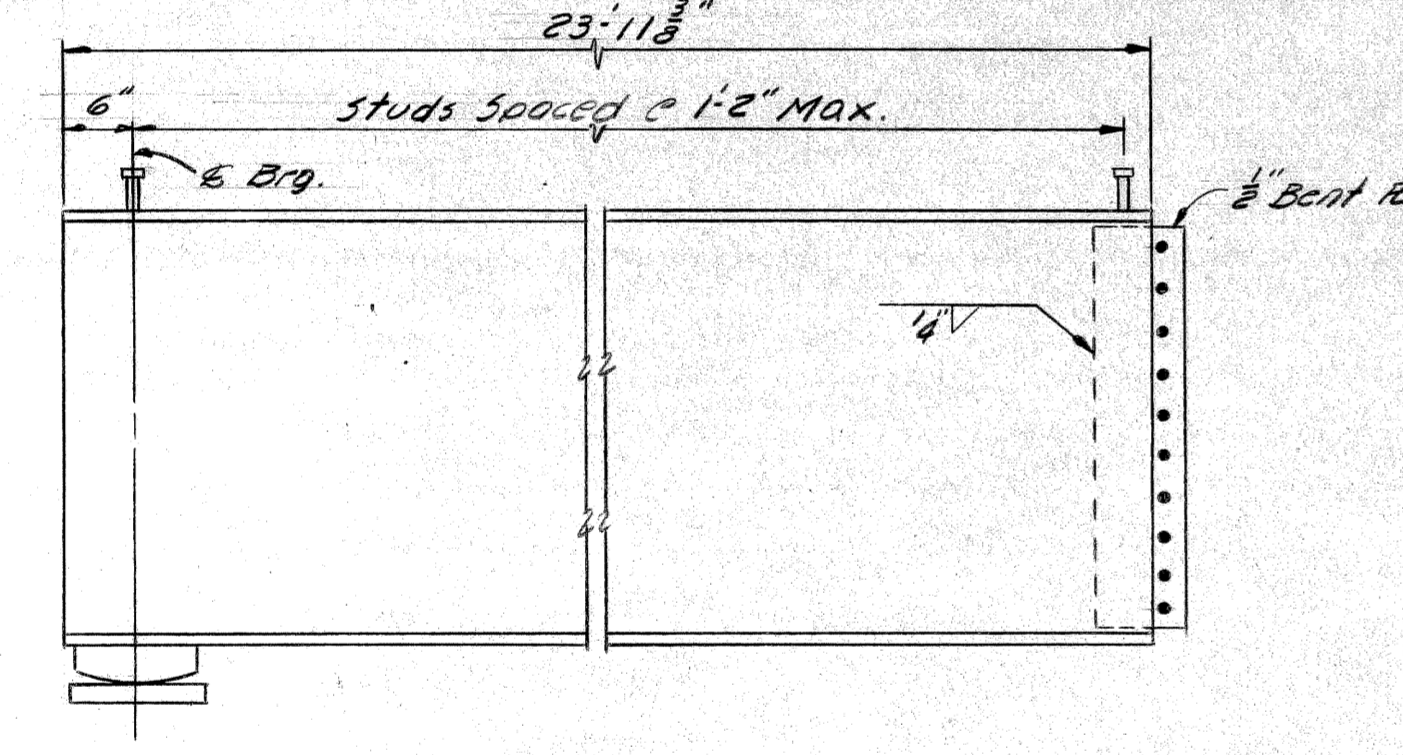
ELEVATION BEAM A1



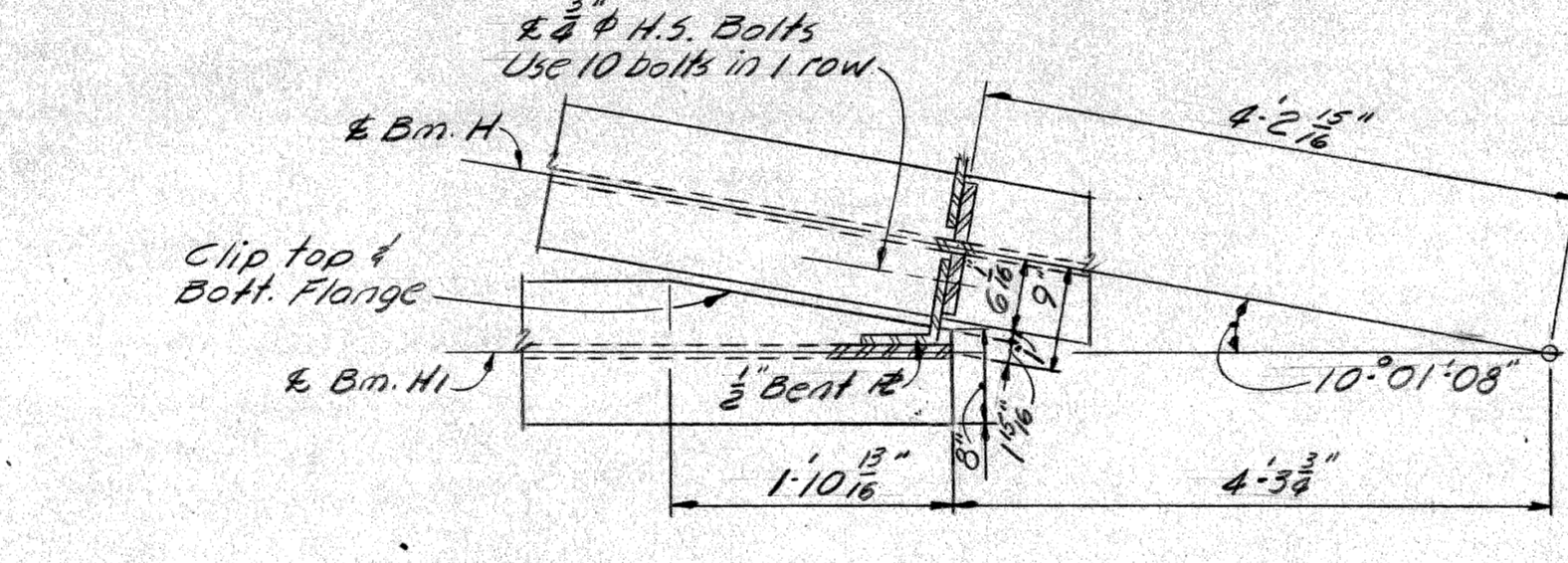
PLAN BEAM A1



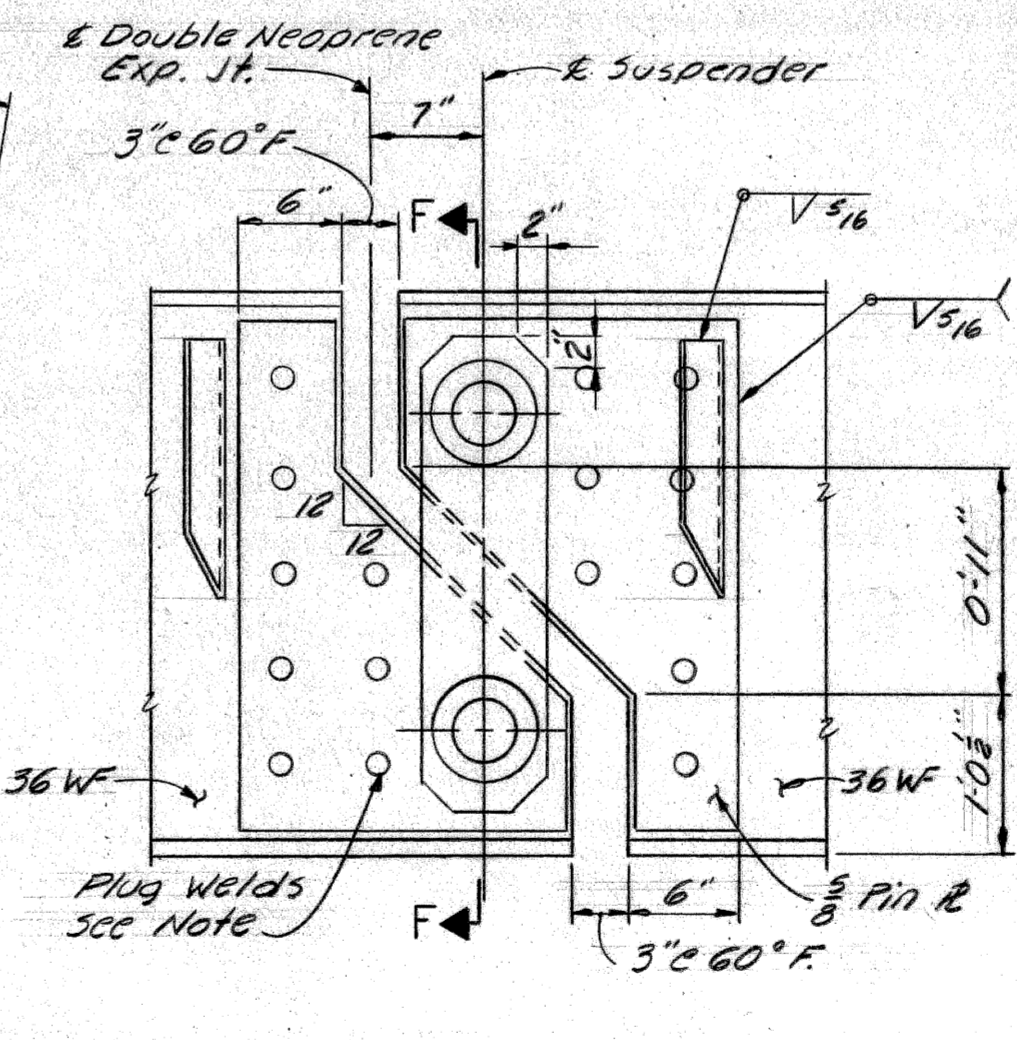
PLAN OF TOP



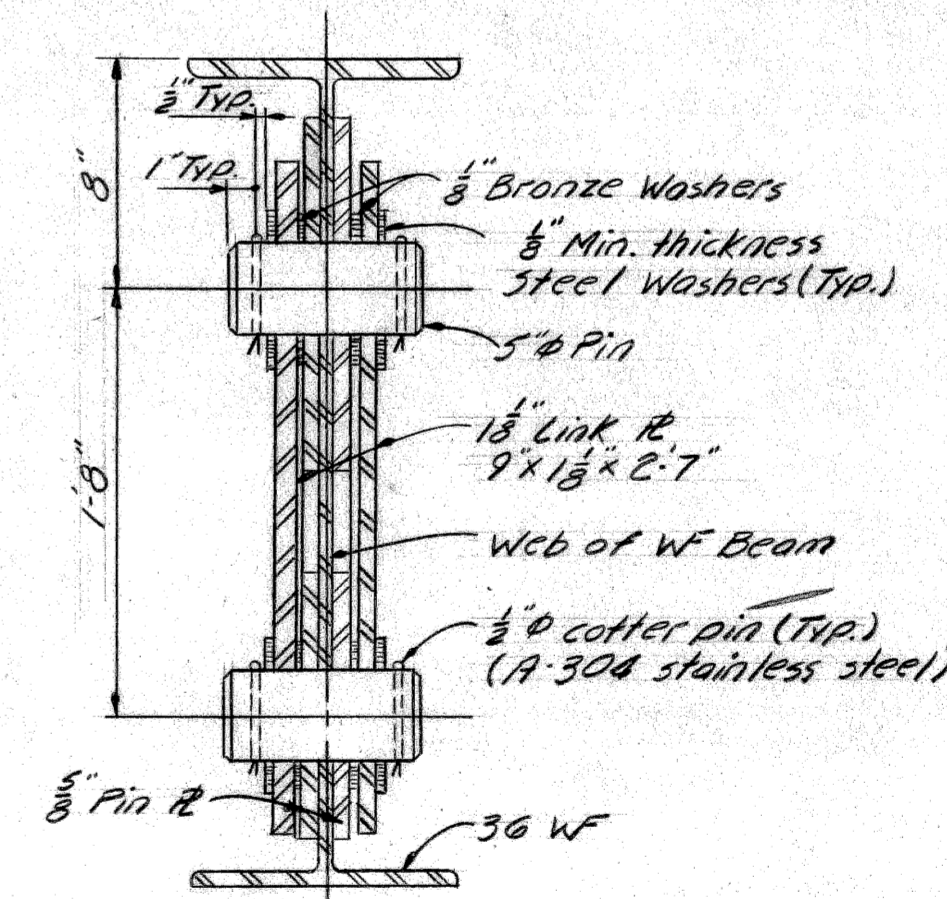
ELEVATION BEAM H1



PLAN BEAM H1



ELEVATION

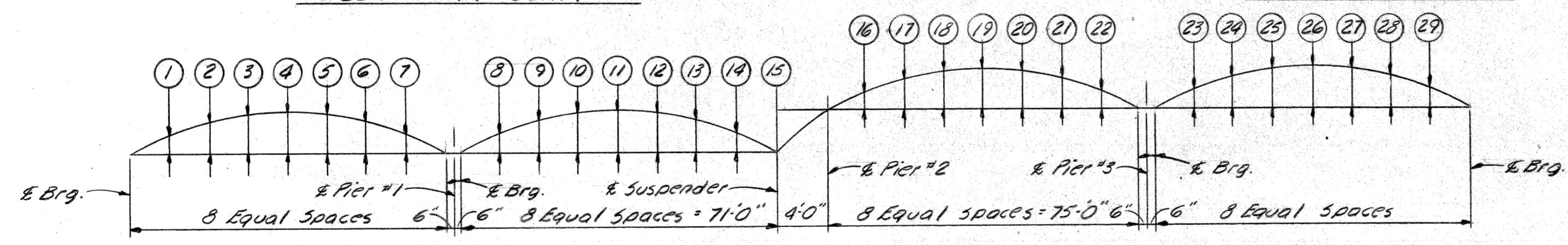


SECTION FF

SCHEDULE OF TOP OF STEEL ELEVATIONS											
Bm. & Brg.	Span #1			Span #2			Span #3			Span #4	
	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.	1/2 pt.
AI	—	—	—	148.94	148.95	148.96	—	—	—	—	—
A	148.33	148.34	148.91	148.91	148.92	148.55	148.55	148.50	148.27	148.23	147.92
B	148.29	148.34	148.86	148.98	148.87	148.52	148.53	148.65	148.25	148.21	148.26
C	148.39	148.39	148.96	149.04	148.98	148.63	148.63	148.57	148.14	148.10	148.04
D	148.46	148.48	148.05	148.11	148.08	148.74	148.72	148.54	147.95	147.90	147.81
E	148.48	148.52	148.09	148.11	148.12	148.77	148.74	148.41	147.68	147.62	147.48
F	148.36	148.45	148.99	149.02	149.04	148.65	148.60	148.07	147.26	147.20	147.04
G	148.20	148.28	148.83	148.85	148.88	148.42	148.36	147.64	146.77	146.71	146.60
H	148.01	148.01	148.65	148.69	148.63	148.06	148.04	147.04	146.25	146.20	146.17
HI	—	—	—	—	—	—	—	—	—	—	145.56

* Elevation at Connection to Bm. A

** Elevation at Connection to Bm. H



CAMBER & BEAM DEAD LOAD DEFLECTION DIAGRAM

Note: Beam A1 span #2 & Beam H1 span #4 no camber

CAMBER & BEAM DEAD LOAD DEFLECTION ORDINATES (INS) (D.L. Δ from steel wt. only)																														
Bm.	Ord.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
A	Com.	13	22	33	33	33	22	13	1	13	24	24	24	14	4	3	1	13	13	12	18	3	13	13	13	3	13	13	13	3
	Defl.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
B	Com.	13	22	33	33	33	22	13	1	13	24	24	24	14	4	3	1	13	13	12	18	3	13	13	13	3	13	13	13	3
	Defl.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C	Com.	13	22	33	33	33	22	13	1	13	24	24	24	14	4	3	1	13	13	12	18	3	13	13	13	3	13	13	13	3
	Defl.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
D	Com.	13	22	33	33	33	22	13	1	13	24	24	24	14	4	3	1	13	13	12	18	3	13	13	13	3	13	13	13	3
	Defl.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

SUSPENDER DETAILS

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

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

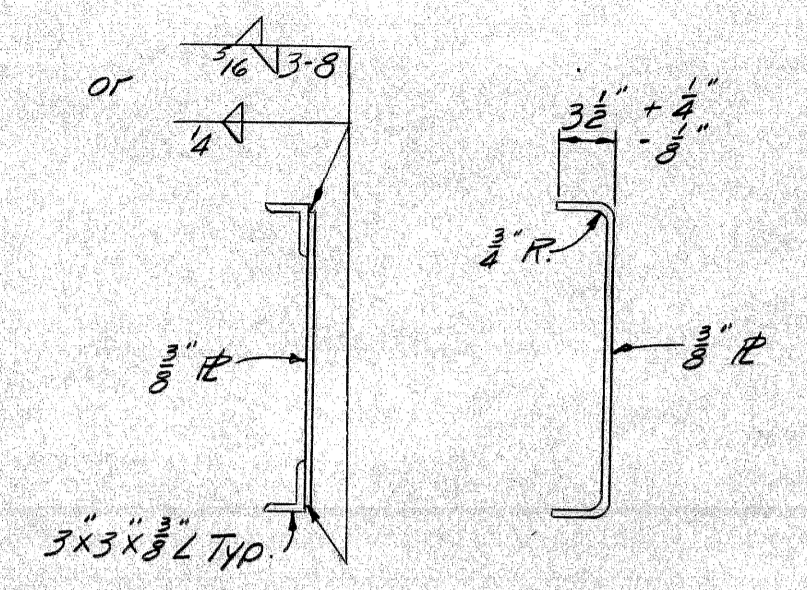
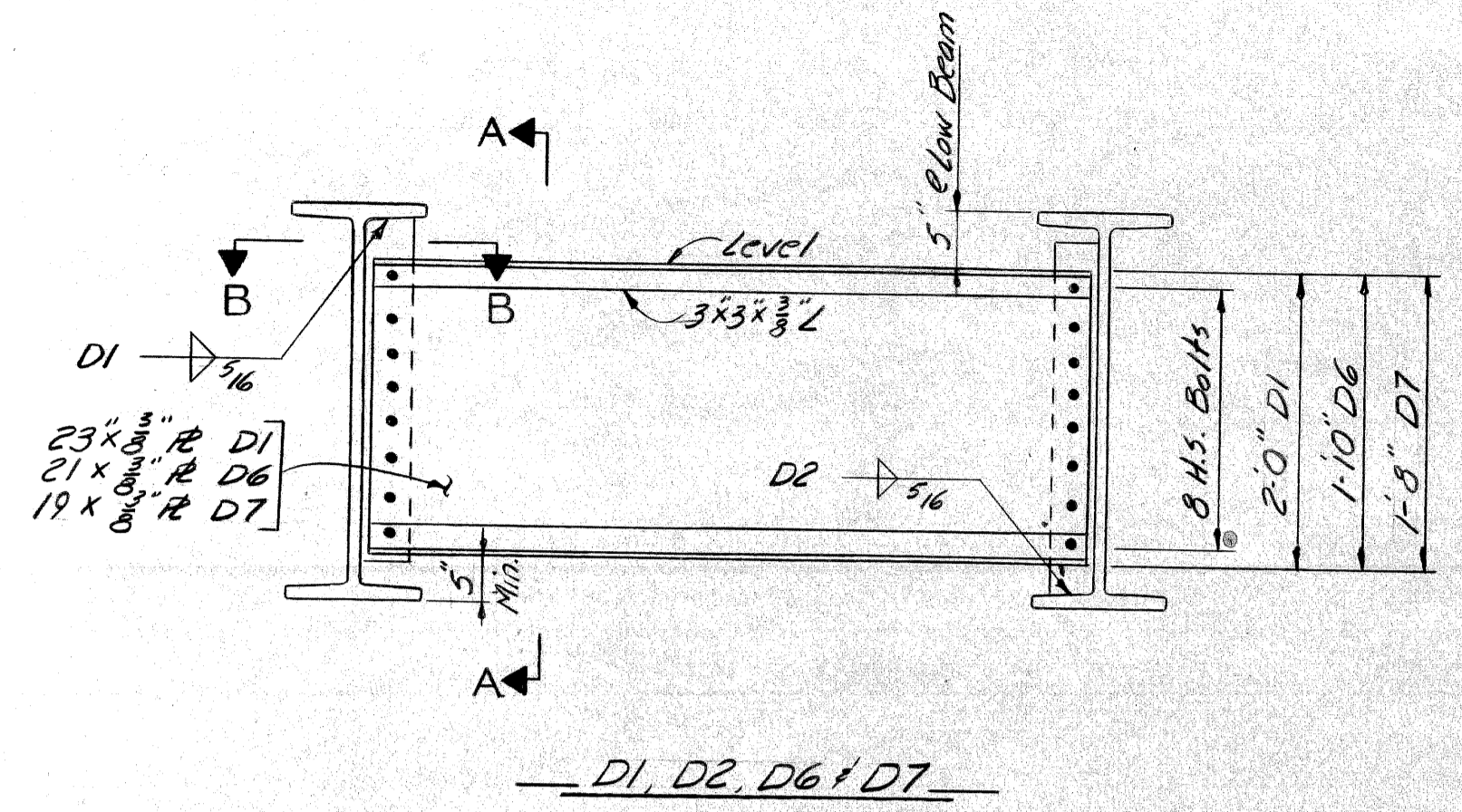
STRUCTURAL STEEL DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVED: [Signature]
STRUCTURAL ENGINEER
JOB No. PW 990 (16)

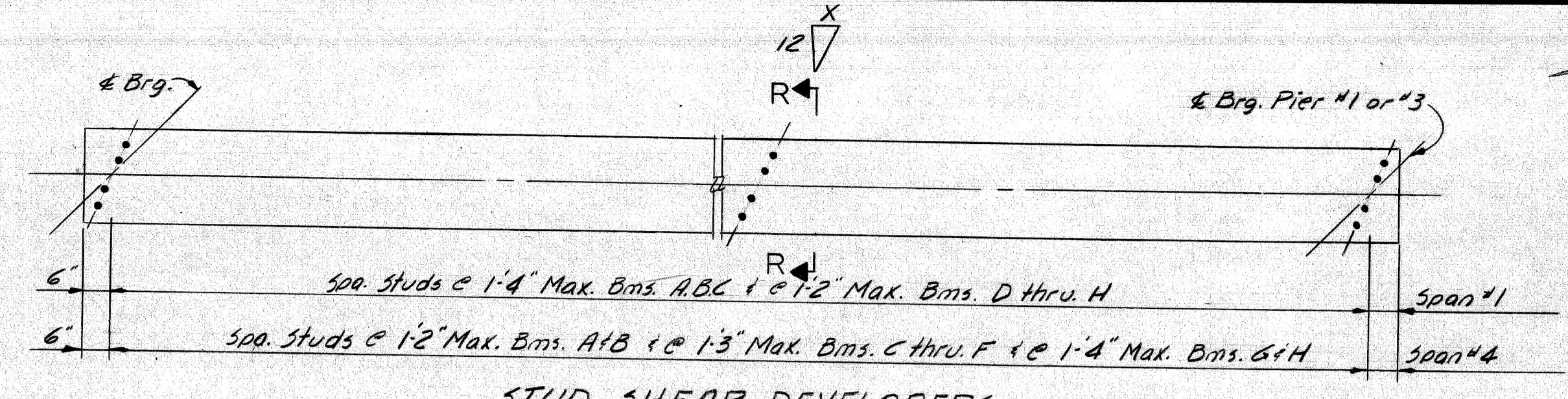
DATE: 7-20
DRAWN BY: [Signature]
CHECKED BY: W.L. RAB
SHEET 20 OF 36

S13 of 82123D

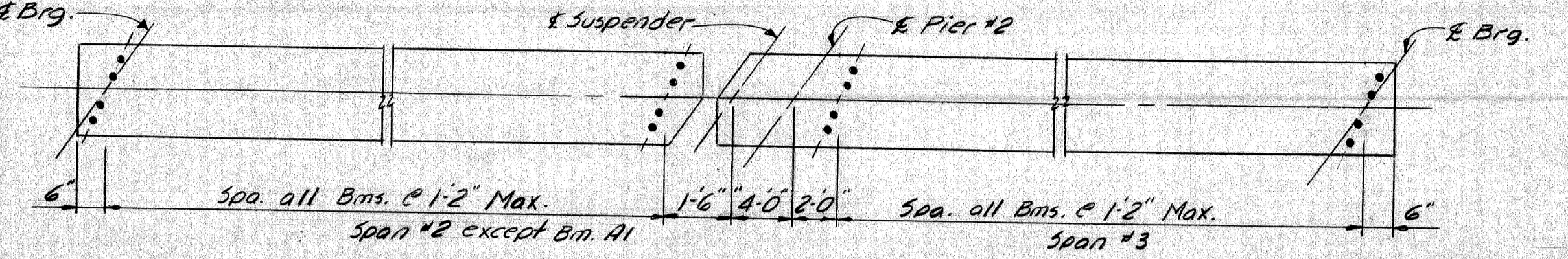


Either detail may be used.

SECTION A-A



STUD SHEAR DEVELOPERS



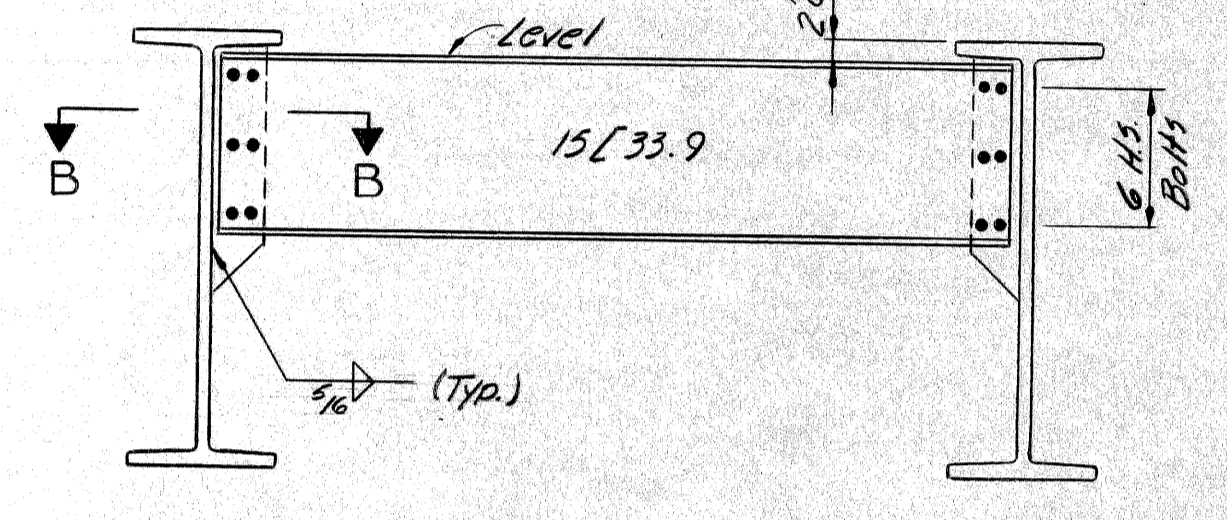
STUD SHEAR DEVELOPERS

SECTION R-R

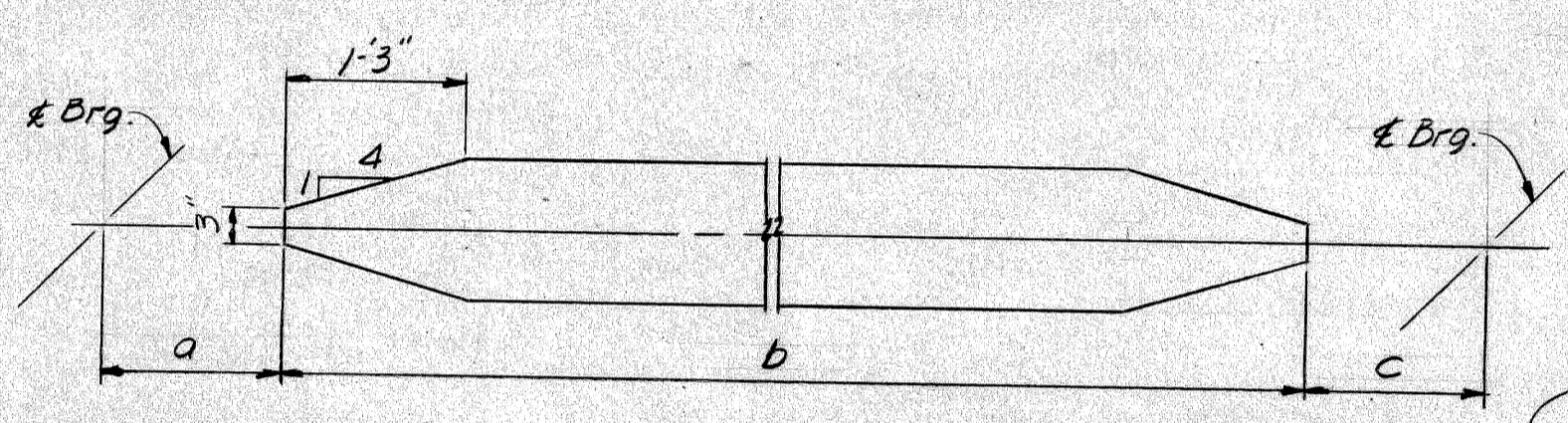
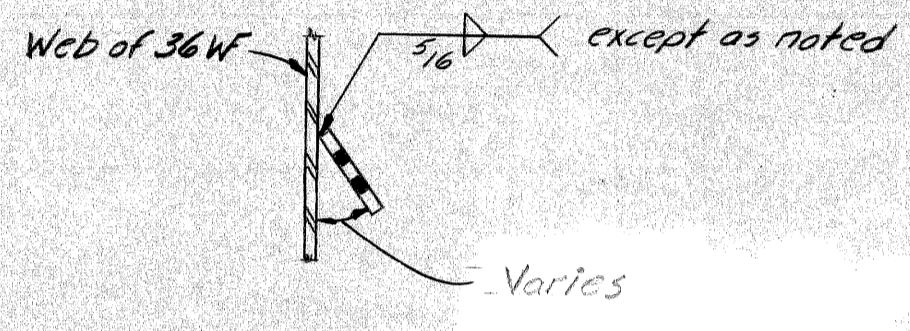
Beam #	A	B	C	D	E	F	G	H	HI
1	+2	+3	+4	+5	0	-2	-3	-2	-
2	+3	-3	-3	-3	0	0	0	0	-
3	0	0	0	0	0	0	0	0	-
4	-1	-4	-4	0	+8	+3	+3	+2	-

Note: (X on 12) 12

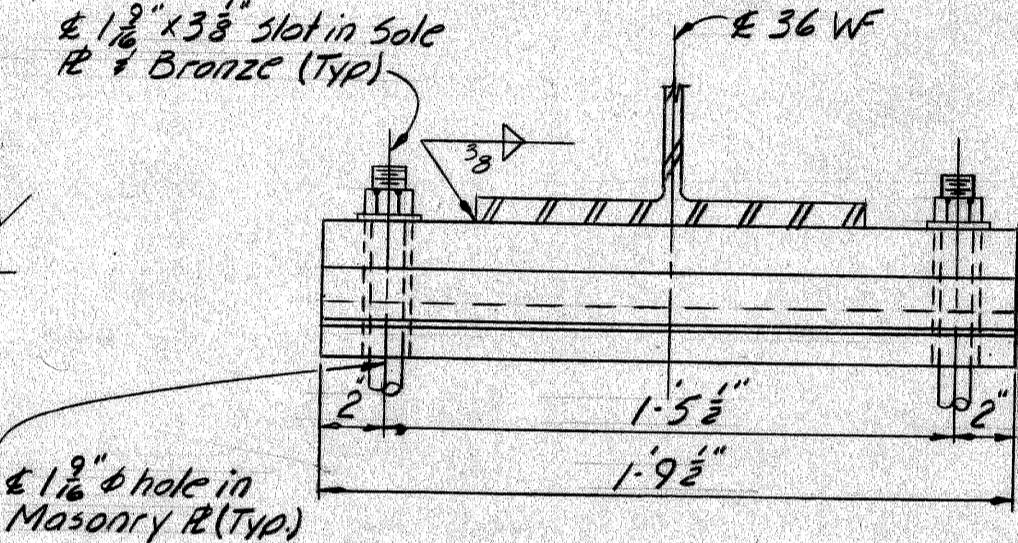
Note: Nuts to be drawn up finger tight then backed off 3/8 turn. Threads of bolt to be burred off face of nut with pointed tool.



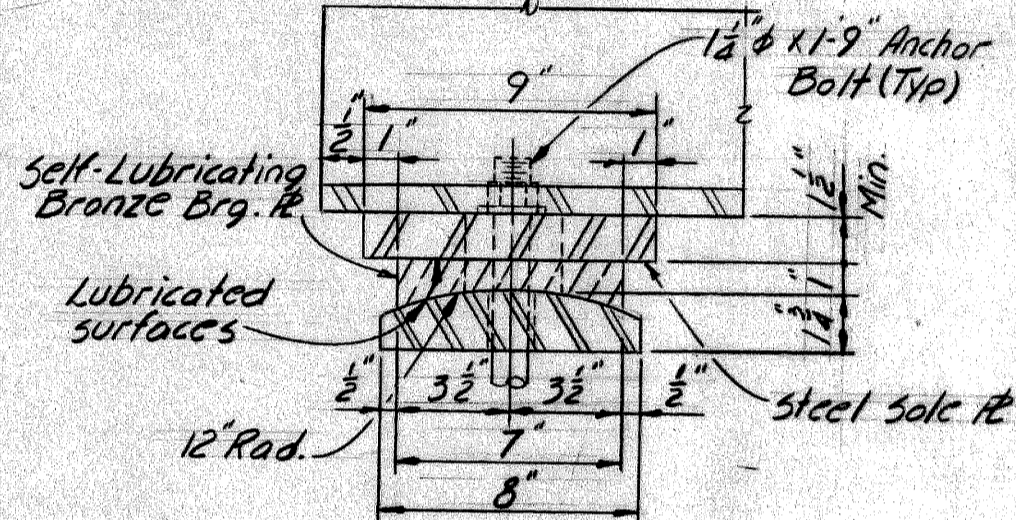
SECTION B-B



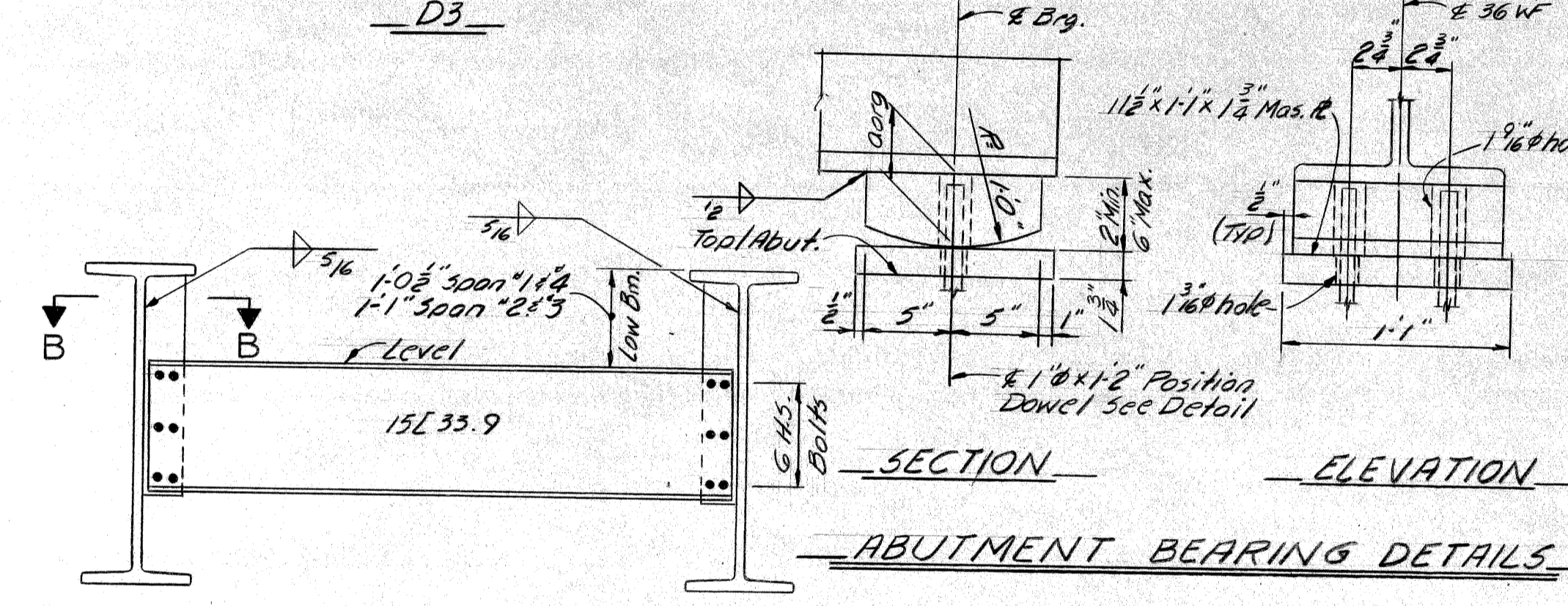
COVER PLATE DETAILS



ELEVATION



SECTION



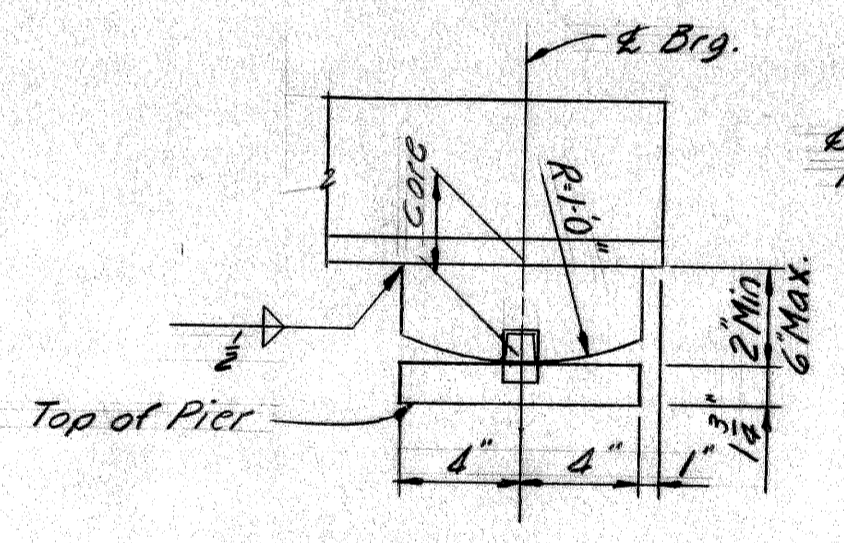
SECTION D3

COVER PLATE DESIGN TABLE

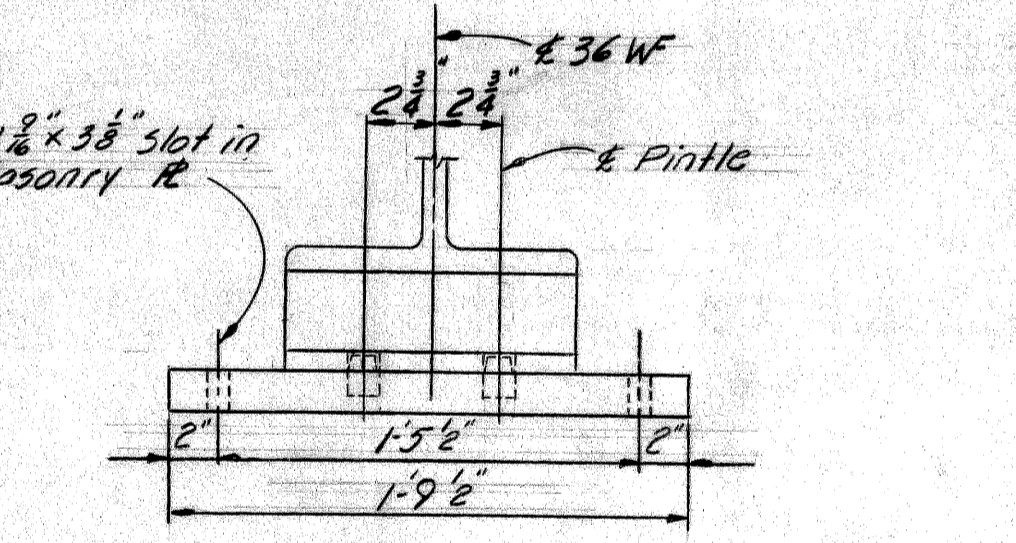
Bm	Span #1			Span #2			Span #3			Span #4		
	R size	a	b	c	R size	a	b	c	R size	a	b	c
A	10 1/2 x 1 1/2	13'-5"	64'-0"	13'-4"	10 1/2 x 1 1/2	10'-8"	49'-10"	10'-6"	10 1/2 x 1 1/2	11'-4"	53'-4"	10'-4"
B	do	13'-4"	63'-0"	13'-4"	do	10'-8"	49'-10"	10'-6"	do	11'-4"	53'-4"	10'-4"
C	do	13'-4"	61'-11"	13'-3 1/2"	do	10'-8"	49'-10"	10'-6"	do	11'-4"	53'-4"	10'-4"
D	do	12'-2"	63'-4"	11'-11 1/2"	do	10'-8"	49'-10"	10'-6"	do	11'-4"	53'-4"	10'-4"
E	10 1/2 x 1 1/2	12'-3"	62'-0"	12'-1 1/2"	do	10'-8"	49'-10"	10'-6"	do	11'-4"	53'-4"	10'-4"
F	10 1/2 x 1 1/2	11'-10"	61'-9"	11'-8 1/2"	10 1/2 x 1 1/2	10'-8"	49'-10"	10'-6"	do	11'-4"	53'-4"	10'-4"
G	10 1/2 x 1 1/2	12'-3"	59'-11"	12'-1 1/2"	10 1/2 x 1 1/2	10'-6"	49'-11"	10'-7"	do	11'-4"	53'-4"	10'-4"
H	10 1/2 x 1 1/2	12'-3"	59'-11"	11'-0 1/2"	10 1/2 x 1 1/2	10'-6"	49'-11"	10'-7"	10 1/2 x 1 1/2	13'-1"	64'-11"	13'-0 1/2"

Note: In span #3, dimension 'a' is from & Brg. of Pier #2 and 'c' is from & Brg. of Pier #3

PIER #1 & #3 EXPANSION BEARING DETAILS

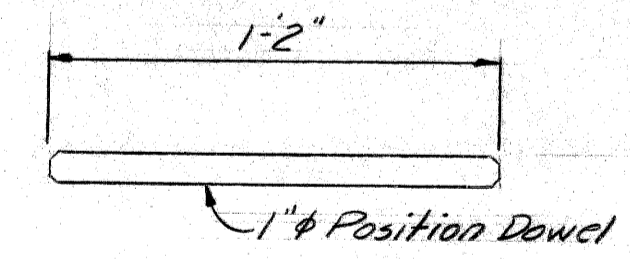


SECTION

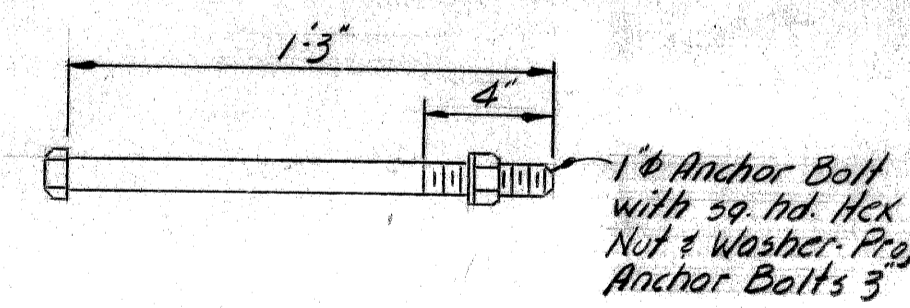


ELEVATION

PIER #1 & #3 FIXED BEARING DETAILS



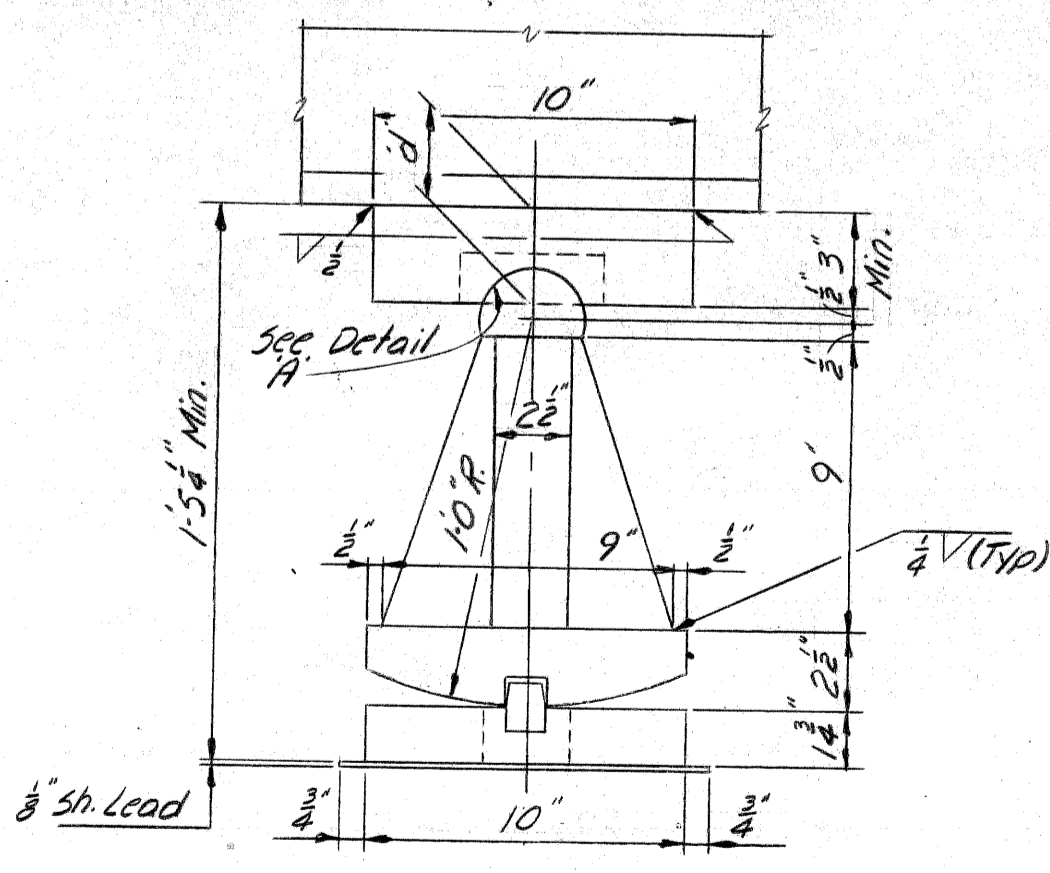
POSITION DOWEL DETAIL



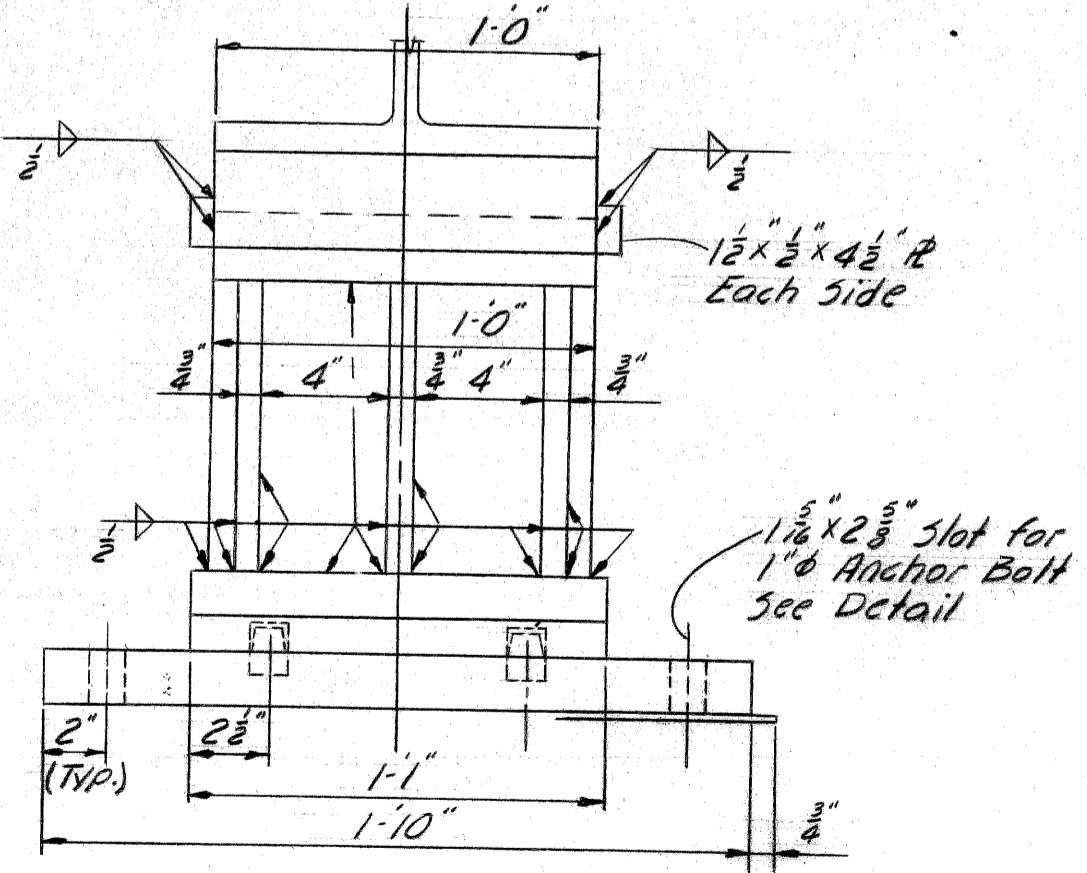
ANCHOR BOLT DETAIL

SOLE PLATE THICKNESS TABLE

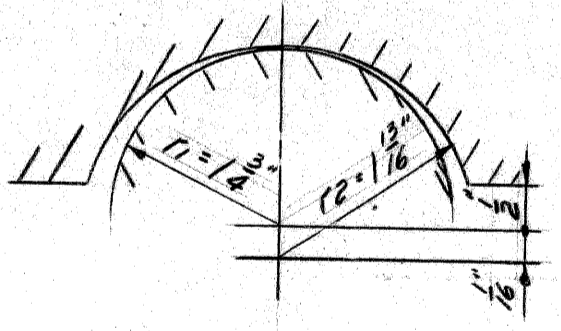
Bm	AI	A	B	C	D	E	F	G	H	HI
a	-	2 1/4"	2 1/4"	3 1/2"	4 1/2"	4 3/4"	3 1/2"	4 1/4"	2"	-
b	-	2 3/4"	2 3/4"	3 1/2"	1 3/4"	2 1/4"	3"	4"	1 3/4"	-
c	4 1/2"	4 1/2"	4 1/4"	6"	4"	4 3/4"	5 3/4"	3 3/4"	-	-
d	-	3 3/4"	3 1/2"	4 3/4"	5 3/4"	6"	4 1/2"	3 1/2"	2 3/4"	-
e	-	5 1/4"	5 1/2"	4 1/4"	4"	3 3/4"	4 3/4"	4 1/4"	4 1/2"	-
f	-	4"	3 3/4"	2 1/4"	2"	1 1/2"	2 1/4"	2 1/2"	2 1/4"	-
g	-	3 1/4"	2 1/4"	5 1/2"	2 1/2"	4"	3"	2 1/2"	4"	2 1/4"



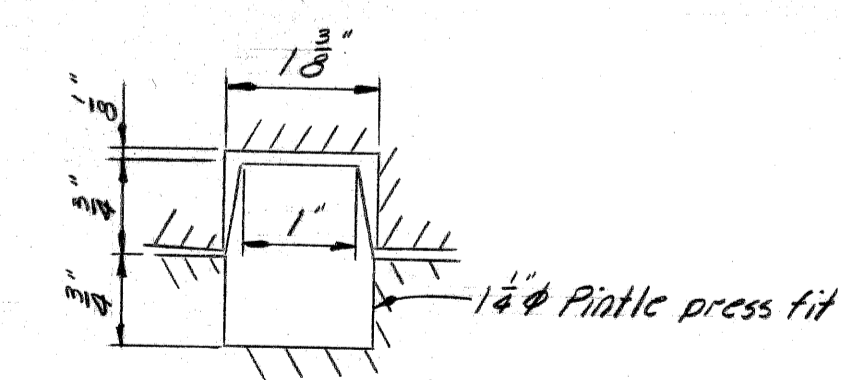
SECTION



ELEVATION



DETAIL A



PINTLE DETAIL

PIER #2 BEARING DETAILS

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

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

REVISIONS

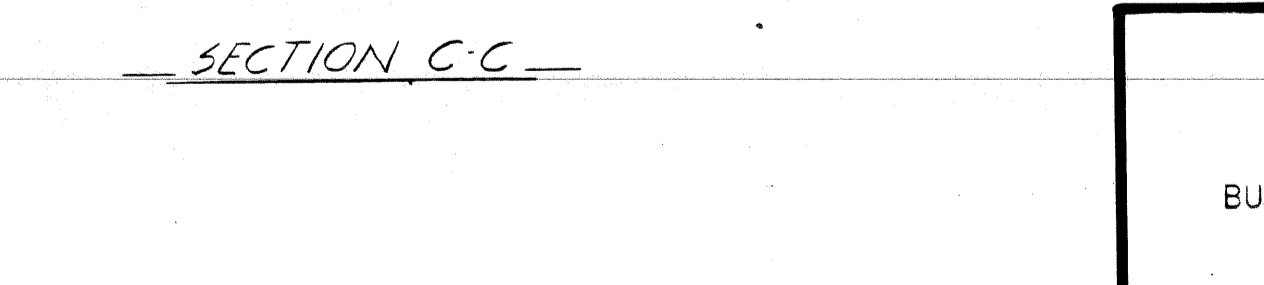
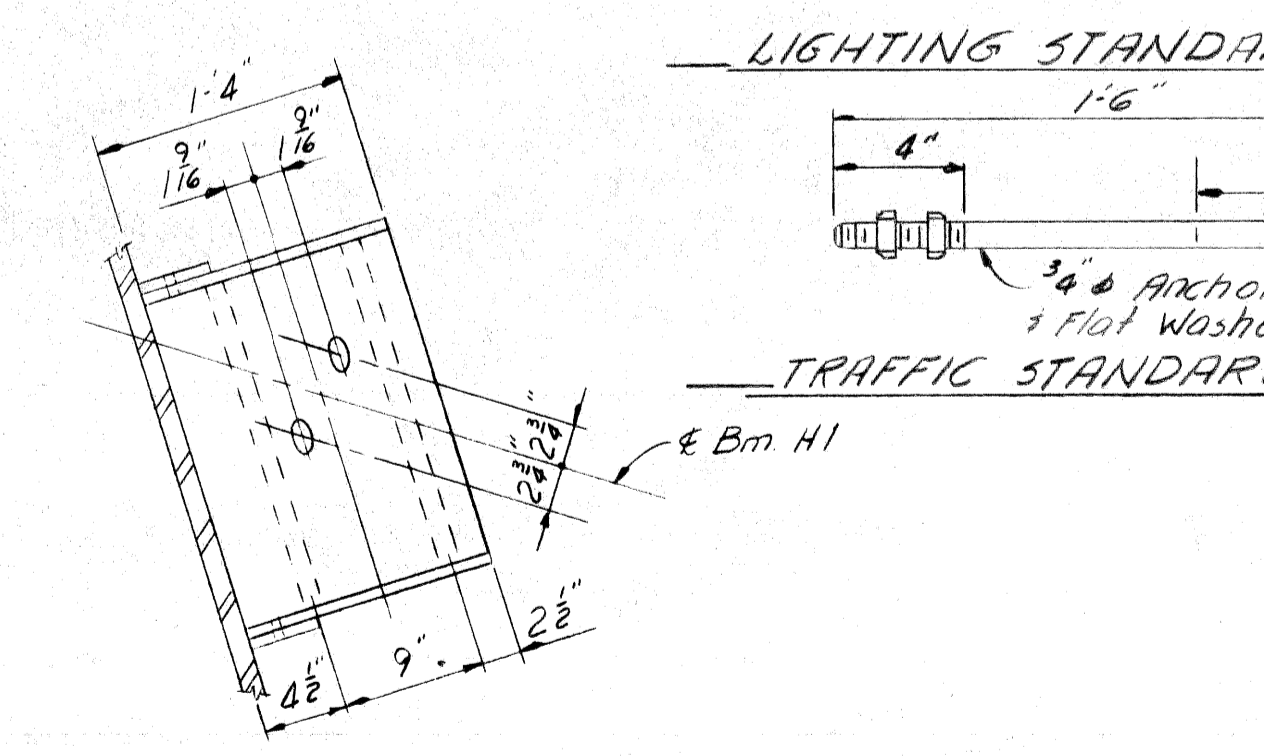
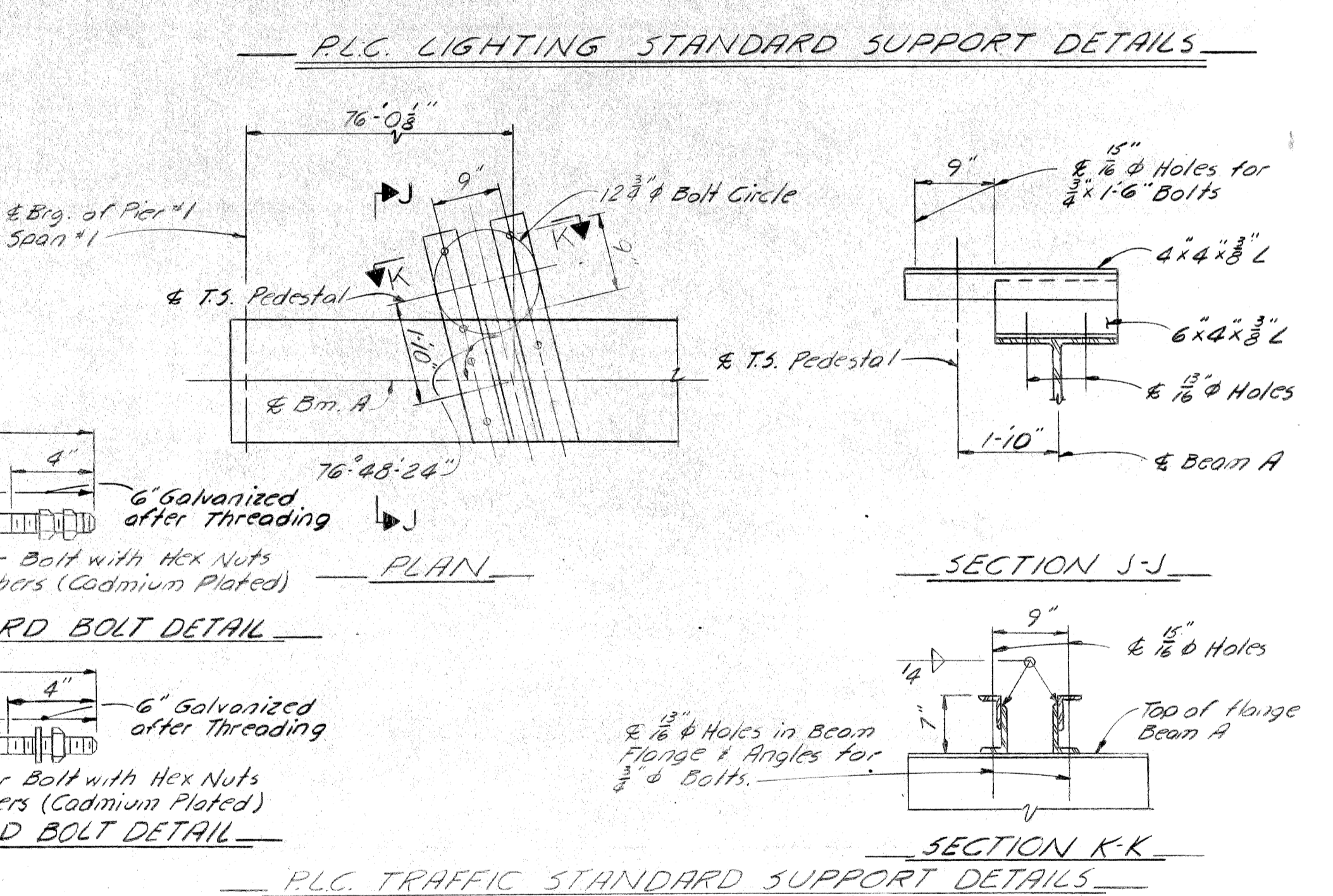
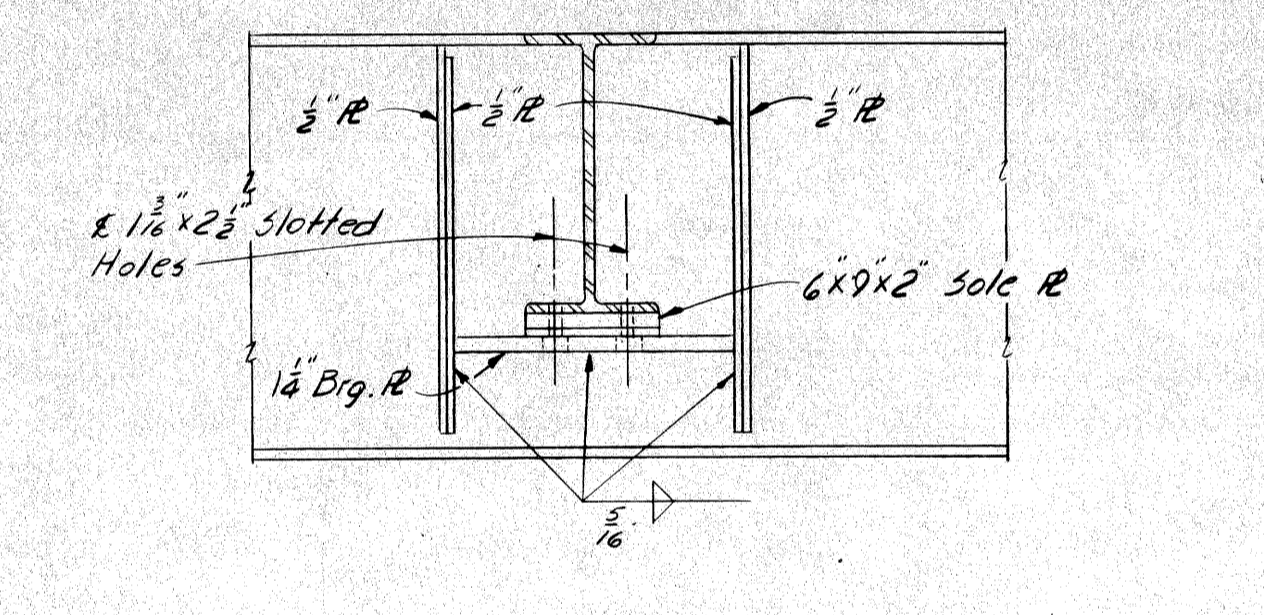
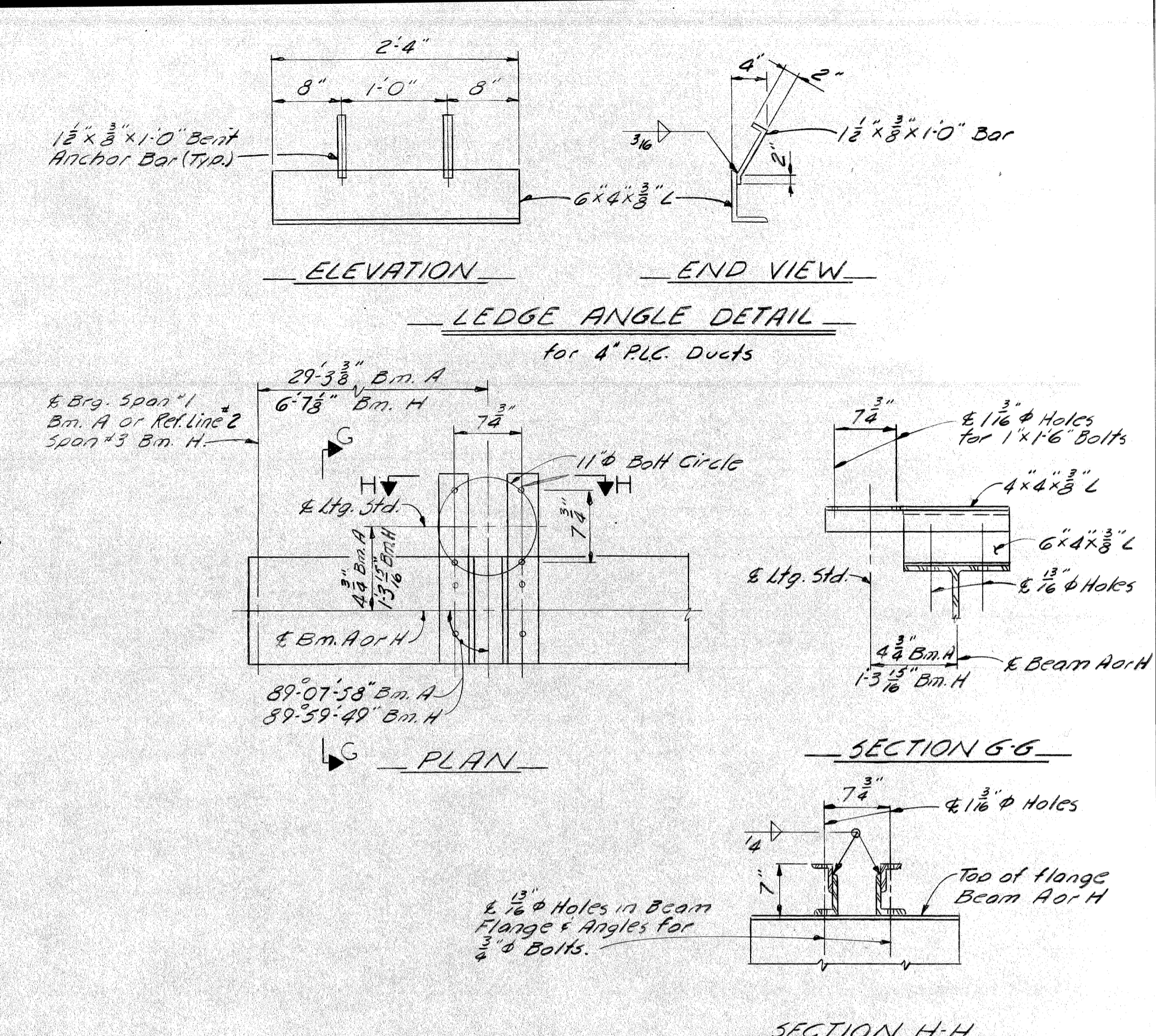
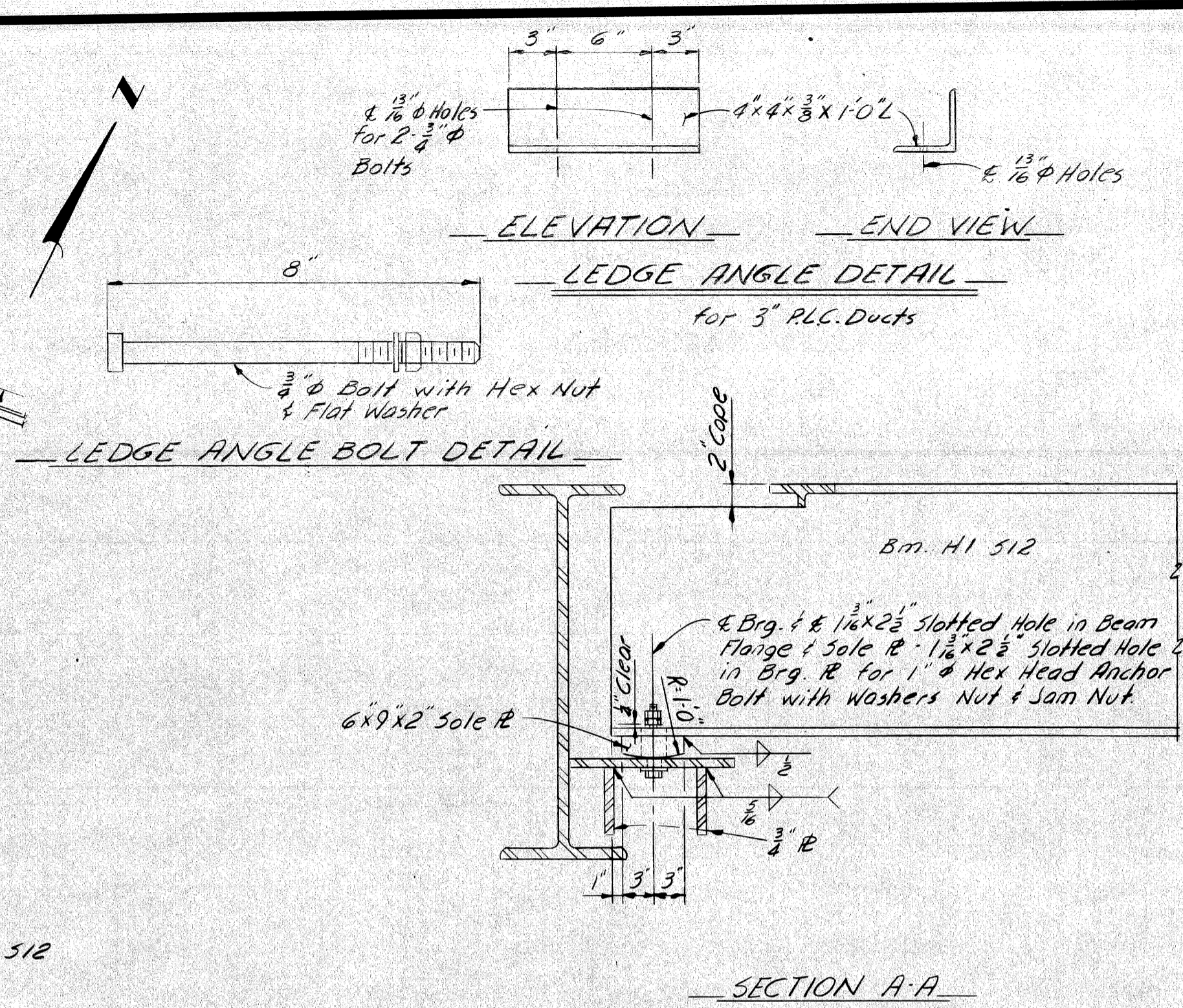
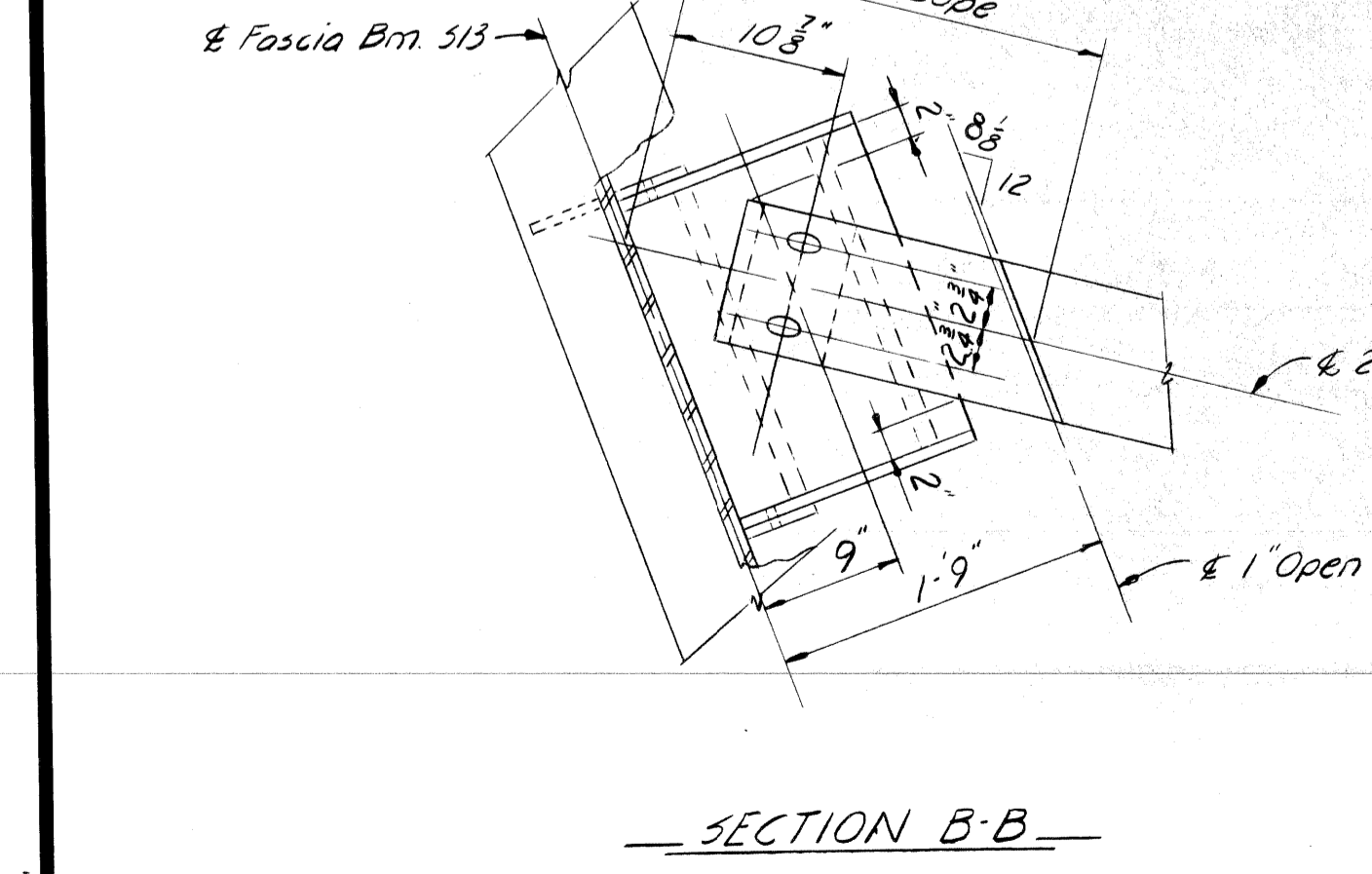
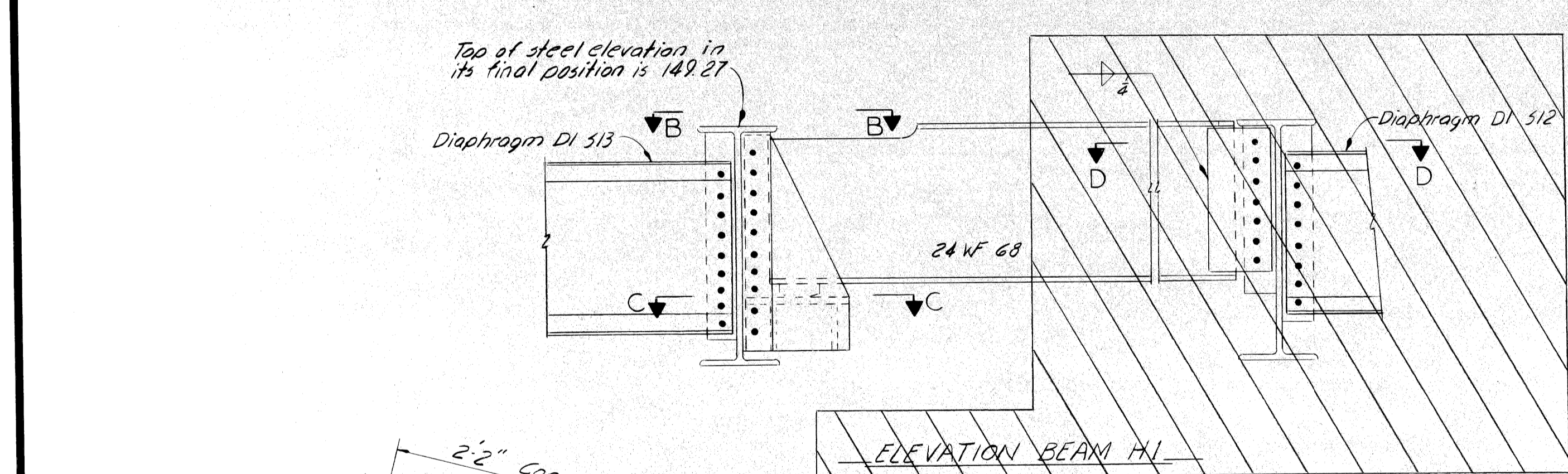
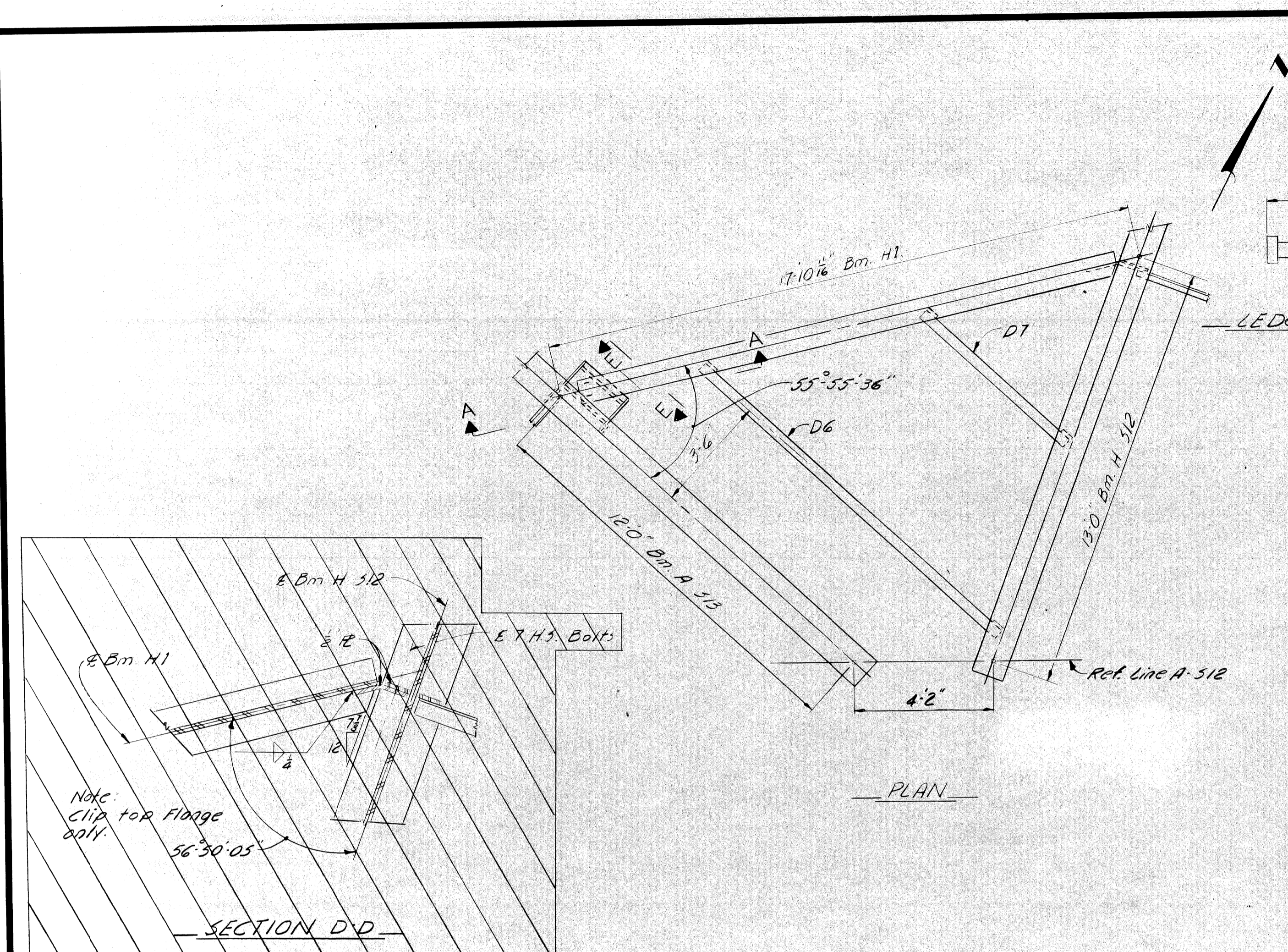
NO.	DESCRIPTION	DATE	BY

APPROVED: _____

JOB No. PW 990 118

SQUAD BOSS: Locher 7-70
DRAWN BY: A.G. 5-70
TRACED BY: WJ RAB 7-70
CHECKED BY: WJ RAB 7-70
SHEET 21 OF 36

513 of 82123D



MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CONCRETE AND STEEL OFFICE
BUREAU OF HIGHWAYS AND BRIDGES

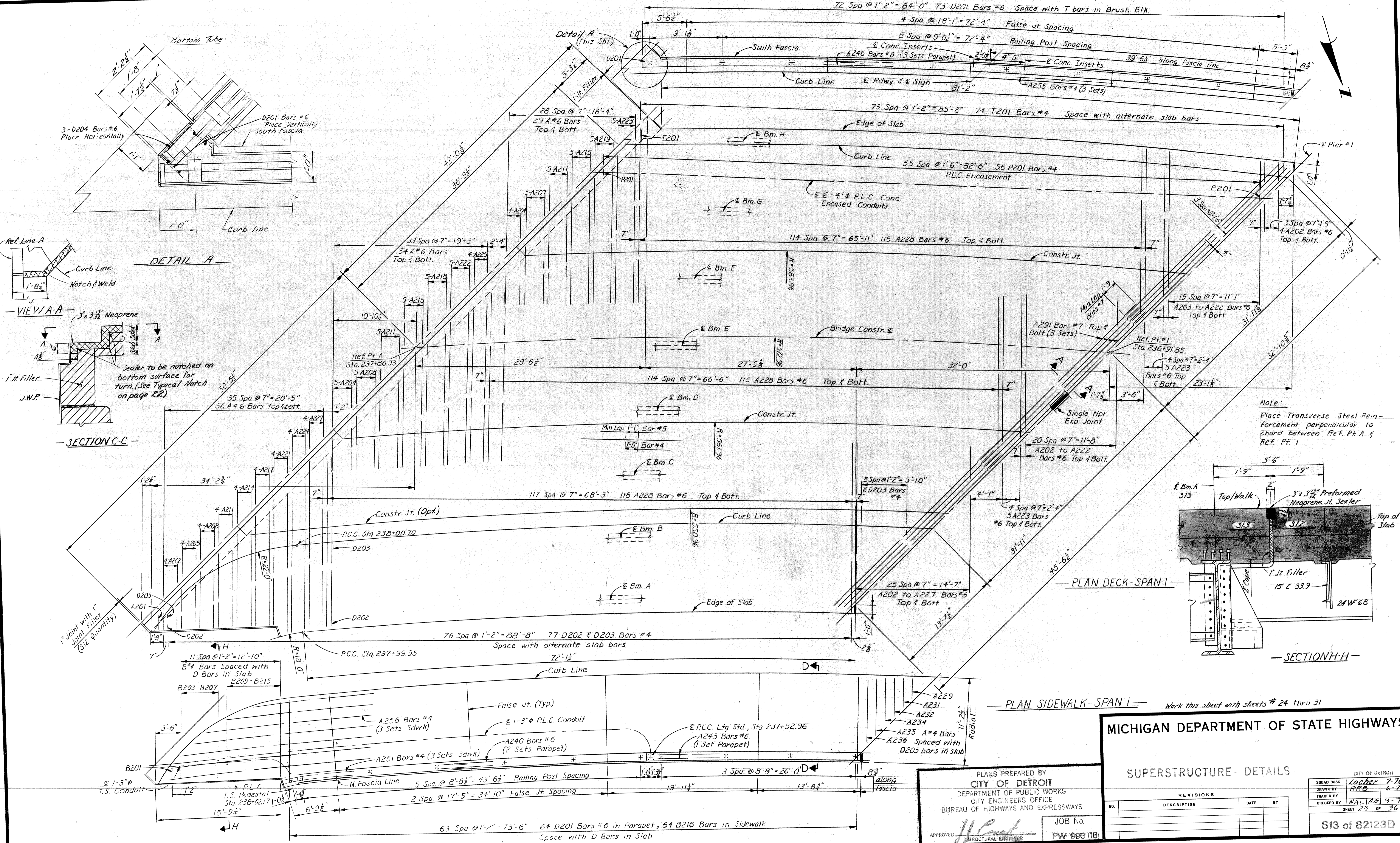
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT		
DRAWN BY	Locher	7-70
TRACED BY	A.G.	1-70
CHECKED BY	W.L.R.A.B.	7-70
SHEET	22	OF 30

S13 of 82123 D

APPROVED: *H. C. ...*
STRUCTURAL ENGINEER

JOB No. PW 990 18



Note: Place Transverse Steel Reinforcement perpendicular to chord between Ref. Pt. A & Ref. Pt. I

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

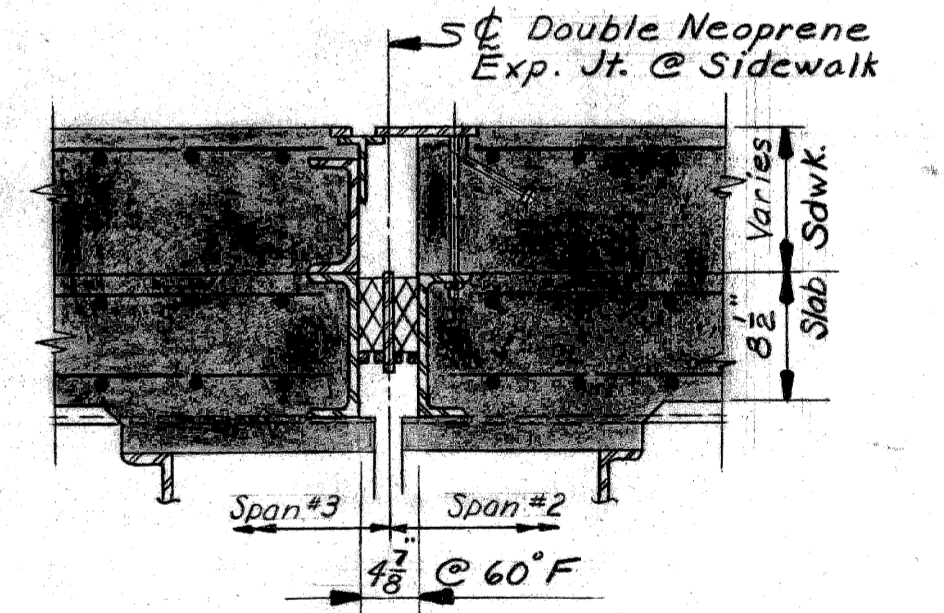
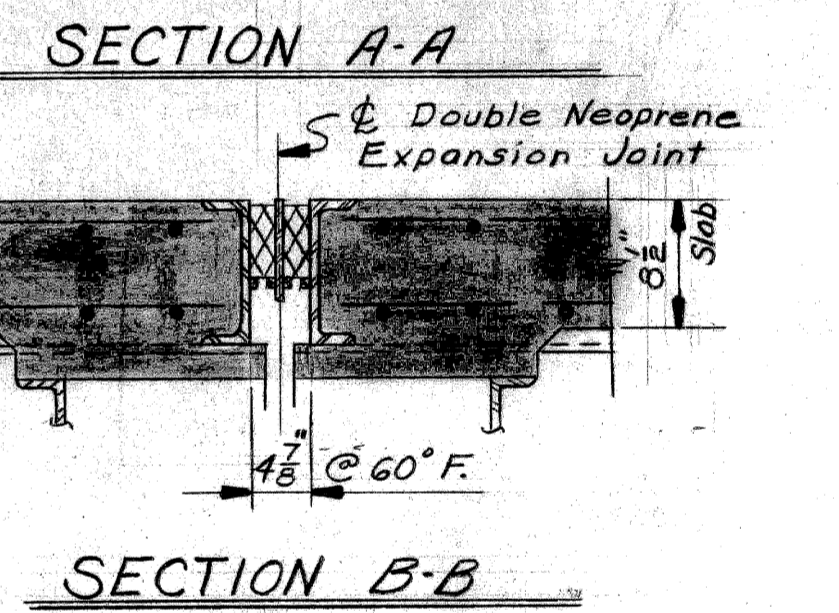
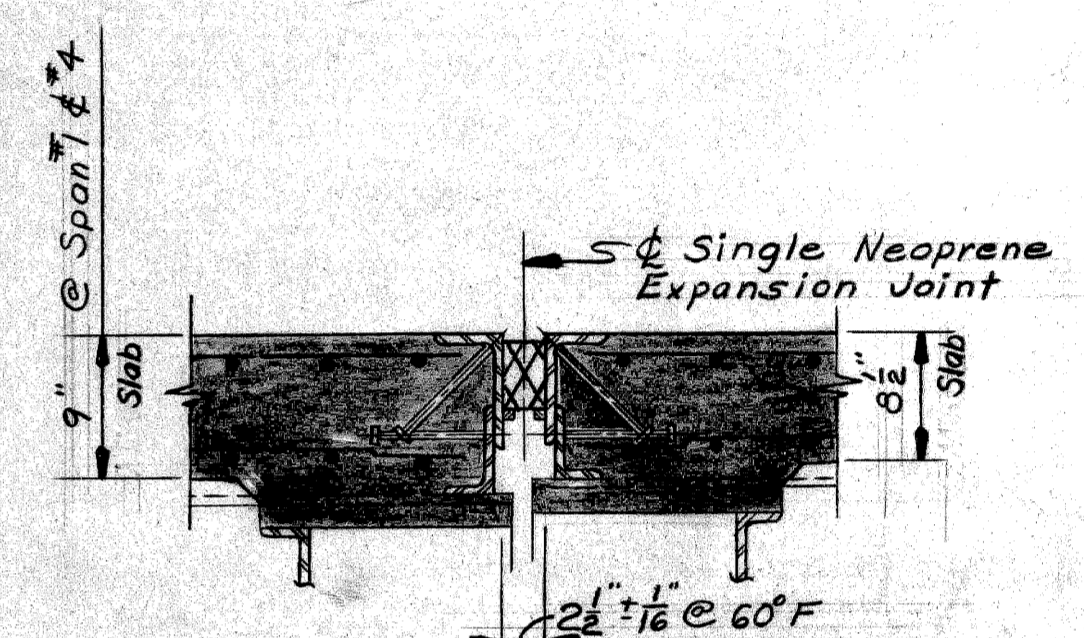
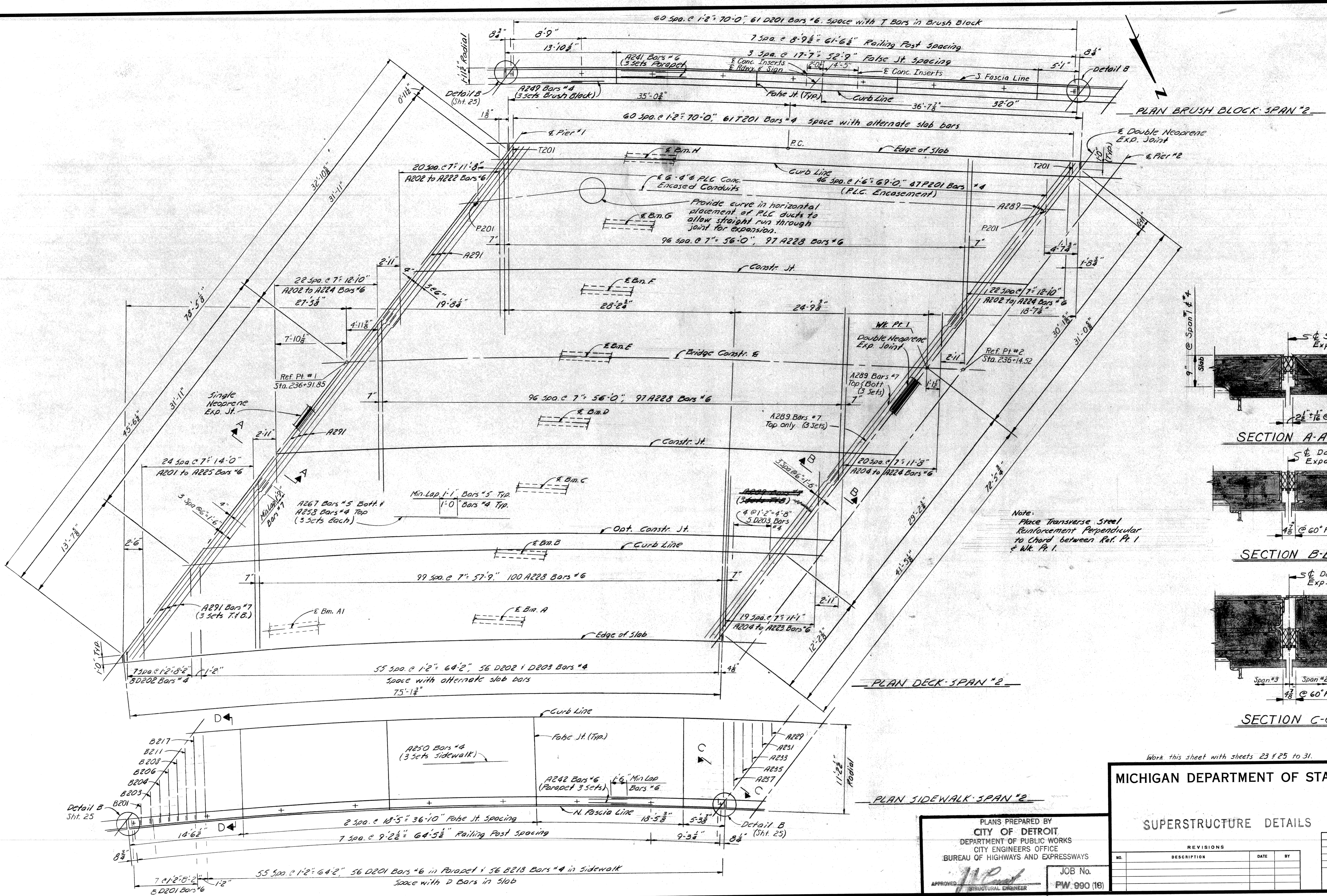
APPROVED: *[Signature]* STRUCTURAL ENGINEER
 JOB No. PW 990 (18)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE - DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS: Locher 7-70
 DRAWN BY: RRE 6-70
 CHECKED BY: WALIAG 9-70
 SHEET 23 OF 36
 S13 of 82123D



Note:
Place Transverse Steel
Reinforcement Perpendicular
to Chord between Ref. Pt. 1
& Wk. Pt. 1.

Work this sheet with sheets 23 & 25 to 31.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

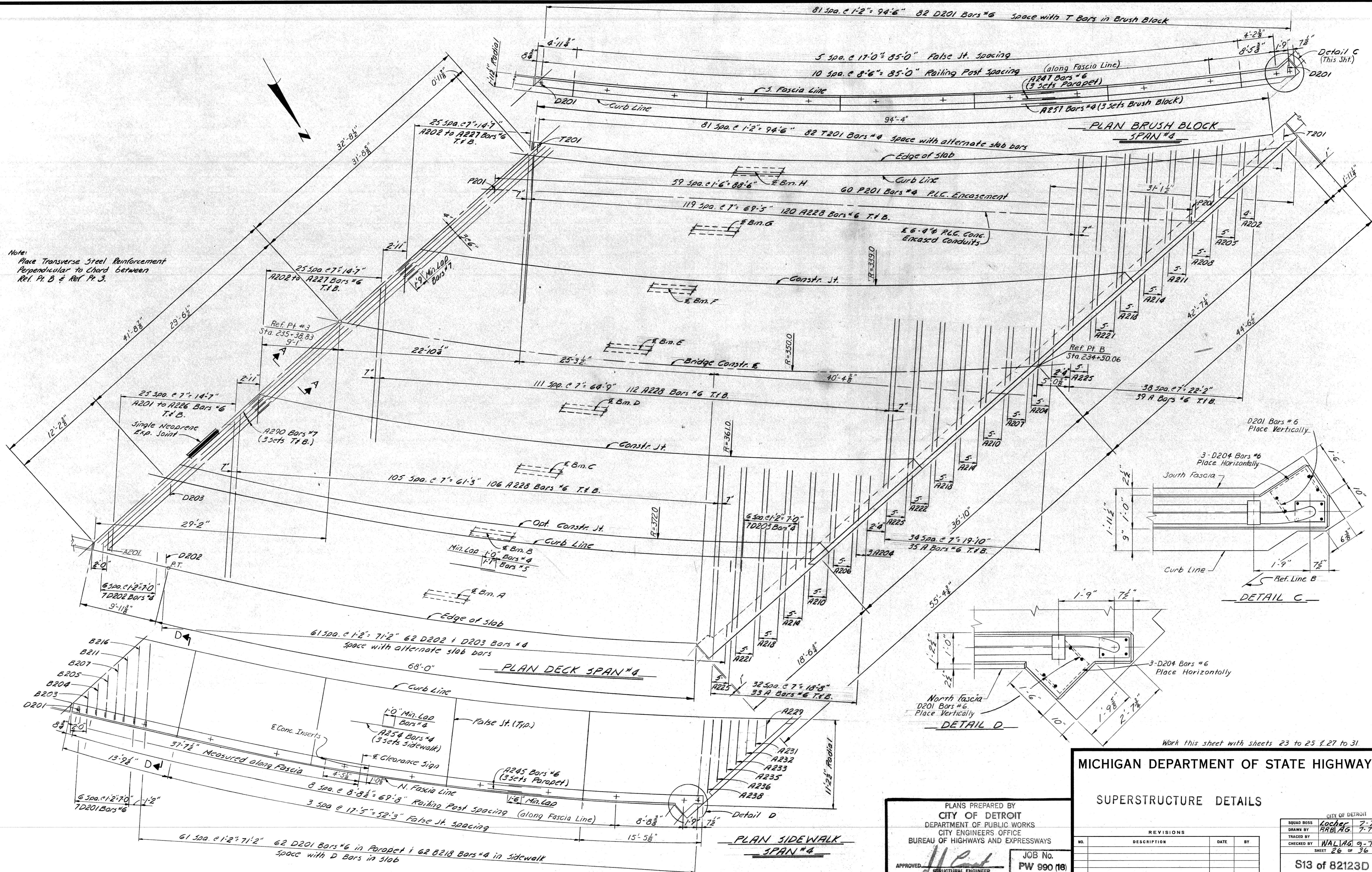
SUPERSTRUCTURE DETAILS

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

REVISIONS			
NO.	DESCRIPTION	DATE	BY

DATE OF DETROIT	
DESIGNED BY	7-70
DRAWN BY	6-70
CHECKED BY	9-70
SHEET	24 OF 36

JOB No.
PW 990 (18)



Note:
Place Transverse Steel Reinforcement
Perpendicular to Chord between
Ref. Pt. B & Ref. Pt. J.3.

Detail C
(This Sht.)

DETAIL C

DETAIL D

Work this sheet with sheets 23 to 25 & 27 to 31

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

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

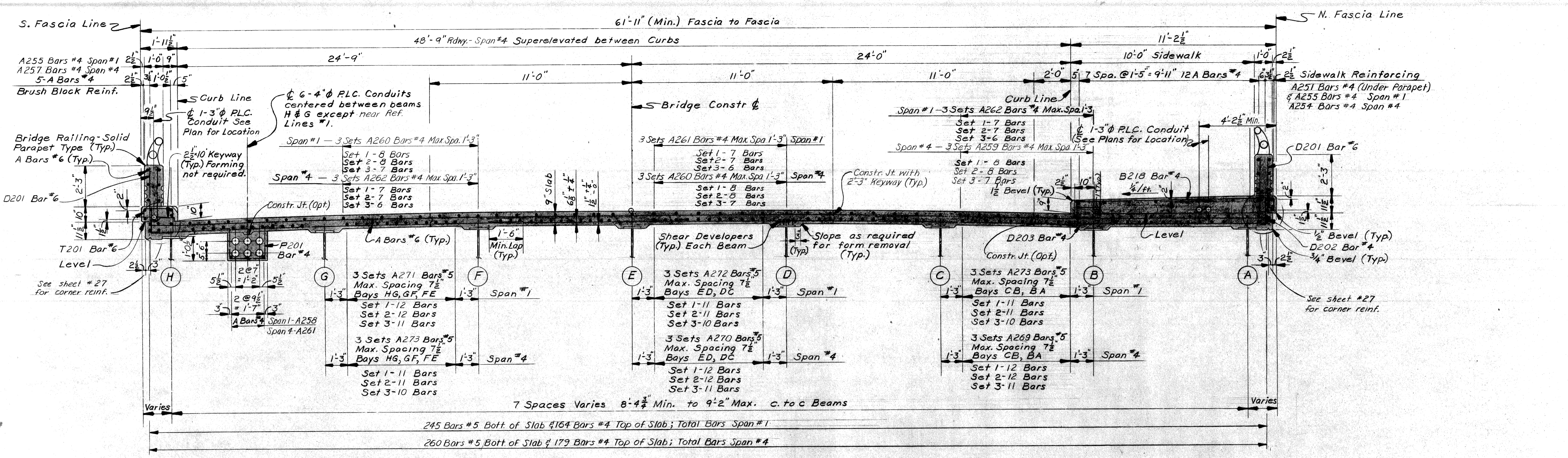
APPROVED: *[Signature]*
STRUCTURAL ENGINEER

REVISIONS			
NO.	DESCRIPTION	DATE	BY

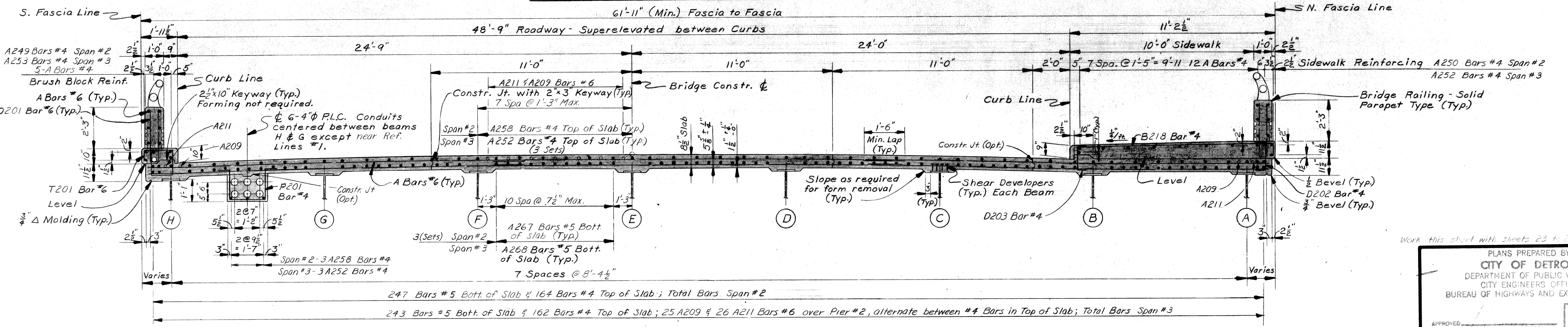
CITY OF DETROIT	
SQUAD BOSS	Locher 7-70
DRAWN BY	ARBL AG 7-70
TRACED BY	
CHECKED BY	WAL 106 9-70
SHEET	26 OF 36

S13 of 82123D

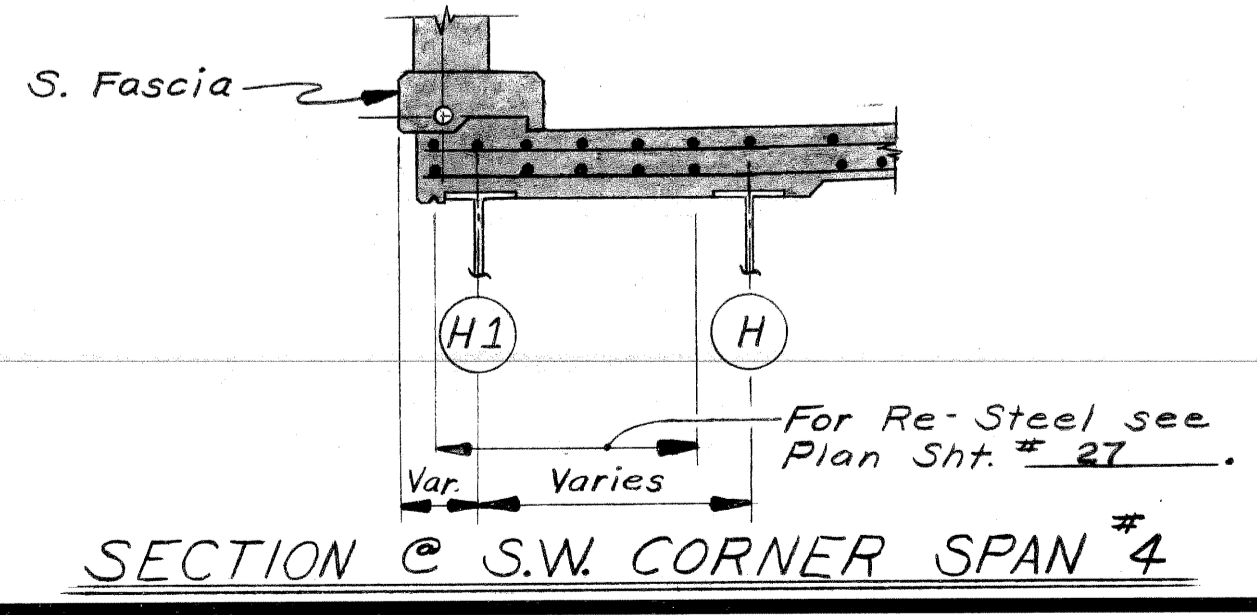
JOB No.
PW 990 (18)



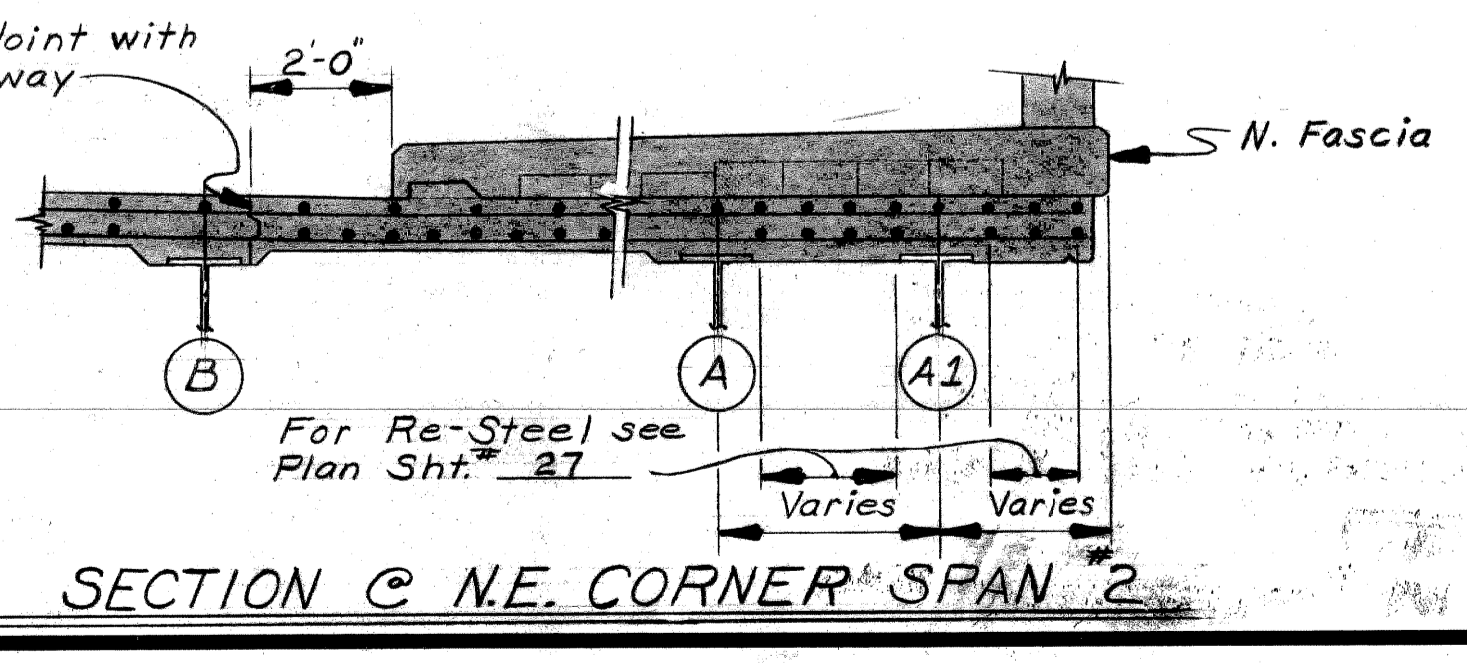
CROSS SECTION - SPAN #1 & #4



CROSS SECTION - SPAN #2 & #3



SECTION @ S.W. CORNER SPAN #4



SECTION @ N.E. CORNER SPAN #2

Work this sheet with sheets 23, 24, 25, 26, 27, 28, 29, 30, 31.

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

APPROVED: _____
 STRUCTURAL ENGINEER

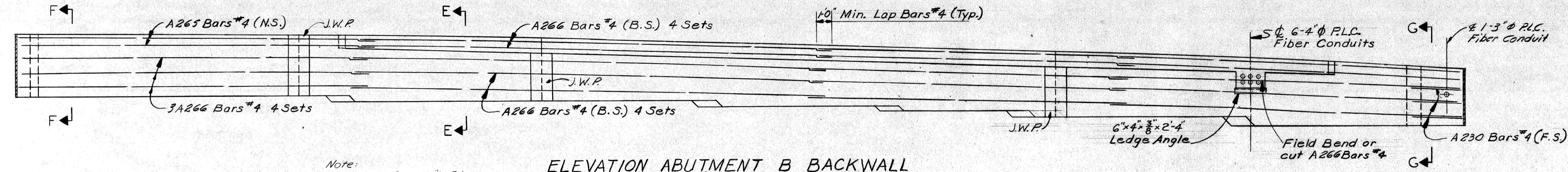
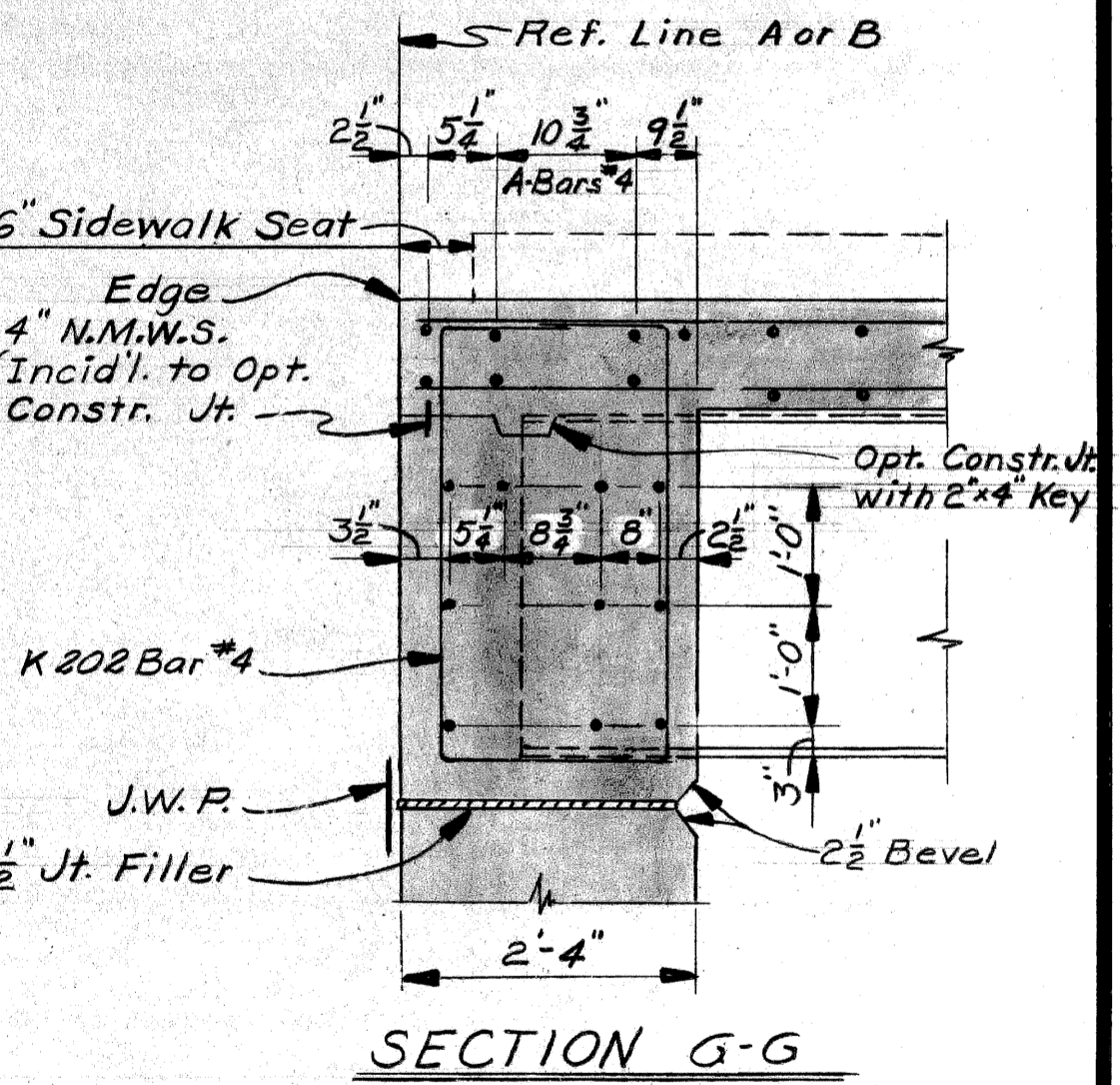
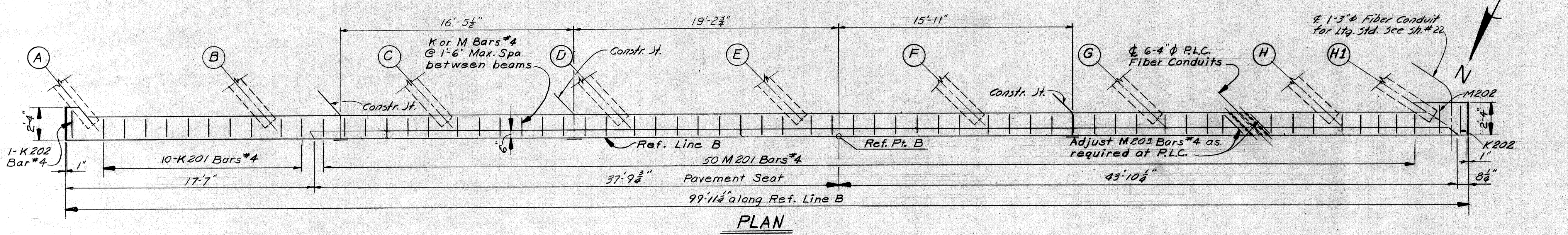
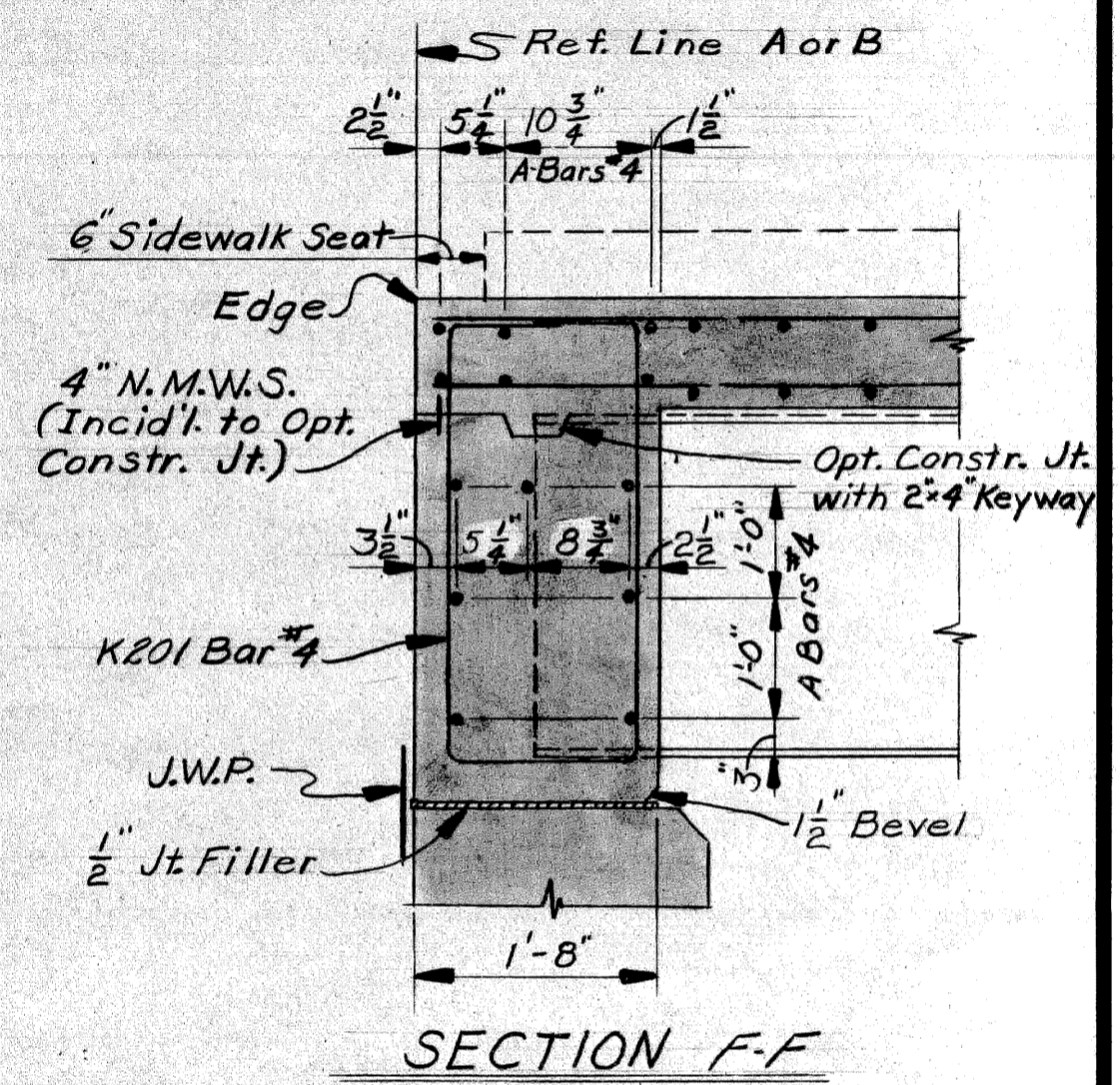
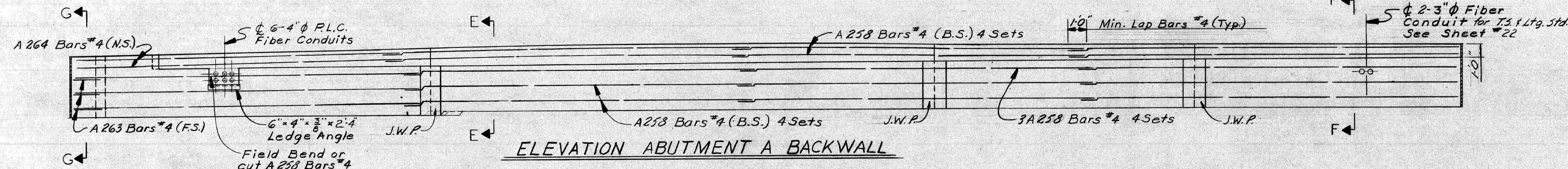
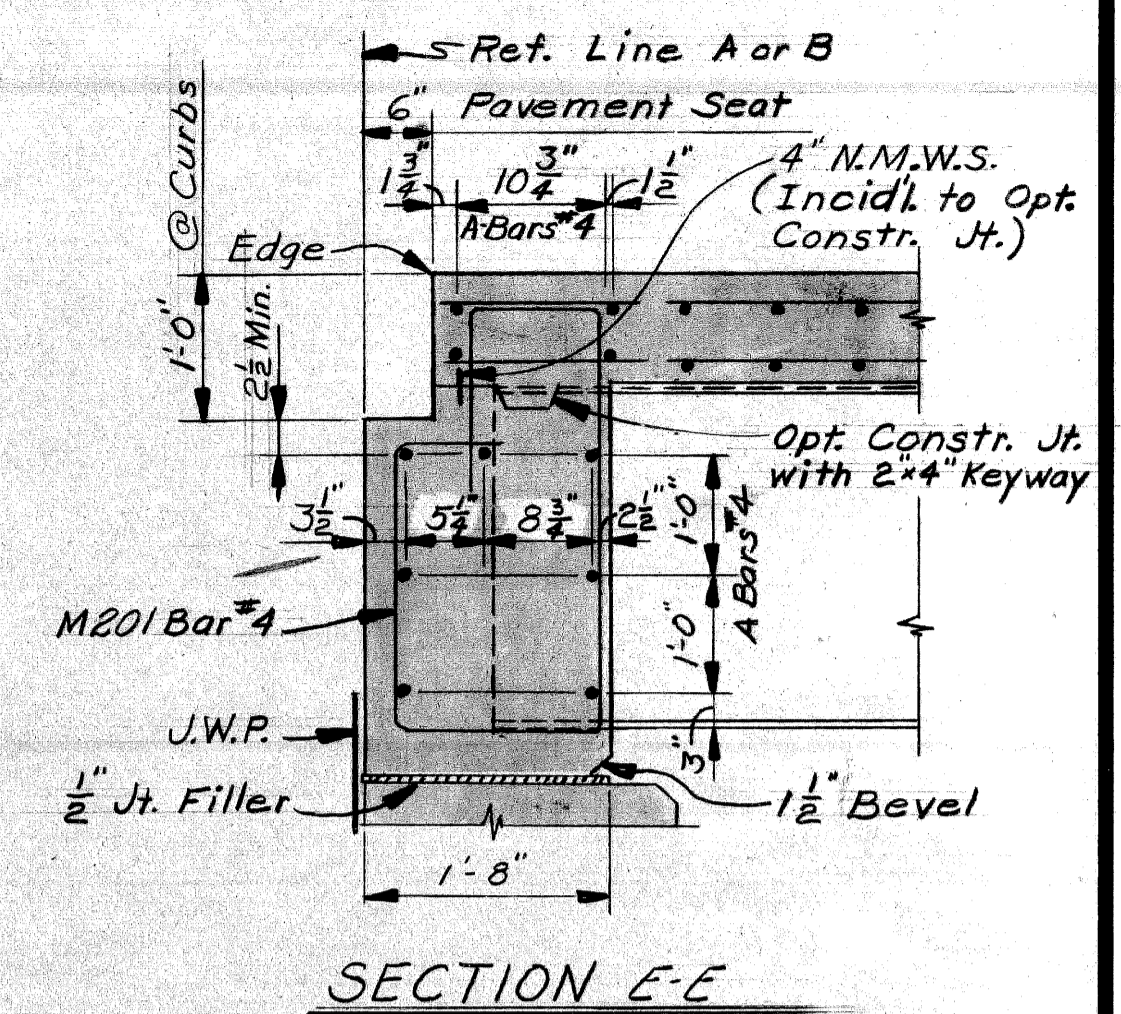
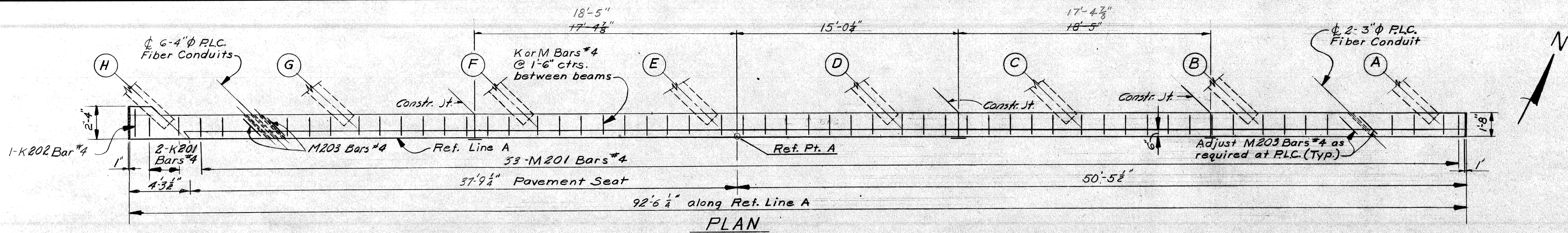
JOB NO.
 PW 990 (18)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

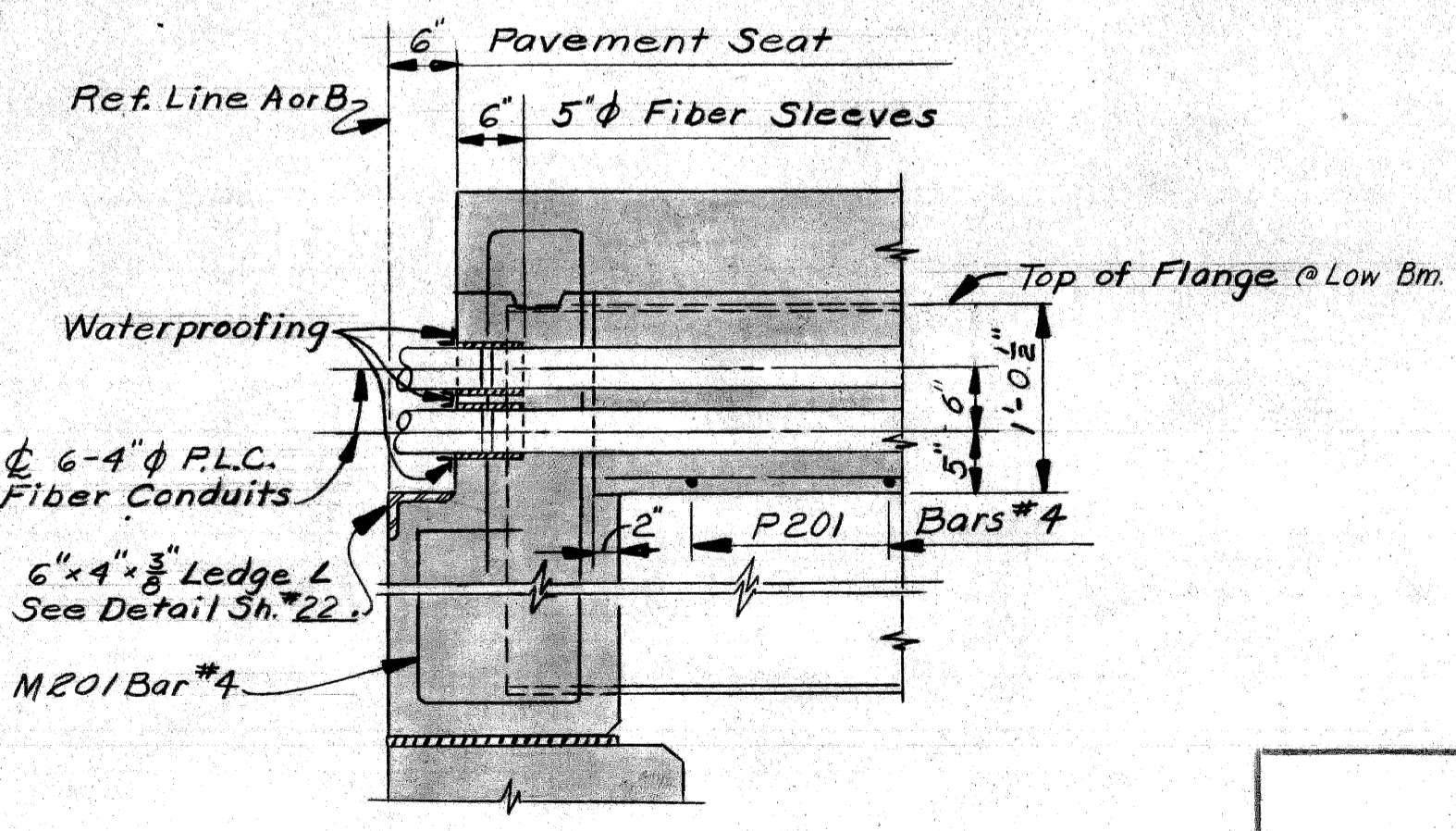
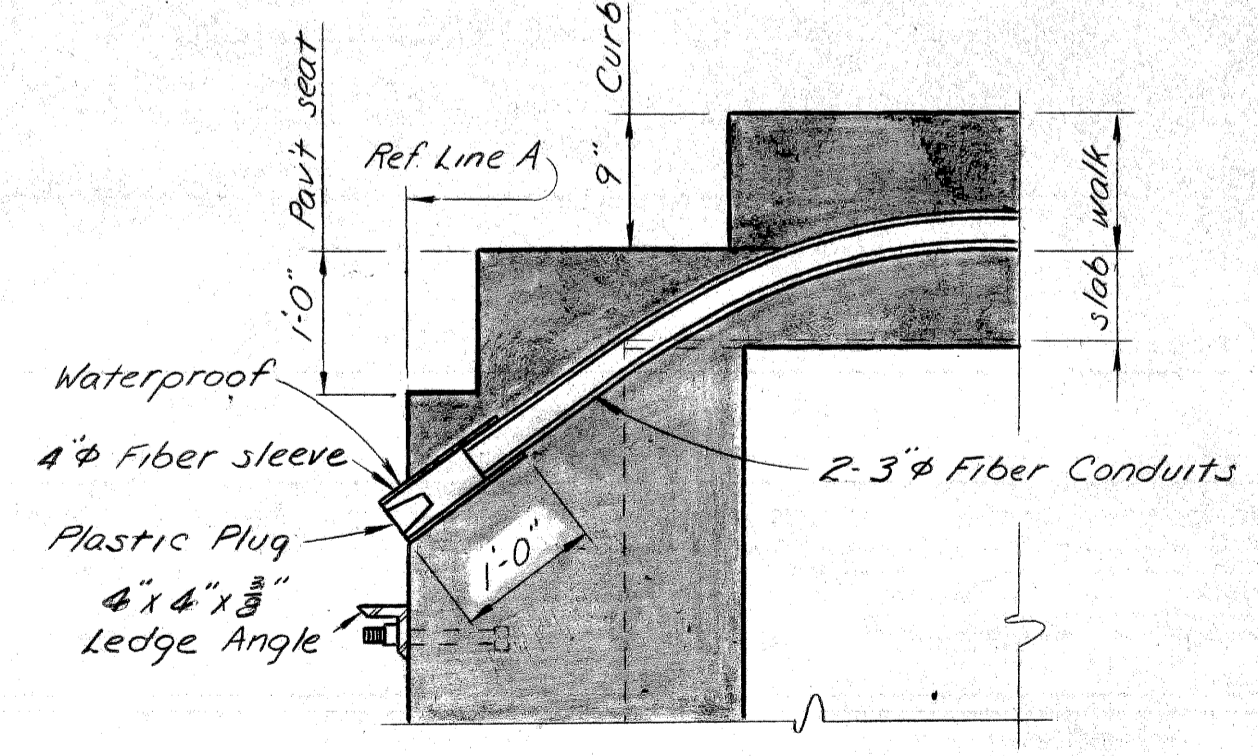
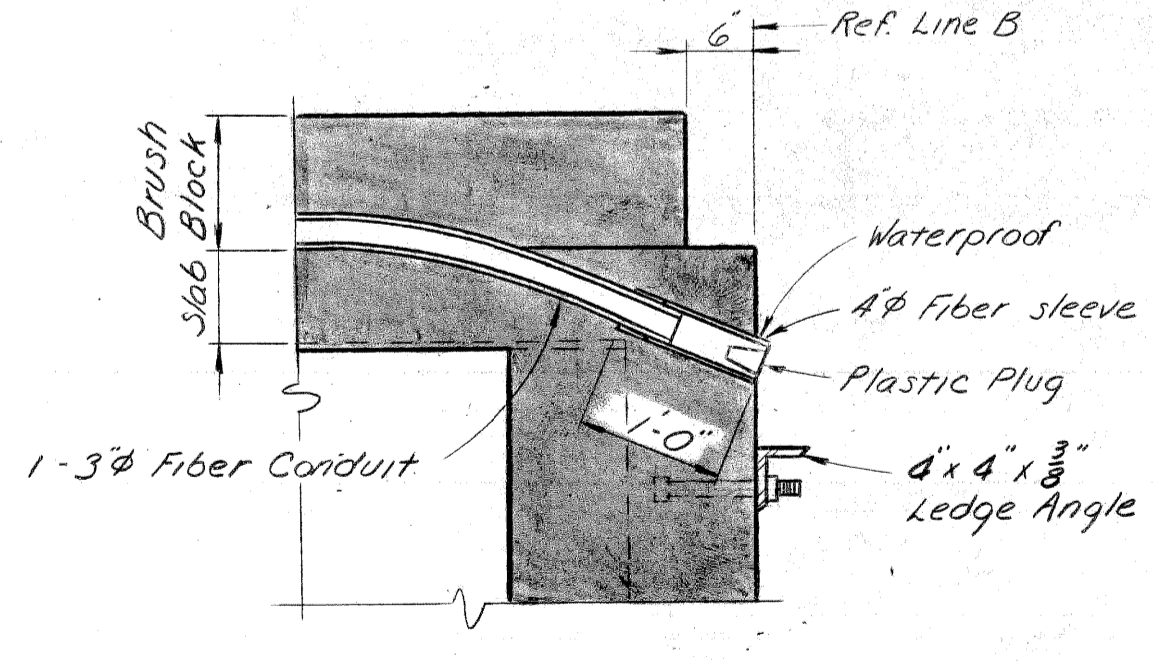
SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS: Locher 7-70
 DRAWN BY: R. Rosik 06/70
 CHECKED BY: WAL 10.6.91/70
 SHEET 28 OF 36
S13 of 82123D



Note: Waterproofing, 4" Fiber sleeves, & Plastic plug are incidental to 3" Conduits



Work this sheet with sheets 23 to 28, 30 & 31.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

PLANS PREPARED BY
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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

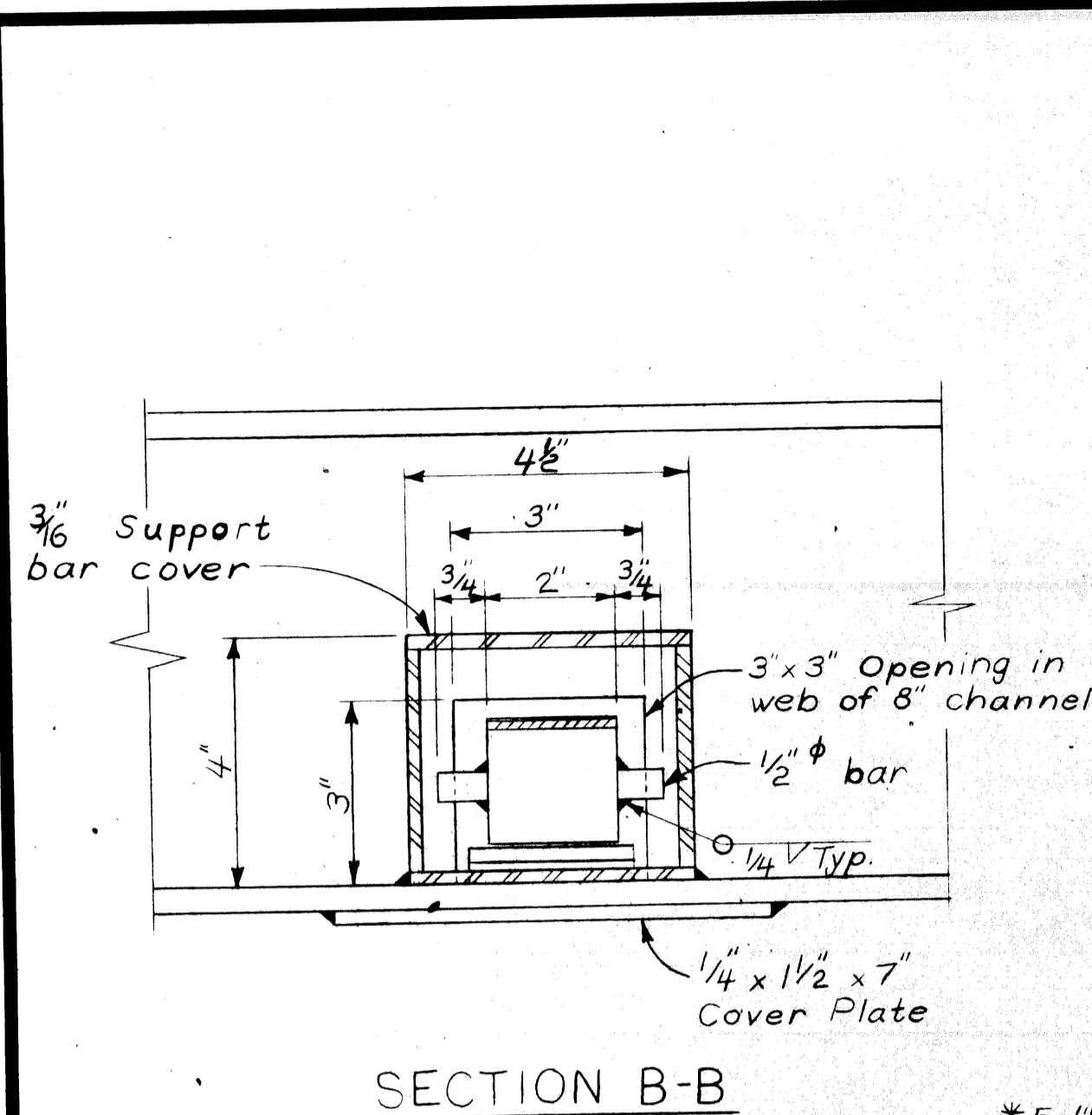
APPROVED: *[Signature]*
 STRUCTURAL ENGINEER

JOB No.
 PW 990 (18)

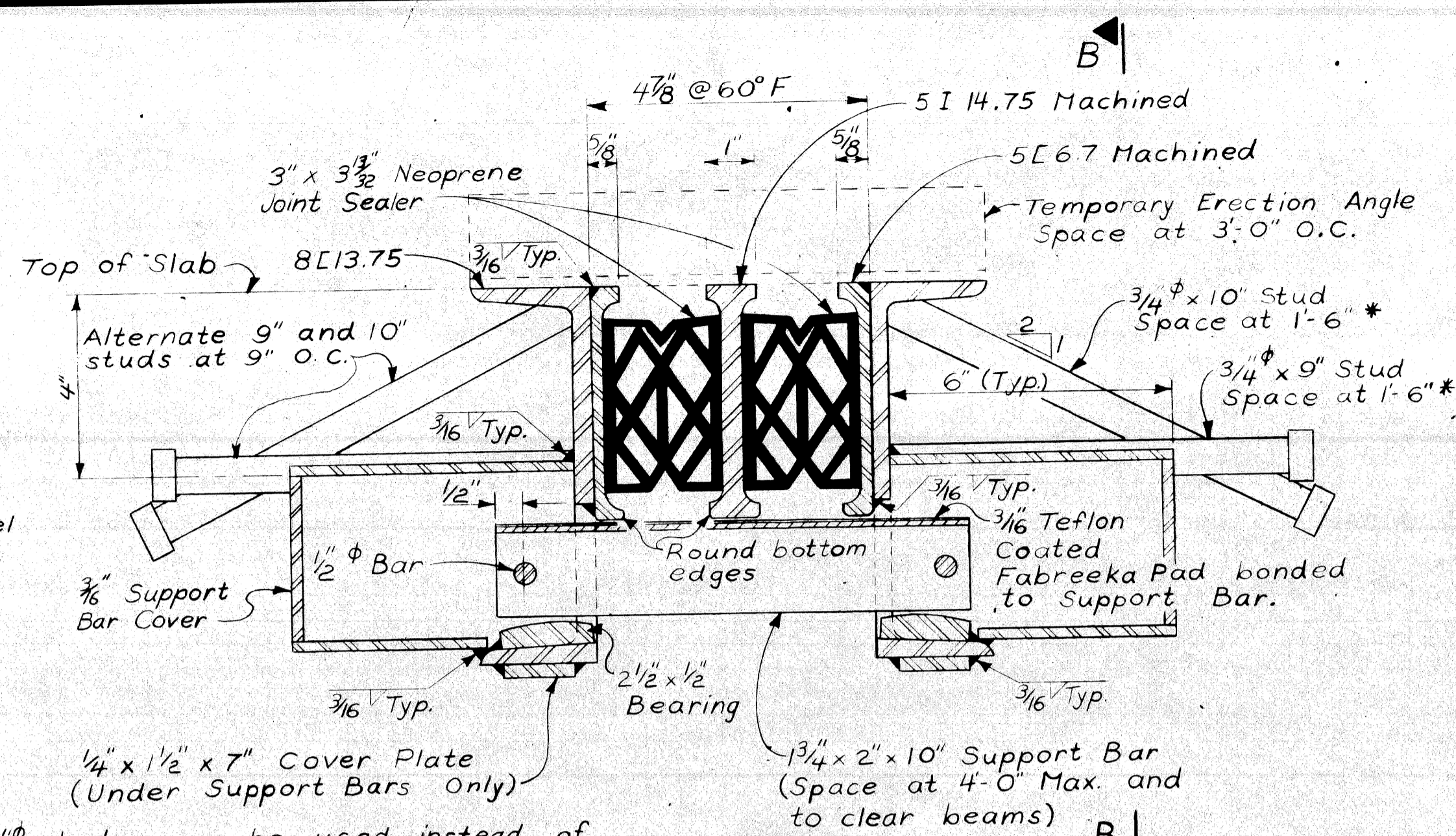
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT		
SQUAD BOSS	Locher	7-70
DRAWN BY	R. Rosik	06/70
TRACED BY		
CHECKED BY	WALAB	9/70
SHEET	29	OF 30

513 of 82123D

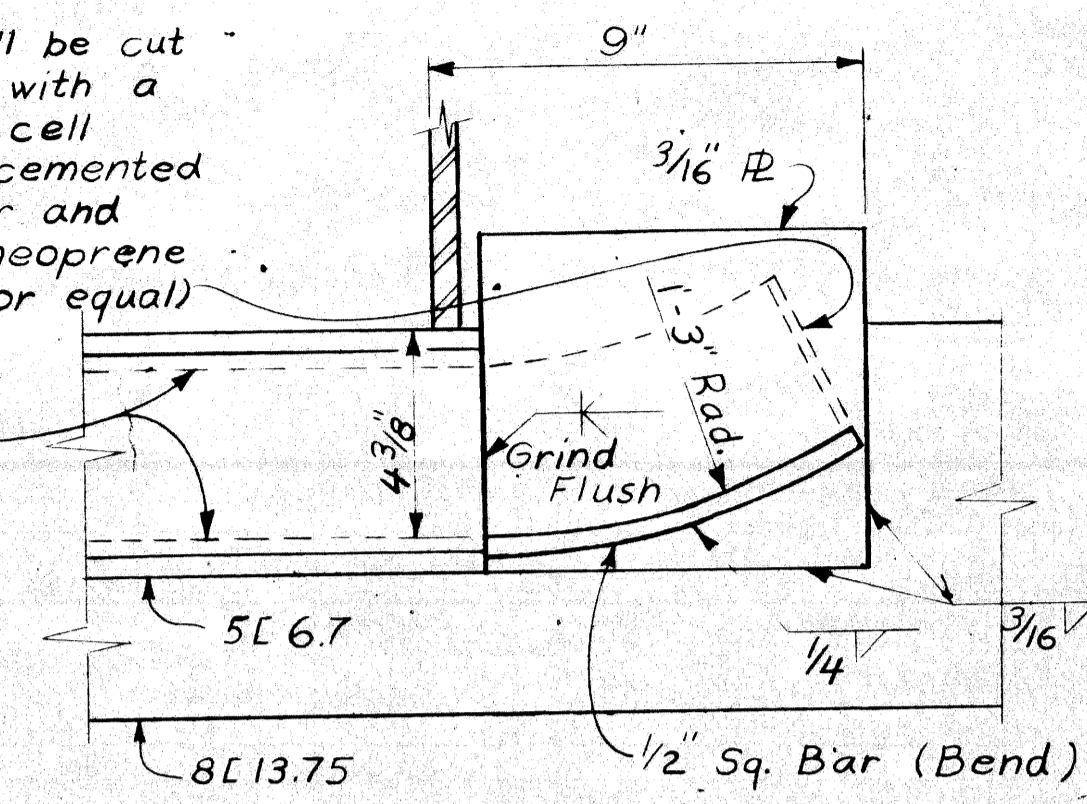


SECTION B-B

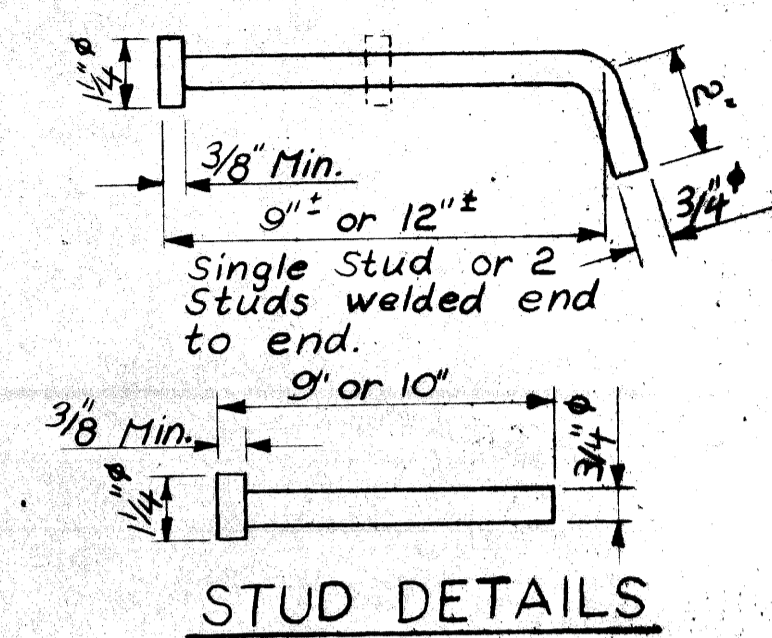


SECTION A-A

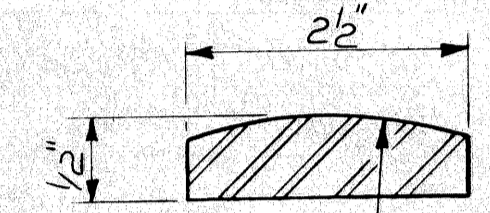
Neoprene ends shall be cut square and sealed with a 1/8 inch sheet of closed cell neoprene sponge cemented to a full perimeter and walls with liquid neoprene adhesive (1501 B or equal)



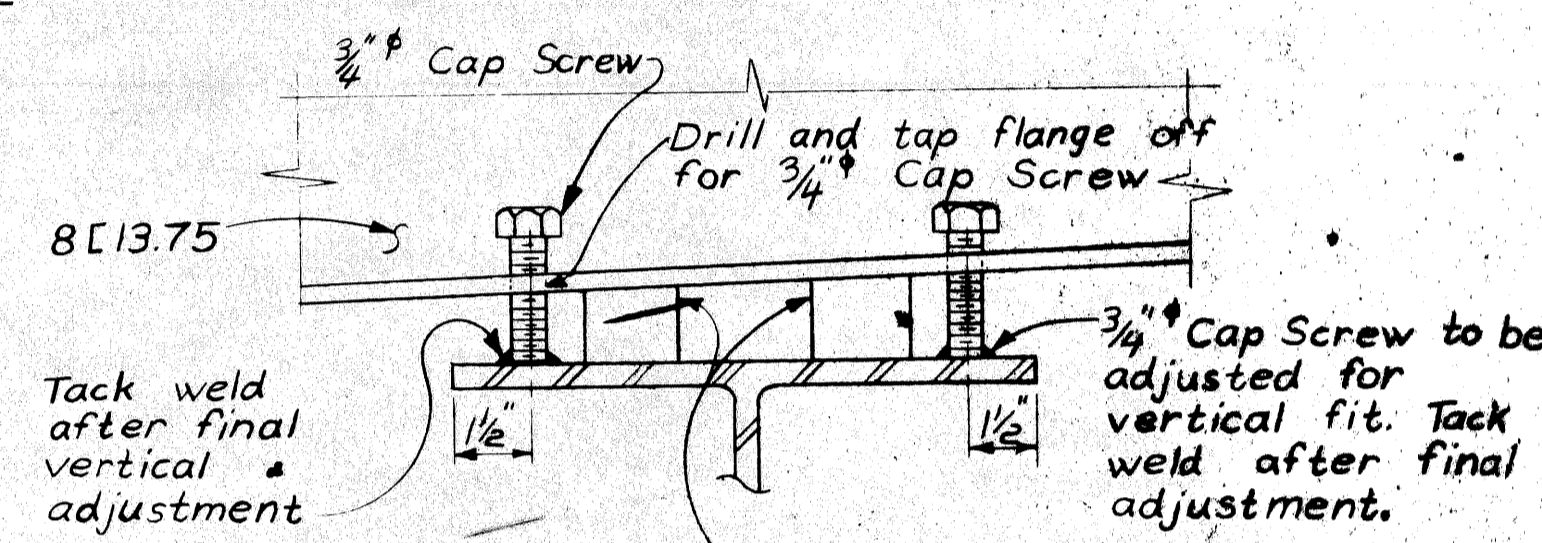
SECTION F-F



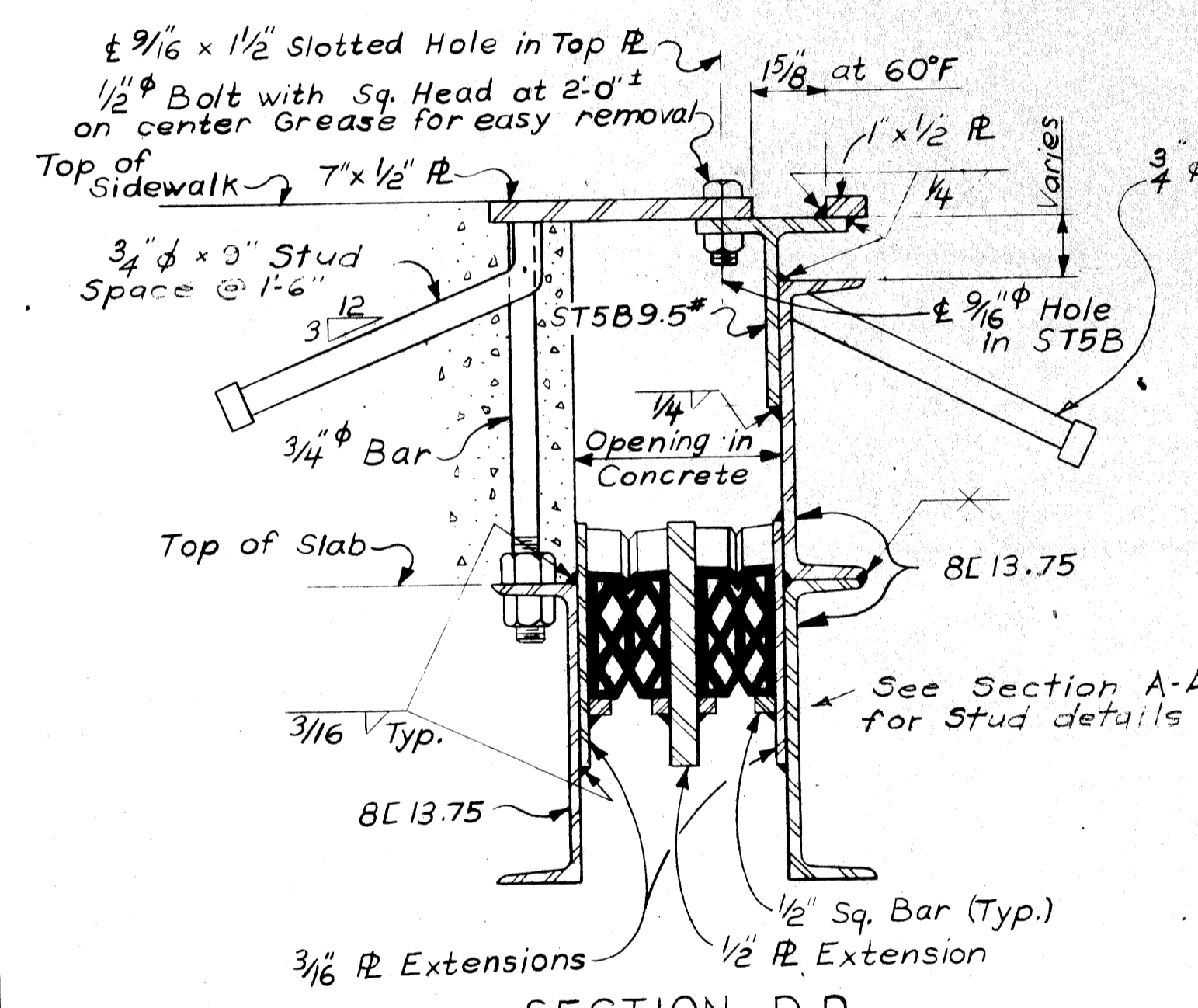
STUD DETAILS



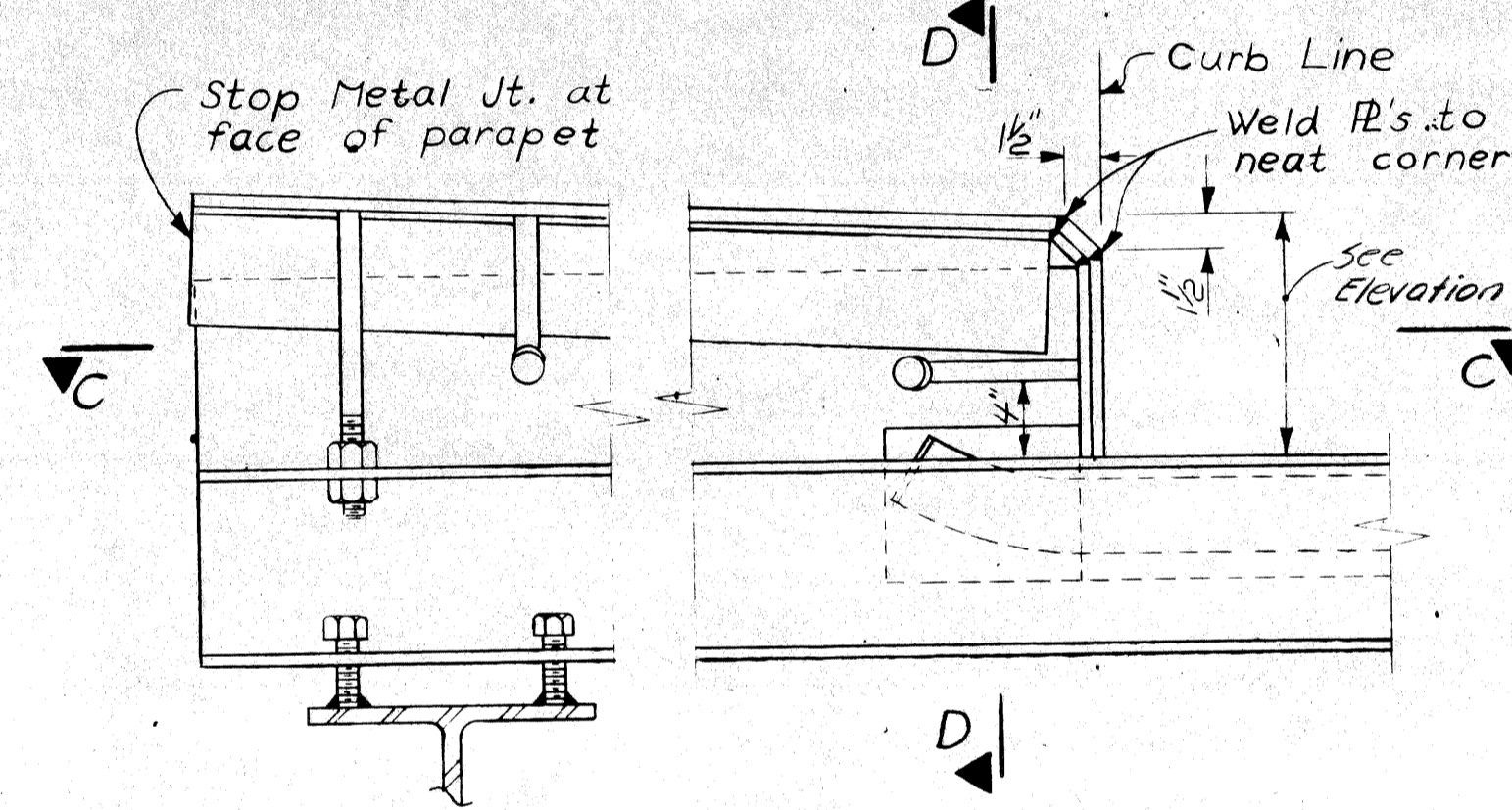
BEARING



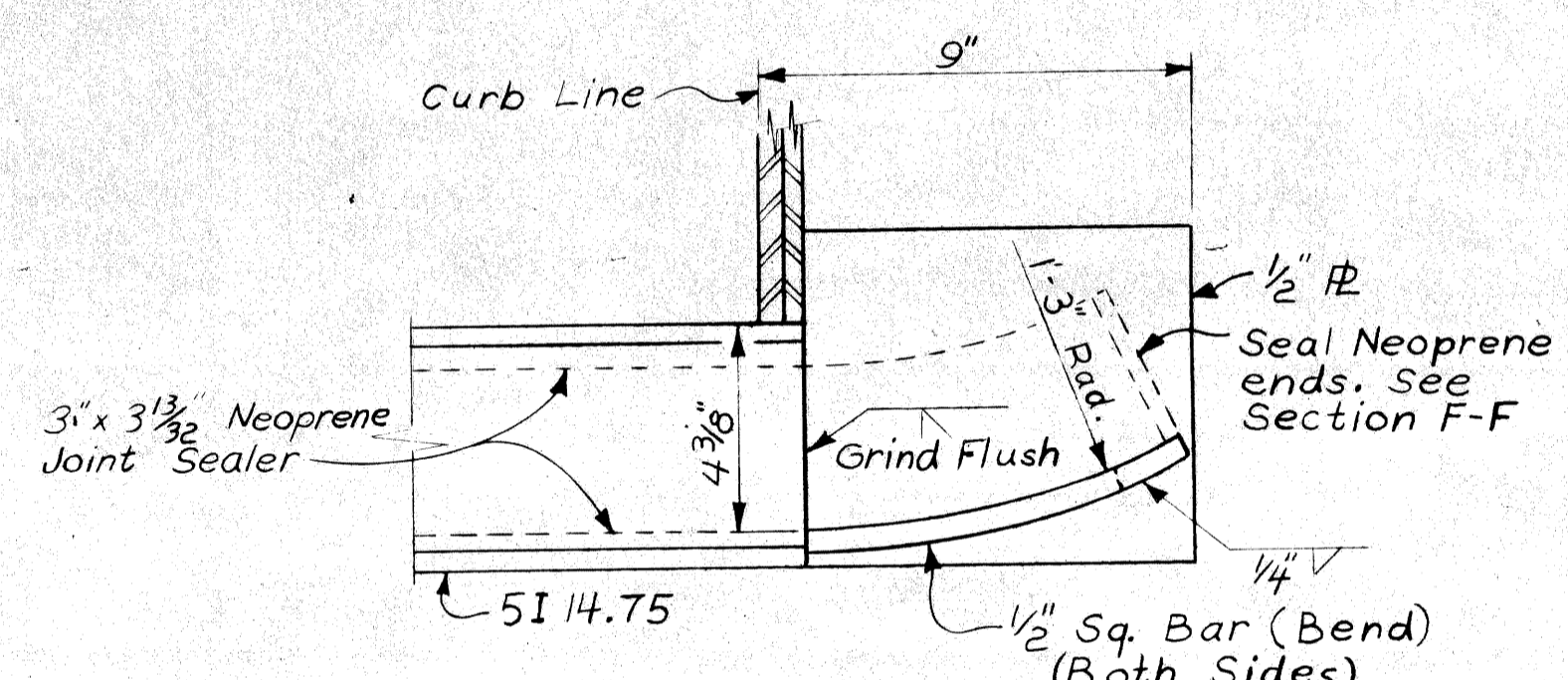
ATTACHMENT TO BEAM



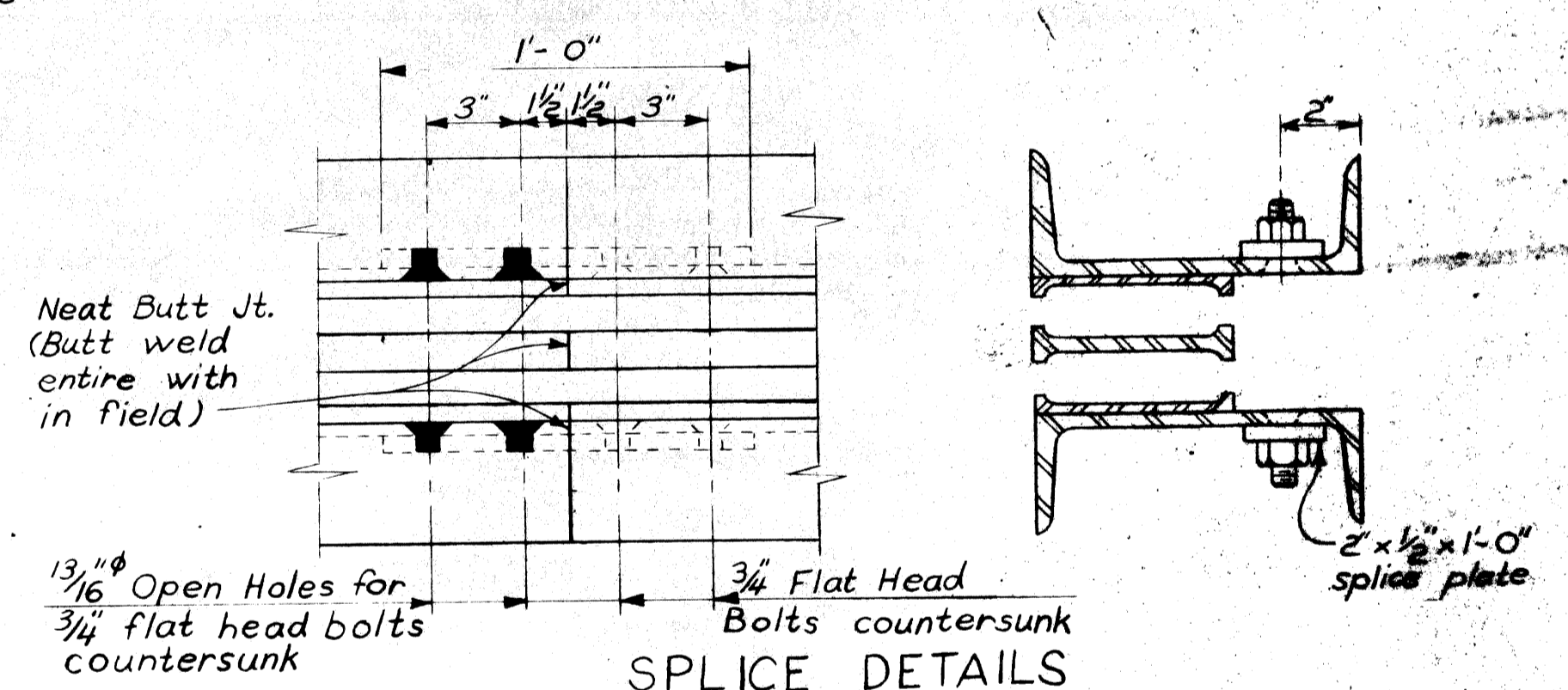
SECTION D-D



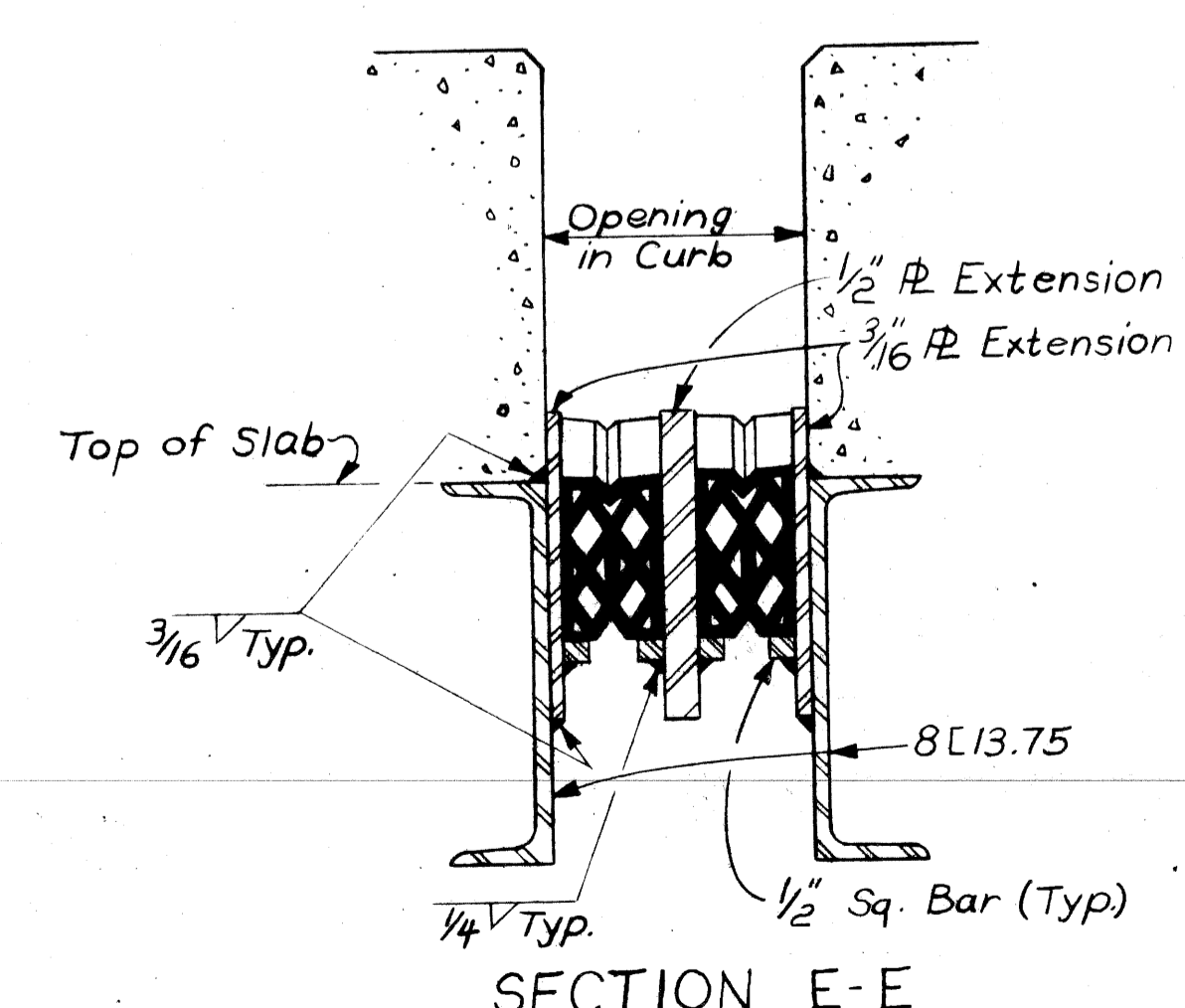
ELEVATION AT SIDEWALK



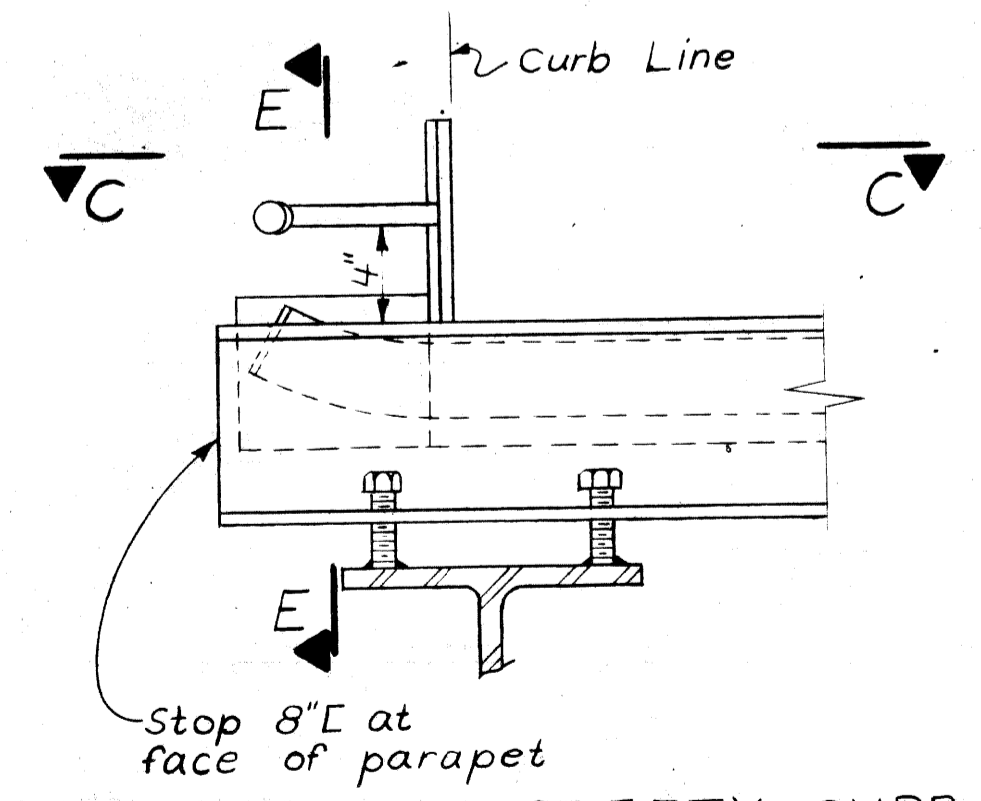
SECTION G-G



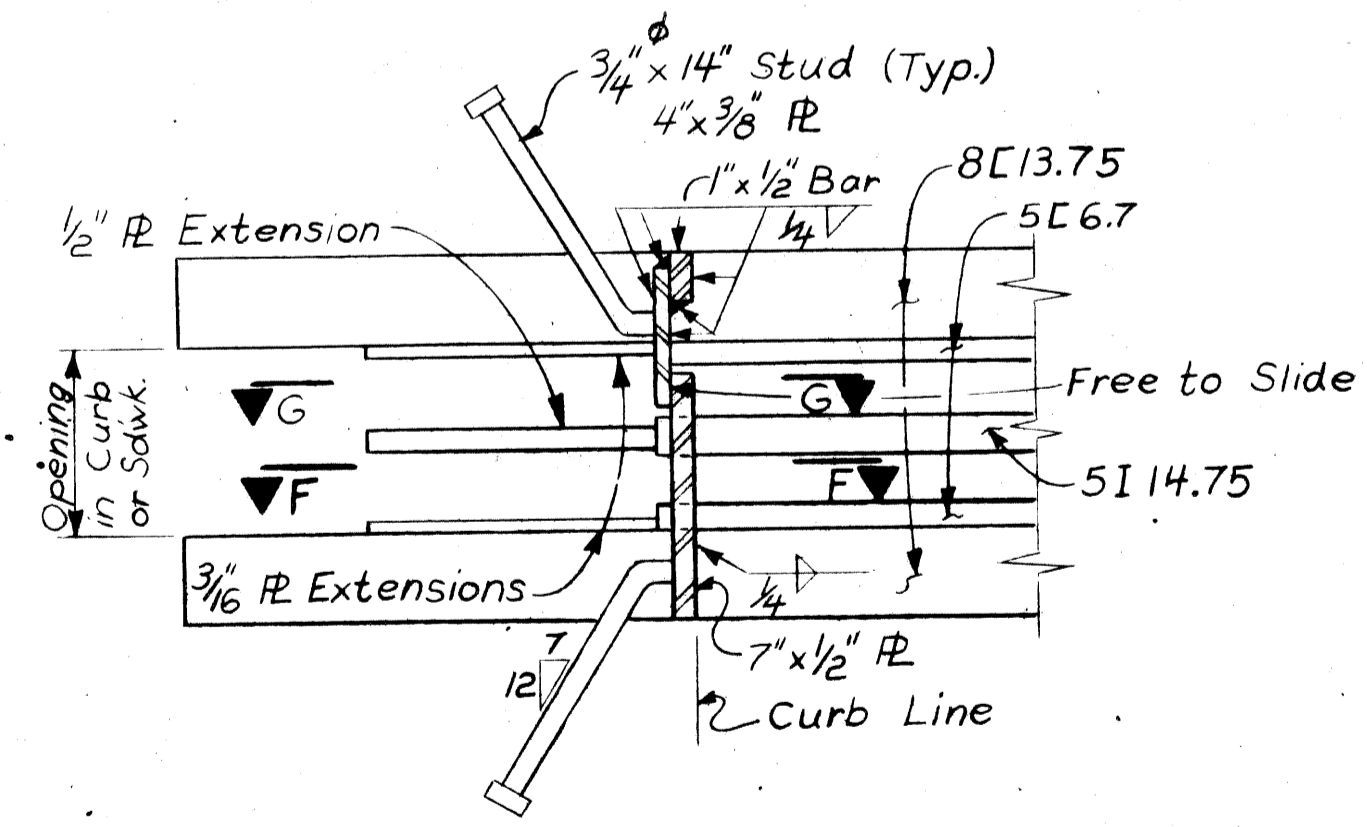
SPlice DETAILS



SECTION E-E



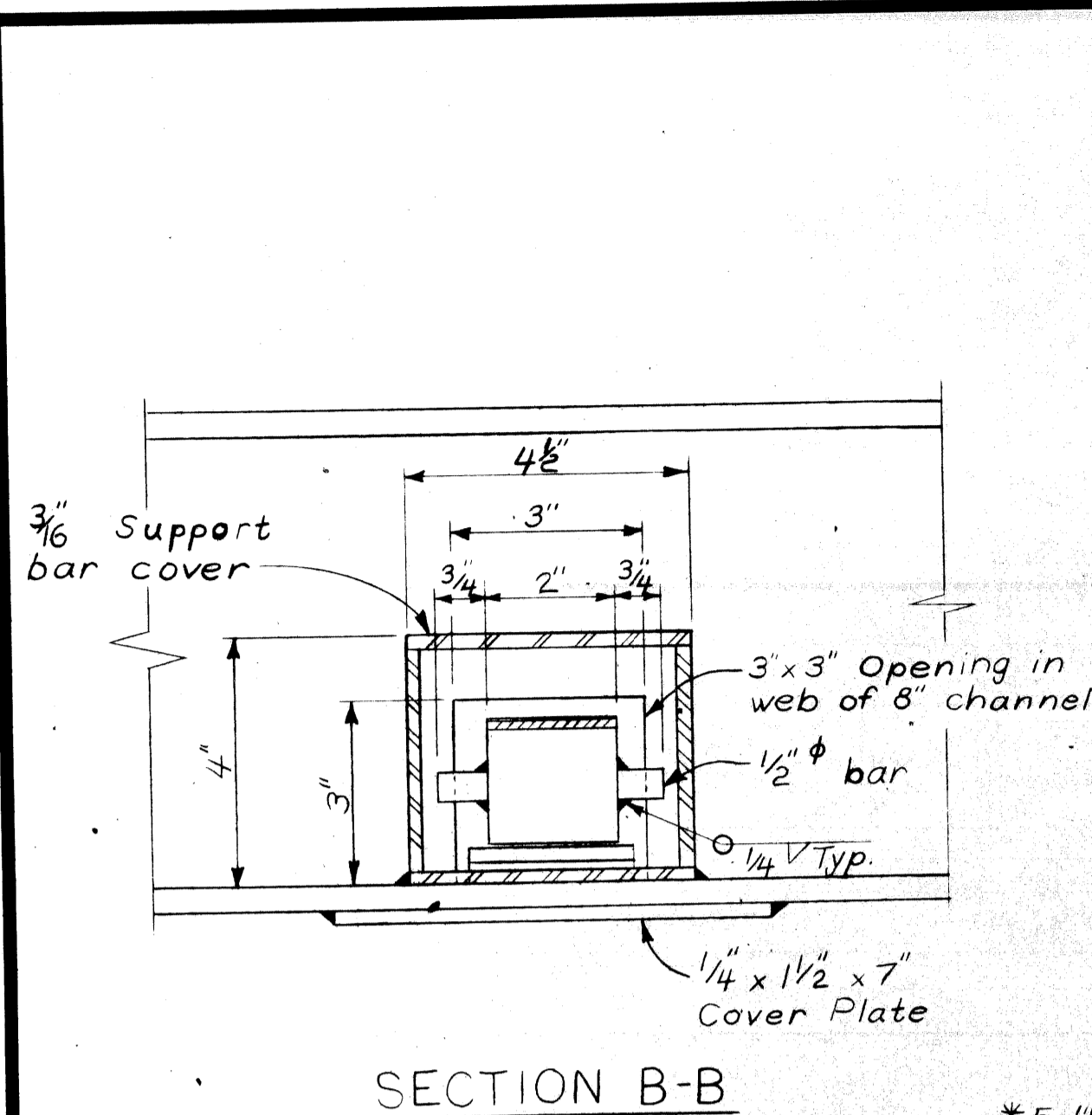
ELEVATION AT SAFETY CURB



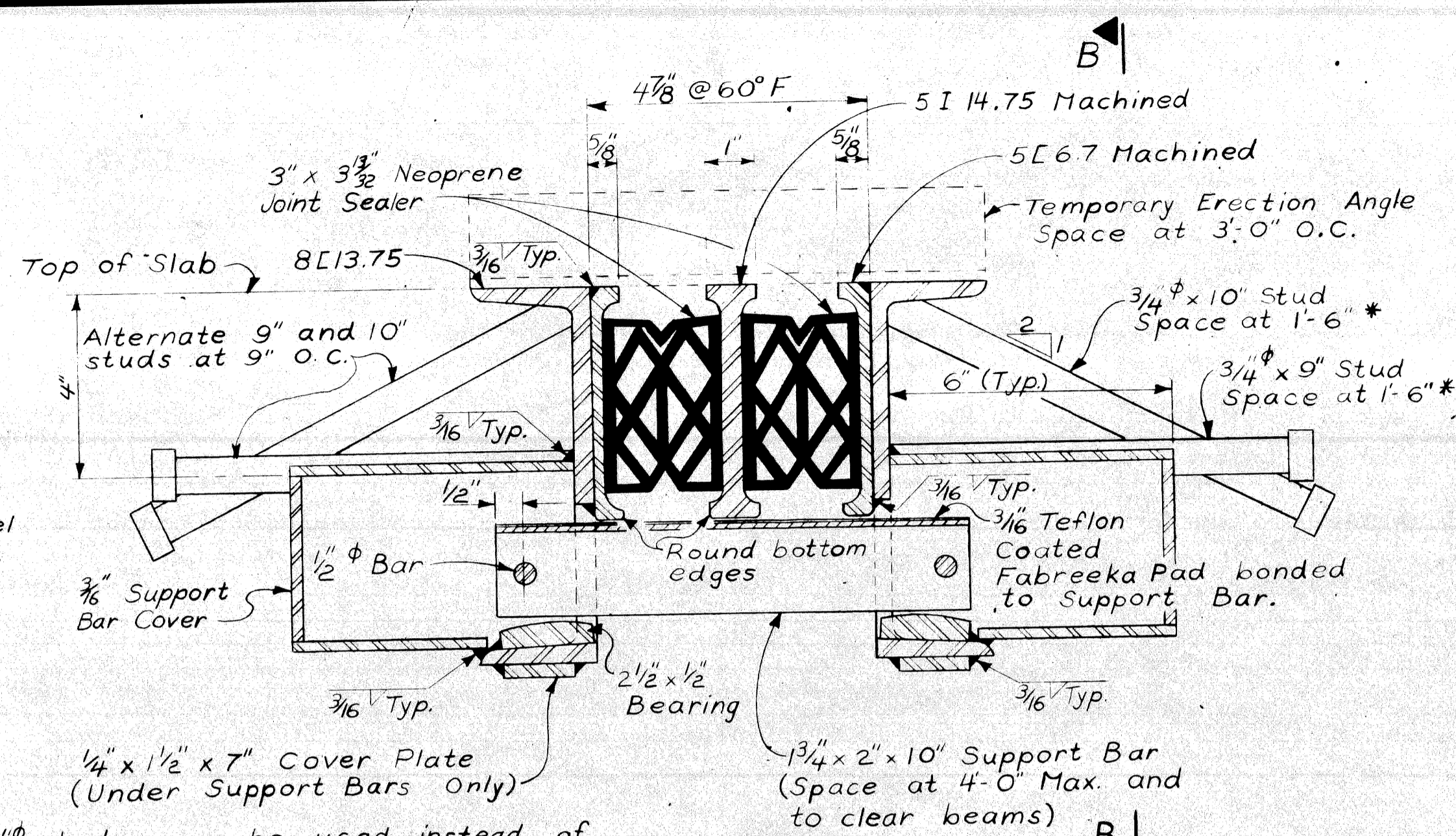
SECTION C-C

NOTES:
 The Neoprene Expansion Joint shall be prefabricated and assembled in the shop.
 The Neoprene Expansion Joint shall be bent in the shop to conform with the contour of the Top of Roadway Slab.
 The steel and the 3 inch Neoprene Joint Sealer in the Expansion Joint is included in the Quantity Double Neoprene Expansion Joint-Lin. Ft. For details of Sealer and Installation Procedure, see Supplemental Specifications.
 Steel to be A.S.T.M. A-588
 Work this sheet with sheet #33.

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN DEPARTMENT OF STATE HIGHWAYS	
APPROVED: <i>[Signature]</i> STRUCTURAL ENGINEER		DOUBLE NEOPRENE EXPANSION JOINT DETAILS	
JOB No. PW 990 (18)		REVISIONS	
NO. _____		DESCRIPTION _____	
DATE _____		BY _____	
SHEET 30 of 36		SHEET 30 of 36	
ID: S13 of 82123D		ID: S13 of 82123D	



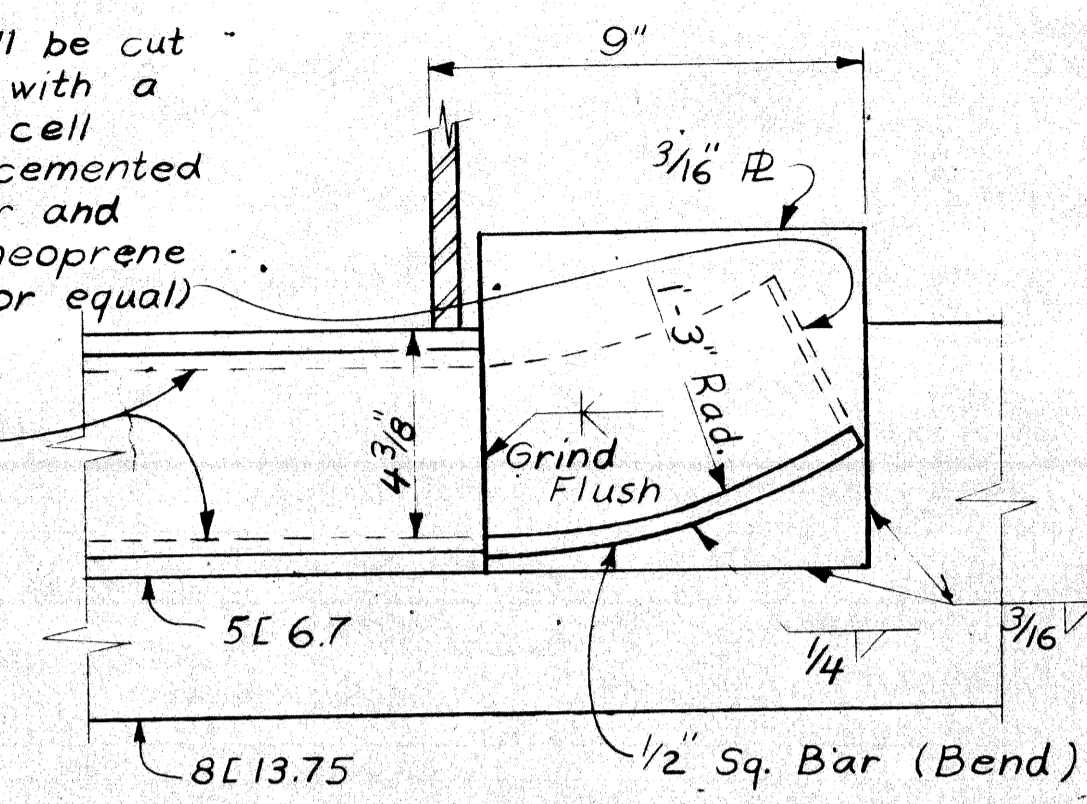
SECTION B-B



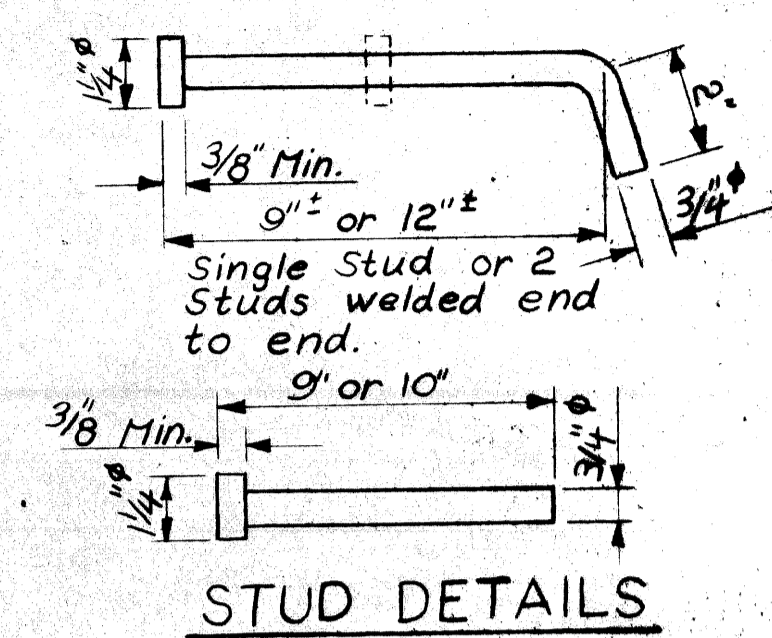
SECTION A-A

*5/8" φ studs may be used instead of 3/4" φ studs. The spacing of the 5/8" φ studs shall be 2/3 of that shown for 3/4" φ studs.

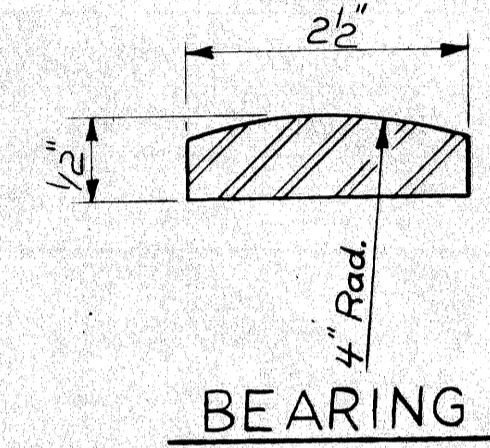
Neoprene ends shall be cut square and sealed with a 1/8" sheet of closed cell neoprene sponge cemented to a full perimeter and walls with liquid neoprene adhesive (1501 B or equal)



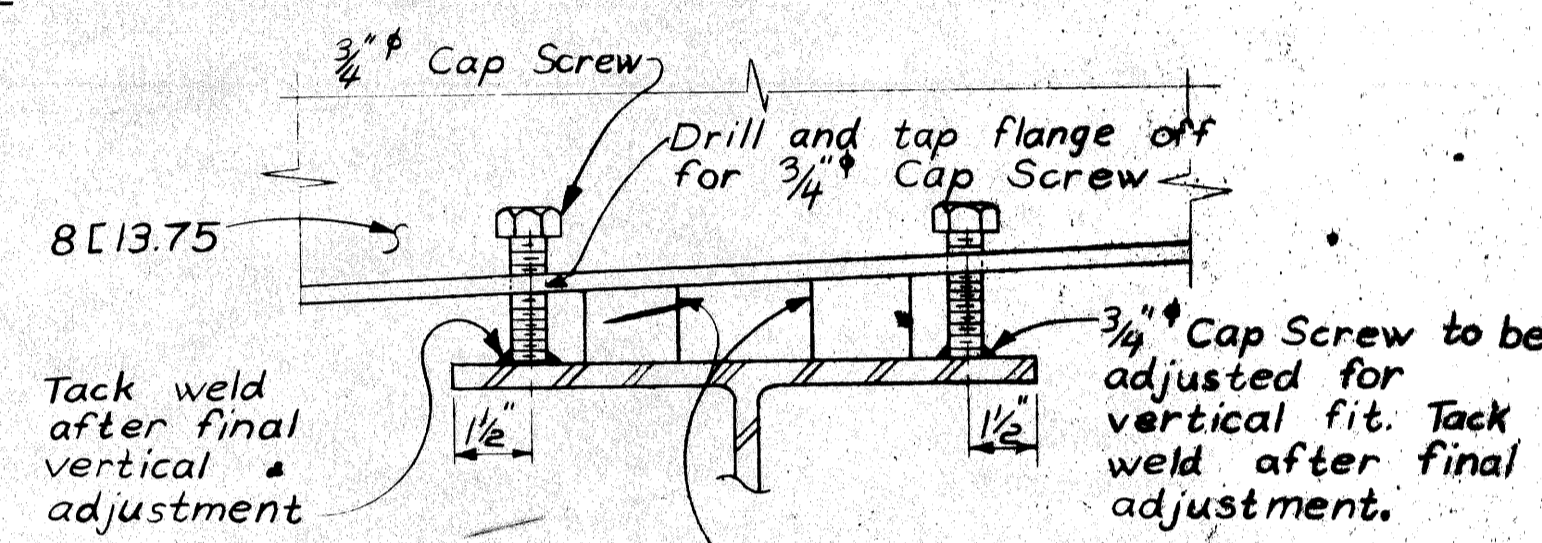
SECTION F-F



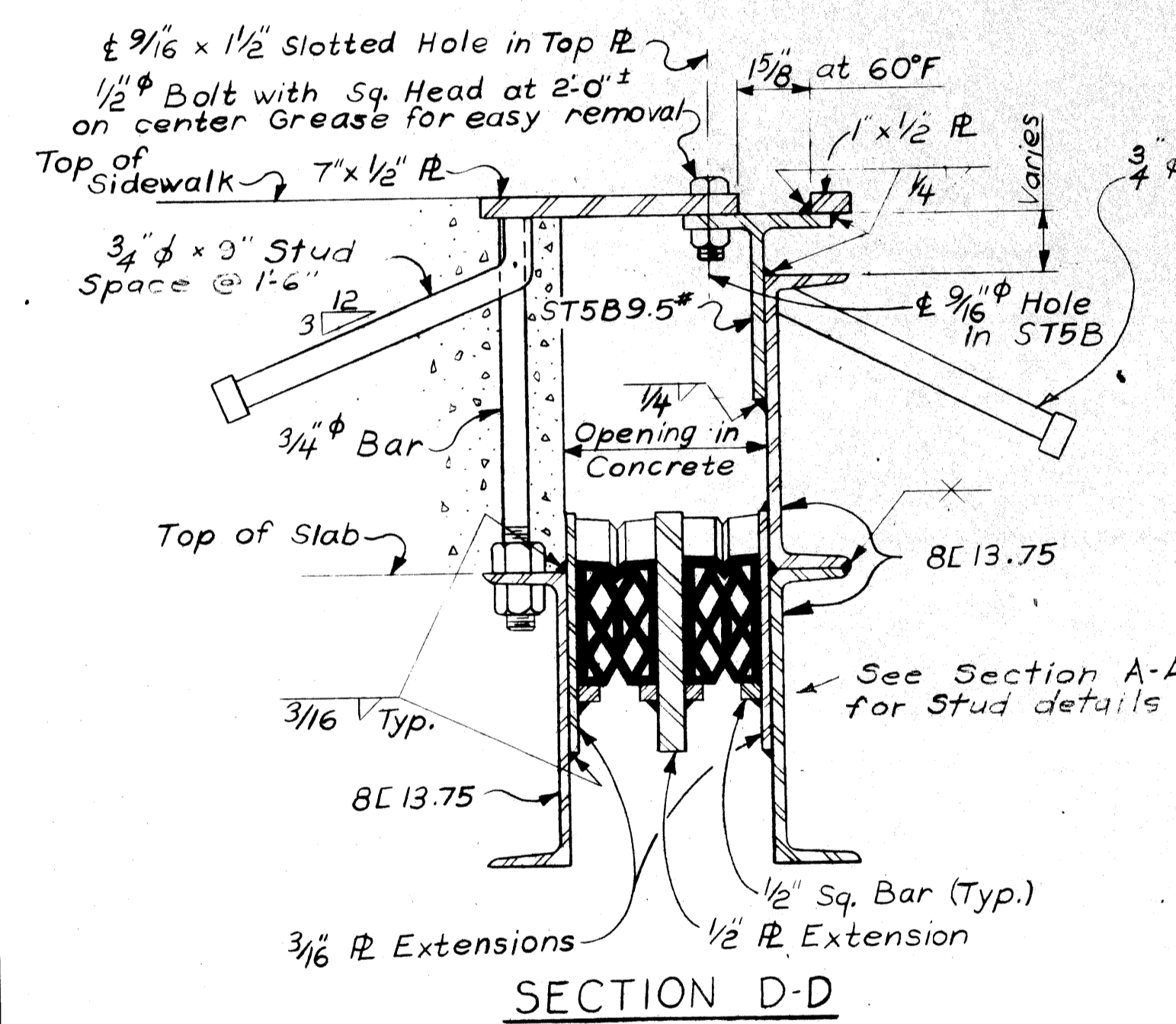
STUD DETAILS



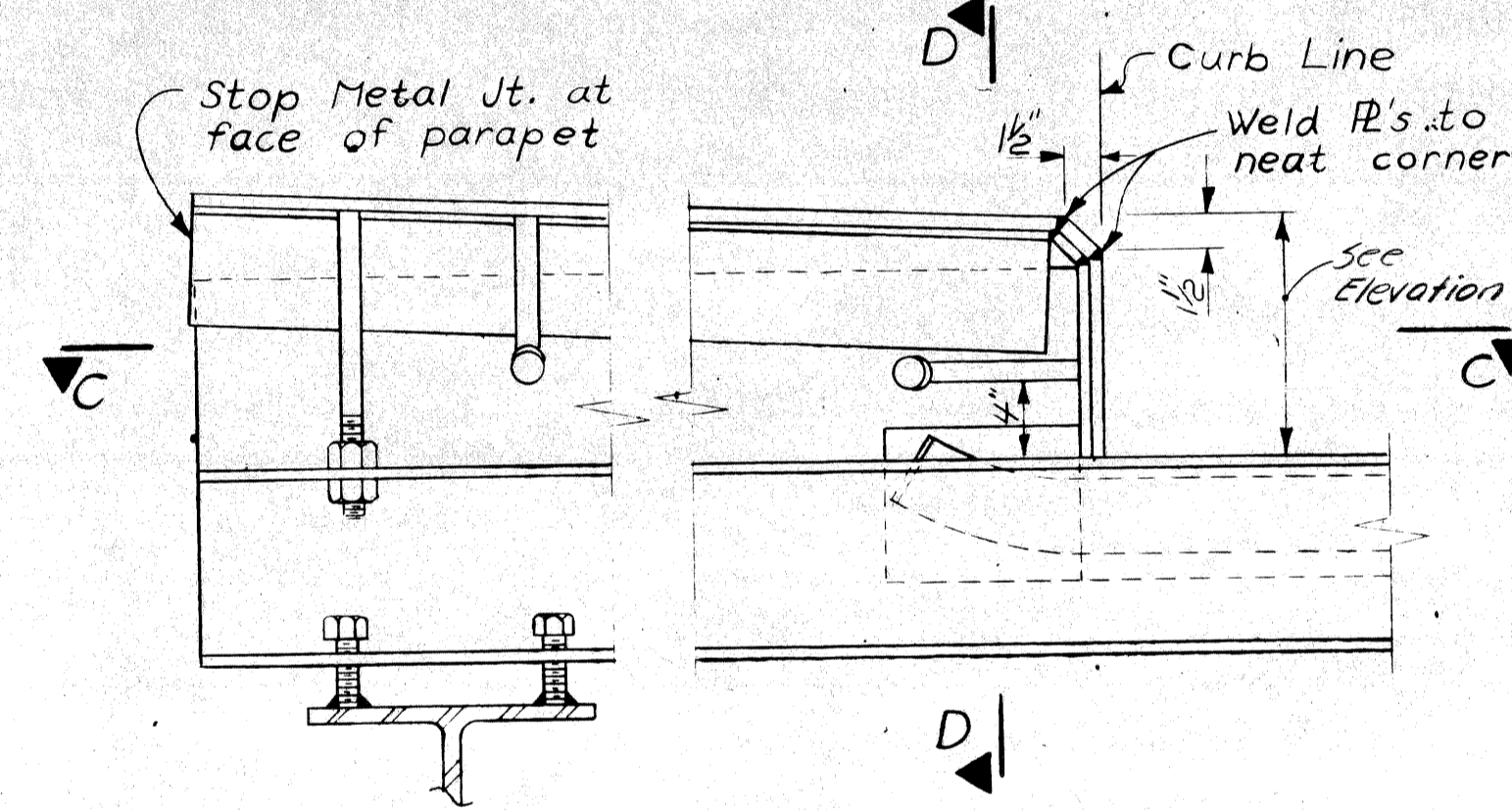
BEARING



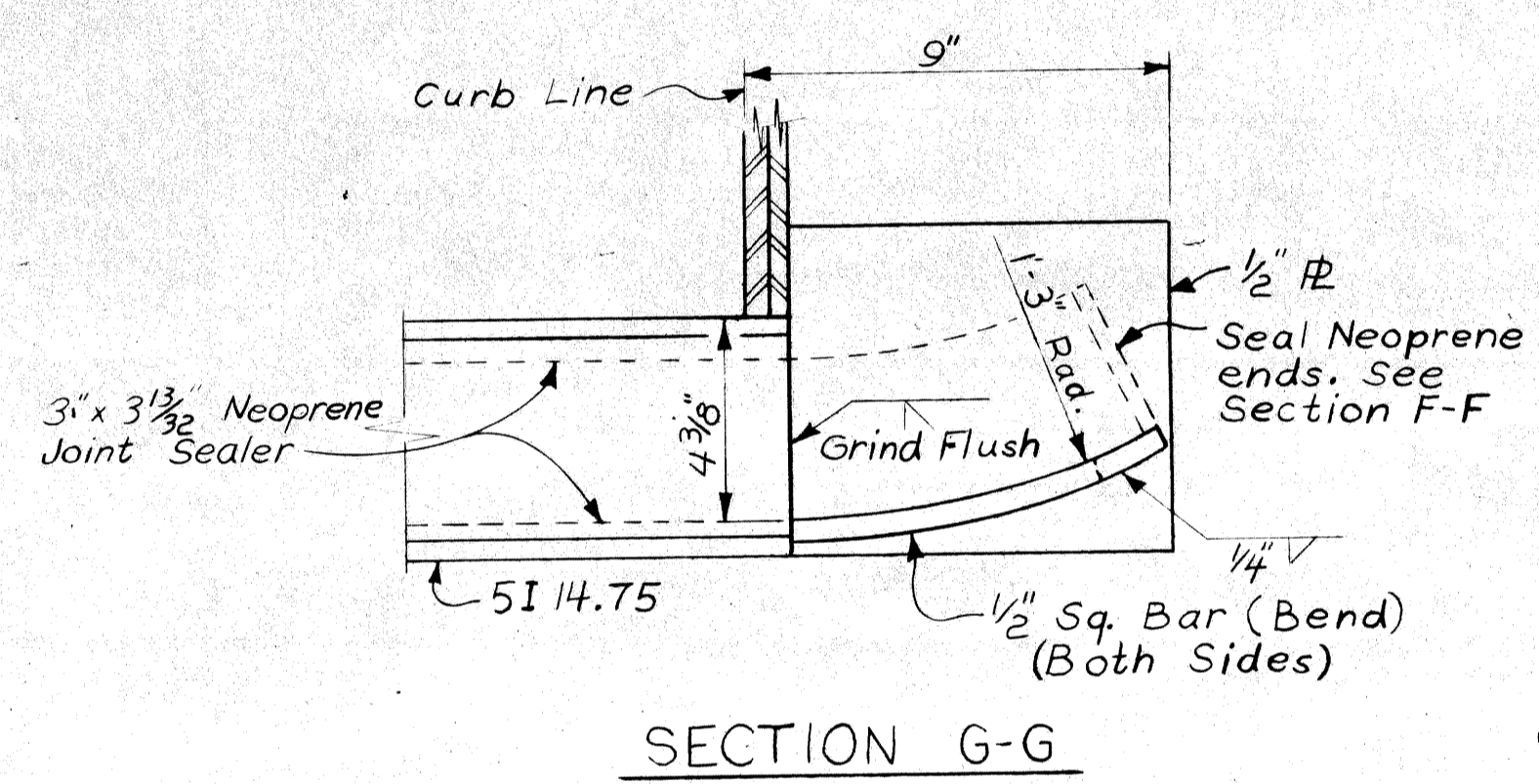
ATTACHMENT TO BEAM



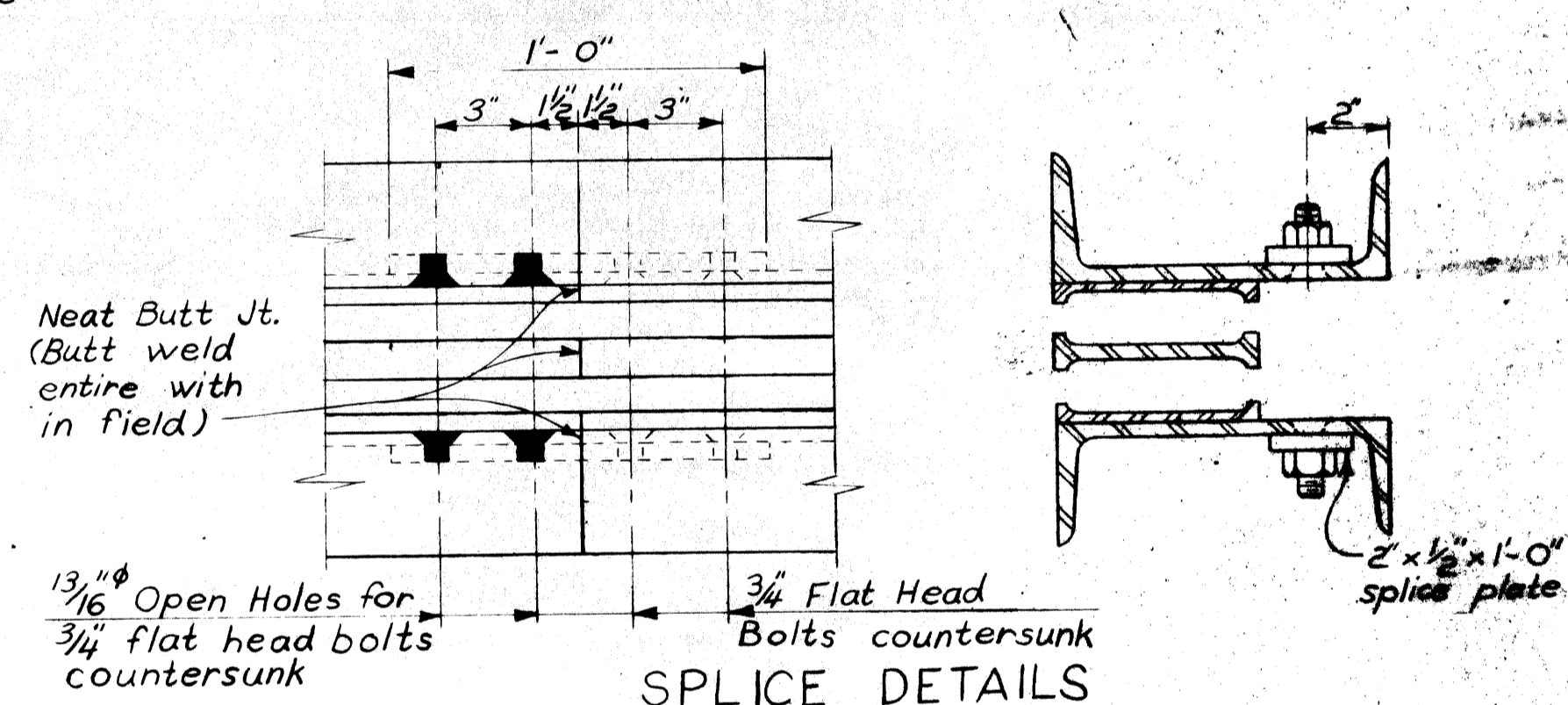
SECTION D-D



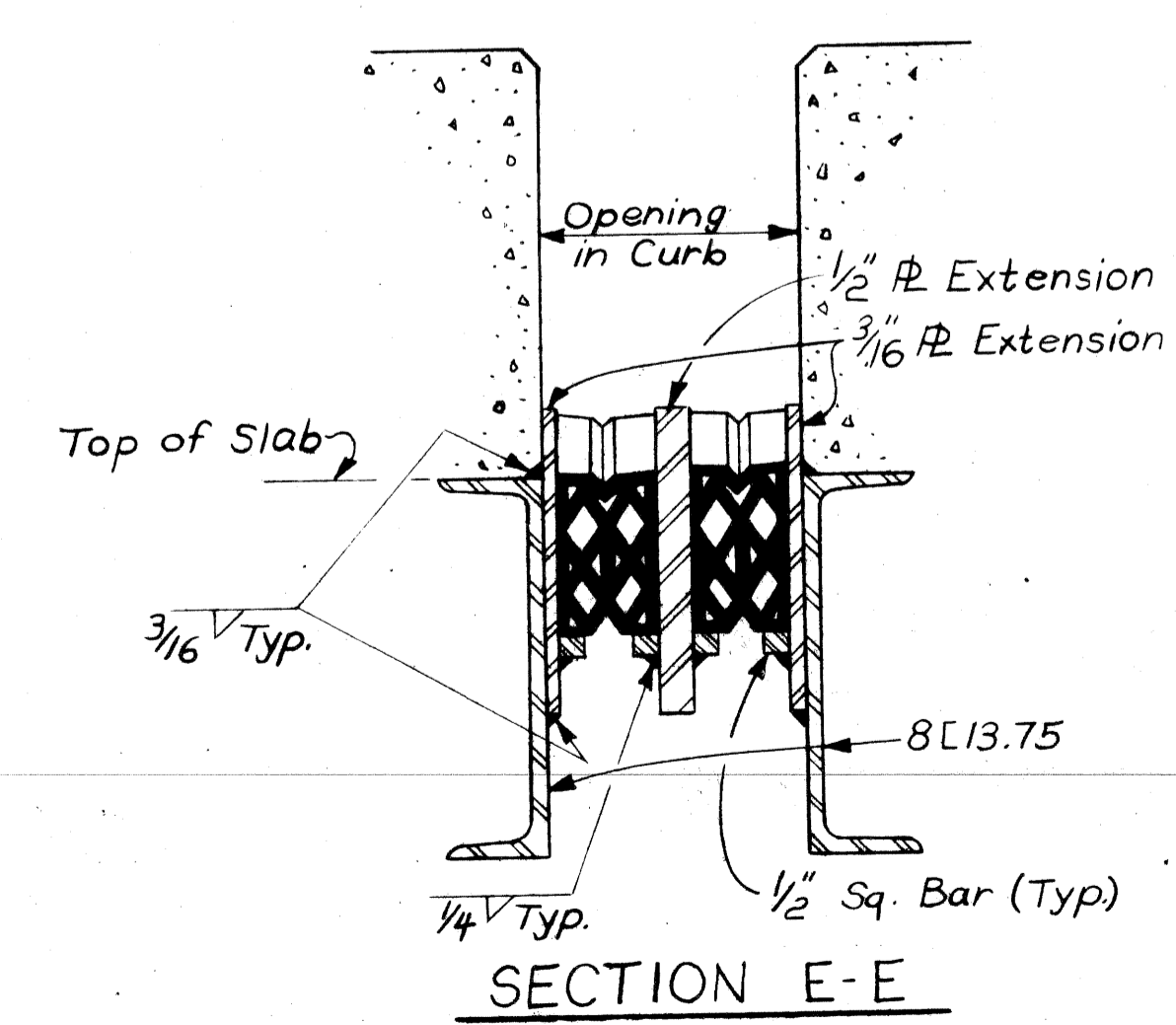
ELEVATION AT SIDEWALK



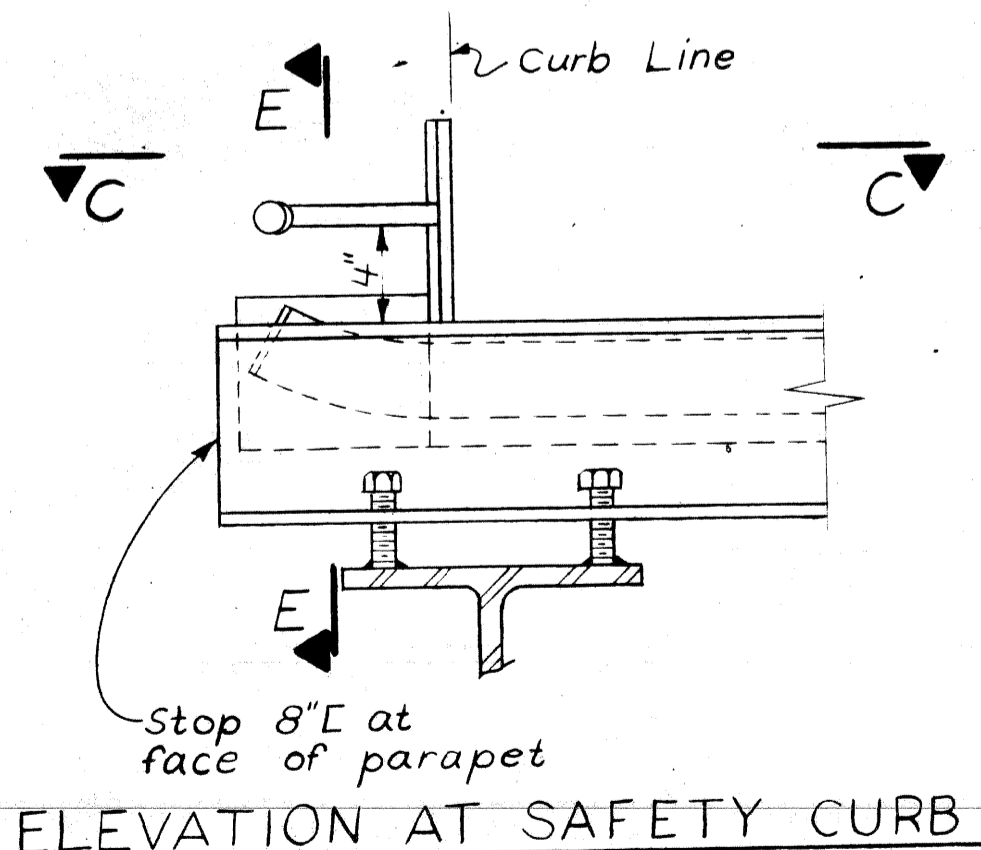
SECTION G-G



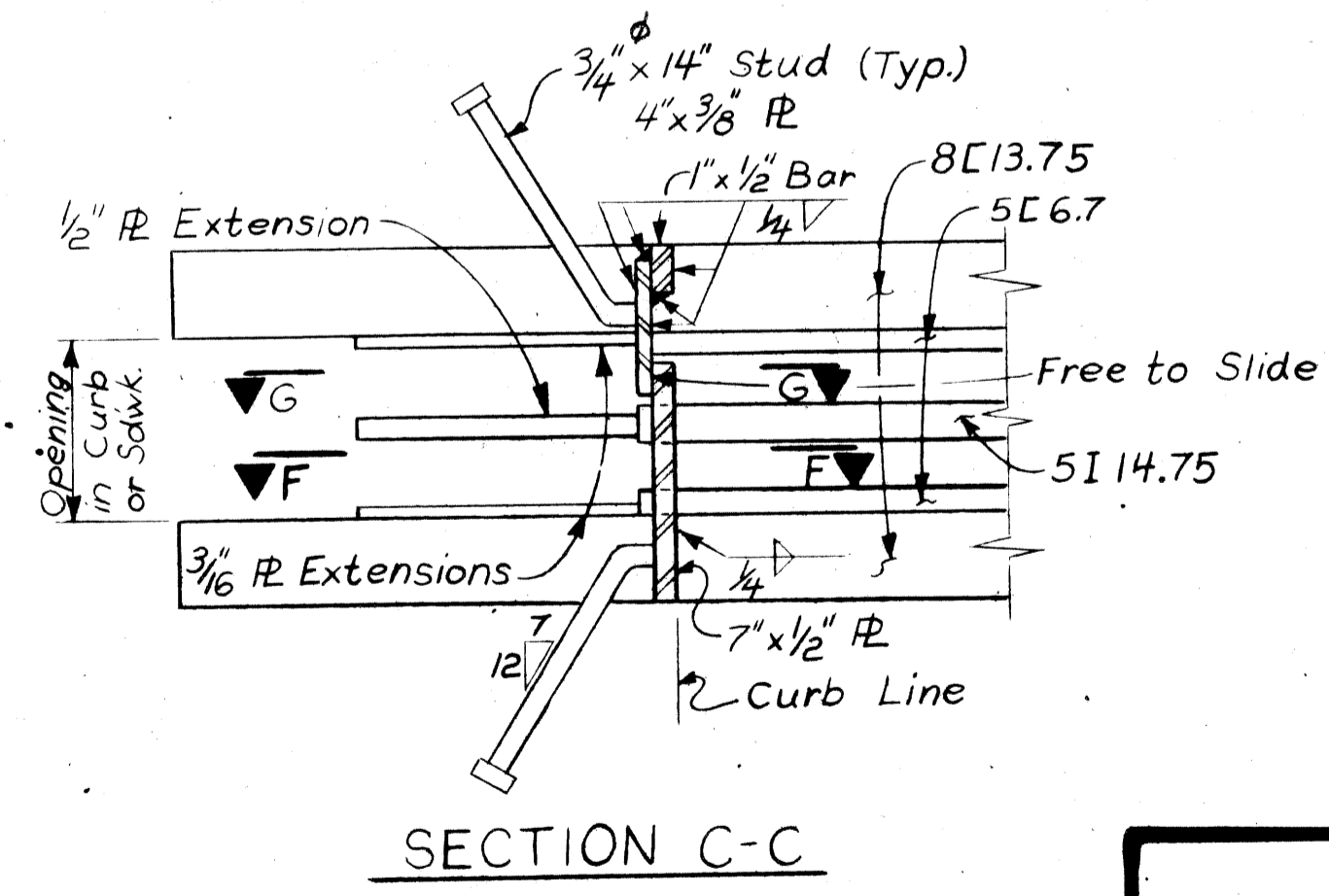
SPlice DETAILS



SECTION E-E



ELEVATION AT SAFETY CURB



SECTION C-C

NOTES:
 The Neoprene Expansion Joint shall be prefabricated and assembled in the shop.
 The Neoprene Expansion Joint shall be bent in the shop to conform with the contour of the Top of Roadway Slab.
 The steel and the 3" Neoprene Joint Sealer in the Expansion Joint is included in the Quantity Double Neoprene Expansion Joint-Lin. Ft. For details of Sealer and Installation Procedure, see Supplemental Specifications.
 Steel to be A.S.T.M. A-588
 Work this sheet with sheet #33.

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 (18)

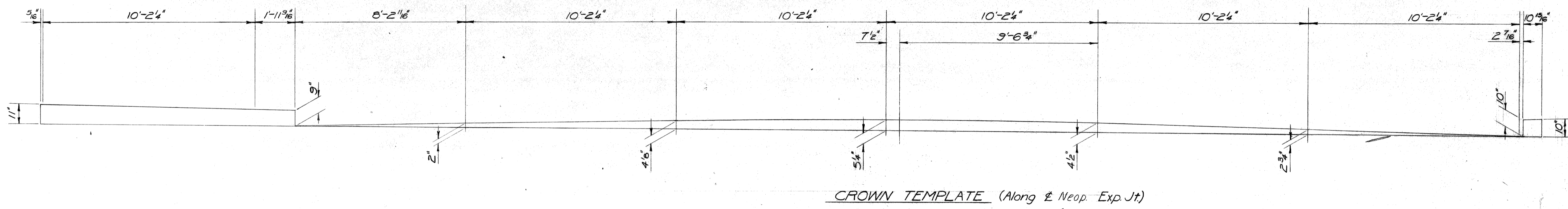
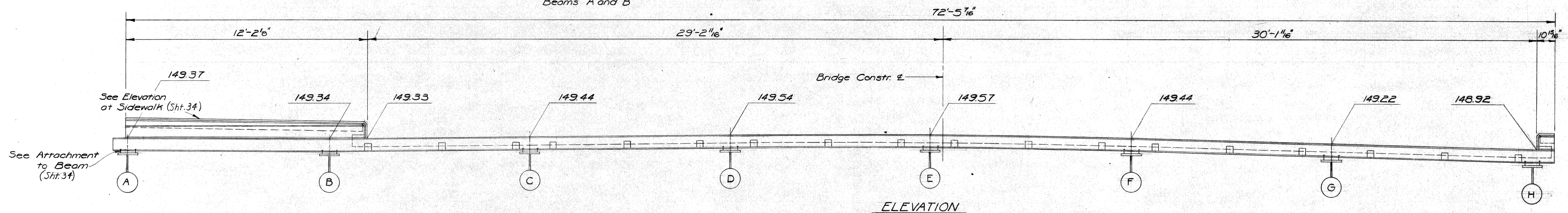
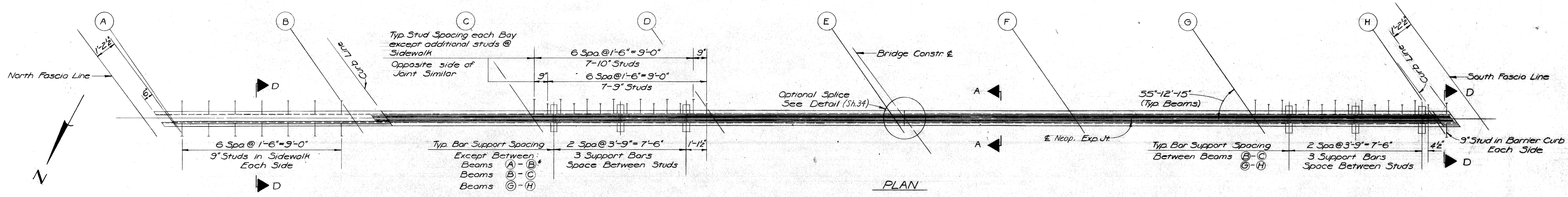
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

DOUBLE NEOPRENE EXPANSION JOINT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

DESIGNED BY	Locher	5-70
DRAWN BY	Van Pelt	4-16-70
CHECKED BY	M. Gupte	5-1-70
SHEET	36	of 36

ST3 of 82123D



Work this sheet with sheet #32

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

DOUBLE NEOPRENE EXPANSION JOINT DETAILS

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

JOB No.
 PW 990 113

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	LOCKER	DATE

CITY OF DETROIT

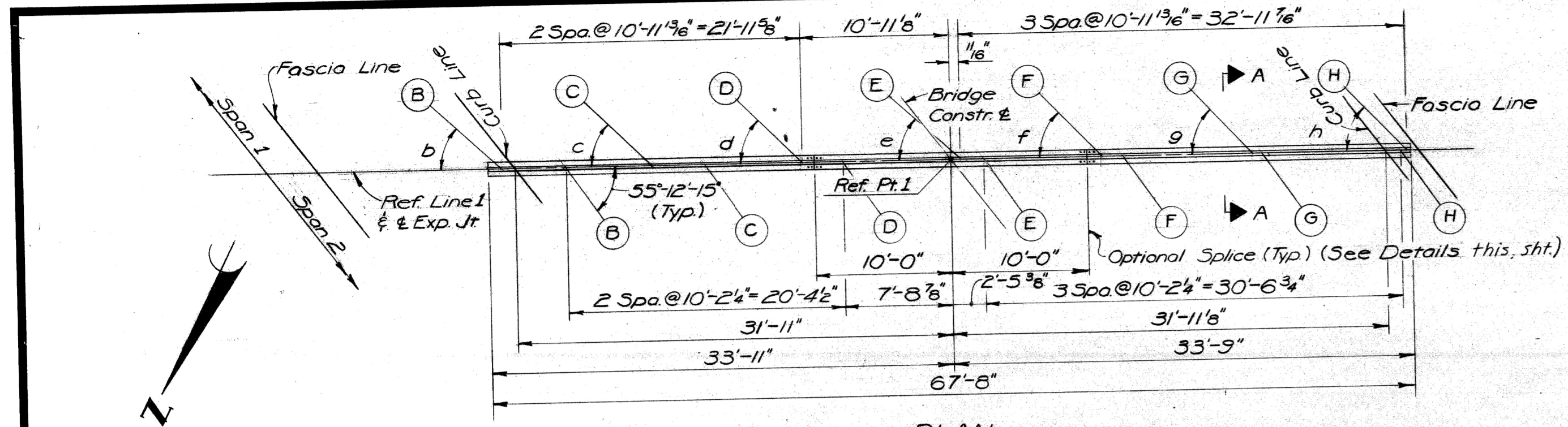
TRACED BY: J. H. K. 6-70

CHECKED BY: J. H. K. 6-70

SHEET 33 OF 36

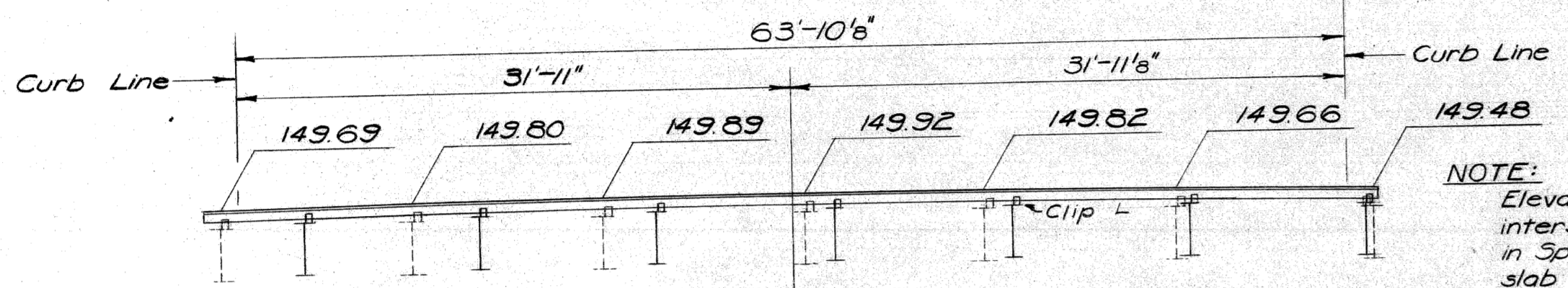
S13 of 82123D

SINGLE NEOPRENE EXPANSION JOINT DETAILS

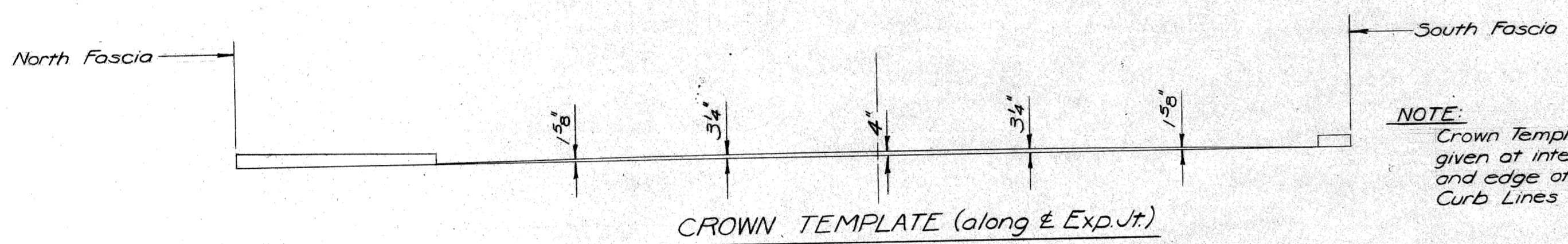


L	Span 1	Span 4
b	43'-30'-45"	49'-25'-55"
c	44'-53'-27"	48'-42'-05"
d	44'-53'-27"	47'-00'-59"
e	45'-36'-22"	45'-52'-31"
f	46'-20'-22"	44'-46'-36"
g	47'-05'-27"	43'-43'-08"
h	47'-51'-40"	42'-42'-02"

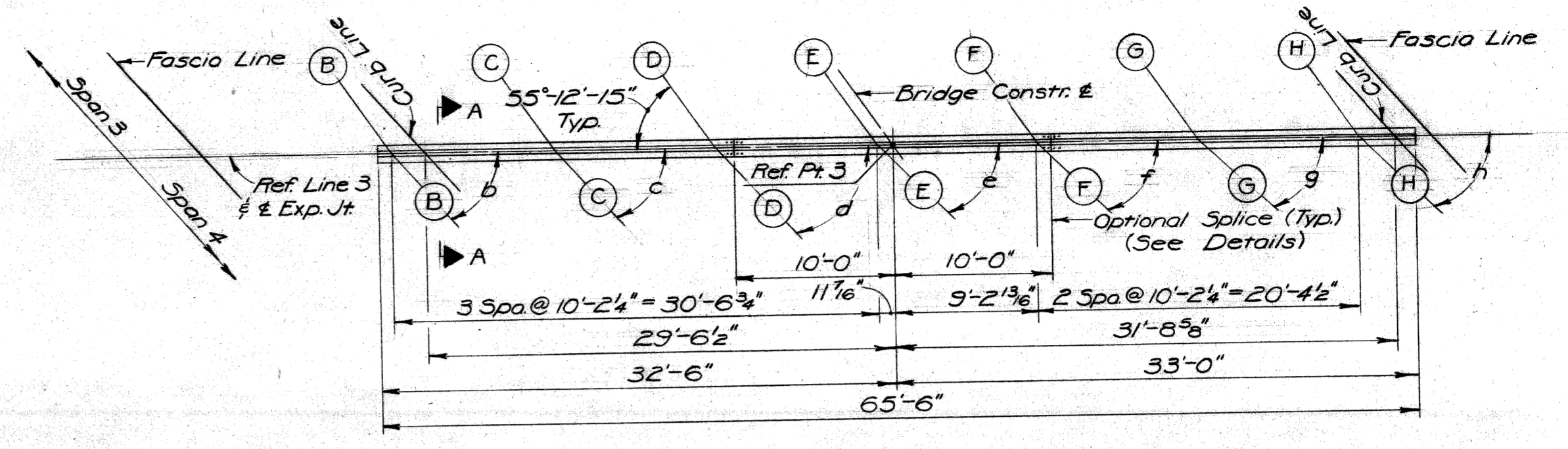
PLAN



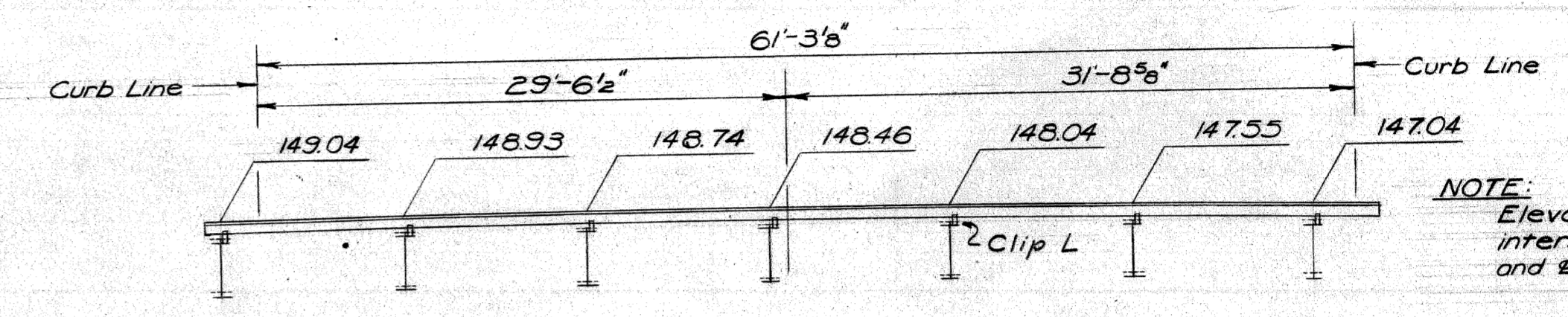
ELEVATION



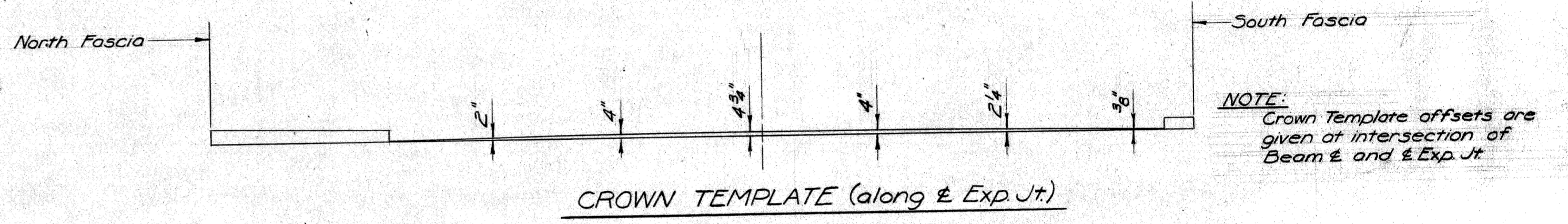
CROWN TEMPLATE (along E Exp Jt)



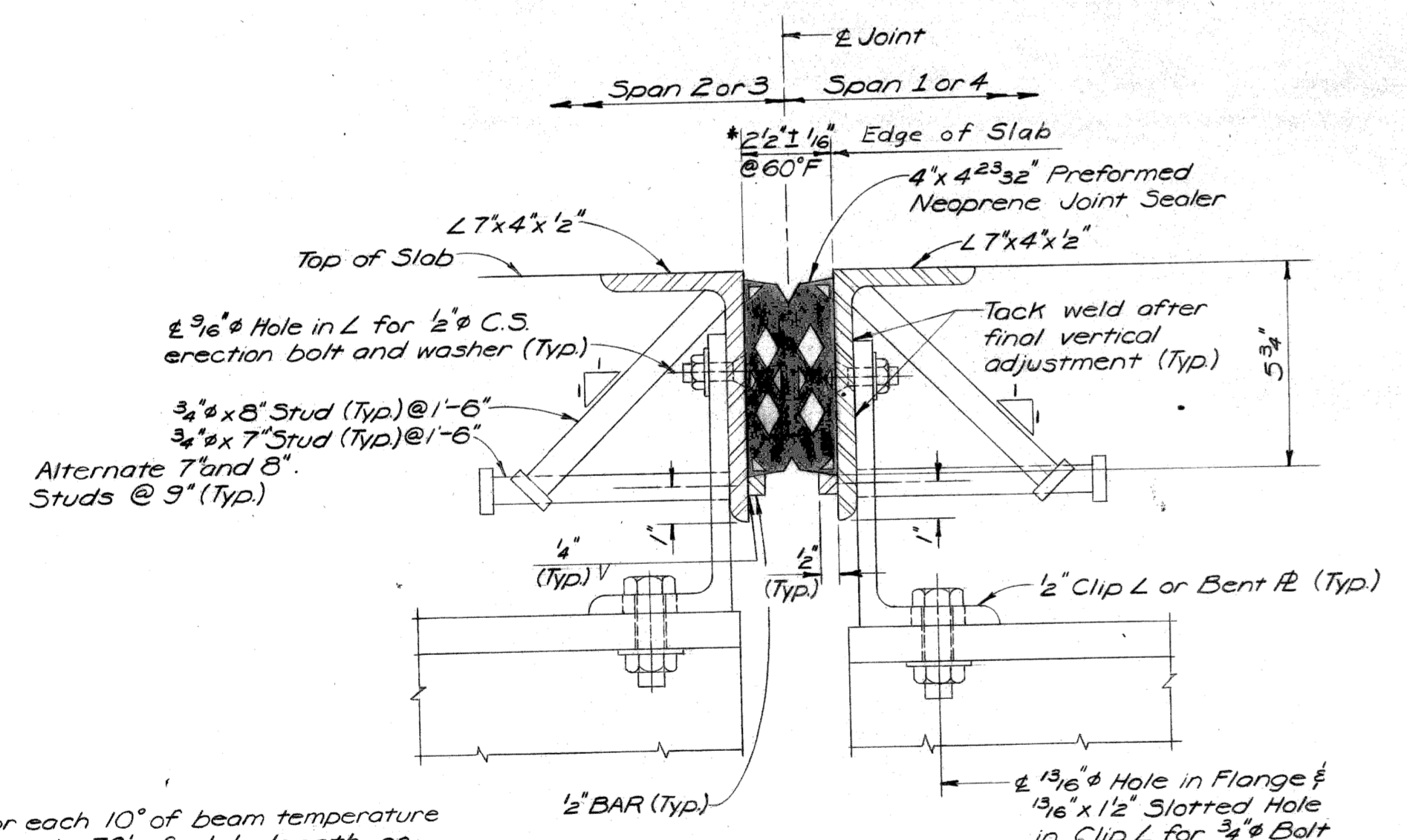
PLAN



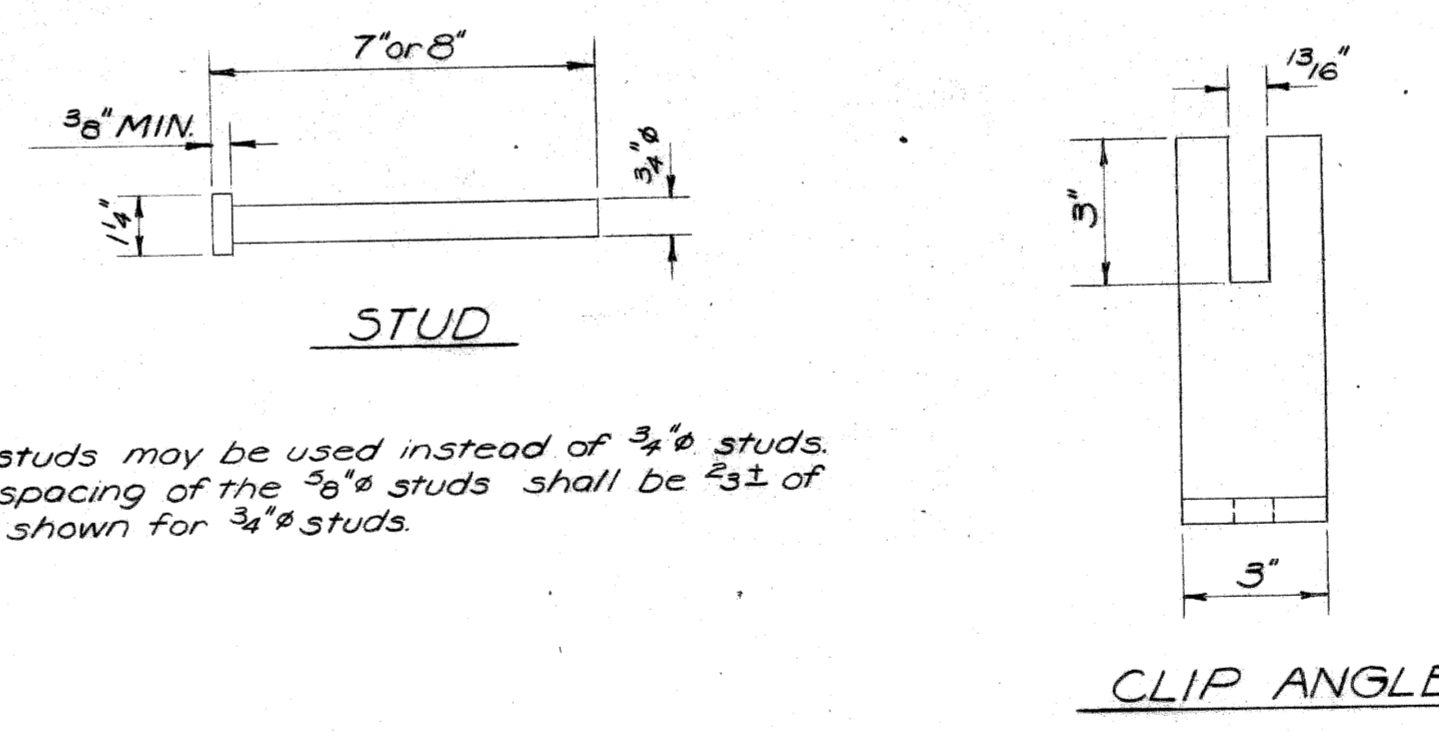
ELEVATION



CROWN TEMPLATE (along E Exp Jt)

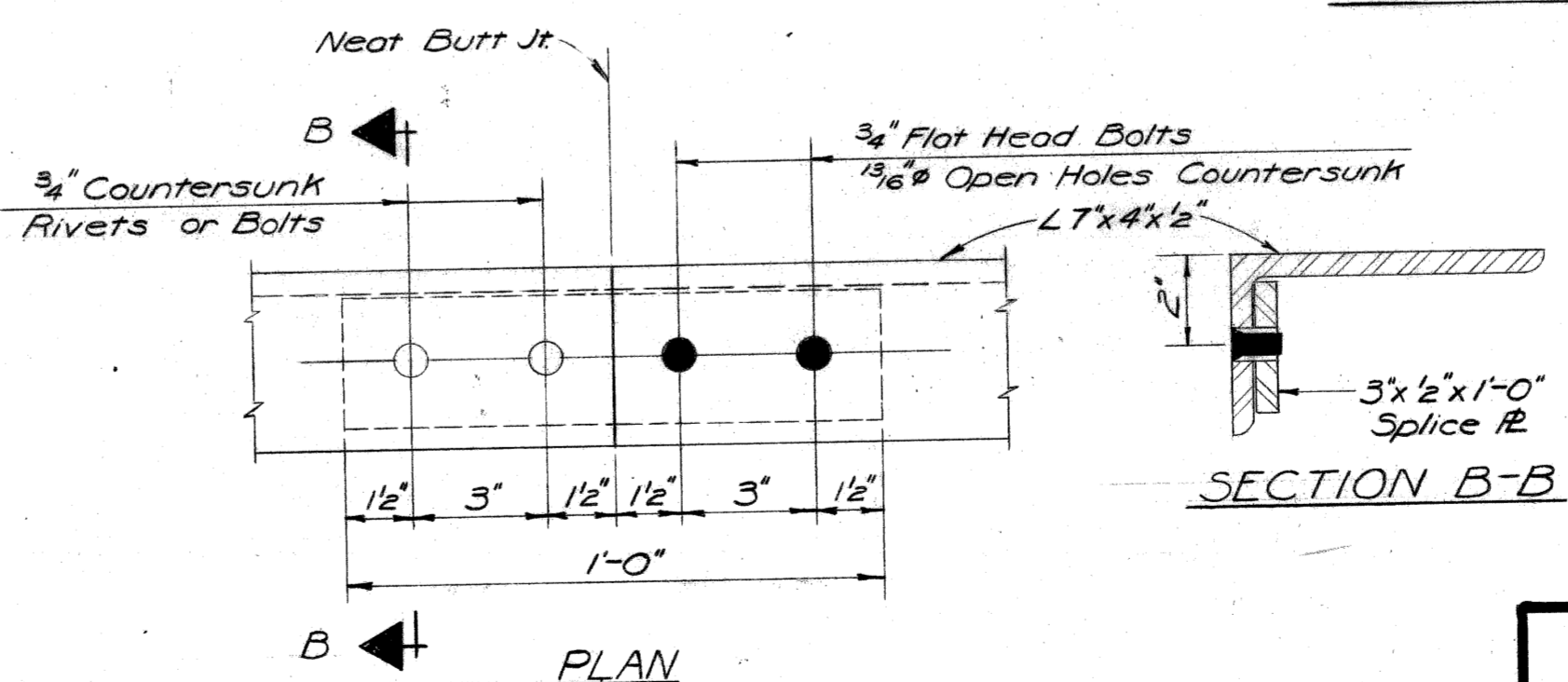


SECTION A-A



NOTE:
3/8" studs may be used instead of 3/4" studs.
The spacing of the 3/8" studs shall be 2 1/2" of that shown for 3/4" studs.

NOTES:
The Neoprene Expansion Joint shall be prefabricated and assembled in the shop.
The Neoprene Expansion Joint shall be bent in the shop to conform with the contour of the top of Roadway Slab.
The steel in the Expansion Joint and 4" Neoprene Joint Sealers are included in the Quantity Single Neoprene Expansion Joint - Lin. Ft. Steel to be A.S.T.M. A-588.
For details of Sealer and Installation Procedure, see Supplemental Specifications.



SECTION B-B

PLAN

SPLICE R DETAILS

*Increase by 1/8" for each 10° of beam temperature below 60°F for each 70' of slab length or decrease by 1/8" for each 10° of beam temperature above 60°F for each 70' of slab length. (Slab length is measured at right angles to joint)

NOTES:
Dimensions apply at right angles to the joint
For details of sealer and installation procedure see supplemental specifications.

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 (18)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SINGLE NEOPRENE EXPANSION JOINT DETAILS

CITY OF DETROIT

SQUAD BOSS	LOCHNER	6-70
DRAWN BY	A. MORRIS	5-70
CHECKED BY	E.H.K.	6-70
SHEET 34 of 36		

S13 of 82123D

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A1	32'-0"							6	32'-0"	51	2451
A2	16'-6"							6	16'-6"	544	13482
A3	16'-6"							8	16'-6"	127	5595
A4	11'-9"							6	11'-9"	203	3583
A5	11'-9"							8	11'-9"	127	3984
A6	11'-9"							10	11'-9"	127	6421
A7	8'-6"							6	8'-6"	322	4111
A8	19'-9"							10	19'-9"	143	12153
A9	12'-3"							11	12'-3"	127	8266
A10	15'-6"							6	15'-6"	332	7279
A11	23'-3"							4	23'-3"	26	404
A12	24'-0"							4	24'-0"	52	834
A13	23'-0"							4	23'-0"	26	399
A14	34'-3"							6	34'-3"	51	2624
A15	26'-6"							4	26'-6"	50	885
A16	24'-6"							4	24'-6"	26	426
A17	24'-3"							4	24'-3"	24	389
A18	25'-6"							6	25'-6"	58	2221
A19	17'-6"							6	17'-6"	44	1157
A20	13'-9"							9	13'-9"	47	2197
A21	13'-9"							7	13'-9"	67	1883
A22	13'-9"							8	13'-9"	81	2974
A23	23'-6"							6	23'-6"	41	1447
A24	6'-9"							6	6'-9"	60	608
A25	9'-6"							6	9'-6"	90	1284
A26	3'-9"							6	3'-9"	49	276
A27	5'-6"							6	5'-6"	133	1099
A28	12'-6"							8	12'-6"	16	534
A29	11'-0"							11	11'-0"	47	2147
A30	18'-3"							11	18'-3"	16	1551
A31	19'-0"							8	19'-0"	16	812
A32	12'-6"							6	12'-6"	16	300
A33	19'-0"							6	19'-0"	16	457
A34	8'-9"							6	8'-9"	22	289
A35	7'-3"							6	7'-3"	82	893
A36	6'-6"							6	6'-6"	218	2109
A37	4'-9"							6	4'-9"	38	271
A38	24'-9"							4	24'-9"	134	2215
A39	23'-6"							4	23'-6"	42	659
A40	23'-6"							4	23'-6"	30	511
A41	17'-6"							4	17'-6"	18	210
A42	3'-6"							6	3'-6"	34	179
A43	15'-6"							4	15'-6"	26	269
A44	31'-6"							6	31'-6"	10	473
A45	10'-6"							6	10'-6"	32	505
A46	13'-6"							10	13'-6"	10	581
A47	16'-9"							4	16'-9"	10	112
A48	25'-9"							6	25'-9"	29	1122
A49	13'-6"							6	13'-6"	68	1379
A50	10'-9"							6	10'-9"	48	775

ABUTMENT TOTAL = 132,048 Lbs.

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A51	19'-3"							10	19'-3"	16	1325
A52	11'-6"							10	11'-6"	16	792
A53	18'-0"							9	18'-0"	16	979
A54	11'-6"							6	11'-6"	62	1071
A55	10'-0"							6	10'-0"	32	431
A56	12'-0"							6	12'-0"	32	577
A57	8'-0"							8	8'-0"	16	342
A58	12'-9"							7	12'-9"	16	417
A59	27'-9"							9	27'-9"	34	3208
A60	20'-0"							9	20'-0"	34	2312
A61	23'-9"							6	23'-9"	108	3853
A62	20'-3"							6	20'-3"	66	2007
A63	24'-6"							11	24'-6"	15	1953
A64	18'-3"							6	18'-3"	10	274
A65	16'-3"							6	16'-3"	10	244
A66	7'-6"							6	7'-6"	40	451
A67	5'-3"							6	5'-3"	54	426
B1	3'-0"	1'-0"						6	4'-0"	190	1142
D1	2'-4"	1'-2"						6	5'-9"	100	864
D2	3'-6"	0'-6"						6	7'-6"	32	360
E1	5'-6"	2'-1 1/2"	3'-1"	3'-9"				11	9'-3"	15	737
E2	5'-6"	2'-1 1/2"	3'-1"	3'-9"				10	9'-3"	10	398

ABUTMENTS

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.				
	a	b	c	d	PIER 1	PIER 2	PIER 3								
A101	27'-10"							#8	27'-10"	18	1338				
A102	7'-6"							#6	7'-6"	151	1701				
A103	5'-0"							#5	5'-0"	290	1512				
A104	27'-0"							#6	27'-0"	18	730				
A105	32'-2"							#8	32'-2"	8	687				
A106	16'-9"							#8	16'-9"	4	179				
A107	3'-4"							#6	3'-4"	12	60				
A108	9'-0"							#10	9'-0"	144	5577				
A109	13'-4"							#10	13'-4"	48	2753				
A110	35'-2"							#8	35'-2"	14	315				
A111	16'-9"							#8	16'-9"	7	1313				
A112	34'-3"							#5	34'-3"	4	143				
A113	16'-9"							#5	16'-9"	2	35				
A114	31'-8"							#8	31'-8"	28	2368				
A115	23'-9"							#8	23'-9"	14	888				
A116	22'-3"							#5	22'-3"	3	70				
A117	14'-7"							#5	14'-7"	3	46				
A118	25'-6"							#8	25'-6"	36	2457				
A119	24'-8"							#6	24'-8"	36	1334				
A120	29'-2"							#7	29'-2"	16	954				
A121	15'-2"							#7	15'-2"	8	248				
A122	4'-3"							#5	4'-3"	12	53				
A123	12'-2"							#10	12'-2"	48	2514				
A124	32'-8"							#7	32'-8"	28	1870				
A125	15'-3"							#7	15'-3"	14	436				
A126	31'-9"							#5	31'-9"	8	265				
A127	15'-3"							#5	15'-3"	4	64				
A128	28'-8"							#6	28'-8"	56	2412				
A129	22'-6"							#6	22'-6"	28	946				
A130	20'-8"							#5	20'-8"	3	65				
A131	13'-0"							#10	13'-0"	24	1343				
A132	11'-5"							#10	11'-5"	24	1179				
A133	9'-7"							#5	9'-7"	3	30				
A134	9'-6"							#5	9'-6"	3	30				
A135	11'-0"							#5	11'-0"	3	34				
C101	8 3/4	8 3/4	15 1/2	7 1/4	17 1/8	10 1/2			102	92	92	#5	6'-9"	286	2015
D101	1'-9"	2'-6"							24	13	20	#5	5'-10 1/2"	57	351
D102	2'-7"	3'-0"							10	10	10	#5	8'-0 3/4"	30	252
K101	3'-1"	1'-6"	1'-6"	1'-11"					102	82	68	#5	0'-11 1/2"	252	2886
K102	3'-7"	1'-6"	1'-6"	1'-11"						14		#5	11'-11 1/2"	14	175
U101	1'-7"	4'-1 1/2"	1'-3 1/2"						8	8	8	#5	7'-3 1/2"	24	183
V101	7'-10 1/2"	10"	2'-5 1/2"						60	54	57	#4	8'-8 1/2"	171	995

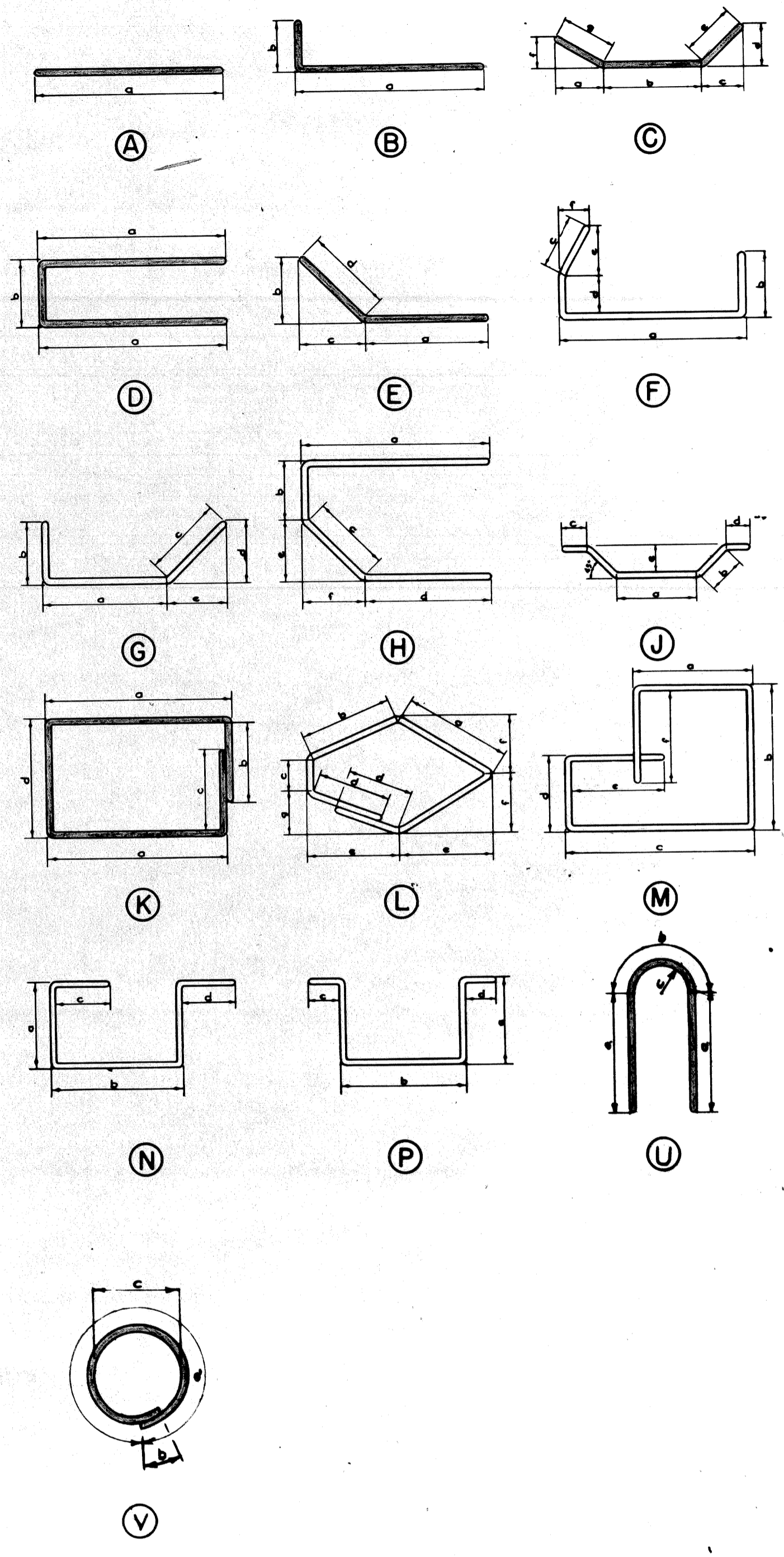
PIER TOTAL = 42,800 Lbs.

Note:-

All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.
All bar numbers on this sheet to be prefixed

Tolerances in cutting and bending bars are as established in Manual of Standard Practices of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute.
Grand Total Steel Reinforcement
See Sheet # 36

BAR BENDING DIAGRAM



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.
990 (18)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

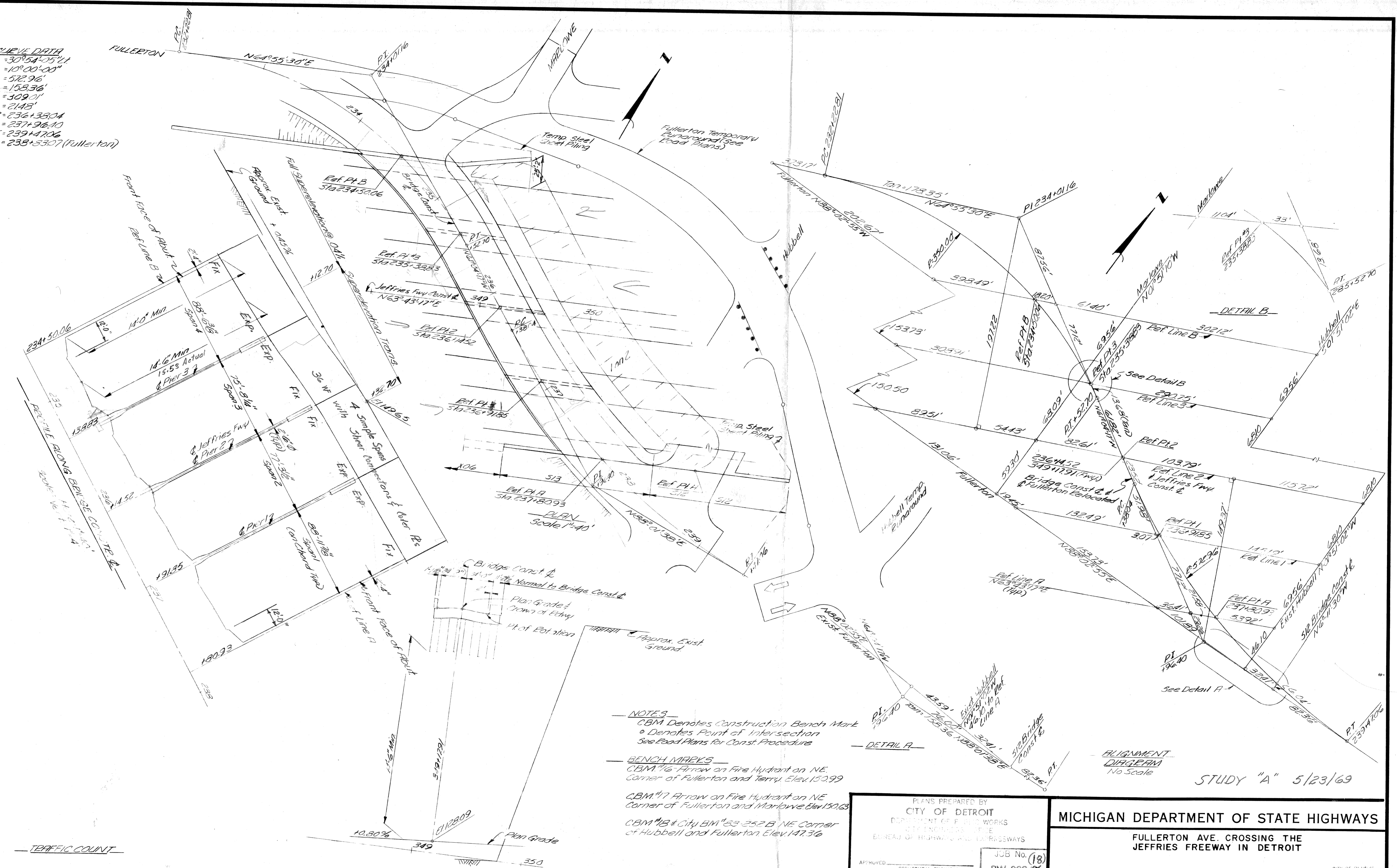
STEEL REINFORCEMENT DETAILS

CITY OF DETROIT

DESIGNED BY: LOCHER 6-70
DRAWN BY: T.M.H.P. 6-70
CHECKED BY: I.H.K. 6-70
SHEET 35 OF 36

S13 of 82123D

FULLERTON AVE. CURVE DATA
 $\Delta = 54^{\circ}00'13''$ $E\Delta = 30^{\circ}54'05''$
 $D = 16^{\circ}22'13''$ $D = 10^{\circ}00'00''$
 $E = 350.00'$ $E = 572.96'$
 $T = 173.35'$ $T = 153.36'$
 $L = 329.39'$ $L = 309.01'$
 $E = 42.82'$ $E = 21.48'$
 $PC = 232+22.81$ $PC = 236+33.04$
 $PI = 234+01.16$ $PI = 237+96.10$
 $PT = 235+52.70$ $PT = 239+47.06$
 $= 238+53.07$ (Fullerton)



NOTES
 CBM Denotes Construction Bench Mark
 o Denotes Point of Intersection
 See Road Plans for Const. Procedure

BENCH MARKS
 CBM #16 Arrow on Fire Hydrant on NE Corner of Fullerton and Terry, Elev. 150.99
 CBM #17 Arrow on Fire Hydrant on NE Corner of Fullerton and Marlowe, Elev. 150.63
 CBM #13 & City BM #63-252 B NE Corner of Hubbell and Fullerton, Elev. 147.36

TRAFFIC COUNT

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

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

APPROVED: _____
 STRUCTURAL ENGINEER

JOB No. (18)
 PW 990

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FULLERTON AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT

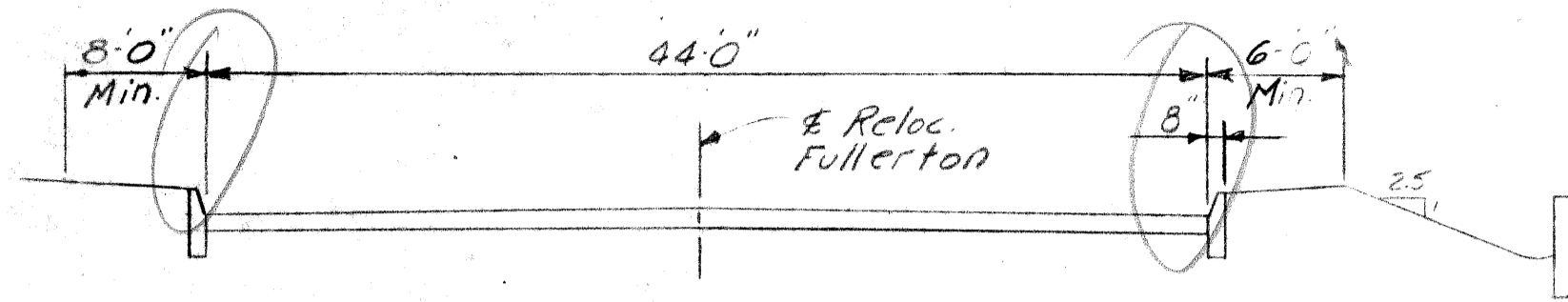
GENERAL DRAWING

APPROVED: _____
 DESIGN SUPERVISING ENGINEER

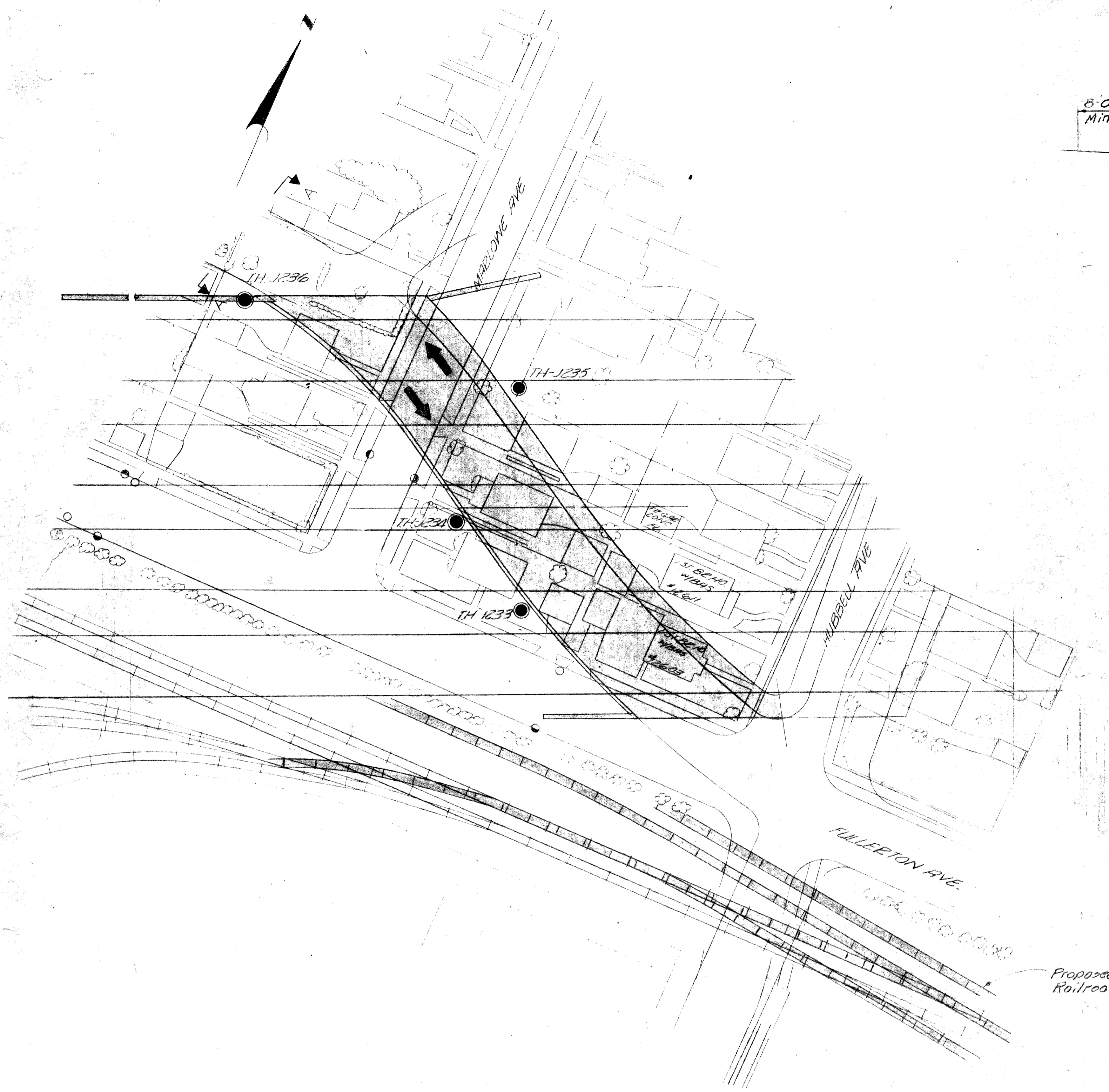
APPROVED: _____
 DESIGN ENGINEER

CITY OF DETROIT	
SQUAD BOSS	
DRAWN BY	
TRACED BY	
CHECKED BY	
SHEET	OF
S13 of 82123D	

STUDY "A" 5/23/69



SECTION A-A



SURVEY PLAN
Scale: 1" = 40'

- LEGEND**
- Tree
 - Fence
 - R.L.C. Manhole
 - Sewer Manhole
 - ⊕ Water Gatewell & Valve
 - ⊙ D.E. Manhole
 - ⊗ R.L.C. Lightpole
 - Sewer Inlet or Catch Basin

GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge. All other work is included in the Road Plans which are a part of this contract. Removal of buildings and fences is not a part of this contract.

Datum refers to City of Detroit datum.

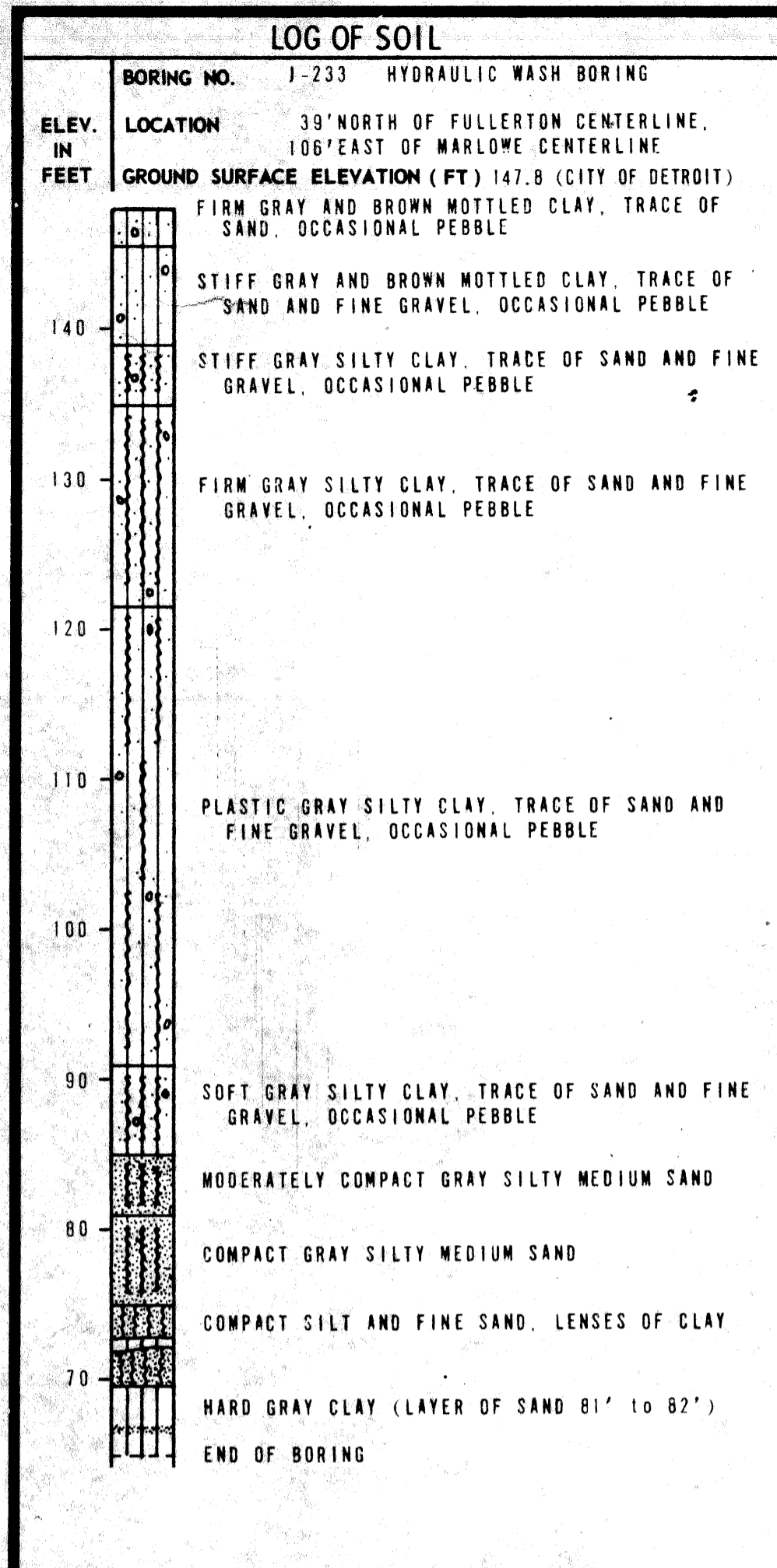
Fullerton traffic is to be maintained over the temporary road. (See Rd. Plans)

Add Traffic Count

Note: ● TH-1233 denotes test hole location. See Sheets 1 & 3 for Log of Soil Borings.

PRELIMINARY PLAN 'A' DATE 9-15-69

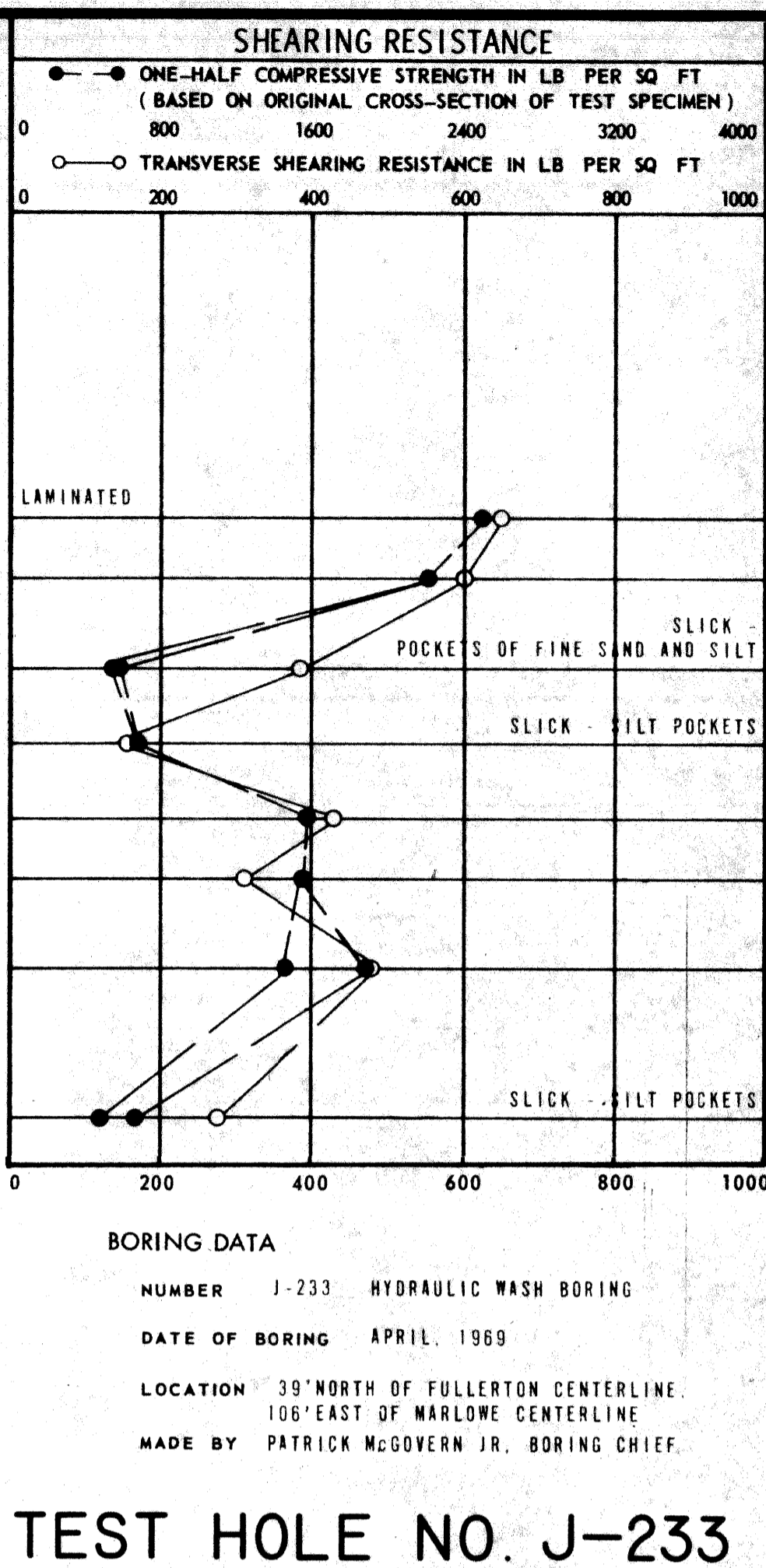
CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS 1500 W. WABASH AVE. DETROIT 16, MICH.		JOB No. PW 990(18)	
MICHIGAN DEPARTMENT OF STATE HIGHWAYS FULLERTON AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT			
GENERAL PLAN OF SITE			
APPROVED: <i>R. Montgomery</i> 10-8-69 SUPERVISOR DESIGN		SHEET NO. 13 OF 18 DATE 10-18-69	
APPROVED: <i>J. J. Cash</i> ENGINEER		SHEET 13 OF 18 DATE 9-69	
NO. DESCRIPTION DATE BY		S13 of 82123D	



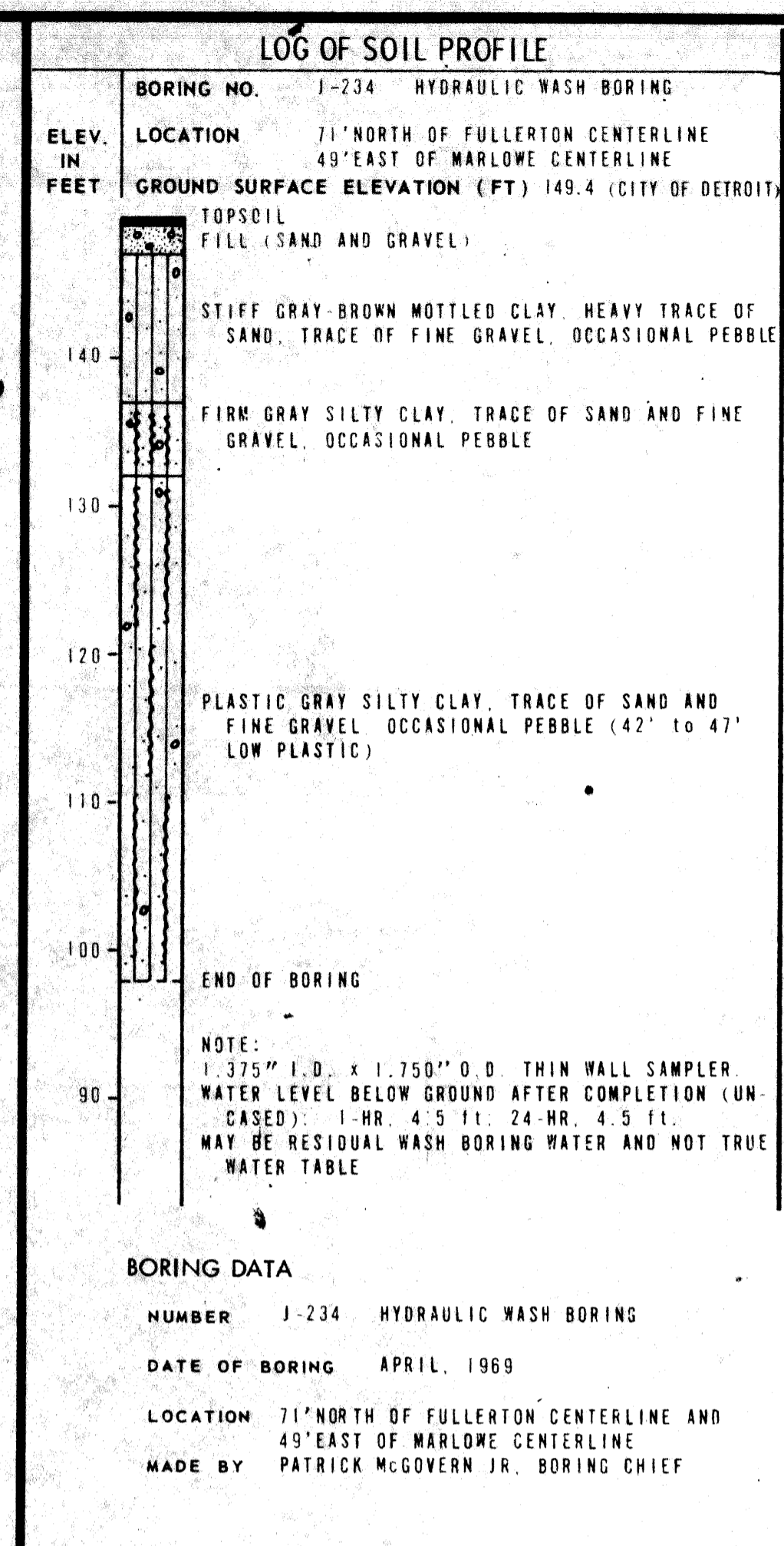
SOIL SAMPLE

SA. NO.	ELEV. IN FEET	PENETRATION		CONSISTENCY	MOISTURE PER CENT DRY WT.	DRY WT. LB PER CU FT
		NO. OF BLOWS	DRIVE IN INCHES			
1	142.8	7-10	6-6	NO	SAMPLE	
	137.8	7-9	6-6	NO	SAMPLE	
2	132.8	5-8	6-6	NO	SAMPLE	
3	127.3	LEVERED	FIRM	FIRM	19.4	108.6
4	123.3	LEVERED	FIRM	FIRM	17.5	113.6
5	117.3	LEVERED	PLASTIC	SOFT TO PLASTIC	29.0	94.8
					31.0	89.9
6	112.3	LEVERED	PLASTIC	SOFT	24.0	103.0
					30.0	92.4
					29.4	92.4
7	107.3	LEVERED	PLASTIC	PLASTIC	23.6	101.7
8	103.3	LEVERED	PLASTIC	PLASTIC	23.8	102.3
9	97.3	LEVERED	PLASTIC	PLASTIC TO FIRM	22.9	102.3
					22.3	103.0
	92.8	FAILED		NO	SAMPLE	
	87.3	PUSHED AND LEVERED	SOFT	SOFT TO PLASTIC	37.2	83.0
	83.8	10-14	6-6	NO	SAMPLE	
	77.8	17	6	NO	SAMPLE	
	72.8	14	6	NO	SAMPLE	

NOTE: 1.375" I.D. x 1.750" O.D. THIN WALL SAMPLER. CASING LEFT IN HOLE TO ALLOW GAS TO DISSIPATE. VERY SLIGHT GAS FLOW WAS NOTICED WHEN RETRIEVING CASING AT 83' FT. THERE WAS JUST ENOUGH FLOW TO CAUSE SLIGHT NOISE AS THE GAS BUBBLED THROUGH THE WATER IN CASING.

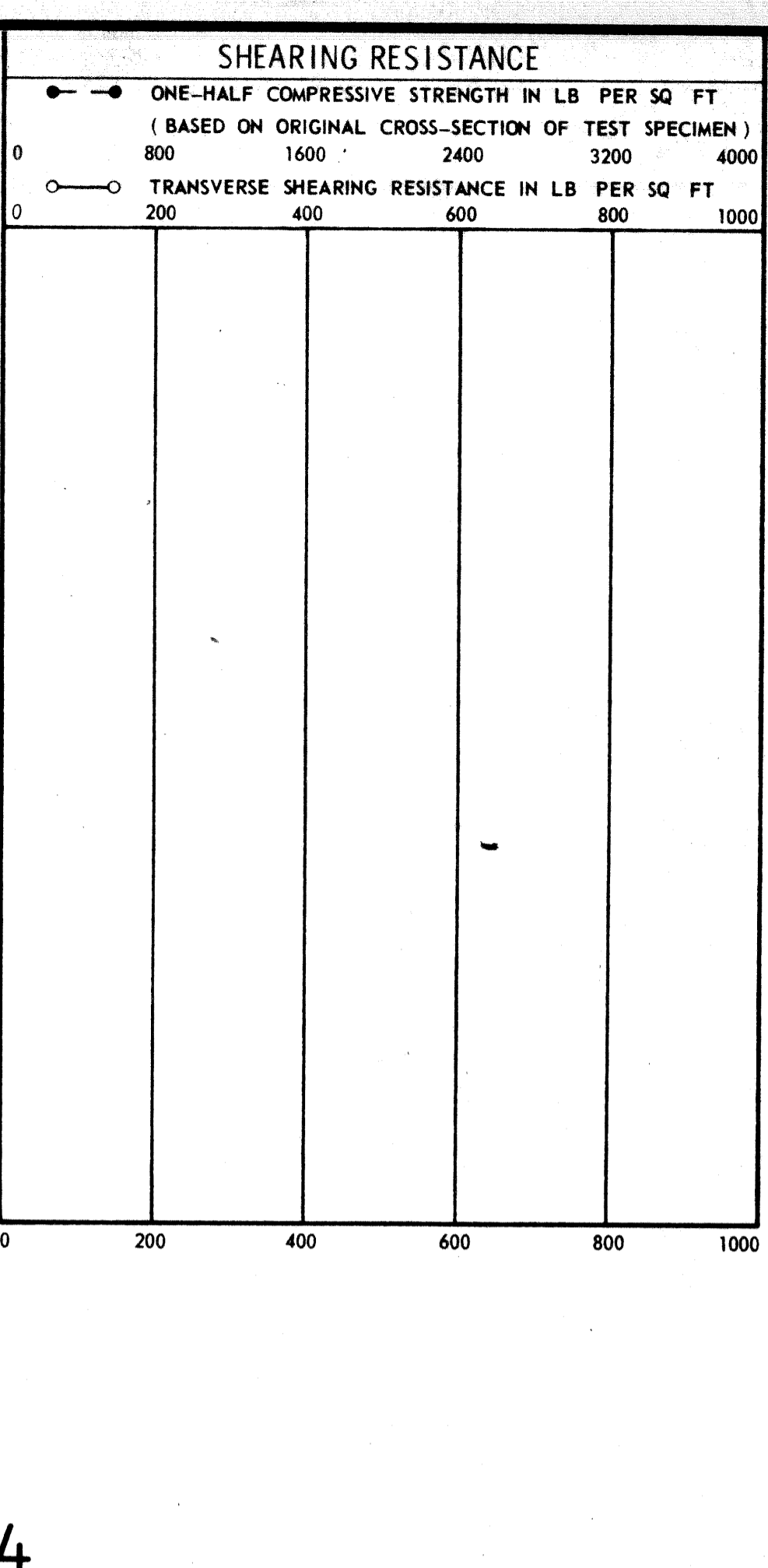


TEST HOLE NO. J-233

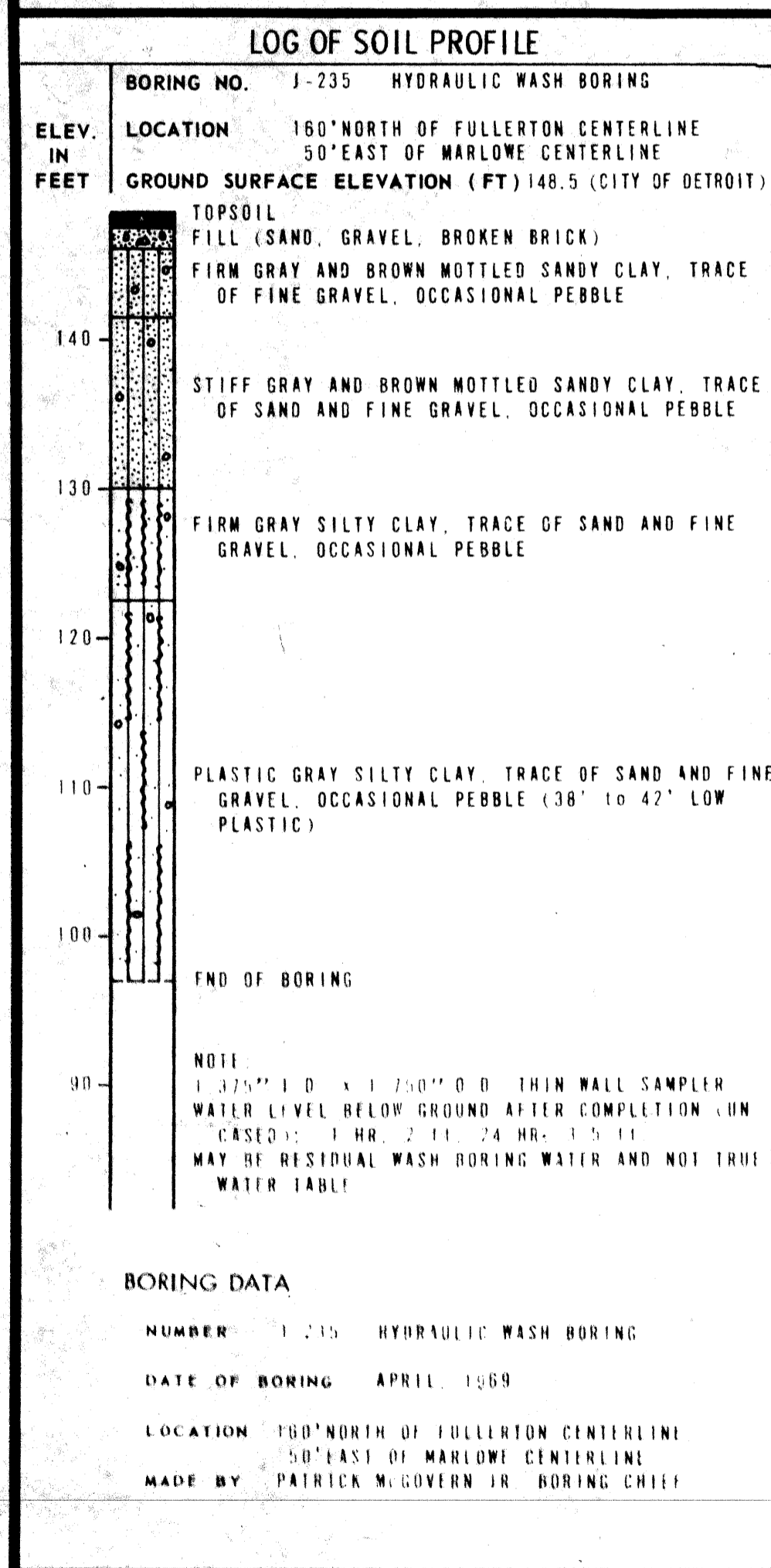


SOIL SAMPLE

SA. NO.	ELEV. IN FEET	PENETRATION		CONSISTENCY	MOISTURE PER CENT DRY WT.	DRY WT. LB PER CU FT
		NO. OF BLOWS	DRIVE IN INCHES			
	144.4	8-12	6-6			
	139.4	9-12	6-6			
	134.4	6-8	6-6			
	129.4	4-4	6-6			
	125.4	3-4	6-6			
	119.4	3-4	6-6			
	114.4	3-3	6-6			
	109.4	2-3	6-6			
	105.4	2-2	6-6			
	99.4	2-3	6-6			

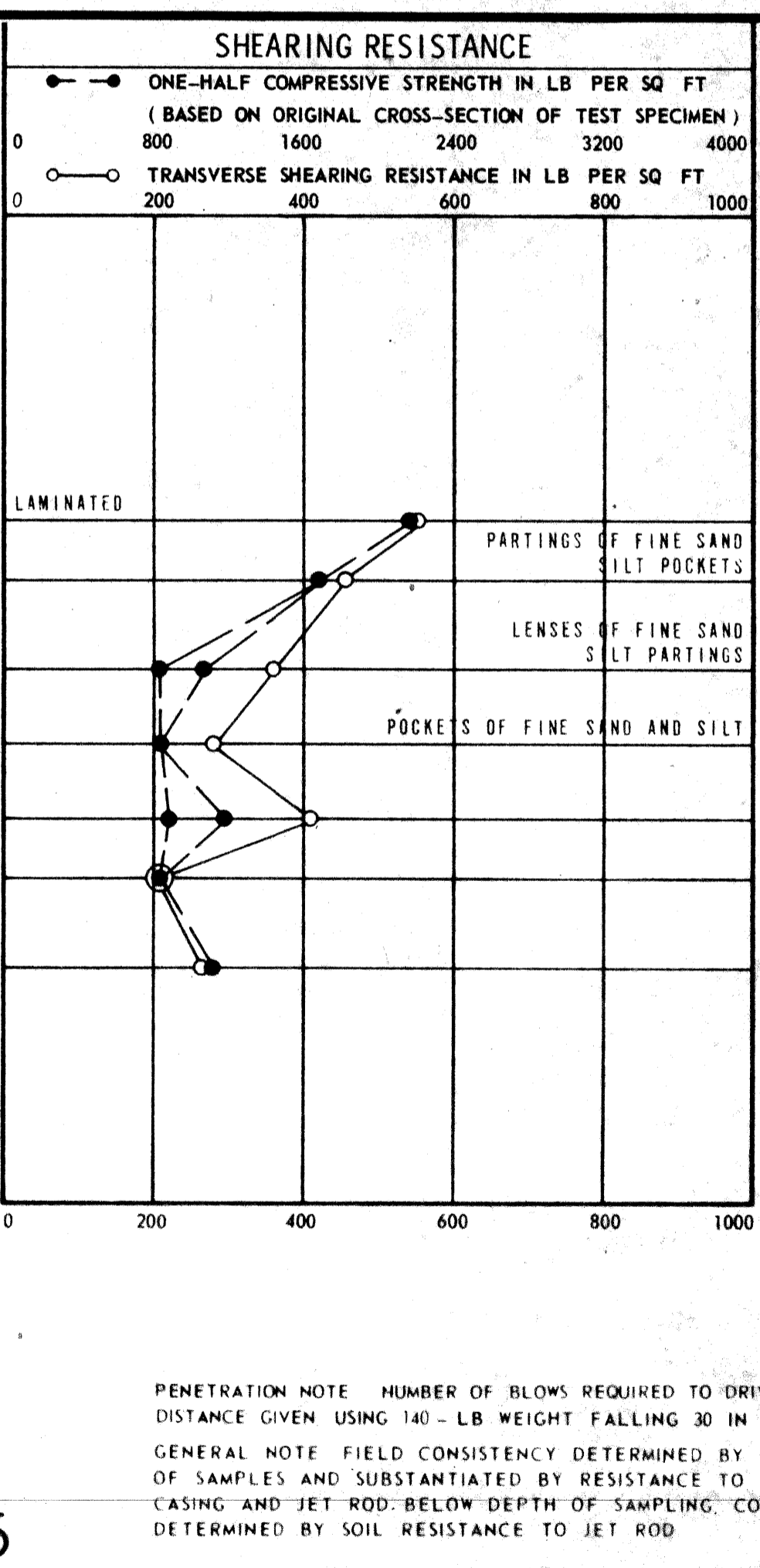


TEST HOLE NO. J-234

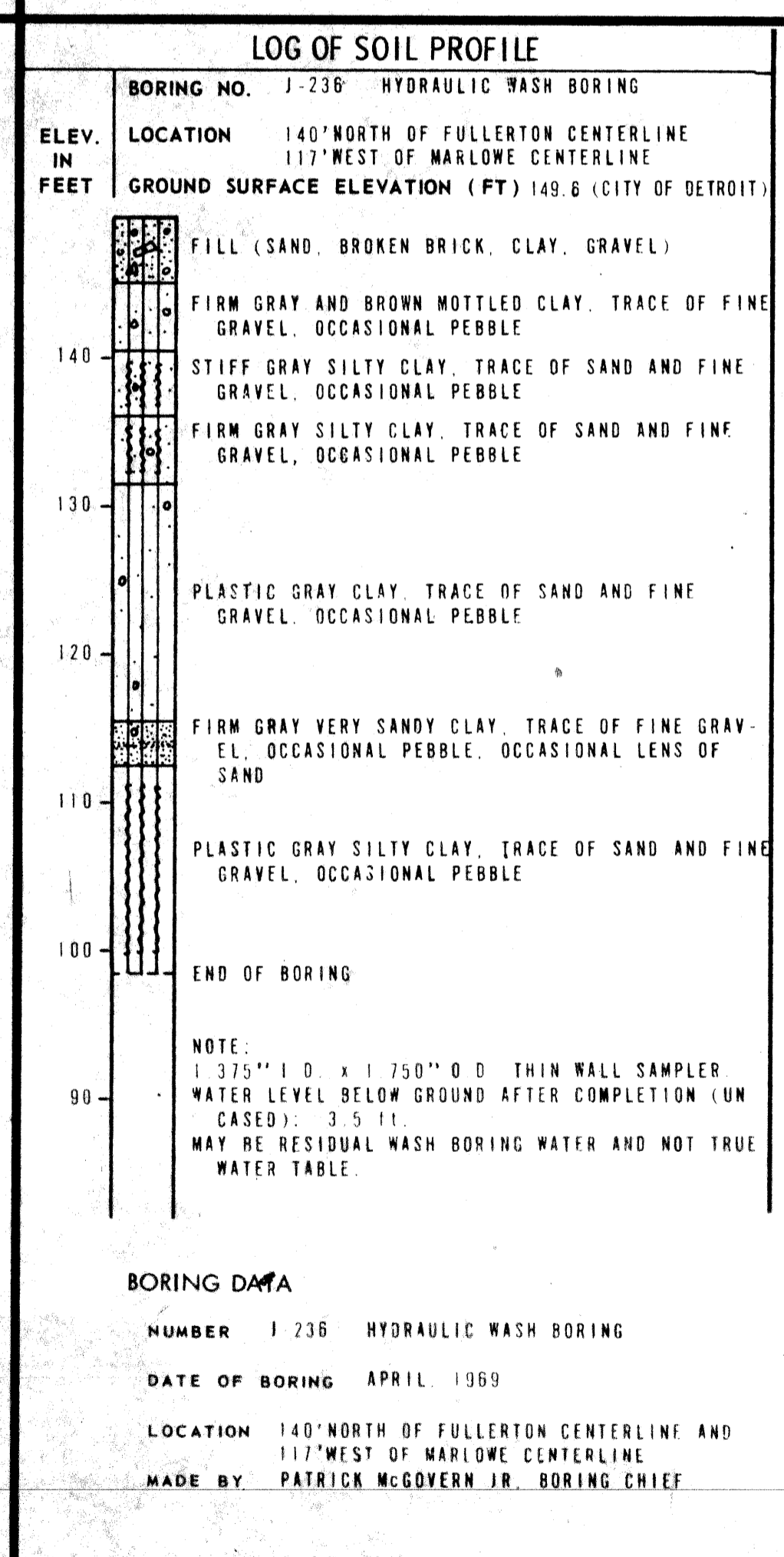


SOIL SAMPLE

SA. NO.	ELEV. IN FEET	PENETRATION		CONSISTENCY	MOISTURE PER CENT DRY WT.	DRY WT. LB PER CU FT
		NO. OF BLOWS	DRIVE IN INCHES			
	143.5	5-6	6-6	NO	SAMPLE	
	138.5	9-11	6-6	NO	SAMPLE	
	133.5	5-6	6-6	NO	SAMPLE	
1	128.0	LEVERED	FIRM	FIRM	19.2	109.8
2	124.0	LEVERED	FIRM	PLASTIC	20.3	106.7
3	118.0	LEVERED	PLASTIC	SOFT TO PLASTIC	26.4	96.7
					19.0	108.6
					17.8	111.7
4	113.0	LEVERED	PLASTIC	SOFT TO PLASTIC	21.2	106.7
5	108.0	LEVERED	PLASTIC	SOFT TO PLASTIC	17.3	103.6
					23.2	103.6
6	104.0	LEVERED	PLASTIC	SOFT	21.3	106.1
7	98.0	LEVERED	PLASTIC	PLASTIC	24.0	99.8

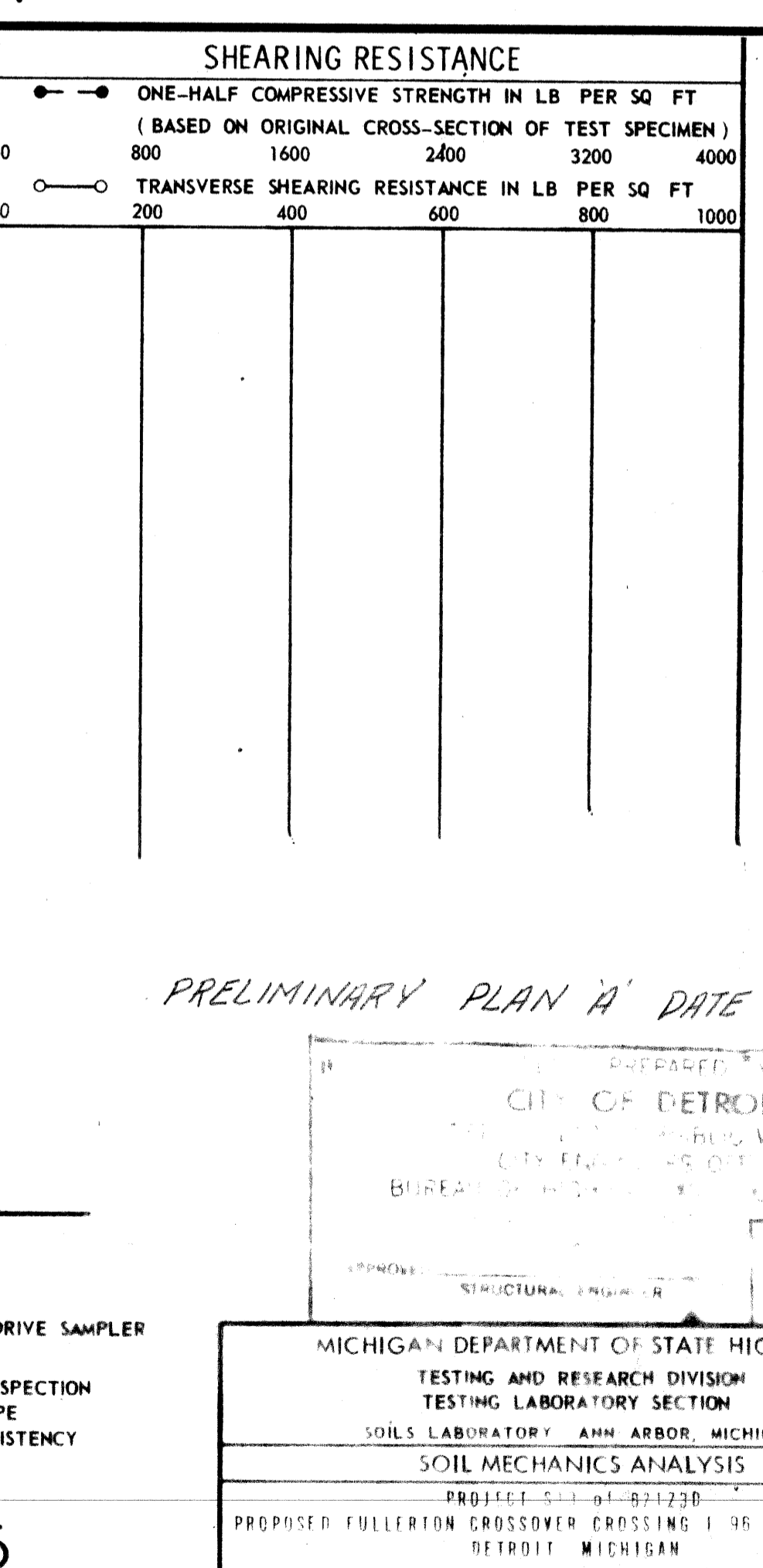


TEST HOLE NO. J-235



SOIL SAMPLE

SA. NO.	ELEV. IN FEET	PENETRATION		CONSISTENCY	MOISTURE PER CENT DRY WT.	DRY WT. LB PER CU FT
		NO. OF BLOWS	DRIVE IN INCHES			
	144.6	4-6	6-6			
	139.6	10-12	6-6			
	134.6	4-6	6-6			
	129.6	3-5	6-6			
	125.6	3-3	6-6			
	119.6	2-2	6-6			
	114.6	6-8	6-6			
	109.6	3-3	6-6			
	105.6	3-3	6-6			
	99.6	2-3	6-6			



TEST HOLE NO. J-236

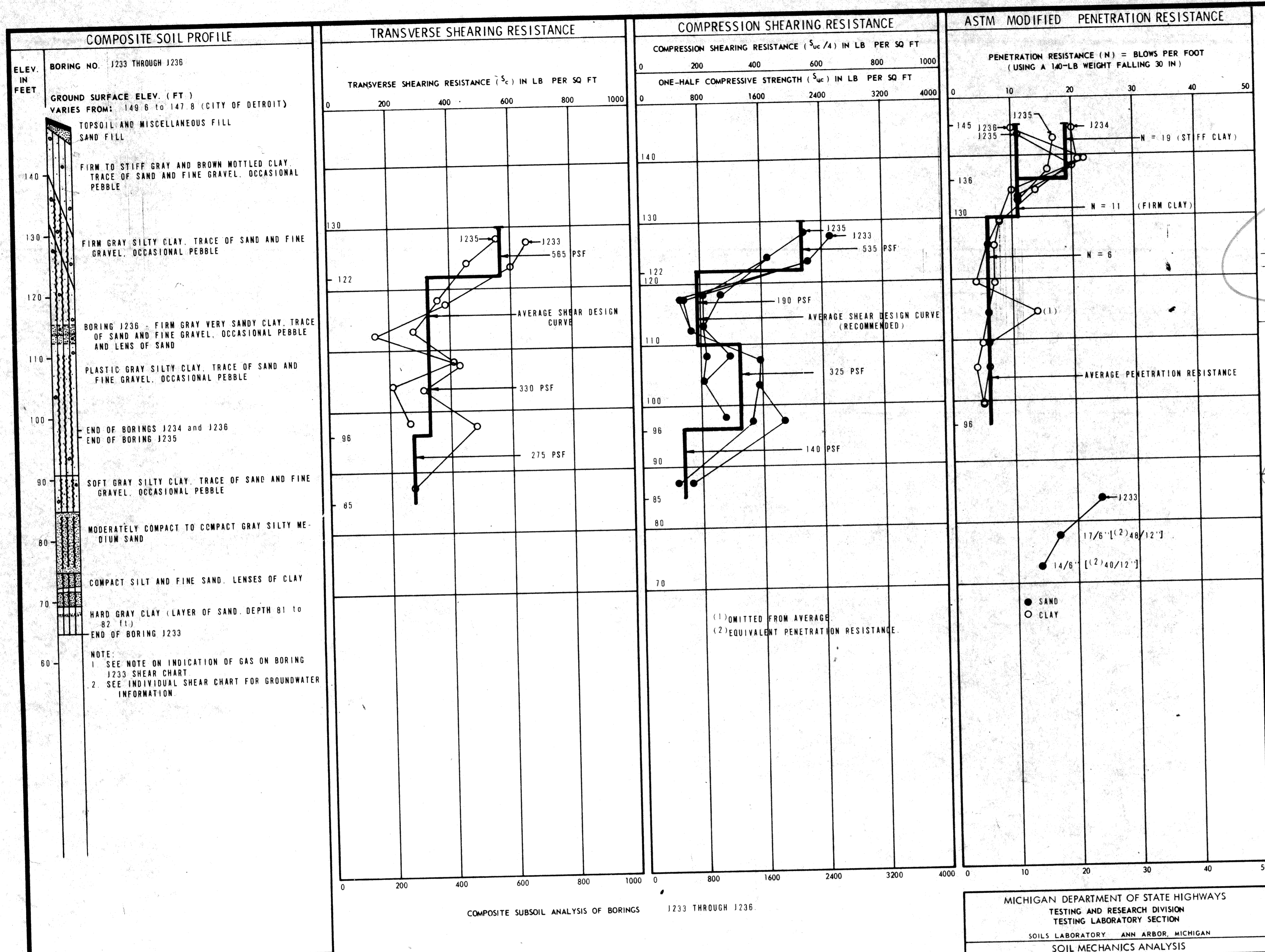
PRELIMINARY PLAN "A" DATE 9-15-69

CITY OF DETROIT
 ENGINEERING DEPARTMENT
 CIVIL ENGINEERING SECTION
 BUREAU OF STREETS AND HIGHWAYS

STRUCTURAL ENGINEER

JOB NO.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 TESTING AND RESEARCH DIVISION
 TESTING LABORATORY SECTION
 SOILS LABORATORY ANN ARBOR, MICHIGAN
 SOIL MECHANICS ANALYSIS
 PROJECT 11-1-61-821230
 PROPOSED FULLERTON CROSSOVER CROSSING I-96 (JEFFRIES FREEWAY) DETROIT, MICHIGAN



Bott. of ftg elevs vary from 121.5 to 123.0

112 MINIMUM PILE TIP PENETRATION

87 ESTIMATED PILE TIP BEARING

THE ABOVE COMPOSITE SOIL PROFILE IS INTENDED ONLY TO PRESENT AVERAGE CONDITIONS THROUGHOUT THE GROUP OF BORINGS REPRESENTED. SEE INDIVIDUAL BORING CHARTS FOR DETAILS.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
TESTING AND RESEARCH DIVISION
TESTING LABORATORY SECTION
SOILS LABORATORY ANN ARBOR, MICHIGAN
SOIL MECHANICS ANALYSIS

PROJECT S13 of 82123D
PROPOSED FULLERTON CROSSOVER CROSSING I-96
(JEFFRIES FREEWAY), DETROIT, MICHIGAN

PREPARED BY: *Devin D. Brooks* DATE: 6-30-69
CHECKED BY: *Paul N. Martella* DATE: 6-30-69

PRELIMINARY PLAN A DATE 9-15-69

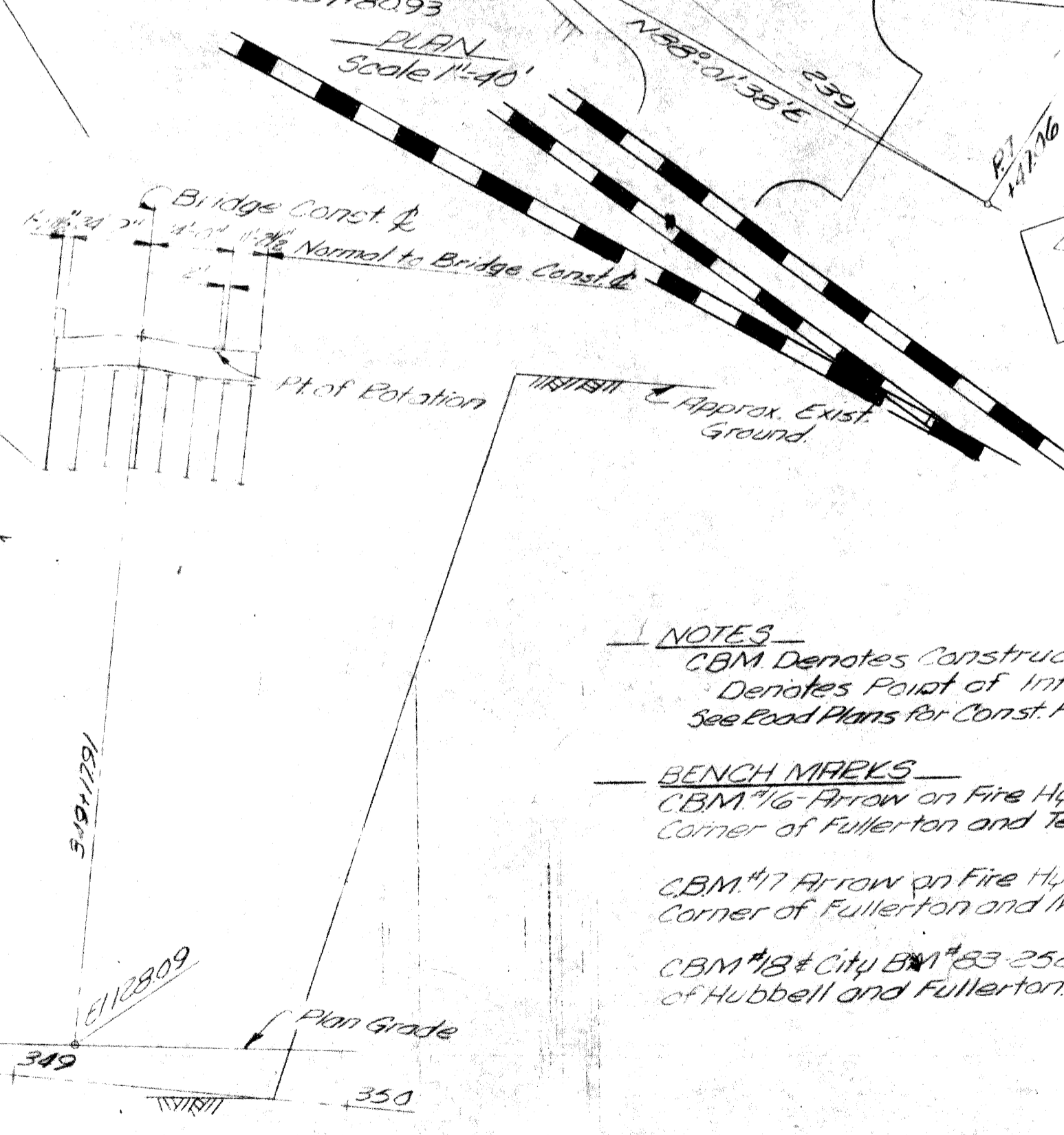
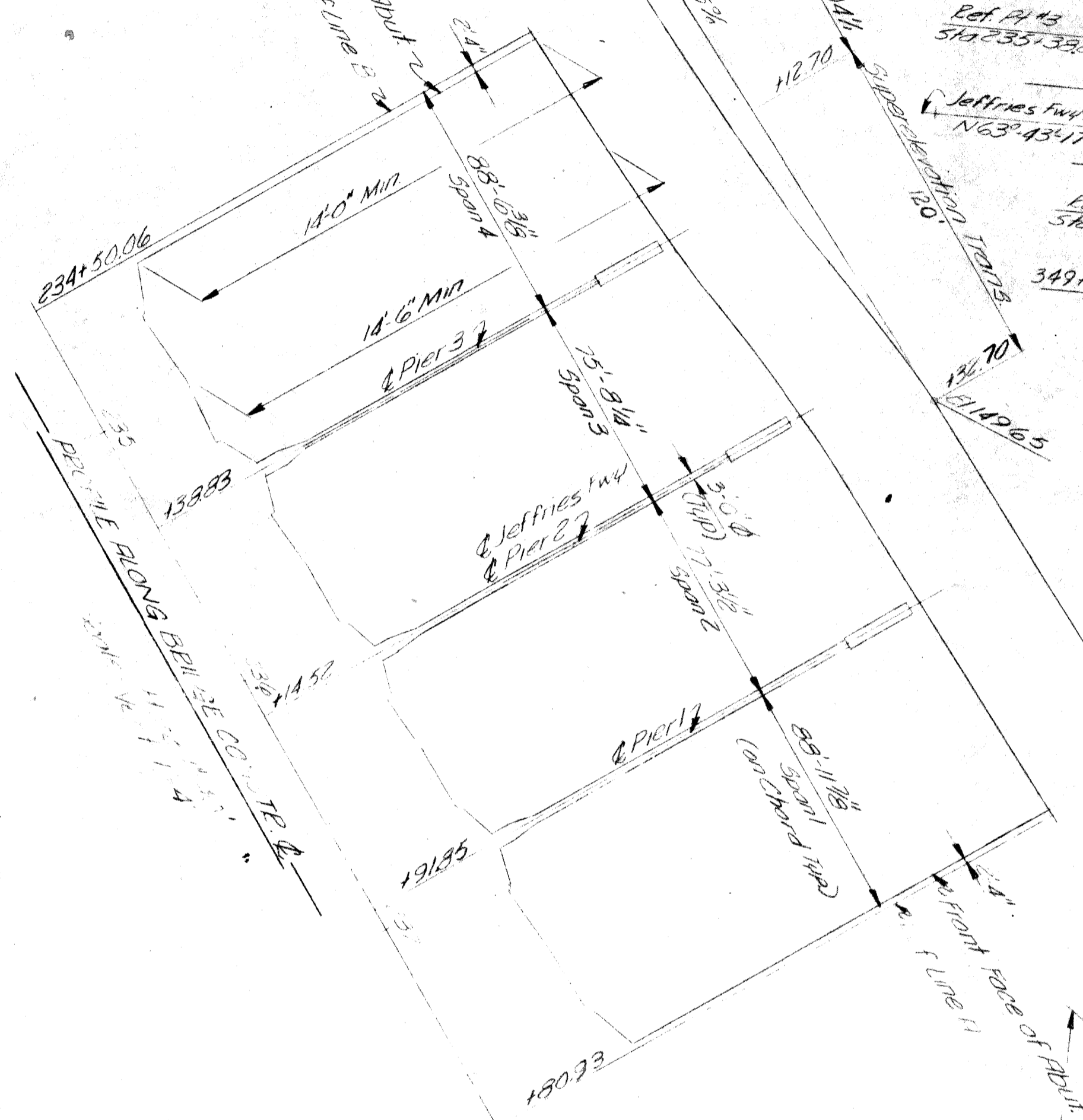
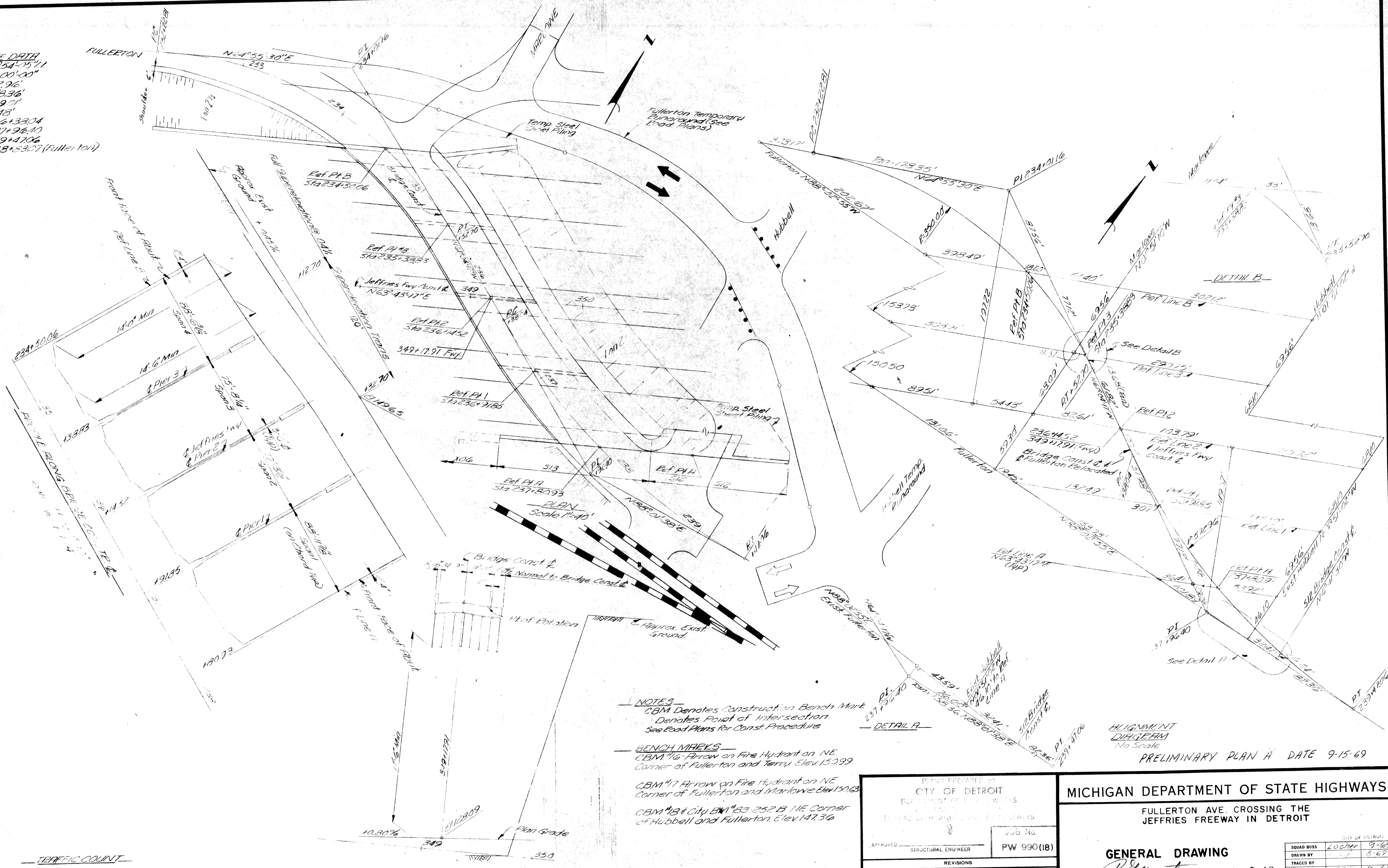
DESIGNED BY
CITY OF DETROIT
ENGINEERS OFFICE
APPROVED: _____
STRUCTURAL ENGINEER

COMPOSITE SUBSOIL ANALYSIS
OF BORINGS
J-233, J-234, J-235 & J-236
DETROIT, MICHIGAN

S13 OF 82123D

STATE PROJECT	FEDERAL PROJECT	SHEET NO.
		3 of 7

FULLERTON AVE CURVE DATA
 $\Delta = 54^{\circ}00'13''$ $EAD = 30^{\circ}54'05''$
 $D = 16^{\circ}22'13''$ $D = 10^{\circ}00'00''$
 $E = 350.00'$ $E = 522.96'$
 $T = 178.35'$ $T = 153.36'$
 $L = 329.59'$ $L = 309.01'$
 $E = 42.86'$ $E = 2148'$
 $PC = 232+22.81$ $PT = 236+33.04$
 $PI = 234+01.16$ $PI = 237+96.10$
 $AT = 235+52.70$ $PT = 239+47.06$
 $= 238+53.07$ (Fullerton)



NOTES
 CBM Denotes Construction Bench Mark
 Denotes Point of Intersection
 See Exd Plans For Const. Procedure

BENCH MARKS
 CBM #6 Arrow on Fire Hydrant on NE Corner of Fullerton and Marlowe Elev. 150.63
 CBM #7 Arrow on Fire Hydrant on NE Corner of Fullerton and Terry Elev. 152.99
 CBM #8 City BM #83-252-B NE Corner of Hubbell and Fullerton Elev. 147.36

DETAIL A

ALIGNMENT
 QUADGRAM
 No Scale

PRELIMINARY PLAN A DATE 9-15-69

TRAFFIC COUNT

PROFILE ALONG FREEWAY CONST. E
 Horizontal Scale 1"=40'
 Vertical Scale 1"=4'

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

APPROVED: _____
 STRUCTURAL ENGINEER

JOB NO.
 PW 990 (18)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FULLERTON AVE. CROSSING THE
 JEFFRIES FREEWAY IN DETROIT

GENERAL DRAWING

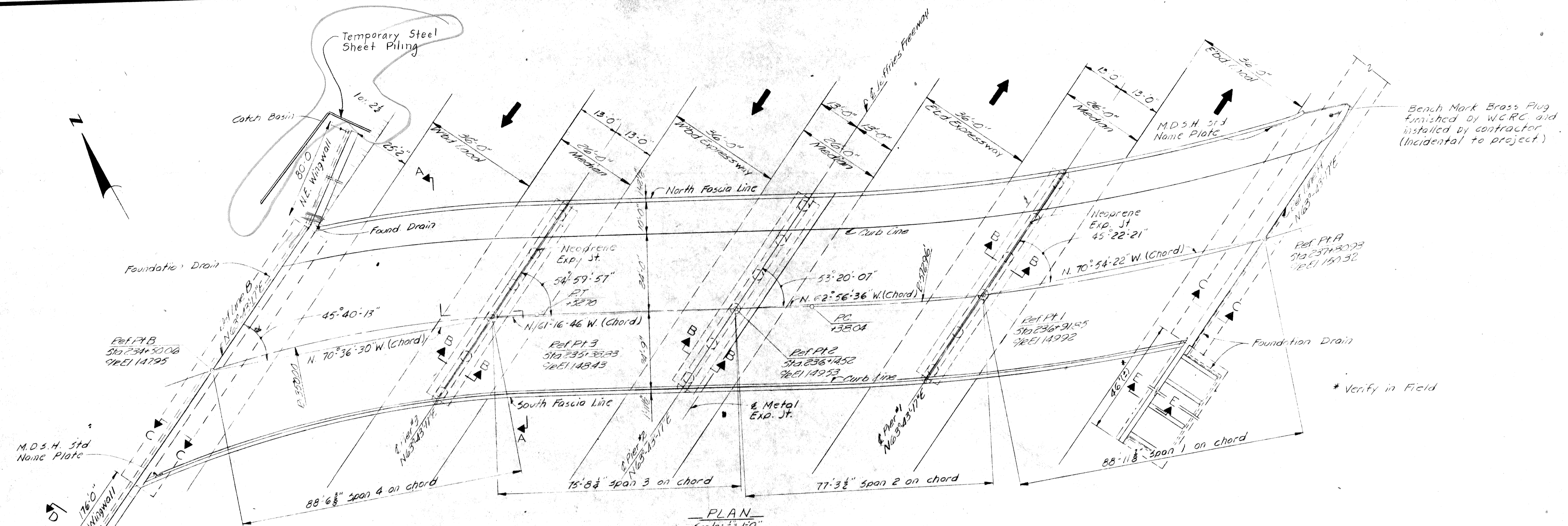
APPROVED: *R. J. ...* 10-8-69
 SUPERVISOR - DESIGN

APPROVED: *F. J. ...* 10-8-69
 ENGINEER - DESIGN

SQUAD BOSS	DATE
Locher	9-69
	8-69
	9-69

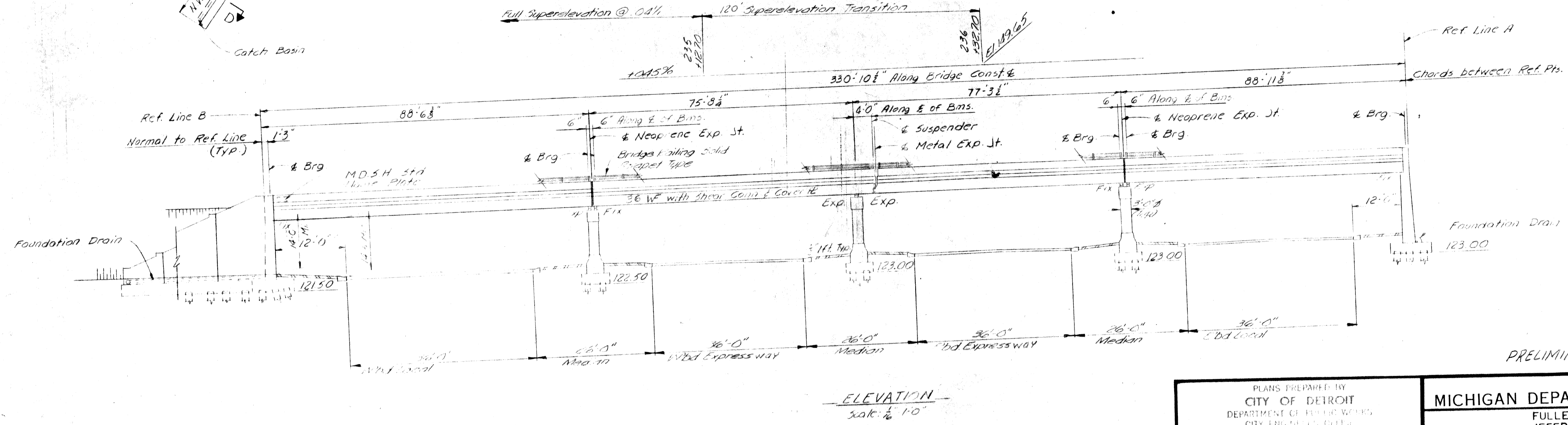
SHEET 4 OF 7

S13 of 82123D



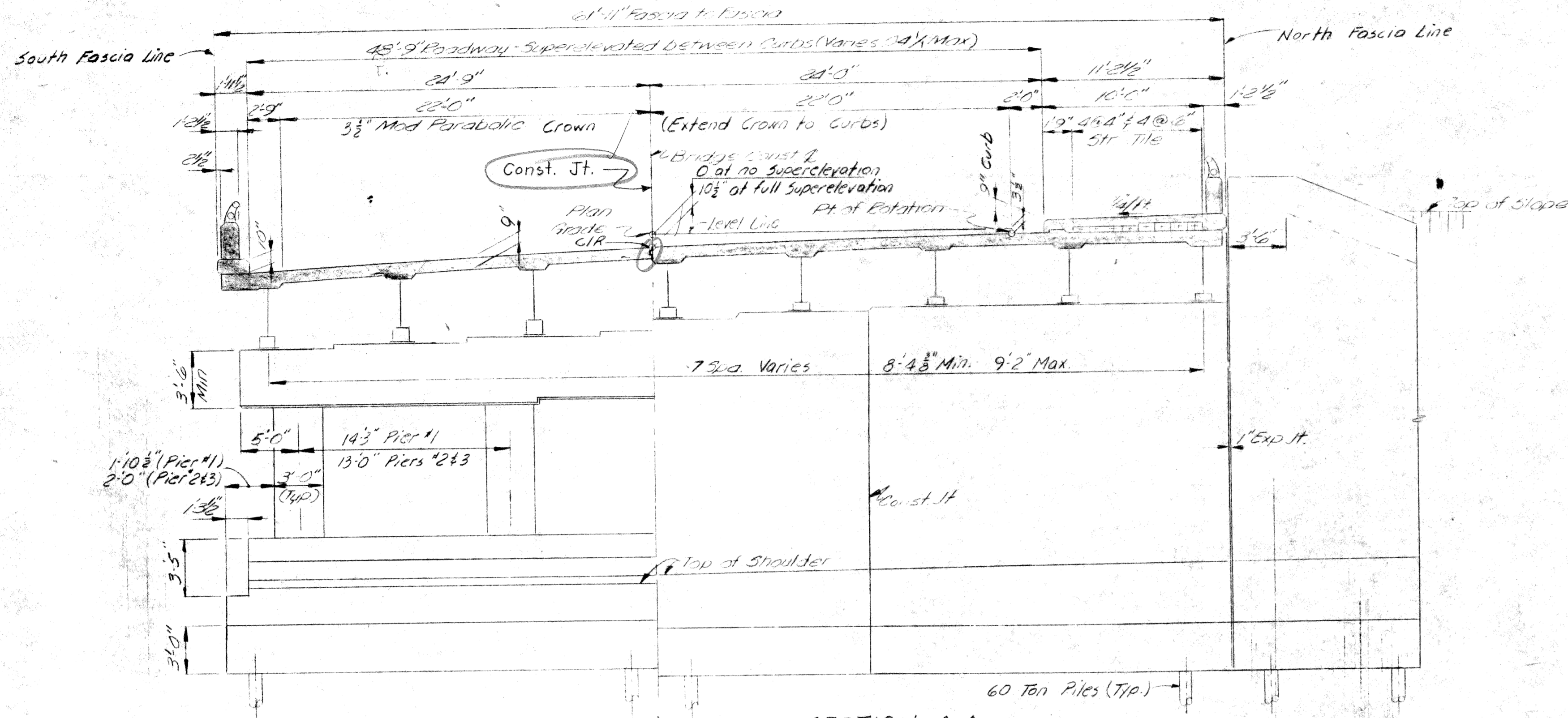
Bench Mark Brass Plug furnished by W.C.R.C. and installed by contractor (Incidental to project)

* Verify in Field

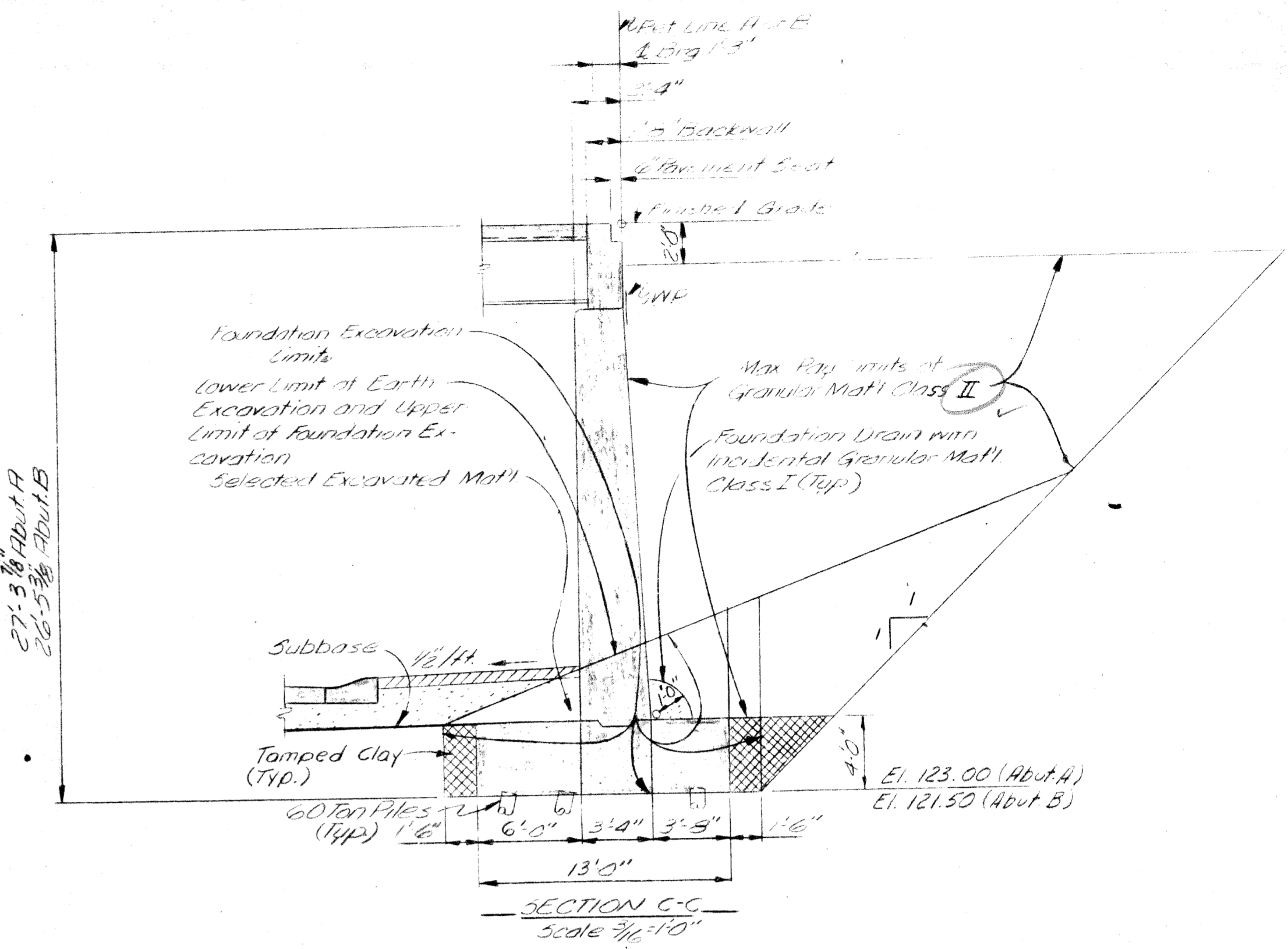


PRELIMINARY PLAN A DATE 9-15-69

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEER'S OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN DEPARTMENT OF STATE HIGHWAYS FULLERTON AVE. CROSSING THE JEFFRIES FREEWAY IN DETROIT GENERAL PLAN OF STRUCTURE	
APPROVED: _____ STRUCTURAL ENGINEER	JOB No. PW 990 (18)	APPROVED: <i>R. J. Montgomery</i> 10-8-69 SUPERVISOR - DESIGN	APPROVED: <i>F. J. Cook</i> 10-8-69 ENGINEER - IN CHARGE
REVISIONS NO. DESCRIPTION DATE BY		SQUAD BOSS DRAWN BY CHECKED BY SHEET 2 OF 2	S13 of 82123D

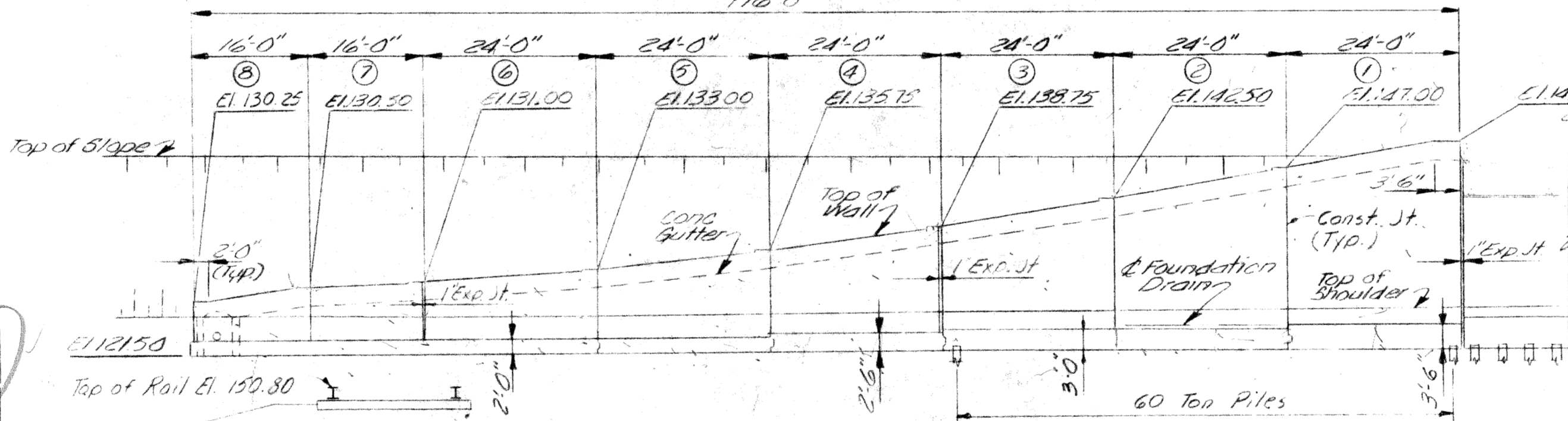


SECTION A-A
Scale 1/8" = 1'-0"

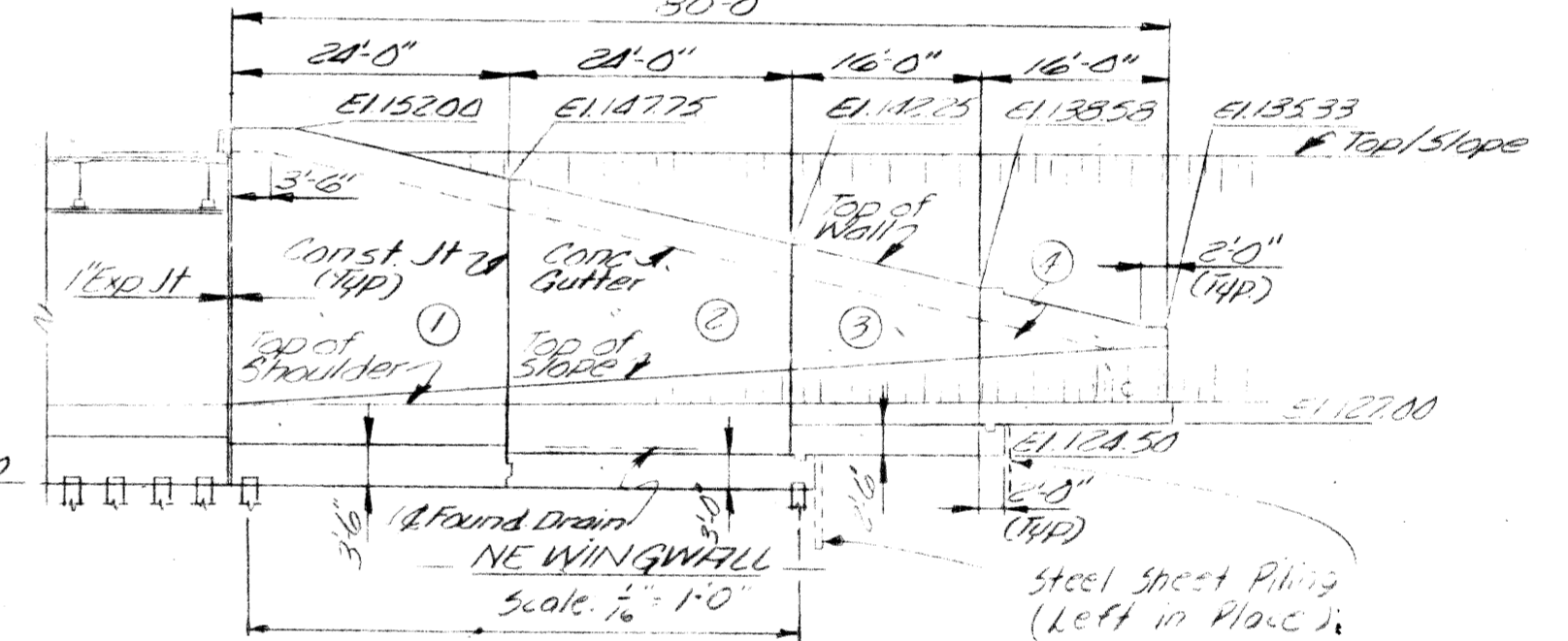


SECTION C-C
Scale 3/16" = 1'-0"

2 Piers 12'3" x 12'3"
Neoprene Exp. Jt @ Pier #1 & #3 only
Metal Exp. Jt Pier #2 only



SECTION B-B
Scale 1/8" = 1'-0"

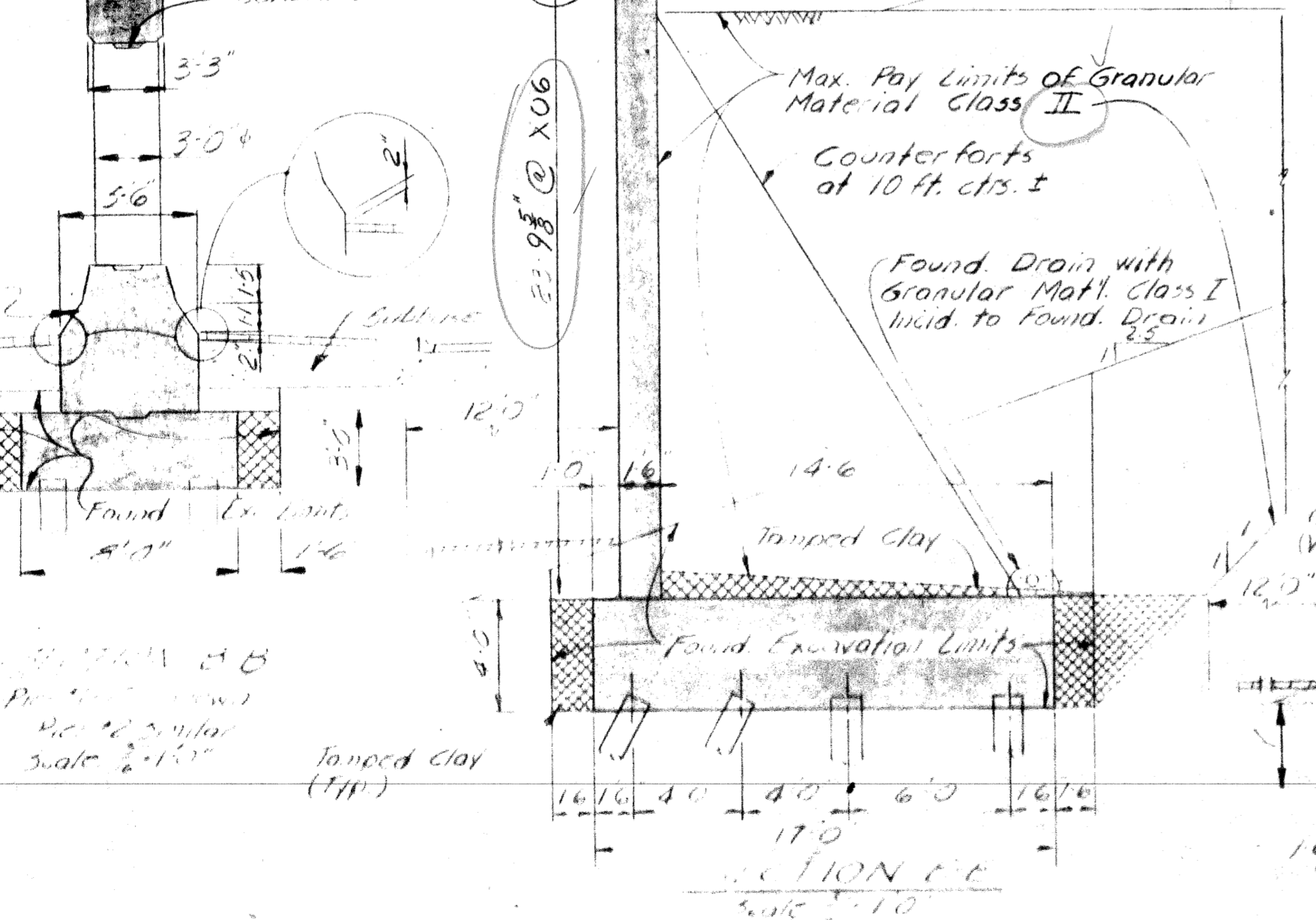


SECTION D-D
Scale 1/8" = 1'-0"

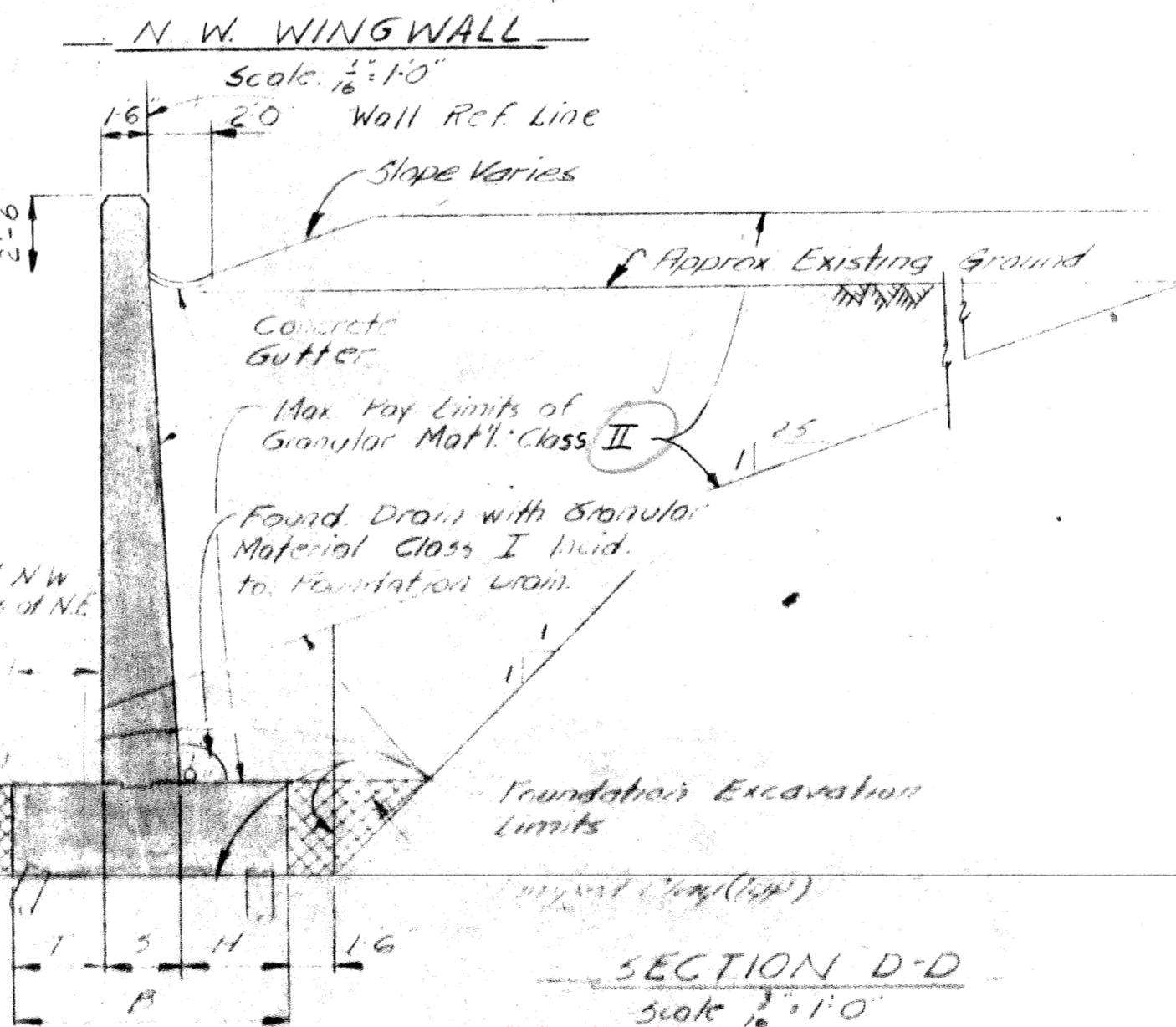
GENERAL NOTES:
The Design of this structure is based on the AASHTO specifications for the Design of Highway Bridges, 1958 edition and current AASHTO Standard Specifications for Highway Bridges H-20-44 loading. It is designed to carry a design truck load of 160,000 lbs. and a design wind load of 100 lbs./sq. ft. The top of roadway slab and top of curb sidewalks are to be finished to the same level as the roadway surface except for a 1/4" slope to the curb. This structure is to be constructed using the following materials and methods: Granular Material Class II for the roadway surface and Class I for the sidewalks. The lateral pay limits of temporary steel sheet piling are to be determined by the Engineer. Structural Steel shall be ASTM A-508.

Lower Limit of Earth Excavation, Upper Limit of Foundation Excavation

Selected Excavated Material Per: 123.00
Tamped clay Per: 122.50
Inc. Mat (TYP) 14"



SECTION E-E
Scale 1/8" = 1'-0"



SECTION D-D
Scale 1/8" = 1'-0"

WINGWALL DIMENSIONS					
Section	T	S	H	B	Y
1	4'6"	3'6"	5'0"	13'0"	3'6"
2	3'6"	3'0"	4'6"	11'0"	3'0"
3	3'0"	2'9"	4'3"	10'0"	3'0"
4	3'0"	2'6"	4'6"	10'0"	2'6"
5	2'0"	2'3"	2'9"	7'0"	2'0"
6/7/8	2'0"	2'0"	2'0"	6'0"	2'0"
1	4'6"	3'6"	5'0"	13'0"	3'6"
2	3'6"	3'0"	4'6"	11'0"	3'0"
3	3'0"	2'6"	4'6"	10'0"	2'6"
4	2'0"	2'0"	2'0"	6'0"	2'0"

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

FULLERTON AVE CROSSING THE
MERRILL FREEWAY IN DETROIT

GENERAL PLAN OF STRUCTURE

JOB NO
PW 990(18)

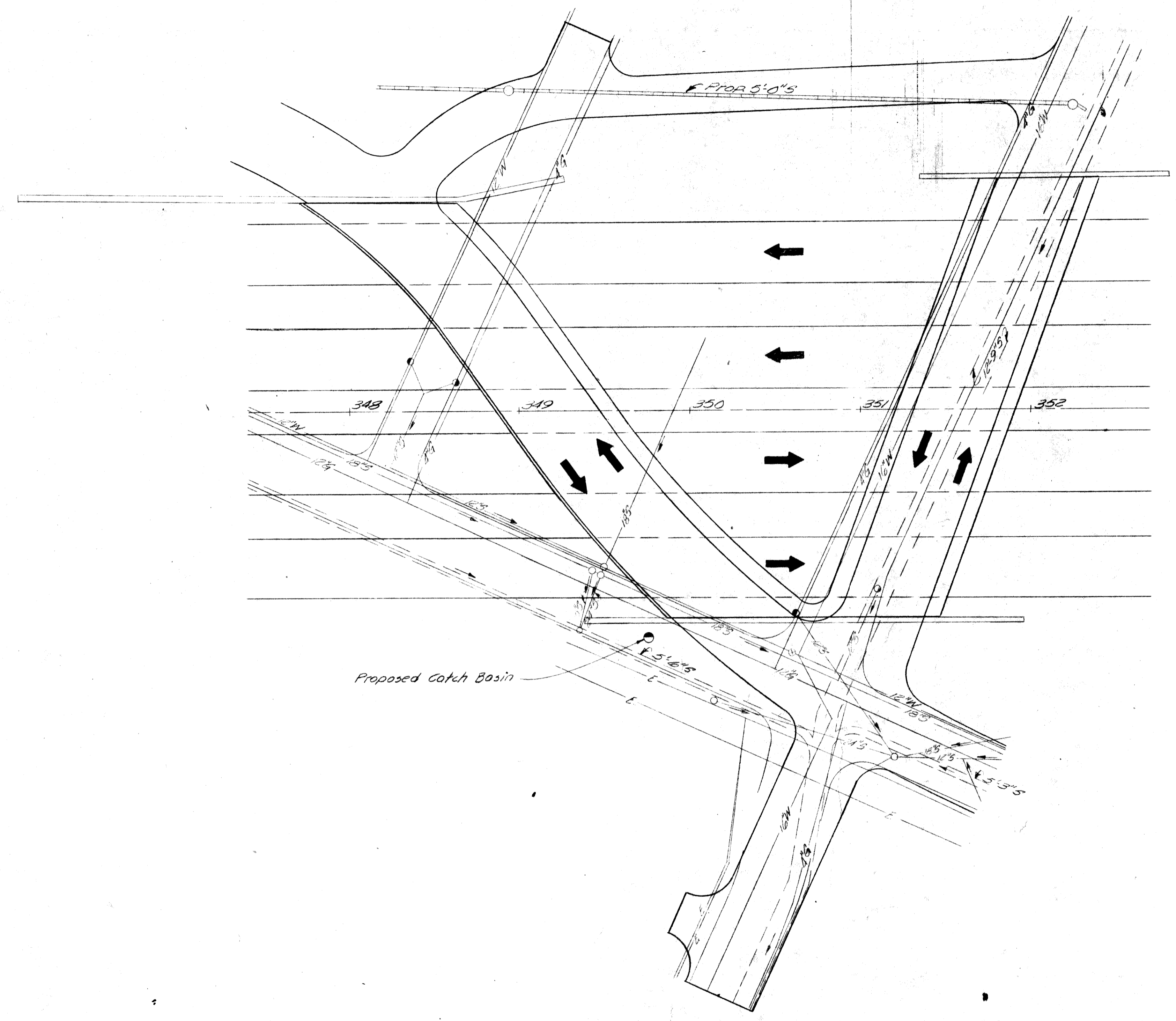
APPROVED: R. Montgomery 10-8-69
S. J. Cook 10-8-69

S13 of 8213D

LEGEND

UTILITY	Existing	Abandoned or Deleted	New Work by Others
Michigan Consolidated Gas Co.	— G —	--- G ---	
Water	— W —	--- W ---	
Sewers	— E —	--- S ---	=== S ===
Detroit Edison	— E —	--- E ---	

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.



SITUATION PLAN
Scale: 1"=40'

PRELIMINARY PLAN 'A' DATE 9-15-69

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

APPROVED _____
STRUCTURAL ENGINEER

JOB No.
PW 99C

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

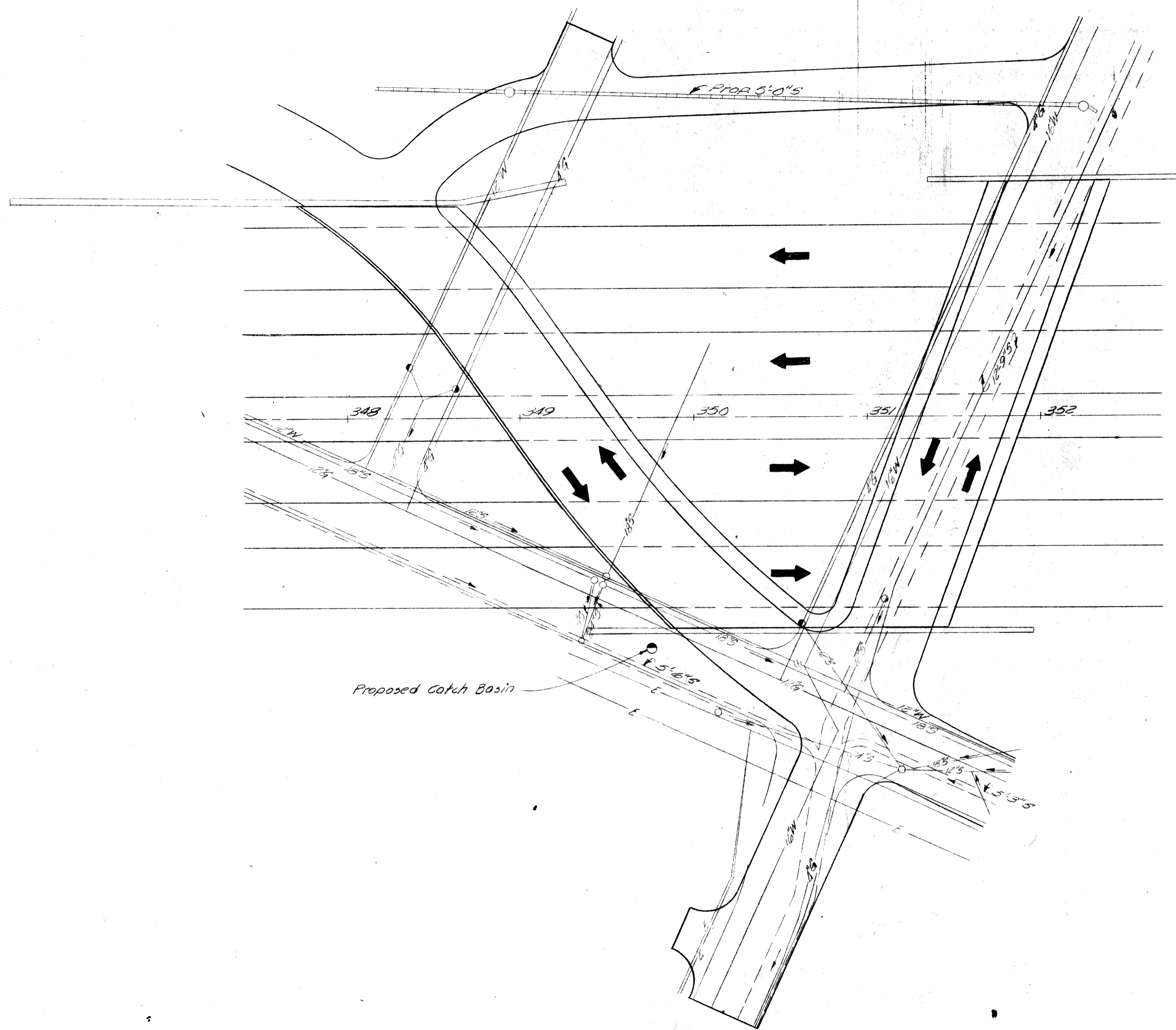
EXISTING UTILITIES AND PROPOSED ALTERATIONS

REVISIONS

NO	DESCRIPTION	DATE	BY

SQUAD BOSS	Locher	9-69
DRAWN BY	Locher	9-69
CHECKED BY	Locher	9-69
SHEET	7	OF 7

S13 of 82123D



SITUATION PLAN
Scale: 1"=40'

LEGEND

UTILITY	Existing	Abandoned or Deleted	New Work by Others
Michigan Consolidated Gas Co.	— G —	--- G ---	— S —
Water	— W —	--- W ---	
Sewers	— E —	--- S ---	
Detroit Edison	— E —	--- E ---	

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.

PRELIMINARY PLAN 'A' DATE 9-15-69

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

APPROVED _____
STRUCTURAL ENGINEER

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

EXISTING UTILITIES AND PROPOSED ALTERATIONS

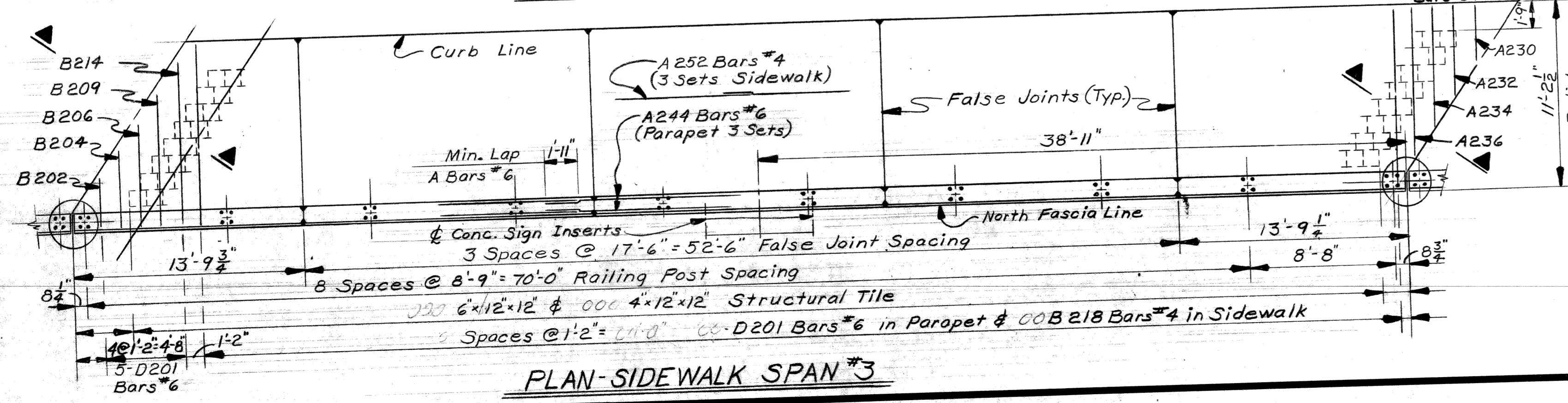
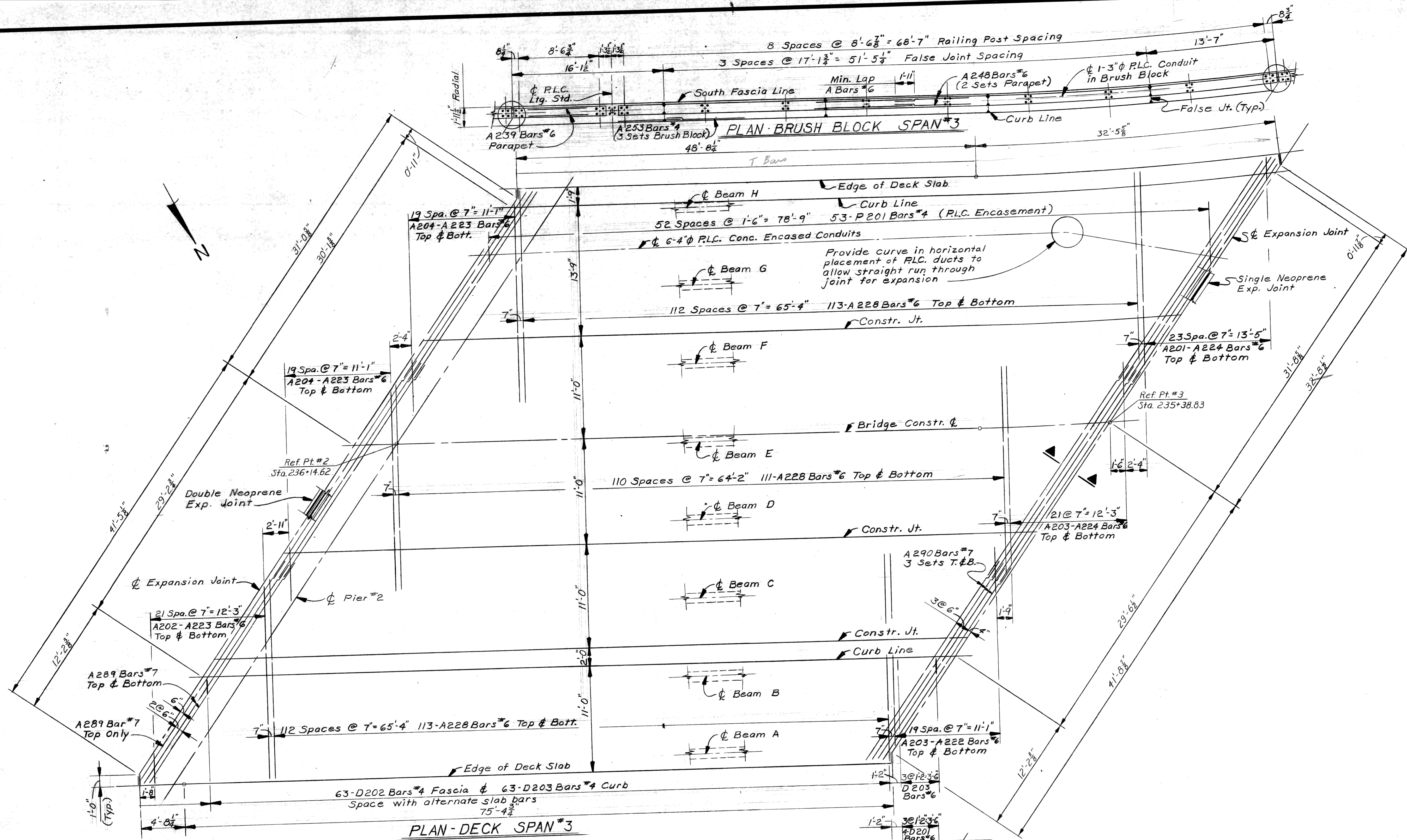
REVISIONS

NO	DESCRIPTION	DATE	BY

JOB No. PW 99C

SQUAD BOSS: Locher 9-69
DRAWN BY: Duff 8-69
CHECKED BY: Hayes 9-69
SHEET 7 OF 7

S13 of 82123D



MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

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 (16)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS
 DRAWN BY
 TRACED BY
 CHECKED BY

R Rosik 06/70

SHEET 25 of 36

S13 of 82123D

Road Squad - Roush

D.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			30	
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
4	MICH.			30	
D.P. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			30	
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS
4	MICH.			30	

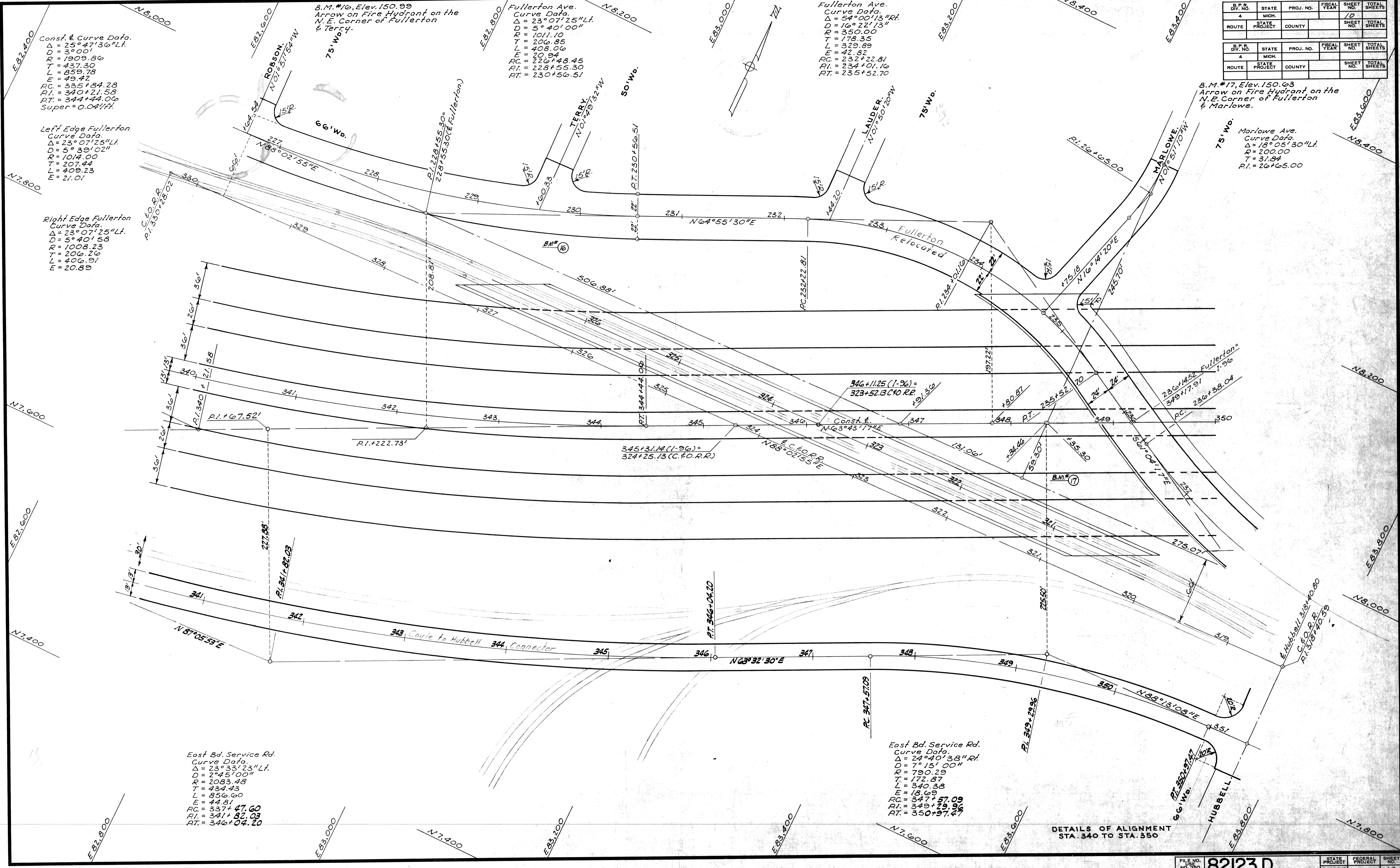


Sewers Checked by RJ 8-28-68
 Utilities Checked by RJ 8-29-68

GENERAL UTILITIES
 STA. 350 TO STA. 360

FILE NO.	82123 D	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
NO. 300		82123		30

SQUAD R. E. ROUSH



Const. & Curve Data.
 $\Delta = 25^{\circ}47'36''$ Lt.
 $D = 39^{\circ}00'$
 $R = 1909.86$
 $T = 437.30$
 $L = 859.78$
 $E = 49.42$
 $PC = 335+84.28$
 $PT = 340+21.58$
 $PI = 344+44.09$
 $Super = 0.04177$

Left Edge Fullerton Curve Data.
 $\Delta = 23^{\circ}07'25''$ Lt.
 $D = 5^{\circ}39'02''$
 $R = 1014.00$
 $T = 207.44$
 $L = 409.23$
 $E = 21.01$

Right Edge Fullerton Curve Data.
 $\Delta = 23^{\circ}07'25''$ Lt.
 $D = 5^{\circ}40'15''$
 $R = 1008.23$
 $T = 206.26$
 $L = 406.91$
 $E = 20.89$

Fullerton Ave. Curve Data.
 $\Delta = 23^{\circ}07'25''$ Lt.
 $D = 5^{\circ}40'00''$
 $R = 1011.10$
 $T = 206.85$
 $L = 408.06$
 $E = 20.94$
 $PC = 226+48.45$
 $PT = 228+55.30$
 $PI = 230+56.51$

Fullerton Ave. Curve Data.
 $\Delta = 54^{\circ}00'13''$ Rt.
 $D = 16^{\circ}22'13''$
 $R = 350.00$
 $T = 178.35$
 $L = 329.89$
 $E = 42.82$
 $PC = 232+22.81$
 $PT = 234+01.16$
 $PI = 235+52.70$

B.M. #16, Elev. 150.99
 Arrow on Fire Hydrant on the N.E. Corner of Fullerton & Terry.

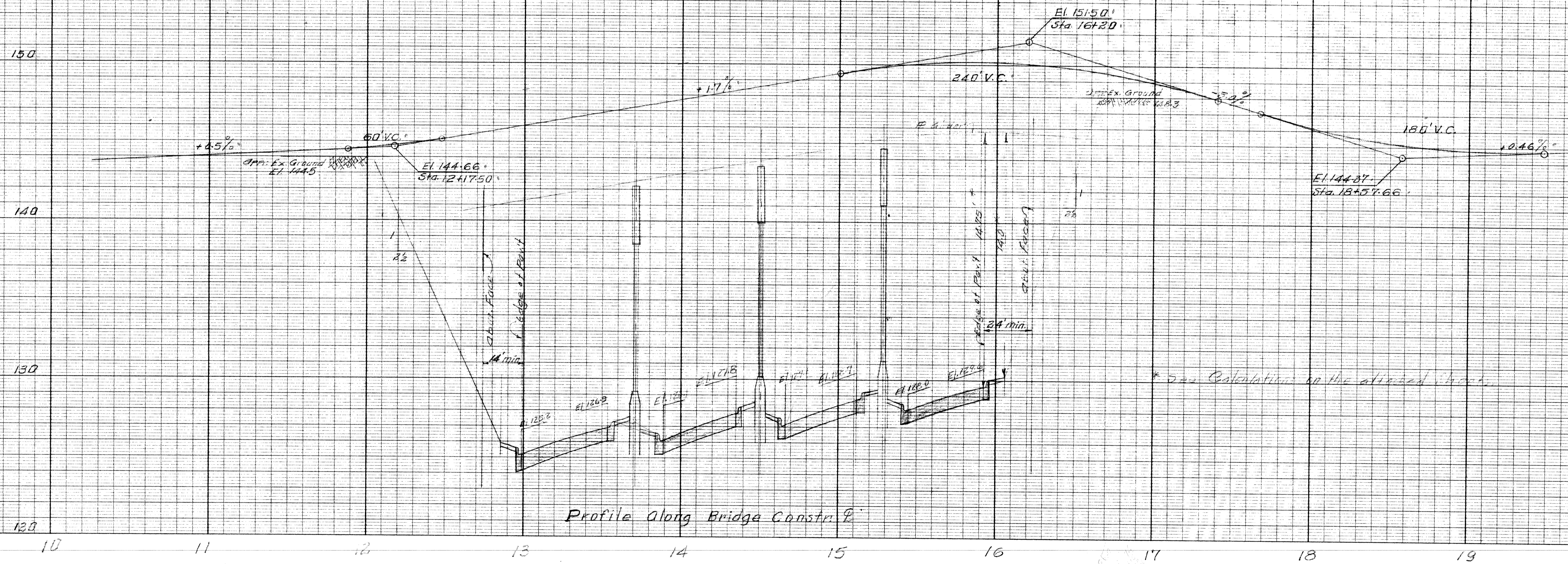
Marlowe Ave. Curve Data.
 $\Delta = 18^{\circ}05'30''$ Lt.
 $R = 200.00$
 $T = 31.84$
 $PI = 26+65.00$

East Bd. Service Rd. Curve Data.
 $\Delta = 23^{\circ}33'23''$ Lt.
 $D = 2^{\circ}45'00''$
 $R = 2083.48$
 $T = 484.43$
 $L = 856.60$
 $E = 44.81$
 $PC = 337+47.60$
 $PT = 341+82.03$
 $PI = 346+04.20$

East Bd. Service Rd. Curve Data.
 $\Delta = 24^{\circ}40'38''$ Rt.
 $D = 7^{\circ}15'00''$
 $R = 790.29$
 $T = 172.87$
 $L = 340.38$
 $E = 18.68$
 $PC = 347+57.09$
 $PT = 349+29.96$
 $PI = 350+97.47$

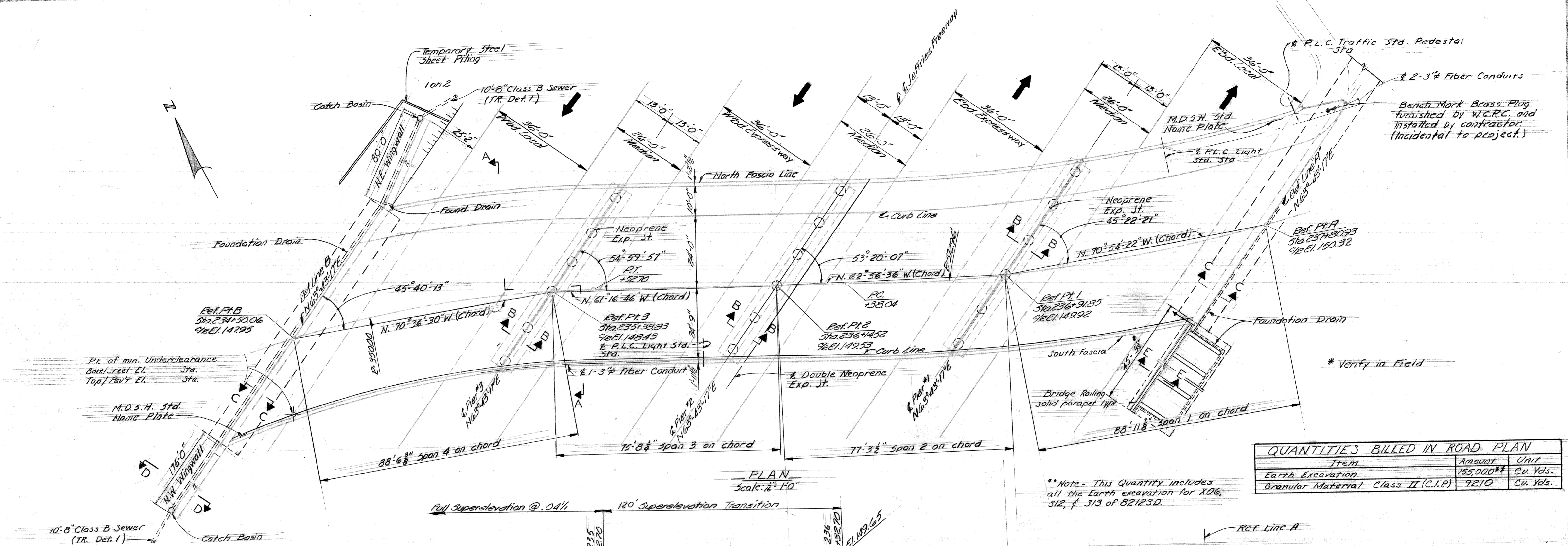
DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.			12	
ROUTE	PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS

DETAILS OF ALIGNMENT
 STA. 340 TO STA. 350

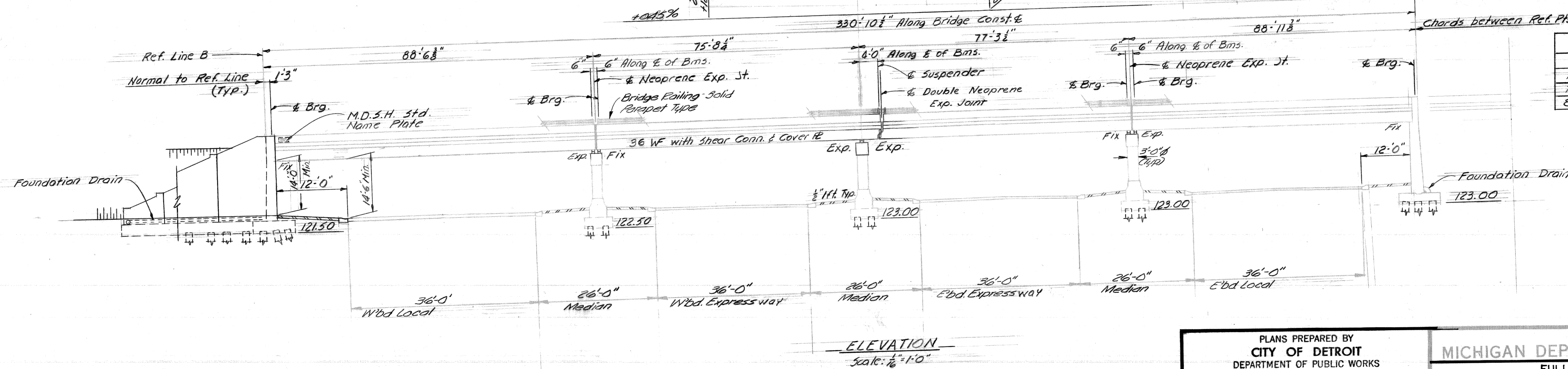


Profile along Bridge Constr. E

Schoolcraft Crossover
by
P. G. Gaffney



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



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

QUANTITIES BILLED IN ROAD PLAN		
Item	Amount	Unit
Earth Excavation	155,000**	Cu. Yds.
Granular Material Class II (C.I.P.)	9210	Cu. Yds.

** Note - This Quantity includes all the Earth excavation for X06, 312, & 313 of 82123D.

MISCELLANEOUS QUANTITIES		
Item	Amount	Unit
Foundation Drain	7	Lin. Ft.
Temporary Steel Sheet Piling	2481	Sq. Ft.
8" Class B Sewer (TR. Det. 1)		Lin. Ft.

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 (18)

NO.	DESCRIPTION	DATE	BY

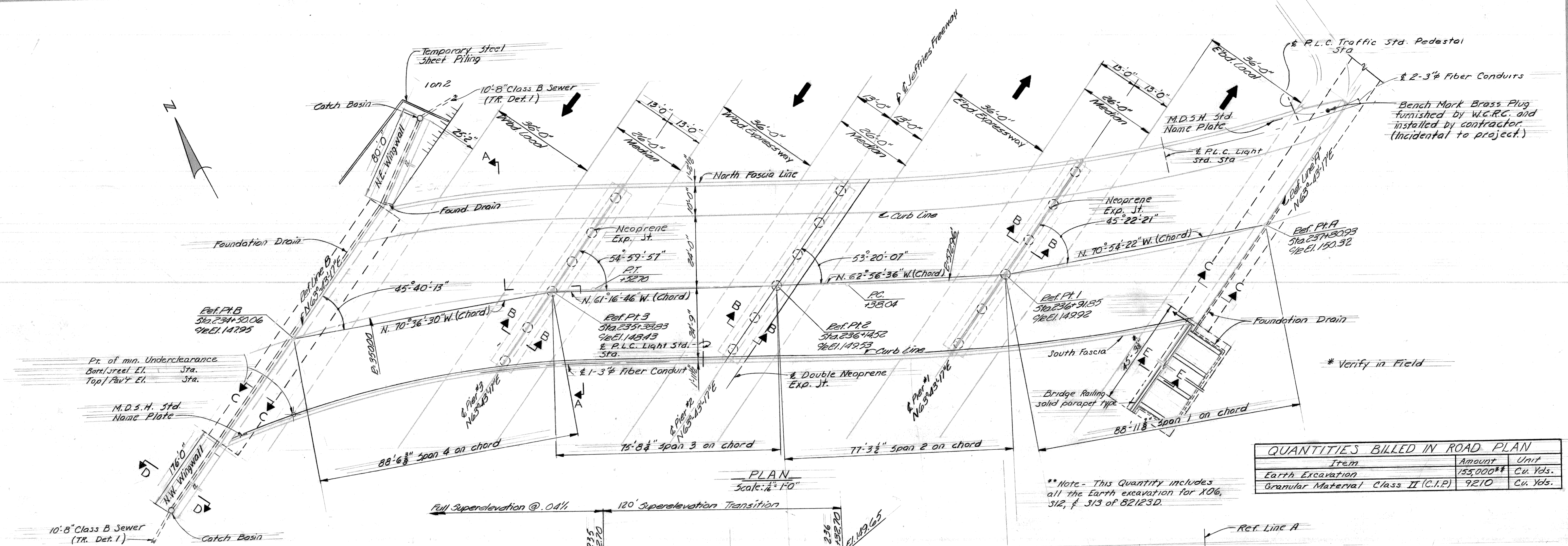
MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 FULLERTON AVE. CROSSING THE
 JEFFRIES FREEWAY IN DETROIT
GENERAL PLAN OF STRUCTURE

CITY OF DETROIT
 DESIGNED BY: Locher 9-69
 DRAWN BY: Hart 7-69
 CHECKED BY: D. Rowe 9-69
 SHEET 5 OF 30

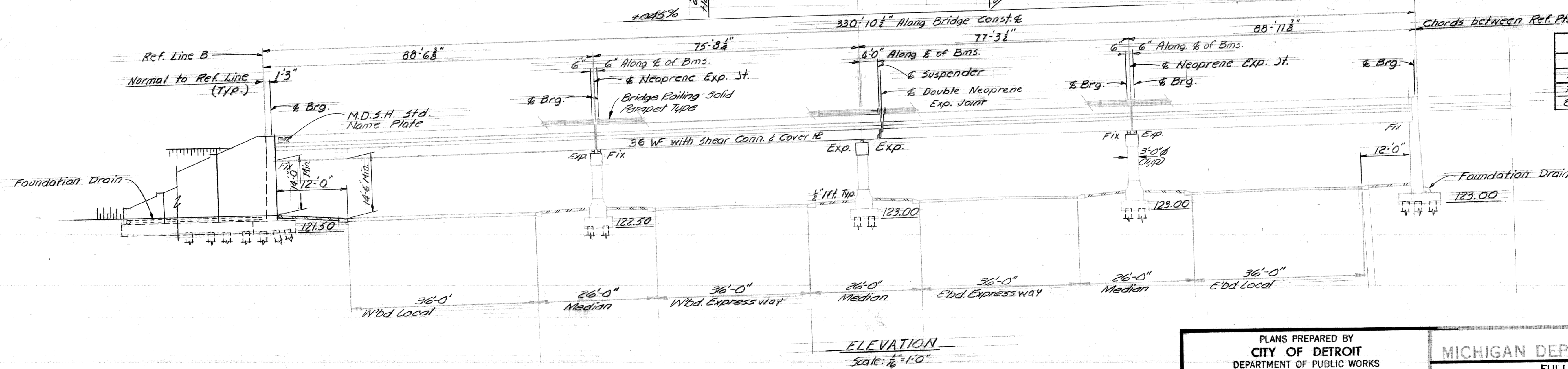
APPROVED: _____
 SUPERVISOR - DESIGN

APPROVED: _____
 ENGINEER - DESIGN SECTION I

S13 of 82123D



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



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

QUANTITIES BILLED IN ROAD PLAN

Item	Amount	Unit
Earth Excavation	155,000**	Cu. Yds.
Granular Material Class II (C.I.P.)	9210	Cu. Yds.

** Note - This Quantity includes all the Earth excavation for X06, 312, & 313 of 82123D.

MISCELLANEOUS QUANTITIES

Item	Amount	Unit
Foundation Drain	7	Lin. Ft.
Temporary Steel Sheet Piling	2481	Sq. Ft.
8" Class B Sewer (TR. Det. 1)		Lin. Ft.

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 (18)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
FULLERTON AVE. CROSSING THE
JEFFRIES FREEWAY IN DETROIT
GENERAL PLAN OF STRUCTURE

APPROVED: _____
SUPERVISOR - DESIGN

APPROVED: _____
ENGINEER - DESIGN SECTION I

CITY OF DETROIT
DESIGNED BY: Locher 9-69
DRAWN BY: Herb 7-69
CHECKED BY: D. Rowe 9-69
SHEET 5 OF 30

S13 of 82123D