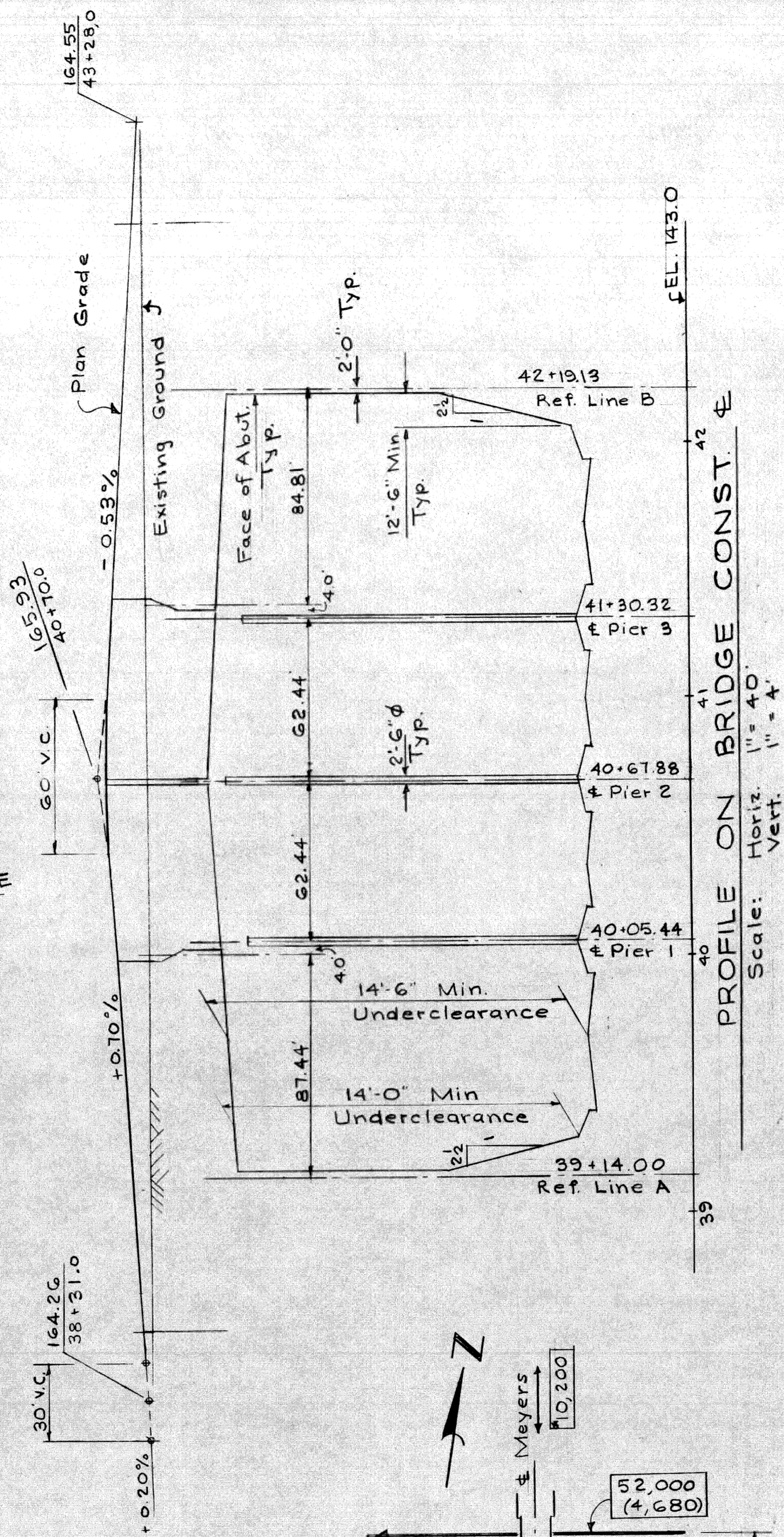
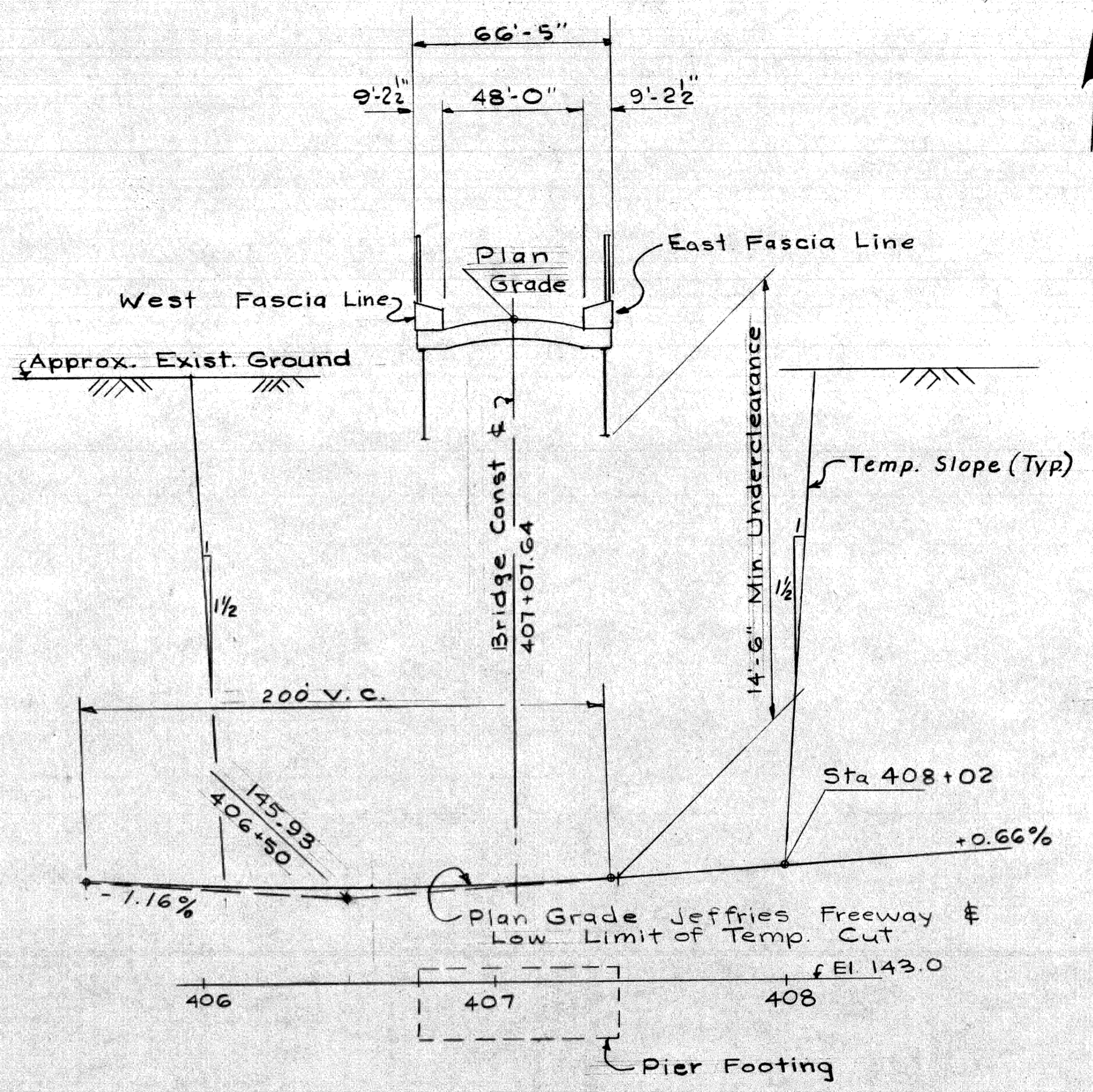


PLAN  
Scale: 1" = 40'



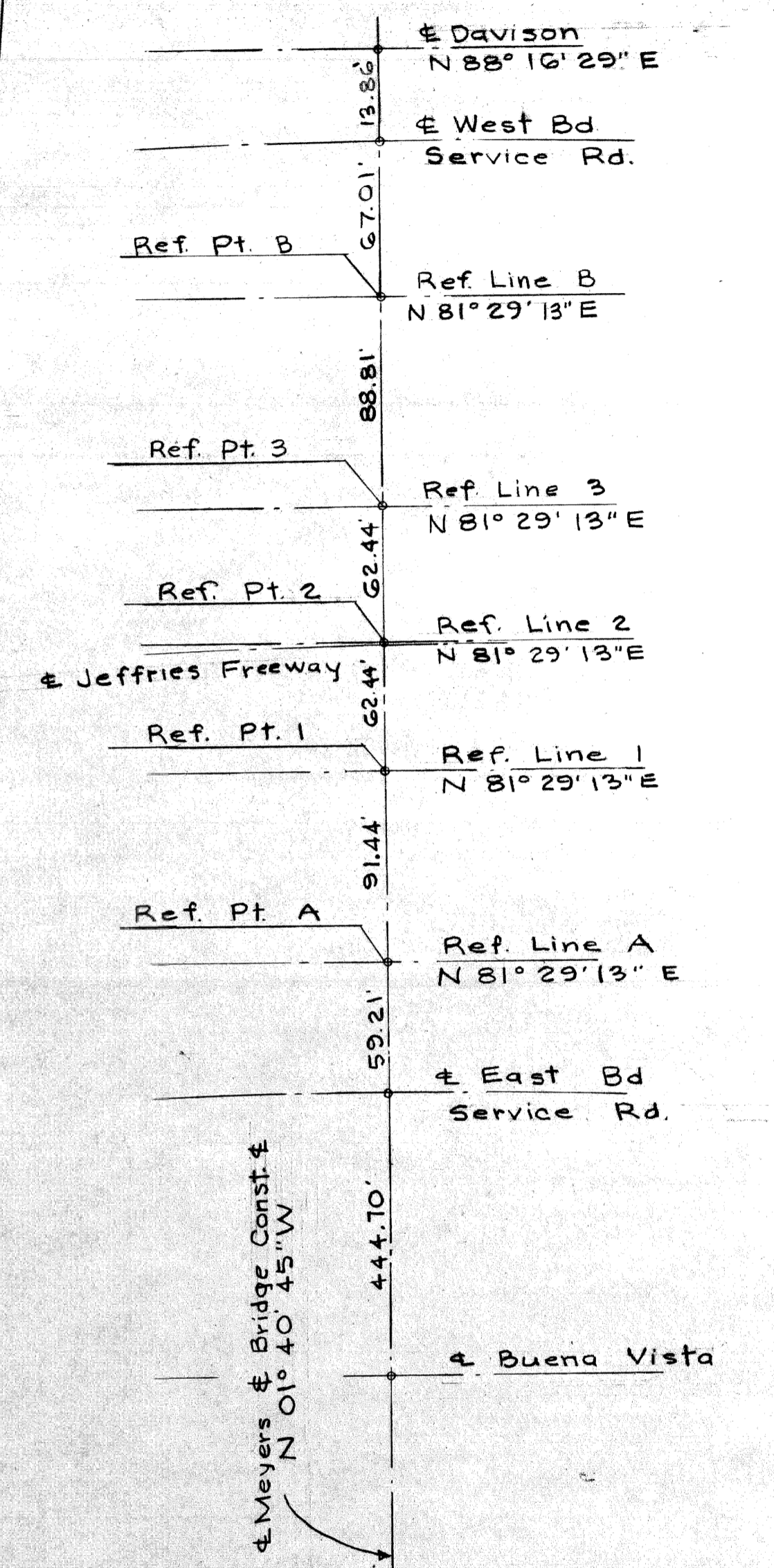
PROFILE ON BRIDGE CONST.  $\Phi$   
Scale: Horiz. 1" = 40', Vert. 1" = 4'



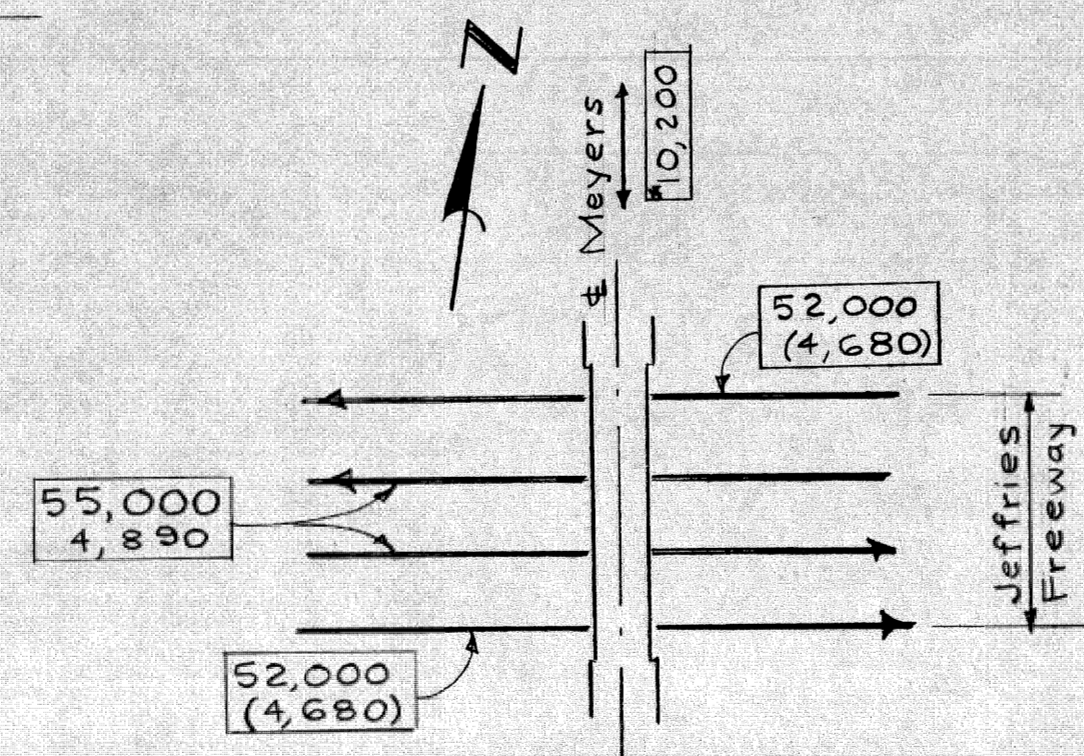
PROFILE ON  $\Phi$  JEFFRIES FREEWAY  
Scale: Horiz. 1" = 40', Vert. 1" = 4'

**CONSTRUCTION BENCH MARKS**  
 C.B.M. #9-250, Mon. Box on the S.E. Corner of Meyers & Schoolcraft. El. 166.49.  
 C.B.M. #39, Arrow on Fire Hydrant on the N.E. Corner of Meyers & Davison. El. 167.07

**NOTES:**  
 C.B.M. Denotes Construction Bench Mark.  
 o Denotes Reference Point or point of intersection.  
 Elevations are referred to City of Detroit Datum, which is 479.755 ft. above sea level.



ALIGNMENT DIAGRAM  
No Scale



0000 1990 Est Avg. Daily Traffic  
 (0000) 1990 Est Design Hour Vol.  
 00000 1965 Avg. Daily Traffic

TRAFFIC COUNT

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(21)

NO.	DESCRIPTION	DATE	BY

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

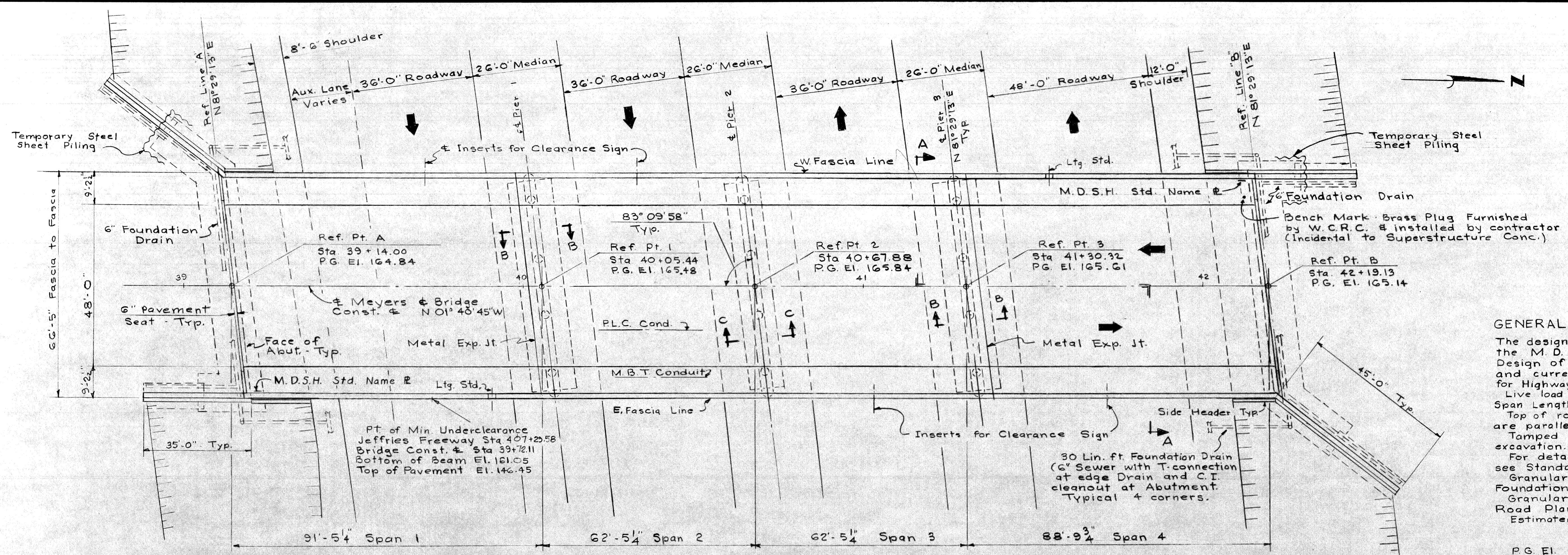
MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**GENERAL DRAWING**

APPROVED: \_\_\_\_\_ DESIGN SUPERVISING ENGINEER  
 APPROVED: \_\_\_\_\_ ENGINEER - DESIGN SECTION I

CITY OF DETROIT		
SQUAD BOSS	M'GOWAN	5-69
DRAWN BY	T.E.M.	6-69
CHECKED BY	I.K.	7-69

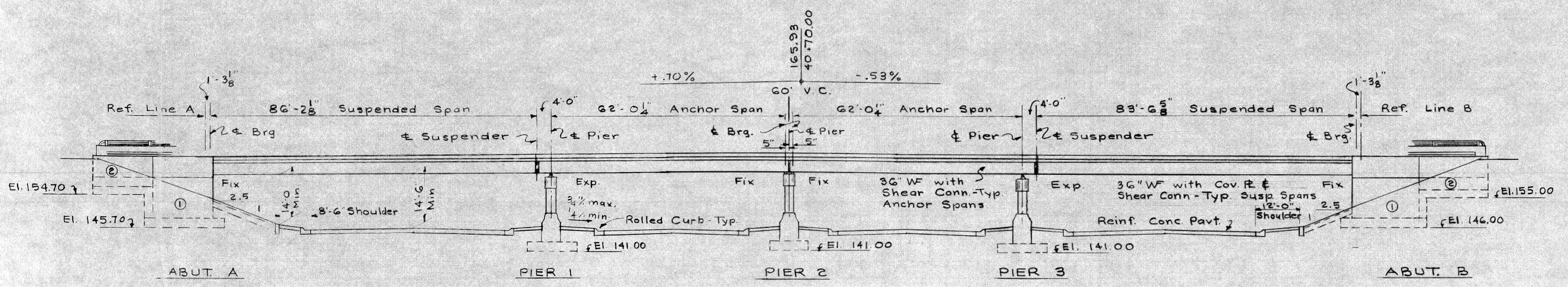
SHEET 3 OF 27  
**S17 of 82123 F**



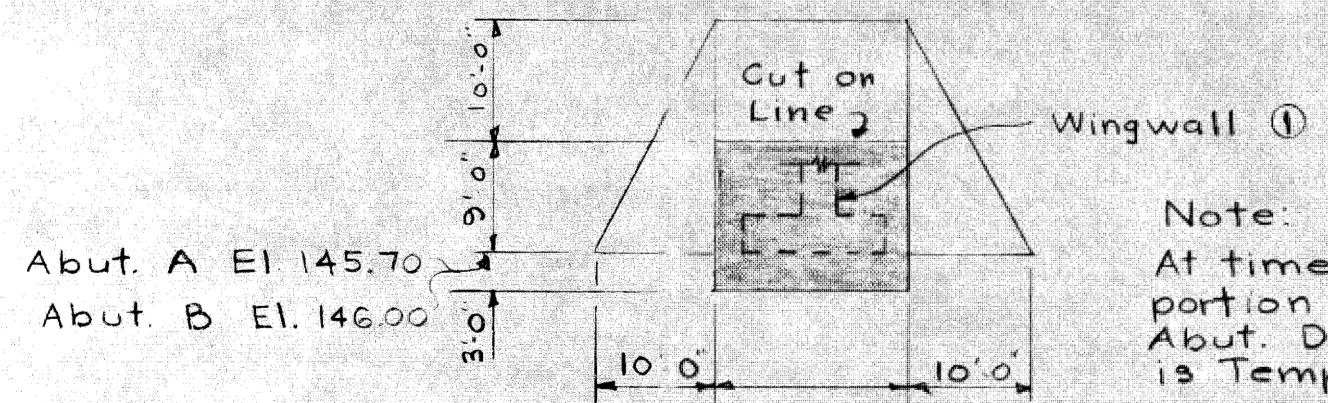
**GENERAL NOTES**

The design of this Structure is based on the M.D.S.H. Specifications for the Design of Highway Bridges, 1958 Edition and current AASHTO Standard Specifications for Highway Bridges HS 20-44 loading. Live load plus impact deflection = 1/1000 of Span Length and 1/375 of Cantilever Arm. Top of roadway slab and tops of curbs are parallel to the vertical curve. Tamped Clay is incidental to unclassified excavation. For details of Slope Protection Class A, see Standard Sheet SP2. Granular Material Class I incidental to Foundation Drain. Granular Material Class II is billed on Road Plans. Estimated Amount is: 1300 cu. yds. Abutments, 70 cu. yds. Slope Protection. P.G. El. Denotes Plan Grade Elevation. N.W. & S.W. Wingwalls, Section @ are to be constructed after removal of temporary detour road. Temporary steel sheet piling shall be of the continuous interlock type either new or used, in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Ladle analysis and mill reports are not required for steel used in Sheet Piling. Structural Steel shall be ASTM A588.

**PLAN**  
Scale: 1/16" = 1'-0"



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



Southwest or Northwest Wingwall (Developed)

**SHEET PILING PAY LIMITS**

MISCELLANEOUS QUANTITIES				
Item	Unit	Amount		
		Abut. A	Abut. B	Total
Temporary Steel Sheet Piling	Sq. Ft.	325	325	650
6" Foundation Drains	Lin. Ft.	60	60	120
Slope Protection - Class A	Sq. Yds.	100	100	200
Slope Protection Headers	Lin. Ft.	95	95	190
*Earth Excavation	Cu. Yds.	-	-	38,800

\* Road Plan Item

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CITY ENGINEERS OFFICE  
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURAL ENGINEER  
JOB No. PW 990(21)

REVISIONS

NO.	DESCRIPTION	DATE	BY

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

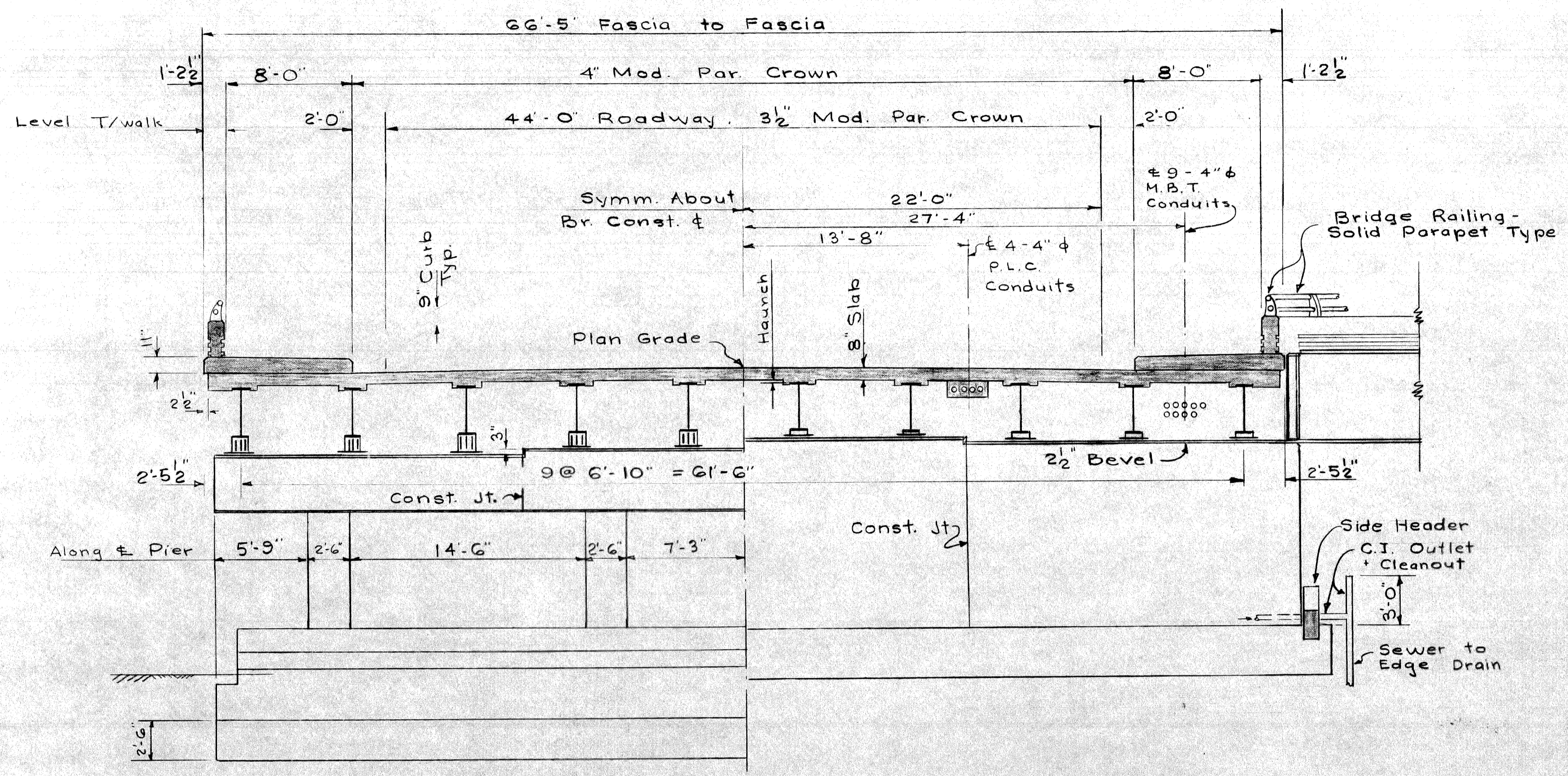
**GENERAL PLAN OF STRUCTURE**

CITY OF DETROIT

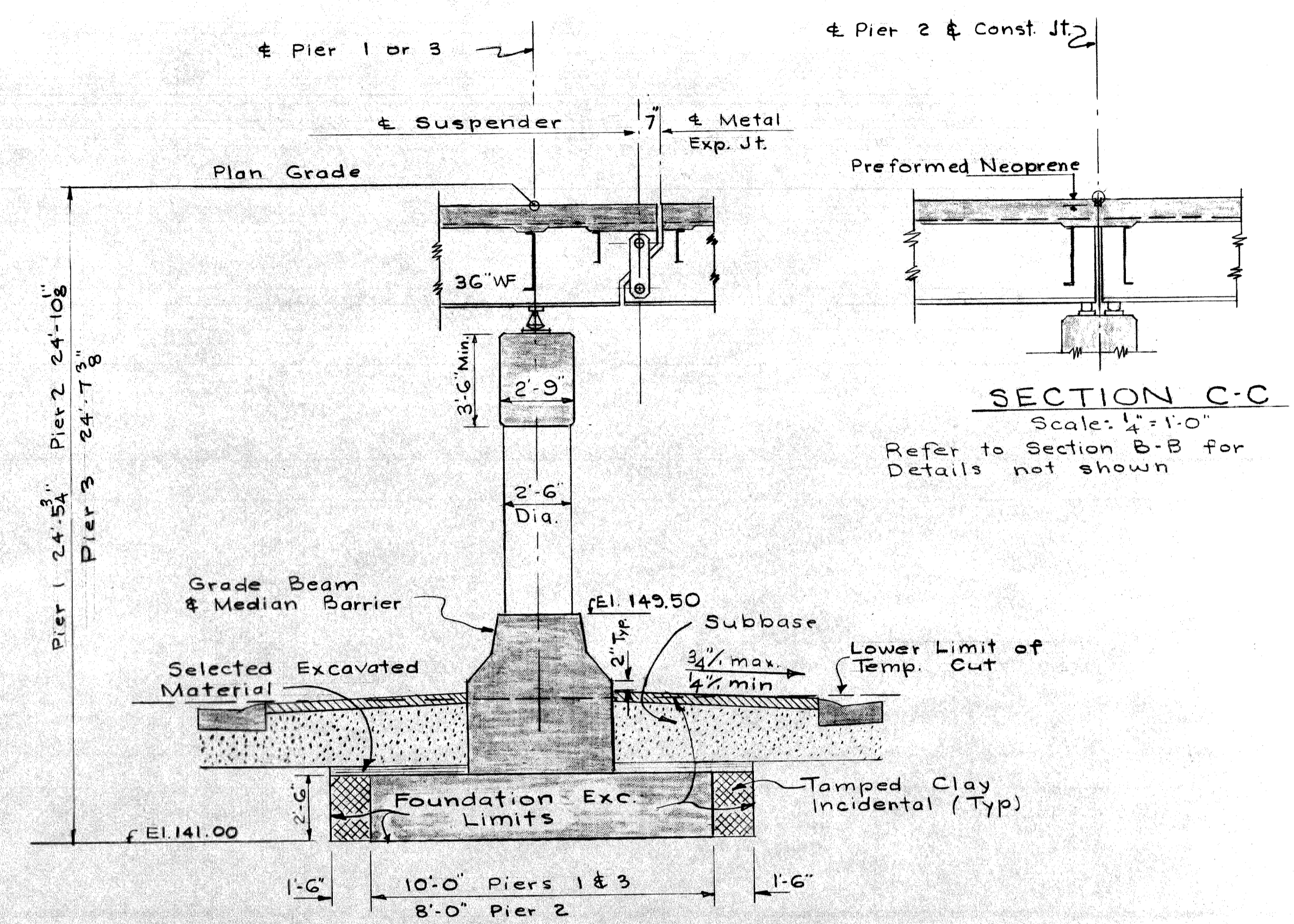
APPROVED: \_\_\_\_\_ DESIGN SUPERVISING ENGINEER  
APPROVED: \_\_\_\_\_ ENGINEER - DESIGN SECTION I

SQUAD BOSS: M. GOWAN 5-69  
DRAWN BY: T. M. G. 69  
CHECKED BY: L. R. 7-69  
SHEET 4 OF 27

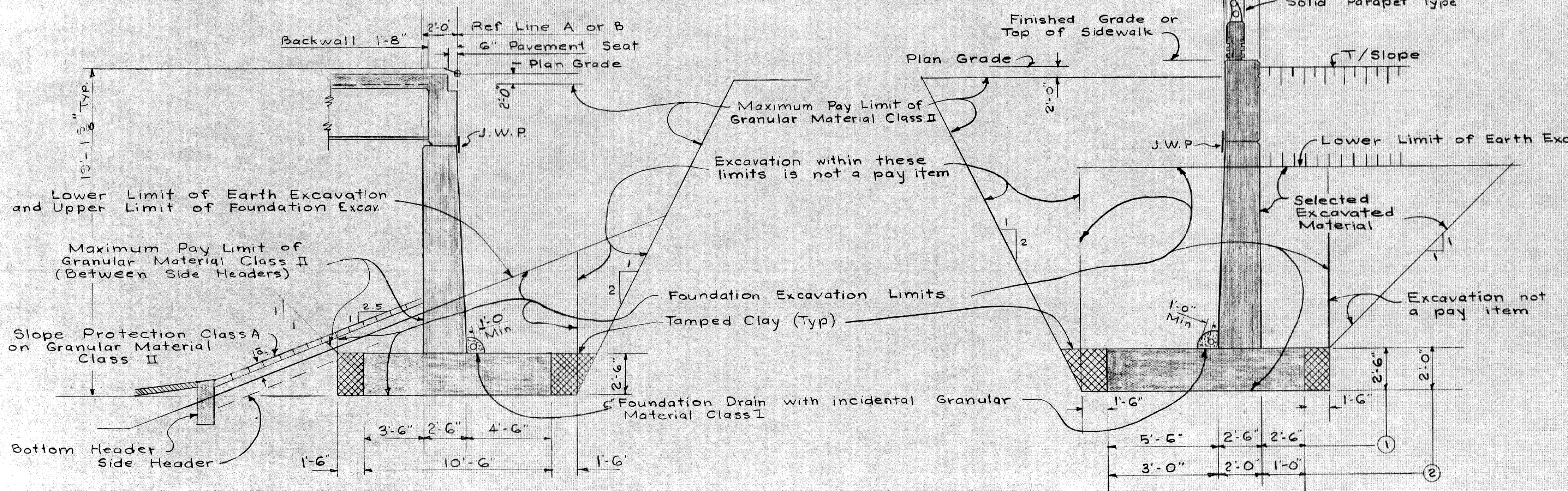
**S17 of 82123 F**



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



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



TYP ABUTMENT SECTION  
Scale: 1/4" = 1'-0"

TYP WINGWALL SEC.  
No Scale

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

APPROVED: *H. Cant*  
STRUCTURAL ENGINEER

JOB No.  
FW 990(21)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

GENERAL PLAN OF STRUCTURE

CITY OF DETROIT

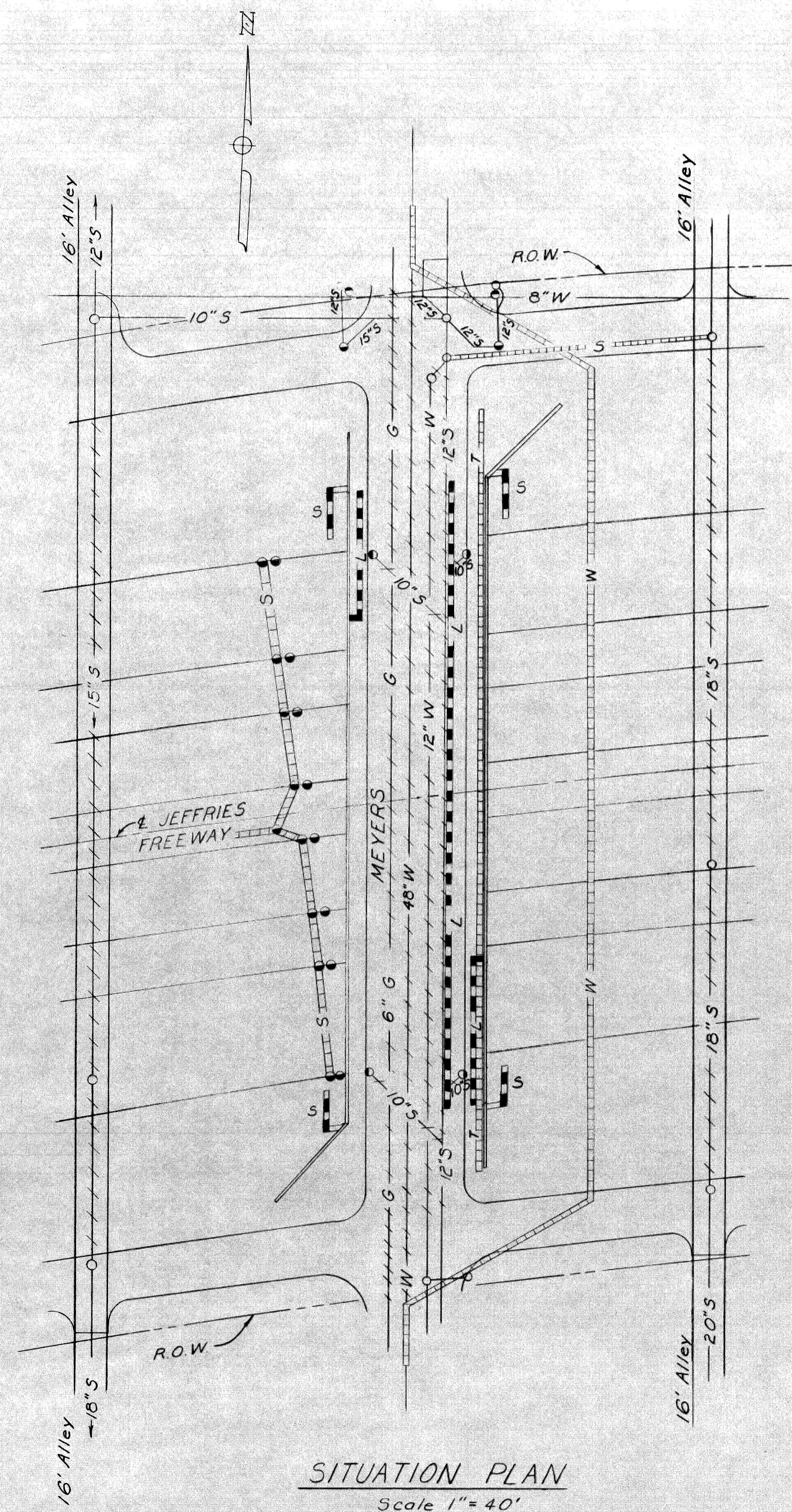
SQUAD BOSS	M'GOWAN	5-69
DRAWN BY	T. M.	6-69
TRACED BY	I. K.	7-69
CHECKED BY	I. K.	7-69

APPROVED: \_\_\_\_\_  
DESIGN SUPERVISING ENGINEER

APPROVED: \_\_\_\_\_  
ENGINEER - DESIGN SECTION I

SHEET 5 OF 27

S17 of 82123 F



SITUATION PLAN  
Scale 1" = 40'

**LEGEND**

UTILITY	EXISTING	DELETE OR ABANDONED	NEW WORK BY OTHERS	NEW WORK BY CONTRACTOR
DETROIT WATER DEPARTMENT	—W—	+++W+++	W	—S—
FREEWAY & CITY OF DETROIT SEWERS	—S—	+++S+++	S	—S—
MICHIGAN CONSOLIDATED GAS CO.	—G—	+++G+++	G	—S—
MICHIGAN BELL TELEPHONE CO.	—T—		T	—S—
PUBLIC LIGHTING COMMISSION	—L—			—S—
DETROIT EDISON COMPANY	—E—			—S—

**NOTE:**  
 Bridge construction and utility alterations are included in package contract for Control Section 82123 F.  
 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.

**NOTE:**  
 The sewer inlets on the Freeway are located approximately at the low points.

PLANS PREPARED BY  
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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]*  
 STRUCTURAL ENGINEER

JOB No.  
 FW 990(21)

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

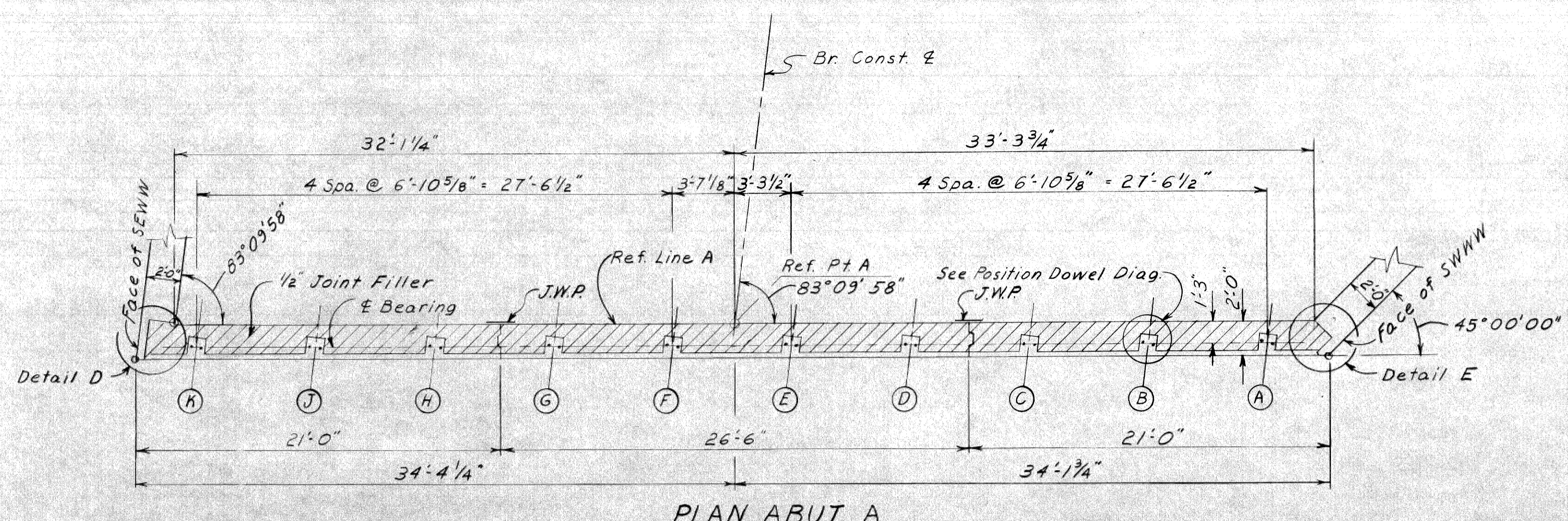
MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**EXISTING UTILITIES AND  
 PROPOSED ALTERATIONS**

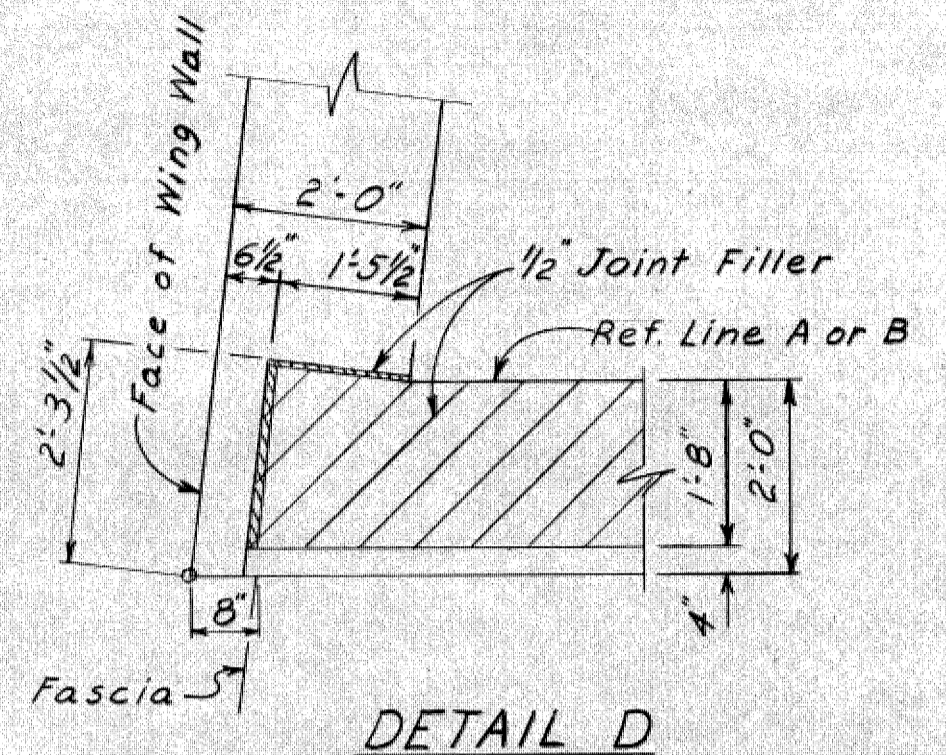
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT		
SQUAD BOSS	MCGOWAN	5-63
DRAWN BY	A. M.	6-63
TRACED BY		
CHECKED BY	I. K.	7-63
SHEET 6 OF 27		

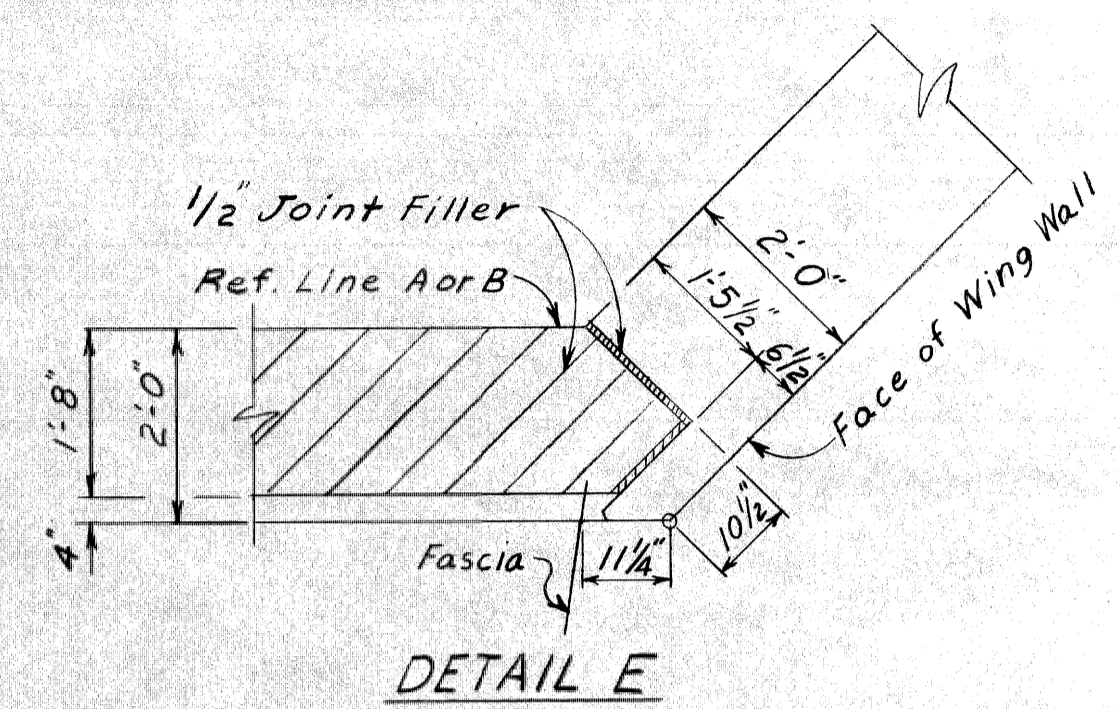
S17 of 82123 F



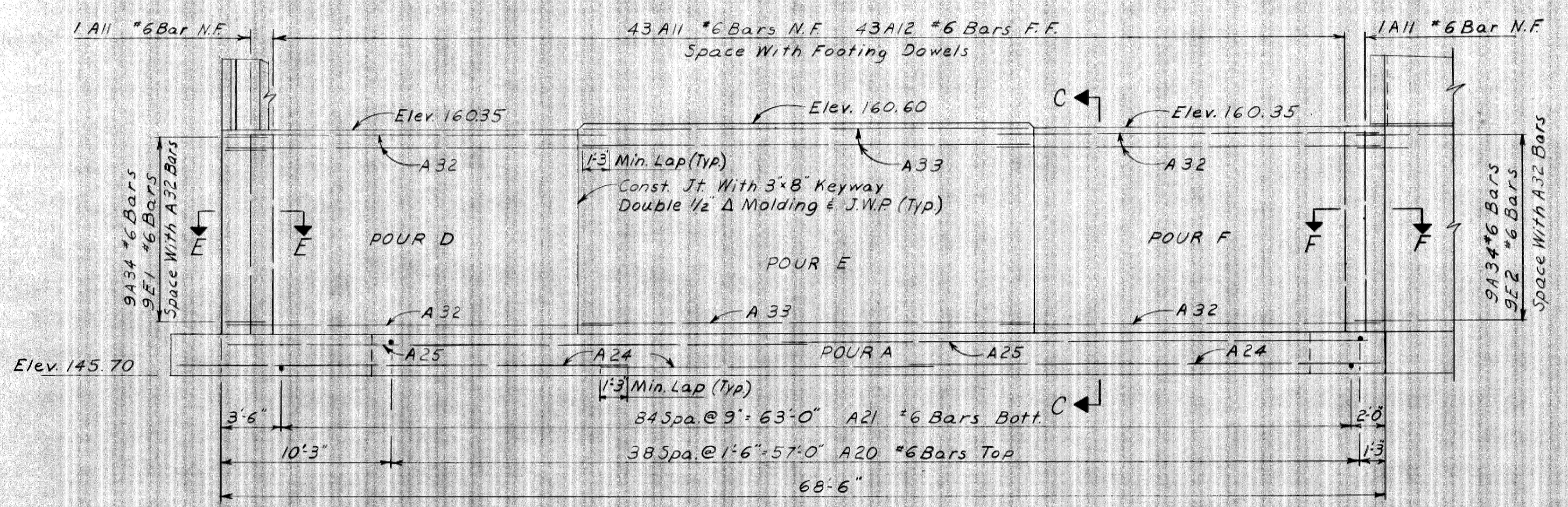
PLAN ABUT. A



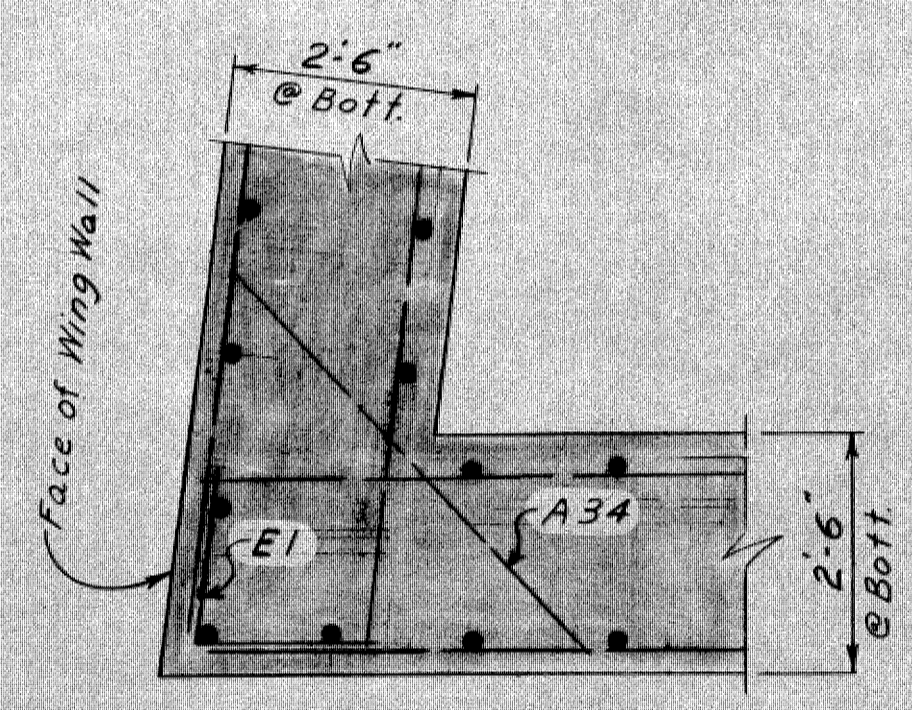
DETAIL D



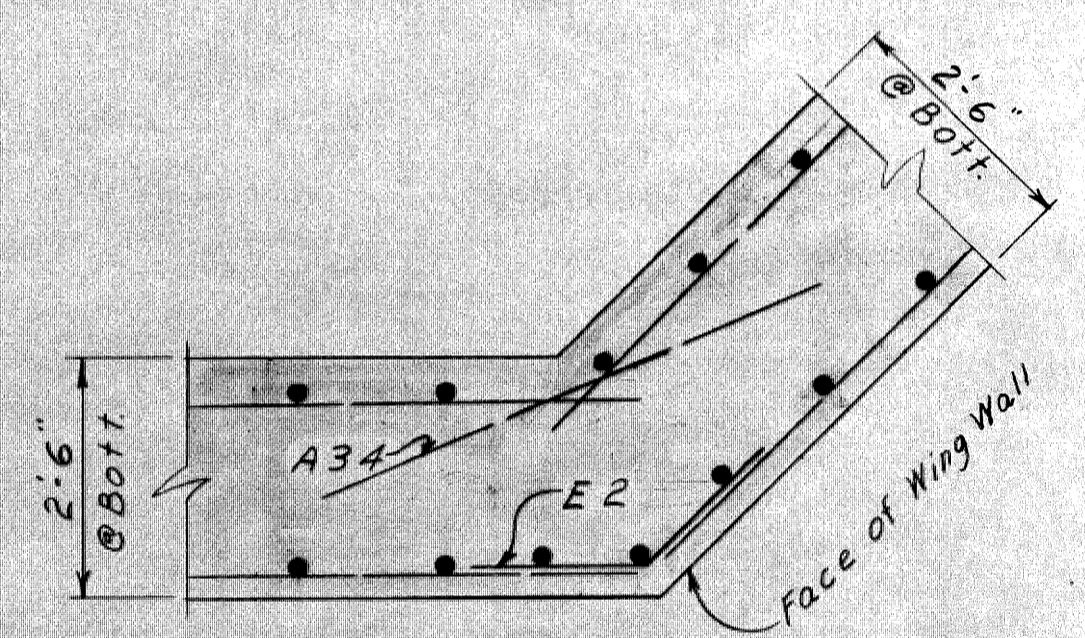
DETAIL E



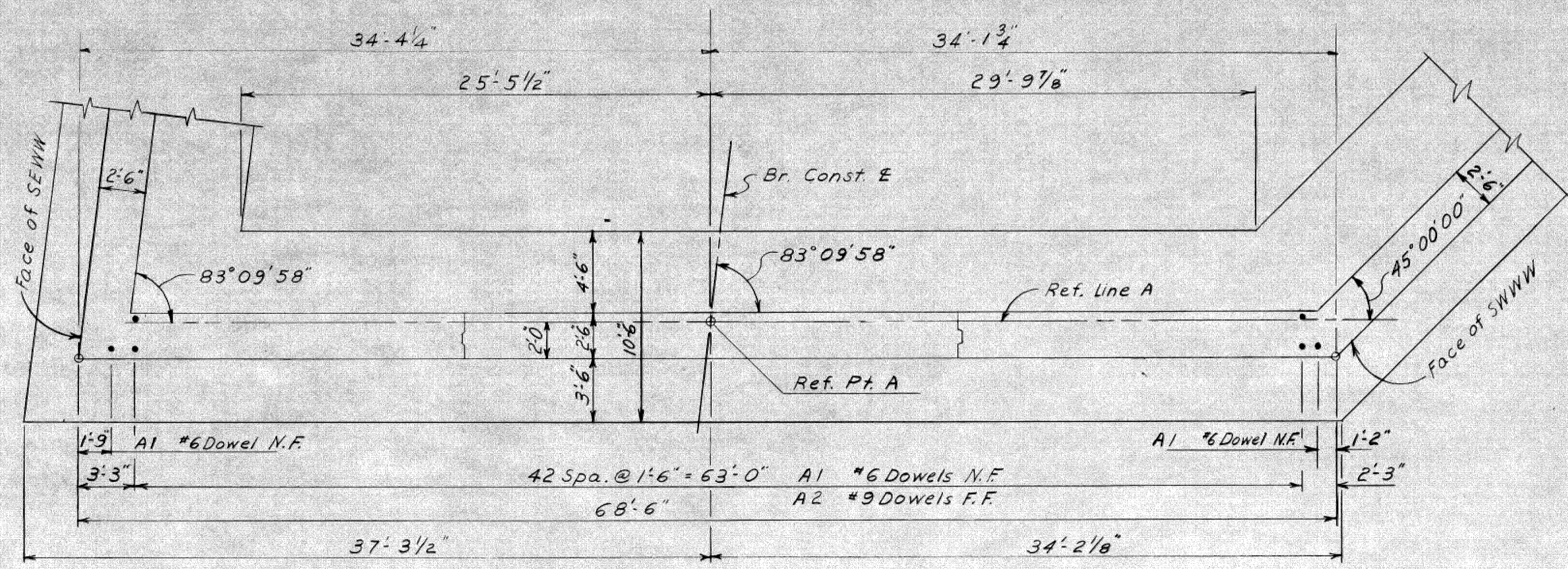
ELEVATION



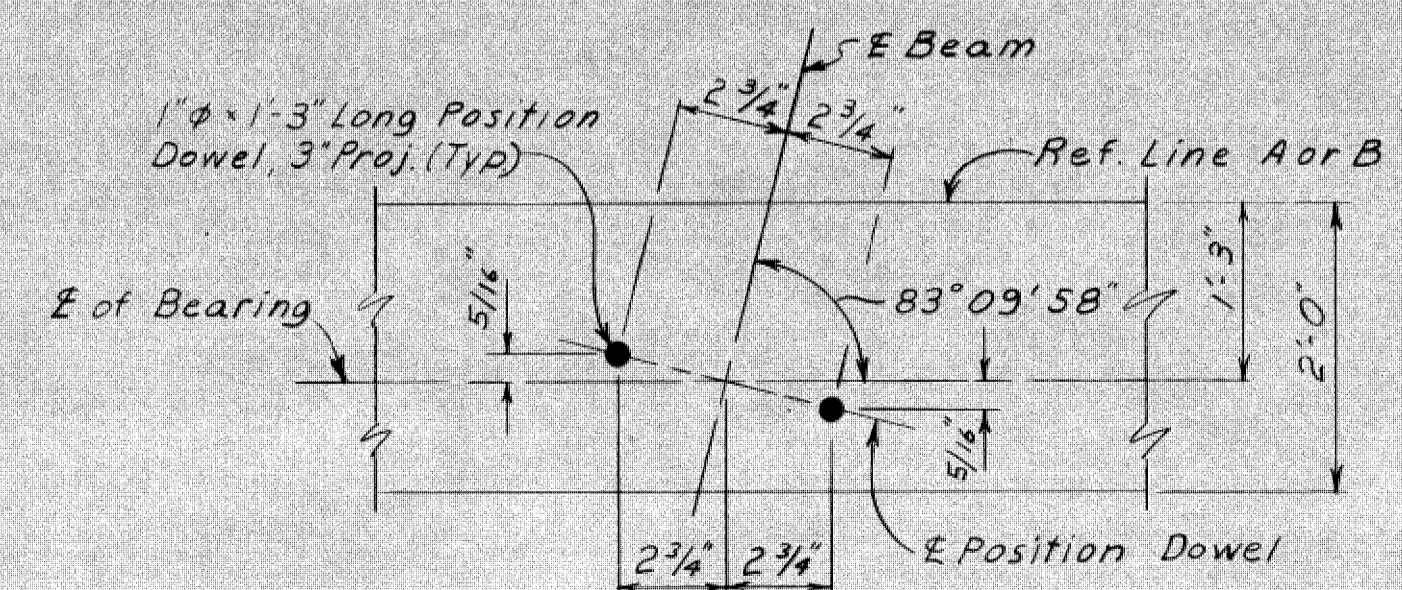
SECTION E-E



SECTION F-F



FOUNDATION PLAN



POSITION DOWEL DIAG.

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(21)

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

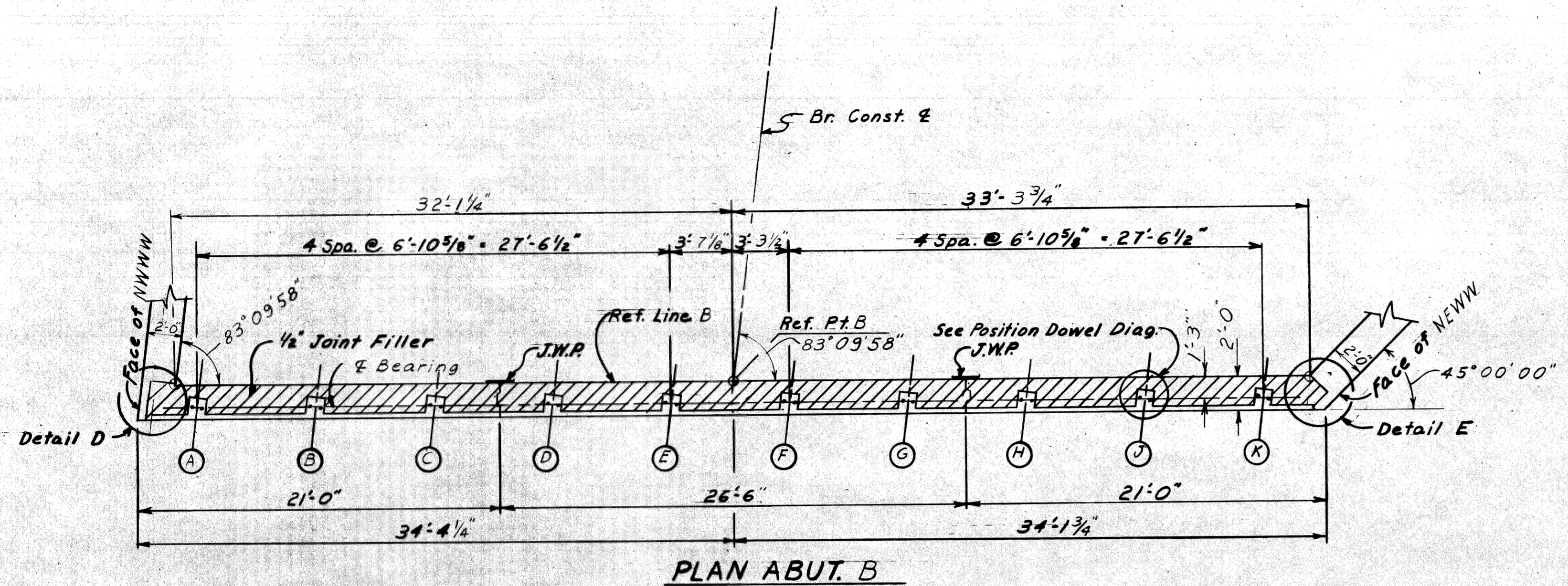
**ABUTMENT A DETAILS**

CITY OF DETROIT

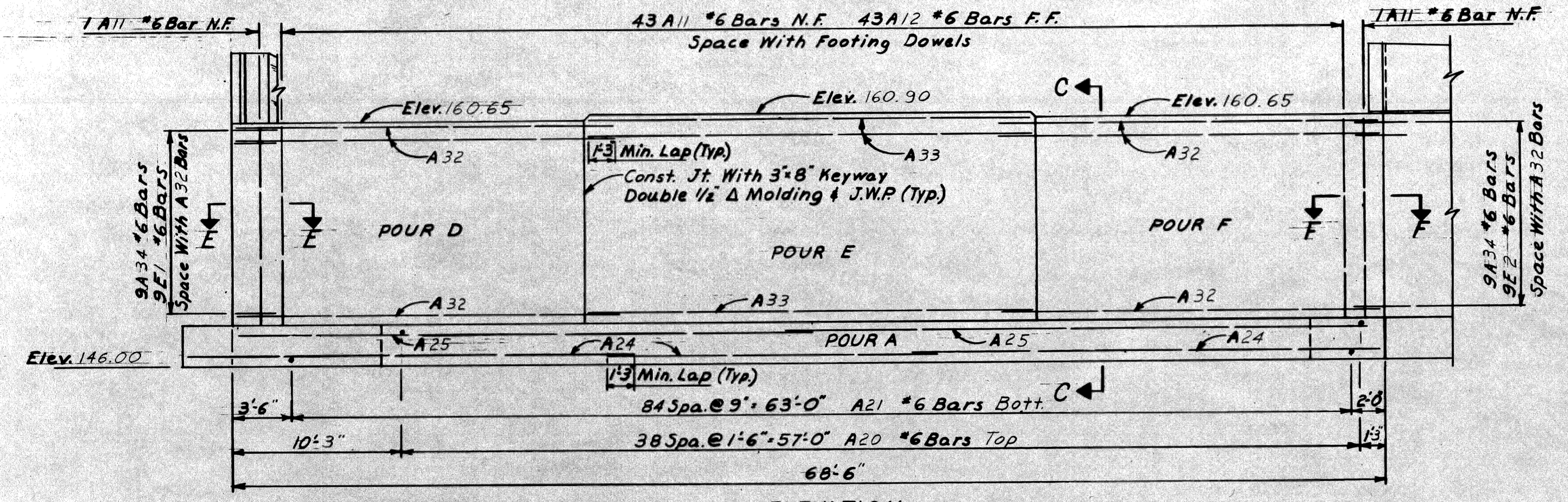
SQUAD BOSS: MYGOWAN 1-70  
 DRAWN BY: D.L.N. 10-24-92  
 CHECKED BY: E.H.P. 11-21  
 SHEET 7 OF 27

NO.	DESCRIPTION	DATE	BY

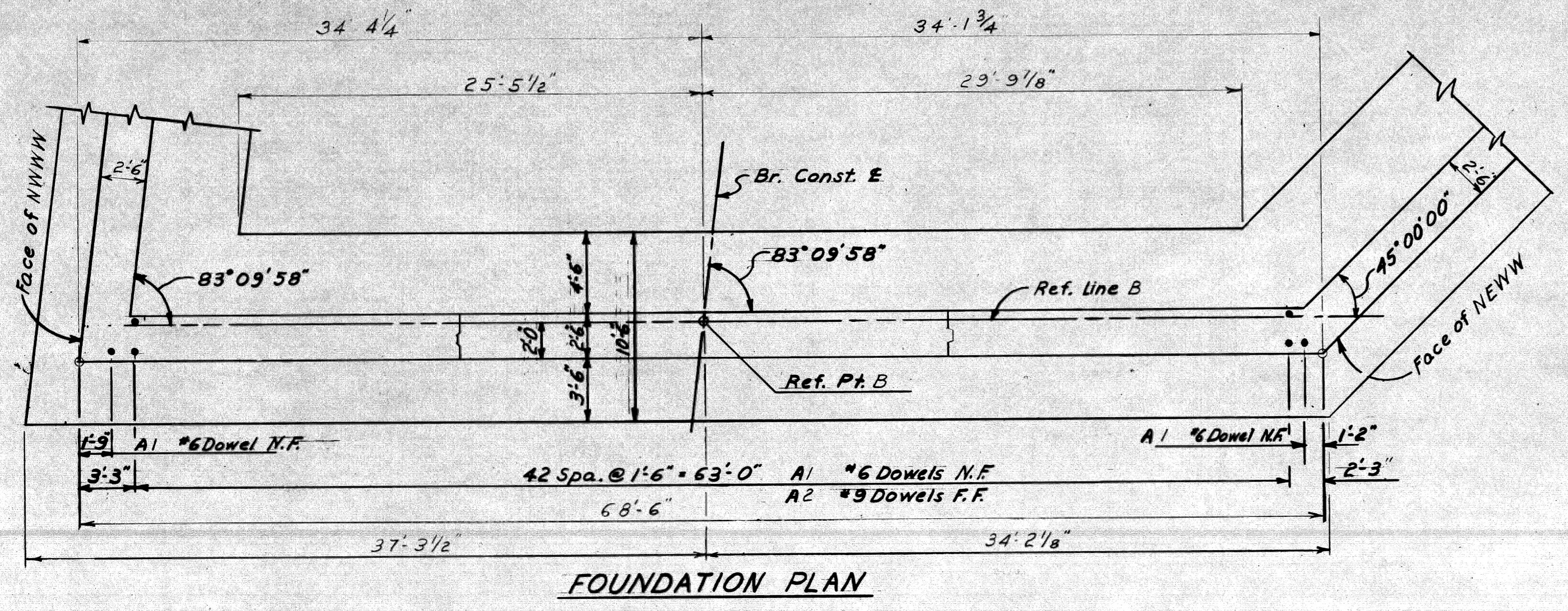
S17 of 82123 F



PLAN ABUT. B



ELEVATION



FOUNDATION PLAN

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

APPROVED \_\_\_\_\_  
 STRUCTURAL ENGINEER

JOB No.  
 FW 990(21)

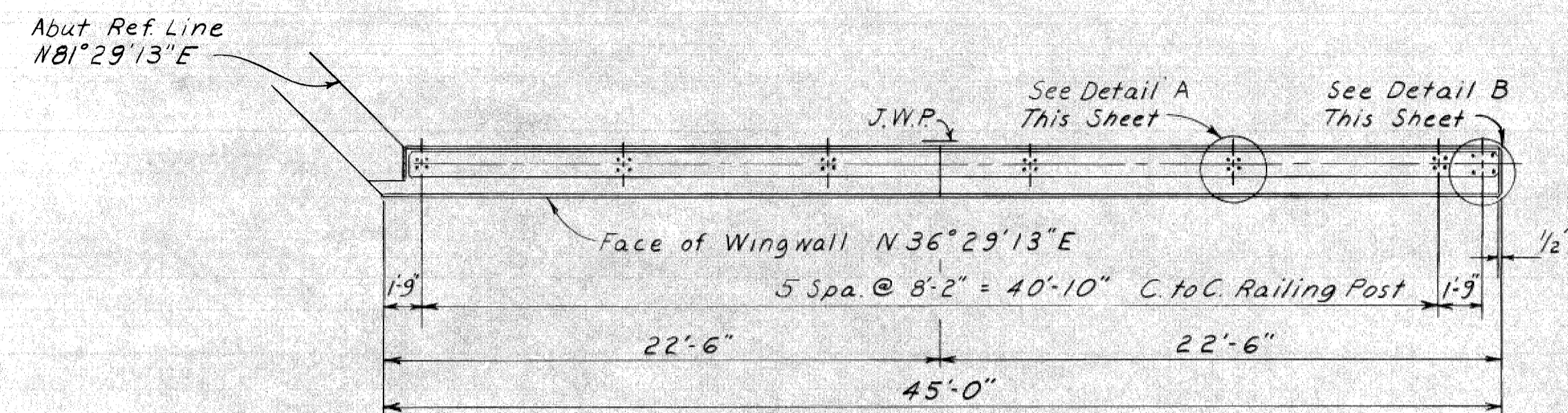
**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
 MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**ABUTMENT B DETAILS**

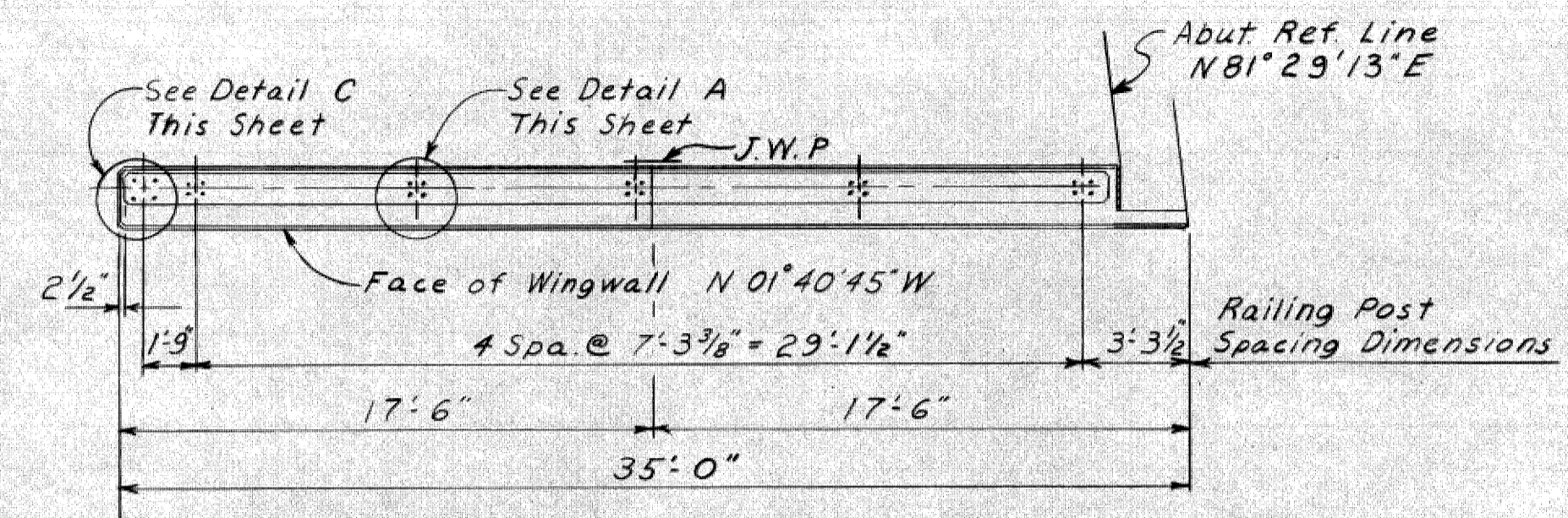
REVISIONS			
NO.	DESCRIPTION	DATE	BY

DRAWN BY	DLN	1-70
TRACED BY		10-69
CHECKED BY		1-69
SHEET	2	OF 27

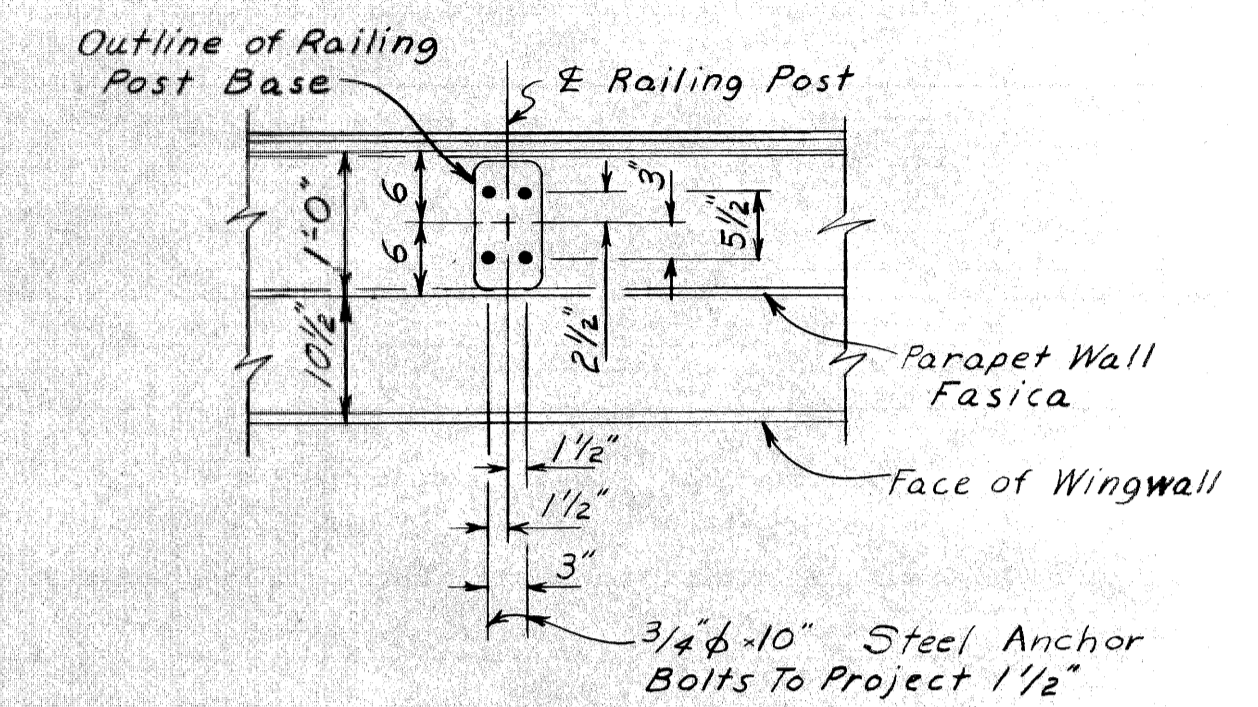
S17 of 82123 F



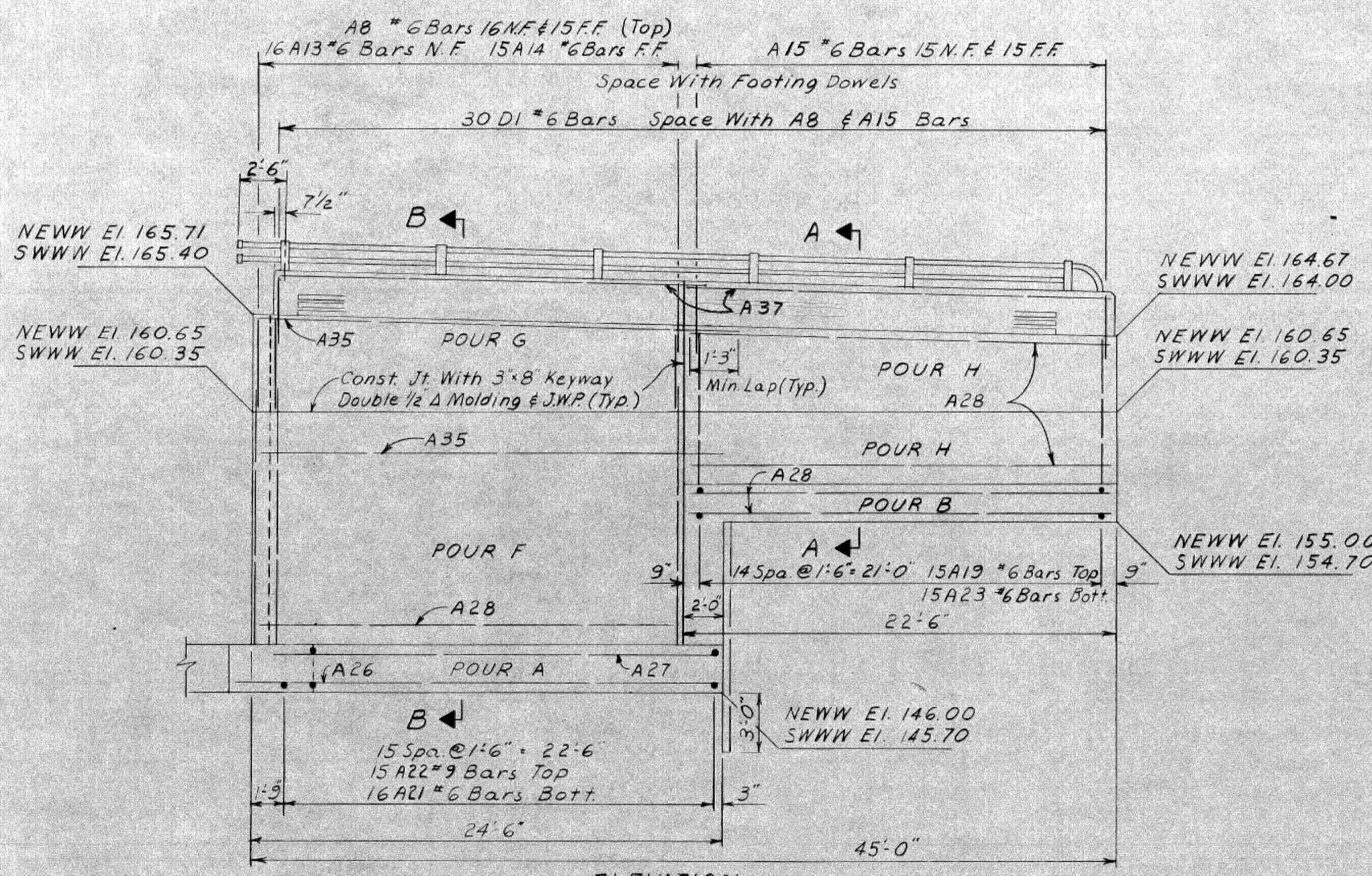
PLAN  
(NEWW & S.W.W.W)



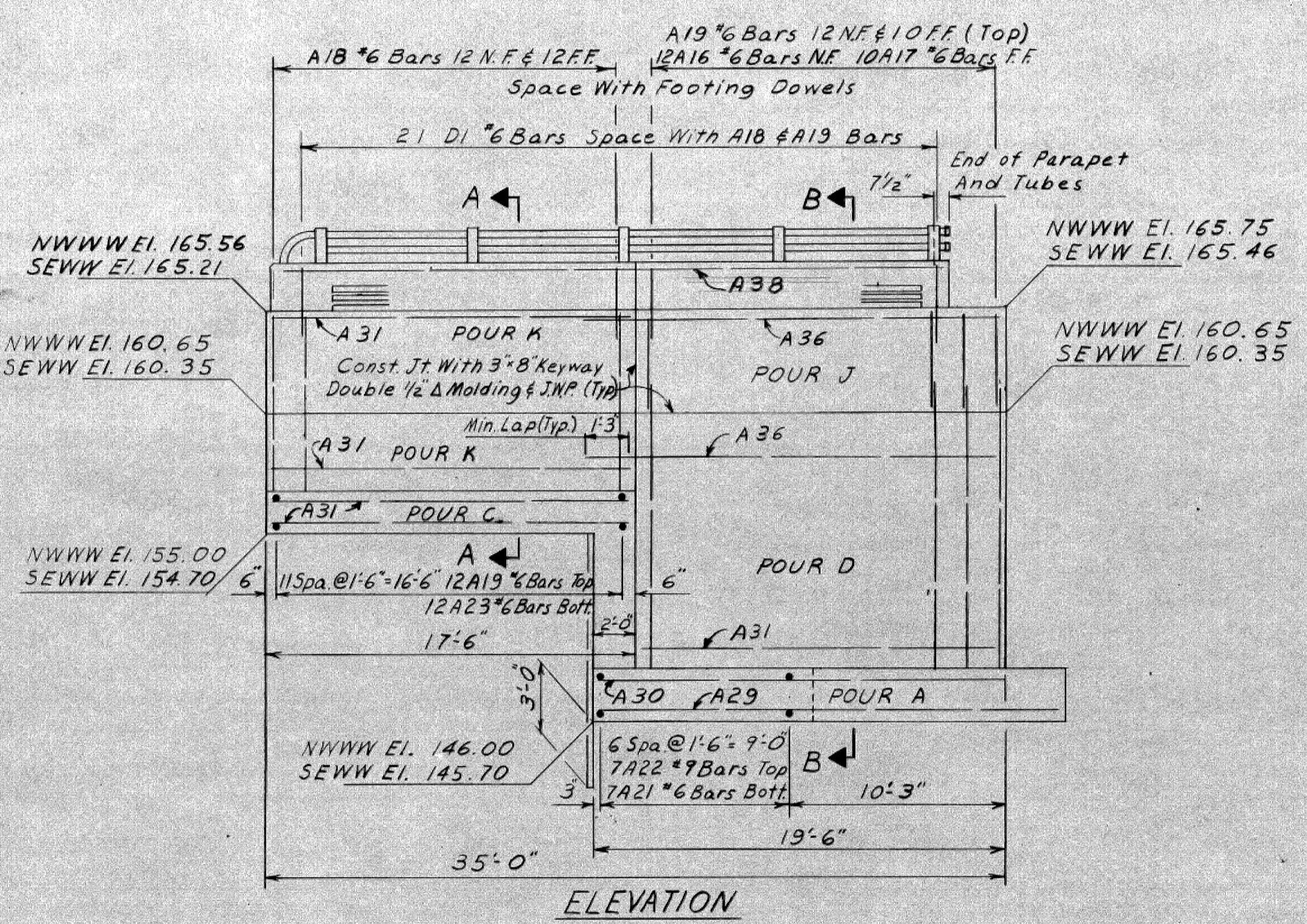
PLAN  
(N.W.W.W & S.E.W.W)



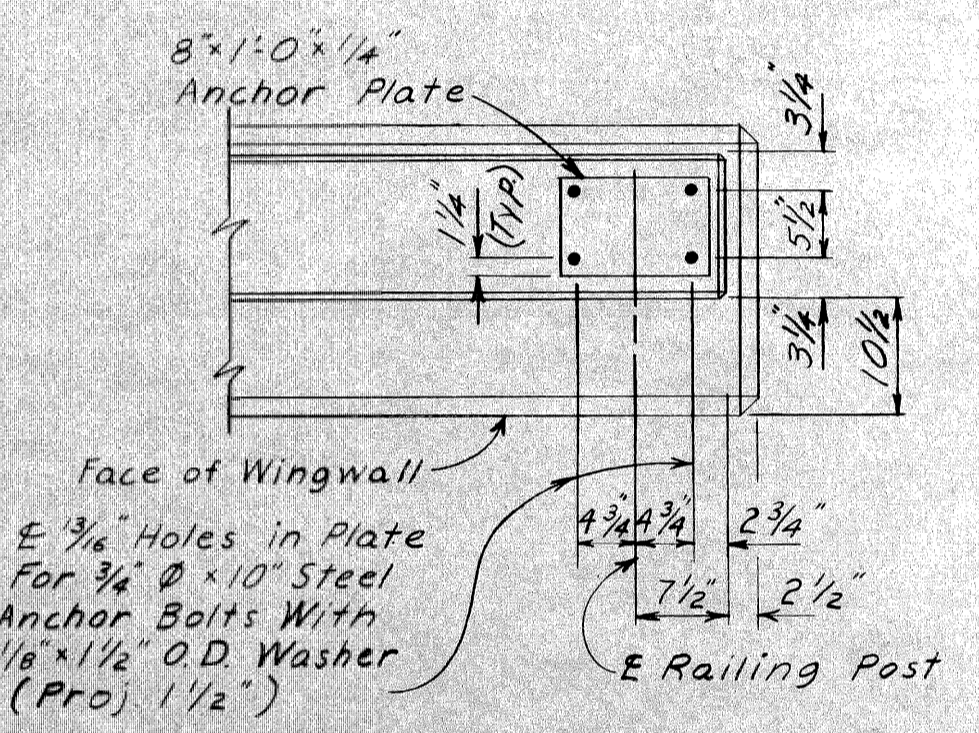
DETAIL A



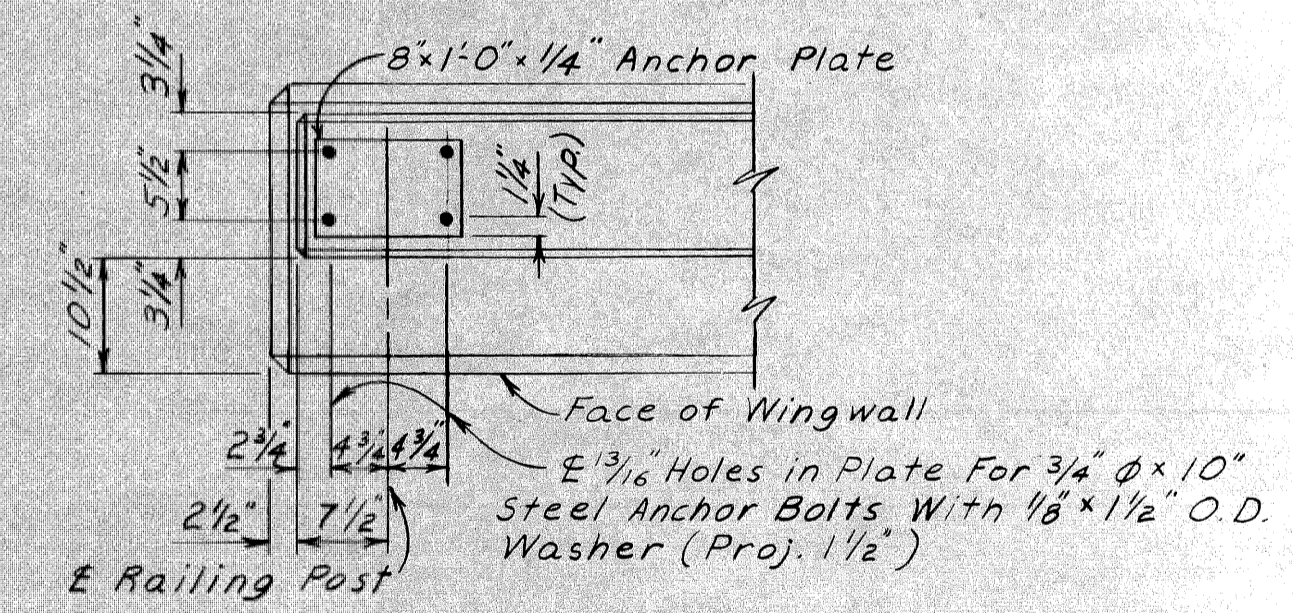
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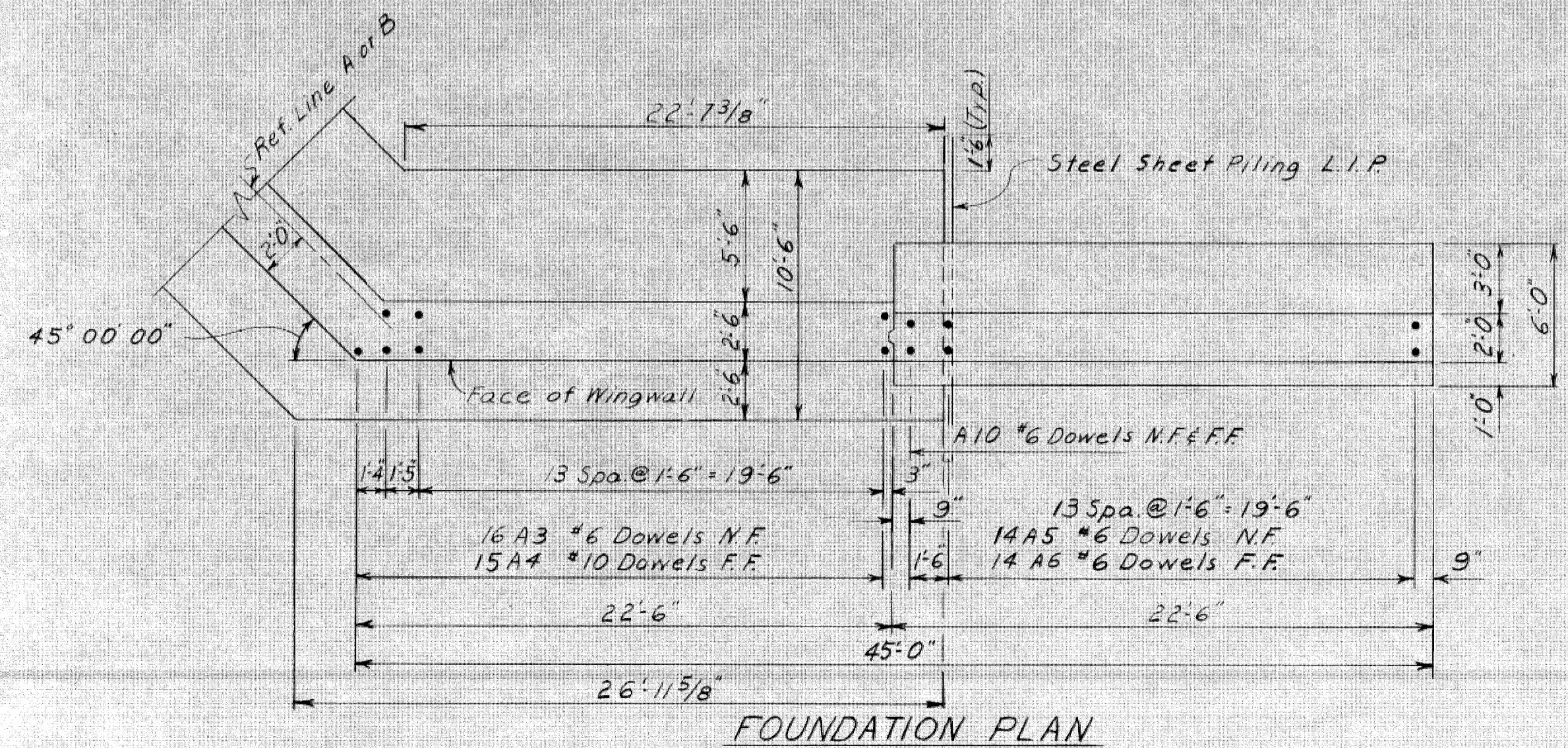
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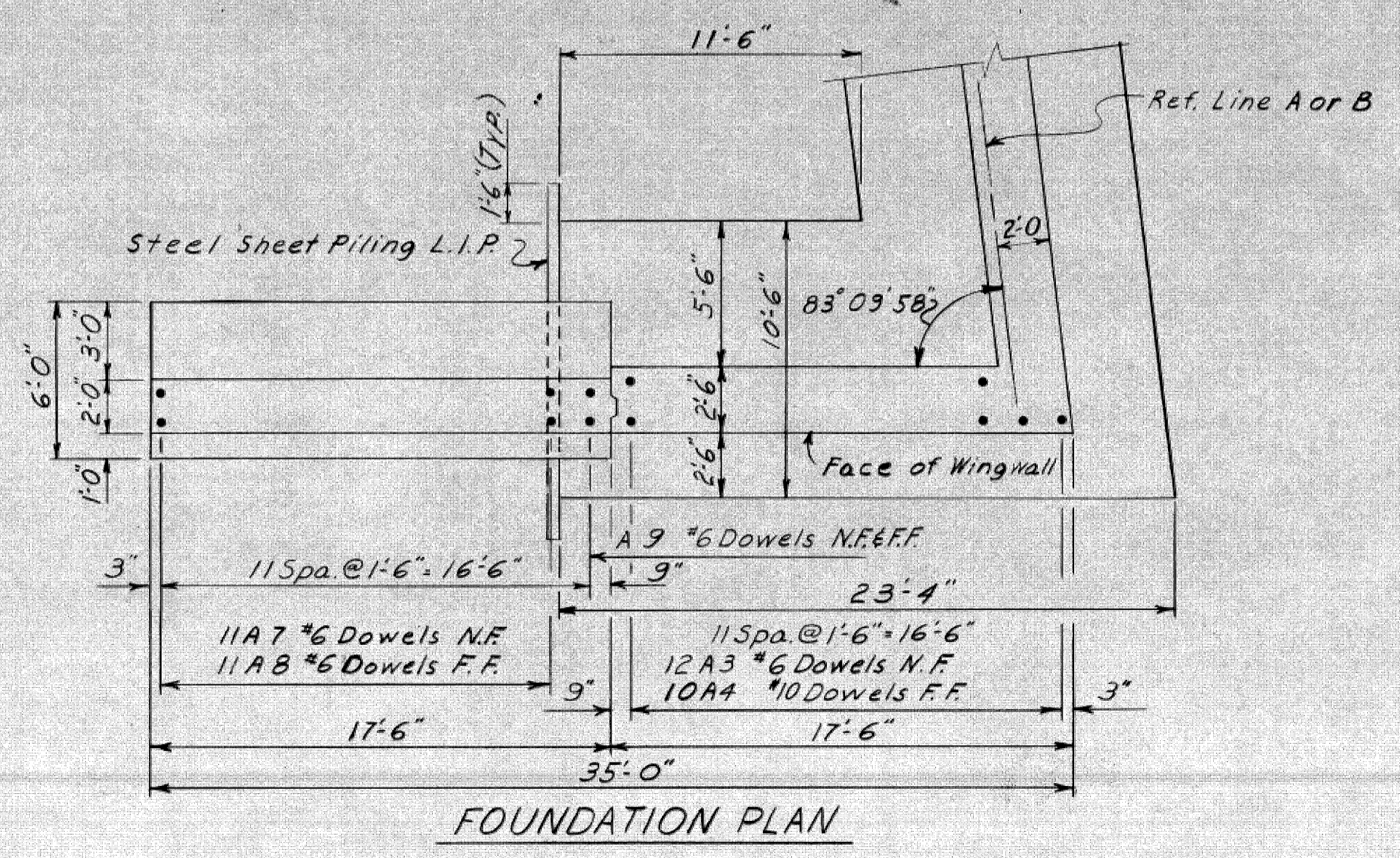
DETAIL B



DETAIL C



FOUNDATION PLAN



FOUNDATION PLAN

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(21)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

WINGWALL DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS: MICHIGAN 1-70

DRAWN BY: DLN 10-63

TRACED BY: J.H.K. 1-67

CHECKED BY: J.H.K. 1-67

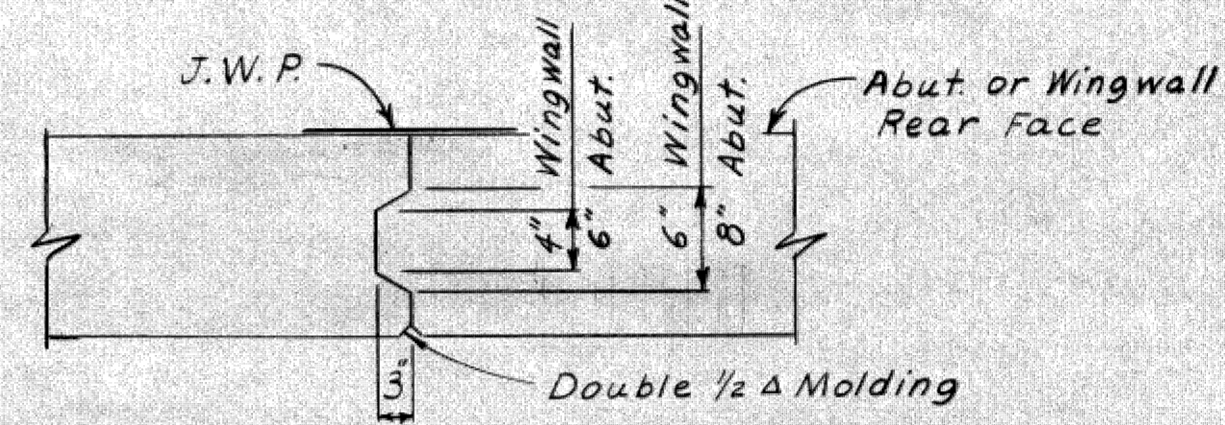
SHEET 3 OF 27

S17 of 82123 F

MISCELLANEOUS QUANTITIES				
ITEM	UNIT	AMOUNT		
		ABUT. A	ABUT. B	TOTAL
Unclassified Excavation	Cu. Yds.	468	457	925
Steel Sheet Piling (L.I.P.)	Sq. Ft.	324	324	648
Clear Protective Coating For Substructure Concrete	Sq. Ft.	972	972	1944
Low Temp. Protection - Substr. Conc.	Cu. Yds.	271	271	542
1/2" Joint Filler	Sq. Ft.	128	128	256
Joint Waterproofing	Sq. Ft.	113	114	227
Bridge Railing - Solid Parapet Type	Lin. Ft.	76.0	76.0	152
6" Foundation Drains *	Lin. Ft.	158	158	316

CONCRETE QUANTITIES (Cu. Yds.)					
POUR	LOCATION	ABUTMENT A		ABUTMENT B	
		A(6A)	A(6AA)	A(6A)	A(6AA)
A	Footing	103.0		103.0	
B	Footing (N.E. & S.W.W)	12.9		12.9	
C	Footing (N.W. & S.E.W.W)	10.7		10.7	
D	Abut. Wall		36.4		36.4
E	Abut. Wall		27.4		27.4
F	Abut. Wall		42.9		42.9
G	Wingwall (N.E. & S.W)		7.7		7.8
H	Wingwall (N.E. & S.W)		12.8		13.2
J	Wingwall (N.W. & S.E)		5.9		5.9
K	Wingwall (N.W. & S.E)		11.1		11.2
Total		126.6	144.2	126.6	144.8
Grade A(6A) Concrete - Substructure		253.2 Cu. Yds.			
Grade A(6AA) Concrete - Substructure		289.0 Cu. Yds.			

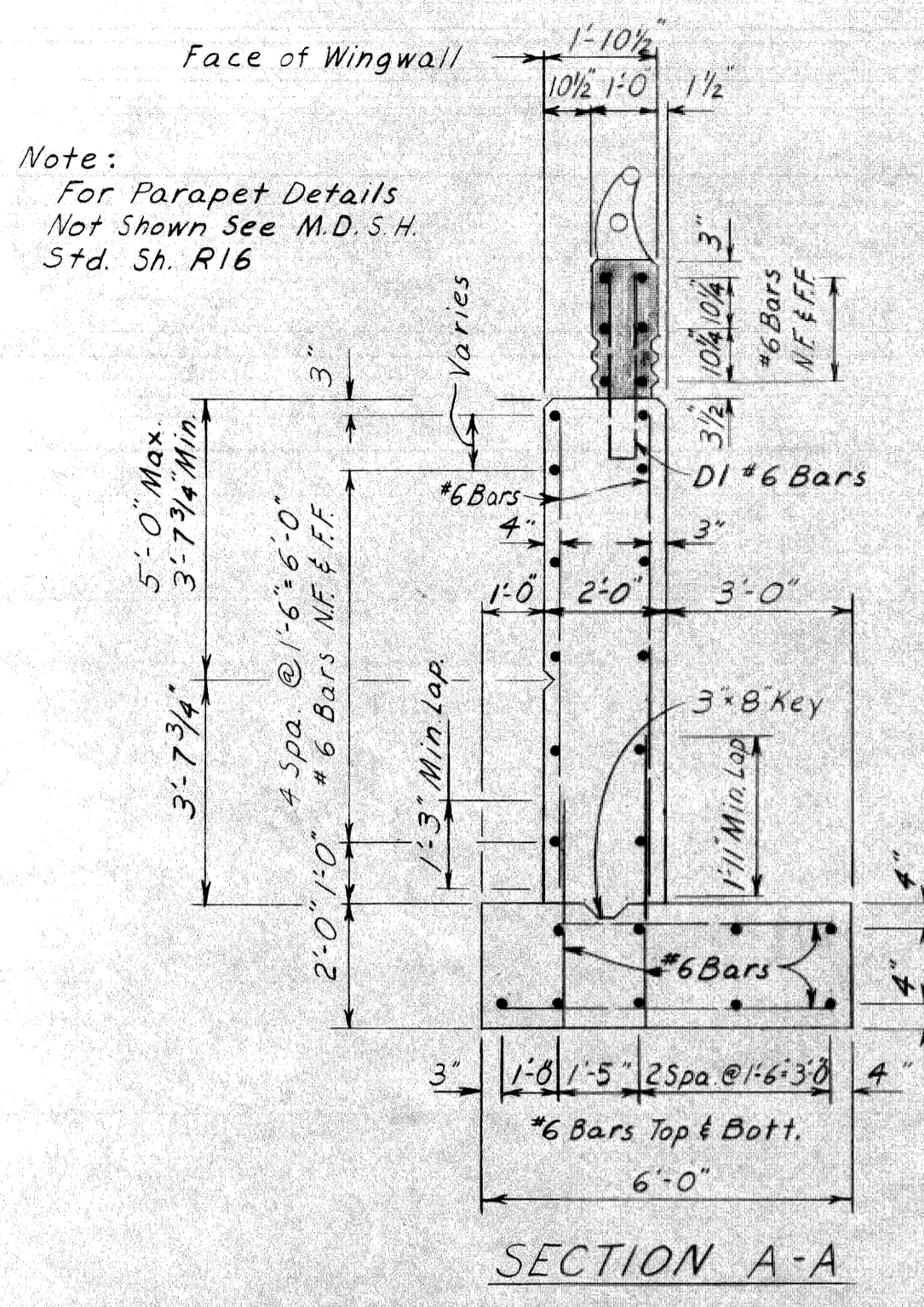
\* 6" Foundation Drains shall be perforated pipe, sloped 1/8 in./ft. min, continuous over the length of the Abutment and Wingwall Footings, and placed as shown on the General Plan of Structure.



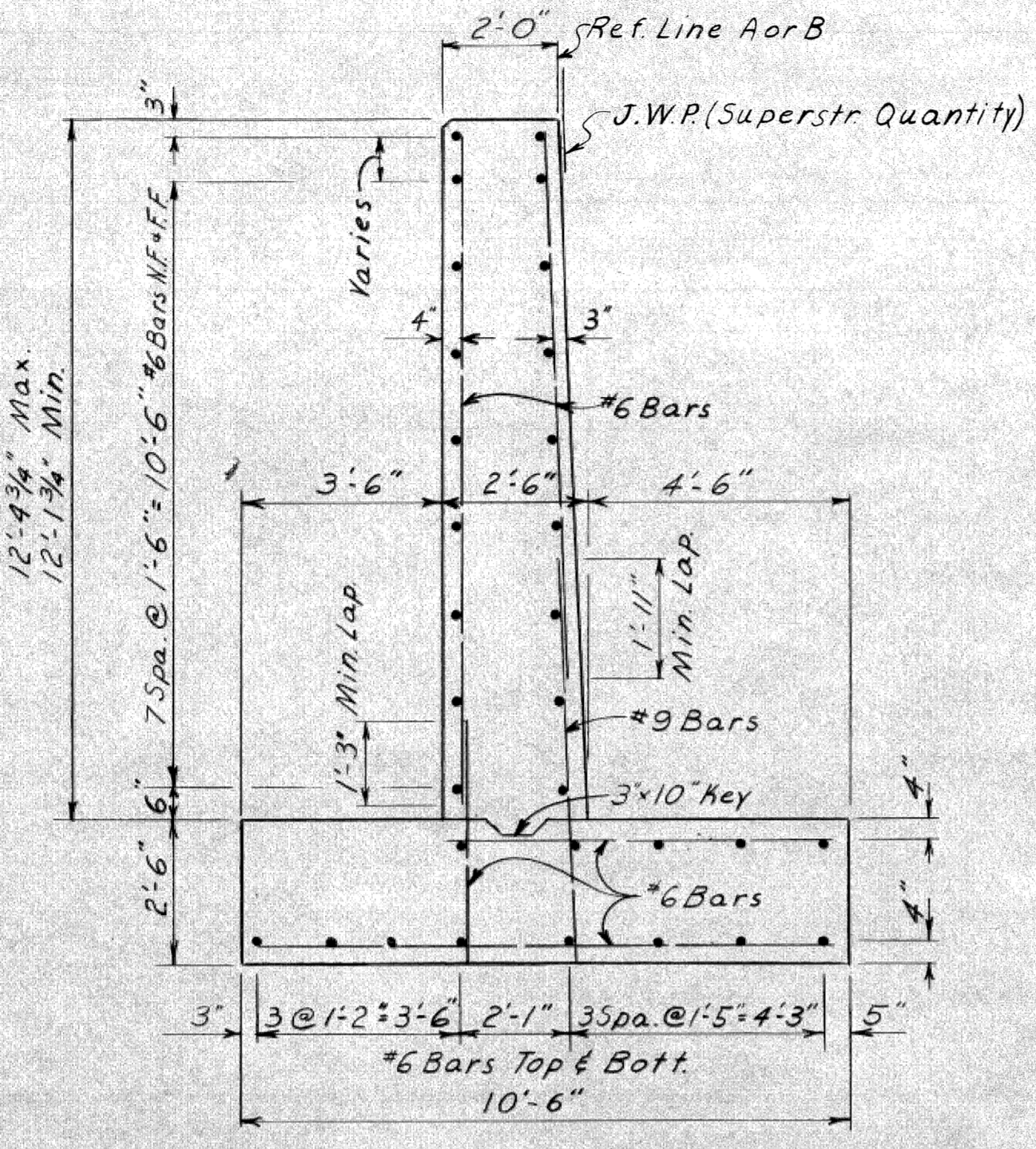
Note: Stop all keyways 1'-0" below top of Wingwalls.

GENERAL NOTES

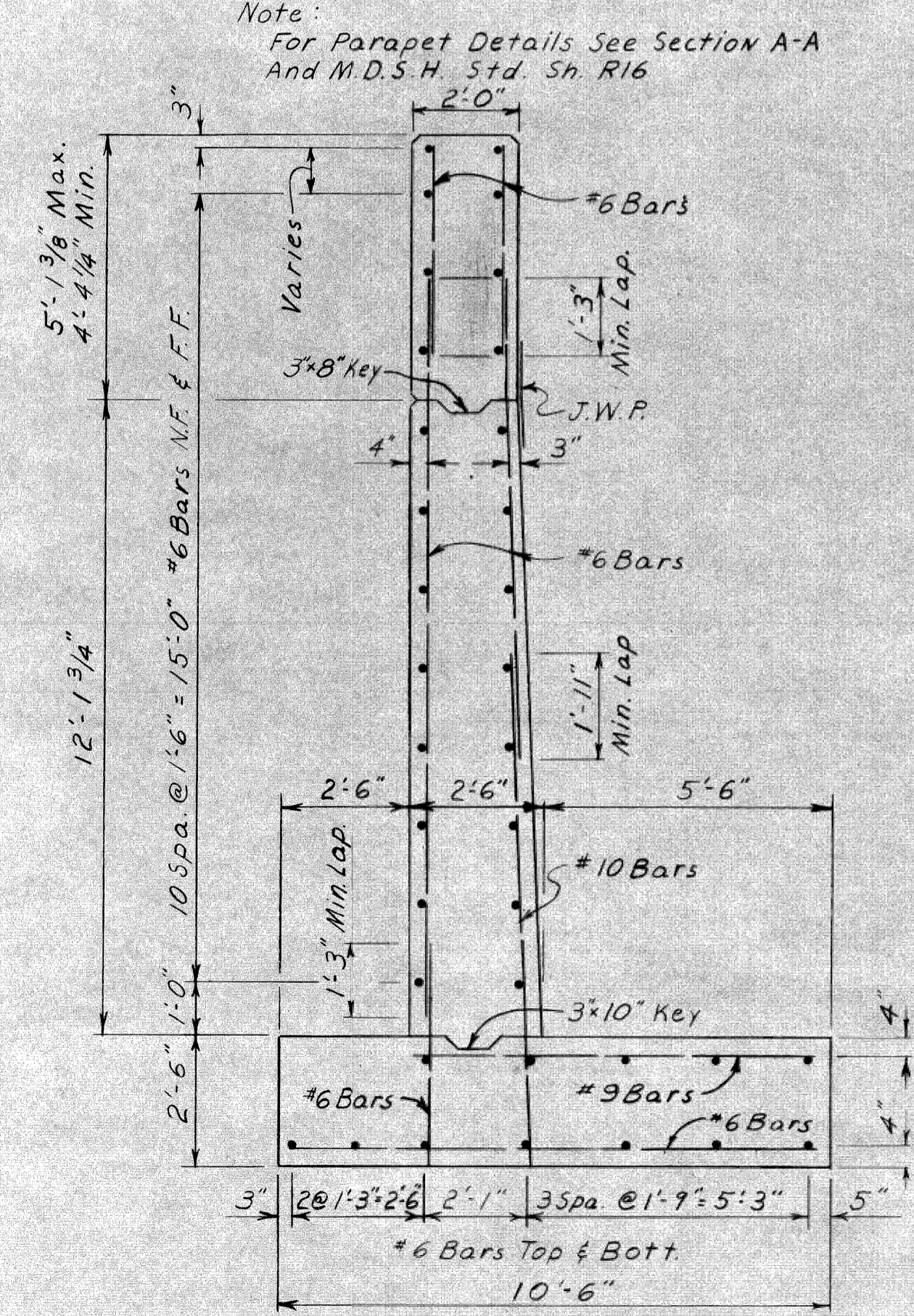
J.W.P. denotes Joint Waterproofing; N.F. denotes Near Face; F.F. denotes Far Face; B.F. denotes Both Faces.  
 Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.  
 Footing concrete quantities are computed on the basis of an outline 3/4" outside of the footing where the concrete is poured against Steel Sheet Piling Left in place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.  
 Steel sheet piling left in place shall be of the continuous interlock type, either new or used, in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Ladle analysis and mill reports are not required for steel used in Sheet Piling.  
 Steel Sheet Piling Left in place shall be driven to its final penetration before adjacent concrete is poured.  
 If it is necessary to lower the top of sheeting after the concrete has been poured, the excess shall be removed by cutting.  
 Adjust the spacing of the reinforcing steel as required to permit placing of foundation drains and Position Dowels.  
 Maximum average foundation pressure D.L. only = 3500 P.S.F.  
 Maximum foundation pressure D.L.+L.L. = 5000 P.S.F.  
 For Bevel and Molding Details see Std. Sh. R16  
 Bridge Railing is to be aluminum tubular railing on solid concrete parapet.  
 For Railing Details (except as noted) See Std. Sh. R16.  
 The bridge seat and front face of each abutment above top of footing or grade beam between wingwall returns shall be given an application of Clear Protective Coating for Substructure Concrete.



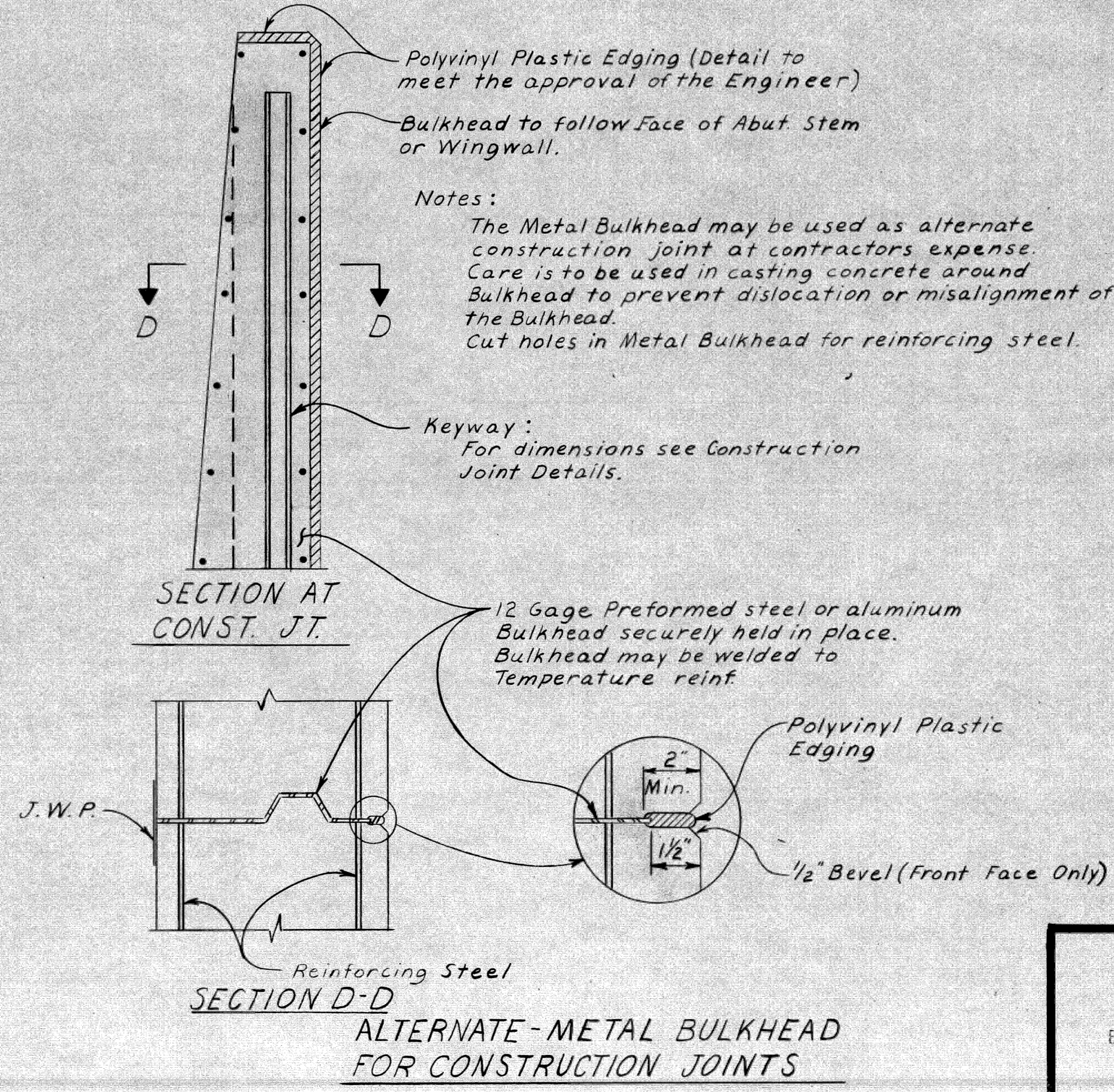
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D  
ALTERNATE-METAL BULKHEAD FOR CONSTRUCTION JOINTS

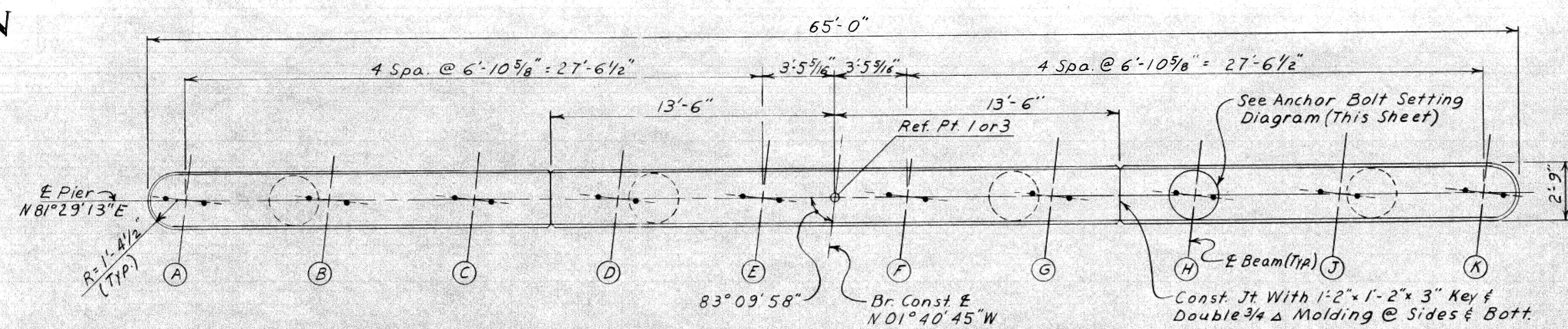
PLANS PREPARED BY  
 CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 CITY ENGINEERS OFFICE  
 BUREAU OF HIGHWAYS AND EXPRESSWAYS  
 JOB No. PW 990(21)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
 MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

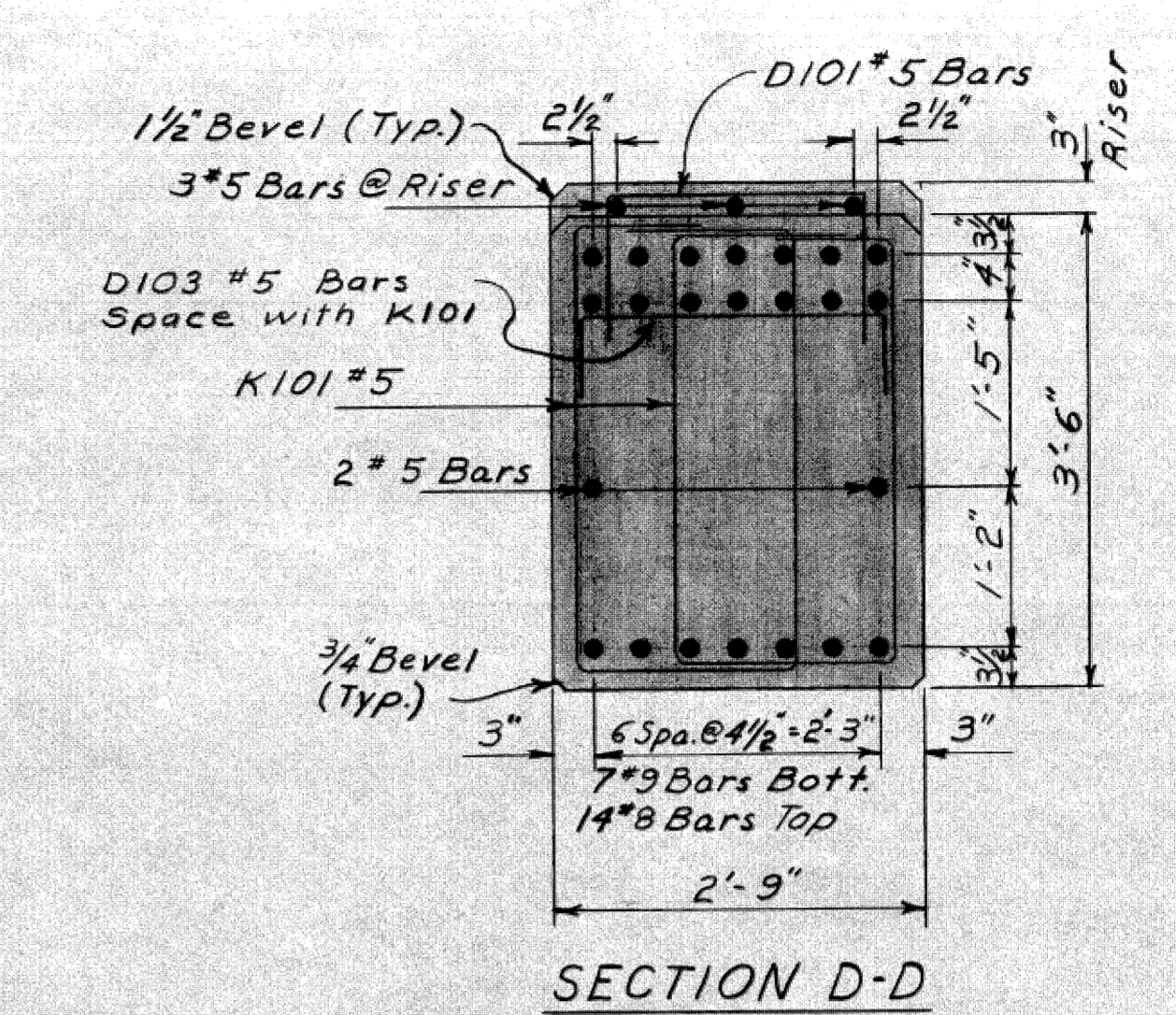
ABUTMENT DETAILS			
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT  
 DRAWN BY DLN 10-69  
 CHECKED BY Z.H.K. 11-69  
 SHEET 10 OF 27  
 S17 of 32'23' F

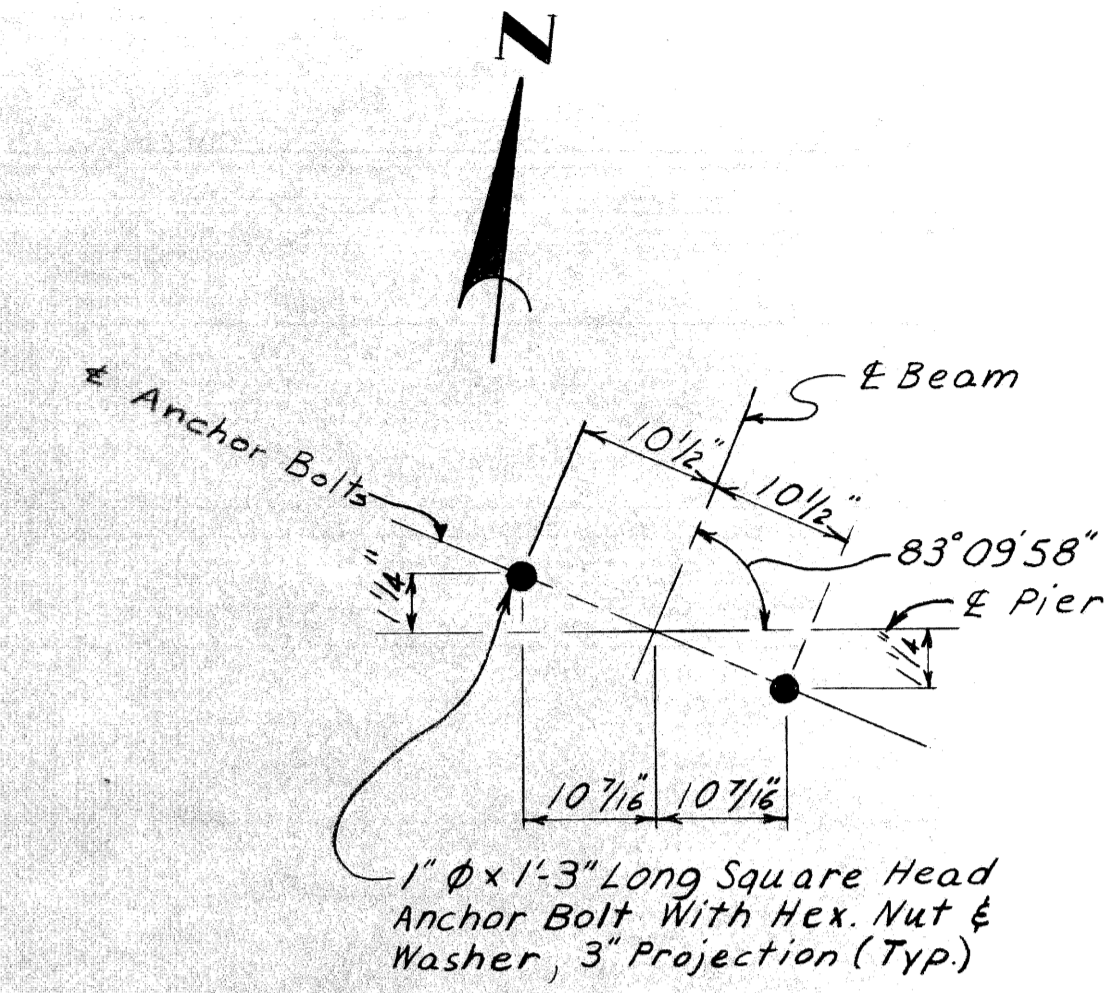




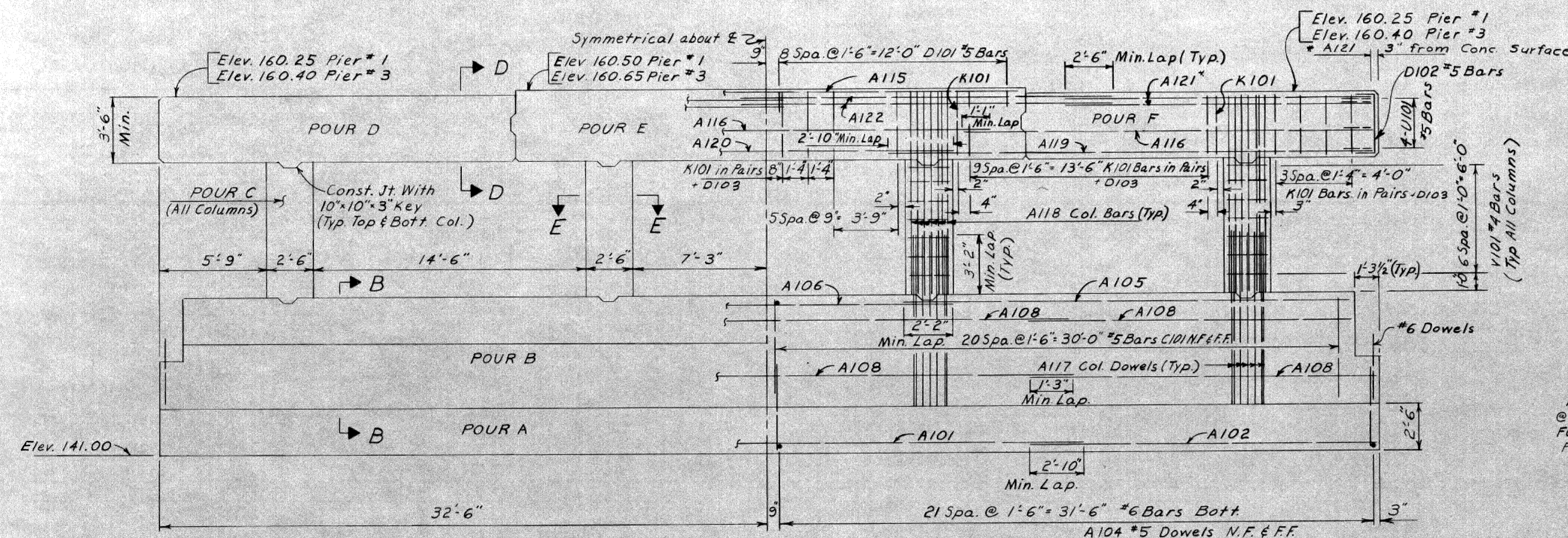
TOP PLAN



SECTION D-D



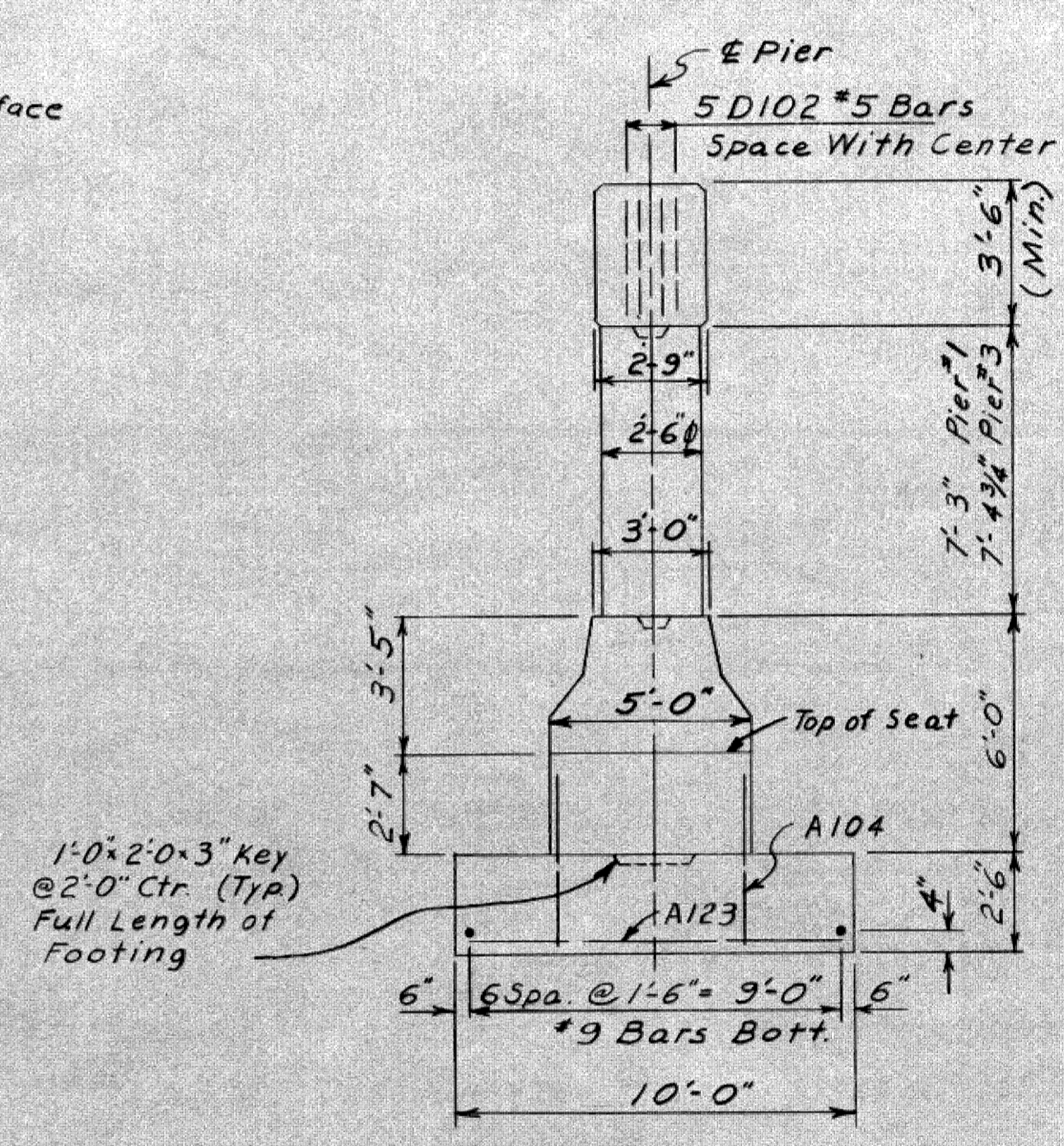
ANCHOR BOLT SETTING DIAG.



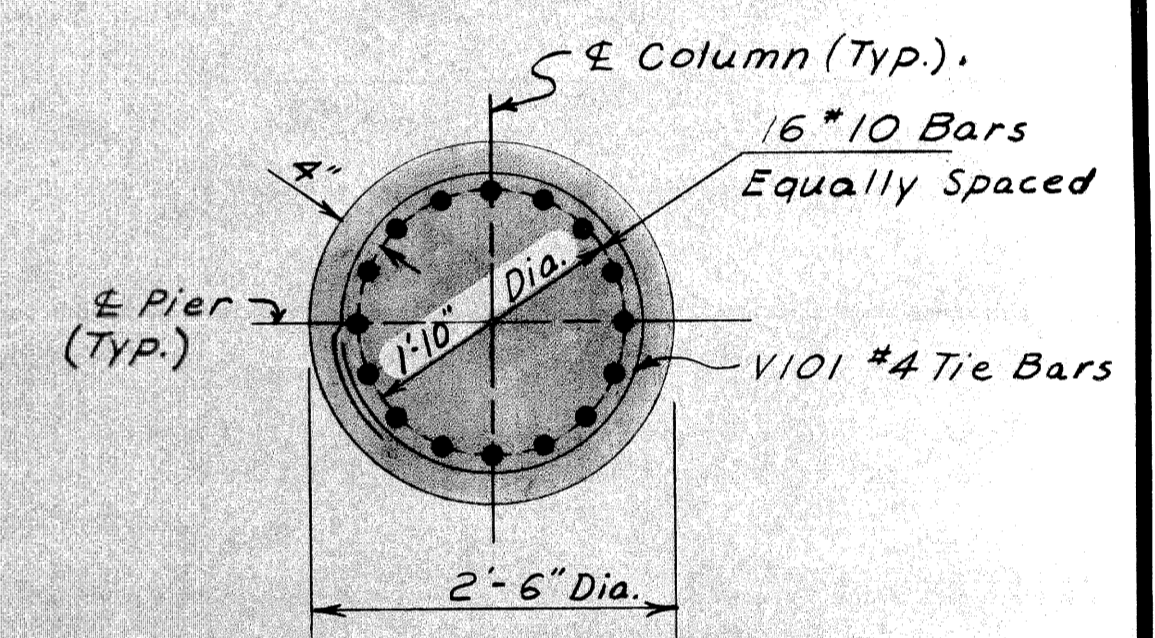
ELEVATION

PIER #1 & 3

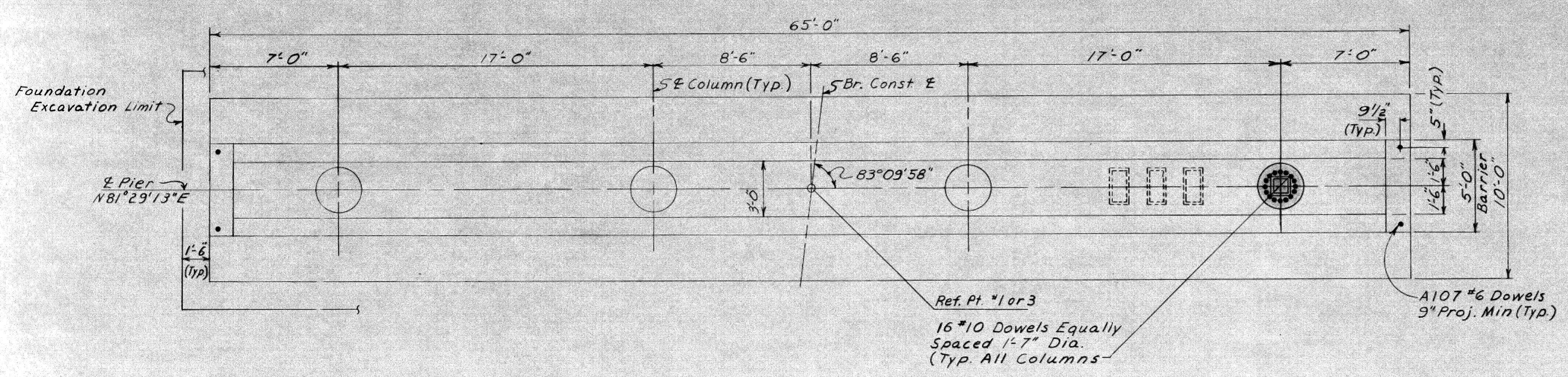
SECTION ON E OF PIER



END ELEVATION



SECTION E-E



FOOTING PLAN

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(21)

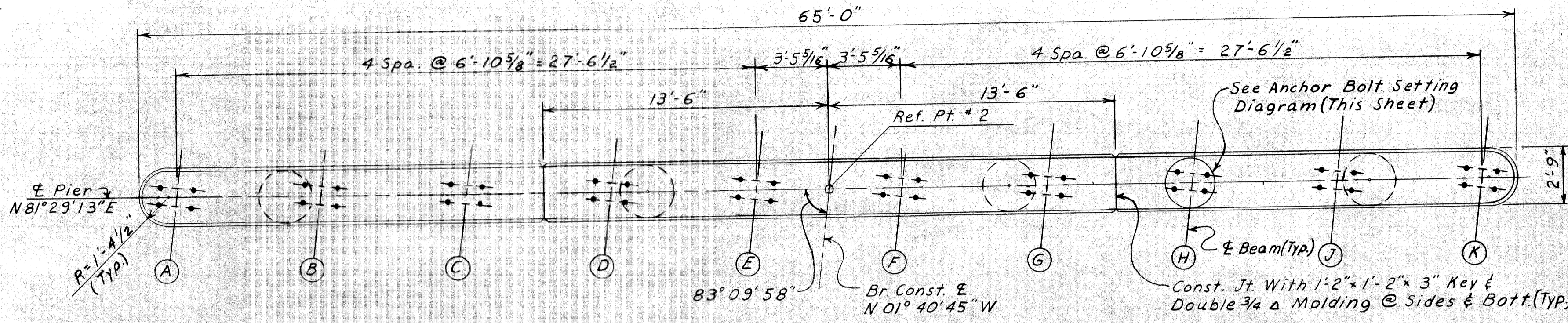
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

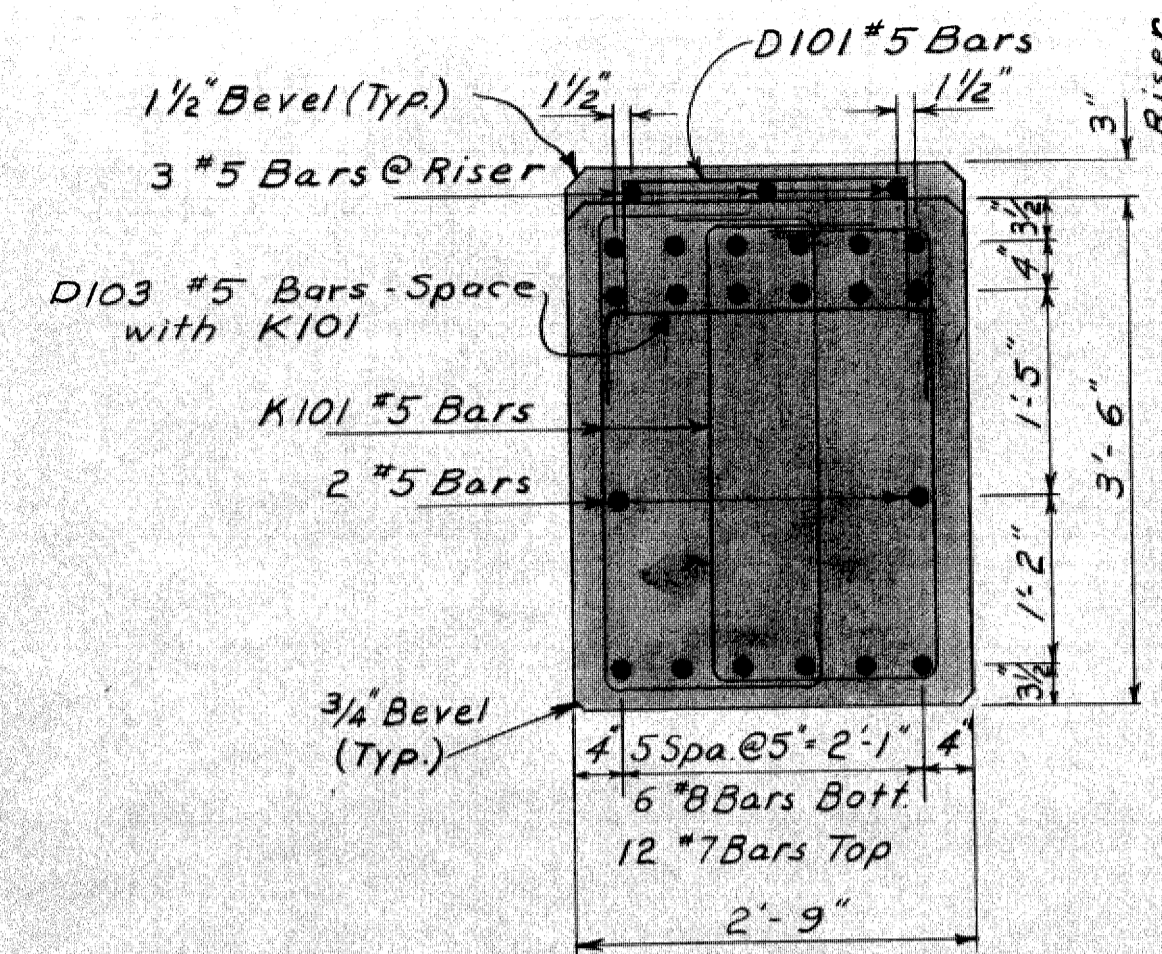
PIERS 1 & 3

NO.	REVISIONS	DESCRIPTION	DATE	BY

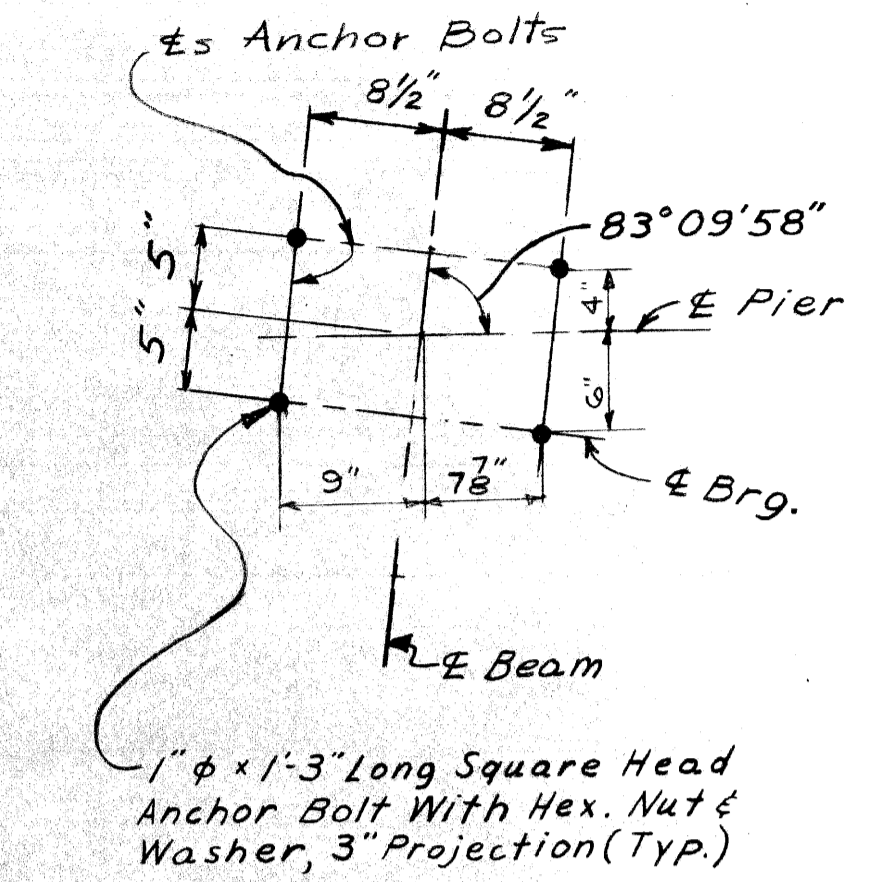
DRAWN BY	TRACED BY	CHECKED BY	SHEET 11	OF 27
DLN		J.H.K.	9-69	



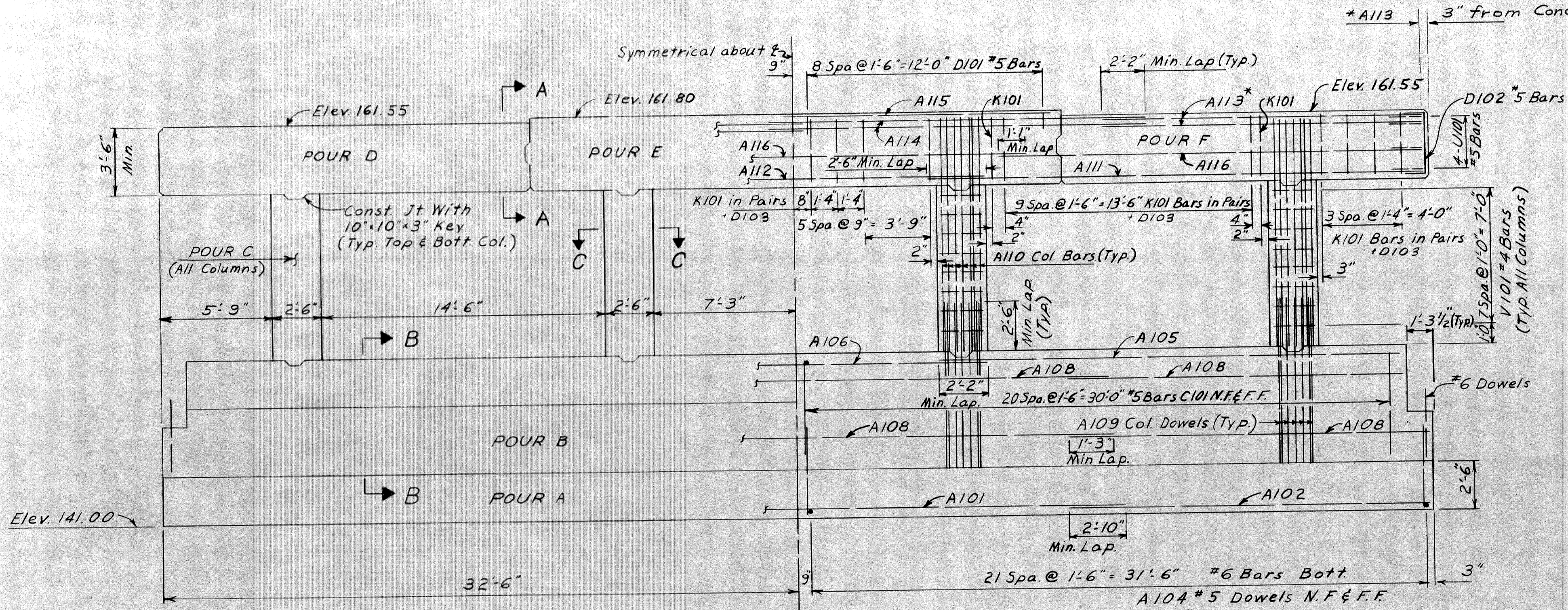
TOP PLAN



SECTION A-A



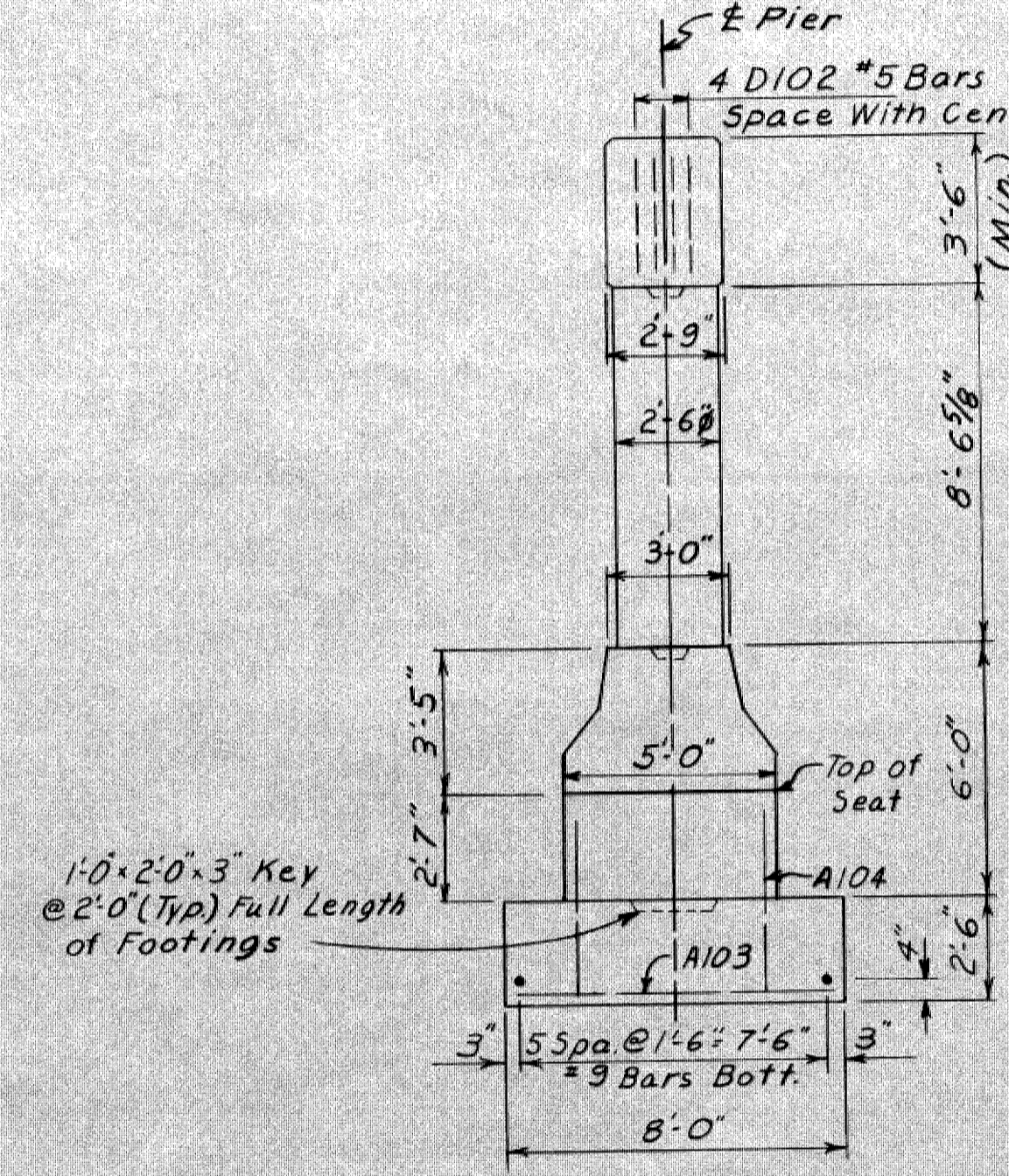
ANCHOR BOLT SETTING DIAG.



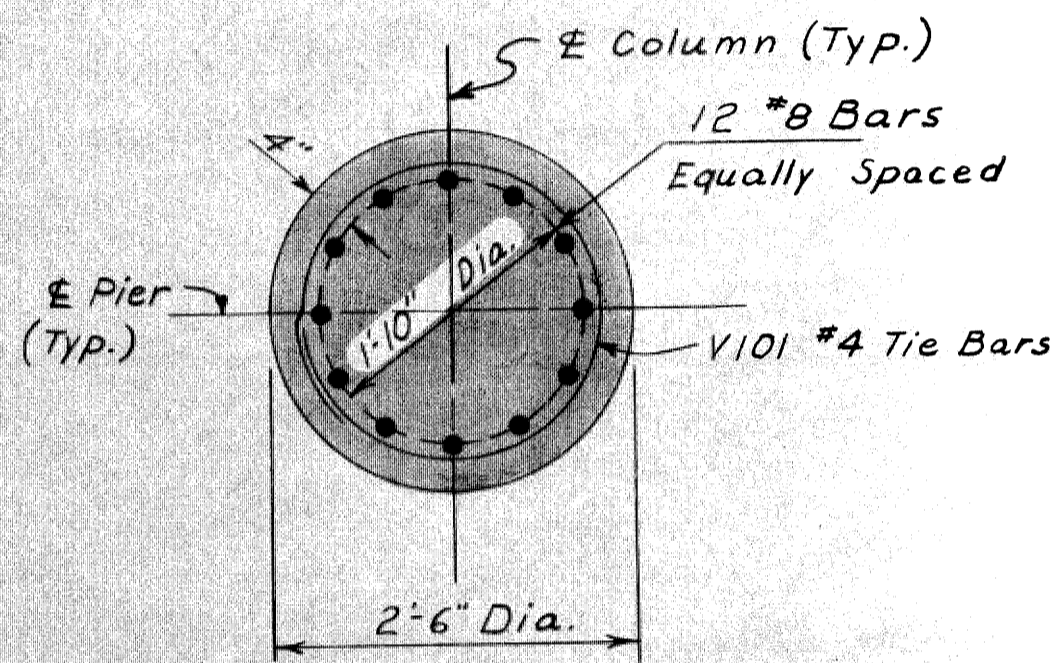
ELEVATION

PIER #2

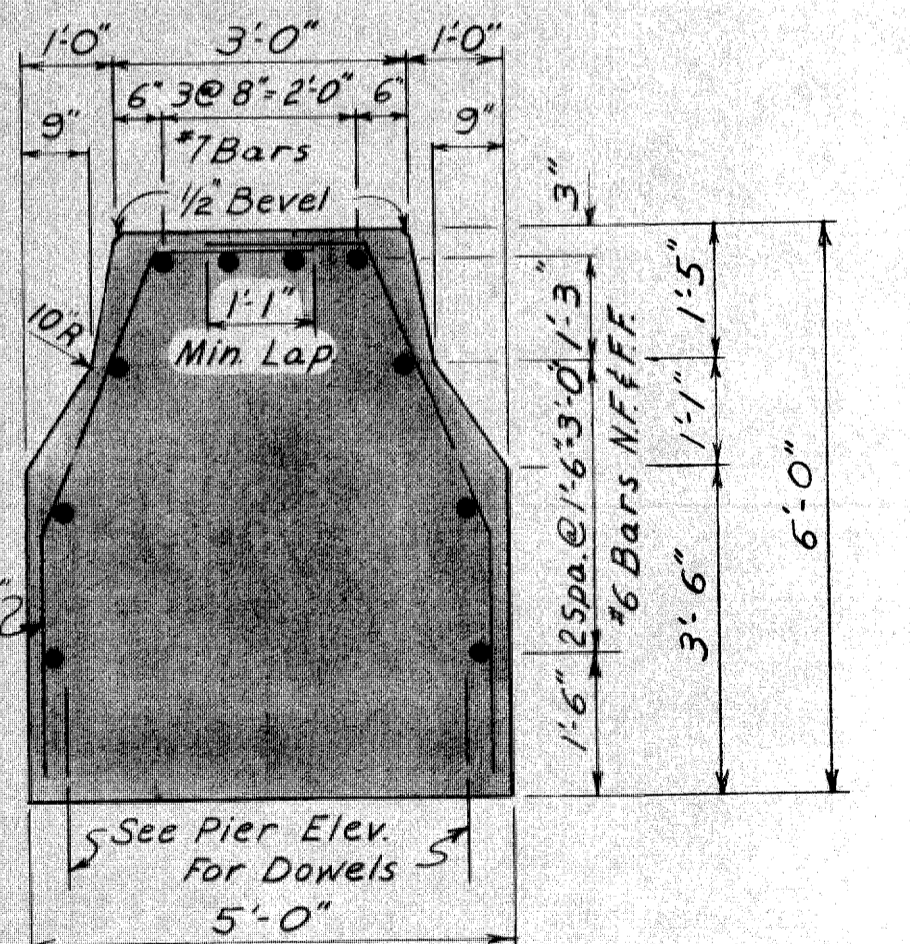
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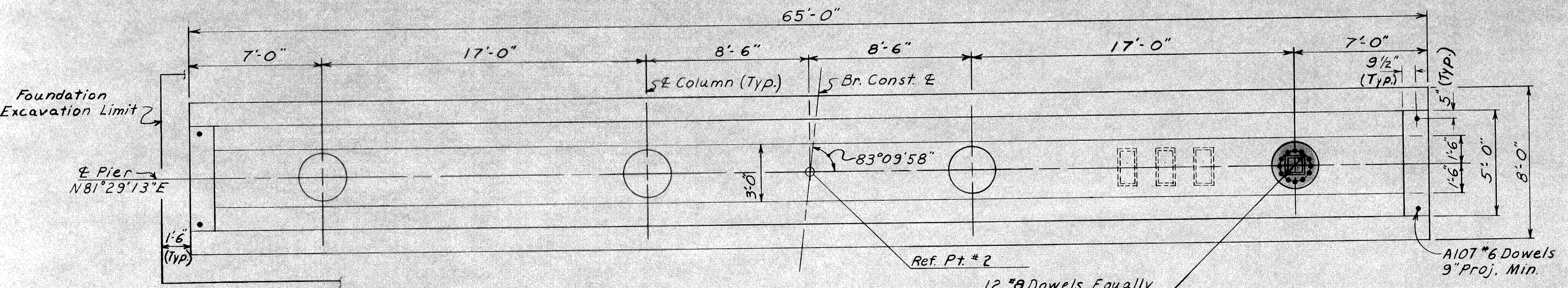
END ELEVATION



SECTION C-C



SECTION B-B



FOOTING PLAN

GENERAL NOTES

For Molding and Bevel Details see M.D.S.H. Std. Dwg. R-16.  
 Anchor Bolts are to be set accurately to a template.  
 Rockers and Anchor Bolts are furnished with Structural Steel.  
 The Project Engineer shall adjust the spacing of the reinforcing steel as required to permit placing of Anchor Bolts.  
 The complete exposed surface of the pier concrete above top of footing shall be given an application of Clear Protective Coating for Substructure Concrete.  
 Maximum Average Foundation Pressure  
 D.L. only = 2900 P.S.F.  
 Maximum Foundation Pressure  
 D.L. + L.L. = 3800 P.S.F.

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

APPROVED: *[Signature]*  
 STRUCTURAL ENGINEER

JOB No.  
 PW 990(21)

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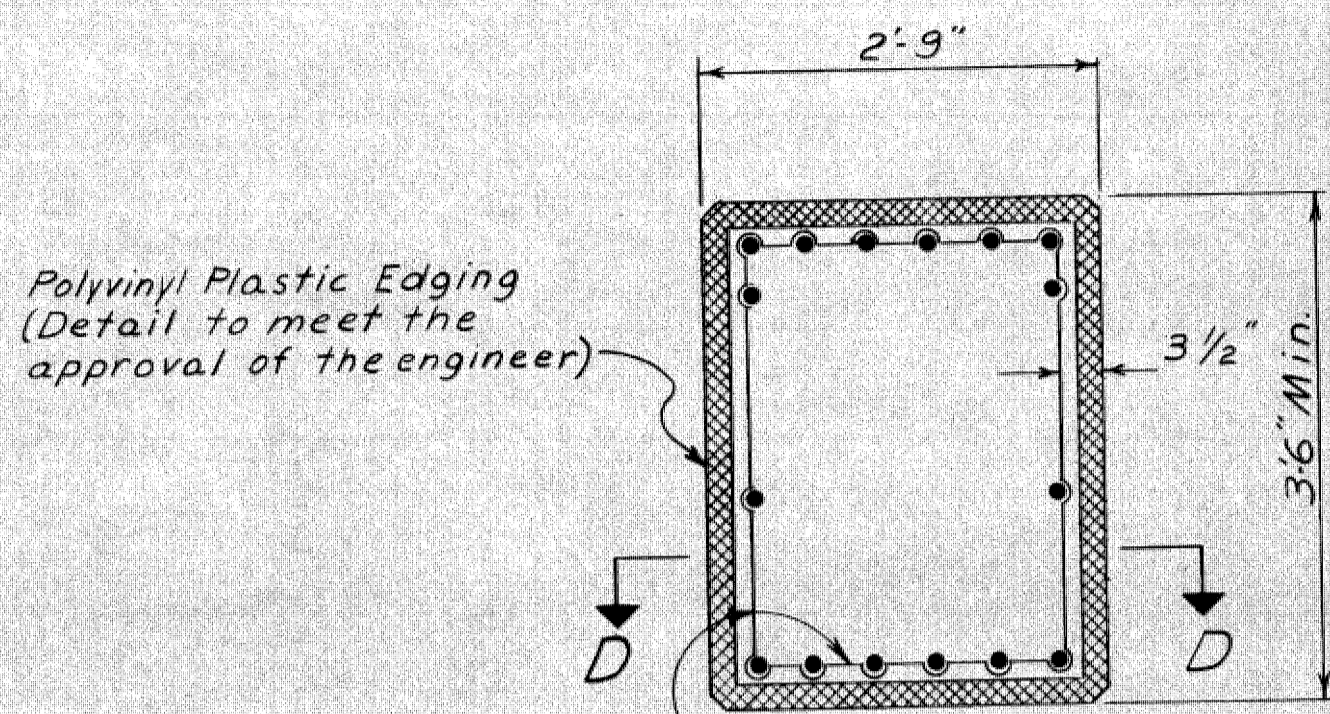
MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**PIER 2**

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT  
 SQUAD BOSS: M. GOWAN 1-70  
 DRAWN BY: D. L. N. 8-69  
 CHECKED BY: I. H. K. 9-69  
 SHEET 12 OF 27

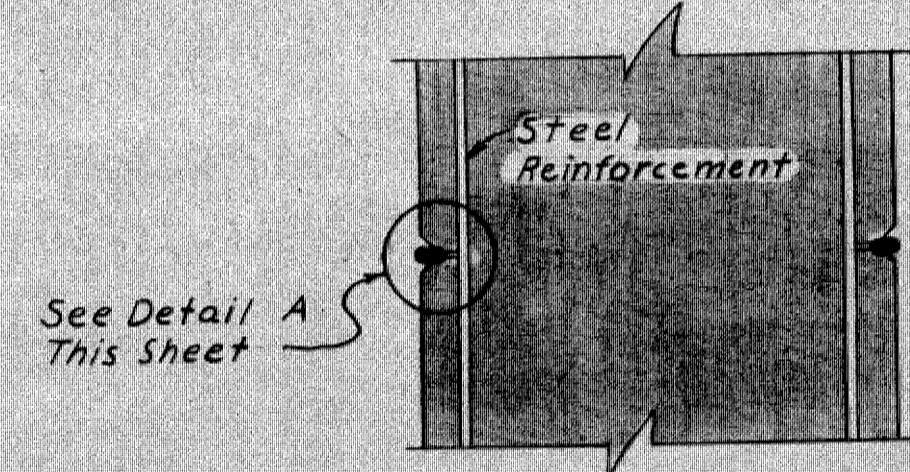
S17 of 82123 F



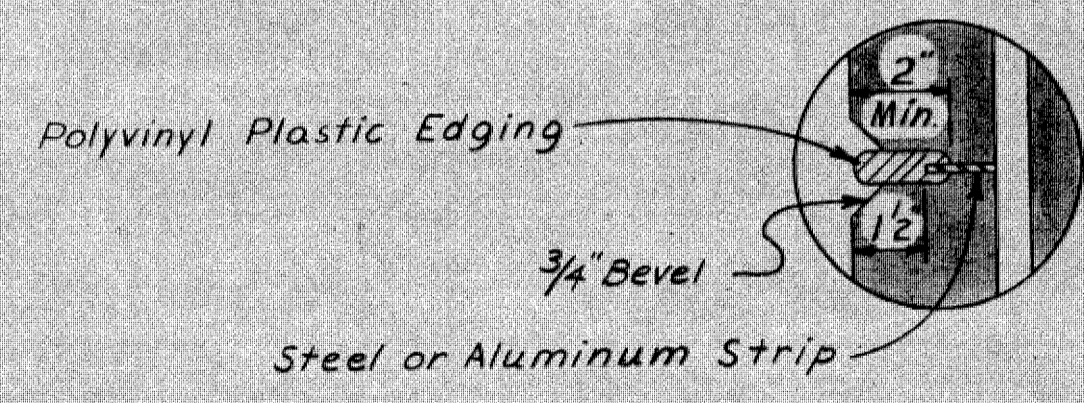
Polyvinyl Plastic Edging  
(Detail to meet the approval of the engineer)

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

SECTION THRU. PIER CAP



SECTION D-D



DETAIL A

CONCRETE QUANTITIES (Cu. Yds.)							
POUR	LOCATION	PIER #1		PIER #2		PIER #3	
		A(6A)	A(6AA)	A(6A)	A(6AA)	A(6A)	A(6AA)
A	Footing	60.2		48.2		60.2	
B	Median Barrier		62.3		62.3		62.3
C	Column		5.3		6.2		5.4
D	Pier Cap		6.8		6.8		6.8
E	Pier Cap		10.3		10.3		10.3
F	Pier Cap		6.8		6.8		6.8
Grade A(6A) Concrete - Substructure						168.6	
Grade A(6AA) Concrete - Substructure						275.5	

MISCELLANEOUS QUANTITIES					
ITEM	UNIT	PIER #1	PIER #2	PIER #3	TOTAL
Unclassified Excavation	Cu. Yds.	177	150	177	504
Clear Protective Coating For Substructure Concrete	Sq. Ft.	2052	2088	2052	6192
Low Temp. Protection - Substructure	Cu. Yds.	152	141	152	445

**NOTES:**  
 Partial metal bulkhead may be used as alternate construction joint at contractor's expense.  
 Care is to be used in casting concrete around to prevent dislocation or misalignment of the bulkhead.  
 Notch metal strip to fit around reinforcing steel.

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APPROVED: *H. Paul*  
 STRUCTURAL ENGINEER

JOB No.  
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**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**PIER DETAILS**

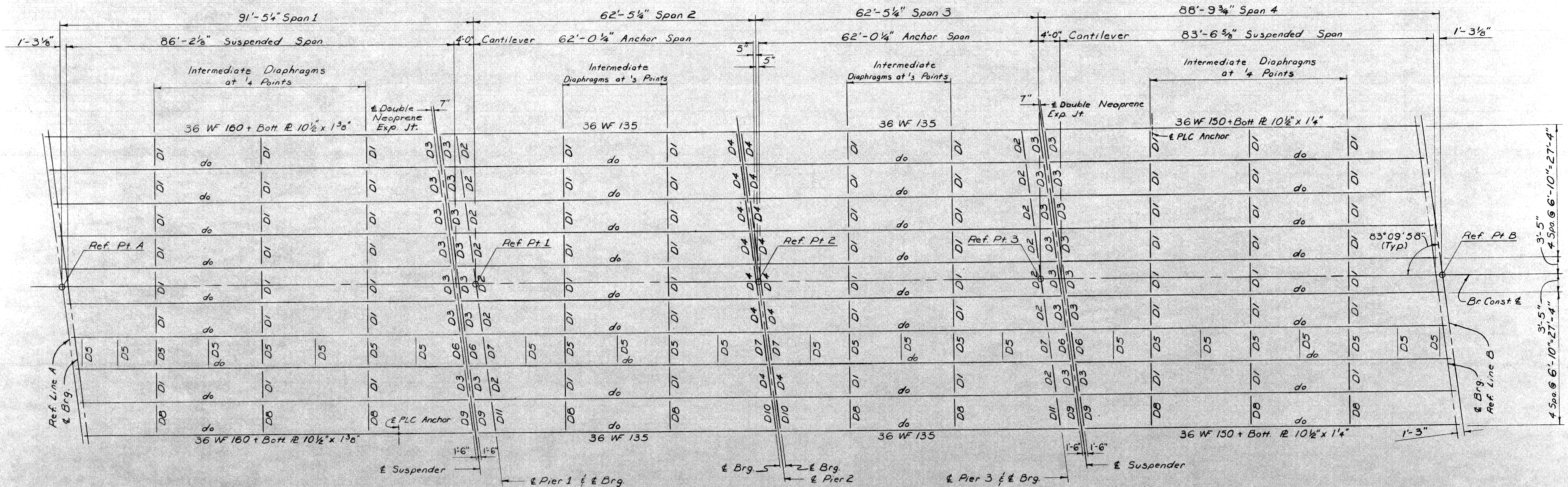
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CITY OF DETROIT

SQUAD BOSS	McGOWAN	1-70
DRAWN BY	DLN	8-69
CHECKED BY	ISK	9-69
SHEET 13 OF 27		

S17 of 82123 F



ERECTOR DIAGRAM

**STRUCTURAL STEEL NOTES**

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

Fabrication: Michigan Department of State Highways Standard Specifications for Highway Construction - 1970 edition.

Camber: Camber shall be measured with the beam lying on its side. Camber tolerance is  $\pm 1/4"$ . Heating shall be used if necessary to assure permanent camber within the above limits. Mid-Span dead load deflection of the steel beams alone is calculated to be  $5/8"$ .

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

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

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

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

Anchor Bolts: Steel in anchor bolts may be ASTM A-307. Anchor bolts and position dowels including nuts and washers shall be galvanized in accordance with ASTM Designation A-153. Anchor bolt lengths shown are minimum. Longer bolts may be furnished at no additional cost.

Bronze: Bronze for washers shall be ASTM B-100, or ASTM B-22.

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

Beams: Beam dimensions are horizontal and along  $\perp$  beam.

**QUANTITIES**

Structural Steel - Furnishing and Fabricating \* 580,500  
 Structural Steel - Erection 580,500  
 Shear Developers Lump Sum

\* Excludes Weight of Steel in Double Neoprene Exp. Jts. and consists of:

ASTM A-588 Steel - 580,120 Lbs.  
 Sheet Lead 260 Lbs.  
 Bronze 100 Lbs.  
 Stainless Steel A304 20 Lbs.

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**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

STRUCTURAL STEEL DETAILS

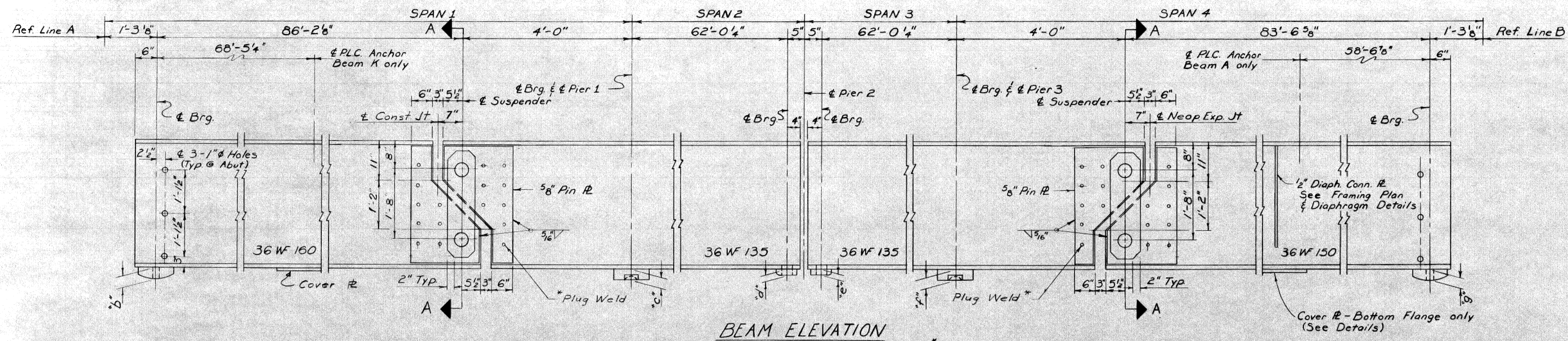
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REVISIONS

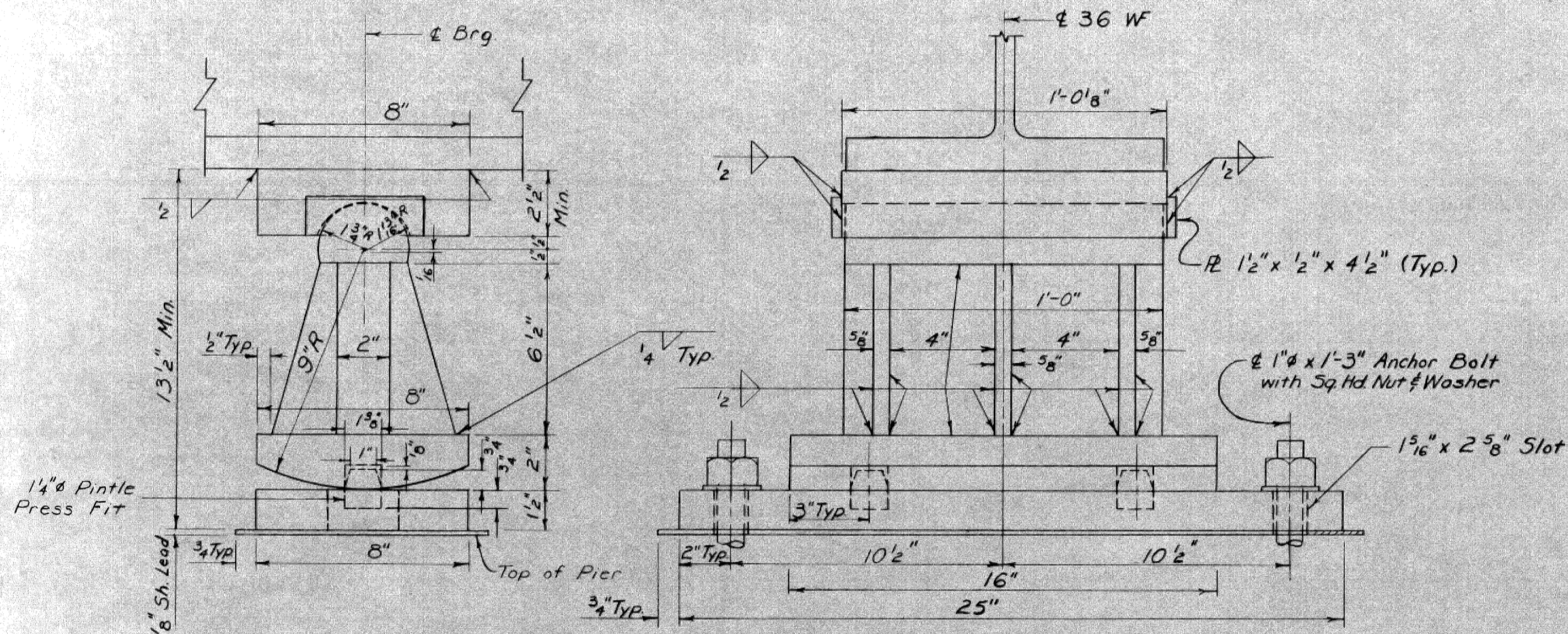
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 DRAWN BY: A. H. K. 10-69  
 TRACED BY: A. H. K. 11-69  
 CHECKED BY: J. H. K. 11-69  
 SHEET 14 OF 27

S17 of 82123 F



BEAM ELEVATION

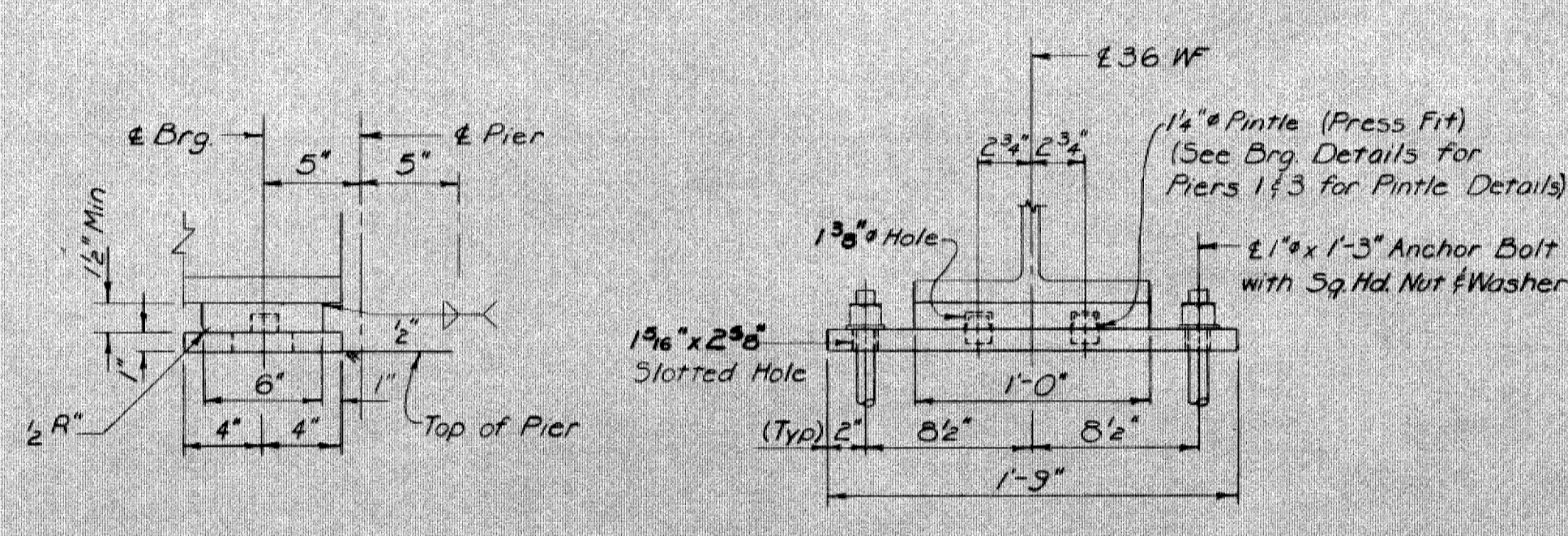
\* Size and spacing of Plug Welds according to current A.W.S. Spec.



SIDE VIEW

END VIEW

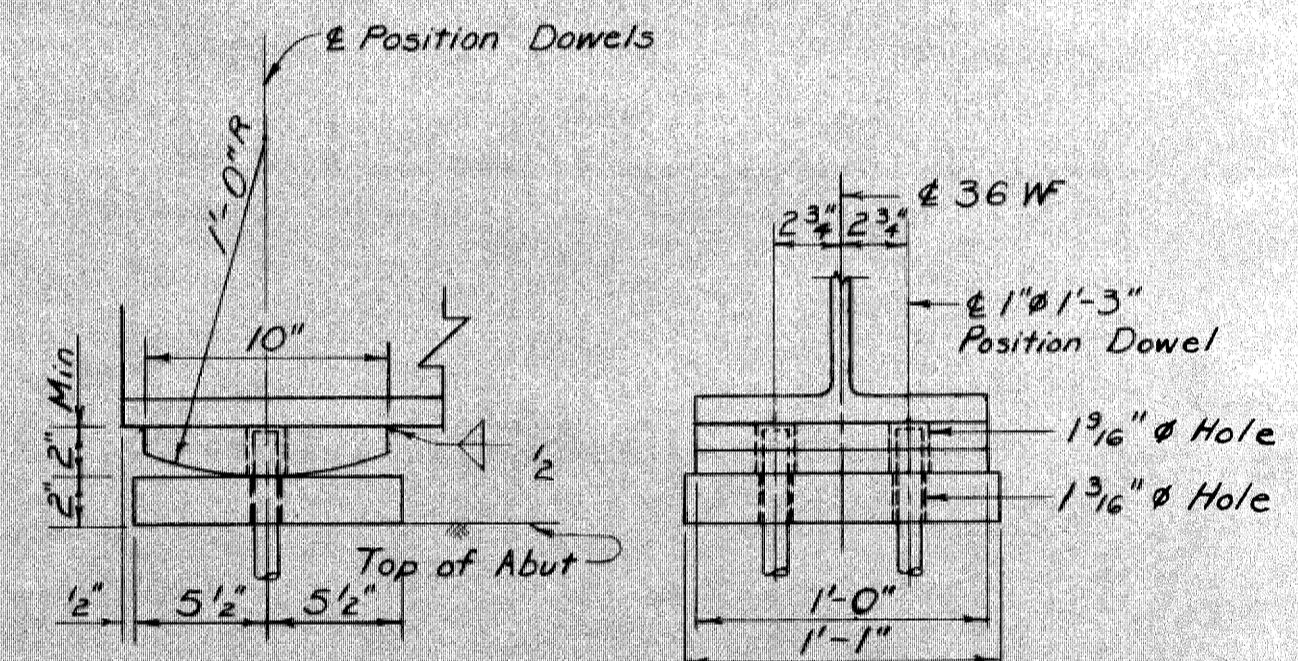
PIER 1 & 3 BEARING DETAILS



SIDE VIEW

END VIEW

PIER 2 BEARING DETAILS

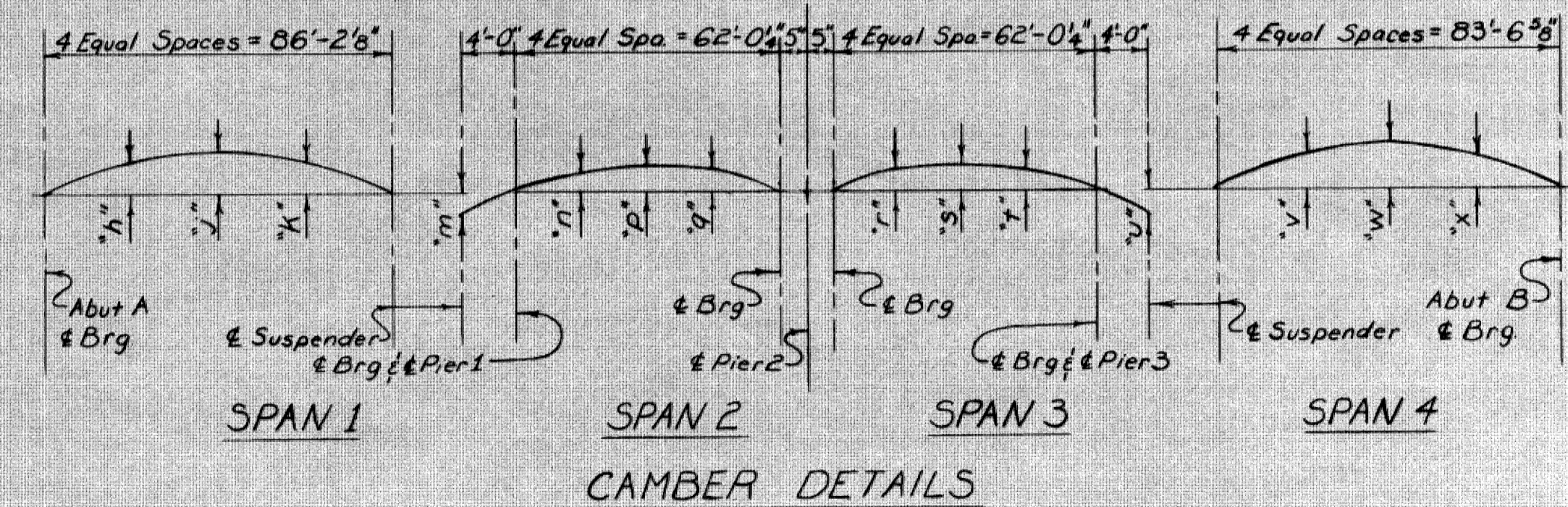


SIDE VIEW

END VIEW

ABUTMENT BEARING DETAILS

SCHEDULE OF VARIABLE DIMENSIONS AND CAMBER																				
(inches)																				
Beam	"b"	"c"	"d"	"e"	"f"	"g"	"h"	"j"	"k"	"m"	"n"	"p"	"q"	"r"	"s"	"t"	"u"	"v"	"w"	"x"
A	2 3/4	2 3/4	1 3/4	1 3/4	3 3/4	3 3/4	2 1/2	3 3/4	2 1/2	1/8	1/2	1/8	1/8	1 3/8	1 3/8	1/4	2 1/4	3	2 1/4	
B	2 3/4	3	1 3/4	1 3/4	3	3 3/4	2 3/8	3 1/2	2 3/8	1/4	1/8	1/2	1/8	1 3/8	1 3/8	1/4	2 1/2	3 3/4	2 1/2	
C	4 1/2	4 1/2	3 1/2	3 1/2	4 3/4	4 3/4														
D	2 3/4	3	1 3/4	1 3/4	3	3														
E	3 3/4	3 3/4	2 3/4	2 3/4	3 3/4	4														
F	3 3/4	4	2 3/4	2 3/4	3 3/4	3 3/4														
G	3	3	1 3/4	1 3/4	2 3/4	3														
H	4 3/4	5	3 1/2	3 1/2	4 1/2	4 1/2														
J	3 3/4	3 3/4	2	2	2 3/4	3	2 5/8	3 1/2	2 3/8	1/4	1/8	1/2	1/8	1 3/8	1 3/8	1/4	2 1/2	3 3/4	2 1/2	
K	3 3/4	3 1/2	2	2	2 3/4	2 3/4	2 1/2	3 3/4	2 1/2	1/4	1/8	1/2	1/8	1 3/8	1 3/8	1/4	2 1/4	3	2 1/4	



CAMBER DETAILS

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MEYERS ROAD OVER JEFFRIES FREEWAY IN DETROIT  
STRUCTURAL STEEL DETAILS

CITY OF DETROIT

SQUAD BOSS: MCGOWAN 1-70  
DRAWN BY: A MORRIS 11-69  
TRACED BY:  
CHECKED BY: I.H.K. 11-69  
SHEET 15 OF 27

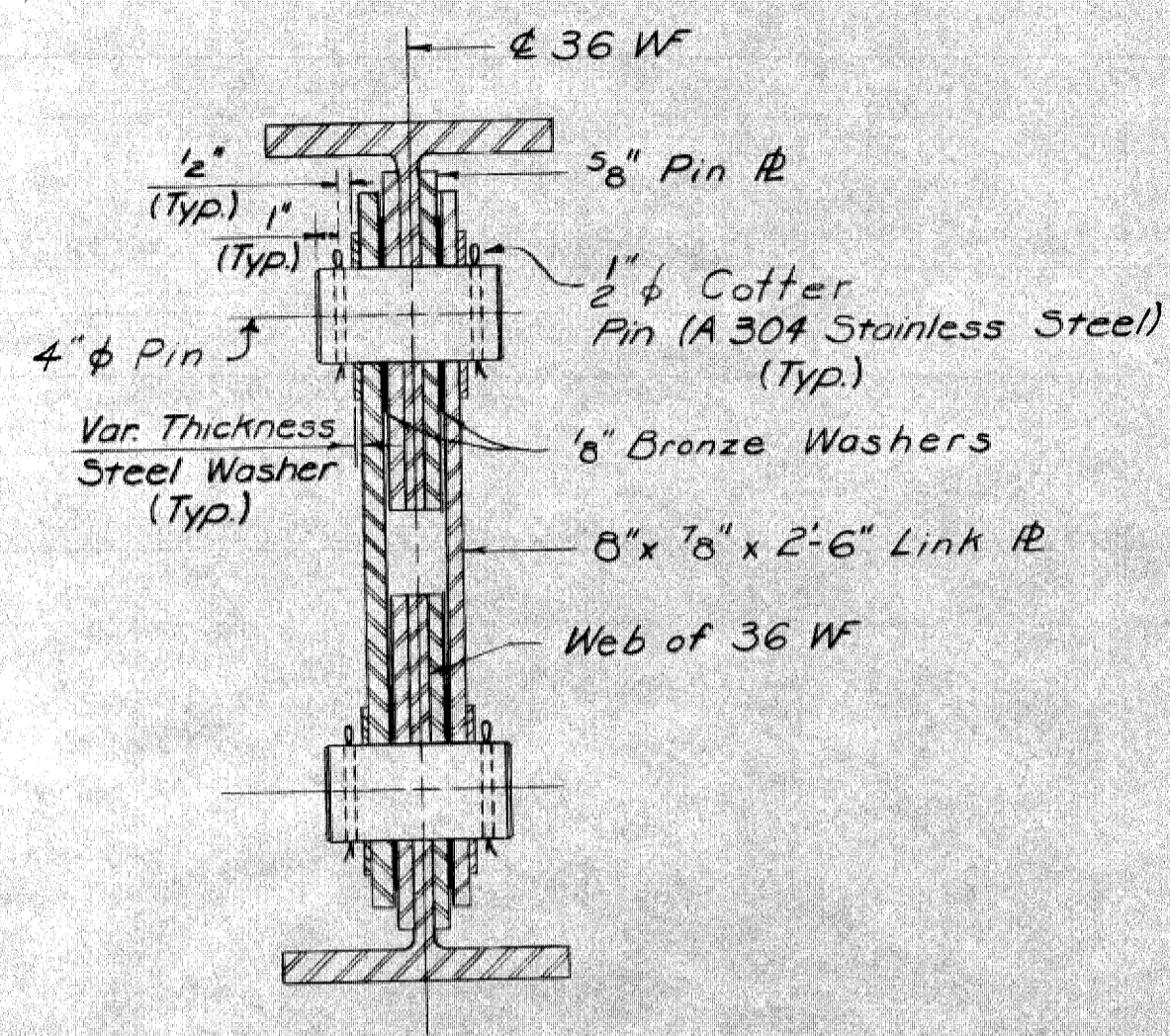
917 of 82123 F

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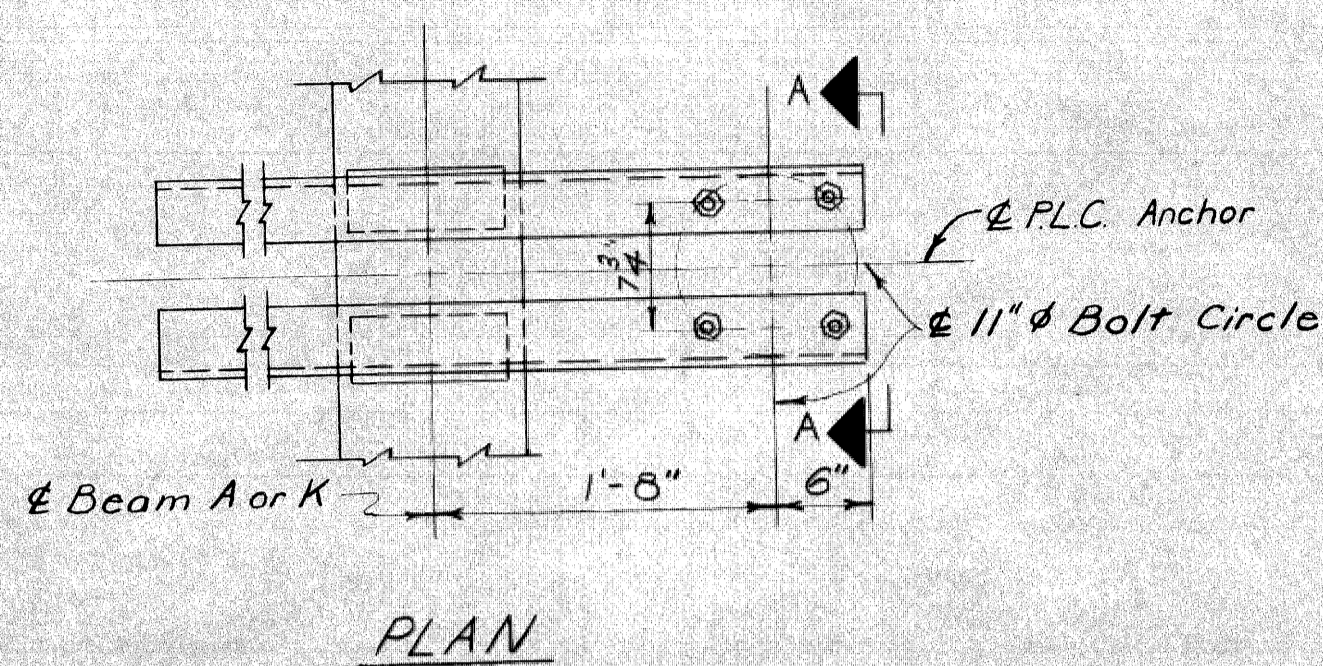
APPROVED: [Signature] STRUCTURAL ENGINEER

JOB No. PW 990(21)

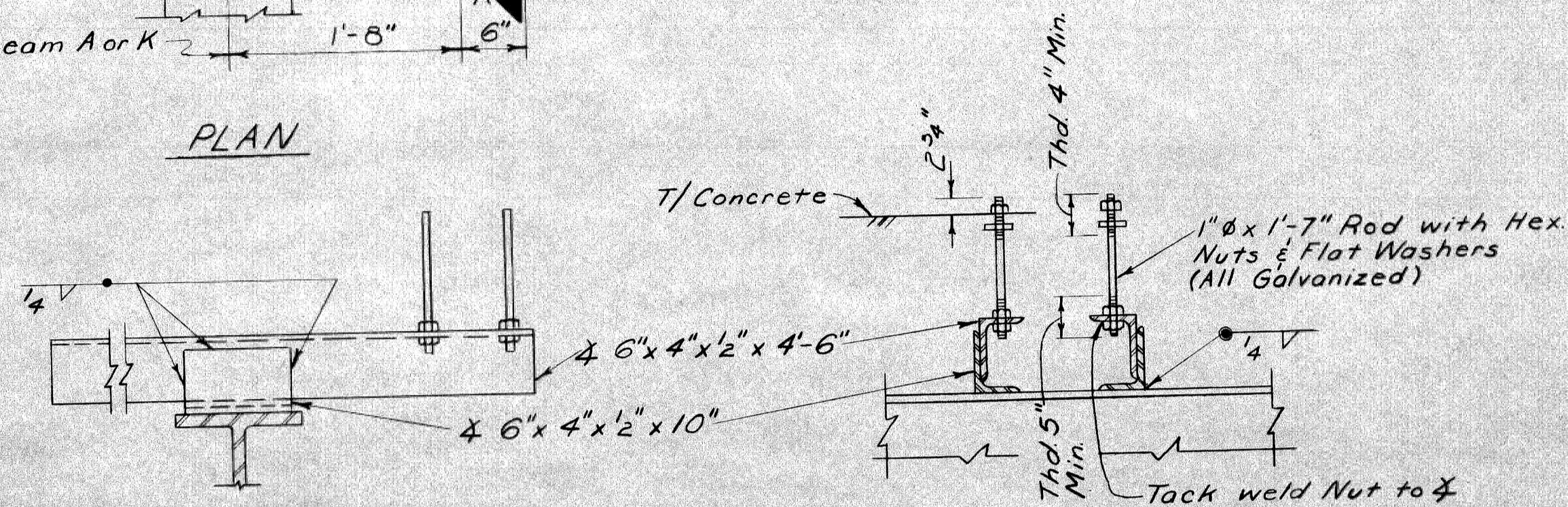
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SECTION A-A  
(Section Through Suspenders)



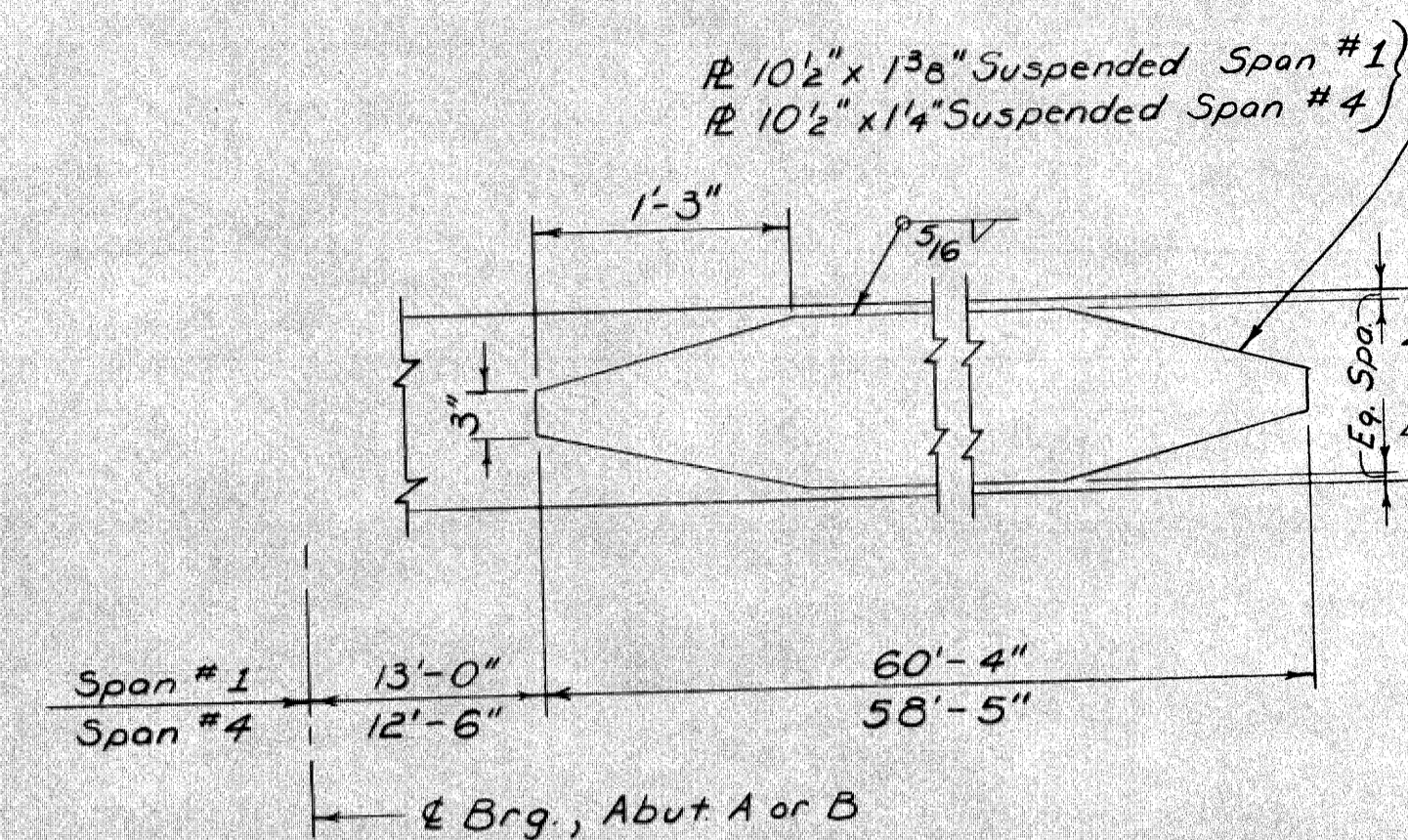
PLAN



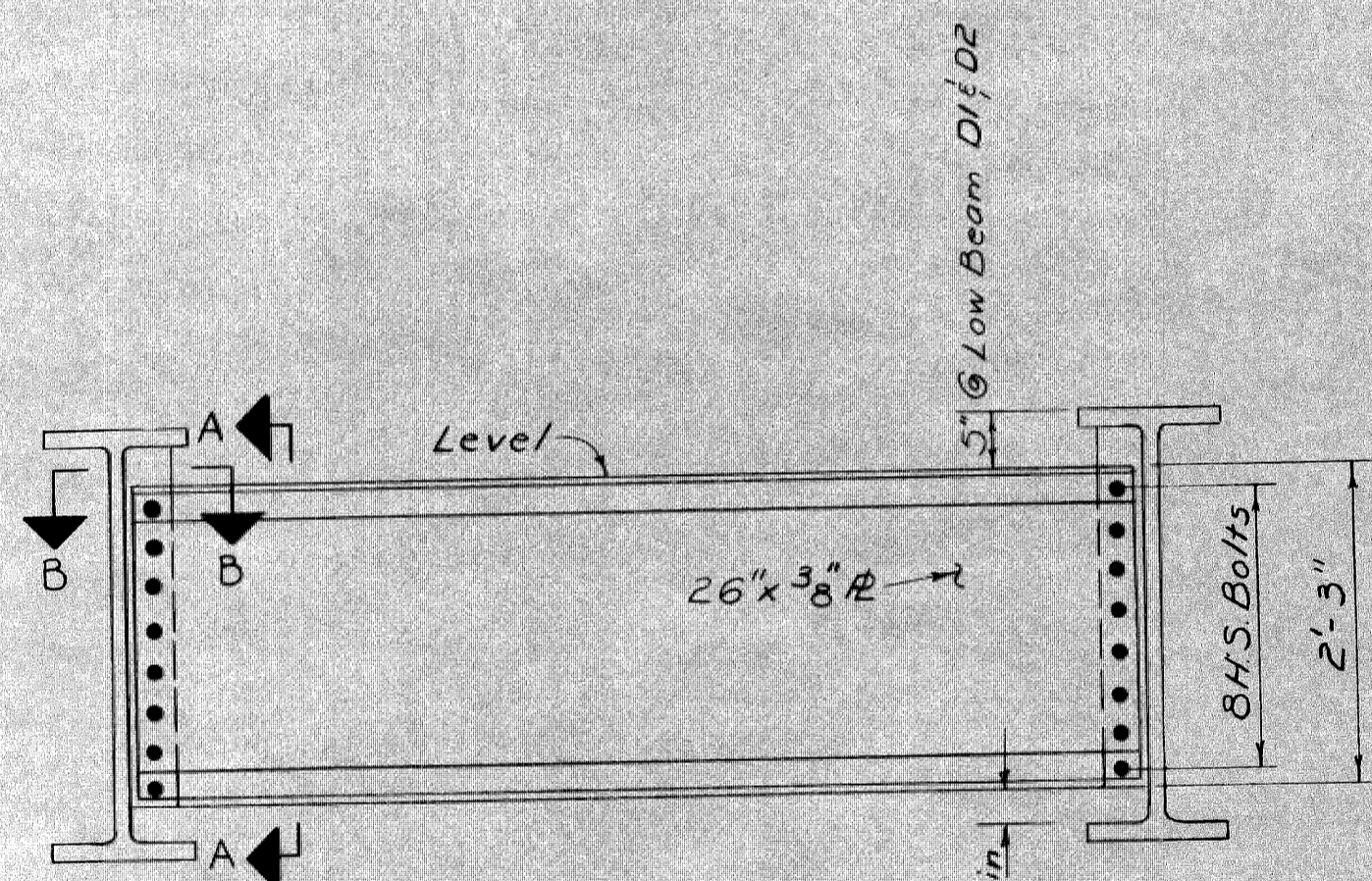
ELEVATION

PLC ANCHOR DETAILS

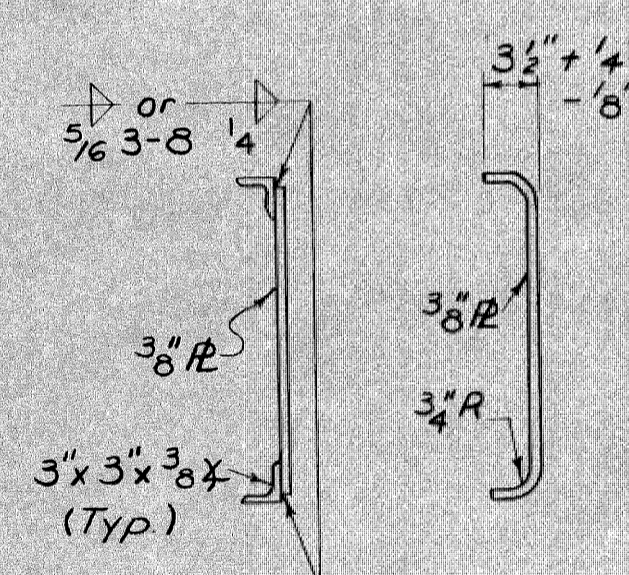
VIEW A-A



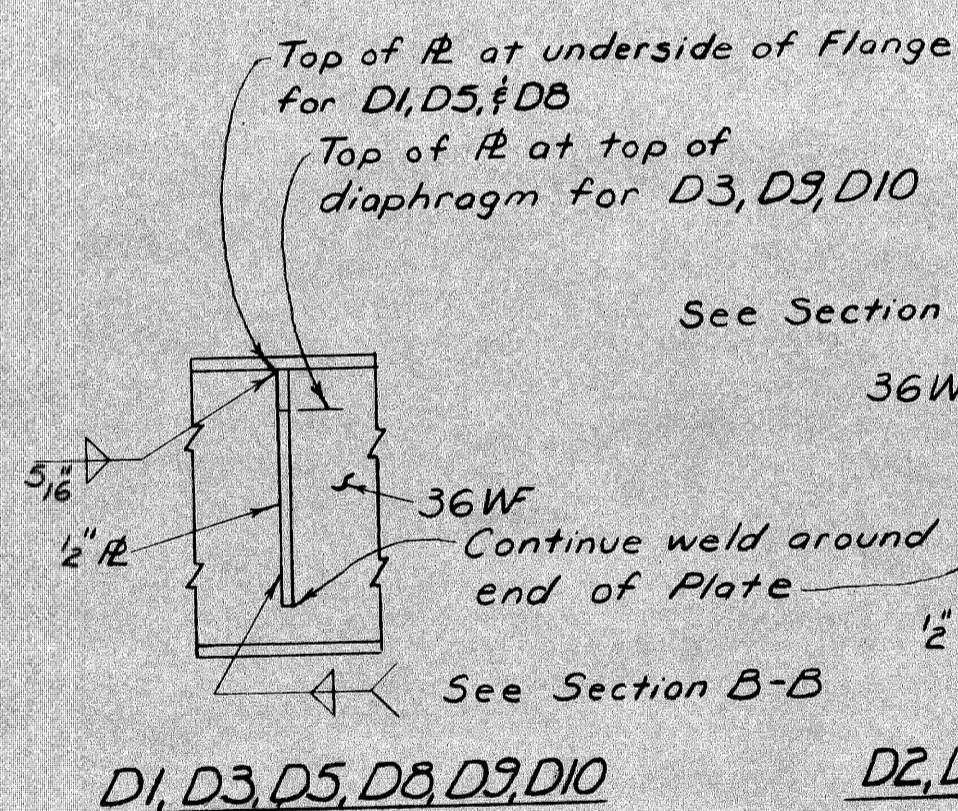
COVER PLATE DETAILS



D1 & D2

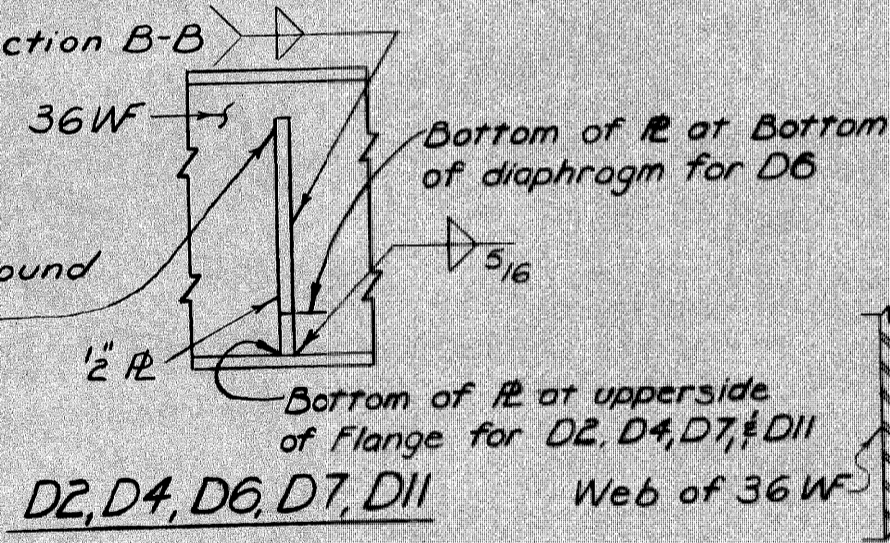


Either detail may be used  
SECTION A-A



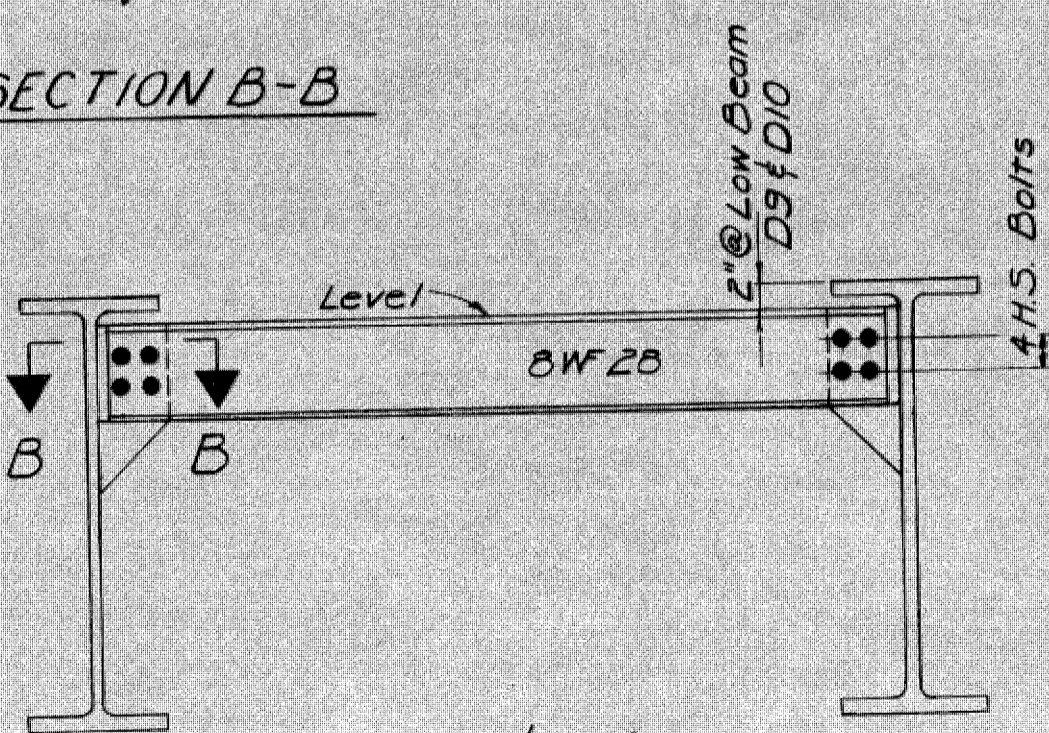
D1, D3, D5, D8, D9, D10

ELEVATION OF BEAM  
AT CONNECTION PLATE

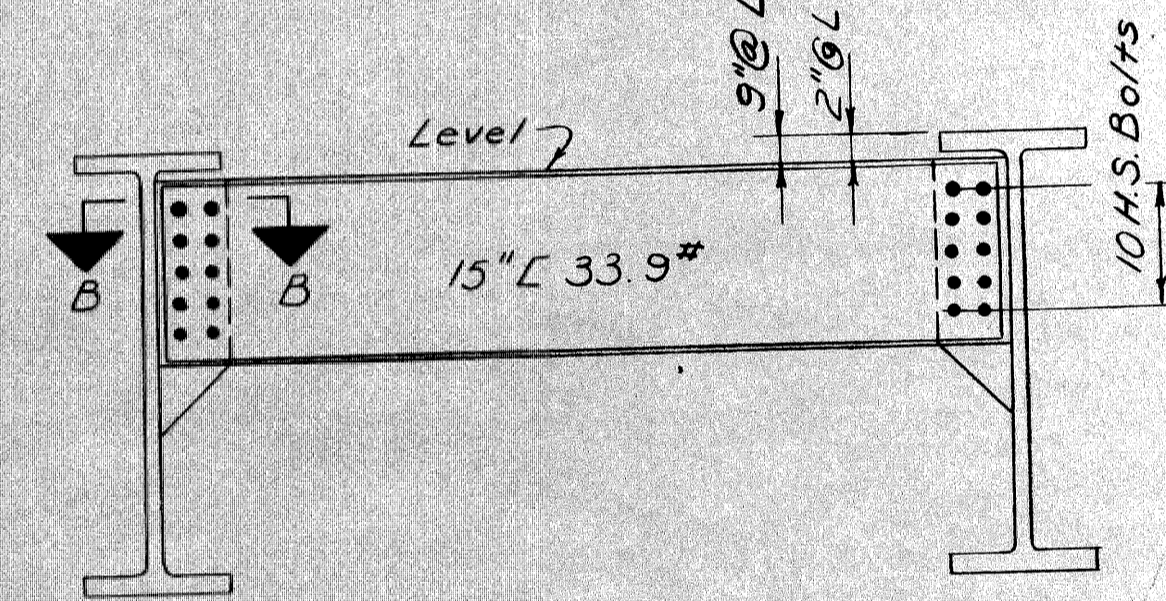


D2, D4, D6, D7, D11

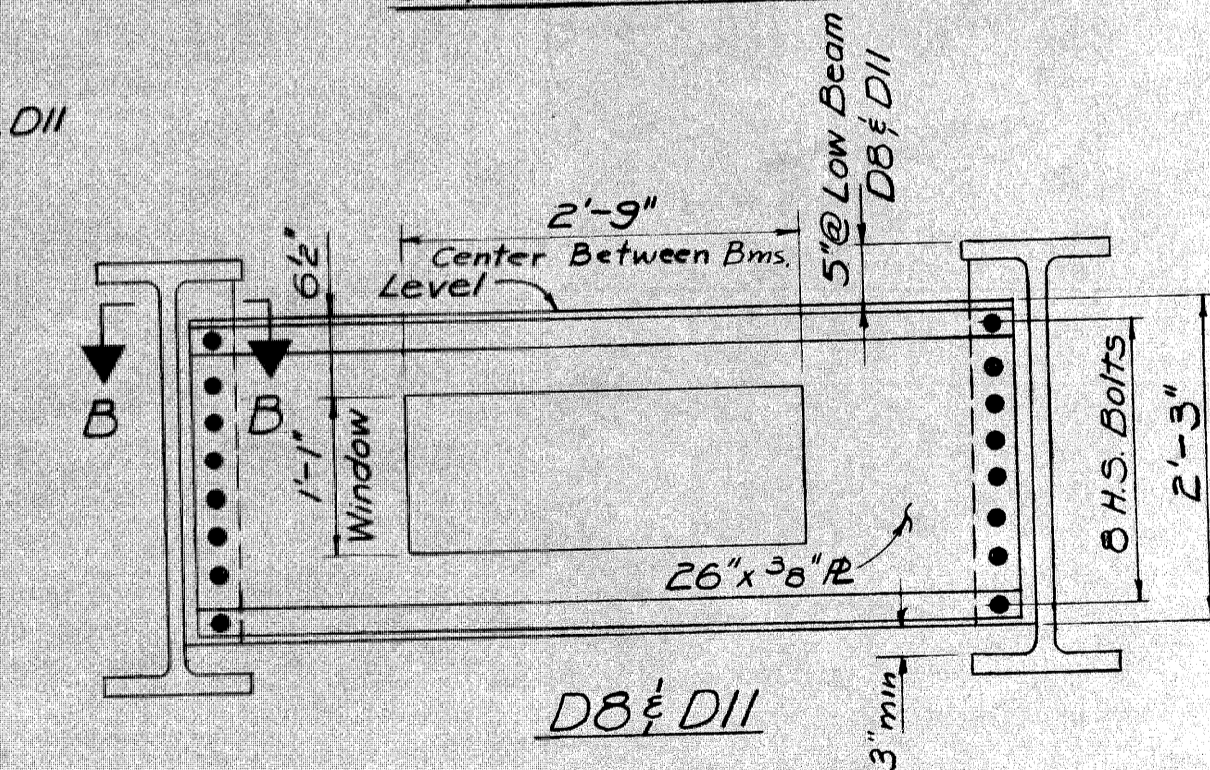
SECTION B-B



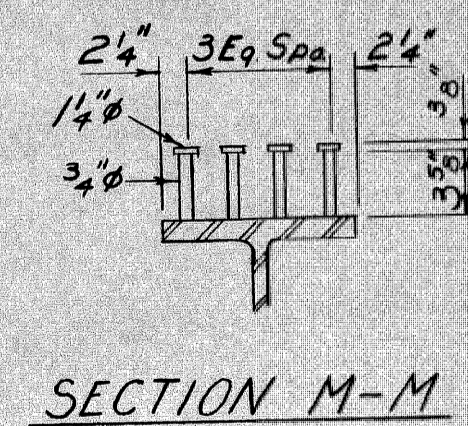
D9 & D10



D3, D4, D5, D6, & D7



D8 & D11



SECTION M-M

Place rows of studs parallel to transverse reinforcement

Span	Equal Spaces	1'-6" Max.	Span Length	Span Location
Span #1 @ Brg. Abut. A	57	1'-6" Max.	85'-2 1/8"	5'-0" @ Pier 1
Span #4 @ Brg. Abut. B	56	1'-6" Max.	82'-6 5/8"	5'-0" @ Pier 3
Span #2 @ Brg. Pier 2	40	1'-6" Max.	59'-6"	2'-6" @ Pier 1
Span #3 @ Brg. Pier 2	40	1'-6" Max.	59'-6"	2'-6" @ Pier 3

STUD SHEAR CONNECTORS

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STRUCTURAL ENGINEER

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MICHIGAN DEPARTMENT OF STATE HIGHWAYS

MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

STRUCTURAL STEEL DETAILS

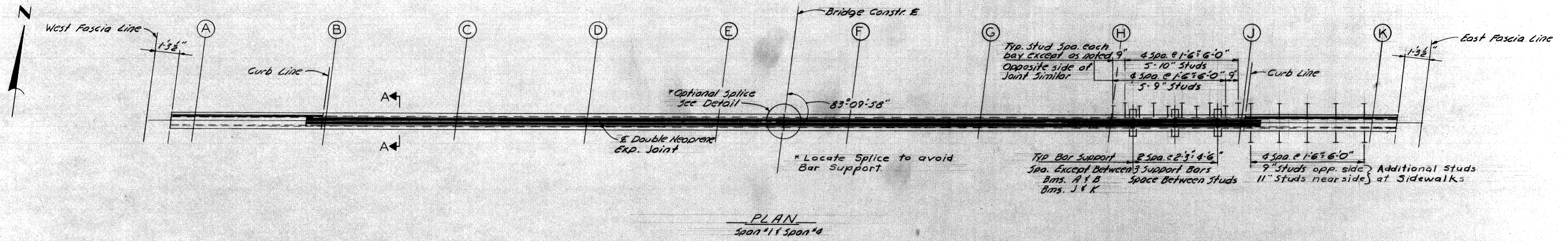
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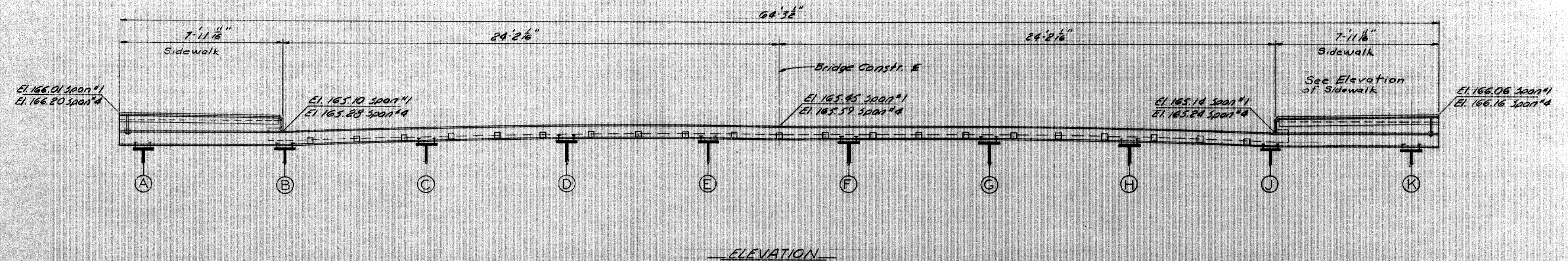
CITY OF DETROIT

SQUAD BOSS	MC GOWAN	1-70
DRAWN BY	A. MORRIS	11-69
CHECKED BY	I.H.K.	11-69
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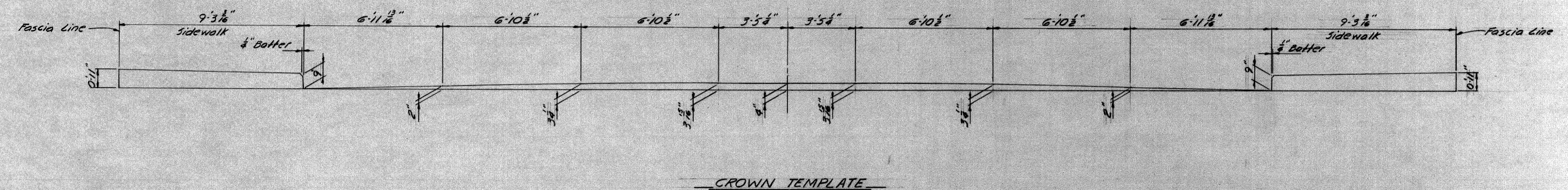
S17 of 82123 F



PLAN  
Span #1 & Span #4



ELEVATION



CROWN TEMPLATE

MISCELLANEOUS QUANTITIES				
Item	Unit	Span #1	Span #4	Total
Double Neoprene Exp. Jt.	Lin. Ft.	64.3	64.3	128.6

\*Complete; includes all Steel, Neoprene Jt. Sealer & H. P. R. A. T. F.

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DOUBLE NEOPRENE EXPANSION  
JOINT DETAILS

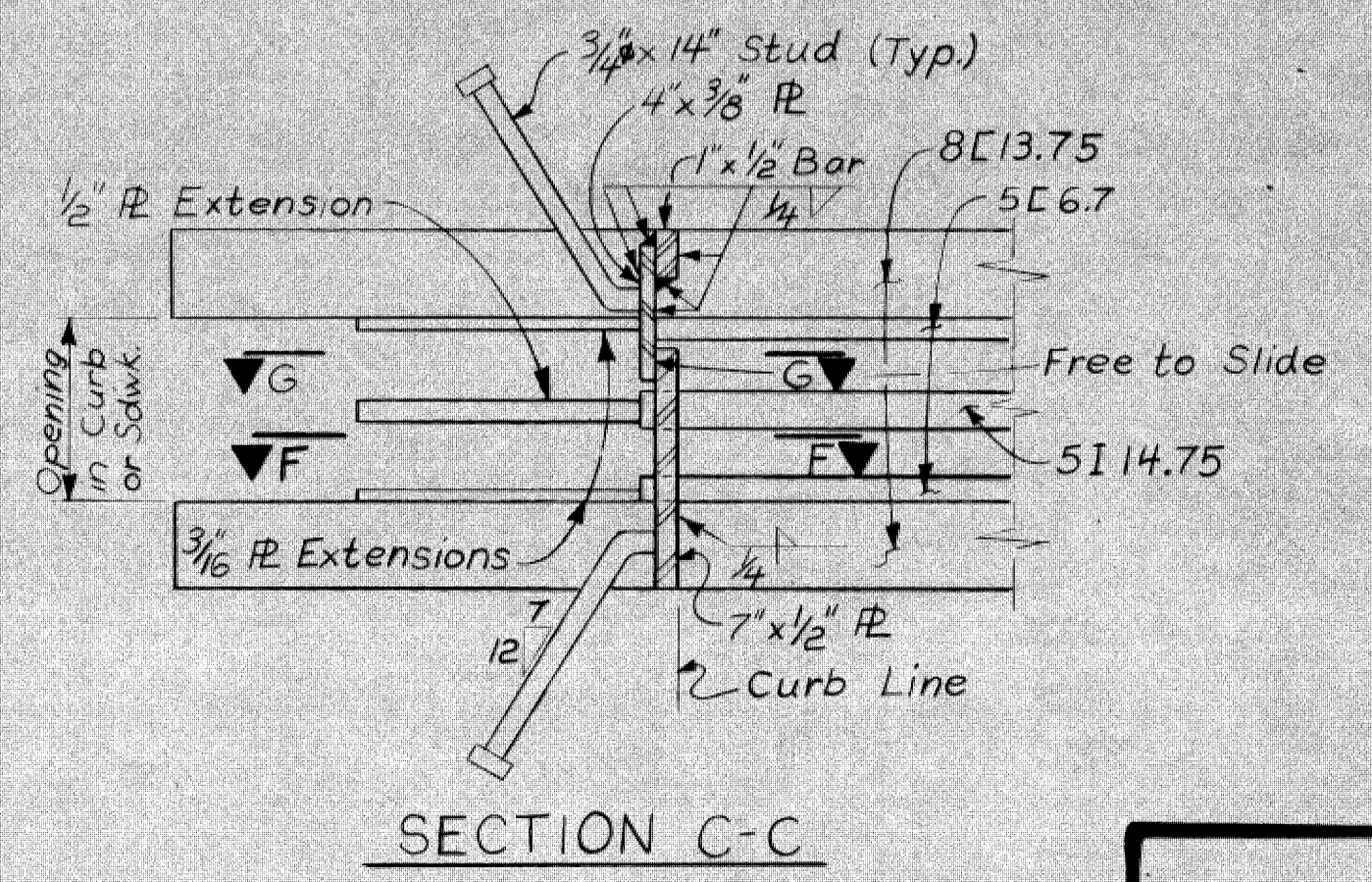
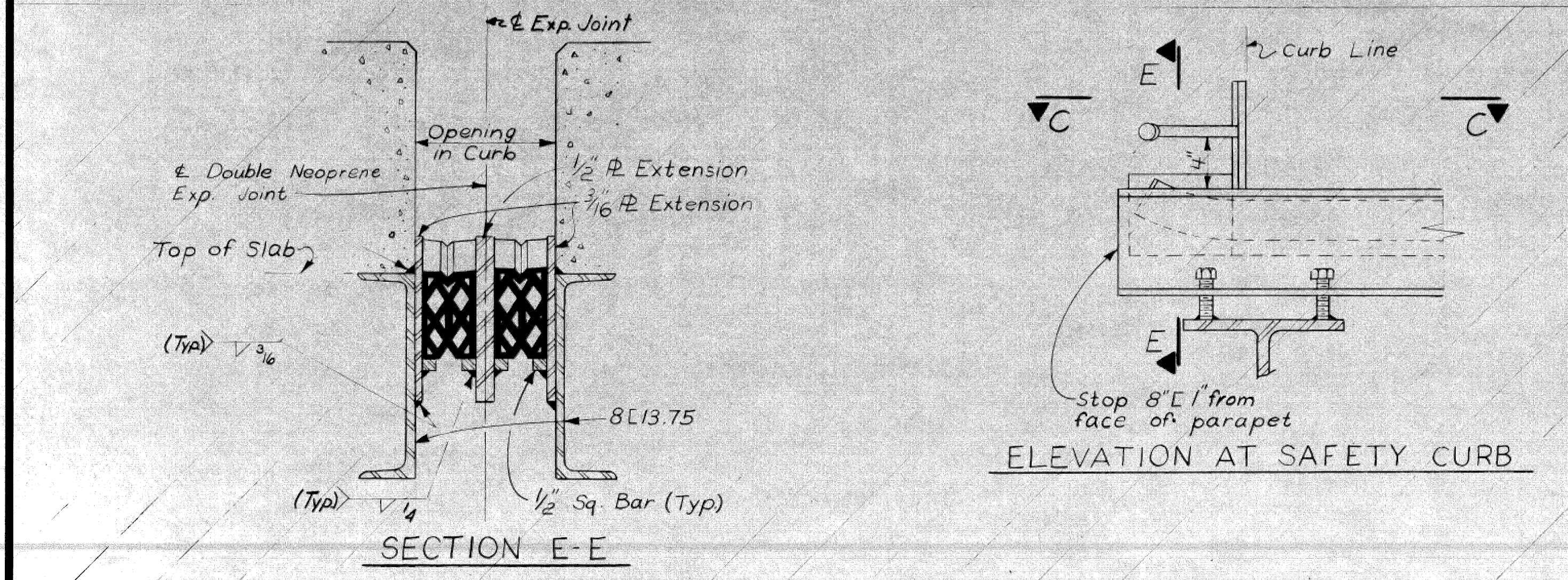
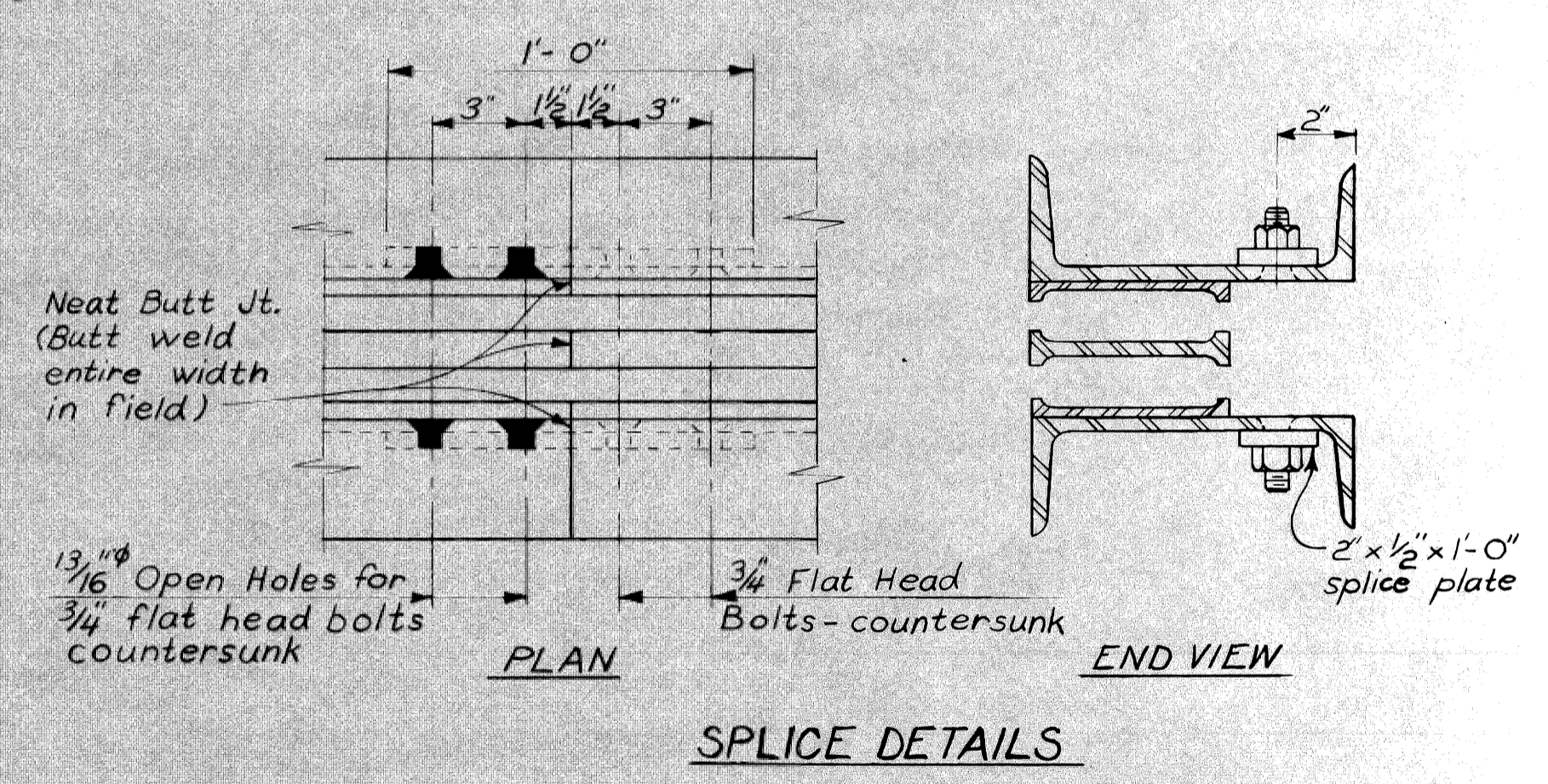
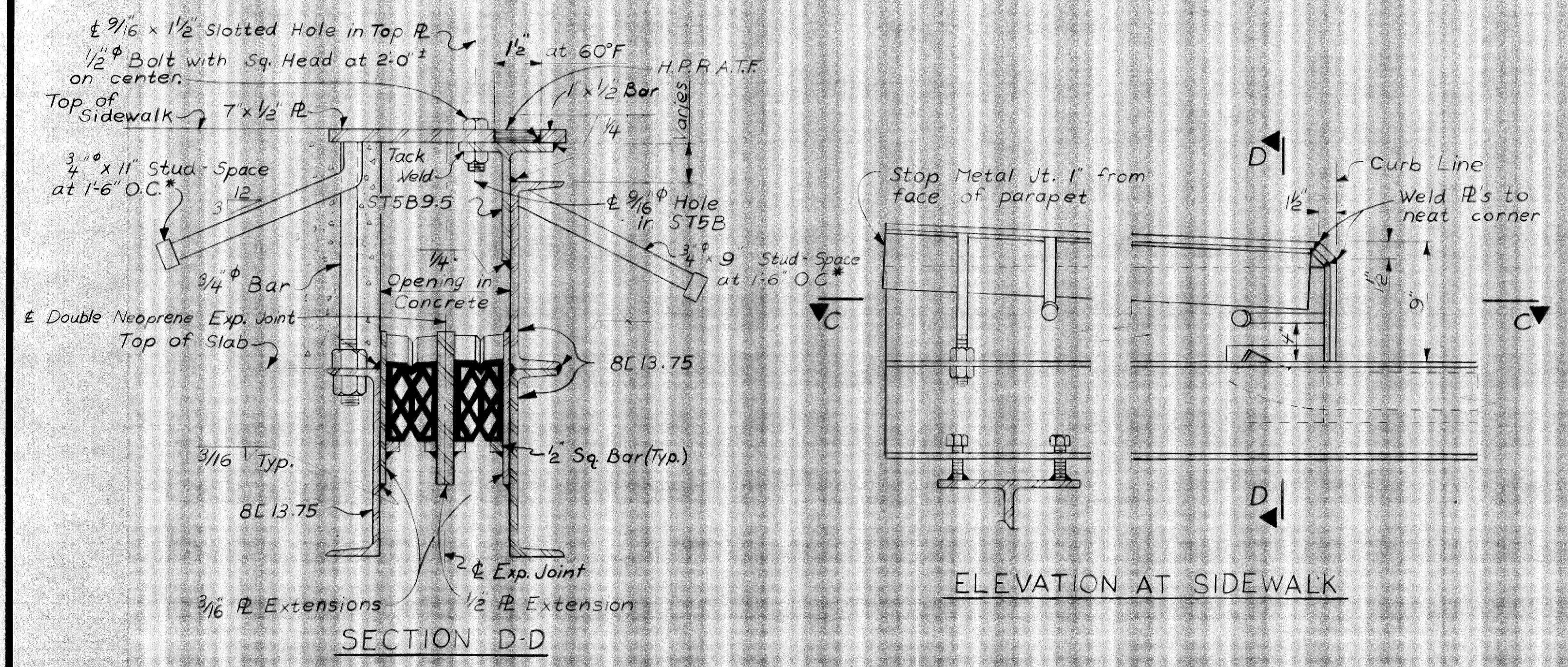
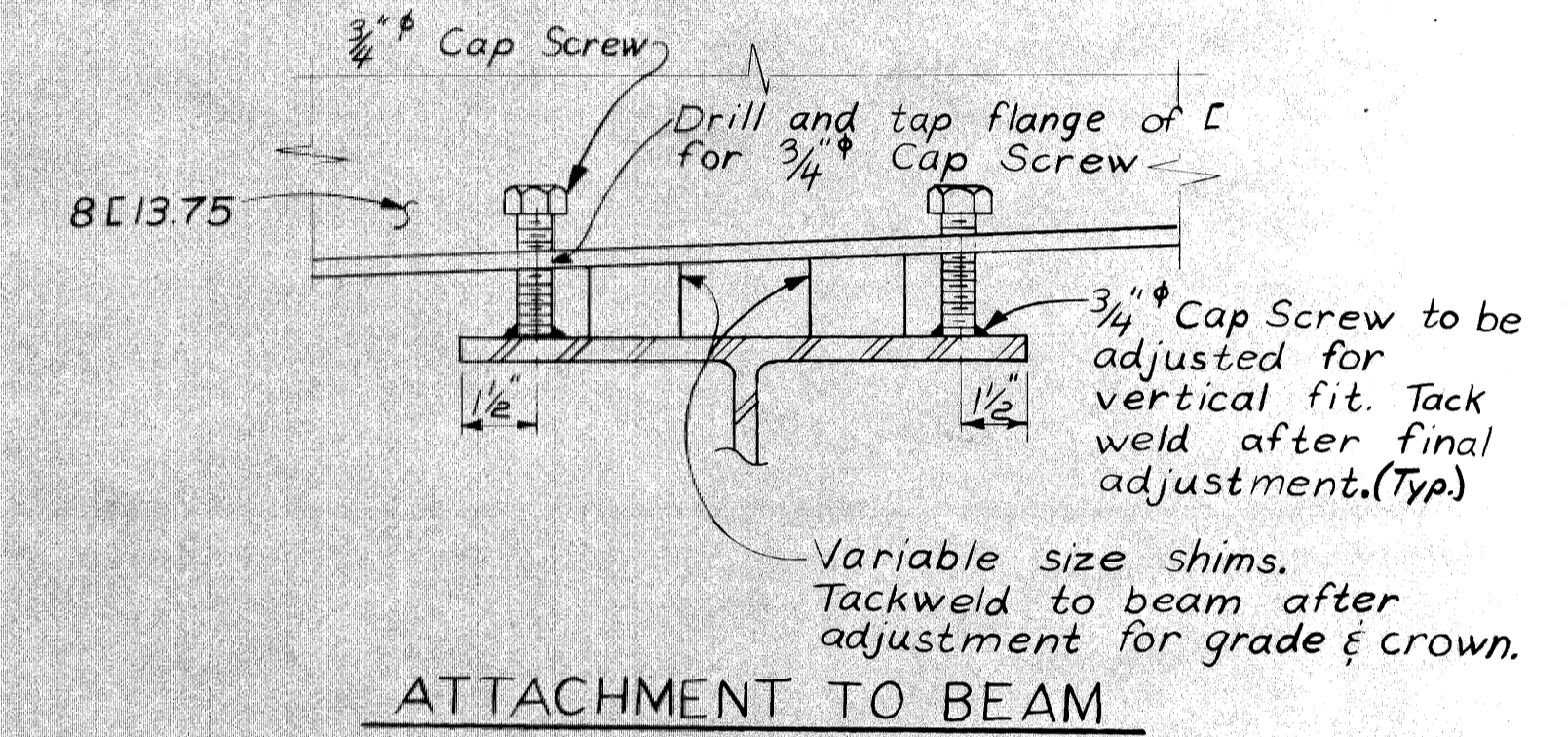
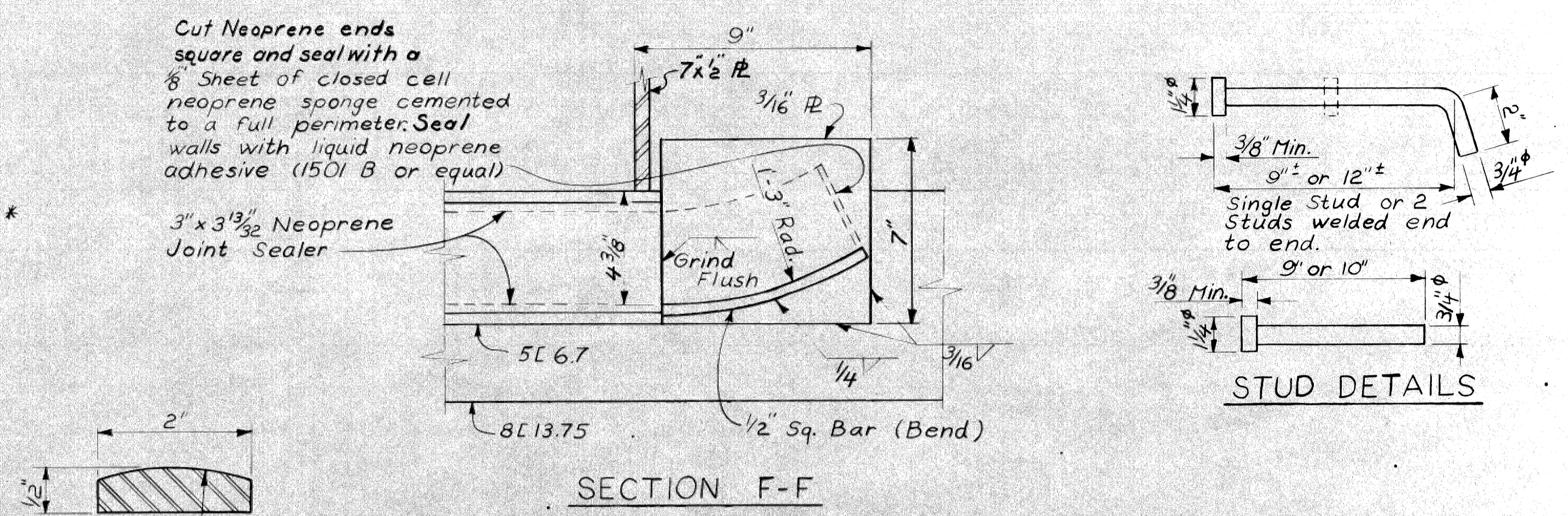
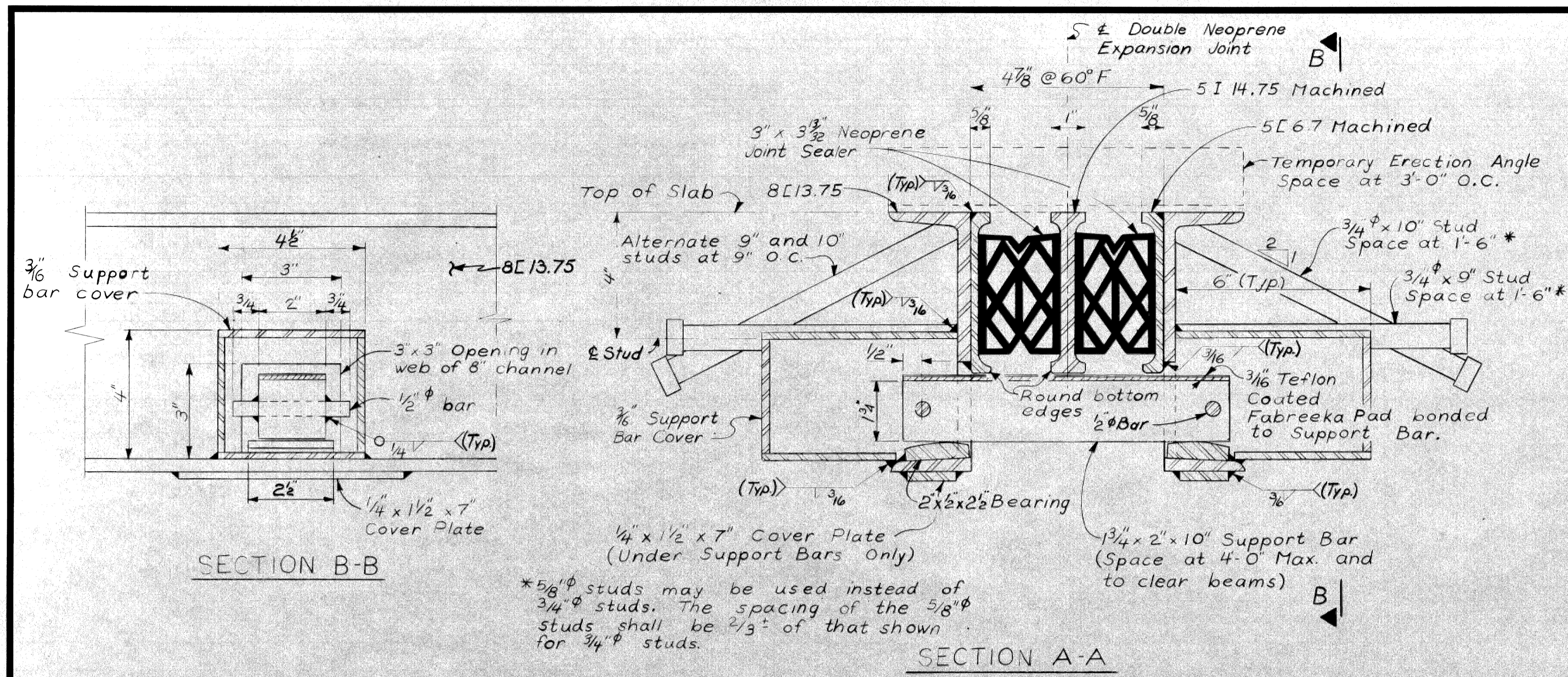
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SQUAD BOSS	MCGOWAN	B-70
DRAWN BY	A.G.	B-70
CHECKED BY	T.M.	B-70

SHEET 17 OF 27

S17 of 82123F



**NOTES:**

For details of Sealer and Installation Procedure, see Supplemental Specifications.

Studs are to be attached as shown by welding according to the manufacturer's recommendations.

The Neoprene Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab. Steel to be A.S.T.M. A-558.

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

**DOUBLE NEOPRENE EXPANSION JOINT DETAILS**

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DESIGNED BY: MCGOWAN 8-70

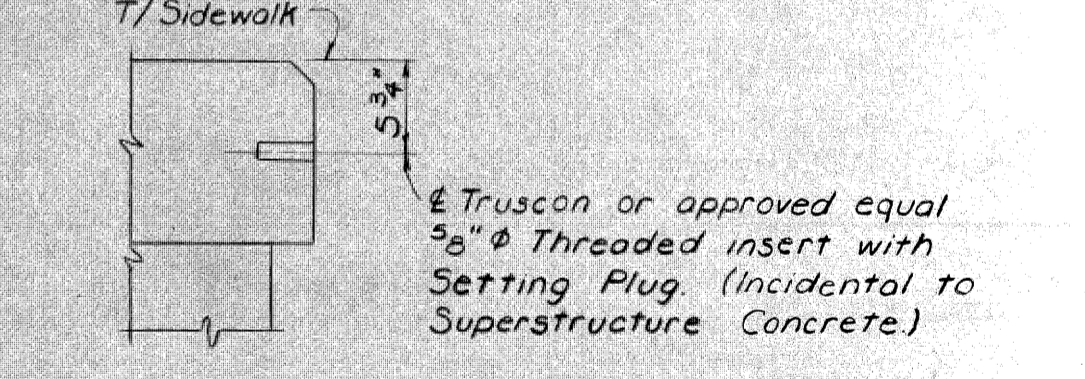
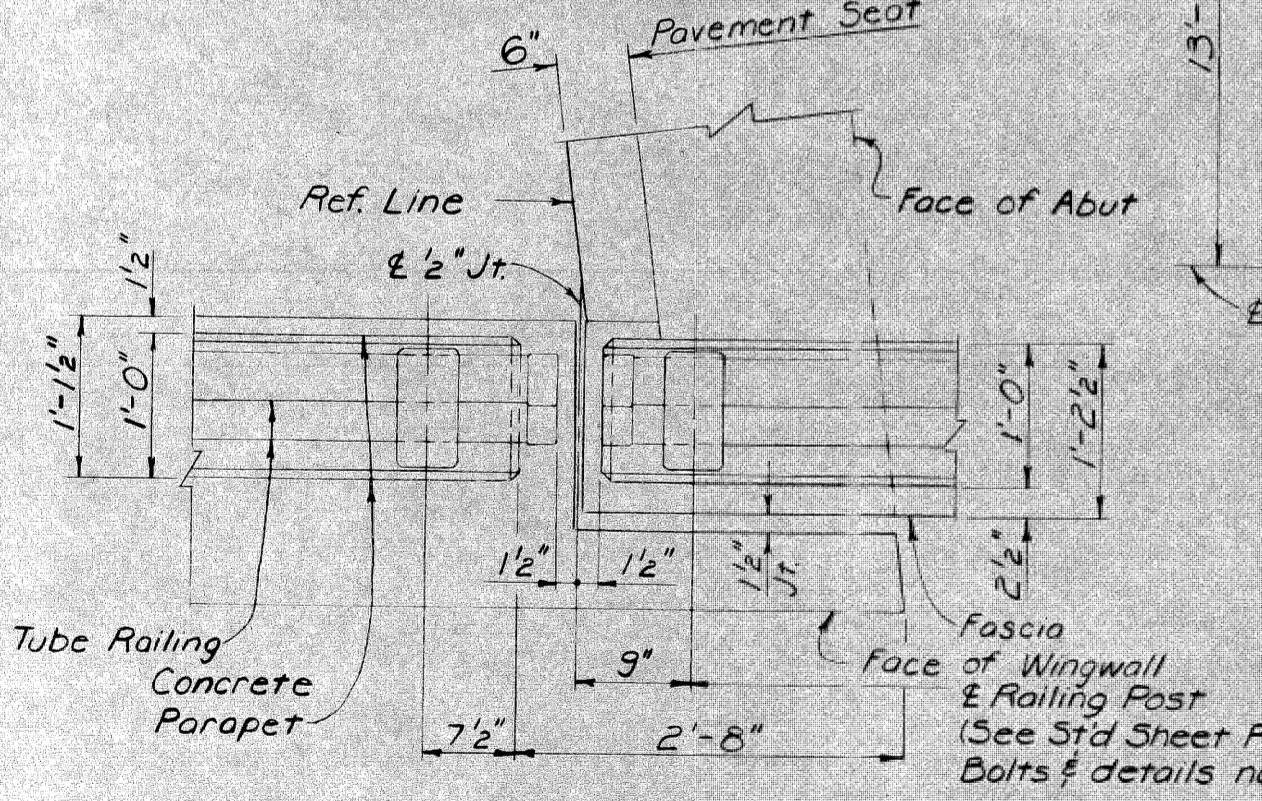
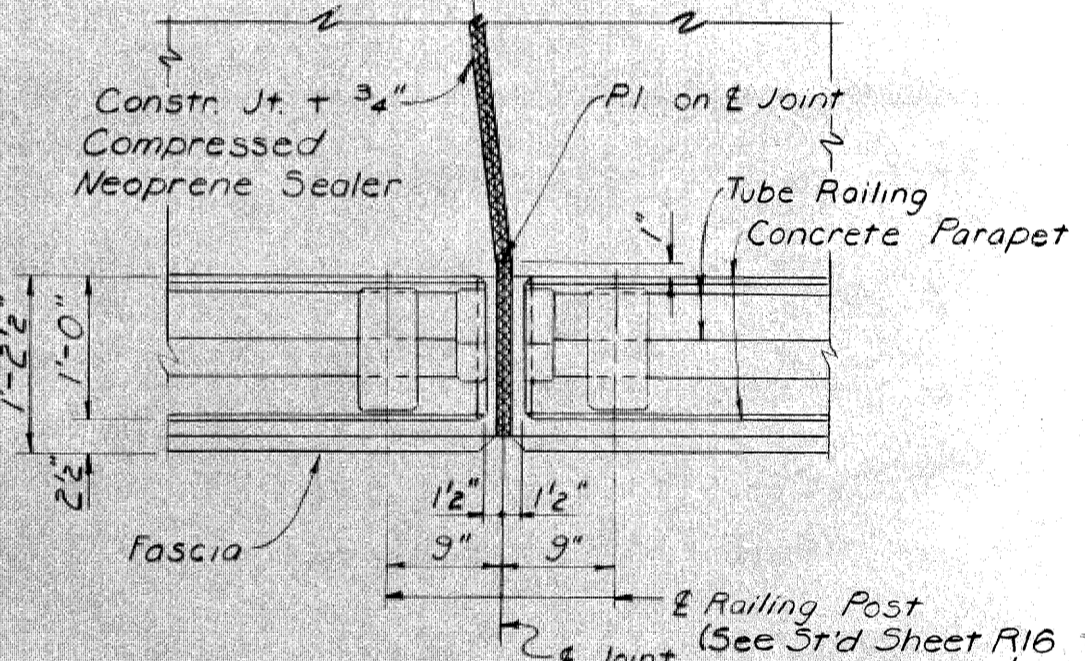
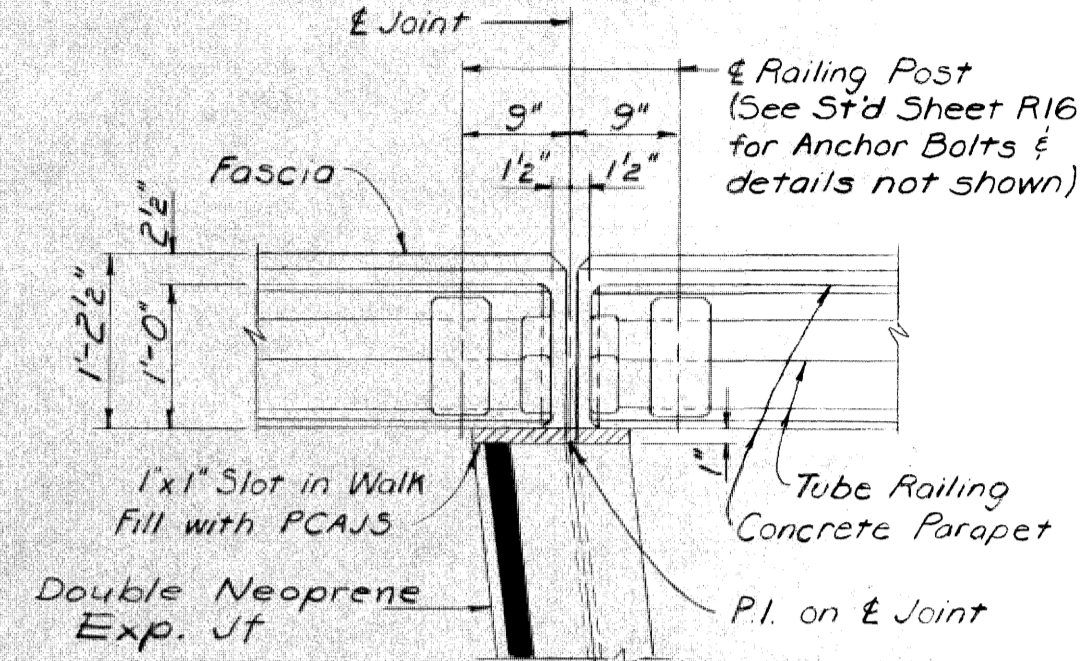
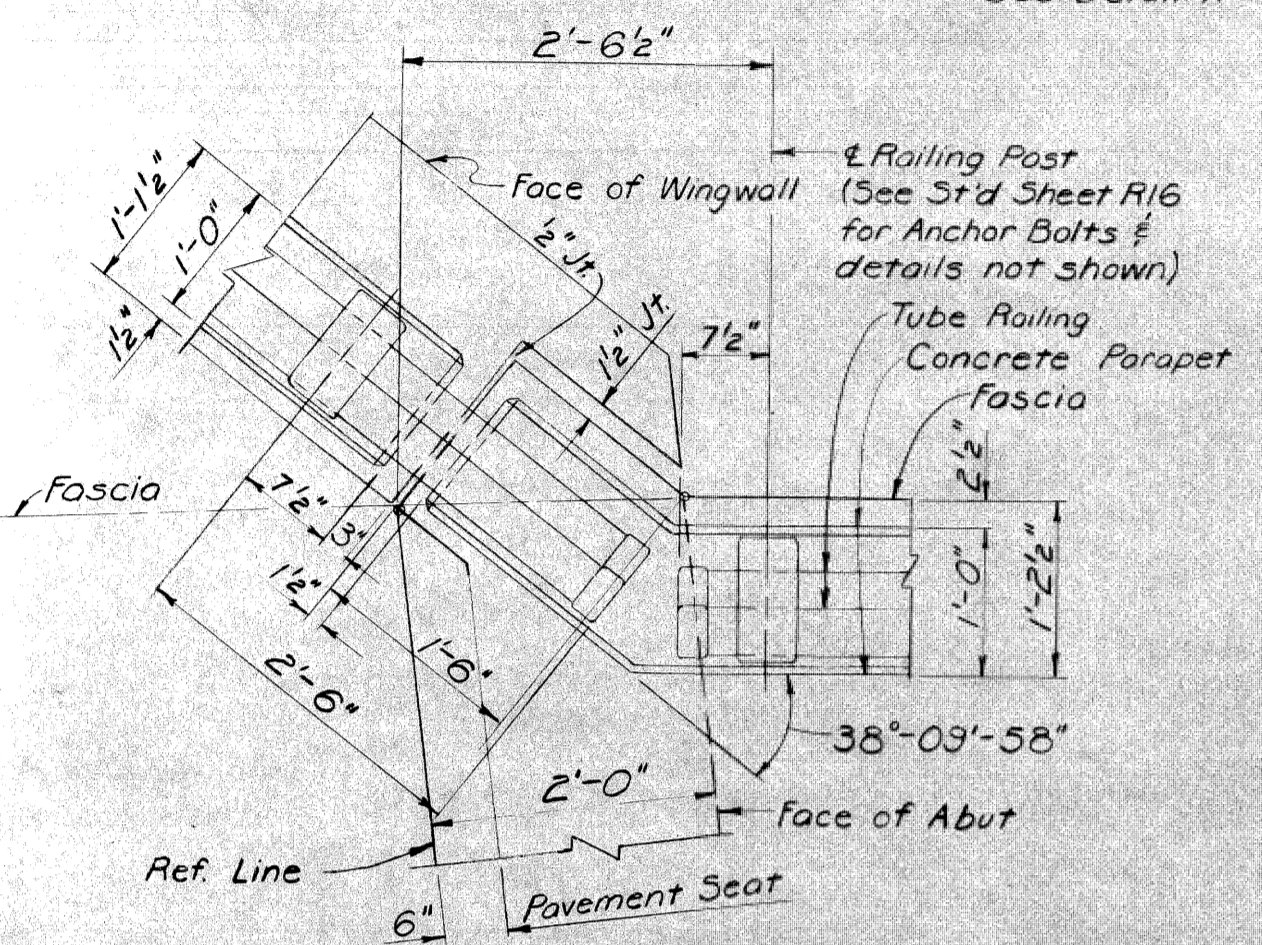
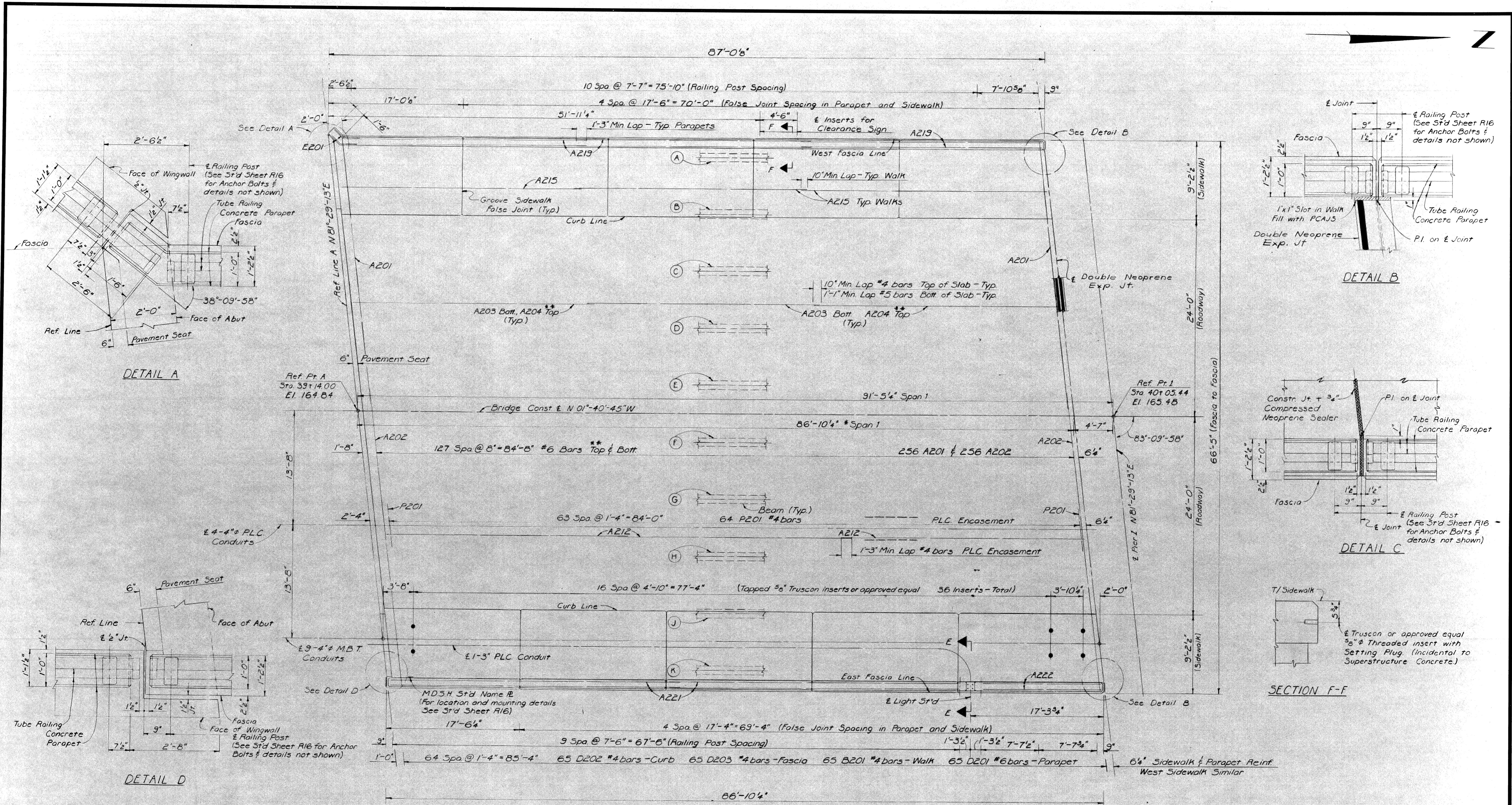
DRAWN BY: Van Nierbach 4-16-70

CHECKED BY: T.M. 8-70

SHEET 13 OF 27

**SI7 of 82123F**





PLAN - SPAN 1

\*\* All Reinforcing in top mat of slab, Spans 1 & 2, is to be Galvanized (See Bar Schedule)

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APPROVED \_\_\_\_\_  
STRUCTURAL ENGINEER

JOB No. \_\_\_\_\_  
PW 990(21)

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

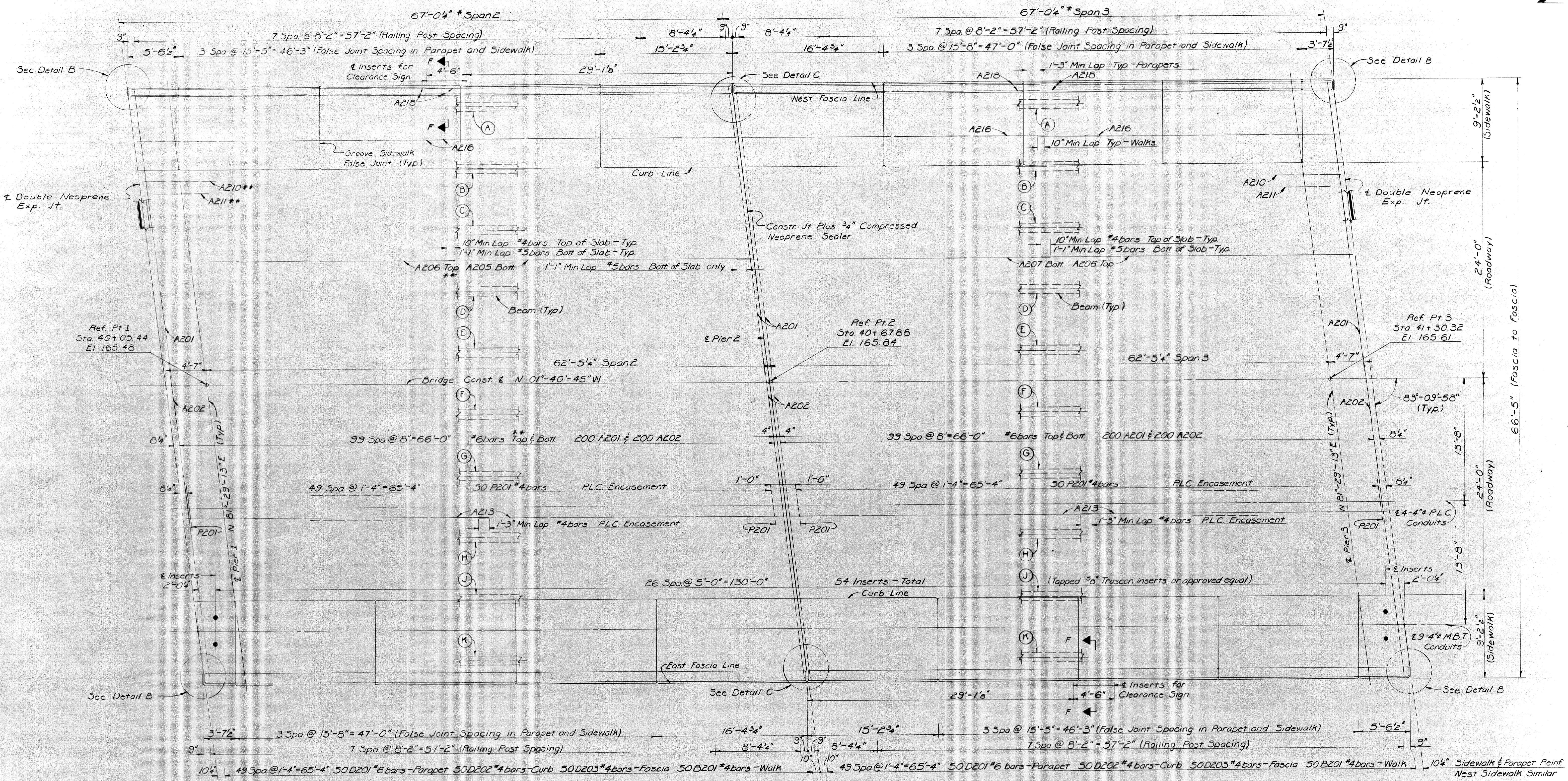
**SUPERSTRUCTURE DETAILS**

CITY OF DETROIT

NO.	REVISIONS	DATE	BY

SQUAD BOSS	McGOWAN	1-70
DRAWN BY	A. McNeil	11-69
CHECKED BY	L.H.A.	12-67
SHEET NO.	19	OF 27

S17 of 82123 F



**PLAN-SPAN 2**

\*\* All Reinforcing in top mat of slab, Spans 1 & 2, is to be Galvanized (See Bar Schedule)

**PLAN-SPAN 3**

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APPROVED: \_\_\_\_\_  
 STRUCTURAL ENGINEER

JOB No.  
 PW 9901211

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**SUPERSTRUCTURE DETAILS**

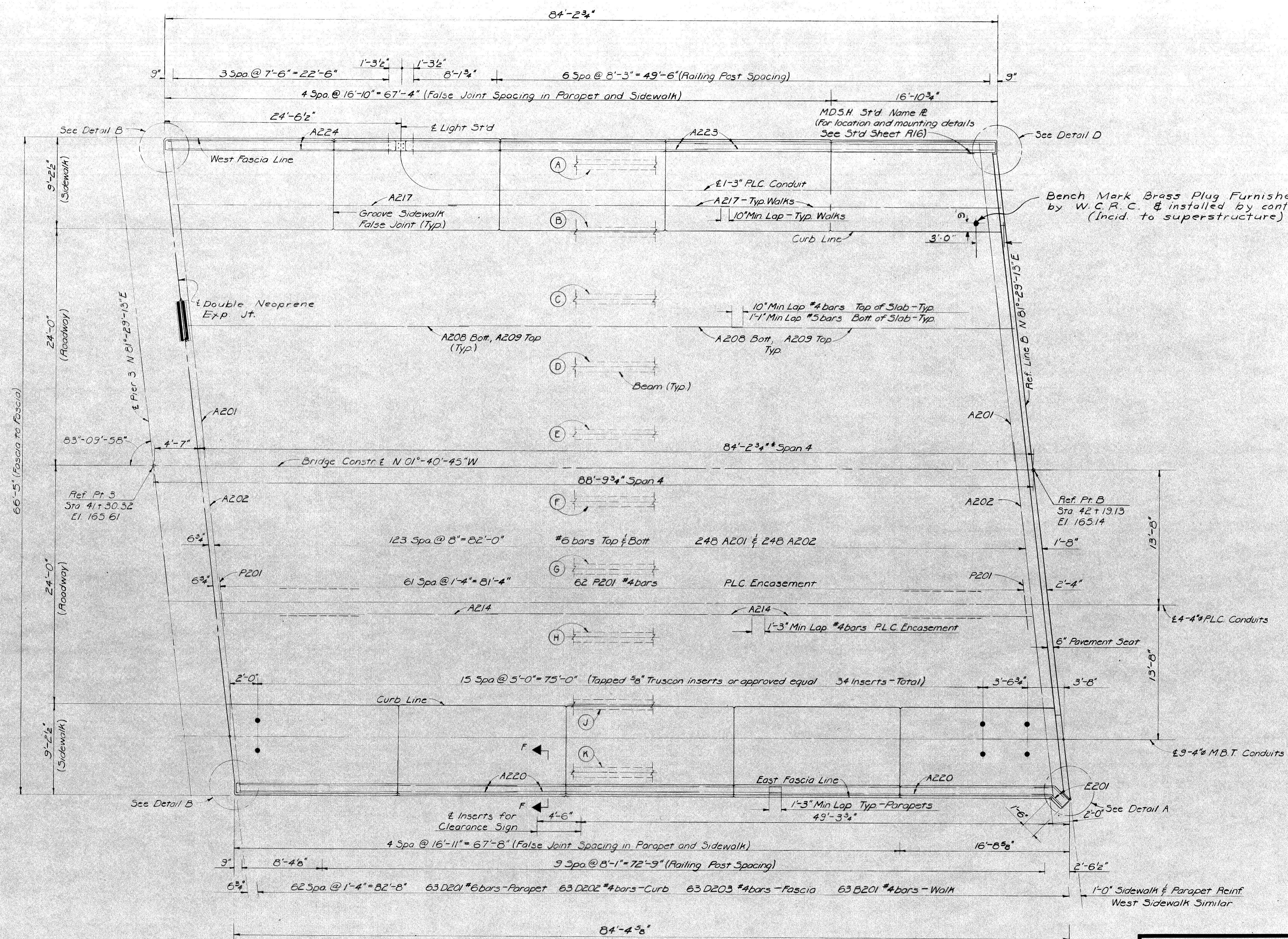
CITY OF DETROIT

NO.	DESCRIPTION	DATE	BY

REVISIONS

SQUAD BOSS: MCGOWAN 1-70  
 DRAWN BY: A. MORRIS 71-69  
 CHECKED BY: H. R. 12-67  
 SHEET 20 OF 27

S17 of 82123 F



PLAN - SPAN 4

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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**SUPERSTRUCTURE DETAILS**

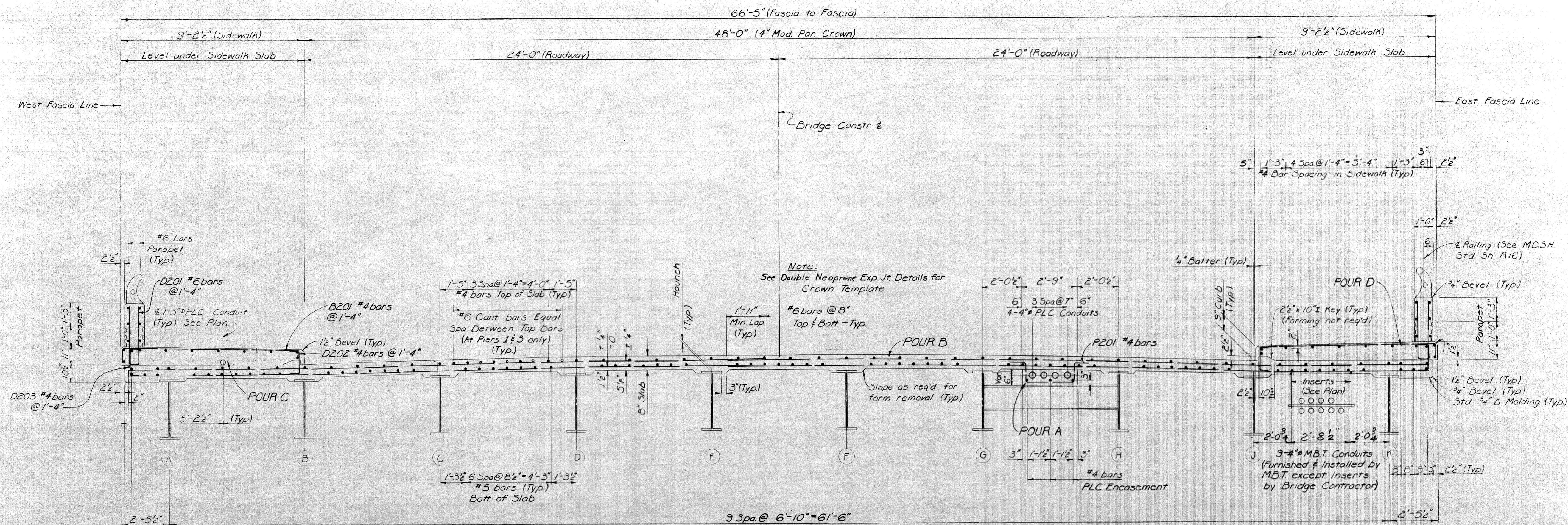
CITY OF DETROIT

SQUAD BOSS: MCGOWAN L-70  
 DRAWN BY: A. Meier 11-69  
 CHECKED BY: J.H.K. 12-29  
 SHEET 21 OF 27

S17 of 82123 F

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVED: [Signature] STRUCTURAL ENGINEER  
 JOB NO: [Blank]  
 PW 990(21)



207 A203 #5bars	Bott of Slab	**150 A204 #4bars	Top of Slab	66 A215 #4bars	Sidewalks	18 A219 & 6 E201 #6bars	West Parapet	9 A212 #4bars	PLC Encasement	*Span 1
138 A205 #5bars	Bott of Slab	**100 A206 #4bars	Top of Slab	44 A216 #4bars	Sidewalks	24 A218 #6bars	Parapets	6 A213 #4bars	PLC Encasement	*Span 2
138 A207 #5bars	Bott of Slab	100 A206 #4bars	Top of Slab	44 A216 #4bars	Sidewalks	24 A218 #6bars	Parapets	6 A213 #4bars	PLC Encasement	*Span 3
207 A208 #5bars	Bott of Slab	150 A209 #4bars	Top of Slab	66 A217 #4bars	Sidewalks	12 A223 & 6 A224 #6bars	West Parapet	9 A214 #4bars	PLC Encasement	*Span 4
				**22 A210 #6bars		**23 A211 #6bars				Top of Slab Pier 1
				22 A210 #6bars		23 A211 #6bars				Top of Slab Pier 3

**CROSS SECTION**

\*\* All Reinforcing in top mat of slab, Spans 1 & 2, is to be Galvanized (See Bar Schedule)

PLANS PREPARED BY  
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APPROVED \_\_\_\_\_  
 STRUCTURAL ENGINEER

JOB No.  
 PW 930(21)

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

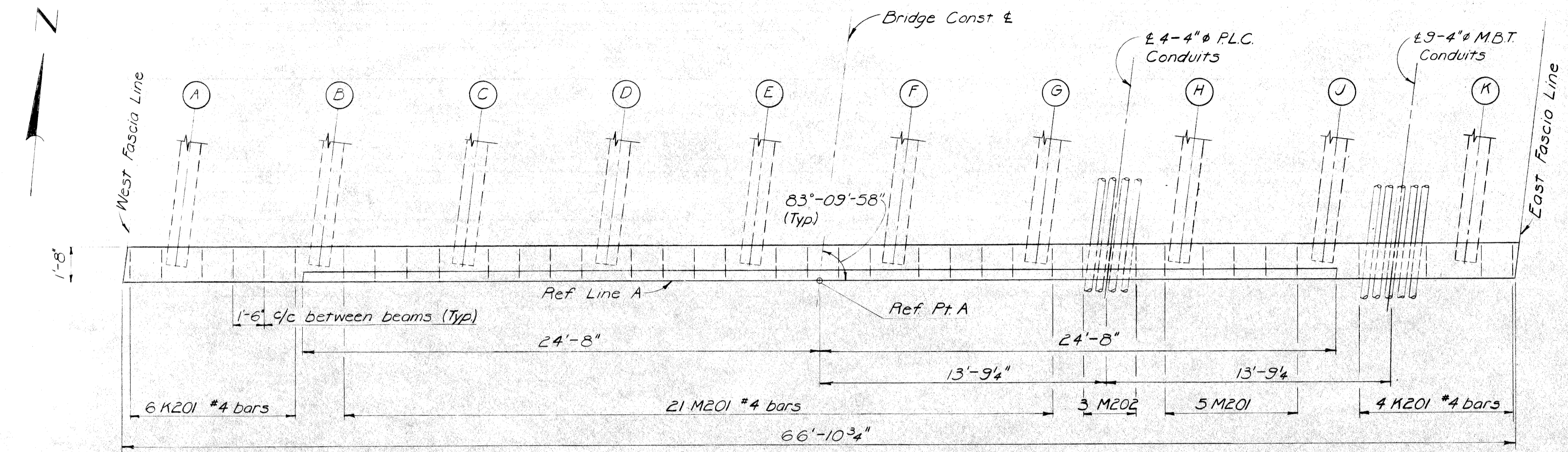
**SUPERSTRUCTURE DETAILS**

CITY OF DETROIT

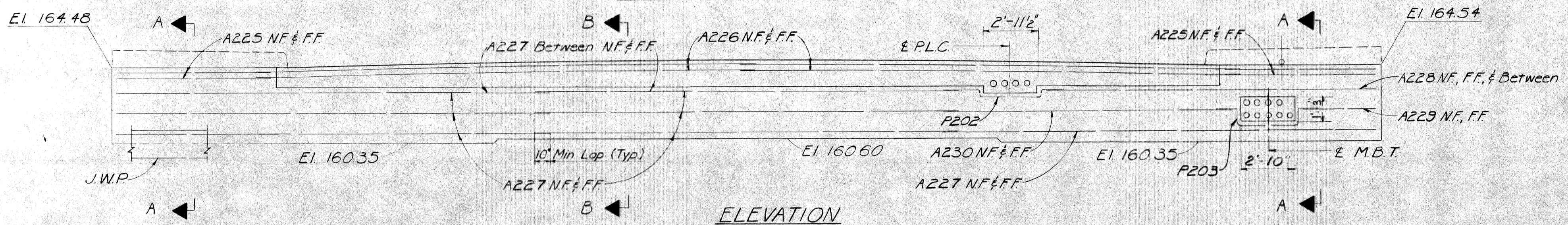
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS M. GOWAN 1-70  
 DRAWN BY A. MORRIS 9-69  
 TRACKED BY J. H. O. 12-69  
 CHECKED BY J. H. O. 12-69  
 SHEET 22 OF 27

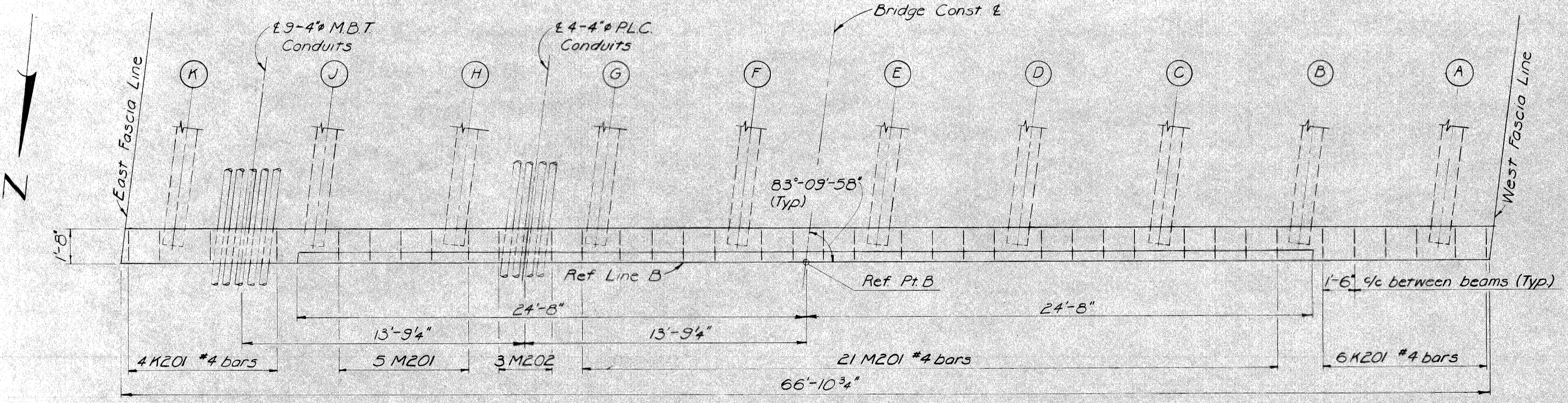
S17 of 82123 F



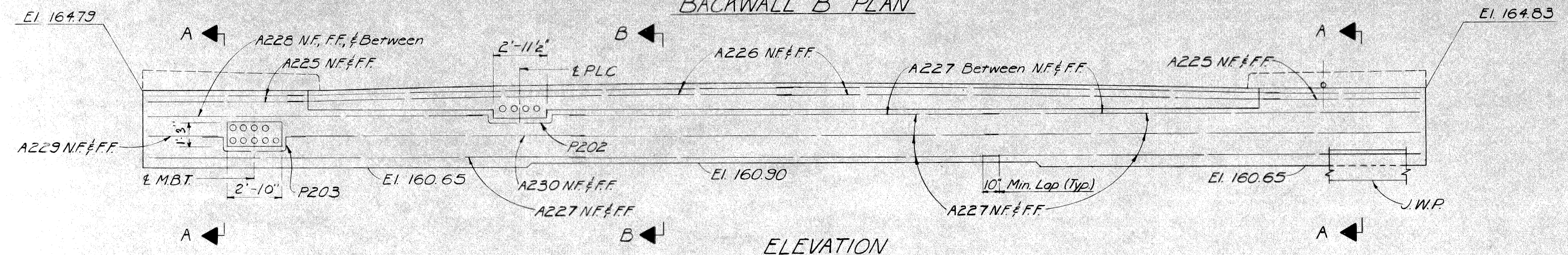
BACKWALL 'A' PLAN



ELEVATION

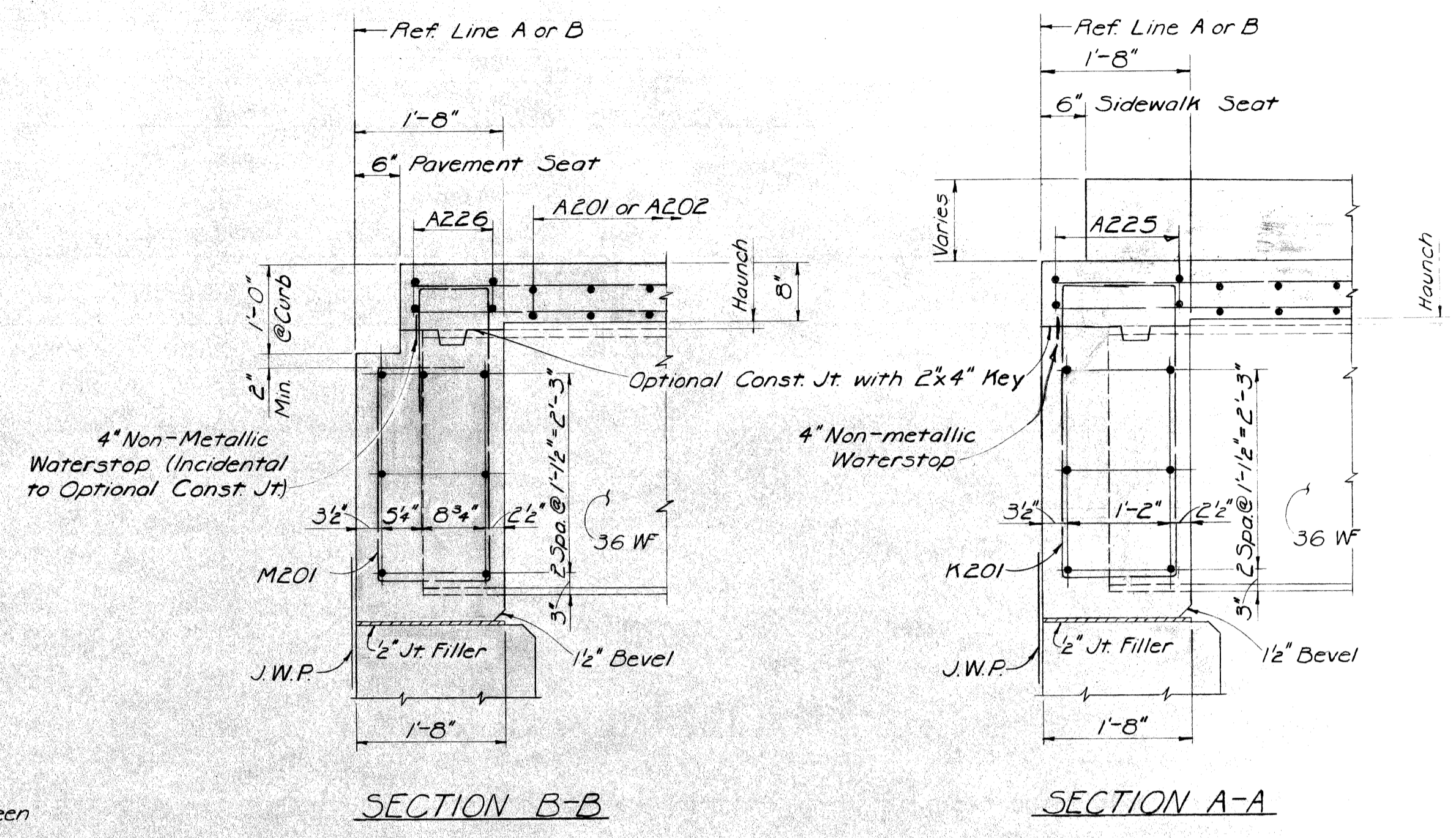


BACKWALL 'B' PLAN



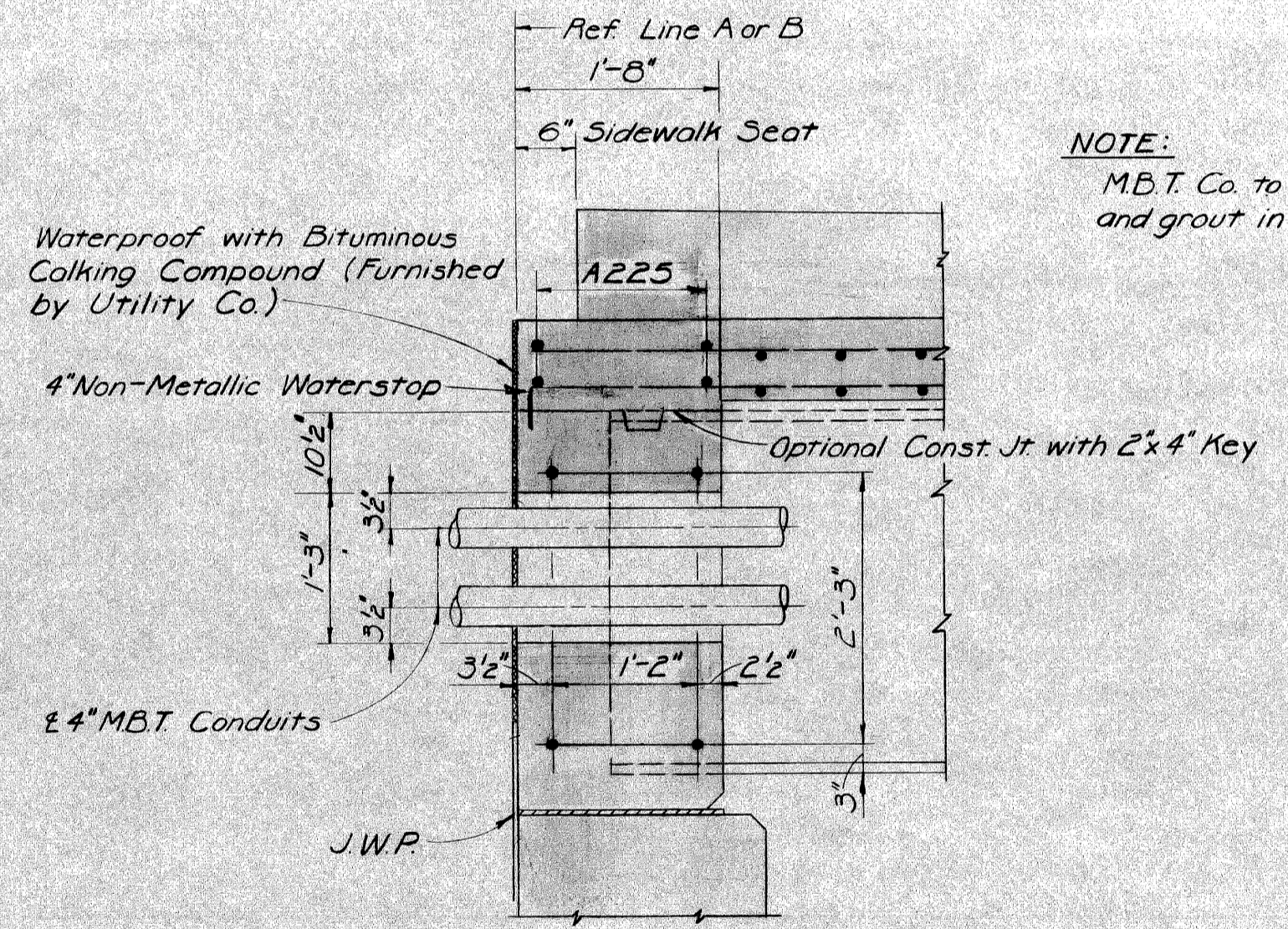
ELEVATION

NOTE:  
All Backwall Reinforcing #4 bars  
N.F. denotes Near Face  
F.F. denotes Far Face



SECTION B-B

SECTION A-A



SECTION FOR MICH BELL TELEPHONE CO. CONDUITS

NOTE:  
M.B.T. Co. to place conduit and grout in place.

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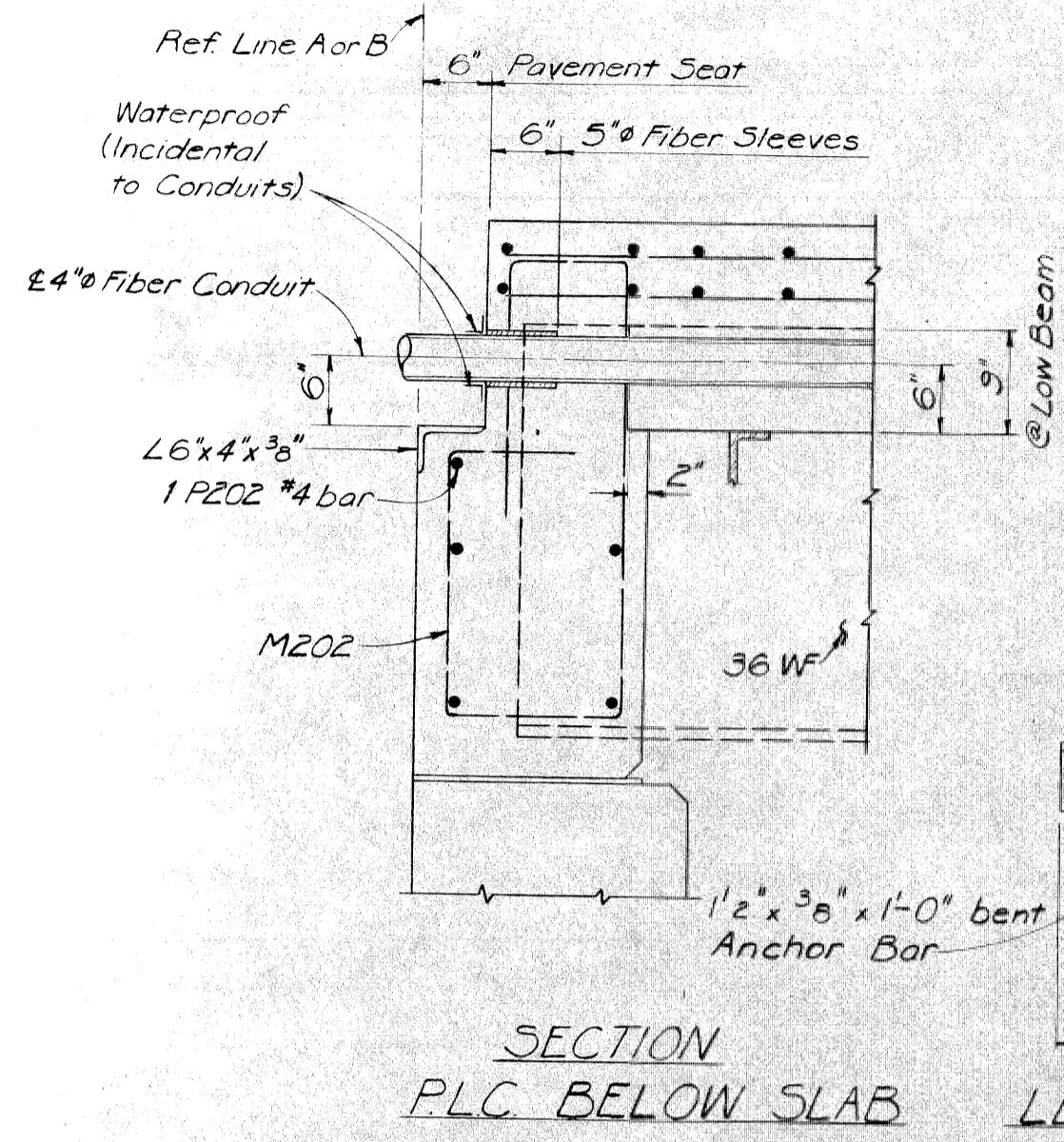
JOB No. PW 990(21)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS ROAD OVER JEFFRIES FREEWAY IN DETROIT.  
SUPERSTRUCTURE DETAILS

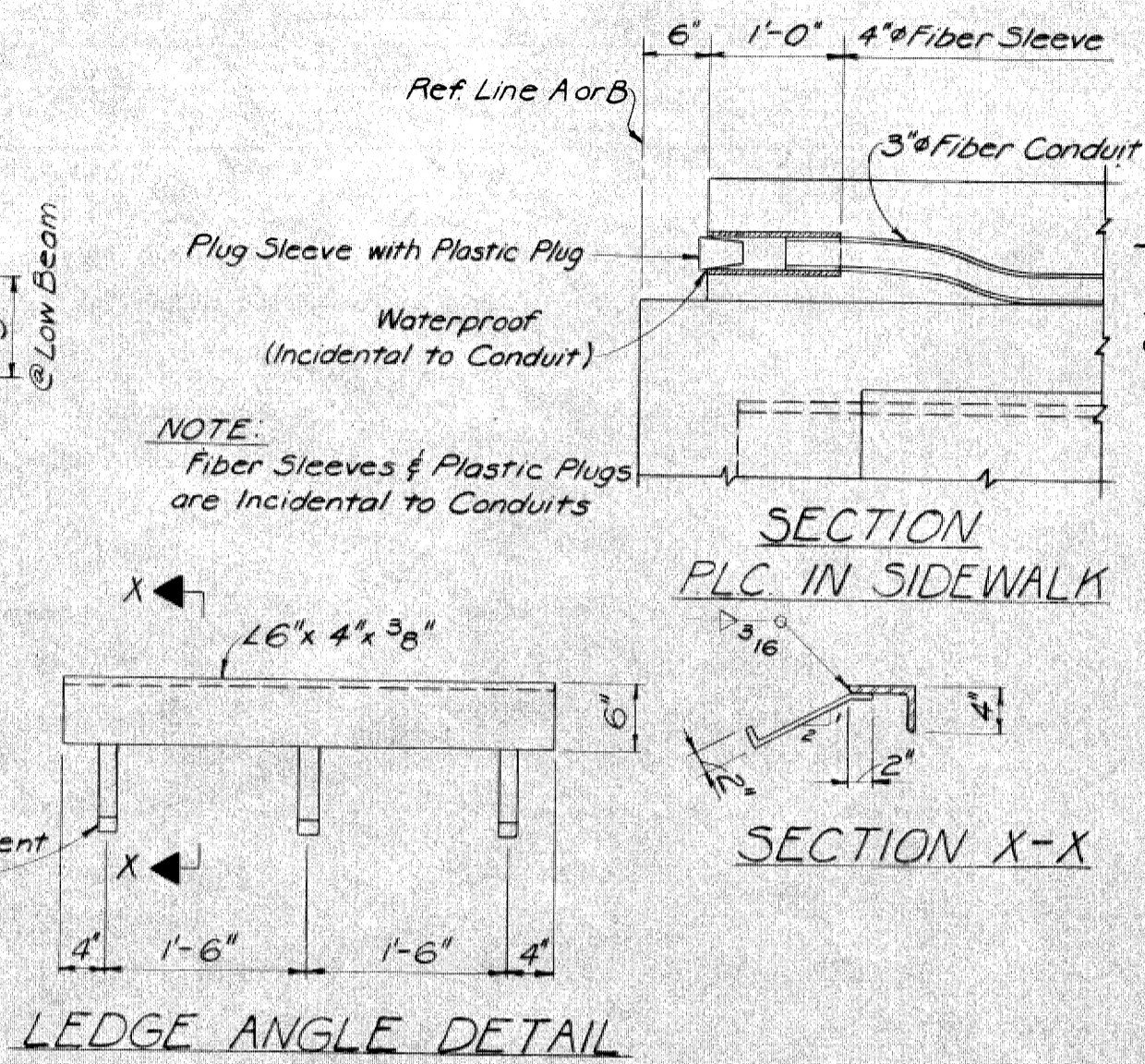
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT  
SQUAD BSS MCGWALL 1-70  
DRAWN BY A. Adams (11-61)  
TRACED BY  
CHECKED BY F. H. [Signature] 12-69  
SHEET 3 OF 27  
S17 of 82123 F

Weight of PLC Anchor Bolts and Anchor and PLC Ledge Angle is included in Structural Steel weight.



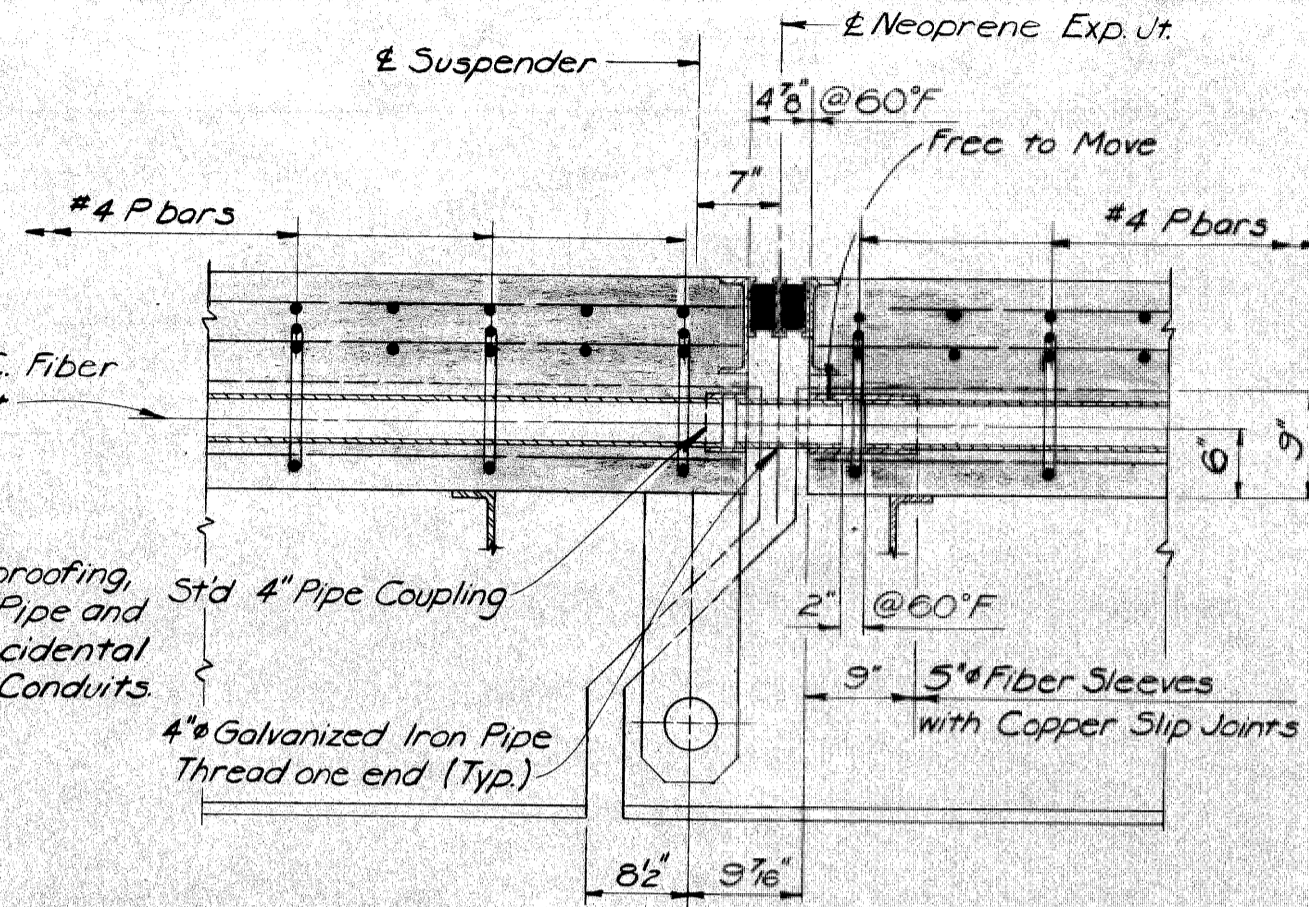
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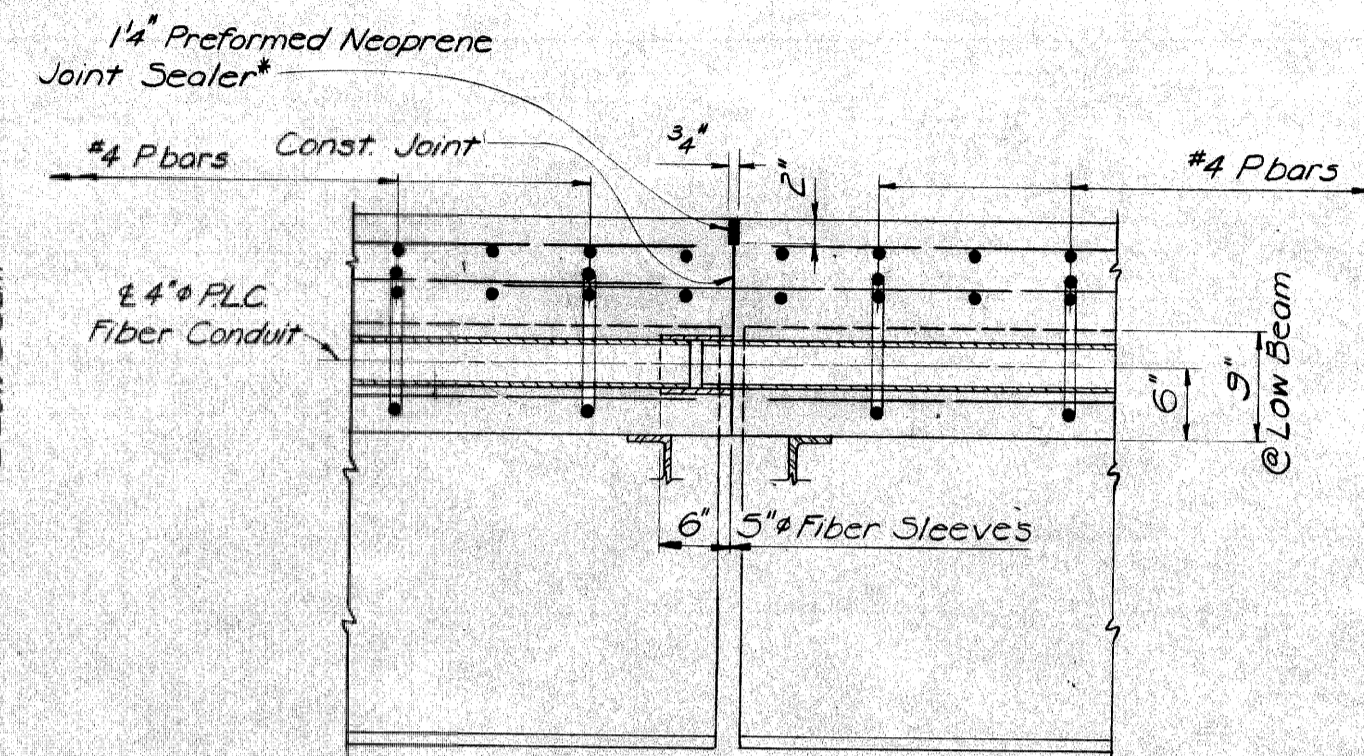
SECTION PLC IN SIDEWALK

LEDGE ANGLE DETAIL

NOTE: Waterproofing, Dampproofing, Sleeves, Slip Joints, Pipe and Couplings are all Incidental to 3" and 4" Fiber Conduits



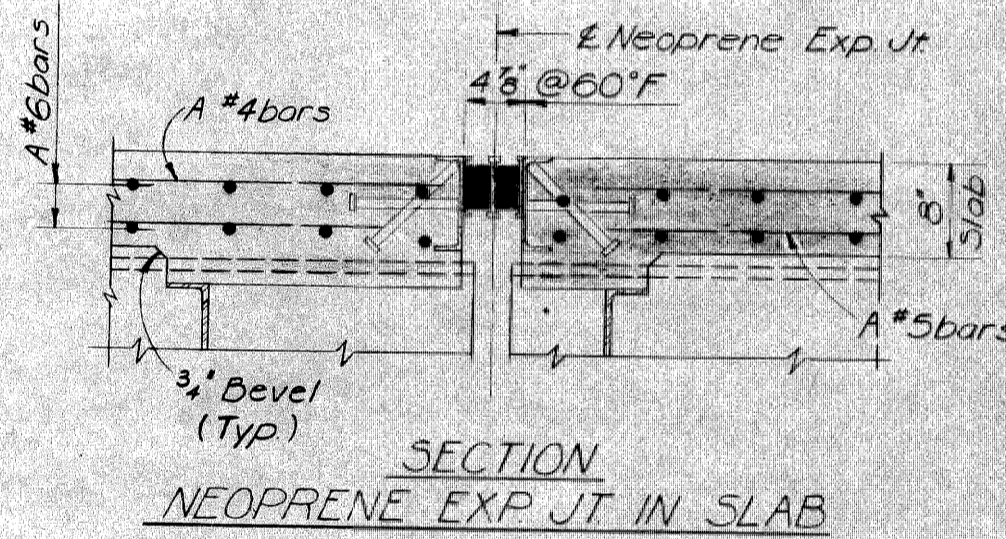
PLC DETAILS @ NEOPRENE EXP JT & CONSTR JT



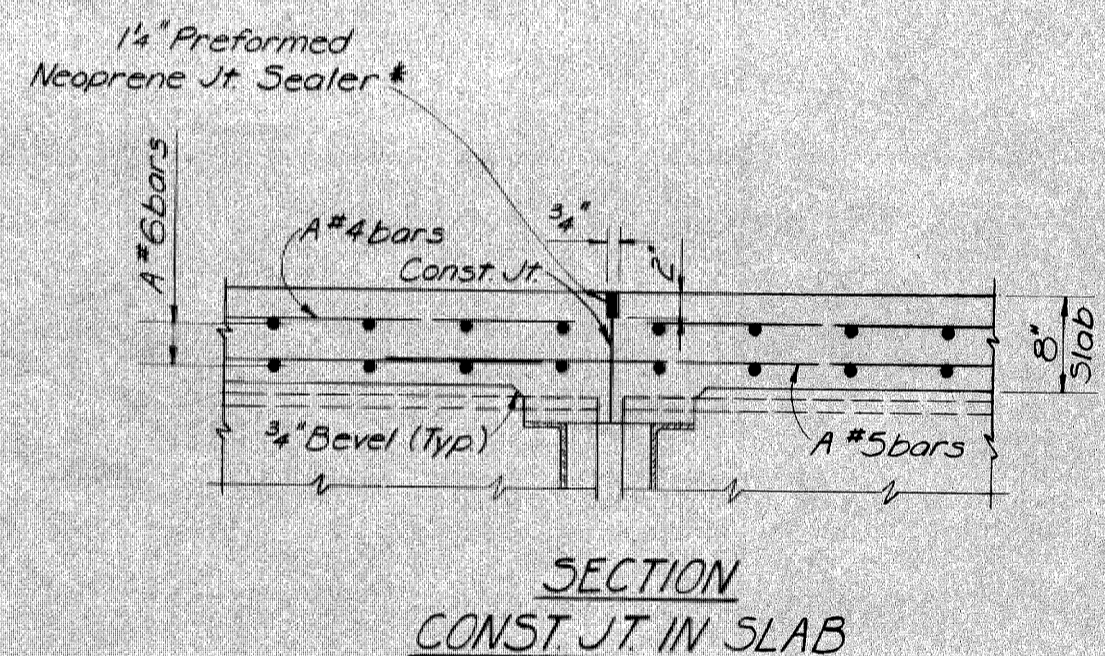
CONCRETE QUANTITIES (CU. YDS.)						
Pour	Location	Grade	*Span 1	*Span 2	*Span 3	*Span 4
A	PLC Encasement	XX	6.2	4.8	4.8	6.0
B	Deck Slab	A(6AA)	165.2	117.7	117.7	160.9
C	West Sidewalk	A(6AA)	23.7	18.4	18.4	22.7
D	East Sidewalk	A(6AA)	23.5	18.4	18.4	22.9
Total Grade XX Concrete - Superstructure			21.8			
Total Grade A(6AA) Concrete - Superstructure			727.9			

NOTES:  
Parapet Concrete = 51 Cu Yds. Grade A(6AA). Part of Bridge Railing - Solid Parapet Type and not a pay item.  
Alphabetical designation of pours is not to be construed as a pour sequence.  
Sidewalk pours shall not be cast until slab concrete has attained at least 50% of its design strength as determined by Table 701-5 of the Standard Specifications.

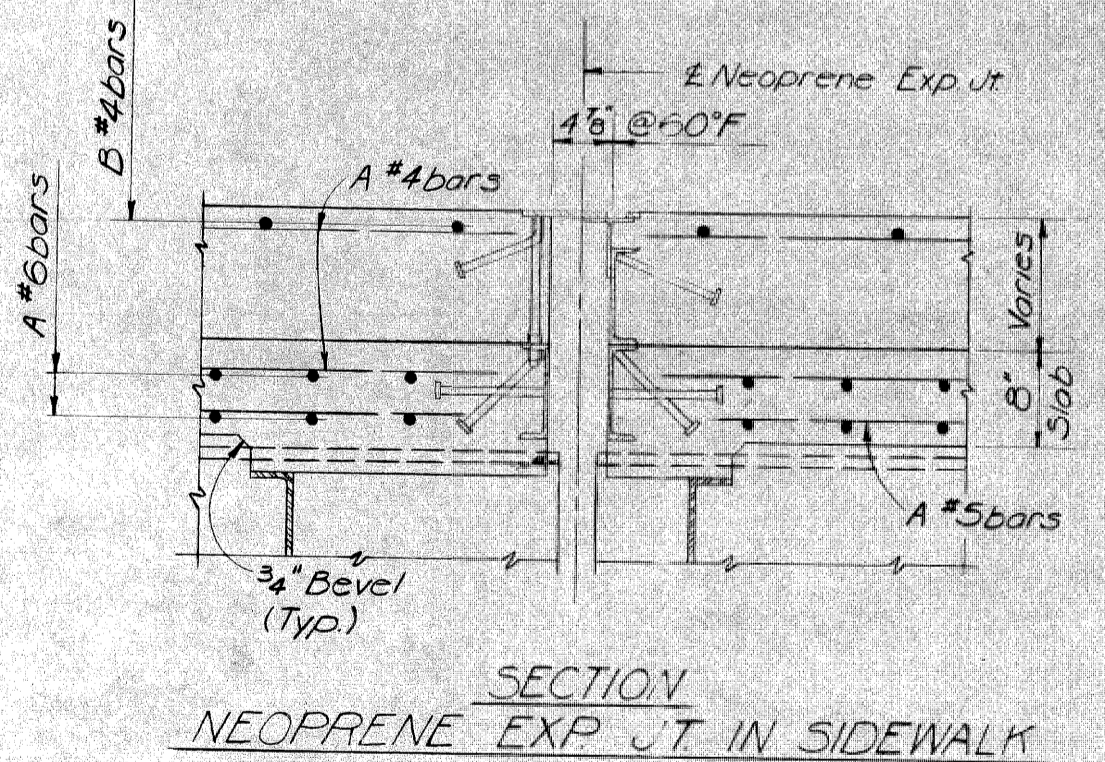
MISCELLANEOUS QUANTITIES		
Item	Unit	Amount
Water-Reducing Retarding Admixture	Gal.	84
5" Concrete Inserts	Each	124
Low Temp Protection - Superstructure Concrete	Cu. Yds.	750
Protective Treatment for Bridge Decks	Sq. Ft.	19,600
1/4" Preformed Neoprene Joint Sealer	Lin. Ft.	67
Joint Waterproofing	Sq. Ft.	201
Bridge Railing - Solid Parapet Type	Lin. Ft.	607
3" Conduits	Lin. Ft.	135.5
4" Conduits	Lin. Ft.	1,220.5



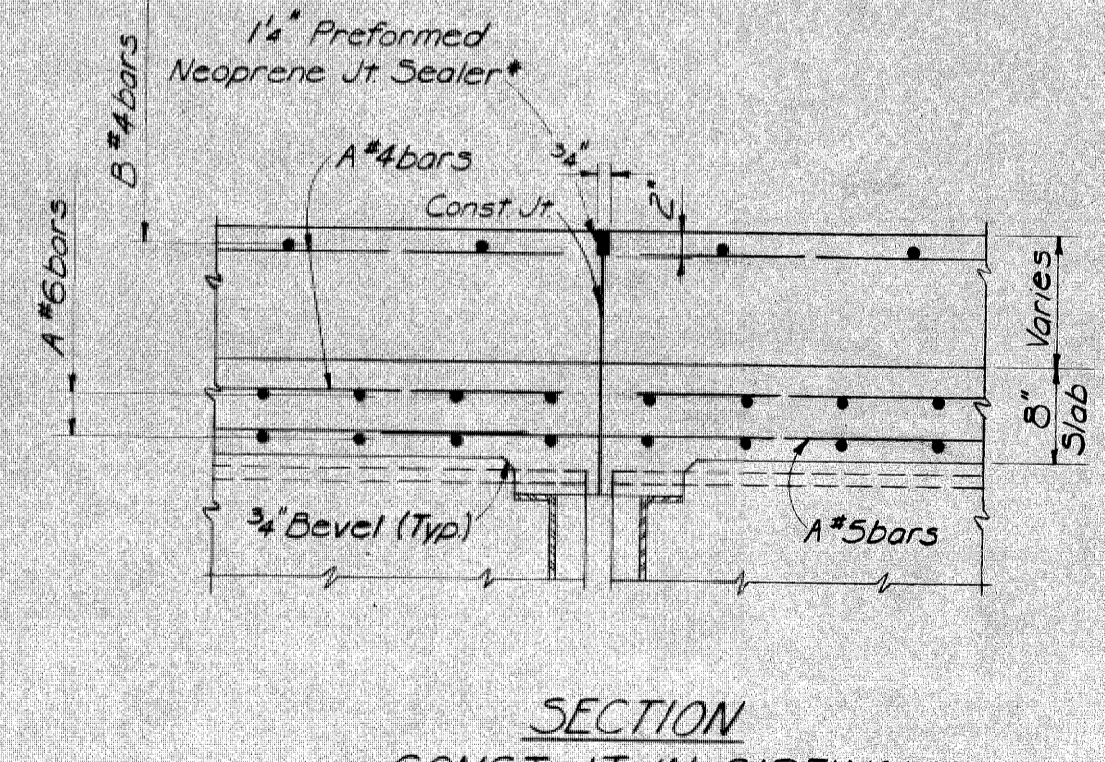
SECTION NEOPRENE EXP JT IN SLAB



SECTION CONST JT IN SLAB

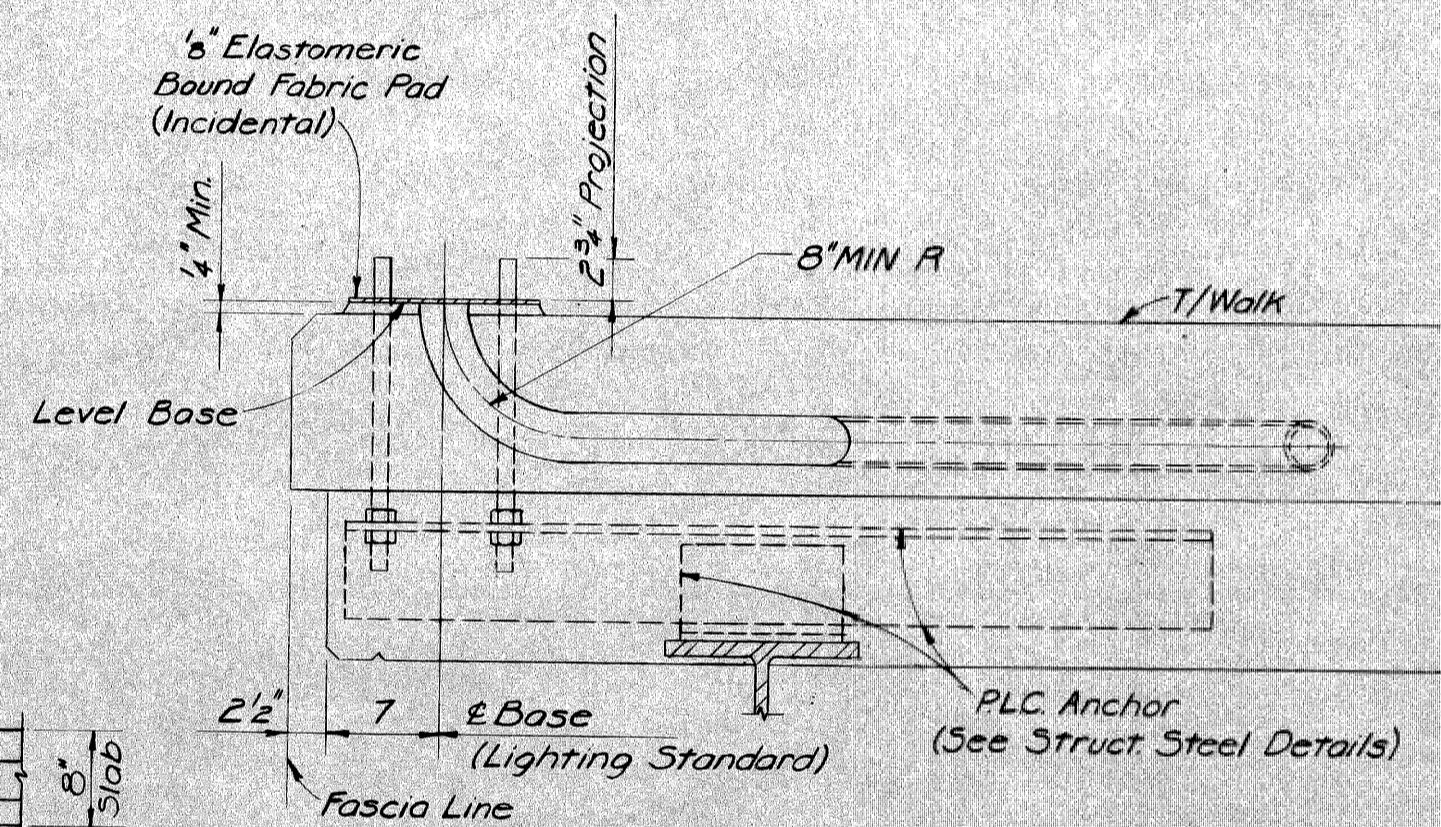


SECTION NEOPRENE EXP JT IN SIDEWALK

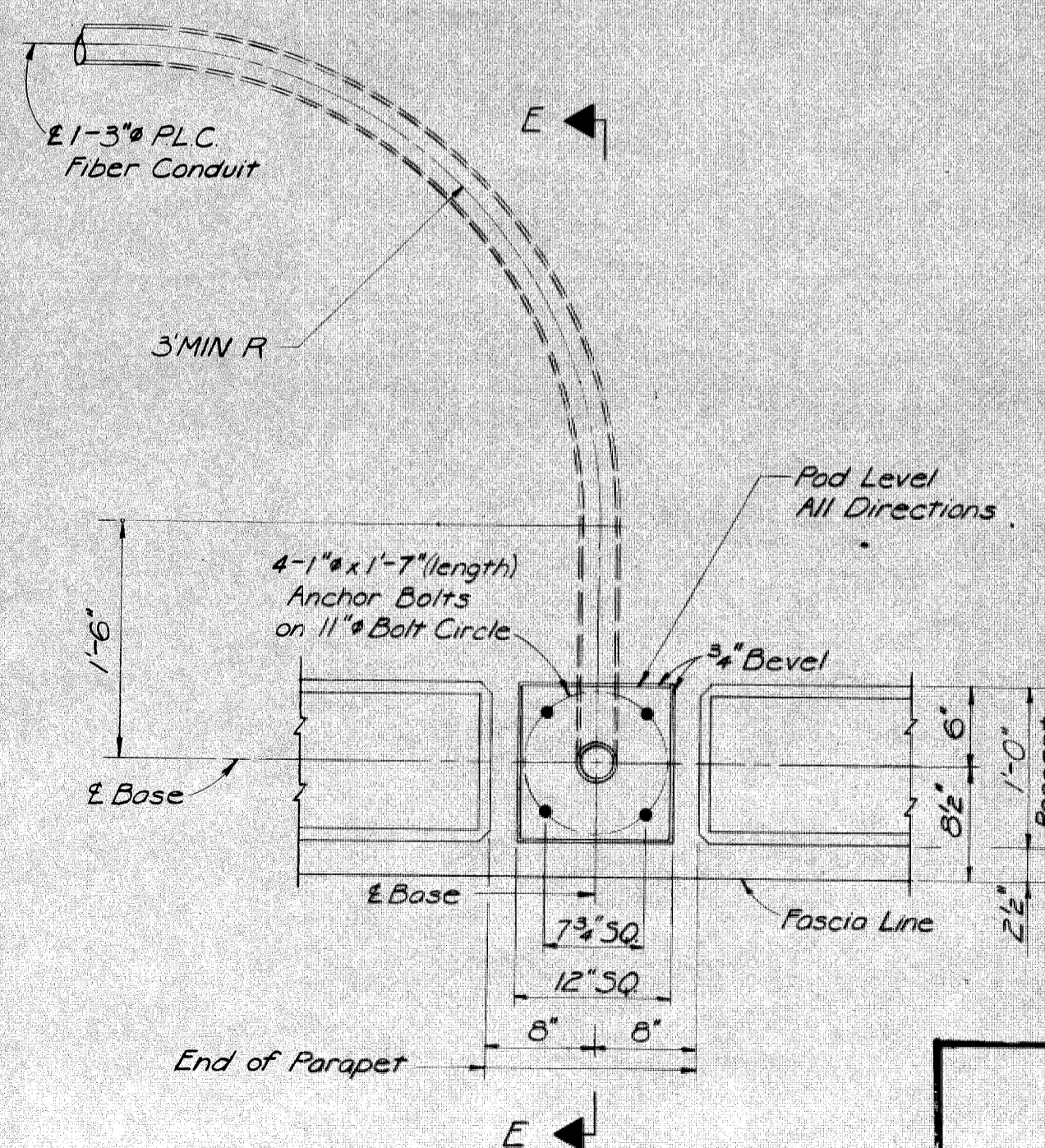


SECTION CONST JT IN SIDEWALK

\* See Supplemental Specifications for Details of Sealer and Installation Procedure



SECTION E-E



DETAILS OF BASE FOR PLC LIGHT STANDARD

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CITY ENGINEERS OFFICE  
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: [Signature] STRUCTURAL ENGINEER

JOB No. PW 990(21)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

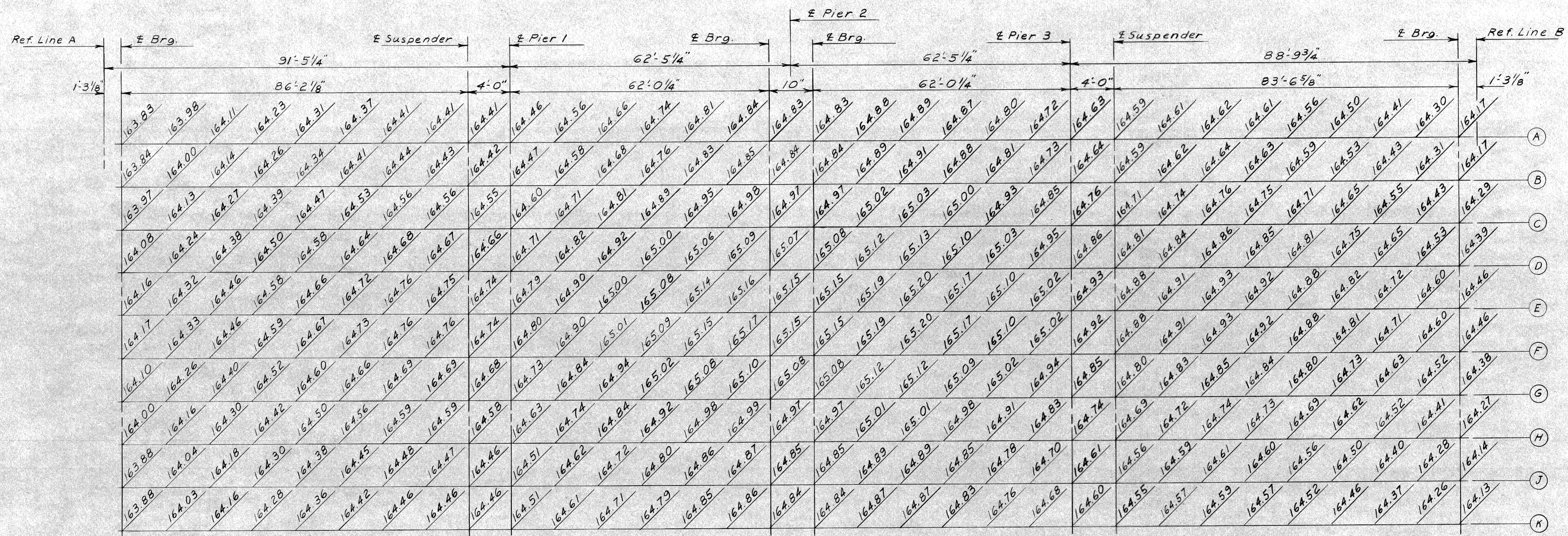
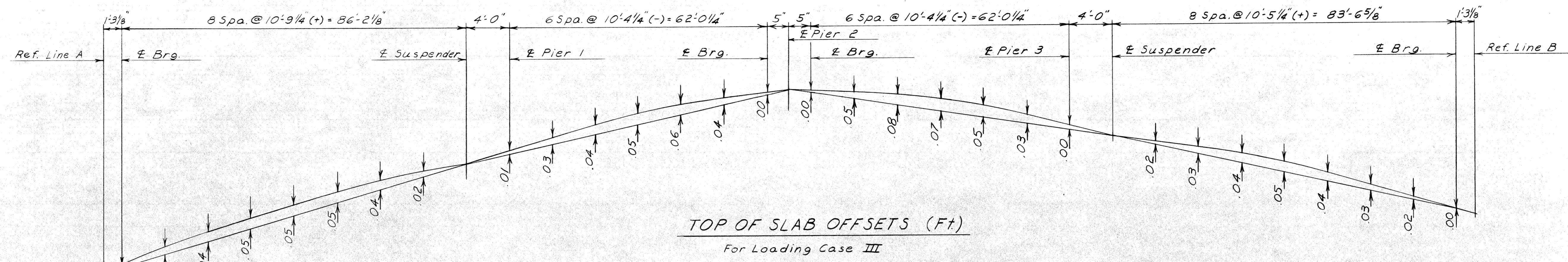
MEYERS ROAD OVER JEFFRIES FREEWAY IN DETROIT

SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SHEET 4 OF 7			
SQUAD BISS	DATE	BY	
MCDONALD	11-7-67		

S17 of 82123 F



PLANS PREPARED BY  
**CITY OF DETROIT**  
 DEPARTMENT OF PUBLIC WORKS  
 CITY ENGINEERS OFFICE  
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APPROVED: *[Signature]*  
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JOB No.  
 PW 990(21)

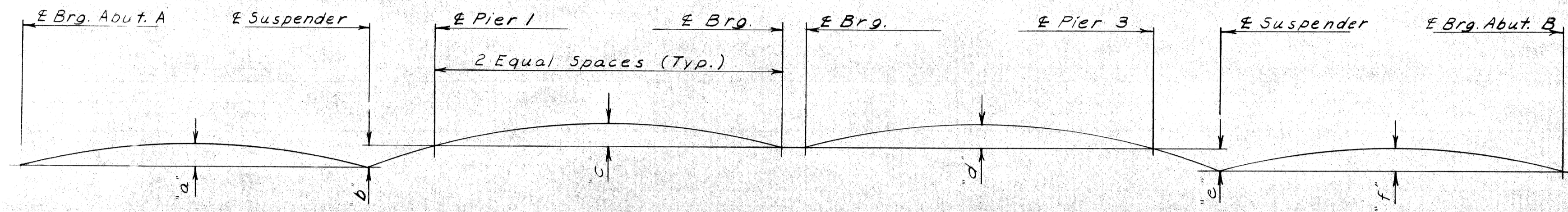
**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
 MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

**SUPERSTRUCTURE DETAILS**

REVISIONS			
NO.	DESCRIPTION	DATE	BY

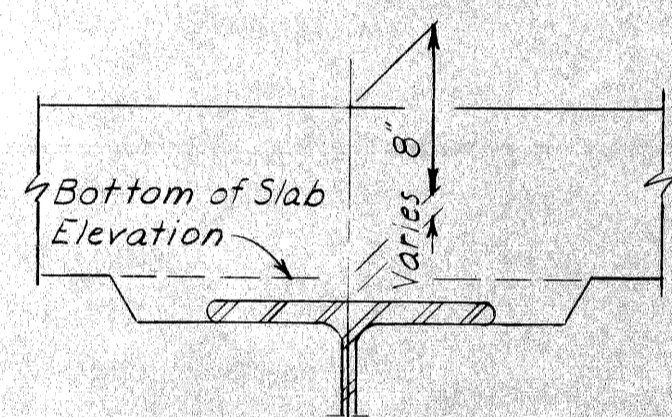
SQUAD BOSS	M. GILMAN	1-70	
DRAWN BY	D.L.M.	11-69	
CHECKED BY	J.P.K.	11-69	
SHEET 25 OF 27			

S17 of 82123 F

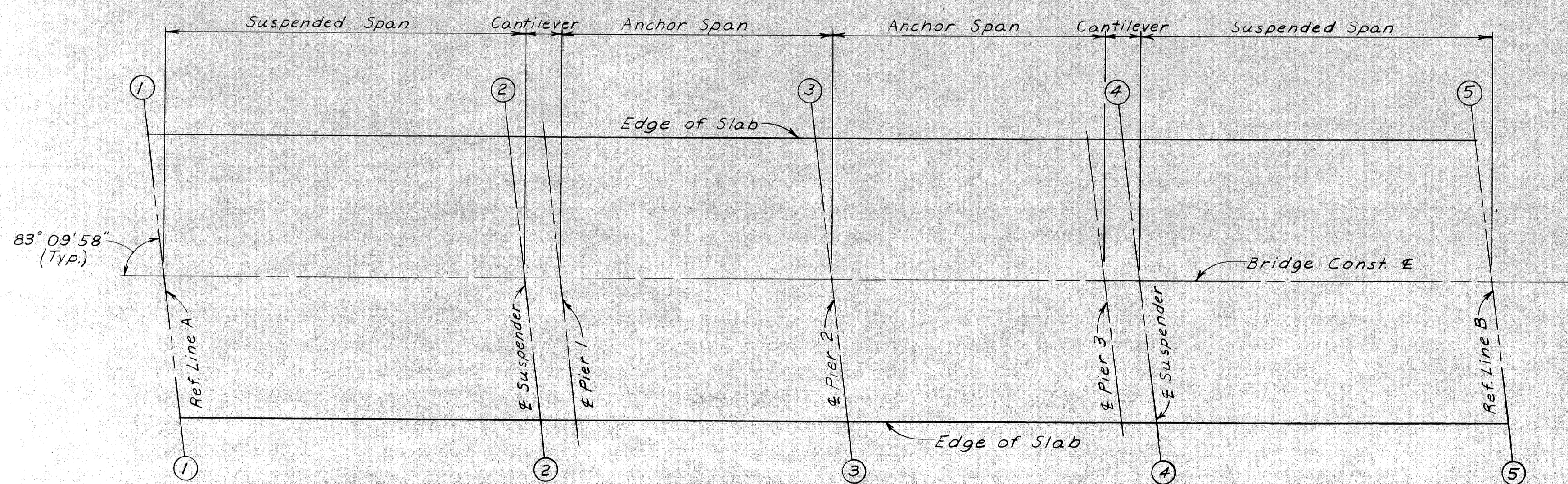


**CAMBER DIAGRAM**  
(For Loading Cases Shown In Table)

CAMBER ORDINATES (inches)										
BEAM	A, K	B-J	A-K	A, K	B-J	A, K	B-J	A-K	A, K	B-J
CAMBER DIMENSION	"a"	"b"	"c"	"d"	"e"	"f"				
LOADING CASE I	2 1/2	2 3/4	1/4	1 3/8	1 3/8	1 5/8	1 5/8	1/4	2 3/8	2 5/8
LOADING CASE II	2 1/8	2 3/8	1/4	1 1/4	1 1/4	1 1/2	1 1/2	1/4	2	2 1/4
LOADING CASE III	5/8	0	5/8	7/8	0	1/2				



TYPICAL SECTION AT EACH BEAM



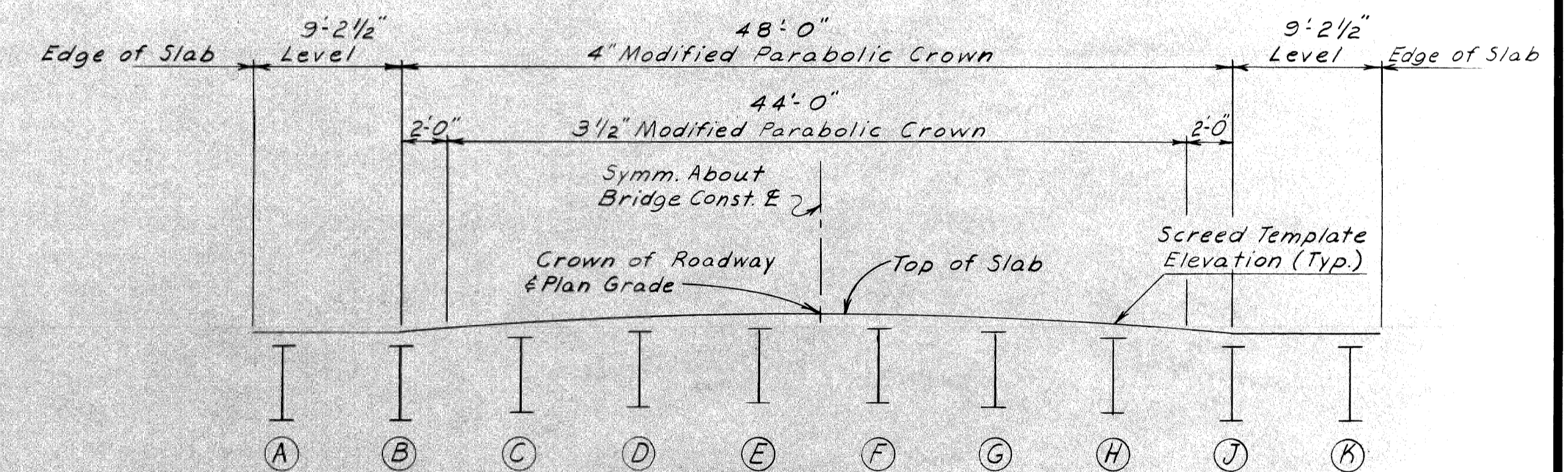
PLAN OF SLAB

**NOTES:**

- Use longitudinal strike-off finishing machine in placing slab concrete.
- Pour suspended span before pouring anchor span.
- Screeds affected by loads in other span shall be set to elevations shown before pouring any concrete.
- Elevations and cambers shown include allowances for deflections due to the weight of structural steel, weight of forms, steel reinforcement, P.L.C. encasement, slab concrete, sidewalk and railing.

The loading cases are as follows:

- Case I - All structural steel erected and no other load applied.
- Case II - Forms, steel reinforcement and P.L.C. encasement in place on structural steel and no other load applied.
- Case III - Steel reinforcement, P.L.C. encasement and slab concrete in place on structural steel and no other load applied.



SCREED TEMPLATE

SCREED TEMPLATE ELEVATIONS FOR LOADING CASE II										
BEAM LINE	A	B	C	D	E	F	G	H	J	K
1-1	164.48	164.49	164.63	164.74	164.82	164.82	164.75	164.65	164.53	164.54
2-2	165.09	165.09	165.23	165.34	165.42	165.42	165.36	165.26	165.13	165.14
3-3	165.50	165.50	165.64	165.74	165.82	165.82	165.75	165.64	165.51	165.51
4-4	165.27	165.27	165.39	165.49	165.56	165.56	165.48	165.37	165.24	165.23
5-5	164.83	164.83	164.95	165.05	165.12	165.12	165.04	164.93	164.80	164.79

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**

MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

**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(21)

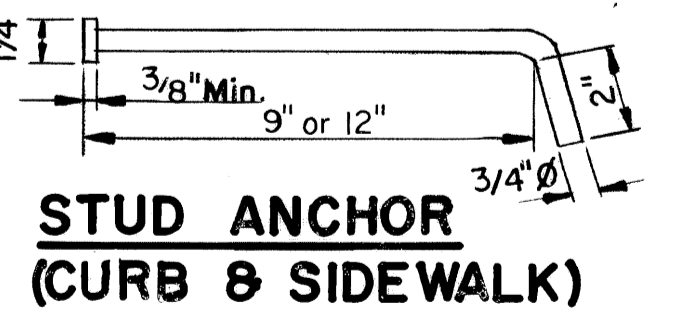
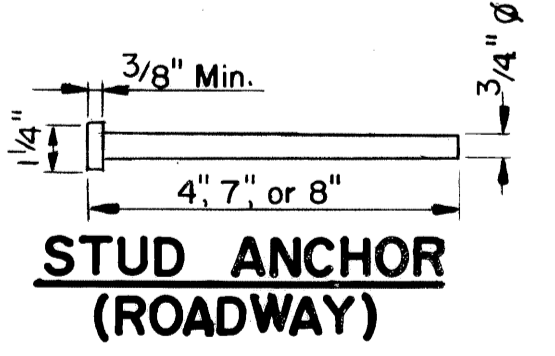
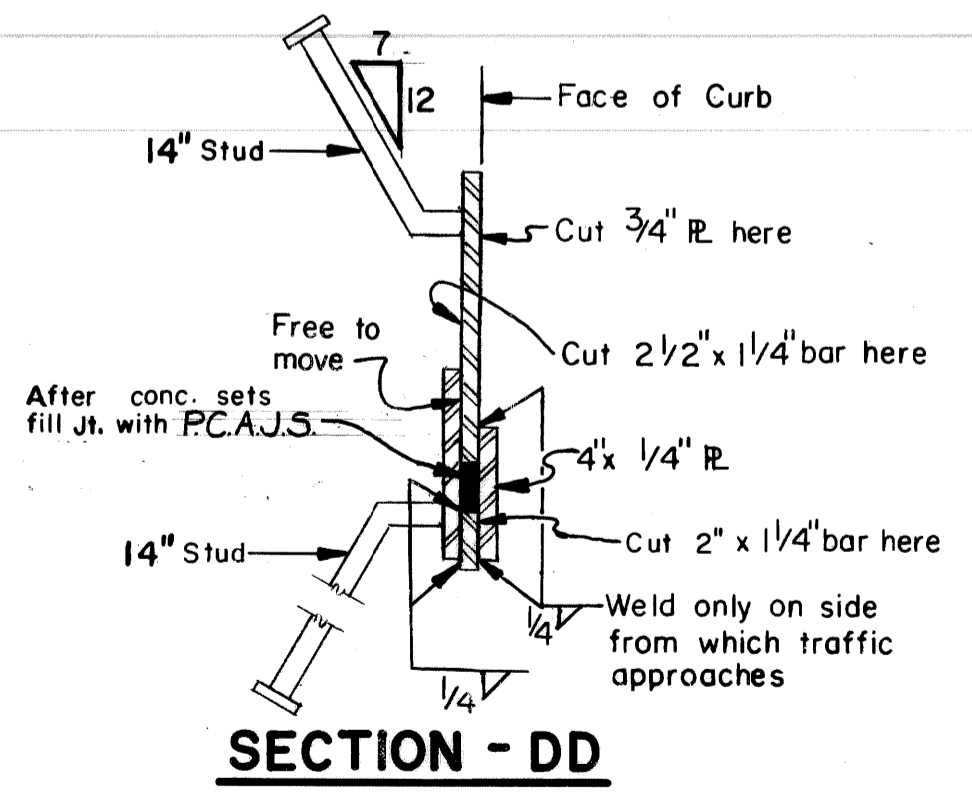
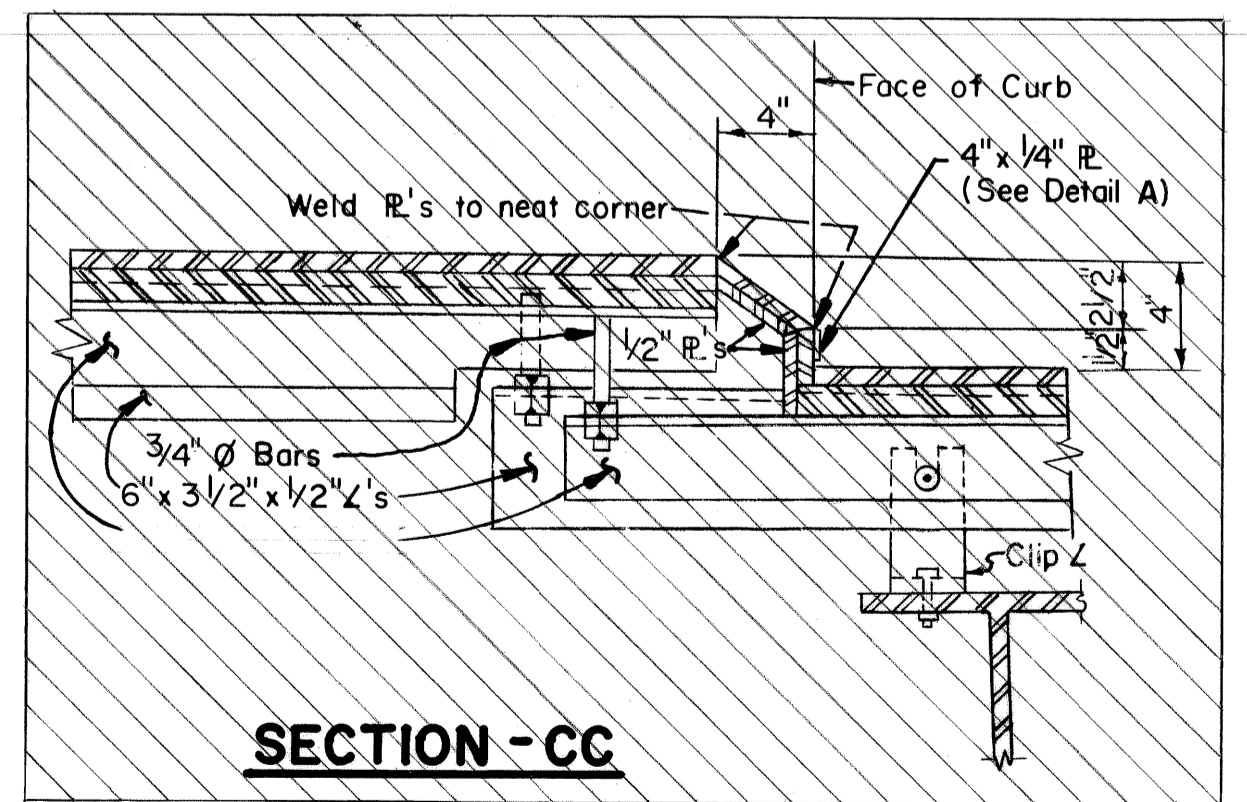
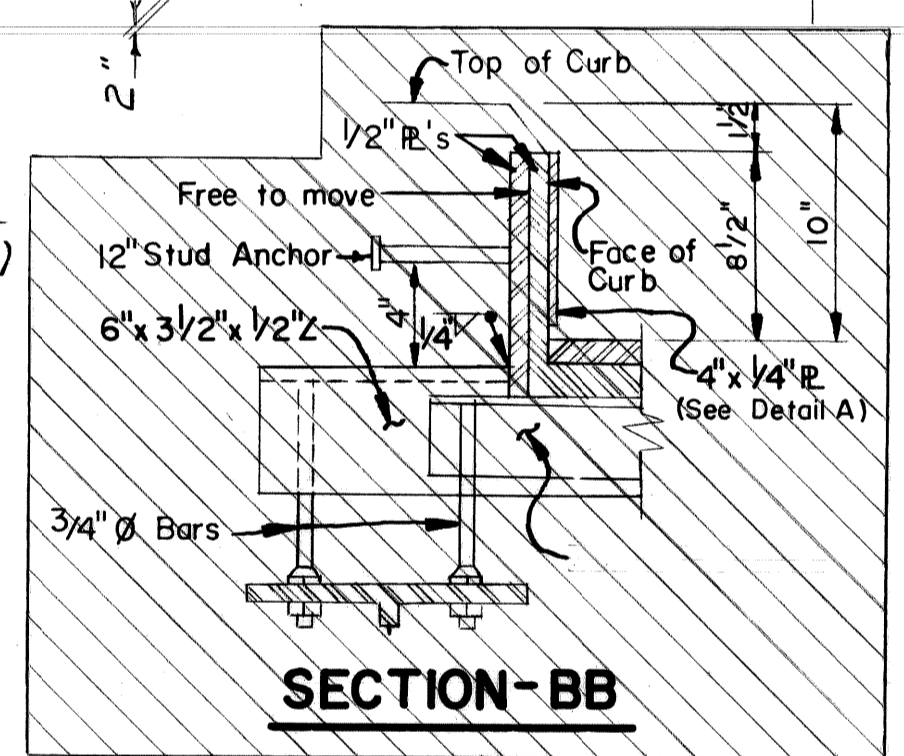
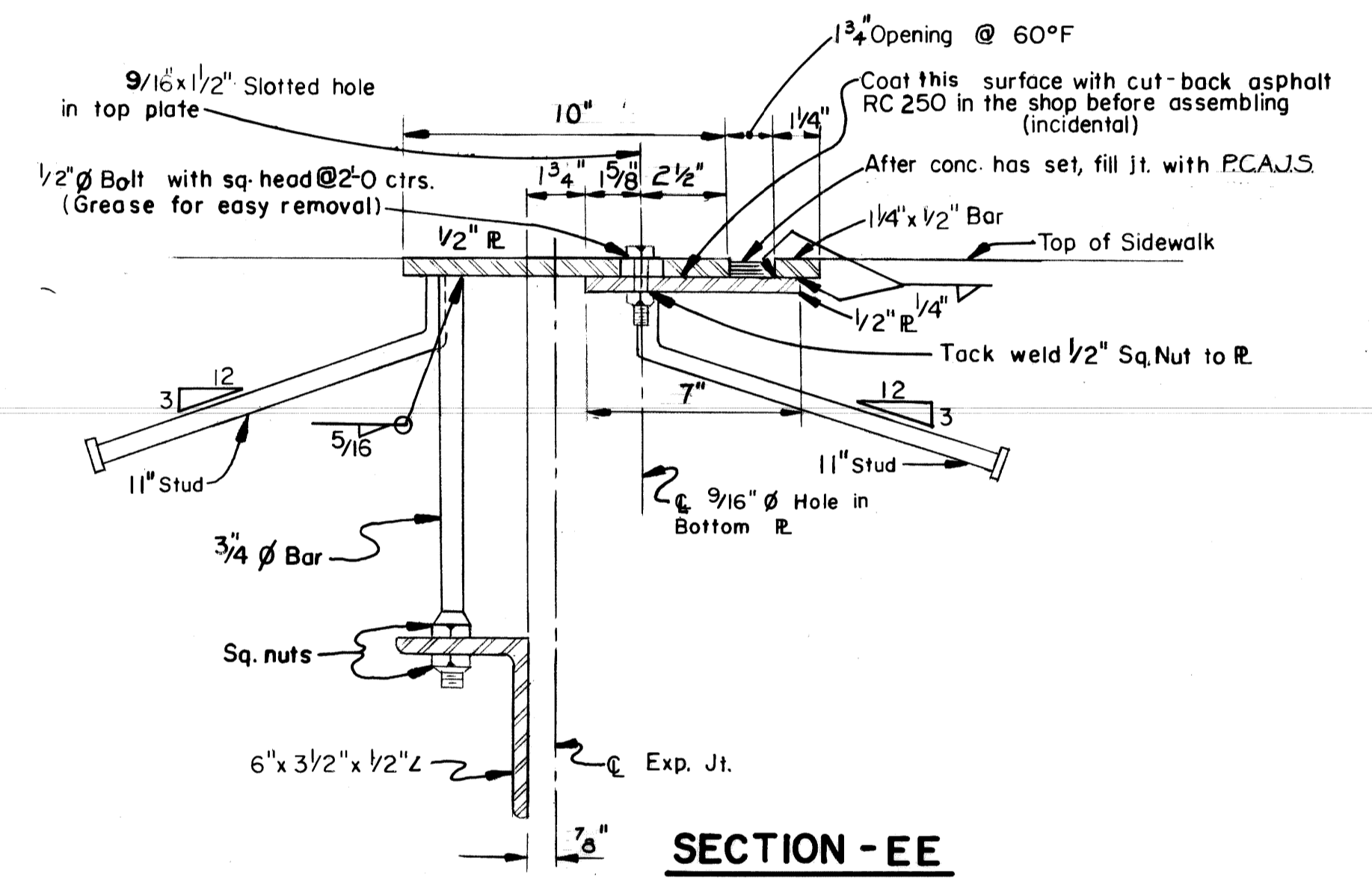
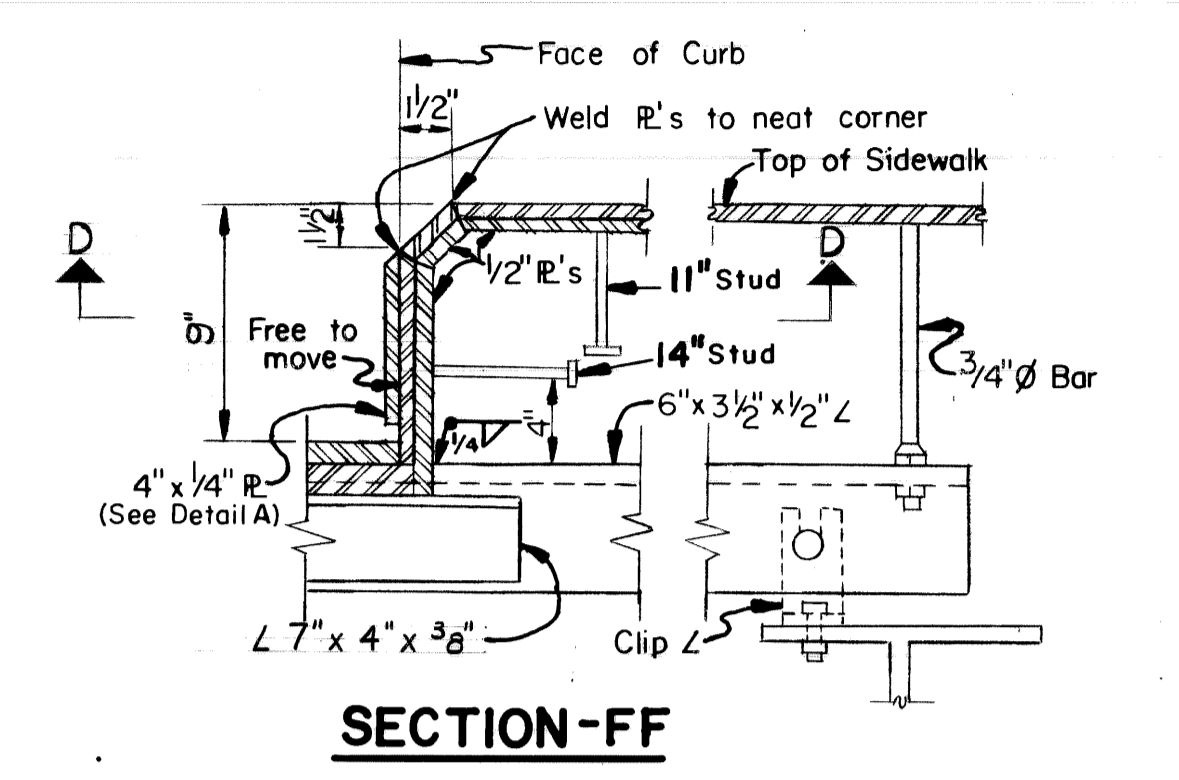
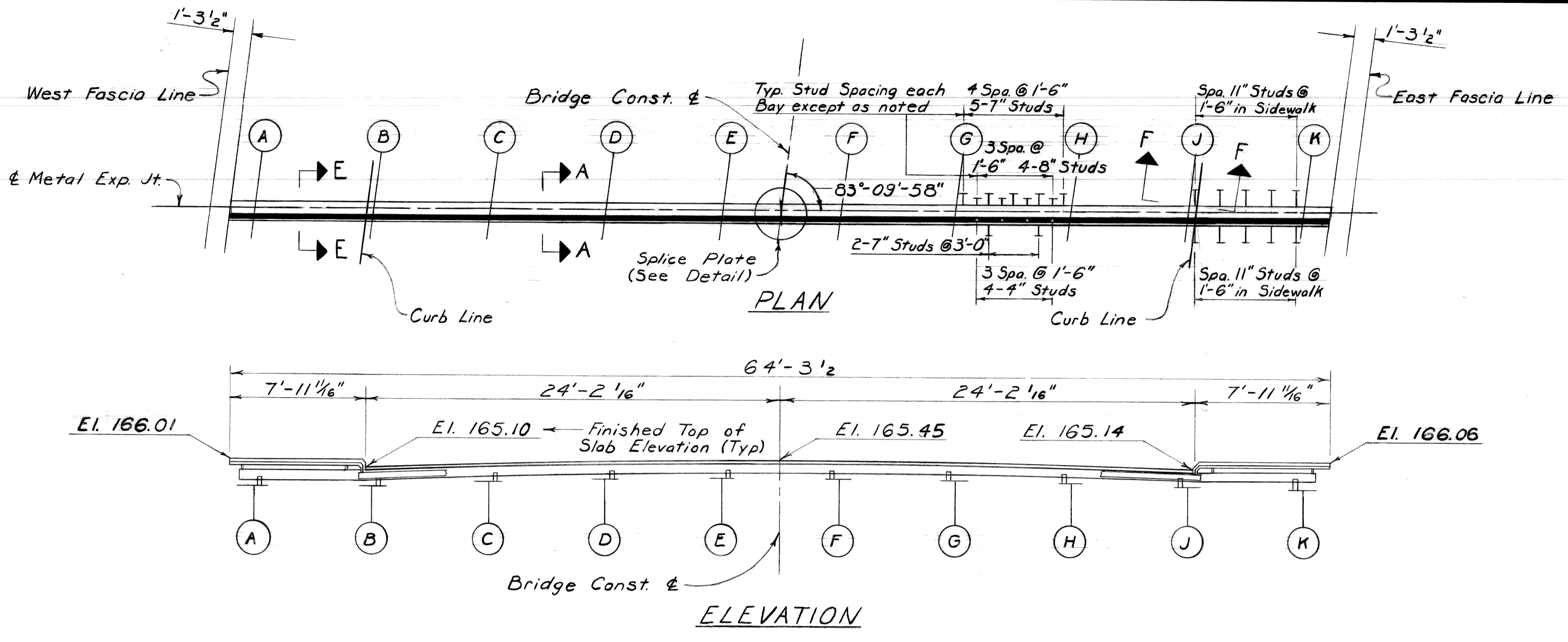
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT			
SQUAD BOSS	M. GONNAN	1-70	
DRAWN BY	D.L.M.	1-69	
TRACED BY			
CHECKED BY	J.H.S.	1-67	
SHEET 26 OF 27			

S17 of 82123 F



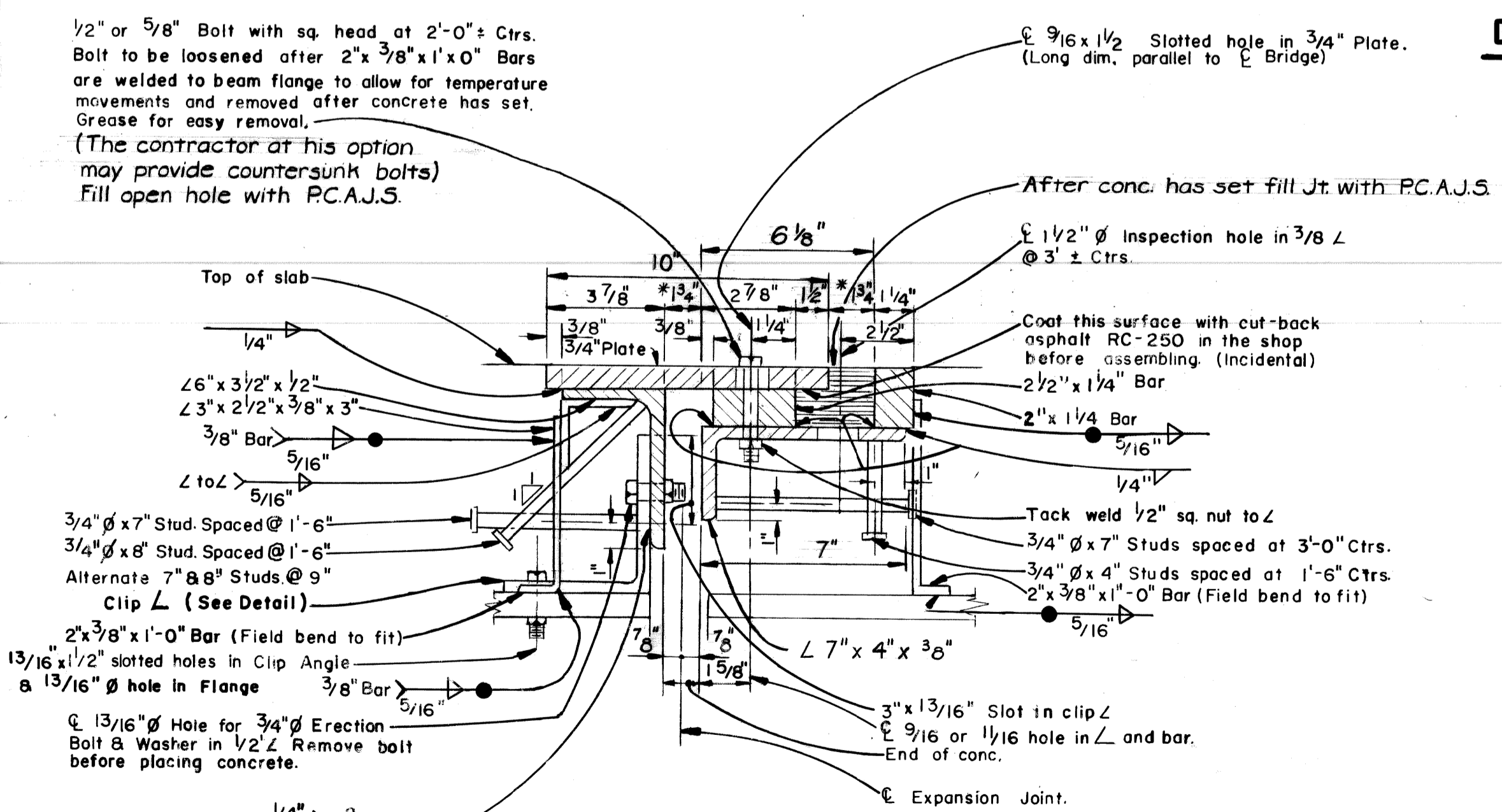
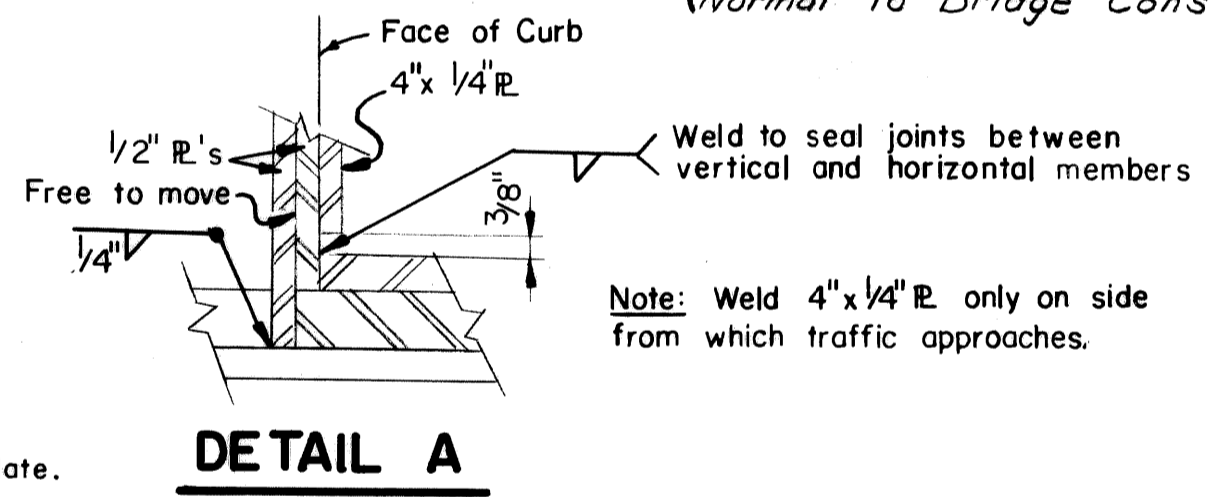
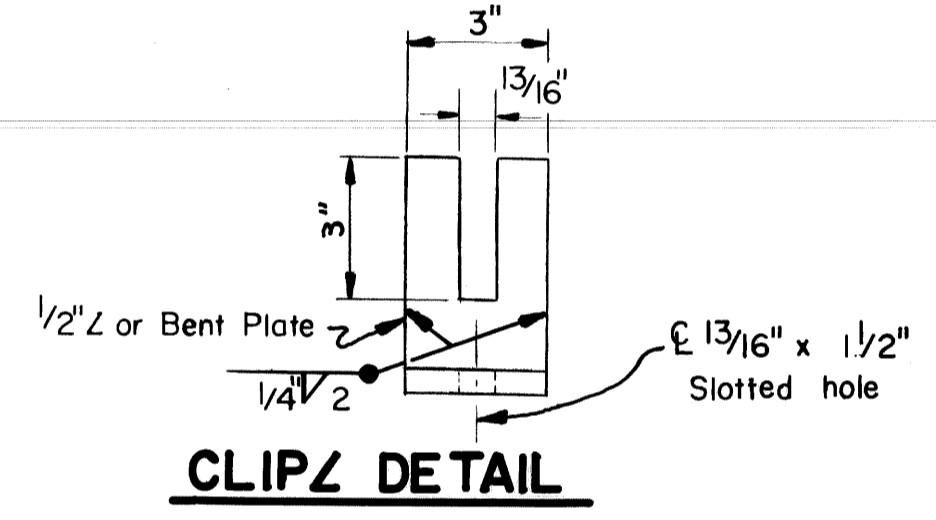
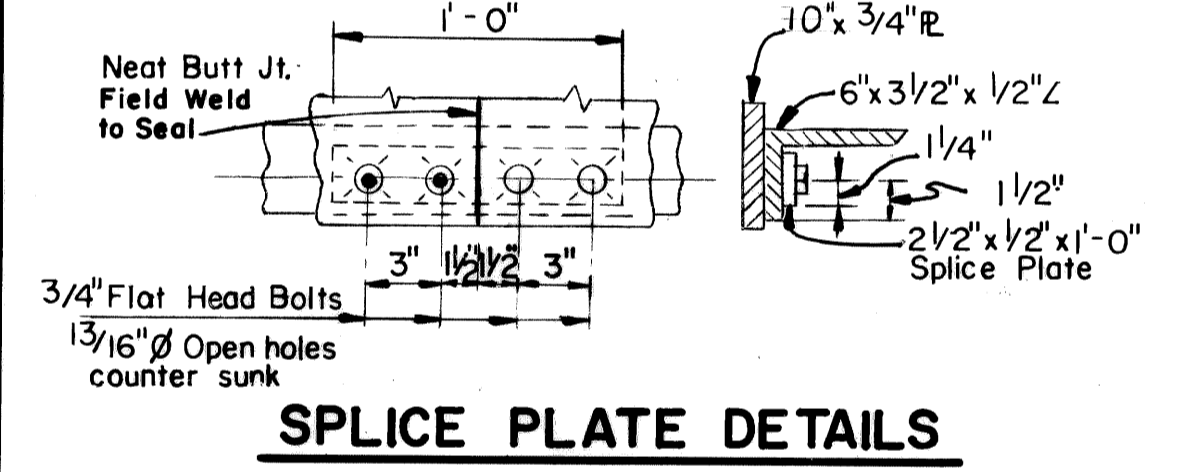




**NOTES:**

The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.

Weight of Metal Expansion Joint 4,600 lbs.  
 Weight of Metal Expansion Joint is included in Structural Steel weight on sheet.  
 P.C.A.J.S. denotes Two-component Polyurethane Cold-Applied Joint Sealer  
 P.C.A.J.S. is included in Superstructure Quantities



**SECTION-AA**  
\* 60° F.

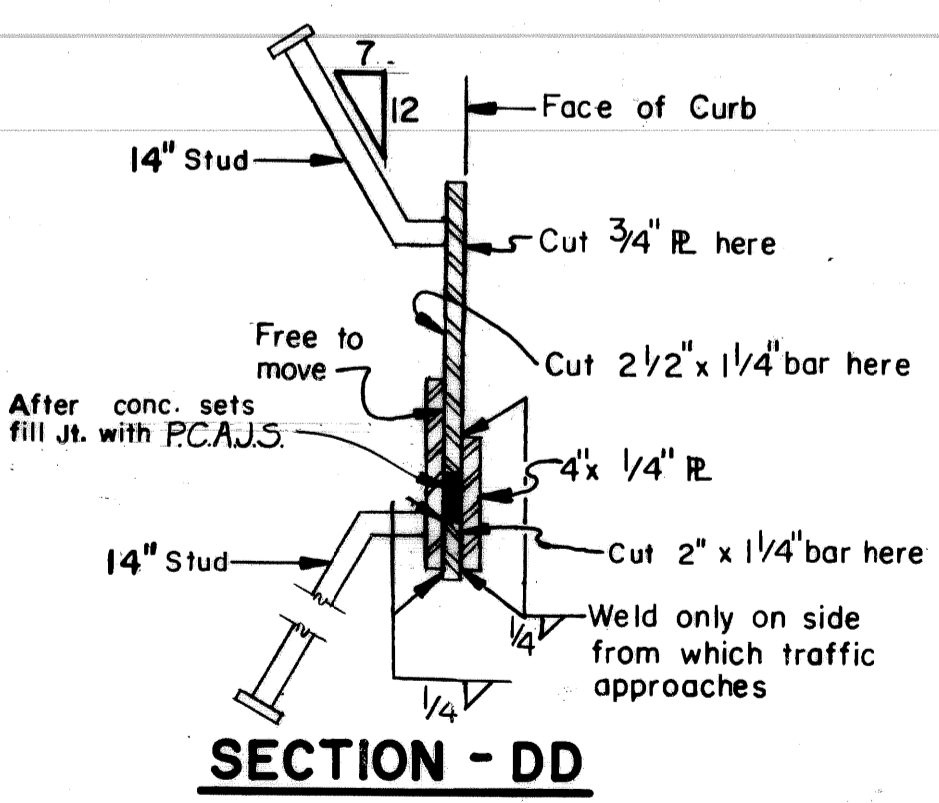
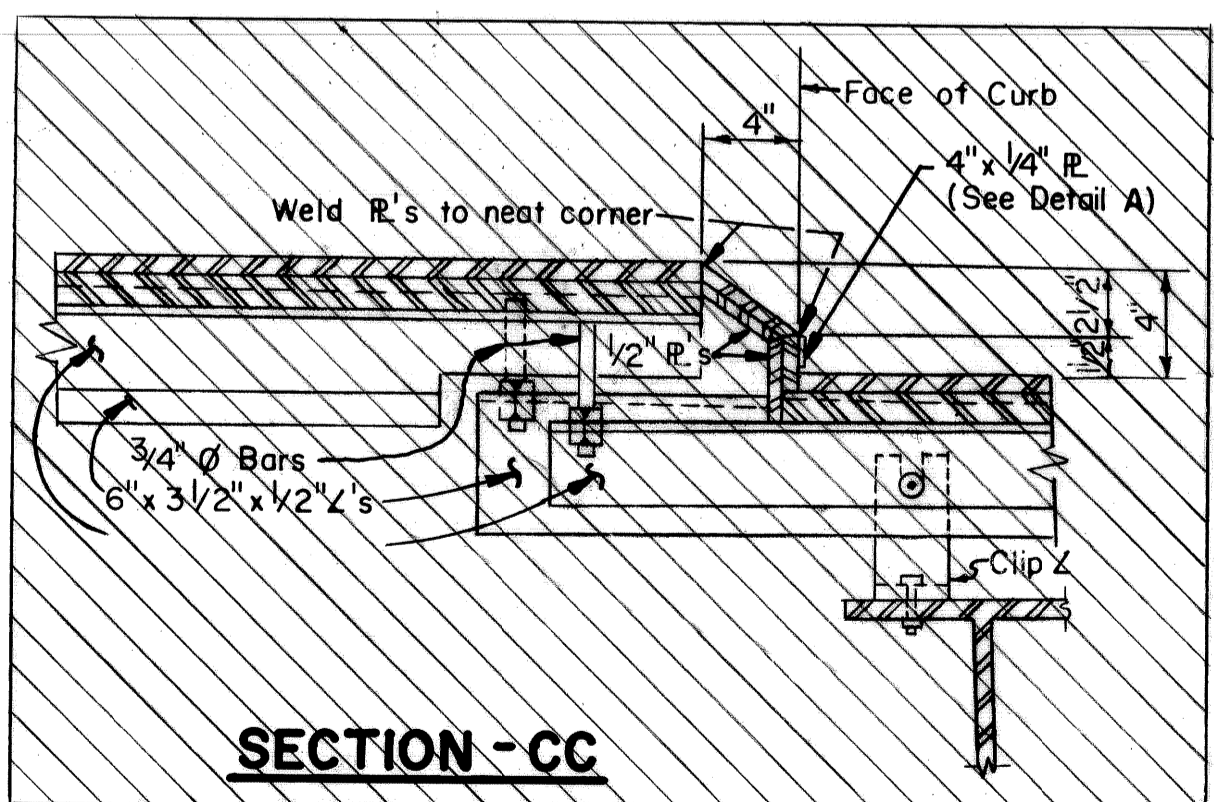
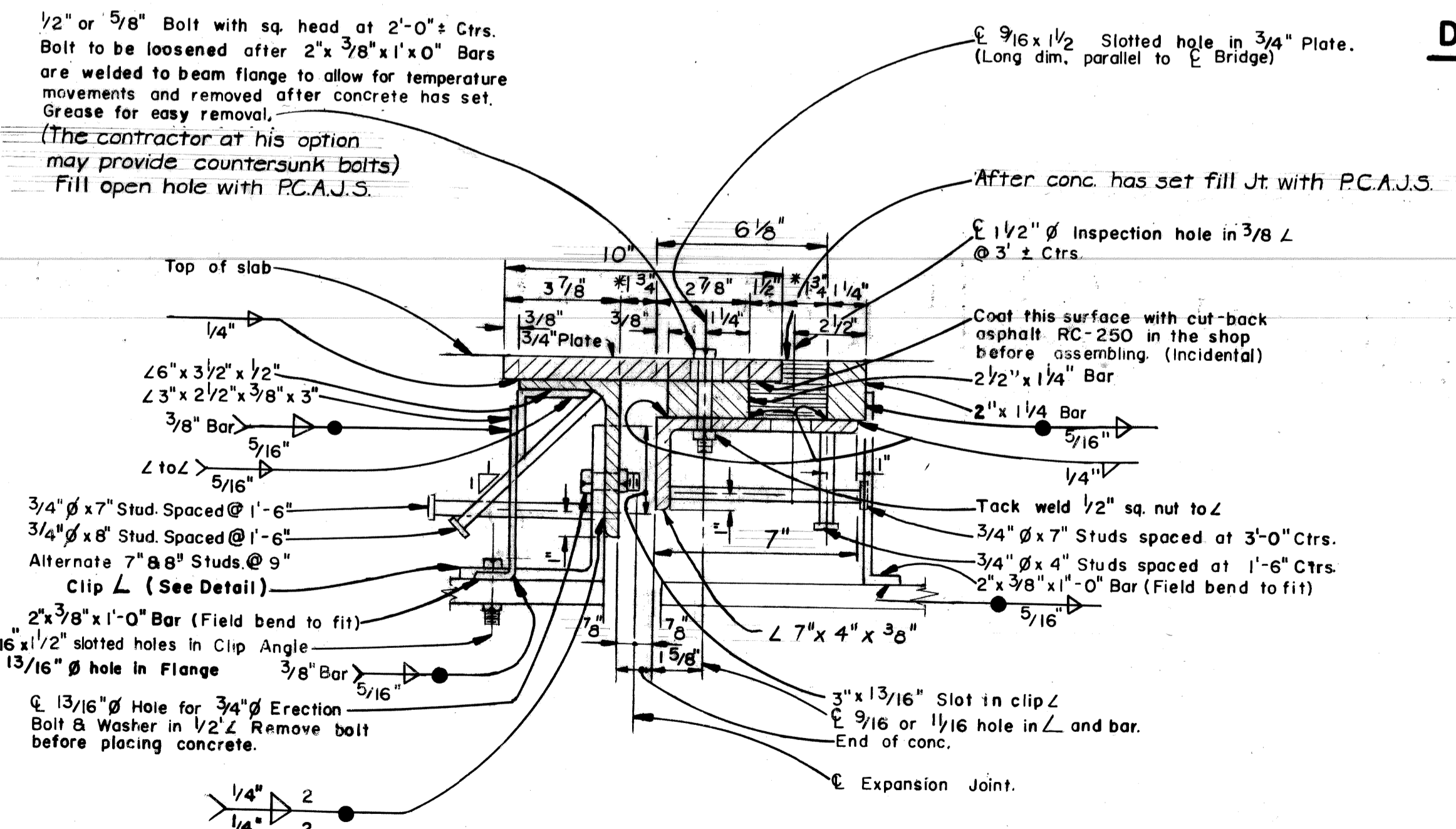
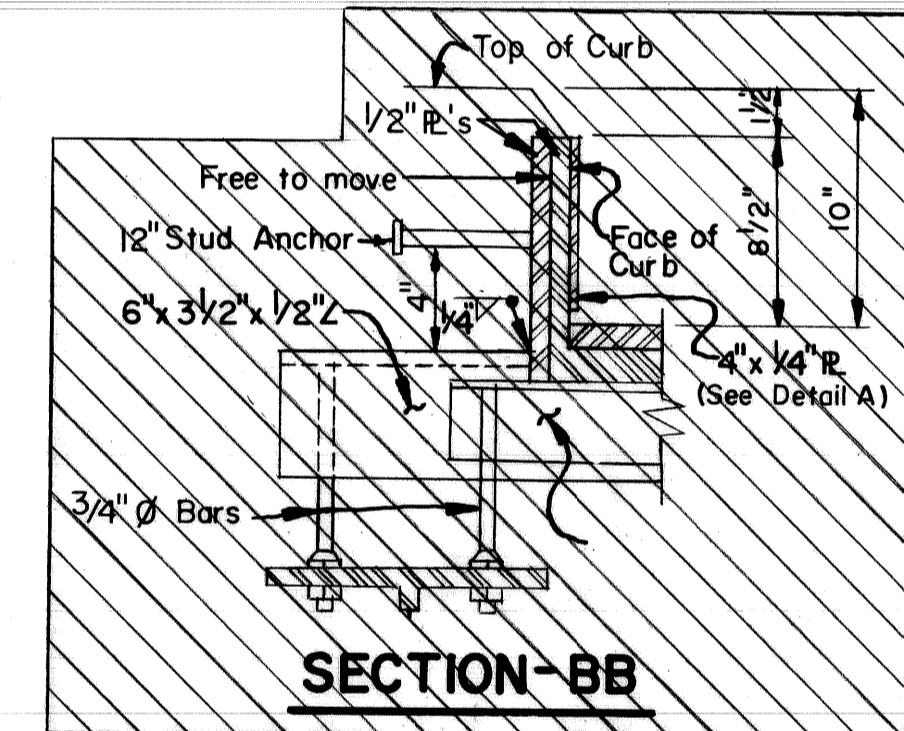
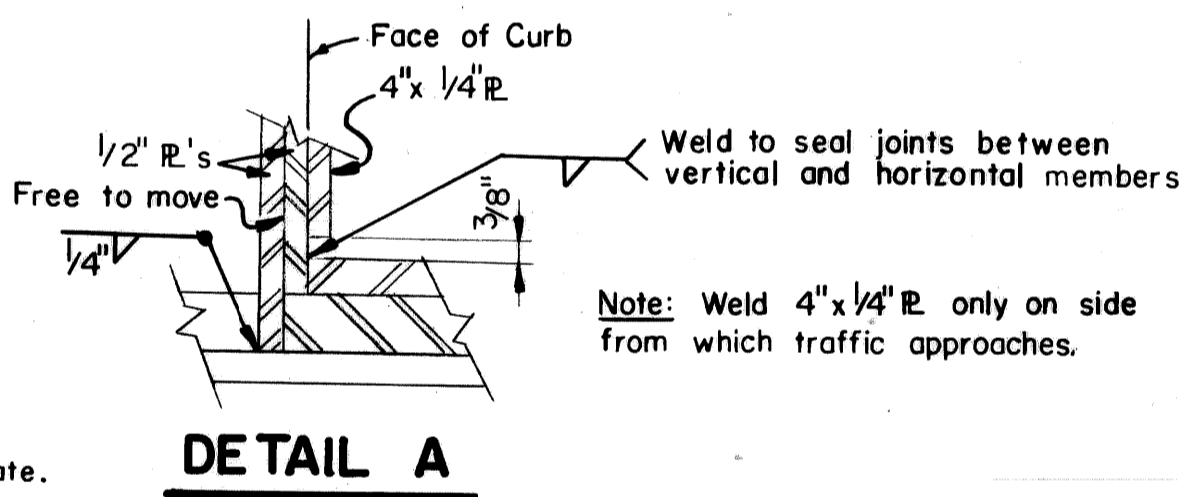
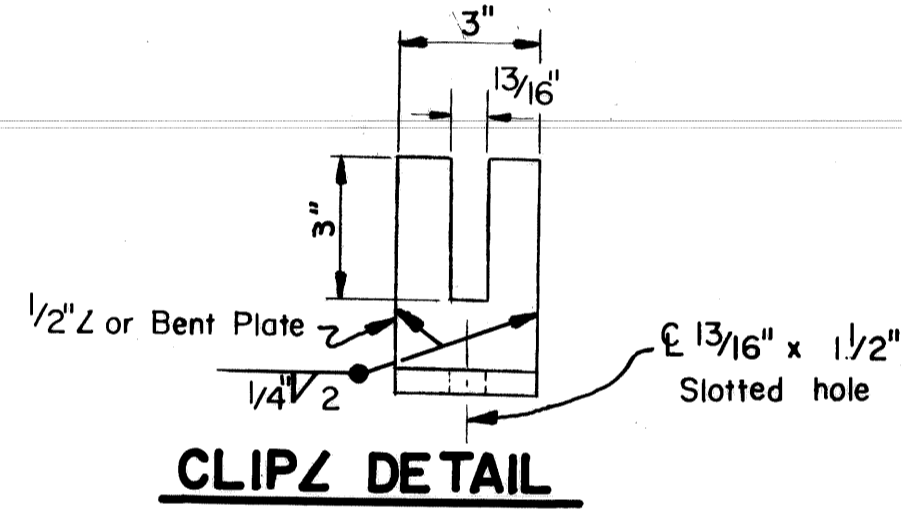
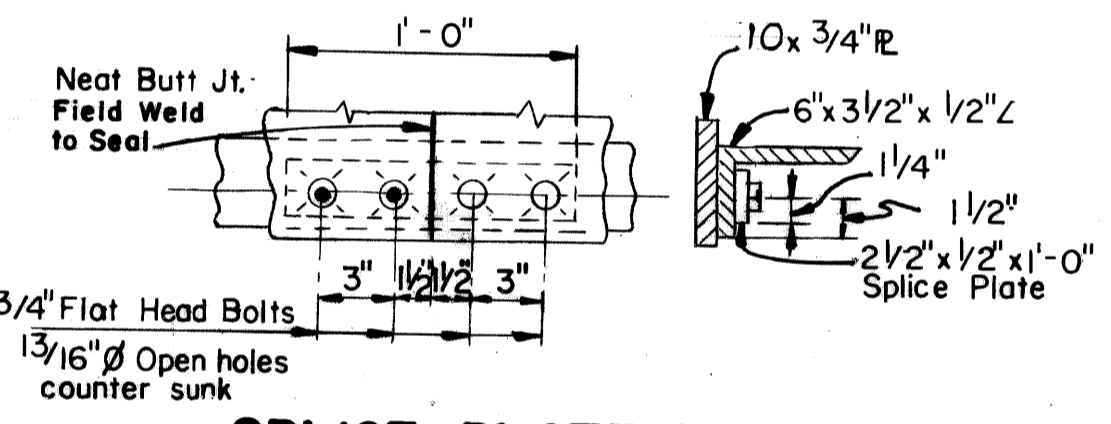
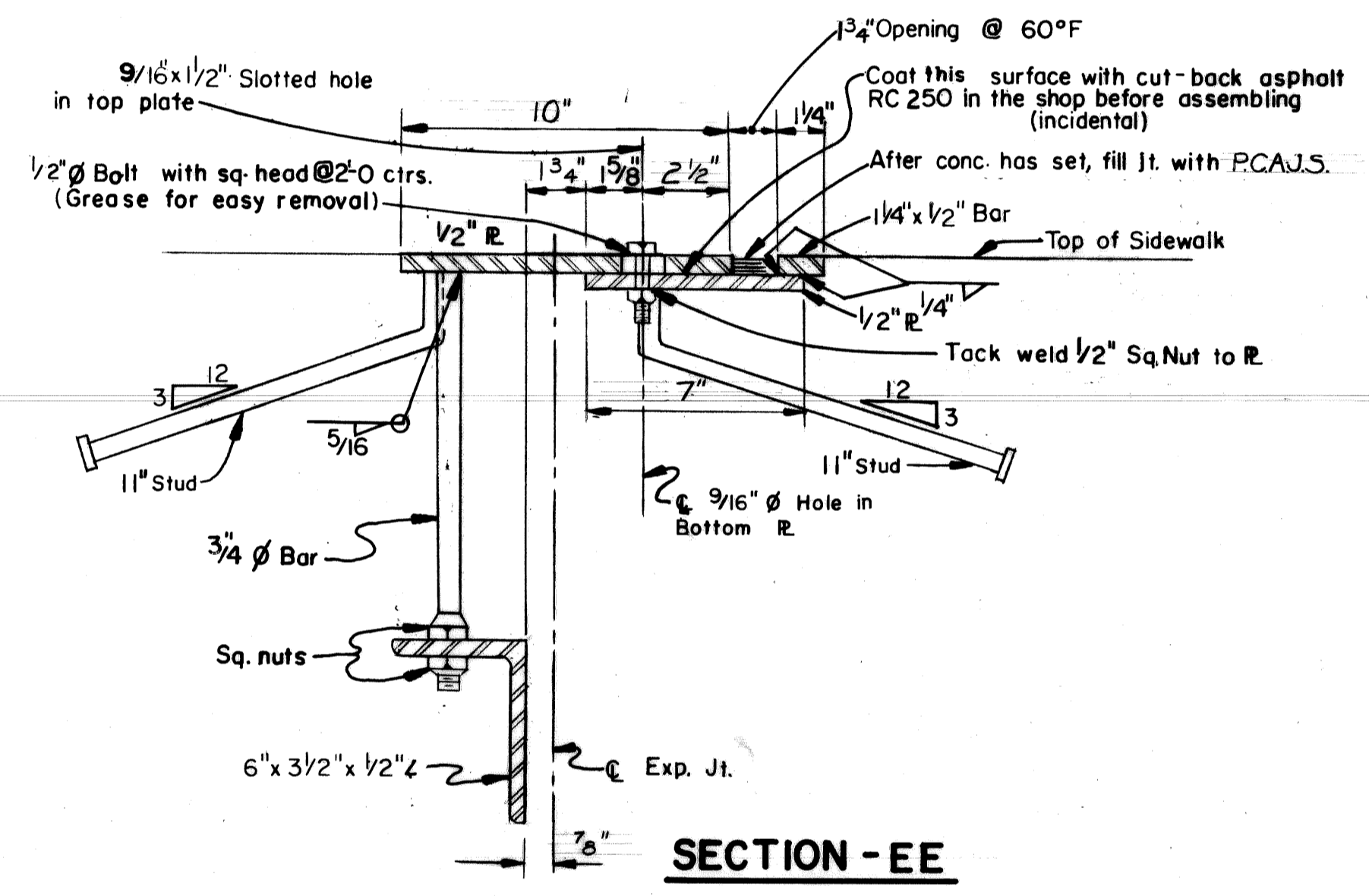
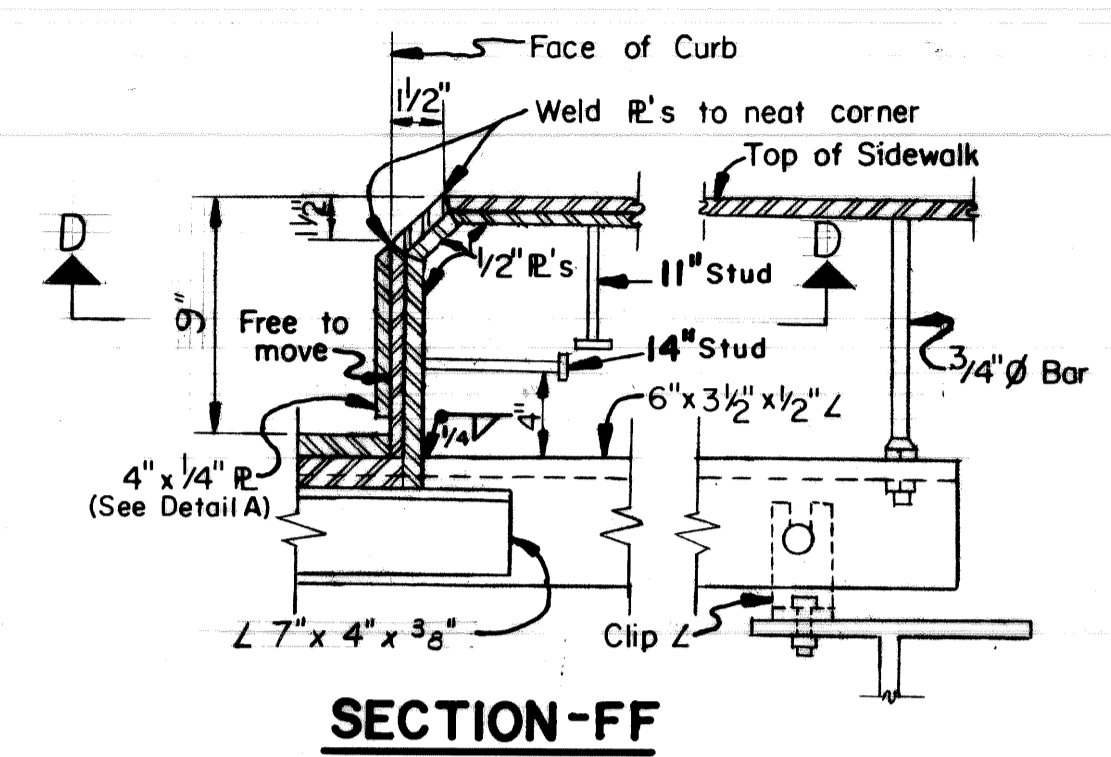
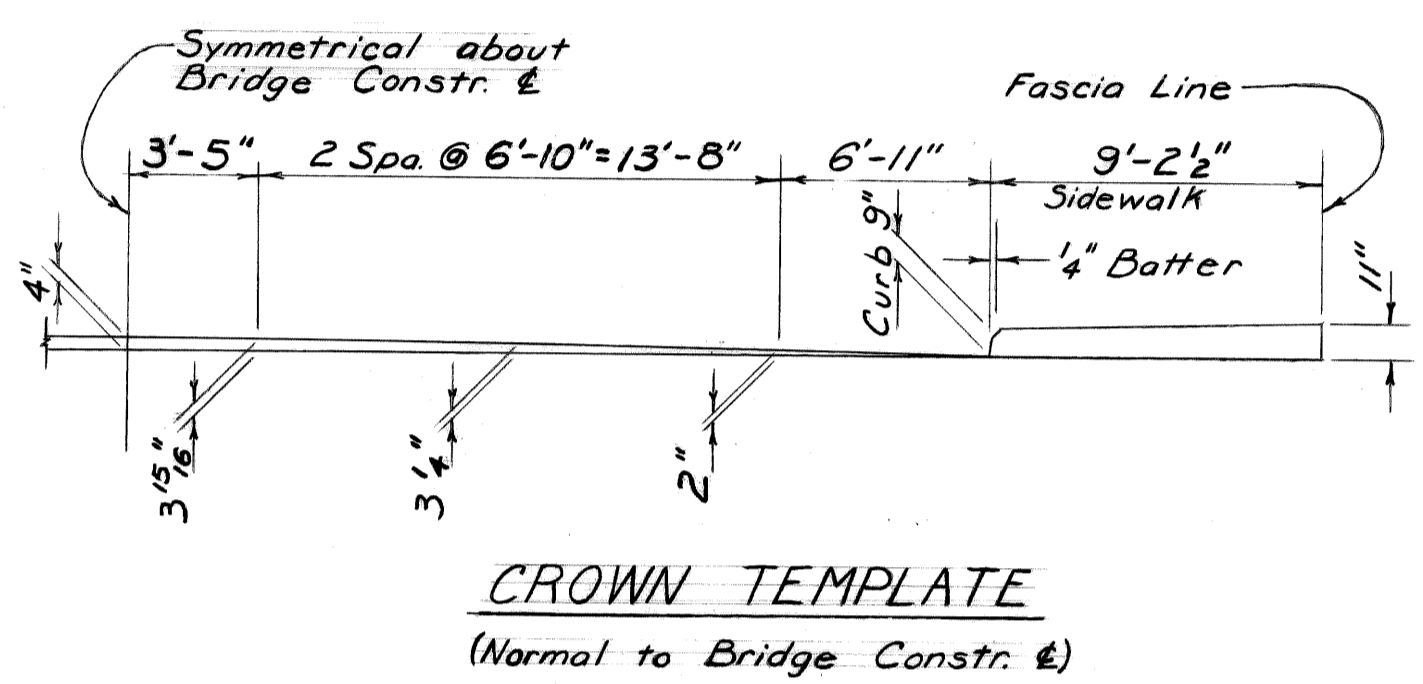
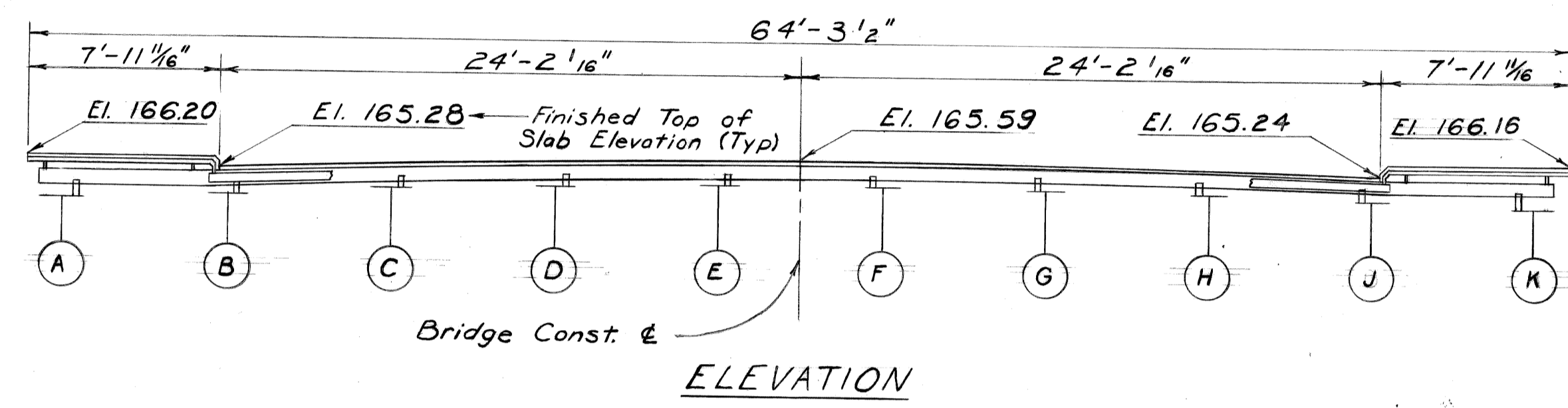
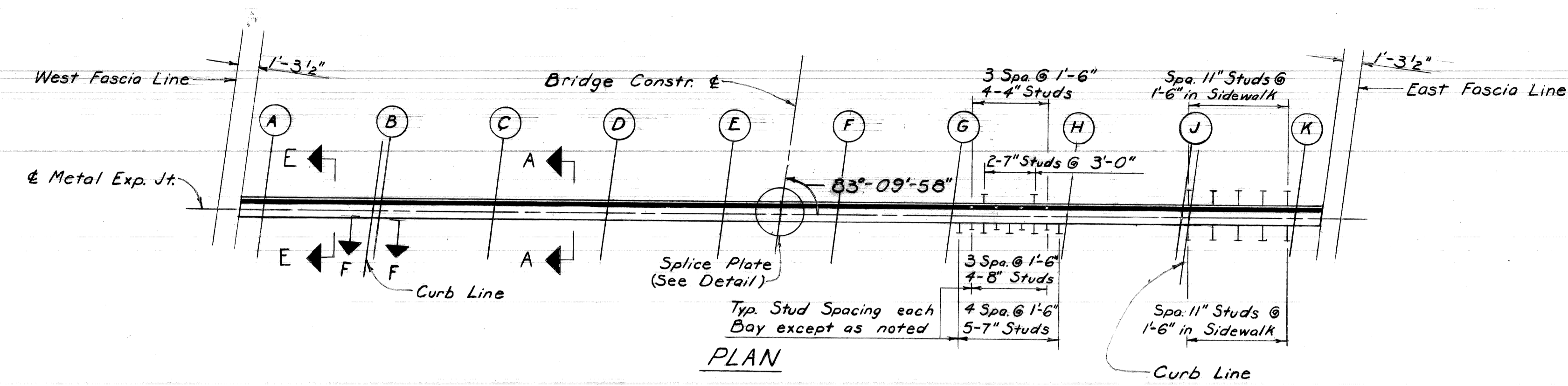
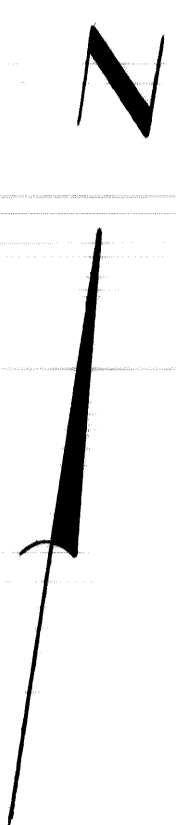
**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFRIES FREEWAY  
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**METAL EXPANSION JOINT-SPAN I**

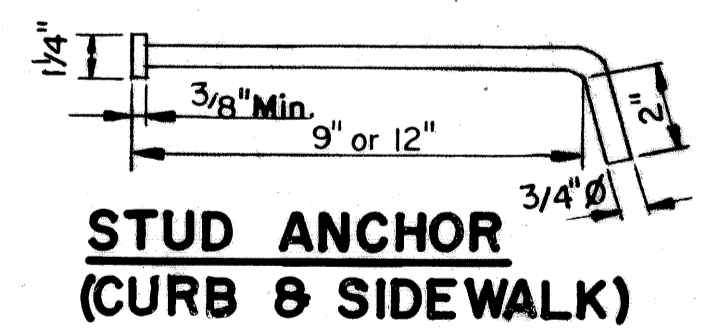
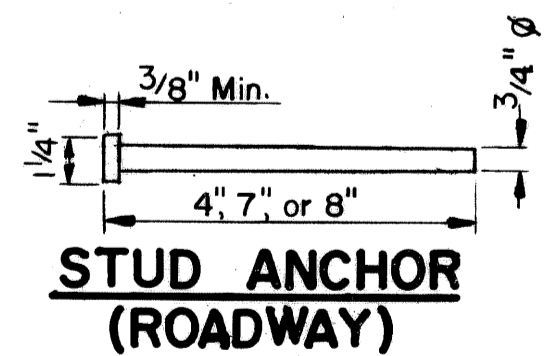
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 STRUCTURAL ENGINEER  
 PW 990(21)

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT			
SQUAD BOSS	MCGOWAN	1-70	
DRAWN BY	A. Hopkins	1-6-68	
TRACED BY	A. Hopkins	7-69	
CHECKED BY	Z. H. K.	7-69	



NOTES:  
 The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.  
 Weight of Metal Expansion Joint 4600 lbs.  
 Weight of Metal Expansion Joint is included in Structural Steel weight on sheet  
 PCAJ.S denotes Two-component Polyurethane Cold-Applied Joint Sealer  
 PCAJ.S is included in Superstructure Quantities.



**SECTION-AA**  
 \* 60° F.

**SECTION-CC**

**SECTION-DD**

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
 MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

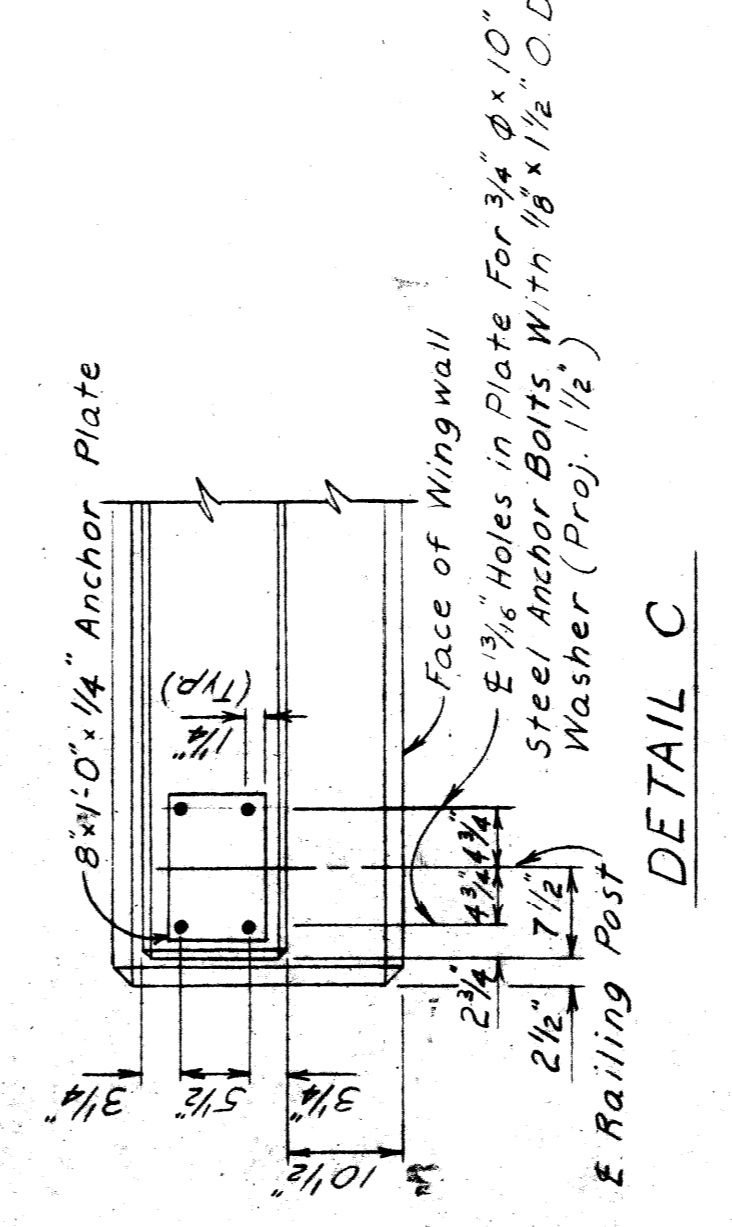
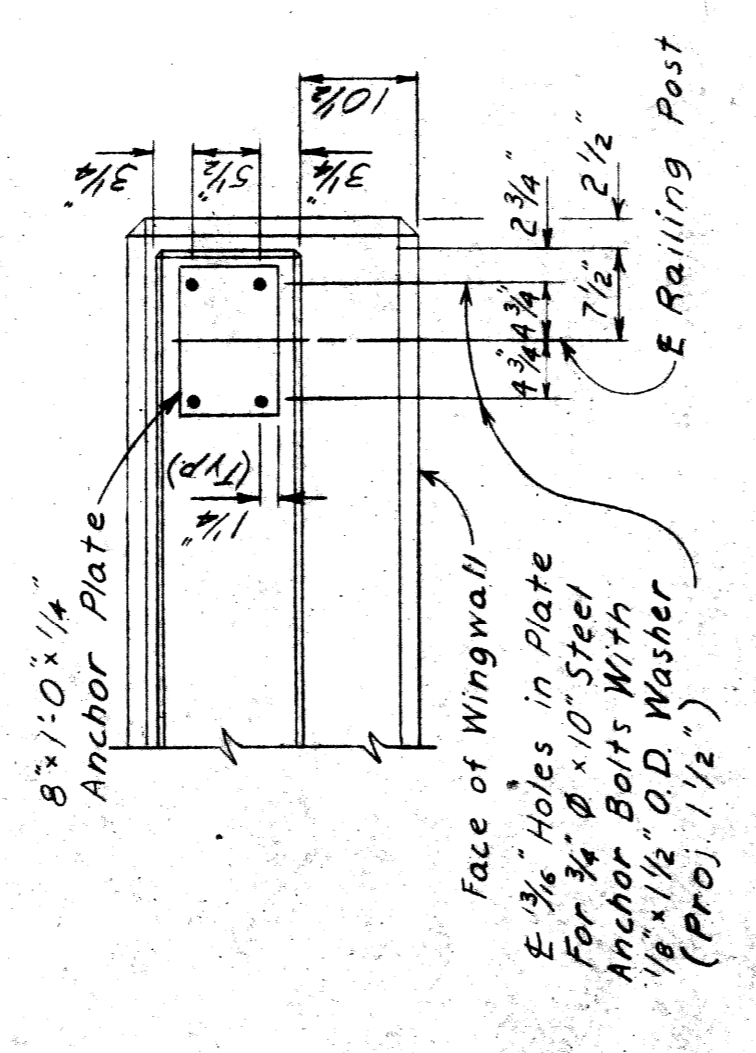
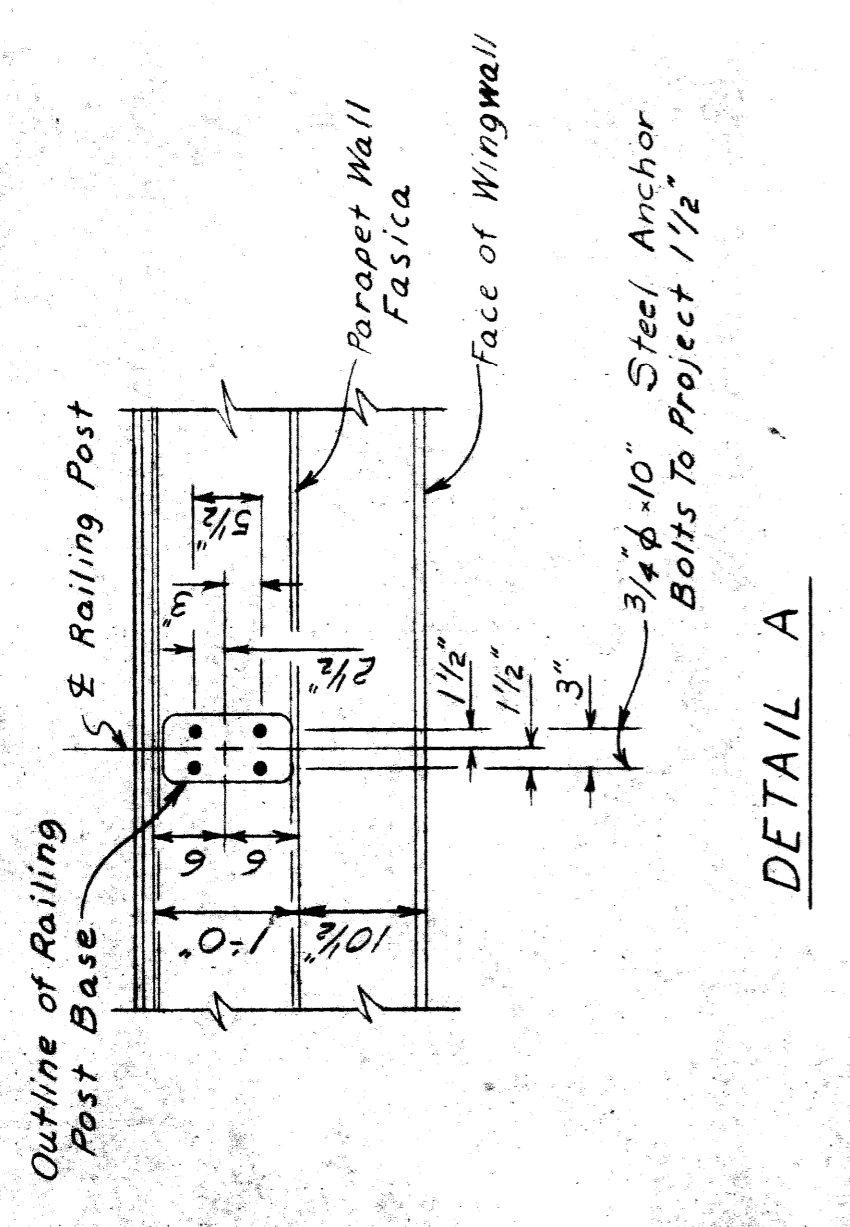
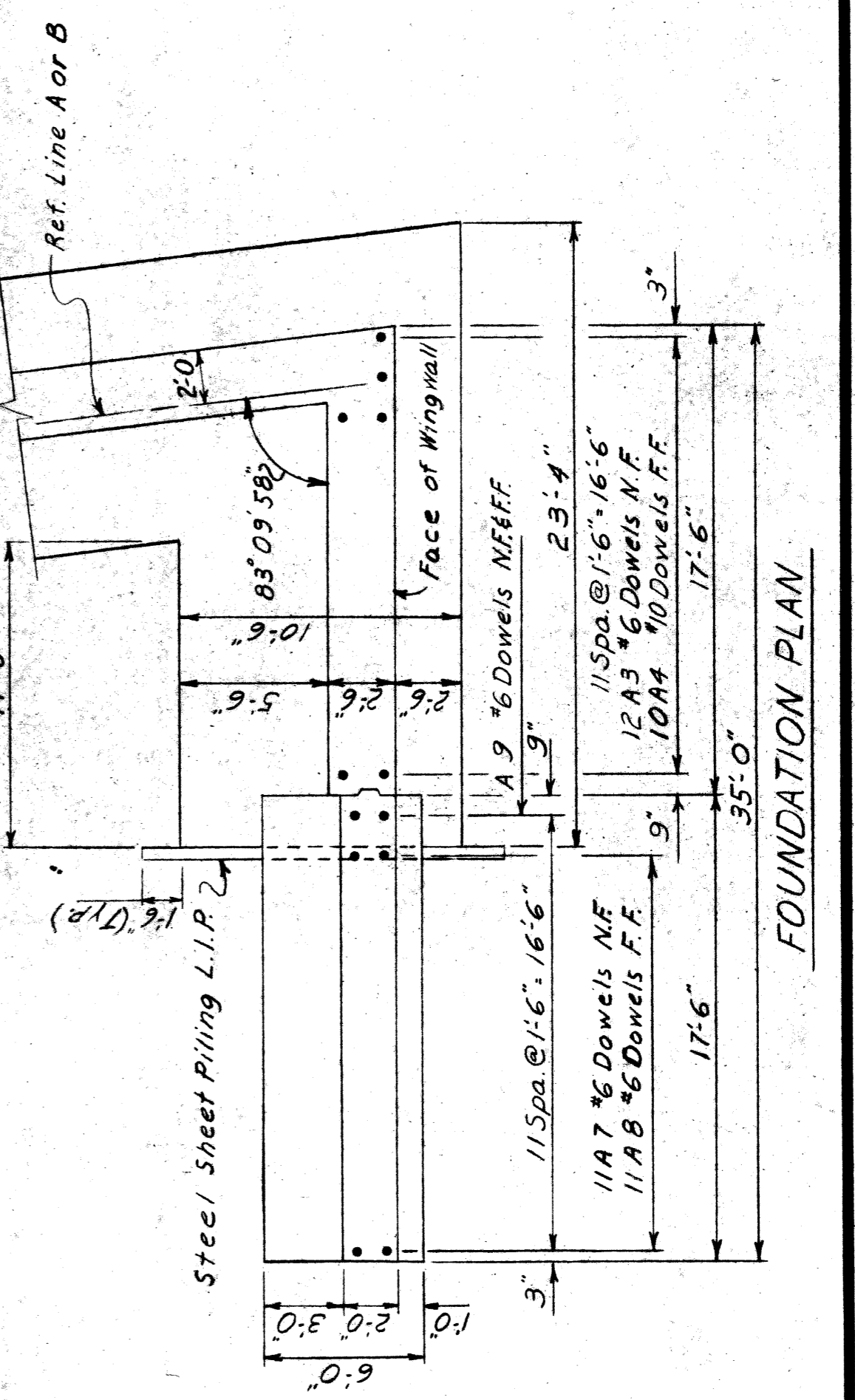
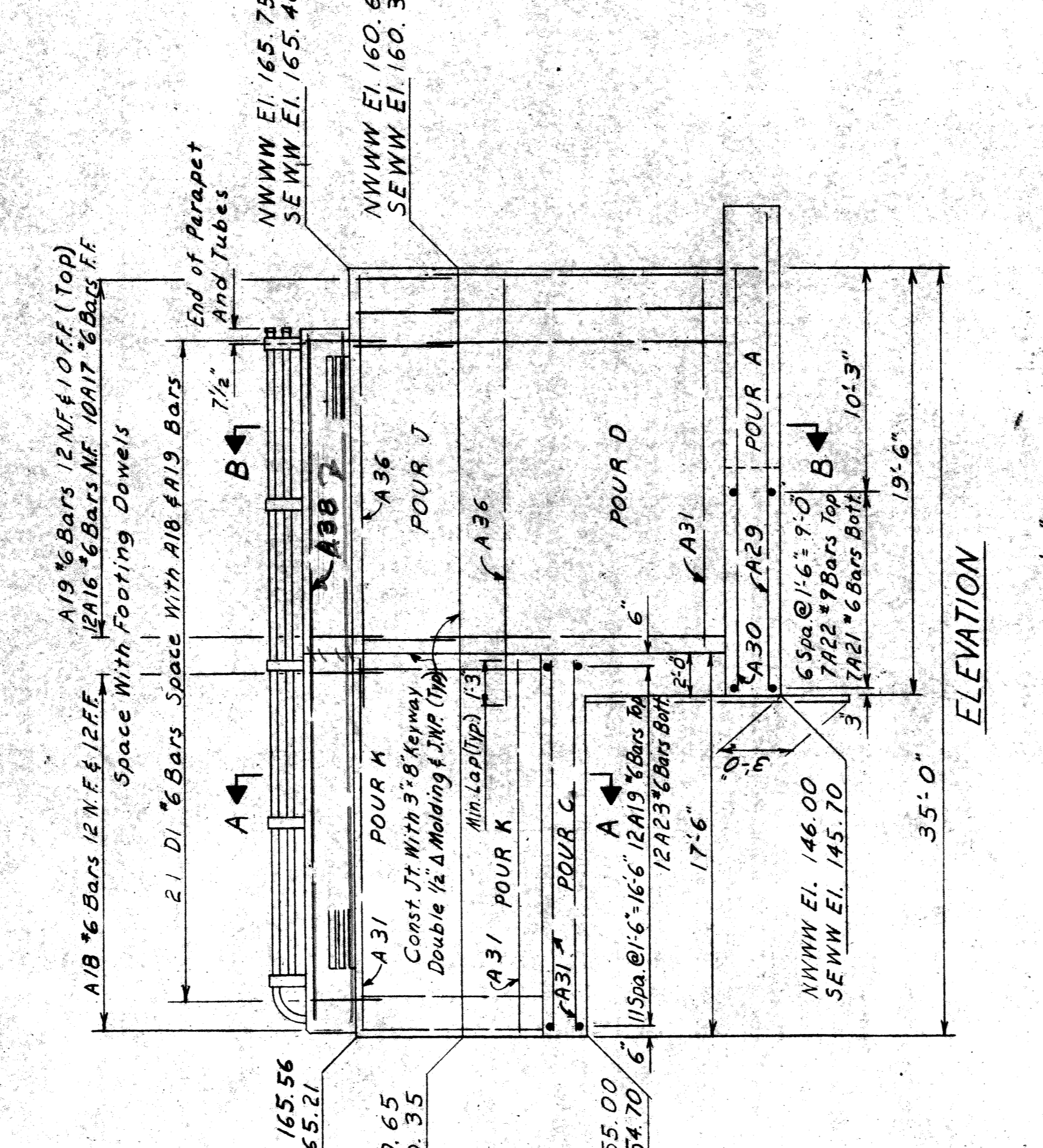
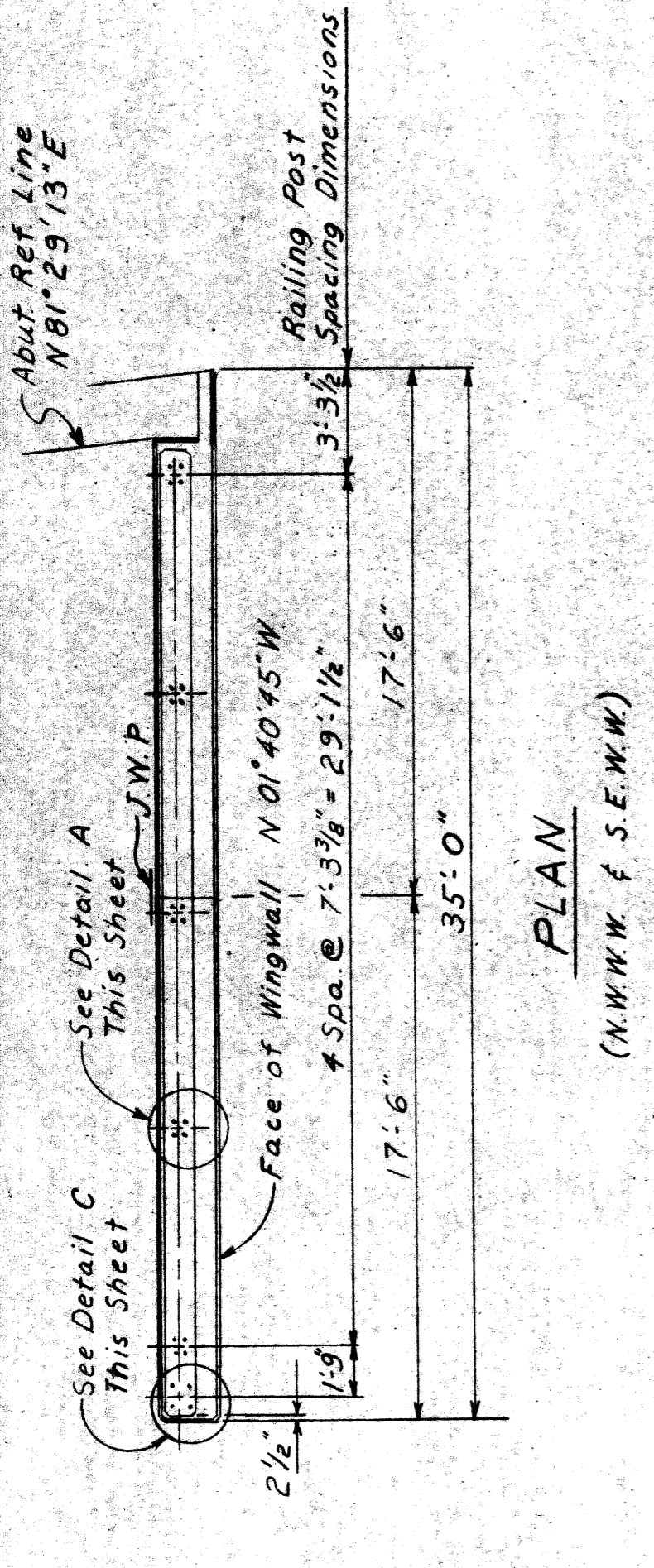
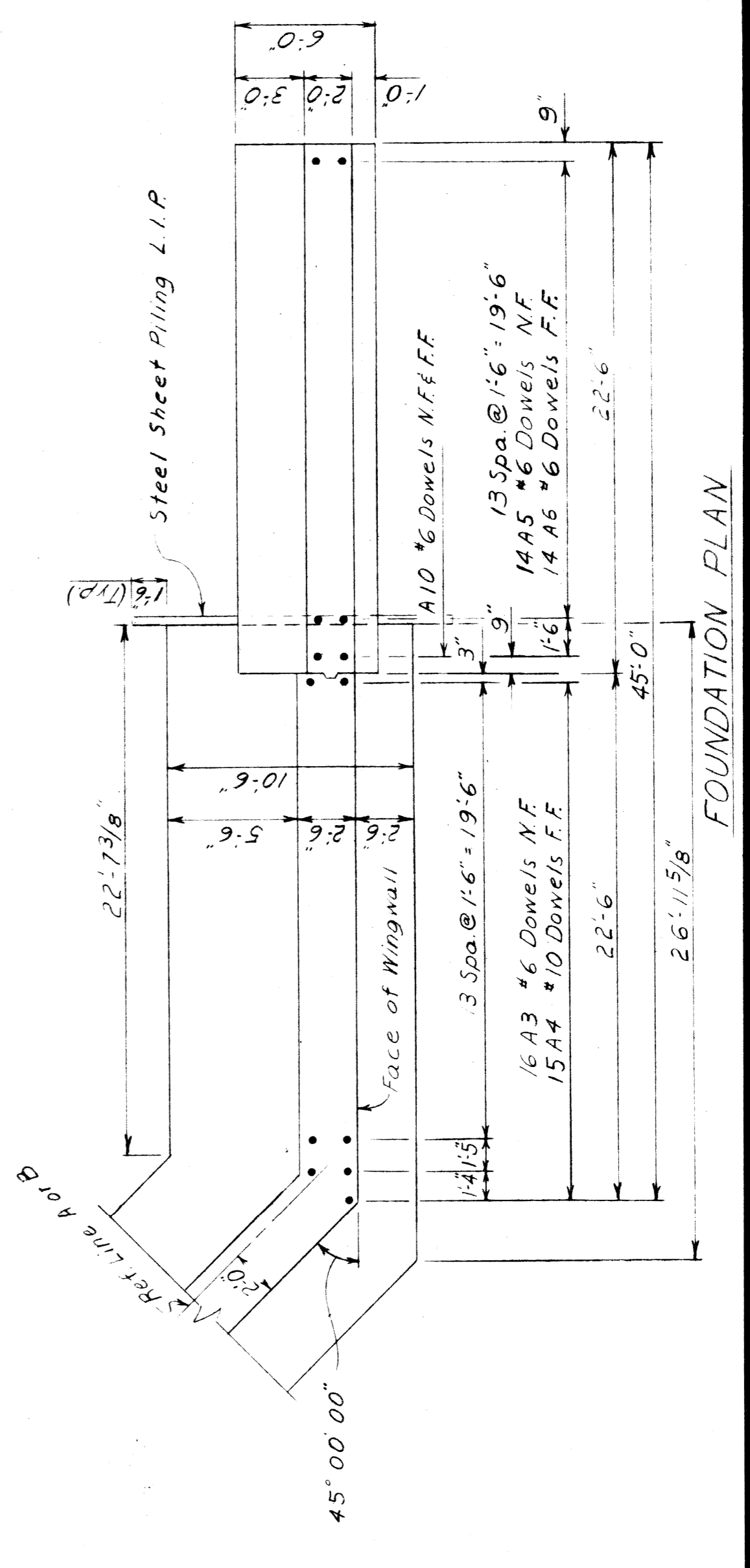
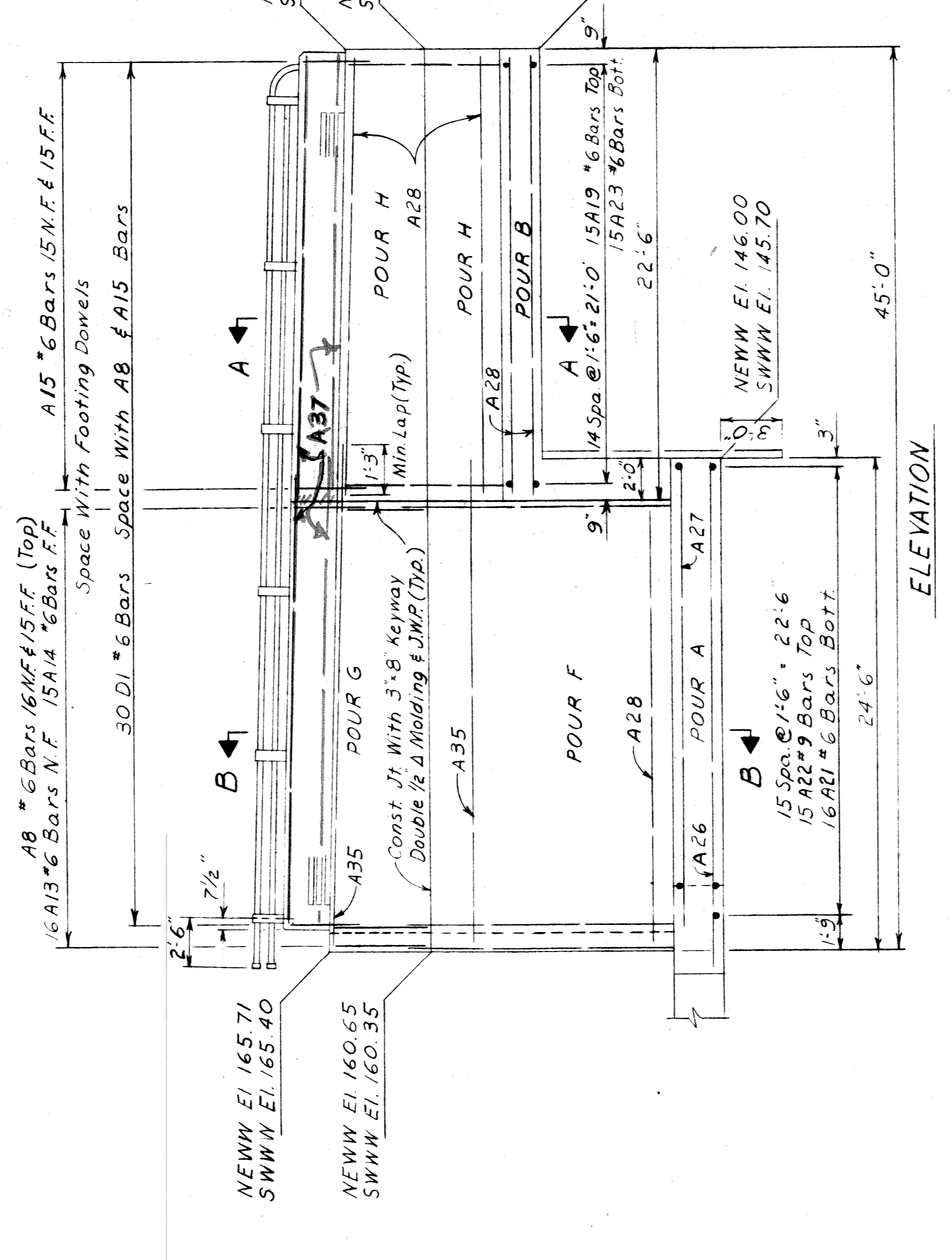
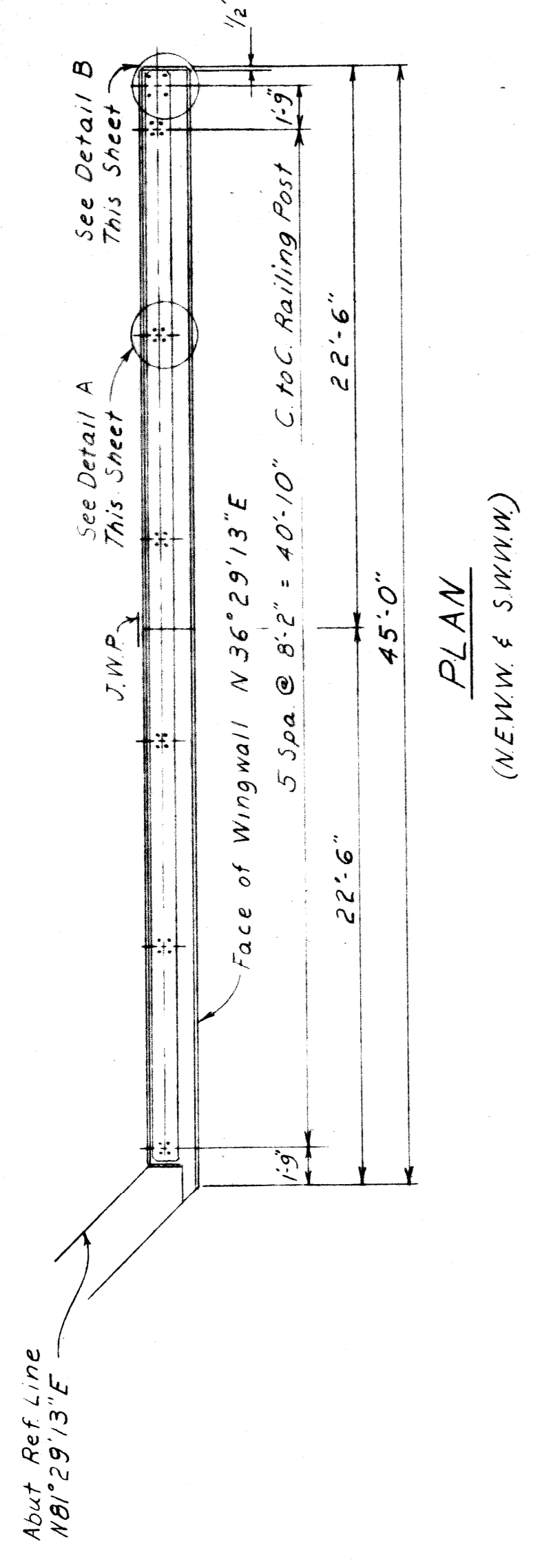
**METAL EXPANSION  
 JOINT-SPAN 4**

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

NO.	DESCRIPTION	DATE	BY

REVISIONS	DATE	BY

APPROVED \_\_\_\_\_  
 STRUCTURAL ENGINEER  
 PW 990(21)



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

JOB No. **PW 550221**

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

**WINGWALL DETAILS**

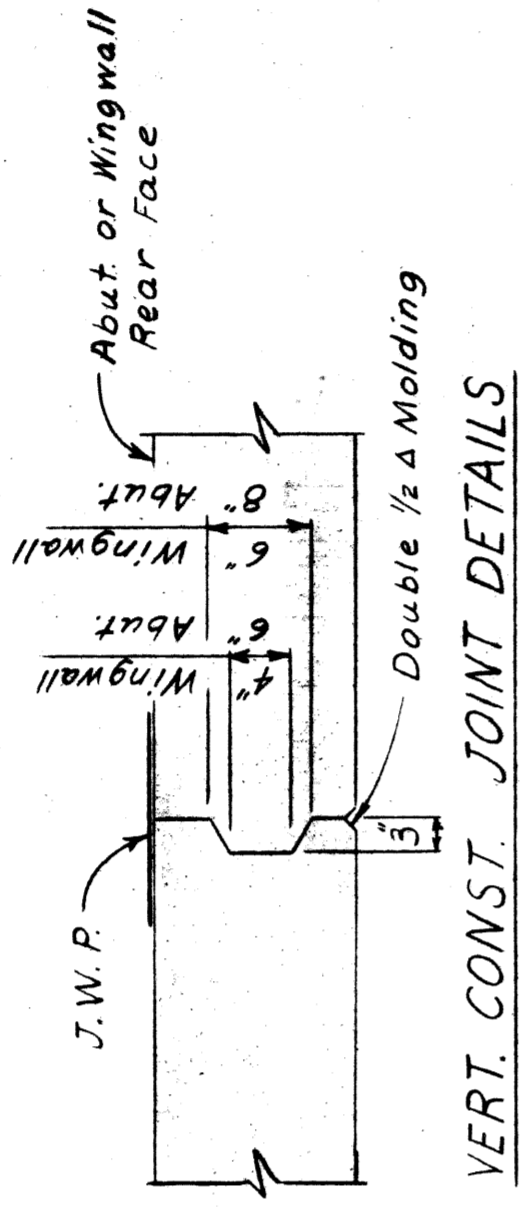
NO.	DATE	BY	REVISIONS

DRAWN BY: D.L.N. 1-7-76  
CHECKED BY: J.C. 1-7-76  
SHEET 5 OF 21

S17 of 82123 F

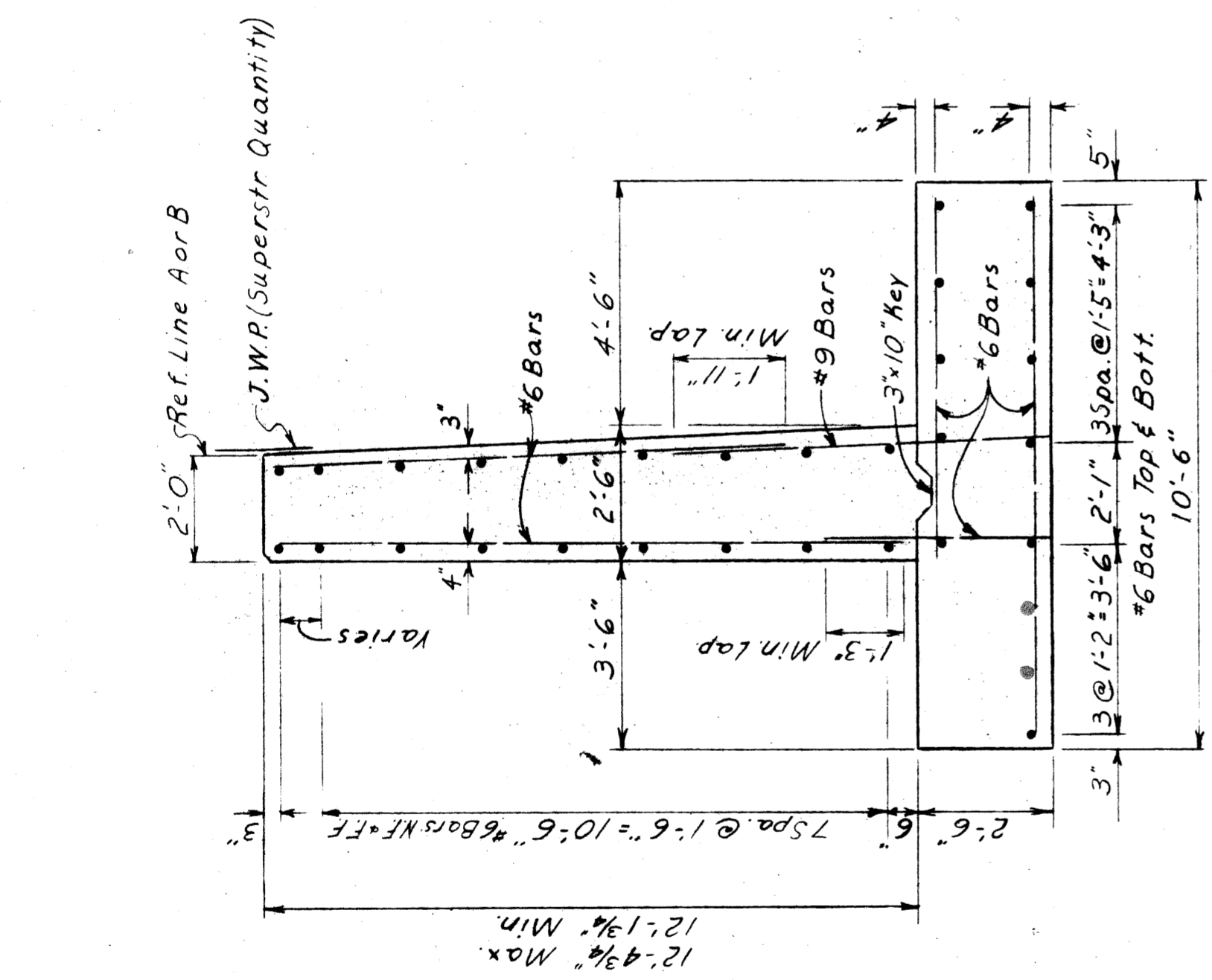
MISCELLANEOUS QUANTITIES				
ITEM	UNIT	AMOUNT		TOTAL
		ABUT. A	ABUT. B	
Unclassified Excavation	Cu. Yds.	468	457	925
Steel Sheet Piling (L.I.P.)	Sq. Ft.	324	324	648
Clear Protective Coating for Substructure Concrete	Sq. Ft.	972	972	1944
Low Temp Protection - Substr. Conc.	Cu. Yds.	271	271	542
1/2" Joint Filler	Sq. Ft.	128	128	256
Joint Waterproofing	Sq. Ft.	113	114	227
Bridge Railing - Solid Parapet Type	Lin. Ft.	76.0	76.0	152
6" Foundation Drains *	Lin. Ft.	158	158	316

\* 6" Foundation Drains shall be perforated pipe, sloped 1/8" in ft. min, continuous over the length of the Abutment and Wingwall Footings, and placed as shown on the General Plan of Structure.

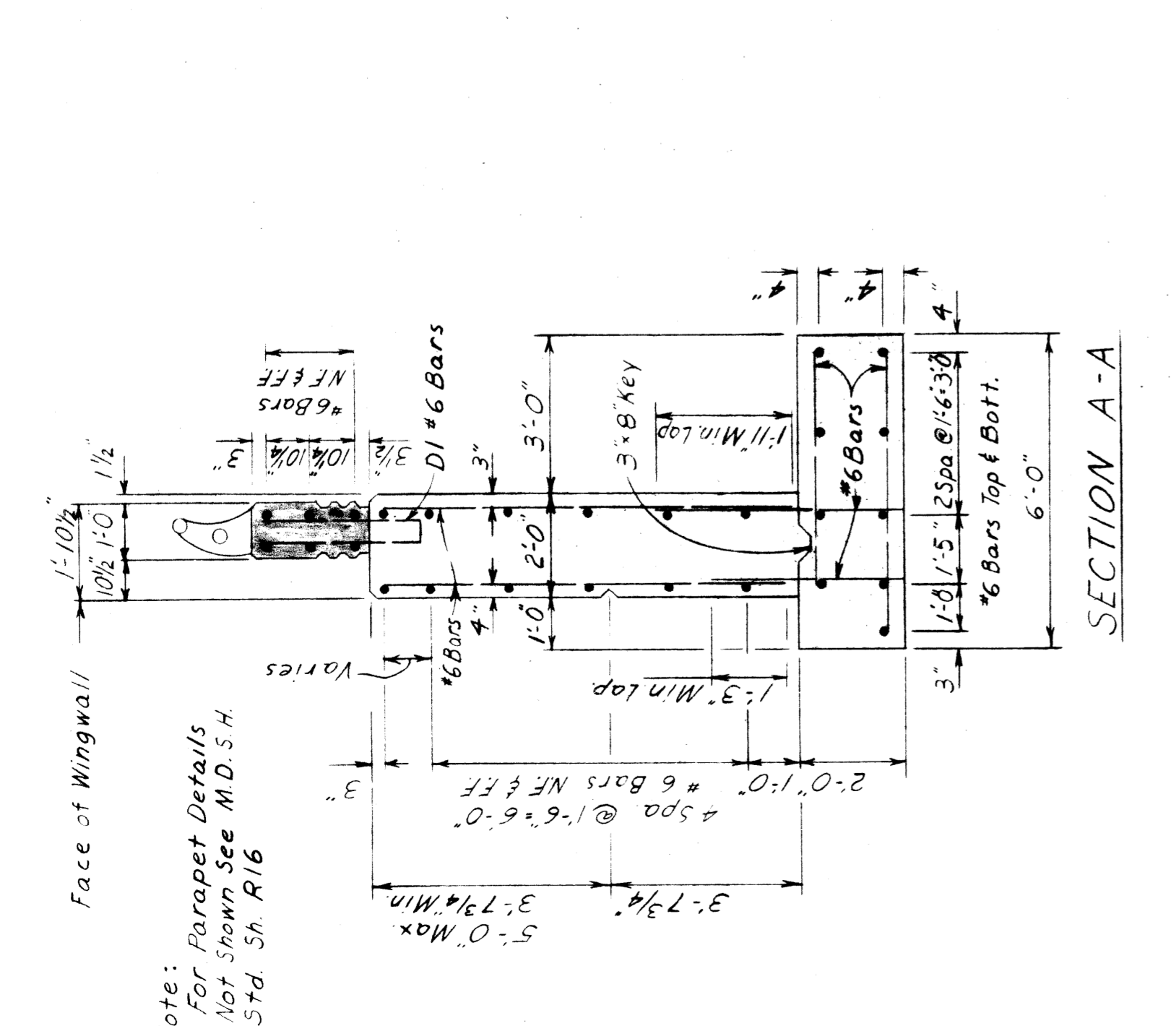


VERT. CONST. JOINT DETAILS

Note: Stop all keyways 1'-0" below top of Wingwalls.

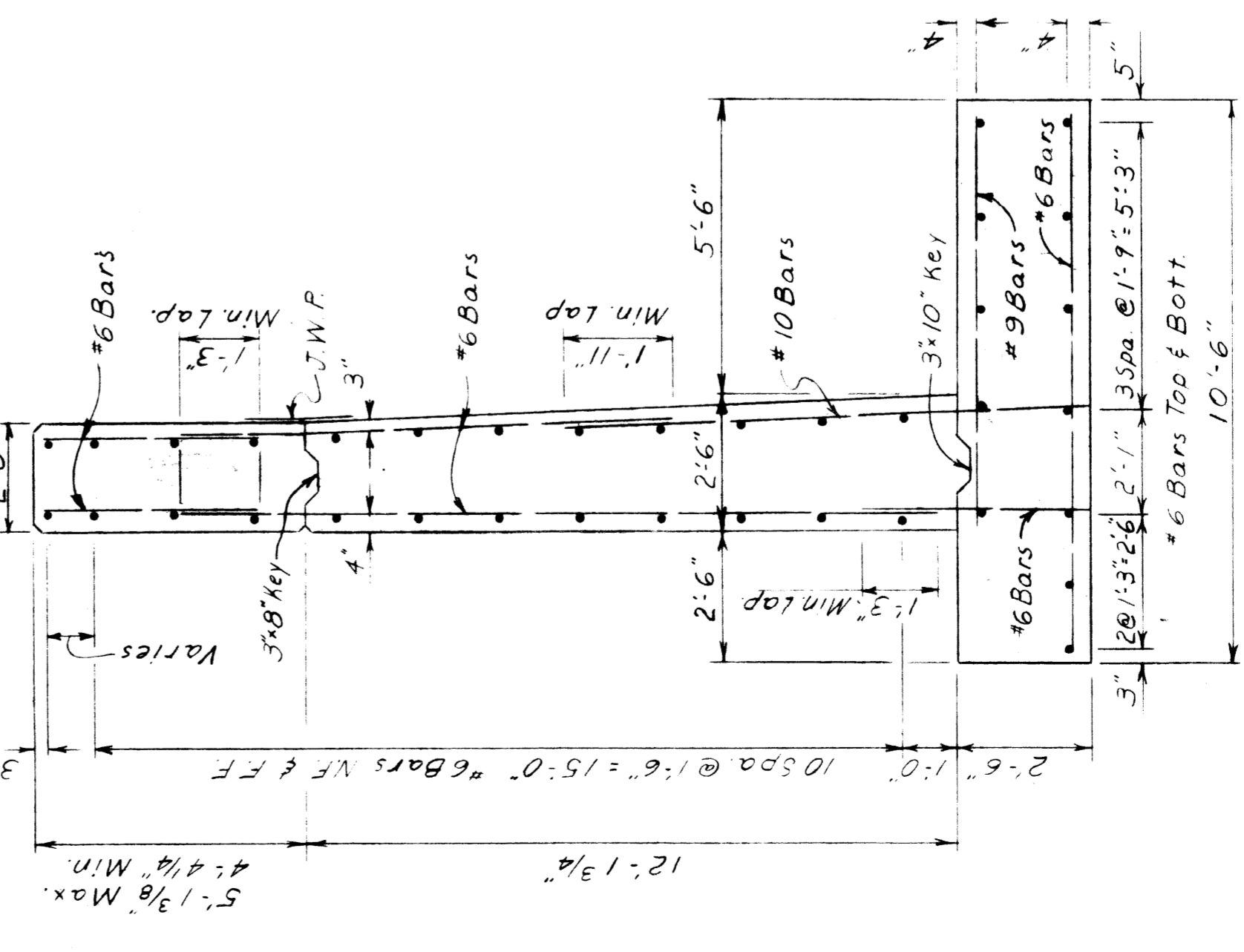


SECTION C-C

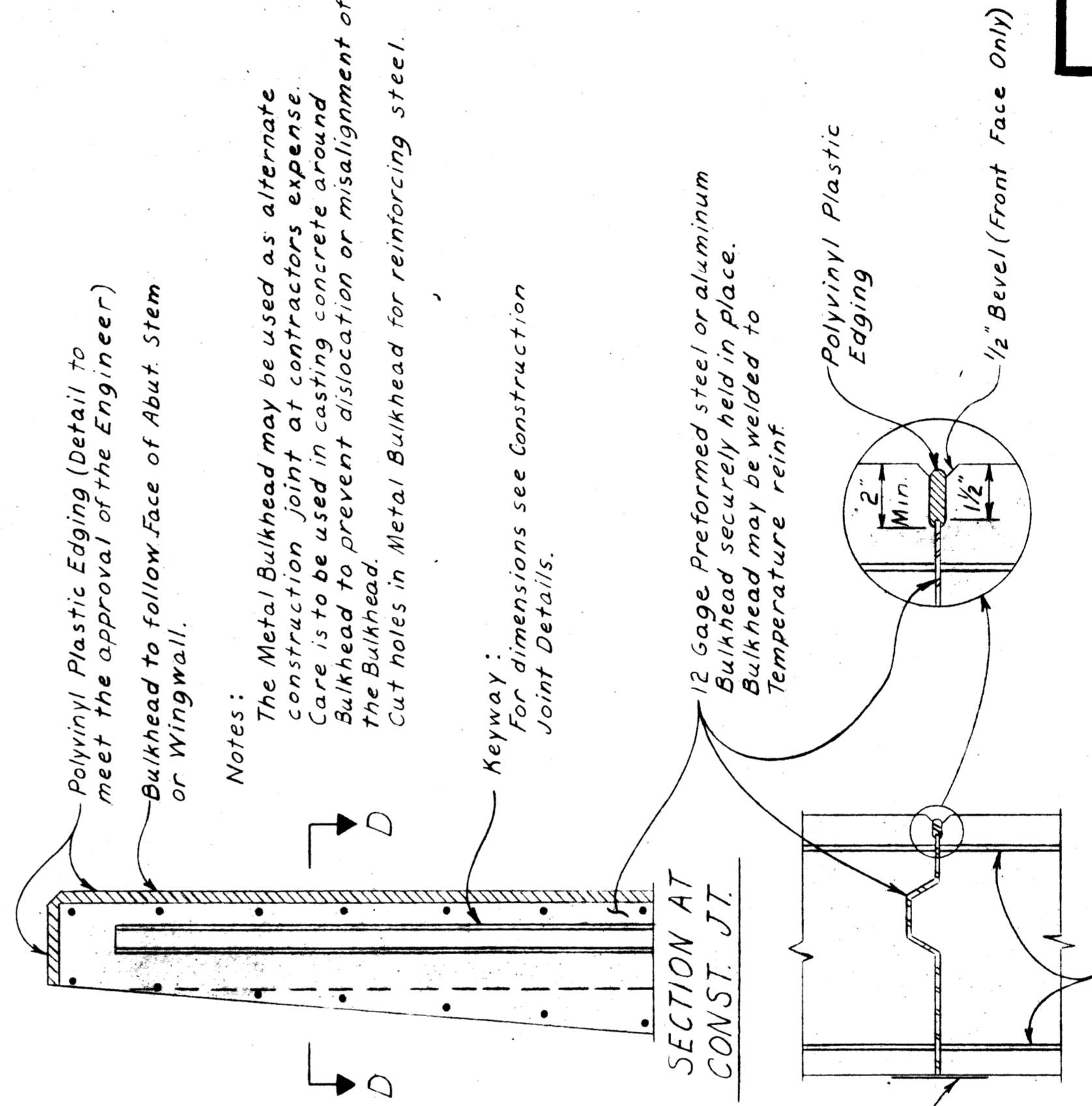


SECTION A-A

Note: For Parapet Details See Section A-A And M.D.S.H. Std. Sh. R16



SECTION B-B



SECTION AT CONST. J.T.

Notes: The Metal Bulkhead may be used as alternate construction joint at contractors expense. Care is to be used in casting concrete around Bulkhead to prevent dislocation or misalignment of the Bulkhead. Cut holes in Metal Bulkhead for reinforcing steel.

Keyway: For dimensions see Construction Joint Details.

SECTION D-D ALTERNATE - METAL BULKHEAD FOR CONSTRUCTION JOINTS

CONCRETE QUANTITIES (Cu. Yds.)				
POUR	LOCATION	ABUTMENT A		ABUTMENT B
		A(6A)	A(6AA)	
A	Footings	103.0	103.0	206.0
B	Footings (M.E. & S.W.)	12.9	12.9	25.8
C	Footings (W.F. & E.W.)	10.7	10.7	21.4
D	Abut. Wall	36.4	36.4	72.8
E	Abut. Wall	27.4	27.4	54.8
F	Abut. Wall	42.9	42.9	85.8
G	Wingwall (M.E. & S.W.)	7.7	7.7	15.4
H	Wingwall (W.F. & E.W.)	12.8	12.8	25.6
J	Wingwall (W.F. & E.W.)	5.9	5.9	11.8
K	Wingwall (M.E. & S.W.)	11.1	11.1	22.2
Total		126.6	144.2	270.8
Grade A(6A) Concrete - Substructure		253.2 Cu. Yds.		
Grade A(6AA) Concrete - Substructure		289.0 Cu. Yds.		

Parapet Concrete = 12.7 Cu. Yds. Grade A(6AA)  
Part of Bridge Railing - Solid Parapet Type, and not a pay item.

GENERAL NOTES

J.W.P. denotes Joint Waterproofing; N.F. denotes Near Face, F.F. denotes Far Face; B.F. denotes Both Faces.  
Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.  
Footings concrete quantities are computed on the basis of an outline 3/4" outside of the footing where the concrete is poured against Steel Sheet Piling. Left in place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.  
Steel sheet piling left in place shall be of the continuous interlock type, either new or used, in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Tackle analysis and mill reports are not required for steel used in Sheet Piling.  
Steel Sheet Piling Left in place shall be driven to its final penetration before adjacent concrete is poured.  
If it is necessary to lower the top of sheeting after the concrete has been poured, the excess shall be removed by cutting.  
Adjust the spacing of the reinforcing steel as required to permit placing of foundation drains and Position Dowels.  
Maximum average foundation pressure D.L. only: 3500 P.S.F.  
Maximum foundation pressure D.L. + L.L. = 5000 P.S.F.  
For Bevel and Molding Details see Std. Sh. R16  
Bridge Railing is to be aluminum tubular railing on solid concrete parapet.  
For Railing Details (except as noted) see Std. Sh. R16.  
The bridge seat and front face of each abutment above top of footing or grade beam between wingwall returns shall be given an application of Clear Protective Coating for Substructure Concrete.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

REVISIONS		DETAILS	
NO.	DESCRIPTION	DATE	BY

DESIGNED BY: [Blank]  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF HIGHWAYS AND BRIDGES  
NO. [Blank] SHEET NO. OF 27  
DATE: 9/28/51  
BY: [Blank]



PLANS PREPARED BY  
 CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 ENGINEERING DIVISION  
 HIGHWAY AND EXPRESSWAYS  
 J. J. Gorman  
 ENGINEERING CONSULTANT

JOB No.  
 PW 990 (17)  
 PW 990 (21)

MICHIGAN STATE HIGHWAY DEPARTMENT

QUANTITY SHEET

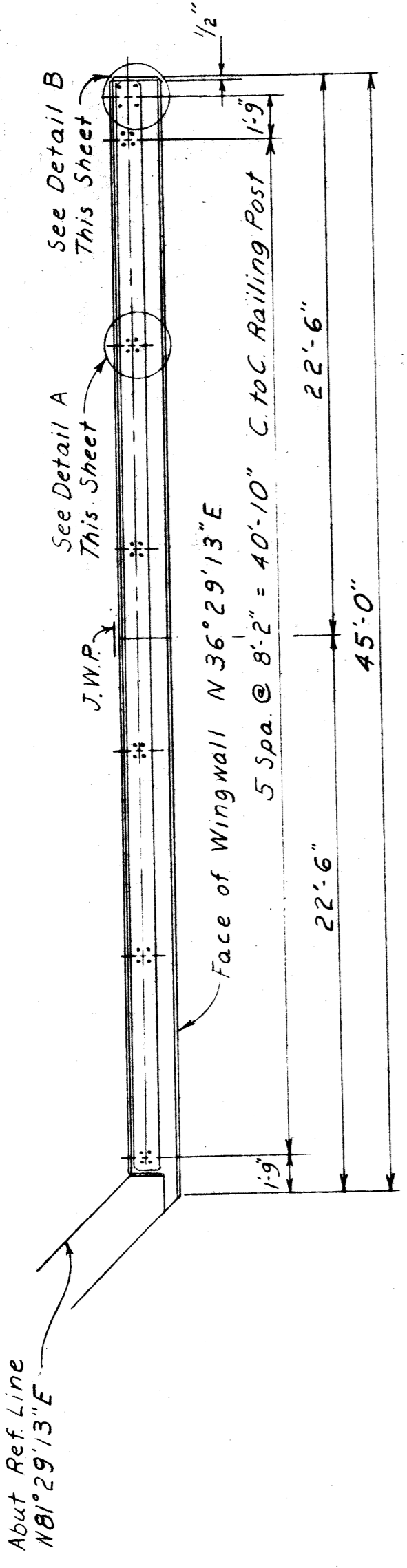
I-UI-96-4 (

BIU 82123,  
 S14, S15, S16 of 82123E  
 S17 of 82123 F

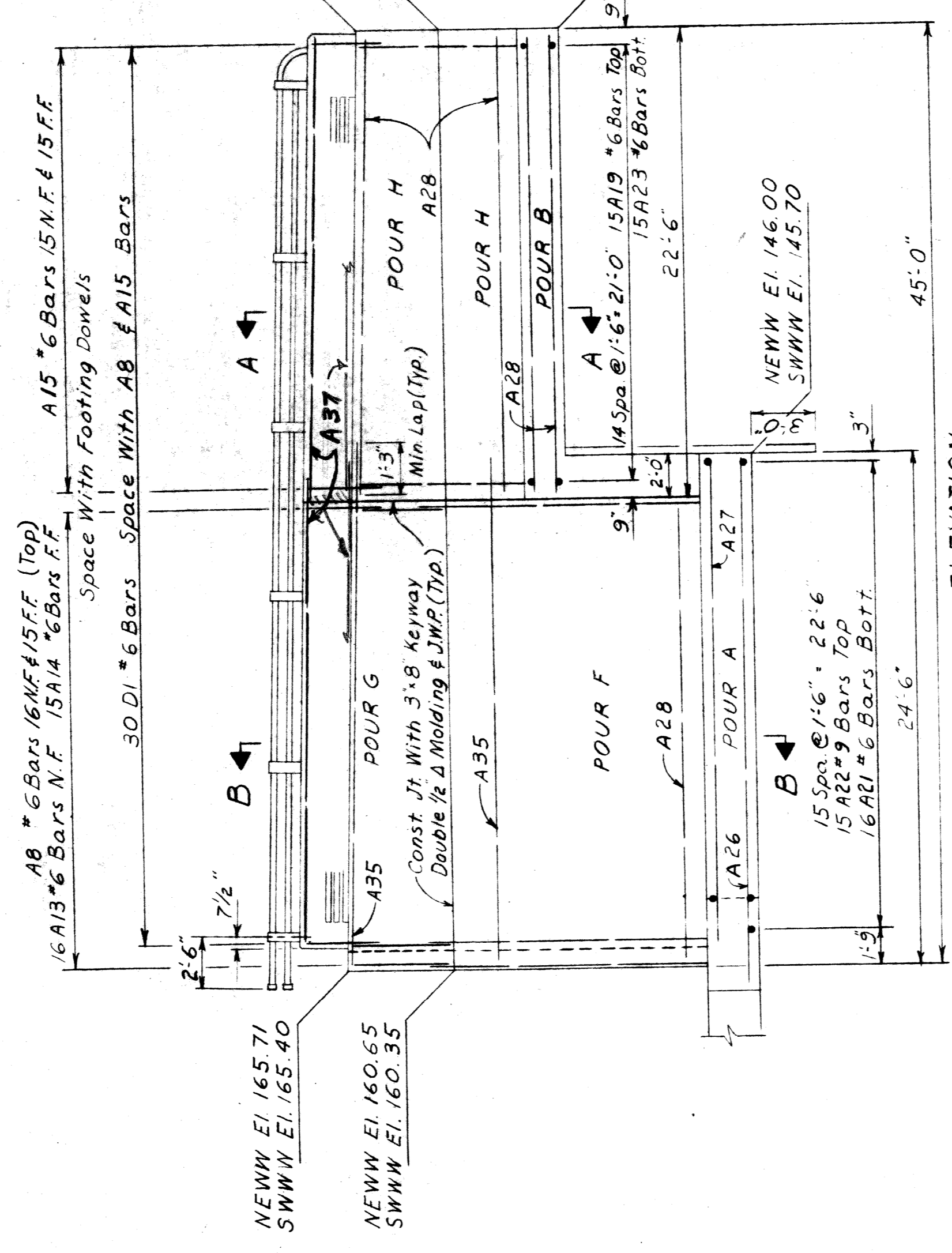
SHEET 75 of 79

ITEM	CODE NO	UNIT	CONTR. QUANT.	FINAL QUANT.	UNIT PRICE	FINAL COST	S14 of 82123 F		S15 of 82123 E		S16 of 82123 E		S17 of 82123 F	
							REMARKS (AUTH. NOS.)	CONTR. QUANT.	FINAL QUANT.	REMARKS (AUTH. NOS.)	CONTR. QUANT.	FINAL QUANT.	REMARKS (AUTH. NOS.)	CONTR. QUANT.
Cover E	264	Each	1											
Unclassified Excavation	6020	C.Y.	9591											
Temporary Steel Sheet Piling	6073	S.F.	1650											
Steel Sheet Piling I.P.P.	6074	S.F.	648											
Structural Lightweight Concrete		C.Y.	60											
Concrete Grade XX	6082	C.Y.	21.8											
Concrete Grade A(6A) Substructure	6090	C.Y.	2624.0											
Concrete Grade A(6AA) Substructure	6091	C.Y.	319.7											
Clear Protective Coating for Substructure Concrete		S.F.	4396											
Protective Sealant Coating for Substructure Concrete	6096	S.F.	525											
Concrete Grade A(6AA) Superstructure	6100	C.Y.	3456.6											
Water Reducing Retarding Admixture	6103	Gal	409											
Protective Treatment for Bridge Decks	6104	S.F.	921.9											
Low Temperature Protection Substructure Conc	6106	C.Y.	6165.6											
Low Temperature Protection Superstructure Concrete	6107	C.Y.	3536.0											
Steel Reinforcement	6160	Lbs	109997											
Steel Reinforcement Galvanized		Lbs	19666											
1/2 in. Concrete Inserts	6166	Each	184											
Structural Steel, Erection (A-588 Rolled)	6199	Lbs	14084.00											
Structural Steel, Erection (A-588 Rolled)	6200	Lbs	14084.00											
Structural Steel, Erection (A-588 Plate)	6202	Lbs	11531.00											
Structural Steel, Erection (A-588 Plate)	6203	Lbs	11531.00											
Shear Developers (S14)		Lump Sum												
Shear Developers (S15)		Lump Sum												
Shear Developers (S16)		Lump Sum												
Shear Developers (S17)		Lump Sum												
1/4 in Joint Filler	6290	S.F.	70											
1 in Joint Filler	6292	S.F.	1110											
1/4 in Preformed Neoprene Joint Sealer	6296	S.F.	7624											
2 in Preformed Neoprene Joint Sealer	6310	L.F.	300											
3 in Preformed Neoprene Joint Sealer	6312	L.F.	390											
Double Neoprene Expansion Joint	6314	L.F.	76											
Joint Waterproofing	6337	S.F.	2138											
Hot Poured Rubber Asphalt Type Filler	6338	L.F.	60											
Two Component Polyurethane Cold Applied Joint Sealer	6340	L.F.	202											
Bridge Railing - Solid Parapet Type	6381	L.F.	2695.6											
Expansion Joint Drain	6410	L.F.	266											
3 in Conduits	6416	L.F.	559.5											
4 in Conduits	6417	L.F.	10893.5											
Slope Protection - Class A	6462	S.Yd.	1541											
Slope Protection Headers	6466	L.F.	925											
6" Foundation Drains		L.F.	1577											
			TOTAL											

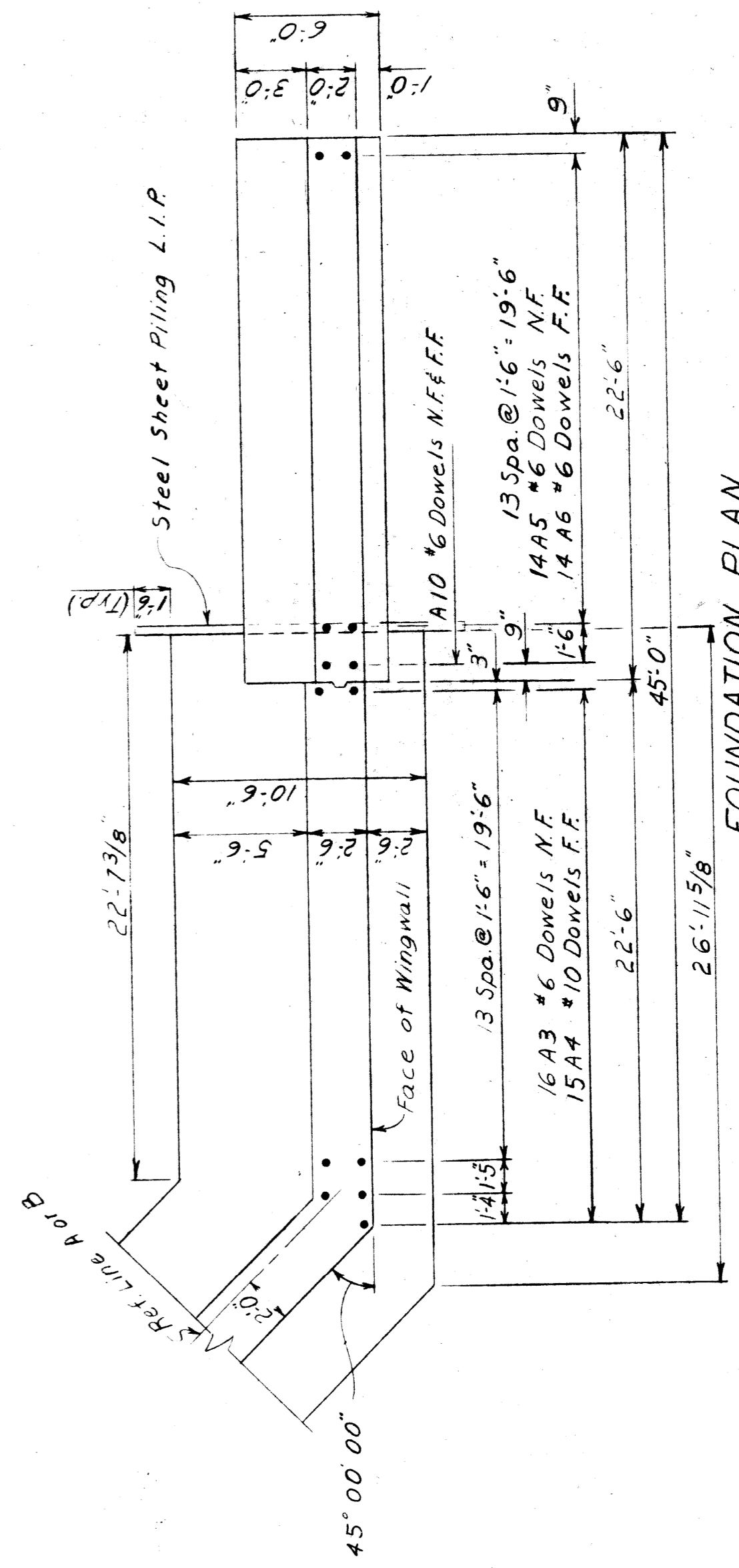
CHANGES TO STATE  
 12-1-70



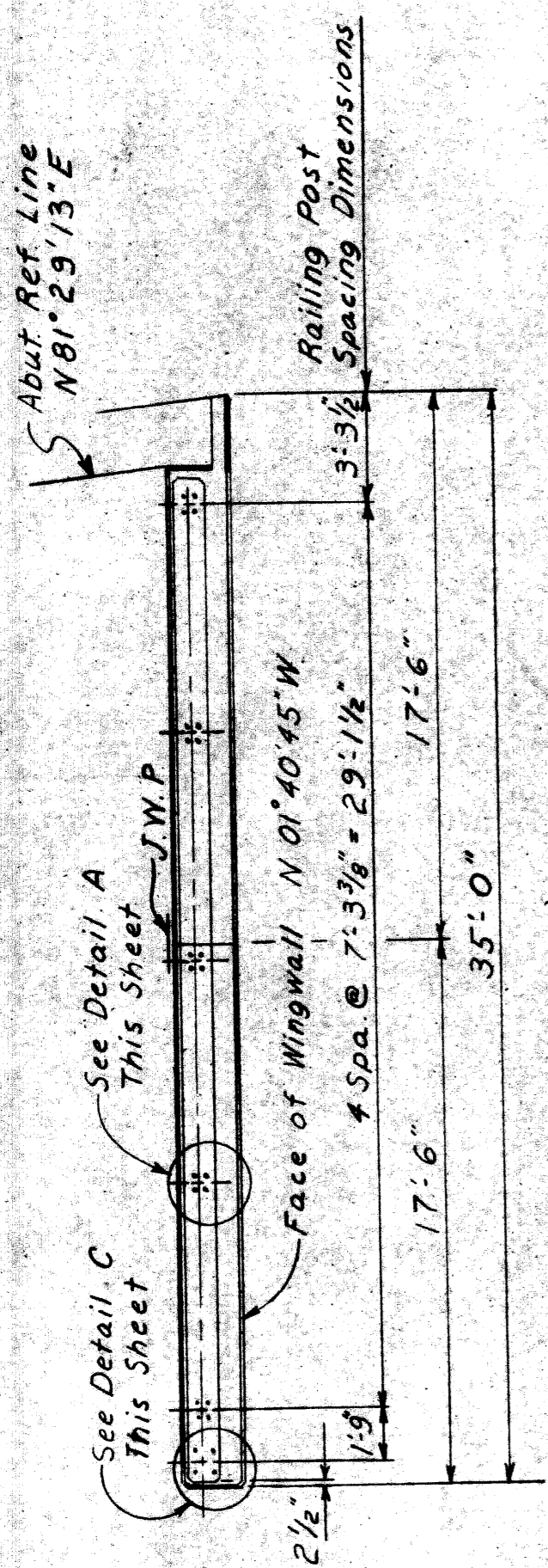
**PLAN**  
(NEWW & SWWW)



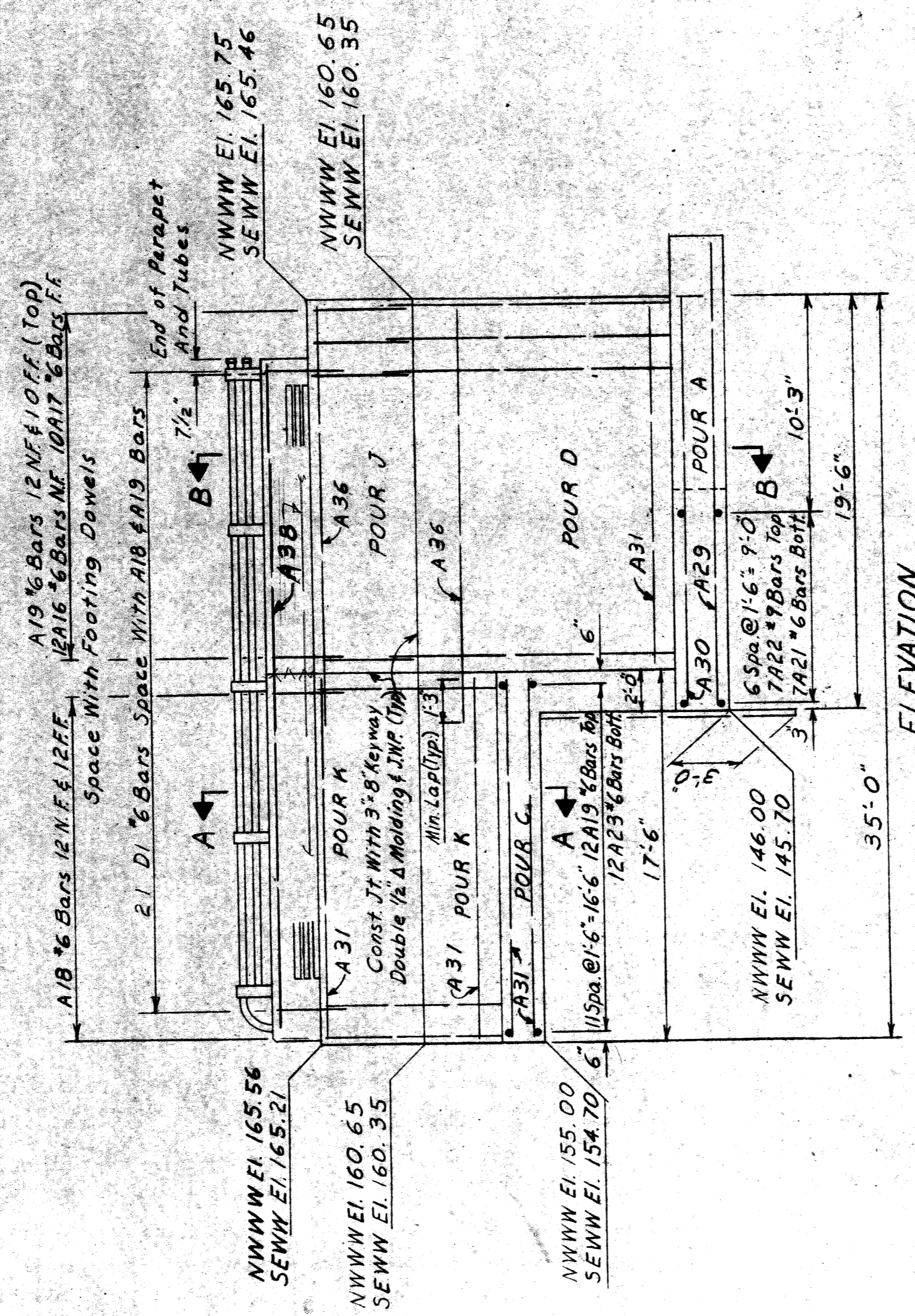
**ELEVATION**



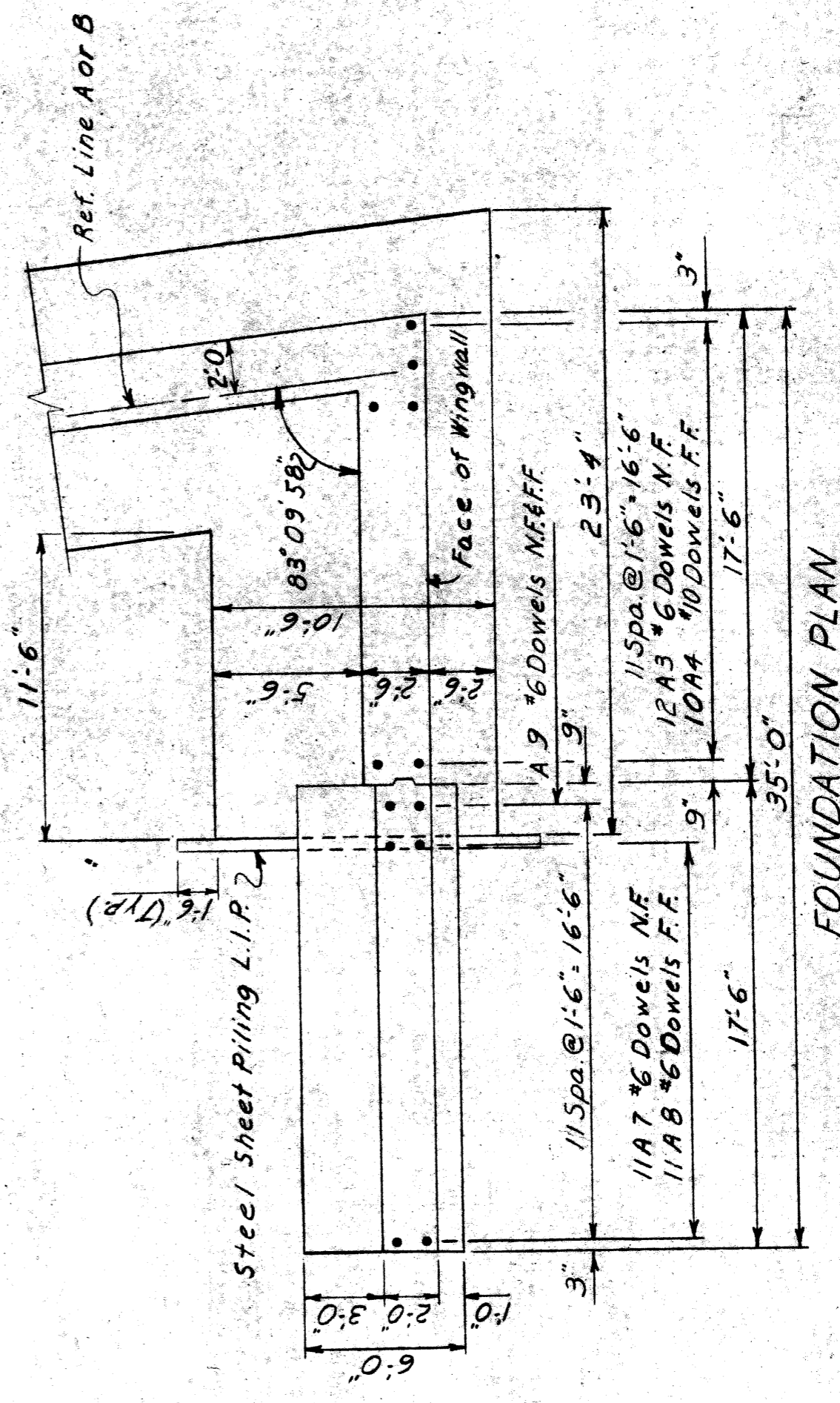
**FOUNDATION PLAN**



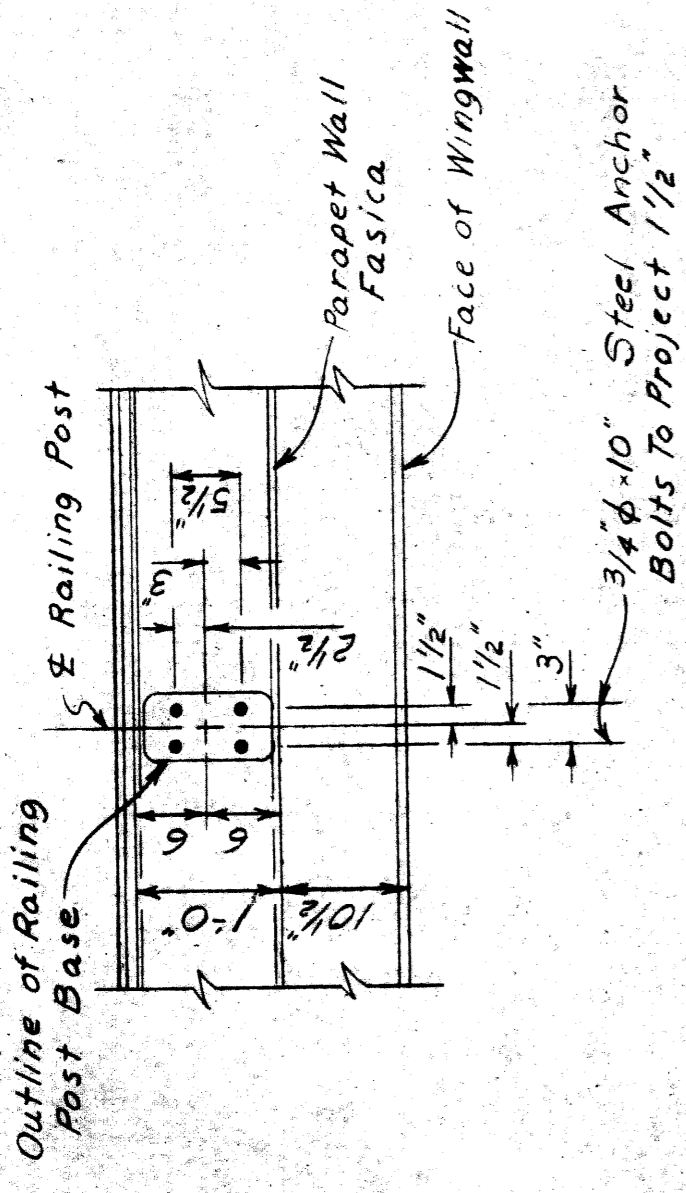
**PLAN**  
(NWWW & SEWW)



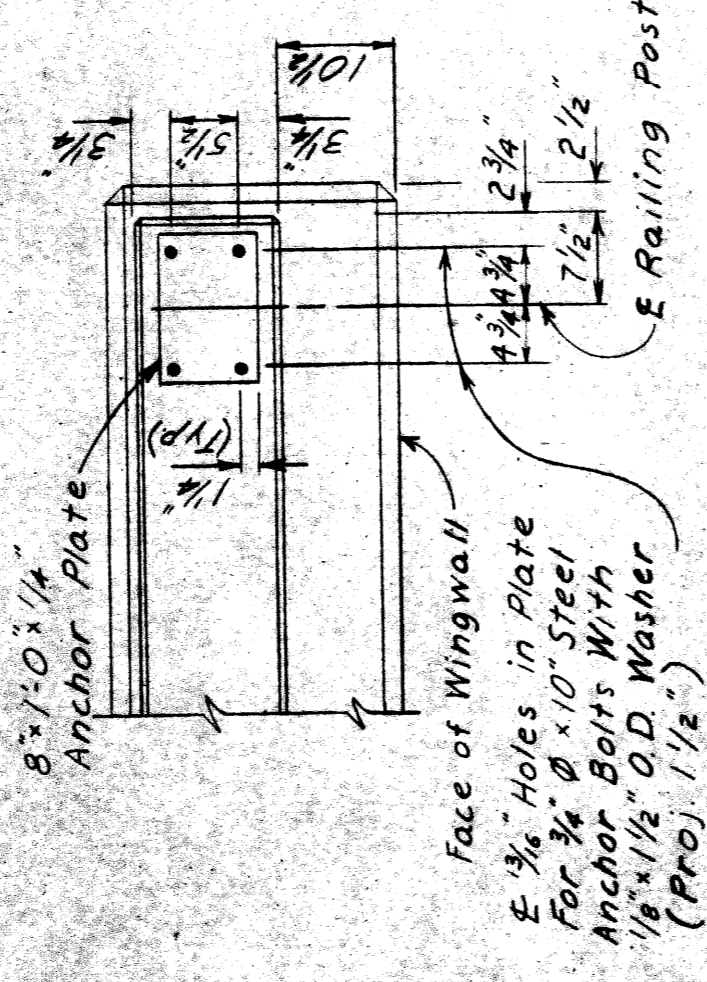
**ELEVATION**



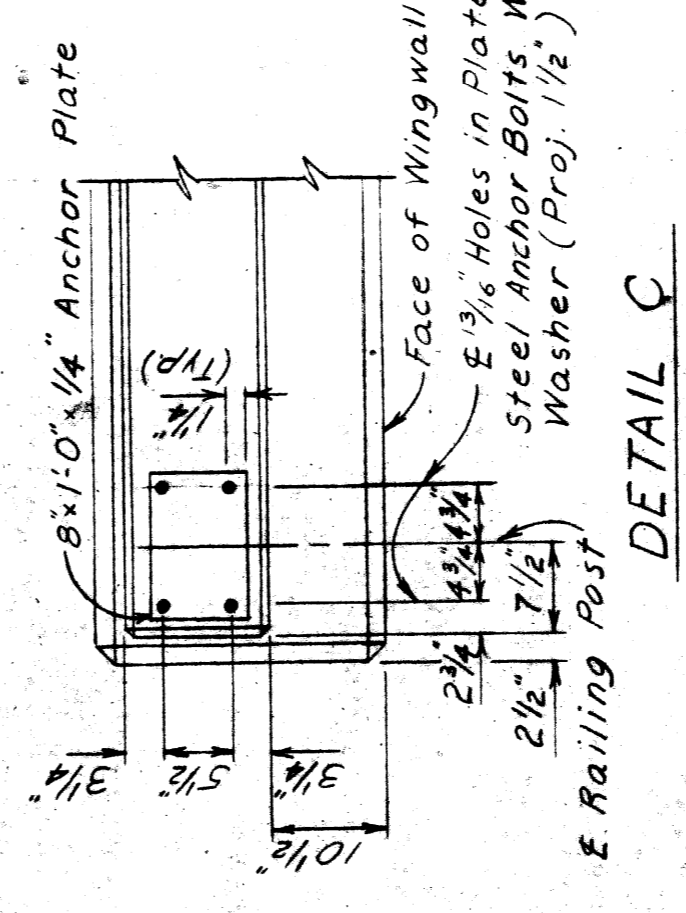
**FOUNDATION PLAN**



**DETAIL A**



**DETAIL B**



**DETAIL C**

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

APPROVED  
STRUCTURAL ENGINEER  
JOB No.  
FW 55021

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

**WINGWALL DETAILS**

NO.	REVISIONS	DATE	BY

DESCRIPTION

CITY OF DETROIT  
SHEET NO. 5 OF 27  
S17 of 82123 F



### MISCELLANEOUS QUANTITIES

ITEM	UNIT	AMOUNT		TOTAL
		ABUT. A	ABUT. B	
Unclassified Excavation	Cu. Yds.	46.8	45.7	92.5
Steel Sheet Piling (L.I.R.)	Sq. Ft.	324	324	648
Clear Protective Coating For Substructure Concrete	Sq. Ft.	972	972	1944
Low Temp. Protection - Substr. Conc.	Cu. Yds.	271	271	542
1/2" Joint Filler	Sq. Ft.	128	128	256
Joint Waterproofing	Sq. Ft.	113	114	227
Bridge Railing - Solid Parapet Type	Lin. Ft.	76.0	76.0	152
6" Foundation Drains*	Lin. Ft.	15.8	15.8	31.6

\* 6" Foundation Drains shall be perforated pipe, sloped 1/8" in 10' min, continuous over the length of the Abutment and Wingwall Footings, and placed as shown on the General Plan of Structure.

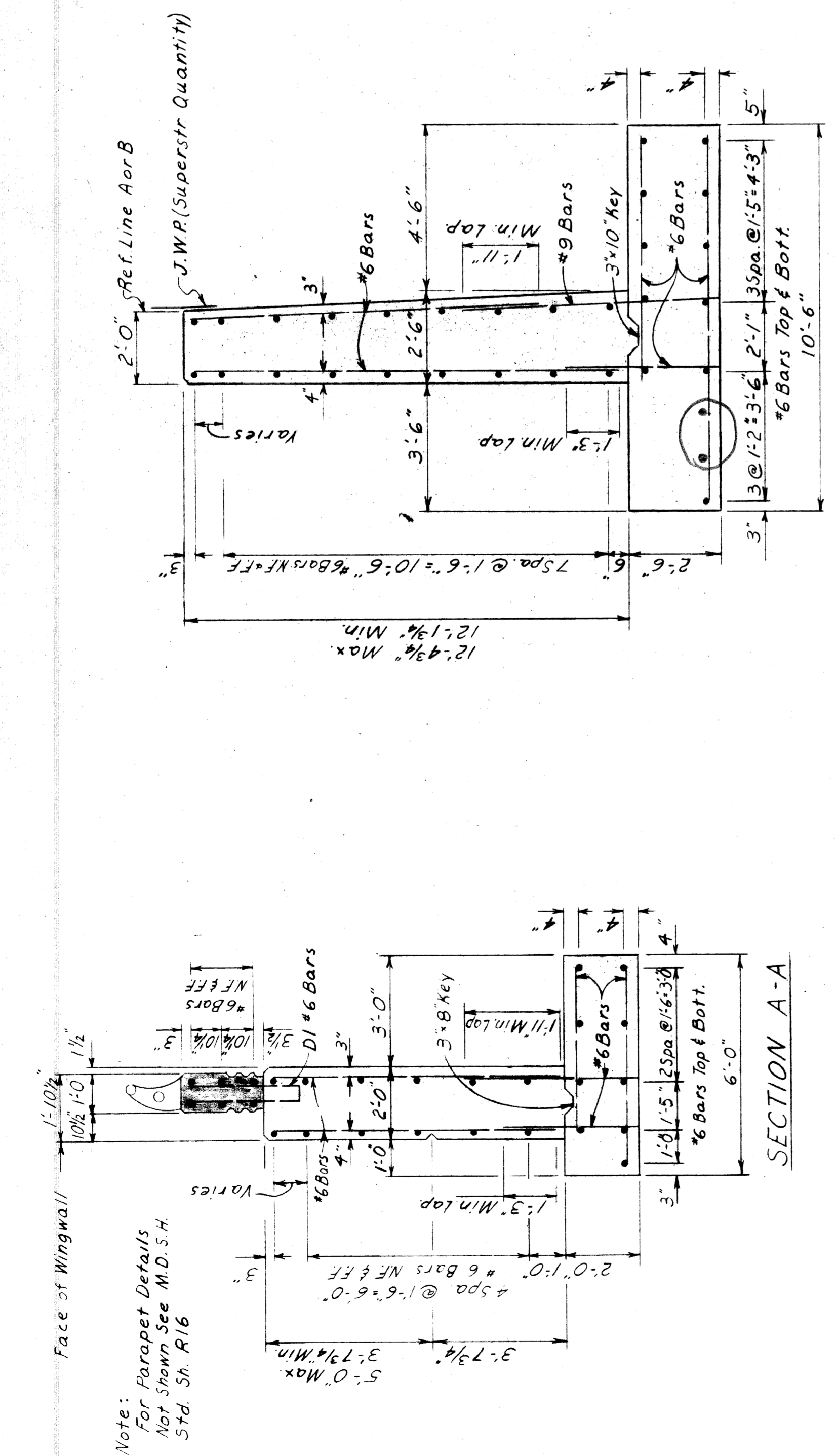
### CONCRETE QUANTITIES (Cu. Yds.)

POUR	LOCATION	ABUTMENT A		ABUTMENT B	
		A(6A)	A(6AA)	A(6A)	A(6AA)
A	Footings	103.0		103.0	
B	Footings (N.E. & S.W.W.)	12.9		12.9	
C	Footings (N.W. & E.W.W.)	10.7		10.7	
D	Abut. Wall		36.4		36.4
E	Abut. Wall		27.4		27.4
F	Abut. Wall		42.9		42.9
G	Wingwall (N.E. & S.W.)		7.7		7.8
H	Wingwall (N.E. & S.W.)		12.8		13.2
J	Wingwall (N.W. & E.W.)		5.9		5.9
K	Wingwall (N.W. & E.W.)		11.1		11.2
	Total	126.6	144.2	126.6	144.8
	Grade A(6A) Concrete - Substructure		253.2		289.0
	Grade A(6AA) Concrete - Substructure				289.0

Parapet Concrete = 12.7 Cu. Yds. Grade A(6AA)  
Part of Bridge Railing - Solid Parapet Type, and not a pay item.

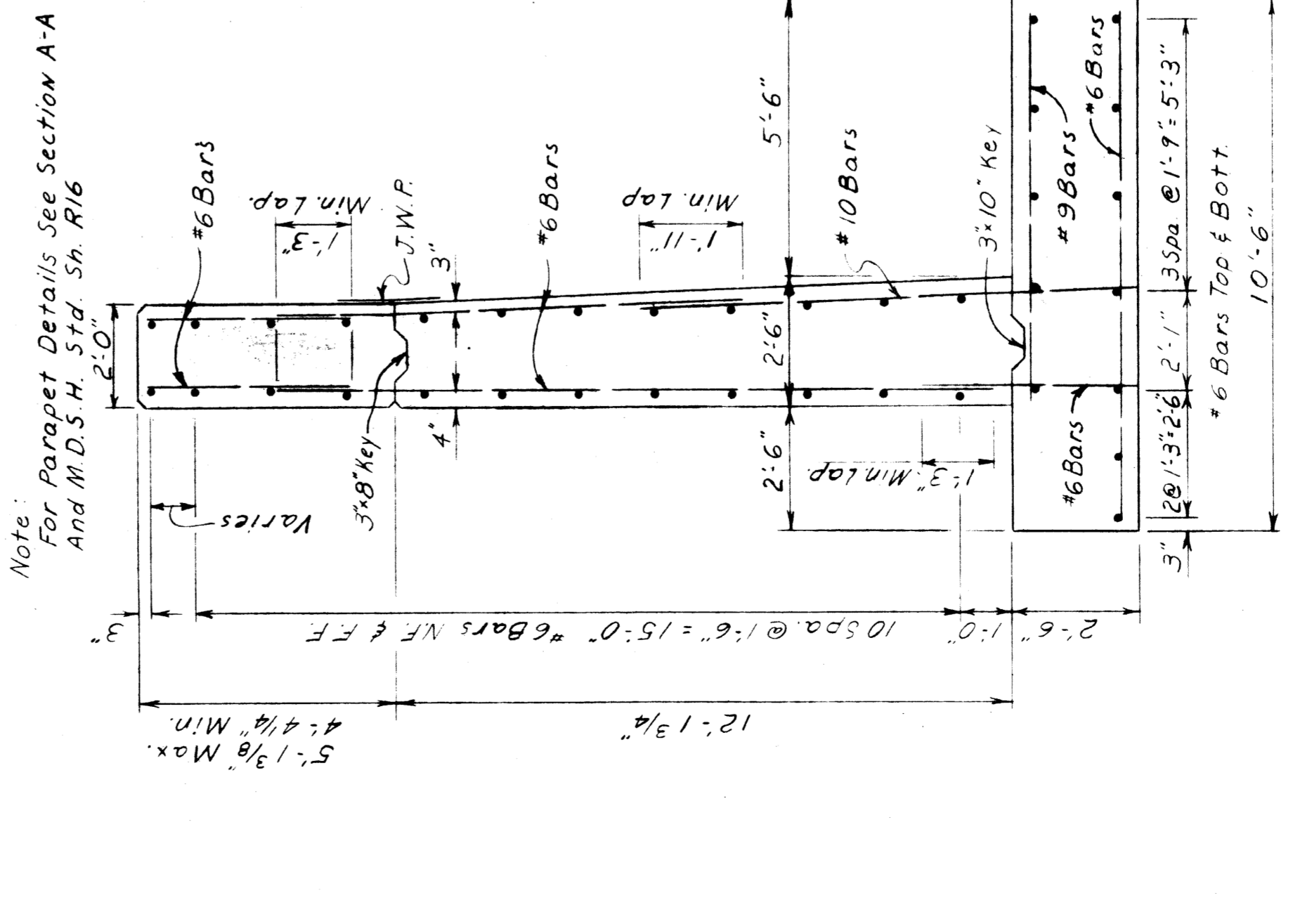
### GENERAL NOTES

J.W.P. denotes Joint Waterproofing; N.F. denotes Near Face; F.F. denotes Far Face; B.F. denotes Both Faces  
Position DOWELS shall be set accurately to a template and are to be furnished with Structural Steel.  
Footings concrete quantities are computed on the basis of an outline 3/4" outside of the footing where the concrete is poured against Steel Sheet Piling Left in place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.  
Steel sheet piling left in place shall be of the continuous interlock type, either new or used, in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Ladle analysis and mill reports are not required for steel used in Sheet Piling.  
Steel Sheet Piling Left in place shall be driven to its final penetration before adjacent concrete is poured.  
If it is necessary to lower the top of sheeting after the concrete has been poured, the excess shall be removed by cutting.  
Adjust the spacing of the reinforcing steel as required to permit placing of foundation drains and Position DOWELS.  
Maximum average foundation pressure D.L. only: 3500 P.S.F.  
Maximum foundation pressure D.L. + L.L. = 5000 P.S.F.  
For Bevel and Molding Details see Std. Sh. R16  
Bridge Railing is to be aluminum tubular railing on solid concrete parapet.  
For Railing Details (except as noted) see Std. Sh. R16.  
The bridge seat and front face of each abutment above top of footing or grade beam between wingwall returns shall be given an application of Clear Protective Coating for Substructure Concrete.

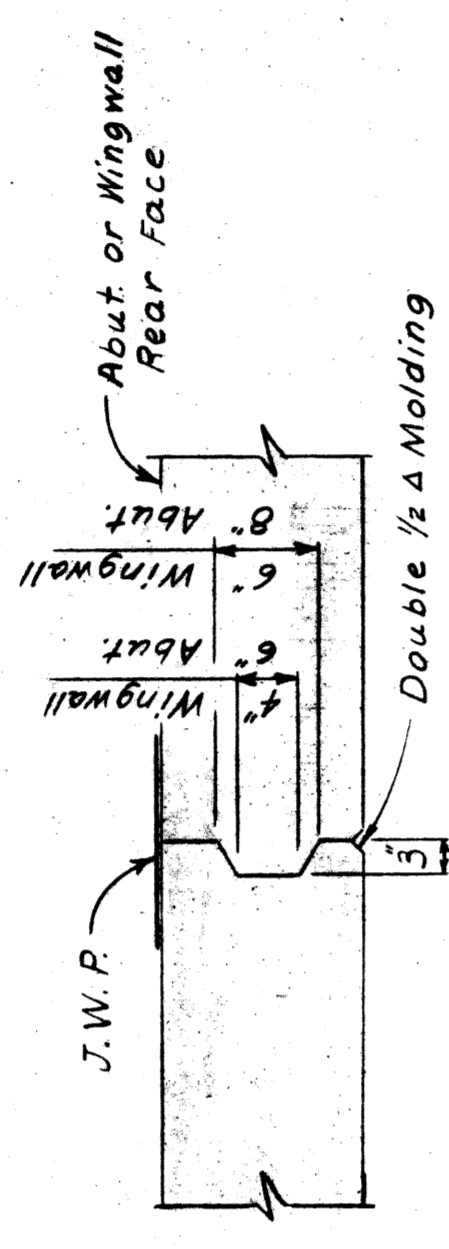


SECTION A-A

SECTION C-C

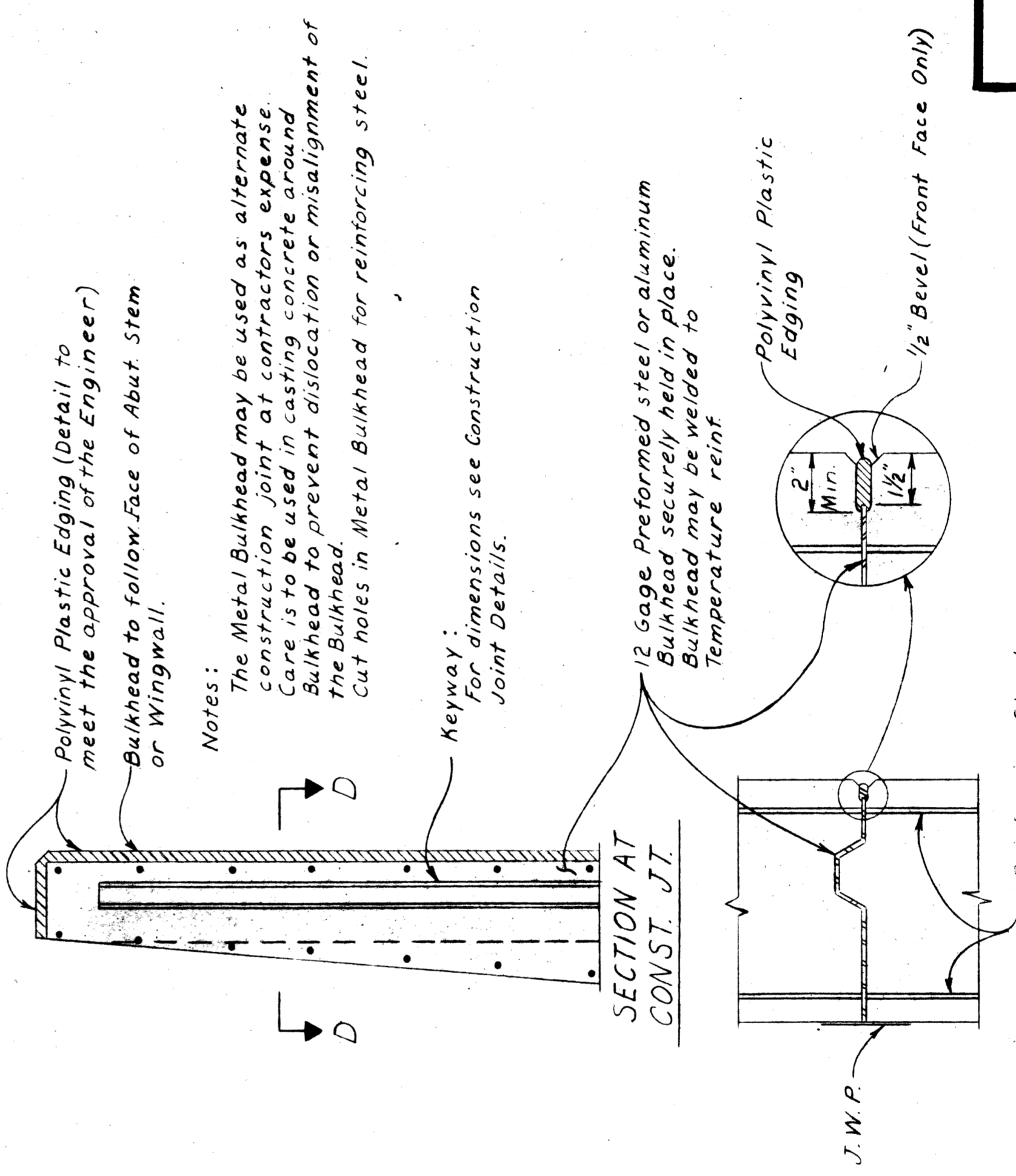


SECTION B-B



VERT. CONST. JOINT DETAILS

Note: Stop all keyways 1'-0" below top of Wingwalls.



SECTION AT  
CONST. JT.

SECTION D-D  
ALTERNATE - METAL BULKHEAD  
FOR CONSTRUCTION JOINTS

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

### ABUTMENT DETAILS

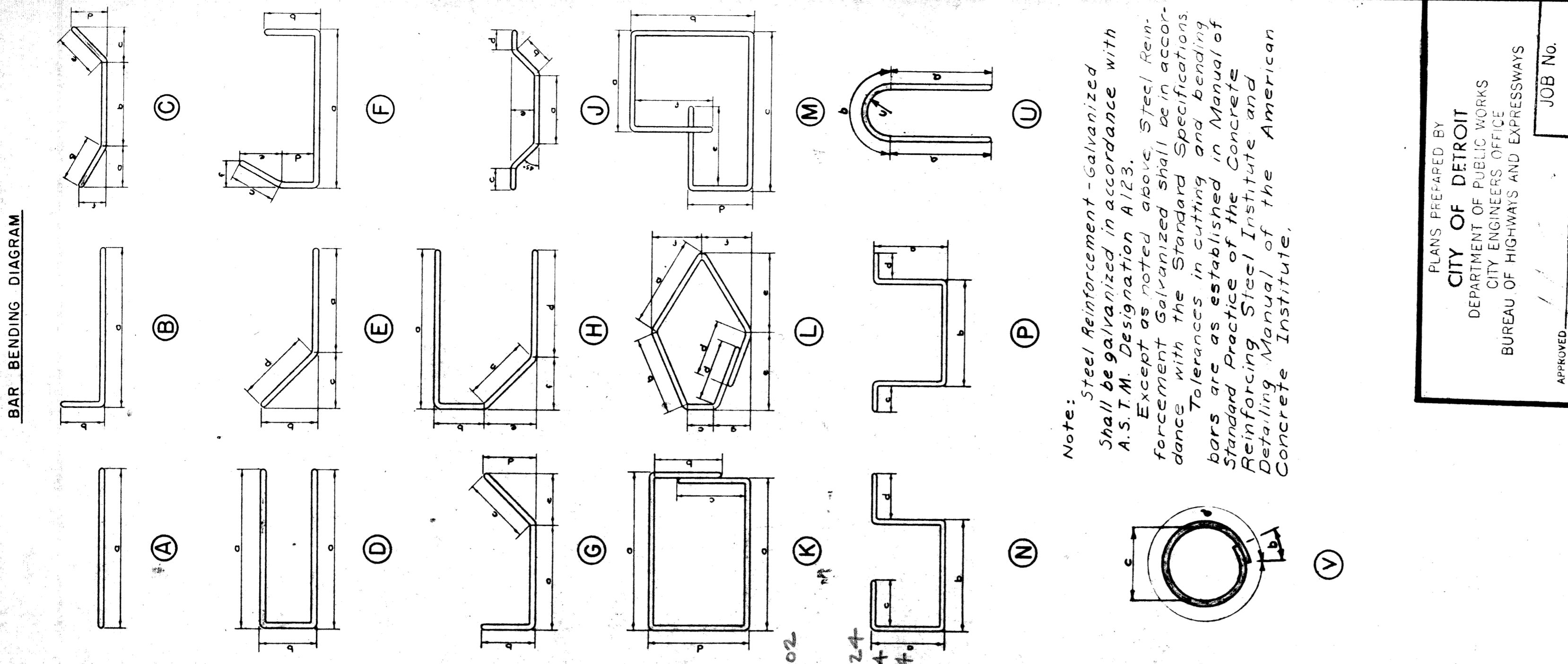
NO.	REVISIONS	DESCRIPTION	DATE	BY

PLANS PREPARED BY:  
CITY OF DETROIT  
DEPARTMENT OF HIGHWAYS  
CONSTRUCTION DIVISION  
BUILDING DIVISION  
1000 WEST WASHINGTON  
DETROIT, MICHIGAN 48226  
DATE: 11-15-59  
SHEET NO. OF 27  
57 0 02 98

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A1	4'-0"						30	541
A2	7'-2"						86	2096
A3	3'-9"						56	315
A4	9'-6"						50	2044
A5	4'-4"						28	182
A6	5'-0"						28	210
A7	3'-5"						22	113
A8	4'-1"						84	515
A9	13'-0"						4	78
A10	13'-8"						4	82
A11	11'-11"						90	1611
A12	9'-5"						86	1216
A13	14'-3"						32	685
A14	9'-3"						30	417
A15	7'-0"						60	631
A16	13'-6"						24	487
A17	8'-5"						20	253
A18	8'-3"						48	595
A19	4'-9"						98	699
A20	6'-9"						78	791
A21	10'-0"						216	3244
A22	7'-9"						44	1159
A23	5'-6"						54	446
A24	24'-6"						48	1766
A25	34'-3"						20	1029
A26	26'-6"						14	557
A27	24'-0"						10	360
A28	22'-0"						66	2181
A29	21'-7"						14	454
A30	19'-0"						10	283
A31	17'-0"						66	1685
A32	22'-3"						72	2406
A33	26'-0"						36	1406
A34	5'-3"						36	284
A35	23'-9"						24	656
A36	18'-9"						24	676
A37	22'-3"						24	802
A38	31'-7"						12	570
DI	3'-0"						102	976
E1	2'-0"	1'-11/4"	3"	2'-0"			18	108
E2	2'-0"	1'-5"	1'-5"	2'-0"			18	108
ABUTMENT TOTAL = 34,919								
ABUTMENT TOTAL = 36,574								

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A101	33'-6"						20	2278
A102	18'-6"						40	2516
A103	7'-6"						44	496
A104	4'-0"						264	1101
A105	23'-8"						24	1161
A106	9'-3"						12	472
A107	3'-4"						60	618
A108	22'-4"						48	1089
A109	8'-6"						48	1506
A110	11'-9"						48	312
A111	25'-0"						6	801
A112	19'-6"						6	312
A113	16'-4"						24	801
A114	19'-2"						24	940
A115	26'-6"						9	249
A116	22'-3"						18	418
A117	9'-2"						128	5049
A118	10'-6"						128	5783
A119	25'-2"						28	2396
A120	19'-10"						14	944
A121	16'-6"						56	2467
A122	19'-6"						56	2916
A123	9'-6"						88	1256
PIERS								
C101	17'-3/8"	12'-6"	1'-6 1/2"	1'-6 1/2"			252	1949
D101	1'-6"	2'-0"					54	277
D102	2'-7"	3'-0"					28	236
D103	8	2-4					144	538
K101	3'-1/4"	1'-4"	1'-4"	1'-8 1/2"			288	3154
U101	1'-7"	3'-5"	1'-0 1/8"				24	165
V101	6'-4"	10"	1'-11 1/2"				88	421
PIER TOTAL = 43,562 Lbs.								

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A201	32'-6"						676	32996
A202	35'-11"						676	36465
A203	29'-5"						207	6357
A205	33'-10"						138	4870
A206	33'-8"						100	2247
A207	34'-9"						138	5002
A208	28'-8"						207	6189
A209	28'-6"						150	2854
A210	8'-0"						22	264
A211	6'-0"						23	207
A212	29'-2"						9	175
A213	33'-11"						12	272
A214	28'-4"						9	170
A215	29'-4"						66	1292
A216	33'-8"						88	1978
A217	28'-6"						66	1256
A218	33'-11"						48	2445
A219	29'-0"						18	784
A220	28'-2"						18	761
A221	35'-7"						12	632
A222	16'-0"						6	144
A223	30'-0"						12	541
A224	23'-3"						6	210
A225	8'-3"						16	88
A226	26'-2"						16	279
A227	22'-8"						32	484
A228	17'-5"						6	70
A229	3'-7"						4	10
A230	15'-2"						4	40
B201	7"	8'-8"					456	1401
D201	2'-10 1/2"	6'-4"					242	4124
D202	6"	1'-2"					377	634
D203	6"	1'-4"					228	342
E201	2'-0"	9 3/8"	11 5/8"	1'-5"			12	62
K201	3'-4"	9 1/4"	9 1/4"	1'-3 1/2"			20	126
M201	10 1/2"	3'-4"	1'-3 1/2"	2'-5"	11 1/4"	1'-5"	52	351
M202	10 1/4"	3'-4"	1'-3 1/2"	1'-10"	11 1/4"	2'-0"	6	41
P201	1'-0 1/2"	2'-4 1/2"	1'-4 1/2"	1'-4 1/2"			226	1069
P202	5"	3'-5 1/2"	1'-1"	1'-7"			6	28
P203	9"	3'-6 1/2"	1'-1"	1'-7"			4	19
SUPER TOTAL = 44,944 Lbs.								
STEEL REINFORCEMENT - GALVANIZED								
A201	32'-6"						228	1129
A202	35'-11"						228	1229
A204	29'-3"						150	2929
A206	33'-8"						100	2248
A210	8'-0"						22	265
A211	6'-0"						23	208
GALV. REINF. SUPER. TOTAL = 29,078 Lbs.								



Note: Steel Reinforcement - Galvanized shall be galvanized in accordance with A.S.T.M. Designation A123. Except as noted above, Steel Reinforcement shall be in accordance with the Standard Specifications and Tolerances established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Design Manual of the American Concrete Institute.

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

APPROVED: \_\_\_\_\_  
STRUCTURAL ENGINEER

JOB No. \_\_\_\_\_

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS ROAD OVER JEFFRIES FREEWAY  
IN DETROIT

STEEL REINFORCEMENT DETAILS

REVISIONS: \_\_\_\_\_  
DATE: \_\_\_\_\_

DESIGNER: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

NO. \_\_\_\_\_

197.597  
Steel Reinforcement - Galvanized  
Total 29,078 Lbs.

Grand Total Steel Reinforcement 197,597 Lbs.

Note: -  
All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

ITEM	CODE NO.	UNIT	CONTR. QUANT.	UNIT PRICE	FINAL QUANT.	FINAL COST	REMARKS (AUTH. NOS.)	CONTR. QUANT.	FINAL QUANT.	FINAL COST	REMARKS (AUTH. NOS.)	CONTR. QUANT.	FINAL QUANT.	FINAL COST	REMARKS (AUTH. NOS.)	CONTR. QUANT.	FINAL QUANT.	FINAL COST	DESCRIPTION	DATE	UNIT	QUANTITY ESTIMATE	QUANTITY FINAL																					
Cover E	6241	Each	1																																									
Unclassified Excavation	6020	C.Y.	9591		1950			1532				4680																																
Temporary Sheet Piling	6073	S.Ft.	1650		1000																																							
Steel Sheet Piling L.I.P.	6074	S.Ft.	648		60																																							
Structural Lightweight Concrete	6086	C.Y.	218		6130			4538				19054																																
Concrete Grade A(6A) Substructure	6090	C.Y.	25240		7974			3419				19873																																
Concrete Grade A(6A) Substructure	6091	C.Y.	34977		10485			4743				21032																																
Clear Protective Coating For Substructure Concrete	6096	S.Ft.	48396					113				472																																
Protective Sealant Coating for Substructure Concrete	6100	C.Y.	3135.6		792.7			353.4				15828																																
Water Reducing Retarding Admixture	6103	Gal	409		96			43				84																																
Protective Treatment for Bridge Decks	6104	S.Ft.	97618		23300			9618				40100																																
Low Temperature Protection Substructure Concrete	6106	C.Y.	6185.8		14104			993.7				27927																																
Low Temperature Protection Substructure Concrete	6107	C.Y.	3228.0		852.0			333.2				15828																																
Steel Reinforcement	6160	Lbs.	1097971		235559			120009				484337																																
Steel Reinforcement Galvanized	6166	Lbs.	192666		37023							63363																																
3/4 in. Concrete Inserts	6169	Each	134									124																																
Structural Steel, Furnishing and Fabricating (A-588 Rolled)	6200	Lbs	1408400		325000			222200				113100																																
Structural Steel, Furnishing and Fabricating (A-588 Plates)	6202	Lbs	1153100		575000			252900				113100																																
Structural Steel-Erection (A-588 Plate)	6203	Lbs	1153100									113100																																
Shear Developers (S14)		Lump Sum																																										
Shear Developers (S15)		Lump Sum																																										
Shear Developers (S16)		Lump Sum																																										
Shear Developers (S17)		Lump Sum																																										
1/4 in Joint Filler	6290	S.Ft.	70																																									
1/2 in Joint Filler	6292	S.Ft.	110		264			131				20																																
1 in Joint Filler	6296	S.Ft.	1624		196			221				459																																
1 1/4 in Performed Neoprene Joint Sealer	6310	L.Ft.	300		86							147																																
2 in Performed Neoprene Joint Sealer	6312	L.Ft.	390									390																																
3 in Performed Neoprene Joint Sealer	6314	L.Ft.	76																																									
Double Neoprene Expansion Joint		L.Ft.	613.4		164.0							283.8																																
Joint Water-proofing		S.Ft.	2198		273							948																																
Hot Poured Rubber Asphalt Type Filler	6339	L.Ft.	60		166							60																																
Two Component Polyurethane Cold Applied Joint Sealer	6340	L.Ft.	204																																									
Bridge Railing - Solid Forcort Type	6381	L.Ft.	26956		5566							2030																																
Expansion Joint Drain	6410	L.Ft.	266		88							94																																
3 in Conduits	6416	L.Ft.	559.5		990							186.0																																
4 in Conduits	6417	L.Ft.	10893.5		3420							6752.0																																
Slope Protection - Class A	6462	S.16	124		24.8							475																																
Slope Protection Headers	6466	L.Ft.	925		118							140																																
6" Foundation Drains		L.Ft.	1577		416							279																																
TOTAL																																												

CHANGES SENT TO STATE  
12-1-70

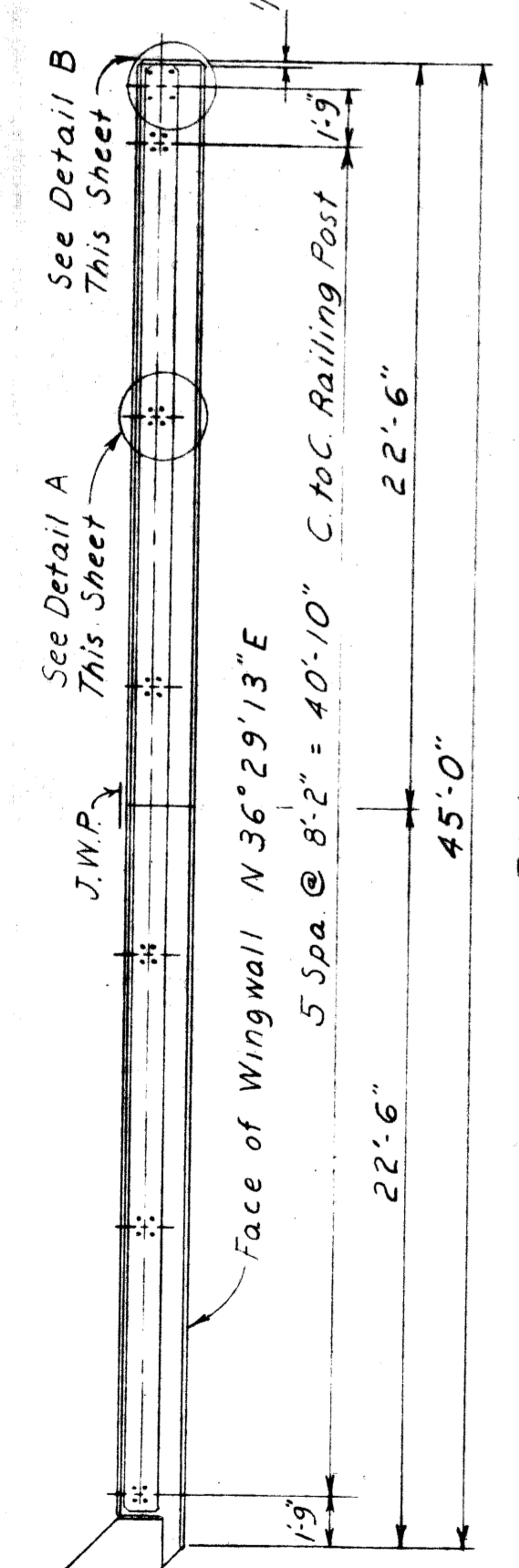
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CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION AND EXPRESSWAYS  
JOB No.  
PW 990 (17)  
PW 990 (21)

MICHIGAN STATE HIGHWAY DEPARTMENT  
QUANTITY SHEET  
I-UI-96-4(

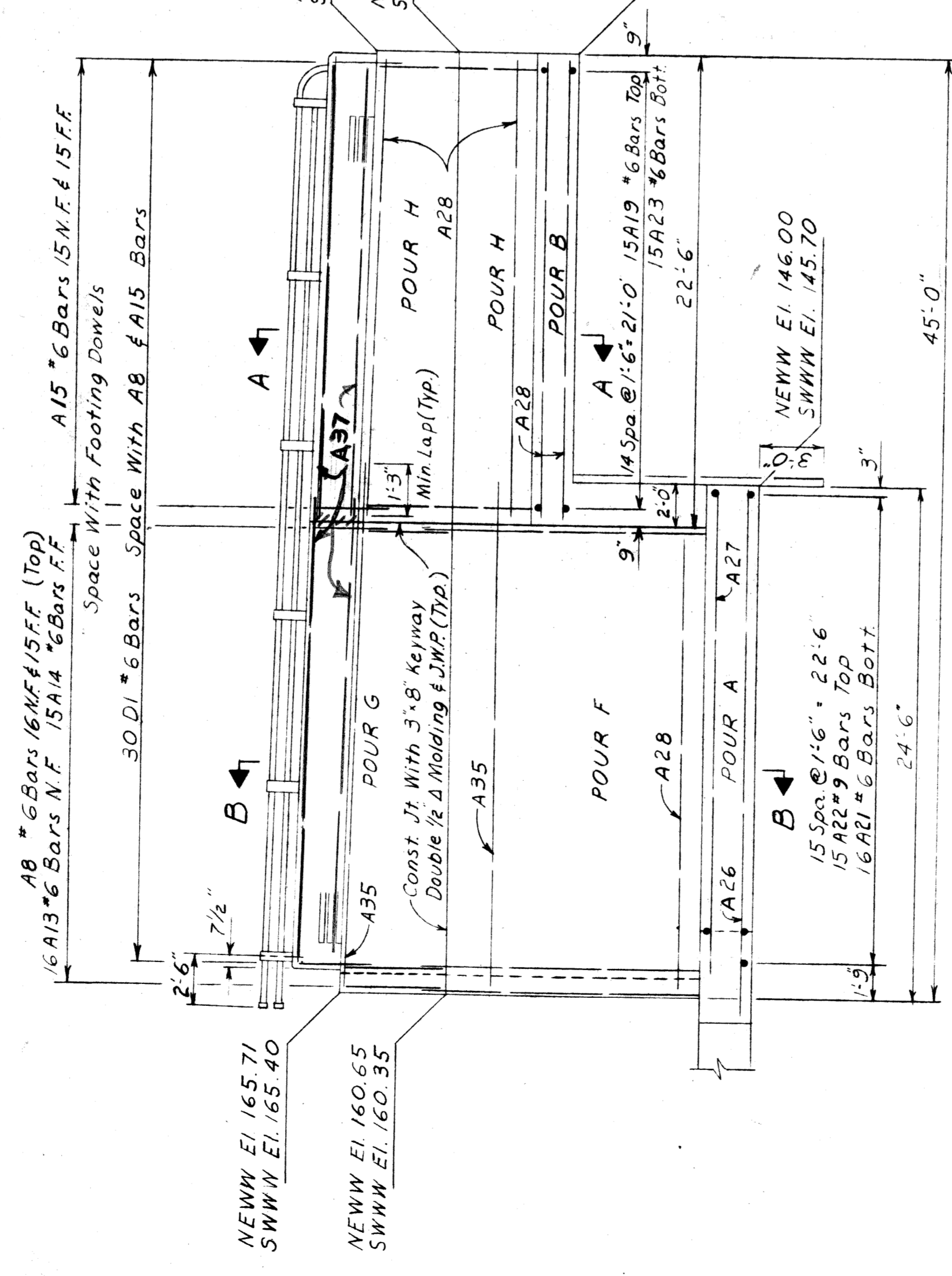
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DRAWN BY	11-70
CHECKED BY	11-70

BIU 82123,  
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01280 A

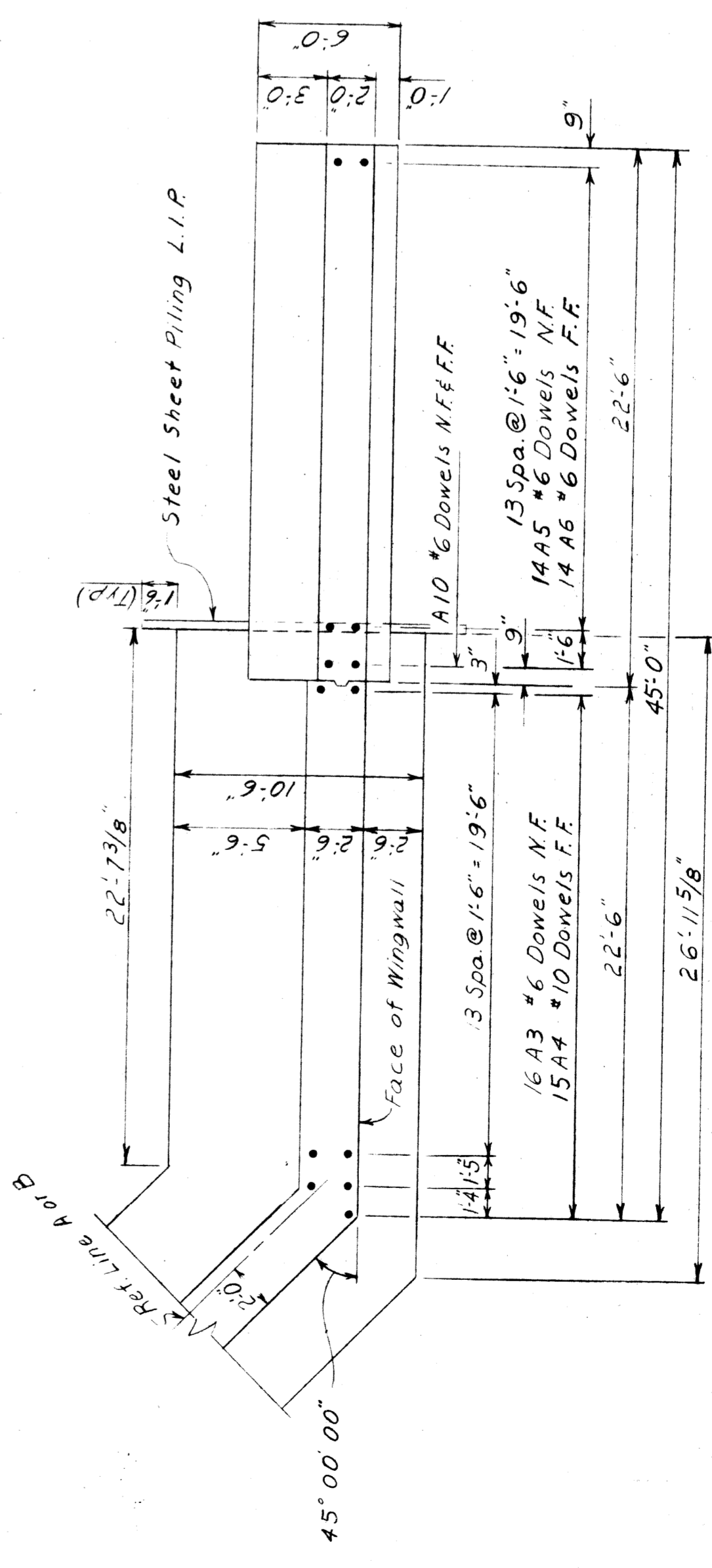
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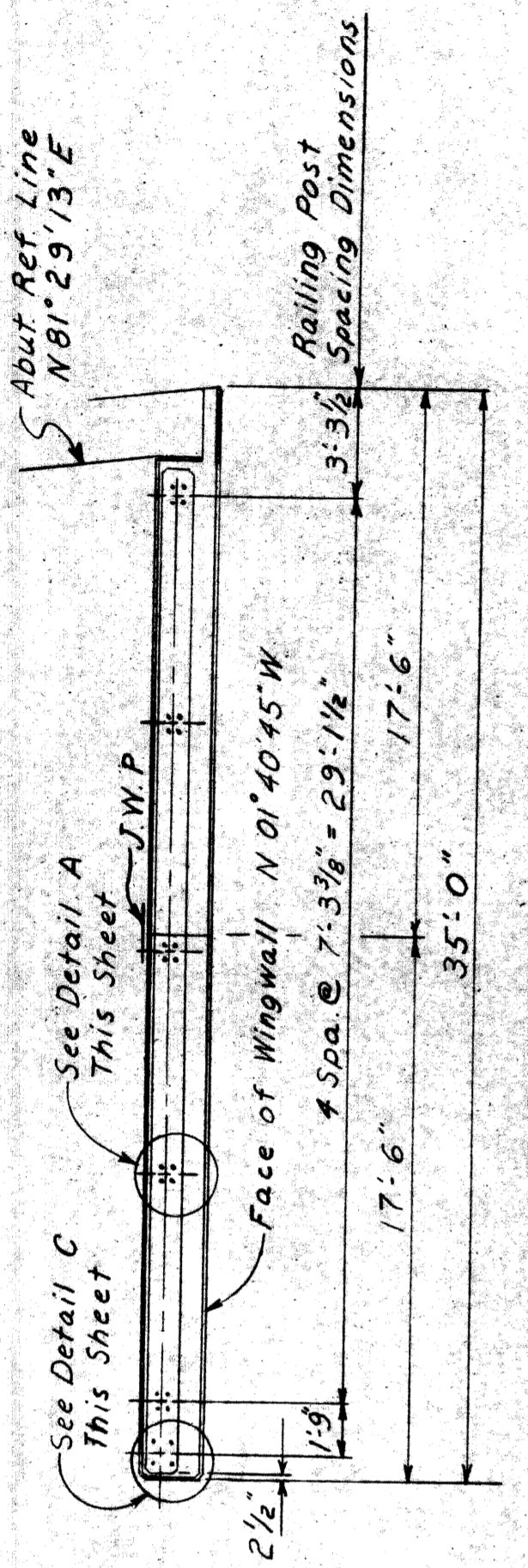
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(NEWW & SWWW)



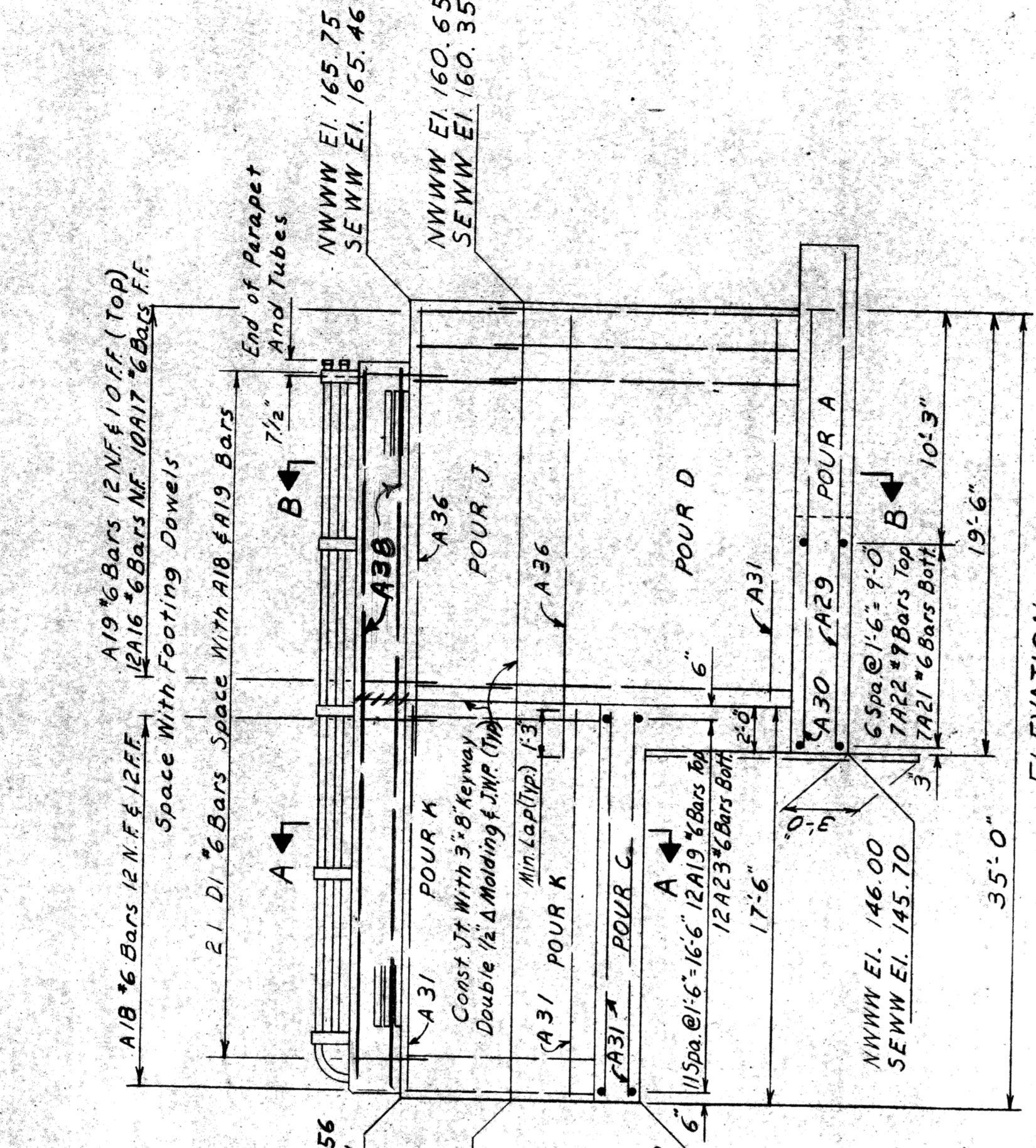
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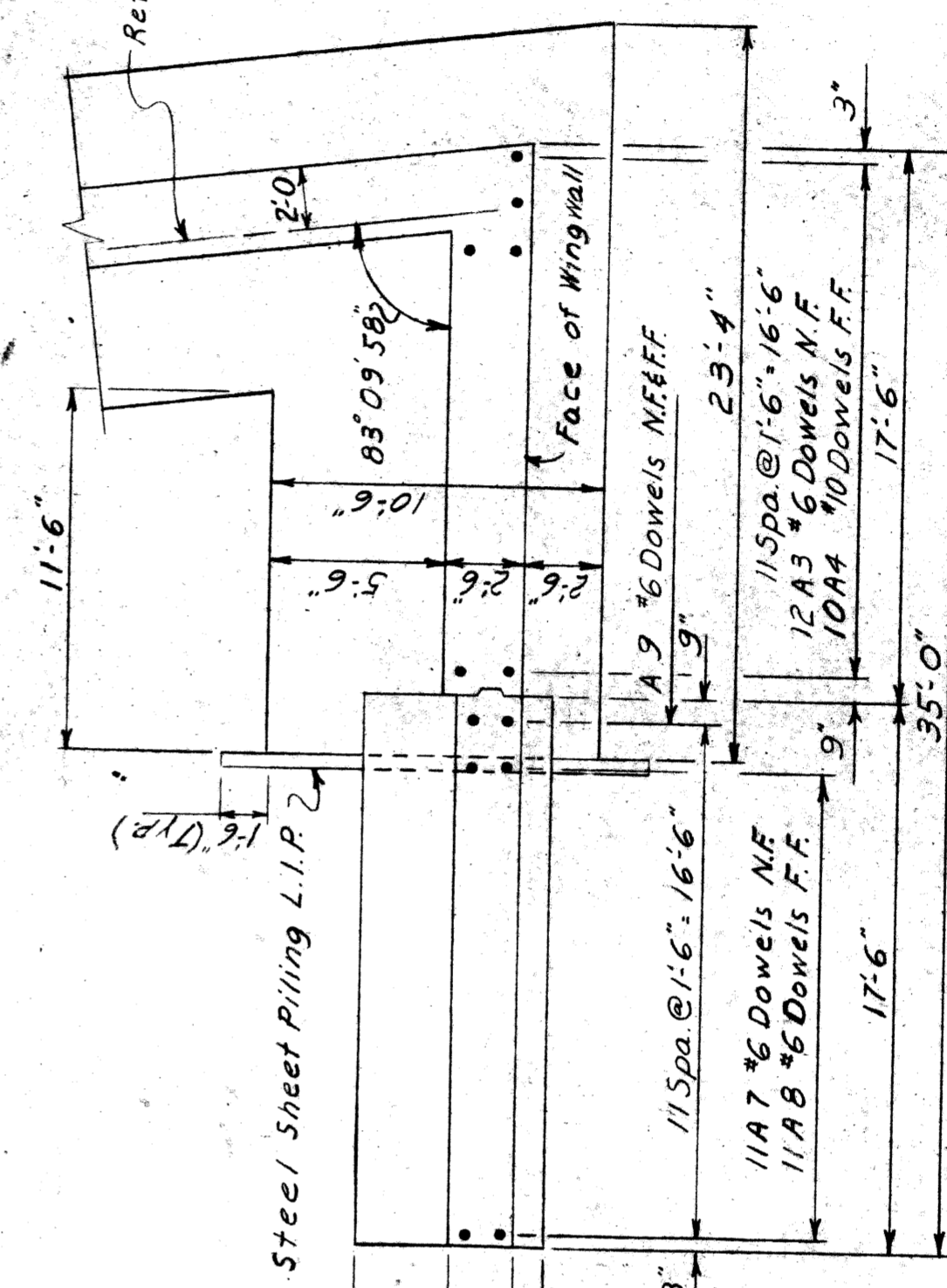
FOUNDATION PLAN



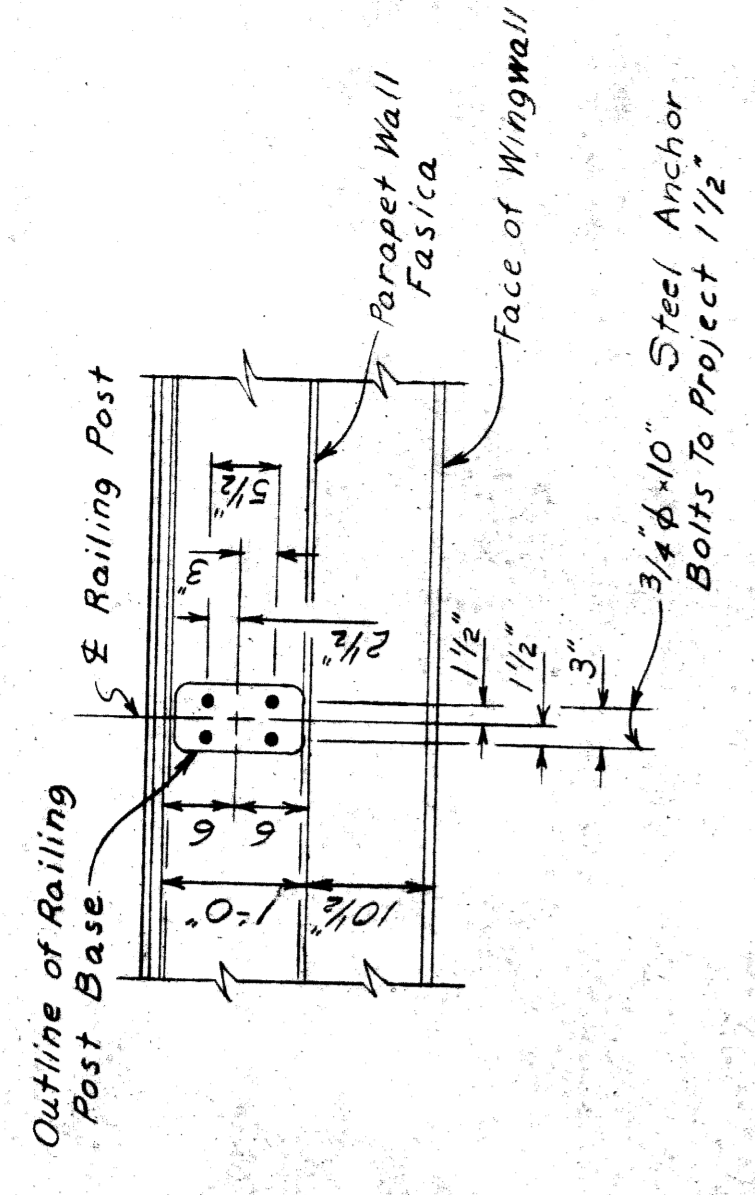
PLAN  
(N.W.W.W. & S.E.W.W.W.)



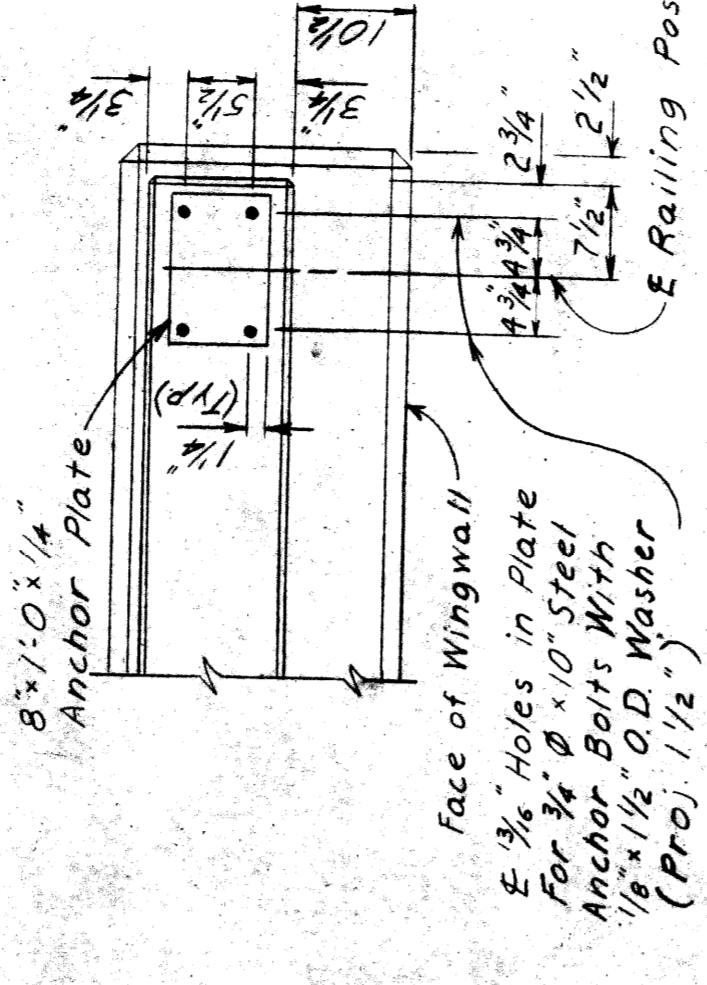
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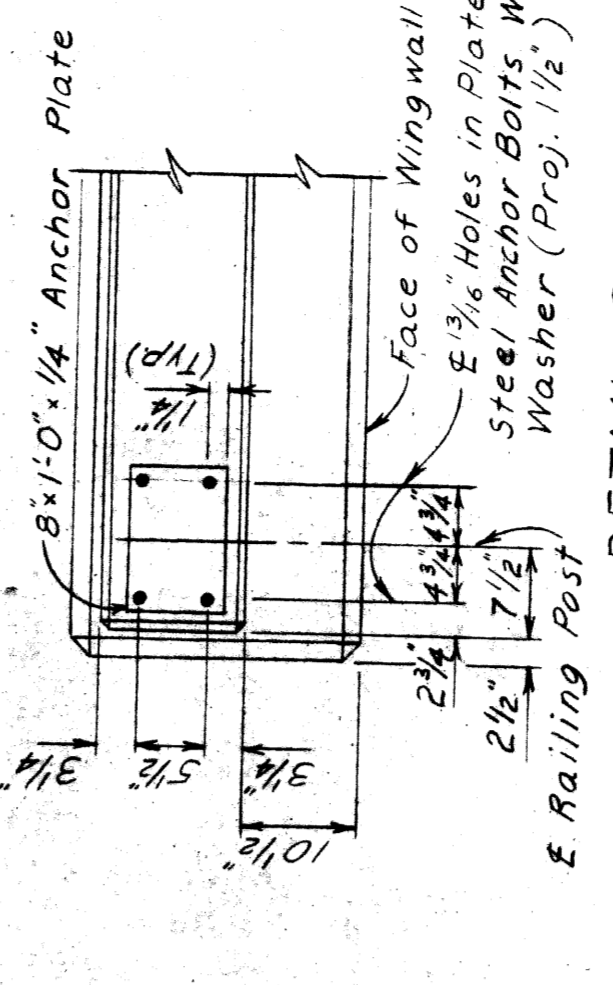
FOUNDATION PLAN



DETAIL A



DETAIL B



DETAIL C

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

APPROVED: \_\_\_\_\_  
STRUCTURAL ENGINEER

JOB No. FW 65021

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFERIES FREEWAY  
IN DETROIT

**WINGWALL DETAILS**

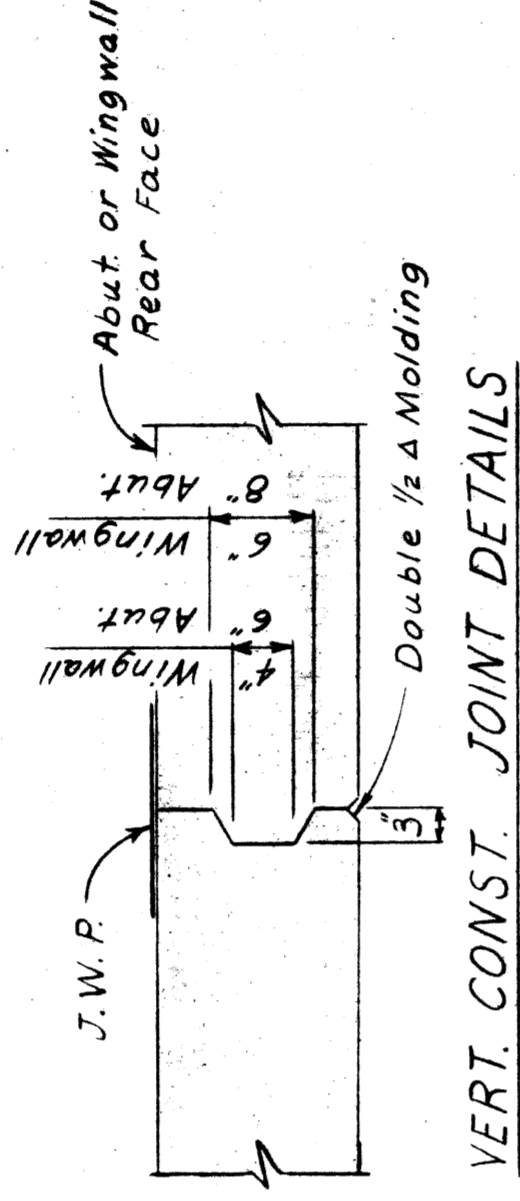
SHEET 21 OF 21

S17 of 82123 F

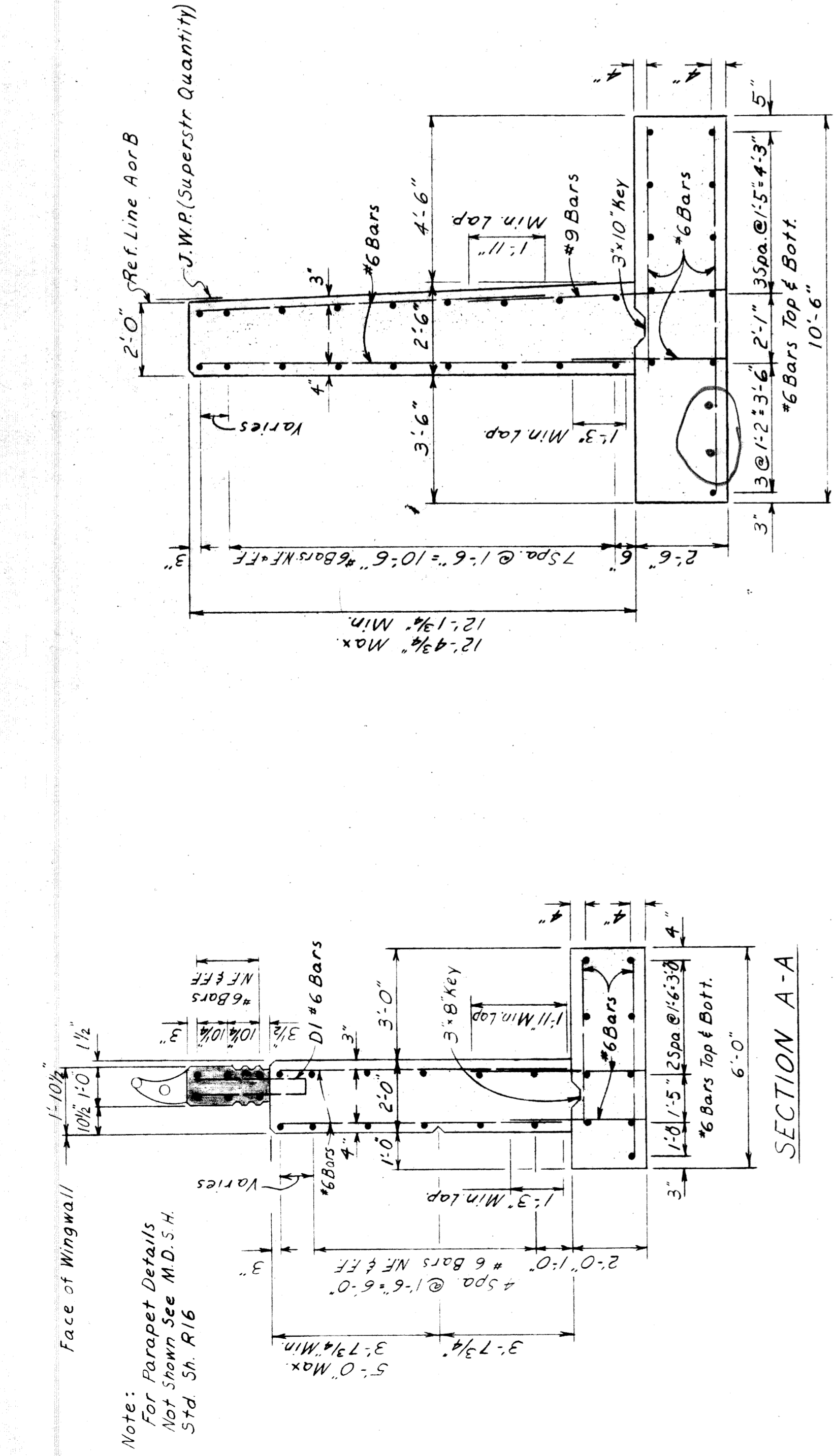
NO.	REVISIONS	DATE	BY

ITEM	UNIT	AMOUNT		TOTAL
		ABUT. A	ABUT. B	
Unclassified Excavation	Cu. Yds.	46.8	45.7	92.5
Steel Sheet Piling (L.I.P.)	Sq. Ft.	32.4	32.4	64.8
Clear Protective Coating For Substructure Concrete	Sq. Ft.	97.2	97.2	194.4
Low Temp. Protection - Substr. Conc.	Cu. Yds.	27.1	27.1	54.2
1/2" Joint Filler	Sq. Ft.	12.8	12.8	25.6
Joint Waterproofing	Sq. Ft.	11.3	11.4	22.7
Bridge Railing - Solid Parapet Type	Lin. Ft.	76.0	76.0	152
6" Foundation Drains *	Lin. Ft.	15.8	15.8	31.6

\* 6" Foundation Drains shall be perforated pipe, sloped 1/8 in./ft. min. continuous over the length of the Abutment and Wingwall Footings, and placed as shown on the General Plan of Structure.

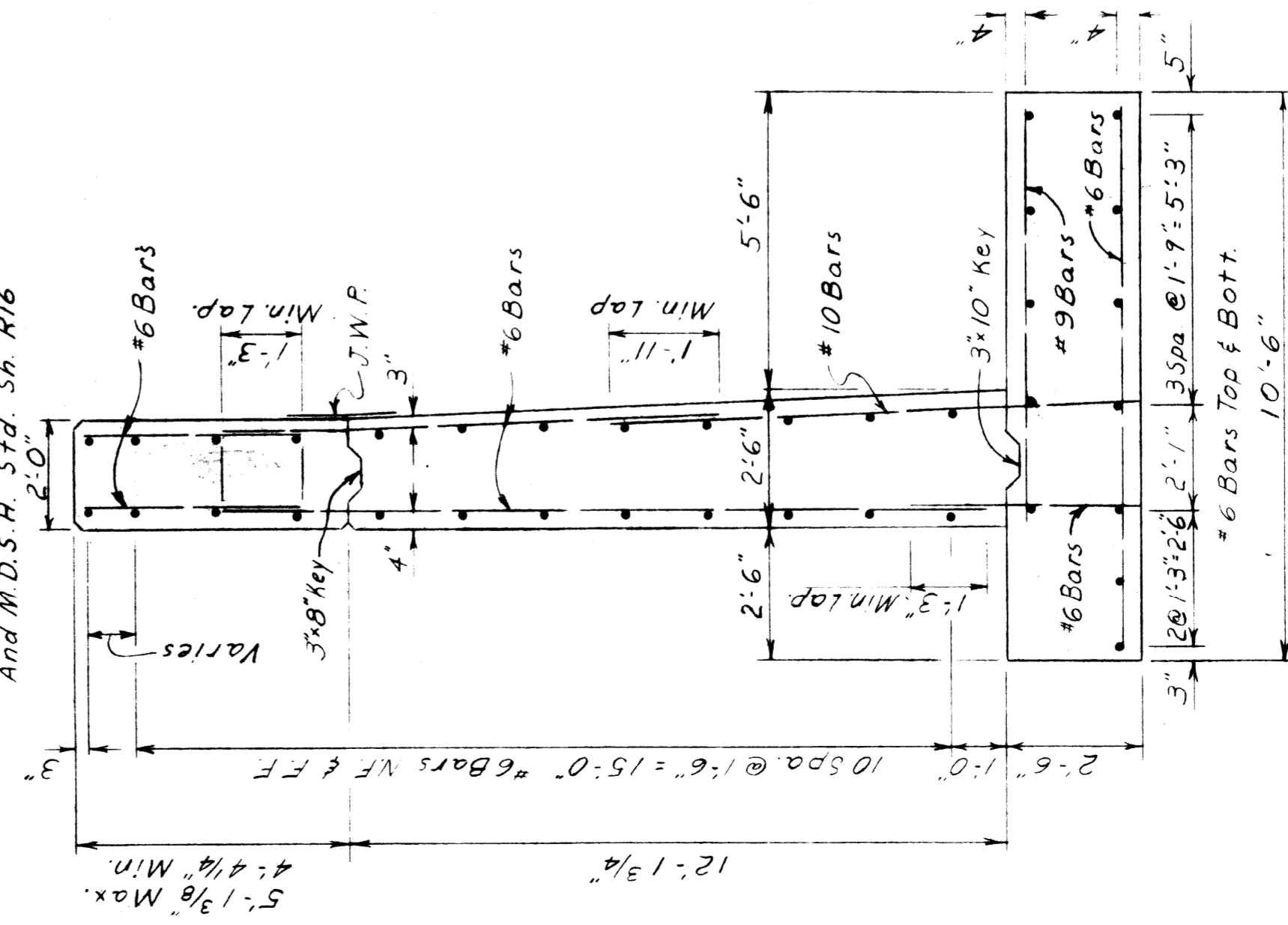


Note: Stop all keyways 1'-0" below top of Wingwalls.



SECTION C-C

Note: For Parapet Details See Section A-A And M.D.S.H. Std. Sh. R16



SECTION B-B

MISCELLANEOUS QUANTITIES

POUR	LOCATION	ABUTMENT A		ABUTMENT B	
		A(6A)	A(6AA)	A(6A)	A(6AA)
A	Footings	103.0		103.0	
B	Footings (N.E. & S.W.)	12.9		12.9	
C	Footings (N.W. & S.E.)	10.7		10.7	
D	Abut. Wall		36.4		36.4
E	Abut. Wall		27.4		27.4
F	Abut. Wall		42.9		42.9
G	Wingwall (N.E. & S.W.)		7.7		7.8
H	Wingwall (N.E. & S.W.)		12.8		13.2
J	Wingwall (N.W. & S.E.)		5.9		5.9
K	Wingwall (N.W. & S.E.)		11.1		11.2
Total		126.6	144.2	126.6	144.8
Grade A(6A) Concrete - Substructure		253.2 Cu. Yds.			
Grade A(6AA) Concrete - Substructure		289.0 Cu. Yds.			

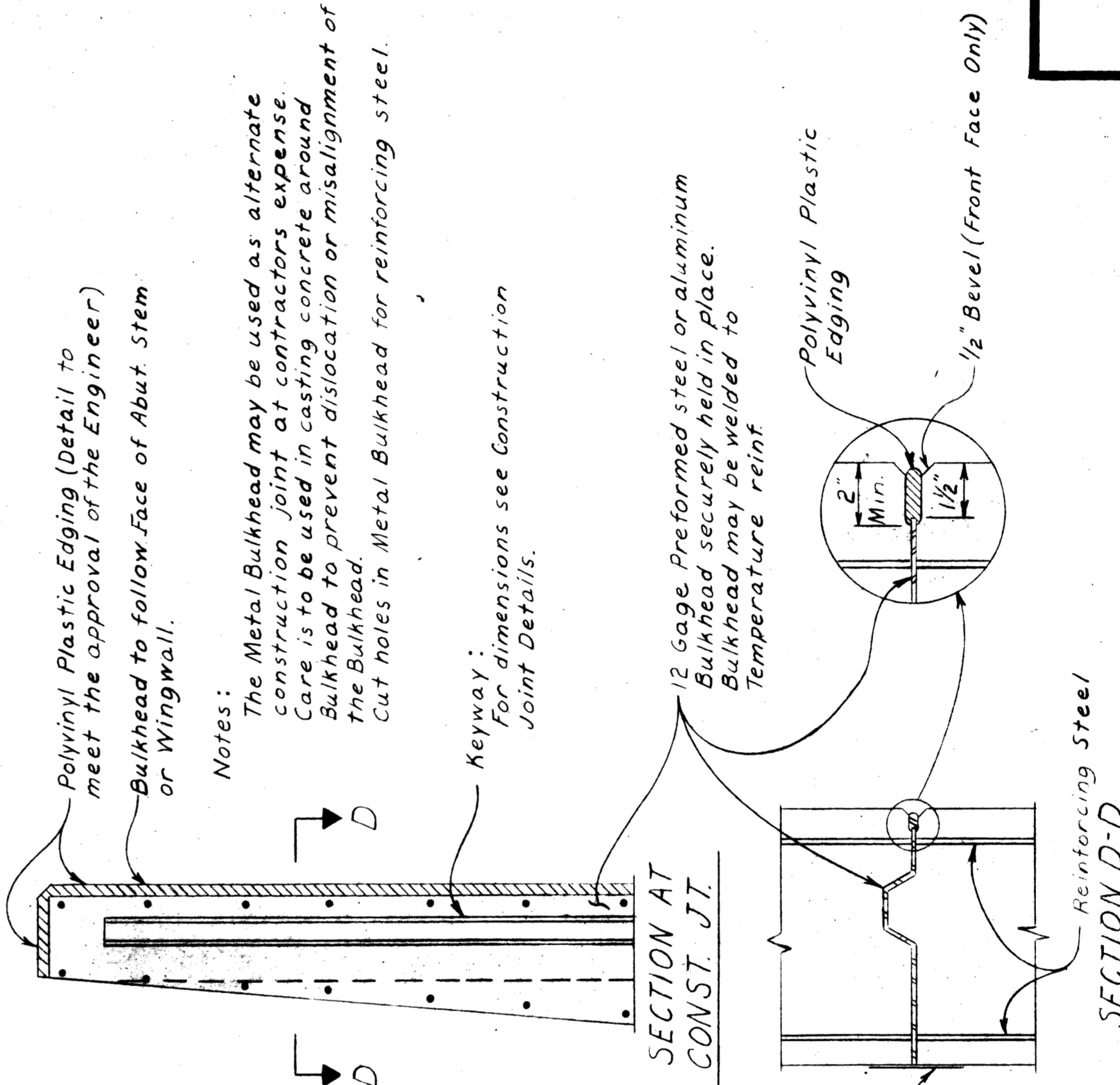
Parapet Concrete = 12.7 Cu. Yds Grade A(6AA)  
Part of Bridge Railing - Solid Parapet Type, and not a pay item.

GENERAL NOTES

J.W.P. denotes Joint Waterproofing; N.F. denotes Near Face; F.F. denotes Far Face; B.F. denotes Both Faces.  
Position Dowels shall be set accurately to a template and are to be furnished with Structural Steel.  
Footings concrete quantities are computed on the basis of an outline 3/4" outside of the footing where the concrete is poured against Steel Sheet Piling left in place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.  
Steel sheet piling left in place shall be of the continuous interlock type, either new or used, in good condition, weighing not less than 22 pounds per square foot of wall, and shall be furnished with suitable connecting and corner pieces. Ladle analysis and mill reports are not required for steel used in sheet piling.  
Steel Sheet Piling Left in place shall be driven to its final penetration before adjacent concrete is poured.  
If it is necessary to lower the top of sheeting after the concrete has been poured, the excess shall be removed by cutting.  
Adjust the spacing of the reinforcing steel as required to permit placing of foundation drains and Position Dowels.  
Maximum average foundation pressure D.L. only = 3500 P.S.F.  
Maximum foundation pressure D.L. + L.L. = 5000 P.S.F.  
For Bevel and Molding Details see Std. Sh. R16  
Bridge Railing is to be aluminum tubular railing on solid concrete parapet.  
For Railing Details (except as noted) see Std. Sh. R16  
The bridge seat and front face of each abutment above top of footing or grade beam between wingwall returns shall be given an application of Clear Protective coating for Substructure Concrete.

Notes:  
The Metal Bulkhead may be used as alternate construction joint at contractors expense. Care is to be used in casting concrete around Bulkhead to prevent dislocation or misalignment of the Bulkhead.  
Cut holes in Metal Bulkhead for reinforcing steel.

Keyway:  
For dimensions see Construction Joint Details.



SECTION D-D  
ALTERNATE - METAL BULKHEAD FOR CONSTRUCTION JOINTS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS ROAD OVER JEFFERIES FREEWAY  
IN DETROIT

ABUTMENT DETAILS

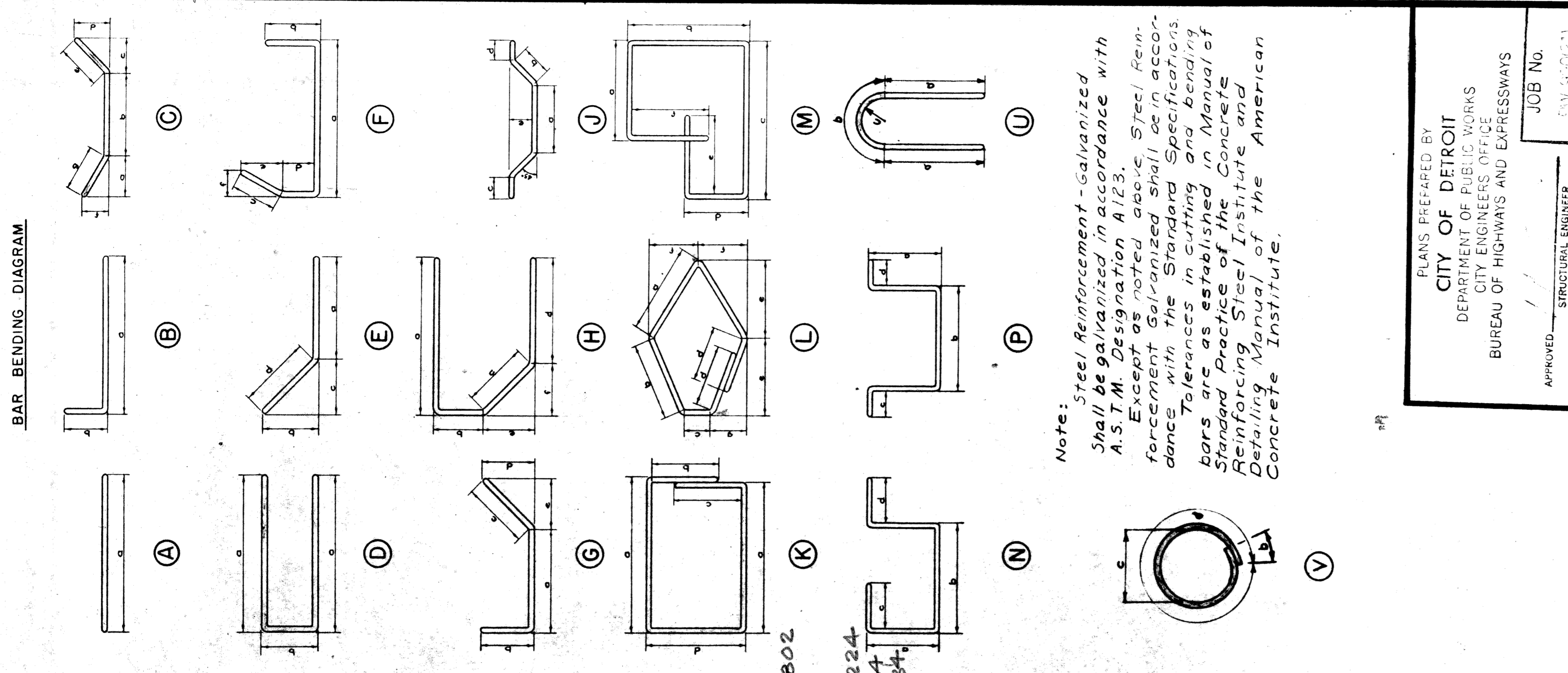
NO.	REVISIONS	DATE	BY
	DESCRIPTION		

DESIGNED BY: [Blank]  
CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF HIGHWAYS AND BRIDGES  
JOB NO. [Blank]  
DRAWN BY: [Blank]  
CHECKED BY: [Blank]  
DATE: [Blank]  
SHEET NO. OF 27  
87 0 22 23 2

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A1	4'-0"						30	541
A2	7'-2"						86	2096
A3	3'-9"						56	315
A4	9'-6"						50	2044
A5	4'-4"						28	182
A6	5'-0"						28	210
A7	3'-5"						22	113
A8	4'-1"						84	515
A9	13'-0"						4	78
A10	13'-8"						4	82
A11	11'-11"						90	1611
A12	9'-5"						86	1216
A13	14'-3"						32	685
A14	9'-3"						30	417
A15	7'-0"						60	631
A16	13'-6"						24	487
A17	8'-5"						20	253
A18	8'-3"						48	699
A19	4'-9"						98	791
A20	6'-9"						78	924
A21	10'-0"						44	1159
A22	7'-9"						44	1159
A23	5'-6"						54	446
A24	2'-6"						48	1766
A25	3'-3"						20	1029
A26	2'-6"						14	557
A27	2'-0"						10	360
A28	2'-0"						66	2181
A29	2'-7"						14	454
A30	19'-0"						10	285
A31	17'-0"						66	1685
A32	22'-3"						72	2406
A33	26'-0"						36	1406
A34	5'-3"						36	284
A35	23'-9"						24	856
A36	18'-9"						24	676
A37	22'-3"						24	804
A38	31'-7"						12	570
DL	3'-0"	6"					102	976
E1	2'-0"	1'-11 3/4"	3"	2'-0"			18	108
E2	2'-0"	1'-5"	1'-5"	2'-0"			18	108
ABUTMENT TOTAL = 34,919 Lbs.								

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A101	3'-6"						20	2278
A102	18'-6"						40	2516
A103	7'-6"						44	496
A104	4'-0"						264	1101
A105	23'-8"						1161	
A106	19'-3"						12	472
A107	3'-4"						12	60
A108	22'-4"						54	1811
A109	8'-6"						48	1089
A110	11'-9"						48	1506
A111	25'-0"						12	801
A112	19'-6"						6	312
A113	16'-4"						24	801
A114	19'-2"						24	940
A115	26'-6"						3	249
A116	22'-3"						6	418
A117	9'-2"						64	5049
A118	10'-6"						64	5783
A119	25'-2"						14	2396
A120	19'-10"						7	944
A121	16'-6"						28	2467
A122	19'-6"						28	2916
A123	9'-6"						44	1256
PIER TOTAL = 43,562 Lbs.								

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A201	32'-6"						1676	32996
A202	35'-11"						1676	36465
A203	29'-5"						207	6357
A206	33'-8"						138	4870
A207	34'-9"						138	5002
A208	28'-8"						150	2854
A210	8'-0"						22	264
A212	29'-2"						9	175
A213	33'-11"						12	272
A214	28'-4"						9	170
A215	29'-4"						166	1292
A216	33'-8"						88	1978
A217	28'-6"						126	2445
A219	29'-0"						18	784
A220	28'-2"						18	761
A221	35'-1"						12	632
A222	16'-0"						6	144
A223	30'-0"						12	341
A224	23'-3"						6	210
A225	8'-3"						16	88
A226	26'-2"						16	279
A227	22'-8"						32	484
A228	17'-5"						6	70
A229	3'-7"						4	10
A230	15'-2"						4	40
B201	7'	8'-8"					456	2802
D201	2'-10 3/8"	6 1/4"					456	4224
D202	6'	7'-2"					372	624
D203	6'	7'-4"					328	684
E201	2'-0"	9 3/8"	11 3/8"	7'-5"			12	62
K201	3'-4"	9 1/4"	9 1/4"	7'-3 1/2"			20	126
M201	10'-4"	3'-4"	1'-3 1/2"	2'-5"	11 1/4"	7'-5"	52	351
M202	10'-4"	3'-4"	1'-3 1/2"	1'-10"	11 1/4"	2'-0"	6	41
P201	1'-0 1/2"	2'-4 1/2"	1'-4 1/2"	1'-4 1/2"			226	1069
P202	5'	3'-5 1/2"	1'-1"	1'-7"			6	28
P203	9'	3'-6 1/2"	1'-7"	1'-7"			4	19
SUPER TOTAL = 14,944 Lbs.								
STEEL REINFORCEMENT - GALVANIZED								
A201	32'-6"						228	11,229
A202	35'-11"						228	12,299
A204	29'-5"						150	2,929
A206	33'-8"						100	2,248
A210	8'-0"						22	265
A211	6'-0"						23	208
GALV. REINF. SUPER. TOTAL = 29,078 Lbs.								



Note: Steel Reinforcement - Galvanized Shall be galvanized in accordance with A.S.T.M. Designation A123. Except as noted above, Steel Reinforcement Galvanized shall be in accordance with the Standard Specifications. Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute.

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

APPROVED: \_\_\_\_\_  
 STRUCTURAL ENGINEER

JOB No. \_\_\_\_\_  
 (BY 550021)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
 MEYERS ROAD OVER JEFFRIES FREEWAY  
 IN DETROIT

STEEL REINFORCEMENT DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			

DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 SHEET 27 OF 27

S17 of 82123 F

Note: - All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

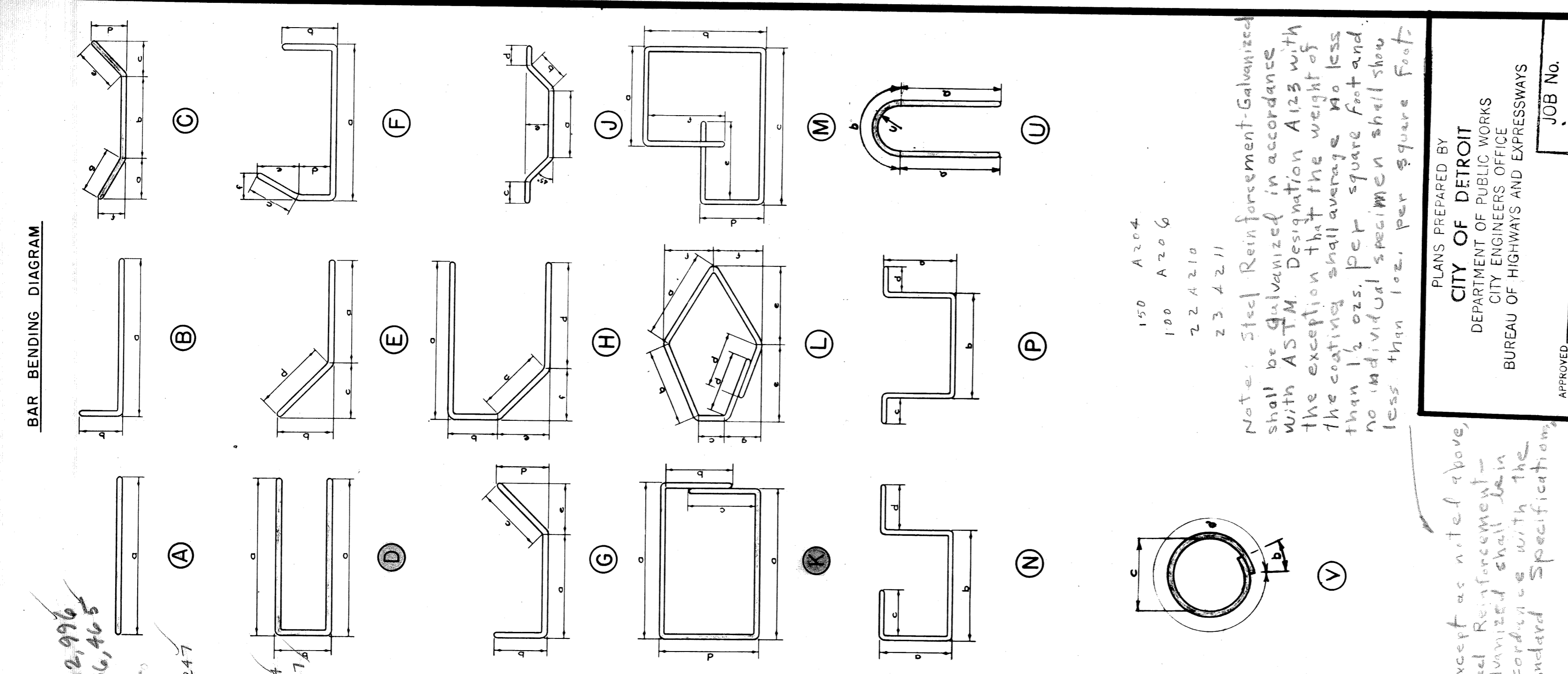
Grand Total Steel Reinforcement - Galvanized 191,597

Steel Reinforcement - Galvanized Total 29,078

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A1	4'-0"						541	
A2	7'-2"						2096	
A3	3'-9"						315	
A4	9'-6"						2044	
A5	4'-4"						182	
A6	5'-0"						210	
A7	3'-5"						113	
A8	4'-1"						515	
A9	7'-0"						78	
A10	13'-8"						52	
A11	11'-11"						1611	
A12	9'-5"						1216	
A13	14'-3"						685	
A14	9'-3"						417	
A15	7'-0"						631	
A16	13'-6"						487	
A17	8'-5"						253	
A18	8'-3"						595	
A19	4'-9"						699	
A20	6'-9"						791	
A21	10'-0"						3244	
A22	7'-9"						1159	
A23	5'-6"						446	
A24	2'-6"						1766	
A25	3'-3"						1029	
A26	2'-6"						557	
A27	2'-0"						360	
A28	2'-0"						2181	
A29	2'-7"						14	
A30	19'-0"						454	
A31	17'-0"						1685	
A32	22'-3"						2406	
A33	26'-0"						1406	
A34	5'-3"						284	
A35	23'-9"						856	
A36	18'-9"						676	
E1	2'-0"	1'-11 1/4"	-3"	2'-0"			108	
E2	2'-0"	1'-5"	1'-5"	2'-0"			108	
ABUTMENT TOTAL = 32571 Lbs.								

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A101	3'-6"						20	2278
A102	18'-6"						40	2516
A103	7'-6"						44	496
A104	4'-0"						264	1101
A105	2'-3"						24	1161
A106	19'-3"						12	472
A107	3'-4"						12	60
A108	22'-4"						54	1811
A109	8'-6"						48	1089
A110	11'-9"						48	1506
A111	25'-0"						12	801
A112	19'-6"						6	312
A113	16'-4"						24	801
A114	19'-2"						24	801
A115	26'-6"						9	249
A116	22'-3"						6	418
A117	9'-2"						64	5049
A118	8'-6"						64	5783
A119	25'-2"						7	2396
A120	19'-10"						28	944
A121	16'-6"						28	2467
A122	19'-6"						44	2916
A123	9'-6"						44	1256
PIER TOTAL = 43024 Lbs.								

BAR	DIMENSIONS						NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f		
A201	32'-6"						100	4425
A202	35'-11"						100	48764
A203	29'-5"						100	16357
A204	29'-3"						100	150299
A205	33'-10"						100	1384870
A206	33'-8"						100	1385002
A207	34'-9"						100	2076189
A208	28'-8"						100	1502854
A209	28'-6"						100	2854
A210	8'-0"						22	44
A211	6'-0"						23	46
A212	29'-2"						23	46
A213	33'-11"						23	46
A214	28'-4"						23	46
A215	29'-4"						23	46
A216	33'-8"						23	46
A217	28'-6"						23	46
A218	33'-11"						23	46
A219	29'-0"						23	46
A220	28'-2"						23	46
A221	35'-1"						23	46
A222	16'-0"						23	46
A223	30'-0"						23	46
A224	23'-3"						23	46
A225	8'-3"						23	46
A226	26'-2"						23	46
A227	22'-8"						23	46
A228	17'-5"						23	46
A229	3'-7"						23	46
A230	15'-2"						23	46
B201	7"	8'-8"					23	46
D201	2'-10 3/8"	6 1/4"					23	46
D202	6"	1'-2"					23	46
D203	6"	1'-4"					23	46
E201	2'-0"	9 3/8"	11 5/8"	1'-5"			23	46
K201	3'-4"	9 1/4"	9 1/4"	11 3/8"			23	46
M201	10 1/4"	3'-4"	1'-3 3/8"	2'-5"	11 1/4"	1'-5"	23	46
M202	10 1/4"	3'-4"	1'-3 3/8"	1'-10"	11 1/4"	2'-0"	23	46
P201	1'-0 1/2"	2'-4 1/2"	1'-4 1/2"	1'-4 1/2"			23	46
P202	5"	3'-5 1/2"	1'-1"	1'-7"			23	46
P203	9"	3'-6 1/2"	1'-1"	1'-7"			23	46
SUPER. TOTAL = 44022 Lbs.								
STEEL REINFORCEMENT GALVANIZED								
A204	29'-5"						150	2929
A205	33'-10"						100	2248
A206	33'-8"						100	265
A207	34'-9"						100	208
A208	28'-8"						100	1129
A209	28'-6"						100	1237
A210	8'-0"						22	44
A211	6'-0"						23	46
A212	29'-2"						23	46
A213	33'-11"						23	46
A214	28'-4"						23	46
A215	29'-4"						23	46
A216	33'-8"						23	46
A217	28'-6"						23	46
A218	33'-11"						23	46
A219	29'-0"						23	46
A220	28'-2"						23	46
A221	35'-1"						23	46
A222	16'-0"						23	46
A223	30'-0"						23	46
A224	23'-3"						23	46
A225	8'-3"						23	46
A226	26'-2"						23	46
A227	22'-8"						23	46
A228	17'-5"						23	46
A229	3'-7"						23	46
A230	15'-2"						23	46
GALV. REINF. SUPER TOTAL 29,078 Lbs.								



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

APPROVED \_\_\_\_\_  
STRUCTURAL ENGINEER

JOB No. \_\_\_\_\_  
PW 900(21)

Notes: Steel Reinforcement-Galvanized shall be galvanized in accordance with ASTM Designation A123 with the exception that the weight of the coating shall average no less than 1.2 ozs. per square foot and no individual specimen shall show less than 1.2 ozs. per square foot.

Except as noted above, Steel Reinforcement-Galvanized shall be galvanized in accordance with the Standard Specifications.

**MICHIGAN DEPARTMENT OF STATE HIGHWAYS**  
MEYERS ROAD OVER JEFFERIES FREEWAY IN DETROIT

**STEEL REINFORCEMENT DETAILS**

REVISIONS: \_\_\_\_\_  
DATE: \_\_\_\_\_

DRWD BY: D.L.V. / 12-59  
CHECKED BY: Z.H.K. / 12-61  
SHEET 35 OF 35

CITY OF DETROIT  
JOB No. \_\_\_\_\_  
PW 900(21)

S17 of 82123 F

Note: -  
All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

Grand Total Steel Reinforcement ~~29,078~~ \* 190,539  
Steel Reinforcement-Galvanized Total 29,078 #

- ① END X Y REF PT 2.
- ② " " " " FACE ABOUT BR. CONST. 4
- ③ " " " " FACE ABOUT .94' BEYOND PASCIA
- ④ END X Y O RAMP CURVE
- ⑤ END DISTANCE 4 RAMP CURVE TO.

**EAST BD ON RAMP CURVE**  
 $\Delta = 6^\circ 30' 21''$   
 $D = 11' 00''$   
 $R = 5729.58$   
 $T = 325.64$   
 $L = 650.58$   
 $E = 9.25$   
 $PC = 402 + 24.21$   
 $PI = 405 + 49.85$   
 $PCC = 408 + 74.79$

$X = 88871.5651$   
 $Y = 9715.8288$

$X = 89193.6302$   
 $Y = 9763.9618$

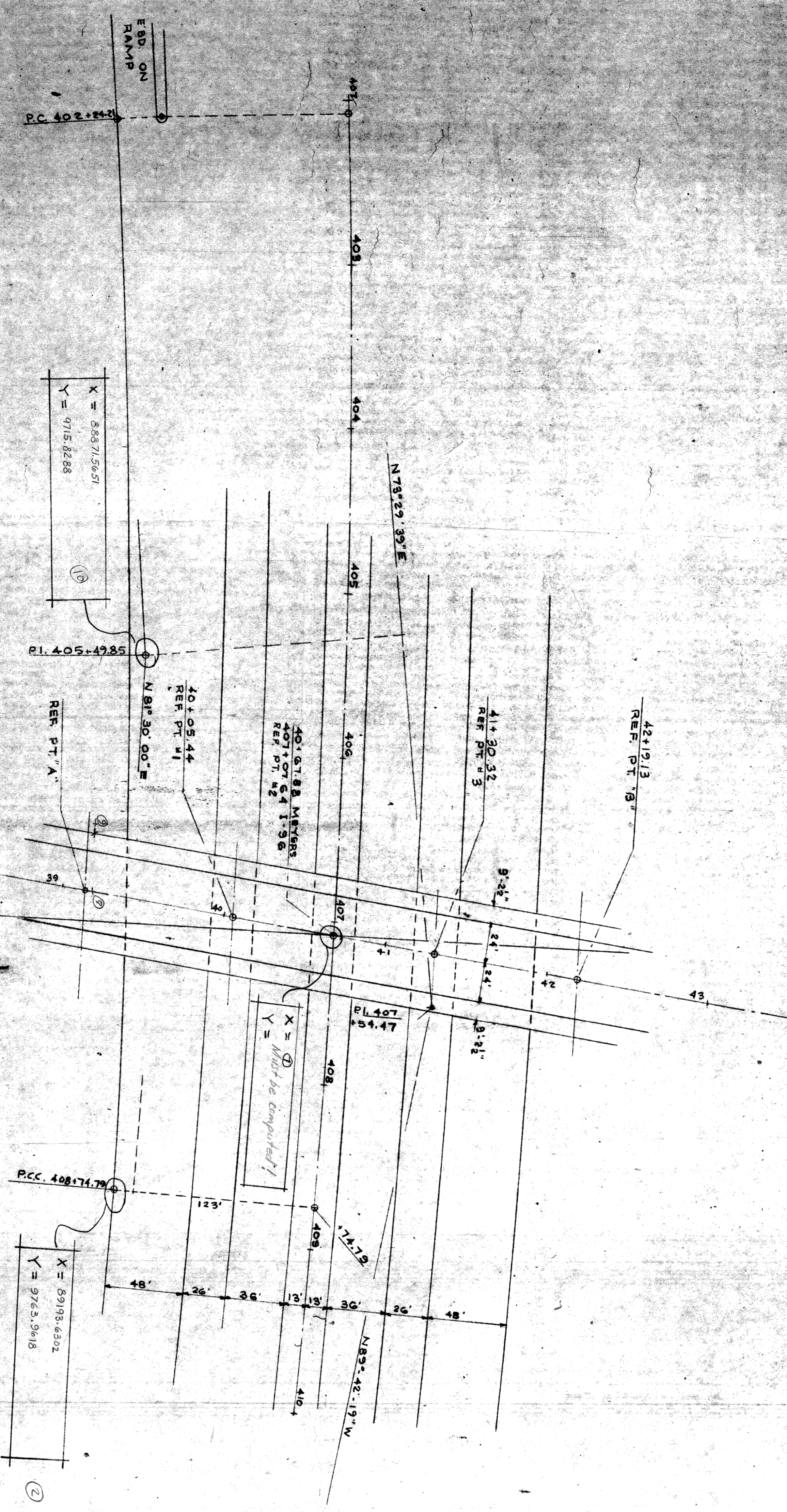
**COORDINATES OF CENTER**

**RADIUS**  
 $28' - 30' - 47'' W$

**MEYERS BRIDGE**  
 196  
 S17 0' 21.23 F

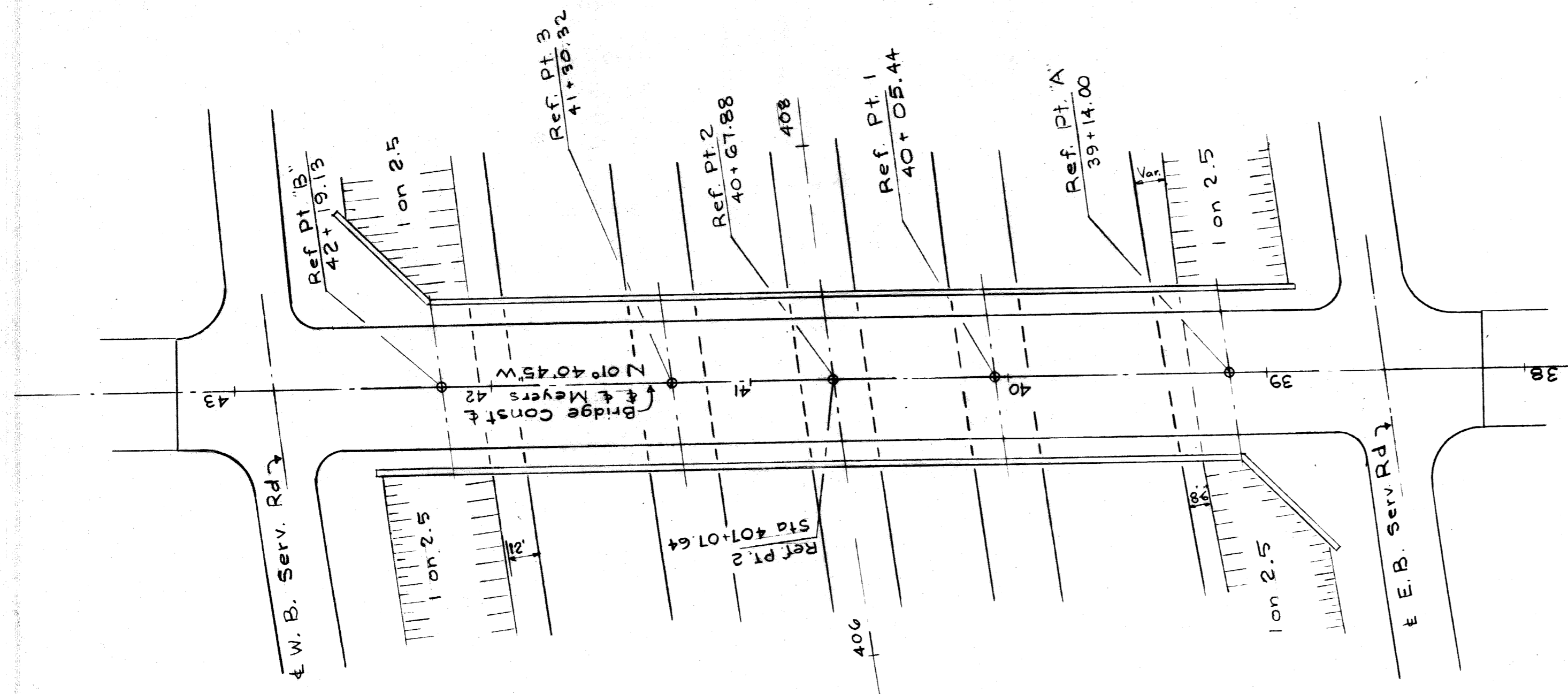
**CONST & CURVE DATA**  
 $\Delta = 16' 48' 02'' W$   
 $D = 1' 00''$   
 $R = 5729.58$   
 $T = 325.64$   
 $L = 650.58$   
 $E = 9.25$   
 $PC = 402 + 24.21$   
 $PI = 405 + 49.85$   
 $PCC = 408 + 74.79$   
 NO SUPER

**COORDINATES OF CENTER**  
 $X = 88253.6677$   
 $Y = 9690.7737$

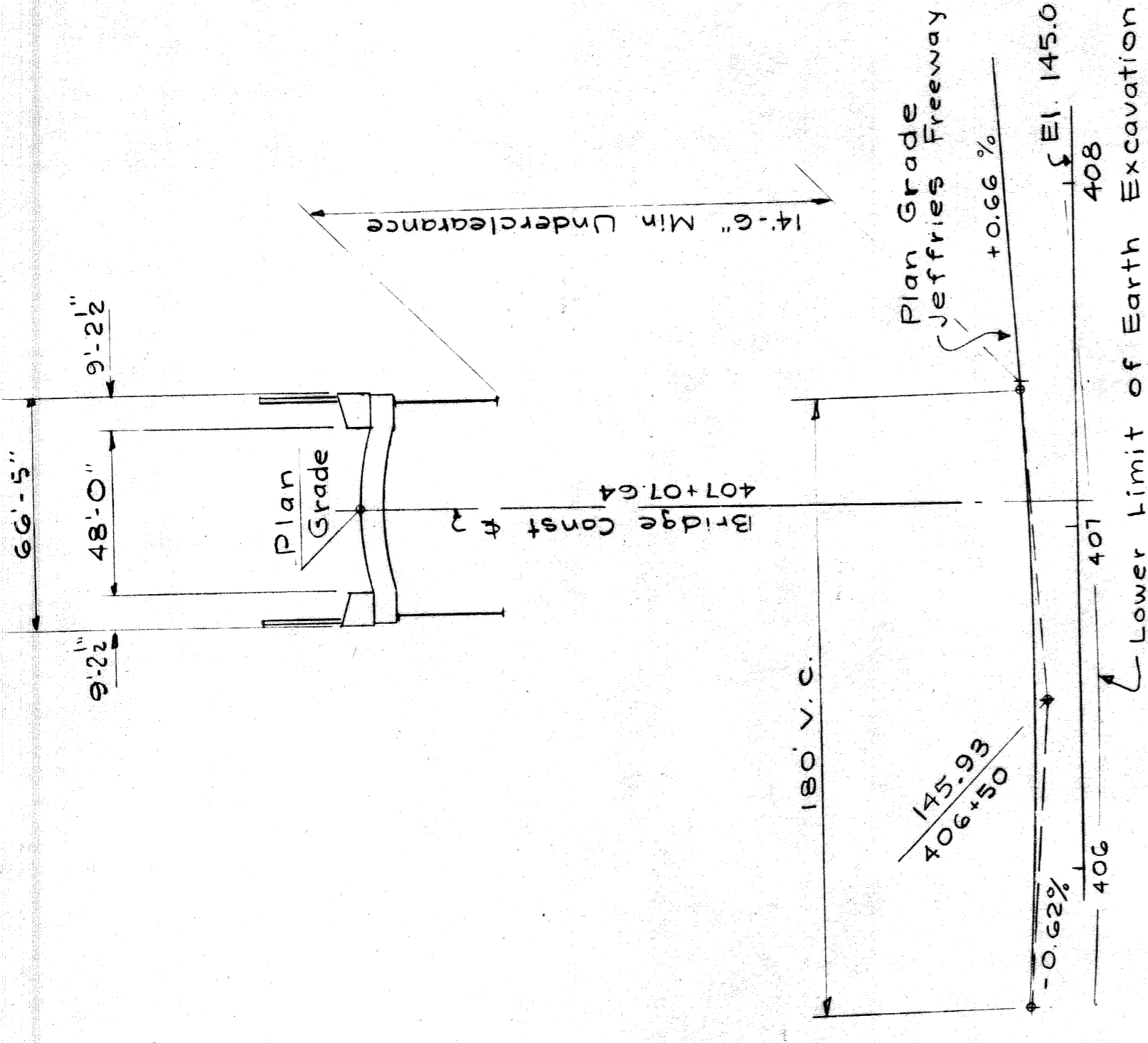


5729.58  
 9.25  
 38.83





PLAN  
Scale: 1" = 40'



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

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

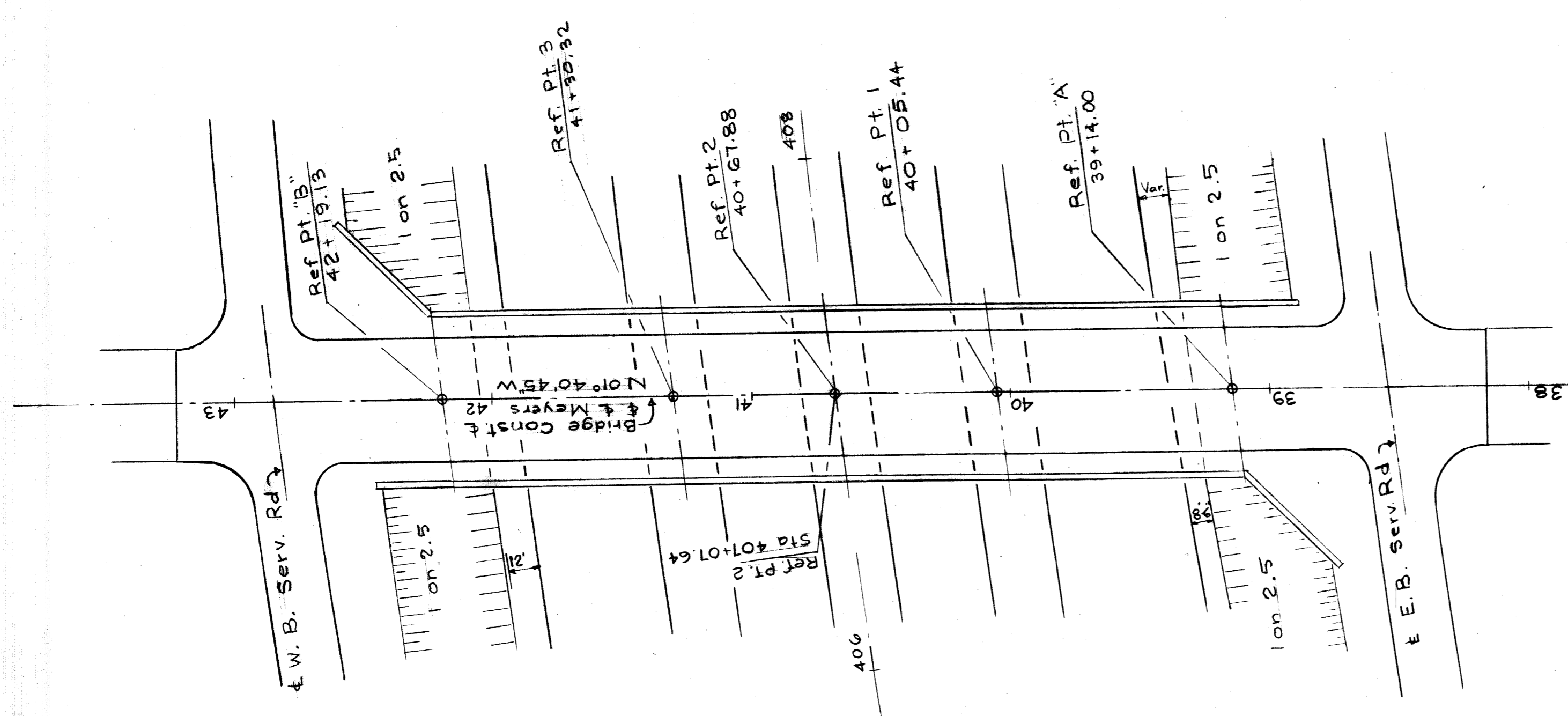
PLAN "A" 4-30-69

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS RD OVER JEFFRIES FREEWAY

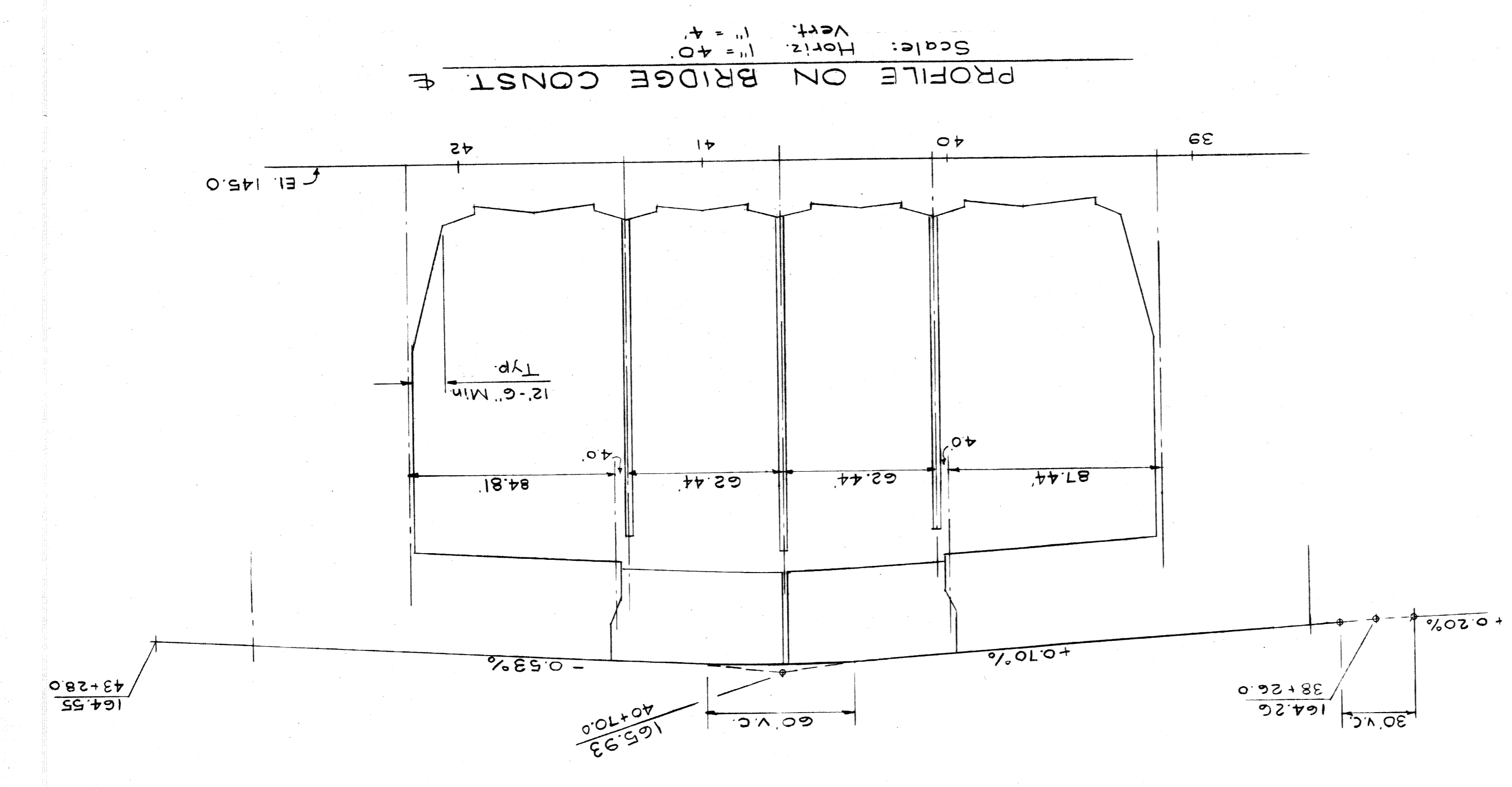
DESIGNED BY	T. E. M.
DRAWN BY	
CHECKED BY	
DESIGN SUPERVISING ENGINEER	
ASST. ENGINEER OF DESIGN	
APPROVED	
APPROVED	
S17 of 82123 F	

NO.	REVISIONS	DESCRIPTION	DATE	BY

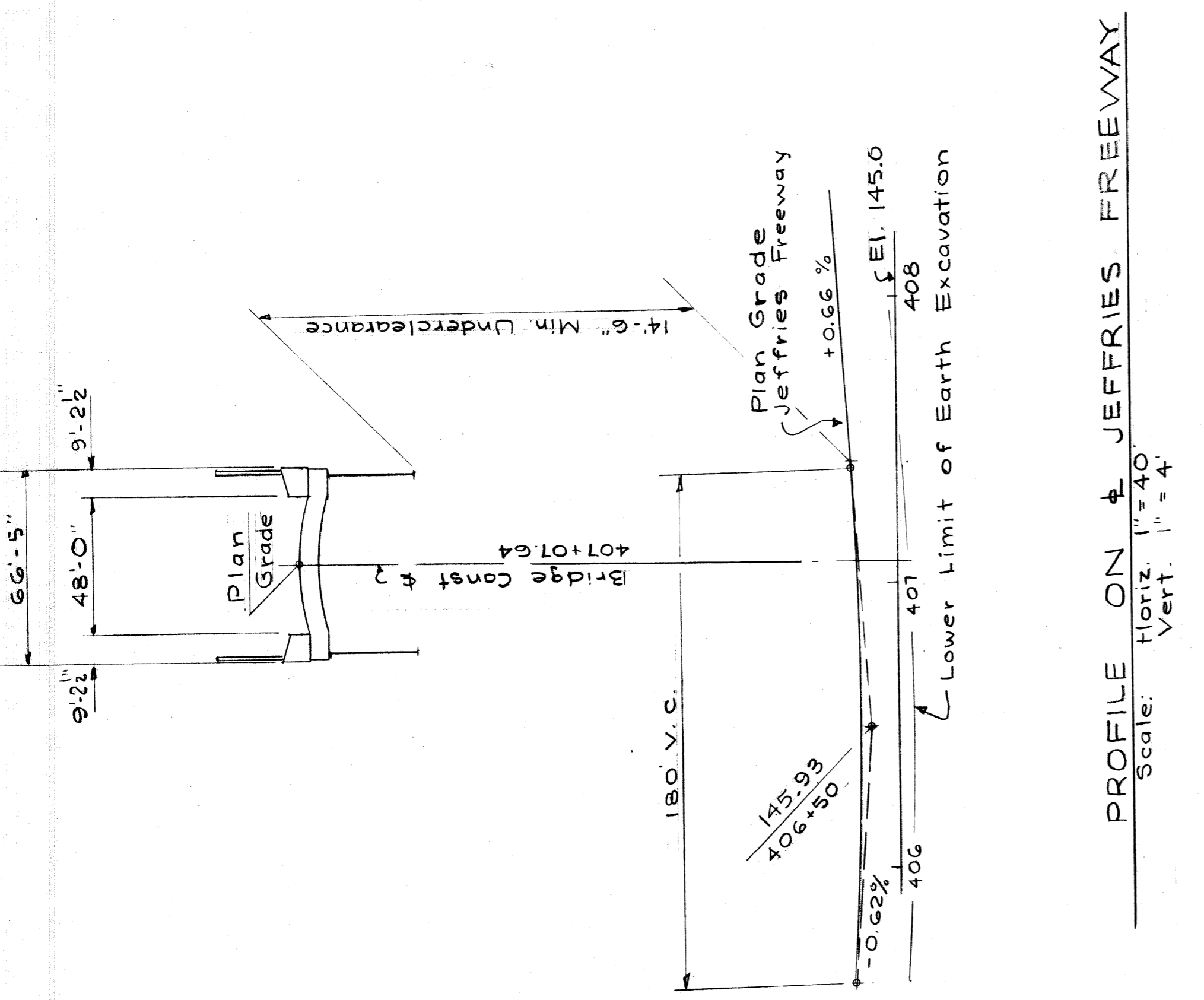




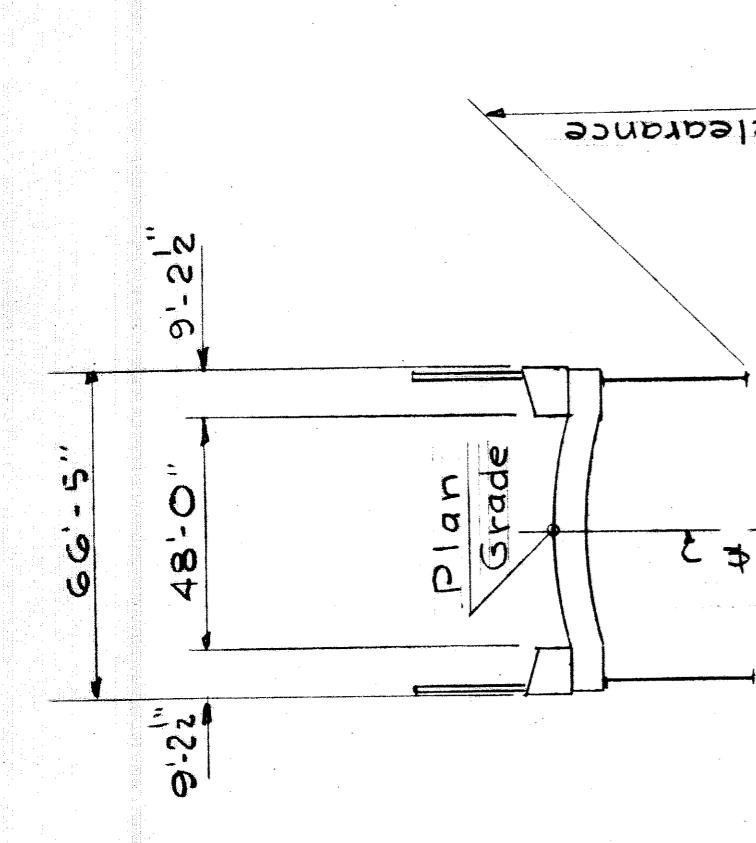
PLAN  
Scale: 1" = 40'



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



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

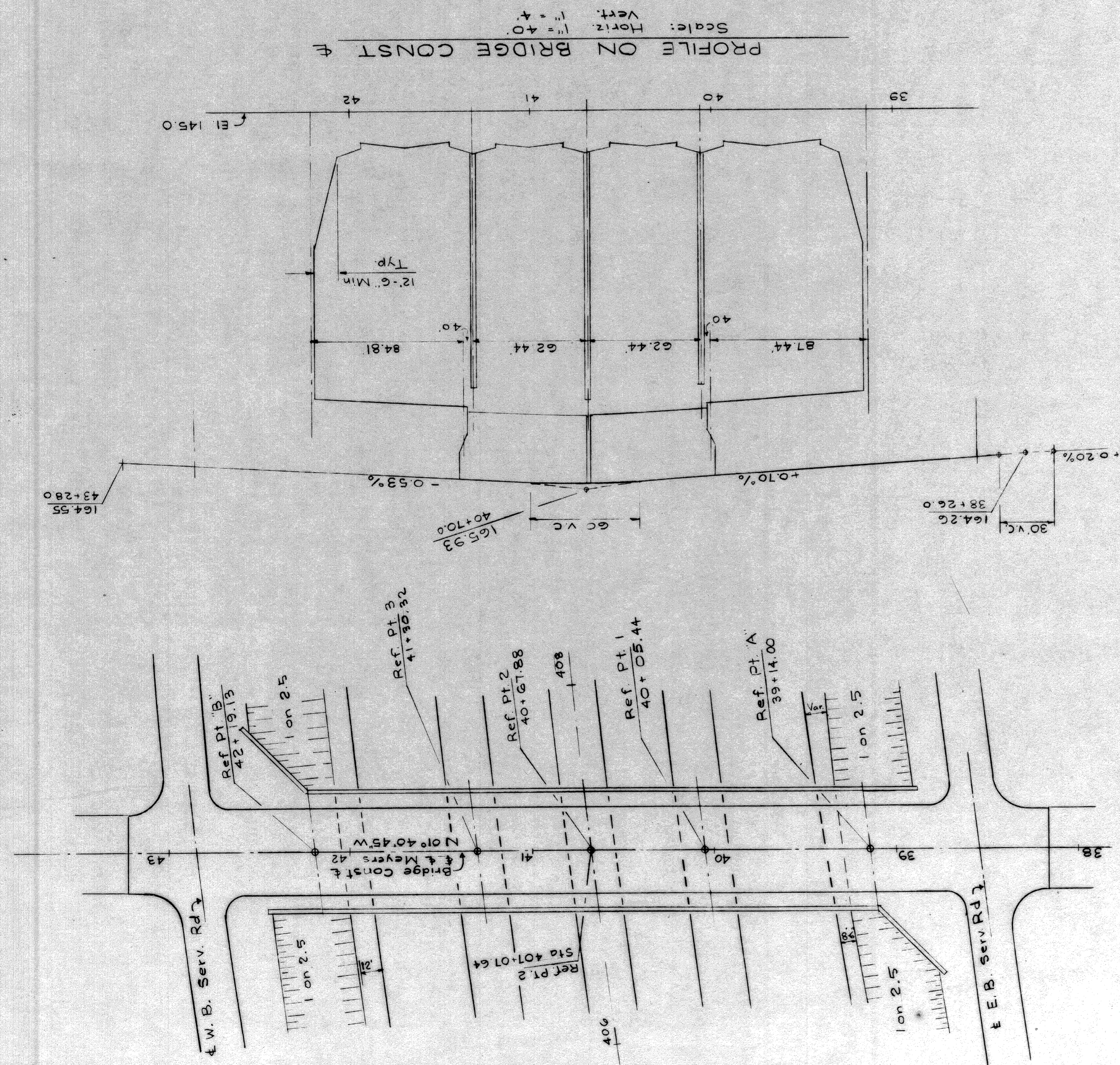


PLAN "A" 4-30-69

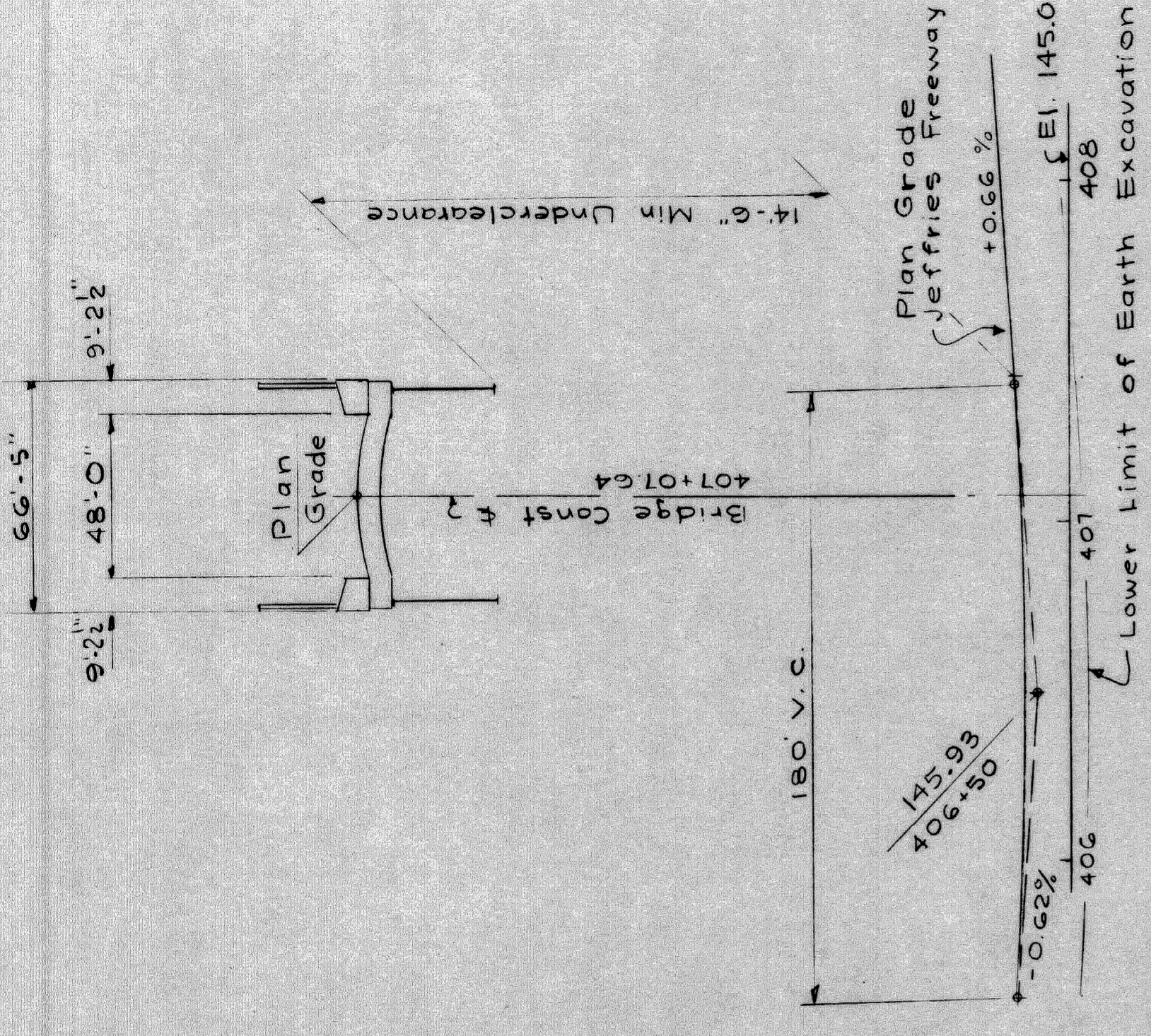
MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS RD OVER JEFFRIES FREEWAY

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED	DATE
DESIGN SUPERVISING ENGINEER	
ASST. ENGINEER OF DESIGN	

S17 of 82123 F



PLAN  
Scale: 1" = 40'



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

PLAN "A"

4-30-69

MICHIGAN DEPARTMENT OF STATE HIGHWAYS  
MEYERS RD. OVER JEFFRIES FREEWAY

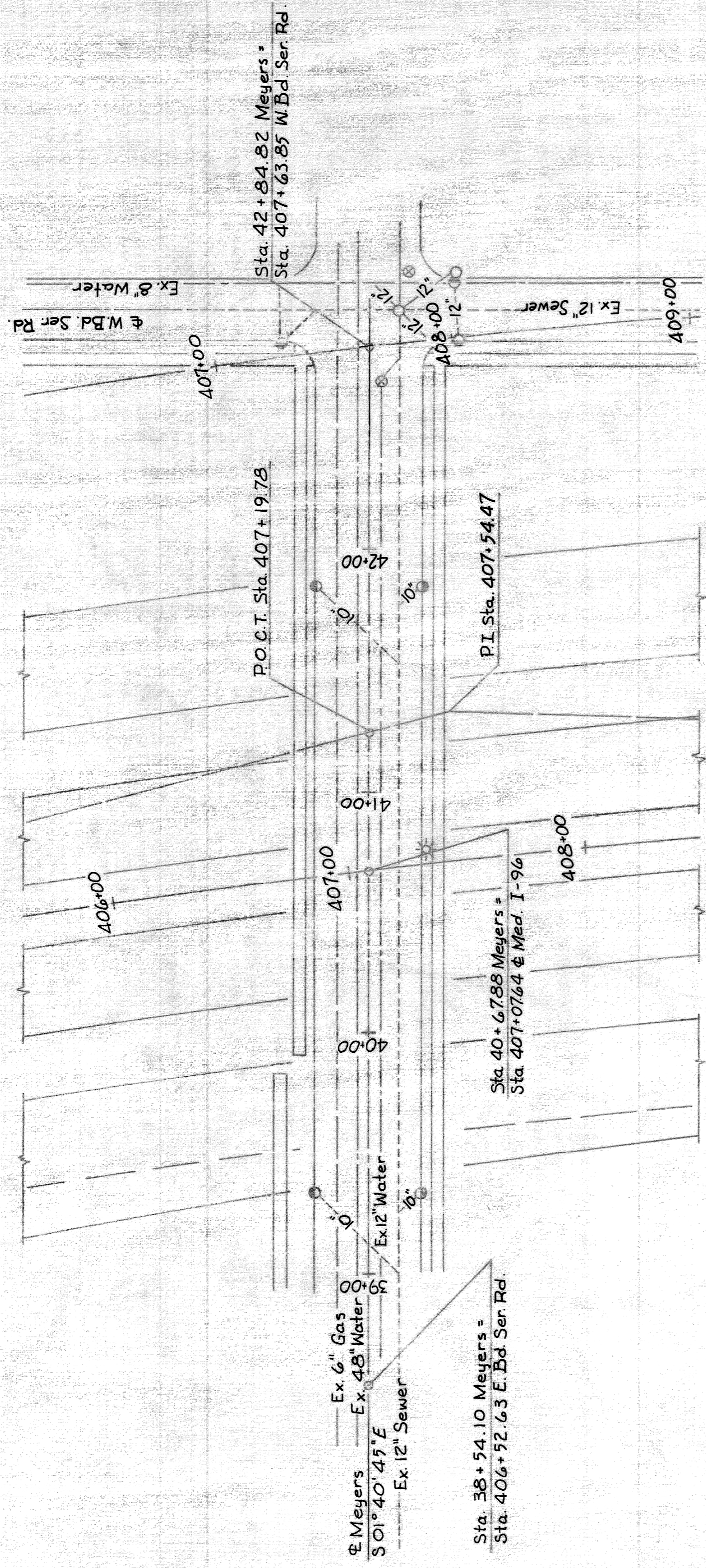
NO.	REVISIONS	DATE	BY

DESIGNED BY	
CHECKED BY	
DATE	
DESIGN SUPERVISING ENGINEER	
ASST. ENGINEER OF DESIGN	

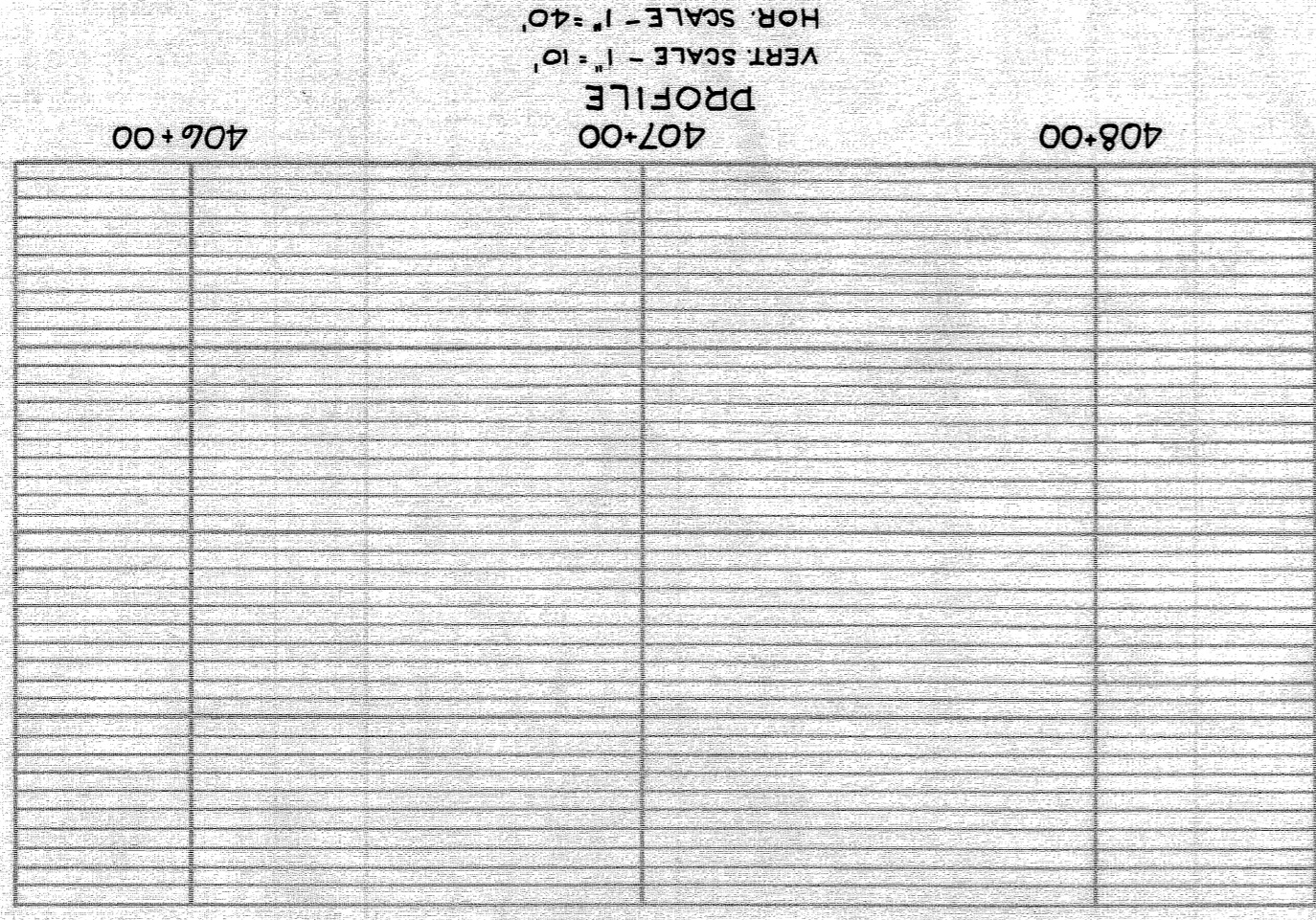
S17 of 82123 F

CURVE DATA	
$\Delta$	$16^{\circ}48'02''$ Rt.
D	$1^{\circ}00'00''$
R	$5729.98'$
T	$846.10'$
L	$1680.06'$
E	$62.14'$
PC	$399+08.37$
PI	$407+54.47$
PT	$415+88.43$
No Super	

**BENCH MARK DATA**  
 B.M. # 59 El. 16.707  
 Arrow on Fire Hydrant on the  
 N.E. Corner of Meyers & Davison.  
 15.5' Lt. of Sta. 290+43 (Davison)



**SITUATION PLAN**  
 Scale 1" = 40'



**PROFILE**  
 VERT. SCALE - 1" = 10'  
 HOR. SCALE - 1" = 40'

NO.	DESCRIPTION	DATE	BY
	1-9% E. Bd.		
	1-9% W. Bd.		

000 1990 Est. Avg. Daily Traffic  
 000 1990 Est. Design Hour Vol.  
 000 1965 Avg. Daily Traffic

**TRAFFIC DISTRIBUTION**

NO.	DESCRIPTION	DATE	BY

**PROFILE**  
 VERT. SCALE - 1" = 10'  
 HOR. SCALE - 1" = 40'

39+00

40+00

42+00

43+00

MICHIGAN STATE HIGHWAY DEPARTMENT  
 I-96 UNDER MEYERS RD. IN THE CITY OF DETROIT.  
 GENERAL PLAN OF SITE

DESIGNED BY	C. G. Miller	DATE	3-1-67
DRAWN BY			
CHECKED BY			
APPROVED			
DESIGN SUPERVISING ENGINEER			
ASST. ENGINEER OF DESIGN			

**S17 of 82123**