

LEGEND

- Tree
- Fence
- Sewer Manhole
- Sewer Inlet or Catch Basin
- Water Gate Well and Valve
- D.F.D. Manhole
- P.L.C. Manhole
- Test Hole for Soil Profile

NOTES

The topography shown represents conditions existing at the time the field survey was made. These conditions may have been altered by the operations of others before this work is started.

Bench Marks are referenced to the City of Detroit Datum

This set of drawings covers the Jeffries Freeway Bridge (S39) crossing over the E.bnd to N.bnd Turning Roadway and placing Sand gravel material to the limits shown.

All work not listed above is included in road plans which are a part of this contract.

This Bridge is part of an interchange and all area shown is within MDSH R.O.W.

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

SURVEY PLAN
Scale 1"=40'

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

APPROVED: *J. J. Conroy*
 PROFESSIONAL ENGINEER

JOB No.
 PW 990(2)

NO.	REVISIONS	DATE	BY

DESIGN SUPERVISING ENGINEER
 ENGINEER OF DESIGN - CONSULTANTS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE E.B.D. TO N.B.D.
TURNING ROADWAY IN DETROIT

GENERAL PLAN OF SITE

SHOWN BY: *Roberts* 2-17
 DRAWN BY: *Roberts* 5-7-66
 CHECKED BY: *L.B. Jackson* 1-67
 SHEET 22 OF 23

S 39 of 82123 K

E'BND TO N'BND TURNING ROADWAY

CURVE DATA 3EN

Δ = 55° 23' 18"
 D = 18° 20' 04.74"
 R = 312.500'
 T = 164.026'
 L = 302.096'
 E = 40.431'
 PC = 19+16.949'
 PT = 20+80.975'
 PI = 20+80.975'
 PT = 22+19.045'
 Super Elev. $r = .06$ A.A.

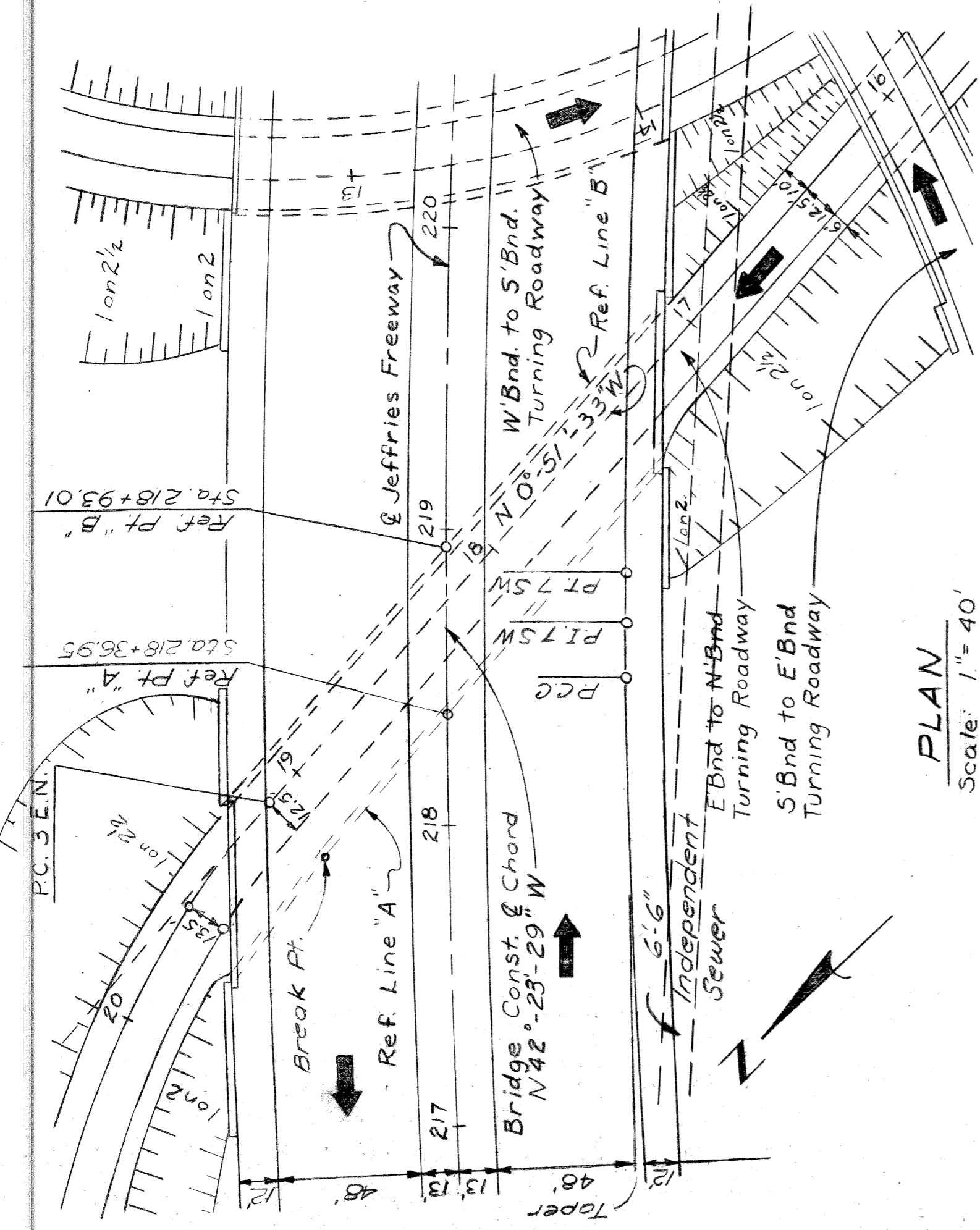
JEFFRIES FREEWAY

CURVE DATA 9J

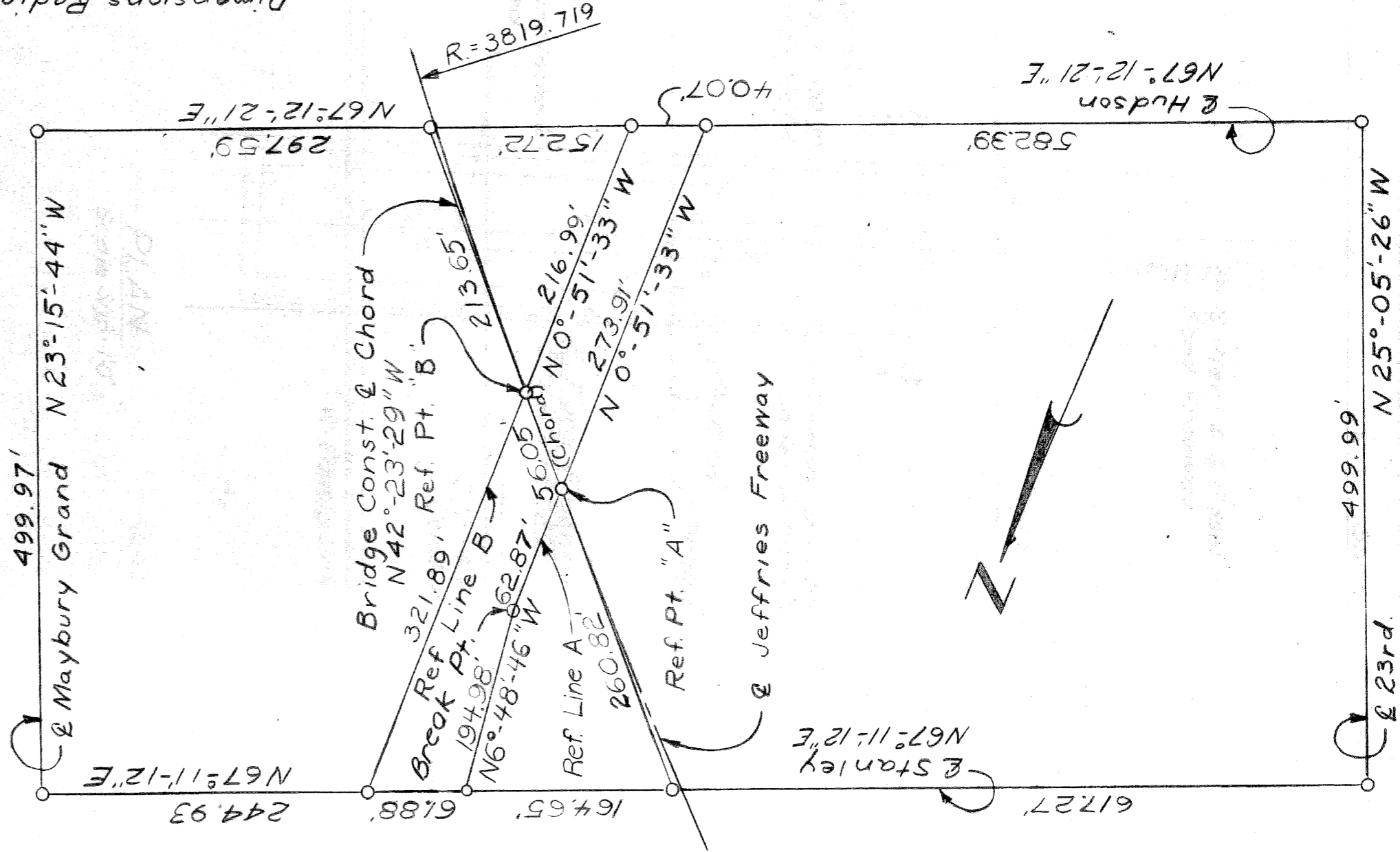
Δ = 44° 37' 30"
 D = 1° 30' 00"
 R = 3219.719'
 T = 1567.555'
 L = 2975.000'
 E = 309.140'
 PC = 201+55.000'
 PT = 217+22.555'
 PI = 231+30.000'
 PT = 231+30.000'
 No Superlevation

BENCH MARKS

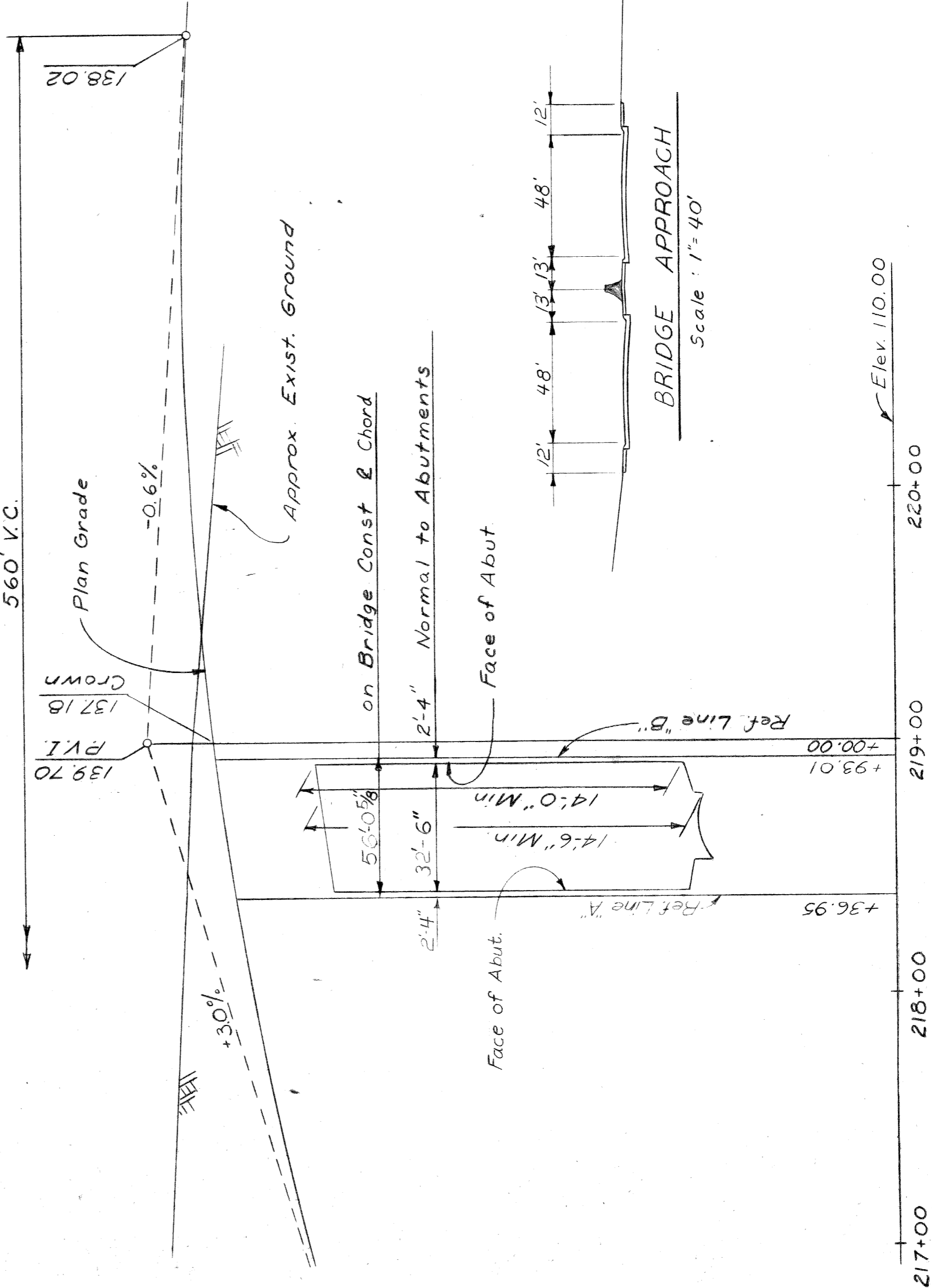
- P.B.M. 21-253 City of Detroit Monument N.E. Corner 23rd. and Stanley Elev. 136.07
- C.B.M. 26 Arrow on Hydrant N.E. Corner Merrick and Tillman Elev. 134.43
- C.B.M. 36 Arrow on Hydrant S.W. Corner Lawton and Ford S. Service Drive Elev. 140.83
- C.B.M. 62 Arrow on Hydrant E. Side of Williams 50' S. of Mc Graw Elev. 142.78
- P.B.M. = Denotes Permanent Bench Marks
- C.B.M. = Denotes Construction Bench Marks.



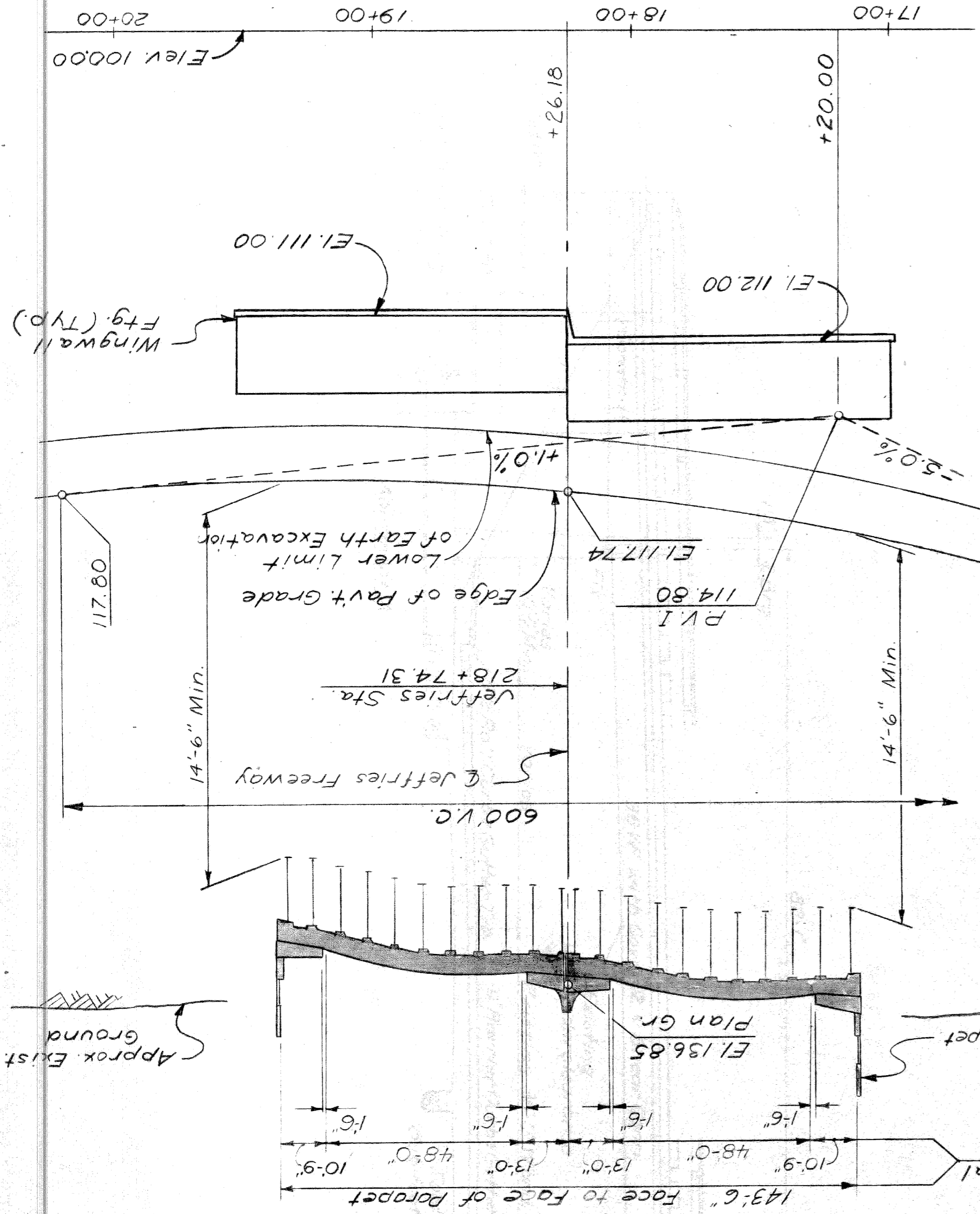
PLAN
Scale: 1" = 40'



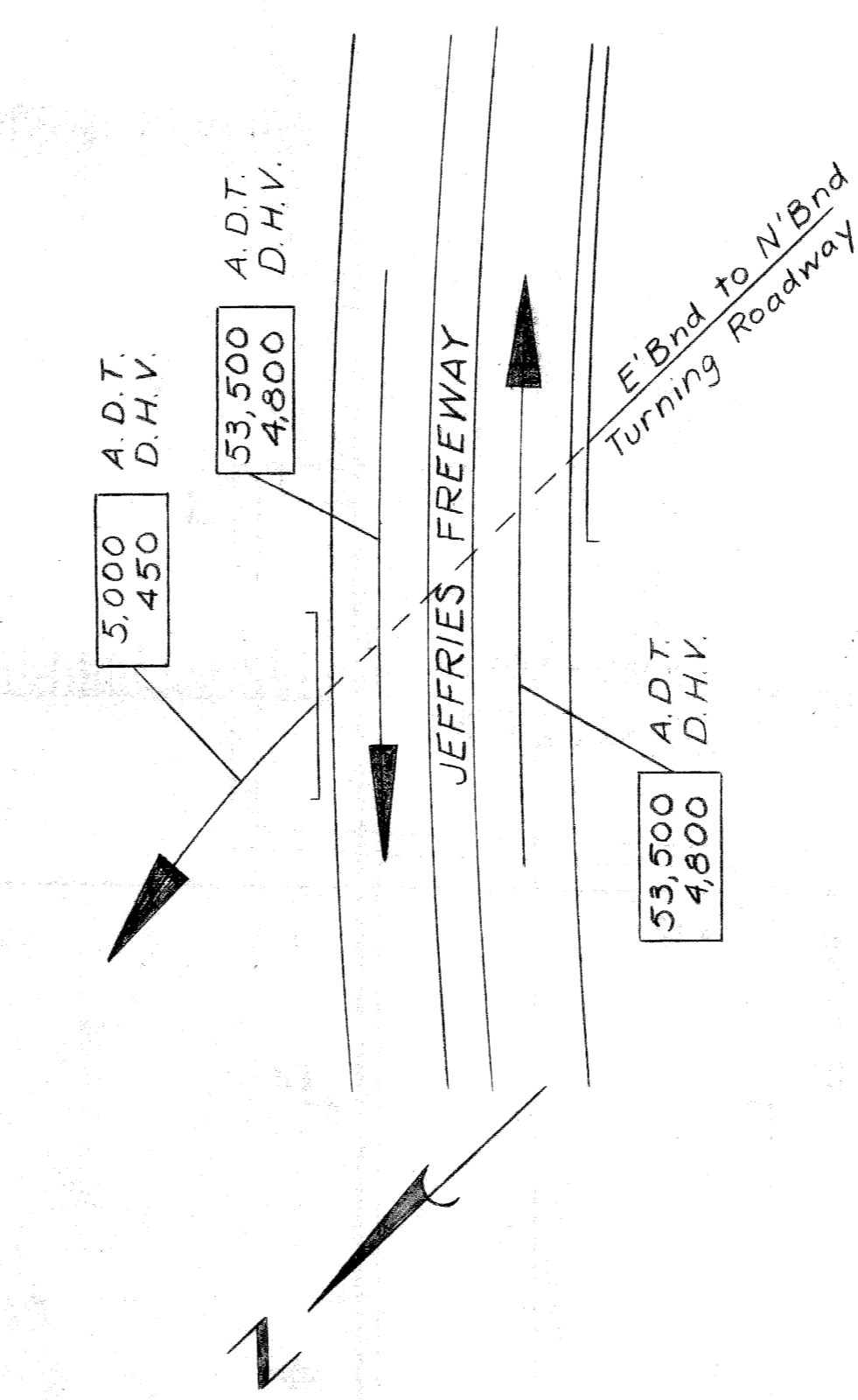
ALIGNMENT DIAGRAM
No Scale



PROFILE ALONG BRIDGE CONSTRUCTION
Scale: Hor. 1" = 40', Vert. 1" = 4'



PROFILE ALONG E'BND TO N'BND TURNING ROADWAY
Scale: Hor. 1" = 40', Vert. 1" = 4'



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

TRAFFIC COUNT
Estimated Traffic 1990

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

APPROVED: *J. J. [Signature]* STRUCTURAL ENGINEER
 JOB No. PW99021

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 JEFFRIES-FORD INTERCHANGE
 FREEWAY CROSSING THE E'BND TO N'BND TURNING ROADWAY IN DETROIT

GENERAL DRAWING

APPROVED: _____ DESIGN SUPERVISING ENGINEER
 APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS

SHEET 4 OF 23
 S39 of 82123K

GENERAL NOTES

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

Live load plus impact deflection equals 1/400 of the span length.

Selected Exc. Material and Tamped Clay are incidental to unclassified excavation.

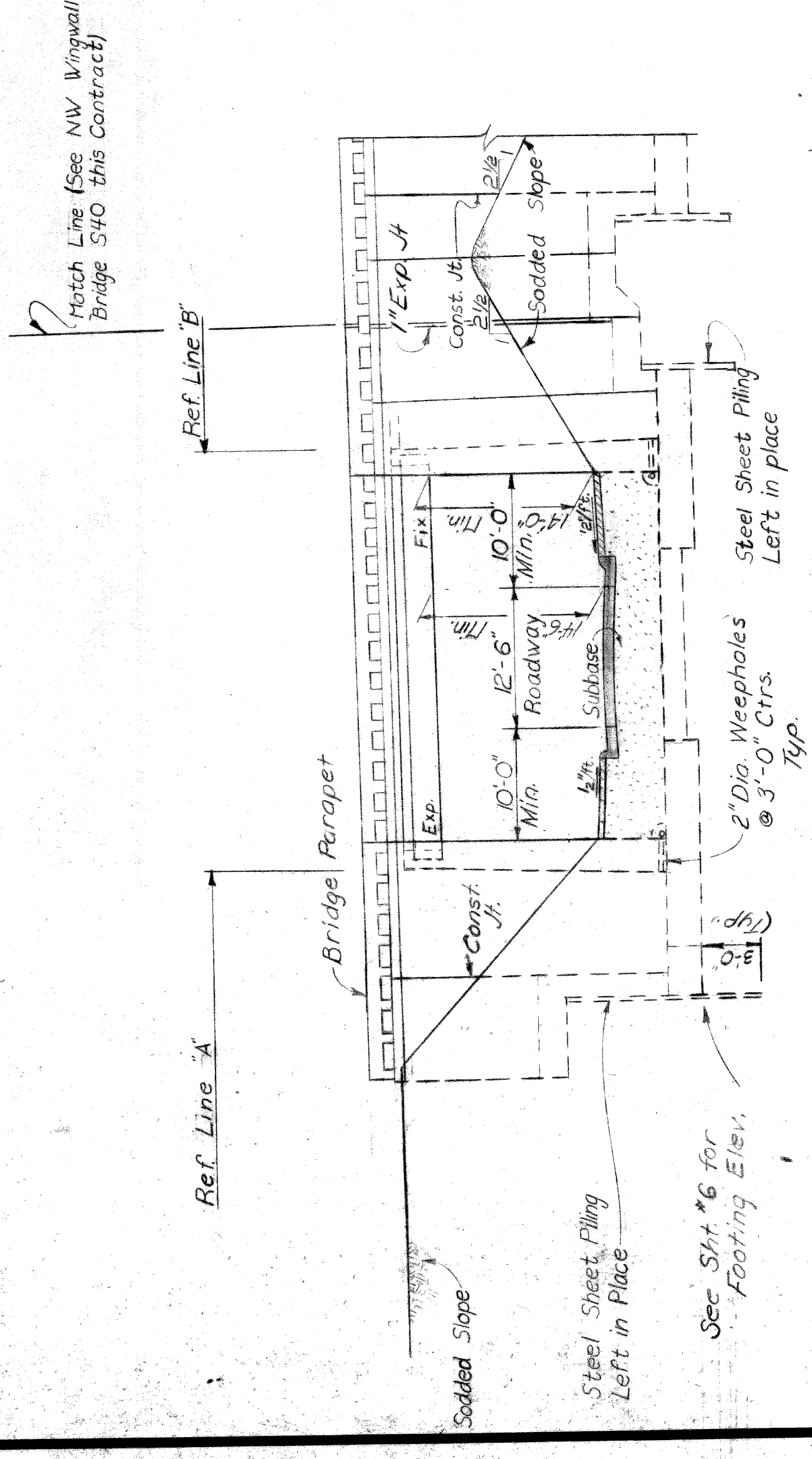
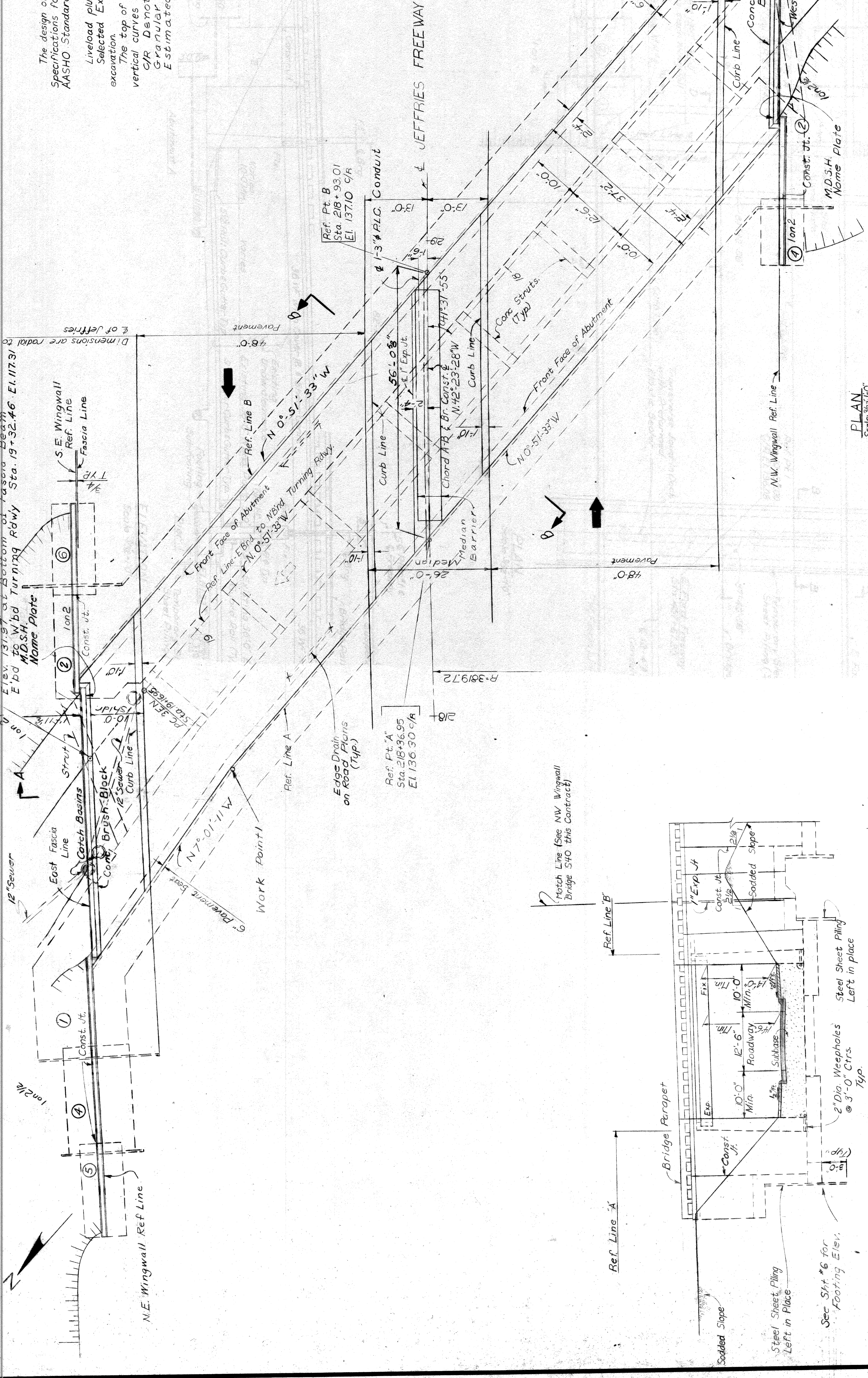
The top of roadway slab and tops of curbs are parallel to the vertical curves and/or tangents.

C/R Denotes Crown of Roadway

Granular Material Class III is Billed in Road Plans

Estimated amount is 4300 Cu. Yds. Abutments

Point of Min. Underclearance Jeffries Sta. 217 + 95.78
 Elev. 131.97 at Bottom of Fascia Beam
 E'bd to Wbd Turning Rdwy Sta. 19 + 32.46 El. 117.31



PLAN
 Scale: 3/32"=1'-0"

PLANS PREPARED BY
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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *[Signature]* STRUCTURAL ENGINEER
 JOB No. PW 9902

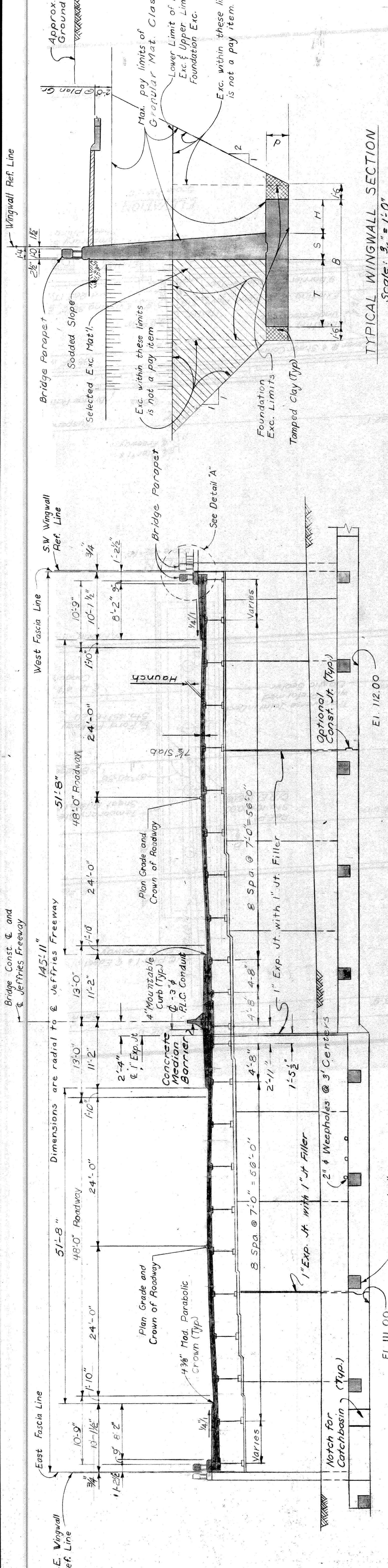
APPROVED: _____ DESIGN SUPERVISING ENGINEER
 APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
JEFFRIES - FORD INTERCHANGE
 JEFFRIES FREEWAY CROSSING THE EBD, TURNING ROADWAY IN DETROIT

GENERAL PLAN OF STRUCTURE

DRAWN BY	C. Amick	DATE	2-67
CHECKED BY	L. B. Ackerson	DATE	7-25-66
DATE	1-67	SHEET	5 OF 23

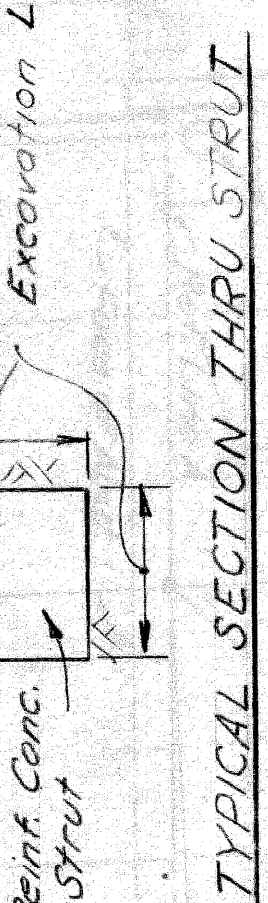
S 39 of 82123 K



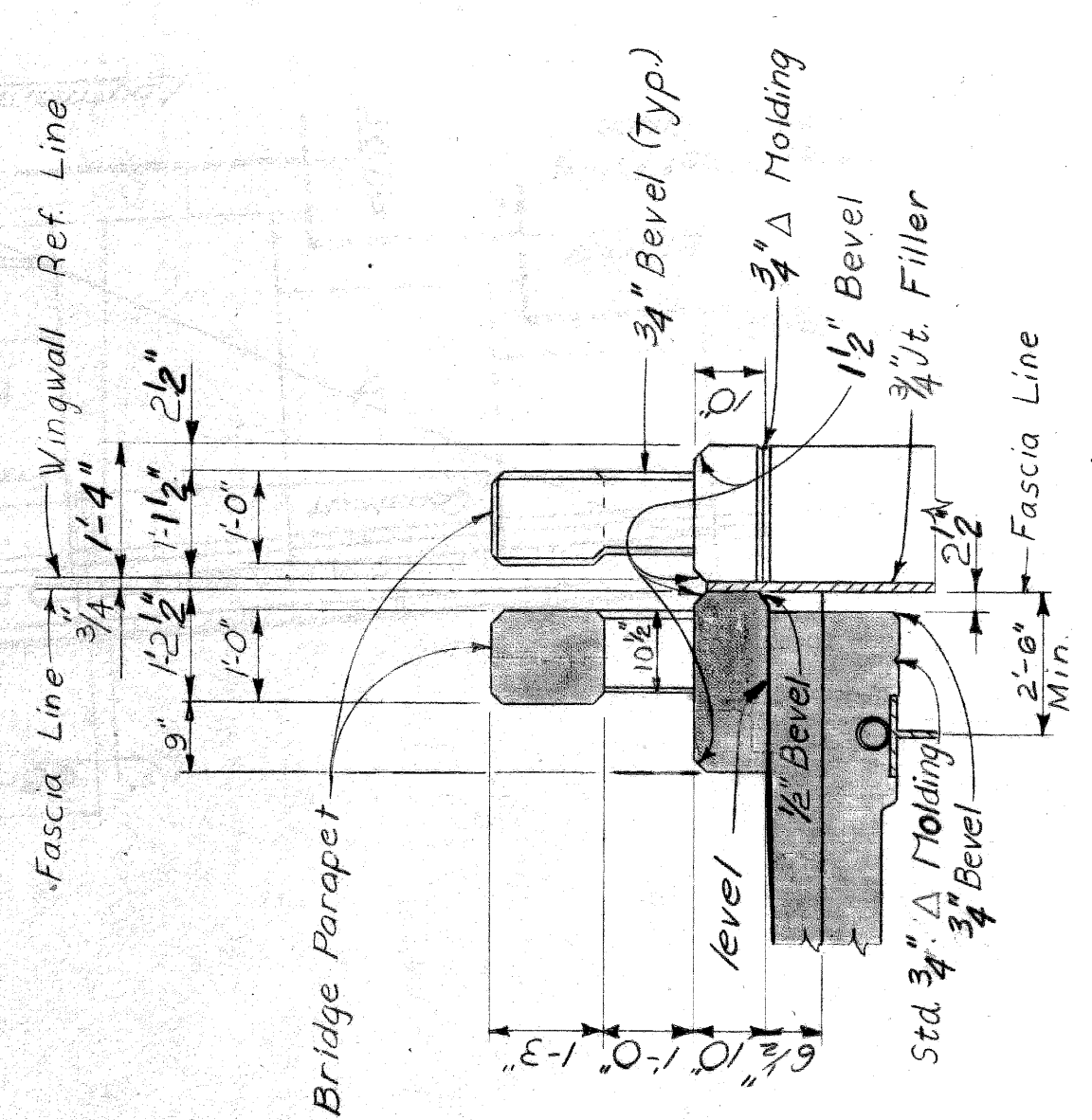
SECTION "AA"
Scale: $\frac{1}{8}'' = 1'-0''$

TYPICAL WINGWALL SECTION
Scale: $\frac{3}{16}'' = 1'-0''$

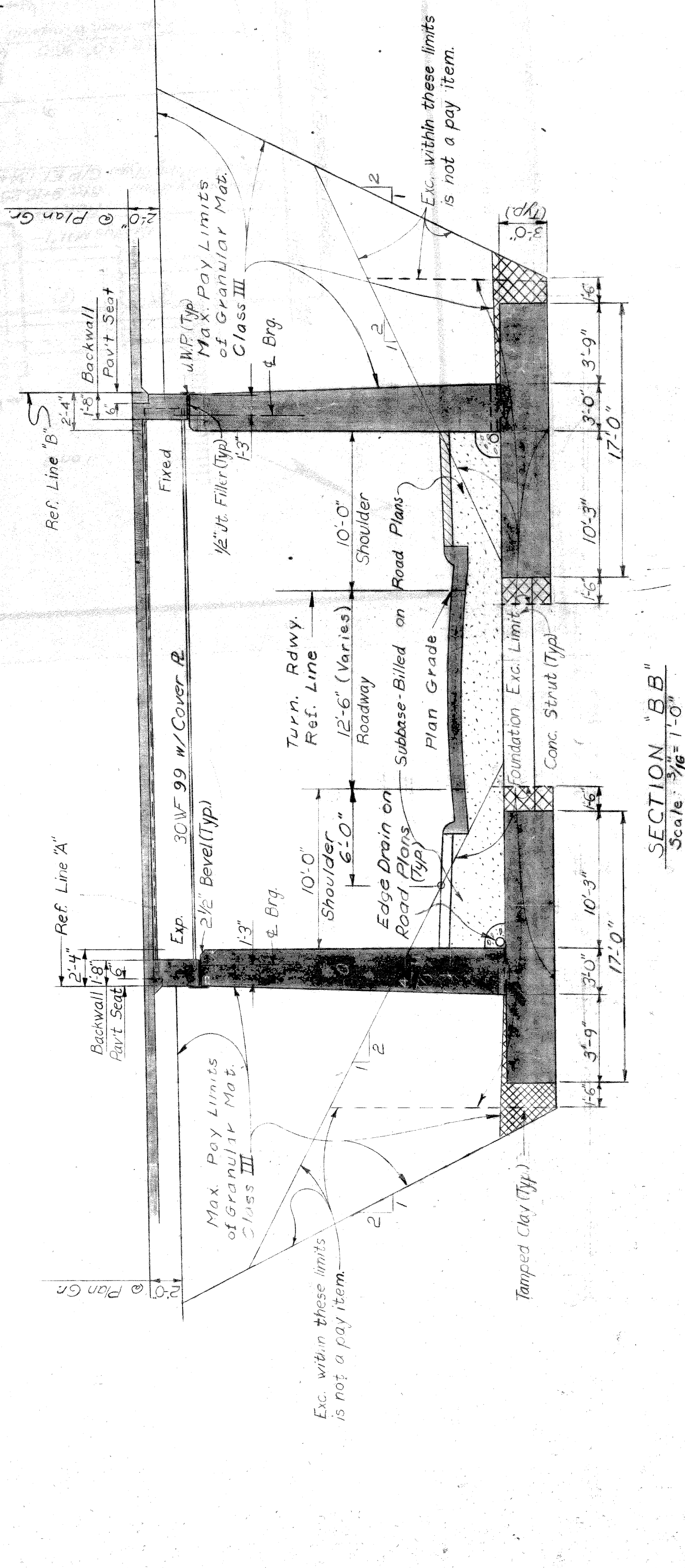
Section	C	B	T	S	H	E. 155'	W. 155'	ELEV.
1	3'-0"	20'-0"	17'-6"	3'-0"	3'-6"	111.0	112.0	1120
2	3'-0"	-	3'-6"	3'-0"	-	111.0	112.0	1170
3	2'-6"	14'-0"	5'-6"	3'-0"	5'-6"	-	-	120.0
4	2'-6"	11'-0"	3'-6"	2'-6"	5'-0"	-	-	120.0
5	2'-0"	7'-0"	1'-6"	2'-0"	3'-6"	123.0	-	-
6	2'-6"	11'-0"	3'-6"	2'-6"	5'-0"	120.0	-	-



TYPICAL SECTION THRU STRUT



DETAIL "A"
Scale: $\frac{1}{2}'' = 1'-0''$



SECTION "B-B"
Scale: $\frac{3}{16}'' = 1'-0''$

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

APPROVED: *[Signature]* CIVIL ENGINEER
JOB No. PW 990(2)

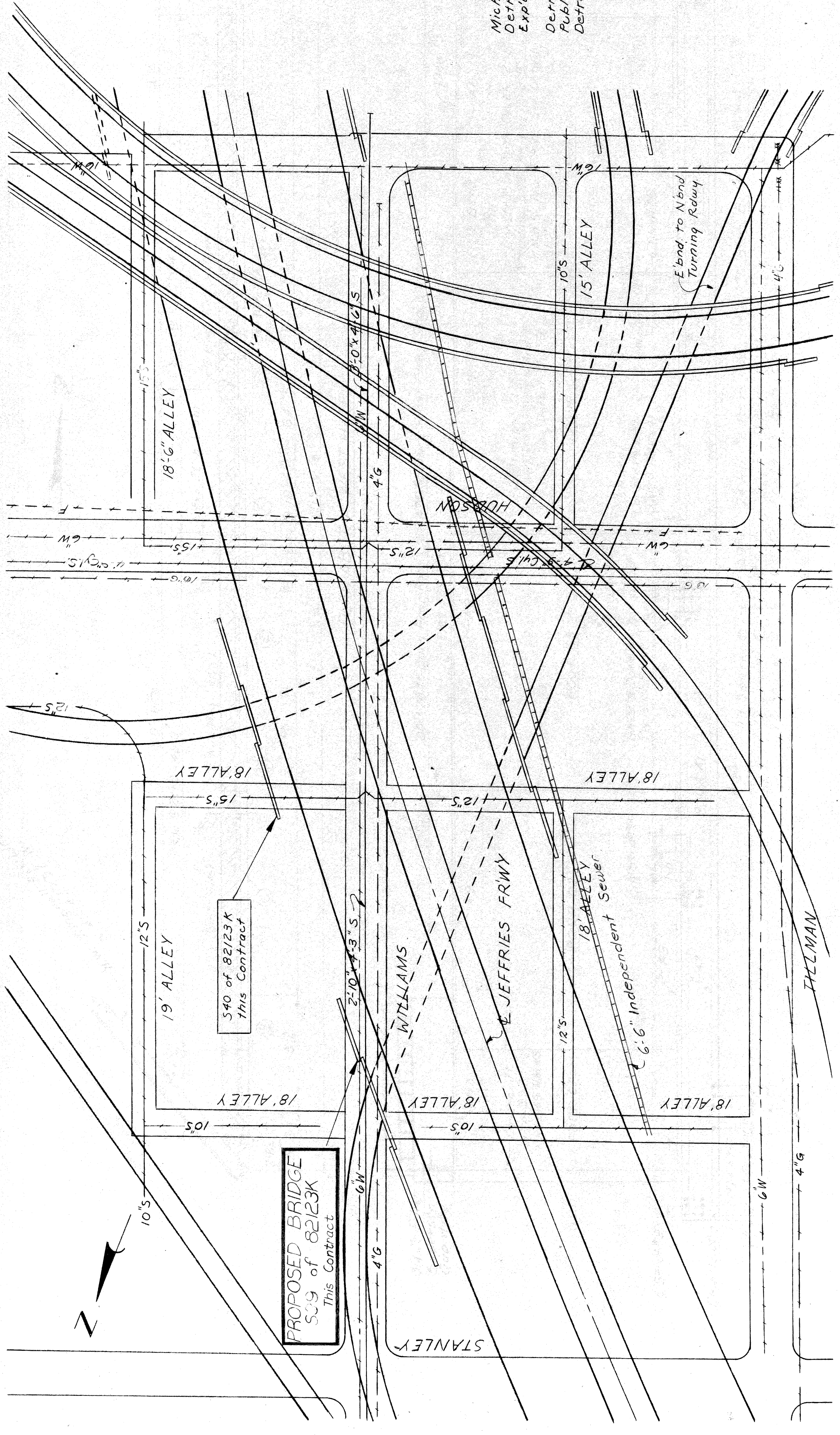
APPROVED: _____ DESIGN SUPERVISING ENGINEER
APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
JEFFRIES - FORD INTERCHANGE
TURNING ROADWAY IN DETROIT

GENERAL PLAN OF STRUCTURE
CITY OF DETROIT

DESIGNED BY: *[Signature]* / B-67
CHECKED BY: *[Signature]* / B-2-6-66
SHEET 6 OF 23

S 39 of 82123 K



UTILITY
 Michigan Consolidated Gas Co.
 Detroit Water Dept.
 Exwy and City of Detroit Sewers
 Detroit Edison Co.
 Public Lighting Commission
 Detroit Fire Dept.

LEGEND
 Deleted or Abandoned
 ---G---
 ---W---
 ---S---
 Existing
 ---G---
 ---W---
 ---S---
 New Work by Others
 ---E---
 ---L---
 ---F---
 New Work by Bridge Contractor
 ---E---
 ---L---
 ---F---

NOTE:
 Bridge construction and utility alterations are included in package contract for control Section 82123K.
 The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.

SITUATION PLAN
 Scale: 1" = 40'-0"

MICHIGAN DEPARTMENT OF STATE HIGHWAYS
 JEFFRIES-FORD INTERCHANGE
 JEFFRIES FREEWAY CROSSING THE EBD. TO NBD.
 TURNING ROADWAY IN DETROIT

EXISTING UTILITIES AND PROPOSED ALTERATIONS

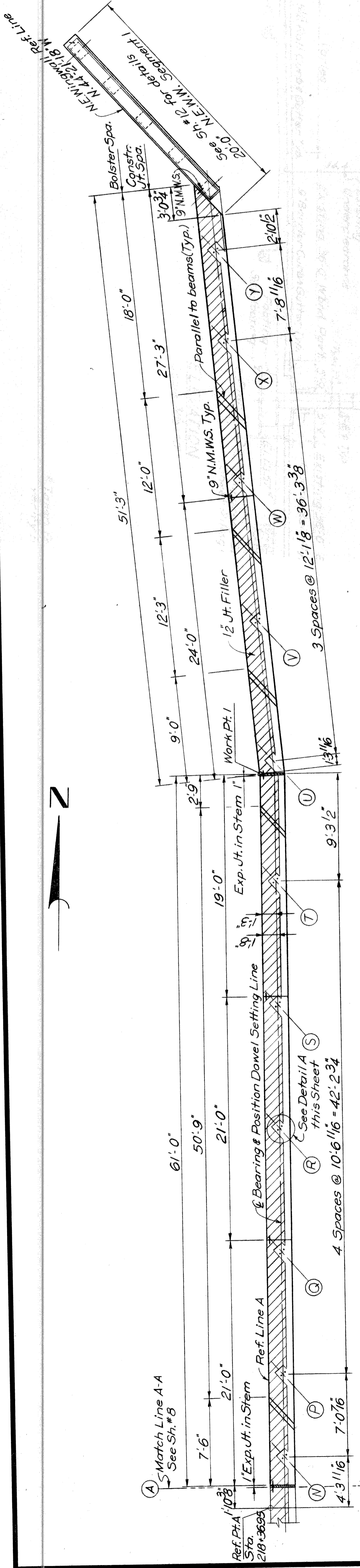
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND INTERCHANGES

J. J. Condit
 CIVIL ENGINEER

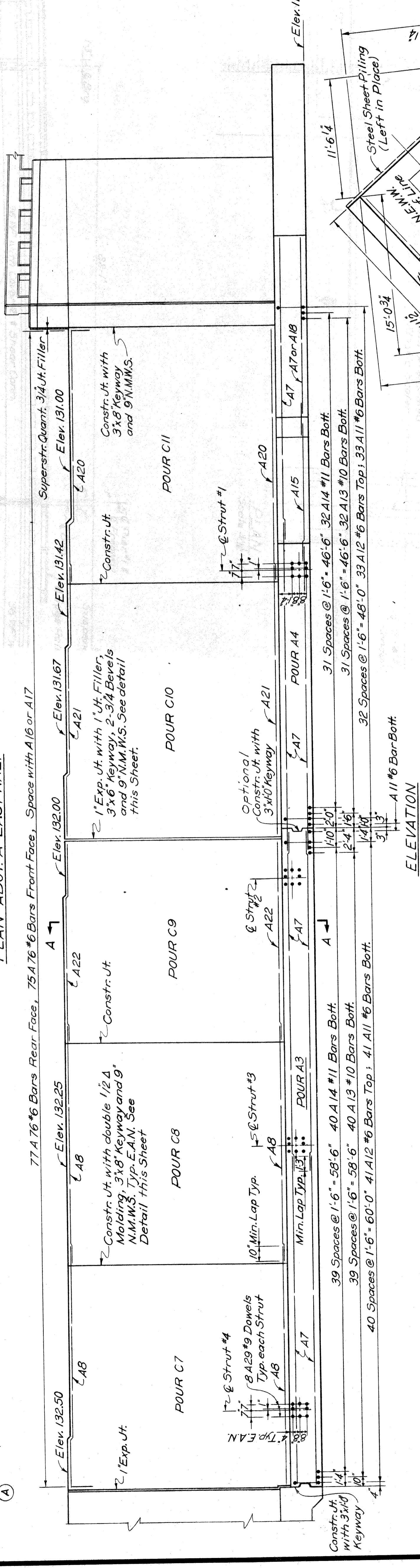
NO.	REVISIONS	DATE	BY

DESIGNED BY: R. J. Adams 12-67
 CHECKED BY: L. E. JOHNSON 12-67
 SHEET 7 OF 23

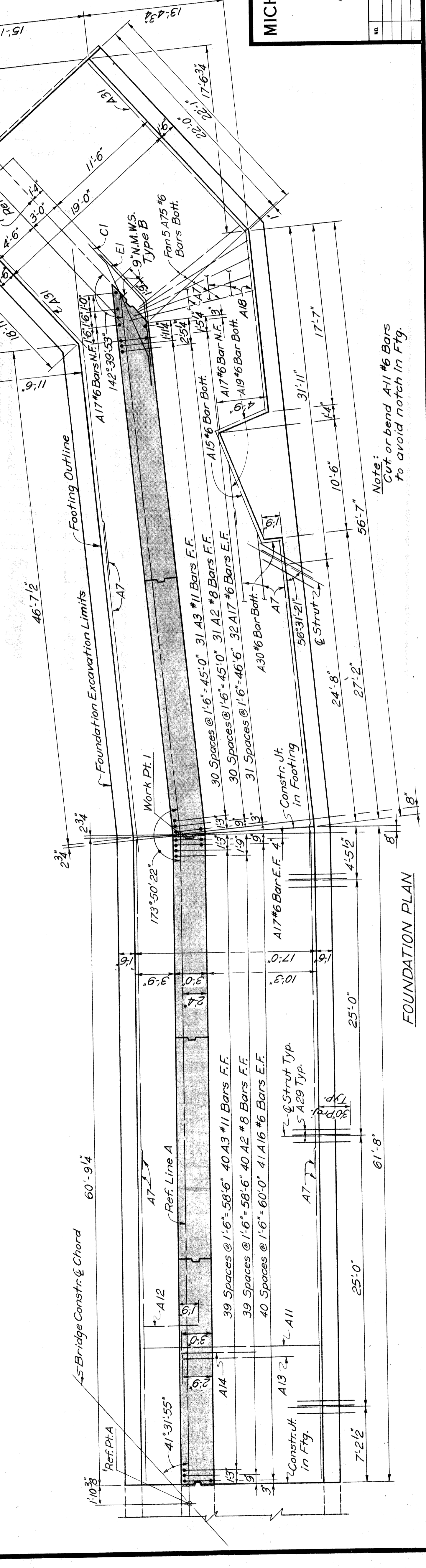
S 39 of 82123 K



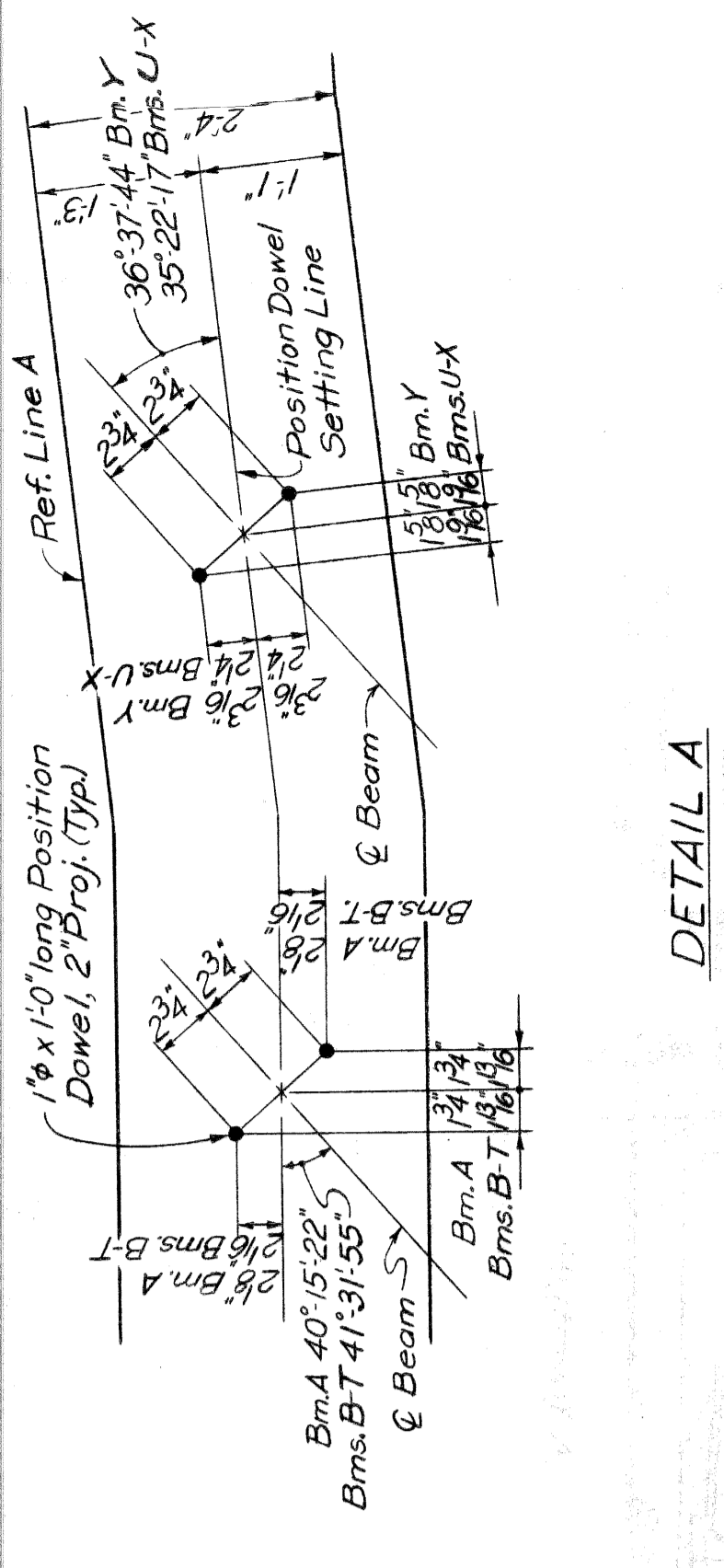
PLAN-ABUT. A EAST HALF



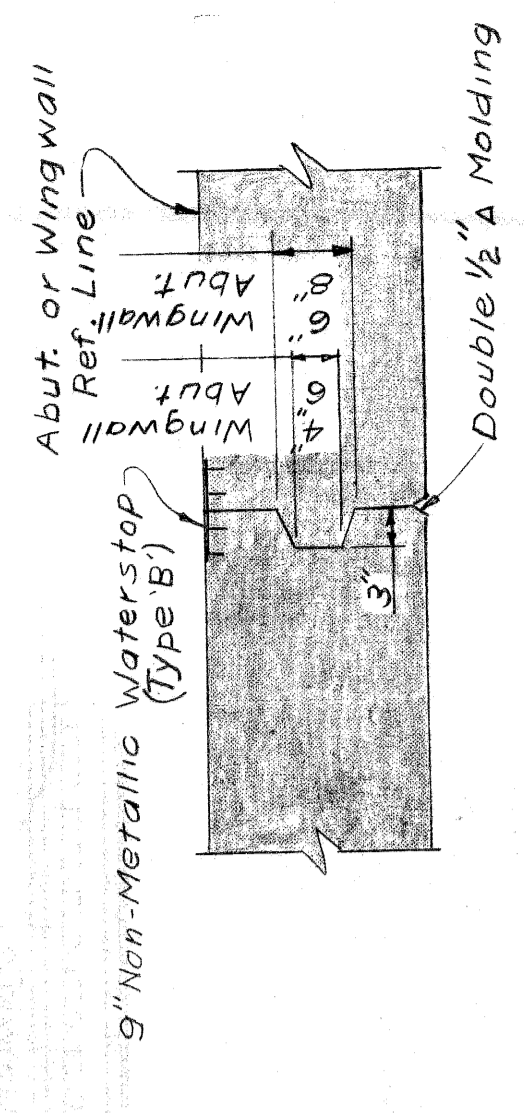
ELEVATION



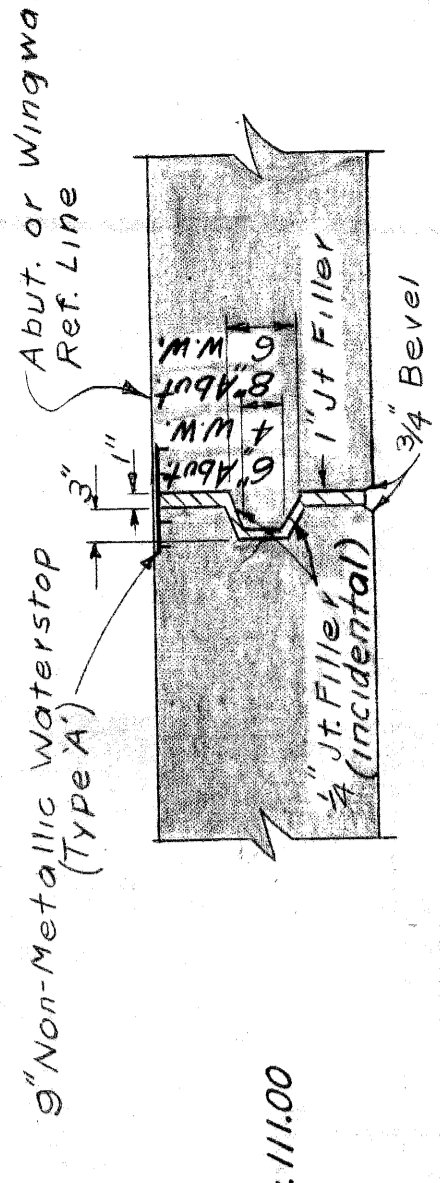
FOUNDATION PLAN



DETAIL A



VERT. CONSTR. JOINT DETAILS



VERT. EXPANSION JOINT DETAILS

NOTES:
 Stop all keyways 1'-0" below top of wingwalls
 Stop all N.M.W.S. 1'-0" below top of wingwalls.
 Non-Metallic Waterstops & Keyways are to
 be extended to the top of the abutment.
 Adjust rear face of wingwall to match adjacent
 section for type A & B waterstops.

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 CITY ENGINEERS OFFICE
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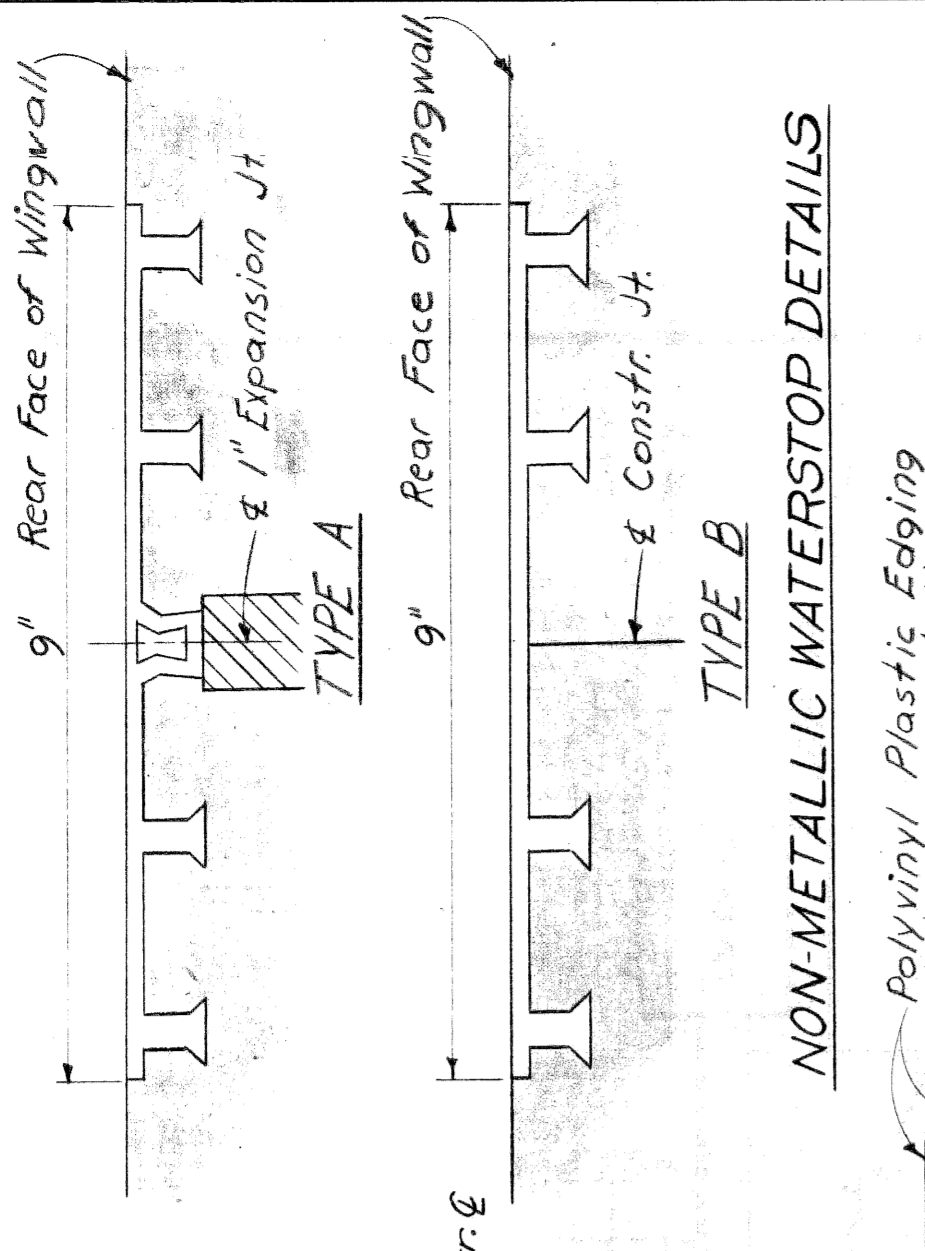
APPROVED: *[Signature]* CIVIL ENGINEER
 JOB NO. PW 99021

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

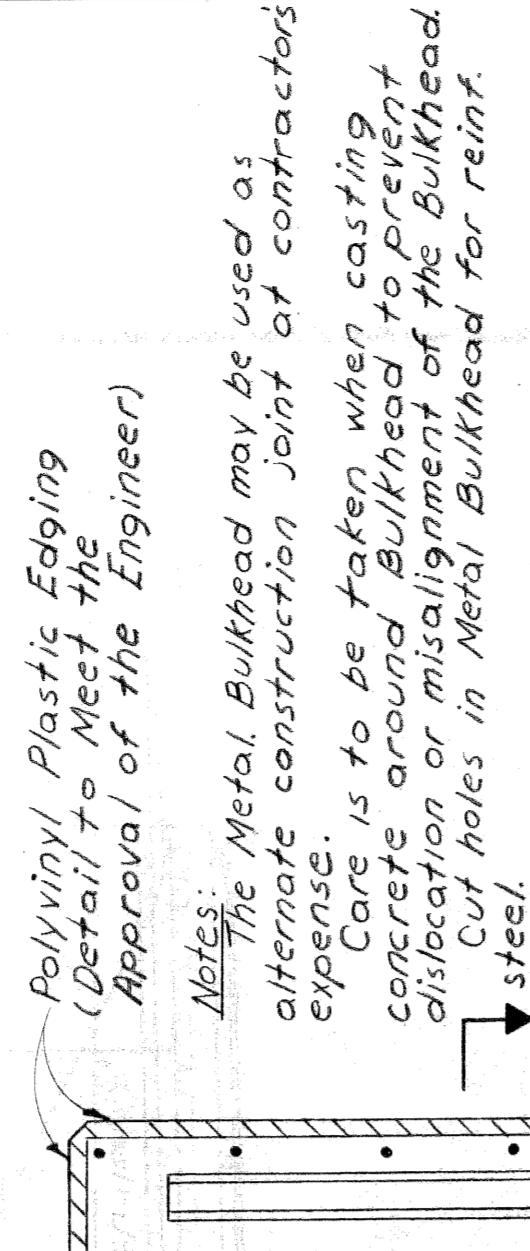
ABUTMENT A DETAILS

NO.	REVISIONS	DATE	BY

CITY OF DETROIT
 DRAWN BY: D.W. K/H
 CHECKED BY: V.A.L.
 SHEET 9 OF 23
 S 39 of 82123 K



NON-METALLIC WATERSTOP DETAILS



ALTERNATE-METAL BULKHEAD FOR CONSTRUCTION JOINTS

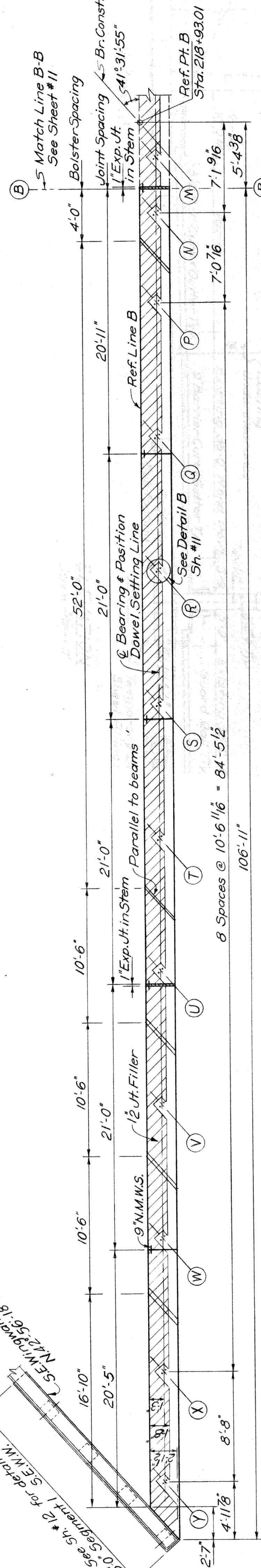
Work this Sheet with Sh.# 8,941/13
 PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 APPROVED: *[Signature]* CIVIL ENGINEER
 JOB No. **PW 99042**

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

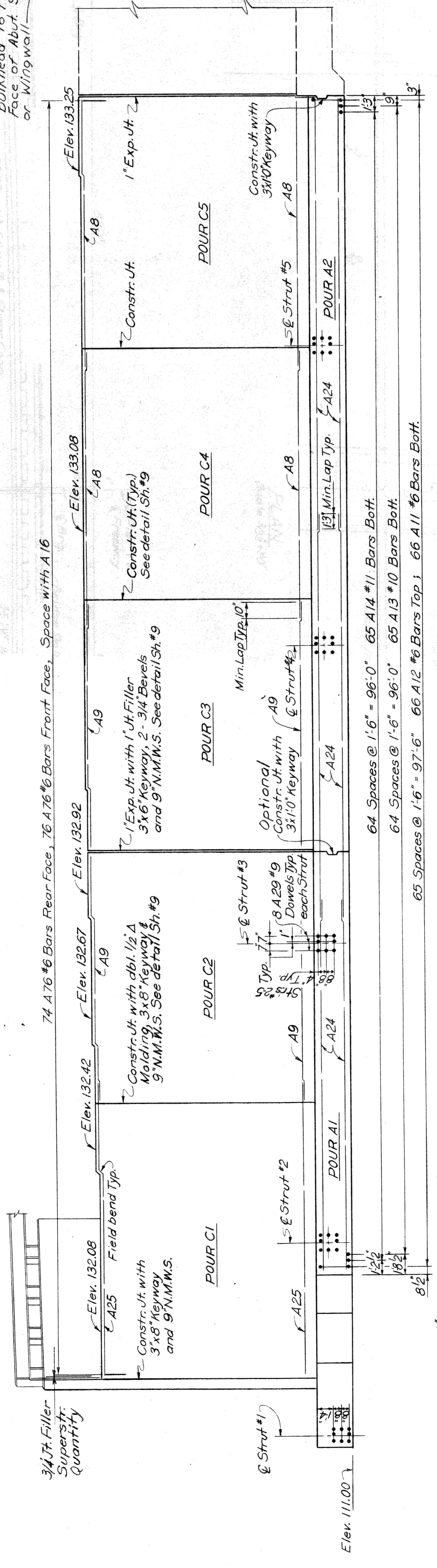
ABUTMENT B DETAILS

CITY OF DETROIT
 DRAWN BY *[Signature]* 12-67
 CHECKED BY *[Signature]* 10-67
 SHEET 10 OF 23
S 39 of 82123 K

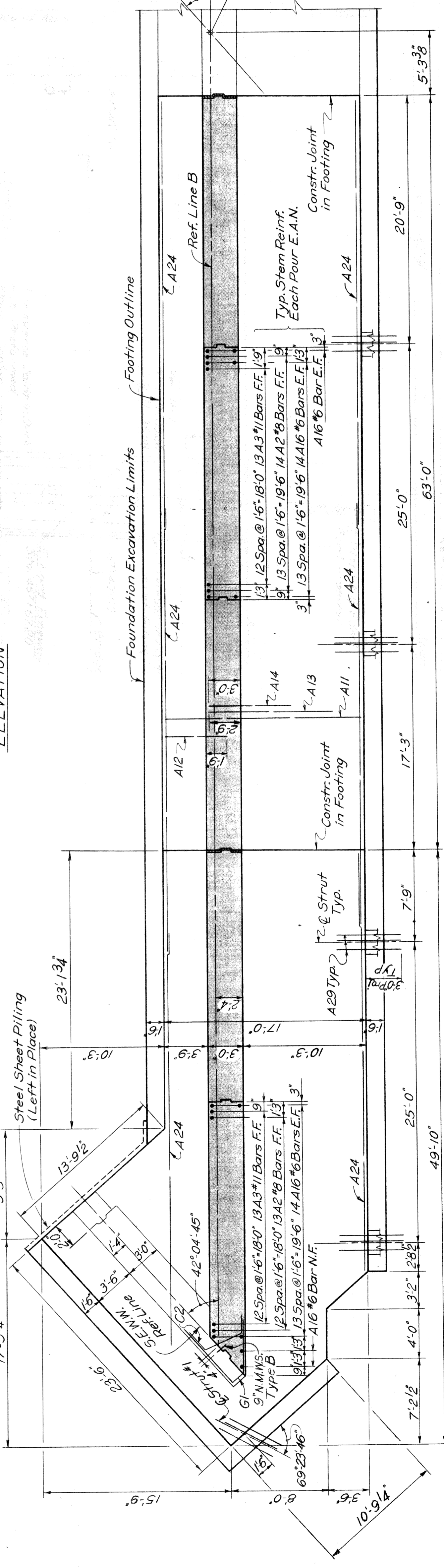
NO.	REVISIONS	DATE	BY



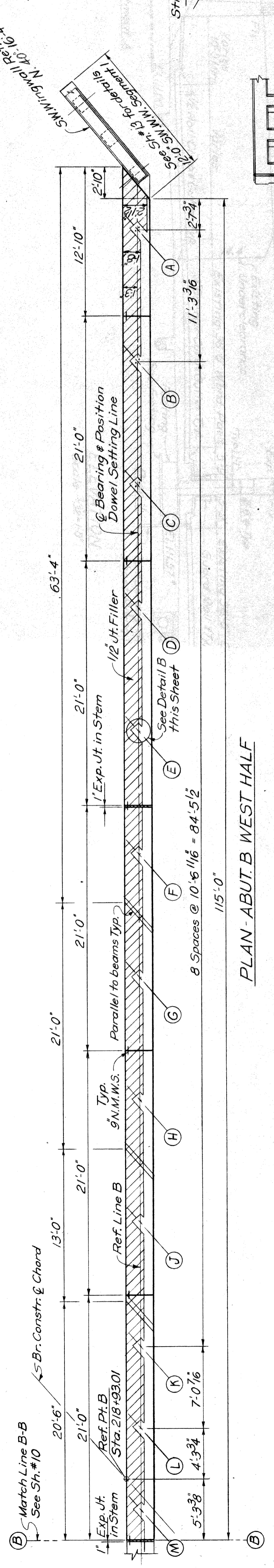
PLAN-ABUT. B EAST HALF



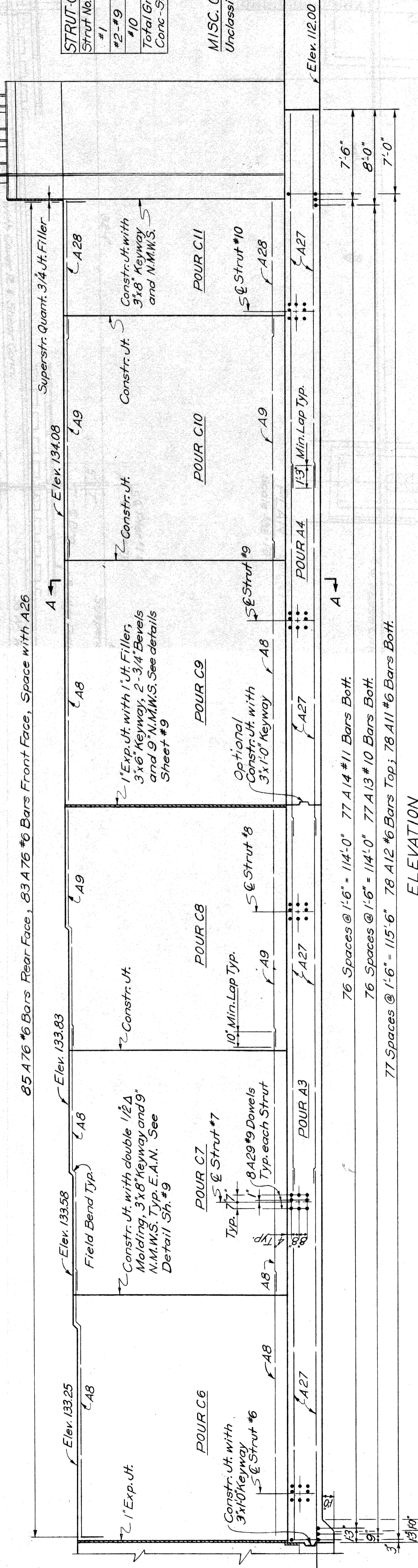
ELEVATION



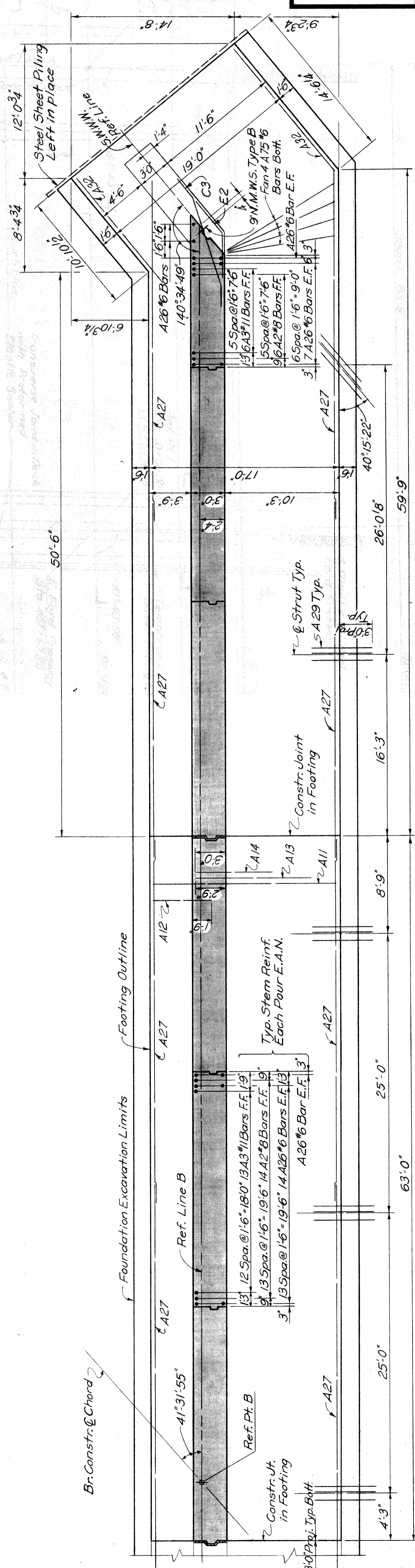
FOUNDATION PLAN



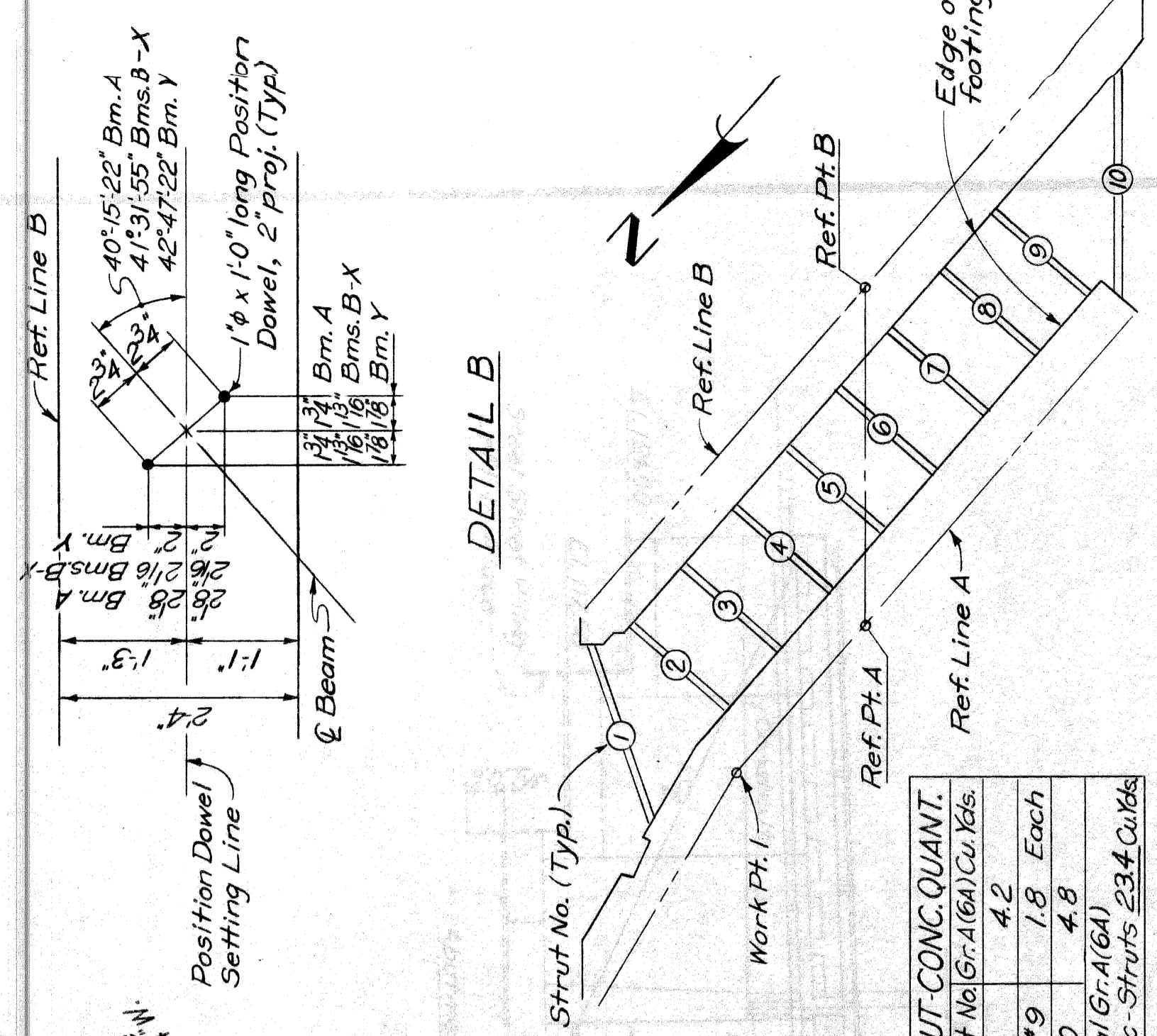
PLAN - ABUT. B WEST HALF



ELEVATION

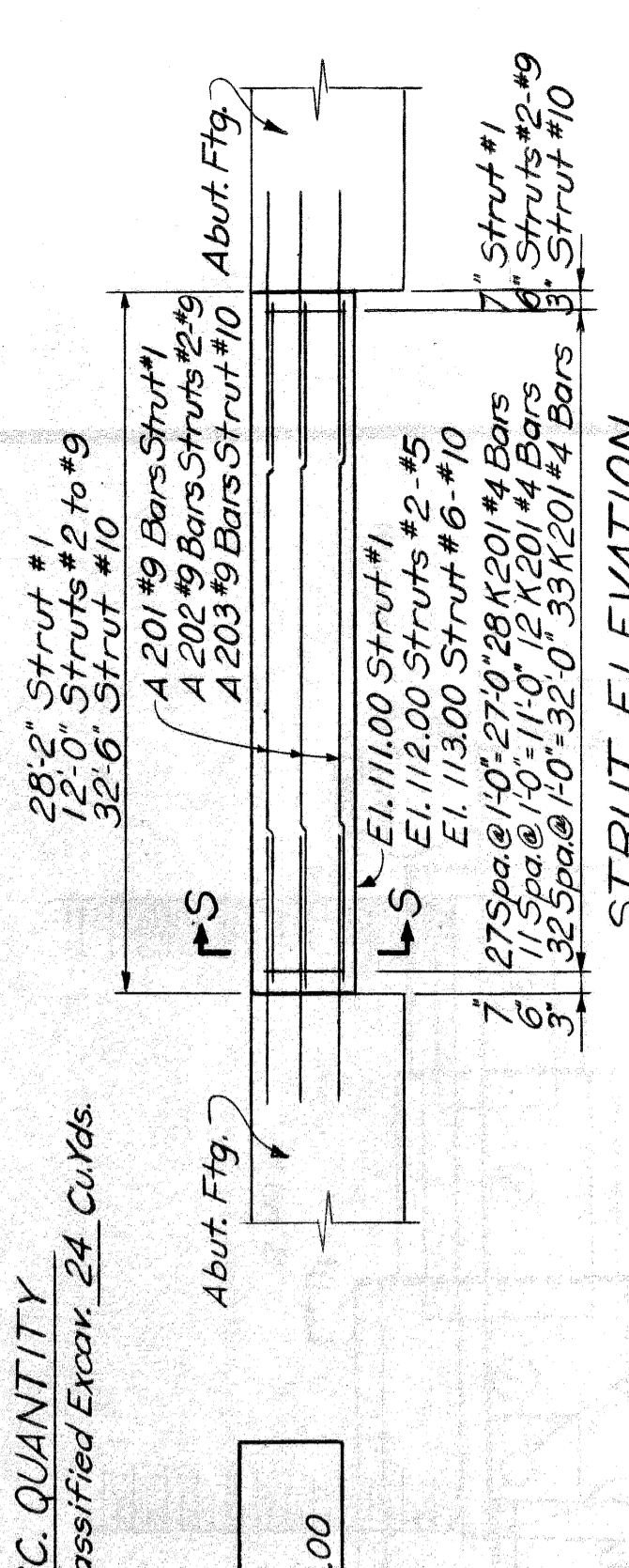


FOUNDATION PLAN



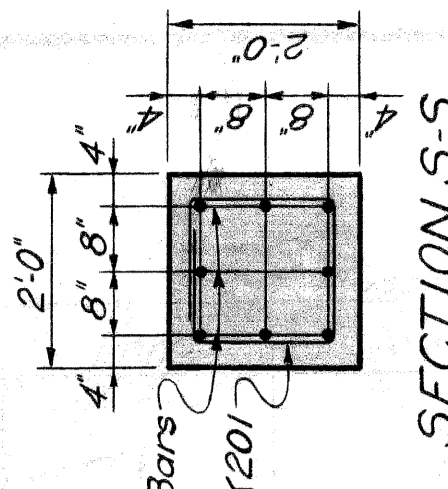
DETAIL B

STRUT LOCATION PLAN



STRUT CONC. QUANT.		
Strut No.	Gr. A (6A) Cu. Yds.	Each
#1	4.2	7.8
#2-#9	1.8	4.8
#10	4.8	
Total Gr. A (6A)		
Conc. Struts	23.4	Cu. Yds.

MISC. QUANTITY
Unclassified Excav. 24 Cu. Yds.



SECTION S-S

Work this Sheet with Sheets 8-10, 12 & 13
PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
JOB No.
PW 99021
APPROVED: [Signature]
CIVIL ENGINEER

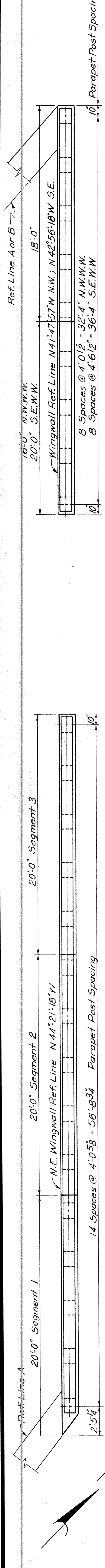
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT B DETAILS

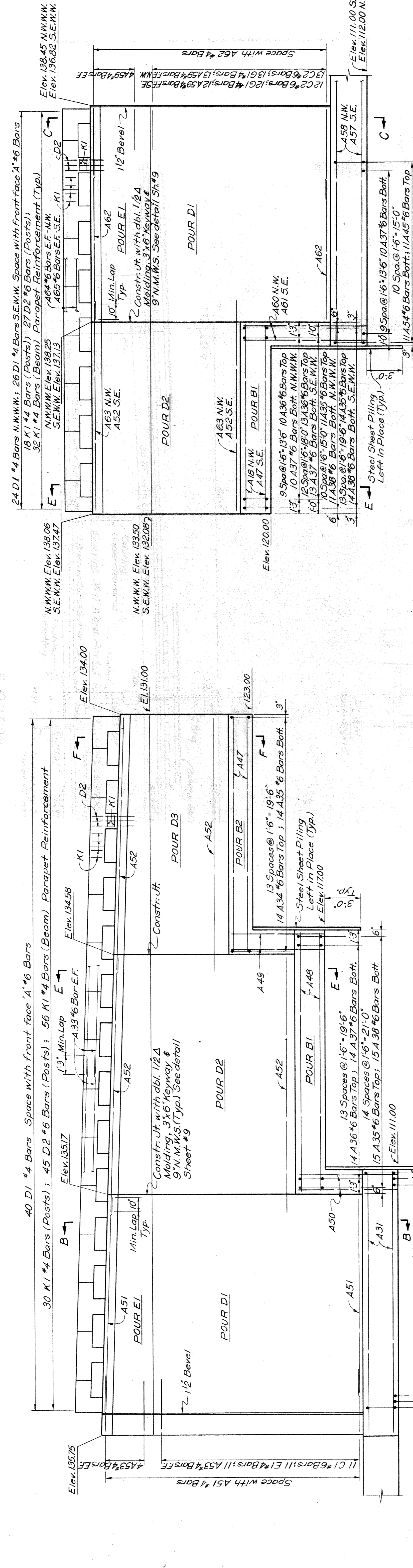
NO.	REVISIONS	DATE	BY

CITY OF DETROIT	
DRAWN BY	DAL/KKH
CHECKED BY	WAL
DATE	12-67
SHEET	11 OF 23

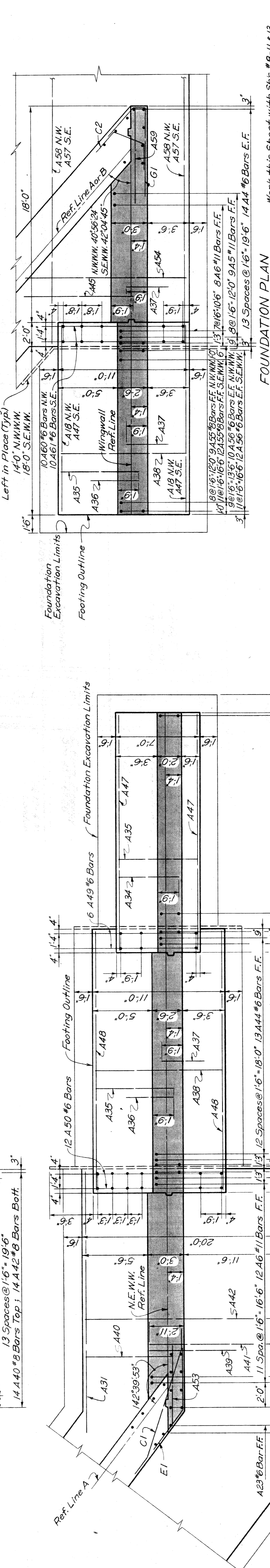
S 39 of 82123 K



PLAN - N.E.W.W.
(N.W.W.W. Shown)
(S.E.W.W. Similar)



ELEVATION



FOUNDATION PLAN

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

Work this Sheet with Shgs. # 8-11 & 13

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

APPROVED: [Signature] REGISTERED ENGINEER

JOB No. PW 990(2)

ABUTMENT DETAILS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SHEET NO.	DATE	BY

S 39 of 82123 K

STRUCTURAL STEEL NOTES

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

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

Shop Connections shall be welded as shown on the plans. All welding shall be in accordance with all current specifications for STR-1 welding. Field Connections shall be bolted with $\frac{3}{4}$ " high-strength bolts except as noted.

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

Welding on tension flanges of beams will not be permitted except as shown on the plans. Welding at other locations not shown on the plans may be permitted by written authorization provided the welding is to be performed in strict accordance with all specification requirements for structural welding.

Shear Developers may be spirals or studs at the contractor's option. Camber all beams $\frac{1}{2}$ ".

Beam dimensions are horizontal and along the ϵ of beam. Camber shall be measured with the beam lying on its side. Camber tolerance is $\pm \frac{1}{4}$ ". Heating shall be used if necessary to assure tolerances. Plates shall have their bottom surfaces coated and Masonry plates shall have their top surfaces coated in accordance with the requirements for machine-finished surfaces.

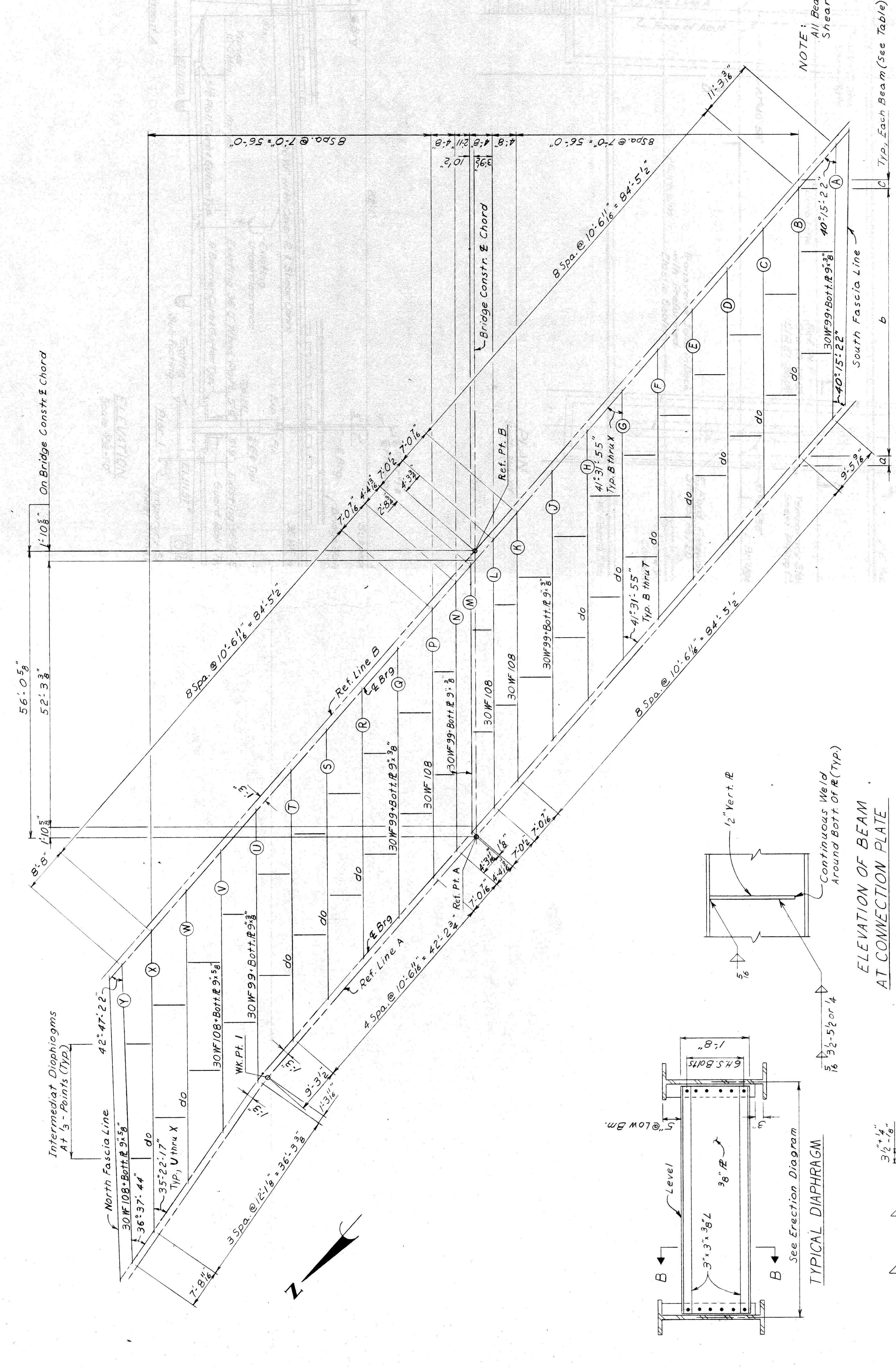
All steel shall be Unpainted A 441 (Modified)

QUANTITIES

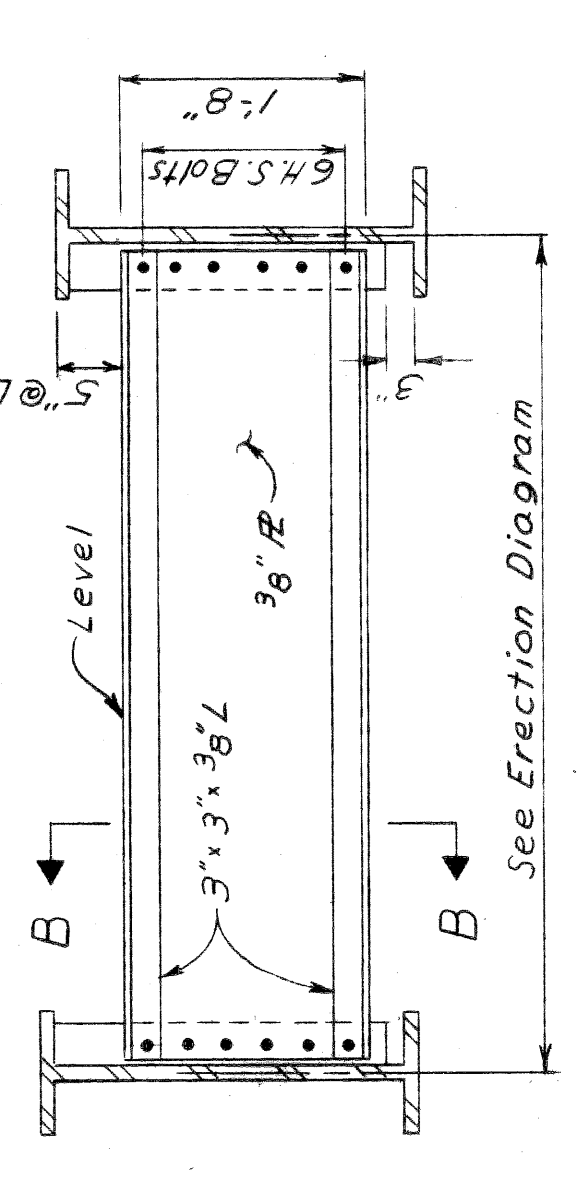
Structural Steel - Furnishing and Fabricating 155,300 Lbs.
Structural Steel - Erection 155,300 Lbs.
Shear Developers Lump Sum

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

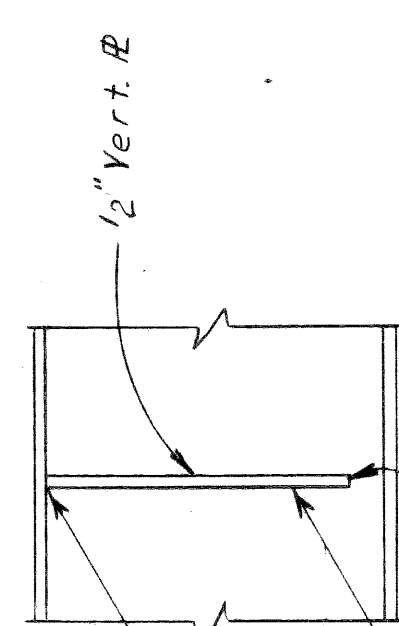
VARIABLE BEAM DIMENSIONS			
BEAM	DIM. A	DIM. b	DIM. c
Y	2'-1 1/8"	58'-2 3/8"	1'-10 1/4"
X		58'-4 1/2"	
W	2'-2"	56'-5"	1'-10 5/8"
V		54'-5 1/2"	
U		52'-6"	
B-T	1'-10 5/8"	52'-3 3/8"	
A	1'-11 3/8"	53'-7 3/4"	1'-11 3/8"



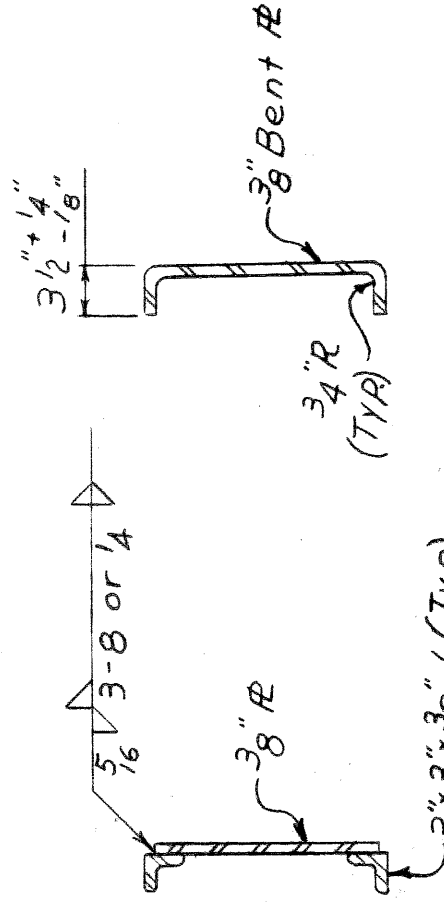
NOTE: All Beams With Shear Developers



TYPICAL DIAPHRAGM



ELEVATION OF BEAM AT CONNECTION PLATE



SECTION B-B

(Either detail may be used)

ERECTION DIAGRAM

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(2)

STRUCTURAL STEEL DETAILS

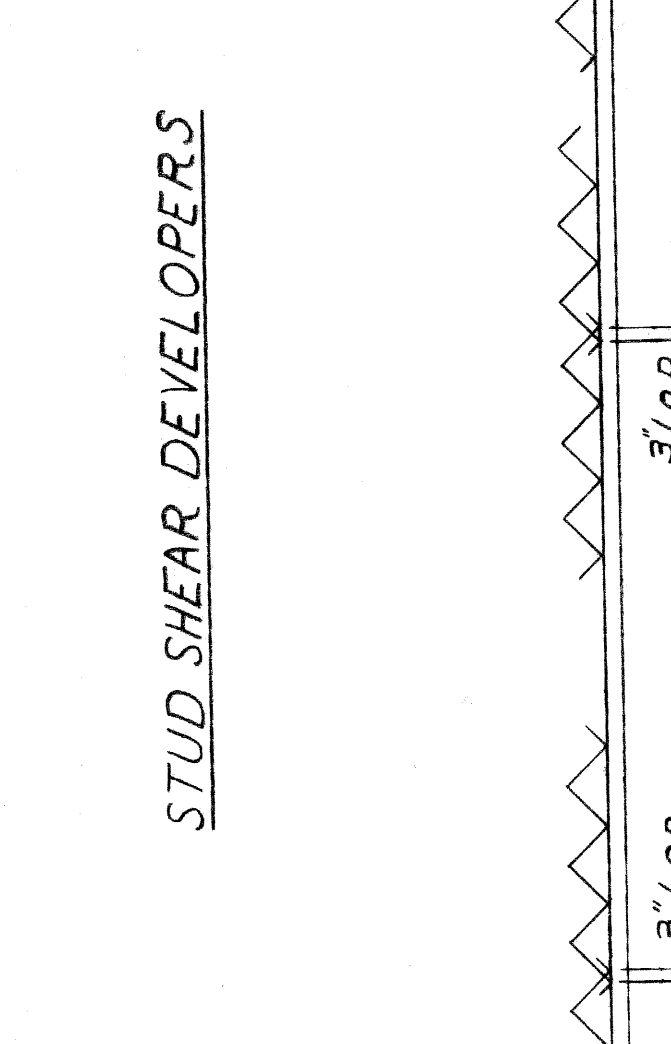
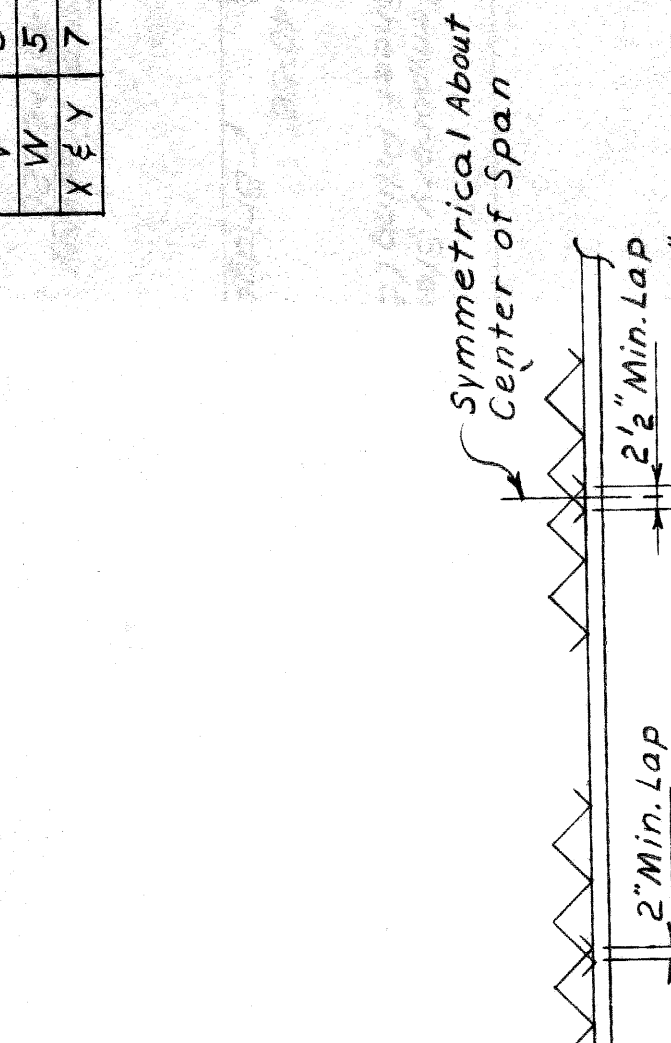
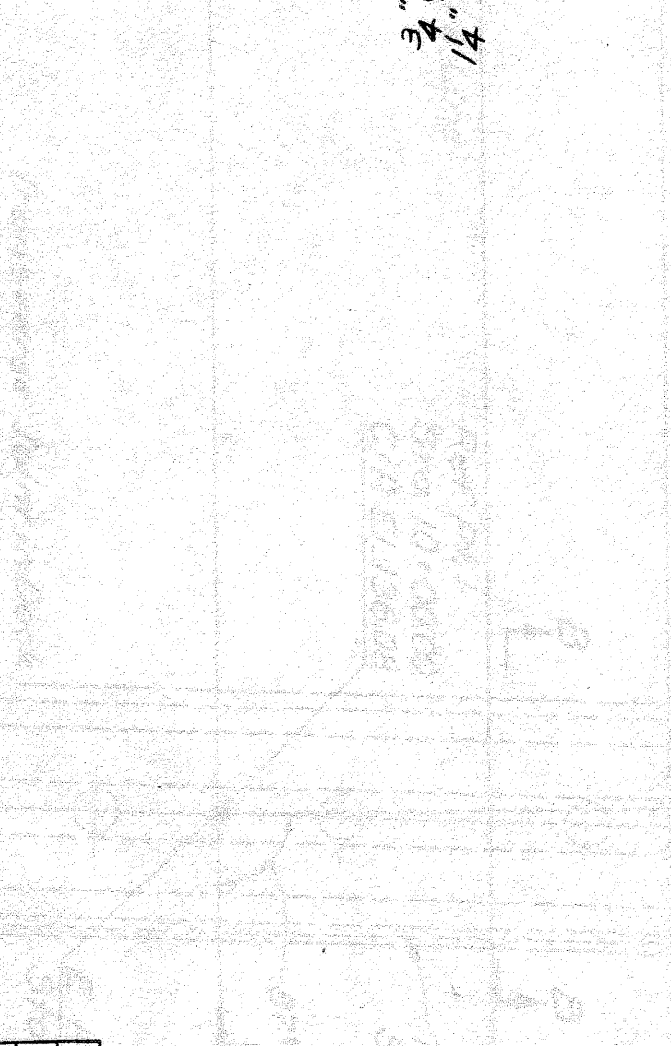
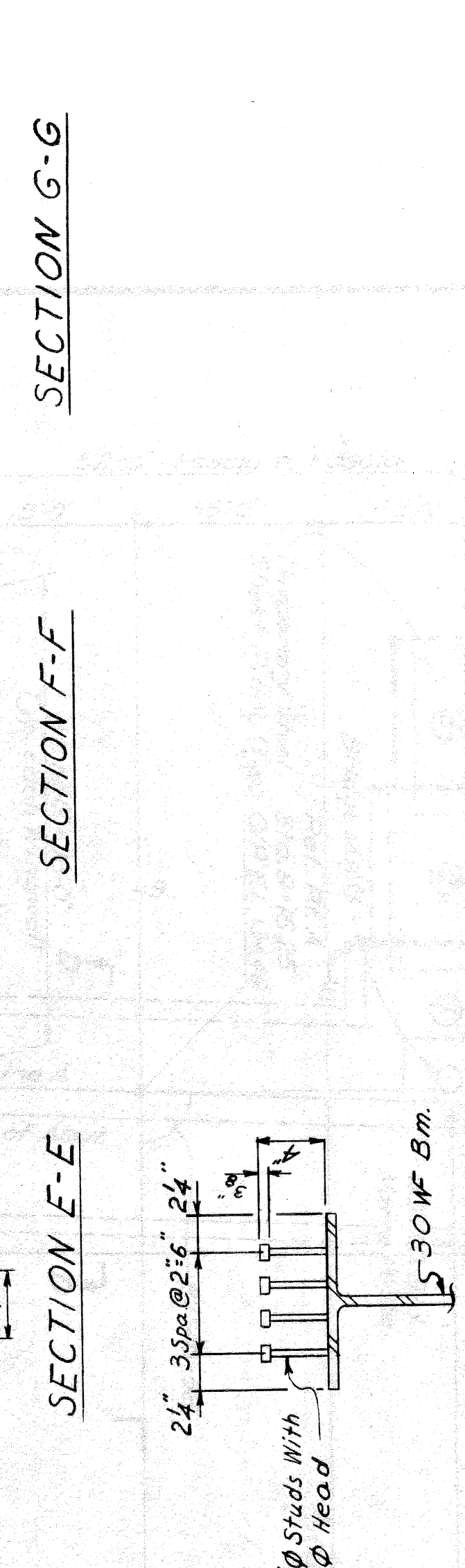
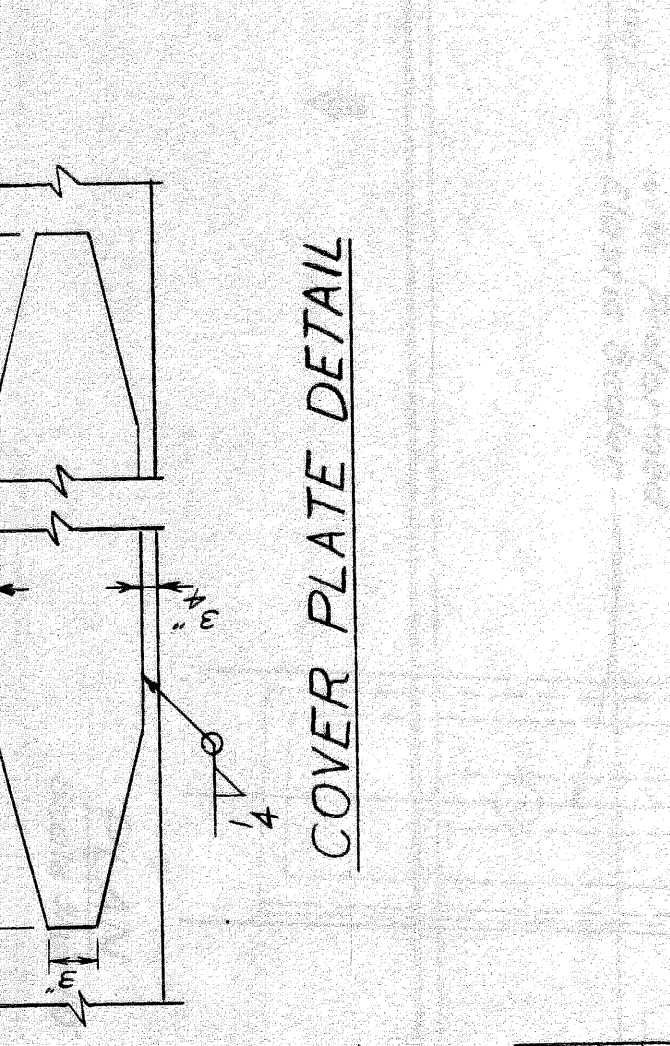
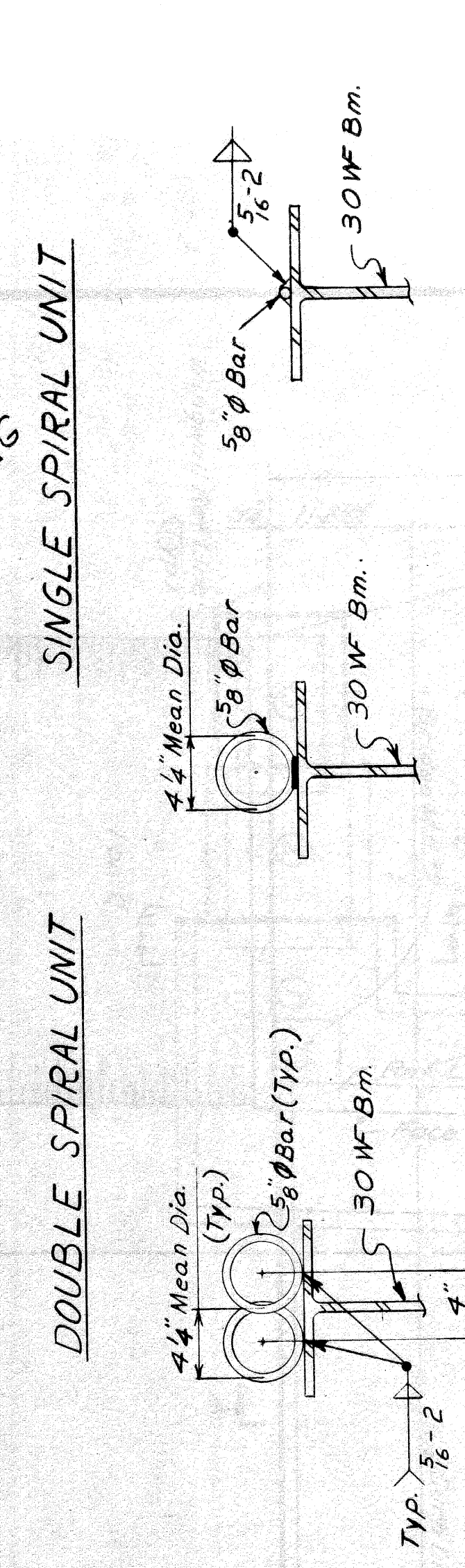
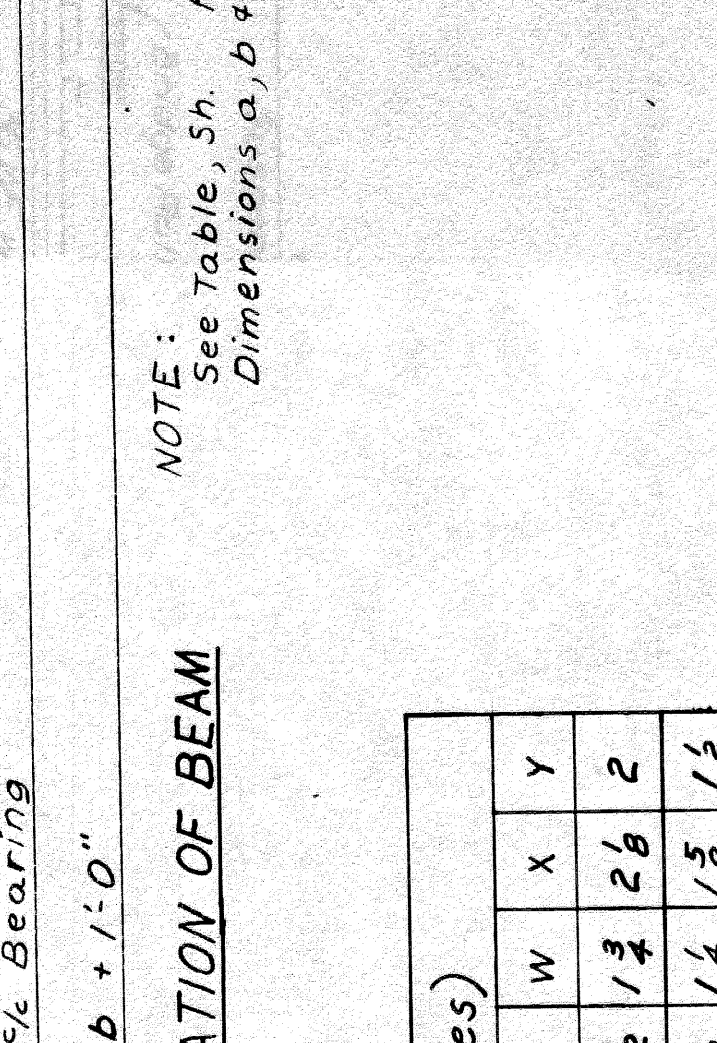
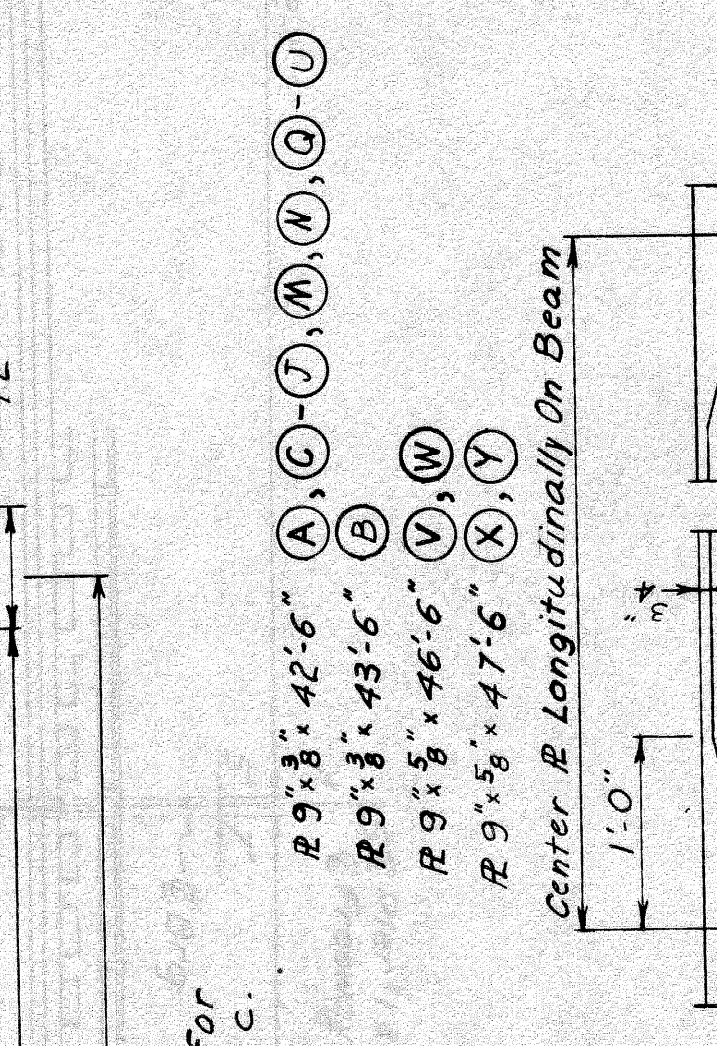
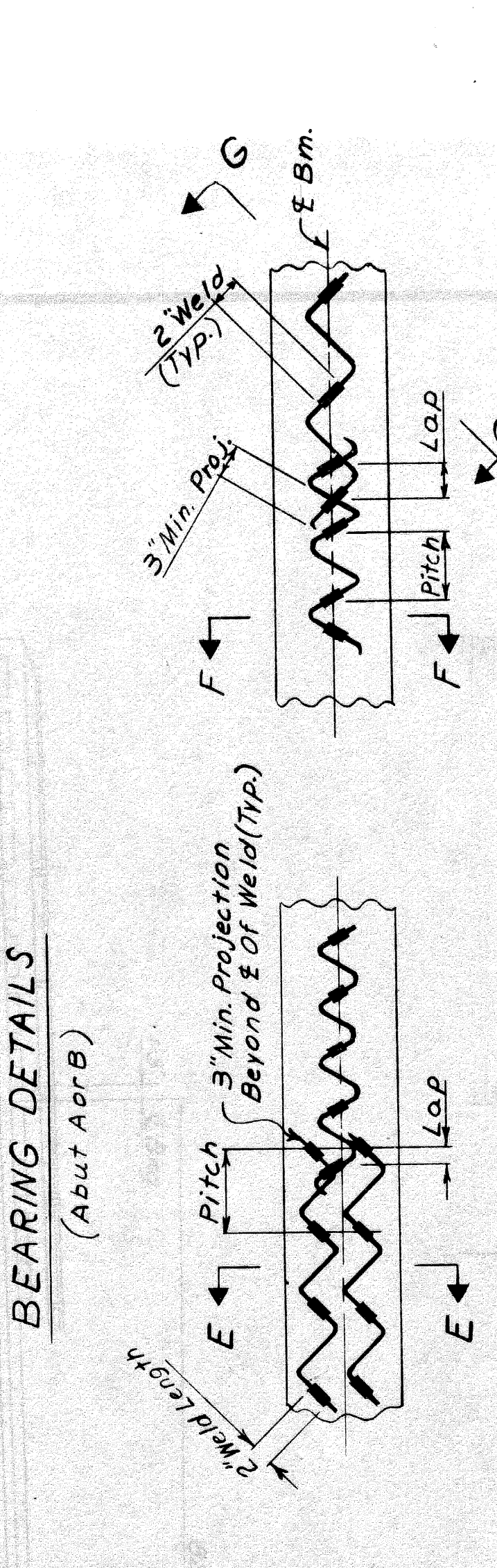
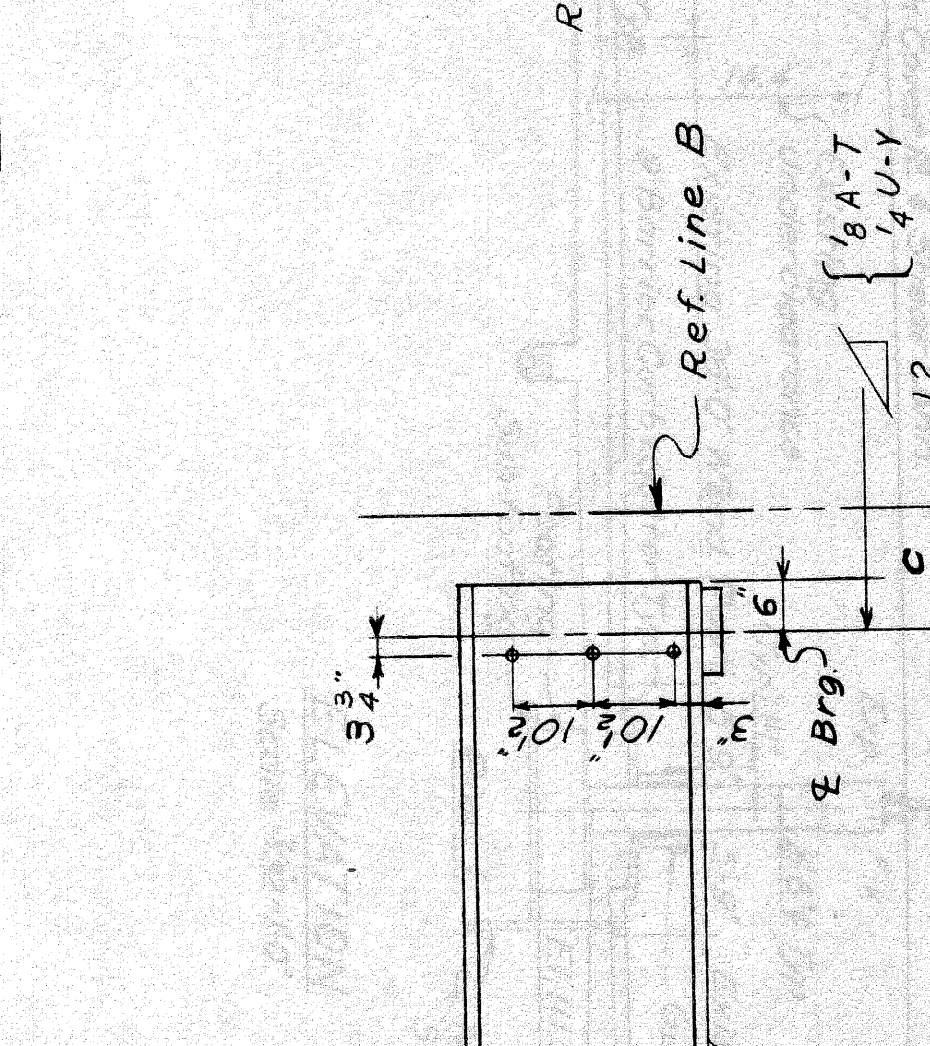
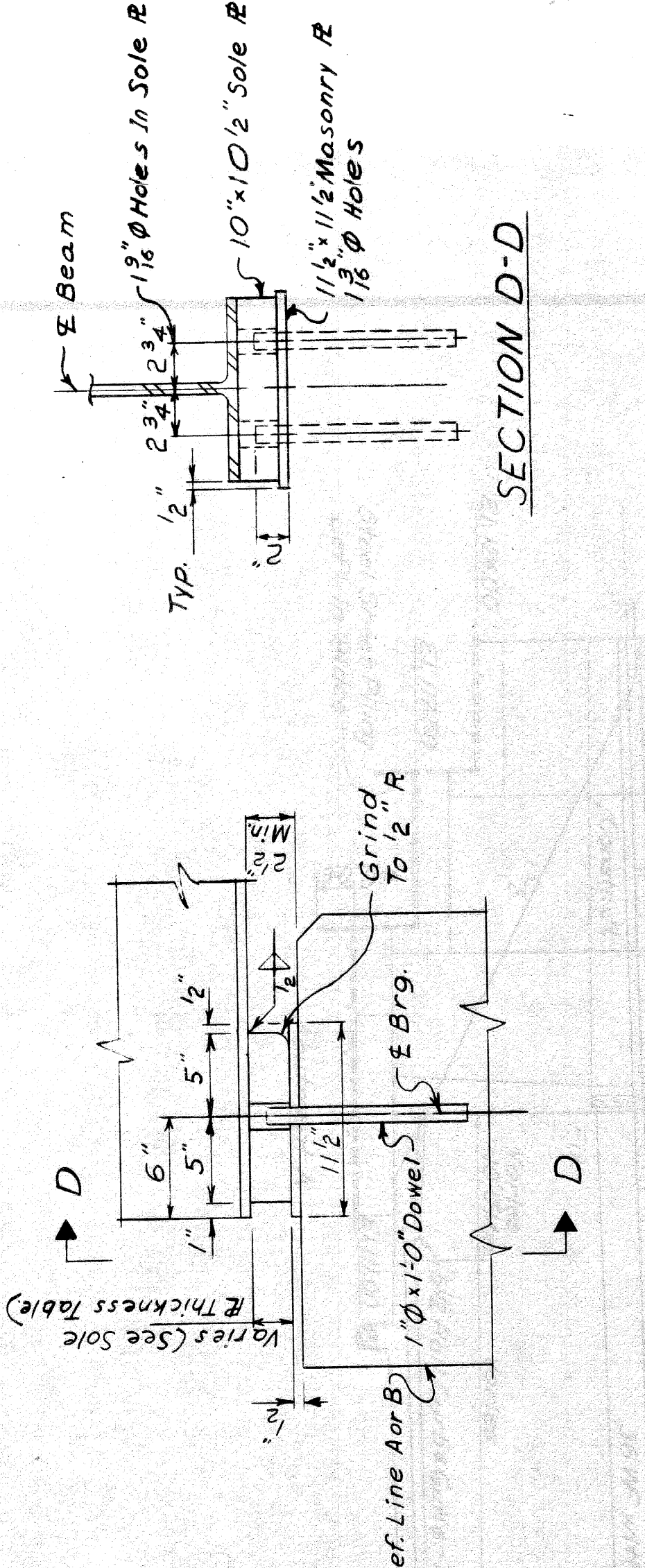
NO.	DESCRIPTION	DATE	BY

MICHIGAN STATE HIGHWAY DEPARTMENT

CITY OF DETROIT
SHEET NO. **S 39** of **82123 K**
DRAWN BY: **MAGLE B-67**
CHECKED BY: **G. Molnar 11-67**
SHEET OF **23**

SOLE PLATE THICKNESS TABLE (Inches)

BEAM	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y
ABUT. A	3 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2	12	12 1/2
ABUT. B	2 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2



NOTE: See Table, Sh. For Dimensions a, b & c.

ELEVATION OF BEAM

Dim. b + 1'-0"

CAMBER ORDINATES (Inches)

BEAM	A	B	C-J	K	L	M	N	P	V	W	X	Y
h	1 1/8	1 3/8	1 1/2	1 5/8	1 7/8	2	2 1/8	2 1/4	2 3/8	2 1/2	2 5/8	3
g	1 1/8	1 1/4	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8

BEAM d

A	3
B-U	2
V	3
W	5
X & Y	7

BEAM e f

A	13	5'-5"
B-T	11	4'-7"
U	12	5'-0"
V	14	5'-10"
W	16	6'-8"
X & Y	19	7'-11"

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVED: *[Signature]* STRUCTURAL ENGINEER

JOB No. PW 990(2)

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

Work This Sheet With Sh. # 14

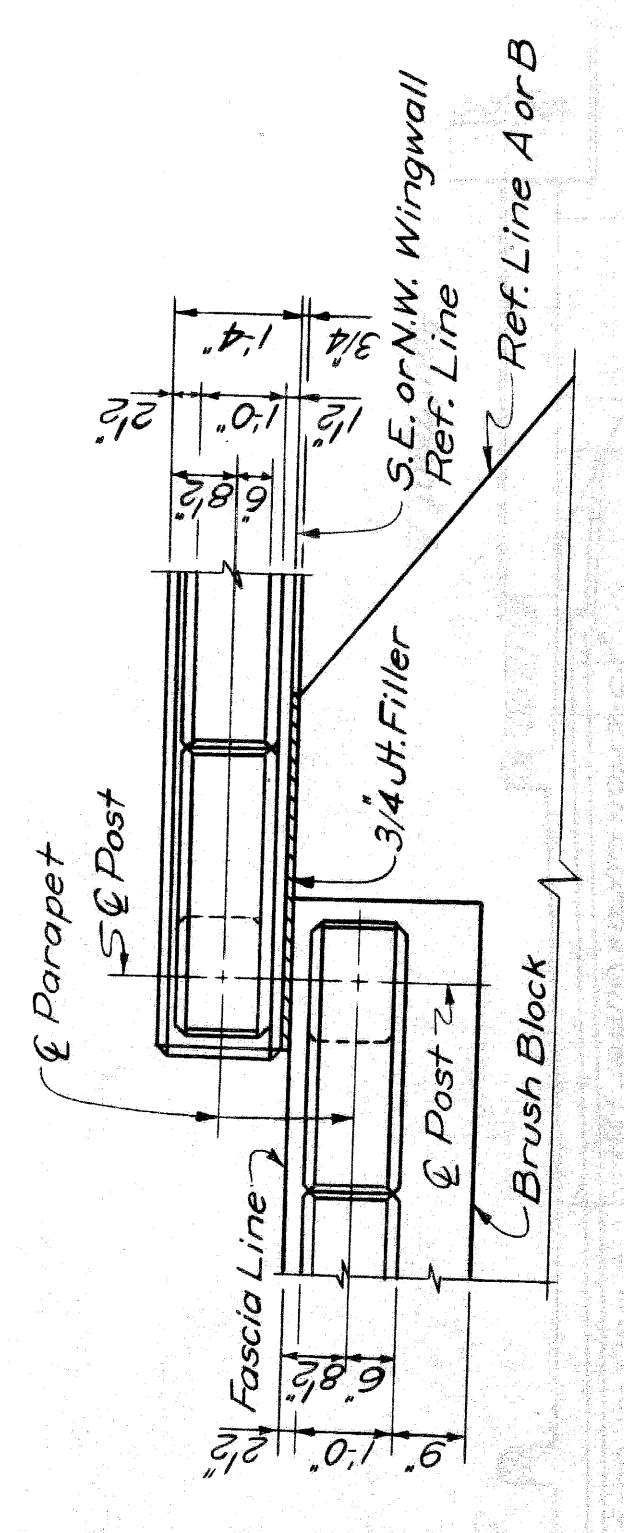
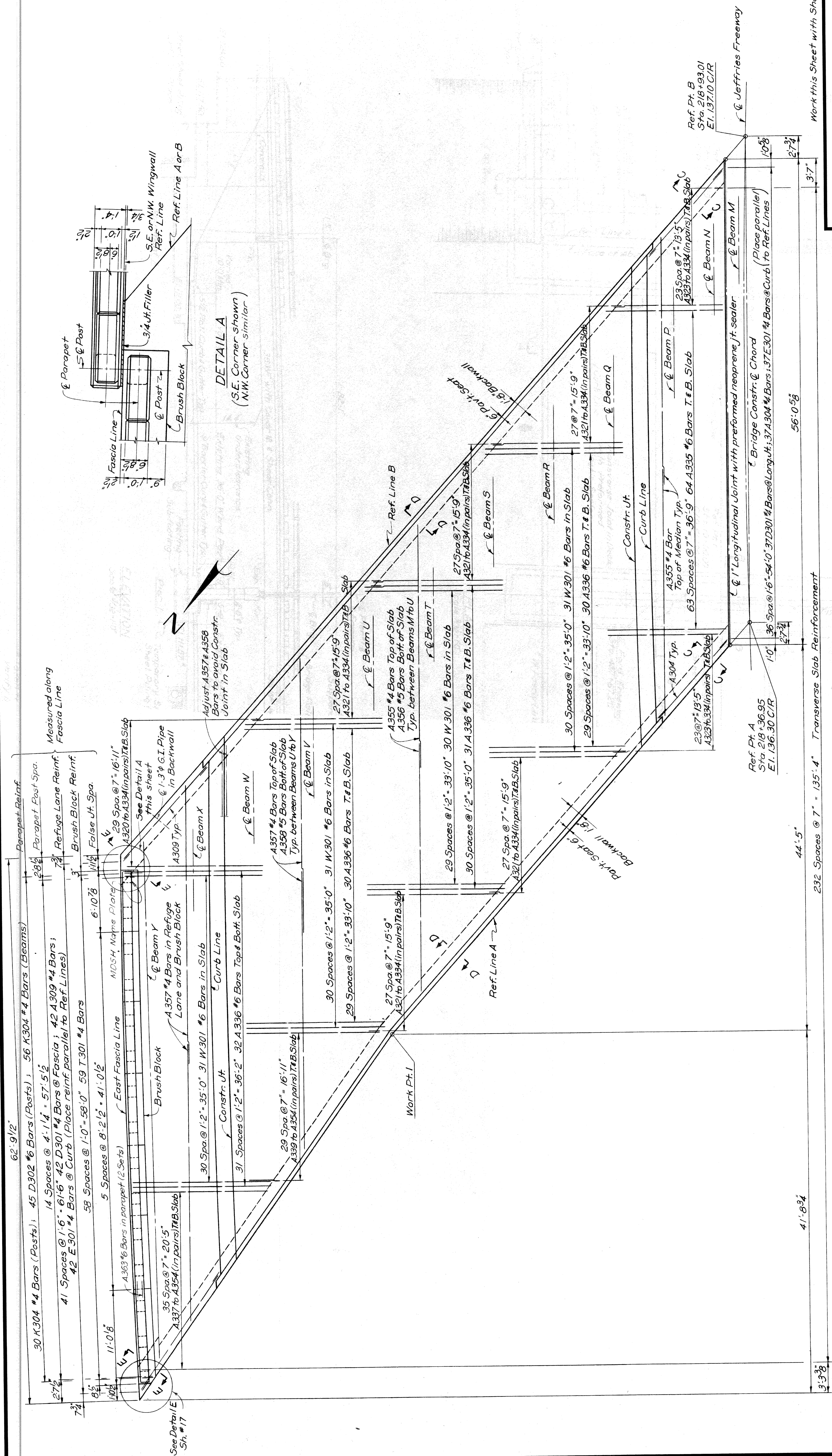
CITY OF DETROIT

DESIGNED BY: *[Signature]* 12-67

CHECKED BY: *[Signature]* 12-67

SHEET 15 OF 23

S 39 of 82123 K



MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

Work this Sheet with Sheets #17-22

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

APPROVED: *[Signature]*
 PROFESSIONAL ENGINEER
 JOB No. PW 990(2)

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 CIVIL ENGINEER
 12-17
 K.V.H.
 5/2/82
 23
 S 39 of 82123 K

DECK PLAN
 EAST HALF

3'-3 3/8"

41'-8 3/4"

44'-5"

56'-0 5/8"

232 Spaces @ 7" = 135'-4" Transverse Slab Reinforcement

Ref. Pt. A
 Sta. 218+36.95
 El. 136.30 C/R

Ref. Pt. B
 Sta. 218+93.01
 El. 137.10 C/R

Jeffries Freeway