

542 of 82123K
this Contract

PROPOSED BRIDGE
S40 of 82123K
This Contract

S41 of 82123K
this Contract

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 (S40) crossing over the West Bnd to South Bnd. Turning Roadway and placing granular Mat'l Class III 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. Coust*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

GENERAL PLAN OF SITE

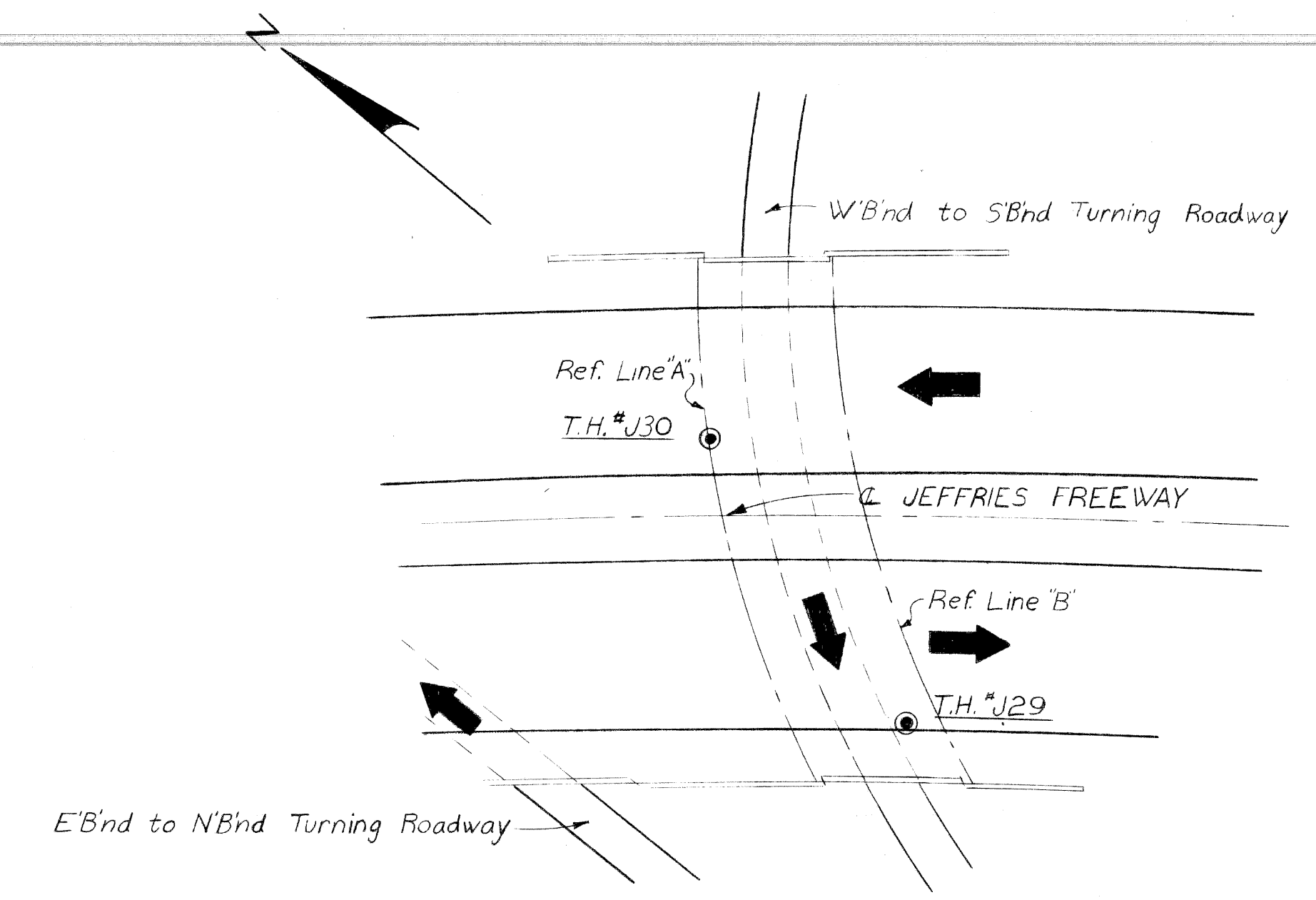
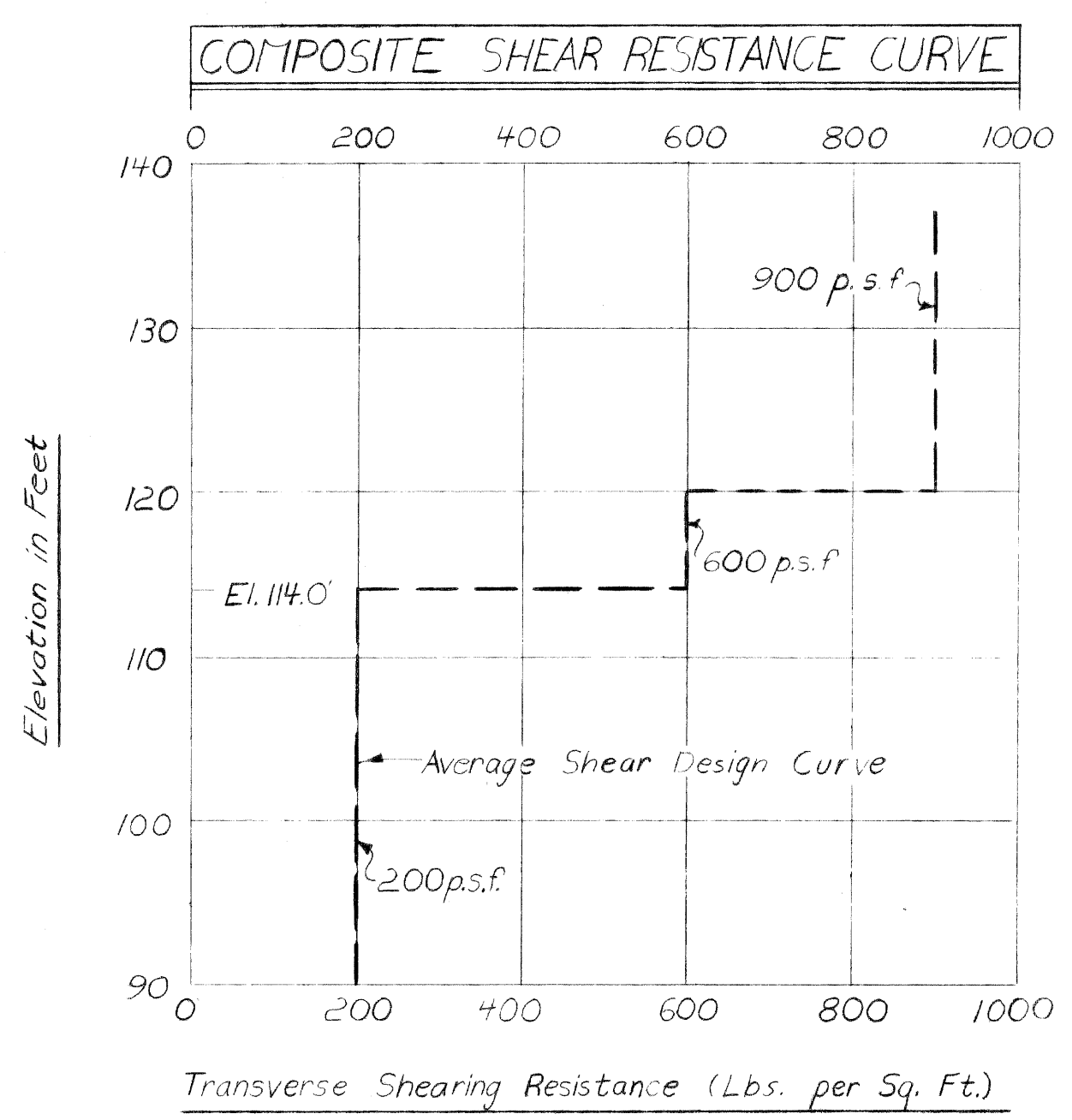
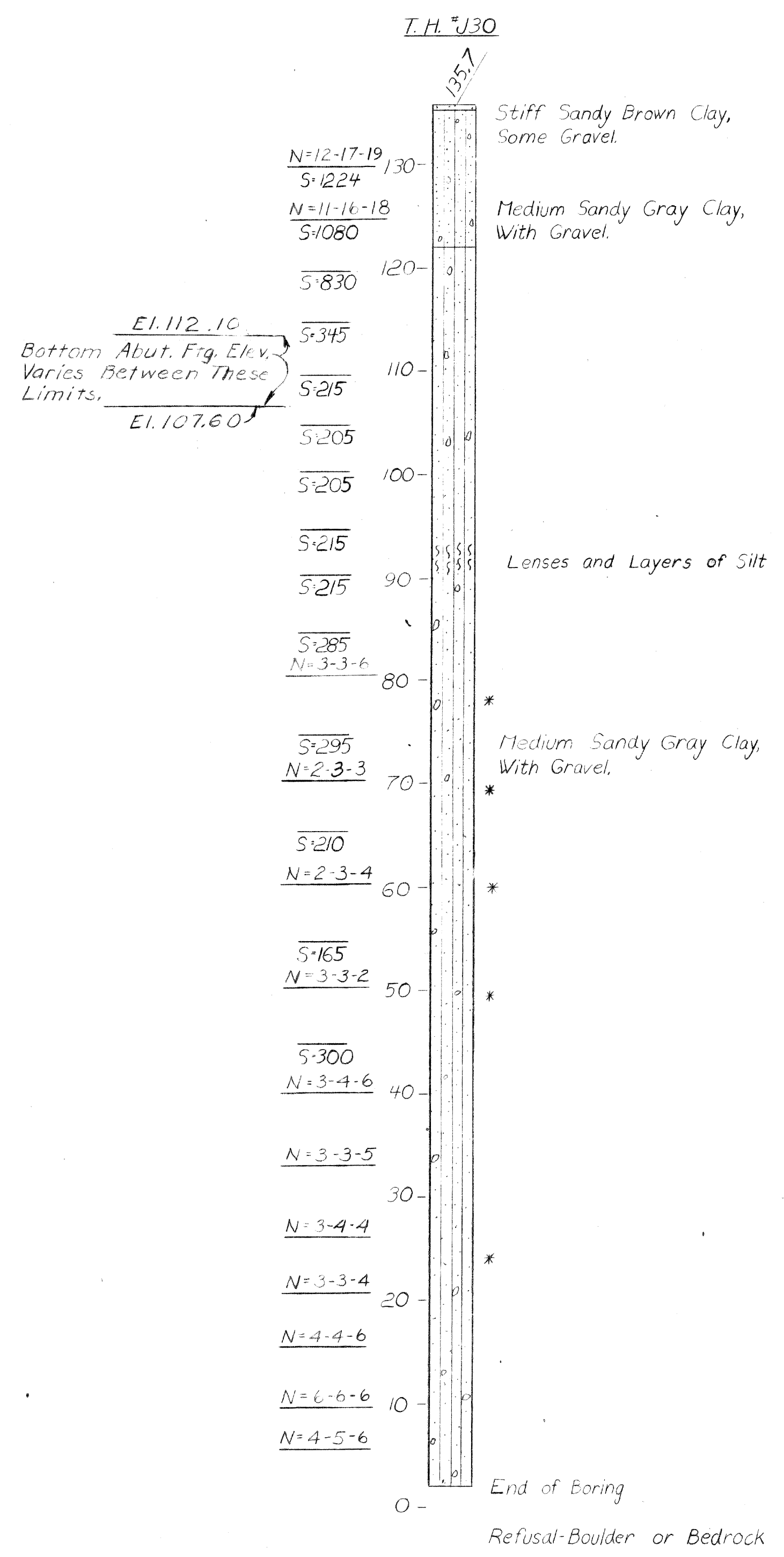
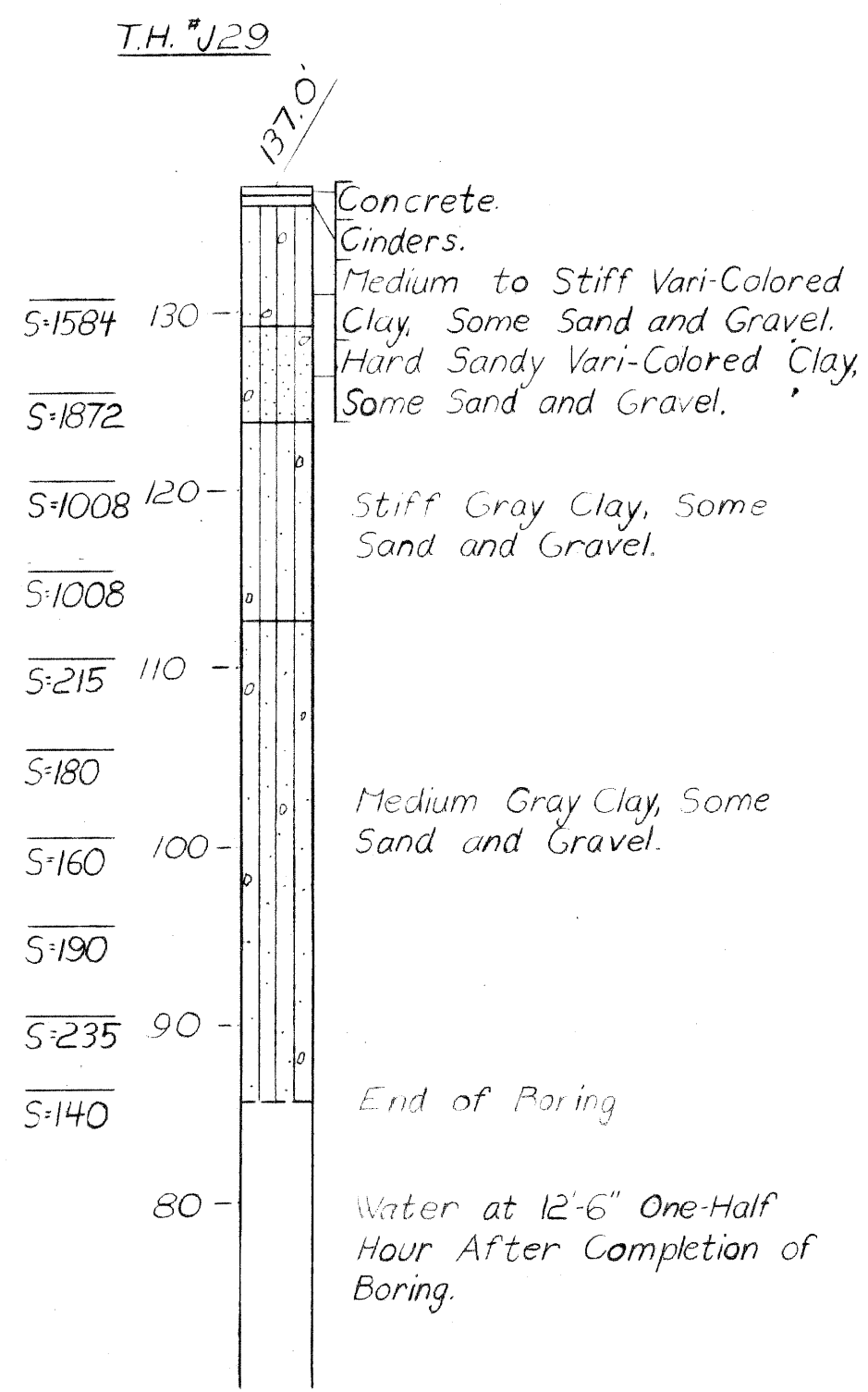
CITY OF DETROIT

SQUAD BOSS *R. James* 12-67
DRAWN BY *V. Kerckhoff* 5-7-66
TRACED BY
CHECKED BY *McGuire* 9/66
SHEET 2 OF 23

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

S40 of 82123K

LOG OF SOIL BORINGS



SOIL BORING LOCATION SKETCH

NOTES

N Indicates the number of blows required to drive the 2" Sampler 6" (or as noted) using a 140 lb. hammer falling 30". Where blow count is not shown, Sampler was levered, pushed or hand-driven.

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

* Indicates no sample.

All elevations are based on City of Detroit Datum.

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

APPROVED: *J. J. Casutt*
 STRUCTURAL ENGINEER

JOB NO.
 PW 990(2)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
 JEFFRIES FREEWAY CROSSING THE
 WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

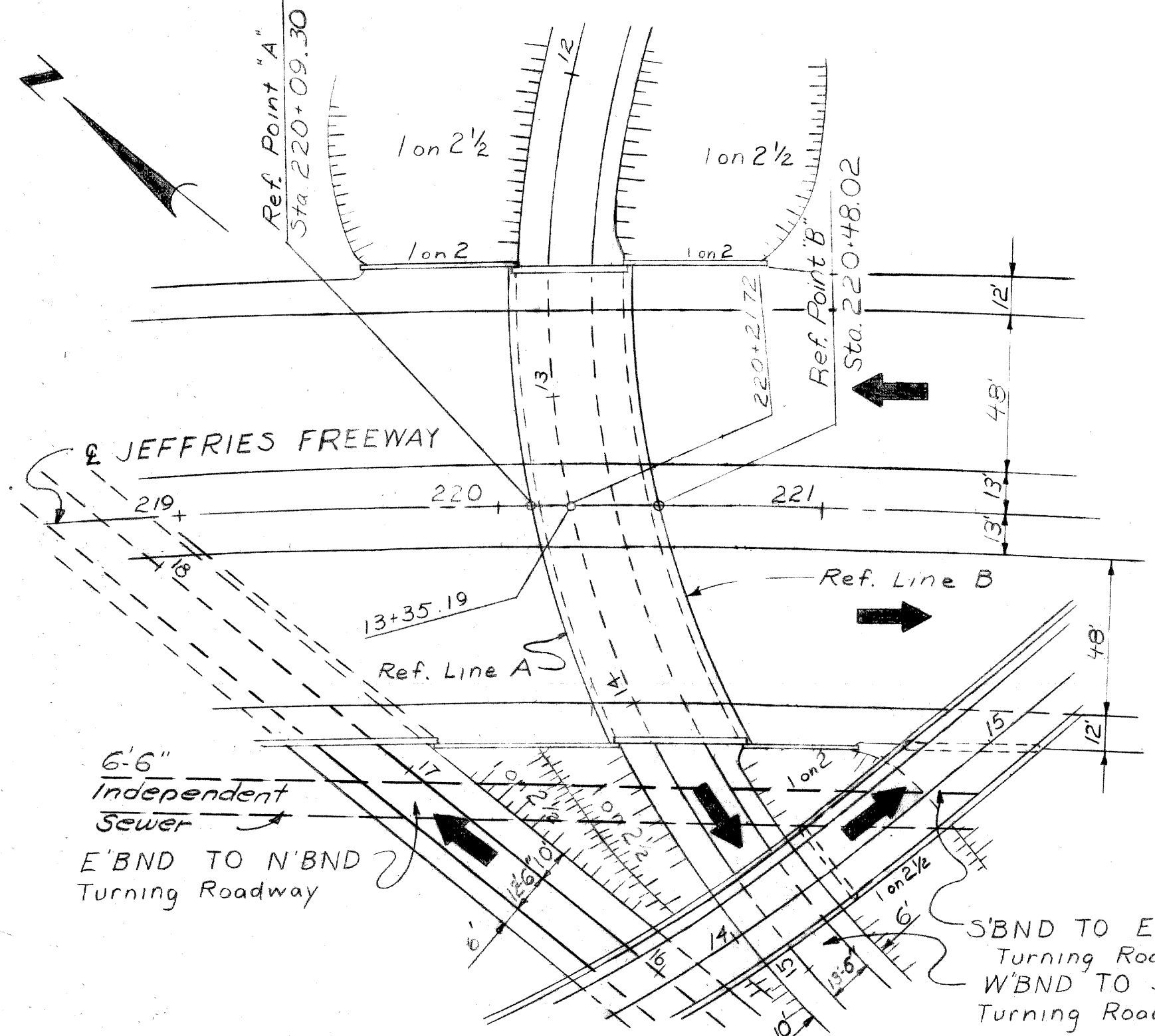
LOG OF SOIL BORINGS

APPROVED: _____
 DESIGN SUPERVISING ENGINEER

APPROVED: _____
 ENGINEER OF DESIGN - CONSULTANTS

SQUAD BOSS	R. Jones	12-67
DRAWN BY	A.V. Karchner	7-30-66
TRACED BY	McGuire	9/66
CHECKED BY	McGuire	9/66
SHEET	3	OF 23

S40 of 82123K

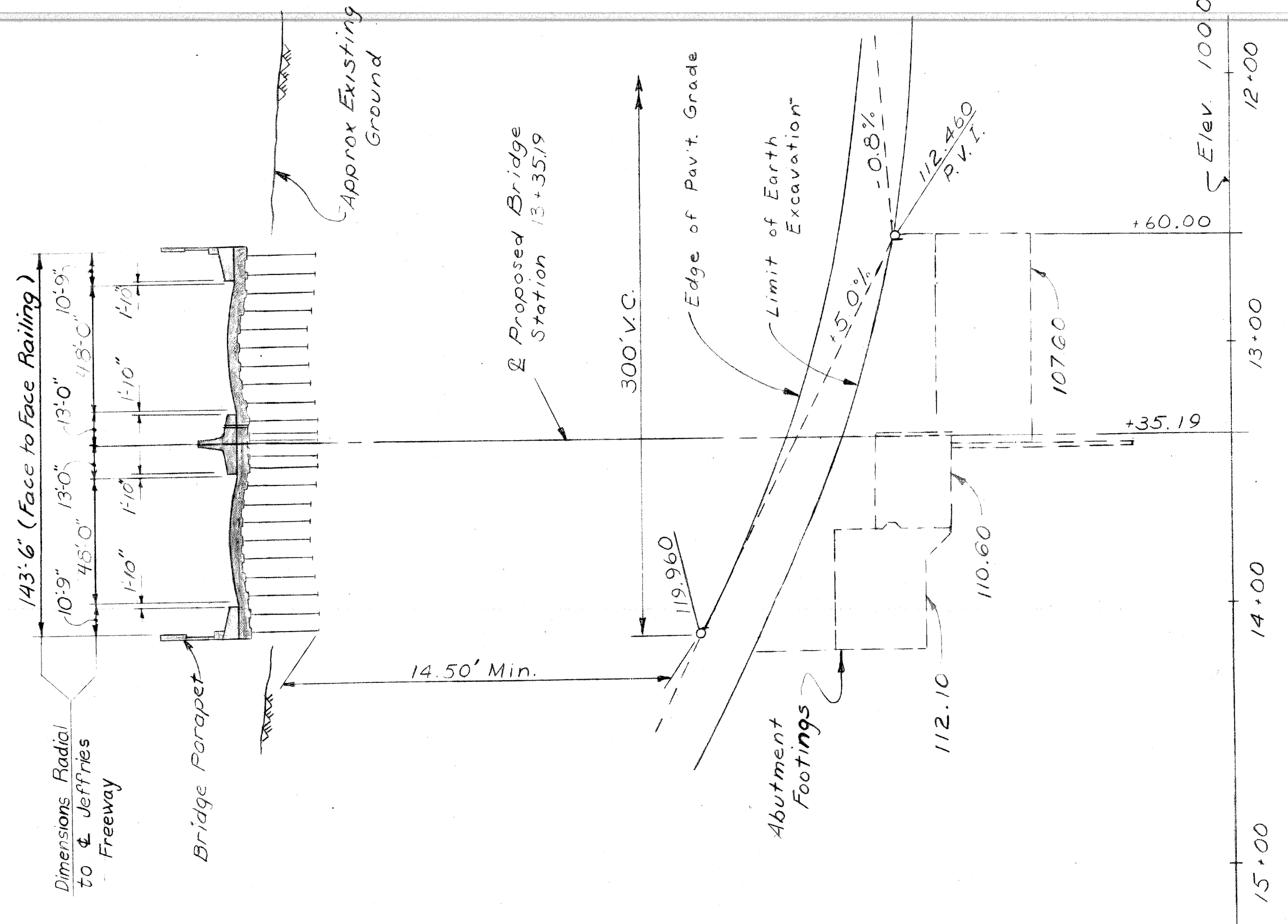


PLAN
Scale: 1" = 40'

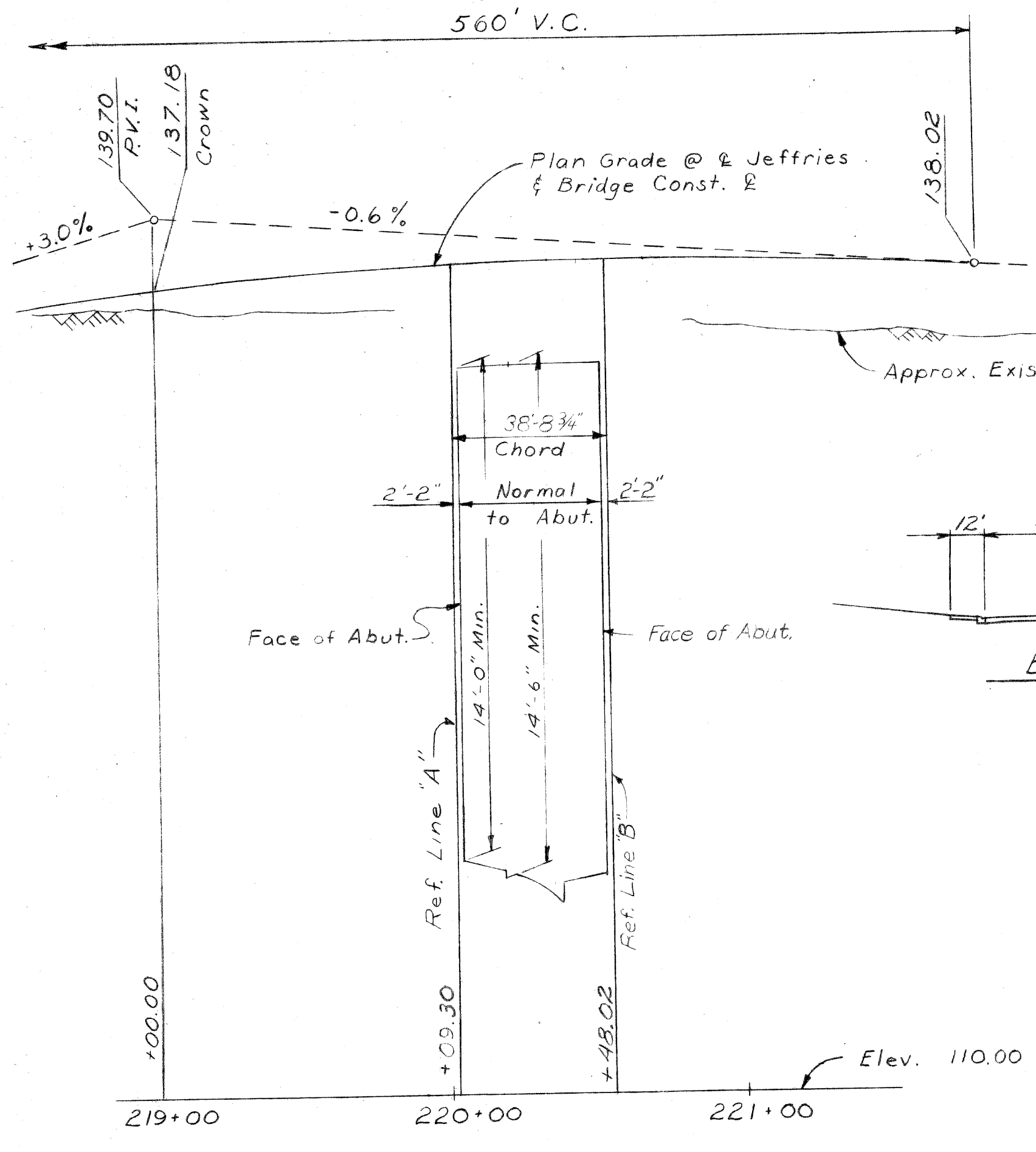
W'BND TO S'BND TURNING ROADWAY
CURVE DATA 1WS.
 $\Delta = 155^\circ - 31' - 12''$
 $D = 18 - 20 - 04.74'$
 $R = 312.500'$
 $T = 1440.500'$
 $L = 848.230'$
 $E = 1161.507'$
 $PC = 8+81.358$
 $PI = 23+21.858$
 $PT = 17+29.588$
 $S.E.I.R = 0.006 \frac{1}{2} \text{ max.}$

JEFFRIES FREEWAY
CURVE DATA 9J
 $\Delta = 44^\circ - 37' - 30''$
 $D = 1^\circ - 30' - 00''$
 $R = 3819.719'$
 $T = 1567.555'$
 $L = 2975.000'$
 $E = 309.140'$
 $PC = 201+55.000$
 $PI = 217+22.555$
 $PT = 231+30.000$
 No Superelevation

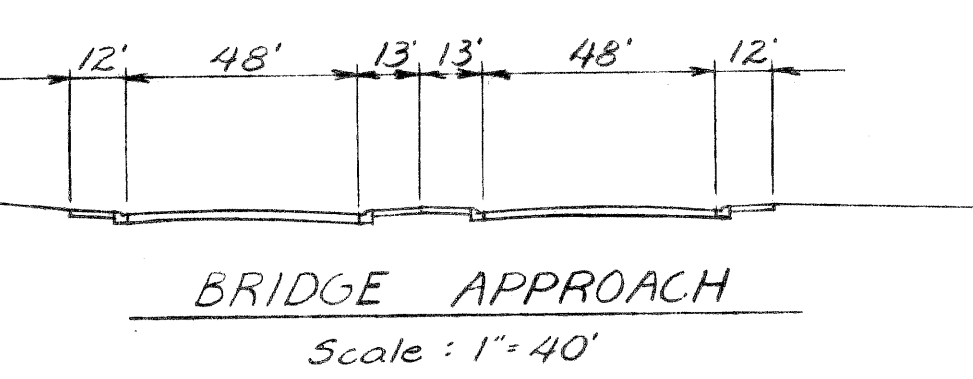
- BENCH MARKS**
- P.B.M. 21-253 City of Detroit Monument N.E. Corner 23rd, and Stanley Elev. 136.07
 - C.B.M. 26 Arrow on Hydrant N.E. Corner Merrick and Tillman Elev. 134.43
 - C.B.M. 36 Arrow on Hydrant S.W. Corner Lawton and Ford. S. Service Drive Elev. 140.83
 - C.B.M. 62 Arrow on Hydrant E. Side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



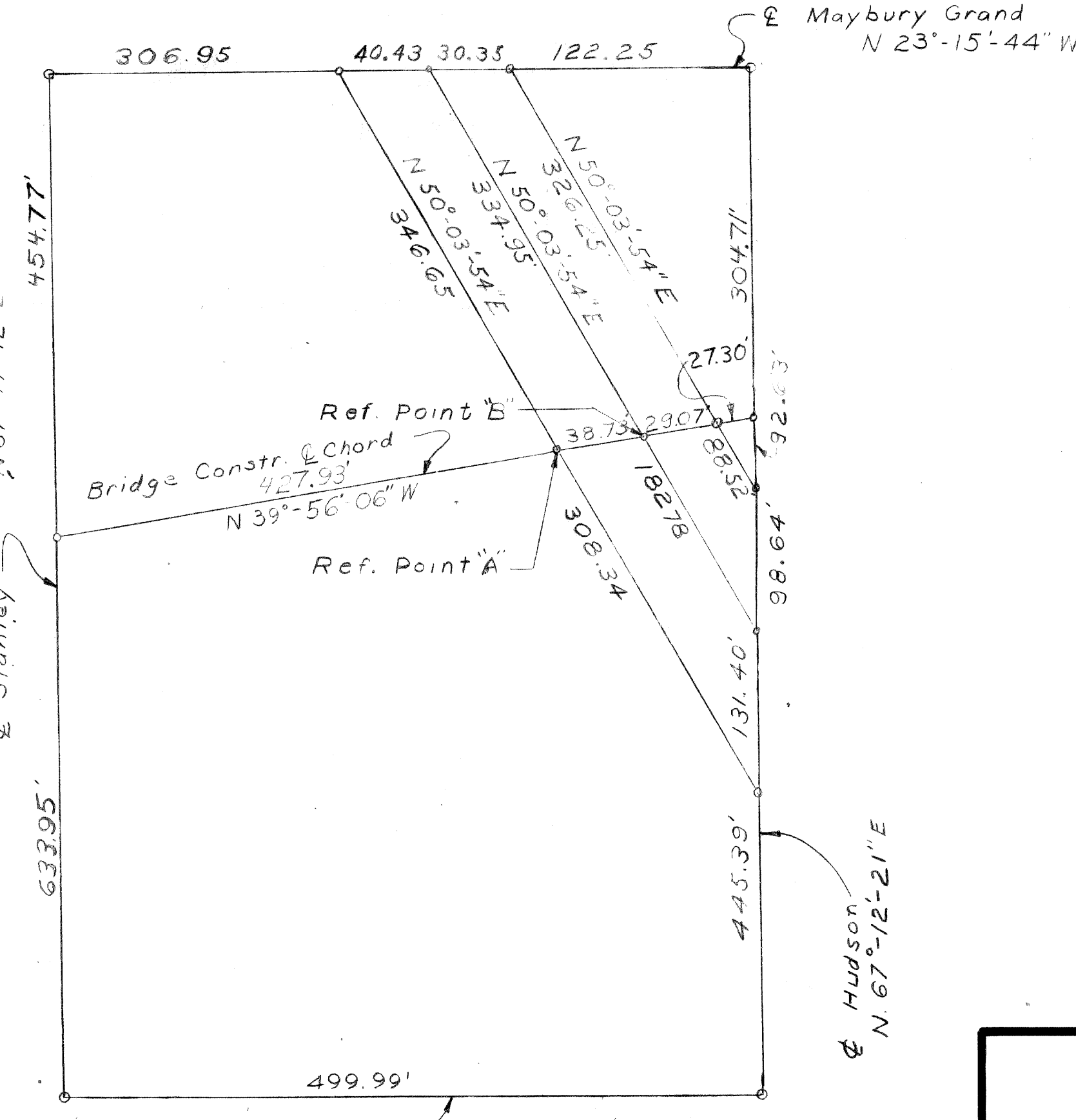
PROFILE ALONG TURNING ROADWAY
Scale: Horz. 1" = 40'
Vert. 1" = 4'



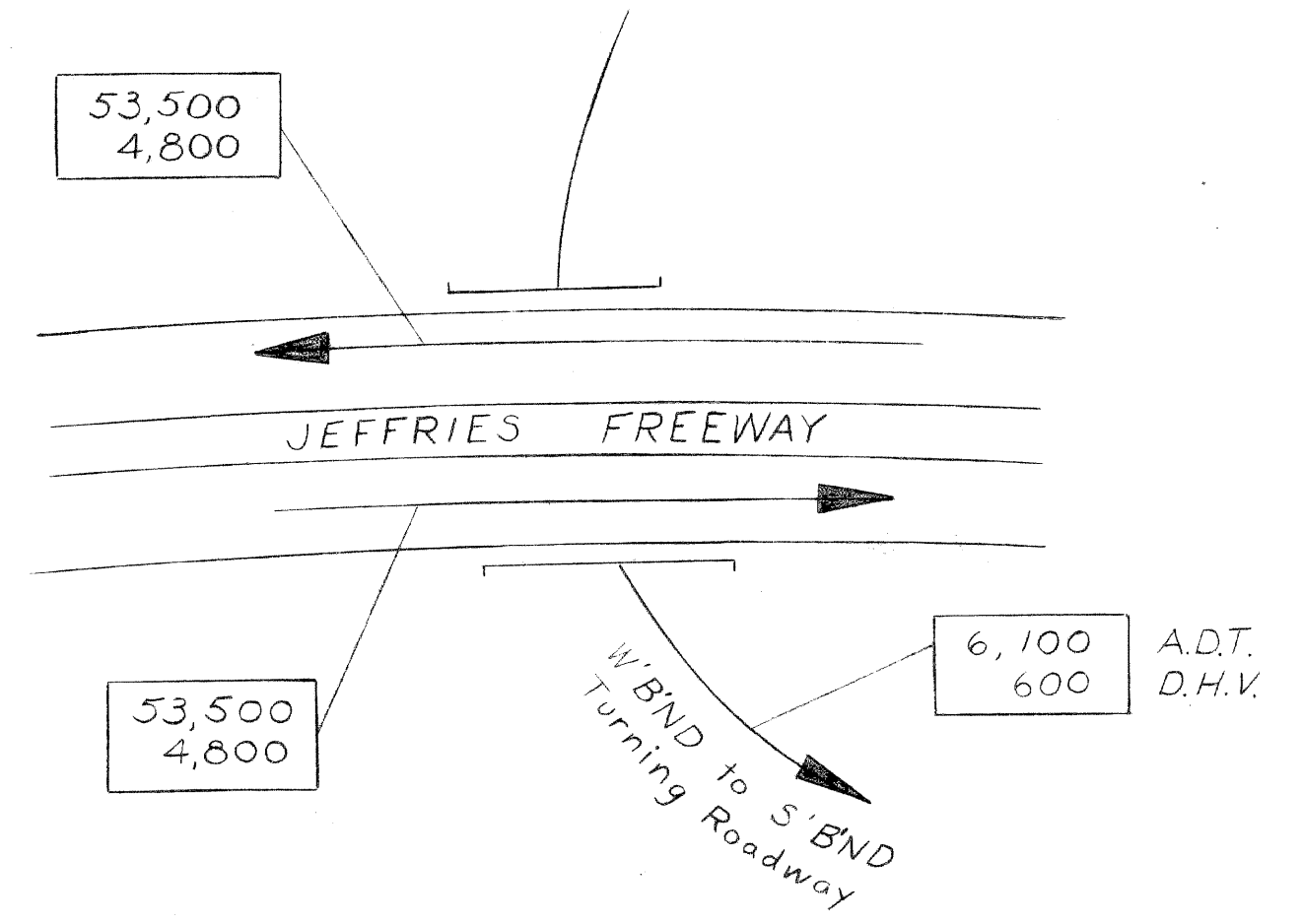
PROFILE ALONG BRIDGE
Scale: Horz. 1" = 40'
Vert. 1" = 4'



BRIDGE APPROACH
Scale: 1" = 40'



ALIGNMENT DIAGRAM
No Scale



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
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *H. Conit*
STRUCTURAL ENGINEER

JOB No. PW 9902

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

GENERAL DRAWING

CITY OF DETROIT

SQUAD BOSS	<i>C. Ames</i>	12-69
DRAWN BY	<i>R. G.</i>	7-24-60
TRACED BY		
CHECKED BY	<i>McGuire</i>	9/66
SHEET	4	OF 23

APPROVED: _____ DESIGN SUPERVISING ENGINEER

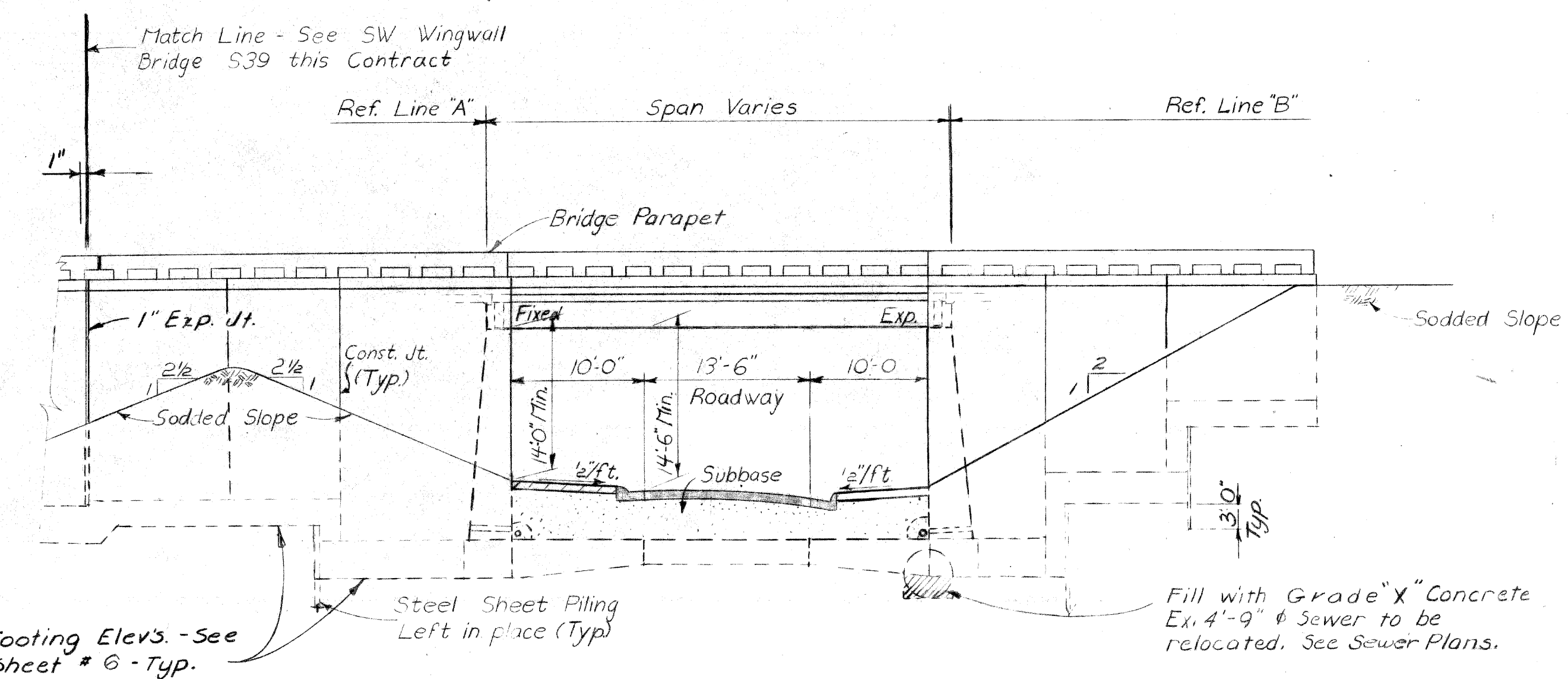
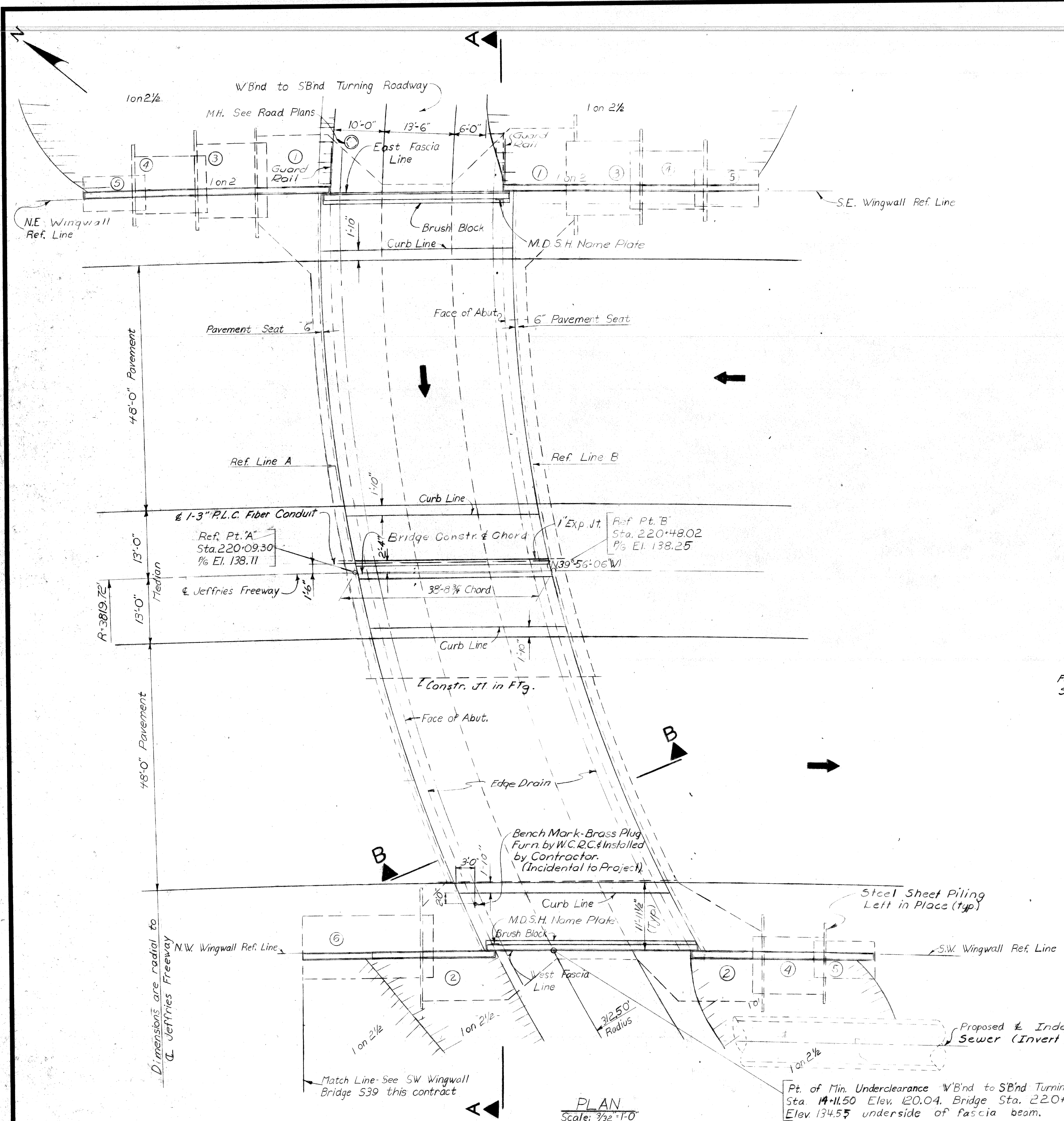
APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS

S40 of 82123K

GENERAL NOTES

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

Liveload plus impact deflection equals 1/1000 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.



WEST ELEVATION
Scale: 3/32" = 1'-0"

MISCELLANEOUS QUANTITIES

Item	Unit	Amount
Grade "X" Conc	Cu. Yd.	18.0

Work this sheet with sheet # 5.

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

APPROVED: *H. Conrad*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

CITY OF DETROIT

GENERAL PLAN OF STRUCTURE

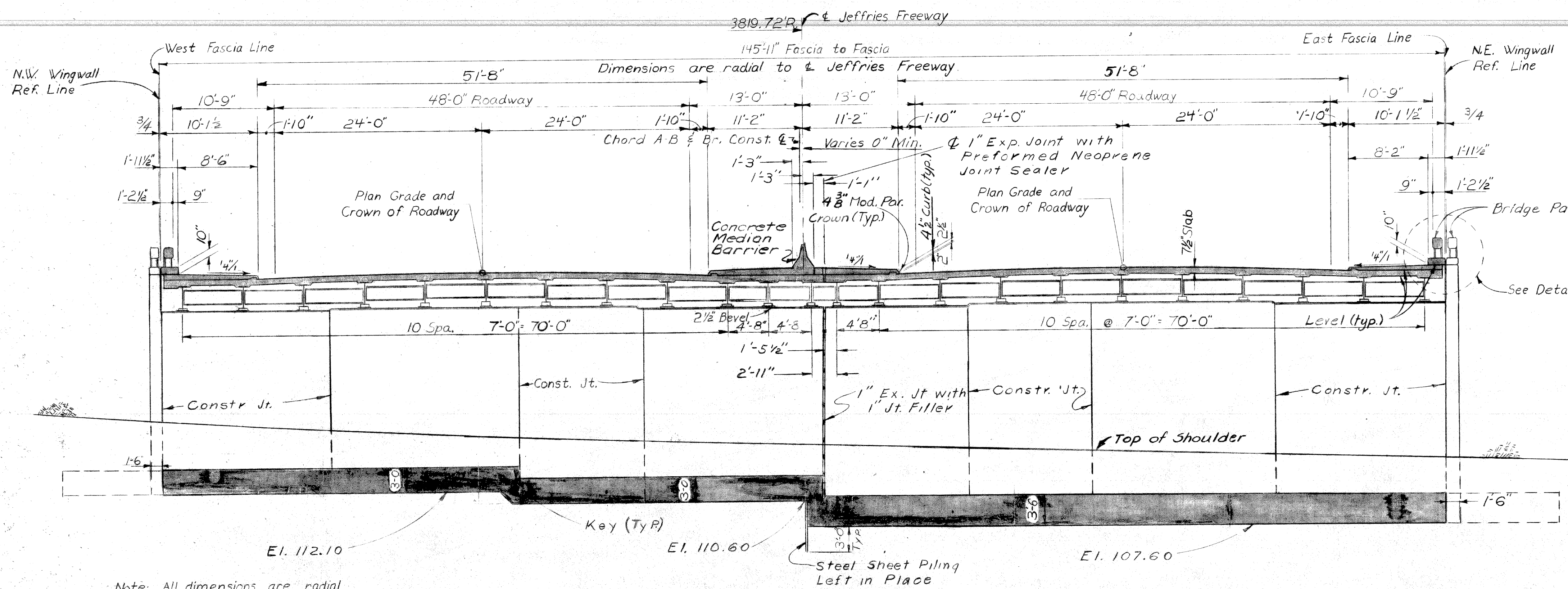
APPROVED: _____
DESIGN SUPERVISING ENGINEER

APPROVED: _____
ENGINEER OF DESIGN - CONSULTANT

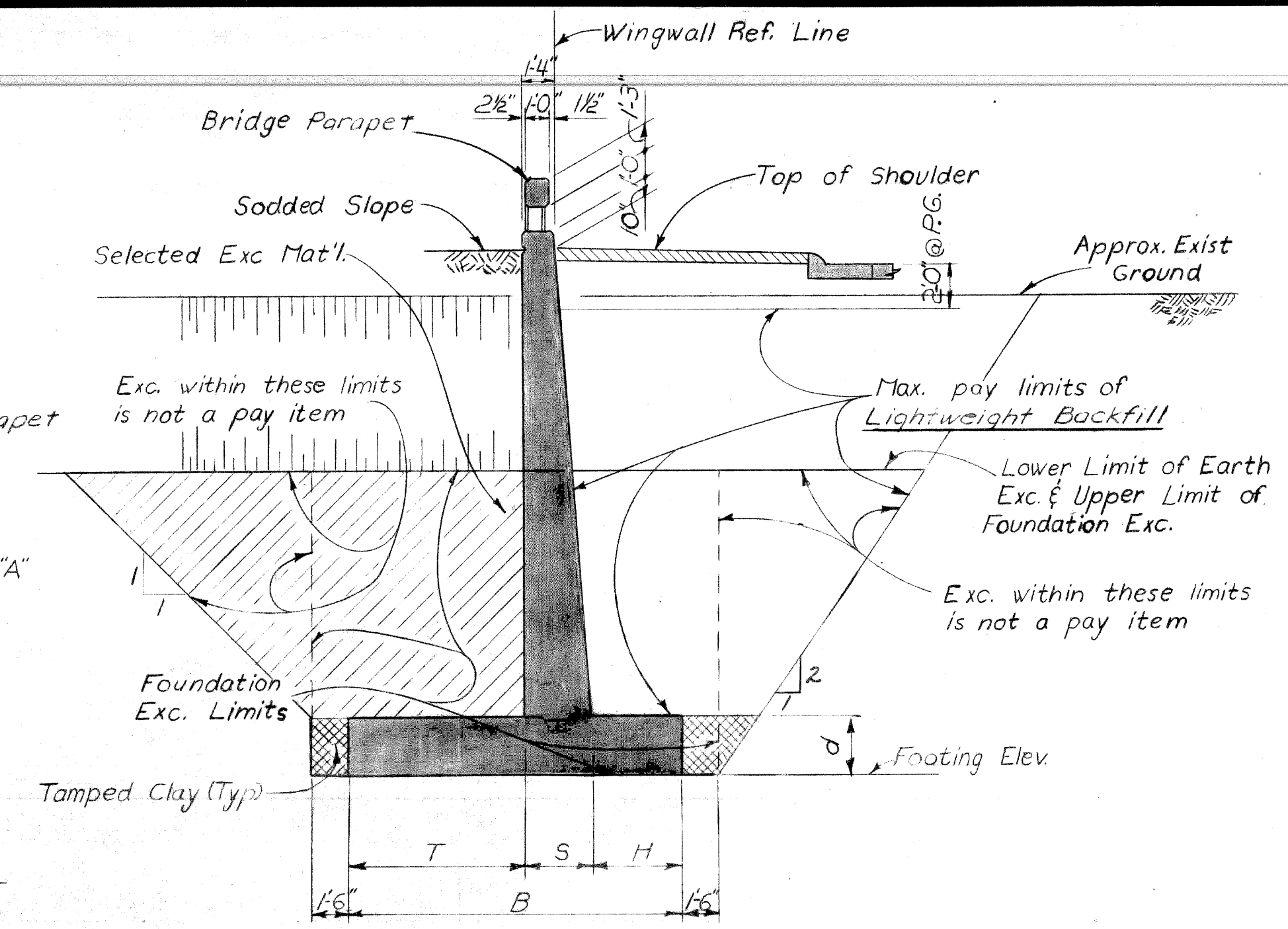
SQUAD BOSS	DATE
<i>R. James</i>	12-67
<i>V. Kerckhove</i>	7-11-66
<i>McGuire</i>	9/66

SHEET 5 OF 23

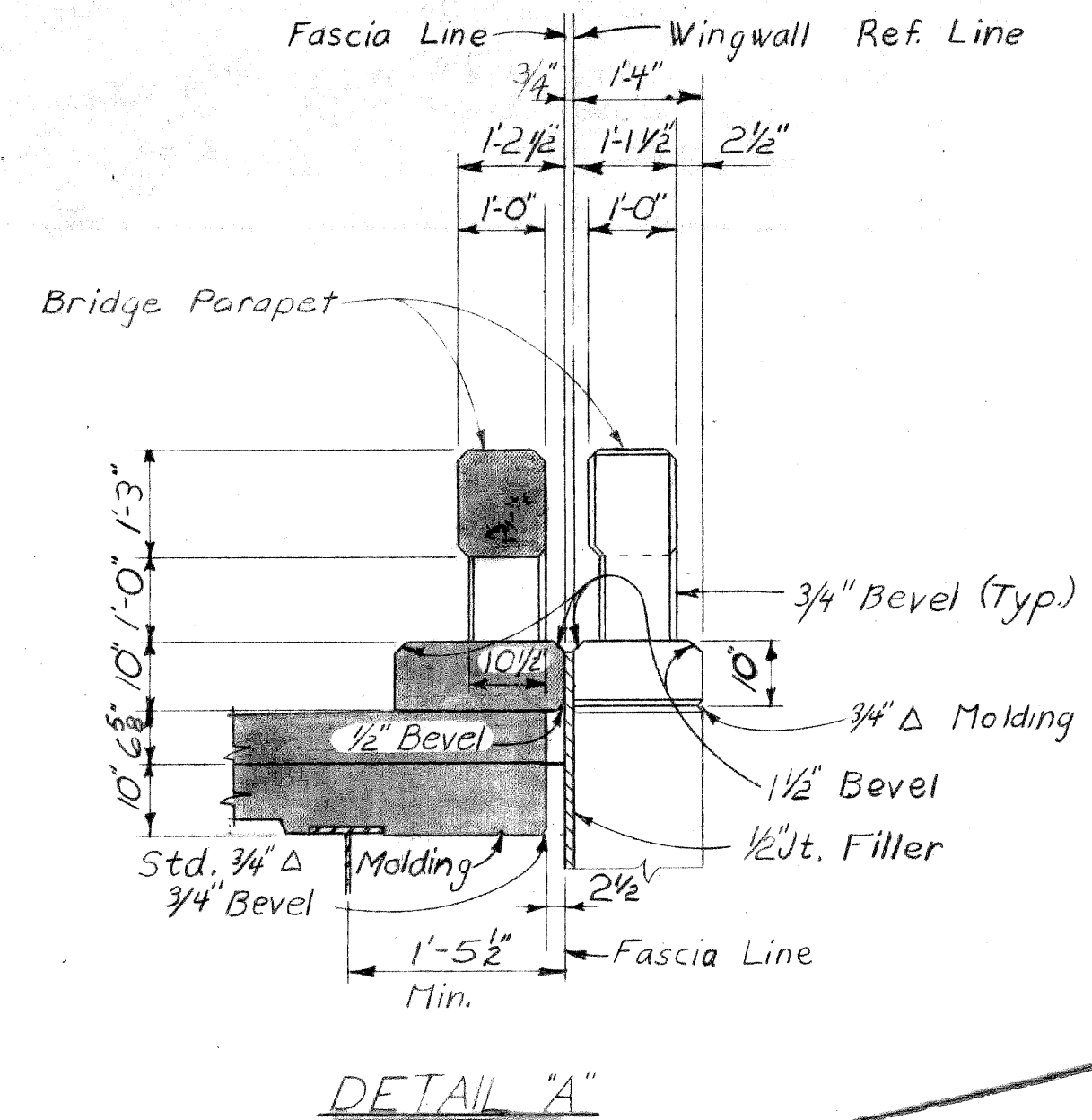
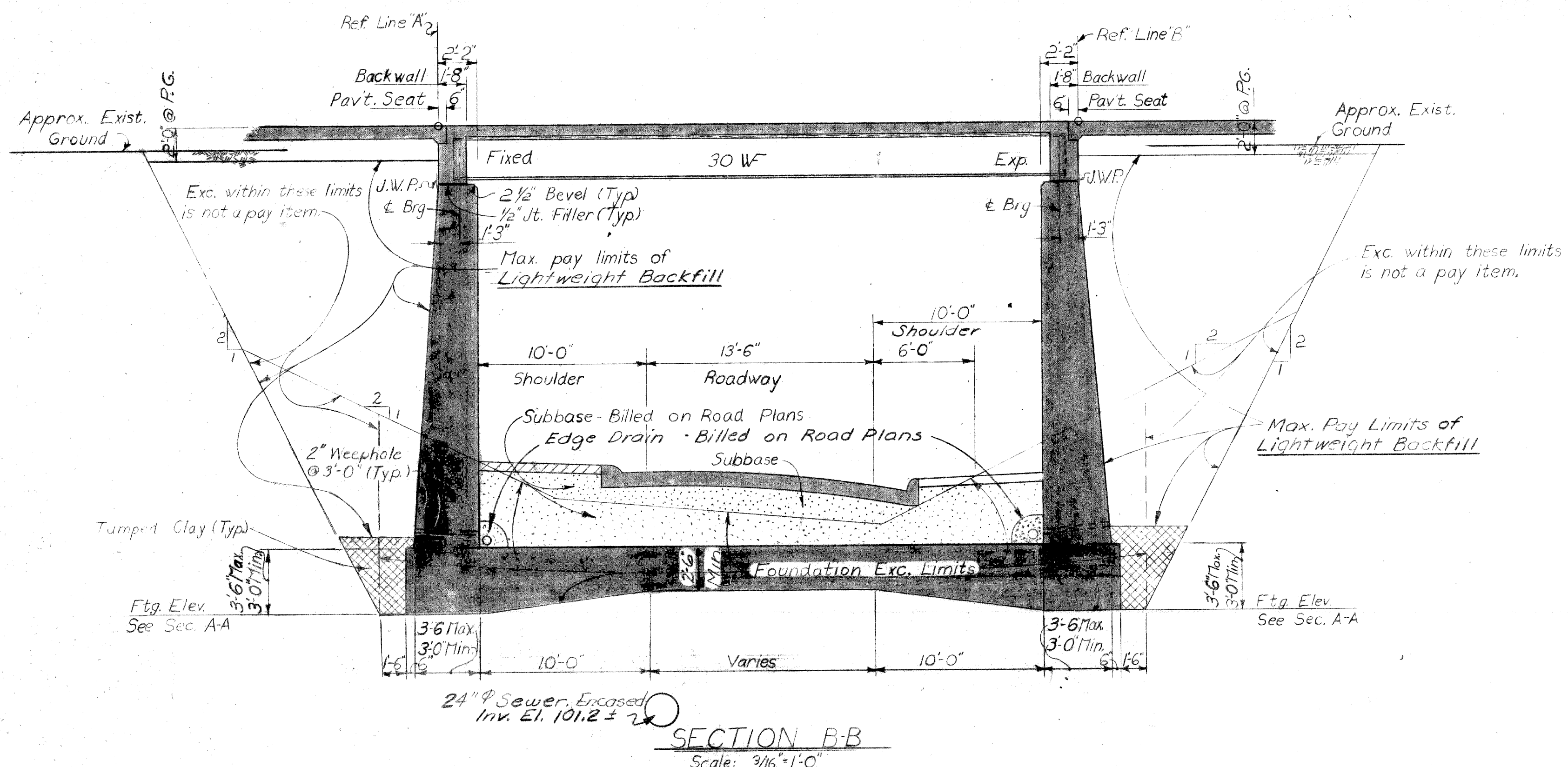
S40 of 82123K



Note: All dimensions are radial to centerline of Bridge



SECT.	WINGWALL FOOTING DIMENSIONS					W.W. FOOTING ELEV.			
	B	T	S	H	d	Abut. A		Abut. B	
						NE	NW	SE	SW
①	—	10'-0"	3'-6"	—	3'-6"	107.60	—	107.60	—
②	—	8'-0"	3'-3"	—	3'-0"	—	112.10	—	112.10
③	14'-6"	8'-6"	3'-0"	3'-0"	3'-0"	114.60	—	114.60	—
④	11'-0"	6'-6"	2'-6"	2'-0"	2'-6"	121.60	—	121.60	119.10
⑤	7'-0"	3'-0"	2'-3"	1'-9"	2'-0"	128.60	—	128.60	126.10
⑥	12'-0"	3'-6"	2'-9"	5'-6"	2'-6"	—	119.10	—	—



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

APPROVED: *J. J. Cant*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

REVISIONS

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

CITY OF DETROIT

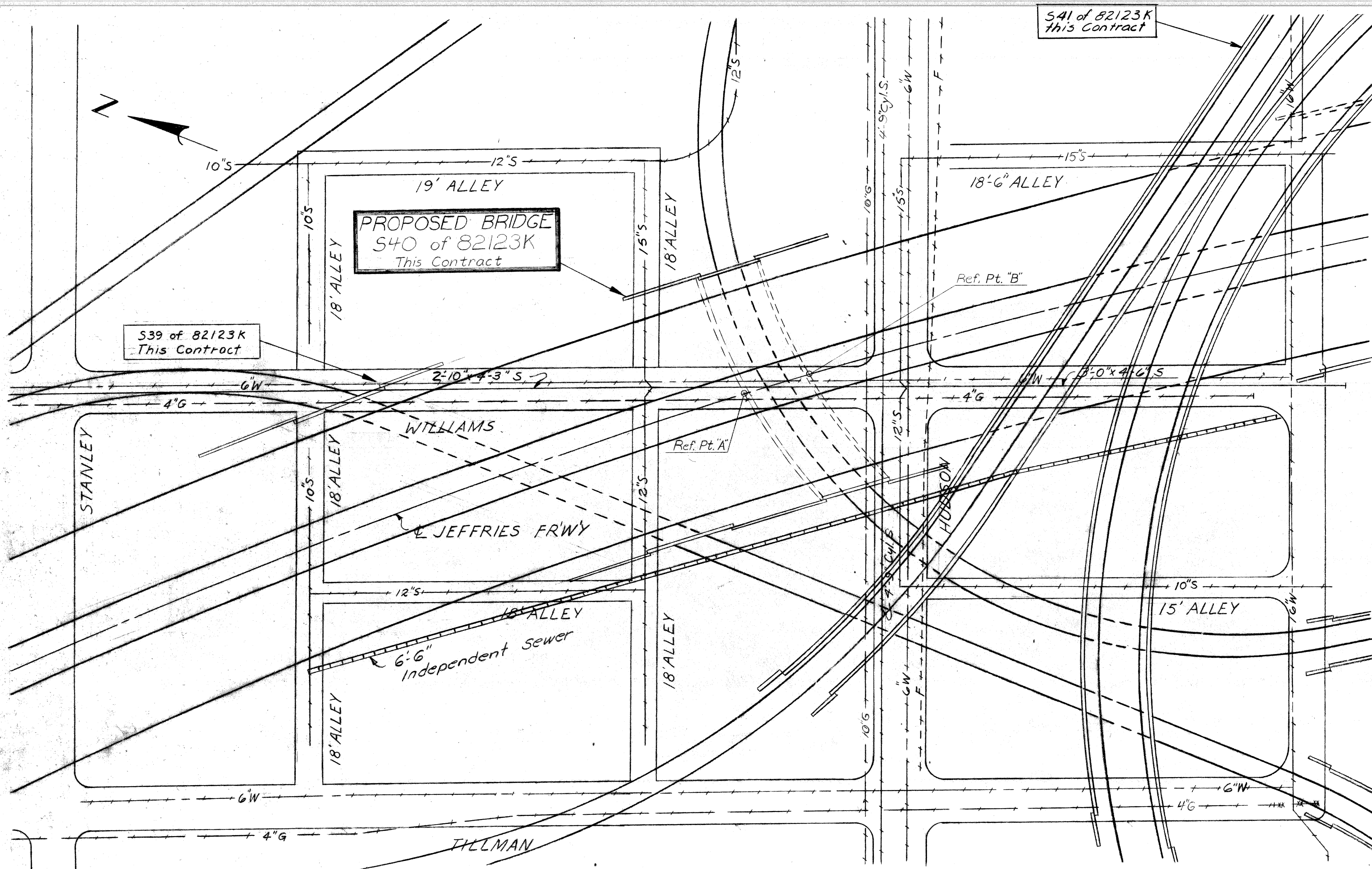
GENERAL PLAN OF STRUCTURE

APPROVED: _____
DESIGN SUPERVISING ENGINEER

APPROVED: _____
ENGINEER OF DESIGN - CONSULTANTS

SQUAD BOSS: *E. Jones* 12-67
DRAWN BY: *A.V. Merckham* 8-16-66
CHECKED BY: *McGuire* 9/66
SHEET 6 OF 23

S40 of 82123K



LEGEND

UTILITY	Existing	Deleted or Abandoned	New Work by Others	New Work by Bridge Contractor
Michigan Consolidated Gas Co.	—G—	---G---	---G---	---G---
Detroit Water Dept.	—W—	---W---	---W---	---W---
Exp'wy and City of Detroit Sewers	—S—	---S---	---S---	---S---
Detroit Edison Co.	—E—	---E---	---E---	---E---
Public Lighting Commission	—L—	---L---	---L---	---L---
Detroit Fire Dept.	—F—	---F---	---F---	---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"

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

APPROVED: *J. Carst*
 STRUCTURAL ENGINEER

JOB No.
 PW 330(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
 JEFFRIES FREEWAY CROSSING THE
 WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT
**EXISTING UTILITIES AND
 PROPOSED ALTERATIONS**

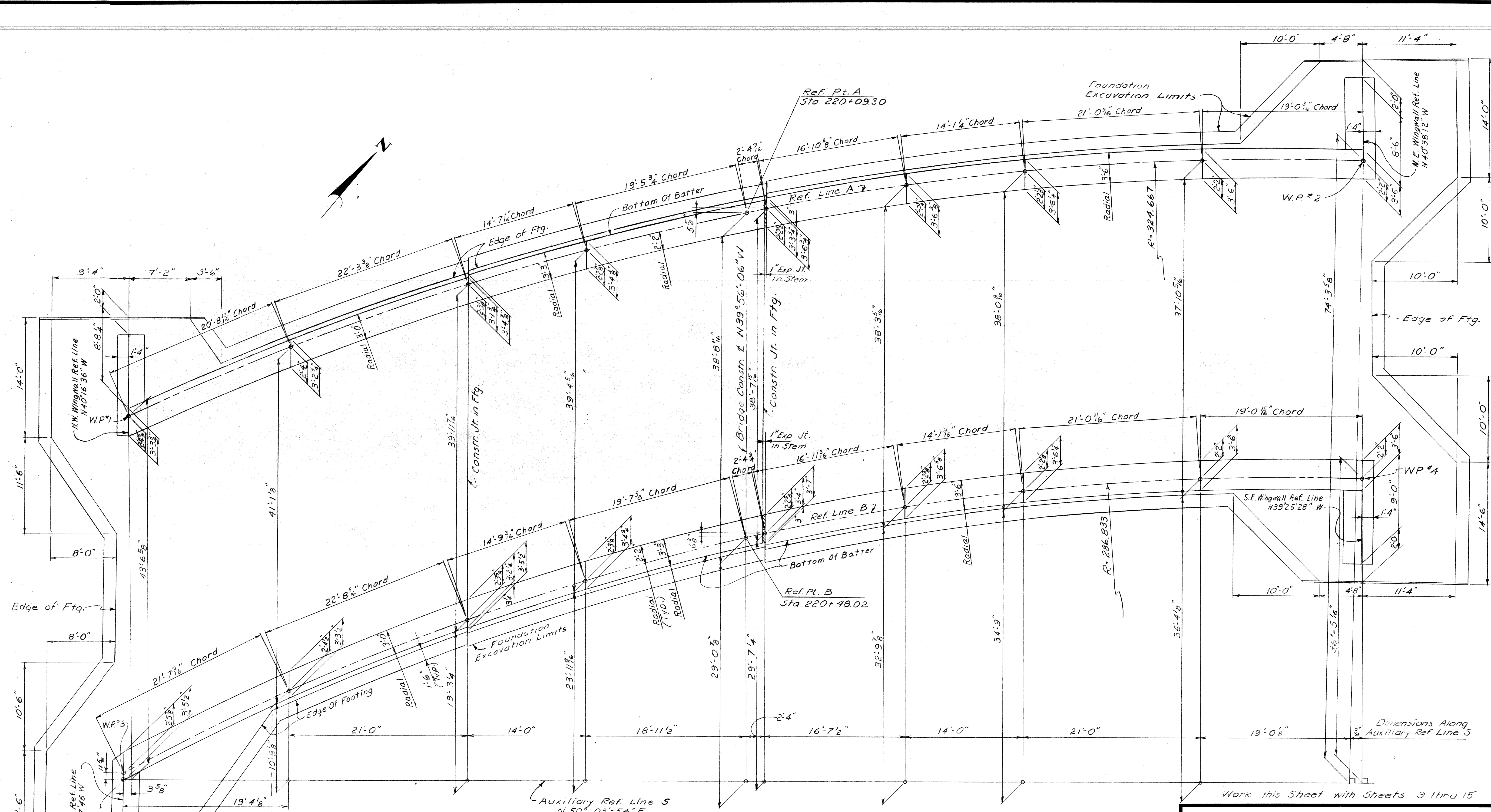
CITY OF DETROIT

REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS *P. James* 12-67
 DRAWN BY
 TRACED BY *SEIDLIN* 5-5-66
 CHECKED BY *McGuire* 9/66
 SHEET 7 OF 23

S40 of 82123K



STAKE OUT DIAGRAM

Note: Constr. & Exp. Joints except joints at Wingwalls are parallel to Bridge Constr. & Normal to Aux. Ref. Line S

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 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Conroy*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(2)

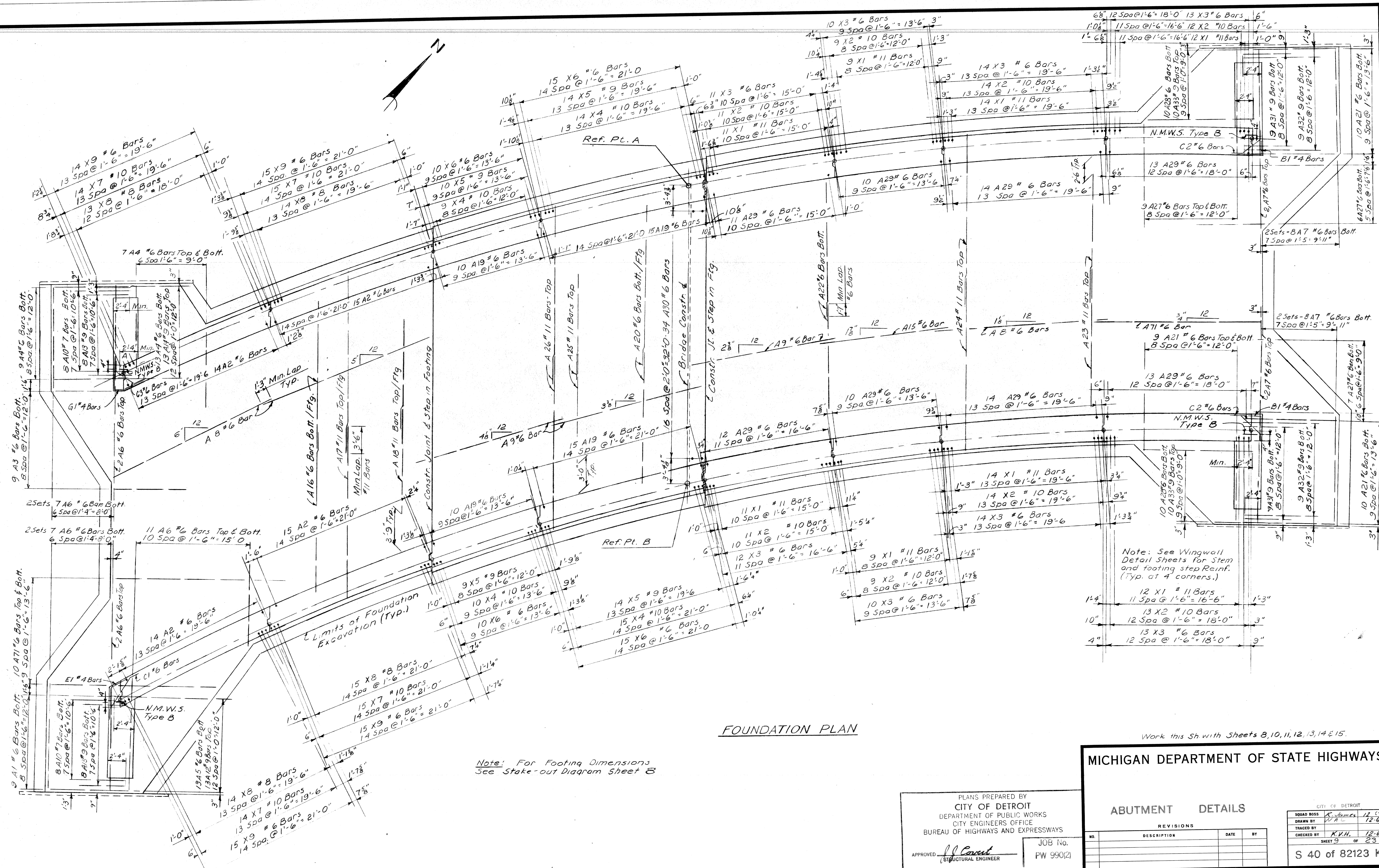
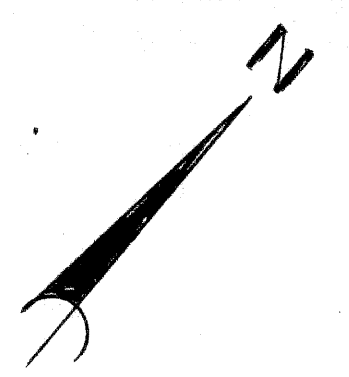
MICHIGAN STATE HIGHWAY DEPARTMENT

ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS: *K. Jones* 12-67
 DRAWN BY: *NAGLE* 8-67
 CHECKED BY: *K.V.H.* 9-67
 SHEET 8 OF 23

S 40 of 82123 K



FOUNDATION PLAN

Note: For Footing Dimensions See Stake-out Diagram Sheet 8

Work this Sh with Sheets 8, 10, 11, 12, 13, 14 & 15.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

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

JOB No.
PW 990(2)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	<i>R. J. ...</i>	12-57
DRAWN BY	<i>D. A. ...</i>	12-67
TRACED BY		
CHECKED BY	<i>K. V. H.</i>	12-67
SHEET 9 OF 23		

S 40 of 82123 K

Beam Spacing
Normal to
Bridge Constr. &

9 Spaces @ 7'-0" = 63'-0"

9 Spaces @ 7'-0" = 63'-0"

N.E. Wingwall Ref. Line
N 40°-38'-12" W

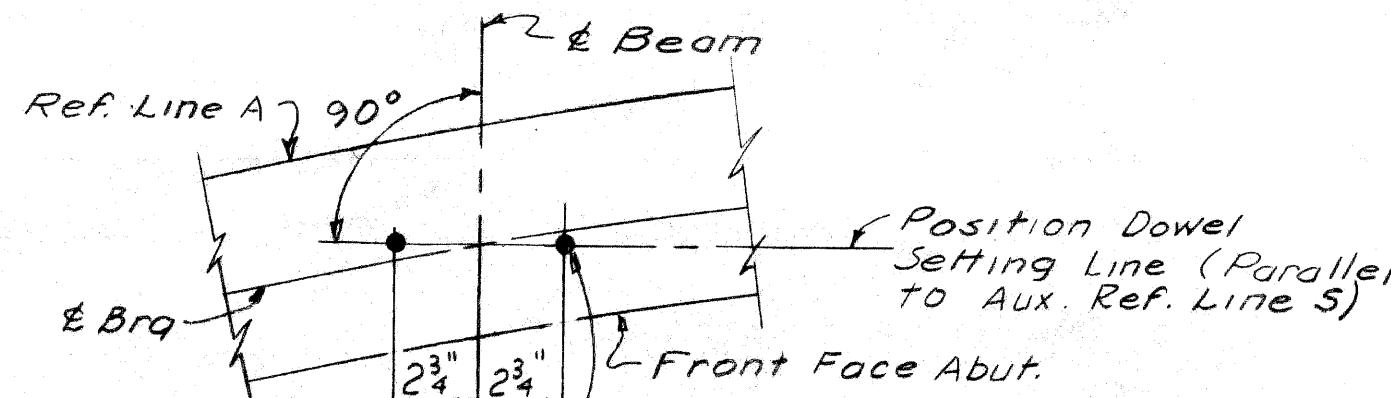
Bridge Constr. & Chord
N 33°-56'-06" W

Note: Dimensions between
Beams are chords at bearing

Parallel to Aux.
Ref. Line 5 (Typ.)

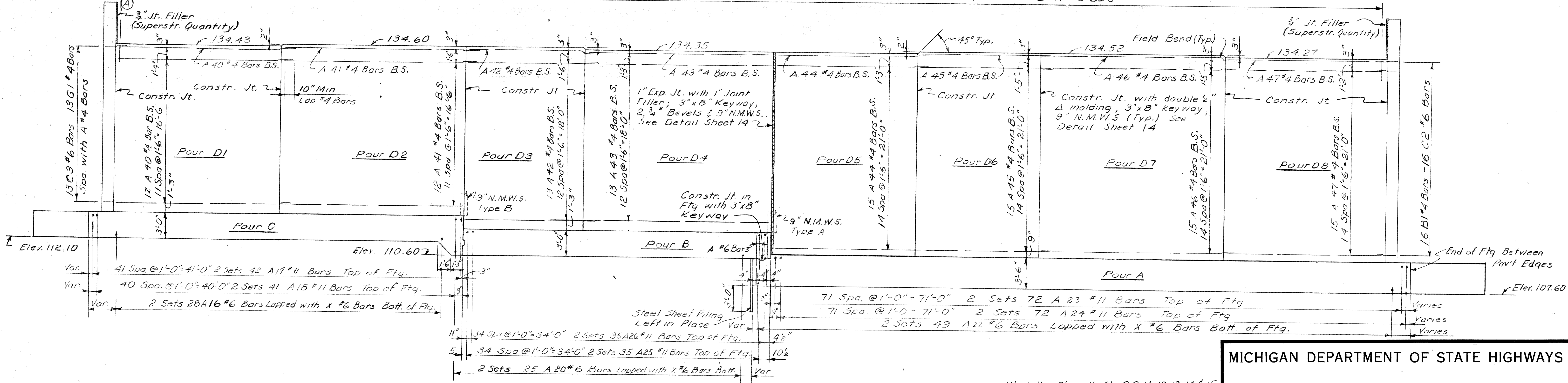
N.W. Wingwall Ref.
Line N 40°-16'-36" W

ABUT. A PLAN OF TOP



POSITION DOWEL SETTING DIAGRAM

204 A55 #6 Bars Spa. with Near Side A #6 Bars & Far Side X #6 Bars



ELEVATION

Work this Sh. with Sh. 8, 9, 11, 12, 13, 14 & 15

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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Carver*
STRUCTURAL ENGINEER

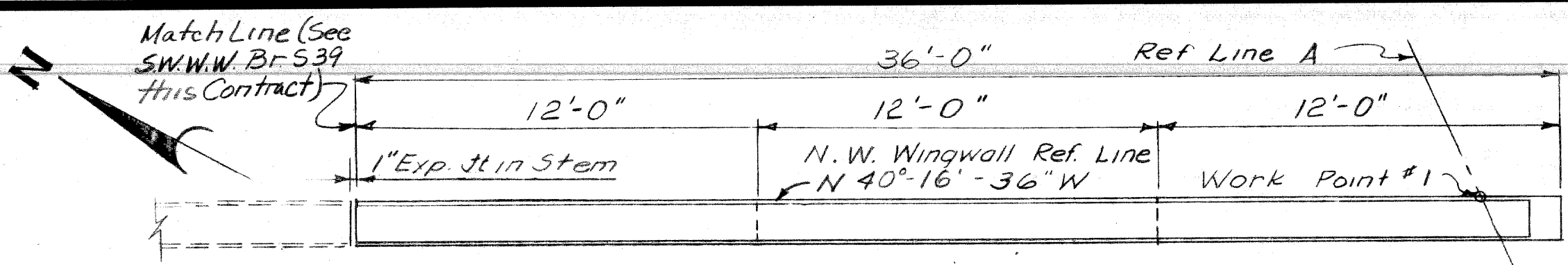
JOB No.
PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

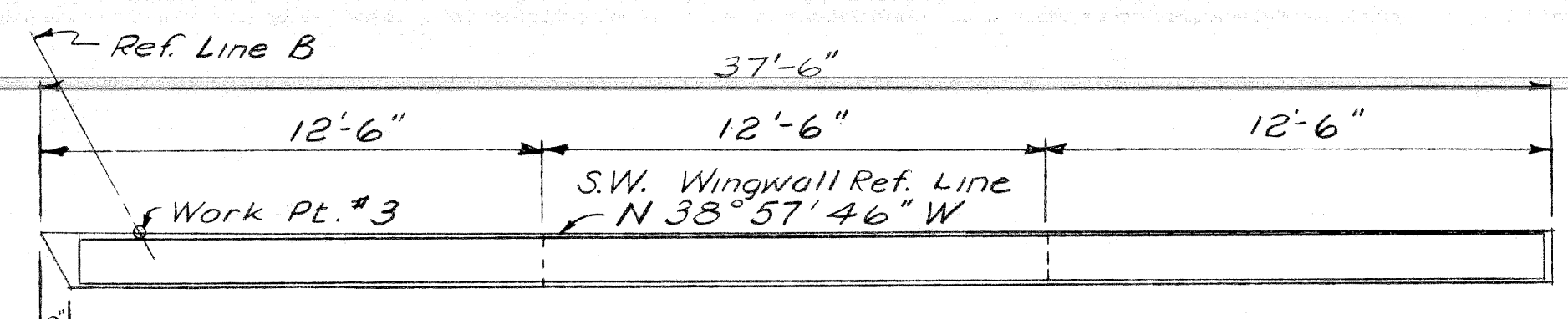
ABUTMENT A DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

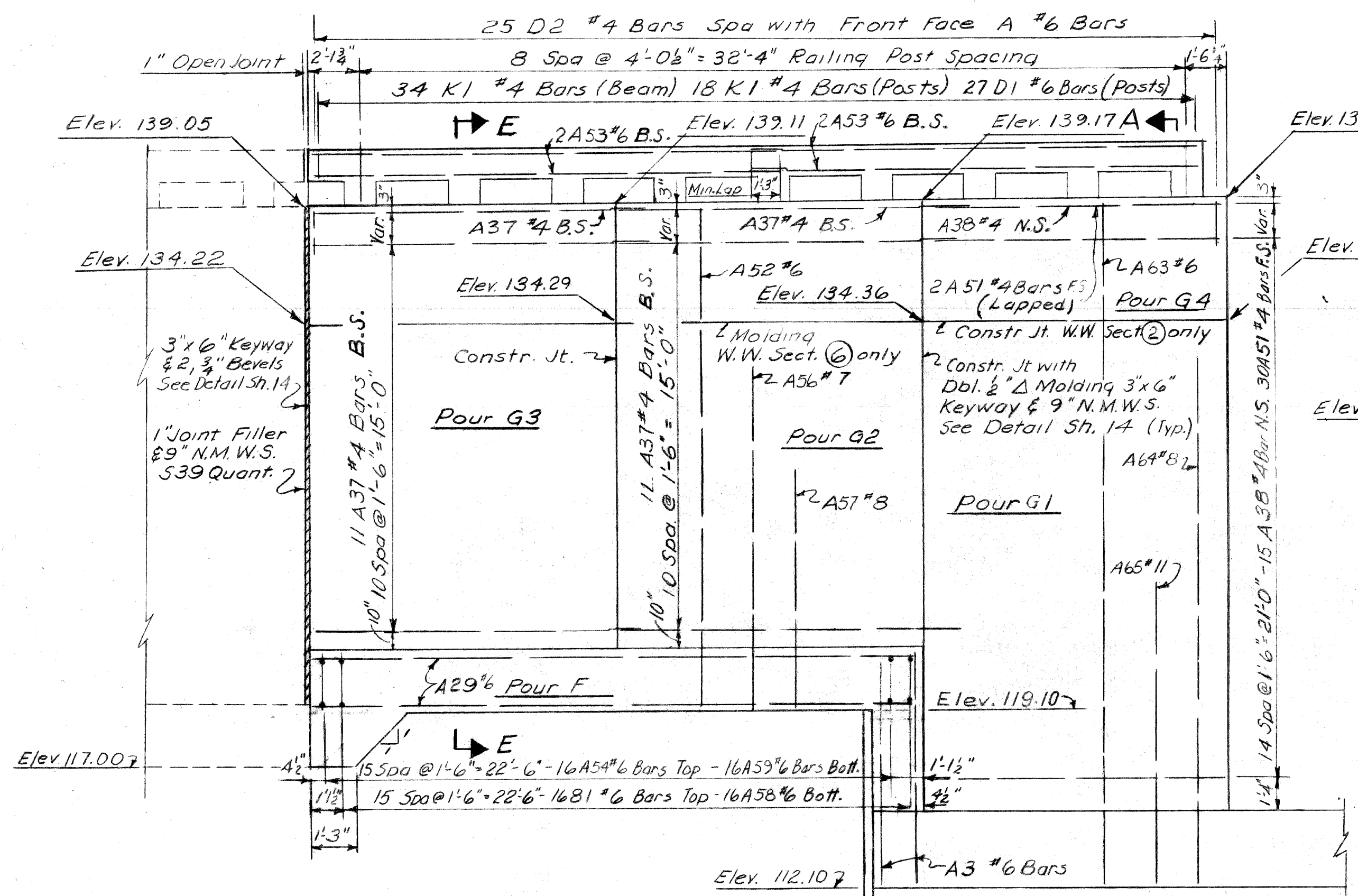
CITY OF DETROIT	
SQUAD BOSS	R. J. ... 12-27
DRAWN BY	WAL 8167
TRACED BY	
CHECKED BY	K.V.H. 12-67
SHEET 10 OF 23	
S 40 of 82123 K	



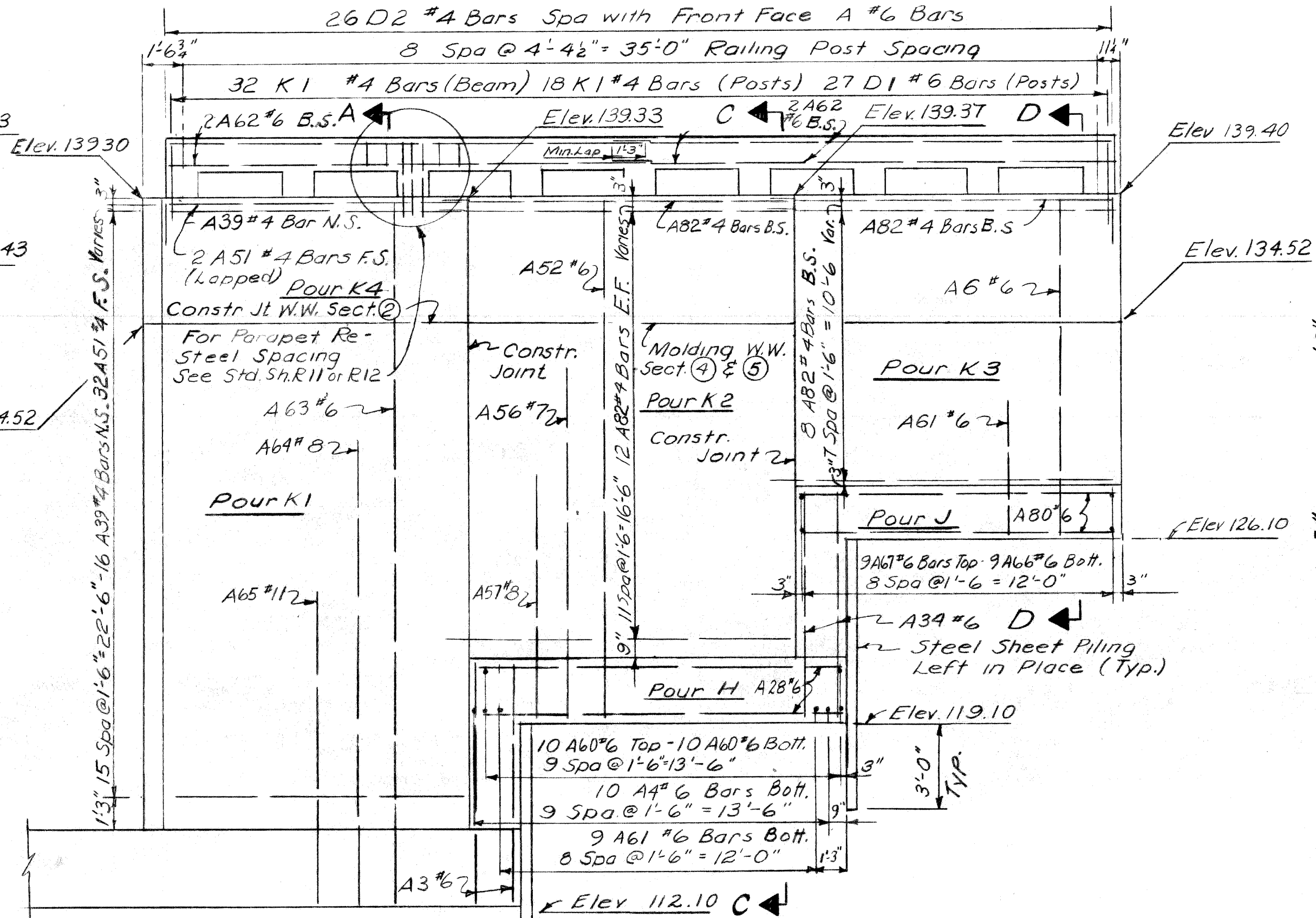
PLAN OF TOP



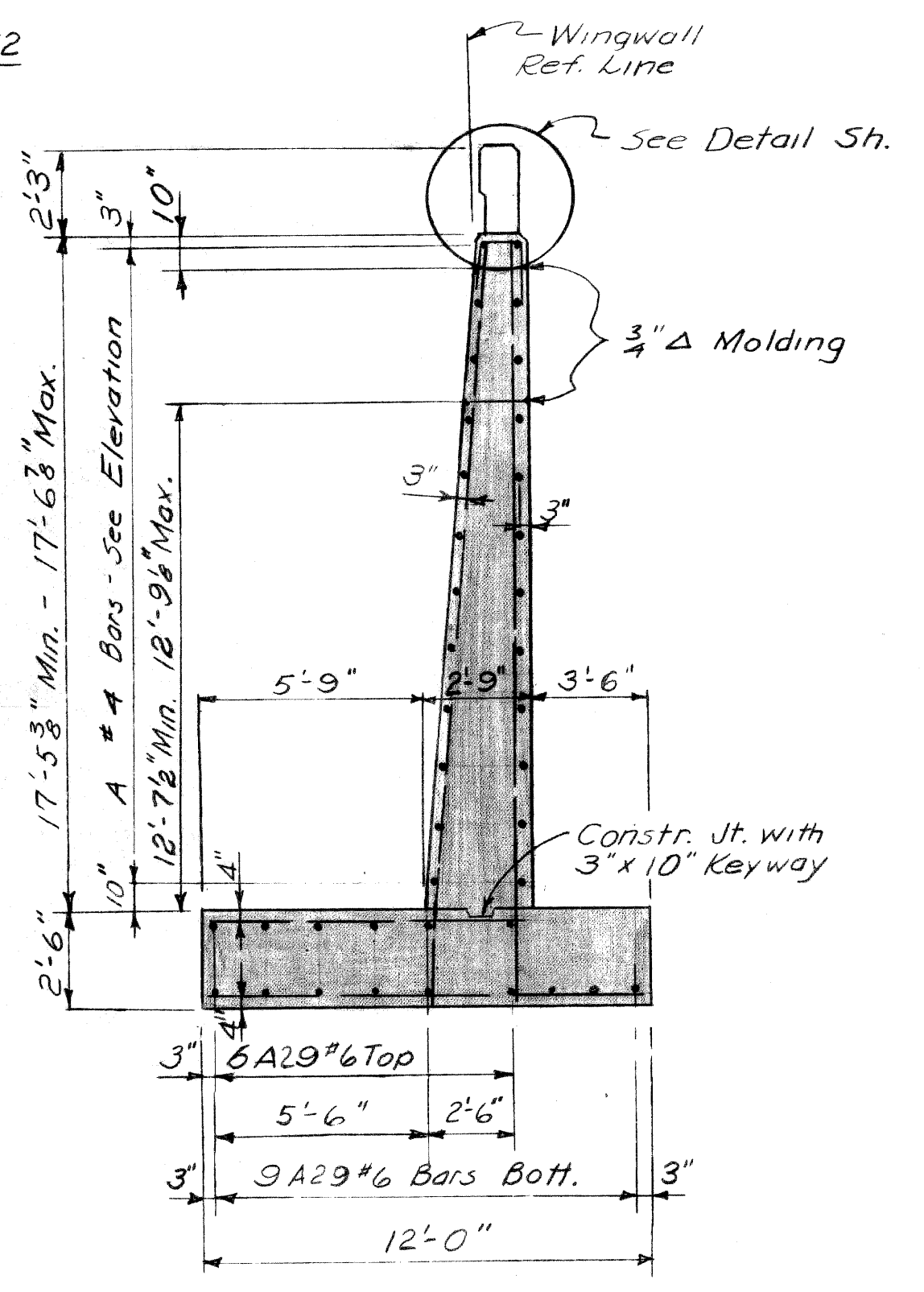
PLAN OF TOP



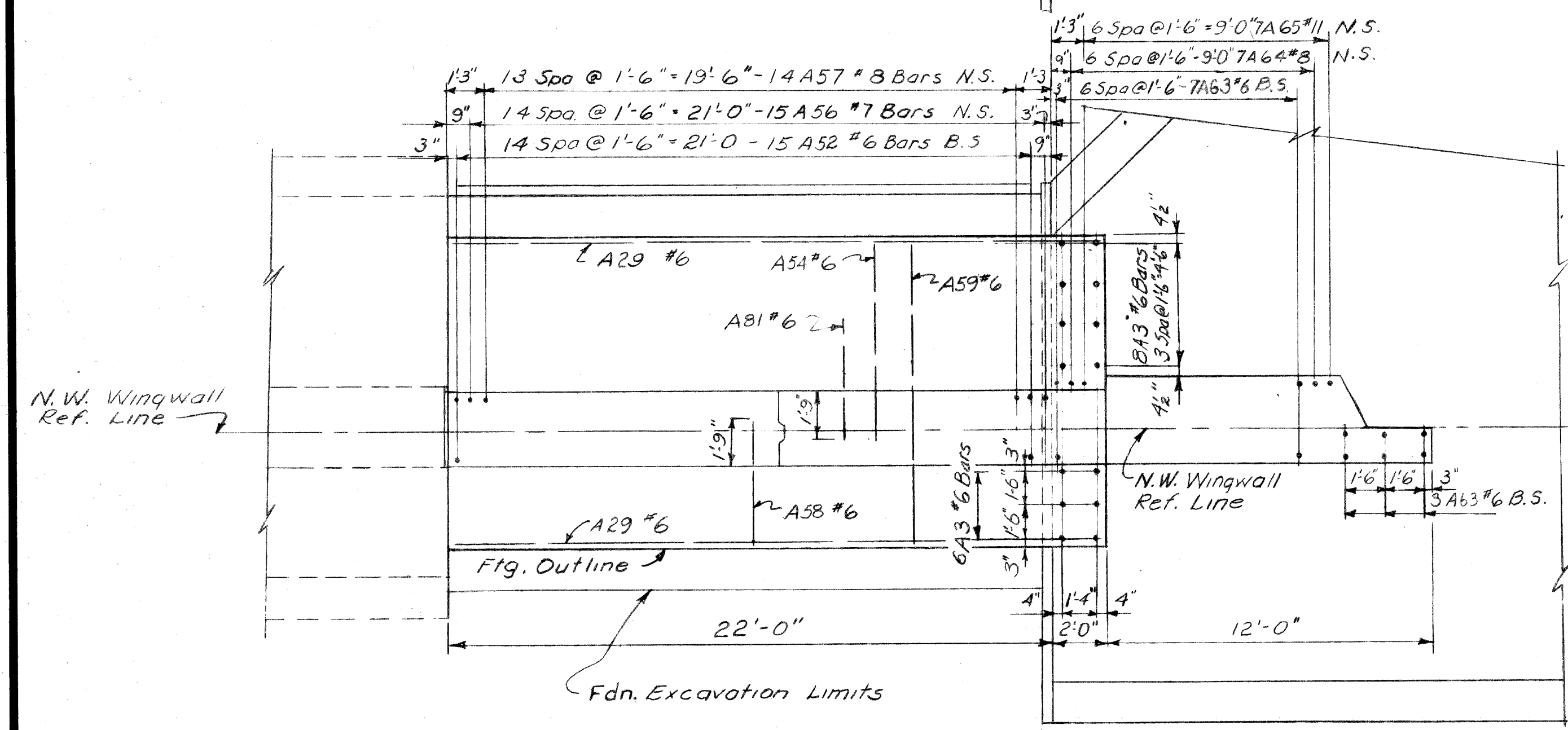
ELEVATION



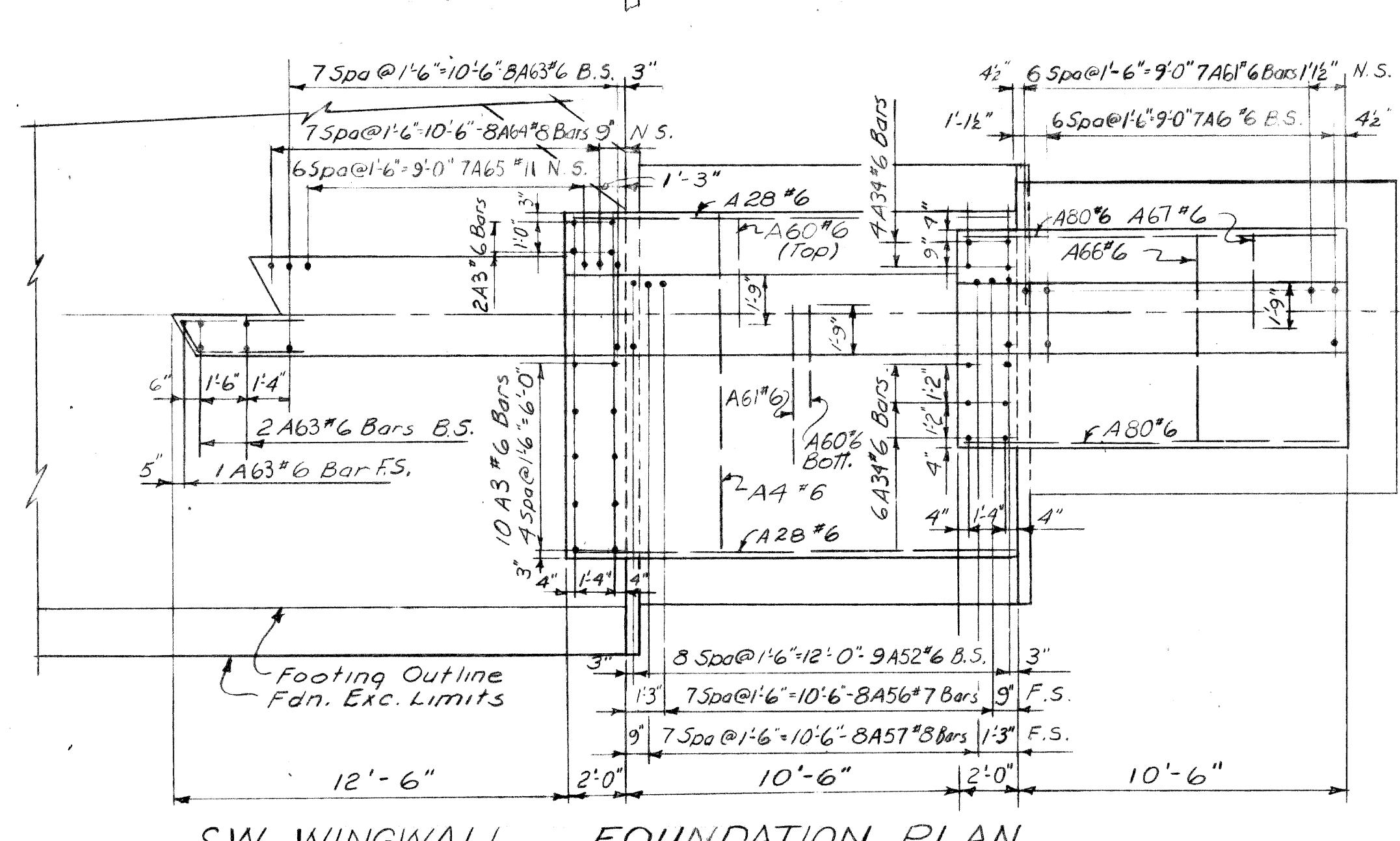
ELEVATION



SECTION EE



N.W. WINGWALL FOUNDATION PLAN



S.W. WINGWALL FOUNDATION PLAN

Work this sheet with sheets 8,9,10,11,13,14&15

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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Court*
STRUCTURAL ENGINEER

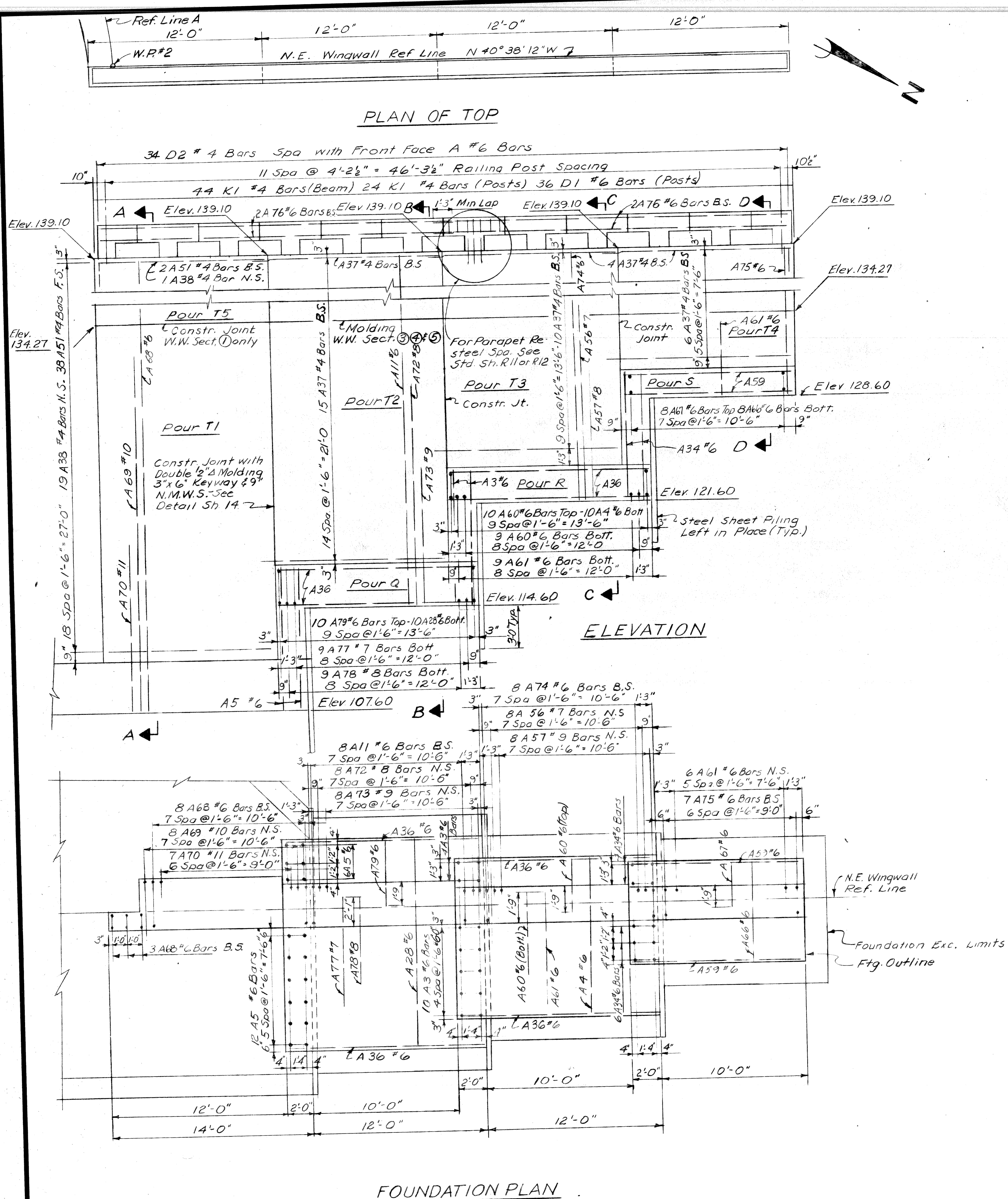
JOB No.
PW 990(2)

MICHIGAN STATE HIGHWAY DEPARTMENT

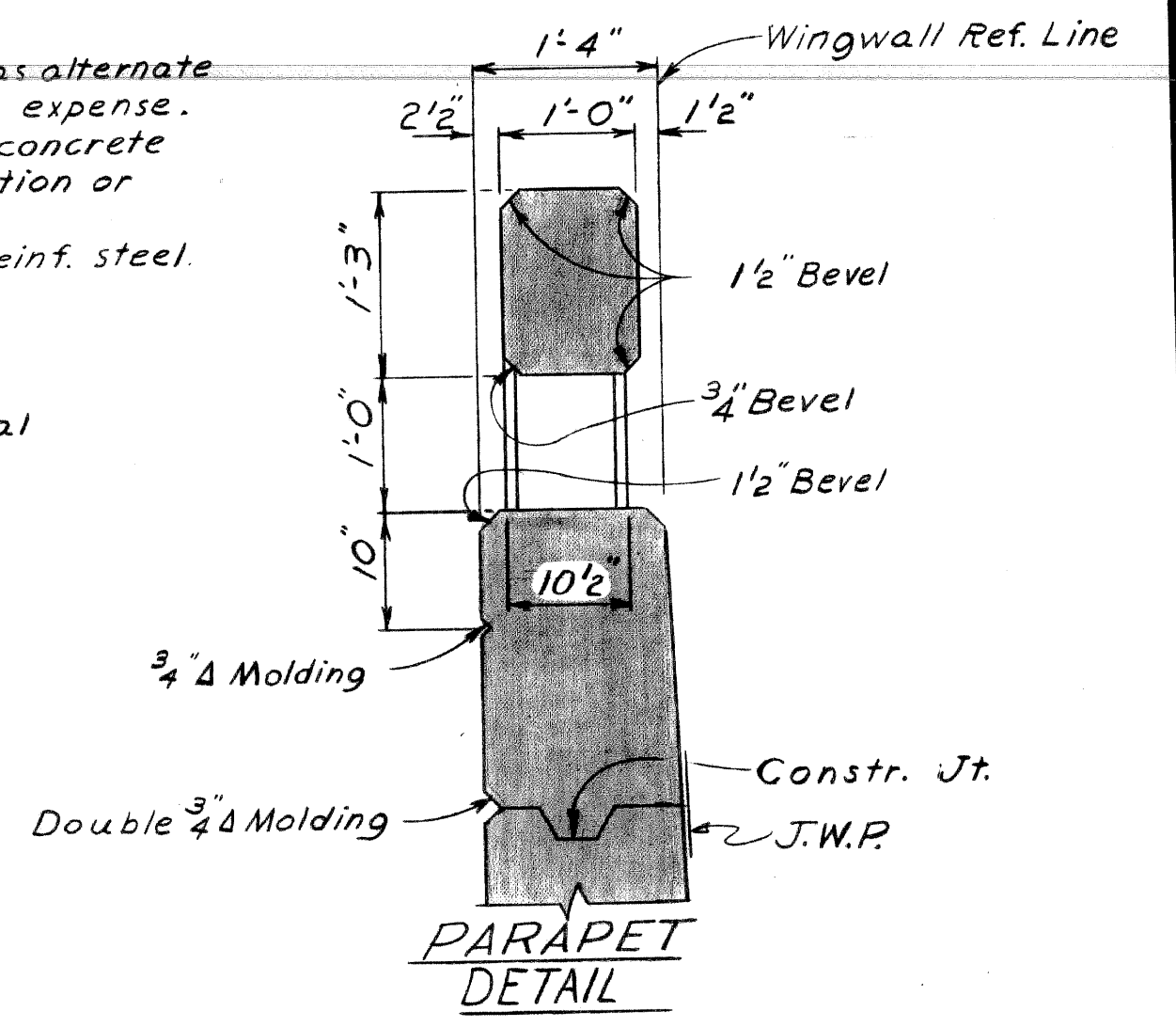
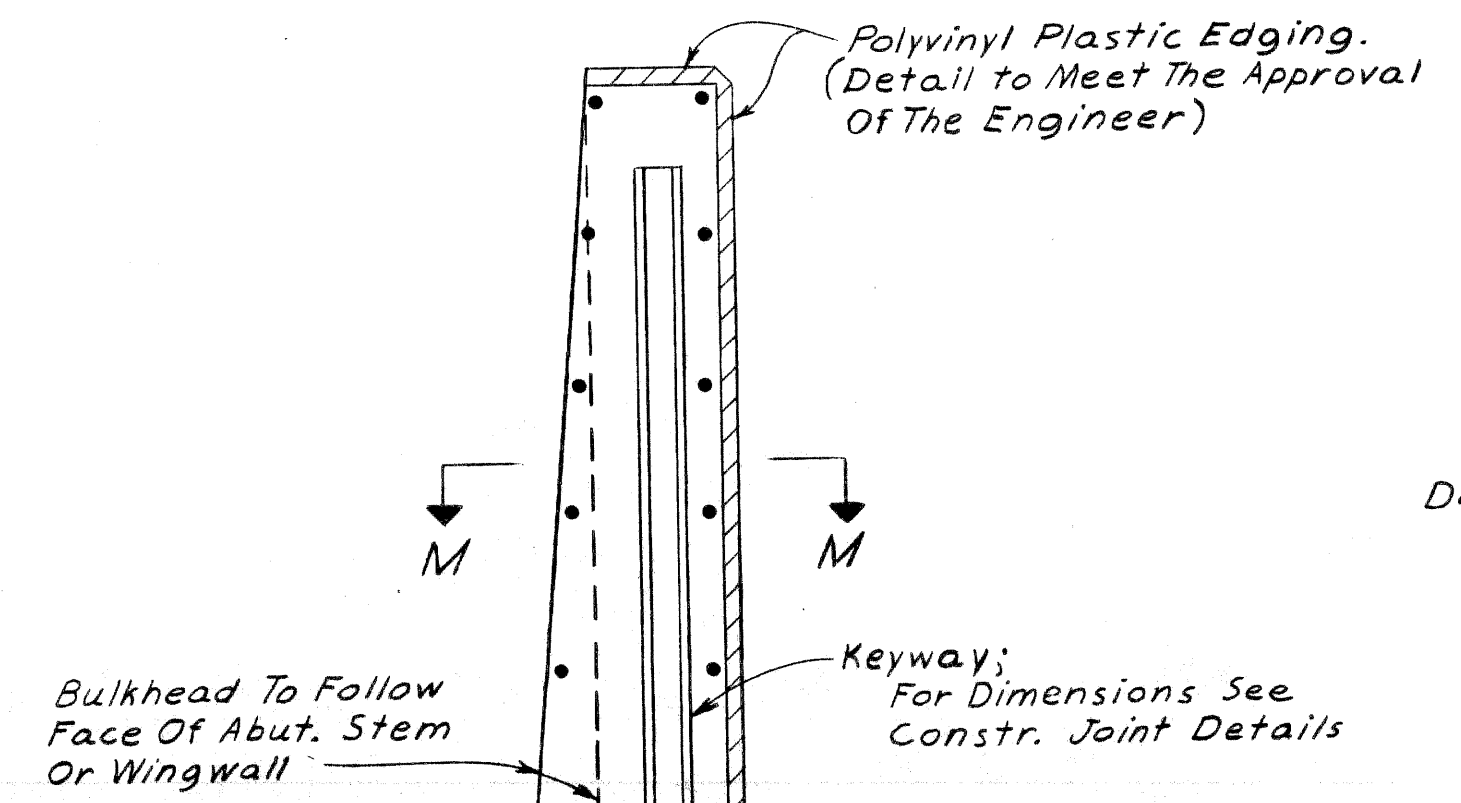
ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

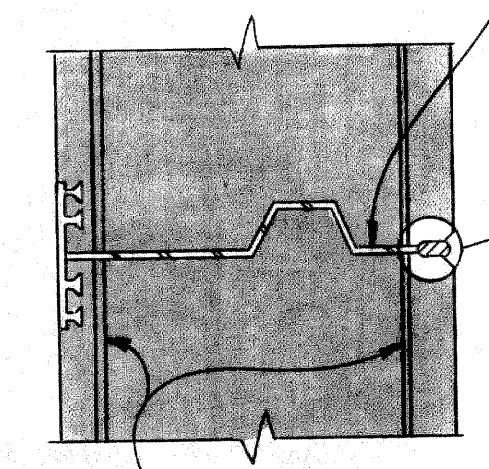
CITY OF DETROIT	
SQUAD BOSS	<i>L. J. Camp</i> 12-6-7
DRAWN BY	<i>WAL</i> 8/67
TRACED BY	<i>KVH</i> 12-6-7
CHECKED BY	<i>KVH</i> 12-6-7
SHEET 12 OF 23	
S 40 of 82123 K	



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

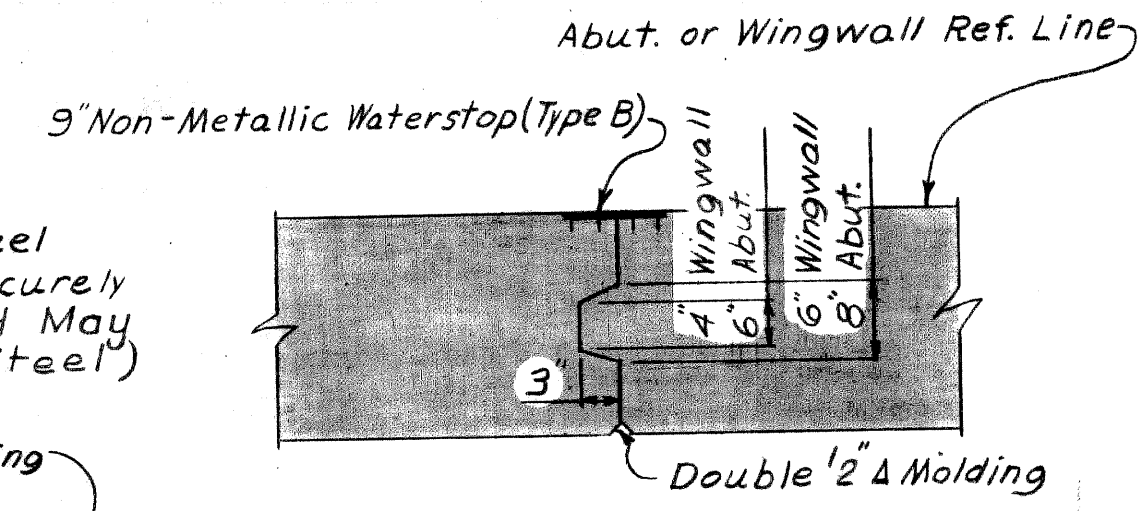


SECTION AT CONSTR. JOINT

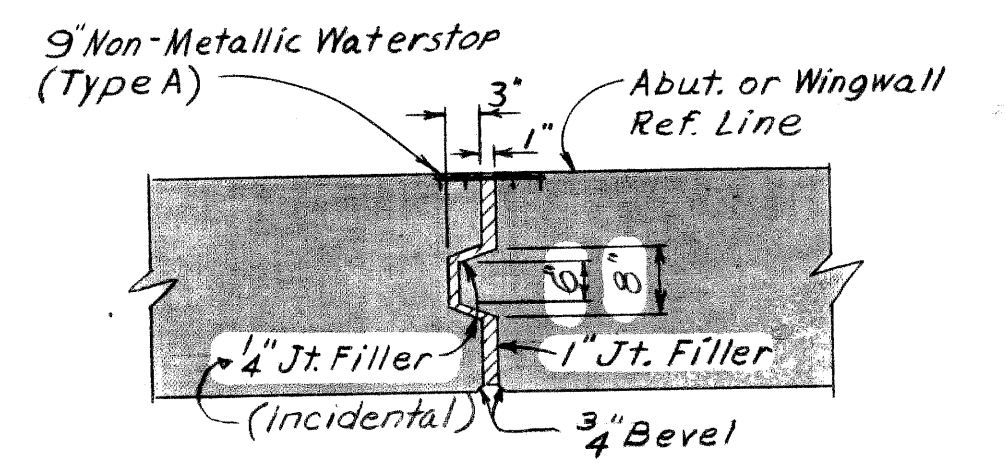


SECTION M-M

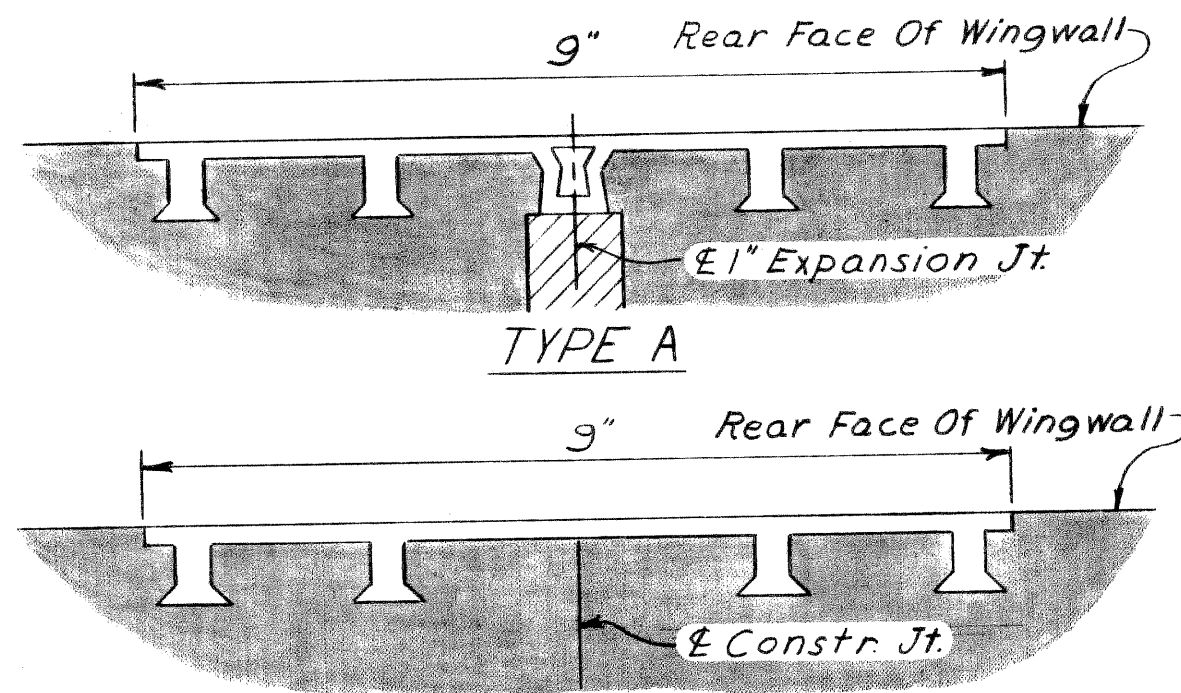
METAL BULKHEAD FOR ABUTMENT & RETAINING WALL CONSTRUCTION JOINT
 Alternate



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL



NON-METALLIC WATERSTOP 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.

Work this Sh. with Sh. 8, 9, 10, 11, 12, 13 & 15

MICHIGAN STATE HIGHWAY DEPARTMENT

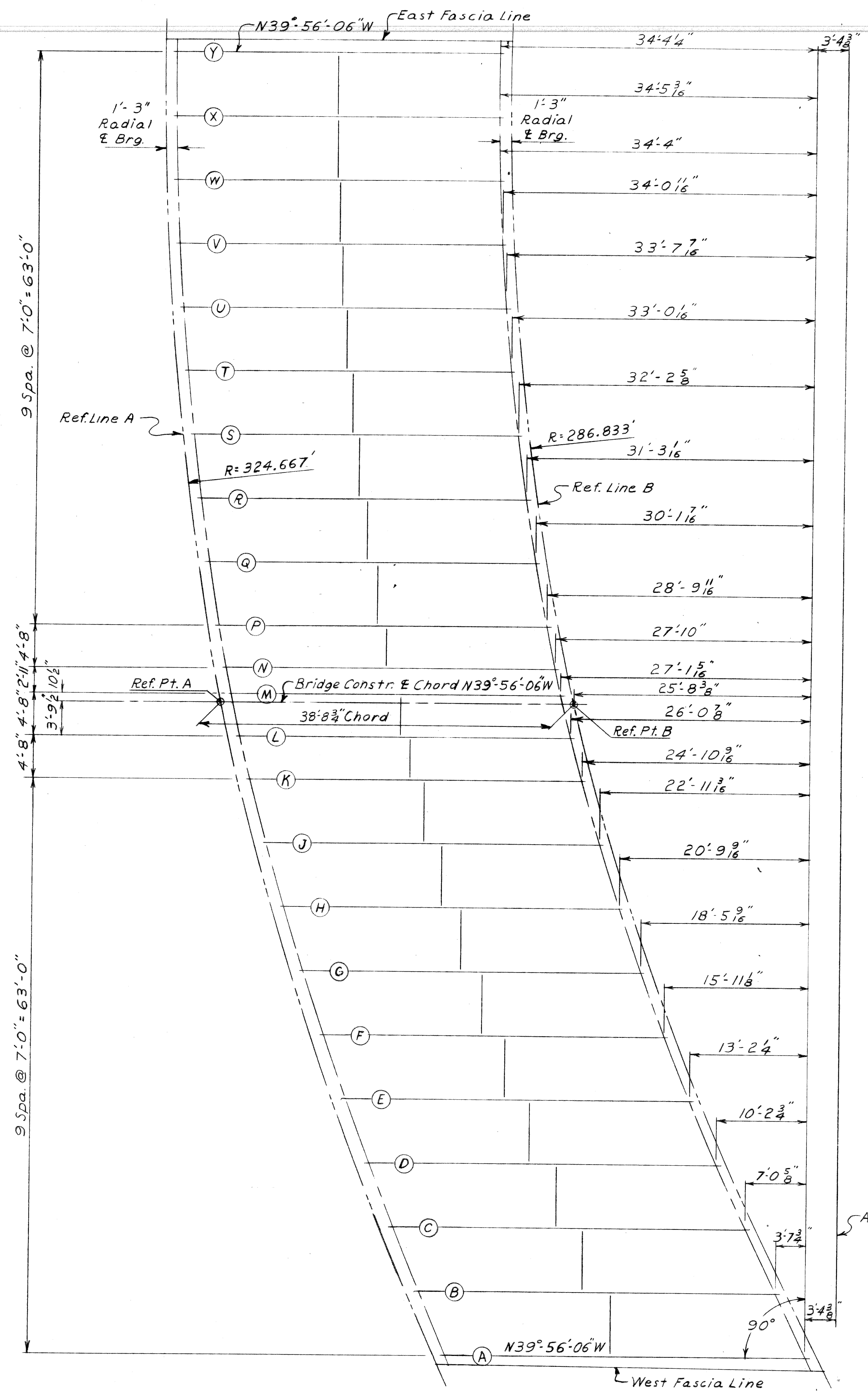
ABUTMENT DETAILS

PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS
 APPROVED: J. J. Carver
 STRUCTURAL ENGINEER

JOB No.
 PW 990(2)

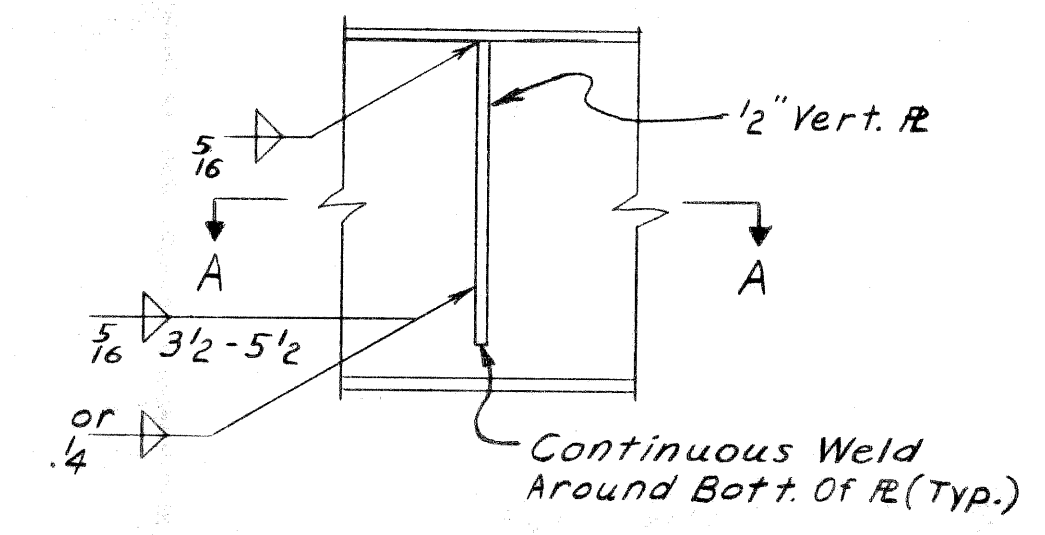
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS: R. James 12-67
 DRAWN BY: DN/WAL 12-67
 TRACED BY: K.V.H. 12-67
 CHECKED BY: K.V.H. 12-67
 SHEET 14 OF 23
 S 40 of 82123 K

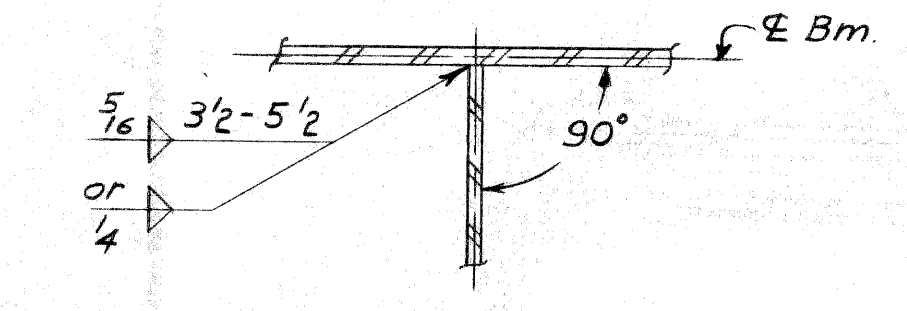


ERECTOR DIAGRAM

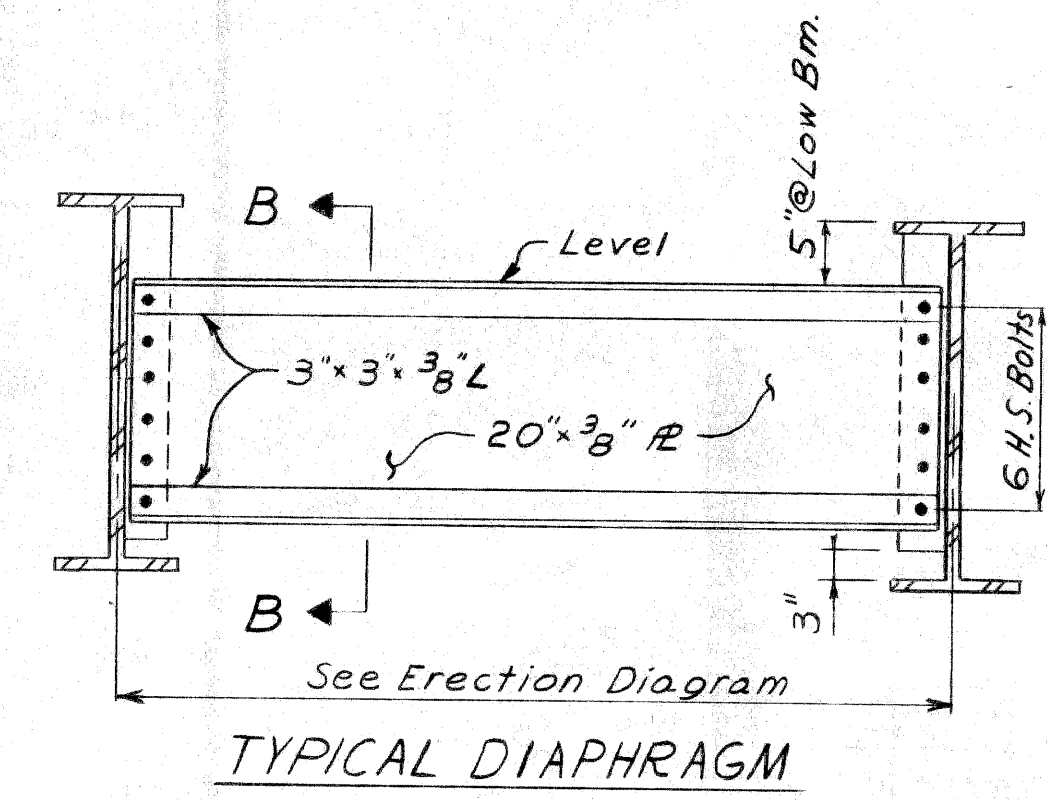
NOTE
All Beams Are 30W 99
With Shear Connectors



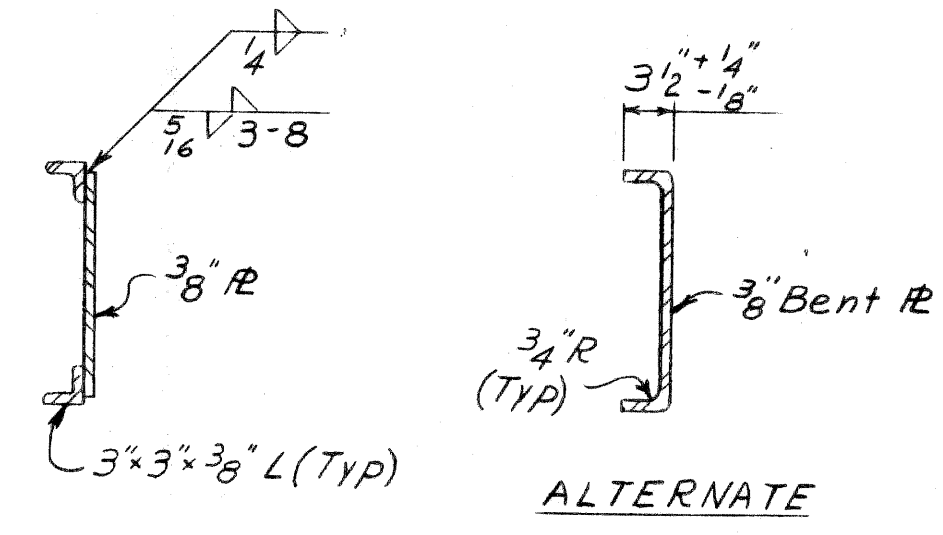
ELEVATION OF BEAM @ CONNECTION PLATE



SECTION A-A



TYPICAL DIAPHRAGM



SECTION B-B

VARIABLE BEAM DIMENSIONS	
BEAM	DIM. "A" % BRG
A	39'-6 7/8"
B	39'-0 7/8"
C	38'-7"
D	38'-2 7/8"
E	37'-9 1/8"
F	37'-5 1/8"
G	37'-2"
H	36'-10 7/8"
J	36'-7 7/8"
K	36'-4 7/8"
L	36'-3 1/4"
M	36'-1 3/4"
N	36'-0 7/8"
P	35'-11 1/2"
Q	35'-9 3/4"
R	35'-8 3/8"
S	35'-6 7/8"
T	35'-5 1/2"
U	35'-5 1/8"
V	35'-4 1/2"
W	35'-4 7/8"
X	35'-4"
Y	35'-4 1/8"

STRUCTURAL STEEL NOTES

Design: Michigan State Highway Department's Specifications for Design of Highway Bridges - 1958 edition and current AASHO Standard Specifications for Highway Bridges, HS 20 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 structural steel.

Field Connections shall be bolted with 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 1/2" in thickness. Edges must be beveled 4" and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates. All Steel Shall be Unpainted A441 (Modified)

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 1/2".

Beam dimensions are horizontal and along the E of Beam.

Camber shall be measured with the beam lying on its side. Camber tolerance is ± 1/4". Heating shall be used if necessary to assure permanent camber within the above limits. Sole 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.

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.

QUANTITIES

Structural Steel - Furnishing and Fabricating	96,800 Lbs.
Structural Steel - Erection	96,800 Lbs.
Shear Developers	Lump Sum

Work This Sheet With Sh. # 17

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

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

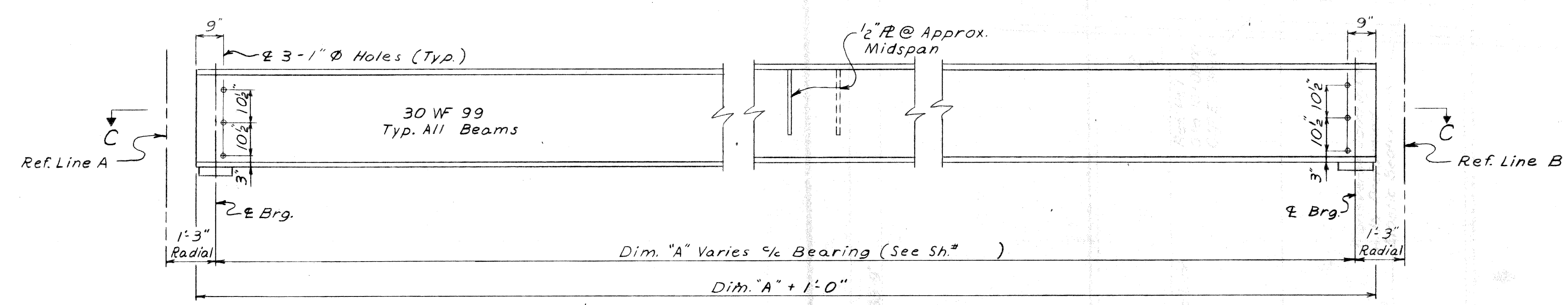
APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

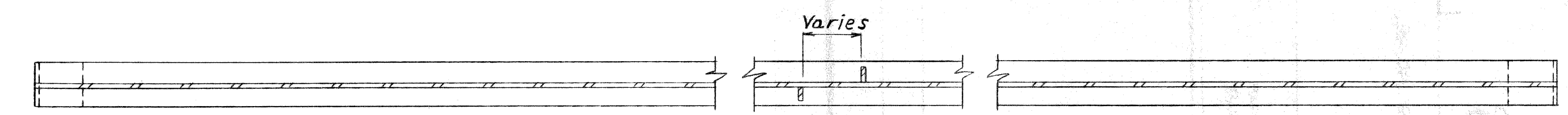
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	R. JAMES 12-67
DRAWN BY	WAGLE 7-67
TRACED BY	CJ 12-67
CHECKED BY	
SHEET 16 OF 23	
S 40 of 82123 K	

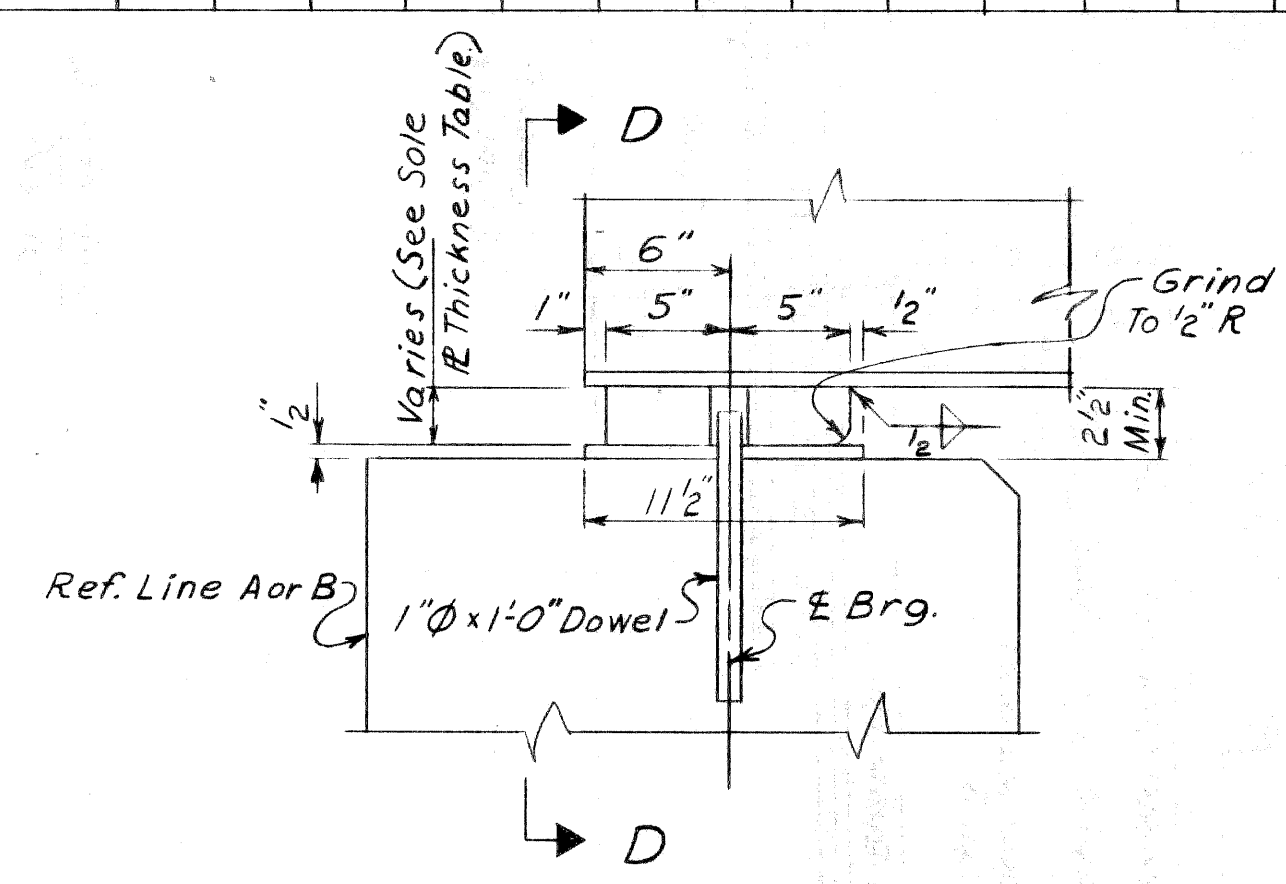
SOLE PLATE THICKNESS TABLE (Inches)																							
BEAM	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y
ABUT. A	2 1/4	2 1/4	3/4	2 3/4	3 3/4	4	3 1/4	2	3 1/2	2 1/4	2 1/4	2	2	2	3	2 1/2	3 1/2	4 1/4	3 1/2	2 1/2	4	2 3/4	2 3/4
ABUT. B	2 1/4	2 1/4	3 1/2	3	4	4 1/2	3 3/4	2 1/2	4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	3 3/4	2 1/4	3 1/4	4	3 1/4	2 1/4	3 3/4	2 1/2	2 1/2



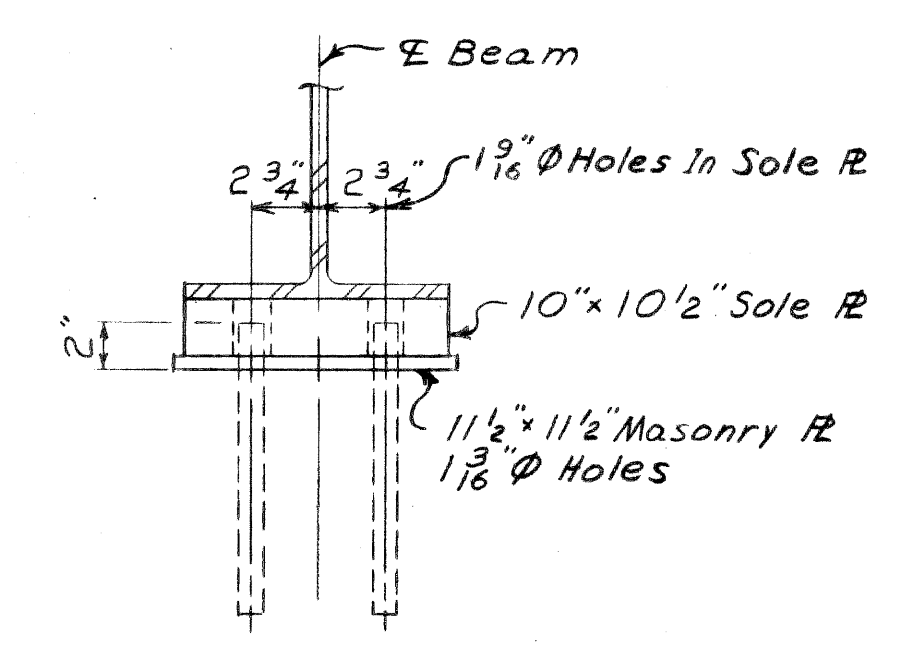
ELEVATION



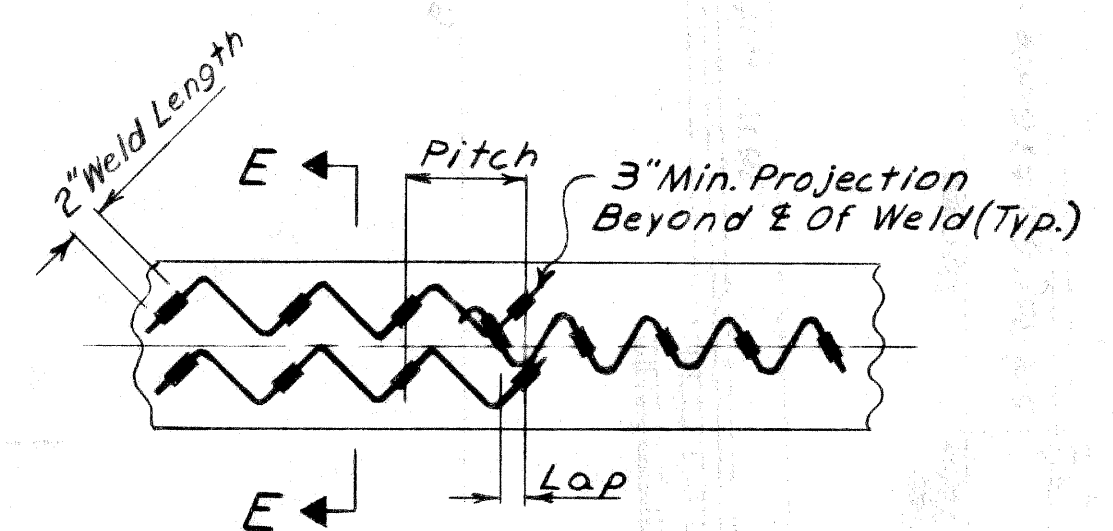
SECTION C-C



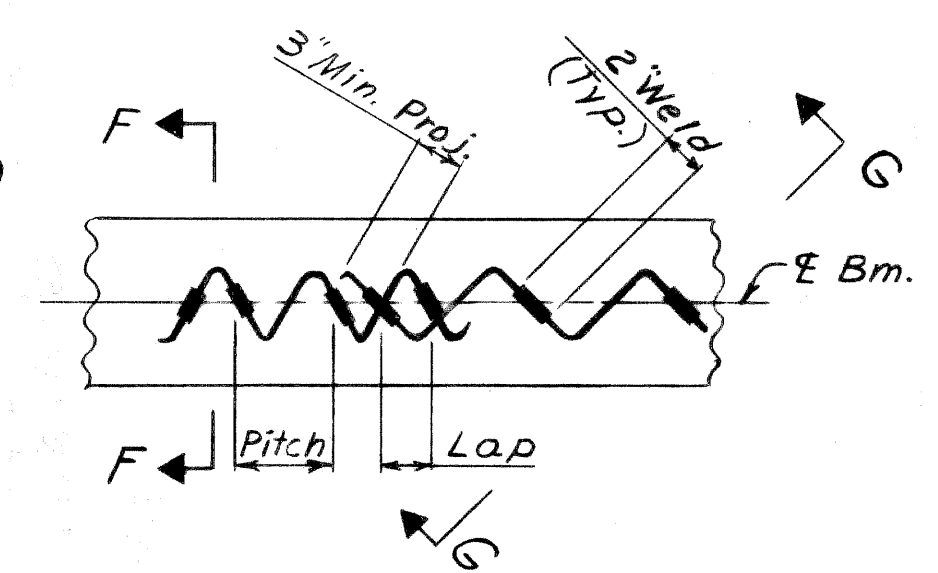
ABUT. A OR B
BEARING DETAILS



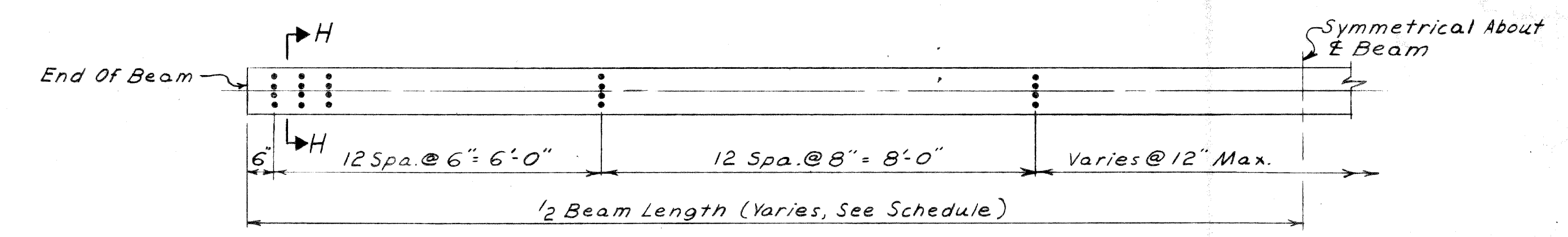
SECTION D-D



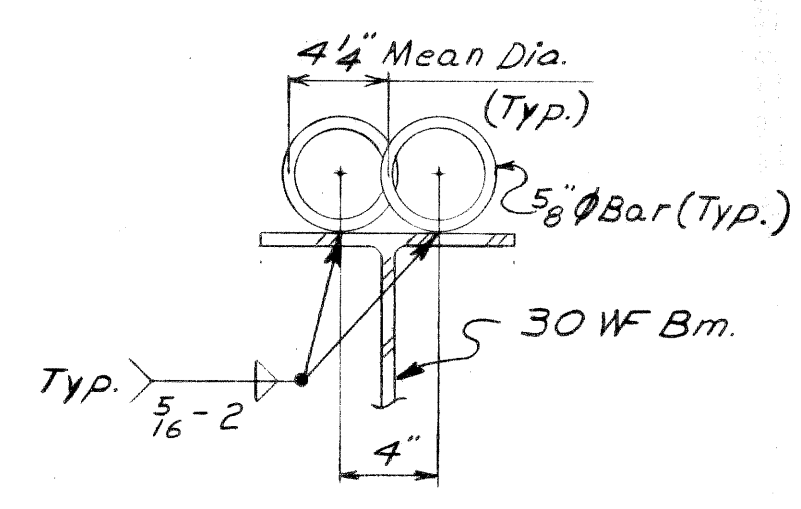
DOUBLE SPIRAL UNIT



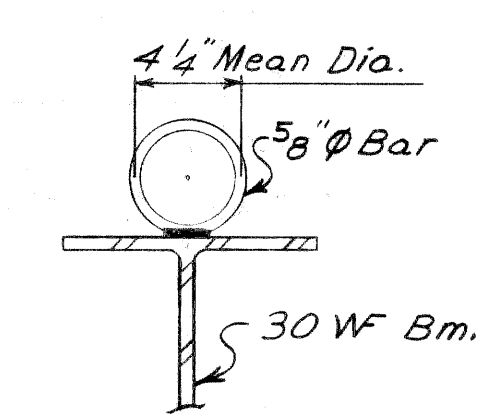
SINGLE SPIRAL UNIT



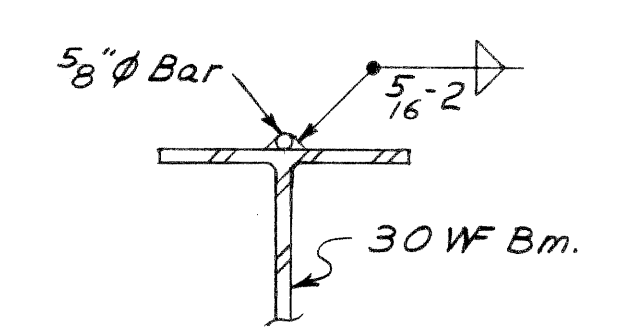
STUD SHEAR DEVELOPERS



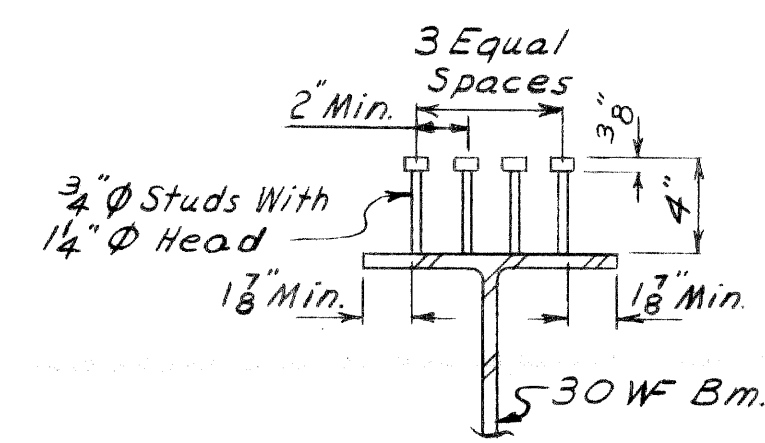
SECTION E-E



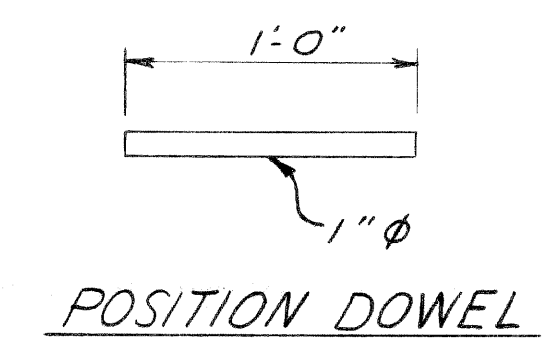
SECTION F-F



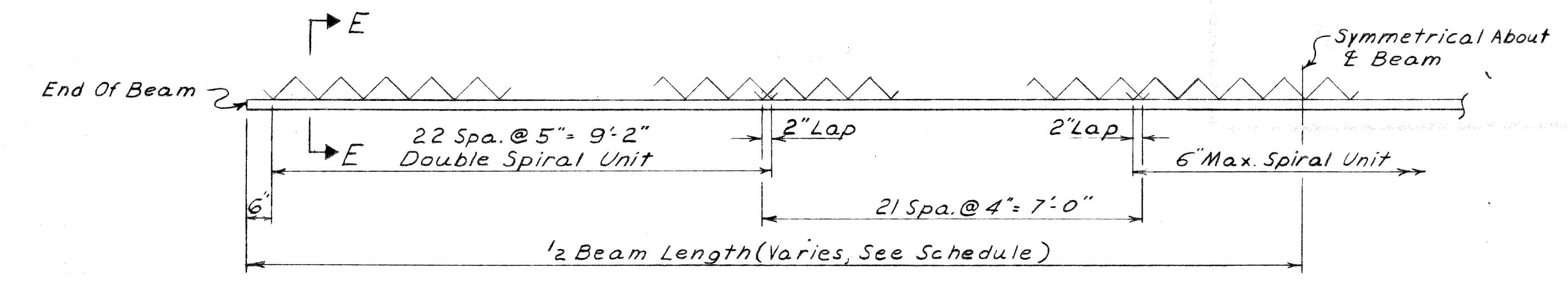
SECTION G-G



SECTION H-H



POSITION DOWEL



SPIRAL SHEAR DEVELOPERS

Work This Sheet With Sh. # 16

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

APPROVED: *J. J. Conant*
STRUCTURAL ENGINEER

JOB No.
PW 9902C

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

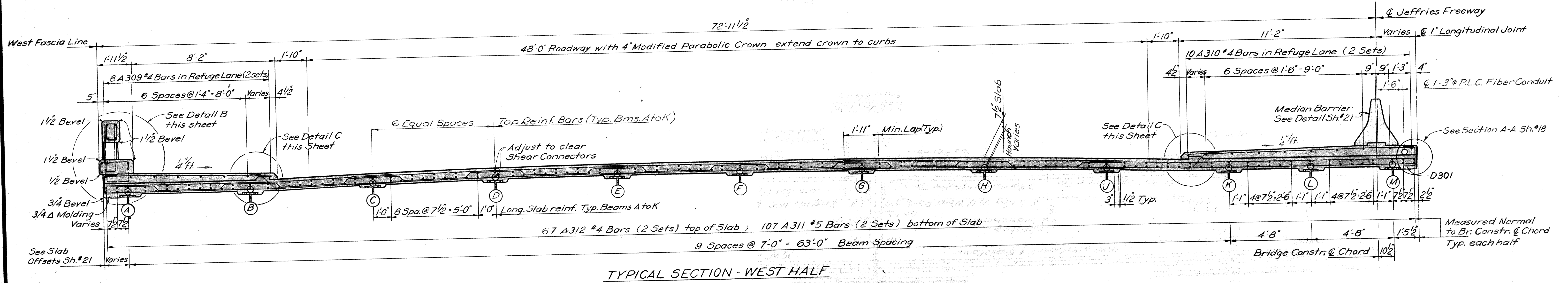
CITY OF DETROIT

REVISIONS

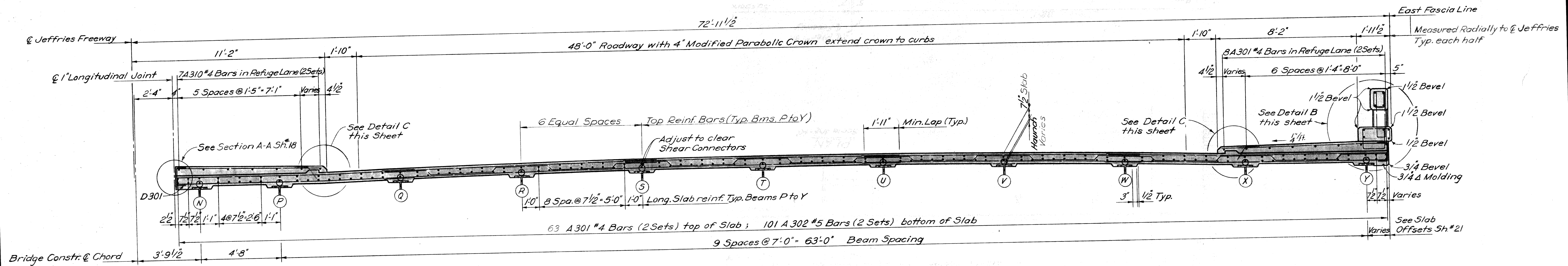
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS
DRAWN BY: *C. Slagter* 12-67
TRACED BY: *NAGLE* 7-67
CHECKED BY: *R. J.* 12-67
SHEET 17 OF 23

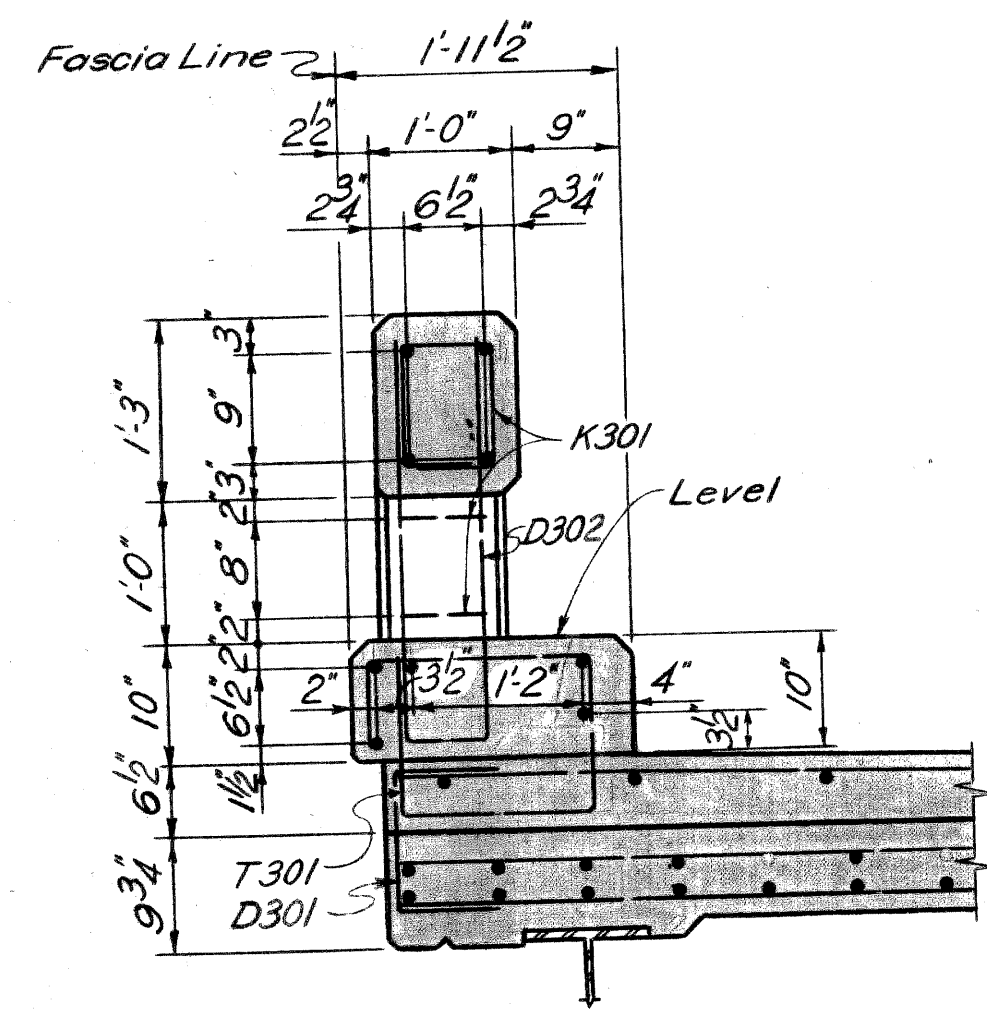
S 40 of 82123 K



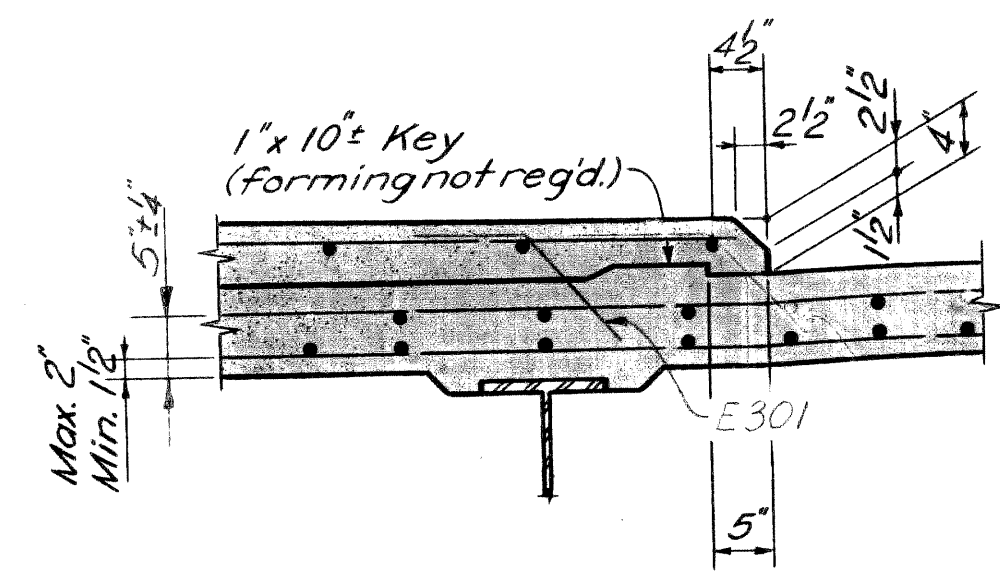
TYPICAL SECTION - WEST HALF



TYPICAL SECTION - EAST HALF



DETAIL B



DETAIL C

Work this Sheet with Sheets 18 & 20-22

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

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

APPROVED *J. J. Conroy*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(2)

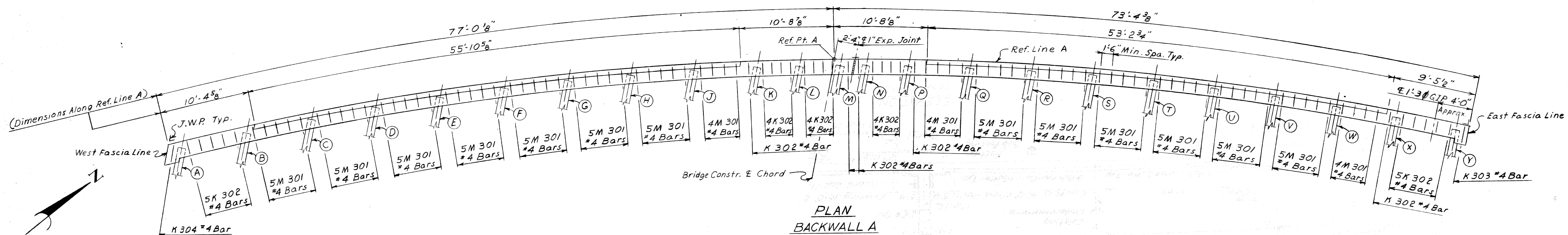
SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

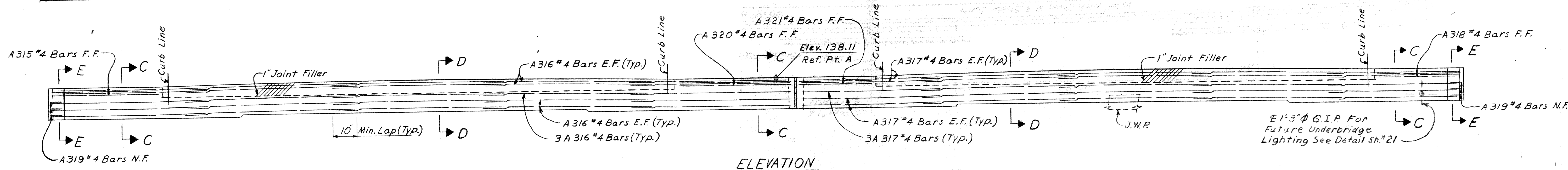
CITY OF DETROIT

SQUAD BOSS	R. J. ...	12-67
DRAWN BY	K.V.H.	6-67
CHECKED BY	STWEM	12-67
SHEET 19 OF 23		

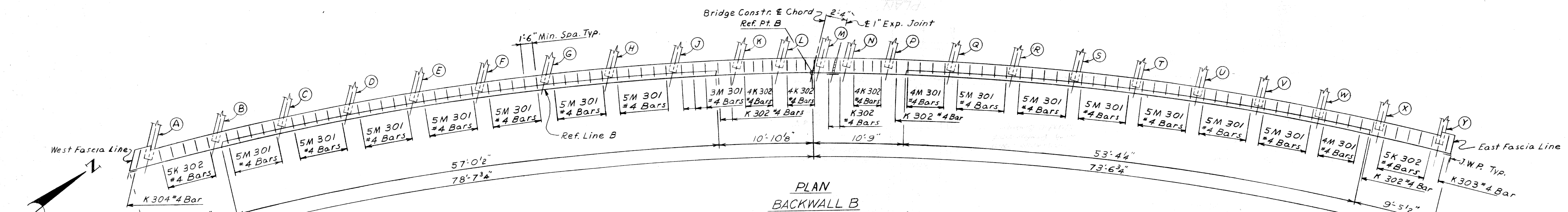
S 40 of 82123 K



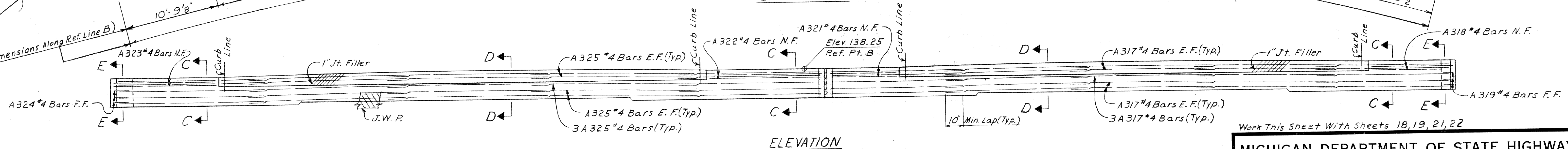
PLAN
BACKWALL A



ELEVATION



PLAN
BACKWALL B



ELEVATION

Work This Sheet With Sheets 18, 19, 21, 22

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

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

APPROVED: *J. A. Conroy*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

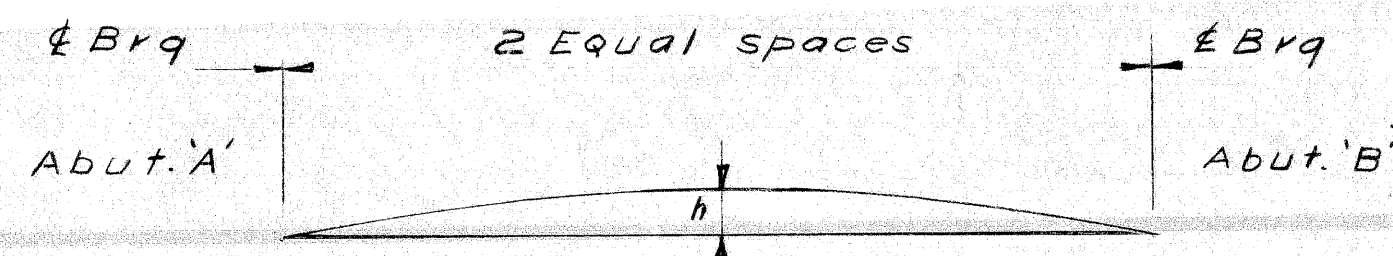
CITY OF DETROIT

SQUAD BOSS	R. Jones	12-67
DRAWN BY	NAGLE	7-67
CHECKED BY	Stover	12-67
SHEET	20	OF 23

S 40 of 82123 K

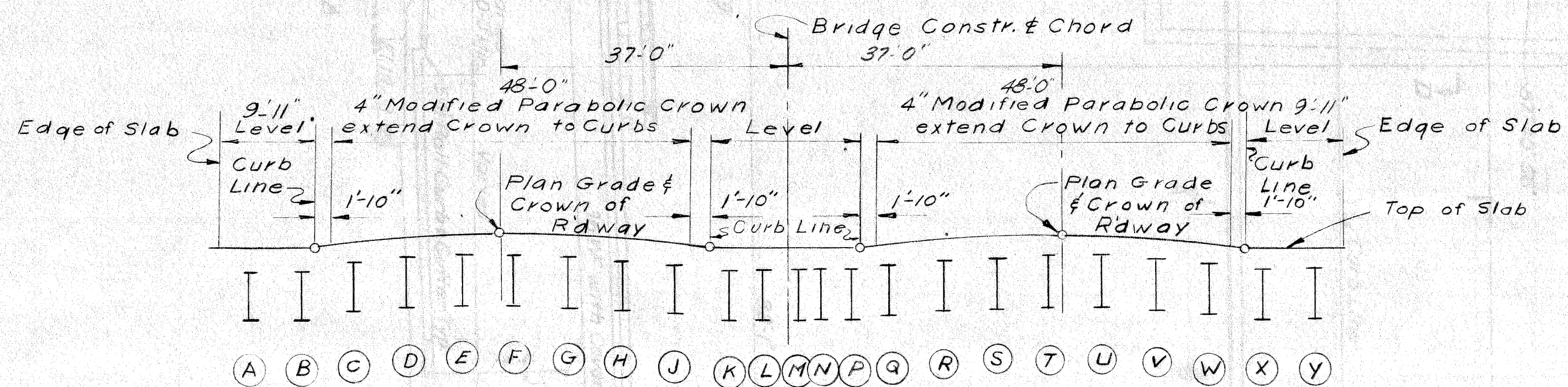
Ref. Line A	4 Equal Spaces on 4 Beams	4 Equal Spaces on 4 Beams	Ref. Line B
137.09	137.15	137.20	137.23
137.09	137.15	137.20	137.23
137.20	137.26	137.31	137.34
137.32	137.39	137.43	137.46
137.41	137.48	137.53	137.55
137.46	137.53	137.57	137.60
137.41	137.47	137.52	137.54
137.32	137.38	137.43	137.45
137.20	137.26	137.31	137.33
137.11	137.18	137.22	137.25
137.12	137.18	137.23	137.25
137.12	137.18	137.23	137.25
137.13	137.19	137.23	137.26
137.13	137.19	137.24	137.26
137.23	137.29	137.33	137.35
137.36	137.42	137.46	137.48
137.47	137.53	137.57	137.58
137.53	137.60	137.64	137.66
137.50	137.55	137.59	137.61
137.42	137.48	137.51	137.53
137.31	137.36	137.39	137.41
137.21	137.26	137.30	137.30
137.22	137.27	137.30	137.30

BOTTOM SLAB ELEVATIONS
For Loading Case I

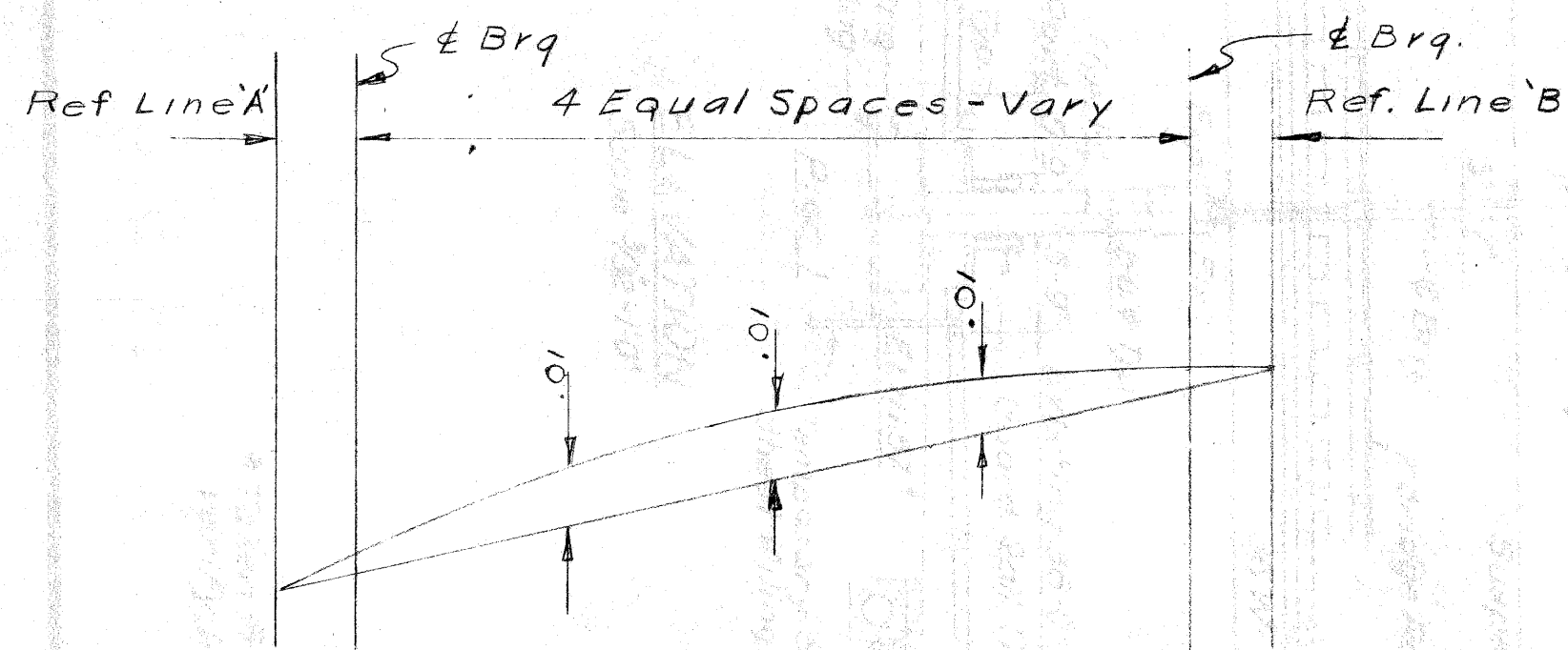


CAMBER DIAGRAM
For Loading Cases Shown in Table

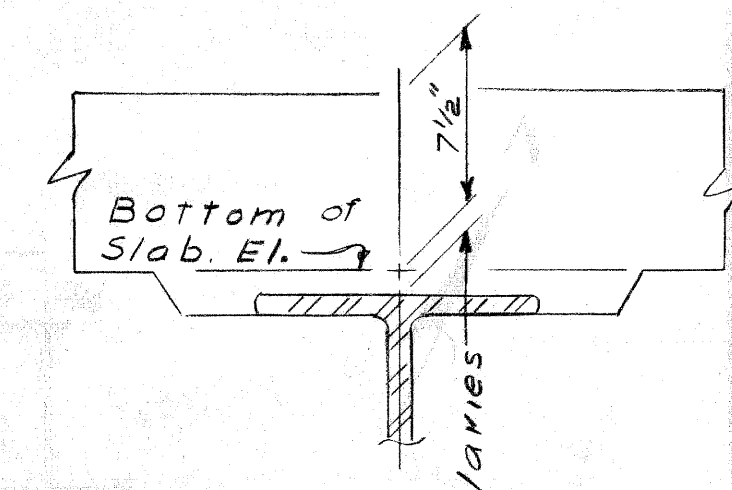
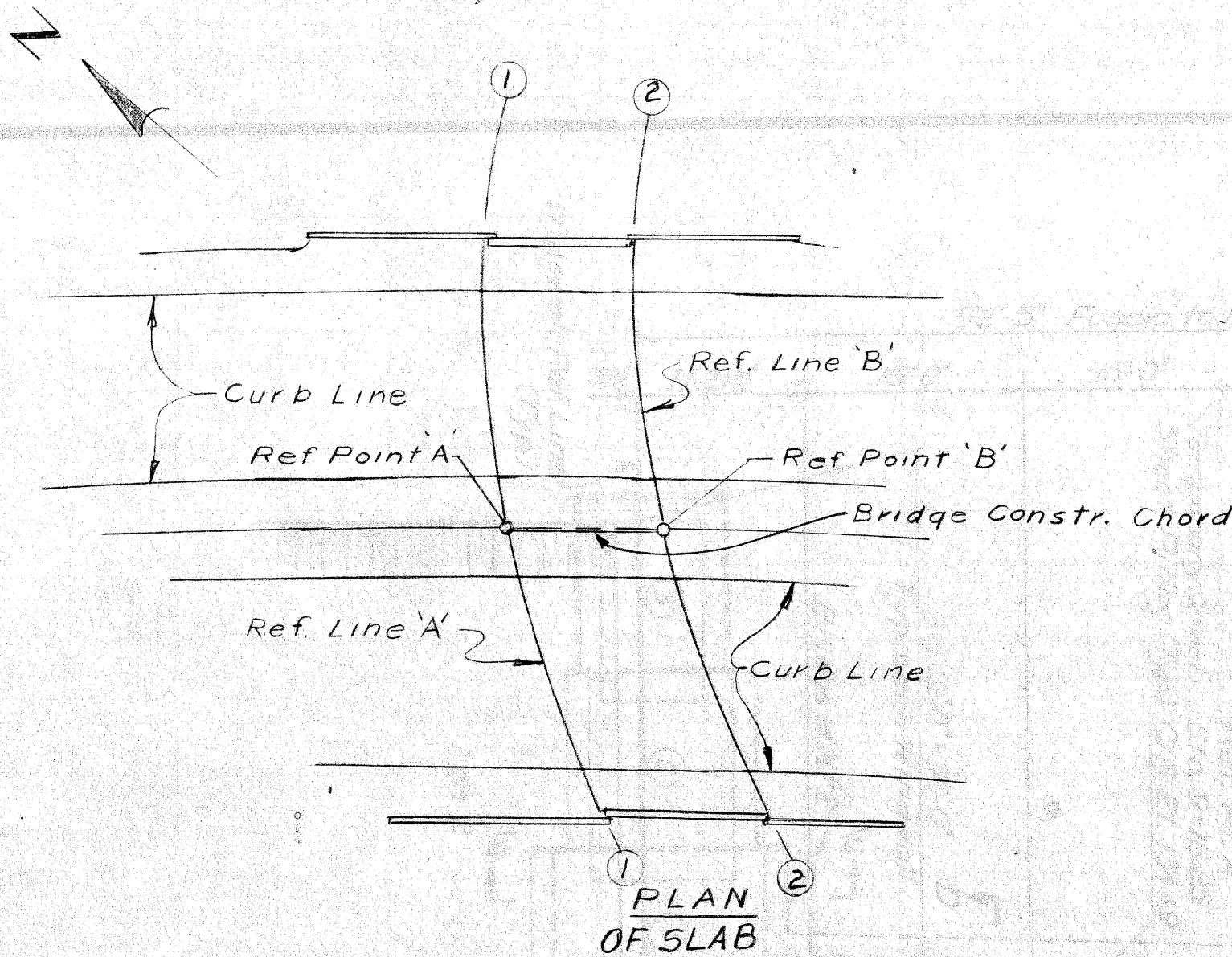
BEAM	LOADING CASE		
	I	II	III
Y	1/2	3/8	1/4
P-X	1/2	1/4	1/8
L-N	1/2	3/8	1/4
A-K	1/2	1/4	1/8



SCREED TEMPLATE
Note: Dimensions on Screed Template are radial



TOP OF SLAB OFFSETS
Case III



TYPICAL SECTION AT EACH BEAM

BEAM	SCREED TEMPLATE ELEV For Case II	
	Line 1-1	Line 2-2
Y	137.71	137.86
X	137.71	137.86
W	137.82	137.97
V	137.94	138.10
U	138.04	138.18
T	138.09	138.23
S	138.03	138.18
R	137.94	138.08
Q	137.82	137.96
P	137.74	137.88
N	137.74	137.88
M	137.75	137.88
L	137.75	137.88
K	137.76	137.89
J	137.85	137.98
H	137.99	138.11
G	138.09	138.21
F	138.16	138.27
E	138.12	138.23
D	138.04	138.15
C	137.93	138.03
B	137.83	137.92
A	137.85	137.93

NOTES:

- Use longitudinal Strike-Off Finishing machine in placing slab concrete.
- Elevations and cambers shown include allowances for deflection due to the weight of structural steel, welding shear developers, weight of forms, steel reinforcement, slab concrete, sidewalk and railing. The loading cases are as follows:
 - Case I All structural steel erected and no other load applied.
 - Case II Shear developers, forms, and Steel reinforcement in place on Structural Steel and no other load applied.
 - Case III Shear developers, Steel reinforcement, and slab concrete in place on Structural Steel and no other load applied.

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

APPROVED: *J. J. Covert*
STRUCTURAL ENGINEER

JOB No.
PW 99012

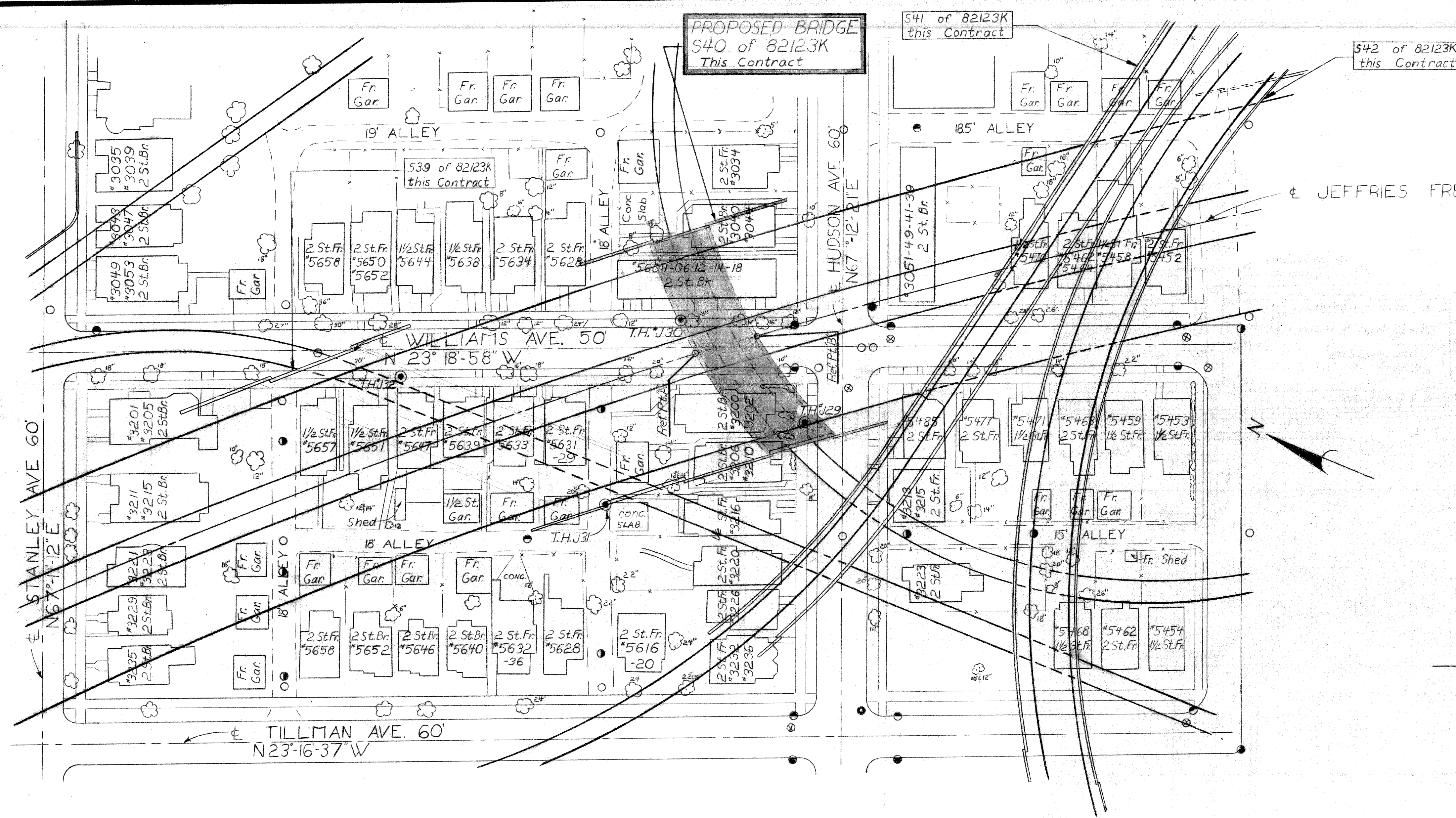
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

CITY OF DETROIT

NO.	REVISIONS	DATE	BY

SQUAD BOSS: *R. Jones* 12-67
DRAWN BY: *D. J. S.* 11-67
CHECKED BY: *K. H. A.* 12-67
SHEET 22 OF 23
S 40 of 82123 K



PROPOSED BRIDGE
S40 of 82123K
This Contract

S41 of 82123K
this Contract

S42 of 82123K
this Contract

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 (S40) crossing over the W'bd to S'bd Turning Roadway and placing Granular Mat'l Class III to the limits shown.

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

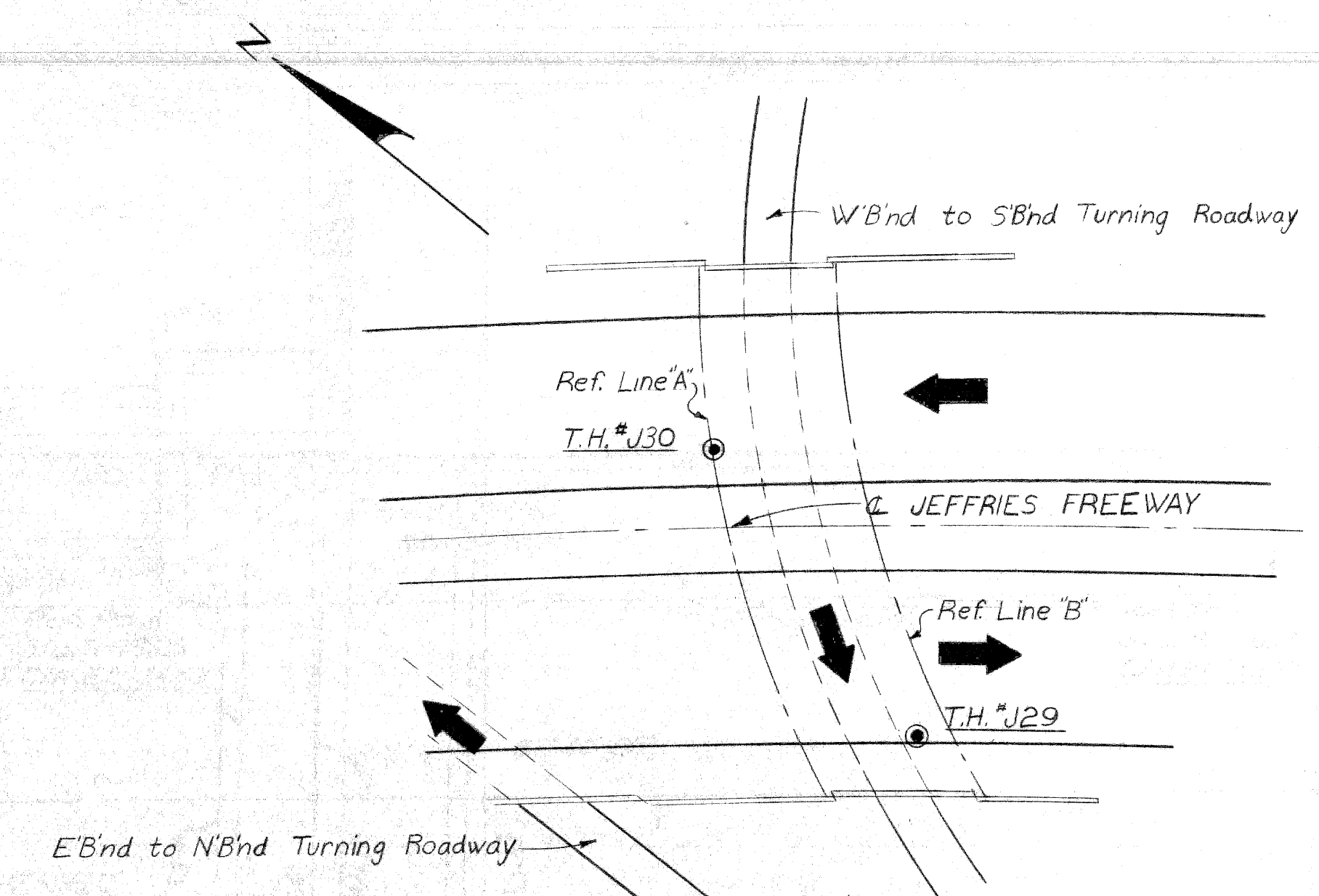
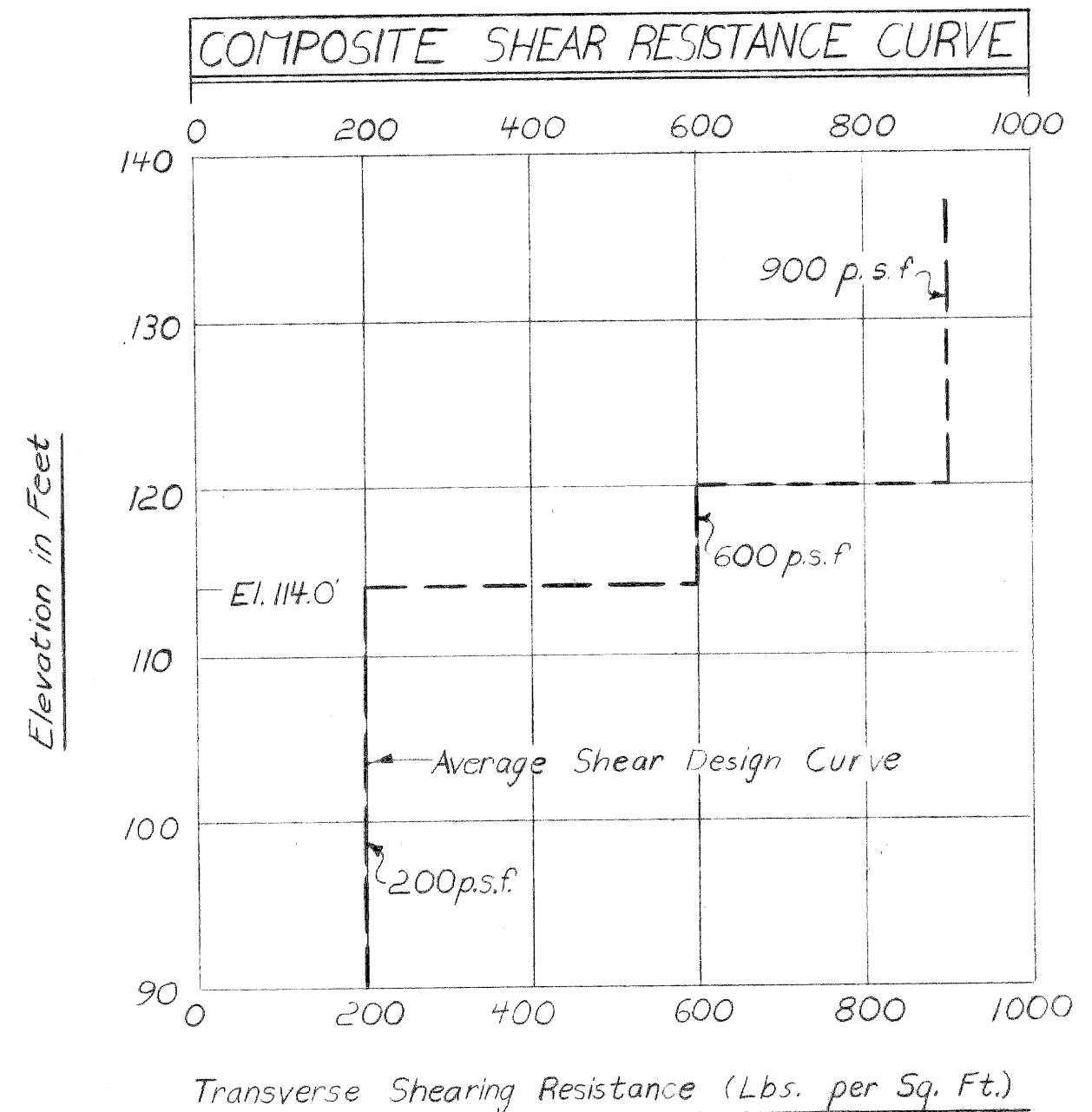
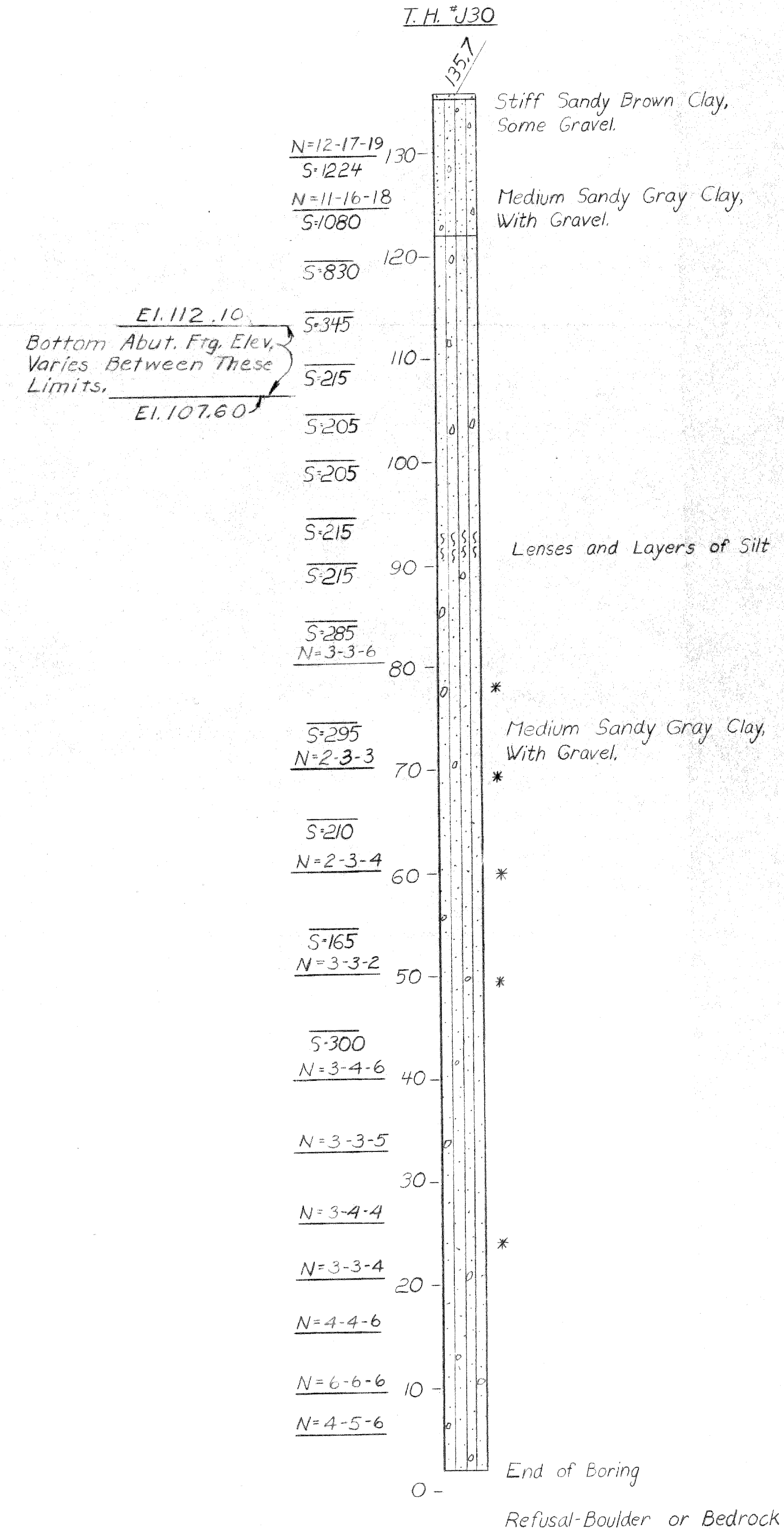
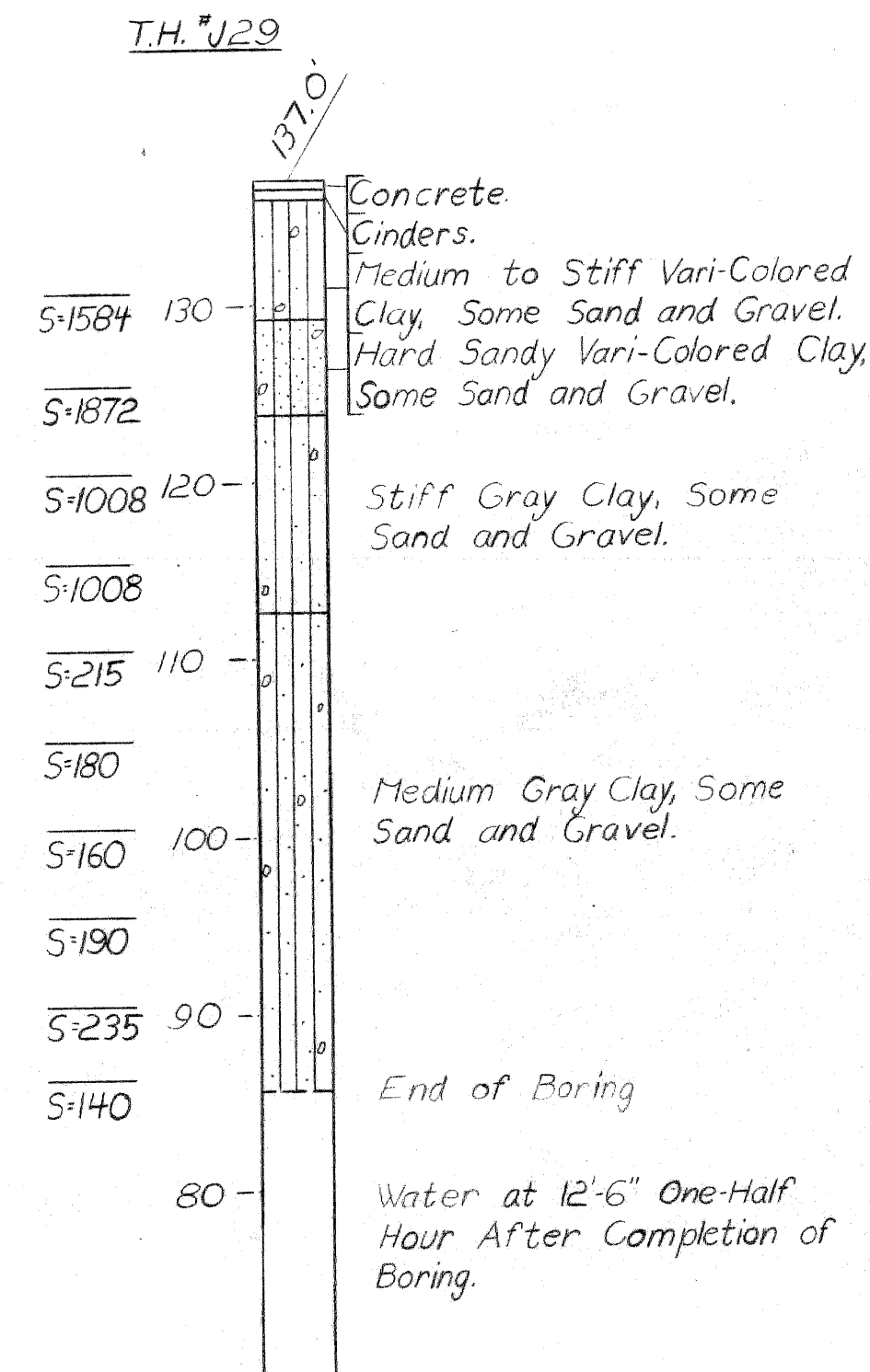
This Bridge is part of an interchange and all area shown is within MDSH R.O.W.

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

SURVEY PLAN
Scale: 1"=40'

<p>PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS</p> <p>APPROVED: <i>J.J. Conant</i> STRUCTURAL ENGINEER</p>	<p>MICHIGAN DEPARTMENT OF STATE HIGHWAYS</p> <p>JEFFRIES-FORD INTERCHANGE JEFFRIES FREEWAY CROSSING THE WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT</p> <p>CITY OF DETROIT</p> <p>JOB No. PW 990(2)</p>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DESCRIPTION	DATE	BY													<p>APPROVED: _____ DESIGN SUPERVISING ENGINEER</p> <p>APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS</p>
NO.	DESCRIPTION	DATE	BY														
<p>SQUAD BOSS <i>R. James</i> 12-67 DRAWN BY <i>V. Kerth</i> 5-7-66 CHECKED BY <i>McGuire</i> 9/66 SHEET 2 OF 23</p> <p>S40 of 82123K</p>																	

LOG OF SOIL BORINGS



SOIL BORING LOCATION SKETCH

NOTES

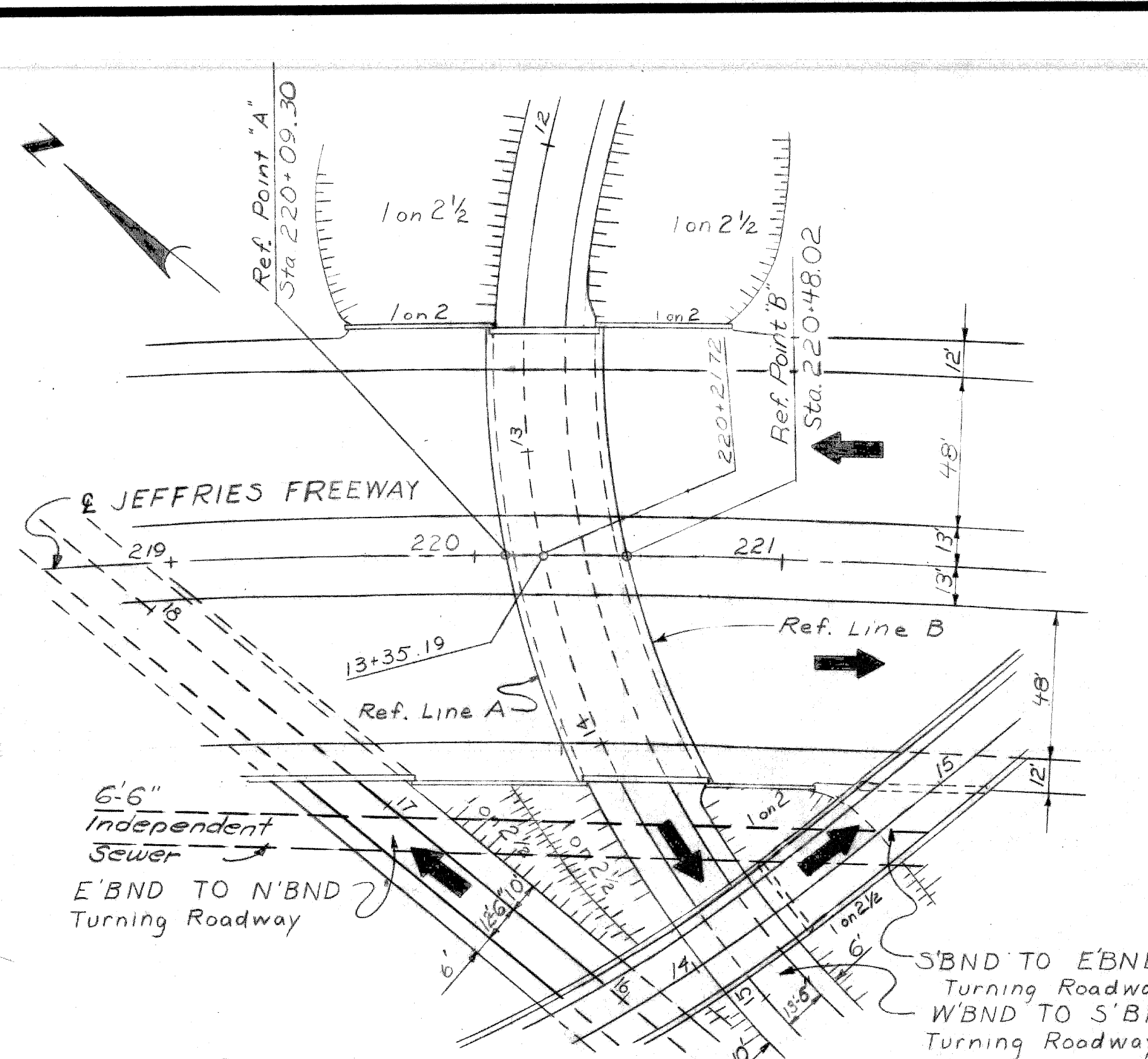
N Indicates the number of blows required to drive the 2" Sampler 6" (or as noted) using a 140 lb. hammer falling 30". Where blow count is not shown, Sampler was levered, pushed or hand-driven.

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

* Indicates no sample.

All elevations are based on City of Detroit Datum.

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN DEPARTMENT OF STATE HIGHWAYS JEFFRIES-FORD INTERCHANGE JEFFRIES FREEWAY CROSSING THE WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT	
APPROVED: <i>J. J. Conant</i> STRUCTURAL ENGINEER	JOB NO. PW 990(2)	CITY OF DETROIT SQUAD BOSS: <i>K. James</i> 12-67 DRAWN BY: <i>A. W. Kerckhoff</i> 7-30-66 TRACED BY: CHECKED BY: <i>McGuire</i> 9/66 SHEET 3 OF 23	
REVISIONS NO. DESCRIPTION DATE BY		APPROVED: _____ DESIGN SUPERVISING ENGINEER	APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS
		S40 of 82123K	



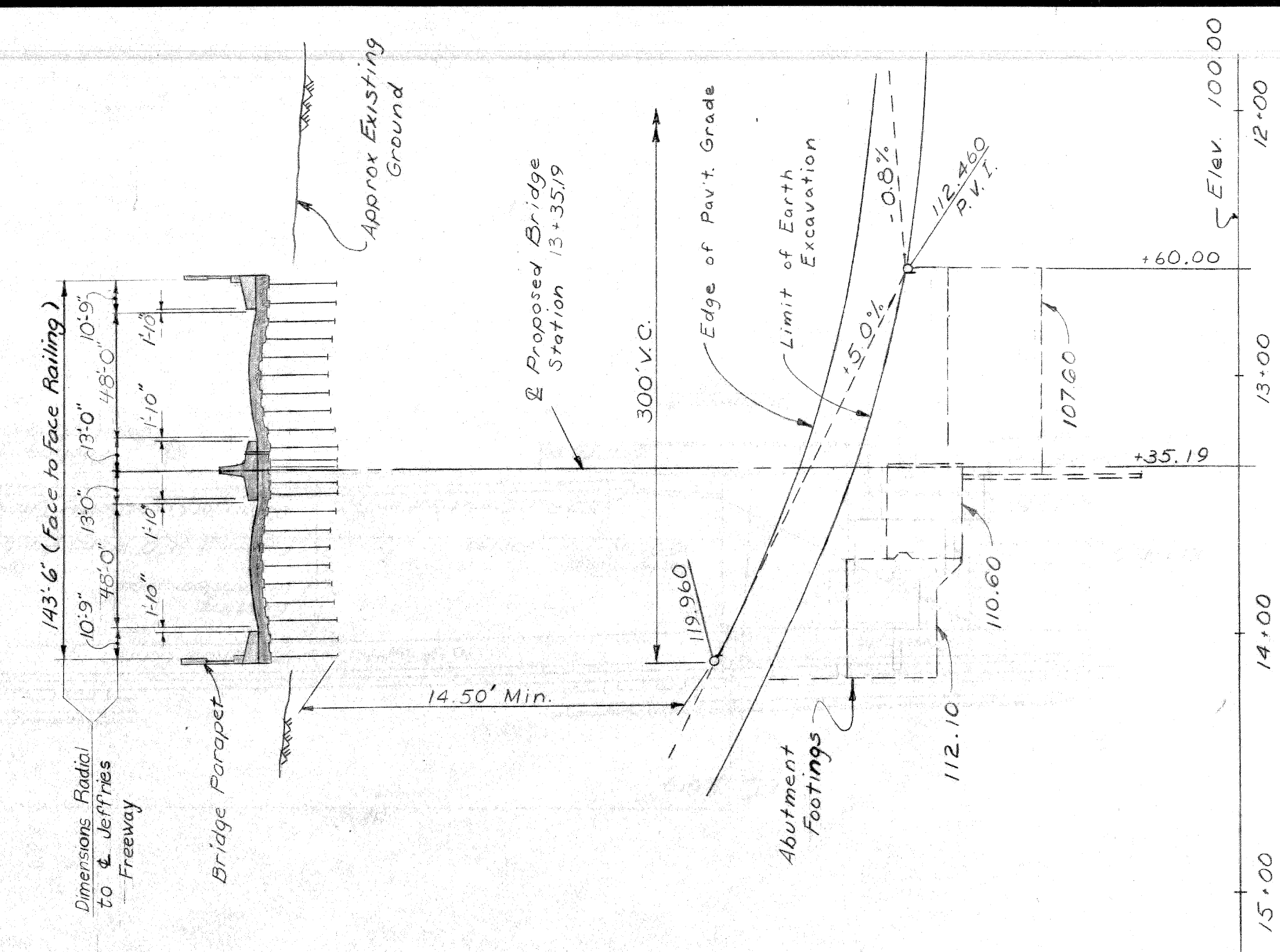
PLAN
Scale: 1" = 40'

W'BND TO S'BND TURNING ROADWAY
 CURVE DATA 1WS.
 $\Delta = 155^\circ-31'-12''$
 $D = 18-20'-04.74''$
 $R = 312.500'$
 $T = 1440.500'$
 $L = 848.230'$
 $E = 1161.507'$
 $PC = 8+81.358$
 $PI = 23+21.858$
 $PT = 17+29.588$
 $S.E.I.R = 0.06 \frac{1}{2} \text{ max.}$

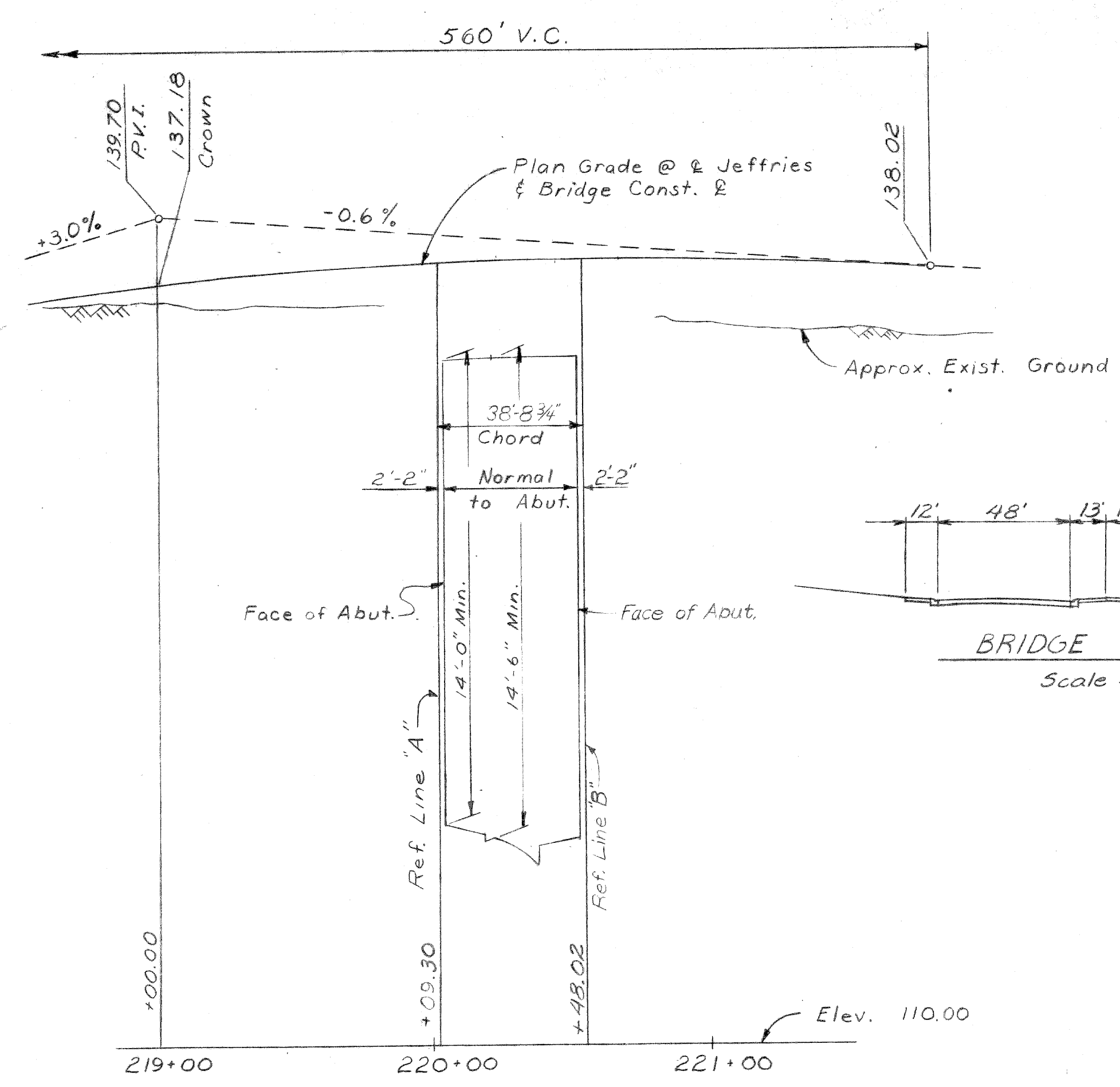
E JEFFRIES FREEWAY
 CURVE DATA 9J
 $\Delta = 44^\circ-37'-30''$
 $D = 1'-30'-00''$
 $R = 3819.719'$
 $T = 1567.555'$
 $L = 2975.000'$
 $E = 309.140'$
 $PC = 201+55.000$
 $PI = 217+22.555$
 $PT = 231+30.000$
 No Superelevation

BENCH MARKS

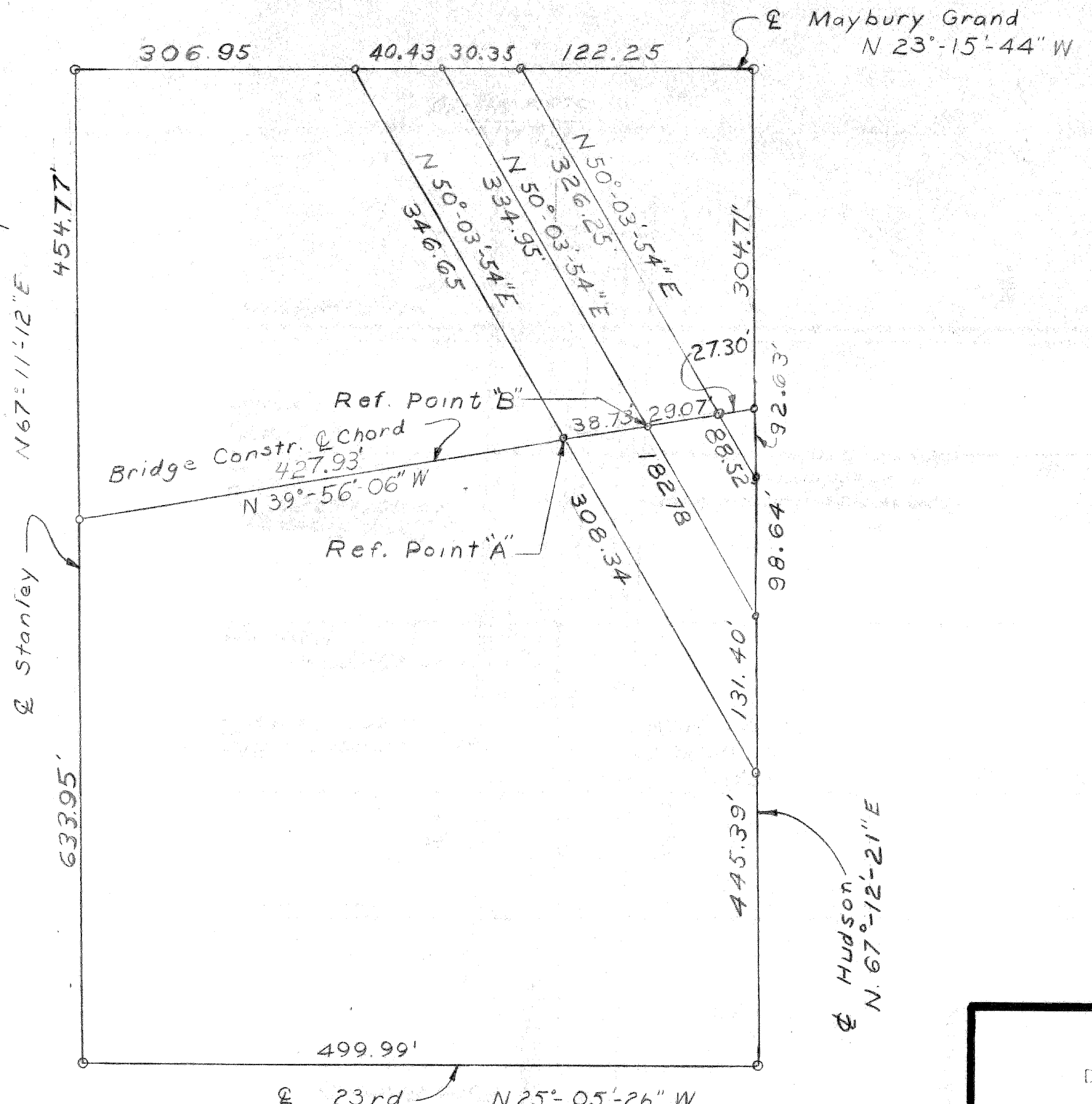
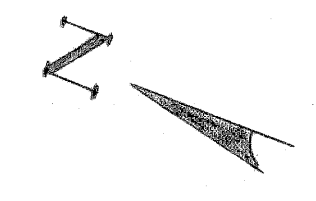
- P.B.M. 21-253 City of Detroit Monument N.E. Corner 23rd. and Stanley Elev. 136.07
- C.B.M. 26 Arrow on Hydrant N.E. Corner Merrick and Tillman Elev. 134.43
- C.B.M. 36 Arrow on Hydrant S.W. Corner Lawton and Ford. S. Service Drive Elev. 140.83
- C.B.M. 62 Arrow on Hydrant E. Side of Williams 50' S.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



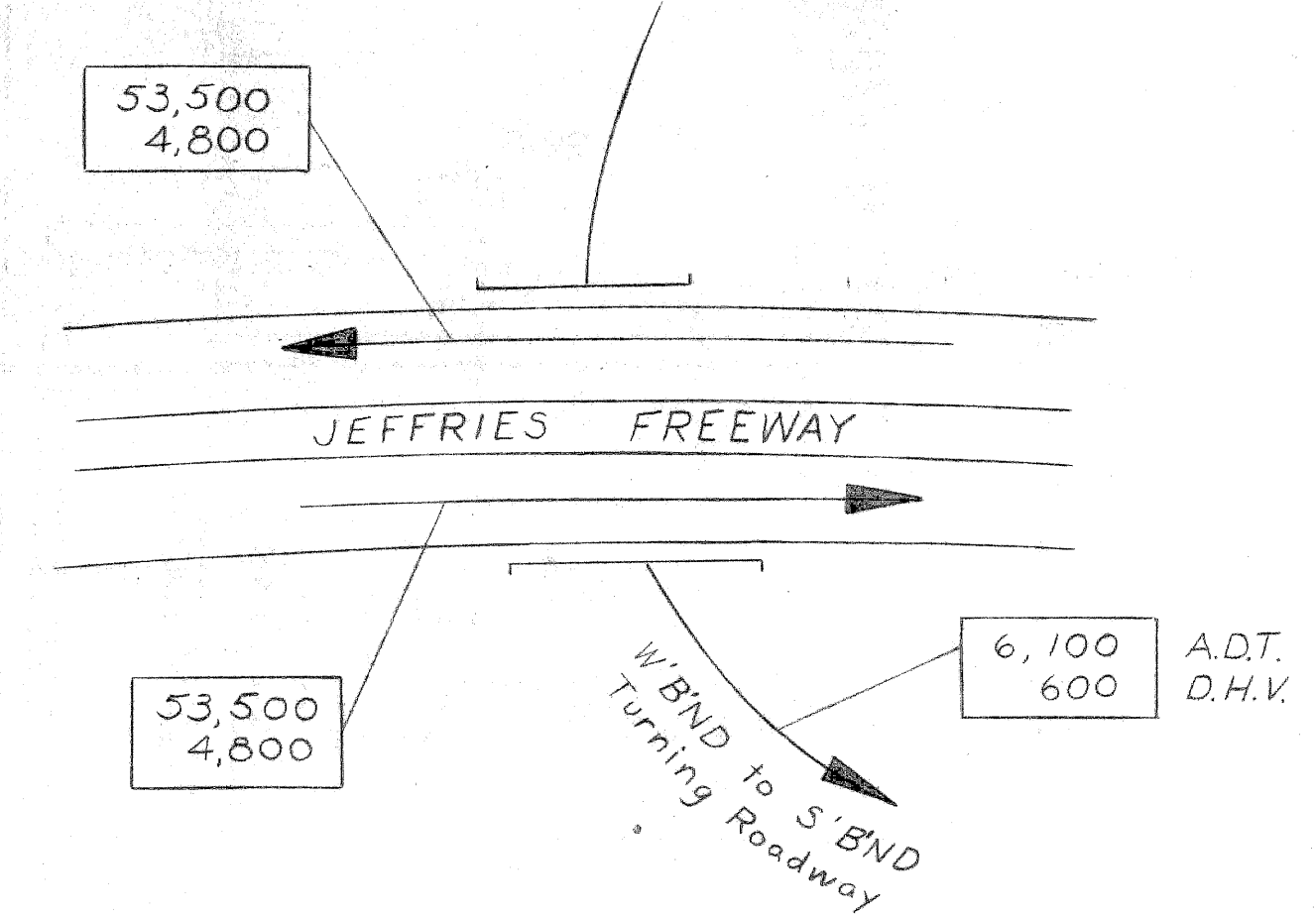
PROFILE ALONG TURNING ROADWAY
Scale: Horz. 1" = 40' Vert. 1" = 4'



PROFILE ALONG BRIDGE
Scale: Horz. 1" = 40' Vert. 1" = 4'



ALIGNMENT DIAGRAM
No Scale



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
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. Conit*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(2)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

GENERAL DRAWING

CITY OF DETROIT

SQUAD BOSS	<i>R. James</i>	12-67
DRAWN BY	<i>R. G.</i>	7-23-66
TRACED BY		
CHECKED BY	<i>McGuire</i>	9/16/66
SHEET 4 OF 23		

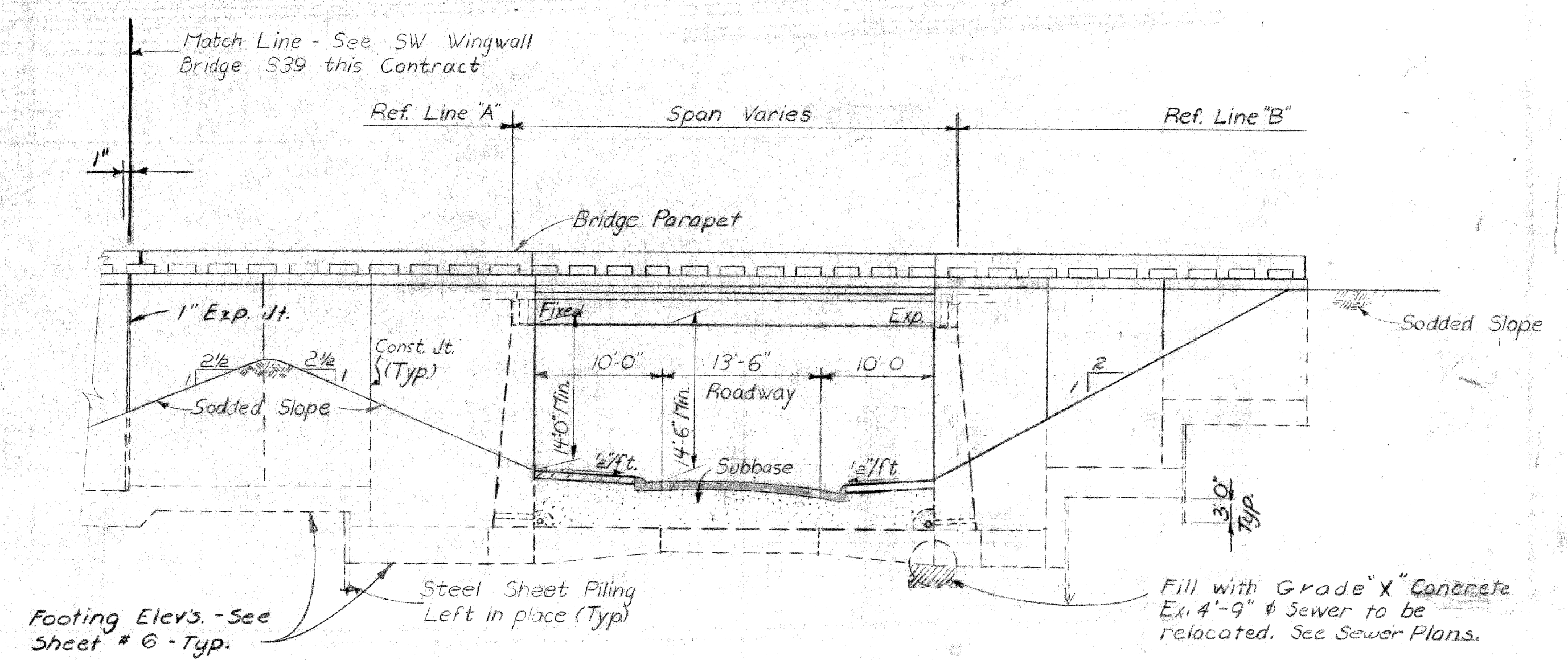
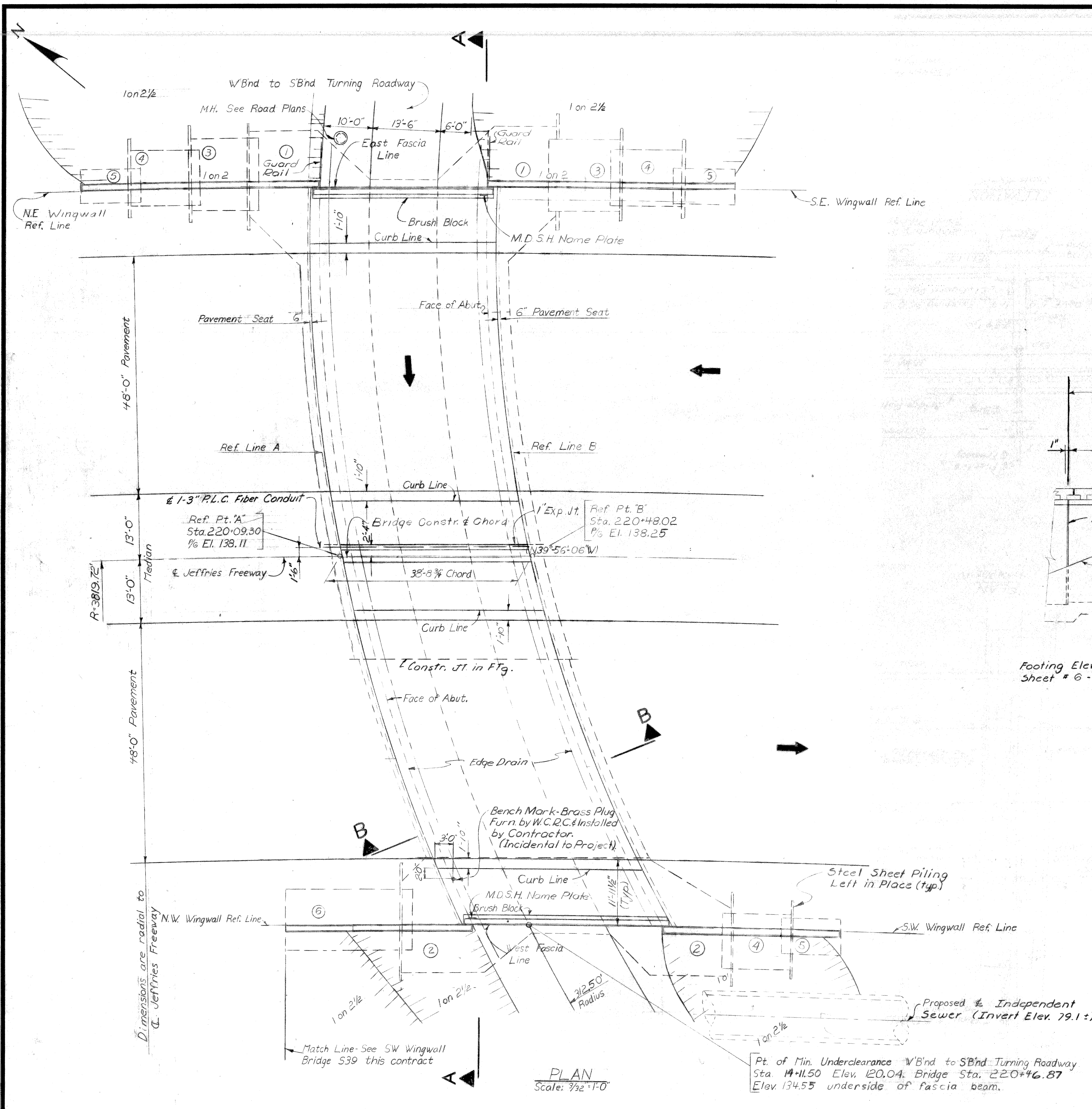
APPROVED: _____ DESIGN SUPERVISING ENGINEER

APPROVED: _____ ENGINEER OF DESIGN - CONSULTANTS

S40 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 1/1000 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.



WEST ELEVATION
 Scale: 3/32" = 1'-0"

MISCELLANEOUS QUANTITIES

Item	Unit	Amount
Grade "X" Conc. Cu. Yd.		18.0

Work this sheet with sheet # 5.

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

APPROVED: *H. Conant* STRUCTURAL ENGINEER
 JOB No. PW 990(2)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
 JEFFRIES FREEWAY CROSSING THE
 WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT
 CITY OF DETROIT

GENERAL PLAN OF STRUCTURE

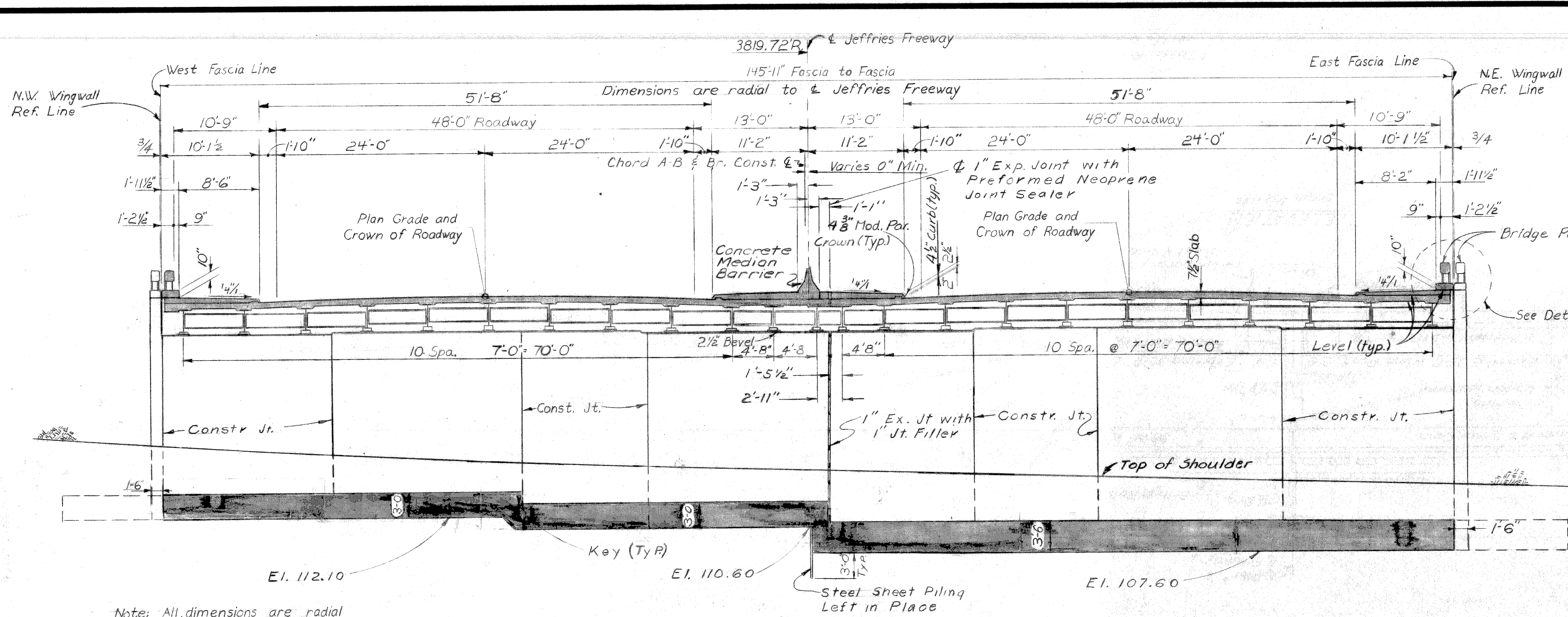
APPROVED: _____ DESIGN SUPERVISING ENGINEER
 APPROVED: _____ ENGINEER OF DESIGN - CONSULTANT

SQUAD BOSS	DATE
<i>R. Brown</i>	12-67
<i>V. Kocubun</i>	7-11-66
<i>McConie</i>	9/66

SHEET 5 OF 23
S40 of 82123K

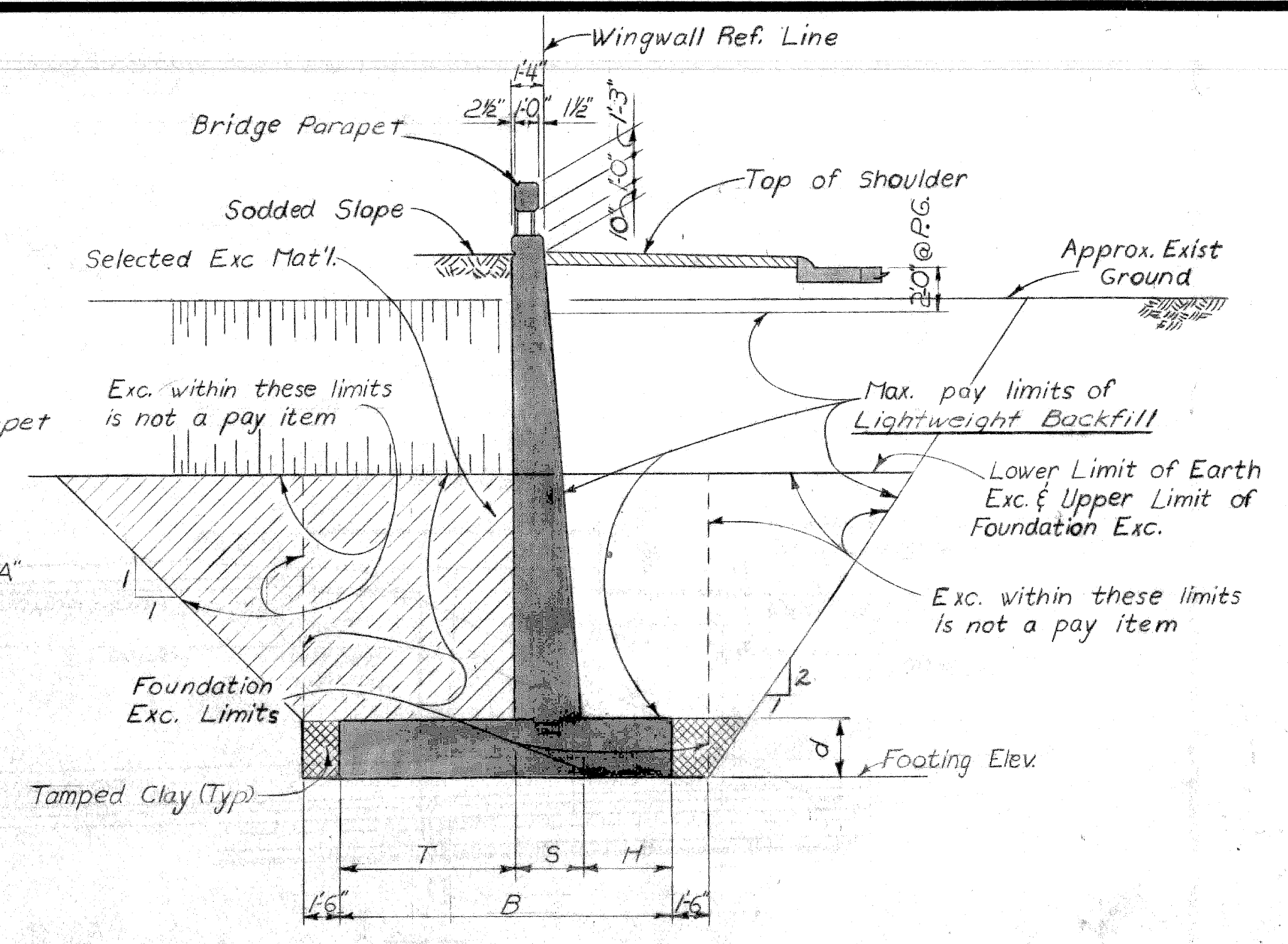
Pt. of Min. Underclearance W'nd to S'nd Turning Roadway
 Sta. 14+11.50 Elev. 120.04. Bridge Sta. 220+46.87
 Elev. 134.55 underside of fascia beam.

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



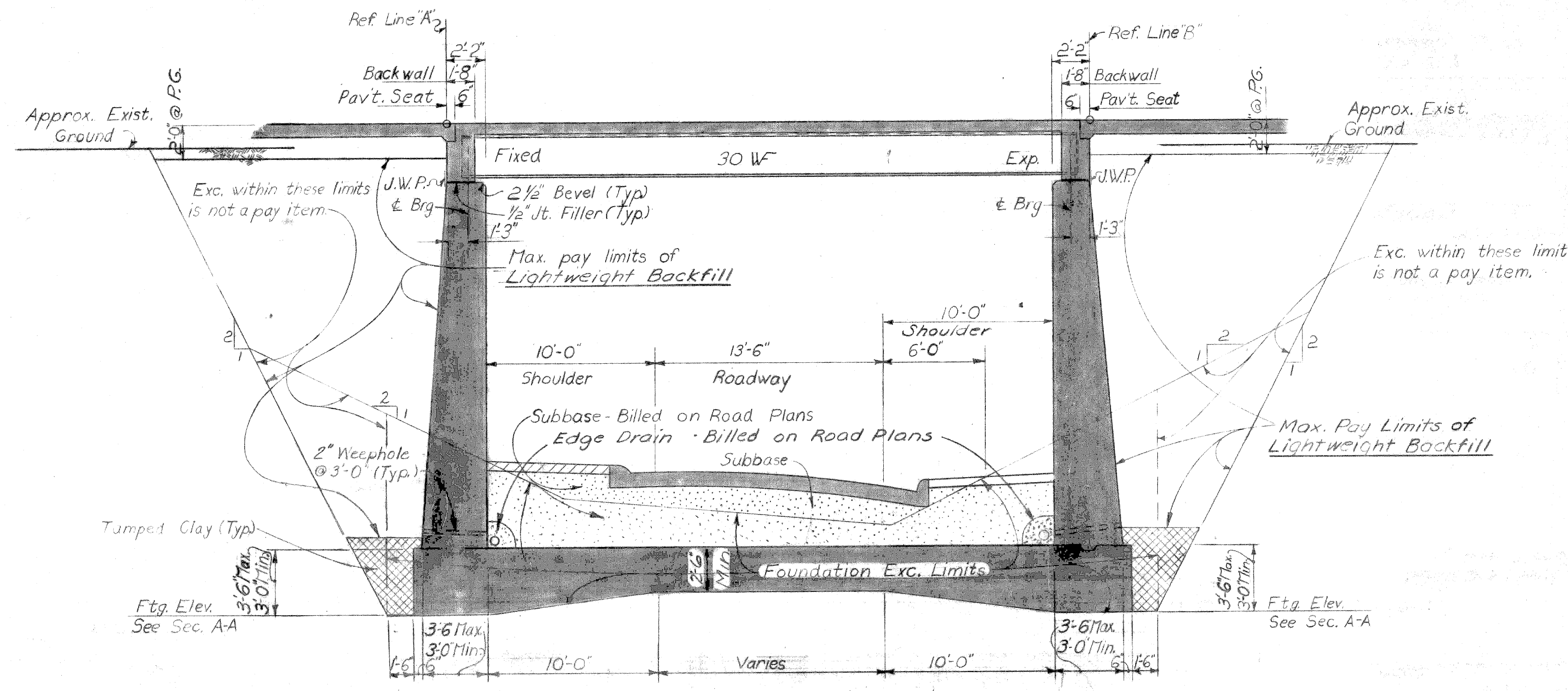
Note: All dimensions are radial to & of Bridge

SECTION AA
Scale: 1/8"=1'-0"

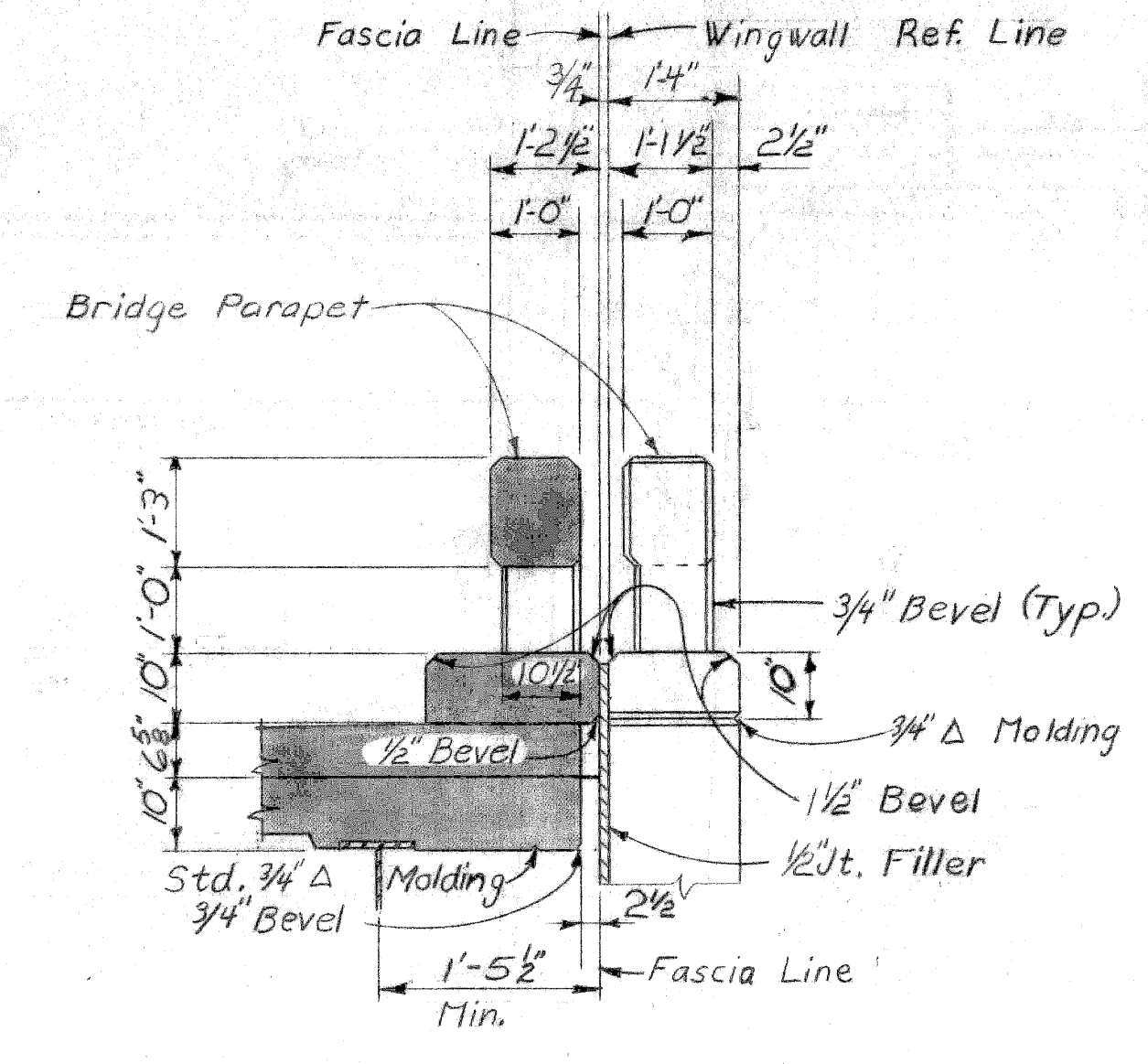


TYP. WINGWALL SECTION
Scale: 3/16"=1'-0"

SECT.	WINGWALL FOOTING DIMENSIONS					W.W. FOOTING ELEV.			
	B	T	S	H	d	Abut. A		Abut. B	
						NE	NW	SE	SW
①	—	10'-0"	3'-6"	—	3'-6"	107.60	—	107.60	—
②	—	8'-0"	3'-3"	—	3'-0"	—	112.10	—	112.10
③	14'-6"	8'-6"	3'-0"	3'-0"	3'-0"	114.60	—	114.60	—
④	11'-0"	6'-6"	2'-6"	2'-0"	2'-6"	121.60	—	121.60	119.10
⑤	7'-0"	3'-0"	2'-3"	1'-9"	2'-0"	128.60	—	128.60	126.10
⑥	12'-0"	3'-6"	2'-9"	5'-6"	2'-6"	—	119.10	—	—



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



DETAIL "A"

PLANS PREPARED BY
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Conant*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

CITY OF DETROIT

GENERAL PLAN OF STRUCTURE

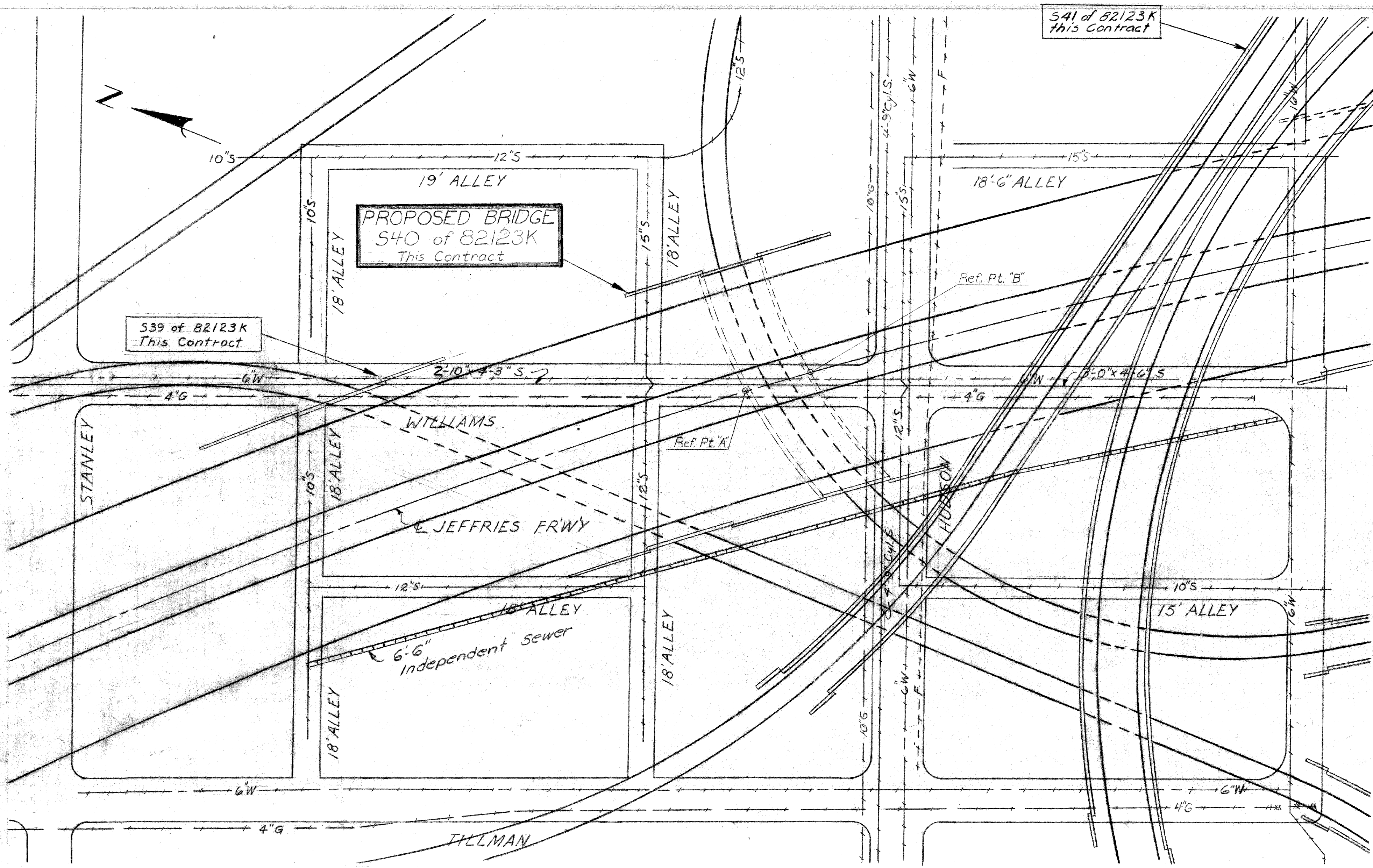
APPROVED: _____
DESIGN SUPERVISING ENGINEER

APPROVED: _____
ENGINEER OF DESIGN - CONSULTANTS

SQUAD BOSS	DATE
<i>R. Jones</i>	12-67
<i>A.W. Henderson</i>	8-16-68

CHECKED BY: *McGraw* 9/66
SHEET 6 OF 23

S40 of 82123K



539 of 82123K
This Contract

541 of 82123K
This Contract

542 of 82123K
This Contract

PROPOSED BRIDGE
540 of 82123K
This Contract

LEGEND

UTILITY	Existing	Deleted or Abandoned	New Work by Others	New Work by Bridge Contractor
Michigan Consolidated Gas Co.	— G —	--- G ---	--- G ---	--- G ---
Detroit Water Dept.	— W —	--- W ---	--- W ---	--- W ---
Exp'wy and City of Detroit Sewers	— S —	--- S ---	--- S ---	--- S ---
Detroit Edison Co.	— E —	--- E ---	--- E ---	--- E ---
Public Lighting Commission	— L —	--- L ---	--- L ---	--- L ---
Detroit Fire Dept.	— F —	--- F ---	--- F ---	--- 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"

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

APPROVED: *J. Lovell*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT
CITY OF DETROIT

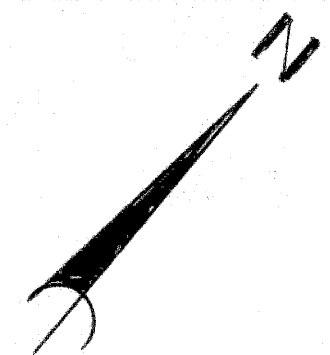
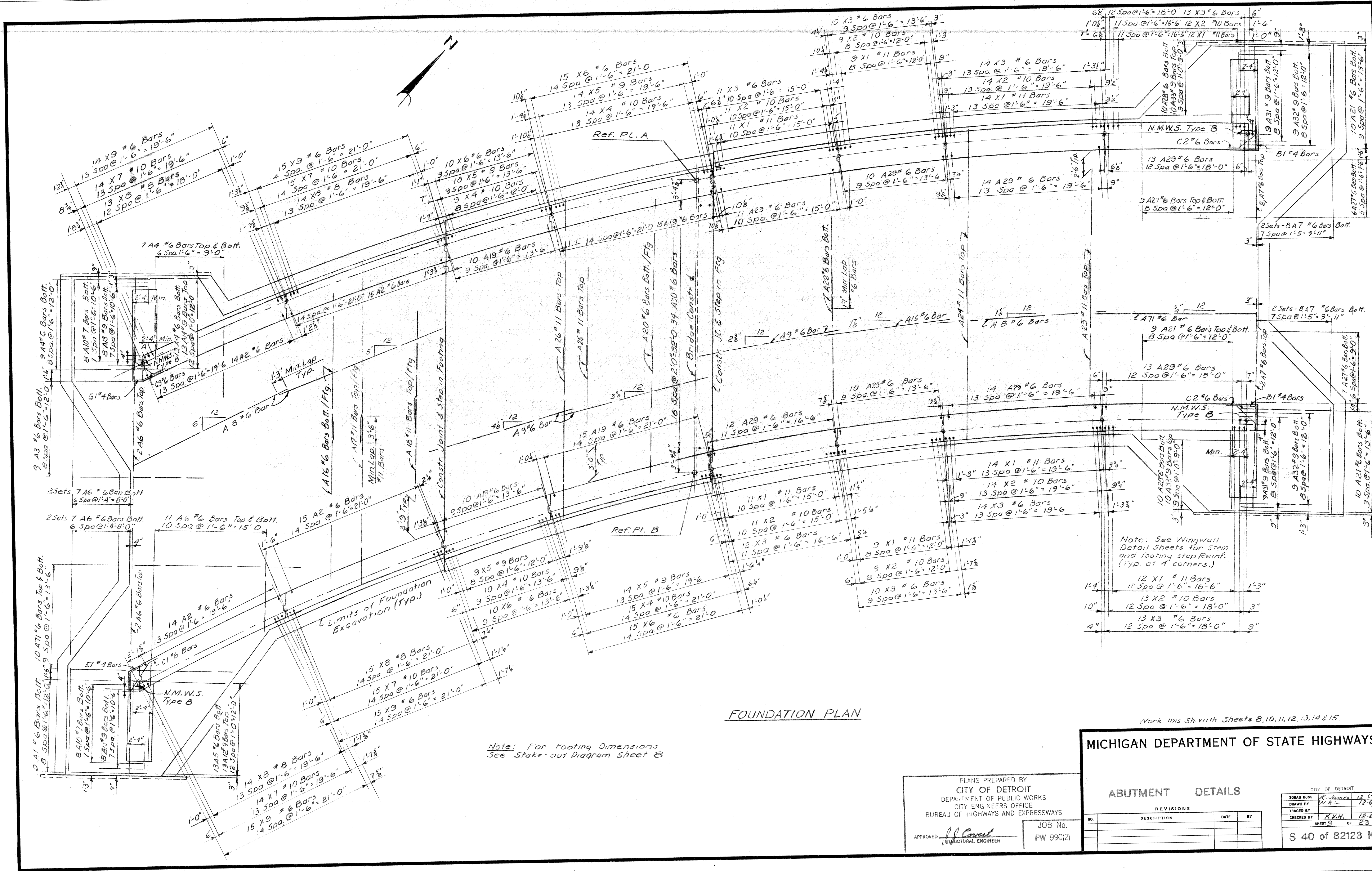
EXISTING UTILITIES AND PROPOSED ALTERATIONS

REVISIONS

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS: *C. Jones* 17-67
DRAWN BY: *SEIDLIN* 5-5-66
CHECKED BY: *McQuinn* 7/66
SHEET 7 OF 25

S40 of 82123K



FOUNDATION PLAN

Note: For Footing Dimensions See Stake-out Diagram Sheet 8

Note: See Wingwall Detail Sheets for Stem and footing step Reinf. (Typ. at 4 corners.)

Work this Sh. with Sheets 8, 10, 11, 12, 13, 14 & 15.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

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

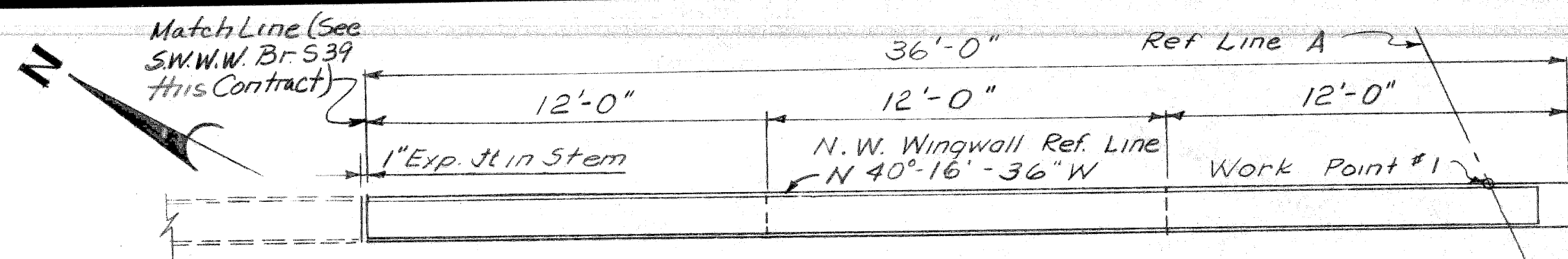
ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

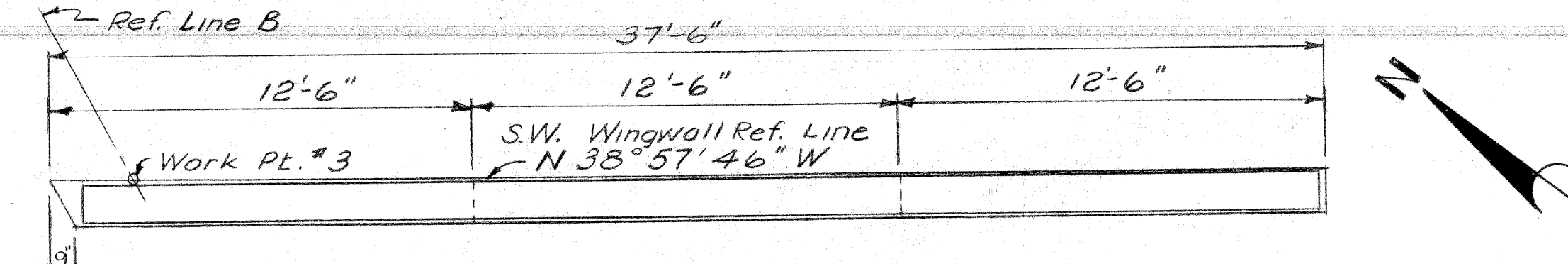
SQUAD BOSS	K. James	12-17
DRAWN BY	W.A.L.	12-67
TRACED BY		
CHECKED BY	K.V.H.	12-67
SHEET	9	OF 23

JOB No.
 PW 990(2)

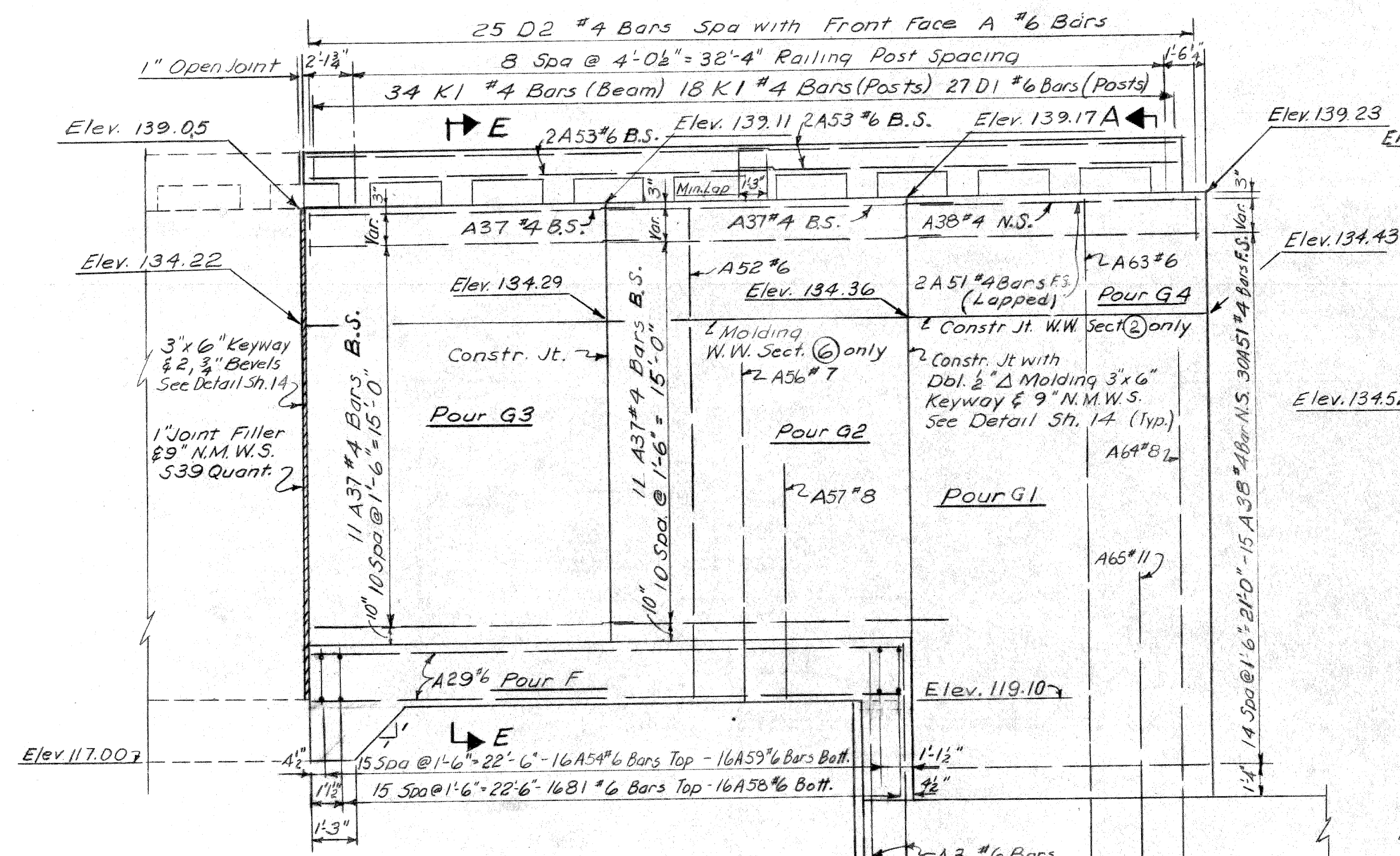
S 40 of 82123 K



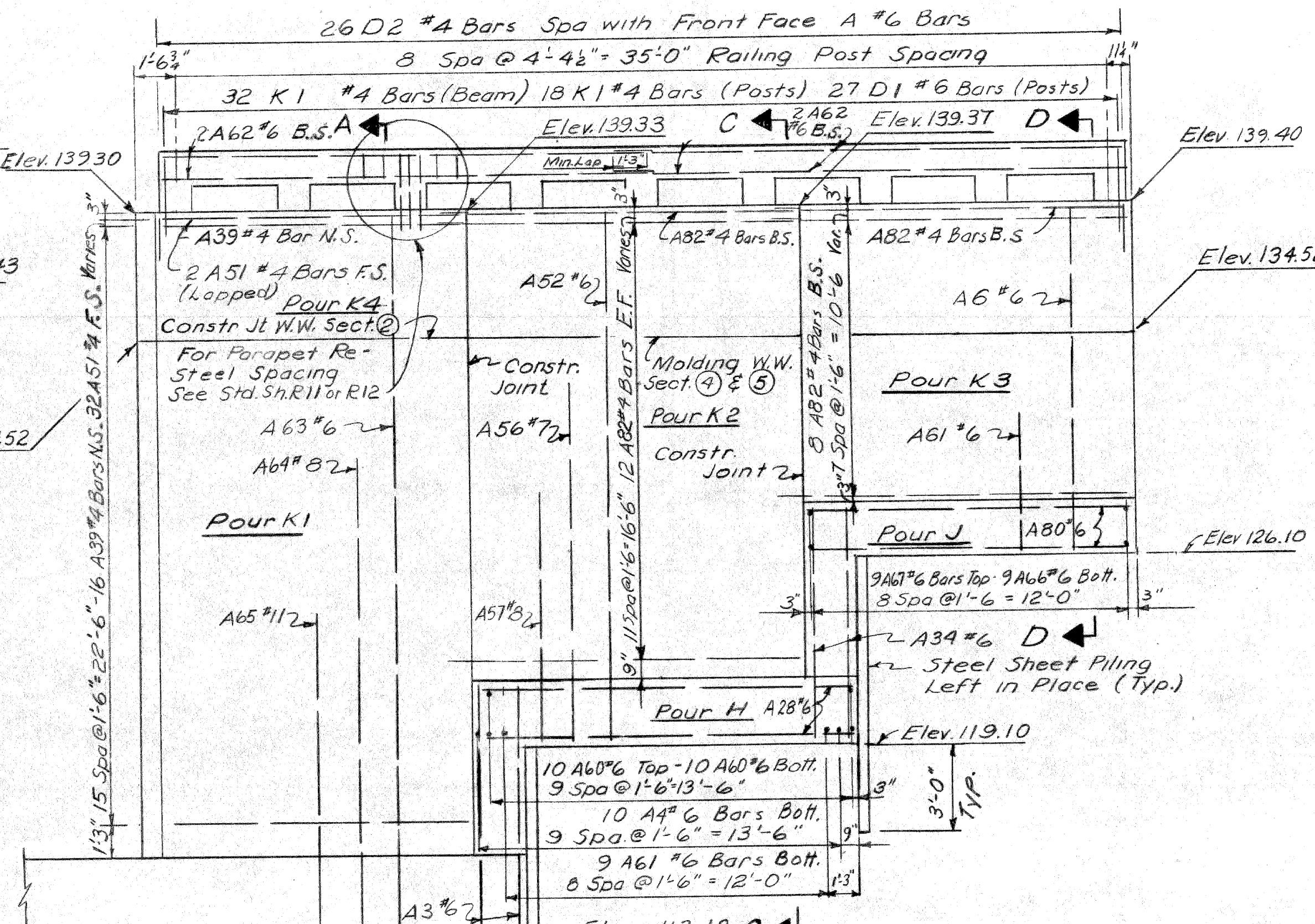
PLAN OF TOP



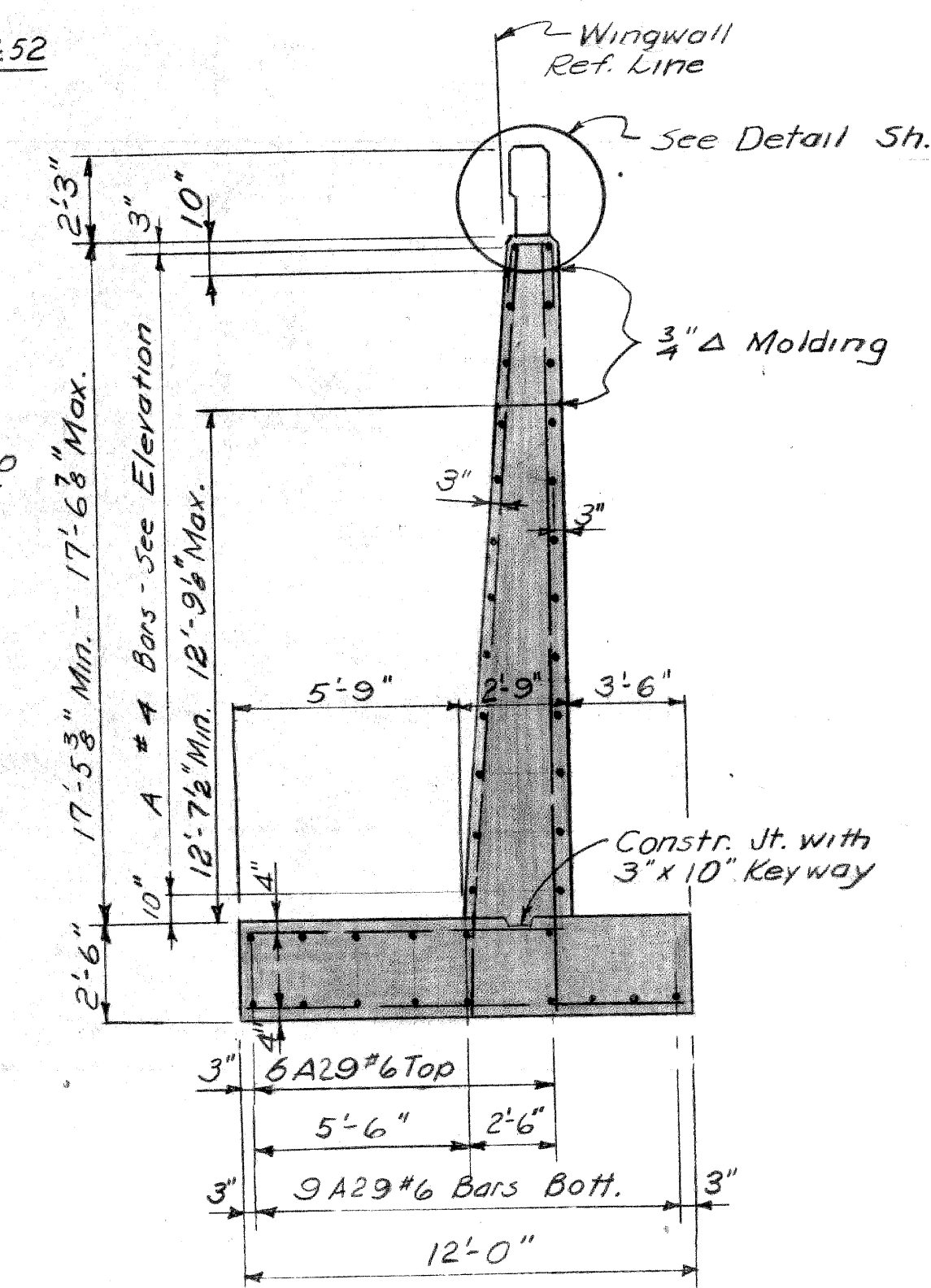
PLAN OF TOP



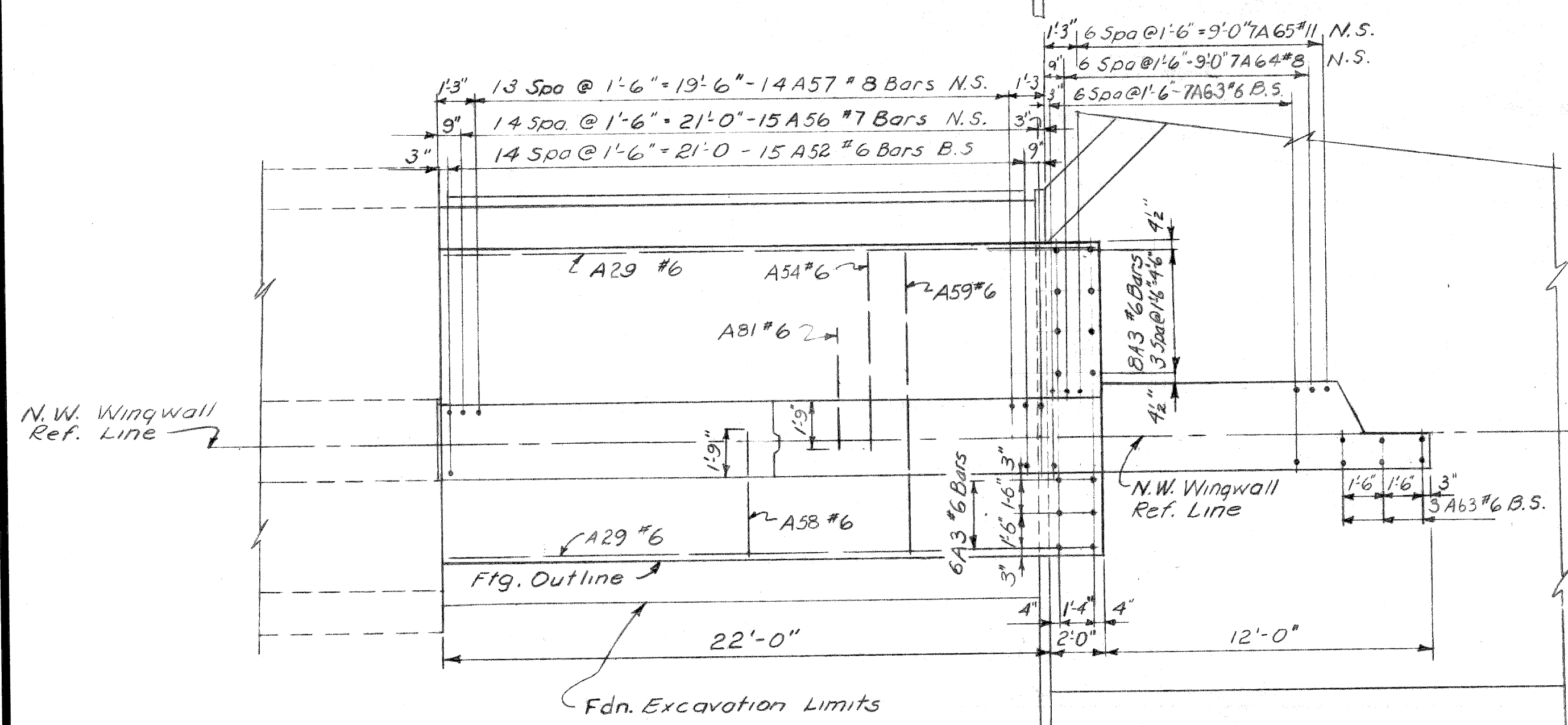
ELEVATION



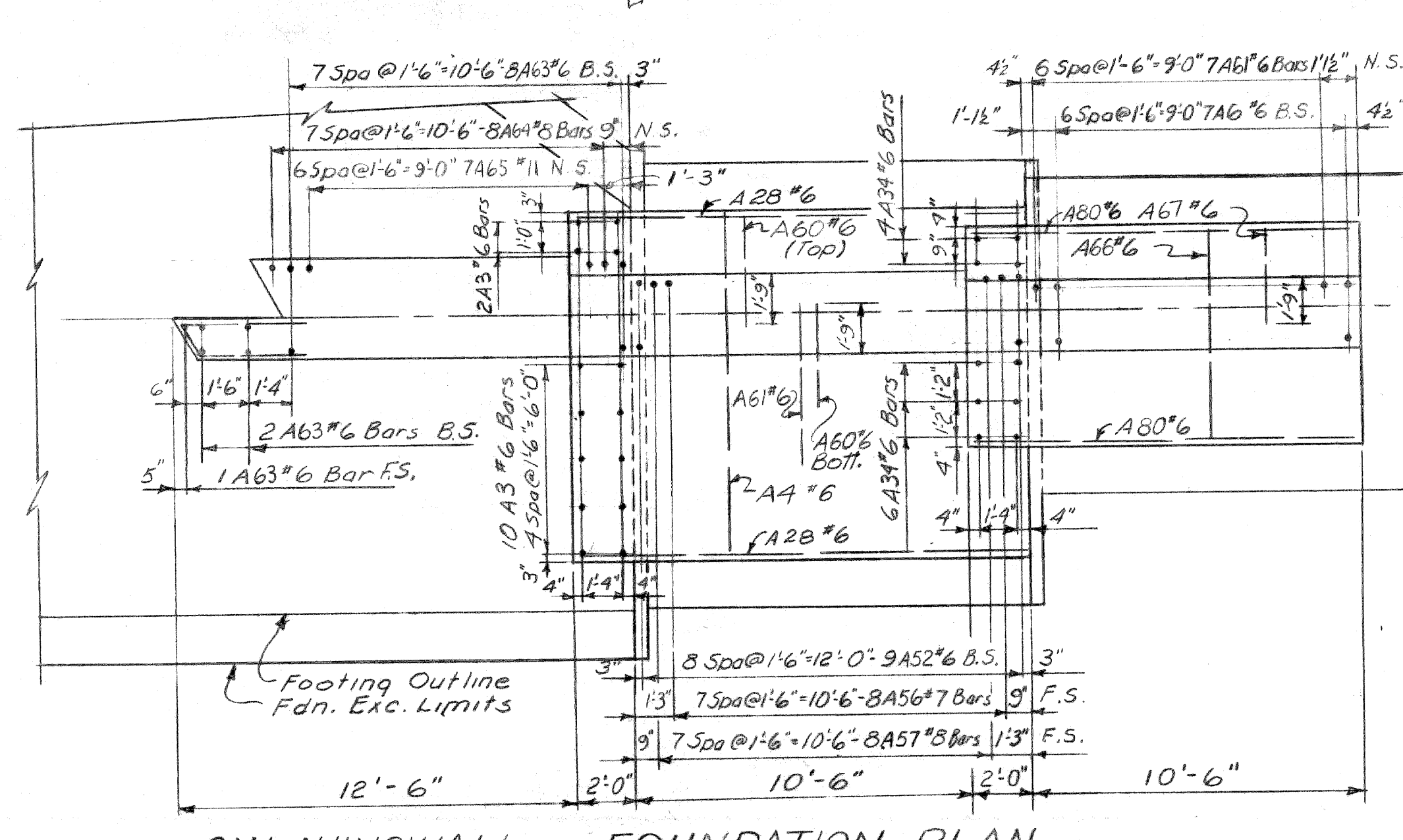
ELEVATION



SECTION EE



N.W. WINGWALL FOUNDATION PLAN



S.W. WINGWALL FOUNDATION PLAN

Work this sheet with sheets 8,9,10,11,13,14&15

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CITY ENGINEERS OFFICE
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APPROVED: *J. J. Conant*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

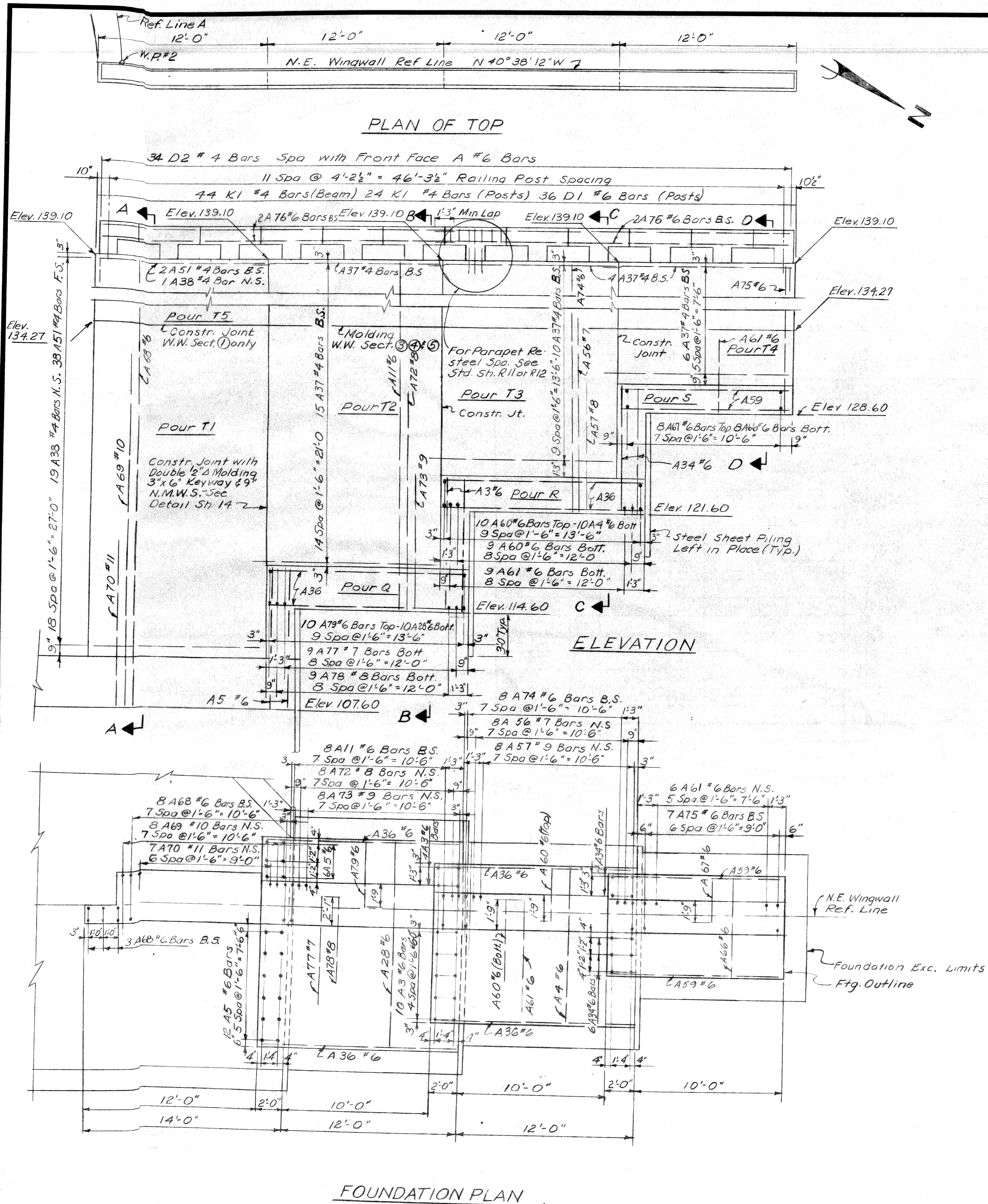
MICHIGAN STATE HIGHWAY DEPARTMENT

ABUTMENT DETAILS

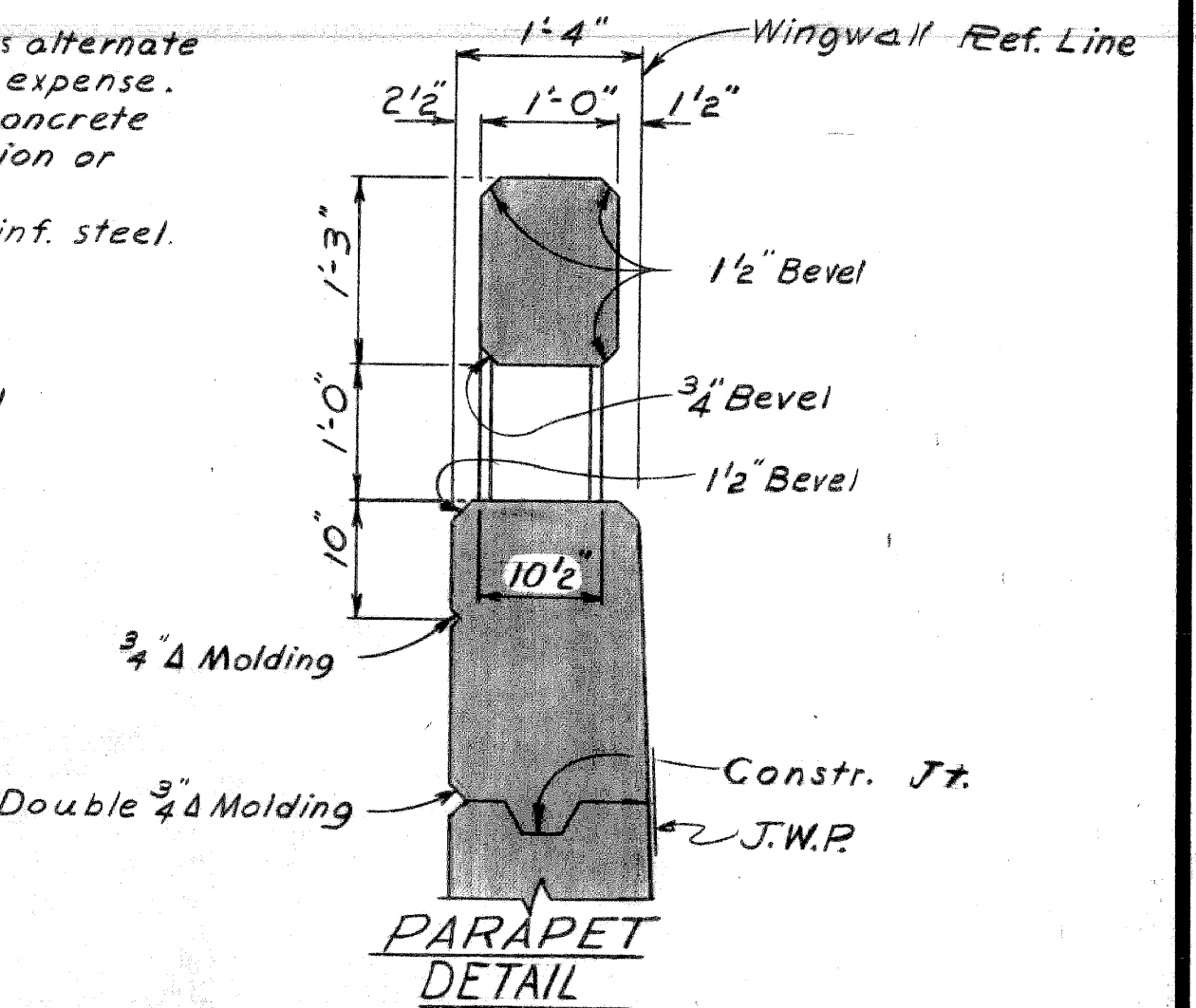
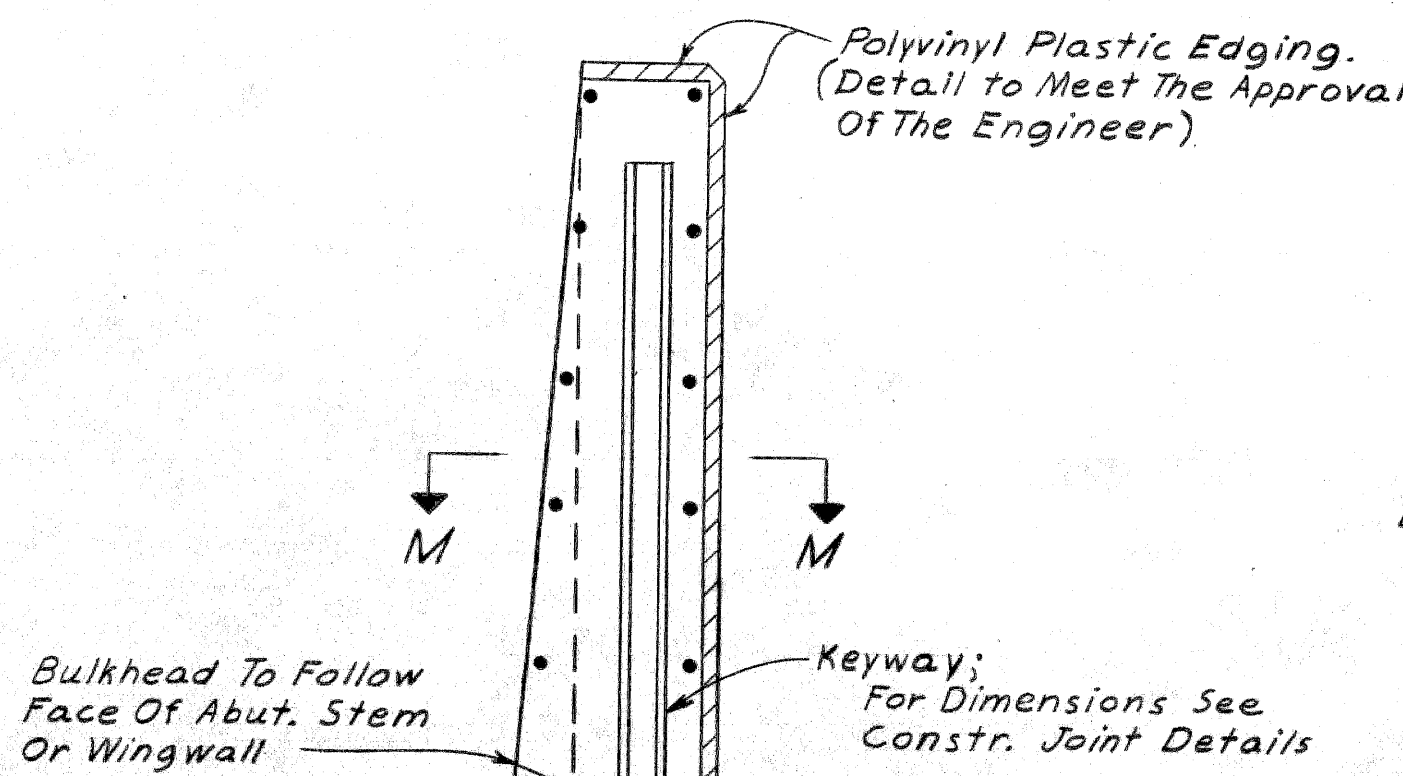
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	<i>R. Adams</i> 12-67
DRAWN BY	<i>W.A.L.</i> 8/67
CHECKED BY	<i>K.V.N.</i> 12-67
TRACED BY	
SHEET	12 OF 23

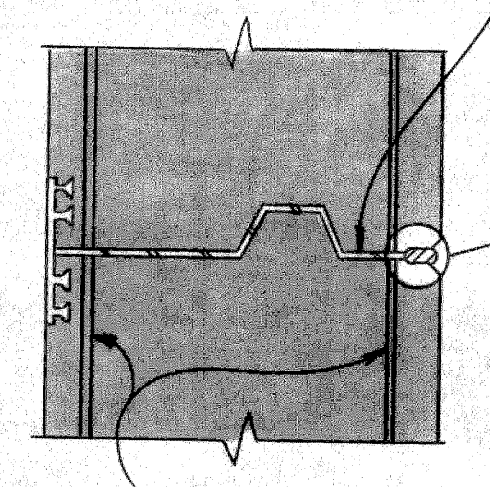
S 40 of 82123 K



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

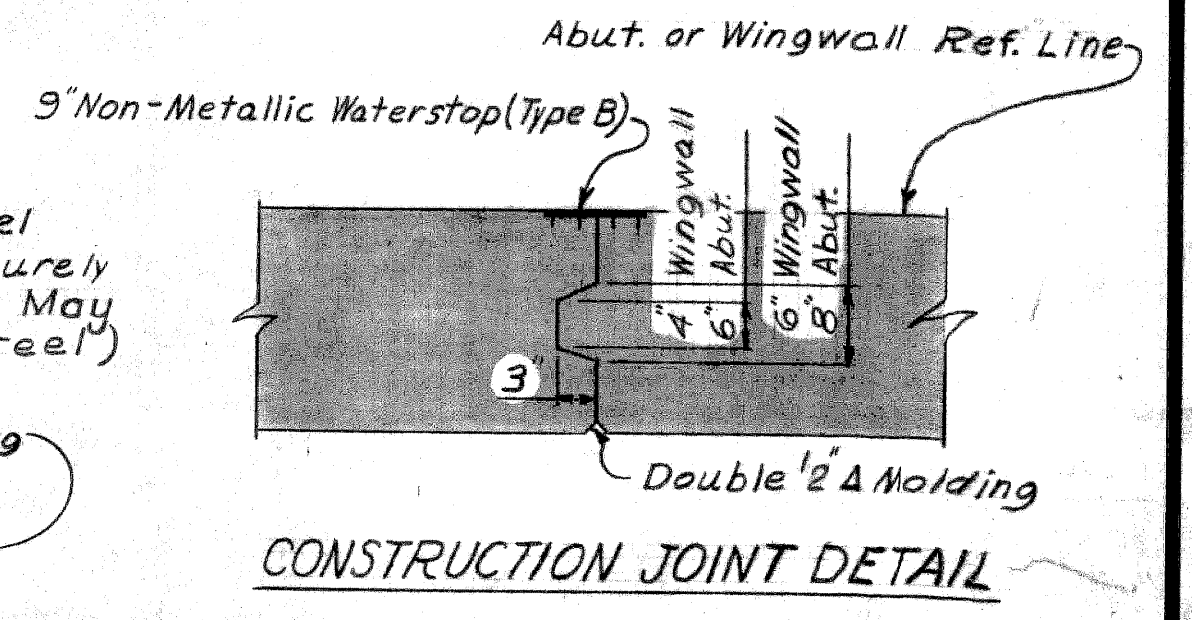


SECTION AT CONSTR. JOINT

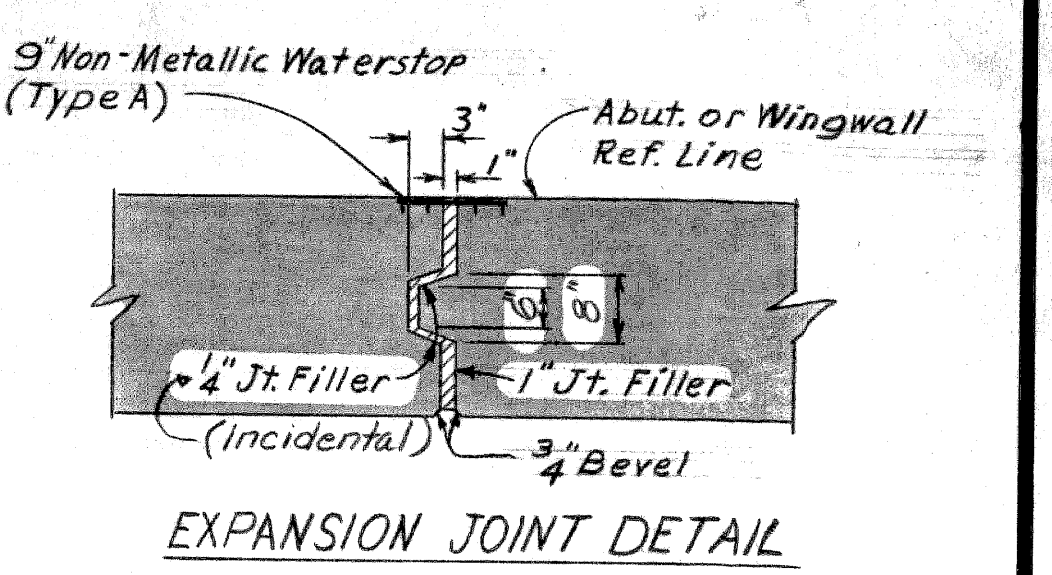


REINFORCING STEEL SECTION M-M

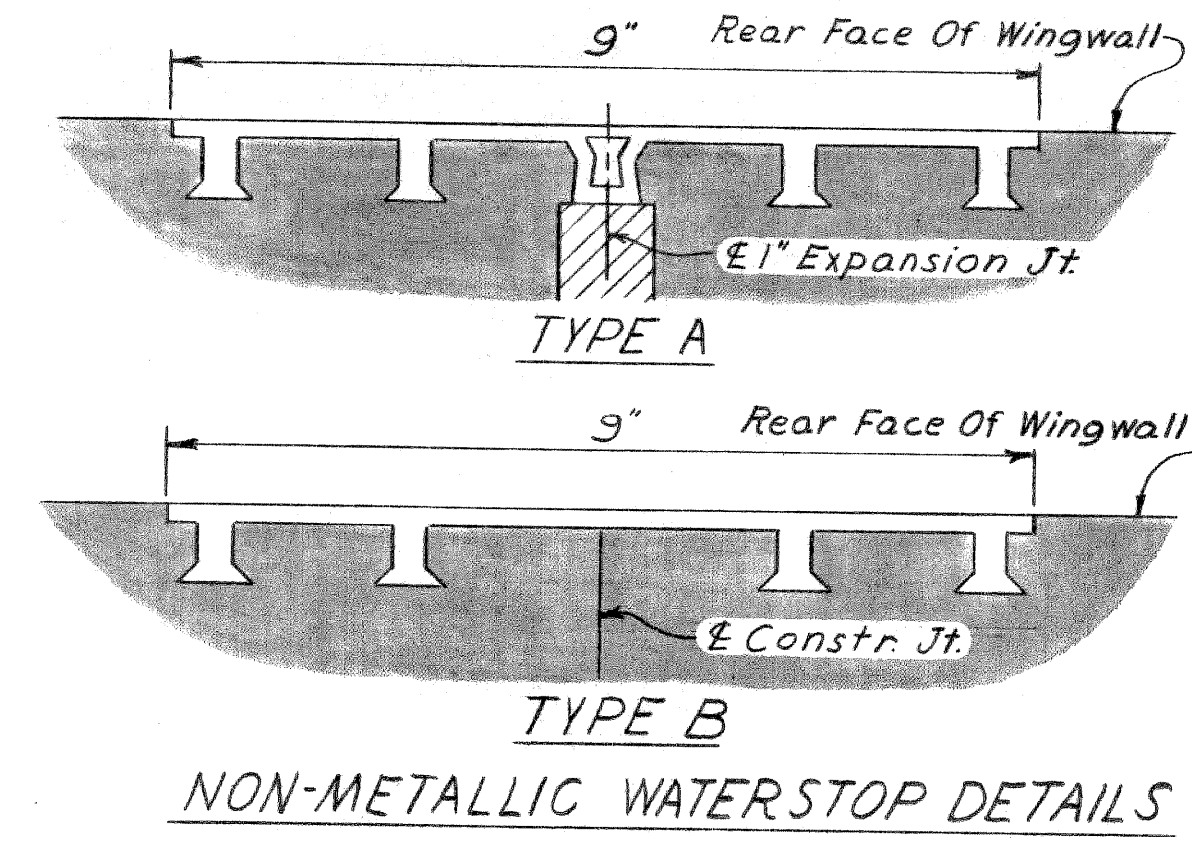
METAL BULKHEAD FOR ABUTMENT & RETAINING WALL CONSTRUCTION JOINT Alternate



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL



NON-METALLIC WATERSTOP 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.

Work this Sh. with Sh. 8, 9, 10, 11, 12, 13 & 15

MICHIGAN STATE HIGHWAY DEPARTMENT

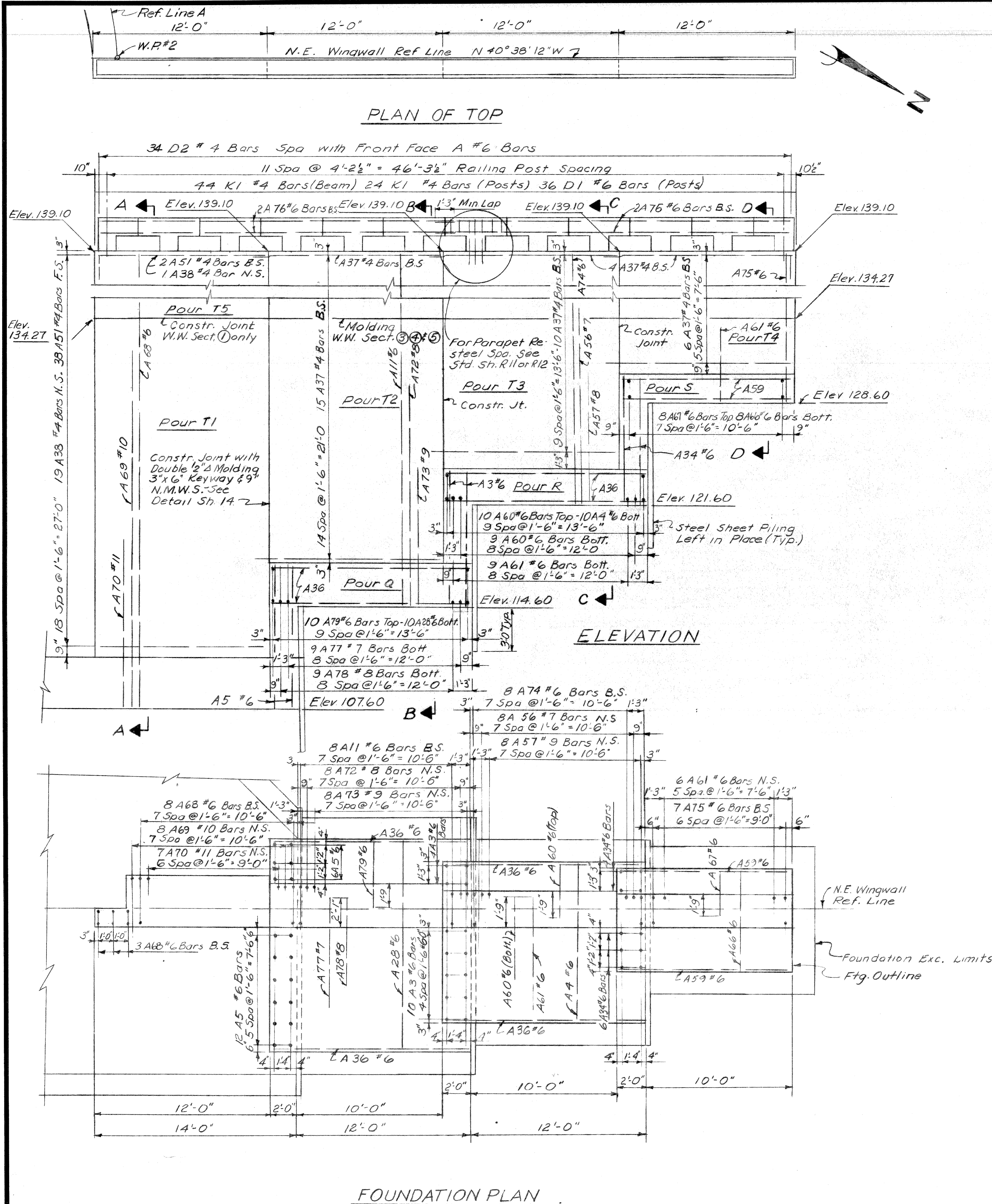
ABUTMENT DETAILS

NO.	DESCRIPTION	DATE	BY

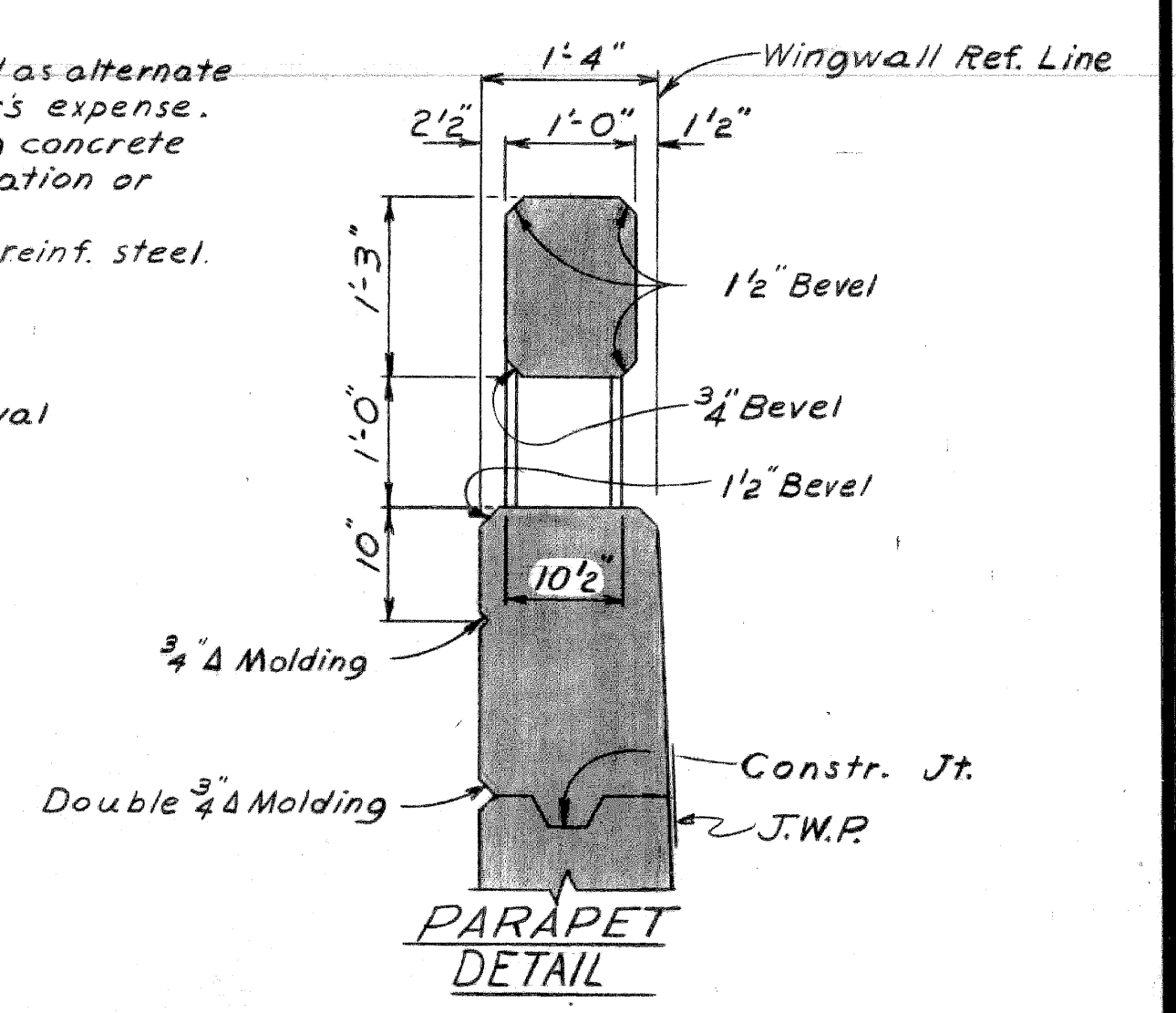
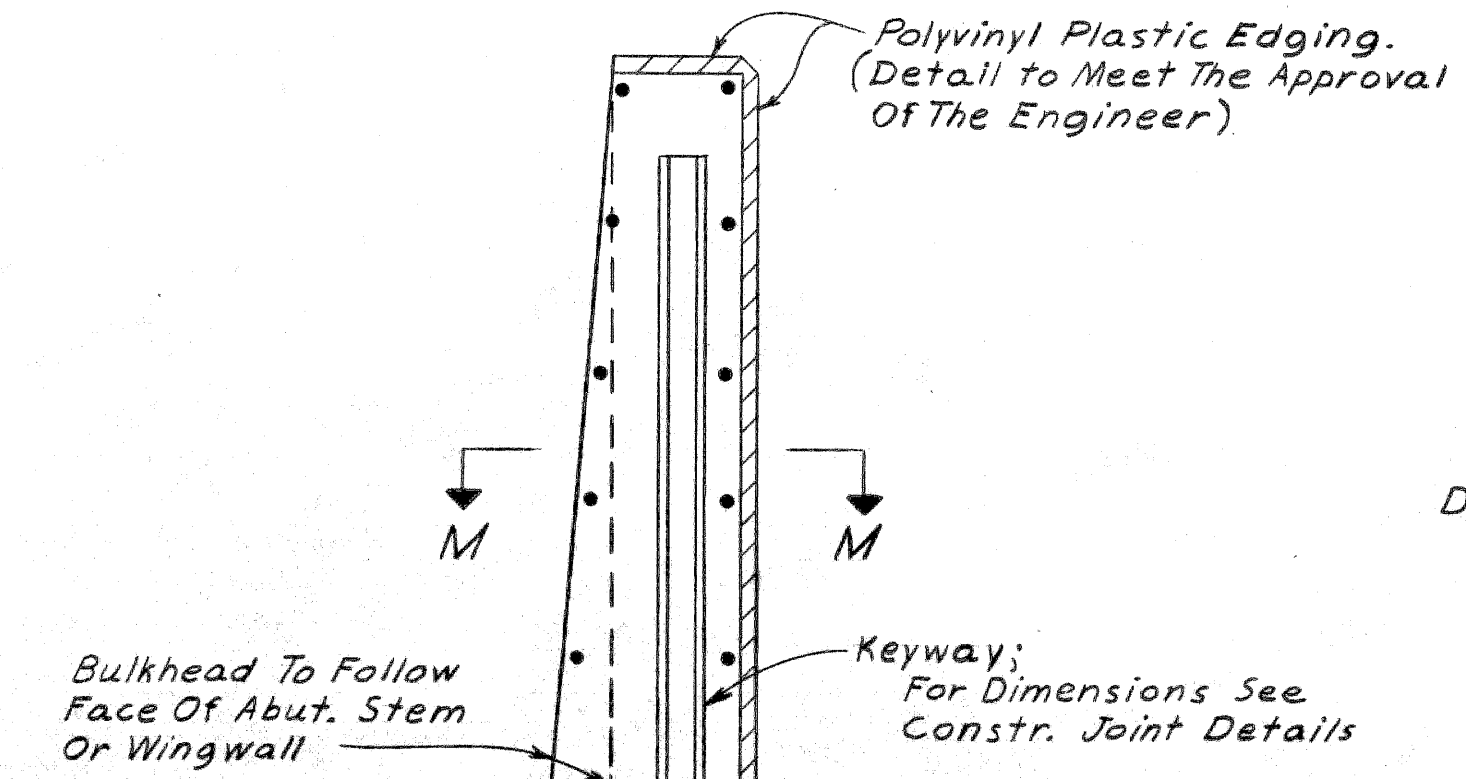
APPROVED: *J. J. Cant* STRUCTURAL ENGINEER

JOB No. PW 990(2)

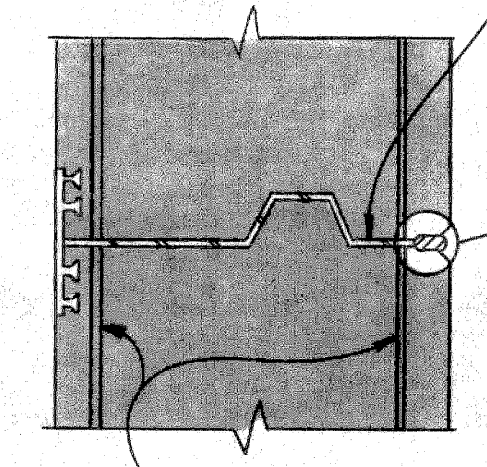
CITY OF DETROIT
 SQUAD BOSS: R. James 12-67
 DRAWN BY: DN WAL 12-67
 CHECKED BY: K.V.H. 12-67
 SHEET 14 OF 23
 S 40 of 82123 K



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

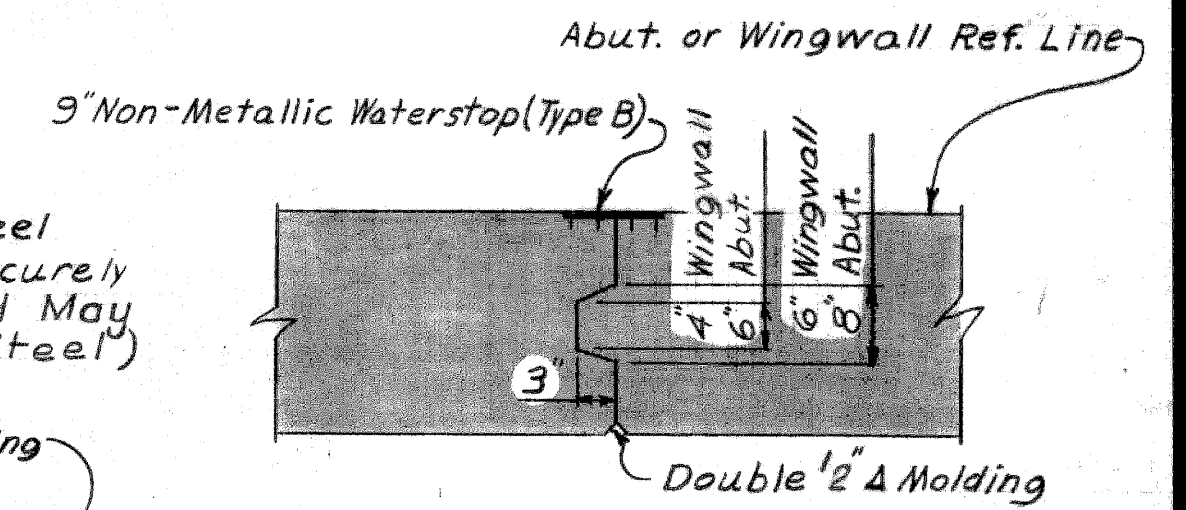


SECTION AT CONSTR. JOINT

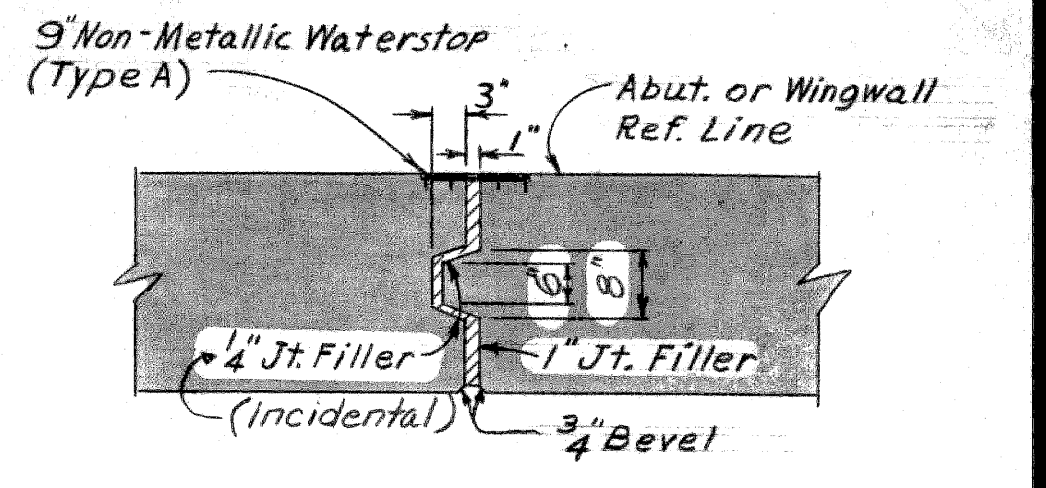


SECTION M-M

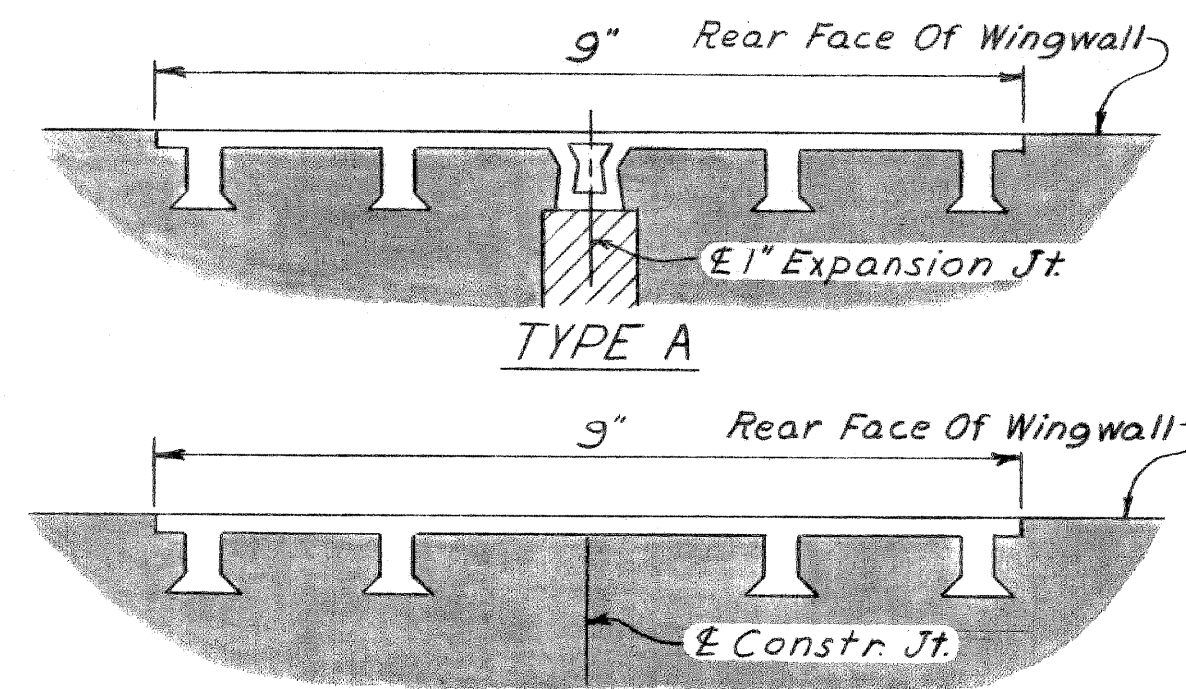
METAL BULKHEAD FOR ABUTMENT & RETAINING WALL CONSTRUCTION JOINT
 Alternate



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL



NON-METALLIC WATERSTOP DETAILS

Notes:
 Stop all keyways 1'-0" below top of wingwalls.
 Stop all N.M.W.S. 1'-0" below top of abutment.
 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.

Work this Sh. with Sh. 8, 9, 10, 11, 12, 13 & 15

MICHIGAN STATE HIGHWAY DEPARTMENT

ABUTMENT DETAILS

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

APPROVED: *J. J. Conant*
 STRUCTURAL ENGINEER

JOB No.
 PW 990(2)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT
 SQUAD BOSS: R. JAMES 12-67
 DRAWN BY: DN WAL 12-67
 TRACED BY: K.V.H. 12-67
 CHECKED BY: K.V.H. 12-67
 SHEET 14 OF 23
 S 40 of 82123 K

GENERAL NOTES:

N.M.W.S. denotes Non-Metallic Waterstop; J.W.P. denotes Joint Waterproofing; N.S. denotes Near Side; F.S. denotes Far Side; B.S. denotes Both Sides.

For bevel, molding, parapet reinf. spa. details see Std. Sh. R11 or R12.
 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 outline where the concrete is poured against Steel Sheet Piling Left in Place. No additional allowance will be made in concrete or Excav. quantities regardless of the 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 is poured, the excess shall be removed by cutting.
 Pours G4, K4, P5 and T5 shall not be cast until superstructure is complete to tops of Brush Block.

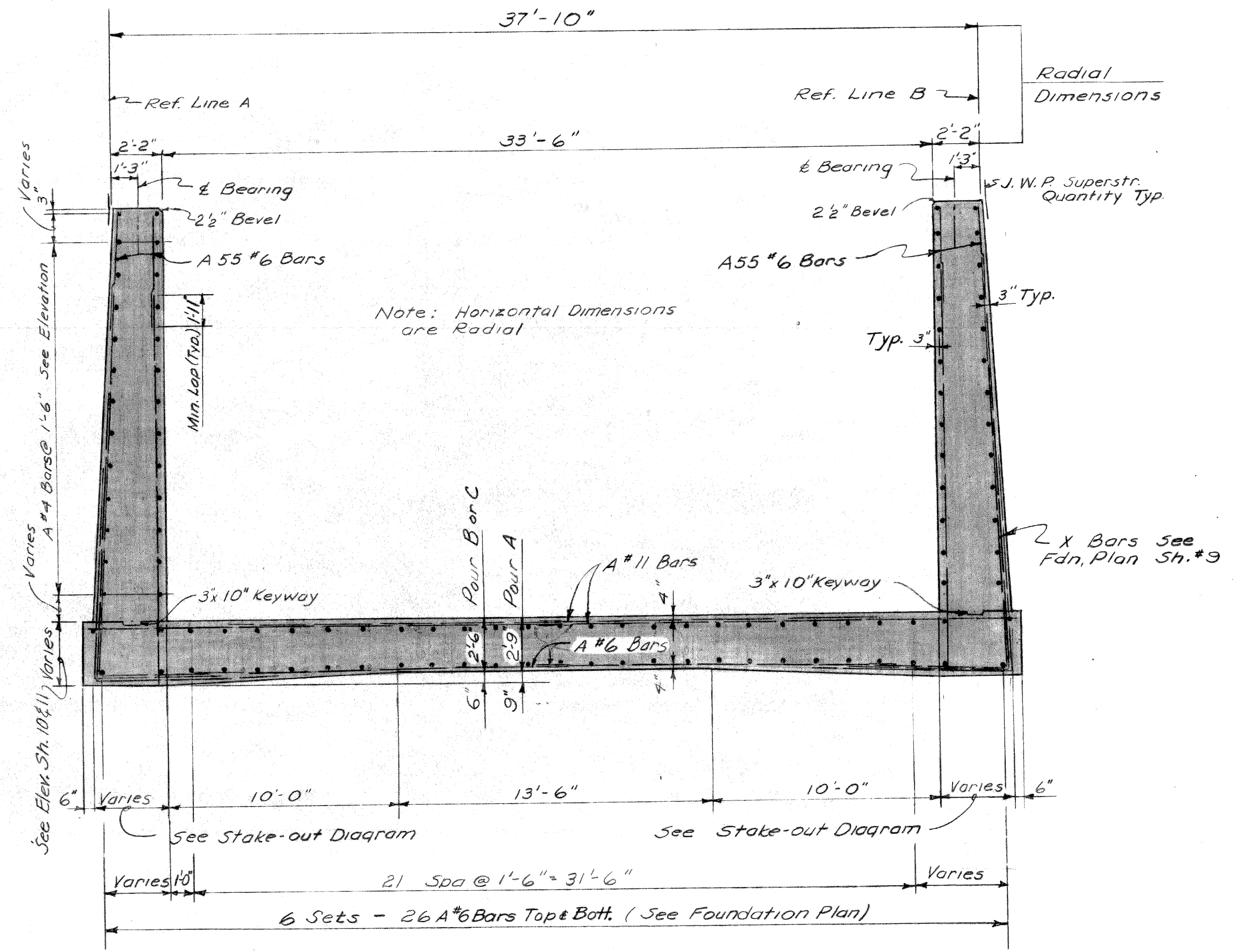
Maximum average foundation pressure D.L. only = 1,750#/sq.ft.
 Maximum foundation pressure DL and L.L. = 1,950#/sq.ft.

MISCELLANEOUS QUANTITIES		
Item	Unit	Amount
Unclassified Excavation	Cu. Yds	3150
Steel Sheet Piling Left in Place	Sq. Ft.	1787
Low Temperature Protection	Cu Yds.	2070
1/2 Joint Filler	Sq. Ft.	467
Lightweight Fill (C.I.P.)	Cu. Yds	3102
1" Joint Filler	Sq. Ft.	129
Non Metallic Waterstop	Sq. Ft.	394
Bridge Parapet	Lin. Ft.	168.5
Joint Waterproofing	Sq. Ft.	74

CONCRETE QUANTITIES (CU. YDS)

ABUTMENTS			WINGWALLS		
Pour	Footing Gr A (6A)	Stem Gr A (6AA)	Pour	Footing Gr A (6A)	Stem Gr A (6AA)
A	422.6		F	32.4	
B	150.9		G1		21.3
C	243.4		G2		15.9
D1		38.4	G3		15.8
D2		41.7	G4		3.2
D3		30.7	H	16.0	
D4		40.5	J	8.8	
D5		41.3	K1		22.3
D6		34.7	K2		15.7
D7		51.9	K3		9.3
D8		46.2	K4		3.4
E1		46.6	L	23.9	
E2		52.1	M	16.0	
E3		35.0	N	8.8	
E4		41.3	P1		28.1
E5		46.2	P2		21.8
E6		31.4	P3		13.6
E7		42.6	P4		7.4
E8		40.2	P5		3.4
			Q	23.1	
			R	15.5	
			S	8.6	
			T1		26.8
			T2		20.7
			T3		12.8
			T4		6.8
			T5		3.3
Total Conc. Gr. A (6A) Conc. Substr.			970.0 Cu. Yds.		
Total Conc. Gr. A (6AA) Conc. Substr.			912.4 Cu. Yds.		

Parapet Concrete = 9.6 Cu.Yds. Gr. A(6AA) Incidental to Bridge Parapet and not a pay item.



TYPICAL SECTION THRU ABUTMENT

Work this Sheet with Sheets 8 thru 14

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

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

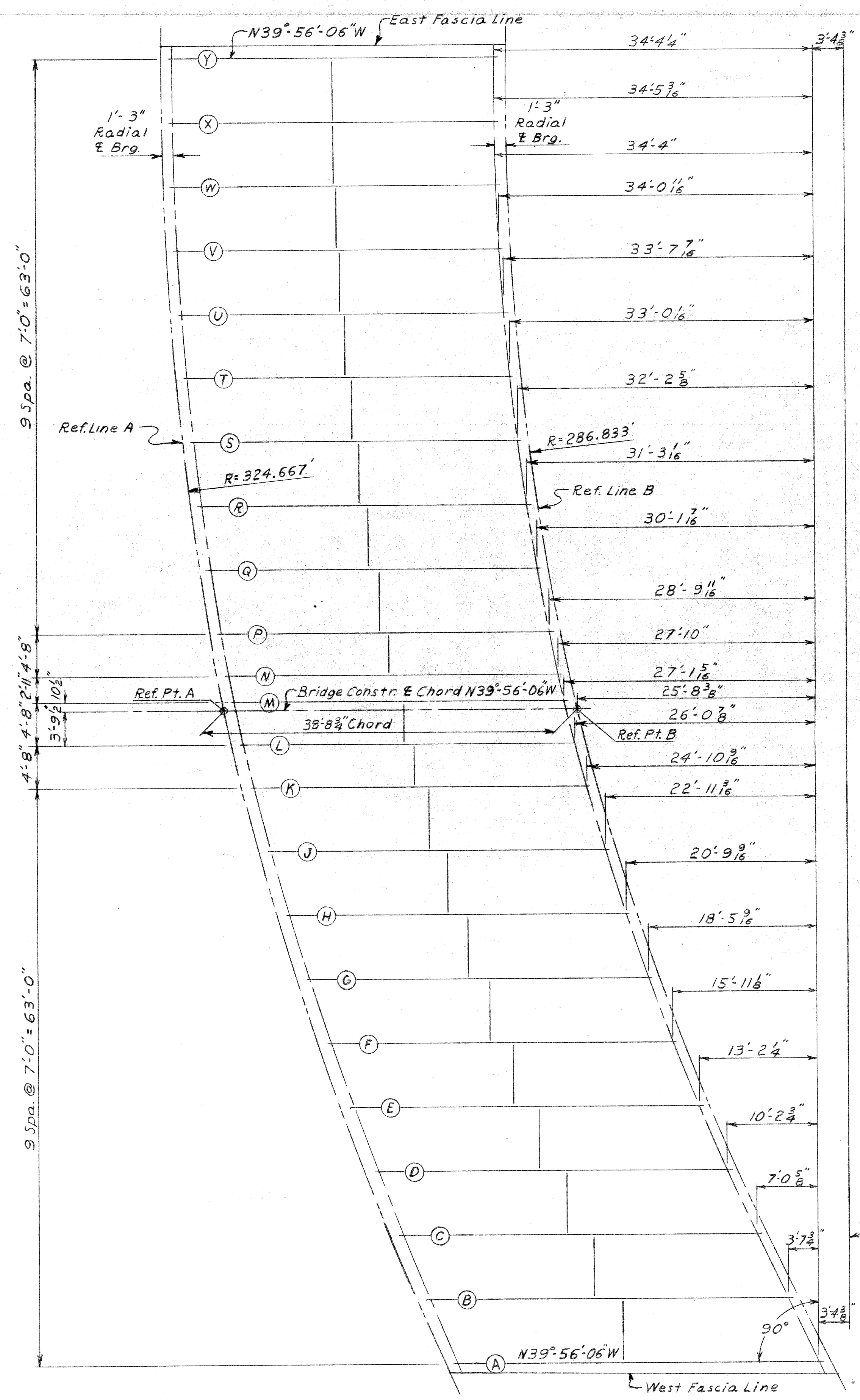
ABUTMENT DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	L. James 12-67
DRAWN BY	WAL 8167
CHECKED BY	K.V.H. 12-67
SHEET 15 OF 23	

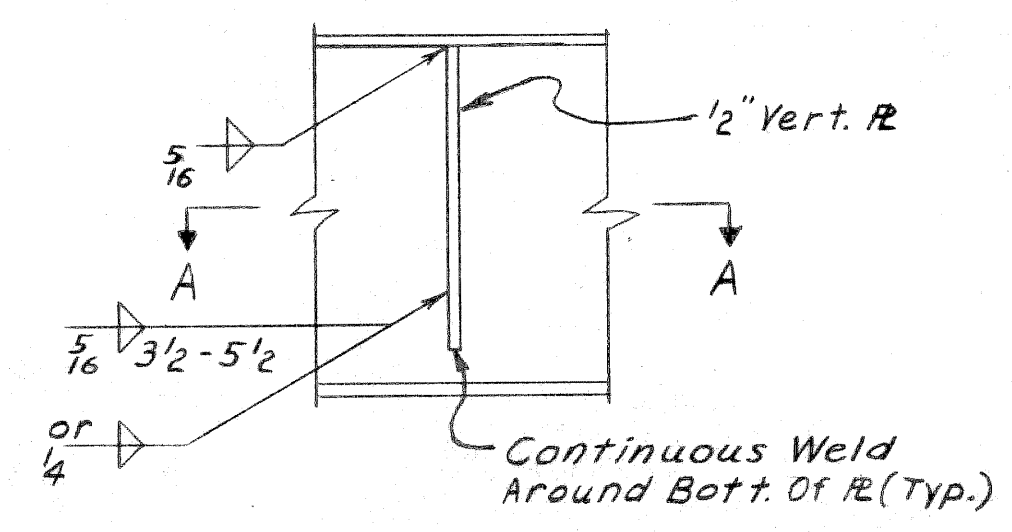
S 40 of 82123 K

SCALE 1/8" = 1'-0"

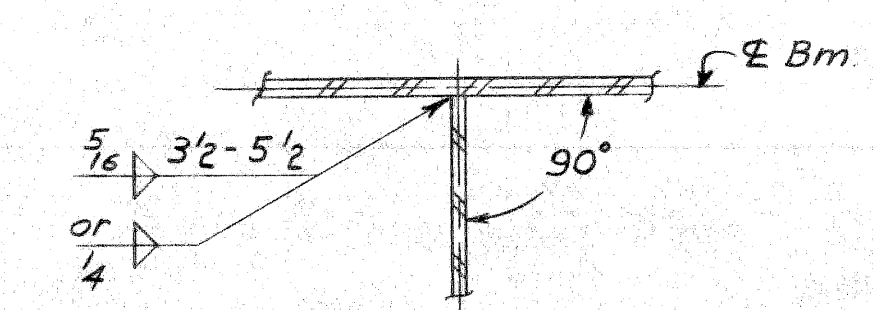


NOTE
All Beams Are 30W 99
With Shear Connectors

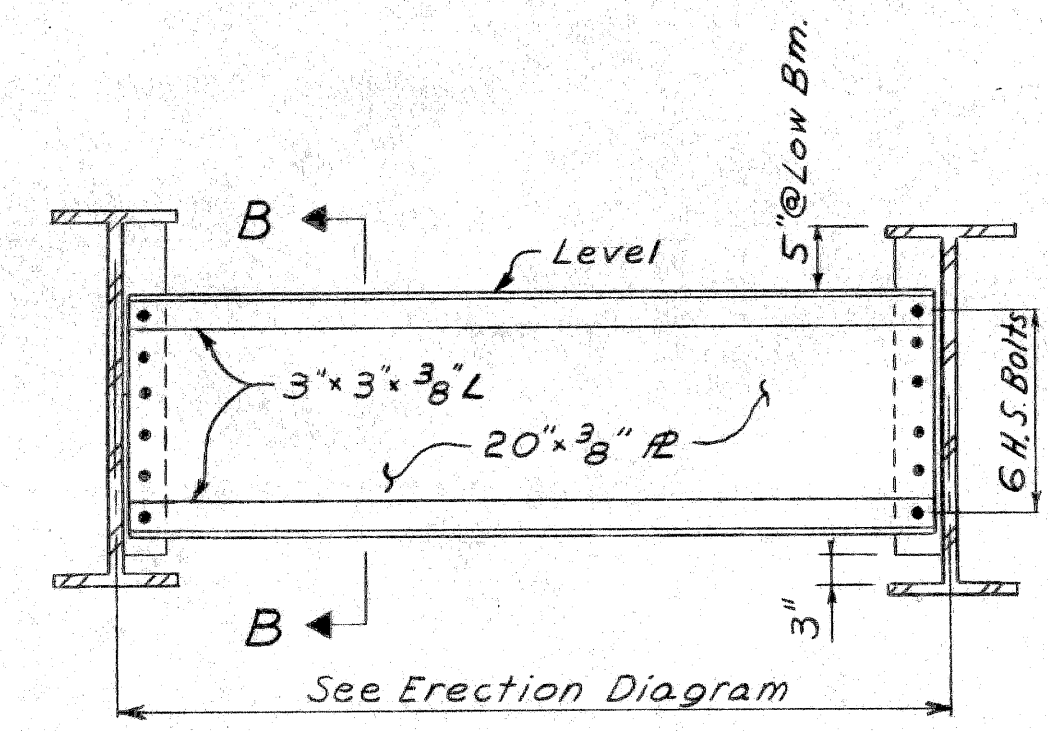
ERECTOR DIAGRAM



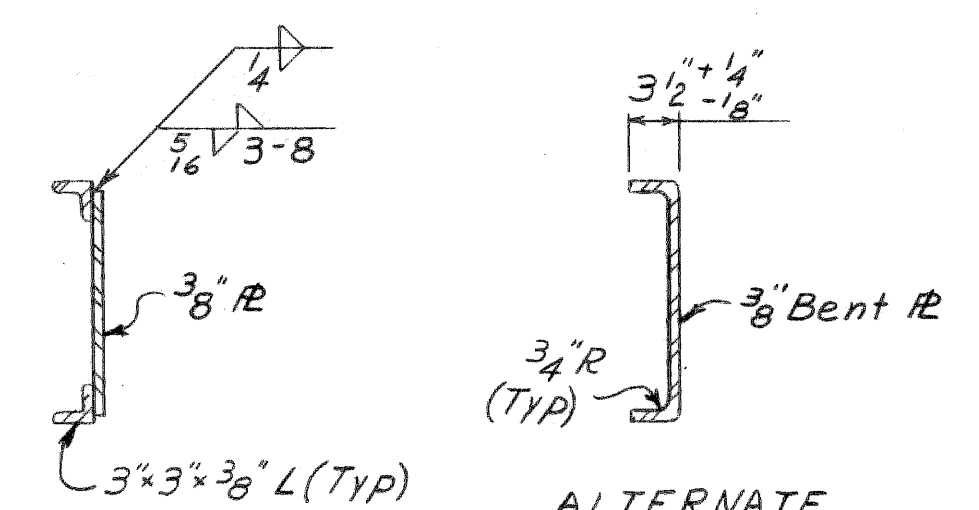
ELEVATION OF BEAM @ CONNECTION PLATE



SECTION A-A



TYPICAL DIAPHRAGM



SECTION B-B

VARIABLE BEAM DIMENSIONS	
BEAM	DIM. "A" c/c BRG
A	39'-6 3/16"
B	39'-0 5/16"
C	38'-7"
D	38'-2 1/8"
E	37'-9 1/16"
F	37'-5 1/16"
G	37'-2"
H	36'-10 5/8"
J	36'-7 3/8"
K	36'-4 3/8"
L	36'-3 1/4"
M	36'-1 3/4"
N	36'-0 3/8"
P	35'-11 1/2"
Q	35'-9 3/4"
R	35'-8 3/8"
S	35'-6 7/8"
T	35'-5 1/8"
U	35'-5 1/16"
V	35'-4 1/2"
W	35'-4 1/8"
X	35'-4"
Y	35'-4 1/8"

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. HS 20 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-l weld.

Field Connections shall be bolted with 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 1/2" in thickness. Edges must be beveled 4" and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates. All Steel Shall be Unpainted A441 (Modified)

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 1/2".

Beam dimensions are horizontal and along the E of Beam.

Camber shall be measured with the beam lying on its side. Camber tolerance is ± 1/4". Heating shall be used if necessary to assure permanent camber within the above limits. Sole 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.

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.

QUANTITIES

Structural Steel - Furnishing and Fabricating	96,800 Lbs.
Structural Steel - Erection	96,800 Lbs.
Shear Developers	Lump Sum

Work This Sheet With Sh. # 17

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

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

APPROVED: *J. J. Carver*
STRUCTURAL ENGINEER

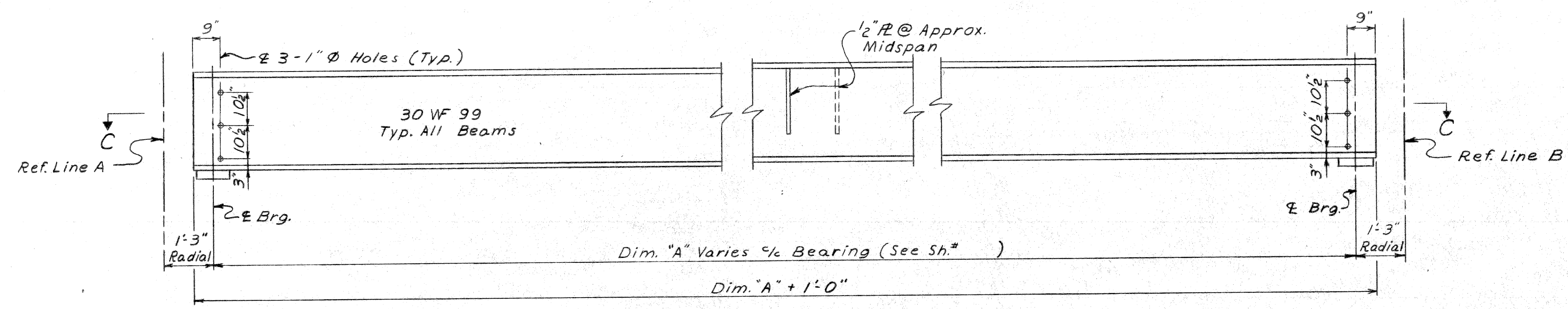
JOB No.
PW 990(2)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

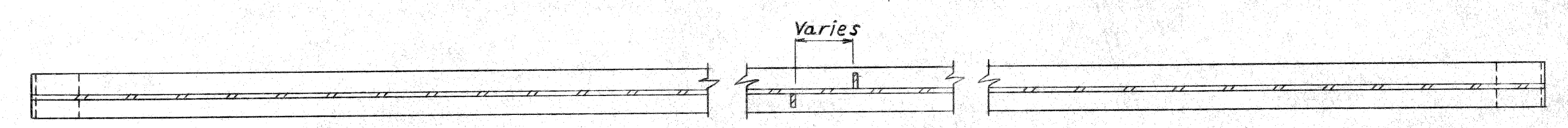
SQUAD BOSS	<i>R. James</i>	12-67
DRAWN BY	<i>NAGLE</i>	7-67
TRACED BY		
CHECKED BY	<i>CJ</i>	12-67
SHEET 16 OF 23		

S 40 of 82123 K

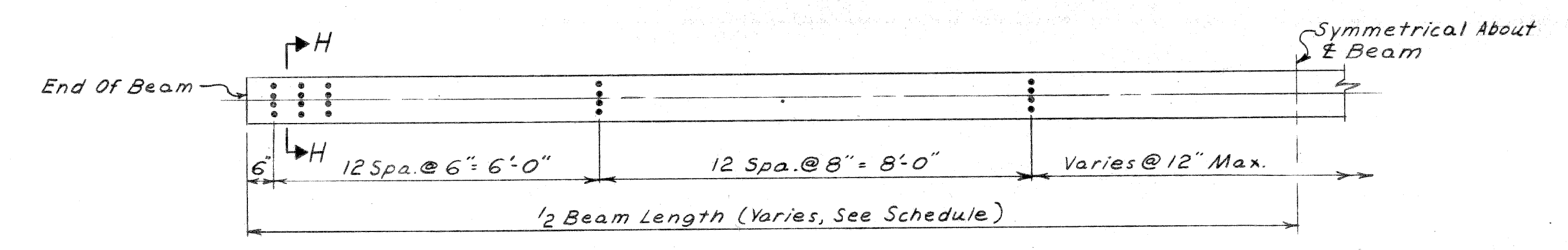
SOLE PLATE THICKNESS TABLE (Inches)																							
BEAM	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y
ABUT. A	2 1/4	2 1/4	3 1/4	2 3/4	3 3/4	4	3 1/4	2	3 1/2	2 1/4	2 1/4	2	2	2	3	2 1/2	3 1/2	4 1/4	3 1/2	4	2 3/4	2 3/4	
ABUT. B	2 1/4	2 1/4	3 1/2	3	4	4 1/2	3 3/4	2 1/2	4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	3 3/4	2 1/4	3 1/4	4	3 1/4	2 1/4	3 3/4	2 1/2	2 1/2



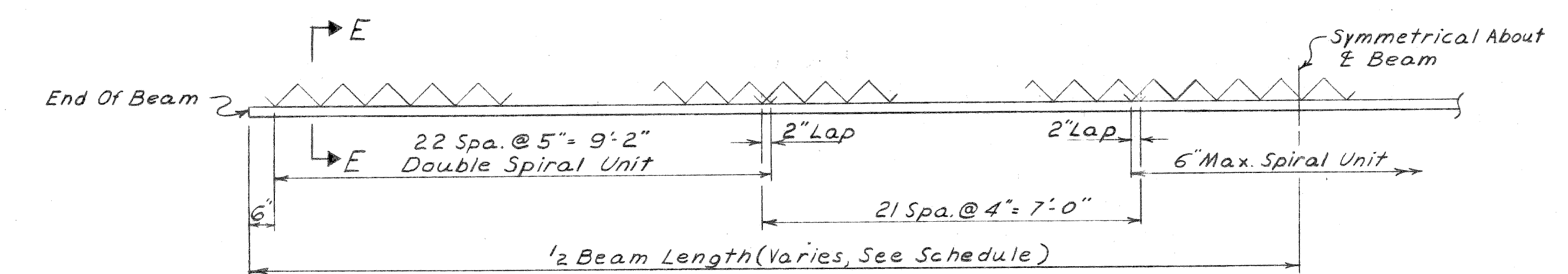
ELEVATION



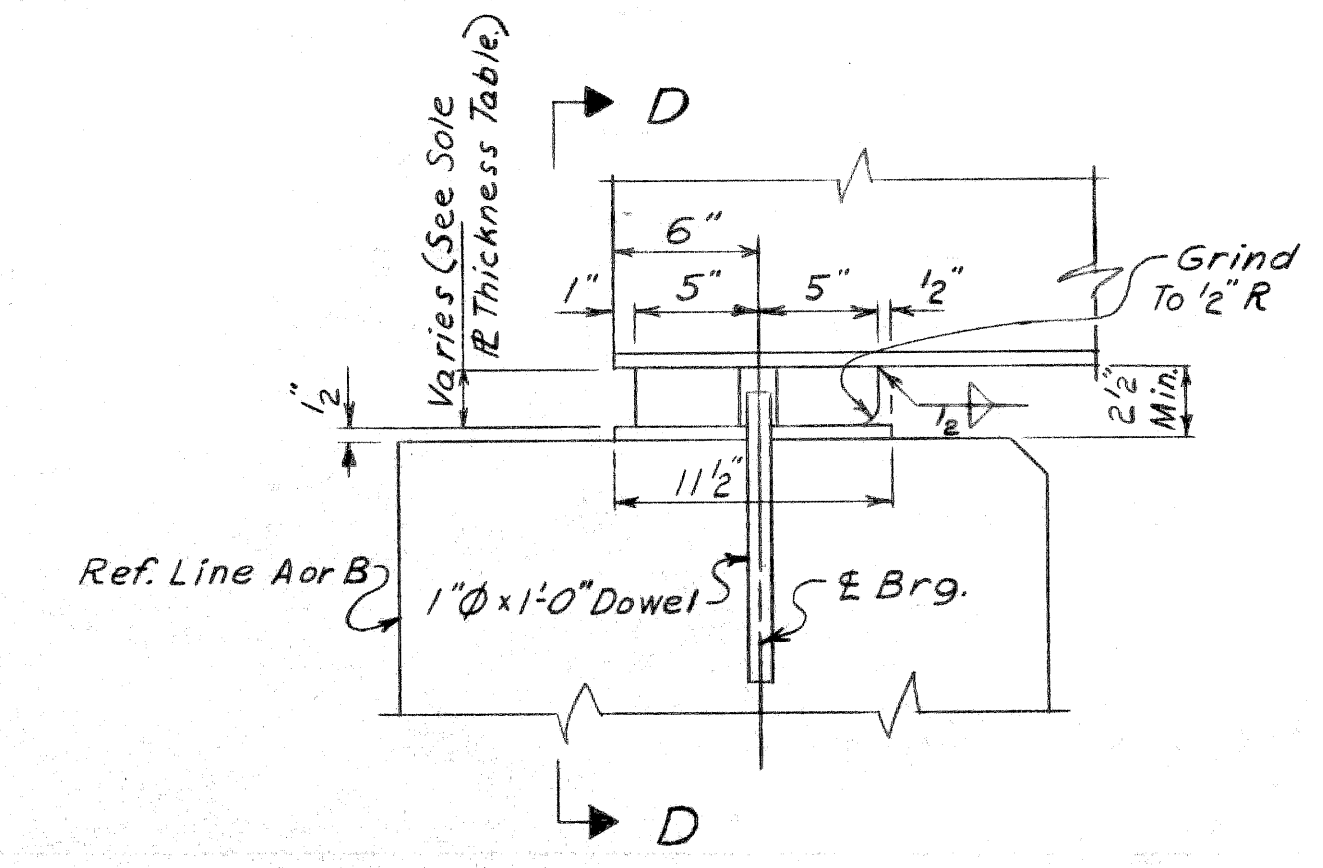
SECTION C-C



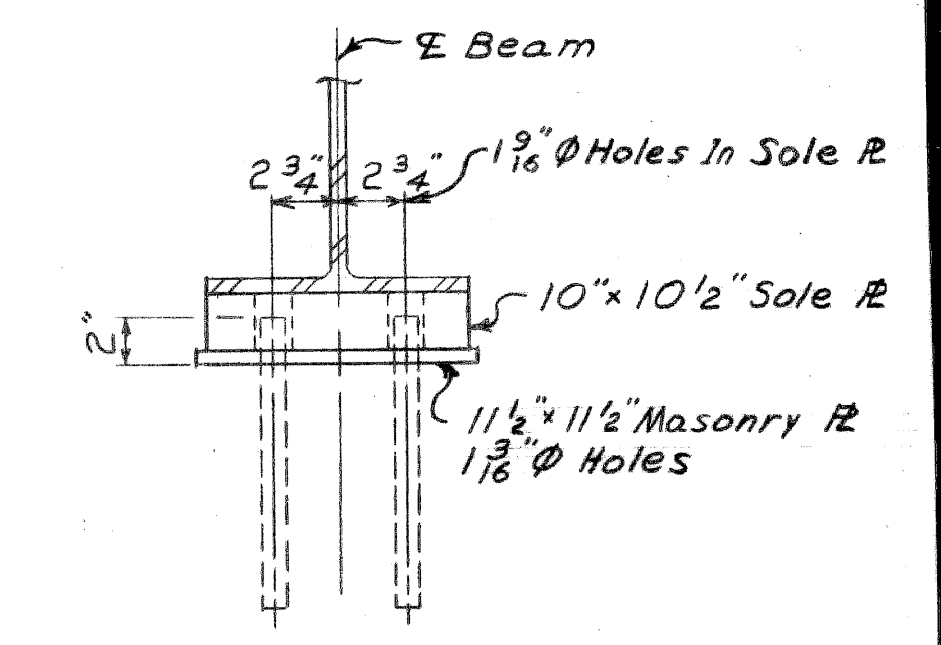
STUD SHEAR DEVELOPERS



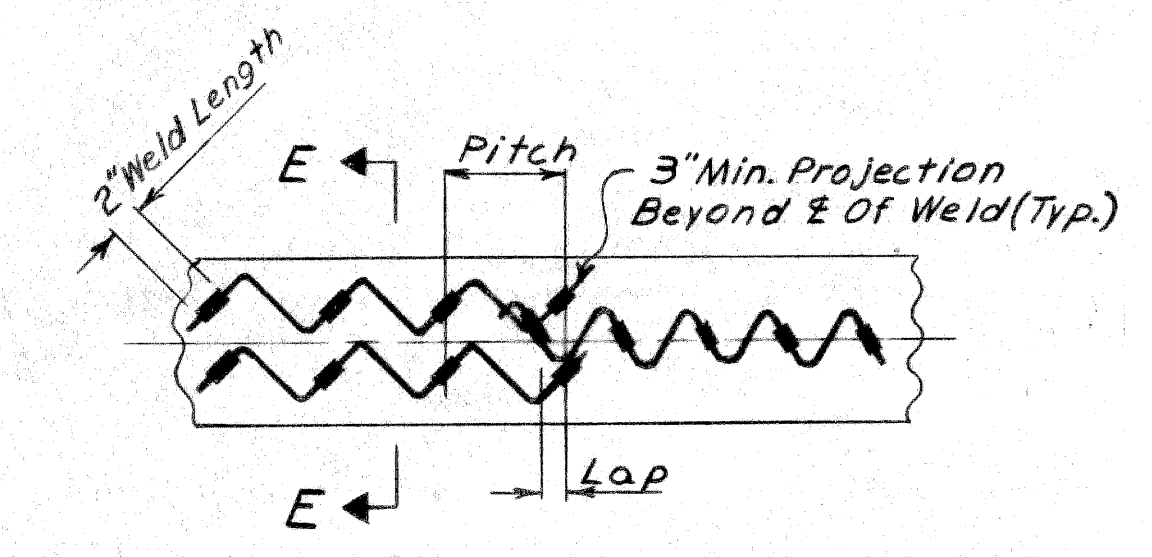
SPIRAL SHEAR DEVELOPERS



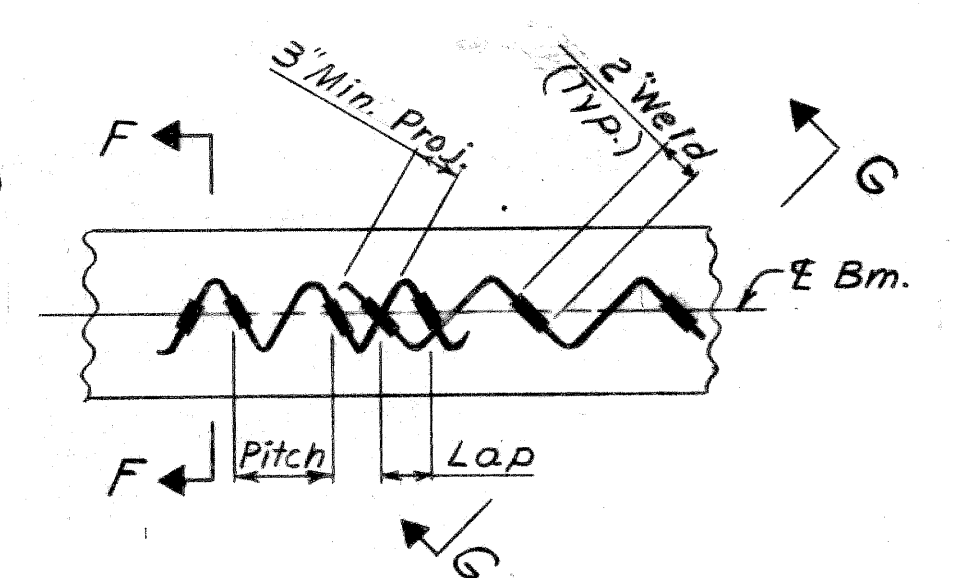
ABUT. A OR B BEARING DETAILS



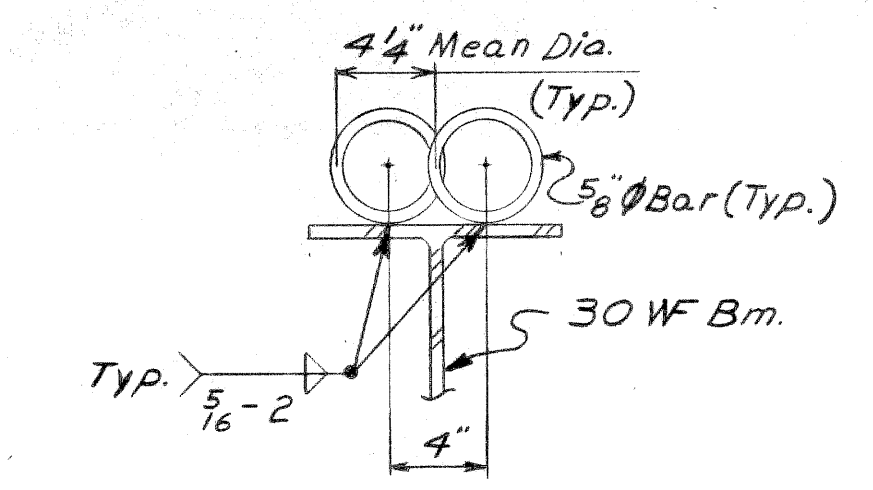
SECTION D-D



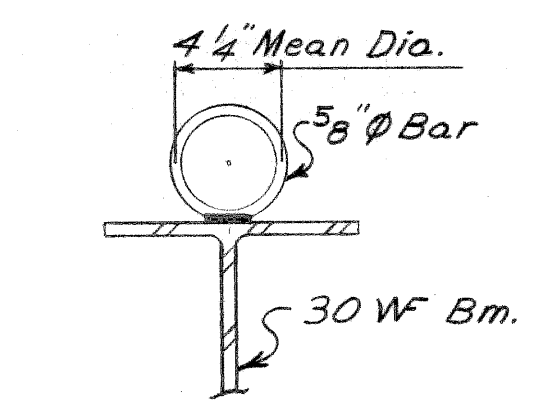
DOUBLE SPIRAL UNIT



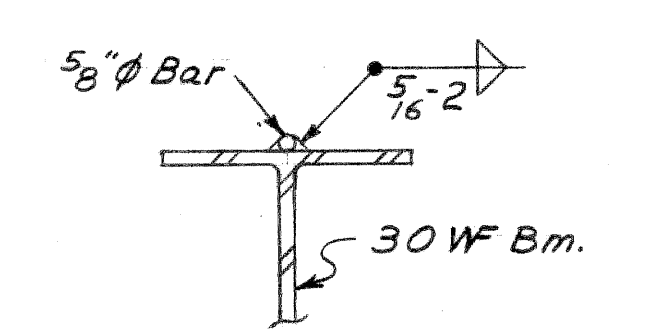
SINGLE SPIRAL UNIT



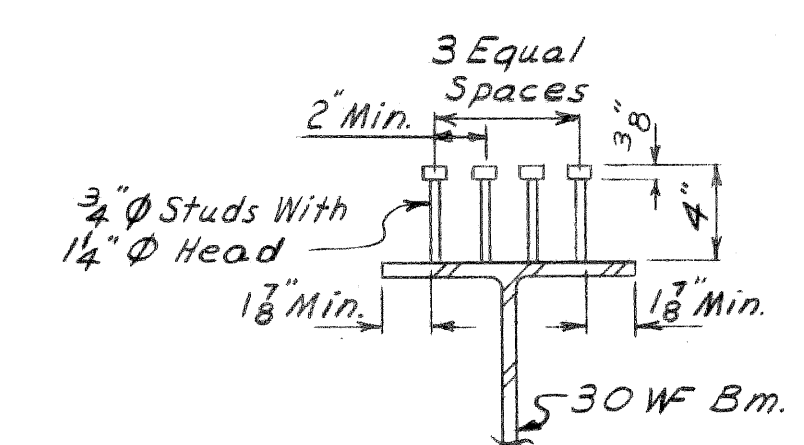
SECTION E-E



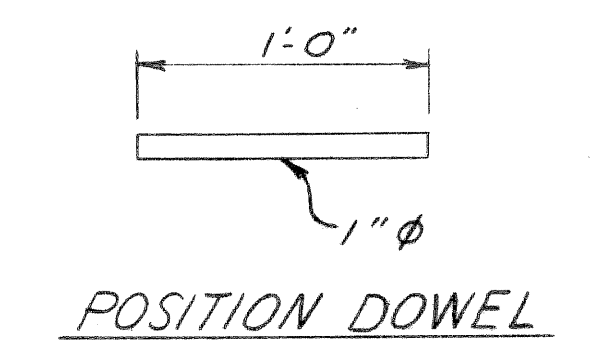
SECTION F-F



SECTION G-G



SECTION H-H



POSITION DOWEL

Work This Sheet With Sh.# 16

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 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Conroy*
 STRUCTURAL ENGINEER

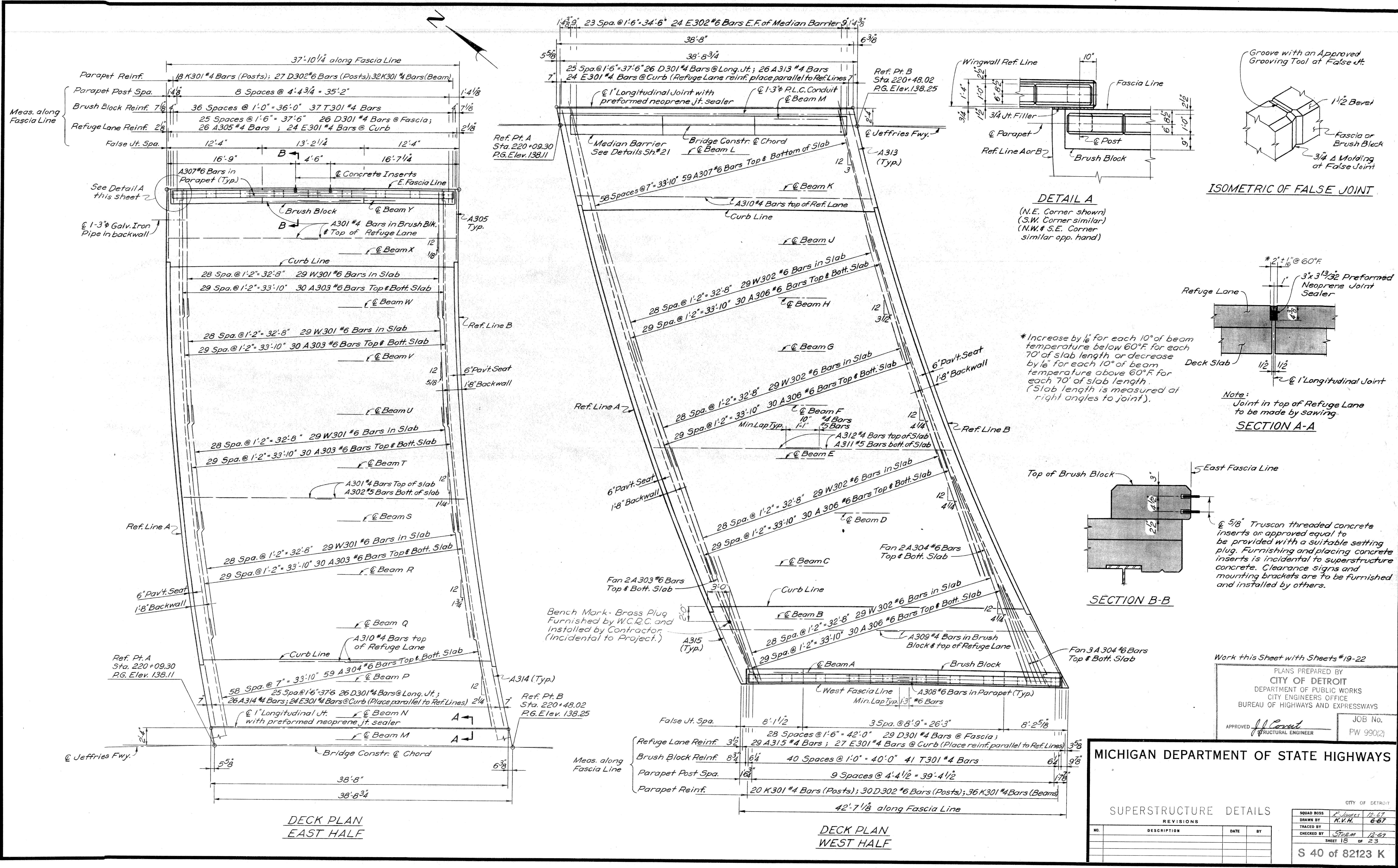
JOB No. PW 990

MICHIGAN STATE HIGHWAY DEPARTMENT

STRUCTURAL STEEL DETAILS

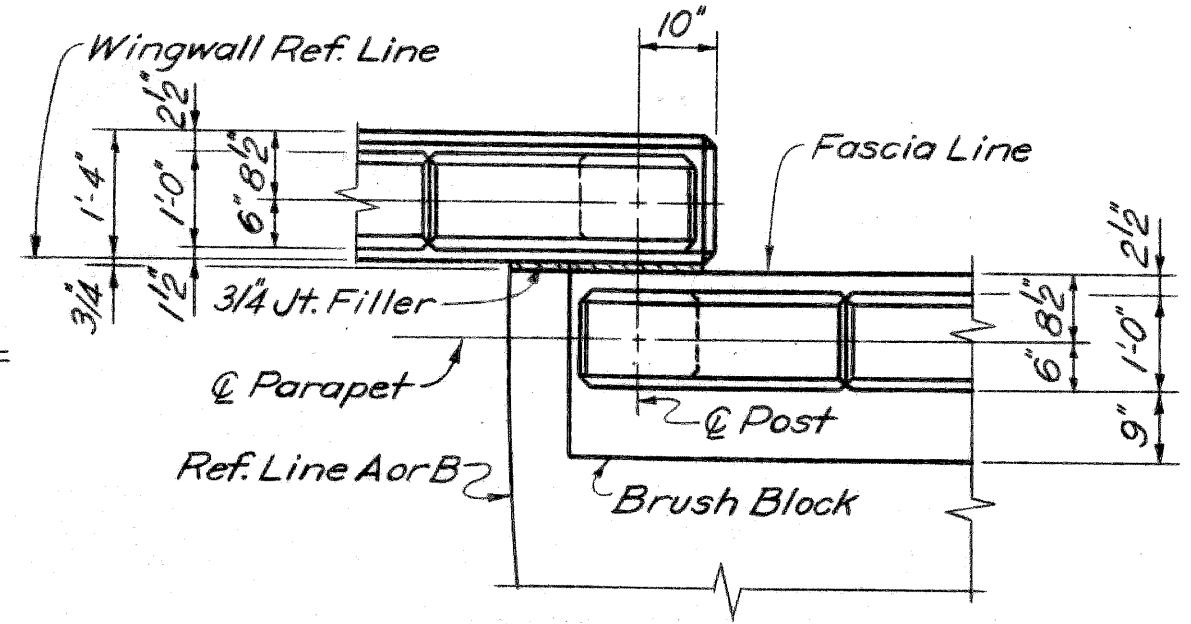
REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT	
SQUAD BOSS	R. James 12-67
DRAWN BY	NAGLE 7-67
CHECKED BY	R.J. 12-67
SHEET 17 OF 23	
S 40 of 82123 K	

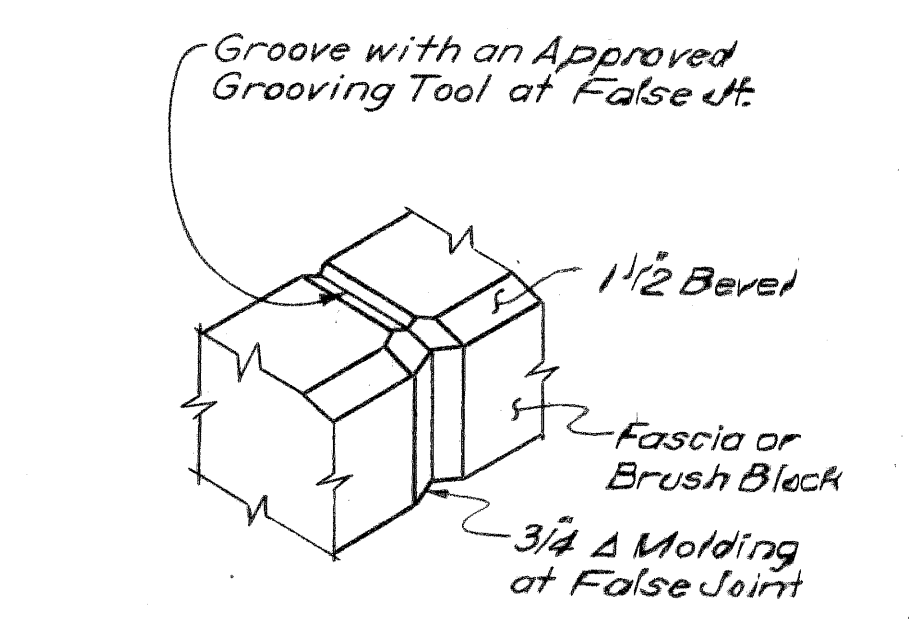


DECK PLAN EAST HALF

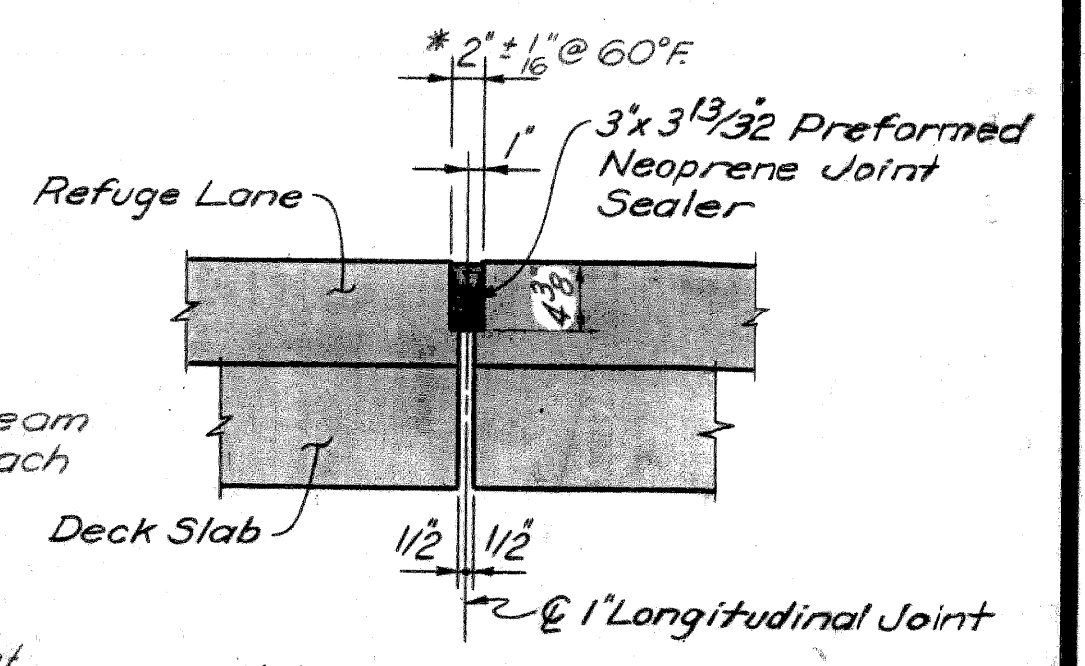
DECK PLAN WEST HALF



DETAIL A
(N.E. Corner shown)
(S.W. Corner similar)
(N.W. & S.E. Corner similar opp. hand)

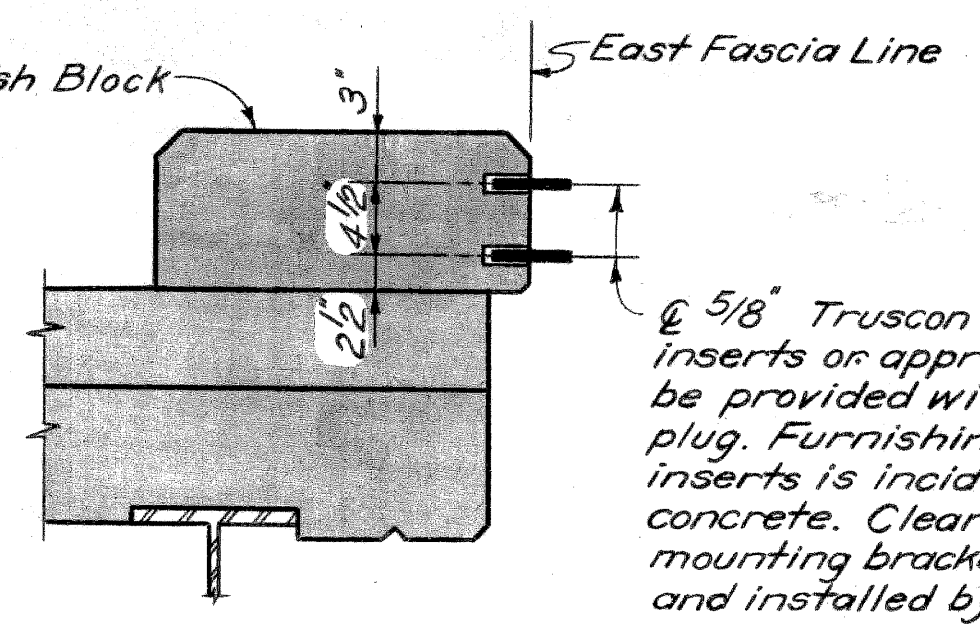


ISOMETRIC OF FALSE JOINT



SECTION A-A
Note: Joint in top of Refuge Lane to be made by sawing.

* Increase by 1/16" for each 10° of beam temperature below 60°F. for each 70' of slab length or decrease by 1/16" for each 10° of beam temperature above 60°F. for each 70' of slab length. (Slab length is measured at right angles to joint).



SECTION B-B

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

Work this Sheet with Sheets #19-22

PLANS PREPARED BY
CITY OF DETROIT
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BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *J. J. Corbett*
STRUCTURAL ENGINEER

JOB No. PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

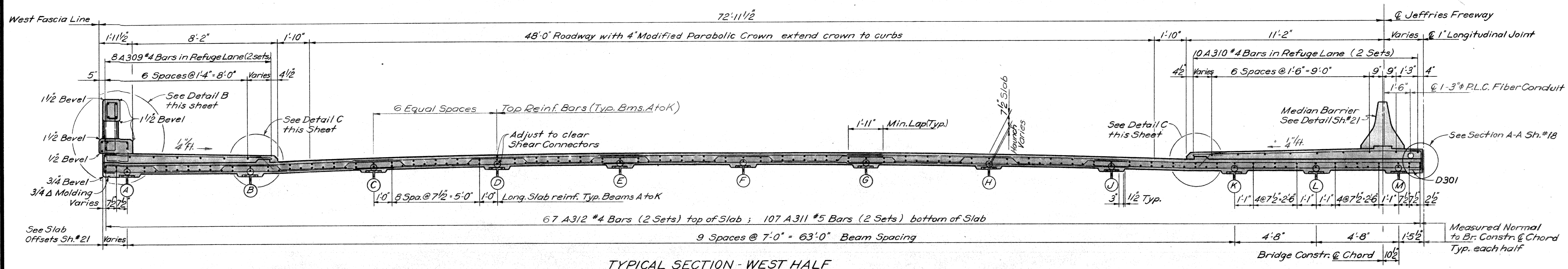
SUPERSTRUCTURE DETAILS

CITY OF DETROIT

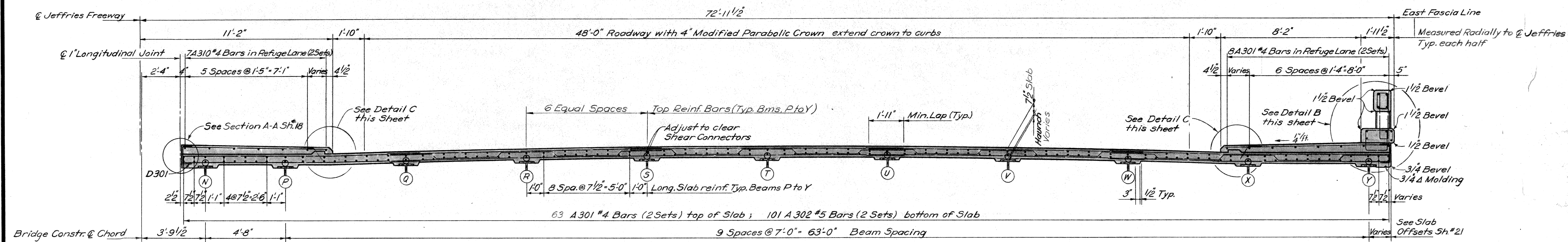
SQUAD BOSS: *C. Jones* 12-67
DRAWN BY: *K.V.H.* 6-67
TRACED BY: *STEVEN* 12-67
CHECKED BY: *STEVEN* 12-67
SHEET 18 OF 23

S 40 of 82123 K

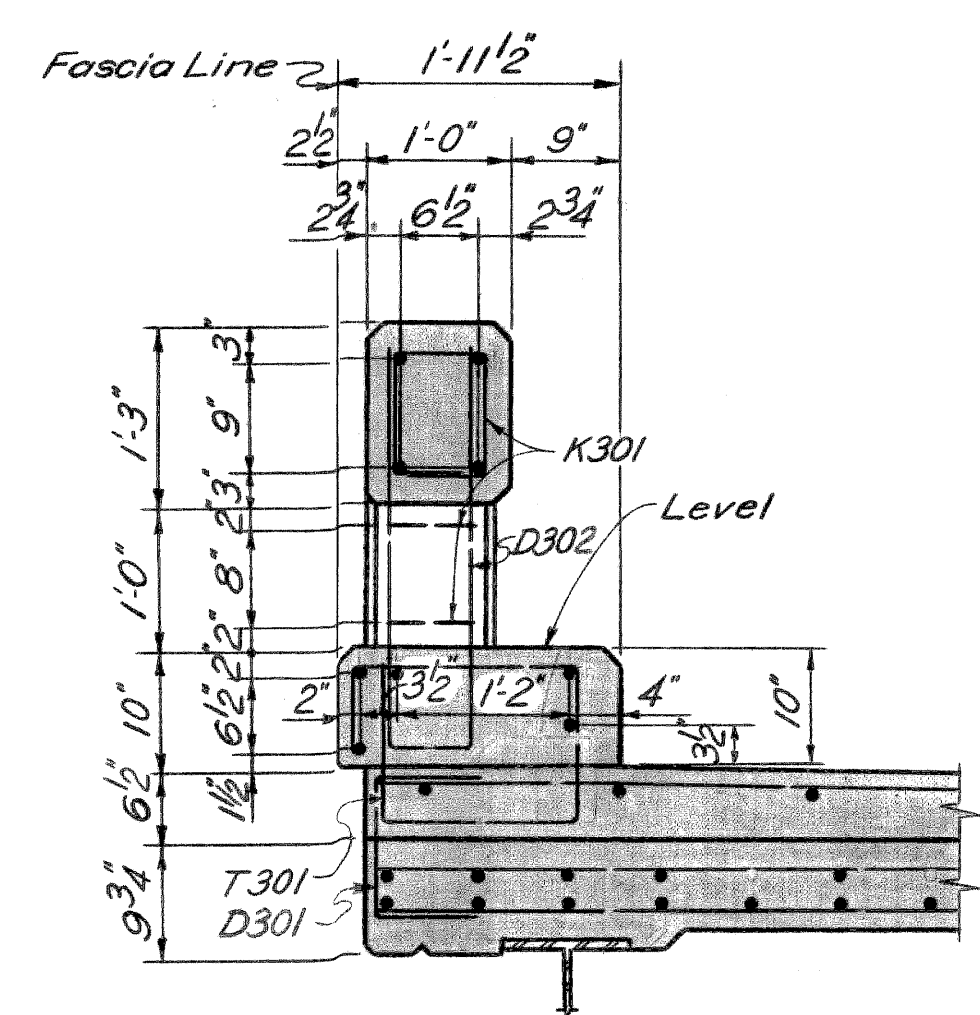
NO.	DESCRIPTION	DATE	BY



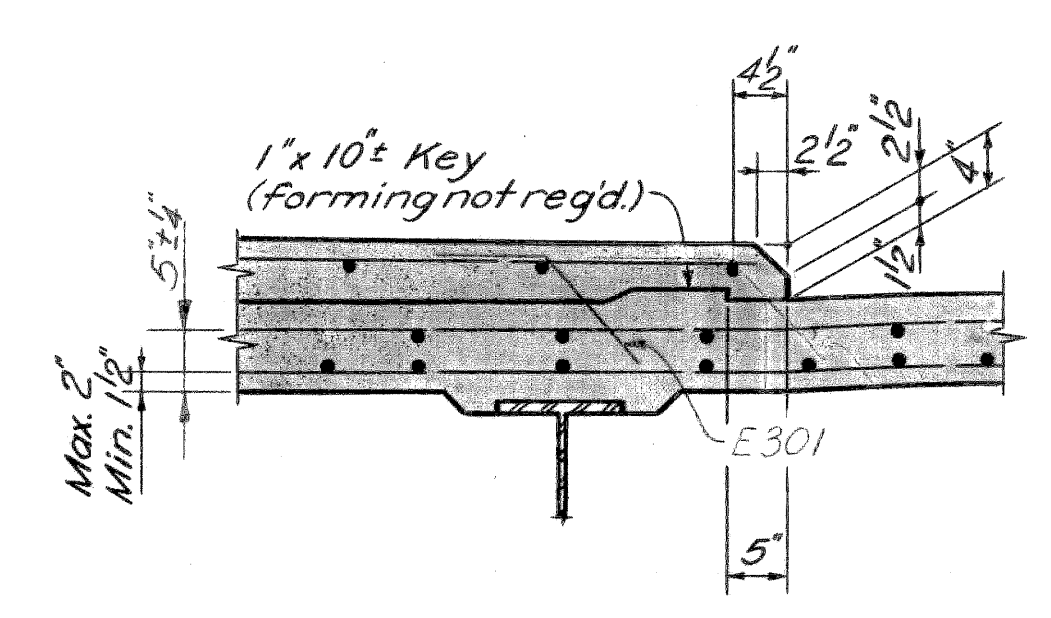
TYPICAL SECTION - WEST HALF



TYPICAL SECTION - EAST HALF



DETAIL B



DETAIL C

Work this Sheet with Sheets 18 & 20-22

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

REVISIONS

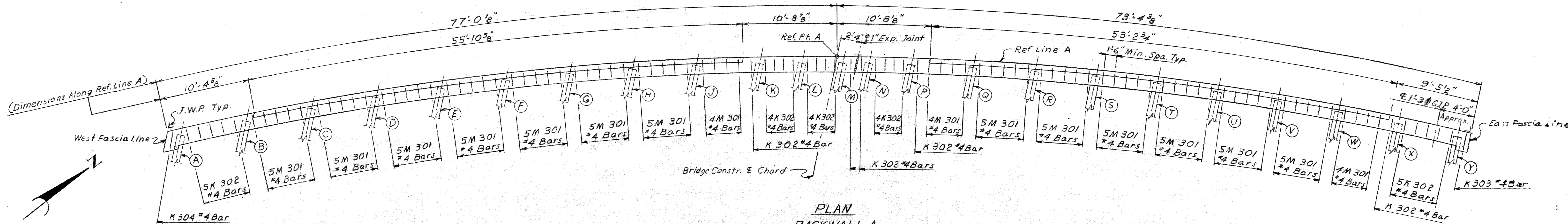
NO.	DESCRIPTION	DATE	BY

PLANS PREPARED BY
CITY OF DETROIT
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BUREAU OF HIGHWAYS AND EXPRESSWAYS

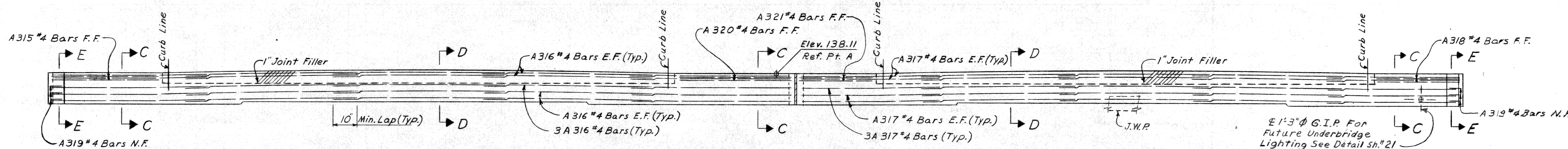
APPROVED: *J. J. Conant*
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

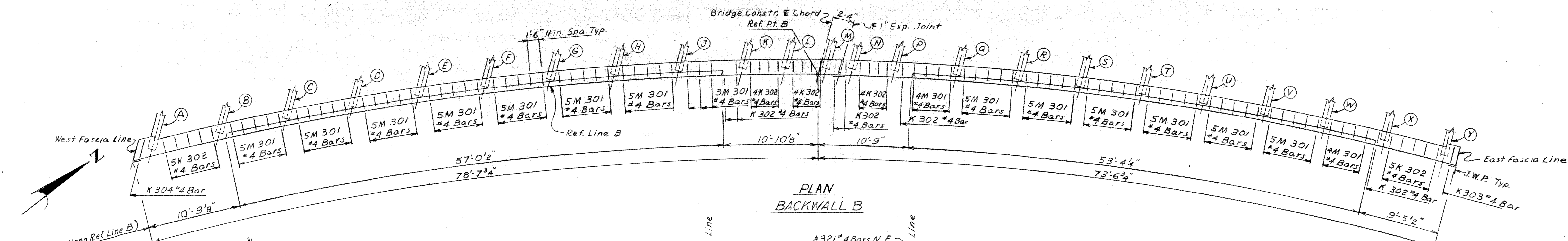
CITY OF DETROIT
SQUAD BOSS: R. S. Smith 12-67
DRAWN BY: K.V.H. 6-67
TRACED BY: SPW 12-67
CHECKED BY: SPW 12-67
SHEET 19 OF 23
S 40 of 82123 K



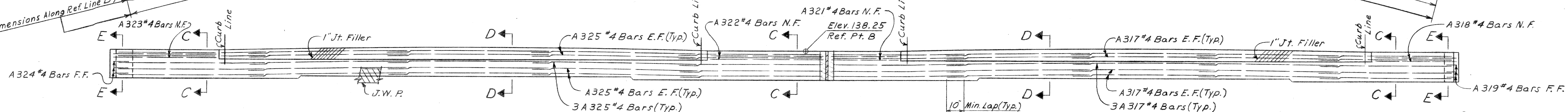
PLAN
BACKWALL A



ELEVATION



PLAN
BACKWALL B



ELEVATION

Work This Sheet With Sheets 18, 19, 21, 22

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS
APPROVED: *J. A. Conroy*
STRUCTURAL ENGINEER

JOB No.
PW 9902

SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

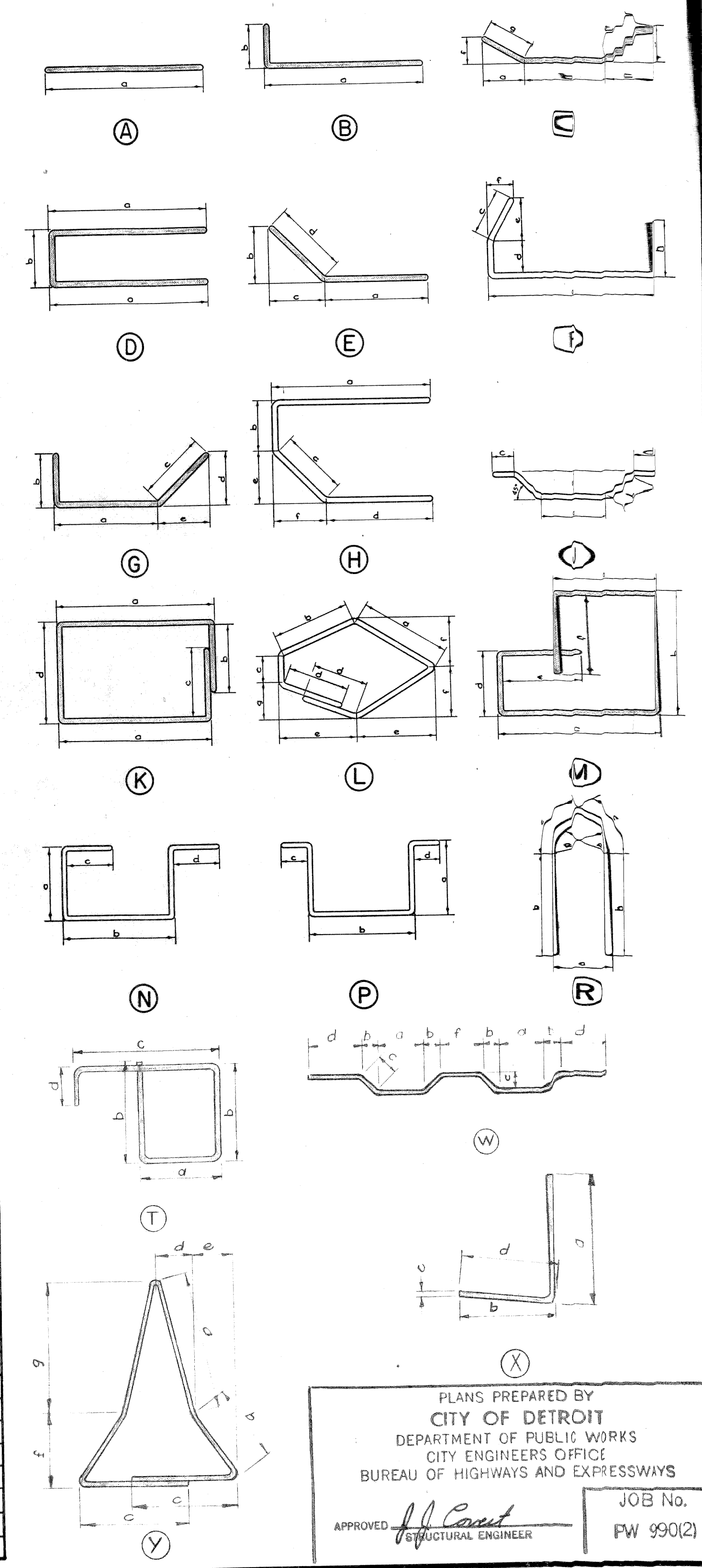
DRAWN BY	<i>NAGLE</i>	7-67
CHECKED BY	<i>STURM</i>	12-67
SHEET 20 OF 23		
S 40 of 82123 K		

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A1	12'-6"							#6	12'-6"	9	169
A2	19'-9"							#6	19'-9"	58	1721
A3	9'-0"							#6	9'-0"	65	879
A4	10'-6"							#6	10'-6"	66	1041
A5	9'-6"							#6	9'-6"	49	699
A6	12'-9"							#6	12'-9"	68	1302
A7	13'-0"							#6	13'-0"	36	703
A8	23'-0"							#6	23'-0"	156	5389
A9	20'-0"							#6	20'-0"	156	4686
A10	7'-6"							#7	7'-6"	16	245
A11	24'-3"							#6	24'-3"	34	1239
A12	12'-0"							#9	12'-0"	13	530
A13	6'-3"							#9	6'-3"	16	340
A14	11'-6"							#9	11'-6"	13	508
A15	16'-0"							#6	16'-0"	52	1250
A16	20'-3"							#6	20'-3"	56	1703
A17	25'-3"							#11	25'-3"	84	11269
A18	18'-3"							#11	18'-3"	82	7951
A19	20'-6"							#6	20'-6"	50	1540
A20	19'-3"							#6	19'-3"	50	1446
A21	12'-0"							#6	12'-0"	38	685
A22	19'-0"							#6	19'-0"	98	2797
A23	17'-0"							#11	17'-0"	144	13007
A24	23'-6"							#11	23'-6"	144	17980
A25	17'-6"							#11	17'-6"	70	6508
A26	24'-0"							#11	24'-0"	70	8926
A27	11'-0"							#6	11'-0"	31	512
A28	14'-0"							#6	14'-0"	80	1682
A29	23'-3"							#6	23'-3"	112	3911
A30	5'-6"							#6	5'-6"	34	281
A31	6'-0"							#9	6'-0"	18	367
A32	9'-6"							#9	9'-6"	18	581
A33	14'-0"							#9	14'-0"	20	952
A34	8'-6"							#6	8'-6"	30	383
A35	25'-6"							#6	25'-6"	8	306
A36	13'-6"							#6	13'-6"	27	547
A37	13'-0"							#4	13'-0"	110	955
A38	11'-9"							#4	11'-9"	35	275
A39	11'-6"							#4	11'-6"	17	131
A40	21'-9"							#4	21'-9"	26	378
A41	23'-3"							#4	23'-3"	54	839
A42	15'-9"							#4	15'-9"	56	589
A43	21'-6"							#4	21'-6"	28	402
A44	18'-0"							#4	18'-0"	64	770
A45	15'-3"							#4	15'-3"	64	652
A46	22'-0"							#4	22'-0"	64	941
A47	18'-6"							#4	18'-6"	64	791
A48	23'-9"							#4	23'-9"	26	412
A49	21'-0"							#4	21'-0"	26	365
A50	12'-3"							#4	12'-3"	20	164
A51	6'-6"							#4	6'-6"	144	625
A52	19'-6"							#6	19'-6"	48	1406
A53	18'-3"							#6	18'-3"	8	219
A54	7'-3"							#6	7'-3"	16	174
A55	5'-6"							#6	5'-6"	411	3395
A56	12'-9"							#7	12'-9"	39	1016
A57	8'-3"							#8	8'-3"	38	837
A58	5'-0"							#6	5'-0"	16	120
A59	11'-6"							#6	11'-6"	26	449
A60	3'-6"							#6	3'-6"	59	310
A61	5'-3"							#6	5'-3"	47	371
A62	18'-9"							#6	18'-9"	8	225
A63	26'-6"							#6	26'-6"	41	1632
A64	17'-9"							#8	17'-9"	15	711
A65	12'-0"							#11	12'-0"	14	893
A66	6'-6"							#6	6'-6"	26	254
A67	3'-3"							#6	3'-3"	26	127
A68	31'-0"							#6	31'-0"	44	2049
A69	22'-6"							#10	22'-6"	16	1549
A70	13'-0"							#11	13'-0"	15	1036
A71	21'-3"							#6	21'-3"	72	2298
A72	16'-0"							#8	16'-0"	16	684
A73	9'-9"							#9	9'-9"	16	530
A74	17'-3"							#6	17'-3"	34	881
A75	10'-3"							#6	10'-3"	28	431
A76	24'-6"							#6	24'-6"	8	294
A77	7'-6"							#7	7'-6"	19	291
A78	6'-0"							#8	6'-0"	18	288

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A79	4'-6"							#6	4'-6"	20	135
A80	12'-0"							#6	12'-0"	20	360
A81	4'-3"							#6	4'-3"	16	102
A82	13'-6"							#4	13'-6"	112	1010
B1	2'-0 1/2"	2'-0"						#4	4'-0"	32	86
C1	1'-8 3/4"	4'-6"	1'-8 3/4"	1'-0"	2'-0"	1'-0"	2'-0"	#6	8'-6"	13	166
C2	1'-5"	3'-9"	1'-5"	1'-5"	2'-0"	1'-5"	2'-0"	#6	7'-9"	32	372
C3	1'-3"	3'-3"	1'-0"	1'-9 7/8"	2'-0"	1'-7"	2'-0"	#6	7'-3"	13	142
D1	2'-10 5/8"	7'-4"						#6	6'-3"	126	1183
D2	1'-5"	1'-0"						#4	3'-9"	121	303
E1	3'-0"	1'-9"	11 3/4"	2'-0"				#4	5'-0"	13	43
G1	1'-3 1/2"	2'-0"	2'-0"	9 3/4"	1'-10"			#4	5'-3"	13	46
K1	10 3/4"	6'-4"	6"	8'-4"				#4	3'-5"	238	544
X1	11'-0"	16'-6"	1'-11"	16'-7 3/8"				#11	27'-6"	92	13442
X2	19'-3"	8'-6 3/4"	10"	8'-7 1/4"				#10	27'-9"	93	11105
X3	23'-0"	4'-0 5/8"	3"	4'-0 3/4"				#6	27'-0"	97	3934
X4	10'-0"	11'-6 1/2"	1'-1"	11'-7 1/4"				#10	21'-6"	48	4441
X5	16'-6"	6'-6 3/4"	7"	6'-7 1/8"				#9	23'-0"	47	3675
X6	20'-3"	4'-0 5/8"	3"	4'-0 3/4"				#6	24'-3"	50	1821
X7	9'-9"	10'-0 3/4"	11"	10'-1 1/4"				#10	19'-9"	58	4929
X8	14'-6"	4'-9 5/8"	6"	4'-10"				#8	19'-3"	56	2864
X9	18'-9"	4'-0 5/8"	3"	4'-0 3/4"				#6	22'-9"	59	2016
Total Abutments ————— 187,526 #											

BAR	DIMENSIONS							SIZE	LENGTH	NO. REQ'D	TOTAL WT.
	a	b	c	d	e	f	g				
A301	19'-3"							#4	19'-3"	152	1955
A302	19'-6"							#5	19'-6"	202	4108
A303	16'-0"							#6	16'-0"	244	5864
A304	14'-0"							#6	14'-0"	128	2692
A305	9'-3"							#4	9'-3"	26	181
A306	17'-3"							#6	17'-3"	240	6308
A307	19'-0"							#6	19'-0"	126	3596
A308	21'-0"							#6	21'-0"	8	252
A309	21'-9"							#4	21'-9"	26	378
A310	20'-0"							#4	20'-0"	34	454
A311	21'-9"							#5	21'-9"	214	4855
A312	21'-6"							#4	21'-6"	134	1925
A313	13'-3"							#4	13'-3"	26	230
A314	18'-6"							#4	18'-6"	26	48
A315	9'-6"							#4	9'-6"	31	197
A316	16'-6"							#4	16'-6"	55	606
A317	15'-0"							#4	15'-0"	110	1102
A318	9'-0"							#4	9'-0"	4	24
A319	1'-0"							#4	1'-0"	9	6
A320	12'-6"							#4	12'-6"	2	17
A321	7'-9"							#4	7'-9"	4	21
A322	12'-9"							#4	12'-9"	2	7
A323	10'-3"							#4	10'-3"	2	14
A324	1'-6"							#4	1'-6"	3	3
A325	17'-0"							#4	17'-0"	55	625
A326	35'-6"							#4	35'-6"	5	119
D301	6 1/2"	1'-10"						#4	2'-0"	107	143
D302	2'-10 3/8"	7 1/4"						#6	6'-3"	57	535
E301	10 1/2"	7 1/2"	7 1/2"	10 1/2"				#4	1'-9"	99	116
E302	1'-6"	2'-3"	1'-6 3/4"	2'-9"				#6	4'-3"	48	306
K301	10 3/4"	6 1/4"	6"	8 1/4"				#4	3'-5"	106	248
K302	2'-10"	1'-1"	1'-0 1/2"	1'-3 1/2"				#4	9'-0"	53	331
K303	2'-10"	1'-7"	1'-6 1/2"	1'-9 1/2"				#4	10'-6"	2	14
K304	2'-10"	1'-9"	1'-8 1/2"	1'-11 1/2"				#4	11'-0"	2	15
M301	10 1/2"	2'-10"	1'-3 1/2"	1'-11"	1'-0 3/4"	1'-8"		#4	9'-6"	153	971
T301	1'-3 1/2"	1'-2"	1'-7 1/2"	7"				#4	5'-8"	78	295
W301	3'-6 1/2"	3 1/8"	4 1/2"	2'-7 3/8"	2'-11 1/2"			#6	16'-9"	116	2918
W302	3'-9"	3 1/8"	4 1/2"	2'-10 1/8"	3'-3"			#6	18'-0"	116	3136
Y301	1'-6 1/2"	10 1/2"	1'-2"	4 3/4"	5 1/2"	8 3/4"	1'-5 3/4"	#4	7'-0"	24	112
Total Superstructure ————— 44817											

BAR BENDING DIAGRAM



Note:—
 All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.
 Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute.
 Grand Total Steel Reinforcement 232,343 #
 Steel for reinforcement shall be intermediate or hard grade only. All bar numbers shown on this sheet shall be prefixed S40.

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL REINFORCEMENT DETAILS

CITY OF DETROIT

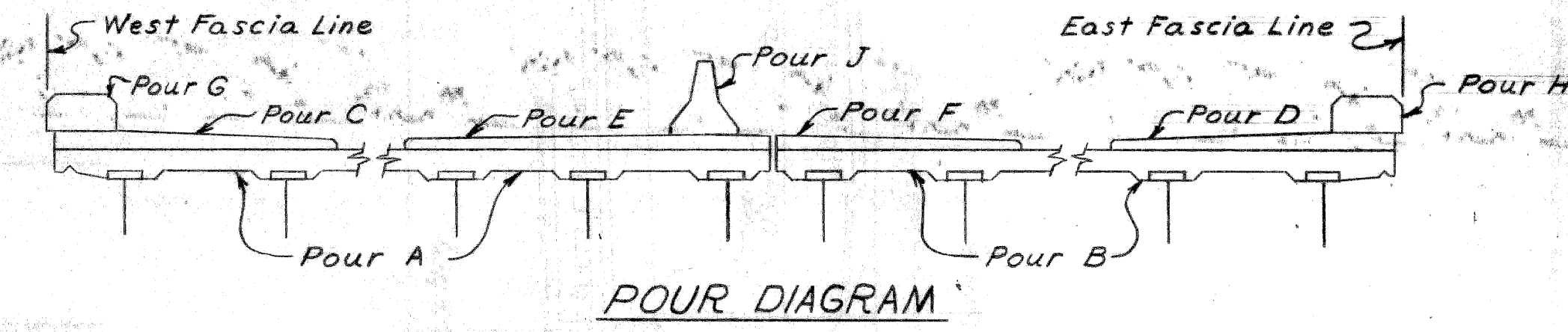
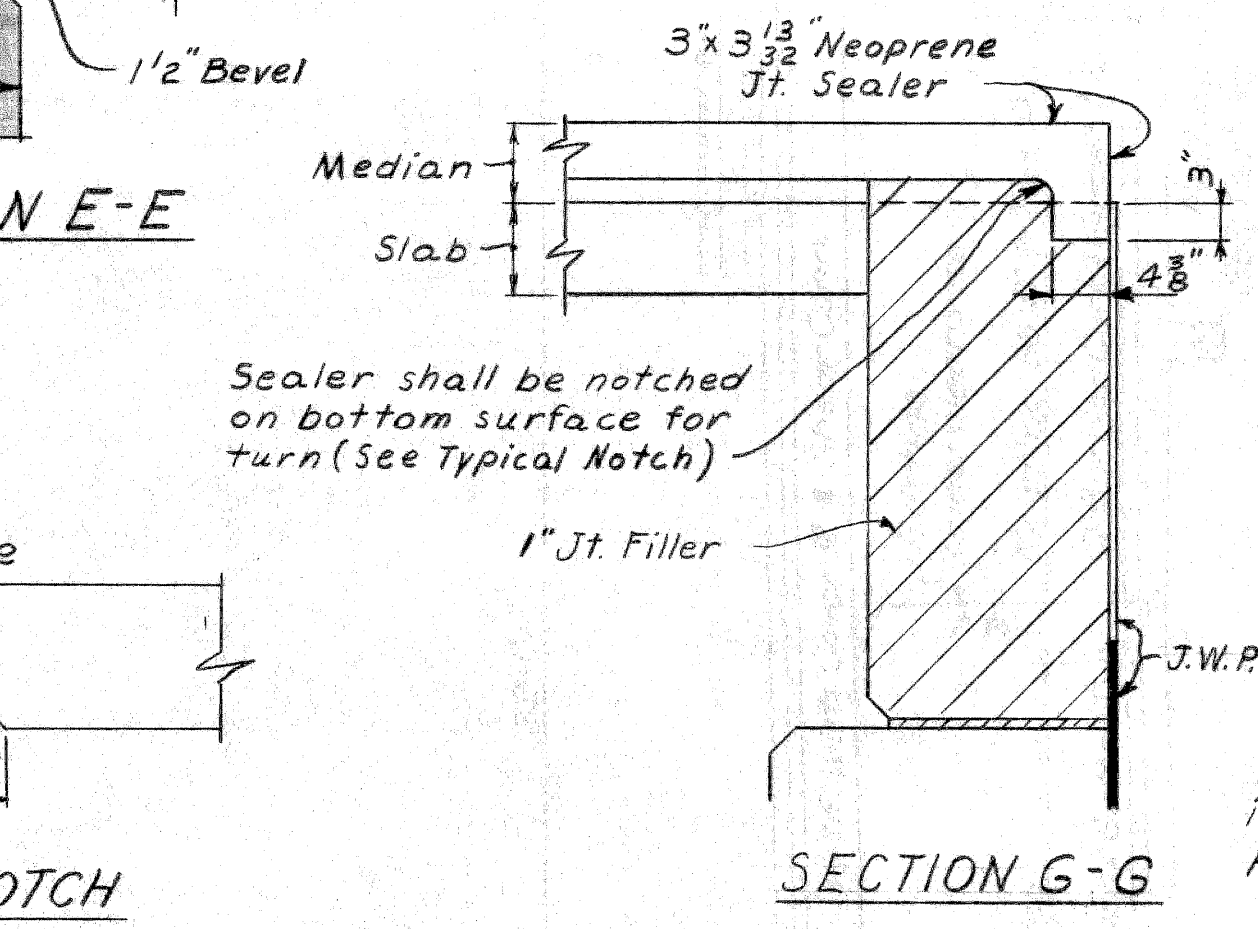
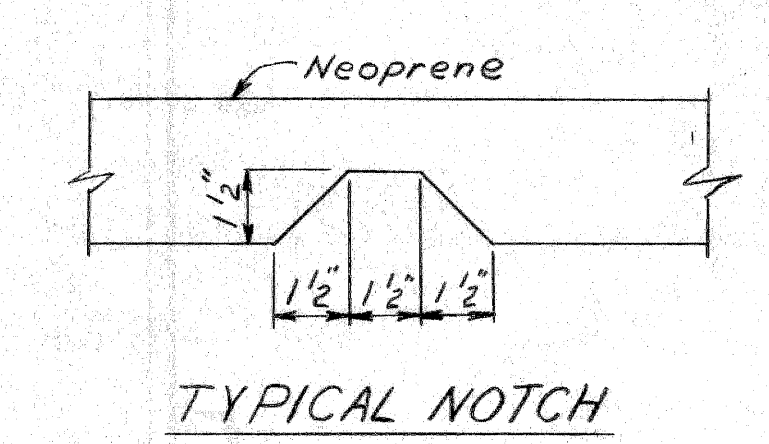
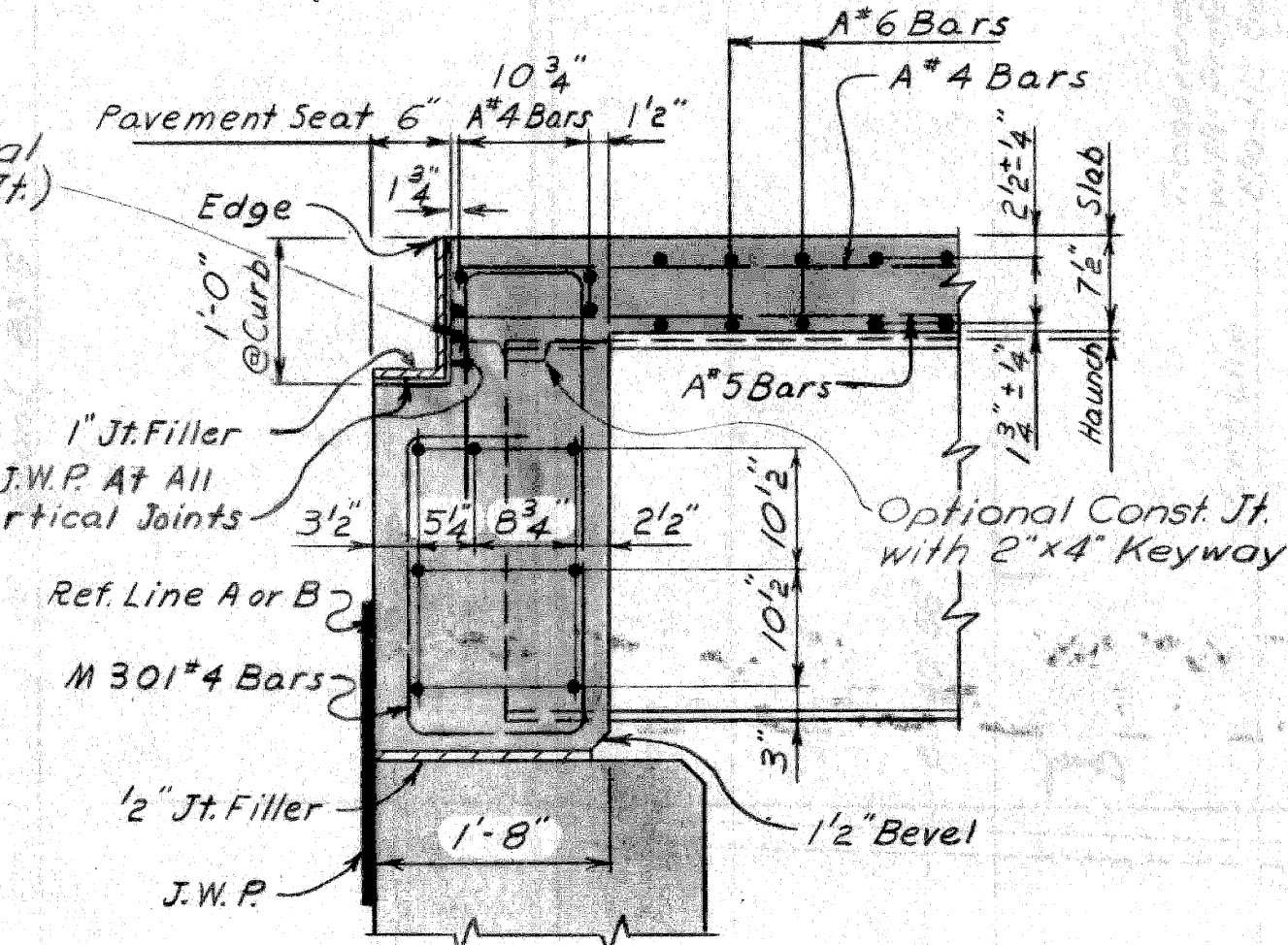
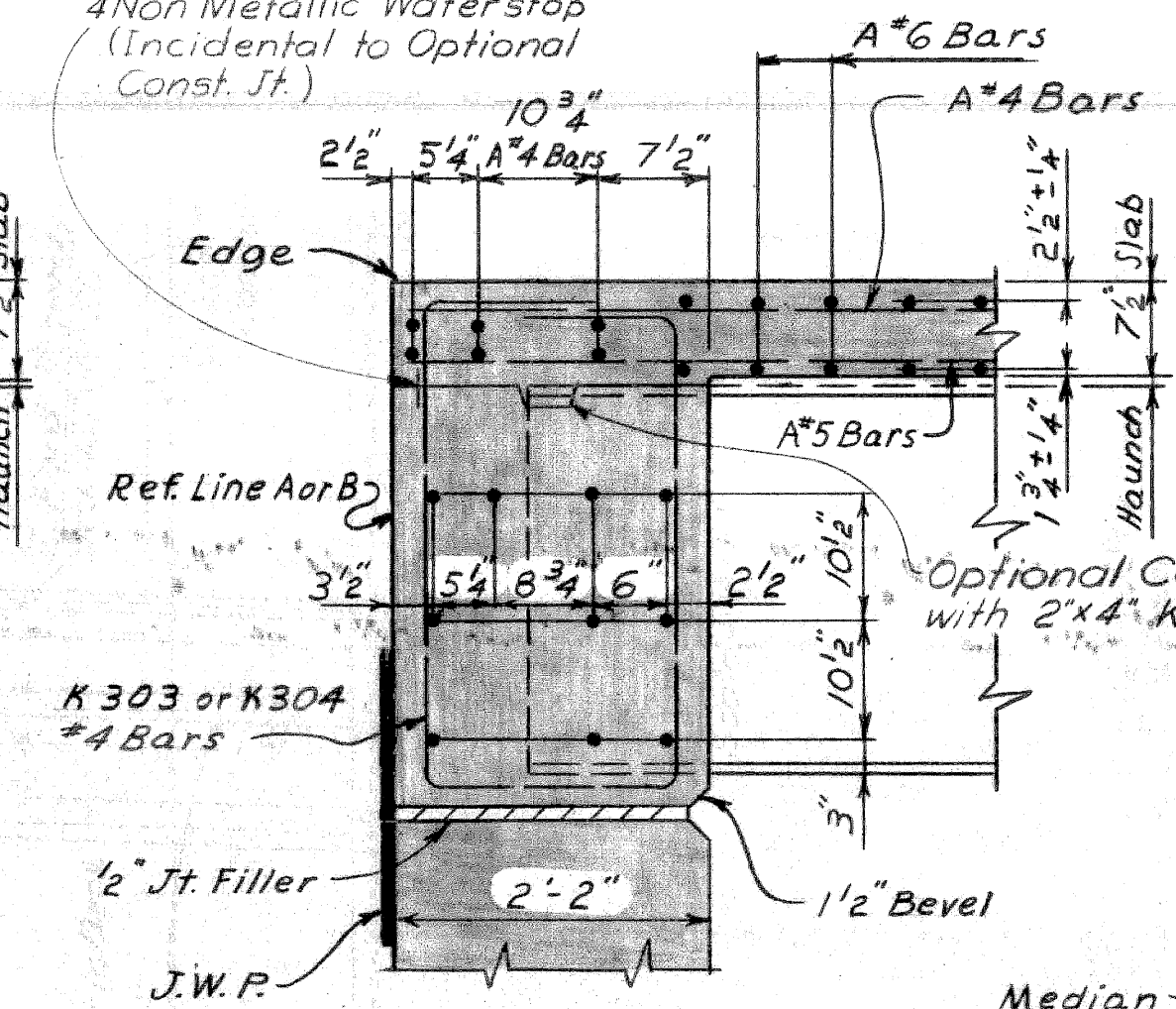
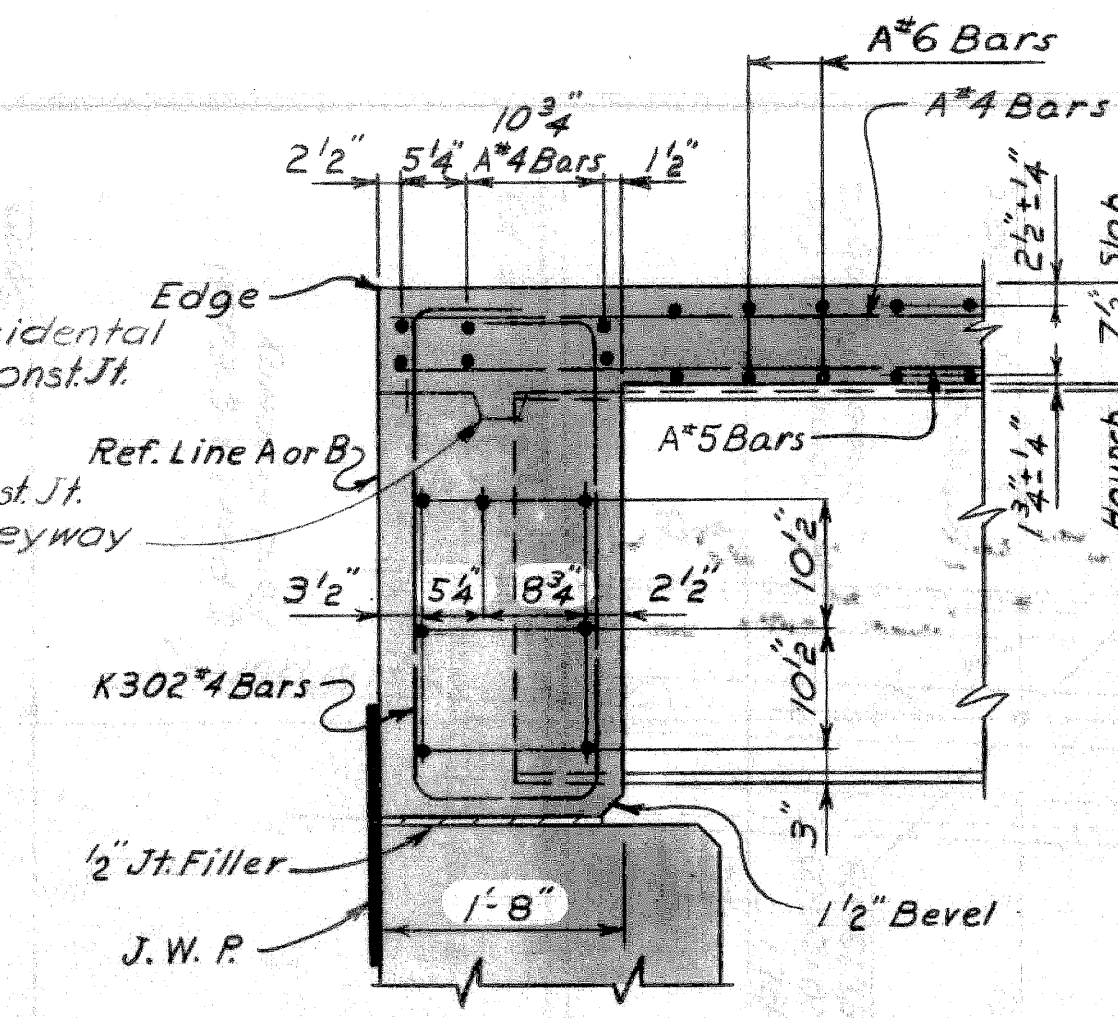
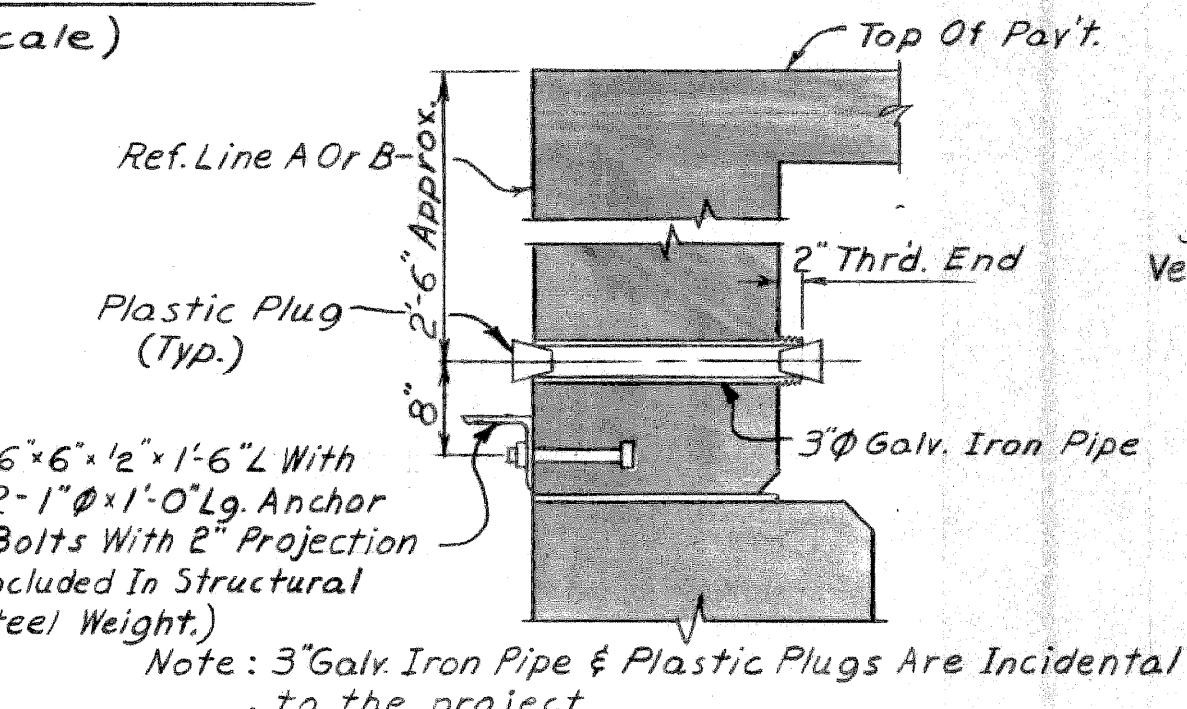
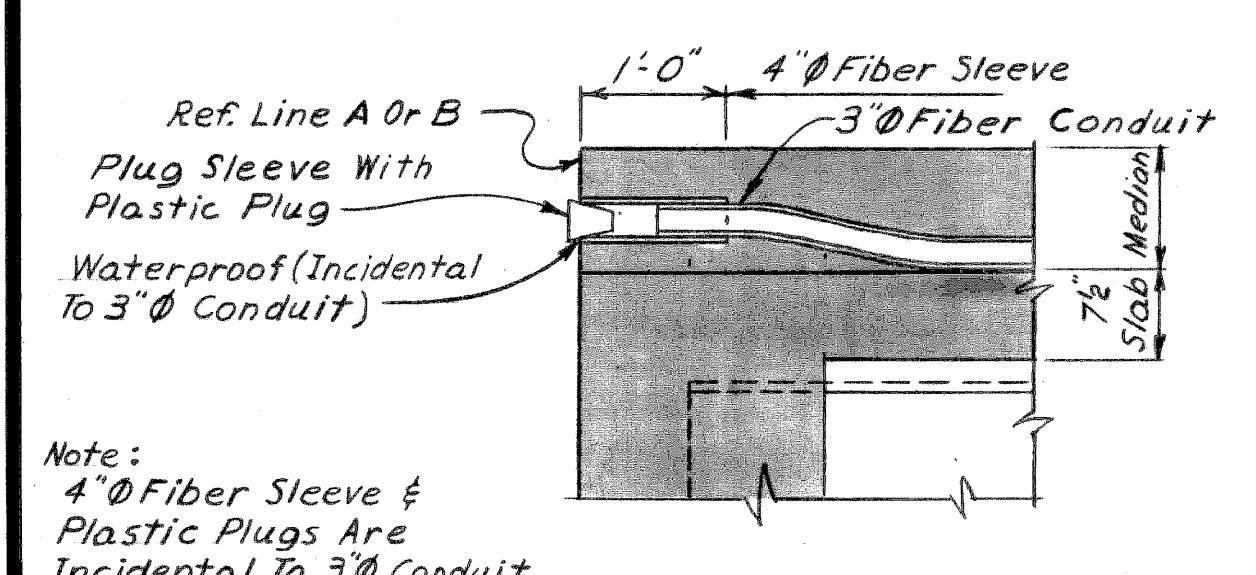
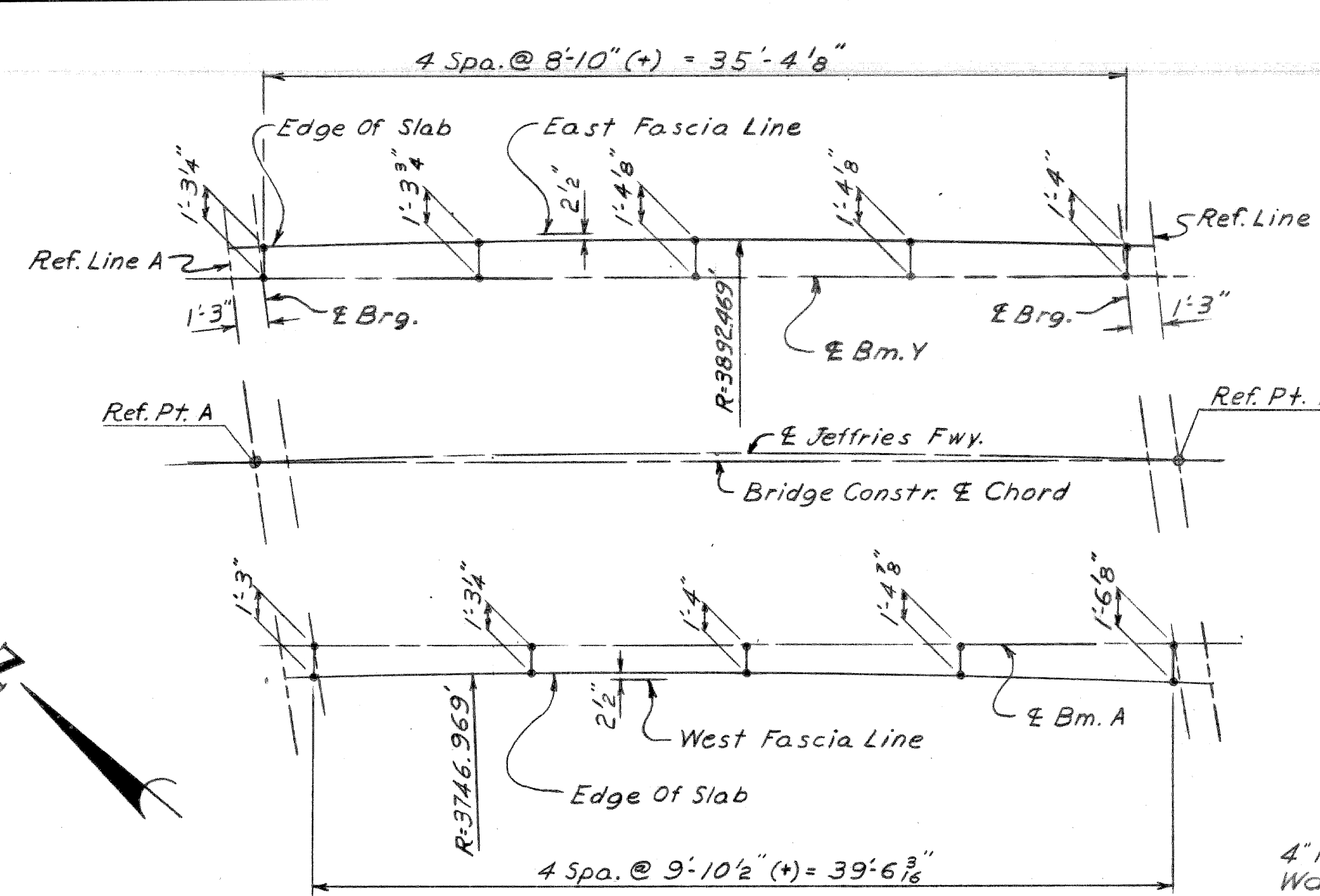
PLANS PREPARED BY
 CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

JOB No.
 FW 990(2)

APPROVED *J. J. Conroy*
 STRUCTURAL ENGINEER

NO.	DESCRIPTION	DATE	BY

SQUAD BOSS *R. J. Jones* 12-67
 DRAWN BY *KW/JO.S.* 12-67
 TRACED BY
 CHECKED BY *R. J. Jones* 12-67
 SHEET 25 OF 25
S 40 of 82123 K



MISCELLANEOUS QUANTITIES		
Water Reducing Retarding Admixture	31	Gal.
3/4" Joint Filler	40	Sq. Ft.
1" Joint Filler	381	Sq. Ft.
3" x 3 3/8" Preformed Neoprene Joint Sealer	41	Lin. Ft.
Joint Waterproofing	493	Sq. Ft.
Bridge Parapet	7.71	Lin. Ft.
3" Fiber Conduit	39	Lin. Ft.
Protective Treatment For Bridge Decks	5672	Sq. Ft.

CONCRETE QUANTITIES			
POUR	LOCATION	WEST HALF	EAST HALF
A	Slab	97.9	-
B	Slab	-	86.7
C	Refuge Lane	7.6	-
D	Refuge Lane	-	6.8
E	Median	9.6	-
F	Median	-	5.8
G	Brush Block	2.3	-
H	Brush Block	-	2.0
J	Median Barrier	4.2	-
Total Gr. A(6AA) Conc. - Superstr.		222.9	Cu. Yds.

Parapet concrete 6.3 Cu. Yds. Grade A-6AA incidental to Bridge Parapet and not a pay item.

NOTES:

M.F. denotes, near face; F.F. denotes, far face; E.F. denotes, each face.

J.W.P. denotes Joint Waterproofing.

For details of bevels, moldings and Bridge Parapet, see Standard Sheet R11 or R12.

Edge denotes edging with an approved tool.

Median and Refuge Lane pours shall not be cast until slab concrete has attained at least 50% of its design strength as determined by Section 5.01.05 of the Standard Specifications.

Alphabetical designation of pours is not to be construed as a pour sequence.

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

The finished surface of the Median barrier shall be smooth, dense, and relatively free of pits, air bubble pockets, depressions, and honeycomb.

The 1" Joint Filler shall be attached to the concrete with galvanized roofing nails and shall be set back 1" from faces and top of barrier.

Protective Treatment for Bridge Deck shall be placed from Brush Block to Median Barrier and will include the Median Barrier.

Work This Sheet With Sheets 18-20, 22

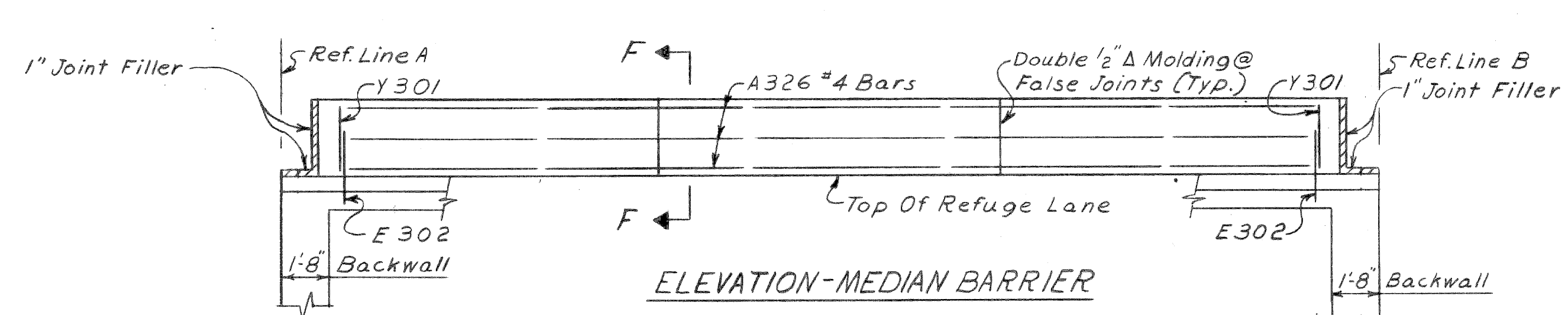
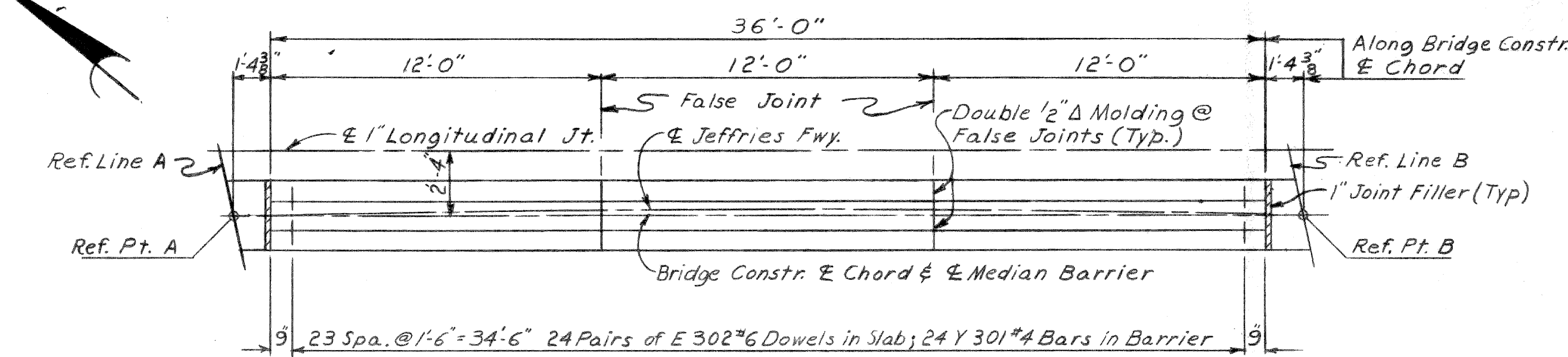
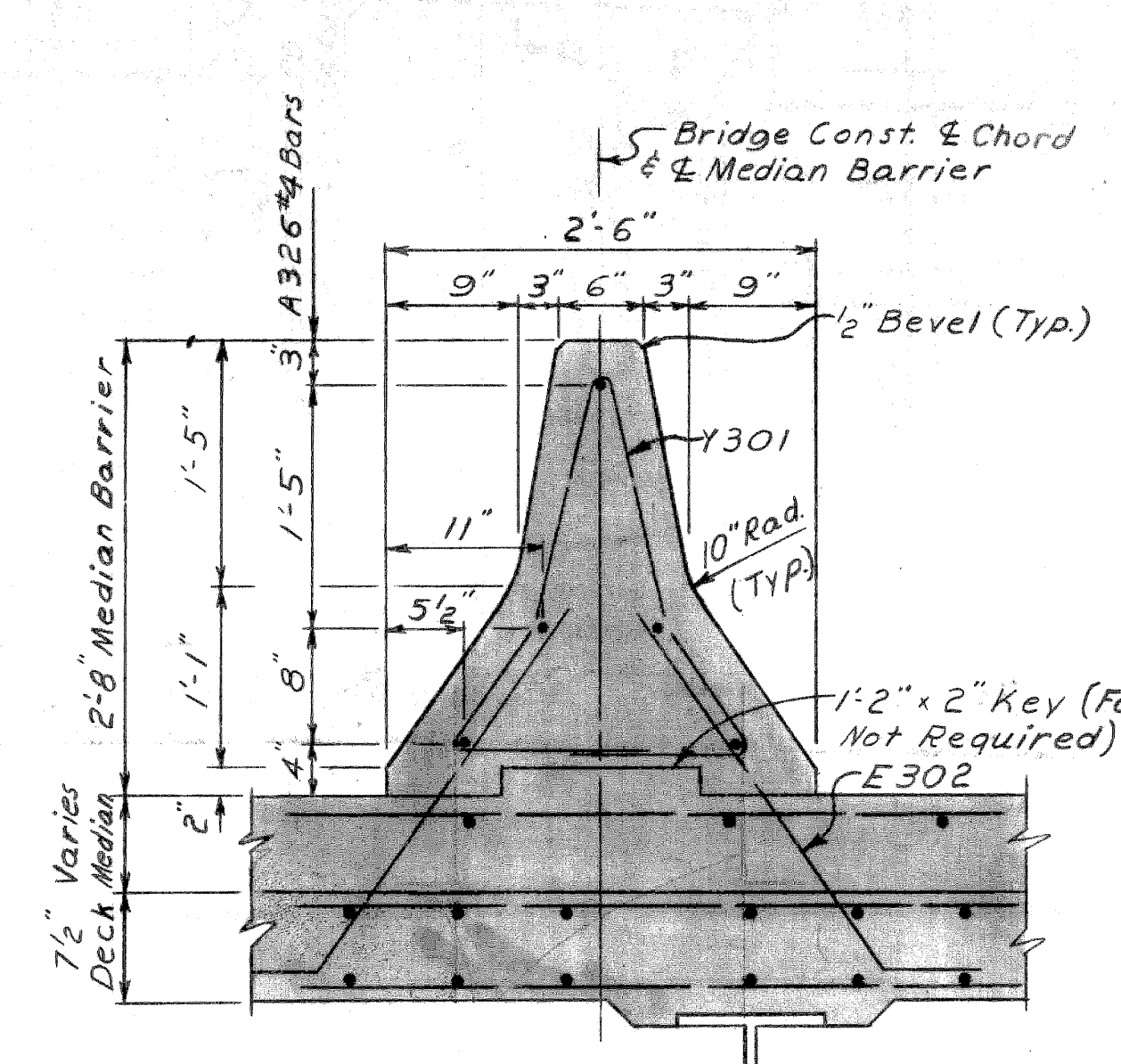
MICHIGAN DEPARTMENT OF STATE HIGHWAYS

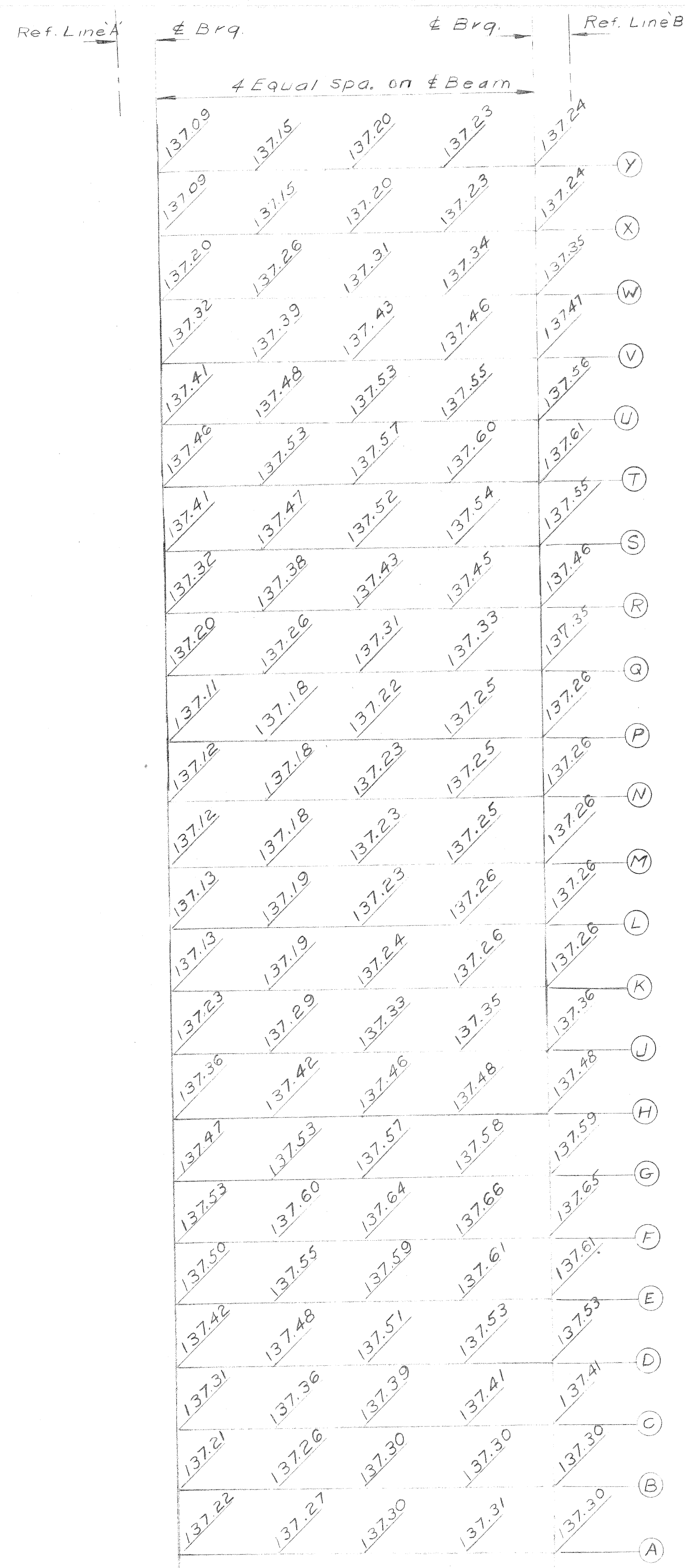
SUPERSTRUCTURE DETAILS		CITY OF DETROIT	
NO.	DESCRIPTION	DATE	BY
REVISIONS			
SQUAD BOSS		CITY OF DETROIT	
DRAWN BY NAGLE		7-67	
TRACED BY		1267	
CHECKED BY		SHEET 21 OF 23	
S 40 of 82123 K			

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

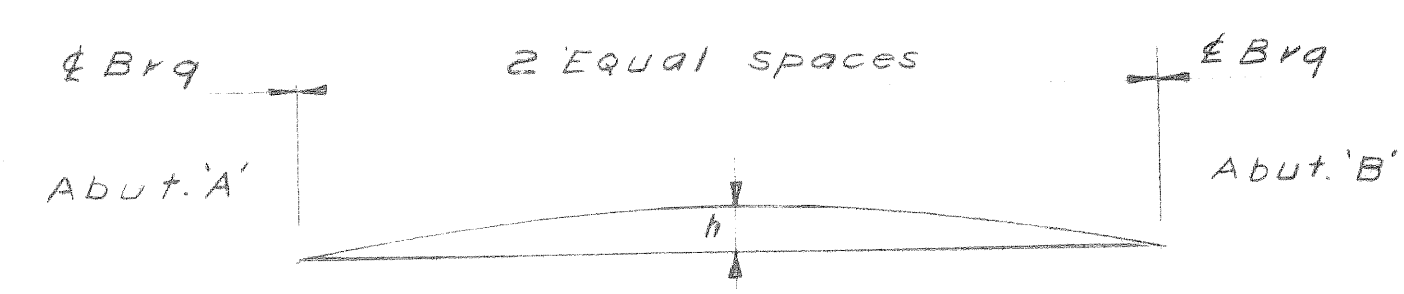
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JOB No. PW 990(2)





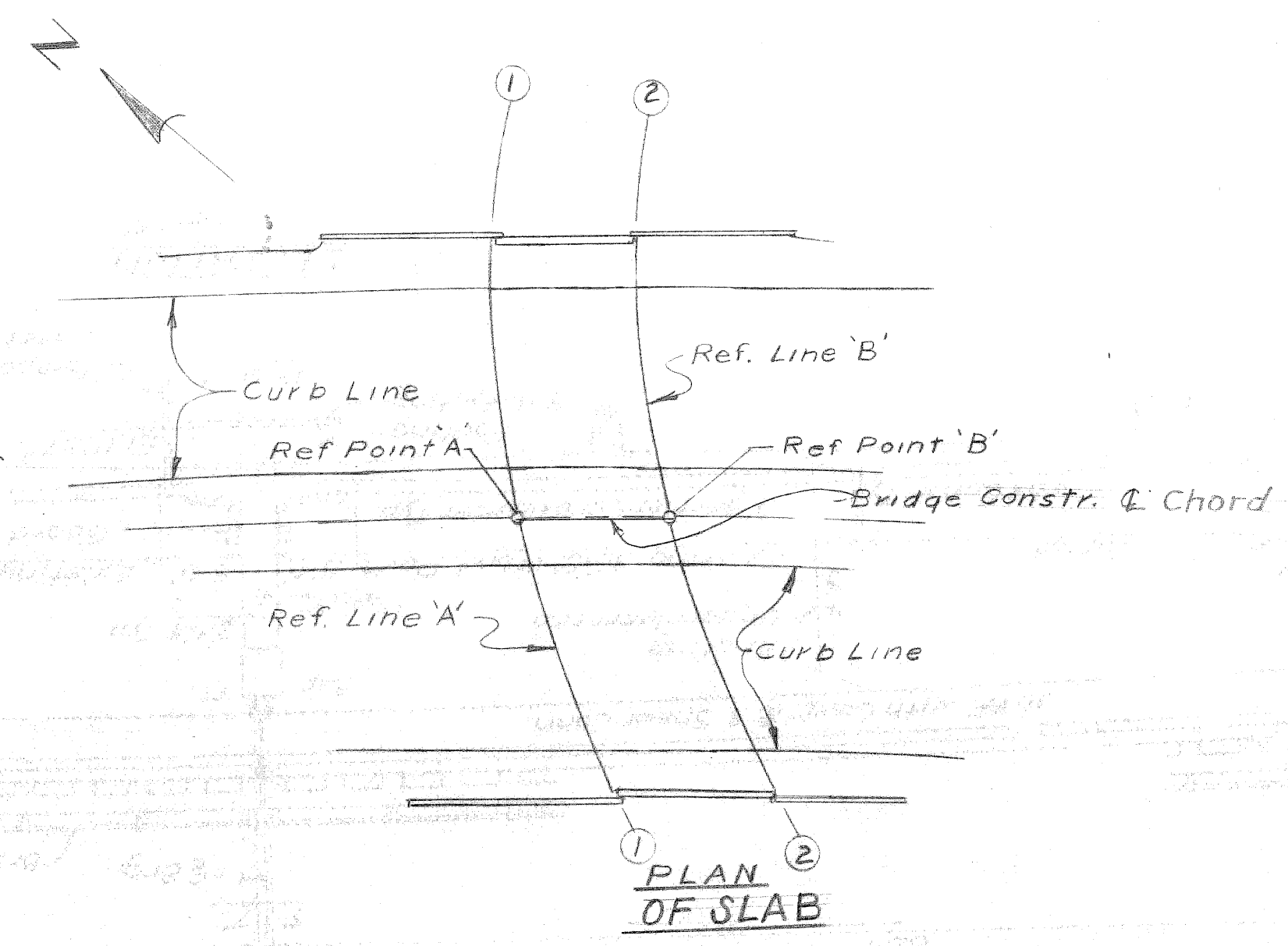
BOTTOM SLAB ELEVATIONS
For Loading Case I



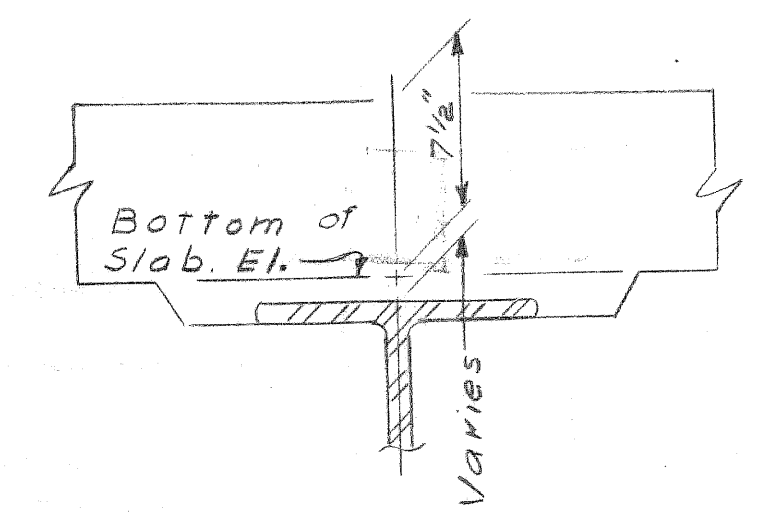
CAMBER DIAGRAM
For Loading Cases Shown in Table

BEAM	LOADING CASE		
	I	II	III
Y	1/2	3/8	1/4
P-X	1/2	1/4	1/8
L-N	1/2	3/8	1/4
A-K	1/2	1/4	1/8

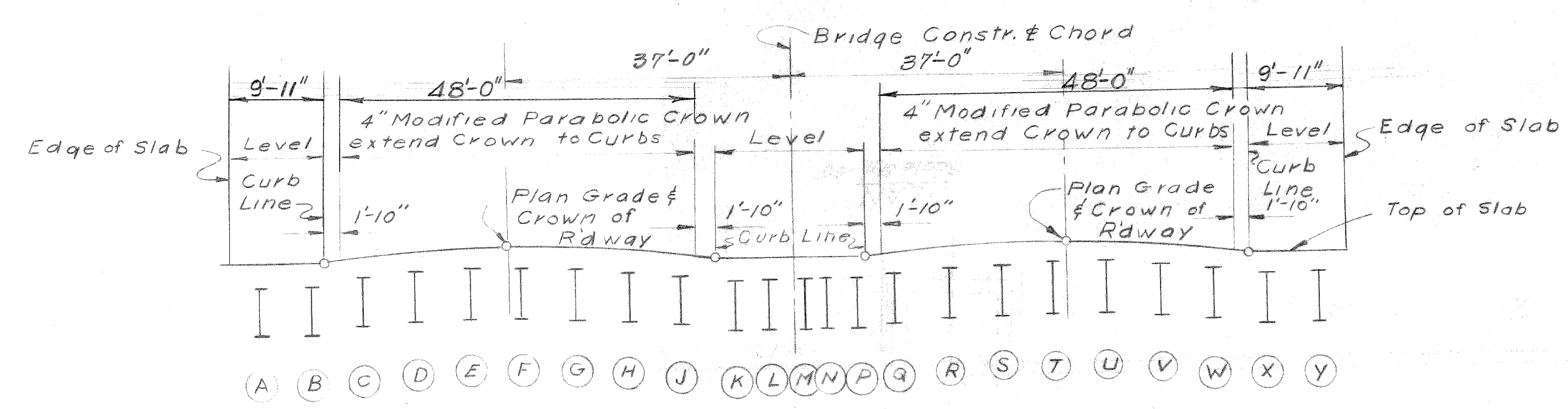
CAMBER ORDINATE h (inches)



PLAN OF SLAB



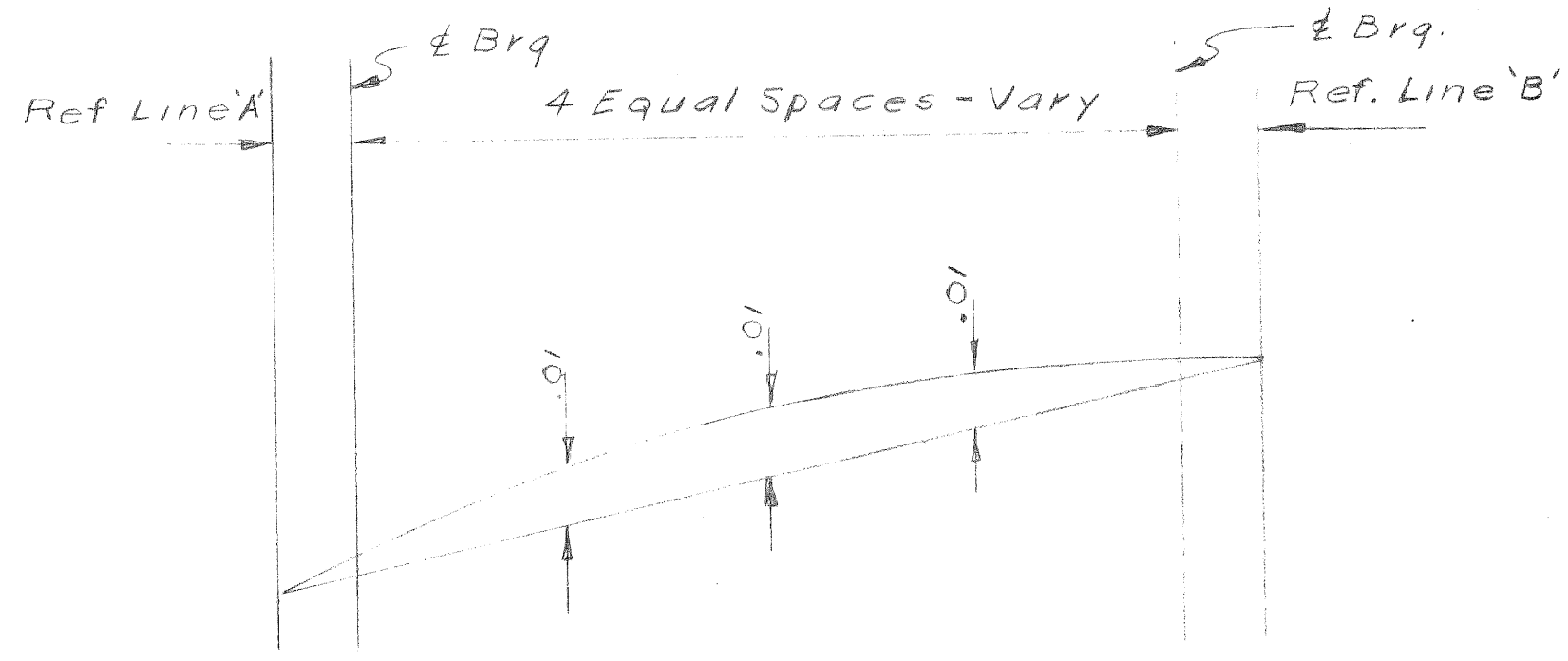
TYPICAL SECTION AT EACH BEAM



SCREED TEMPLATE

Notes:
Dimensions on Screed Template are radial

BEAM	SCREED TEMPLATE ELEV For Case II	
	Line 1-1	Line 2-2
Y	137.71	137.86
X	137.71	137.86
W	137.82	137.97
V	137.94	138.10
U	138.04	138.18
T	138.09	138.23
S	138.03	138.18
R	137.94	138.08
Q	137.82	137.96
P	137.74	137.88
N	137.74	137.88
M	137.75	137.88
L	137.75	137.88
K	137.76	137.89
J	137.85	137.98
H	137.99	138.11
G	138.09	138.21
F	138.16	138.27
E	138.12	138.23
D	138.04	138.15
C	137.93	138.03
B	137.83	137.92
A	137.85	137.93



TOP OF SLAB OFFSETS
Case III

NOTES:

- Use longitudinal Strike-Off Finishing machine in placing slab concrete.
- Elevations and cambers shown include allowances for deflection due to the weight of structural steel, welding shear developers, weight of forms, steel reinforcement, slab concrete, sidewalk and railing.
- The loading cases are as follows:
 - Case I All structural steel erected and no other load applied.
 - Case II Shear developers, forms, and Steel reinforcement in place on structural steel and no other load applied.
 - Case III Shear developers, steel reinforcement, and slab concrete in place on structural steel and no other load applied.

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

APPROVED: *J.C. Coit*
STRUCTURAL ENGINEER

JOB No.
PW 990123

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

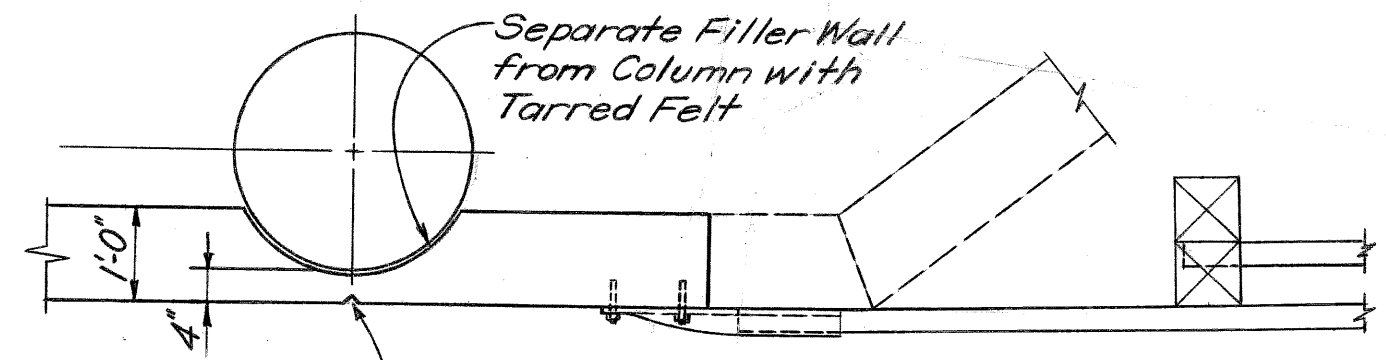
SUPERSTRUCTURE DETAILS

CITY OF DETROIT

REVISIONS			
NO.	DESCRIPTION	DATE	BY

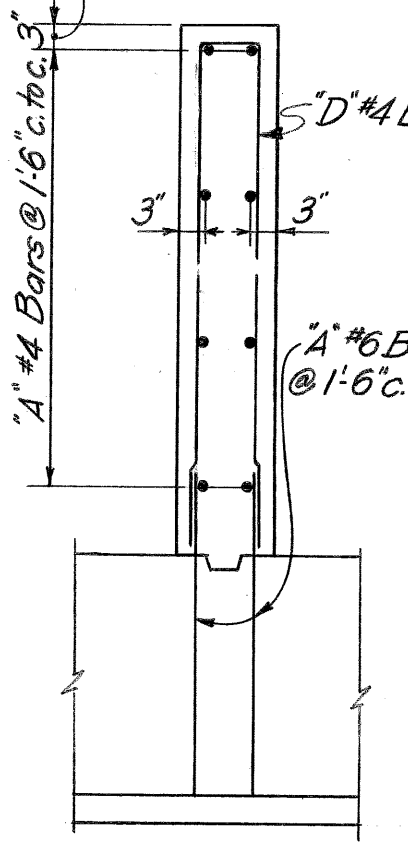
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DRAWN BY	D.J.S.	11-67
CHECKED BY		12-67
SHEET 22 OF 23		

S 40 of 82123 K

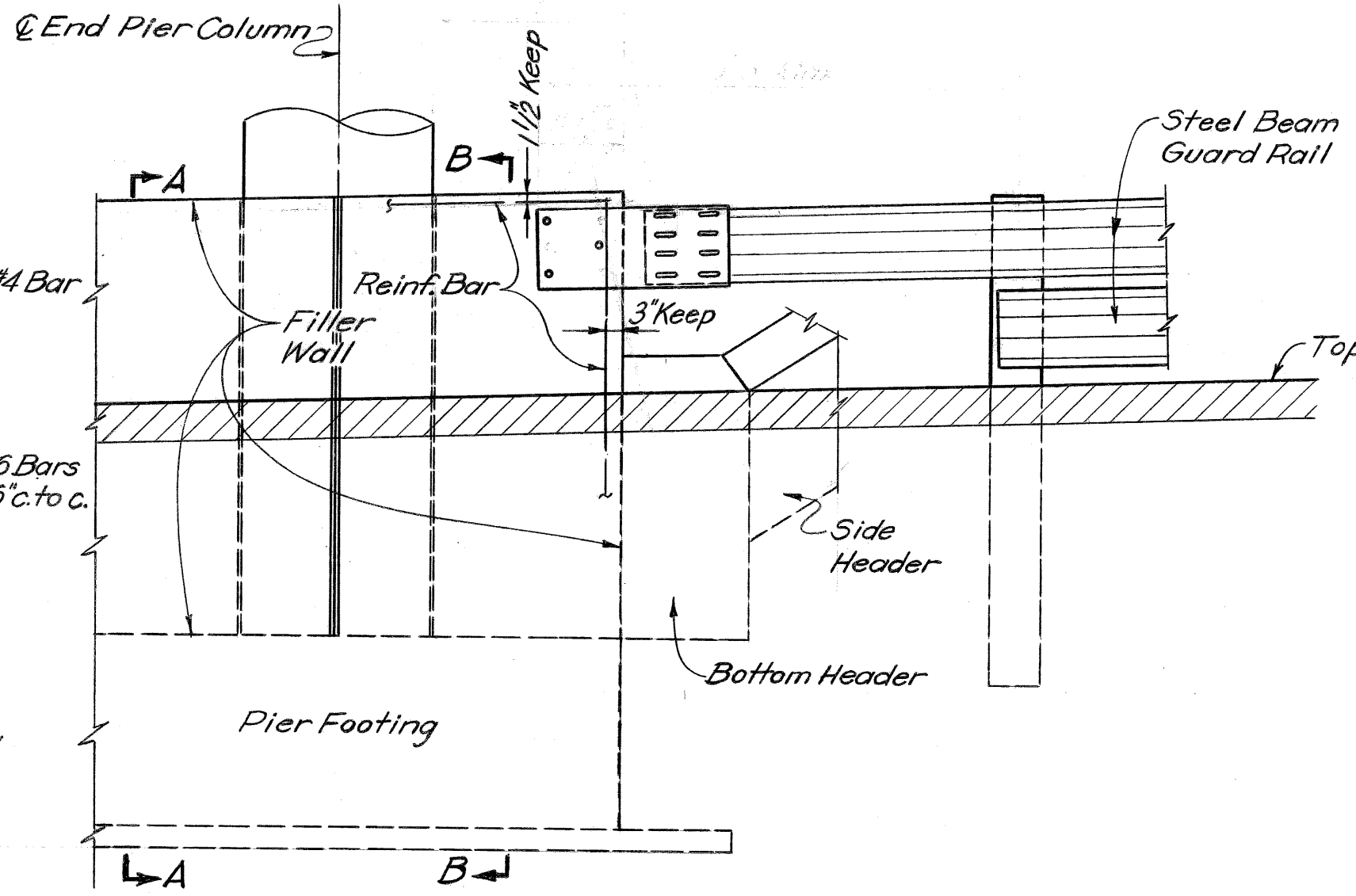


PLAN

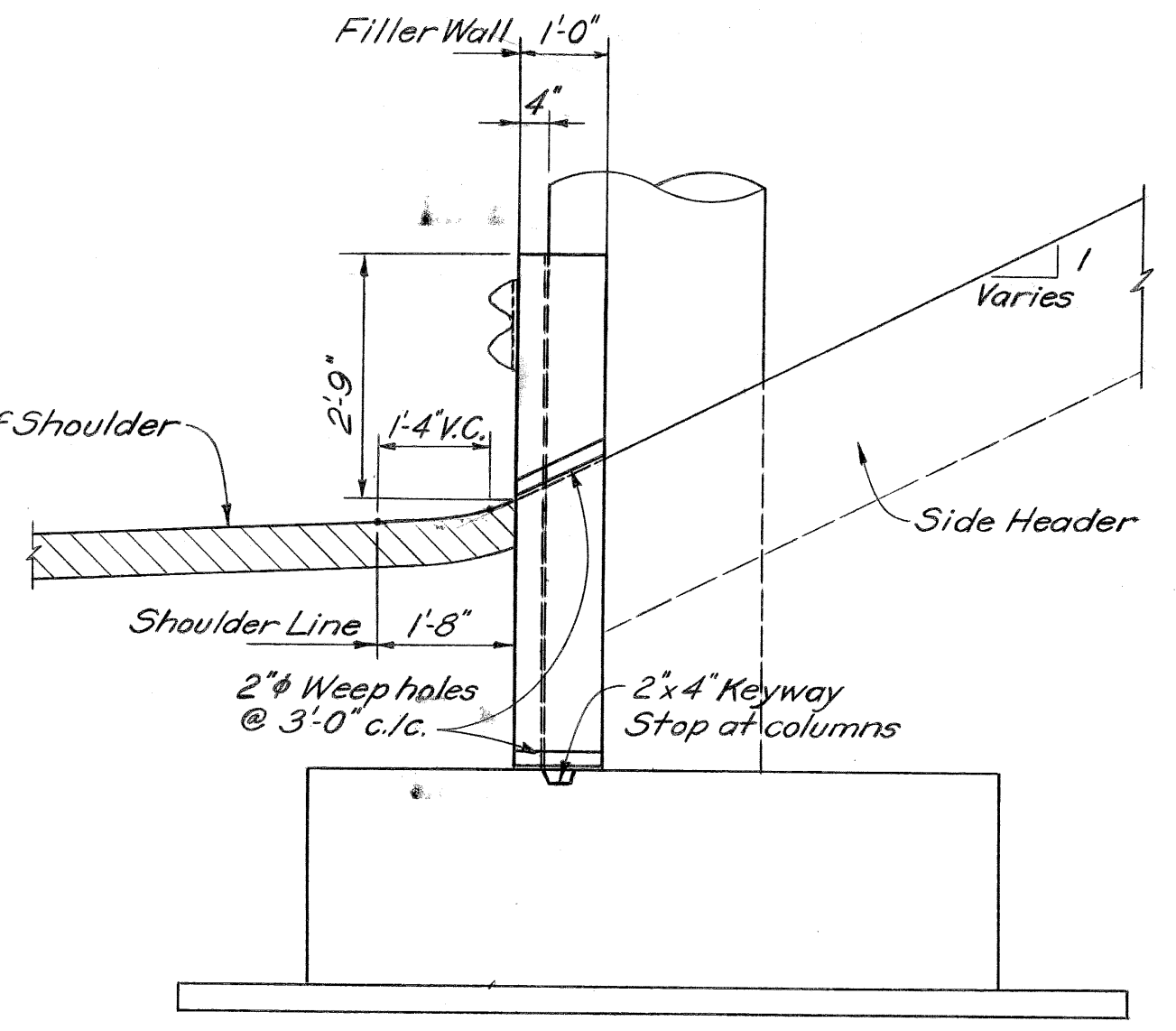
Typ, except at end where guard rail is attached (See Elevation)



SECTION A-A

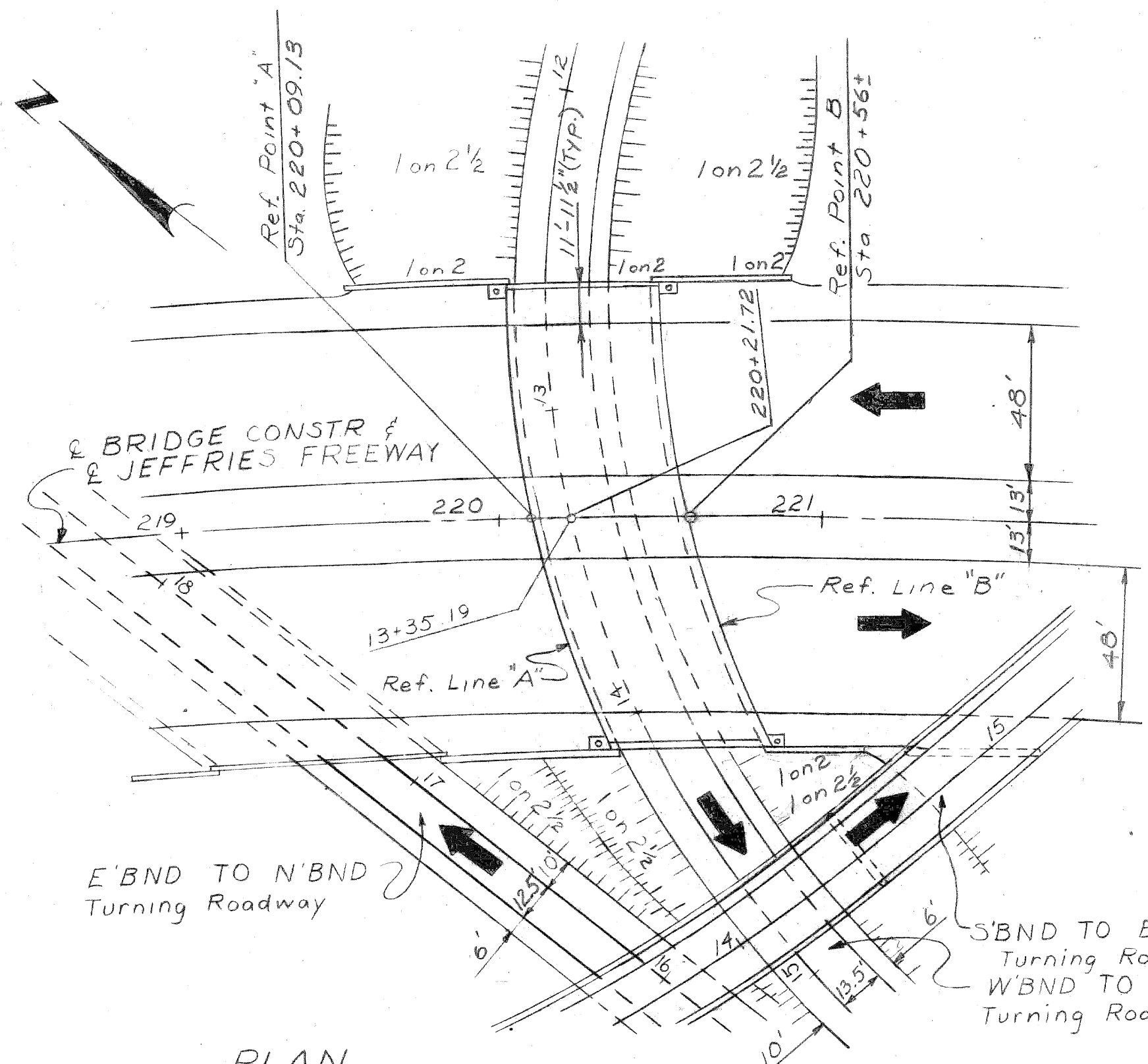


ELEVATION



SECTION B-B

FILLER WALL & GUARD RAIL ANCHORAGE



W' BND TO S' BND TURNING ROADWAY

CURVE DATA IWS.
 $\Delta = 155^\circ - 31' - 12''$
 $D = 18 - 20' - 00.47'$
 $R = 312.500'$
 $T = 1440.500'$
 $L = 848.230'$
 $E = 1161.507'$
 $PC = 8 + 81.358$
 $PI = 23 + 21.858$
 $PT = 17 + 29.588$

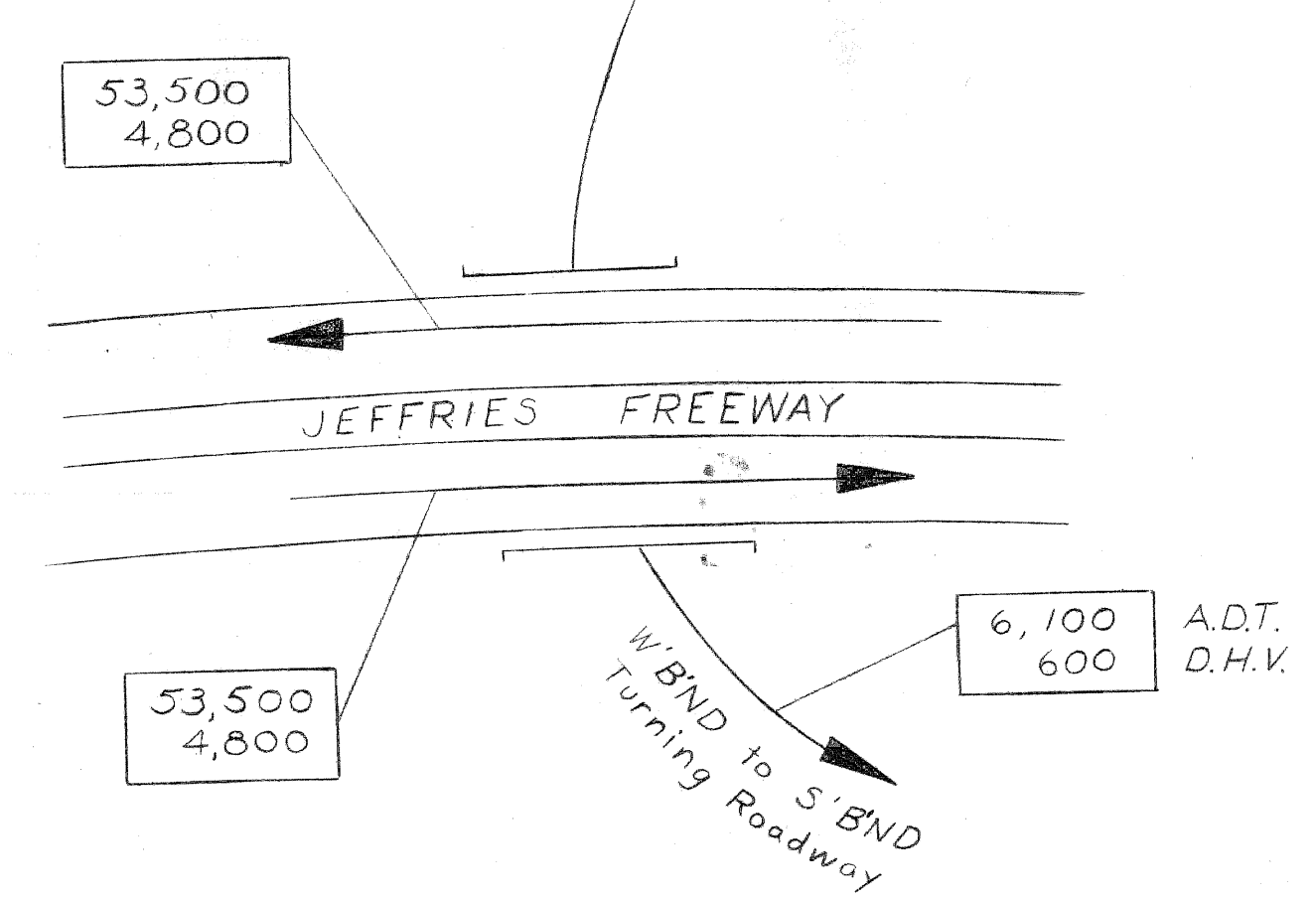
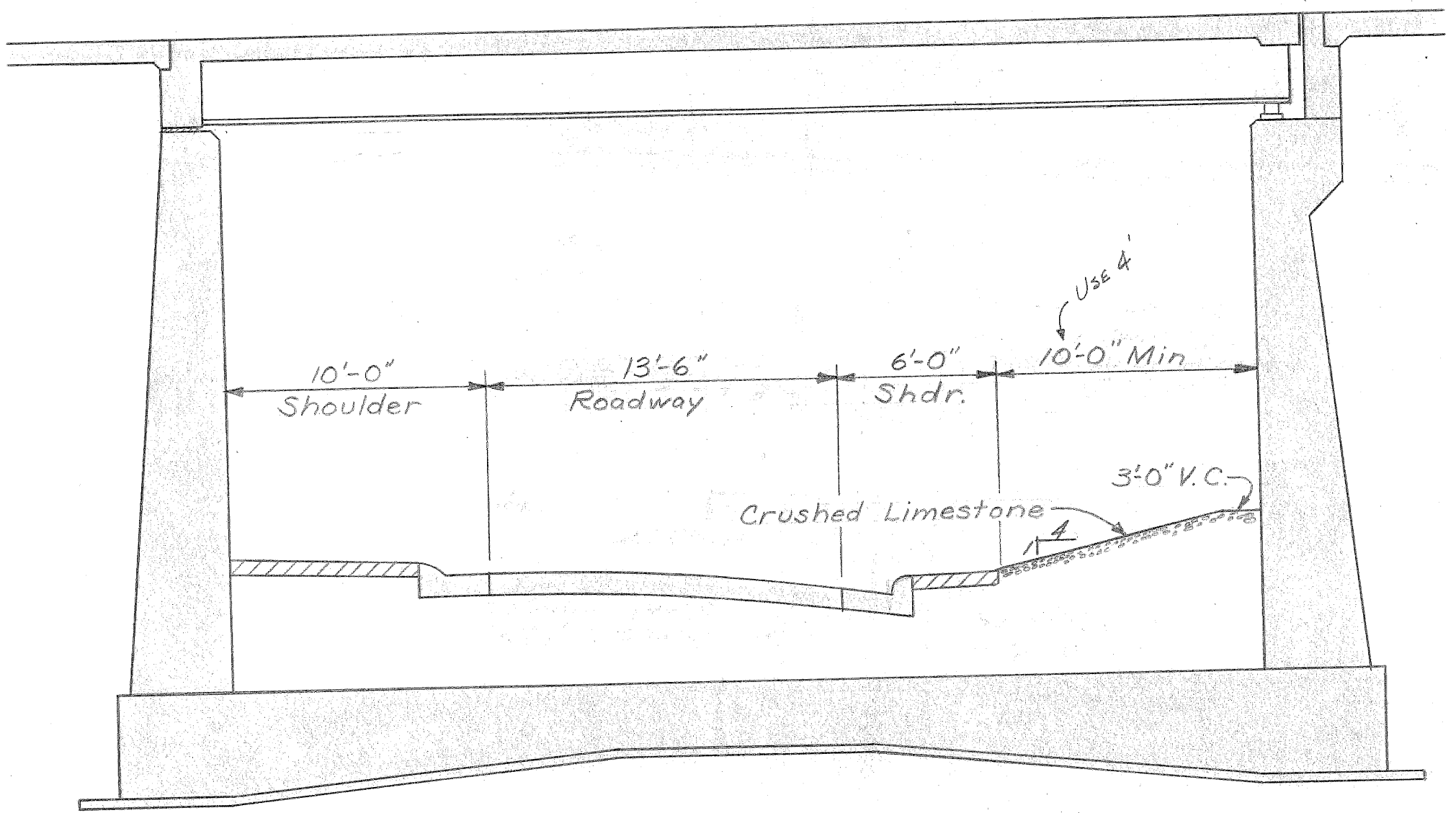
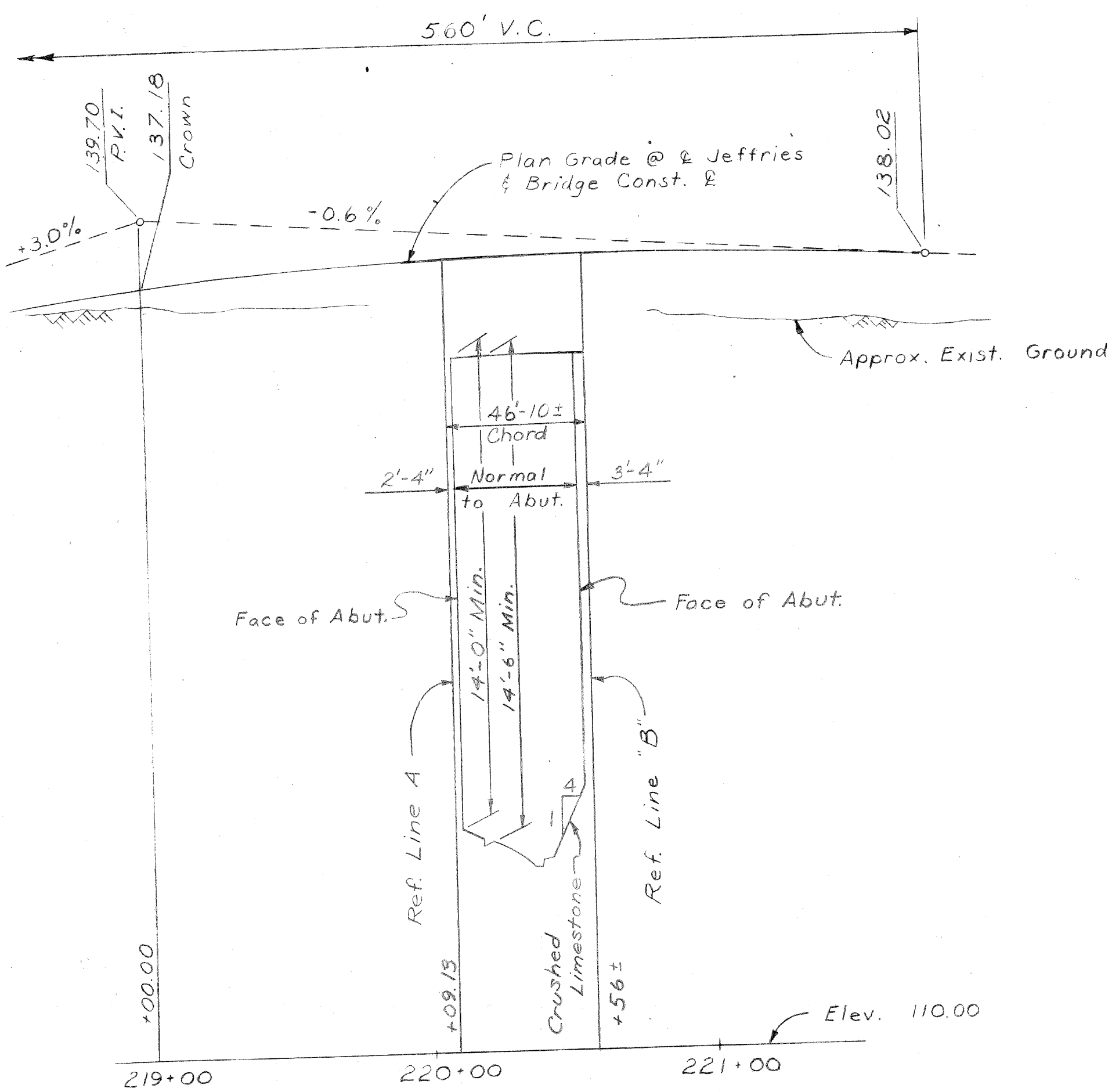
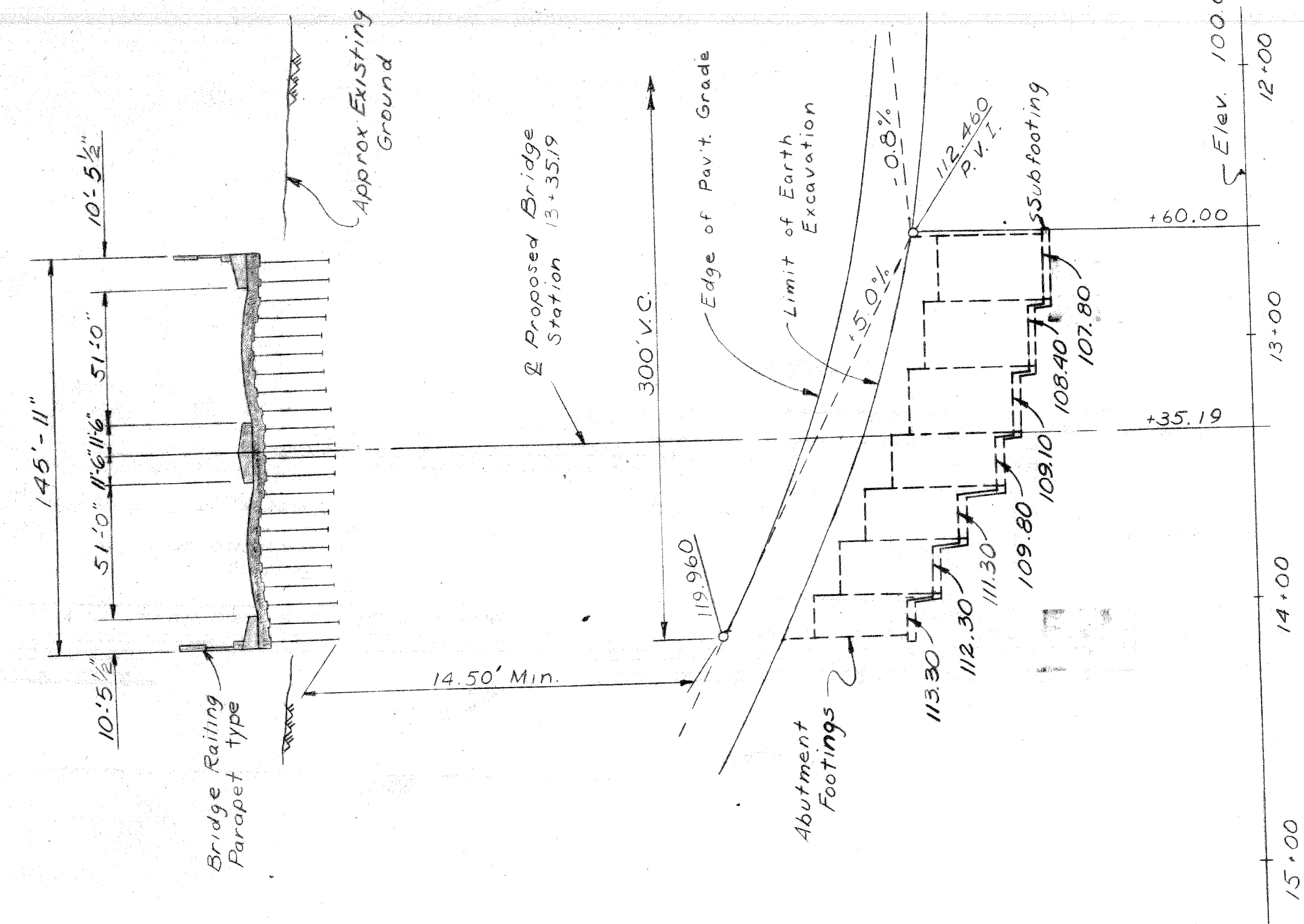
show Rate of Super.

JEFFRIES FREEWAY

CURVE DATA 9J
 $\Delta = 44^\circ - 37' - 30''$
 $D = 1' - 30' - 00''$
 $R = 3819.719'$
 $T = 1567.555'$
 $L = 2975.000'$
 $E = 309.140'$
 $PC = 201 + 55.000$
 $PI = 217 + 22.555$
 $PT = 231 + 30.000$

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 McGraw Elev. 143.78
- P. B.M. = Denotes Permanent Bench Marks
- C. B.M. = Denotes Construction Bench Marks



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

TRAFFIC COUNT
Estimated Traffic 1990

PRELIMINARY PLAN "A"
DATED: OCT. 14, 1966

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(2)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT

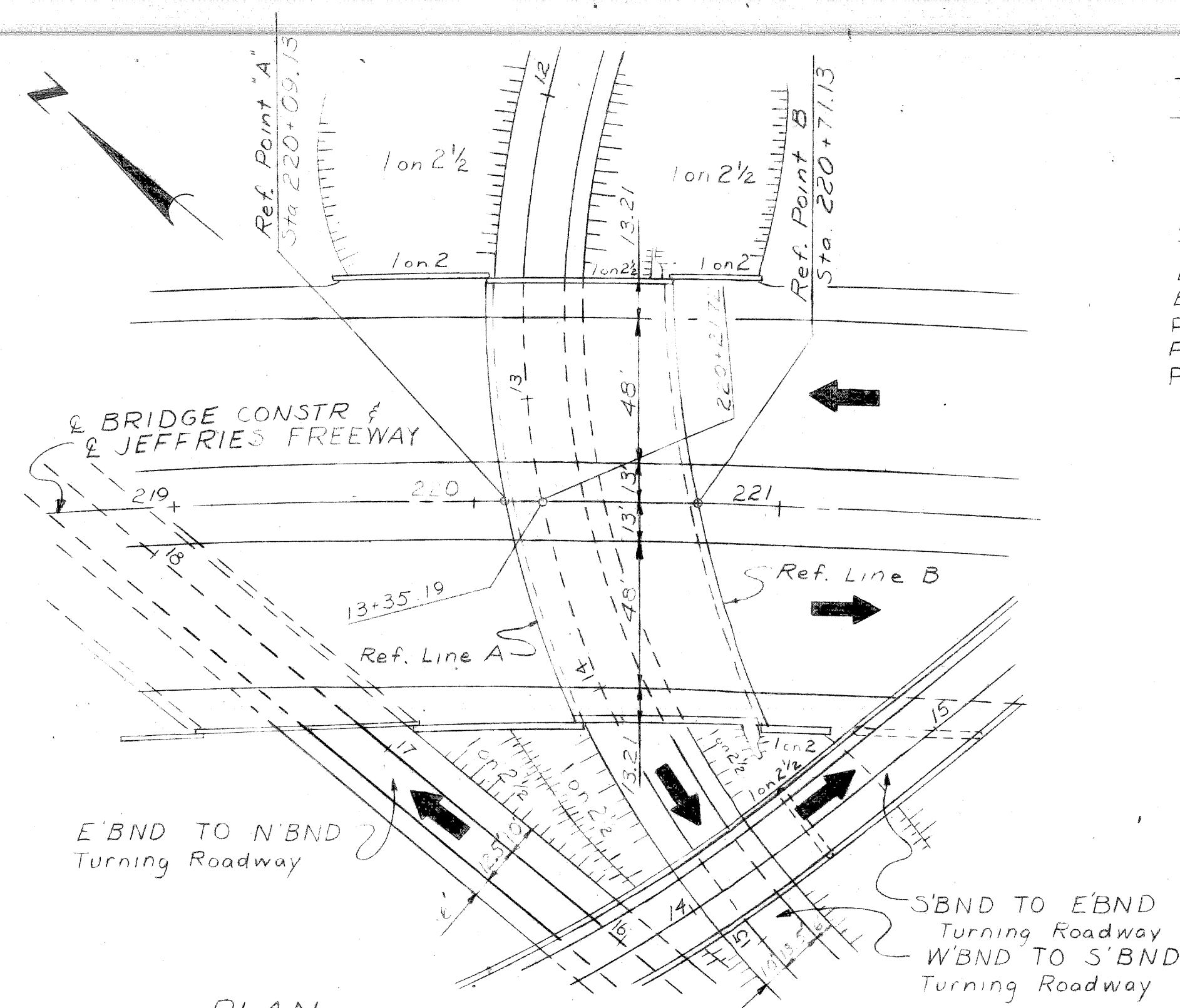
GENERAL DRAWING

APPROVED: _____
DESIGN SUPERVISING ENGINEER

APPROVED: _____
ENGINEER OF DESIGN - CONSULTANTS

SQUAD BOSS		
DRAWN BY	R G	7-21-66
TRACED BY		
CHECKED BY	McGuire	9/66
SHEET	5	OF 6

S40 of 82123K



PLAN
Scale: 1" = 40'-0"

**WBND TO S'BND
TURNING ROADWAY**

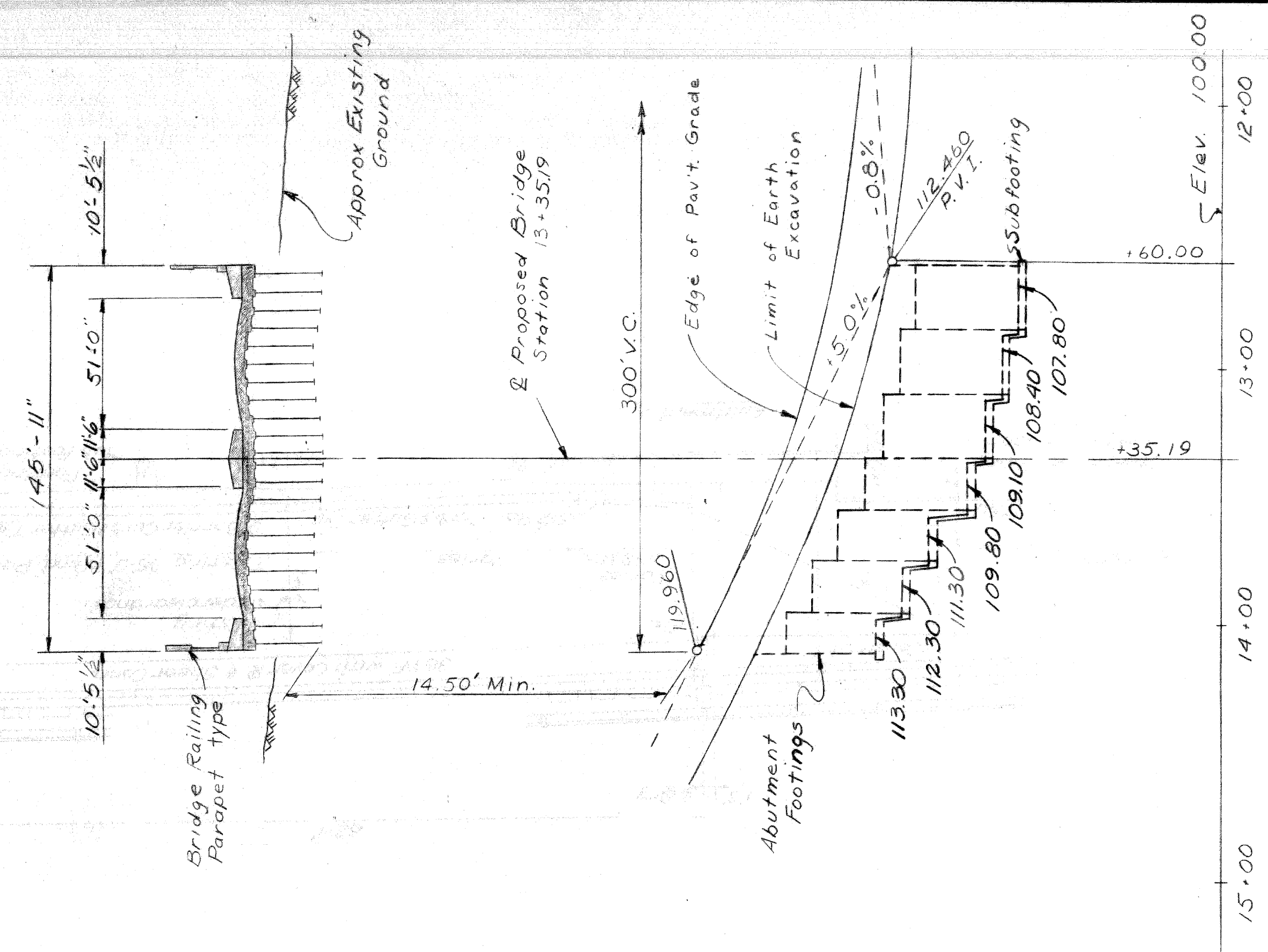
CURVE DATA IWS.
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 $R = 312.500'$
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**& JEFFRIES
FREEWAY**

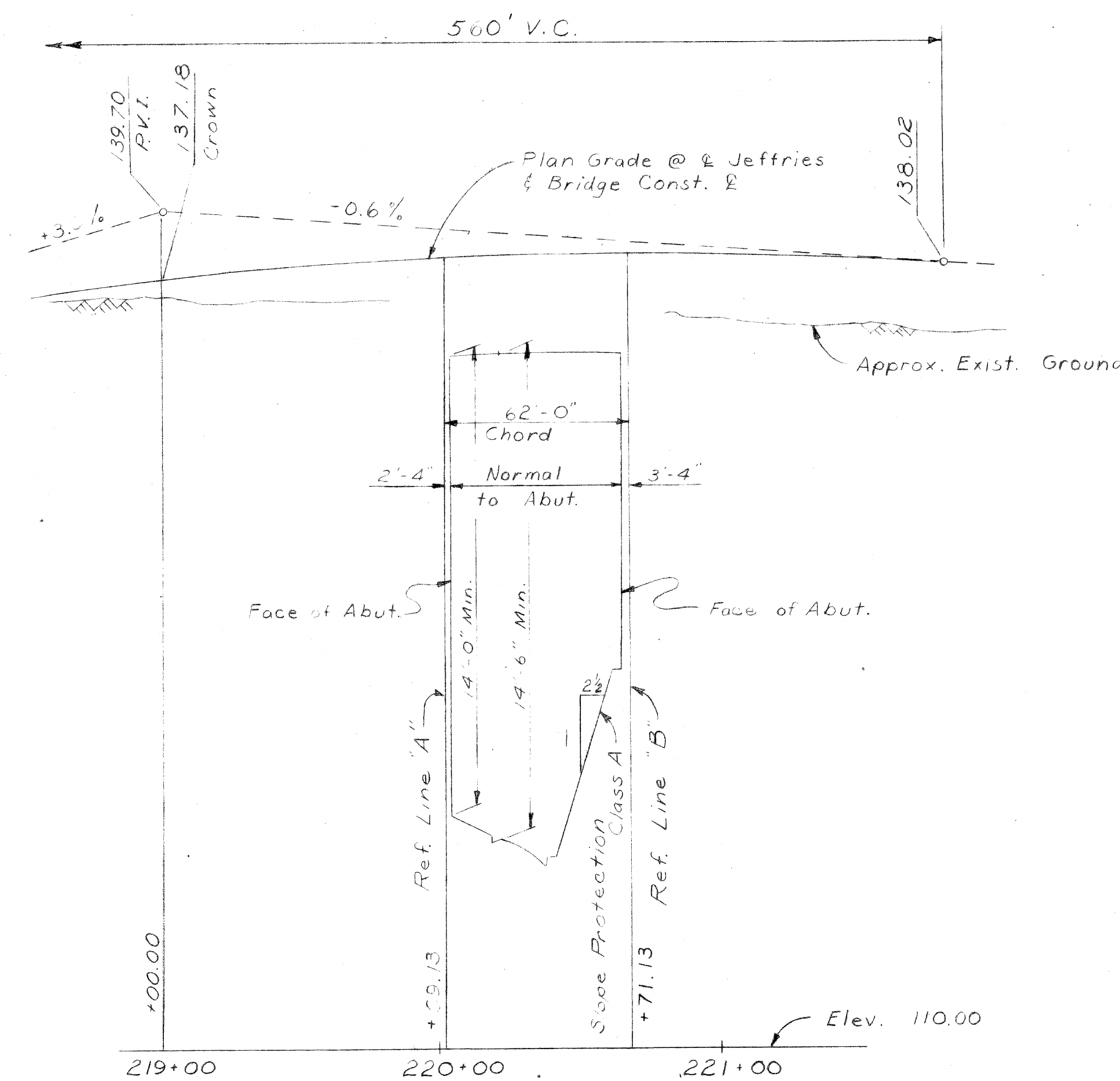
CURVE DATA 9J
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BENCH MARKS

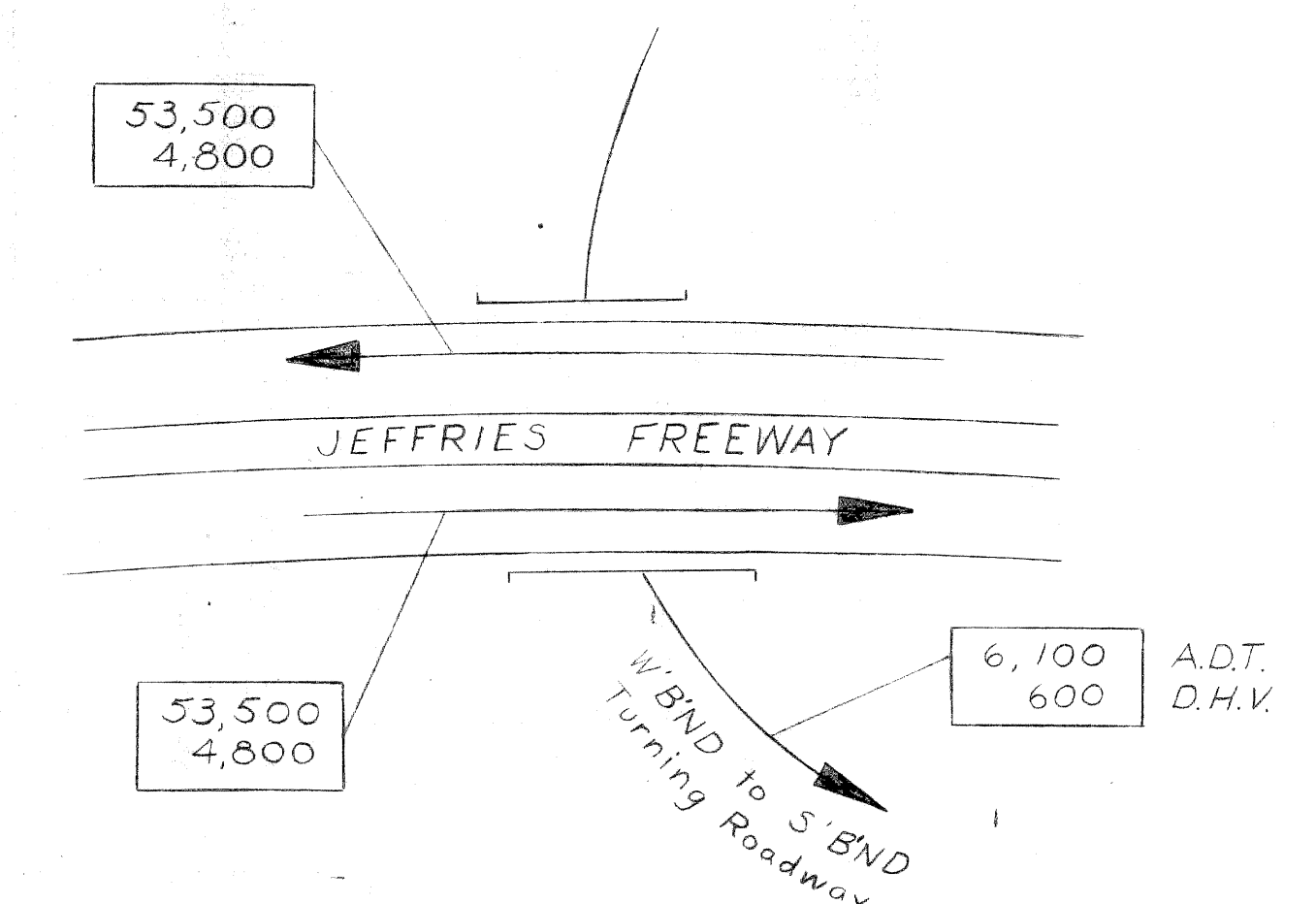
- P.B.M. 21-253 City of Detroit Monument N.E. Corner 23rd. and Stanley Elev. 136.07
- C.B.M. 26 Arrow on Hydrant N.E. Corner Merrick and Tillman Elev. 134.43
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- C.B.M. 62 Arrow on Hydrant E. Side of Williams 50' S. of Mc Grow Elev. 143.78
- P.B.M. = Denotes Permanent Bench Marks
- C.B.M. = Denotes Construction Bench Marks



PROFILE ALONG TURNING ROADWAY
Scale: Horz. 1" = 40'-0" Vert. 1" = 4'-0"



PROFILE ALONG BRIDGE
Scale: Horz. 1" = 40'-0" Vert. 1" = 4'-0"



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
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____
STRUCTURAL ENGINEER

JOB No.
PW 990(2)

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

**JEFFRIES-FREED INTERCHANGE
JEFFRIES FREEWAY CROSSING THE
WEST BND. TO SOUTH BND. TURNING ROADWAY IN DETROIT**

GENERAL DRAWING

CITY OF DETROIT

SQUAD BOSS _____
DRAWN BY R.G. 7-24-66
TRACED BY _____
CHECKED BY McGuire 9/26
SHEET 3 OF 6

APPROVED _____
DESIGN SUPERVISING ENGINEER

APPROVED _____
ENGINEER OF DESIGN - CONSULTANTS

S40 of 82123K