

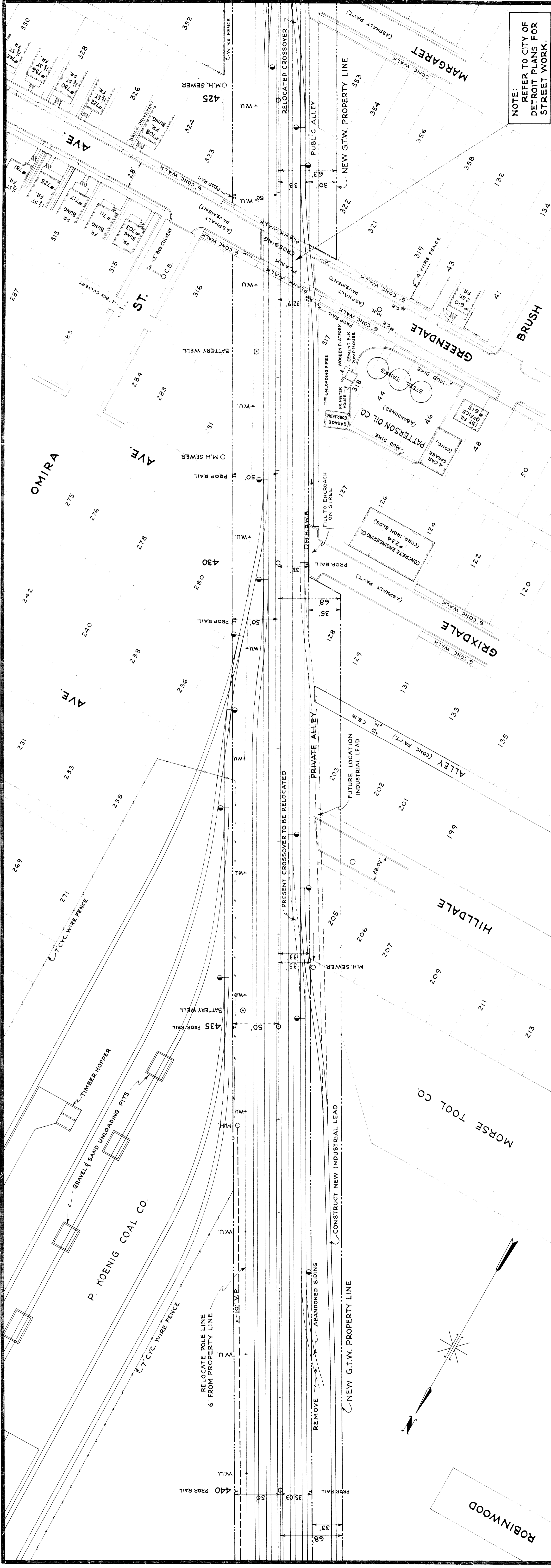
EXHIBIT "D"

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEER'S OFFICE
 BUREAU OF PUBLIC STRUCTURES
 SEVEN MILE RD.
 G.T.W.R.R.
 GRADE SEPARATION
 SCALE AS INDICATED JULY 1937
 SURVEY B. DMS 792 62-1131

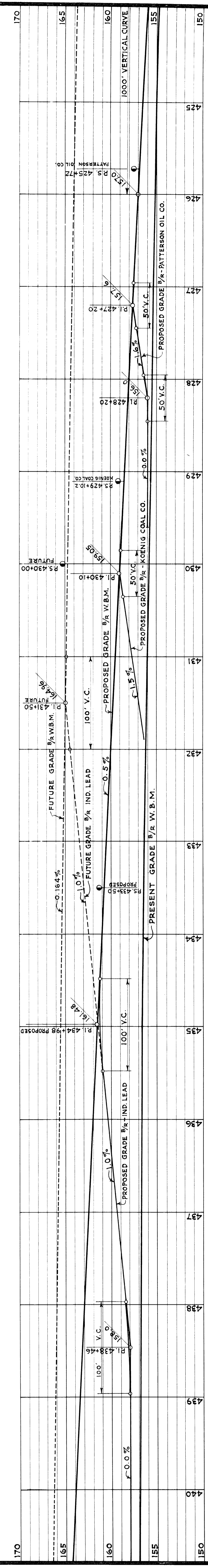
APPROVED *W.H.S. Smith* CHIEF DRAFTERMAN 8-27-37
 APPROVED *A.J. High* ENGINEER OF BRIDGE DESIGN 8-30-37
 ELEV. 1930

PROFILE
 ON E OF SEVEN MILE RD.
 SCALE 1"=40' VERT.

XI of 82-22-20 SHEET 2 OF 21



NOTE:
REFER TO CITY OF
DETROIT PLANS FOR
STREET WORK.

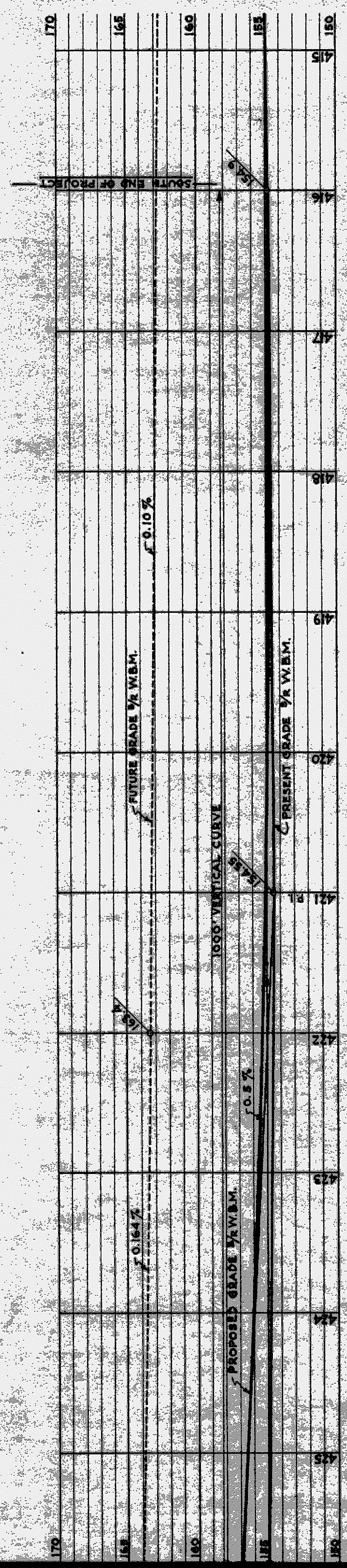
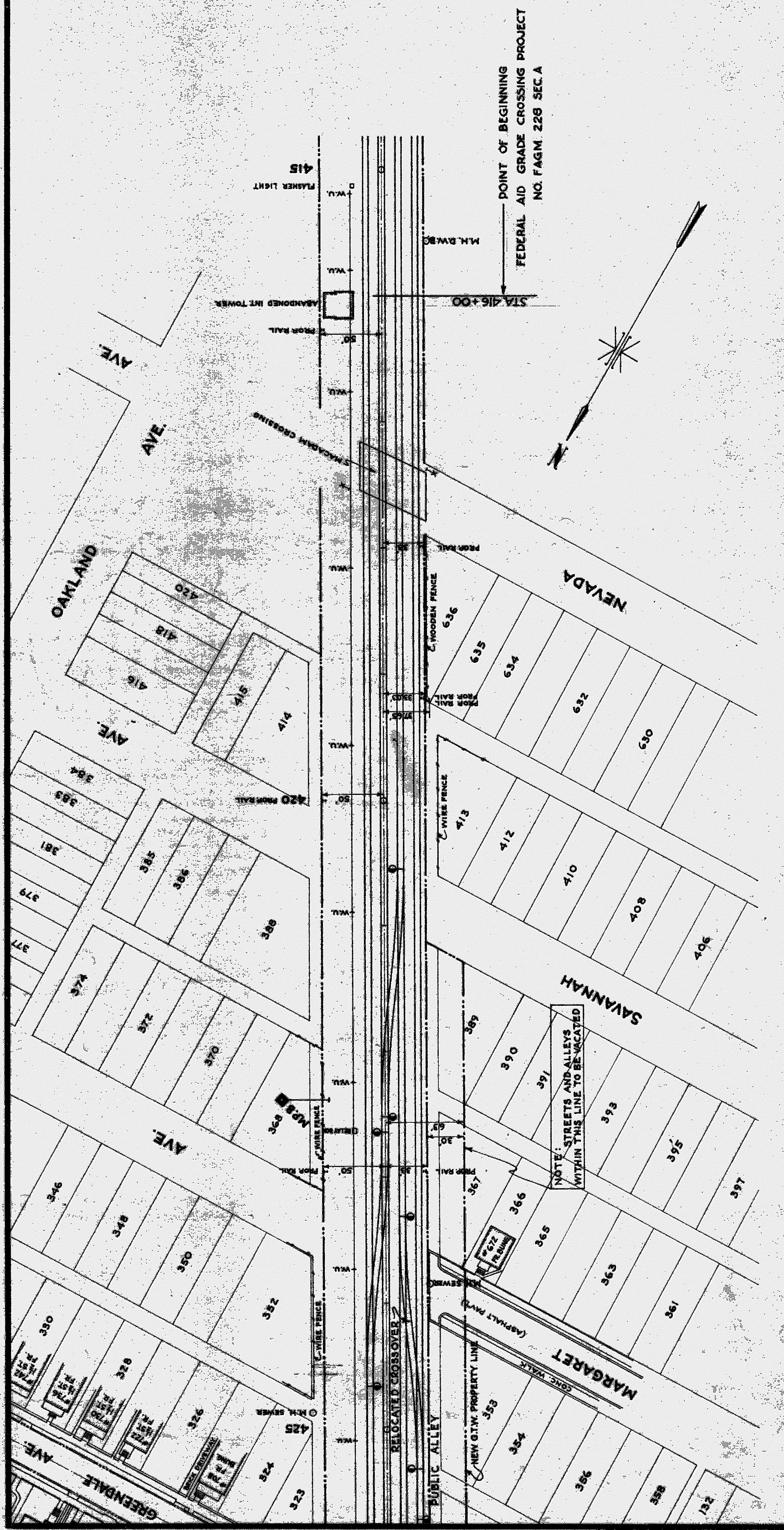


MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
SEC. 1 T. 15. R. 11 E. WAYNE CO. SEVEN MILE RD.
BRIDGE FILE NO. XI OF 82-22-20 ROAD
CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT
RAILWAY TRACK PLAN AND PROFILE
STATION 425+00 TO STATION 440+00
SCALE: VERTICAL 1 IN. = 5 FT.
HORIZONTAL 1 IN. = 50 FT.

DESIGNED BY	T. H. J.	DATE	8-8-37
DRAWN BY	L. W. S.	DATE	7-23-37
CHECKED BY	R. A. W.	DATE	5-14-37
APPROVED	CHIEF ENGINEER	DATE	8-8-37
APPROVED	ENGINEER OF BRIDGE DESIGN	DATE	

NO.	REVISIONS	DATE	BY

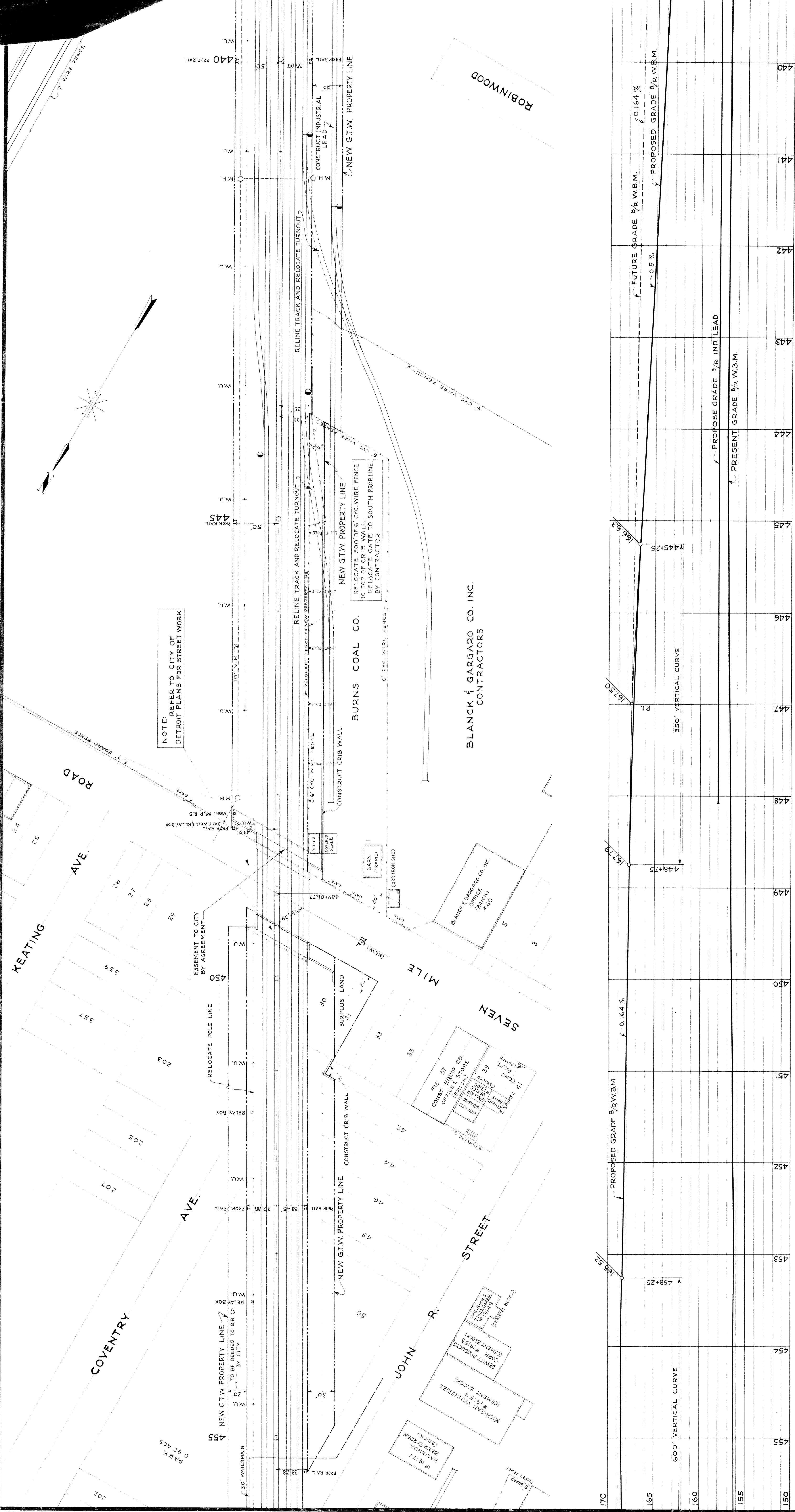
XI OF 82-22-20
SHEET 21



MICHIGAN STATE HIGHWAY DEPARTMENT
 MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 12. R. 11 E. TWP. WAYNE CO.
 BRIDGE FILE NO. 81 OF 82-22-20 ROAD 3 1/2 MI. S. 700 Y. S. T. AKO SEVEN MILE RD.
 CROSSING GRAND TRUNK WESTERN R.R. VIADUCT IN CITY OF DETROIT
RAILWAY TRACK PLAN AND PROFILE
 STATION 415+00 TO STATION 425+00
 SCALE: VERTICAL 1" = 5 FT.
 HORIZONTAL 1" = 80 FT.
 APPROVED: *W. J. S. [Signature]* 8-27-37
 APPROVED: *[Signature]* 8-30-37
 ENGINEER OF BRIDGE DEPARTMENT

NO.	REVISIONS	DESCRIPTION	DATE	BY

XI of 82-22-20



MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER—COMMISSIONER
 SEC. 1 T. 1 S. R. 11 E. TWP. WAYNE CO.
 BRIDGE FILE NO. XI OF 82-22-20 ROADS JOHN R. ST. AND SEVEN MILE RD.
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

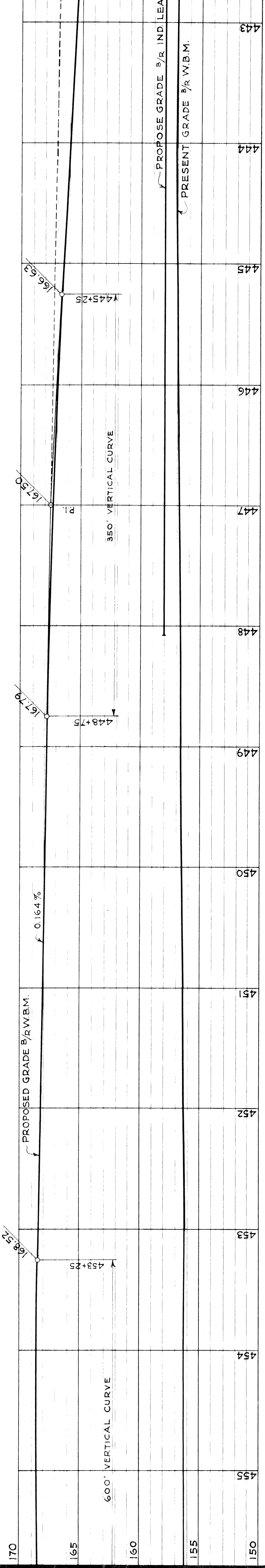
RAILWAY TRACK PLAN AND PROFILE
 STATION 440+00 TO STATION 455+00
 SCALE: VERTICAL 1 IN. = 5 FT.
 HORIZONTAL 1 IN. = 50 FT.

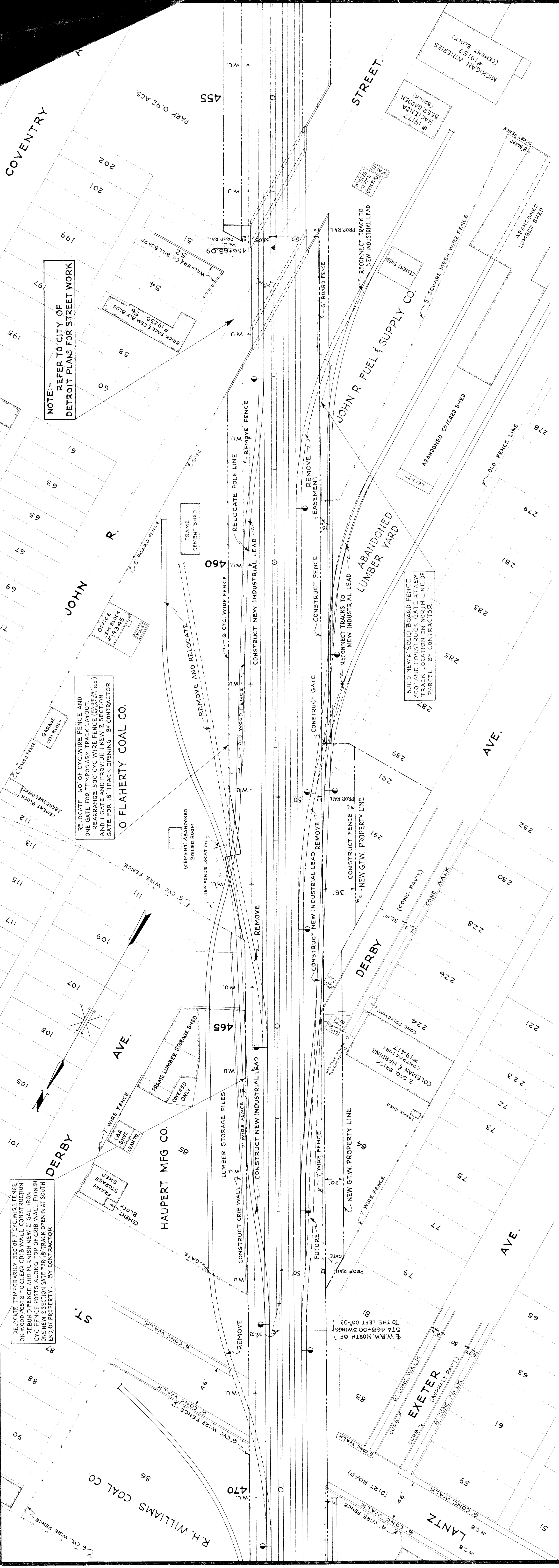
APPROVED: _____ CHIEF ENGINEER
 APPROVED: _____ ENGINEER OF BRIDGE DESIGN

REVISIONS

NO.	DESCRIPTION	DATE	BY

P. A. W. 57-14-37
 H. S. F. 57-14-37
 L. W. S. 7-30-37
 T. H. J. 8-8-37
 SHEET OF





NOTE: REFER TO CITY OF DETROIT PLANS FOR STREET WORK

RELOCATE 160 FT OF CYC WIRE FENCE AND ONE GATE FOR TEMPORARY TRACK LAYOUT. REARRANGE 500' CYC WIRE FENCE (40' 1" WIDE) AND 1 GATE AND PROVIDE 1 NEW 2 SECTION GATE FOR 18' TRACK OPENING. BY CONTRACTOR.

REMOVE TEMPORARILY 300' OF CYC WIRE FENCE ON WOOD POSTS TO CLEAR CRIB WALL CONSTRUCTION. REBUILD FENCE AND FURNISH NEW 2 GAL. IRON CYC FENCE POSTS ALONG TOP OF CRIB WALL. FURNISH ONE NEW 2 SECTION GATE FOR 18' TRACK OPENING AT SOUTH END OF PROPERTY. BY CONTRACTOR.

BUILD NEW 6' SOLID BOARD FENCE 300' AND CONSTRUCT GATE AT NEW TRACK LOCATION ON NORTH LINE OF PARCEL BY CONTRACTOR.

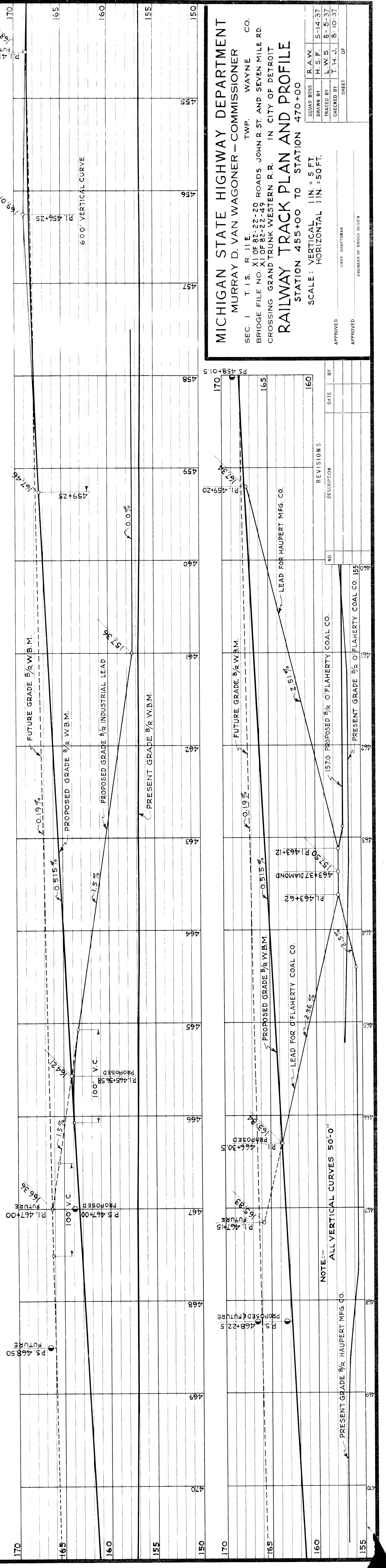
MICHIGAN STATE HIGHWAY DEPARTMENT
 MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 15. R. 11 E. WAYNE CO.
 BRIDGE FILE NO. XI OF 82-22-20 ROADS JOHN R. ST. AND SEVEN MILE RD.
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

RAILWAY TRACK PLAN AND PROFILE
 STATION 455+00 TO STATION 470+00

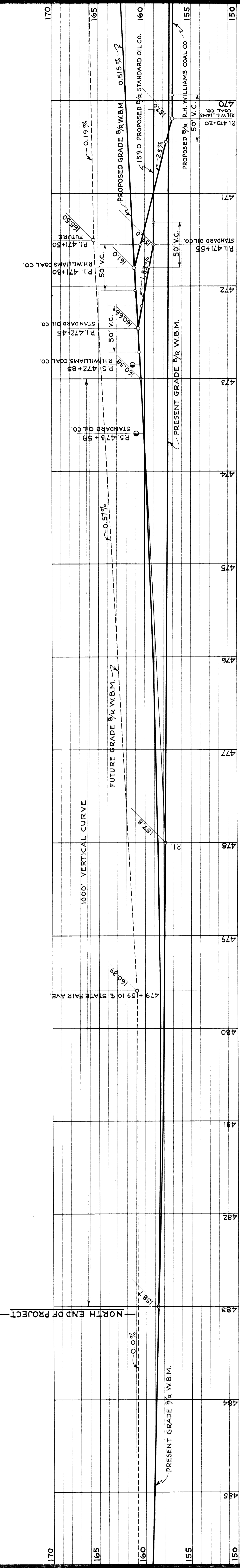
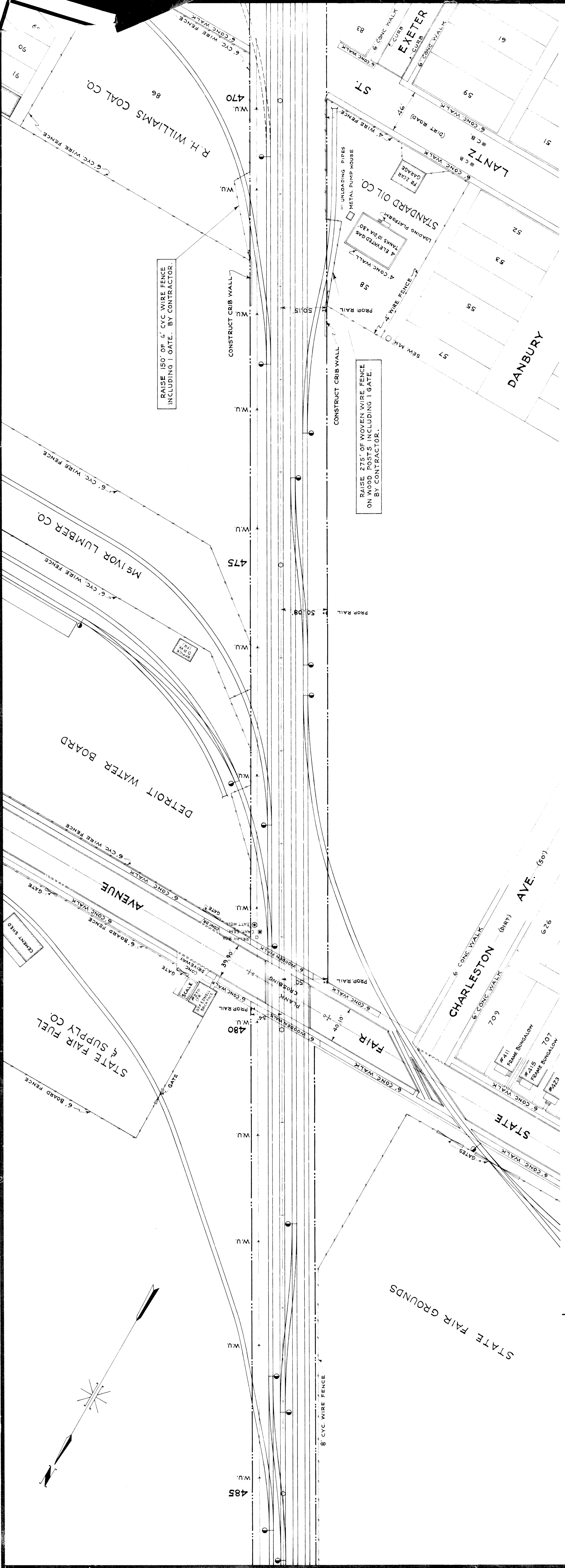
SCALE: VERTICAL 1" = 5 FT.
 HORIZONTAL 1" = 50 FT.

APPROVED: [Signature] CHIEF DRAFTSMAN
 APPROVED: [Signature] ENGINEER OF BRIDGE DESIGN

SUBMIT	R.A.W.	5-14-37
DRAWN BY	H.S.F.	6-5-37
TRACED BY	L.W.S.	8-10-37
CHECKED BY	T.H.J.	8-10-37
SHEET	OF	



NOTE: ALL VERTICAL CURVES 50'-0"



MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER

SEC. 1 T. 15. R. 11 E. TWP. WAYNE CO.
 BRIDGE FILE NO. X1 OF 82-22-20 ROADS JOHN R. ST. AND SEVEN MILE RD.
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

RAILWAY TRACK PLAN AND PROFILE
 STATION 470+00 TO STATION 485+00

SCALE: VERTICAL 1 IN. = 5 FT.
 HORIZONTAL 1 IN. = 50 FT.

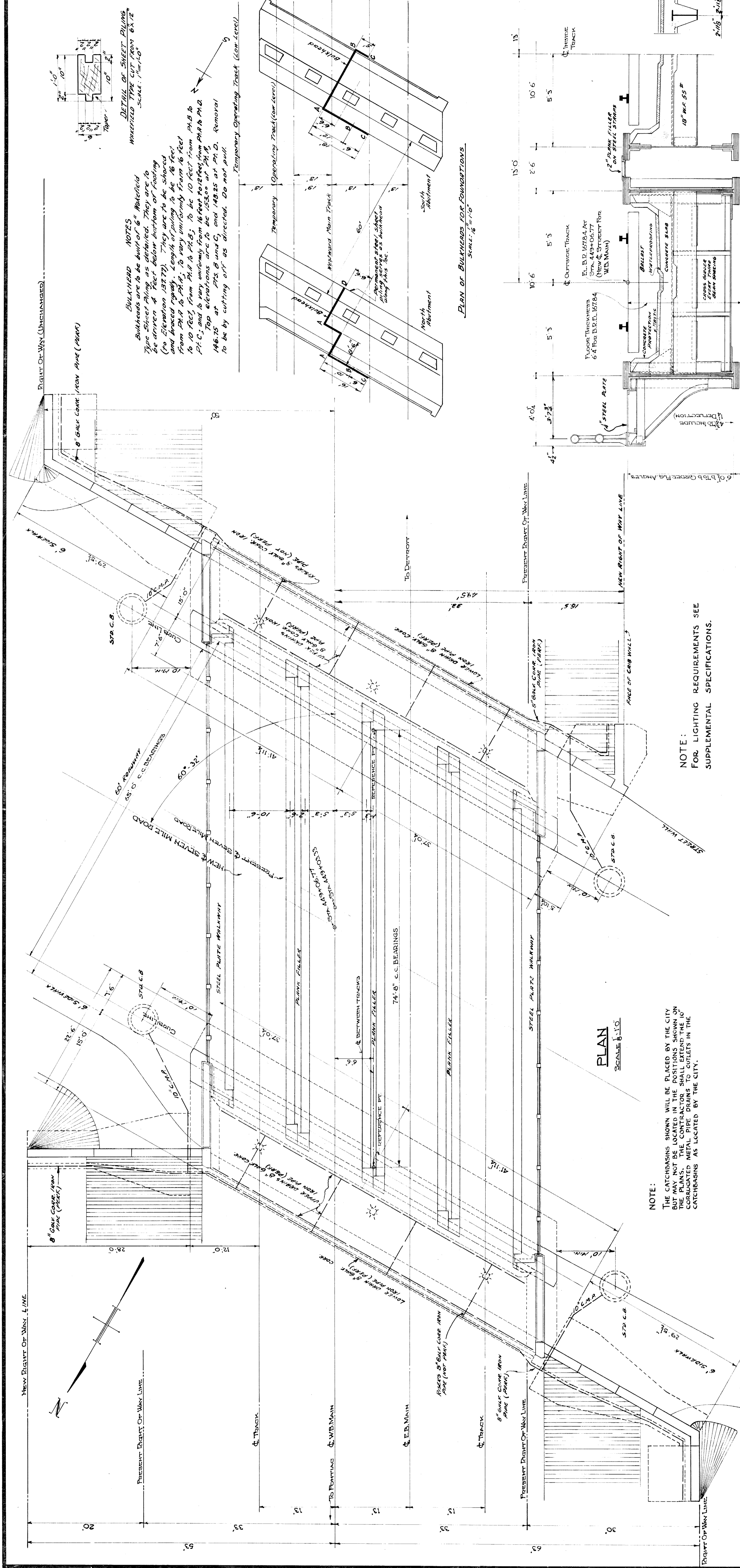
APPROVED: _____ CHIEF DRAFTSMAN
 APPROVED: _____ ENGINEER OF BRIDGE DESIGN

SHEET _____ OF _____

REVISIONS

NO.	DESCRIPTION	DATE	BY

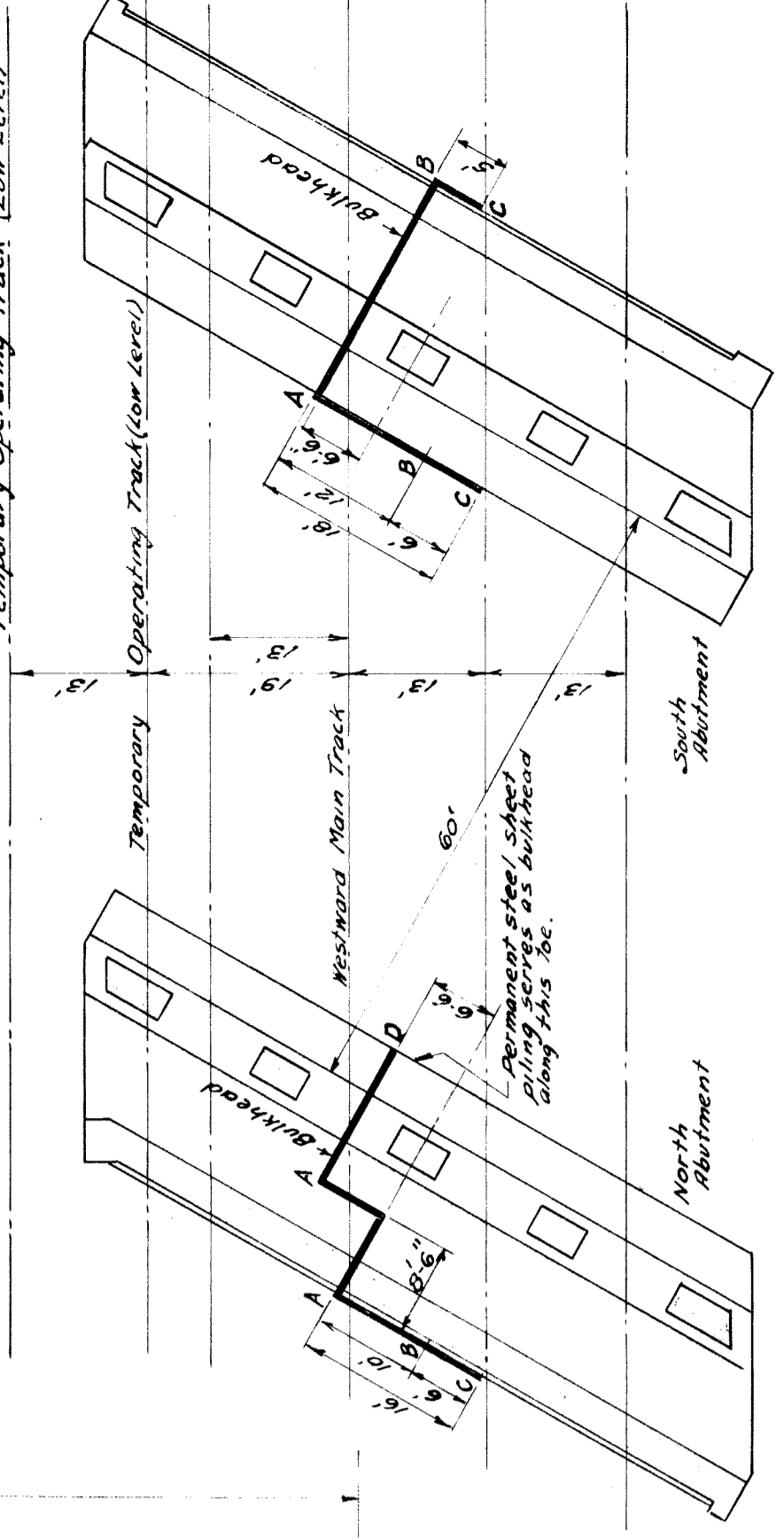
DRAWN BY: H.S.F. 5-14-37
 TRACED BY: L.W.S. 8-6-37
 CHECKED BY: T.H.J. 8-10-37
 SQUARE BOSS: R.A.W.
 DRAWN BY: H.S.F. 5-14-37
 TRACED BY: L.W.S. 8-6-37
 CHECKED BY: T.H.J. 8-10-37



BULKHEAD NOTES
 Bulkheads are to be built of 8" Whitefield Type Sheet Piling, as detailed. They are to be driven 4 feet below bottom of footing (no elevation shown). They are to be spaced and braced rigidly. Length of piling to be 16 feet from P.A. to P.A., to vary uniformly from 16 feet to 10 feet from P.A. to P.A.; to be 10 feet from P.A. to P.A.; and to vary uniformly from 16 feet to 10 feet from P.A. to P.A. Top elevations are to be 153.00 at P.A., 146.15 at P.S. B and C, and 148.25 at P.A. D. Removal to be by cutting out as directed. Do not pull.

DETAIL OF SHEET PILING
 WHITEFIELD TYPE CUT FROM 6X12
 SCALE: 1/4"=1'-0"

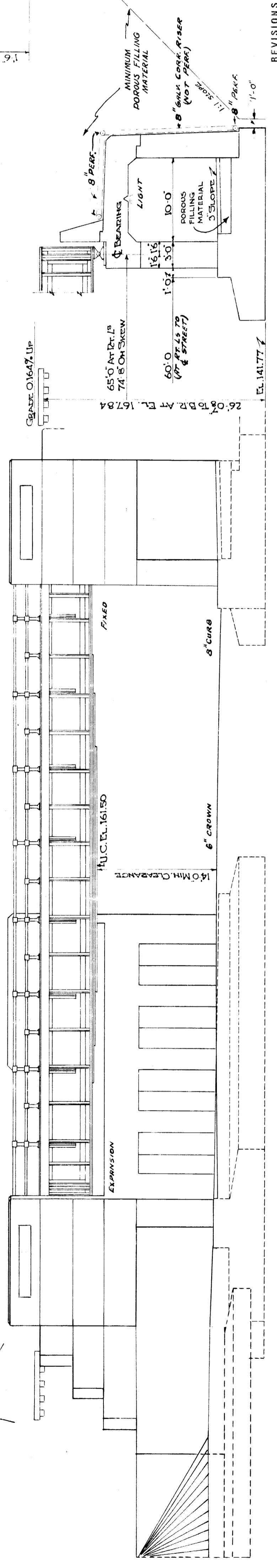
PLAN OF BULKHEADS FOR FOUNDATIONS
 SCALE: 1/4"=1'-0"



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

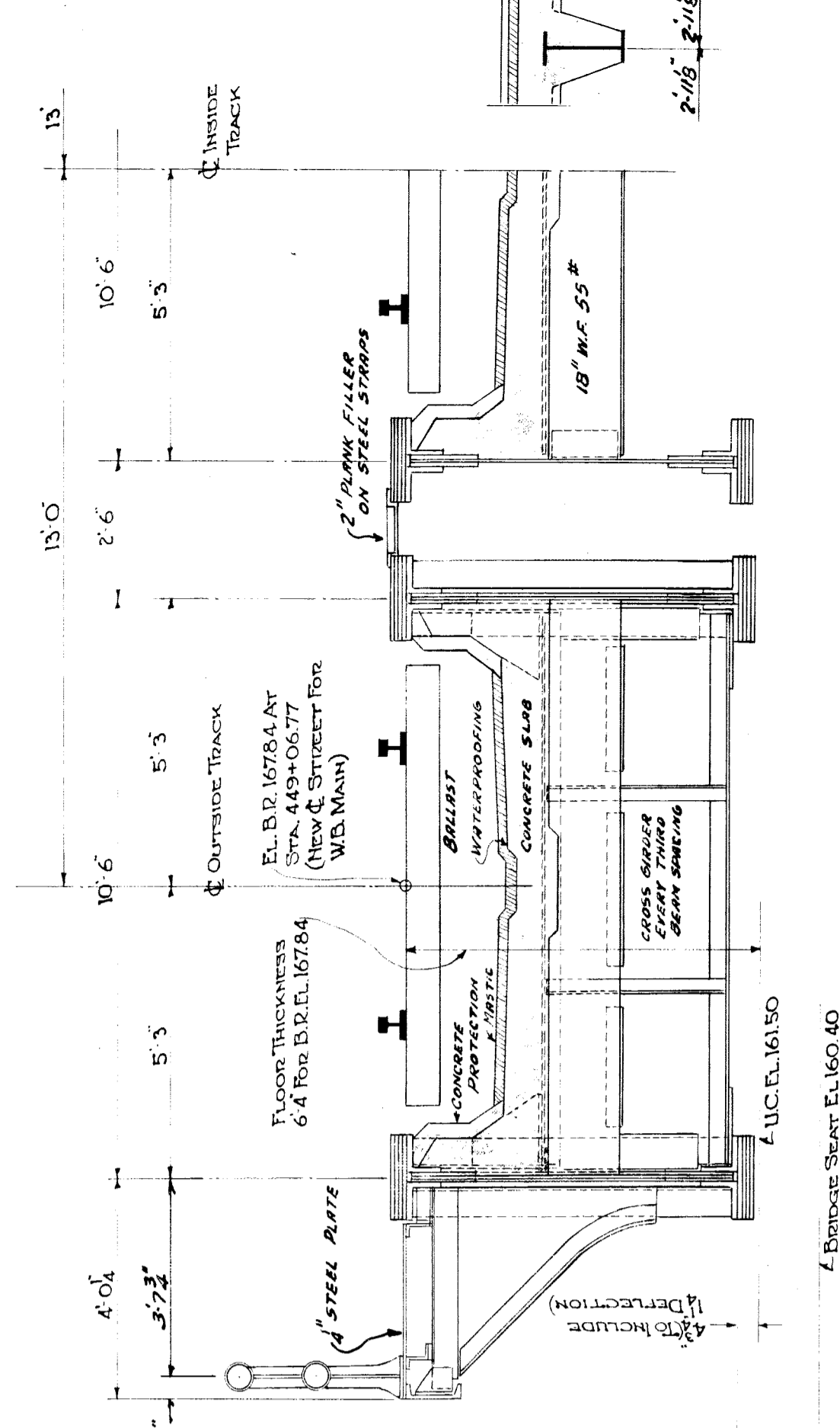
NOTE:
 THE CATCHBASINS SHOWN WILL BE PLACED BY THE CITY BUT MAY NOT BE LOCATED IN THE POSITIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXTEND THE 10" CORRUGATED METAL PIPE DRAINS TO OUTLETS IN THE CATCHBASINS AS LOCATED BY THE CITY.

NOTE:
 FOR LIGHTING REQUIREMENTS SEE SUPPLEMENTAL SPECIFICATIONS.



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

AT BRACKET AND FLOOR BEAM AT FLOOR BEAM
PART CROSS SECTION OF DECK
 SCALE: 1/4"=1'-0"



MICHIGAN STATE HIGHWAY DEPARTMENT
 MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 15 R. 11E
 BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT
GENERAL STRUCTURE PLAN.

SQUAD BOSS	R. J. W.	MAY 1937
DRAWN BY	W. H. F.	MAY 1937
CHECKED BY	M. J. B.	AUG. 1937
SHEET 10 OF 21		

XI of 82-22-20

SECTION
 SCALE: 1/4"=1'-0"

REVISIONS

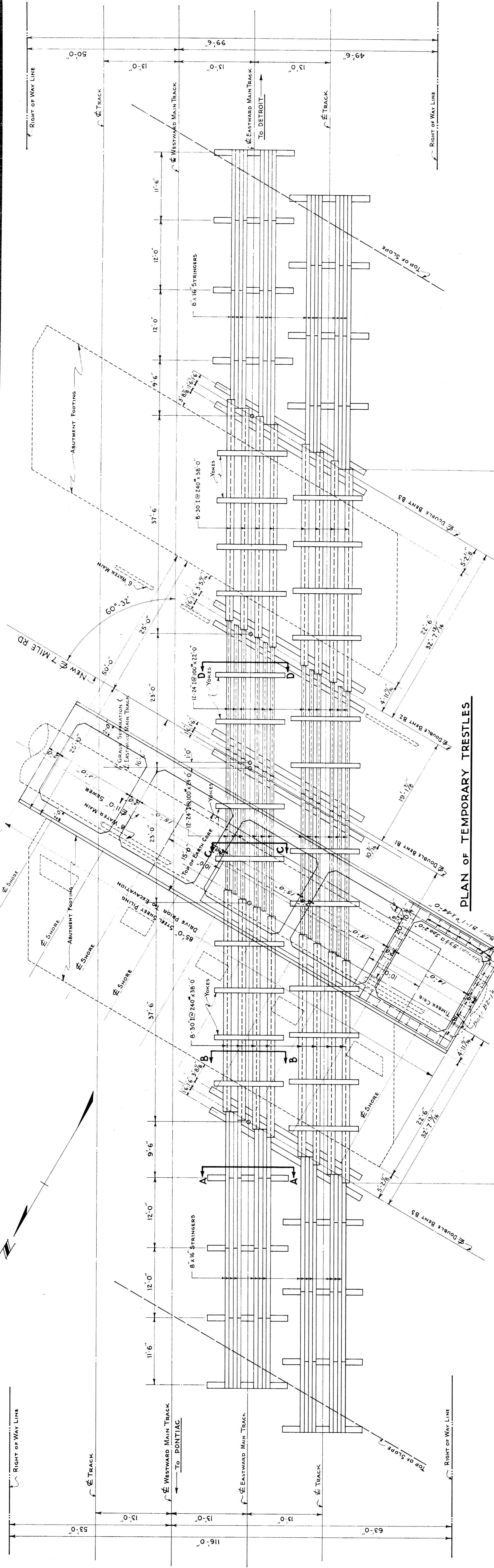
NO.	DESCRIPTION	DATE	BY

APPROVED

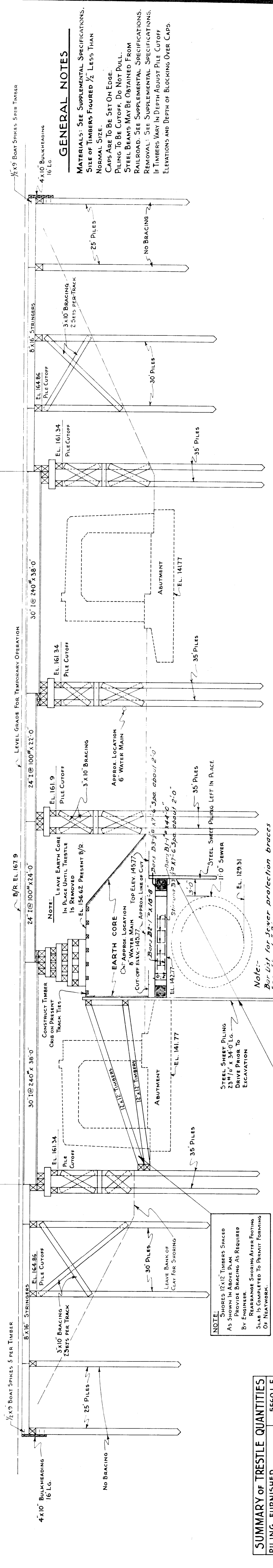
APPROVED

CHIEF DESIGNER

ENGINEER OF BRIDGE DESIGN



PLAN OF TEMPORARY TRESTLES



ELEVATION

SUMMARY OF TRESTLE QUANTITIES

PILING FURNISHED	5560 LF
PILING DRIVEN	5030 LF
TIES	30500 BF
STRINGERS	15600 BF
CAPS & CRIB TIMBERS	32800 BF
BRACING	4700 BF
WALKWAY & GD. TIMBERS	4900 BF
BLOCKING	7100 BF
MISC. IRON	9600 #
STEEL BEAMS	20170 #

NOTE: STEEL SHEET PILING TO BE CUT OFF AT ELEVATION 145.77 AFTER REMOVAL OF EARTH CORE AND TEMPORARY TRESTLE. LEAVE PILING BELOW EL. 145.77 IN PLACE PERMANENTLY. THE STEEL SHEET PILING WHICH IS CUT OFF IS TO BE DRIVEN ALONG THE SOUTH SIDE OF THE 11'-0" SEWER IN THE LOCATION SHOWN AND LEFT IN PLACE.

NOTE: SHORES 12x12 TIMBERS SPACED AS SHOWN IN ABOVE PLAN. PROVIDE BRACING AS REQUIRED BY ENGINEER. REPAIR AND SHORING AFTER FORMING COMPLETE TO PERMIT FORMING OF NETWORK.

NOTE: LEAVE EARTH CORE IN PLACE UNTIL TRESTLE IS DRIVEN TO EL. 156.62 PRESENT 8/4.

NOTE: EARTH CORE LOCATION (SEE BOX LOCATION TOP ELEV. 145.77) APPROX. LINE OF CUT-OFF ELEV. 145.77. APPROX. LINE OF CUT-OFF ELEV. 145.77. APPROX. LINE OF CUT-OFF ELEV. 145.77.

NOTE: 20' dia for sewer protection braces. See Sheet 8/4. 40.0 Cu Yds of Grade A Concrete.

GENERAL NOTES
 MATERIALS: SEE SUPPLEMENTAL SPECIFICATIONS.
 SIZE OF TIMBERS FIGURED 1/2" LESS THAN NORMAL SIZE.
 CAPS ARE TO BE SET ON EDGE.
 PILING TO BE CUT OFF. DO NOT PULL.
 STEEL BEAMS MAY BE OBTAINED FROM RAILROAD. SEE SUPPLEMENTAL SPECIFICATIONS.
 REMOVAL: SEE SUPPLEMENTAL SPECIFICATIONS.
 IF TIMBERS VARY IN DEPTH ADJUST PILE CUTOFF ELEVATIONS AND DEPTH OF BLOCKING OVER CAPS.

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 15. R. 11 E.
 BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

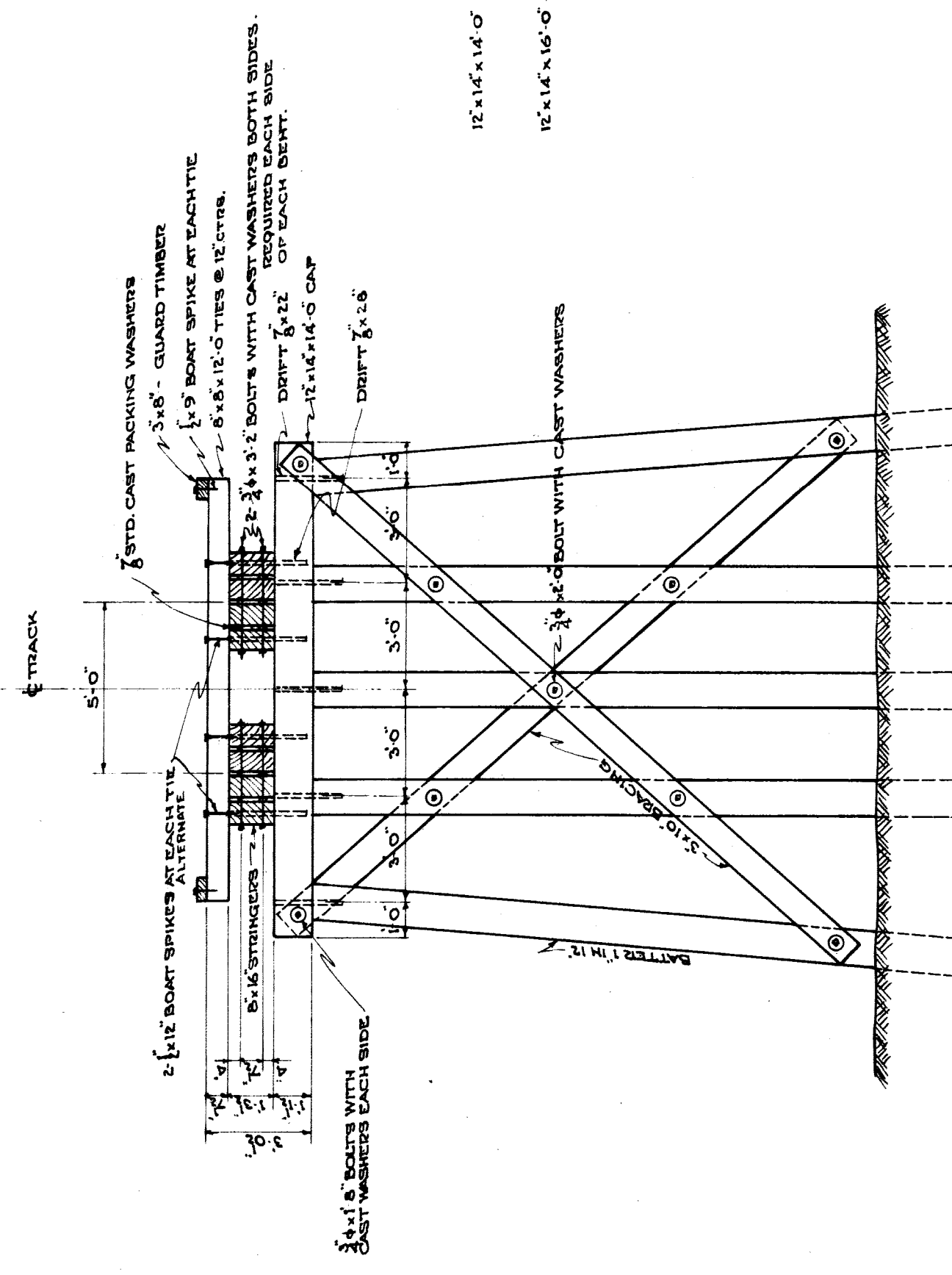
TEMPORARY OPERATING TRESTLE
 SCALE: 1/8" = 1'-0"

SOLID BOSS	RAW	7-23-37
DRAWN BY	H.S.F.	8-3-37
TRACED BY	E.R.S.	8-12-37
CHECKED BY	A.N.L.	8-12-37
APPROVED	J. J. ...	8-21-37
ENGINEER

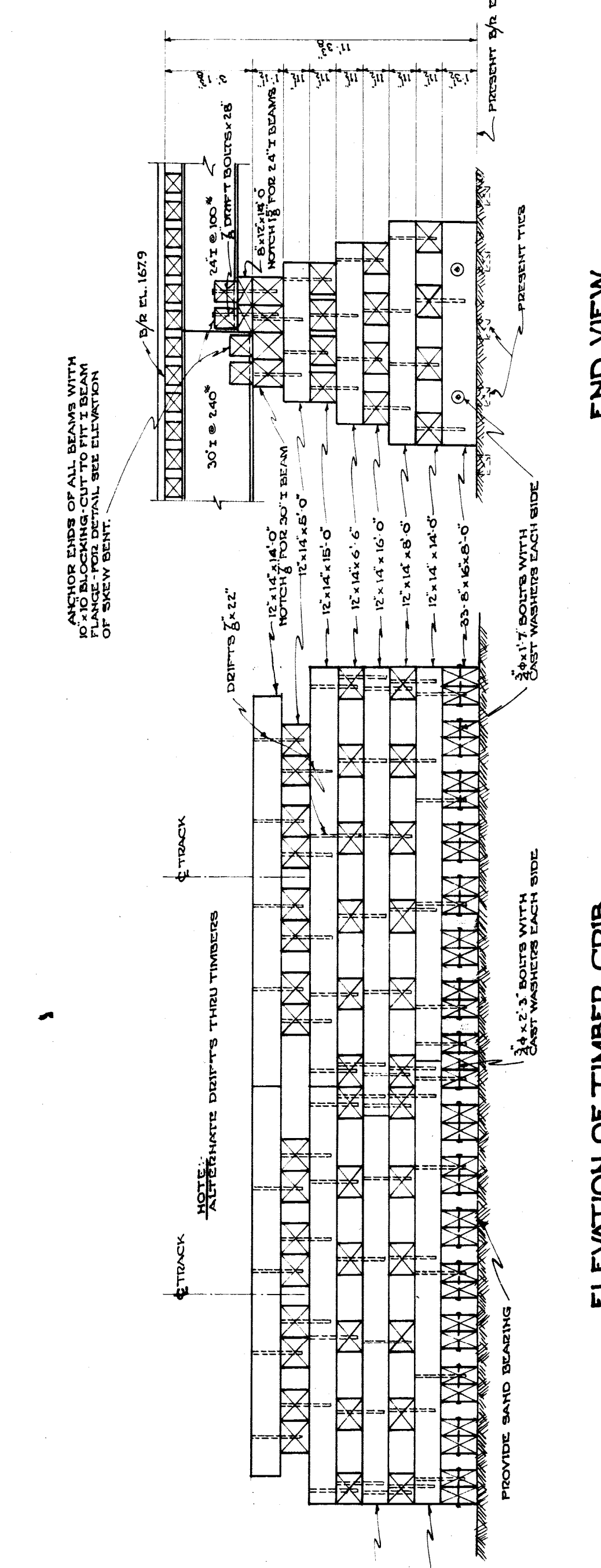
XI OF 82-22-20

REVISIONS

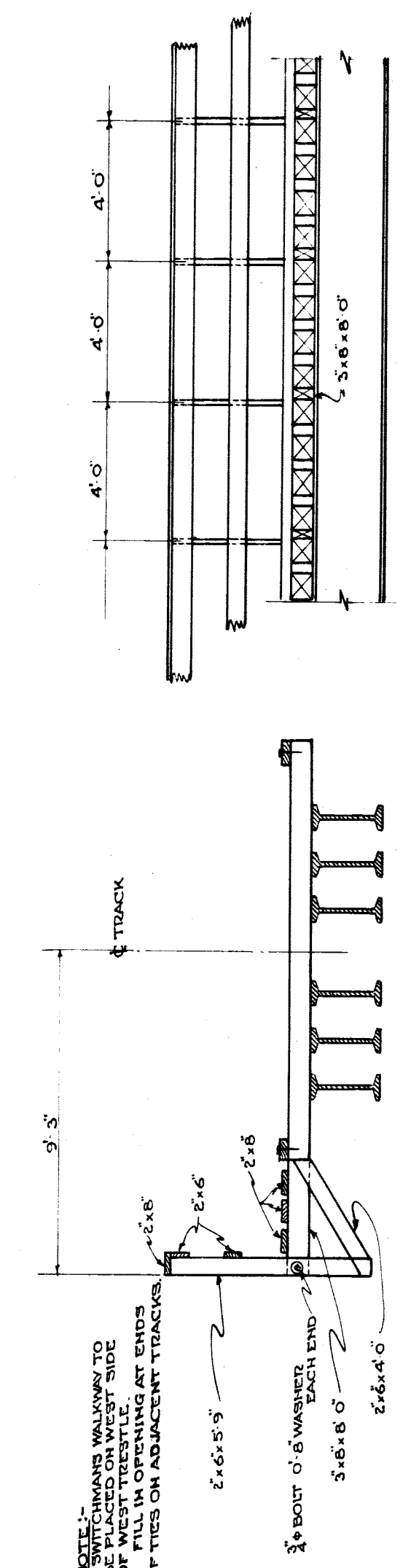
NO.	DESCRIPTION	DATE	BY



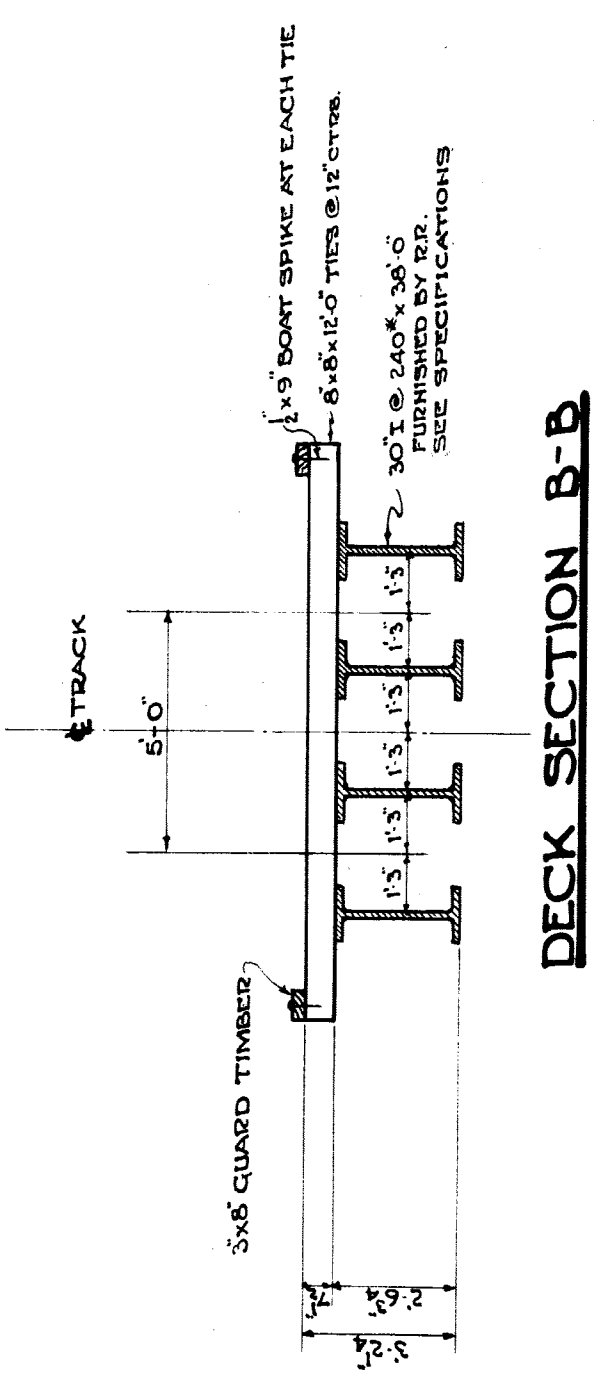
**SINGLE 5 PILE BENT
DECK SECTION A-A'
DETAIL OF TYPICAL SQUARE BENT**



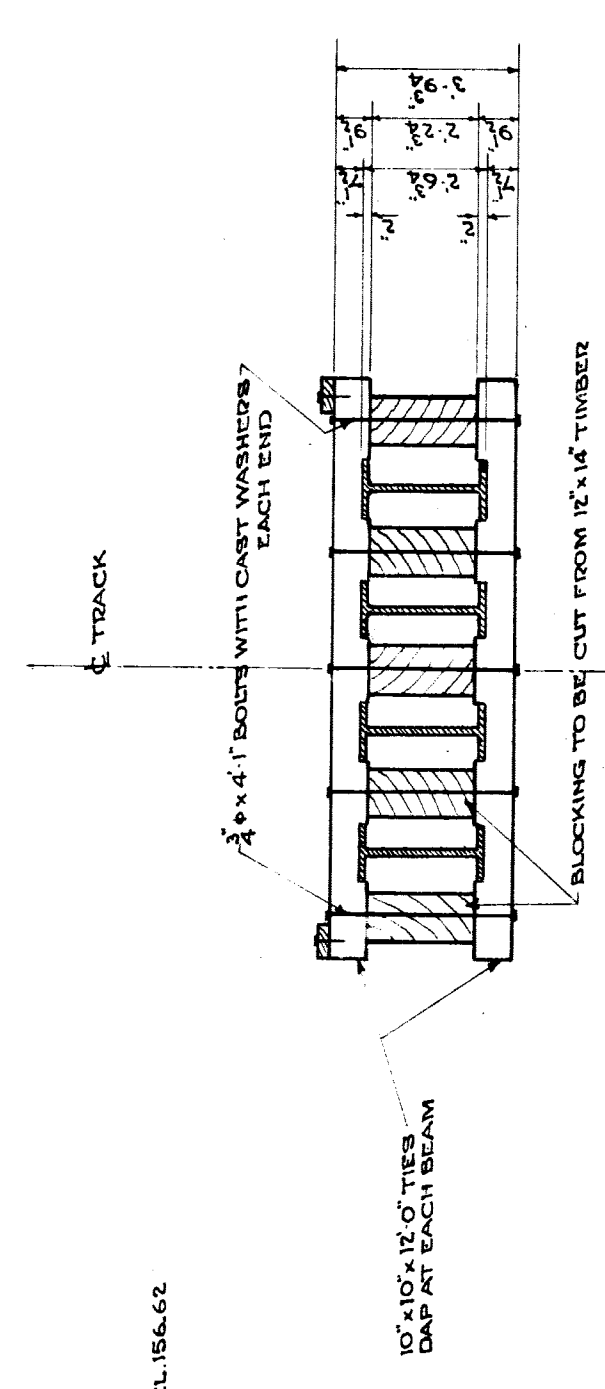
ELEVATION OF TIMBER CRIB



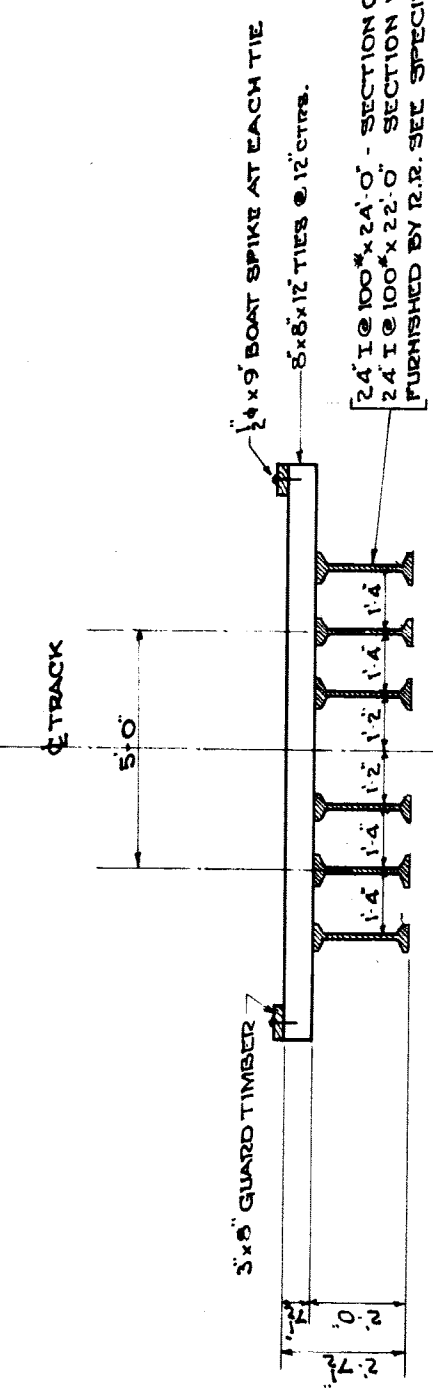
WALKWAY DETAILS



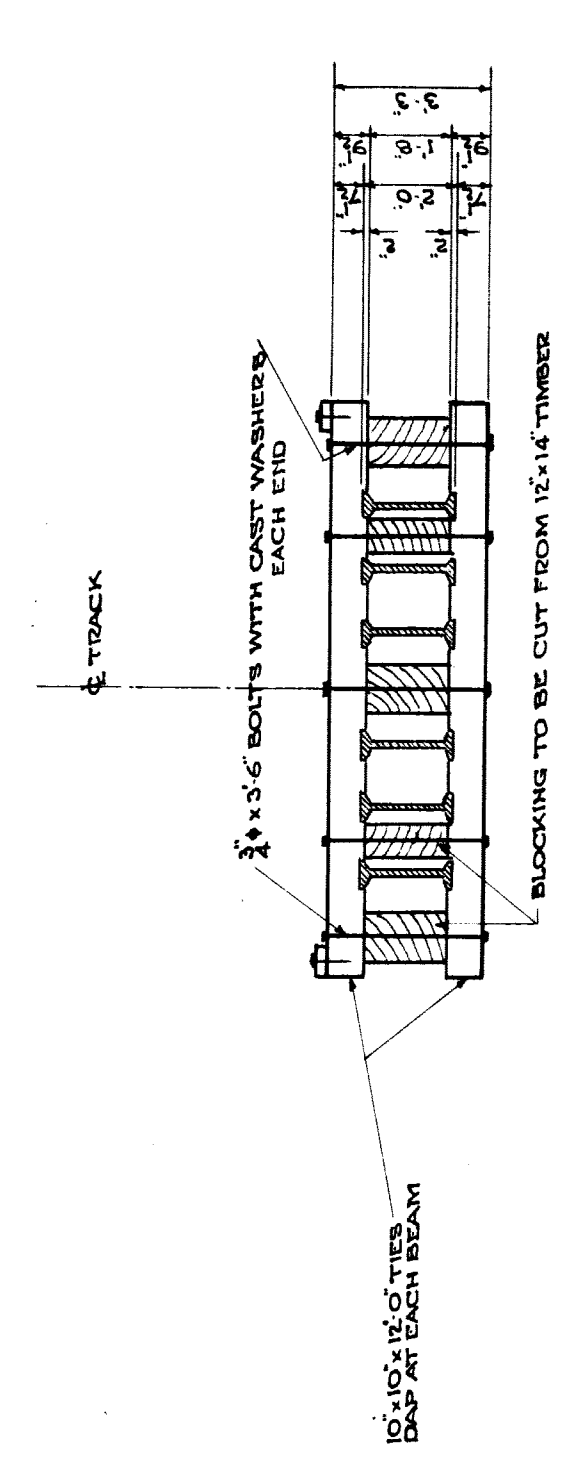
DECK SECTION B-B



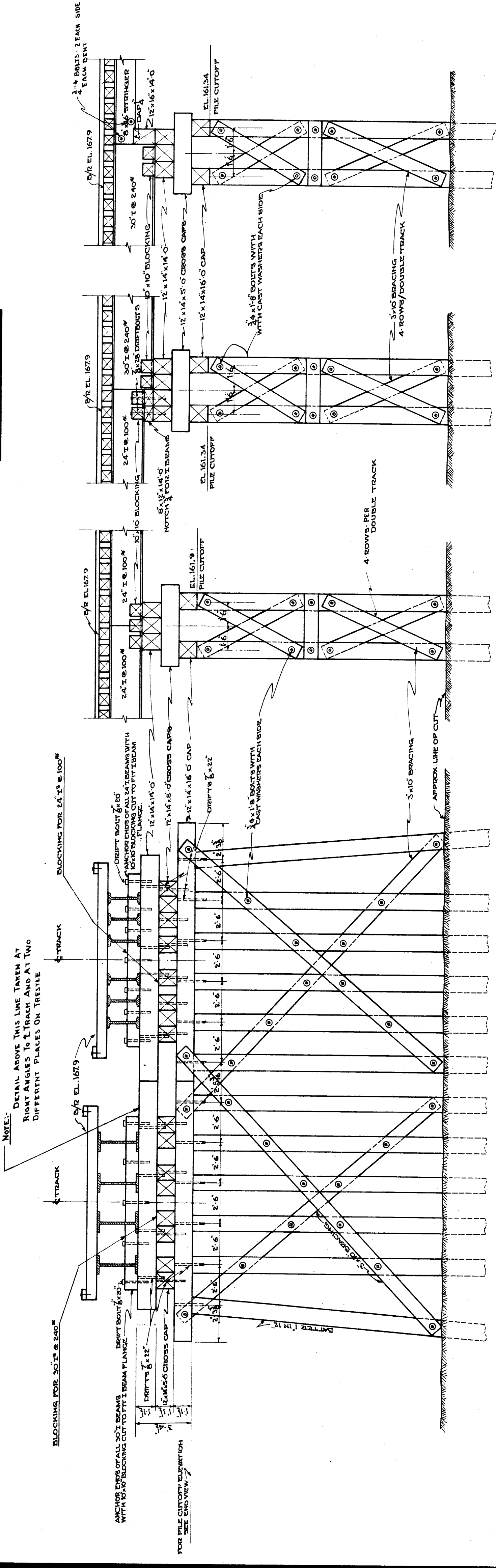
DETAIL OF YOKE FOR SECTION B-B



DECK SECTIONS C-C & D-D



DETAIL OF YOKE FOR SECTIONS C-C & D-D



**DOUBLE BENT - 12 PILES PER TRACK
ELEVATION OF SKEW BENT**

END VIEW BENT B1

END VIEW BENT B2

END VIEW BENT B3

DETAILS OF TEMPORARY OPERATING TRESTLE

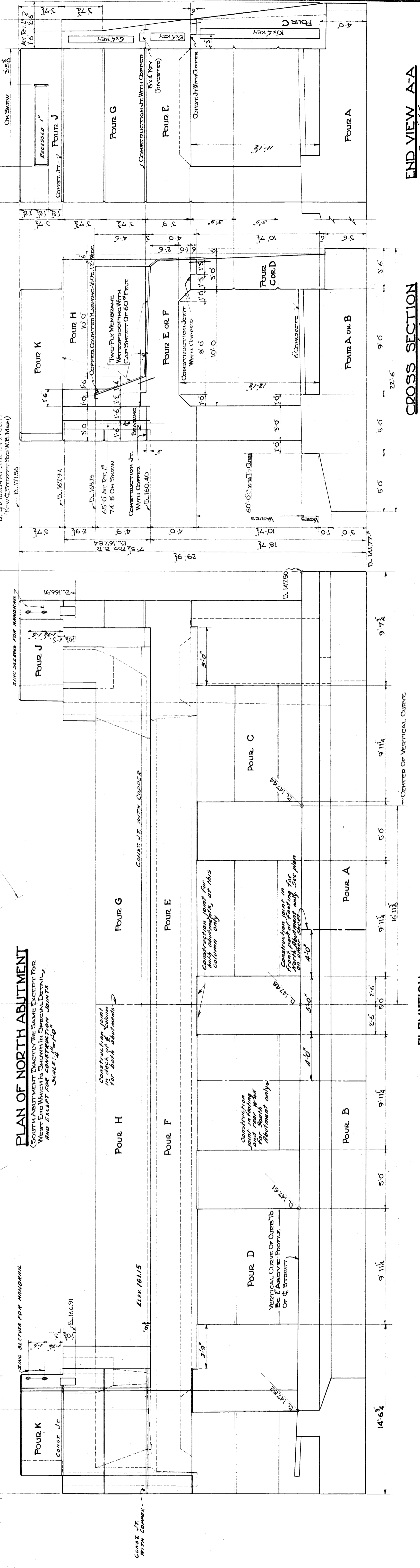
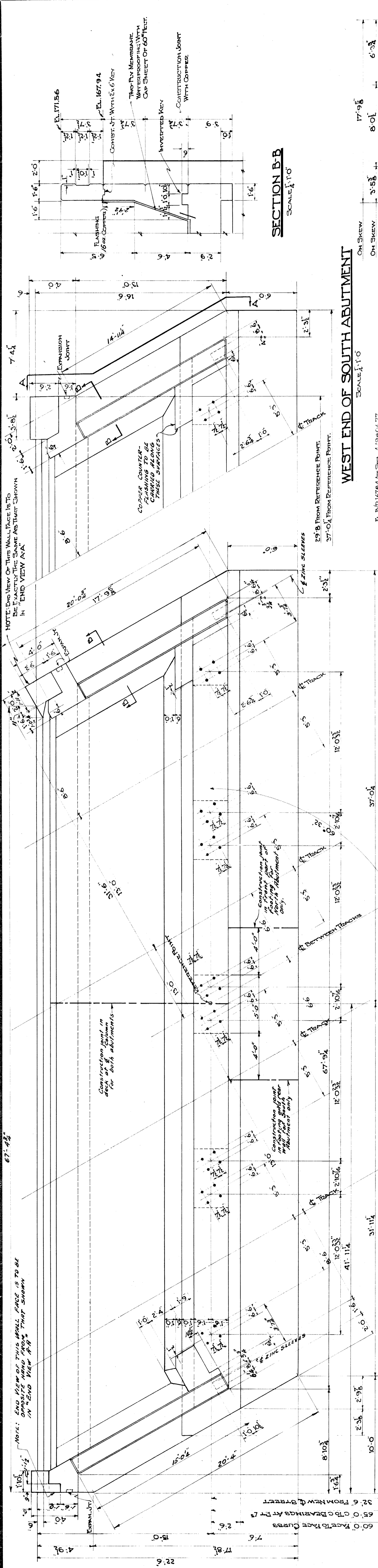
SCALE: 1/4" = 1'-0"

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
 TWP. WAYNE CO.
 SEC. 1 T. 15 S. R. 11 E.
 BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
 CROSSING GRAND TRUNK WESTERN RR. IN CITY OF DETROIT

APPROVED: *[Signature]* CHIEF ENGINEER
 APPROVED: *[Signature]* ENGINEER IN CHARGE OF BRIDGE DESIGN
 SHEET 12 OF 21

NO.	REVISIONS	DATE	BY

XI 82-22-20



CONCRETE QUANTITIES

POUR	NORTH ABUT.	SOUTH ABUT.
A	103.0 CY	142.0 CY
B	146.0 CY	108.0 CY
C	32.0	42.0
D	50.0	41.0
E	70.0	73.0
F	84.0	82.0
G	18.0	19.0
H	19.0	19.0
J	3.0	3.0
K	3.0	3.0
TOTAL	528.0 CY	532.0 CY
TOTAL BOTH ABUTS	1060.0 CY	

END VIEW A-A
SCALE 1/10

CROSS SECTION
SCALE 1/10

ELEVATION
SCALE 1/10

DETAIL OF V-JOINT
NOT TO SCALE

WATERPROOFING AT EXPANSION JOINT
NOT TO SCALE

WATERPROOFING AT CONSTRUCTION JOINT
NOT TO SCALE

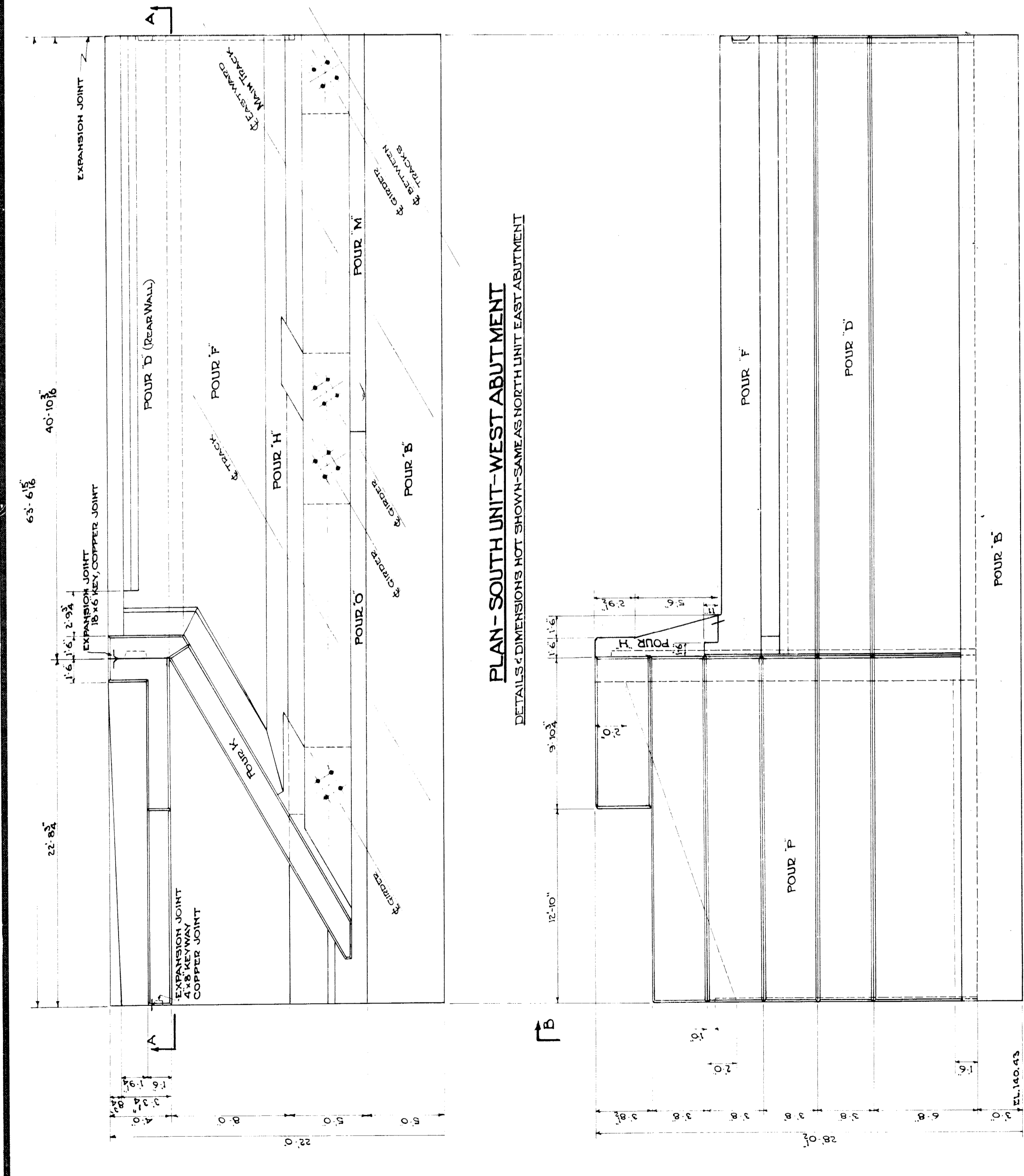
ABUTMENTS

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
SEC. 1 T. 15 R. 11E WAYNE CO.
BRIDGE FILE NO. XI OF 22-20 ROAD SEVEN MILE ROAD
CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

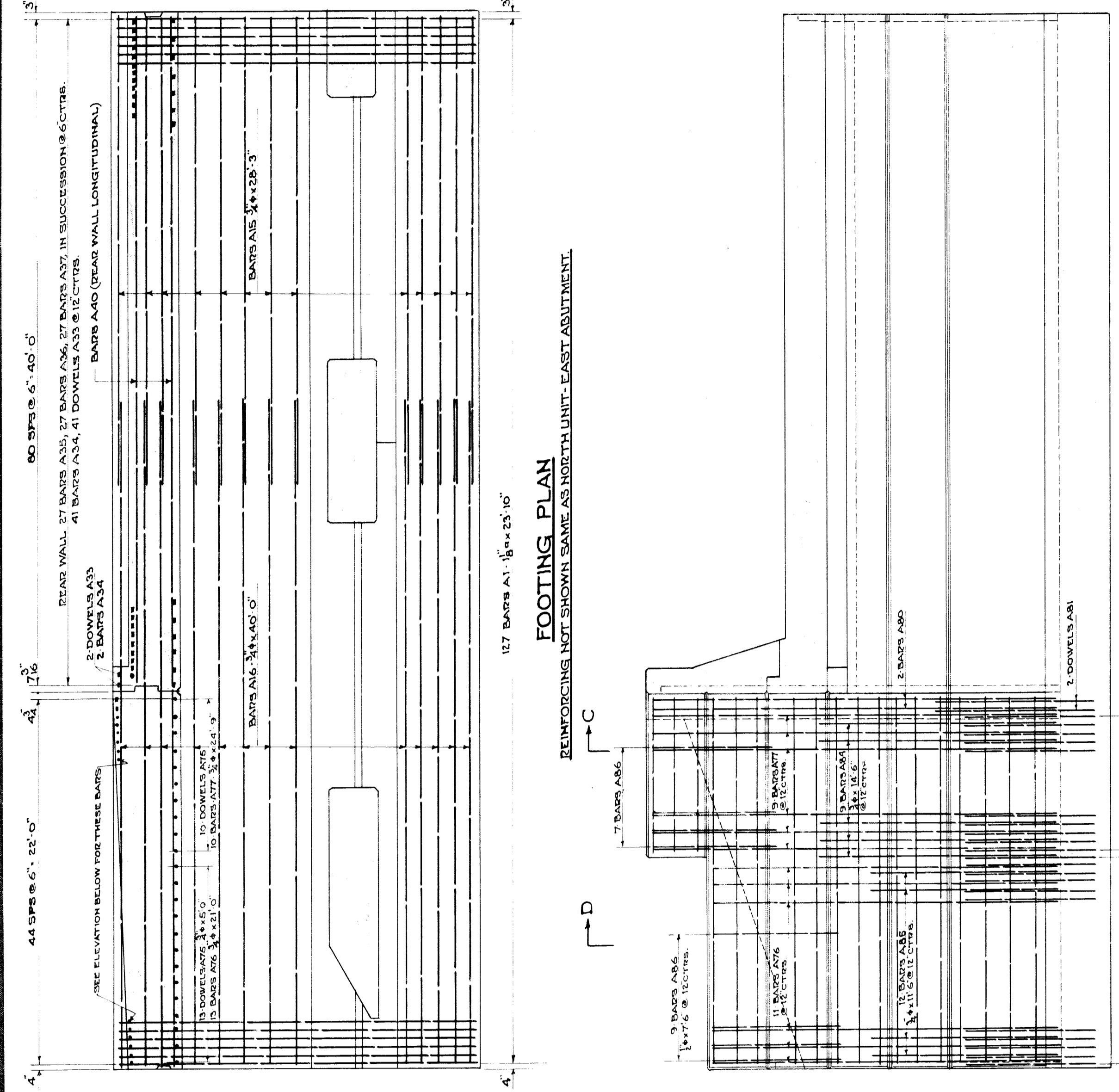
APPROVED: [Signature] CHIEF DRAFTSMAN
APPROVED: [Signature] ENGINEER OF BRIDGE DESIGN

DATE: 8/6/1927
SHEET 13 OF 21

XI of 82-22-20

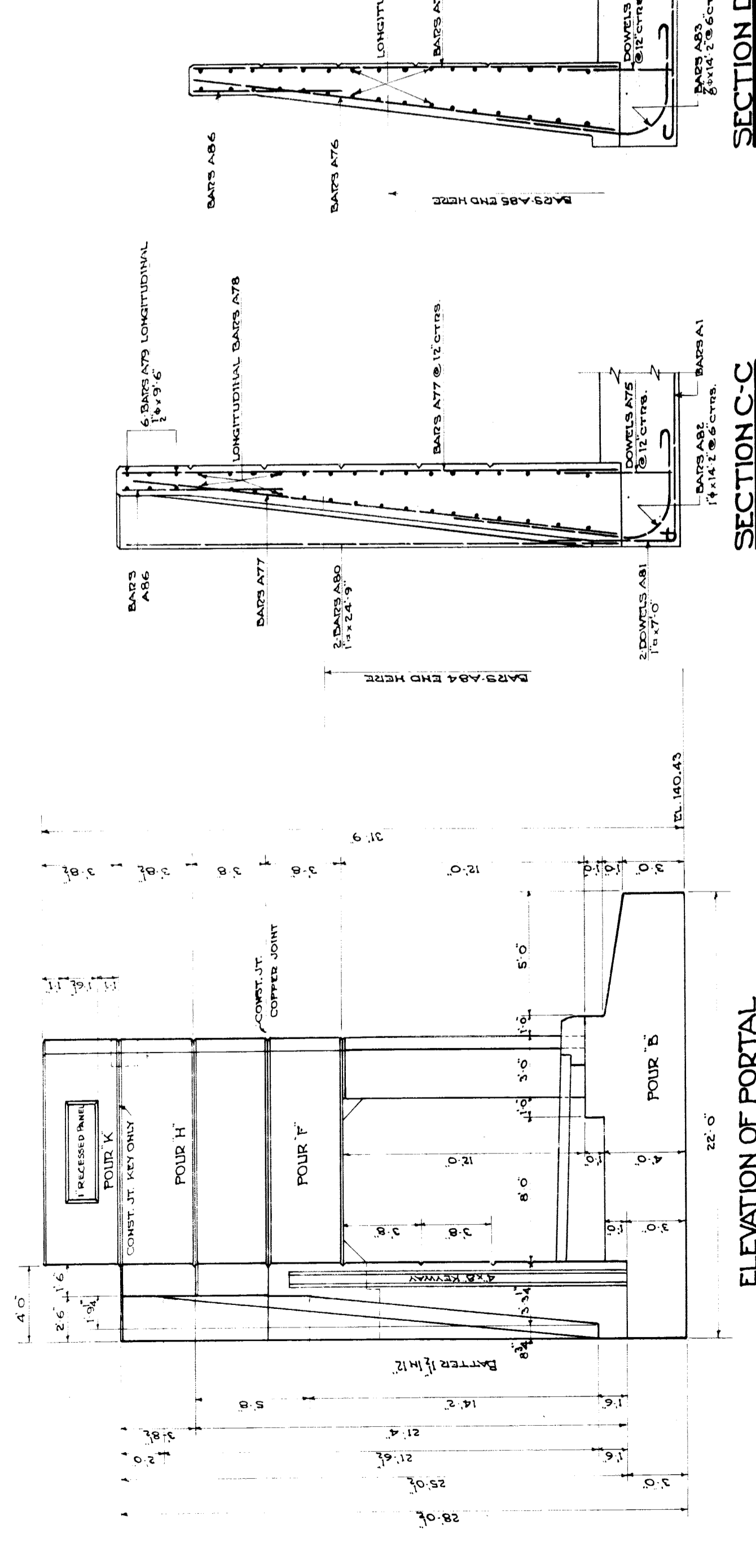


PLAN - SOUTH UNIT-WEST ABUTMENT
 DETAILS & DIMENSIONS NOT SHOWN SAME AS NORTH UNIT EAST ABUTMENT

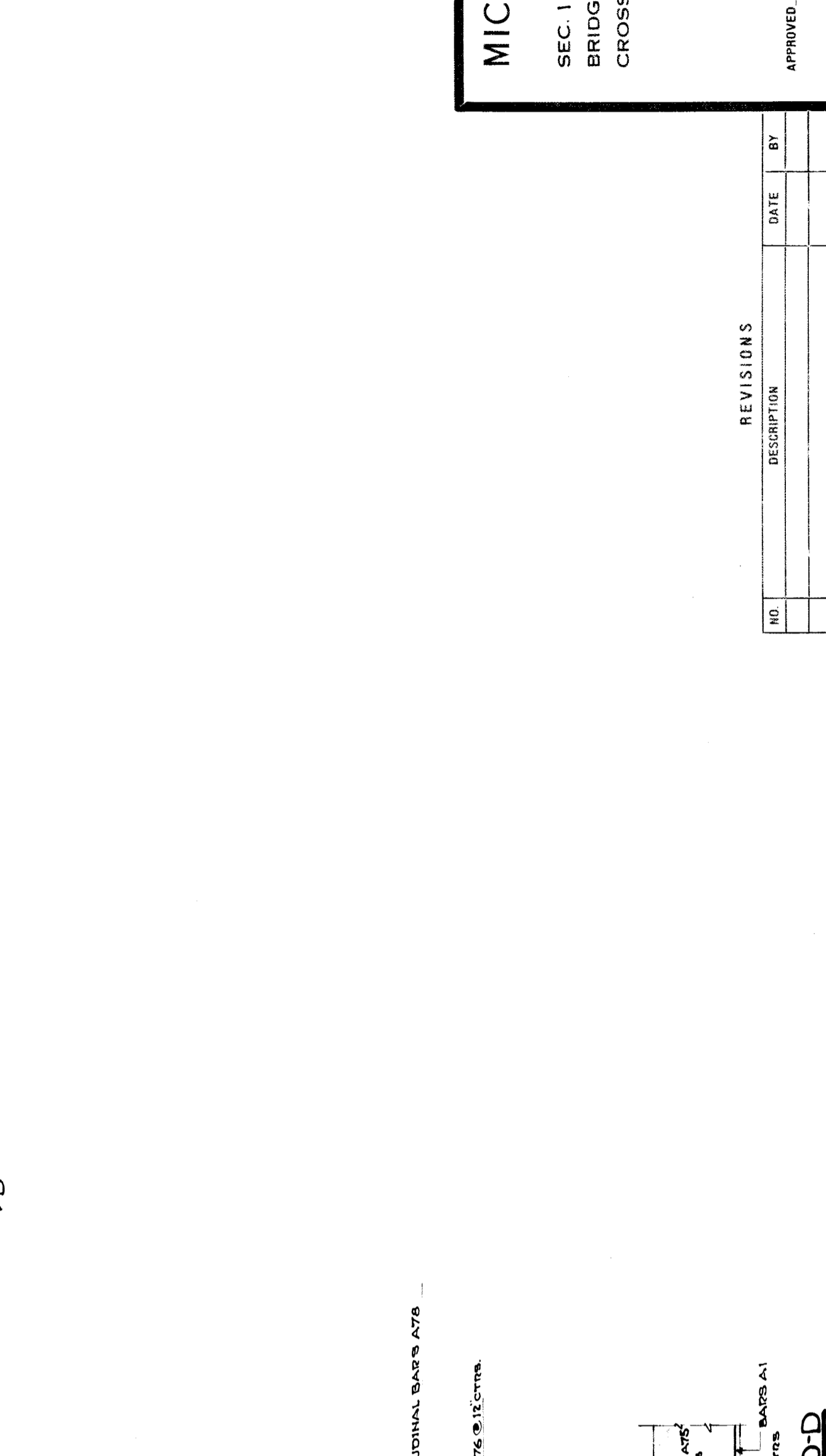


FOOTING PLAN
 REINFORCING NOT SHOWN SAME AS NORTH UNIT-EAST ABUTMENT

SECTIONAL ELEVATION B-B



ELEVATION OF REAR WALL - SOUTH UNIT-WEST ABUTMENT
 SECTION A-A



SECTION C-C

SECTION D-D

BAR LIST	BAR LIST FOR ABUTMENTS		WEST ABUTMENT
	EAST ABUTMENT	FOUR-FOOT BARS	
MARK	INCREASING	LENGTH	FOUR-FOOT BARS
A1	430	23.10	5/16
A2	12	22.8	3/4
A3	12	21.6	3/4
A4	12	20.4	3/4
A5	12	19.2	3/4
A6	12	18.0	3/4
A7	12	17.0	3/4
A8	12	16.0	3/4
A9	12	15.0	3/4
A10	12	14.0	3/4
A11	14	13.4	3/4
A12	4	10.1	3/4
A13	4	9.7	3/4
A14	4	9.7	3/4
A15	78	28.5	3/4
A16	18	40.0	3/4
A17	19	30.9	3/4
A18	8	17.0	3/4
A19	5	12.0	3/4
A20	2	24.0	3/4
A21	18	18.0	3/4
A22	598	23.10	5/16
A23	50	15.3	3/4
A24	380	11.9	3/4
A25	152	18.6	3/4
A26	76	28.6	3/4
A27	224	33.6	3/4
A28	224	22.6	3/4
A29	80	14.6	3/4
A30	80	32.3	3/4
A31	160	15.9	3/4
A32	116	15.3	3/4
A33	248	15.3	3/4
A34	156	23.4	3/4
A35	156	20.4	3/4
A36	156	16.0	3/4
A37	154	7.5	3/4
A38	234	9.6	3/4
A39	234	2.0	3/4
A40	126	15.6	3/4
A41	150	3.0	3/4
A42	64	15.6	3/4
A43	4	17.0	3/4
A44	4	17.1	3/4
A45	920	12.4	3/4
A46	128	11.5	3/4
A47	16	10.0	3/4
A48	16	8.9	3/4
A49	16	14.9	3/4
A50	16	14.9	3/4
A51	16	26.3	3/4
A52	8	27.3	3/4
A53	8	7.0	3/4
A54	10	10.0	3/4
A55	22	28.0	3/4
A56	6	26.3	3/4
A57	28	27.3	3/4
A58	28	7.0	3/4
A59	143	10.0	3/4
A60	50	28.0	3/4
A61	48	9.0	3/4
A62	168	11.1	3/4
A63	50	10.0	3/4
A64	114	15.9	3/4
A65	218	14.1	3/4
A66	11	8.6	3/4
A67	72	10.3	3/4
A68	70	11.9	3/4
A69	94	10.3	3/4
A70	16	11.9	3/4
A71	16	25.0	3/4
A72	50	18.0	3/4
A73	24	18.0	3/4
A74	14	21.0	3/4
A75	23	24.9	3/4
A76	24	22.0	3/4
A77	19	24.9	3/4
A78	32	9.6	3/4
A79	6	24.9	3/4
A80	2	14.2	3/4
A81	2	14.2	3/4
A82	17	14.2	3/4
A83	26	14.6	3/4
A84	9	11.6	3/4
A85	12	7.6	3/4
A86	16	7.6	3/4

MICHIGAN STATE HIGHWAY DEPARTMENT
 MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 1 S. R. 11 E
 BRIDGE FILE NO. XI OF 82-22-49 ROAD JOHN R. STREET
 CROSSING GRAND TRUNK WESTERN RR. IN CITY OF DETROIT

ABUTMENT DETAILS
 SCALE: 3/16" = 1'-0"

APPROVED: _____
 CHIEF DRAFTSMAN

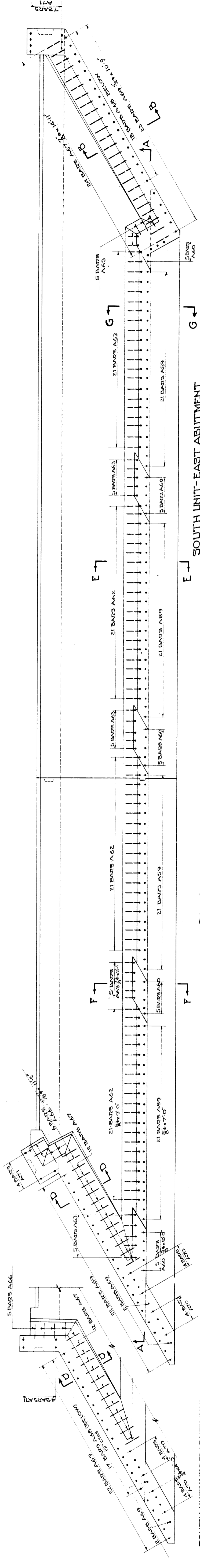
APPROVED: _____
 ENGINEER OF BRIDGE DESIGN

REVISIONS

NO.	DESCRIPTION	DATE	BY

SHEET _____ OF _____

DRAWN BY: T.H.J. JULY 1937
 CHECKED BY: W.H.F. JULY 1937
 M.J.B. AUG. 1937



SOUTH UNIT WEST ABUTMENT
 DETAILS NOT SHOWN SAME AS NORTH UNIT EAST ABUTMENT

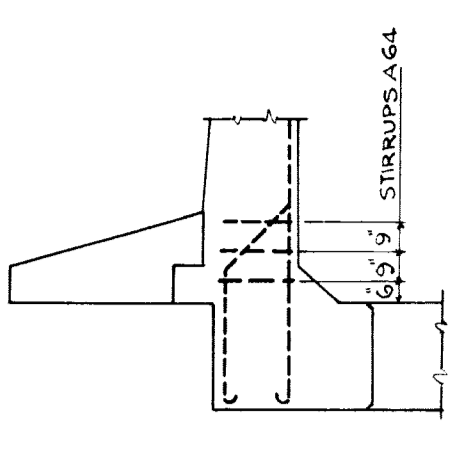
NORTH UNIT EAST ABUTMENT

DECK SLAB DOWEL PLAN
 FOR BALLAST WALL & PORTALS

27 STIRRUPS A64 - 3 LINES - 9 EACH LINE

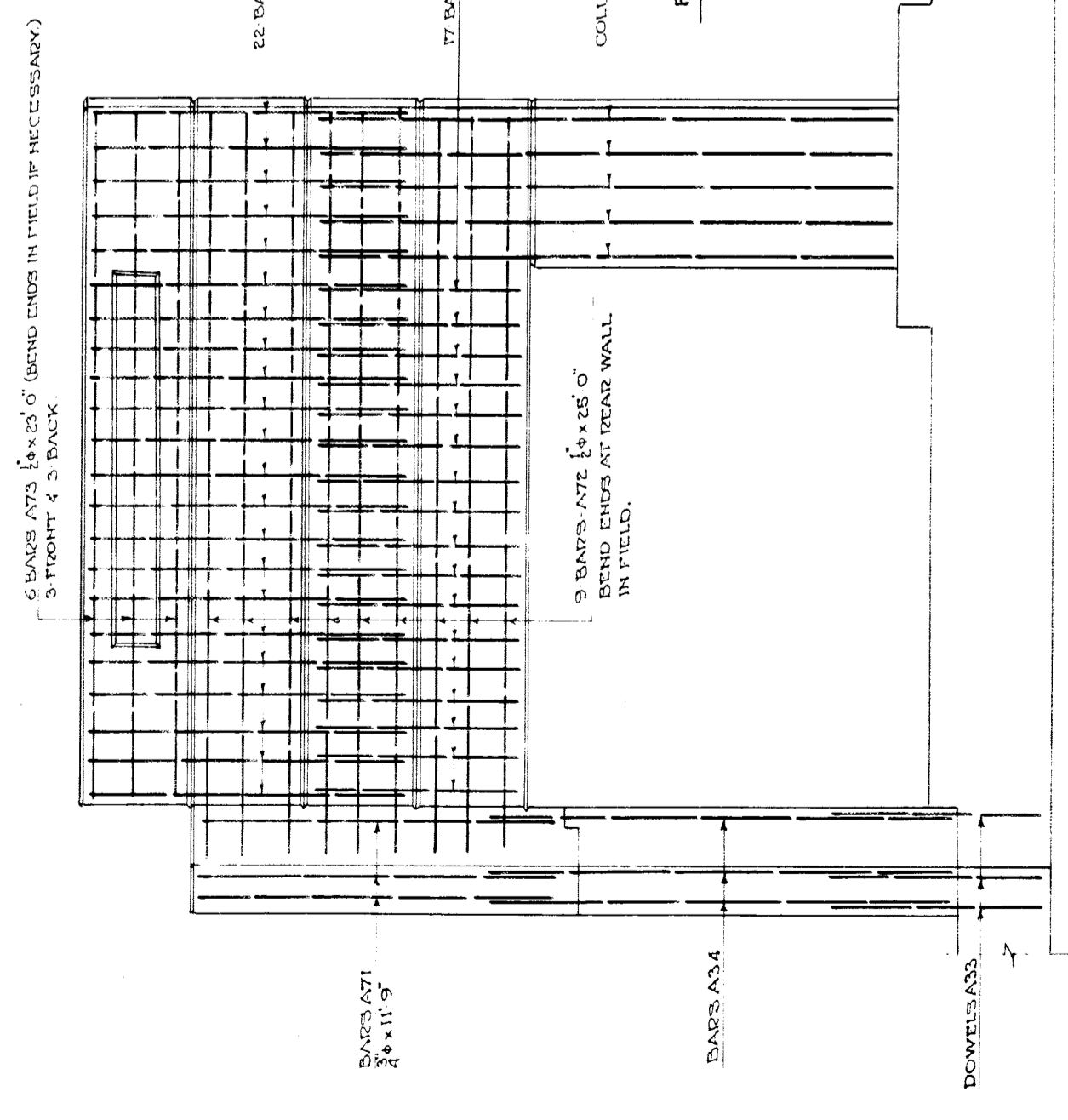
30 STIRRUPS A64 - 3 LINES - 10 EACH LINE

SOUTH UNIT - EAST ABUTMENT
NORTH UNIT - WEST ABUTMENT

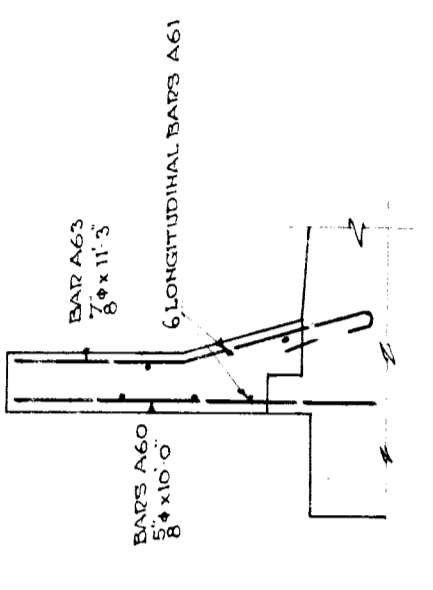


SECTION GG

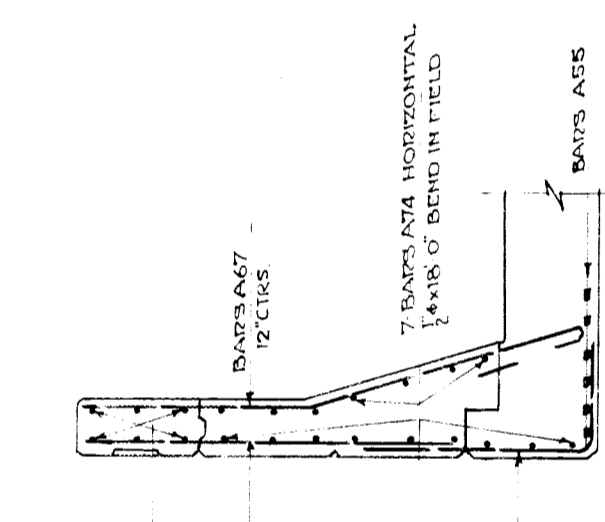
STIRRUP DIAGRAM DECK SLAB
 SECTION A-A



TYPICAL DETAIL OF PORTAL REINFORCING
 PORTAL OF SOUTH UNIT WEST ABUTMENT SHOWN - OTHERS SIMILAR



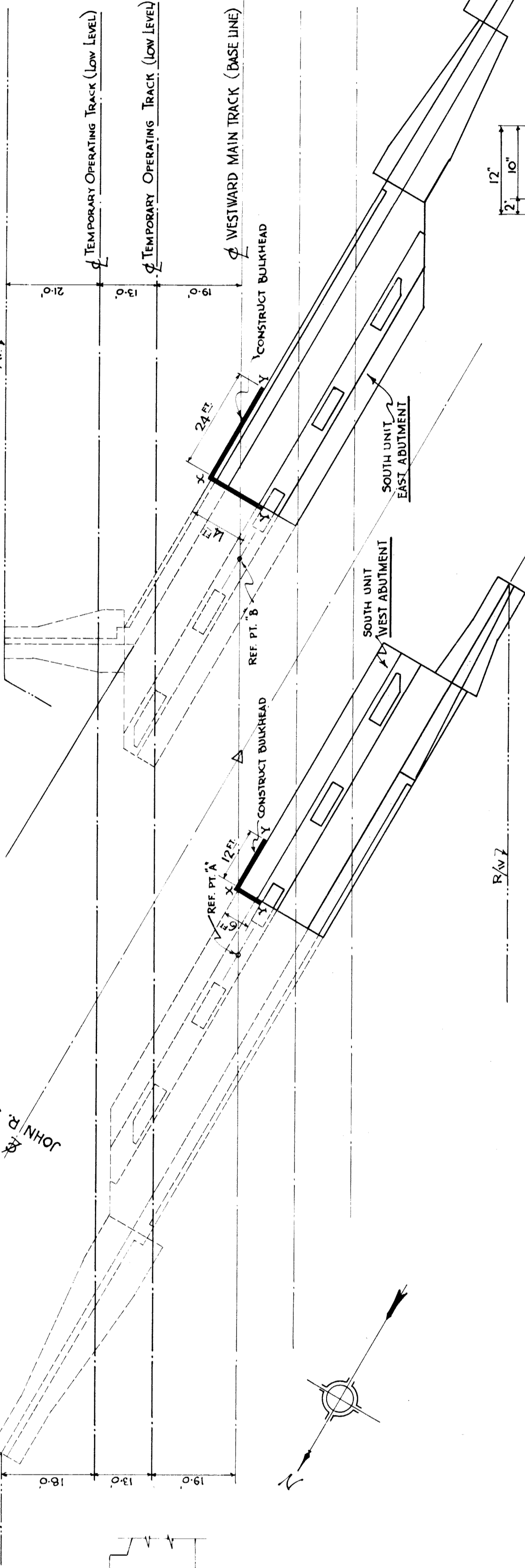
SECTION E-E



SECTION F-F

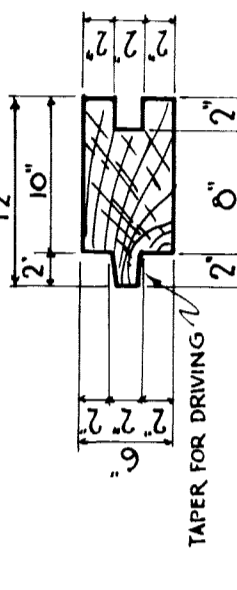
SECTION B-B

SECTION D-D



LAYOUT OF FOUNDATION BULKHEADS
 METHOD OF PROTECTING FOUNDATION AND TEMPORARY OPERATING TRK.
 SCALE: 1 IN = 20 FT.

TYPICAL X SECTION OF SHEET PILING
 WAKEFIELD TYPE CUT FROM 6-1/2"
 SCALE: 1 IN = 1 FT



GENERAL NOTES ON BULKHEADS
 BULKHEADS ARE TO BE BUILT WITH 6" WAKEFIELD TYPE SHEET PILING (SEE DETAIL). PILING TO BE DRIVEN TO ELEVATION OF 4' BELOW FOUNDATION OF FOOTING SLAB. SHORE AND BRACE BULKHEAD TO MAKE A RIGID UNIT. LENGTH OF PILING VARIES FROM 20' AT POINTS X TO 12' AT POINTS Y. REMOVAL TO BE BY CUTOFF AS DIRECTED. DONOT PULL.

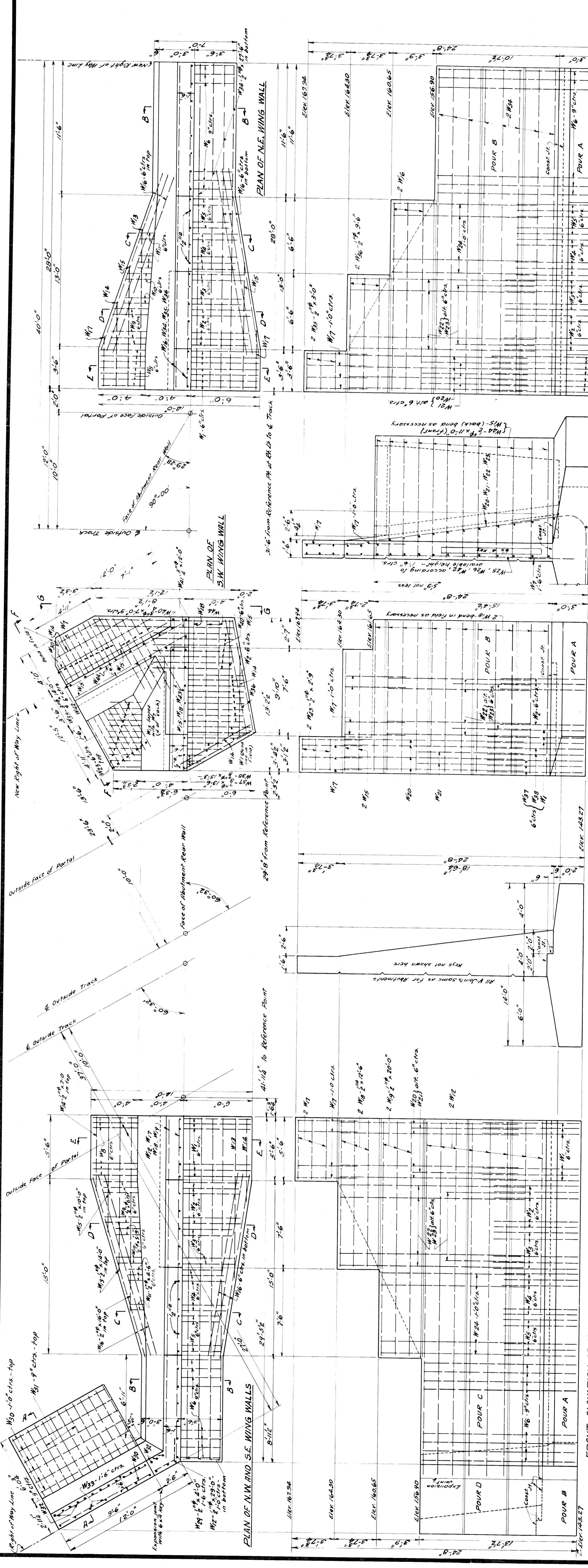
MICHIGAN STATE HIGHWAY DEPARTMENT
 MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 1 S. R. 11 E. TWP. WAYNE CO.
 BRIDGE FILE NO. X1 OF 82-22-49 ROAD JOHN R. STREET
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

ABUTMENT DETAILS
 SCALE: 1/2" = 1'-0"
 EXCEPT AS SHOWN

APPROVED	CHIEF DRAFTSMAN	SHEET	OF
APPROVED	ENGINEER OF BRIDGE DESIGN		

NO.	REVISIONS	DESCRIPTION	DATE	BY

NO.	REVISIONS	DESCRIPTION	DATE	BY



FRONT ELEVATION OF N.W. AND S.E. WING WALL
 FRONT ELEVATION OF N.E. WING WALL
 SIDE ELEVATION G-G OF S.W. WING WALL
 FRONT ELEVATION OF S.W. WING WALL
 END VIEW FOR N.W. AND S.E. WING WALL
 OPPOSITE VIEW FOR N.E. WING WALL AS RESPECTS NEATHWORK ONLY
 END VIEW F-F
 SECTION A-A
 SECTION B-B
 SECTION C-C
 SECTION D-D
 SECTION E-E
 SECTION F-F

CONCRETE QUANTITIES (in cu yds.)

POUR	N.W. WING	S.E. WING	S.W. WING	TOTALS
A	28.25	28.25	25.05	81.55
B	8.75	8.75	36.95	54.45
C	42.75	42.75	8.75	94.25
D	8.25	8.75		17.00
TOTALS	88.00	88.00	62.00	238.00

WING WALL BAR DISTRIBUTION BY POURS

BAR MARK	N.W. WING				S.E. WING				S.W. WING				TOTAL				
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	
W1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W22	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W24	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

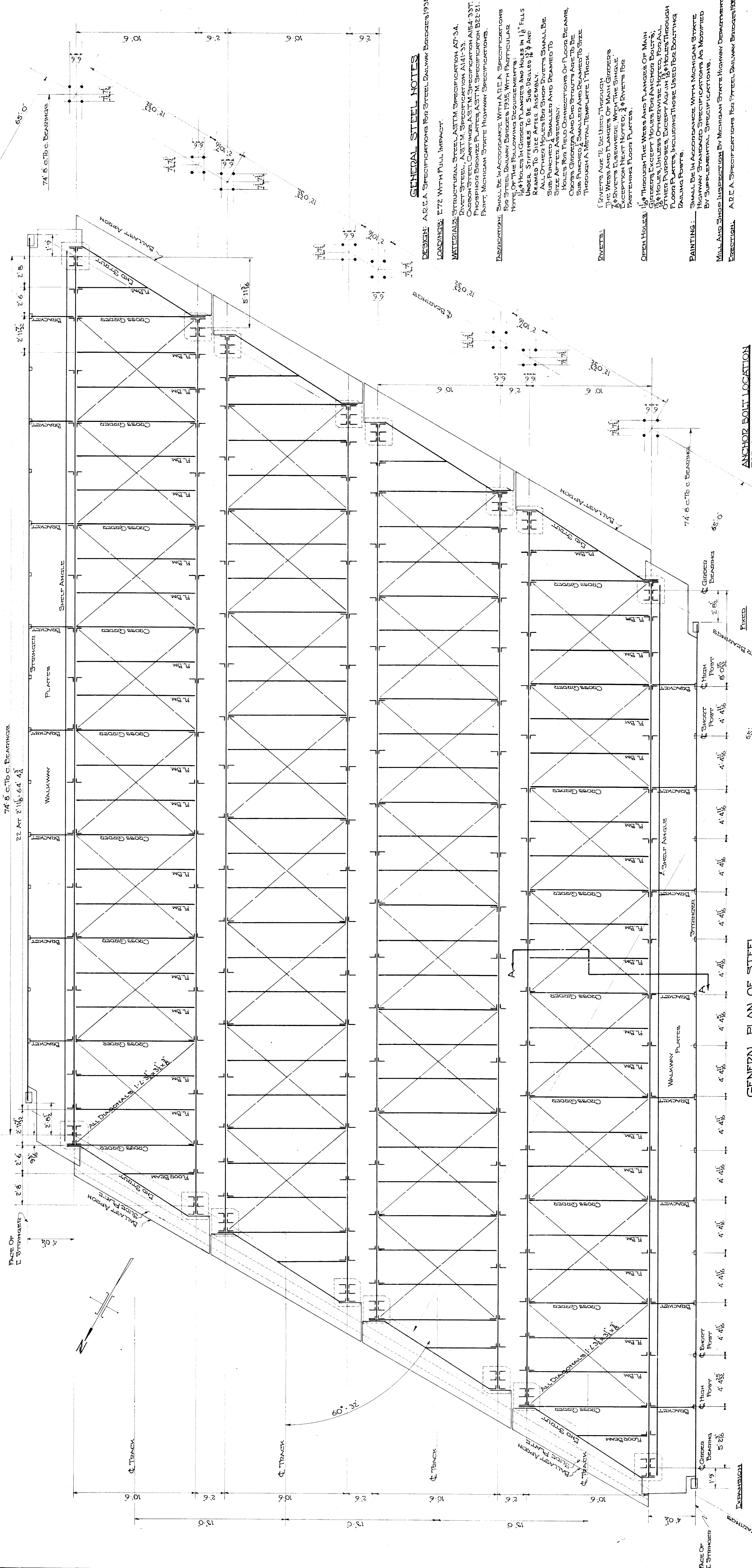
MICHIGAN STATE HIGHWAY DEPARTMENT
 MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 15 R. 11 E
 BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD WAYNE CO.
 CROSSING GRAND TRUNK WESTERN RAILROAD IN CITY OF DETROIT

WING WALLS

APPROVED: [Signature] DATE: 8-21-37
 CHIEF DRAFTSMAN
 ENGINEER OF BRIDGE DESIGN

REVISIONS

NO.	DESCRIPTION	DATE	BY



GENERAL PLAN OF STEEL
SCALE 1/10

DESCRIPTION

The Structural Steel Company's Plan Shows Track Brackets On Two Girders Each With Two Channels On Each. The Channels Are On Ballast Aprons, Lateral Bracing, Brackets, Anchor Bolts, And All Connections. In Addition There Are Two Channels Walkways With Brackets, Strainers, Floor Plates, Railings, Anchor Bolts And Connections, Besides Walkway Straps Between Adjacent Girders.

Generally The Steel Details Include Only The Main Features Of Members. In Particular, The General Order Show The Attached Brackets. Sections Are Typical. Differences Between General Notes Indicated By Note.

ESTIMATED WEIGHT

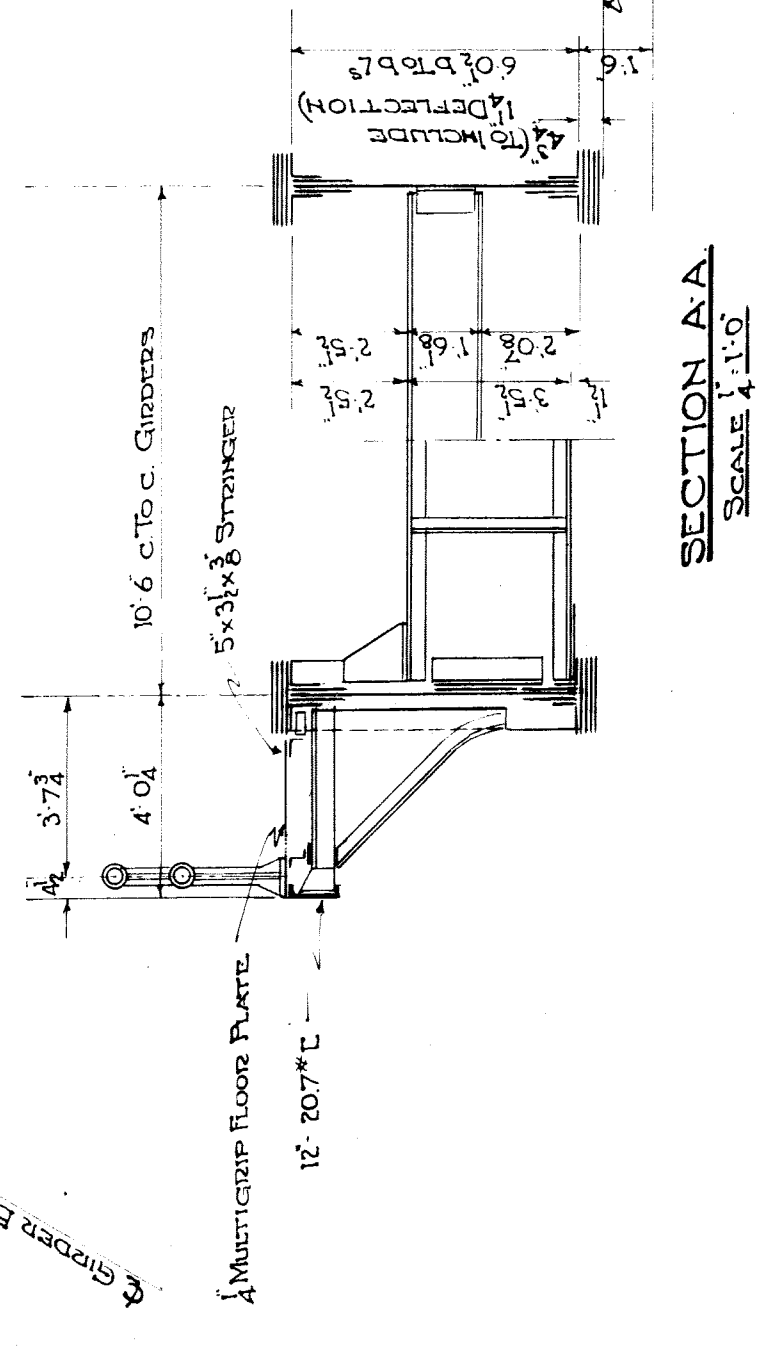
STRUCTURAL STEEL	711,832 LB.
CAST CADRON STEEL	13,336 LB.
PHOSPHOR BRONZE IR	272 LB.
TOTAL	725,440 LB.

[WEIGHTS DO NOT INCLUDE HANDRAIL MATERIAL]

TABLE OF STRESSES

MEMBER	LOAD IN FOOT-POUNDS	MAXIMUM MOMENT IN FOOT-POUNDS	MAXIMUM SHEAR IN POUNDS	SECTION
GIRDER	D.L.	2,499,000	133,500	Web Plate 72" x 8"
	L	1,100,000	131,500	Flange Plates 15" x 6"
	T	2,235,000	131,500	Covers (2 x 4 1/2" x 1/2" Each Flg)
	Total	5,199,000	481,500	
FLOOR BEAM	D.L.	16,500	6,330	18" x 55" WF For All Floor Beams
	L	59,500	21,600	Floor Beams
	T	33,500	21,600	Sec. Mod Provided 98.2 in ⁴
	Total	135,500	49,530	

ANCHOR BOLT LOCATION FOR ONE ABUTMENT



GENERAL STEEL NOTES

- DESIGN:** A.R.E.A. Specifications For Steel Railway Bridges, 1935.
- LOADINGS:** E 72 WITH FULL IMPACT.
- MATERIALS:** STRUCTURAL STEEL, ASTM SPECIFICATION A7-34. CAST IRON, ASTM SPECIFICATION A11-33. CARBON STEEL CASTINGS, ASTM SPECIFICATION A154-35T. PHOSPHOR BRONZE PLATES, ASTM SPECIFICATION B22-21. PAINT, MICHIGAN STATE HIGHWAY SPECIFICATIONS.
- FABRICATION:** SHALL BE IN ACCORDANCE WITH A.R.E.A. SPECIFICATIONS FOR STEEL RAILWAY BRIDGES, 1935, WITH PARTICULAR REFERENCE TO THE FOLLOWING: 1. ALL HOLES IN GIRDERS, FLANGES AND BOLTS IN 1 1/2" FILLS UNDER STIFFENERS TO BE SUB-DRIILLED 1/8" AND REAMED TO SIZE AFTER ASSEMBLY. 2. ALL OTHER HOLES FOR SHOP DIVERTS SHALL BE SUB-PUNCHED 1/8" SMALLER AND REAMED TO SIZE. 3. ALL HOLES FOR FIELD CONNECTIONS OF FLOOR BEAMS, CROSS GIRDERS AND END STRAINERS ARE TO BE SUB-PUNCHED 1/8" SMALLER AND REAMED TO SIZE THROUGH A METAL TEMPLATE, 1" THICK.
- DIVERTS:** DIVERTS ARE TO BE USED THROUGH THE WEBS AND FLANGES OF MAIN GIRDERS EXCEPT HOLES FOR ANCHOR BOLTS, END STRAINERS, AND DIVERTS FOR THE SHIP STRUTS. EXCEPT WHERE NOTED, DIVERTS FOR WEARING FLOOR PLATES.
- OPEN HOLES:** 1/8" THROUGH THE WEBS AND FLANGES OF MAIN GIRDERS EXCEPT HOLES FOR ANCHOR BOLTS, END STRAINERS, AND DIVERTS FOR THE SHIP STRUTS. EXCEPT WHERE NOTED, DIVERTS FOR WEARING FLOOR PLATES.
- PAINTING:** SHALL BE IN ACCORDANCE WITH MICHIGAN STATE HIGHWAY SPECIFICATIONS, WITH PARTICULAR REFERENCE TO THE FOLLOWING: 1. ALL STEEL SHALL BE PAINTED WITH AN ANTI-RUST PAINT AS NOTED BY SUPPLEMENTAL SPECIFICATIONS.
- WELD AND SHOP INSPECTION:** BY MICHIGAN STATE HIGHWAY DEPARTMENT.
- EXECUTION:** A.R.E.A. SPECIFICATIONS FOR STEEL RAILWAY BRIDGES, 1935.
- CHECKING:** STEEL COMPANY TO FURNISH DETAILS FOR CHECKING.
- TRACING:** STEEL COMPANY IS TO FURNISH INKED LINES TRACINGS OF ALL SHOP DRAWINGS FOR PERMANENT RECORD.
- ADDITIONAL NOTE:** SEE SHEET NO. 17

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER

SEC. 1 T. 1 S. R. 11 E.
BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

STRUCTURAL STEEL
GENERAL PLAN AND NOTES

APPROVED: *W. A. ...* CHIEF ENGINEER
APPROVED: *...* ENGINEER OF BRIDGE DESIGN

SHEET 16 OF 21

XI OF 82-22-20

REVISIONS

NO.	DESCRIPTION	DATE	BY

76'-2" O.T.O. GIRDER

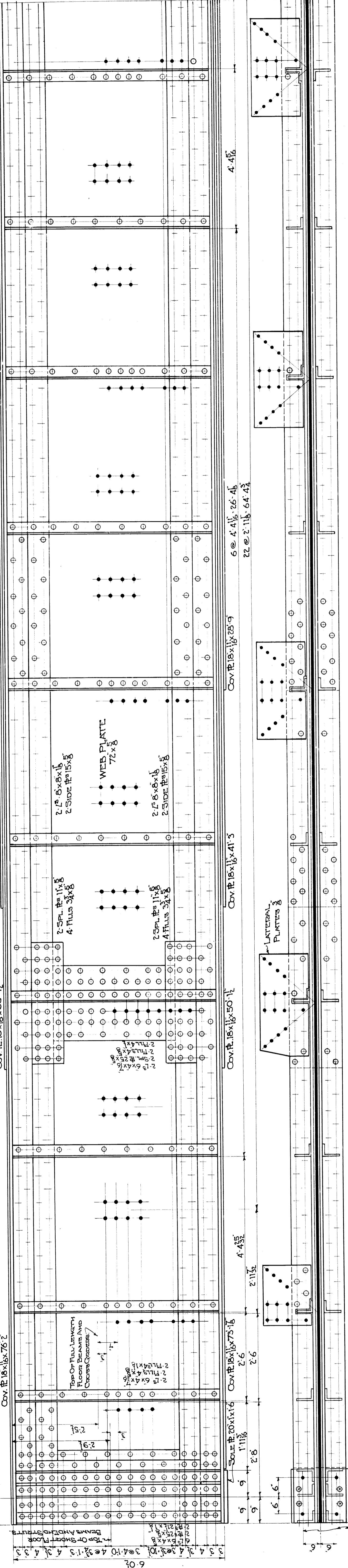
74'-8" C.T.O.C. BEARINGS

Cov. Pl. 18x11/2x28'-9"

Cov. Pl. 18x11/2x41'-3"

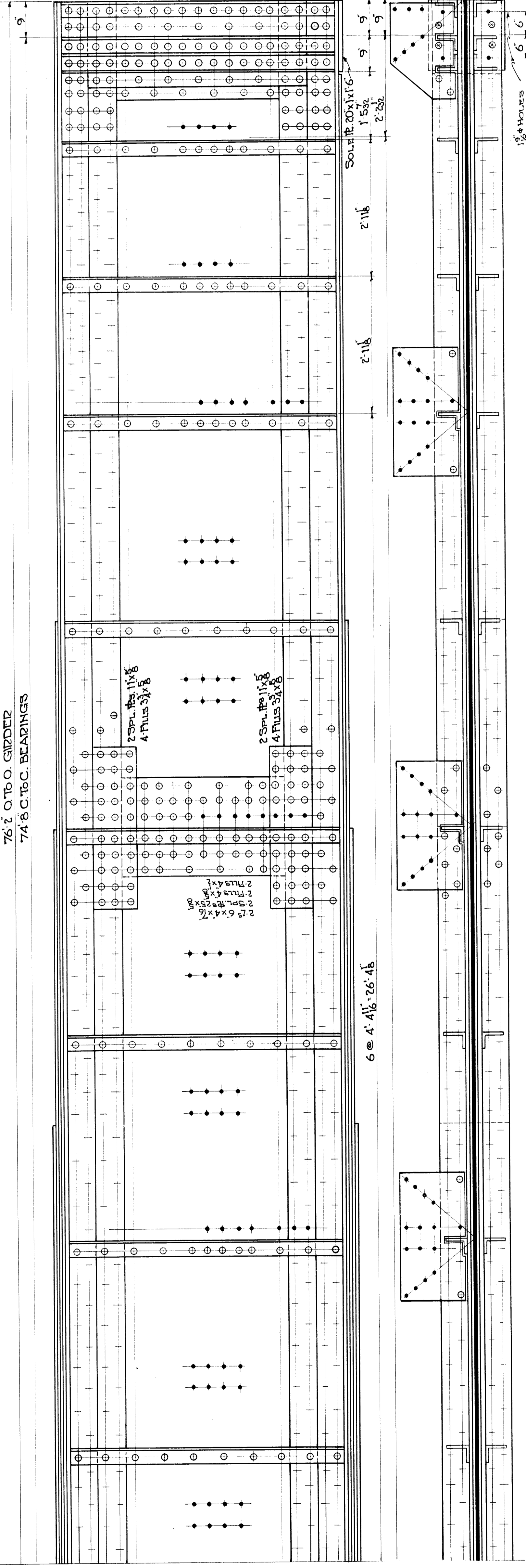
Cov. Pl. 18x11/2x50'-1"

Cov. Pl. 18x11/2x76'-2"



APPROXIMATE WEIGHT OF ONE GIRDER - 69,200 LB.

76'-2" O.T.O. GIRDER
74'-8" C.T.O.C. BEARINGS



GENERAL STEEL NOTES CONTINUED

THE HIGHWAY DEPARTMENT HAS CONTRACTED FOR THE "FURNISHING AND FABRICATING" OF THE STRUCTURAL STEEL FOR THE SEVEN MILE ROAD GRADE SEPARATION WHICH WILL BE USED FOR THE TEMPORARY BRIDGE AT JOHN D. STREET, AND THIS STRUCTURAL STEEL WILL BE DELIVERED TO THE CONTRACTOR AT THE SITE.

THE ITEMS OF STRUCTURAL STEEL FOR THE SEVEN MILE ROAD GRADE SEPARATION WHICH ARE NOT INCLUDED IN THE ABOVE CONTRACT BUT ARE TO BE FABRICATED & ERECTED BY THE CONTRACTOR ARE BLOCKED IN AND MARKED ON THE PLANS TO BE FABRICATED AND ERECTED AS A PART OF THIS CONTRACT. THE ESTIMATED WEIGHTS OF THE STRUCTURAL STEEL TO BE FABRICATED & ERECTED IS AS FOLLOWS:

BEARING PLATES, PINS, BOLTS ETC.	15,632 LB.
CAST CARBON STEEL	13,336 LB.
PHOSPHOR BRONZE PLATES	272 LB.
TOTAL	29,240 LB.

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
SEC. 1 T. 15. R. 11E. TWP. WAYNE CO.
BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

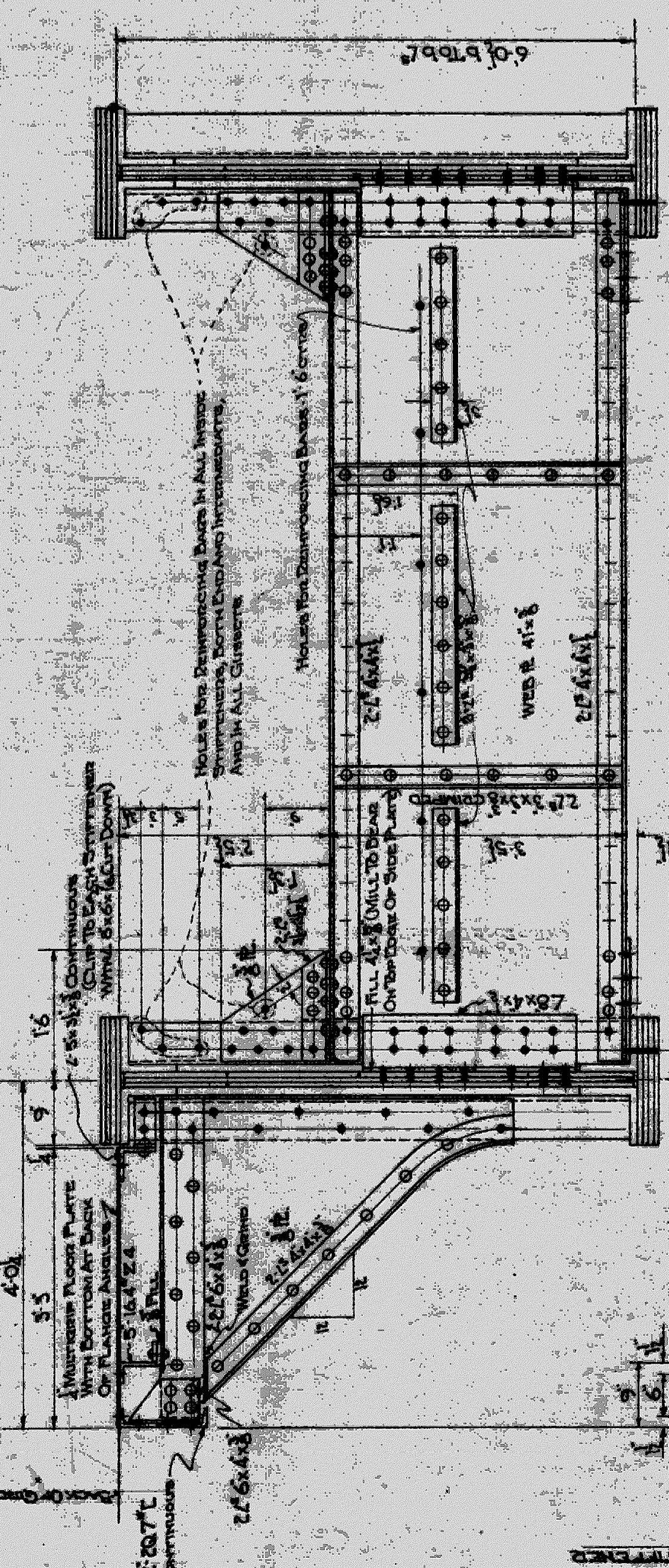
DETAIL OF GIRDER
GIRDERS ARE ALIVE EXCEPT FOR DIRECTION AND WALKWAY CONNECTIONS.
& GIRDERS REQUIRED WITH DIMENSIONS AS NOTED.

SCALE: 3/4" IN. = 1 FT.

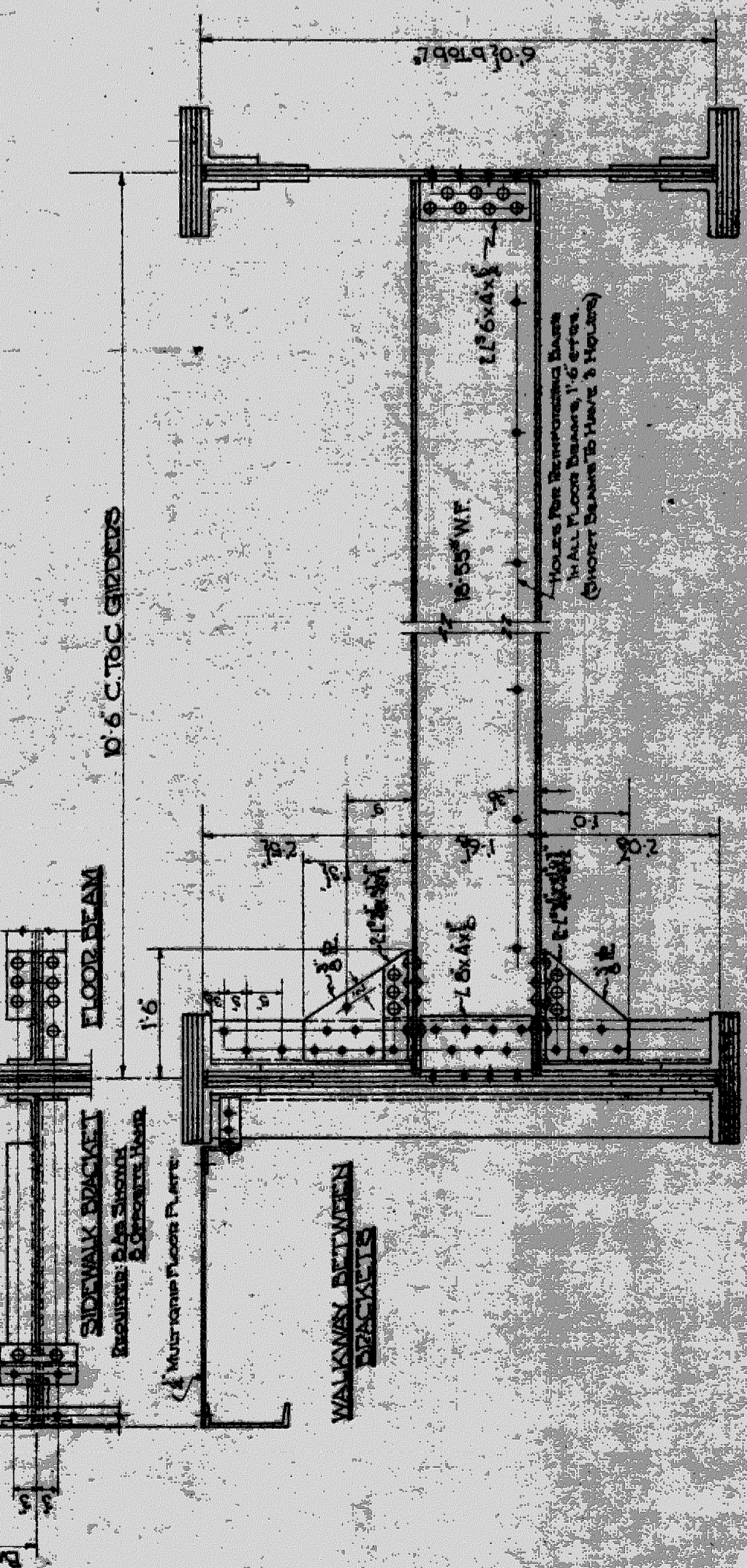
APPROVED	W. J. ...	CHIEF ENGINEER
APPROVED	...	ENGINEER OF BRIDGE DESIGN
SQUAD BOSS	P. A. W.	MAY 1937
DRAWN BY	P. E. M.	MAY 1937
TRACED BY	W. H. F.	MAY 1937
CHECKED BY	P. A. W.	JUNE 1937
		SHEET 17 OF 21

XI of 82-22-20

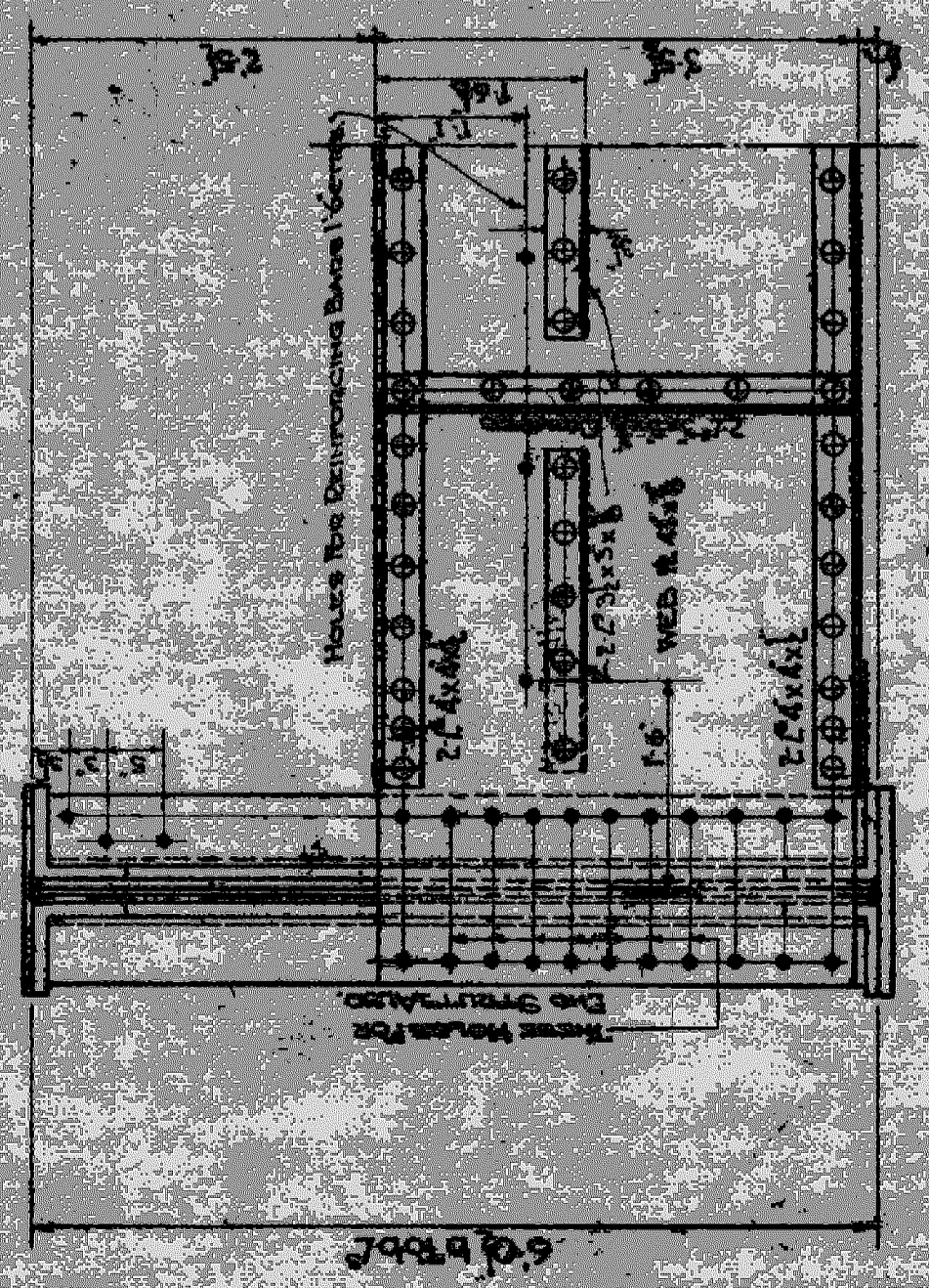
NO.	REVISIONS	DESCRIPTION	DATE	BY



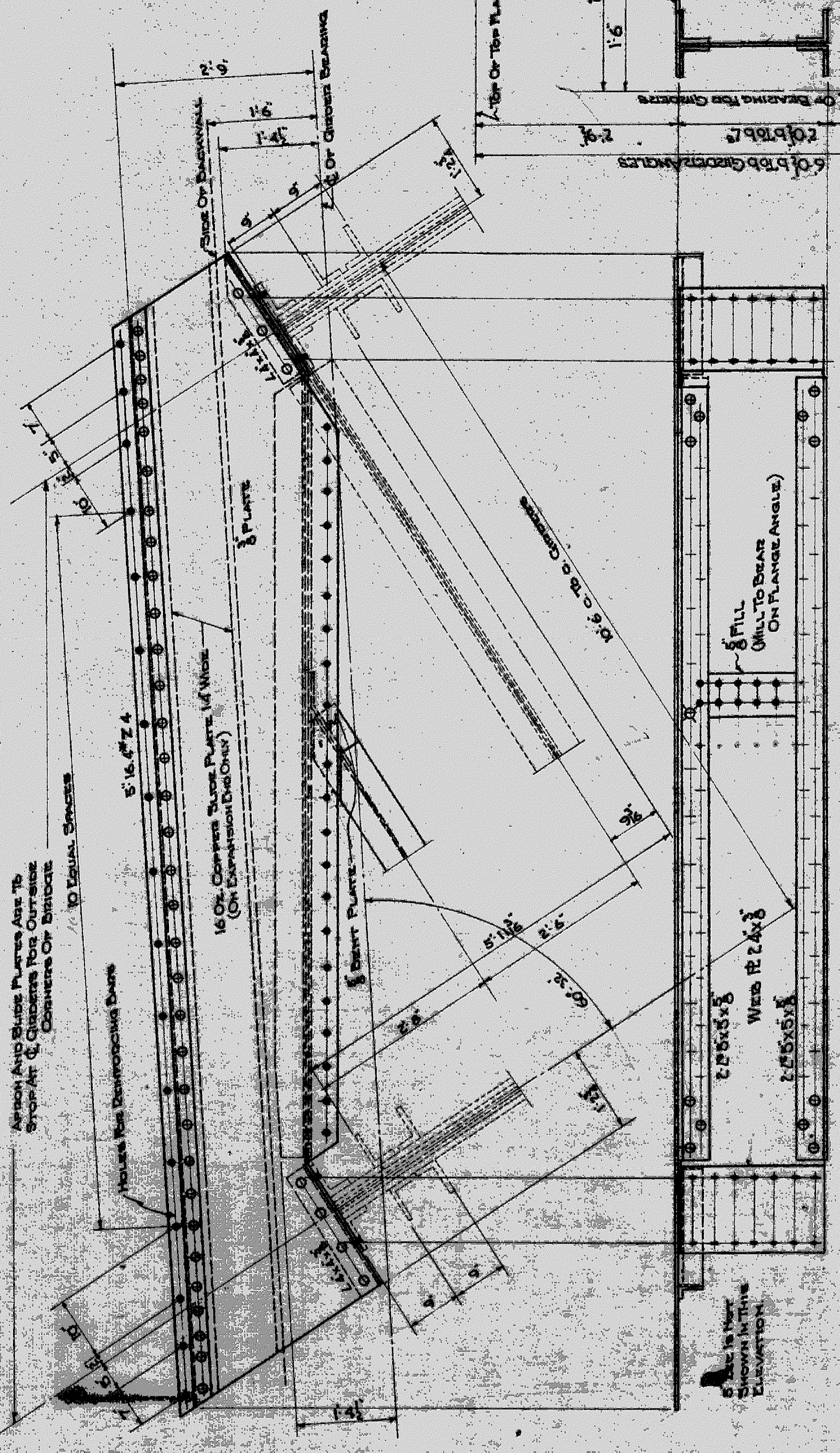
TYPICAL CROSS GIRDER
Scale: 3/16"



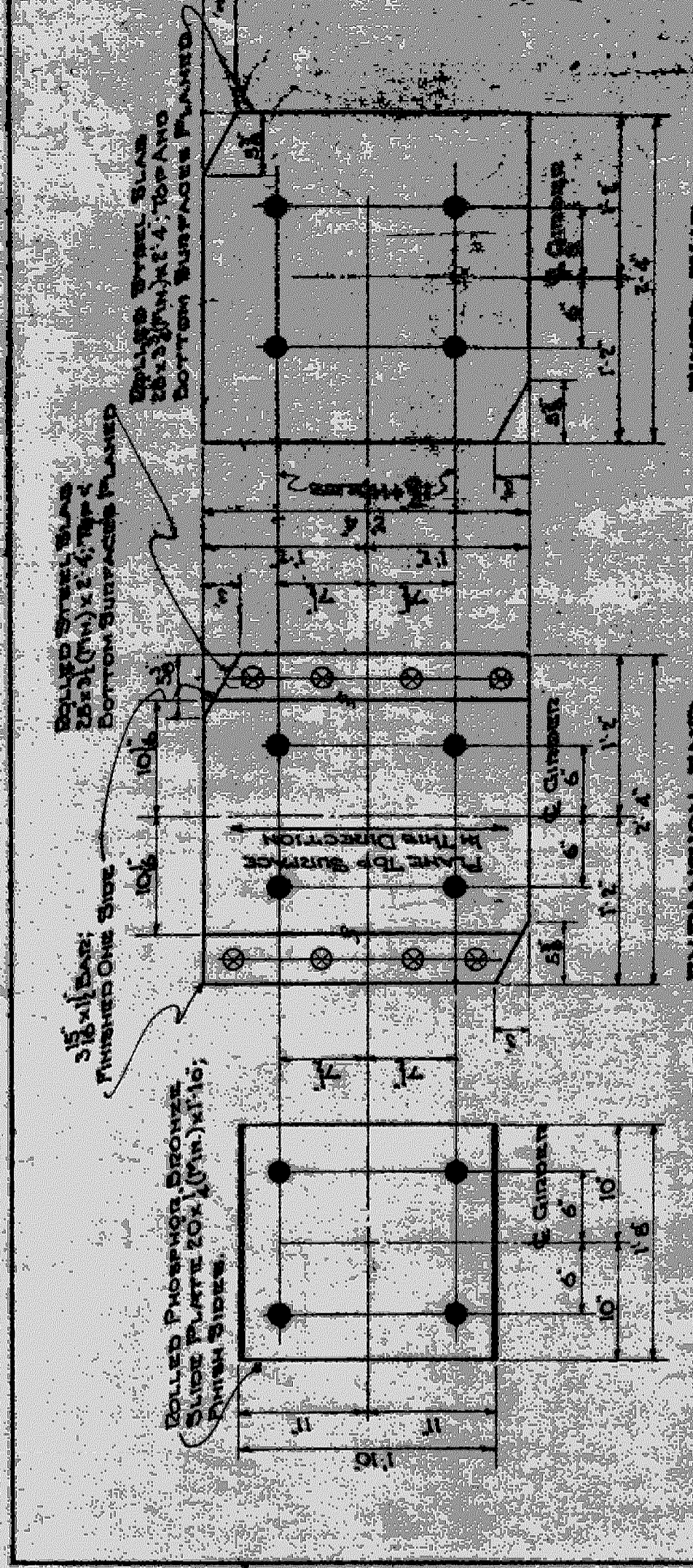
TYPICAL CONNECTION FOR MILLER'S FLOOR BEAMS
Scale: 3/16"



SPECIAL CONNECTION FOR END CROSS GIRDER
Scale: 3/16"



TYPICAL DETAIL OF END STEEL BALLAST APRON SIDE PLATE AND BENT PLATE CONNECTION FOR SHORT FLOOR BEAM
Scale: 3/16"



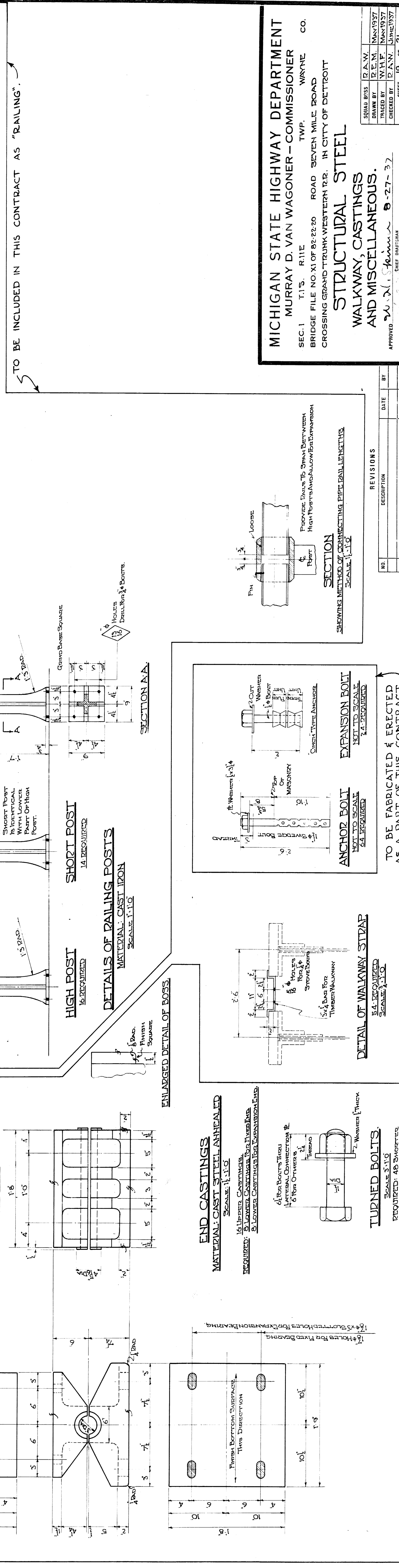
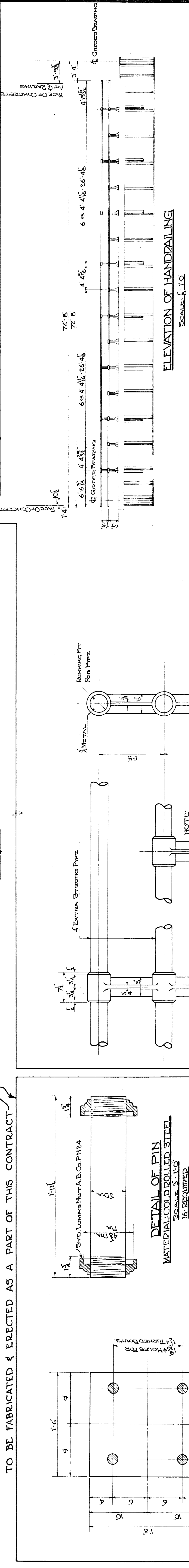
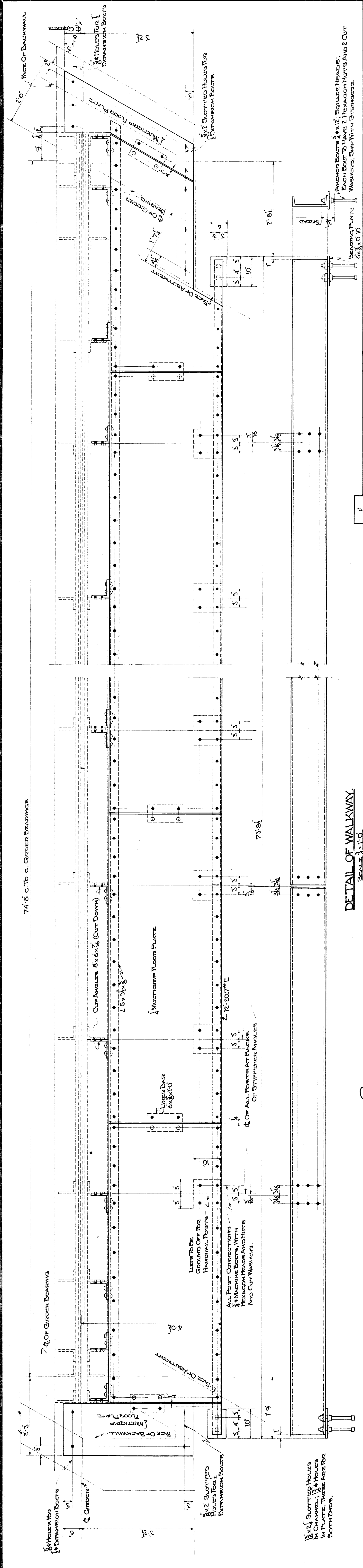
SLIDE PLATE REINFORCED
EXPANSION END BEARING PLATE REINFORCED
Scale: 3/16"

TO BE FABRICATED & ERECTED AS A PART OF THIS CONTRACT

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 155. R. 11 E
 BRIDGE FILE NO. 31 OF 50-25-20 ROAD SEVEN MILES ROAD
 CROSSING GRAND TRUNK WESTERN DIS. HIGHWAY OF DETROIT
STRUCTURAL STEEL
TYPICAL DETAILS AND BEARING PLATES.
 APPROVED: *J. A. Schumaker* 8-27-37
 DESIGNED BY: *J. A. Schumaker* 8-29-37
 DRAWN BY: *J. A. Schumaker*
 CHECKED BY: *J. A. Schumaker*
 SCALE: 3/16"

NO.	REVISIONS	DATE	BY

15-201-X-17-1
 No 82-22-80



TO BE FABRICATED & ERECTED AS A PART OF THIS CONTRACT

TO BE INCLUDED IN THIS CONTRACT AS 'RAILING'

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 1 S. R. 11 E TWP. WAYNE CO.
 BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
 CROSSING GRAND TRUNK WESTERN RR. IN CITY OF DETROIT

STRUCTURAL STEEL
WALKWAY, CASTINGS
AND MISCELLANEOUS.

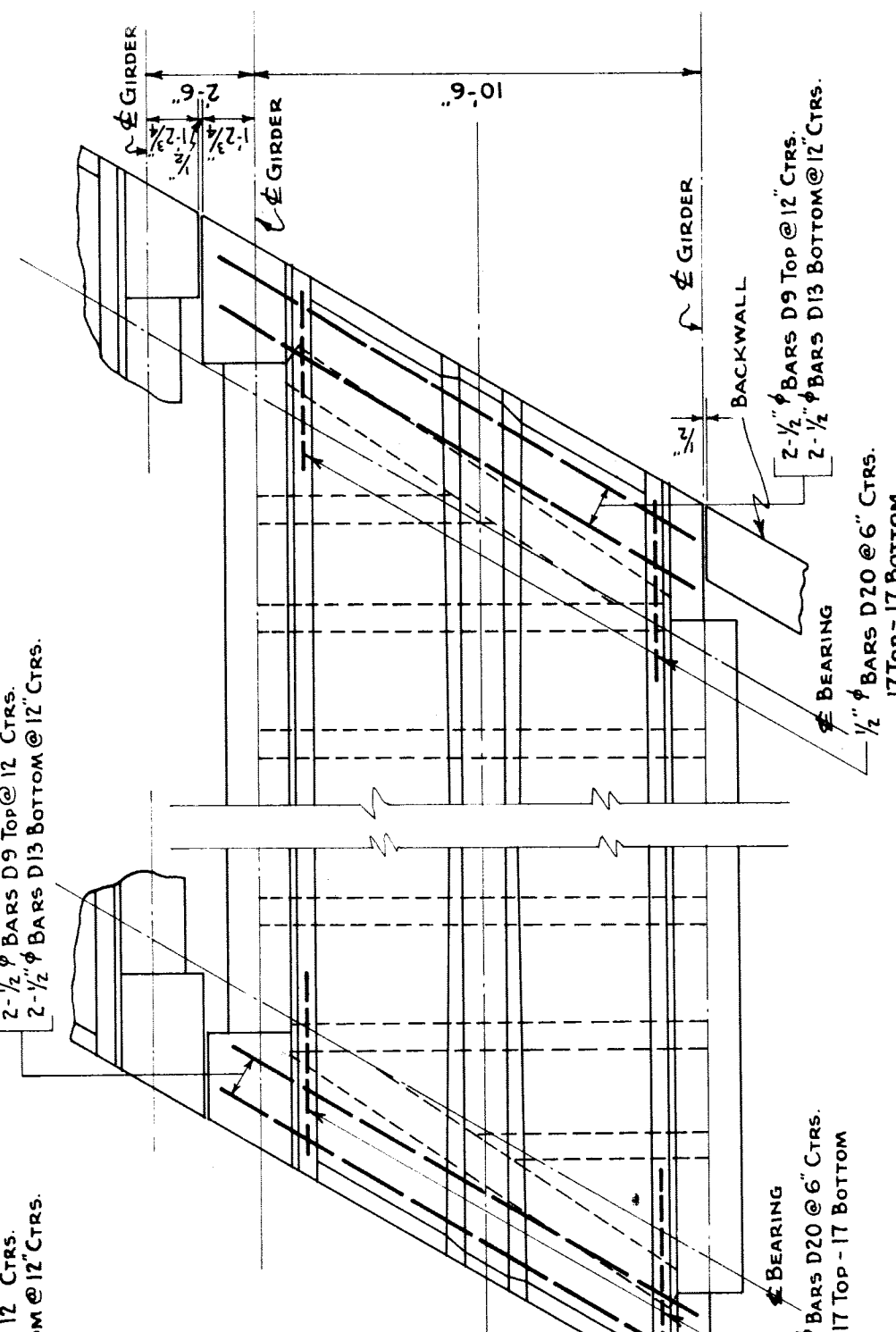
APPROVED: *W. A. Stein* 8-27-37
 CHIEF ENGINEER

DRAWN BY	R. A. W.	DATE	MAY 1937
CHECKED BY	W. H. F.	DATE	MAY 1937
APPROVED	R. A. W.	DATE	JUNE 1937
SHEET	19	OF	21

ENGINEER OF BRIDGE DESIGN

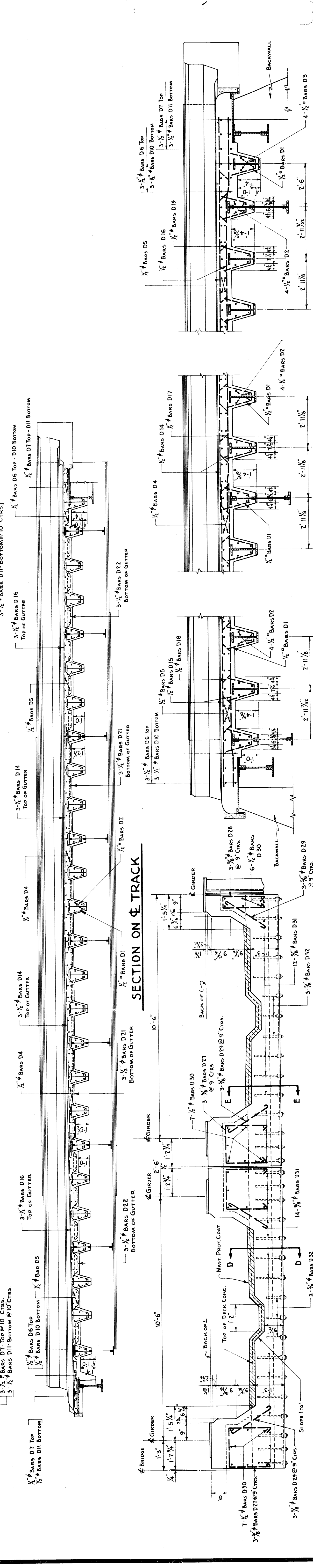
NO.	REVISIONS	DESCRIPTION	DATE	BY

74'-5" C TO C BEARINGS
22 @ 2'-11 1/8" . 64' . 4 1/2"



PLAN OF INSIDE SPAN
SCALE: 1/4" IN. = 1 FT.

PART PLAN OF OUTSIDE SPAN
SAME AS INSIDE SPAN EXCEPT FOR OUTSIDE CORNERS



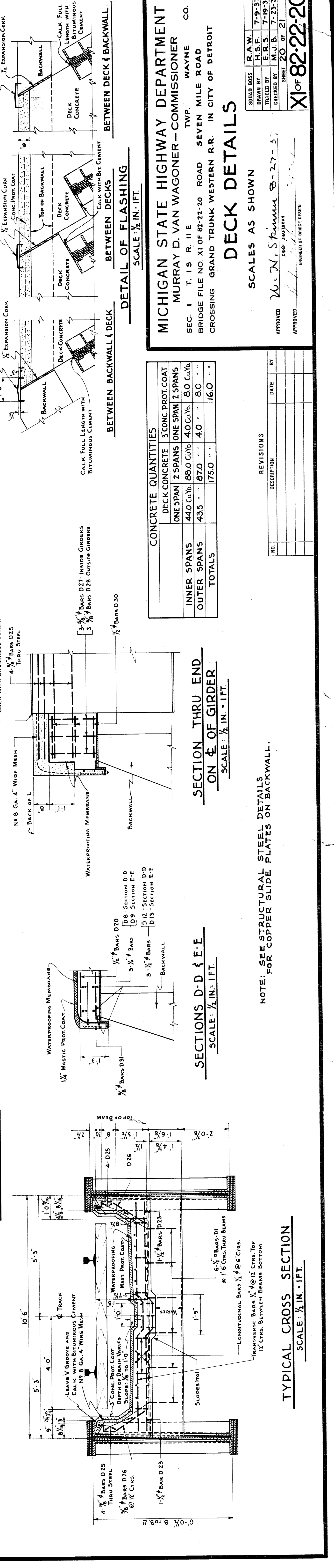
SECTION A-A
SCALE: 1/2" IN. = 1 FT.

SECTION B-B
SCALE: 3/8" IN. = 1 FT.

SECTION C-C
SCALE: 1/2" IN. = 1 FT.

SECTION D-D & E-E
SCALE: 1/2" IN. = 1 FT.

SECTION THRU END ON & OF GIRDER
SCALE: 1/2" IN. = 1 FT.



CONCRETE QUANTITIES

	DECK CONCRETE	3" CONC PROT COAT
ONE SPAN	440 Cu Yd	88.0 Cu Yd
TOTALS	435	175.0

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER CO.
SEC. 1 T 1 S R 11 E
BRIDGE FILE NO. XI OF 82-22-20 ROAD SEVEN MILE ROAD
CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

APPROVED *M.J. B.* M.J. B.
CHECKED BY M.J. B. 7-23-37
DRAWN BY H.S.F. 7-9-37
SQUAD BOSS R.A.W. 7-9-37

DECK DETAILS
SCALE: 1/2" IN. = 1 FT.

NOTE: SEE STRUCTURAL STEEL DETAILS ON BACKWALL.

TYPICAL CROSS SECTION
SCALE: 1/2" IN. = 1 FT.

REVISIONS

NO.	DESCRIPTION	DATE	BY

XI of 82-22-20

BAR LIST - DECK

Table with columns: MARK, N^O REQ'D, SIZE, LENGTH, BENDING DIAGRAM, WEIGHT. Includes items D1 through D22.

Michigan State Highway Department
Murray D. Van Wagoner - Commissioner
Wayne County, Michigan
Schedule of Reinforcing Steel

BAR LIST - WING WALLS.

Table with columns: MARK, N^O REQ'D, SIZE, LENGTH, BENDING DIAGRAM, WEIGHT. Includes items W1 through W38.

Summary of Reinforcing Bar Weights
Abutments 172,596
Wing Walls 11,467
Deck 22,817
Sewer Protection Bracing 4,198
Grand Total 211,078

BAR LIST - ABUTMENTS

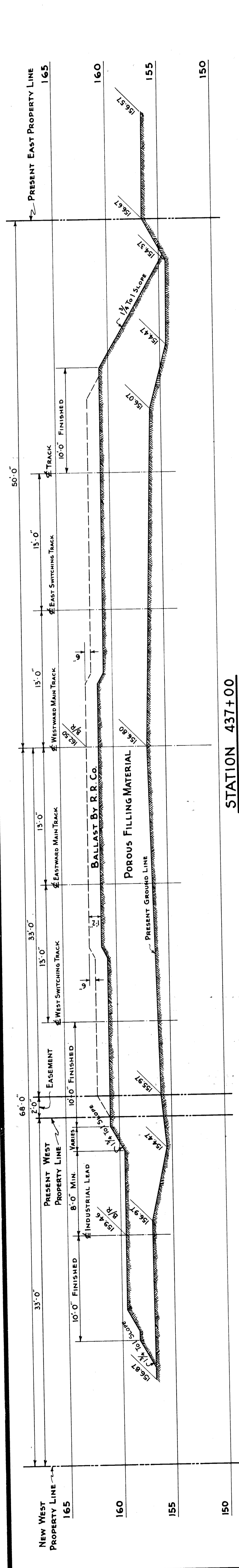
Table with columns: MARK, N^O REQ'D, SIZE, LENGTH, BENDING DIAGRAM, WEIGHT. Includes items A25 through A54.

Summary of Reinforcing Bar Weights (Continued)
TOTAL WEIGHT 172,596

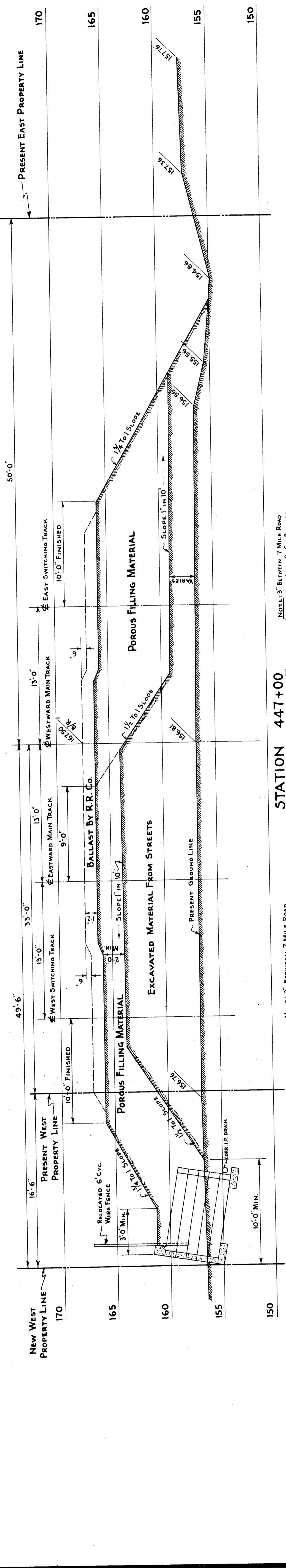
BAR LIST - ABUTMENTS

Table with columns: MARK, N^O REQ'D, SIZE, LENGTH, BENDING DIAGRAM, WEIGHT. Includes items A1 through A18.

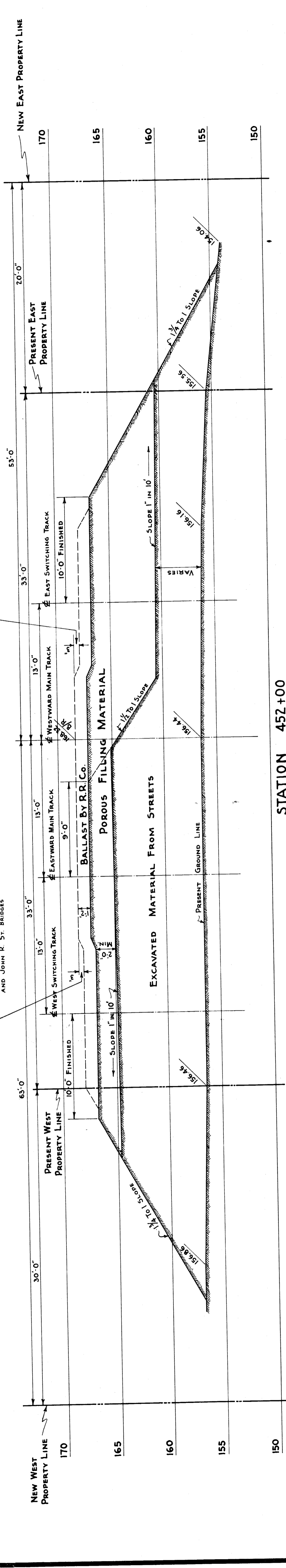
Summary of Reinforcing Bar Weights (Continued)
TOTAL WEIGHT 2,346



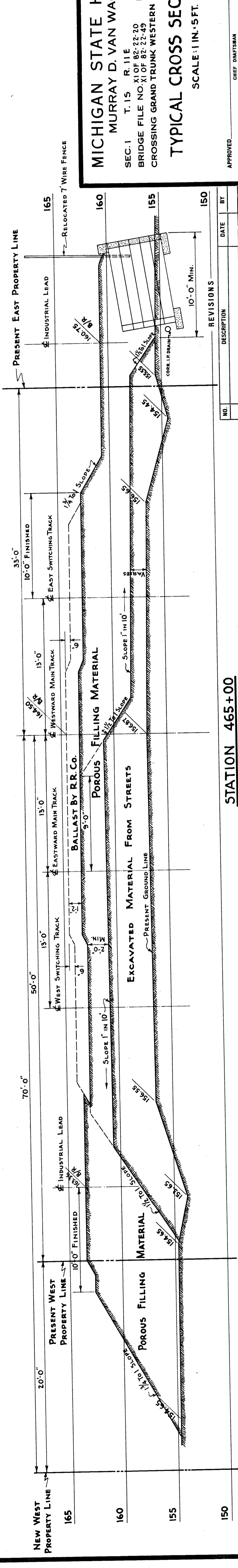
STATION 437+00



STATION 447+00



STATION 452+00



STATION 465+00

MICHIGAN STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER - COMMISSIONER
 SEC. 1 T. 15 R. 11 E. TWP. WAYNE CO.
 BRIDGE FILE NO. X1 OF 82-22-20 ROADS JOHN R. ST. AND SEVEN MILE RD.
 CROSSING GRAND TRUNK WESTERN R.R. IN CITY OF DETROIT

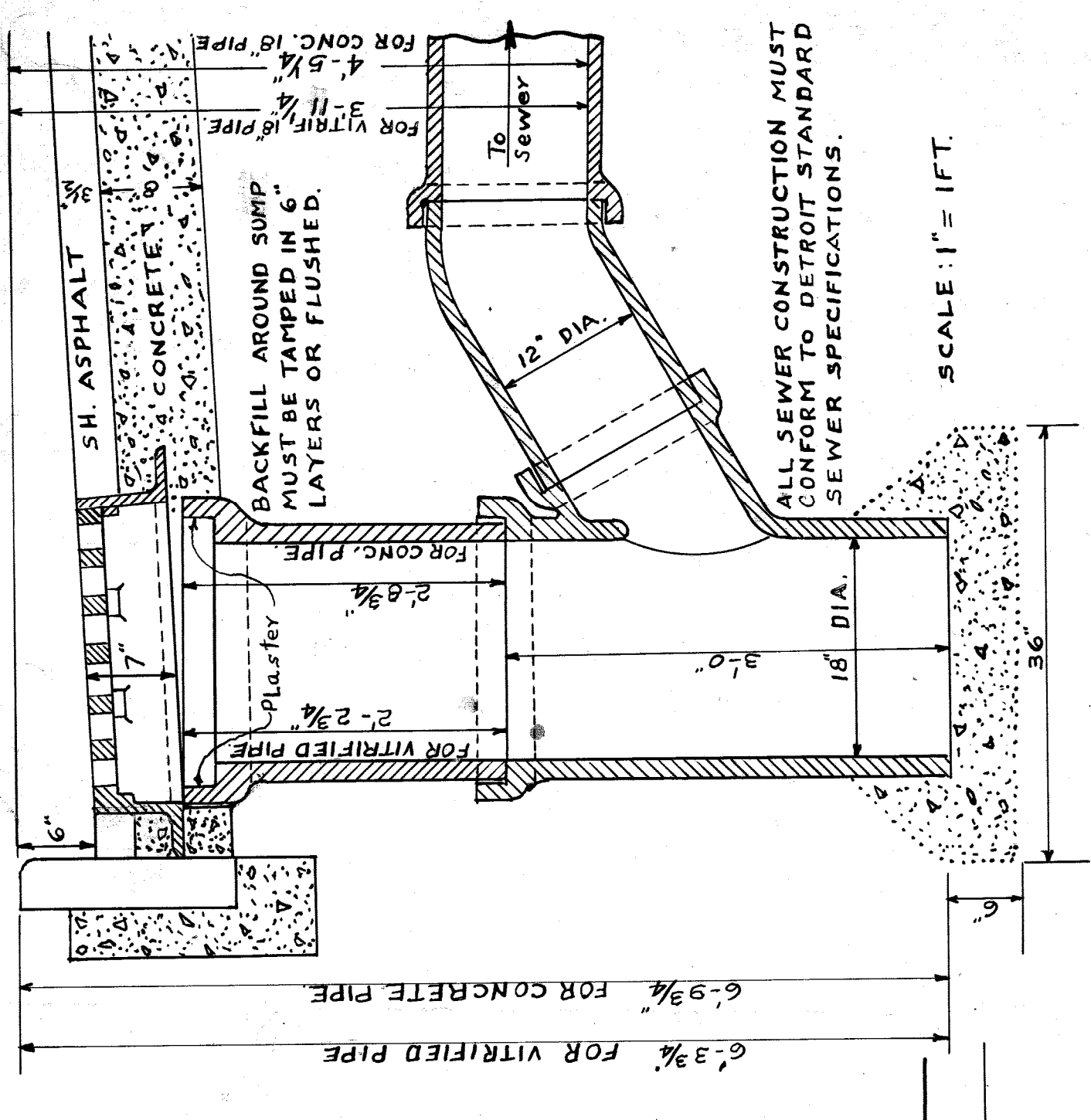
TYPICAL CROSS SECTIONS OF RIGHT OF WAY
 SCALE: 1 IN. = 5 FT.

APPROVED: _____
 DATE: _____
 REVISIONS: _____

NO.	DESCRIPTION	DATE	BY

CHIEF ENGINEER: _____
 ENGINEER OF BRIDGE DESIGN: _____

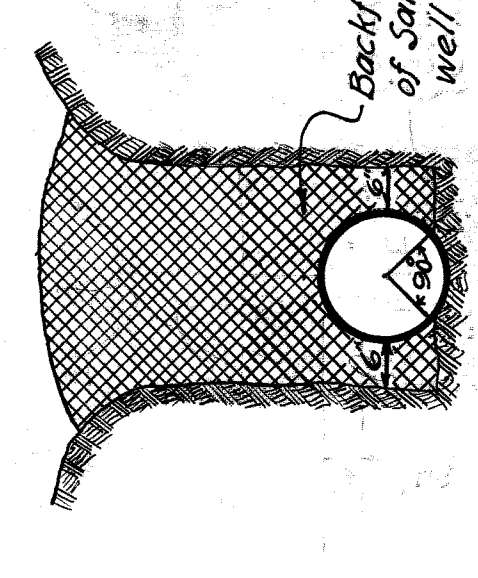
SQUAD BOSS	RAW	8-10-37
DRAWN BY	H.S.F.	8-10-37
TRACED BY	E.R.S.	8-16-37
CHECKED BY	T.H.J.	8-15-37
		SHEET



ALL SEWER CONSTRUCTION MUST CONFORM TO DETROIT STANDARD SEWER SPECIFICATIONS.

SCALE: 1" = 1' FT.

STANDARD CONSTRUCTION OF FLAT GRATE CATCH BASIN.



METHOD OF LAYING PIPE IN OPEN CUT BOTTOM 90° SECTOR TO BE HAND SHAPED TO EXACT FIT OF PIPE. ADDITIONAL EXCAVATIONS TO BE MADE FOR BELLS OF PIPES.

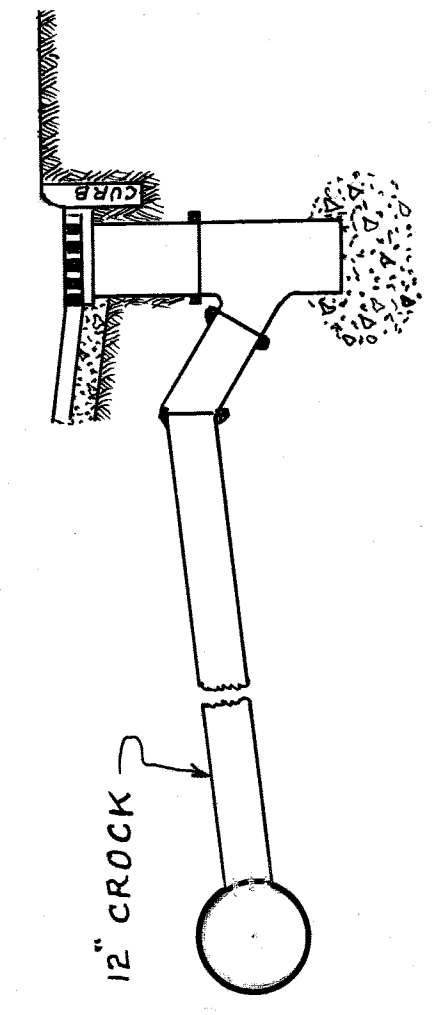
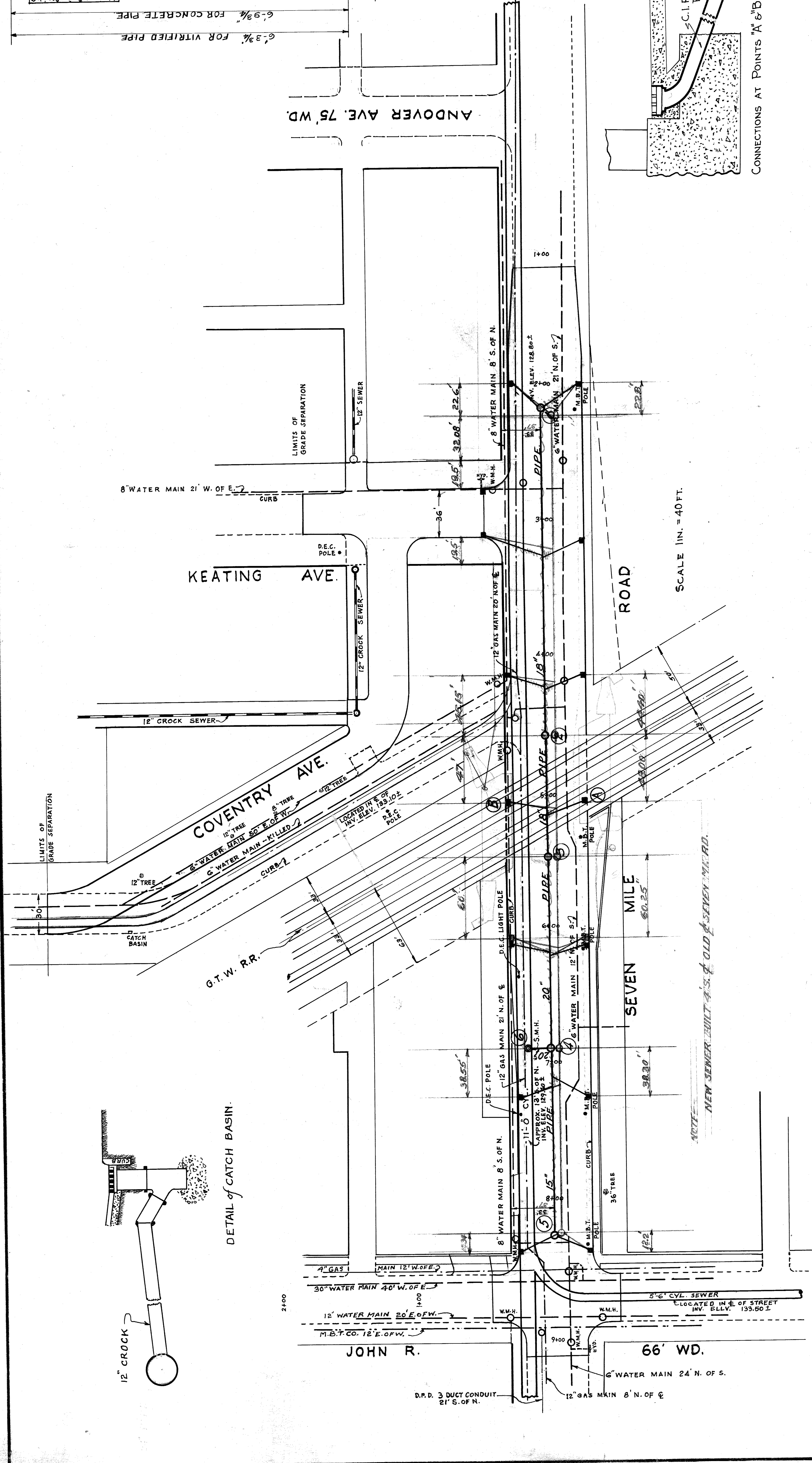
Backfill to be made of Sand or Gravel well-tamped.

BILL OF MATERIALS

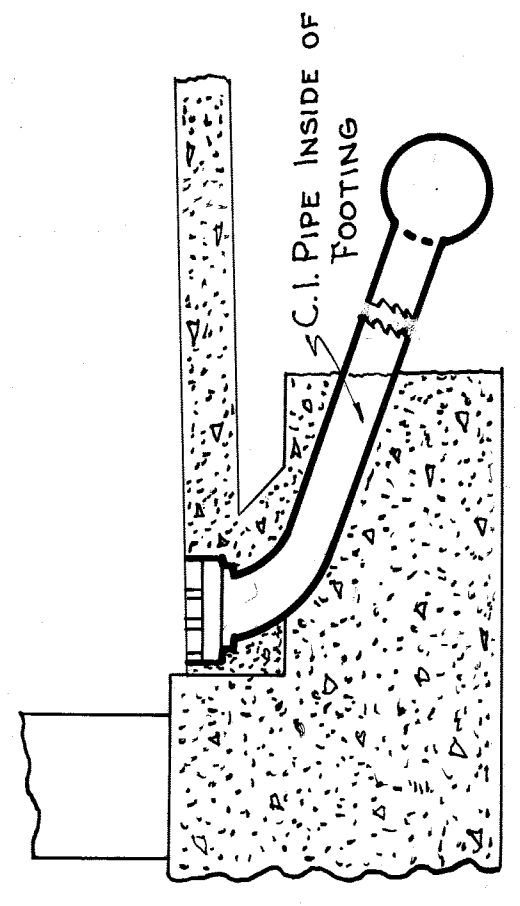
TOTAL LENGTH OF SEWER	110'-4" = 106.33 FT. MORE OR LESS
" 20" PIPE	16.65' = 15.94
" 18" "	53.87' = 52.57
" 15" "	136.10' = 132.63
" 12" "	48.10' = 46.71

FIVE (5) STANDARD MANHOLES INC. IRON STEPS & COVERS.
FIFTEEN (15) STANDARD CATCH BASINS.

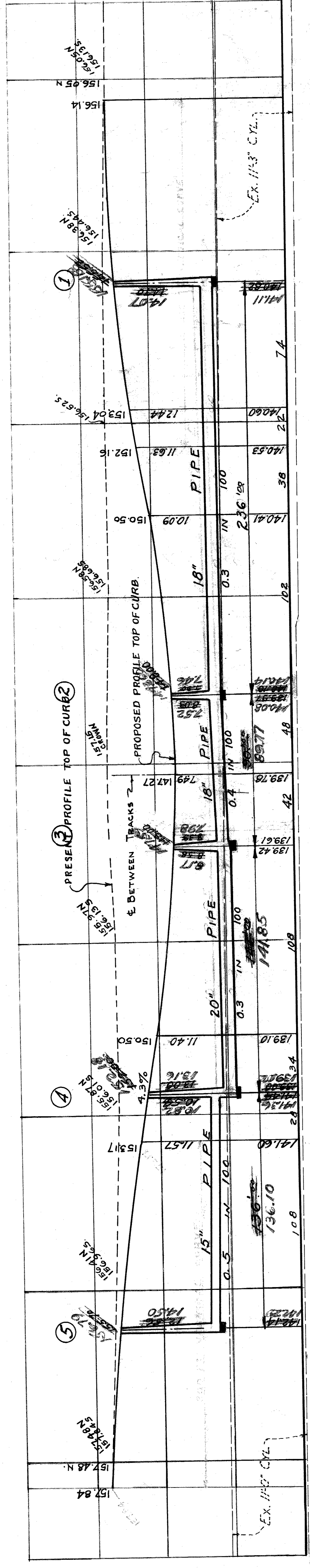
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF PUBLIC UTILITIES
SEVEN MILE ROAD
GRADE SEPARATION
DRAINAGE PLAN
SCALE AS INDICATED OCTOBER, 1937



DETAIL OF CATCH BASIN.

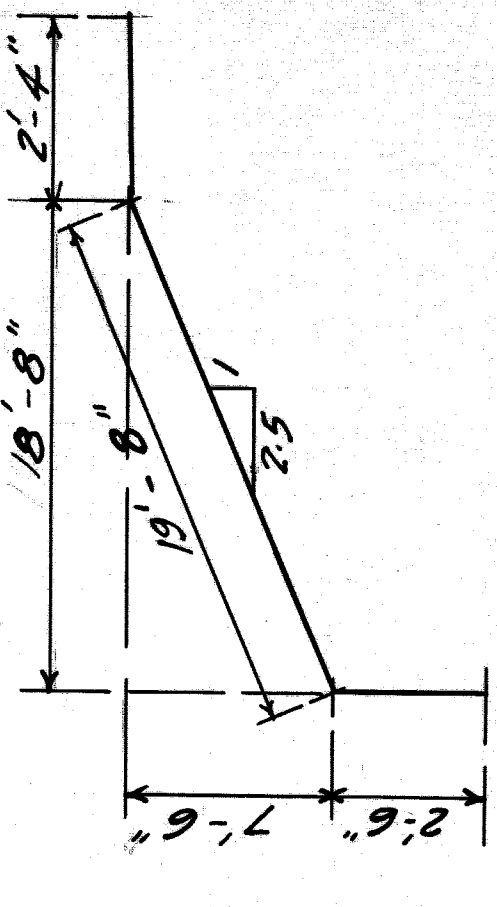
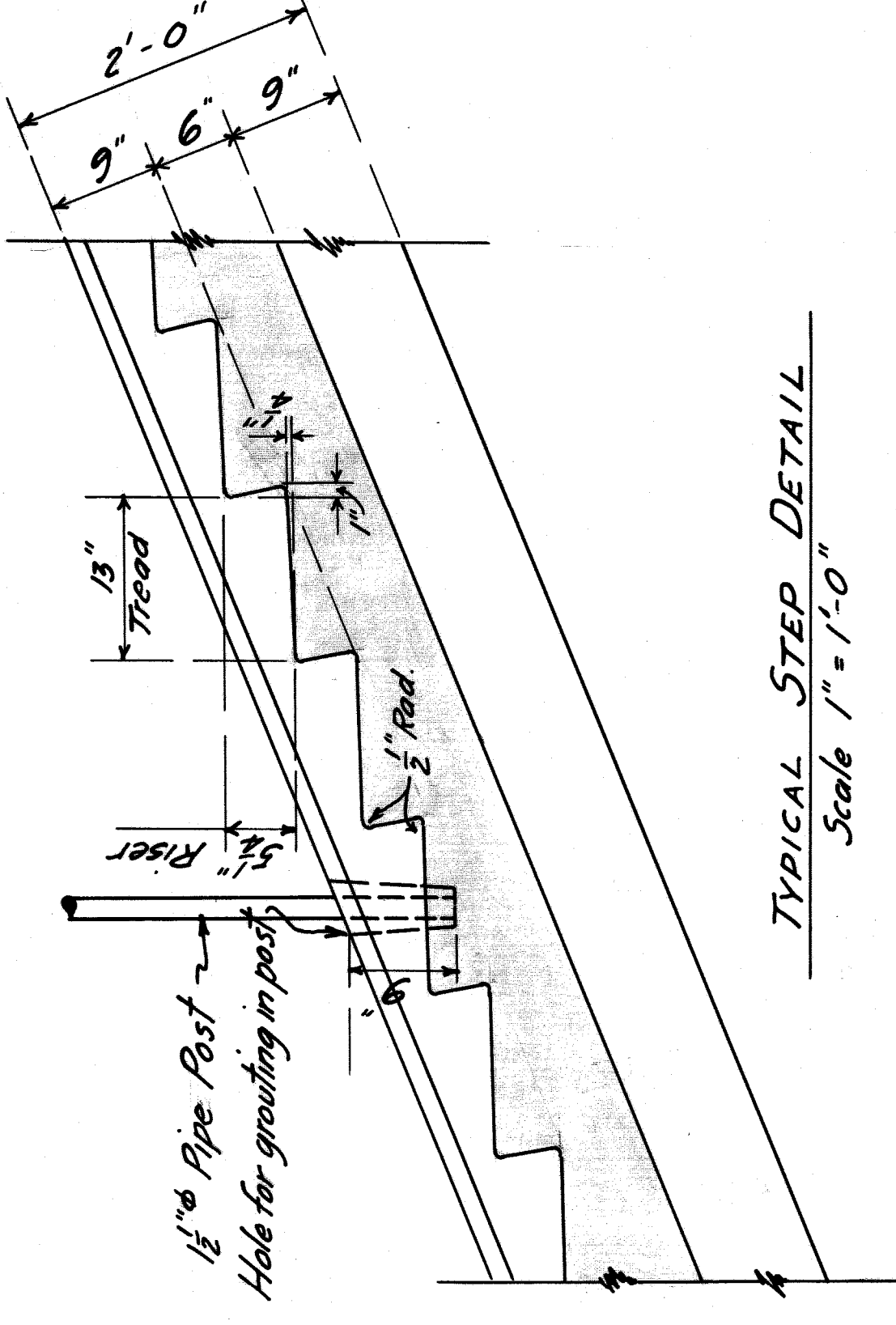
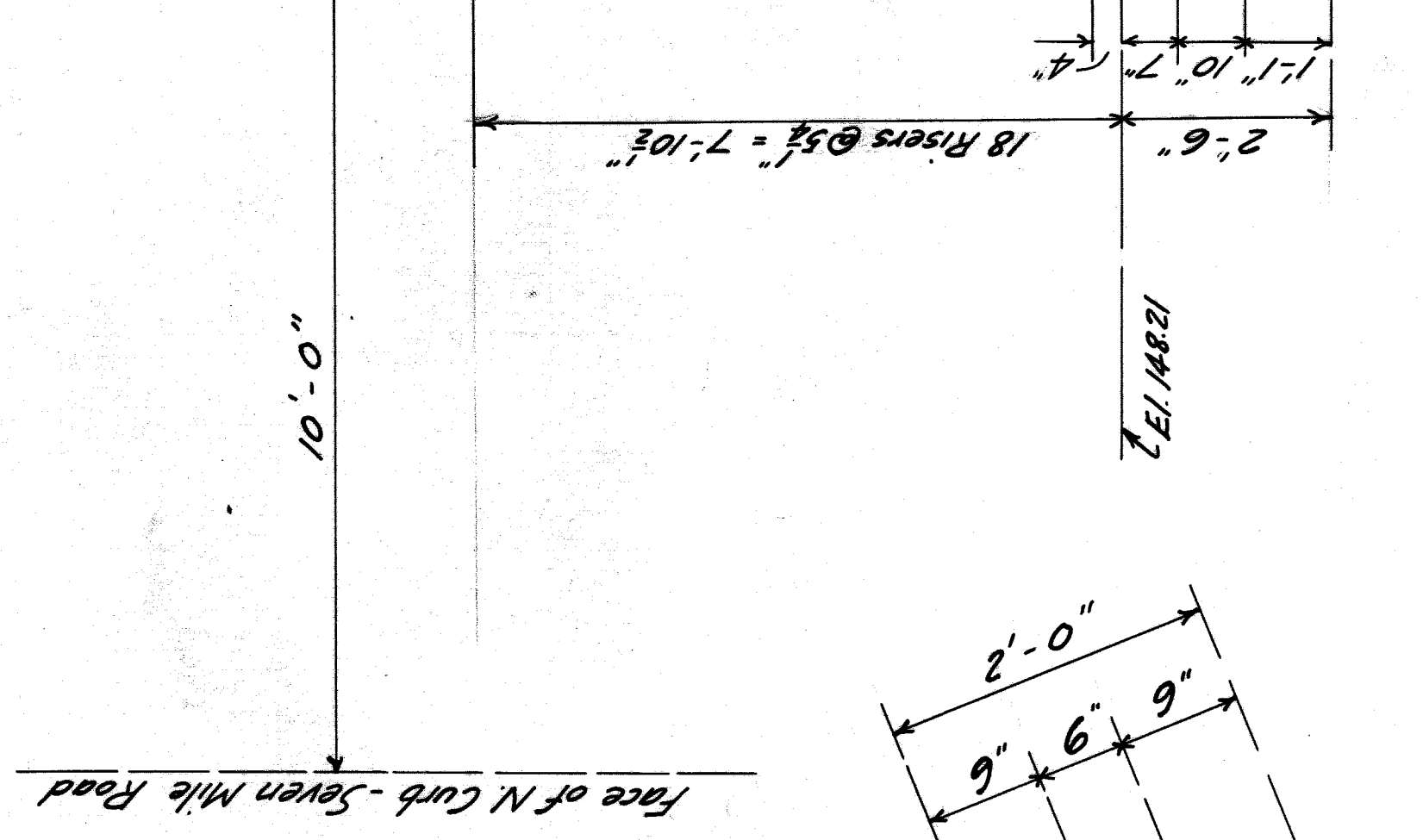
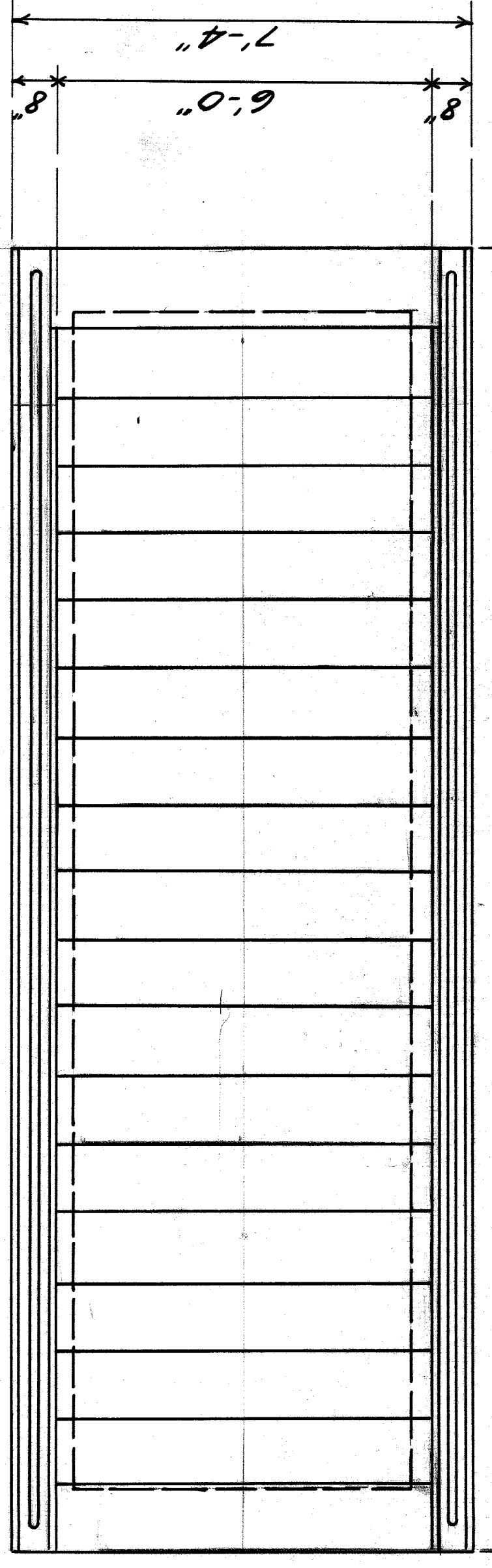
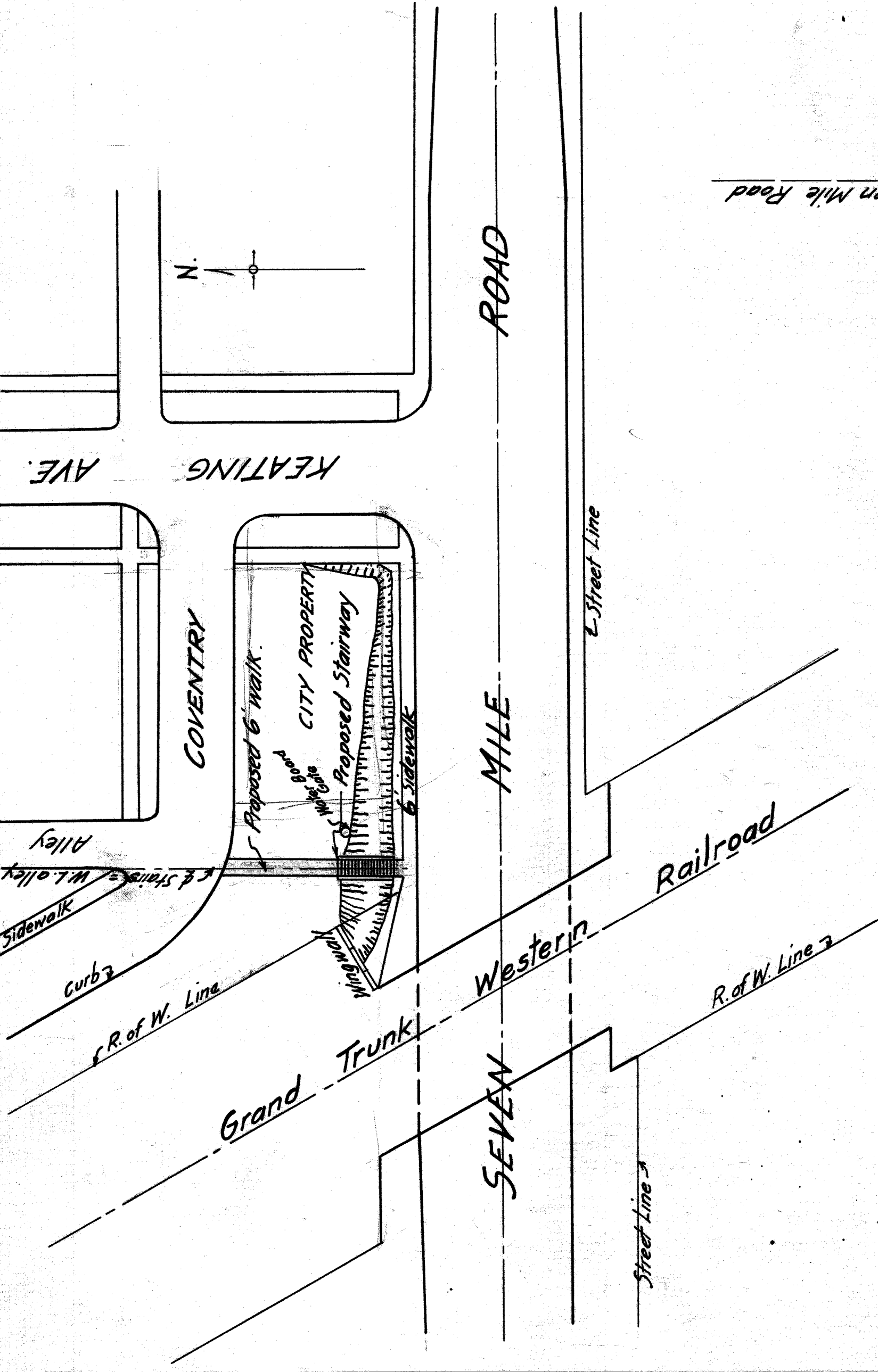


CONNECTIONS AT POINTS A & B



SCALE 1/4" = 10 FT.

REVISIONS
A. 11/19/37 Backfill in Trench



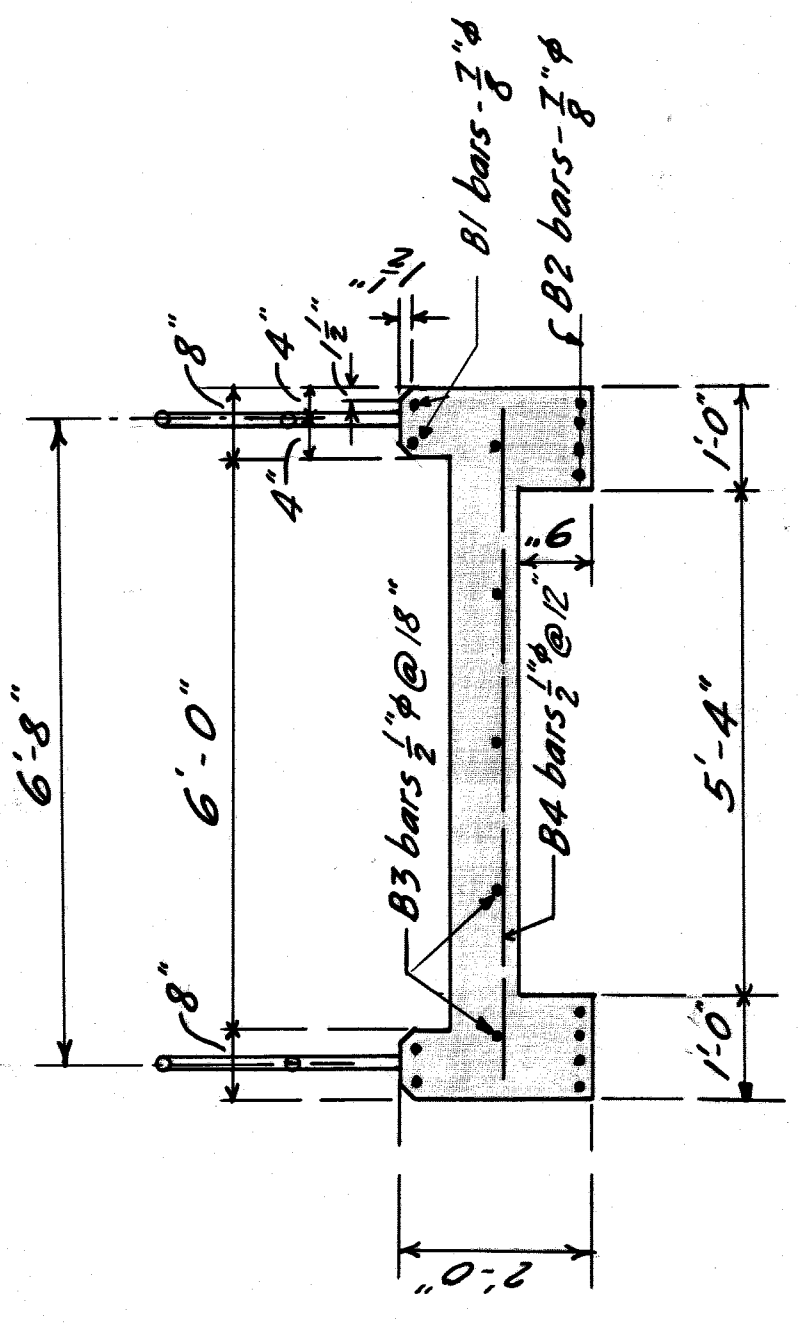
MARK	NO.	SIZE	LENGTH	REMARKS
B1	4	3/8" φ	24'-6"	Bent
B2	8	3/8" φ	22'-2"	Straight
B3	5	3/8" φ	22'-2"	"
B4	29	1/2" φ	7'-0"	"

GENERAL NOTES.
Concrete: Grade A 1:2:3 for ult 3000*1a
Exposed surfaces of Concrete shall be rubbed immediately after forms are removed. Exposed corners shall be beveled only as called for on plan.

QUANTITIES

Concrete	80 C.Ys.
Reinf Steel	775 Lbs.
Pipe Railing	44 Lin. Ft.
6" Sidewalk	300 Sq. Ft.

SECT. A-A.



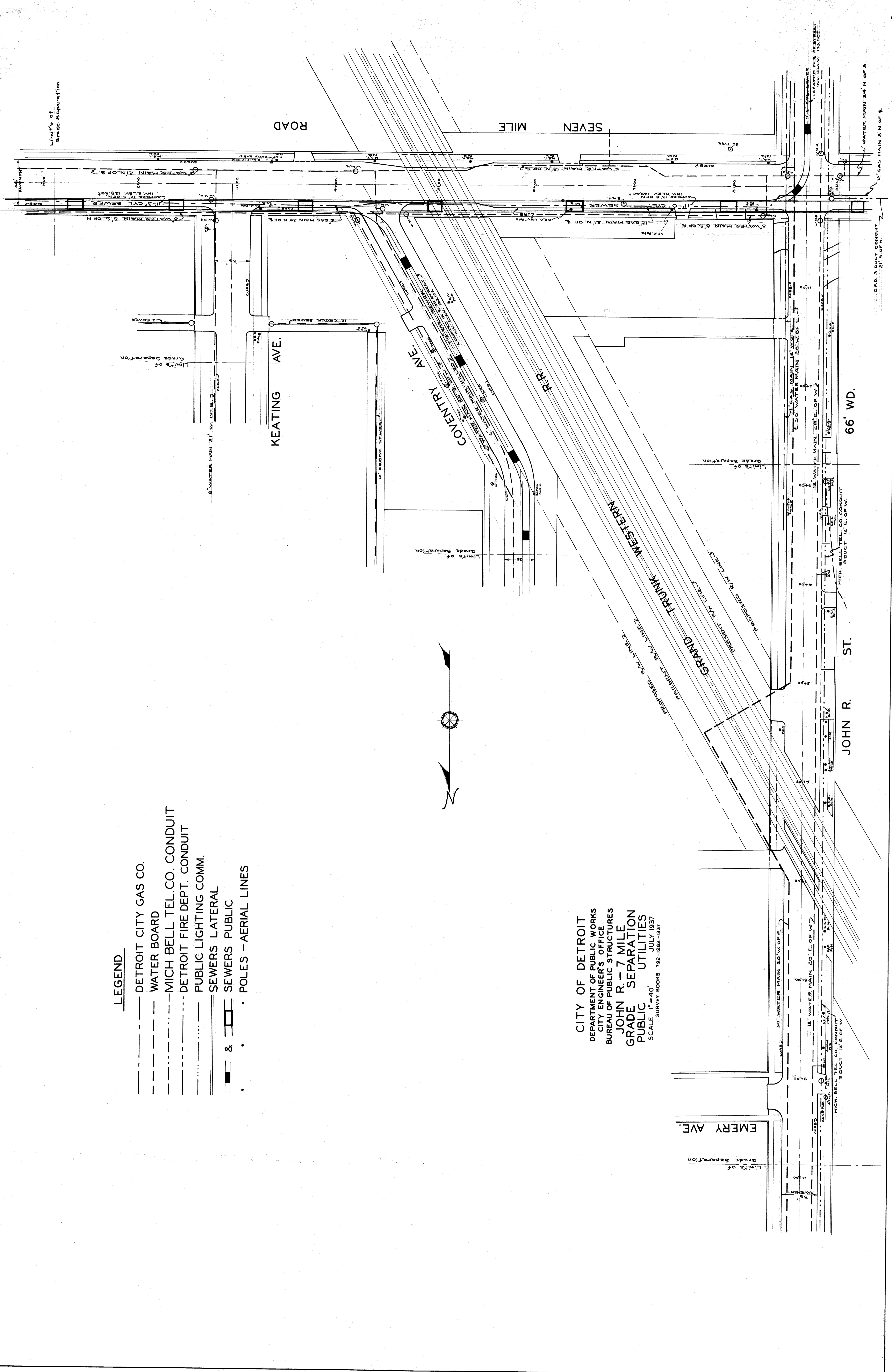
CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF PUBLIC STRUCTURES		SEVEN MILE ROAD - G. T. W. R. R. GRADE SEPARATION CONCRETE STAIRS FOR COVENTRY AVE CONNECTION		SHEET 1 OF 1 SHEETS
APPROVED: <i>J.L. Barber</i>		DESIGNED BY: <i>J.L. Barber</i>		CONTRACT
DRAWN BY: <i>J.L. Barber</i>		TRACED BY: <i>J.L. Barber</i>		DRWG NO.
CHECKED BY: <i>J.L. Barber</i>		ENGINEER OF PUBLIC STRUCTURES <i>G.P. Thompson</i>		
DATE: _____		SCALE: 1/2" = 1'-0" UNLESS NOTED OTHERWISE		
DESCRIPTION: _____		REVISIONS:		
NO.	DATE	BY	DESCRIPTION	

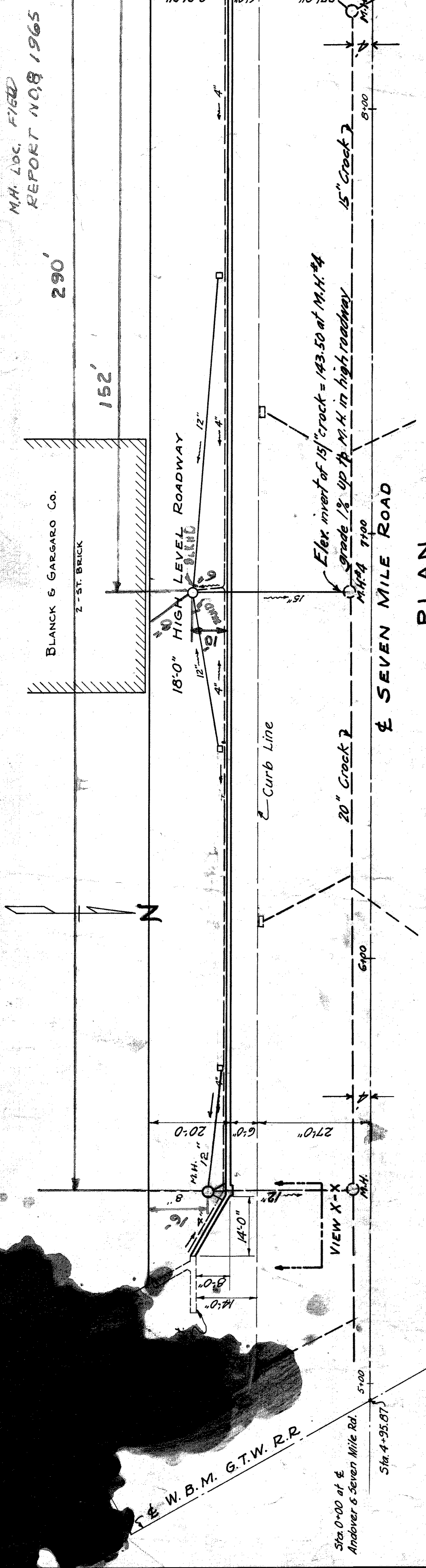
Completing Nov. 27, 1946

LEGEND

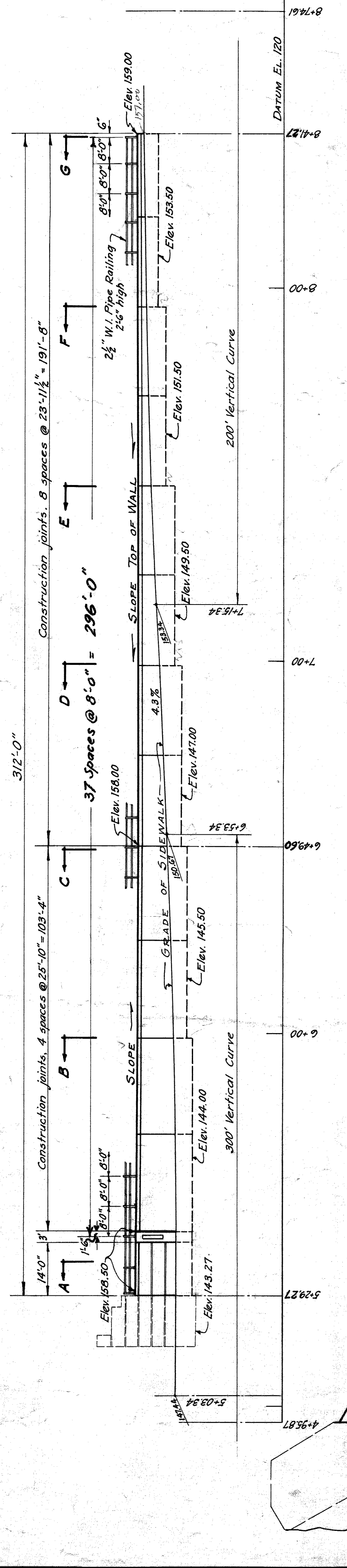
- DETROIT CITY GAS CO.
- WATER BOARD
- MICH BELL TEL. CO. CONDUIT
- DETROIT FIRE DEPT. CONDUIT
- PUBLIC LIGHTING COMM.
- SEWERS LATERAL
- SEWERS PUBLIC
- • POLES - AERIAL LINES

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEER'S OFFICE
 BUREAU OF PUBLIC STRUCTURES
 JOHN R - 7 MILE
 GRADE SEPARATION
 PUBLIC UTILITIES
 SCALE 1" = 40'
 JULY 1937
 SURVEY BOOKS 792-1282-1337

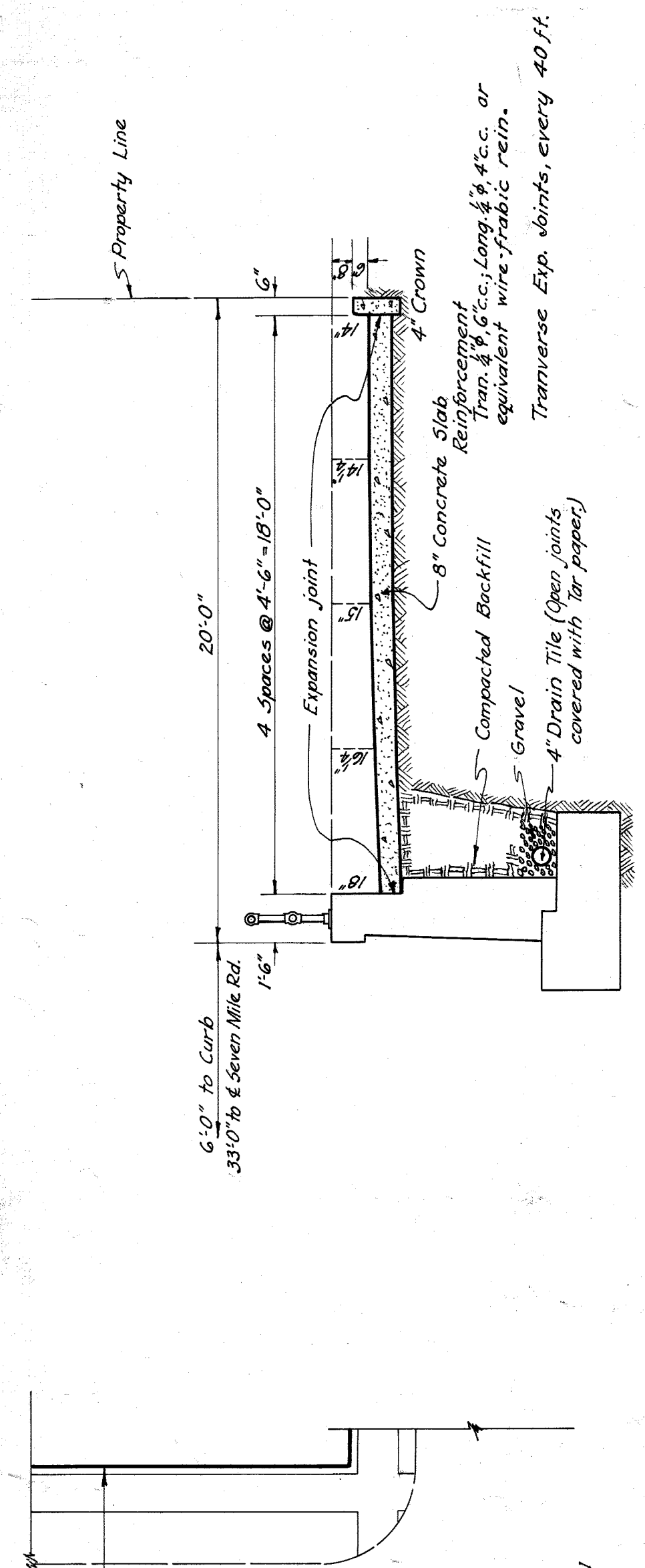




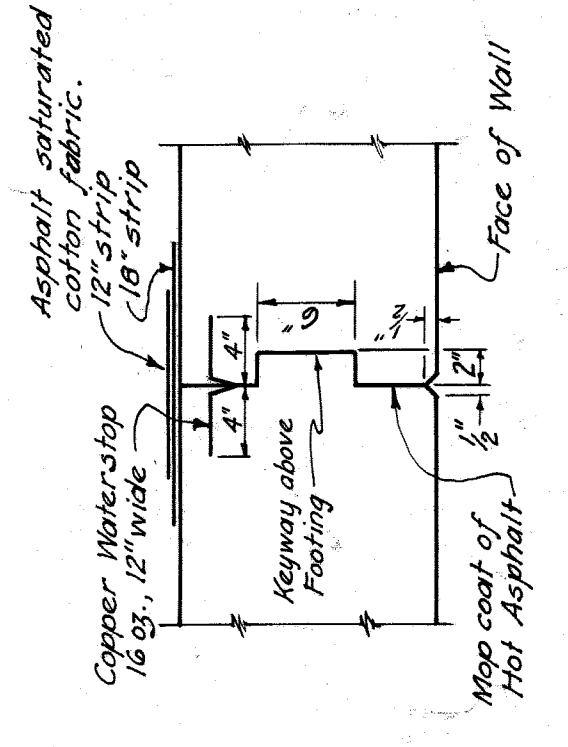
PLAN
SCALE 1/4" = 20 FT.



ELEVATION
SCALE 1/4" = 20 FT.



TYPICAL SECTION FOR 18'-0" HIGH LEVEL ROADWAY



VERTICAL CONSTRUCTION JOINT
SCALE 1/4" = 1 FT.

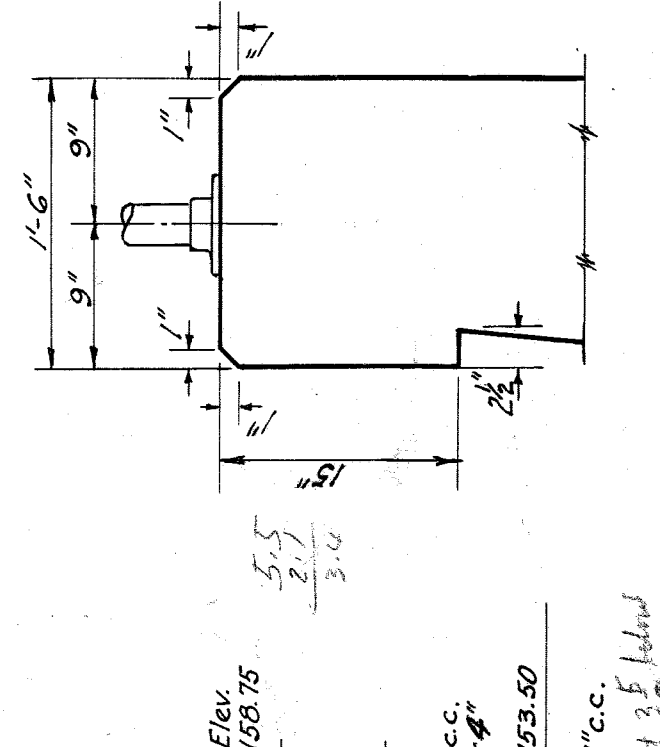
MARK NO.	SIZE	LENGTH	DESCRIPTION	LOCATION
A1	1/4" x 3/8"	11'-9"	W-4-3"	Footing, Sec. A & B
A2	1/4" x 3/8"	10'-3"	W-4-3"	Footing, Sec. C
A3	3/8" x 3/8"	9'-3"	W-3-3"	Footing, Sec. D
A4	3/8" x 3/8"	9'-0"	W-2-4"	Footing, Sec. E
A5	3/8" x 3/8"	6'-9"	W-2-4"	Footing, Sec. F
A6	3/8" x 3/8"	5'-0"	W-4-0"	Footing, Sec. B
A7	3/8" x 3/8"	7'-0"	W-3-0"	Coping, Full Length
A8	3/8" x 3/8"	19'-4"	W-3-0"	Coping, Sec. A
A9	3/8" x 3/8"	19'-4"	W-3-0"	Footing & Wall, Sec. A
A10	3/8" x 3/8"	10'-0"	W-3-0"	Wall, Sec. A & B
A11	3/8" x 3/8"	7'-0"	W-3-0"	Footing & Wall, Sec. A & B
A12	3/8" x 3/8"	2'-6"	W-3-0"	Consoles All Sec's except F
A13	3/8" x 3/8"	25'-6"	W-3-0"	Coping, Sec. B & C
A14	3/8" x 3/8"	25'-6"	W-3-0"	" " " " Sec. B & C
A15	3/8" x 3/8"	6'-0"	W-3-0"	" " " " Sec. C & D
A16	3/8" x 3/8"	8'-0"	W-3-0"	Wall, Sec. C
A17	3/8" x 3/8"	23'-8"	W-3-0"	Coping, Secs. D, E, F & G
A18	3/8" x 3/8"	5'-0"	W-3-0"	Wall, Sec. D
A19	3/8" x 3/8"	4'-6"	W-3-0"	Footing & Wall, Sec. E & F
A20	3/8" x 3/8"	3'-6"	W-3-0"	Footing, Sec. F & G
A21	3/8" x 3/8"	23'-8"	W-3-0"	Footing & Wall, Sec. D, E, F & G

ESTIMATE OF QUANTITIES

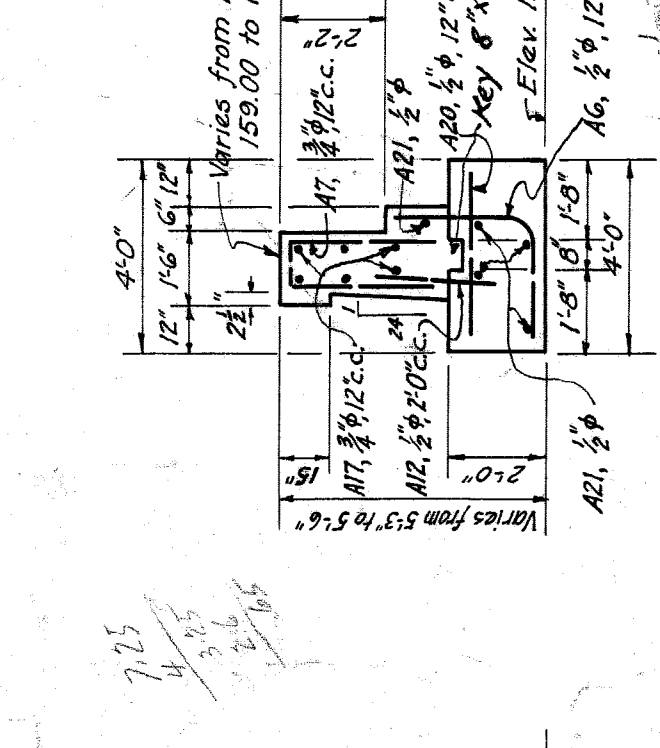
Excavation	800 Cu Yds.	8" Concrete Pavement	625 Sq. Yds.
Concrete in Retaining Wall	350 Cu Yds.	3/4" Concrete	312 Sq. Yds.
Concrete in Footing	1400 Cu Yds.	4" Drain Tile (Open joints)	525 Lin. Ft.
Gravel	88 Cu Yds.	15" Sewer Pipe	40 Lin. Ft.
Waterproofing on back of Walls	2,350 Sq. Ft.	Standard Manhole	2
Gravel Fill	36 Cu Yds.	Standard Catch Basins	7
Asphalt	320 Cu Yds.	Brick Catch Basin	1
Asphalt Saturated Cotton Fabric	3070 Sq. Ft.		

GENERAL NOTES:
Exposed faces of concrete shall be rubbed smooth immediately after forms are removed.
Curb cuts for High Level Roadway shall be determined to provide a 1/4" slope to the gutter.
Back of Walls and Vertical Consoles to receive two brush coats of Asphalt waterproofing.
4" Drain Tile joints to be covered with tar paper.

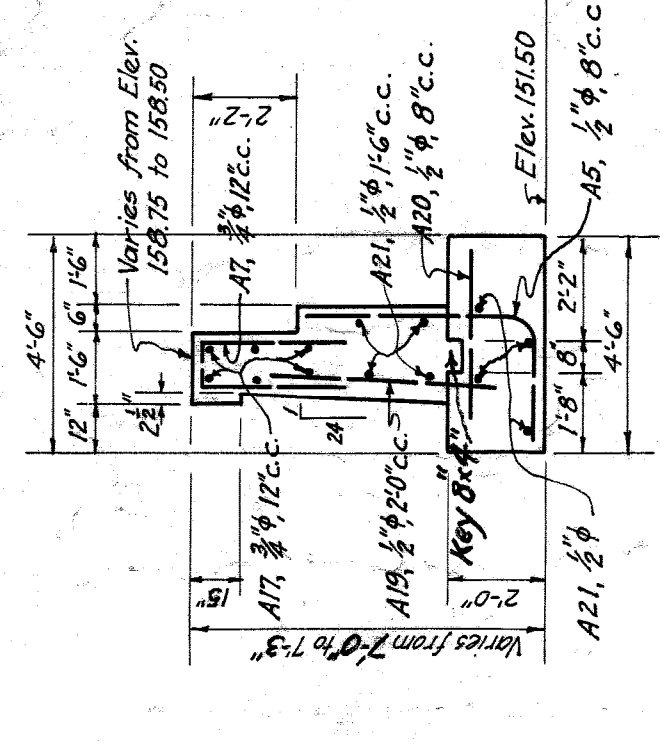
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF PUBLIC STRUCTURES
SEVEN MILE RD - G.T.W. R.R.
GRADE SEPARATION
RETAINING WALL PLANS
SCALE 1/4" = 1 FT., EXCEPT AS NOTED.
OCT 1937



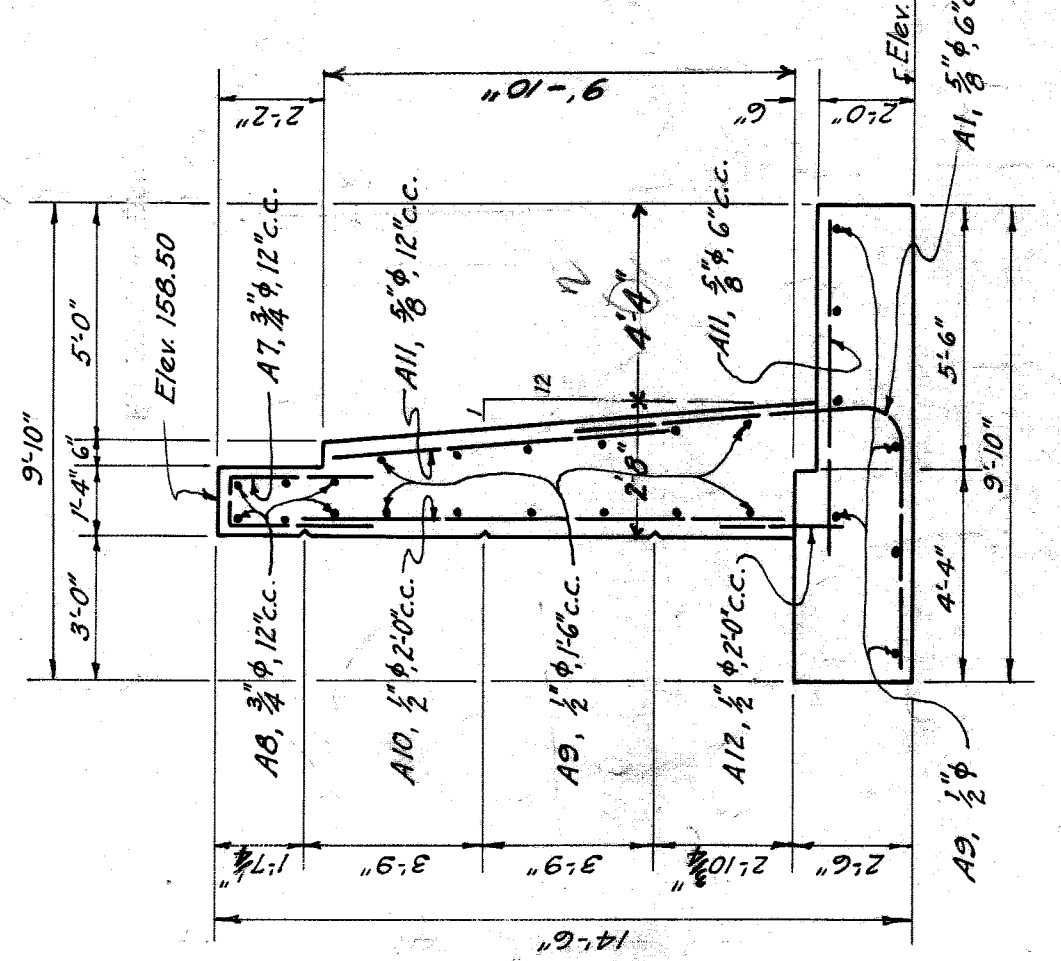
SECTION G
SCALE 1/4" = 1 FT.



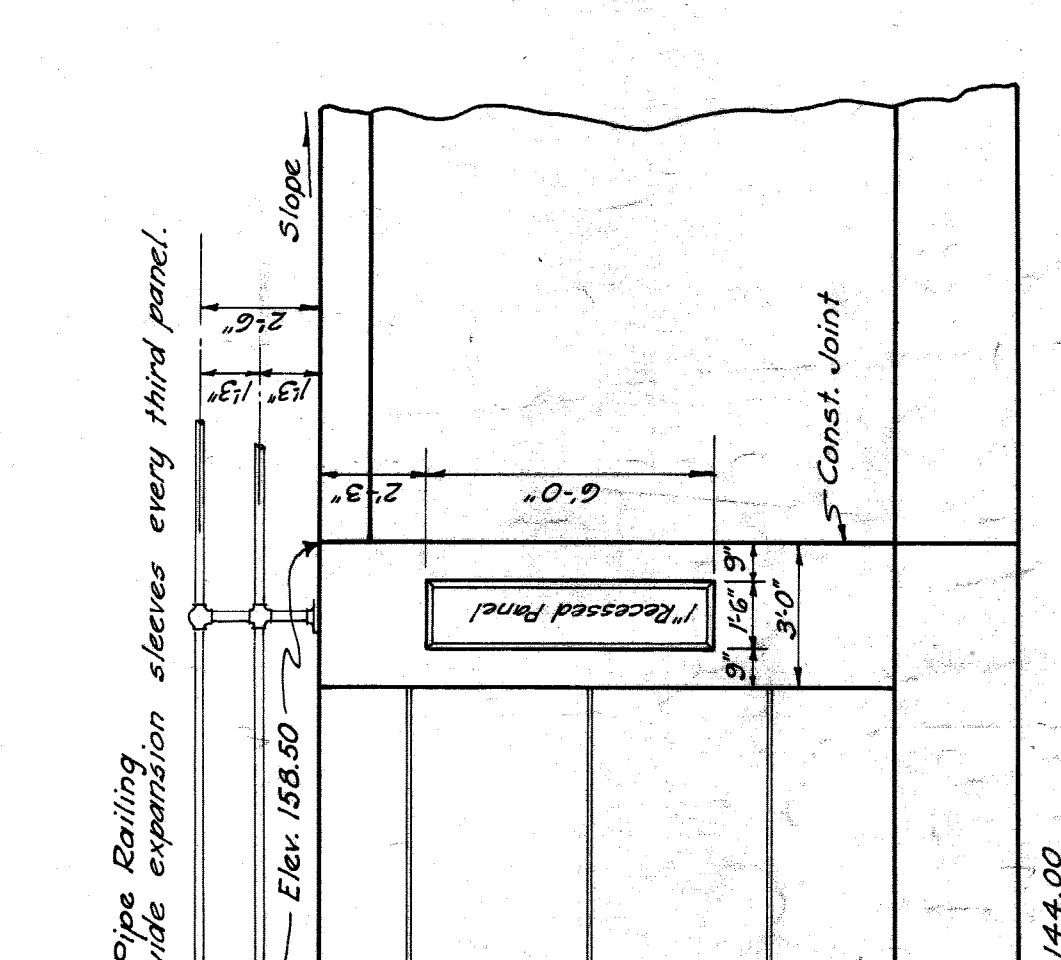
SECTION F



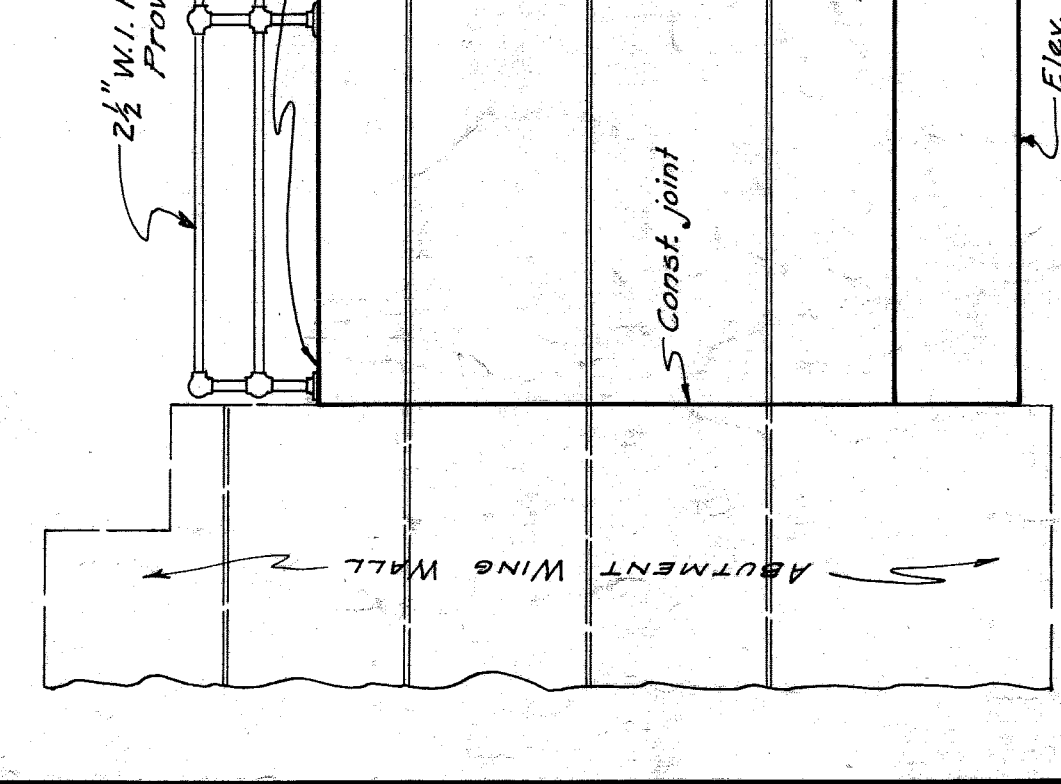
SECTION E



SECTION A



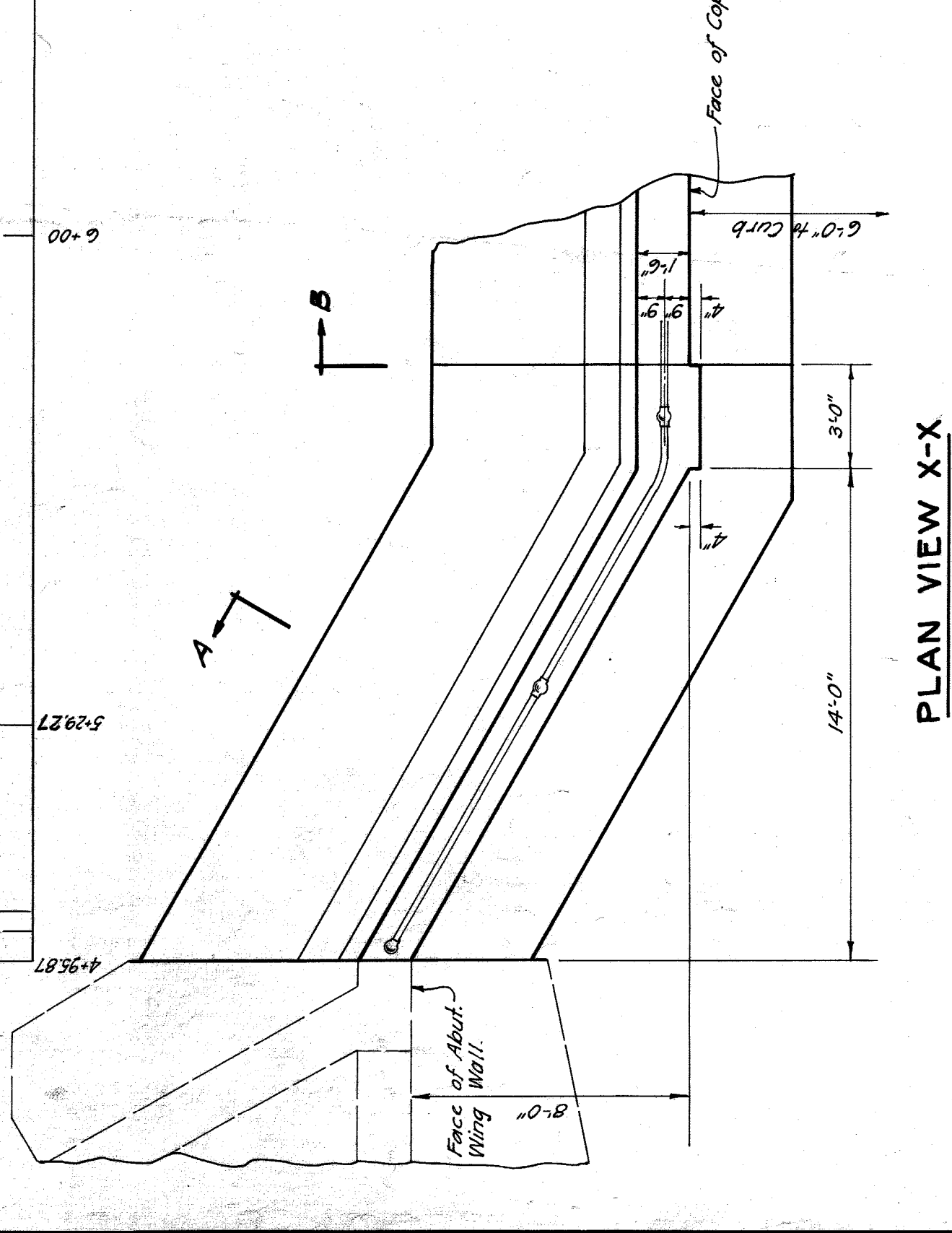
SECTION B



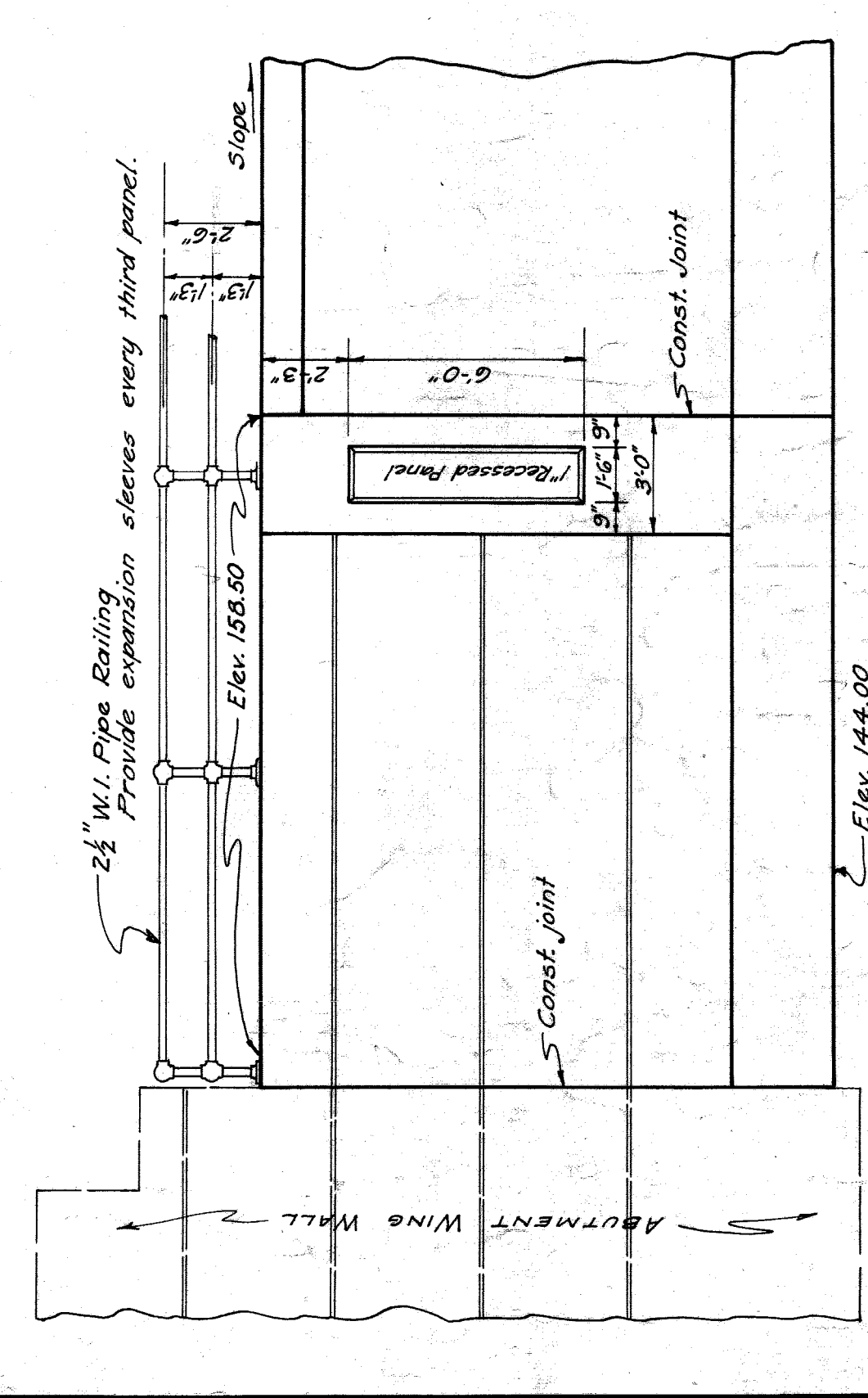
SECTION C



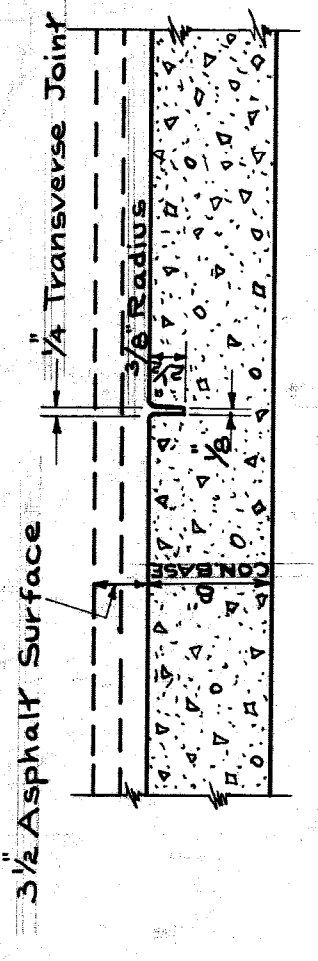
SECTION D



PLAN VIEW X-X

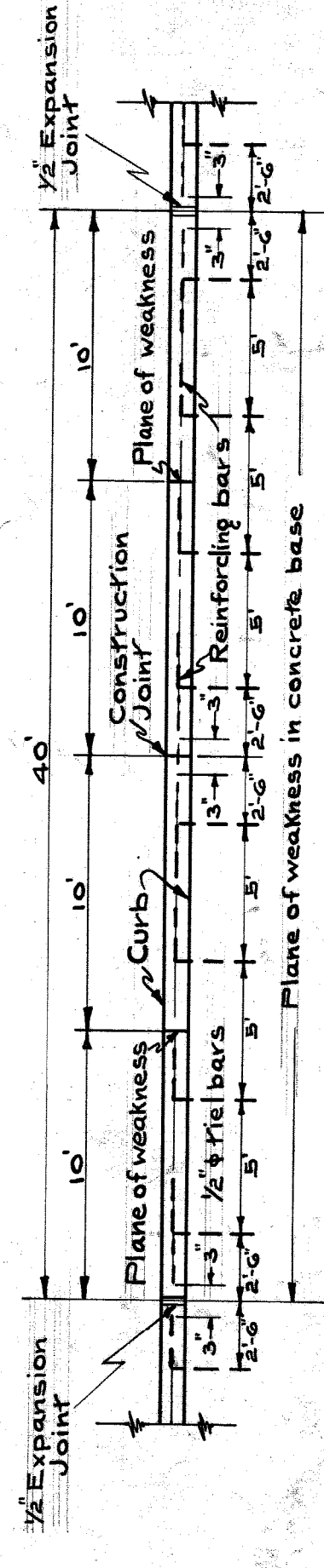


ELEVATION VIEW X-X

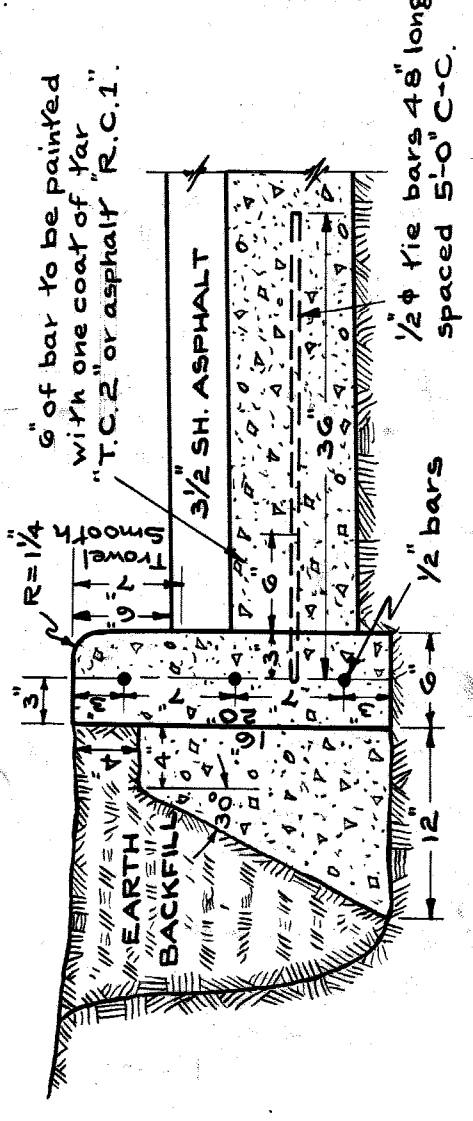


**DETAIL SHOWING
TRANSVERSE PLANE OF WEAKNESS JOINT**
SCALE 1"=1'

These joints to be placed in concrete base only, at approximately equal intervals between. The transverse joint is to be formed immediately following the placing of concrete and shall be at right angles to the center line of the street. After the concrete has hardened sufficiently the form is to be removed and the edges are to be rounded to a 3/8 radius. No filler is to be placed in this joint.



**PLAN SKETCH SHOWING
STEEL REINFORCEMENT, TIE BARS AND JOINTS IN
CONCRETE CURB**
SCALE 1/2"=1'-0"



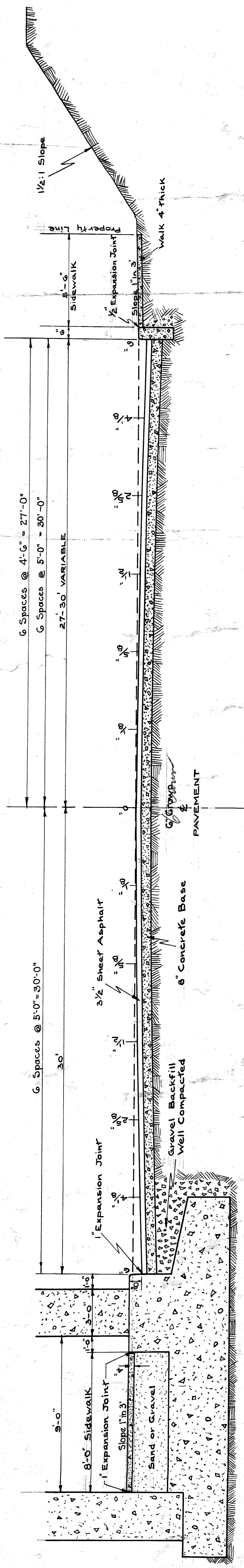
**DETAIL SHOWING
CONCRETE CURB**
SCALE 1/2"=1'-0"

Area behind curb to be backfilled with lean concrete after forms are removed.
CONCRETE MIX { CURB 1:2:3
BACKING 1:3:6

ITEM	QUANTITY	UNIT
Earth Excavation	9550	Sq. Yds.
Removing Old Pavement	4450	Sq. Yds.
Fine Grading	800	Stations
Removing Old Conc. Sidewalk	870	Sq. Yds.
New 8" Concrete Base	570	Sq. Yds.
New 4" Concrete Sidewalk	8620	Sq. Ft.
Concrete Straight Curb	1240	Lin. Ft.
Concrete Circular Curb	130	Sq. Yds.
3/2" Asphalt Top	5210	Sq. Yds.
Sodding	600	Sq. Yds.

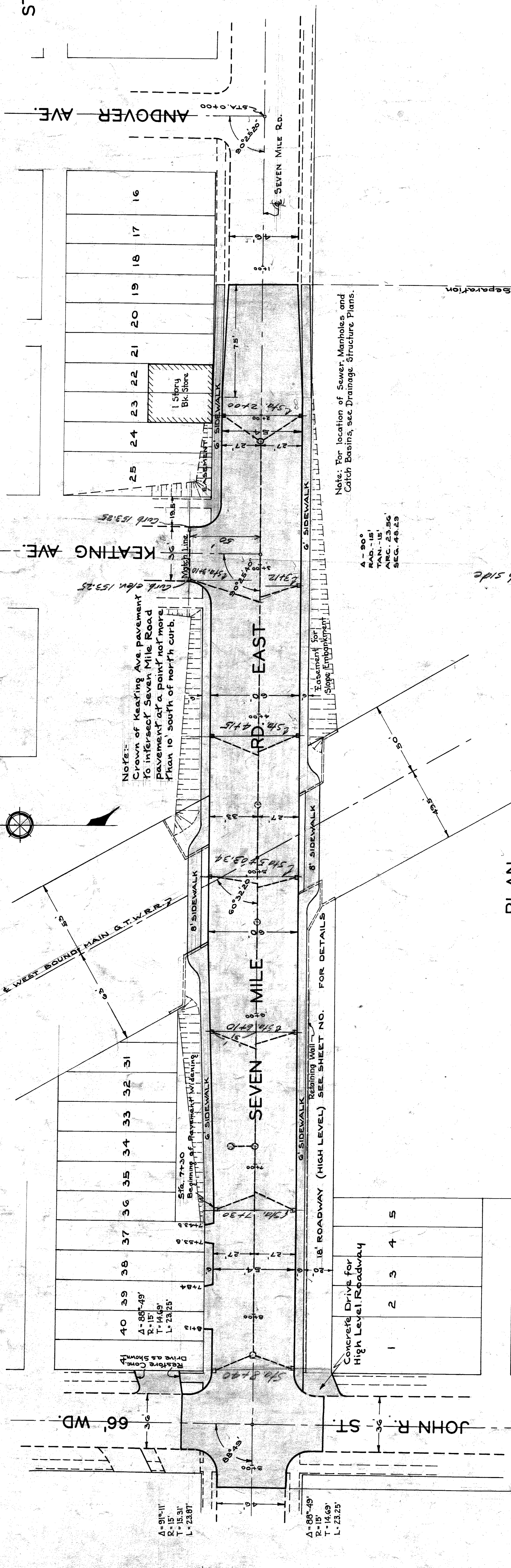
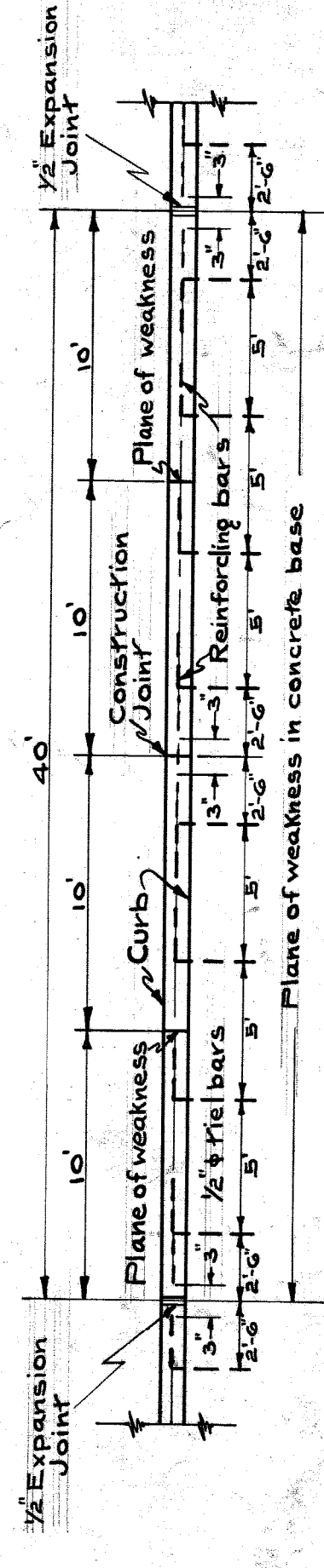
Notes: For Sewer, Manholes and Catch Basin Quantities, See Drainage Structure Plans.

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
BUREAU OF PUBLIC STRUCTURES
SEVEN MILE RD. - G.T.W.R.R.
GRADE SEPARATION
PAVEMENT DRAWING
SCALE AS INDICATED AUG. 1937
SURVEY BOOKS 792-1282-1337

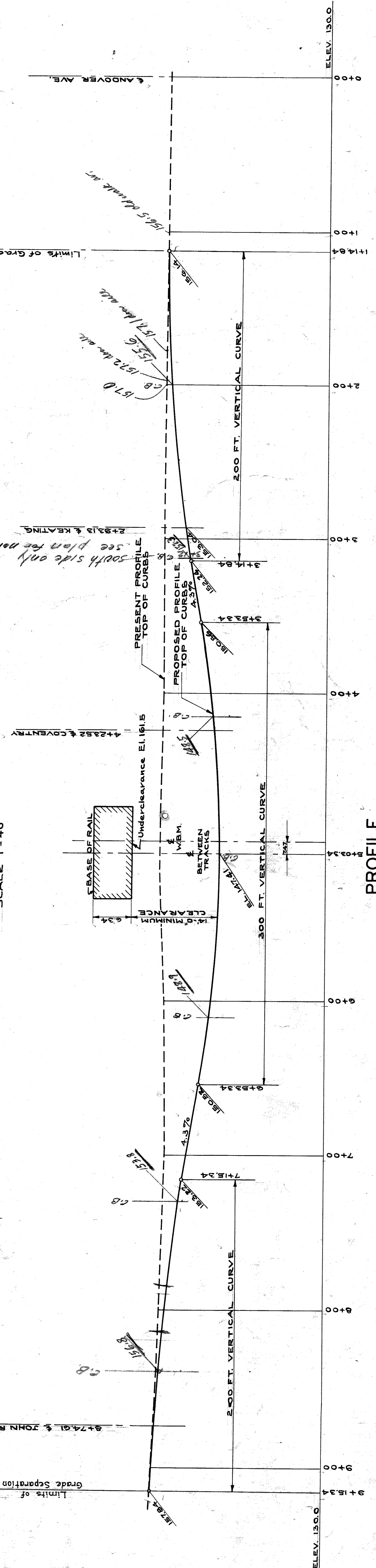


**TYPICAL CROSS SECTION OF
PAVEMENT UNDER BRIDGE**

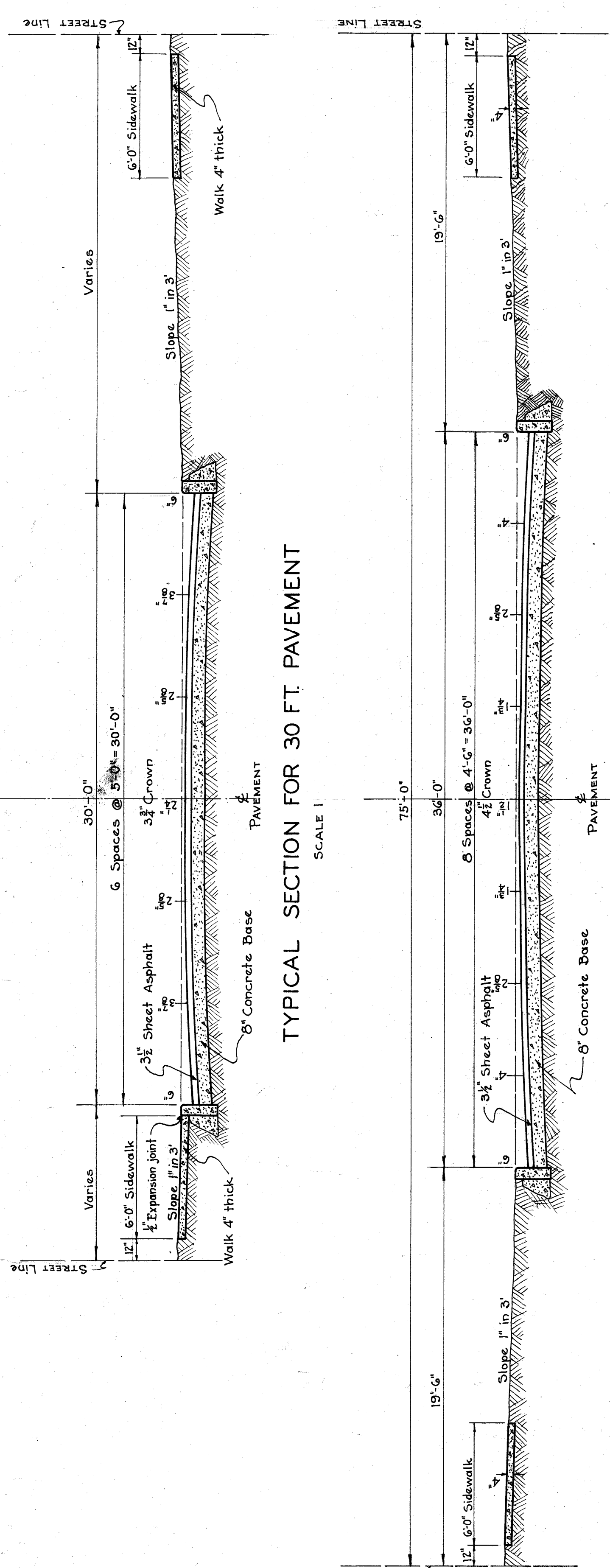
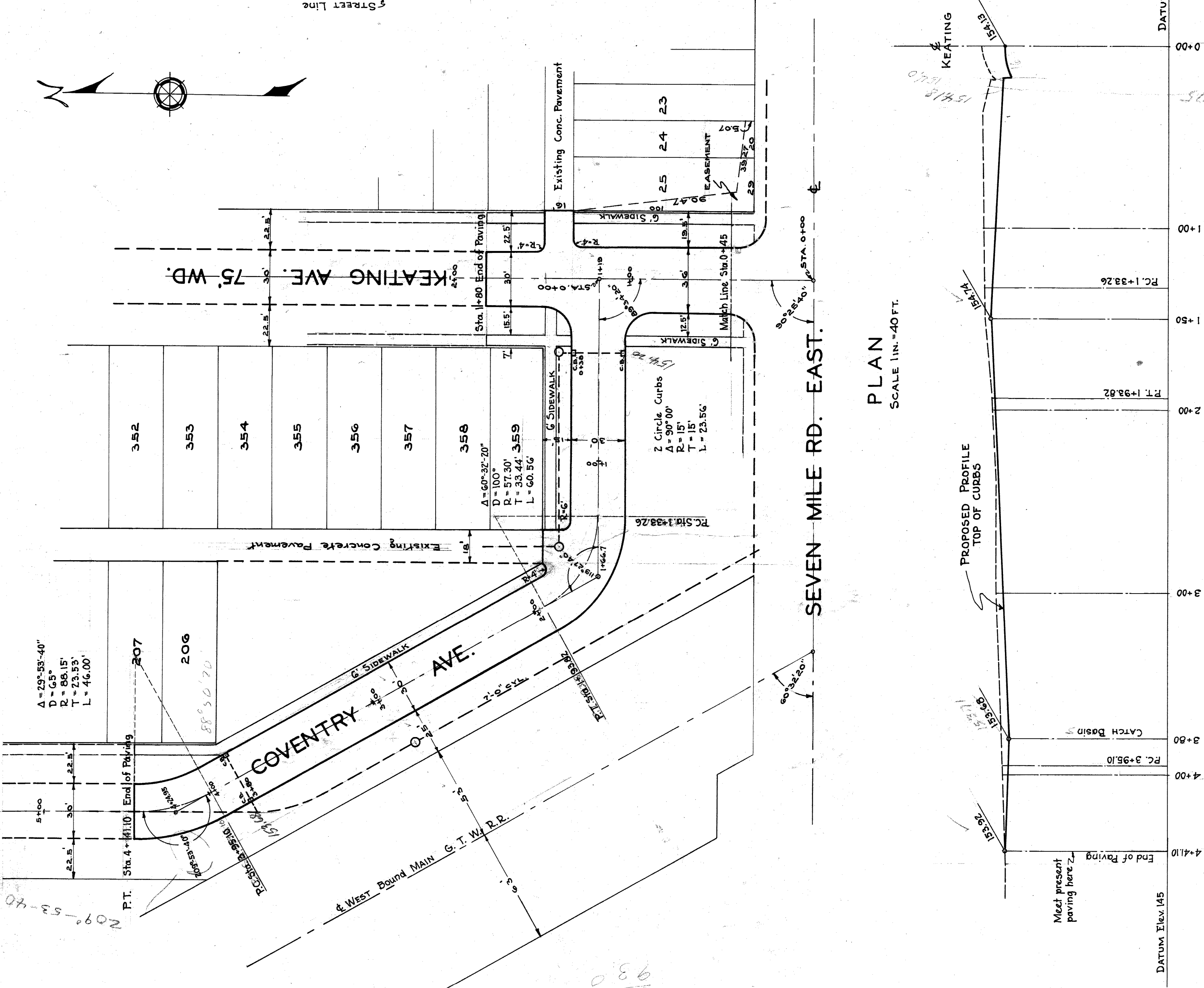
**TYPICAL CROSS SECTION OF
PAVEMENT ON APPROACH**



**PLAN
SCALE 1/4"=1'-0"**

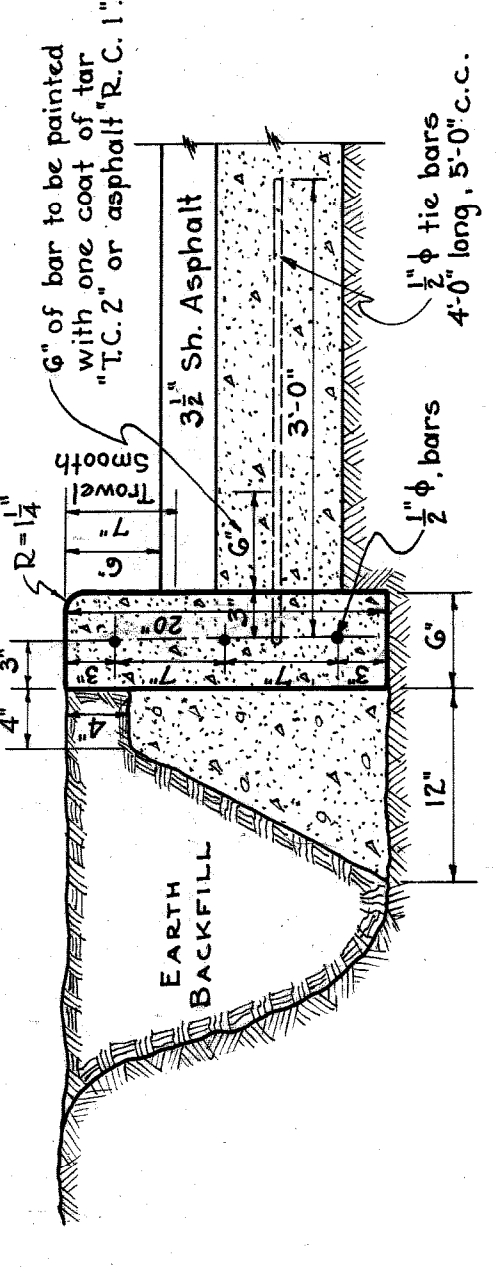


**PROFILE
ON E OF SEVEN MILE RD.
SCALE 1/4"=1'-0"**



TYPICAL SECTION FOR 30 FT. PAVEMENT
SCALE 1/40 FT.

TYPICAL SECTION FOR 36 FT. PAVEMENT
SCALE 1/40 FT.

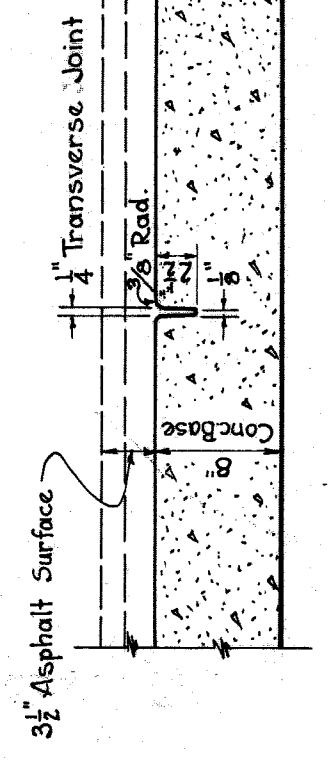


CONCRETE CURB
SCALE 1/40 FT.

STEEL REINFORCEMENT, TIE BARS AND JOINTS IN
CONCRETE CURB
SCALE 1/40 FT.

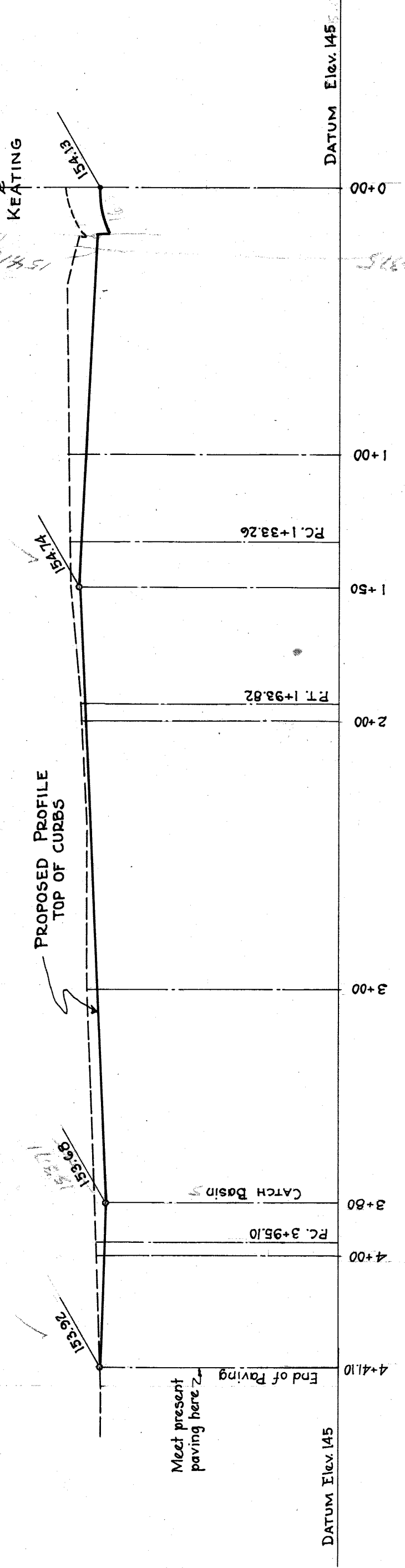
CONCRETE CURB
SCALE 1/40 FT.

ESTIMATE OF PAVING QUANTITIES	ITEM	QUANTITY
Earth Excavation	T4 Cu Yds	714
Removing Old Pavement	915 Sq. Yds	915
Fine Grading	5.6 Stations	5.6
Removing Old Conc. Sidewalk	340 Sq. Yds	340
New 8" Concrete Base	2,002 Sq. Ft.	2,002
New 4" Concrete Sidewalk	5,522 Sq. Ft.	5,522
6" Concrete Straight Curb	645 Lin. Ft.	645
6" Concrete Circular Curb	245 Lin. Ft.	245
3/2" Asphalt Top	2,002 Sq. Yds	2,002
Sodding	45 Sq. Yds	45

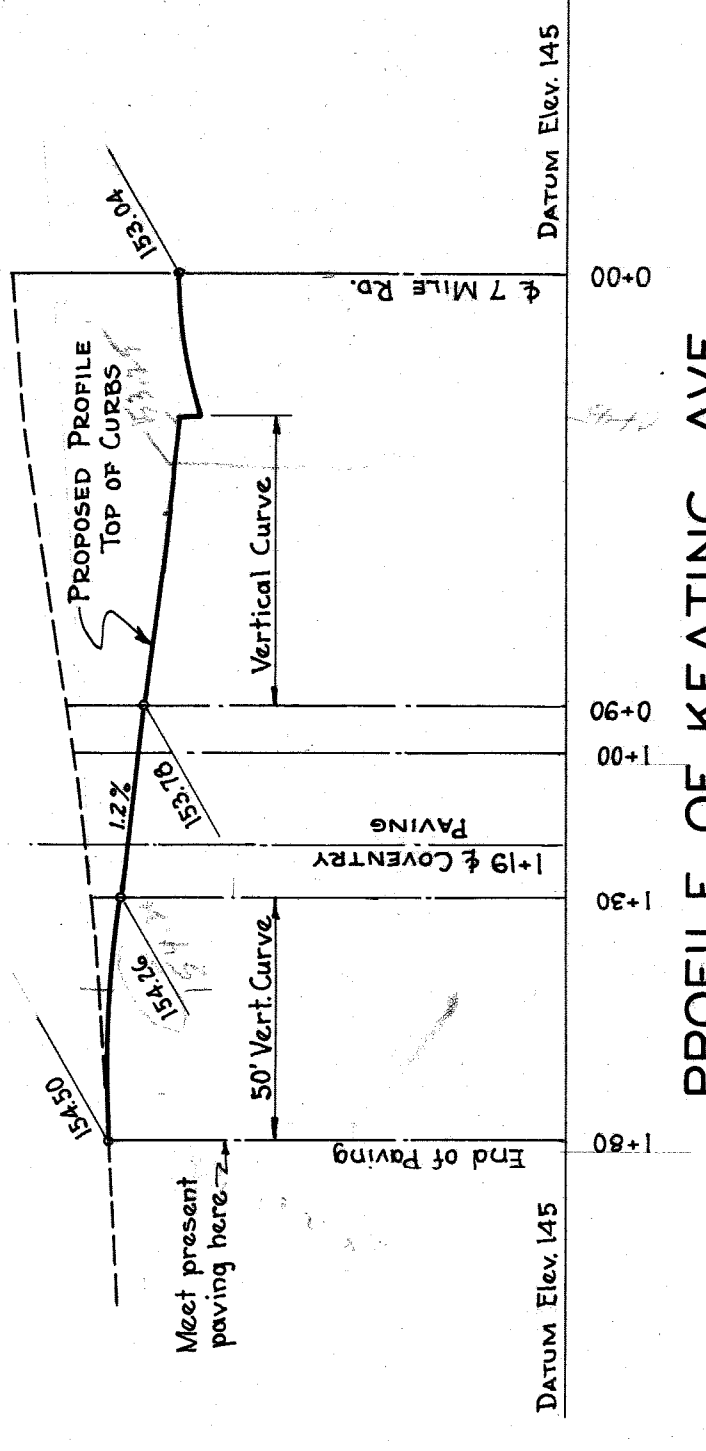


TRANSVERSE PLANE OF WEAKNESS JOINT
SCALE 1/40 FT.

These joints to be placed in concrete base only, at approximately 40' equal intervals between. To be formed immediately following the placing of concrete and shall be at right angles to the center line of the street. After the concrete has hardened sufficiently the form is to be removed and the edges are to be rounded to a 3/8" radius. No filler is to be placed in this joint.



PROFILE OF COVENTRY AVE.
SCALE 1/40 FT. (HOR. 1/40 FT., VER. 1/4 FT.)



PROFILE OF KEATING AVE.
SCALE 1/40 FT. (HOR. 1/40 FT., VER. 1/4 FT.)

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF PUBLIC STRUCTURES
SEVEN MILE RD. - G.T.W. R. R.
GRADE SEPARATION
PAVEMENT DRAWING
SCALE AS INDICATED SEPT. 1937
SURVEY BOOKS 72-1282-137