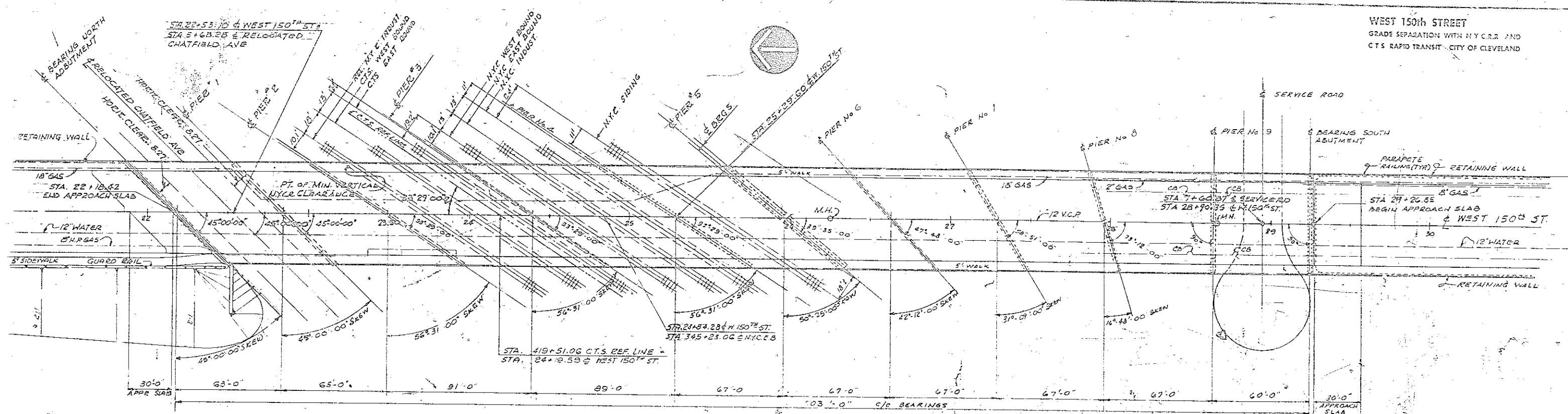
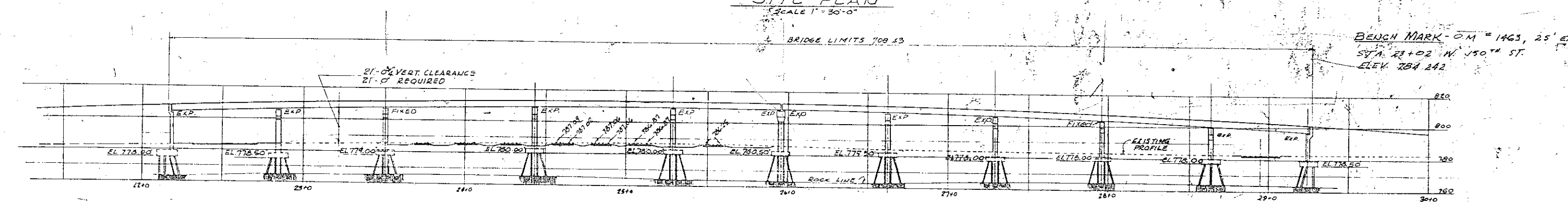




SITE PLAN
SCALE 1" = 30'-0"



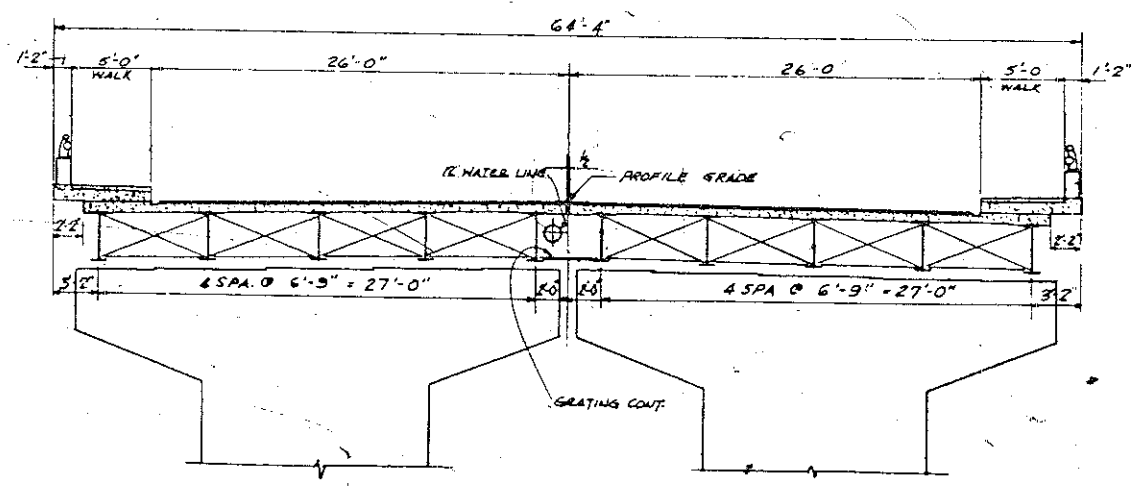
PROFILE
1" = 30'-0"

NOTE: ALL PILES ARE 10" DIA. WITH AN ESTIMATED VERTICAL LENGTH OF 16'-0".

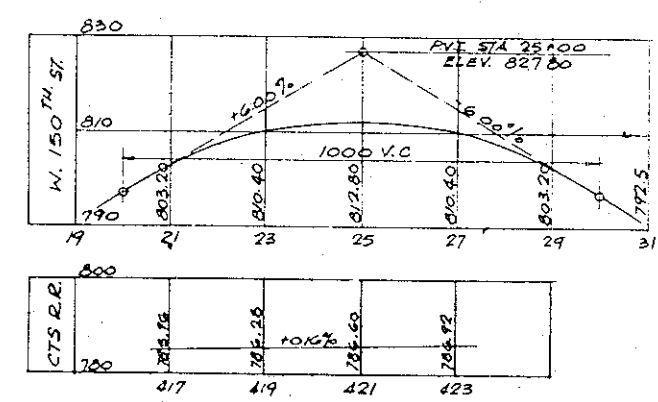
PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SKW: VARIES FROM 56° 31' 00" TO 0° (SEE PLAN)
SPANS: 1 @ 68', 1 @ 65', 1 @ 91', 1 @ 89', 5 @ 67', 1 @ 60'
ROADWAY: 52'-0" F/F 5'-0" SIDEWALKS
LOAD FREQUENCY: CP-2000 ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
WEARING SURFACE: 2" ASPHALTIC CONCRETE
APPROACH SLABS: 30' LONG, AS-1-54
ALIGNMENT: TANGENT
SUPERELEVATION: NONE

NOTE: FOR 4" OF PAVEMENT ELEVATIONS SEE SHEET NO. 77



TYPICAL SECTION



PROFILES
1" = 200' HORIZ.
1" = 20' VERT.

SITE PLAN & PROFILE

SLM 0194

BEISWENGER HOCH & ARNOLD
Consulting Engineers
Alma, Ohio

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 6929
NO. B-162
SCALE AS NOTED
DRAWN BY J.L.S. CHECKED BY J.W. REVISIONS

BRIDGE NO. 132
1/48

REF	ITEM	PROPOSAL QUANTITIES	UNIT	DESCRIPTION	ESTIMATED QUANTITIES										ESTIMATED QUANTITIES TOTAL
No.					ABUTMENTS	WALL A	WALL B	WALL C	WALL D	WALL E	WALLS SUB-TOTAL	PIER	SUPER-STRUCTURE	GENERAL	
108	503	4500	CUYD	EXCAVATION FOR STRUCTURES	668	497	501	60	719	325	2082	1580			4330
109	503	3000	SQ. FT.	COFFERDAMS, CRIBS AND SHEETING								2920			2920
110	507	14800	LIN. FT.	BEARING PILES, 10 BP42	9214				2772		2772	7516			14502
111	509	921 000	LB.	REINFORCING STEEL	97803	32898	34705	1349	98106	16987	184045	226428	410163		918439
112	511	1970	CUYD	CLASS "E" CONCRETE, FOOTINGS	372	217	212	10	375	115	929	649			1950
113	511	630	CUYD	CLASS "E" CONCRETE, WALLS ABOVE FOOTINGS		229	219	12	58	106	624				624
114	511	530	CUYD	CLASS "C" CONCRETE ABUTMENTS ABOVE FOOTINGS	527										527
115	511	350	CUYD	CLASS "C" CONCRETE WALLS ABOVE FOOTINGS - WALL D					347		347				347
116	511	760	CUYD	CLASS "C" CONCRETE PIERS ABOVE FOOTINGS								752			752
117	511	1340	CUYD	CLASS "C" CONCRETE SUPERSTRUCTURE									1328		1328
118	511	7000	SQ. FT.	CLASS "C" CONCRETE, 3" REINFORCED SIDEWALK WEARING COURSE INCLUDING RAINDRAGS, MESH									6995		6995
119	512	560	LIN. FT.	WATERPROOFING PREMOULDED SEALING STRIP	93	110	107	6	167	64	454				547
120	512	790	SQ. YD.	WATERPROOFING, TYPE "A" - BRIDGE SIDEWALK									778		778
121	513	1335 000	LB.	STRUCTURAL STEEL										1330 200	1330 200
122	514	1335 000	LB.	FIELD PAINTING OF STRUCTURAL STEEL										1330 200	1330 200
123	516	450	SQ. FT.	PREFORMED EXPANSION JOINT FILLERS 1" CORK	40	124	118		121	25	388				434
124	517	2170	LIN. FT.	TYPE "2" RAILING	80 12	275 79	184 15		213 83		673 80			1408 95	2762 87
125	517	560	LIN. FT.	1 1/2" GALVANIZED STEEL PIPE RAILING WELDED			121 00	61 46	69 00	299 42	550 88				550 88
126	518	1020	CUYD	POROUS BACKFILL	256	183	190		246	126	745				1001
127	518	48	EACH	SCUPPERS, INCLUDING SUPPORTS									48		48
128	518	1420	LIN. FT.	SUBDRAINAGE FOR WEARING SURFACE COURSE									1408		1408
129	518	590	LIN. FT.	8" W.I. OR HOT DIP GALVANIZED STEEL STD. PIPE DOWNSPUTS INCLUDING SPECIALS	90							488			578
130	518	820	LIN. FT.	METAL GUTTER, INCLUDING SUPPORTS AND SPECIALS											
131	611	365	SQ. YDS	REINFORCED CONCRETE APPROACH SLABS - INCLUDING CURBS, AND 3" INSULATION COURSE									811 25		811 25
132	625	LUMP SUM		ELECTRICAL EQUIPMENT											361
133	608	420	SQ. FT.	6" CONCRETE SIDEWALK INCLUDING 2" GRANULATED SLAG BEDDING AND POURED JOINT SEALER											413
134	518	1500	LIN. FT.	8" PERFORATED BITUMINOUS COVERED CMP	250	276	302	63	265	314	1220				1470
135	518	40	LIN. FT.	8" CMP	15	3	3		5	3	14				29
136	808	1340	EACH	WATER-REDUCING SET RETARDING ADMIXTURE									1328		1328
137	812	12400	EACH	WELDED STUD SHEAR CONNECTORS									12 360		12 360
138	SPECIAL	2840	LIN. FT.	HOT APPLIED JOINT SEALER (SEE 70501)									2816		2816
139	SPECIAL	4050	SQ. YD.	CONCRETE DECK WATERPROOFING									3994		3994
140	SPECIAL	420	GALLONS	RUBBERIZED ASPHALT TACK COAT									418		418
141	SPECIAL	200	CUYD.	ASPHALT CONCRETE INTERMEDIATE COURSE									194		194
142	SPECIAL	85	CUYD.	RUBBERIZED SAND ASPHALT									84		84
WATERWORK ON BRIDGE															
143	SPECIAL	700	LIN. FT.	12" EXTRA HEAVY, GALVANIZED, WROUGHT IRON PIPE, INCLUDING COUPLINGS, TIMBER SADDLES, MISCELLANEOUS, STRUCTURAL STEEL PIPE SUPPORTS, 2" AIR COCK, SPLIT MANHOLE FRAME AND COVER AND INSULATION - COMPLETE IN PLACE - AS PER SHEET N° 89 OF 92.											
144	SPECIAL	43.4	LIN. FT.	12" DUCTILE IRON PIPE, CEMENT LINED, FLANGED ENDS, INCLUDING PIPE BENDS, PIPE SLEEVES, INSULATION AND CONCRETE ANCHORS - COMPLETE IN PLACE - AS PER SHEET N° 89 OF 92.											
145	SPECIAL	2200	SQ. FT.	STEEL WALKWAY FLOOR GRATINGS, GALVANIZED, ALL WELDED, 1" 3/16" BEARING BARS - COMPLETE IN PLACE - AS PER SHEET N° 89 OF 92.											

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STRUCTURAL GENERAL NOTES

WEST 150th STREET
GRADE SEPARATION WITH N.Y.C.R.R. AND
C.T.S. RAPID TRANSIT - CITY OF CLEVELAND

59
98

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9/1/57, TOGETHER WITH CURRENT REVISIONS THEREOF.

DESIGN LOADINGS - SEE SITE PLANS

CONCRETE CLASS C	BASIC UNIT STRESS 1,333 p.s.i.
CONCRETE CLASS E	BASIC UNIT STRESS 1,133 p.s.i.
STRUCTURAL STEEL	ALL STRUCTURAL STEEL SHALL BE ASTM A 36, ASTM A 36-BASIC UNIT STRESS 20,000 p.s.i.
REINFORCING STEEL	ASTM A 15, A 16, A160, DEFORMED, INTERMEDIATE GRADE. BASIC UNIT STRESS 20,000 p.s.i.

REFERENCE

REFERENCE SHALL BE MADE TO SUPPLEMENTAL STANDARD DRAWINGS:

BR-1-65	SHEET 2 REVISED	11/24/65
AS-1-55	REVISED	2/2/59
SD-1-65	SHEETS 1, 2, AND 3	
AS-1-54	REVISED	11/8/65
808	SUPPLEMENTAL SPEC. DATED	7/14/65
812	SUPPLEMENTAL SPEC. DATED	7/21/65
828	SUPPLEMENTAL SPEC. DATED	7/21/65

SLAB DEPTH OVER BEAMS OR GIRDERS

THE DIMENSION SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP FLANGE OF THE BEAMS IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES, AS PER ITEM 511.19 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

FOUNDATION BEARING PRESSURE

FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 2500 LBS. PER SQ. FT.

DECK SLAB HAUNCH

A TYPICAL HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

ADJUTANT BACKFILL

THE CONCRETE IN THE ADJUTANT BACKFILL SHALL NOT BE PLACED UNTIL AFTER THE STEEL WORK IS ERECTED, BUT SHALL BE PLACED BEFORE THE DECK SLAB IS POURED.

POROUS BACKFILL

POROUS BACKFILL 1'-6" THICK, FULL LENGTH OF ADJUTANTS AND RETAINING WALLS, SHALL EXTEND UP TO THE UNDERSIDE OF THE APPROACH SLAB, OR TO THE FINISHED GRADE SURFACE UNLESS OTHERWISE SHOWN. EXCAVATION, THEREFORE, IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ADJUTANT OR RETAINING WALL, SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICE PER CU. YD. PAID FOR POROUS BACKFILL.

FOUNDATION MATERIAL

FOUNDATION MATERIAL OF APPROXIMATELY UNIFORM BEARING CAPACITY IS CONTEMPLATED. SPOTS OF SOFT EARTH SHALL BE REMOVED AND BE REPLACED WITH THOROUGHLY COMPACTED GRANULAR MATERIAL.

PILES

PILES SHALL BE DRIVEN TO FIRM CONTACT WITH SHALE. IF THE LENGTH OF PENETRATION IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT, THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN ITEM 507.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING:

44 TONS PER PILE USING A 7,000 FT.-LB. HAMMER
39 TONS PER PILE USING AN 11,000 FT.-LB. HAMMER
35 TONS PER PILE USING A 15,000 FT.-LB. OR GREATER HAMMER

IF THE ENERGY RATING OF THE HAMMER IS BETWEEN THE RATINGS AS SHOWN ABOVE, THE REQUIRED FORMULA CAPACITY SHALL BE DETERMINED BY INTERPOLATION. THE DESIGN LOAD IS 30 TONS PER PILE.

CONSTRUCTION CLEARANCE

A CONSTRUCTION CLEARANCE OF 20'-0" VERTICALLY ABOVE THE TOP OF THE RAILROAD RAILS AND 7'-0" HORIZONTALLY FROM THE CENTER OF TRACKS SHALL BE MAINTAINED AT ALL TIMES.

SHEETING AND BRACING

BEFORE CONSTRUCTION IS STARTED, FIVE SETS OF PRINTS SHOWING DETAILS OF THE SHEETING AND BRACING TO BE USED FOR EXCAVATION ADJACENT TO THE RAILROAD TRACKS SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL BY THE ENGINEER AND BY THE RAILROAD COMPANY.

ALIGNING RAILROAD TRACKS

AFTER THE CONTRACTOR HAS COMPLETED ALL EXCAVATION AND BACKFILL ADJACENT TO THE RAILROAD TRACKS IN COMPLIANCE WITH SEC. 503.04 AND 503.09 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SUBJECT TO THE SUPERVISION OF THE RAILROAD COMPANY, NOTHING IN SEC. 503.04, 503.09 or 108.04 OF THE SPECIFICATIONS SHALL BE CONSTRUED TO HOLD THE CONTRACTOR LIABLE FOR ALIGNING AND RESURFACING THE RAILROAD TRACKS.

DIMENSIONS

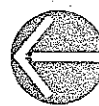
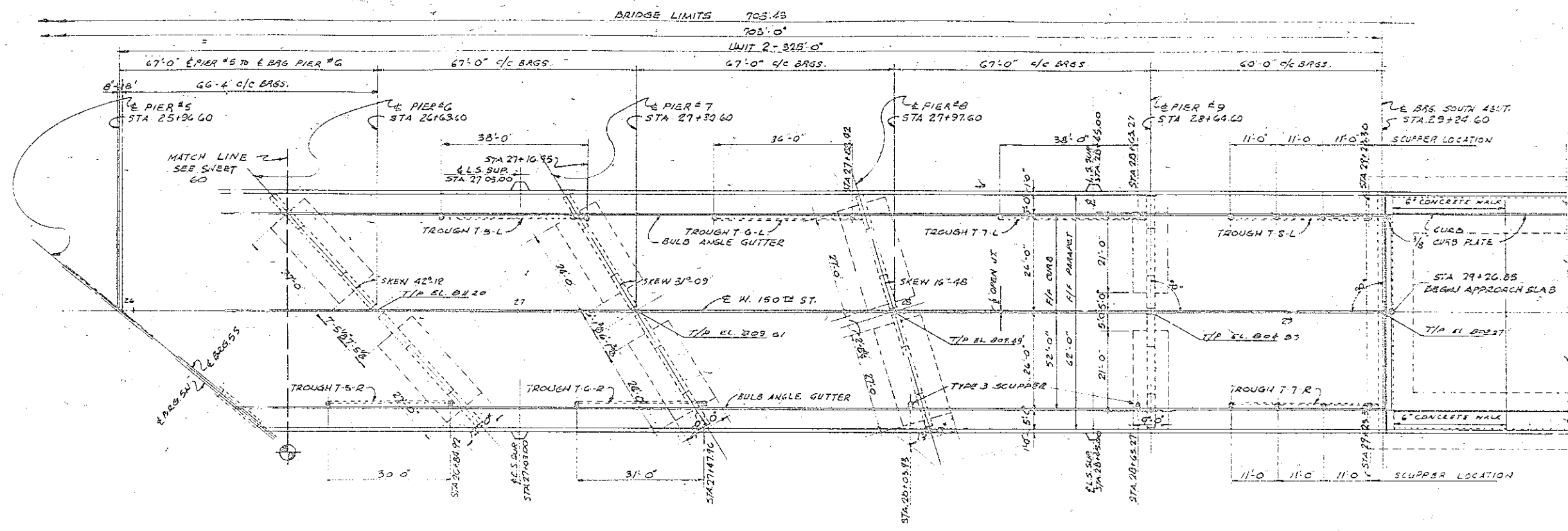
DIMENSIONS GIVEN ARE MEASURED HORIZONTALLY AND AT 60°F., UNLESS OTHERWISE NOTED.

STRUCTURE GROUNDING

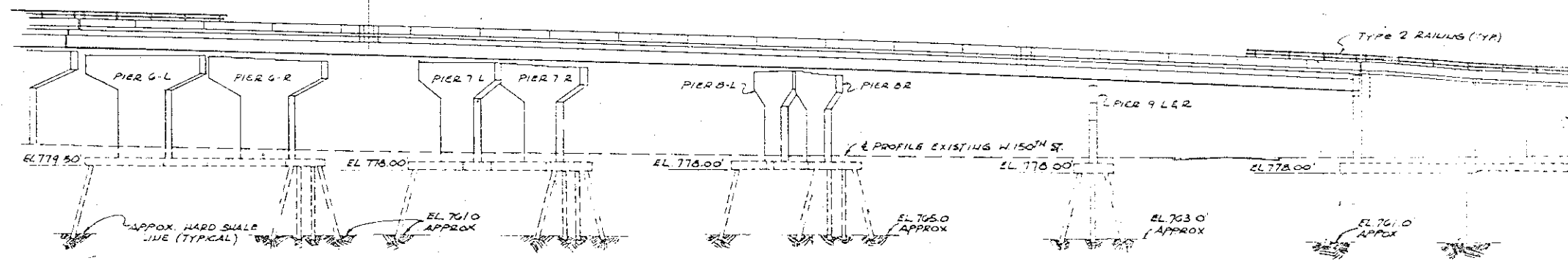
A STRUCTURE GROUNDING SYSTEM SHALL BE PROVIDED AS PER SECTION 625.20 AND SHALL BE INCLUDED WITH ITEM 625, ELECTRICAL EQUIPMENT, FOR PAYMENT.

GENERAL NOTES

BEISWENGER, HOCH & ARNOLD Consulting Engineers Akron, OH	
WEST 150th STREET CITY OF CLEVELAND BRIDGE OVER N.Y.C.R.R. AND C.T.S. RAPID TRANSIT	
REPORT NO. 6929	BRIDGE NO. 1
NO. B-162	
SCALE: None	DATE: Nov. 7, 1964
DRAWN BY: [Signature]	CHECKED BY: [Signature] REVISED: [Signature]



GENERAL PLAN
SCALE 1/16" = 1'-0"



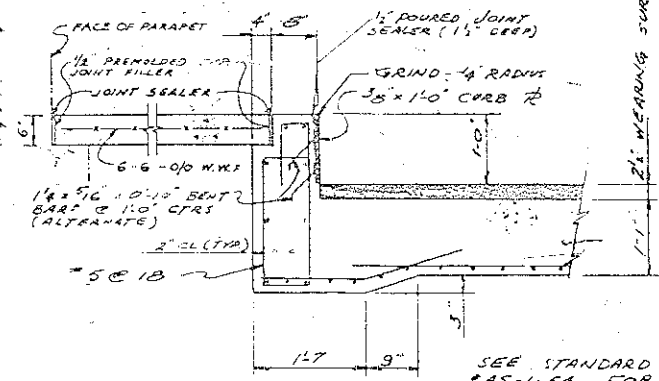
ELEVATION
SCALE 1/16" = 1'-0"

NOTE: TROUGH'S AND DOWNSPOUTS NOT SHOWN

WEST 150th STREET
GRADE SEPARATION WITH N.Y.C.R.R. AND
C.T.S. RAPID TRANSIT CITY OF CLEVELAND



NOTE: CURB PLATE TO BE PAID FOR UNDER ITEM 513



**TYPICAL SECTION THRU
APPROACH SLAB CURB & CONC. WALK**
SCALE 1/4" = 1'-0"

NOTE: WELDED WIRE FABRIC, 1/2" PREFORMED EXPANSION JOINT FILLER AND JOINT SEALER SHALL BE INCLUDED WITH ITEM 608 FOR PAYMENT.

NOTE FOR NOTES SEE SHEET 60

APPROVED
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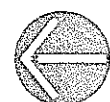
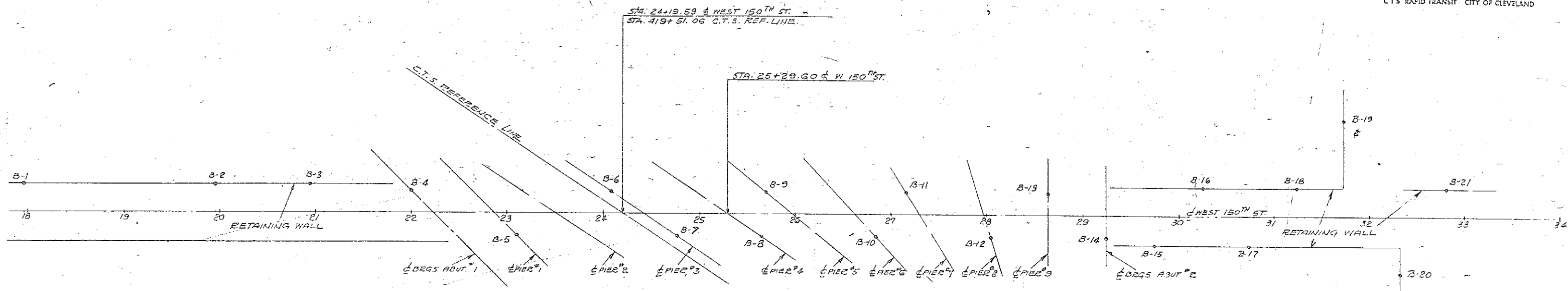
BEISWENGER HOCH & ARNOLD
Consulting Engineers
Akron, Ohio

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 4929
NO. B-162
SCALE AS NOTED
DRAWN BY J.L.B. CHECKED BY J.L.B. REVISIONS

BRIDGE NO. 15
5/22
DATE: JUN 1 1964

GENERAL PLAN & ELEVATION



SOIL BORING PLAN

SCALE 1" = 50'-0"

- BLACK TOP SOIL
- MED. STIFF BROWN & GRAY SANDY CLAY
- SOFT BROWN SANDY CLAY WITH VEGETATION
- COMPACT SILTY SANDY CLAY WITH ROCK FRAGMENTS & SOFT GRAY SLATE
- STIFF BROWN & GRAY SANDY CLAY WITH ROCK FRAGMENTS
- STIFF GRAY SANDY CLAY WITH ROCK FRAGMENTS
- COMPACT GRAY SILTY SAND SOME FINE GRAVEL & LIME STONE FRAGMENTS
- HARD SHALE

LEGEND

NOTES: IT IS ANTICIPATED THAT ROCK LIES AT A RELATIVELY CONSTANT DEPTH OF 15 TO 20 FEET. THE BORINGS SHOULD BE TAKEN TO DEPTH OF ROCK AND SHOULD FOLLOW THE PROCEDURE FOR SUBSURFACE INVESTIGATION AS OUTLINED IN THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS SPECIFICATIONS.

ROCK SHALL BE CORED TO A DEPTH OF 5 FEET AT B-4, B-6, B-8, AND B-14.

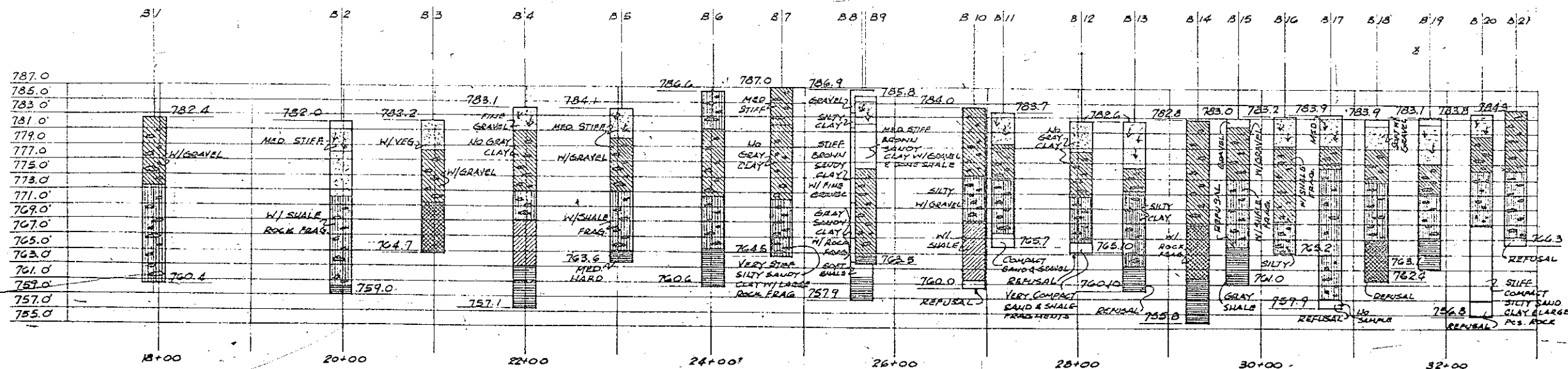
SOIL SAMPLES FROM B-1, B-3, B-5, B-10, B-13 AND B-18 SHALL BE ANALYZED TO ESTABLISH VALUES FOR SHEAR, COMPRESSION, MOISTURE CONTENT AND NATURAL DENSITY OF THE SOIL UNDER CONSIDERATION. THEN RECOMMENDATIONS FOR THE SAFE SOIL BEARING CAPACITY SHALL BE MADE.

ESTIMATED BORINGS (MACHINE, CORING ROCK IN PLACE) - 30 LIN. FT.

ESTIMATED BORINGS (MACHINE, CASED OR UNCASD SOIL, STANDARD PENETRATION TEST, SAMPLES AT 5' INTERVALS) - 380 LIN. FT.

BORING LOCATIONS

NO. OF HOLE	STATION	OFFSET	LEFT RIG.
B-1	17+95.60	30'	L
B-2	19+95.60	30'	L
B-3	20+95.60	30'	L
B-4	21+97.60	24'	L
B-5	23+08.60	24'	R
B-6	24+04.60	24'	L
B-7	24+76.60	24'	R
B-8	25+65.60	24'	R
B-9	25+67.60	24'	L
B-10	26+85.60	24'	R
B-11	27+16.60	24'	L
B-12	28+08.60	24'	R
B-13	28+64.60	24'	L
B-14	29+24.60	24'	R
B-15	29+74.60	30'	R
B-16	30+24.60	30'	L
B-17	30+74.60	30'	R
B-18	31+24.60	30'	L
B-19	31+79.60	100'	L
B-20	32+37.60	70'	R
B-21	32+79.60	30'	L



TEST BORINGS

SCALE: HORIZ 1" = 100'-0"
1" = 8'-0"

PLAN & LOG OF BORINGS

NOTE IF BORINGS CAN NOT BE TAKEN AT LOCATIONS SHOWN, DUE TO LOCAL CONDITIONS, A RELOCATION OF UP TO 10' IN ANY DIRECTION IS PERMITTED, BUT THE NEW LOCATION INFORMATION SHALL BE SUBMITTED TO THE ENGINEER.

BEISWENGER, HOCH & ARNOLD
Consulting Engineers
Alton, O.

WEST 150th STREET CITY OF CLEVELAND

BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

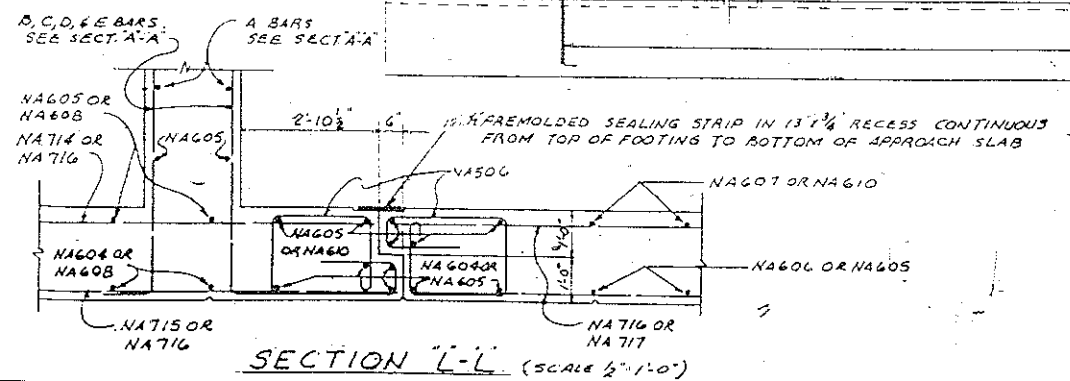
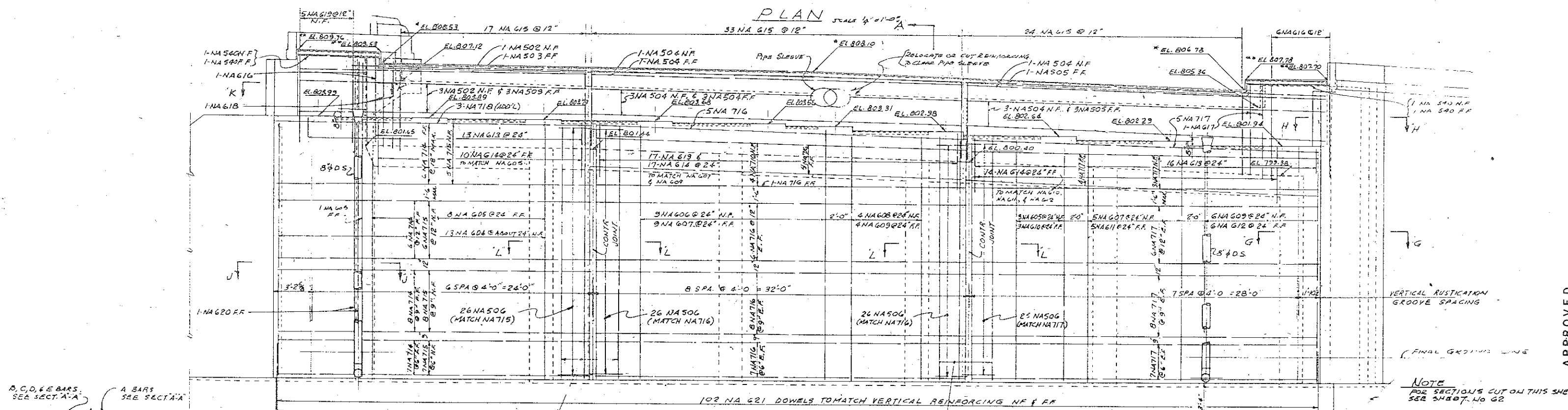
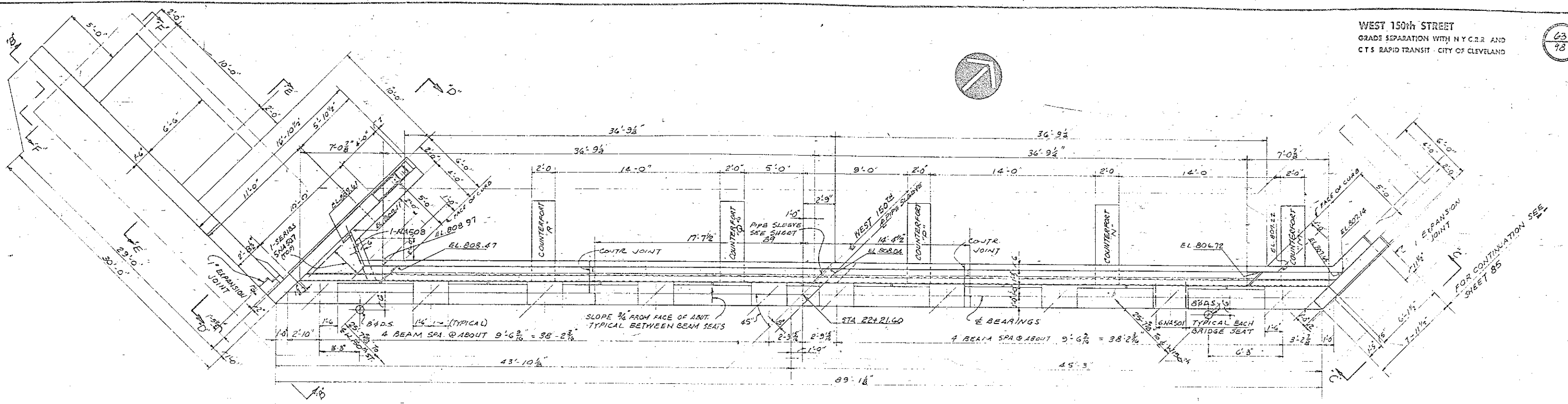
REPORT NO. 6929

BRIDGE NO.

NO. B-162

SCALE AS NOTED
DRAWN BY J.J.S. CHECKED BY J.H. REVISION

DATE JAN 17 1962



NORTH ABUTMENT - PLAN & ELEVATION

* ELEVATION GIVEN TO TOP OF 8 1/2" BRIDGE DECK ANGLE AT FACE OF BACKWALL

** ELEVATION GIVEN TO TOP OF 7 1/2" BRIDGE DECK ANGLE AT FACE OF BACKWALL

BEISWENGER HOCH & ARNOLD
Consulting Engineers
Akron, Ohio

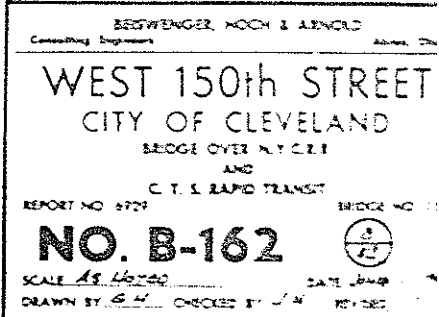
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

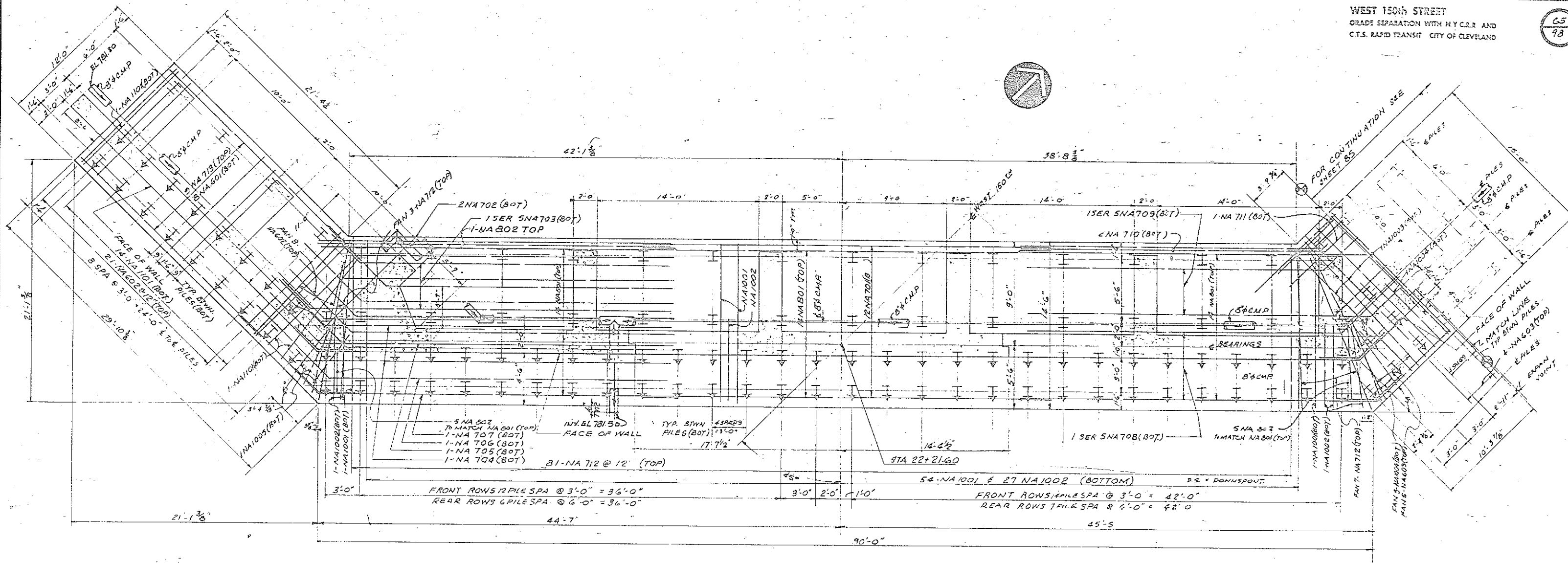
REPORT NO. 6929
BRIDGE NO. 15

NO. B-162

SCALE AS NOTED
DATE JAN 1, 1960
DRAWN BY G.H. CHECKED BY J.H. REVISED

APPROVED
[Signature]





FOUNDATION PLAN

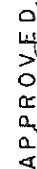
SCALE 1/4" = 1'-0"

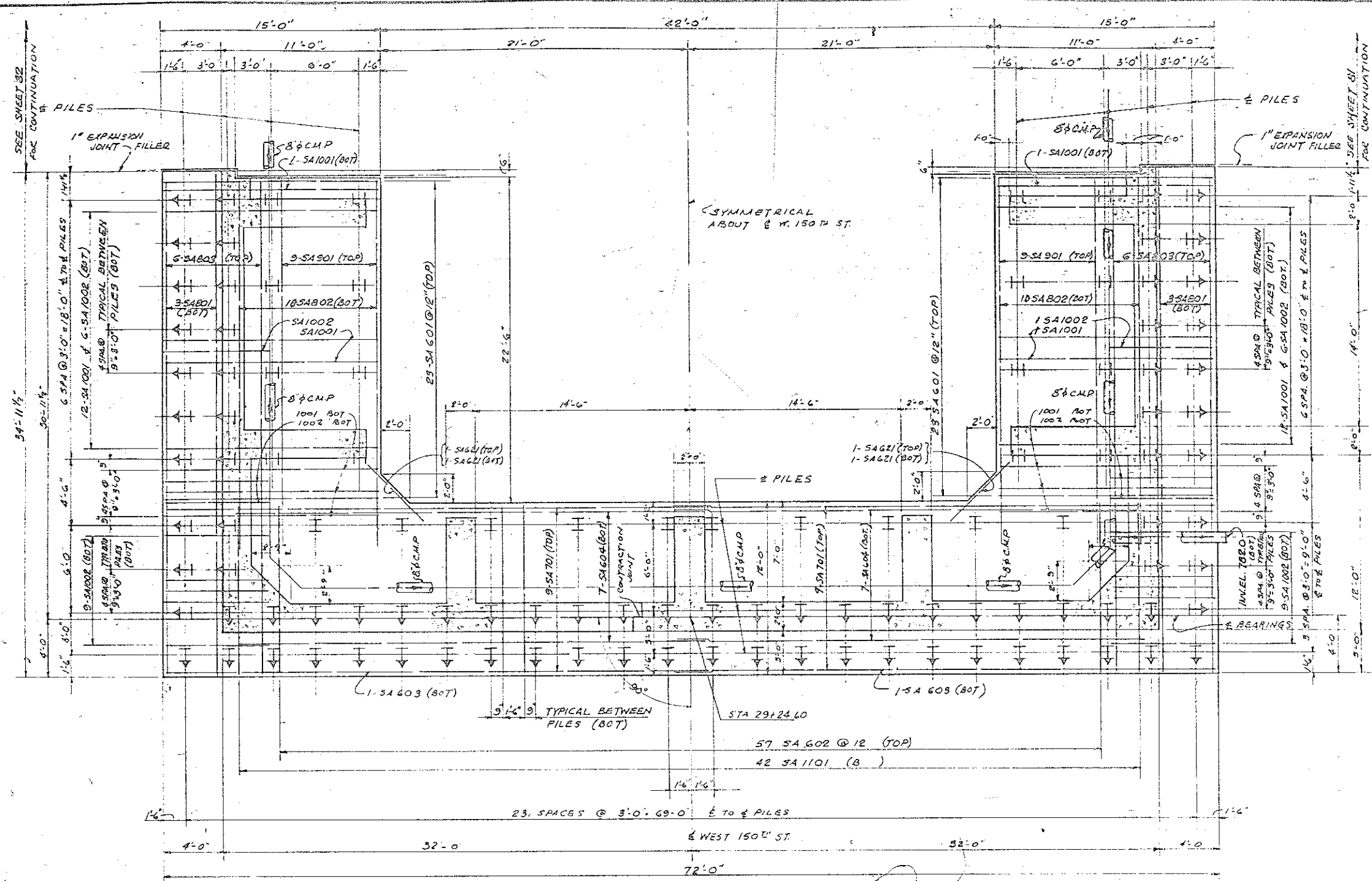
▲ INDICATES 1-4 BATTERED PILE AND DIRECTION OF BATTER

NOTE: WHERE B & PERFORATED PILES PASS THROUGH A CONCRETE THICKNESS GREATER THAN 2'-0" A NEW PERFORATED PILE SHALL BE USED. FOR REINFORCING SCHEDULE SEE SHEET 9.

NORTH ABUTMENT - FOUNDATION PLAN

BEISWENGER, HOCH & ARNOLD
Consulting Engineers
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT
REPORT NO. 8779
NO. B-162
SCALE AS NOTED
DRAWN BY G.M. CHECKED BY J.M. REVISED





FOUNDATION PLAN

SCALE 1/4" = 1'-0"

Δ INDICATES 1:4 BATTERED PILE
AND DIRECTION OF BATTER

NOTE: FOR REINFORCING SCHEDULE SEE
SUBSET 91 & 92

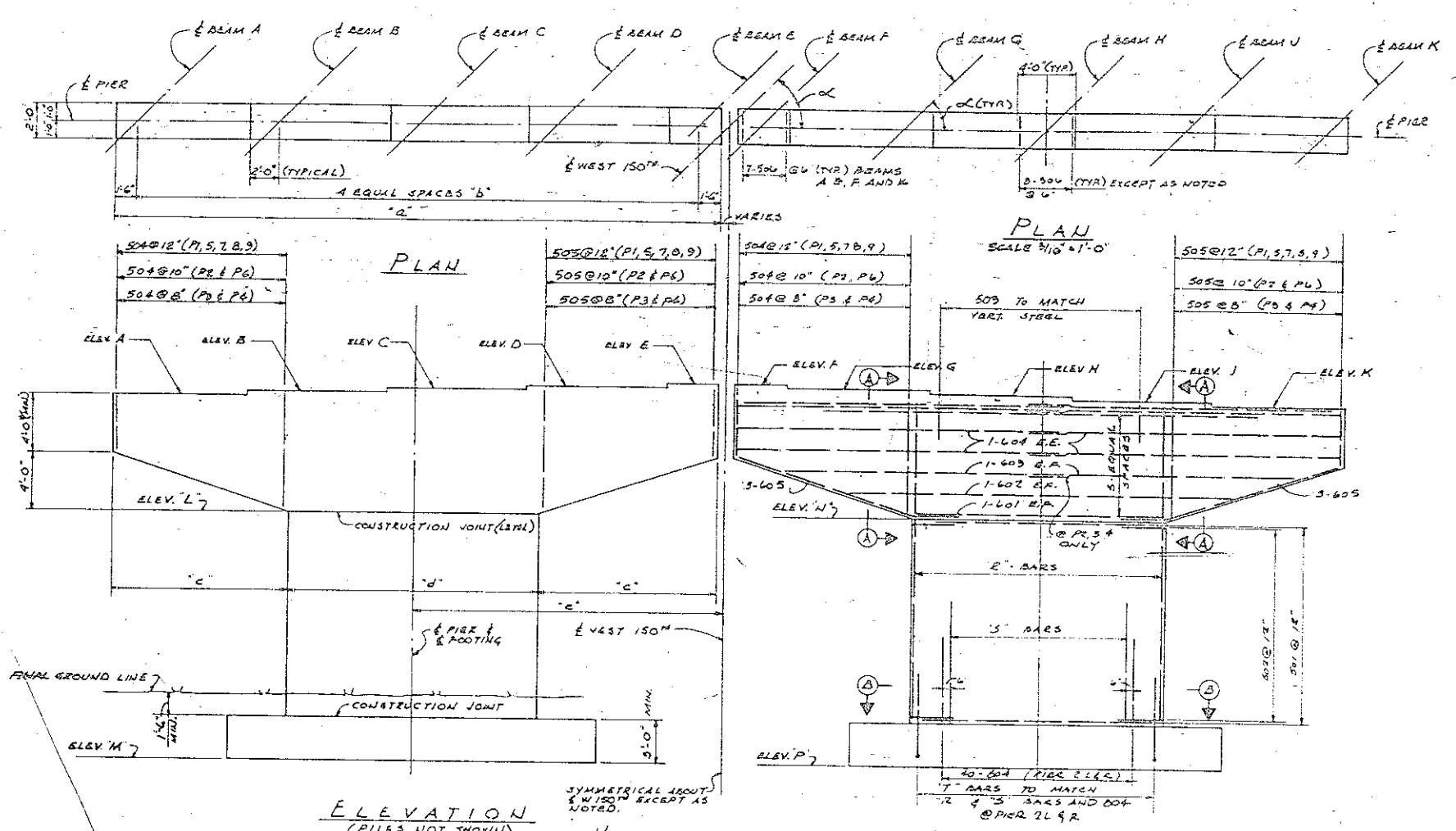
SOUTH ABUTMENT - FOUNDATION PLAN

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Consulting Engineers
Alma, Ohio

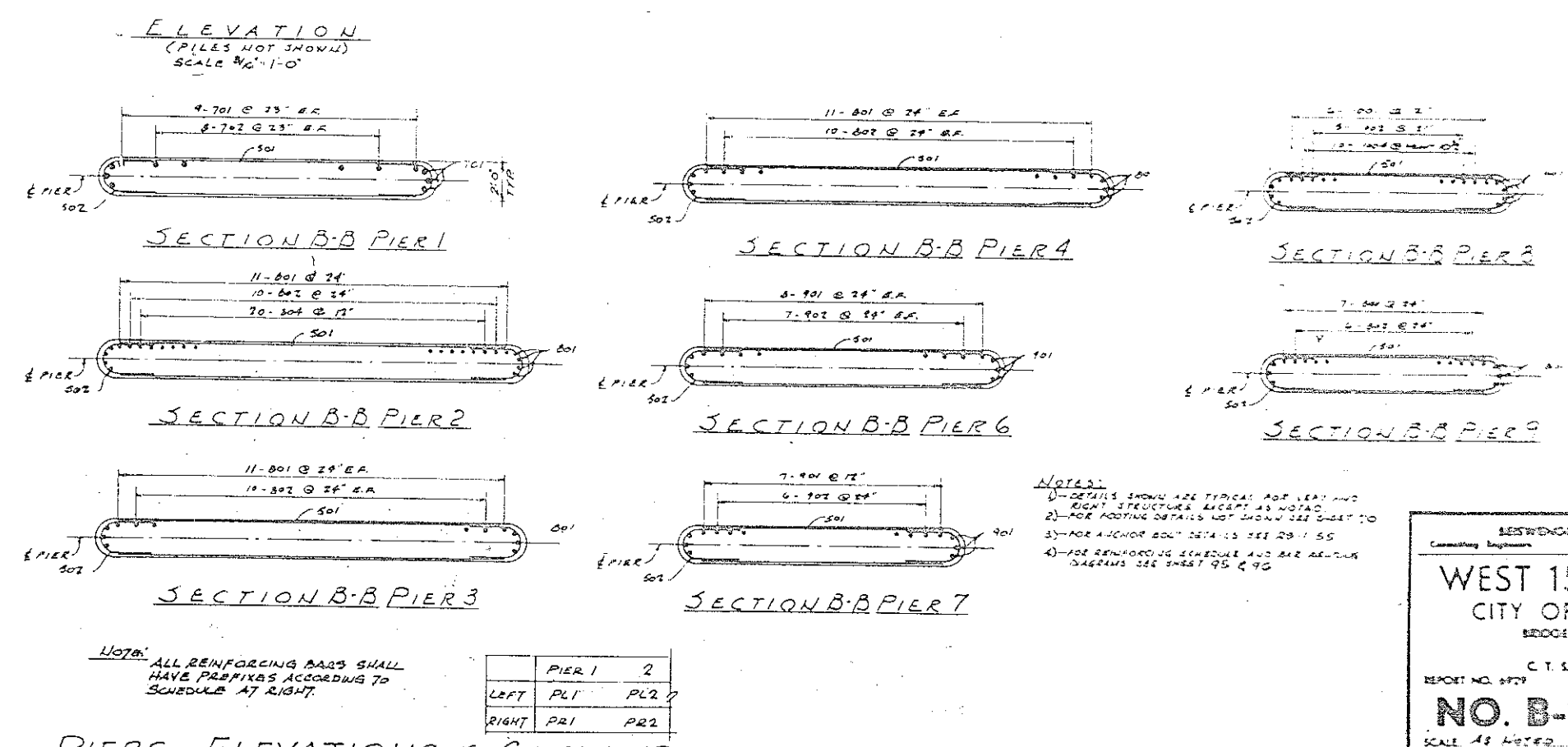
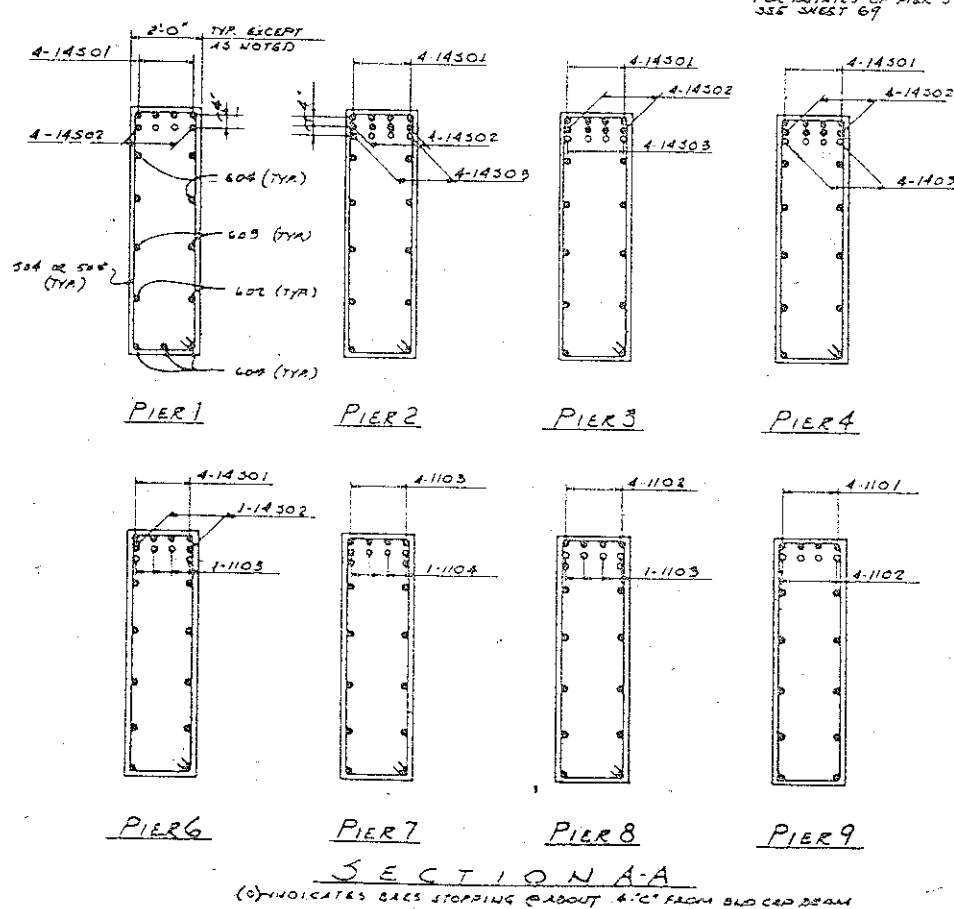
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 6929
NO. B-162
SCALE As Noted
DRAWN BY G.H. CHECKED BY J.H. REVISED

BRIDGE NO. 11
11
15



PIER DATA									
PIER No.	1	2	3	4	5	6	7	8	9
ELEVATION	A	803.61	804.77	806.22	804.94	807.53	805.84	804.36	802.07
	B	804.05	805.21	806.57	807.10	807.40	805.93	804.46	802.22
	C	804.35	805.54	806.70	807.20	807.45	805.92	804.46	802.26
	D	804.64	805.85	806.96	807.21	807.45	805.91	804.47	802.24
	E	804.92	806.15	807.17	807.37	807.47	805.90	804.47	802.33
	F	804.89	806.15	807.24	807.55	807.55	805.99	804.56	802.45
	G	804.95	806.22	807.20	807.40	807.54	805.96	804.56	802.47
	H	805.01	806.27	807.24	807.23	807.13	805.95	804.52	802.10
	J	805.06	806.32	807.07	807.26	806.90	805.69	803.90	801.17
	K	804.99	806.31	806.65	806.72	806.66	805.05	803.67	801.74
	L	795.61	796.77	798.22	798.94	799.33	797.84	796.36	794.07
	M	795.50	796.00	796.00	796.00	796.00	796.00	796.00	796.00
	N	796.81	798.15	798.85	798.72	798.64	797.05	795.67	793.14
	P	795.50	796.00	796.00	796.00	796.00	796.00	796.00	796.00
	Q	41'-2 1/4"	51'-11 1/4"	51'-11 1/4"	51'-11 1/4"	45'-4 1/2"	39'-5 1/4"	34'-6 3/8"	31'-2 1/2"
	R	9'-6 1/2"	12'-2 1/4"	12'-2 1/4"	12'-2 1/4"	10'-7 1/8"	9'-1 1/8"	7'-10 3/8"	7'-0 3/8"
DIMENSIONS	S	12'-0"	15'-0"	15'-0"	15'-0"	13'-3"	11'-6"	10'-0"	9'-3"
	T	17'-2 1/4"	21'-11 1/4"	21'-11 1/4"	21'-11 1/4"	18'-10 3/8"	16'-5 1/4"	14'-6 3/8"	12'-0 3/8"
	U	21'-11"	28'-1 1/8"	28'-1 1/8"	28'-1 1/8"	24'-3 3/8"	20'-1 1/8"	18'-1 1/8"	16'-2 1/4"
	V	45'-00"	33'-29"	33'-29"	33'-29"	39'-55"	47'-48"	53'-51"	75'-12"
BAR SCHEDULES									
BAR S	24-701	30-801	28-801	28-801	24-701	22-901	20-101	20-1001	20-801
BAR T	16-702	20-802	20-802	20-802	18-702	14-902	12-902	10-1002	12-802
BAR U	40-703	50-803	48-803	48-803	44-703	36-103	32-103	30-1003	32-803



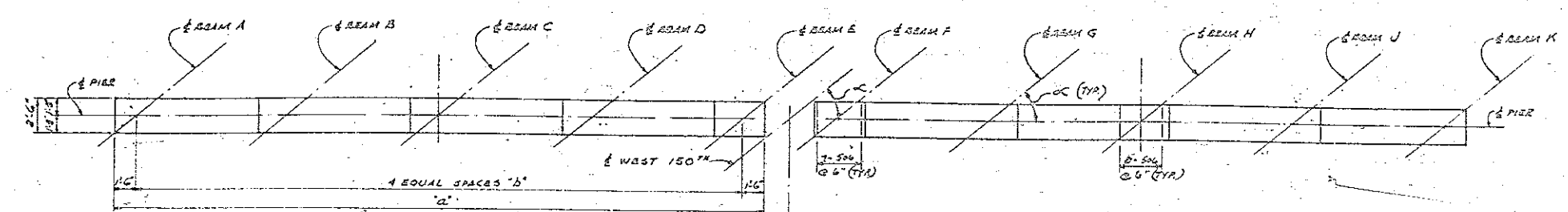
NOTE: ALL REINFORCING BARS SHALL HAVE PREFIXES ACCORDING TO SCHEDULE AT RIGHT.

	PIER 1	2
LEFT	PL1	PL2
RIGHT	PR1	PR2

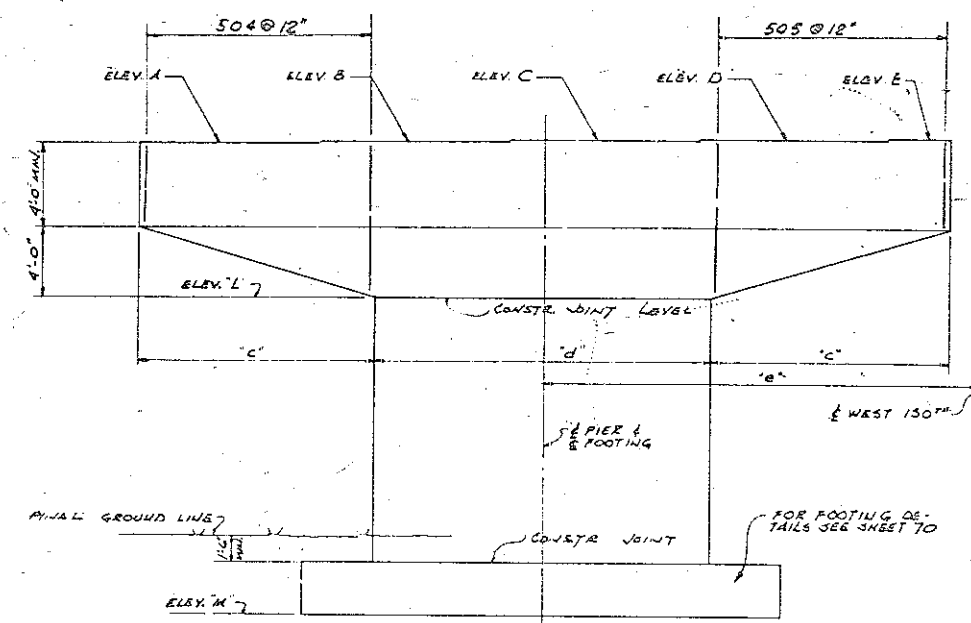
PIERS - ELEVATIONS & SECTIONS

NOTES:
1) DETAILS SHOWN ARE TYPICAL FOR LEFT AND RIGHT STRUCTURE EXCEPT AS NOTED.
2) FOR FOOTING DETAILS NOT SHOWN SEE SHEET 69.
3) FOR ANCHOR BOLT DETAILS SEE SHEET 69.
4) FOR REINFORCING SCHEDULE AND BAR SCHEDULES SEE SHEET 95 & 96.

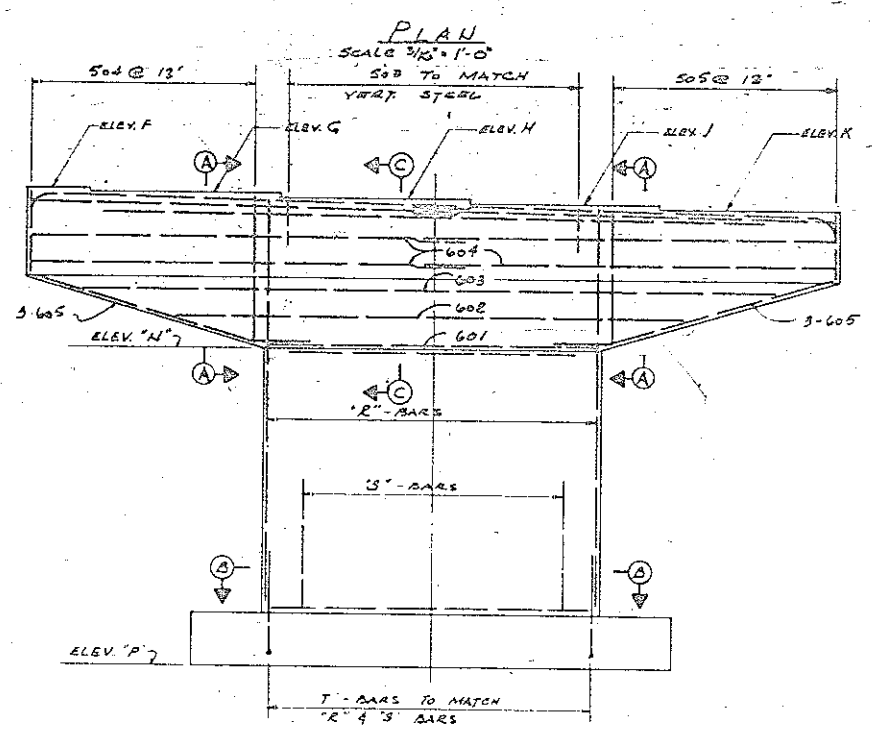
WESTWING, MOON & LINDSAY
Consulting Engineers
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT
REPORT NO. 8779
NO. B-162
SCALE AS NOTED
DRAWN BY R.P. CHECKED BY M.T. REVISED



PLAN

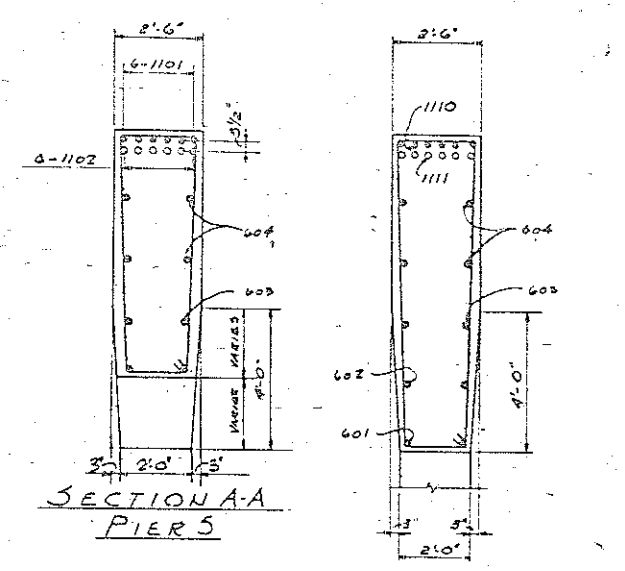


ELEVATION
(PILES NOT SHOWN)



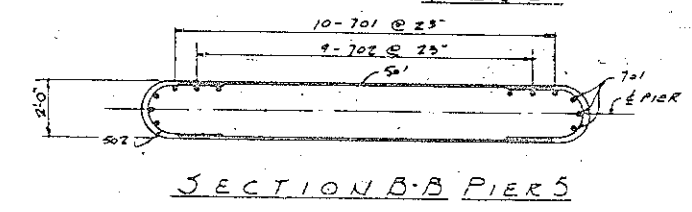
ELEVATION
(PILES NOT SHOWN)
SCALE 3/16" = 1'-0"

DETAILS PIER 5



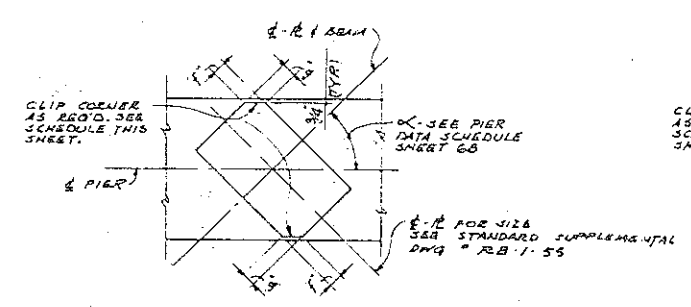
SECTION A-A
PIER 5

SECTION C-C
PIER 5

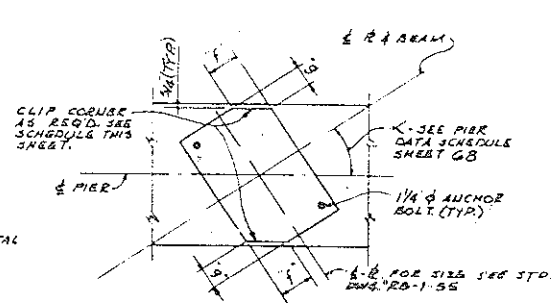


SECTION B-B PIER 5

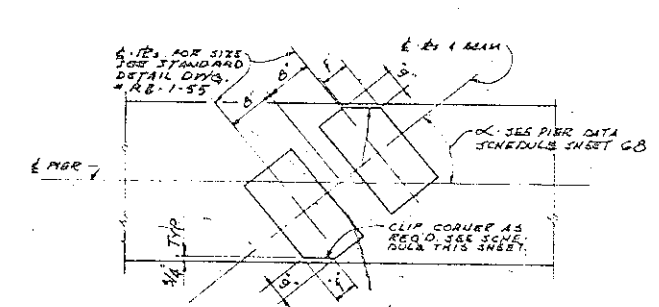
NOTE:
FOR INFORMATION NOT GIVEN
THIS SHEET SEE SHEET 68



BASE DETAILS
TYPICAL EXCEPT AS NOTED

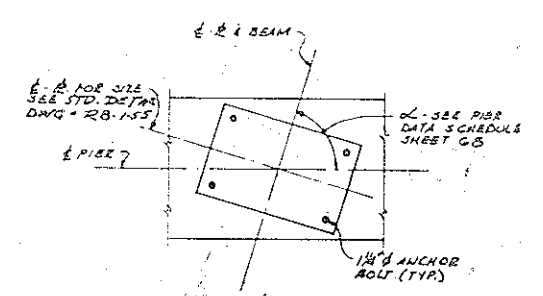


BASE DETAILS PIER 2



BASE DETAILS PIER 5

CLIPPED BASE DATA												
LOCATION	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7					
A	2' 2 1/2"	2' 2 1/2"	5' 3 1/2"	3' 3 1/2"	6' 4 1/2"	5' 2"	7' 4 1/2"	2' 1 1/2"	4' 2 1/2"	5' 4 1/2"	3' 2 1/2"	3' 5"
B	1' 1 1/4"	1' 1 1/4"	4' 1 1/2"	2' 2 1/2"	5' 1 1/2"	3' 3 1/2"	5' 3 1/2"		3' 2 1/2"	4' 1"	1' 1 1/2"	
C												
D												
E												
F	2' 2 1/2"	2' 2 1/2"	5' 3 1/2"	3' 3 1/2"	4' 2 1/2"	2' 2 1/2"	7' 4 1/2"	2' 1 1/2"	2' 2 1/2"			
G												
H												
J												
K	4' 3 1/2"	4' 3 1/2"		8' 1/2"	5' 1/2"	5' 3 1/2"	3' 3 1/2"					



BASE DETAILS PIER 8

PIER No. 5 - ELEVATION & SECTIONS

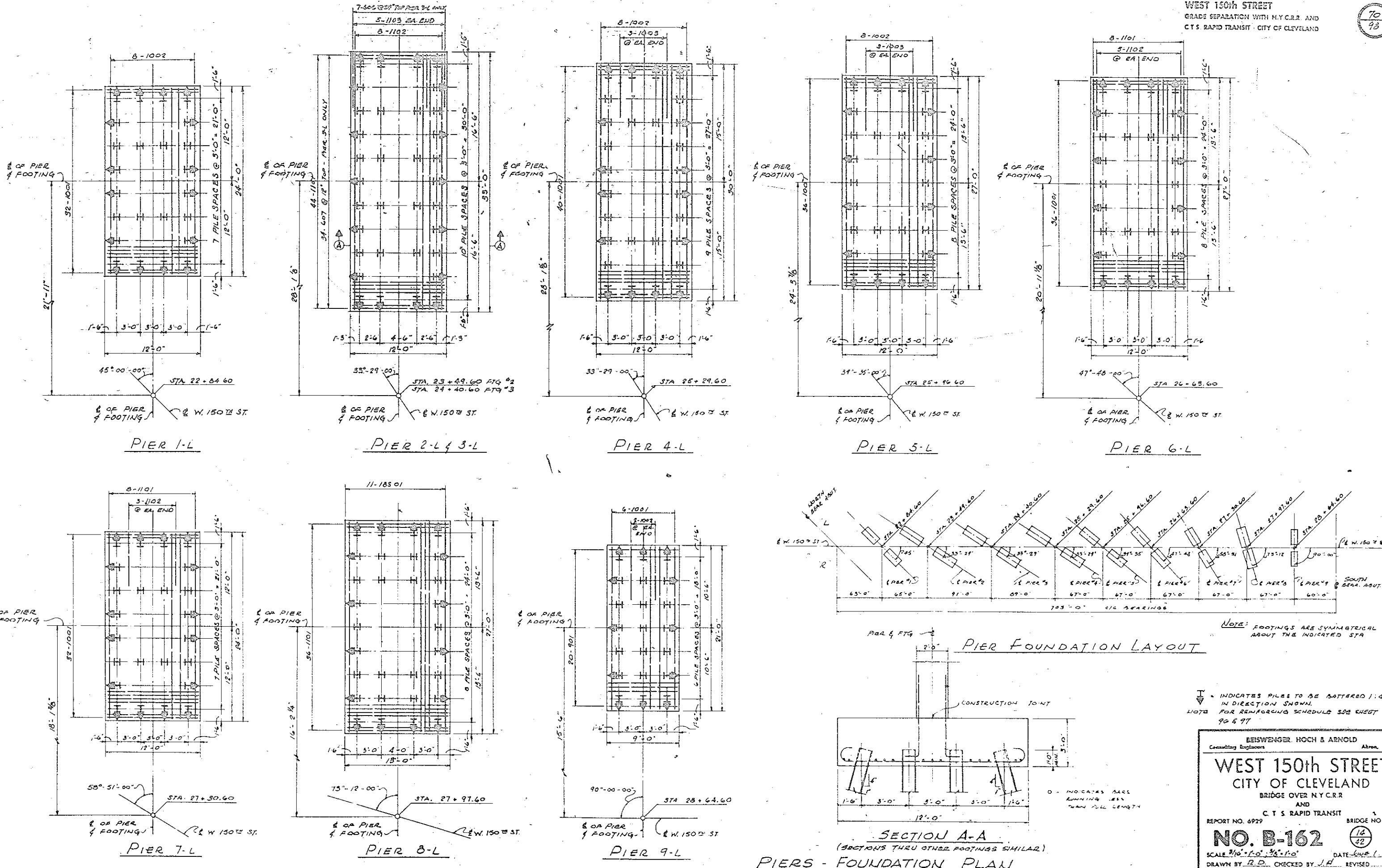
NOTE: FOR REINFORCING SCHEDULES
SEE SHEET 98

BRIDGEMAN, WOOD & ALVOLD
Consulting Engineers

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 6729
NO. B-162
SCALE AS NOTED
DRAWN BY R.D. CHECKED BY J.B. REVISED

BRIDGE NO. 13
DATE 10/1/42

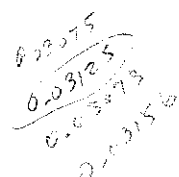


BEISWENGER, HOCH & ARNOLD
Consulting Engineers
Albion, O.

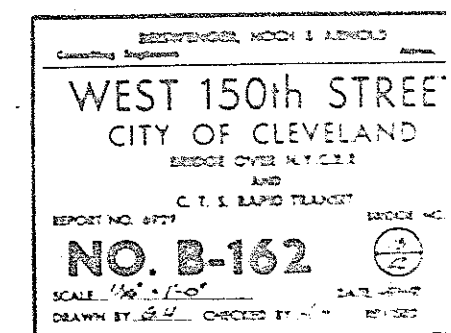
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 6929
BRIDGE NO. 162

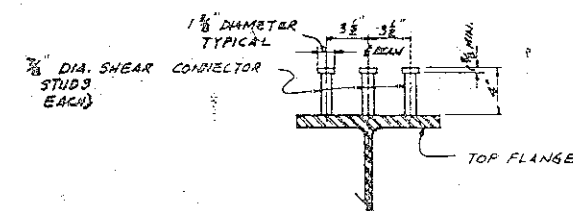
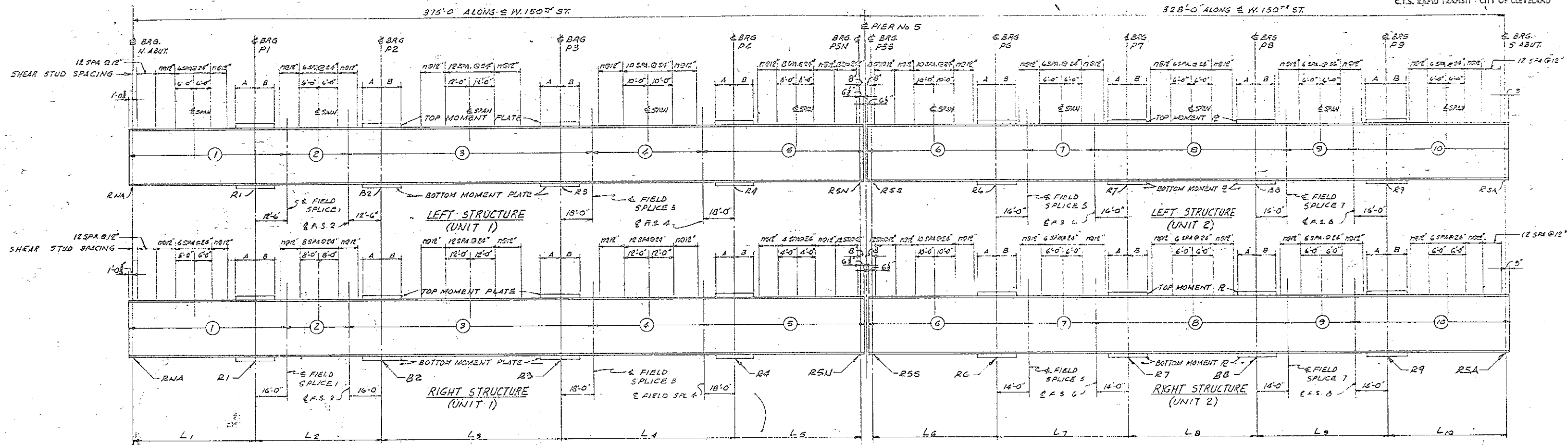
SCALE 3/16" = 1'-0" 3/8" = 1'-0"
DRAWN BY R.D. CHECKED BY J.H. REVISED



Notes FOR LOCATION OF SCUPPERS
SEE SHT 60 G/G
FOR SCUPPER DETAILS SEE
SHEET 79
FOR DETAILS OF ROW-WAY
END DAM SEE SUPPLEMENTAL
STANDARD OVG SO-1-85, SHT 1 CC
FOR TROUGH LOCATIONS SEE
SHEET 60 G/G
FOR SCUPPER LOCAL DWS SEE
SHEET 60 G/G



STEEL FRAMING PLAN



SHEAR CONNECTOR STUD DETAIL

NOTE: STUDS SHALL BE USED IN GROUPS OF THREE AS SHOWN. FOR SPACING OF GROUPS SEE BEAM ELEV. AND TABLE OF DIMENSIONS.

BEAM ELEVATIONS

SHOP PAINTING

ALL STEEL COMPONENTS EXCEPT THE SURFACES IN CONTACT WITH OR IMBEDDED IN CONCRETE SHALL BE GIVEN PAINT SHOP COAT OF BASIC LEAD SILICO CHROMATE ALKYL PAINT PRIMER CONFORMING TO ITEM 514 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

FIELD PAINTING

ALL EXPOSED SURFACES OF STEEL IN THE ABOVE ITEMS SHALL BE GIVEN TWO COATS OF BASIC LEAD SILICO CHROMATE ALKYL PAINT, CONFORMING TO THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATIONS. THE PAINT SHALL BE GRAY IN COLOR AND SHALL MATCH A COLOR STANDARD FURNISHED BY THE COUNTY ENGINEER. IN ORDER TO DISTINGUISH THE FIRST COAT FROM THE SECOND OR FINAL COAT, THE PAINT USED FOR THE FIRST COAT SHALL BE TINTED A LIGHTER SHADE.

SHOP DRAWINGS

ALL SHOP DRAWINGS REQUIRED FOR THE FABRICATION OF THE STEEL IN THE ABOVE ITEMS ARE TO BE INKED TRACINGS ON STANDARD FEDERAL SHEETS OF TRACING CLOTH OR PROCESSED TRACINGS ON CLOTH. TRACINGS ARE TO BE SENT TO THE PROPERTY OF THE COUNTY ENGINEER AFTER COMPLETION OF THE PROJECT.

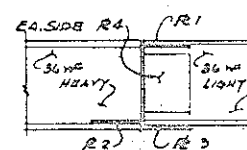
TABLE OF DIMENSIONS AND SIZES

BEAM	ROLLED BEAM SIZE										LENGTH & TO & BEARINGS										MOMENT PLATES										N SPACES (BEAM SHEAR STUDS)										BEAM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
																					P1		P2		P3		P4		P6		P7		P8		P9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	1	2	3	4	5	6	7	8	9	10	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	SIZE	A	B	SIZE	A	B	SIZE	A	B	SIZE	A	B	SIZE	A	B	SIZE	A	B	SIZE	A		B	SIZE	A	B	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
LEFT STRUCT.	A	36W130	36W135	36W140	36W145	36W150	36W155	36W160	36W165	36W170	63'-0"	50'-0"	50'-0"	50'-0"	50'-0"	50'-0"	50'-0"	50'-0"	50'-0"	50'-0"	50'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	1

BEAM FILLER & THICKNESS										ROCKERS & BOLSTERS									
FIELD SPICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
B	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
C	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
D	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
E	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
F	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
G	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
H	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
I	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
J	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
K	1/2"	1/4"	3/8"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"

NOTE: BEARINGS INDICATED THUS * SHALL HAVE BEVELLED SOLE PLATES. TOP OF BEVELLED SOLE PLS. SHALL BE PARALLEL TO FINISHED PAVEMENT GRADIENT AT BEARING LOCATION.

NOTE: FOR ROCKERS & BOLSTERS SEE SUPPLEMENTAL STANDARD DWG. RB-1-65. FOR MODIFIED BASE RS. SEE SHEET 69.

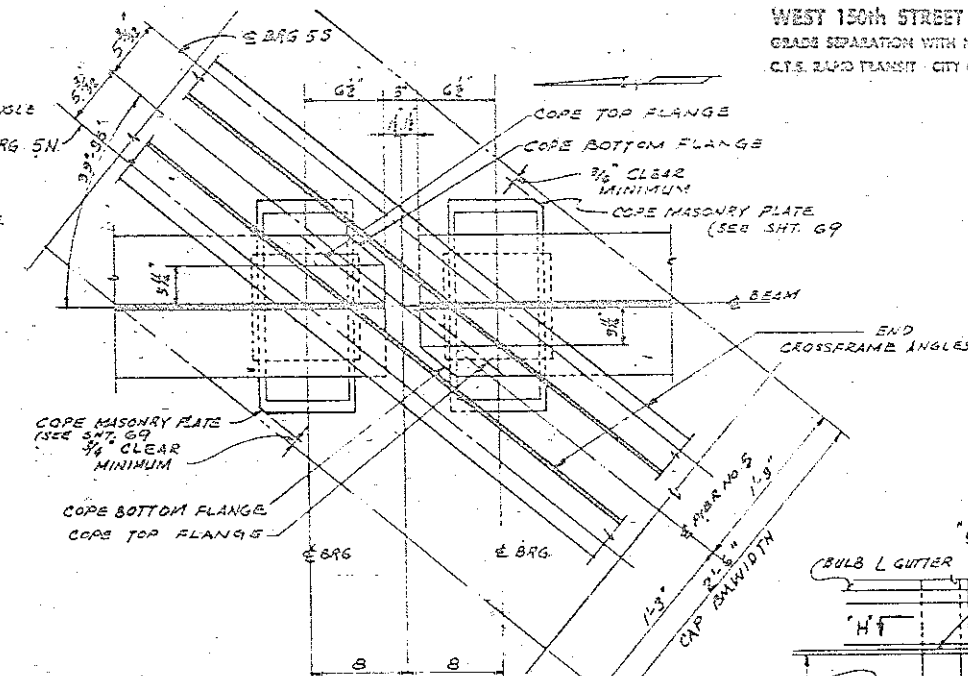


BEAM FILLER & R DIAGRAM

NOTE: FOR BEAM FIELD SPICE DETAILS SEE SUPPLEMENTAL DWG. SD-2-65 - SHEET 3-13.

DETAILS OF STEEL STRINGERS

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT
REPORT NO. 6929
NO. B-162
SCALE: NONE
DRAWN BY: S.H. CHECKED BY: J.H. REVISED: 12/24/65



MOMENT PLATE WELDING DETAIL
(TOP PLATE SHOWN - BOTTOM PLATE SIMILAR)

[illegible]

Hand-drawn sketch of a building section, likely a wall or foundation detail. The drawing includes the following annotations:

- Top Center:** $\frac{3}{8}$ " CURB S
- Top Left:** 7"
- Top Right:** NORMAL TO FACE OF ABUTMENT
- Left Side:** $\frac{3}{8}$ " CURB S, 12.175"
- Center:** 5"
- Right Side:** 8" CURB PLATE, 12"
- Bottom Right:** BUILD. L. BUTTER

The sketch shows a cross-section of a structure with various layers and dimensions. A dashed line indicates a boundary or interface. Arrows point to specific features, and the text "NORMAL TO FACE OF ABUTMENT" is written vertically on the right side.

CONFIDENTIAL, ROOM 1, 11/10/01

NO. B-162

SCALE 45 METERS

DRAWN BY G.W. CHECKED BY J.W. 1952

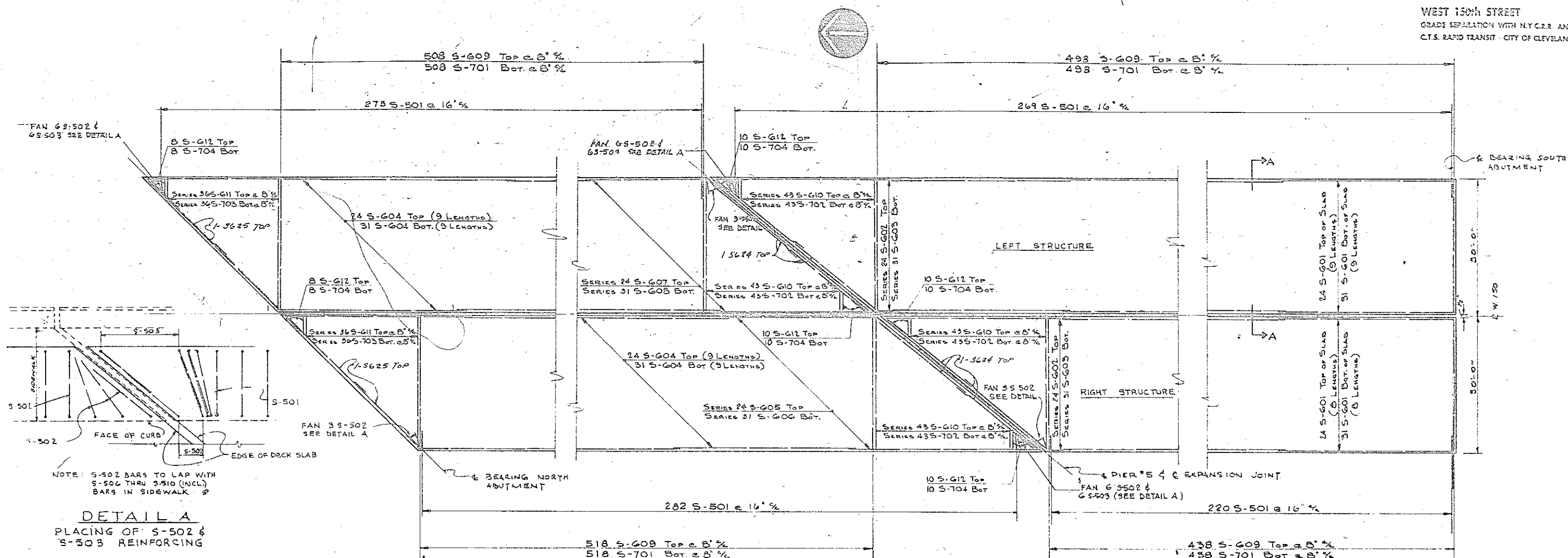
SECTION "B-B"

NOTE "E" SAME AS NOTE A EXCEPT BOLTS TO BE 1/2" X 2"

[illegible]

CURB AND SIDEWALK END DAM DETAILS
STRUCTURE DETAILS

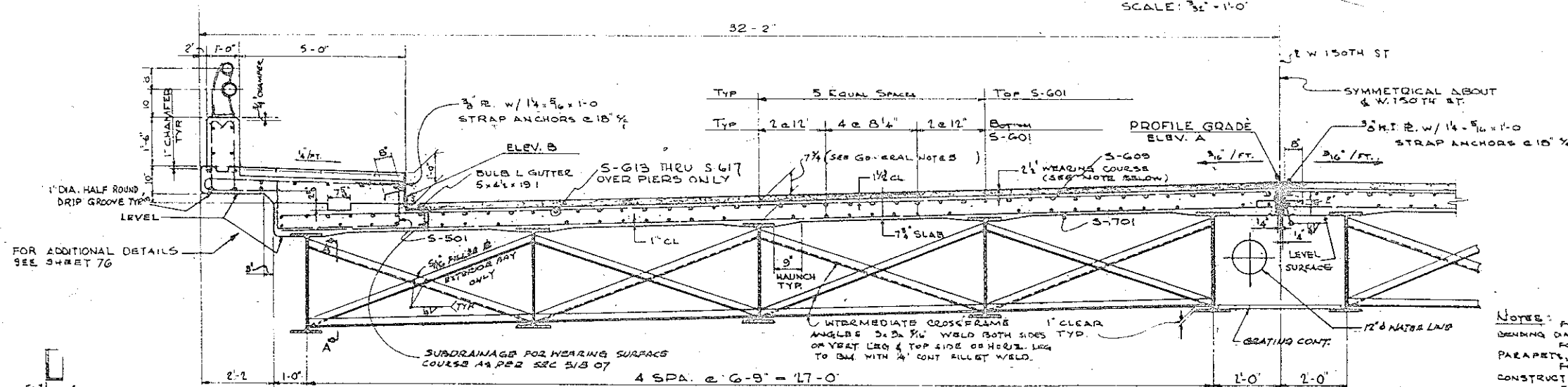
Note: FOR FURTHER DETAIL
SEE SUPPLEMENTAL
STANDARD DRG 40-1-65
SHEET 2 & 3.



DETAIL A
PLACING OF S-502 &
S-503 REINFORCING

SLAB REINFORCING PLAN

SCALE: 3/8" = 1'-0"



NOTE: FOR ELEVATIONS
A & B SEE SHEET 77

TYPICAL CROSS SECTION

SCALE: 1/2" = 1'-0"

(LOOK REINFORCING SHOWN FOR SECT A-A)
(SHEAR CONNECTOR STUDS NOT SHOWN)

DECK PLAN & SECTION

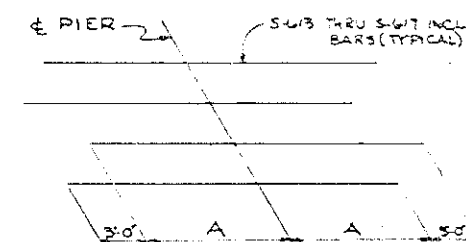
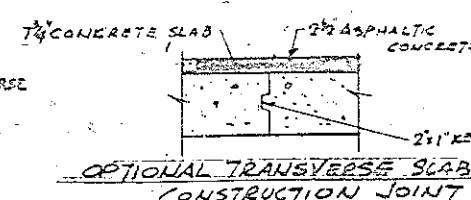


DIAGRAM OF ADDITIONAL
REINFORCING OVER PIERS

PER	BAR	A
1L	S-503	5'-0"
2L	S-504	3'-6"
3L	S-505	11'-0"
4L	S-506	7'-0"
5L	S-507	10'-0"

NOTES: FOR REINFORCING SCHEDULE AND ALL
BENDING DIAGRAMS, SEE SHT 73
FOR LONGITUDINAL REINFORCING - THE
PARAPETS, SEE SHT 73
FOR OPTIONAL TRANSVERSE SLAB
CONSTRUCTION JOINT, SEE THIS SHEET
FOR DETAILS OF ROADWAY END DRAIN,
SEE SHT 73



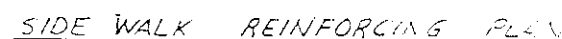
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 0729

NO. B-162

SCALE AS NOTED

DRAWN BY: J.R. CHECKED BY: J.R.

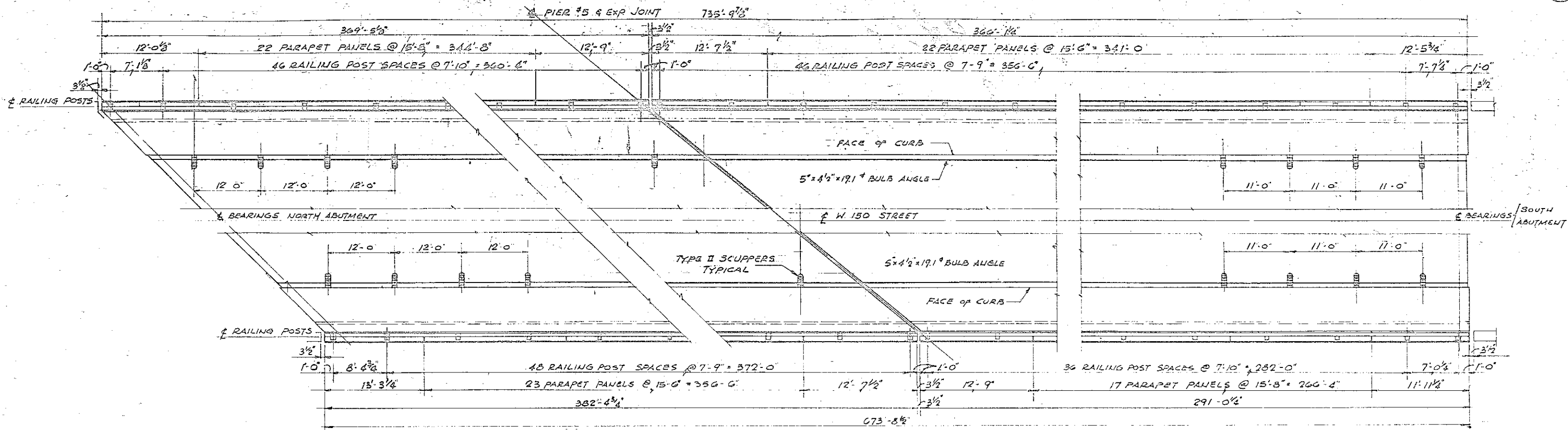


SIDEWALK DETAILS

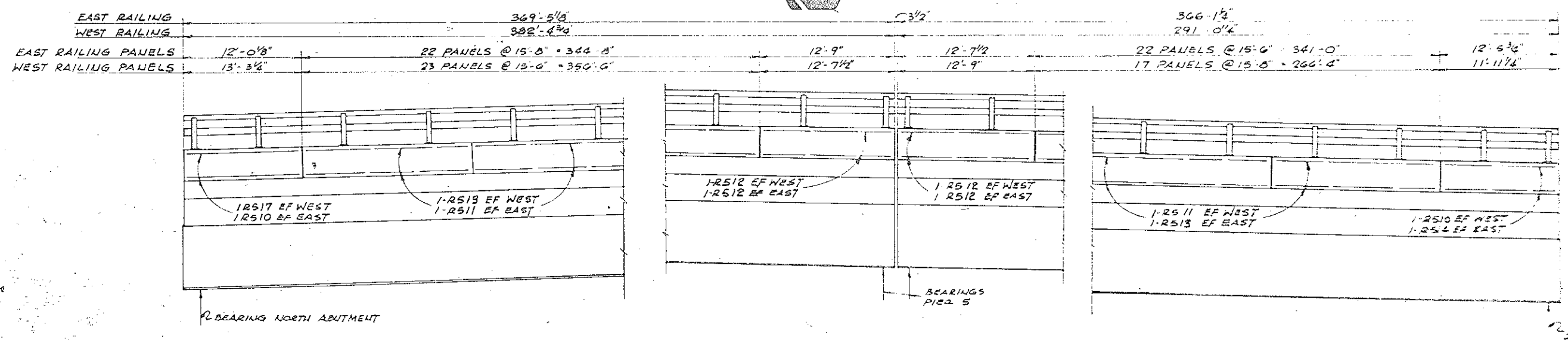
REFERENCE, ROOM 1 AIRCRAFT
Communications Section
SECRET

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER R. C. L.
AND
C. L. L. RAILROAD TRAM
SECRET

REPORT NO. 162
NO. B-162
DATE JAN 1 1946
DRAWN BY J. J. L. CHECKED BY J. J. L. APPROVED



PLAN of RAILINGS & SCUPPERS



ELEVATION - RAILINGS & PARAPETS
(LOOKING EAST @ BOTH RAILINGS)

TOP OF PAYEMENT ELEVATIONS (ELEVATIONS GIVEN ARE FINISHED PAVEMENT ELEVATIONS)																																	
STA.	21+75	22+00	22+25	22+50	22+75	23+00	23+25	23+50	23+75	24+00	24+25	24+50	24+75	25+00	25+25	25+50	25+75	26+00	26+25	26+50	26+75	27+00	27+25	27+50	27+75	28+00	28+25	28+50	28+75	29+00	29+25	29+50	
A	806.46	807.40	808.76	809.05	809.76	810.40	810.96	811.45	811.86	812.20	812.96	812.65	812.76	812.80	812.76	812.65	812.46	812.20	811.86	811.45	810.96	810.40	809.76	809.05	808.26	807.40	806.46	805.45	804.36	803.20	801.96	800.65	
B	806.22	807.16	808.02	808.31	809.32	810.16	810.72	811.21	811.62	811.96	812.22	812.41	812.52	812.56	812.52	812.41	812.22	811.96	811.62	811.21	810.72	810.16	809.52	808.81	808.02	807.16	806.22	805.21	804.12	802.96	801.72	800.41	

Note:
FOR LOCATION OF ELEV.
PTS. A & B, SEE SH. 75

RAILING PLAN

WESTINGHOUSE, KODAK & LINCOLN
Consulting Engineers

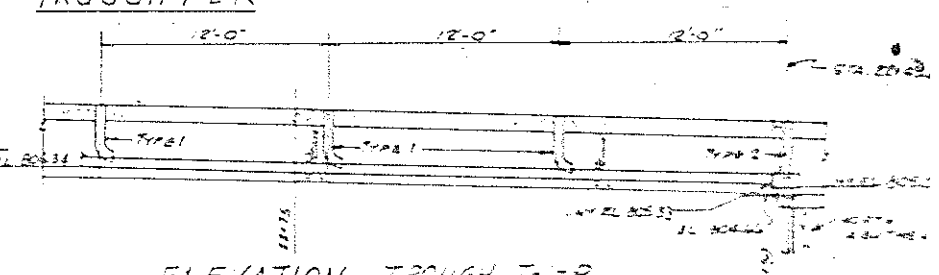
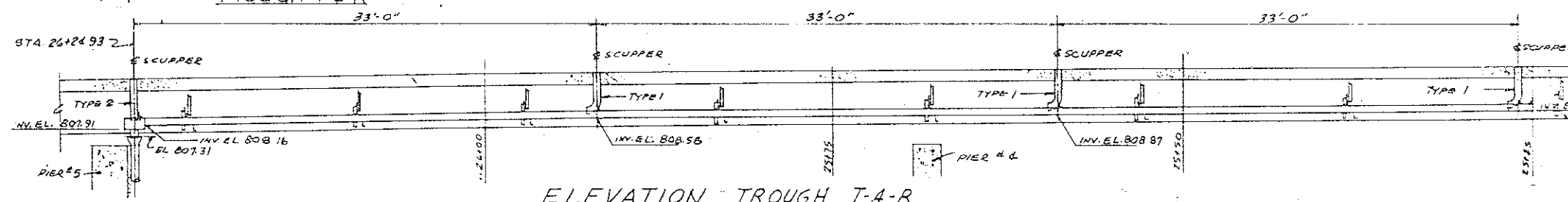
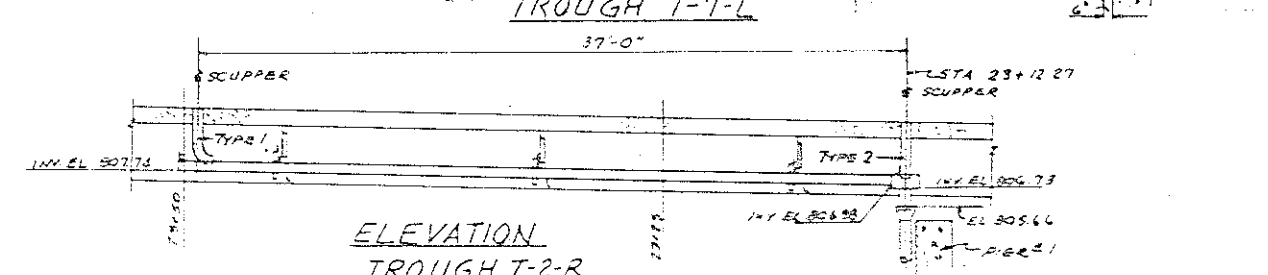
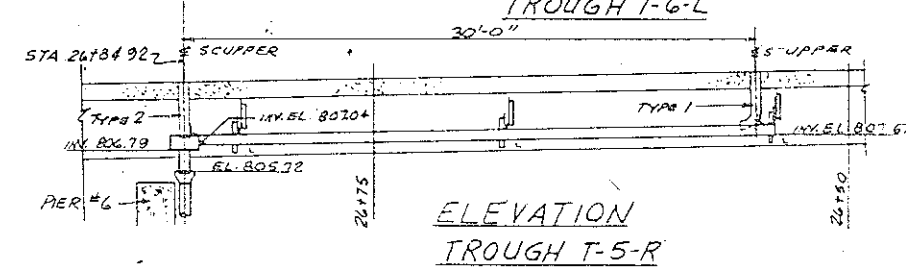
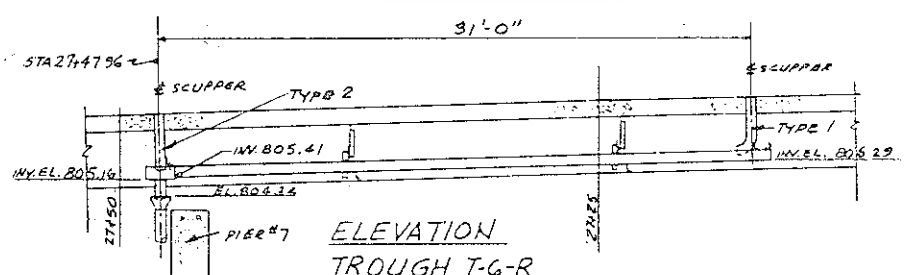
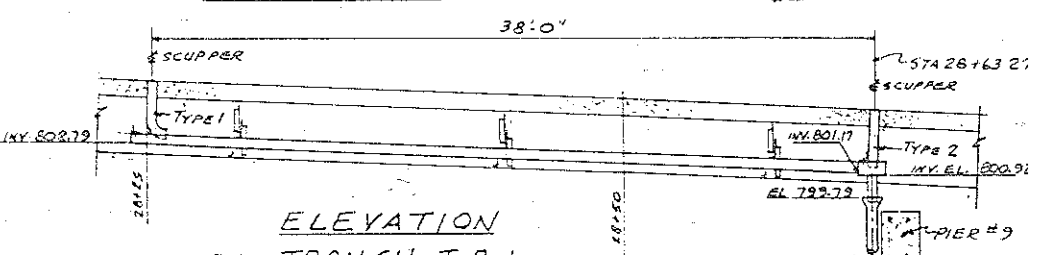
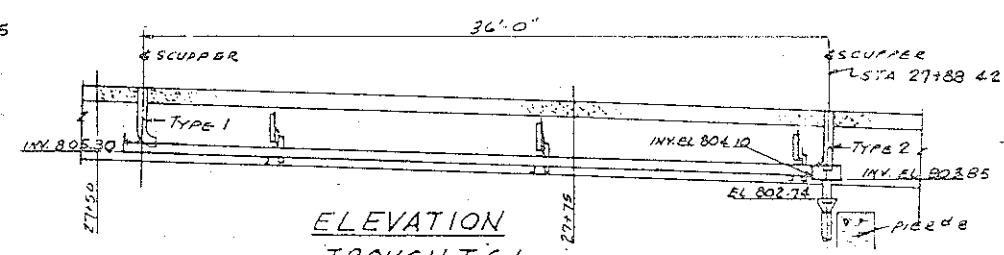
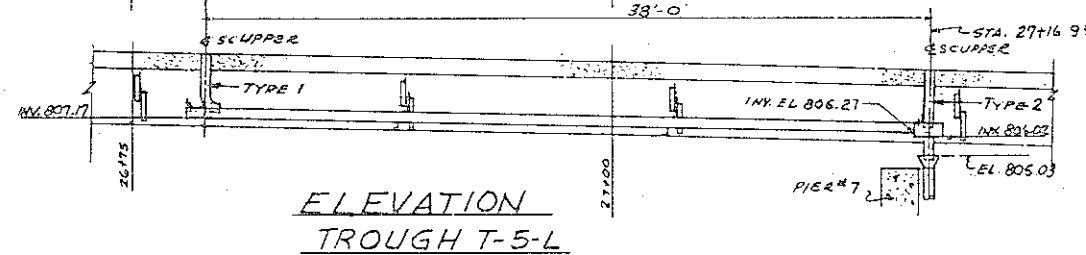
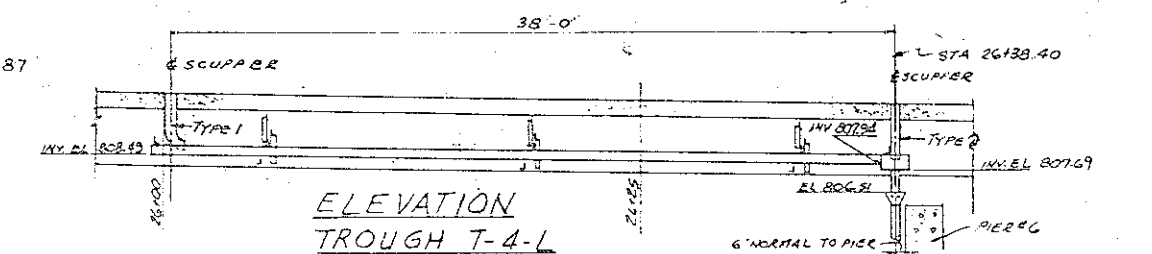
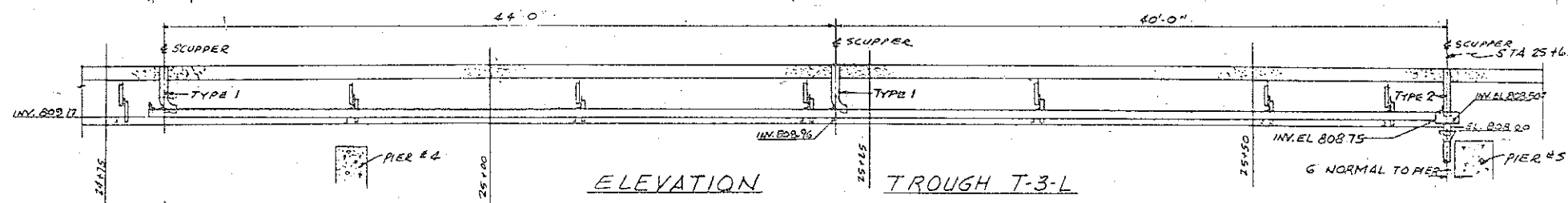
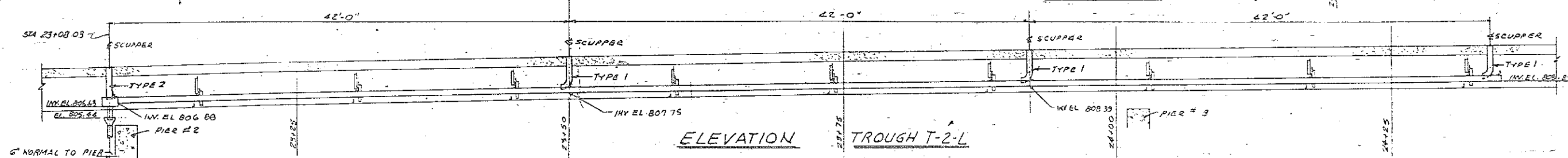
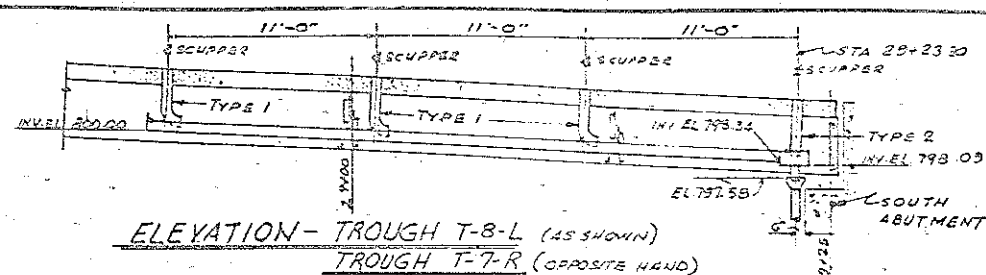
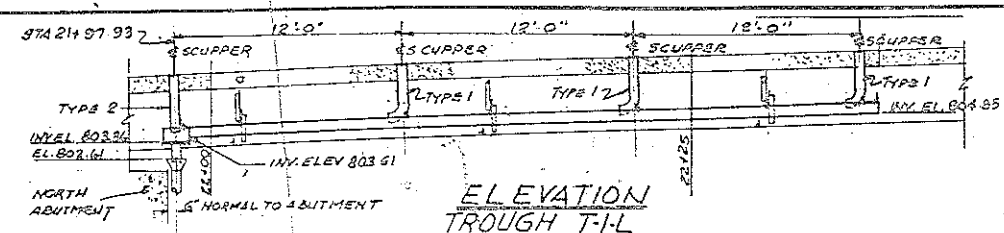
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 4379

NO. B-162

SCALE 3/8" = 1'-0"

DRAWN BY J.E.S. CHECKED BY J.E.S.



NOTE: FOR SUPPER, TROUGH AND DOWNSPOUT
DETAILS SEE SUBMITTAL
FOR PLAN AND LOCATION OF TROUGHS
AND SUPPERS SEE SHEETS 20-9-01

BERNARD, MOON & LINDSAY
Consulting Engineers

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C.T.S. RAPID TRANSIT

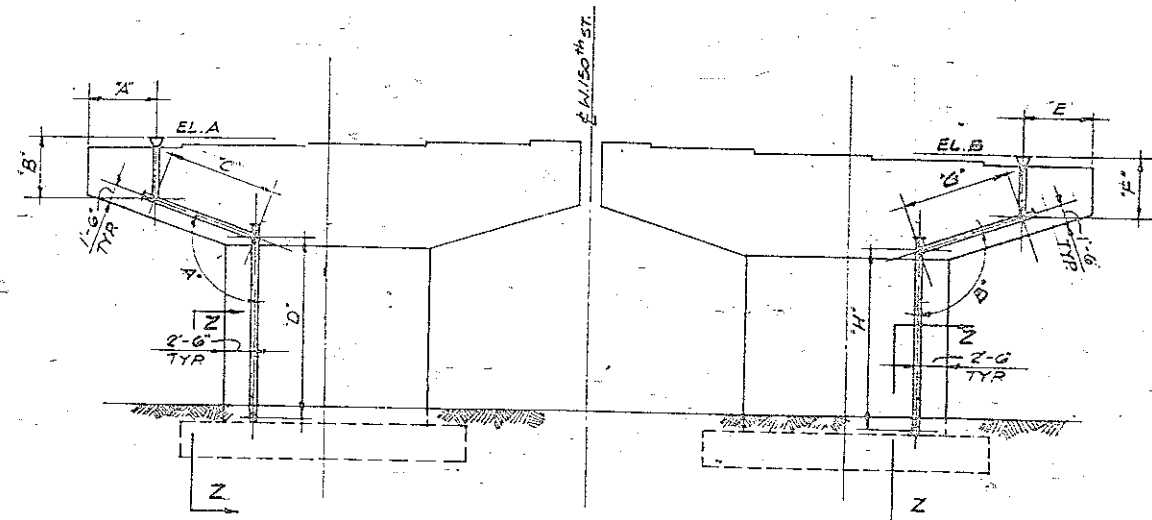
REPORT NO. 8771

NO. B-162

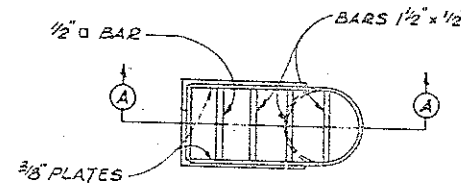
SCALE: 1/2" = 1'-0"

DESIGN: P.E. 1000000000

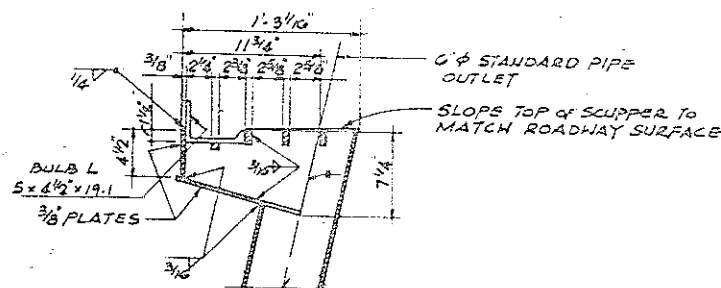
DECK DRAINAGE GUTTERS



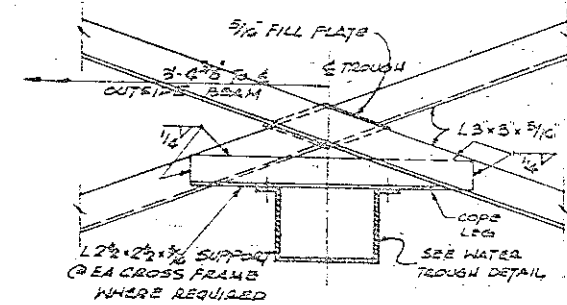
ELEVATION OF PIERS



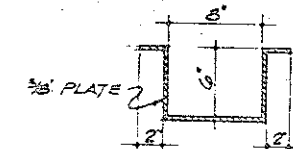
SCUPPER PLAN



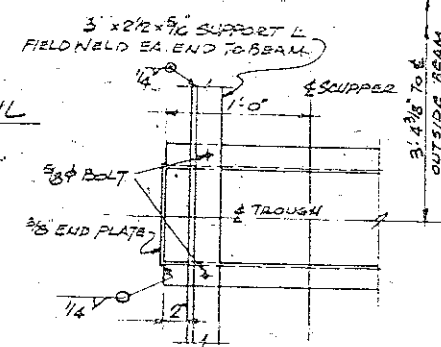
SECTION A-A



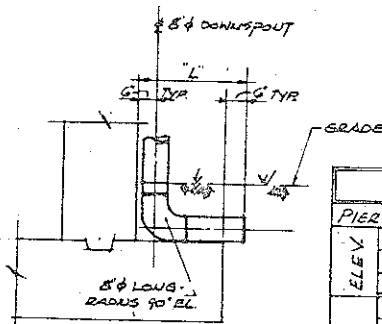
TROUGH SUPPORT DETAIL



TYP. TROUGH SECTION

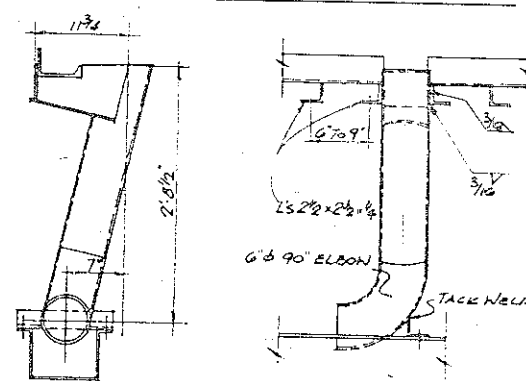


PLAN @ HIGH END OF TROUGH

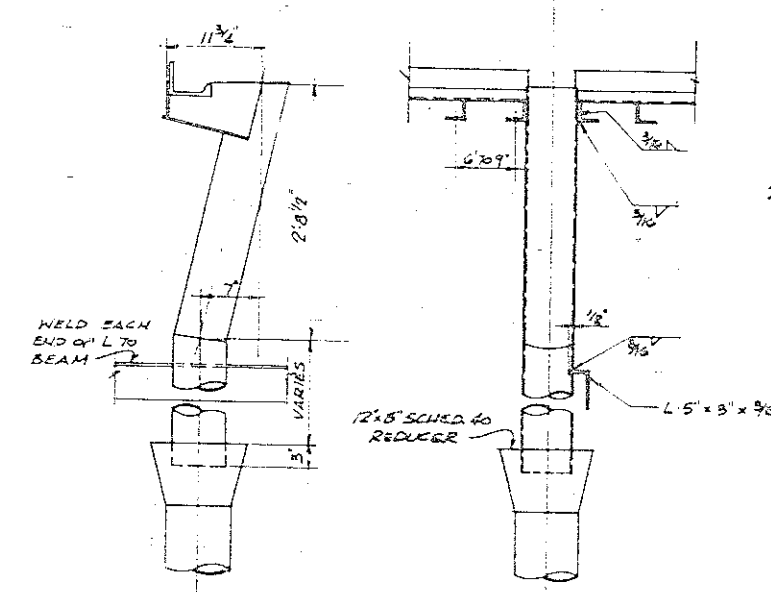


SECTION Z-Z

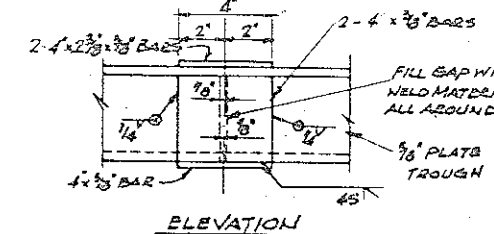
PIER No.	1	2	5	6	7	8	9
ELEV							
A	805.66	805.44	808.00	806.51	804.34	802.74	799.79
B	804.28	806.95	807.31	805.72	805.03	802.41	800.06
DIMENSIONS							
L	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"	5'-0"
A	4'-9"	5'-4"	4'-8"	4'-8 1/8"	4'-6 1/2"	4'-6 3/4"	4'-10 3/8"
B	4'-9 1/2"	4'-6 3/8"	4'-6 1/8"	4'-8 1/4"	4'-10 3/8"	5'-0 1/8"	5'-2 7/8"
C	10'-3 1/4"	12'-7 1/8"	11'-7"	9'-10 3/8"	8'-7 1/8"	7'-10"	7'-0 1/2"
D	15'-9 1/8"	15'-3 3/8"	10'-5 1/8"	15'-8 1/8"	14'-10 1/8"	13'-2 7/8"	10'-3"
E	7'-9"	9'-10 3/8"	8'-10 3/8"	7'-4 7/8"	6'-4"	5'-5 3/8"	4'-10 3/8"
F	5'-5"	5'-10 3/8"	5'-9 3/8"	5'-7 3/8"	5'-7"	5'-4 3/4"	5'-2 1/8"
G	7'-1 1/2"	7'-10 1/4"	7'-1 1/2"	6'-11 1/2"	6'-7 5/8"	6'-10 3/8"	7'-0 1/8"
H	14'-5 3/4"	10'-7 1/8"	13'-2 7/8"	14'-10 3/8"	15'-7 1/8"	12'-10 3/8"	10'-6 1/4"
Lx	108'-26"	104'-56"	106'-48"	109'-11"	111'-48"	113'-23"	118'-34"
B	108'-26"	104'-56"	106'-48"	109'-11"	111'-48"	113'-23"	118'-34"



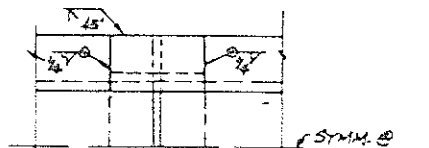
ELEVATION TYPE 1 SCUPPER ELEVATION



ELEVATION TYPE 3 SCUPPER ELEVATION FOR LOCATION SEE SHEET 60 961

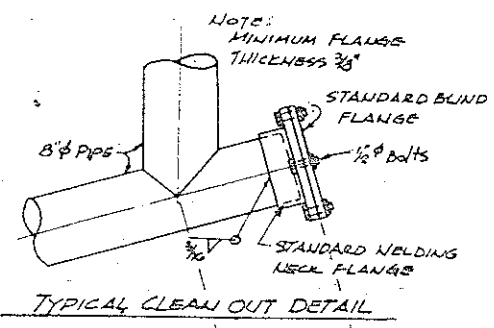


ELEVATION



PLAN

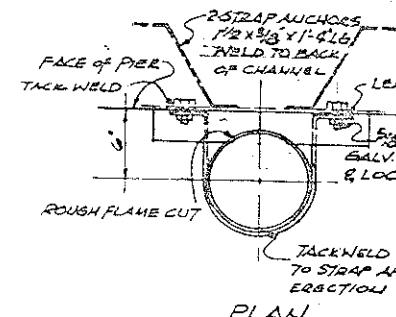
TROUGH FIELD SPLICE



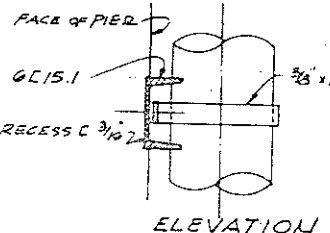
TYPICAL CLEAN OUT DETAIL

NOTES

ALL 6" SCUPPER OUTLET PIPES AS WELL AS ALL 6" DOWNSPOUT PIPE, SPECIALS, AND ACCESSORIES SHALL BE STANDARD WEIGHT, H.T. OR HOT DIP GALVANIZED STEEL PIPE. ALL SCUPPER MATERIALS, DRAINAGE TROUGHS, OUTLET BOXES, AND END PLATES SHALL BE 3/8" THICK CORTEZ STEEL OR EQUAL.



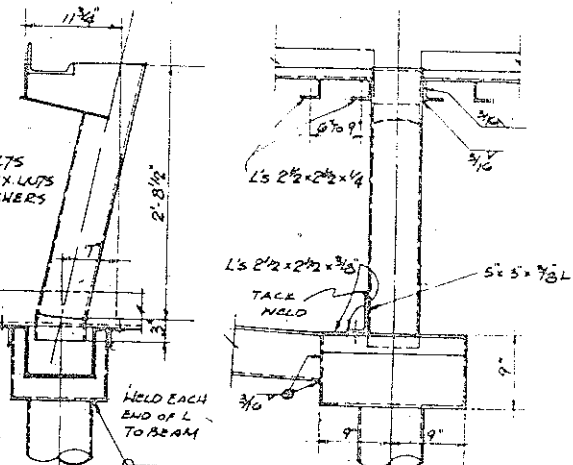
PLAN



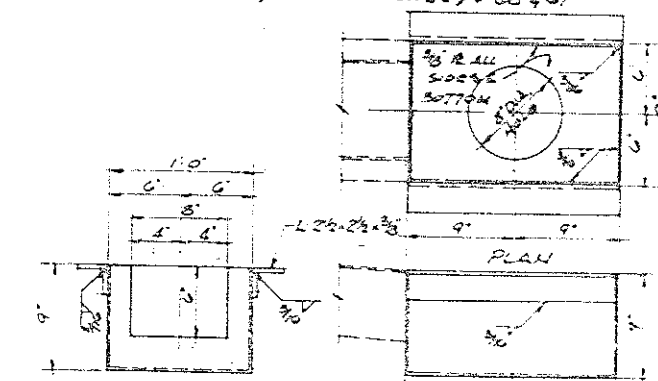
ELEVATION

PIPE SUPPORT DETAIL

(NOTE: MAX. SPACING @ 6'-0" O.C.)



ELEVATION TYPE 2 SCUPPER ELEVATION



FRONT VIEW

ELEVATION

DETAIL

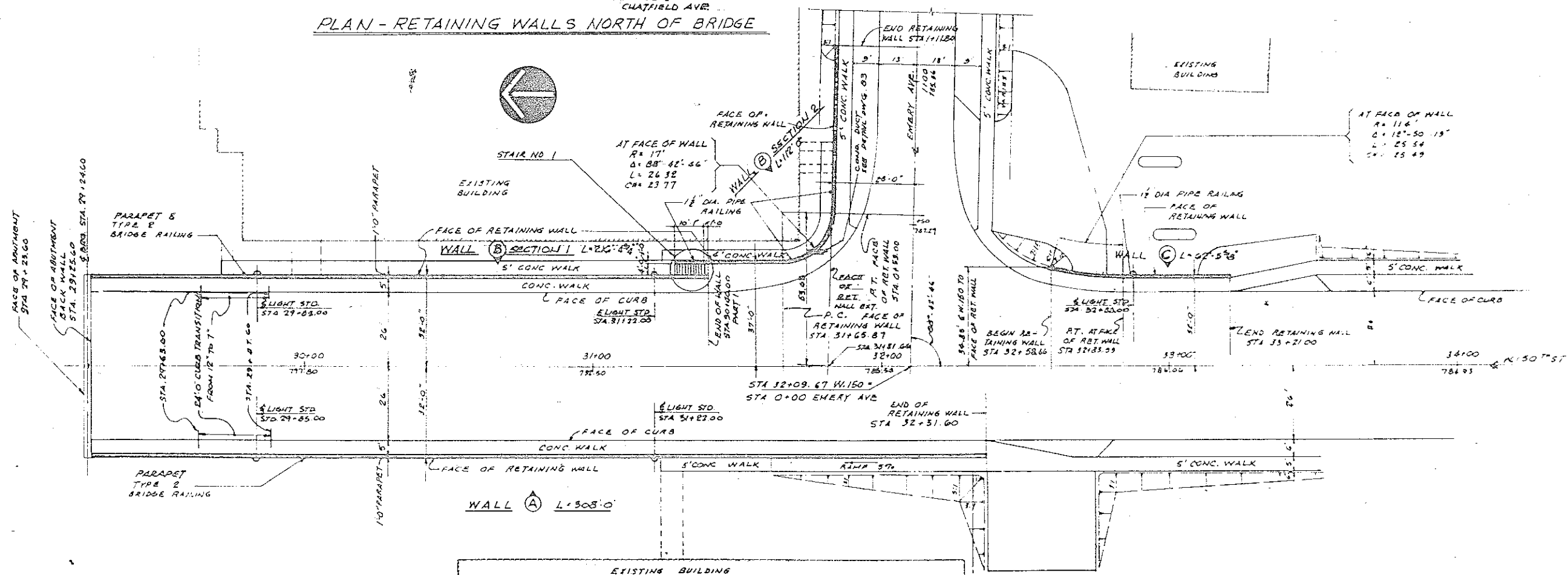
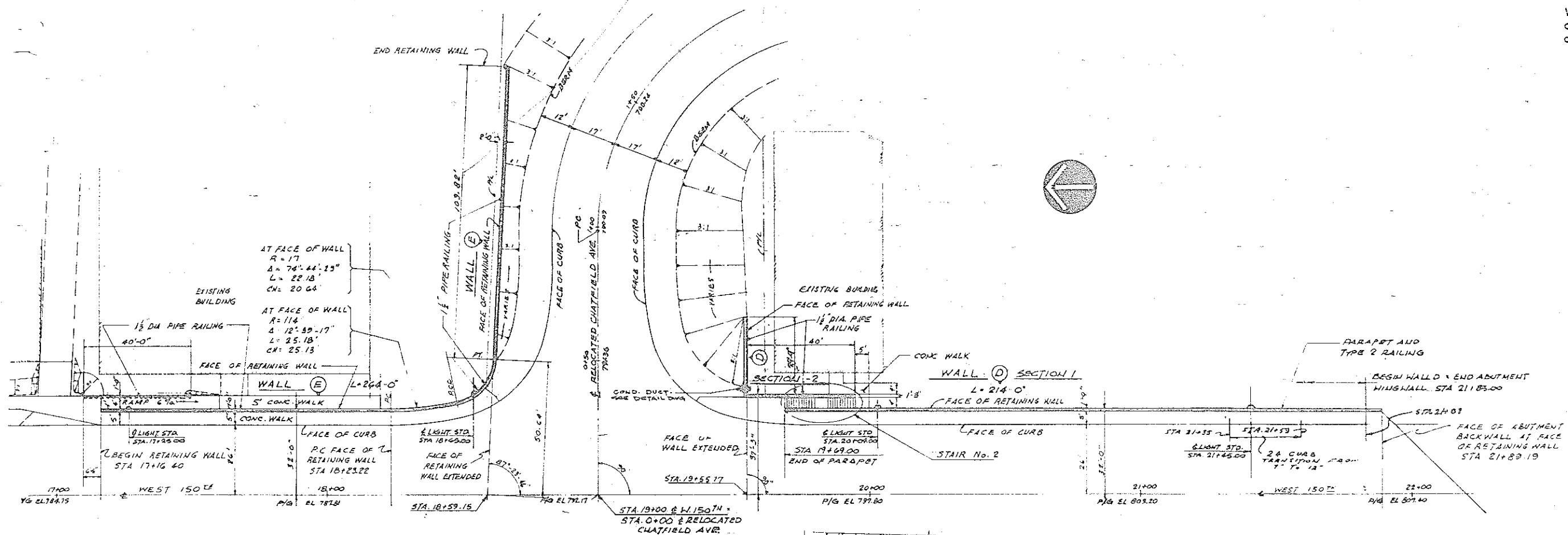
TROUGH OUTLET BOX

NOTE: OUTLET BOX TO BE PLACED UNDER ITEM 516, METAL GUTTER, INCLUDING SUPPORTS & SPECIALS.

DRAINAGE DETAILS

NOTE FOR LOCATIONS OF SCUPPERS SEE SHEET 60 961

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER RAILROAD
AND
C.T.S. RAPID TRANSIT
NO. B-162
SCALE 1/4" = 1'-0"
DATE 10-1-57
DRAWN BY J.E. CHECKED BY J.E.



GENERAL PLAN, RETAINING WALLS

REDFINGER, MOON & LAYCOCK
 Consulting Engineers

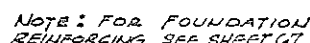
WEST 150th STREET
CITY OF CLEVELAND

REPORT NO. 67-9

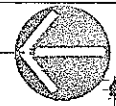
NO. B-162

SCALE AS NOTED

DATE OF ISSUE 1/15 CLOSURE NO.



FOOTING PLAN
SCALE $\frac{3}{4}" = 1'-0"$

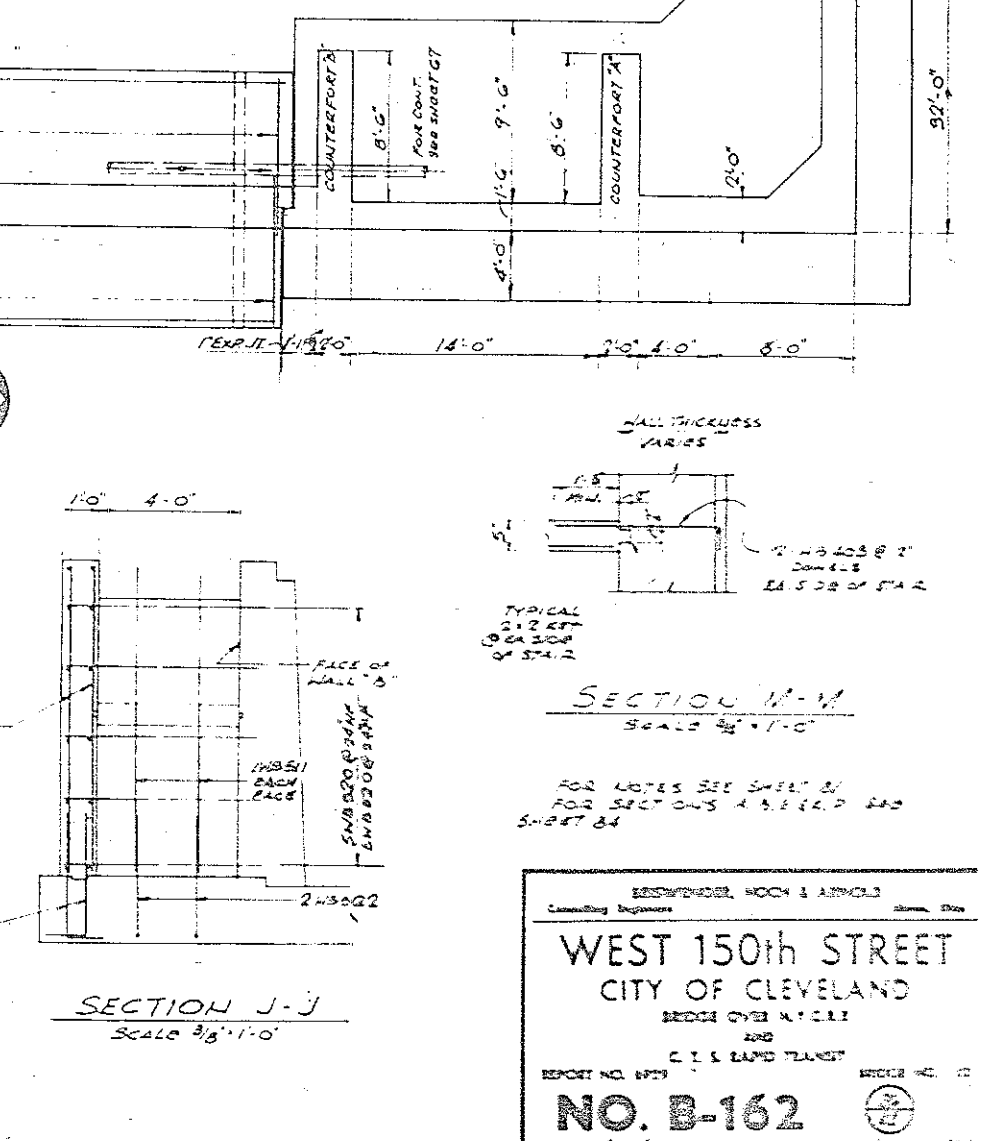
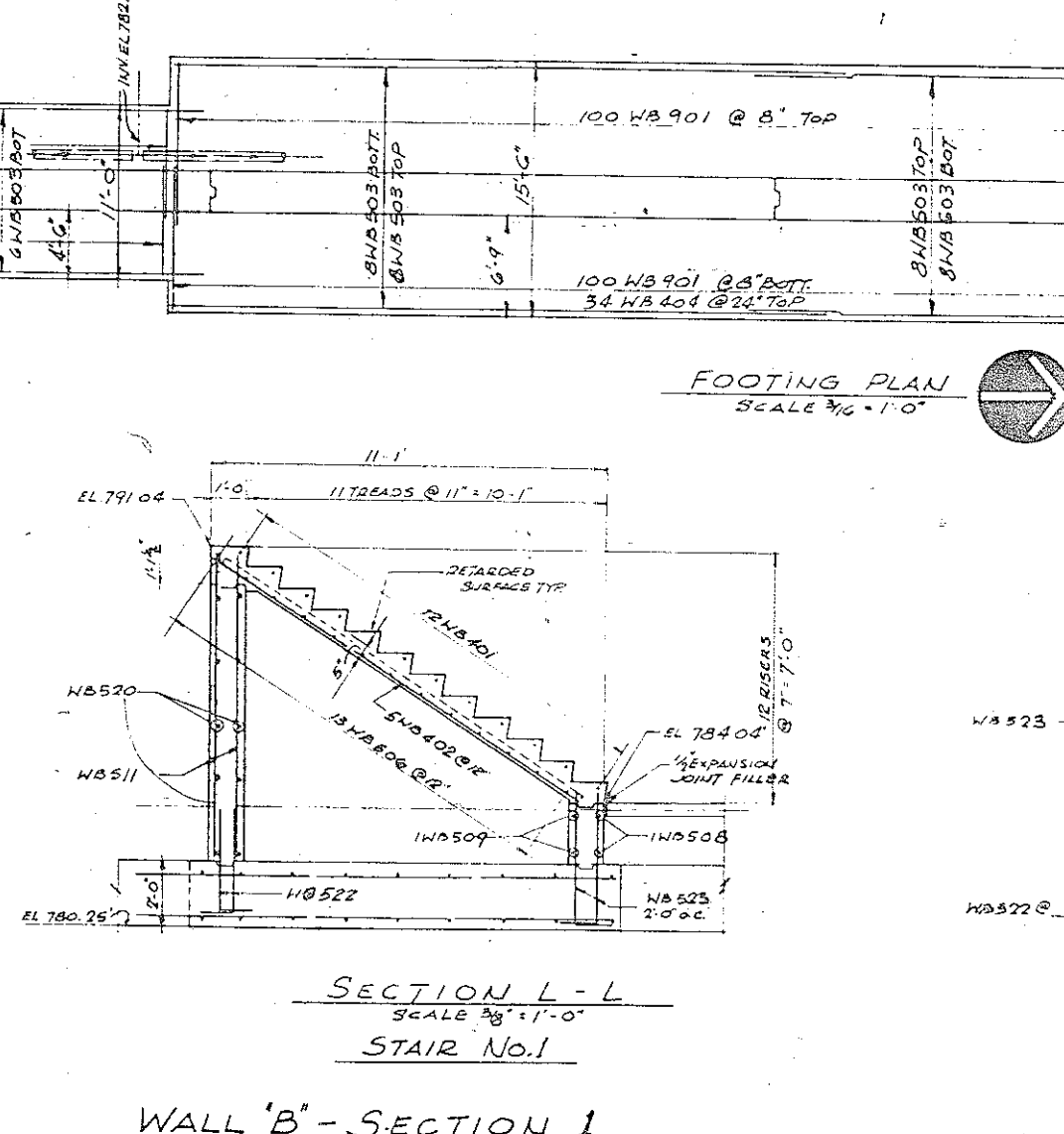
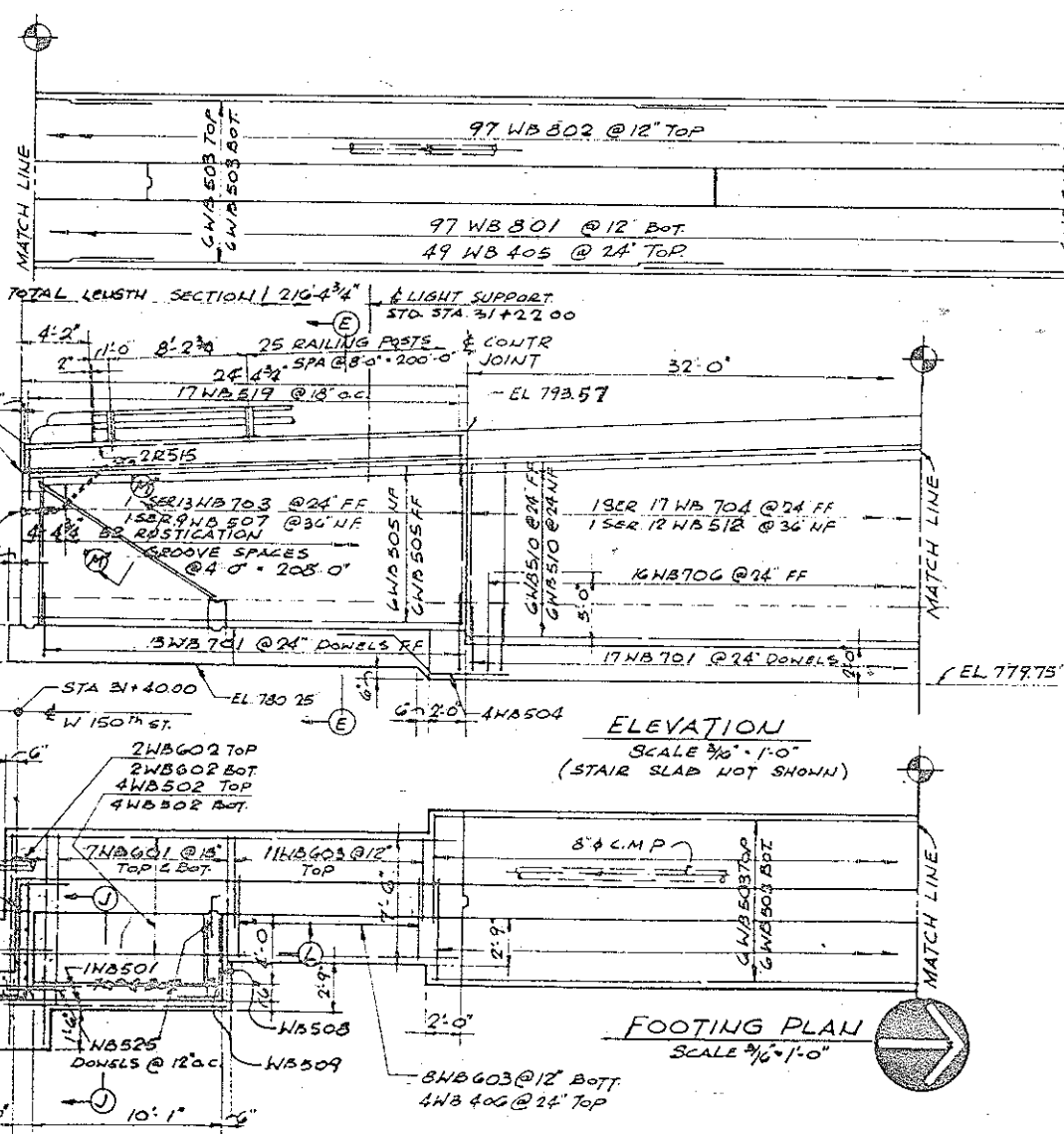
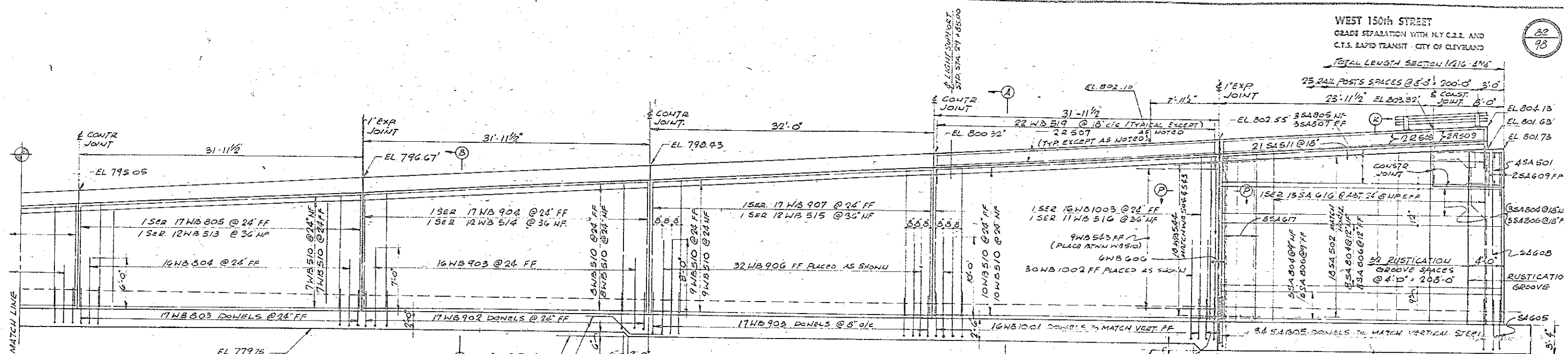


FOOTING PLAN.
SCALE $\frac{3}{8}" = 1'-0"$



BETWEEN MOON & ALMOND
 Connecting Engineers
 ALMOND, CT
 WEST 150th STREET
 CITY OF CLEVELAND
 BRIDGE OVER RYLER
 AND
 C. T. & RAPID TRANSIT
 REPORT NO. 6779
 BRIDGE NO.
NO. B-162
 SCALE 1/8" = 1'-0"
 DRAWN BY W.S. CHECKED BY W.S.

TOTAL LENGTH SECTION 1216'-4 1/2"



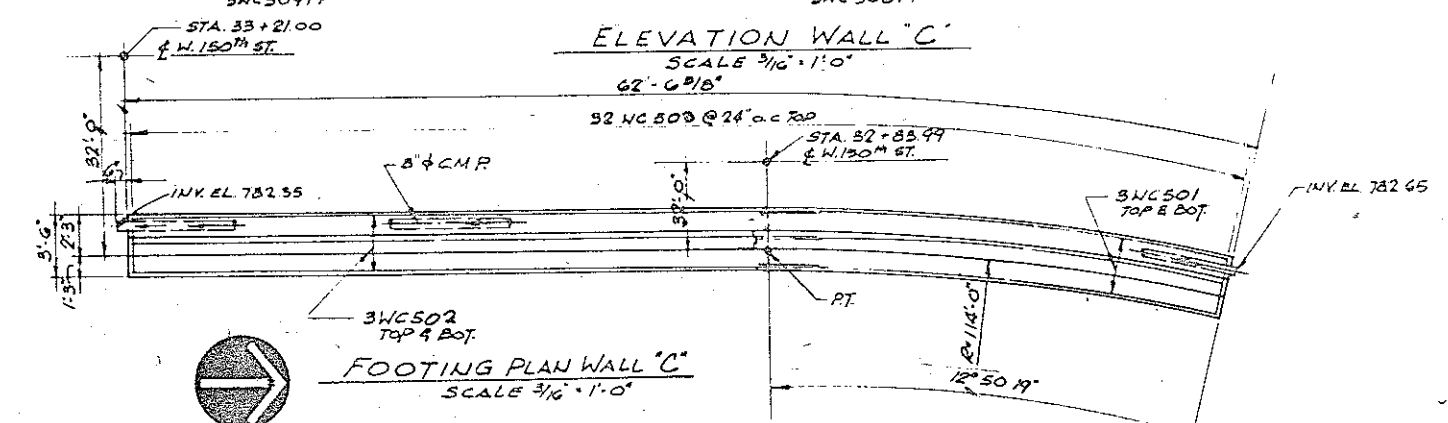
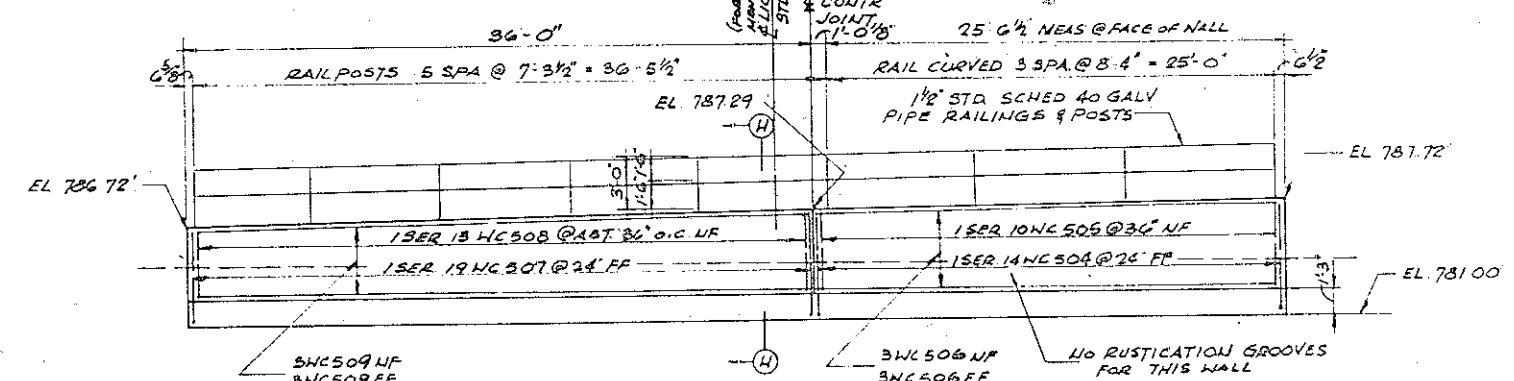
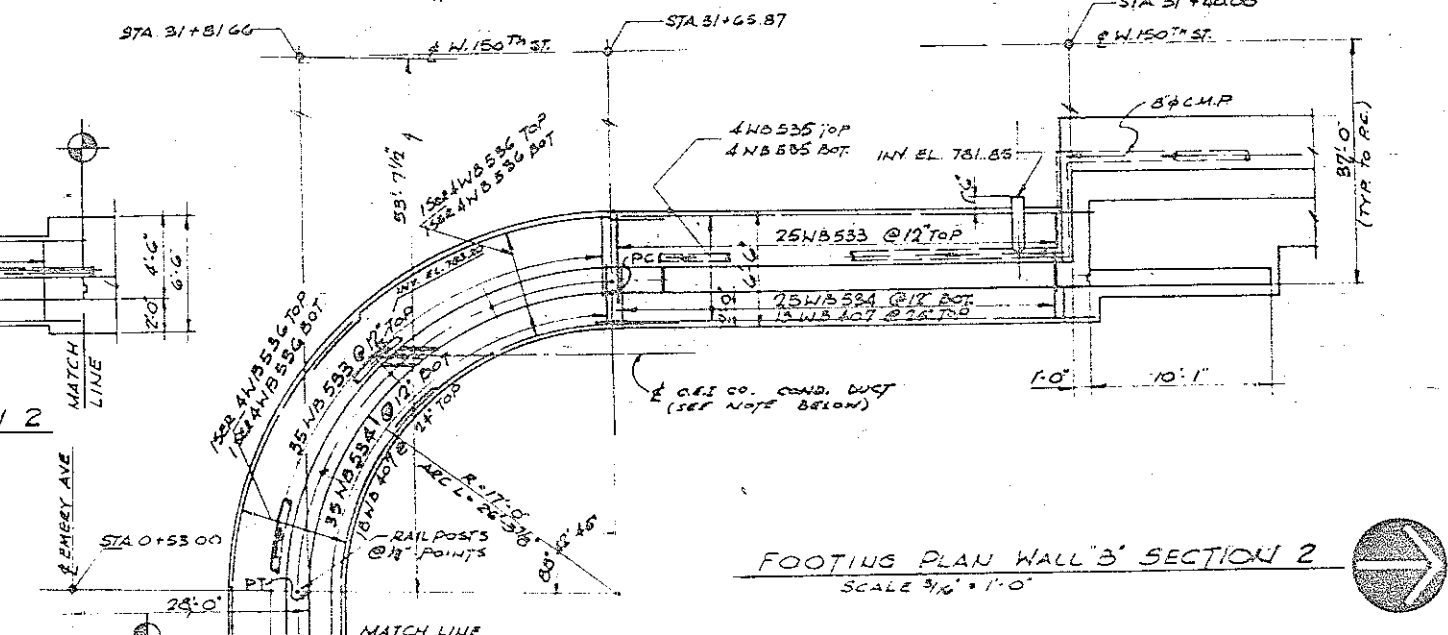
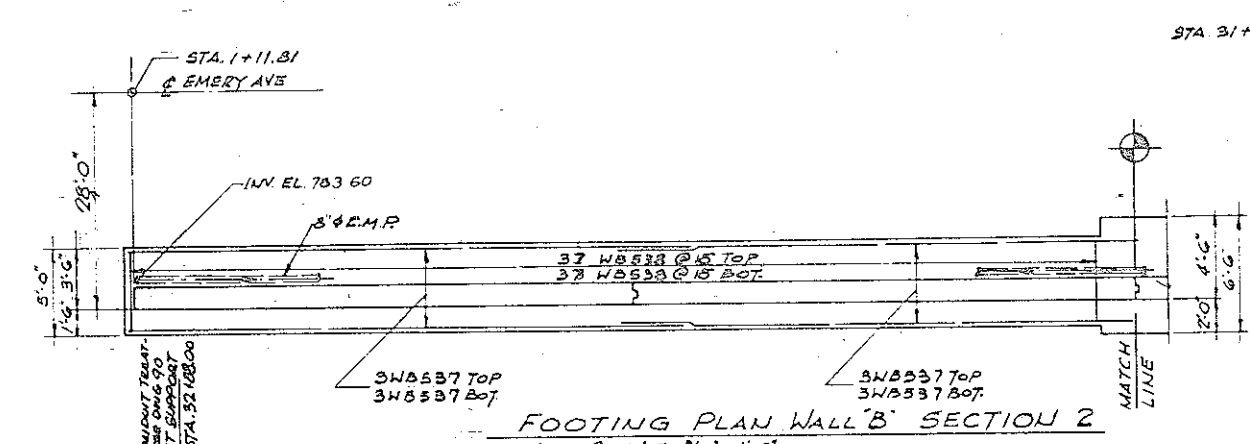
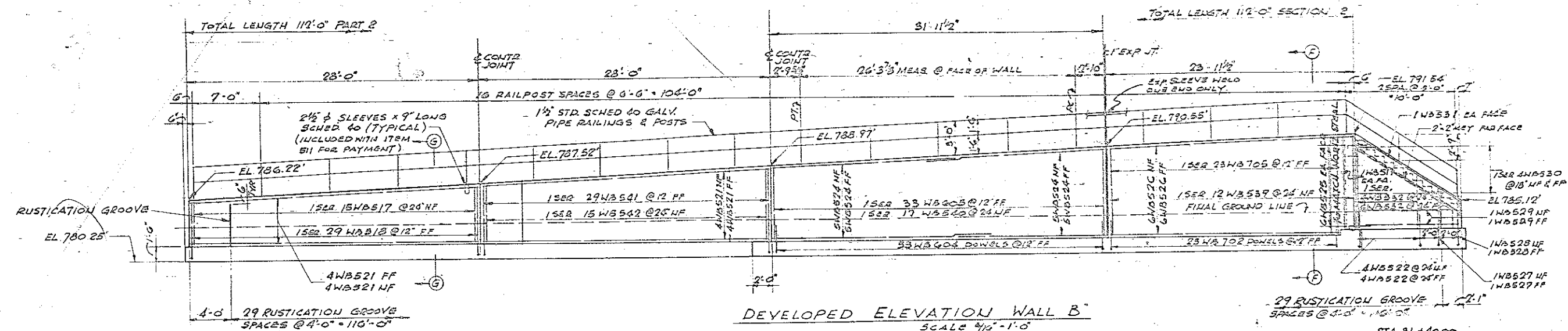
WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.
AND
C.T.S. RAPID TRANSIT

REPORT NO. 1079

NO. B-162

SCALE 3/8" = 1'-0"

DESIGNED BY J.E. L. CHECKED BY J.E. L. DRAWN BY J.E. L.



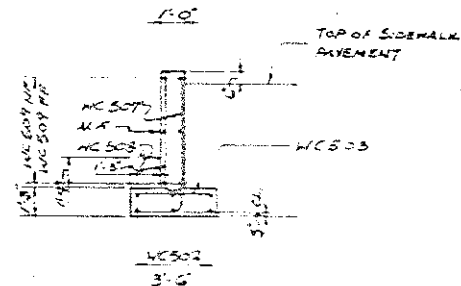
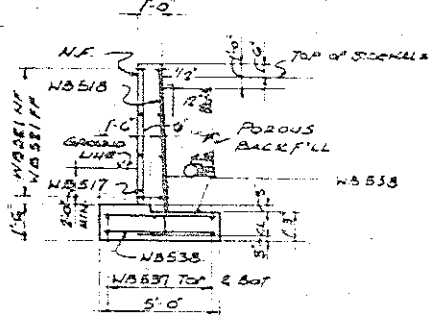
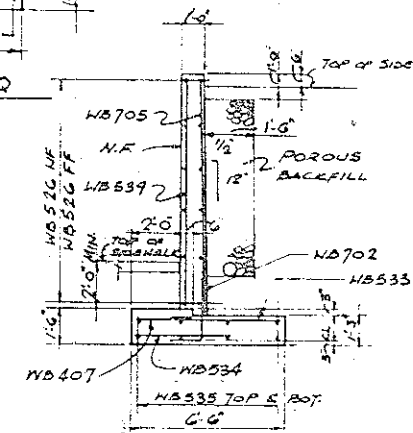
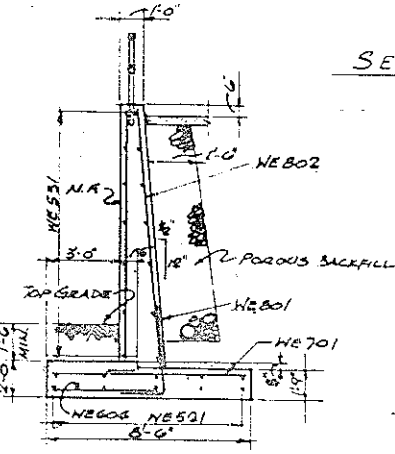
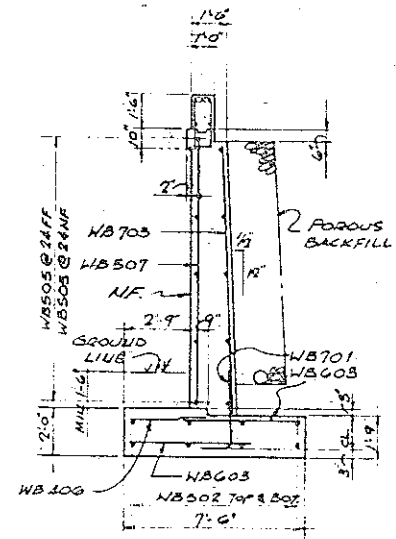
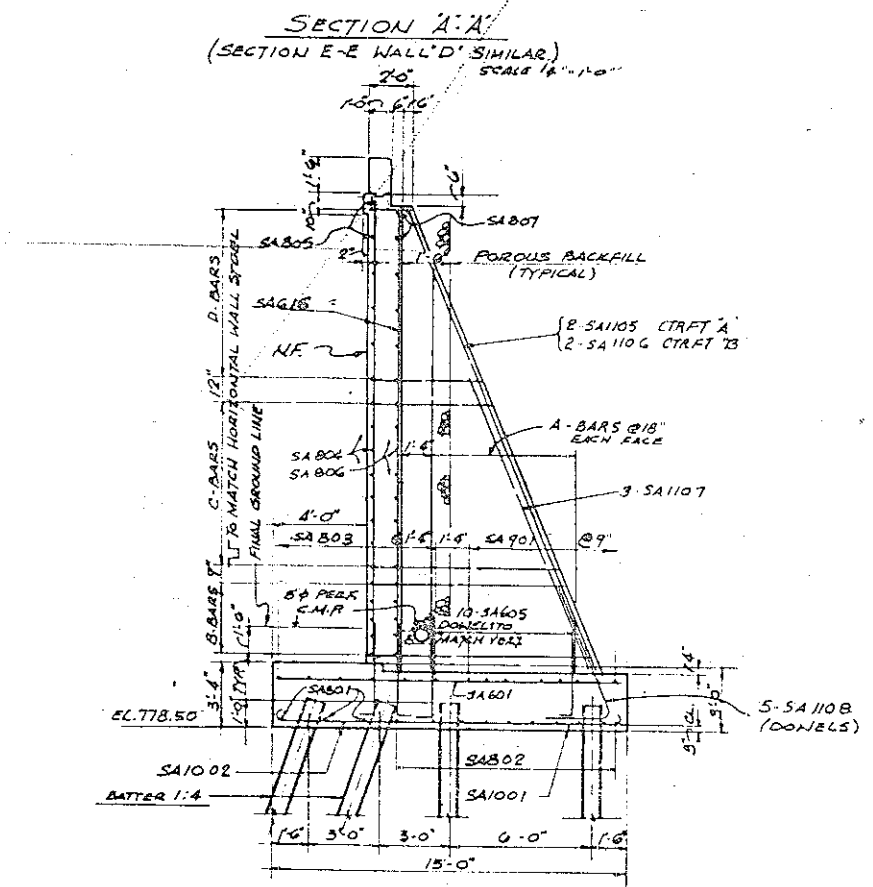
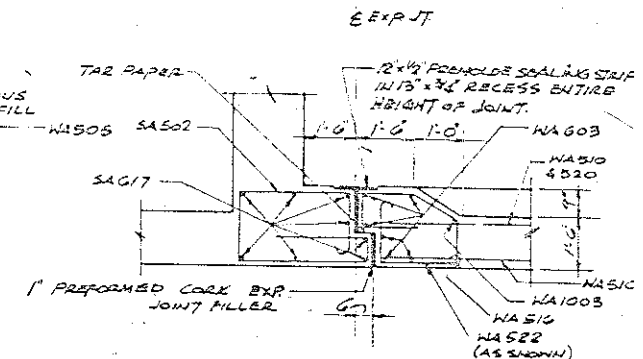
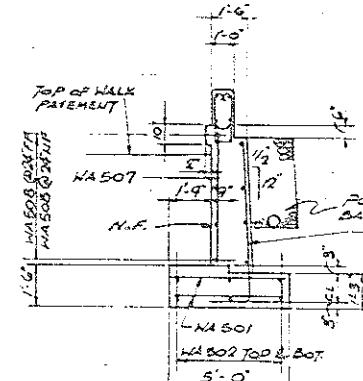
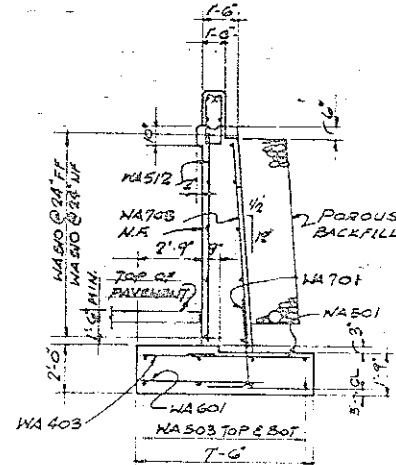
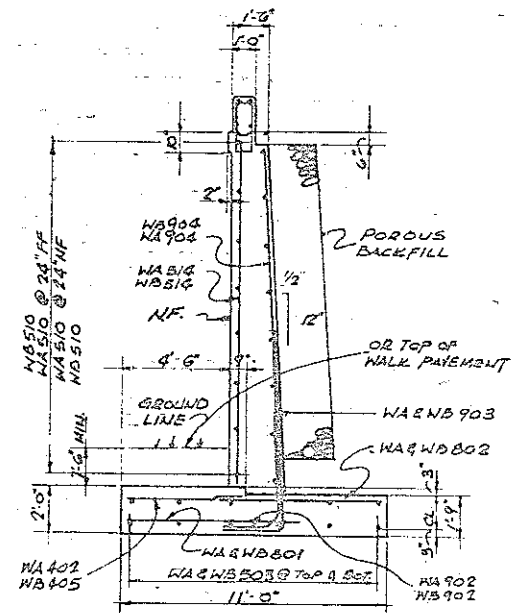
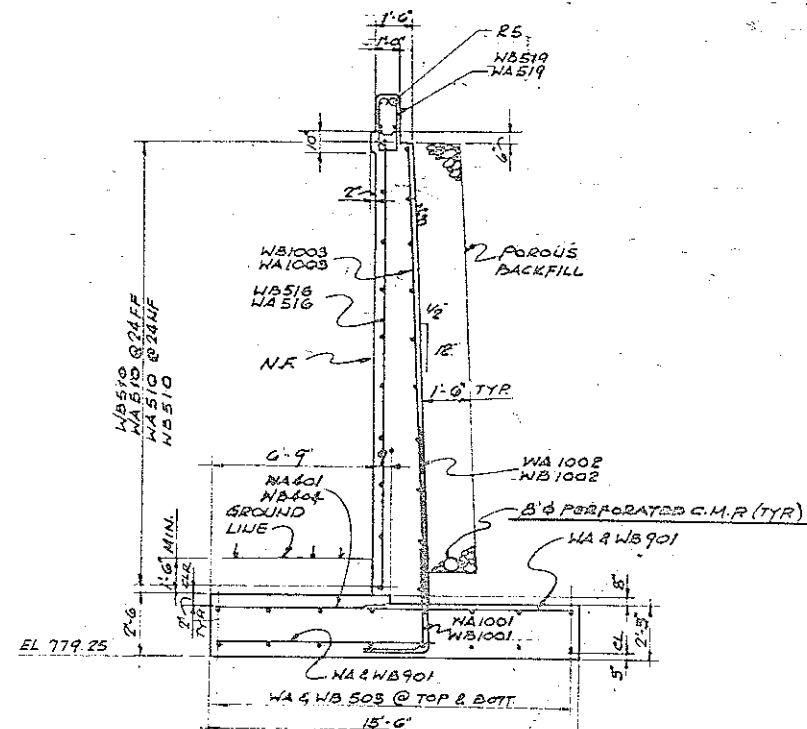
NOTE FOR C.E.I. CONDUIT DUCT
THE CLEVELAND ELECTRIC ILLUMINATING CO. WILL FURNISH THE CONTRACTORS SIX - 5" & 6" RIGID CONDUITS FOR INSTALLATION ABOVE THE TOP OF THE FOOTING PRIOR TO THE PLACEMENT OF THE WALL STEEL CONCRETE. THE INDICATED SPACING OF DOWELS AND VERTICAL BARS SHALL NOT BE VIOLATED. THE CONTRACTOR SHALL INSTALL THE CONDUITS BETWEEN THE DOWELS UNDER THE DIRECTION OF A C.E.I. REPRESENTATIVE. PAYMENT FOR THE CONDUIT INSTALLED SHALL BE MADE DIRECTLY TO THE CONTRACTOR BY THE C.E.I. CO. UPON TERM MUTUALLY AGREED UPON.

NOTES:
FOR NOTES SEE SHEET 21
FOR SECTIONS F THROUGH H SEE SHEET 24

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER R.T.C.R.
AND
C.T.A. RAPID TRANSIT
REPORT NO. 5077
NO. B-162
SCALE AS SHOWN
DRAWN BY J.L.L. CHECKED BY J.L.L. REVISIONS

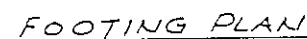
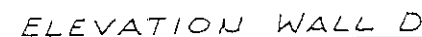
WALL "B" SECTION 2 AND WALL "C"

COUNTERFOOT BAR	MARK	NUMBER
A	A	SA 513 2 SER. 5
	B	SA 512 1 SER. 5
	C	SA 513 1 SER. 6
	D	SA 514 1 SER. 5
B	A	SA 519 2 SER. 5
	B	SA 512 1 SER. 5
	C	SA 515 1 SER. 5
	D	SA 516 1 SER. 4



WALL SECTIONS & DETAILS

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER NYCRR
AND
C.T.S. RAPID TRANSIT
REPORT NO. 8727
NO. B-162
SCALE 1/4\"/>



Note

WALL "D" - SECTION I

KEEFINGER, MOON & ARMOLD
Consulting Engineers
St. Louis, Mo.

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER RY. T. & E.
AND
C. T. & R. R. TRANSIT
REPORT NO. 6777

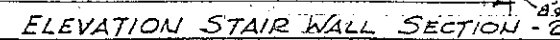
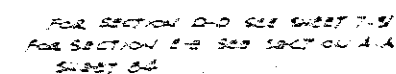
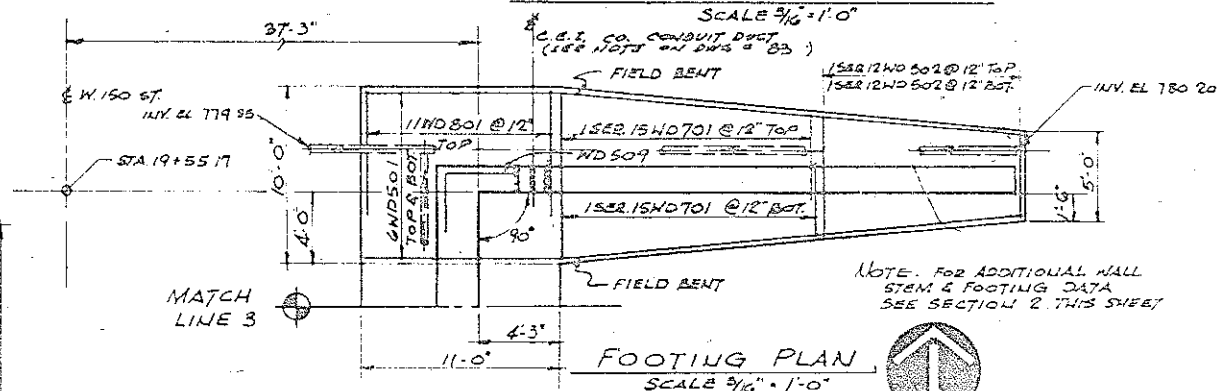
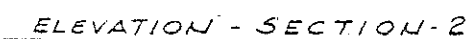
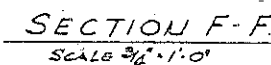
NO. B-162

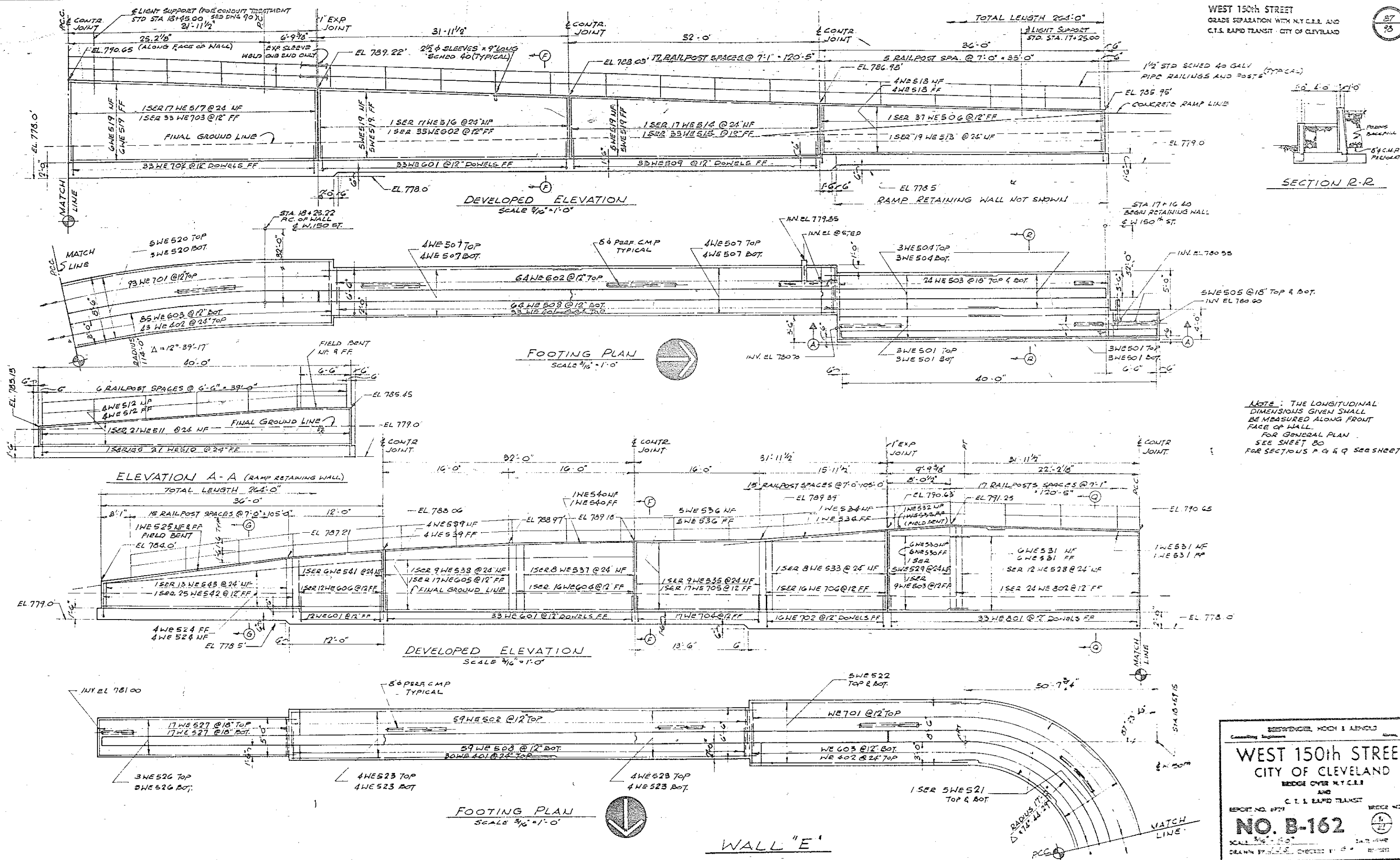
SCALE 5/8" = 1'-0"
DRAWN BY J. L. S. CHECKED BY J. L. S. 12/1/22

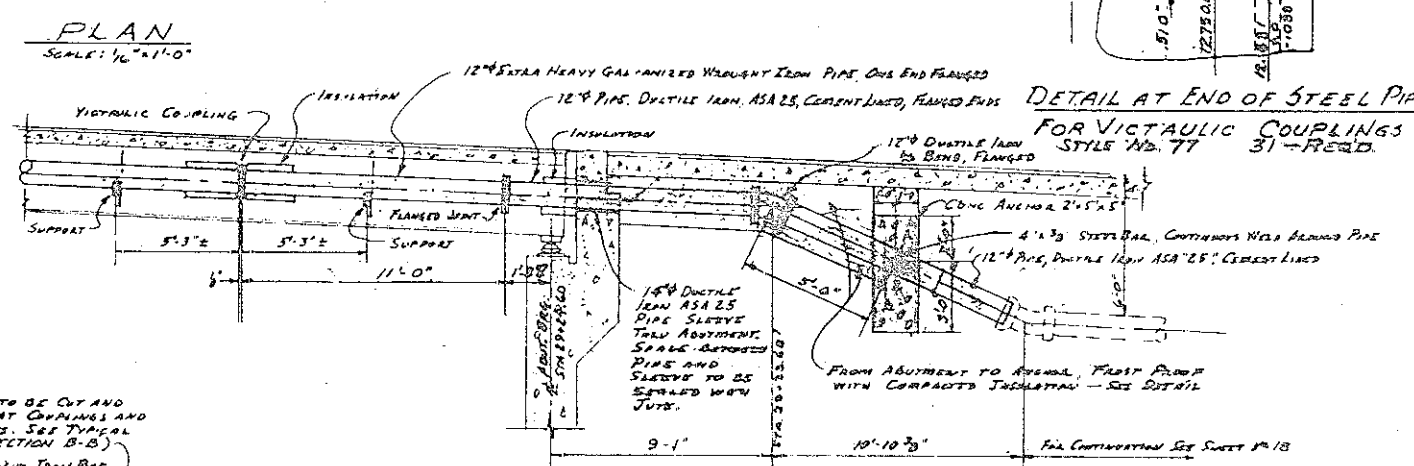
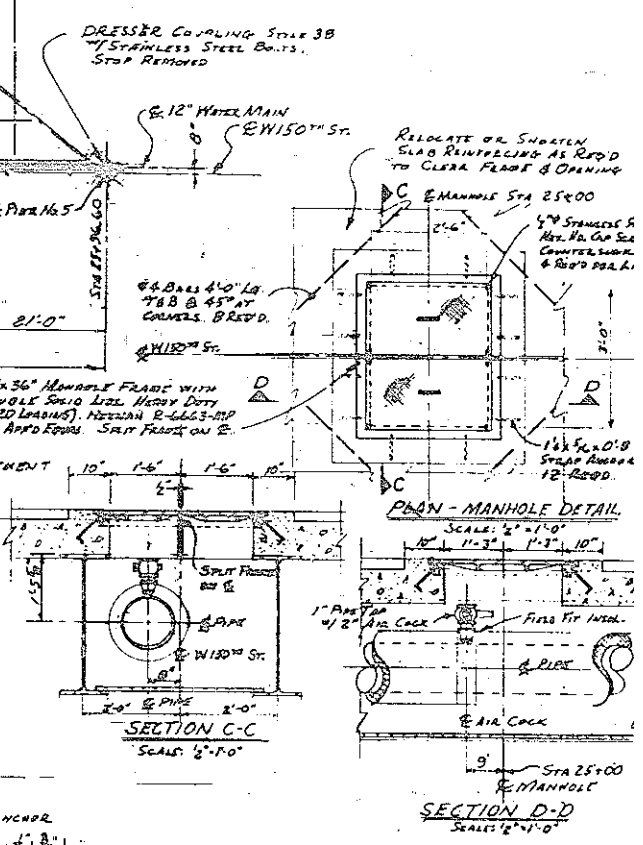
BRIDGE NO. 6777

12/1/22

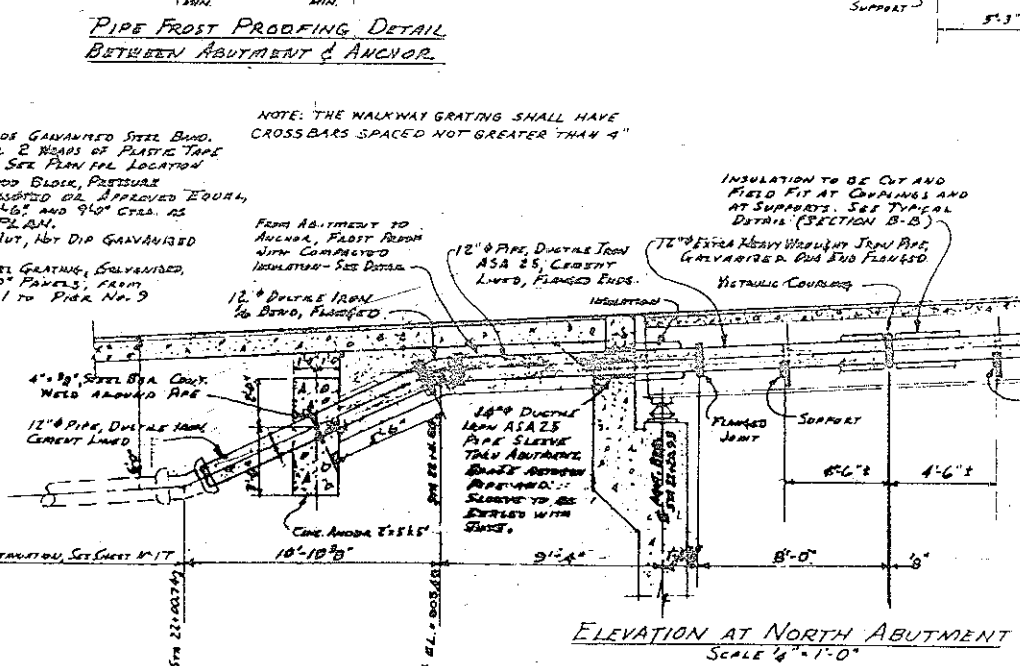
DATE SHOWN
REVISED



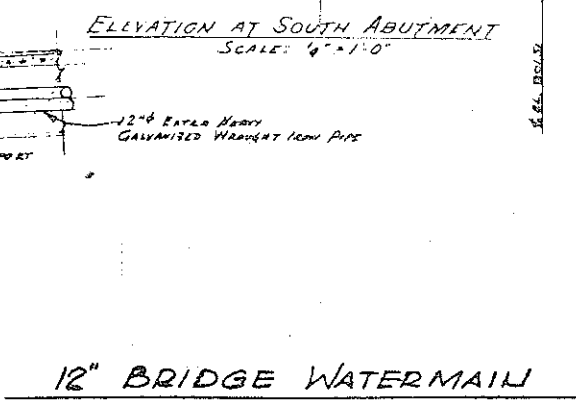




DETAIL AT END OF STEEL PIPE
FOR VICTAULIC COUPLINGS
STYLE NO. 77 31-REQD.



ELEVATION AT SOUTH ABUTMENT
SCALE: 4" = 1'-0"



12" BRIDGE WATERMAIN

SCALE 1" = 1'-0"

APPROVED *Stallard*

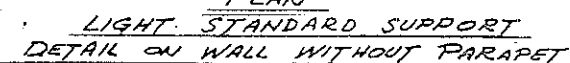
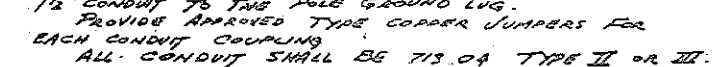
REISWENGER, MOCH & AENOLD
Consulting Engineers
Akron, Ohio

WEST 150th STREET
CITY OF CLEVELAND
BRIDGE OVER N.Y.C.R.R.
AND
C. T. S. RAPID TRANSIT
REPORT NO. 6929
BRIDGE NO. 131

NO. B-162

SCALE As Noted DATE June 1, 1964
DRAWN BY SL CHECKED BY SL REVISIONS

90
98



NOTE:
REINFORCING FOR
THIS PLAN SAME AS DETAIL
ON WALL WITH PARAPET
EXCEPT BARS 6B1
(OMIT)

~~THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER BAR. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER. SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 309. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNELS, LEE OR ANGLE SPACERS (AS HAS APPROX. 0.60 LBS. PER LINEAL FT.) OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.60 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.~~

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR

RAILING REINFORCEMENT BARS
WILL BE INCLUDED AS PART OF ITEM
517 FOR PAYMENT.

BREWSTER, MOON & ADKINS
 Consulting Engineers
 Address: Ohio
 WEST 150th STREET
 CITY OF CLEVELAND
 BRIDGE OVER N.Y.C.R.R.

1997-1998

NO. B-162

SCALE: None DATE: 10/1/88
DRAWN BY: JLS CHECKED BY: JLS

PIER 4 LEFT										PIER 5 RIGHT										PIER 6 RIGHT										
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				SERIES	WEIGHT LBS.	MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				SERIES	WEIGHT LBS.	MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				SERIES	WEIGHT LBS.	
A	B	C	D	INCR						A	B	C	D	INCR						A	B	C	D	INCR						
P4L501	34	20'-0"	STR						709	P5L604	8	23'-6"	STR						283	P6L14501	8	22'-7"	1	3'-6"	19'-6"					1382
P4L502	34	5'-11"	9	1'-8"	2'-7"	10'			210	P5L605	6	15'-9"	12	13'-9"	2'-0"	7'			142	P6L14502	2	39'-0"	STR							597
P4L503	11	6'-11"	3	1'-8"	2'-9"				79																					
P4L504	15	15'-23"	14	3'-8"	1'-8"				364	P5L701	26	22'-9"	STR						1209											
P4L505	15	15'-23"	14	3'-8"	1'-8"				380	P5L702	18	14'-0"	STR						315											
P4L506	38	5'-7"	3	1'-8"	1'-1"				142	P5L703	44	5'-10"	1	1'-0"	5'-0"				525											
P4L601	2	22'-0"	STR						66	P5L1001	36	14'-6"	2	1'-5"	11'-8"				2246	P6R501	32	14'-3"	STR						476	
P4L602	2	32'-0"	STR						96	P5L1002	8	29'-6"	2	1'-5"	26'-8"				1016	P6R502	32	5'-11"	9	1'-8"	2'-7"	10'			197	
P4L603	4	22'-0"	STR						132	P5L1003	6	8'-1"	6	6'-8"	1'-5"				209	P6R503	8	6'-11"	3	1'-8"	2'-9"			58		
P4L604	8	27'-0"	STR						324											P6R504	15	15'-23"	14	3'-8"	1'-8"			258		
P4L605	6	17'-6"	12	15'-6"	2'-0"	7'			158											P6R505	15	15'-23"	14	3'-8"	1'-8"			237		
																				P6R506	38	5'-7"	3	1'-8"	1'-1"			142		
P4L801	28	22'-9"	STR						1701	P5L1101	12	27'-6"	1	3'-6"	24'-3"				1753	P6R601	2	16'-3"	STR					49		
P4L802	20	14'-0"	STR						748	P5L1102	6	35'-0"	STR						1116	P6R602	2	23'-4"	STR					71		
P4L803	48	6'-2"	1	1'-1"	5'-3"				790											P6R603	2	31'-3"	STR					94		
																				P6R604	8	20'-6"	STR					246		
																				P6R605	6	14'-0"	12	12'-0"	2'-0"			126		
P4L1001	40	14'-6"	2	1'-5"	11'-8"				2496	P5R501	34	16'-9"	STR						594	P6R901	22	21'-6"	STR					160		
P4L1002	8	32'-6"	2	1'-5"	29'-8"				1119	P5R502	34	5'-11"	9	1'-8"	2'-9"	10'			210	P6R902	14	15'-0"	STR					716		
P4L1003	6	8'-1"	6	6'-8"	1'-5"				209	P5R503	10	7'-5"	3	2'-2"	2'-9"				77	P6R903	36	6'-9"	1	1'-3"	5'-9"			826		
										P5R504	15	15'-23"	14	3'-8"	1'-8"				252	P6R1001	36	14'-6"	2	1'-5"	11'-8"			2246		
P4L14501	8	28'-10"	1	3'-6"	25'-9"				1765	P5R505	15	15'-23"	14	3'-8"	1'-8"				232	P6R1101	8	29'-10"	2	1'-7"	26'-8"			126		
P4L14502	8	25'-9"	STR						1576	P5R506	38	4'-1"	3	2'-2"	1'-1"				162	P6R1102	10	10'-1"	6	8'-6"	1'-7"			536		
P4L14503	8	21'-9"	STR						1331											P6R1103	4	30'-6"	STR					64		
										P5R601	2	19'-0"	STR						57											
										P5R602	2	27'-6"	STR						83	P6R14501	8	22'-7"	1	3'-6"	19'-6"			1382		
										P5R603	2	36'-6"	STR						110	P6R14502	2	39'-0"	STR					597		
										P5R604	8	27'-6"	STR						283											
										P5R605	6	15'-9"	12	13'-9"	2'-0"	7'			142											
P4R1001	40	14'-6"	2	1'-5"	11'-8"				2496	P5R1001	36	14'-6"	2	1'-5"	11'-8"				2246											
P4R1002	8	32'-6"	2	1'-5"	29'-8"				1119	P5R1002	8	29'-6"	2	1'-5"	26'-8"				1016											
P4R1003	6	8'-1"	6	6'-8"	1'-5"				209	P5R1003	6	8'-1"	6	6'-8"	1'-5"				209											
P4R14501	8	28'-10"	1	3'-6"	25'-9"				1765	P5R1101	12	27'-6"	1	3'-6"	24'-3"				1753											
P4R14502	8	25'-9"	STR						1576	P5R1102	6	35'-0"	STR						1116											
P4R14503	8	21'-9"	STR						1331																					

