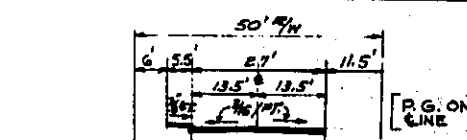
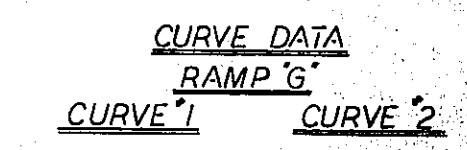


TYP. SECTION EXISTING VALLEY ST.



TYP. SECTION PROPOSED RELOCATED VALLEY ST.



CURVE DATA

RAMP 'G'	
CURVE '1'	CURVE '2'
Δ = 12° 30'	Δ = 27° 52' 34"
Dc = 7° 29' 46"	Dc = 10° 00'
R = 764.35'	R = 578.96'
T = 65.91'	T = 142.20'
Lc = 166.76'	Lc = 278.76'

RAMP 'H'	VALLEY ST.
P.S.C. STA 7+85.86	P.I. STA 10+25.85
Δ = 34° 22' 39"	Δ = 28° 20' 00"
Dc = 17° 06' 46"	Dc = 50°
R = 334.61'	R = 114.59'
T = 103.57'	T = 28.65'
Lc = 200.59'	Lc = 47.00'

FOUNDATION SOUNDINGS

FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF ROCK SOUNDINGS AND SOIL SAMPLINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE OF THE BUREAU OF BRIDGES IN COLUMBUS OR IN THE DIVISION OFFICE BUT THE STATE DOES NOT GUARANTEE THE ACCURACY THEREOF.

PROPOSED STRUCTURE

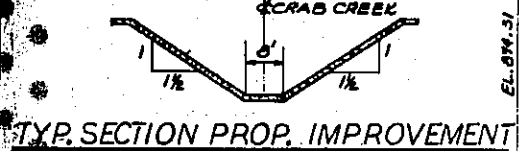
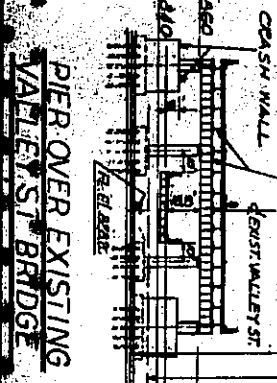
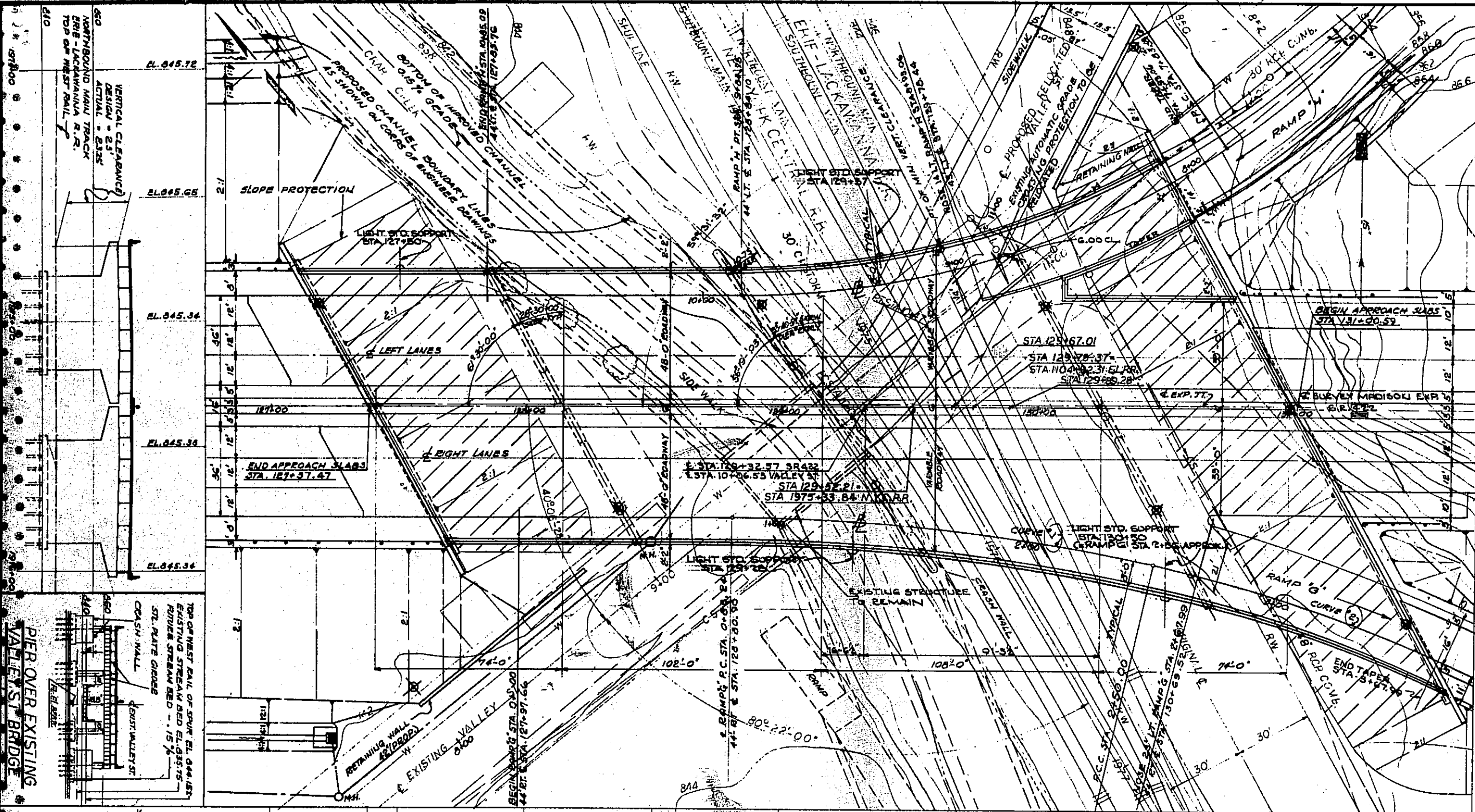
TYPE: CONTINUOUS STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
 SKEW: 23° 30' 00" BR-TYP # 33' 40' 57" R# ONLY
 SPAN: 74'-0" 108'-0" 108'-0" 74'-0" 1/4" BEARINGS
 ROADWAY: VARIABLE WITH 6" MEDIAN & 14" CURBS
 LOAD FREQUENCY: CP 2000(37)
 WEARING SURFACE: 1" MONOLITHIC APPROACH SLAB: 25' LONG (15'-1'-54")
 ALIGNMENT: TANGENT
 SUPERELEVATION: TRANSITION (MAX. 1.04655'/FT) (ON RAMP)
 SLOPE PROTECTION: 601 CRUSHED AGGREGATE, CRAB CREEK CHANNEL IMPROVEMENT

INDICATES PROPOSED SOIL BORING LOCATIONS
 1975 - A.D.T. 14,360

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES
 BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
 CONSULTING ENGINEERS
 4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

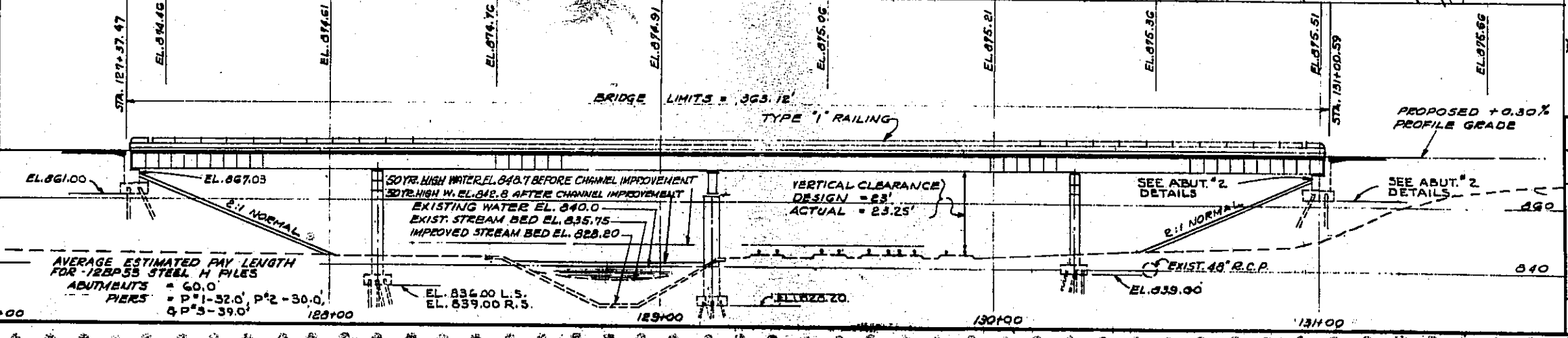
SITE PLAN
 BRIDGE NO MAH-422-0354
 OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
 YOUNGSTOWN MAHONING COUNTY
 STA. 127+37.47 TO STA. 134+00.59

DESIGNED D.H.S.	DRAWN RENE JY	TRACED	CHECKED HAGER	REVIEWED RDH	DATE 11-14-66	COVERED
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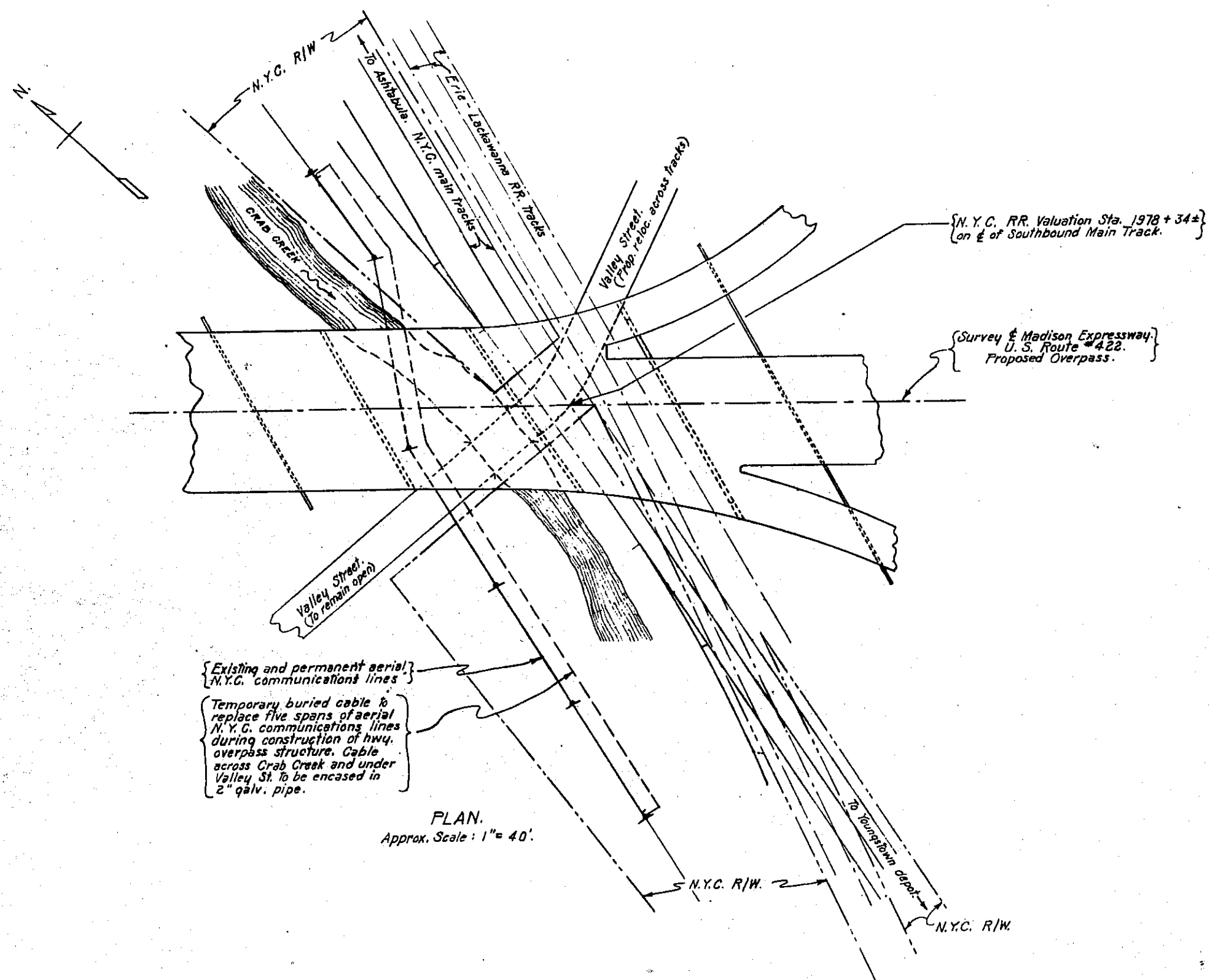


EXIST. STRUCTURE DATA-VALLEY ST.

TYPE: 27" x 36" PRECAST PRESTRESSED CONCRETE BOX GIRDERS WITH REINFORCED CONCRETE DECK AND WITH REINFORCED CONCRETE ABUTMENT CAPS ON EXISTING STONE WALLS. 6" PIPE HANDRAIL (3 PIPES)
 SKEW: 90° 00' 00"
 SPAN: 45'-0"
 HEIGHT: 5'-6"
 PROVIDED OPENING: 43'-4" x 5'-6" = 238.34 SQ. FT.
 50 YEAR HIGH WATER EL. 846.50



Now MAH-62-1969 B BUILT AS MAH-422-0349



Existing and permanent aerial N.Y.C. communications lines

Temporary buried cable to replace five spans of aerial N.Y.C. communications lines during construction of hwy. overpass structure. Cable across Crab Creek and under Valley St. to be encased in 2" galv. pipe.

PLAN.
Approx. Scale: 1" = 40'

GENERAL NOTES.

Light lines indicate existing facilities. Heavy lines indicate necessary changes in N.Y.C. RR. facilities to permit construction of proposed overpass highway structure.

Communications Work - Temporary. Install underground cable to permit removal of five spans of aerial line to clear bridge construction site. Abandon, in place, when no longer required.

Communications Work - Permanent. Remove five spans of existing aerial lines to clear bridge construction area. Replace to original alignment when job progress will permit.

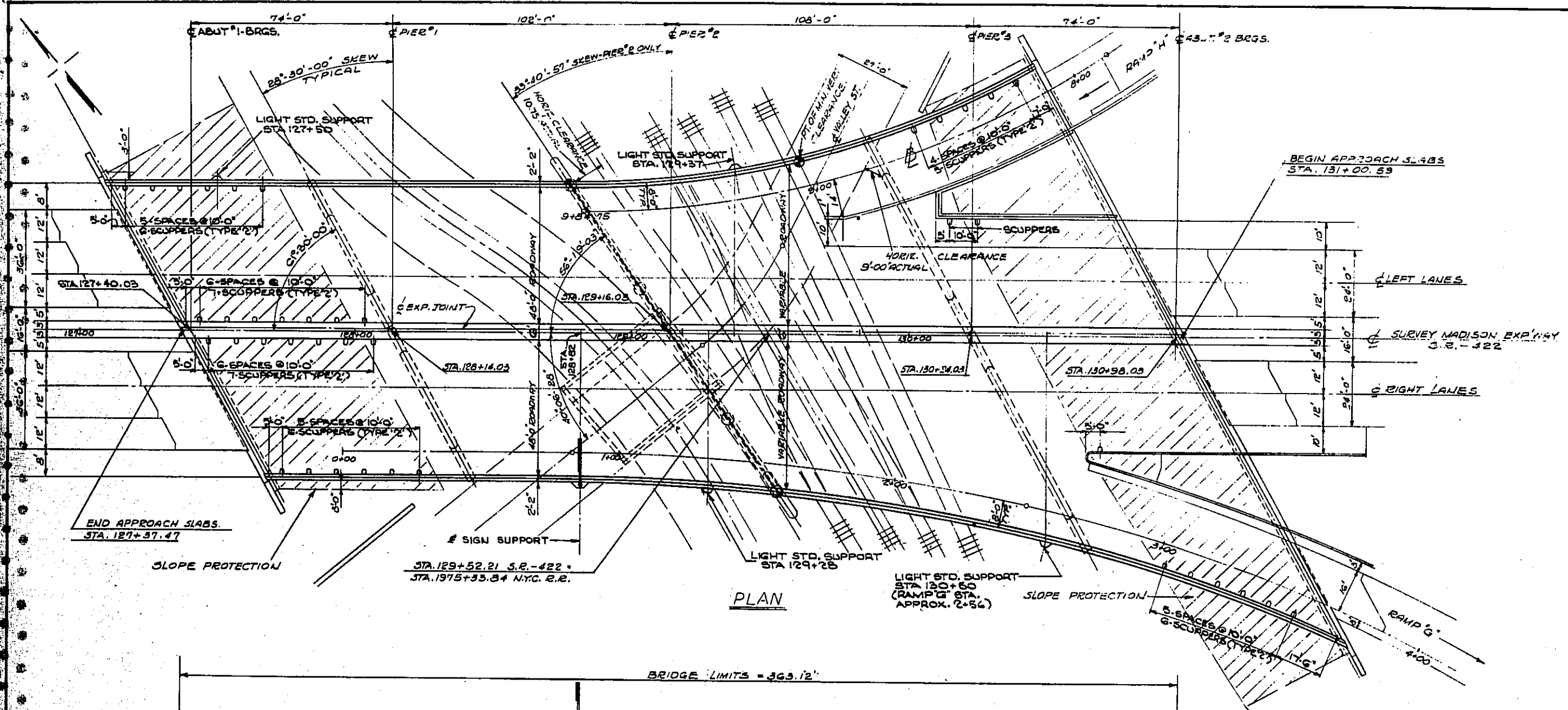
Track Work - Permanent. Adjust track zone areas of existing Valley Street grade crossing to fit revised alignment of street across N.Y.C. tracks.

All labor and furnishing of all material in connection with changes to N.Y.C. RR. facilities described on this plan and called for in the force account estimate will be performed by the New York Central Railroad.

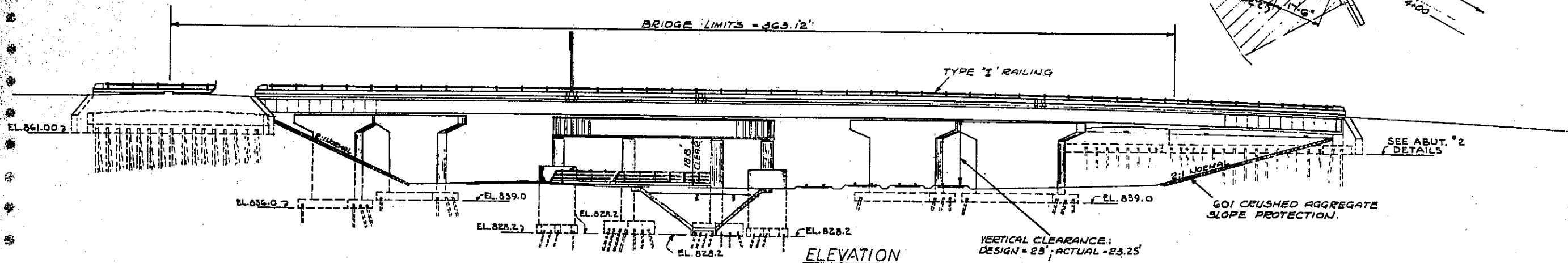
Grade crossing protection at Valley Street is maintained by the Erie-Lackawanna R.R..

HIGHWAY BR. NO. MAH-422-0354

N.Y.C. SYSTEM	OFFICE OF CHIEF ENGINEER.	NEW YORK, N.Y.
BRIDGE NA 128j		STATION 1978+34
Proposed Overpass U. S. Route 422 Valley Street, YOUNGSTOWN, OHIO. Railroad Force Account Plan. Communications & Track Work.		
Western Dist. - Lake Div. - Youngstown Br.	Plan # 7615.	
Scales: As Shown. Feb. 10, 1966		Vol. Sec. 223-A File # 132-89.



PLAN



ELEVATION

ESTIMATED QUANTITIES

* Modified as per plan, see shts. 13, 257A & 257B.

SEE SHEET NO. 344 FOR STRUCTURAL GENERAL NOTES.

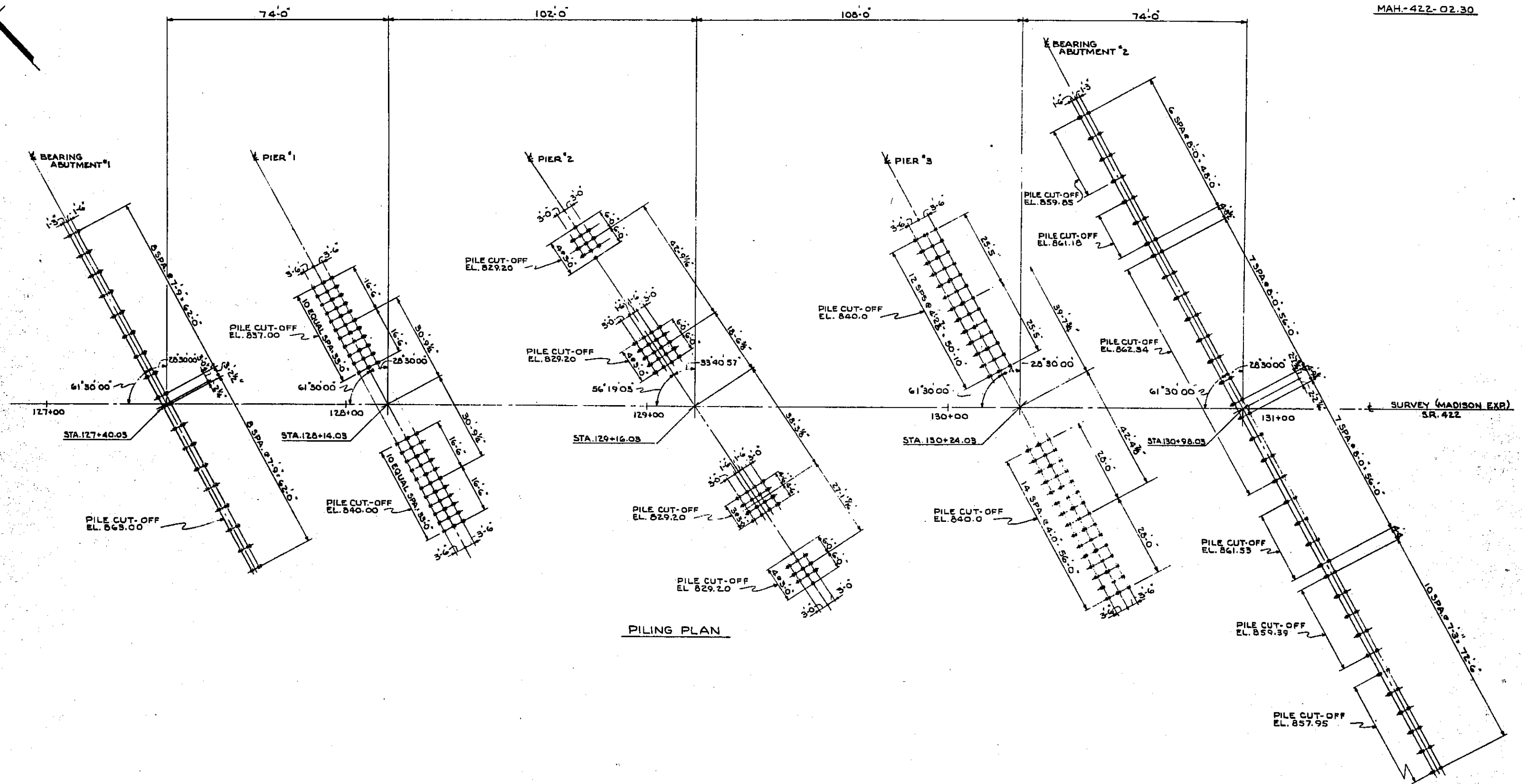
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN.	ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN.	ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN.
503	LUMP	SUM.	COFFERDAMS, CRIBS AND SHEETING				LS	512	88	LN.FT.	PREMOLED SEALING STRIP				517	878.05	LN.FT.	BRIDGE RAILING (TYPE 'I')					
509	1821	CUYDS	UNCLASSIFIED EXCAVATION	860	961			512	32	SQ.YDS	TYPE 'B' WATERPROOFING				517	363.12	LN.FT.	RAILING - DOUBLE-FACED DEEP BEAM RAIL WITH STEEL POST & BOLTS					
505	LUMP	SUM.	FIRST TEST PILE				LS	513	1,711,600	LBS.	STRUCTURAL STEEL	1,711,600			518	258	CU.YDS	POROUS BACKFILL		258			
506	LUMP	SUM.	FIRST PILE TEST LOAD				LS	514	1,711,600	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	1,711,600			518	40	EACH	SCUPPERS, INCLUDING SUPPORTS	40				
506	1	EACH	SUBSEQUENT PILE TEST LOAD					516	175	Sq.Ft.	1" PREFORMED EXR JT. FILLER (AASHO - M-153)	175			518	341	LN.FT.	6" DEF. HELICAL C.M.P. 70706 INCLUDING SPECIALS		341			
507	13,500	LN.FT.	12 BPS3 STEEL 'H' PILES	6240	7260			518	252	LN.FT.	6" HELICAL NON-PERF C.M.P. 70706				518	252	LN.FT.	6" HELICAL NON-PERF C.M.P. 70706		252			
509	534,980	LBS.	REINFORCING STEEL	599,509	40,418	97,023		601	2924	Sq.Yds	CRUSHED AGGREGATE SLOPE PROTECTION		2924		225			SEE SHT. # 283 FOR LIGHTING SUMMARY					
511	1394	CUYDS	CLASS 'C' CONC. SUPERSTRUCTURE	1394				808	1394	UNITS	WATER REDUCING, SET RETARDING ADMIXTURE		1394		825	5,347	SQ.YD.	CONCRETE SURFACE TREATMENT		5,347			
511	388	CUYDS	CLASS 'C' CONC. ABUTS ABOVE FOOTINGS	388				826	263	LN.FT.	JOINT SEALER		263		511	678	CUYDS	CLASS 'C' CONC. PIERS ABOVE FOOTINGS		678			
511	678	CUYDS	CLASS 'C' CONC. PIERS ABOVE FOOTINGS			678									511	282	CUYDS	CLASS 'C' CONC. PIER AND ABUT FOOTINGS		282	291		
511	282	CUYDS	CLASS 'C' CONC. PIER AND ABUT FOOTINGS			291																	

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEIWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
4 YOUNGSTOWN ROAD CONSULTING ENGINEERS YOUNGSTOWN 14, OHIO

GENERAL PLAN & ELEVATION
BRIDGE NO. MAH 422-0354
OVER N.Y.C. AND ERIE LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+37.47 TO STA 131+00.59

DESIGNED BY: W.P. DRAWN BY: JK. TRACED BY: [blank]. CHECKED BY: [blank]. REVIEWED BY: RDN. DATE: 11-14-66.



PILING PLAN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

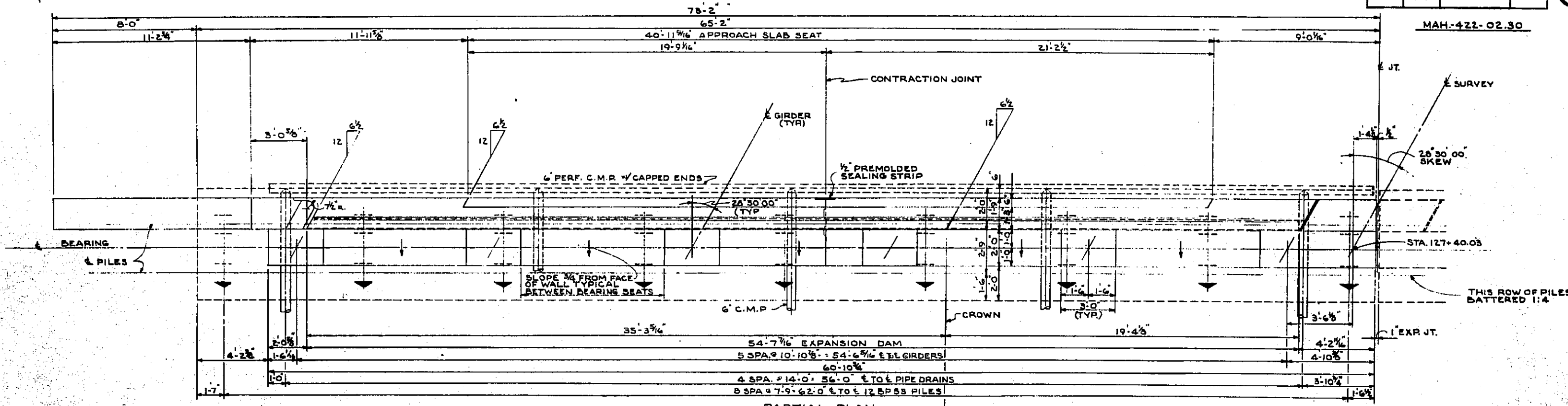
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

PILING PLAN
BRIDGE NO. MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 127+37.47 TO STA. 131+00.59

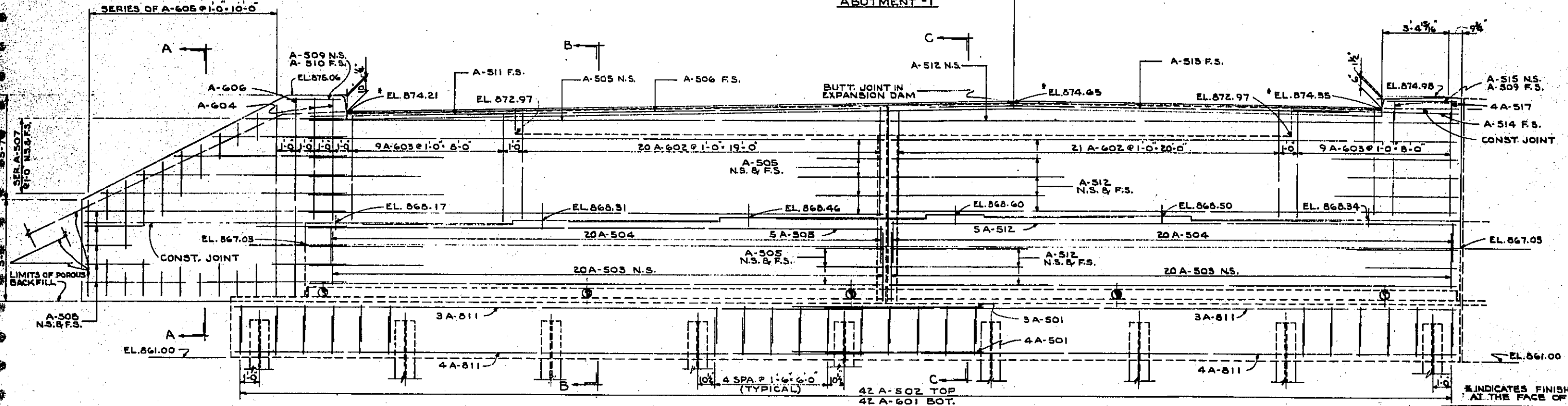
DESIGNED	DRAWN	TRACKED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		HASER	EDH	4-14-66	

PILES TO BE 12 BP 53 STEEL H PILES
↑ INDICATES DIRECTION OF 1:4 BATTER FOR BATTERED PILES

MAH-422-02.30



PARTIAL PLAN
ABUTMENT #1



PARTIAL ELEVATION
ABUTMENT #1

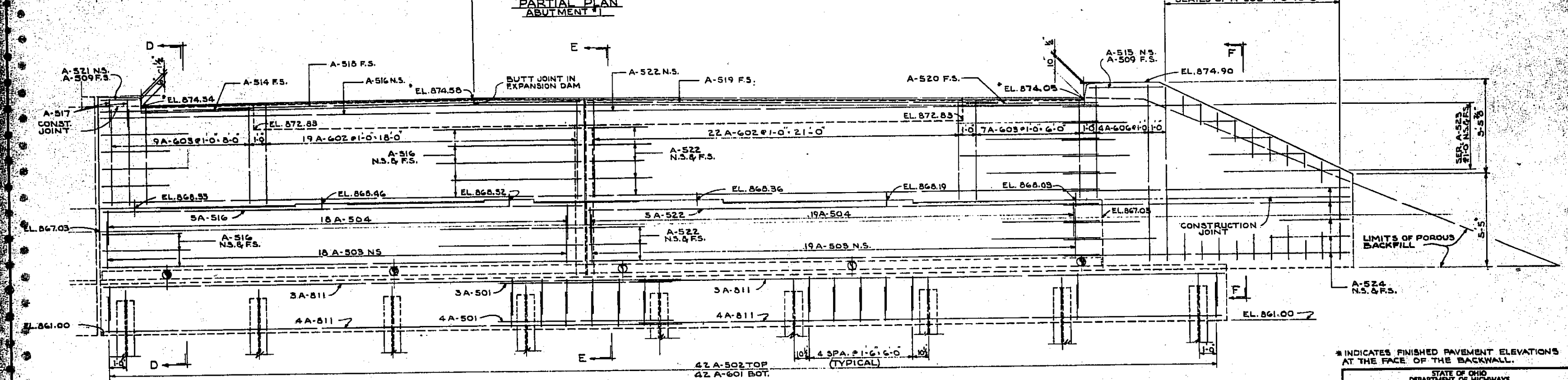
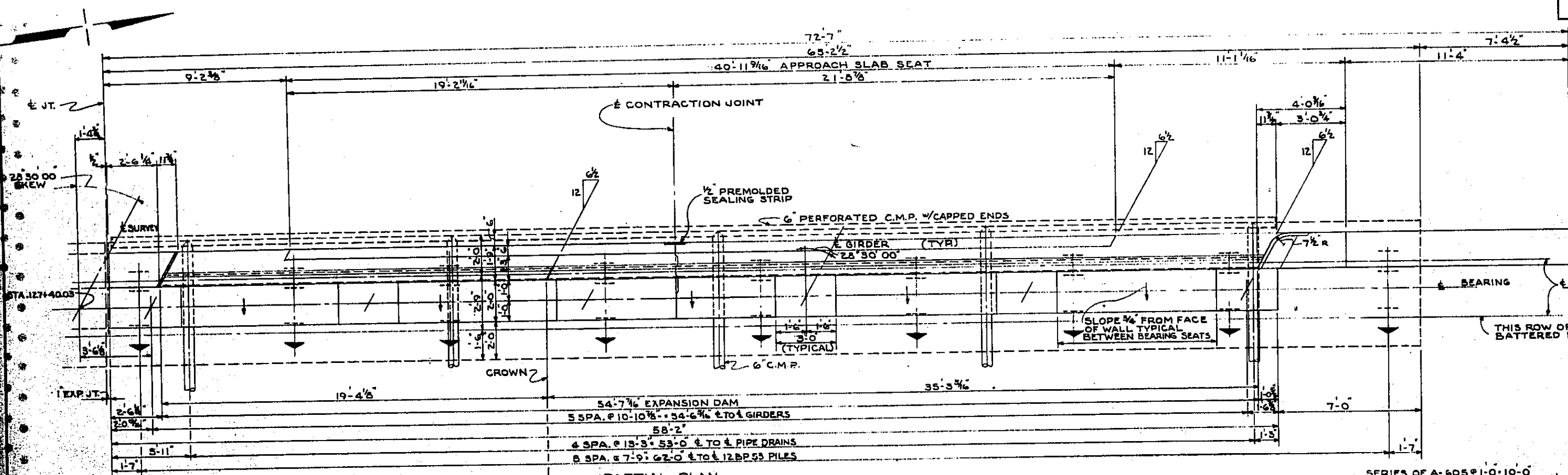
INDICATES FINISHED PAVEMENT ELEV'S.
AT THE FACE OF THE BACKWALL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT #1
BRIDGE # MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 127+37.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		HAGER	R.D.H.	11-14-66	

MAH-422-02.30



* INDICATES FINISHED PAVEMENT ELEVATIONS AT THE FACE OF THE BACKWALL.

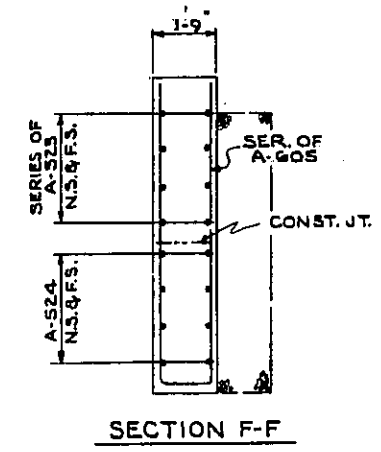
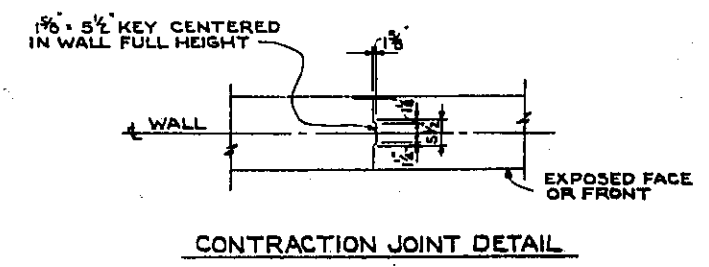
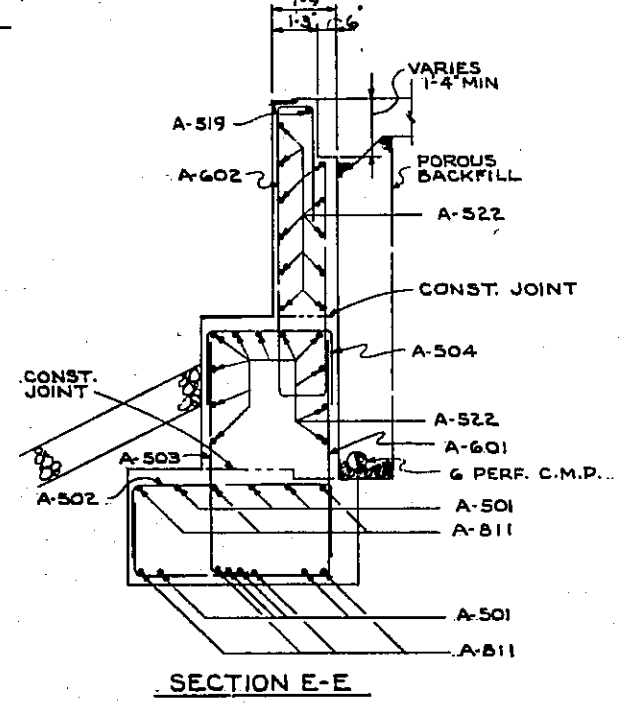
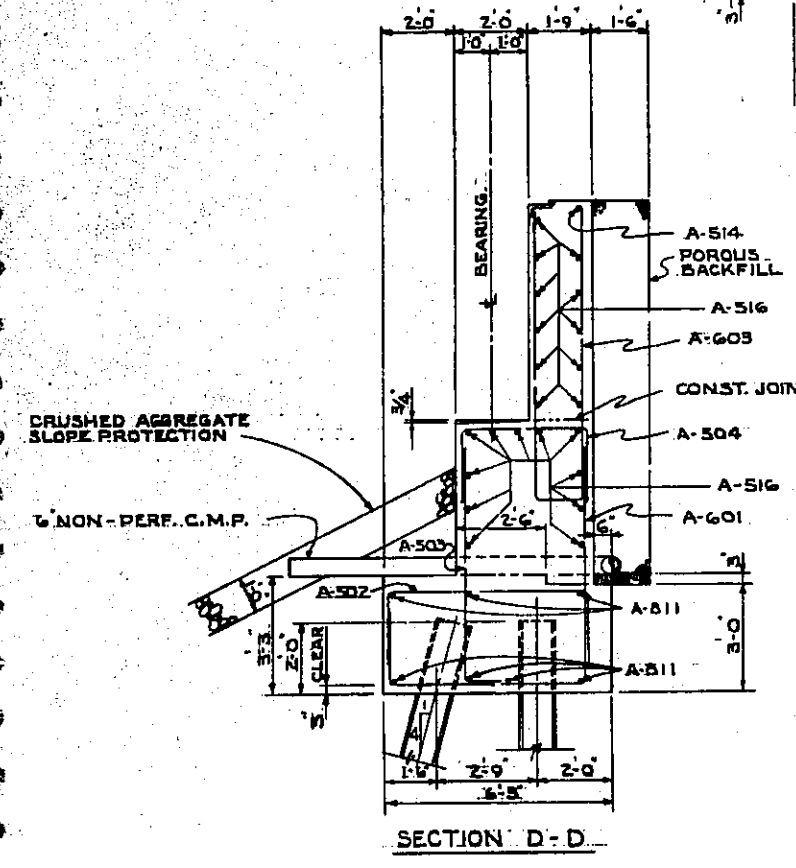
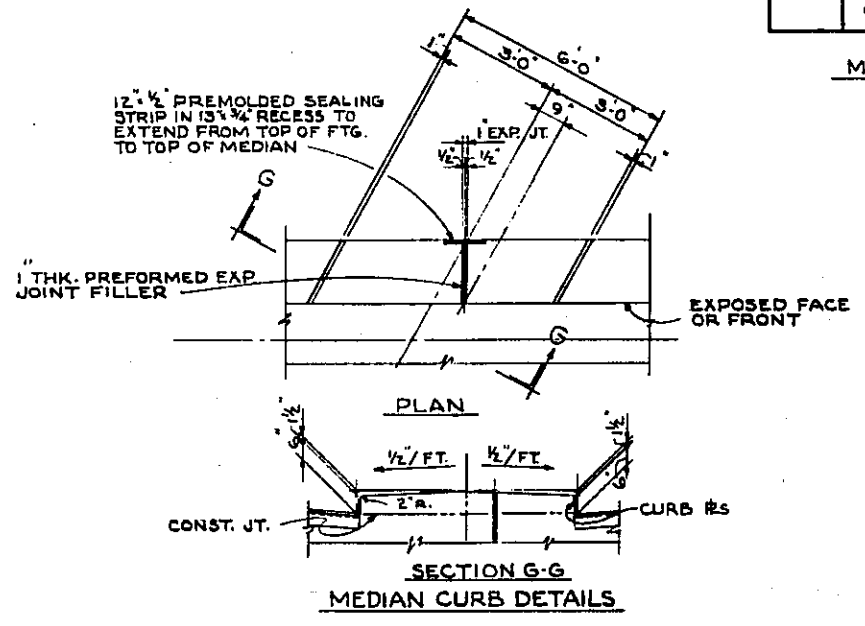
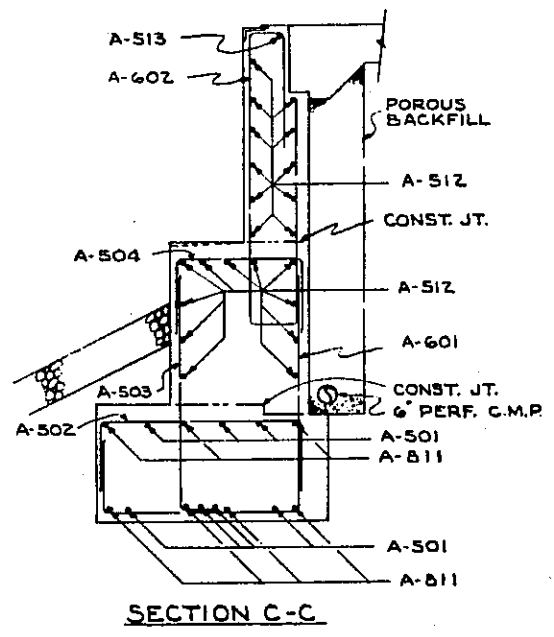
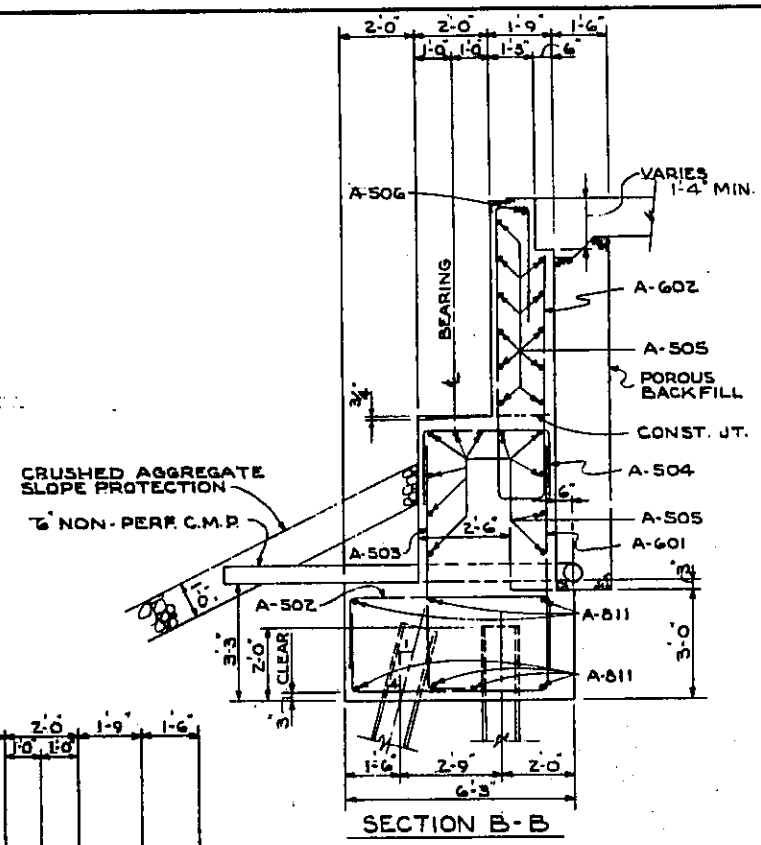
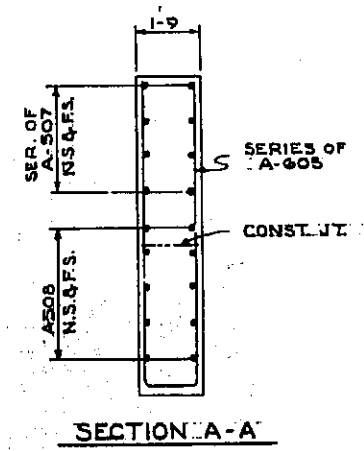
STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
 CONSULTING ENGINEERS
 4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT #1
 BRIDGE # MAH-422-0354
 OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
 YOUNGSTOWN MAHONING COUNTY
 STA. 127+37.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
hup	JLH		HAGER	EDH	11-14-66	

MAH-422-02.30



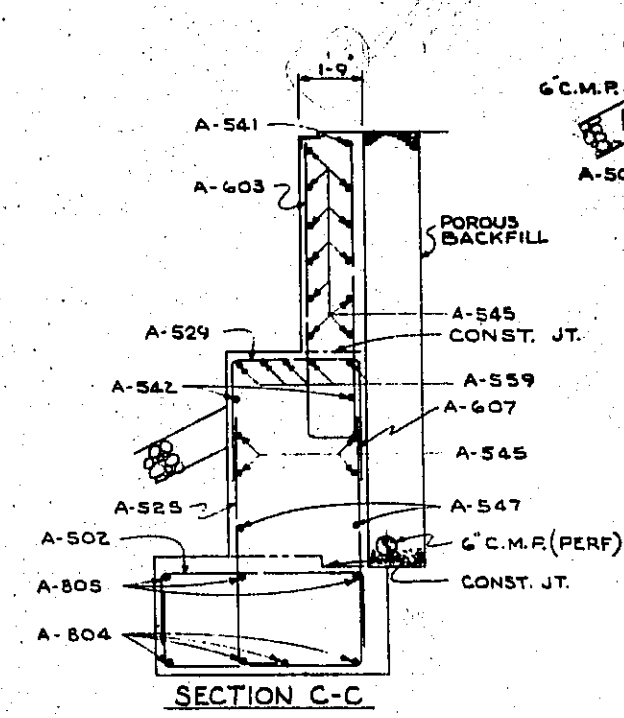
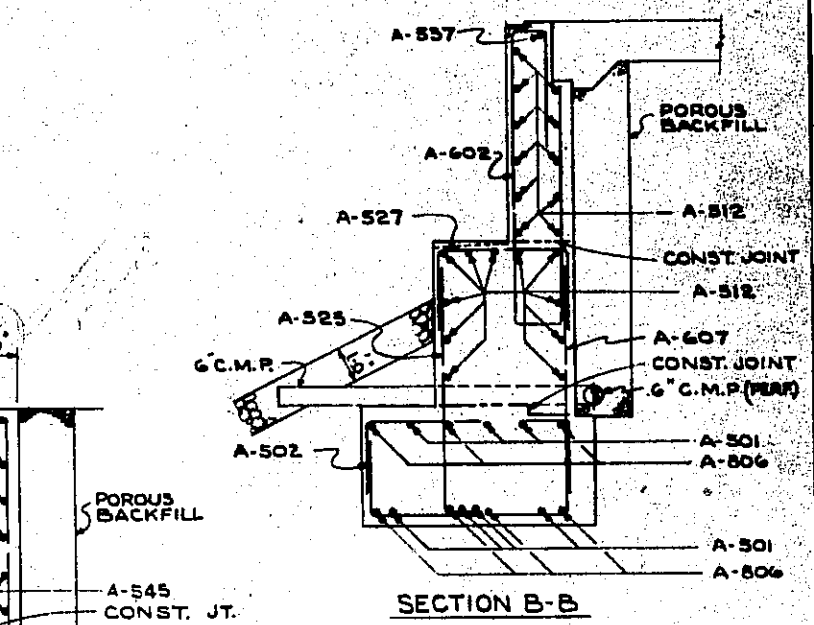
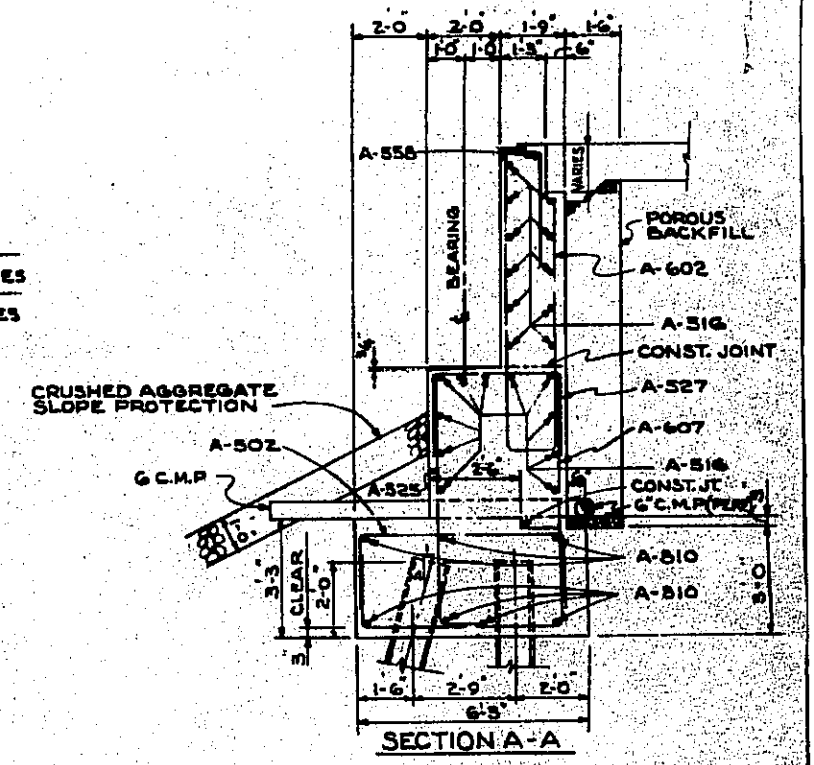
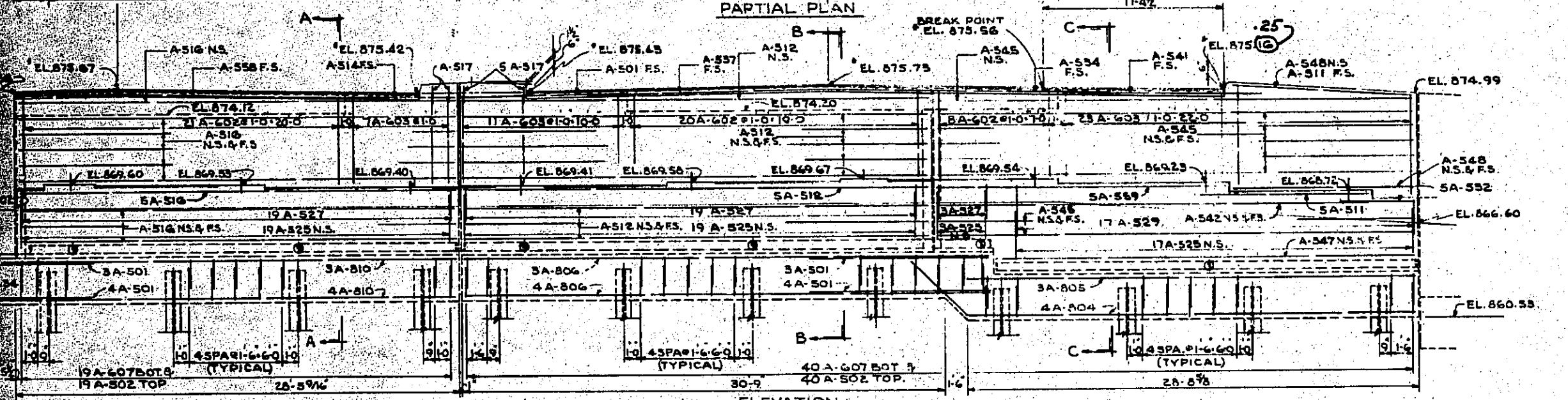
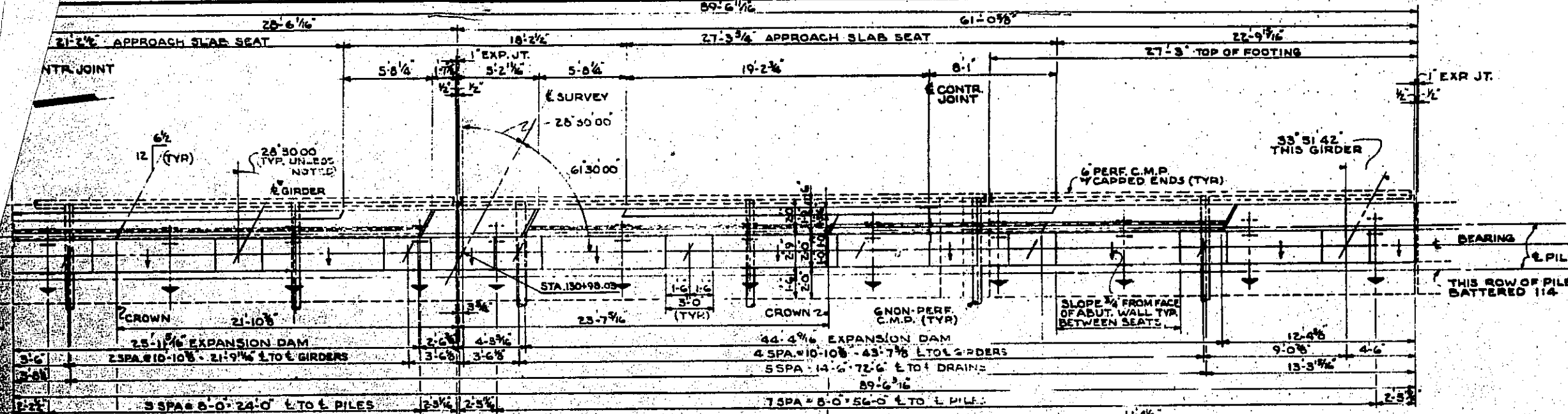
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT NO. 1 DETAILS
BRIDGE NO. MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 127+37.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		HAGER	R.D.H.	11-14-66	

MAH-422-02.30

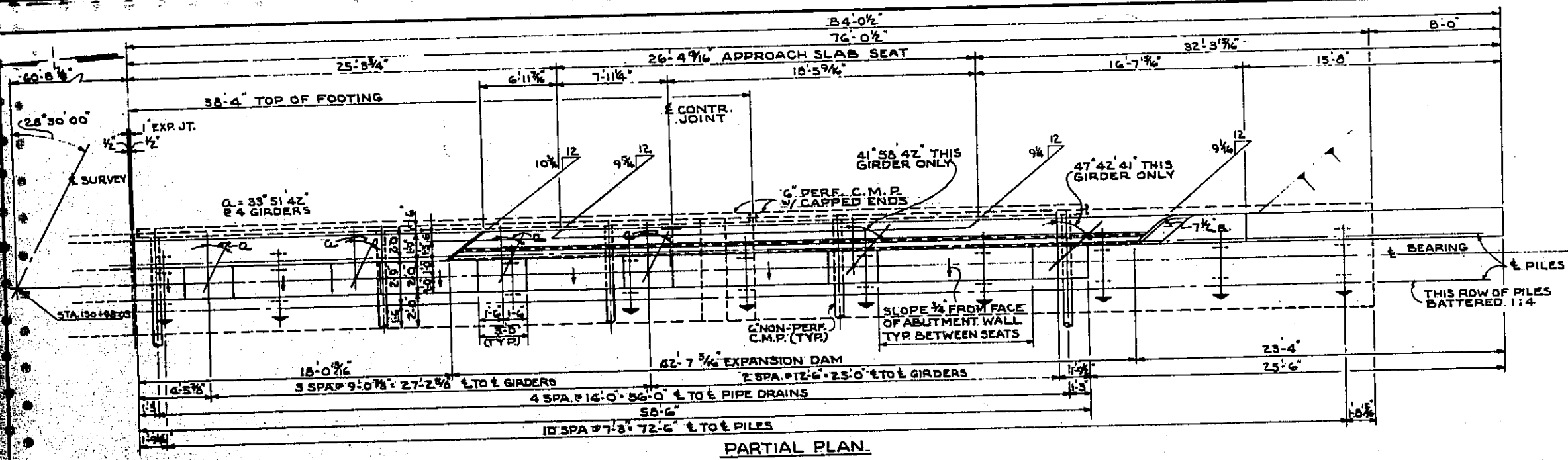


NOTE: FOR MEDIAN DETAIL SEE ABUTMENT NO. 1 INDICATES FINISHED PAVEMENT ELEVATIONS AT THE FACE OF BACKWALL

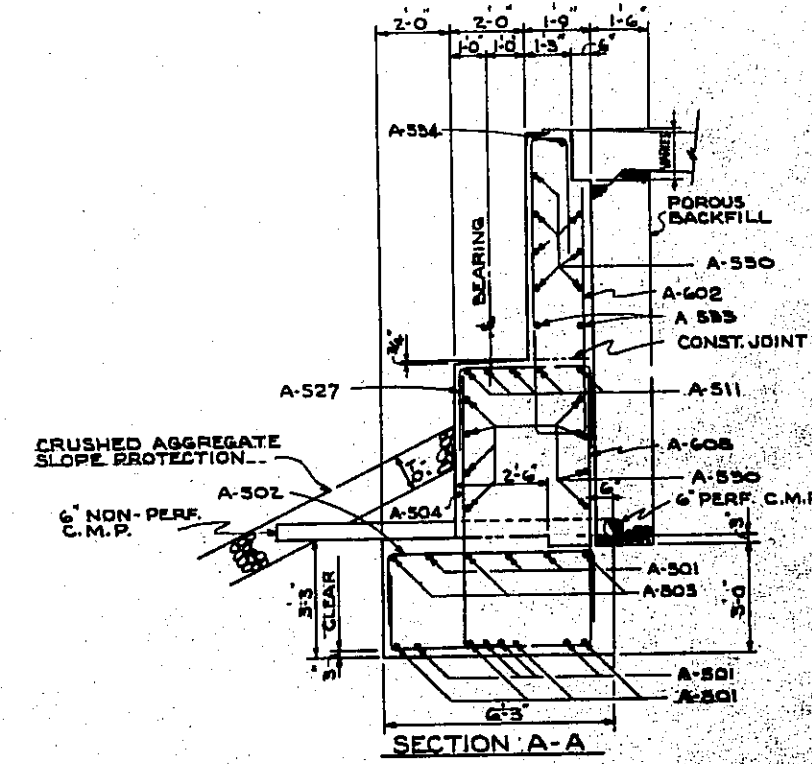
STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER CONSULTING ENGINEERS 4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO					
ABUTMENT NO. 2					
BRIDGE NO. MAH-422-0354					
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD					
YOUNGSTOWN MAHONING COUNTY					
STA. 127+37.47 TO STA. 131+00.59					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
W.P.	J.L.H.		H.H.R.	EDH	11-14-65

Revised elevation at face of curb, 875.16 to 875.25

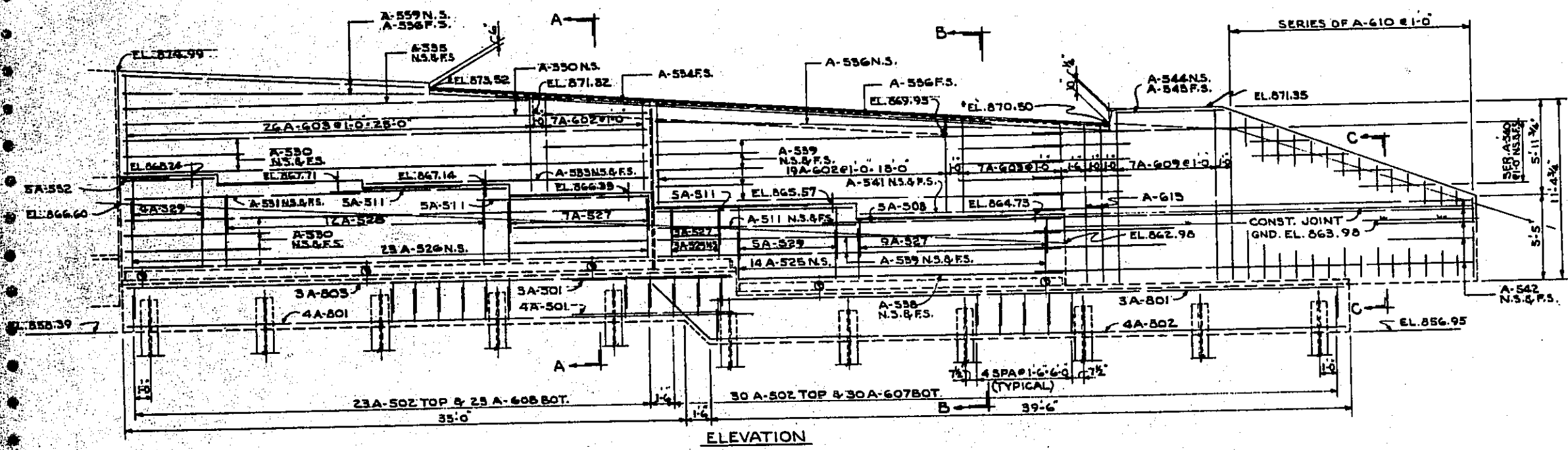
MAH-422-0230



PARTIAL PLAN



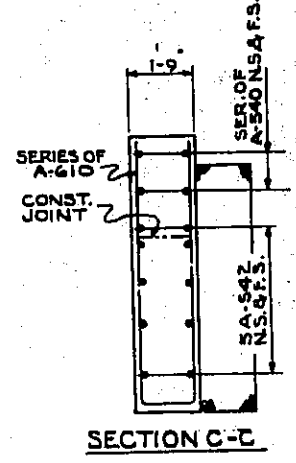
SECTION A-A



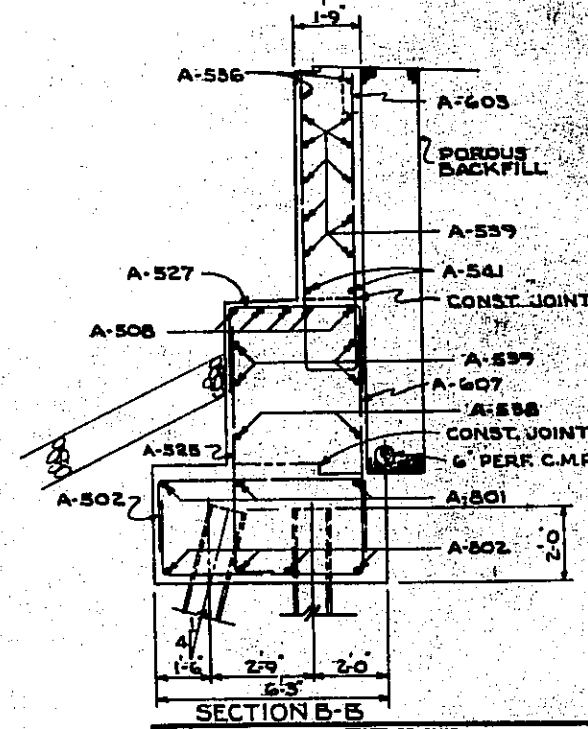
ELEVATION

NOTE: ...INDICATES FINISHED PAVEMENT ELEVATIONS AT THE FACE OF BACKWALL.

LIMITS OF POROUS BACK FILL



SECTION C-C

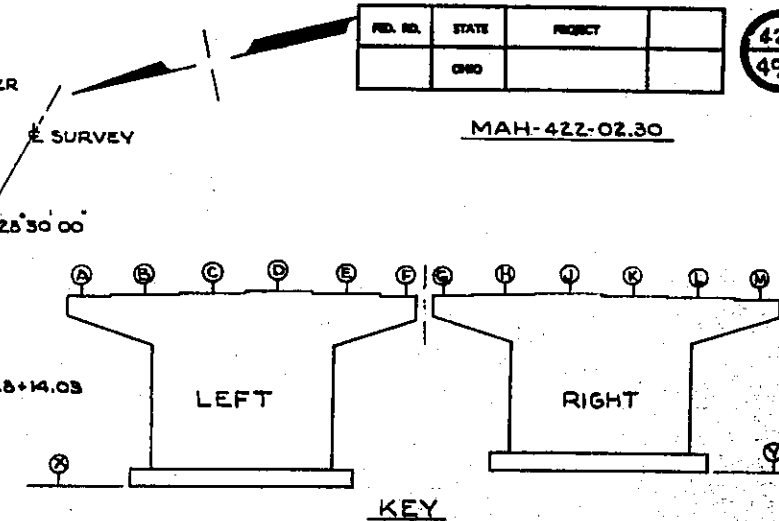
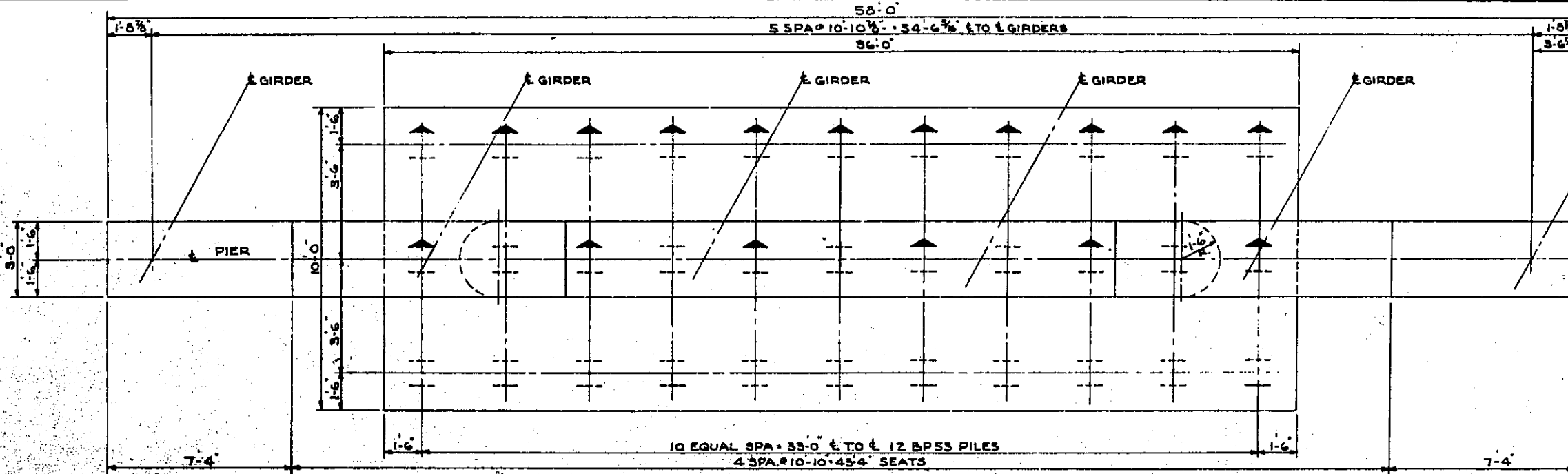


SECTION B-B

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
BEHNENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

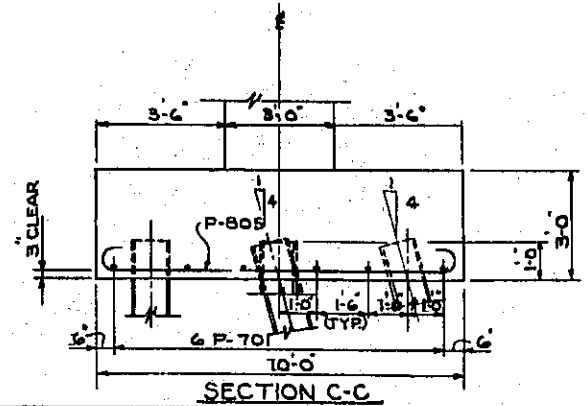
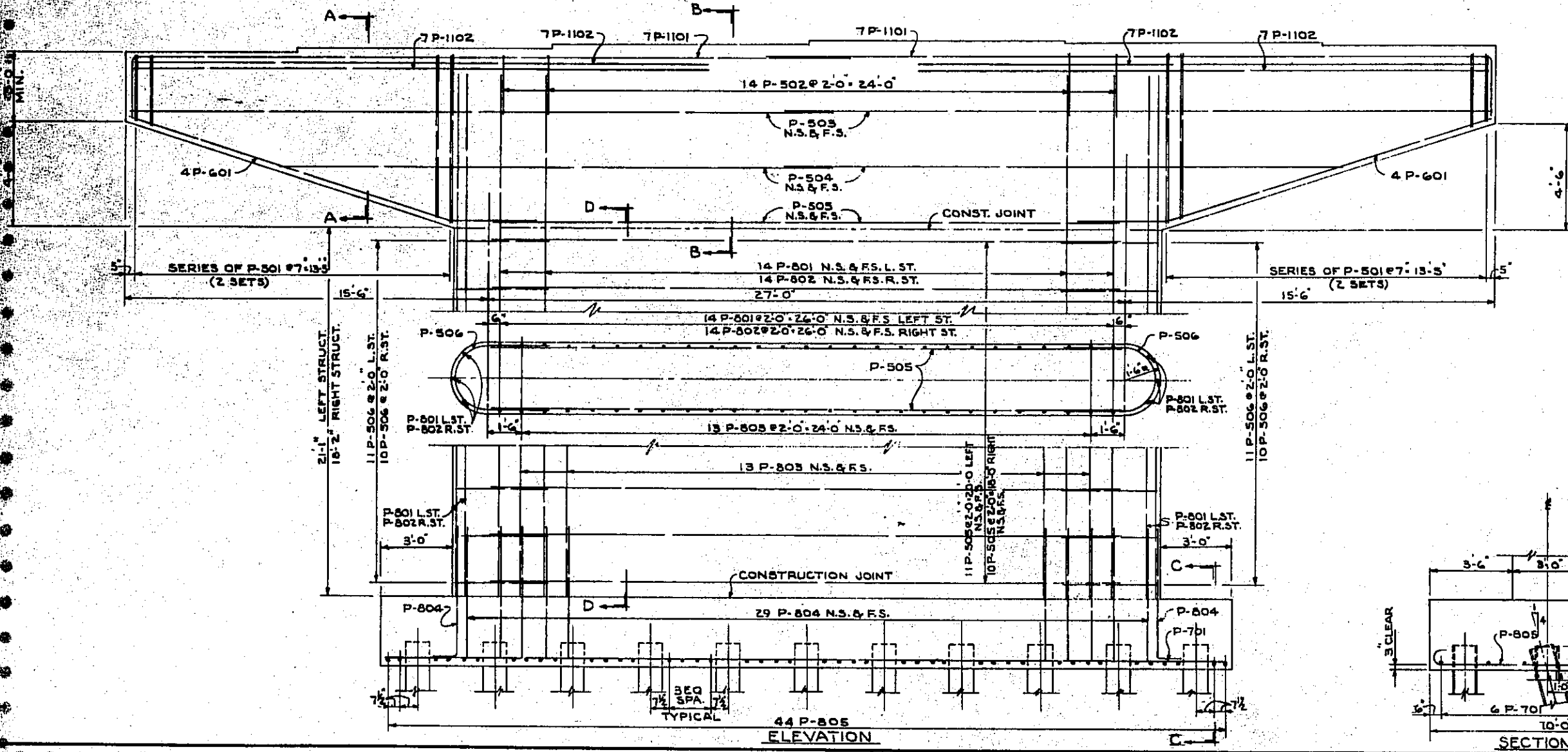
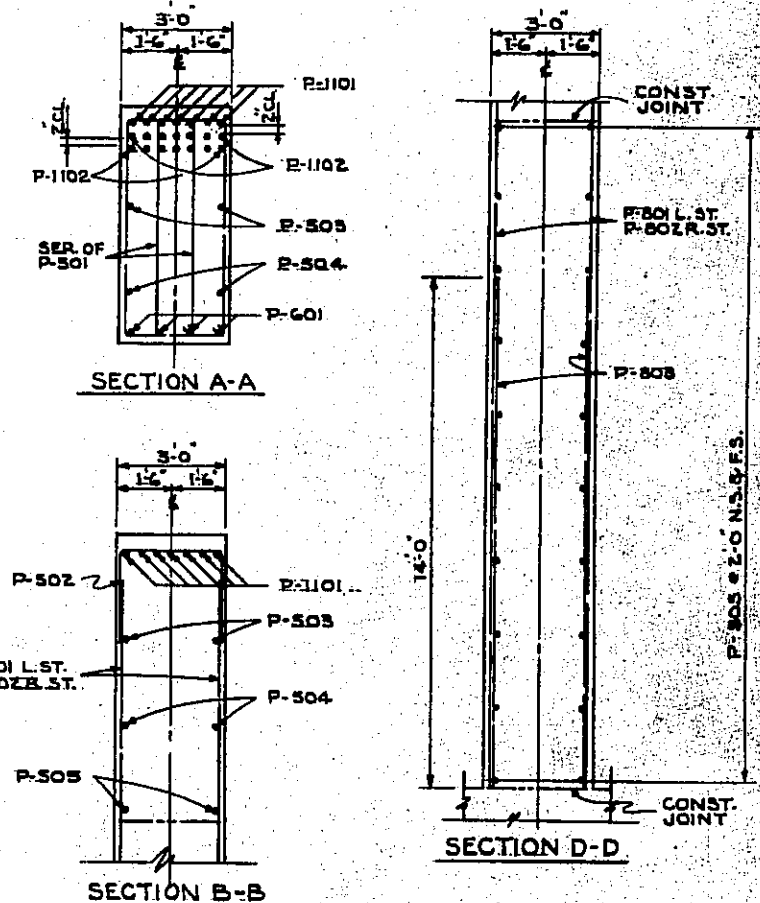
ABUTMENT NO. 2
BRIDGE NO. MAH-422-0230
OVER NYGAND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 12+51.47 TO STA. 13+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
W.P.	J.L.H.		Hagen	EDN	11-14-66	



ELEVATION TABLE

STRUCT	A	B	C	D	E	F	X	G	H	J	K	L	M	Y
LEFT	867.58	867.75	867.94	868.10	868.04	867.90	836.00							
RIGHT								867.91	868.08	868.17	868.04	867.85	867.66	839.00



↑ PILES TO BE 12 BP53 STEEL H PILES
↑ INDICATES DIRECTION OF 1:4 BATTER.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

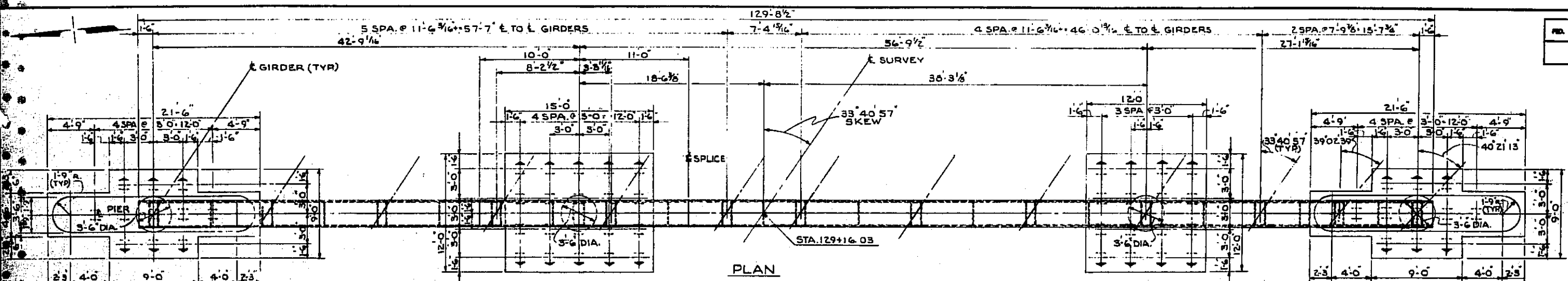
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

PIER No. 1

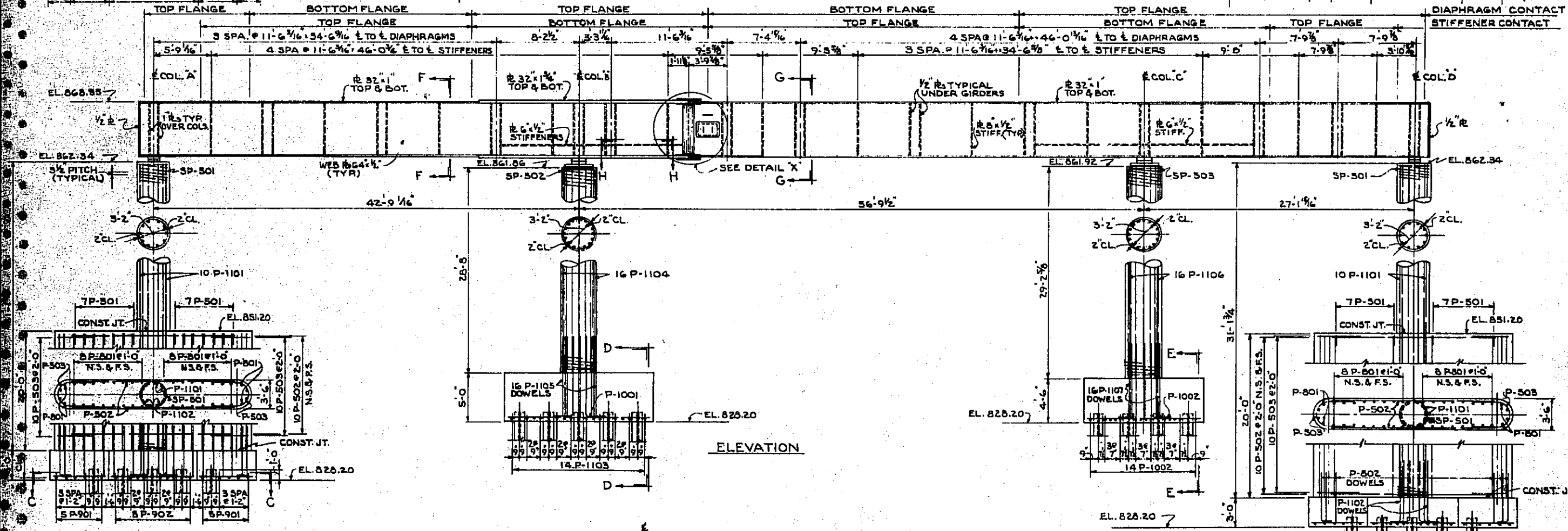
BRIDGE No. MAH-422-0334
OVER N.Y. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 127+37.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		H.A.G.	R.D.H.	11-14-66	

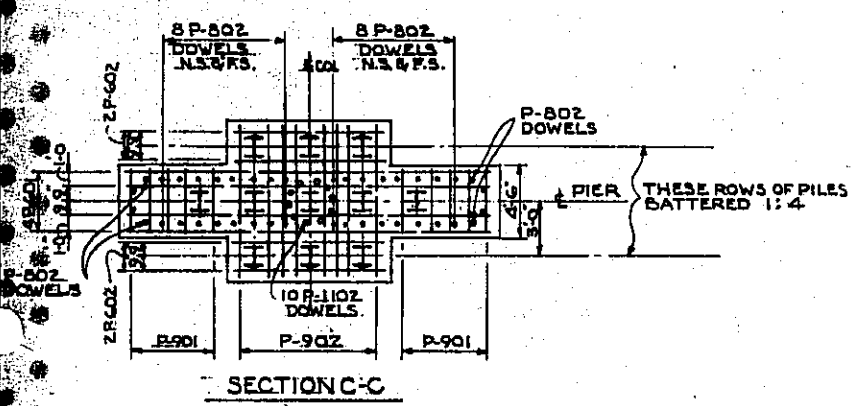
MAH-422-02.30



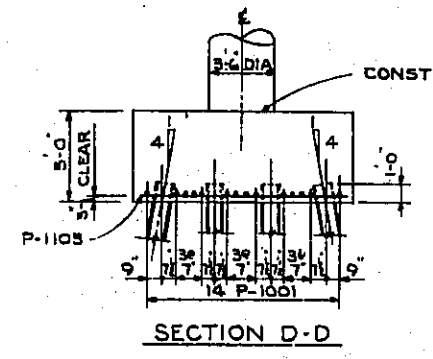
PLAN



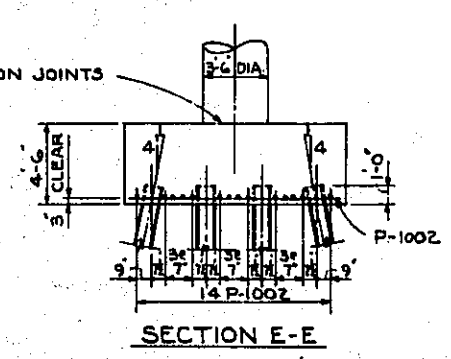
ELEVATION



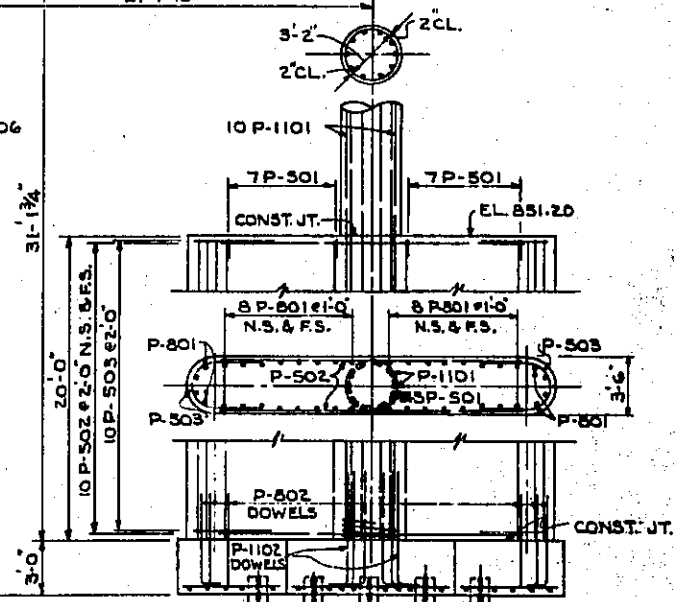
SECTION C-C



SECTION D-D



SECTION E-E



FOR FOOTING DETAILS SEE SECTION C-C

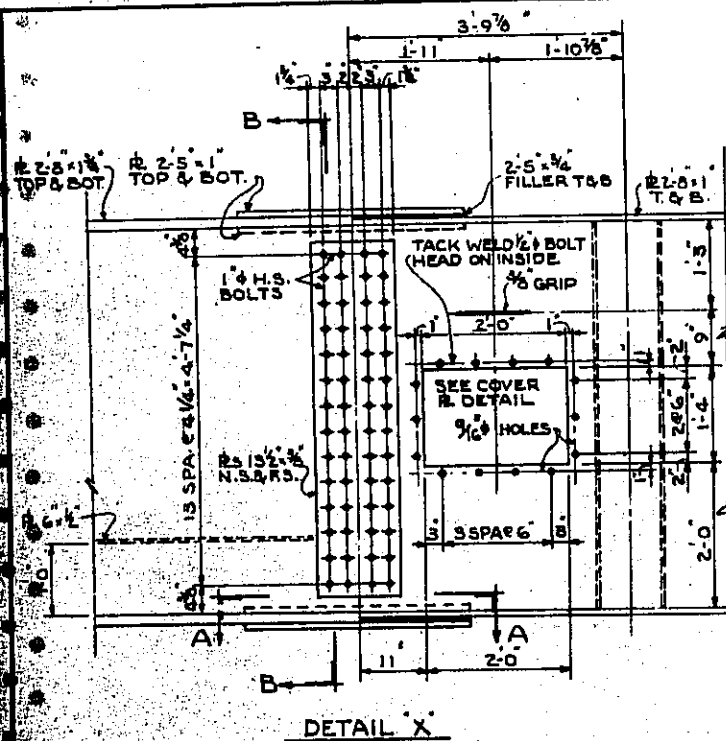
ALL PILES 12 SP 63 STEEL 'H' PILES.
I INDICATES DIRECTION OF BATTER OF 1:6 BATTERED PILES.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
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CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

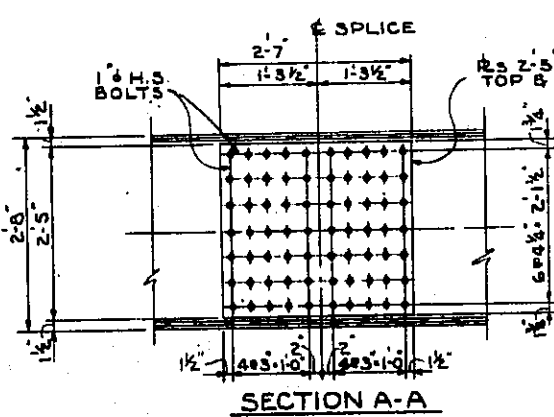
PIER No 2
BRIDGE No MAH-422-0354
OVER NYC AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 127+57.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		H.A.S.	R.D.H.	11-14-66	

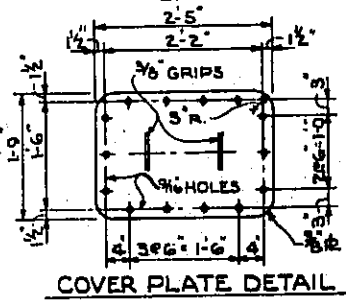
MAH-422-02.30



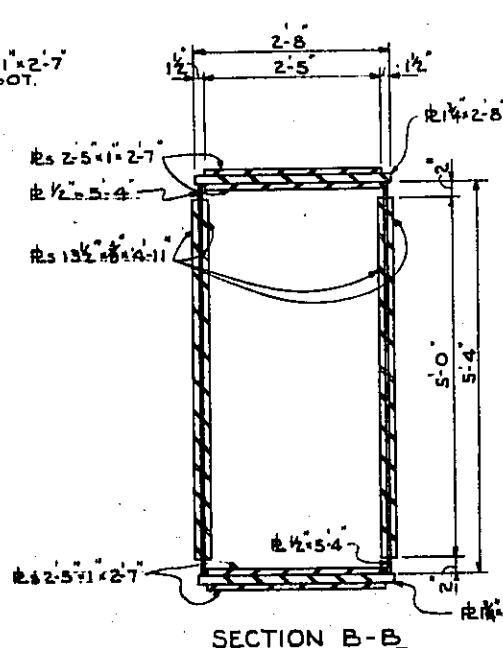
DETAIL X



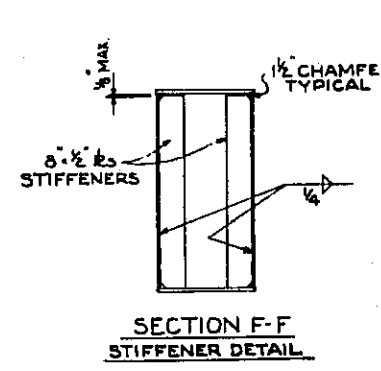
SECTION A-A



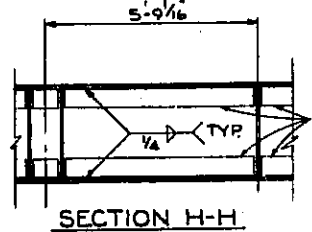
COVER PLATE DETAIL



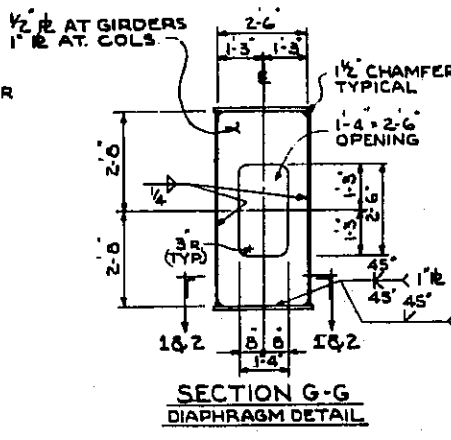
SECTION B-B



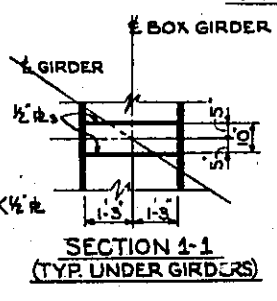
SECTION F-F STIFFENER DETAIL



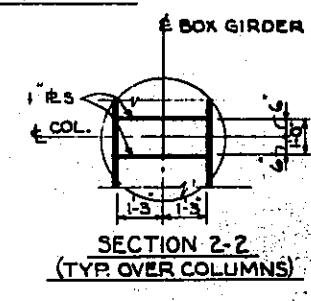
SECTION H-H



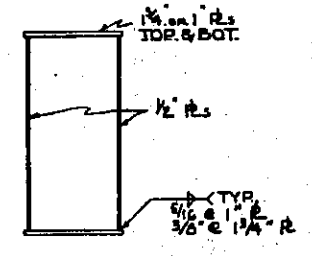
SECTION G-G DIAPHRAGM DETAIL



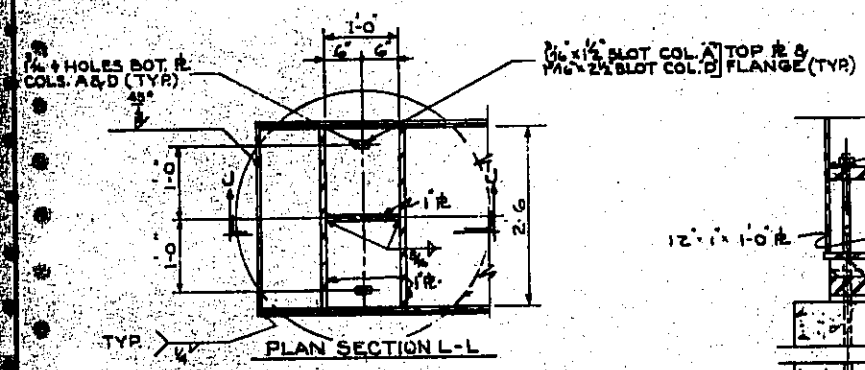
SECTION 1-1 (TYP. UNDER GIRDERS)



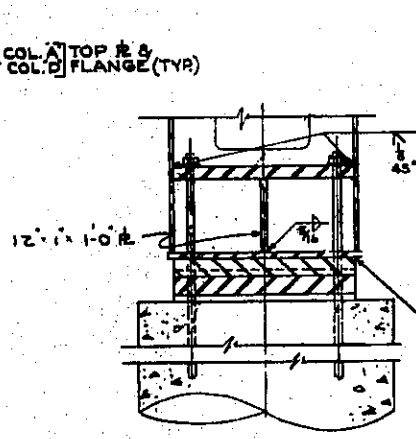
SECTION 2-2 (TYP. OVER COLUMNS)



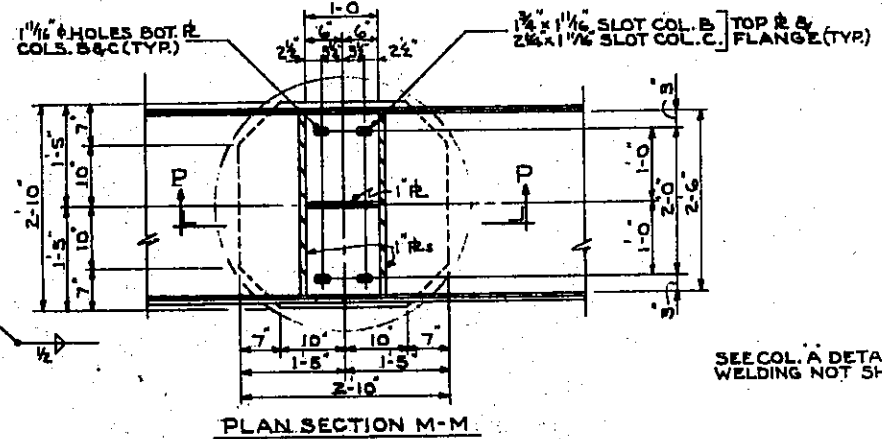
TYPICAL SECTION THRU BOX GIRDER



PLAN SECTION L-L

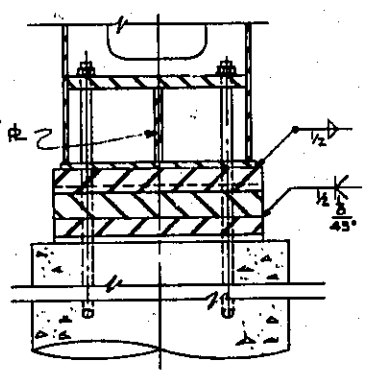


SECTION K-K

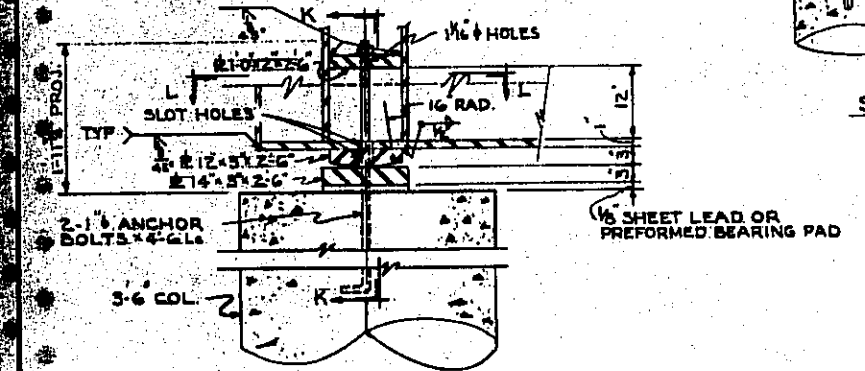


PLAN SECTION M-M

SEE COL. A DETAILS FOR WELDING NOT SHOWN.

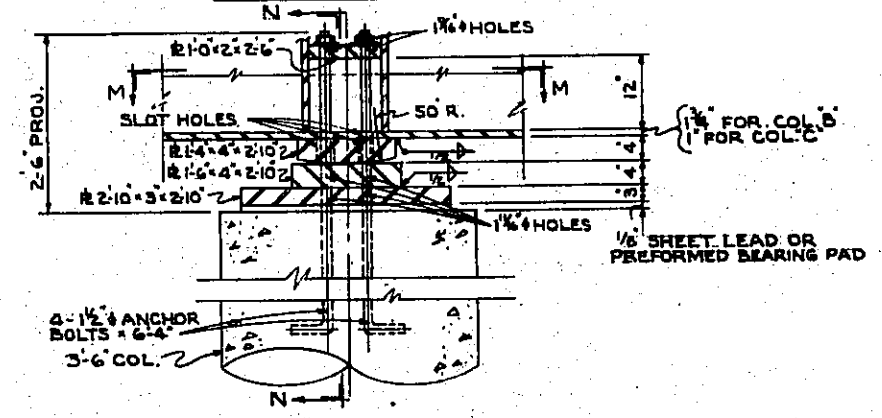


SECTION N-N



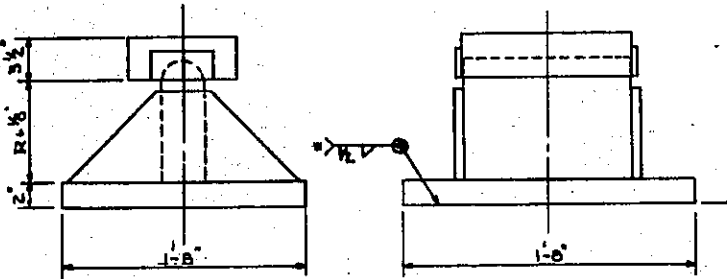
SECTION J-J

COLUMN A SHOWN COLUMN D SIMILAR EXCEPT AS NOTED.



SECTION P-P

COLUMN B SHOWN COLUMN C SIMILAR EXCEPT AS NOTED



BEARING DETAIL

GIRDER	R
A	4 1/4
B	7 1/2
C	1-0
D	1-1 1/4
E	1-0 1/2
F	11 1/2
G	11 1/2
H	11 1/2
J	1-3
K	1-1 1/2
L	9 1/2
M-7	7 1/2
M	4

FOR DIMENSIONS & DETAILS NOT SHOWN SEE STD. DWG. RB-1-55 (B-500)
* OMIT WELD AT GIRDERS D, E, J, K & L

NOTES:
CUT INTERMEDIATE STIFFENERS TO CONTACT TOP OR BOTTOM FLANGE AS SHOWN IN THE ELEVATION VIEW.
DIAPHRAGMS TO BE INSTALLED TO CONTACT TOP OR BOTTOM FLANGE AS SHOWN IN THE ELEVATION VIEW AND WELDED TO THE OTHER FLANGE AS INDICATED IN SECTION G-G.

STATE OF OHIO
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4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

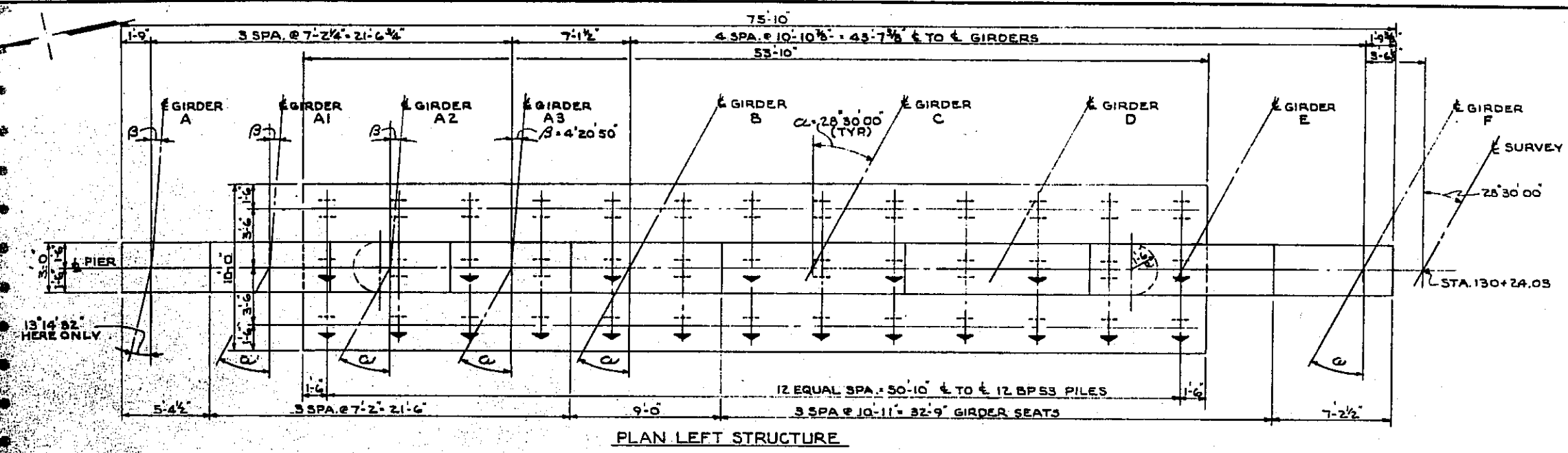
PIER No 2
BRIDGE No MAH-422-0254
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 127+37.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
WUP	JLH		HAGER	R.D.H.	11-14-66	

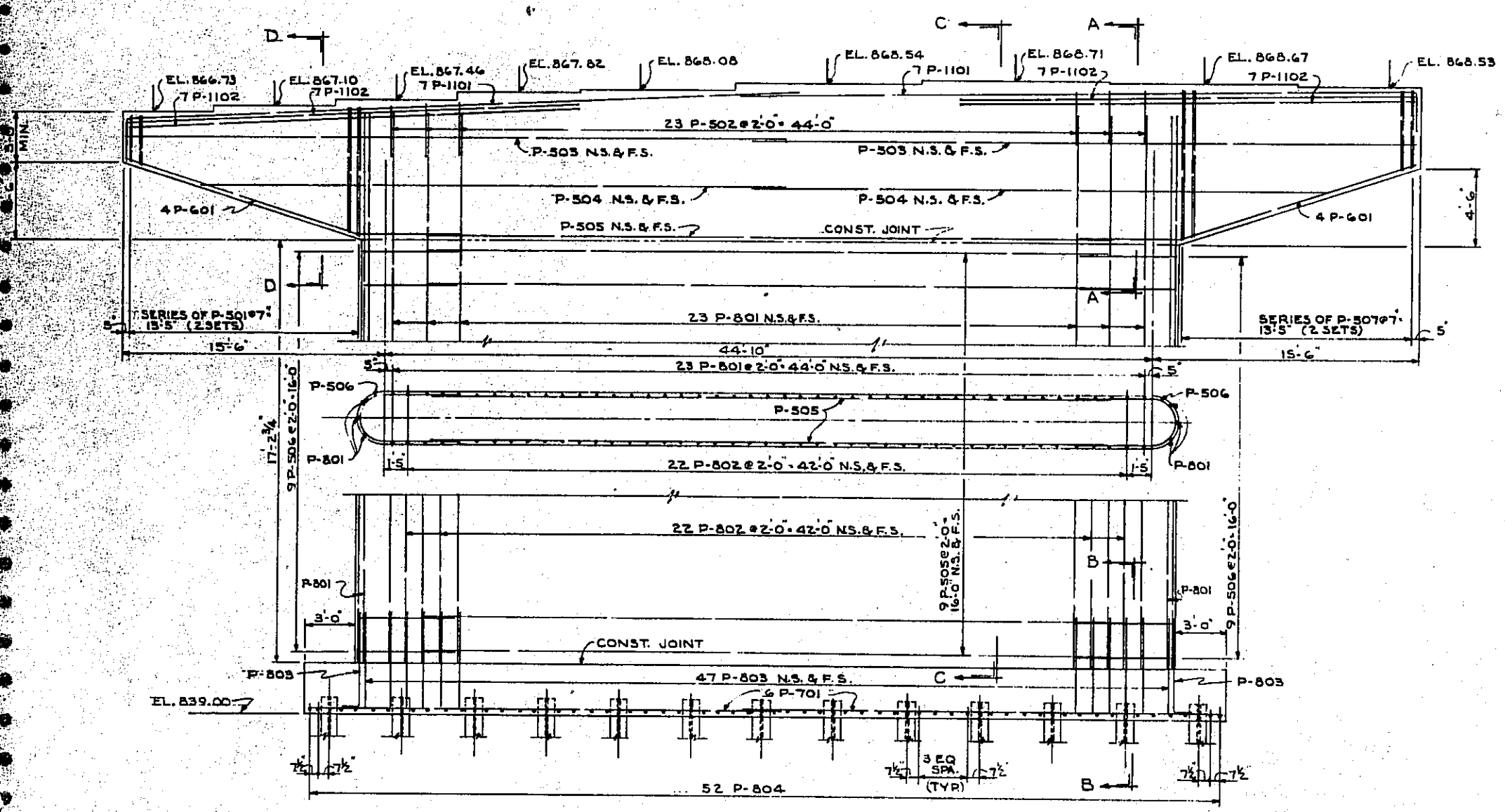
PBL. NO.	DATE	PROJECT

422
498

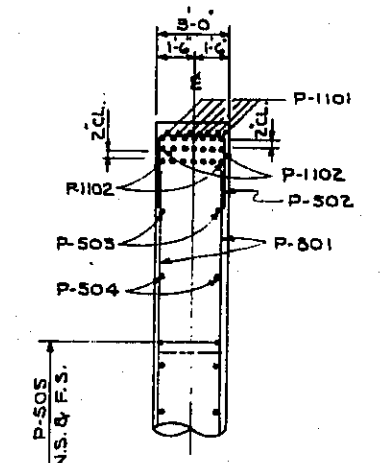
MAH-422-02.90



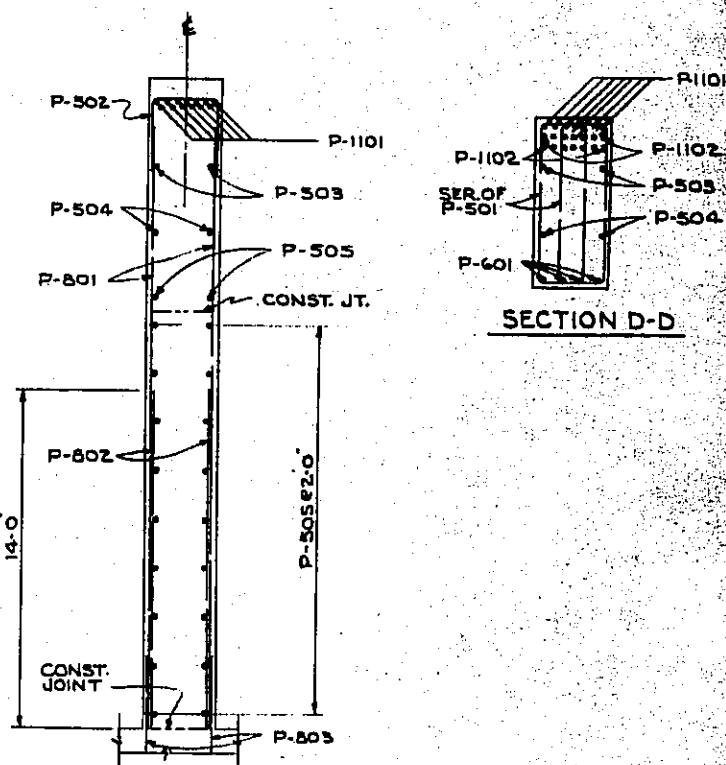
PLAN LEFT STRUCTURE



ELEVATION

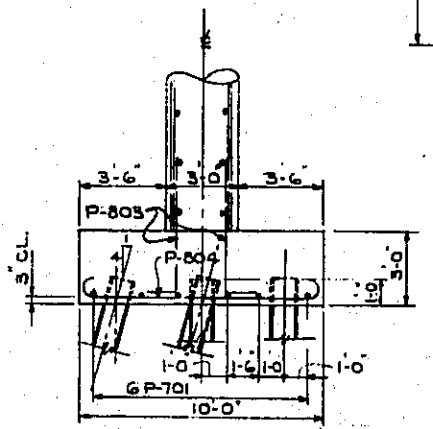


SECTION A-A



SECTION C-C

SECTION D-D

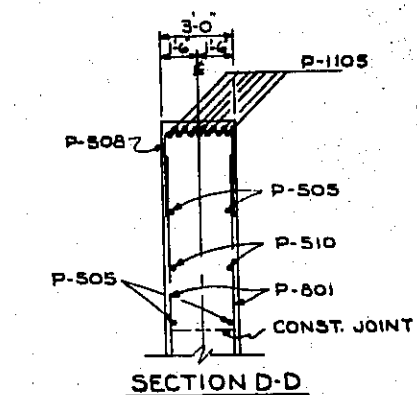
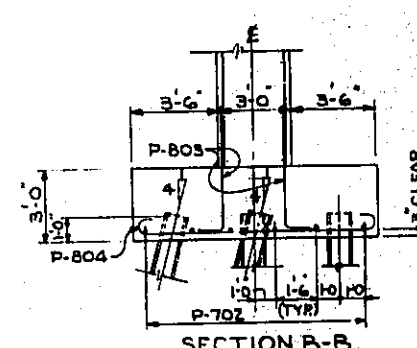
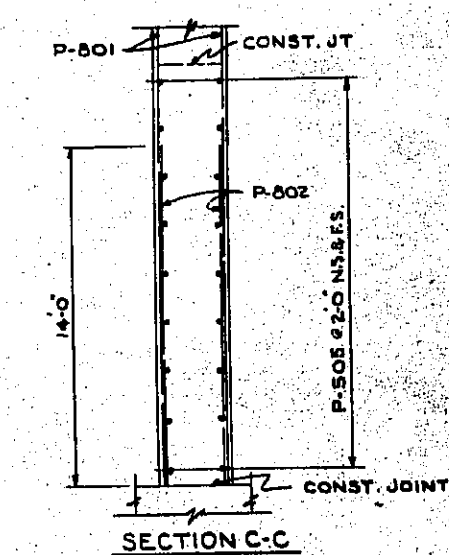
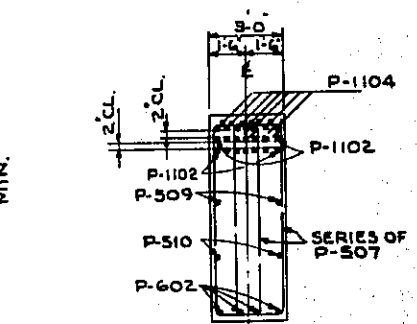
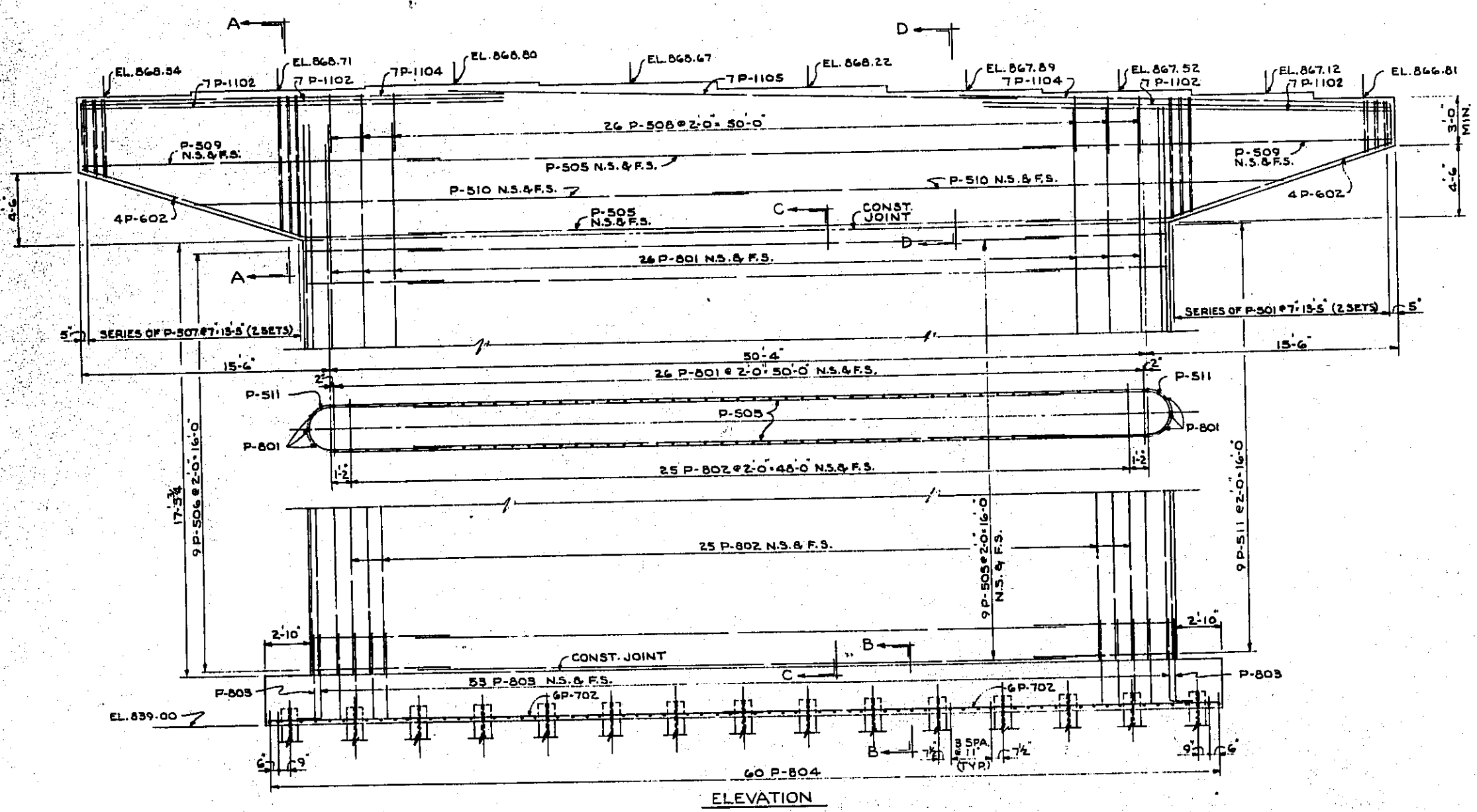
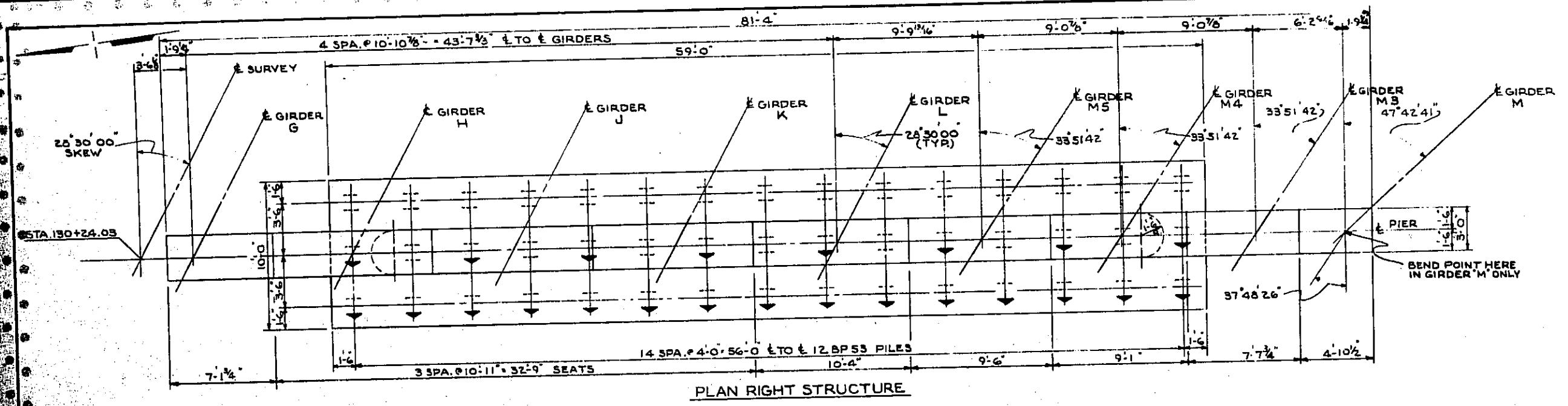


SECTION B-B

PILES TO BE 12 BP53 STEEL 'H' PILES
↑ INDICATES DIRECTION OF 1:4 BATTER.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
BEIWEIDENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER CONSULTING ENGINEERS 4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO					
PIER No 3					
BRIDGE No MAH-422-0354 OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD YOUNGSTOWN MAHONING COUNTY STA. 127+37.47 TO STA. 131+00.59					
DESIGNED WP	DRAWN JLH	TRACED	CHECKED HARR	REVIEWED EDH	DATE 11-16-66

MAH-422-02.30



PILES TO BE 12BPS3 STEEL H PILES
↑ INDICATES DIRECTION OF 1/4 BATTER

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

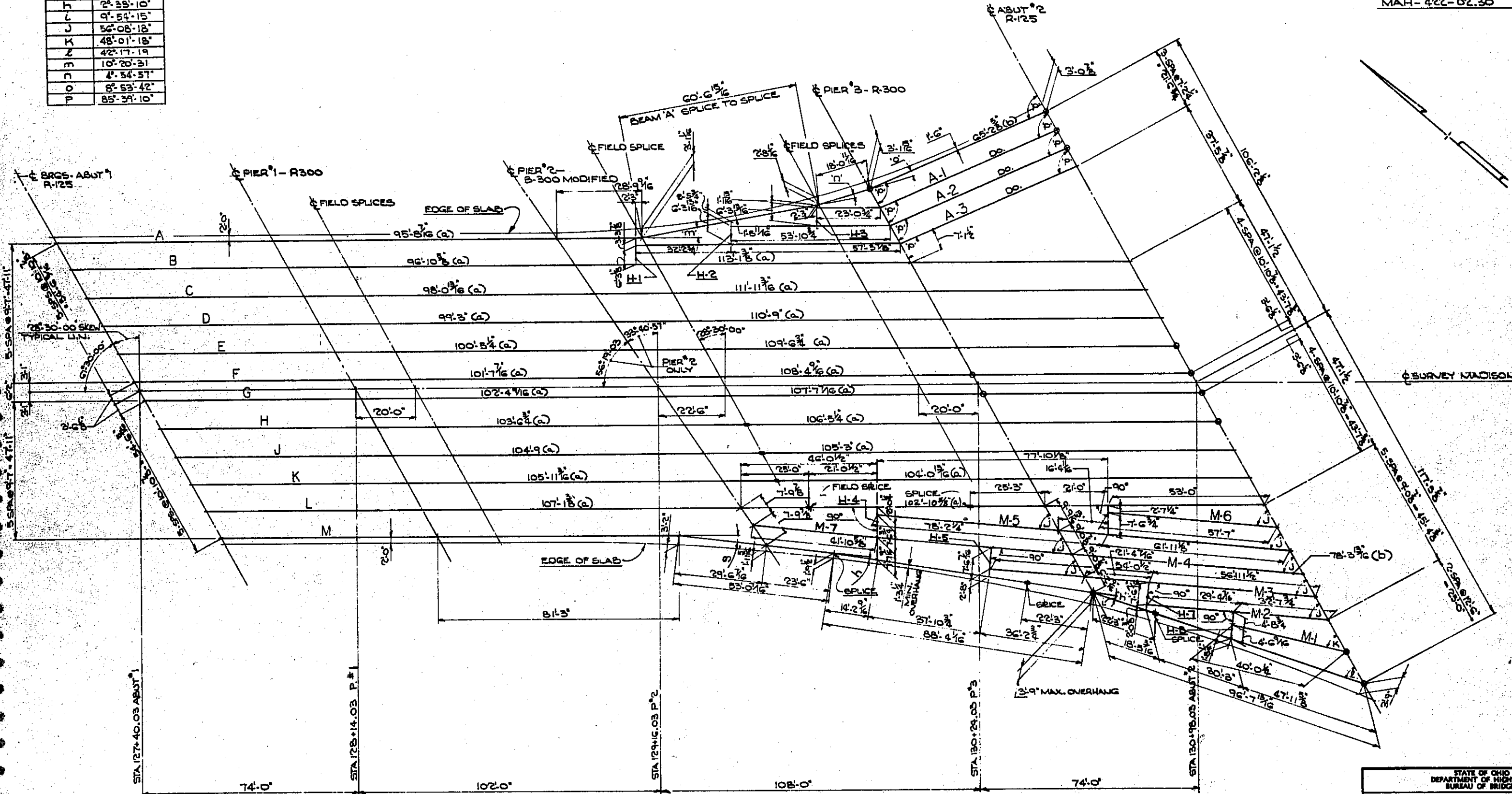
PIER No 3

BRIDGE No MAH-422-0354
OVER NYC AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY

STA 127+37.47 TO STA 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		H.H.G.	R.D.H.	11-14-66	

TABLE OF ANGLES	
MARK	ANGLE
S	6° 40' 16"
T	2° 33' 10"
L	9° 54' 15"
J	56° 08' 18"
K	48° 01' 18"
Z	42° 17' 19"
M	10° 20' 31"
N	4° 54' 57"
O	8° 53' 42"
P	85° 39' 10"



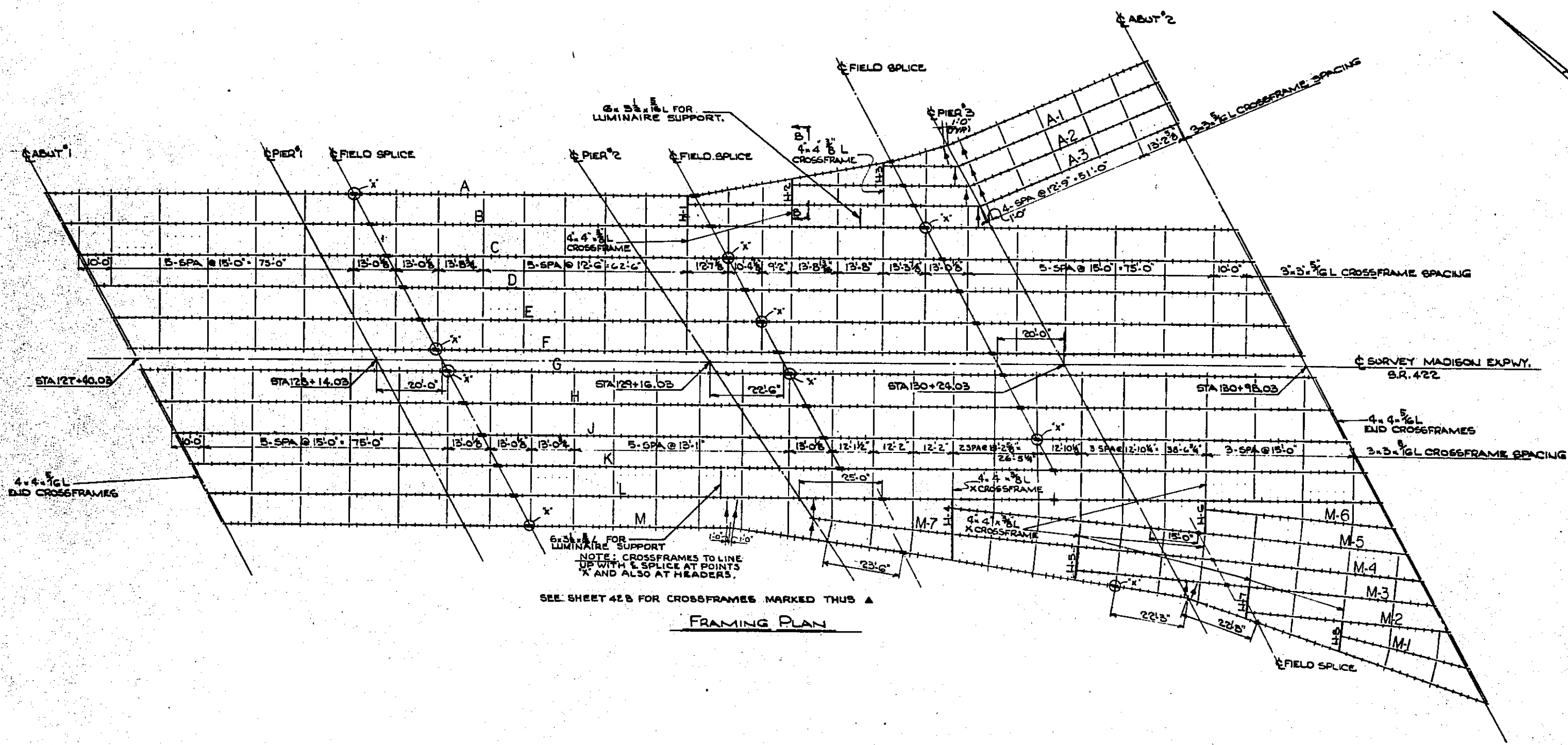
GEOMETRIC LAYOUT

(a) INDICATES LENGTH BETWEEN PIER BRGS.
 (b) INDICATES LENGTH BETWEEN PIER 3 BRGS. & ABUT 2 BRGS.
 THE SIDE PLATES ATTACHED TO THE SOLE PLATES OF ROCKERS AS SHOWN ON STANDARD DWG. RB-1-88 SHALL BE OMITTED ON ROCKERS AT POINTS THAT ARE CIRCLED.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES
 BEISWEHNER, HOCH & ASSOCIATES AND ROBERT A. SCHMIDT
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 4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

GEOMETRICS
 BRIDGE NO MAH-422-0354
 OVER N.Y.C. AND ERIE LACKAWANNA RAILROAD
 YOUNGSTOWN MAHONING COUNTY
 STA 127+37.47 TO STA 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
BML	JWD		Hager	RDH	11-14-66	

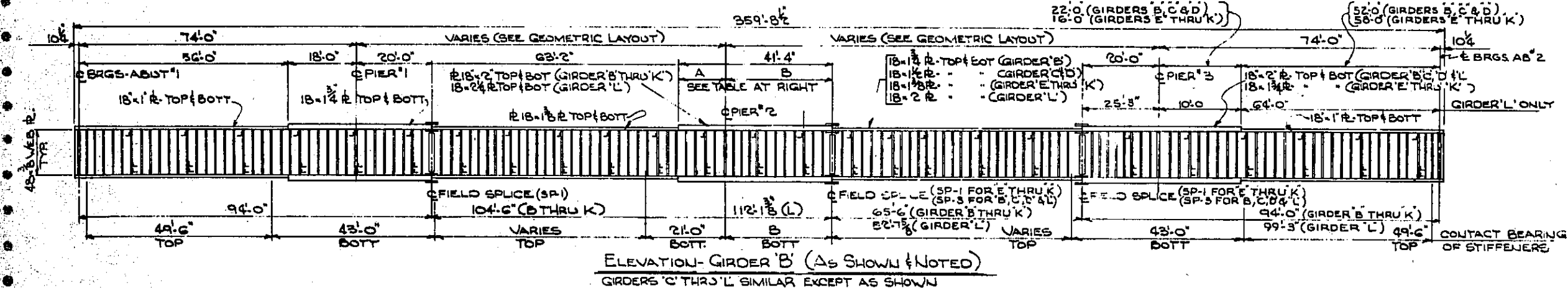
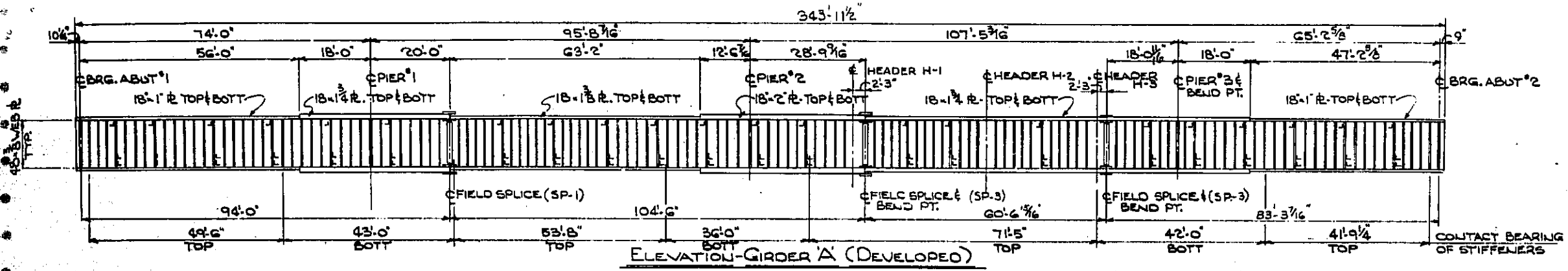


SEE SHEET 42B FOR CROSSFRAMES MARKED THUS ▲

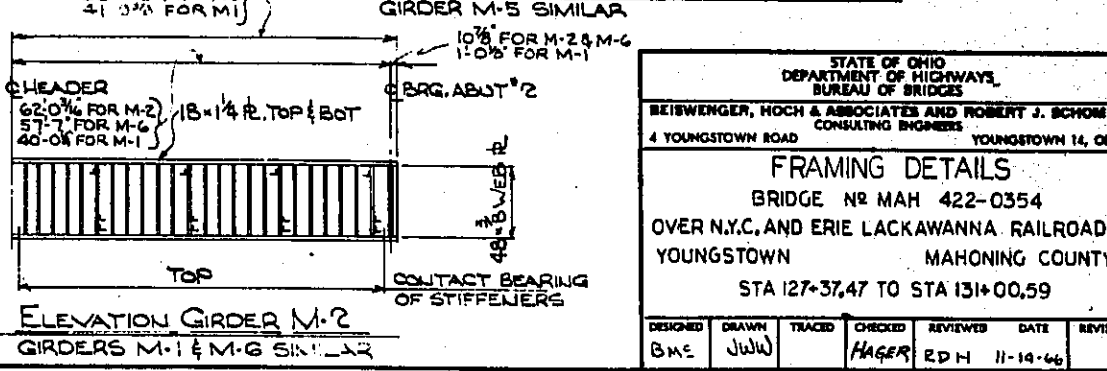
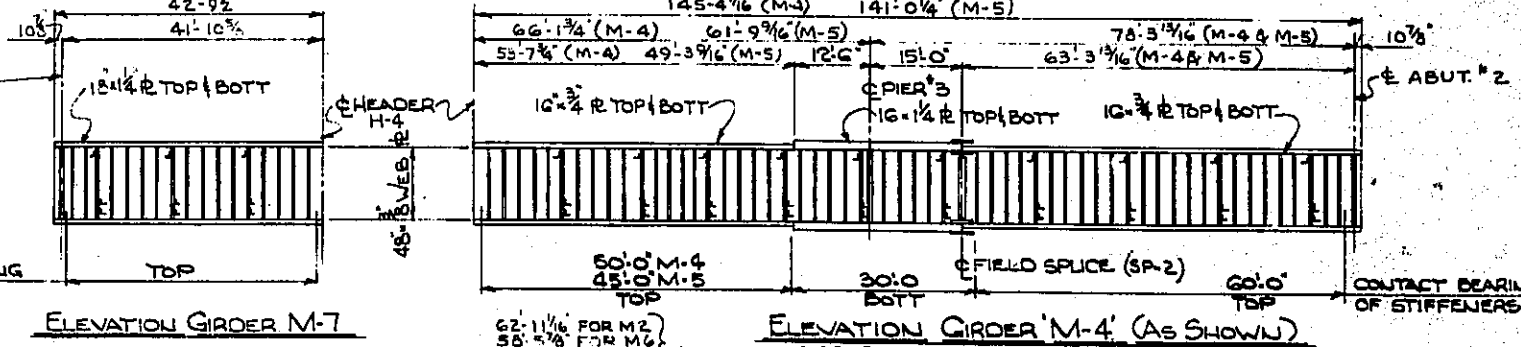
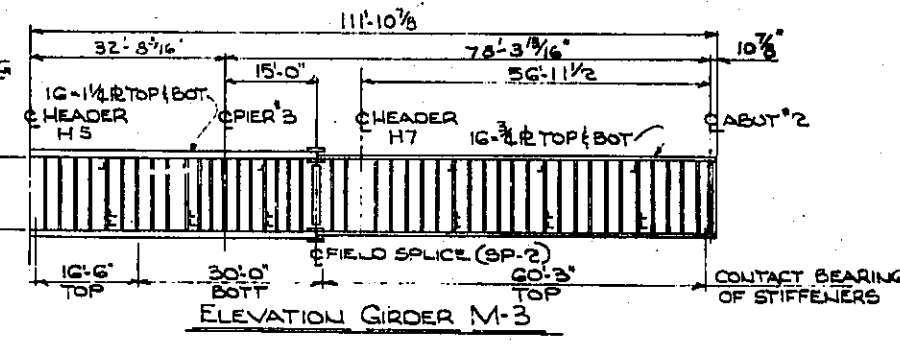
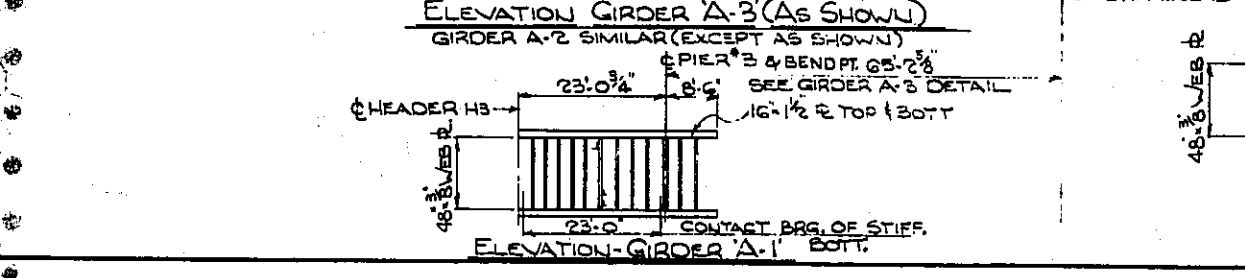
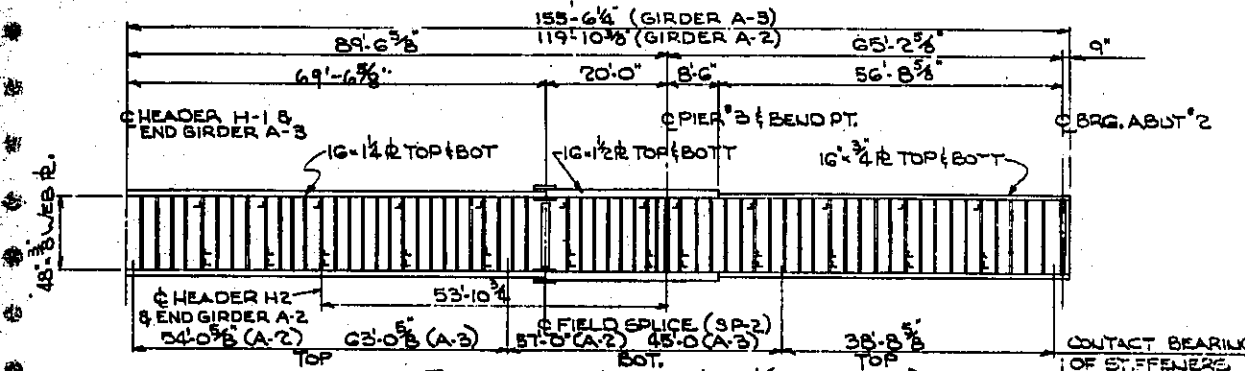
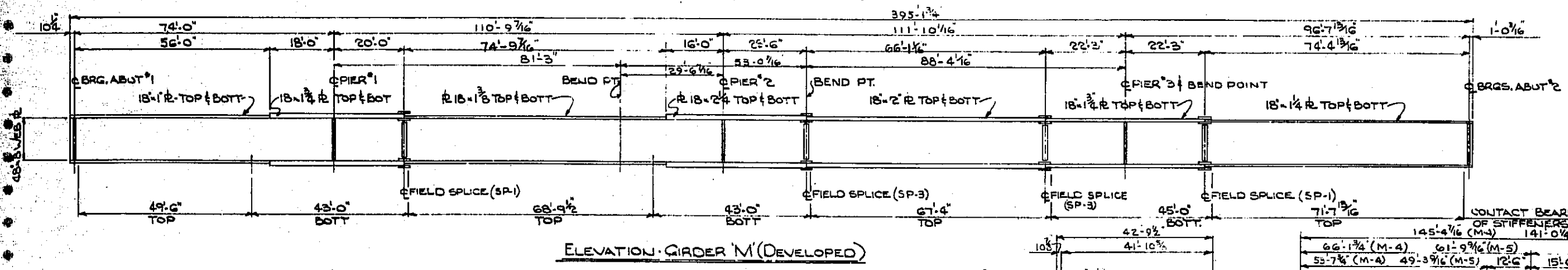
FRAMING PLAN

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
BEIRWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER CONSULTING ENGINEERS 4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO					
FRAMING PLAN					
BRIDGE NO MAH-422-0354 OVER N.Y.C. AND ERIE LACKAWANNA RAILROAD YOUNGSTOWN MAHONING COUNTY STA 127+37.47 TO STA 131+00.59					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
BNS	JWS		Hager	EDH	11-14-66

MAH-422-02.30



GIRDER	B	C	D	E	F	G	H	J	K	L
DIM.										
A	13'-8 3/8"	14'-0 1/2"	16'-1"	17'-3 1/4"	18'-5 1/2"	19'-2 1/4"	20'-4 3/8"	21'-7"	22'-9 1/2"	16'-4"
B	27'-7 1/8"	28'-5"	25'-3"	24'-0 1/2"	22'-10 1/2"	22'-1 1/2"	20'-11 1/8"	19'-9"	18'-6 1/2"	25'-0"



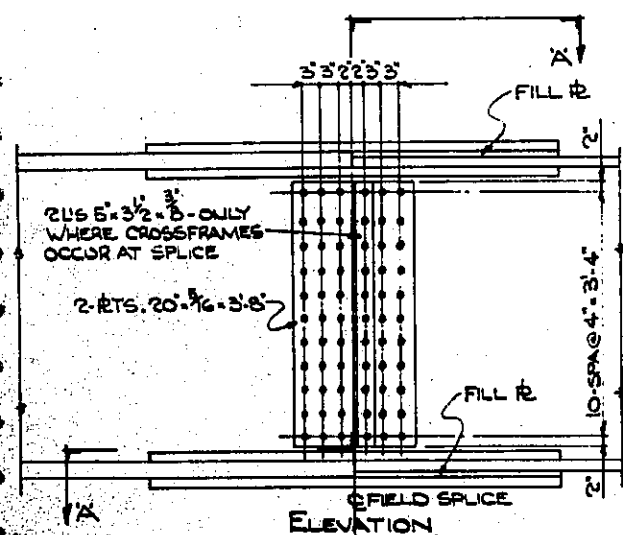
STATE OF OHIO
DEPARTMENT OF HIGHWAYS,
BUREAU OF BRIDGES

REISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

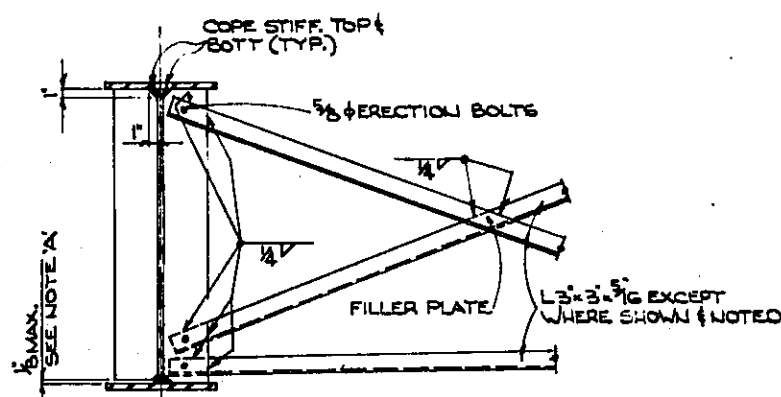
FRAMING DETAILS

BRIDGE NO MAH 422-0354
OVER N.Y.C. AND ERIE LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+37.47 TO STA 131+00.59

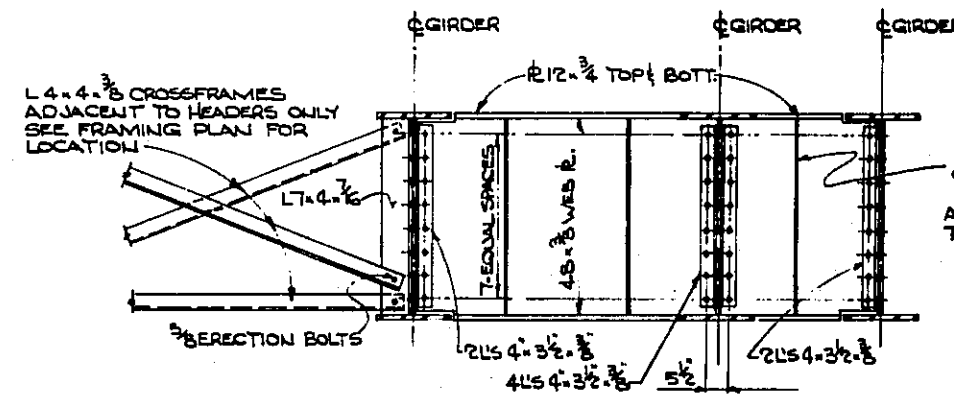
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BME	JULU		HAGER	EDH	11-14-46	



ALL BOLTS SHALL BE 7/8" HIGH STRENGTH STEEL BOLTS

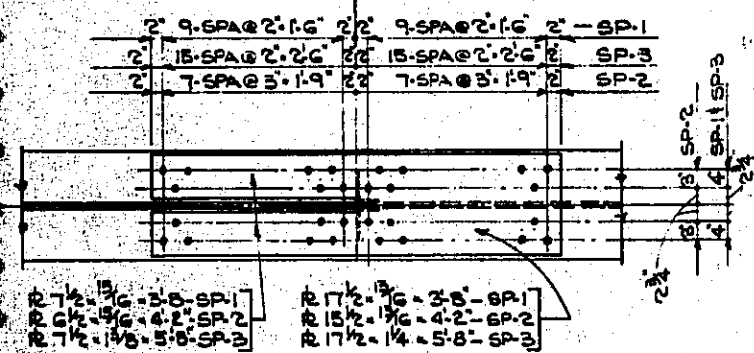


INTERMEDIATE CROSSFRAME & STIFFENER DETAIL

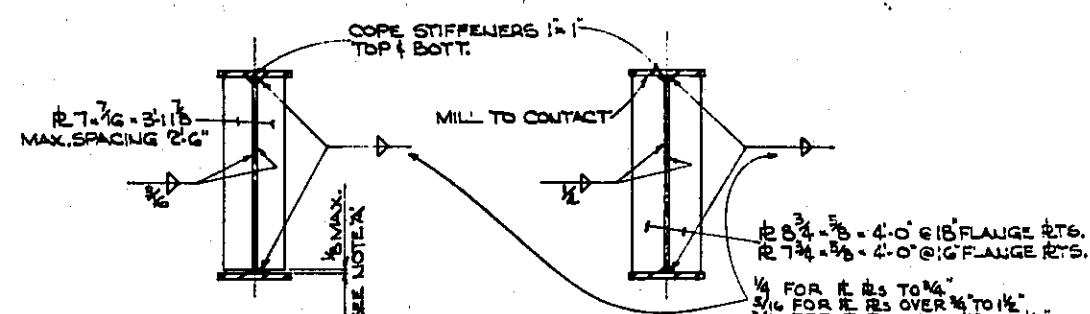


SECTION B-B
TYPICAL HEADER DETAIL

2x5x7/16x5-11 3/8
SEE INTERMEDIATE STIFFENER DETAIL CONTACT TOP FLANGE ONLY.
ALL BOLTS FOR HEADER COLLECTIONS 7/8" HIGH STRENGTH BOLTS

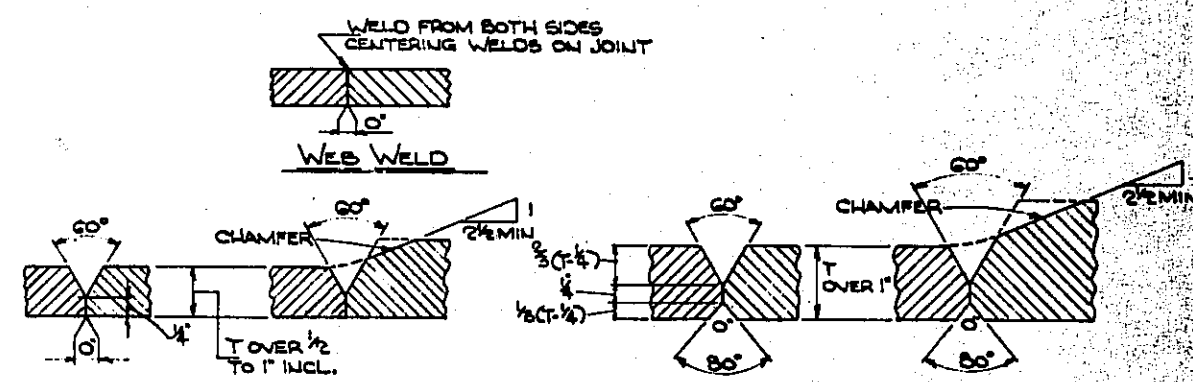


SECTION A-A
FIELD SPLICE DETAIL SP-1, SP-2, SP-3



INTERMEDIATE STIFFENERS BEARING STIFFENERS

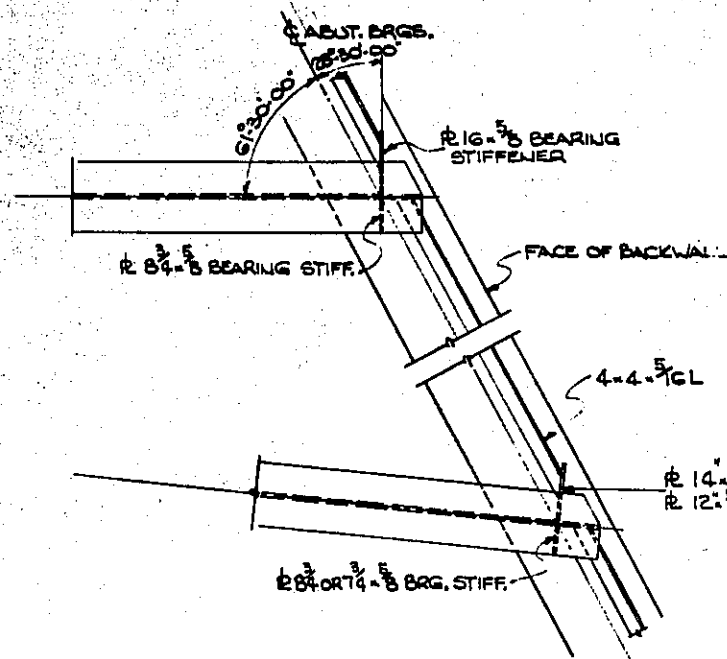
NOTE 'A'
CUT TO BEAR INTERMEDIATE STIFFENERS TO CONTACT TOP OR BOTTOM FLANGE AS SHOWN. MILL BEARING STIFFENERS TO CONTACT TOP FLANGES (SEE DETAILS & SPECIFICATIONS) MAX. STIFFENER SPACING 2'-6"



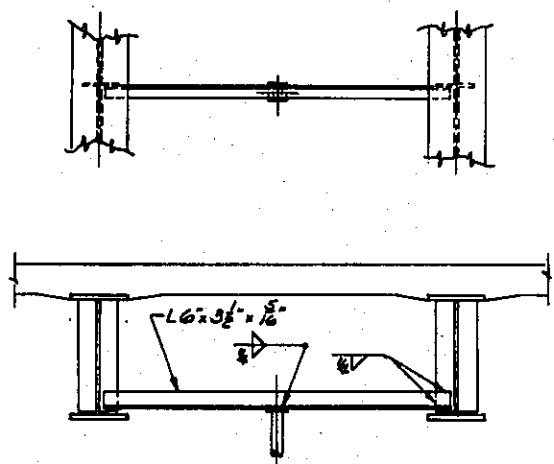
FLANGE WELD

ALL OF THE ABOVE FULL PENETRATION WELDS SHALL BE BACK GOUGED AND WELDED AFTER WELDING FAR SIDE. BUTT WELDS ON GIRDER FLANGE PLATES SHALL BE GROUND FLUSH, THE FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS

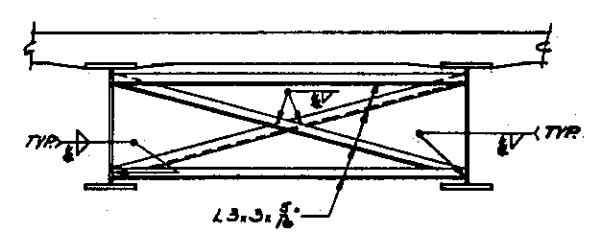
JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS



ABUTMENT BEARING STIFFENER DETAIL

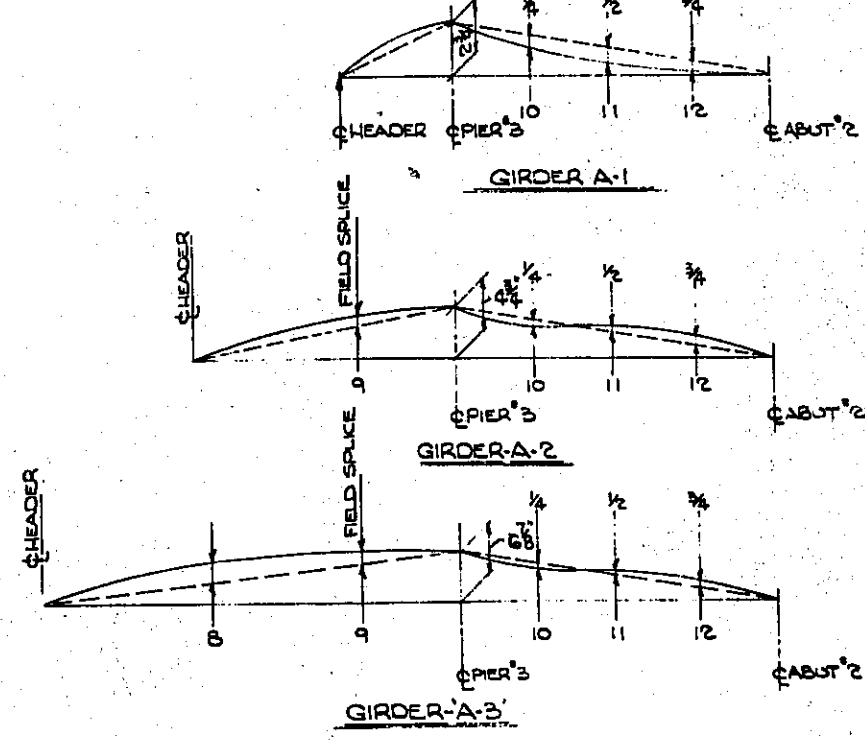
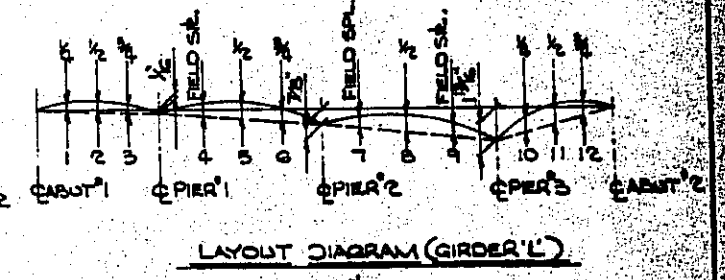
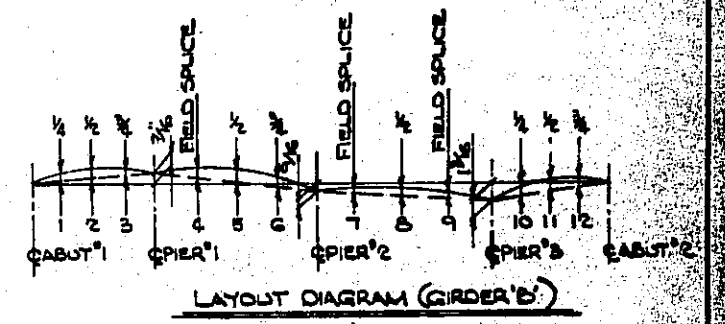
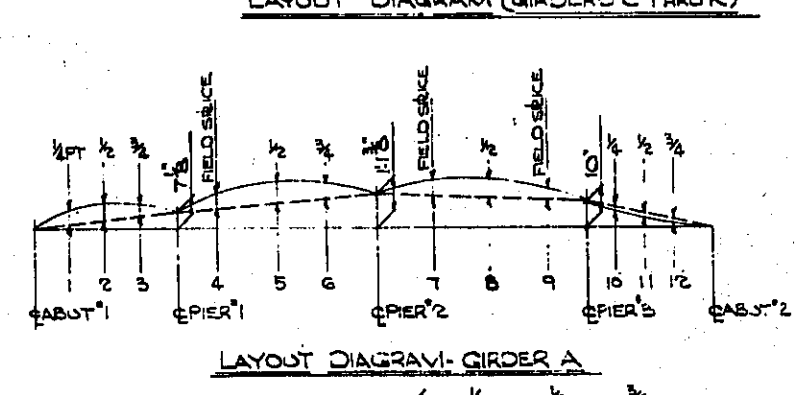
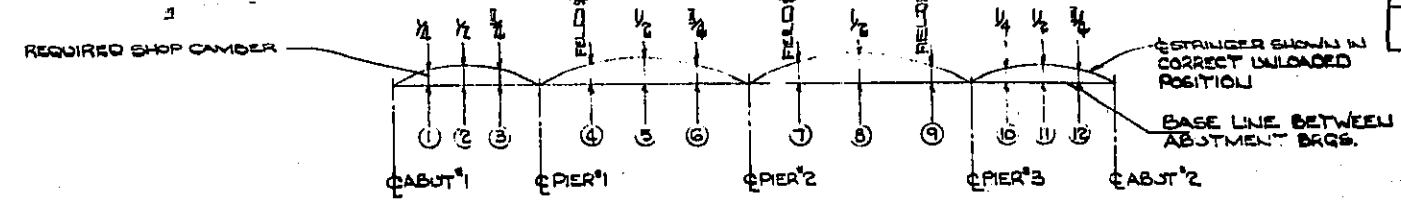


LUMINAIRE SUPPORT DETAIL
SEE LIGHTING DETAILS FOR DETAILS NOT SHOWN



DETAIL CROSSFRAME MARK THUS A

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
BEHNENGER, HOCH & ASSOCIATES AND ROBERT J. SCHORER CONSULTING ENGINEERS					
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO					
FRAMING DETAILS					
BRIDGE NO MAH-422-0354					
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YOUNGSTOWN MAHONING COUNTY					
STA 127+37.47 TO STA 131+00.59					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
BME	JWW		HAGER	EDH	11-14-66

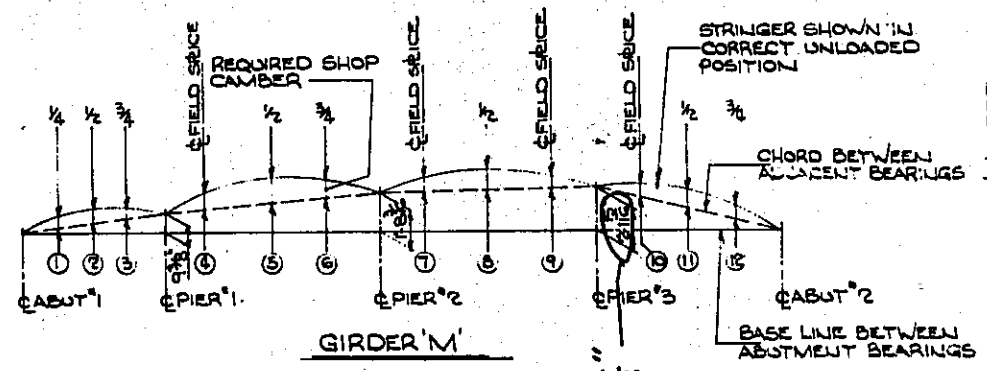


DEFLECTION DUE TO WEIGHT OF STEEL
DEFLECTION DUE TO REMAINING DEAD LOAD
CONVEKITY REQUIRED FOR VERTICAL CURVE
REQUIRED CAMBER

CAMBER & DEFLECTION LOCATION DIAGRAM
SEE ALSO LAYOUT DIAGRAMS

DEFLECTION & CAMBER SCHEDULE

GIRDER	DEFLECTION & CAMBER SCHEDULE												LOCATION	DEFLECTION & CAMBER SCHEDULE											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
M-3	.049	.056	.018	.058	.126	.048	.176	.301	.194	-.043	-.080	-.010	A												
	.310	.385	.185	.018	.150	-.002	.604	.950	.404	-.164	-.103	-.050	B												
	0	0	0	0	0	0	0	0	0	0	0	0	C												
	.359	.414	.205	.136	.216	.042	2.680	4.181	2.198	-.207	-.135	-.040	D												
M-2													A												
													B												
													C												
													D												
M-1													A												
													B												
													C												
													D												
M													A												
													B												
													C												
													D												
M-7													A												
													B												
													C												
													D												



Revised offset dimension girder M 2'-1 15/16" to 4'-9 5/16"

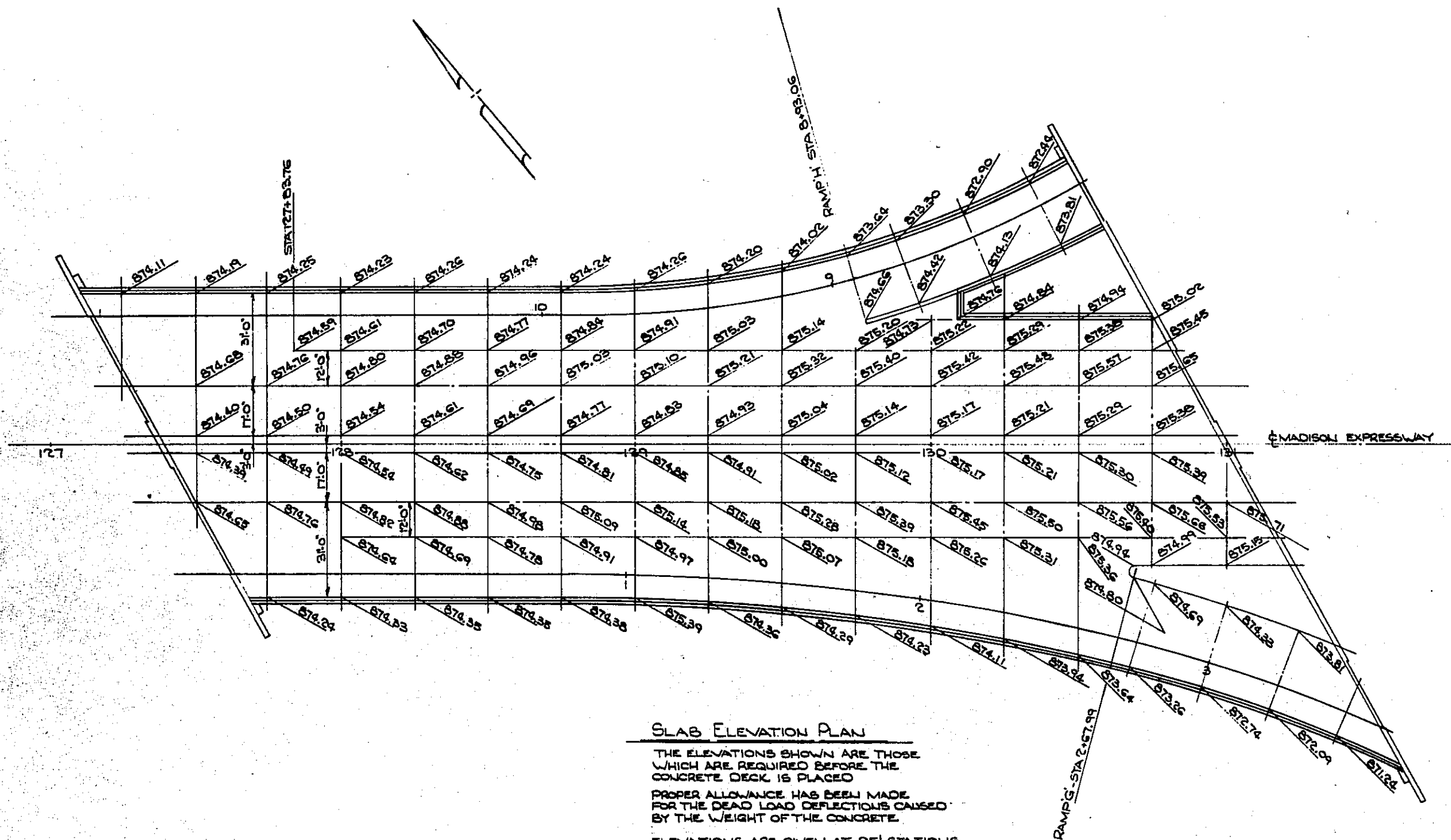
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHWABER
CONSULTING ENGINEERS

4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

DEFLECTION & CAMBER
BRIDGE NO MAH-422-0354
OVER N.Y. & ERIE LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+37.47 TO STA 131+00.59

DESIGNED DRAWN TRACED CHECKED REVISED DATE
BME JWS JH RDM 11-14-66



SLAB ELEVATION PLAN

THE ELEVATIONS SHOWN ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE DECK IS PLACED

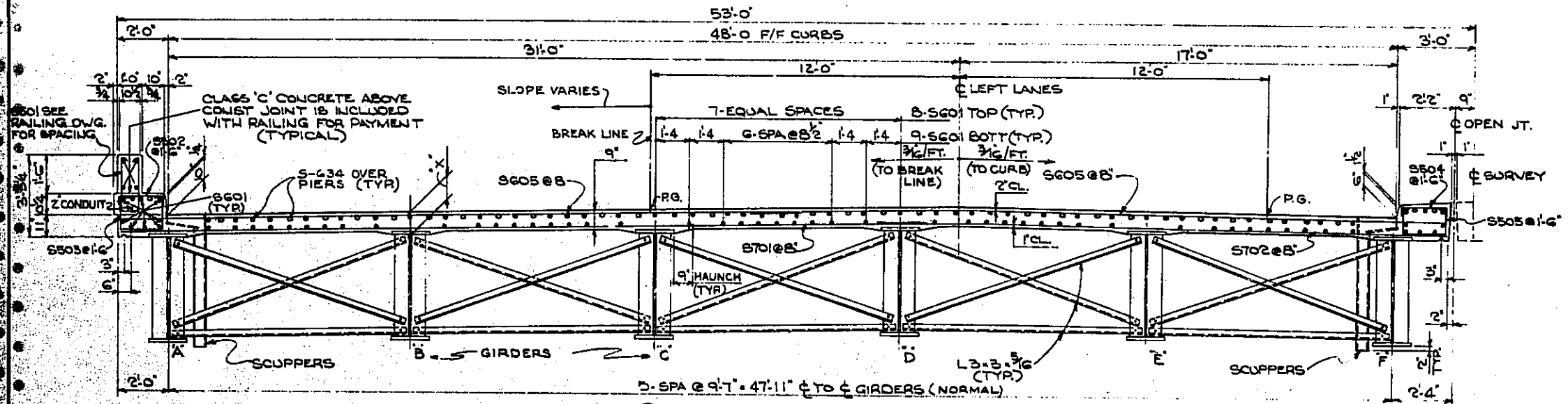
PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE

ELEVATIONS ARE GIVEN AT 25' STATIONS MEASURED ON THE C. OF MADISON EXPRESSWAY OR BASE LINE OF RAMPS 'G' OR 'H'

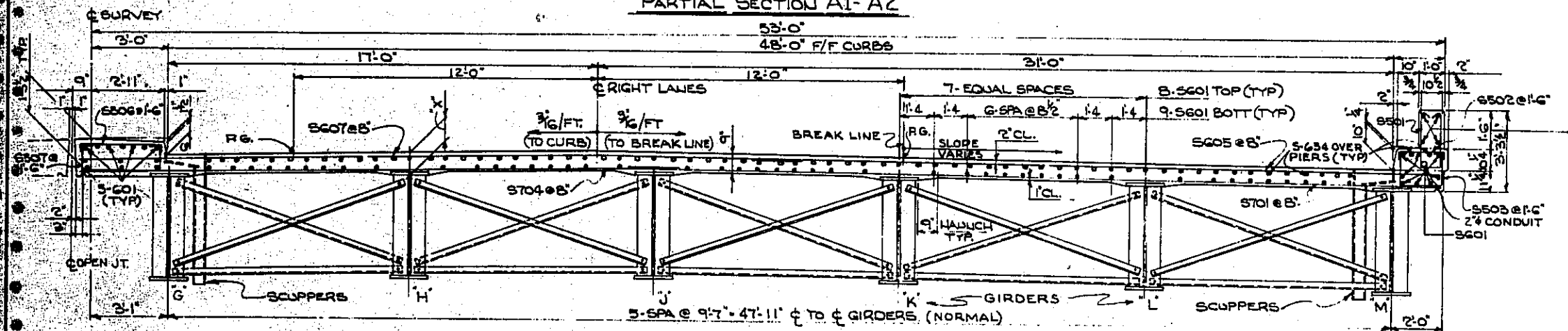
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB ELEVATIONS
BRIDGE #MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+37.47 TO STA 131+00.59

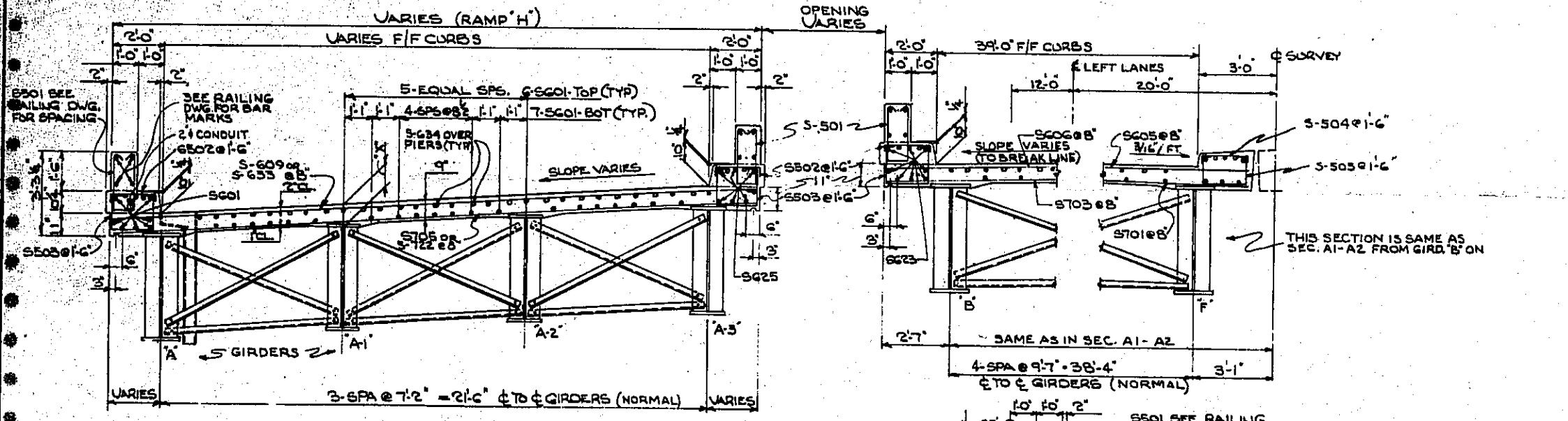
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BMS	JWJ			RDH	11-14-66	



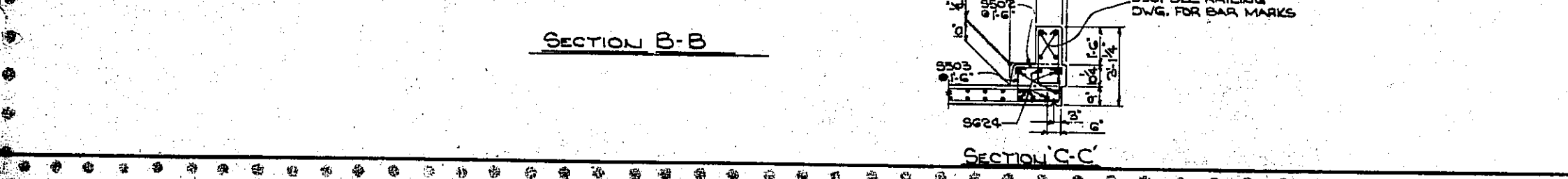
PARTIAL SECTION A1-A2



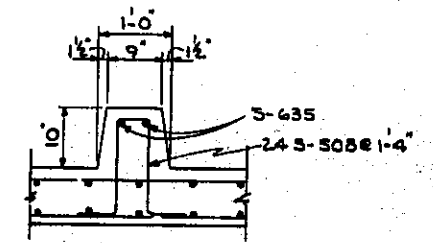
PARTIAL SECTION A2-A3



SECTION B-B



SECTION C-C



SECTION D-D
CURB EXTENSION
AT RAMP 'H'

* - SLAB THICKNESS TO TOP OF WEB PLATES

"K"	GIRDERS
11"	A THRU K
11 1/2"	L & M
10 1/2"	A-1 THRU A-3
10 1/4"	M-1 THRU M-7

SEE RAILING DWG. FOR BAR MARKS

WORK THIS SHEET WITH SHEET NO. 432

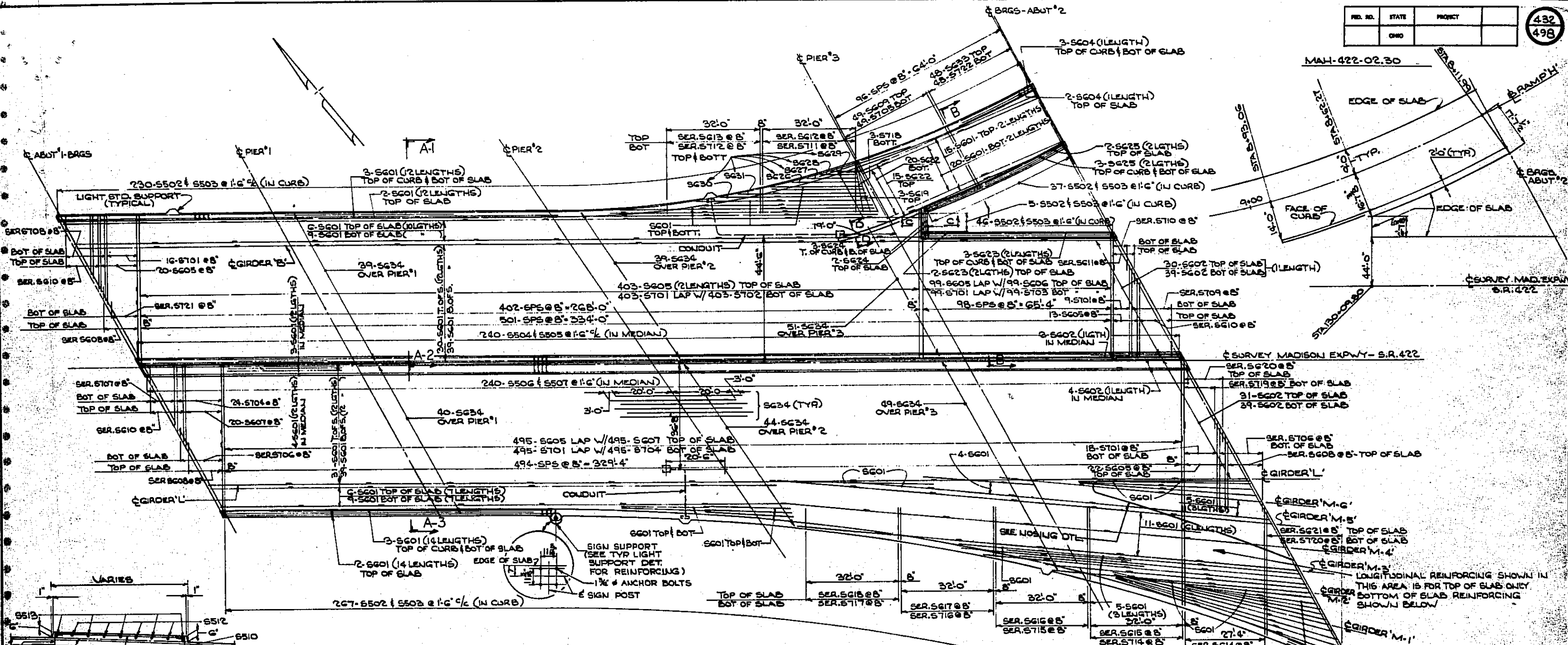
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCER, HOCH & ASSOCIATES AND ROBERT J. SCHORER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB DETAILS
BRIDGE NO MAH-422-0354
OVER N.Y.C. AND ERIF LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+37.47 TO STA 131+00.59

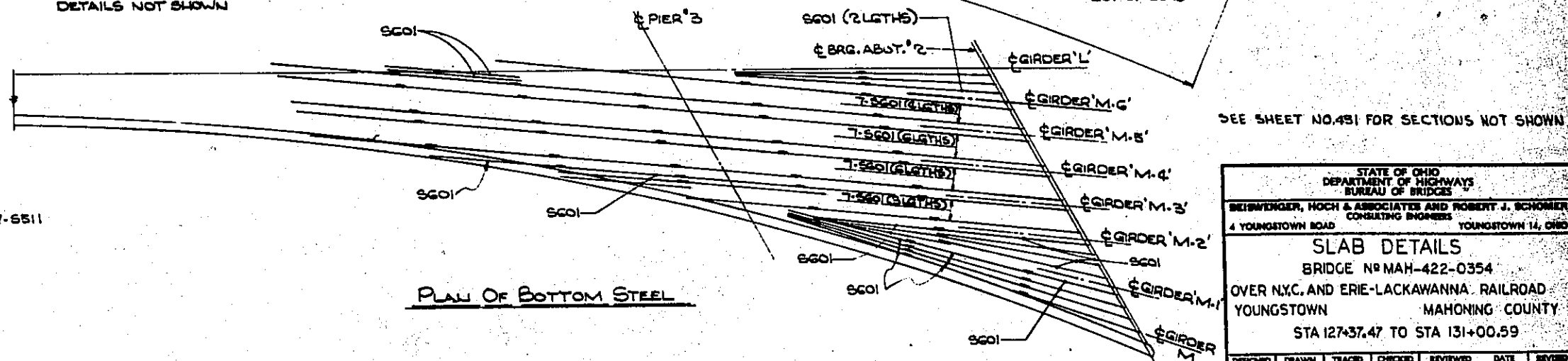
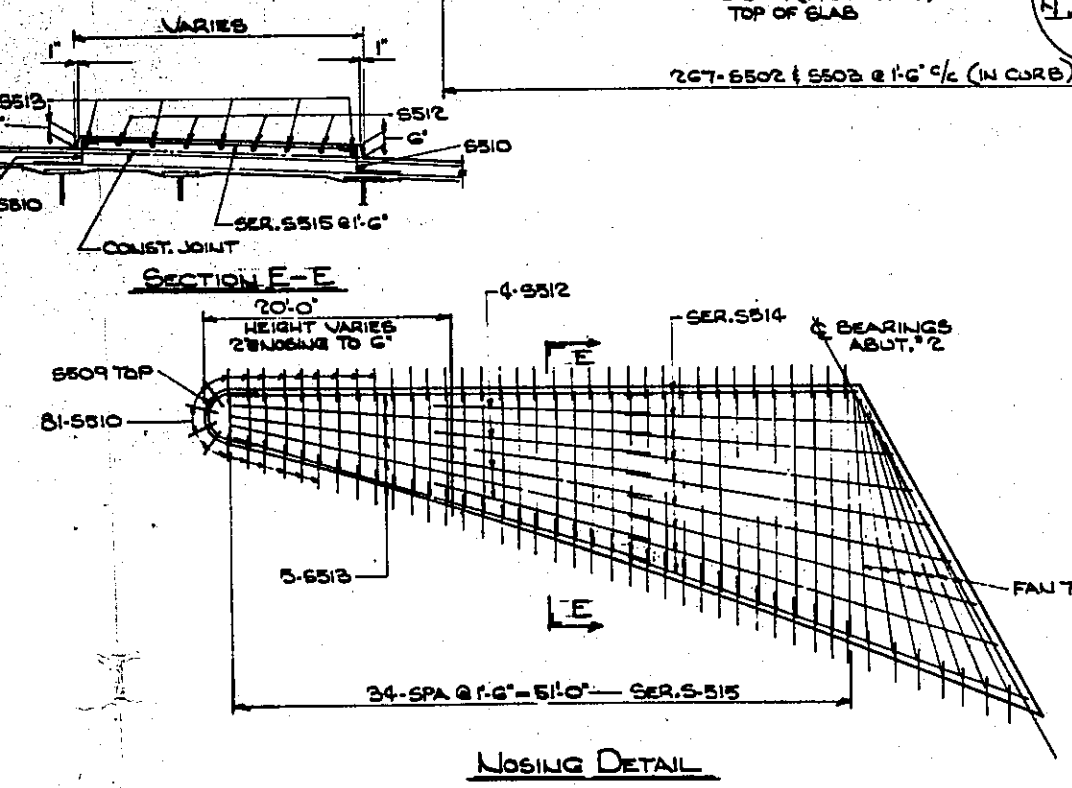
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BMS	JWW		HCC	EDH	11-14-66	

MAH-422-02.30



SLAB REINFORCING PLAN

FOR DETAILS OF CONDUIT BOX AND UNDERSTRUCTURE LIGHTS SEE LIGHTING DRAWINGS FOR DETAILS NOT SHOWN

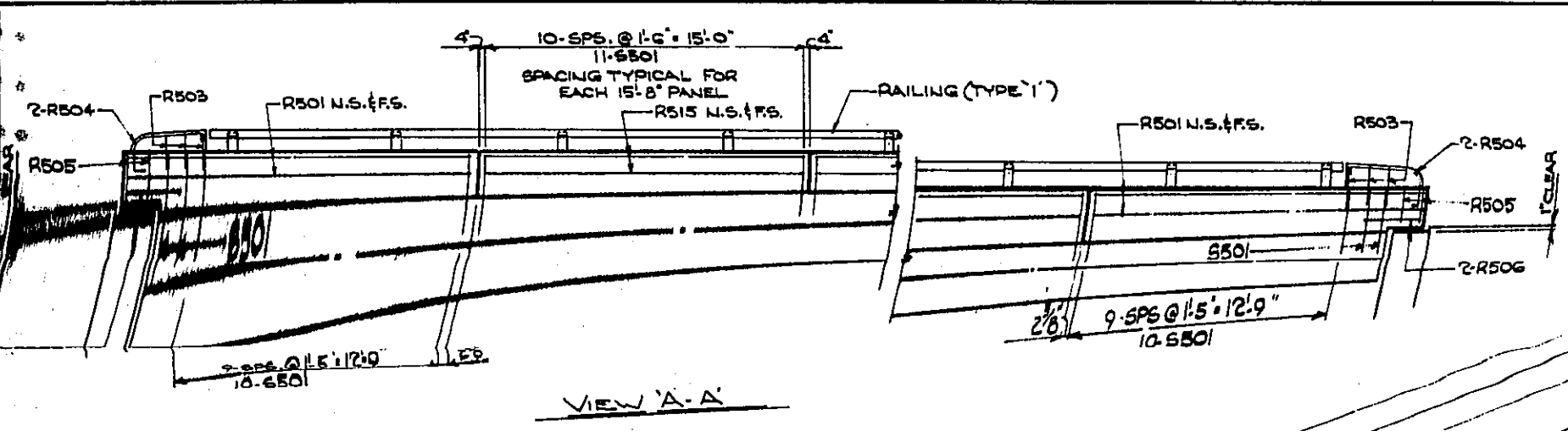


STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

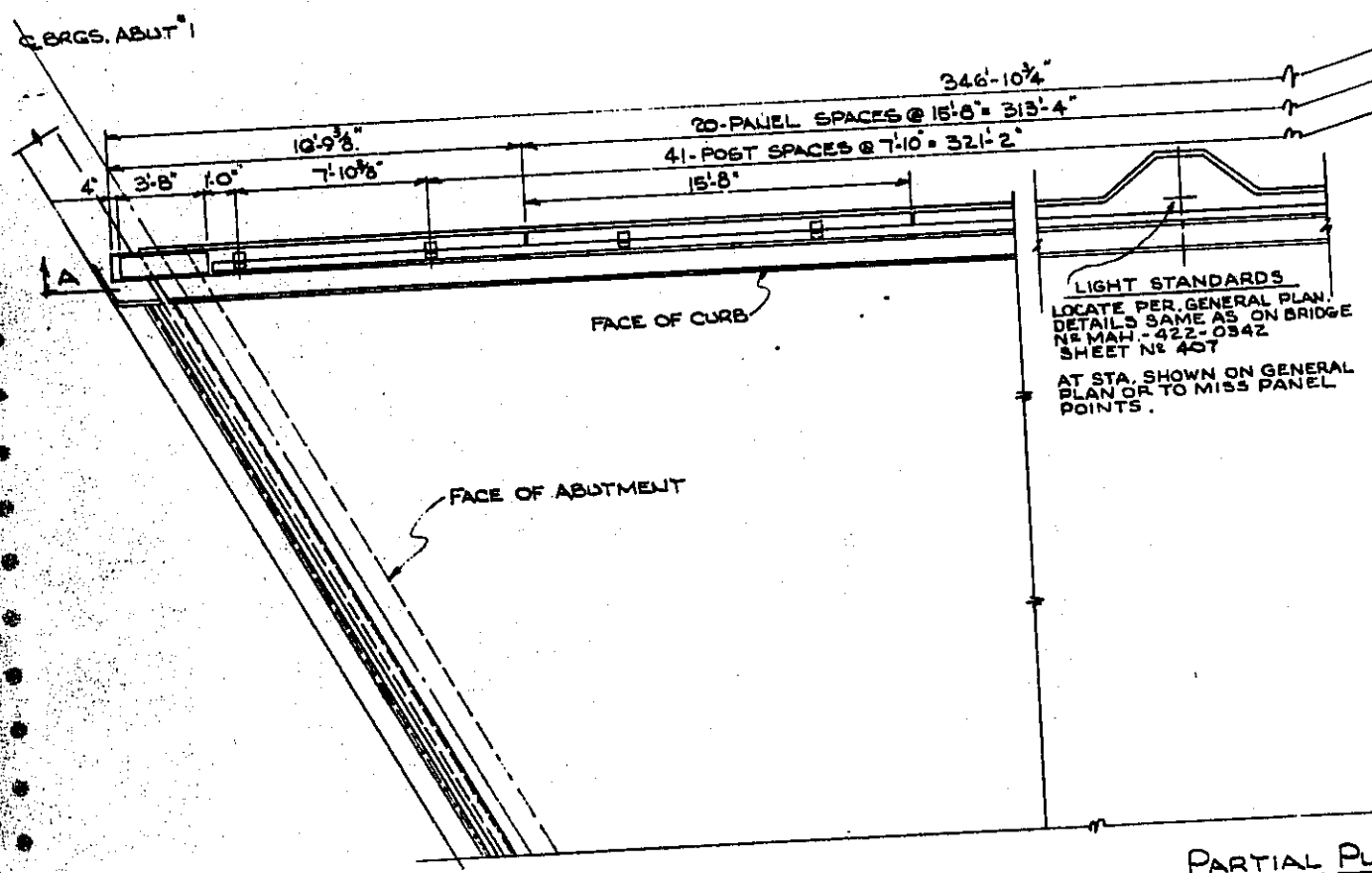
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB DETAILS
BRIDGE NO. MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+37.47 TO STA 131+00.59

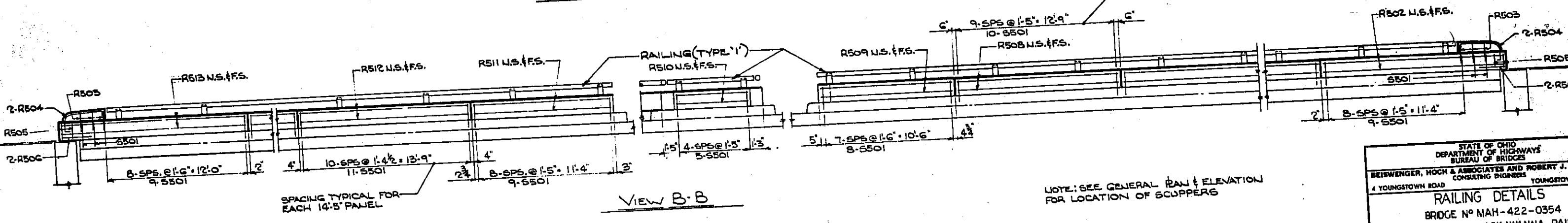
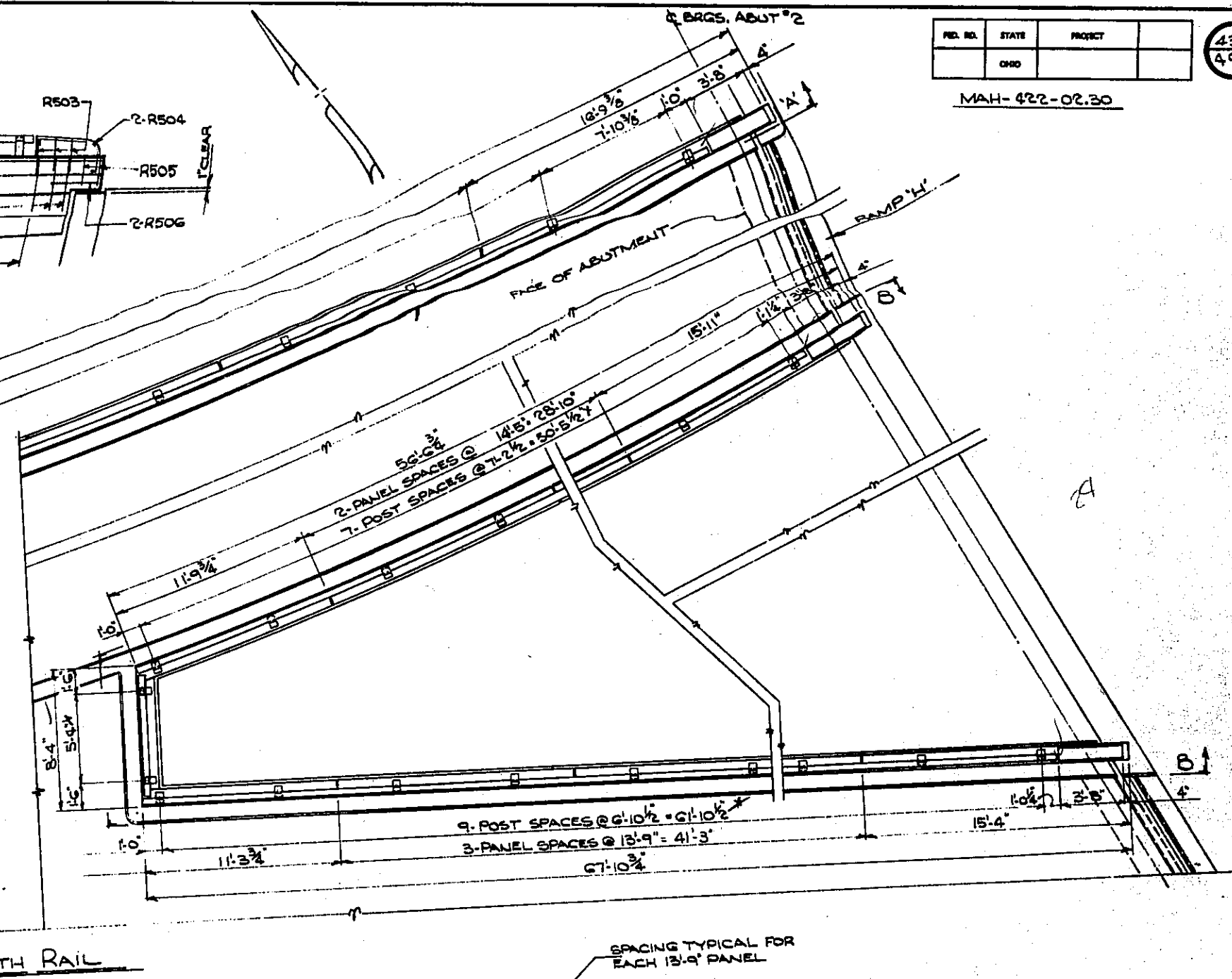
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.M.S.	J.W.J.		HAGER	R.H.	11-18-66	



VIEW 'A-A'



PARTIAL PLAN NORTH RAIL



VIEW B-B

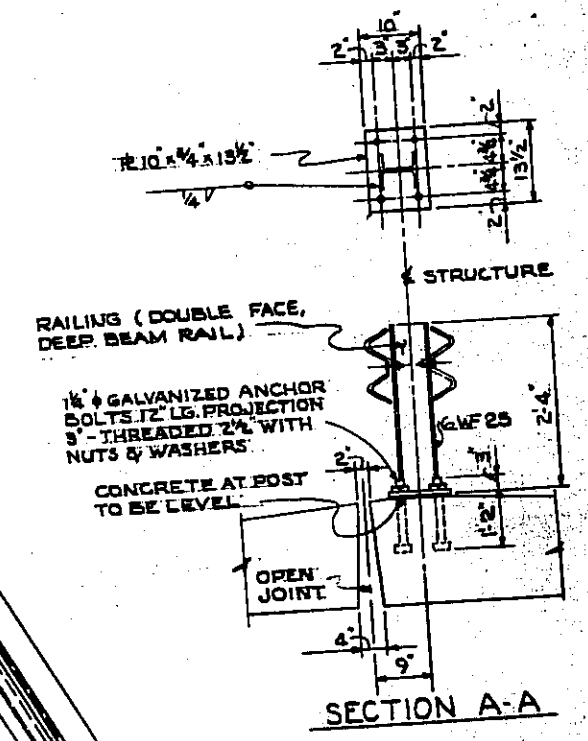
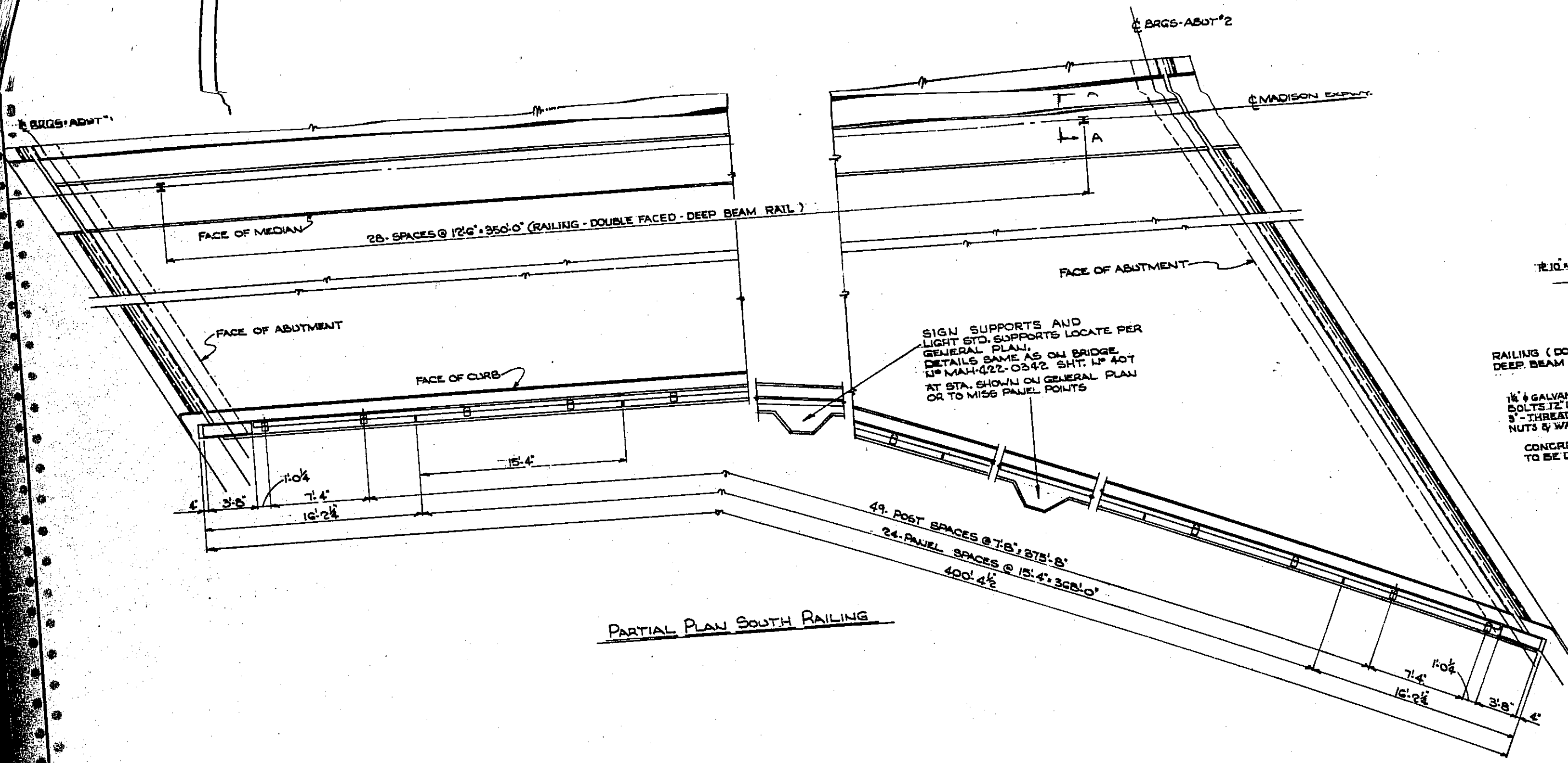
NOTE: SEE GENERAL PLAN & ELEVATION FOR LOCATION OF SCUPPERS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

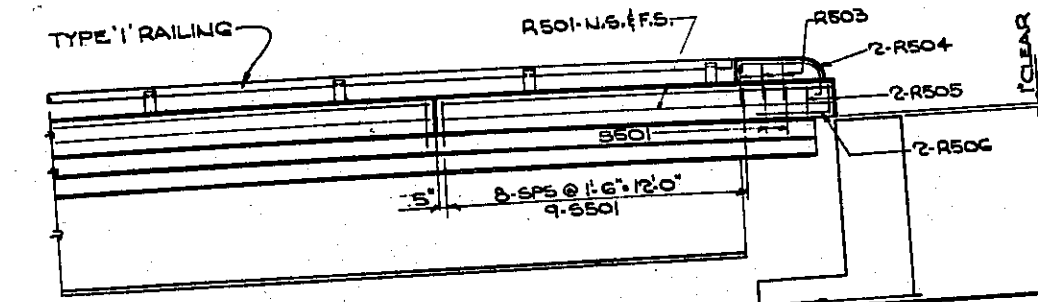
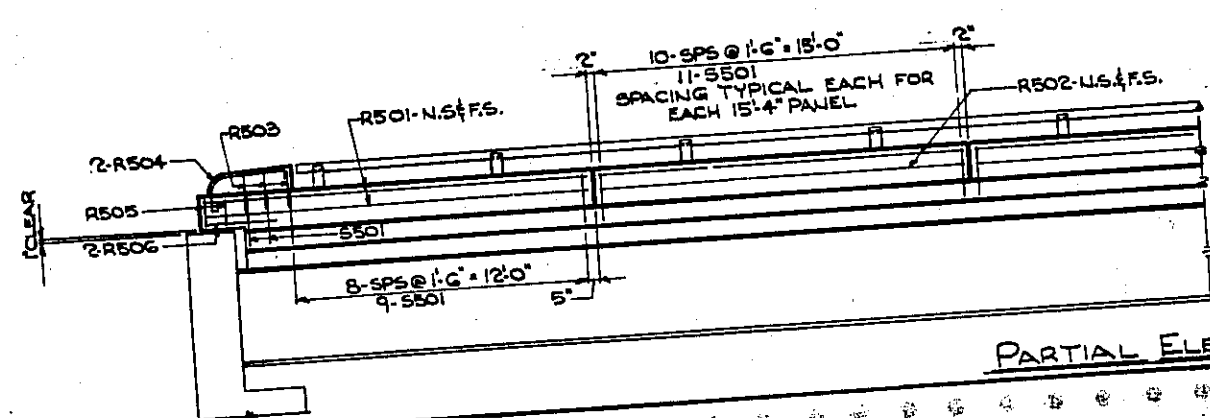
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. MC
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD
YOUNGSTOWN, OHIO

RAILING DETAILS
BRIDGE NO MAH-422-0354
OVER N.Y.C. AND ERIE LACKAWANNA RAILROAD
YOUNGSTOWN, OHIO
MAHONING COUNTY
STA 127+37.47 TO STA 131+00.55

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
BM	JWW		HAGER	RDH	11-14-66



NOTE: SEE GENERAL PLAN & ELEVATION FOR LOCATION OF SCUPPERS



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

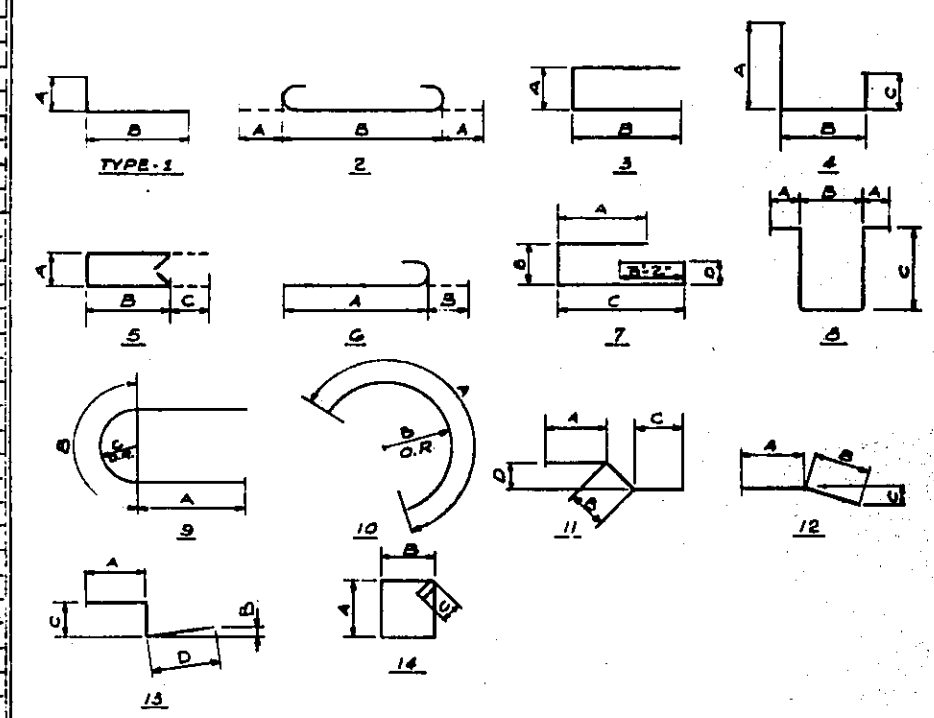
REIBWENGER, HOCH & ASSOCIATES AND ROBERT J. SCH
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN, OHIO

RAILING DETAILS
BRIDGE N° MAH 422-0354
OVER NYC AND ERIE LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127-37.47 TO STA 131-00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
BM	JWW		HAGER	RDH	11-14-66

MAH-422-02.30

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS					WEIGHT LBS.	MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS					WEIGHT LBS.
				A	B	C	D	INCR.						A	B	C	D	INCR.	
ABUTMENTS N ^o 1 & N ^o 2																			
A-501	55	10'-0"	ST														574		
A-502	249	9'-2"	3	5'-5"	2'-0"												2379		
A-503	77	7'-5"	1	1'-0"	6'-6"												597		
A-504	77	7'-2"	3	3'-5"	2'-0"												576		
A-505	22	30'-4"	ST														696		
A-506	2	22'-3"	ST														23		
SERIES OF A-507	2 SETS OF 3 BARS	VARIES FROM 13'-0" TO 5'-0"	ST						2'-0"								94		
A-508	26	14'-0"	ST														360		
A-509	4	2'-10"	ST														12		
A-510	1	3'-3"	ST														4		
A-511	25	10'-5"	ST														278		
A-512	44	29'-10"	ST														1352		
A-513	1	23'-6"	ST														25		
A-514	11	8'-7"	ST														98		
A-515	2	8'-8"	ST														8		
A-516	44	25'-0"	ST														1286		
A-517	13	3'-2"	3	1'-5"	1'-0"												43		
A-518	1	21'-3"	ST														22		
A-519	1	23'-6"	ST														25		
A-520	7	7'-8"	ST														56		
A-521	1	2'-0"	ST														2		
A-522	22	29'-4"	ST														673		
SERIES OF A-523	2 SETS OF 3 BARS	VARIES FROM 16'-0" TO 7'-9"	ST						2'-0"								124		
A-524	10	16'-5"	ST														171		
A-525	104	7'-8"	1	1'-0"	6'-9"												852		
A-526	25	8'-5"	1	1'-0"	7'-6"												202		
A-527	68	7'-8"	3	3'-5"	2'-3"												528		
A-528	52	8'-2"	3	3'-5"	2'-6"												273		
A-529	26	9'-6"	3	3'-5"	3'-3"												262		
A-530	15	32'-10"	ST														514		
A-531	2	15'-0"	ST														31		
A-532	10	5'-8"	ST														59		
A-533	2	17'-6"	ST														37		
A-534	2	9'-6"	ST														20		
A-535	2	25'-2"	ST														53		
A-536	3	20'-10"	ST														65		
A-537	1	20'-8"	ST														22		
A-538	2	19'-10"	ST														41		
A-539	20	24'-11"	ST														520		
SERIES OF A-540	2 SETS OF 3 BARS	VARIES FROM 23'-6" TO 18'-0"	ST						2'-7 1/2"								211		
A-541	5	12'-9"	ST														40		
A-542	12	27'-8"	ST														344		
A-543	1	4'-11"	ST														5		
A-544	10	6'-10"	ST														71		
A-545	15	30'-6"	ST														477		
A-546	8	19'-5"	ST														162		
A-547	2	26'-9"	ST														56		
A-548	8	11'-7"	ST														56		
SERIES OF A-549	2 SETS OF 3 BARS	VARIES FROM 15'-7" TO 8'-7"	ST						1'-9"								126		
A-550	2	4'-0"	ST														8		
A-551	10	16'-0"	ST														167		
A-552	15	13'-10"	ST														216		
A-553	11	32'-0"	ST														367		
A-554	5	23'-2"	ST														72		
A-555	7	13'-2"	ST														96		
A-556	11	31'-6"	ST														361		
A-557	20	6'-5"	1	1'-0"	5'-6"												134		
A-558	1	22'-10"	ST														24		
A-559	6	18'-5"	ST														115		
TOTAL ABUTMENTS N ^o 1 & N ^o 2 = 40,418																			
TOTAL THIS SHEET = 40,418 LBS																			



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

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

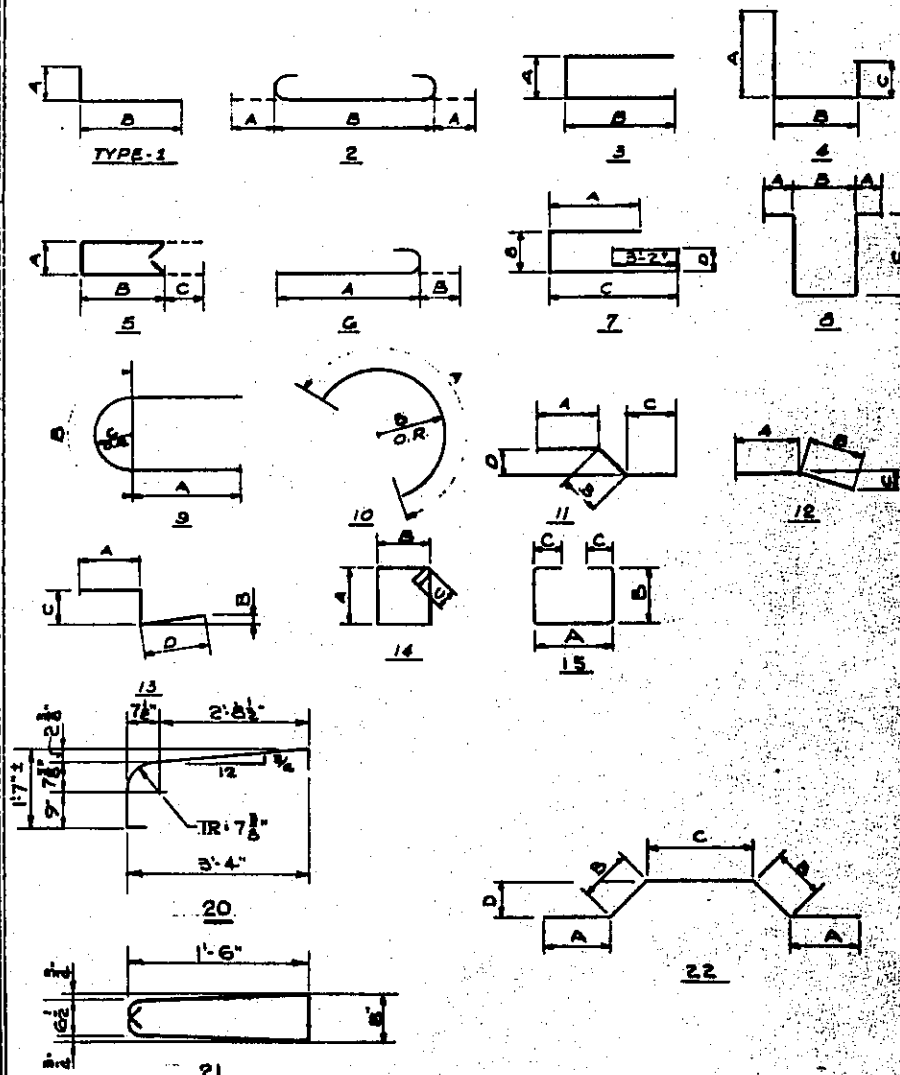
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN, OHIO

REINFORCING SCHEDULE
BRIDGE N^o MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA. 12+37.47 TO STA. 13+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	J.L.H.		HAGER	ROH	11-14-66	

MAH-422-02.30

SLAB										SLAB (CONT.)									
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				WEIGHT	MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				WEIGHT		
				A	B	C	D	LBS.					A	B	C	D	LBS.		
S-501	626	5-7'	S	6'	2-2'	5'		5645	S-701	1040	31-10'	ST					67,670		
S-502	588	2-8'	S	1-6'	6'			1372	S-702	403	22-4'	ST					16,397		
S-503	885	4-8'	S	1-6'	1-4'	6'		2847	S-703	99	13-6'	ST					2,752		
S-504	240	2-5'	S	1-8'	6'			608	S-704	519	23-10'	ST					25,283		
S-505	240	4-2'	S	1-8'	1-0'	6'		1043	S-705	49	25-3'	ST					2,529		
S-506	240	5-11'	S	3-2'	6'			980	S-706	23 SETS	VARIABLES	ST					1,638		
S-507	240	5-8'	S	3-2'	1-0'	6'		1418	S-707	1 SET	VARIABLES	ST					366		
S-508	24	3-6'	S	6'	6'	1-3'		88	S-708	1 SET	VARIABLES	ST					764		
S-509	1	7-6'	S	1-7'	4-4'	1-9'		8	S-709	1 SET	VARIABLES	ST					824		
S-510	81	2-11'	S	2-0'		6'		199	S-710	1 SET	VARIABLES	ST					136		
S-511	7	20-6'	ST					150	S-711	1 SET	VARIABLES	ST					1,415		
S-512	4	18-0'	ST					188	S-712	1 SET	VARIABLES	ST					676		
S-513	5	36-0'	ST					253	S-713	1 SET	VARIABLES	ST					3,477		
S-514	1 SET	VARIABLES	ST					420	S-714	1 SET	VARIABLES	ST					3,080		
S-515	1 SET	VARIABLES	ST					118,012	S-715	1 SET	VARIABLES	ST					2,208		
S-516	1 SET	VARIABLES	ST					3,117	S-716	1 SET	VARIABLES	ST					2,003		
S-517	2619	30-0'	ST					84	S-717	1 SET	VARIABLES	ST					977		
S-518	146	23-4'	ST					109	S-718	1 SET	VARIABLES	ST					117		
S-519	8	7-0'	ST					59,006	S-719	1 SET	VARIABLES	ST					463		
S-520	8	9-0'	ST					2,677	S-720	1 SET	VARIABLES	ST					2,039		
S-521	1436	27-0'	ST					23,042	S-721	1 SET	VARIABLES	ST					401		
S-522	99	18-0'	ST					1,291	S-722	48	25-9'	ST					2,526		
S-523	515	28-6'	ST					1,858											
S-524	49	25-8'	ST					1,200											
S-525	3 SETS	VARIABLES	ST					190											
S-526	3 SETS	VARIABLES	ST					1,040											
S-527	1 SET	VARIABLES	ST					497											
S-528	1 SET	VARIABLES	ST					2,553											
S-529	1 SET	VARIABLES	ST					2,263											
S-530	1 SET	VARIABLES	ST					1,619											
S-531	1 SET	VARIABLES	ST					1104											
S-532	1 SET	VARIABLES	ST					718											
S-533	3	19-0'	ST					84											
S-534	1 SET	VARIABLES	ST					498											
S-535	1 SET	VARIABLES	ST					1,498											
S-536	35	17-0'	ST	10-0'	7-0'	2-11'		894											
S-537	16	35-0'	ST					841											
S-538	8	9-8'	ST					116											
S-539	16	20-10'	ST					693											
S-540	2	24-0'	ST					72											
S-541	2	18-0'	ST					54											
S-542	2	14-0'	ST					42											
S-543	2	8-0'	ST					24											
S-544	2	21-0'	ST					63											
S-545	2	14-0'	ST					42											
S-546	9	25-0'	ST					356											
S-547	48	25-9'	ST					1852											
S-548	262	43-0'	ST					16,922											
S-549	2	32-6'	ST					98											
TOTAL SLAB = 399,509																			
LIGHT STANDARD REINFORCEMENT STEEL																			
S-551	10	10-6'	22	2-0'	2-8'	1-5'	1-11 1/2'	110											
S-552	60	6-0'	ST					507											
S-553	20	8-7'	14	2-4'	1-9'	4'		243											
TOTAL THIS SHEET = 399,509 LBS																			



BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE 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

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

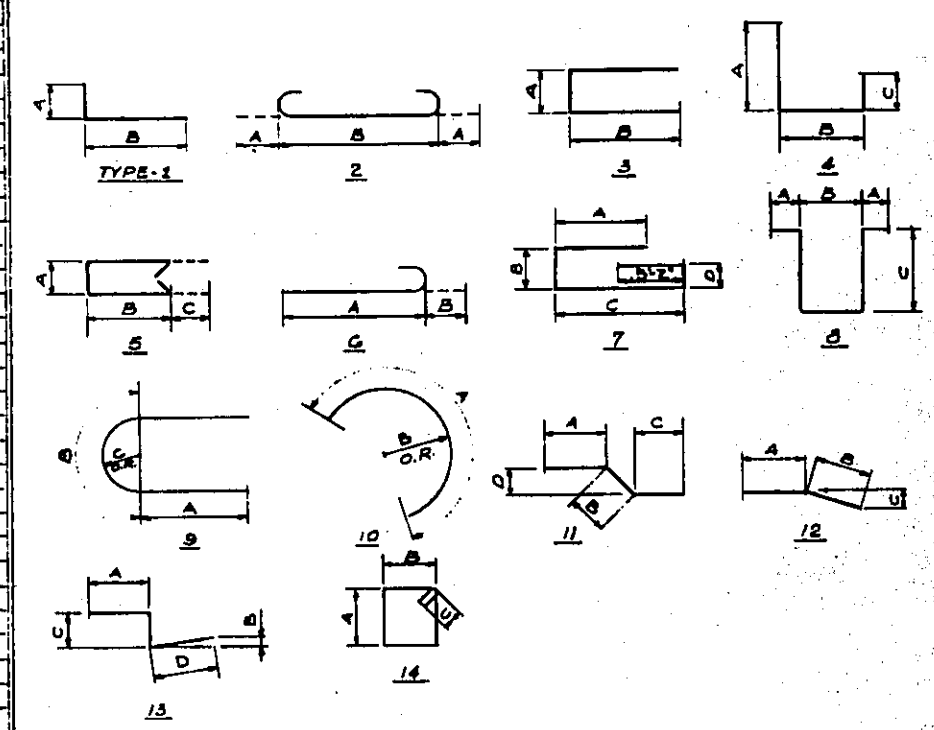
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 15 OHIO

REINFORCING SCHEDULE
BRIDGE NO MAH-422-0334
OVER N.Y.C AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY
STA 127+57.47 TO STA 131+00.69

DESIGNED BY S.M.S. DRAWN BY J.L.H. CHECKED BY HAGER. REVIEWED BY RDH. DATE 11-16-66

MAH-422-0230

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				WEIGHT LBS.	MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS				WEIGHT LBS.
				A	B	C	D						A	B	C	D	
PIER NO. 1								PIER NO. 2 (CONT.)									
SERIES OF P-501	6 SETS OF 24 BARS	VARIES 17'-11" TO 9'-7"	14	VARIES 7'-0" TO 2'-10"	1'-10"	4"	4 1/2"	2754	P-1105	16	9'-0"	ST	1	1'-0"	8'-3"	768	
P-502	28	7'-5"	3	2'-6"	2'-6"			217	P-1106	16	29'-0"	ST				2465	
P-503	8	29'-8"	ST					248	P-1107	16	8'-6"	1	1'-0"	7'-9"	728		
P-504	8	23'-4"	ST					195									
P-505	46	26'-8"	ST					1279									
P-506	42	8'-11"	9	2'-6"	3'-11 1/8"	1'-3"		391									
								SPIRALS 4678*									
								TOTAL PIER NO. 2 = 26,032*									
PIER NO. 3								PIER NO. 4									
SERIES OF P-601	4 SETS OF 24 BARS	VARIES 17'-11" TO 9'-7"	14	VARIES 7'-0" TO 2'-10"	1'-10"	4"	4 1/2"	1377	SERIES OF P-701	4 SETS OF 24 BARS	VARIES 17'-11" TO 9'-7"	14	VARIES 7'-0" TO 2'-10"	1'-10"	4"	5"	1711
P-602	23	8'-5"	3	2'-8"	3'-0"			161	P-702	23	8'-5"	3	2'-8"	3'-0"			143
P-603	4	38'-7"	ST					142	P-703	4	34'-0"	ST					143
P-604	4	34'-0"	ST					1752	P-704	42	40'-0"	ST					249
P-605	42	40'-0"	ST					249	P-705	18	12'-11"	9	4'-6"	3'-11 1/8"	1'-3"		255
P-606	18	12'-11"	9	4'-6"	3'-11 1/8"	1'-3"		255	SERIES OF P-801	4 SETS OF 24 BARS	VARIES 17'-11" TO 9'-7"	14	VARIES 7'-0" TO 2'-10"	1'-10"	4"	5"	1711
P-607	26	9'-5"	5	2'-8"	3'-6"			94	P-802	26	9'-5"	5	2'-8"	3'-6"			145
P-608	4	22'-6"	ST					145	P-803	4	22'-6"	ST					346
P-609	4	34'-9"	ST					346	P-804	4	34'-9"	ST					
P-610	16	18'-5"	9	7'-3"	3'-11 1/8"	1'-3"		245	P-805	16	18'-5"	9	7'-3"	3'-11 1/8"	1'-3"		278
P-611	8	20'-5"	12	14'-6"	6'-0"	1'-0"		245									
P-612	8	23'-2"	12	14'-6"	8'-9"	2'-0"		278									
P-613	12	35'-8"	ST					687									
P-614	12	30'-7"	ST					750									
								TOTAL PIER NO. 3 = 30,436*									
PIER NO. 5								PIER NO. 6									
P-501	28	4'-10"	3	3'-0"	1'-0"			141	P-601	8	25'-0"	ST					7343
P-502	40	16'-6"	ST					688	P-602	8	25'-2"	ST					3514
P-503	40	10'-0"	9	2'-6"	5'-0"	1'-7"		417	P-603	204	6'-1"	1	1'-0"	5'-8"			3314
									P-604	112	11'-10"	2	1'-1"	9'-8"			3539
P-605	8	21'-0"	ST					252									
P-606	8	8'-8"	ST					104									
P-607	80	19'-10"	ST					4236									
P-608	80	5'-8"	1	6"	5'-3"			1210									
P-609	20	4'-0"	ST					272									
P-610	16	8'-8"	ST					471									
P-611	14	14'-8"	ST					884									
P-612	26	11'-8"	ST					1406									
P-613	20	30'-11"	ST					3285									
P-614	20	7'-0"	1	1'-0"	6'-3"			744									
P-615	14	11'-8"	ST					868									
P-616	16	28'-6"	ST					2423									
								TOTAL PIERS = 97,023 LBS									
								TOTAL SPIRALS = 4678*									
								TOTAL SPACERS = 326									
								GRAND TOTAL 536,950 LBS									



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE TOP OF THE COLUMN MINUS 2 INCHES. 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 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPROX. 0.66 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 0.66 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 ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-6G1 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

REPLACEMENT BARS

MARK	NO. REQ'D	LENGTH	TYPE	WEIGHT LBS.
RE-501	1	5'-6"	10	5'-6" 1'-7"
RE-502	3	5'-6"	ST	
RE-601	14	6'-0"	ST	3118
RE-701	8	6'-3"	ST	7884
RE-801	8	6'-6"	ST	
RE-901	1	6'-0"	ST	2151
RE-1001	1	7'-3"	ST	1302
RE-1101	2	7'-9"	ST	

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-501	2	3'-2"	31'-0"	3 1/2"	110	2258
SP-502	1	3'-2"	28'-6"	3 1/2"	101	1057
SP-503	1	3'-2"	29'-0"	3 1/2"	103	1057
						326
TOTAL SPIRALS						4678*

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

WEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS

4 YOUNGSTOWN ROAD YOUNGSTOWN 19, OHIO

REINFORCING SCHEDULE

BRIDGE NO. MAH-422-0354
OVER N.Y.C. AND ERIE-LACKAWANNA RAILROAD
YOUNGSTOWN MAHONING COUNTY

STA. 127+57.47 TO STA. 131+00.59

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JWP	JLH		HAGER	ROH	11-14-66	