FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG 70-2(5)54	

1 / 200

CLA.-70-13.98

I-IG 70-2(5)54

NOTE: ALL REFERENCES TO CLA.-40-13.98 APPEARING IN THESE PLANS SHALL BE CONSIDERED TO READ CLA.-70-13.98

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
CLA-70-13.98
CLARK COUNTY
SPRINGFIELD TOWNSHIP
GRADE SEPARATION WITH THE DETROIT, TOLEDO & IRONTON RAILROAD CO.

LIMITED ACCESS

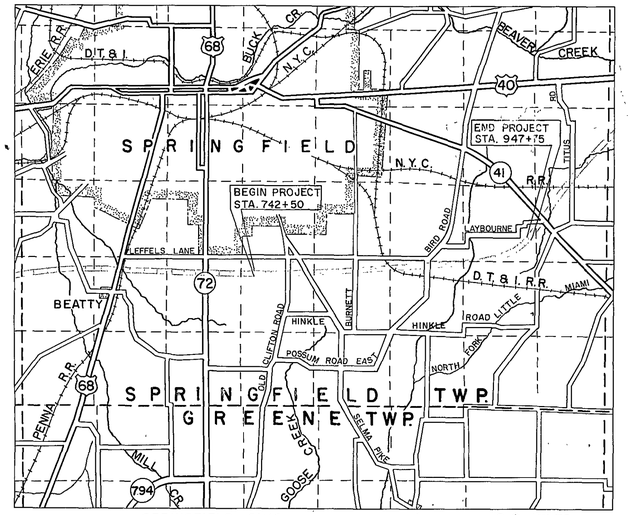
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02, REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

TREES AND STUMPS (EXISTING)	
TREES (TO BE REMOVED IN NON-L.A. R/W)	
FENCE LINE	
POLE LINE	
COUNTY LINE	
TOWNSHIP LINE	
SECTION LINE	
CORPORATION LINE	
CENTER LINE	
GUARD RAIL	EXISTING — PROPOSED
DRAIN PIPE	
RAILROAD	
PROPERTY LINE	℄
EXISTING RIGHT OF WAY	
PROPOSED RIGHT OF WAY	R/W
PROPOSED LIMITED ACCESS RIGHT OF WAY	L.A.
PROPOSED LIMITED ACCESS AND RIGHT OF WAY	L.A. R/W

INDEX OF SHEETS

ACTUAL TOTAL SHEETS 201



DELIVERY POINT SPRINGFIELD, OHIO AVERAGE HAUL FROM SIDING 2.0 MILES
D.T.&I. R.R. & N.Y.C. R.R.

LOCATION MAP

0 1 2 3 4
SCALE IN MILES

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
PORTION TO BE IMPROVED UNDER SEPARATE CONTRACT

SCALES

PLAN	1" = 50'	
PROFILE - HORIZONTAL	1" = 50'	1" = 50'
PROFILE - VERTICAL	1" = 5'	
CROSS SECTIONS	1" = 10'	1" = 10'

GRAPHIC SCALES

0 50 100 150 200

0 10 20 30 40

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT-OF-WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED: Olive M. Leggett
DATE: 3-12-65 DIVISION DEPUTY DIRECTOR

APPROVED: O.H. Altvater
DATE: 6-14-65 ENGINEER OF BRIDGES

APPROVED: R.N. Ruckett
DATE: 6-14-65 ENGINEER OF LOCATION & DESIGN

APPROVED: O.S. Schully
DATE: 6-14-65 DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION

APPROVED: T.H. Bowers
DATE: 6-21-65 DEPUTY DIRECTOR OF RIGHT-OF-WAY

APPROVED: J.W. Wilson
DATE: 6-21-65 DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED:
DATE: _____ FIRST ASSISTANT DIRECTOR

APPROVED: J.E. Marsh
DATE: 6/22/65 DIRECTOR OF HIGHWAYS

Sheet Nos. 139, 145, 157 & 163 revised 9-10-65
Sheet No. 151 revised 9-10-65
Sheet No. 153 revised 10-29-65
Sheet No. 148 & 149 revised 1-4-66
Sheet No. 143 revised 4-15-66
Sheet Nos. 138 & 139 revised 5-6-66
Sheet Nos. 137, 138, 139, 140, 141, 142 & 143 revised 5-11-66
Sheet Nos. 138, 139, 140, 142 & 143 revised 5-27-66
Sheet No. 139A Added 7-8-66

LINE DATA

PROJECT	BEGIN STATION	SUSPEND STATION	RESUME STATION	END STATION	LENGTH LIN. FT.	LENGTH MILES
I 70-2(5)54	742+50.00	822+00.00	852+00.00	947+75.00	17,525.00	3.319
IG 70-2(5)54	822+00.00			852+00.00	3000.00	0.568
TOTAL LENGTH OF PROJECT					20,525.00	3.887

WORK	BEGIN STATION	SUSPEND STATION	RESUME STATION	END STATION	LENGTH LIN. FT.	LENGTH MILES
I 70-2(5)54	742+50.00	822+00.00	852+00.00	947+75.00	17,525.00	3.319
IG 70-2(5)54	822+00.00			852+00.00	3,000.00	0.568
OLD CLIFTON ROAD RELOCATION	8+93.00			22+86.19	1,393.19	0.264
SELMA PIKE RELOCATION	8+91.00			47+75.00	3,884.00	0.736
SELMA PIKE CONNECTION	0+12.00			3+50.00	338.00	0.064
BURNETT ROAD	17+75.00			33+06.00	1,531.00	0.289
POSSUM ROAD EAST	22+25.00			27+75.00	550.00	0.104
TOTAL LENGTH OF WORK					28,221.19	5.344

STANDARD DRAWINGS

FACI-1	2-25-64	HW-E	2-1-63					
FACI-2	2-25-64	I-1	11-15-60					
B.T. 70.71	11-15-60	I-8 2-2-A&B	2-1-63	L-1	4-1-50	AR-1-57	4-2-62	
B-T-71R	3-2-53	I-8 NO. 5	2-1-63	L-3	4-1-50	AS-1-54	7-5-62	
DR-1	1-3-55	I-8 NO. 8	2-1-63	L-3-A	4-1-50	FSB-1-62	1-15-63	
				L.J. NO. 1	7-1-55			
F-2	2-1-63	I-14G.	1-22-52	I-8 M.H. No. 1	2-1-63			
F-3	2-1-63	I-15 NO. 1	11-15-60	I-8 M.H. No. 1-A	2-1-63	SD-1-63 SHEETS 2384	11-12-63	
G-7.07	4-1-64	I-15 NO. 2-A	8-17-60	RI-1	9-1-64			
HW NO. 1	8-1-63			T-35	1-2-56	SD-2-64	11-25-64	
HW NO. 2	8-1-63	I-15 NO. 5-A	2-1-63	T-J	9-12-60			
HW NO 3	8-1-63	I-15 NO. 6	2-1-63	SP-53	6-30-61			

SUPPLEMENTAL SPECIFICATIONS

L-120 REV.	1-2-62	
CE-101-04	5-22-56	
I-125 REV.	6-26-61	
I-127 REV.	1-15-62	
T-335	10-28-63	
S-307 Rev.	10-1-64	
S-101	7-12-62	
M-107.18 REV.	4-3-61	
M-106.6(d) REV.	4-1-58	

FILE NO.	CLA.-70-13.98 CLARK COUNTY DATE OF LETTING _____ 196__ CONTRACT NO. _____

PREPARED AND RECOMMENDED BY
SHAFFER, PARRETT AND ASSOCIATES
CONSULTING ENGINEERS
MANSFIELD OHIO WOOSTER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

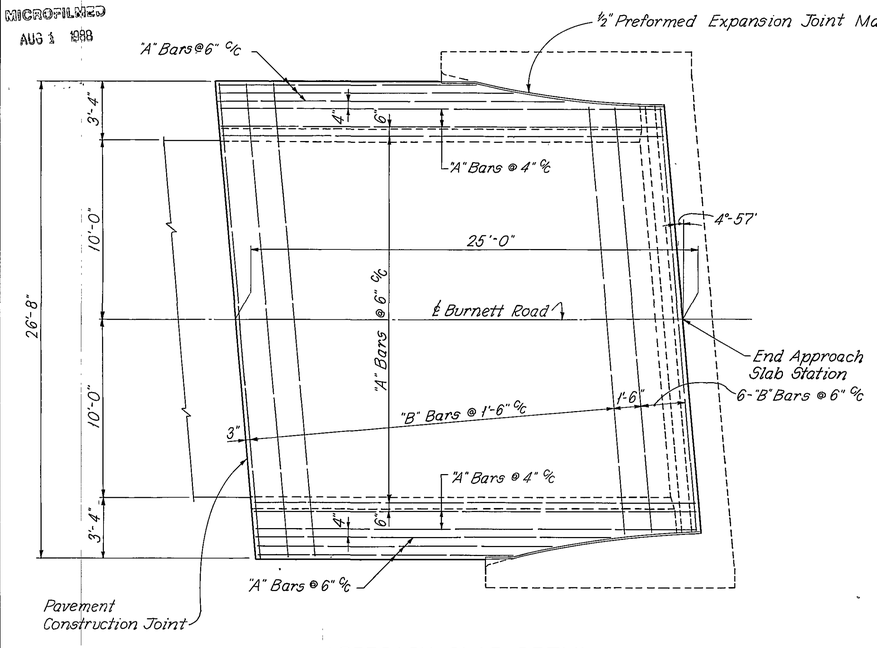
_____ DIVISION ENGINEER

_____ DATE

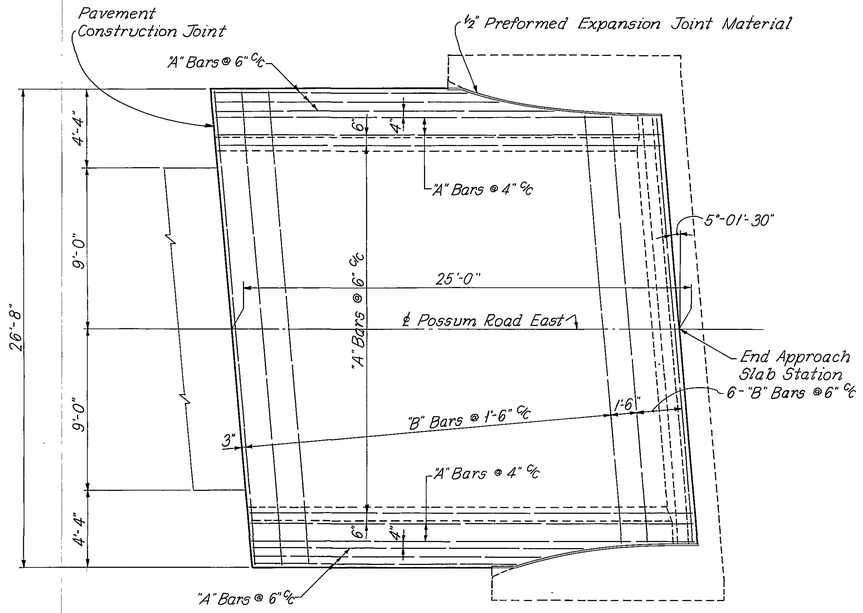
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

135
200

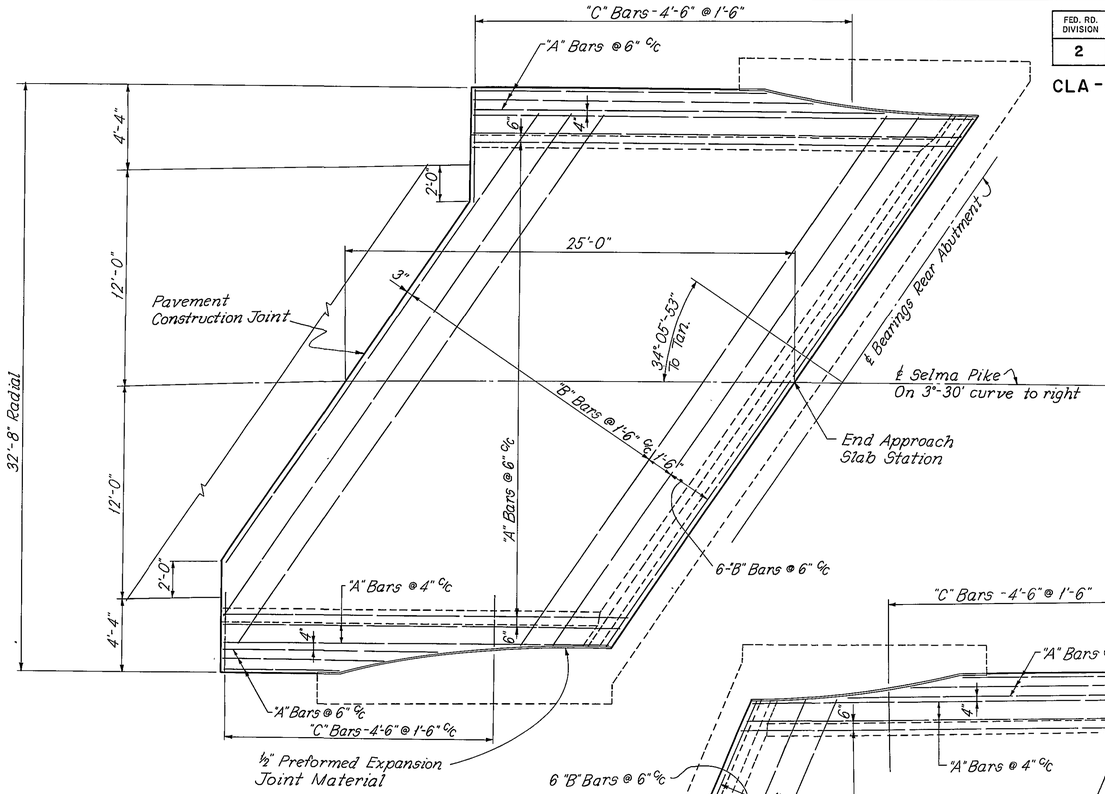
CLA - 40 - 13.98



APPROACH SLAB DETAIL
BRIDGE NO. CLA-40-1533
UNDER BURNETT ROAD



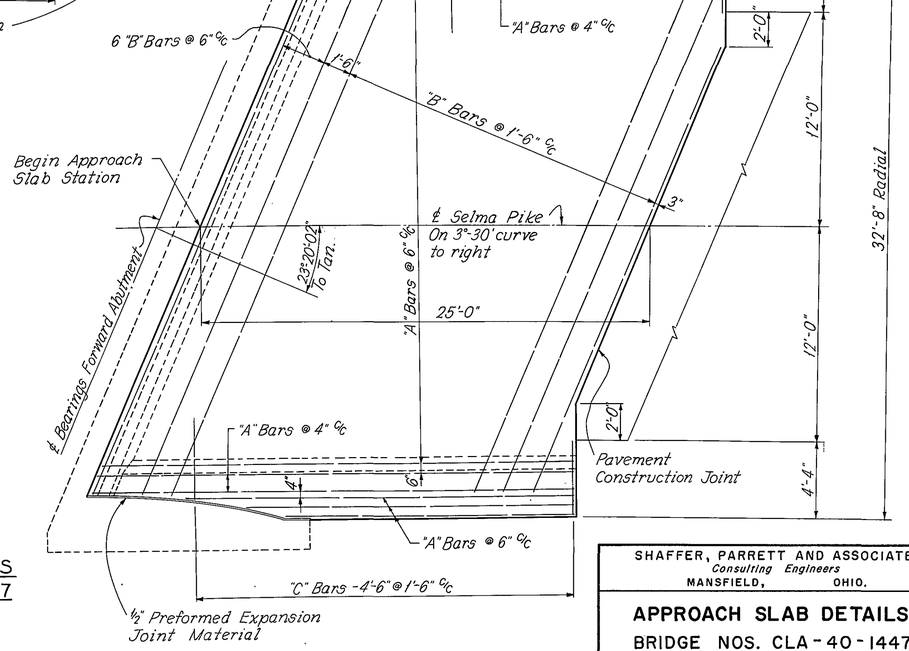
APPROACH SLAB DETAIL
BRIDGE NO. CLA-40-1642
UNDER POSSUM ROAD EAST



NOTES:
For notes and details, see Std. Dwg. AS-1-54.

CONCRETE: All approach slab concrete shall be Class 'C'.

REINFORCING STEEL:
"A" Bars are No. 8
"B" Bars are No. 5
"C" Bars are No. 5



APPROCH SLAB DETAILS
BRIDGE NO CLA-40-1447
UNDER SELMA PIKE

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

APPROACH SLAB DETAILS

BRIDGE NOS. CLA-40-1447, CLA-40-1553 AND CLA-40-1642

CLARK COUNTY U.S.R. 40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D&C	D&C	LK				

FED RD DIVISION	STATE	PROJECT	
2	OHIO		

136
200

CLA-40-13.98

B.M. - R.R. Spike in E/S Pole #7526
W. Side Old Clifton Rd. Sta. 765+76,
680' Lt. Elev. 1047.44

℄ Selma Pike - Sta. 37+50.27
℄ U.S.R. 40 (I.R. 70) - Sta. 768+02.61

Old Clifton Road

8" Pipe

℄ East bound Lanes

℄ West bound Lanes

shoulder line

ditch

guard rail

toe of slope

End Approach Slab
Sta. 35+91.53

Begin Approach Slab
Sta. 39+04.23

Crushed aggregate slope protection

3'-0" Typ.

Top of Slope El. 1065.73

36'-0" ℅ Deck

28°-38'-14"

61°-21'-46"

14.00' Required
14.00' Furnished

B-8

T/S El. 1065.23

T/S El. 1063.08

B-3

T/S El. 1062.96

Point of minimum vertical clearance

+54.0

+18.0

Special berm and slope protection

38" ASH

20" CHV

22" CHV

24" CHV

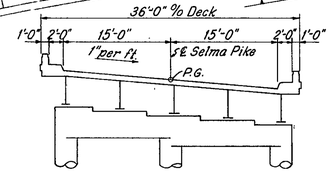
15" Pipe

12" ASH

℄ Selma Pike
(Relocated)

2:1

TYPICAL SECTION



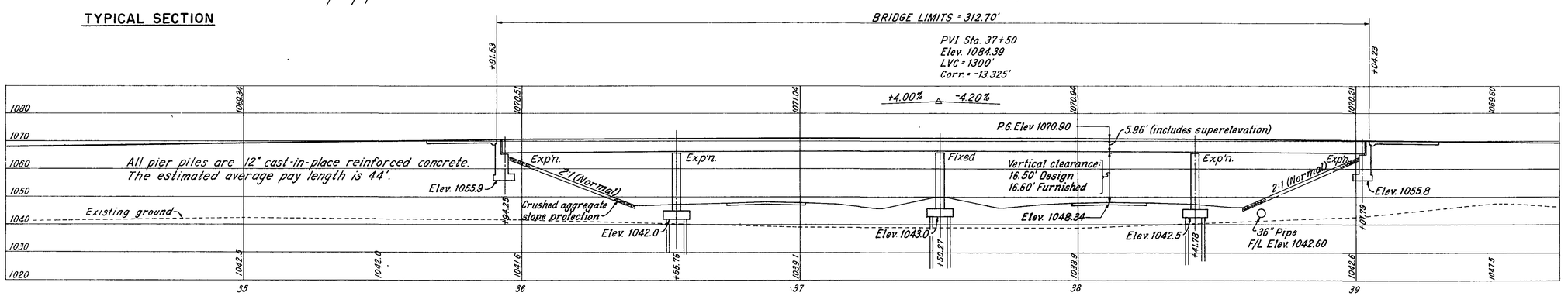
CURVE DATA
SELMA PIKE (RELOCATED)

P.I. Sta. 38+38.42
Δ = 61°-00'-00"
D = 3°-30'
θs = 3°-30'
Ls = 200'
Lc = 1542.86'
R = 1637.02'
Ts = 1064.87'
Es = 264.08'

PROPOSED STRUCTURE

TYPE: Continuous welded steel girder with reinforced concrete deck and substructure.
SPANS: 61'-6"; 94'-6"; 91'-6"; 60'-0" ℅ bearings.
ROADWAY: 30'-0" f/f of 2'-0" Safety Curb
LOAD FREQUENCY: CF400 (57)
SKEW: 28°-38'-14" L.F. to tangent
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: AS-1-54 (25'-0" long, modified)
ALIGNMENT: 3°-30' curve to right
SUPERELEVATION: 1" per foot
AVERAGE DAILY TRAFFIC: 2650 (1975)

FOUNDATION INVESTIGATION LEGEND
⊕ - Indicates core boring.
• - Indicates rod sounding.



SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

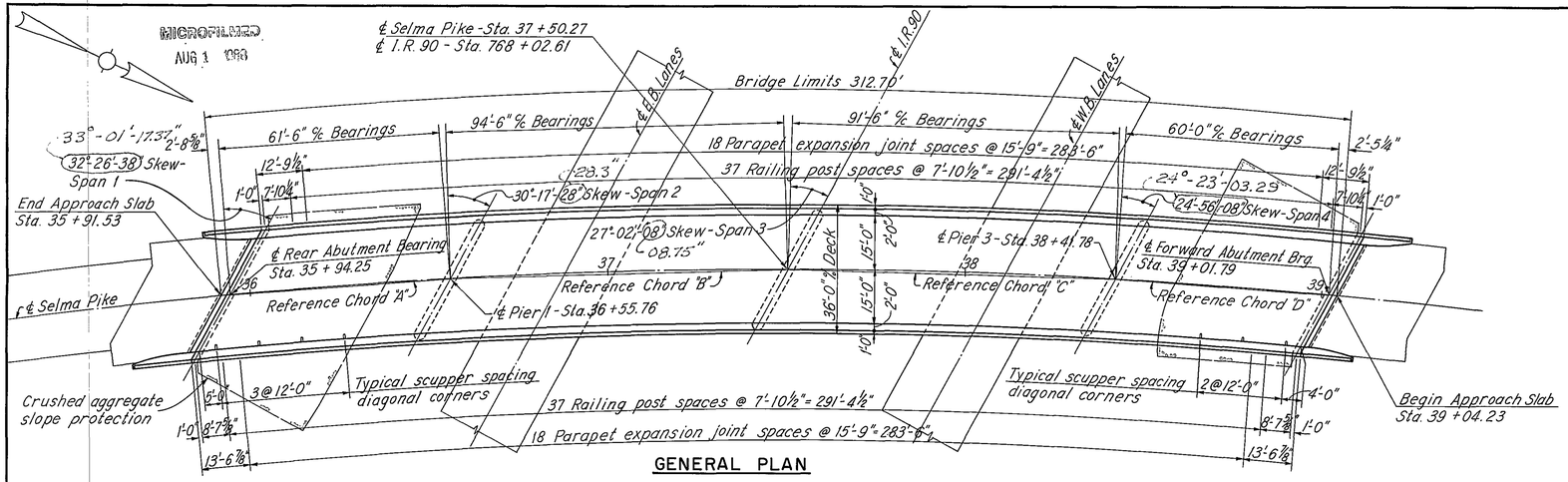
SITE PLAN

BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE

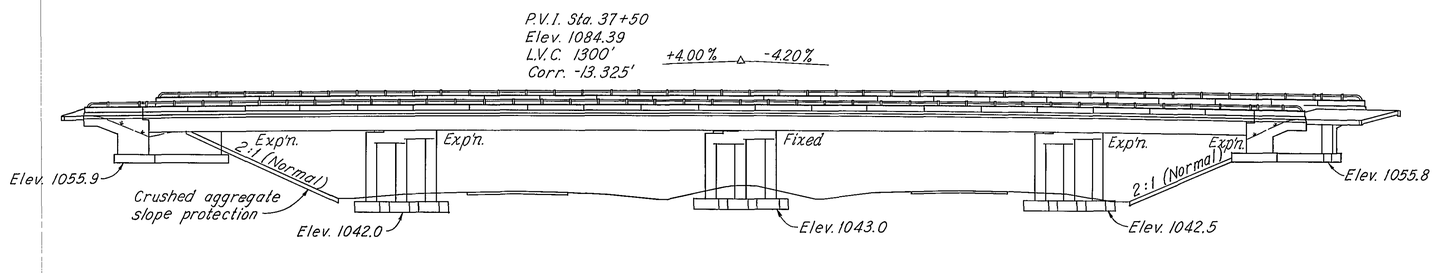
CLARK COUNTY U.S.R. 40

STA. 768+02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	Bob	UL	RAK			



GENERAL PLAN



ELEVATION

Pier piles omitted for clarity

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L.
E-2	417	cu.yds.	Unclassified excavation		288	129	
S-1	348	cu.yds.	Class "C" concrete, superstructure	348			
S-1	83	cu.yds.	Class "C" concrete, piers above foolings			83	
S-1	48	cu.yds.	Class "E" concrete, pier footings			48	
S-1	189	cu.yds.	Class "E" concrete, abutments		189		
S-4	126,630	lbs.	Reinforcing steel	93,425	10,652	22,553	
S-7	307,554	lbs.	Structural steel	307,554			
S-8	307,554	lbs.	Field painting of structural steel	307,554			
S-14	619.4	lin.ft.	Railing (Type "A" alum. rail & supports, and concrete parapet)	619.7	59.7		
S-16	Lump	sum	First test pile				lump
S-18	1584	lin.ft.	12" cast-in-place reinforced concrete piles			1584	
S-29	45	cu.yds.	Porous backfill		45		
S-29	7	each	Scuppers, including supports	7			
S-29	68	lin.ft.	6" helical perforated CMP, Sec. M-6.4 (h), including specials		68		
S-29	91	lin.ft.	6" helical CMP, Sec. M-6.4 (h), non-perforated		91		
I-10	511	sq.yds.	Crushed aggregate slope protection				511
S-101	348	each	Water-reducing, set-retarding admixture	348			

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

137
200

CLA-40-13.98

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-63, Sheets 2, 3 and 4 of 4 (dated 11-12-63), AR-1-57 (revised 4-2-62), FSB-1-62 (revised 1-15-63), AS-1-54 (revised 7-5-62), to Supplemental Specifications S-101 (dated 7-12-62), and S-307 (revised 10-1-64).

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, except strength of splices, which conform to Sec. 1.6.31 of the AASHO "Standard Specifications for Highway Bridges" dated 1961, together with current revisions thereof.

UNIT STRESSES:
- Concrete Class C - basic unit stress 1,333 p.s.i.
- Concrete Class E - basic unit stress 1,133 p.s.i.
- Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i. (ASTM A7 and A373 not permitted except piling)
- Reinforcing Steel - ASTM A15, A16, A160, deformed, intermediate or hard grade - basic unit stress 20,000 p.s.i., except spiral reinforcement may be plain structural grade with basic unit stress of 18,000 p.s.i.
- Design Loading - CF400 (57)

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and piers

PILES shall be driven to a minimum bearing capacity of 45 tons per pile.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.2 tons per sq.ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

MACHINE FINISH: At the Contractor's option, the concrete deck may be finished by the use of a finishing machine.

WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus B.

PROCEDURE: The embankment for Selma Pike shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments for a period of 90 days, after which excavation shall be made for the abutments. The embankment for I.R. 90 shall be placed in the pier areas before excavating for the piers.

BOLTED FIELD SPLICES

UNIT STRESSES: Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i. bending; 12,000 p.s.i. shear. High Strength Bolts - ASTM A325 - basic unit stress 13,500 p.s.i. shear; 40,000 p.s.i. bearing.

MATERIAL: Splice plates and bolts shall be according to Item S-7. Bolts shall be ⅞" diameter, High Strength. The splice weight shall be included under Item S-7, Structural Steel, for payment.

FIELD ASSEMBLY: In the final assembly of parts to be bolted, each girder shall be so supported that drift pins may be placed in a sufficient number of holes (not less 25% for field erection), to provide and maintain accurate alignment of holes and parts. Heavy driving of drift pins will not be permitted. Sufficient bolts shall be installed and brought to a snug tight condition to bring all parts of the splice into complete contact before the member is released. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-the-nut method. Drift pins shall then be replaced with bolts and tightened in the same manner. Bolt lengths determined by the use of Table No. 1 in Sec. S-7.10 shall be adjusted to the next ¼-inch length increment.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES

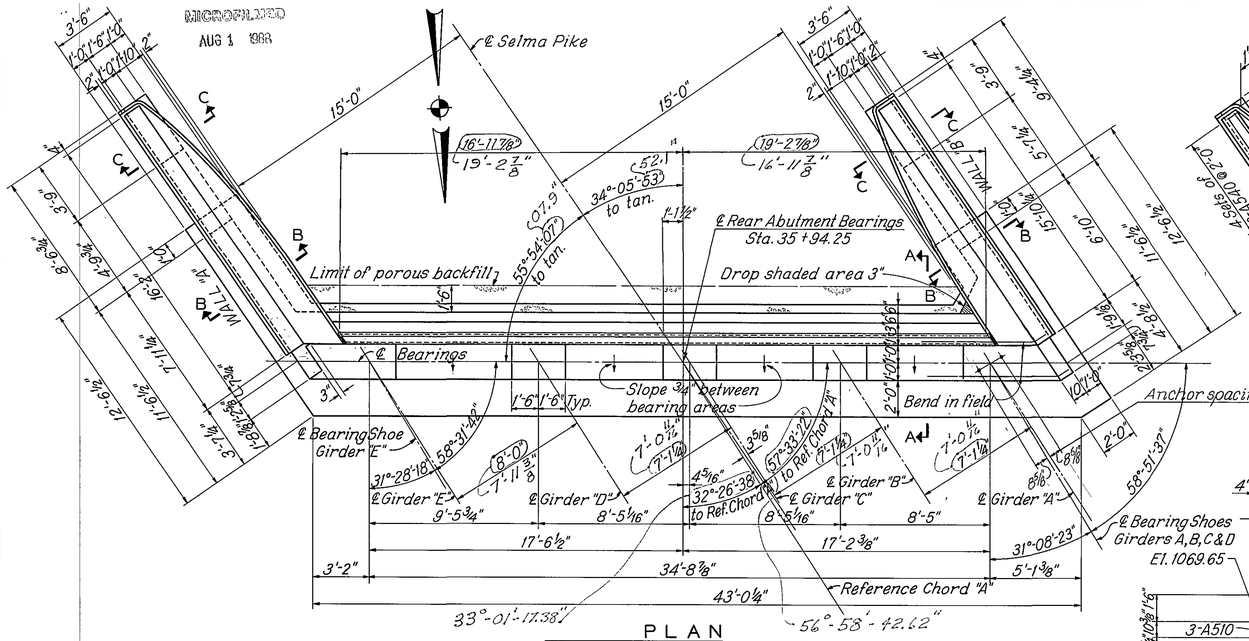
BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE
CLARK COUNTY U.S.R. 40
STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK		RAK	RAK			5-11-66

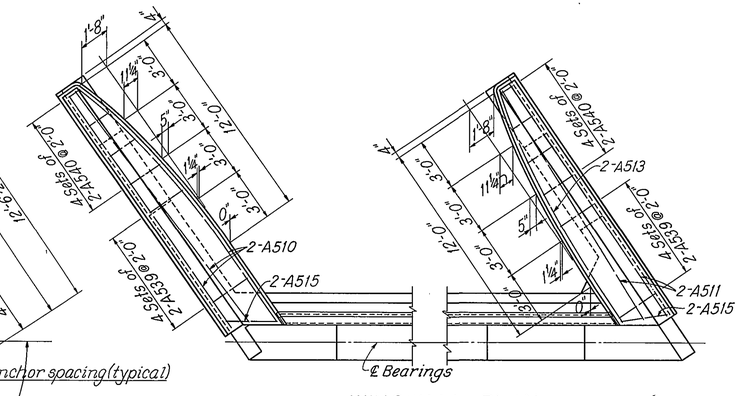
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

138
200

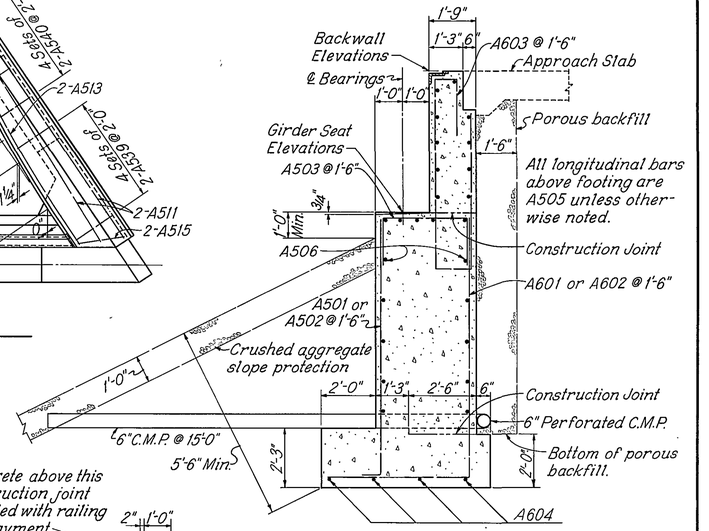
CLA-40-13.98



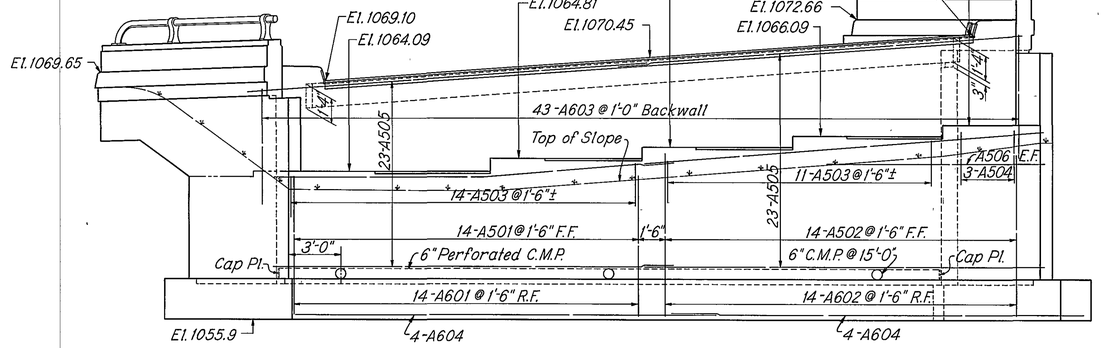
PLAN



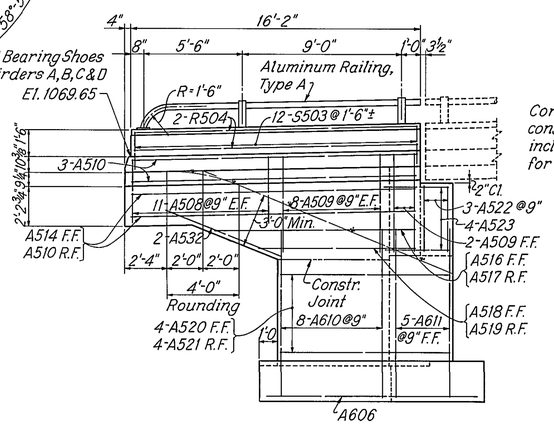
WINGWALL PLAN



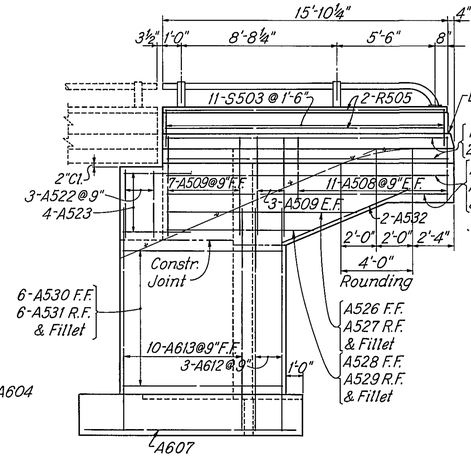
SECTION A-A



ELEVATION

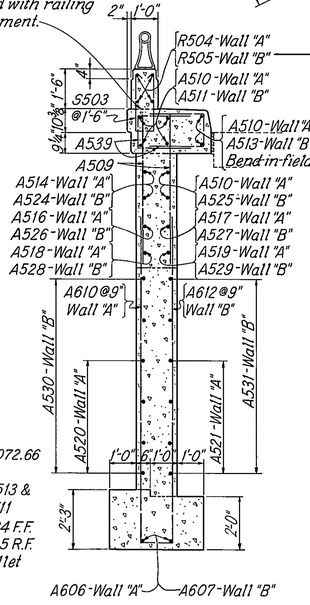


WALL "A"

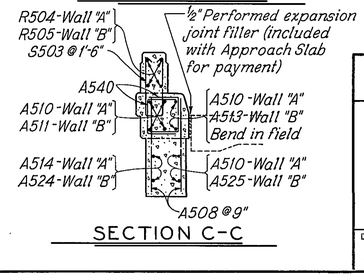


WALL "B"

Concrete above this construction joint included with railing for payment.



SECTION B-B



SECTION C-C

NOTES

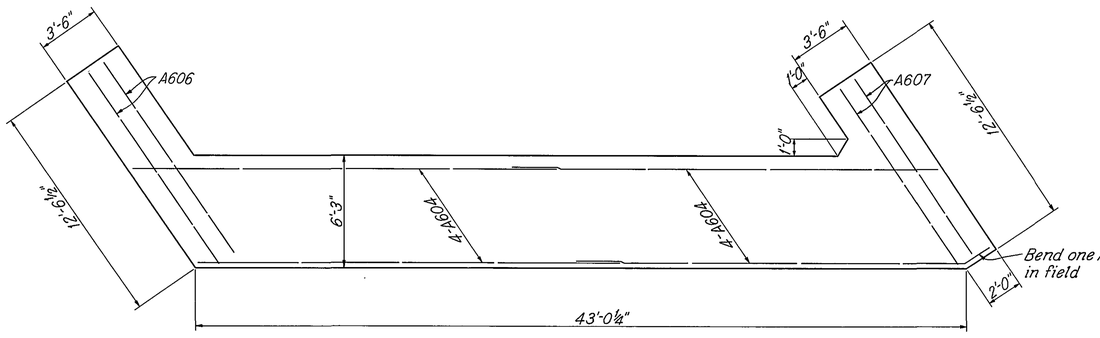
CONCRETE: All abutment concrete shall be Class "E" except parapets, which shall be Class "C".

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

POROUS BACKFILL, 1'-6" thick, shall extend upward to the approach slab for the full length of the abutment. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

NOTATION: F.F. - Front Face; R.F. - Rear Face; E.F. - Each Face.

GENERAL NOTES: See Sheet 137



FOUNDATION PLAN

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

REAR ABUTMENT

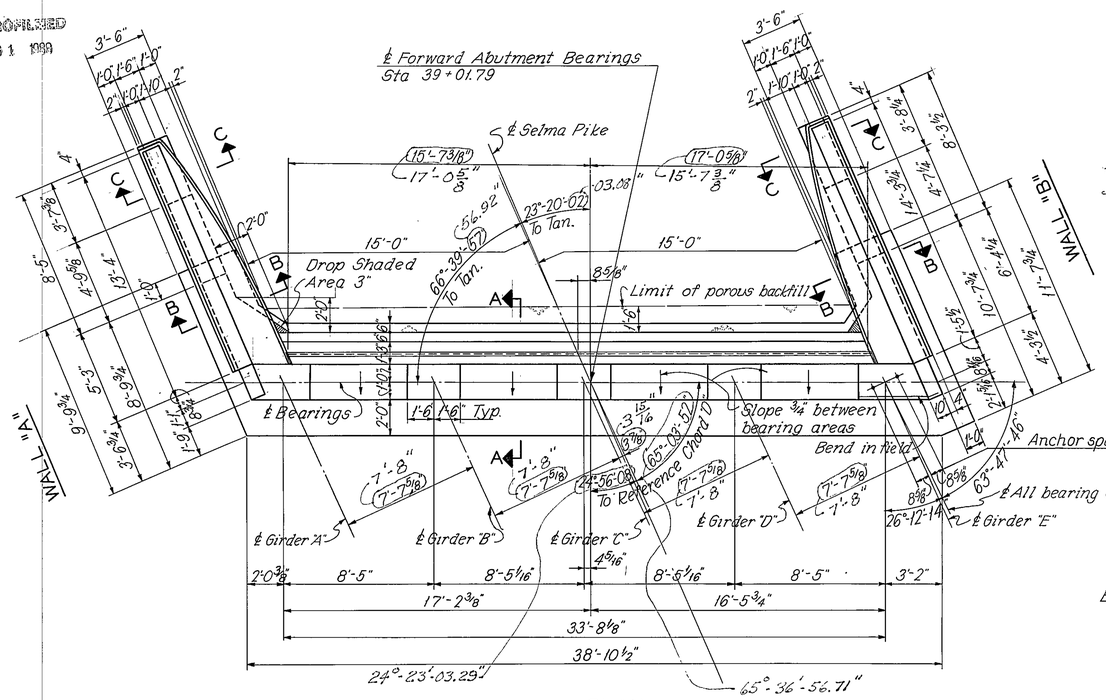
BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE
CLARK COUNTY U.S.R. 40
STA. 768+02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	R.H.U.	UL	RAK			5-6-66 5-11-66 5-27-66

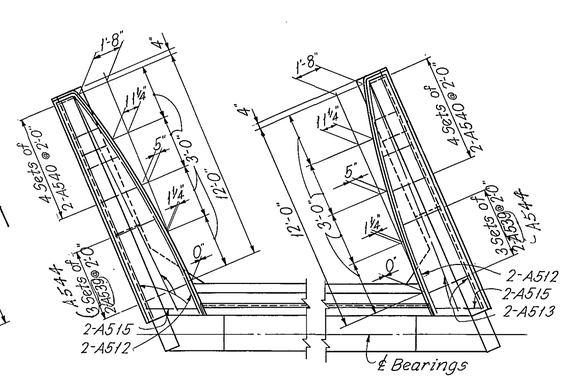
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

139
200

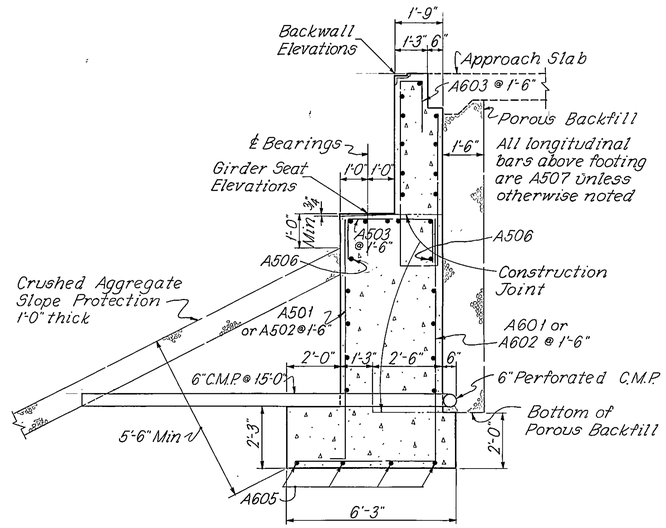
CLA-40-13.98



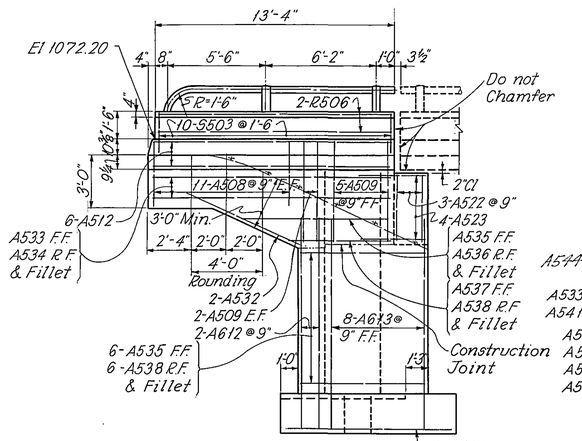
PLAN



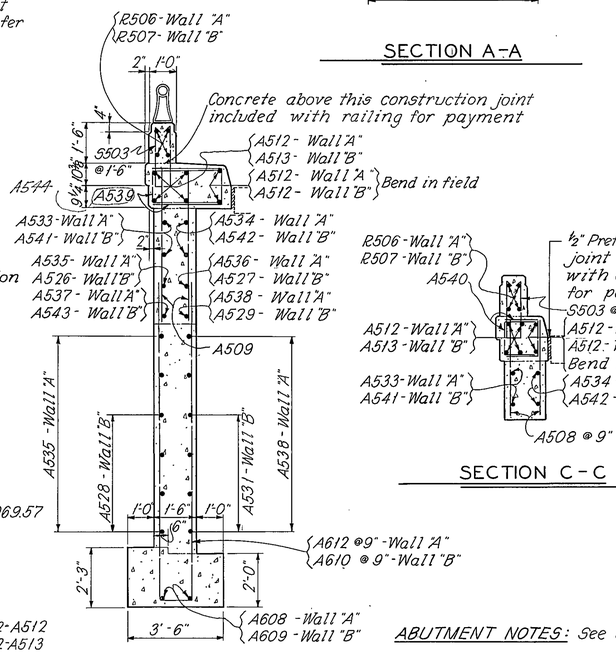
WINGWALL PLAN



SECTION A-A

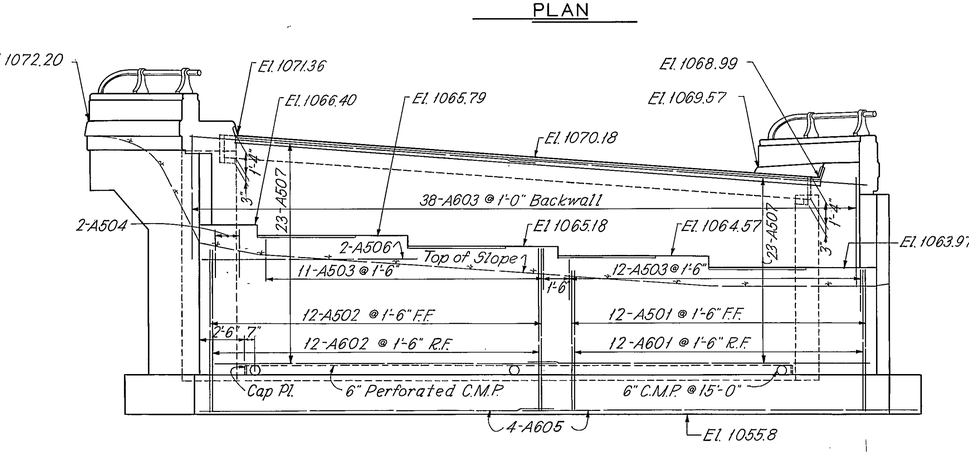


WALL "A"

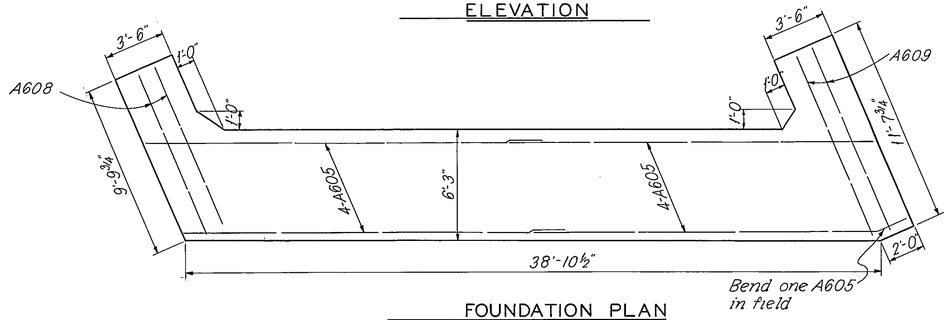


SECTION B-B

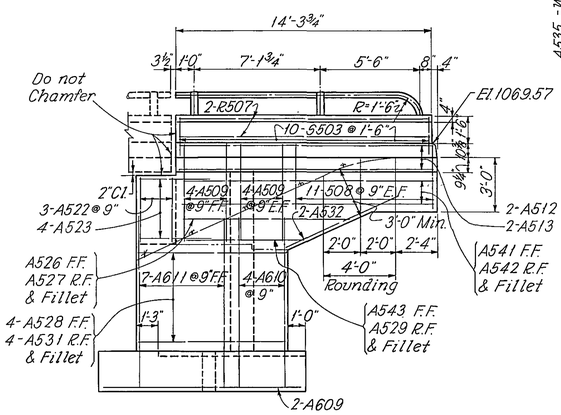
SECTION C-C



ELEVATION



FOUNDATION PLAN



WALL "B"

ABUTMENT NOTES: See Sheet 138

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

FORWARD ABUTMENT
BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE

CLARK COUNTY U.S.R. 40

STA. 768 + 02.61

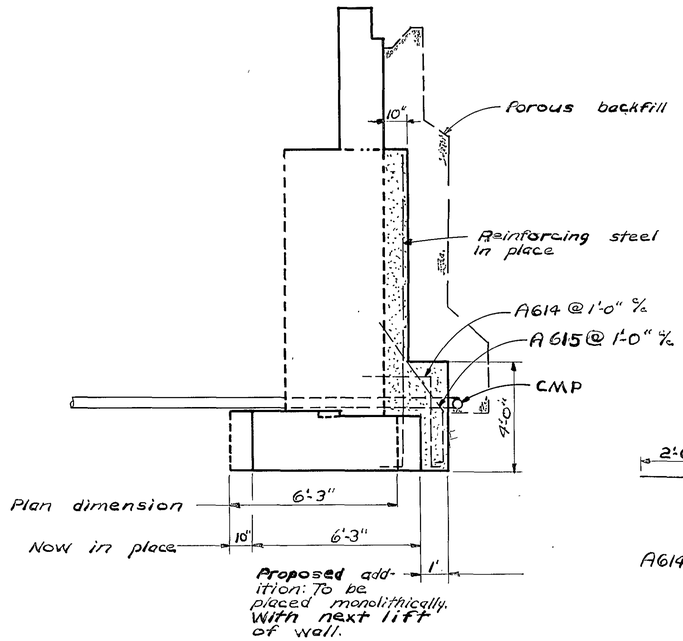
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	LK	LK	RAK			9-10-65 5-5-66 5-31-66 5-27-66

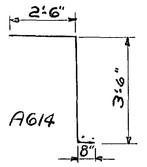
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

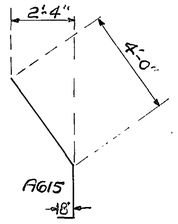
139A
200

CLA-40-13.98

Addition to abutments needed because footing was placed 10" away from plan position.







STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

Revision of
FORWARD ABUTMENT
BRIDGE No. CLA-40-1447
UNDER SELMA PIKE

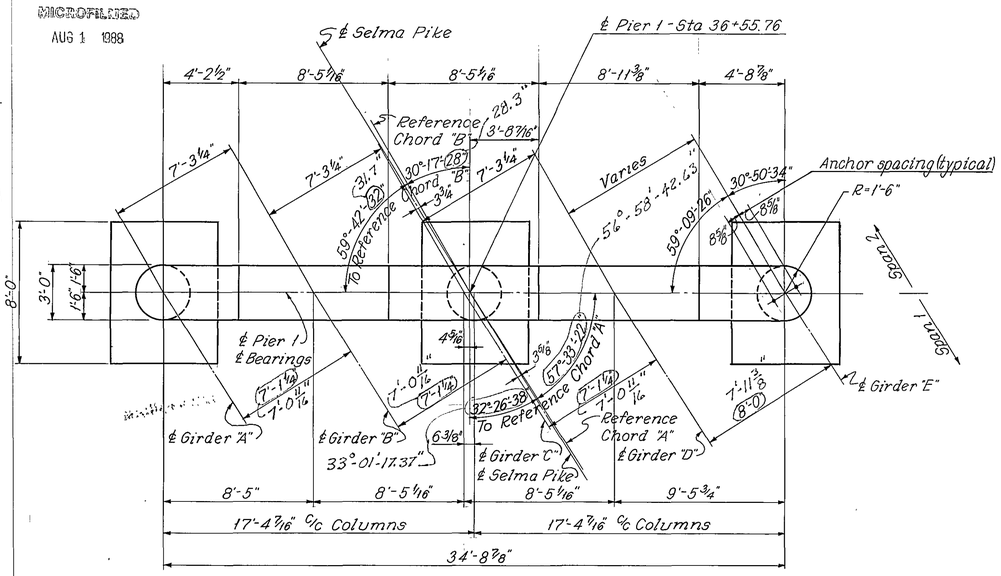
CLARK COUNTY USR 40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	CP	ARB	CDB			7-866

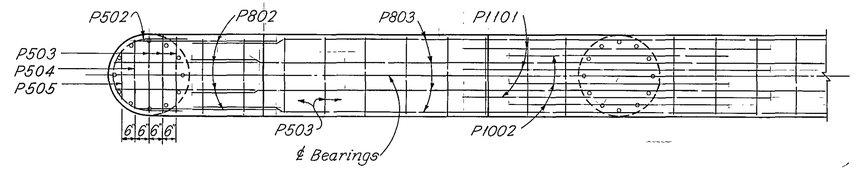
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

140
200

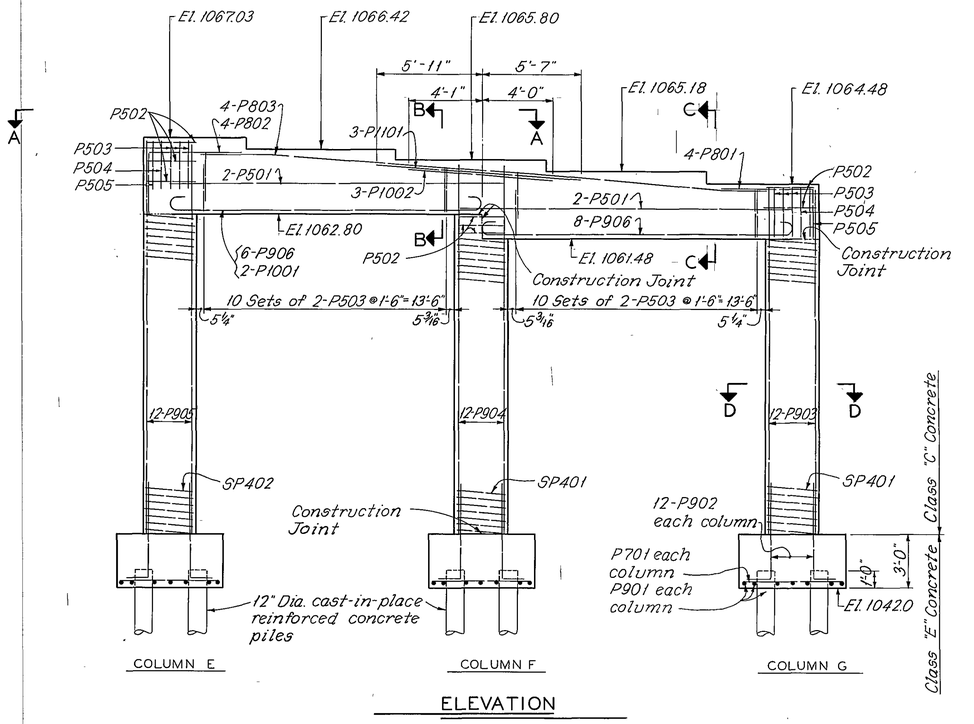
CLA-40-13.98



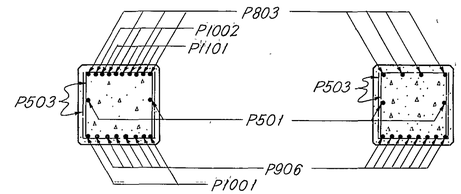
PLAN



VIEW A-A

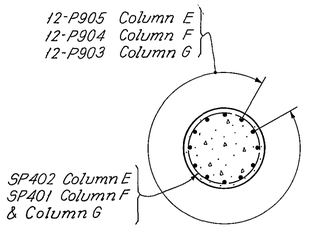


ELEVATION

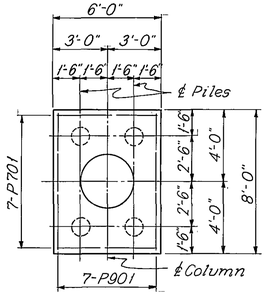


SECTION B-B

SECTION C-C



SECTION D-D



PLAN OF TYPICAL FOOTING

NOTES

CONCRETE: All concrete for pier footings shall be Class "E". All concrete for piers above footings shall be Class "C".

BRIDGE SEAT REINFORCING Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

GENERAL NOTES: See Sheet 137

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

PIER 1

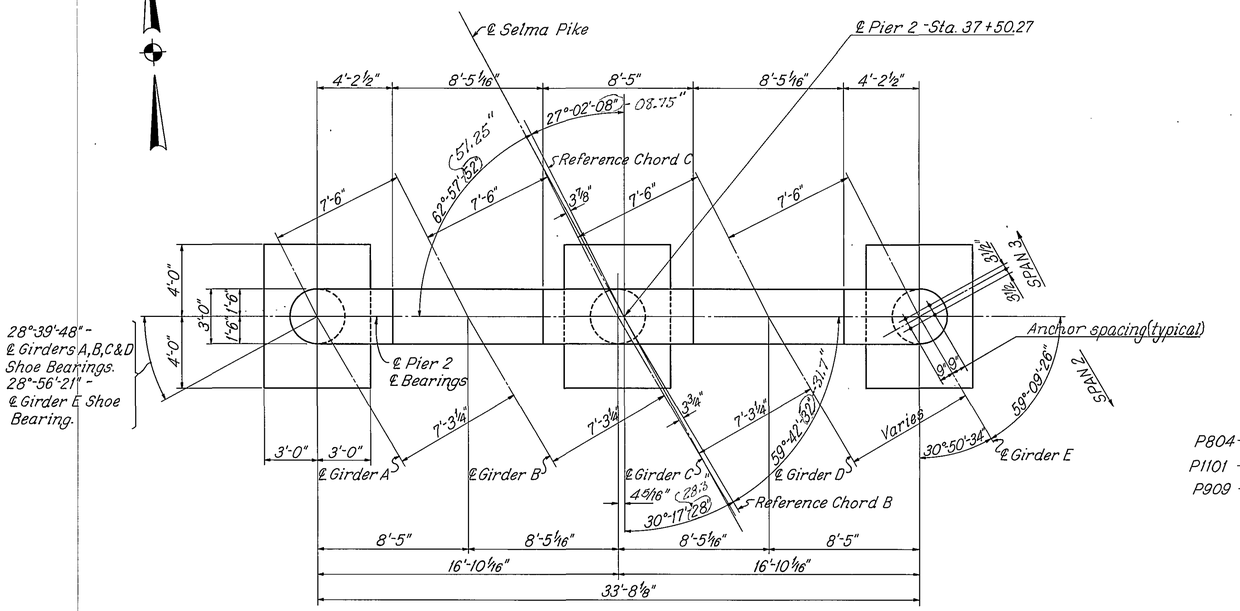
BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE
CLARK COUNTY U.S.R. 40
STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	RAK			5-11-22 5-27-22

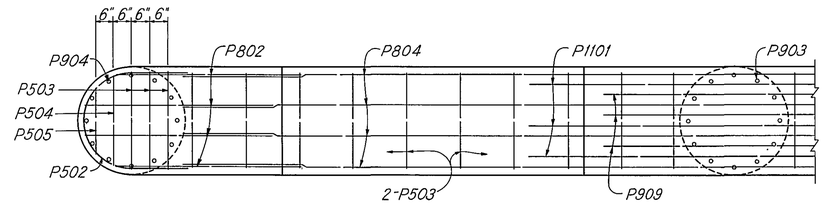
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141
200

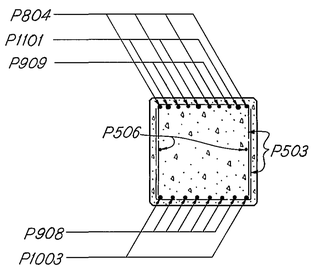
CLA-40-13.98



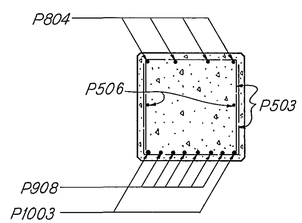
PLAN



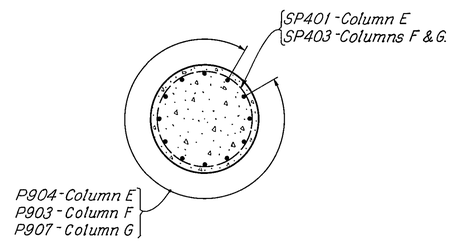
VIEW A-A



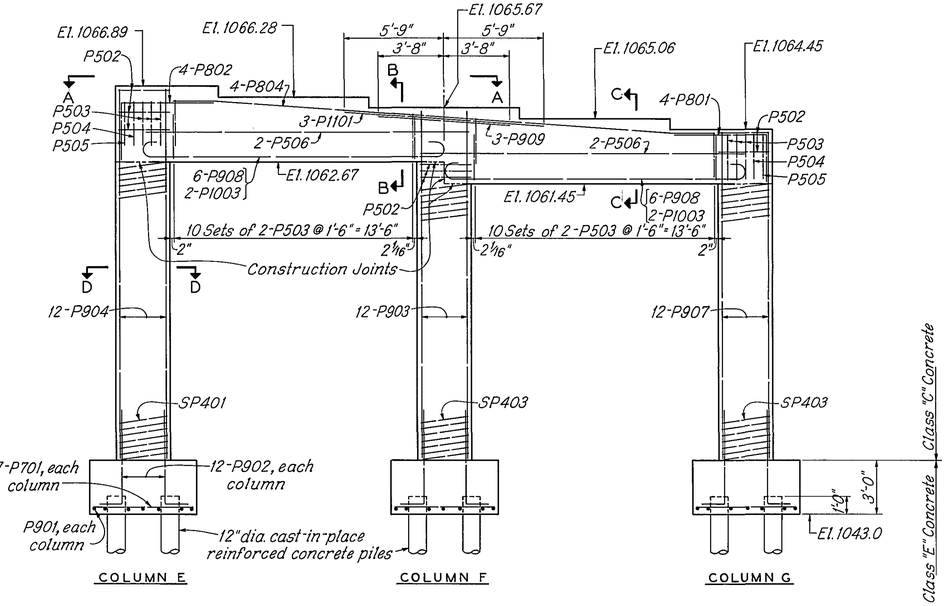
SECTION B-B



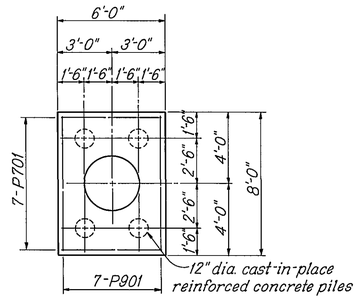
SECTION C-C



SECTION D-D



ELEVATION



PLAN OF TYPICAL FOOTING

PIER NOTES: See Sheet 140

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

PIER 2

BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE

CLARK COUNTY U.S.R. 40

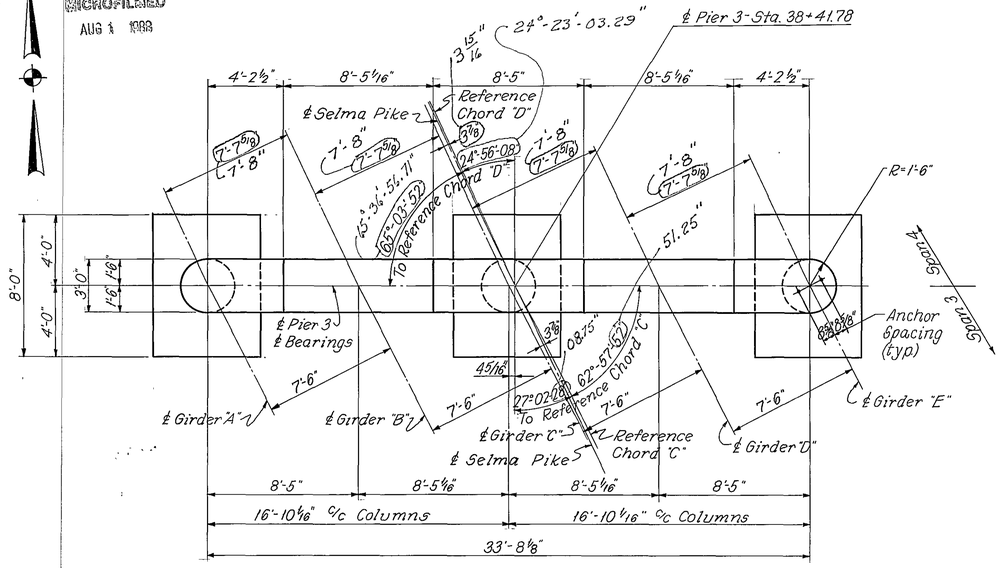
STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RHU	UL	RAK			5-11-66

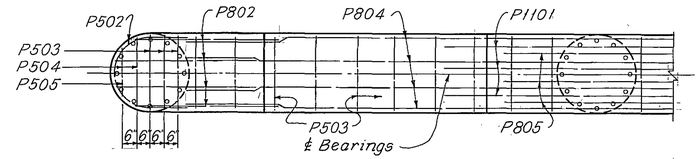
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

142
200

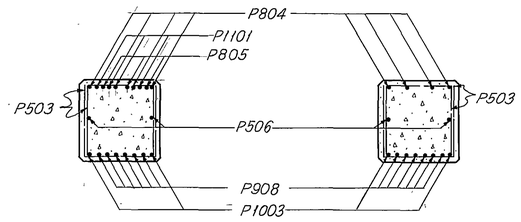
CLA-40-13.98



PLAN

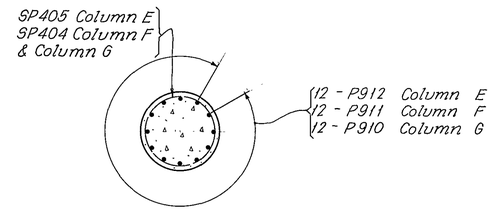


VIEW A-A

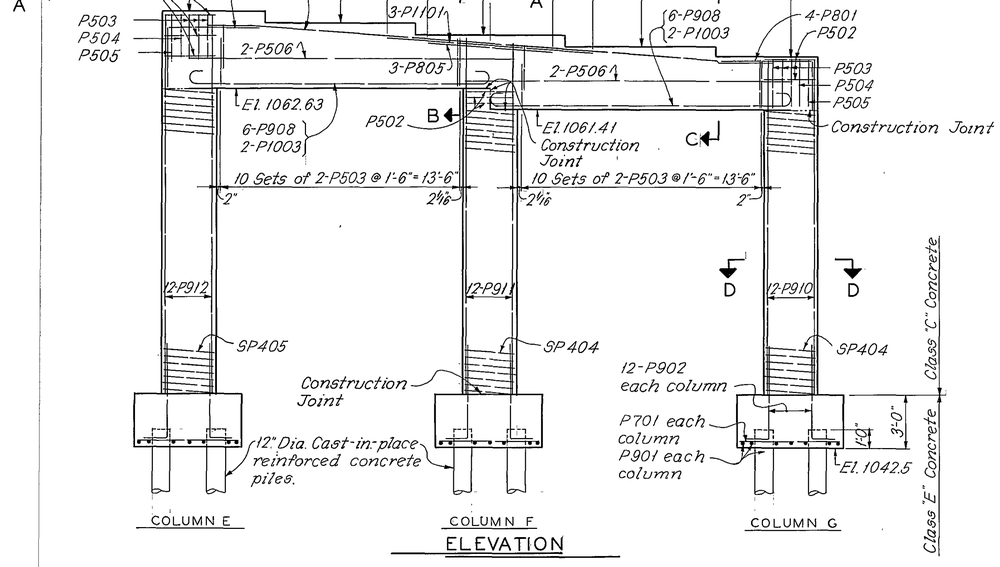


SECTION B-B

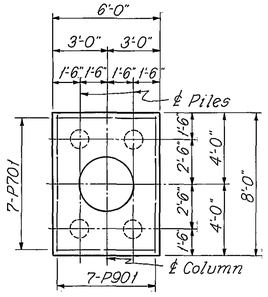
SECTION C-C



SECTION D-D



ELEVATION



PLAN OF TYPICAL FOOTING

PIER NOTES: See Sheet 140

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

PIER 3

BRIDGE NO. CLA-40-1447 UNDER SELMA PIKE

CLARK COUNTY U.S.R. 40

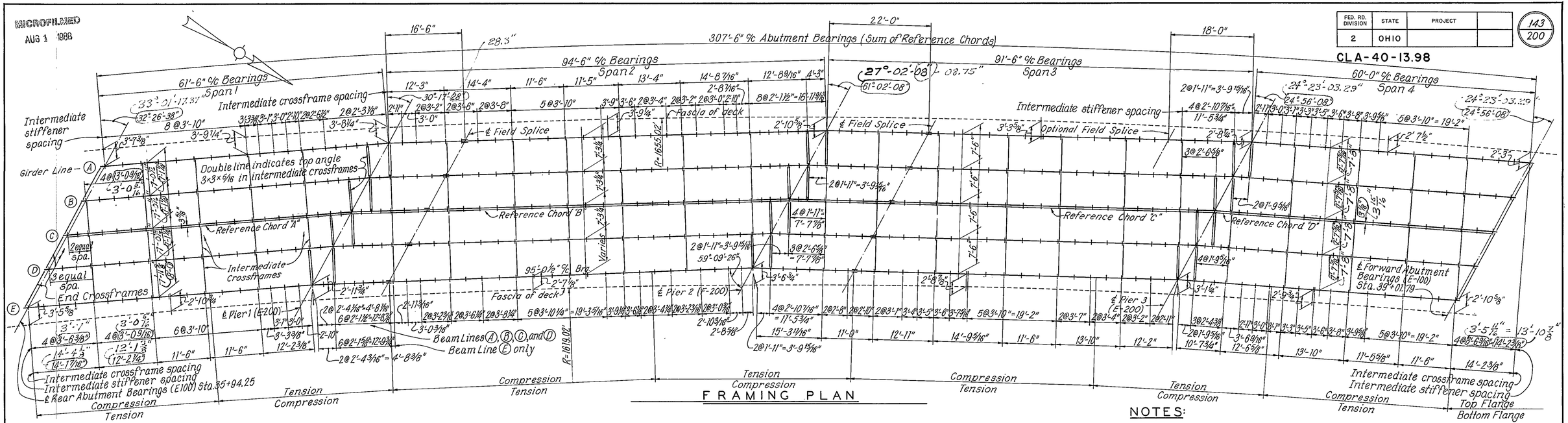
STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	RAK			5-11-66 5-27-66

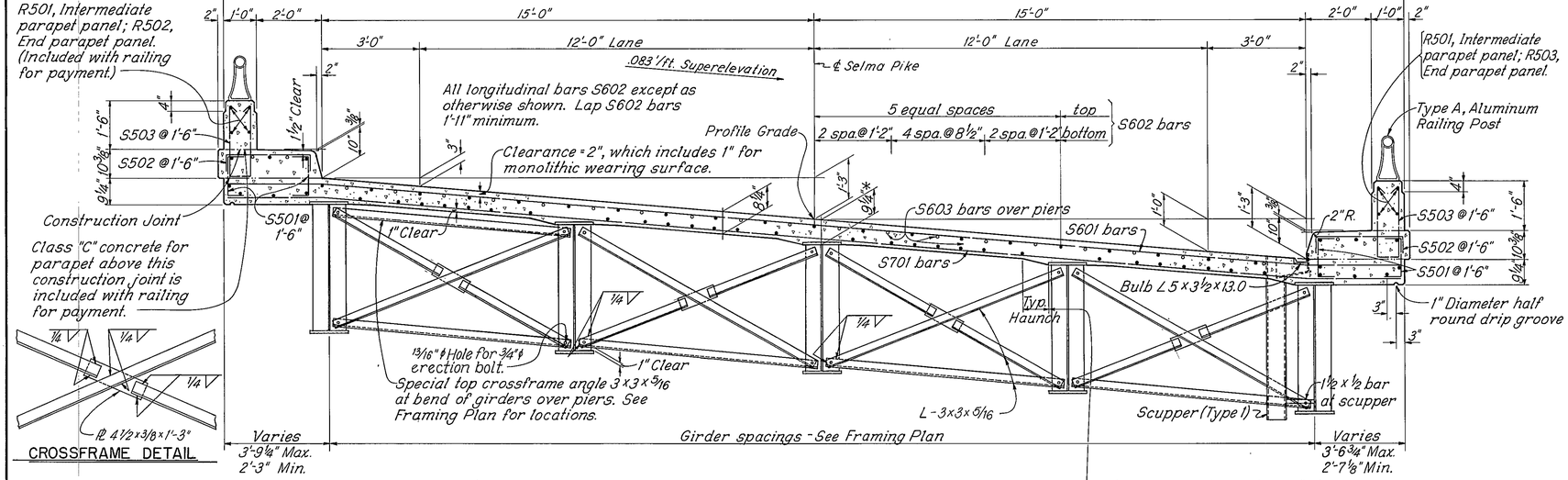
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

143
200

CLA-40-13.98



FRAMING PLAN



TRANSVERSE SECTION

CROSSFRAME DETAIL

* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation necessary to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. S-1.25 of the Construction and Material Specifications.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" on the low side and between 9" and 12" on the high side. Except on the high side, the maximum slope shall not exceed 3 inches per foot.

Note: See Sheet 145 for diagram of vertical offset dimensions.

NOTES:

END CROSSFRAMES, END DAMS, GUTTERS, SCUPPERS AND CURB PLATES: See Standard Drawing SD-1-63, Sheets 2, 3 and 4 of 4. Length of support angles for gutters and length of scuppers shall be adjusted to accomodate curvature of roadway. For end crossframes use 4×4×3/8 angles in place of 4×4×5/16.

CONCRETE: All superstructure concrete shall be Class "C".

RAILING POST, PARAPET EXPANSION JOINT AND SCUPPER SPACING: See Sheet 137.

RAILING: See Standard Drawing AR-1-57.

INTERMEDIATE STIFFENERS shall have contact bearing with the compression flange, but may have a clearance of not more than ⅛" from the tension flange. In shop painting, care shall be taken to make certain that paint is forced through from one side to the other of the ⅛" opening. (Supplement to Sec. S-7.14)

ERECTION PROCEDURE: The Contractor shall submit to the Director, for approval, three (3) prints showing his proposed erection procedure for the plate girders.

GENERAL NOTES: See Sheet 137

BUTT WELDS in girder webs and flanges shall be radiographed in accordance with Supplemental Specification S-307.

BEARINGS: See Standard Drawing FSB-1-62 for the following: E-100 Abutments, E-200 Piers 1 and 3, and F-200 Pier 2.

CAMBERING of girders is required in accordance with the following table: (Negative values indicate girder should be concave upward.)

DEFLECTION AND CAMBER

	LEFT FASCIA GIRDER												TYPICAL INTERIOR GIRDER												RIGHT FASCIA GIRDER											
	SPAN 1			SPAN 2			SPAN 3			SPAN 4			SPAN 1			SPAN 2			SPAN 3			SPAN 4			SPAN 1			SPAN 2			SPAN 3			SPAN 4		
	¼	½	¾	Splice	½	¾	Splice	½	Opt. Splice	¼	½	¾	¼	½	¾	Splice	½	¾	Splice	½	Opt. Splice	¼	½	¾	¼	½	¾	Splice	½	¾	Splice	½	Opt. Splice	¼	½	¾
Deflection due to weight of steel	0	0	0	1/16	1/8	1/16	1/16	1/16	1/16	0	0	0	0	0	0	1/16	1/8	1/16	1/16	1/16	1/16	0	0	0	0	0	0	1/16	1/8	1/16	1/16	1/16	1/16	0	0	0
Deflection due to remaining dead load	3/16	3/16	0	1/4	11/16	3/8	3/16	1/2	1/4	-1/16	1/16	1/8	1/8	1/8	0	1/8	7/16	1/4	3/16	7/16	1/8	-1/16	1/8	1/8	3/16	3/16	0	3/16	7/16	1/4	3/16	7/16	1/4	-1/16	1/8	3/16
Convexity required for vertical curve	1/4	3/8	1/4	1/2	7/8	5/8	9/16	13/16	1/2	1/4	5/16	1/4	1/2	7/8	5/8	9/16	13/16	1/2	1/4	5/16	1/4	1/4	3/8	1/4	1/2	7/8	5/8	9/16	13/16	1/2	1/4	5/16	1/4	1/4	5/16	1/4
Convexity reqd. for horiz. curvature & superel.	-1/8	-5/16	-1/8	-5/16	-11/16	-9/16	-1/2	-5/8	-3/8	-1/8	-1/4	-1/8	-1/8	-5/16	-1/8	-5/16	-11/16	-9/16	-1/2	-5/8	-3/8	-1/8	-1/4	-1/8	-1/8	-5/16	-1/8	-5/16	-11/16	-9/16	-1/2	-5/8	-3/8	-1/8	-1/4	-1/8
Algebraic sum of deflection and convexity	5/16	1/4	1/8	1/2	1	1/2	5/16	3/4	5/8	1/16	1/8	1/4	1/4	3/16	1/8	3/8	3/4	3/8	5/16	11/16	1/2	1/16	3/16	1/4	5/16	1/4	1/8	7/16	3/4	3/8	5/16	11/16	7/16	1/16	3/16	5/16
Required camber																																				

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

SUPERSTRUCTURE

BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE

CLARK COUNTY — U.S.R. 40

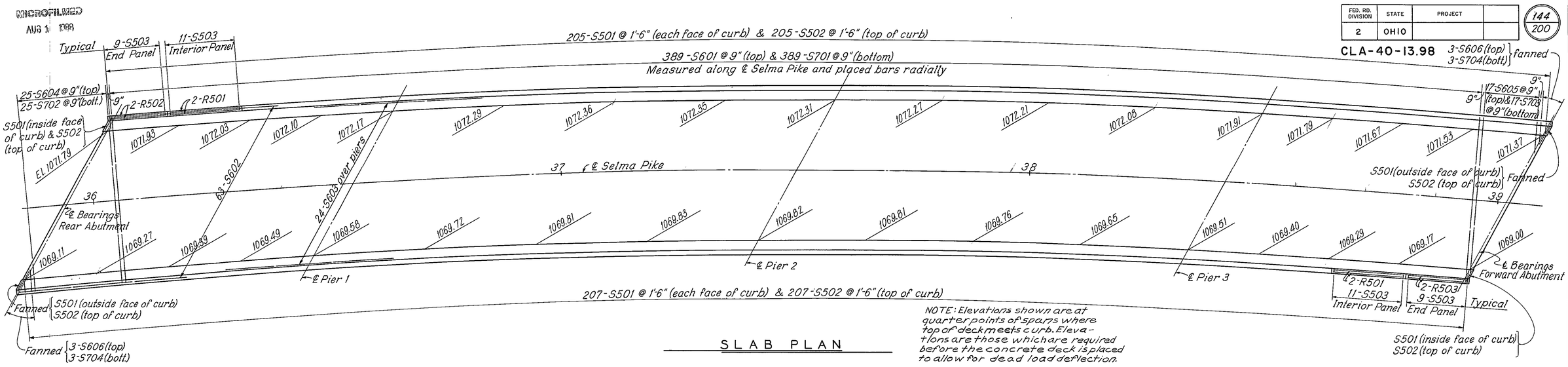
STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	Bob	VL	RAK			4-15-66 5-11-66

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

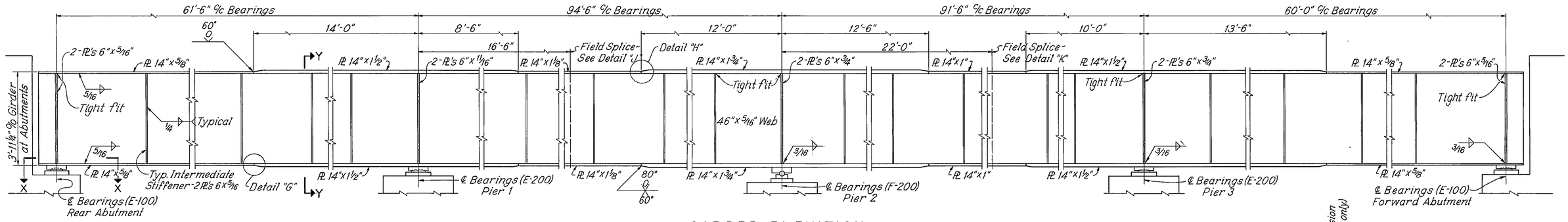
CLA-40-13.98

144
200



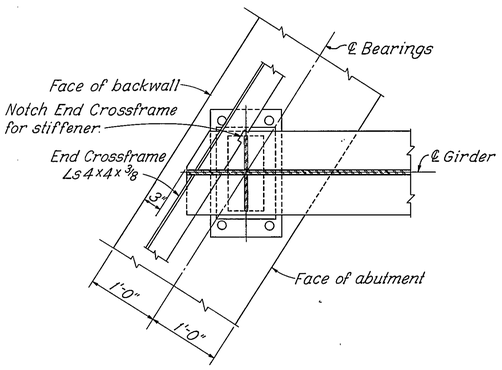
NOTE: Elevations shown are at quarter points of spans where top of deck meets curb. Elevations are those which are required before the concrete deck is placed to allow for dead load deflection.

SLAB PLAN



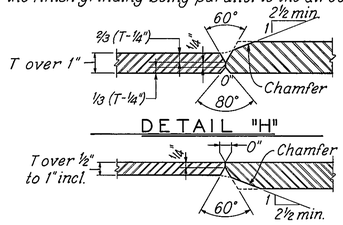
GIRDER ELEVATION
[EXTERIOR & INTERIOR GIRDERS]

Notes: 1. Place bolt head on exposed side of fascia girder.
2. Place nuts on top surface of lower flange splice.
3. Washers may be omitted as allowed in Sec. 5-7.10.



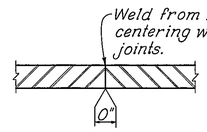
SECTION "X-X"

Butt welds on girder flange plates shall be ground flush, the finish grinding being parallel to the direction of stress.



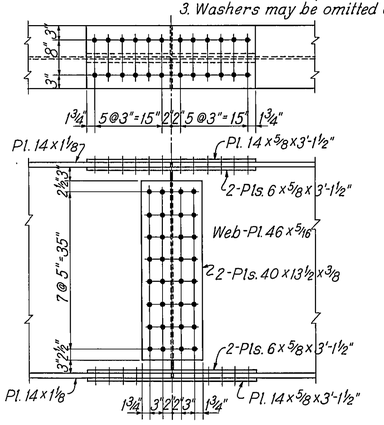
All full penetration welds shall be back-gouged and welded after welding far side.

DETAIL "G"

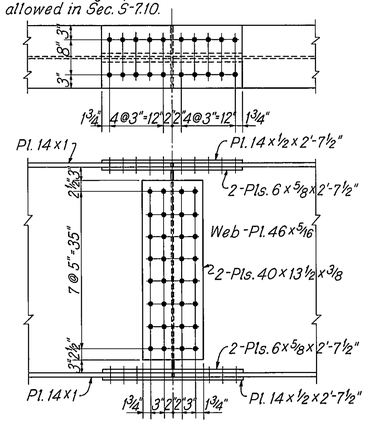


Locate to make web plates in convenient lengths.

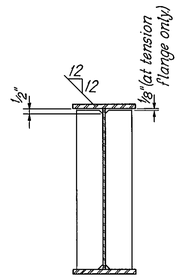
WEB SHOP SPLICE TYPICAL



DETAIL "J"



DETAIL "K"



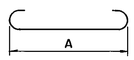
SECTION "Y-Y"

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

SUPERSTRUCTURE DETAILS

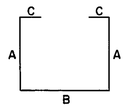
BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE
CLARK COUNTY U.S.R. 40
STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RHU	UL	RAK			

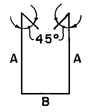


TYPE 1

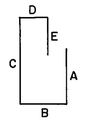
TYPE 2



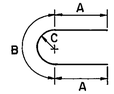
TYPE 3



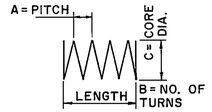
TYPE 4



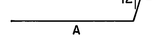
TYPE 5



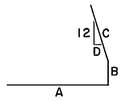
TYPE 6



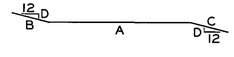
TYPE 7



TYPE 8



TYPE 9



TYPE 10

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

CLA-40-13.98

145
200

ABUTMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R504	4	15'-10"	Str.						*
R505	4	15'-6"	Str.						*
R506	4	13'-0"	Str.						*
R507	4	13'-11"	Str.						*
S503	43	5'-7"	4	2'-2"	8"				250
A501	26	8'-3"	2	7'-9"	7½"	0			224
A502	26	9'-6"	2	9'-0"	7½"	0			258
A503	48	7'-10"	2	2'-4"	3'-5"	2'-4"			392
A504	5	9'-4"	2	3'-1"	3'-5"	3'-1"			49
A505	46	22'-1"	Str.	Bend 5 in field					1059
A506	4	12'-0"	Str.	Bend 2 in field					50
A507	46	19'-11"	Str.	Bend 5 in field					956
A508	88	3'-6"	Str.						321
A509	52	5'-8"	Str.						307
A510	8	16'-0"	Str.	Bend 2 in field					133
A511	4	15'-6"	Str.						65
A512	8	13'-0"	Str.						108
A513	6	14'-0"	Str.	Bend 2 in field					88
A514	2	17'-0"	8	15'-6"	1'-7"	8¼"			35
A515	8	5'-4"	2	2'-2"	1'-3"	2'-2"			44
A516	1	12'-4"	8	10'-10"	1'-7"	8¼"			13
A517	1	11'-5"	Str.						12
A518	1	9'-9"	8	8'-3"	1'-7"	8¼"			10
A519	1	9'-0"	Str.						9
A520	4	9'-10"	8	9'-5"	6"	8½"			41
A521	4	10'-4"	Str.						43
A522	12	7'-11"	2	3'-10"	6"	3'-10"			99
A523	16	8'-1"	2	3'-11"	6"	3'-11"			135
A524	2	17'-2"	9	15'-9"	6"	1'-1"	8¼"		36
A525	2	15'-1"	8	11'-2"	4'-0"	6 7/8"			31
A526	2	11'-11"	9	10'-6"	6"	1'-1"	8¼"		25
A527	2	9'-7"	8	5'-8"	4'-0"	6 7/8"			20
A528	5	9'-7"	9	8'-2"	6"	1'-1"	8¼"		50
A529	2	6'-10"	8	3'-0"	3'-11"	6 7/8"			14
A530	6	10'-3"	9	8'-10"	6"	1'-1"	8"		64
A531	10	5'-6"	8	1'-9"	3'-10"	6 3/4"			57
A532	8	7'-0"	Str.						58
A533	2	14'-4"	8	12'-10"	1'-7"	5 3/16"			30
A534	2	14'-6"	8	9'-7"	5'-0"	8 3/4"			30
A535	7	8'-2"	8	6'-8"	1'-7"	5 3/16"			60
A536	1	9'-7"	8	4'-8"	5'-0"	8 3/4"			10
A537	1	6'-9"	8	5'-3"	1'-7"	5 3/16"			7
A538	7	6'-11"	8	2'-0"	5'-0"	8 3/4"			50
A539	16-(28)	②	2	①	1'-3"	①			82-(144)
A540	32	④	2	③	1'-3"	③			117
A541	2	15'-9"	9	14'-3"	6"	1'-1"	5⅛"		33
A542	2	14'-1"	8	10'-2"	4'-0"	8 3/4"			29
A543	1	8'-7"	9	7'-2"	6"	1'-1"	5⅛"		9
A544	12	⑩	2	⑨	1'-3"	⑨			62
A601	26	12'-10"	2	7'-9"	5'-3"	0			501
A602	26	14'-1"	2	9'-0"	5'-3"	0			550
A603	81	19'-0"	5	7'-0"	1'-5"	8'-5"	11"	1'-11"	2312
A604	8	23'-5"	Str.	Bend one in field					281
A605	8	21'-3"	Str.	Bend one in field					255
A606	2	12'-9"	Str.						28
A607	2	11'-8"	Str.						35
A608	2	9'-6"	Str.						29
A609	2	10'-9"	Str.						32
A610	12	20'-0"	2	9'-7"	1'-2"	9'-7"			360
A611	12	9'-7"	Str.						173
A612	5	25'-4"	2	12'-3"	1'-2"	12'-3"			190
A613	18	12'-3"	Str.						331
								Total Weight	10,652

PIERS

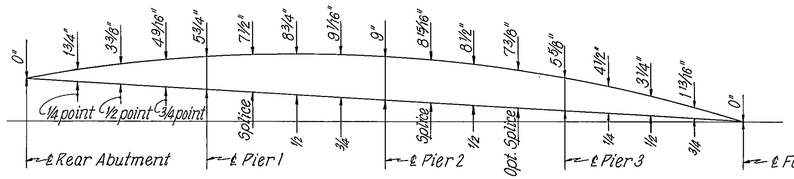
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	4	18'-8"	Str.						78
P502	24	7'-4"	6	1'-7"	4'-2"	1'-4"			184
P503	138	7'-5"	2	2'-6"	2'-8"	2'-6"			1068
P504	6	7'-3"	2	2'-6"	2'-6"	2'-6"			45
P505	6	6'-6"	2	2'-6"	1'-9"	2'-6"			41
P506	8	18'-2"	Str.						152
P701	63	5'-6"	Str.						708
P801	12	7'-11"	2	2'-10"	5'-3"	0			254
P802	12	8'-6"	2	3'-5"	5'-3"	0			272
P803	4	31'-8"	Str.						338
P804	8	30'-8"	Str.						655
P805	3	7'-0"	Str.						56
P901	63	10'-0"	1	7'-6"					2142
P902	108	6'-7"	2	5'-7"	1'-3"	0			2417
P903	24	19'-4"	Str.						1578
P904	24	20'-8"	Str.						1686
P905	12	21'-10"	Str.						891
P906	14	19'-10"	1	17'-4"					944
P907	12	18'-3"	Str.						745
P908	24	19'-4"	1	16'-10"					1578
P909	3	7'-4"	Str.						75
P910	12	18'-8"	Str.						762
P911	12	19'-11"	Str.						813
P912	12	21'-2"	Str.						864
P1001	2	20'-2"	1	17'-4"					174
P1002	3	8'-1"	Str.						104
P1003	8	19'-8"	1	16'-10"					677
P1101	9	11'-6"	Str.						550
SP401	3	16'-5"	7	4½"	47	32"			926
SP402	1	17'-9"	7	4½"	50	32"			329
SP403	2	14'-5"	7	4½"	41	32"			539
SP404	2	15'-10"	7	4½"	45	32"			592
SP405	1	17'-0"	7	4½"	48	32"			316
								Total Weight	22,553

SUPERSTRUCTURE

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R501	144	15'-5"	Str.						*
R502	8	12'-5"	Str.						*
R503	8	13'-2"	Str.						*
S501	828	2'-4"	3	7½"	1'-4"	7½"			2015
S502	416	3'-6"	3	7½"	2'-6"	7½"			1519
S503	432	5'-7"	4	2'-2"	8"				2516
S601	389	35'-9"	10	30'-1"	2'-10"	2'-10"	1		20,888
S602	567	36'-2"	Str.						30,801
S603	72	37'-6"	Str.						4055
S604	25	⑥	10	⑤	2'-10"	0	1		782
S605	17	⑧	10	⑦	0	2'-10"	1		528
S606	6	5'-4"	Str.						48
S701	389	35'-9"	10	30'-1"	2'-10"	2'-10"	1		28,425
S702	25	⑥	10	⑤	2'-10"	0	1		1065
S703	17	⑧	10	⑦	0	2'-10"	1		718
S704	6	5'-4"	Str.						65
								Total Weight	93,425

⑤ 31'-6" to 43'-6". Vary each by 1'-1½".
⑥ 34'-4" to 37'-4". Vary each by 1'-1½".
⑦ 30'-8" to 35'-0". Vary each by 1'-7¼".
⑧ 33'-6" to 37'-10". Vary each by 1'-7½".

* These railing bars are included with Item S-14 for payment.



SCHEMATIC DIAGRAM OF VERTICAL OFFSET DIMENSIONS
TYPICAL - ALL BEAMS - FULL D.L.

① 2'-1" to 1'-10" Vary 12 4 4 each by 1"
② 5'-2" to 4'-8" Vary 12 each by 2"
③ 1'-9" to 9" Vary 16 8 8 each by 4"
④ 4'-6" to 2'-6" Vary 10 5 5 each by 8"
⑨ 2'-1" to 1'-11" Vary 4 each by 1"
⑩ 5'-2" to 4'-10" Vary 4 each by 2"

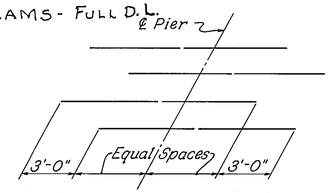
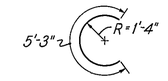


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

NOTES

BAR SIZE is indicated in the bar mark. The first digits where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No. 5 size bar and P1101 is a No. 11 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No of Turns" shown is the "Length" divided by the pitch, plus 3 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 5-4. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.



TYPE 11

REPLACEMENT BARS

MARK	NO.	LENGTH	TYPE
RE400	1	5'-3"	11
RE500	1	5'-7"	Str.
RE600	4	5'-11"	Str.
RE700	2	6'-2"	Str.
RE800	1	6'-6"	Str.
RE900	1	6'-10"	Str.
RE1000	1	7'-2"	Str.
RE1100	1	7'-6"	Str.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

REINFORCING STEEL

BRIDGE NO. CLA-40-1447
UNDER SELMA PIKE

CLARK COUNTY U.S.R. 40

STA. 768 + 02.61

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK.	RWH	RWH.	RAK.			9-10-65