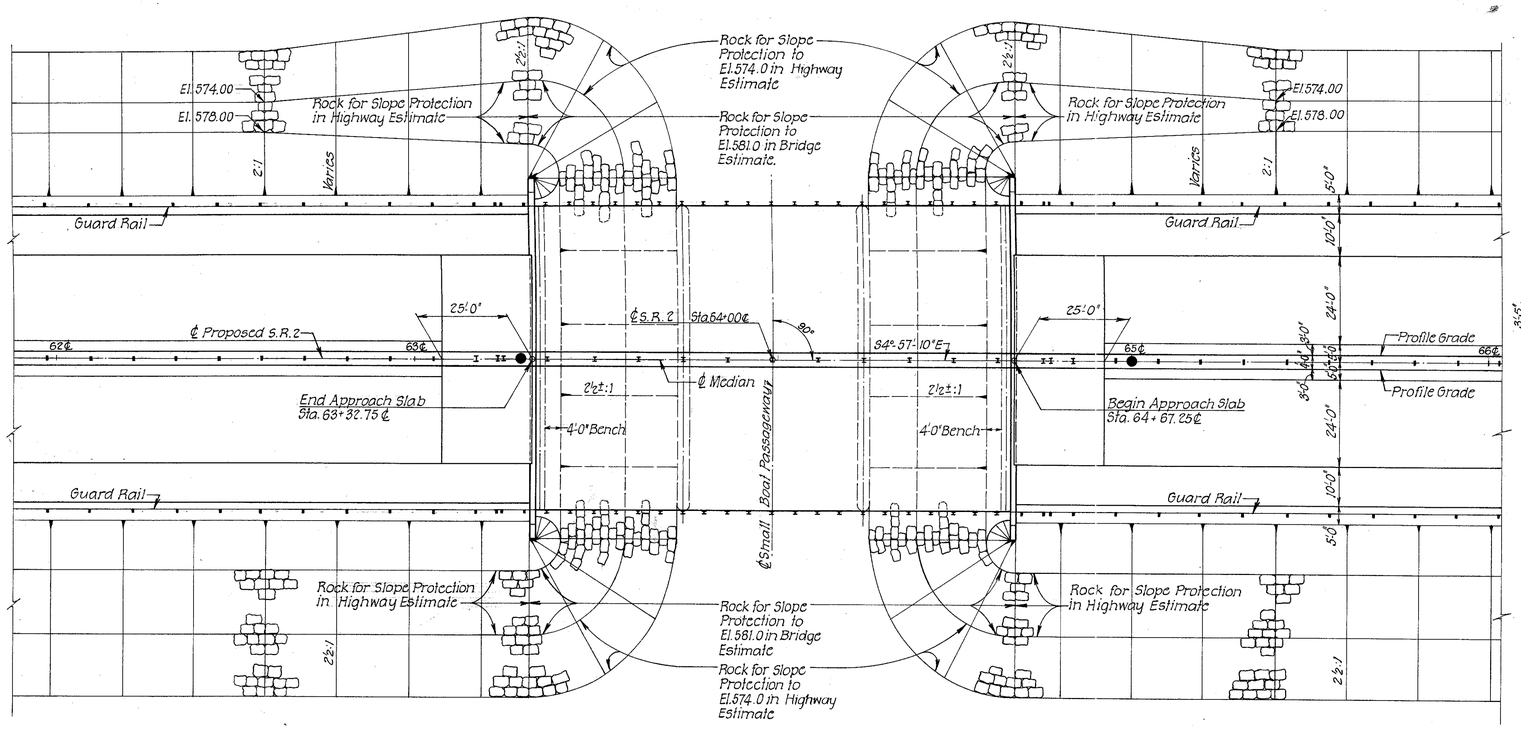
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042(13)	

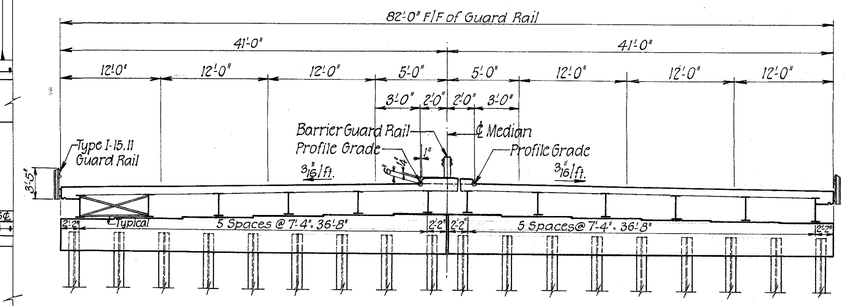
93
48

OTT-2-27.36
ERI-2-0.15

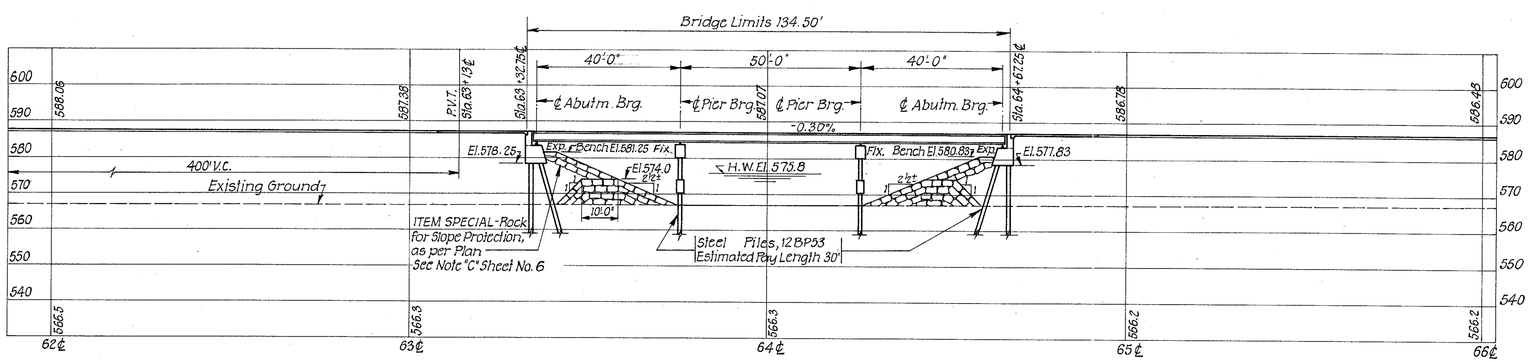


PLAN

FOUNDATION SOUNDINGS. Foundation design and foundation quantities are based on a study of rod 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.



SECTION THRU BRIDGE



PROFILE ON GRADE LINE OF PROPOSED S.R. 2

PROPOSED STRUCTURE

TYPE: Continuous Steel Beam with reinforced Conc. Deck and Substructure
SPANS: 40'-50'-40'
SKEW: 0°
WEARING SURFACE: 1" Monolithic
ROADWAY: 82'-0" Face to Face of Guard Rail
LOAD FREQUENCY: C.F. 2000# (Adequate for AASHO alternate loading)
APPROACH SLABS: 25' Long
ALIGNMENT: Tangent

KING & GAVARIS
CONSULTING ENGINEERS

SITE PLAN

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

OTTAWA COUNTY — STA. 63+32.75℄ STA. 64+67.25℄

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
AERIAL SURVEY	AERIAL SURVEY	[illegible]	V.B.	[illegible]	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042(13)	

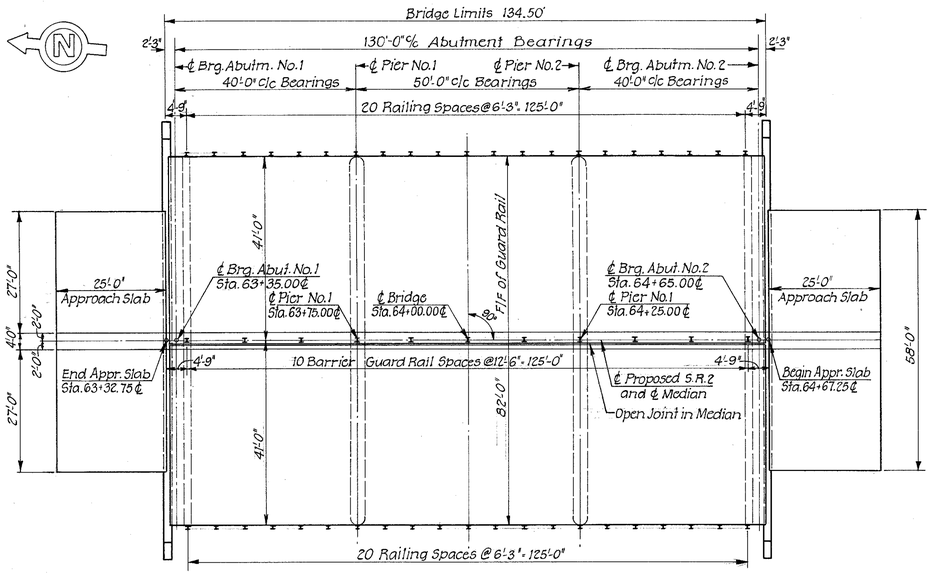
94
118

OTT-2-27.36
ERI-2-0.15

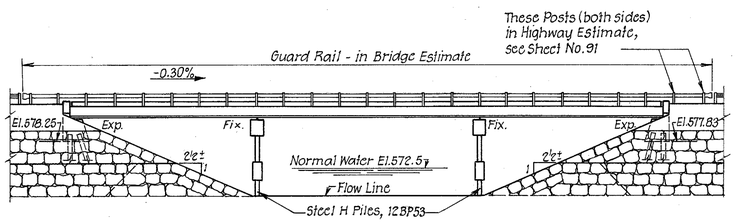
PIER ELEVATIONS

	A .18	B .30	C .41	D .53	E .64	F .75	G
PIER NO.1	583.14	583.26	583.37	583.49	583.60	583.71	579.57
PIER NO.2	582.99	583.11	583.22	583.34	583.45	583.56	579.50
	3.03	.15	.26	.38	.49	.60	

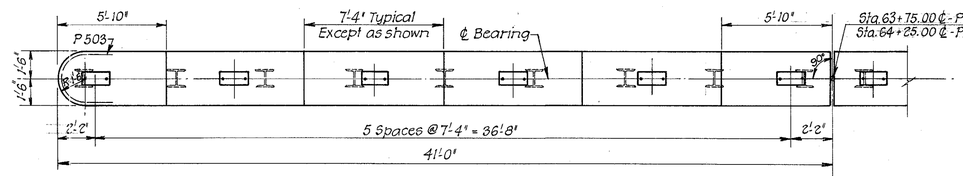
PIER NOTES
1. All reinforcing steel shall be 2" clear from face of concrete unless otherwise shown.
2. For Reinforcing Steel List, see Sheet No. 97



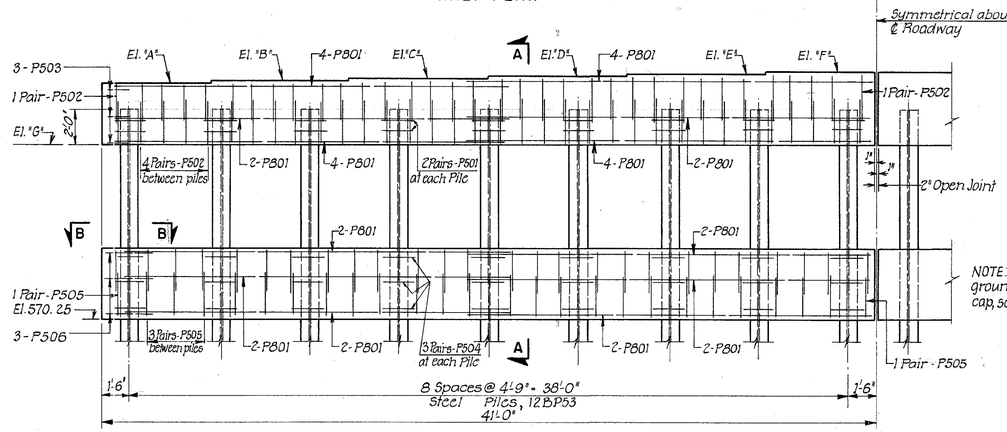
PLAN



ELEVATION

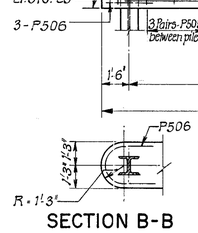


HALF PLAN

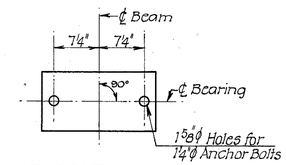


HALF ELEVATION

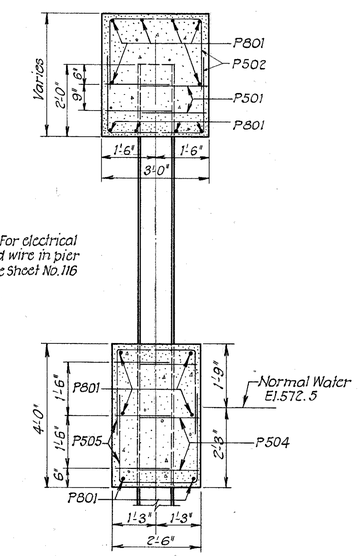
CAPPED PILE PIERS



SECTION B-B



ANCHOR BOLT LAYOUT



SECTION A-A

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abut.	Piers	Gen'l.
E-2	143	Cu.Yd.	Unclassified Excavation		143		
S-1	320	Cu.Yd.	Class "C" Concrete, Superstructure	320			
S-1	128	Cu.Yd.	Class "C" Concrete, Pier Caps & Diaphragms			128	
S-1	210	Cu.Yd.	Class "E" Concrete, Abutments		210		
S-3	15	Lin.Ft.	Waterproofing premolded sealing strip		15		
S-4	118,345	Lb.	Reinforcing Steel	90,505	14,938	12,902	
S-7	243,200	Lb.	Structural Steel	243,200			
S-8	243,200	Lb.	Field painting of structural steel	243,200			
S-9	72	Sq.Ft.	1" thick preformed expansion joint filler		72		
S-14	304	Lin.Ft.	Railing (Type 1-15,11 with galvanized steel posts and bolts)	304			
S-14	152	Lin.Ft.	Railing (Barrier Guard-Type 1-15,11 with galvanized steel posts & bolts)	152			
S-16	Lump	Lump Sum	First Test Pile				Lump
S-18	2520	Lin.Ft.	Steel Piles, 12 BP 53		1440	1080	
S-25	Lump	Lump Sum	Electric Lighting System*				Lump
S-29	50	Cu.Yd.	Porous Backfill		50		
SPECIAL	700	Cu.Yd.	Rock for Slope Protection, as per Plan**				700
SPECIAL	320	Each	Water-reducing set-retarding admixture***	320			

* For Quantities breakdown see Estimated Quantities - Lighting Sheet No. 115
** Rock for Slope Protection, as per plan see Note "C" Sheet No. 6
*** See Proposal Note.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-54 revised 12-1-54, CSB-1-55 Sheets 1 & 2 revised 2-2-59.

DESIGN SPECIFICATIONS: This structure conforms to the requirments of "Design Specifications for Highway Structures" of the State of Ohio Department of Highways, dated 9-1-57 together with current revisions therefore.

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

PILES shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments and piers.

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.

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.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope (bottom of rock slope protection) and to the level of the subgrade for a distance of 200 ft. back of the abutments, after which excavation shall be made for the abutment. All embankment should be in place before the abutments are constructed.

KING & GAVARIS
CONSULTING ENGINEERS

GENERAL PLAN AND PIERS

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

OTTAWA COUNTY

STA. 63+32.75 ℄
STA. 64+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.S.L.	V.B.	P.A.M.	W.S.L.	WC	12-8-61	9-17-62

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

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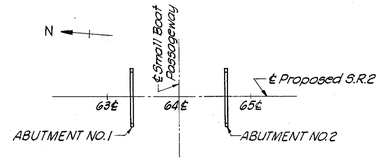
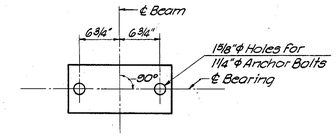
H8

OTT-2-27.36
ERI-2-0.15

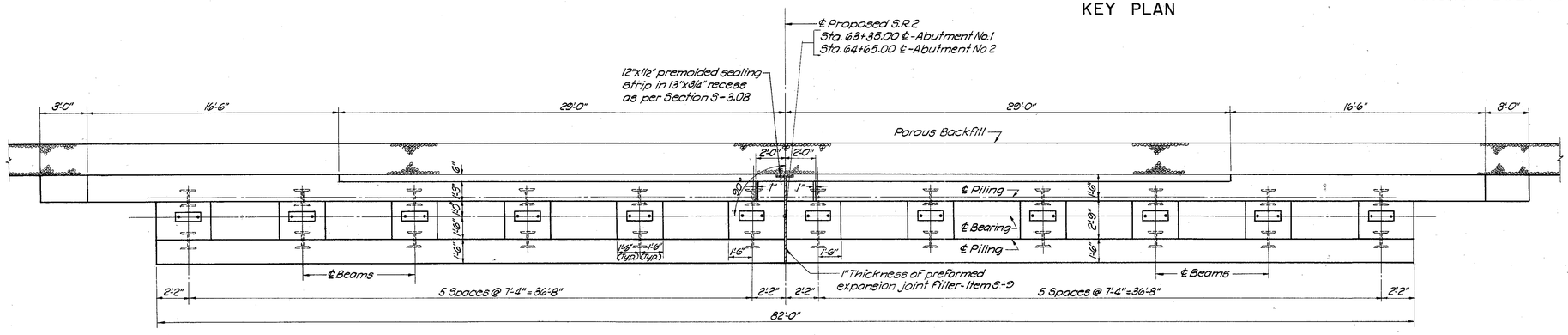
POROUS BACKFILL shall extend upward to the approach slab and to the paved shoulders, and outward to the surface of the embankment slopes. Excavation therefore, in excess of that required for the construction of the abutment, shall be considered as paid for in the price per cu. yd. paid for porous backfill.



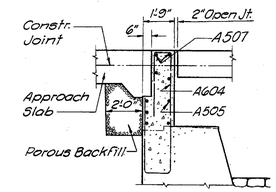
KEY PLAN



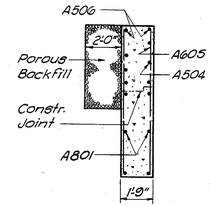
ANCHOR BOLT LAYOUT



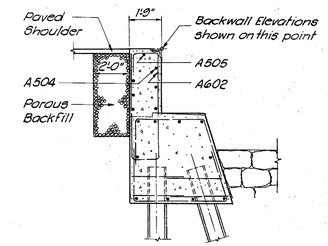
PLAN



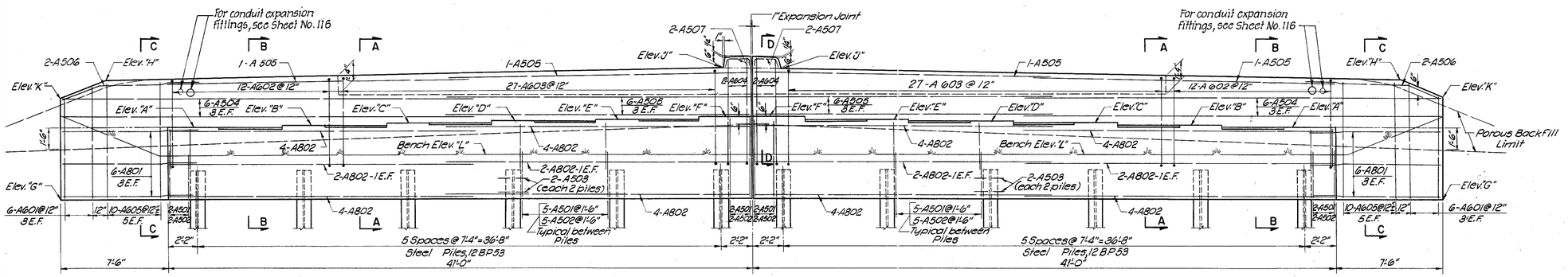
SECTION D-D



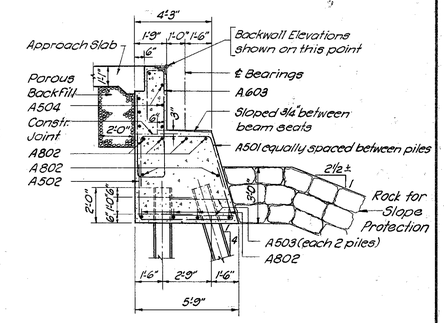
SECTION C-C



SECTION B-B



ELEVATION



SECTION A-A

ABUTMENT ELEVATIONS											
	A .28	B .39	C .50	D .62	E .73	F .85	G	H	J	K	L
ABUTMENT NO.1	583.24	583.35	583.40	583.58	583.62	583.81	578.25	586.59	587.27	585.39	581.25
ABUTMENT NO.2	582.85	582.96	583.08	583.19	583.31	583.42	577.83	586.20	586.88	585.00	580.83
	.89	3.00	.12	.23	.35	.46					

NOTES:

1. All reinforcing steel shall be 2" clear from face of concrete unless otherwise shown.
2. Designations used are as follows: E.F.=Each face.
3. For Reinforcing Steel List, see Sheet No. 97

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ABUTMENTS

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)

OTTAWA COUNTY

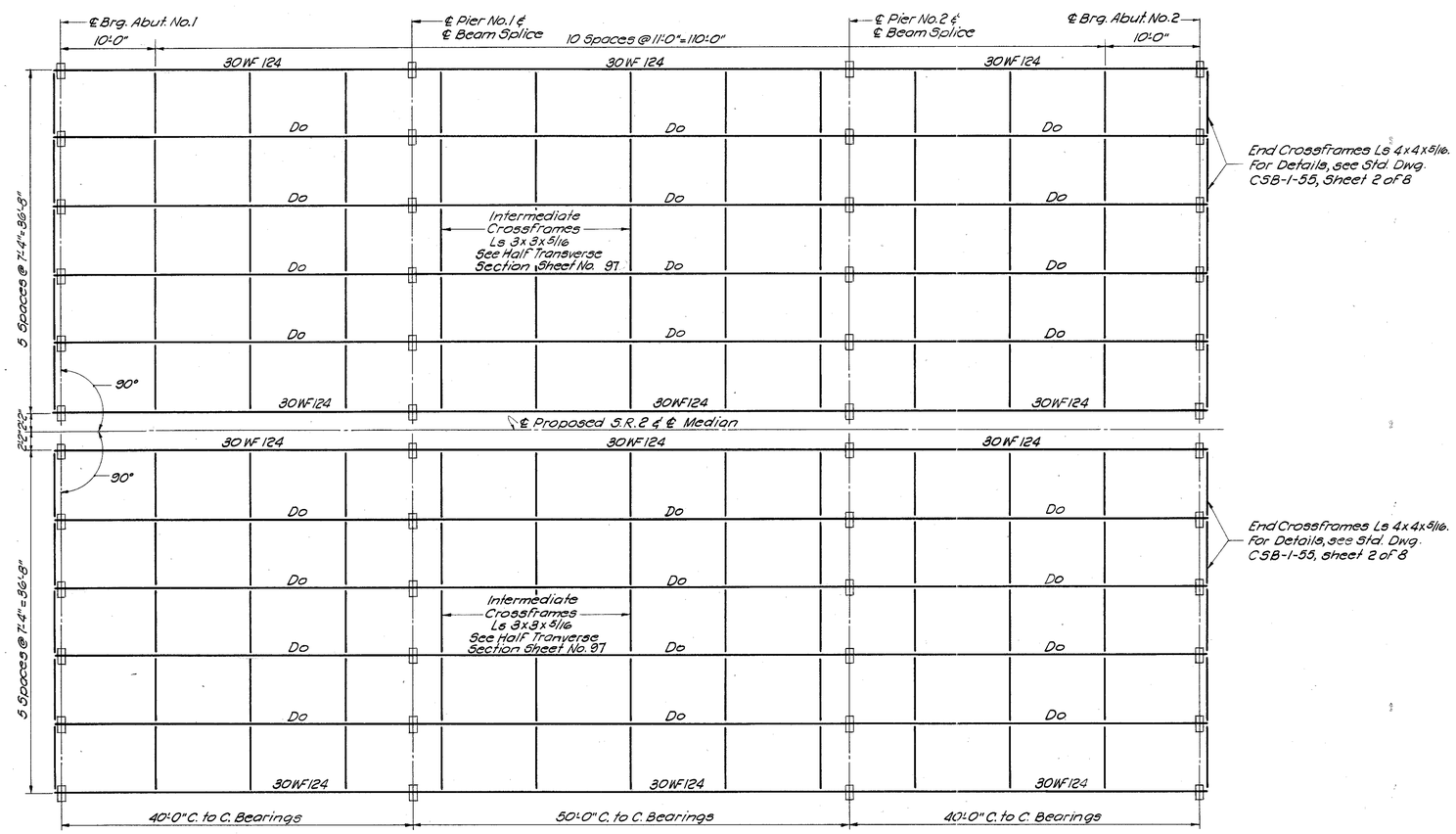
STA. 63+32.75 ℄
STA. 64+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.T.L.	F.A.M.	A.W.	V.T.L.	[illegible]	12-8-61	9-11-62

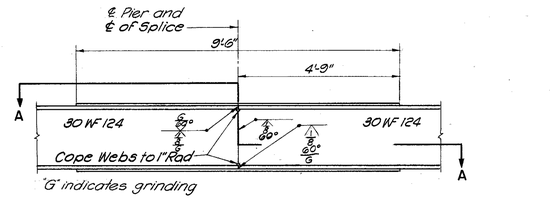
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

36
H8

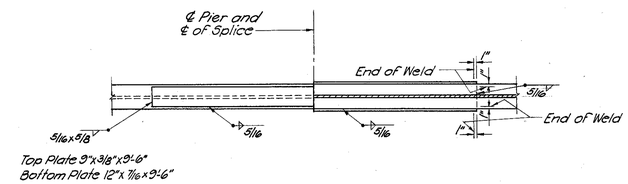
OTT-2-27.36
ERI-2- 0.15



FRAMING PLAN



ELEVATION



SECTION A-A

BEAM SPLICE DETAILS

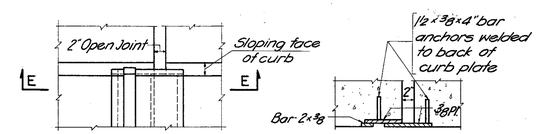
BEAM SPLICE WELDING PROCEDURE

1. Raise the Abutment ends of the beams 3/8".
2. Butt - weld the beam flanges and web, using the following sequence: make two passes on each flange, then two on the web; repeat, using one pass at each location, until welds are completed.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

NOTES:

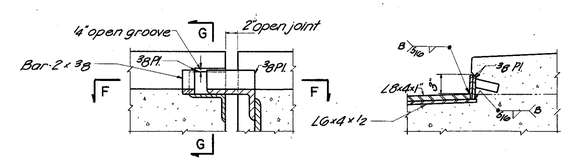
1. For Bearing Plate Details see Std. Dwg. CSB-1-55 Sheet No. 1 of 8.
2. Provide Bumper Ls-8"x6"x3/4" at Abutments, see Standard Drawing CSB-1-55, sheet No. 1 of 8.

DEFLECTIONS AND CAMBER				
LOCATION	OUTSIDE BEAMS		INSIDE BEAMS	
	END SPAN	MID. SPAN	END SPAN	MID. SPAN
Deflection due to Wt. of steel	0	0	0	0
Deflection due to remaining D.L.	1/8"	1/8"	1/8"	1/8"
Sum of Deflections	1/8"	1/8"	1/8"	1/8"
Required Camber	0	0	0	0



PART PLAN

SECTION F-F



SECTION E-E

SECTION G-G

CURB PLATE DETAILS AT MEDIAN

KING & GAVARIS
CONSULTING ENGINEERS

STEEL FRAMING PLAN

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
OTTAWA COUNTY

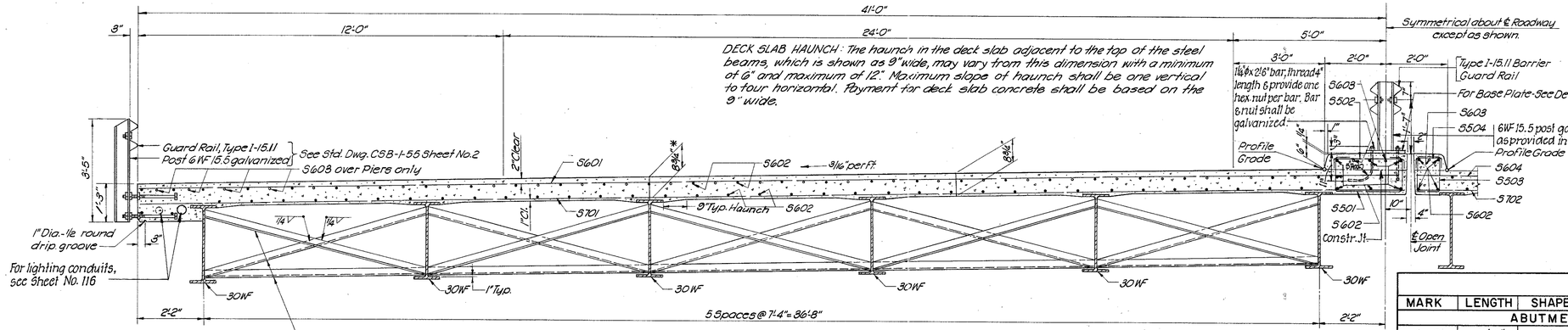
STA. 63+32.75 ℄
STA. 64+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.J.L.	A.J.	A.M.B.	W.J.L.		12-8-61	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	F1042 (13)	

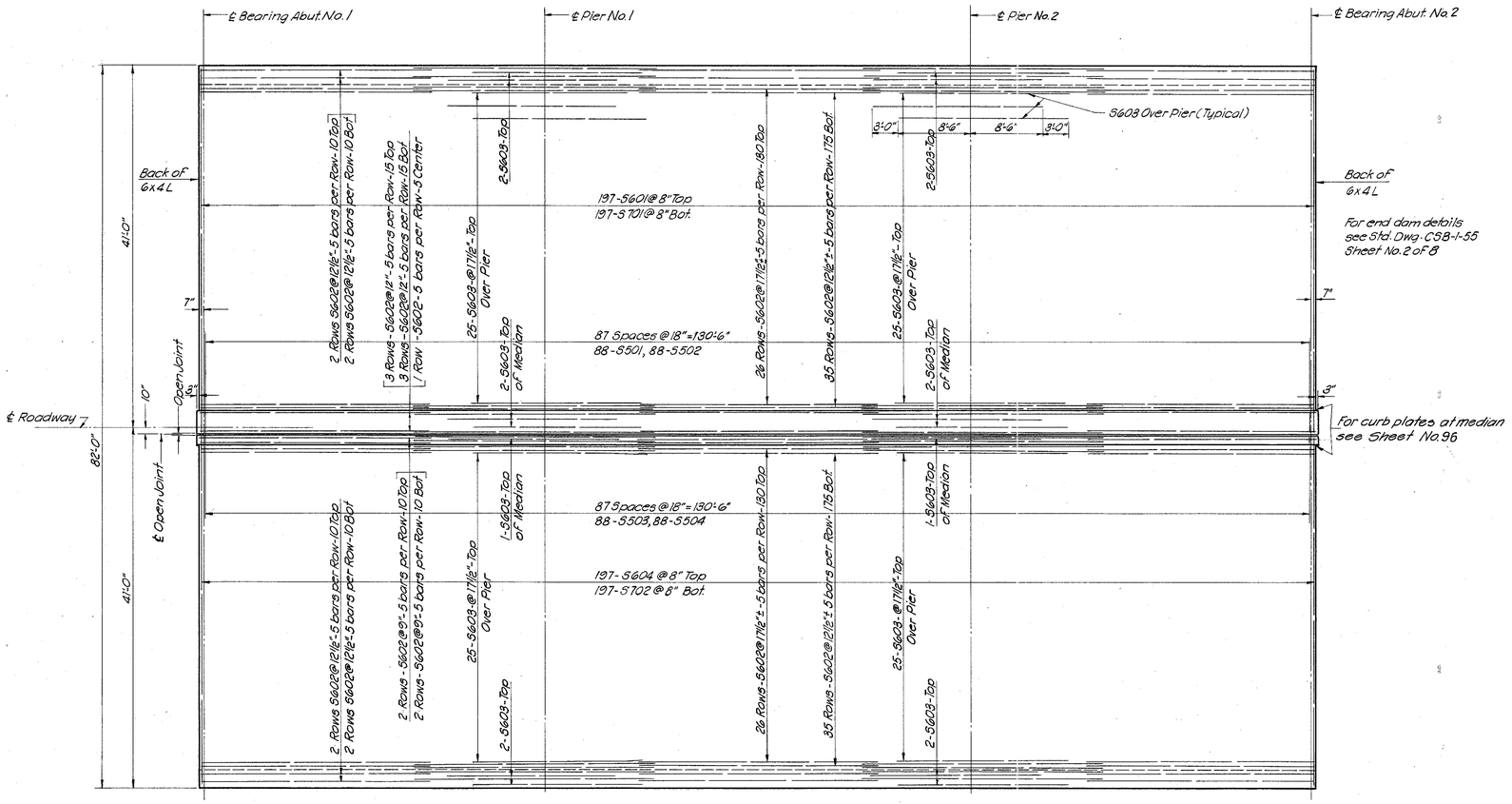
97
48

OTT-2-27.36
ERI-2-0.15

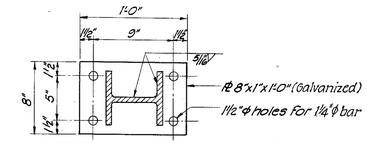


* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

HALF TRANSVERSE SECTION



SLAB REINFORCING



DETAIL "A"

REINFORCING STEEL LIST

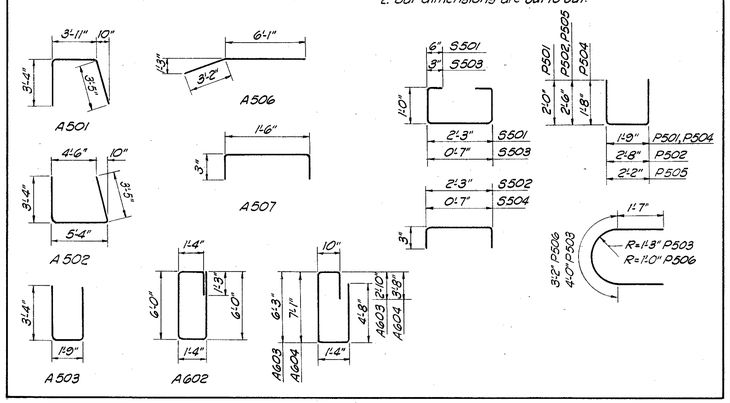
MARK	LENGTH	SHAPE	NO.	WEIGHT
ABUTMENTS				
A 501	10'-6"	Bt.	116	1270
A 502	11'-11"	Bt.	116	1442
A 503	8'-3"	Bt.	96	826
A 504	28'-8"	Str.	24	718
A 505	21'-2"	Str.	32	706
A 506	9'-3"	Bt.	8	77
A 507	1'-10"	Bt.	8	15
A 601	7'-10" thru 7'-10" Varies by 5"	Str.	8-Series of 8 bars	267
A 602	15'-8"	Bt.	48	1130
A 603	15'-8"	Bt.	108	2541
A 604	17'-4"	Bt.	8	208
A 605	8'-0"	Str.	40	481
A 801	10'-0"	Str.	24	641
A 802	21'-7"	Str.	80	4610
PIERS				
P 501	5'-7"	Bt.	144	889
P 502	7'-6"	Bt.	272	2128
P 503	7'-2"	Bt.	12	90
P 504	4'-9"	Bt.	216	1070
P 505	7'-0"	Bt.	208	1519
P 506	6'-4"	Bt.	12	79
P 801	21'-0"	Str.	128	7177

MARK	LENGTH	SHAPE	NO.	WEIGHT
SUPERSTRUCTURE				
S 501	4'-11"	Bt.	88	451
S 502	2'-7"	Bt.	88	237
S 503	2'-9"	Bt.	88	252
S 504	0'-11"	Bt.	88	84
S 601	41'-4"	Str.	197	12,230
S 602	27'-10"	Str.	705	20,473
S 603	20'-0"	Str.	114	3425
S 604	39'-8"	Str.	197	11,737
S 701	41'-4"	Str.	197	16,643
S 702	39'-8"	Str.	197	15,973
REPLACEMENT BARS				
RE 5	5'-7"	Str.	1	
RE 6	5'-11"	Str.	4	
RE 7	6'-2"	Str.	2	
RE 8	6'-6"	Str.	1	

If reinforcing bars are fabricated from stock which has previously been tested approved by the OHIO Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

NOTES

1. Bar size is indicated in the bar mark. The first digit where three digits are used, indicates the bar size number. For example, A601 is a No. 6 size bar.
2. Bar dimensions are out to out.



NOTE:

Slab thicknes includes 1" monolithic wearing surface.

KING & GAVARIS
CONSULTING ENGINEERS

SUPERSTRUCTURE ROADWAY SLAB & REINFORCING STEEL LIST

BRIDGE NO. OTT-2-2820
OVER SANDUSKY BAY
(SMALL BOAT PASSAGEWAY)
OTTAWA COUNTY

STA. 63+32.75 ℄
STA. 64+67.25 ℄

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.J.L.	P.A.M.	A.M.	V.J.L.	Ve	12-8-61	