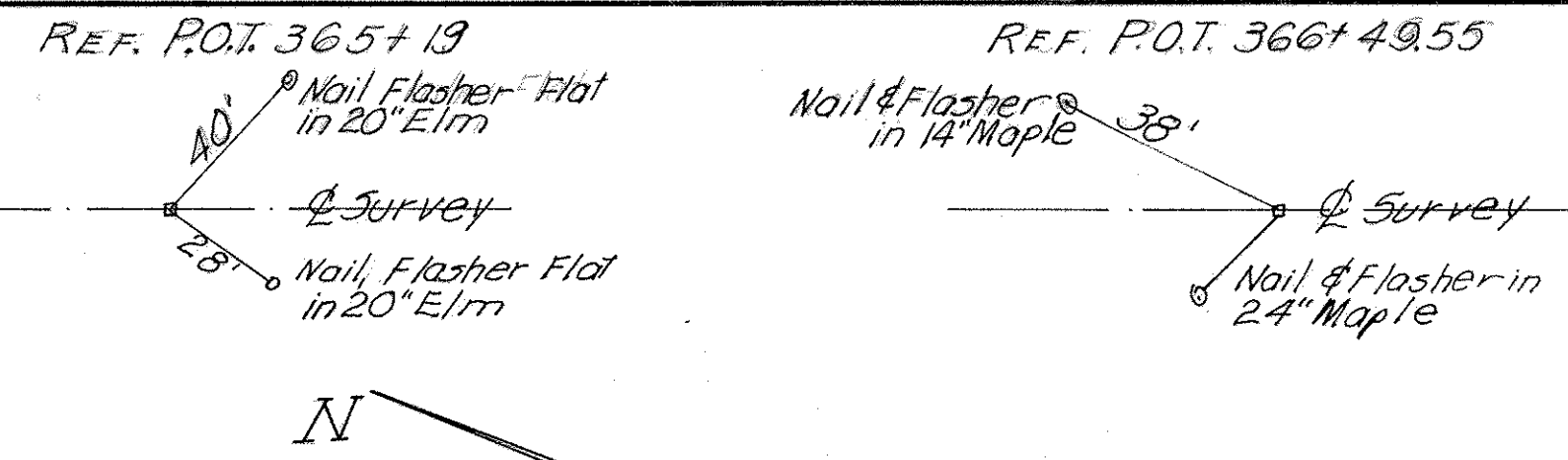
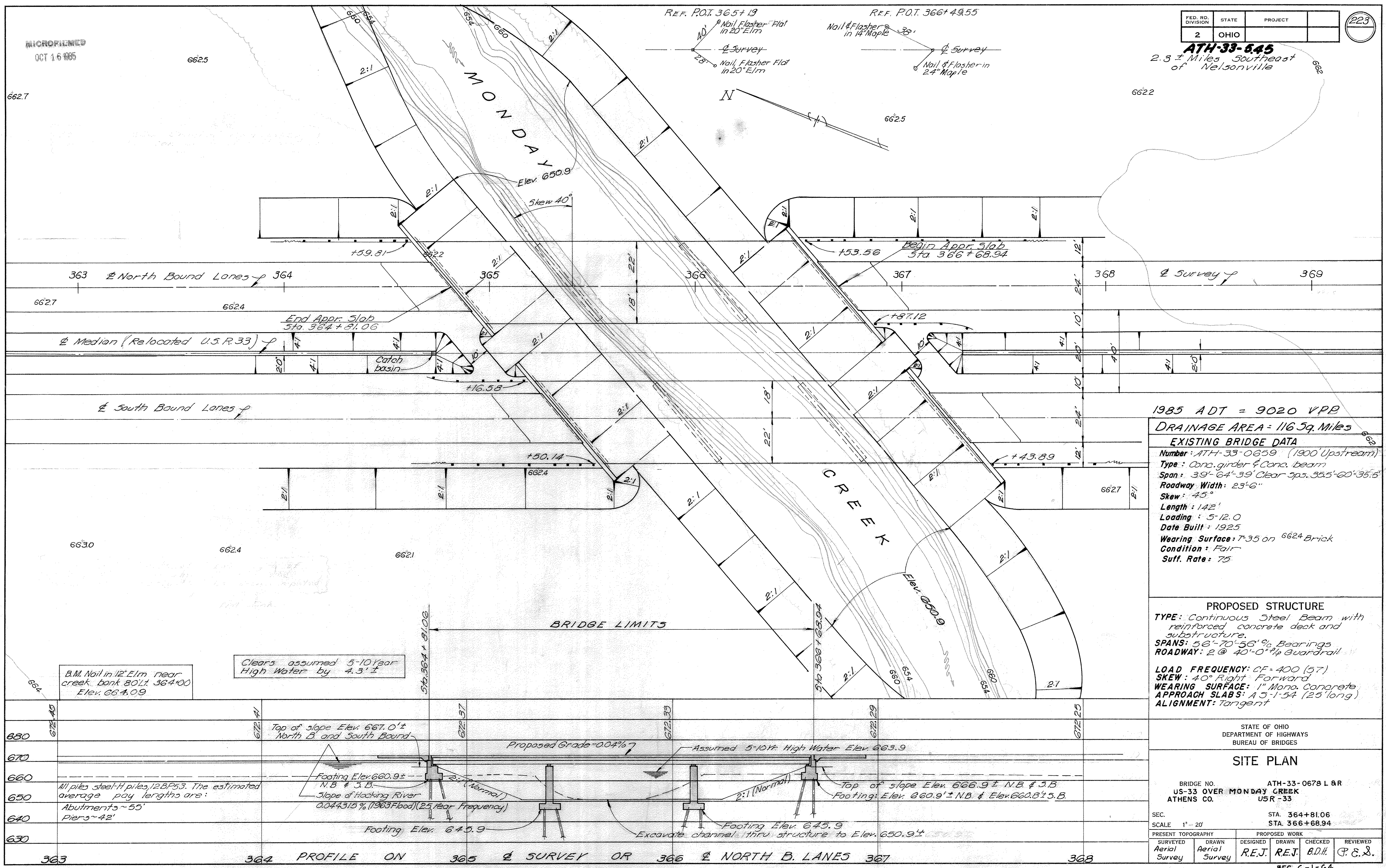


MICROFILMED  
OCT 16 1985

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		223

**ATH-33-645**  
2.3 ± Miles Southeast of Nelsonville



1985 ADT = 9020 VPB  
DRAINAGE AREA = 116.59 Miles  
**EXISTING BRIDGE DATA**  
Number: ATH-33-0659 (1900 Upstream)  
Type: Conc. girder & Conc. beam  
Span: 39'-64'-39' Clear sps. 35.5'-60'-35.5'  
Roadway Width: 23'-6"  
Skew: 45°  
Length: 142'  
Loading: 5-12.0  
Date Built: 1925  
Wearing Surface: T-35 on 6624 Brick  
Condition: Fair  
Suff. Rate: 75

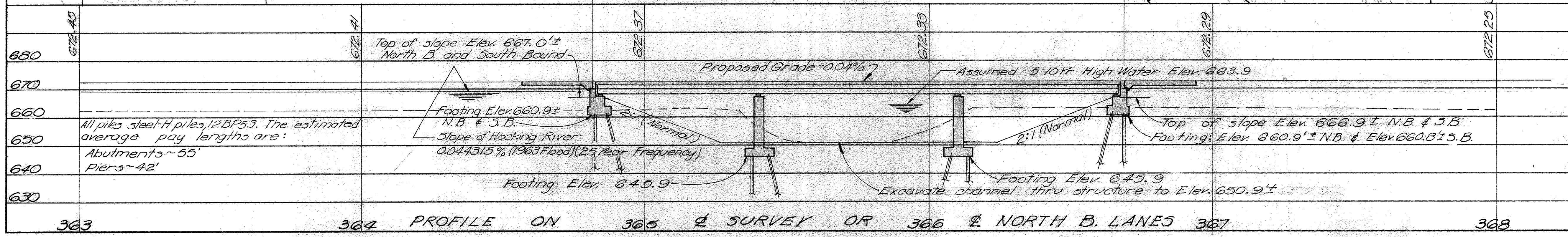
**PROPOSED STRUCTURE**  
TYPE: Continuous Steel Beam with reinforced concrete deck and substructure.  
SPANS: 56'-70'-56' @ Bearings  
ROADWAY: 2 @ 40'-0" @ 1/4 Guardrail  
LOAD FREQUENCY: CF-400 (57)  
SKEW: 40° Right Forward  
WEARING SURFACE: 1" Mono. Concrete  
APPROACH SLABS: A 5'-1-54 (25' long)  
ALIGNMENT: Tangent

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES  
**SITE PLAN**  
BRIDGE NO. ATH-33-0678 L & R  
US-33 OVER MONDAY CREEK  
ATHENS CO. USR-33

SEC.	STA. 364+81.06		
SCALE	1" = 20'		
	STA. 366+68.94		
PRES. TOPOGRAPHY	PROPOSED WORK		
SURVEYED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	R.E.J.	R.E.J. B.D.H. P.E.S.

B.M. Nail in 12" Elm near creek bank 80' L 364+00 Elev. 664.09

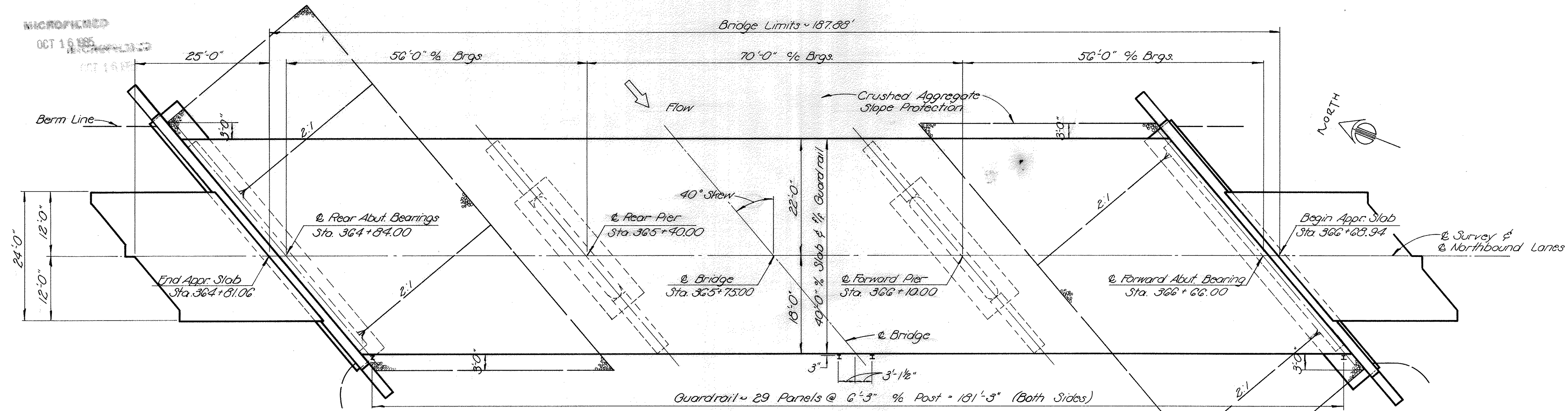
Clears assumed 5-10 Year High Water by 4.3' ±



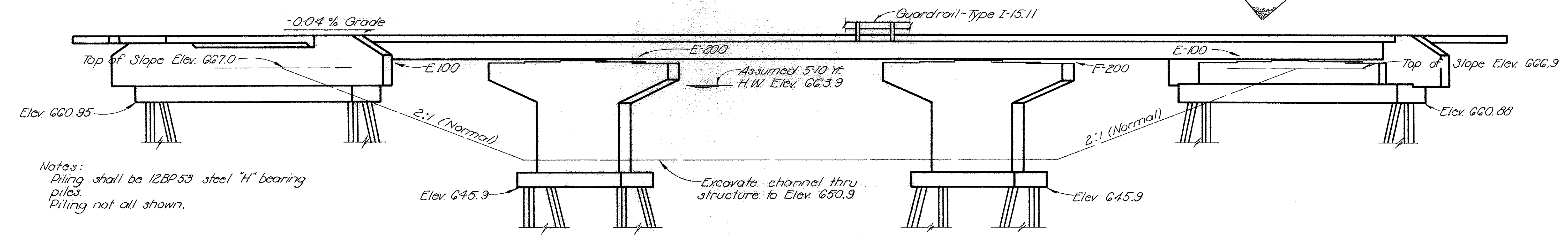
363 364 PROFILE ON 365 & SURVEY OR 366 & NORTH B. LANES 367 368



ATH-33-548



GENERAL PLAN



ELEVATION

Notes:  
Piling shall be 12BP53 steel "H" bearing piles.  
Piling not all shown.

GENERAL NOTES

**REFERENCE** shall be made to Standard Drawings SD-1-63 Sheets 1 & 2, dated 11-12-63; CSB-1-63 sheets 1 & 4 dated 12-18-63; and FSB-1-62 revised 1-15-63 and to Supplemental Specifications S-101 dated 7-12-62, and S-307 dated 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.

**DESIGN LOADING - CF 400 (57)**  
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. (except piling) (ASTM A7 and A373 steel not permitted)  
Reinforcing Steel - ASTM A-15, A-16, A-160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

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

**PILES** shall be driven with a hammer of not less than 11,000 ft. lb. per blow to firm contact with bedrock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18:05 is not less than the following value for a pile hammer of the indicated energy rating:

60 tons per pile using an 11000 ft. lb. hammer.  
55 tons per pile using a 15000 ft. lb. or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 45 tons per pile.  
**FIRST TEST PILE.** Payment will be made for only one first test pile. It may be driven for either the Right or Left bridge.

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

**HIGH STRENGTH STEEL BOLTS:** Under Sec. 8.710, High-Strength Steel Bolts, Nuts and Washers, paragraph two (2), shall be completely revised and the last sentence of paragraph four (4), revised to read as follows:

"In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts to complete contact. 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-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner."

"Bolt lengths determined by the use of Table No. 1 shall be adjusted to the next 1/4 inch length increment."

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
<b>GENERAL PLAN &amp; ELEVATION AND NOTES</b>						
<b>BRIDGE NO. ATH-33-067BL&amp;R</b>						
<b>OVER MONDAY CREEK</b>						
<b>NORTHBOUND LANES</b>						
ATHENS COUNTY						STA. 364+81.06
						STA. 366+68.94
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JEF	JEF	jtk	WCK	BFG	6-1-64	



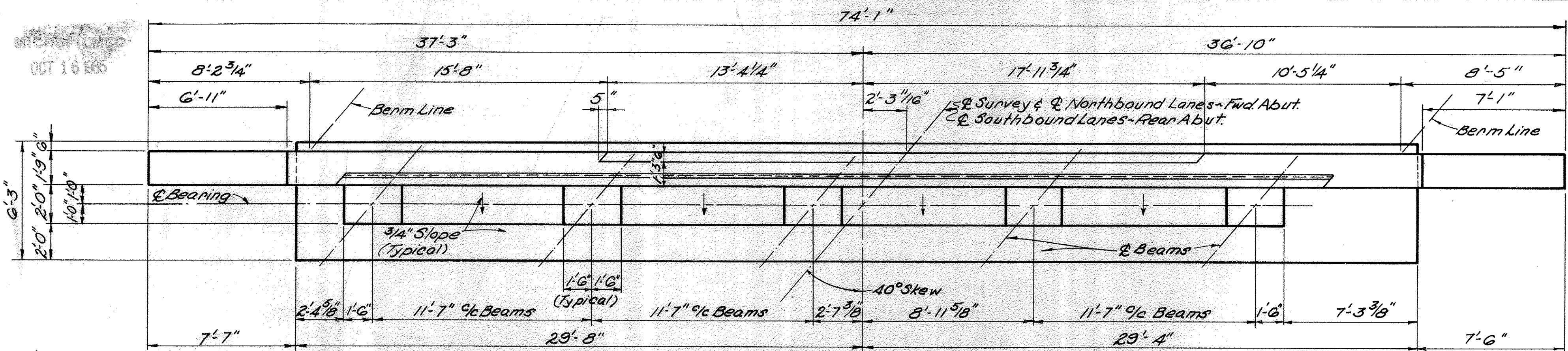




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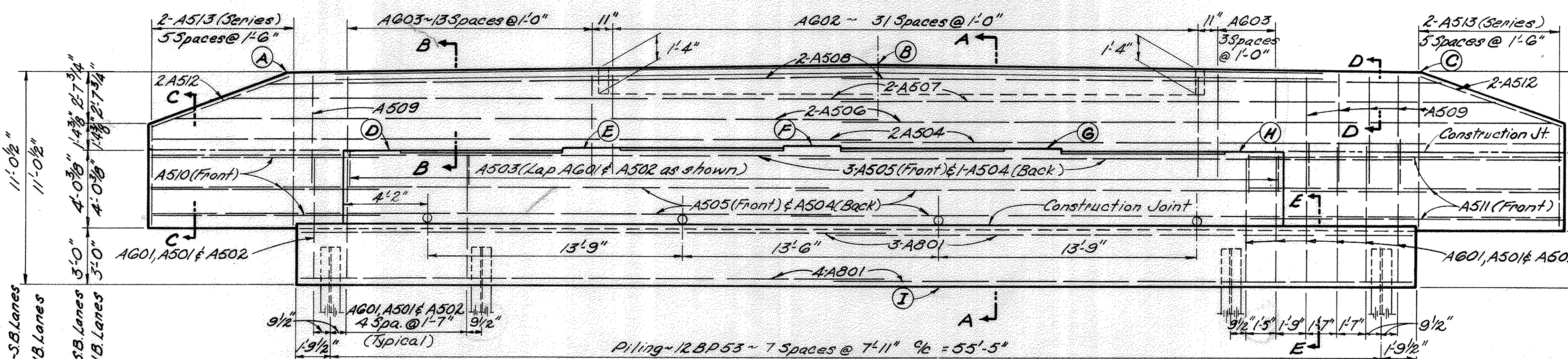
FED. RD. DIVISION	STATE	PROJECT	220
2	OHIO		

ATH-33-5.48

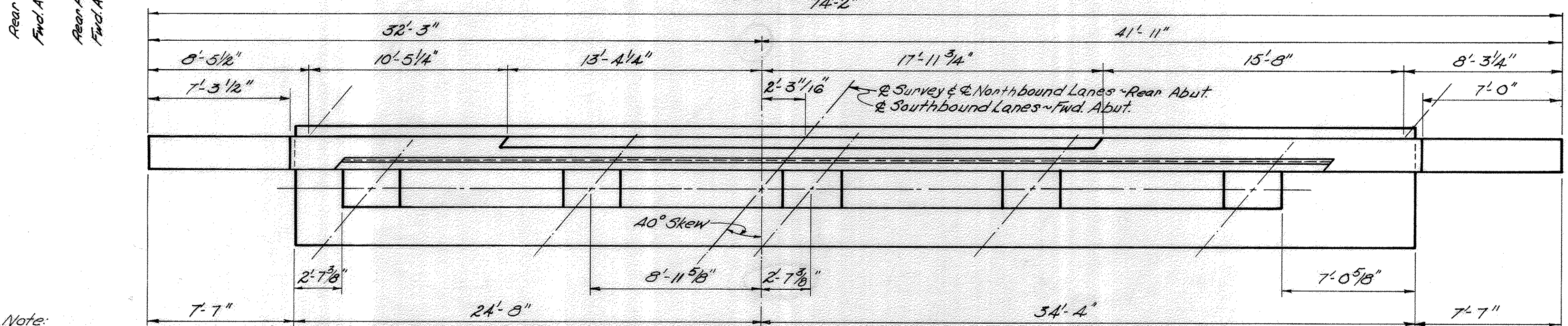


**PLAN "A"**  
(Rear Abut.-S.B. Lanes & Fwd. Abut.-N.B. Lanes)

Legend:  
N.B. ~ Northbound  
S.B. ~ Southbound

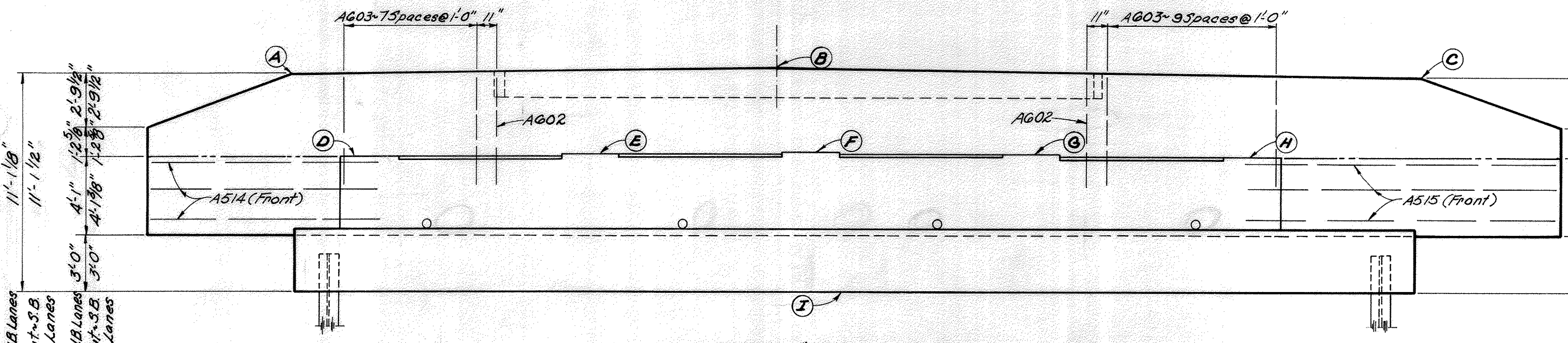


**ELEVATION "A"**  
(Rear Abut.-S.B. Lanes & Fwd. Abut.-N.B. Lanes)

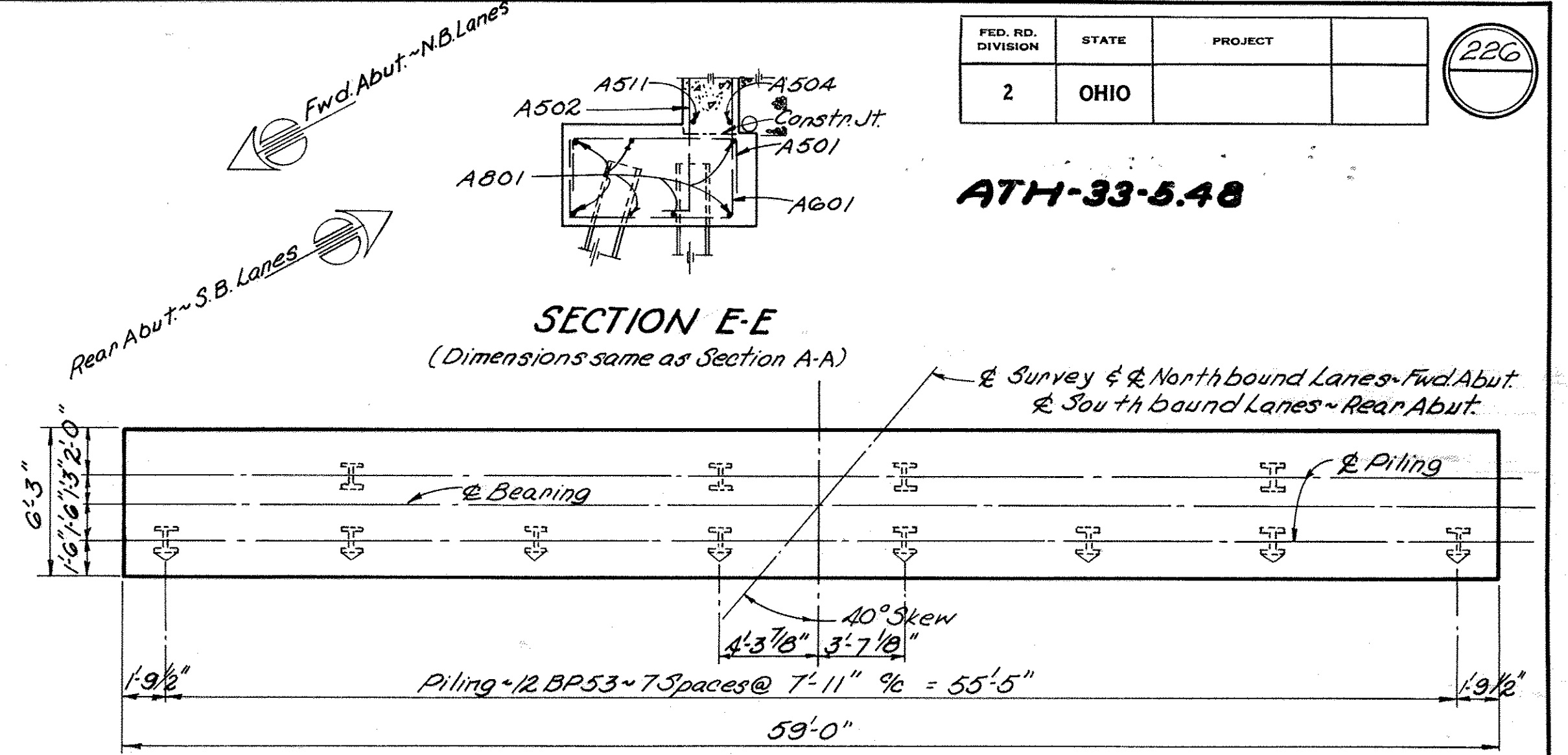


**PLAN "B"**  
(Rear Abut.-N.B. Lanes & Fwd. Abut.-S.B. Lanes)

Note:  
Details, dimensions, and reinforcement for PLAN "B" & ELEVATION "B" unless shown otherwise, are the same as for PLAN "A" & ELEVATION "A", respectively.

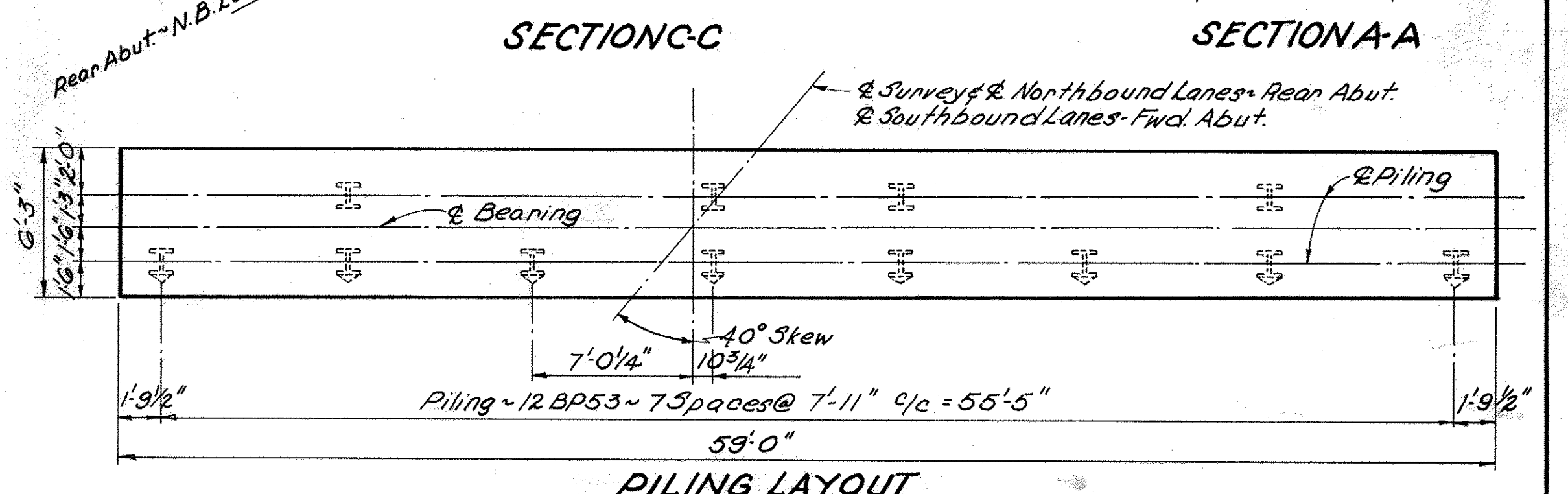
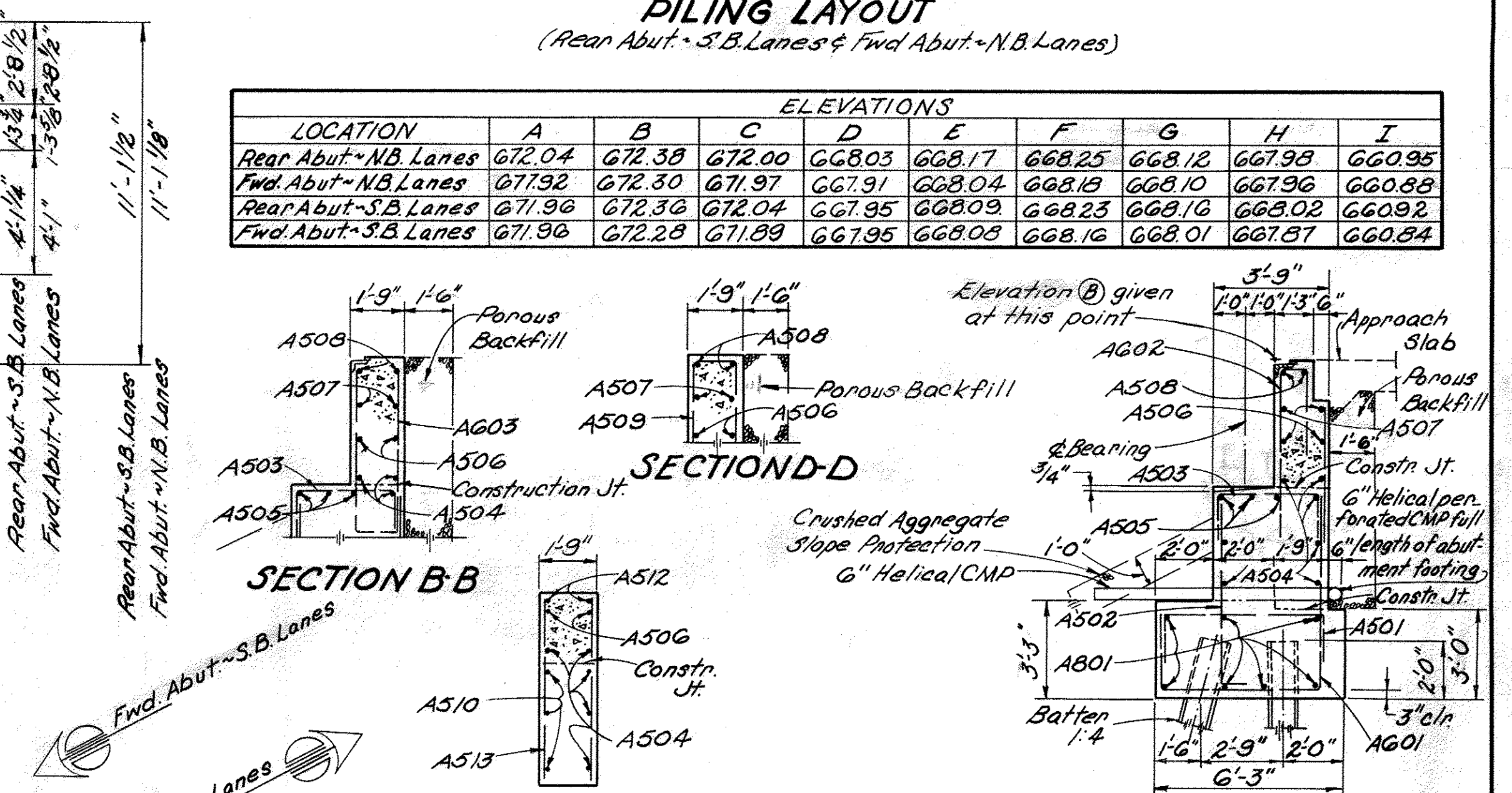


**ELEVATION "B"**  
(Rear Abut.-N.B. Lanes & Fwd. Abut.-S.B. Lanes)



**PILING LAYOUT**  
(Rear Abut.-S.B. Lanes & Fwd. Abut.-N.B. Lanes)

LOCATION	ELEVATIONS								
	A	B	C	D	E	F	G	H	I
Rear Abut.-N.B. Lanes	672.04	672.38	672.00	668.03	668.17	668.25	668.12	667.98	660.95
Fwd. Abut.-N.B. Lanes	677.92	672.30	671.97	667.91	668.04	668.15	668.10	667.96	660.88
Rear Abut.-S.B. Lanes	671.96	672.36	672.04	667.95	668.09	668.23	668.16	668.02	660.84
Fwd. Abut.-S.B. Lanes	671.96	672.28	671.89	667.95	668.03	668.16	668.01	667.87	660.84



**PILING LAYOUT**  
(Rear Abut.-N.B. Lanes & Fwd. Abut.-S.B. Lanes)

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level at the top of slope, after which excavation shall be made for the abutment and piles driven.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the end of the abutment footing. Excavation thereon, 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.

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.

CONCRETE shall be Class "E"

PILE LEGEND	
	Battered Vertical

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

**ABUTMENT DETAILS**  
BRIDGE No. ATH-33-067BL4R  
OVER MONDAY CREEK

ATHENS COUNTY STA. 364+81.06  
STA. 366+68.94

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JEF	JEF	WCK	BFG	G-1-64		

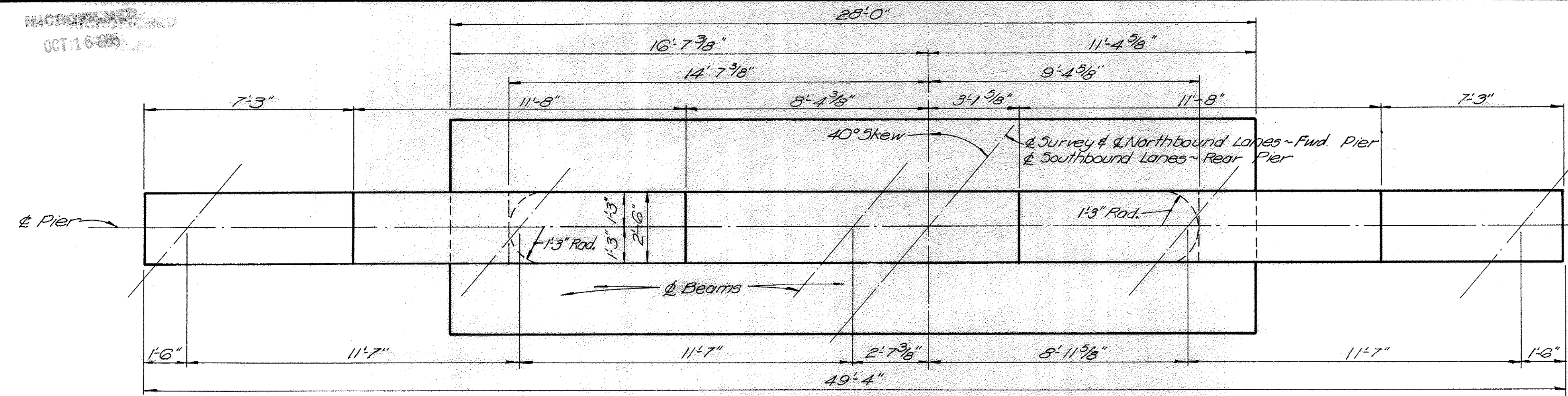


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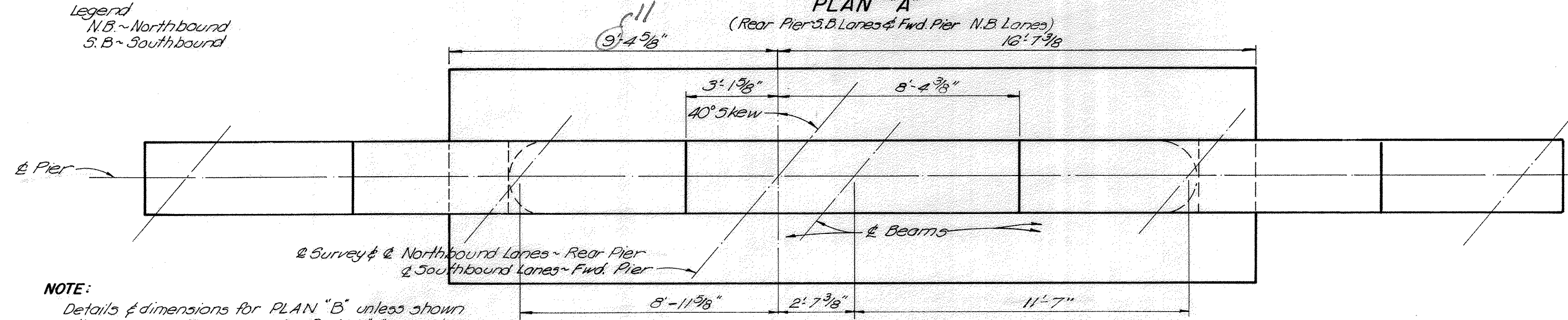
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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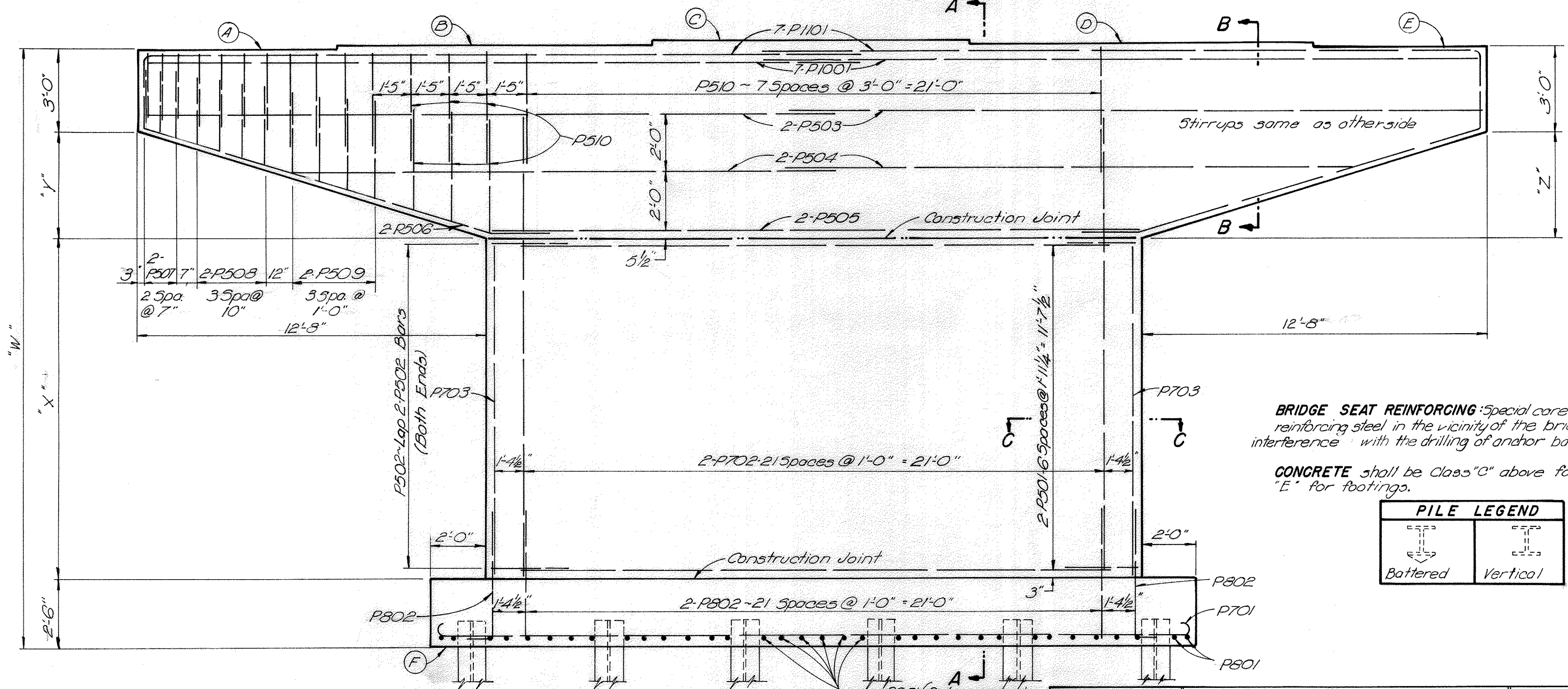
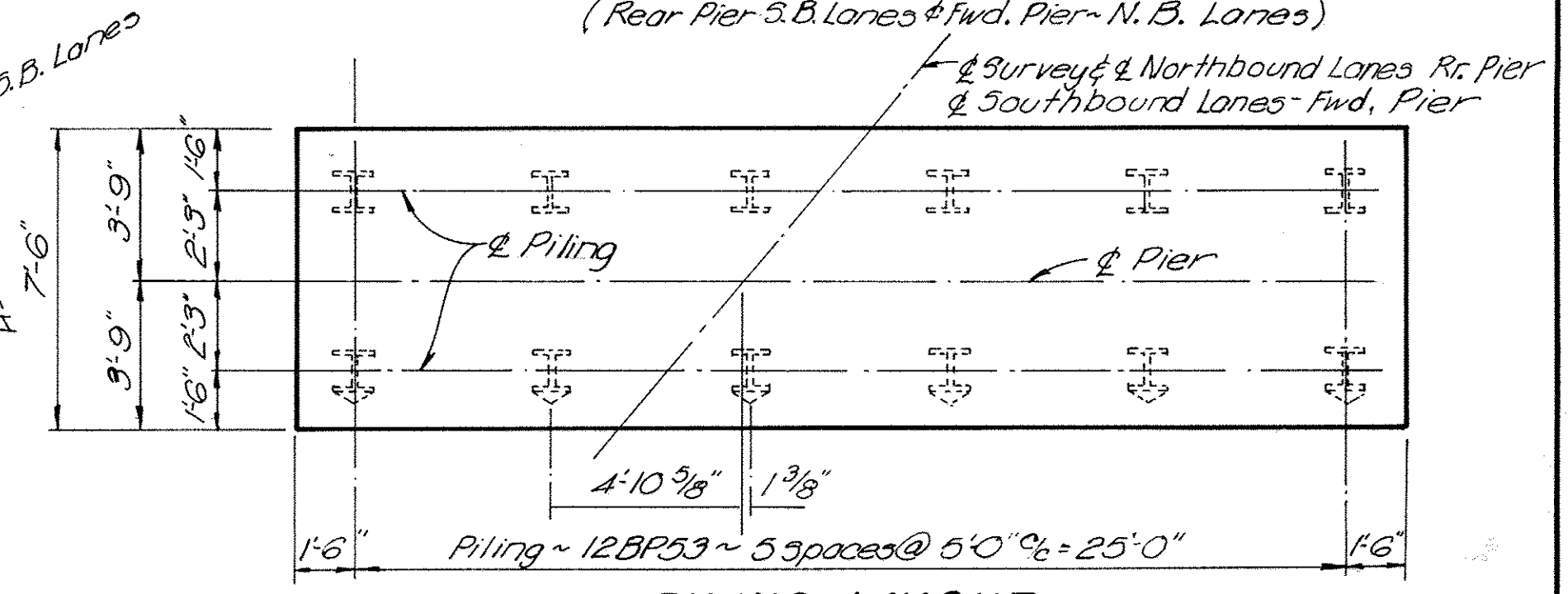
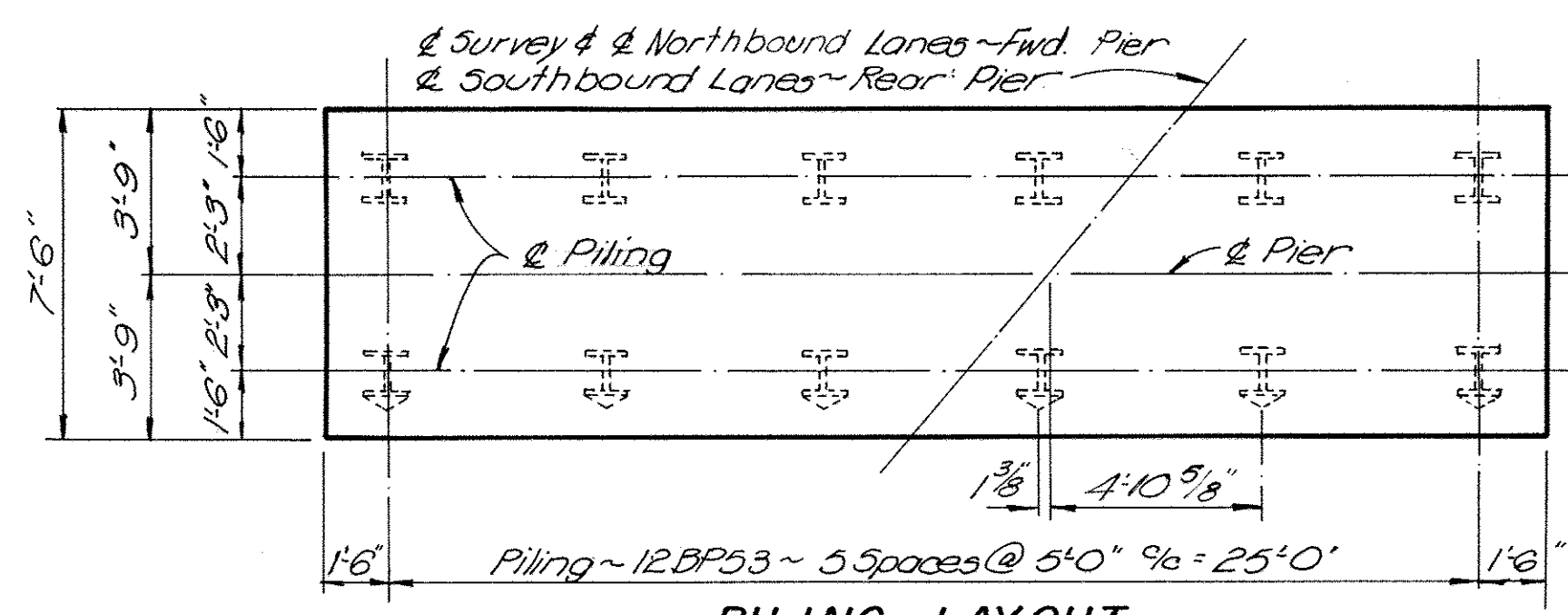
ATH-33-548



Legend  
N.B. ~ Northbound  
S.B. ~ Southbound



NOTE:  
Details & dimensions for PLAN "B" unless shown otherwise are the same as for PLAN "A" except being opposite hand.

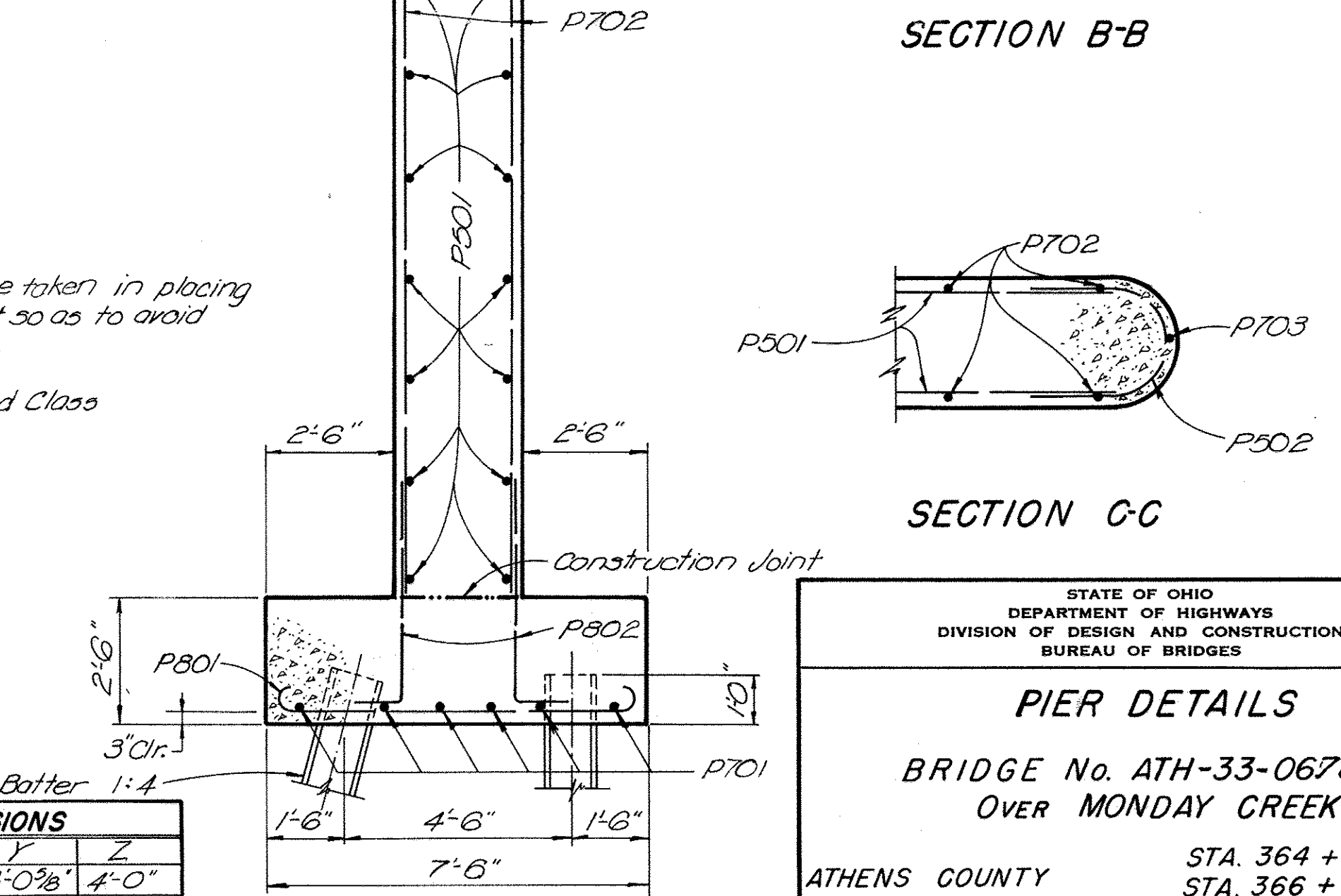
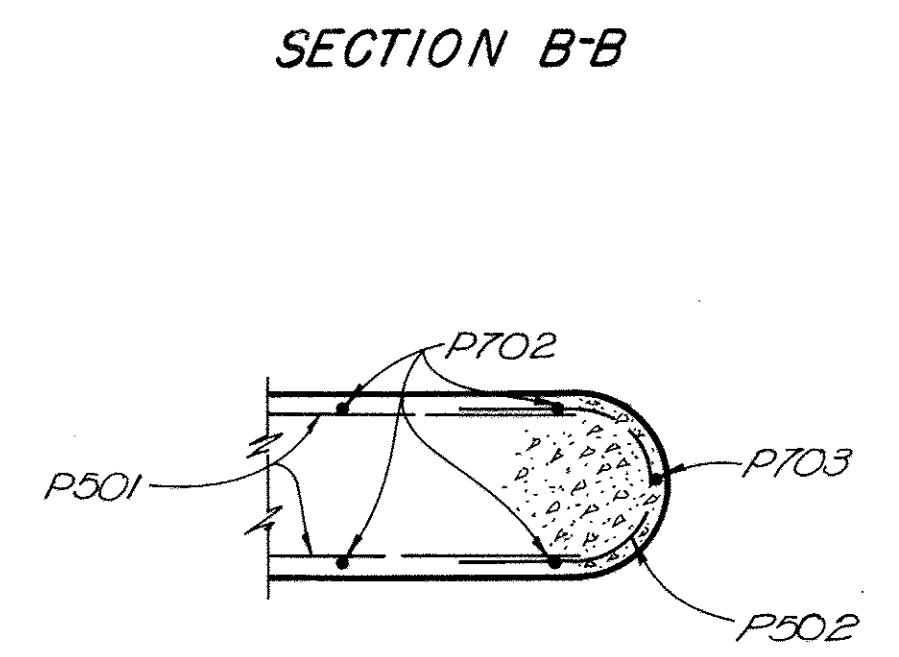
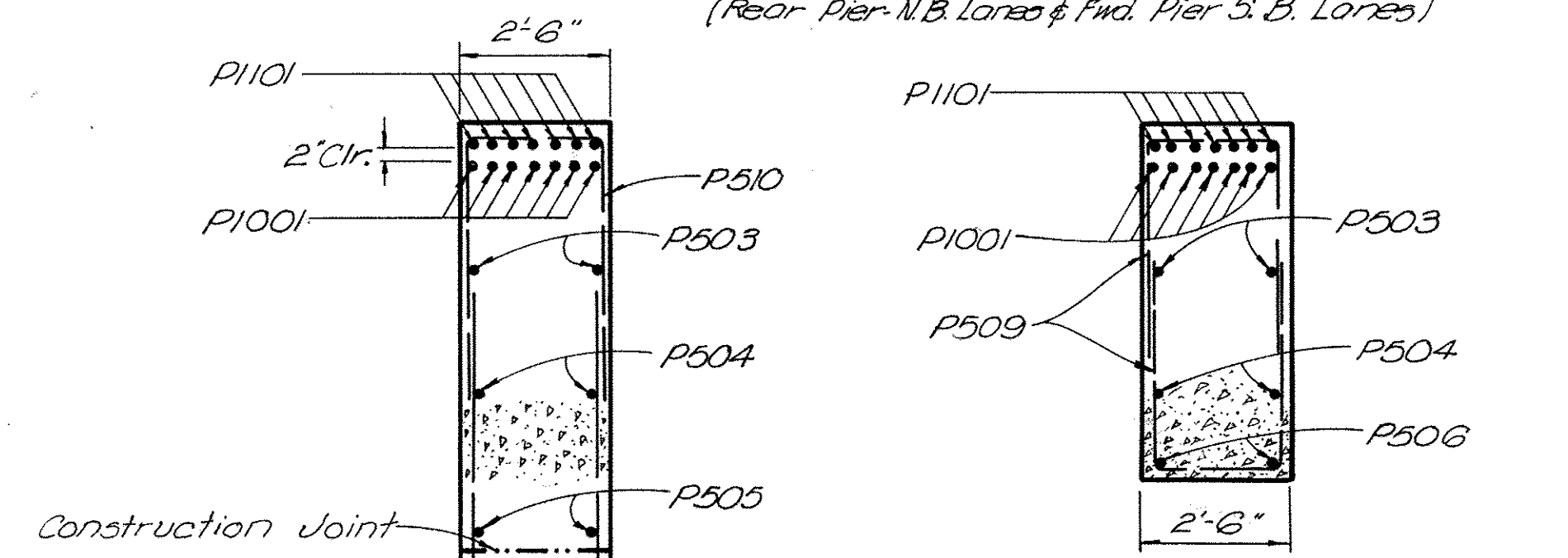


BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

CONCRETE shall be Class "C" above footing and Class "E" for footings.

PILE LEGEND

Battered	Vertical
----------	----------



LOCATION	ELEVATIONS						DIMENSIONS			
	A	B	C	D	E	F	W	X	Y	Z
Rr. Pier-N.B. Lanes	667.97	668.11	668.19	668.05	667.92	645.9	22'-0 1/8"	12'-6 1/4"	4'-0 3/8"	4'-0"
Fwd. Pier-N.B. Lanes	667.60	667.73	667.87	667.79	667.65	645.9	21'-8 3/8"	12'-2 3/8"	4'-0"	4'-0 3/8"
Rr. Pier-S.B. Lanes	667.83	668.02	668.17	668.09	667.96	645.9	21'-11 3/4"	12'-5 3/4"	4'-0"	4'-1"
Fwd. Pier-S.B. Lanes	667.62	667.77	667.85	667.70	667.56	645.9	21'-8 3/8"	12'-1 1/8"	4'-1"	4'-0"

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

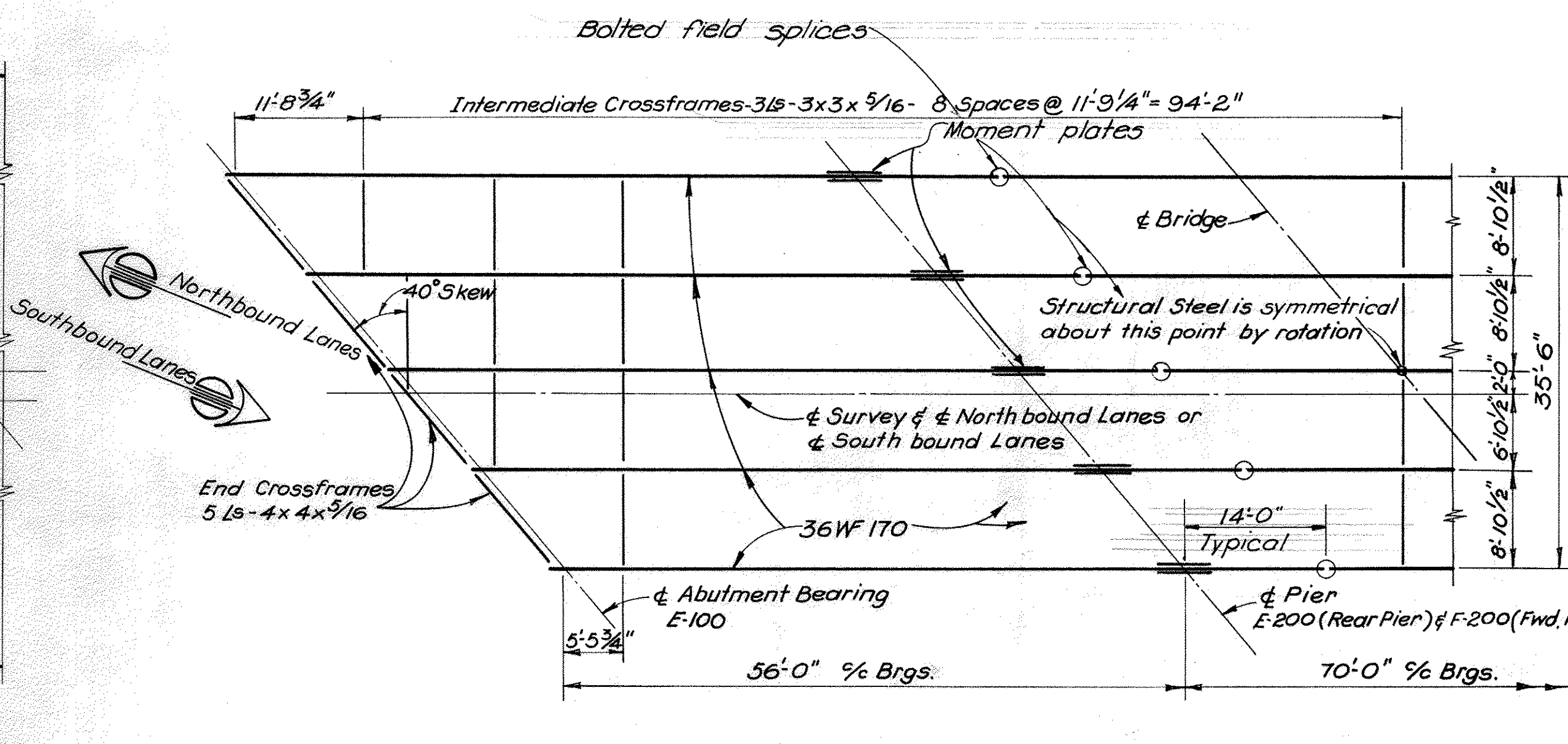
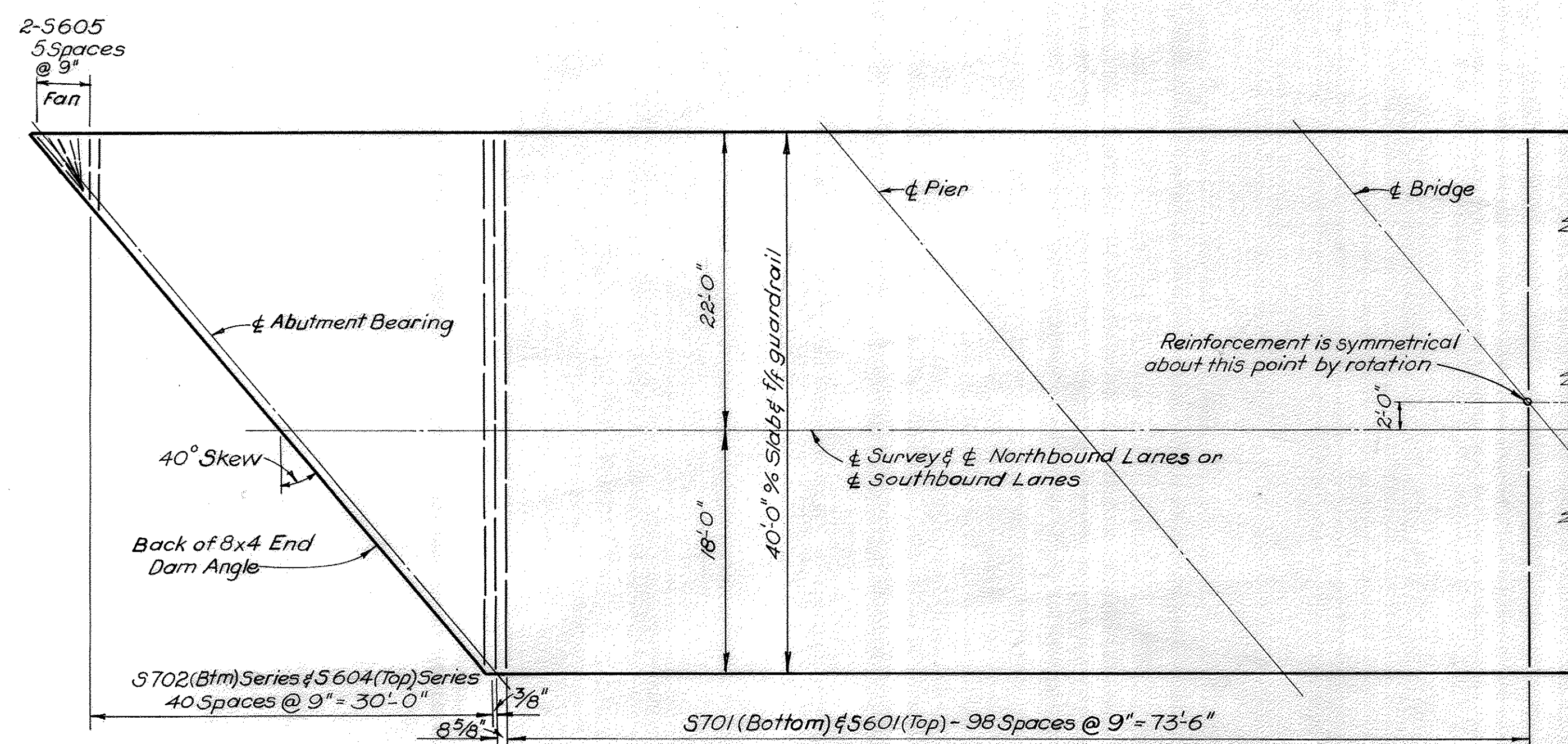
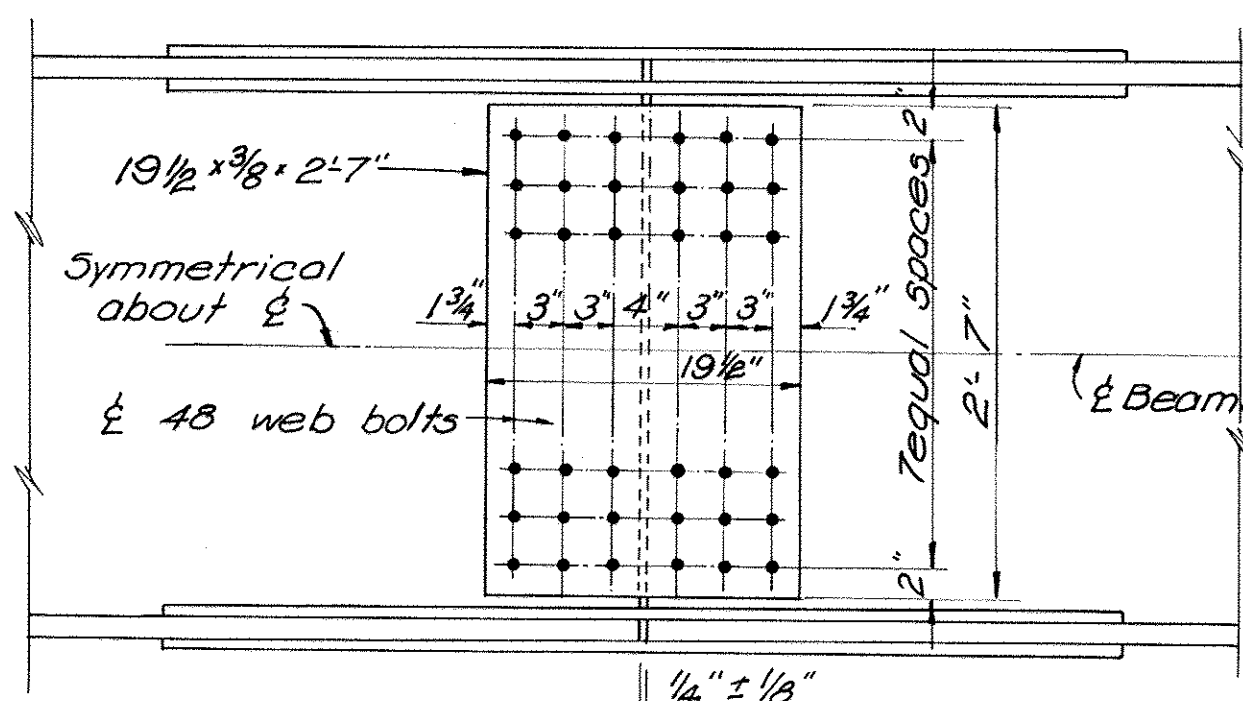
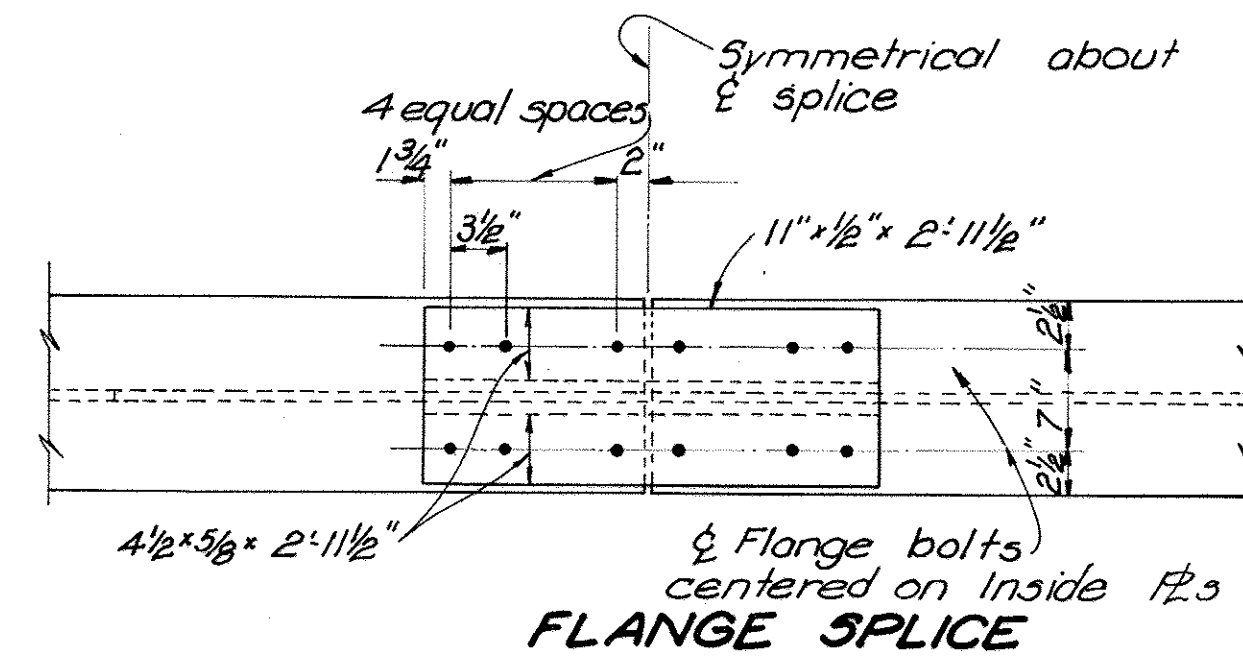
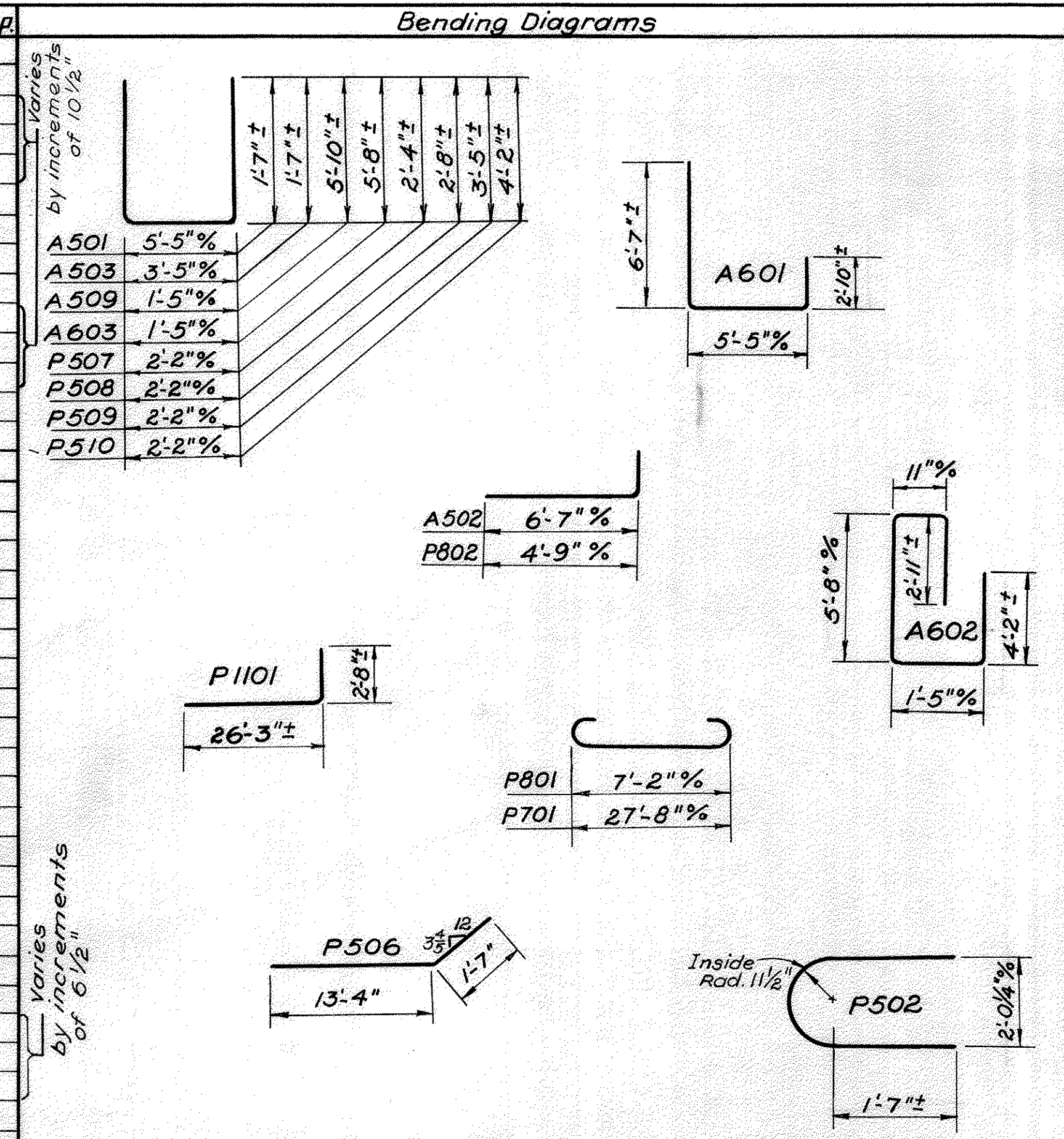
PIER DETAILS  
BRIDGE No. ATH-33-0678LAR  
OVER MONDAY CREEK

ATHENS COUNTY STA. 364 + 81.06  
DESIGNED BY J.E.F. DRAWN BY J.E.F. TRACED BY cam. CHECKED BY WCK. REVIEWED BY BFG. DATE 9/23/65



ATH-33-548

REINFORCING STEEL LIST				
Mark	No.	Length	Weight	Shp.
<b>Superstructure</b>				
S701	394	39'-8"	3,945	S
S702	Series of 41	4'-8"	7,431	S
S601	394	39'-8"	23,475	S
S602	650	38'-3"	37,343	S
S603	104	28'-0"	4,374	S
S604	Series of 41	4'-8"	5,460	S
S605	40	3'-10"	230	S
<b>Abutments</b>				
A801	56	30'-7"	4,573	S
A601	148	14'-6"	3,223	B
A602	128	14'-6"	2,788	B
A603	72	12'-5"	1,343	B
A501	148	8'-4"	1,286	B
A502	148	7'-1"	1,093	B
A503	128	6'-4"	845	B
A504	40	37'-9"	1,575	S
A505	40	25'-4"	1,057	S
A506	16	36'-10"	615	S
A507	16	33'-11"	566	S
A508	16	32'-0"	534	S
A509	20	12'-10"	268	B
A510	6	11'-6"	72	S
A511	6	16'-4"	102	S
A512	16	7'-5"	124	S
A513	Series of 6	5'-2"	653	S
A514	6	7'-10 1/2"	74	S
A515	6	11'-9"	74	S
A515	6	16'-2"	101	S
<b>Piers</b>				
P1101	56	28'-7"	8504	B
P1001	56	26'-1"	6285	S
P801	136	9'-4"	3389	B
P802	184	5'-8"	2784	B
P701	24	29'-4"	1439	B
P702	176	16'-9"	6026	S
P703	8	12'-1"	198	S
P501	56	21'-6"	1256	S
P502	56	6'-4"	370	S
P503	16	25'-4"	423	S
P504	16	20'-0"	334	S
P505	8	24'-0"	200	S
P506	16	14'-11"	249	B
P507	48	6'-7"	330	B
P508	64	7'-3"	484	B
P509	64	8'-9"	584	B
P510	80	10'-3"	855	B
<b>Replacement Bars</b>				
RE1101	1	7'-6"	—	S
RE1001	1	7'-2"	—	S
RE801	1	6'-6"	—	S
RE701	3	6'-2"	—	S
RE601	4	5'-11"	—	S
RE501	1	5'-7"	—	S



DEFLECTION AND CAMBER		
Location	End Span	Middle Span
Deflection due to weight of steel	1/16"	1/16"
Deflection due to remaining dead load	7/32"	5/16"
Sum of Deflection	9/32"	3/8"
Camber	0	0

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

**SUPERSTRUCTURE DETAILS AND REINFORCING STEEL LIST**  
BRIDGE No. ATH-33-0678 L&R  
OVER MONDAY CREEK

ATHENS COUNTY STA. 364+81.06  
STA. 366+86.94

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JEF	JEF	WCK	BFG	G-1-64	