

2	OHIO	PROJECT
2	STATE	PROJECT
2	DIVISION	PROJECT

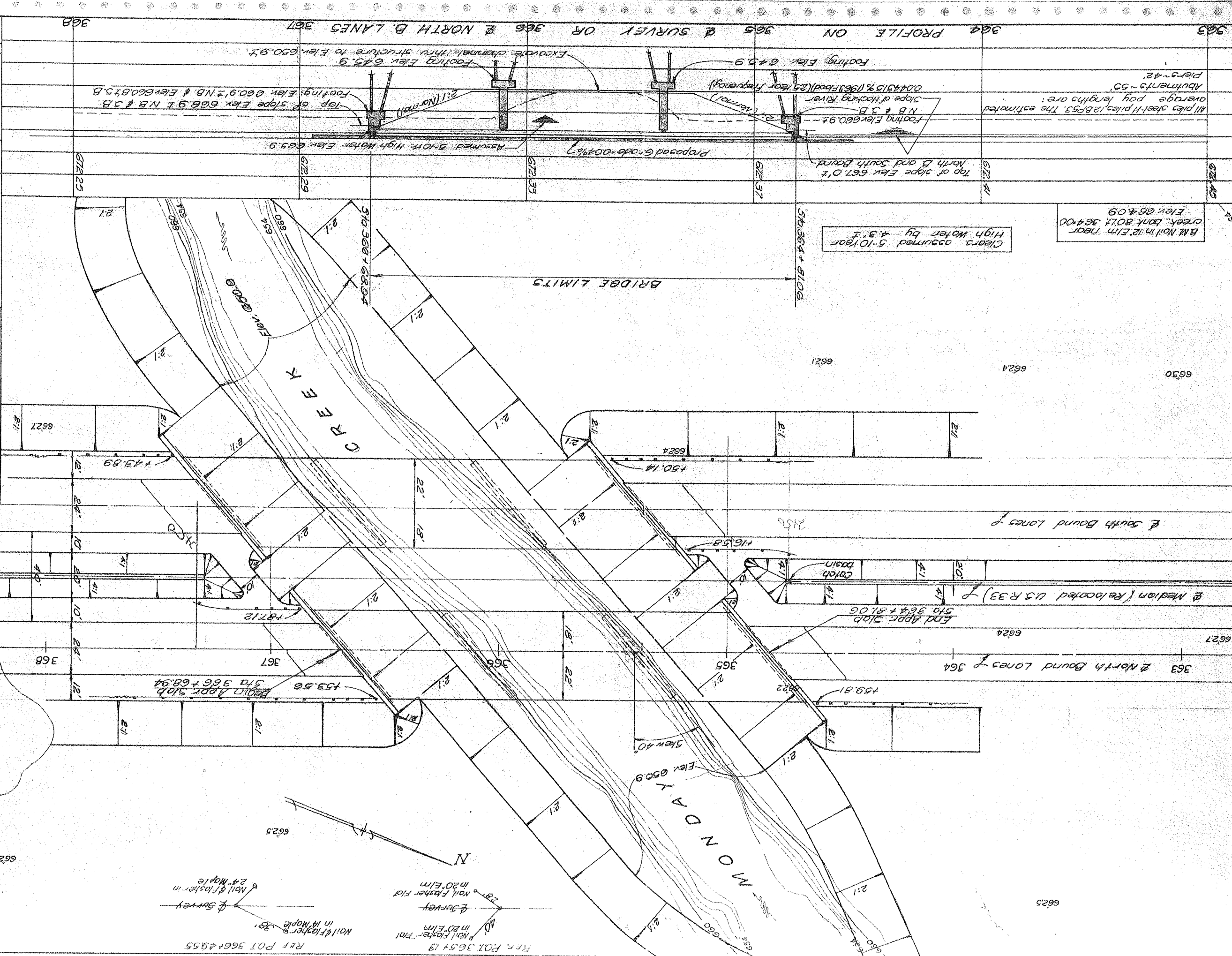
2.3 Miles South of Nelsonville  
 ATH-33-645  
 2.3 Miles South of Nelsonville

1985 ADT = 9020 VPB  
 DRAINAGE AREA = 116.59 Miles  
 EXISTING BRIDGE DATA  
 Number: ATH-33-0859 (1900 Upstream)  
 Type: Conc. girder & Conc. beam  
 Spans: 39'-64.39' Clear span, 355'-60'-38.15'  
 Roadway Width: 29'-6"  
 Skew: 45°  
 Length: 142'  
 Loading: 5-12.0  
 Date Built: 1925  
 Wearing Surface: 7.35 on, 6824 Brick  
 Condition: Fair  
 Surr. Rate: 75

PROPOSED STRUCTURE  
 TYPE: Continuous Steel Beam with reinforced concrete deck and substructure.  
 SPANS: 36'-70'-56" Bearings  
 ROADWAY: 2 @ 40'-0" Guardrail.  
 LOAD FREQUENCY: CF-400 (57)  
 SKEW: 40° Right Forward  
 WEARING SURFACE: 1" Mono. concrete  
 APPROACH SLABS: 45'-1.54 (25' long)  
 ALIGNMENT: Tangent

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 BUREAU OF BRIDGES  
 SITE PLAN

US-33 OVER MONDAY CREEK  
 ATH-33-0670.1 BR  
 BRIDGE NO.  
 ATHENS CO.  
 USR-33  
 STA. 364+81.08  
 STA. 366+68.94  
 SCALE 1" = 20'  
 PRESENT TOPOGRAPHY  
 REVERTED Aerial Survey  
 DESIGNED DRAWN CHECKED  
 REJ. RET. BDK. P.S.A.  
 REJ. RET. BDK. P.S.A.



DESIGNED	DATE	BY	CHKD	DATE	BY
U.E.F.					
THROU					
DATE					
REVISIONS					
NO.	DATE	BY	CHKD	DATE	BY
1	6-1-64	W.C.K.	B.F.G.	6-1-64	U.E.F.

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

**GENERAL PLAN & ELEVATION**  
AND  
NOTES  
BRIDGE NO. ATH-33-0678LBR  
OVER MONDAY CREEK  
NORTHBOUND LANES  
ATHENS COUNTY  
STA. 366 + 88.94  
STA. 364 + 81.06

"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."

**HIGH STRENGTH STEEL BOLTS:** Under Sec. 8710, High-strength Steel Bolts, Nuts and Washers, paragraph two (2), shall be completely revised and the last sentence finished by the use of a finishing machine.

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

of paragraph four (4), revised to read as follows:

Concrete Class C - basic unit stress 1,333 psi.  
Concrete Class C - basic unit stress 1,133 psi.  
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.  
(except piling) (ASTM A7 and A373 steel not permitted)  
Reinforcing Steel - ASTM A15, A16, A16C, 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 which the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity value for a pile hammer of the indicated energy rating:

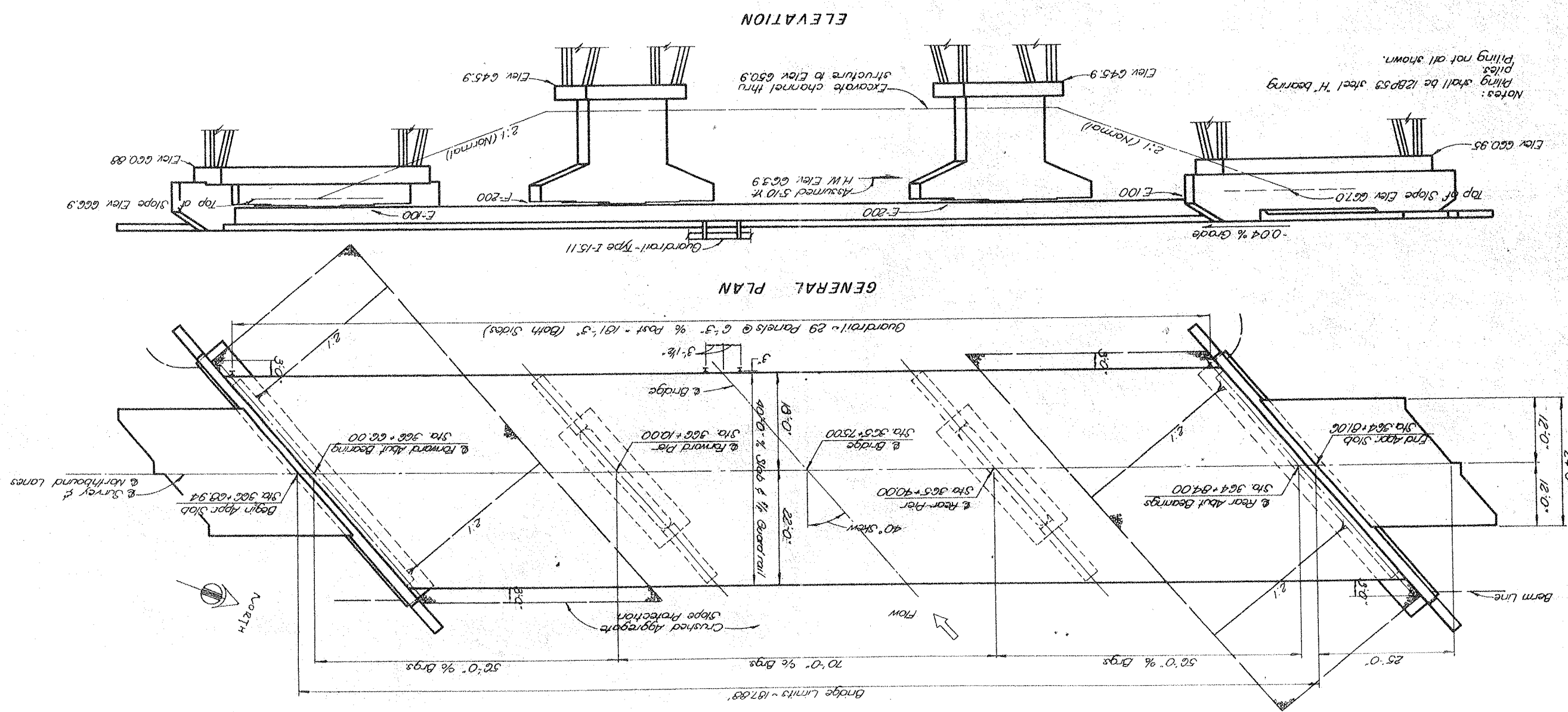
50 tons per pile using an 11,000 ft. lb. hammer.  
55 tons per pile using a 15,000 ft. lb. or greater hammer.

**DESIGN LOADING - CF 400 (57)**  
Concrete Class C - basic unit stress 1,333 psi.  
Concrete Class C - basic unit stress 1,133 psi.  
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.  
(except piling) (ASTM A7 and A373 steel not permitted)  
Reinforcing Steel - ASTM A15, A16, A16C, 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.

REFERENCE shall be made to Standard Drawings SD-1-63 Sheets 1 & 2, dated 11-12-63; 12-18-63 and to Supplemental Specifications S-101 dated 7-12-62, revised 1-15-63 and to Specifications 3-101 dated 7-12-62, and 3-307 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 hereof.

**GENERAL NOTES**  
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 if may be driven for either the right or left bridge.



ATH-33-548

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

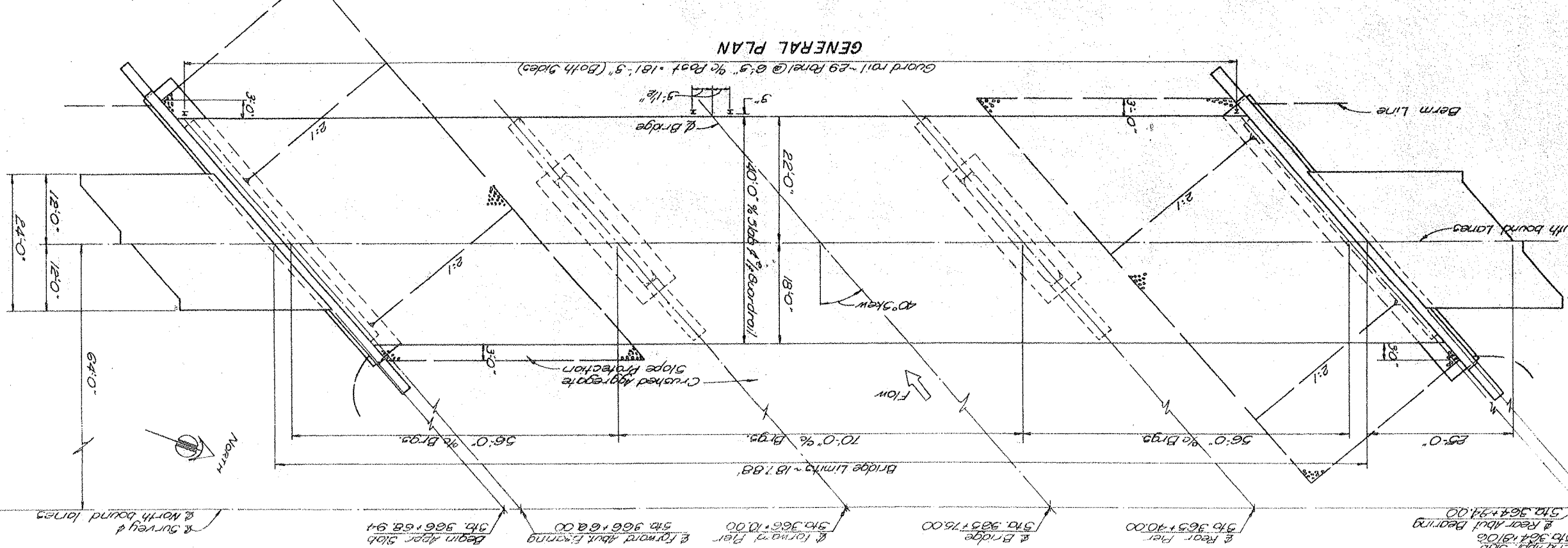
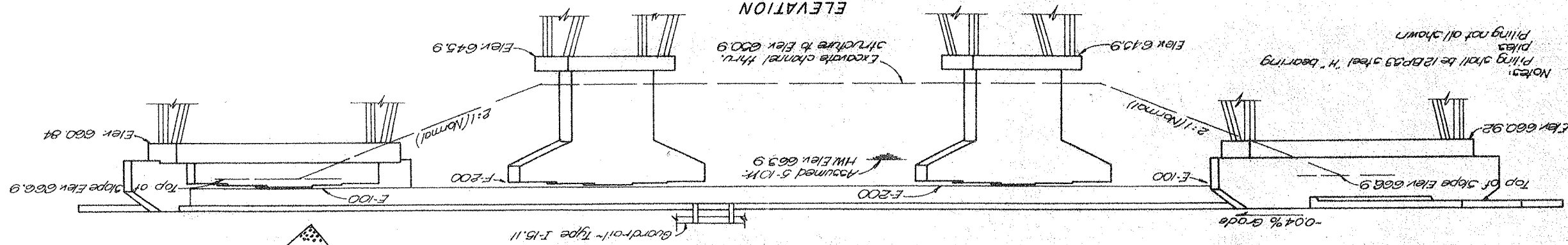
**GENERAL PLAN & ELEVATION,  
 AND ESTIMATED QUANTITIES  
 FOR  
 BRIDGE NO. ATH-33-0678  
 OVER MONDAY CREEK  
 SOUTHBOND LANES**

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

DESIGNED: J.F.  
 DRAWN: J.F.  
 CHECKED: C.A.M.  
 W.C.K.  
 B.F.G. 6-1-64

**ESTIMATED QUANTITIES**

Item	Total	Unit	Description	Super.	Abut's	Piers	Gen'l
F-2	Lump	Summ	Cofferdams, cribs and sheetpiles				Lump
E-2	676	Cu Yds.	Unclassified excavation	464	212		
E-3	10778	Cu Yds.	Channel excavation				10778
9-1	420	Cu Yds.	Class C concrete, superstructure	420			
9-1	210	Cu Yds.	Class E concrete, pier above footing		210		
9-1	251	Cu Yds.	Class F concrete, footings		173		78
9-4	164860	Lbs.	Reinforcing steel	110258	20892		33710
9-7	393100	Lbs.	Structural steel	383100			
9-8	383100	Lbs.	Field painting of structural steel	383100			
5-14	75152	Lin. Ft.	Rolling (Type F-11) with galvanized steel posts and bolts)				75152
5-18	4660	Lin. Ft.	Steel pipe, 12 BPS3	2640	2020		Lump
5-29	98	Cu Yds.	Porous backfill	98			
5-29	236	Lin. Ft.	6" Perforated helical C.M.P. M-6.4(h) including specials	236			
5-29	128	Lin. Ft.	6" Helical C.M.P. M-6.4(h) non-perforated	128			
I-10	1202	Sq. Yds.	Crushed aggregate slope protection				1202
5-101	420	Each	Water-reducing set-retarding admixture	420			



ATH-33-5.48

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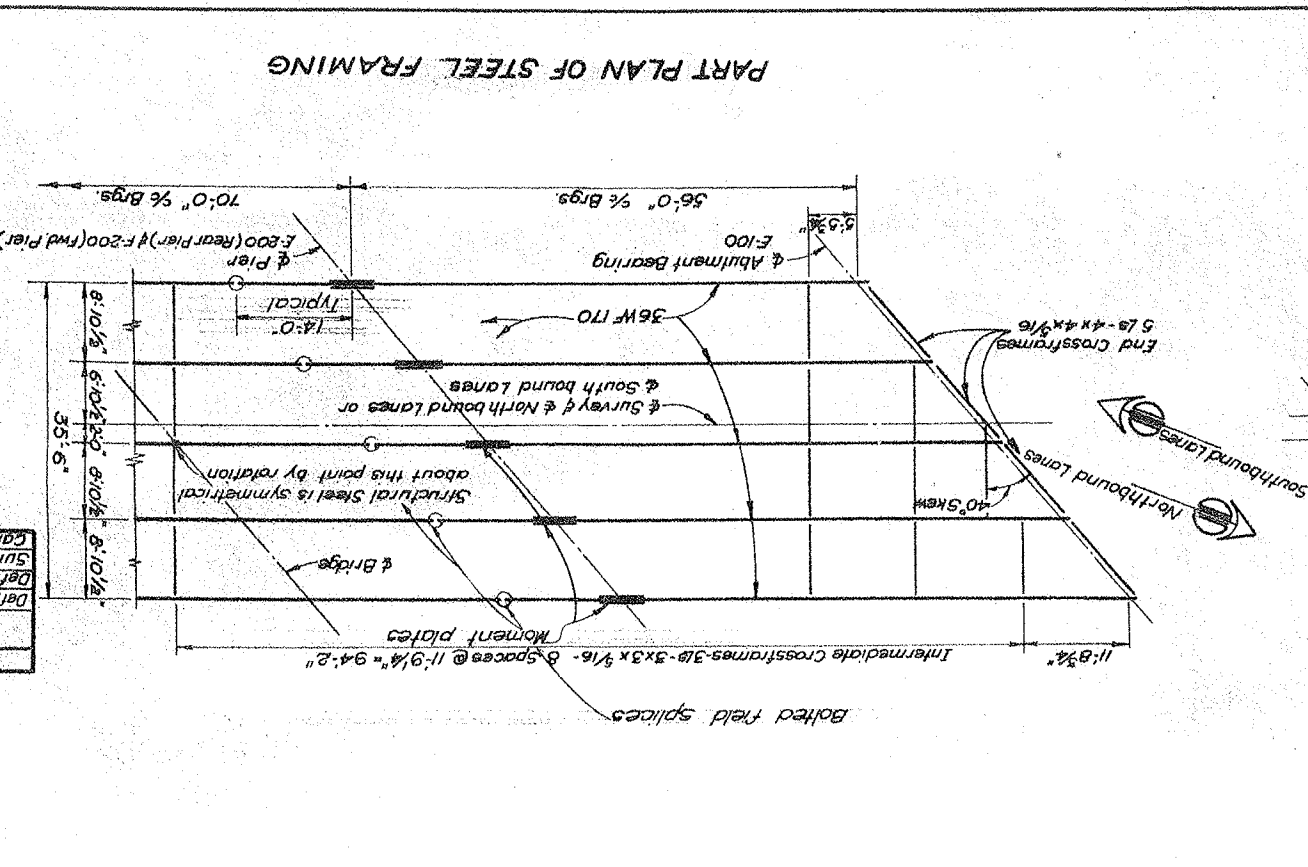
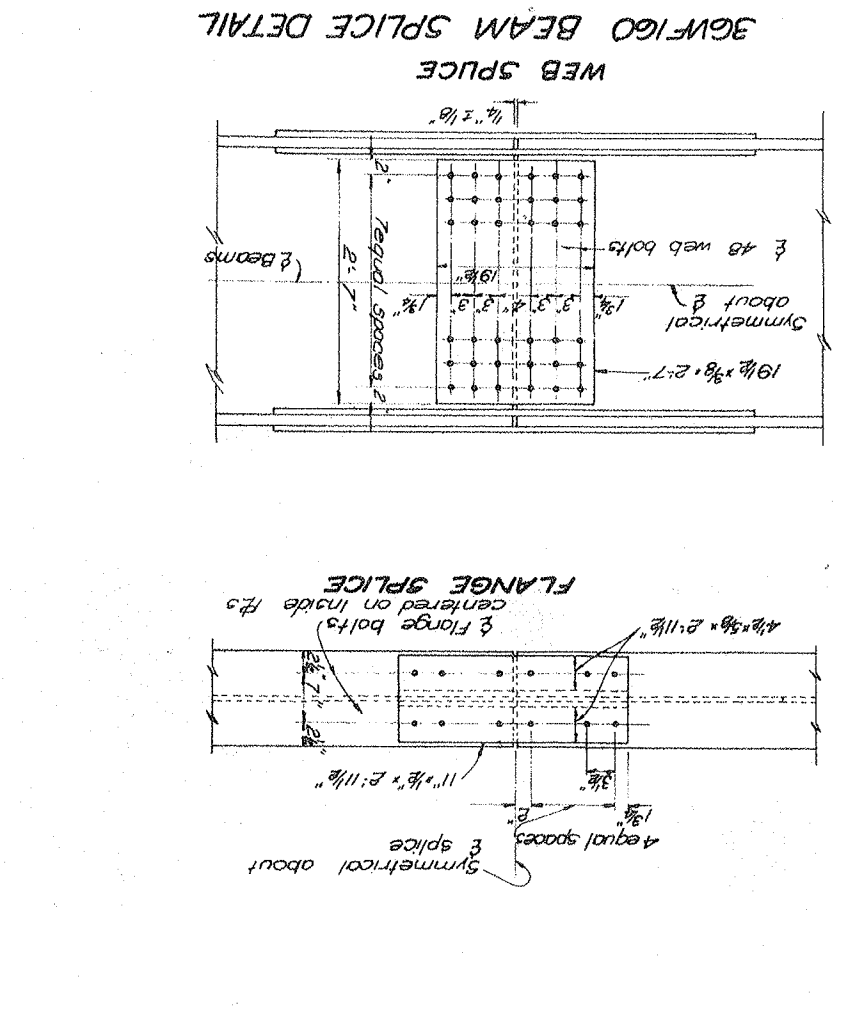
ATH-33-548

Location	Span	Deflection due to weight of steel	Deflection due to remaining dead load	Sum of Deflection
Middle	33m	1/8"	5/16"	3/8"
End	33m	1/8"	5/16"	3/8"

Location	Span	Deflection due to weight of steel	Deflection due to remaining dead load	Sum of Deflection
Middle	33m	1/8"	5/16"	3/8"
End	33m	1/8"	5/16"	3/8"

STATE OF OHIO  
 DEPARTMENT OF HIGHWAYS  
 DIVISION OF DESIGN AND CONSTRUCTION  
 BUREAU OF BRIDGES  
 SUPERSTRUCTURE DETAILS  
 AND REINFORCING STEEL LIST  
 BRIDGE No. ATH-33-0670 L/R  
 OVER MONDAY CREEK  
 ATHENS COUNTY  
 STA. 364+81.06  
 STA. 366+86.94  
 BFG C-1-C4



Mark No.	Length	Weight	Shp
P510	80	10'-3"	B55
P509	64	8'-9"	B584
P508	64	7'-3"	A84
P507	48	6'-7"	B330
P506	16	14'-11"	B49
P505	8	24'-0"	B200
P504	16	20'-0"	B334
P503	16	25'-4"	B423
P502	56	6'-4"	B370
P501	56	21'-6"	B1256
P703	8	12'-1"	B198
P702	176	16'-9"	B6026
P701	24	29'-4"	B1439
P802	184	5'-8"	B2784
P801	136	9'-4"	B389
P1001	56	26'-1"	B6885
P1101	56	28'-7"	B504

Mark No.	Length	Weight	Shp
A501	394	39'-8"	B23475
A503	650	38'-3"	B37343
A509	104	28'-0"	B4374
A603	4	4'-8"	B
A604	58/103	10	B5460
P507	41	39'-8"	B230
P508	41	39'-8"	B230
P509	41	39'-8"	B230
P510	41	39'-8"	B230
A501	394	39'-8"	B23475
A503	650	38'-3"	B37343
A509	104	28'-0"	B4374
A603	4	4'-8"	B
A604	58/103	10	B5460
P507	41	39'-8"	B230
P508	41	39'-8"	B230
P509	41	39'-8"	B230
P510	41	39'-8"	B230
A501	148	8'-4"	B1286
A502	148	7'-1"	B1093
A503	128	6'-4"	B845
A504	40	37'-9"	B4575
A505	40	25'-4"	B1057
A506	16	33'-10"	B615
A507	16	33'-11"	B566
A508	16	32'-0"	B534
A509	20	12'-10"	B268
A510	6	11'-6"	B72
A511	6	16'-4"	B102
A512	16	7'-5"	B124
A513	16	5'-2"	B84
A514	6	11'-9"	B74
A515	6	16'-2"	B101

