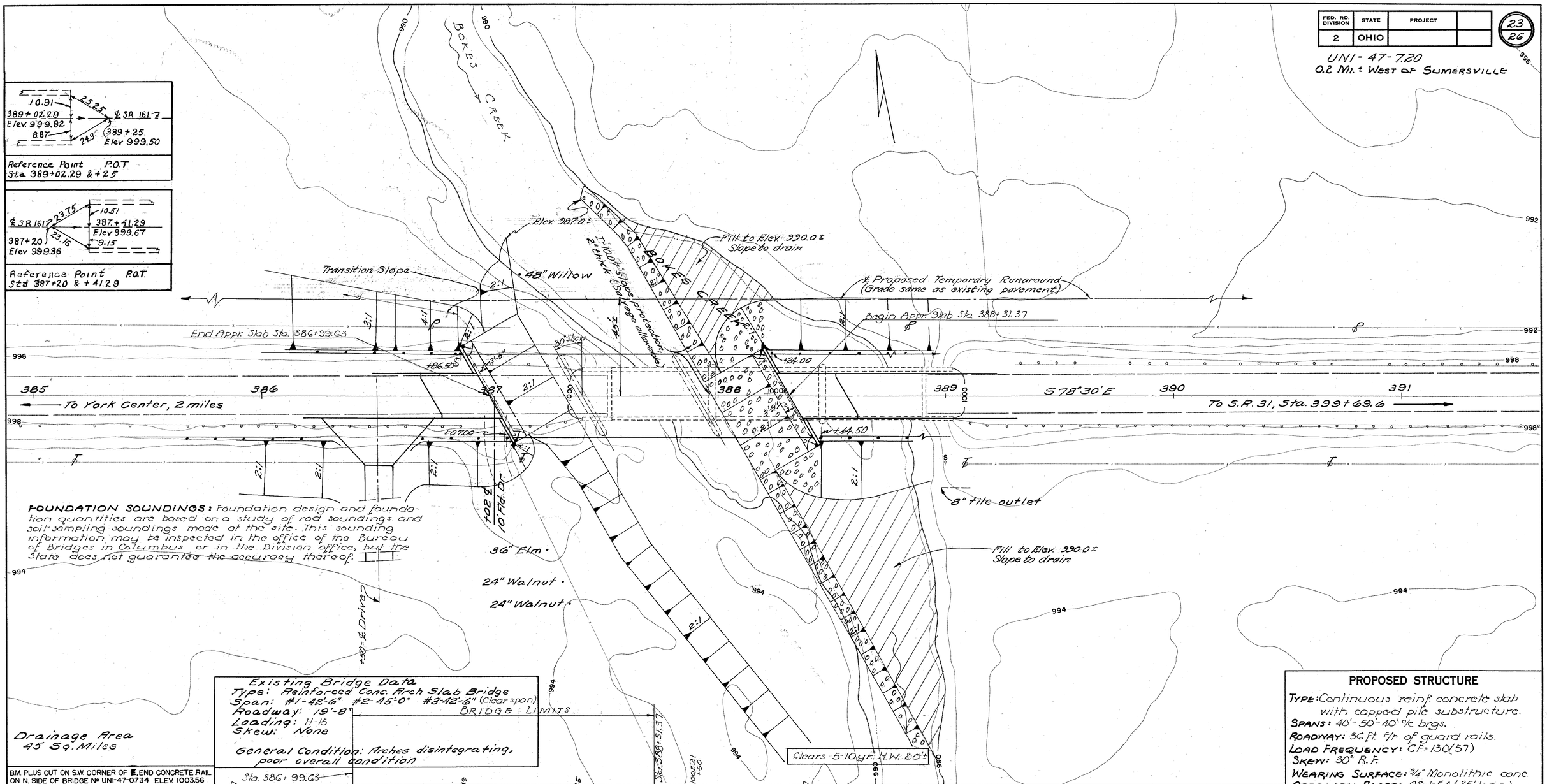
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

23
26

UNI-47-7.20
0.2 Mi.± West of Sumersville



FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings 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 reinf. concrete slab with capped pile substructure.
SPANS: 40'-50'-40' c/c brgs.
ROADWAY: 36 ft. f/f. of guard rails.
LOAD FREQUENCY: C.F. = 130(57)
SKEW: 30° R.F.
WEARING SURFACE: 3/4" Monolithic conc.
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. UNI-47-0734
OVER BOKES CREEK
UNION CO. SR-47
STA. 386 + 99.63
388 + 31.37
SCALE 1" = 20'

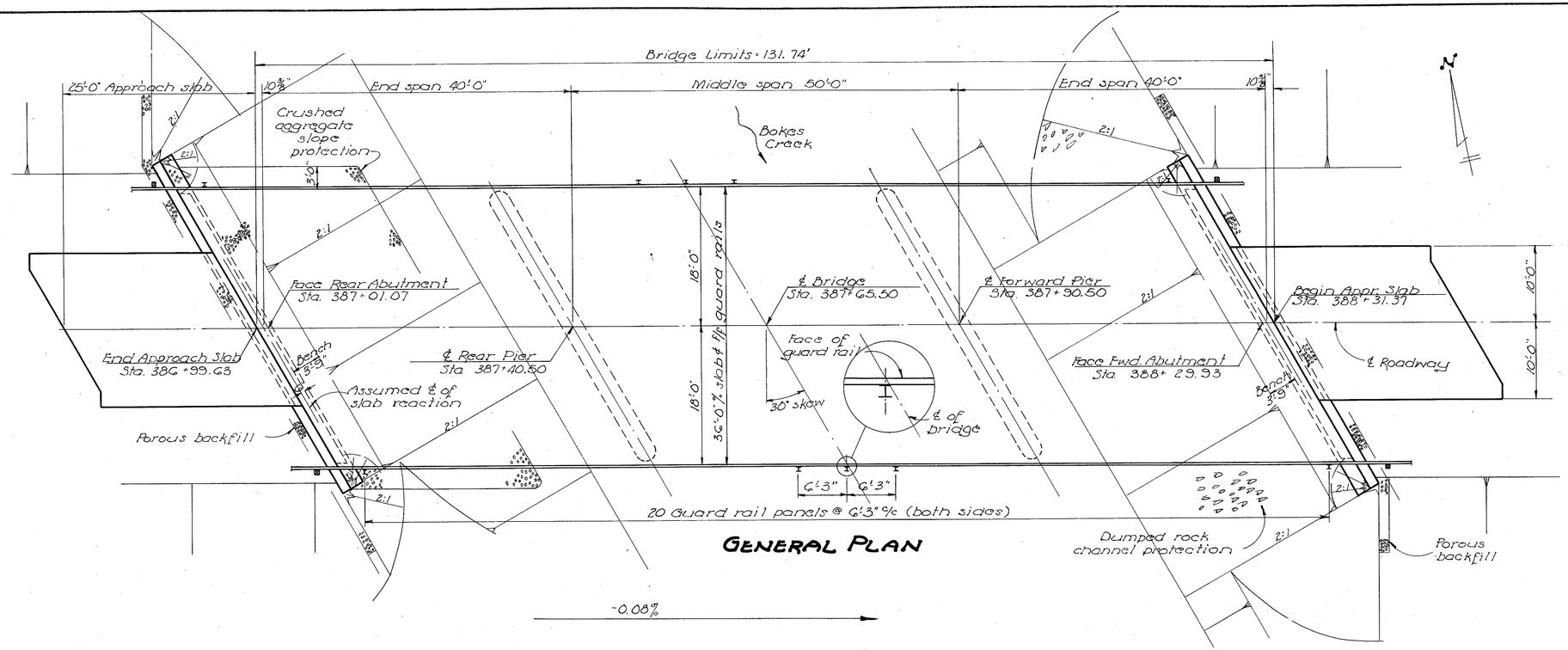
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	J.E.P.	J.E.P.	D.G.M.	J.H.B.

BFG 9-1-59

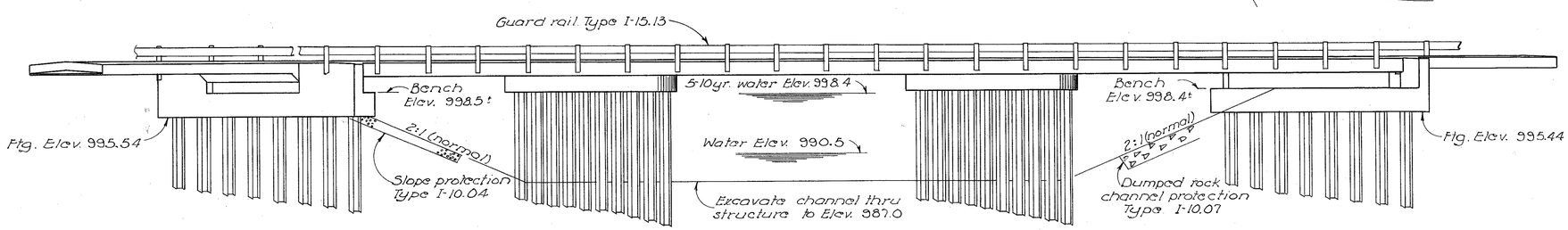
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

24
26

UNI-47-7.20



GENERAL PLAN



All piles 12BP53

ELEVATION

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superst.	Piers	Abuts.	Gen'l		
E-2	57	Cu. Yds.	Unclassified excavation			57			
E-3	3291	Cu. Yds.	Channel excavation				3291		
S-1	315	Cu. Yds.	Class "C" concrete, superstructure & pier caps.	300	15				
S-1	52	Cu. Yds.	Class "E" concrete, abutments			52			
S-4	77,140	Lbs.	Reinforcing steel	68,184	3473	5483			
S-14	263.48	Lin. Ft.	Railing (Type I-15.13 with galvanized steel posts and bolts)	263.48					
S-15	Lump	Sum	Temporary run-around bridge				Lump		
S-16	Lump	Sum	First test pile				Lump		
S-18	1010	Lin. Ft.	Steel piles, 12BP53		560	450			
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	18	Cu. Yds.	Porous backfill			18			
I-10	115	Sq. Yds.	Crushed aggregate slope protection				115		
I-10	242	Cu. Yds.	Dumped rock channel protection				242		

GENERAL NOTES

REFERENCE shall be made to Standard Drawings A-1-54 revised 12-1-54, P-1-54 revised 2-2-59 and CS-1-54, sheet No. 1 & 2 revised 7-16-56.

TEMPORARY RUN-AROUND BRIDGE: Load frequency for bridge, CF-30, with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. Run-around road, T-10 surface course and chloride is included in roadway quantities.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed.

EXCAVATION QUANTITY for the Rear abutment, in addition to that outlined in Sec. E-2.09, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. E-2.09 and by the finished slope of the cut.

PILES shall be driven to firm contact with rock. 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:

For the abutment piles:

33 tons per pile using a 11,000 ft. lb. hammer
30 tons per pile using a 15,000 ft. lb. or greater hammer

For the pier piles:

48 tons per pile using a 11,000 ft. lb. hammer
44 tons per pile using a 15,000 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 32 tons per pile for the abutment piles and 37 tons per pile for the pier piles.

PIER PILE ENCASEMENT as shown on Std. Drwg. No. P-1-54 is not required. The painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

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

GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES

BRIDGE No. UNI-47-0734
OVER BOKES CREEK
STA. 386+99.63
388+31.37

UNION CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.Y.	A.Y.	RICE	F.E.E.	BFG G.S.K.	9-1-59	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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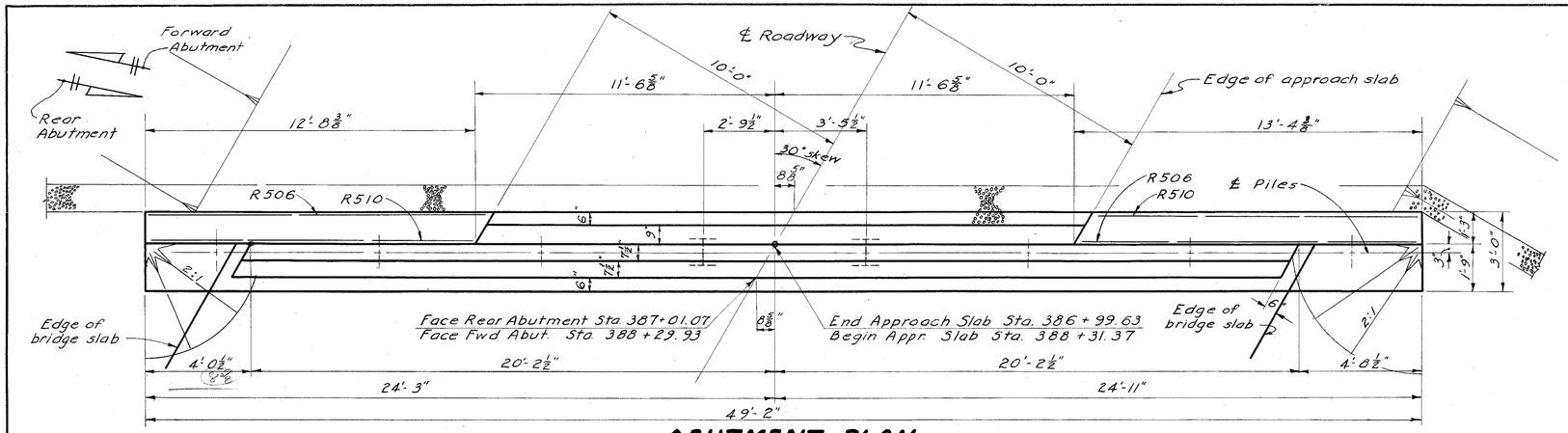
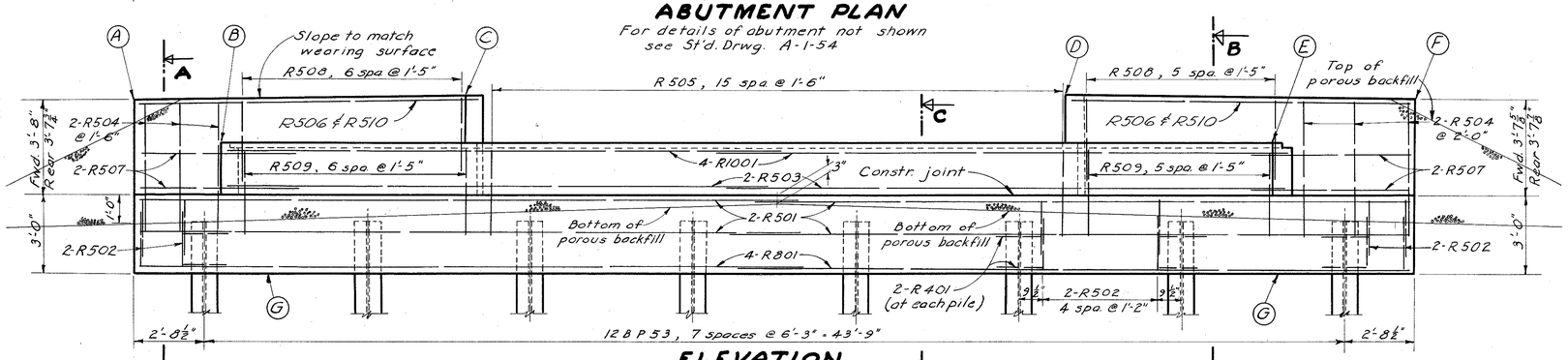
26

UNI-47-7.20



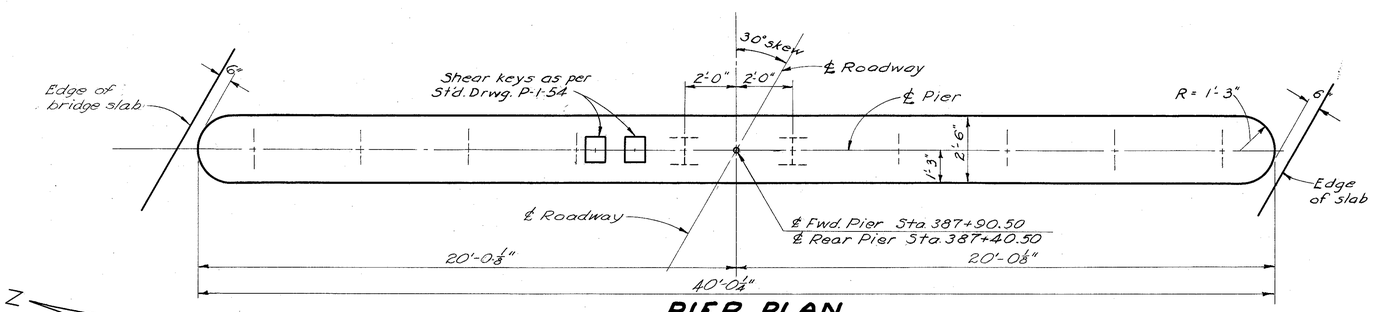
ABUTMENT PLAN

For details of abutment not shown see St'd. Drwg. A-1-54

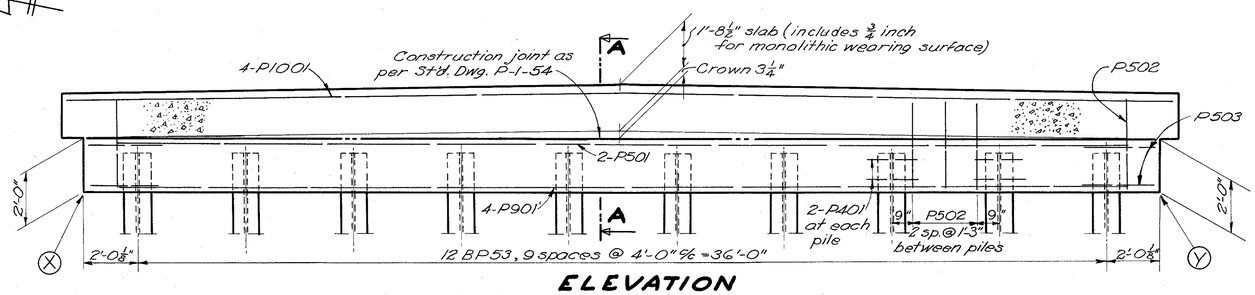


ELEVATION

For Sections A-A, B-B and C-C see St'd. Drwg. A-1-54



PIER PLAN



ELEVATION

For Section A-A see St'd. Drwg. P-1-54

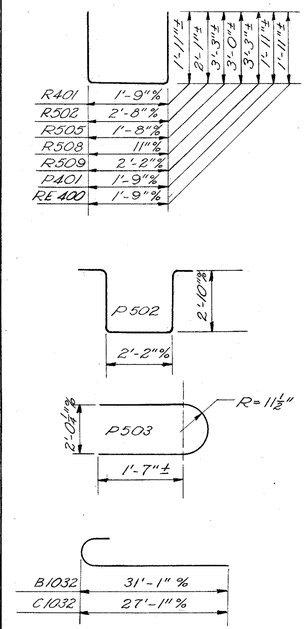
ELEVATIONS ON ABUTMENTS		
Point	Rear Abut.	Fwd. Abut.
A	1002.19	1002.11
B	1000.54	1000.45
C	1002.38	1002.27
D	1002.37	1002.26
E	1000.56	1000.44
F	1002.20	1002.08
G	995.54	995.44

ELEVATIONS ON PIERS		
Point	Rear Pier	Fwd. Pier
X	998.53	998.49
Y	998.51	998.47

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
Abutments				
R401	64	5'-5"	232	B
R501	16	25'-3"	421	S
R502	156	6'-7"	1071	B
R503	8	20'-10"	174	S
R504	24	5'-3"	131	S
R505	32	7'-11"	264	B
R506	4	12'-10"	54	S
R507	16	6'-0"	100	S
R508	26	6'-8"	181	B
R509	26	8'-5"	228	B
R510	4	12'-3"	51	S
R801	16	25'-8"	1096	S
R1001	16	21'-7"	1486	S
Piers				
P401	80	5'-5"	289	B
P501	4	37'-6"	156	S
P502	58	9'-0"	544	B
P503	8	6'-4"	53	B
P901	8	37'-6"	1020	S
P1001	8	41'-0"	1411	S
Superstructure				
A1032	96	45'-10"	18933	S
B1032	32	32'-4"	4432	B
C1032	30	28'-4"	3658	B
D1032	15	29'-0"	1872	S
E1032	16	22'-0"	1515	S
F1132	72	37'-3"	14249	S
G1132	34	21'-9"	3922	S
H1132	36	16'-6"	3150	S
J601	38	27'-0"	1541	S
K601	19	17'-4"	495	S
N601	80	41'-0"	4927	S
M701	113	41'-0"	9470	S
Replacement Bars				
RE1100	2	7'-6"	–	S
RE1000	2	7'-2"	–	S
RE900	1	6'-10"	–	S
RE800	1	6'-6"	–	S
RE700	1	6'-2"	–	S
RE600	1	5'-11"	–	S
RE500	1	5'-7"	–	S
RE400	1	5'-3"	–	B

BENDING DIAGRAM



REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and 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.

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

ABUTMENT & PIER DETAILS
REINFORCING STEEL LIST
BRIDGE No. UNI-47-0734
OVER BOKES CREEK

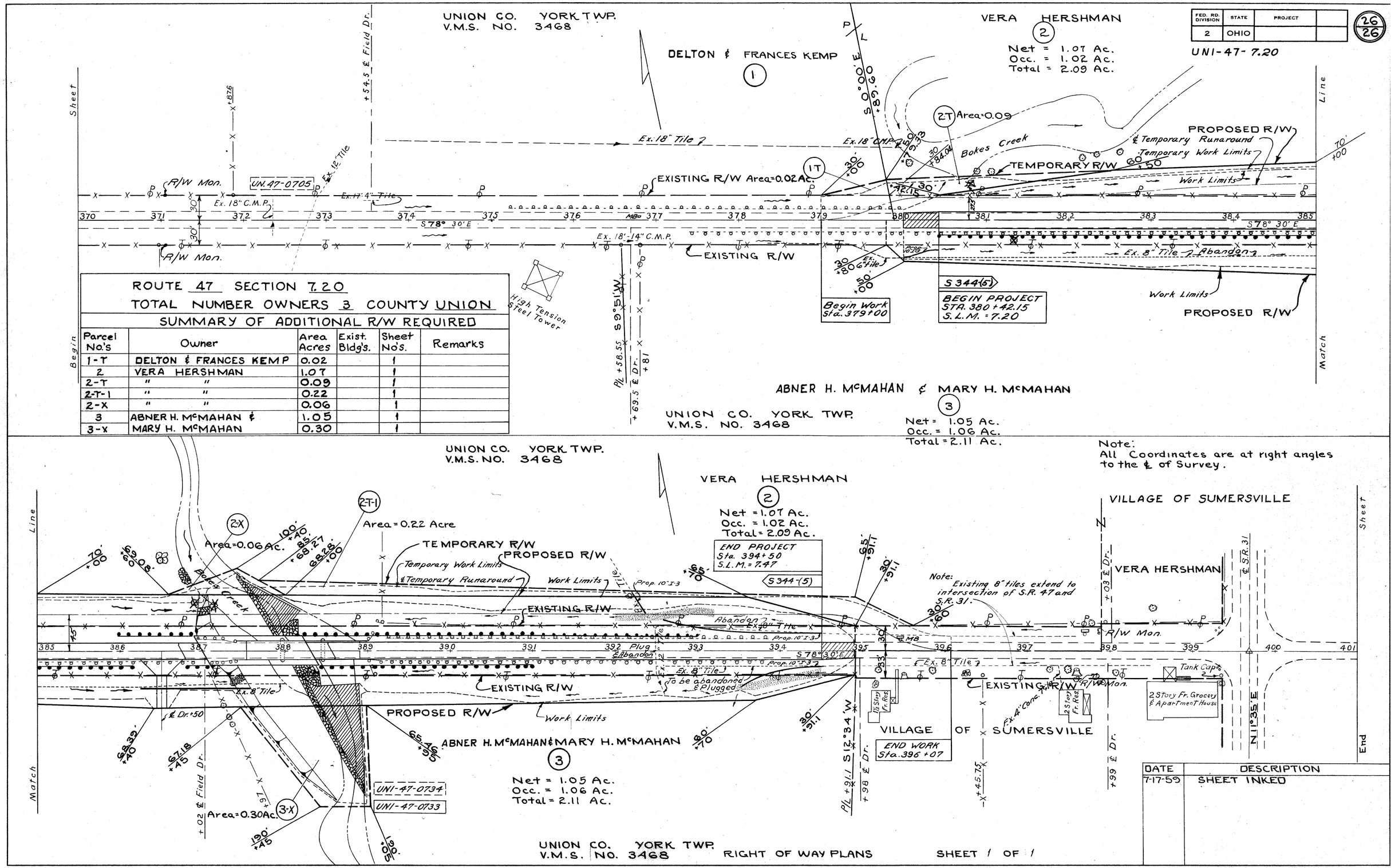
UNION CO. STA. 386+99.63
388+31.37

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
A.J.	A.J.	I.W.	F.E.E.	BFG a.g.h.	9-1-59	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

26/26

UNI-47-7.20



Parcel No's	Owner	Area Acres	Exist. Bldg's.	Sheet No's.	Remarks
1-T	DELTON & FRANCES KEMP	0.02		1	
2	VERA HERSHMAN	1.07		1	
2-T	" "	0.09		1	
2-T-1	" "	0.22		1	
2-X	" "	0.06		1	
3	ABNER H. McMAHAN &	1.05		1	
3-X	MARY H. McMAHAN	0.30		1	

DATE	DESCRIPTION
7-17-59	SHEET INKED

UNION CO. YORK TWP.
V.M.S. NO. 3468

RIGHT OF WAY PLANS

SHEET 1 OF 1

STA. 370+00 To STA. 401+00