FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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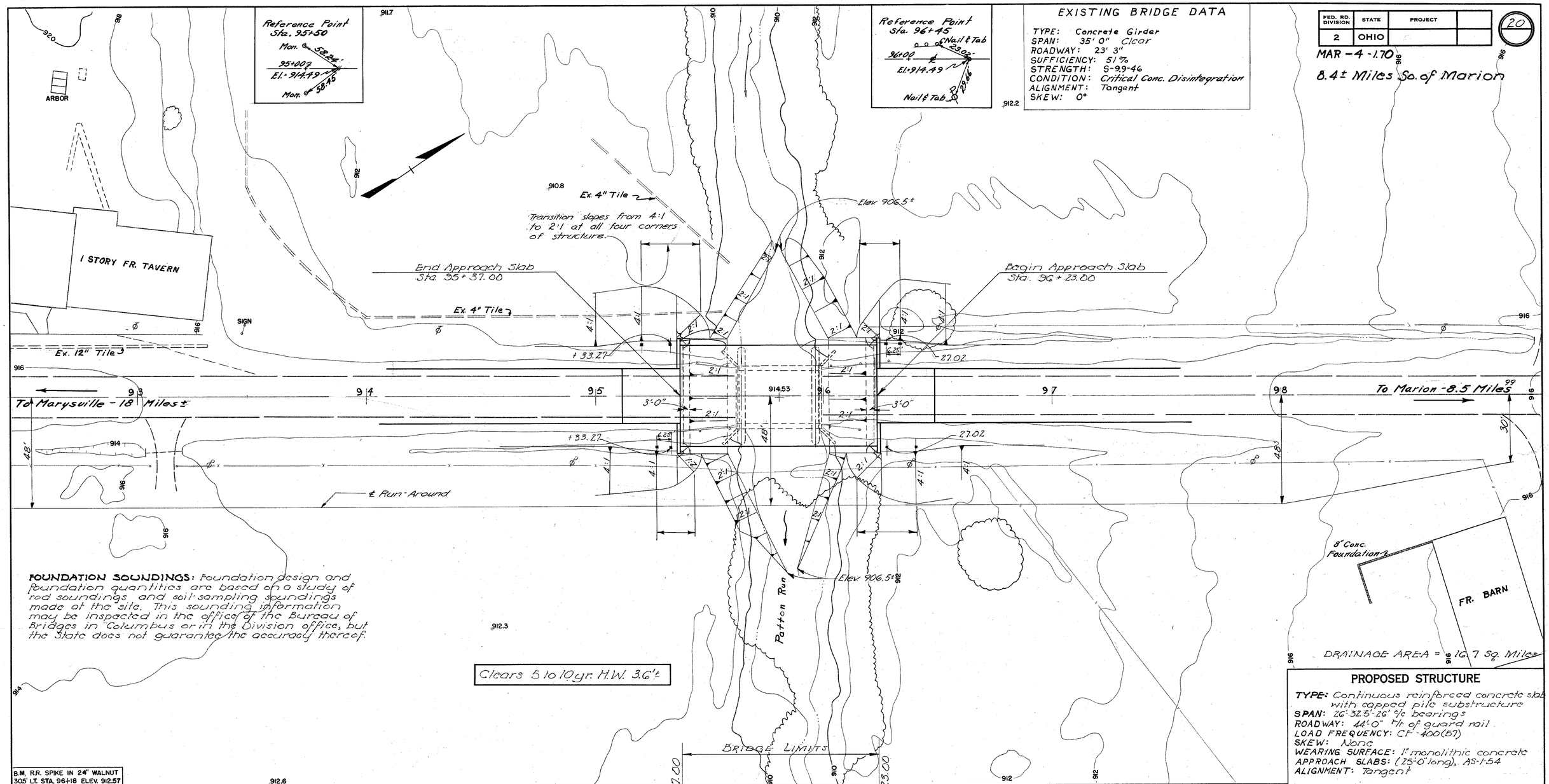
MAR-4-1.70

8.4± Miles So. of Marion

EXISTING BRIDGE DATA

TYPE: Concrete Girder
SPAN: 35' 0" Clear
ROADWAY: 23' 3"
SUFFICIENCY: 51%
STRENGTH: S-9.9-46
CONDITION: Critical Conc. Disintegration
ALIGNMENT: Tangent
SKEW: 0°



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 reinforced concrete slab with capped pile substructure
SPAN: 26'-32.5'-26' c/c bearings
ROADWAY: 44'-0" f/f of guard rail
LOAD FREQUENCY: CF-400(57)
SKEW: None
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: (25'-0" long), AS-1-54
ALIGNMENT: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. MAR-4-0180
OVER PATTON RUN
MARION CO. SR-4

SEC. STA. 95+37.00
SCALE 1" = 20' STA. 96+23.00

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Rural Survey	Rural Survey	CEJ	CEJ	D.H.S.	P.E.S.

BFG 9-5-A 6-30-59

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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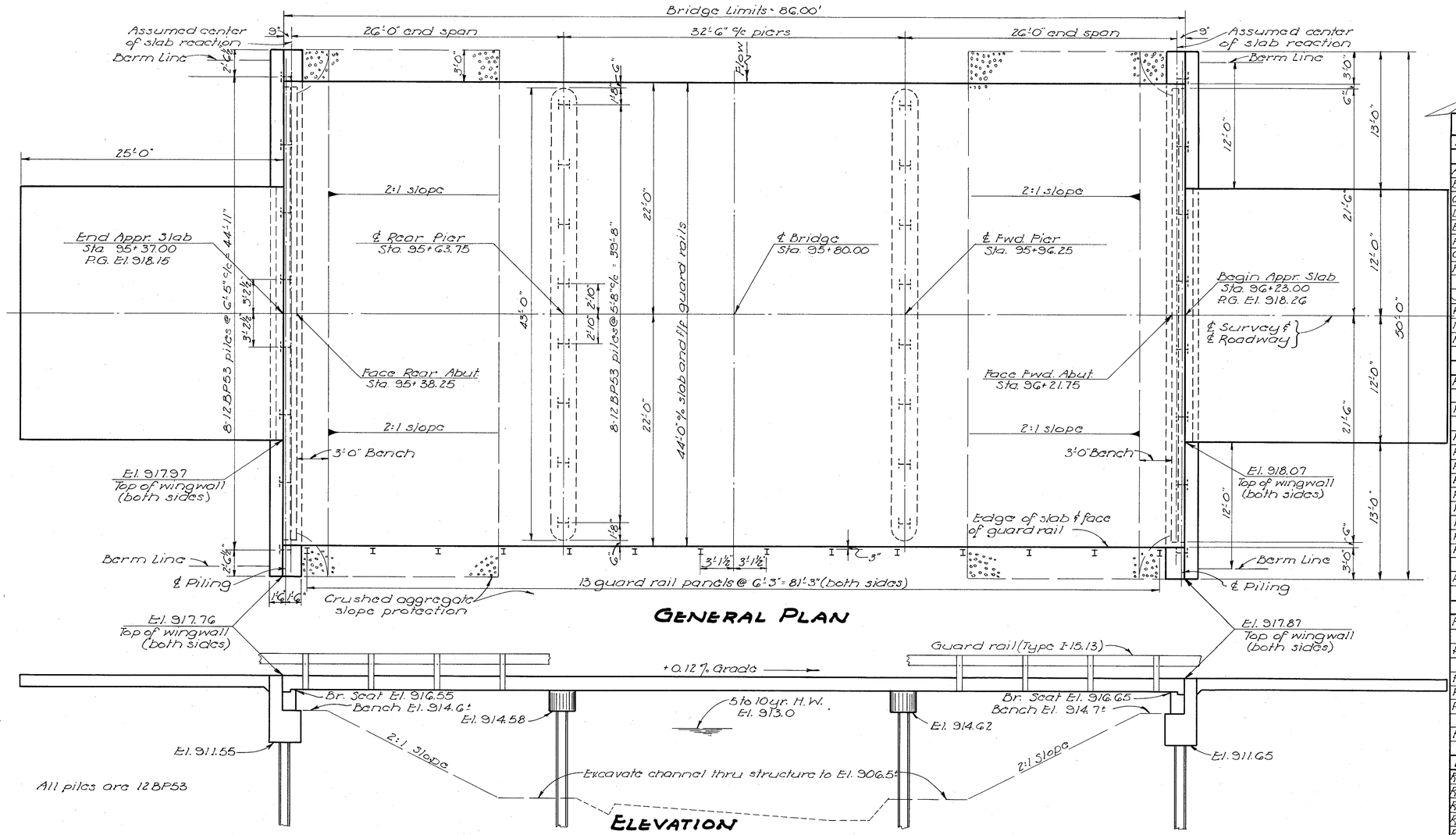
MAR-4-1.70



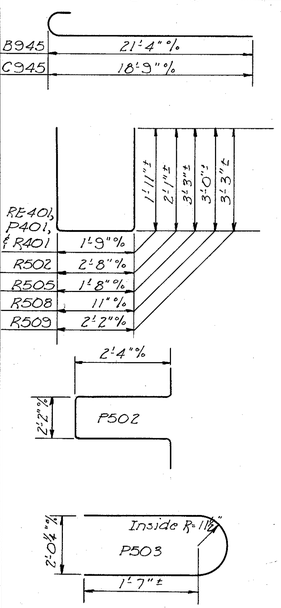
GENERAL PLAN

ELEVATION

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp
SUPERSTRUCTURE				
A945	114	30'-6"	11,822	S
B945	36	22'-5"	2,744	B
C945	38	19'-10"	2,562	B
D945	18	21'-4"	1,306	S
E945	19	16'-10"	1,087	S
F945	88	24'-0"	7,181	S
G945	44	11'-0"	1,646	S
H945	44	8'-2"	1,222	S
J601	44	15'-10"	1,046	S
K601	22	13'-8"	452	S
M601	186	22'-9"	6,356	S
N601	114	22'-9"	3,895	S
ABUTMENTS				
R1001	16	22'-11"	1,578	S
R801	16	26'-1"	1,114	S
R501	16	25'-7"	427	S
R502	156	6'-7"	1,071	B
R503	8	22'-1"	184	S
R504	24	5'-4"	134	S
R505	32	7'-11"	264	B
R506	8	12'-6"	104	S
R507	16	4'-11"	82	S
R508	28	6'-8"	195	B
R509	28	8'-5"	246	B
R401	64	5'-5"	232	B
PIERS				
P1001	8	43'-6"	1,497	S
P901	8	40'-6"	1,102	S
P501	4	40'-6"	169	S
P502	68	8'-0"	567	B
P503	8	6'-4"	53	B
P401	64	5'-5"	232	B
REPLACEMENT BARS				
RE1001	1	7'-2"	-	S
RE901	2	6'-10"	-	S
RE801	1	6'-6"	-	S
RE601	1	5'-11"	-	S
RE501	1	5'-7"	-	S
RE401	1	5'-5"	-	B

Bending Diagrams



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.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abuts.	Piers	Gen'l
E-2	58	Cu. Yds.	Unclassified excavation		58		
E-3	431	Cu. Yds.	Channel excavation				431
S-1	196	Cu. Yds.	Class "C" concrete, superstructure & pier caps	180		16	
S-1	52	Cu. Yds.	Class "E" concrete, abutments		52		
S-4	50,570	Lbs.	Reinforcing steel	41,319	5,631	3,620	
S-14	172.00	Lin. Ft.	Railing (Type I-15.13 with galvanized steel posts and bolts)	172.00			
S-15	Lump	Sum	Temporary run-around bridge				Lump
S-16	Lump	Sum	First test pile				Lump
S-18	860	Lin. Ft.	Steel piles, 12BP53		430	430	
S-24	Lump	Sum	Removal of existing structure				Lump
S-29	14	Cu. Yds.	Porous backfill		14		
I-10	230	Sq. Yds.	Crushed aggregate slope protection				230

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-54, revised 7-16-56, A-1-54, revised 12-1-54, and P-1-54, revised 2-2-59.

TEMPORARY RUN-AROUND BRIDGE
Load frequency for bridge, CF = 130, with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. Bridge width, 22'. The approach embankment and pavement are included in the roadway quantities for payment.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Suitable waste masonry may be used as bank protection as directed by the Engineer.

SLAB THICKNESS is 15¼" which includes 1" for monolithic wearing surface.

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

30 tons per pile using a 7,000 ft. lb. hammer.
25 tons per pile using a 11,000 ft. lb. hammer.
25 tons per pile using a 15,000 ft. lb. or greater hammer

For the pier piles

50 tons per pile using a 7,000 ft. lb. hammer
41 tons per pile using a 11,000 ft. lb. hammer
38 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 25 tons per pile for the abutment piles and 35 tons per pile for the pier piles.

PIER PILE ENCASEMENT as shown on Std. Dwg. 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
EST. QUANTITIES, & REINF. STEEL LIST
BRIDGE No. MAR-4-0180
OVER PATTON RUN
MARION COUNTY — STA. 95+37.00 — STA. 96+23.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.L.C.	H.L.C.	RJCC	DGM	BFG DGM	6-30-59	