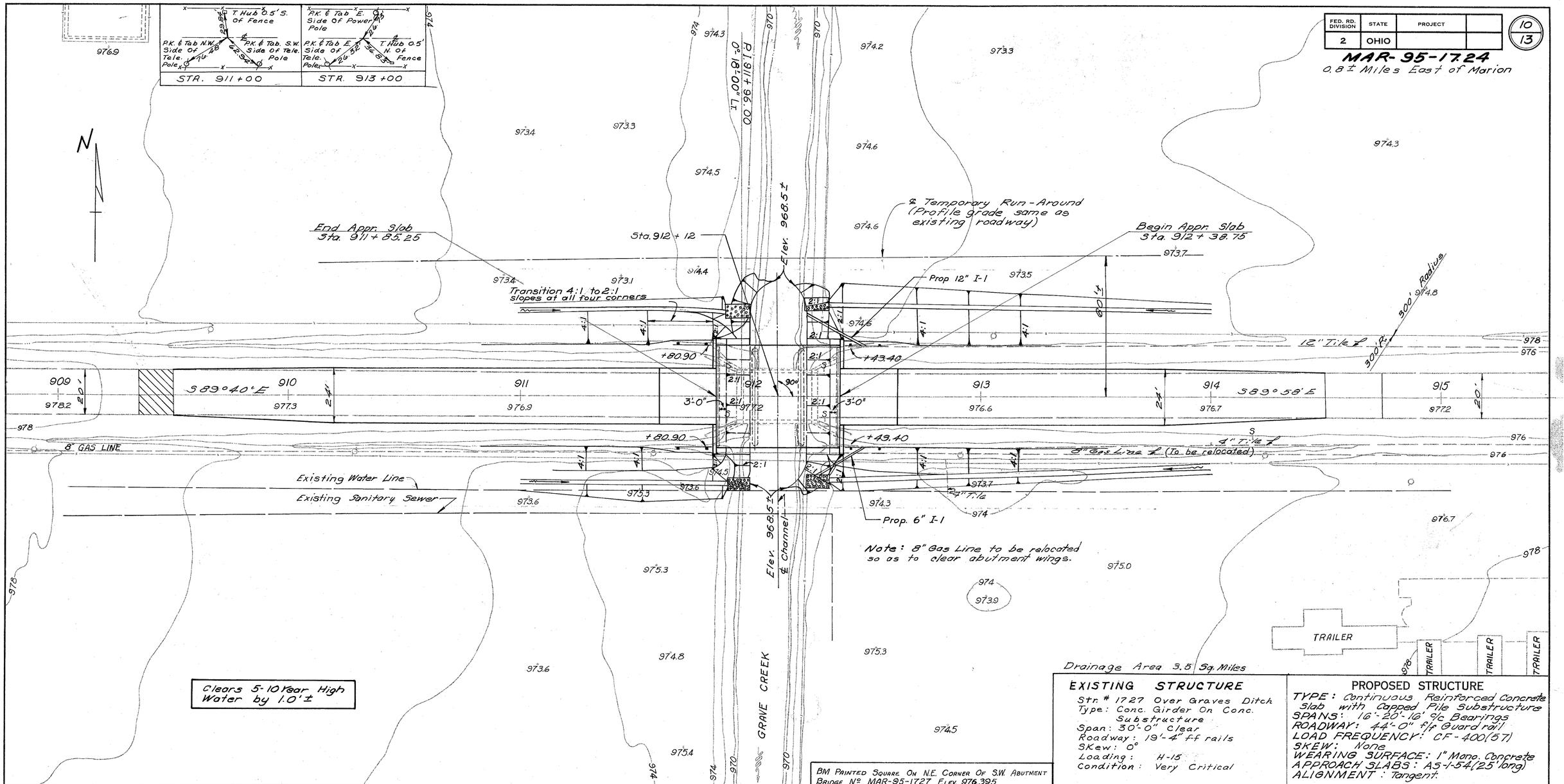
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

10/13

MAR-95-17.24

0.8± Miles East of Marion



EXISTING STRUCTURE

Str. # 1727 Over Graves Ditch
Type: Conc. Girder On Conc. Substructure
Span: 30'-0" Clear
Roadway: 19'-4" f-f rails
Skew: 0°
Loading: H-15
Condition: Very Critical

PROPOSED STRUCTURE

TYPE: Continuous Reinforced Concrete Slab with Capped Pile Substructure
SPANS: 16'-20'-16' c/c Bearings
ROADWAY: 44'-0" f/f Guard rail
LOAD FREQUENCY: CF-400(57)
SKEW: None
WEARING SURFACE: 1" Mono. Concrete
APPROACH SLABS: AS-1-54(25' long)
ALIGNMENT: Tangent.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. MAR-95-1727
SR-95 OVER GRAVE CREEK
MARION CO. SR-95

SEC. STA. 911+85.25
SCALE 1" = 20' STA. 912+38.75

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
		R.E.J.	R.E.J.	G.E.S.	G.E.S.

BFG 12-6-63

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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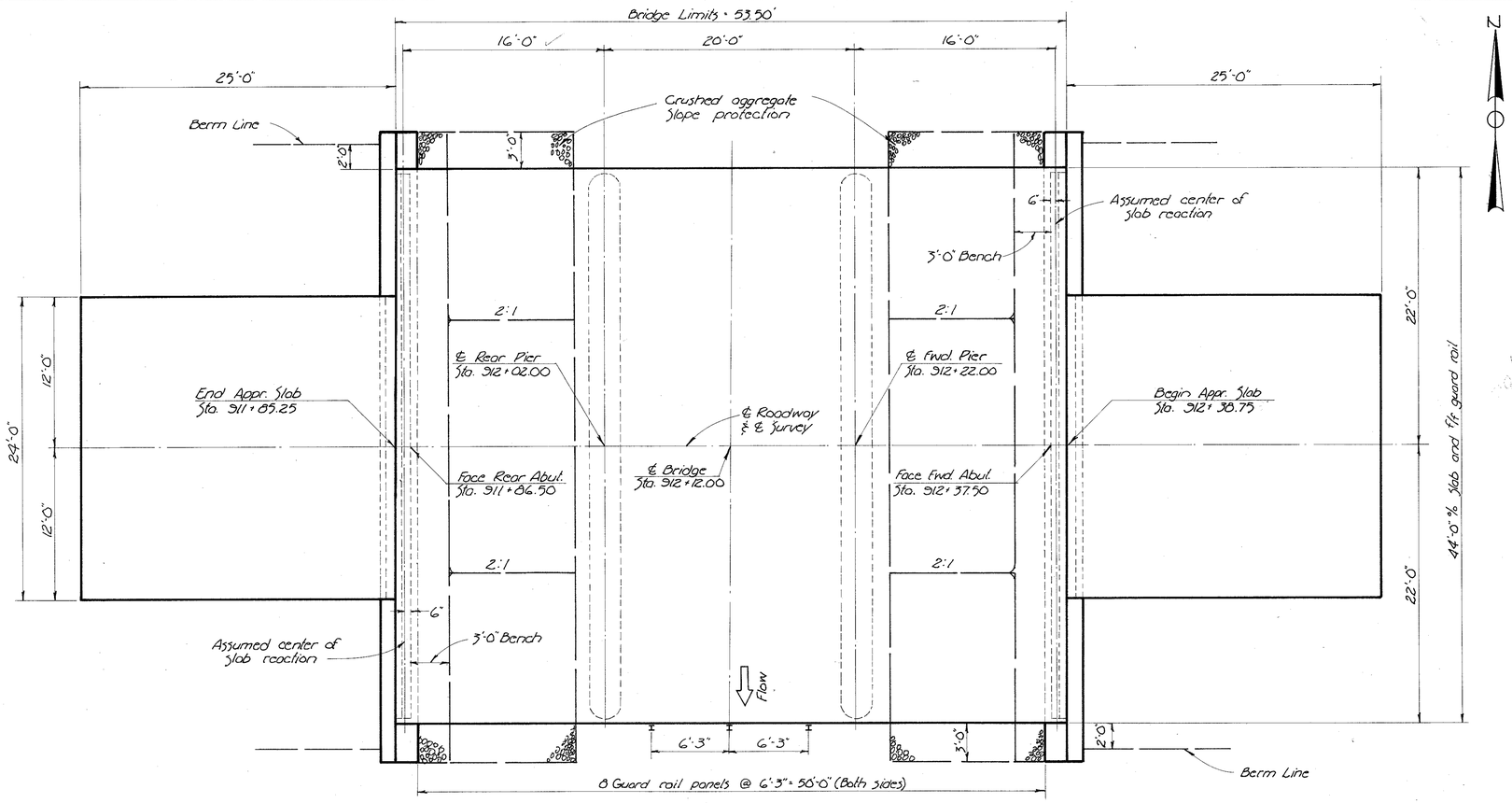
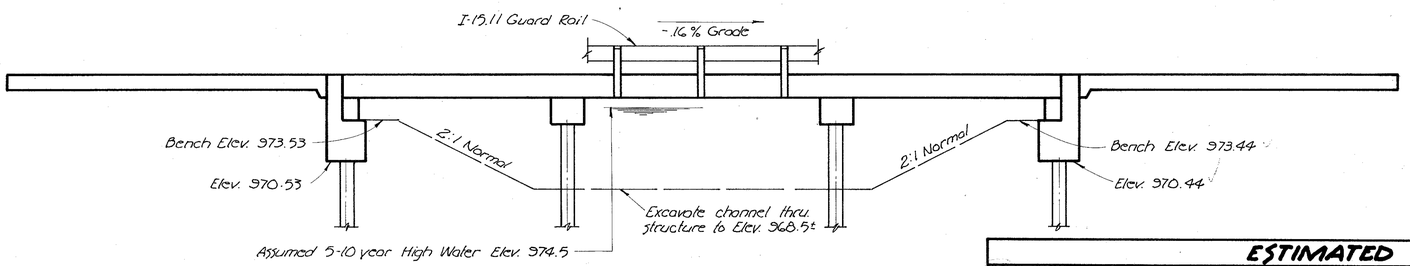
MAR-95-17.24



GENERAL PLAN



ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings A-1-54, P-1-54, C5-1-54 revised 12-1-54, 2-2-59 & 4-1-63, respectively; to Supplemental Specification S-101 dated 7-12-62.

TEMPORARY RUN-AROUND, BRIDGE, APPROACH EMBANKMENT AND PAVEMENT: Load Frequency for bridge, CF=130, with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specification for Highway Structures. Bridge width 20'. Approach width, out-to-out of shoulders, 26'.

DESIGN LOADING – CF400(57)

CONCRETE CLASS C – basic unit stress 1,333 p.s.i.

CONCRETE CLASS E – basic unit stress 1,133 p.s.i.

REINFORCING STEEL – ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

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

PILES shall be driven to a minimum bearing capacity of 19 tons per pile for the abutments and 22 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than No. 7 gauge, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface on the ground.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

REINFORCING STEEL CLEARANCE shall be 2" from the top of the monolithic concrete wearing surface.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abut.	Piers	Gen'l.		
E-2	95	Cu. Yds.	Unclassified excavation		95				
E-3	131	Cu. Yds.	Channel excavation				131		
S-1	111	Cu. Yds.	Class "C" concrete, superstructure & pier caps	95		16			
S-1	52	Cu. Yds.	Class "E" concrete, abutments		52				
S-4	31,943	Lbs.	Reinforcing steel	21,843	5633	4476			
S-14	107.0	Lin. Ft.	Railing (Type I-15.11 with galvanized steel posts and bolts)	107.0					
S-15	Lump	Sum	Temporary run-around, bridge,				Lump		
S-16	Lump	Sum	First test pile.				Lump		
S-18	790	Lin. Ft.	14" dia. cast-in-place reinforced concrete piles		370	420			
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	17	Cu. Yds.	Porous backfill		17				
S-101	111	each	Water-reducing, set-retarding admixture	95		16			
I-10	160	Sq. Yds.	Crushed aggregate slope protection				160		

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

GENERAL PLAN, ELEVATION, NOTES & ESTIMATED QUANTITIES

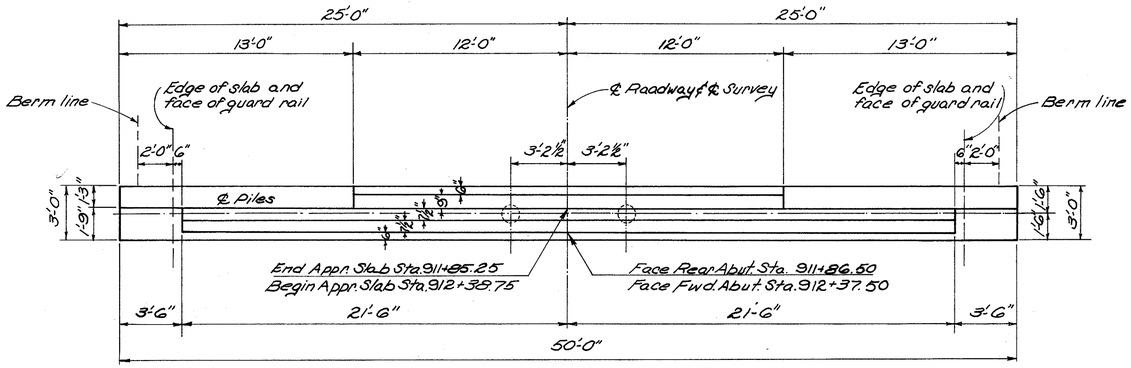
BRIDGE No. MAR-95-1727
OVER GRAVE CREEK
Sta. 911+85.25
Sta. 912+38.75
MARION COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.D.A.	D.D.A.	J.A.M.	W.C.K.	BFG	12-6-63	

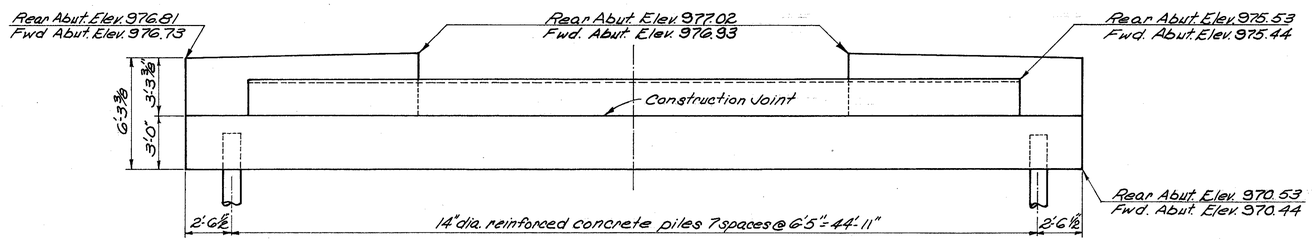
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

12/13

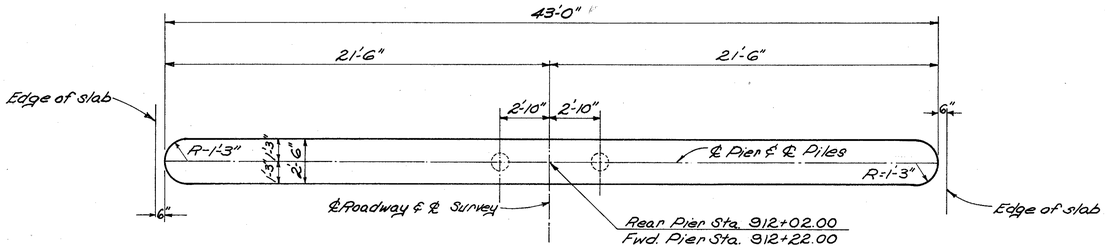
MAR-95-17.24



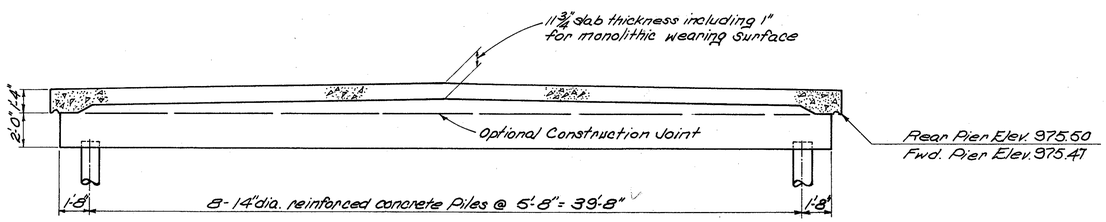
ABUTMENT PLAN



ABUTMENT ELEVATION



PIER PLAN

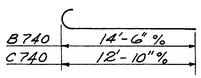


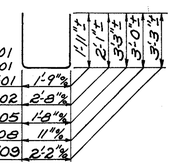
PIER ELEVATION

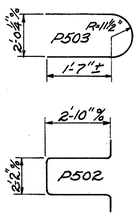
REINFORCING STEEL LIST

MARK	No.	LENGTH	WEIGHT	SHP
Superstructure				
A740	138	19'-3"	5430	S
B740	44	15'-4"	1379	B
C740	46	13'-8"	1285	B
D740	22	15'-10"	712	S
E740	23	11'-0"	517	S
F840	78	16'-2"	3367	S
G840	38	8'-6"	862	S
H840	38	7'-6"	761	S
J601	40	10'-5"	626	S
K601	20	7'-8"	230	S
M601	61	43'-6"	3986	S
N601	41	43'-6"	2679	S
Abutments				
R1001	16	22'-11"	1578	S
R801	16	26'-1"	1114	S
R501	16	25'-7"	427	S
R502	156	6'-7"	1071	B
R503	8	22'-1"	184	S
R504	24	5'-4"	134	S
R505	32	7'-11"	264	B
R506	8	12'-8"	106	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"	1497	S
P901	8	40'-6"	1102	S
P701	96	4'-0"	785	S
P501	4	40'-6"	169	S
P502	68	9'-0"	638	B
P503	8	6'-4"	53	B
P401	64	5'-5"	232	B
Replacement Bars				
RE1001	1	7'-2"	—	S
RE901	1	6'-10"	—	S
RE801	1	6'-6"	—	S
RE701	1	6'-2"	—	S
RE601	1	5'-11"	—	S
RE501	1	5'-7"	—	S
RE401	1	5'-5"	—	B

BENDING DIAGRAMS







NOTE-

For additional details refer to Std. Drgs. A-1-54 & P-1-54.

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

ABUTMENT & PIER DETAILS
REINFORCING STEEL LIST
BRIDGE NO MAR-95-1727
OVER GRAVE CREEK
STA. 911+85.25
911+38.75
MARION COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.D.A.	D.D.A.	JA	WCK	BFG	12-6-93	