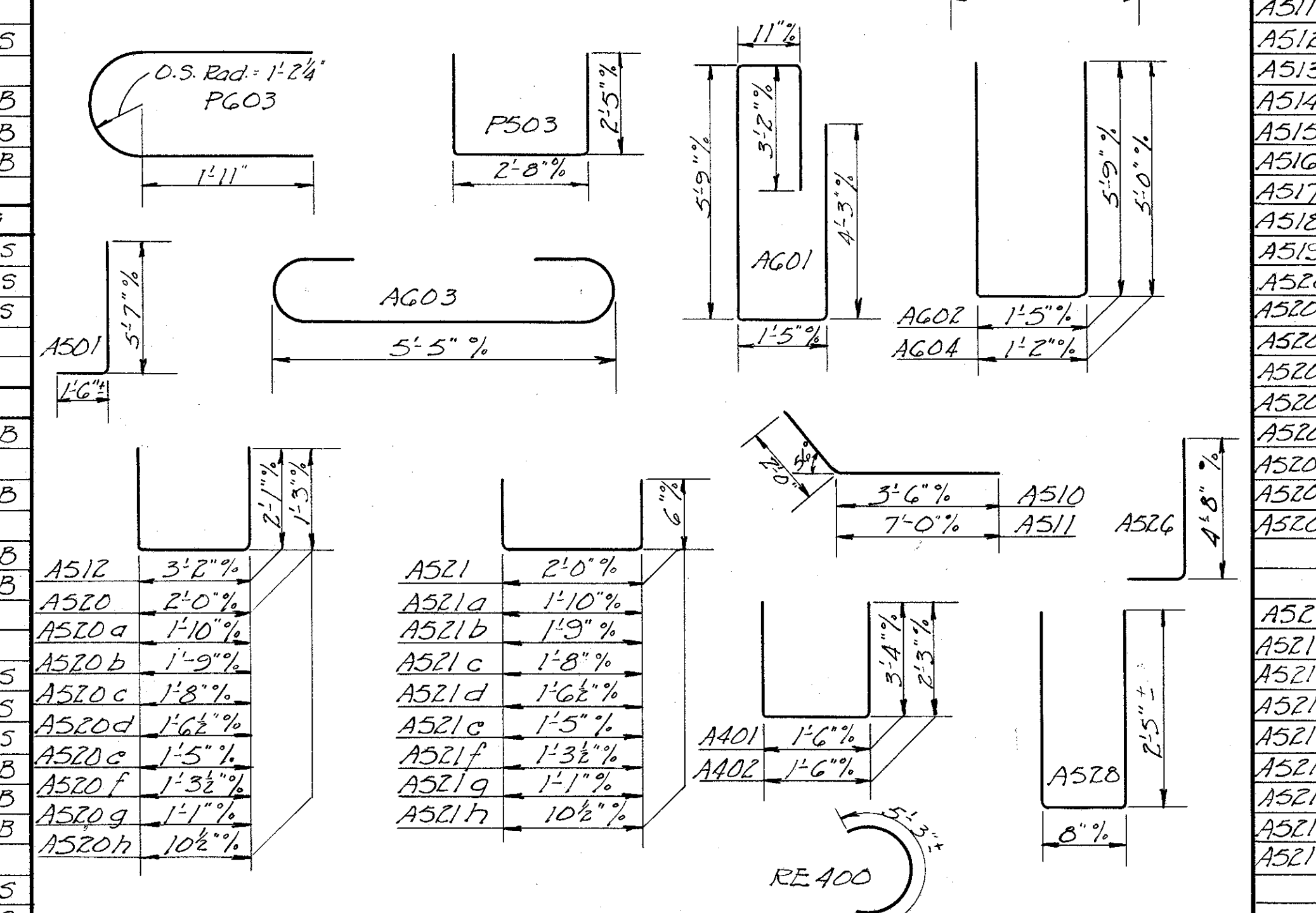
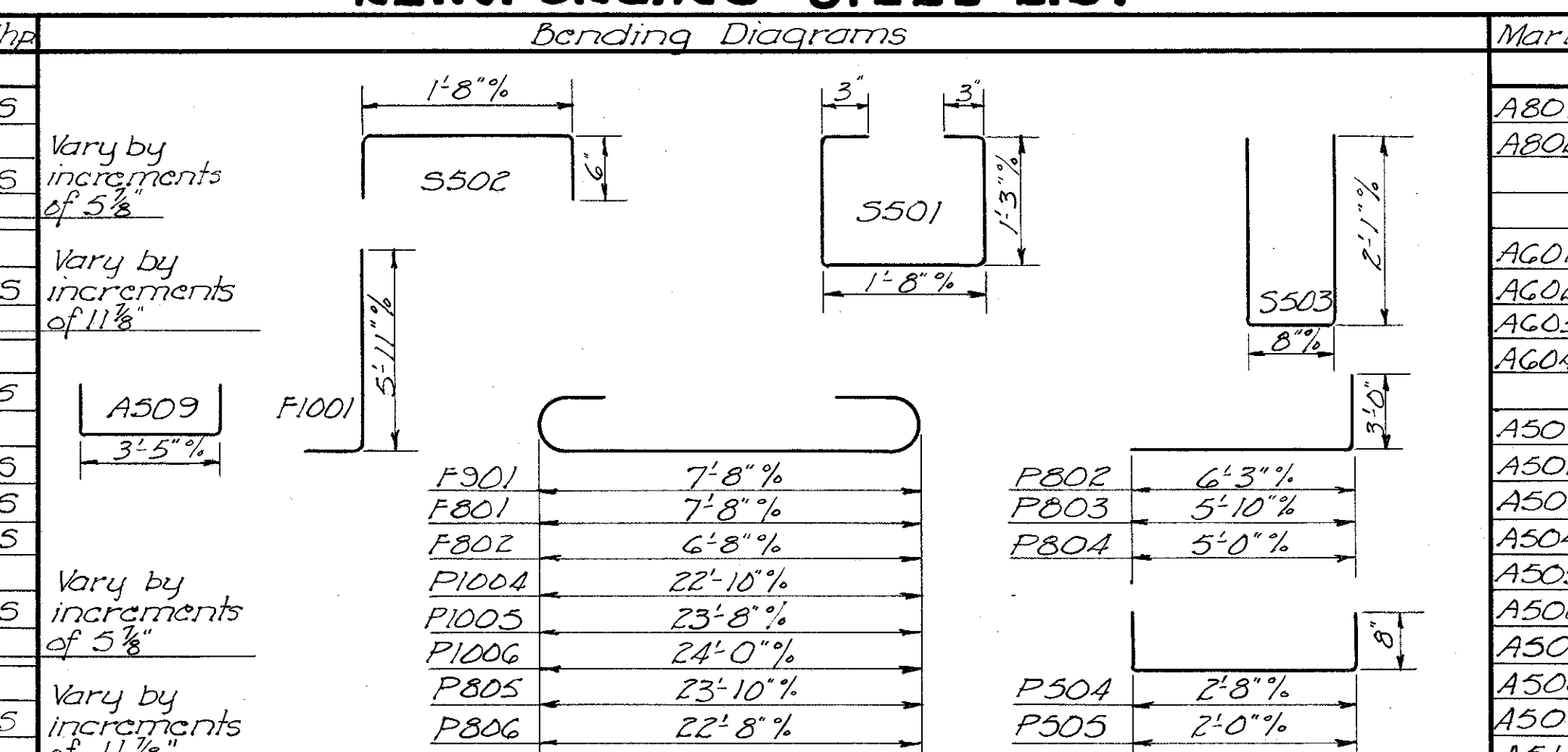


REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.	Bending Diagrams		Mark	No.	Length	Weight	Shp.
SUPERSTRUCTURE											
S701	576	28'-11"	34,045	S	Vary by increments of 5%		A801	16	15'-0"	641	S
S702	8 series of 27	15'-8"	9,750	S	Vary by increments of 11 1/2%		A802	32	35'-6"	3,033	S
S703	4 series of 23	6'-5"	3,252	S	Vary by increments of 5%		AG01	172	14'-10"	3,832	B
S704	16	5'-5"	177	S	Vary by increments of 11 1/2%		AG02	80	12'-7"	1,512	B
S601	576	28'-9"	24,873	S	Vary by increments of 5%		AG03	88	6'-9"	892	B
S602	856	34'-9"	44,678	S	Vary by increments of 11 1/2%		AG04	44	10'-10"	716	B
S603	176	24'-0"	6,344	S	Vary by increments of 5%		A501	368	6'-11"	2,655	B
S604	8 series of 27	15'-7"	7,138	S	Vary by increments of 11 1/2%		A502	16	34'-0"	567	S
S605	4 series of 23	6'-5"	2,389	S	Vary by increments of 5%		A503	60	32'-0"	2,003	S
S606	16	5'-5"	130	S	Vary by increments of 11 1/2%		A504	12	36'-0"	451	S
S501	452	4'-2"	1,964	B	Vary by increments of 5%		A505	4	26'-0"	108	S
S502	452	2'-5"	1,139	B	Vary by increments of 11 1/2%		A506	4	18'-8"	78	S
S503	452	4'-7"	2,161	B	Vary by increments of 5%		A507	4	13'-6"	36	S
RAILING REINFORCING											
R501	32	14'-5"	-	S	Vary by increments of 11 1/2%		A508	4	6'-0"	25	S
R502	32	12'-4"	-	S	Vary by increments of 5%		A509	264	4'-5"	1,216	B
R503	112	15'-2"	-	S	Vary by increments of 11 1/2%		A510	24	5'-6"	130	B
PIERS											
F1001	120	7'-0"	3,615	B	Vary by increments of 5%		A511	24	9'-0"	225	B
F901	80	10'-2"	2,765	B	Vary by increments of 11 1/2%		A512	144	7'-1"	1,065	B
F801	200	9'-10"	5,251	B	Vary by increments of 5%		A513	160	7'-0"	1,168	S
F802	168	8'-10"	3,962	B	Vary by increments of 11 1/2%		A514	48	13'-0"	651	S
P1001	120	16'-0"	8,262	S	Vary by increments of 5%		A515	12	12'-8"	159	S
P1002	60	15'-8"	4,045	S	Vary by increments of 11 1/2%		A516	28	10'-6"	307	S
P1003	60	15'-5"	3,980	S	Vary by increments of 5%		A517	16	15'-6"	239	S
P1004	8	25'-8"	884	B	Vary by increments of 11 1/2%		A518	8	14'-0"	117	S
P1005	8	26'-6"	912	B	Vary by increments of 5%		A519	8	15'-8"	131	B*
P1006	16	26'-10"	1,847	B	Vary by increments of 11 1/2%		A520	8	4'-3"	35	B
P801	48	7'-0"	897	S	Vary by increments of 5%		A520a	32	4'-1"	136	B
P802	32	9'-1"	776	B	Vary by increments of 11 1/2%		A520b	16	4'-0"	67	B
P803	32	8'-8"	740	B	Vary by increments of 5%		A520c	8	3'-11"	33	B
P804	32	7'-10"	669	B	Vary by increments of 11 1/2%		A520d	8	3'-10"	32	B
P805	16	26'-0"	1,111	B	Vary by increments of 5%		A520e	8	3'-8"	31	B
P806	8	24'-10"	530	B	Vary by increments of 11 1/2%		A520f	8	3'-7"	30	B
PG01	16	12'-0"	288	S	Vary by increments of 5%		A520g	8	3'-4"	28	B
PG02	32	13'-8"	657	S	Vary by increments of 11 1/2%		A520h	8	3'-2"	26	B
PG03	32	7'-8"	368	B	Vary by increments of 5%		A521	8	2'-9"	23	B
P501	8	22'-0"	184	S	Vary by increments of 11 1/2%		A521a	32	2'-7"	86	B
P502	16	12'-0"	200	S	Vary by increments of 5%		A521b	16	2'-6"	42	B
P503	304	7'-3"	2,299	B	Vary by increments of 11 1/2%		A521c	8	2'-5"	20	B
P504	80	3'-9"	313	B	Vary by increments of 5%		A521d	8	2'-4"	19	B
P505	8	3'-1"	26	B	Vary by increments of 11 1/2%		A521e	8	2'-2"	18	B
P506	8	2'-10"	24	B	Vary by increments of 5%		A521f	8	2'-1"	17	B
REPLACEMENT BARS											
RE1000	2	7'-2"	-	S	Vary by increments of 11 1/2%		A521g	8	1'-10"	15	B
RE900	1	6'-10"	-	S	Vary by increments of 5%		A521h	8	1'-8"	14	B
RE800	1	6'-6"	-	S	Vary by increments of 11 1/2%		A522	8	14'-8"	122	B*
RE700	3	6'-2"	-	S	Vary by increments of 5%		A523	64	4'-0"	267	S
RE600	5	5'-11"	-	S	Vary by increments of 11 1/2%		A524	64	3'-6"	234	S
RE500	2	5'-7"	-	S	Vary by increments of 5%		A525	16	3'-8"	95	S
RE400	1	5'-3"	-	S	Vary by increments of 11 1/2%		A526	16	3'-2"	86	B
RE400	1	5'-3"	-	B	Vary by increments of 5%		A527	24	12'-2"	304	S
RE400	1	5'-3"	-	B	Vary by increments of 11 1/2%		A528	96	5'-3"	526	B
SPIRAL REINFORCING											
SP401	12	32"	12'-10"	4 1/2	No. of Turns		A401	128	8'-0"	684	B
SP402	6	32"	12'-7"	4 1/2	Weight		A402	72	5'-5"	277	B
SP403	6	32"	12'-4"	4 1/2	Weight						



The "Length" shown in steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The "No. of Turns" shown in the steel list for the spiral bars is the "length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 5-4.

1/2 closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee, or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

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. 5-4.02 need not be furnished and replacement bars will not be required.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super	Abut.	Pier	Gen'l	As Built
E-2	891	Cu. Yds.	Unclassified excavation		556	335		
S-1	450	Cu. Yds.	Class "C" concrete, superstructure	450				
S-1	169	Cu. Yds.	Class "C" concrete, pier caps and columns			169		
S-1	225	Cu. Yds.	Class "E" concrete, abutments above footings.		225			
S-1	363	Cu. Yds.	Class "E" concrete, footings		211	154		
S-4	213,645	Lbs.	Reinforcing steel	138,040	25,272	50,333		
S-7	375,200	Lbs.	Structural steel	375,200				
S-8	375,200	Lbs.	Field painting of structural steel, as per plan	375,200				
S-14	655.67	Lin. Ft.	Railing (Aluminum rail and supports and concrete parapet.)	655.67				
S-16	Lump	Sum	First test pile				Lump	
S-18	6330	Lin. Ft.	Steel piles 12BP53		3530	2800		CO-3 -1883.7 1446.3
S-29	106	Cu. Yds.	Porous backfill		106			CO-3 -12.9 93.1

GENERAL NOTES

- DESIGN SPECIFICATIONS:** This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 3-1-57.
- EXCAVATION QUANTITY** includes the removal of fill material required for construction of the abutments and piers.
- POROUS BACKFILL**, two feet thick, full length of abutment shall extend up to the underside of the approach slab, or to the finished ground surface.
- WELDING** of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus:
- CONCRETE DECK PLACING:** In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the center line of bridge and are located near the center of any span.
- PROCEDURE:** The embankment shall be placed and compacted up to the finished spill thru steps and to the level of the sub-grade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and piers and piles driven.
- PAINTING:** After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 8.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the outside steel beams (girders), all sides of bottom flange as well as exterior brackets (if any).
- MACHINE FINISH:** The concrete bridge deck shall be finished as specified in the proposal note "Machine Finishing of Bridge Deck Slabs".
- PILES** shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:
 For abutment piles:
 35 tons per pile using a 11,000 ft. lb. hammer.
 35 tons per pile using a 15,000 ft. lb. or greater hammer.
 For pier piles:
 54 tons per pile using a 11,000 ft. lb. hammer.
 44 tons per pile using a 15,000 ft. lb. or greater hammer.

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

REINFORCING STEEL LIST, ESTIMATED QUANTITIES, AND GENERAL NOTES
BRIDGE NO. LAK-2-03C3 L&R
OVER BEIDLER ROAD
Sta. 291+88.11
293+25.53

LAKE COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.V.G.	J.V.G.	E.C.C.	E.B.L.	B.F.G.	11-28-58	12-9-58 2-20-59

Revised As-Built VLA ~ 6-11-63