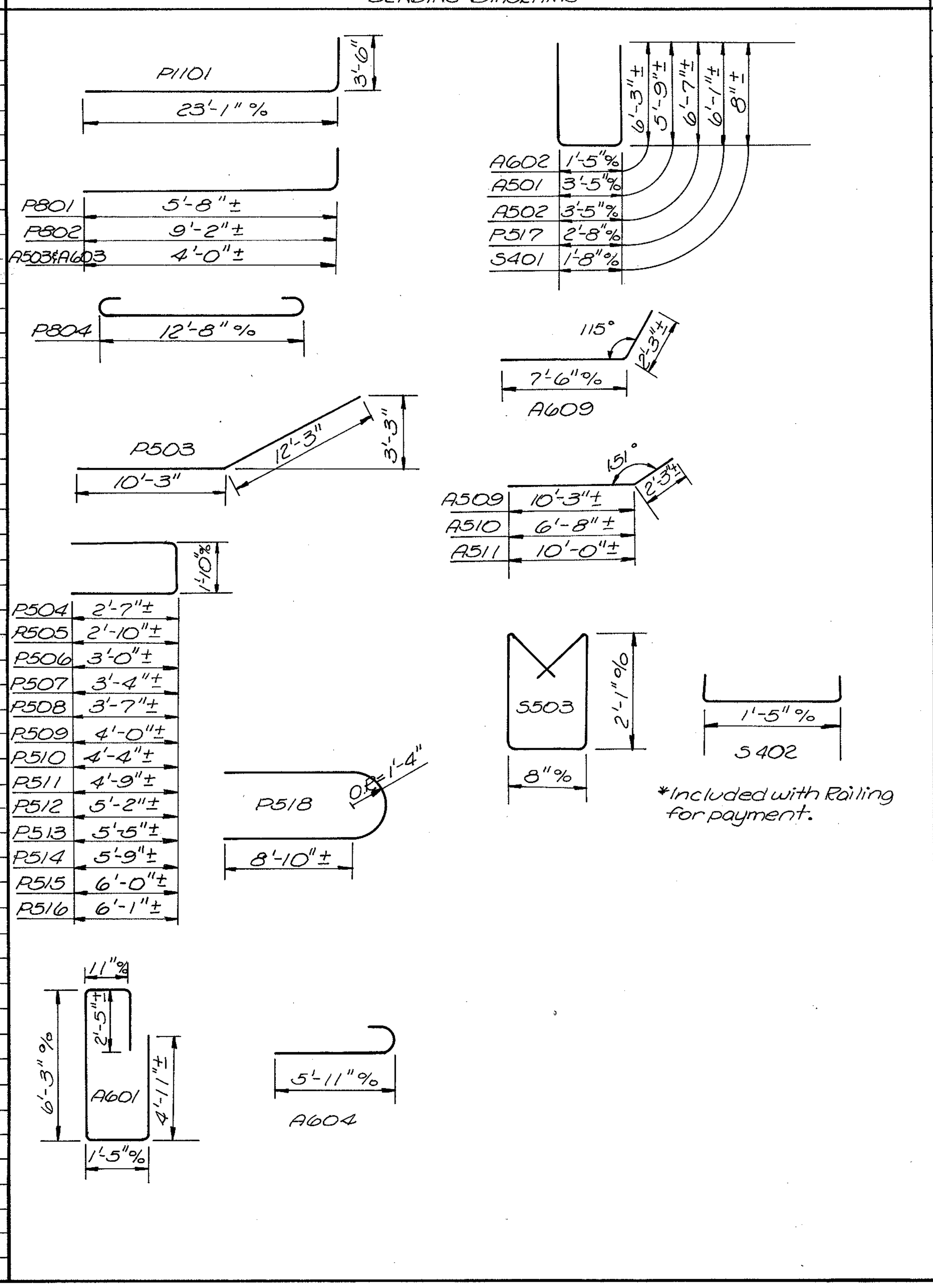
MICROFILMED
DEC 16 1987

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.
Piers				
P1101	56	26'-4"	7835	B
P1102	56	23'-1"	6868	S
P1103	16	32'-0"	2720	S
P801	112	6'-7"	1969	B
P802	96	10'-1"	2585	B
P803	112	17'-2"	5134	S
P804	136	14'-10"	5386	B
P805	36	22'-6"	2163	S
P701	28	13'-9"	787	S
P702	28	14'-10"	849	S
P703	28	15'-6"	887	S
P704	28	16'-7"	949	S
P501	32	22'-1"	737	S
P502	8	29'-6"	246	S
P503	16	22'-6"	375	B
P504	104	6'-9"	732	B
P505	104	7'-3"	786	B
P506	16	7'-7"	127	B
P507	16	8'-3"	138	B
P508	16	8'-9"	146	B
P509	16	9'-7"	160	B
P510	16	10'-3"	171	B
P511	16	11'-1"	185	B
P512	16	11'-11"	199	B
P513	16	12'-5"	207	B
P514	16	13'-1"	218	B
P515	16	13'-7"	227	B
P516	48	13'-9"	688	B
P517	44	14'-7"	669	B
P518	148	21'-2"	3267	B
Abutments				
A601	96	15'-3"	2199	B
A602	76	13'-7"	1551	B
A603	172	4'-8"	1206	B
A604	144	6'-7"	1424	B
A605	32	24'-10"	1194	S
A606	8	5'-6"	66	S
A607	24	11'-8"	421	S
A608	32	13'-5"	645	S
A609	16	9'-9"	234	B
A610	16	8'-4"	200	S
A611	16	9'-0"	216	S
A612	16	9'-10"	236	S
A613	24	10'-3"	369	S
A614	8	10'-8"	128	S
A615	8	11'-5"	137	S
A616	16	11'-11"	286	S
A501	64	14'-8"	979	B
A502	52	16'-4"	886	B
A503	116	4'-6"	544	B
A504	88	22'-0"	2019	S
A505	16	31'-9"	530	S
A506	16	29'-8"	495	S
A507	16	26'-10"	448	S
A508	8	24'-10"	207	S
A509	6	12'-6"	78	B
A510	8	8'-11"	74	B
A511	2	12'-3"	26	B
Superstructures				
S701	642	19'-0"	24,933	S
S702	642	26'-10"	35,212	S
S601	1284	22'-10"	44,036	S
S602	686	33'-2"	34,174	S
S501	574	32'-11"	19,707	S
S502	176	36'-0"	6,608	S
S503	592	5'-5"	3345	B
S401	592	2'-9"	1088	B
S402	1184	2'-3"	1780	B
Railing				
*R501	32	9'-5"	–	S
*R502	192	16'-6"	–	S
Replacement Bars				
RE1101	1	7'-6"	–	S
RE801	1	6'-6"	–	S
RE701	4	6'-2"	–	S
RE601	5	5'-11"	–	S
RE501	3	5'-7"	–	S
RE401	1	5'-3"	–	S

Bending Diagrams



BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size.

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.

⊛ See Proposal Note

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts	Piers	Superst	Gen'l	As Built	
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump		
E-2	~~1135~~	Cu. Yds.	Unclassified excavation	538	597			CO 7 +13	1148
S-1	610	Cu. Yds.	Class "C" concrete, superstructure			610			
S-1	~~342~~	Cu. Yds.	Class "C" concrete, piers above footings		342			CO 7 +6	348
S-1	155	Cu. Yds.	Class "E" concrete, pier footings		155				
S-1	360	Cu. Yds.	Class "E" concrete, abutments	360					
S-4	235,091	Lbs.	Reinforcing steel	16,798	47,410	170,883			
S-7	725,000	Lbs.	Structural steel			725,000			
S-8	725,000	Lbs.	Field painting of structural steel			725,000			
S-14	886.0	Lin. ft.	Railing (aluminum rail & supports, & concrete parapet)			886.0			
S-25	Lump	Sum	Electric grounding system				Lump		
S-29	20	Each	Scuppers			20			
S-29	93	Cu. Yds.	Porous backfill	93					
I-10	~~1387~~	Sq. Yds.	Crushed aggregate slope protection				1387	CO 10 -70	1317
⊛ Special	~~610~~	Each	Water-reducing, set retarding admixture			610		CO 15 -610	0

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CSB-2-56, sheet 3, revised 2-2-59, AR-1-57, revised 12-12-60 and RB-1-55, revised 2-2-59.

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 thereof.

EXCAVATION QUANTITY includes the removal of fill material between the surface of proposed embankment and the bottom of footings.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3.0 tons per sq. ft.; abutment footings, 2.5 tons per sq. ft.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

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.

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

RAILROAD AERIAL LINES shall be relocated by the railroad. The Contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

CONSTRUCTION CLEARANCE of 20' vertically above the top of the railroad rails and 8' horizontally from the center of tracks shall be maintained at all times.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-204 and E-208 of the Construction and Material Specifications, subject to the supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

ELECTRICAL GROUNDS: A stranded No. 0 gage bare copper wire electrical ground shall be embedded in the south pier of each bridge. The lower end of each wire shall terminate in a 25 ft. length coiled under the footing and separated from the concrete by two layers of tar paper. The upper end shall extend sufficiently above the top of the concrete to provide for connection to the superstructure, by brazing or bolting to the fascia beam carrying the roadway lighting cable.

MACHINE FINISH: The concrete bridge decks shall be finished by the use of a finishing machine, as per Sec. S-1.23.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per plans and specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the specifications regarding the use of chromate primers.

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

GENERAL NOTES, ESTIMATED QUANTITIES & REINFORCING STEEL LIST

Bridge No. LAK-44-0556 L & R
over N.Y.C. RR
STA 310+14.33
312+38.33
LAKE COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	MKH	[signature]	BFG [signature]	6-7-61	

Revised As-Built CAM 2-19-64