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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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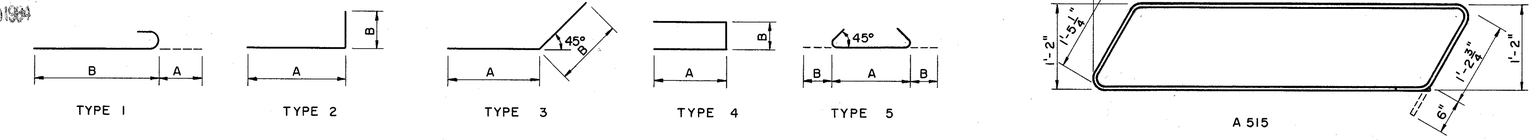
LAKE COUNTY
LAK-2-16.49



REINFORCING STEEL LIST

ABUTMENTS

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	VARIES BY	NO OF EACH
A 501	57	53	110	30'-11"	3,547	S				
A 502	24	–	24	20'-2"	505	S				
A 503	–	24	24	17'-2"	430	S				
A 504	24	24	48	4'-0"	200	S				
A 505	3	3	6	26'-0"	163	S				
A 506	2	2	4	29'-0"	121	S				
A 507	2	2	4	5'-0"	21	S				
A 508	4	4	8	5'-9"	48	2	4'-0"	1'-10 1/2"		
A 509	8	8	16	5'-0"	83	2	4'-0"	1'-1 1/2"		
A 510	2	2	4	7'-8"	32	4	3'-1 1/2"	1'-8"		
A 511	4	4	8	3'-0"	25	S				
A 512	16	16	32	6'-0"	200	S				
A 513	16	–	16	6'-3"	104	S				
A 514	–	16	16	5'-9"	96	S				
A 515	10	10	20	12'-6"	261	See	Sketch			
A 601	31	31	62	17'-0"	1,583	S				
A 602	23	23	46	9'-4"	645	3	4'-8"	4'-8"		
A 603	2	2	4	8'-8"	52	3	4'-8"	4'-0"		
A 604	20	20	40	5'-0"	300	2	4'-1 1/2"	1'-0"		
A 605	22	22	44	5'-0"	330	S				
A 606	6	6	12	4'-10"	87	S				
A 1001	30	30	60	11'-0"	2,840	S				
A 1002	42	42	84	10'-0"	3,615	S				
A 1101	33	33	66	12'-4"	4,324	1	1'-7"	10'-9"		
A 1102	33	–	33	17'-6"	3,068	S				
A 1103	–	33	33	14'-6"	2,542	S				
A 1104	32	32	64	12'-7"	4,278	1	1'-7"	11'-0"		

TOTAL 29,500

SHORT WINGS

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	VARIES BY	NO OF EACH
W 516	12	12	24	6'-0" to 14'-8 1/2"	259	S			9 1/2"	2
W 517	11	11	22	6'-0"	138	S				
W 518	52	44	96	16'-0"	1,602	S	Bend in	Field		
W 519	8	8	16	14'-0" to 23'-9"	315	S			3'-3"	2
W 520	23	23	46	4'-0"	192	S				
W 521	8	8	16	8'-0"	134	1	7'	7'-5"		
W 522	1	–	1	23'-6"	25	S				
W 523	11	–	11	16'-9" to 23'-0"	228	S			7 1/2"	1
W 524	11	–	11	9'-9" to 16'-0"	148	S			7 1/2"	1
W 525	11	–	11	10'-0" to 16'-3"	151	S			7 1/2"	1
W 526	–	1	1	20'-6"	21	S				
W 527	–	11	11	14'-0" to 20'-3"	197	S			7 1/2"	1
W 528	–	11	11	7'-2" to 13'-5"	118	S			7 1/2"	1
W 529	–	11	11	7'-5" to 13'-8"	121	S			7 1/2"	1
W 531	10	10	20	4'-6" to 15'-0"	203	S	Bend in	Field	2'-7 1/2"	4
W 532	10	–	10	4'-9" to 15'-5"	105	S	Bend in	Field	2'-8"	2
W 533	–	10	10	4'-4" to 15'-0"	101	S	Bend in	Field	2'-8"	2
W 534	4	4	8	17'-3"	144	S	Bend in	Field		
W 607	8	8	16	4'-6" to 8'-7"	157	S			7"	2
W 901	10	10	20	13'-0"	884	S				
W 902	5	5	10	9'-0" to 12'-0"	357	S			9"	2
W 903	10	10	20	8'-0"	544	S				
W 904	5	5	10	7'-0"	238	S				
W 905	23	23	46	6'-9"	1,056	1	1'-3"	5'-6"		
W 906	14	14	28	11'-9"	1,119	1	1'-3"	10'-6"		
W 907	1	–	1	23'-9"	81	S				
W 908	11	–	11	17'-0" to 23'-3"	753	S			7 1/2"	1
W 909	–	1	1	20'-9"	71	S				
W 910	–	11	11	14'-3" to 20'-6"	650	S			7 1/2"	1

TOTAL 10,112

LONG WINGS

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	VARIES BY	NO OF EACH
W 540	16	16	32	8'-3" to 14'-6"	380	S			5"	2
W 541	15	15	30	6'-0"	188	S				
W 542	31	27	58	22'-7"	1,366	S	Bend in	Field		
W 543	23	19	42	19'-0"	832	S	Bend in	Field		
W 544	8	8	16	22'-0" to 36'-0"	484	S			4'-8"	4
W 545	2	2	4	22'-0"	92	S				
W 546	34	34	68	4'-0"	284	S				
W 547	16	16	32	8'-0"	267	1	7"	7'-5"		
W 548	1	–	1	23'-6"	25	S				
W 549	–	1	1	20'-11"	22	S				
W 550	17	–	17	10'-2" to 16'-10"	239	S			5"	1
W 551	16	–	16	17'-0" to 23'-3"	336	S			5"	1
W 552	17	–	17	10'-5" to 17'-1"	244	S			5"	1
W 553	–	17	17	7'-4" to 14'-0"	189	S			5"	1
W 554	–	16	16	14'-5" to 20'-8"	293	S			5"	1
W 555	–	17	17	7'-7" to 14'-3"	194	S			5"	1
W 556	2	2	4	20'-6"	86	S				
W 557	2	2	4	23'-0"	96	S				
W 558	10	–	10	6'-6" to 21'-2"	144	S	Bend in	Field	3'-8"	2
W 559	–	10	10	6'-0" to 20'-8"	139	S	Bend in	Field	3'-8"	2
W 560	8	–	8	4'-6" to 15'-6"	83	S	Bend in	Field	3'-8"	2
W 561	–	8	8	4'-3" to 15'-3"	81	S	Bend in	Field	3'-8"	2
W 608	7	7	14	7'-0" to 9'-0"	168	S			4"	2
W 920	13	13	26	13'-0"	1,150	S				
W 921	7	7	14	10'-6" to 12'-0"	536	S			3"	2
W 922	5	5	10	9'-0" to 10'-6"	332	S			4 1/2"	2
W 923	12	12	24	8'-0"	653	S				
W 924	6	6	12	7'-0"	286	S				
W 925	4	4	8	6'-0"	163	S				
W 926	34	34	68	6'-9"	1,561	1	1'-3"	5'-6"		
W 927	16	16	32	11'-9"	1,278	1	1'-3"	1'-3"		
W 928	1	–	1	23'-9"	81	S				
W 929	–	1	1	21'-2"	72	S				
W 930	16	–	16	17'-4" to 23'-7"	1,113	S			5"	1
W 931	–	16	16	14'-8" to 20'-11"	968	S			5"	1

TOTAL 14,425

PIERS

MARK	SIZE	TOTAL	LENGTH	WEIGHT	TYPE	A	B
P 401	4	72	9'-9"	469	4	2'-10 1/2"	4'-3"
P 402	4	144	5'-0"	481	5	4'-3"	4 1/2"
P 801	8	12	4'-0"	128	S	–	–
P 901	9	60	14'-8"	2,993	S	–	–
P 902	9	48	7'-6"	1,224	1	1'-3"	6'-3"
P 903	9	48	17'-9"	2,897	S	–	–

TOTAL 8,192

REPLACEMENT BARS

MARK	NO.	LENGTH		TYPE
RE 400	1	5'-3"		S
RE 500	1	5'-7"		S
RE 600	1	5'-11"		S
RE 900	1	6'-10"		S
RE 1000	1	7'-3"		S
RE 1100	1	7'-7"		S

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIER	SUPER	GENERAL
E-2	2,230	Cu. Yds.	Unclassified excavation	2,065	165		
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump
S-1	28	Cu. Yds.	Class C concrete, pier above footings		28		
S-1	203	Cu. Yds.	Class E concrete, abut. walls and wingwalls above footings	203			
S-1	413	Cu. Yds.	Class E concrete, footings	354	59		
S-3	351	Sq. Yds.	Waterproofing, Type A	351			
S-4	900	Lbs.	Welded wire fabric			900	
S-4	62,229	Lbs.	Reinforcing steel bars	54,037	8,192		
S-6	845	Sq. Ft.	Pneumatically placed mortar			845	
S-8	278,500	Lbs.	Field painting of structural steel			278,500	
S-9	246	Sq. Ft.	1" preformed expansion joint filler	246			
S-9	19	Sq. Ft.	1/2" preformed expansion joint filler	19			
S-29	46	Lin. Ft.	8" non-perforated bituminous coated corrugated metal pipe,				
			M6.4(c), including specials	46			
S-29	218	Lin. Ft.	8" perforated bituminous coated corrugated metal pipe,				
			M6.4(f), including specials	218			
S-29	251	Cu. Yds.	Porous backfill	251			
S-103	318	Sq. Yds.	Waterproofing, Type d			318	
S-103	24	Sq. Yds.	Waterproofing, Type a and d			24	
S-107	278,500	Lbs.	Structural steel			278,500	
Special	233	Sq. Yds.	Asphalt concrete deck cover		233		
Special	14	Sq. Yds.	Asphalt roofing felt, 50 lbs.				14

NOTES

ASPHALT CONCRETE DECK COVER: Contractor shall furnish and place complete as shown on the drawings the Asphalt Concrete specified hereinafter.

MATERIALS

1. Emulsified Asphalt shall be in accordance with Federal Specifications SS-A-674 b.
2. Fine aggregate shall be as specified for concrete.
3. Coarse aggregate shall be as specified for concrete with the following gradation:

Sieve Size (inches)	Percent Passing by weight
3/8"	100
1/2"	90 - 100
3/8"	40 - 70
No.4	0 - 15

MIX

The asphalt concrete shall be proportioned by volume, 1 part portland cement, 2 parts fine aggregate, three parts coarse aggregate ± 1½ parts emulsified asphalt Type SS-1 and minimum amount of water required to make a workable mix. The dry materials shall first be thoroughly mixed then the water added to produce a uniform mixture after which the emulsified asphalt is added and mixing continued until of uniform color.

APPLICATION

Work shall be done only when the temperature will be above 40°F. for a period of at least 24 hours after starting application.

Surface to be covered shall be thoroughly cleaned and given a uniform primer or bond coating of Emulsified Asphalt Type RS-1, using not less than 1 gallon per 80 sq. ft.

The asphalt concrete shall then be screeded over the primed area to the thickness indicated on the drawings. After the asphalt concrete has set sufficently to allow a man to walk upon it without indentation but prior to final set, it shall be given a uniform coating of emulsified asphalt Type RS-2 applied at the rate of one gallon per 50 sq. ft. This final coating shall be covered with clean sand.

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. For example, A 700 is a No. 7 size bar and A 1014 is a No. 10 size.

All dimensions are out to out of bars.

Type "S" bars are straight.

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REINFORCING STEEL LIST
& ESTIMATED QUANTITIES
BRIDGE NO. LAK - 2 - 1721
RELOC. S.R. 2 UNDER F P & E R. R.
LAKE COUNTY
STA. 808+46.23

DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
B.O.L.		E.L.M.	L.L.D.			