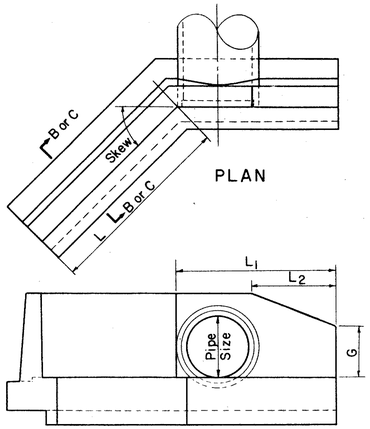
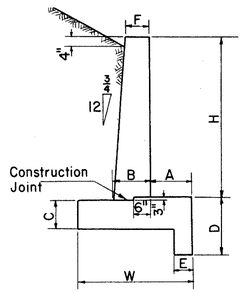
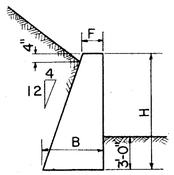
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	ACI-1103(21)	

LAKE COUNTY
LAK-1-12.89







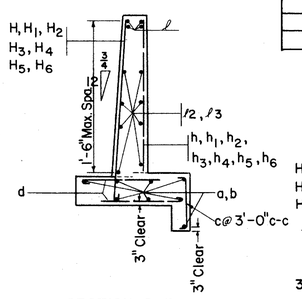
HEADWALL DIMENSIONS

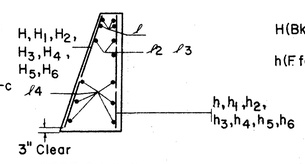
STRUCTURE NO.	STATION*	PIPE SIZE	H	L	L_1	L_2	W	A	B	C	D	E	F	G
	328 + 06 Lt.	42"	4'-8"	9'-0"	8'-11"	5'-3"	4'-3"	1'-3 1/2"	1'-9 5/8"	1'-9"	3'-6"	1'-0"	1'-6"	3'-0"
	328 + 06 Rt.	42"	4'-8"	9'-6"	8'-9"	5'-1"	4'-3"	1'-3 1/2"	1'-9 5/8"	1'-9"	3'-6"	1'-0"	1'-6"	2'-11"
	329 + 50 Lt.	15"	5'-1"	3'-5"	4'-1"	2'-9"			2'-8 3/8"				1'-0"	4'-8"
	380 + 55 Lt.	72"	7'-0"	20'-0"	12'-4"	6'-0"	5'-9"	2'-1 1/2"	1'-11 1/4"	1'-9"	3'-6"	1'-0"	1'-6"	5'-4"
	390 + 90 Rt.	24"	6'-0"	5'-6"	6'-8"	4'-5"			3'-0"				1'-0"	5'-6"
	411 + 83 Lt.	24"	6'-0"	5'-2"	6'-10"	4'-7"			3'-0"				1'-0"	5'-8"
	448 + 50 Lt.	30"	7'-2"	6'-5"	8'-8"	5'-10"			3'-4 3/4"				1'-0"	6'-3"
	482 + 90 Rt.	30"	6'-10"	5'-9"	8'-0"	5'-3"			3'-3 3/8"				1'-0"	5'-11"
	121 + 25 Reloc. Rte 44	72"	7'-8"	14'-3"	18'-5"	13'-1"	5'-9"	2'-1 1/2"	1'-11 3/4"	1'-9"	3'-6"	1'-0"	1'-6"	6'-11"
	5+87.57 Ramp "D"	48"	5'-6"	13'-3"	11'-2"	7'-11"	4'-6"	1'-5"	1'-10 1/8"	1'-9"	3'-6"	1'-0"	1'-6"	4'-4"

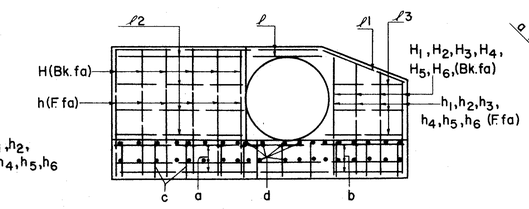
REINFORCING STEEL LIST & CONCRETE QUANTITIES

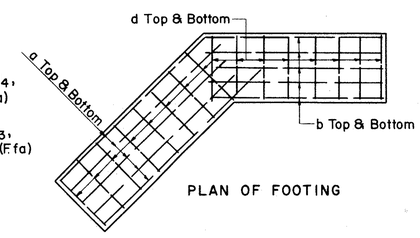
STRUCTURE NO.	STATION*	PIPE SIZE	SKEW	MARK a	NO.	MARK b	NO.	MARK c	NO.	MARK d	NO.	MARK ℓ	NO.	MARK ℓ1	NO.	MARK ℓ2	NO.	MARK ℓ3	NO.	MARK ℓ4	NO.
	328 + 06 Lt.	42"	23°	9-6	8	9-5	8	4-1	7	3-2	26	12-6	4	5-1	2	8-8	6	5-1	6		
	328 + 06 Rt.	42"	23°	10-0	8	9-3	8	4-1	7	3-2	26	13-0	4	4-11	2	9-2	6	4-11	6		
	329 + 50 Lt.	15"	15°									4-7	4	2-7	2	3-1	2	2-6	2	7-2	6
	380 + 55 Lt.	72"	34°	20-6	10	12-10	10	4-1	12	4-8	46	26-2	4	5-10	2	19-8	12	5-4	10		
	390 + 90 Rt.	24"	27°									7-7	4	4-3	2	5-2	2	3-2	4	11-10	6
	411 + 83 Lt.	24"	10°									7-3	4	4-5	2	4-10	2	4-6	4	11-8	6
	448 + 50 Lt.	30"	11°									9-1	4	5-8	2	6-1	2	5-2	4	14-9	6
	482 + 90 Rt.	30"	11°									8-4	4	5-1	2	5-5	2	4-8	4	13-5	6
	121 + 25 Reloc. Rte 44	72"	12°	14-9	10	18-11	10	4-1	12	4-8	46	19-5	4	12-11	2	13-11	12	11-5	12		
	5+87.57 Ramp "D"	48"	27°	13-9	8	11-8	8	4-1	8	3-5	36	16-4	4	7-9	2	12-11	10	6-2	8		
	121 + 25 Cont.																				

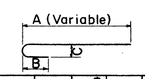
STRUCTURE NO.	STATION*	MARK H	NO.	MARK H_1	NO.	MARK H_2	NO.	MARK H_3	NO.	MARK H_4	NO.	MARK h	NO.	MARK h_1	NO.	MARK h_2	NO.	MARK h_3	NO.	MARK h_4	NO.			S-4* REINFORCING STEEL LBS.	S-1* CLASS "C" CONCRETE CU. YDS.	STRUCTURE DETAILS SHEET NO.
	328 + 06 Lt.	7-0	5	7-0	1	6-5	1	5-11	1	5-4	1	4-6	5	4-6	1	3-11	1	3-5	1	2-10	1			511	10.7	
	328 + 06 Rt.	7-0	6	7-0	1	6-5	1	5-10	1	5-3	1	4-6	6	4-6	1	3-11	1	3-4	1	2-9	1			542	10.9	
	329 + 50 Lt.	5-0	3	5-0	1	4-10	1	4-7	1			4-8	3	4-8	1	4-6	1	4-3	1					140	2.5	
	380 + 55 Lt.	9-4	11	9-4	1	8-9	1	8-3	1	7-8	1	6-10	11	6-10	1	6-3	1	5-9	1	5-2	1			1355	27.3	
	390 + 90 Rt.	5-11	4	5-11	1	5-8	1	5-5	1			5-7	4	5-7	1	5-4	1	5-1	1					220	5.1	
	411 + 83 Lt.	5-11	4	5-11	1	5-10	1	5-8	1	5-7	1	5-7	4	5-7	1	5-6	1	5-4	1	5-3	1			236	5.0	
	448 + 50 Lt.	7-1	4	7-1	1	6-9	1	6-6	1	6-2	1	6-9	4	6-9	1	6-5	1	6-2	1	5-10	1			288	8.2	
	482 + 90 Rt.	6-9	4	6-9	1	6-5	1	6-2	1	5-10	1	6-5	4	6-5	1	6-1	1	5-10	1	5-6	1			266	6.9	
	121 + 25 Reloc. Rte 44	10-0	8	10-0	1	9-10	1	9-9	1	9-7	1	7-6	8	7-6	1	7-4	1	7-3	1	7-1	1	Cont.		1467	29.2	
	5+87.57 Ramp "D"	7-10	8	7-10	1	7-5	1	7-1	1	6-8	1	5-4	8	5-4	1	4-11	1	4-7	1	4-2	1			805	16.5	
				H_5		H_6		H_7						h_5		h_6		h_7								
	121 + 25 Cont.			9-6	1	9-4	1	9-3	1					7-0	1	6-10	1	6-9	1							





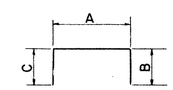






MARK	SIZE	A*	B	C
ALL H BARS	VARIES		4 3/4"	4 1/4"
d	5/8		4 3/4"	4 1/4"

*Varies



MARK	A	B	C
C	3'-1"	6"	6"

NOTE:
For additional information see Std. Constr. Dwgs. Hdwl. A, B & C.
Mark ℓ and ℓ4 bars to be bent in field.

*NOTE:
Quantities shown are for one Hdwl.
Vertical Bars spaced @ 2'-0" c-c.
Horizontal Bars spaced @ 1'-6" c-c Max.