

APRON AND HEADWALL BAR LIST

MARK	SIZE	FORM	4' SPAN			5' SPAN			6' SPAN			7' SPAN			8' SPAN			9' SPAN			10' SPAN			11' SPAN		
			NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION	NO.	LENGTH	LENGTH VARIATION
ABD1	#4	STR.	12	4'-3"		14	4'-3"		16	4'-3"		18	4'-3"		20	4'-3"		22	4'-3"		24	4'-3"		26	4'-3"	
ABD2	#4	BNT.	4	5'-0"		4	5'-0"		4	5'-0"		4	5'-0"		4	5'-0"		4	5'-0"		4	5'-0"		4	5'-0"	
AD	#4	STR.	4	16'-9"		4	16'-9"		4	16'-9"		4	16'-9"		4	16'-9"		4	16'-9"		4	16'-9"		4	16'-9"	
AL1	#4	STR.	12	15'-7"		14	15'-7"		16	15'-7"		18	15'-7"		20	15'-7"		22	15'-7"		24	15'-7"		26	15'-7"	
AL2	#4	STR.	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"	32	8'-3" AVG.	2'-3" TO 14'-3"
AT1	#4	STR.	4	21'-9"		4	22'-9"		4	23'-9"		4	24'-9"		4	25'-9"		4	27'-3"		4	28'-3"		4	29'-3"	
AT2	#4	STR.	15	13'-0" AVG.	4'-11" TO 21'-1"	15	14'-0" AVG.	5'-11" TO 22'-1"	15	15'-0" AVG.	6'-11" TO 23'-1"	15	16'-0" AVG.	7'-11" TO 24'-1"	15	17'-0" AVG.	8'-11" TO 25'-1"	15	18'-6" AVG.	10'-5" TO 26'-7"	15	19'-6" AVG.	11'-5" TO 27'-7"	15	20'-6" AVG.	12'-5" TO 28'-7"
AT3	#5	STR.	15	13'-0" AVG.	4'-11" TO 21'-1"	15	14'-0" AVG.	5'-11" TO 22'-1"	15	15'-0" AVG.	6'-11" TO 23'-1"	15	16'-0" AVG.	7'-11" TO 24'-1"	15	17'-0" AVG.	8'-11" TO 25'-1"	15	18'-6" AVG.	10'-5" TO 26'-7"	15	19'-6" AVG.	11'-5" TO 27'-7"	15	20'-6" AVG.	12'-5" TO 28'-7"
CH	#4	STR.	4	4'-10"		4	5'-10"		4	6'-10"		4	7'-10"		4	8'-10"		4	10'-4"		4	11'-4"		4	12'-4"	
CL1	#4	BNT.	6	4'-4"		7	4'-4"		8	4'-4"		9	4'-4"		10	4'-4"		13	4'-4"		14	4'-4"		15	4'-4"	
CL2	#4	BNT.	6	4'-4"		7	4'-4"		8	4'-4"		9	4'-4"		10	4'-4"		13	4'-4"		14	4'-4"		15	4'-4"	

①

① 4 SETS OF 8 BARS

NOTE:
 QUANTITIES ARE FOR ONE END SECTION WHICH INCLUDES ONE HEADWALL, ONE APRON AND TWO WINGWALLS. PIPE RAILING IS BASED ON PLAN DIMENSION AT CENTERLINE OF RAILING.

QUANTITIES

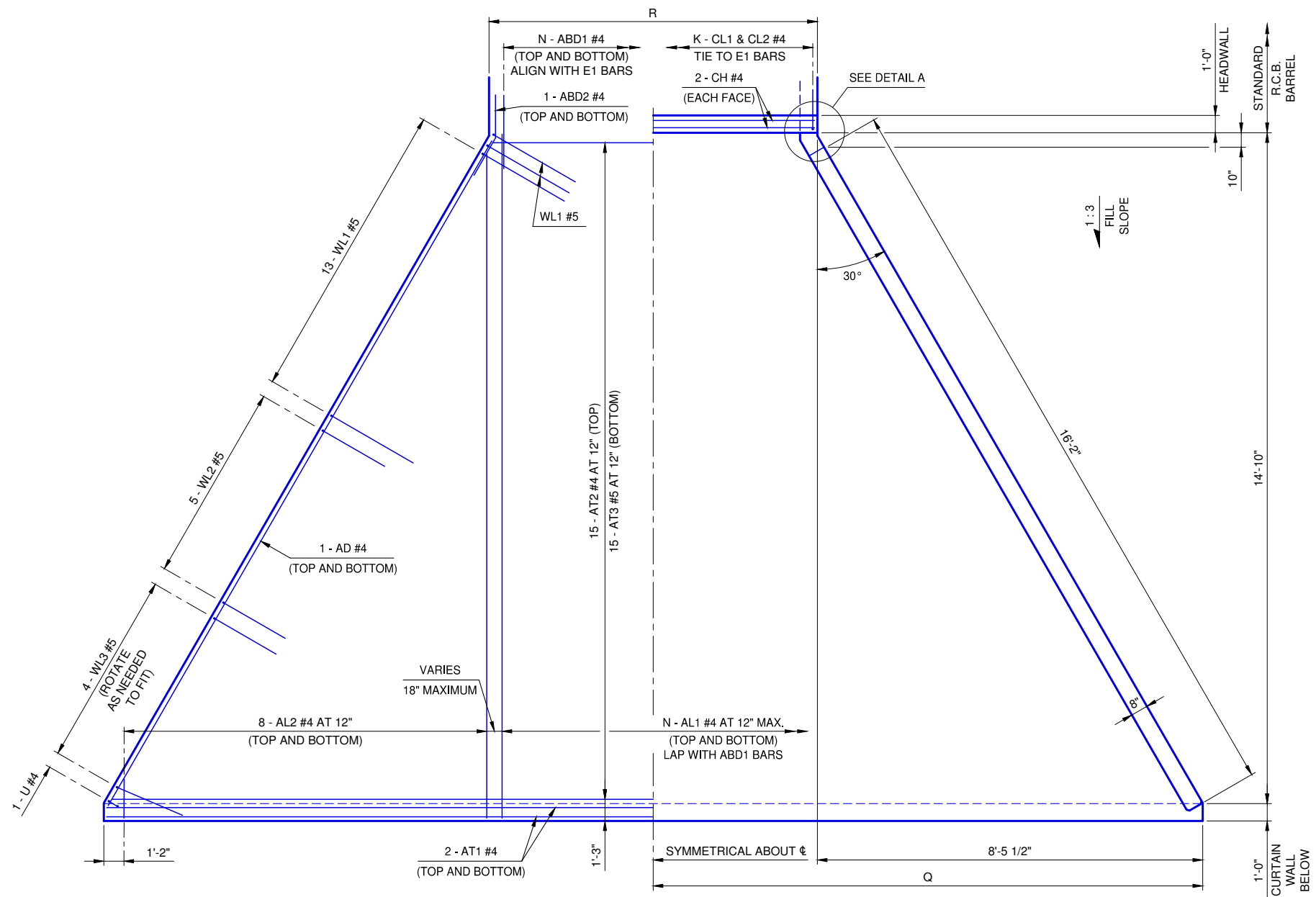
ITEM	UNIT	4' SPAN	5' SPAN	6' SPAN	7' SPAN	8' SPAN	9' SPAN	10' SPAN	11' SPAN
CLASS AA CONCRETE	C.Y.	10.6	11.2	11.8	12.3	12.8	13.7	14.2	14.7
REINFORCING STEEL	LB.	1,820	1,890	1,940	2,000	2,070	2,210	2,270	2,340
PIPE RAILING	L.F.	39	40	41	42	43	45	46	47

APRON VARIABLES

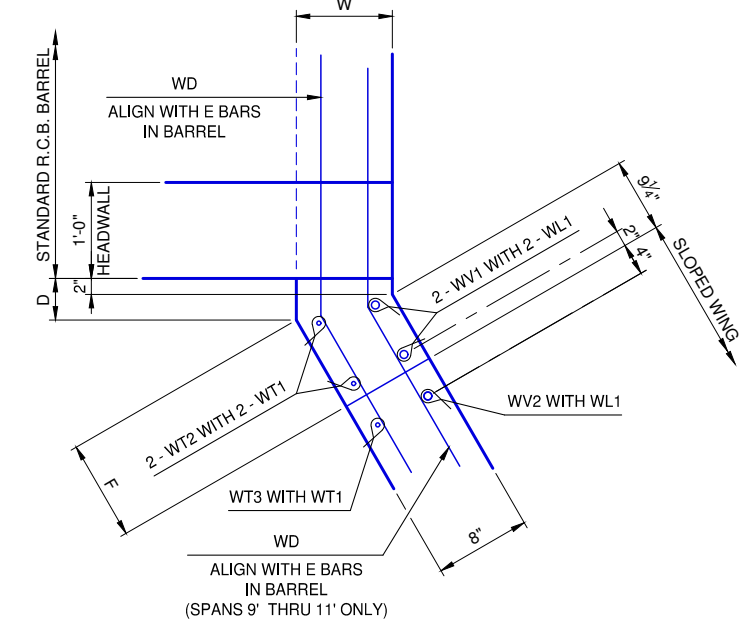
SPAN	DIMENSIONS				NO. OF BARS	
	R	Q	K	N		
4'	5'-2"	11'-0 1/2"	6	6		
5'	6'-2"	11'-6 1/2"	7	7		
6'	7'-2"	12'-0 1/2"	8	8		
7'	8'-2"	12'-6 1/2"	9	9		
8'	9'-2"	13'-0 1/2"	10	10		
9'	10'-8"	13'-9 1/2"	13	11		
10'	11'-8"	14'-3 1/2"	14	12		
11'	12'-8"	14'-9 1/2"	15	13		

WINGWALL DIMENSIONS

SPAN	W	D	F
4'	7"	5 7/8"	9 3/8"
5'	7"	5 7/8"	9 3/8"
6'	7"	5 7/8"	9 3/8"
7'	7"	5 7/8"	9 3/8"
8'	7"	5 7/8"	9 3/8"
9'	10"	11/16"	1'-3 3/8"
10'	10"	11/16"	1'-3 3/8"
11'	10"	11/16"	1'-3 3/8"



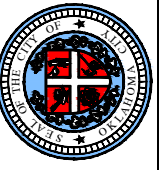
APRON PLAN



DETAIL A

REVISION NO.
DATE

The City of
Oklahoma City
 Public Works Department
 Engineering Division



APPROVED BY:
 ERIC J. WENGER, P.E.
 CITY ENGINEER

R.C.B. CULVERTS - END SECTION DETAILS
SINGLE CELL - 4' HEIGHT - 0° SKEW
 SHEET NO. 1 OF 2

Drawing Number
 RCB-018