

APRON AND HEADWALL BAR LIST																										
MARK	SIZE	FORM	5' SPAN			6' SPAN			7' SPAN			8' SPAN			9' SPAN			10' SPAN			11' SPAN			12' 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.	14	4'-3"		16	4'-3"		18	4'-3"		20	4'-3"		22	4'-3"		24	4'-3"		26	4'-3"		28	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	20'-2"		4	20'-2"		4	20'-2"		4	20'-2"		4	20'-2"		4	20'-2"		4	20'-2"		4	20'-2"	
AL1	#4	STR.	14	18'-7"		16	18'-7"		18	18'-7"		20	18'-7"		22	18'-7"		24	18'-7"		26	18'-7"		28	18'-7"	
AL2	#4	STR.	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"	40	10'-1" AVG.	2'-4" TO 17'-10"
AT1	#4	STR.	4	26'-4"		4	27'-4"		4	28'-4"		4	29'-4"		4	30'-8"		4	31'-8"		4	32'-8"		4	33'-8"	
AT2	#4	STR.	18	15'-11" AVG	6'-1" TO 25'-9"	18	16'-11" AVG	7'-1" TO 26'-9"	18	17'-11" AVG	8'-1" TO 27'-9"	18	18'-11" AVG	9'-1" TO 28'-9"	18	20'-3" AVG.	10'-5" TO 30'-1"	18	21'-3" AVG.	11'-5" TO 31'-1"	18	22'-3" AVG.	12'-5" TO 32'-1"	18	23'-3" AVG.	13'-5" TO 33'-1"
AT3	#5	STR.	18	15'-11" AVG	6'-1" TO 25'-9"	18	16'-11" AVG	7'-1" TO 26'-9"	18	17'-11" AVG	8'-1" TO 27'-9"	18	18'-11" AVG	9'-1" TO 28'-9"	18	20'-3" AVG.	10'-5" TO 30'-1"	18	21'-3" AVG.	11'-5" TO 31'-1"	18	22'-3" AVG.	12'-5" TO 32'-1"	18	23'-3" AVG.	13'-5" TO 33'-1"
CH	#4	STR.	4	6'-0"		4	7'-0"		4	8'-0"		4	9'-0"		4	10'-4"		4	11'-4"		4	12'-4"		4	13'-4"	
CL1	#4	BNT.	7	4'-4"		8	4'-4"		9	4'-4"		10	4'-4"		13	4'-4"		14	4'-4"		15	4'-4"		16	4'-4"	
CL2	#4	BNT.	7	4'-4"		8	4'-4"		9	4'-4"		10	4'-4"		13	4'-4"		14	4'-4"		15	4'-4"		16	4'-4"	

①

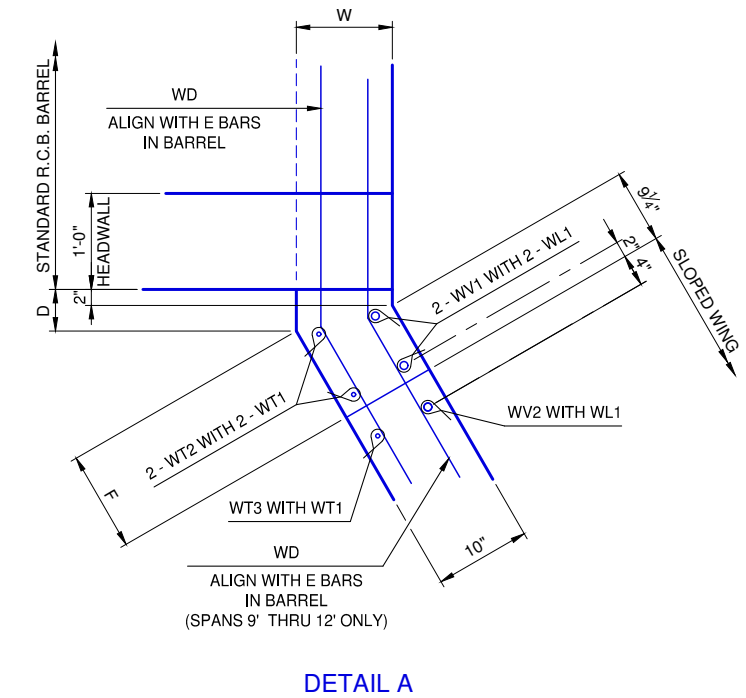
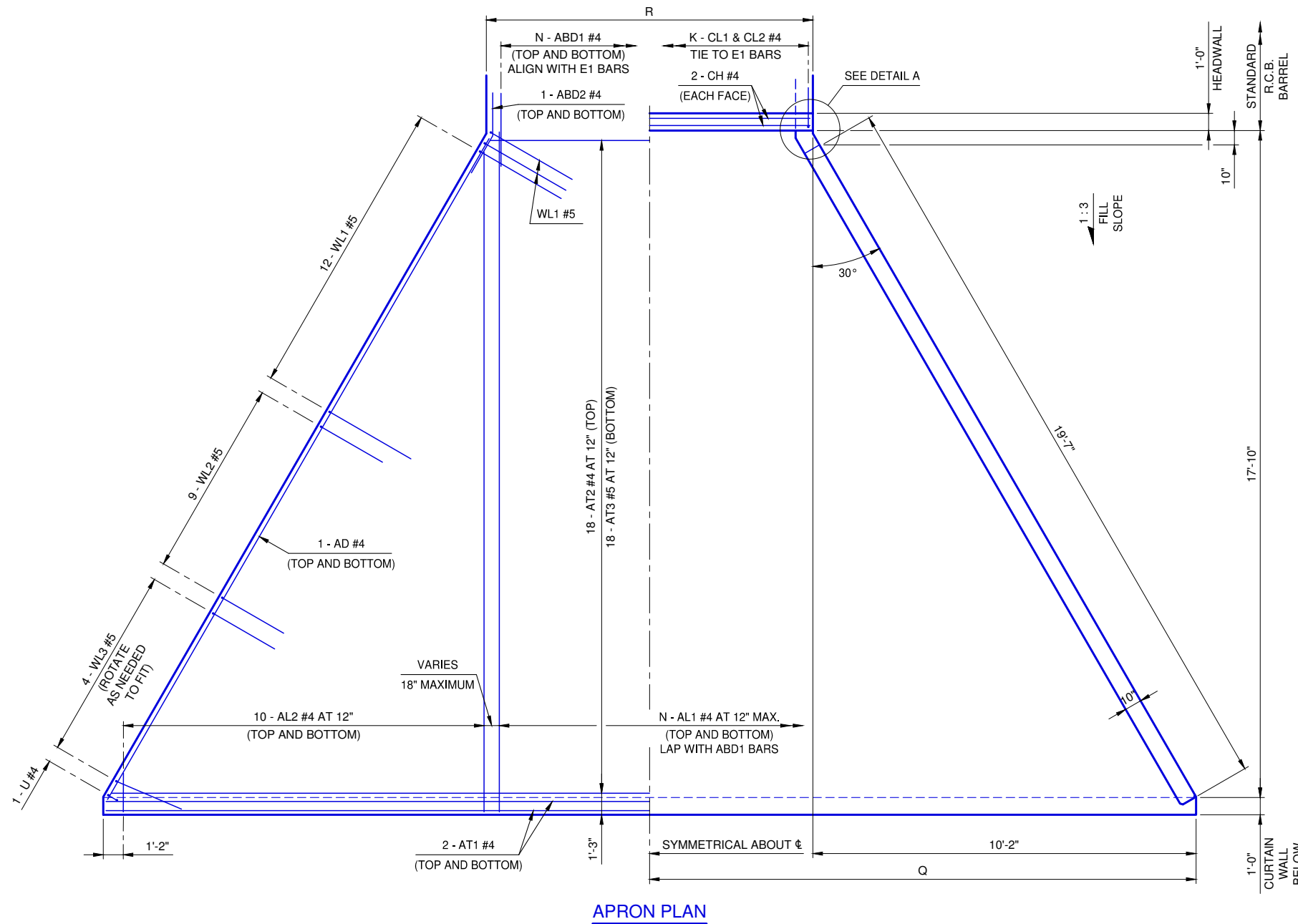
① 4 SETS OF 10 BARS

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	5' SPAN	6' SPAN	7' SPAN	8' SPAN	9' SPAN	10' SPAN	11' SPAN	12' SPAN
CLASS AA CONCRETE	C.Y.	16.0	16.7	17.3	17.9	18.8	19.5	20.1	20.7
REINFORCING STEEL	LB.	2,390	2,450	2,510	2,580	2,760	2,830	2,900	2,970
PIPE RAILING	L.F.	47	48	49	50	52	53	54	55

APRON VARIABLES					
SPAN	DIMENSIONS		NO. OF BARS		
	R	Q	K	N	
5'	6'-4"	13'-4"	7	7	
6'	7'-4"	13'-10"	8	8	
7'	8'-4"	14'-4"	9	9	
8'	9'-4"	14'-10"	10	10	
9'	10'-8"	15'-6"	13	11	
10'	11'-8"	16'-0"	14	12	
11'	12'-8"	16'-6"	15	13	
12'	13'-8"	17'-0"	16	14	

WINGWALL DIMENSIONS				
SPAN	W	D	F	
5'	8"	8 1/8"	7 15/16"	
6'	8"	8 1/8"	7 15/16"	
7'	8"	8 1/8"	7 15/16"	
8'	8"	8 1/8"	7 15/16"	
9'	10"	4 11/16"	11 15/16"	
10'	10"	4 11/16"	11 15/16"	
11'	12'-8"	4 11/16"	11 15/16"	
12'	10"	4 11/16"	11 15/16"	



DETAIL A

REVISION NO.
DATE

The City of
Oklahoma City
 Public Works Department
 Engineering Division

APPROVED BY: DATE: 6/22/2023
 ERIC J. WENGER, P.E.
 CITY ENGINEER

THESE STANDARD DRAWINGS AND ASSOCIATED CALCULATIONS HAVE BEEN PREPARED BY CEC CORPORATION UNDER CONTRACT WITH THE CITY OF OKLAHOMA CITY.

R.C.B. CULVERTS - END SECTION DETAILS
SINGLE CELL - 5' HEIGHT - 0° SKEW
 SHEET NO. 1 OF 2

Drawing Number
 RCB-020

