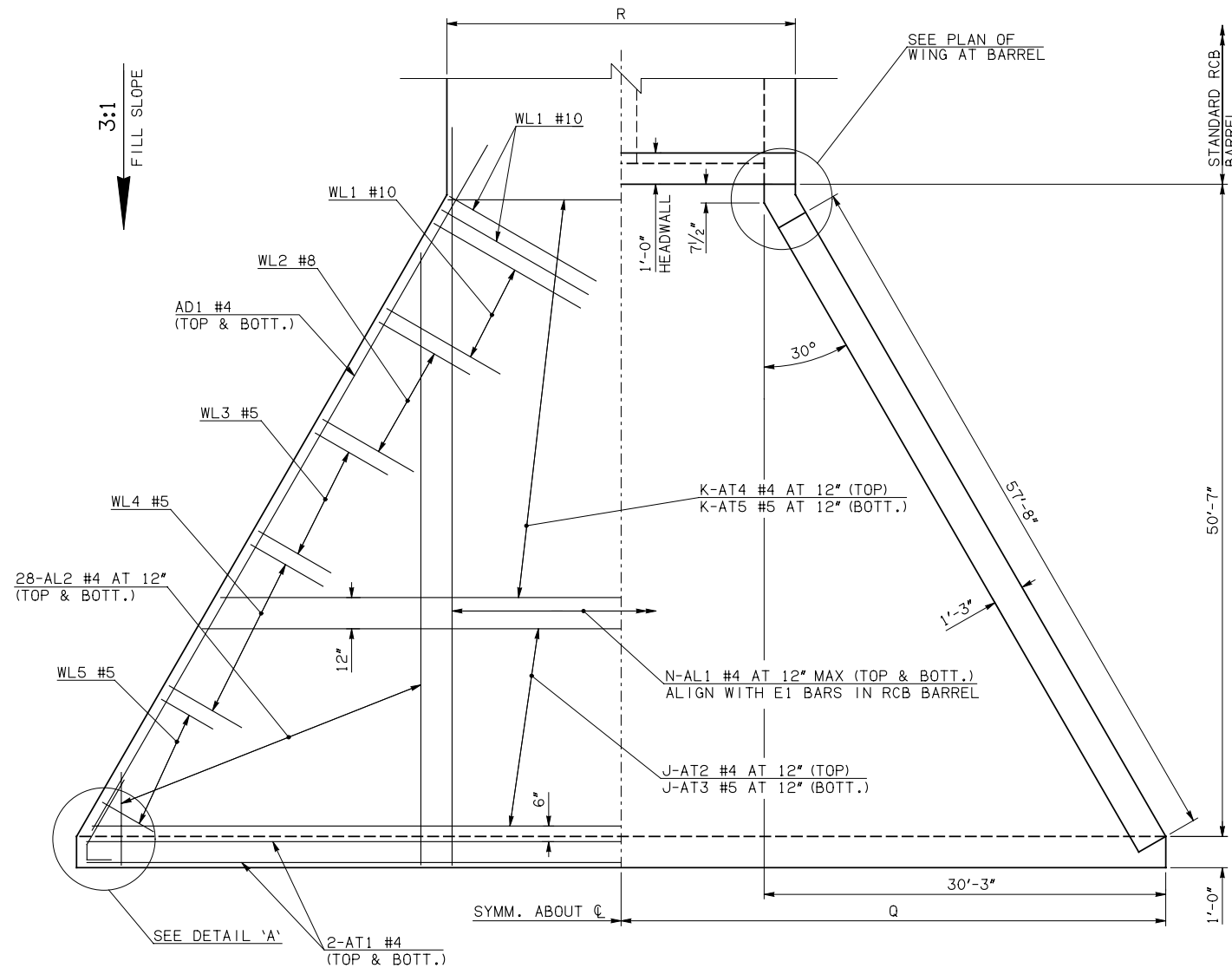


DESCRIPTION	REVISIONS	DATE

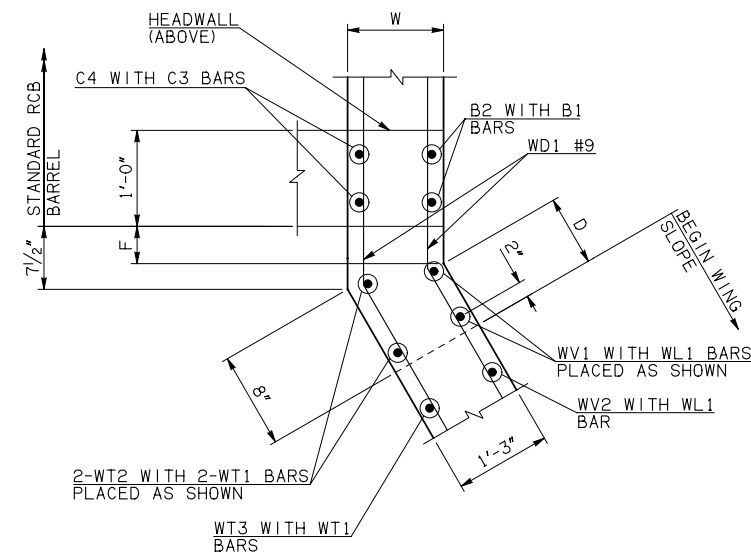
WINGWALL DIMENSIONS			
SPAN	W	D	F
16'	13"	8"	0"
18'	14"	6"	1 1/4"
20'	15"	4"	3 1/2"



HALF APRON REINFORCING

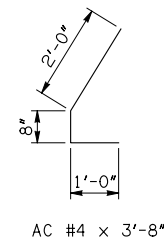
APRON DETAIL

HALF APRON PLAN



PLAN OF WING AT BARREL

APRON VARIABLES						
SPAN	DIM. R	DIM. Q	QTY. J	QTY. K	QTY. N	
16'	35'-2"	46'-9"	29	22	38	
18'	39'-4"	48'-9"	32	19	42	
20'	43'-6"	50'-9"	36	15	46	



DETAIL 'A'

WINGWALL BAR LIST					
ONE WINGWALL SHOWN; TWO REQUIRED					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
WD1	#9	32	BNT	8'-4"	
WH1	#4	2	STR	58'-2"	
② WH2	#4	32	STR	29'-5 1/2" AVG.	3'-6" TO 55'-5"
WH3	#5	2	STR	59'-9"	
WL1	#10	16	BNT	21'-1"	
WL2	#8	28	BNT	17'-6"	
WL3	#5	24	BNT	11'-8"	
WL4	#5	14	BNT	5'-3"	
WL5	#5	11	BNT	4'-11" AVG.	3'-6" TO 6'-4"
WT1	#4	47	STR	3'-6"	
WT2	#4	2	STR	17'-0"	
WT3	#4	47	STR	10'-2 1/2" AVG.	3'-7" TO 16'-10"
WT4	#4	11	STR	2'-11" AVG.	1'-6" TO 4'-4"
WV1	#8	2	STR	17'-0"	
WV2	#8	14	STR	15'-11" AVG.	15'-0" TO 16'-10"
WV3	#6	28	STR	12'-10 1/2" AVG.	10'-11" TO 14'-10"
WV4	#5	26	STR	7'-2" AVG.	3'-7" TO 10'-9"
U1	#4	1	BNT	3'-9"	

- ① 4-SETS OF 28-AL2 BARS REQUIRED
- ② 2-SETS OF 16-WH2 BARS REQUIRED
- ③ INCLUDES 2'-6" LAP

APRON AND HEADWALL BAR LIST											
ONE APRON AND ONE HEADWALL SHOWN											
MARK	SIZE	FORM	16' SPAN			18' SPAN			20' SPAN		
			QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS
AC	#4	BNT	4	3'-8"		4	3'-8"		4	3'-8"	
AD1	#4	STR	4	60'-0"		4	60'-0"		4	60'-0"	
AL1	#4	STR	76	53'-4"		84	53'-4"		92	53'-4"	
① AL2	#4	STR	112	25'-10 1/2" AVG.	2'-6" TO 49'-3"	112	25'-10 1/2" AVG.	2'-6" TO 49'-3"	112	25'-10 1/2" AVG.	2'-6" TO 49'-3"
③ AT1	#4	STR	4	95'-8"		4	99'-8"		4	103'-8"	
③ AT2	#4	STR	29	79'-0" AVG.	62'-10" TO 95'-2"	32	81'-3" AVG.	63'-4" TO 99'-2"	36	82'-11 1/2" AVG.	62'-9" TO 103'-2"
③ AT3	#5	STR	29	79'-0" AVG.	62'-10" TO 95'-2"	32	81'-3" AVG.	63'-4" TO 99'-2"	36	82'-11 1/2" AVG.	62'-9" TO 103'-2"
AT4	#4	STR	22	47'-0 1/2" AVG.	34'-11" TO 59'-2"	19	49'-3 1/2" AVG.	38'-11" TO 59'-8"	15	51'-0" AVG.	42'-11" TO 59'-1"
AT5	#5	STR	22	47'-0 1/2" AVG.	34'-11" TO 59'-2"	19	49'-3 1/2" AVG.	38'-11" TO 59'-8"	15	51'-0" AVG.	42'-11" TO 59'-1"
CH	#4	STR	4	34'-10"		4	39'-0"		4	43'-2"	
CL1	#4	BNT	38	4'-4"		42	4'-4"		46	4'-4"	
CL2	#4	BNT	38	4'-3"		42	4'-3"		46	4'-3"	

QUANTITIES				
ITEM	UNIT	16' SPAN	18' SPAN	20' SPAN
CLASS AA CONCRETE	CY	214.70	224.90	235.10
REINFORCING STEEL	LB	24740.00	25430.00	26120.00

NOTE: QUANTITIES ABOVE ARE FOR ONE END SECTION, WHICH IS COMPRISED OF ONE HEADWALL, ONE APRON, AND TWO WINGWALLS.

APPROVED BY BRIDGE ENGINEER *Robert J. Muehl* DATE 4/09/09

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
RCB CULVERTS - END SECTION DETAILS
DOUBLE CELL - 15'-0" HEIGHT - 0°
SHEET NO. 1 OF 2

1999 SPECIFICATIONS RCB-E2-H15-0-1 OOE B-620E