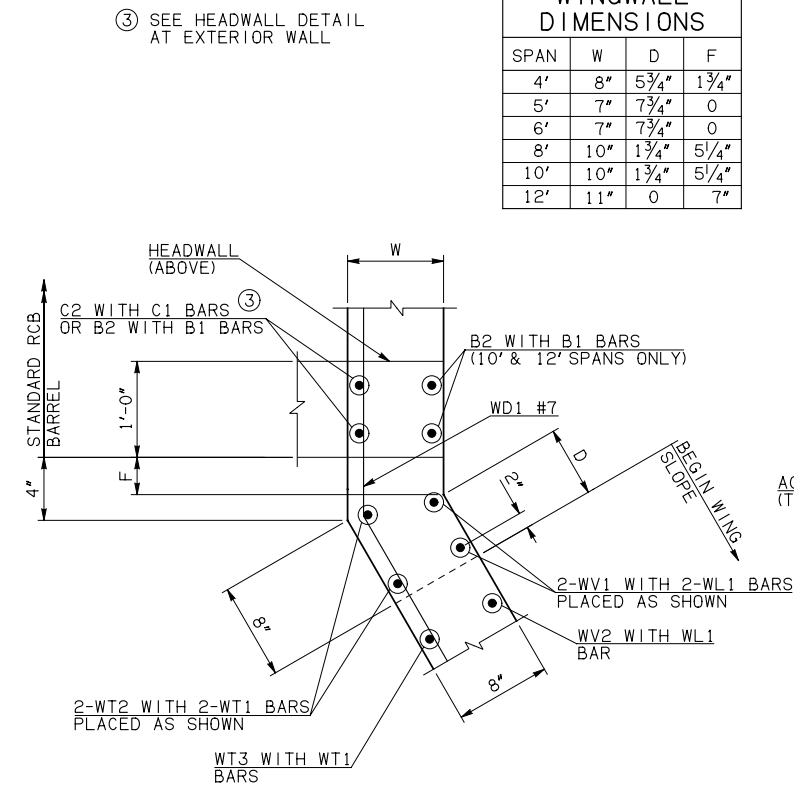


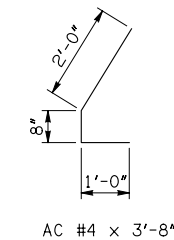
DESCRIPTION	REVISIONS	DATE

WINGWALL DIMENSIONS			
SPAN	W	D	F
4'	8"	5 3/4"	1 3/4"
5'	7"	7 3/4"	0
6'	7"	7 3/4"	0
8'	10"	1 3/4"	5 1/4"
10'	10"	1 3/4"	5 1/4"
12'	11"	0	7"



PLAN OF WING AT BARREL

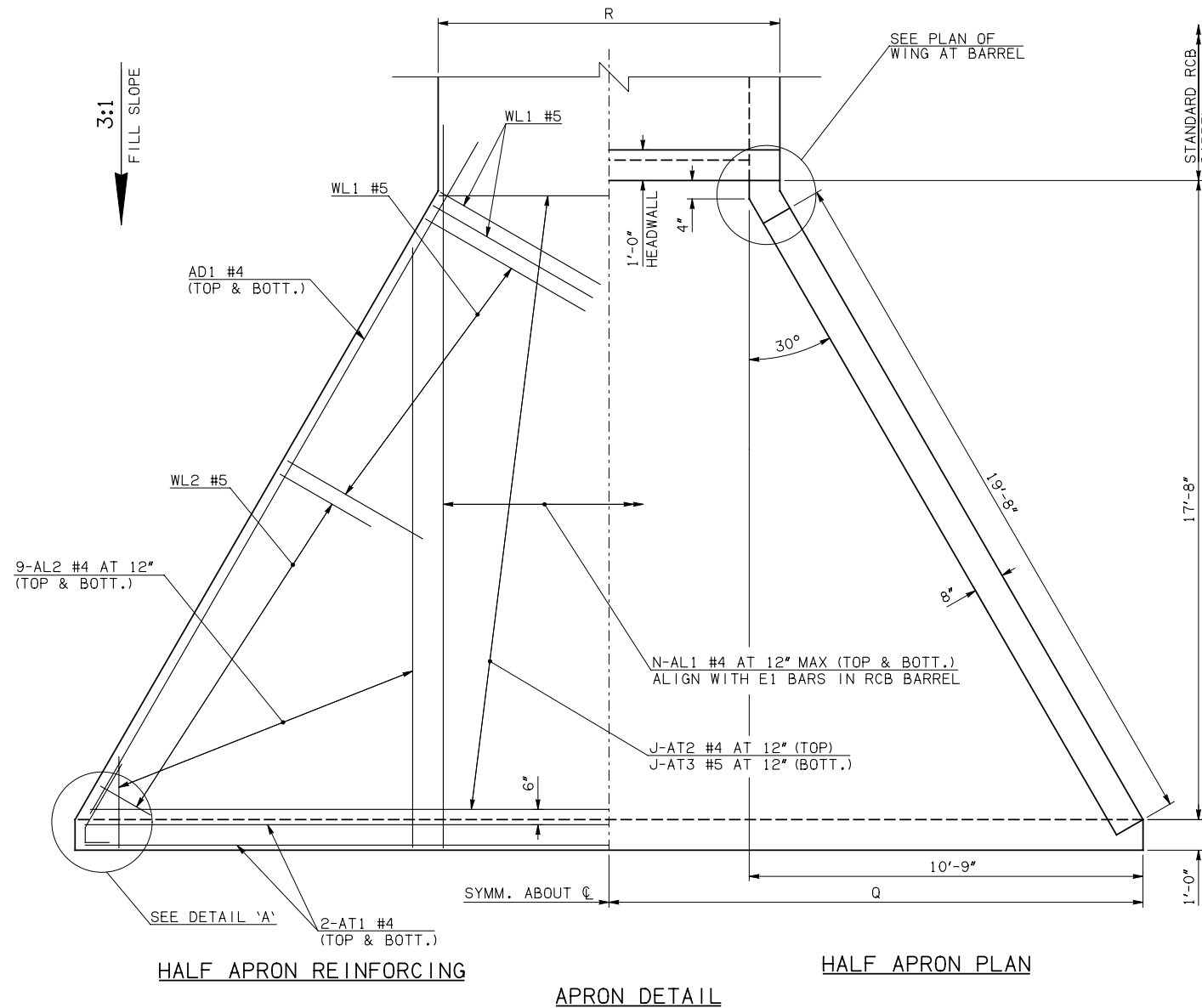
APRON VARIABLES					
SPAN	DIM. R	DIM. Q	QTY. J	QTY. N	
4'	5'-4"	12'-9"	18	6	
5'	6'-2"	13'-3"	18	7	
6'	7'-2"	13'-9"	18	8	
8'	9'-8"	14'-9"	18	10	
10'	11'-8"	15'-9"	18	14	
12'	13'-10"	16'-9"	18	16	



DETAIL 'A'

WINGWALL BAR LIST					
ONE WINGWALL SHOWN; TWO REQUIRED					
MARK	SIZE	QTY.	FORM	LENGTH	REMARKS
WD1	#7	5	BNT	8'-4"	
WH1	#4	2	STR	20'-2"	
WH2	#4	10	STR	10'-5 1/2" AVG.	3'-6" TO 17'-5"
WH3	#5	2	STR	20'-3"	
WL1	#5	13	BNT	6'-1"	
WL2	#5	11	BNT	4'-5" AVG.	3'-0" TO 5'-10"
WT1	#4	11	STR	2'-10"	
WT2	#4	2	STR	6'-0"	
WT3	#4	9	STR	4'-8 1/2" AVG.	3'-7" TO 5'-10"
WT4	#4	11	STR	2'-5" AVG.	1'-0" TO 3'-10"
WV1	#5	2	STR	6'-0"	
WV2	#5	9	STR	4'-8 1/2" AVG.	3'-7" TO 5'-10"
U1	#4	1	BNT	2'-2"	

- ① 4-SETS OF 9-AL2 BARS REQUIRED
- ② 2-SETS OF 5-WH2 BARS REQUIRED



HALF APRON REINFORCING

HALF APRON PLAN

APRON DETAIL

APRON AND HEADWALL BAR LIST

APRON AND HEADWALL BAR LIST																				
ONE APRON AND ONE HEADWALL SHOWN																				
MARK	SIZE	FORM	4' SPAN			5' SPAN			6' SPAN			8' SPAN			10' SPAN			12' SPAN		
			QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS
AC	#4	BNT	4	3'-8"		4	3'-8"		4	3'-8"		4	3'-8"		4	3'-8"		4	3'-8"	
AD1	#4	STR	4	22'-2"		4	22'-2"		4	22'-2"		4	22'-2"		4	22'-2"		4	22'-2"	
AL1	#4	STR	12	20'-5"		14	20'-5"		16	20'-5"		20	20'-5"		28	20'-5"		32	20'-5"	
AL2	#4	STR	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"
AT1	#4	STR	4	25'-2"		4	26'-2"		4	27'-2"		4	29'-2"		4	31'-2"		4	33'-2"	
AT2	#4	STR	18	14'-10" AVG.	5'-0" TO 24'-8"	18	15'-10" AVG.	6'-0" TO 25'-8"	18	16'-10" AVG.	7'-0" TO 26'-8"	18	18'-10" AVG.	9'-0" TO 28'-8"	18	20'-10" AVG.	11'-0" TO 30'-8"	18	22'-10" AVG.	13'-0" TO 32'-8"
AT3	#5	STR	18	14'-10" AVG.	5'-0" TO 24'-8"	18	15'-10" AVG.	6'-0" TO 25'-8"	18	16'-10" AVG.	7'-0" TO 26'-8"	18	18'-10" AVG.	9'-0" TO 28'-8"	18	20'-10" AVG.	11'-0" TO 30'-8"	18	22'-10" AVG.	13'-0" TO 32'-8"
CH	#4	STR	4	5'-0"		4	5'-10"		4	6'-10"		4	9'-4"		4	11'-4"		4	13'-6"	
CL1	#4	BNT	6	4'-4"		7	4'-4"		8	4'-4"		10	4'-4"		14	4'-4"		16	4'-4"	
CL2	#4	BNT	6	4'-3"		7	4'-3"		8	4'-3"		10	4'-3"		14	4'-3"		16	4'-3"	

QUANTITIES							
ITEM	UNIT	4' SPAN	5' SPAN	6' SPAN	8' SPAN	10' SPAN	12' SPAN
CLASS AA CONCRETE	CY	13.00	13.60	14.20	15.50	16.70	17.90
REINFORCING STEEL	LB	2060.00	2120.00	2170.00	2330.00	2530.00	2670.00

NOTE: QUANTITIES ABOVE ARE FOR ONE END SECTION, WHICH IS COMPRISED OF ONE HEADWALL, ONE APRON, AND TWO WINGWALLS. INCLUDED IN REINFORCING STEEL PAY ITEM QUANTITY IS THE WEIGHT OF ADDITIONAL RCB BARREL REINFORCING STEEL REQUIRED AS SHOWN.

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

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
RCB CULVERTS - END SECTION DETAILS
SINGLE CELL - 4'-0" HEIGHT - 0°
SHEET NO. 1 OF 2