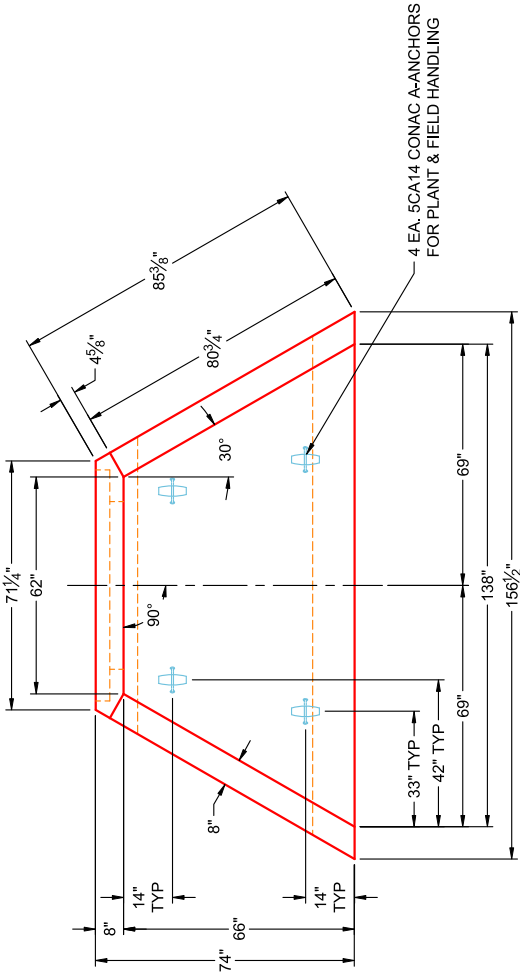


Structure ID: St. 45+00 HW (1)

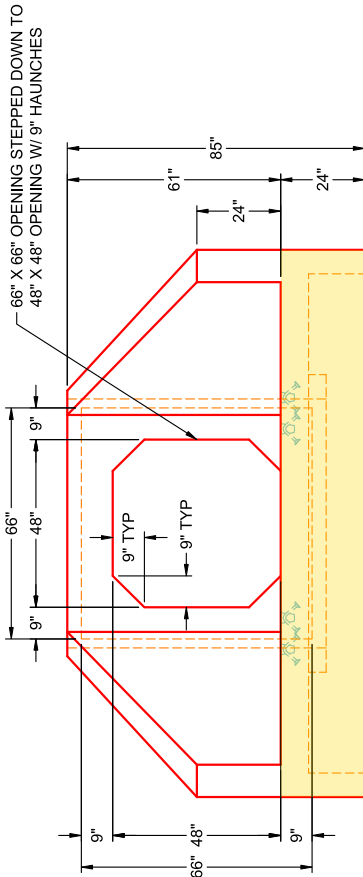
P1 HWCUSTOM

48" x 48" - BOX CULVERT HEADWALL F/F

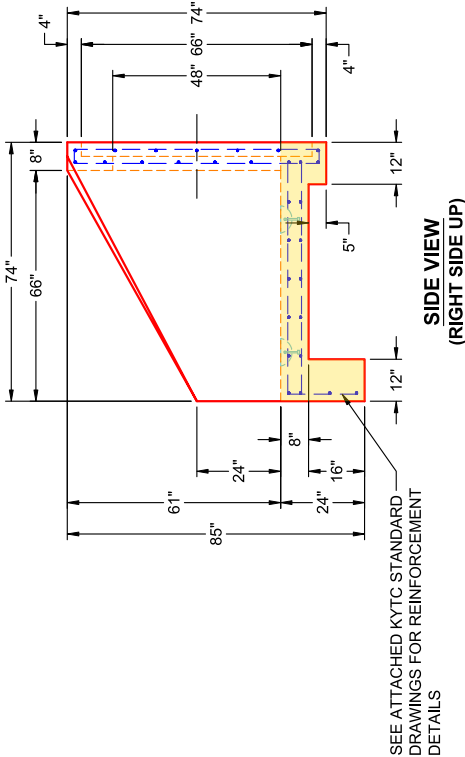
- GENERAL NOTES:**
- DRAWING TO BE USED IN CONJUNCTION WITH KYTC STANDARD DRAWINGS RDH-1000-02, RDH-1100-02, RDH-1200-02, & RDH-1300-03
 - REINFORCEMENT PER ATTACHED KYTC STANDARD DRAWINGS RDH-1000-02, RDH-1200-02, & RDH-1300-03 - 2" MIN. REBAR CLEARANCE (TYP)
 - CONCRETE: 5,000 PSI AT 28 DAYS
 - TOTAL WEIGHT: 13,810 LBS
- FIRST POUR: 8,262 LBS
- SECOND POUR: 5,548 LBS



PLAN VIEW
(RIGHT SIDE UP)



FRONT VIEW
(RIGHT SIDE UP)



SIDE VIEW
(RIGHT SIDE UP)

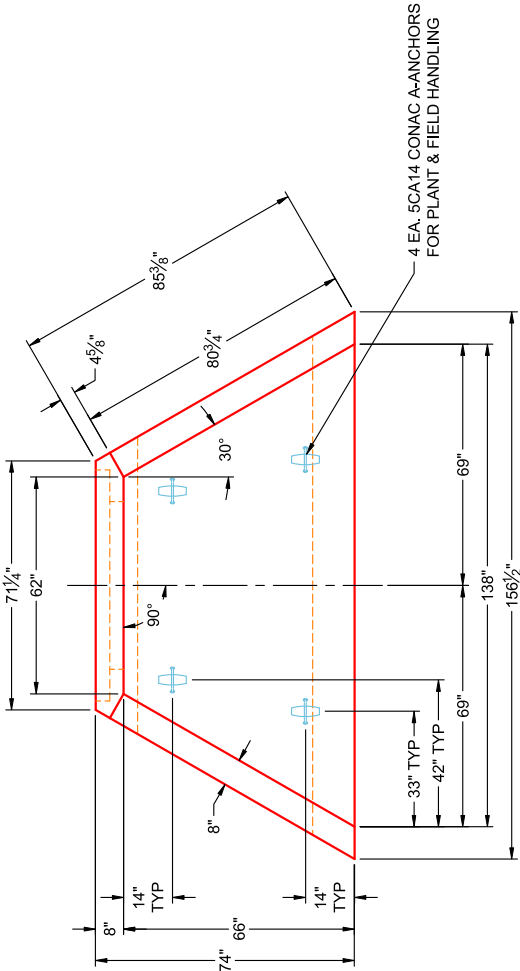
PRODUCTION WORK ORDER		PRODUCT I.D.: HWCUSTOM	DESCRIPTION: 48" X 48" BOX CULVERT HEADWALL - 0° SKEW
ICAST INFRASTRUCTURE PRECAST	QUALITY CONTROL CHECKLIST		CUSTOMER: JIM SMITH CONTRACTING
	☐ ALL DIMENSIONS CORRECT.		PROJECT: KYTC MCCracken CO. CALL 200 (ID 241301)
	☐ LIFTERS INSTALLED		STRUCTURE: ST. 45+00 HW (1)
	☐ OPENING CENTERED.		ORDER NO: 24-1643B
	☐ REINFORCING CORRECT.		PE: J.H. ROSS
☐ SURFACE QUALITY ACCEPTABLE.		BASE SECTION JOINT: N / A	DRAWING: K. CARDWELL
☐ EDGES CHAMFERED.		QC CHECK INITIALS:	DATE: 05/28/26
☐ ALL PATCHWORK ACCEPTABLE.		SCALE: NTS	PG. 1 OF 1

Structure ID: St. 45+00 HW (1)

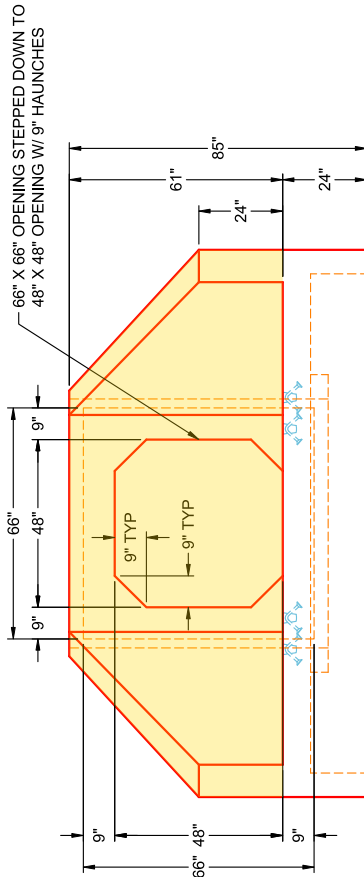
P1 HWCUSTOM

48" x 48" - BOX CULVERT HEADWALL F/F

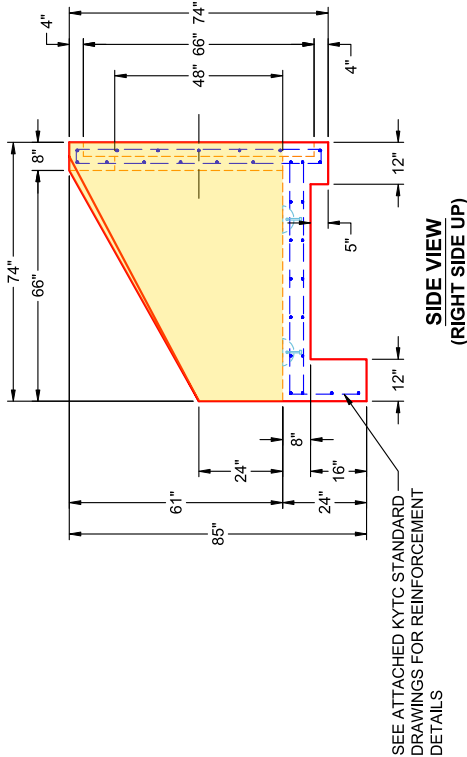
- GENERAL NOTES:**
- DRAWING TO BE USED IN CONJUNCTION WITH KYTC STANDARD DRAWINGS RDH-1000-02, RDH-1100-02, RDH-1200-02, & RDH-1300-03
 - REINFORCEMENT PER ATTACHED KYTC STANDARD DRAWINGS RDH-1000-02, RDH-1200-02, & RDH-1300-03 - 2" MIN. REBAR CLEARANCE (TYP)
 - CONCRETE: 5,000 PSI AT 28 DAYS
 - TOTAL WEIGHT: 13,810 LBS
- FIRST POUR: 8,262 LBS
- SECOND POUR: 5,548 LBS



PLAN VIEW
(RIGHT SIDE UP)



FRONT VIEW
(RIGHT SIDE UP)

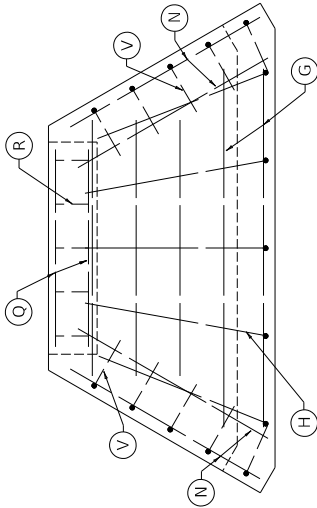
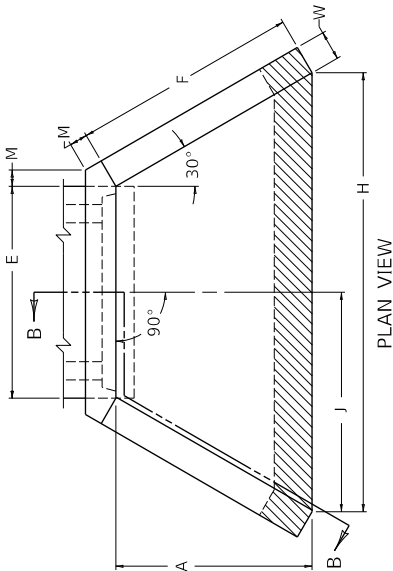


SIDE VIEW
(RIGHT SIDE UP)

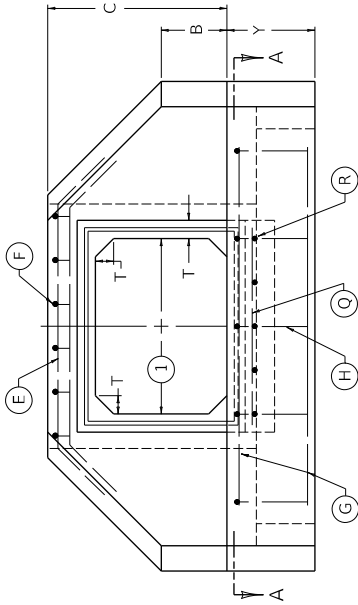
SEE ATTACHED KYTC STANDARD
DRAWINGS FOR REINFORCEMENT
DETAILS

PRODUCTION WORK ORDER		PRODUCT I.D.: HWCUSTOM	DESCRIPTION: 48" X 48" BOX CULVERT HEADWALL - 0° SKEW	
 QUALITY CONTROL CHECKLIST ☐ ALL DIMENSIONS CORRECT. ☐ LIFTERS INSTALLED ☐ OPENING CENTERED. ☐ REINFORCING CORRECT. ☐ SURFACE QUALITY ACCEPTABLE. ☐ EDGES CHAMFERED. ☐ ALL PATCHWORK ACCEPTABLE.	PRODUCT VIEW: RIGHT SIDE UP	CUSTOMER: JIM SMITH CONTRACTING	DRAWING: K. CARDWELL	
	PLANT: BEAVER DAM, KY	PROJECT: KYTC MCCracken CO. CALL 200 (ID 241301)	SCALE: NTS	
	WEIGHT: 13,810 LBS	STRUCTURE: ST. 45+00 HW (1)	PG. 1 OF 1	
	TOP SECTION JOINT: N / A	ORDER NO: 24-1643B		
	BASE SECTION JOINT: N / A	PE: J.H. ROSS		
QC CHECK INITIALS:		DATE: 05/28/26		

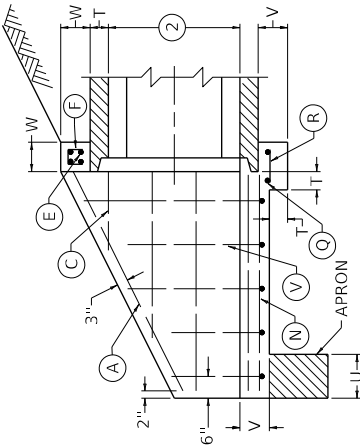
DRAWING SCALE:
1/2" = 1'



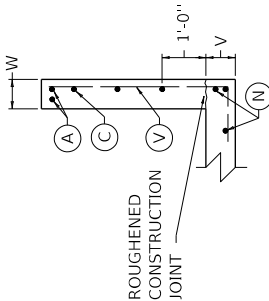
SECTION A-A



FRONT ELEVATION



SECTION B-B



WING SECTION

NOTES

1. SPAN OF BOX CULVERT
2. RISE OF BOX CULVERT
3. FOR DIMENSIONS, QUANTITIES, AND BILL OF REINFORCEMENT SEE CUR. STD. DWGS. RDH-1100, RDH-1200 AND RDH-1300 SERIES.
4. DIMENSIONS FROM FACE OF CONCRETE TO STEEL SHALL BE 2" CLEAR DISTANCE.
5. ENCIRCLED LETTERS, (), INDICATE STEEL BAR LOCATIONS.
6. BARS (), (), AND () ARE SPACED 1'-0" O.C. ALL OTHER BARS SHALL BE EVENLY SPACED.
7. BARS () ARE PLACED IN ORDER OF INCREASING LENGTHS, BEGINNING AT THE END OF EACH WING.
8. BARS () ARE PLACED IN ORDER OF INCREASING LENGTHS, BEGINNING AT THE TOP OF EACH WING.
9. HEADWALLS LOCATED AT SHOULDER EDGE SHALL BE PARALLEL TO CENTERLINE OF ROAD.
10. LIMITS OF APRON.
11. PAVING SHALL BE REQUIRED AND SHALL BE SLOPED IN DIRECTION OF FLOW EQUAL TO SLOPE OF BOX. FRONT FACE OF HEADWALL AND ENDS OF WINGS SHALL REMAIN VERTICAL.

(LAYOUT AND STEEL PATTERN)
KENTUCKY DEPARTMENT OF HIGHWAYS
PRECAST BOX CULVERT HEADWALLS - 0° SKEW (BOX RISE LESS THAN 6'-0")
STANDARD DRAWING NO. RDH-1000-02
SUBMITTED _____ DIRECTOR, DIVISION OF DESIGN _____ DATE _____
APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE _____

DIMENSION	PRECAST BOX CULVERT												DIMENSION	
	3'x2'	3'x3'	4'x2'	4'x3'	4'x4'	5'x3'	5'x4'	5'x5'	6'x3'	6'x4'	6'x5'	6'x6'		
A	3'-4"	4'-4"	3'-6"	4'-6"	5'-6"	4'-8"	5'-8"	6'-8"	4'-10"	5'-10"	6'-10"	8'-0"	A	
B	1'-0"	1'-6"	1'-0"	1'-6"	2'-0"	1'-6"	2'-0"	2'-6"	1'-6"	2'-0"	2'-6"	3'-0"	B	
C	3'-0"	4'-0"	3'-1"	4'-1"	5'-1"	4'-2"	5'-2"	6'-2"	4'-3"	5'-3"	6'-3"	7'-5"	C	
E	3'-8"			4'-10"			6'-0"			7'-2"			E	
F	3'-10"	5'-0"	4'-0"	5'-2"	6'-4"	5'-5"	6'-7"	7'-8"	5'-7"	6'-9"	7'-11"	9'-3"	F	
H	7'-6"	8'-8"	8'-10"	10'-0"	11'-2"	11'-5"	12'-7"	13'-8"	12'-9"	13'-11"	15'-1"	16'-5"	H	
J	3'-9"	4'-4"	4'-5"	5'-0"	5'-7"	5'-8"	6'-3"	6'-10"	6'-4"	6'-11"	7'-6"	8'-2"	J	
M						0'-5"							0'-6"	M
T	0'-4"		0'-5"			0'-6"			0'-7"				T	
U	1'-0"													U
V						0'-8"							1'-0"	V
W						0'-8"							0'-10"	W
X						----							2'-0"	X
Y						2'-0"							2'-6"	Y
Z						----							1'-3"	Z

BOX SIZE ①	CONCRETE 2 HEADWALLS						REINFORCEMENT 2 HEADWALLS	
	②	③	④	⑤	⑥		⑦	⑧
3 X 2	3.17	0.82	—	—	—		271	—
3 X 3	4.39	0.94	—	—	—		365	—
4 X 2	3.74	0.96	—	—	—		311	—
4 X 3	5.06	1.07	—	—	—		389	—
4 X 4	6.60	1.18	—	—	—		497	—
5 X 3	5.76	1.20	—	—	—		430	—
5 X 4	7.39	1.32	—	—	—		576	—
5 X 5	9.24	1.43	—	—	—		681	—
6 X 3	6.51	1.34	—	—	—		483	—
6 X 4	8.22	1.45	—	—	—		603	—
6 X 5	10.16	1.57	—	—	—		738	—
6 X 6	19.81	2.39	2.24	3.26	18.43		1619	273
7 X 4	9.10	1.59	—	—	—		652	—
7 X 5	11.13	1.70	—	—	—		796	—
7 X 6	21.08	2.54	2.56	3.43	19.40		1678	292
7 X 7	24.13	2.67	3.00	3.69	22.15		2092	353
8 X 4	9.59	1.68	—	—	—		693	—
8 X 5	11.67	1.80	—	—	—		805	—
8 X 6	21.80	2.65	2.78	3.54	19.90		1736	325
8 X 7	24.88	2.78	3.25	3.80	22.64		2117	350
8 X 8	31.42	4.03	3.34	5.47	29.52		2749	427

BOX SIZE ①	CONCRETE 2 HEADWALLS						REINFORCEMENT 2 HEADWALLS	
	②	③	④	⑤	⑥		⑦	⑧
9 X 5	12.70	1.93	—	—	—		877	—
9 X 6	23.13	2.81	3.12	3.71	20.91		1791	327
9 X 7	26.26	2.93	3.62	3.97	23.68		2204	397
9 X 8	33.01	4.23	3.73	5.70	30.75		2846	479
9 X 9	36.81	4.40	4.25	6.04	34.20		3431	509
10 X 5	13.79	2.07	—	—	—		971	—
10 X 6	24.50	2.96	3.47	3.89	21.96		1972	376
10 X 7	27.69	3.09	4.00	4.14	24.75		2419	444
10 X 8	34.64	4.43	4.12	5.93	32.01		3081	482
10 X 9	38.50	4.60	4.68	6.27	35.49		3539	565
10 X 10	53.89	7.29	5.40	9.95	51.16		4748	674
11 X 4	12.60	2.09	—	—	—		870	—
11 X 6	25.92	3.11	3.83	4.06	23.04		2049	413
11 X 8	36.32	4.63	4.53	6.16	33.32		3180	534
11 X 10	56.04	7.59	5.89	10.29	52.85		4801	677
11 X 11	69.84	7.77	6.93	10.66	65.81		5688	778
12 X 4	13.72	2.22	—	—	—		903	—
12 X 6	27.39	3.26	4.19	4.23	24.17		2134	457
12 X 8	38.05	4.84	4.94	6.39	34.66		3424	587
12 X 10	60.16	7.88	6.38	10.62	56.52		5075	740
12 X 12	92.85	8.01	8.83	10.98	86.98		6916	929

① PRECAST CONCRETE BOX CULVERT SECTIONS EQUALS THE INTERIOR SPAN (S) BY THE INTERIOR RISE (R) IN FEET.

② CU. YDS. OF CONCRETE IN TWO HEADWALLS WITH PAVING.

③ CU. YDS. OF CONCRETE IN TWO APRONS (HEADWALLS WITH PAVING).

④ CU. YDS. OF CONCRETE IN TWO PAVED AREAS OF THE HEADWALLS.

⑤ CU. YDS. OF CONCRETE IN TWO APRONS (HEADWALLS WITHOUT PAVING).

⑥ CU. YDS. OF CONCRETE IN TWO HEADWALLS WITHOUT PAVING.

⑦ POUNDS OF REINFORCING STEEL IN TWO HEADWALLS WITH PAVING.

⑧ POUNDS OF REINFORCING STEEL TO DEDUCT WHEN PAVING FOR TWO HEADWALLS IS ELIMINATED.

KENTUCKY DEPARTMENT OF HIGHWAYS	
QUANTITIES 3' x 2' - 12' x 12' H-WALLS PRECAST BOX CULVERTS 0° SKEW	
STANDARD DRAWING NO. RDH-1200-02	
SUBMITTED _____	DIRECTOR DIVISION OF DESIGN _____ DATE _____
APPROVED _____	STATE HIGHWAY ENGINEER _____ DATE _____

