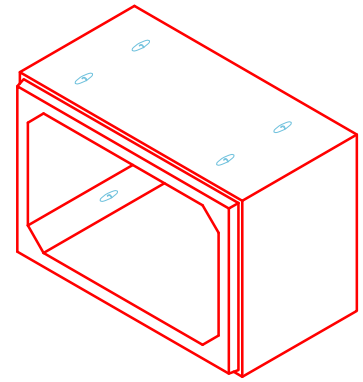
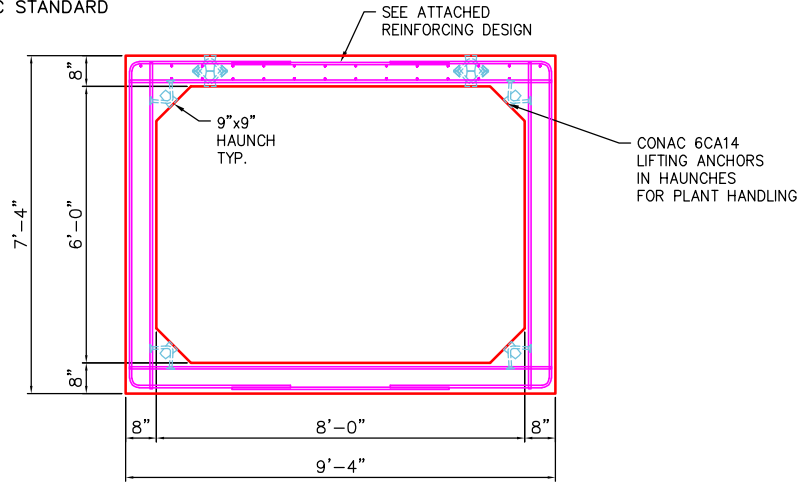
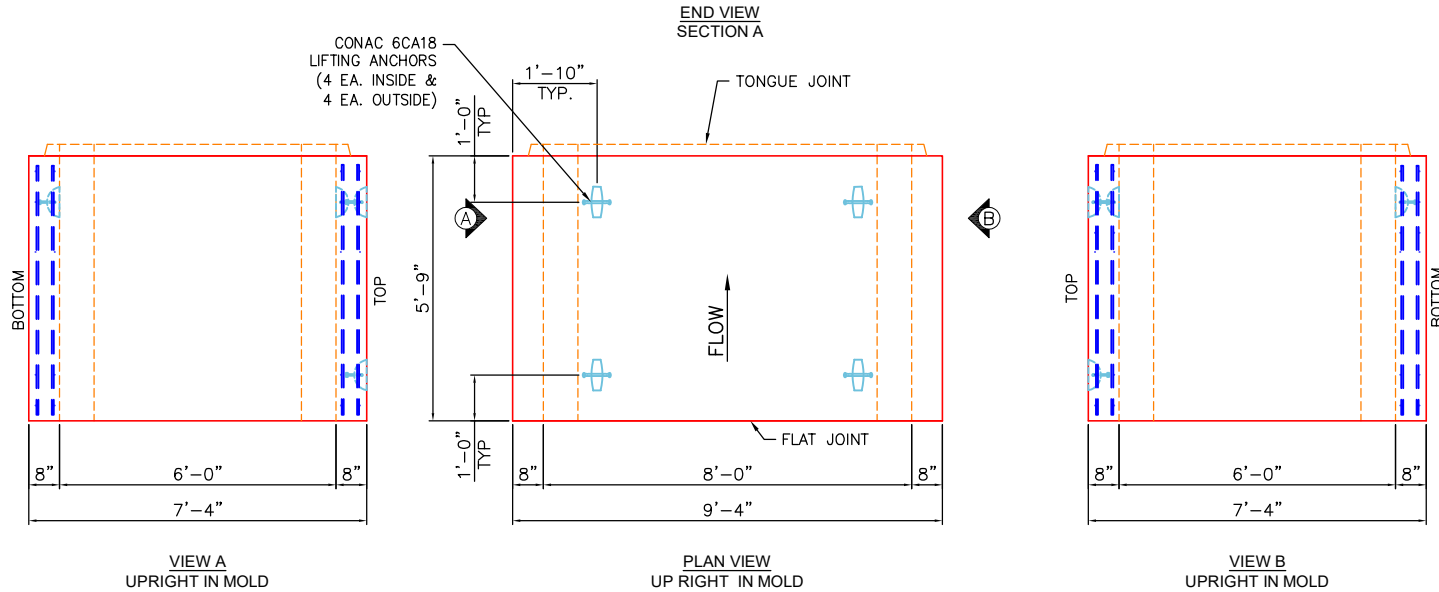


NOTES:

1. BOX CULVERT IS DESIGNED PER SECTION 605 OF THE KYTC STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
2. LOAD REQUIREMENTS = KY-HL93 (KY TABLE 1).
3. COVER DEPTH = 0' to 2'.
4. CONCRETE: 5,000 PSI AT 28 DAYS.
5. JOINT SEALANT = 1" BUTYL MASTIC (CS 102).
6. EXTERIOR JOINT WRAP = 12" WIDE CS212.
7. REINFORCING PER ASTM C1577 (GRADE 60).
8. WEIGHT = 8'x6' RCBC = 3,128 LBS/L.FT
 5.75' LONG SECTION = 17,984 LBS (TYPICAL)
 6.92' LONG SECTION = 21,646 LBS (PC. 01)



COMPONENT ISOMETRIC VIEW



PRODUCTION WORK ORDER

PRODUCT I.D.: BC096072-08WLF-9H

DESCRIPTION: 96"x72"x69" BOX CULV. (8W & 9" HAUNCH)



QUALITY CONTROL CHECKLIST

- ALL DIMENSIONS CORRECT.
- LIFTERS INSTALLED INSIDE.
- RECESS WITH HAUNCHES CORRECT.
- REINFORCING CORRECT.
- SURFACE QUALITY ACCEPTABLE.
- LIFTERS INSTALLED OUTSIDE.
- PRODUCT SQUARE.

PRODUCT VIEW: RIGHT SIDE UP

CUSTOMER: WINWATER HARTFORD KY CO.

PLANT: BEAVER DAM, KY.

PROJECT: WINWATER CULVERT

WEIGHT: 17,984 LBS.

STRUCTURE: BC 8X6 - PC.05

TOP JOINT: TONGUE

SALES ORDER/QUOTE NO: 26-1919

BOTTOM JOINT: FLAT

CHECK: B. SMITH

DRAWING: J. HORSLEY

QC CHECK INITIALS:

DATE: 04/08/26

SCALE: NTS

PG. 1 of 1

INFRASTRUCTURE PRECAST (ICAST)

Sht _____ of _____
 By: J. Horsley
 Ck: _____
 4/8/2026 3:33:05 PM
 p. 1 of 4

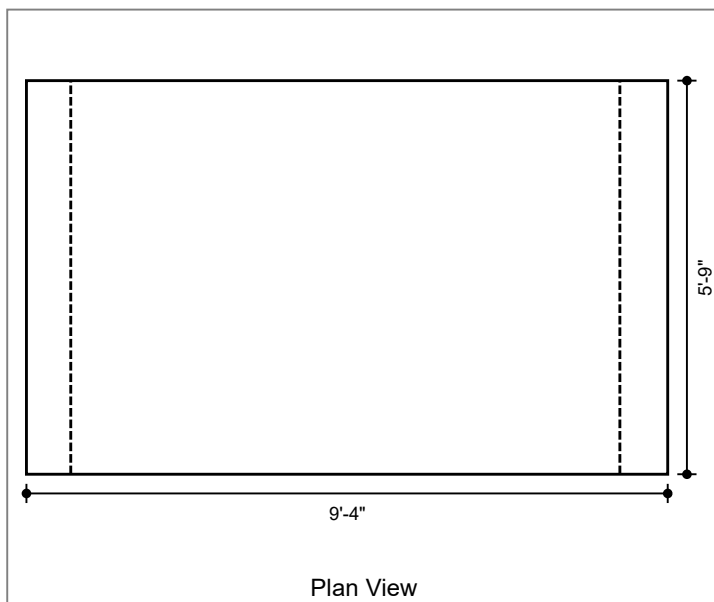
Project : Winwater Culvert
 Task :
 Job No. : 26-1919

Client: Winwater Hartford KY
 File: 8x6 BC Four Sided - 26-1919 Winater Culvert.etcx

Spec.: LRFD 9th ed.
 Type of Culvert: Precast

Physical Dimensions

Clear Span: 8'-0"
 Clear Height: 6'-0"
 Top Slab: 8"
 Bottom Slab: 8"
 Ext. Wall: 8"
 Fill Depth Range
 Maximum: 1.99 ft
 Minimum: 0.00 ft
 Increment: 0.50 ft
 Length: 5'-9"
 Skew Angle: 0.00 deg
 Bottom Slab Support: Full Slab
 Top Haunch, Width: 9"
 Top Haunch, Height: 9"
 Bottom Haunch, Width: 9"
 Bottom Haunch, Height: 9"



Material Properties

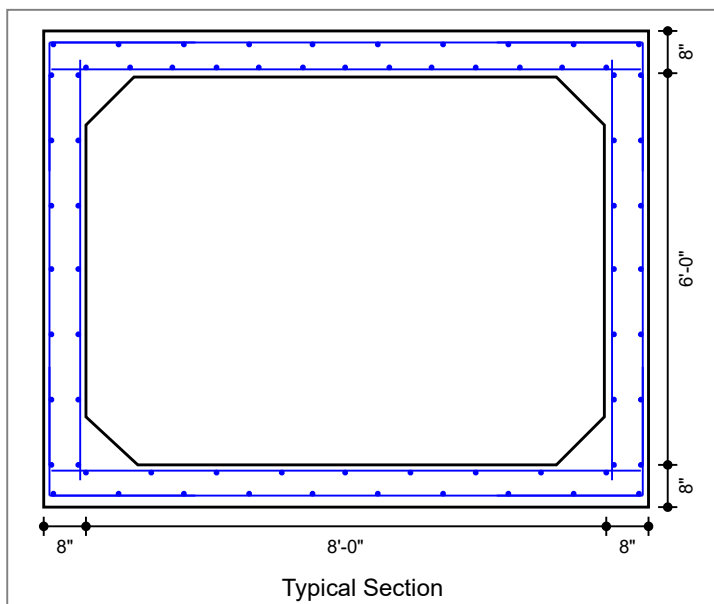
Concrete
 Strength, f'c: 6.500 ksi
 Density: 0.150 kcf
 Elasticity, Ec: 4739 ksi
 Type: Normal wt

Steel
 Yield, fy: 60 ksi
 Allow Stress: 36 ksi
 Elasticity, Es: 29000 ksi

Soil
 Density: 0.120 kcf

Exposure Factor
 Class 2 Exposure

Reinforcement Covers
 Ext. Cover Top Slab: 2"
 Ext. Cover Bottom Slab: 2"
 Ext. Cover Walls: 1"
 Int. Cover Walls: 1"
 Int. Cover Top Slab: 1"
 Int. Cover Bottom Slab: 1"



Controlling Ratings

Inventory Rating: 0.85
 Operating Rating: 1.10

Loads

Live Load
 Vehicle Names: KY HL-93
 Traffic Direction: Parallel
 Eq. Height of Soil: Calculated

Dead Load
 Future Wearing Surface: 0.000 klf
 Additional Dead Load: 0.000 klf
 Concentrated Loads: none

Lateral Soil Loads
 Eq. Fluid Press. Max: 60.00 pcf
 Eq. Fluid Press. Min: 30.00 pcf

Interior Water Pressure: yes, head pressure = 0 ft
 Exterior Water Pressure: no

INFRASTRUCTURE PRECAST (ICAST)

Sht _____ of _____
 By: J. Horsley
 Ck: _____
 4/8/2026 3:33:05 PM
 p. 2 of 4

Project : Winwater Culvert

Task :

Client: Winwater Hartford KY

Job No. : 26-1919

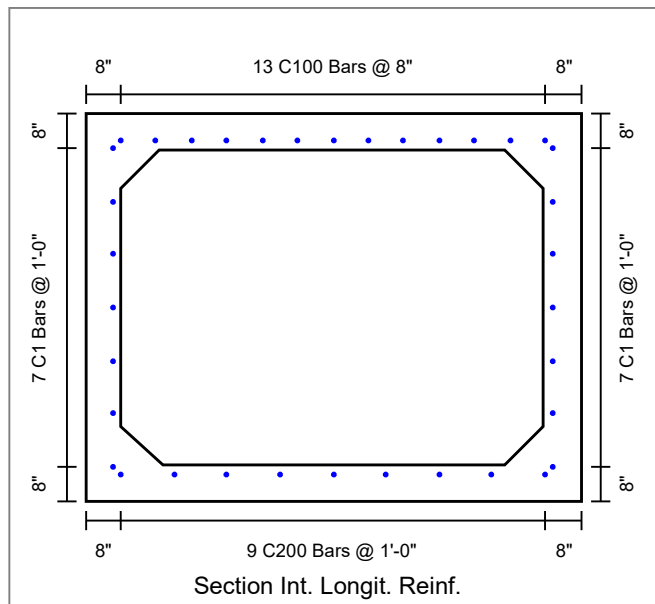
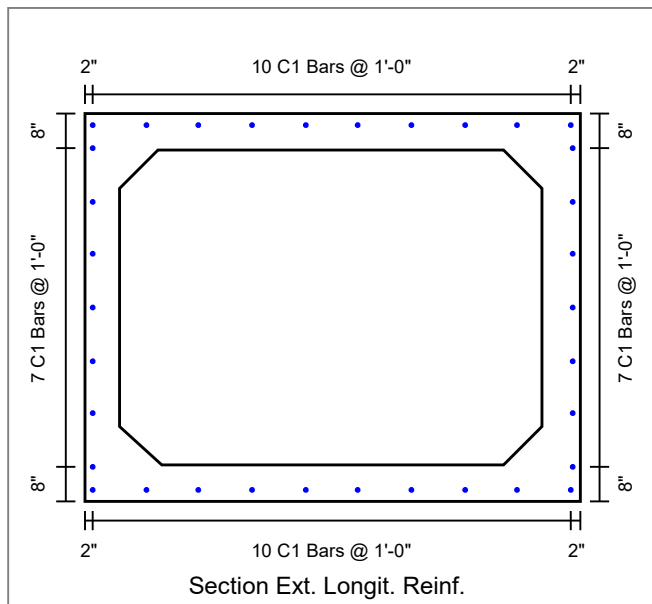
File: 8x6 BC Four Sided - 26-1919 Winater Culvert.etcx

Concrete Summary

Volume of Concrete: 0.799 cy/ft Total Volume of Concrete: 4.593 cy

Reinforcing Steel Bar Schedule (lb)

Location	Mark	Qty	Size	Spacing	Type	Length	Hor. Leg	Ver. Leg	Tot. Weight
Top Slab(Int)	A100 (AS2)	12	5	6"	S	9'-1"	--	--	114.0
Bot Slab(Int)	A200 (AS3)	9	5	8"	S	9'-1"	--	--	85.0
Top Slab(Ext)	A300 (AS7)	12	5	6"	S	9'-1"	--	--	114.0
Bot Slab(Ext)	A400 (AS8)	9	5	8"	S	9'-1"	--	--	85.0
Corner(Top)	A1 (AS1)	24	5	6"	L	4'-3"	2'-3"	2'-0"	106.0
Corner(Bot)	A2 (AS1)	24	5	6"	L	4'-3"	2'-3"	2'-0"	106.0
Wall(Int)	B1 (AS4)	24	5	6"	S	6'-6"	--	--	163.0
Wall(Ext)	B2 (AS1)	12	5	1'-0"	S	6'-0"	--	--	75.0
Longit. Top (Int)	C100 (AS5)	13	5	8"	S	5'-8"	--	--	77.0
Longit. Bot (Int)	C200	9	5	1'-0"	S	5'-8"	--	--	53.0
Longit. Top (Ext)	C1 (AS6)	10	5	1'-0"	S	5'-8"	--	--	59.1
Longit. Bot (Ext)	C1 (AS6)	10	5	1'-0"	S	5'-8"	--	--	59.1
Longit. Wall (Ext)	C1 (AS6)	14	5	1'-0"	S	5'-8"	--	--	82.8
Longit. Wall (Int)	C1 (AS6)	14	5	1'-0"	S	5'-8"	--	--	82.8
									1262



INFRASTRUCTURE PRECAST (ICAST)

Sht _____ of _____
By: J. Horsley
Ck: _____
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p. 3 of 4

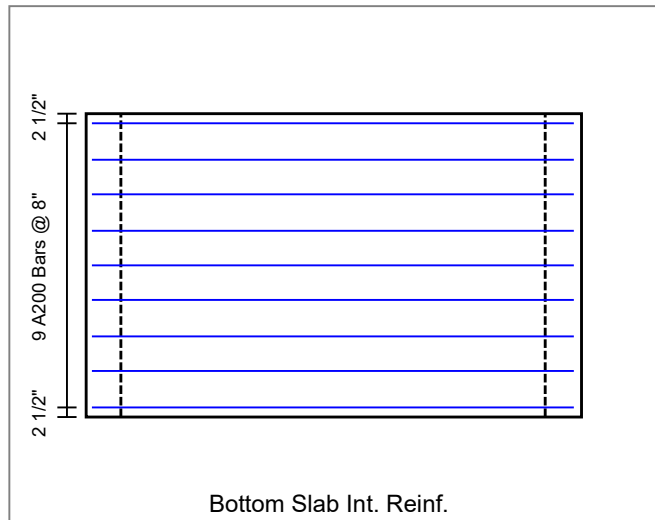
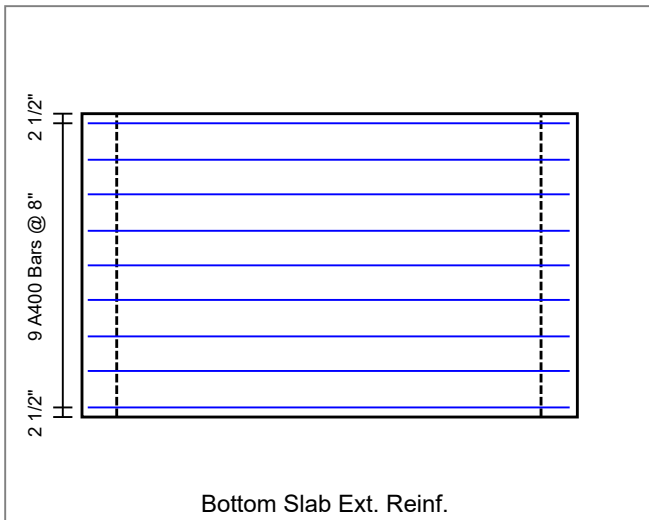
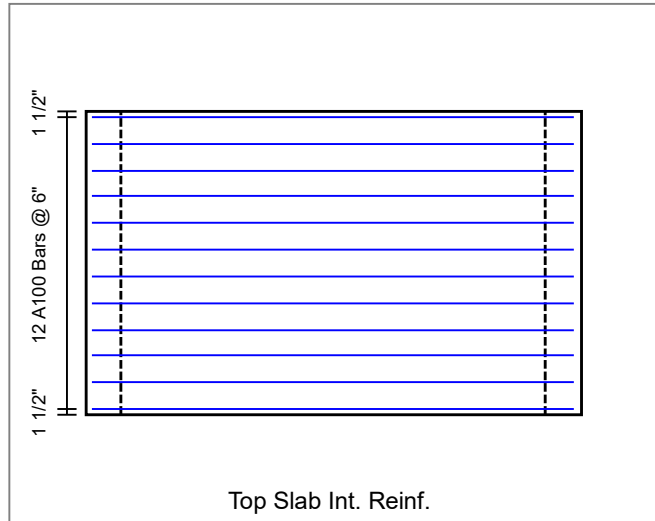
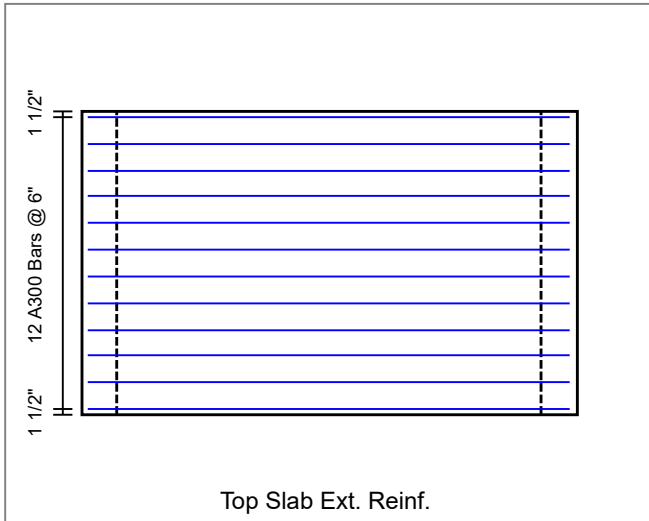
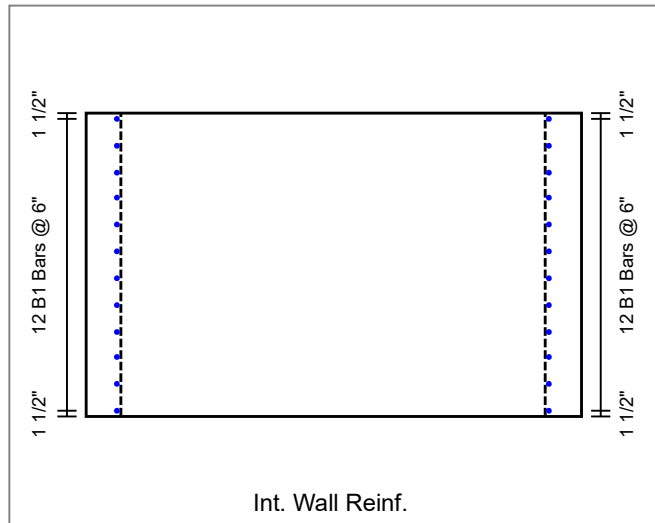
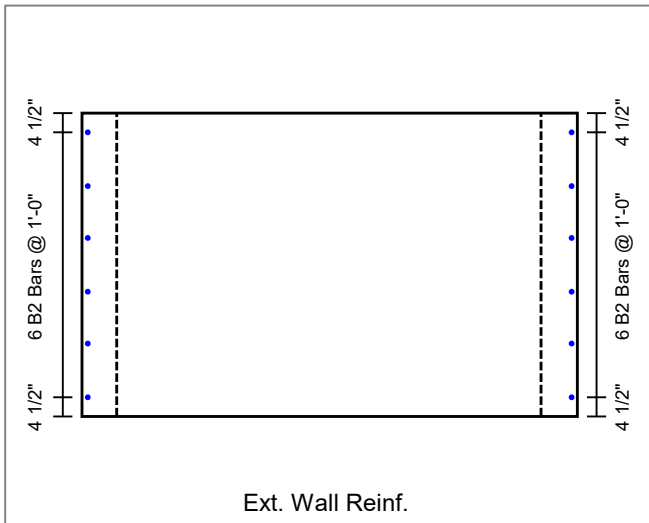
Project : Winwater Culvert

Task :

Job No. : 26-1919

Client: Winwater Hartford KY

File: 8x6 BC Four Sided - 26-1919 Winater Culvert.etcx



INFRASTRUCTURE PRECAST (ICAST)

Sht _____ of _____

By: J. Horsley

Ck: _____

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p. 4 of 4

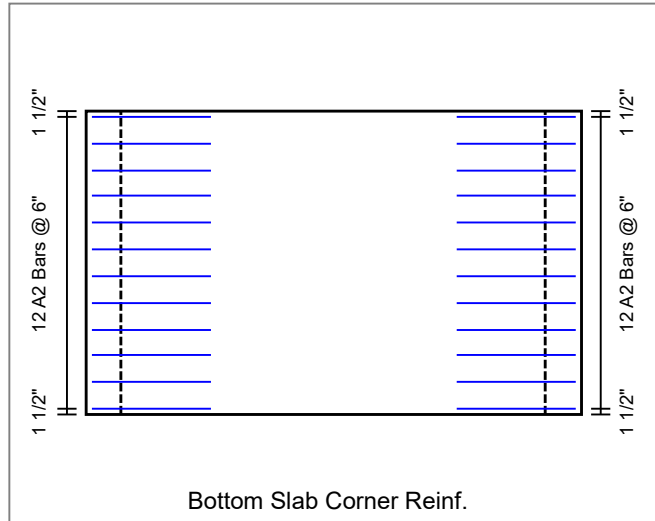
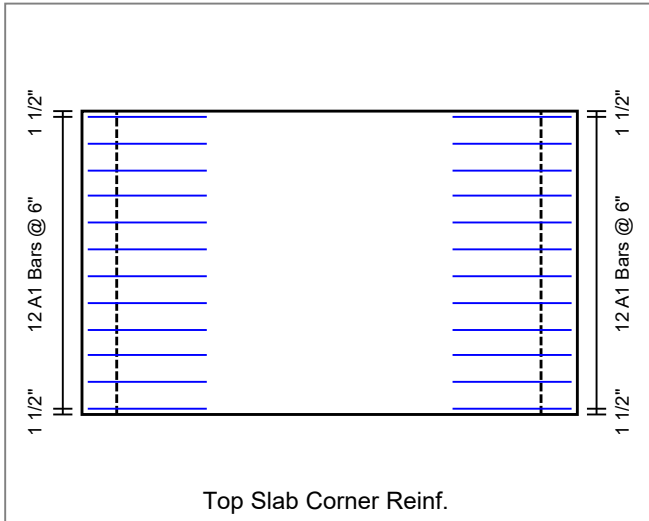
Project : Winwater Culvert

Task :

Client: Winwater Hartford KY

Job No. : 26-1919

File: 8x6 BC Four Sided - 26-1919 Winater Culvert.etcx



REINFORCEMENT SUMMARY
 =====

M dimension = 1' 6" (method of equivalent capacity)
 = 5' 5" (method of contraflexure - ASTM)

Reinforcing steel Schedule

Location	Bar Mark	Qty	Size	Type	Spacing (in)	As,prv (in2/ft)	Length (ft-in)	Wgt (lbs)	H Leg (ft-in)	V Leg (ft-in)
Top slab (int)	A100 (AS2)	12	5	STR	6.00	0.620	9- 1	114		
Bot slab (int)	A200 (AS3)	9	5	STR	8.00	0.465	9- 1	85		
Top slab (ext)	A300 (AS7)	12	5	STR	6.00	0.620	9- 1	114		
Bot slab (ext)	A400 (AS8)	9	5	STR	8.00	0.465	9- 1	85		
Corner (Top)	A1 (AS1)	24	5	L-BAR	6.00	0.620	4- 3	106	2- 3	2- 0
Corner (Bottom)	A2 (AS1)	24	5	L-BAR	6.00	0.620	4- 3	106	2- 3	2- 0
Ext wall (int)	B1 (AS4)	24	5	STR	6.00	0.620	6- 6	163		
Ext wall (ext)	B2 (AS1)	12	5	STR	12.00	0.310	6- 0	75		
Top slab (int- 1)	C100 (AS5)	13	5	STR	8.00	0.465	5- 8	77		
Bot slab (int- 1)	C200	9	5	STR	12.00	0.310	5- 8	53		
Temperature (1)	C1 (AS6)	10	5	STR	12.00	0.310	5- 8	59		
Temperature (1)	C1 (AS6)	10	5	STR	12.00	0.310	5- 8	59		
Temperature (1)	C1 (AS6)	14	5	STR	12.00	0.310	5- 8	83		
Temperature (1)	C1 (AS6)	14	5	STR	12.00	0.310	5- 8	83		
Total								1262		

Note: A denotes flexural steel, B denotes vertical steel, C denotes longitudinal steel

AS Bar Marks

Location	As prv in2/ft
Transverse Side Wall - Outside Face (AS1)	0.620
Transverse Top Slab - Inside Face (AS2)	0.620
Transverse Bottom Slab - Inside Face (AS3)	0.465
Transverse Side Wall - Inside Face (AS4)	0.620
Distribution Top Slab - Inside Face (AS5)	0.465
Distribution Top Slab - Outside Face (AS6)	0.310
Transverse Top Slab - Outside Face (AS7)	0.620
Transverse Bottom Slab - Outside Face (AS8)	0.465

Notes: 1.) Final areas of steel provided must be checked in analysis mode