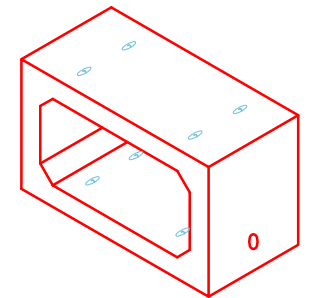
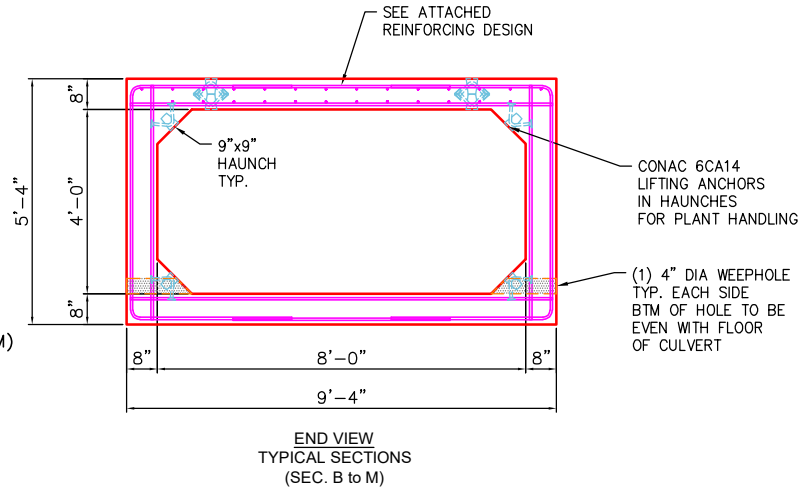
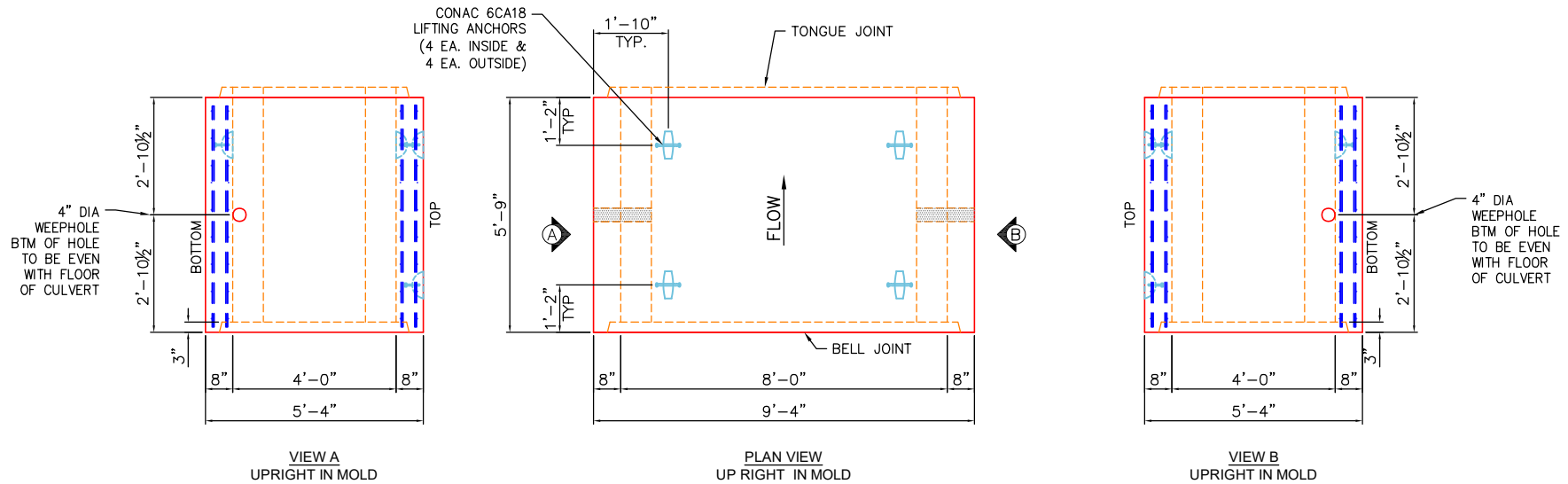



**NOTES:**

1. BOX CULVERT IS DESIGNED PER SECTION 605 OF THE KYTC STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
  - KYTC STAMP REQUIRED.
  - WEEP HOLES REQUIRED.
2. LOAD REQUIREMENTS = KY-HL93 (KY TABLE 1).
3. COVER DEPTH = 0' TO 4'.
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'x4' RCBC = 2,577 LBS/L.FT
  - 5.17' LONG SECTION = 16,871 LBS (SEC. N)
  - 5.75' LONG SECTION = 14,822 LBS (SEC. A-M)



**COMPONENT ISOMETRIC VIEW**



<b>PRODUCTION WORK ORDER</b>		PRODUCT I.D.: BC096048-08WLF-9H	DESCRIPTION: 96"x48"x69" BOX CULV. (8W & 9" HAUNCH)
	QUALITY CONTROL CHECKLIST	PRODUCT VIEW: RIGHT SIDE UP	CUSTOMER: SCOTTY'S CONTRACTING & STONE LLC.
	<input type="checkbox"/> ALL DIMENSIONS CORRECT.	PLANT: BEAVER DAM, KY.	PROJECT: INDUSTRIAL DRIVE EXTENSION
	<input type="checkbox"/> LIFTERS INSTALLED INSIDE.	WEIGHT: 14,822 LBS.	STRUCTURE: 8x4 BC (SEC. B-M) <b>P5</b>
	<input type="checkbox"/> RECESS WITH HAUNCHES CORRECT.	TOP JOINT: TONGUE	SALES ORDER/QUOTE NO: 25-4685BC
	<input type="checkbox"/> REINFORCING CORRECT.	BOTTOM JOINT: GROOVE	CHECK: B. SMITH      DRAWING: J. HORSLEY
	<input type="checkbox"/> SURFACE QUALITY ACCEPTABLE.	QC CHECK INITIALS:	DATE: 02/19/26      SCALE: NTS      PG. 1 of 1
<input type="checkbox"/> LIFTERS INSTALLED OUTSIDE.			
<input type="checkbox"/> PRODUCT SQUARE.			

# INFRASTRUCTURE PRECAST (ICAST)

Sht \_\_\_\_\_ of \_\_\_\_\_  
 By: J. Horsley  
 Ck: \_\_\_\_\_  
 2/19/2026 2:31:59 PM  
 File: 8x4 Four Sided - 25-4685BC Morgantown Industrial Park. pic 1 of 4

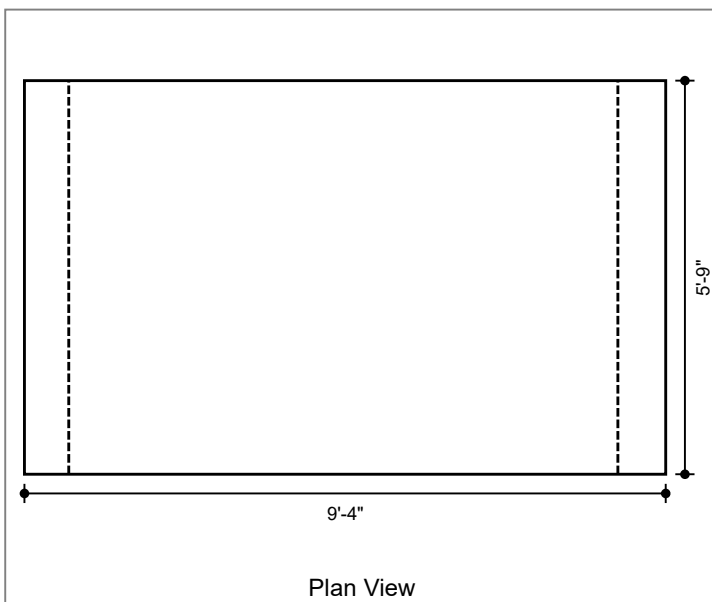
Project : Morgantown Industrial Park  
 Task : 8x4 BC  
 Job No. : 25-4685BC

Client: Scotty's Contractng  
 File: 8x4 Four Sided - 25-4685BC Morgantown Industrial Park.

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

## Physical Dimensions

Clear Span: 8'-0"  
 Clear Height: 4'-0"  
 Top Slab: 8"  
 Bottom Slab: 8"  
 Ext. Wall: 8"  
 Fill Depth Range  
   Maximum: 3.99 ft  
   Minimum: 2.00 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

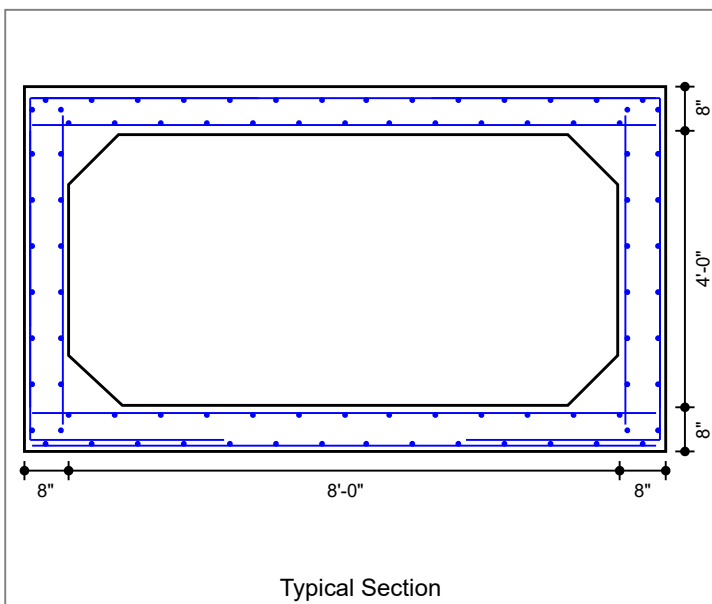
**Concrete**  
 Strength, f'c: 5.000 ksi  
 Density: 0.150 kcf  
 Elasticity, Ec: 4592 ksi  
 Type: Normal wt

**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: 1"  
 Ext. Cover Walls: 1"  
 Int. Cover Walls: 1"  
 Int. Cover Top Slab: 1"  
 Int. Cover Bottom Slab: 1"



## Controlling Ratings

Inventory Rating: 1.30  
 Operating Rating: 1.68

## 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)

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 By: J. Horsley  
 Ck: \_\_\_\_\_  
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 etc of 4

Project : Morgantown Industrial Park

Task : 8x4 BC

Client: Scotty's Contractng

Job No. : 25-4685BC

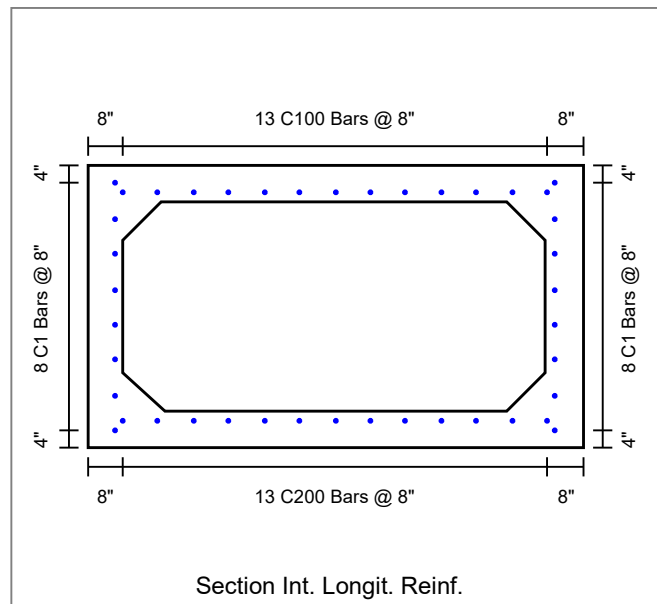
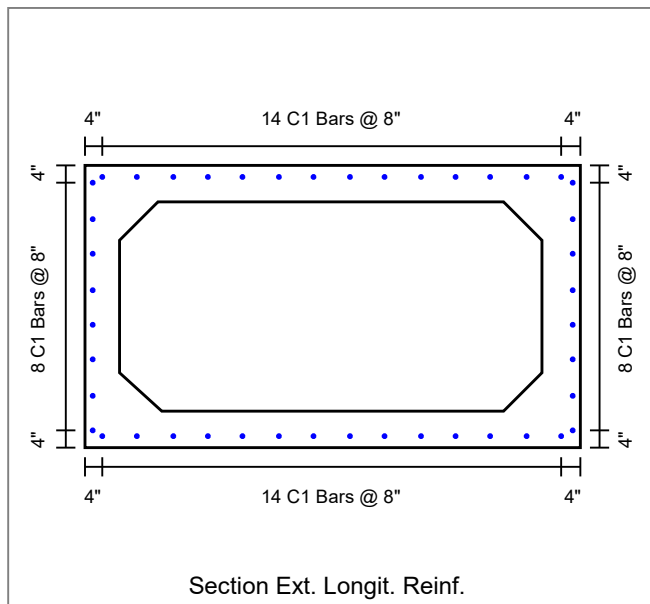
File: 8x4 Four Sided - 25-4685BC Morganton Industrial Park

## Concrete Summary

Volume of Concrete: 0.700 cy/ft Total Volume of Concrete: 4.026 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	6'-8"	3'-4"	3'-4"	167.0
Corner(Bot)	A2 (AS1)	18	5	8"	L	6'-3"	2'-10"	3'-5"	117.0
Wall(Int)	B1 (AS4)	18	5	8"	S	4'-6"	--	--	84.0
Wall(Ext)	B2 (AS1)	18	5	8"	S	4'-0"	--	--	75.0
Longit. Top (Int)	C100 (AS5)	13	5	8"	S	5'-8"	--	--	77.0
Longit. Bot (Int)	C200	13	5	8"	S	5'-8"	--	--	77.0
Longit. Top (Ext)	C1 (AS6)	14	5	8"	S	5'-8"	--	--	82.8
Longit. Bot (Ext)	C1 (AS6)	14	5	8"	S	5'-8"	--	--	82.8
Longit. Wall (Ext)	C1 (AS6)	16	5	8"	S	5'-8"	--	--	94.6
Longit. Wall (Int)	C1 (AS6)	16	5	8"	S	5'-8"	--	--	94.6
									1350



# INFRASTRUCTURE PRECAST (ICAST)

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By: J. Horsley

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Project : Morgantown Industrial Park

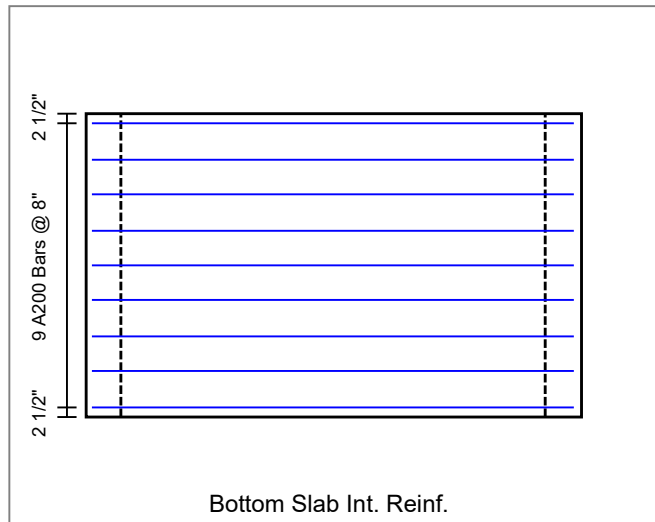
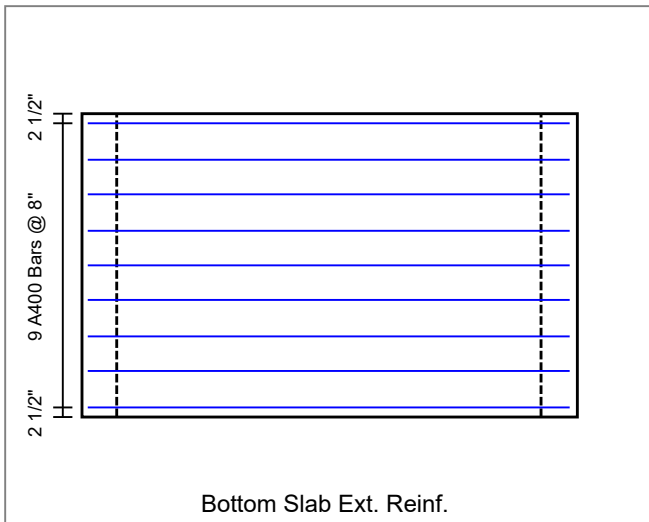
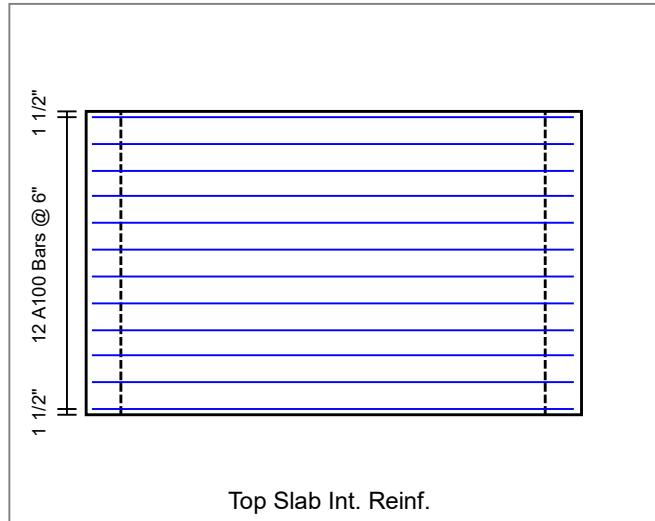
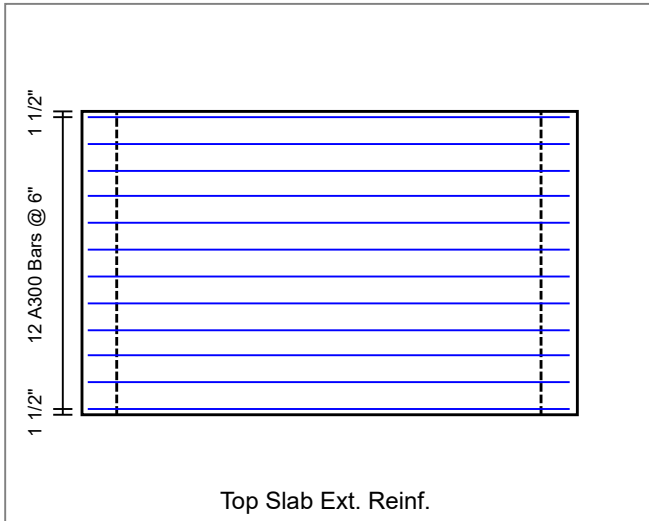
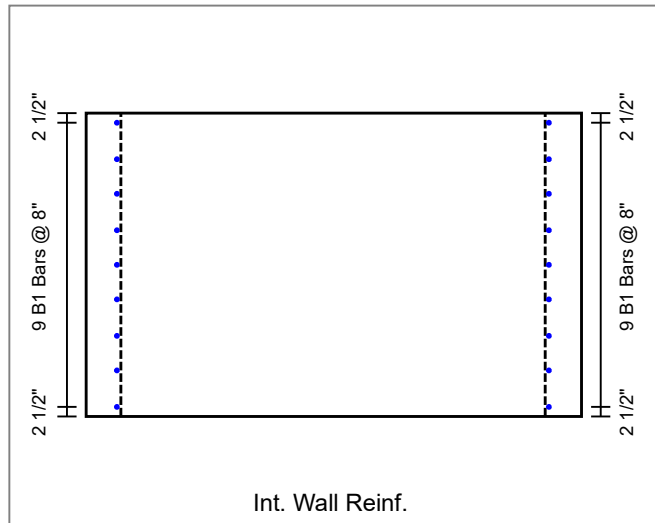
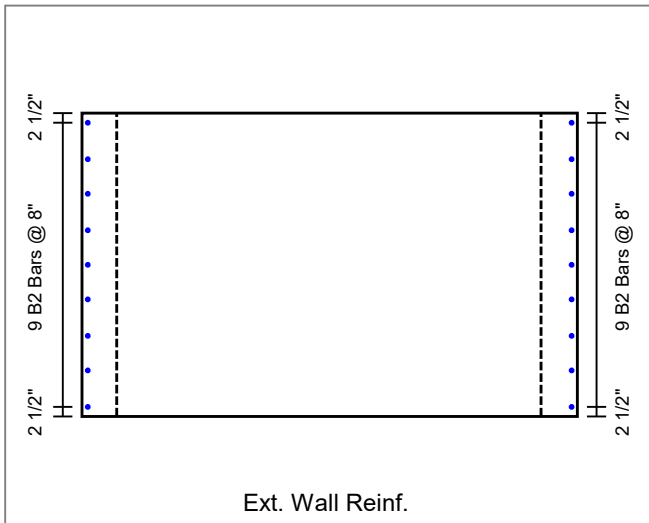
Task : 8x4 BC

Client: Scotty's Contractng

Job No. : 25-4685BC

File: 8x4 Four Sided - 25-4685BC Morgantown Industrial Park

etc of 4



# INFRASTRUCTURE PRECAST (ICAST)

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By: J. Horsley

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Project : Morgantown Industrial Park

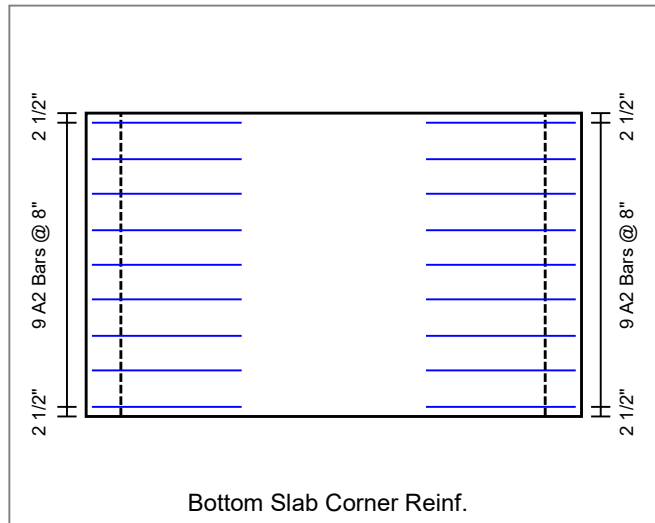
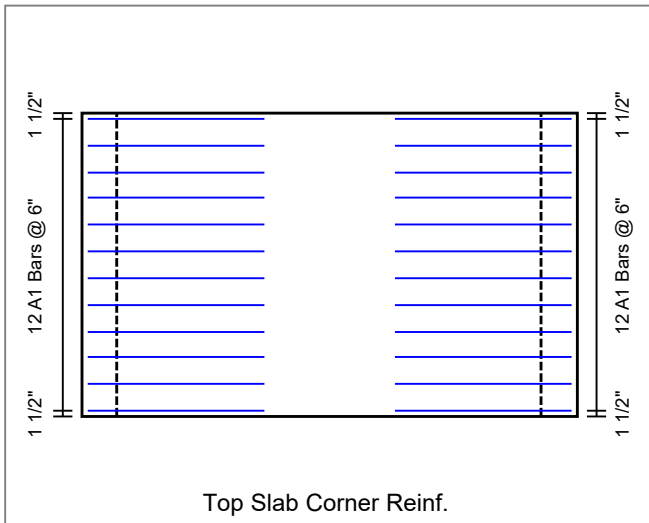
Task : 8x4 BC

Client: Scotty's Contractng

Job No. : 25-4685BC

File: 8x4 Four Sided - 25-4685BC Morganton Industrial Park

Sheet of 4



REINFORCEMENT SUMMARY

M dimension = 1' 8" (method of equivalent capacity)  
 = 4' 1" (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	6- 8	167	3- 4	3- 4
Corner (Bottom)	A2 (AS1)	18	5	L-BAR	8.00	0.465	6- 3	117	2-10	3- 5
Ext wall (int)	B1 (AS4)	18	5	STR	8.00	0.465	4- 6	84		
Ext wall (ext)	B2 (AS1)	18	5	STR	8.00	0.465	4- 0	75		
Top slab (int- 1)	C100 (AS5)	13	5	STR	8.00	0.465	5- 8	77		
Bot slab (int- 1)	C200	13	5	STR	8.00	0.465	5- 8	77		
Temperature ( 1)	C1 (AS6)	14	5	STR	8.00	0.465	5- 8	83		
Temperature ( 1)	C1 (AS6)	14	5	STR	8.00	0.465	5- 8	83		
Temperature ( 1)	C1 (AS6)	16	5	STR	8.00	0.465	5- 8	95		
Temperature ( 1)	C1 (AS6)	16	5	STR	8.00	0.465	5- 8	95		
Total								1350		

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)	0.465
Distribution Top Slab - Inside Face (AS5)	0.465
Distribution Top Slab - Outside Face (AS6)	0.465
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