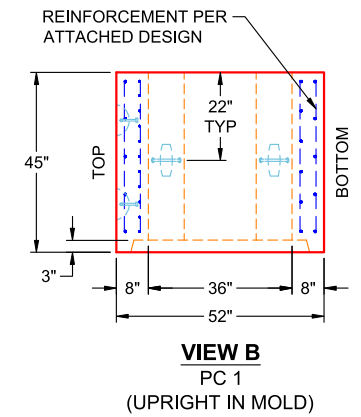
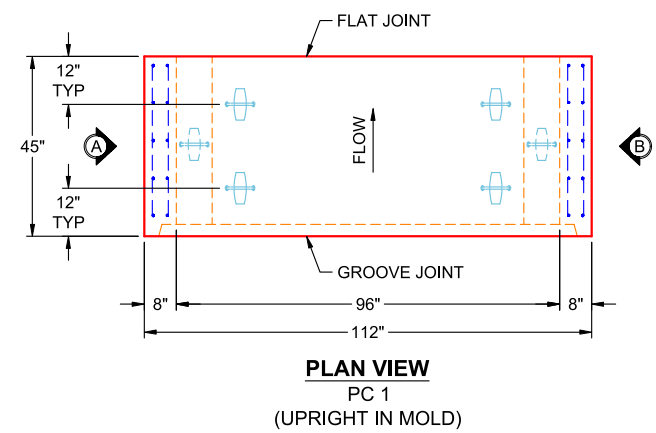
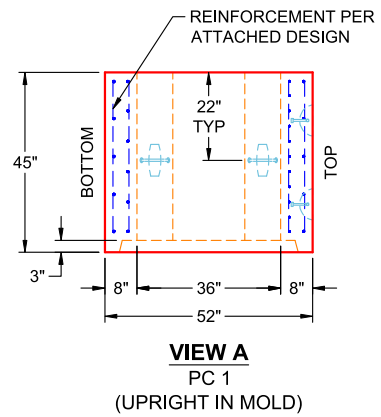
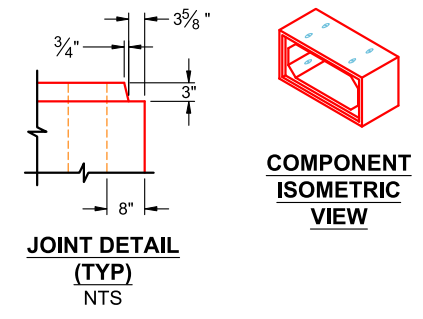
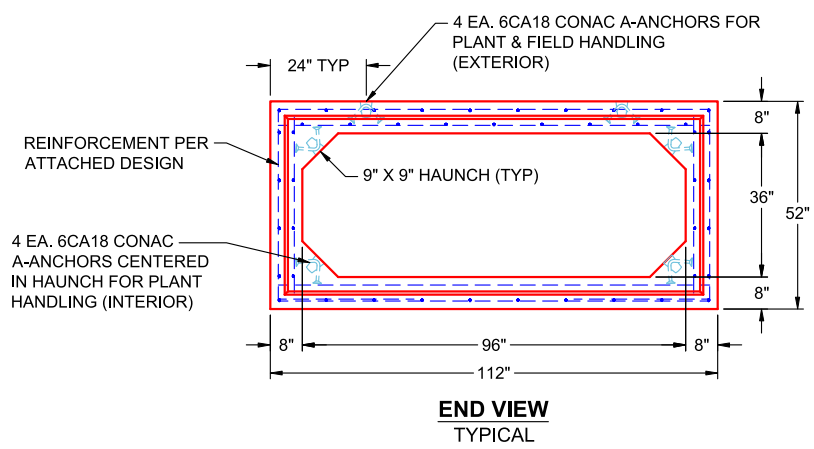



Structure ID: BC 8 x 3 (PC 1)
P1 BC096036-08WLF-9HC

BOX CULVERT (08W/08F/08T) No Tongue G/F

- GENERAL NOTES:**
1. MANUFACTURED TO ASTM C-1577 & SECTION 714 OF INDOT STANDARD SPECIFICATIONS FOR REINFORCED CONCRETE BOX STRUCTURES
 2. LOAD REQUIREMENTS: HL93
 3. REINFORCEMENT PER ATTACHED DESIGN
 4. COVER DEPTH: 0'-5"
 5. CONCRETE: 5,000 PSI AT 28 DAYS
 6. JOINT SEALANT: 1" BUTYL MASTIC (CS-102)
EXTERIOR JOINT WRAP: 12" WIDE (CS-212)
 7. WEIGHT: 8' X 3' RCBC = 2,548 LBS / LF
(3'-9" LONG SECTION = 9,553 LBS)



| PRODUCTION WORK ORDER | | PRODUCT I.D.: BC096036-08WLF-9HC | DESCRIPTION: 96" X 36" X 45" BOX CULVERT (8" WALLS & 9" HAUNCH) |
|--|--|----------------------------------|---|
|  | QUALITY CONTROL CHECKLIST | PRODUCT VIEW: RIGHT SIDE UP | CUSTOMER: BOWEN ENGINEERING CORPORATION |
| | <input type="checkbox"/> ALL DIMENSIONS CORRECT. | PLANT: BEAVER DAM, KY | PROJECT: ALCOA OUTFALL |
| | <input type="checkbox"/> LIFTERS INSTALLED INSIDE. | WEIGHT: 9,553 LBS | STRUCTURE: BC 8 X 3 (PC 1) |
| | <input type="checkbox"/> RECESS WITH HAUNCHES CORRECT. | TOP SECTION JOINT: FLAT | ORDER NO: 25-2073 |
| | <input type="checkbox"/> REINFORCING CORRECT. | BASE SECTION JOINT: GROOVE | PE: J.H. ROSS |
| | <input type="checkbox"/> SURFACE QUALITY ACCEPTABLE. | QC CHECK INITIALS: | DRAWING: K. CARDWELL |
| | <input type="checkbox"/> LIFTERS INSTALLED OUTSIDE. | | DATE: 04/17/26 |
| <input type="checkbox"/> PRODUCT SQUARE. | | SCALE: NTS | |
| | | | PG. 1 OF 1 |

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INFRASTRUCTURE PRECAST (ICAST)

Sht _____ of _____
 By: J. Horsley
 Ck: _____
 4/17/2026 8:51:51 AM
 File: 8x3 BC Four Sided (3.75ft sections) - 25-2073 Alcoa Outfall, etc

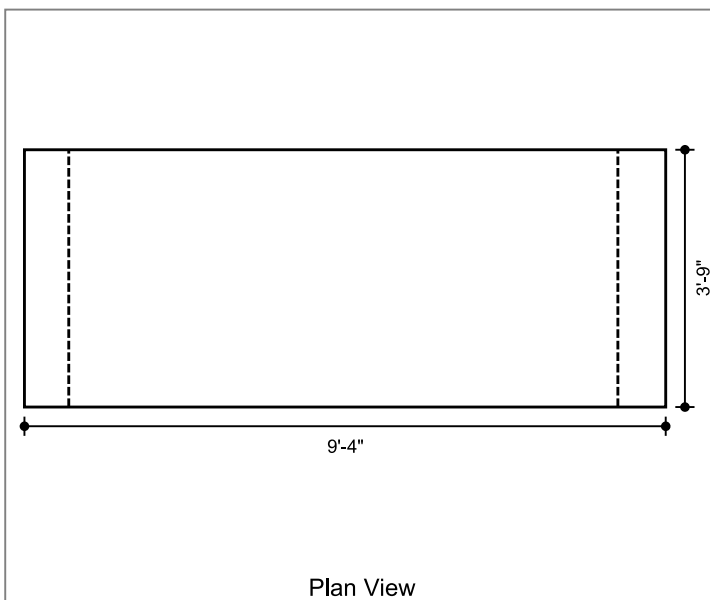
Project : Alcoa Outfall
 Task :
 Job No. : 25-2073

Client: Bowen Engineering
 File: 8x3 BC Four Sided (3.75ft sections) - 25-2073 Alcoa Outfall, etc

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

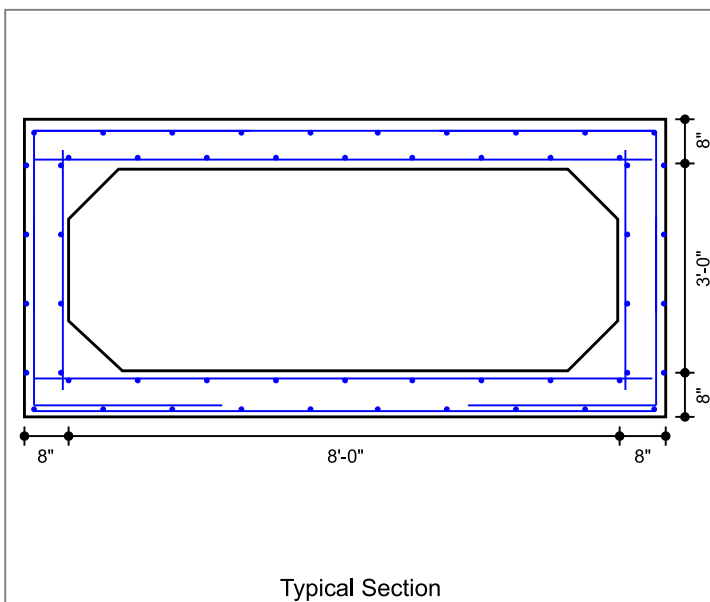
Physical Dimensions

Clear Span: 8'-0"
 Clear Height: 3'-0"
 Top Slab: 8"
 Bottom Slab: 8"
 Ext. Wall: 8"
 Fill Depth Range
 Maximum: 5.00 ft
 Minimum: 2.00 ft
 Increment: 1.00 ft
 Length: 3'-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, E_c: 3834 ksi
 Type: Normal wt
 Steel
 Yield, f_y: 60 ksi
 Allow Stress: 36 ksi
 Elasticity, E_s: 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 1/2"
 Int. Cover Walls: 1"
 Int. Cover Top Slab: 1"
 Int. Cover Bottom Slab: 1"



Controlling Ratings

Inventory Rating: 1.14
 Operating Rating: 1.48

Loads

Live Load
 Vehicle Names: 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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Task :

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Job No. : 25-2073

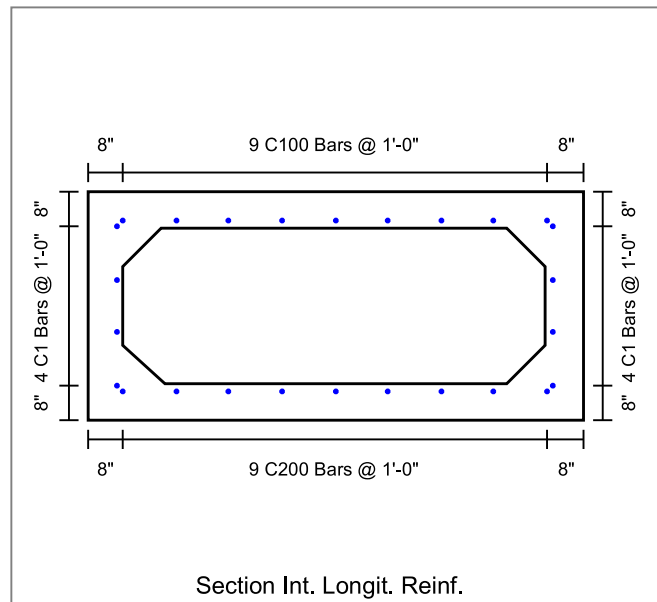
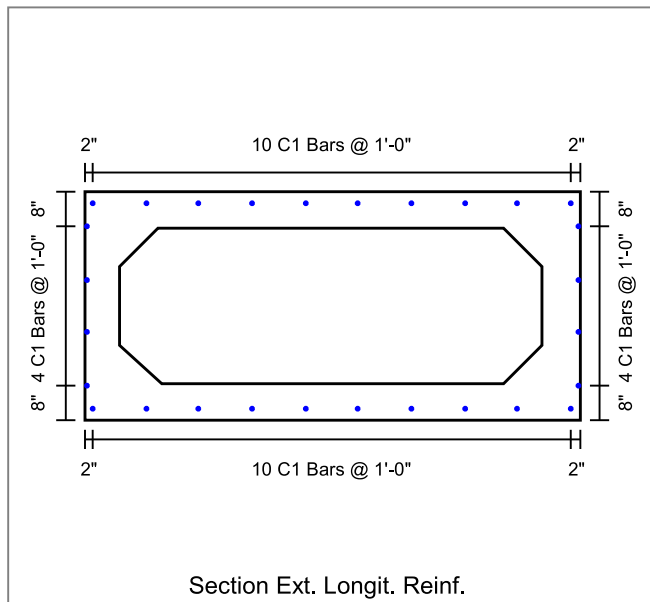
File: 8x3 BC Four Sided (3.75ft sections) - 25-2073 Alcoa Outfall.dwg

Concrete Summary

Volume of Concrete: 0.651 cy/ft Total Volume of Concrete: 2.440 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 | 3 | 4" | S | 9'-0" | -- | -- | 41.0 |
| Bot Slab(Int) | A200 (AS3) | 6 | 4 | 8" | S | 9'-0" | -- | -- | 36.0 |
| Top Slab(Ext) | A300 (AS7) | 4 | 4 | 1'-0" | S | 9'-0" | -- | -- | 24.0 |
| Bot Slab(Ext) | A400 (AS8) | 4 | 4 | 1'-0" | S | 9'-0" | -- | -- | 24.0 |
| Corner(Top) | A1 (AS1) | 16 | 4 | 6" | L | 5'-10" | 3'-2" | 2'-8" | 62.0 |
| Corner(Bot) | A2 (AS1) | 16 | 4 | 6" | L | 5'-6" | 2'-9" | 2'-9" | 59.0 |
| Wall(Int) | B1 (AS4) | 8 | 4 | 1'-0" | S | 3'-6" | -- | -- | 19.0 |
| Longit. Top (Int) | C100 (AS5) | 9 | 4 | 1'-0" | S | 3'-8" | -- | -- | 22.0 |
| Longit. Bot (Int) | C200 | 9 | 4 | 1'-0" | S | 3'-8" | -- | -- | 22.0 |
| Longit. Top (Ext) | C1 (AS6) | 10 | 4 | 1'-0" | S | 3'-8" | -- | -- | 24.4 |
| Longit. Bot (Ext) | C1 (AS6) | 10 | 4 | 1'-0" | S | 3'-8" | -- | -- | 24.4 |
| Longit. Wall (Ext) | C1 (AS6) | 8 | 4 | 1'-0" | S | 3'-8" | -- | -- | 19.5 |
| Longit. Wall (Int) | C1 (AS6) | 8 | 4 | 1'-0" | S | 3'-8" | -- | -- | 19.5 |
| | | | | | | | | | 397 |



INFRASTRUCTURE PRECAST (ICAST)

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Project : Alcoa Outfall

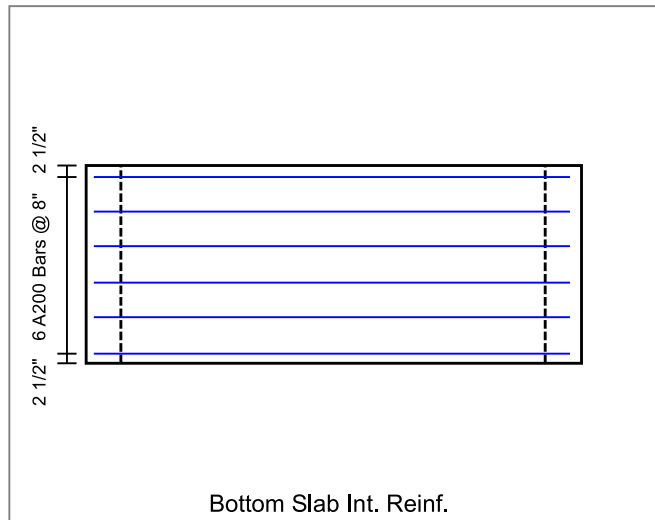
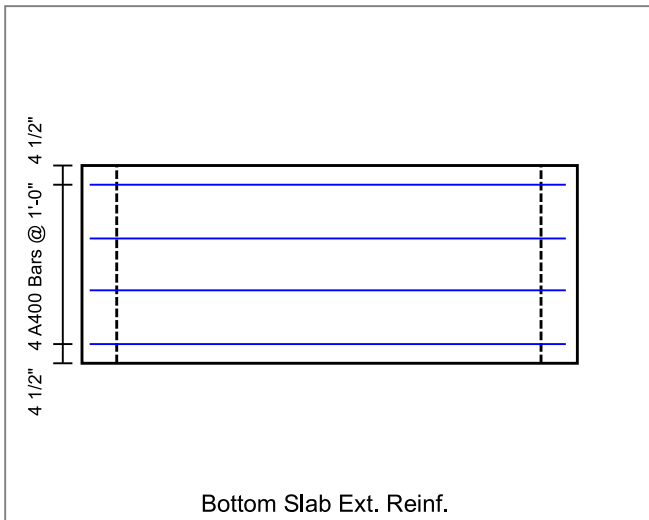
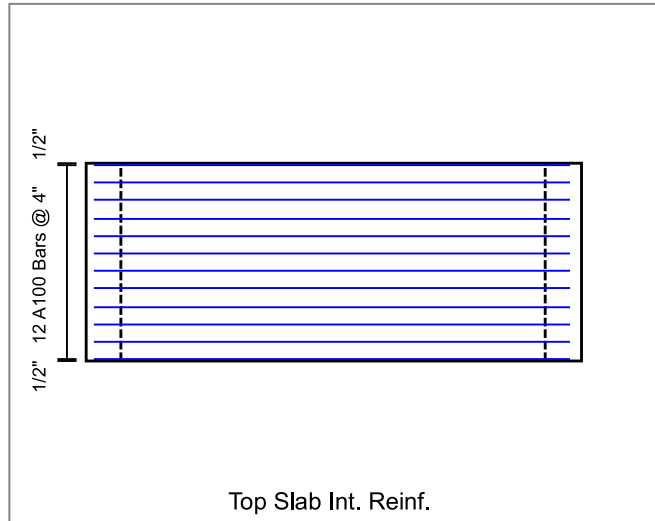
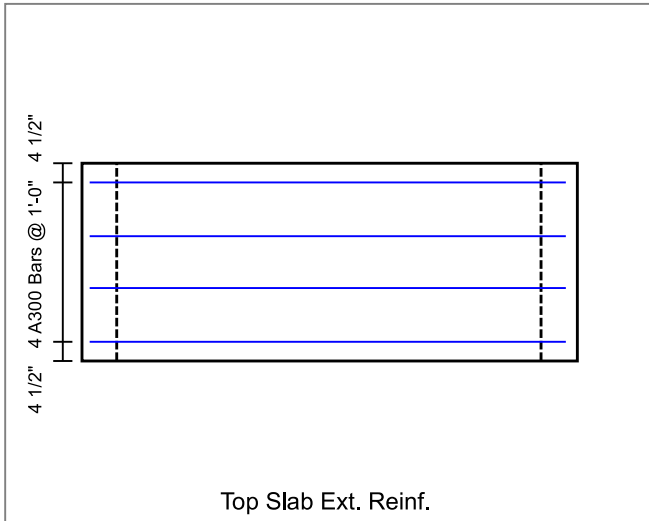
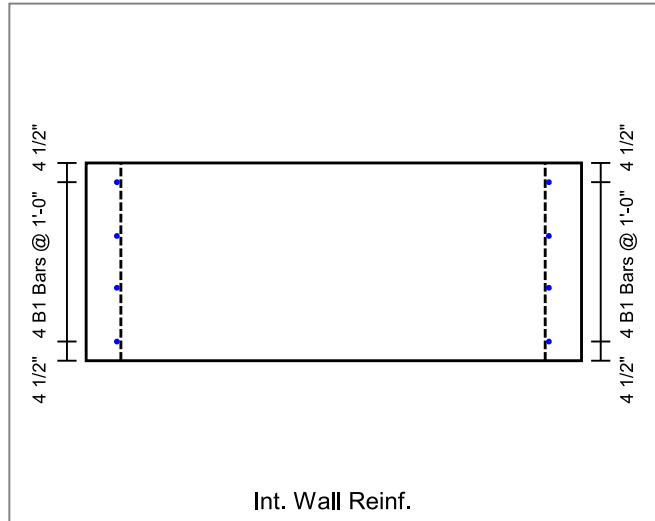
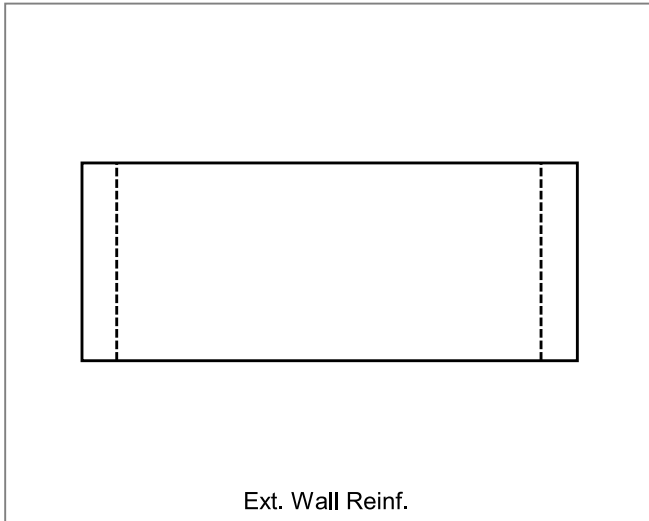
Task :

Job No. : 25-2073

Client: Bowen Engineering

File: 8x3 BC Four Sided (3.75ft sections) - 25-2073 Alcoa Outfall

Sheet 4



INFRASTRUCTURE PRECAST (ICAST)

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Task :

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Sheet 4 of 4

