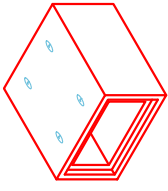




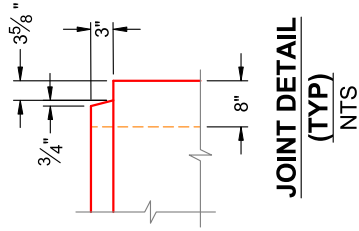
Structure ID: BC 4 x 2 (PC 16)

P1 BC048024-08WLF

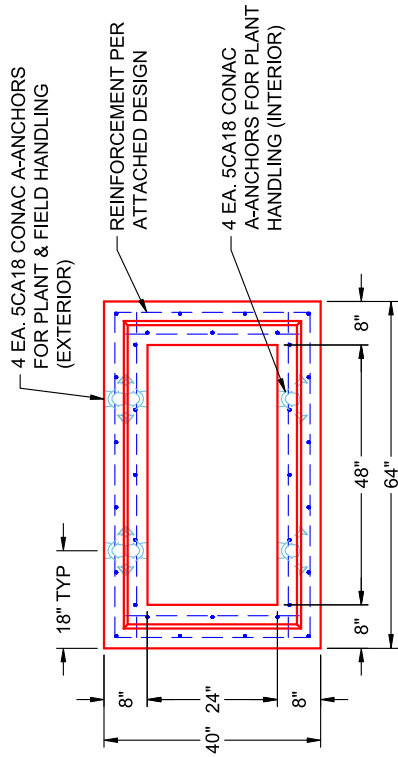
BOX CULVERT (08W/08F/08T) No Haunch G/T



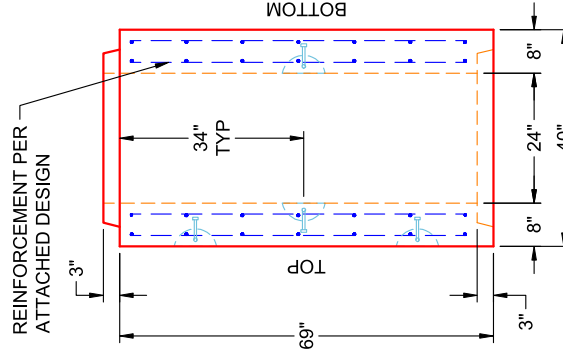
COMPONENT ISOMETRIC VIEW



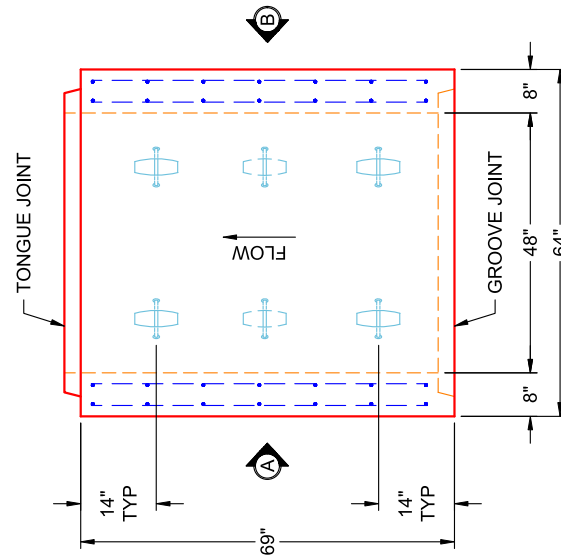
JOINT DETAIL (TYP) NTS



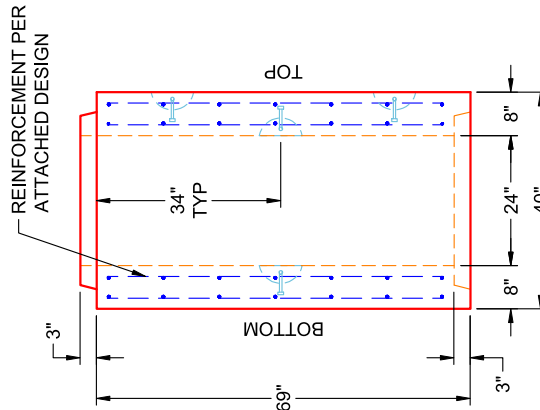
END VIEW TYPICAL



VIEW B PC 16 (UPRIGHT IN MOLD)



PLAN VIEW PC 16 (UPRIGHT IN MOLD)



VIEW A PC 16 (UPRIGHT IN MOLD)

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: 4'-8"
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: 4' X 2' (48" X 24") RCBC = 1,418 LBS / LF (69" LONG SECTION = 8,152 LBS)

INFRASTRUCTURE PRECAST (ICAST)

Sht _____ of _____

By: J. Horsley

Ck: _____

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Sheet 1 of 3

Project : Alcoa Outfall

Task :

Client: Bowen Engineering Co

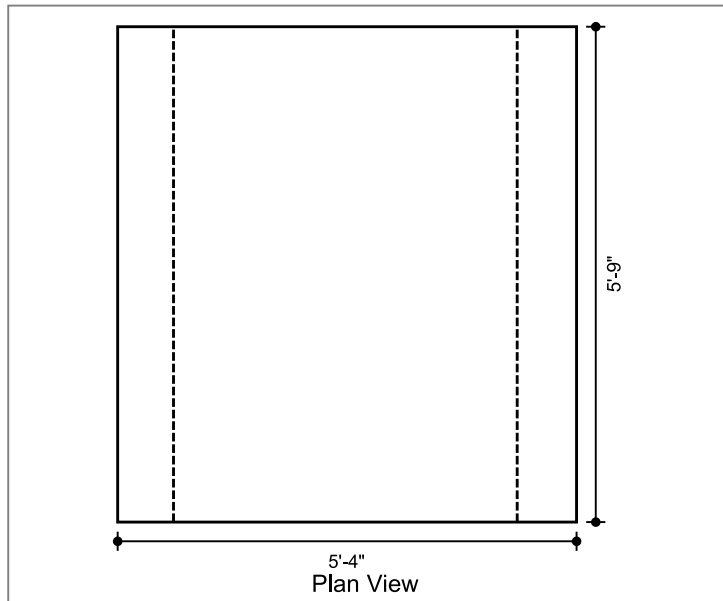
Job No. : 25-2073

File: 4x2 BC Four Sided (no haunch) - 25-2073 Alcoa Outfall.dwg

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

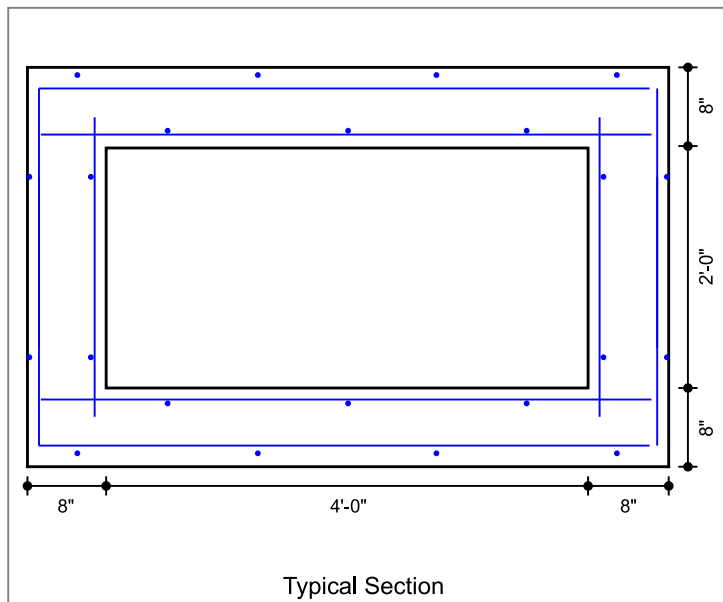
Physical Dimensions

Clear Span:	4'-0"
Clear Height:	2'-0"
Top Slab:	8"
Bottom Slab:	8"
Ext. Wall:	8"
Fill Depth Range	
Maximum:	7.99 ft
Minimum:	4.00 ft
Increment:	0.50 ft
Length:	5'-9"
Skew Angle:	0.00 deg
Bottom Slab Support:	Full Slab
Top Haunch, Width:	0"
Top Haunch, Height:	0"
Bottom Haunch, Width:	0"
Bottom Haunch, Height:	0"



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



Controlling Ratings

Inventory Rating: NaN
Operating Rating: NaN

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)

Sht _____ of _____

By: J. Horsley

Ck: _____

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etc of 3

Project : Alcoa Outfall

Task :

Client: Bowen Engineering Co

Job No. : 25-2073

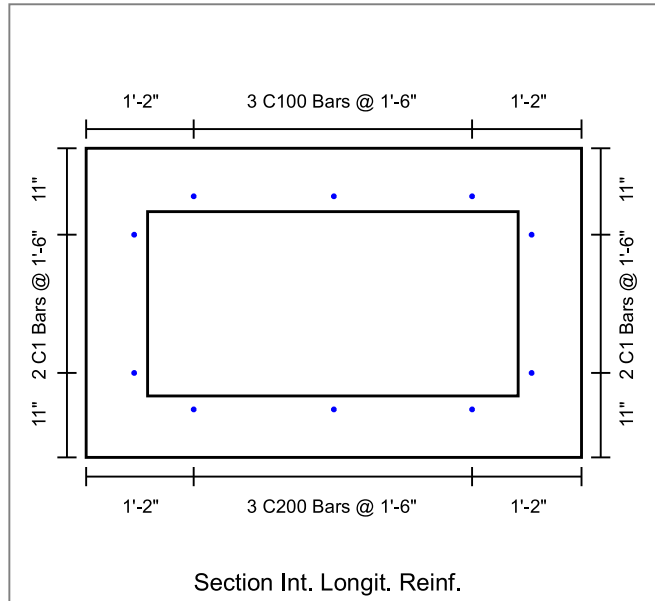
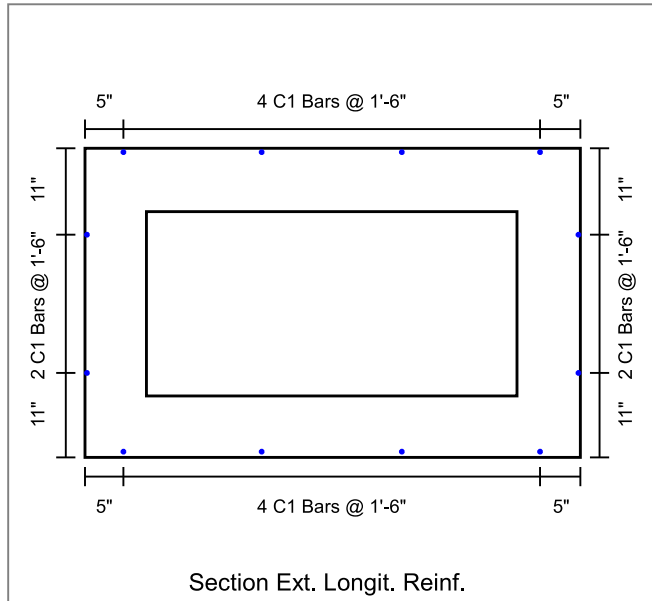
File: 4x2 BC Four Sided (no haunch) - 25-2073 Alcoa Outfall

Concrete Summary

Volume of Concrete: 0.362 cy/ft Total Volume of Concrete: 2.082 cy

Reinforcing Steel Bar Schedule (lb)

Location	Mark	Qty	Size	Spacing	Type	Length	Center	Ver.Leg	Tot.Weight
Top Slab(Int)	A100 (AS2)	6	4	1'-0"	S	5'-1"	--	--	20.0
Bot Slab(Int)	A200 (AS3)	6	4	1'-0"	S	5'-1"	--	--	20.0
Corner(Top)	A1 (AS1)	6	4	1'-0"	U	9'-5"	5'-1"	2'-2"	38.0
Corner(Bot)	A2 (AS1)	6	4	1'-0"	U	9'-7"	5'-1"	2'-3"	38.0
Wall(Int)	B1 (AS4)	12	4	1'-0"	S	2'-6"	--	--	20.0
Longit. Top (Int)	C100 (AS5)	3	3	1'-6"	S	5'-8"	--	--	6.0
Longit. Bot (Int)	C200	3	3	1'-6"	S	5'-8"	--	--	6.0
Longit. Top (Ext)	C1 (AS6)	4	3	1'-6"	S	5'-8"	--	--	8.6
Longit. Bot (Ext)	C1 (AS6)	4	3	1'-6"	S	5'-8"	--	--	8.6
Longit. Wall (Ext)	C1 (AS6)	4	3	1'-6"	S	5'-8"	--	--	8.6
Longit. Wall (Int)	C1 (AS6)	4	3	1'-6"	S	5'-8"	--	--	8.6
									182



INFRASTRUCTURE PRECAST (ICAST)

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Project : Alcoa Outfall

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Task :

File: 4x2 BC Four Sided (no haunch) - 25-2073 Alcoa Outfall

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