

Job Name: 26-2254 - Wilder Box Culvert
Job Location: Wilder, KY
Contractor: Eaton Asphalt

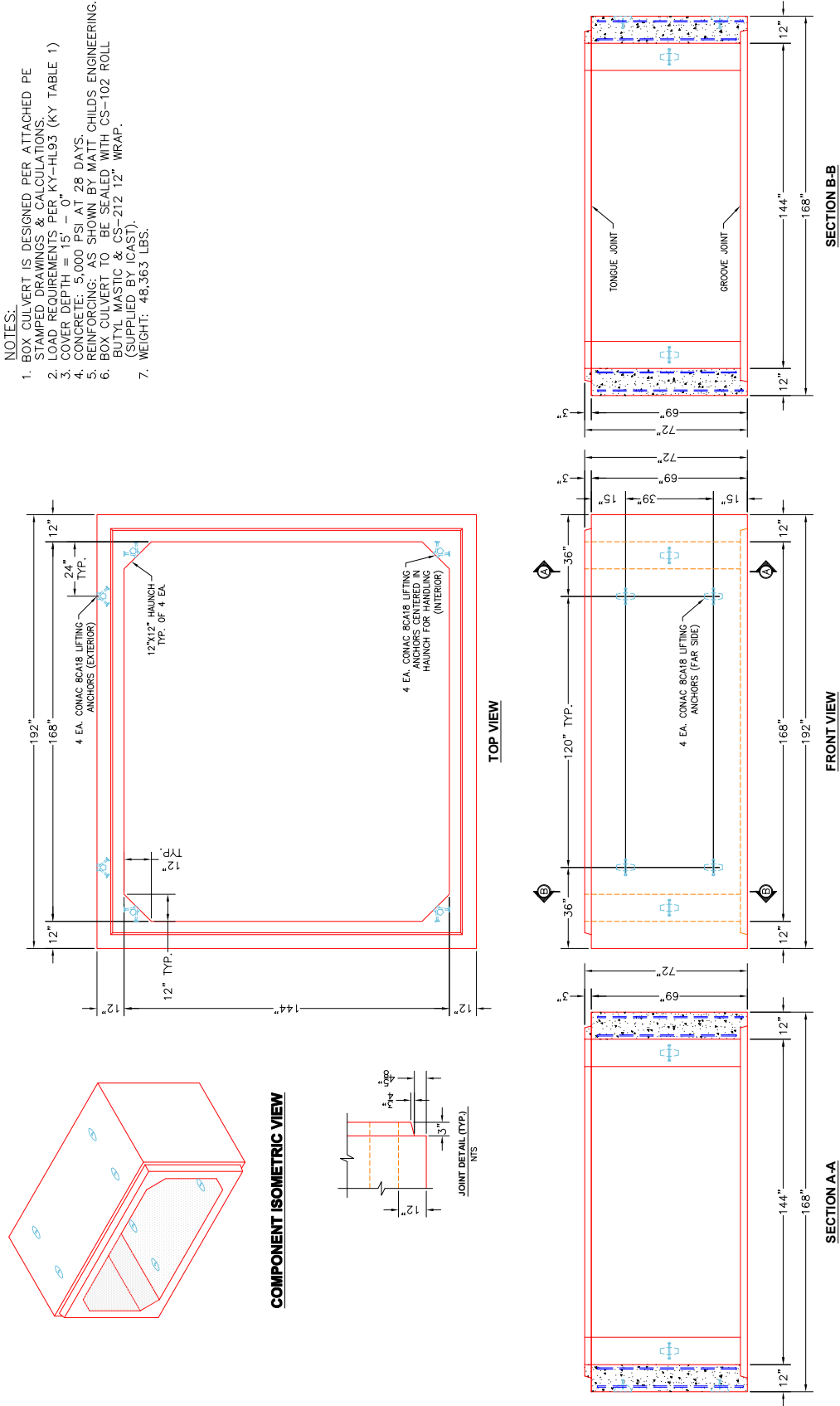
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Tech: Jared - A
PC: E. Bradley



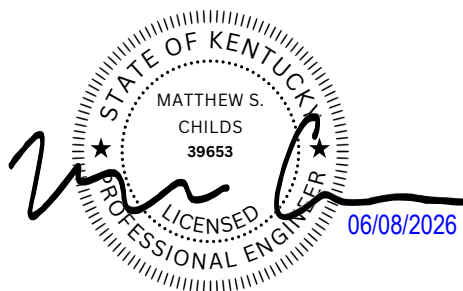
Structure ID: Box Culvert
P20 BC168144-12W12T12F-12H BOX CULVERT (12W/12F/12T) T/G

- NOTES:
- 1. BOX CULVERT IS DESIGNED PER ATTACHED PE STAMPED DRAWINGS & CALCULATIONS.
 - 2. LOAD REQUIREMENTS PER KY-HL93 (KY TABLE 1)
 - 3. COVER DEPTH = 15' - 0"
 - 4. CONCRETE: 5,000 PSI AT 28 DAYS.
 - 5. REINFORCING: AS SHOWN BY MATT CHILDS ENGINEERING.
 - 6. BOX CULVERT TO BE SEALED WITH CS-102 ROLL BUTYL MASTIC & CS-212 12" WRAP. (SUPPLIED BY ICAST).
 - 7. WEIGHT: 48,363 LBS.



Coating (Int): Coating (Ext):	Seam Up: Tongue Seam Dn: Groove	Wall Thickness: 12" Floor Height: 0"	Height (Int): 69" Height (Ext): 69"	Weight (Net): 48363 lb Volume (Net): 12.35cu.yd
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Project: Mooch Road
Product: 14' x 12' Box Culvert
Job: 26-2254
Design No.:
Location: Wilder, KY
Reference #:



MATT CHILDS ENGINEERING, PLLC

Project : City of Wilder
Task : 14x12 15' Fill
Job No. :

Client: ICast
File: 20260605-ICast-CityofWilder-14x12(15'Fill).etcx

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p. 1 of 2

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

Physical Dimensions

Clear Span:	14'-0"
Clear Height:	12'-0"
Top Slab:	1'-0"
Bottom Slab:	1'-0"
Ext. Wall:	1'-0"
Fill Depth:	15.00 ft
Length:	4'-0"
Skew Angle:	0.00 deg
Bottom Slab Support:	Full Slab
Top Haunch, Width:	1'-0"
Top Haunch, Height:	1'-0"
Bottom Haunch, Width:	1'-0"
Bottom Haunch, Height:	1'-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 :	65 ksi
Allow Stress:	39 ksi
Elasticity, E _s :	29000 ksi
Soil	
Density:	0.120 kcf
Exposure Factor	
Class 2 Exposure	
Reinforcement Covers	
Ext. Cover Top Slab:	1"
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

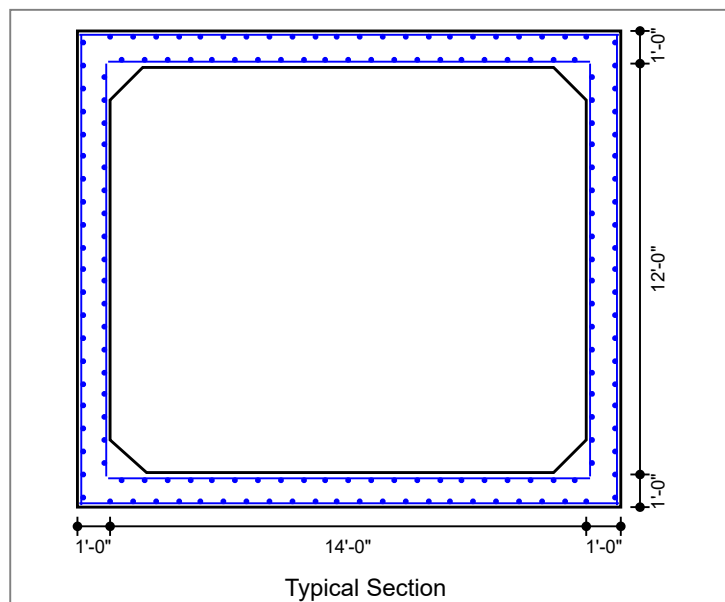
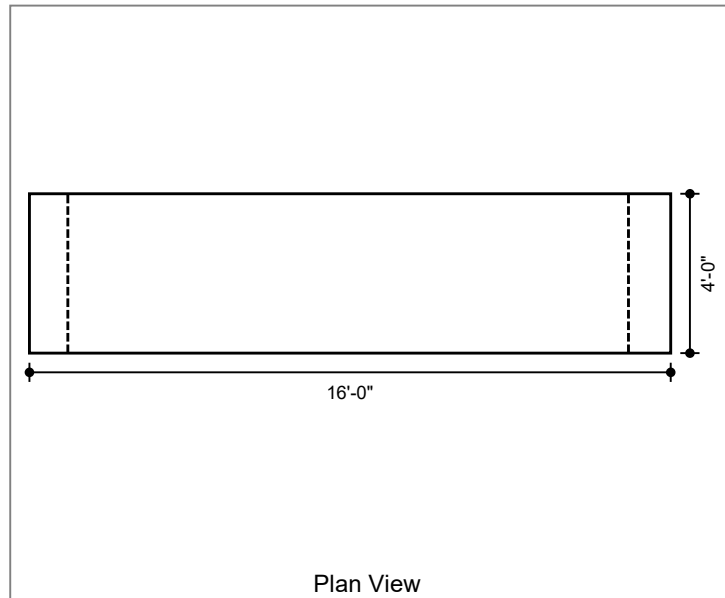
Inventory Rating: 5.85
Operating Rating: 7.59

Loads

Live Load	
Vehicle Names:	HL-93
Traffic Direction:	Parallel
Eq. Height of Soil:	2.00 ft (Calc'd)
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



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p. 2 of 2

Concrete Summary

Volume of Concrete: 2.148 cy/ft Total Volume of Concrete: 8.593 cy

Reinforcing Steel Bar Schedule (lb)

Location	Mark	Sheets Included	As Provided
Top Slab(Int)	A100 (AS2)	Top	1.200
Bot Slab(Int)	A200 (AS3)	Bot	1.290
Top Slab(Ext)	A300 (AS7)	Top	0.300
Bot Slab(Ext)	A400 (AS8)	Bot	0.300
Corner(Top)	A1 (AS1)	Top	0.780
Corner(Bot)	A2 (AS1)	Bot	0.780
Wall(Int)	B1 (AS4)	L&R	0.300
Wall(Ext)	B2 (AS1)	L&R	0.780
Longit. Top (Int)	C100 (AS5)	Top	0.150
Longit. Bot (Int)	C200	Bot	0.150
Longit. Top (Ext)	C1 (AS6)	Top	0.150
Longit. Bot (Ext)	C1 (AS6)	Bot	0.150
Longit. Wall (Ext)	C1 (AS6)	L&R	0.150
Longit. Wall (Int)	C1 (AS6)	L&R	0.150