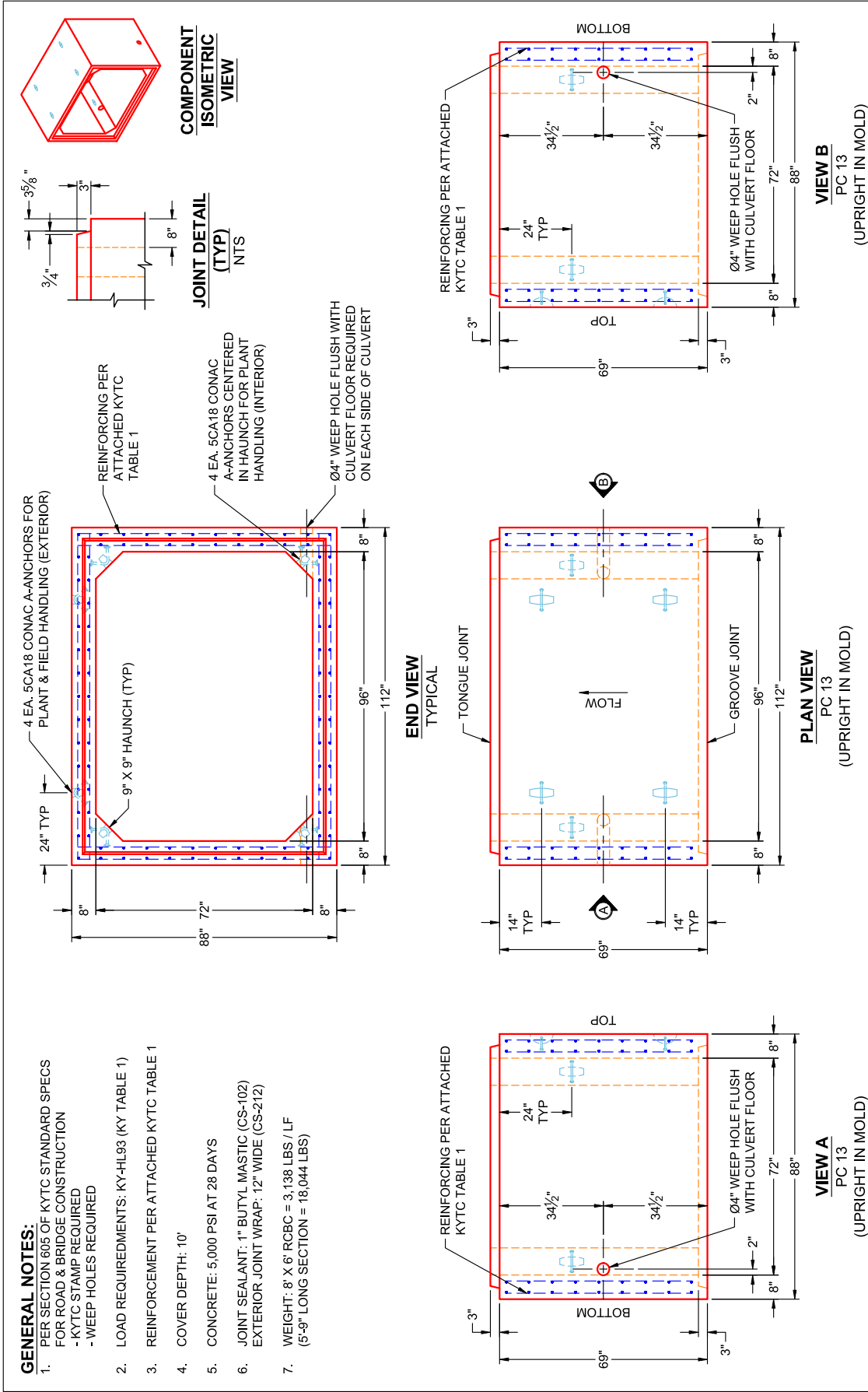






- * <L1> is Splice Length
- * (AS7) is Top Slab Outside
- * (AS8) is Bottom Slab Outside
- * See Box Culvert Design Summary Sheet for transverse and distribution reinforcement, as required.
- * For sidewall thicknesses of 6 in. and above, extend AS2 and AS3 a min. of 4 in. beyond the inside face of the sidewall. For thicknesses less than 6 in., extend AS2 and AS3 at least to within 1-1/2 in. of the outside face of the sidewall.

Notes:

- 1) Other reinforcement schemes that provide the required reinforcement areas at all locations identified in the program output are acceptable.
- 2) Longitudinal reinforcement is not shown for clarity, see AASHTO M259 for longitudinal reinforcement and for additional requirements.

KY Table 1

Precast Culvert KYHL-93 Design Table

Design Earth Cover, ft		As1	As2	As3	As4	As7	As8	As5	As6
8x6x8	0<2	0.267	0.536	0.382	0.192	0.192	0.192	0.192	0.192
	2<3	0.266	0.458	0.382	0.192	0.192	0.192	0.192	0.192
	3-5	0.237	0.392	0.359	0.192	0.192	0.192		
	10	0.244	0.365	0.38	0.192	0.192	0.192		
	15	0.321	0.489	0.505	0.192	0.192	0.192		
	20	0.408	0.627	0.644	0.192	0.192	0.192		
	25	0.502	0.774	0.791	0.192	0.192	0.192		
	30	0.602	0.928	0.946	0.192	0.192	0.192		
	35	0.708	1.089	1.108	0.192	0.192	0.192		

Design Earth Cover, ft		As1	As2	As3	As4	As7	As8	As5	As6
8x7x8	0<2	0.245	0.557	0.403	0.192	0.192	0.192	0.197	0.192
	2<3	0.243	0.479	0.403	0.192	0.192	0.192	0.192	0.192
	3-5	0.215	0.409	0.378	0.192	0.192	0.192		
	10	0.225	0.378	0.396	0.192	0.192	0.192		
	15	0.295	0.507	0.526	0.192	0.192	0.192		
	20	0.374	0.651	0.671	0.192	0.192	0.192		
	25	0.459	0.804	0.825	0.192	0.192	0.192		
	30	0.549	0.965	0.987	0.192	0.192	0.192		
	35	0.644	1.134	1.157	0.192	0.192	0.192		

Design Earth Cover, ft		As1	As2	As3	As4	As7	As8	As5	As6
8x8x8	0<2	0.226	0.575	0.42	0.192	0.192	0.192	0.203	0.192
	2<3	0.224	0.494	0.42	0.192	0.192	0.192	0.192	0.192
	3-5	0.201	0.423	0.393	0.192	0.192	0.192		
	10	0.211	0.386	0.407	0.192	0.192	0.192		
	15	0.276	0.518	0.54	0.192	0.192	0.192		
	20	0.349	0.665	0.688	0.192	0.192	0.192		
	25	0.427	0.822	0.846	0.192	0.192	0.192		
	30	0.51	0.988	1.013	0.192	0.192	0.192		

Default Configuration Image

?

Design Code: 2450110-LL10D

Strength Reduction Factors: Flexure: 1, Shear: 0.9

Axial Thrust Load Factor: User Specified

Crack Width (CHBDC Only): 0.25 mm

Reinforcement Diameter: 1

	Diameter	* Sidewall Thickness	* Top Slab Thickness	* Bottom Slab Thickness	* Sidewall Thickness	* Top Slab Thickness	* Bottom Slab Thickness	Maximum Spacing
Sidewall Outside	(AS1)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	4 in.
Top Inside	(AS2)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	4 in.
Bottom Inside	(AS3)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	4 in.
Sidewall Outside	(AS4)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	4 in.
Top Outside	(AS7)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	4 in.
Bottom Outside	(AS8)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	4 in.

Soil Load Data: Soil Unit Weight: 120 pcf, Minimum Lateral Pressure Coefficient: 0.25, Maximum Lateral Pressure Coefficient: 0.5, Vertical Arching Factor: Embankment/Compacted

Return to Main Menu

Jeremiah Littlelor Documents 3052483

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SPAN < / ft: {Span/12} + {0} in.

SPAN > / ft: {Span/12} + {0} in.

MINIMUM DEPTH OF FILL < 2 ft: {Span/12} + {0} in.

MINIMUM DEPTH OF FILL >= 2 ft: {Span/12} + {0} in.

Reinforcement Type: Welded Wire

Restore Default Settings

Return to Main Menu

Material Properties

Main Reinforcement Yield Strength: 65000 psi

Design Concrete Strength: 5000 psi

Concrete Unit Weight: 150 pcf

Stirrup Reinforcement Developable Yield Stress: 60000 psi

Total Service Stress Limit: 100 %

Boxcar - Default (page 3) - Intermodal

?

Live Load Data: HS-Series: 25 tons, Interstate/Tandem: 80 kips, Cooper Series: 80 kips, CHBDC Truck: 140 kips, Tandem/Tandem: 140 kips, Other: 10 kips, None

Magnitude (N): 25 tons, 80 kips, 140 kips, 140 kips, 10 kips

Direction of Traffic: Parallel, To Span

Impact Factor Options: Design Code: 1

Impact Factor (User Def): 1

Lane Load: 0 lb/ft

Live Load Distribution Factor (LLDF): Design Code: 1.15

Fluid Loads: Depth of Fluid: 1 * Hise, Fluid Unit Weight: 62.5 pcf

Surcharge Loads: Uniform Vertical: 0 lb/ft, Lateral - Top of Culvert (LLTC): 90 lb/ft, Lateral - Bottom of Culvert (LLBC): 90 lb/ft

Return to Main Menu

Interstate/Tandem Truck Wheel Layout

Diagram showing truck wheel layout with dimensions: 14 ft, 5 ft, 0.67 ft, 0.5 ft, 0.5 ft, 4 ft, A=Axle Load