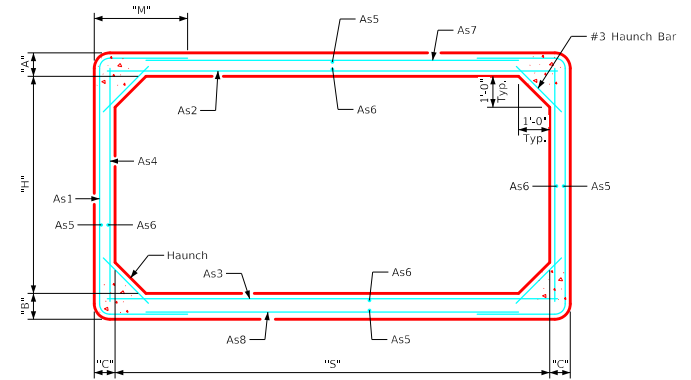
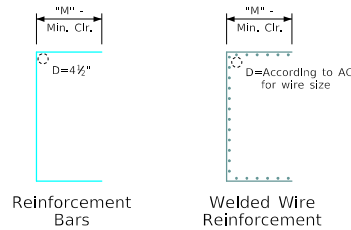


Variable Dimensions and Quantities for 14' Span Barrel Sections

Dimensions		Reinforcement Requirements												Weight (LB/FT)						
		As1		As2		As3		As4		As7/As8										
Size	Class	f _c (KSI)	Fill (FT)	S (FT)	H (FT)	A (IN)	B (IN)	C (IN)	Area (IN ² /FT)	Length	M	Area (IN ² /FT)	Length	Area (IN ² /FT)	Length	Area (IN ² /FT)	Length	Area (IN ² /FT)	Length	
14'x4'	1	5.0	2-8	14	4	10	10	9	1.14	12'-0"	3'-6"	0.72	14'-6"	0.72	14'-6"	0.23	4'-6"	0.24	13'-6"	5075
	2	5.0	9-12	14	4	10	10	10	1.37	12'-10"	3'-11"	0.98	14'-6"	0.93	14'-6"	0.24	4'-6"	0.24	13'-8"	5220
	3	5.0	13-16	14	4	11	11	10	1.55	12'-2"	3'-6"	0.99	14'-6"	1.01	14'-6"	0.24	4'-6"	0.27	13'-8"	5610
14'x5'	1	5.0	2-8	14	5	10	10	8	1.20	11'-10"	2'-11"	0.92	14'-6"	0.93	14'-6"	0.20	5'-6"	0.24	13'-4"	5135
	2	5.0	9-13	14	5	10	10	9	1.55	12'-10"	3'-5"	1.19	14'-6"	1.22	14'-6"	0.23	5'-6"	0.24	13'-6"	5300
	3	5.0	14-16	14	5	11	11	10	1.40	12'-10"	3'-4"	1.10	14'-6"	1.13	14'-6"	0.24	5'-6"	0.27	13'-8"	5860
14'x6'	1	5.0	2-8	14	6	10	10	8	1.11	12'-8"	2'-10"	1.02	14'-6"	1.05	14'-6"	0.20	6'-6"	0.24	13'-4"	5335
	2	5.0	9-11	14	6	10	10	9	1.26	13'-6"	3'-3"	1.14	14'-6"	1.17	14'-6"	0.23	6'-6"	0.24	13'-6"	5525
	3	5.0	12-16	14	6	11	11	9	1.38	13'-0"	3'-11"	1.37	14'-6"	1.40	14'-6"	0.23	6'-6"	0.27	13'-6"	5915
14'x7'	1	5.0	2-9	14	7	10	10	8	1.14	13'-6"	2'-9"	1.22	14'-6"	1.26	14'-6"	0.20	7'-6"	0.24	13'-4"	5535
	2	5.0	10-13	14	7	10	10	9	1.35	14'-6"	3'-3"	1.43	14'-6"	1.49	14'-6"	0.23	7'-6"	0.24	13'-6"	5750
	3	5.0	14-16	14	7	11	11	9	1.26	13'-10"	2'-10"	1.49	14'-6"	1.52	14'-6"	0.23	7'-6"	0.27	13'-6"	6140
14'x8'	1	5.0	2-9	14	8	10	10	8	1.08	14'-6"	2'-9"	1.32	14'-6"	1.38	14'-6"	0.20	8'-6"	0.24	13'-4"	5735
	2	5.0	10-13	14	8	10	10	8	1.35	14'-8"	2'-10"	1.73	14'-6"	1.80	14'-6"	0.20	8'-6"	0.24	13'-4"	5735
	3	5.0	14-16	14	8	11	11	9	1.17	14'-10"	2'-10"	1.58	14'-6"	1.64	14'-6"	0.23	8'-6"	0.27	13'-6"	6365
14'x9'	1	5.0	2-9	14	9	10	10	8	1.05	15'-6"	2'-9"	1.41	14'-6"	1.49	14'-6"	0.20	9'-6"	0.24	13'-4"	5935
	2	5.0	10-12	14	9	10	10	8	1.22	15'-8"	2'-10"	1.74	14'-6"	1.83	14'-6"	0.20	9'-6"	0.24	13'-4"	5935
	3	5.0	13-16	14	9	11	11	9	1.10	15'-10"	2'-10"	1.70	14'-6"	1.76	14'-6"	0.23	9'-6"	0.27	13'-6"	6590
14'x10'	1	5.0	2-9	14	10	10	10	8	1.02	16'-8"	2'-10"	1.52	14'-6"	1.61	14'-6"	0.20	10'-6"	0.24	13'-4"	6135
	2	5.0	10-13	14	10	10	10	9	1.19	17'-6"	3'-3"	1.76	14'-6"	1.86	14'-6"	0.23	10'-6"	0.24	13'-6"	6425
	3	5.0	14-16	14	10	11	11	9	1.04	17'-0"	2'-11"	1.79	14'-6"	1.88	14'-6"	0.23	10'-6"	0.27	13'-6"	6815
14'x11'	1	5.0	2-9	14	11	10	10	8	1.02	18'-2"	3'-1"	1.62	14'-6"	1.74	14'-6"	0.20	11'-6"	0.24	13'-4"	6335
	2	5.0	10-12	14	11	10	10	9	1.13	18'-8"	3'-4"	1.77	14'-6"	1.89	14'-6"	0.23	11'-6"	0.24	13'-6"	6650
	3	5.0	13-16	14	11	11	12	9	0.95	18'-1"	2'-11"	1.80	14'-6"	1.89	14'-6"	0.23	11'-6"	0.29	13'-6"	7235
14'x12'	1	5.0	2-9	14	12	10	10	8	1.05	20'-0"	3'-6"	1.73	14'-6"	1.88	14'-6"	0.27	12'-6"	0.24	13'-4"	6535
	2	5.0	10-12	14	12	10	10	9	1.13	20'-2"	3'-7"	1.88	14'-6"	2.01	14'-6"	0.23	12'-6"	0.24	13'-6"	6875
	3	5.0	13-16	14	12	11	12	9	0.95	19'-9"	3'-3"	1.89	14'-6"	1.98	14'-6"	0.23	12'-6"	0.29	13'-6"	7460
14'x13'	1	5.0	2-9	14	13	10	10	8	1.08	21'-10"	3'-11"	1.86	14'-6"	2.01	14'-6"	0.38	13'-6"	0.24	13'-4"	6735
	2	5.0	10-13	14	13	10	11	10	1.02	22'-1"	4'-0"	1.70	14'-6"	1.85	14'-6"	0.32	13'-6"	0.24	13'-8"	7665
	3	5.0	14-16	14	13	11	12	10	0.89	21'-5"	3'-7"	1.80	14'-6"	1.94	14'-6"	0.29	13'-6"	0.29	13'-8"	8055
14'x14'	1	5.0	2-7	14	14	10	10	8	1.10	24'-8"	4'-10"	1.77	14'-6"	1.94	14'-6"	0.50	14'-6"	0.24	13'-4"	6935
	2	5.0	8-12	14	14	11	12	10	0.96	23'-1"	3'-11"	1.67	14'-6"	1.82	14'-6"	0.38	14'-6"	0.29	13'-8"	8305
	3	5.0	13-16	14	14	11	12	12	0.90	23'-3"	4'-0"	1.61	14'-6"	1.77	14'-6"	0.32	14'-6"	0.29	14'-0"	9100



Typical Barrel Section



Bent Bar Details

All dimensions are out to out.
D = pin diameter (min.).
Pin diameter may be increased if needed to maintain clear cover.

Notes:

1. Longitudinal reinforcement denoted as As5 and As6 must be placed in slab, floor, and walls and must be 0.06 in²/ft minimum.
2. All reinforcement lengths and areas are minimum requirements.
3. If reinforcing bars are substituted for welded wire reinforcing, dimension "M" and/or length of the As7/As8 reinforcement shall be adjusted to ensure adequate lap length is provided.
4. Weight of sections assumes a density of 150 PCF and squared corners.
5. See PRCB G1-20 and G2-20 for additional information and notes.

10-2021 LATEST REVISION DATE	APPROVED BY BRIDGE ENGINEER	Standard Design Single Precast Reinforced Concrete Box Culverts December, 2020
Culvert Barrel Details		PRCB 14-20 14'-0" Span Barrel Sections