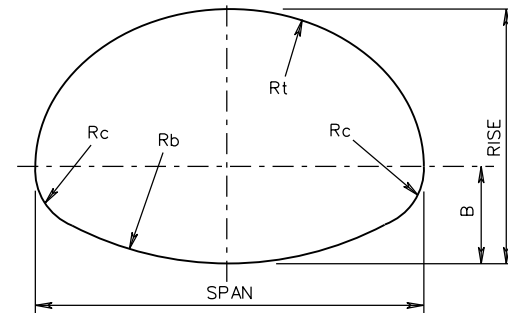


**MINIMUM THICKNESS-STRUCTURAL PLATE STEEL PIPE ARCHES
6" x 2" CORRUGATIONS**

PIPE ARCH DIMENSION					MINIMUM SHEET THICKNESS REQUIRED GAUGE	MAXIMUM ALLOWABLE COVER HEIGHT IN FEET	
NOMINAL SIZE		AREA SQ. FT.	B INCHES (SEE NOTE 8)	Rc INCHES		MAXIMUM CORNER PRESSURE	
SPAN	RISE					4000 LBS./SQ.FT. (SEE NOTE 4)	6000 LBS./SQ.FT. (SEE NOTE 6)
6'-1"	4'-7"	22	21.0	18	12	16	24
6'-4"	4'-9"	24	20.5	18	12	15	23
6'-9"	4'-11"	26	22.0	18	12	14	22
7'-0"	5'-1"	28	21.4	18	12	14	21
7'-3"	5'-3"	31	20.8	18	12	13	20
7'-8"	5'-5"	33	22.4	18	12	12	19
7'-11"	5'-7"	35	21.7	18	12	12	18
8'-2"	5'-9"	38	20.9	18	12	12	18
8'-7"	5'-11"	40	22.7	18	12	11	17
8'-10"	6'-1"	43	21.8	18	12	11	16
9'-4"	6'-3"	46	23.8	18	12	10	16
9'-6"	6'-5"	49	22.9	18	12	10	15
9'-9"	6'-7"	52	21.9	18	12	10	15
10'-3"	6'-9"	55	23.9	18	12	9	14
10'-8"	6'-11"	58	26.1	18	12	9	14
10'-11"	7'-1"	61	25.1	18	12	9	13
11'-5"	7'-3"	64	27.4	18	12	8	13
11-7"	7'-5"	67	26.3	18	12	8	12
11'-10"	7'-7"	71	25.2	18	12	8	12
12'-4"	7'-9"	74	27.5	18	12	8	12
12'-6"	7'-11"	78	26.4	18	12	8	12
12'-8"	8'-1"	81	25.2	18	12	7	11
12'-10"	8'-4"	85	24.0	18	12	7	11
13'-5"	8'-5"	89	26.3	18	12	7	11
13-11"	8'-7"	93	28.9	18	12	7	10
14'-1"	8'-9"	97	27.6	18	12	7	10
14'-3"	8'-11"	101	26.3	18	12	6	10
14'-10"	9'-1"	105	28.9	18	12	6	10
15'-4"	9'-3"	109	31.6	18	12	6	9
15'-6"	9'-5"	113	30.2	18	12	6	9
15'-8"	9'-7"	118	28.8	18	12	6	9
15'-10"	9'-10"	122	27.4	18	12	6	9
16'-5"	9'-11"	126	30.1	18	12	6	9
16'-7"	10'-1"	131	28.7	18	12	6	9

NOTES:

- COVER HEIGHTS INDICATED IN TABLES ARE FOR FINISHED CONSTRUCTION WHICH MATCH FORMER VDOT ALLOWABLE STRESS DESIGN TABLES. COVER HEIGHTS WERE NOT RE-CALCULATED USING LRFD.
- TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHT OF COVER PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS INSTALLATION SHALL BE 1/2 SPAN. THE COVER SHALL EXTEND THE FULL LENGTH OF THE PIPE ARCH. THE APPROACH FILL RAMP IS TO EXTEND A MINIMUM OF 10(HHEIGHT + 1/2 SPAN) ON EACH SIDE OF THE STRUCTURE, OR TO THE INTERSECTION WITH A CUT.
- STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES SHALL BE 2.0' OR 1/2 SPAN, WHICHEVER IS GREATER. IN CASES IN WHICH THESE COVER HEIGHTS CANNOT BE ACHIEVED, AN ABSOLUTE MINIMUM FINISHED COVER HEIGHT OF 1.0' OR 1/8 SPAN, WHICHEVER IS GREATER, WILL BE ALLOWED ONLY IF ALL POSSIBLE MEANS TO OBTAIN THE STANDARD VALUE HAVE BEEN EXHAUSTED.
- SEE STANDARD PB-1 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS.
- THE MAXIMUM HEIGHT OF COVER SHOWN IN THE TABLES IS BASED ON A SOIL MODULUS OF 700 PSI. ALL OTHER DESIGN CRITERIA ARE IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS AND VDOT MODIFICATIONS FOR SOIL CORRUGATED METAL STRUCTURE INTERACTION SYSTEMS.
- WHEN DESIGN HEIGHT OF COVER REQUIRES THE USE OF THIS CATEGORY OF PIPE, BEDDING AND BACKFILL MUST BE APPROVED BY THE ENGINEER.
- STRUCTURAL PLATE PIPE-ARCH DIMENSIONS ARE TO INSIDE OF CREST AND ARE SUBJECT TO MANUFACTURING TOLERANCES.
- SPAN OF PIPE ARCHES IS MEASURED "B" INCHES ABOVE THE INVERT. SEE DIAGRAM BELOW FOR ILLUSTRATION OF "B" DIMENSION.



VDOT
ROAD AND BRIDGE STANDARDS

SHEET 9 OF 18
107.13

REVISION DATE
07/16

A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE.

**STRUCTURAL PLATE STEEL PIPE ARCH
HEIGHT OF COVER TABLE FOR HL-93 LIVE LOAD**

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE
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