3" x 1" CORRUGATED STEEL PIPE-ARCH (RIVETED OR LOCK SEAM)
HEIGHT OF COVER LIMITS (ft.)

Rc (in.)	SPAN (in.)	RISE (in.)	AREA (sft)	THICKNESS (in.)									
				0.064		0.079		0.109		0.138		0.168	
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
$8/18\frac{3}{4}$	60	46	15.6			1.1	20.8	1.1	20.8	1.1	20.8	1.1	20.8
$9/20\frac{3}{4}$	66	51	19.3			1.1	20.9	1.1	20.9	1.1	20.9	1.1	20.9
$12/22\frac{7}{8}$	73	55	23.2			1.1	20.8	1.1	20.8	1.1	20.8	1.1	20.8
$14/20\frac{7}{8}$	81	59	27.4			1.2	17.1	1.2	17.1	1.2	17.1	1.2	17.1
$14/22\frac{5}{8}$	87	63	32.1			1.2	17.3	1.2	17.3	1.2	17.3	1.2	17.3
$16/24\frac{3}{8}$	95	67	37.0			1.2	17.1	1.2	17.1	1.2	17.1	1.2	17.1
$16/26\frac{1}{8}$	103	71	42.4					1.2	16.9	1.2	16.9	1.2	16.9
$18/27\frac{3}{4}$	112	75	48.0					1.3	16.5	1.3	16.5	1.3	16.5
$18/29\frac{1}{2}$	117	79	59.2					1.2	16.8	1.2	16.8	1.2	16.8
$18/31\frac{1}{4}$	128	83	60.5							1.3	16.2	1.3	16.2
18/33	137	87	67.4							1.3	16.0	1.3	16.0
$18/34\frac{3}{4}$	142	91	74.5									1.3	16.3

NOTE:

1. The tabulated cover depths shall be measured from the bottom of the asphalt or concrete pavement to the top of the pipe.

2. 2. Dual entries in the ,Corner Radius, column, such as $8/18\frac{3}{4}$, represent the following:
   8 – minimum corner radius allowed by AASHTO M 36.
   $18\frac{3}{4}$ – corner radius typically available.

3. The tabulated cover heights reflect pipe-arches with typically available corner radii. If a pipe-arch with corner radii other than what is typically available is to be used, a specific design shall be performed to verify structural adequacy.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

JANUARY 1998

STANDARD DRAWING NO. **E 715-PHCL-14**

ANTHONY L. UREMOVICH REGISTERED No. 18095 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGN STANDARDS ENGINEER

DETAILS PLACED IN THIS FORMAT 11-15-99

/s/ Anthony L. Uremovich 11-15-99
DESIGN STANDARDS ENGINEER DATE

/s/ Firooz Zandi 11-15-99
CHIEF HIGHWAY ENGINEER DATE

ORIGINALLY APPROVED 1-02-98