TABLE NO. 1 R ROUND PIPE - SPIRAL RIB STEEL - SPIRAL RIB ALUMINUM

MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL (FEET) ABOVE TOP OF PIPE 1-10	10-15	15-20	20-25	25-30	30-35	35-40	40-50	50-60	60-70	70-80	80-90	PIPE DIAMETER (INCHES)
12															12
15															15
18	STEEL R	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079		18
	ALUM R	12	.060	.060	.060	.060	.060	.060	.075	.075					
24	STEEL R	12	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109		24
	ALUM R	12	.060	.060	.060	.060	.075	.075	.105	.105	.105				
30	STEEL R	12	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	.109		30
	ALUM R	15	.060	.060	.060	.075	.075	.105	.105	.105					
36	STEEL R	12	.064	.064	.064	.064	.064	.079	.079	.109	.109	.109			36
	ALUM R	18	.060	.060	.075	.075	.105	.105	.105	.135	.135				
42	STEEL R	12	.064	.064	.064	.064	.079	.079	.109	.109	.109				42
	ALUM R	21	.075	.075	.075	.105	.105	.105	.135	.135					
48	STEEL R	12	.064	.064	.064	.079	.079	.109	.109	.109					48
	ALUM R	24	.105	.105	.105	.105	.105	.135	.135						
54	STEEL R	15	.064	.064	.064	.079	.079	.109	.109						54
	ALUM R	24	.105	.105	.105	.105	.135	.135	.135						
60	STEEL R	15	.079	.079	.079	.079	.109	.109	.109						60
	ALUM R	24	.105	.105	.105	.105	.135	.135							
66	STEEL R	18	.079	.079	.079	.109	.109	.109	.109						66
	ALUM R	24	.135	.135	.135	.135	.135								
72	STEEL R	18	.109	.109	.109	.109	.109	.109							72
	ALUM R	27	.135	.135	.135	.135	.135								
78	STEEL R	21	.109	.109	.109	.109	.109								78
84	STEEL R	21	.109	.109	.109	.109	.109								84
90															90
96															96
102															102
108															108
114															114
120															120

R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7-1/2"

TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, f_y=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (f_y=20,000 PSI), ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:

A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 IN. BECOMES 13.8 IN.)

B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FT. BECOMES 29.7-34.0 FT.)

MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

TABLE NO. 2 (PIPE-ARCH)

TABLE SHOWING MINIMUM THICKNESS IN INCHES OF CORRUGATED STEEL AND CORRUGATED ALUMINUM PIPE-ARCH AND MAXIMUM HEIGHTS OF FILL IN FEET ABOVE THE TOP OF THE PIPE-ARCH.

DIAMETER OF PIPE OF EQUAL PERIPHERY INCH	NOM.-MIN. SPAN INCH	NOM.-MIN. RISE INCH	MIN. THICKNESS (INCHES) COR. STEEL ①	COR. STEEL ②	COR. ALUMINUM	MIN. COVER (INCHES)	MAX. HT. FILL (FEET)
15	17	13	.064			18	13
					.060	18	15
18	21	15	.064			18	12
					.060	18	14
21	24	18	.064			18	10
					.060	18	13
24	28	20	.064			18	9
					.075	18	11
30	35	24	.064			18	9
					.075	18	9
36	42	29	.064			18	7
					.105	18	7
	40	31		.079		18	12
42	49	33	.079			18	7
					.105	18	7
	46	36	.079	.079		18	12
48	57	38	.109			18	7
					.135	18	7
	53	41		.079		18	12
54	64	43	.109			18	7
					.135	18	7
	60	46		.079		18	12
60	71	47	.138			18	7
					.164	18	7
	66	51		.079		18	12
66	77	52	.168			18	7
	73	55		.079		18	15
77	83	57	.168			18	8
	81	59		.079		18	15
78	87	63		.079		18	14
84	95	67		.109		18	12
90	103	71		.109		24	11

NOTE FOR TABLE NO. 2.
ALTERNATE SPAN-RISE COMBINATIONS FOR PIPE-ARCHES, HAVING EQUAL PERIPHERY TO THAT SHOWN, MAY BE SUBSTITUED IF LISTED IN AASHTO SPECIFICATION.

BY	REVISION	DATE

DESIGNED ____ TRACED ____ CHECKED ____ REVISED ____

NO SCALE

(SUBMITTED) STATE ROAD & TRANSPORT DESIGN ENGINEER

(APPROVED) CHIEF ENGINEER

SEPT., 2001

STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 3 OF 3
(FILL HEIGHTS FOR SPIRAL RIB METAL PIPE & FOR PIPE ARCH)

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

NUMBER 1030D

41-007

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	NHS00-0002-00(923)	493	690