0012722-41.dgn 5/9/2016 8:46:06 AM

## 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 |

NOTES:

1. PIPE IS DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014
2. R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7-1/2"
3. TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, $f_y$=24,000 PSI.
4. 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.)
5. MINIMUM COVER VALUES APPLY TO HL-93 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

| BY | REVISION | DATE |
|---|---|---|
| BJQ | REV. TO MEET LRFD | 9-14-15 |

DESIGNED ____ TRACED ____ CHECKED ____ REVISED ____

(SUBMITTED) STATE DESIGN POLICY ENGINEER
(APPROVED) CHIEF ENGINEER

NO SCALE

SEPT., 2001

NUMBER 1030D

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

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

DRAWING NO. 41-0007

### 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.

| STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| GA. | 0012722 | | |