

**POLYETHYLENE (PE) PLASTIC ROUND PIPE CULVERT**

FILL HEIGHT TABLE AND MINIMUM CELL CLASSIFICATION NUMBER PER ASTM D 3350

SMOOTH WALL, CORRUGATED AND RIBBED PIPE CULVERT

| SMOOTH WALL (SOLID WALL) |               |                                    |      |      |      |      |      | CORRUGATED            |               |                         |                         | RIBBED                |               |                         |                         |                               |  |  |  |
|--------------------------|---------------|------------------------------------|------|------|------|------|------|-----------------------|---------------|-------------------------|-------------------------|-----------------------|---------------|-------------------------|-------------------------|-------------------------------|--|--|--|
| PIPE SIZE<br>DIAMETER    | MINIMUM COVER | CELL CLASSIFICATION NUMBER 335434C |      |      |      |      |      | PIPE SIZE<br>DIAMETER | MINIMUM COVER | CELL CLASS. NO. 315412C | CELL CLASS. NO. 324420C | PIPE SIZE<br>DIAMETER | MINIMUM COVER | CELL CLASS. NO. 334433C | CELL CLASS. NO. 335434C |                               |  |  |  |
|                          |               | MINIMUM WALL THICKNESS             |      |      |      |      |      |                       |               |                         |                         |                       |               |                         |                         | MAXIMUM FILL HEIGHT IN METERS |  |  |  |
|                          |               | 15.4                               | 21.7 | 23.4 | 29.3 | 35.1 | 32.8 |                       |               |                         |                         |                       |               |                         |                         | 37.5                          |  |  |  |
| 300                      | 300           | 17.5                               |      |      |      |      |      | 300                   | 300           | 3.5                     | 3.0                     | 450                   | 300           | 5.5                     | 7.5                     |                               |  |  |  |
| 450                      | 300           |                                    | 16   |      |      |      |      | 375                   | 300           | 3.5                     | 3.0                     | 600                   | 300           | 6.5                     | 8.5                     |                               |  |  |  |
| 600                      | 300           |                                    |      | 11.5 |      |      |      | 450                   | 300           | 3.5                     | 3.0                     | 750                   | 300           | 6.5                     | 8.5                     |                               |  |  |  |
| 750                      | 300           |                                    |      |      | 11.5 |      |      | 600                   | 300           | 3.5                     | 3.0                     | 900                   | 300           | 7.5                     | 9.5                     |                               |  |  |  |
| 900                      | 300           |                                    |      |      |      | 11.5 |      | 750                   | 300           | 3.5                     | 3.0                     | 1050                  | 300           | 6.5                     | 8.0                     |                               |  |  |  |
| 1050                     | 300           |                                    |      |      |      |      | 8.0  | 900                   | 300           | 3.5                     | 3.0                     | 1200                  | 300           | 6.5                     | 8.0                     |                               |  |  |  |
| 1200                     | 300           |                                    |      |      |      |      | 8.0  |                       |               |                         |                         |                       |               |                         |                         |                               |  |  |  |

**NOTE:**

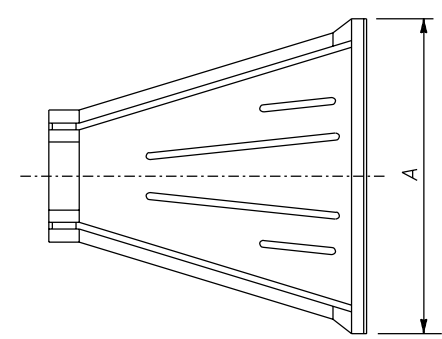
- Dimensions not labeled are in millimeters.
- When directed, camber pipe culverts upward from a chord through the inlet and outlet inverts an ordinate amount equal to 1% of the pipe length. Develop camber on a parabolic curve. If the midpoint elevation on the parabolic curve as designed exceeds the elevation of the inlet invert, reduce the amount of camber or increase the pipe culvert gradient.
- Measure minimum cover from the top of the pipe culvert to the subgrade for flexible pavements, and to the top of the pavement for rigid pavements. Measure maximum fill height from the top of the pipe to the top of the pavement for both flexible and rigid pavement.

**POLYVINYL CHLORIDE (PVC) PLASTIC ROUND PIPE CULVERT**

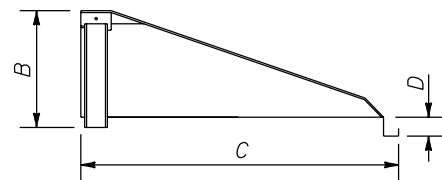
FILL HEIGHT TABLE AND MINIMUM CELL CLASSIFICATION NUMBER PER ASTM D 1784

SMOOTH WALL AND RIBBED PIPE CULVERT

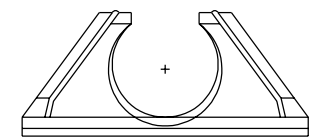
| SMOOTH WALL (SOLID WALL) |               |                        |      |                        |      | RIBBED                |               |                        |                        |                               |  |  |  |
|--------------------------|---------------|------------------------|------|------------------------|------|-----------------------|---------------|------------------------|------------------------|-------------------------------|--|--|--|
| PIPE SIZE<br>DIAMETER    | MINIMUM COVER | CELL CLASS. NO. 12454C |      | CELL CLASS. NO. 12364C |      | PIPE SIZE<br>DIAMETER | MINIMUM COVER | CELL CLASS. NO. 12454C | CELL CLASS. NO. 12364C |                               |  |  |  |
|                          |               | MINIMUM WALL THICKNESS |      |                        |      |                       |               |                        |                        | MAXIMUM FILL HEIGHT IN METERS |  |  |  |
|                          |               | 9.1                    | 11.1 | 9.1                    | 11.1 |                       |               |                        |                        |                               |  |  |  |
| 300                      | 300           | 20                     |      | 21                     |      | 300                   | 300           | 11.0                   | 8.0                    |                               |  |  |  |
| 375                      | 300           |                        | 19   |                        | 20   | 375                   | 300           | 9.5                    | 6.5                    |                               |  |  |  |
|                          |               |                        |      |                        |      | 450                   | 300           | 10.0                   | 7.0                    |                               |  |  |  |
|                          |               |                        |      |                        |      | 600                   | 300           | 9.0                    | 6.5                    |                               |  |  |  |
|                          |               |                        |      |                        |      | 750                   | 300           | 8.5                    | 6.0                    |                               |  |  |  |
|                          |               |                        |      |                        |      | 900                   | 300           | 8.5                    | 6.0                    |                               |  |  |  |
|                          |               |                        |      |                        |      | 1050                  | 300           | 8.0                    | 5.5                    |                               |  |  |  |
|                          |               |                        |      |                        |      | 1200                  | 300           | 7.5                    | 5.5                    |                               |  |  |  |



TOP



SIDE



FRONT

**PLASTIC PIPE END SECTION**

| PIPE SIZE<br>DIAMETER | DIMENSIONS |      |      |     |
|-----------------------|------------|------|------|-----|
|                       | A          | B    | C    | D   |
| 300                   | 1065       | 370  | 840  | 150 |
| 375                   | 1170       | 620  | 1155 | 150 |
| 450                   | 1370       | 735  | 1395 | 150 |
| 600                   | 1625       | 940  | 1650 | 150 |
| 750                   | 2235       | 915  | 1615 | 150 |
| 900                   | 2235       | 1090 | 1690 | 150 |

NO SCALE

|  |          |
|--|----------|
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>FEDERAL LANDS HIGHWAY |          |
| METRIC STANDARD  |          |
| PLASTIC PIPE CULVERT   |          |
| STANDARD APPROVED FOR USE 3/1996   | STANDARD |
| REVISED:   | M602-5   |

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