DESMOTO COUNTY
DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION

ENGINEERING STANDARD DETAILS

REVISED: MARCH 24, 2016
STANDARD DETAIL INDEX

G-1 GENERAL NOTES
D-1 UTILITY LOCATIONS IN RIGHT-OF-WAY
D-2 PAVEMENT RESTORATION FOR OPEN CUT
D-3A 60’ PUBLIC RIGHT-OF-WAY (OPEN DRAINAGE)
D-3B 60’ PUBLIC RIGHT-OF-WAY (CLOSED DRAINAGE)
D-3C 80’ PUBLIC RIGHT-OF-WAY (OPEN DRAINAGE)
D-3D 80’ PUBLIC RIGHT-OF-WAY (CLOSED DRAINAGE)
D-3E 100’ PUBLIC RIGHT-OF-WAY (OPEN DRAINAGE)
D-3F 100’ PUBLIC RIGHT-OF-WAY (CLOSED DRAINAGE)
D-3G 100’ PUBLIC RIGHT-OF-WAY - 2 LANE DIVIDED (OPEN DRAINAGE)
D-3H 100’ PUBLIC RIGHT-OF-WAY - 2 LANE DIVIDED (CLOSED DRAINAGE)
D-4 MAIL BOX LOCATION
D-5 RURAL SWALE DRIVEWAY
D-6 TYPICAL DRIVEWAY STORM PIPE CROSS SECTION
D-7 RESIDENTIAL DRIVEWAY MITERED END SECTION
D-8 CONCRETE STORM PIPE FILTER WRAP
D-9 CONCRETE SIDEWALK
D-10A TYPE ‘D’ CONCRETE CURB
D-10B TYPE ‘F’ CONCRETE CURB
D-10C MIAMI CONCRETE CURB
D-11A MITERED END SECTION ELLIPTICAL CONCRETE PIPE
D-11B MITERED END SECTION ROUND CONCRETE PIPE
D-12 STOP BAR, STOP SIGN AND INTERSECTION STRIPING
D-13 STOP SIGN INSTALLATION
D-14 CUL-DE-SAC DETAIL
D-15 MAXIMUM CUL-DE-SAC LENGTH
D-16 SUBDIVISION EASEMENT UTILITY LOCATIONS
D-17A TYPICAL PAVEMENT SECTION NO. 1
D-17B TYPICAL PAVEMENT SECTION NO. 2
D-17C TYPICAL PAVEMENT SECTION NO. 3
D-17D TYPICAL PAVEMENT SECTION NO. 4
D-17E TYPICAL PAVEMENT SECTION NO. 5
D-17F TYPICAL PAVEMENT SECTION - NOTES
D-18 TYPICAL ON-SITE PARKING SPACE LAYOUT
D-19 TYPICAL PARKING SPACE
D-19A TYPICAL CONCRETE WHEEL STOP DETAIL
D-20 TYPICAL HANDICAP PARKING SPACE
D-21 HANDICAP PARKING SIGN DETAIL
D-22 CONCEPTUAL LAYOUT OF ACCESSIBLE ROUTES
FOR BICYCLE AND PEDESTRIAN CIRCULATION
D-23 SPEED BUMP DETAIL
D-24 SPEED TABLE DETAIL
D-25 NON-RESIDENTIAL DRIVEWAY
D-26 TYPICAL BICYCLE RACK DETAIL
D-27 TYPICAL DUMPSTER ENCLOSURE DETAIL
D-28 TYPICAL BOLLARD DETAIL

M-1 MATERIAL STANDARDS
M-2 MATERIAL STANDARDS
M-3 MATERIAL STANDARDS
GENERAL NOTES

PUBLICATIONS, CODES AND SPECIFICATIONS, AS HEREINAFTER LISTED AND REFERENCED THROUGHOUT THESE REGULATIONS, ARE A PART OF THIS DIVISION JUST AS IF INCORPORATED THEREIN. REFERENCE IS INTENDED TO REFER TO THE LATEST REVISION OR PUBLICATION WHICH HAS BEEN OFFICIALLY ADOPTED BY THE ISSUING AGENCY UNLESS A DATED ISSUE IS INDICATED. REFERENCE IN F.D.O.T. STANDARD SPECIFICATIONS TO THE STATE SHALL BE INTERPRETED TO MEAN THE COUNTY ENGINEER OR PROJECT ENGINEER, DEPENDING ON THE RESPONSIBILITIES ASSIGNED BY REQUIREMENTS HEREIN. REFERENCE TO TESTING, SAMPLING, JOB MIXTURES AND OTHER QUALITY CONTROL PROVISIONS THEREIN ARE DELETED IN FAVOR OF QUALITY CONTROL PROVISIONS OF THESE REQUIREMENTS.

MINIMUM STANDARDS: THE REQUIREMENTS INCLUDED HEREIN ARE MINIMUM STANDARDS CONSIDERED ONLY AS BASIC REQUIREMENTS FOR PERFORMANCE, STRUCTURAL SUITABILITY AND DURABILITY. ALL PROPOSED CONSTRUCTION MUST BE DESIGNED WITH FULL CONSIDERATION GIVEN TO THE FUNCTIONAL, STRUCTURAL AND AESTHETIC REQUIREMENTS OF THE PARTICULAR INSTALLATION. WHERE STRICT ADHERENCE TO THE STANDARDS IS NOT PRACTICAL, A DEVIATION MAY BE GRANTED BY THE COUNTY ENGINEER.
NOTES:

1. APPROVED BASE MATERIAL SHALL BE COMPACTED IN 6" LIFTS MAX., TO 98% DENSITY PER A.A.S.H.T.O. T-180.
2. APPROVED SUB-BASE MATERIAL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO 95% DENSITY PER A.A.S.H.T.O. T-180.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.
5. SURFACE MATERIAL SHALL BE CONSISTENT WITH EXISTING SURFACE. ASPHALT SHALL BE TYPE III AND EQUAL TO OR GREATER IN THICKNESS. MINIMUM THICKNESS FOR ASPHALT SHALL BE 1-1/2".
6. CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED COMPLETELY THROUGH.
7. CONCRETE PAVEMENT REPLACEMENT SHALL EXTEND 3" BEYOND THE EDGE OF PAVEMENT.
8. BASE MATERIAL SHALL BE PRIMED AND TACKED IN ACCORDANCE WITH SECTION 300 OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).
9. a. IN 30 M.P.H. SPEED ZONES, ROADWAY SHALL BE OVERLAYERED 20 FEET EACH SIDE OF DISTURBED AREA.
   b. IN 45 M.P.H. SPEED ZONES, ROADWAY SHALL BE OVERLAYERED 50 FEET EACH SIDE OF DISTURBED AREA.
   c. IN 55 M.P.H. SPEED ZONES, ROADWAY SHALL BE OVERLAYERED 100 FEET EACH SIDE OF DISTURBED AREA.
   (NOTE: MINIMUM 1" OVERLAY IS REQUIRED.)
10. ROADWAY SURFACE DISTORTION AS A RESULT OF JACK AND BORE (SETTLING OR HUMPING OF ROADWAY) OR ANY OTHER FORM OF DAMAGE WHICH WOULD REQUIRE PATCHING, SHALL BE OVERLAYERED WITH TYPE III ASPHALTIC CONCRETE AS OUTLINED IN NOTE NO. 9.
11. ALL STRIPPING, REFLECTORS, AND OTHER MARKINGS OBLITERATED BY OVERLAY SHALL BE RESTORED IN ACCORDANCE WITH F.D.O.T. STANDARDS AND TO THE SATISFACTION OF DESOTO COUNTY.
NOTE:
SUB–GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D–17A THROUGH D–17F.
NOTE:
SUB-GRAGE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D-17A THROUGH D-17F.
NOTE:
SUB-GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D-17A THROUGH D-17F.
NOTE:
SUB–GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D–17A THROUGH D–17F.
NOTE:
SUB-GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D-17A THROUGH D-17F.
NOTE:
SUB–GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D–17A THROUGH D–17F.
NOTE:

SUB-GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D-17A THROUGH D-17F.
NOTE:
SUB-GRADE, STABILIZED SHOULDERS, SHELl OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D-17A THROUGH D-17F.
CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE U. S. POSTAL SERVICE

FOR RIGHT-OF-WAYS 
80' AND GREATER

FOR RIGHT-OF-WAYS 
LESS THAN 80'

MAIL BOX LOCATION

DESMOTO COUNTY
DEVELOPMENT DEPARTMENT
ENGINEERING DIVISION
201 EAST OAK STREET, SUITE 204
ARCADIA, FLORIDA 34266
OFFICE: 863-491-6165
FAX: 863-491-6163
(A) CONSTRUCT WITH 6" REINFORCED CONCRETE (3,000 psi @ 28 DAYS) WITH 6"x6" #10 MESH FROM EDGE OF PAVEMENT TO THE RIGHT—OF—WAY LINE.

(B) DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE (A) ABOVE.

(C) EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE COUNTY’S DISCRETION.

(D) 3"x8’ FLARED APRON IS MINIMAL, OR 18’ RADIUS.

(E) IF THE DRIVEWAY SLOPE IS STEEPER THAN 1:14, A STORM PIPE WITH MITERED ENDS SHALL BE INSTALLED.

(F) NO DRIVEWAY RETURN, AT THE EDGE OF PAVEMENT, SHALL BE CLOSER THAN 50’ FROM THE INTERSECTING STREET EDGE OF PAVEMENT.
TYPICAL DRIVEWAY

VARIABLES: TOTAL OF 1' OF COVER. HDPE OR CMP PIPE IS ACCEPTABLE IN LIEU OF RCP. R.C.P. WILL REQUIRE A MINIMUM 6" OF COVER BENEATH BOTTOM OF DRIVEWAY, FOR A

NOTE: 1) GRADES AND LOCATIONS MUST BE REVIEWED AND APPROVED BY THE COUNTY ENGINEERING STAFF FOR ALL PIPE INSTALLATIONS.

2) ACTUAL REQUIRED PIPE DIAMETER WILL BE BASED ON THE FLOW RATE REQUIRED TO PASS THROUGH PIPE SO AS NOT TO IMPOUND WATER UPSTREAM.

3) PIPE SIZE TO BE DETERMINED AND APPROVED BY DESOTO COUNTY.
NOTE: ON SIDE DRAIN M.E.S., BARS ONLY TO BE USED ON ROUND PIPE 30" IN DIA. & GREATER, ELIPTICAL PIPE 19" X 30" & GREATER, AND ARCH PIPE 35" X 24" OR GREATER. FOR BAR SIZE SEE F.D.O.T. INDEX NO. 273

PLAN VIEW

SECTION A-A

END VIEW

DESMOTO COUNTY DEVELOPMENT DEPARTMENT ENGINEERING DIVISION 201 EAST OAK STREET, SUITE 204 ARCADIA, FLORIDA 34266 OFFICE: 863-491-6165 FAX: 863-491-6163

RESIDENTIAL DRIVEWAY MITERED END SECTION

REVISION DATE: 3-24-16 SCALE: NOT TO SCALE DETAIL D - 7
NOTE: FILTER FABRIC NOT REQUIRED WHEN AN O-RING GASKET IS USED.

NOTE: FILTER FABRIC MATERIAL MUST MEET THE FOLLOWING ASTM REQUIREMENTS:
- ASTM D 4595
- ASTM D 4632
- ASTM D 4533
- ASTM D 4833
- ASTM D 4491

VARIES

12" MIN. 12" MIN.

WOVEN OR NON-WOVEN FILTER FABRIC
NOTE: NOT NECESSARY WITH O-RING GASKET

VARIES

12" MIN. 12" MIN.

WOVEN OR NON-WOVEN FILTER FABRIC

ISOMETRIC VIEW

CONCRETE STORM PIPE FILTER WRAP

DESMOTO COUNTY DEVELOPMENT DEPARTMENT ENGINEERING DIVISION
201 EAST OAK STREET, SUITE 204 ARCADIA, FLORIDA 34266 OFFICE: 863-491-6165 FAX: 863-491-6163

REVISION DATE: 3-24-16 SCALE: NOT TO SCALE DETAIL

D - 8
SIDEWALK NOTES:

1. CONCRETE SHALL HAVE A COMPRESSION STRENGTH OF 3000 P.S.I. IN 28 DAYS.

2. CONTRACTION JOINTS SHALL BE SAW CUT TO A 1 1/2" DEPTH AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK, AND MAXIMUM SPACING OF 5.0'.

3. AN EXPANSION JOINT WILL BE PLACED AT THE END OF ALL RETURNS, AT FIXED OBJECTS (DRIVEWAYS, CURBS ETC.) AND INTERVALS NOT TO EXCEED 20'. EXPANSION JOINTS SHALL BE CONSTRUCTED WITH 1/2" PREMOLDED EXPANSION JOINT MATERIAL.

4. ALL SIDEWALKS AND SIDEWALK CROSSING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).

TYPE 'A'   TYPE 'B'

TABLE OF SIDEWALK JOINTS

<table>
<thead>
<tr>
<th>TYPE</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>'A'</td>
<td>5'-0&quot; CENTER TO CENTER ON SIDEWALKS.</td>
</tr>
<tr>
<td>'B'</td>
<td>WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS &amp; SIMILAR STRUCTURES AT INTERVALS NOT TO EXCEED 20 FEET.</td>
</tr>
</tbody>
</table>

NOTES:

1. ALL ORGANIC MATERIAL & DEBRIS SHALL BE REMOVED & AREA SHALL BE GRADED & COMPACTED PRIOR TO CONCRETE PLACEMENT.

2. THE MINIMUM COMPRESSION STRONGTH OF THE CONCRETE SHALL BE CLASS 1, 3,000 P.S.I. @ 28 DAYS.
CURB NOTES:

1) CONCRETE SHALL HAVE A COMPREHENSIVE STRENGTH OF 3,000 P.S.I. IN 28 DAYS.

2) AN EXPANSION JOINT WILL BE PLACED AT THE END OF ALL RETURNS AND AT INTERVALS NOT TO EXCEED 20'. CONSTRUCTION JOINTS AT A MAXIMUM SPACING OF 10' SHALL BE SAW CUT 1-1/2" DEEP.

3) EXPANSION JOINTS SHALL BE CONSTRUCTED WITH 1/2" BITUMINOUS IMPREGNATED EXPANSION JOINT MATERIAL.
CURB NOTES:

1) CONCRETE SHALL HAVE A COMPRESSION
    STRENGTH OF 3,000 P.S.I. IN 28 DAYS.

2) WHEN USED ON THE HIGH SIDE OF THE
    ROADWAY THE CROSS SLOPE OF THE GUTTER
    SHALL MATCH THE CROSS SLOPE OF THE
    ADJACENT PAVEMENT.

3) AN EXPANSION JOINT WILL BE PLACED AT
    THE END OF ALL RETURNS AND AT INTERVALS
    NOT TO EXCEED 20'. CONSTRUCTION JOINTS AT
    A MAXIMUM SPACING OF 10' SHALL BE SAW CUT
    1-1/2" DEEP.

4) EXPANSION JOINTS SHALL BE CONSTRUCTED
    WITH 1/2" BITUMINOUS IMPREGNATED EXPANSION
    JOINT MATERIAL.
CURB NOTES:

1) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 P.S.I. IN 28 DAYS.

2) AN EXPANSION JOINT WILL BE PLACED AT THE END OF ALL RETURNS AND AT INTERVALS NOT TO EXCEED 20', CONSTRUCTION JOINTS AT A MAXIMUM SPACING OF 10' SHALL BE SAW CUT 1-1/2" DEEP.

3) EXPANSION JOINTS SHALL BE CONSTRUCTED WITH 1/2" BITUMINOUS IMPREGNATED EXPANSION JOINT MATERIAL.
NOTE:
ON SIDE DRAIN M.E.S. BARS SHALL ONLY BE USED ON ELLIPTICAL PIPE 19"x30" ERCP & GREATER. FOR BAR SIZE SEE F.O.D.T. INDEX NO. 273

**ELLIPSPICAL CONCRETE PIPE**

**DIMENSIONS & QUANTITIES**

<table>
<thead>
<tr>
<th>Rise R</th>
<th>Span S</th>
<th>X</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>(12^\circ)</td>
<td>(18^\circ)</td>
<td>2-10&quot;</td>
<td>1.97</td>
<td>1.01</td>
<td>5.06</td>
<td>1.56</td>
<td>5.06</td>
<td>1.00</td>
<td>4.90</td>
</tr>
<tr>
<td>(14^\circ)</td>
<td>(22^\circ)</td>
<td>3-4&quot;</td>
<td>2.51</td>
<td>1.99</td>
<td>4.00</td>
<td>1.89</td>
<td>5.00</td>
<td>1.89</td>
<td>2.00</td>
</tr>
<tr>
<td>(16^\circ)</td>
<td>(30^\circ)</td>
<td>4-0&quot;</td>
<td>2.11</td>
<td>2.92</td>
<td>5.03</td>
<td>2.73</td>
<td>6.00</td>
<td>2.73</td>
<td>2.73</td>
</tr>
<tr>
<td>(24^\circ)</td>
<td>(38^\circ)</td>
<td>5-0&quot;</td>
<td>2.20</td>
<td>3.85</td>
<td>6.00</td>
<td>3.56</td>
<td>7.00</td>
<td>3.56</td>
<td>2.85</td>
</tr>
<tr>
<td>(29^\circ)</td>
<td>(45^\circ)</td>
<td>5-11&quot;</td>
<td>2.34</td>
<td>4.79</td>
<td>7.13</td>
<td>4.39</td>
<td>8.08</td>
<td>4.39</td>
<td>3.19</td>
</tr>
<tr>
<td>(34^\circ)</td>
<td>(55^\circ)</td>
<td>7-0&quot;</td>
<td>2.45</td>
<td>5.72</td>
<td>8.15</td>
<td>5.23</td>
<td>9.06</td>
<td>5.23</td>
<td>3.57</td>
</tr>
<tr>
<td>(38^\circ)</td>
<td>(60^\circ)</td>
<td>7-10&quot;</td>
<td>2.52</td>
<td>6.65</td>
<td>9.98</td>
<td>6.89</td>
<td>10.01</td>
<td>6.89</td>
<td>3.95</td>
</tr>
<tr>
<td>(43^\circ)</td>
<td>(68^\circ)</td>
<td>8-11&quot;</td>
<td>2.62</td>
<td>7.59</td>
<td>10.01</td>
<td>8.39</td>
<td>11.04</td>
<td>8.39</td>
<td>4.28</td>
</tr>
<tr>
<td>(48^\circ)</td>
<td>(76^\circ)</td>
<td>8-15&quot;</td>
<td>2.71</td>
<td>8.33</td>
<td>11.04</td>
<td>9.79</td>
<td>12.15</td>
<td>9.79</td>
<td>4.59</td>
</tr>
<tr>
<td>(53^\circ)</td>
<td>(83^\circ)</td>
<td>10-8&quot;</td>
<td>2.80</td>
<td>9.25</td>
<td>12.06</td>
<td>10.39</td>
<td>13.23</td>
<td>10.39</td>
<td>4.77</td>
</tr>
<tr>
<td>(58^\circ)</td>
<td>(91^\circ)</td>
<td>11-8&quot;</td>
<td>2.90</td>
<td>10.19</td>
<td>13.09</td>
<td>11.35</td>
<td>14.32</td>
<td>11.35</td>
<td>5.01</td>
</tr>
</tbody>
</table>

**TOP VIEW—SINGLE PIPE**

**TOP VIEW—MULTIPLE PIPE**

**FOR NON—RESIDENTIAL USE**

---

**MITERED END SECTION ELLIPTICAL CONCRETE PIPE**

**DESKOTO COUNTY**
**DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**
201 EAST OAK STREET, SUITE 204
ARCADIA, FLORIDA 34266
OFFICE: 863-491-6165
FAX: 863-491-6163

**REVISION DATE:** 3-24-16
**SCALE:** NOT TO SCALE
**DETAIL** D - 11A
## ROUND CONCRETE PIPE

### DIMENSIONS AND QUANTITIES

<table>
<thead>
<tr>
<th>D</th>
<th>X</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Single</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Double</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Triple</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Quadruple</strong></td>
</tr>
</tbody>
</table>

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2:1 Slope</td>
<td>15°</td>
<td>2°-7&quot;</td>
<td>19.0°</td>
<td>2.12&quot;</td>
<td>2.12&quot;</td>
<td>4.10&quot;</td>
<td>2.00</td>
<td>3&quot;</td>
</tr>
<tr>
<td>18°</td>
<td>2°-10&quot;</td>
<td>19.9°</td>
<td>2.74&quot;</td>
<td>2.74&quot;</td>
<td>4.71&quot;</td>
<td>2.56</td>
<td>5&quot;</td>
<td>1.41</td>
</tr>
<tr>
<td>24°</td>
<td>3°-5&quot;</td>
<td>2.06</td>
<td>3.85&quot;</td>
<td>3.85&quot;</td>
<td>5.91&quot;</td>
<td>3.58</td>
<td>7&quot;</td>
<td>1.73</td>
</tr>
<tr>
<td>35°</td>
<td>4°-9&quot;</td>
<td>2.88&quot;</td>
<td>6.95&quot;</td>
<td>7.10&quot;</td>
<td>4.55&quot;</td>
<td>4.55</td>
<td>8&quot;</td>
<td>2.00</td>
</tr>
<tr>
<td>35°-1&quot;</td>
<td>2.88&quot;</td>
<td>6.95&quot;</td>
<td>8.33&quot;</td>
<td>5.56&quot;</td>
<td>9&quot;</td>
<td>2.24</td>
<td>6.67&quot;</td>
<td>11.75</td>
</tr>
<tr>
<td>42°</td>
<td>6°-9&quot;</td>
<td>2.88&quot;</td>
<td>7.29&quot;</td>
<td>9.51&quot;</td>
<td>6.58</td>
<td>10</td>
<td>2.45</td>
<td>7.70&quot;</td>
</tr>
<tr>
<td>48°</td>
<td>6°-9&quot;</td>
<td>2.88&quot;</td>
<td>8.33&quot;</td>
<td>10.78&quot;</td>
<td>7.56</td>
<td>11&quot;</td>
<td>2.65</td>
<td>7.83&quot;</td>
</tr>
<tr>
<td>54°</td>
<td>7°-8&quot;</td>
<td>2.88&quot;</td>
<td>9.44&quot;</td>
<td>11.96&quot;</td>
<td>8.56</td>
<td>12&quot;</td>
<td>2.84</td>
<td>8.42&quot;</td>
</tr>
<tr>
<td>60°</td>
<td>8°-7&quot;</td>
<td>2.88&quot;</td>
<td>10.56</td>
<td>13.18&quot;</td>
<td>9.56</td>
<td>14&quot;</td>
<td>3.00</td>
<td>9.00&quot;</td>
</tr>
<tr>
<td>65°</td>
<td>9°-6&quot;</td>
<td>2.88&quot;</td>
<td>11.66&quot;</td>
<td>14.39&quot;</td>
<td>10.56</td>
<td>15&quot;</td>
<td>3.18</td>
<td>9.58&quot;</td>
</tr>
<tr>
<td>72°</td>
<td>10°-5&quot;</td>
<td>2.88&quot;</td>
<td>12.80&quot;</td>
<td>15.60&quot;</td>
<td>11.66</td>
<td>16&quot;</td>
<td>3.30</td>
<td>10.16&quot;</td>
</tr>
</tbody>
</table>

### TOP VIEW—SINGLE PIPE

Concrete Slab, "3" Or 5–1/2" Thick, Reinforced With WWF 6x6–W4xW4.

### TOP VIEW—MULTIPLE PIPE

Concrete Slab, "3" Or 5–1/2" Thick, Reinforced With WWF 6x6–W4xW4.

### SECTION

FOR NON–RESIDENTIAL USE

---

DESETO COUNTY
ENGINEERING DEPARTMENT
201 EAST OAK STREET, SUITE 201
ARCADIA, FLORIDA 34266 OFFICE
863–491–6165 FAX
863–491–6163

MITERED END SECTION
ROUND CONCRETE PIPE

REVISED DATE: 3–24–16
SCALE: NOT TO SCALE
DETAIL: D-11B
**STRIPING NOTES**

1. STRIPING AND SIGNAGE SHALL CONFORM WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE F.D.O.T. STANDARD INDEX DRAWINGS FOR SUCH.

2. ALL STRIPING FOR THE INTERSECTIONS SHALL CONFORM WITH THE F.D.O.T. STANDARD INDEX NO. 17346

3. ALL STRIPING SHALL BE PAINT.
NOTE:
SUB-GRADE, STABILIZED SHOULDER, SHELL OR LIMEROCK BASE COURSE, PRIME COAT APPLICATION AND ASPHALTIC CONCRETE SURFACE COURSE ALONG WITH THE STRUCTURAL NUMBER OF THE PAVEMENT SECTION SHALL CONFORM TO DETAILS D-17A THROUGH D-17F.
PAVEMENT SECTION NO. 1
STRUCTURAL NO. = 2.40
MINIMUM STANDARD FOR STABILIZED GRAVEL ROADWAYS,
FIRE ACCESS & PARKING AREAS ALLOWED BY CODE

NOTE:
ALTERNATE PAVEMENT DESIGNS CONFORMING
TO A STRUCTURAL NUMBER FOR THAT PAVEMENT
SECTION MAY BE APPROVED BY THE COUNTY ENGINEER.
1-1/2" TYPE S-1 ASPHALT W/ PRIME/TACK COAT (SN = 0.66)

6" SHELL / LIMEROCK BASE – LBR 100 MIN. COMPACTED TO 98% DENSITY, MODIFIED PROCTOR (AASHTO T-180) (SN = 1.08)

8" STABILIZED SUBGRADE – LBR 40 MIN. COMPACTED TO 98% DENSITY, MODIFIED PROCTOR (AASHTO T-180) (SN = 0.64)

PAVEMENT SECTION NO. 2
STRUCTURAL NO. = 2.38
LIGHT TRAFFIC – ON-SITE ONLY

NOTE:
ALTERNATE PAVEMENT DESIGNS CONFORMING TO A STRUCTURAL NUMBER FOR THAT PAVEMENT SECTION MAY BE APPROVED BY THE COUNTY ENGINEER.
PAVEMENT SECTION NO. 3

STRUCTURAL NO. = 3.50

MINIMUM STANDARD FOR PUBLIC ROADWAY & ASPHALT DRIVEWAY
WITHIN THE PUBLIC RIGHT-OF-WAY & MODERATE ON-SITE TRAFFIC

NOTE:
ALTERNATE PAVEMENT DESIGNS CONFORMING
TO A STRUCTURAL NUMBER FOR THAT PAVEMENT
SECTION MAY BE APPROVED BY THE COUNTY ENGINEER.
1" TYPE S-3 ASPHALT W/ TACK COAT  
(SN = 0.44)

2 Lifts of 1-1/2" TYPE S-1 ASPHALT 
W/ PRIME/TACK COAT  
(SN = 1.32)

10" SHELL / LIMEROCK BASE - LBR 100 MIN. 
COMPACTED TO 98% DENSITY, MODIFIED 
PROCTOR (AASHTO T-180)  
(SN = 1.80)

12" STABILIZED SUBGRADE - LBR 40 MIN. 
COMPACTED TO 98% DENSITY, MODIFIED 
PROCTOR (AASHTO T-180)  
(SN = 0.96)

PAVEMENT SECTION NO. 4
STRUCTURAL NO. = 4.52

MINIMUM STANDARD FOR LARGE COMMERCIAL VEHICLE WITHIN THE 
PUBLIC RIGHT-OF-WAY & FOR HEAVY ON-SITE TRUCK TRAFFIC

NOTE:
ALTERNATE PAVEMENT DESIGNS CONFORMING 
TO A STRUCTURAL NUMBER FOR THAT PAVEMENT 
SECTION MAY BE APPROVED BY THE COUNTY ENGINEER.
PAVEMENT SECTION NO. 5
MINIMUM STANDARD FOR CONCRETE
DRIVEWAY WITHIN THE PUBLIC RIGHT-OF-WAY

NOTES:

1. EXPANSION JOINTS (COLD JOINTS) SHALL BE 1/2” EXPANSION JOINT MATERIAL AND ARE TO BE SPACED AT 40’ MAXIMUM INCREMENTS AND SHALL BE SHOWN ON THE PLANS. ALL EXPANSION JOINTS SHALL BE SEALED WITH "SIKAFLEX-1C SL" SEALANT AND BACKER ROD BOND BREAKER OR ENGINEER APPROVED EQUAL.

2. CONTRACTION JOINTS SHALL BE 1/4”x1” DEEP SAWCUTS MADE ON ALL CONCRETE PAVEMENT. THE SPACING SHALL BE AS FOLLOWS: THE SPACING SHALL BE THE EQUIVALENT TO THE WIDTH OF THE TRAVEL LANE.
WORK WITHIN THE PUBLIC RIGHT-OF-WAY


2. IF A CULVERT IS REQUIRED, THE CULVERT SIZE, TYPE AND INVERTS SHALL BE DETERMINED BY THE COUNTY.

3. REQUIRED INSPECTIONS:
   - AT STAKE OUT OF CULVERT AND SWALE
   - AFTER PIPE HAS BEEN PLACED
   - AFTER COMPACTION / PRIOR TO PAVEMENT
   - FINAL

4. DENSITY TEST:
   - COMMERCIAL DEVELOPMENT REQUIRES ONE TEST PER LANE, 12" LIFTS AT 98% DENSITY MODIFIED PROCTOR (AASHTO T-180) SIGNED AND SEALED BY A FLORIDA PROFESSIONAL ENGINEER AND SHALL BE SUPPLIED TO THE COUNTY.

5. THE DESOTO COUNTY ENGINEERING DIVISION SHALL BE NOTIFIED A MINIMUM OF 2 BUSINESS DAYS PRIOR TO INSPECTIONS / TESTING.
NOTE:
1. ALL DIMENSIONS SHOWN ARE MINIMUM.

2. COMMERCIAL, INDUSTRIAL AND MULTIFAMILY ON-SITE PARKING SHALL HAVE, AS A MINIMUM, PAVEMENT SECTION NO. 2 (DETAIL D-17B).

3. PARKING SPACES SHALL COMPLY WITH TYPICAL PARKING SPACE (DETAIL D-19) AND TYPICAL HANDICAP PARKING SPACE (DETAIL D-20).
2.0'  6.0'  2.0'

EDGE OF PAVEMENT

20.0'  10.0'

CONCRETE WHEEL STOP
(REFER TO LDR DETAIL)

6" WHITE HIGH DURABLE PAINT STRIPE OR
THERMOPLASTIC STRIPE (TYP)
SECTION

ELEVATION

NOTE:

1. REBARS SHALL BE 3" CLEAR AT ENDS

2. EQUIVALENT DESIGNS MAY BE APPROVED AT THE DISCRETION OF THE COUNTY ENGINEER.

3. WHEEL STOPS SHALL BE REQUIRED ON ALL PARKING SPACES EXCEPT PARALLEL PARKING SPACES.
USE OF PAVEMENT SYMBOL IN ACCESSIBLE PARKING SPACES IS OPTIONAL, WHEN USED THE SYMBOL SHALL BE 3' OR 5' HIGH AND WHITE IN COLOR.

**SYMBOL FOR HANDICAPPED PARKING**

1. WHITE AND BLUE STRIPING SHALL BE HIGH DURABLE PAINT OR THERMOPLASTIC (TYP).
NOTE:

1. AN ALTERNATE MOUNTING LOCATION, SUBJECT TO ADA REQUIREMENTS, MAY BE APPROVED BY THE DEVELOPMENT DIRECTOR.
NOTE:

1. ALL CROSSWALKS AND CURB CUT RAMPS SHALL BE IN ACCORDANCE WITH FDOT STANDARDS.

2. ALL CROSSWALKS SHALL BE A MINIMUM OF 1.0' LARGER THAN THE ABUTTING SIDEWALK.
NOTE:
1. SPEED BUMPS SHALL ONLY BE USED IN ON-SITE PARKING LOTS.
2. LAY OUT AND MARK AREA FOR PLACEMENT OF SPEED BUMPS.
3. CLEAN AREA OF ALL DIRT AND DEBRIS.
4. NOTCH EXISTING ASPHALT SURFACE TO ALLEVIATE SPEED BUMP DISPLACEMENT.
5. TACK COAT AREA OF INSTALLATION USING LIQUID ASPHALT.
6. INSTALL HOT MIX SURFACE ASPHALT TO A MAXIMUM HEIGHT OF 3/4" AT THE APEX AND A WIDTH OF 18".
7. APPLY A SEAL OF LIQUID ASPHALT TO THE ADJOINING EDGE OF THE INSTALLATION TO HELP PREVENT MOISTURE PENETRATION.
8. APPLY HEAVY-DUTY REFLECTIVE TRAFFIC PAINT SUFFICIENT TO IDENTIFY THE SPEED BUMP.
9. “SPEED BUMP” WARNING SIGN (W17-1) WITH POSTED SPEED LIMIT SIGN (W13-1P) SHALL BE POSTED 100 FT. FROM THE SPEED BUMP.
10. SPEED BUMPS SHALL BE AT LEAST 25 FT. FROM ANY ROAD INTERSECTION.
11. SPEED BUMPS SHALL BE AT LEAST 90 FT. FROM AN ADJACENT CROSSWALK.
12. THE MINIMUM SPACING FOR SPEED BUMPS SHALL BE: 15 mph SPEED LIMIT THE SPACING IS 120 LF; 20 mph SPEED LIMIT THE SPACING IS 240 LF AND A 25 mph SPEED LIMIT THE SPACING IS 360 LF.
NOTE:
1. "SPEED HUMP AHEAD" WARNING SIGN (W17-1) WITH POSTED SPEED LIMIT SIGN (W13-1P) SHALL BE POSTED 100 FT. FROM THE SPEED TABLE AND A "SPEED HUMP" WARNING SIGN (W17-1) SHALL BE POSTED AT THE BEGINNING OF THE SPEED TABLE.
2. SPEED TABLES SHALL BE AT LEAST 25 FT. FROM ANY ROAD INTERSECTION.
3. SPEED TABLES SHALL BE AT LEAST 90 FT. FROM AN ADJACENT CROSSWALK.
4. THE MINIMUM SPACING FOR SPEED TABLES SHALL BE THE FOLLOWING: 15 mph SPEED LIMIT THE SPACING IS 120 LF; 20 mph SPEED LIMIT THE SPACING IS 240 LF AND A 25 mph SPEED LIMIT THE SPACING IS 360 LF.
NOTES:

1. CONSTRUCT WITH 6" REINFORCED CONCRETE (3,000 psi @ 28 DAYS) WITH 6"x6" #10 MESH FROM EDGE OF PAVEMENT TO THE RIGHT-OF-WAY LINE.

2. DRIVEWAYS ADJACENT TO A PAVED ROADWAY MUST HAVE THE APRON CONSTRUCTED IN COMPLIANCE WITH THE NOTE NO. 1 (ABOVE).

3. EXISTING DRAINAGE FLOWLINE TO BE MAINTAINED. PIPING MAY BE REQUIRED AT THE COUNTY’S DISCRETION.

4. NO DRIVEWAY RETURN, AT THE EDGE OF PAVEMENT, SHALL BE CLOSER THAN 50’ FROM THE INTERSECTING STREET EDGE OF PAVEMENT.

NOTE:

ALL BICYCLE PARKING SPACES SHALL INCLUDE A STATIONARY PARKING DEVICE ON A CONCRETE SURFACE WHICH ADEQUATELY SUPPORTS THE BICYCLE AND MUST HOLD AT LEAST 180° OF THE WHEEL ARC.
NOTES:
1. THE INTERIOR SLAB SHALL BE 6" CONCRETE (3000 psi) WITH 6"x6"x1.4"x1.4 OR FIBER MESH EQUIVALENT AND A 12" WIDE x 12" DEEP CONCRETE FOOTING WITH (2) NO. 5 REBAR'S CONTINUOUS ON 12" STABILIZED SUBGRADE (LBR 40). THE INTERIOR CONCRETE SLAB SHALL BE SLOPED TO THE FRONT FOR POSITIVE DRAINAGE, UNLESS A FLOOR DRAIN IS REQUIRED. THE EXTERIOR SLAB SHALL BE 6" CONCRETE (3000 psi) WITH NO. 4 REBAR AT 12" O.C.E.W. AND A 12"x12" THICKENED EDGE WITH NO. 5 REBAR'S CONTINUOUS ON 12" STABILIZED SUBGRADE (LBR 40). THE EXTERIOR CONCRETE SLAB SHALL MATCH THE PARKING LOT/Roadway DRAINAGE.

2. THE WALLS SHALL BE 6'-0" HIGH AND SHALL BE CONSTRUCTED OF 8" CMU WITH FILLED CELLS AS SHOWN ON THE PLAN. THE TOP COURSE SHALL BE A LINTEL BEAM WITH (1) NO. 5 REBAR CONTINUOUS. THE EXTERIOR FINISH OF THE WALLS SHALL MATCH THE FINISH OF THE PRINCIPLE STRUCTURE.

3. TWO BOLLARDS ARE REQUIRED WITH ONE DUMPSTER AND 5 BOLLARDS ARE REQUIRED WITH TWO DUMPSTERS. SEE TYPICAL BOLLARD DETAIL D-28.

4. THE DUMPSTER ENCLOSURE SHALL HAVE AN OPAQUE DOUBLE GATE HAVING FRAME WORK MADE OF 2"x2"x.062 STEEL ANGLE IRON AND 18 GA. SHEETING WITH DIAGONAL BRACING. CONTINUOUS WELD ALL JOINTS. EACH GATE SHALL HAVE A 3/8" L" BOLT TO SECURE THE GATE CLOSED AND OPEN WHEN THE DUMPSTER IS BEING EMTIED. THE GATE SHALL SWING 90° MINIMUM.

5. WHEN THE DUMPSTER IS USED BY A RESTAURANT A HOSE BIBB SHALL BE INSTALLED AND THE DUMPSTER INTERIOR SLAB SHALL BE SLOPED FROM THE OUTSIDE EDGES TO A POINT CENTERED ON THE DUMPSTER AT A SLOPE OF 0.5 PER FOOT. A 4" FLOOR DRAIN SHALL BE INSTALL AND SHALL DRAIN TO THE SANITARY SEWER. WHEN DOUBLE DUMPSTERS ARE USED THE DEVELOPER SHALL INSTALL 2 FLOOR DRAINS, ONE AT EACH DUMPSTER.

6. THE DEVELOPER SHALL COORDINATE WITH THE LOCAL WASTE HAULER FRANCHISEE FOR HIS SIZING REQUIREMENTS FOR THE DUMPSTER AND THE ENCLOSURE.
ROUND CONCRETE TOP

6" GALVANIZED STEEL PIPE FILLED WITH 3000 PSI CONCRETE

1/2" EXPANSION JOINT MATERIAL

FINISH GRADE (SLAB OR EARTH)

1'-6" DIA CONCRETE FOOTING (3000 PSI)

(1) NO. 5 REBAR

1'-6" DIA.
MATERIAL STANDARDS

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

AASHTO M36-03 (R2011)  Zinc Coated (Galvanized) Corrugated Iron or Steel Culverts and Underdrains
AASHTO M171-05  Standard Specifications for Waterproof Paper for Curing Concrete
AASHTO M148-05  Standard Specifications for Liquid Membrane-Forming Compounds for Curb Concrete
AASHTO M171-05  Standard Specifications for White Polyethylene Sheeting (Film) for curing Concrete
AASHTO M190-4  Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M114-10  Building Brick (Made from Clay or Shale)

AMERICAN CONCRETE INSTITUTE (ACI)

ACI STANDARD 301-10  Specifications for Structural Concrete for buildings
ACI STANDARD 318-11  Building code Requirements for Reinforced Concrete

AMERICAN IRON AND STEEL INSTITUTE (AISI) HANDBOOK OF STEEL DRAINAGE AND HIGHWAY CONSTRUCTION PRODUCTS – 2007 EDITION

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A53/A53M-10  Pipe, Steel, Black and Hot Dipped Zinc–Coated (Galvanized) Welded and Seamless, for Ordinary Uses, Spec. for
ASTM A123/A123M-09  Zinc (Hot Galvanized) Coatings on products Fabricated From Rolled, Pressed and Forged Steel Shapes, Plates, Bars And Strip, Spec. for,
ASTM B766  Electrodeposited Coatings of Cadmium on Steel, Spec. for,
ASTM F1554 (Grade C)  Carbon Steel Externally Threaded Standard Fasteners, Spec. for
ASTM A185/A185M-07  Welding Steel Wire Fabric for Concrete Reinforcement, Spec. for,
ASTM A615M-0913  Deformed and Plain Billet–Steel Bars for concrete Reinforcement, Spec. for,
ASTM B88-09  ASTM B88-09 Seamless Copper Water Tube, Spec. for,
ASTM B209-10  ASTM B209-10 Aluminum and Aluminum Alloy sheet and Plate, Spec. for,
ASTM F1554  ASTM F1554 (Grade C)  Carbon Steel Externally Threaded Standard Fasteners, Spec. for
ASTM A185/A185M-07  ASTM A185/A185M-07 Welding Steel Wire Fabric for Concrete Reinforcement, Spec. for,
ASTM A615M-0913  ASTM A615M-0913 Deformed and Plain Billet–Steel Bars for concrete Reinforcement, Spec. for,
ASTM B88-09  Seamless Copper Water Tube, Spec. for,
ASTM B108/B108M-11  Aluminum–Alloy Permanent Mold Castings, Spec. for,
ASTM B209-10  Aluminum and Aluminum Alloy sheet and Plate, Spec. for,
ASTM C12-09  Installing Vitrified Clay Sewer Pipe, Rec. Practice for,
| ASTM C55–11 | Concrete Building Brick, Spec. for, |
| ASTM C76–11 | Reinforced Concrete Culvert, Storm Drain and Sewer Pipe, Spec. for, |
| ASTM C139–11 | Concrete Masonry Units for Construction of Catch Basins and Manholes, Spec. for, |
| ASTM C172–10 | Fresh Concrete, Sampling, |
| ASTM C270–10 | Mortar for Unit Masonry, Spec. for, |
| ASTM C700–11 | Vitrified Clay Pipe, Extra Strength, Standards Strength, and Perforated, Spec. for, |
| ASTM D6690–07 | Concrete Joint Sealer, Hot Poured Elastic Type, Spec. for, |
| ASTM D1556–07 | Density of Soil in Place by the Sand–Cone Method, Test for, |
| ASTM D1557–09 | Moisture–Density Relations of Soils and Soil–Aggregate Mixtures using 10–lb Rammer and 18–in Drop, Test for, |
| ASTM D1751–04 (2008) | Preformed Expansion Joint Fillers for Concrete Paving and Structural Constrction (Nonextruding and Resilient Bituminous Types), spec. for, |
| ASTM D1785–06 | Poly Vinyl Chloride (PVC) Plastic Pipe Schedules 40, 80, 120, Spec. for, |
| ASTM D1856–09 | Recovery of Asphalt from Solution by the Abson Method, Test for, |
| ASTM D2104–74 | Withdrawn, No Replacement Polyethylene (PE) Plastic Pipe Schedule, 40, Spec. for, |
| ASTM D2167–08 | Density of Soil in Place by the Rubber–Balloon Method, Test for, |
| ASTM D2172/2172M–11 | Quantitative Extraction of Bitumen from Bituminous Paving Mixtures, Test for, |
| ASTM D2239–03 | Polyethylene (PE) Plastic Pipe (SDR–PR), spec. for, |
| ASTM D2241–09 | Poly Vinyl Chloride (PVC) Plastic Pipe (SDR–PR), Spec. For, |
| ASTM D1785–06 | Poly Vinyl Chloride (PVC) Plastic Pipe Schedules 40, 80, 120, Spec. for, |
| ASTM D1856–09 | Recovery of Asphalt from Solution by the Abson Method, Test for, |
| ASTM D2104–74 | Withdrawn, No Replacement Polyethylene (PE) Plastic Pipe Schedule, 40, Spec. for, |
| ASTM D2167–08 | Density of Soil in Place by the Rubber–Balloon Method, Test for, |
| ASTM D2172/2172M–11 | Quantitative Extraction of Bitumen from Bituminous Paving Mixtures, Test for, |
| ASTM D2239–03 | Polyethylene (PE) Plastic Pipe (SDR–PR), spec. for, |
| ASTM D2241–09 | Poly Vinyl Chloride (PVC) Plastic Pipe (SDR–PR), Spec. For, |
| ASTM D2447–74 | Withdrawn, No Replacement Polyethylene (PE) Plastic Pipe, Schedules 40 and 80 Based on Outside diameter, Spec. for, |
| ASTM D2321–11 | Underground installation of flexible Thermoplastic SewerPipe, Rec. Practice for, |
| ASTM D2487–11 | Classification of Soils for Engineering, |
| ASTM D2662–78 | Withdrawn, No Replacement Polybutylene (PB) Plastic Pipe (SDR–PR), Spec. for, |
| ASTM D2751–05 | Acrylonitrile–Butadiene–Styrene (ABS) Sewer Pipe and Fittings, Spec. for, |
### ASTM D6938–10
Density of Soil and Soil–Aggregate in Place by Nuclear Methods (Shallow Depth), Tests for,

### ASTM D3000–73
Withdrawn, No Replacement Polybutylene (PB) Plastic Pipe (SDR–PR) Based on Outside Diameter, Spec. for,

### ASTM D3033–80
Withdrawn, No Replacement Type PSP Poly (Vinyl–Chloride) (PVC) Sewer Pipe and Fittings, Spec. for,

### ASTM D3034–08
Type PSM Poly (Vinyl–Chloride) (PVC) Sewer Pipe and Fittings, Spec. for,

### ASTM D3035–10
Polyethylene (PE) Plastic Pipe (SDR–PR) Based on Controlled Outside Diameter, Spec. for,

### ASTM D3139–98 (2011)
Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals, Spec. for,

### ASTM D3212–07
Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric seals, Spec. for,

### AMERICAN WATER WORKS ASSOCIATION
Gate Values for ordinary water works service.
Fire Hydrants for ordinary water works service.

### DEPARTMENT OF TRANSPORTATION – STATE OF FLORIDA (F.D.O.T.)
Standard Specifications for Road and Bridge Construction

### FEDERAL HIGHWAY ADMINISTRATION

### AMERICAN NATIONAL STANDARDS INSTITUTE

<table>
<thead>
<tr>
<th>ANSI/AWWA C150/A21.50</th>
<th>Thickness Design of Cast–iron Pipe</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSI A21.6</td>
<td>Cast–iron pipe centrifugally cast in metal molds for water and other liquids.</td>
</tr>
<tr>
<td>(Cancelled)</td>
<td></td>
</tr>
<tr>
<td>ANSI A21.8</td>
<td>Cast–iron pipe centrifugally cast in sand–lined molds, for water and other liquids.</td>
</tr>
<tr>
<td>(Cancelled)</td>
<td></td>
</tr>
<tr>
<td>ANSI/AWWA C110/A21.10</td>
<td>Grey–iron and ductile–iron fittings 2 in. through 48 in. for water and Other Liquids.</td>
</tr>
<tr>
<td>ANSI/AWWA C111/A21.11</td>
<td>Rubber gasket joints for cast–iron and ductile–iron pressure pipe and fittings.</td>
</tr>
<tr>
<td>ANSI/A21.51</td>
<td>Ductile–iron pipe, centrifugally cast in metal molds or sand–lined molds, for water or other liquids.</td>
</tr>
<tr>
<td>AWWA C151</td>
<td></td>
</tr>
</tbody>
</table>