**STANDARD PLANS**

**STANDARD NO. DR-5**

**REVISION DATE**

**.DGN FILE NAME**

**BASE SECTION**

**SECTION**

**CONE SECTION**

**RISER SECTION**

**TOP OF GRATE OR COVER**

**VARIES WITH INSIDE DIAMETER AND WALL THICKNESS OF DRAINAGE STRUCTURE**

**DIAMETER**

<table>
<thead>
<tr>
<th>PIPE SIZE (IN.)</th>
<th>CORE HOLE Dia. (IN.)</th>
<th>CORE HOLE Dia. (FT.)</th>
<th>PLASTIC CORE HOLE Dia. (IN.)</th>
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**MIN. 3" (TYP.) WALL THICKNESS**

**MIN. 6" FLOOR THICKNESS**

**CORE HOLE SIZE**

**ITEM NUMBERS:** C.B. = 604.1XXX, D.I. = 604.2XXX, M.H. = 604.32XX

**GENERAL NOTES**

1. ITEM NUMBERS: C.B. = 604.1XXX, D.I. = 604.2XXX, M.H. = 604.32XX

2. FITTING FRAME TO GRADE MAY BE DONE WITH PRE-FABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).

3. CB & DI GRATES IN PAVED AREAS SHALL BE SET ACCORDING TO THE PAVEMENT DEPRESSION DETAIL SHOWN ON PLATE 4 OF STANDARD NO. DR-2.

4. CORE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CORE SECTION OF THE STRUCTURE AND WOULD PERMIT.

5. FOR STRUCTURES WITH DIAMETERS GREATER THAN 4', THE DIAMETER MAY BE CONSTANT FROM TOP TO BOTTOM WITH A FLAT SLAB TOP, OR A RISER SECTION THAT TRANSITIONS FROM A STANDARD 4' CONE SECTION TO THE LARGER DIAMETER RISER OR BASE SECTION MAY BE USED.

6. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.

7. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.

8. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AT A 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.

9. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

**SECTION A-A**

**SECTION B-B**

**FLAT SLAB TOP**

**PIPE SIZE**

<table>
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<th>DIAMETER</th>
<th>WALL THICKNESS (IN.)</th>
<th>FLOOR THICKNESS (IN.)</th>
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**NOTE NO. 2**

**NOTE NO. 4**

**SEE CHART**

**SEE TABLE**

**FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).**

**CB & DI GRATES IN PAVED AREAS SHALL BE SET ACCORDING TO THE PAVEMENT DEPRESSION DETAIL SHOWN ON PLATE 4 OF STANDARD NO. DR-2.**

**CORE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CORE SECTION OF THE STRUCTURE AND WOULD PERMIT.**

**FOR STRUCTURES WITH DIAMETERS GREATER THAN 4', THE DIAMETER MAY BE CONSTANT FROM TOP TO BOTTOM WITH A FLAT SLAB TOP, OR A RISER SECTION THAT TRANSITIONS FROM A STANDARD 4' CONE SECTION TO THE LARGER DIAMETER RISER OR BASE SECTION MAY BE USED.**

**PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.**

**OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.**

**PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT AT A 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.**

**ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.**