

1. STANDARD STRUCTURE BOTTOMS 4'-0" DIAMETER AND SMALLER AND 3'-6" SQUARE ARE DESIGNATED TYPE P. LARGER STANDARD STRUCTURE BOTTOMS ARE DESIGNATED TYPE J. RISERS ARE PERMITTED FOR ALL STRUCTURES.
2. WALLS OF CIRCULAR STRUCTURES CONSTRUCTED IN PLACE MAY BE OF NON-REINFORCED CONCRETE OR BRICK OR REINFORCED CONCRETE. PRECAST AND RECTANGULAR STRUCTURES SHALL BE CONSTRUCTED OF REINFORCED CONCRETE ONLY.
3. WALL THICKNESS AND REINFORCEMENT ARE FOR EITHER REINFORCED CAST-IN-PLACE OR PRECAST CONCRETE UNITS EXCEPT THAT PRECAST CIRCULAR UNITS MAY BE FURNISHED WITH WALLS IN ACCORDANCE WITH EITHER A.S.T.M. C478 (UP TO 96" DIAMETER) OR A.S.T.M. C76, CLASS III, B WALL, MODIFIED WHERE THE ELLIPTICAL STEEL CAGE AREA IS PLACED IN THE CENTER ONE-THIRD OF THE WALL.
4. TOP AND FLOOR SLAB THICKNESS AND REINFORCEMENT ARE FOR PRECAST AND CAST IN PLACE CONSTRUCTION. TOP AND BOTTOM SLABS SHALL BE OF CLASS II CONCRETE. SPECIFIED IN A.S.T.M. CONCRETE AS C478 (4000 PSI) MAY BE USED IN LIEU OF CLASS I AND CLASS II CONCRETE IN PRECAST ITEMS MANUFACTURED IN PLANTS WHICH ARE UNDER THE "STANDARD OPERATING PROCEDURES" FOR THE INSPECTION OF PRECAST DRAINAGE PRODUCTS.
5. ALL REINFORCEMENT SHOWN IS A.S.T.M. A615/A615M GRADE 60 STEEL, SMOOTH OR DEFORMED. EQUIVALENT AREA GRADE 40 STEEL OR GRADE 65 KSI WELDED WIRE FABRIC MAY BE SUBSTITUTED.
6. STRUCTURE BOTTOMS MAY BE USED IN CONJUNCTION WITH CURB INLET TOPS AND ANY MANHOLE OR JUNCTION BOX UNLESS OTHERWISE SHOWN IN THE PLANS OR OTHER STANDARD DRAWINGS. RECTANGULAR STRUCTURE BOTTOMS MAY BE USED IN CONJUNCTION WITH ANY DITCH BOTTOM INLET UNLESS OTHERWISE SHOWN IN THE PLANS OR OTHER STANDARD DRAWINGS.
7. RECTANGULAR STRUCTURES MAY BE ROTATED AS DIRECTED BY THE ENGINEER IN ORDER TO FACILITATE CONNECTIONS BETWEEN THE STRUCTURE WALLS AND STORM SEWER PIPES.
8. EXCEPT WHEN ACI HOOKS ARE SPECIFICALLY REQUIRED, REINFORCEMENT TOP AND SLAB SHALL BE STRAIGHT EMBEDMENT.
9. ALL STEEL BARS SHALL HAVE 1-1/2" MINIMUM COVER UNLESS OTHERWISE SHOWN EXCEPT FOR PRECAST CIRCULAR UNITS MANUFACTURED UNDER ASTM C76 OR ASTM C478. HORIZONTAL STEEL IN RECTANGULAR STRUCTURES SHALL BE LAPPED A MINIMUM OF 24 BAR DIAMETERS.
10. THE CORNER FILLETS SHOWN ARE NECESSARY FOR RECTANGULAR STRUCTURES USED WITH CIRCULAR RISERS AND INLET THROATS AND USED ON SKEW WITH RECTANGULAR RISERS, INLET AND INLET THROATS. FILLETS WILL BE REQUIRED IN LIEU OF THE BOTTOM SLAB OF THE 3'-6" SQUARE RISER WHEN USED WITH THE CIRCULAR BOX. EACH FILLET SHALL BE REINFORCED WITH 2-#5 BARS.
11. INLET THROATS, RISERS, OR MANHOLE TOPS SHALL BE SECURED TO STRUCTURES AS SHOWN ON THE MANHOLE TOP DETAIL.
12. STRUCTURES WITH DEPTHS OVER 14' ARE TO BE CHECKED FOR FLOATATION BY DESIGNER.

CONTINUED ON GN-3.1

REVISED: SEPT-2009	<b>GENERAL NOTES - STORMWATER DRAINAGE SYSTEMS</b>	STANDARD DETAIL
ISSUED: SEPT-2009	CITY OF WEST PALM BEACH ENGINEERING SERVICES DEPT.	GN-3