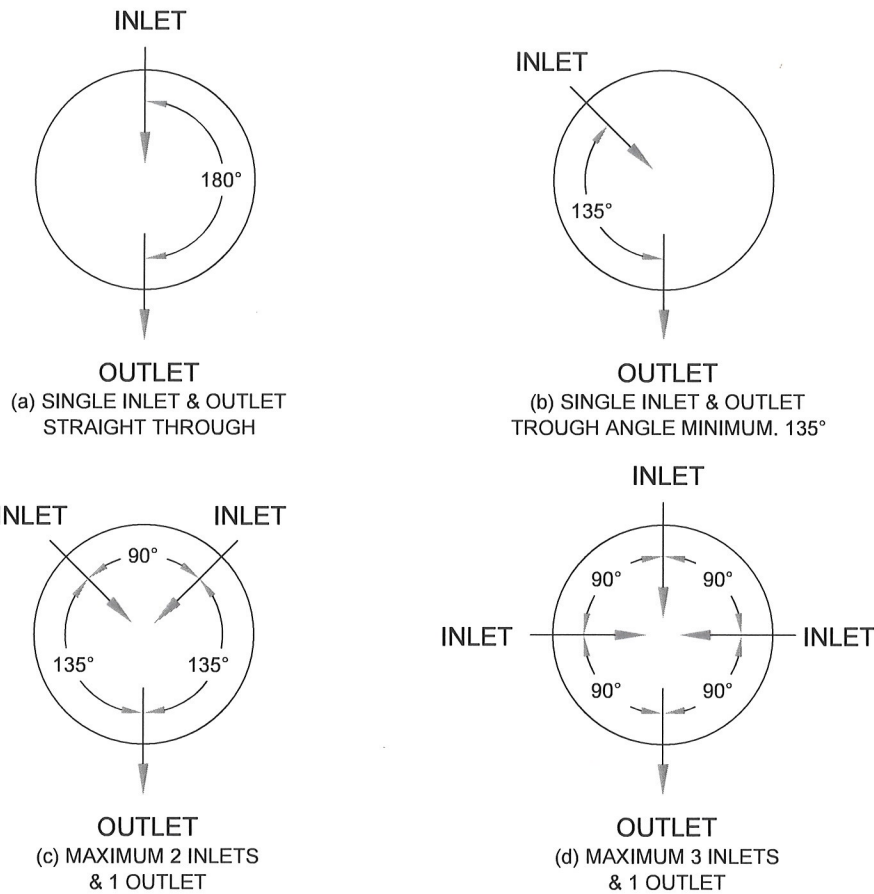


ND-03 MANHOLE DIAMETER REQUIREMENTS

Unless otherwise required by the District, the minimum internal diameter of manholes shall be provided in accordance with Table 3A (Manhole Diameter Requirements). Manhole internal diameter must be large enough to accept the maximum pipe size and provide structural support between pipe openings in the wall. The District, at its sole discretion, may require a larger manhole than listed in Table 3A (Manhole Diameter Requirements) based on the District pipe material and diameter, the number of inlets and outlets, trough pattern and invert of the connections, manhole depth, or any other factors deemed pertinent by the District.

Minimum internal diameter for FRP tee base manholes to be installed on FRP mainlines shall be reviewed and approved by the District on a case-by-case basis. Tees shall be equal to the nominal FRP sewer pipe diameter, unless otherwise approved by the District. Tee outlets shall be as shown on Standard Detail ND-10.

Minimum internal manhole diameter shall be selected based on the following criteria:



For alternative configurations, manhole sizing recommendations may be provided by the Manufacturer. The minimum structural support between openings is 6 inches. Recommendations must be supported by design methods (drawings, calculations) provided by the Manufacturer in accordance with applicable industry standards, such as NPCA.



TABLE 3A. MANHOLE DIAMETER REQUIREMENTS

Minimum Internal Manhole Diameter (in)	Criteria	Pipe Size
48-inch	Single inlet and outlet, straight through flow path	15-inch diameter or less
	Maximum 2 inlets, 1 outlet and troughing pattern with no angle less than 135 degrees between inlet and outlet	15-inch diameter or less
	Maximum 3 inlets, 1 outlet and troughing pattern with no angle less than 90 degrees between inlet and outlet	12-inch diameter or less
	Drop manholes or force main discharges	8-inch diameter or less
	Greater than one outlet	By District Approval Only
60-inch	Single inlet and outlet, straight through flow path	36-inch diameter or less
	Maximum 2 inlets, 1 outlet and troughing pattern with no angle less than 135 degrees between inlet and outlet	36-inch diameter or less
	Troughing pattern with no angle less than 115 degrees	30-inch diameter or less
	Maximum 3 inlets, 1 outlet and troughing pattern with no angle less than 90 degrees between inlet and outlet	24-inch diameter or less
	Drop manholes or force main discharges	12-inch diameter or less
	Greater than one outlet	By District Approval Only
72-inch	Single inlet and outlet, straight through flow path	42-inch diameter or less
	Maximum 2 inlets, 1 outlet and troughing pattern with no angle less than 135 degrees between inlet and outlet	33-inch diameter or less
	Maximum 3 inlets, 1 outlet and troughing pattern with no angle less than 90 degrees between inlet and outlet	27-inch diameter or less
	Drop manholes or force main discharges	18-inch diameter or less
	Greater than one outlet	As directed by the District
96-inch	Single inlet and outlet, straight through flow path	42-inch diameter or greater
	Maximum 2 inlets, 1 outlet and troughing pattern with no angle less than 135 degrees between inlet and outlet	As directed by the District
	Maximum 3 inlets, 1 outlet and troughing pattern with no angle less than 90 degrees between inlet and outlet	As directed by the District
	Drop manholes or force main discharges	As directed by the District
	Greater than one outlet	As directed by the District
As Directed by the District	Single inlet and outlet, straight through flow path per Standard Detail ND-11	54-inch or greater
	All other configurations, pipes greater than 36-inch diameter	As directed by the District



NORTH DAVIS SEWER DISTRICT

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