If manhole depth exceeds 20 feet, install steps.

1. Cast-in-place base shown. If base is precast integral with bottom riser, the footprint of the base is not required to extend beyond the outer edge of the riser.

2. For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.

3. 12 inch minimum riser height above all pipe openings.

<table>
<thead>
<tr>
<th>Manhole Diameter (inches)</th>
<th>Maximum Pipe Diameter (inches) for 2 Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At 180° Separation</td>
</tr>
<tr>
<td>48</td>
<td>24</td>
</tr>
<tr>
<td>60</td>
<td>36</td>
</tr>
<tr>
<td>72</td>
<td>42</td>
</tr>
<tr>
<td>84</td>
<td>48</td>
</tr>
<tr>
<td>96</td>
<td>60</td>
</tr>
</tbody>
</table>

**Bedding Material**

- 8" min. Class I
- 4" min. Class I

**Concrete Fillet**

- 8" min.

**Manhole Diameter**

- 12" min.

**Location Station**

- Precast Riser Sections

**Square Edge**

- 6" min.

**Base**

- 8" min.

**Adjustment Rings**

- 27" dia.

**TYPICAL SECTION**

- 4 Bars @ 12" o.c. Each Way

- Cast-in-place base shown.