Bearing Area of Thrust Blocks (SF)  

<table>
<thead>
<tr>
<th>Fitting Size</th>
<th>Tee, Wye, Dead End, and Hydrant</th>
<th>Straddle Block</th>
<th>90° Bend Plugged or Valved Cross</th>
<th>Tee Plugged or Valved on Run</th>
<th>45° Bend</th>
<th>22.5° Bend</th>
<th>112.5° Bend</th>
<th>90° Bend</th>
<th>45° Bend</th>
<th>22.5° Bend</th>
<th>112.5° Bend</th>
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Volume of Thrust Blocks (CY)

From American Public Works Association

**RODS FOR VERTICAL BENDS**

<table>
<thead>
<tr>
<th>FITTING SIZE</th>
<th>ROD SIZE</th>
<th>EMBEDMENT</th>
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<td>12&quot; AND LESS</td>
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<td>30&quot;</td>
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<tr>
<td>14&quot;-16&quot;</td>
<td>#8</td>
<td>36&quot;</td>
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**NOTES:**

1. Bearing areas are based upon a test pressure of 150 PSI and an allowable soil bearing stress of 1000 PSF. Volumes are based on a test pressure of 150 PSI and a unit weight of concrete of 150 PCF.

2. Concrete thrust blocks shall be poured against undisturbed earth, and shall consist of 3000 psi concrete mix. Sections of thrust block poured against disturbed earth do not count as part of the bearing area.

3. All ductile iron fittings shall have all exposed nuts and bolts completely covered with spray-on rubberized undercoating, and all fittings shall be wrapped with 6-mil polyethylene plastic prior to trench backfill.

4. Joints and connections shall not be completely encased in thrust blocks.

5. Tie rods shall be deformed galvanized cold-rolled steel (40 ksi).

6. Thrust blocking shall not be disturbed after it has been placed. The Contractor shall ensure that adequate lengths of piping are installed prior to the time of thrust block placement to make certain that excavation behind the thrust block is not necessary to make any connections.