### Dimensions

<table>
<thead>
<tr>
<th>NOMINAL PIPE DIA</th>
<th>EXTERNAL PIPE Dia</th>
<th>A*</th>
<th>E</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>342</td>
<td>762</td>
<td>300</td>
<td>531</td>
</tr>
<tr>
<td>375</td>
<td>345</td>
<td>845</td>
<td>300</td>
<td>610</td>
</tr>
<tr>
<td>450</td>
<td>536</td>
<td>934</td>
<td>300</td>
<td>692</td>
</tr>
<tr>
<td>525</td>
<td>616</td>
<td>1016</td>
<td>300</td>
<td>775</td>
</tr>
</tbody>
</table>

**Type 1**
- Slope at 1:3
- B: 143m
- C: 335m
- D: 185m
- F: 246m
- G: 232m
- H: 320m
- I: 275m
- J: 1312m
- K: 393m
- L: 460m

**Type 2**
- Slope at 2:1
- B: 120m
- C: 315m
- D: 185m
- F: 246m
- G: 232m
- H: 320m
- I: 275m
- J: 1727m
- K: 630m
- L: 769m

**Type 3**
- Slope at 3:1
- B: 120m
- C: 315m
- D: 185m
- F: 246m
- G: 232m
- H: 320m
- I: 275m
- J: 2161m
- K: 876m
- L: 1069m

*Theoretical slope of wingwall measured at right angles to the roadway.

**A** = A+4 - External diameter of pipe

*Approximate only

### Notes:
1. **Because the relation of the batter to the top of the endwall is essential for the safety of the motorist, the details shown in Section A-A must be adhered to during construction.**
2. **Reinforcement fabric shall comply with AS/NZS 4671, unless otherwise specified. Reinforcement fabric shall be pre and continuous around corners and located as shown on Sections A-A and B-B. Clear cover 50 mm, laps 300 mm.**
3. **Reinforcement bars shall comply with AS/NZS 4671, grade 400Y. Clear cover 50 mm, laps 25 x bar diameter mm.**
4. **Concrete shall be normal-class N32 standard strength grade or higher complying with the requirements of AS 1379, Exposure classifications up to and including *E*.**
5. **Exposed edges shall have 20 x 20 chamfers.**
6. **Compressive pressure behind walls not to exceed 15 kPa.**
7. **Refer to SD 1923 for quantities (1) Tonite Vibratory roller on 300 kg vibrating plate within 0.5m of wall).**
8. **Concrete aggregates shall comply with Table 701.021 of V12D10.01 Standard specification Section 701.**
9. **Endwalls shall be constructed in accordance with the relevant provisions of AS 3600.**

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### Diagram

**Section A-A**
- 12 mm bar continuous around top of structure.
- SET OUT POINT
- BENDING AS SPECIFIED

**Section B-B**
- V = Variable height of the wingwall
- SET OUT POINT (Single pipe culvert)
- SET OUT POINT (Multiple pipe culvert)

### Standard Drawing

**Reinforced Concrete Wingwall Types 1, 7 & 3 Pipe Culverts 300 to 525 Dia**

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**General Notes:**
- All dimensions are in millimeters.
- Culvert seat and outside structures - selection guide SD 1760

**Issue:**
- Issue Date: 1/1/96
- Notes: 2, 3, A & General Notes 1 & 2

**Revised Date:**
- 11/1/95
- Notes: 2, 3 & General Notes 1 & 2