PRECAST HEADWALL COUNTERFORT DETAILS

**PRECAST HEADWALL TYPE H-1 COUNTERFORT**

- PRECAST HEADWALL TO BE WATER CAST AGAINST CULVERT UNIT.
- PRECAST BRIDGE UNIT.
- STEEL Wire CIRCUIT SLICE AFTER INSTALLATION OF COIL ROD.
- HEADWALL COUNTERFORT H-1
- **NOT TO SCALE**

**PRECAST HEADWALL TYPE H-2 COUNTERFORT**

- PRECAST HEADWALL TO BE WATER CAST AGAINST CULVERT UNIT.
- PRECAST BRIDGE UNIT.
- STEEL Wire CIRCUIT SLICE AFTER INSTALLATION OF COIL ROD.
- HEADWALL COUNTERFORT H-2
- **NOT TO SCALE**

**PRECAST HEADWALL TYPE H-3 COUNTERFORT**

- PRECAST HEADWALL TO BE WATER CAST AGAINST CULVERT UNIT.
- PRECAST BRIDGE UNIT.
- STEEL Wire CIRCUIT SLICE AFTER INSTALLATION OF COIL ROD.
- HEADWALL COUNTERFORT H-3
- **NOT TO SCALE**

**SAMPLE ELEVATION**

**HEADWALL COUNTERFORTS**
- Maximum loads shown in table have only been designed for the following load cases:
  1) Earth Pressure Only
  2) Earth Pressure + Live Load Surcharge
- These details are not to be used where a vehicle load can be transmitted through a barrier to the headwall.
- Assumes no spacing of Counterforts.
- For STAINLESS STEEL HEADWALL,勁WHERE TOP OF HEADWALL IS AT SAME ELEVATION AS TOP OF COUNTERFORT.
- Additional headwall height may be obtained with closer counterfort spacing.
- Not for detached headwall designs only.

**PRECAST FIVE SIDED BOX CULVERT HEADWALL DETAILS**

- **STANDARD:** 36,14

**PRECAST BRIDGE UNIT**

- INSTALLATION OF COIL ROD 3" DIA. HOLE GROUT SOLID AFTER PRECAST BRIDGE UNIT AND PRECAST HEADWALL CONTINUOUSLY BETWEEN PRECAST.
- **NOT TO SCALE**

- **PRECAST THREE-SIDED BOX CULVERT HEADWALL DETAILS**

- **NOT TO SCALE**

**PRECAST HEADWALL TYPE H-1 COUNTERFORT**

- PRECAST HEADWALL TO BE WATER CAST AGAINST CULVERT UNIT.
- PRECAST BRIDGE UNIT.
- STEEL Wire CIRCUIT SLICE AFTER INSTALLATION OF COIL ROD.
- HEADWALL COUNTERFORT H-1
- **NOT TO SCALE**

**PRECAST HEADWALL TYPE H-2 COUNTERFORT**

- PRECAST HEADWALL TO BE WATER CAST AGAINST CULVERT UNIT.
- PRECAST BRIDGE UNIT.
- STEEL Wire CIRCUIT SLICE AFTER INSTALLATION OF COIL ROD.
- HEADWALL COUNTERFORT H-2
- **NOT TO SCALE**

**PRECAST HEADWALL TYPE H-3 COUNTERFORT**

- PRECAST HEADWALL TO BE WATER CAST AGAINST CULVERT UNIT.
- PRECAST BRIDGE UNIT.
- STEEL Wire CIRCUIT SLICE AFTER INSTALLATION OF COIL ROD.
- HEADWALL COUNTERFORT H-3
- **NOT TO SCALE**

**TABLE:**

<table>
<thead>
<tr>
<th>SPANS</th>
<th>NO. COUNTERFORTS</th>
<th>NO. SURCHARGE</th>
<th>MAX HEADWALL HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2'-9&quot;</td>
<td>H-1</td>
<td>M-0&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>1'-0&quot;</td>
<td>H-2</td>
<td>M-0&quot;</td>
<td>1'-0&quot;</td>
</tr>
<tr>
<td>10'-0&quot;</td>
<td>H-3</td>
<td>M-0&quot;</td>
<td>1'-0&quot;</td>
</tr>
</tbody>
</table>

**NOTE:**

- The actual number and type of precast headwall counterforts is to be designed. However, use the following chart as a general guide to feasibility of precast headwall counterforts.