**TYPICAL SECTION**

**BOTTOM SLAB**

**TOP SLAB**

**SECTION THRU CURB**

**SETTING NOTES:**

- Do not use permanent forms.
- Chamfer the bottom edge of the top slab 3" at the entrance.

**PART PLANS**

**TABLE OF BAR DIMENSIONS**

<table>
<thead>
<tr>
<th>Size</th>
<th>#6</th>
<th>#5</th>
<th>#4</th>
</tr>
</thead>
<tbody>
<tr>
<td>5'-0&quot;</td>
<td>3</td>
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<tr>
<td>6'-0&quot;</td>
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<td>4</td>
<td>3</td>
</tr>
<tr>
<td>7'-0&quot;</td>
<td>5</td>
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<td>4</td>
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<tr>
<td>8'-0&quot;</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>9'-0&quot;</td>
<td>7</td>
<td>7</td>
<td>6</td>
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</tbody>
</table>

**MATERIAL NOTES:**

- Provide D60 reinforcing steel.
- Provide galvanized reinforcing steel if required elsewhere in the plans.
- Provide Class C concrete (f'c = 3,600 psi) for culvert barrel and curbs.

**GENERAL NOTES:**

- Designed according to AASHTO LRFD Bridge Design Specifications for the range of fill heights shown.
- See the Multiple Box Culverts Cast-In-Place Miscellaneous Details (MC-MD) standard sheet for details pertaining to skewed ends, angle sections, and lengthening.

For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3' high, Bars M may be omitted.

### Construction Notes:

- Bars B, C, D, E, F1, F2, M, and Z may be reversed.
- If D30.6 wire is used to meet the 0.755 sq. in. per ft. requirement in this example, the maximum bar lap length will be 1'-0" typical. 2'-3" when the Rail Anchor Curb (RAC) standard sheet is referred to elsewhere in the plans.
- Chamfer the bottom edge of the top slab 3" at the entrance.
- The Contractor may replace Bars B, C, D, E, F1, F2, M, and Z with deformed wire or a new reinforcing steel (WWR) meeting the requirements of ASTM A1064. The area required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi.
- Chamfer the bottom edge of the top slab 3" at the entrance.
- Provide bar laps, where required, as follows:
  - Uncoated or galvanized ~ #6 = 2'-6" Min
  - Uncoated or galvanized ~ #5 = 2'-1" Min
  - Uncoated or galvanized ~ #4 = 1'-8" Min
  - Provide bar laps, where required, as follows:
    - Uncoated or galvanized ~ #6 = 2'-6" Min
    - Uncoated or galvanized ~ #5 = 2'-1" Min
    - Uncoated or galvanized ~ #4 = 1'-8" Min
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    - Uncoated or galvanized ~ #6 = 2'-6" Min
    - Uncoated or galvanized ~ #5 = 2'-1" Min
    - Uncoated or galvanized ~ #4 = 1'-8" Min
  - For structures without bridge rail, construct curbs flush with finished grade. For structures with bridge rail, refer to the Mounting Details for T631 or T631LS Rails (T631-CM) standard sheet. Refer to the Rail Anchorage Curb (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
  - Chamfer the bottom edge of the top slab 3" at the entrance.
  - For vehicle safety, the following requirements must be met:
    - All structures without bridge rail, construct curbs flush with finished grade.
    - All structures with bridge rail, construct curbs flush with finished grade. Bars M, K, and Z must be used to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
    - Chamfer the bottom edge of the top slab 3" at the entrance.
    - For vehicle safety, the following requirements must be met:
      -Bars M, K, and Z must be used to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
      - Chamfer the bottom edge of the top slab 3" at the entrance.
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      - Chamfer the bottom edge of the top slab 3" at the entrance.
### SECTION DIMENSIONS

<table>
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<tr>
<th>S</th>
<th>N</th>
<th>Y</th>
<th>U</th>
<th>No. of Bars</th>
<th>2''</th>
<th>4''</th>
<th>6''</th>
<th>8''</th>
<th>10''</th>
<th>12''</th>
<th>14''</th>
<th>16''</th>
<th>18''</th>
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**BILLS OF REINFORCING STEEL (For Box Length = 40 feet)**

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### QUANTITIES

**Per Foot of Barrel**

- Cast-In-Place:
  - 108.4 feet
  - 205.4 feet
  - 292.4 feet

**Per Foot of Curv**

- 9'-0" SPAN:
  - 108.4 feet
  - 205.4 feet
  - 292.4 feet

- 11'-0" SPAN:
  - 108.4 feet
  - 205.4 feet
  - 292.4 feet

- 12'-0" SPAN:
  - 108.4 feet
  - 205.4 feet
  - 292.4 feet

**Total**

- 108.4 feet
  - 205.4 feet
  - 292.4 feet