**SHOULDER CONSTRUCTION WITH SUPERELEVATION**

### NOTES:

1. These details apply to both paved and grassed shoulders. For median shoulders use 0.05 in lieu of 0.06.

2. **SHOULDER ON HIGH SIDE**: A shoulder slope of 0.06 downward from the edge of travel way will be maintained until a 0.07 break in slope at the pavement edge is reached due to superelevation of the pavement. As the pavement superelevation increases, the 0.07 break in slope will be maintained and the shoulder flattened until the shoulder slope reaches the minimum of 0.02 downward from the edge of travel way. Any further increase in pavement superelevation will necessitate sloping the inside half of the shoulder toward the travel way and the outer half outward, both at 0.02 for superelevations 0.06-0.09 and both at 0.03 for superelevation 0.10. For shoulders with paved widths 5 feet or less see Special Shoulder Break Over Details on Sheet 2 of 2.

3. **SHOULDER ON LOW SIDE**: Maintain 0.06 cross slope across shoulder until pavement cross slope reaches 0.06. For pavement cross slopes greater than 0.06, shoulder to have same slope as pavement. See **SHOULDER SLOPES ON SUPERELEVATION SECTION** (Sheet 2).

### SUPERELEVATION TRANSITIONS

#### 2-LANE, 4-LANE OR 6-LANE PAVEMENT, NO MEDIAN

1. **FULLY SUPERELEVATED SECTION CC**

2. **NORMAL SECTION SECTION AA**

3. **REVERSE CROWN SECTION BB**

#### 4-LANE OR 6-LANE PAVEMENT WITH MEDIAN

1. **FULLY SUPERELEVATED SECTION BB**

2. **NORMAL SECTION SECTION AA**

3. **NORMAL CROWN SECTION AA**

### SLOPE RATIOS FOR SUPERELEVATION TRANSITIONS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>DESIGN SPEED, MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>45-50</td>
<td>55-60</td>
</tr>
<tr>
<td>65-70</td>
<td>65-70</td>
</tr>
<tr>
<td>2 Lane</td>
<td>1:200</td>
</tr>
<tr>
<td>4 Lane</td>
<td>1:205</td>
</tr>
<tr>
<td>6 Lane</td>
<td>1:200</td>
</tr>
<tr>
<td>8 Lane</td>
<td>1:170</td>
</tr>
<tr>
<td>0.2 L</td>
<td>1:190</td>
</tr>
</tbody>
</table>

* Short Vertical Curves Are To Be Used On Construction To Avoid Angular Breaks In Edge Profiles.
SUPERELEVATION TRANSITIONS - HIGH SPEED ROADWAYS

8-LANE PAVEMENT WITH ONE LANE SLOPED TO MEDIAN

SECTION A-A
NORMAL CROWNED SECTION

SECTION B-B
SUPERELEVATION SECTION LT. & RT.

SECTION C-C
SUPERELEVATION SECTION LT.
PLANE INCLINED SECTION RT.

SECTION D-D
PLANE INCLINED SECTION LT.
SUPERELEVATION TRANSITION LT.

SECTION E-E
SUPERELEVATION TRANSITION LT.
FULL SUPERELEVATION RT.

SECTION F-F
FULL SUPERELEVATION LT. & RT.

SLOPES OF TRAVELED WAY
AND ADJACENT SHOULDER

SHOULDER SLOPES ON
SUPERELEVATION SECTIONS

1. For shoulders with paved widths 5 feet or less see special shoulder break over details.

2. For concrete pavement, the first 1'-0" of the outside shoulder is cast with the outside travel lane and will have the same cross slope as the outside lane. The shoulder break over will occur at the outside edge of the outside slab.

See Note 1