ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information — Incomplete forms will be returned)

**Contact Information:**
Date: January 27, 2021
Originator: Ben Gerrell
Phone: (850) 414-4318
Email: benjamin.gerrell@dot.state.fl.us

**Standard Plans:**
Index Number: 000-511
Sheet Number (s): 1 and 2
Index Title: Superelevation Transitions - Low Speed Roadways

**Summary of the changes:**
Sheet 1: Updated Note 4 to match values in FDM; added ONE Lane option to the Facilities to be consistent with FDM.

Sheet 2: Update table to match FDM; Changed ratio in the PROFILE views for clarity.

**Commentary / Background:**
These revisions to the Superelevation Transition Indexes are proposed to make the Standard Plans more consistent with the FDOT Design Manual and Table 210.9.3.

**Other Affected Offices / Documents:** (Provide name of person contacted)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

**Origination Package Includes:**
(Email or hand deliver package to Rick Jenkins)

<table>
<thead>
<tr>
<th>Yes</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑</td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

**Implementation:**

| ☐ Design Bulletin (Interim) |
| ☐ DCE Memo |
| ☐ Program Mgmt. Bulletin |
| ☑ FY-Standard Plans (Next Release) |

Contact the Roadway Design Office for assistance in completing this form
GENERAL NOTES:

1. Obtain Superelevation by rotating the plane successively about the break planes of the section until the plane has attained a slope equal to that required by the Plans. Should the rotation traverse the entire section and further superelevation be required, the remaining rotation of the plane shall be about the low edge of the inside travel lane. Crown is to be removed in the auxiliary lane on the outside of the curve only when the adjoining travel lanes require positive superelevation.

2. When positive superelevation is required, continue the slope of the pavement across the gutter on the high side.

3. Place short vertical curves at all angular profile breaks on the high side. Within the limits of the superelevation transition.

4. The variable superelevation transition length L has a minimum value of 30 feet for design speeds of 40-45 MPH and 75 feet for design speeds of 45-50 MPH. When this section is used, superelevation is established by rotating a tangent about the arc of the parabolic crown until the desired slope is attained (points A & B on sketch). The normal parabolic crown will be maintained outside the limits of the plane thus formed.

5. Roadway sections having lane arrangements different from those shown, but composed of a series of planes, are superelevation in a similar manner.

UPDATED TO: 50-55 MPH

ADDED: ONE OR TWO TRAVEL LINES EACH DIRECTION

ADDED: ONE OR TWO TRAVEL LINES EACH DIRECTION WITH MEDIAN

ADDED: ONE OR TWO TRAVEL LINES EACH DIRECTION WITH AUXILIARY LANES

ADDED: ONE OR THREE TRAVEL LINES EACH DIRECTION WITH MEDIAN

ADDED: ONE OR THREE TRAVEL LINES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANES

UPDATED TO: 25-30 MPH

UPDATED TO: 40-45 MPH

TWO TRAVEL LANES EACH DIRECTION WITH MEDIAN

TWO TRAVEL LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANES

TWO TRAVEL LANES EACH DIRECTION WITH AUXILIARY LANES

THREE TRAVEL LANES EACH DIRECTION WITH MEDIAN

THREE TRAVEL LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANES

UNDIVIDED FACILITIES

DIVIDED FACILITIES

PARABOLIC SECTION

SUPERELEVATION TRANSITION SECTIONS

FOR LOW SPEED HIGHWAYS

11/01/21

REVISED: 11/01/21

INDEX 000-511

STANDARD PLANS

FY 2021-22

SUPERELEVATION TRANSITIONS - LOW SPEED HIGHWAYS

1 of 2
**DESCRIPTION:**

**REVISION LAST OF STANDARD PLANS FY 2021-22 SHEET INDEX 000-511**

**PROFILE**

**TWO LANES EACH DIRECTION**

**LINE**
- T Inside Travel Lane
- U Inside Lane Line
- V Inside Median Edge Pavement
- W G Construction
- X Outside Median Edge Pavement
- Y Outside Lane Line
- Z Outside Travel Lane

**SUPERELEVATION SECTIONS AND PROFILES FOR LOW SPEED HIGHWAYS**

**Note:** The sections and profiles shown are examples of superelevation transitions. Similar schemes should be used for roadways having other sections.

**EXAMPLE SUPERELEVATION SECTIONS AND PROFILES FOR LOW SPEED HIGHWAYS**

**Updated Table**

<table>
<thead>
<tr>
<th>Slope Ratio</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:150</td>
<td>30 MPH</td>
</tr>
<tr>
<td>1:125</td>
<td>40 MPH</td>
</tr>
<tr>
<td>1:100</td>
<td>45 MPH</td>
</tr>
</tbody>
</table>

Note:

<table>
<thead>
<tr>
<th>d</th>
<th>Slope Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:125</td>
<td>May be used for some limited restricted conditions.</td>
</tr>
</tbody>
</table>

**SECTION 0-A to 0-D**

**SECTION 0-A to 0-E**

**Updated Table**

<table>
<thead>
<tr>
<th>Slope Ratio</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:150</td>
<td>30 MPH</td>
</tr>
<tr>
<td>1:125</td>
<td>40 MPH</td>
</tr>
<tr>
<td>1:100</td>
<td>45 MPH</td>
</tr>
</tbody>
</table>

Note:

<table>
<thead>
<tr>
<th>d</th>
<th>Slope Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:125</td>
<td>May be used for some limited restricted conditions.</td>
</tr>
</tbody>
</table>
**GENERAL NOTES:**

1. Obtain superelevation by rotating the plane successively about the break point until the plane has attained a slope equal to that required by the plans. Should the plane continue to rotate, the entire section and further superelevation be required, the remaining rotation of the plane shall be about the low edge of the inside travel lane. Crown is to be removed in the auxiliary lane to the outside of the curve only when the adjoining travel lanes require positive superelevation.

2. When positive superelevation is required, continue the slope of the pavement across the gutter on the high side.

3. Place short vertical curves at all angular profile breaks within the limits of the superelevation transition.

4. The variable superelevation transition length "L" has a minimum value of 30 feet for design speeds of 25-30 MPH and 75 feet for design speeds of 40-45 MPH.

5. Roadway sections having lane arrangements different from those shown, but composed of a series of planes, are superelevation in a similar manner.

---

**SUPERELEVATION TRANSITION SECTIONS FOR LOW SPEED HIGHWAYS**

---

**UNDIVIDED FACILITIES**

**DIVIDED FACILITIES**

**PARABOLIC SECTION**

---

**SUPERELEVATION TRANSITIONS - LOW SPEED HIGHWAYS**

---

**DESCRIPTION:**

**REVISION INDEX**

**DRAFT**

**REVIEW**

**FYE 2022-23 STANDARD PLANS**

---

**INDEX**

**SHEET 1 of 2**

---

**Revision Notes:**

---
NOTE:
The sections and profiles shown are examples of superelevation transitions. Similar schemes should be used for roadways having other sections.

SLOPE RATIOS FOR SUPERELEVATION TRANSITIONS

<table>
<thead>
<tr>
<th>DESIGN SPEED MPH</th>
<th>1:d</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-35</td>
<td>1:100</td>
</tr>
<tr>
<td>40</td>
<td>1:125</td>
</tr>
<tr>
<td>45</td>
<td>1:150</td>
</tr>
</tbody>
</table>

1:125 May Be Used For 45 mph Under Restricted Conditions.

EXAMPLE SUPERELEVATION SECTIONS AND PROFILES FOR LOW SPEED HIGHWAYS