

## 4\_2 SUPERELEVATION INPUT

### Question:

What is the best practice for applying superelevation to our models?

### Answer:

Please continue to use the Geopak AutoShape input files for superelevation. An alternate method to help Engineers determine the supers in Roadway Designer has been developed, but it is a little more in-depth.

#### Superelevation with Roadway Designer

Either method should follow the same guideline in obtaining supers to NCDOT standards.

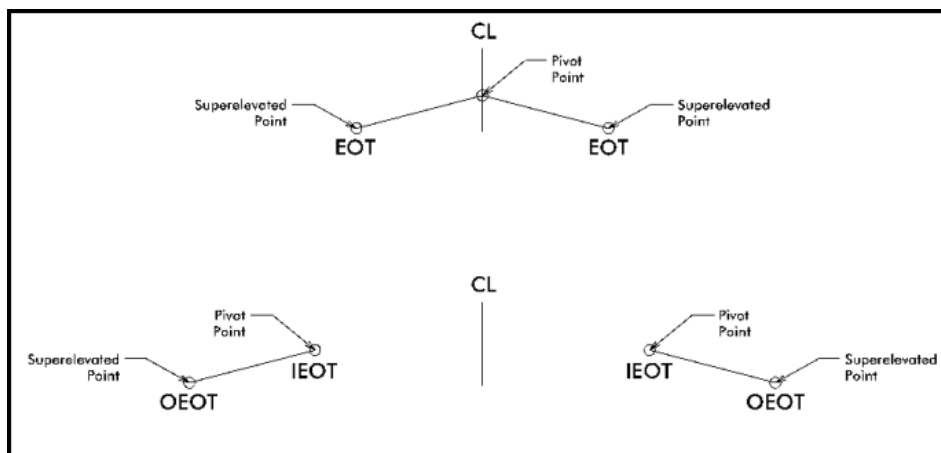
#### Superelevation

Bear in mind that with SS3 and the elimination of Roadway Designer itself, superelevation practice will be different. In the meantime, here are a couple of misconceptions about superelevation inputs in Roadway Designer:

1. Unlike Geopak Shape (SHP) files, they do not determine the width of the road. Pavement widths are determined by what is drawn on the template by default, parametric constraints, plan graphics, or point controls.
2. Roadway Designer uses the "Shape Offset" values to determine the "Pivot" and "Superelevated" points.

**Pivot Point** – the "hinge" point to apply superelevation. Usually the CL point for undivided facilities or IEOT point for divided facilities.

**Superelevated Point** – point moving up or down on a slope (superelevation rate) from the pivot point. Usually the outside EOT point.



Also note that if the offset values in the input matches what is drawn in the template, then the pivot point and superelevated point are automatically selected in the import .INP dialog box.

For example, if the offset is -12 and 0, then both points are automatically selected.

```

17 auto shape set
18   shape cluster baseline   = L
19   shape cluster profile   = PRO_L
20   shape cluster tie       = 0.0000
21   dependent shape
22   chain / offset
23     L      -12.0000
24     L      0.0000
25   filler line station / slope
26     16+25.000000    -2.0000
27     18+44.250000    -2.0000
28     18+21.000000    -2.0000
29     18+75.000000    0.0000
30

```

Point	Offset	Pivot Point	Station	Cross Slope
LT_PV1_OEOT	-12.0000	PV1_PGL	16+25.00	-2.0%
RT_PV1_OEOT	12.0000	PV1_PGL	16+25.00	-2.0%

The default offset values as drawn in templates are:

1. Undivided Facility – (0, 12) which is the CL and EOT 12' pavement width.
2. Divided Facility – (30, 54) which is the inside EOT for 60' median and outside EOT 24' pavement width.

If the input file and the template defaults do not match, then you would have to manually select the points in a drop down dialog box.

For those in the past who have not used the Geopak AutoShape utility to generate a superelevation input file, there will be some reference material help created in our Roadway Web in the coming weeks.