SUPERELEVATION DIAGRAM
SUPERELEVATION DIAGRAM SHEET 1 of 5, RELEASED 11/4/2010

INSTRUCTIONS FOR SUPERELEVATION DIAGRAMS
1. Always look "up-station" (direction of increasing stationing).
2. The lines above or below the axis of rotation represent the cross slope (plane) of the traveled way or shoulders.
3. The axis of rotation is located at the point defined as the "Profile Grade" (PG), as shown on the Typical Cross Section. As a best practice, the PG should be the highest elevation point when the roadbed is tangent.
4. For an undivided highway, the PG is usually the crown of the roadway, see Example 1 on these generic sheets.
5. General rule for tangent sections: ES or ETW should be set at or below the PG, an exception would be if the inside shoulder continued the same cross slope of the traveled way. This may occur with on-ramps and off-ramps, approaches to bridges and future inside widening on existing roads.
6. For a divided highway, the PG can be located at one of two locations:
   a. In the median, along with the alignment line, see Example 2 on these generic sheets. The inside shoulders are typically projected to a common point that can be used as the axis of rotation by both roadbeds. As a best practice, the PG should be above the highest point of either roadbed in a tangent section. This PG location is used when the entire divided square in the same plane.
   b. At both inside ETWs (yellow traffic stripe), see Examples 2 and 3 on these generic sheets.
   c. Use profile grids for superelevation diagrams. Profile grids are cells in the Caltrans cell library "ctcellib." For these first four generic superelevation diagrams, profile grids were not used so instructions could be easier to read.
7. The on-ramp and off-ramp stationing is to be in the direction of the mainline stationing.
8. As a best practice, the PG for on-ramps and off-ramps is usually the ramp alignment line inside Elliptical Traffic Stripes.
9. Left and right callouts for ramps are always shown from the perspective of looking "up-station," DO NOT station ramps with respect to the "flow of traffic."
10. Ramp stationing that ties to the mainline stationing should be the same station number on both the mainline and ramp.

The examples on these first four generic superelevation diagram instructional sheets only show the basics of transitioning from a tangent section to full super. The key points and stationing normally shown and labeled on a superelevation diagram are shown on the fifth generic superelevation diagram instructional sheet.

Example 1
(U) LINE

Example 1
THREE LANE ROAD

Example 1
TWO LANE ROAD

Example 1
TWO LANE ROAD

UNDIVIDED HIGHWAY

The superelevation diagrams shown on these generic examples, DO NOT show the entire diagram.

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