

NOTES:

Horizontal Alignment

Design speed of the highway shall be controlled by the horizontal alignment whenever feasible.

Whenever possible, reversing curves shall be connected by a tangent with a minimum length of 100'. In no case shall tangents between reversing curves be less than required for super-elevation runoff or runoff.

Maximum angle point without a horizontal curve is 30 minutes.

The minimum radii of horizontal curves is determined by the formula

$$R_{min} = \frac{V^2}{15(e+f)} \quad \text{where:}$$

R_{min} = minimum design curve radius in feet

V = design speed in miles per hour

e = super-elevation rate in feet per foot

f = design friction factor.

Design friction factors (f) are presented in the following table:

DESIGN SPEED (MPH)	FRICTION FACTOR (f)
20	0.27
25	0.23
30	0.20
35	0.18
40	0.16
45	0.15
50	0.14

In a normal crown section, super-elevation (e) value is -0.02.

Where practical and feasible, curve radii in excess of the minimum required values should be used.

Super-elevation

Super-elevation for Local Streets is discouraged.

Super-elevation for collector streets and highways with ADTs below 2500 may be designed in accordance with Method 2 of Reference Document 3 (Page 148, Design for Low-Speed Urban Streets)

For new construction, a standard super-elevation rate of Normal Crown, 2%, 4% or 6% should be selected.

At intersections on local streets within Community Regions, or intersections where high truck volumes are anticipated, the maximum super-elevation rate is 4%.

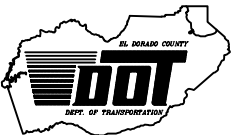
APPROVED BY:

JAMES W. WARE, P.E. NO. C61036
DIRECTOR, EL DORADO COUNTY DEPARTMENT OF TRANSPORTATION

DATE: _____

BOARD OF SUPERVISOR'S RESOLUTION NO. _____

**EL DORADO COUNTY
DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS**



**HORIZONTAL ALIGNMENT
AND SUPERELEVATION
REQUIREMENTS**

**STD.
PLAN**

RD-02