MaineDOT

ENGINEERING INSTRUCTION

Title: Superelevation Rate	Number: C6
Discipline: General Engineering – Controlling Criteria	Issue Date: July 14, 2016
Originator: Steve Bodge, P.E.	Revised Date: January 17, 2019
Approved By: Joyce Taylor, P.E., Chief Engineer	

Background:

Superelevation Rate is one of the Controlling Criteria for roadway design, and is defined as the banking of a roadway to offset the effect of centripetal acceleration. The superelevation of a curve depends on design speed, curve radius, and the maximum superelevation rate. The appropriate maximum superelevation rate is determined by the nature of the roadway, which can be categorized as urban, low-speed urban, or rural. Superelevation transitions are not included in this Controlling Criterion.

Applicability:

This Engineering Instruction applies to all design projects.

Engineering Instruction:

The basic design criteria for superelevation rate are based upon the information contained in Chapter 3 of the AASHTO publication *A Policy on Geometric Design of Highways and Streets* (the Green Book). The Department has adopted the Green Book tables for determining the maximum superelevation rate as well as appropriate superelevation rates for different combinations of design speed and radius.

For Freeways, Rural Highways, and High-Speed Urban Highways:
Minimum Radii for Design Superelevation Rates, Design Speeds, and e_{max} = 6%

For Urban Highways and Streets:
Minimum Radii for Design Superelevation Rates, Design Speeds, and e_{max} = 4%

For Low-Speed Urban Streets:
Minimum Radii and Superelevation for Low-Speed Urban Streets
(e_{max} will not exceed 4% on Low-Speed Urban Streets)

Note: If an existing curve in a rural area has a superelevation rate steeper than 6%, an e_{max} of 8% may be used. Additional guidance contained in the Green Book will be used to determine other superelevation related requirements.

Responsibility:

Program Managers