

Practical Applications of Geometric Design

Duration - 2 Days

Description

This two day course consists of an introductory geometric design class, including practical application problems. The class provides an overview of the basic geometric design elements and their associated 3R and 4R design criteria. In addition, this class familiarize participants with the various sources of reference material used to determine applicable geometric design requirements. Lastly, the geometric design criteria and requirements pertaining to design exceptions and design variances are presented in this class. Practical application problems will be given throughout the course utilizing the knowledge gained in the class. This will allow participants the opportunity to solve example problems and exercises using the information and concepts presented during the two day course.

Required materials

Calculator, Paper, Pencils/Pens (for solving class problems)

Objectives

Improve the understanding of the basic geometric design elements and their relationship to the design process, traffic operations, and safety.

Enhance the participants' knowledge of the various design criteria, standards, and principles governing the geometric design requirements.

Familiarize the class participants with the various departmental Design Guides, Design Manuals, and Standard Plans, and the AASHTO "Green Book," as they apply to the geometric design process and requirements.

Increase the understanding of design exceptions and design variances. Provide class participants with knowledge of the controlling criteria regarding which geometric design elements are subject to design exceptions and/or design variances, and when.

Topics

Topics include (but are not limited to): Basic geometric design elements, 3R and 4R design criteria, design speed, types of sight distance, horizontal alignment, vertical alignment, cross-sectional elements, superelevation, design speeds, freeway interchanges, at-grade intersections, and design exceptions/design variances.

Audience

Engineer (9, 10, 11, & 12), Technicians

Prerequisites

None

09/10/2020