

FDOT Roadway Design and 3D Modeling

Basic Training

CE-11-0138

Description

This is a 2-day training course to include Chapters 1, 2, 3, 4, 6, and 7 of the course guide. Participants will be introduced to Bentley GEOPAK V8i SELECT Series4 (SS4) OpenRoads Technology tools for design and modeling; specifically for Florida Department of Transportation (FDOT) projects using the FDOTSS4 Workspace. Several new technologies will be introduced including:

- Terrain Elements, Terrain Tools, and Sub-Surface Terrain Modeling
- Civil Elements, Civil Features, and Civil Geometry
- Design Intent and Design Standards
- Civil AccuDraw and Civil Cells
- Project Explorer: Civil Model
- Profile and Cross Section View Models
- Task Menus and Cursor Context Menus

Objectives

- Create a Terrain Element from the existing surface to be used as a reference for the project.
- Develop Existing Feature Terrain Surfaces to be shown on cross sections and used in earthwork calculations.
- Use Civil Geometry Elements in the design file to calculate and define a proposed centerline of construction.
- Use Civil Geometry Elements in the design file to define the roadway features of the proposed design.
- Apply Civil Cells delivered within the FDOTSS4 Civil Cell DGN library.
- Use Civil Geometry Elements in the design file to define the vertical profiles of a proposed centerline.
- Create 3D Models of the existing and proposed Roadways.
- Add 2D Civil Geometry Elements as references to a Corridor Model for use as design model control lines.
- View Dynamic Cross Sections for review, updates, and design checks along the project.

Audience

- FDOT Roadway Designers and Engineers

Prerequisites

Participants need to have a basic understanding of Computer Aided Drafting and Design (CADD) using MicroStation, a basic understanding of GEOPAK concepts and a solid understanding of the engineering necessary to design a Roadway.

Duration: 16 Hours

Professional Credit Hours: 16 PDHs