

# FDOT 2008

## Advanced Cross Sections



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REVISIONS				STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO.
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# Introduction

- Using MicroStation XM and GEOPAK Suite – XM Edition
- Using the Criteria updated for XM included in FDOT2008 Software (Maintenance Release 1)

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*MILL & RESURFACE  
CROSS SECTIONS*

# FDOT Criteria Features

## What's New in FDOT2008 Criteria?

- 5 Typicals are provided
  - DrawROW
  - Existing\_Features
  - Proposed\_Features
  - 2 Existing Cross Slope Reports
- Help documentation in html format
  - Accessed through FDOT Menu Bar
  - Accessed through D&C Manager
- New “GEOPAK Lines” file to supplement the TOPORD file.
- More text levels added for flexibility.

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# Provided Material

- Design Files
  - TOPORD01
  - GKLNRD01
  - ALGNRD01
  - DSGNRD01
  - RDXSRD01
  - TIN
  - GPK
- Project for GEOPAK's Project Manager with Working Alignment set up
- Pattern Lines
- Existing Ground
- R/W
- Shapes

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# Design Features supported by Criteria

- Sidewalks
- Paved Shoulder
- Curb & Gutter
- Urban Ditch
- Berms
- Driveways
- Medians
- Ditches/Special Ditches
- Match Lines
- Miscellaneous Asphalt
- Guardrail
- Walls
- Pavement Options
  - Widening
  - Milling
  - Reconstruction
  - New Pavement
- Overlay Profile Override
- Tapering/Plan Graphic Overrides

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AS210      A0124      11/2012      01/12/12

# Existing\_Features

- GKLNRD01.dgn
  - New file to be used to supplement the TOPORD01.dgn file

**\*\*\*IMPORTANT\*\*\***

Features in the TOPORD file should not be duplicated in the GKLNRD file.

GKLNRD file is NOT supported in the proposed features criteria.

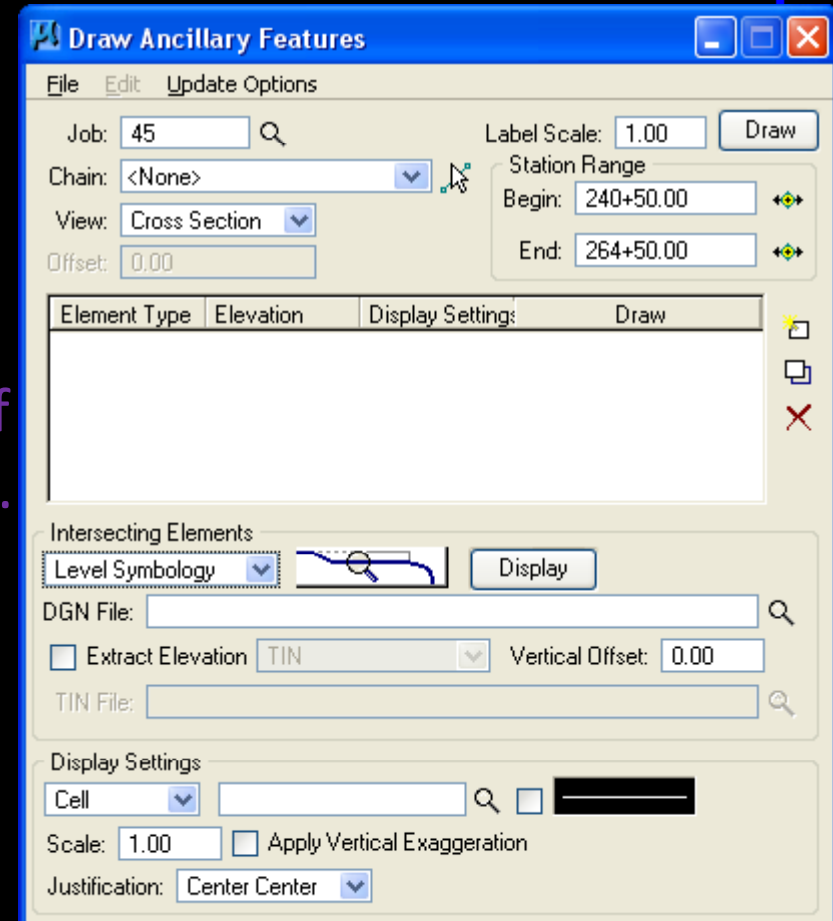
Exercise 1 – Using the GKLNRD file

Exercise 2 – Existing\_Features

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# Ancillary Features

- Tool most commonly used to plot utilities on the cross sections.
- Uses elements in file to set the horizontal location and a depth of cover or profile to set the vertical.
- Places labels.
- Can also be used to draw and label other features such as R/W, baselines, fences, etc.



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# Superelevation Shapes

- Shapes are used by GEOPAK to define the pavement slope.
- Multiple shapes drawn together using the same baseline, profile and tie are called a Shape Cluster and represent 1 piece of pavement.
- Each shape is either Dependent or Independent.
  - Important: Only 1 dependent shape per shape cluster.
- Drawn into the XSSH RD model.
- The tie is either by offset from the baseline chain or by a separate PGL chain.

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# Adhoc Attributes

- Many of the Proposed Options are controlled through Adhoc Attributes.
  - Adhocs set variables within the criteria when found on the element.
  - Those adhocs have been set up within the D&C to be drawn or set onto design elements.
- How can these be adhocs be put onto elements already in the design? How can the values be changed once already placed on the elements?

Let's take a look...

## Exercise 3 – Adhoc Attribute Manager

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# Ground Work

- Not only do adhoc's need to be checked, but extra design elements need to be added to the design file to trigger different features to be drawn into the cross sections.
  - Median Lines, Special Ditch Lines, Plan Graphic Override Lines, Milling Limit Lines, etc.
- These trigger lines are contained within the D&C Manager.

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# Proposed Cross Sections

- Run within the Typical Section Generator within Project Manager.
- Proposed\_Features supports all the previously defined typicals from FDOT2004.
- Designed to apply once to the Shape Cluster on the Left side. Side Slopes will be generated with the correct criteria files.

## Exercise 6 – Proposed\_Features

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# Earthwork

## Exercise 5 – Earthwork

**Earthwork - class**

File

- XS DGN File
- Soil Types
- Earthwork Shapes
- Output Format
- Add/Subtract Volume
- Centroid Adjustment
- Skip Areas
- Ignore Areas
- Sheet Quantity

Class: Existing Ground

Soil Type: Soil

Multiplication Factors

Roadway Excavation: 1.000

Subsoil Excavation: 1.000

Fill: 1.000

Soil Type Items

- Existing Ground

Search Criteria

Use Working Alignment Definition

Lv Names: XSGrdLine\_ex

Lv Numbers:

Colors: 1-2,32-34,67,96,99

Styles:

Weights:

Types:

Match Display Reset

Add Delete Modify

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# Cross Section Sheets

- Cross Section Sheet Composition Tool
  - References cross sections into cross model into sheet format using defined parameters for a Sheet Library.
  - It's important to remember the scale of the cross sections. Elevations will be plotted onto the sheets incorrectly if the scale of the sheets does not match the scale of the sections when they were cut.
  - \*\*Project Manager only remembers 4 settings in the sheet library. When making changes to the sheet parameters, it's best to save a local file and save the library, not just the settings.

## Exercise 6 – Cross Section Sheet Composition Tool

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# Questions

Any and all of your comments and suggestions are greatly appreciated.

Thank-you for attending this training.

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