RRR Modeling

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Resurfacing, Restoration and Rehabilitation (RRR)

Learning Objectives

- Learn to identify key features in a project that determine how best to model it
- Learn how to configure templates to “Match Existing” and for “Crown Correction”
- Learn how to use the Cross Slope Evaluation templates in FDOTSS4 and generate reports

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More Than Just Milling and Resurfacing

- RRR Projects can have different types of work

25.3.1.1 Principal Reason(s) for the RRR Project

As indicated in ***Section 25.2***, the majority of RRR projects are identified and programmed as a result of deficient pavement condition. The following list indicates some, but not all, of the principal reasons that can generate a RRR project:

1. To preserve or extend the life of the existing pavement.
2. Improve capacity (without adding continuous through lanes).
3. Improve operating characteristics.
4. Site specific crash reduction.
5. Section wide crash reduction.
6. General safety modifications.

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Plan Your Approach

Review your project data and decide on the best approach to crating a model.

- Scope of work
  - ✓ Milling
  - ✓ Widening
  - ✓ Sidewalks
  - ✓ Medians
- Controlling Features
  - ✓ Existing Curbs
  - ✓ Existing Guardrail
  - ✓ Right of Way
  - ✓ Wetlands
- Geometry \ Topography
  - ✓ Curves
  - ✓ Cross slope correction
  - ✓ Ditches \ Canals
  - ✓ Utilities, Signs, Lights

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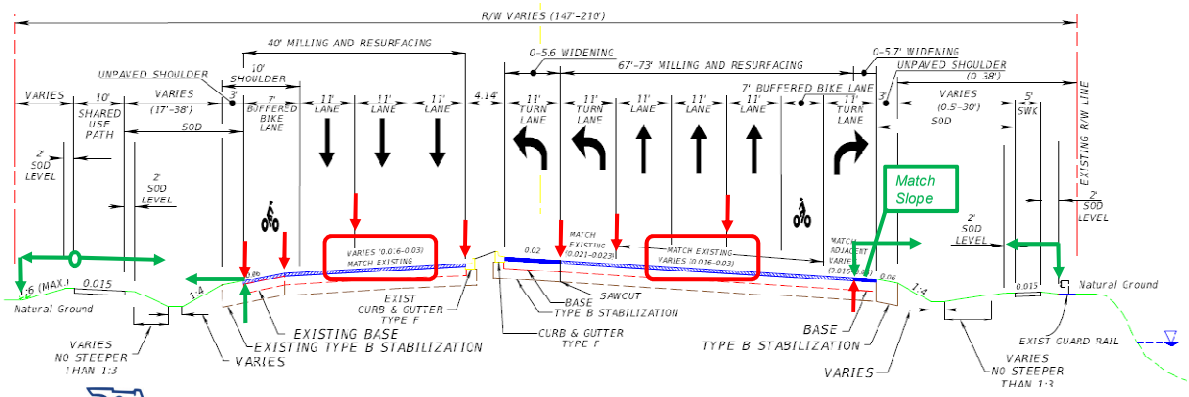
Project Example – Match Existing

- BUFFERED BIKE LANE AND SHARED USE PATH



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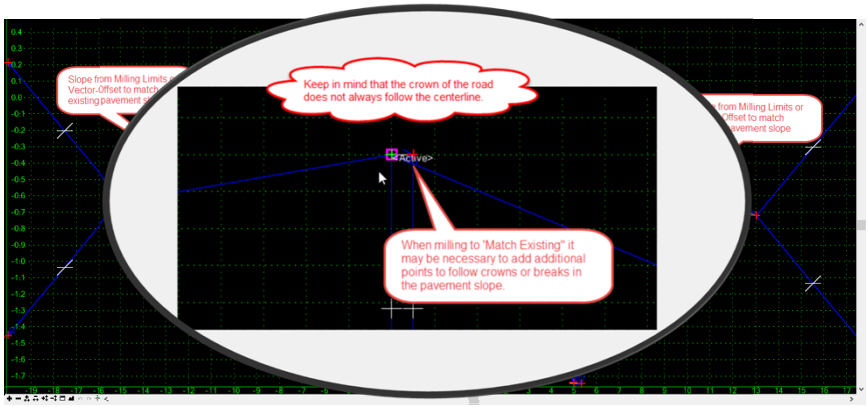
Example Template – Match Existing

- Point constraints on overlay components should be set to “Project to Surface” instead of “Vertical”



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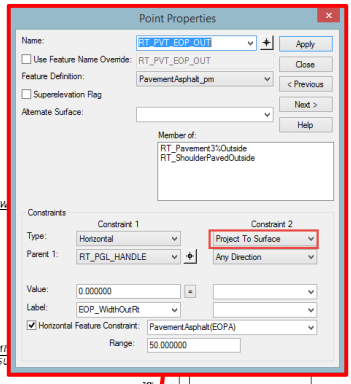
Project Example – Slope Correction

- Crown \ Slope Correction
  - ✓ Safety Issue - Hydroplaning



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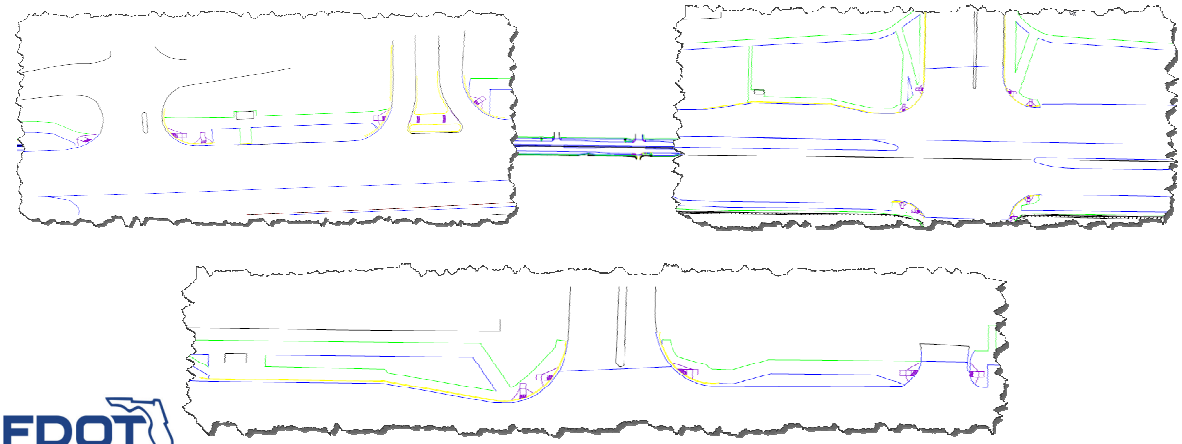
Project Example – No Corridor

- Sometimes corridors aren't the best approach.



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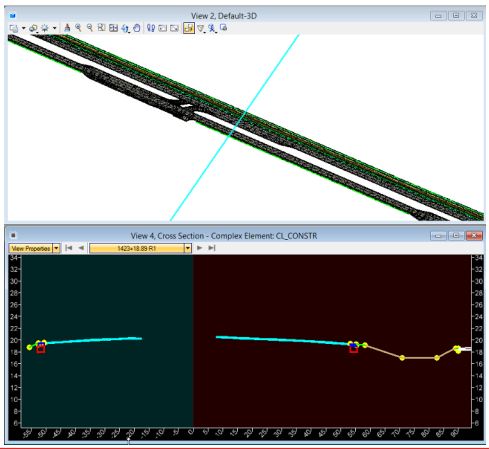
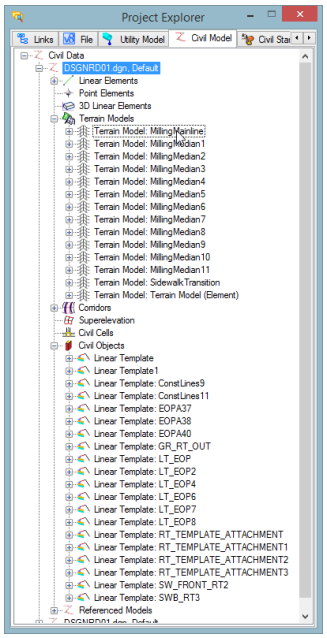
Project Example – No Corridor

- This job was modeled with linear templates and horizontal\vertical geometry. No corridors.





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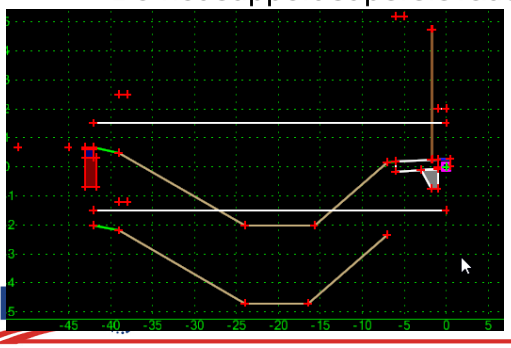
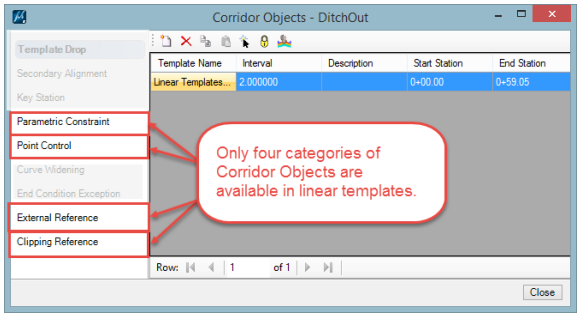
Linear Templates

- Linear Templates can be applied to linear elements with an active profile.
  - ✓ Work well in areas where slopes are based from elements that are not parallel to the centerline
  - ✓ Have limited capabilities
    - Do not support superelevation





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Things to consider

- Corridors typically take more processing time
- Clipping References increase processing time
- If Superelevation is needed you will usually need a corridor
  - ✓ Linear templates do not apply superelevation control
  - ✓ Exception could be “Match Existing” with no widening in the curve

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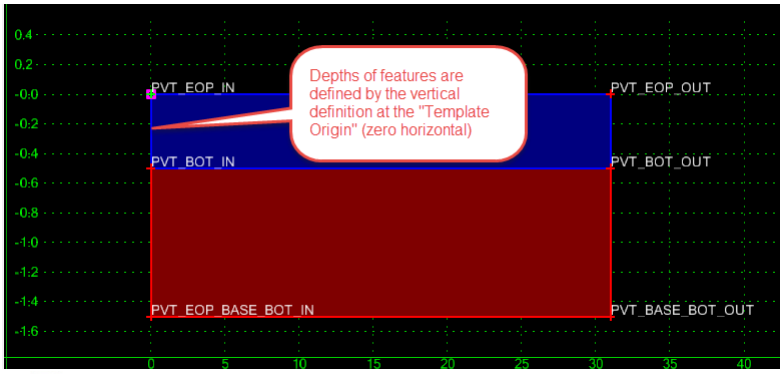
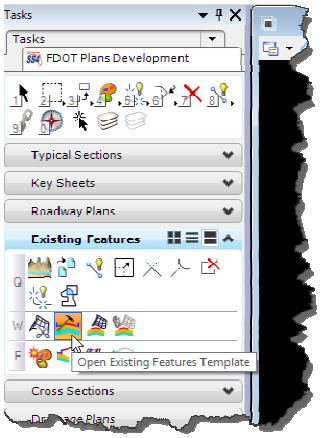
Surface Templates

Surface Templates can be applied to a Terrain element to define depth and symbology.





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Cross Slope Evaluation

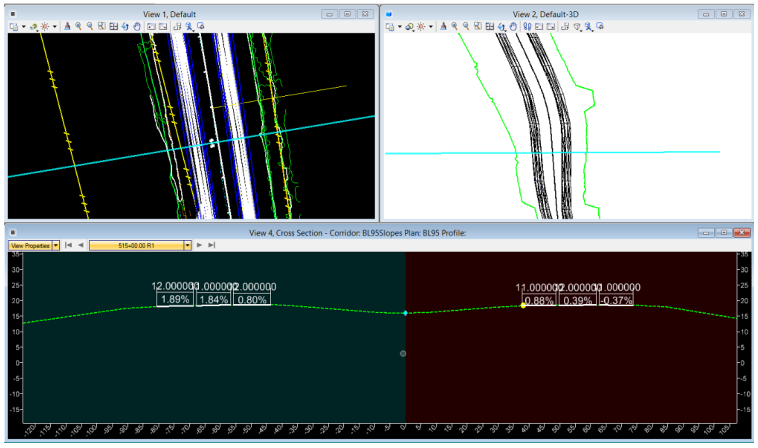
- Did you know you could do cross slope evaluation with a template?

Existing 6 Lane Slopes

Report Created: 9/18/2015
Time: 3:31pm

Corridor: BL95Slopes

STATION	LT_LANE	LT_LANE1	LT_LANE2	RT_LANE	RT_LANE1	RT_LANE2
487+69.12 R1	2.36%	2.39%	0.93%	-0.98%	-1.37%	-2.16%
490+00.00 R1	2.31%	2.36%	0.85%	-0.57%	-1.64%	-1.98%
495+00.00 R1	-0.24%	-1.00%	-4.17%	6.94%	-1.38%	-2.20%
500+00.00 R1	-2.36%	-3.63%	-5.77%	17.87%	-1.65%	-2.30%
505+00.00 R1	-2.97%	-2.07%	2.09%	9.24%	-0.59%	-2.00%
510+00.00 R1	-1.46%	-2.21%	-2.04%	8.75%	6.71%	0.26%
515+00.00 R1	1.76%	1.82%	0.43%	4.92%	7.80%	6.42%
520+00.00 R1	2.06%	1.89%	0.21%	5.95%	5.95%	5.43%
525+00.00 R1	2.07%	2.44%	-1.06%	6.16%	6.16%	5.67%
530+00.00 R1	2.78%	2.08%	-0.09%	5.28%	7.73%	7.30%
535+00.00 R1	2.17%	2.41%	0.23%	7.28%	7.25%	6.32%
540+00.00 R1	4.11%	2.20%	1.95%	3.35%	8.21%	6.99%
545+00.00 R1	-8.12%	-9.39%	1.39%	5.08%	5.05%	4.75%
550+00.00 R1	-6.82%	-7.47%	-4.11%	5.19%	6.87%	5.83%



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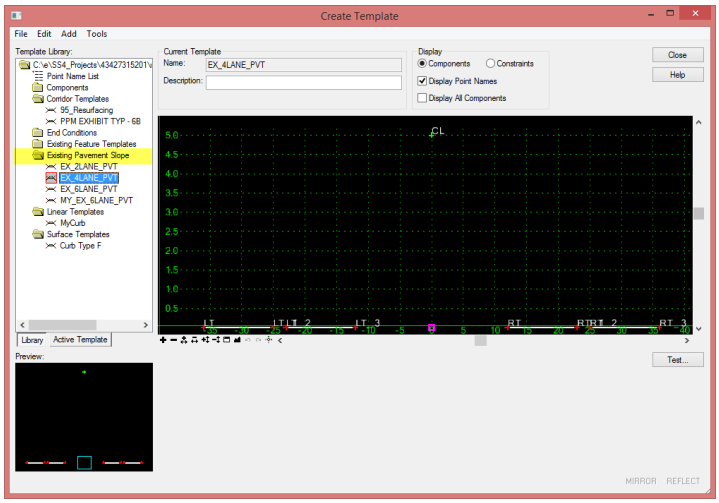
Cross Slope Evaluation Templates

- The FDOTSS4.ITL has templates specifically designed to calculate the cross slope of the existing pavement at each interval.
- Create a corridor using one of the evaluation templates to generate report.
- The point and component names cannot be changed.



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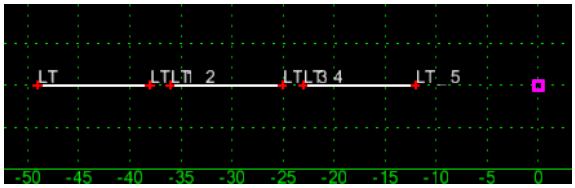
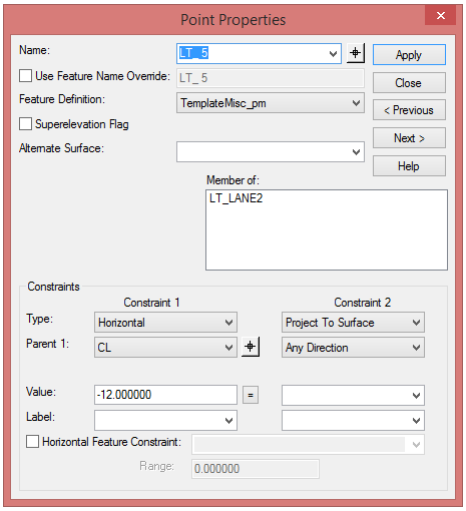
Adjusting Lane Widths and Locations

- Redefine the horizontal constraints to meet your project geometry or set up Horizontal Feature Constraints.
  - ✓ Point and component order must remain the same from left to right.





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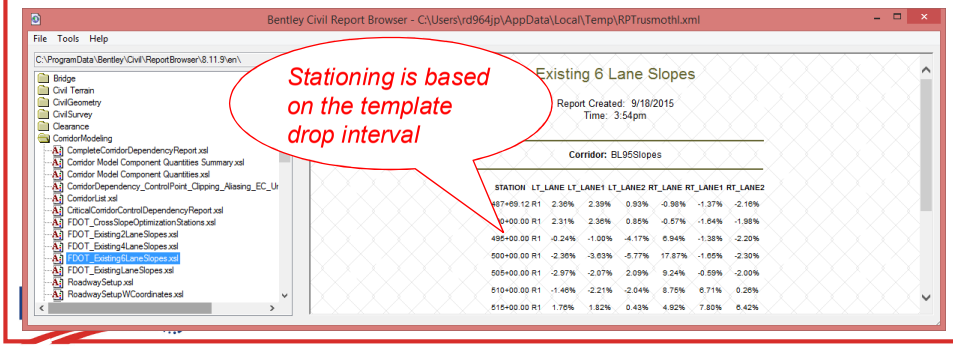
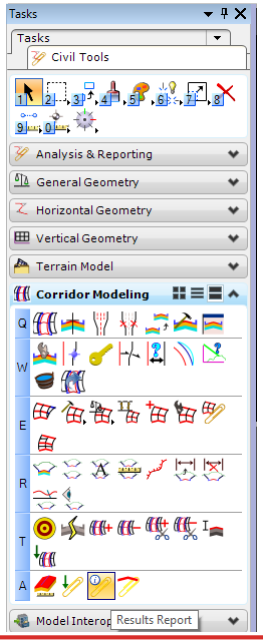
Cross Slope Report

- To report on the results of your cross slope evaluation template select the **"Corridor Modeling > Results"** task.
- Locate the corridor when prompted.
- Select the appropriate report.





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