



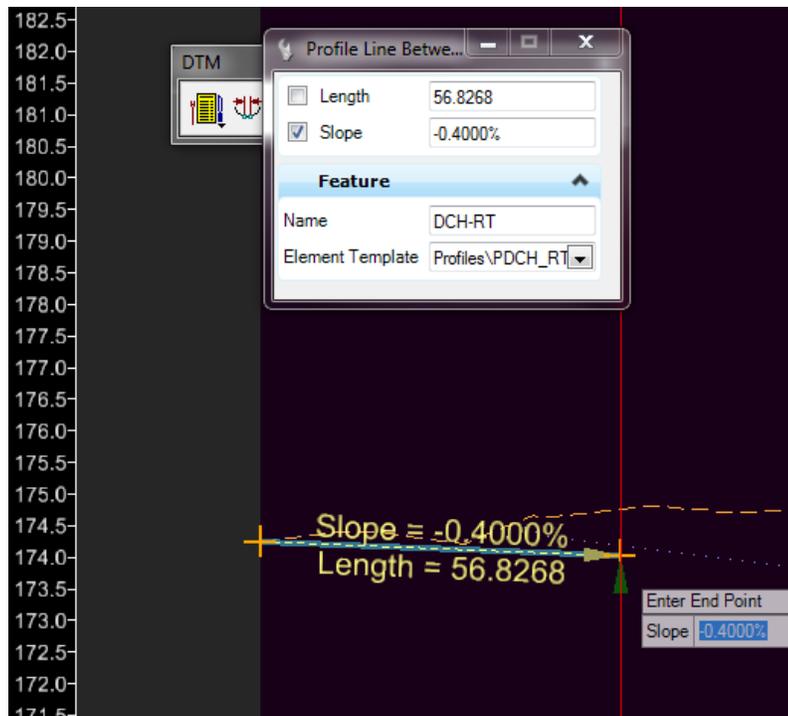
Templates are also pre-built to search for the Vertical External Feature P-DCH-RT or P-DCH-LT to allow for the easy addition of a Ditch profile. Basic steps of this process are:

1. Process your template.
  2. Open the LOW-L or LOW-R alignments in a profile view.
  3. Draw profile where needed.
  4. Copy parallel your Corridor Horizontal Alignment partially at an offset close to the ditch through the area you are placing the grade. Use the P-DCH-L or P-DCH-R feature.
  5. Open this profile view.
  6. Project the profiles drawn in the LOW-L or LOW-R profile views to the P-DCH-L or P-DCH-R alignment.
  7. Add P-DCH-L & P-DCH-R as external constraints to your Corridor.
- Note: For each area you are changing the natural ditch grade, you will need to go through these steps.

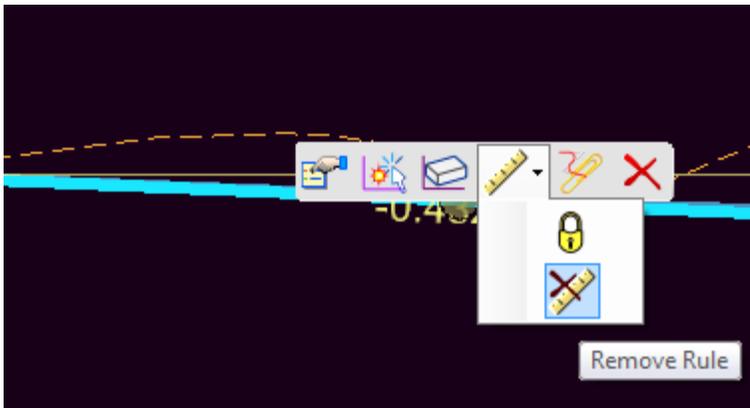
## Initial Ditch Flow & Setting Grades

Note: The example below goes through setting grades for the Right Ditch Profile. You'll use the same process for the Left Ditch but with different Features.

1. Open the profile view of the LOW-R alignment.
2. Add profiles to drain.



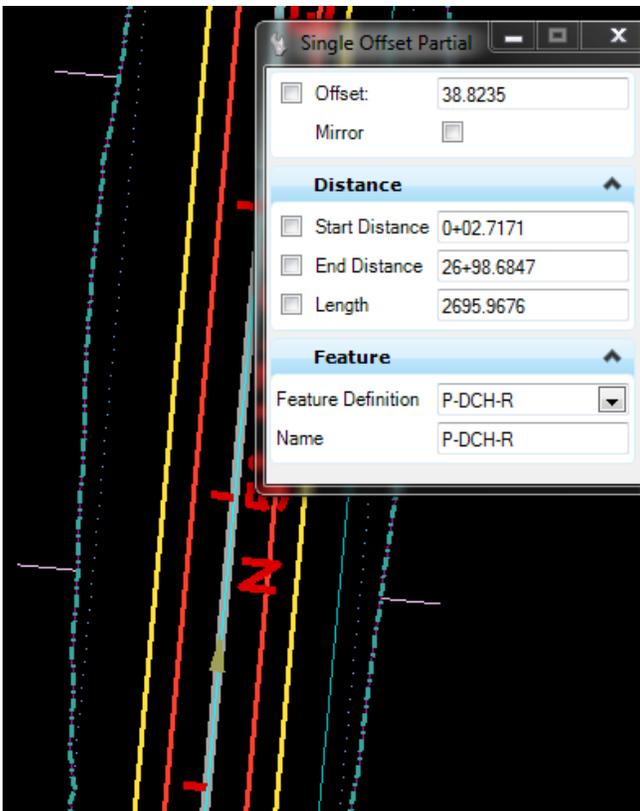
3. Remove the rule created for this element.



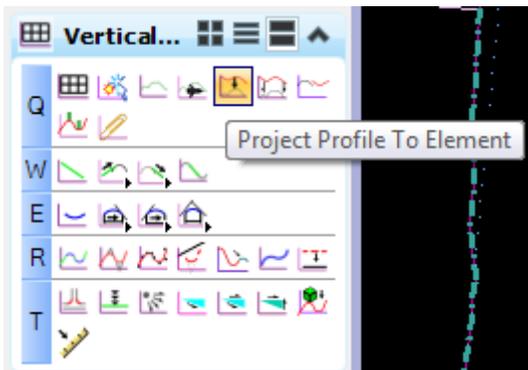
## Projecting to the Alignment.

4. Copy parallel partial your Horizontal Corridor Alignment in to an area around the ditch or slope stake. Use Feature P-DCH-R or P-DCH-L. Make sure it's extents are outside the limits of the ditch grade.

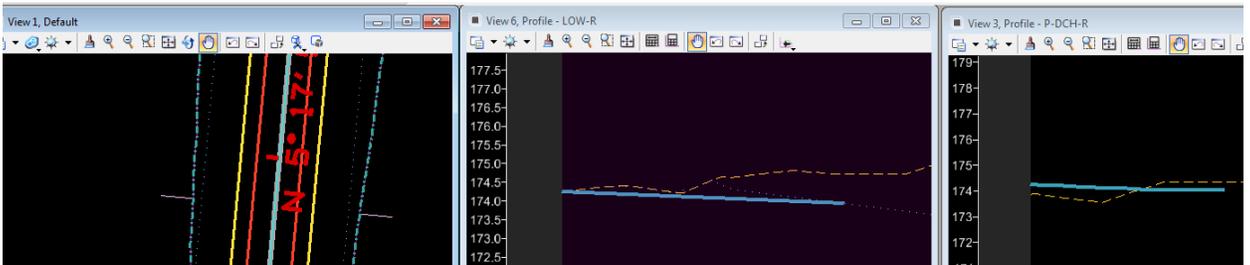
NOTE: You'll need a Horizontal Alignment for each area where you change the grade from what is drawn naturally from the template.



5. Open the profile view of this P-DCH-RT alignment.
6. Choose the Vertical Geometry command shown below.

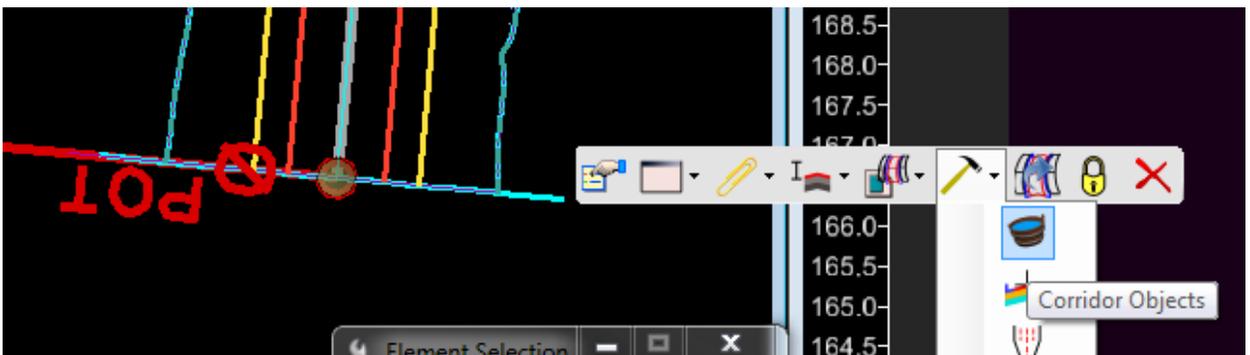


7. Choose the profile that was drawn in the LOW-R profile view and then choose the Horizontal alignment P-DCH-R. You should see the profile appear in the P-DCH-R view.

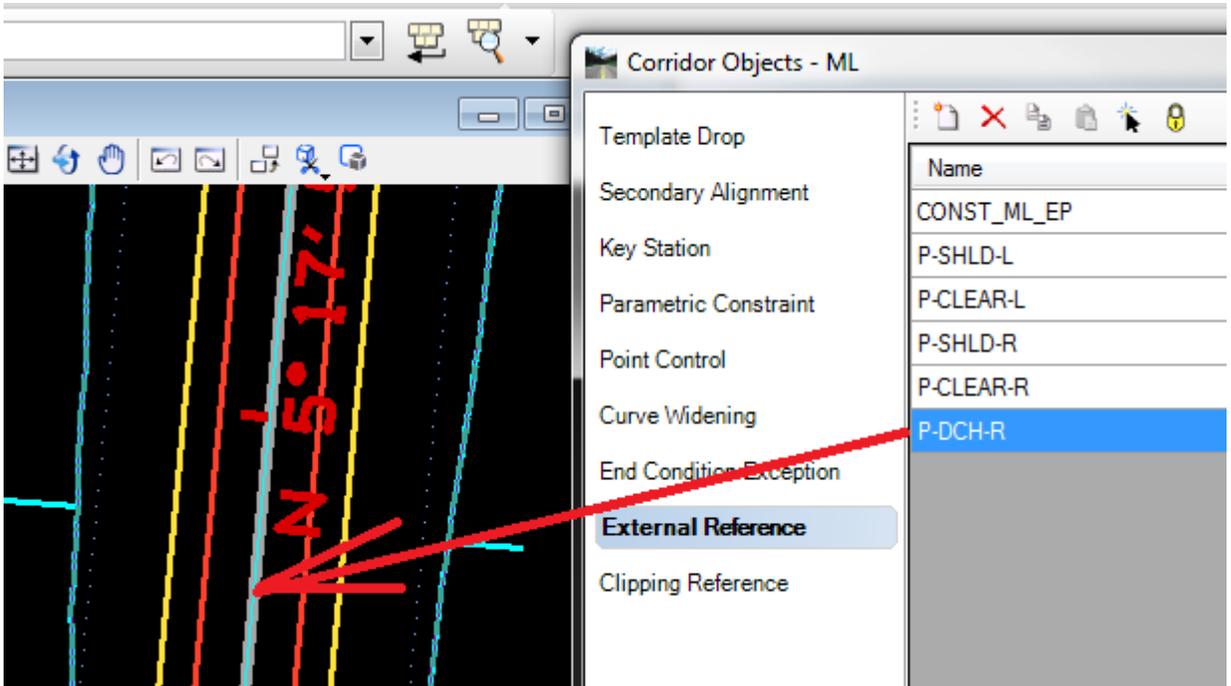


## Applying Ditch Profiles to Corridor.

8. Go to Corridor Objects.



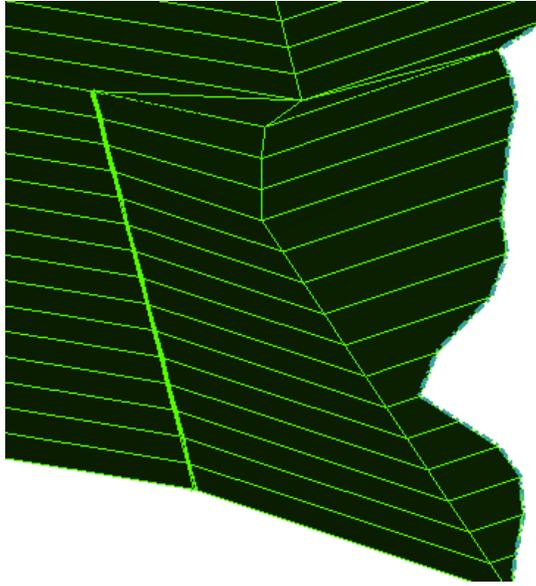
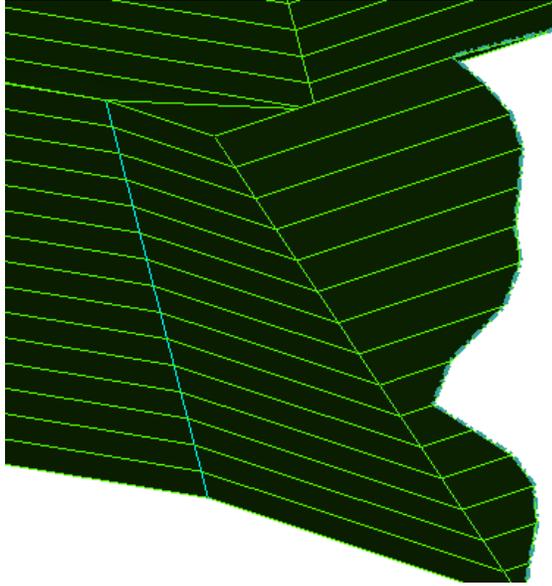
9. Add P-DCH-R as an External Reference.



10. The Ditch profiles should now be a part of your Corridor.

## NOTES

1. The steps above place a Fill Ditch. You may need to transition the Fill Foreslope2 where a Fill Section is leading into a Cut Section with a Parametric Constraint for "Fill Foreslope2 DCH" as shown below in a Cut to Fill Transition area or Vice Vera.
2. In cases where the grade is entirely in a cut section, set the "Fill Foreslope2 DCH" Parametric Constraint a constant value equal to "Fill Foreslope1".
3. As mentioned above, You'll need a Horizontal Alignment for each area where you change the grade from what is drawn naturally from the template.



Corridor Objects - ML

Template Drop  
Secondary Alignment  
Key Station  
**Parametric Constraint**  
Point Control  
Curve Widening  
End Condition Exception  
External Reference

Constraint Label	Enabled	Start Station	End Station
Fill Foreslope2 DCH	True	0+60.0000	0+80.0000

**Parametric Constraint**

Enabled

Constraint Label: Fill Foreslope2 DCH

Start Value: -33.3300%

Stop Value: -16.6667%

**Station Range**

Start Station: 0+60.0000

End Station: 0+80.0000