

PERFORMANCE SETTINGS

A guide to operating Performance Settings in Civil Site Design
V22.10 onwards



Civil Site Design

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Introduction

By default, the software updates every String as you make changes in the Vertical Grading Editor (VGE), after you have edited a design IP/PVI. The Models are updated and displayed in the Cross Section Viewer (CSV), the Plan View as well as the Model Viewer.

This dynamic behaviour on large models can result in a delay in the VGE window after you have made an edit. There are tools in the software to stop automatic updating, so there are no delays while editing the vertical design.

Automatic Updates can be suppressed while you have a VGE window open, or you can opt to disable automatic Model and Surface updates so they will only update when you are ready.

Accessing the Performance Settings Form

The Performance Settings (Advanced Rebuild Settings) form enables changes to the automated processes and can be accessed from multiple locations.

You can directly open the form from the dedicated ribbon command:

- *Roads tab > Active Drawing dropdown > Rebuild Settings*

Otherwise, the command can be run from other forms:


- *Roads tab > Active Drawing dropdown > Active Drawing Settings > Miscellaneous Tab > Advanced Settings button*
- *Roads tab > Modelling Panel > Toggle Display command > Extra Tab > Performance Settings button*
- *Vertical Grading Editor Window > Settings tab > Settings button > Performance Settings button*

Managing the Performance Settings

The **Performance Settings Form** provides access to a variety of controls to facilitate a faster design experience:

Automatic Updates:

1. Toggle on to disable the update of Network Strings (such as Roads, Kerb Returns and Cul-de-sacs etc.) updating when edits are made.

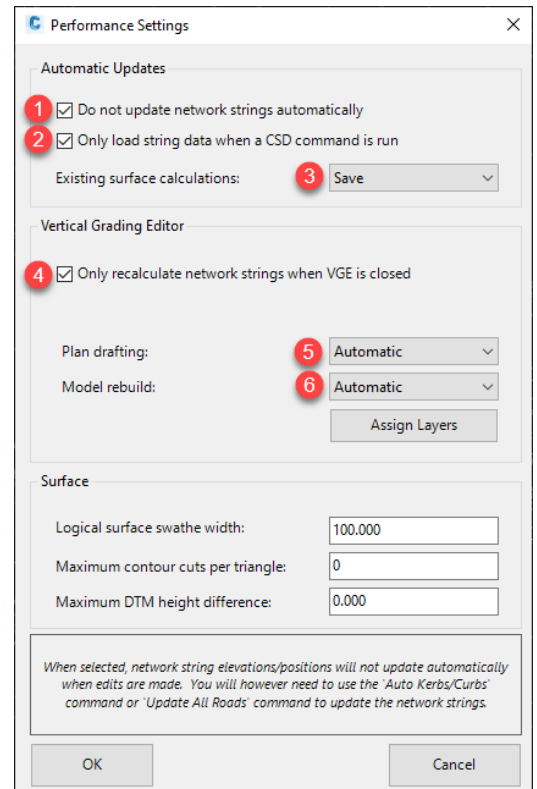
If toggled on, you will need to run the *Update all Road Objects*  command to update the Road and Network Strings.

2. Toggle on to stop Civil Site Design from loading when the drawing is opened.

This makes drawing opening/switching faster, but the design information will not update until a Civil Site Design command is run.

3. Set to *Save* the Existing Surface Calculations.

When set to *Save*, the information is saved to the data folder for faster recall and load. If set to *Redo*, sections are calculated when Civil Site Design is started in a drawing.



Vertical Grading Editor:

4. Toggle on to only recalculate Network Strings when the VGE is Closed.

When toggled on, models, surfaces and linework will only be updated when a VGE window is closed. This will reduce wait times while editing in the VGE window.

5. Toggle Plan Drafting to *Manual* to stop design linework being recreated on every edit in the VGE window. This typically has only a small impact on speed. If set to *Manual*, you will need to run the *Update all Road Objects*  command to update the Road and Network strings.


6. Model Rebuilding can be toggled to *Manual* to stop models (surfaces) from being updated during editing of the design in the VGE window.

If set to *Manual*, you will need to run the *Update all Road Objects*  command to update the Road and Network strings.

Manually Updating Strings & Models


When disabling some of the automated rebuild functionality to increase performance, you will need to intermittently refresh your data manually. Here are some of the manual rebuild commands:

-  **Update All Road Objects.**

Run the ribbon command *Roads Tab > Edit Panel >  Update all Road Objects*

Updates the Road Objects after an edit to a Road Network String such as a Road, Kerb Return, Cul-de-sac, Knuckle or Roundabout.

-  **Rebuild Models.**

Run the ribbon command *Roads Tab > Modelling Panel >  Rebuild Models*


Update the models in your project including the line work and surfaces of models that have both Road and non-Road (Profile) Strings.


Model Viewer Performance Enhancements


When Model Viewer is started, or updates following a design change, it will recalculate all models as well as update the trimming of the Base Surface to show all added design surfaces.


You can improve the speed and control updating of Model Viewer by doing the following inside Model Viewer:

- Home Tab > Auto Update option.

The Model Viewer is modeless and updates in real time as models are rebuilt. With this option toggled OFF, it allows users to make numerous edits and then click to  Refresh Model (or press [ctr]+[r+]) to update Model Viewer.

- Clicking on the Model Viewer's Fastdraw button  at the bottom of the form to cache the Base Surface (setting the trim boundaries and line marking as static).

This is a toggle, so clicking again will turn off Fast Draw. After turning off Fast Draw, click on the  Refresh Model button to update Model Viewer

- Turning off  the display of Objects, Cut-outs and Extrusions via the Objects tab > Display panel.
- Turning off labels via the Home tab > Viewer Settings command, then unticking the Tooltips tab > Show Tooltips toggle.

Civil 3D Object Output

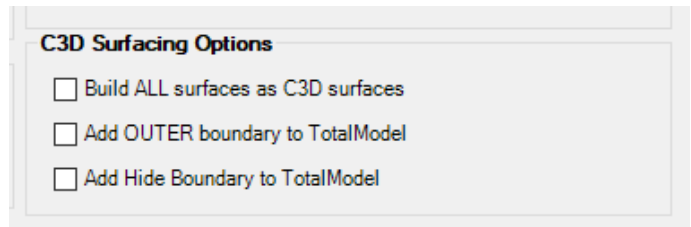
Civil 3D users have two options for automating output to Civil 3D objects:

Civil 3D Surfaces

In the Active Drawing Settings form (accessed from the Roads tab > Active Drawing dropdown > Active Drawing Settings), click on the Modelling tab to see the **C3D Settings Options**.

Untick the option 'Build ALL surfaces as C3D surfaces' to stop an automatic rebuild of Civil 3D surfaces whenever the design is changed.

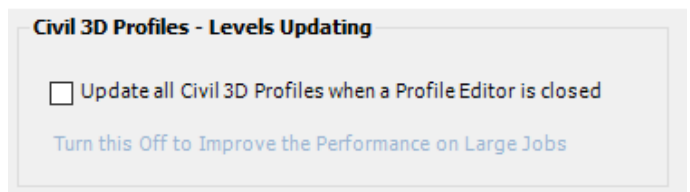
If this option is unticked, the  Civil 3D Surfaces command can be used to push an export/update to Civil 3D surfaces



Civil 3D Profiles and Profile Views

In the Active Drawing Settings form (accessed from the Roads tab > Active Drawing dropdown > Active Drawing Settings), click on the Vertical Grading Editor tab to see the **Civil 3D Profiles - Levels Updating**.

Untick the option 'Update all Civil 3D Profiles when a Profile Editor is closed' to stop automatic rebuild of Civil 3D profiles (and updating of profile views) whenever a Vertical Grading Editor window is closed.



This will make a big difference to performance as the project size increases. If this option is unticked, the  Create/update Civil 3D Profiles command can be used to push an update of all Civil 3D profiles and profile views.