

## Earthwork Modeling Step-by-Step Existing and Design Surface Adjustments

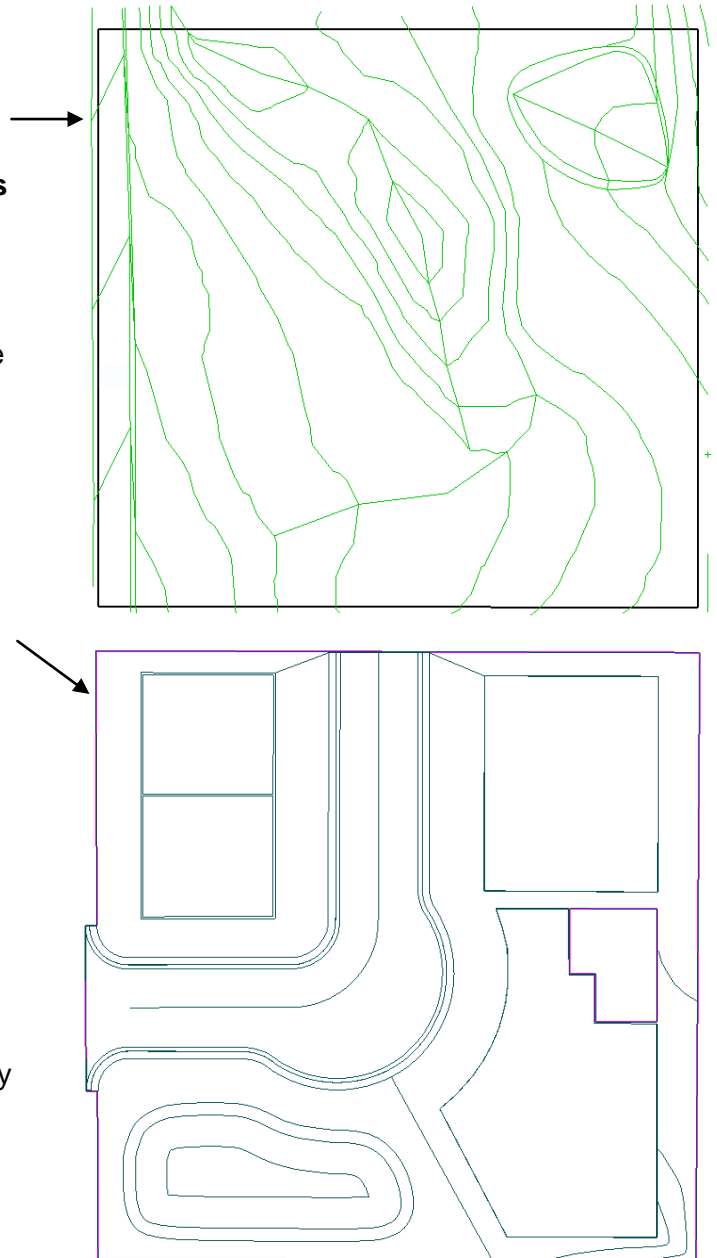
After the preceding steps, our AGTEK job file contains two completed surface models: **Existing** and **Design**. If these surfaces will be used for volume calculations, surface adjustments are typically required for realistic cut/fill volumes (see AGTEK's video at [www.agtek.com/video.html?id=235](http://www.agtek.com/video.html?id=235) for a basic preview of adjusting surfaces with Stripping Areas and Sectional Areas) . . .

The **Existing** surface is typically adjusted to model the stripping of topsoil and/or the removal of existing pavements/structures prior to grading. The most practical (although not the only) way to accomplish this adjustment is by entering one or more **Stripping Areas** (see next page).

- If topsoil stripping and/or removal of existing pavements/structures is not required, there is no need to make this adjustment to the Existing surface (skip pages 166-171).

If the **Design** surface has been modeled using Data Lines with *finish grade* elevations (top of slab, top of pavement, etc.—which is often the case), the Design surface may need to be adjusted to model subgrade ("dirt" grade after deducting the design sectional thickness of structures, pavements, etc.). The most practical (although not the only) way to make this adjustment is by entering **Sectional Areas** (see pages 172-195).

- If Sectional Areas (or a subgrade model) are not required, the AGTEK user may still want to enter **Report Regions** for cut/fill quantity subtotals (see page 172).
- If *Structures* in AGTEK's integrated **Gradework-Materials** module are *Applied* as Sectional Areas and Report Regions, skip the steps on pages 174-187 and use the methods on pages 188-192 to verify the *Applied* results. See AGTEK's training video at [www.agtek.com/video.html?id=536](http://www.agtek.com/video.html?id=536) for details on applying *Gradework-Materials* Structures for use as Sectional Areas and Report Regions.



**Q:** Can Existing and Design models *surfaced* from alignment cross-section data in Highway 3D/4D be adjusted using Stripping Areas and Sectional Areas?

**A:** Yes. For a couple of examples, see AGTEK's training videos at [www.agtek.com/video.html?id=317](http://www.agtek.com/video.html?id=317) and [www.agtek.com/video.html?id=64](http://www.agtek.com/video.html?id=64).