

Program and Vector Data Overview

Typical Vector Data File Manipulation Sequence

The typical steps for importing and processing vector data files are as follows . . .

- ◆ If you're new to importing vector data files, review the preceding pages (28-42) for some useful tips and background information.
- ◆ If the vector data files are compressed, they must be extracted before they can be read by AGTEK (see EXE and ZIP file types on page 43).
- ◆ In AGTEK, start by opening the vector data file (see page 54 for PDF, page 80 for CAD, and page 94 for LandXML).
- ◆ Use Import (CAD Transfer) mode to view, filter, select and transfer relevant imported vector data layers to the appropriate AGTEK surfaces/layers:
 - If expected vector data does not initially display in Import (CAD Transfer) mode, see page 73 (for missing vector PDF data) and pages 86-87 (for missing CAD data).
 - Also with CAD files, be sure to take advantage of important settings such as **Min/Max**, **Import Transfer Units**, **Join** and **Point Labels** (see page 89).
 - Use display options such as **Alt-B**, **Hide** / **Hide All But** with layer and object selection options such as **Ctrl** / **Shift** to efficiently select various sets of imported vector data for transfer (see pages 90-91).
 - Transfer selected vector data sets to the appropriate destination AGTEK Surface/Layer (see pages 92 and 95-97).
- ◆ If working with CAD/LandXML data, use a corresponding PDF plan sheet (or paper plan sheet in older AGTEK systems unable to import PDFs) to verify that the imported vector data matches the corresponding plan sheet:
 - Scale and align the PDF plan image (page 98) or paper plan sheet (*Appendix L*, page 415) using the CAD/LandXML coordinates.
 - Spot check against the scaled PDF (or paper) plan sheet to identify any unexpected horizontal and vertical deviations in the CAD/LandXML data (see page 100).
 - If a paper plan sheet is used for the verification, disable the digitizing tablet when done with the verification (see page 28).

Program and Vector Data Overview

Typical Vector Data File Manipulation Sequence (Cont.)

- ◆ Check, cleanup, and supplement the imported vector data:
 - Use 3D views and **Find Elevation** to identify grossly invalid elevations and use the Point/Line editors to correct them (see pages 101-103).
 - Use **Snap**, **Auto Pad** and **Conform** functions to convert 2D data to 3D data when practical (see pages 104-132). Offset (pages 73 and 124), “draft” (pages 123, 128 and the *Conceptual Modeling Exercise* in *Appendix J*), or manually digitize plan line work that can’t be imported from the vector files—see *Day 1 Handbook* for step-by-step details on manual digitizing from PDF/paper plan sheets).
 - After curb lines and other primary feature lines are converted to 3D, use the **Offset Line** and/or **Apply Template** utilities to enter any parallel or constant-relationship Data Lines (offsetting is fully documented on pages 134-151 of the *Day 1 Handbook*, but see pages 124, 153-154, 158-160, 182-184, 187-188 and *Appendix J* of this *Day 2 Handbook* for various offset examples).
 - Use **Snap** to enter “break lines” to correct any interpolation errors identified in the 2D/3D views (use the error-checking methods detailed in the *Day 1 Handbook*).
 - For grade control modeling, consider the “File Preparation Tips for Field Data” in *Appendix D* (pages 283-284).
- ◆ Enter Existing Perimeter(s) as required (see examples on pages 203, 214, 239, 344, 374, 376, 399; and additional details on pages 78-79 of the *Day 1 Handbook*).
- ◆ Enter Design Perimeter(s) as required (see examples on pages 202, 213, 374, 375, 399; and additional details on pages 162-163 of the *Day 1 Handbook*).
- ◆ Final Error-Check of Design Surface (pages 164-170 of the *Day 1 Handbook*).
- ◆ Enter Stripping Areas, if required (brief example on page 400 but see details on pages 172-177 of the *Day 1 Handbook*).
- ◆ Enter Report Regions/Sectional Areas, if required (see examples on pages 376, 401-403, and additional details and examples on pages 178-199 of the *Day 1 Handbook*).
- ◆ Enter Strata data, if required (see pages 27-53 of the *Day 3 Handbook*).
- ◆ Calculate and document volumes as needed (see calculation/reporting examples on pages 230-234, 404 and 410, and full details on pages 223-230 and *Appendix E* of the *Day 1 Handbook*).
- ◆ (AGTEK 4D Only) Geo-reference job file (pages 134-138 for SPC method and *Appendix I* for Google Earth method); export job file data to KMZ for Google Earth (*Appendix D*, pages 291-293).