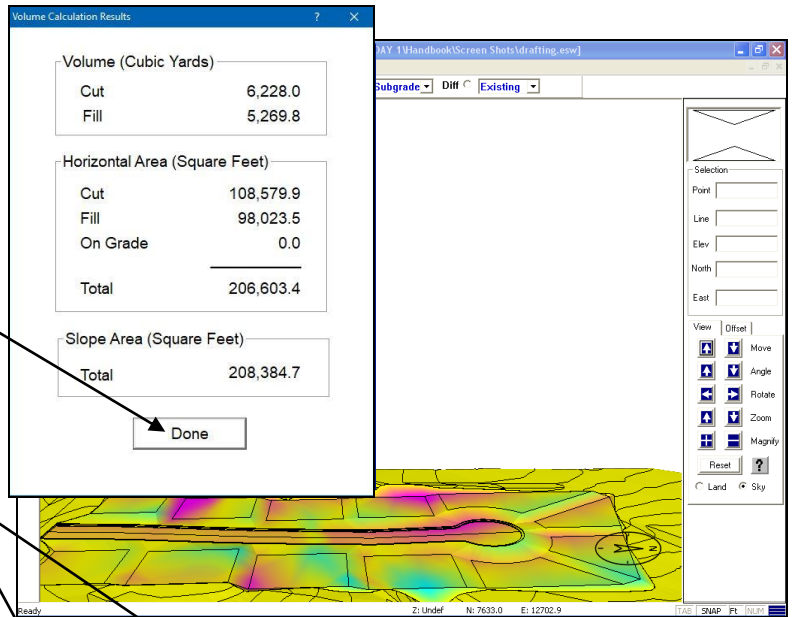


Appendix J Design and Drafting Tools (Cont.)

With the adjustments and assumptions applied, let's update the grading volumes for our design ...

Step 63: Switch to **3D View** mode, set **Ref Surface** to **Subgrade** and **Diff Surface** to **Stripped**, click the **Volume Area** toolbar button then click the **Calc Volume** toolbar button. When the *Results* dialog displays, click **Done** to view the updated Volume Report.

After stripping 4" topsoil (2,536 BCY) and applying 15% cut-to-fill shrinkage, our design requires 6,228 BCY of cut and 6,061 BCY of fill, resulting in a net export of just 167 BCY. Excluding the stripped topsoil (some of which would likely be used in the non-pad lot areas) and any spoil volumes, it looks like we have a balanced site design.



See pages 212-214 in the *Day 1 Seminar Handbook* for details on interpreting AGTEK's Volume Report.

Volume Report Subgrade vs. Stripped												
	Total	Area		Volume	Comp/Ratio		Compact		Export	Change		
		Cut	Fill	OnGrade	Cut	Fill	Cut	Fill	Import	Per	.1 Ft	
Lots	176,007	80,500	95,507	0	4,454	5,198	1.00	1.15	4,454	5,978	-1,524	750
Roadbed	26,359	24,773	1,586	0	1,635	37	1.00	1.15	1,635	43	1,592	112
Walks	4,237	3,308	929	0	139	35	1.00	1.15	139	40	99	18
Regions Total	206,603	108,581	98,022	0	6,228	5,270			6,228	6,061	167	880
Stripping Qtys		Plane Area	Slope Area	Depth	Volume							
Strip Topsoil		206,603	207,496	0.330	2,536							

Step 64: (Optional) To generate contours for the final **Design** surface, switch to **Edit** mode, set **Surface** to **Design** then select **Utility > Contour Surface** from the menu. In the resulting *Edit Contour Interval* dialog, enter the desired **Interval** value (2 feet here) then click **OK**. [The **Apply Smoothing** option produces rounded contour bends rather than the default angular bends.]

Step 65: Generate any required documentation (see *Appendix E* in the *Day 1 Seminar Handbook*) and/or export data for use in a CAD system (see *Appendix D* in this *Day 2 Seminar Handbook*).

No further grade adjustments were needed in this example, but the "Balancing Onsite Cut and Fill" exercise in the *Day 3 Seminar Handbook* documents some additional adjustments. AGTEK's webinar video at www.agtek.com/video.html?id=535 also includes some interesting site design and balancing manipulations (starting at ~17:29 min mark and running to ~37:00 min mark).

