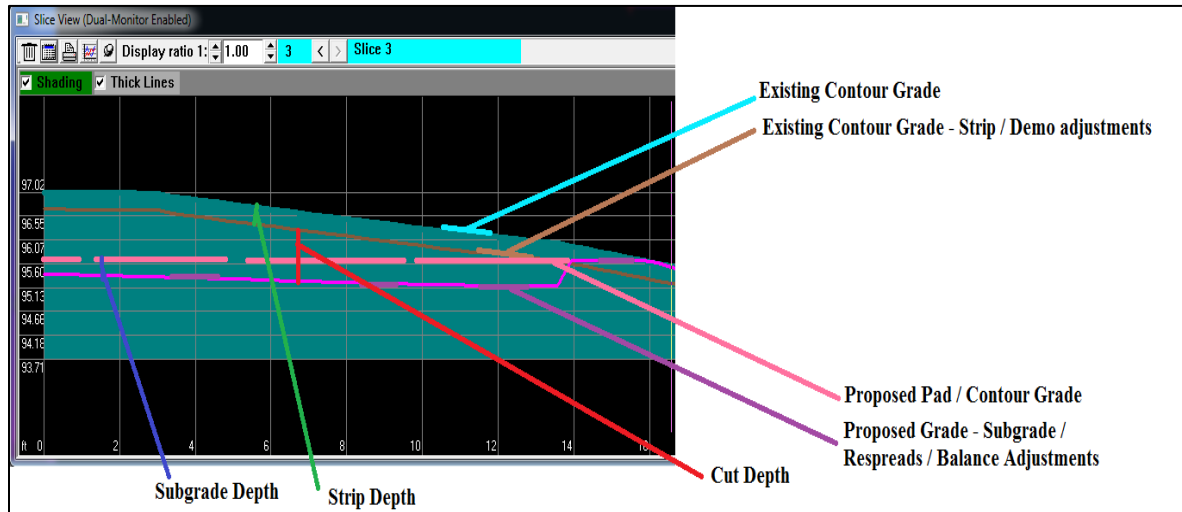# Category Report Overview

Surface Overview: Understanding Surface Calculation

Below is a basic review the surfaces that are used to calculate most of your volumes.

Section 1: Job & Work Region Summary

This section provides a quick reference for all the surface area calculations used in the rest of the report.

Region	Exist-2D(ft²)	Exist-3D(ft²)	Prop'd(ft²)	Cut(ft²)	Fill(ft²)	Av.Dist(ft)	Perimtr(ft)
Total Work Region	61338	61400	62290	44593	14451	98	1144
Pad 1	3483	3484	3483	3490	0	-----	275
Paving Area	24315	24336	24331	24323	0	-----	1629
Concrete	2172	2172	2178	1394	658	-----	591
Topsoil Respread Area	31368	31412	31734	18880	13793	-----	3638

- Exist-2D is the "Plan Area" or area based on a flat surface. If you took a ruler to a piece of paper this is area you would calculate.
- Exist-3D is the area based on the changing existing contour grade. This allows for the calculation of strips/demo on hilly terrain.
- Prop'd is the same as the Exist-3D but for the proposed grade.
- Cut is the area that has a Cut depth greater than zero
- Fill is the area that has a Fill depth greater than zero
- Av.Dist is the Average Haul distance for the Total Work Region
- Perimtr is the perimeter of the Total Work Region

Section 2: Job Strip-Respread Section

Region - Stripped Area	Existing Area - 3D(ft²)	Prop. Area - 3D(ft²)	Depth(in)	Volume(yd³)
Strip (Not included in Exports)				
Site Grading Area	61400	-----	4.00	758
Job Total - Cumulative				758
Re-Spread at 0% Compaction. (Adjusted against Imports and is respread over Proposed Surface)				
Topsoil Respread Area	-----	31734	4.00	392
Job Total - Cumulative				392
Strip Remaining				366

- "Strip" is the volume of the adjustment between the existing contour grade and the strip/demo grade. This adjustment depth is applied to the existing-3D surface area. Uneven terrains will have more strip volume.
    - This example only has one region with strip; however, it is possible to strip multiple areas of different depths. The total strip volume for all strip areas is displayed as "Job Total – Cumulative".
- Re-spread is the volume of strip put pack on site and is adjusted against the Prop'D Area. This can increase cuts and/or reduce fills required.
- "Strip Remaining" is the Net between all expanded strip volumes and all compacted re-spread volumes. This is the total strip volume that needs to leave the site. To edit the expansion and compaction of strips/respreads or cuts/fills go to the Edit Menu and select Edit Job settings.

Section 3: Cut and Fill Section

This is the "normal dirt cuts & fills" section. This covers the volume between the bottom of strip/demo grade and the bottom of subgrade/re-spread/balance grade.

Region	Bank Cut (yd³)	Bank Fill (yd³)	Expnd. Cut (@0.00%)(yd³)	For Comp. Fill (@0.00%)(yd³)	Export/Import (yd³)
Pad 1	158	0	158	0	158
Paving Area	1040	0	1040	0	1040
Concrete	15	1.98	15	1.98	13
Topsoil Respread Area	417	380	417	380	36
Total Work Region	**1472**	**382**	**1472**	**382**	**1089**

- The "Total Work Region" covers the entire site and is the single line item to determine how much normal dirt will be cut on site, filled on site, and the net amount that will need to be hauled on or off. This volume is for normal cuts/fills only and does not include any strip haul off or demolition haul off. Additionally, expansion and compaction can be added under the Edit Menu by selecting Edit Job Settings.
- Each named Work Region/Pad will also display the cuts/fills within its border in case an area needs to be priced separately. You may not simply add the named areas together to equal the "Total Work Region" as it includes all the cuts/fills for the entire site, not just within the named areas.

Section 4: Material Section

This is the material imports section of the report and includes named material subgrades.

Material	Region	Surface Area(ft²)	Thickness(in)	Volume(yd³)	Weight(tons)
Concrete					
	Pad 1	3483	6.00	64	129
	Concrete	2178	5.00	34	67
Total				98	196
Crushed Stone					
	Pad 1	3483	6.00	64	97
	Paving Area	24331	6.00	451	676
Total				515	773
Asphalt					
	Paving Area	24331	4.00	300	601
Total				300	601
*NativeTopSoil(Strip)**					
	Topsoil Respread ...	31734	4.00	392	392
Total				392	392
Total Work Region (required)				1305	1962
Total Work Region (less Native Strip of 392 yd³)	--			913	1570

- This section will list the material name as entered in the Materials Library. Next, it will list all areas that contain that material, the Prop'D surface area of each (sloped areas will have greater volumes), the Thickness entered within each area, the Volume within each, and finally the Tonnage as calculated by the Ton Conversion Ration within the Material Library for each.
- At the end of each material is the Total Volume and Tonnage of each material type. Please note "flat adjustments" or "un-named" subgrade depths entered within a Work Region/Pad will adjust cut/fills but will not show up in this section.

Feel free to call for a complete walkthrough of the report or for any additional questions.

Roctek International
800-826-7763