Session 6: Creating a Report

Objective:

By the end of this session, you will be able to:

- Create reports by using the **Create Report** command in the **Drawings and Reports** task.

Prerequisite Sessions:

- SP3D Overview
- Drawings and Reports: An Overview

Overview:

Reports list the objects that exist in the model along with the parameters such as part number, class, description, location, and approval status. These parameters are defined in the report template that you select while creating a report. Report templates control the content and format of the reports. These templates contain the necessary SQL statements and links to other templates to extract the required information to produce a report.

In **Drawings and Reports** task, you create reports by using the **Create Report…** command. You can also add, delete, modify items in a report and compare it with a previously created report to view the changes between the two reports.

Reports are divided into two categories, personal reports and Catalog reports. Personal reports use templates that you create and save. Catalog reports include report templates that are delivered with the software and the templates of the reports created by users. The Catalog reports are further divided into report component folders. For example, the Piping-related reports and all their supporting files are located in the Piping folder. The reports in this location are Catalog reports and are bulkloaded into the Catalog database.

This session will cover the procedure for creating a report from a template delivered as a Catalog report.

Steps for Creating a Report:

Create a report to include all the Electrical, HVAC, and Process equipment placed in Unit **U01**. The report should include the parameters: Location – with Unit of Measure - Primary ft and Secondary in, Matrix – Global, Description, Permission Group, and Approval Status of the equipment.

1. Click the **Tasks > Drawings and Reports** command to switch to the **Drawings and Reports** task.

2. In the **Management Console**, verify that at least one spreadsheet report component exists. If none exists, then add a component for reports.

3. Right-click the spreadsheet reports component, and click **Create Report** to create a new report, as shown in Figure 1.
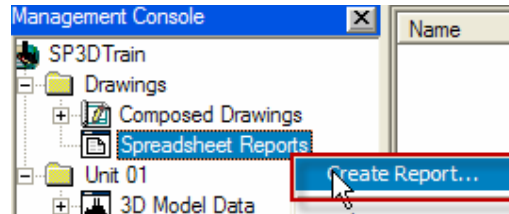

Figure 1: Create Report... Command

4. In the **Select Report Template** dialog box shown in Figure 2, select the **Equipment** category under the **Types of Reports** folder to select a report template to include equipment in the report.

5. The names of the report templates are listed in the right side of the **Select Report Template** dialog box along with their descriptions. Select the **Equipment Location Sorted by Equipment Name Style 1** report template to include the equipment with their location, description, permissions, and approval status and click **OK**, as shown in Figure 2.
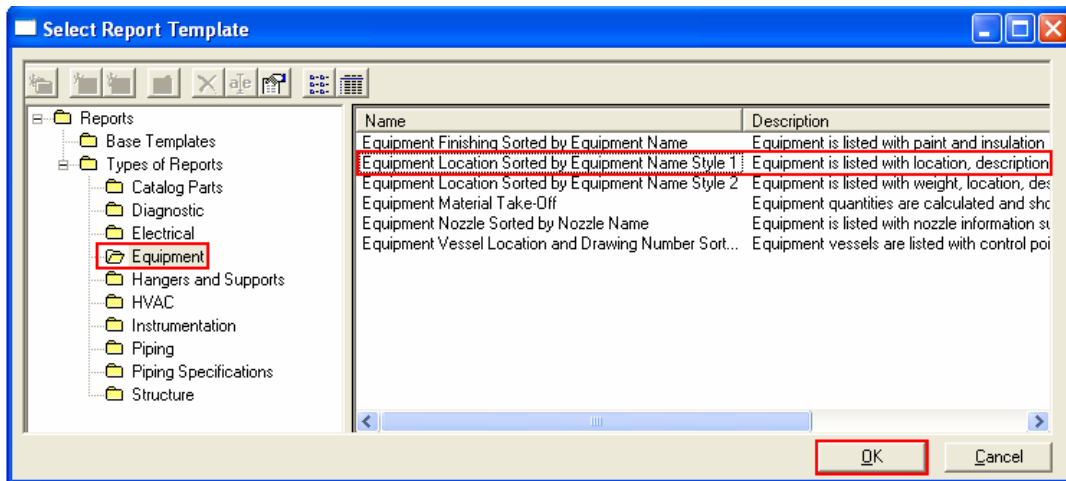
Figure 2: Select Report Template Dialog Box

8. The software prompts for parameters or a filter if the selected report template requires these inputs. In the **Filter Properties for Asking Filter** dialog box, select Unit **U01** to include as a parameter in the report, as shown in Figure 3.
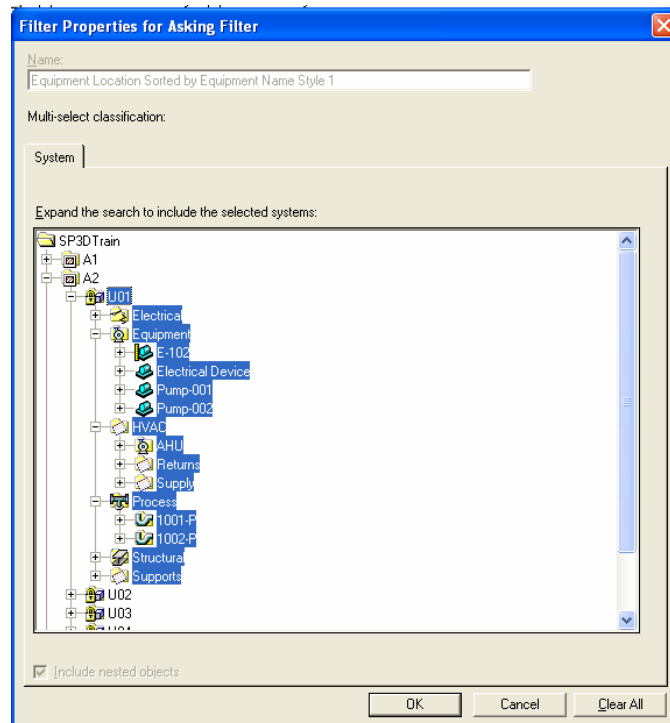
Figure 3: Filter Properties For Asking Filter Dialog Box

9. The **Report Parameters** dialog box appears as shown in Figure 4. You can click browse to select a baseline report if you want to compare the report with any previously created report.

   Click **Next** to continue if you do not have any baseline report created or you do not want to compare this report with any other report.
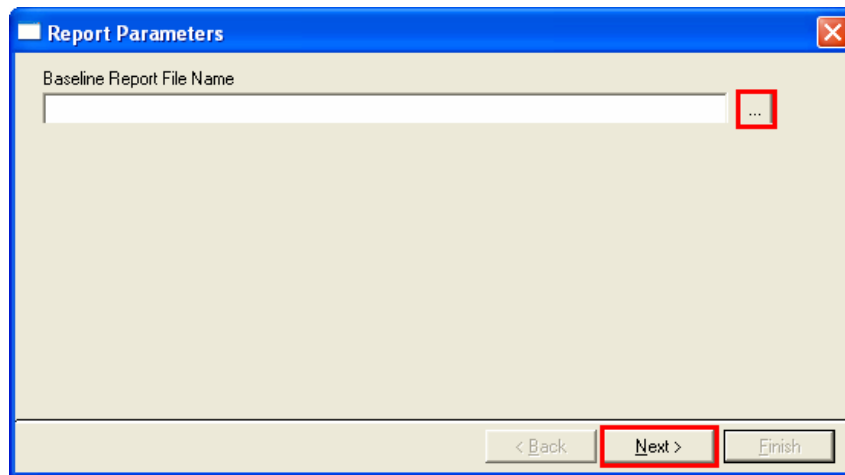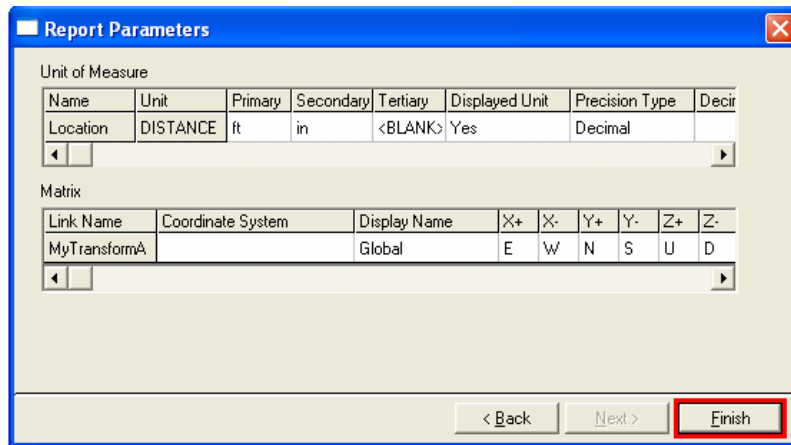
11. Right-click the report, and click **Update Now** to update the report to the model database as shown in Figure 7.
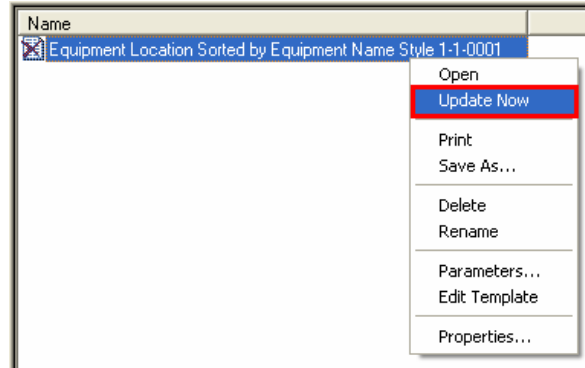

Figure 7: Update Now Command

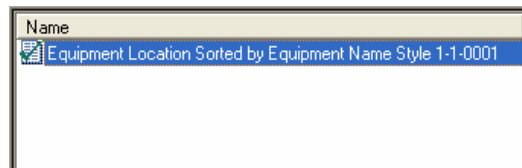After updating the report the software displays the report in the **Detail View**, as shown in Figure 8.

Figure 8: Report Updated in Detail View

Note:

- You can modify the report template if needed. Right-click the report in the **Detail View**, and click **Edit Template**. You can add tabs using commands on the **Tools** menu, and you can save the report template using **File > Save Report Template** command. For more information regarding editing a report template, you can refer to the *Edit a Report Template* topic in the *DrawingsandReportsUsersGuide.pdf*.

12. Double-click the report to view it. The software generates the report in the standard format, as shown in Figure 9. The default file format of reports in SP3D is Microsoft Excel®.

Figure 9: Output – Generated Report

Steps for Editing Report Parameters:

The **Parameters...** command specifies the parameters for a report, such as units of measure and coordinate systems. This command can be accessed by right-clicking a report in the **Detail View**. **Parameters** are defined in the report template.

1. In the **Drawings and Reports** task, locate the report **Equipment Location Sorted by Equipment Name Style 1-1-0001** that was created in the previous lab. Right-click on the report and select **Parameters...** from the right-click menu, as shown in Figure 10.
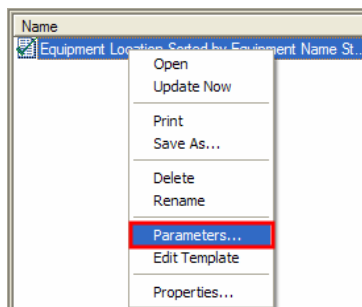

Figure 10: Parameters Command

2. The software prompts for parameters or a filter if the selected report template requires these inputs. In the **Filter Properties for Asking Filter** dialog box, select Unit **U01** to include as a parameter in the report, as shown in Figure 11.
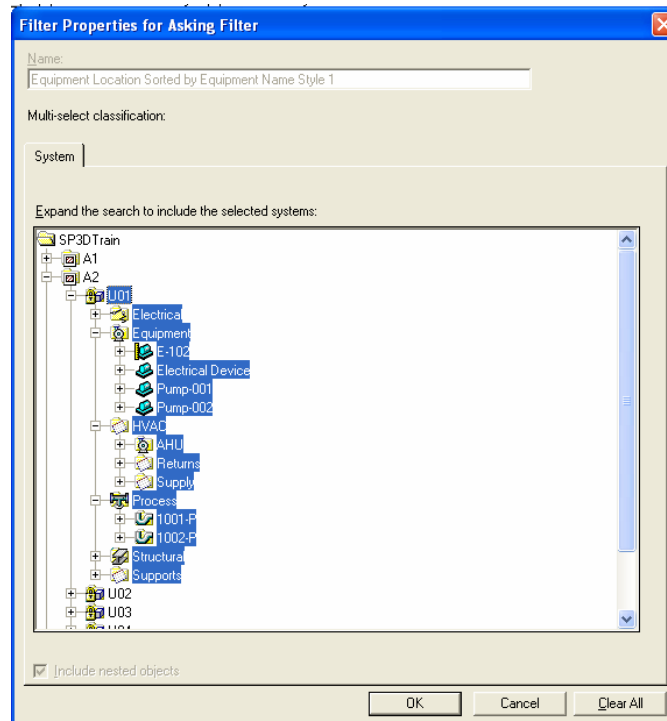

Figure 11: Filter Properties For Asking Filter Dialog Box

3. The **Report Parameters** dialog box appears as shown in Figure 12.

Click **Next** to continue if you do not have any baseline report created or you do not want to compare this report with any other report.
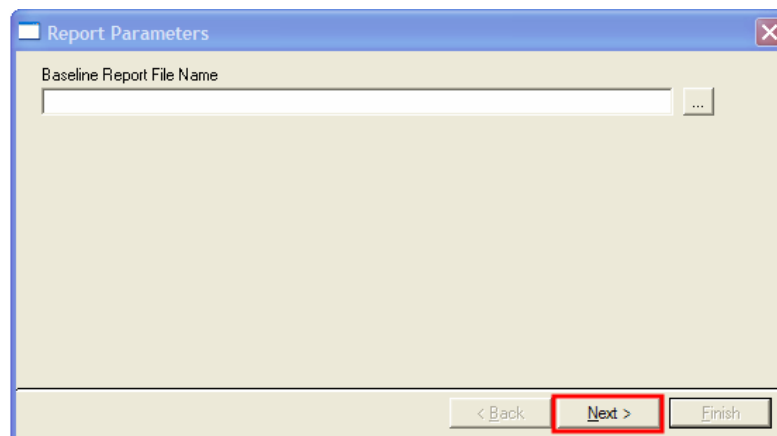
Figure 12: Report Parameters Dialog Box

4. The **Report Parameters** dialog box displays the **Unit of Measure** and **Matrix** properties for the report. For the **Units of Measure** setting, select in the **Primary** column, indicating primary units, and change the value to **mm**, as shown Figure 13. Likewise, for the **Matrix** setting, change column **Z+** and **Z-** to contain the values **EL** and **EL -**, and then click **Finish** as shown in Figure 16.
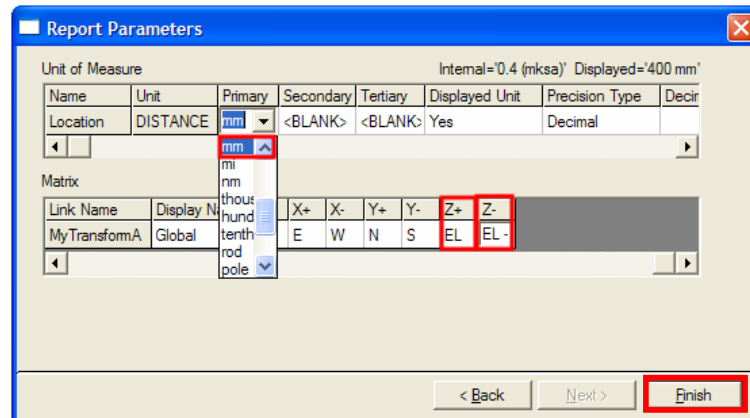

Figure 13: Report Parameters Dialog Box

5. Right-click the report, and click **Update Now** to update the report to the model database, as shown in Figure 14.
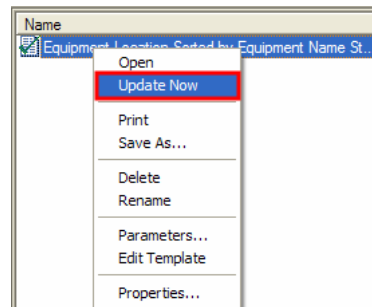

Figure 14: Update Now Command

After updating the report the software displays the report in the **Detail View**, as shown in Figure 15.
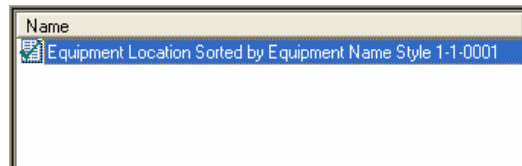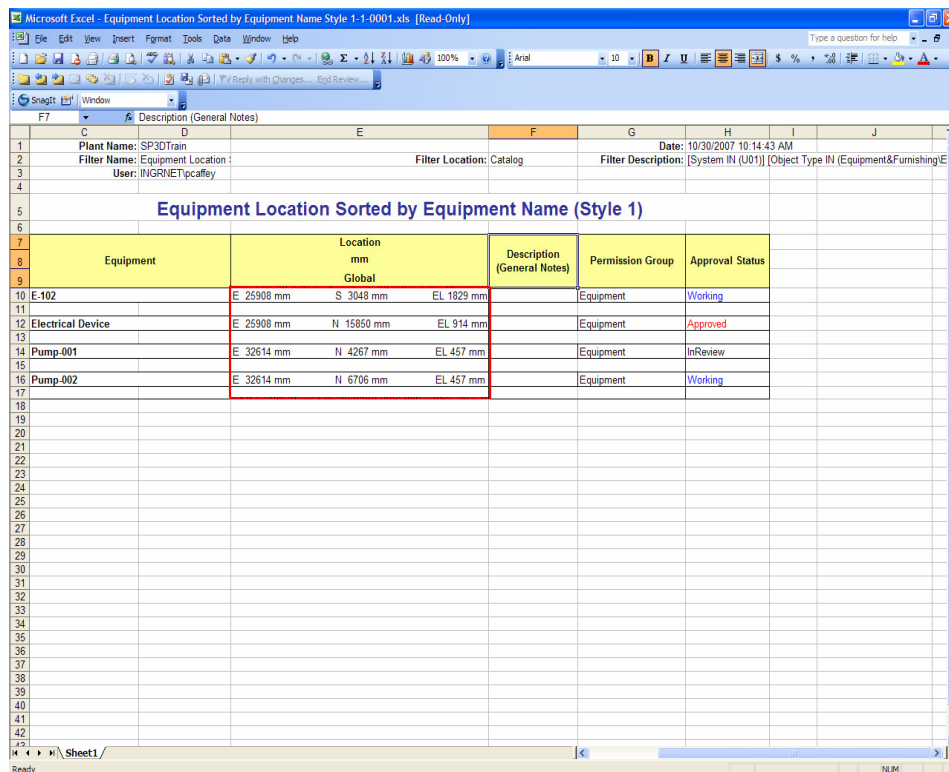
Figure 15: Report Updated in Detail View

6. Double-click the report to view it. Notice, in Figure 16, the Units of Measure and the Elevation labels on the Coordinate readout.

Figure 16: Output – Generated Report After Modifying Report Parameters

Steps for Creating a Baseline Report:

Baseline Reporting uses a differential report showing changes in comparison to the baseline report. For example, you can view which items have been added, deleted, or modified in the two reports. Baseline information is not currently editable.

1. In the **Drawings and Reports** task, locate the report **Equipment Location Sorted by Equipment Name Style 1-1-0001** that was created in the previous lab. Right-click the report and select **Save As** from the right-click menu, as shown in Figure 17.
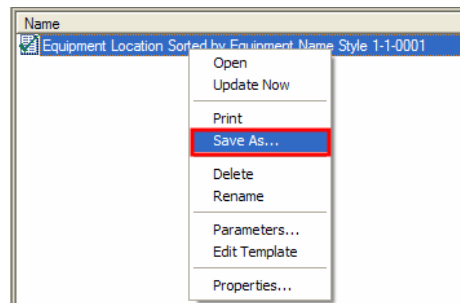
Figure 17: Save As Command

2. Use the **Browse** button on the **Save As** dialog box to navigate to the local machine's **C:** drive, as shown in Figure 18.
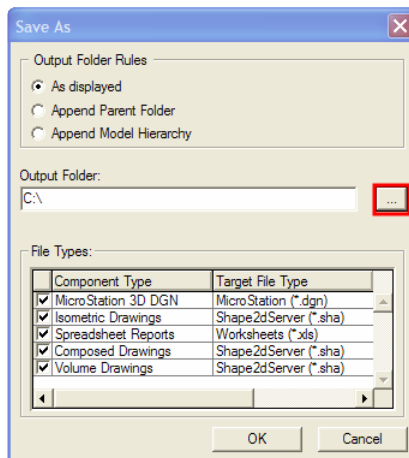

Figure 18: Save As Dialog Box

3. Change tasks to the **Equipment and Furnishings** task and right-click the equipment named **E-102**, and select **Properties** from the menu, as shown in Figure 19.
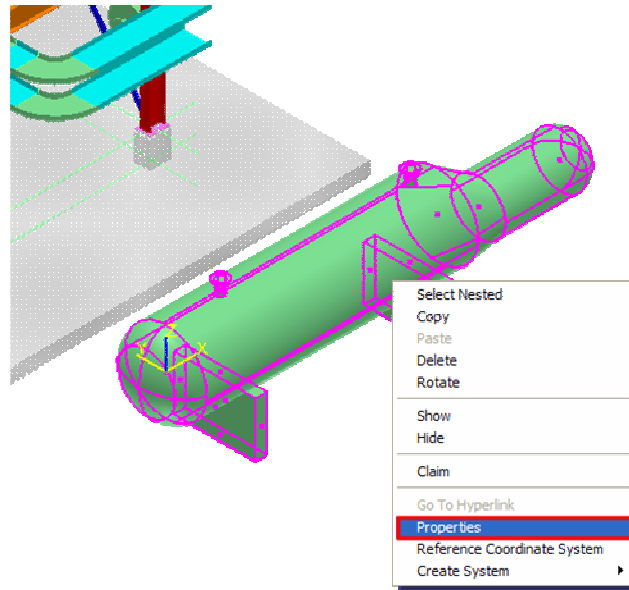
Figure 19: Equipment Properties Command

4. On the **Equipment Properties** dialog box, navigate to the **Configuration** tab and change the **Status** of the equipment from **Working** to **Rejected** and click **OK** in the dialog box to apply the changes, as shown in Figure 20.
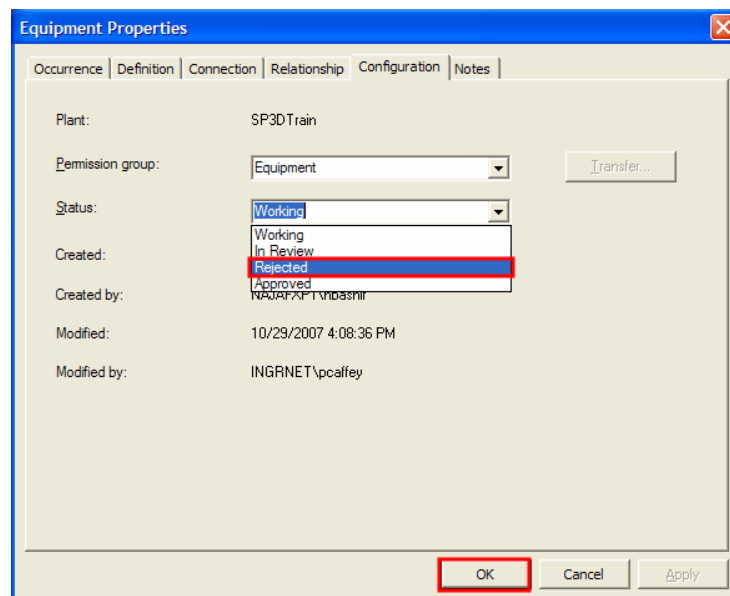

Figure 20: Equipment Properties Dialog Box

5. Change tasks back to the **Drawings and Reports** task. Locate the report **Equipment Location Sorted by Equipment Name Style 1-1-0001** and right-click the report. Select the **Parameters** option on the right-click menu, as shown in Figure 21.
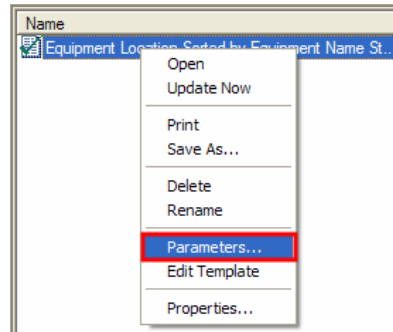
Figure 21: Parameters… Command

6. The software prompts for parameters or a filter if the selected report template requires these inputs. In the **Filter Properties for Asking Filter** dialog box, select Unit **U01** to include as a parameter in the report, as shown in Figure 22.
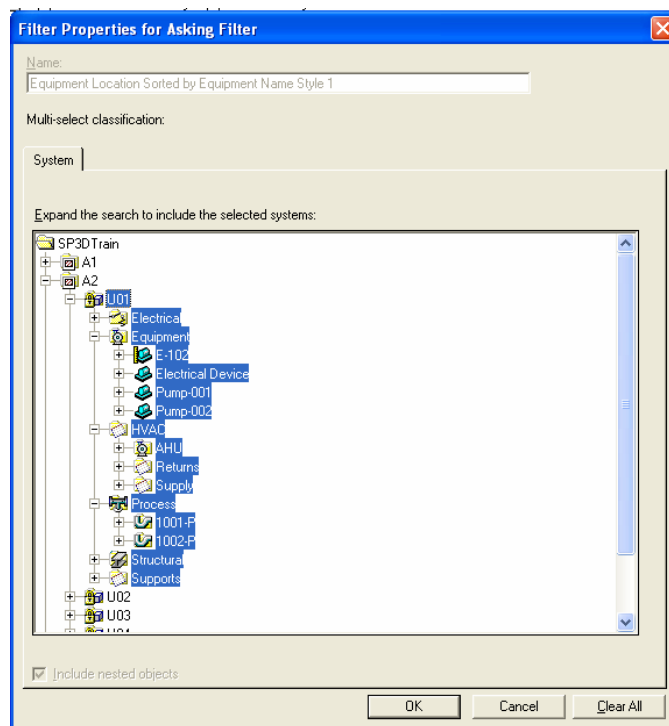

Figure 22: Filter Properties For Asking Filter Dialog Box

7. The **Report Parameters** dialog box appears as shown in Figure 23. You can click browse to select a baseline report if you want to compare the report with any previously created report.

   Select the **Browse** button and navigate to the report that was saved in **C:** drive in step 2.
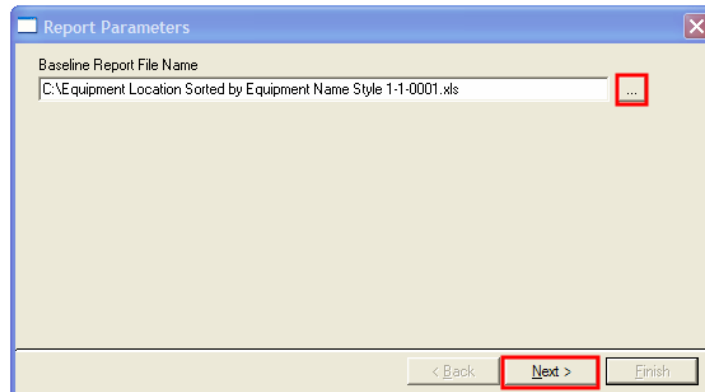
Figure 23: Report Parameters Dialog Box

8. The **Report Parameters** dialog box displays the **Unit of Measure** and **Matrix** properties for the report. You can change these properties as per your requirements, and then click **Finish**, as shown in Figure 24.
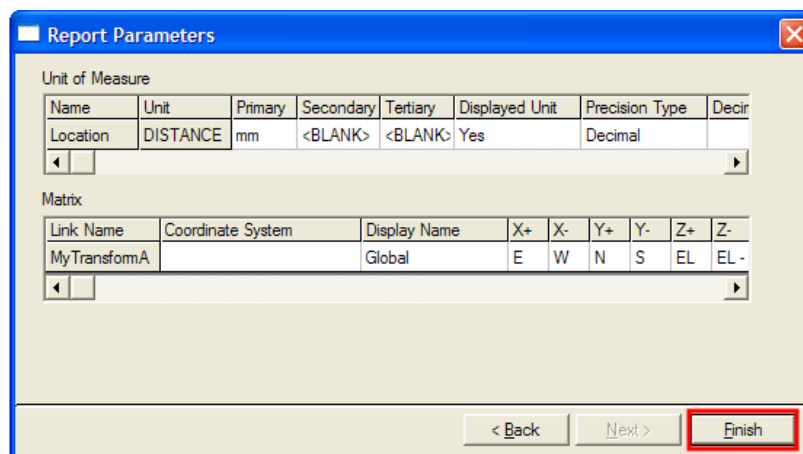

Figure 24: Report Parameters Dialog Box

9. In the **Detail View** of the **Drawings and Reports** task, right-click the report **Equipment Location Sorted by Equipment Name Style 1-1-0001** and select **Update Now**, as shown in Figure 25.
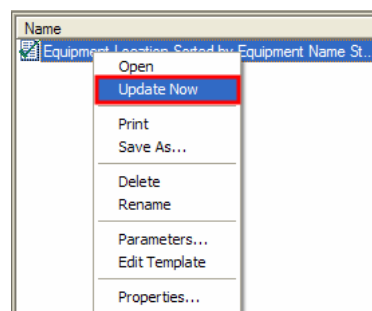

Figure 25: Update Now Command

10. Double-click the report to view it. The software generates the report in the standard format, as shown in Figure 26. The default file format of reports in SP3D is Microsoft Excel®.

Notice the change noted on the report from the last time that the report was run. The row in dark gray is the row that has changed preserving all the values as they were found in the report we used as the **Baseline Report**. Then notice the row, immediately following the grayed out row, contains the newly defined value.
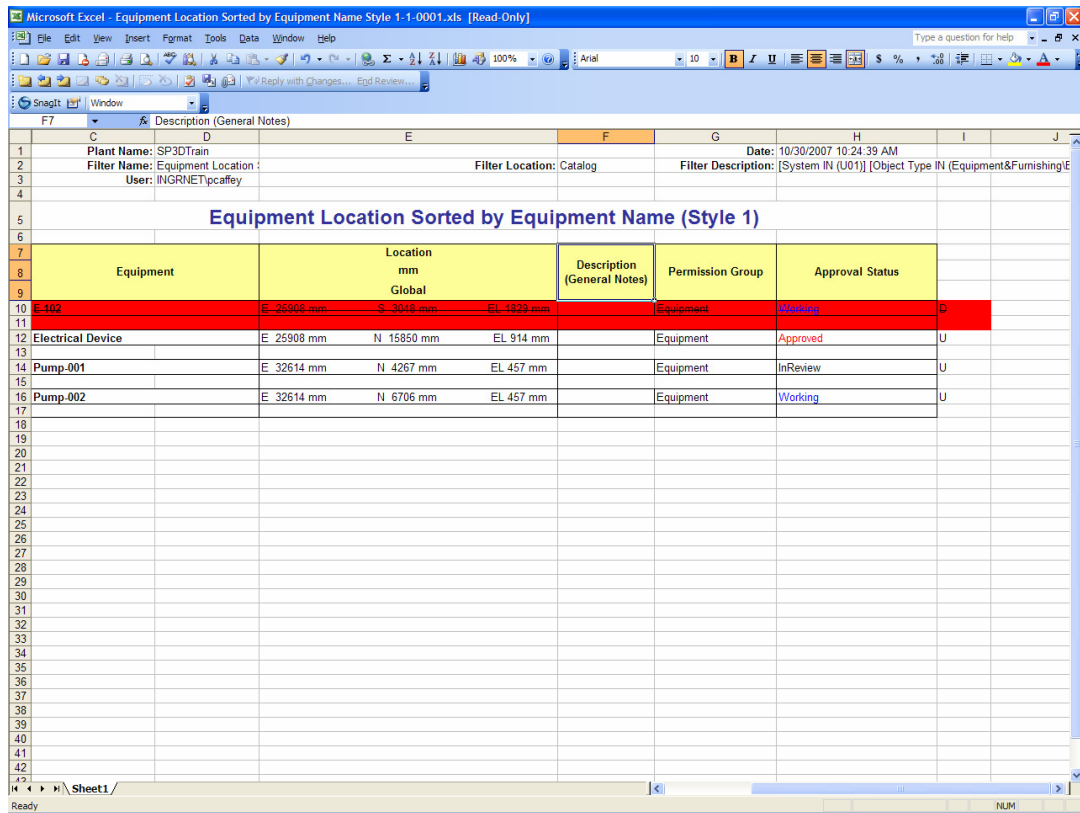

Figure 26: Output – Generated Report Using Baseline Report

11. Change tasks back to the **Equipment and Furnishings** task and right-click the equipment named **E-102**, and select **Properties** from the menu.

12. Change the Status of the equipment **E-102** back to **Working** and delete equipment **E-102**.

13. Change tasks back to the **Drawings and Reports** task and re-update the report.

14. View the report. Notice, in Figure 27, the **E-102** equipment row being called out is highlighted in red with a line marked through the entire row. This indicates that the equipment has been deleted out of the model from the last time that this report was run

(using Baseline Reporting).

Figure 27: Output – Generated Report Using Baseline Report

Tip:

- For reports to view on computers, you need to modify the security settings in Excel to allow Visual Basic projects to run. To change this setting, open Excel, and click **Tools > Macro > Security**. On the **Trusted Publishers** tab, select **Trust access to Visual Basic Project**. You should verify this setting before creating reports.

For more information related to creating a report, refer to the *Spreadsheet Reports: An Overview* topic of the user guide *DrawingsandReportsUsersGuide.pdf*.