

Practice Exercise 4

Develop a Material Takeoff



Learning Objectives that are covered within this practice exercise are:

- 4.2a Develop and customize schedules

Video resources that may help with this challenge exercise are:

- 029 - Developing and customizing schedules.mp4

Criteria: In this practice exercise you are required to calculate the total volume of concrete used for estimation purposes.

The following steps need to be completed:

1. From the Practice Exercise folder, open the Revit model Practice Exercise 4. The model will open with the 3D view active.
2. Create and modify a material takeoff displaying the total quantity of concrete required in cubic feet.

Your schedule should look like the image shown below.

<Concrete Volume>	
A	B
Concrete Grade	Material: Volume
NWT5ksi	21179.11 CF
Grand total: 43	21179.11 CF

Practice Exercise 4

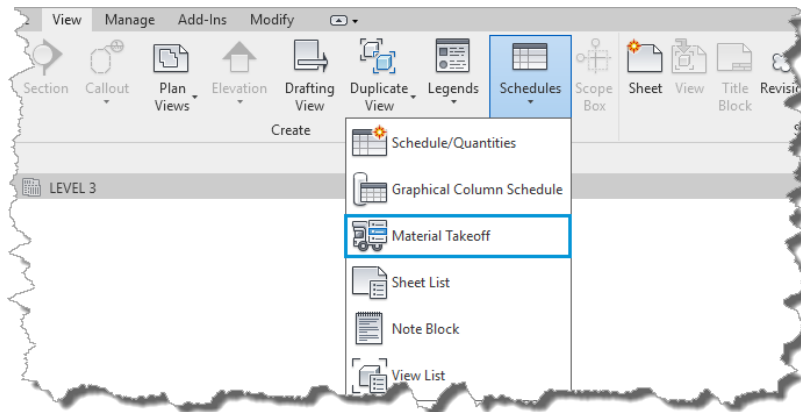
Develop a Material Takeoff



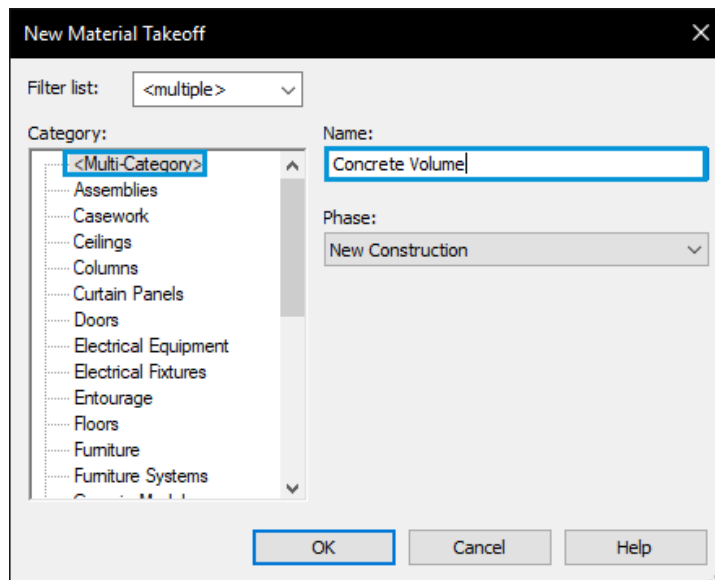
Solution:

To create a tabular schedule that displays the total volume of concrete you are required to create a material takeoff.

1. From the Practice Exercise folder, open the Revit model Practice Exercise 4. The model will open with the 3D view active.
2. On the View ribbon in the create panel, click Schedules and then select Material Takeoff as shown in the image below.



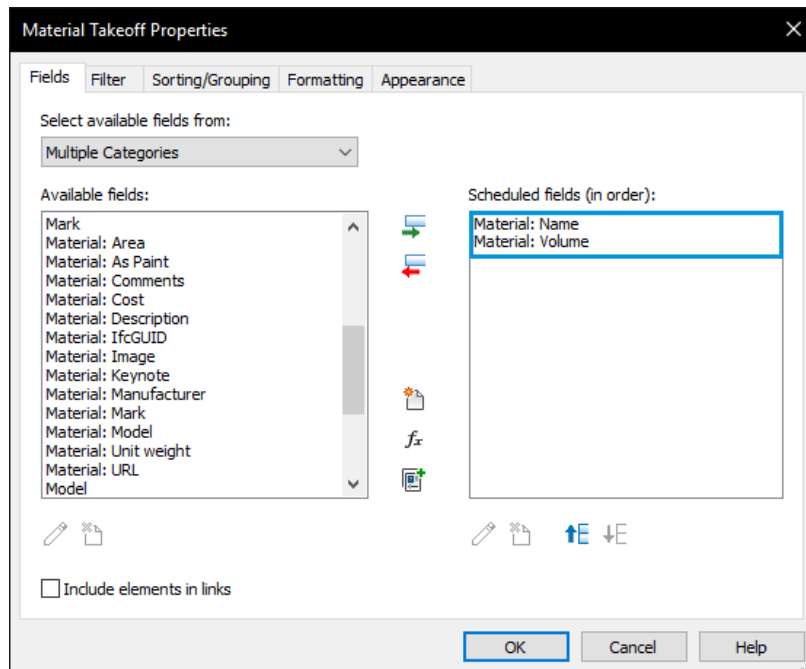
3. In the New Material Takeoff dialog, ensure that Multi-Category is selected and then name the schedule Concrete Volume as shown in the image below.
4. Click OK.



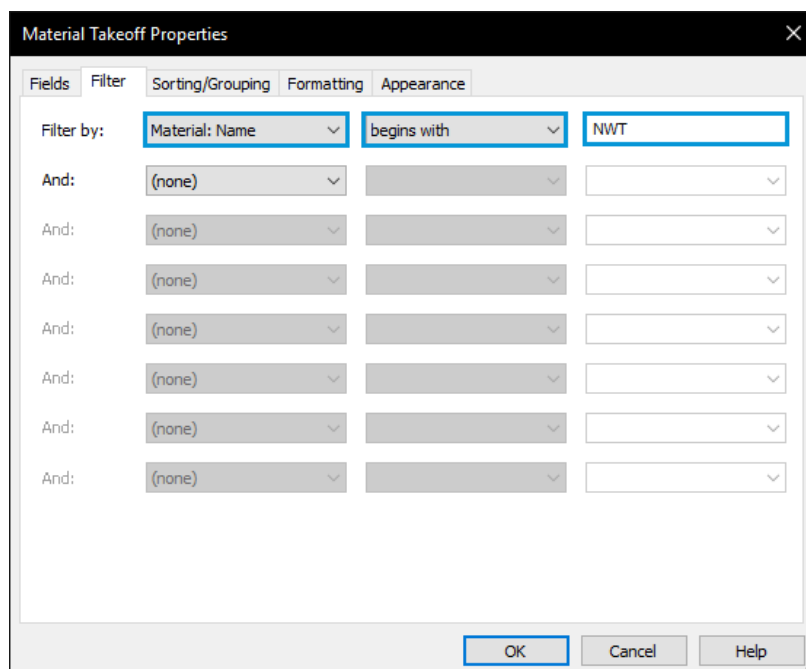
Practice Exercise 4

Develop a Material Takeoff

5. In the Material Takeoff Properties dialog on the Fields tab, add Material:Name and Material:Volume to the Scheduled fields list as shown in the image below.



6. On the Filter tab, you create a filter to only show materials that contain concrete. There are many solutions to this, for example you could use Material:Name begins with NWT.



Practice Exercise 4

Develop a Material Takeoff



- On the Sorting/Grouping tab set Sort by to Material: Name. Check Grand Totals and uncheck Itemize every instance. This will roll up the schedule into a line for each material. Since there is only one grade of concrete in the model, there will be one line displayed.

The image shows the 'Material Takeoff Properties' dialog box with the 'Sorting/Grouping' tab selected. The 'Sort by' dropdown is set to 'Material: Name' with 'Ascending' selected. The 'Then by' dropdowns are all set to '(none)'. The 'Grand totals' checkbox is checked, and the 'Itemize every instance' checkbox is unchecked. The 'Custom grand total title' field contains 'Grand total'. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

- On the Formatting tab select the field Material:Volume and then set this to Calculate totals.

The image shows the 'Material Takeoff Properties' dialog box with the 'Formatting' tab selected. The 'Fields' list on the left contains 'Material: Name' and 'Material: Volume', with 'Material: Volume' selected. The 'Heading' field contains 'Material: Volume'. The 'Heading orientation' is set to 'Horizontal' and the 'Alignment' is set to 'Left'. The 'Field formatting' section has 'Calculate totals' selected in the dropdown. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.

- Click OK

Practice Exercise 4

Develop a Material Takeoff



Your material take-off is now complete and should look like the image below.
Note that you can edit the column titles directly in the schedule view.

<Concrete Volume>	
A	B
Material: Name	Material: Volume
NWT5ksi	21179.11 CF
Grand total: 43	21179.11 CF

END OF EXERCISE