QuanTab (Quantity Table Generator)

- This manual will help you create the quantity blocks shown below using Quantab for each pay item.
- Each pay item should be its own tab in the Excel workbook to guarantee a smooth import to OpenRoads Designer.
- The following pages will help you start your drawing, start an excel file, and import your spreadsheet into OpenRoads Designer.

Type I Rock Blanket:

TYPE I ROCK BLANKET						
STA.	STA.	LOCATION	FURN. CU. YD.	PLACE CU. YD.	TONS	REMARKS
						*EST. AT 1.6 TONS/ CU. YD.
982+00	984+54.3	LT. & RT. ℄ RTE. 77	718	718	1148.8	ON SHOULDERS
984+54.3	985+33.2	℄ RTE. 77	639	639	1022.4	TYPE I ROCK BLANKET FILL
982+03.6		68.8' RT. ℄ RTE. 77	11	11	17.6	COLLAR AROUND TREE
982+55.1		27.8' LT. ℄ RTE. 77	11	11	17.6	COLLAR AROUND TREE
982+56.4		47.2' LT. ℄ RTE. 77	11	11	17.6	COLLAR AROUND TREE
		TOTALS	1390	1390	2224.0	
				USE	2224	

8" Non-Reinforced Concrete Pavement:

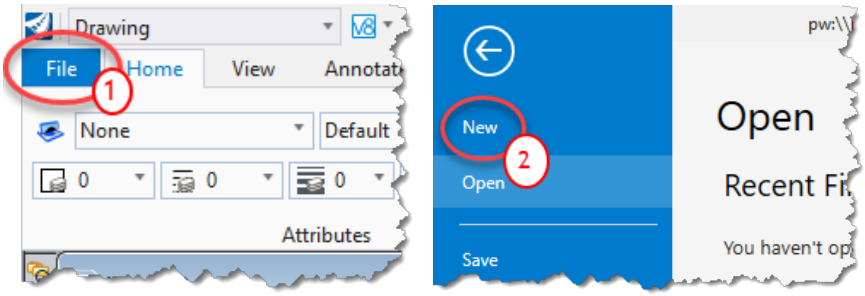
8" NON-REINFORCED CONCRETE PAVEMENT							
STA.	STA.	LOCATION	LENGTH FEET	WIDTH FEET	AREA SQ. YDS.	4" TYPE 1 AGGR. BASE SQ. YDS.	REMARKS
1368+85.00	1392+80.00	RTE. 94	2395	28	7451.11	8249.44	LOGAN CREEK - NEW ROADWAY PAVEMENT
1367+95.00	1368+85.00	RTE. 94	90	26	260	290	LOGAN CREEK - BEGINNING PAVEMENT TRANSITION
1392+80.00	1393+70.00	RTE. 94	90	26	260	290	LOGAN CREEK - ENDING PAVEMENT TRANSITION
38+90.00	55+10.90	RTE. 94	1621	28	5042.80	5583.10	CEDAR CREEK - NEW ROADWAY PAVEMENT
38+00.00	38+90.00	RTE. 94	90	26	260	290	CEDAR CREEK - BEGINNING PAVEMENT TRANSITION
55+10.90	55+95.90	RTE. 94	85	26	245.56	273.89	CEDAR CREEK - ENDING PAVEMENT TRANSITION
				TOTALS	13519.47	14976.43	
				USE	13519	14976	

Bituminous Rumble Strips:

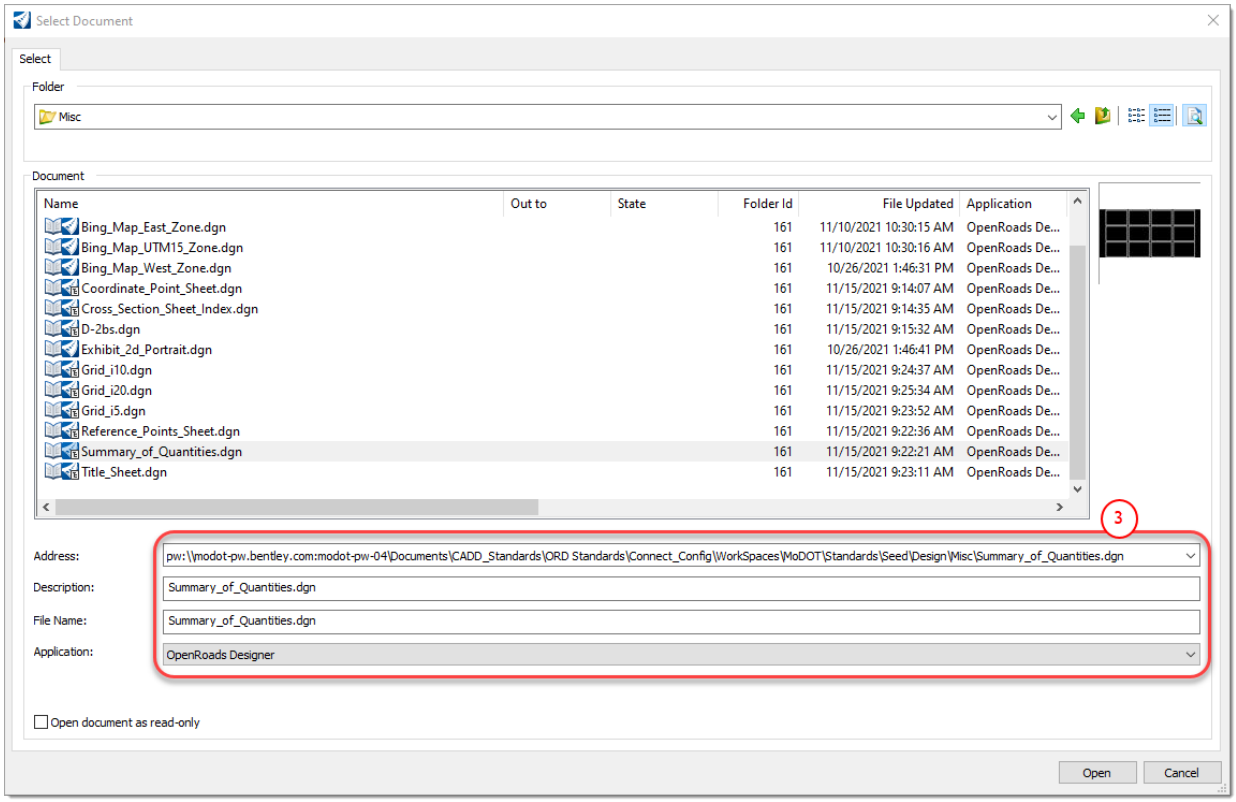
BITUMINOUS RUMBLE STRIPS				
LOG MILE TO LOG MILE		LOCATION	LINEAR FEET	REMARKS
0.087	0.223	RT. ℄ RTE. 77	718.08	RIGHT SHOULDER
0.332	0.680	RT. ℄ RTE. 77	1837.44	RIGHT SHOULDER
0.836	2.481	RT. ℄ RTE. 77	8685.60	RIGHT SHOULDER
		TOTALS	11241.12	
		USE	112.4	

Creating a MoDOT MicroStation summary sheet to receive Excel Data

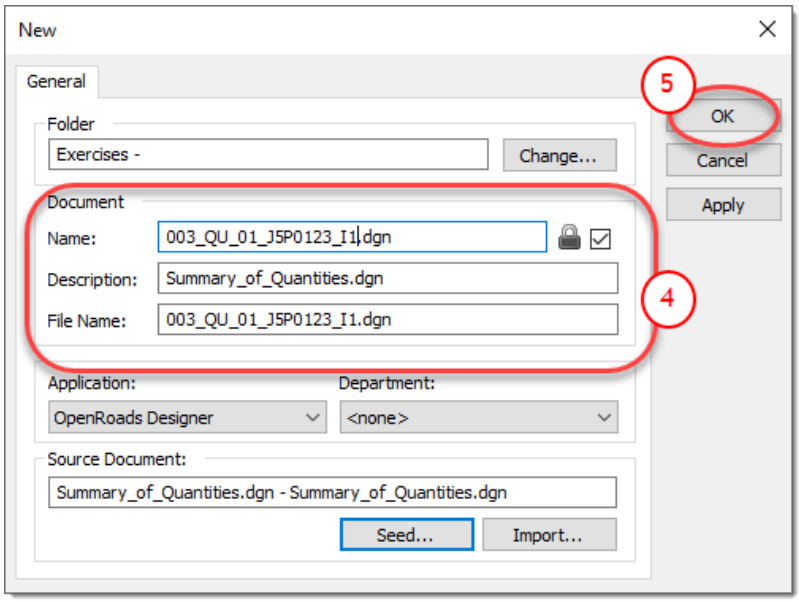
In OpenRoads Designer under the **File** tab ①, select **New** ② to create a new file using



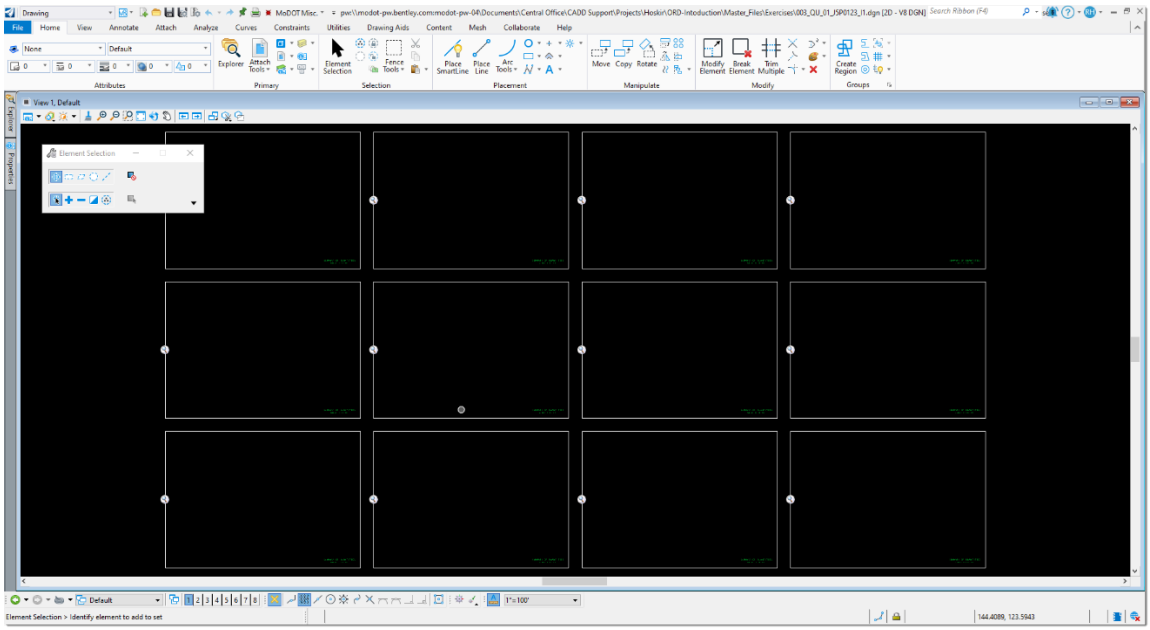
the **Summary_of_Quantities.dgn** seed file. The seed file is located under this location in ProjectWise:Documents/CADD_Standards\ORD Standards\Connect_Config\WorkSpaces\MoDOT\Standards\ Seed\Design\Misc**Summary_of_Quantities.dgn** ③ (if you are not seeing any files make sure the application is set to OpenRoads Designer).



Give the file a **name** and **file name** in the input areas (remember to use letters, numbers, or underscores only) ④ and then click the **OK** ⑤ button when the file has been named.

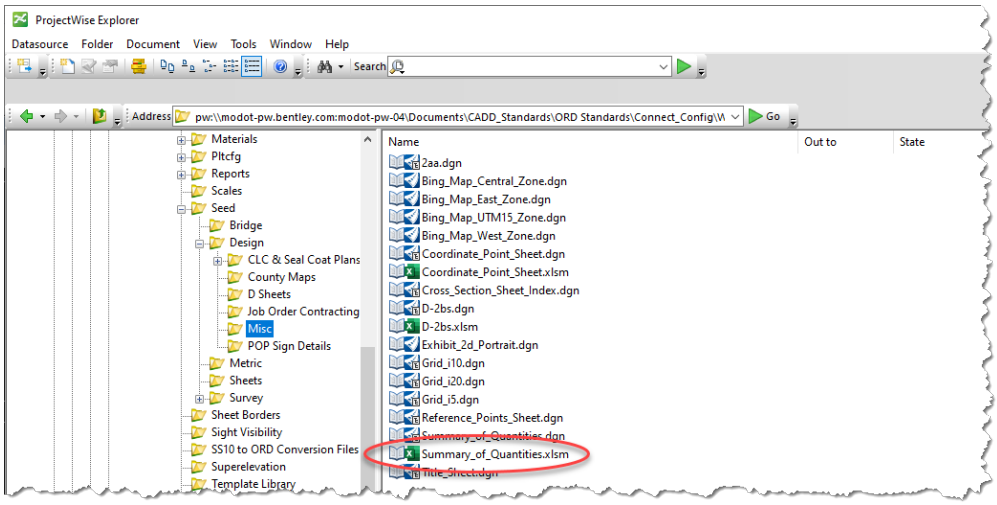


The new file will contain 12 Named Boundaries and look like the window above.
Now that we have an OpenRoads Designer design file created, we will move on to the creation of an Excel spreadsheet.



Creating an Excel spreadsheet to be used in OpenRoads Designer

The **Summary of Quantities Template** excel file is stored in ProjectWise in the following location: *\\Documents\CADD_Standards\ORD Standards\Connect_Config\WorkSpaces\MoDOT\Standards\Seed\Design\Misc*



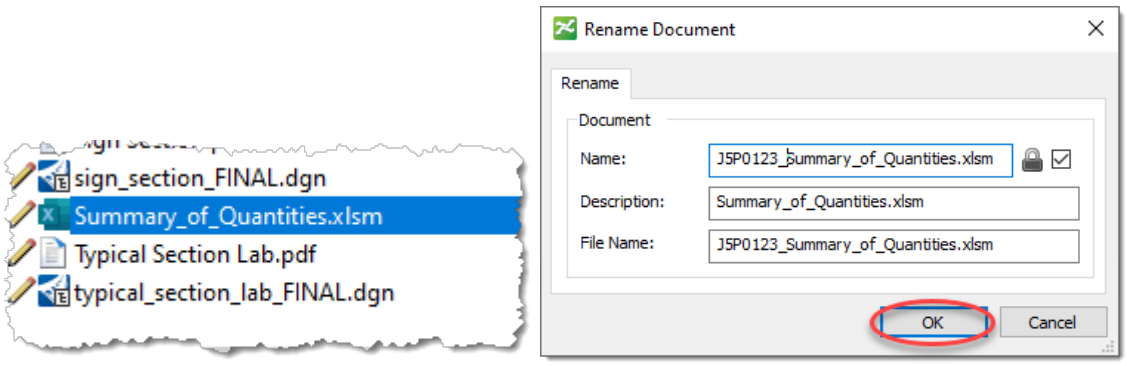
Right click over the excel file and select ***Copy***.

Navigate to your folder under your project that you want to copy the file to.

Right click over the folder and select ***Paste***.

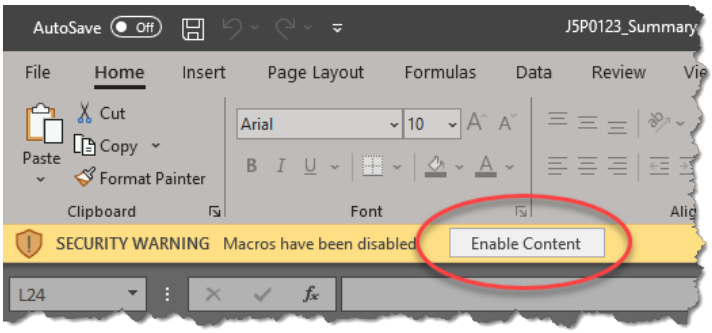
Right click over the file again and select ***Rename*** to rename it to the desired name.

Click ***OK*** to accept the new name.



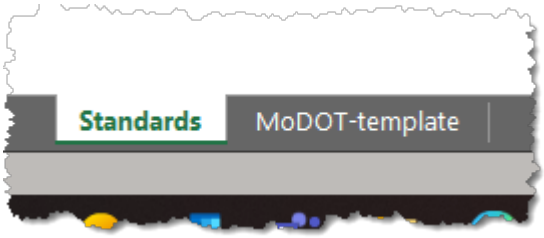
Simply ***double left-click*** on the excel file to open it up.

Once the Summary of Quantities file is open, you will need to change the Macro security settings to be able to use the sheet properly. To do this, simply click on the ***Enable Content*** option.



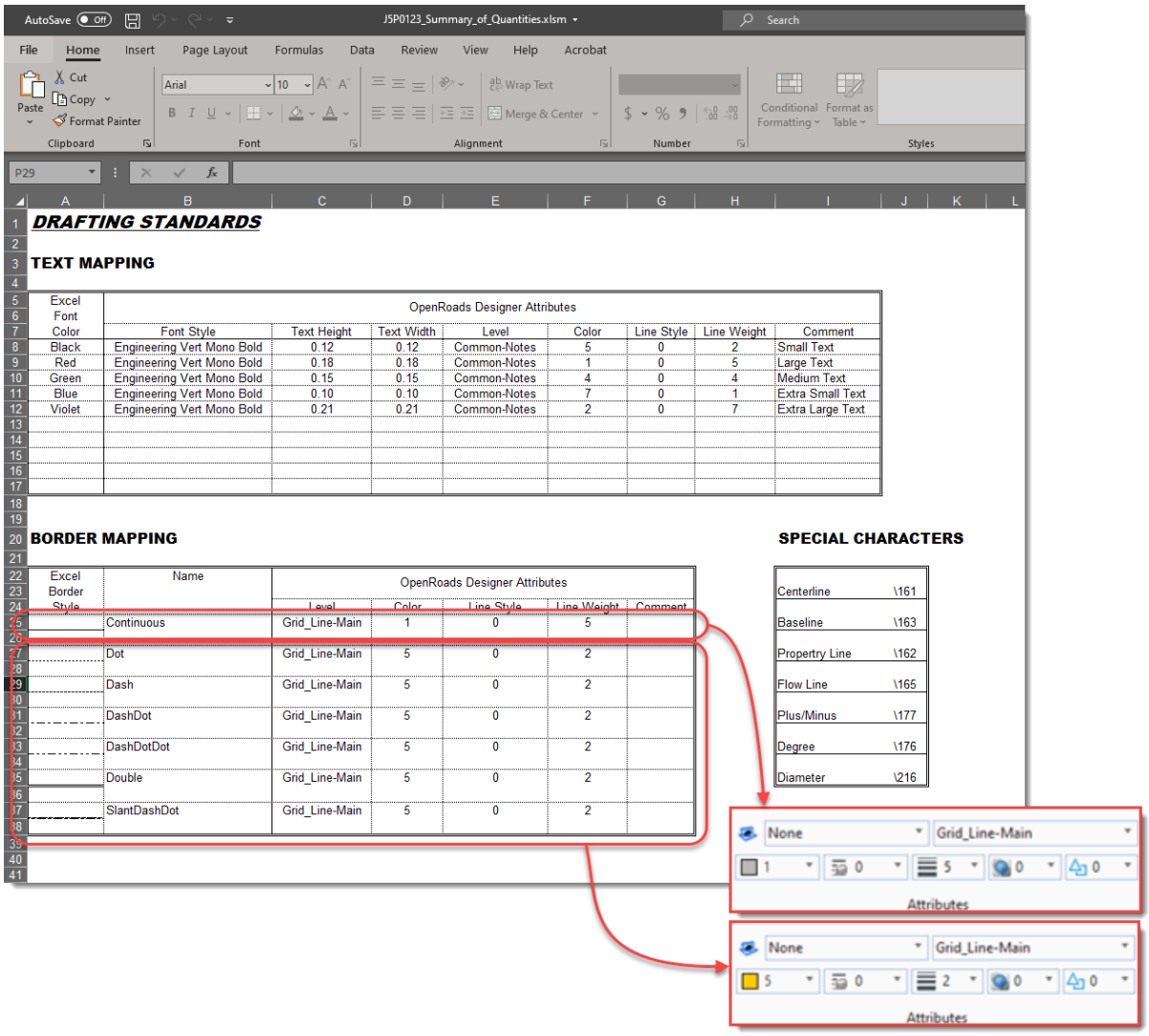
The Excel "Summary of Quantities" File

When you open the newly created file, there are two default tabs at the bottom of the screen. The first tab is labeled ***Standards*** and is password-protected to keep MoDOT's quantity sheets standardized. The second tab is labeled ***MoDOT-template*** and is to be copied and used as a template worksheet.



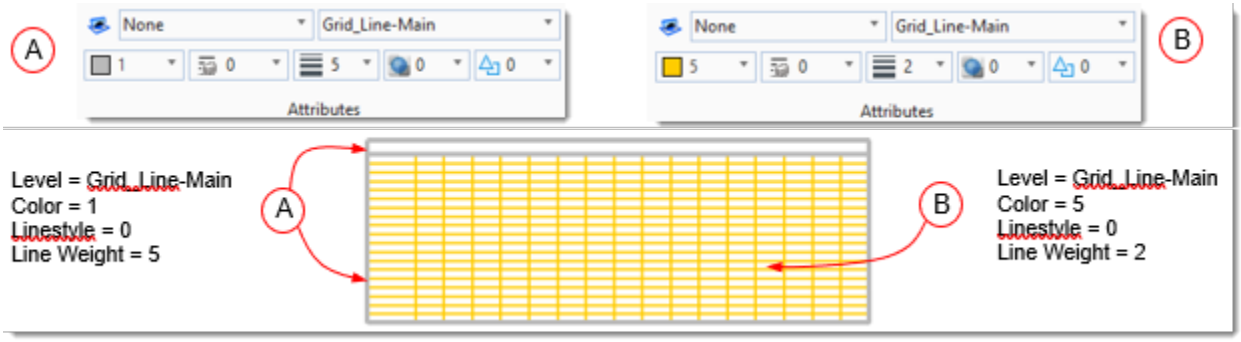
The Standards Tab *** this sheet has been protected to ensure the integrity of the standards***

This sheet has MoDOT's standard text and border mapping preset according to the MoDOT CADD Detailing Standards. Therefore, if a user was to place text using the corresponding color to text height and width, they will translate over to the OpenRoads Designer design file with the correct standard attributes.



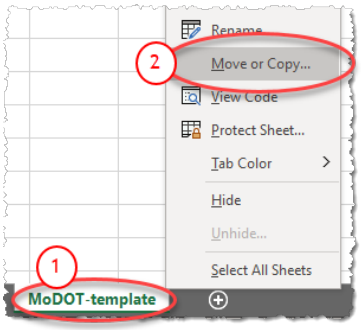
The Border Mapping has numerous line styles but there are only 2 different styles of grid lines used at MoDOT. You can see by using the continuous line style in the Excel sheet it will produce the correct attributes for the box border.

Using any other line style in the Excel sheet will produce the grid line attributes.

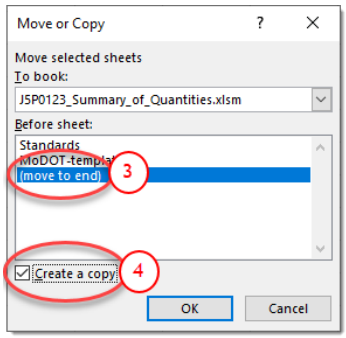


Excel Sheet Tabs

Creating tabs (new sheets) for each quantity box is the best way to organize your spreadsheet.
You can and should create a separate tab (sheet) for each quantity box.
This is done by right clicking over the ***MoDOT-template*** tab ①, and selecting the ***Move or Copy*** option ②.

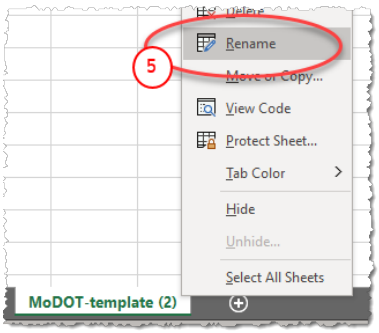


You will get the ***Move or Copy*** dialog. It is in here you will need to make a couple of changes.



Select the ***(move to end)*** option ③ and check the ***Create a copy*** option ④.

The next step is to rename the tab. ***Right click*** over the MoDOT-template(2) tab and select ***Rename*** ⑤.



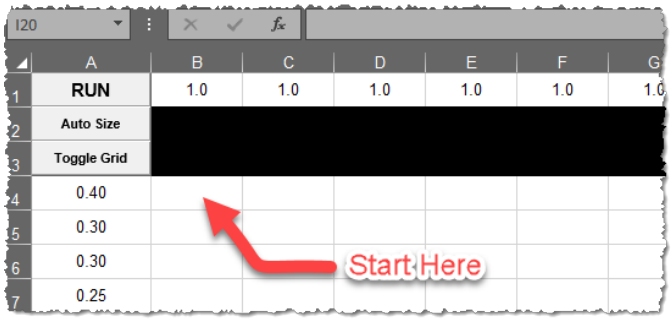
This example uses “TYPE I ROCK BLANKET” for the description of the quantity box.

Entering the Quantity Information in Excel

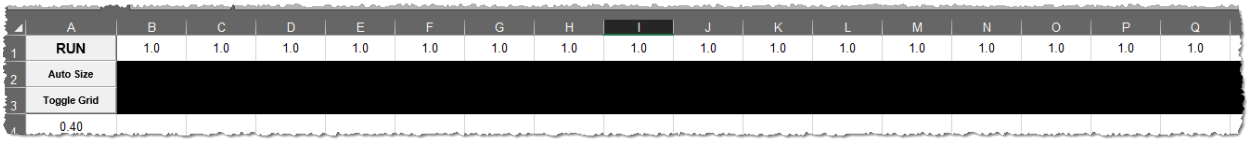
Once the OpenRoads Designer file and the Excel spreadsheet are created, you are ready to input the data into the Excel sheet.

There are a few rules that will need to be followed in order for these sheets to transfer into OpenRoads Designer.

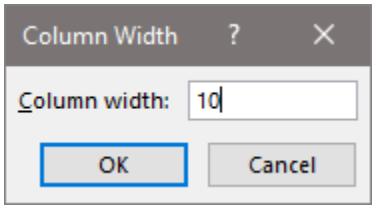
Rows 1, 2, and 3 are not to be used for data input for the quantity box.
Start entering the data with cell B4.



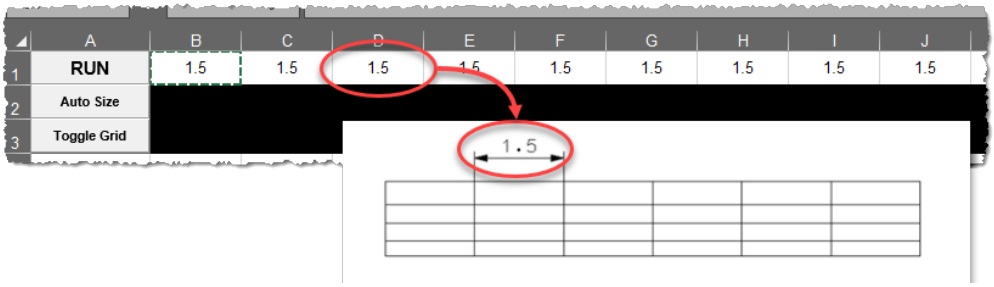
Columns B through Z are setup with a 1.0 default value width. This value controls the width of the columns in OpenRoads Designer.



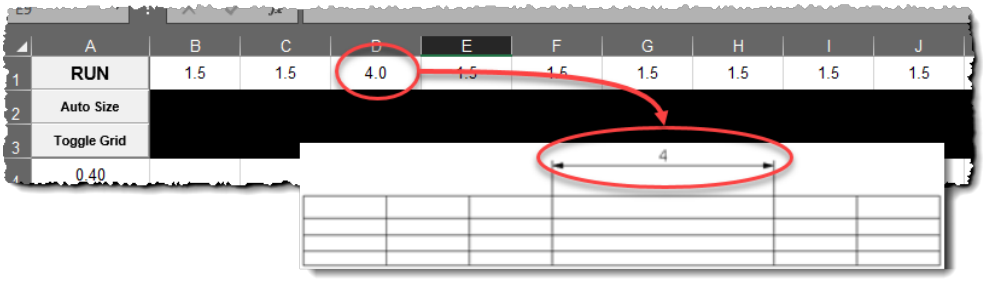
NOTE: *The actual physical column width in Excel means absolutely nothing to the entered value at the top of the columns when transferred to OpenRoads Designer.*



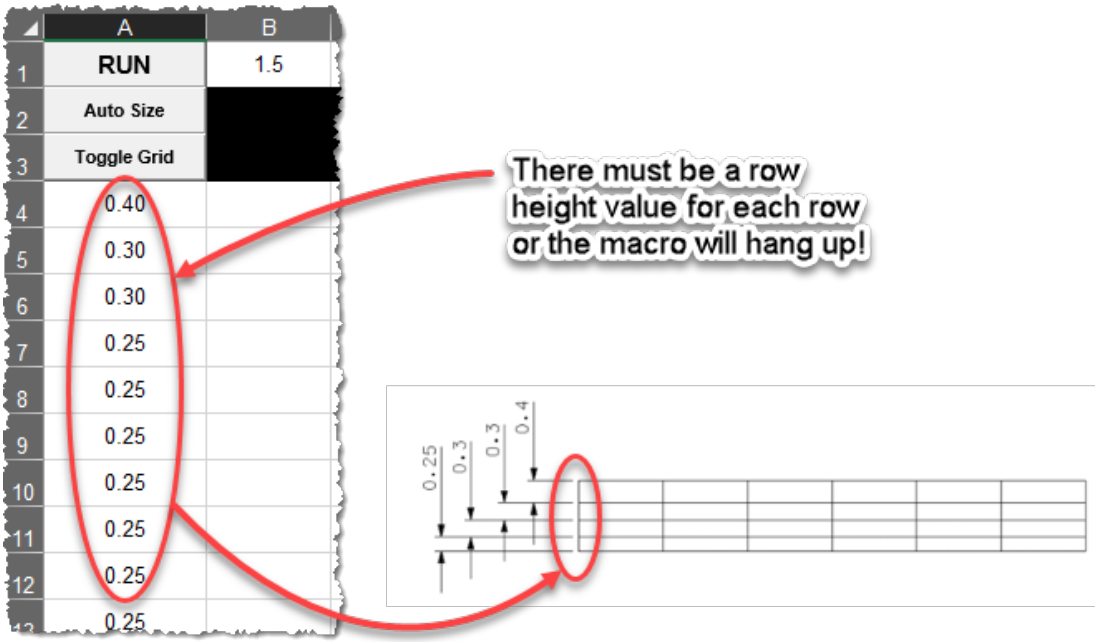
A value of 1.5 in Excel = 1.5’ in OpenRoads Designer.



The default values are suggestive values, which could and should be changed to meet the needs of the size of the text string that is placed in the cell (block).

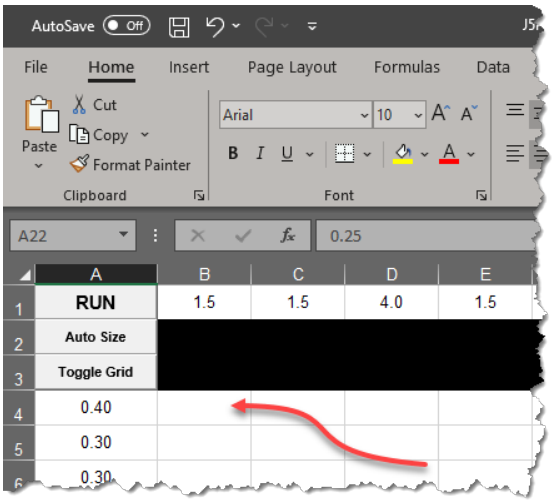


Column A is for adjusting the Row heights. Row heights are defaulted to 0.4 for Large Text, 0.3 for Medium Text, and 0.25 for Small Text. This can be adjusted to fit your quantity boxes needs.
Keep in mind that 0.4 in Excel = 0.4’ in OpenRoads Designer.



To enter data in the Excel sheets, click in the desired cell and key-in the values as needed for the quantity box.

*** Remember to start the box with cell B4. ***



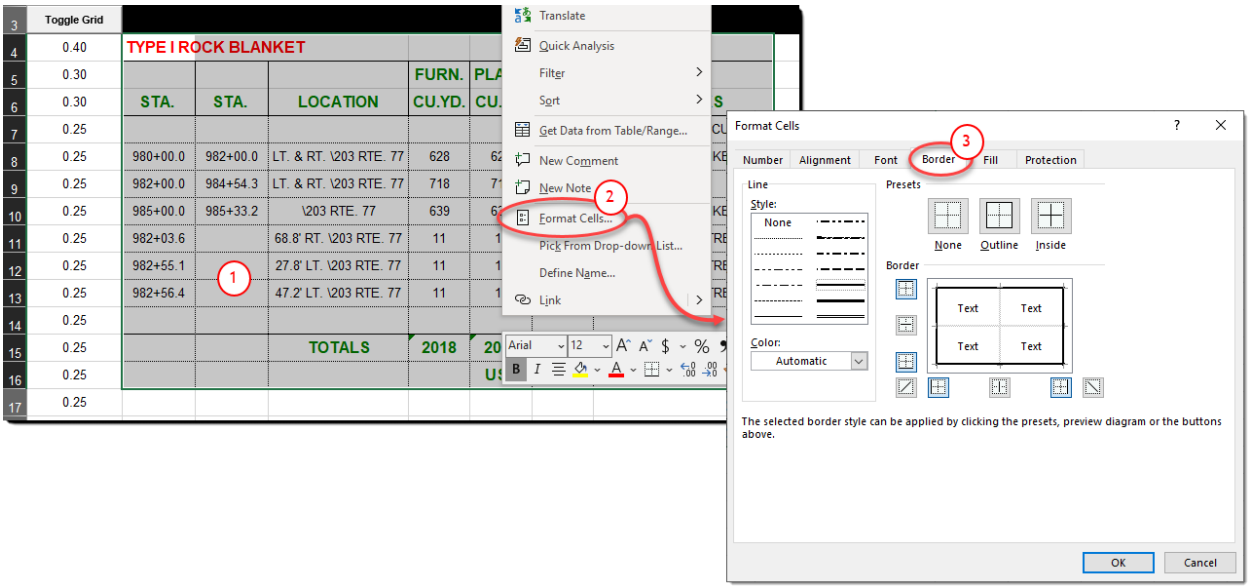
Here is an example of a quantity box that has all the text filled out for it.

	A	B	C	D	E	F	G	H
1	RUN	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2	Auto Size							
3	Toggle Grid							
4	0.40	TYPE I ROCK BLANKET						
5	0.30				FURN.	PLACE		
6	0.30	STA.	STA.	LOCATION	CU.YD.	CU.YD.	TONS	REMARKS
7	0.25							*EST. AT 1.6 TONS/CU.YD.
8	0.25	980+00.0	982+00.0	LT. & RT. \203 RTE. 77	628	628	1004.8	TYPE I ROCK BLANKET FILL
9	0.25	982+00.0	984+54.3	LT. & RT. \203 RTE. 77	718	718	1148.8	ON SHOULDERS
10	0.25	985+00.0	985+33.2	\203 RTE. 77	639	639	1022.4	TYPE I ROCK BLANKET FILL
11	0.25	982+03.6		68.8' RT. \203 RTE. 77	11	11	17.6	COLLAR AROUND TREE
12	0.25	982+55.1		27.8' LT. \203 RTE. 77	11	11	17.6	COLLAR AROUND TREE
13	0.25	982+56.4		47.2' LT. \203 RTE. 77	11	11	17.6	COLLAR AROUND TREE
14	0.25							
15	0.25			TOTALS	2018	2018	3228.8	
16	0.25					USE	3228.8	
17	0.25							

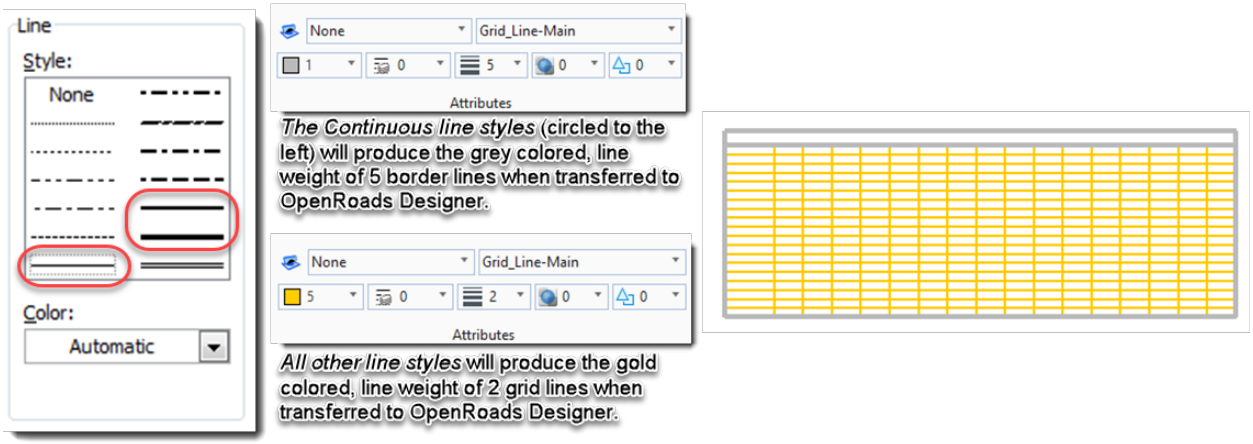
Creating the grid lines after the text has been placed

Keep the line styles in mind, and how they will translate from Excel to OpenRoads Designer (See page 5).

Create a “range” (highlight) of cells ① , then right click over the “range” ② and choose the ***Format Cells*** option. Select the ***Border*** tab to show the line style options ③.



The Border tab opens the abilities to change line styles and the placement of the border.



Make the necessary changes to the border and grid lines of your quantity box.

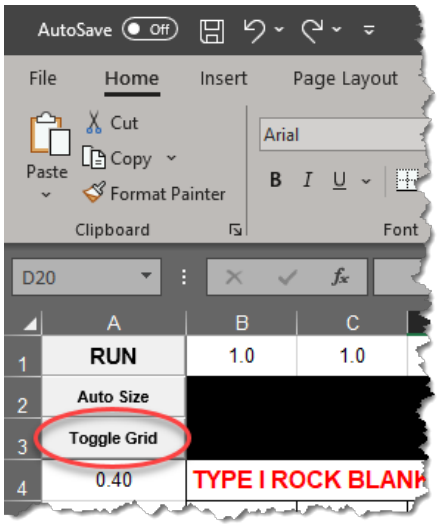
Importing an Excel spreadsheet into OpenRoads Designer

Now that you have the data created in the Excel spreadsheet, you are ready to import the data along with the border and grid work into OpenRoads Designer.

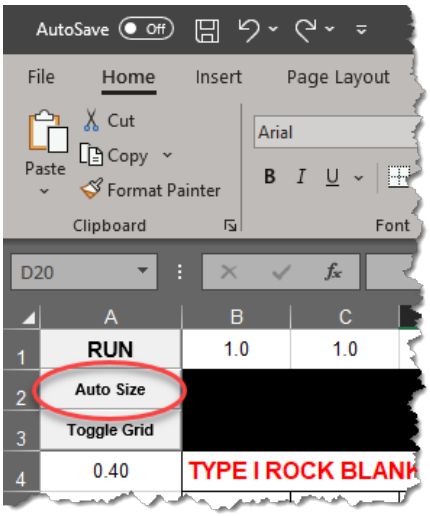
Importing the border and grid work:

Click on the sheet tab of the quantity box that is to be placed.

Optional: There is a ***Toggle Grid*** button which allows you to turn the Excel grid lines on/off with a click of the button.



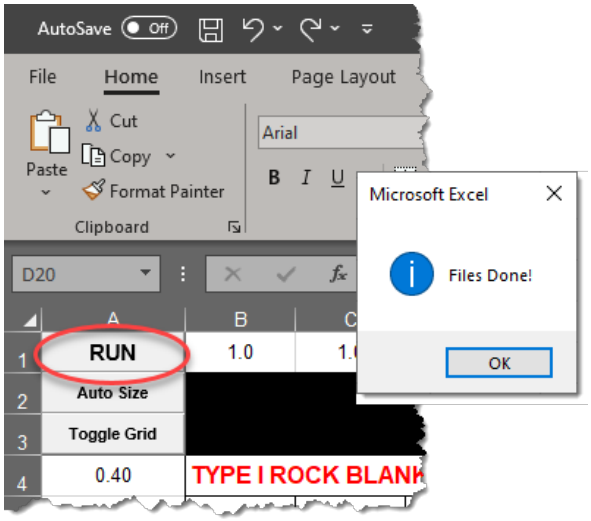
Now the columns need to be resized for the import process into OpenRoads Designer. Click the ***Auto Size*** button, which causes the macro to run from column A to Z and places the appropriate size for each row.



NOTE: *After the columns have been resized to the "suggested value", you may overwrite the column by changing the value to your desired value.*

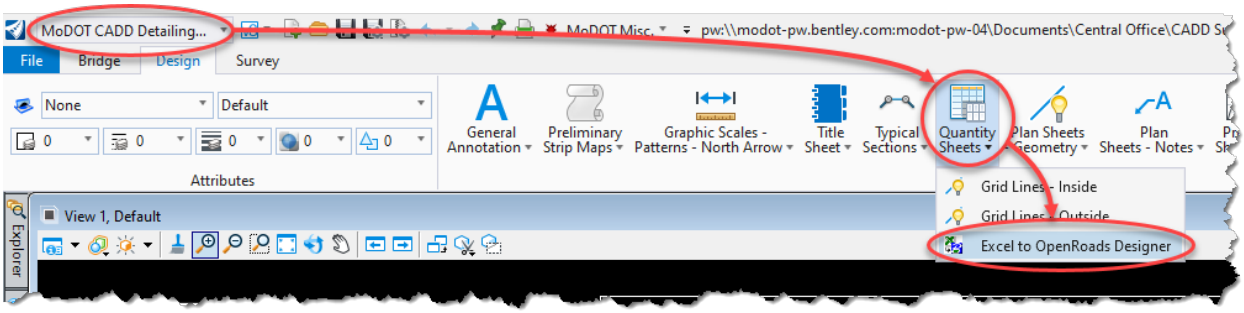
Click the **RUN** button when you have completely finished the quantity box in Excel and you want to bring it into OpenRoads Designer. This will start the macro that creates two text files, one text file contains the border (or gridline) information and the other text file contains the actual text information.

You will also get a ***File Done*** dialog box after you click the Run button. Select ***OK*** close out the dialog box.

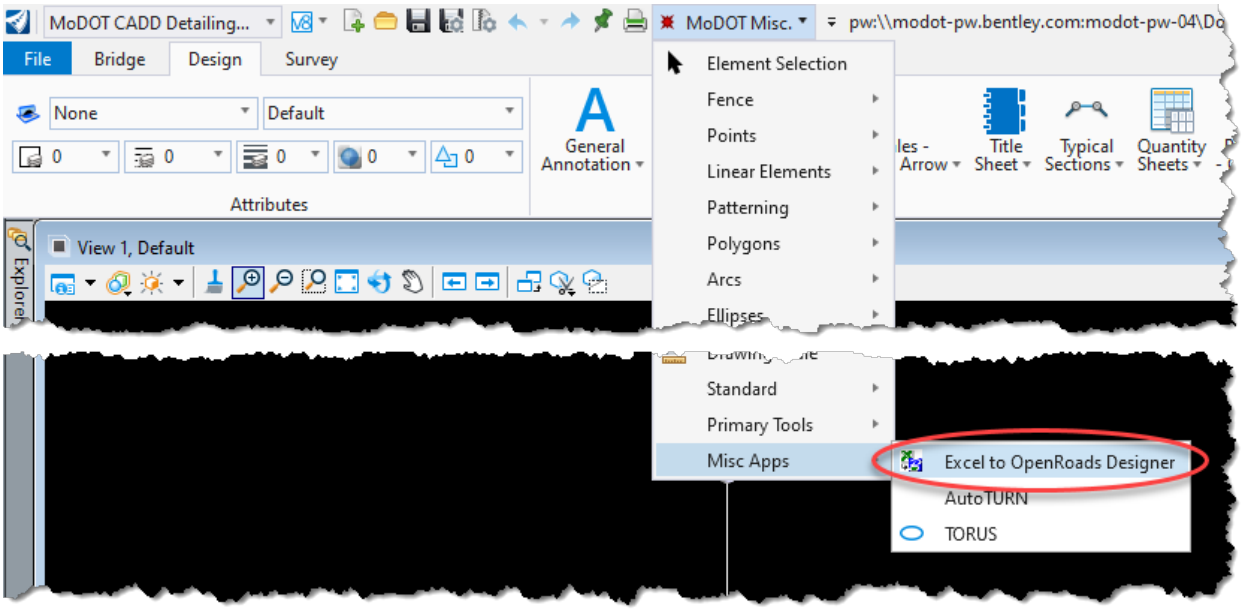


Open the OpenRoads Designer file that was created for this quantity sheet.

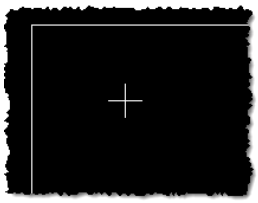
Click on the ***Excel to OpenRoads Designer*** option under the ***MoDOT CADD Detailing Standards*** *workspace –* ***Design*** *ribbon –* ***Quantity Sheets*** *tools*.



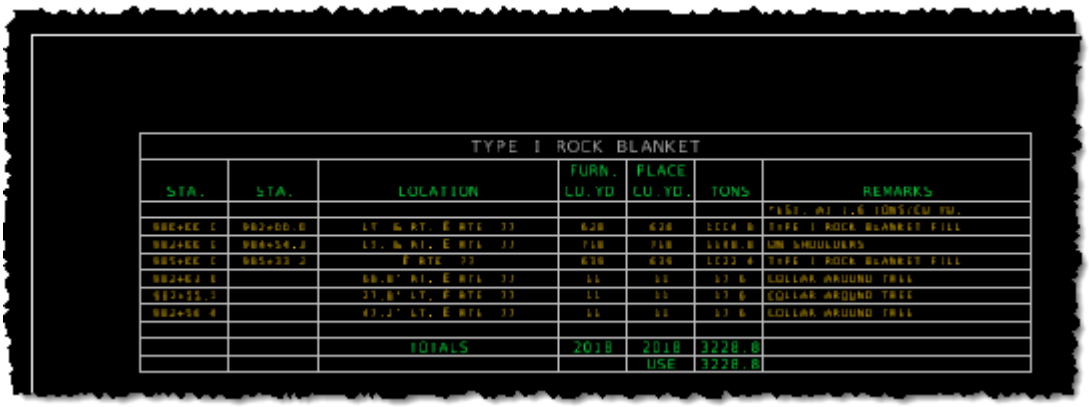
You can also get the ***Excel to OpenRoads Designer*** option by selecting MoDOT Misc.in the Quick Access toolbar and then select the ***Excel to OpenRoads Designer*** option.



Data point (left click) in a blank area on the screen to place the quantity block from the Excel sheet.



When you data point to place the block, it will be created from the upper left to the lower right.



TYPE I ROCK BLANKET

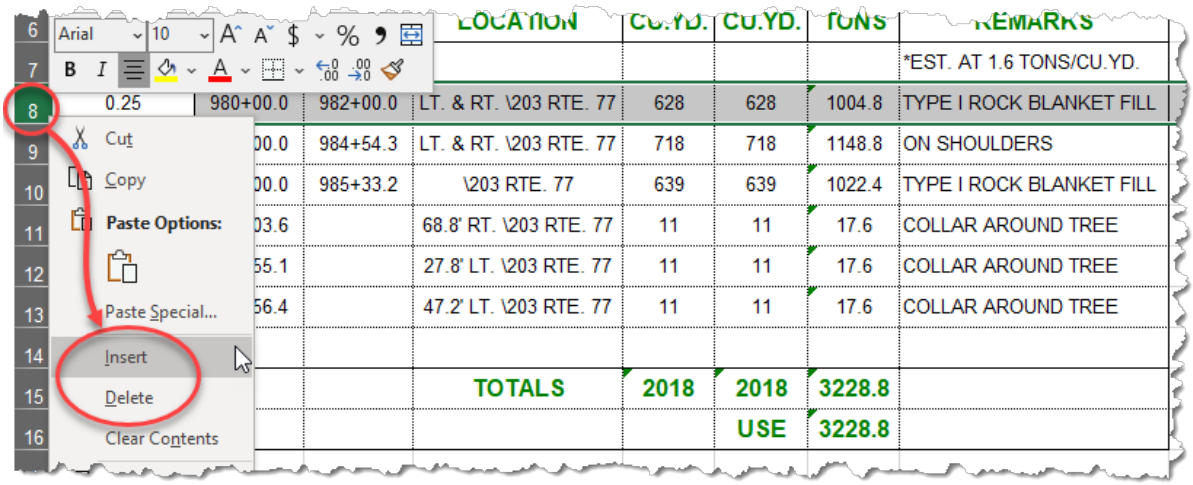
STA.	STA.	LOCATION	FURN. CU. YD	PLACE CU. YD.	TONS	REMARKS
						*EST. AT 1.6 TONS/CU YD.
980+00.0	982+00.0	LT & RT. E RTE 77	628	628	1004.8	TYPE I ROCK BLANKET FILL
982+54.3	984+54.3	LT. & RT. E RTE 77	718	718	1148.8	ON SHOULDERS
985+33.2		E RTE 77	639	639	1022.4	TYPE I ROCK BLANKET FILL
982+68.8		68.8' RT. E RTE 77	11	11	17.6	COLLAR AROUND TREE
983+55.1		27.8' LT. E RTE 77	11	11	17.6	COLLAR AROUND TREE
982+56.4		47.2' LT. E RTE 77	11	11	17.6	COLLAR AROUND TREE
		TOTALS	2018	2018	3228.8	
				USE	3228.8	

NOTE: *QuanTab does not have a linking capability with OpenRoads Designer. If there are changes to be made after placing the quantity box, you need to* ***delete*** *the quantity box and replace it with an updated quantity box.*
DO NOT EDIT THE QUANTITIES IN OPENROADS DESIGNER*.*

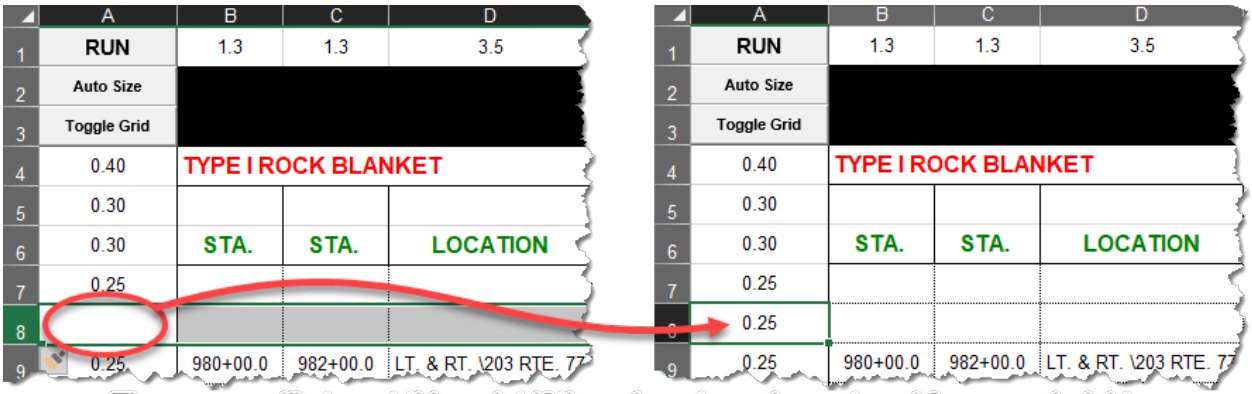
Inserting or Deleting Rows & Columns

There may be a time when your quantity box needs to be updated. Add a row/column, subtract a row/column whatever the case may be, you will need to delete the quantity box in OpenRoads Designer and replace it with an updated Excel quantity box.

To add a row/column, simply **right click** over the number/letter below or to the right of where you need to insert. Then click the ***Insert*** or ***Delete*** option depending on your choice of operation.



After adding a row (as in this example) you need to make sure that a row height is placed in column A at the appropriate row.



	A	B	C	D
1	RUN	1.3	1.3	3.5
2	Auto Size			
3	Toggle Grid			
4	0.40	TYPE I ROCK BLANKET		
5	0.30			
6	0.30	STA.	STA.	LOCATION
7	0.25			
8				
9	0.25	980+00.0	982+00.0	LT. & RT. \203 RTE. 77

	A	B	C	D
1	RUN	1.3	1.3	3.5
2	Auto Size			
3	Toggle Grid			
4	0.40	TYPE I ROCK BLANKET		
5	0.30			
6	0.30	STA.	STA.	LOCATION
7	0.25			
8	0.25			
9	0.25	980+00.0	982+00.0	LT. & RT. \203 RTE. 77

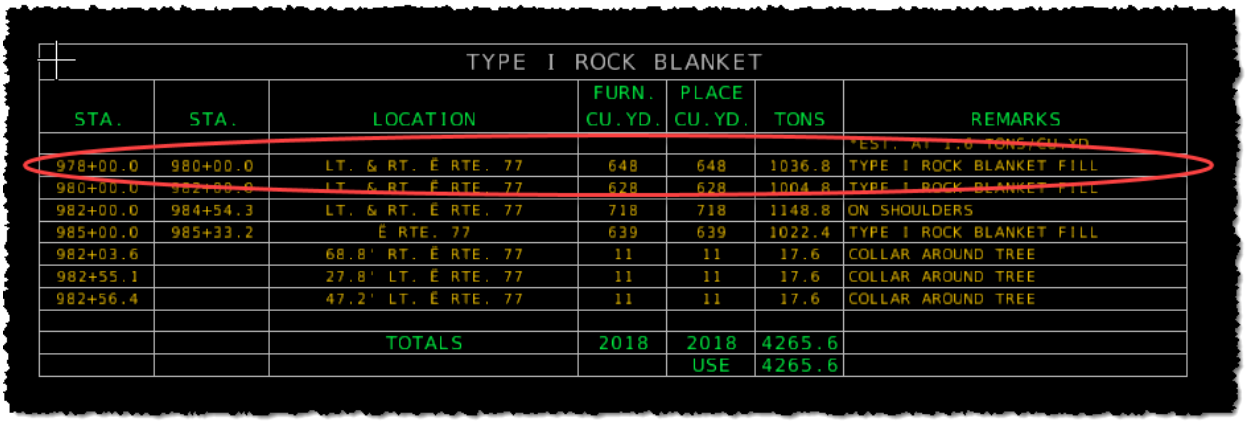
The macro will stop at this point if there is not a value entered for a row height.

	A	B	C	D	E	F	G	H
1	RUN	1.3	1.3	3.5	1.0	1.0	1.0	3.9
2	Auto Size							
3	Toggle Grid							
4	0.40	TYPE I ROCK BLANKET						
5	0.30				FURN.	PLACE		
6	0.30	STA.	STA.	LOCATION	CU.YD.	CU.YD.	TONS	REMARKS
7	0.25							*EST. AT 1.6 TONS/CU.YD.
8	0.25	978+00.0	980+00.0	LT. & RT. \203 RTE. 77	648	648	1036.8	TYPE I ROCK BLANKET FILL
9	0.25	980+00.0	982+00.0	LT. & RT. \203 RTE. 77	628	628	1004.8	TYPE I ROCK BLANKET FILL
10	0.25	982+00.0	984+54.3	LT. & RT. \203 RTE. 77	718	718	1148.8	ON SHOULDERS
11	0.25	985+00.0	985+33.2	\203 RTE. 77	639	639	1022.4	TYPE I ROCK BLANKET FILL
12	0.25	982+03.6		68.8' RT. \203 RTE. 77	11	11	17.6	COLLAR AROUND TREE
13	0.25	982+55.1		27.8' LT. \203 RTE. 77	11	11	17.6	COLLAR AROUND TREE
14	0.25	982+56.4		47.2' LT. \203 RTE. 77	11	11	17.6	COLLAR AROUND TREE
15	0.25							
16	0.25			TOTALS	2018	2018	4265.6	
17	0.25					USE	4265.6	

Notice row 8 has been updated with the added data in the Excel sheet.

After the updated quantity box has been completed and you are ready to bring the data into OpenRoads Designer, make sure that you delete the old version in OpenRoads Designer and select the **Run** button to update the data in OpenRoads Designer.

Select the ***Excel to OpenRoads Designer*** tool again and import the new quantity table.



TYPE I ROCK BLANKET

STA.	STA.	LOCATION	FURN. CU.YD.	PLACE CU.YD.	TONS	REMARKS
						*EST. AT 1.6 TONS/CU.YD.
978+00.0	980+00.0	LT. & RT. É RTE. 77	648	648	1036.8	TYPE I ROCK BLANKET FILL
980+00.0	982+00.0	LT. & RT. É RTE. 77	628	628	1004.8	TYPE I ROCK BLANKET FILL
982+00.0	984+54.3	LT. & RT. É RTE. 77	718	718	1148.8	ON SHOULDERS
985+00.0	985+33.2	É RTE. 77	639	639	1022.4	TYPE I ROCK BLANKET FILL
982+03.6		68.8' RT. É RTE. 77	11	11	17.6	COLLAR AROUND TREE
982+55.1		27.8' LT. É RTE. 77	11	11	17.6	COLLAR AROUND TREE
982+56.4		47.2' LT. É RTE. 77	11	11	17.6	COLLAR AROUND TREE
		TOTALS	2018	2018	4265.6	
				USE	4265.6	