Better by DESIGN
MDOT
Design Division

Project Quantity Spreadsheet (PQS) Guidance Document

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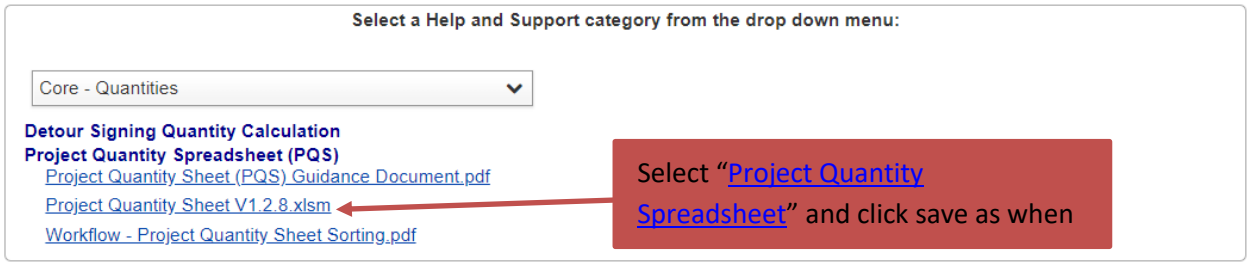
Plan Quantity Spreadsheet Guidance Document

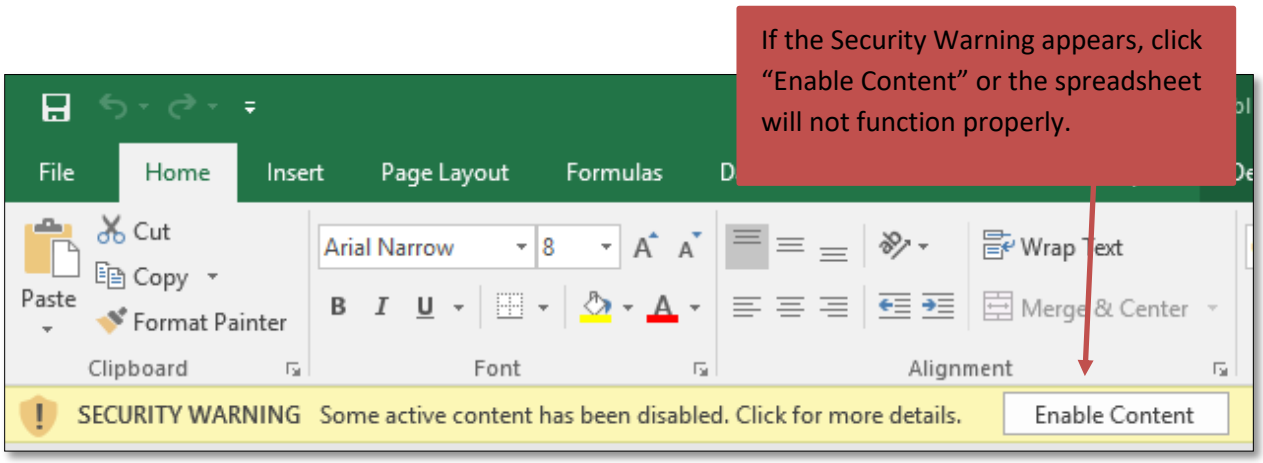
General

To download the Project Quantity Sheet (PQS) download go to the Support Services Website and go to the "Project Quantity Spreadsheet (PQS)" folder under General/Help and Supporting Documents, as shown below.



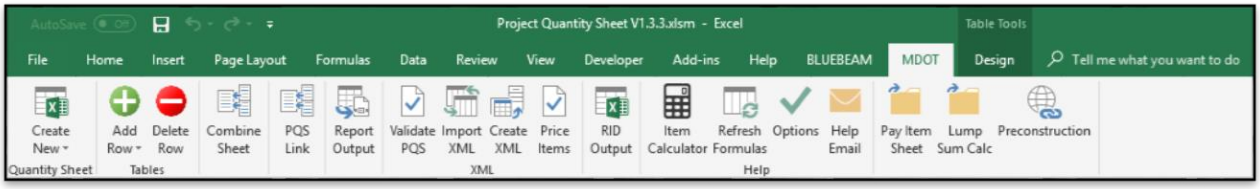
Opening the PQS

Each time the spreadsheet is opened it will verify that the pay items are current.

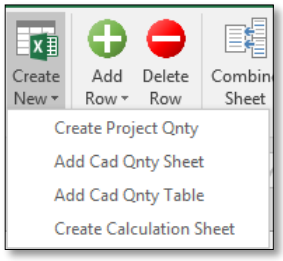


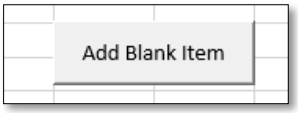
PQS Custom Ribbon Overview

A custom ribbon has been developed for the PQS with a description of each icon as follows. This ribbon will appear when the user has selected the functionality option as noted in the following section.

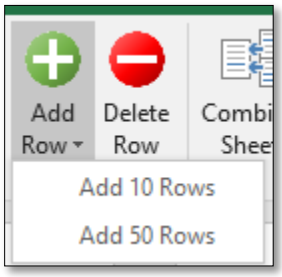


1. **Create New**
   a. Create Project Qnty – Links items created in the Calculation Sheet if created by following the format presented in the **Create Calculation Sheet** button
   b. Add Cad Qnty Sheet – Makes a sheet to build the Misc quantity boxes to be linked with Microstation
   c. Create Calculation Sheet – Gives a generic format to follow
      i. Pay items in Column B
      ii. Only use the word **TOTAL** next to the final quantity calculation
      iii. Put the units next to the final quantity calculation
      iv. To add a blank quantity to select the **Add Blank Quantity** button

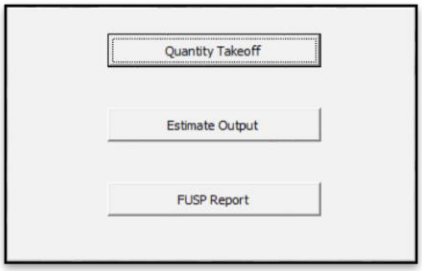




2. **Add Row -** Will add rows to the Project Qnty Tab (10 or 50 rows) or Plan Sheets Tab (1 or 10 rows) depending on which tab is active
3. **Delete Row -** Will delete selected rows
4. **Combine Sheet –** Compiles the information from another selected PQS sheet (used to migrate to a new version)



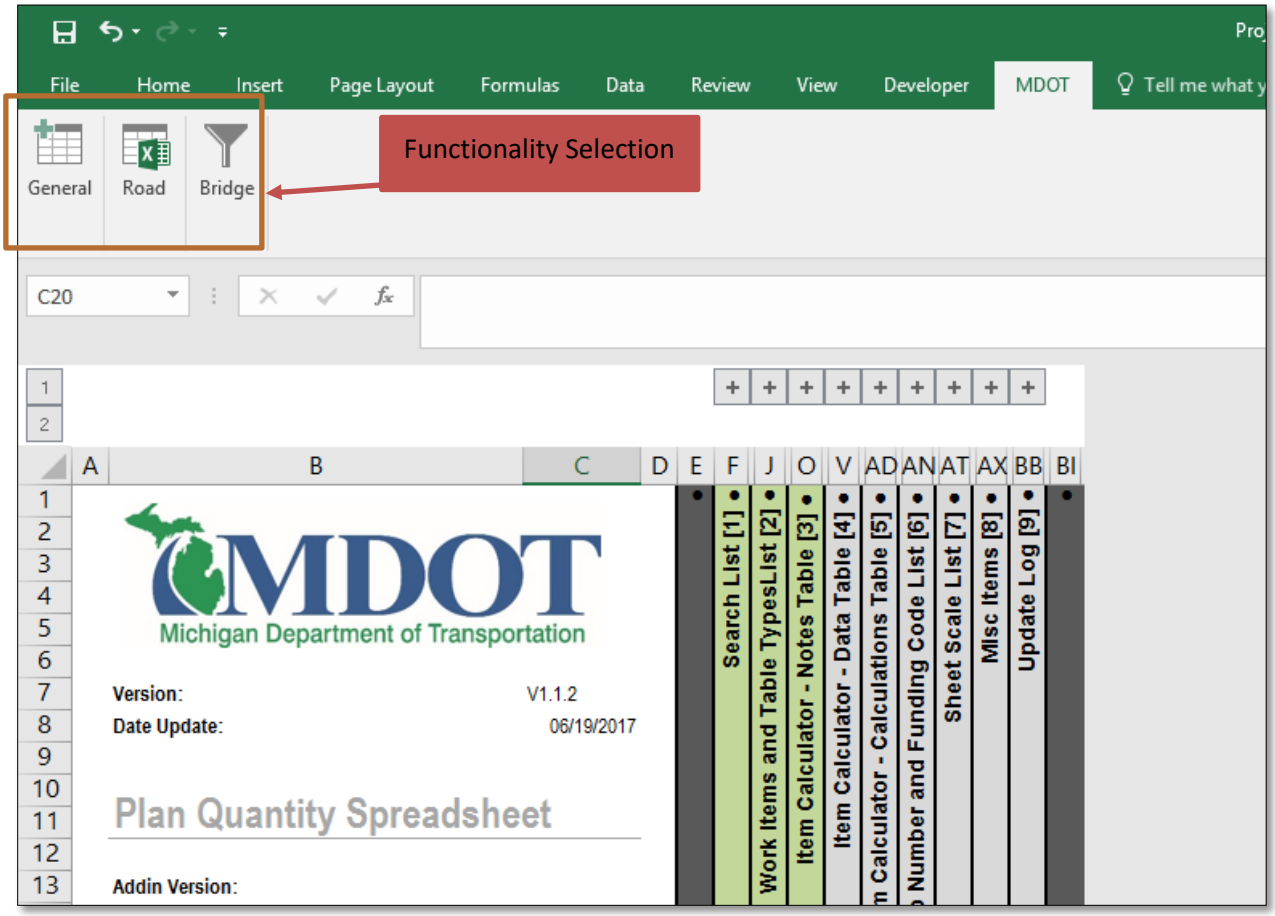
5. **PQS Link –** Only available in Excel 2016 and newer. Creates a soft link to all PQS files in a given folder to in order to create an XML or total project view.
6. **Report Output –** Generates reports based on the data in the Project Qnty Tab**.** Reports include Quantity Takeoff which lists items in each breakdown ID. Estimate Output which prints the Estimate Summary tab and FUSP Report which lists most of the FUSP's needed based on the pay items selected.



7. **Validate PQS-** Verifies the PQS data for items missing Breakdown Id's, missing funding codes, like items in difference sections, or undefined funding codes.

8. **Import Price** – Imports the price from an exported Preconstruction XML
9. **Import XML –** Imports all the items and categories from an exported Preconstruction XML
10. **Create XML –** Creates an XML that can be imported into Preconstruction
11. **RID Output –** Creates the final RID requirement Document (not required at this time)
12. **Item Calculator –** Calculator to develop costs of common project wide lump sums
13. **Refresh Formulas** – Corrects any of the predefined formulas
14. **Options –** sheet options
15. **Help Email –** Creates email to send if the user needs assistance
16. **Pay Item Sheet –** Opens the current Pay Item Sheet from the MDOT Design website
17. **Lump Sum Calc –** Opens the Lump Sum spreadsheet on the MDOT Design website
18. **Preconstruction –** Opens the website to the Preconstruction Import page

PQS Functionality Selection



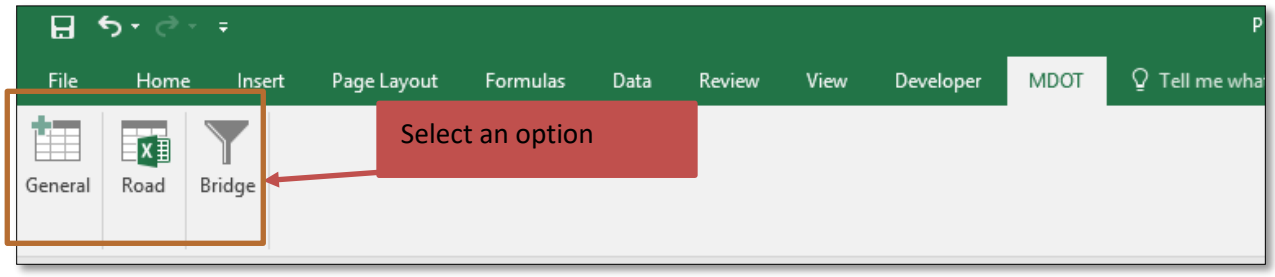
The spreadsheet has three options: General, Road and Bridge. Each has the same base features with discipline specific customizations in the Road and Bridge options. The base features common to each of the options are as follows:

1. Quantity Calculation Sheet (Basic Format)
2. XML Creation *Creates XML file that can be imported into Preconstruction*
3. RID Output *Creates Final Deliverable for future RID Requirements*
4. XML Import *Allows for existing Preconstruction file to be imported into the sheet*
5. Pricing Import *Allows for existing Preconstruction file pricing to be imported into the sheet*

The "Road" and "Bridge" options allow for the following additional features

1. CADD Quantity Linking *Creates tables that can be linked with Microstation*
2. CADD Table Linking (Road Only) *Creates tables that can be linked with Microstation*
3. Automatic Rehab Quantity Generation (Bridge Only)

To begin utilizing the spreadsheet, select the desired option from the ribbon under the "MDOT" tab.



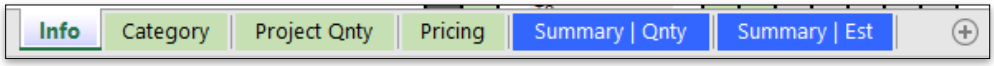
For a project, there should be one sheet per job number and one sheet per discipline. For example, if a project has one job number, but there are multiple units (road, bridge,…) working on the project, each unit should have a separate sheet. When an XML is ready to be created, the sheets can be compiled to create one all-encompassing XML file using a button in the ribbon, to be shown later in the document.

General Option

The General option should be selected if a user does not want the additional road and bridge discipline specific features. The functionality of this option allows users to enter each project item and quantity into the spreadsheet in a user-friendly format and create an XML file for import into Preconstruction. It has a similar functionality to both Preconstruction and the Stand Alone Project Estimator's Worksheet (SAPW) software.

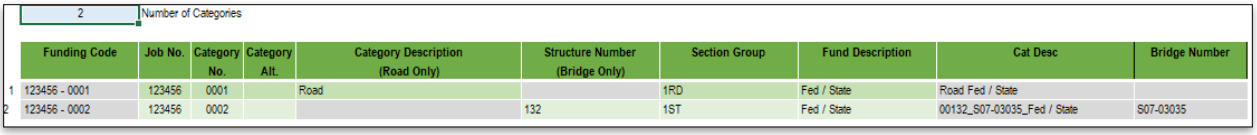
In addition, this option should be selected to import an existing Preconstruction project into the spreadsheet. Users can import a Preconstruction file into the worksheet and make any necessary edits to the project items, quantities and categories. Once any updates have been made, a new XML can be created for import back into Preconstruction.

After a user selects the General option, the spreadsheet will create the following tabs. Instructions on entering data into the spreadsheet are noted in the following sections.



Defining Categories

Project categories are entered into the Category tab of the spreadsheet. User inputs are required in green cells if applicable. If a cell is grey the user DOES NOT need to fill in the cell. The cell is either automatic or is not needed.



2 Number of Categories

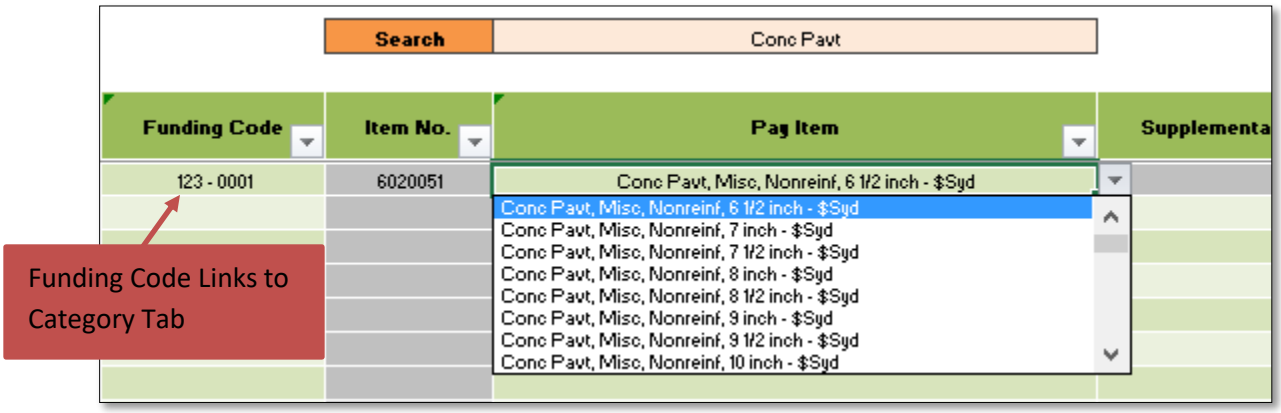
	Funding Code	Job No.	Category No.	Category Alt.	Category Description (Road Only)	Structure Number (Bridge Only)	Section Group	Fund Description	Cat Desc	Bridge Number
1	123456 - 0001	123456	0001		Road		1RD	Fed / State	Road Fed / State	
2	123456 - 0002	123456	0002			132	1ST	Fed / State	00132_S07-03035_Fed / State	S07-03035

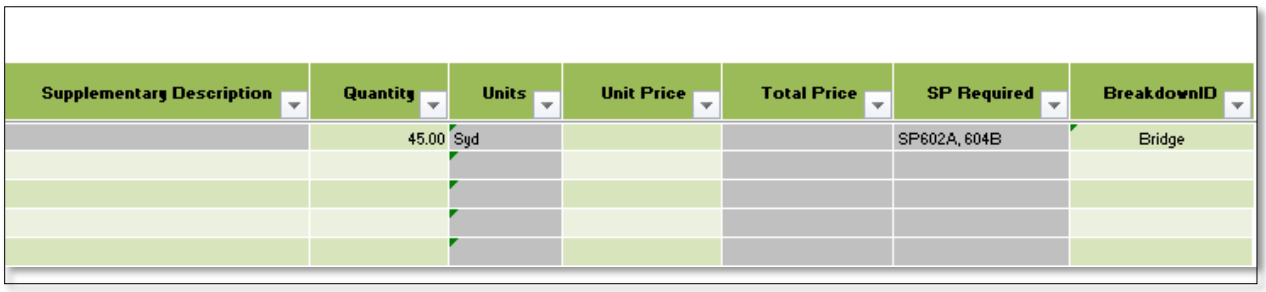
1. **Funding Code** – Unique identifier combining the Job No. and the Category No.
2. **Job No.-** The number used to identify the Project
3. **Category No.** – The number used to differentiate between funding options (even numbers are Bridge only)
4. **Category Alt.** – Used for Alternative Bid Projects
5. **Category Description – (Road Only)** Describes the type of work the category is used for
6. **NBI Number (Bridge Only) –** The NBI number for the bridge the category is associated with
7. **Section Group –** The group identifier for similar items for Preconstruction
8. **Fund Description –** Describing the types of funds associated with the category
    a. (XX% Fed / XX% State / XX% City)
9. **Cat Desc –** The compiled category description to be imported into Preconstruction
10. **Bridge Number –** The bridge number linked with the NBI Number to be used as a reporting tool

Once the categories are defined, items and their respective quantities can be associated with them.

Adding Items

Items are added into the Project Qnty tab in the spreadsheet. At a minimum the Pay Item, Funding Code, Breakdown ID and Quantity columns need to be filled out.





1. **Funding Code (required)** – Drop down list from the categories defined in the **Category** tab
2. **Pay Item (required)** – Searchable drop down.
    a. Use the search bar to abbreviate the **Pay Item** drop down list to only items that include the search keywords. The user can either select from the list of frequently used items or enter a unique search name.
3. **Supplementary Description** – Only required if cell is not grey
4. **Quantity (required)**
5. **Unit Price** – If the user puts a value there it will be imported into Preconstruction
6. **Breakdown ID (required)**

Import an XML into the PQS

Select **Import XML** in the ribbon. A window will appear, select the file to be imported. The file will be imported at the end of the current data set.

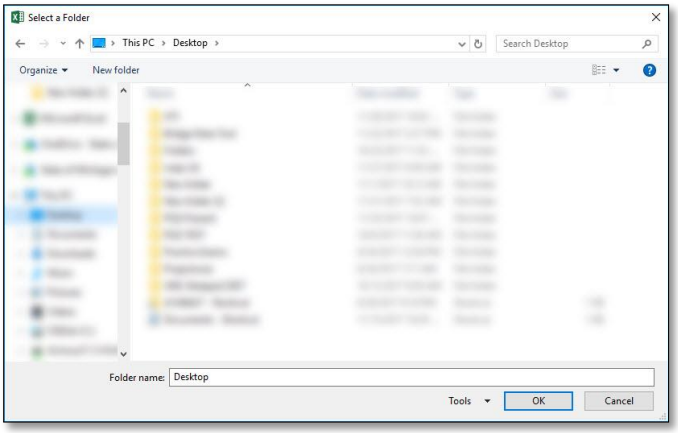
Please note that due to the Preconstruction update that occurred on 9/11/17 to version 3.01, importing quantities to the PQS from an XML created from Preconstruction is no longer available due to the deletion of Breakdown ID's in the program. A user can, however, import the unit costs from an XML into the PQS utilizing the **Import Pricing** feature

See the Preconstruction Manual on how to export an existing project XML from Preconstruction.

Create an Output Quantity XML

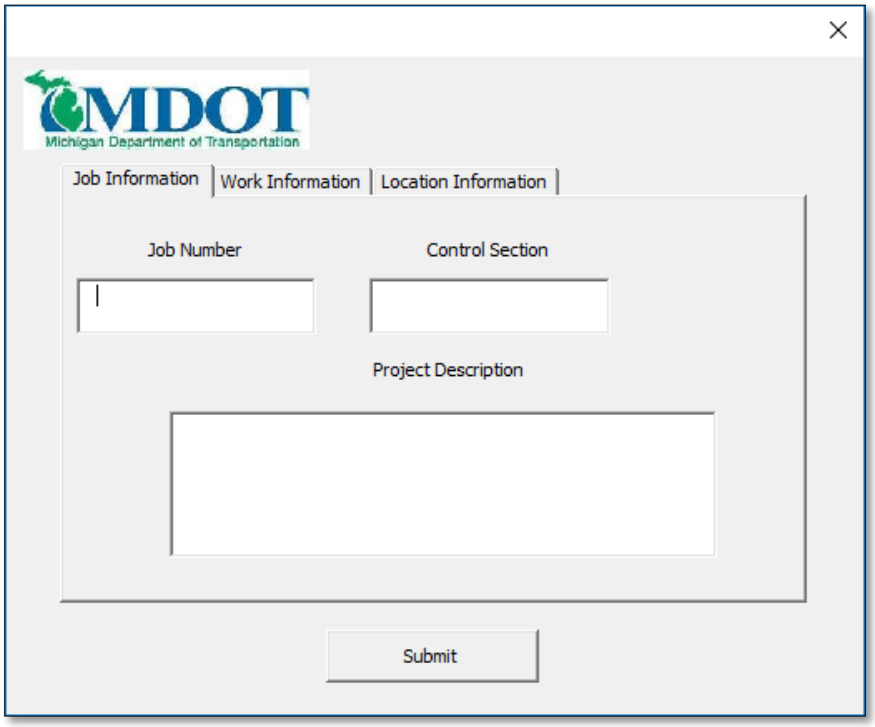
Select the **Create XML** button in the ribbon. A pop-up will appear that will prompt the user to select the Job Number. The job number that has been selected will be highlighted in blue.

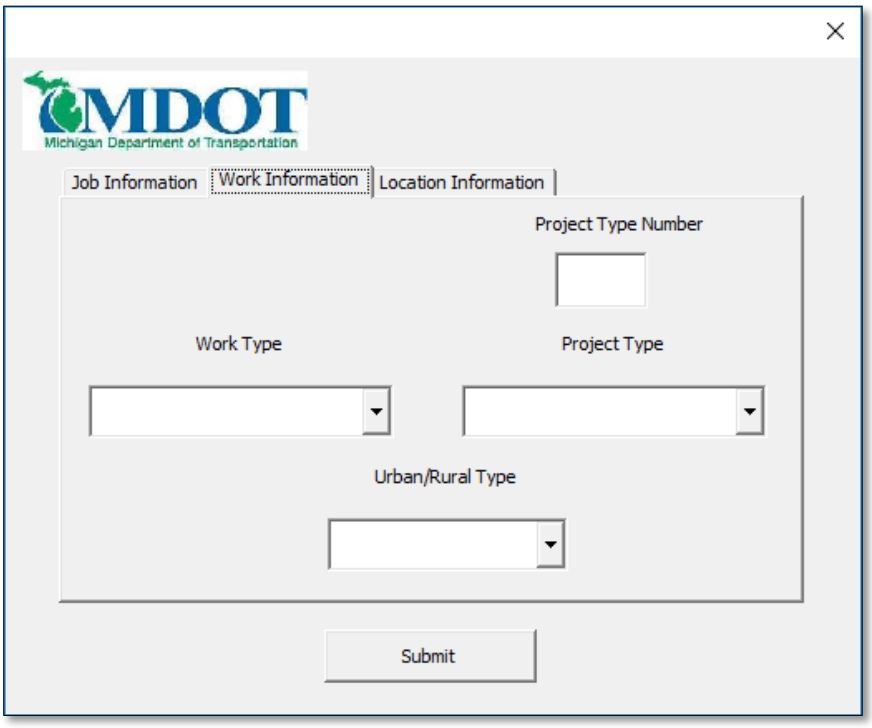
Once the job number has been selected and the user selects submit, another input box will appear. Select the folder destination where the XML will be saved and select "OK".

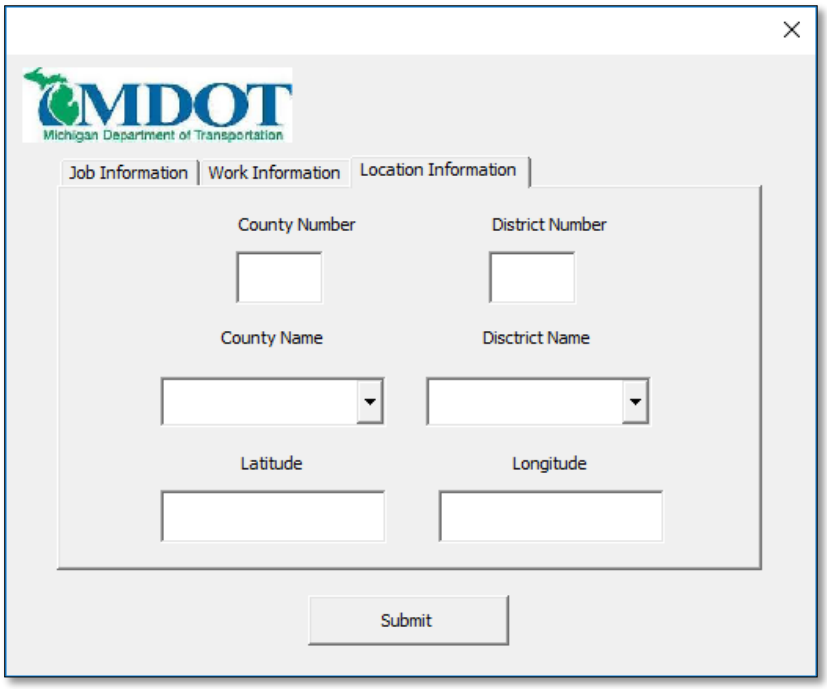


Once the XML destination has been selected the final popup box will appear. The job number will be the one the user selected, but can be modified. The job number that appears in the popup box should be adjusted to match the job number in Preconstruction. Once the job number has been filled in the Project Description must be filled and then select submit. The remaining tabs in the popup can be filled

in or left blank. They are only needed when creating a Preconstruction file. Each subsequant XML import will ignore this data.



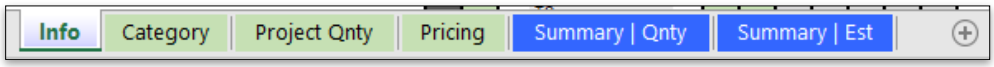




The XML that is created will be saved in the location where the user selected. See the Preconstruction Manual on how to import this XML file into the Preconstruction software.

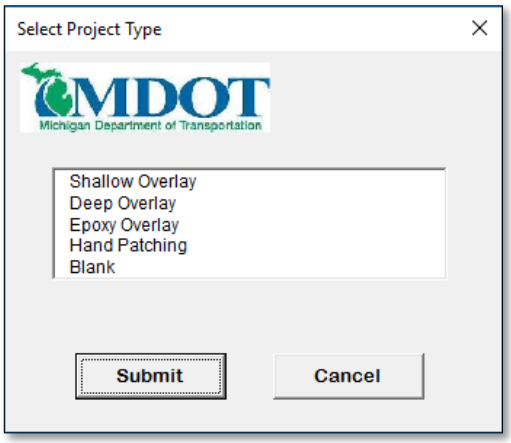
Bridge Option

Select the Bridge option to add the bridge discipline specific functionality into the PQS. When the Bridge option is selected, the following tabs will be created in the spreadsheet. These tabs are the same as the tabs generated when the General option is select, please refer to the **Defining Categories** Defining Categories and Adding Items sections.



Automated Quantity Generation

An additional functionality included in the Bridge option includes automated quantity generation for rehabilitation projects. Utilizing this function will generate a calculation spreadsheet with common items related to a specific rehabilitation project type.

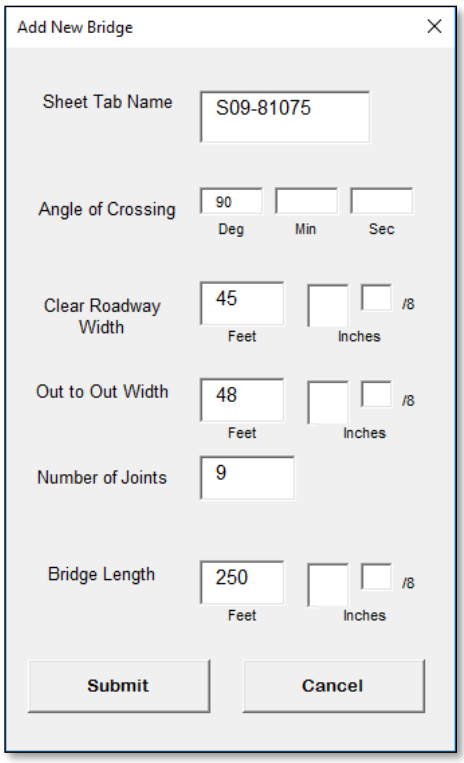


Under the **Create New** button in the ribbon select **Create Calculation Sheet**.

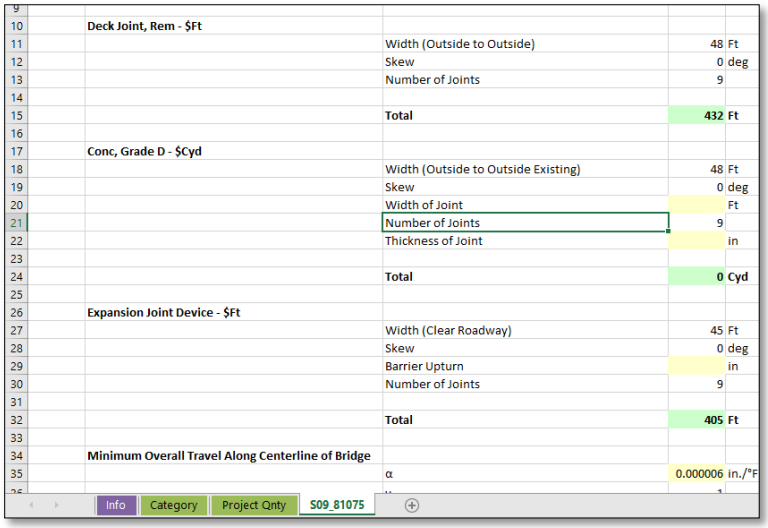
Select the type of project, Overlays and Hand Patching have automated quantity generation. They will calculate 8 to 15 standard quantities for the rehabilitation.

Input Bridge specific information (this can be updated after it is created). The Sheet Tab Name should be the Bridge Number (ex. S09_81075). If no data is entered in a field, other than the Sheet Tab Name, the value will default to zero.

Structure Number		
S09 of 81075		
Skew	0	Deg
Clearroad Way	45	Ft
Out to Out	48	Ft
Length	250	Ft
Number of Joints	9	EA



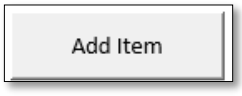
Based on the rehabilitation option that is selected, predetermined quantities will be generated. Items needing additional information will be highlighted in yellow.



10	Deck Joint, Rem - $Ft			
11		Width (Outside to Outside)	48	Ft
12		Skew	0	deg
13		Number of Joints	9	
14				
15		**Total**	**432**	**Ft**
16				
17	Conc, Grade D - $Cyd			
18		Width (Outside to Outside Existing)	48	Ft
19		Skew	0	deg
20		Width of Joint		Ft
21		Number of Joints	9	
22		Thickness of Joint		in
23				
24		**Total**	**0**	**Cyd**
25				
26	Expansion Joint Device - $Ft			
27		Width (Clear Roadway)	45	Ft
28		Skew	0	deg
29		Barrier Upturn		in
30		Number of Joints	9	
31				
32		**Total**	**405**	**Ft**
33				
34	Minimum Overall Travel Along Centerline of Bridge			
35		α	0.000006	in./°F

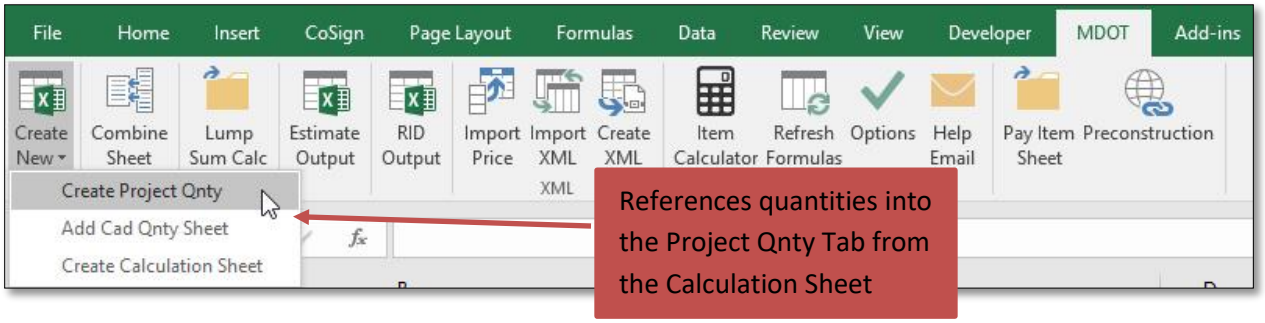
Info | Category | Project Qnty | S09_81075

To add an item, select the **Add Item** button at the top of the Calculation Sheet. This allows the designer to select from 40 quantities and the ability to place a blank quantity. The added quantity will be placed at the bottom of the sheet. It will reference the length, width, and skew if applicable. Anything highlighted in yellow requires additional inputs from the user.



When the quantities are complete and ready to be referenced into the **Project Qnty** tab, select **Create New** in the ribbon and select **Create Project Qnty**. This will find the applicable items and the quantities

and reference them so they are constantly up to date. If another quantity is added to the Calculation sheet select the **Create Project Qnty** button to added it to the **Project Qnty** tab.

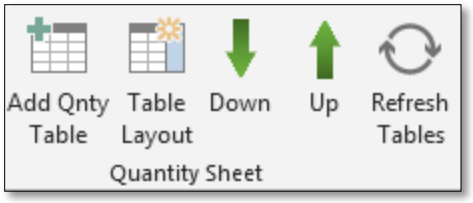


Once the items have been referenced into the **Project Qnty** tab, assign the funding code.

Road Option

Select the Road option to add the road discipline specific functionality into the PQS. When the Road option is selected, the following tabs will be created in the spreadsheet. The Category and Project Qnty tabs are the same tabs generated when the General option is selected, please refer to the **Defining Categories** Defining Categories and **Adding Items** sections.

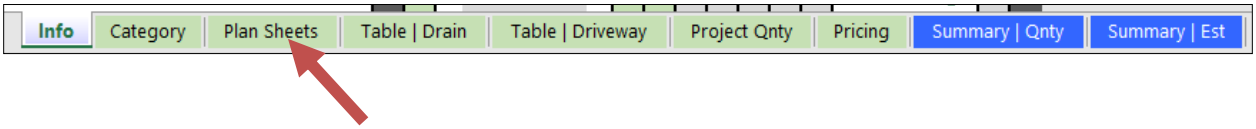
Road Custom Ribbon



1. **Add Qnty Table** (Qnty, Drain, & DrWay Sheets Only) - Adds new Quantity Table
2. **Up / Down** (Qnty, Drain, & DrWay Sheets Only) – Navigates up / down to the next table
3. **Refresh Tables** (Qnty, Drain, & DrWay Sheets Only) – Manually refreshes the tables
4. **Table Layout** (DrWay Sheets Only) - Used to customize the table

1. **Add Row** (Table | Drain & Table | Driveway Sheets Only)
2. **Delete Row** (Table | Drain & Table | Driveway Sheets Only)

Plan Sheet (Location)

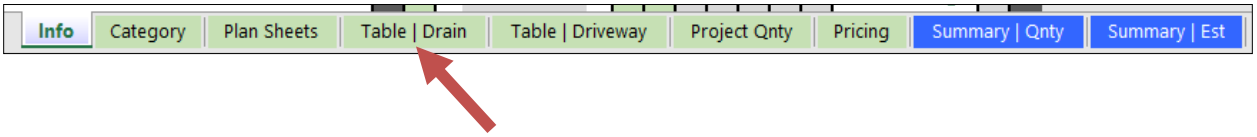


1. **Sheet No** (required) – will be the Breakdown ID in Preconstruction

Sheet No	Sheet Scale	Quantities	Description	DGN1	DGN2	DGN3	DGN Name
001	No Scale	No	Title Sheet	M-999	TITLE	001	M-999_TITLE_001
002	No Scale	No	Project Information Sheet	M-999	PROJ	001	M-999_PROJ_001
003	No Scale	No	Legend Sheet	M-999	LEGEND	001	M-999_LEGEND_001
004	400	No	ROW Vicinity / Drainage Map 1	M-999	VIC	001	M-999_VIC_001
005	No Scale	No	Note Sheet	M-999	NOTE	001	M-999_NOTE_001
006	No Scale	Yes	Miscellaneous Qnty Sheet	M-999	MSCQNT	001	M-999_MSCQNT_001
007	16	No	Typical Section Sheet 1	M-999	TYP	001	M-999_TYP_001
008	16	No	Typical Section Sheet 2	M-999	TYP	002	M-999_TYP_002
009	No Scale	No	Survey Information Sheet	M-999	SURVEY	001	M-999_SURVEY_001
010	200	No	Alignment Sheet 1	M-999	ALI	001	M-999_ALI_001
011	200	No	Alignment Sheet 2	M-999	ALI	002	M-999_ALI_002
012	80	Yes	Removal Sheet 1	M-999	REM	001	M-999_REM_001
013	80	Yes	Construction Sheet 1	M-999	CON	001	M-999_CON_001
014	80	No	Profile Sheet 1	M-999	PROF	001	M-999_PROF_001
015	80	Yes	Removal Sheet 2	M-999	REM	002	M-999_REM_002
016	80	Yes	Construction Sheet 2	M-999	CON	002	M-999_CON_002
017	80	No	Profile Sheet 2	M-999	PROF	002	M-999_PROF_002

2. **Sheet Scale** (not required)
3. **Quantities** (required) – Yes/No option, only sheets marked Yes will appear in the DGN name drop down list on the **Project Qnty** tab
4. **Description** (not required) – This will be the Breakdown Description in Preconstruction
5. **DGN Name** (required) – using MDOT guidelines
    a. Example: *M-xx / CON / 001*

Table | Drain



Drainage Name	Structure No.	Alignment	Station	Offset	Lt/Rt	Cover-N
DRAIN-101	101	M-999	132+50.00	24.00	LT	--
DRAIN-102	102	M-999	150+00.00	24.00	LT	--
DRAIN-103	103	M-999	150+00.00	24.00	RT	--
DRAIN-104	104	M-999	175+00.00	24.00	LT	--
DRAIN-105	105	M-999	175+00.00	24.00	RT	--
DRAIN-106	106	Blue St	1500+00.00	15.00	LT	--
DRAIN-107	107	Blue St	1500+00.00	15.00	RT	--

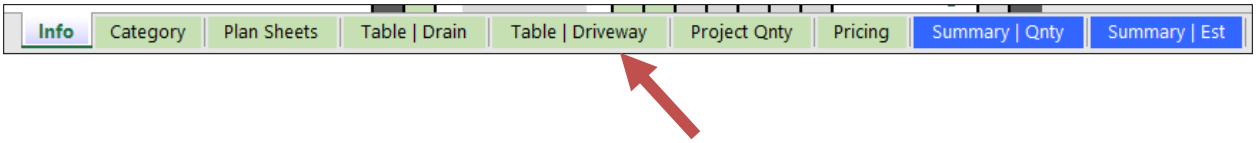
Lt/Rt	Cover-N	Cover-E	Structure-N	Structure-E	Rim Elev.	Offset+Lt/Rt	Station Format
LT	--	--	--	--	652.50	24.00 LT	132+50.00
LT	--	--	--	--	660.60	24.00 LT	150+00.00
RT	--	--	--	--	660.60	24.00 RT	150+00.00
LT	--	--	--	--	665.95	24.00 LT	175+00.00
RT	--	--	--	--	665.95	24.00 RT	175+00.00
LT	--	--	--	--	1250.99	15.00 LT	1500+00.00
RT	--	--	--	--	1250.99	15.00 RT	1500+00.00

1. Enter Structure No. (required) – The **Structure No.** must be a unique value to create the **Drainage Name**. Any duplicate **Drainage Name** will cause an error when creating the drainage qnty tables

The drainage tables will display the **Structure No., Alignment, Station, Offset, Lt/Ft, and Rim elevation**. The **Cover** and **Structure** N&E are for future use.

All empty rows will be removed when the sheet is closed.

Table | Driveway



Driveway Name	Alignment	Station	Lt/Rt	Back Offset from CL
Blue St | 1495+18 | LT	Blue St	1495+18	LT	--
Blue St | 1506+10 | RT	Blue St	1506+10	RT	--
M-999 | 0106+25 | LT	M-999	106+25	LT	34.0
M-999 | 0106+55 | RT	M-999	106+55	RT	40.0
M-999 | 0110+15 | LT	M-999	110+15	LT	34.5
M-999 | 0112+45 | RT	M-999	112+45	RT	30.0
M-999 | 0156+15 | LT	M-999	156+15	LT	34.0
M-999 | 0165+85 | LT	M-999	165+85	LT	42.0
M-999 | 0188+05 | RT	M-999	188+05	RT	28.5
M-999 | 0190+36 | RT	M-999	190+36	RT	48.0

1. Enter **Alignment** (not required)
2. Enter **Station** (not require)
3. Select **Lt/Rt** (not required)

The **Driveway Name** must be unique. Any duplicated **Driveway Name** will cause an error when creating the driveway qnty tables.

All empty rows will be removed when the sheet is closed.

Lt/Rt	Back Offset from CL	Prop Drive Slope	ius - Exiting	Custom 1	Custom 2	Custom 7	Custom 8	Station+Lt/Rt
LT	--	4.2%	10.0	--	--	--	--	1495+18 LT
RT	--	2.0%	25.0	--	--	--	--	1506+10 RT
LT	34.0	2.0%	--	--	--	--	--	106+25 LT
RT	40.0	8.0%	--	--	--	--	--	106+55 RT
LT	34.5	6.5%	--	--	--	--	--	110+15 LT
RT	30.0	2.4%	--	--	--	--	--	112+45 RT
LT	34.0	7.0%	--	--	--	--	--	156+15 LT
LT	42.0	-3.5%	--	--	--	--	--	165+85 LT
RT	28.5	0.4%	--	26.0	--	--	--	188+05 RT
RT	48.0	10.0%	--	28.0	--	--	--	190+36 RT

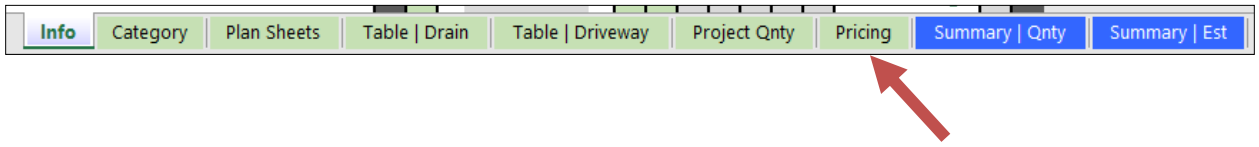
All other fields {not required} are to be used at the user's discretion. The table headers can be edited to customize the driveway qnty table for the project specifics.

Project Qnty

1. Select **Funding Code** (required)
2. Select **DGN Name** (required)
3. Select **Work Item** (not required)
4. Select **Table – Type** (not required)
5. Select **Table – Name** (required if **Table – Type** = “DRAIN” or “DRIVEWAY”)
6. Select **Pay Item** (required)
7. Enter **Supplementary Description** (required if unique item and if not greyed out)
8. Enter **Quantity** (required)
9. Enter **Unit Price** (not required)

Pricing

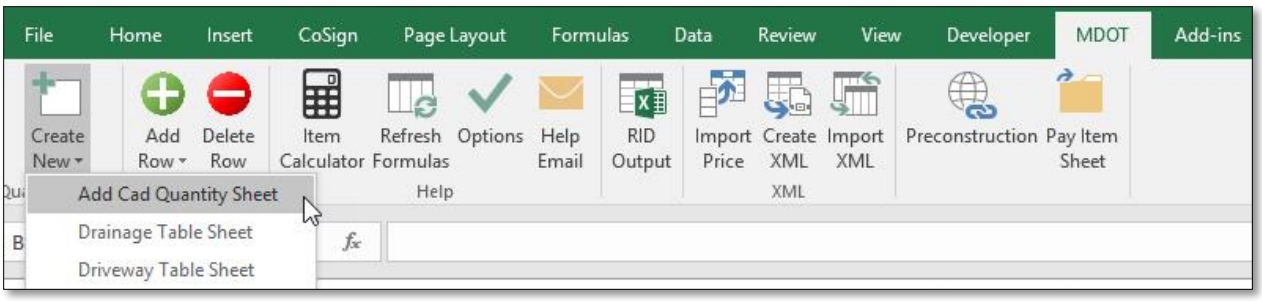
This tab is used to apply user defined unit prices to all items.



Item Number	Item Description	Supplemental Description	Unit Price
8070107	Guardrail, Reconst, Type C - $Ft		$ 2.00

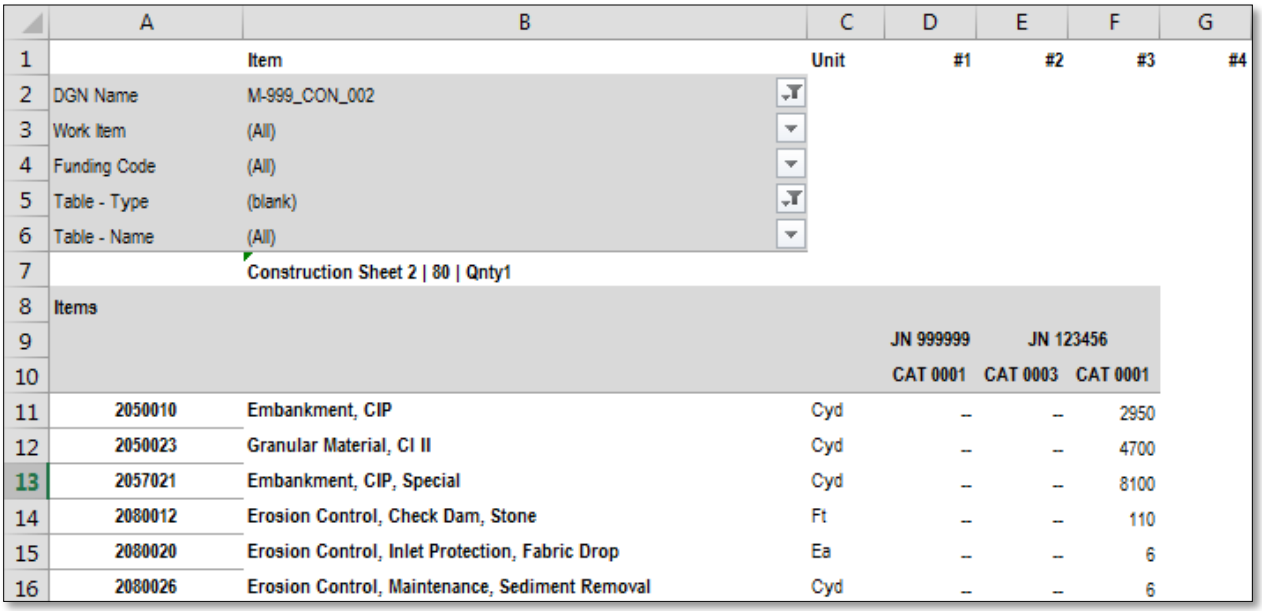
6. Add Unit Prices to Items (required)
7. Select **Price Items** in the Ribbon

Linking the PQS to Microstation



From the MDOT Ribbon, select the Create New button to add a new qnty table sheet. This will create a new sheet named Qnty#, Drain#, or Driveway# and include the first qnty table. This sheet name can be changed, but only prior to linking to Microstation. If the sheet name is changed after the links are established, they will not update properly.

Standard Qnty Table



	A	B	C	D	E	F	G
1		Item	Unit	#1	#2	#3	#4
2	DGN Name	M-999_CON_002					
3	Work Item	(All)					
4	Funding Code	(All)					
5	Table - Type	(blank)					
6	Table - Name	(All)					
7		Construction Sheet 2 | 80 | Qnty1					
8	Items						
9				JN 999999	JN 123456		
10				CAT 0001	CAT 0003	CAT 0001	
11	2050010	Embankment, CIP	Cyd	--	--	2950	
12	2050023	Granular Material, Cl II	Cyd	--	--	4700	
13	2057021	Embankment, CIP, Special	Cyd	--	--	8100	
14	2080012	Erosion Control, Check Dam, Stone	Ft	--	--	110	
15	2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	--	--	6	
16	2080026	Erosion Control, Maintenance, Sediment Removal	Cyd	--	--	6	

1. Select **DGN Name** (required)
2. Select **Table - Type (**required)
3. Match names to Qnty Guide placement points (see Linking)
4. From the MDOT ribbon, select **Add Qnty Table** under **Create New** to add a new table. A single Qnty Sheet can contain as many Qnty Tables as desired, but the plan sheets must all be the same scale. Create a new Qnty Sheet for each set of plan sheet scales required.

*The **Table - Type** should be set to "(blank)" for general sheet quantities (those not assigned to a table). This will filter out any quantities that are intended to be placed in a table*.

Drainage Qnty Table

	A	B	C	D	E
1		Struct	Alignment	Station	Offset
2	DGN Name	M-999_CON_002			
3	Work Item	All			
4	Funding Code	All		Cell: Sh_Sheet_Qnty_Drain	
5	Table - Type	DRAIN			
6	Table - Name	All			
7		Construction Sheet 2 | 80 | Drain1			
8	Items				
9					
10					
11					
12					
13					
14					
15					
16					
17	DRAIN-101	101	M-999	132+50.00	24.00 LT
18	DRAIN-102	102	M-999	150+00.00	24.00 LT

1. The Drainage Qnty Table is very similar to the Standard Qnty Table, except that the **Table - Type** should be set to “DRAIN”.

2. Qnty guide cell name

Driveway Qnty Table

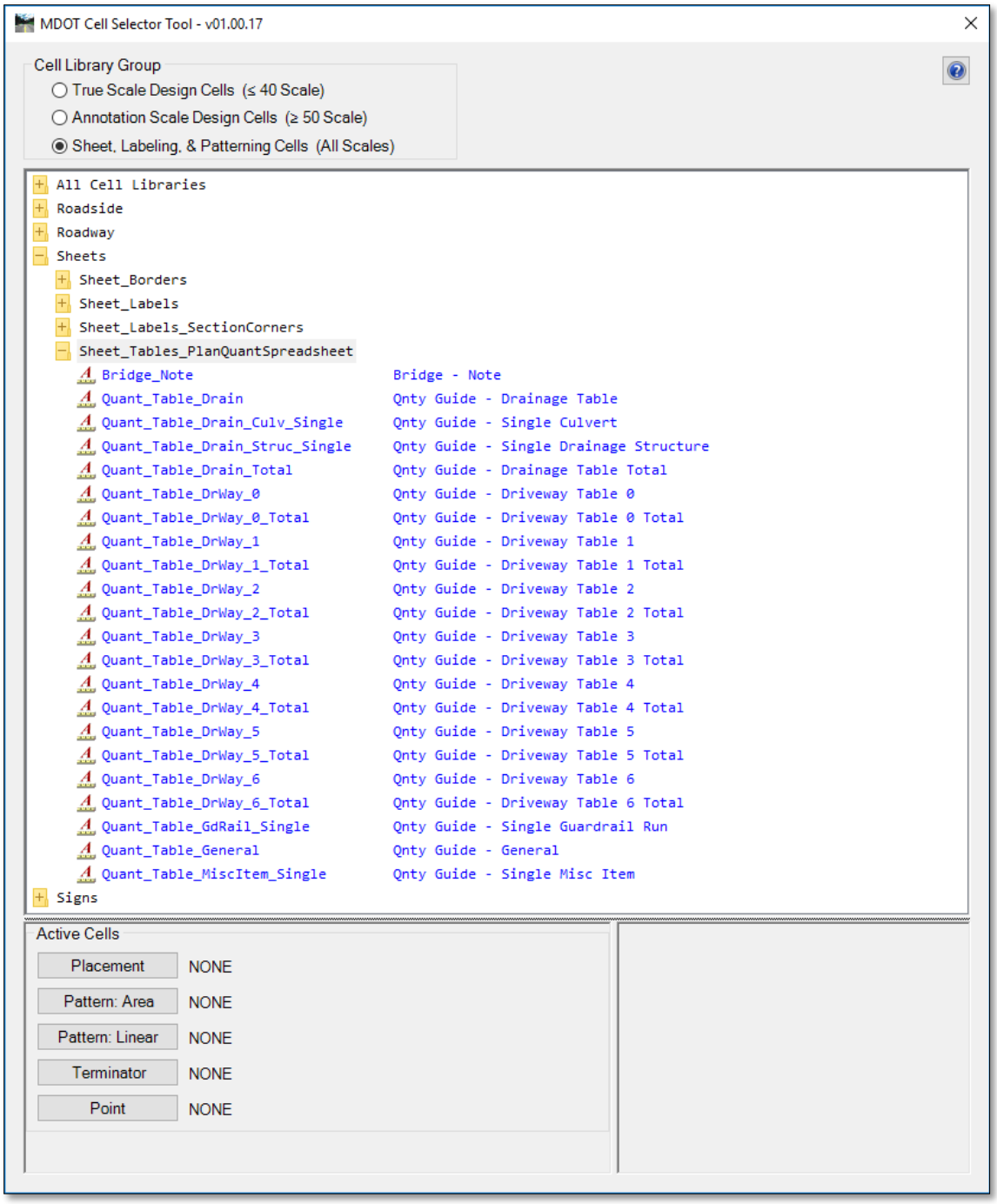
	A	B	C	D	E
1		Alignment	Station	#1	#2
2	DGN Name	M-999_CON_001			
3	Work Item	All			
4	Funding Code	All	Cell: Sh_Sheet_Qnty_DrWay3		
5	Table - Type	DRIVEWAY			
6	Table - Name	All			
7		Construction Sheet 1 | 80 | DrWay1			
8	Items				
9					
10					
11					
12					
13					
14					
15					
16	M-999 | 0106+25 | LT	M-999	106+25 LT	34.0	2.0%
17	M-999 | 0106+55 | RT	M-999	106+55 RT	40.0	8.0%
18	M-999 | 0110+15 | LT	M-999	110+15 LT	34.5	6.5%

1. The Driveway Qnty Table is very similar to the Standard Qnty Table, except that the **Table - Type** should be set to “DRIVEWAY”.

2. Qnty guide cell name – describes the cell required for linking to Microstation, in this case: Sh_Sheet_Qnty_DrWay3

3. From the MDOT QUANTITIES ribbon, select **Table Layout** to customize the Driveway Table. The fields names are from the Driveway Table headers (see Table | Driveway).

Microstation Linking



(In Microstation)

1. Create new Microstation file: "######_Qnty.dgn"

   This will be used as a base file for linking all quantities and referenced to the sheet files. It is recommended that a separate model be created for each required plan sheet scale.

2. Place the Qnty Guide cell in the Microstation file at the desired scale. It contains important information and "guides" for proper creation of the quantity tables and clip boundaries (or saved views). The Qnty Guides are on non-plot levels and will not print if using Print Organizer. They do not need to be turned off in the sheets.

   Standard Quantity Sheet – Quant_Table_General

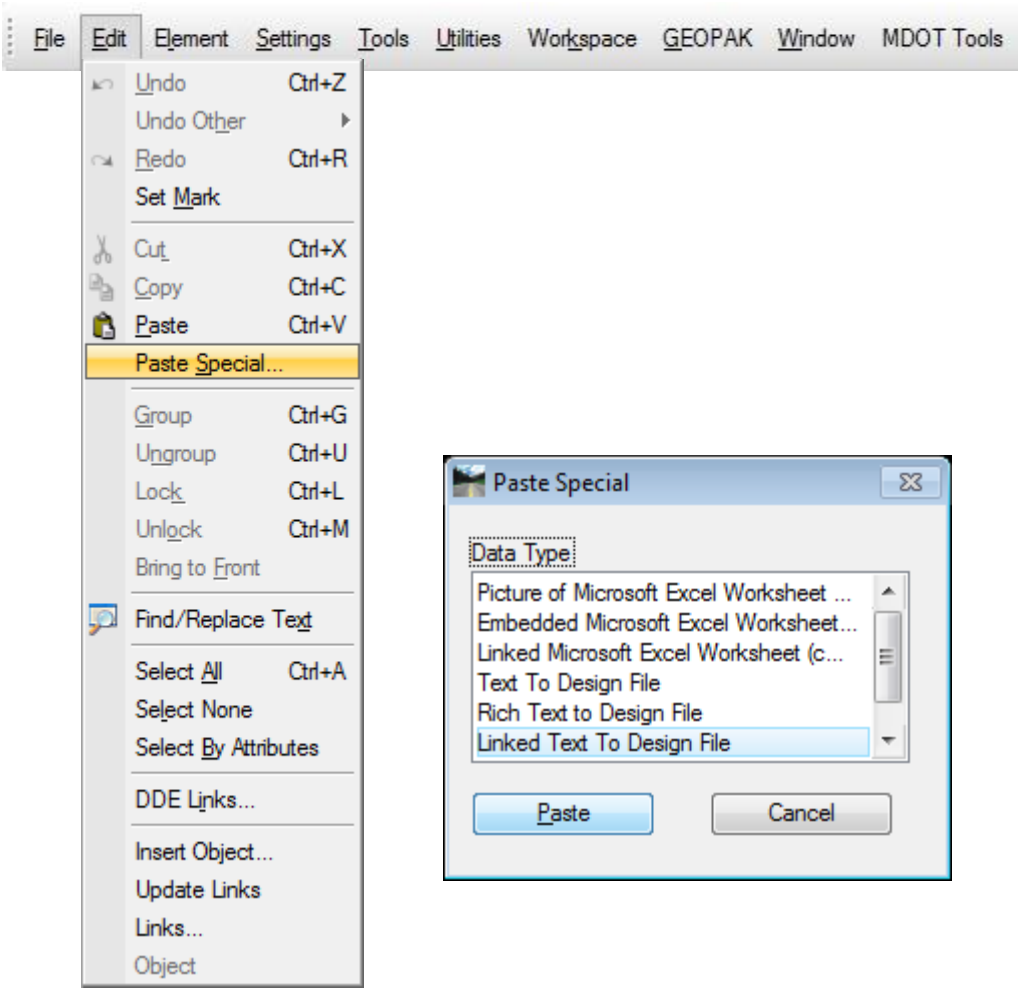
   Drainage Quantity Sheet – Sh_Sheet_Qnty_Drain

   Driveway Quantity Sheet – Sh_Sheet_Qnty_DrWay#

	A	B	C	D	E	F	G	M
1		Item	Unit	#1	#2	#3	9	#10
2	DGN Name	M-999_CON_002						
3	Work Item	(All)						
4	Funding Code	(All)						
5	Table - Type	(blank)						
6	Table - Name	(All)						
7		Construction Sheet 2 | 80 | Qnty1						
8	Items							
9				JN 999999	JN 123456			
10				CAT 0001	CAT 0003	CAT 0001		
11	2050010	Embankment, CIP	Cyd	--	--	2950		
12	2050023	Granular Material, Cl II	Cyd	--	--	4700		
13	2057021	Embankment, CIP, Special	Cyd	--	--	8100		
14	2080012	Erosion Control, Check Dam, Stone	Ft	--	--	110		
15	2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	--	--	6		
16	2080026	Erosion Control, Maintenance, Sediment Removal	Cyd	--	--	6		
17	2080034	Erosion Control, Sediment Trap	Ea	--	--	4		
18	2080036	Erosion Control, Silt Fence	Ft	--	--	600		
19	3010002	Subbase, CIP	Cyd	--	--	4515		
20	3020002	Aggregate Base, LM	Cyd	--	--	420		
21	3020008	Aggregate Base, 3 inch	Syd	--	--	95		
22	3020016	Aggregate Base, 6 inch	Syd	--	1256	2163		

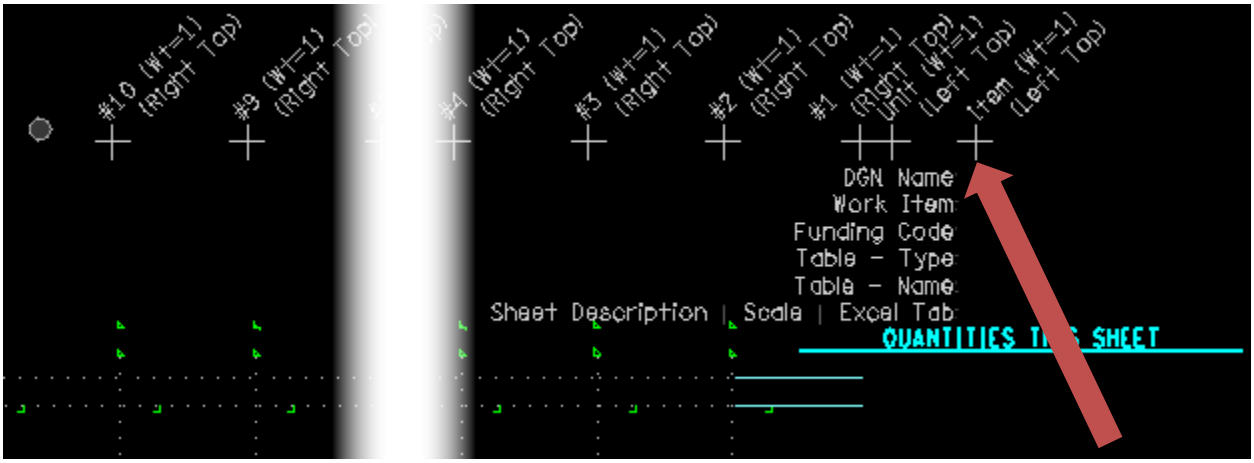
(In PQS)

3. Select desired column and hit **ctrl + C** (or right-click → Copy)



(In Microstation)

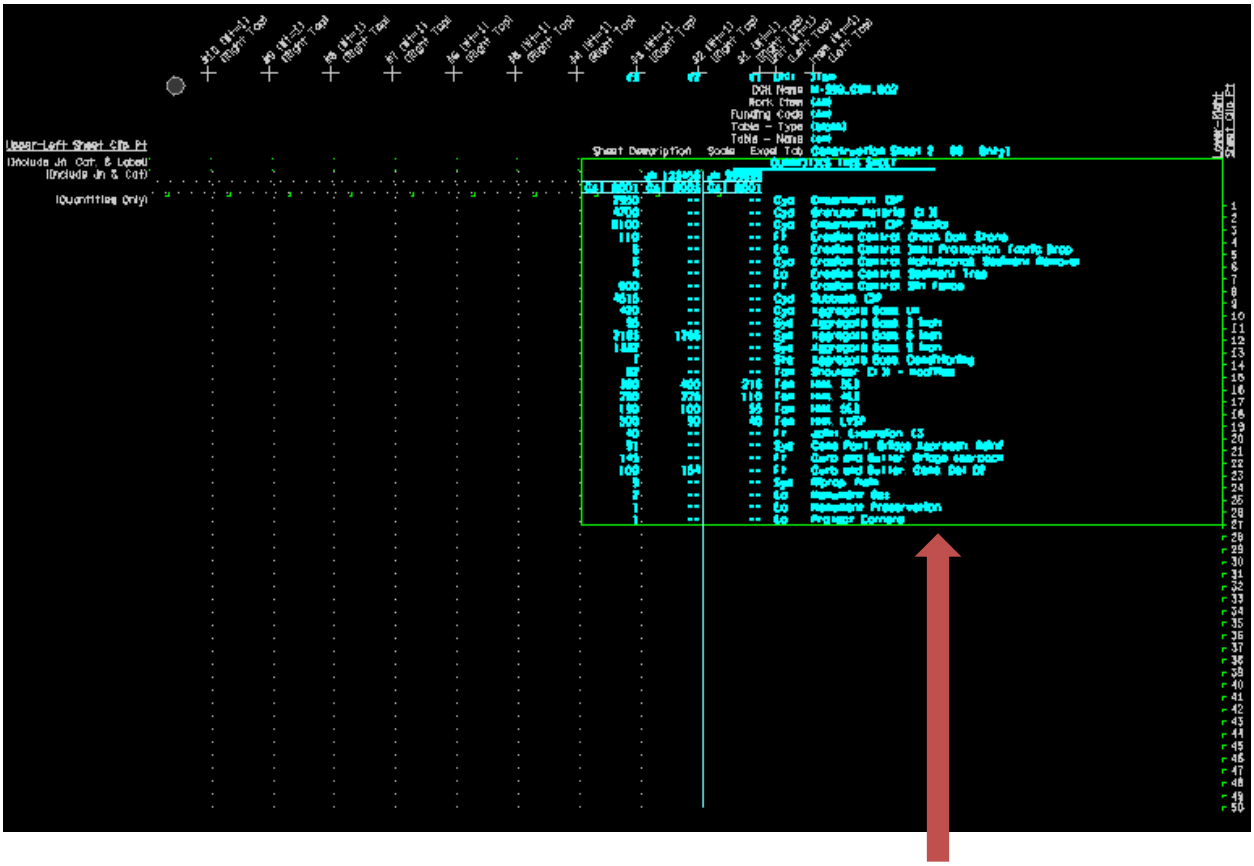
4. Edit → Paste Special
5. Select **Linked Text to Design File**
6. Select **Paste**



[in Microstation]

7. Paste linked text at proper location according to the Qnty guide cell. This will be placed using active level and text settings. Modify as required. The Qnty Guide placement points provide guidance on the appropriate text justification and wt. It is recommended that the Pr_NoMask text style be used.

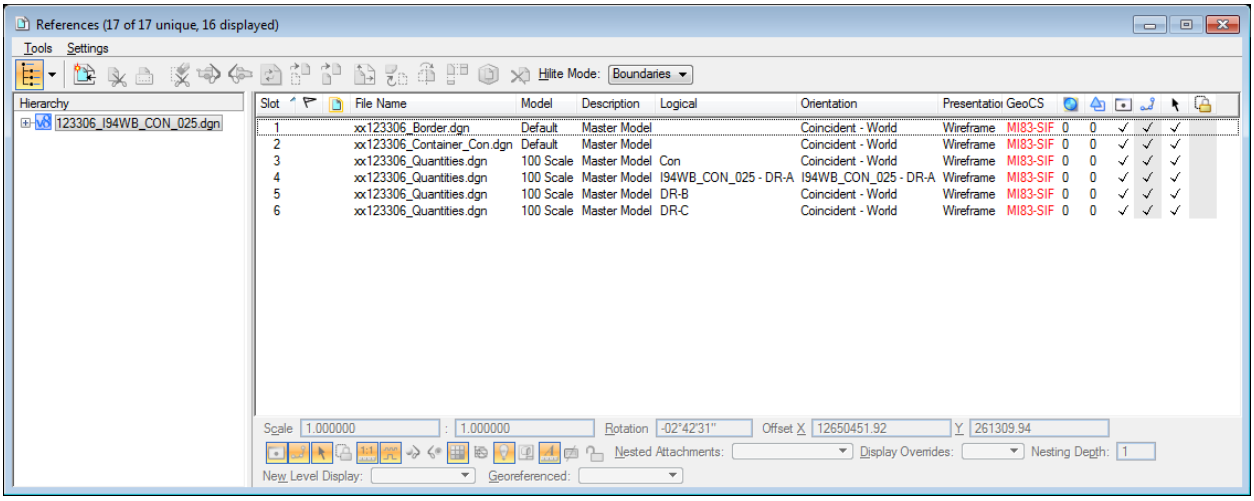
   These steps are repeated for each required column



[in Microstation]

8. Use the clip points to create a clip boundary and saved view. The Qnty Guide cells provide several sets of clip points for the user to customize what is shown in the sheets.

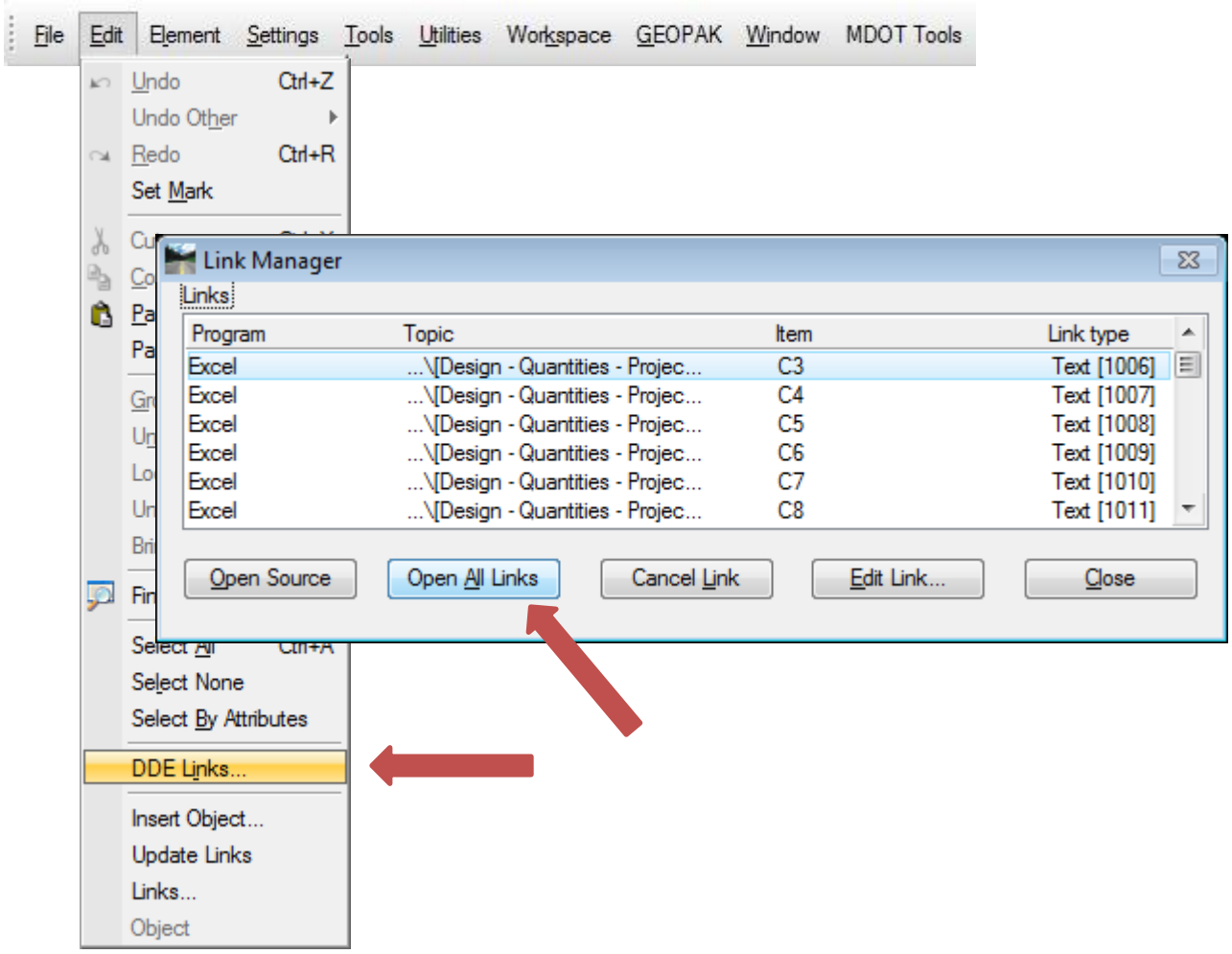
   These steps are repeated for each required column



[in Microstation]

9. Attach the Qnty .dgn file to the plan sheet using either a saved view or clip boundary.

Updating Links



[in Microstation]

When Microstation is closed and reopened, the links will not automatically update until they are reestablished.

1. Edit → DDE Links
2. Select **Open All Links** (PQS must also be open)

Copying / Paste Data

If copying / pasting funding codes, plan sheets, and/or quantities from previous versions, always use the Paste Values to avoid complications. The PQS has a large number of named ranges and lists that may inadvertently be copied over if the standard Paste command is used.