

New Quantity Summary Boxes for Structures

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Objective

- Using the Structures workspace, learn the new workflow for documenting quantities in the new Plan Summary Boxes for Structures.

General

- Joint Bulletin dated July 22, 2013 requires that comp books be replaced with Plan Summary Boxes.
- What does this mean for Structures?
 - Quantities will no longer be documented on the plan sheets with the structure details.
 - New Plan Summary Box to document quantities
 - Summary of Structure Quantities – Bridge XXXXXX
 - New File for a New Sheet
 - B#SumofQuantities* - Summary of Structure Quantities
 - Located directly after the Summary of Pay Items in the General Bridge Section (or behind Key Sheet/Index Sheet if no Summary of Pay Items)
 - Each Bridge will have a separate Summary of Structure Quantities with separate numbering.
 - General bridge pay items and (for stand alone projects) roadway summary boxes – BQ-1, BQ-2, etc.
 - Bridge 1 – BQ1-1, BQ1-2, etc.
 - Bridge 2 – BQ2-1, BQ2-2, etc.
 - Etc....

Create/Edit File

- Now includes the Summary of Quantities file option...

Create File/Project

Project: C:\e\projects\Webinars

Workspace: FDOTSS2

Control File: STRUCTURES.CTL

File Group: PLAN SHEETS

Project Settings

File Type:

- BRIDGE HYDRAULIC RECOMMENDATION SHEET
- BRIDGE KEY SHEET
- DIGITAL SIGNATURES (MULTI)
- GENERAL NOTES
- INDEX OF SHEETS
- PLAN AND ELEVATION
- PROFILE GRADE & SE TRANSITION
- STRUCTURES BORDER
- SUMMARY OF QUANTITIES**

Output File: B#SumOfQuantities01

Output Folder: Struct\

Seed File: StructuresSeed.DGN

Seed Path: resources/seed/

Action:

Create Open File

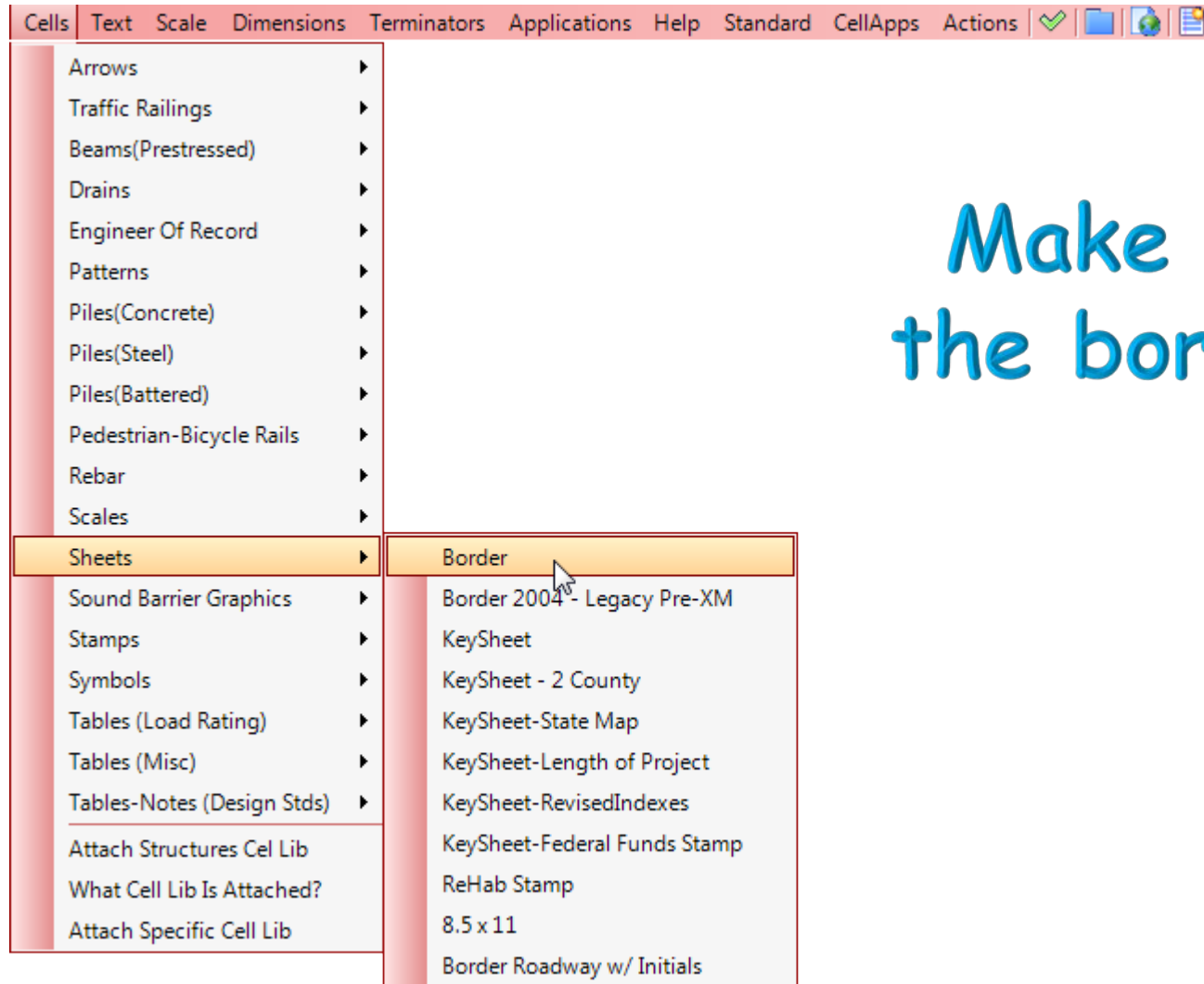
Browse Browse

Apply Action

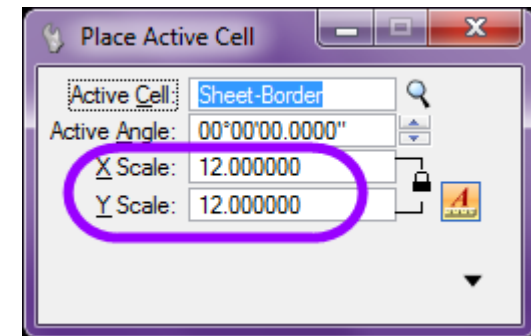
Active File for Open/Edit: B#SumOfQuantities01.DGN

OK

Sheet Border

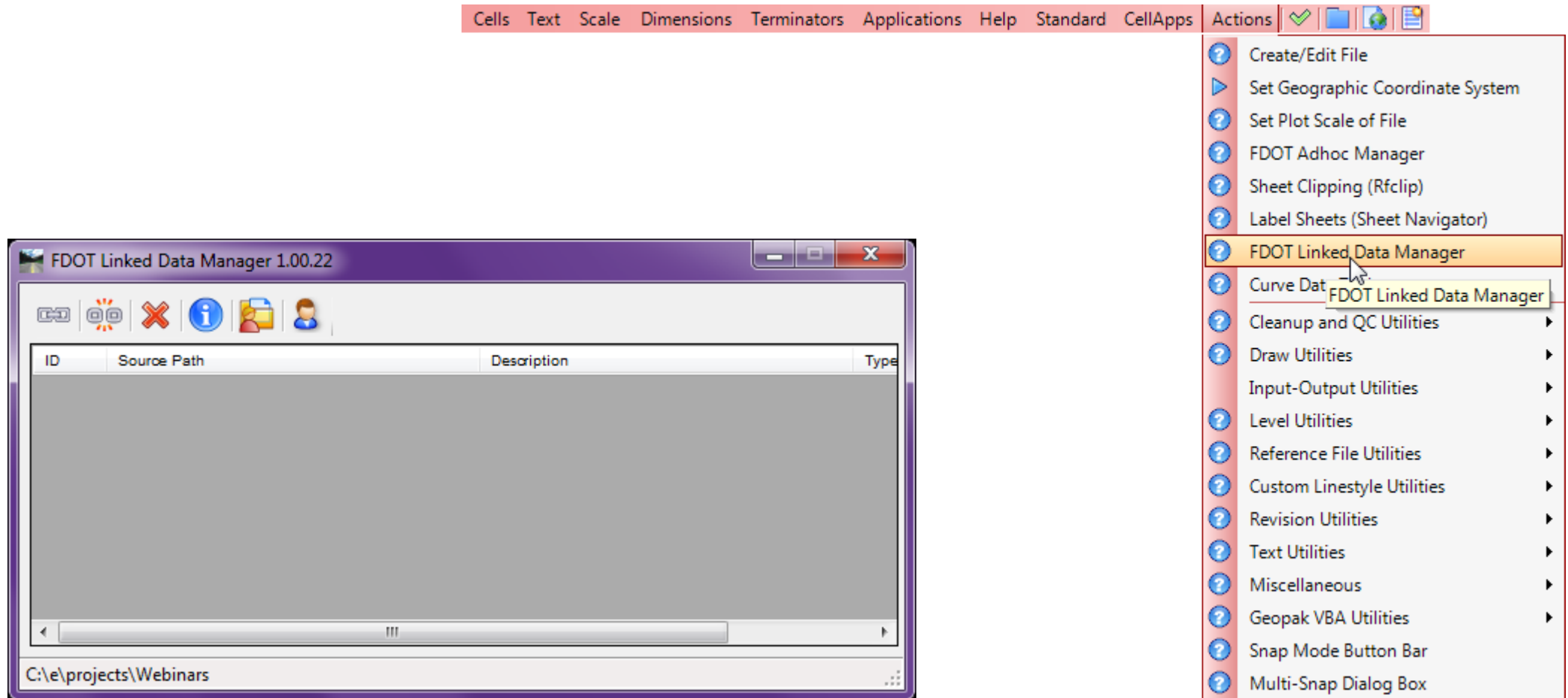


Make sure to place
the border at a scale
of 12.

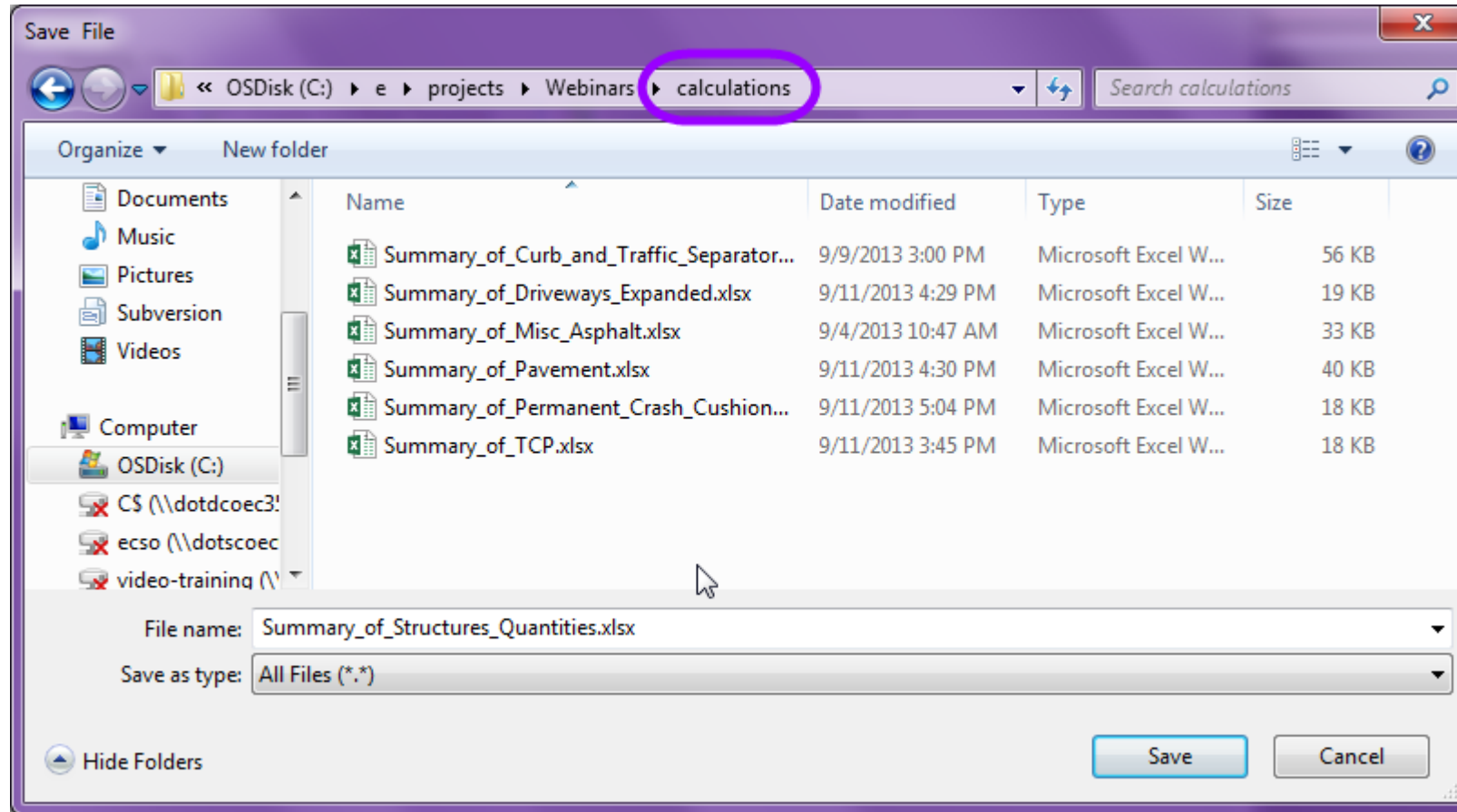


Linked Data Manager

- Summary Box templates are accessed through LDM.



Linked Data Manager



- Save the Excel file in the Calculations directory.
- Optional: a sub directory can be used to organize the different disciplines, i.e. roadway and structures.

Linked Data Manager

- Select the worksheet for Bridge I
- The Description is optional to be used to help organize the links in the LDM dialog box.
- Do NOT toggle on the Use Plot Scale option.
- Click OK.

The screenshot shows the 'Link Information' dialog box with the following settings:

- Source File:** Includes buttons for 'Create New from Template' and 'Create New from Quantities'.
- Source Path:** .calculations\Summary_of_Structures_Quantities.xlsx
- Description:** Bridge 1
- Excel Settings:**
 - Worksheet:** A dropdown menu is open, showing 'Bridge 1' (selected), 'DESIGN BACKUP', and 'FINAL BACKUP'.
 - Header Rows:** 2
 - Use Title Cell:** ☐
- Graphics Settings:**
 - FDOT:** ☒ Standard
 - Site:** ☐ [Empty dropdown]
 - Project:** ☐ [Empty text field]
- Bottom Checkboxes:** ☐ Use Plot Scale, ☐ Update Graphics on File Open, ☐ Lock Graphics
- Buttons:** OK, Cancel

Linked Data Manager

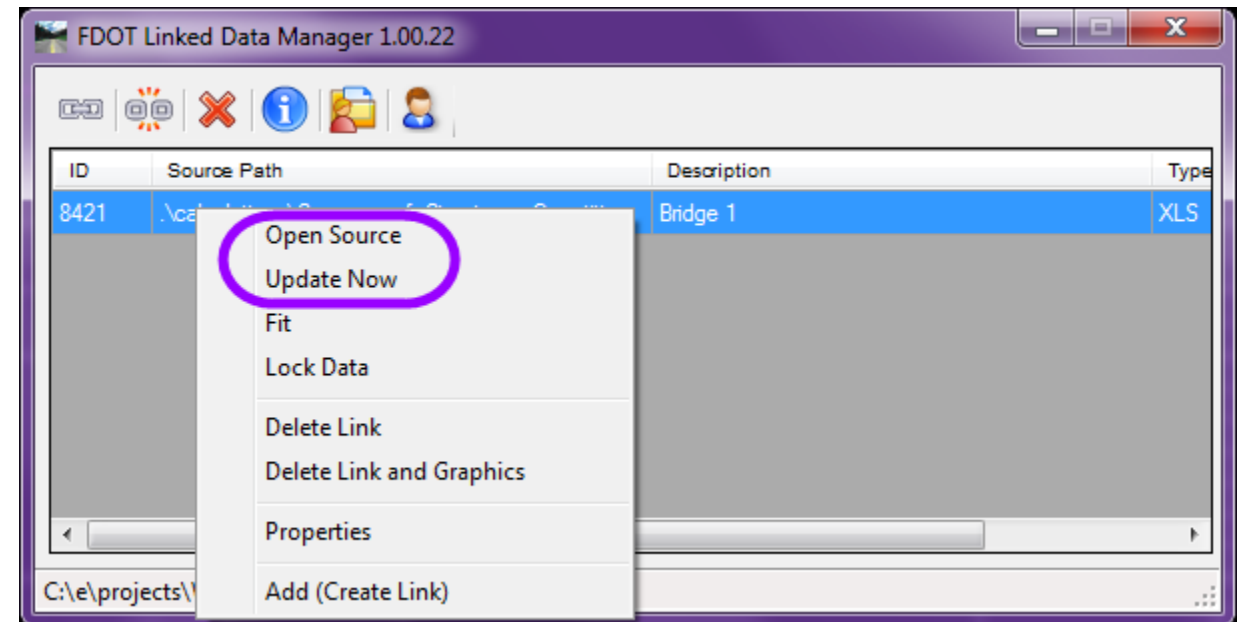
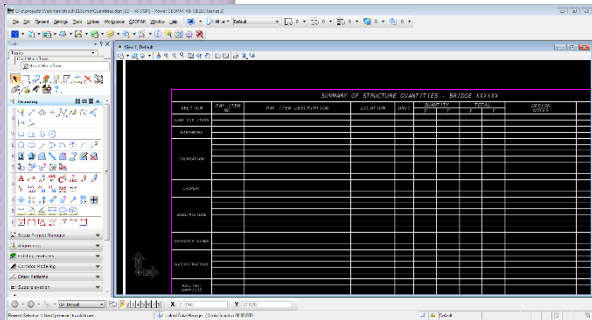
- Place the summary box in the plan sheet.

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE XXXXXX										
SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
LUMP SUM ITEMS										
PAVEMENT										
FOUNDATION										
CULVERT										
SUBSTRUCTURE										
APPROACH SLABS										
SUPERSTRUCTURE										
RAILING/ BARRIERS										
MOVABLE BRIDGE/ ARCHITECTURAL										
SPECIAL FEATURES										

DATE: _____		BY: _____		CHECKED: _____		STATE OF FLORIDA		COUNTY: _____	
PROJECT: _____		SHEET: _____		DESIGNER: _____		DEPARTMENT OF TRANSPORTATION		DISTRICT: _____	
LOCATION: _____		SCALE: _____		DATE: _____		PROJECT NO.: _____		SHEET NO.: _____	
DRAWN BY: _____		CHECKED BY: _____		APPROVED BY: _____		PROJECT NAME: _____		SHEET TITLE: _____	

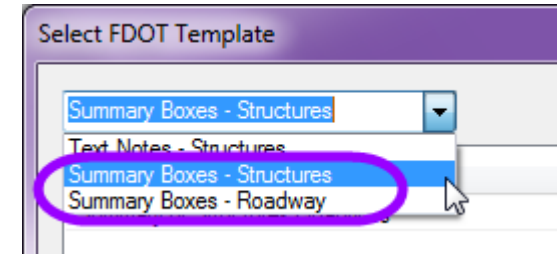
Linked Data Manager

- Use the right click option in LDM to open the source file.
- Fill out the summary box with the appropriate pay item and quantity information and save the file.
- Right click again in LDM to use the Update Now option to update the information in MicroStation.



Basic Summary Box Do's...

- Use LDM to Create Excel Files for Summary Boxes.
 - Use the FDOT templates that have already been formatted for use.
 - (Summary Boxes drop down lists)
- Adjust column widths as needed to fit on the plan sheet or alleviate word wrap.
- Delete un-used Design columns or rows.
- When copying from other xlsx or csv files, Paste Special using the Values Only option to preserve the template formatting.



& Don'ts

Don't...

- Delete the Construction Remarks or “F” columns.
- Modify the Summary Box titles.
- Add NEW columns
- Create separate xlsx files for each box needed for a summary.

Summary Boxes – Misc.

- Only fill out the pay item no., description, unit and total on the FIRST line that pay item appears. Do NOT repeat this information. It makes it harder to read.

Do...

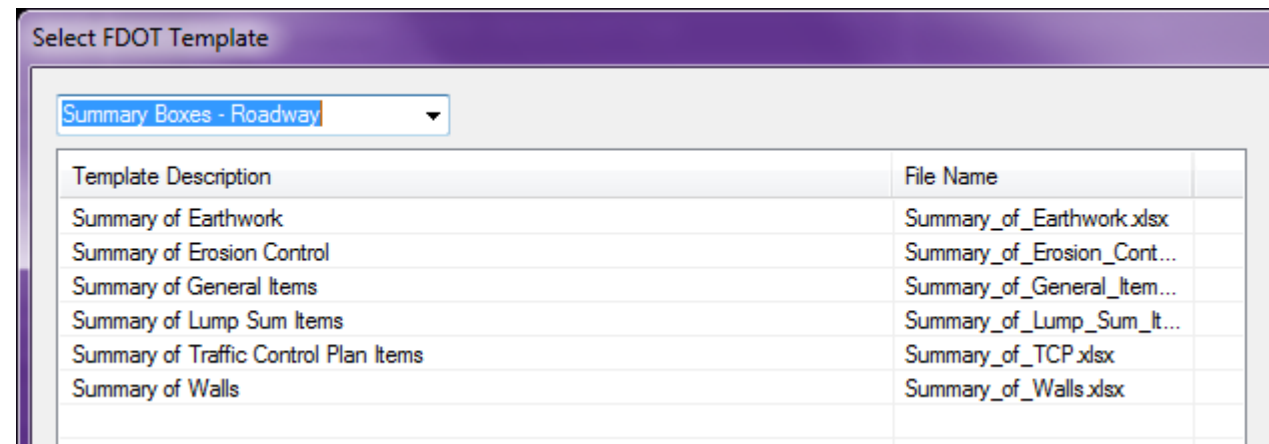
SUMMARY OF STRUCTURE QUANTITIES - BRIDGE XXXXXX							
SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL
					P	F	P
LUMP SUM ITEMS	0110 3	STRUCTURE REMOVAL OF EXISTING	EXISTING BRIDGE	LS/SY	4563.0		6163
			EX. APPR SLAB 1		800.0		
			EX. APPR SLAB 2		800.0		
	0455 18	PROTECTION OF EXISTING STRUCTURES		LS	1		1
EARTHWORK	0120 1	EXCAVATION REGULAR	BEGIN ABUTMENT	CY	403.0		639
			END ABUTMENT		236.0		
	0455 34 3	CONCRETE PILING PRESTRESSED (18" SQ.)	END BENT 1	LF	172.3		718
			END BENT 4		208.1		
			INT BENT 2		198.7		

Don't...

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE XXXXXX							
SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL
					P	F	P
LUMP SUM ITEMS	0110 3	STRUCTURE REMOVAL OF EXISTING	EXISTING BRIDGE	LS/SY	4563.0		6163
	0110 3	STRUCTURE REMOVAL OF EXISTING	EX. APPR SLAB 1	LS/SY	800.0		
	0110 3	STRUCTURE REMOVAL OF EXISTING	EX. APPR SLAB 2	LS/SY	800.0		
	0455 18	PROTECTION OF EXISTING STRUCTURES		LS	1		1
EARTHWORK	0120 1	EXCAVATION REGULAR	BEGIN ABUTMENT	CY	403.0		639
	0120 1	EXCAVATION REGULAR	END ABUTMENT	CY	236.0		
	0455 34 3	CONCRETE PILING PRESTRESSED (18" SQ.)	END BENT 1	LF	172.3		718
	0455 34 3	CONCRETE PILING PRESTRESSED (18" SQ.)	END BENT 4	LF	208.1		
	0455 34 3	CONCRETE PILING PRESTRESSED (18" SQ.)	INT BENT 2	LF	198.7		

More Summary Boxes

- Roadway summary boxes will also be available within the Structures workspace.
 - For projects without a Roadway component.
 - Goes in the summary sheets for the general bridge items. (numbered BQ-1, BQ-2, etc.)



Summary Boxes – Order of Placement RECOMMENDED

- Lump Sum
- General Items
- Temporary Traffic Control
- Temporary Driveways
- Special Detours
 - (for informational purposes, paid for under MOT)
- Temporary Crash Cushions
 - (this one is for information but the quantity goes on the TTC)
- Erosion Control
- Litter Removal & Mowing
- Removal Items
- Mailboxes
- Earthwork
- Geotechnical Items

- Turnouts
- Pavement
- Misc. Pavement
- Walls
 - (if not included with a structures component)
- Box Culverts
- Utility Adjustments
- Side Drain & MES
- Misc. Drainage
- Trench Drain
- Underdrain
- French Drain
- Edge Drain
- Railing

- Permanent Barrier Walls
- Curb & Gutter and/or Traffic Separators
- Sidewalk
- Permanent Driveways
- Ditch Pavement
- Guardrail
- Permanent Crash Cushions
- Fencing
- Performance Turf

**BOE Update
Coming Soon!**

Questions???



Thank-you for joining today's webinar.
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