Fabrication Library

ELECTRONIC SUBMISSION STANDARDS

<p style="text-align:center">Contents</p>

Accessing the Fabrication Library for Electronic Submittals

Requesting Access

To request access, complete this form:
https://wisconsindot.gov/dtsdManuals/strct/fabrication/acc-req-frm-2017.doc

Send completed form to: DOTDLStructuresFabrication@dot.wi.gov

Once your access request form is accepted, you will receive further instructions, including a link to the Fabrication Library.

Opening the Fabrication Library Home Page

To open/view the Fabrication Library Home Page, use the following link on your preferred internet browser: https://wigov.sharepoint.com/sites/dot-dtsd/scr/SitePages/Home.aspx

Questions? Contact: DOTDLStructuresFabrication@dot.wi.gov

Roles

Fabricator: Company assembling the structural components shown on the shop drawing details

Contractor: Prime contractor

Project Leader/Manager: Region project engineer administering the contract or consultant engineer administering the contract on behalf of WisDOT.

Bureau of Structures: Central WisDOT Office

Electronic Submittal Processes

BUREAU OF STRUCTURES

Shop Drawings

References

📌 [How to upload a document?](#)

📌 [How to edit document properties?](#)

📌 [How to check-in a checked-out document?](#)

📌 [How to update review status for Project Manager/Leader?](#)

📌 [How to add review comments?](#)

Parties Involved

💬 Fabricator

💬 Contractor

💬 Project Leader or Manager

💬 Bureau of Structures (BOS)

1) The Fabricator (or the detailer contracted by the Fabricator) produces the shop drawing set.

2) The Fabricator completes a Quality Control (QC) review of the shop drawings, including the review items listed in the applicable Contractor's Certificate of Quality Control DT Form [CCQC DT Form]. The Fabricator should resolve all errors, omissions or constructability issues before signing the DT Form.

Structure/Component	[CCQC DT Form]
Steel Bridges …………………………………………..	DT2333*
Sign Structures …………………………….…………...	DT2326
Fabricated Bridge Components …………………….…...	DT2327
Railings, Steel Bearing Assemblies, Steel Diaphragm, Expansion Devices	
Prestressed Concrete Girders ………………………….	DT2328
Retaining Walls ……………………………………………..	DT2329
Noise Walls ………………………….……………………	*None (TBD)*
Pedestrian Steel Bridges ……………………………….	*None (TBD)*
Box Culverts ………………….….………………………..	*None (TBD)*

* QC Review by a Professional Engineer is required. PE may be contracted by the Fabricator or Contractor.

3) By completing and signing this form the Fabricator confirms the constructability of the components (as detailed in the shop drawings) and the conformance of the shop drawing set to the contract plans.

4) The Fabricator forwards the [CCQC DT Form] and the shop drawing set to the Contractor for review.

5) The Contractor verifies that a complete QC review of the shop drawing set has been completed by the Fabricator and/or may also complete their own review. The Contractor should work with the Fabricator and the Project Leader or Manager to resolve all errors, omissions or constructability issues before signing the DT Form.

6) After confirming that all errors and RFIs have been resolved, the Contractor signs the [CCQC DT Form]. By completing and signing this form the Contractor validates both the constructability of the components as detailed in the shop drawings, and- the conformance of the shop drawing set to the contract plans.

7) The Fabricator or Contractor uploads the shop drawing set to the corresponding Fabricator Folder in the Fabrication Library.
Note: WisDOT does not dictate which party (Fabricator or Contractor) completes the upload. This should be determined by the Fabricator/Contractor team.
The shop drawing file must meet the following requirements:
* Format: PDF (unlocked)
* Do not use any of the following symbols in the filename: ~ " # % & * : < > ? / \ { | }
* Limit the filename length to 180 characters (including spaces)
* Must be legible in a computer monitor
* Size: 11" x 17" - for shop drawing sheets
* Size: 8.5" x 11" - for DT Forms
* First page of the PDF must be the [CCQC DT Form]
* Upload one set of shop drawings for each Structure ID
* Revisions must be uploaded as part of a complete set of shop drawings. All changes must be listed on the first sheet of the shop drawing set and each change marked on the corresponding detail sheet.
* Revised shop drawings sets must include a new [CCQC DT Form].

8) When uploaded and checked in, the Shop Drawing Status is marked as: *Received – Acceptance Pending.*

9) Bureau of Structures (BOS) reviewer is notified of the upload. The project leader or manager is notified of the upload, provided he or she has signed up for system notifications.

10) The Fabricator and Contractor are notified of the review and acceptance status of the shop drawing through the Fabrication Library. This is accomplished through the Project Management Review status and BOS Review status options.

11) Review of the shop drawing set by the project leader or manager is to be completed at the discretion of the project leader or manager. However, even if no review is to be completed, the shop drawing status in the Fabrication Library requires input from the project leader/manager.

After review, the Project Management Review status must be changed to one of the following options: Accepted, Accepted with corrections as noted or Revise & Resubmit and review comments must be added to the pdf (see How to add review comments? guide). When no review is to take place, the Project Management Review status on the Fabrication Library must be changed to Accepted.

In the interest of quality and efficiency any QA reviews by BOS and the project leader/manager should be completed within 10 business days from the time a complete shop drawing set (including the completed & signed [CCQC DT Form]) is uploaded to the Fabrication Library.

12) BOS only reviews a percentage of all shop drawing sets. Shop drawing sets that have received no QA review by BOS are accepted with no comments; stamped accepted with no reviewer name.

Shop drawing sets, reviewed by BOS, are stamped on the first drawing sheet, with the name of the reviewer and date of review

Per Wisconsin Standard Specification 105.2.1(4) Control of Work | General: "The department's review does not relieve the contractor of the responsibility for obtaining satisfactory results, for the accuracy of dimensions and details, or for conformity of these drawings with the contract. The contractor may begin work on associated items without the department's review."

13) Accepted shop drawings may be released for fabrication.

BUREAU OF STRUCTURES

Welding Procedure Specifications (WPS)

References

📌 How to upload a document?

📌 How to edit document properties?

📌 How to check-in a checked-out document?

Parties Involved

💬 Fabricator

💬 Bureau of Structures (BOS)

1) Fabricator uploads WPS and related Procedure Qualification Records (PQR) to the Fabrication Library.

2) BOS reviewer is notified of the upload. All WPS/PQRs will be reviewed and require acceptance from BOS before welding or welding repair of any component can proceed.

3) No Project Leader/Manager review is required.

4) When fabrication uses a WPS which has already been uploaded, accepted and is available in the Fabrication Library, the fabricator need not upload the WPS again. However, if the WPS has been revised, and a new, updated version is available, the fabricator must upload the newer version. Hold for review and approval of updated WPSs before proceeding with welding operations.

Other Fabrication Documents

References

🖈 [How to upload a document?](#)

🖈 [How to edit document properties?](#)

🖈 [How to check-in a checked-out document?](#)

🖈 [How to update an Excel Fabrication Status Report?](#)

🖈 [How to download a document?](#)

Parties Involved

💬 Fabricator

💬 Contractor

💬 Project Leader or Manager

💬 Bureau of Structures (BOS)

Calculations

1) Fabricator uploads calculations to the Fabrication Library. Calculations must be uploaded the same day as the corresponding shop drawing set.
2) No department review status will be posted. Any comments will be included in the shop drawing review comments.

Mill Certifications

1) Fabricator uploads mill certifications to the Fabrication Library.
2) Project Leader/Manager should review all Mill Certifications before the material is incorporated into the structure; preferably before assembly at the fabrication shop. No review status is posted in the Fabrication Library.
   Project Leaders/Managers: for any concerns contact the fabricator, contractor or BOS as applicable.

Storage and Shipping Plan

1) Fabricator uploads storage and shipping plan to the Fabrication Library.
2) No department review status is posted in the Fabrication Library. Any comments would be communicated to the Project Leader/Manager and Fabricator.

Welded Wire Fabric (WWF) Alternate

1) Fabricator uploads WWF alternate drawing to the Fabrication Library.
2) BOS reviewer is notified of the upload. All WWF alternates will be reviewed and require acceptance from BOS before the shop drawing set can be submitted and before fabrication can begin.
3) No Project Leader/Manager review is required.

Fabrication Status Report

Update fabrication status report through the Fabrication Library. Update weekly for duration of each project.

Erection Plan

1) Contractor uploads erection plan to the Fabrication Library.
2) No department review status is posted in the Fabrication Library. Any comments would be communicated to the Project Leader/Manager and Contractor.

Final Fabrication Package

Fabricator uploads final fabrication package to the Fabrication Library. No review status is posted on the Fabrication Library.

Welder Qualification Record

Fabricator uploads welder qualification record to the Fabrication Library. No review status is posted on the Fabrication Library.

Butt-Welding Log

Fabricator uploads butt-welding log to the Fabrication Library. No review status is posted on the Fabrication Library.

High-Strength Steel Bolt Test Results

Fabricator uploads HS Steel Bolt test results to the Fabrication Library. No review status is posted on the Fabrication Library.

Paint/Coating Inspection Reports and/or specifications

Fabricator uploads paint report and/or specifications to the Fabrication Library. No review status is posted on the Fabrication Library.

Meeting Minutes

Fabricator, Contractor, Project Leader/Manager or BOS uploads meeting minutes to the Fabrication Library. No review status is posted on the Fabrication Library.

Quality Assurance (QA) Inspection Reports

References

🖈 [How to upload a quality assurance (QA) inspection report?](#)

🖈 [How to edit document properties?](#)

🖈 [How to check-in a checked-out document?](#)

Parties Involved

💬 QA Inspector

💬 Project Leader or Manager

💬 Bureau of Structures

QA Inspection Report

1) Uploaded by the QA Inspector or QA Inspection Firm representative.
   <u>The inspection report must meet the following requirements:</u>
   - Format: PDF (unlocked)
   - Do not use any of the following symbols in the filename: ~ " # % & * : < > ? / \ { | }
   - Limit the filename length to 180 characters (including spaces)
   - Must be legible in a computer monitor

Forms and corresponding specifications

Download Fabrication DT Forms here: https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/strct/fab-cnstr.aspx

| Document	Specification	Electronic Submittal Method
Primary Members – Steel Bridge (Highway)		
Shop Drawings	STD. SPEC. 105.2.2,506.3.2	Fabrication Library
DT2333 Contractor's Certificate of Quality Control	STD. SPEC. 506.3.2	Fabrication Library
Certified Mill Test Reports (CMTR)	STD. SPEC. 506.3.21	Instead of 2 hard copies, submit CMTR to the Fabrication Library
Welding Procedure Specification (WPS)	STD. SPEC. 506.3.19.2, 506.3.19.3	Fabrication Library
DT2172 Weekly Fabrication Status Report	STD. SPEC. 506.3.1.1	Fabrication Library
NDE Reports	As-requested by the engineer	Fabrication Library
High-Strength Bolt Test Reports	As-requested by the engineer	Fabrication Library
Paint Thickness Record	As-requested by the engineer	Fabrication Library
QA Inspection Report	Inspection Contract	Fabrication Library (Inspection)
RFI/NCR/DIN	STD. SPEC. 104.4	Email to Project Leader/Manager Cc: DOTDLStructuresFabrication@dot.wi.gov
Primary Members – Prestressed Concrete Bridge (Highway)		
Shop Drawings	STD. SPEC. 105.2.2,503.3.1	Fabrication Library
Welded Wire Fabric (WWF) Alternate	STD. Detail Drawings	Fabrication Library
DT2328 Contractor's Certificate of Quality Control	STD. SPEC. 105.2.2,503.3.1	Fabrication Library
DT2336 Weekly Fabrication Status Report	STD. SPEC. 105.2.2,503.3.1	Fabrication Library
QA Inspection Report	Inspection Contract	Fabrication Library (Inspection)
RFI/NCR/DIN	STD. SPEC. 104.4	Email to Project Leader/Manager Cc: DOTDLStructuresFabrication@dot.wi.gov
Prefabricated Steel Truss Bridge (Pedestrian)		
Shop Drawings	Special Provisions	Fabrication Library
Welding Procedure Specification (WPS)	STD. SPEC. 506.3.19.2, 506.3.19.3	Fabrication Library
Certified Mill Test Reports (CMTR)	STD. SPEC. 506.3.21	Instead of 2 hard copies, submit CMTR to the Fabrication Library
DT2335 Weekly Fabrication Status Report	Special Provisions	Fabrication Library
NDE Reports	As-requested by the engineer	Fabrication Library
High-Strength Bolt Test Reports	As-requested by the engineer	Fabrication Library
Paint Thickness Record	As-requested by the engineer	Fabrication Library
QA Inspection Report	Inspection Contract	Fabrication Library (Inspection)
RFI/NCR/DIN	STD. SPEC. 104.4	Email to Project Leader/Manager Cc: DOTDLStructuresFabrication@dot.wi.gov

Retaining Walls		
Shop Drawings	Standard Special Provisions	Fabrication Library
DT2329 Contractor's Certificate of Quality Control	Standard Special Provisions	Fabrication Library
RFI/NCR/DIN	STD. SPEC. 104.4	Email to Project Leader/Manager Cc: DOTDLStructuresFabrication@dot.wi.gov
Sign Structures		
Shop Drawings	STD. SPEC. 105.2.2,641.2.8, 641.2.9	Fabrication Library
DT2326 Contractor's Certificate of Quality Control	STD. SPEC. 641.2.8, 641.2.9	Fabrication Library
Certified Mill Test Reports (CMTR)	As-requested by the engineer	Fabrication Library
Welding Procedure Specification (WPS)	Included in Fabricator QCP Plan	Email to Fabrication Unit Supervisor kristin.revello@dot.wi.gov
DT2334 Weekly Fabrication Status Report	STD. SPEC. 641.2.8, 641.2.9	Fabrication Library
QA Inspection Report	Inspection Contract	Fabrication Library (Inspection)
RFI/NCR/DIN	STD. SPEC. 104.4	Email to Project Leader/Manager Cc: DOTDLStructuresFabrication@dot.wi.gov
Fabricated Bridge Components		
Shop Drawings	STD. SPEC. 105.2.2,506.3.2	Fabrication Library
DT2327 Contractor's Certificate of Quality Control	STD. SPEC. 506.3.2	Fabrication Library
Certified Mill Test Reports (CMTR)	As-requested by the engineer	Fabrication Library
Welding Procedure Specification (WPS)	Included in Fabricator QCP Plan	Email to Fabrication Unit Supervisor kristin.revello@dot.wi.gov
DT2334 Weekly Fabrication Status Report	STD. SPEC. 506.3.1.2	Fabrication Library
QA Inspection Report	Inspection Contract	Fabrication Library
RFI/NCR/DIN	STD. SPEC. 104.4	Email to Project Leader/Manager Cc: DOTDLStructuresFabrication@dot.wi.gov

Appendix

How-to Guides

How to upload a document?

1) Open the corresponding Fabricator Folder (Click on the folder name).
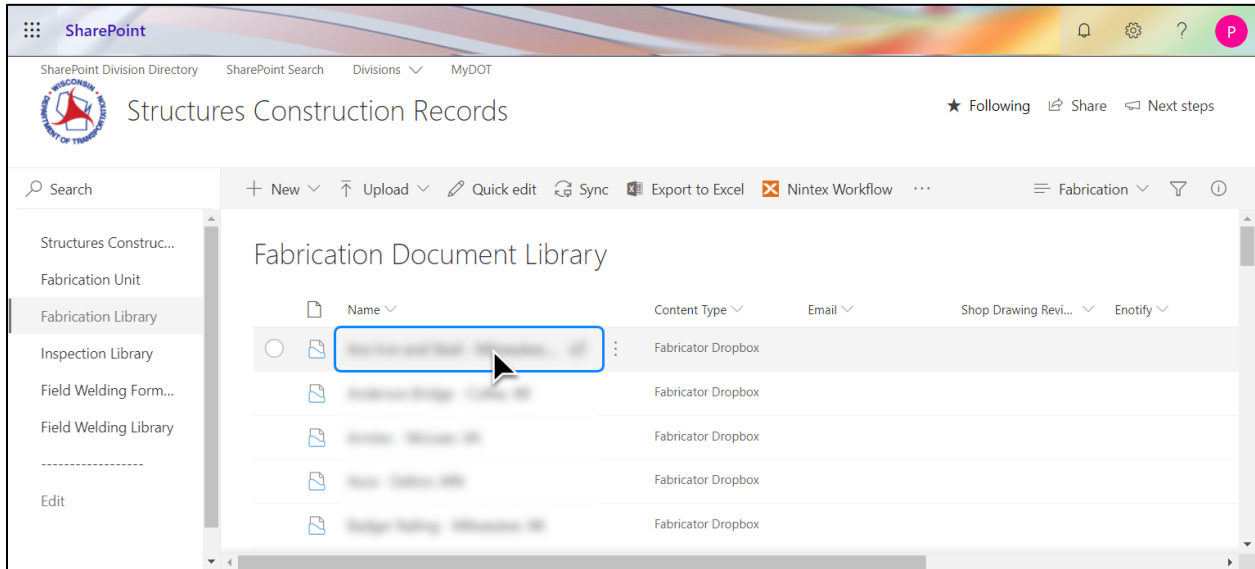
2) Click Upload.
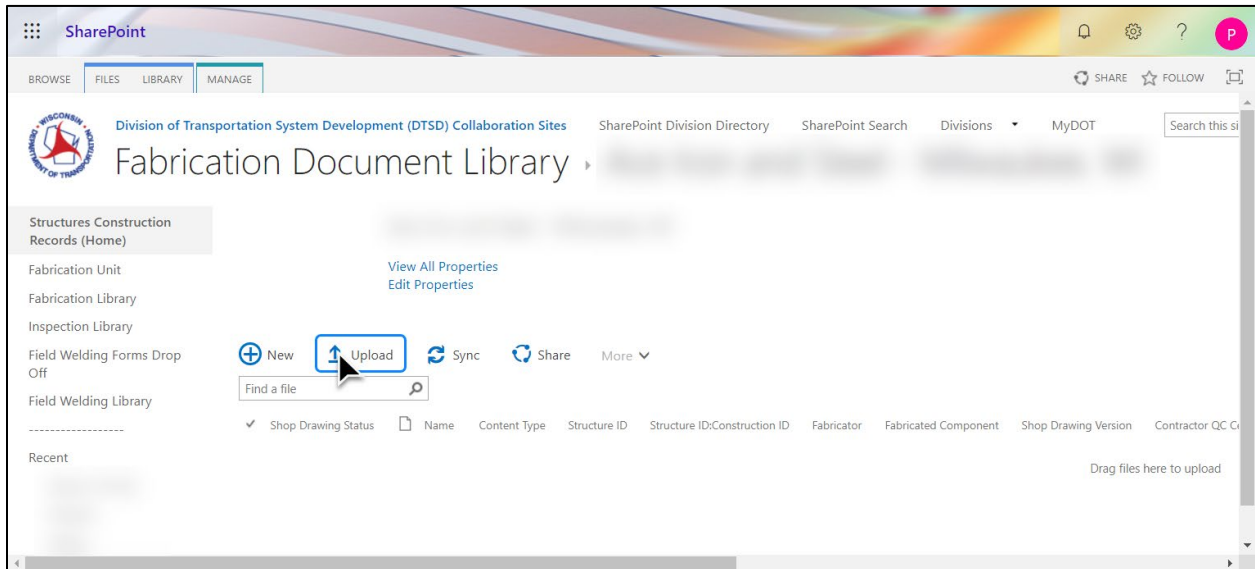
3) Click Choose File (Google Chrome) or Browse (Internet Explorer).
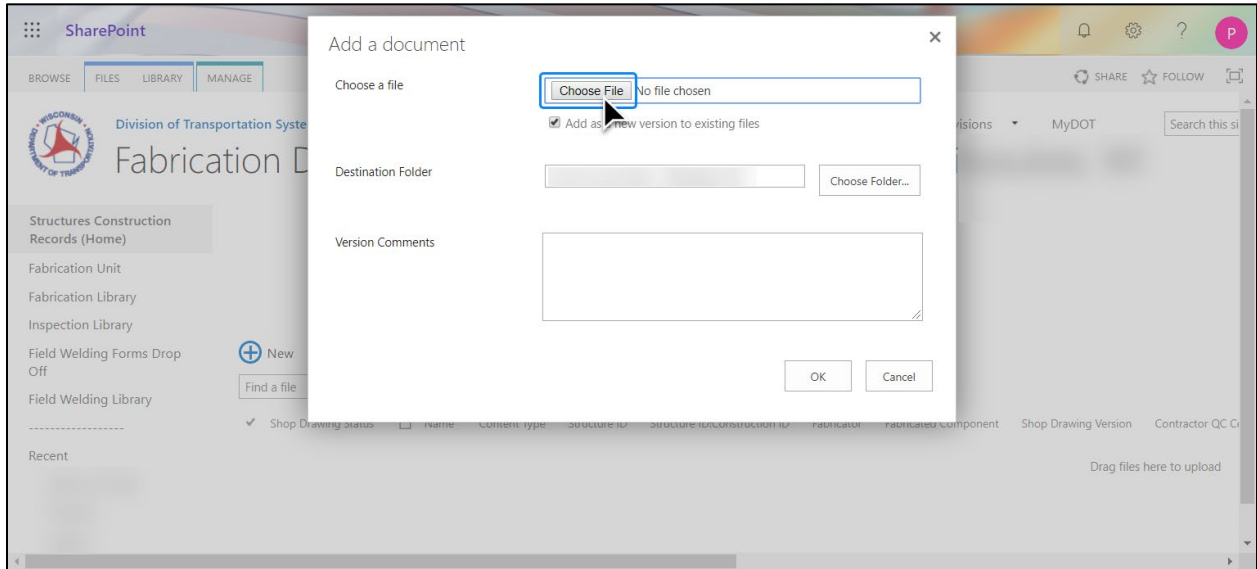
4) Select the file from your computer and click OK.
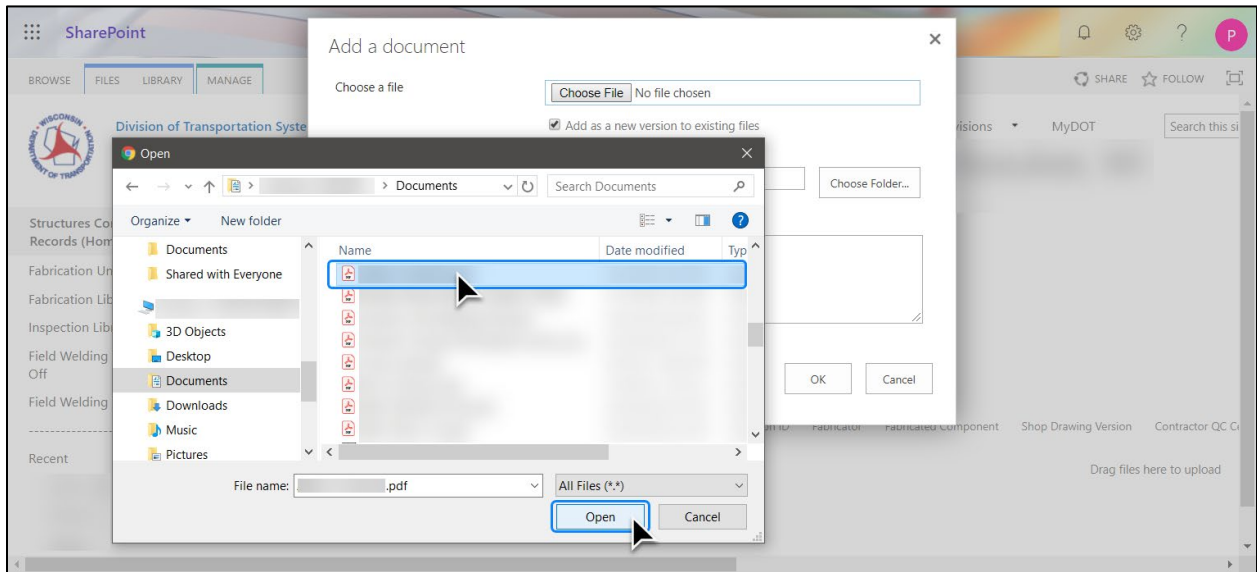
5) **Verify the Filename and Fabricator Folder are correct. Click OK.**
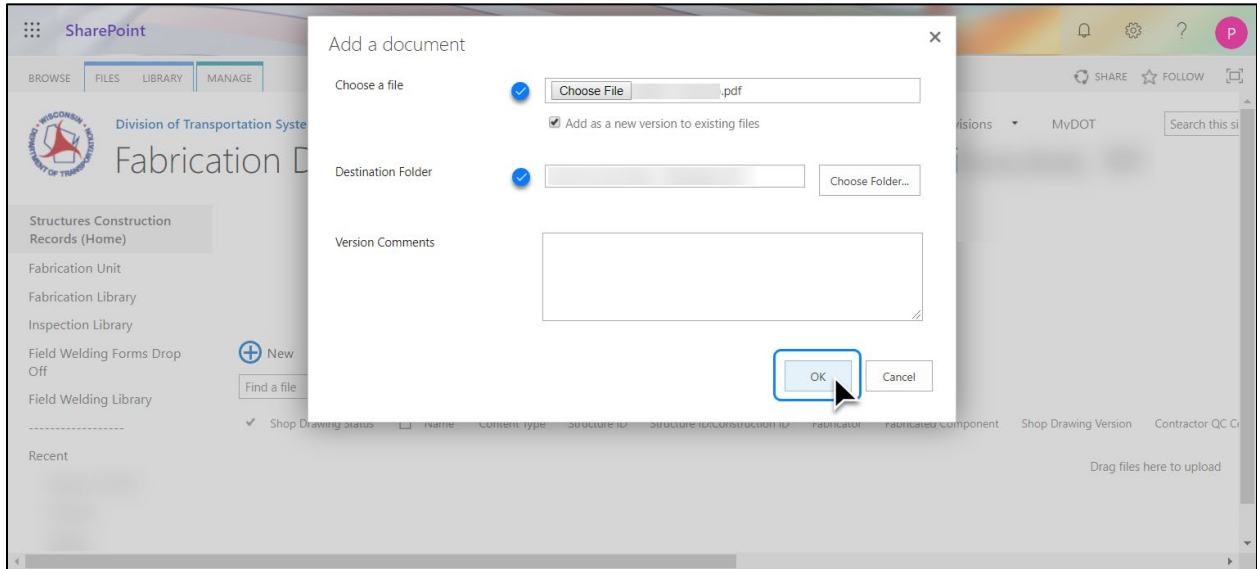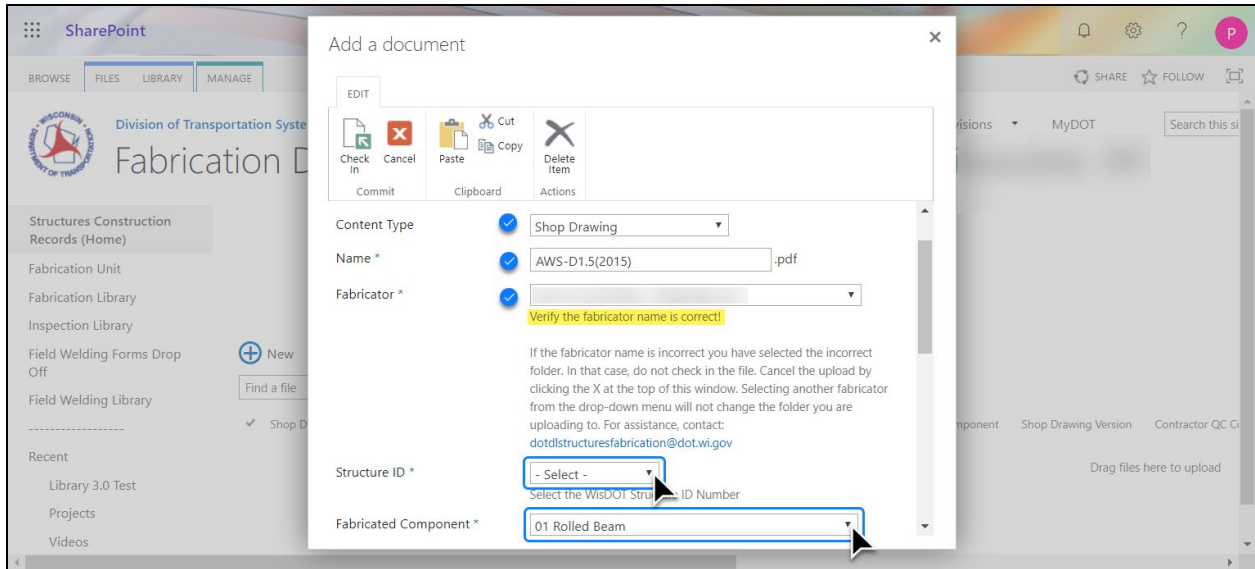
6) **Wait for the Add a Document window to open. This may take a while for large files.**
SELECT A CONTENT TYPE
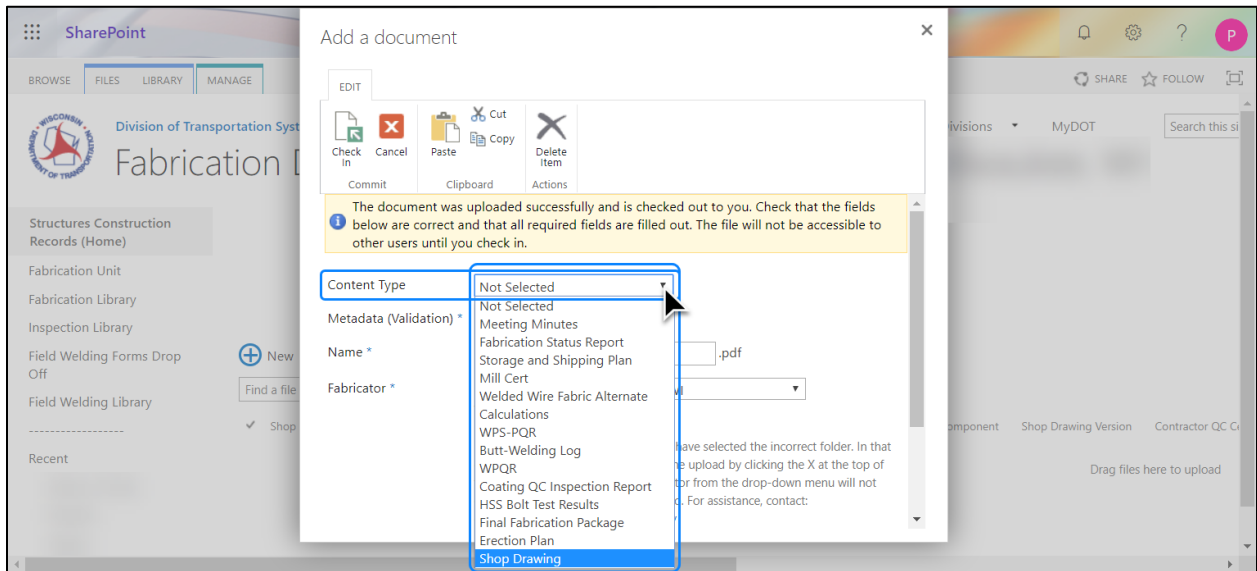
7) **Once the Content Type is selected, additional data fields will show.**

Fields with an asterisk * are required. All required fields must be filled out.

The screenshots below show the required data fields for a Shop Drawing Content Type.

8) After selecting the required information, click Check in.

9) The file will be shown in the Fabricator Folder.

A green star next to the file name denotes a recently uploaded file. ❇
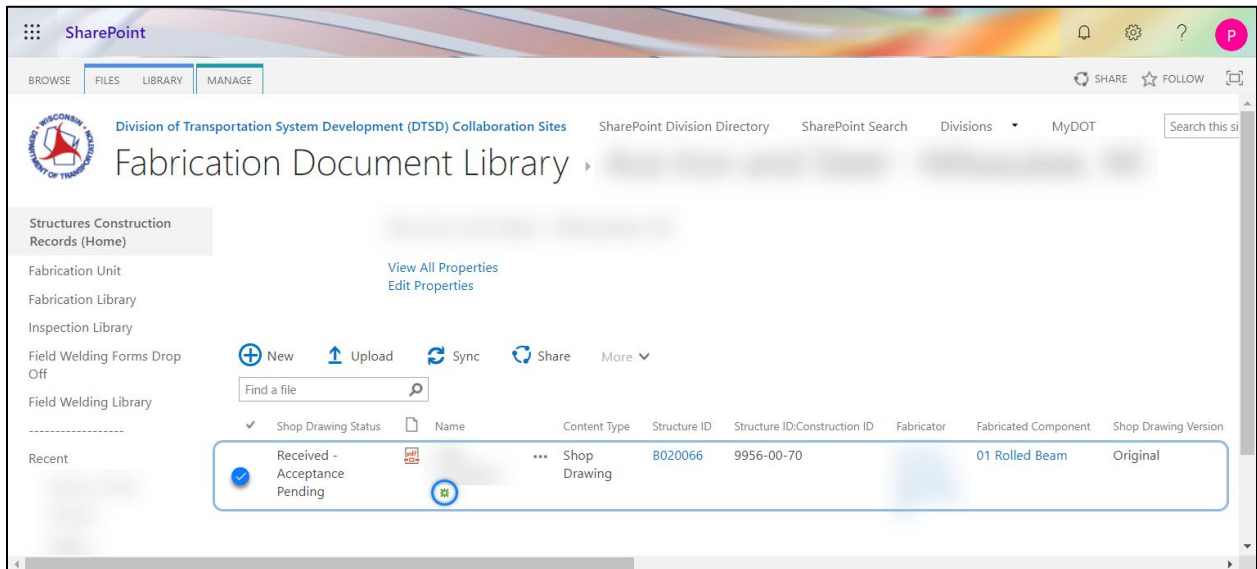
If you see this icon [icon] additional steps need to be taken (see next page)

A green downward facing arrow on the document type icon [icon] denotes a file that has been uploaded successfully but is checked out to you. **This means that no one else can view the file**. This occurs when the content type is not selected, and/or the required data fields are not filled out. **The file will need to be checked in for it to be available to others in the Fabrication Library.** To check in a file, follow the **How to check in a checked-out file?** guide.
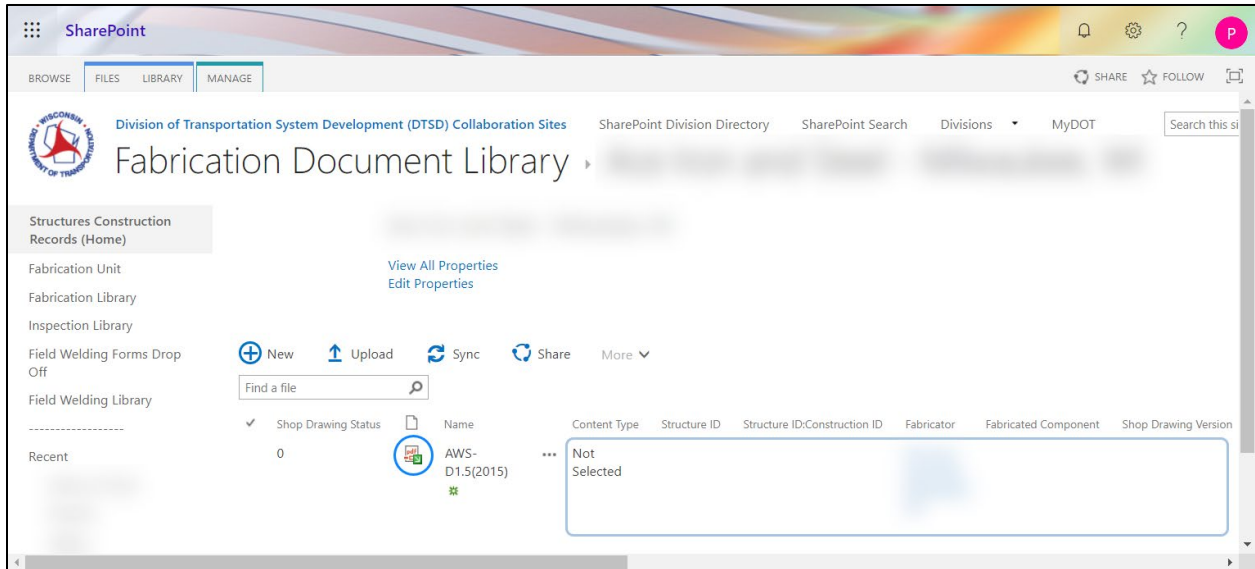
How to upload a quality assurance (QA) inspection report?

1) Open the Inspection Firm Folder (Click on the Inspection Firm name)
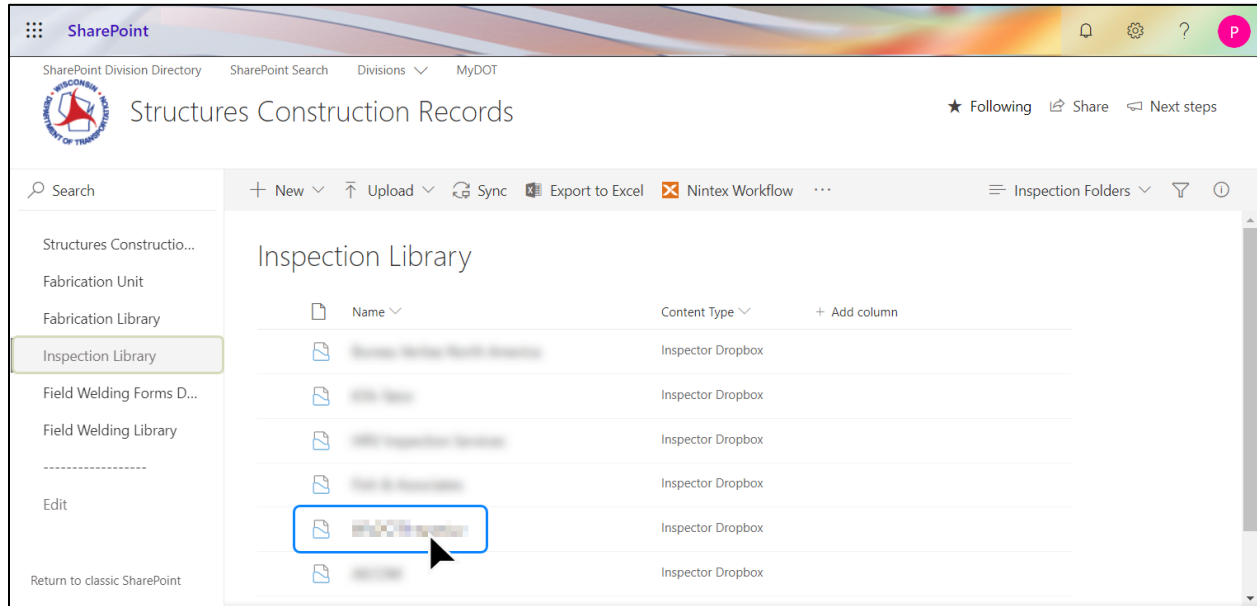
2) Click Upload
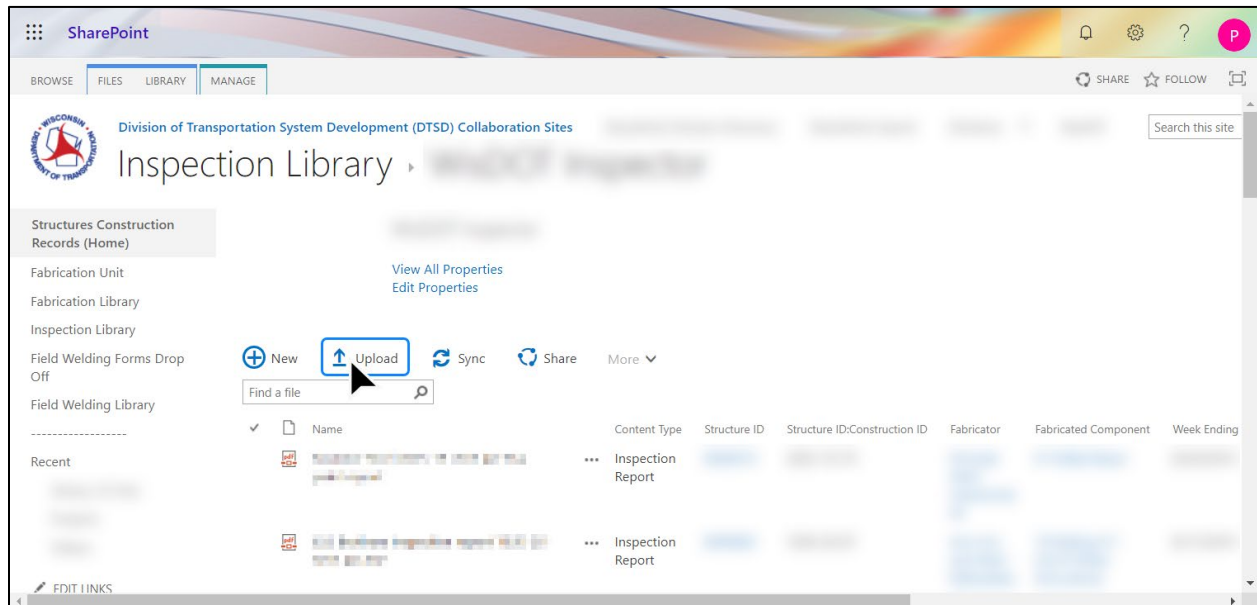
3) Wait for the Add a Document window to open. This may take a while for large files.
   SELECT A CONTENT TYPE
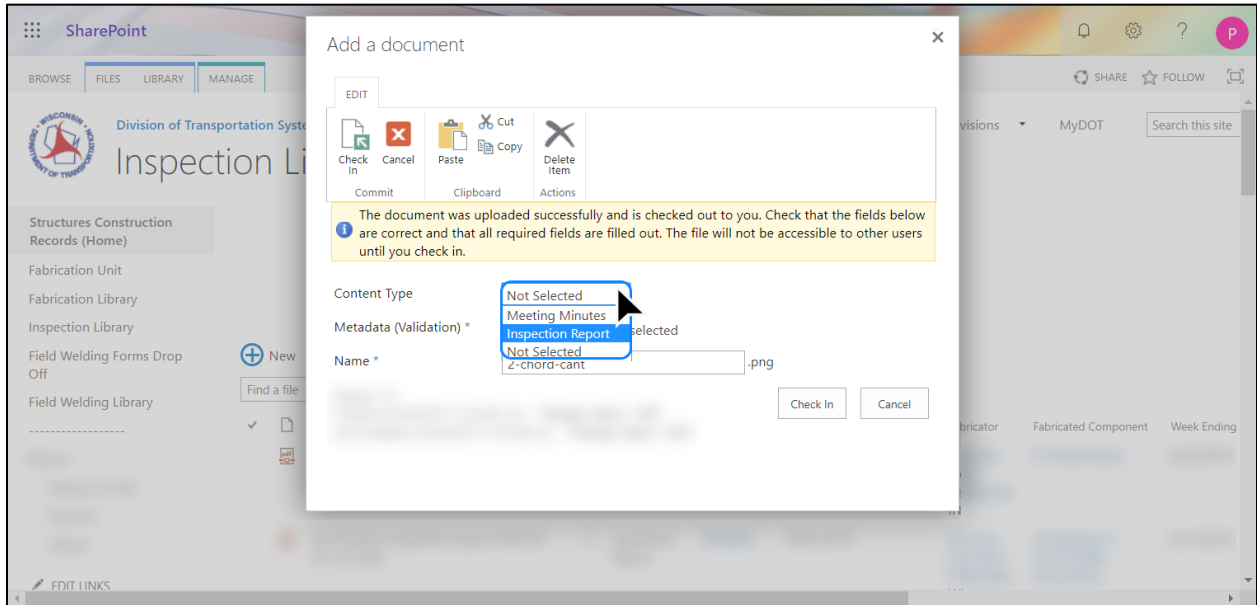
4) Once the Content Type is selected, additional data fields will show.

   Fields with an asterisk * are required. All required fields must be filled out.

   After selecting the required information, click Check in.
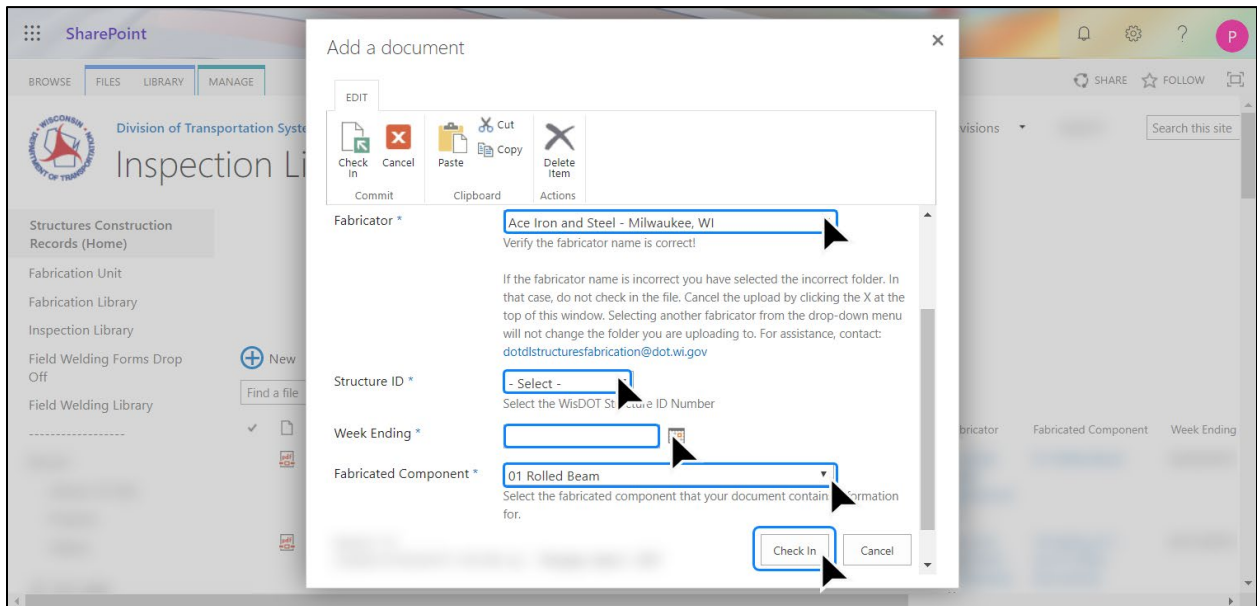
How to edit document properties?

Changing document properties from the Fabricator Folder

1) Open the corresponding Fabricator Folder (Click on the folder name).
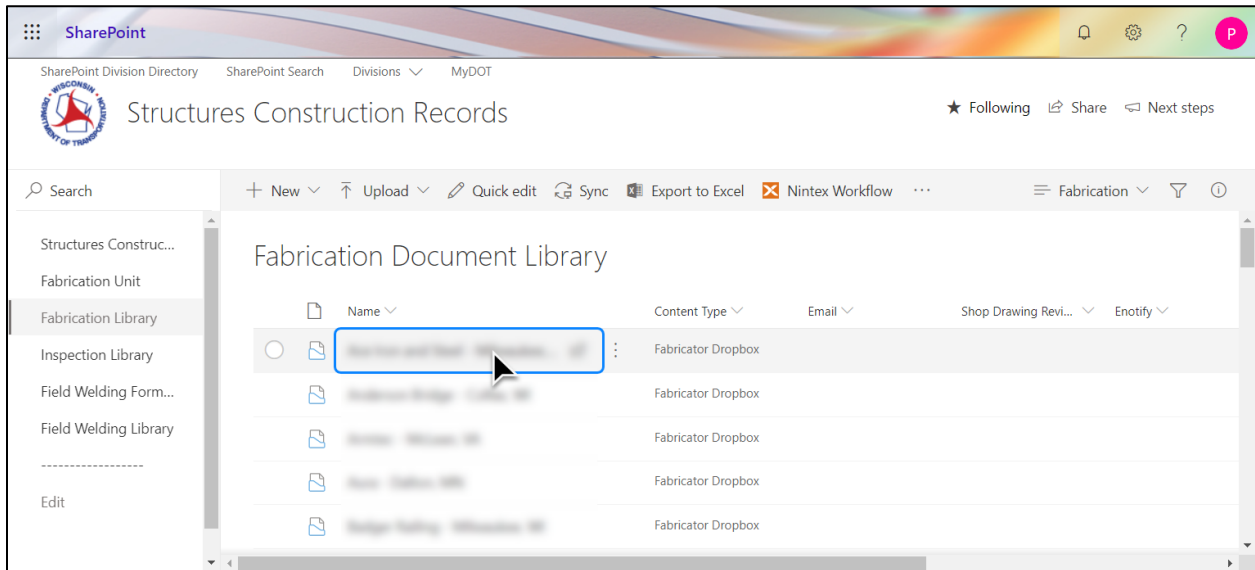
2) Right-click the filename. Select Properties.
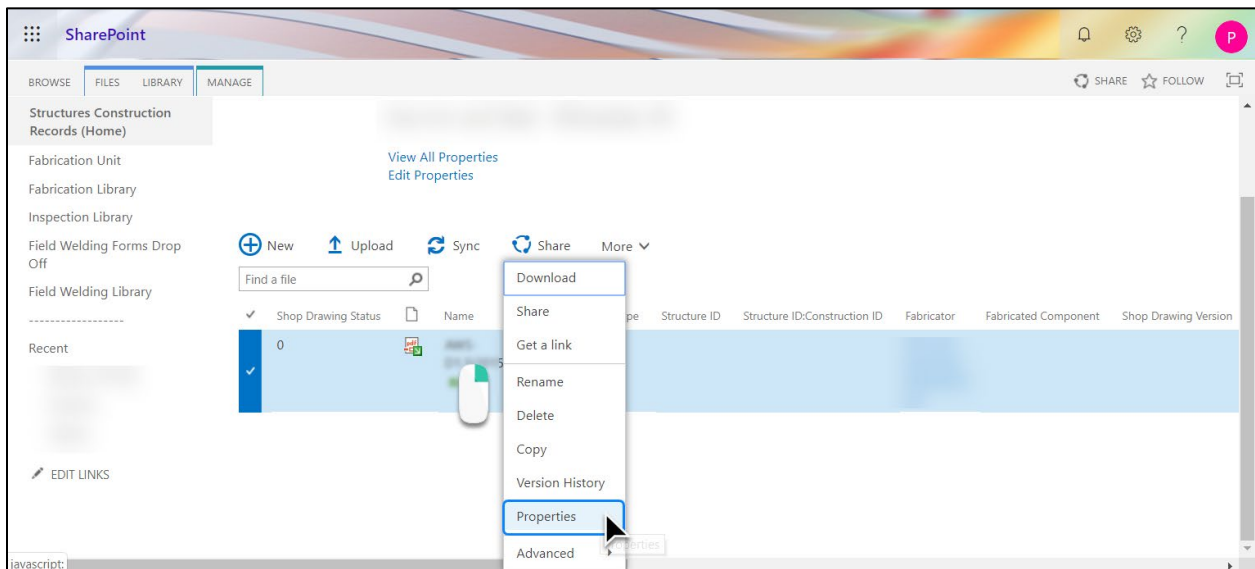
3) Select an appropriate Content Type.
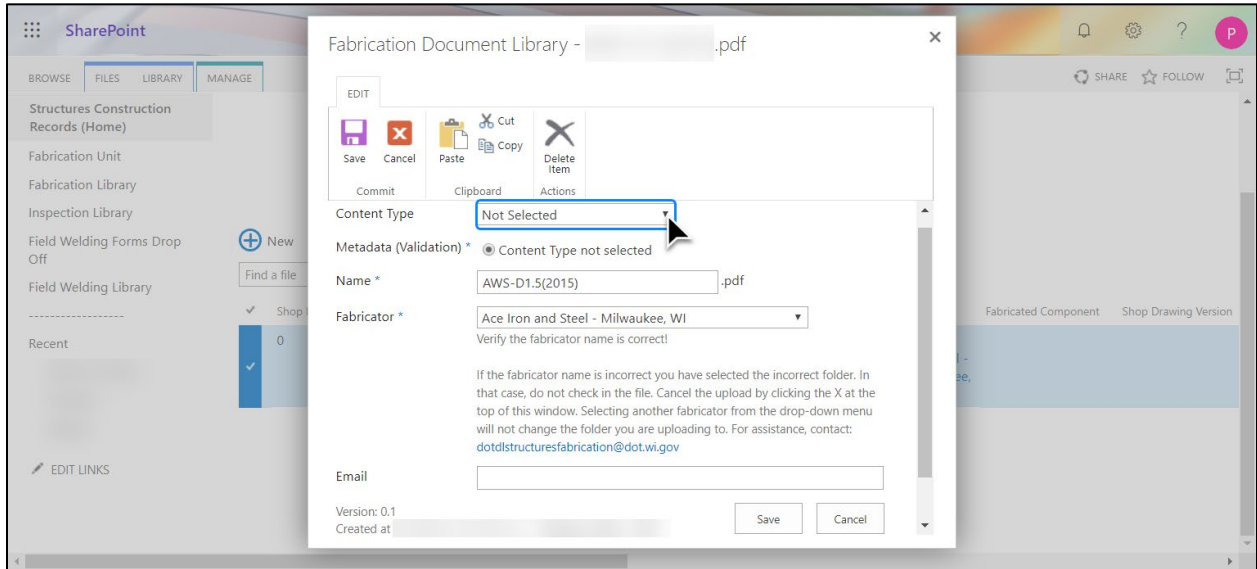
4) Edit the file properties (data fields). Click Save.
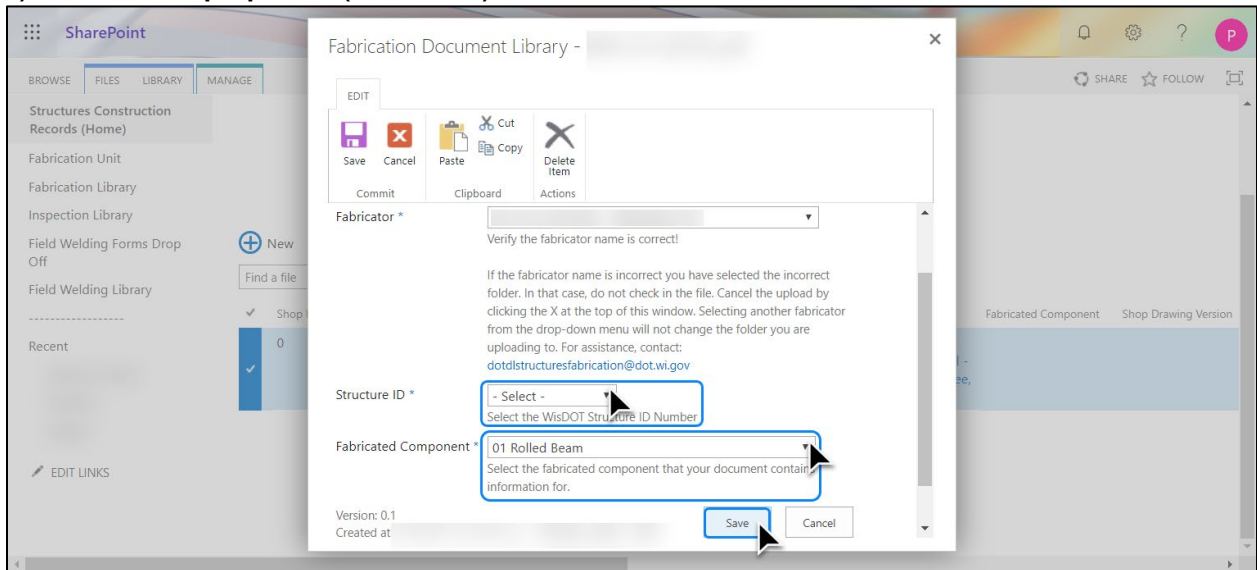
Changing the document properties from the All Document view.

1) **Select the document. (Click the icon ⊘ on the row corresponding to the document.)**
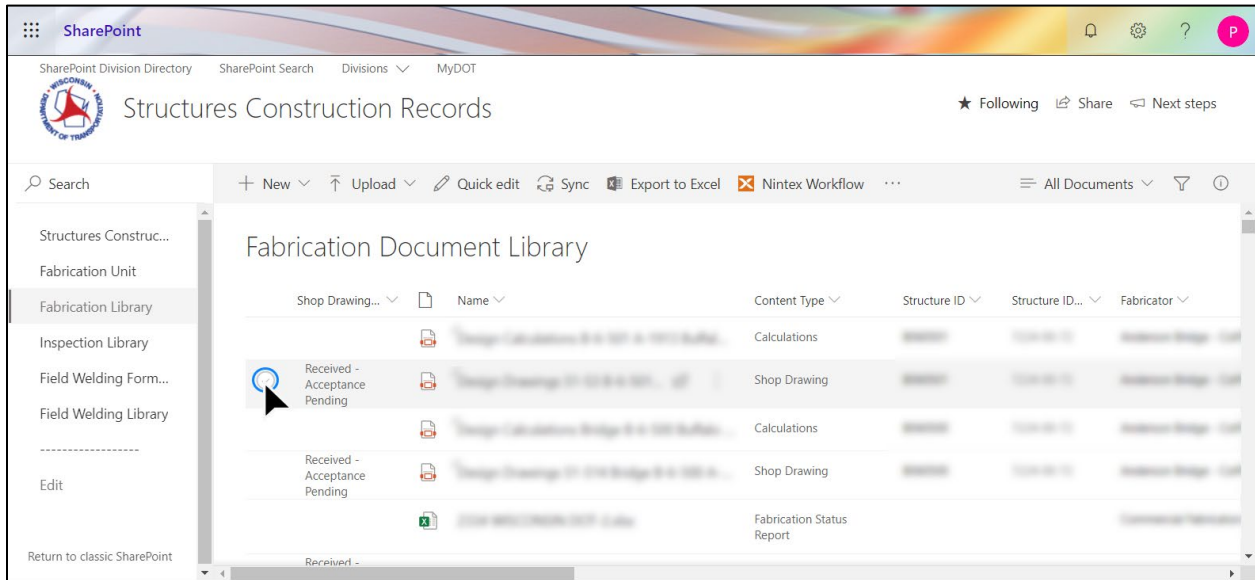
2) **Click the Information Panel icon ⓘ**
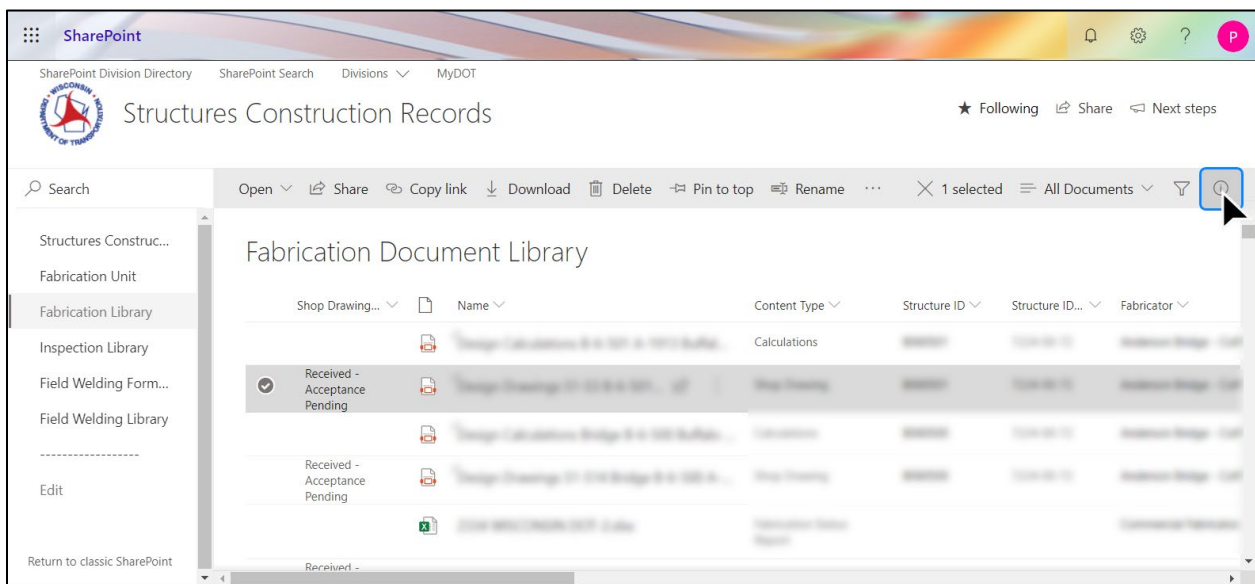
3) The properties may be edited from the information panel, but the scrolling is not optimal.
   Click Edit all to open the Properties window.
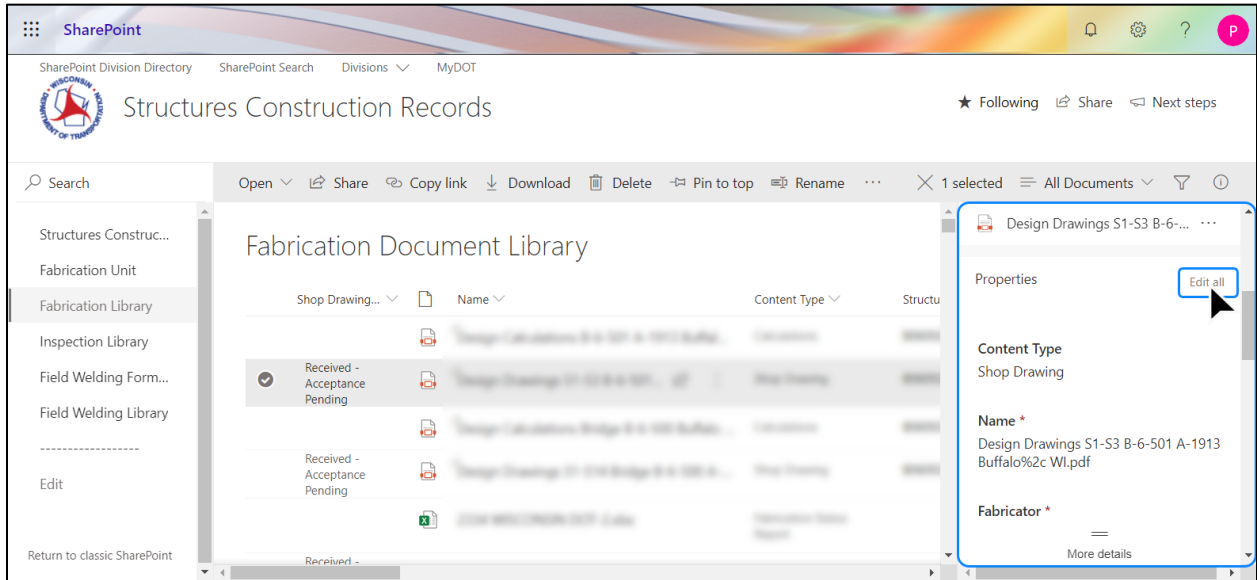
4) Edit the properties
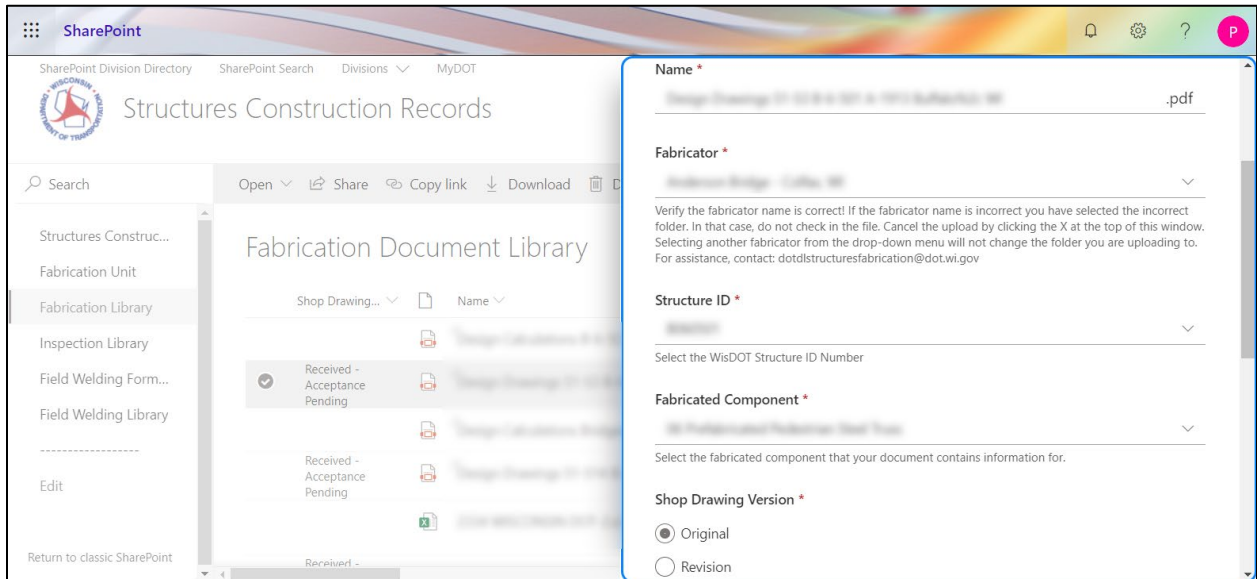
5) Click Save when you are done.
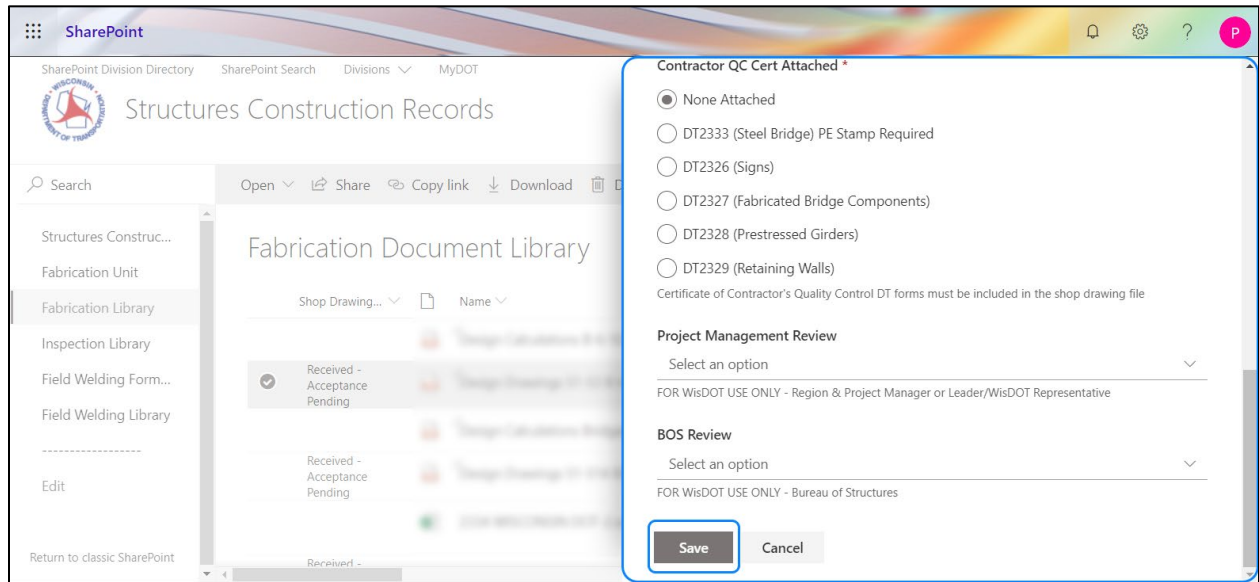
How to check in a checked-out document?

1) **Verify that all required data fields are filled out.**

If the content type has not been selected and required data if missing, follow How to edit document properties? guide to add the missing data. Afer adding the missing data move pn to Step 2.
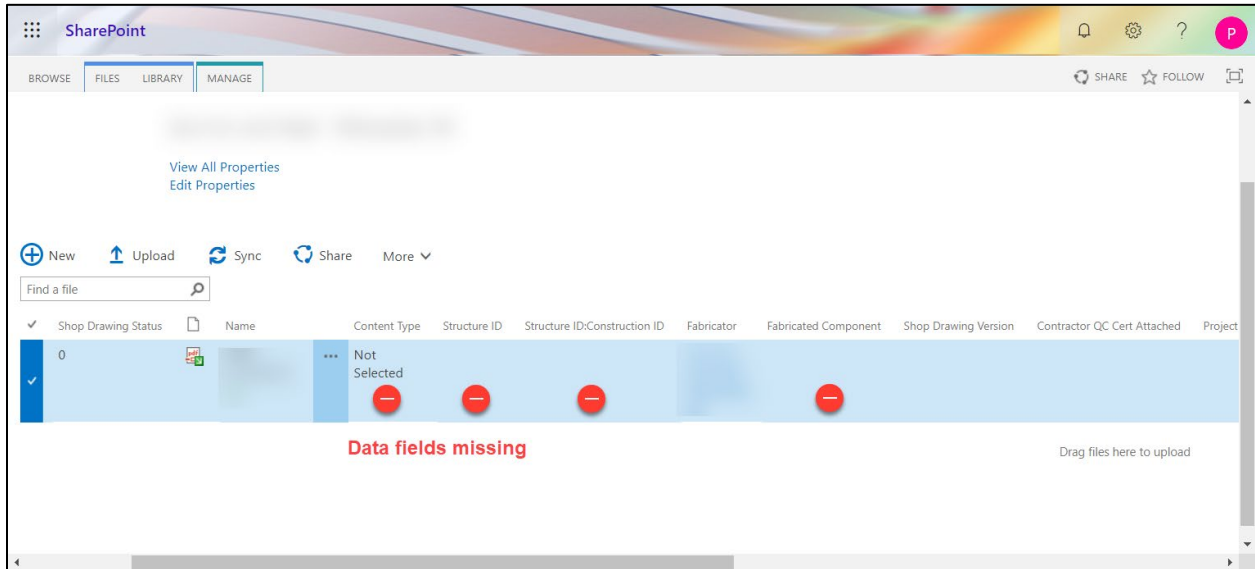
If the content type has been selected, and the required fields filled out continue to step 2.
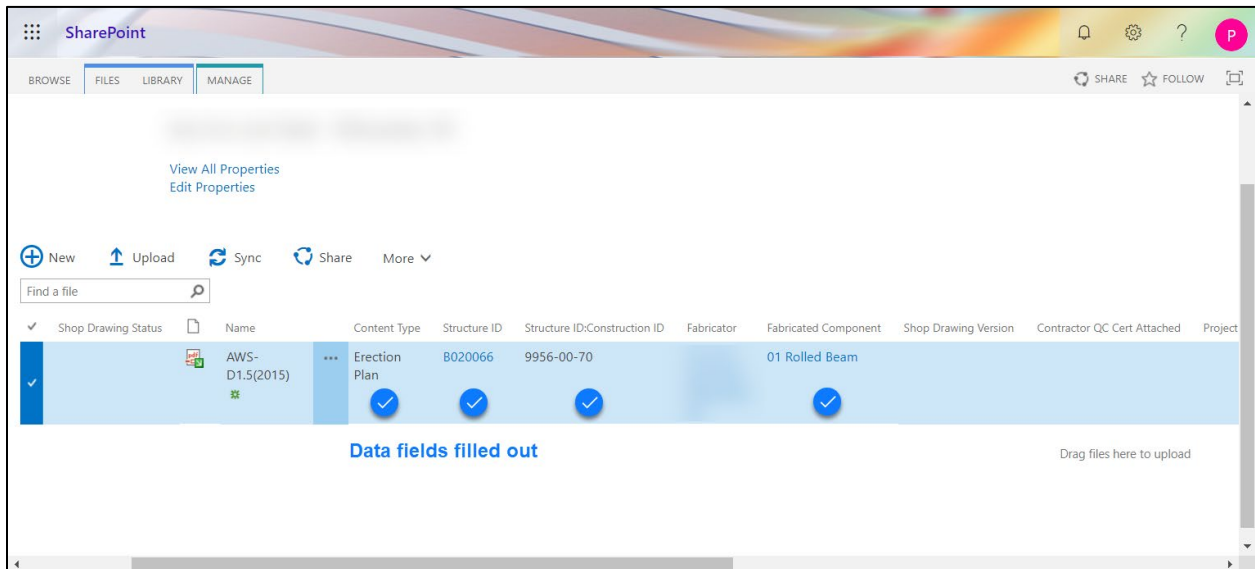
2) Right-click the filename. Check in.
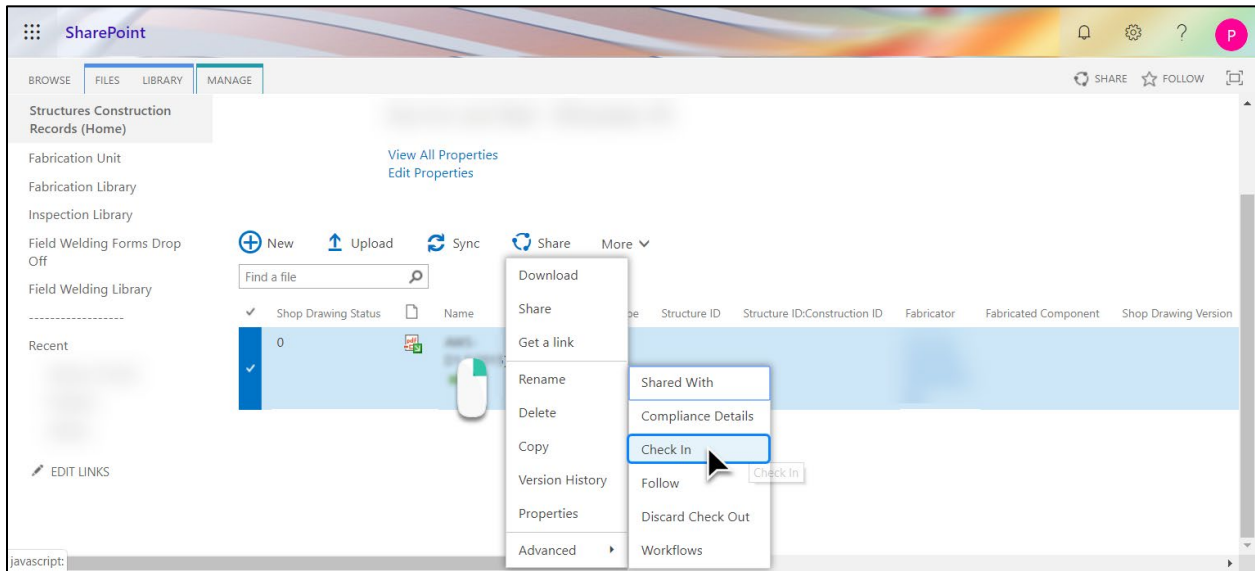
3) Click OK
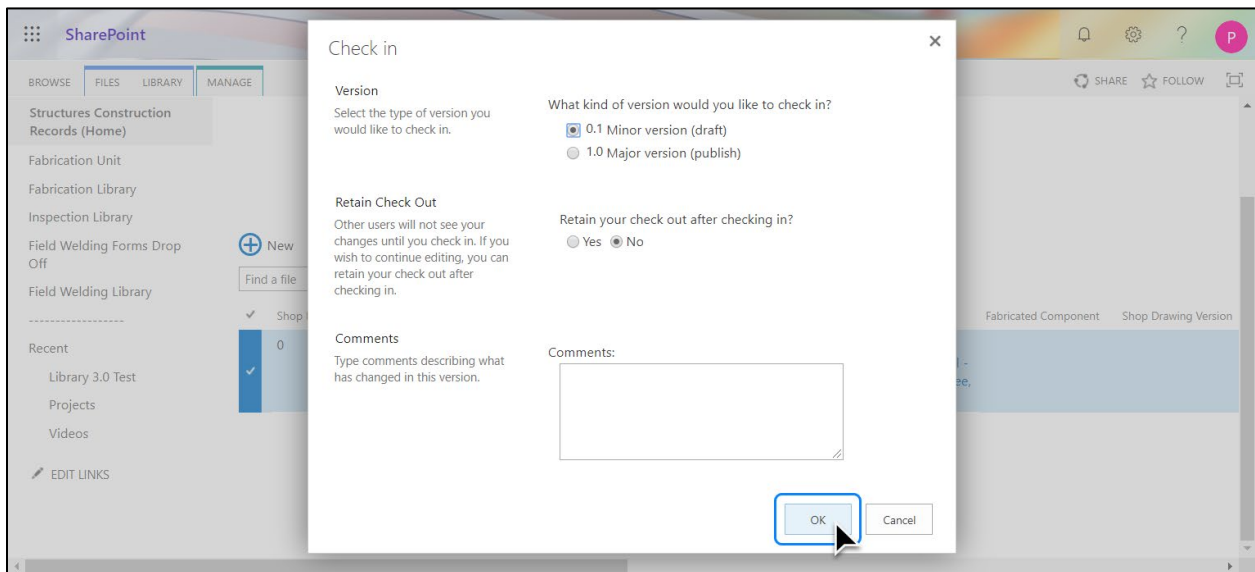
What are New Experience and Classic SharePoint? How does it affect the tools available in the Fabrication Library?

The *New Experience* and *Classic* SharePoint are two user interfaces. Each provides different options and tools to choose from.

***Classic* Sharepoint is the default setting for Fabricator Folders.** When you open a Fabricator Folder the contents will be shown in the *Classic* SharePoint interface. This enables the Upload function. It also alters the way the Properties, Check In, Check Out and Download option are accessed.

How to quickly tell if I am viewing the page in *Classic* SharePoint?

Visual clues: ❶ The 3-dots ❷ Tabs
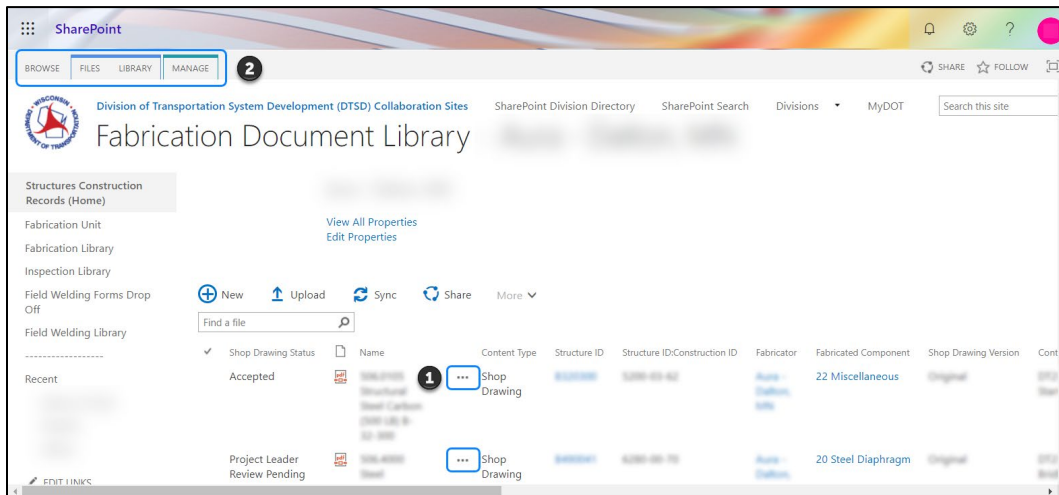
New Experience SharePoint is the default view for All Documents, the Fabricator Folder List and the Projects List. The Upload option will not work in this view. Documents must be uploaded to the corresponding Fabricator Folders. To select a Fabricator Folder, change the view to Fabrication. To change views, follow the **How to change views?** guide.

How to quickly tell if I am viewing the page in *New Experience* SharePoint?

Visual clues: ❶ Information & Filter Icons ❷ Top Menu ❸ Search Bar

29
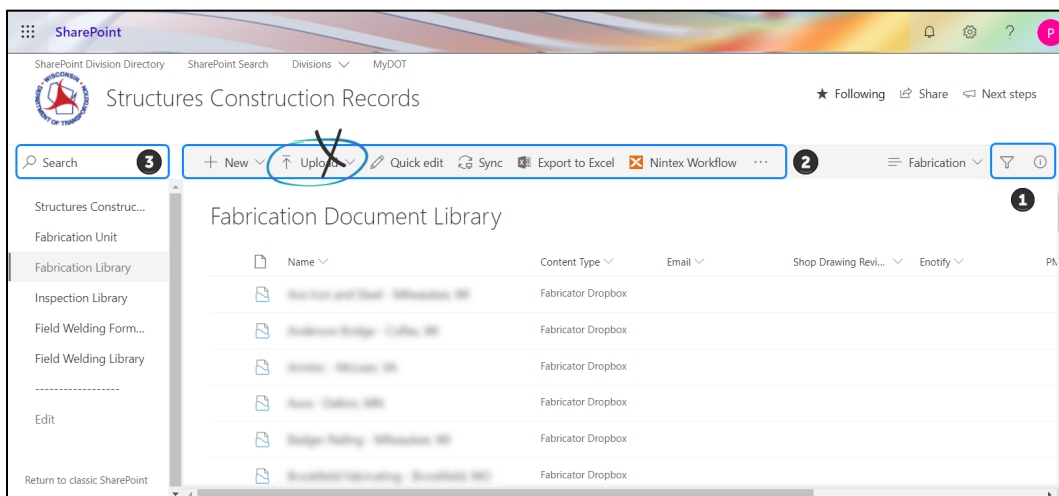
How to change views?

1) **Click on the views drop down to toggle between views.. The displayed test may red Fabrication or All Documents, depending on which view is currently displayed.**
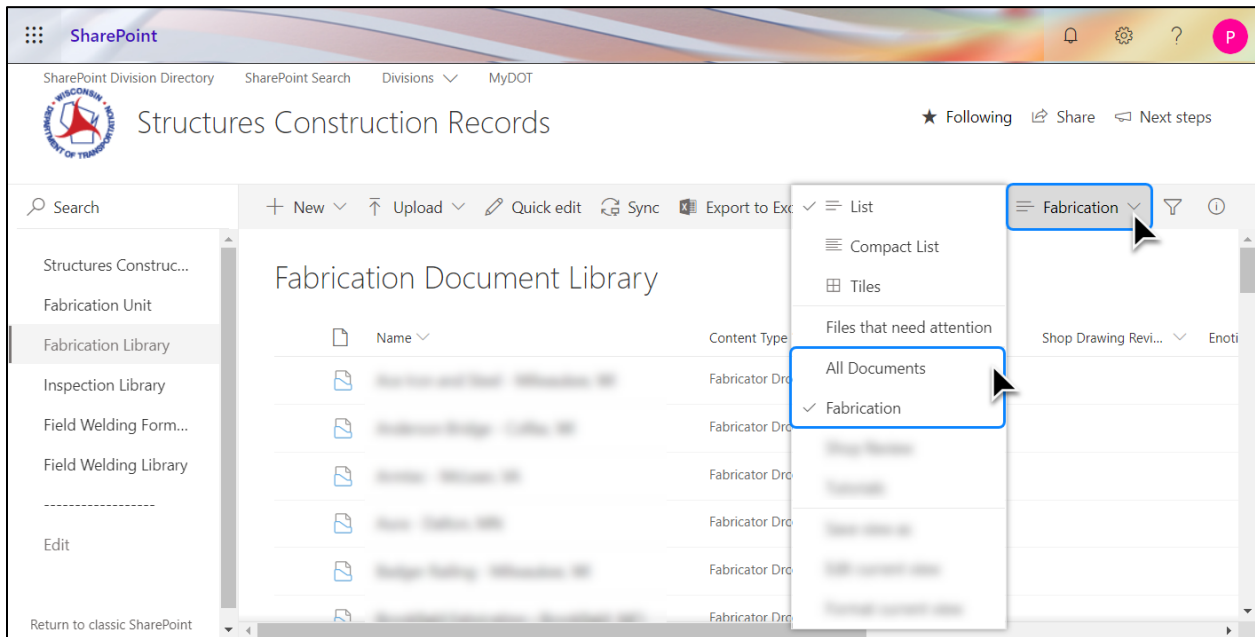
If the current view is filtered, switching between views is not possible. Clear the filters, then switch views.
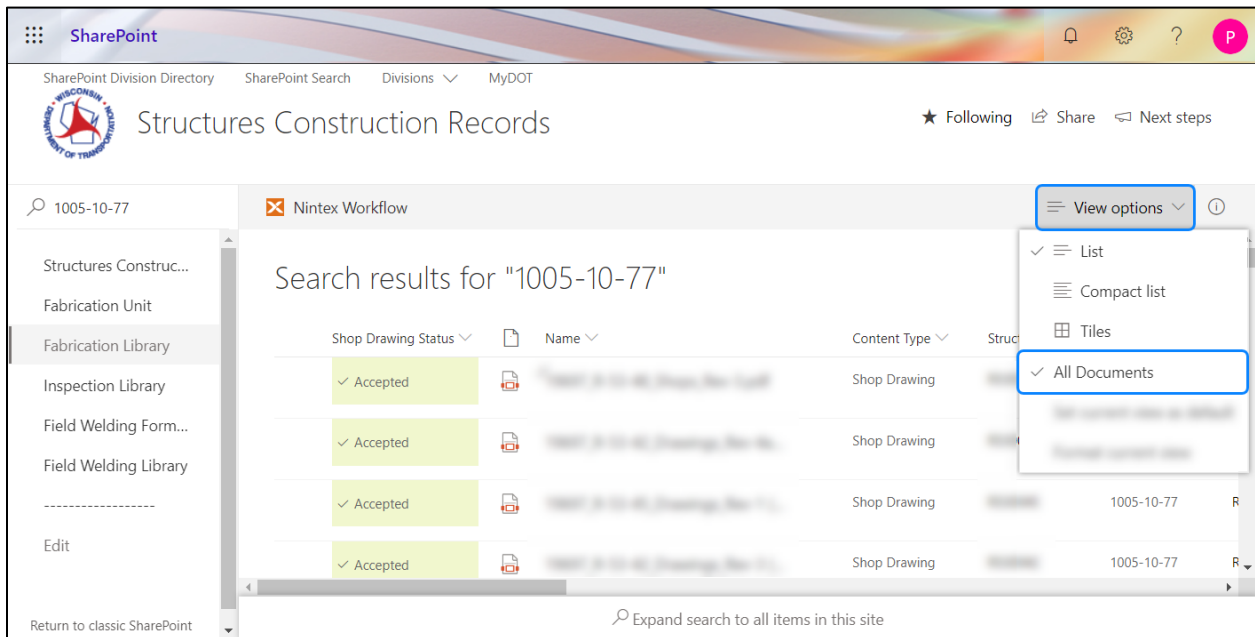
How to download a document?

To 'learn more about classic and new experience interfaces, check out the [What are New Experience and Classic SharePoint?](#) guide.

From All Documents View in *New Experience* Interface

1) **Select the file by clicking on the** ⊘ **icon corresponding to the document. Then, select Download from the Top Menu.**
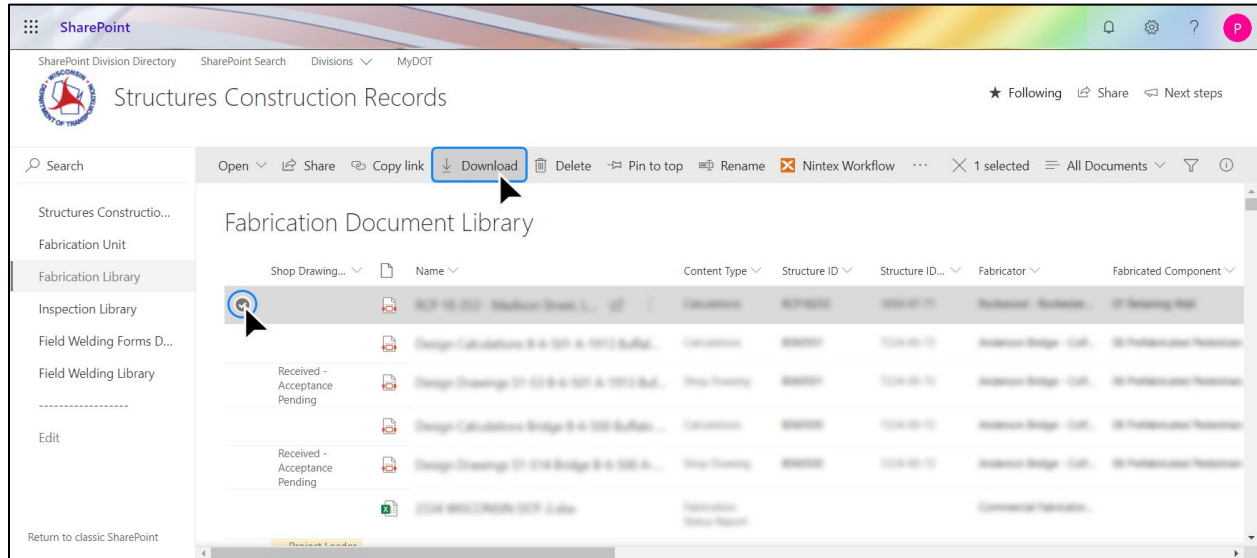
2) **When prompted choose to save the file to your computer. This step may vary depending on your browser and your browser options for handling downloads.**
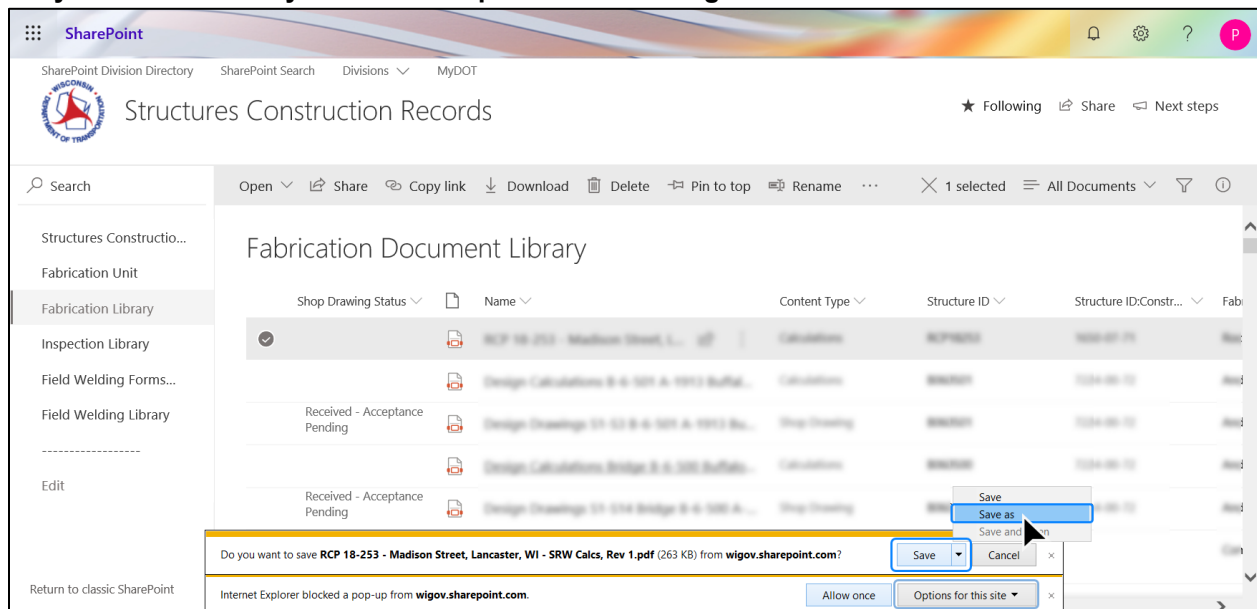
From Fabricator Folder or All Documents in *Classic* Interface

1) **Right-click the filename, then choose Download.**
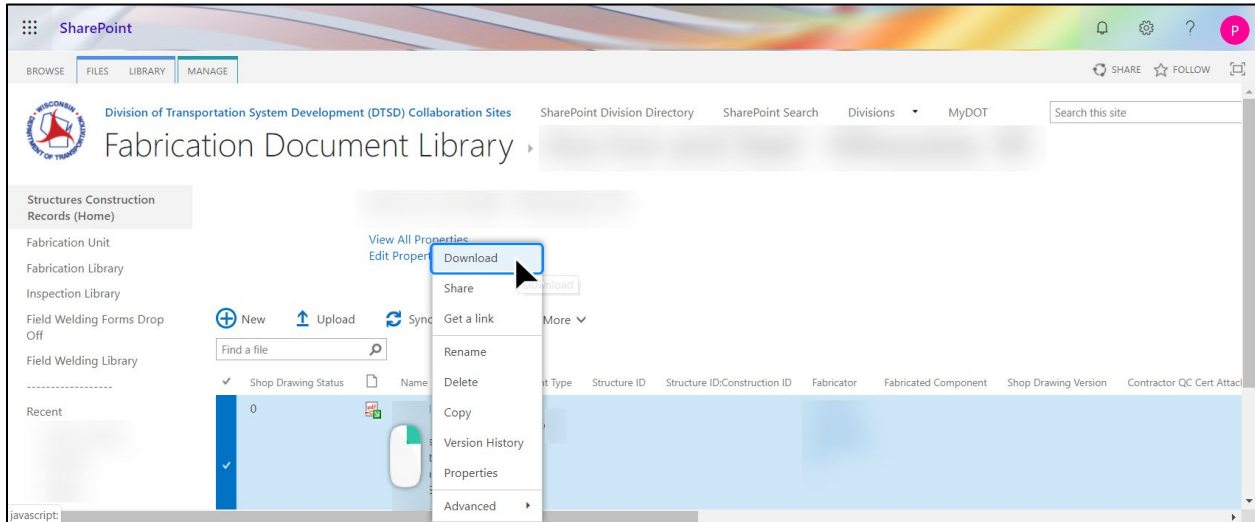
2) **When prompted choose to save the file to your computer. This step may vary depending on your browser and your browser options for handling downloads.**
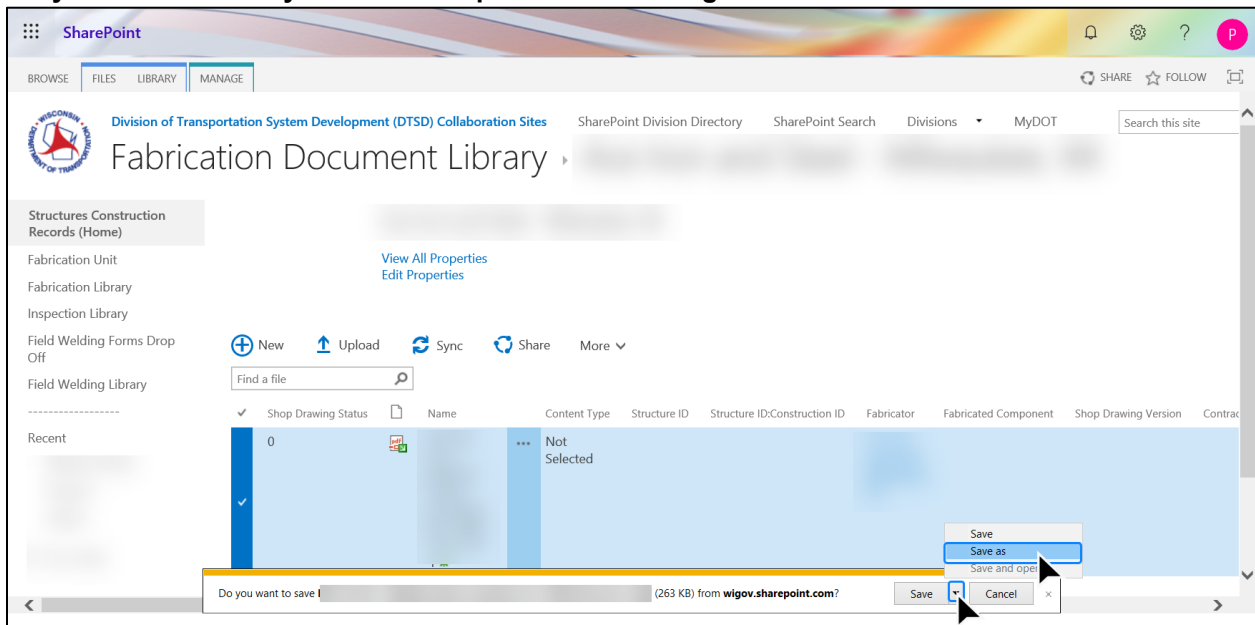
How to search, filter and sort?

Filtering, sorting and grouping options vary by column. For example, the Construction ID column allows for all 3 options, the Structure ID column only allows filtering.

1) **To search for a file: type keywords in search bar at the top left-hand area of the screen, then press Enter (Return) on your keyboard.**
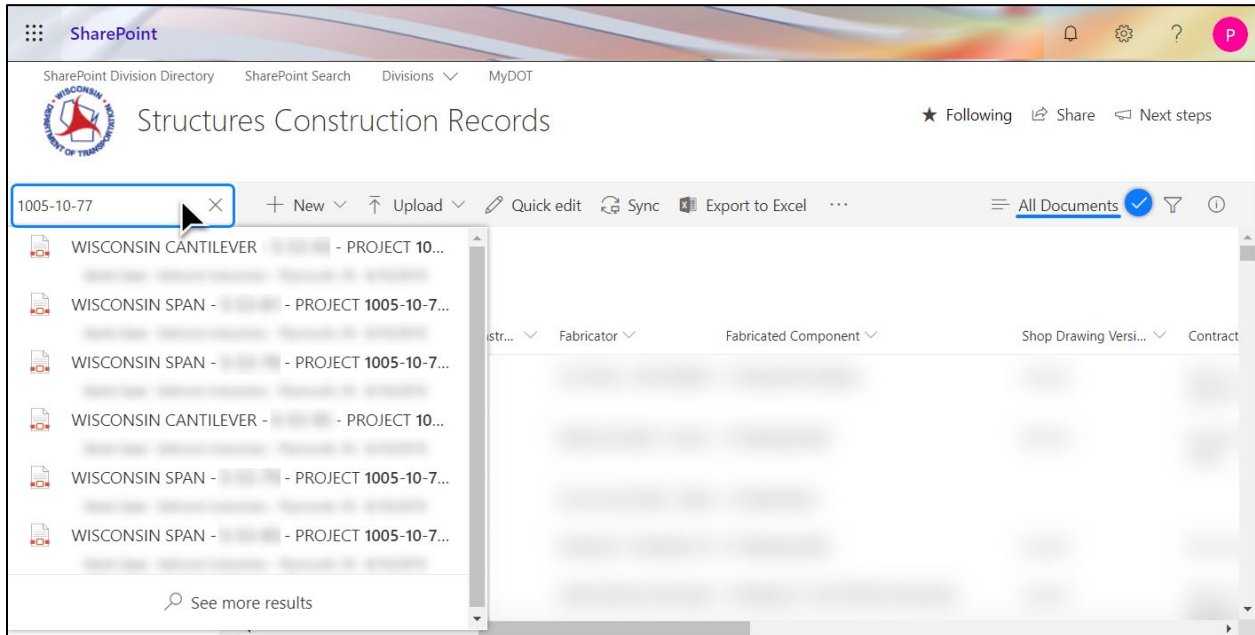
Separate multiple keywords by a coma.
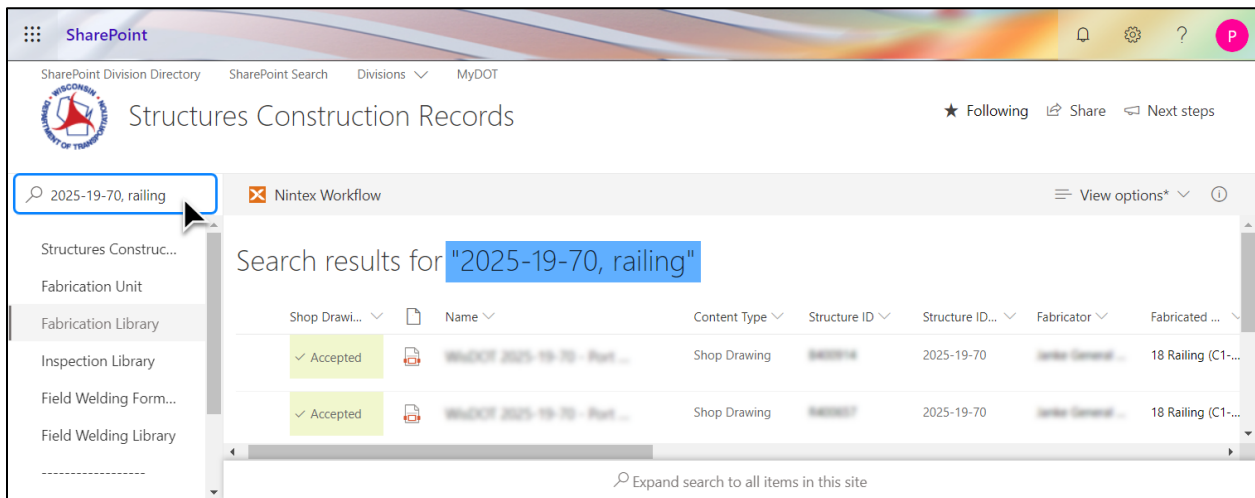
1) To filter and sort: Choose a column to organize the documents by and Click the down arrow next to the column name.
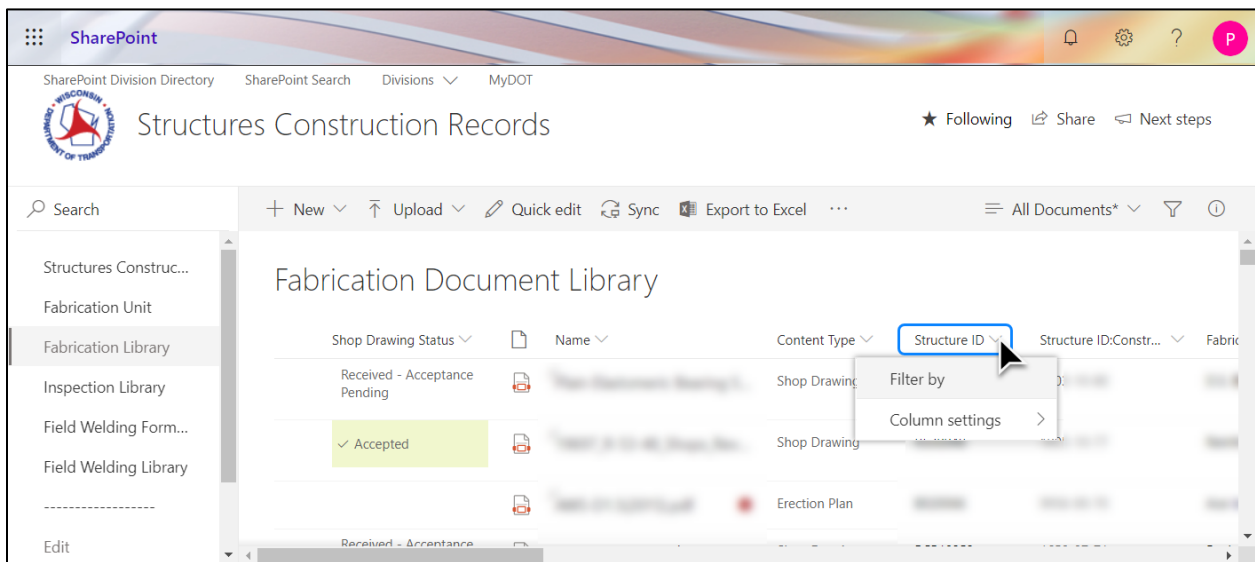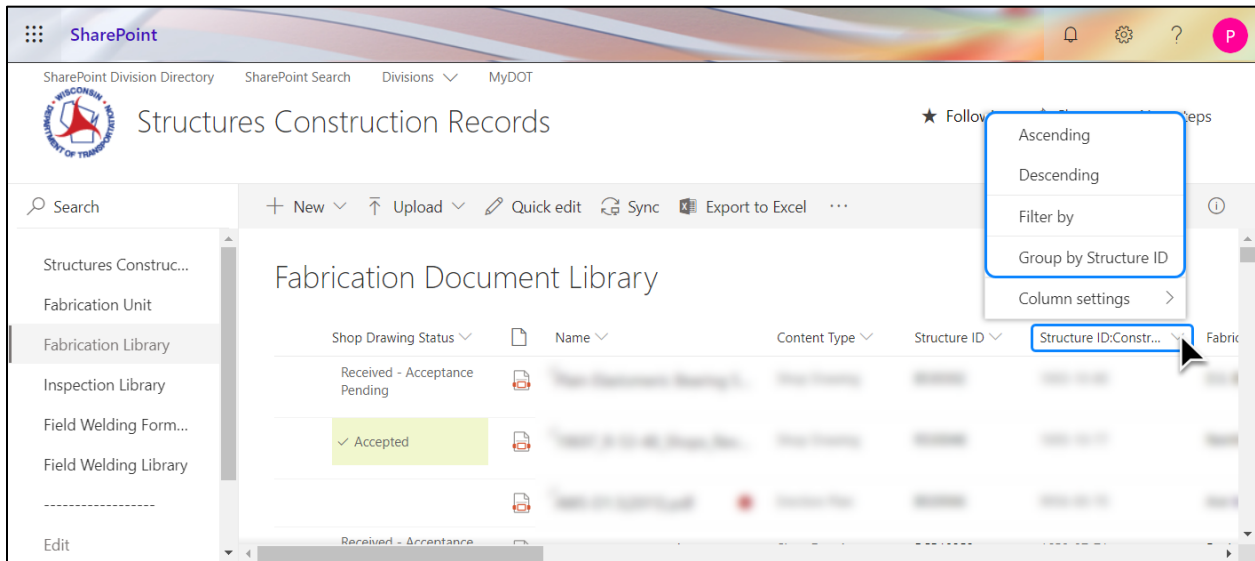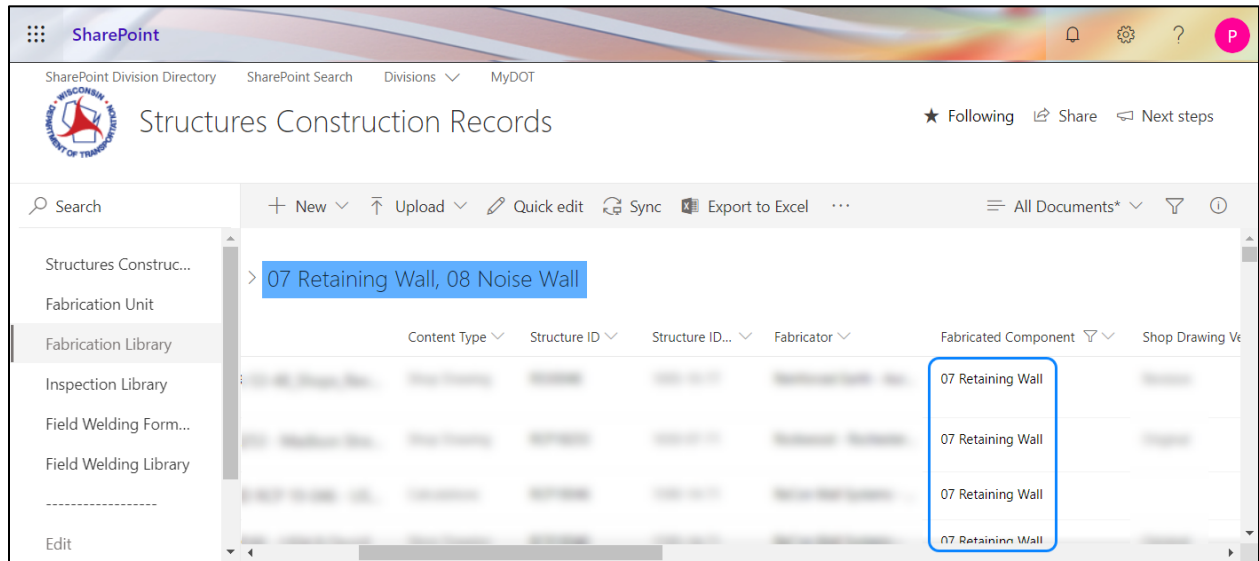
2) **Choose the sort/filer options best suited for your search. Example: [Fabricated Component] > [Filter by].**
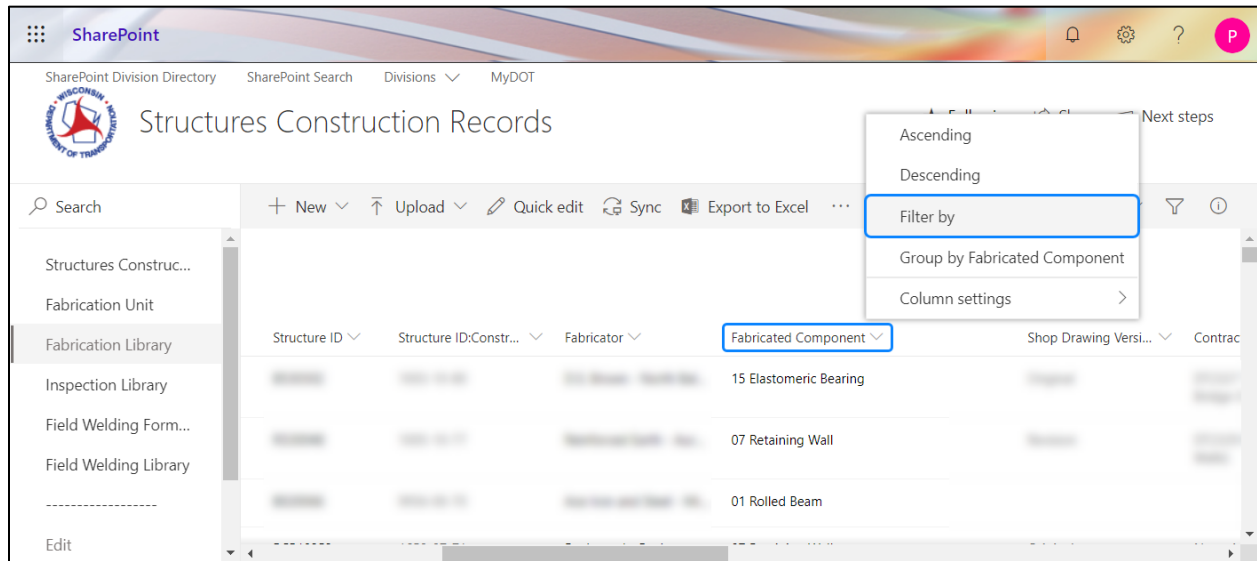
3) **Choose the filtering parameters, then click apply.**
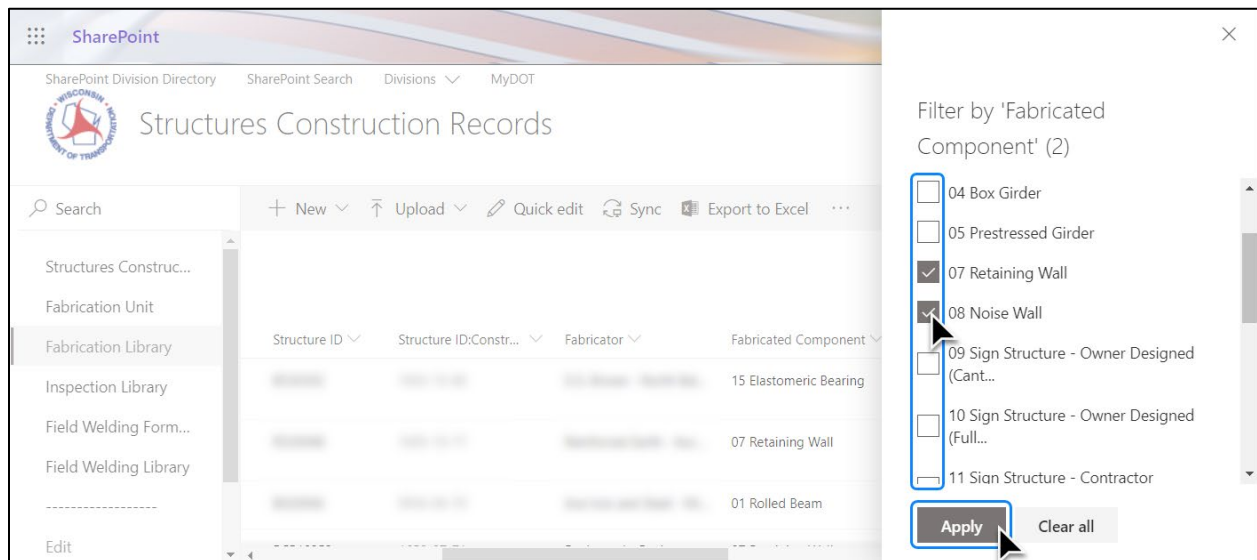
4) **The documents are filtered.**

How to update review status for Project Manager/Leader?

1) From the All Documents views, filter or search for the file. Select the file clicking the ✓ icon.
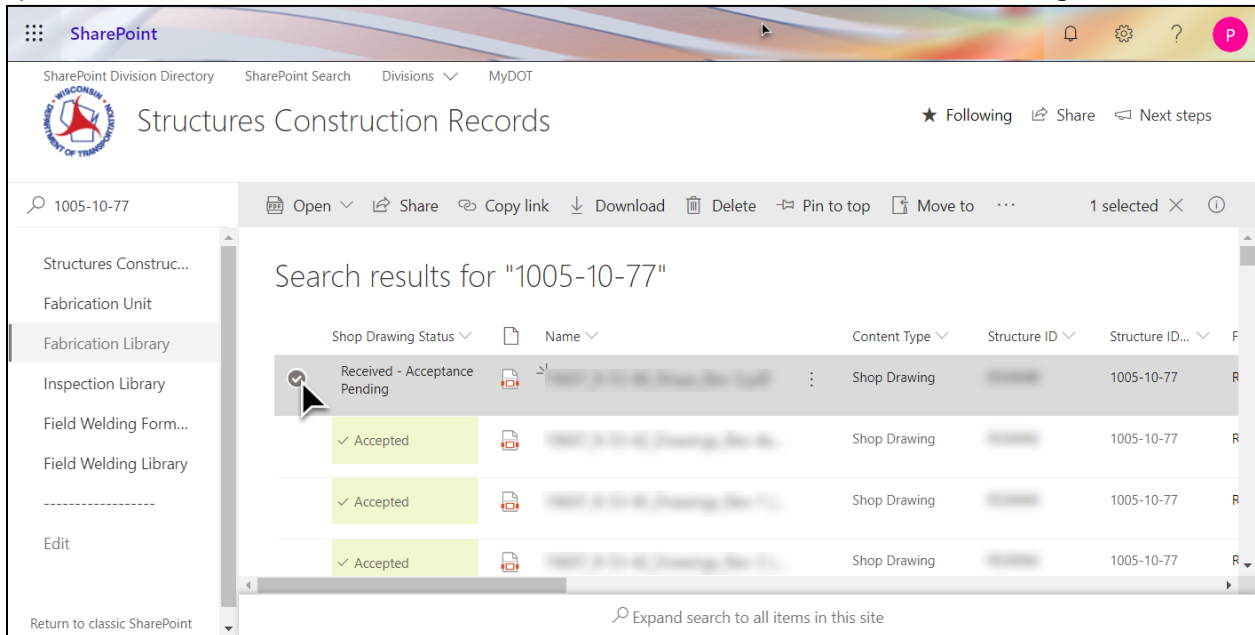
2) If not already open, open the information panel by clicking the Information Panel icon ⓘ. Scroll down the options to the Project Management Review.
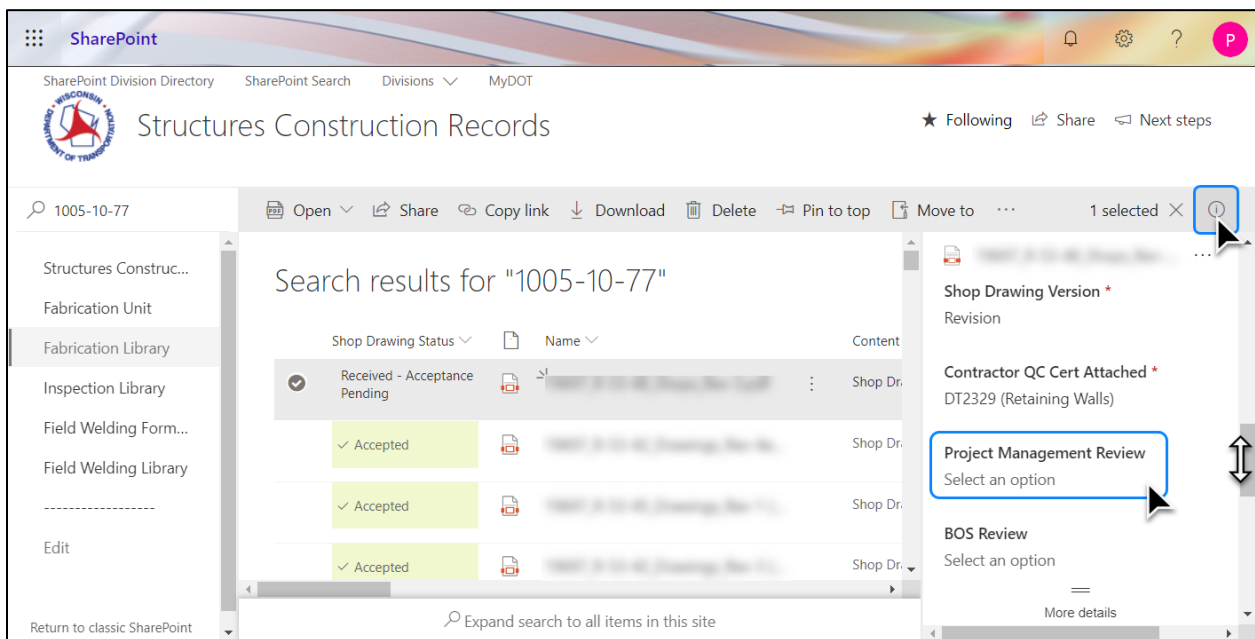
3) Select the status from the options in the drop-down menu. The status has been updated.

How to add review comments?

Method 1 (Preferred): Bluebeam – SharePoint Link

Steps – 1 thru 7	**Set up Bluebeam link to the Fabrication Library (First use)**
Steps – 8 thru 16	**Opening and reviewing documents.**
	(Bluebeam-SharePoint link previously setup)
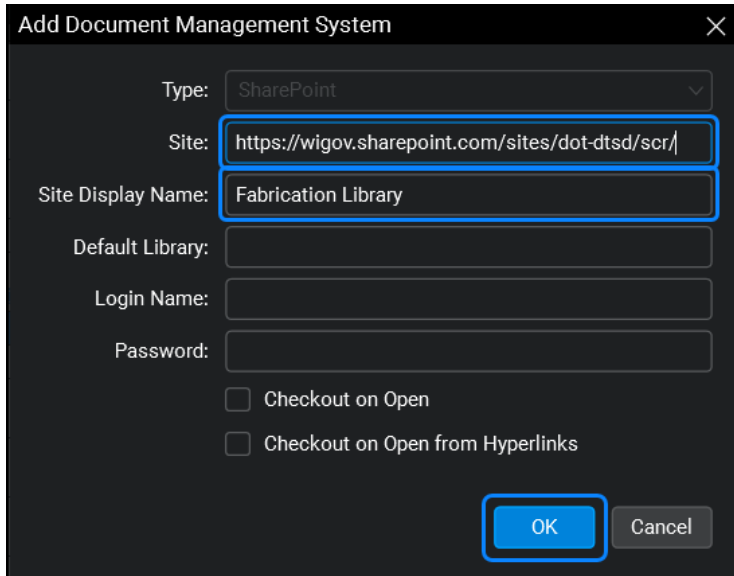
1) **Select Revu from the top menu. Select Preferences.**
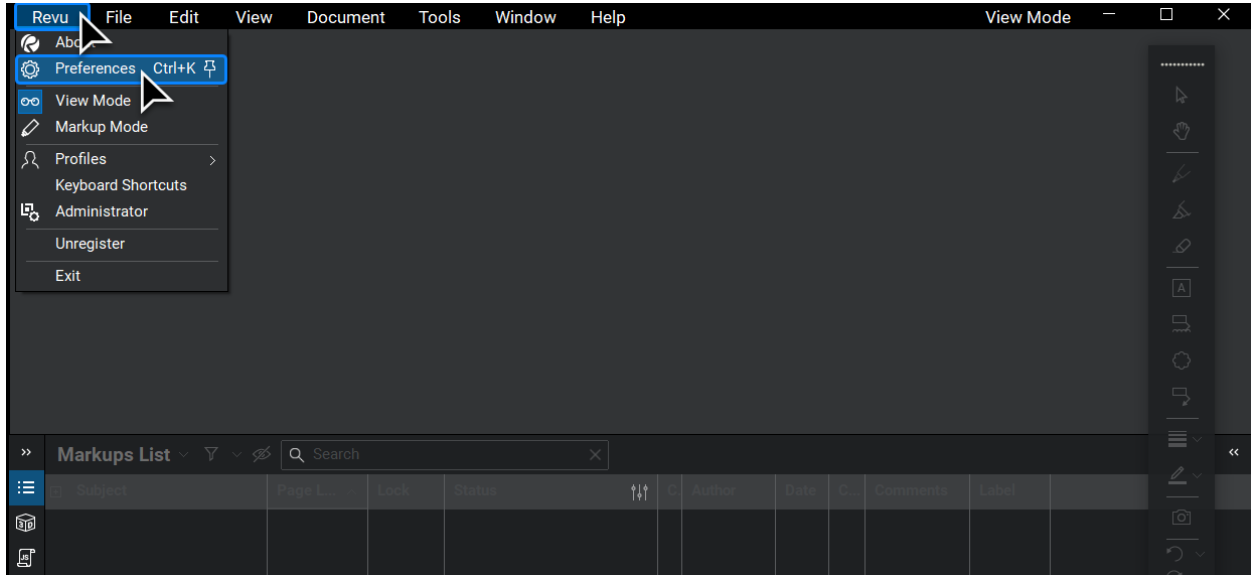
2) **Select Interface from the left-hand menu. Select the File Access Tab. Click on the plus sign + on the bottom left had area of the window.**
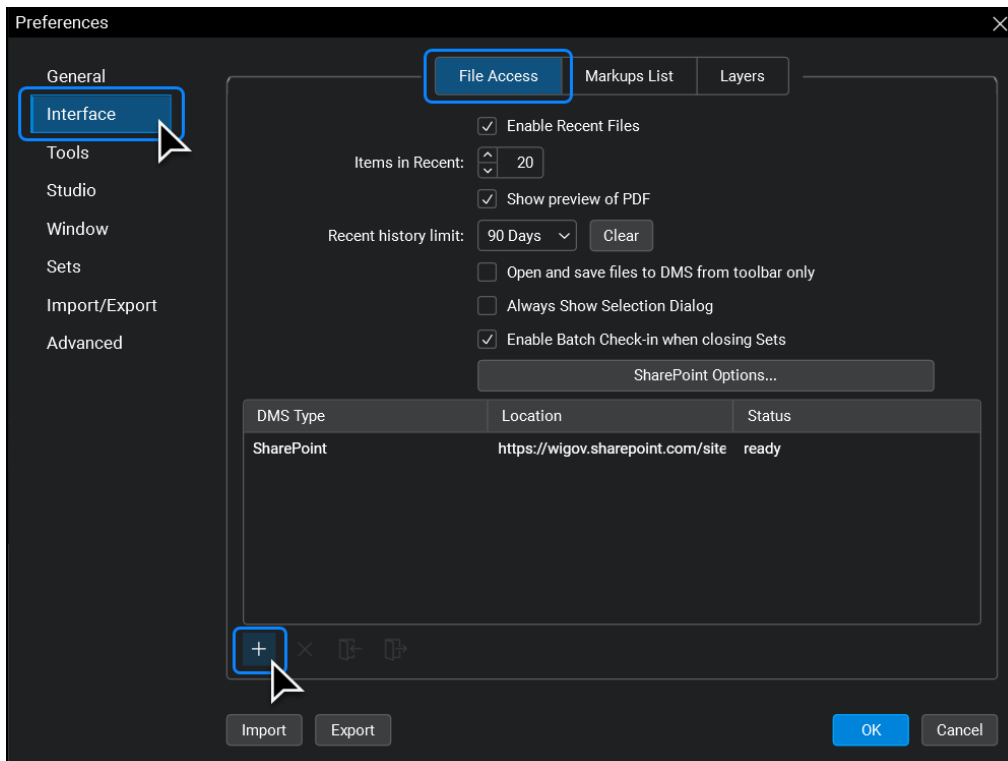
3) Enter the following information, then click OK.
Site: https://wigov.sharepoint.com/sites/dot-dtsd/scr/
Site Display Name: Fabrication Library
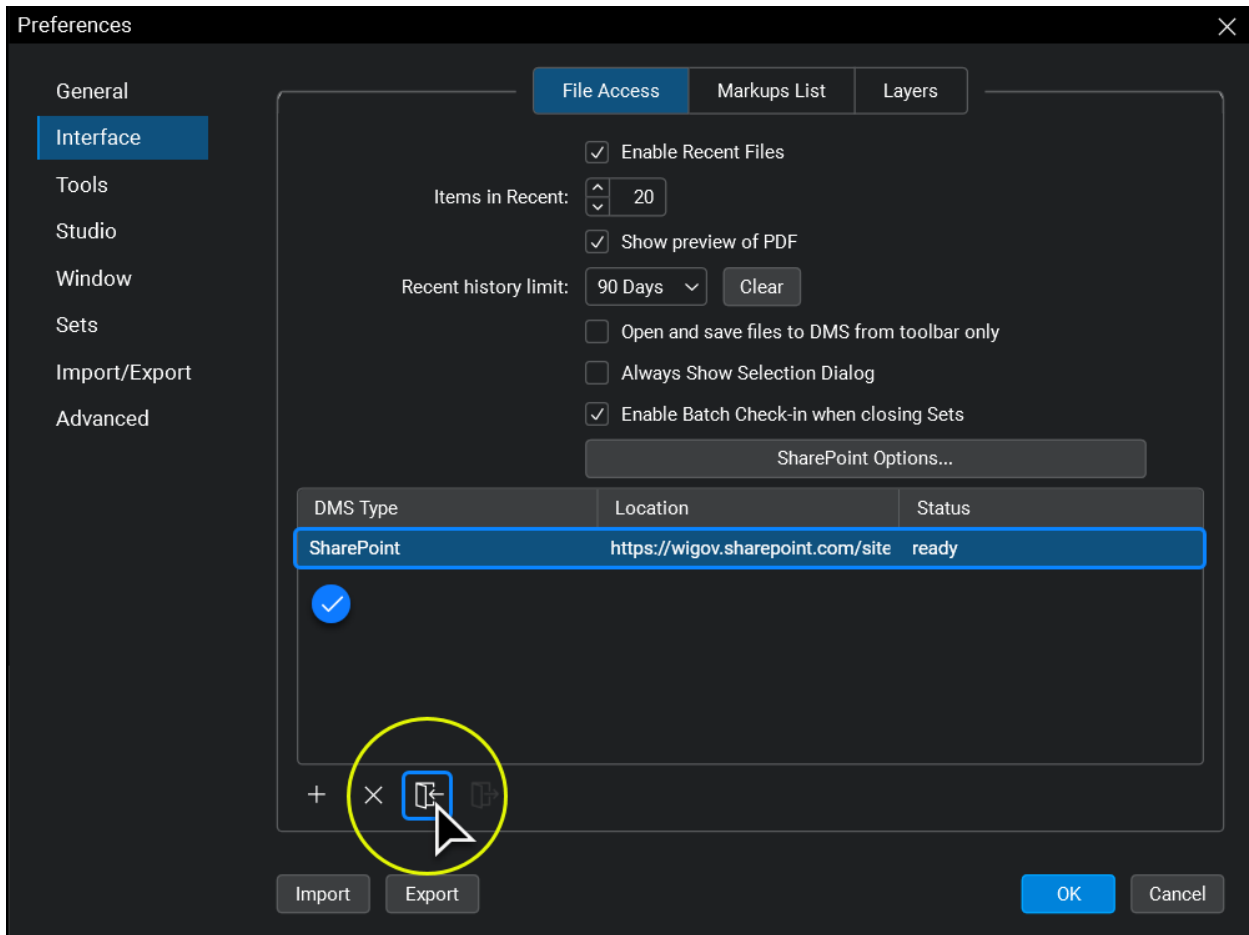
4) The connection is added. Click the log-in icon on the bottom of the window.

5) Enter your log in email for the Fabrication Library
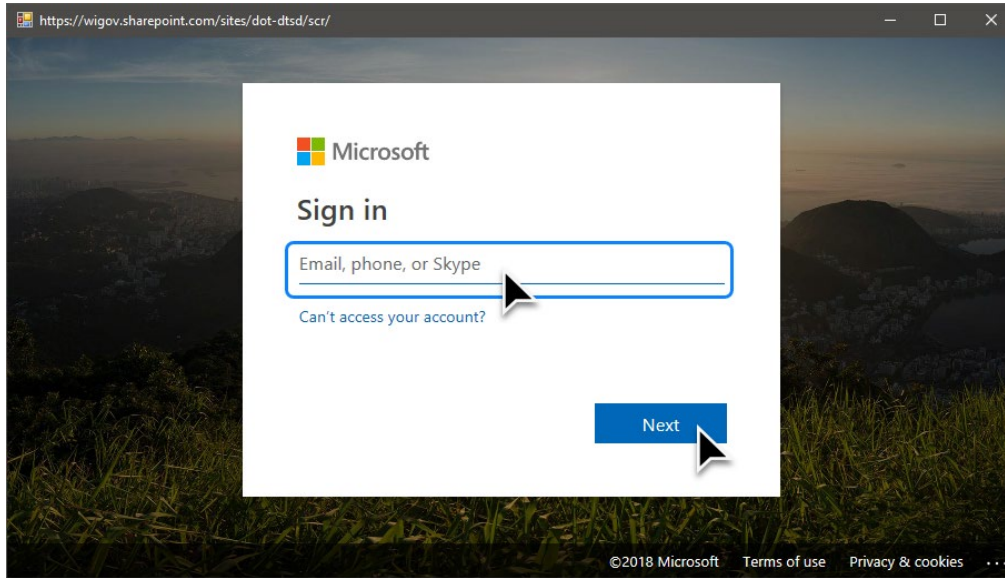
6) Select 'Don't show this again'. Click Yes to stay signed in.
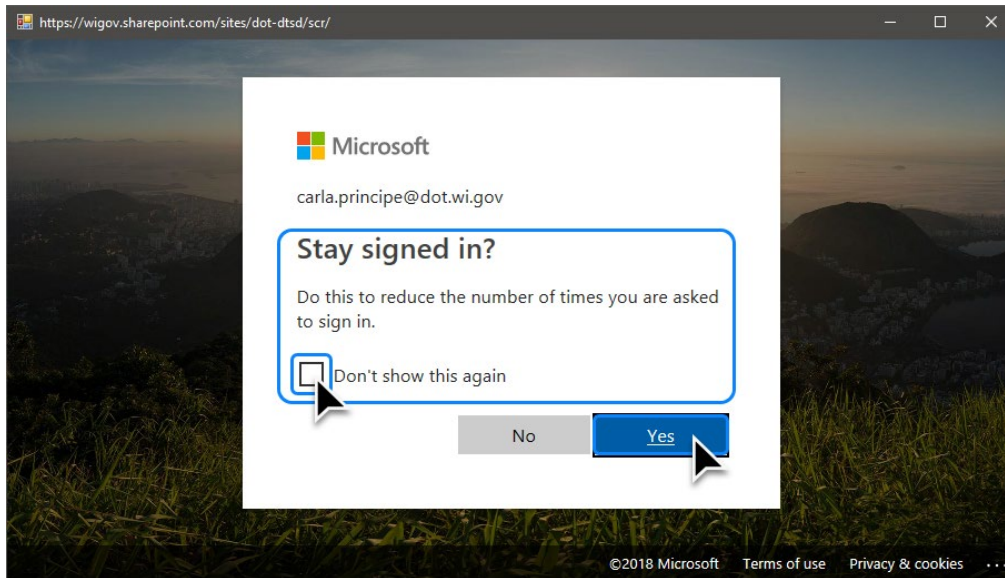
This is the end of the connection set-up.
Steps 1 through 6 need not be repeated to review documents.

7) **Select Revu from the top menu. Select Markup Mode.**
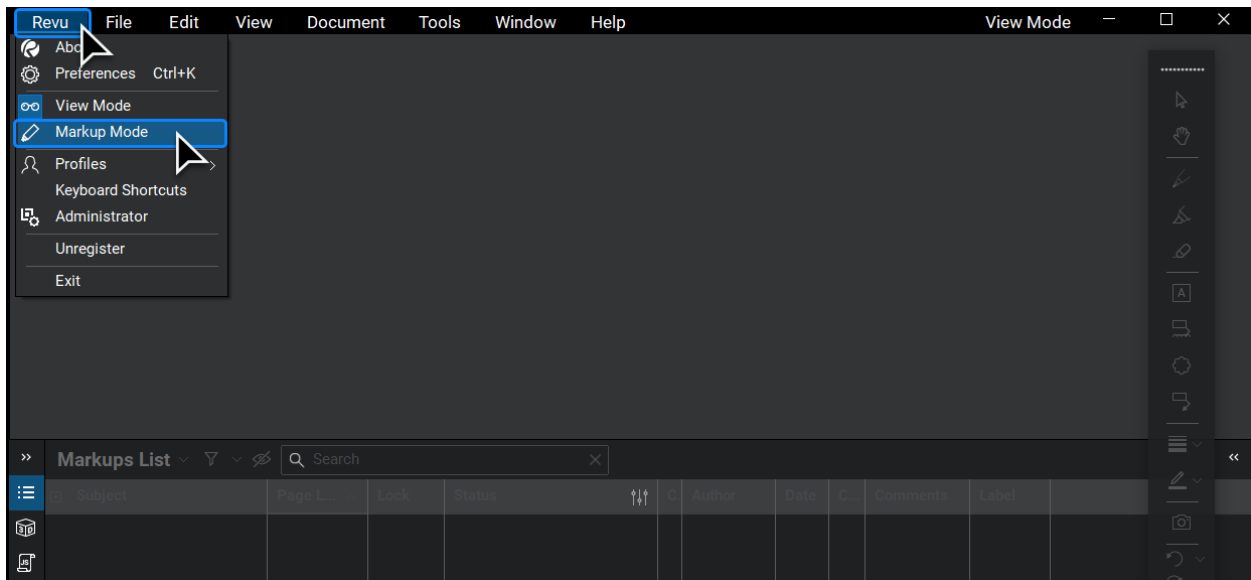
8) **Select File, then select Open.**
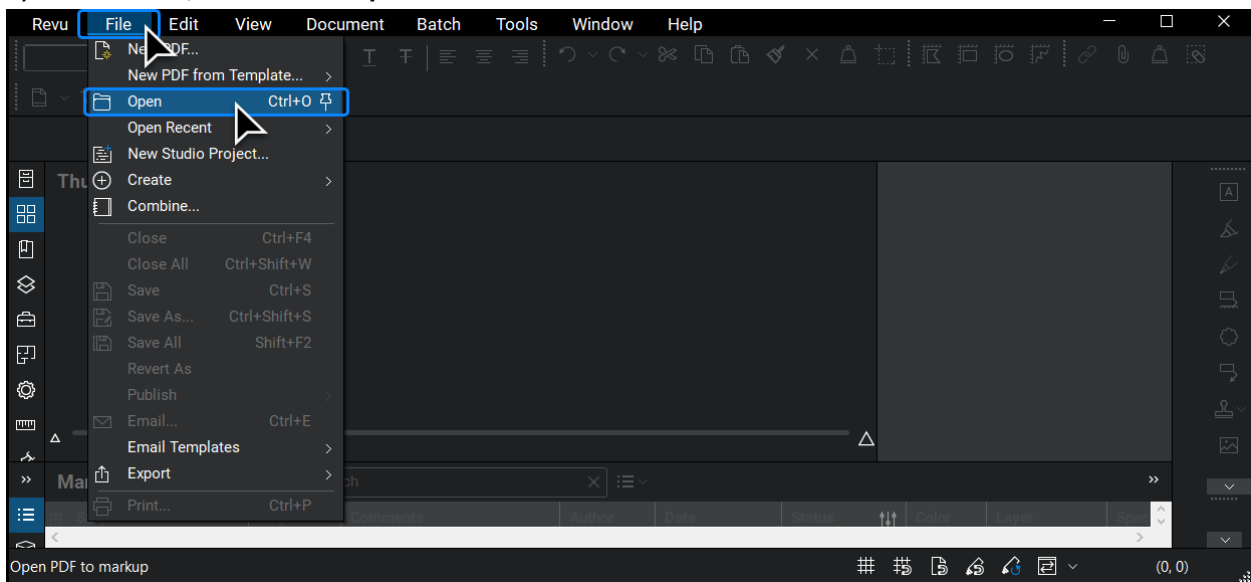
9) Select Fabrication Document Library. (The next time you open a file, this folder may already be selected).
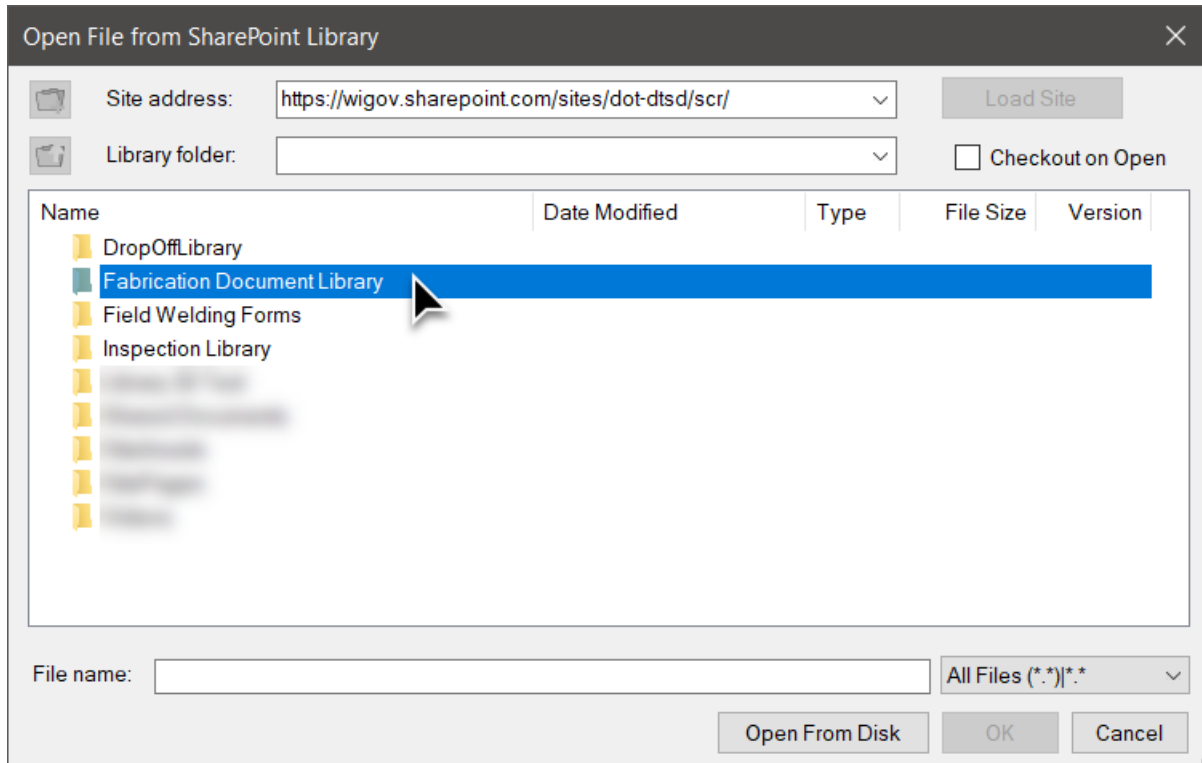
10) Select the document location (Fabricator Folder).
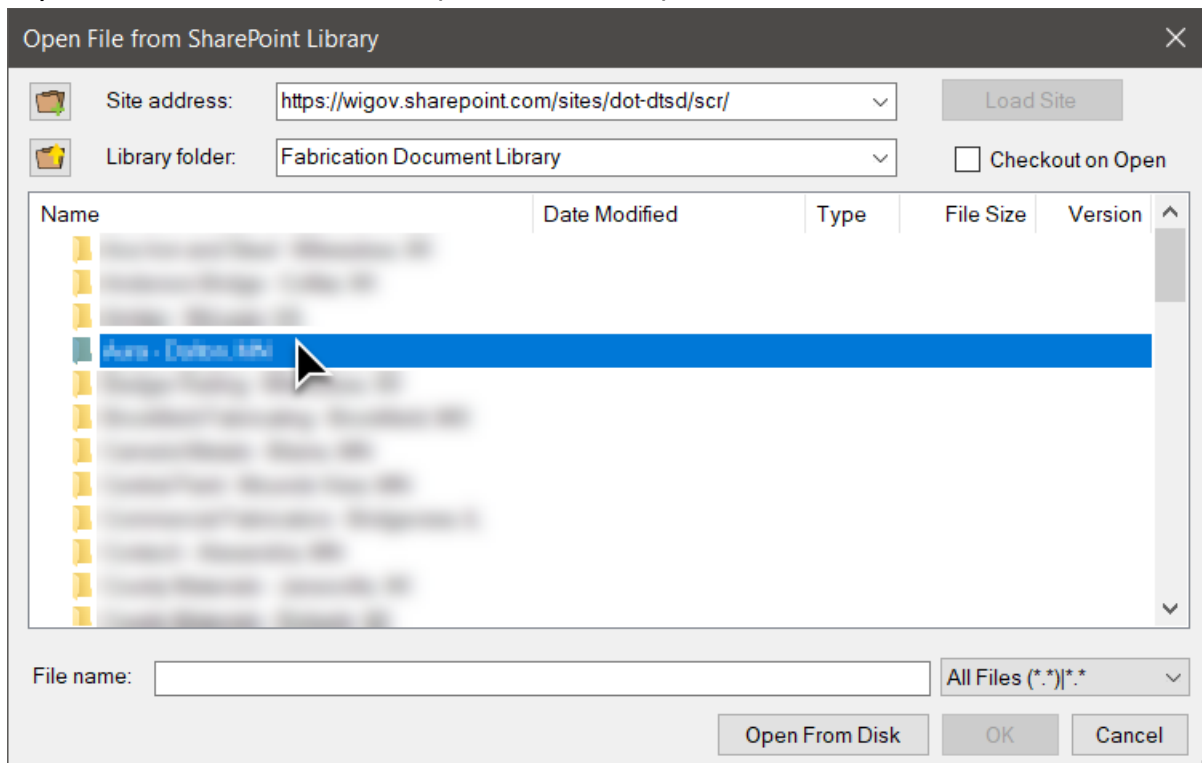
To return to the Fabricator Folders, click the 'Navigate back to previous' folder icon.
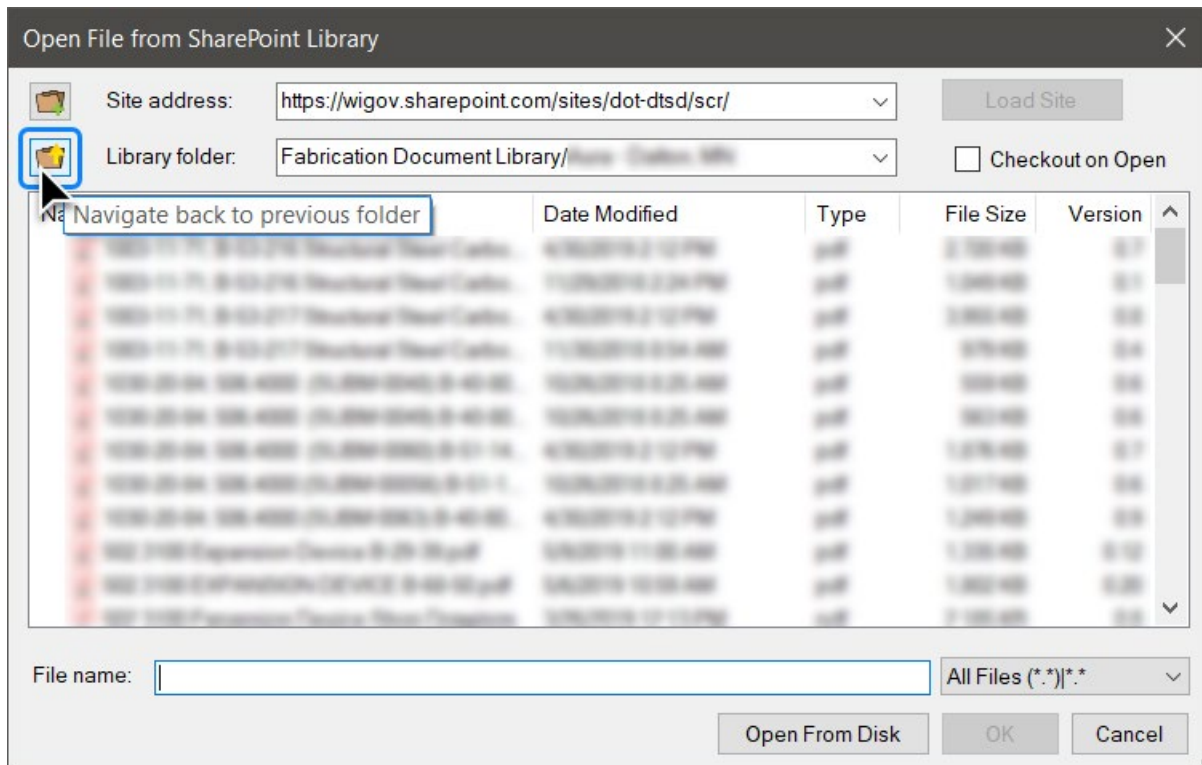
11) Select the document to review. Click OK.
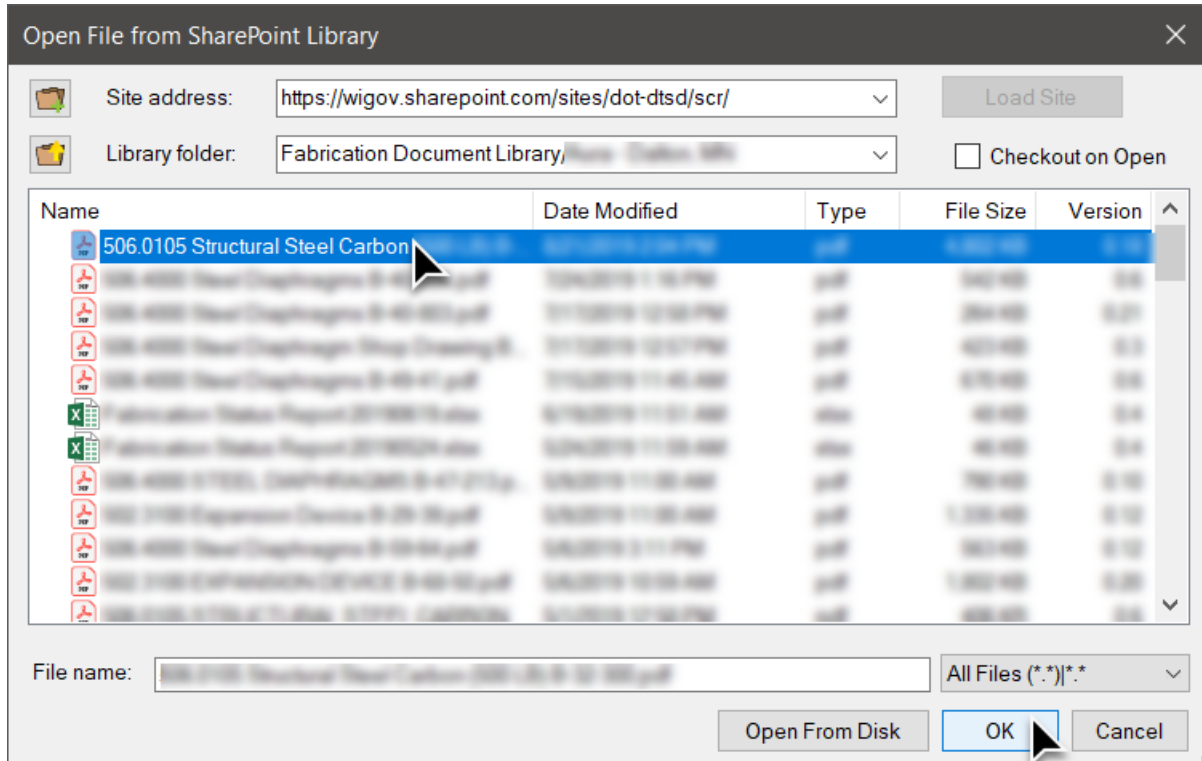
12) To add comments and markup or edit document properties, click the lock icon 🔒 **on the document tab. Select Check Out.**
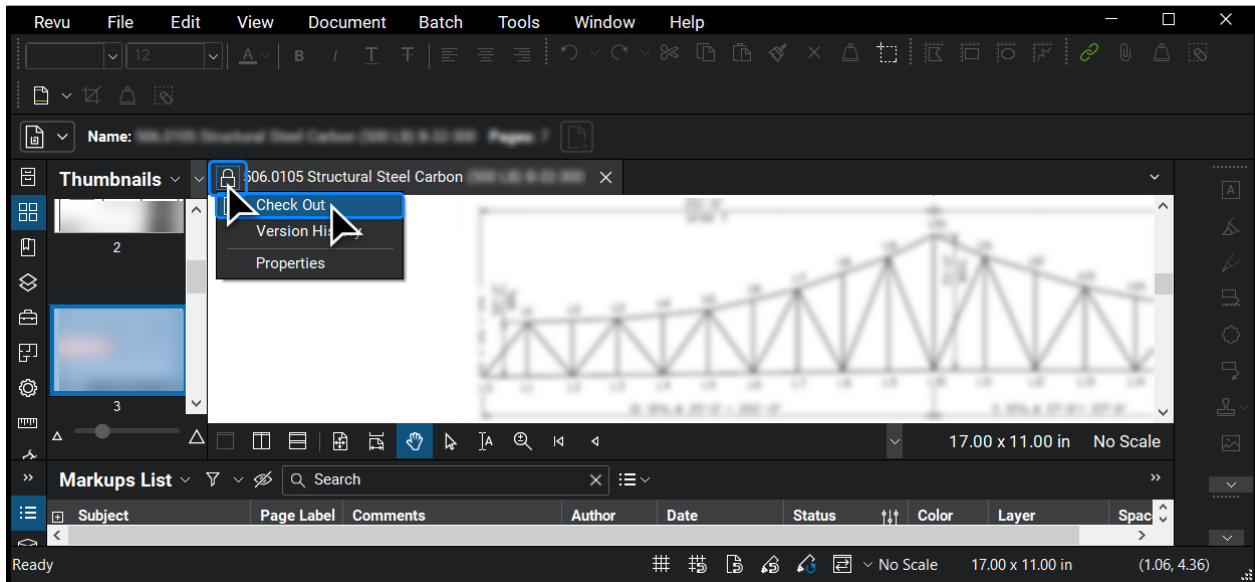
13) To edit the Project Management Review, click the checkout icon 📄 **on the document tab. Select Properties.**
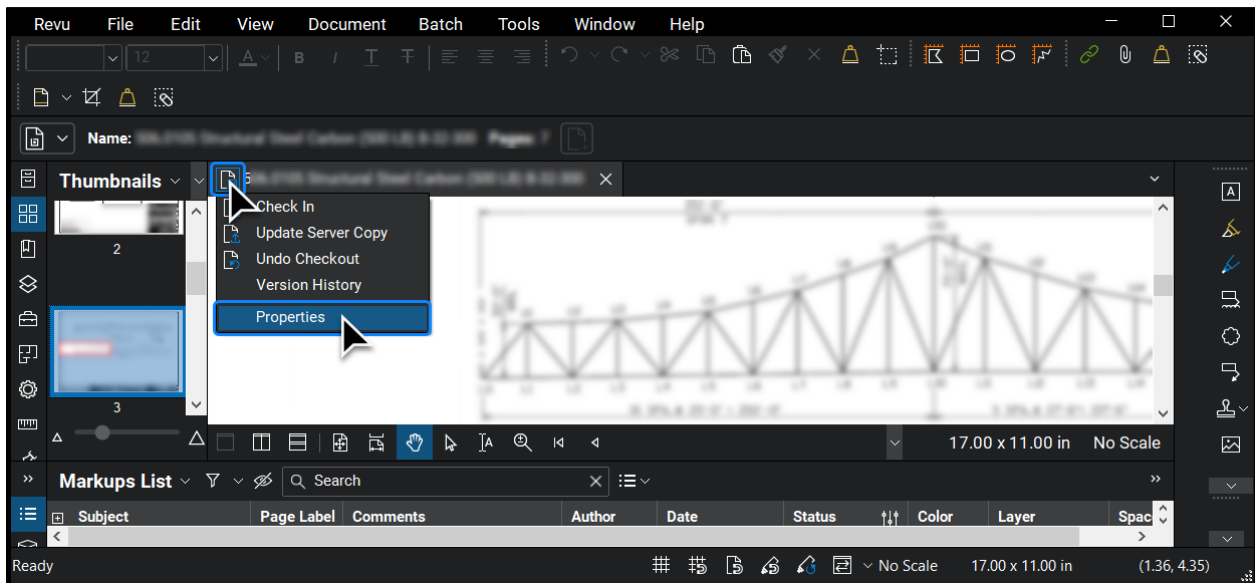
14) ❶ **Double-click on the Project Management Status.**

❷ **Select the new status from the drop-down.** ❸ **Then click OK.** ❹ **Click OK again.**
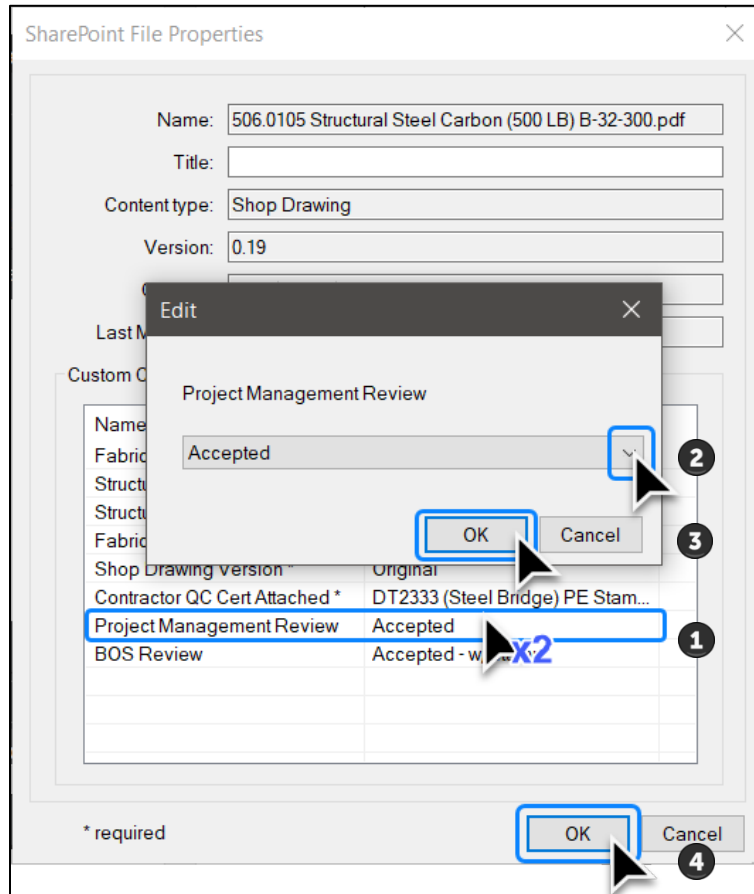
15) ❶ **Use the annotation tools to add comments and notes.**

When you are finished: ❷ **Click the checkout icon.** ❸ **Select Check In.**
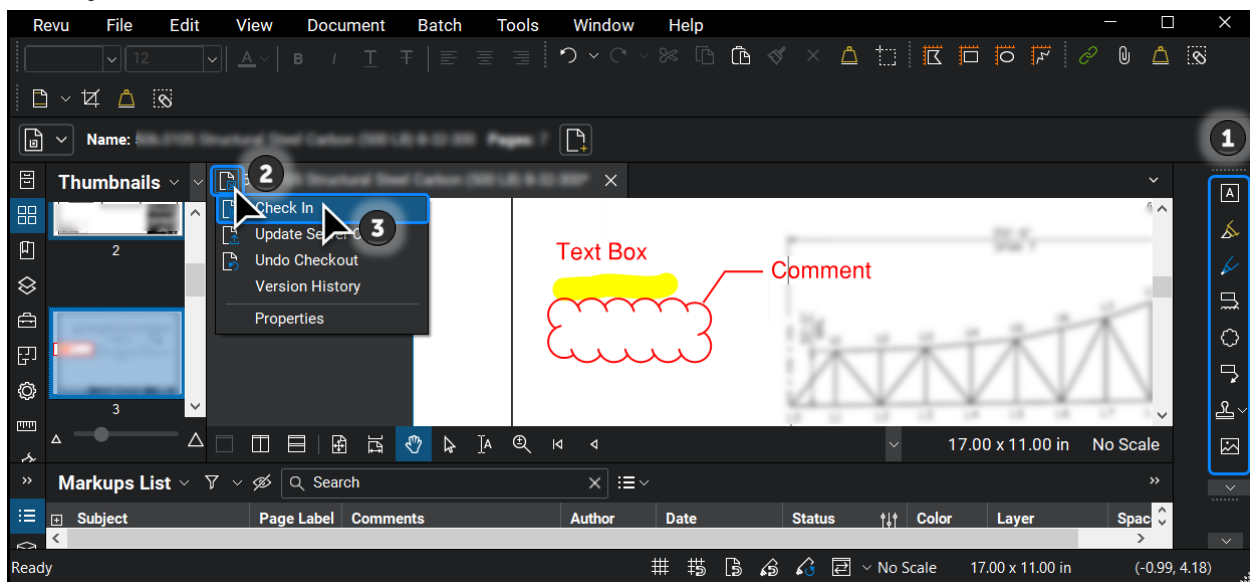
16) Click Checkin.
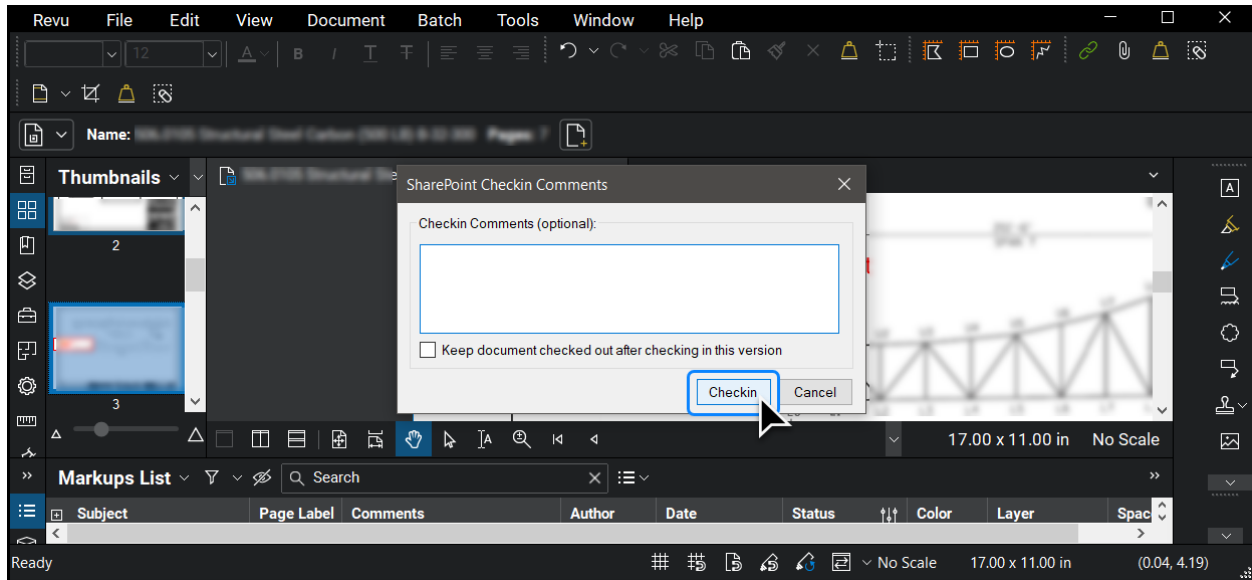
An error may occur when opening or checking in a document. Here are a few possible causes and solutions:

1) *Failed to connect to SharePoint or SharePoint Connection Failed error.*
   Repeat step 15 & 16. If that does not work, check your internet connection and try later. You may save your check out by selecting File > Save from the top menu in Bluebeam.

2) **The file will not open.**
   This is most likely due to the length of the filename, Bluebeam imposes a limit on the number of characters including the file path. In this case, open the fabrication library in your internet browser and edit the filename to make it shorter. To do this follow the How to edit document properties? guide (New Experience). Comeback to Bluebeam and open the file normally.

Method 2: Adobe Acrobat DC – SharePoint Document

1) Open the document in the internet browser

__From the Fabricator Folder__, click on the file name to open the document.
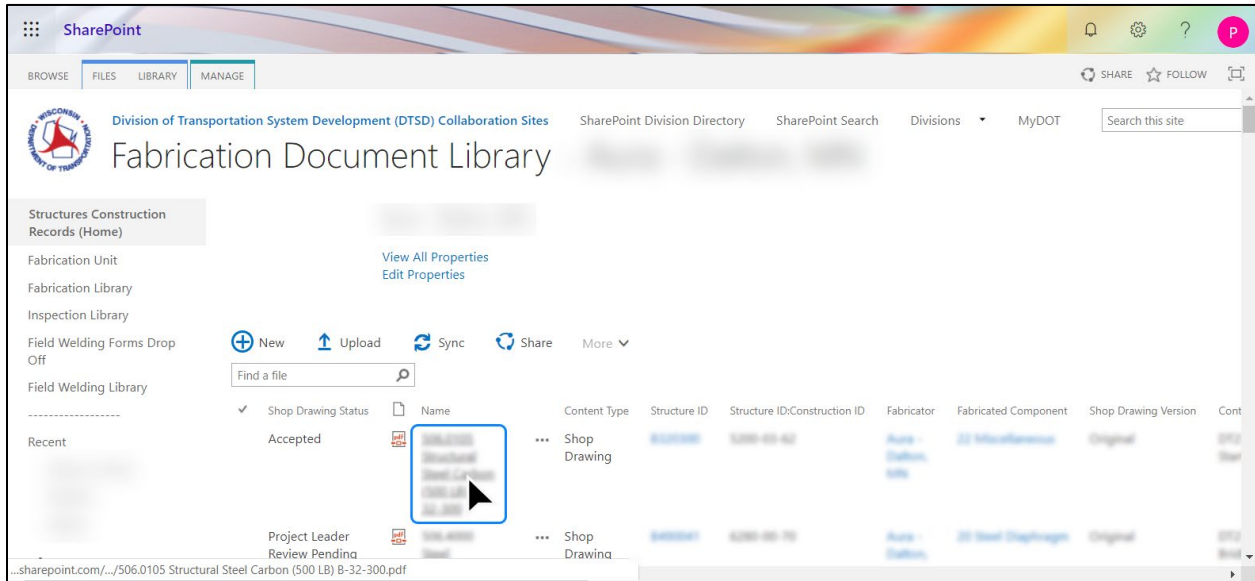
__From All Documents view__, select the file, click Open, then click Open in browser.
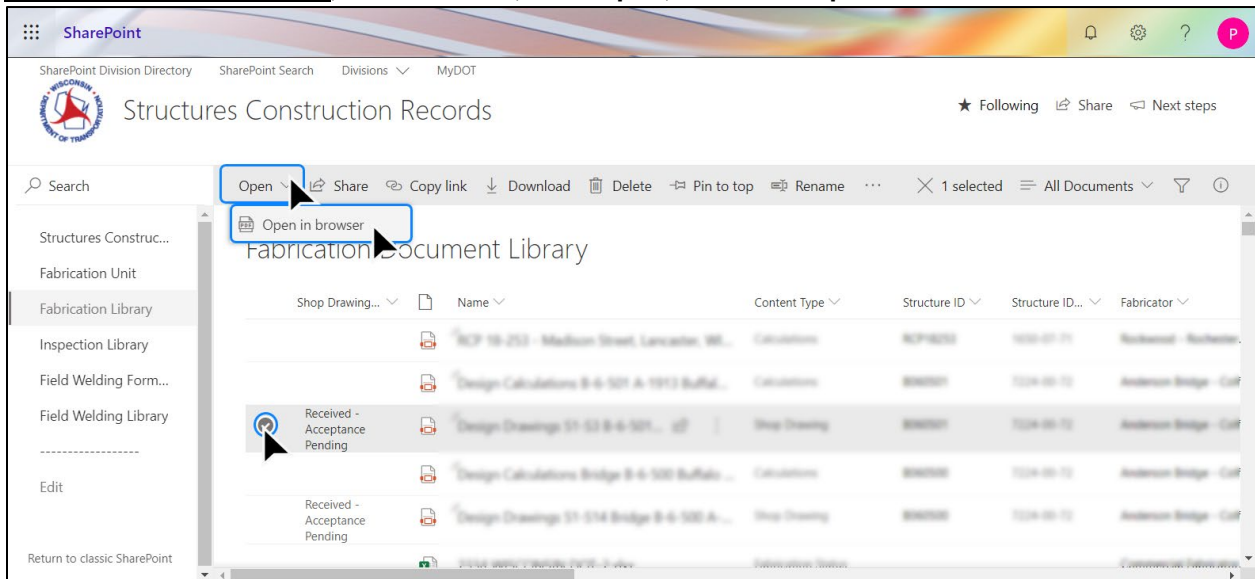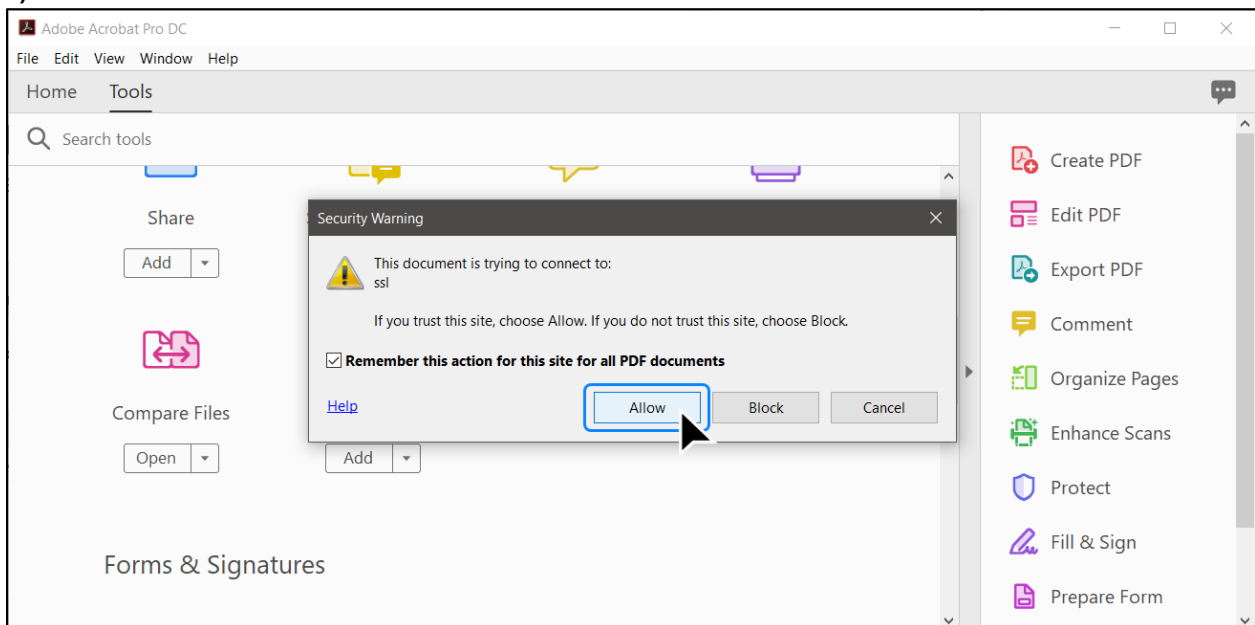
2) Copy the URL
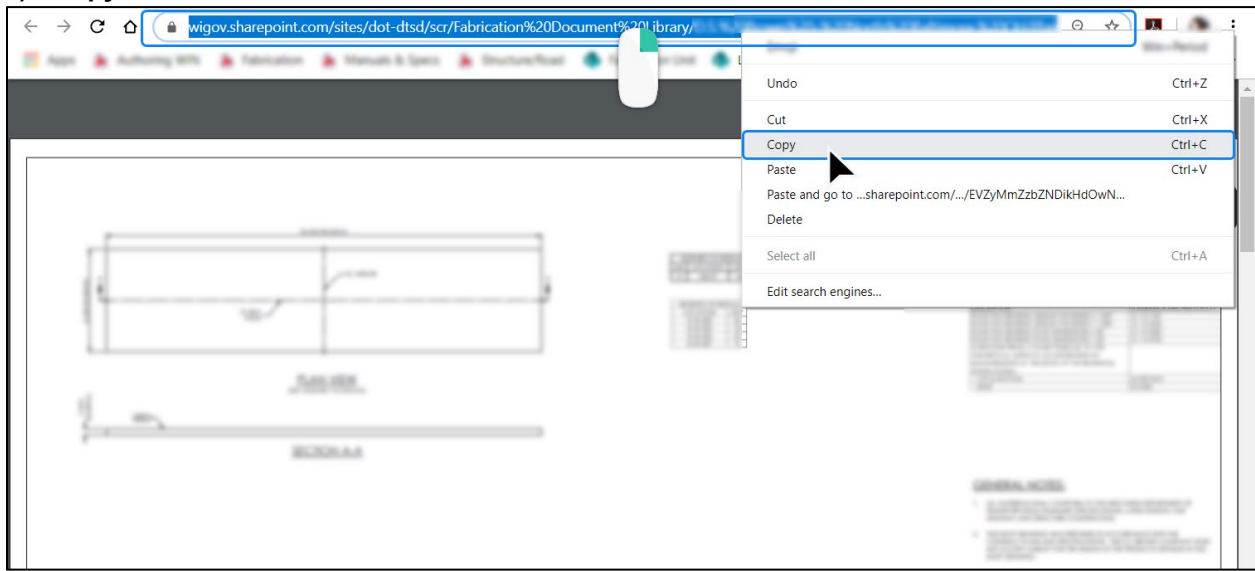
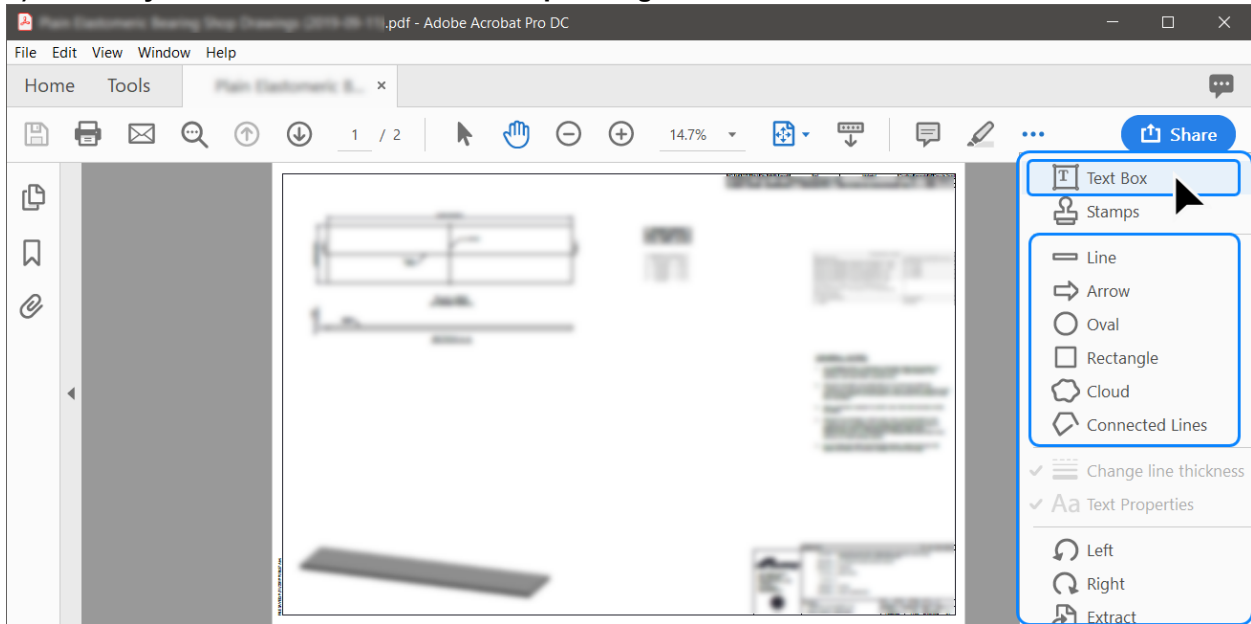## 3) On Adobe Acrobat: Click File, then click Open.
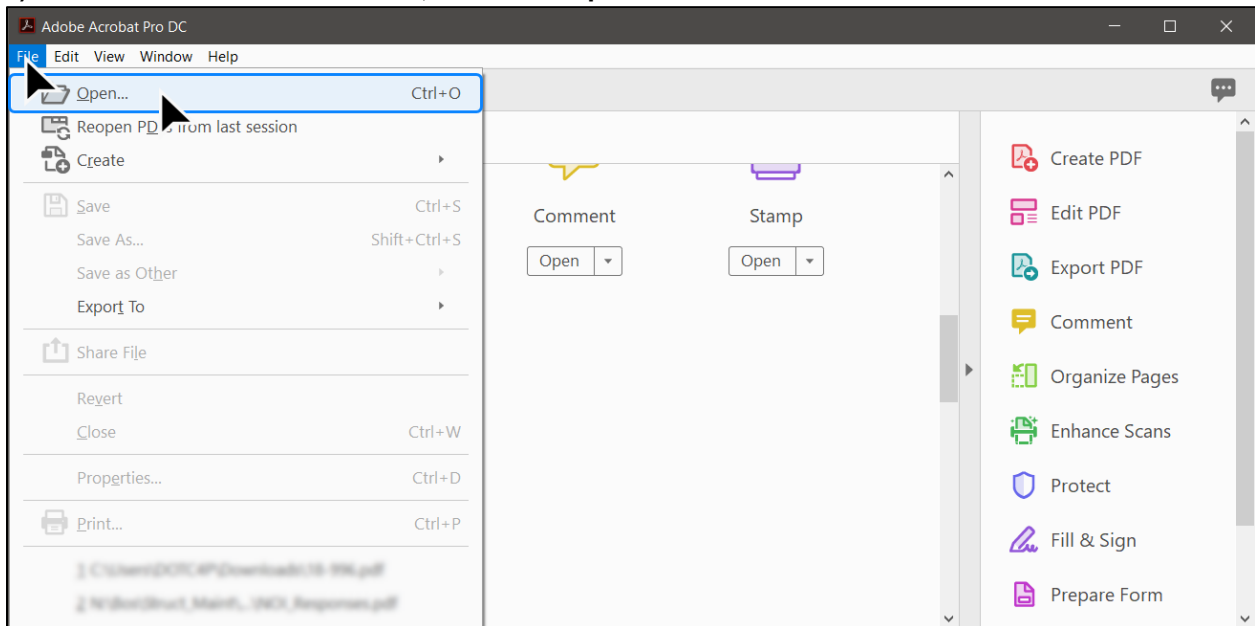
4) Paste the URL in the File name bar. Click Open.
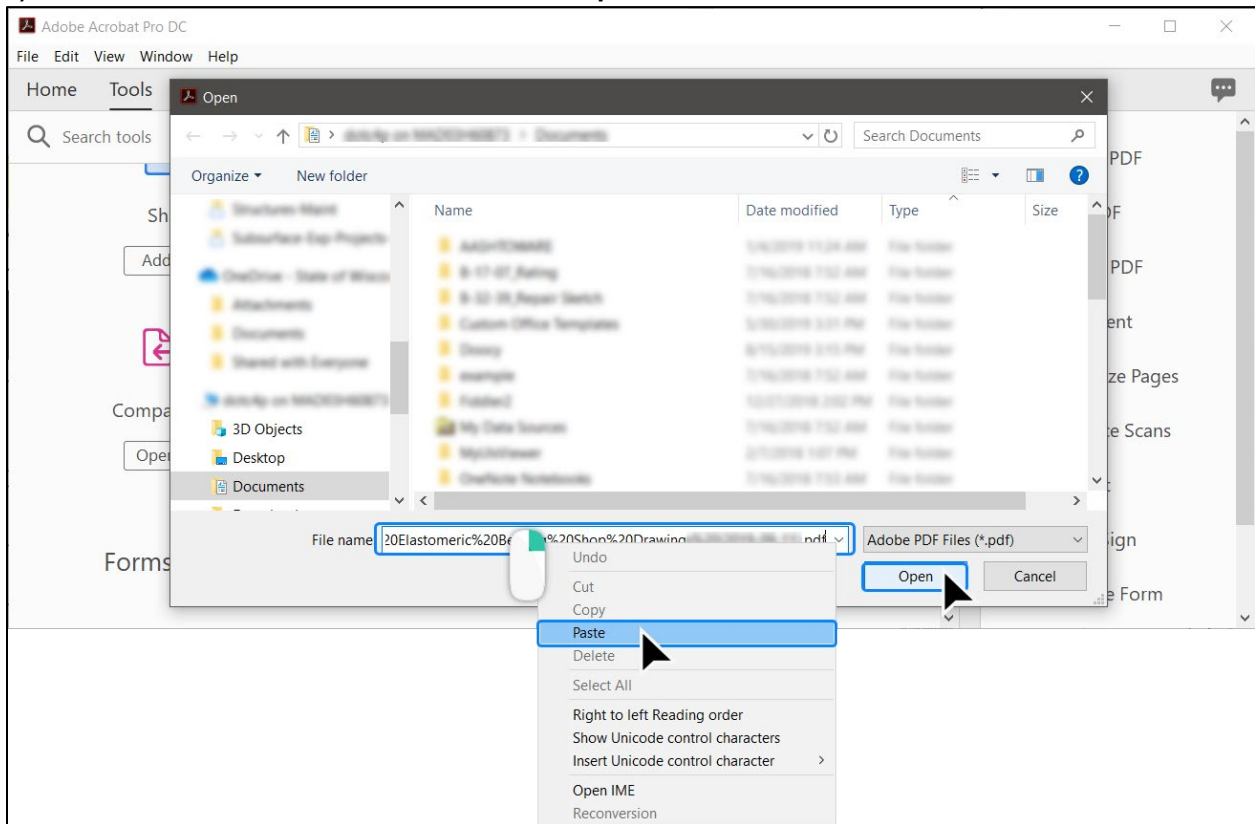
5) Choose Allow to trust the site.

6) Add any needed comments and markups using Adobe's annotation tools.

7) When you are finished, click the Save icon. The edits will be saved and synced with SharePoint. Unlike Bluebeam, the document properties cannot be edited through Adobe. To update the review status, follow the steps in the How to update review status for Project Manager/Leader? guide.
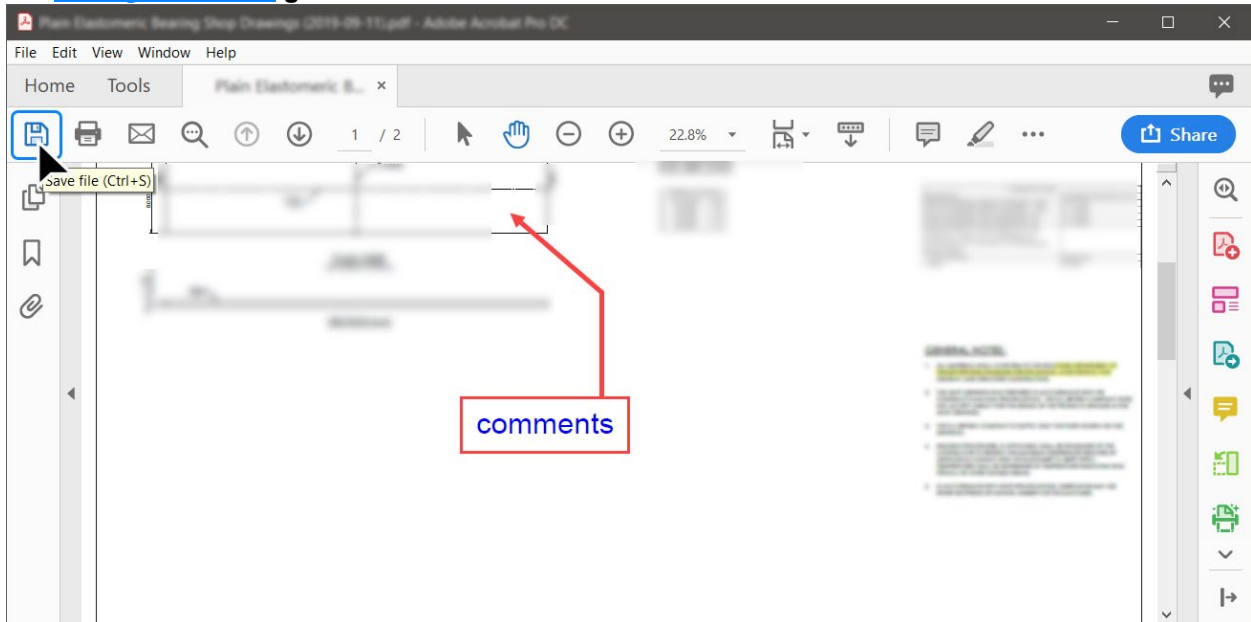
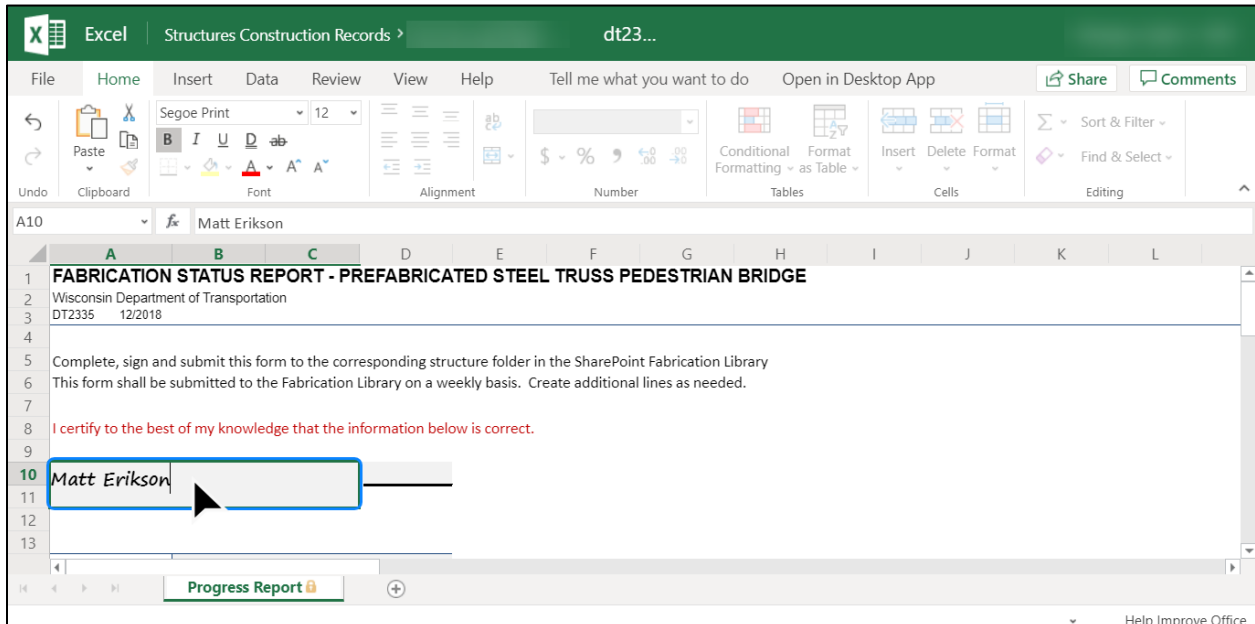## Method 3: Adobe Reader – Manual

1) Download the document and save to your computer.
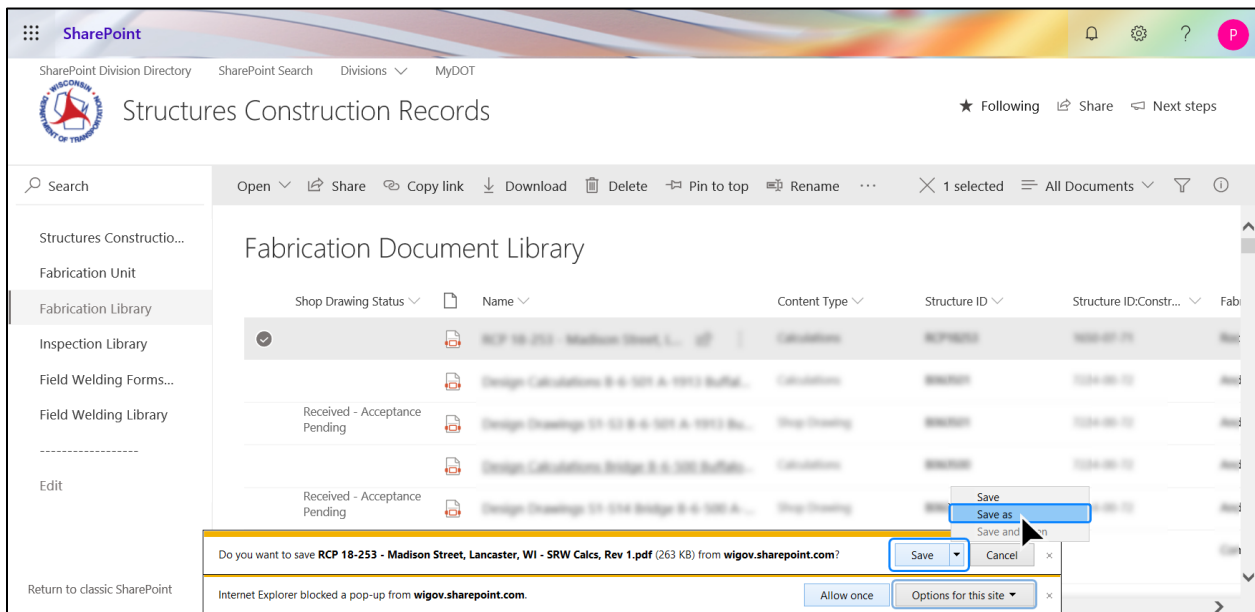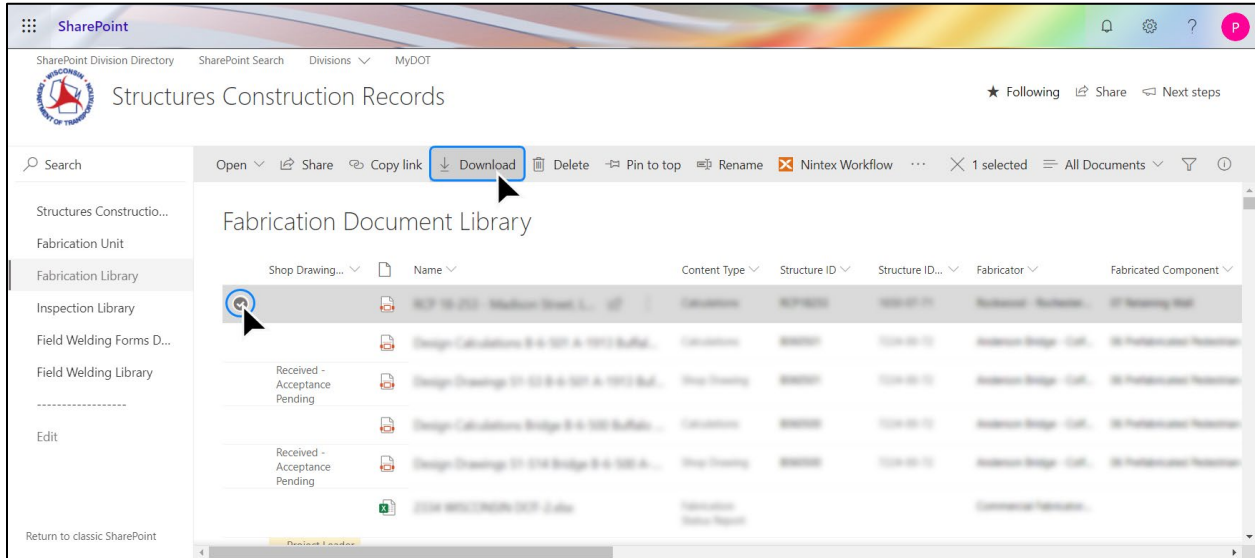
2) **Open the document in Adobe Reader. Add needed comments and markups.**

3) **When you are finished, click the Save icon.**
   Do not choose Save As. Do not change the filename.
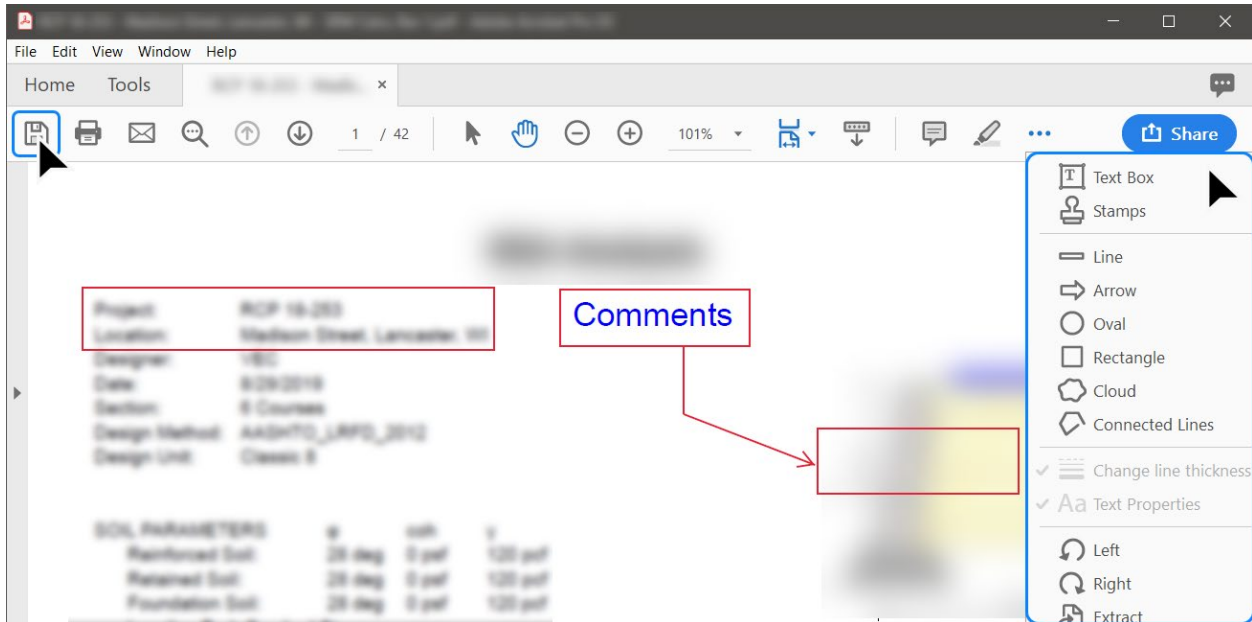
4) **Drag and drop** the updated document **from your computer to the Fabricator Folder.**
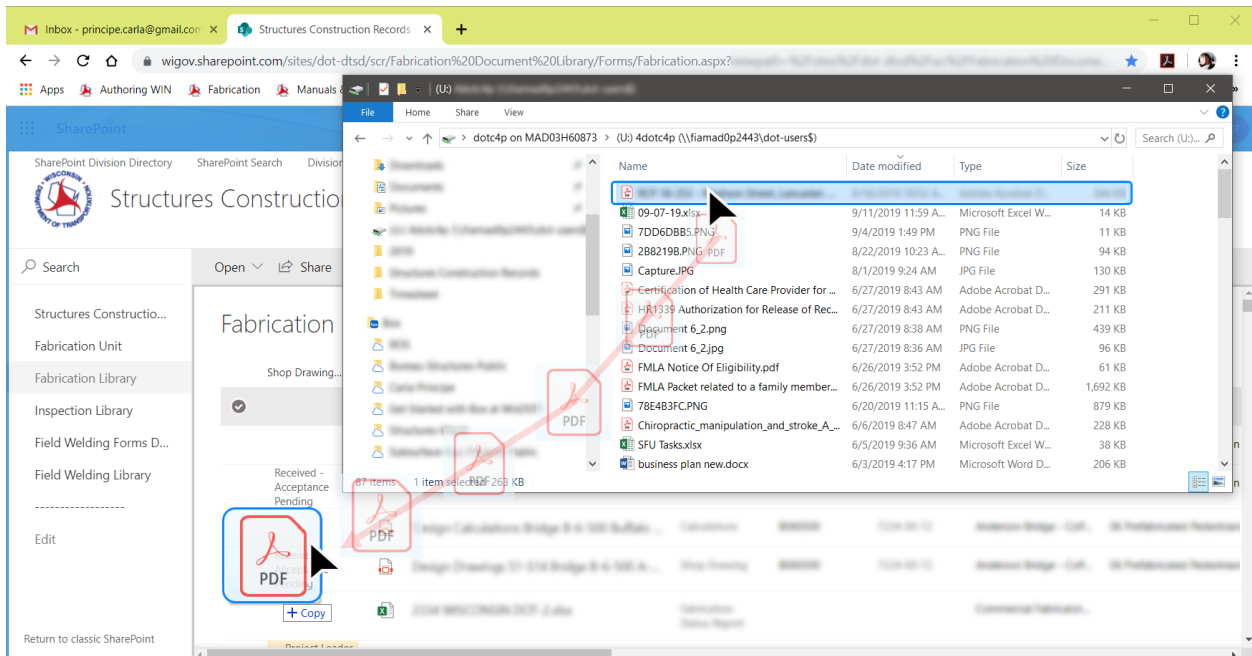
5) When notified that the filename already exists, choose to Replace it.
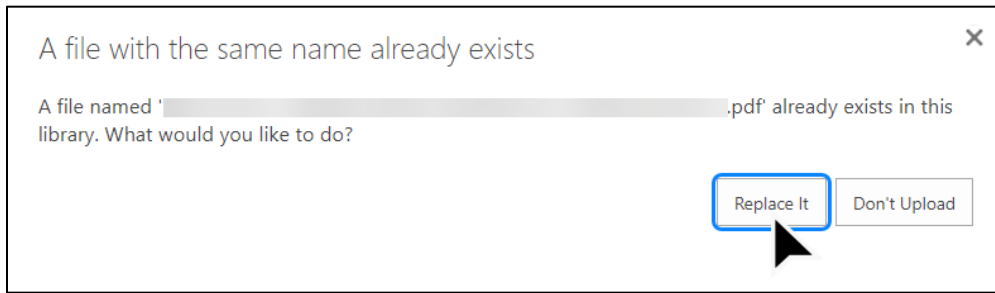
To update the review status, follow the steps in the How to update review status for Project Manager/Leader? guide.

How to update an Excel Fabrication Status Report?

From the Fabricator Folder, click on the filename for the fabrication status report.
(Should be an excel file)
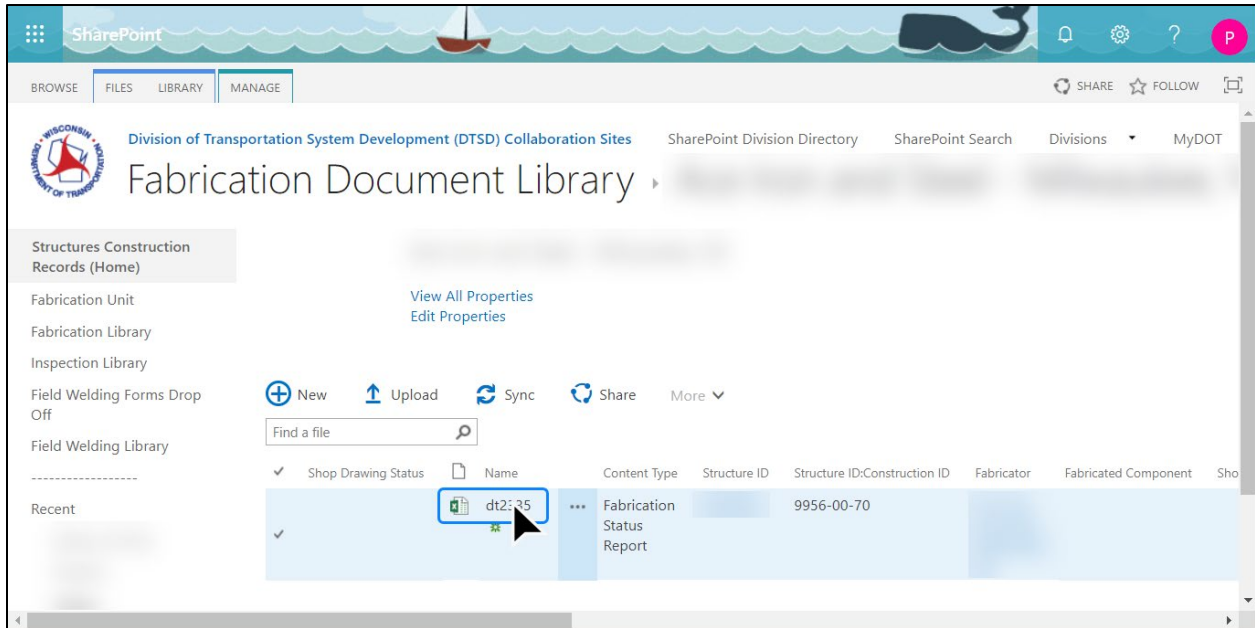
Editing the Fabrication Status Report from the internet browser

1) Edit the spreadsheet in the browser.

Add all required information.

2) To add additional rows, click Insert. Then click Insert Sheet Rows from the drop-down menu options.
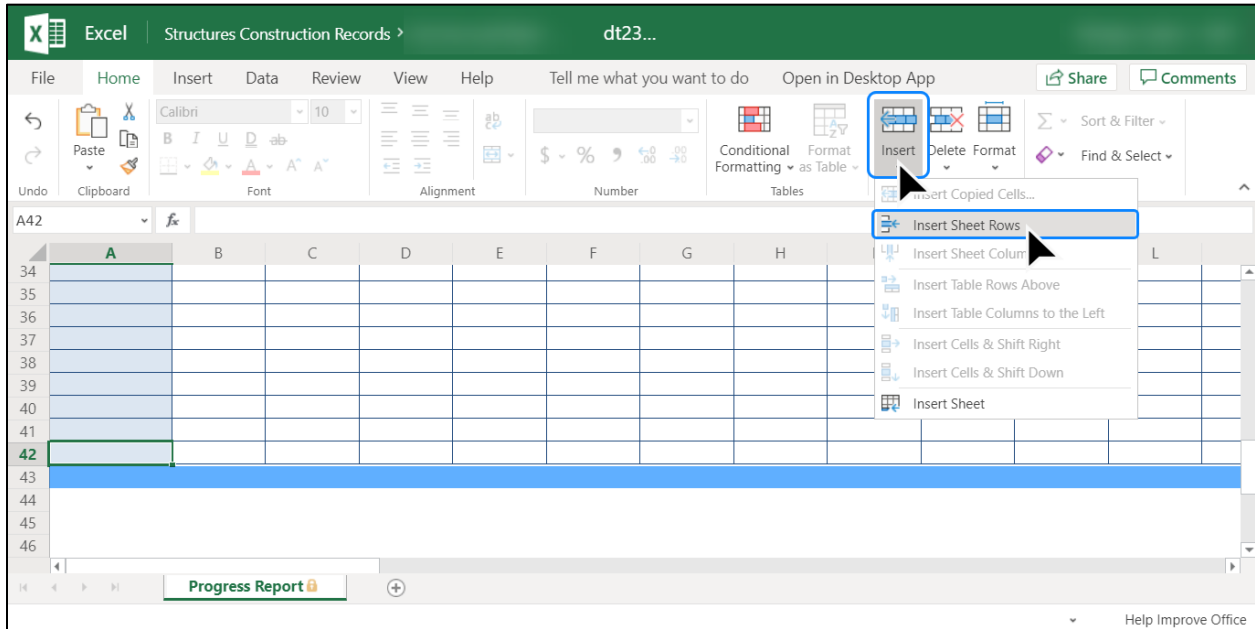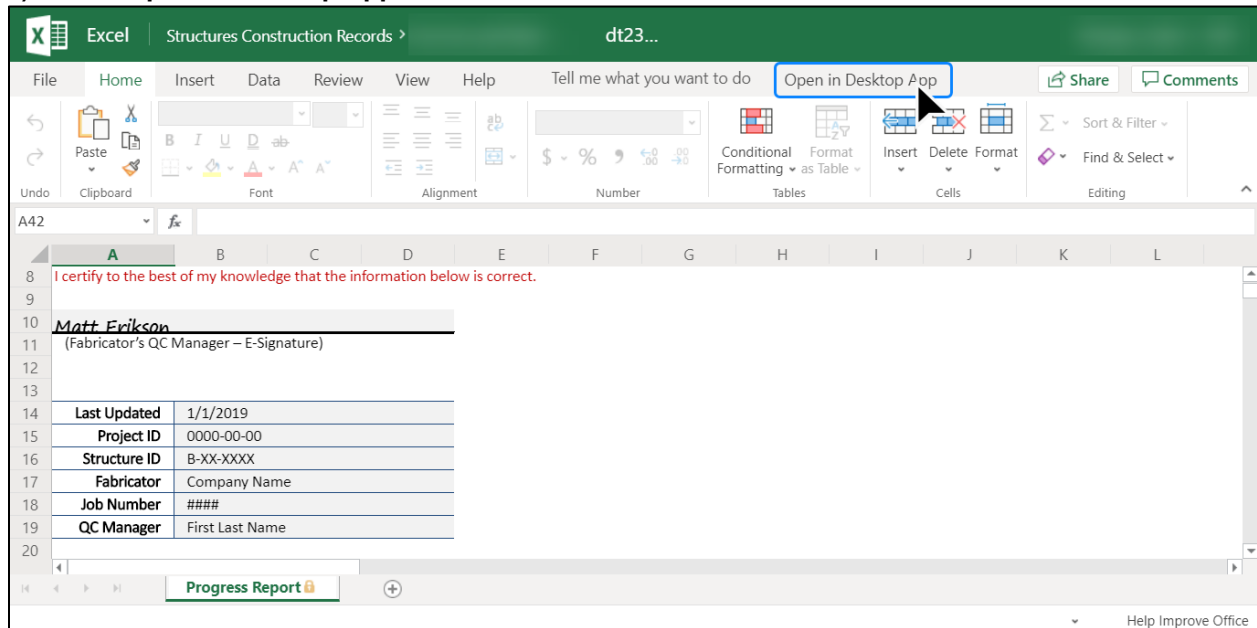

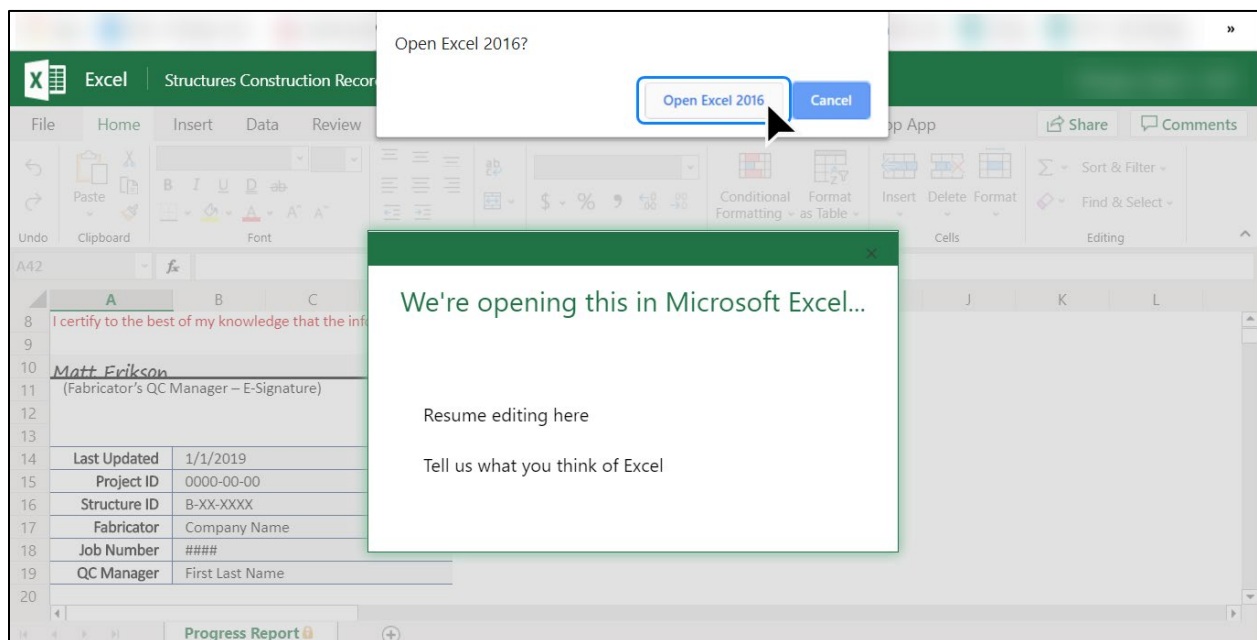**3) When you are finished, close the tab. All changes are automatically saved.**
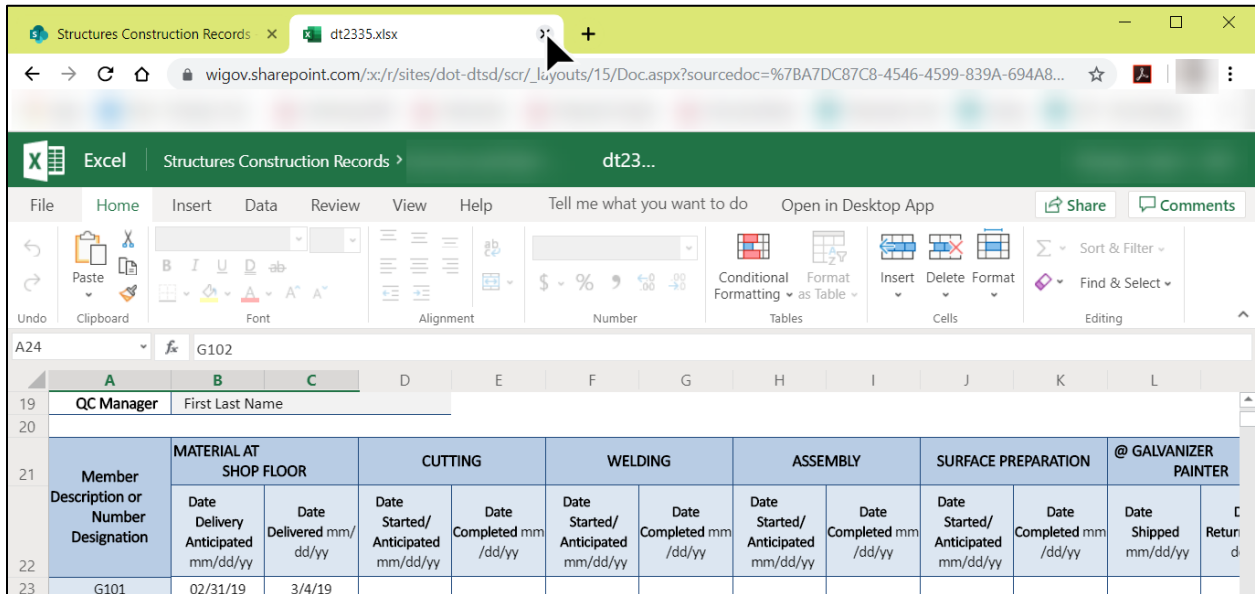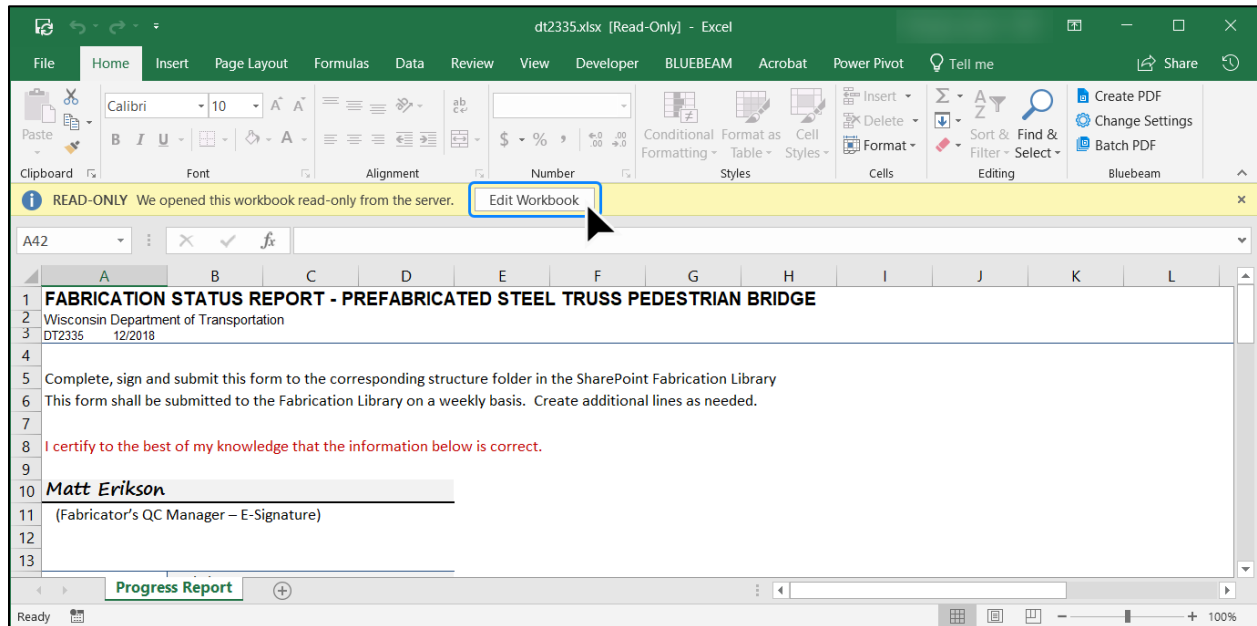
Editing the Fabrication Status Report in Microsoft Excel Desktop Application.

1) Click Open in Desktop App

2) Select Open Excel 2016 (Year may vary depending on the version installed in your computer; must be 2013 or later)

3) MS Excel will open. To edit the spreadsheet, click Edit Workbook.

4) To add sheet rows, navigate to the Home Tab > Cells. Click Insert and select Insert Sheet Rows from the drop-down menu.
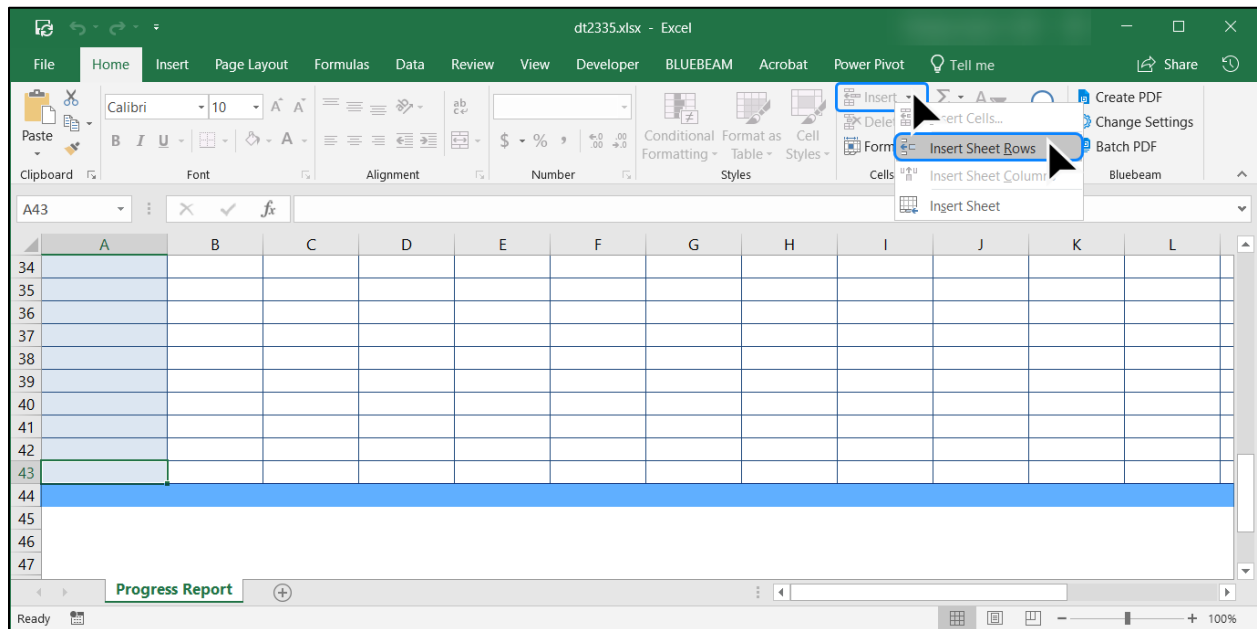
5) Continue editing the workbook. When all information has been entered, click the Save icon. The workbook is saved and automatically synced with the SharePoint copy.
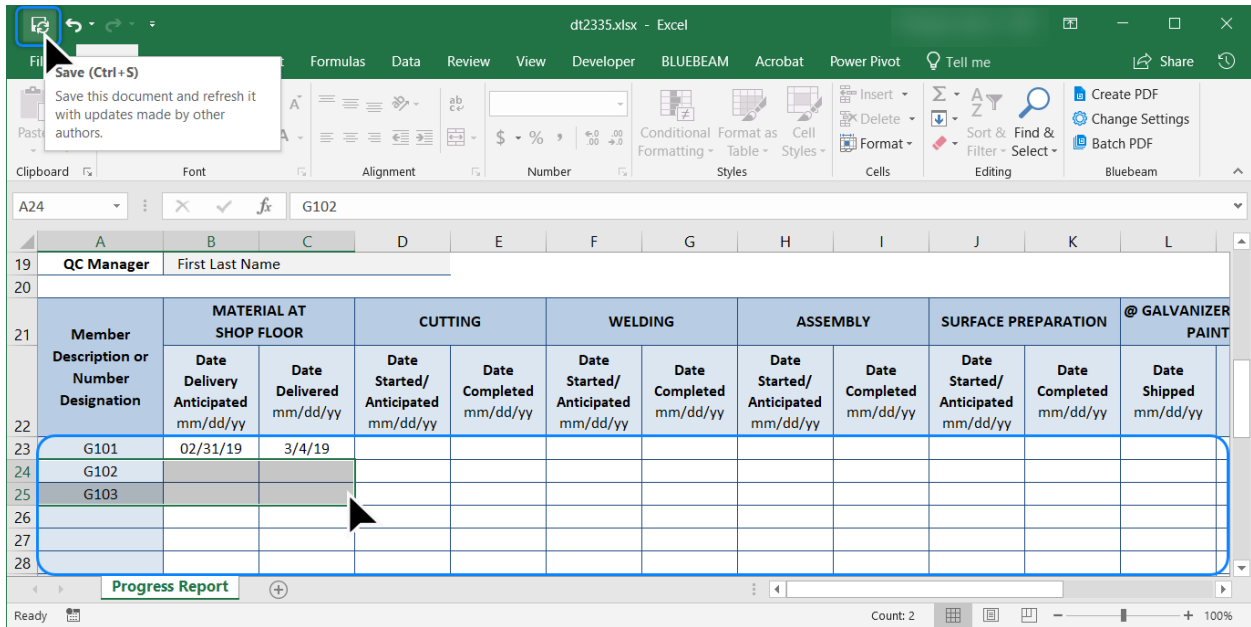
6) Return to the internet browser. Close the pop-up window, then close the tab.