

WORK INSTRUCTION: REVIEW DRAWINGS

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1.0 INTRODUCTION

This work instruction explains the process of reviewing a package of drawings.

Before starting the review process:

- a. AutoDesk Vault Professional (Vault) must be installed
- b. DWG TrueView must be installed
- c. An Engineering Change Order (ECO) must be created by the drafter to hold the drawings package
- d. Drafter must submit the ECO to the Checker when it is ready for review

This review is one step of a specific workflow process. See [Figure 1-1, Drawings Workflow \(Sample\)](#) for an example of this. While the process itself may vary by drawing, the “CHECK” step will always be included.

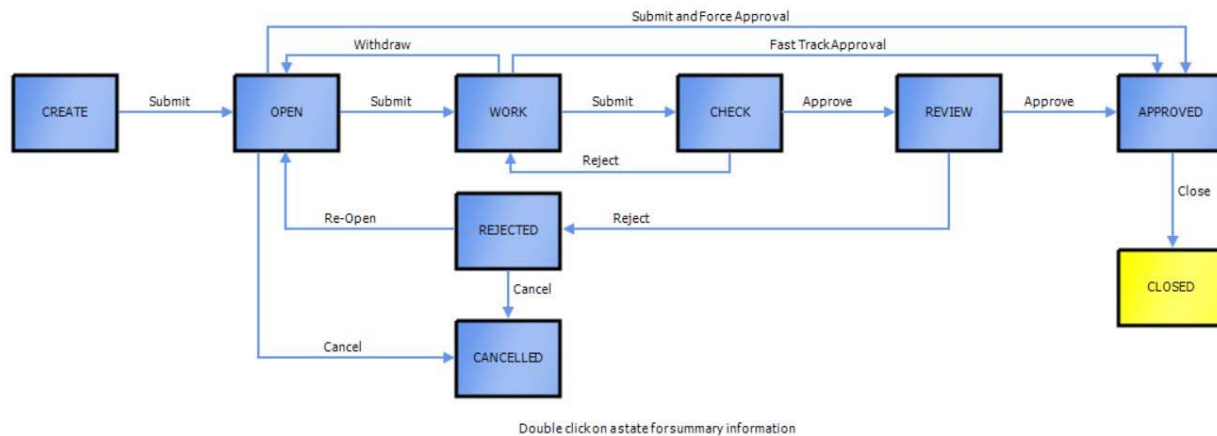


Figure 1-1, Drawings Workflow (Sample)

2.0 GETTING STARTED

Open Autodesk Vault Professional 2019:

1. Type “Autodesk” or “Vault” into the taskbar search function (shown in [Figure 2-1, Taskbar Search Function](#)).

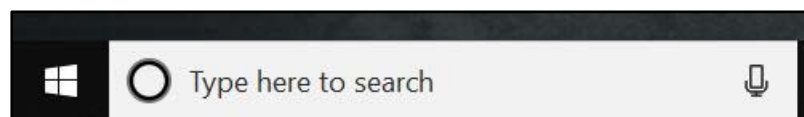


Figure 2-1, Taskbar Search Function

2. Select “Autodesk Vault Professional 2019” from the results
3. Alternatively, the program may be a desktop application (shown in [Figure 2-2, Vault Desktop Icon](#))



Figure 2-2, Vault Desktop Icon

Log in:

1. First time users need to modify the log in screen. Vault will store the new information for subsequent logins
2. Use the dropdown menu to change the Authentication field to “Windows Account”
3. User Name will change to reflect the system account name
4. Password will autofill, do not modify
 - a. For future logins, the password field may appear blank. This is not a problem
5. Delete the pre-filled server and type “vm-autodesk1” instead
6. Reference [Figure 2-3, Log In Screen](#) for an example of all correct information
7. Click OK to log in

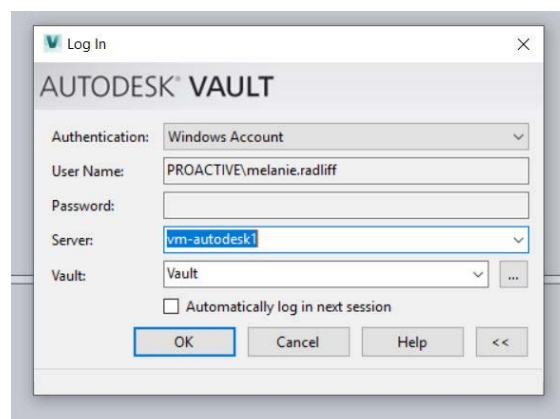


Figure 2-3, Log In Screen

3.0 NAVIGATING VAULT

To navigate within Vault, the left sidebar is the primary tool used. When the mouse hovers over the black lines between sections, it will turn into a divider icon that can adjust section sizes by clicking and dragging. The three sections are:

- a. Home
- b. My Worklist
- c. My Shortcuts

There are also four clickable categories at the bottom. Clicking them will populate the above fields with a navigation map. These four categories are:

- a. Home
- b. Project Explorer
- c. Item Master
- d. Change Order List

Reference [Figure 3-1, Vault Sidebar](#) below for an image of these sidebar fields.

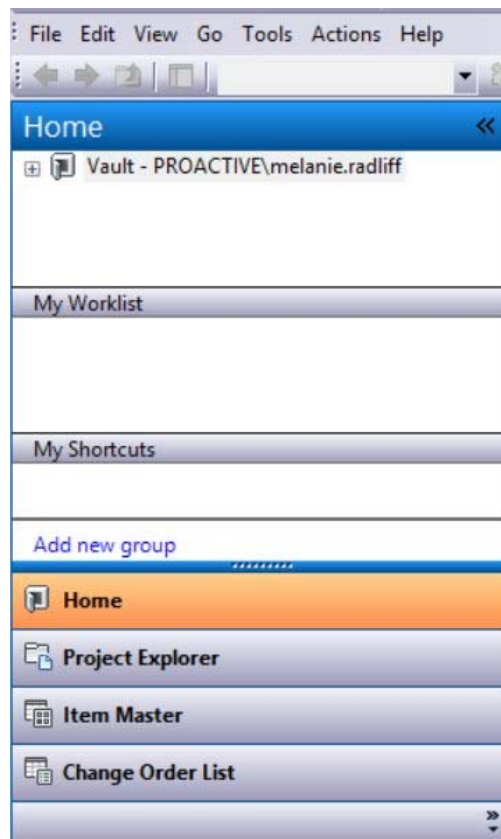


Figure 3-1, Vault Sidebar

Clicking different categories will change the displayed information, and “Home” in the top blue field will change to reflect the selected category.

3.1 Home

This category starts the navigation map at the earliest starting point, showing the full path taken to get to the current location. See [Figure 3-2, Home Navigation Map](#) below for an example of this structure.

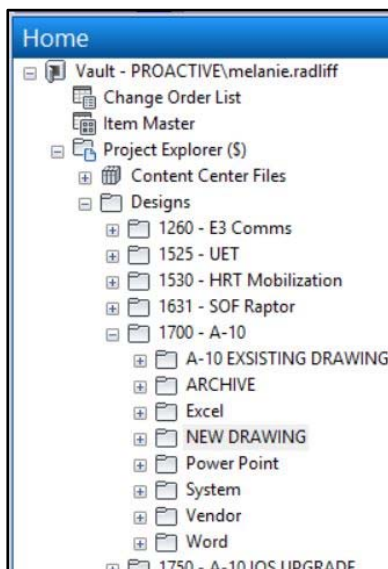


Figure 3-2, Home Navigation Map

3.2 Project Explorer

This category is a comprehensive selection of all drawings for every project. It contains two subsections, Folder and File.

3.2.1 Folder

This subsection contains organizational folders. TP typically only uses the “Designs” folder, which contains subfolders for every project, past and present.

3.2.2 File

This subsection contains individual drawing files that are active. The file extension .dwg denotes these documents.

3.3 Item Master

This category contains a list of all items in the vault. An item refers to a product manufactured by ProActive, and must have an item number assigned to it. Any file can become an item, but an authorized user must do so manually.

3.4 Change Order List

This is the most-used category by the Checker. It contains a list of all change orders, which are a component within the change management process. This allows tracking of all changes, including drawings in-progress. Not everyone can edit the change order, but Vault tracks everyone's actions. Once a drafter creates an ECO, a window of tabs and information will populate below the list. By clicking the "Routing" tab, details of individual responsibilities in the change order are viewable. See [Figure 3-3, ECO Routing](#) below for an example.

The screenshot shows a software window with tabs: General, Records, Comments, Files, Routing (selected), and Status. Below the tabs, there is a section 'Specify the routing to be used:' with a dropdown menu showing '1700 - A-10'. To the right of the dropdown is a green checkmark icon and the text 'Unanimous Approval is Not Required for Selected Routing in Review State'. Below this is a section 'Routing participants:' containing a table with two columns: 'Users' and 'Routing Role'.

Users	Routing Role
PROACTIVE\brezinskil	Change Requestor, Change Administrator, Reviewer, Approv...
PROACTIVE\laila.stewart.ctr	Change Requestor, Reviewer, Checker, Responsible Engineer
PROACTIVE\veronica.cortes	Reviewer, Approver
PROACTIVE\jack.klotzbach	Reviewer, Checker
PROACTIVE\phillip.corson	Checker
PROACTIVE\mark.atkins	Reviewer, Checker

Figure 3-3, ECO Routing

Another window of information will populate in the right sidebar containing an ECO summary. See [Figure 3-4, ECO Information Summary](#) below for an example.

The screenshot shows a 'Properties' window for ECO-000439. It has two main sections: 'System' and 'User Defined'.

System	
Created By	PROACTIVE\laila.stewart.ctr
Current Owner	VM-AUTODESK1\AUTODESKVA...
Date Created	2/28/2019 3:39 PM
Date Modified	3/1/2019 6:33 AM
Date Submitted	3/1/2019 6:33 AM
Description (Item,CO)	DATA BASE FOR MARKING TAB...
Due Date	6/28/2019 3:31 PM
Last Updated By	PROACTIVE\brezinskil
Leased Until	2/28/2019 3:39 PM
Name	ECO-000439
Number	ECO-000439
Number of File Attachments	0
Number of Items	0
State	Work
Submitted By	PROACTIVE\brezinskil
Title (Item, CO)	MASTER CABLE LIST, A-10 BDBS...

User Defined	
Cage Code	1DUZ6
Planned Completion Date	
Project	1700 - A-10
Reason for ECO	Document Change Only







Figure 3-4, ECO Information Summary

4.0 REVIEW PROCESS

This section explains the systematic procedure to review a drawing package once the drafter has sent it to TP.

4.1 Open the ECO/drawing:

1. Click “Change Order List”
2. Scroll through the list of ECOs and click on the desired one
 - a. The ECO can also be found in the “My Worklist” tab
3. Below the list of files, an informational field will populate with specifics to this ECO
4. Select the “Records” tab, shown in [Figure 4-1, ECO Specifics](#)

	ECO-000435	Work	101T00001 - DRAWING TREE, A-10 ATS, BDBS AND SMP-17
	ECO-000433	Closed	101EC2116 - CABLE ASSEMBLY, POWER, 15 FT
	ECO-000390	Closed	101EC2050 - VIDEO TELE-CONFERENCING KIT
	ECO-000408	Closed	101EC2103 - CABLE ASSEMBLY, ETHERNET, CAT6, VIOLET
	ECO-000350	Closed	101BDB076 - TOUCH PANEL, TABLETOP
	ECO-000368	Closed	101IOS121 - IOS CABINET POWER INTERCONNECT
	ECO-000407	Closed	101EC2060 - ENCODER VIDEO

GeneralRecordsCommentsFilesRoutingStatus

Show: All

PreviewAssociated Items

Attached Files:





		File Name	/	Version	Revision
		101T00001.dwg		24	.

Figure 4-1, ECO Specifics

5. Right-click the file name ending in .dwg
6. Select “Open” from the options menu
 - a. Reference [Figure 4-2, Menu Options - Open](#) below for an example of the screen at this step

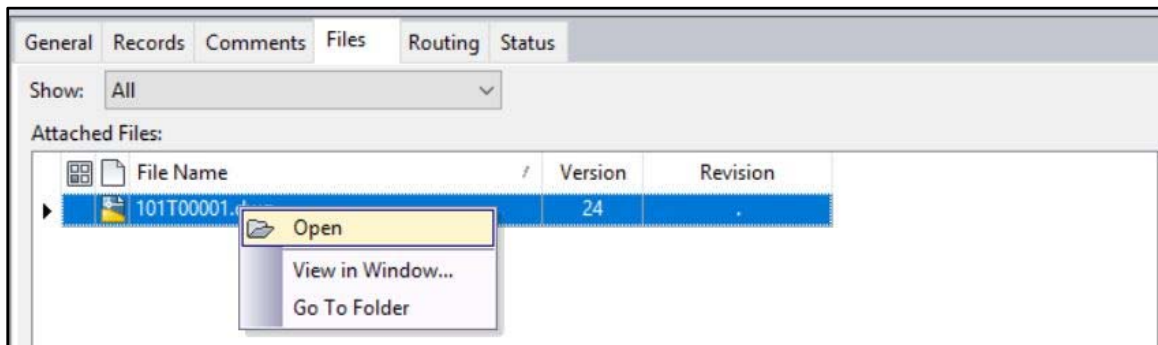


Figure 4-2, Menu Options - Open

7. A dialogue box will open, asking if the drawing should be checked out. Reference [Figure 4-3, Dialogue Box](#) below

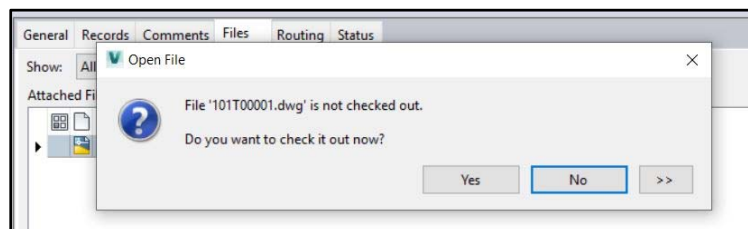


Figure 4-3, Dialogue Box

- a. Always select “No”
 - 1) Checking out the drawing modifies it, which is not part of TP review process
- b. If prompted, open the drawing with TrueView

4.2 Review the drawing

1. Once in TrueView, locate the list of tabs across the top, directly below the editing ribbon
 - a. This may only be one sheet, titled “Start,” and one for the opened drawing. There is no maximum number of sheets that can be displayed
2. By clicking the “Start” tab, it will bring up a homepage with preview thumbnails for recently opened documents. See [Figure 4-4, Preview Thumbnails](#) below for an example

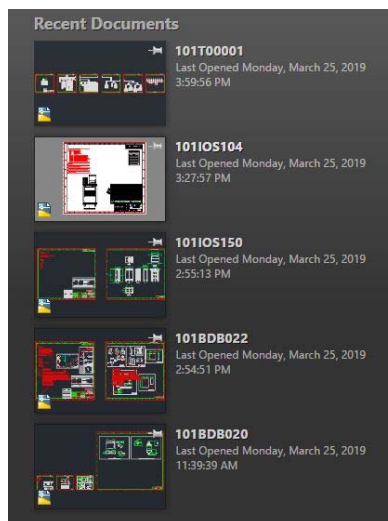


Figure 4-4, Preview Thumbnails

3. Ensure the correct tab for the drawings package is clicked
4. Locate the list of sheets within this package, displayed along the bottom of the screen. Each package can have an infinite number of sheets. These sheets are individual drawings, associated with the “Model” tab diagram, and must all be reviewed
5. Print the drawings if desired, as there is no editing or redlining done within the application

4.2.1 Checklist for Drawing Review

Reference the Drawing Release Checklist, Rev D (15Dec14) for a list of specific requirements, which may or may not all be applicable.

NOTE

Determine company ownership of the drawing listed in the bottom right-hand corner map. For drawing with “ProActive Technologies” listed in this map, the checklist below applies as the drafter will be able to make the updates per TP request. For drawings developed by other companies, only the part of the drawing updated by ProActive, may be updated per TP request. All other items will stay in the original format published by the other company.

Begin the review, checking:

- a. Syntax
- b. Glaring spelling errors
- c. Sheet and drawing numbers in the right-hand corners of every sheet are correct
- d. The date format in the right-hand corner should be “**year month day**” without spaces (e.g., 20190909)
- e. Line *Approved* in the right-hand upper corner should list the name of Lead Engineer approver
- f. Readability
- g. Apply logic, ensuring details of the drawings make sense (i.e. cable names from one component to another are labeled the same)

The only tools used by TP are pan and zoom. Notate any errors on a sheet of paper, and redline a hardcopy if there are substantial issues.

4.3 Respond

1. Exit TrueView and return to Vault
2. Return to the Change Order List (if departed) and locate the ECO
3. Right-click the ECO and select “Respond” from the options menu, shown in [Figure 4-5. Menu Options –Respond](#)

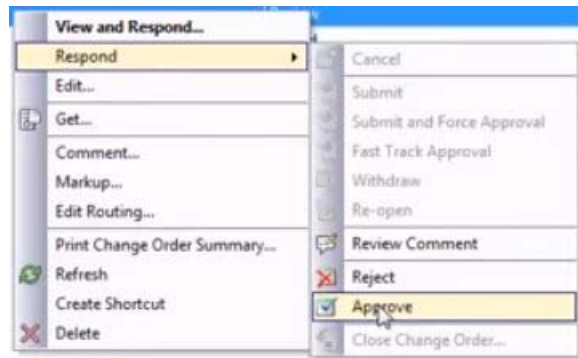


Figure 4-5, Menu Options –Respond

4. To approve, click “Approve”
 - a. No comment needed in the pop-up comment box
5. To reject, select “Reject”
 - a. Notate reason in the pop-up comment box
6. Hit “Send”

5.0 REFERENCES

The following records will be generated or updated and filed in accordance with the WI and SOP 830, Design and Development.