ProjectDox®

Electronic Plan Solutions

MARK - Marking up in ProjectDox® 9.x

avolve® software
Training & Education Services

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1 About this Guide

This guide provides an overview of the ProjectDox Viewer Tool using Internet Explorer as the main web browser, as well as exercises for the most commonly used features. The guide is designed for users who are viewing in ProjectDox, files that were processed and cached through the ProjectDox Server. The ProjectDox Viewer Tool allows users to view, zoom, pan, rotate, measure, and annotate documents and images quickly and easily.

Icon	Represents
	Caution
	If not done correctly, roadblock
	Good to know

2 Accessing the Viewer

The ProjectDox Viewer tool contains a variety of tools and features to assist in review and marking up of electronic plans and documents. You can access the Viewer by the following action:

1) Click the thumbnail or filename for a file in a project folder
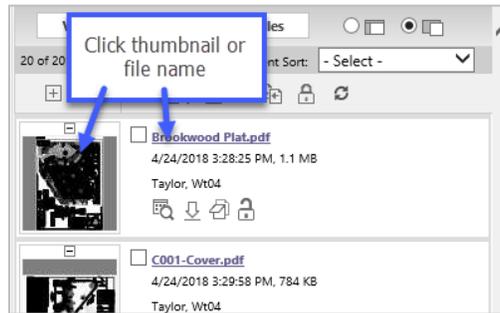
Figure 2.1 Accessing the Viewer

3 Viewer User Interface
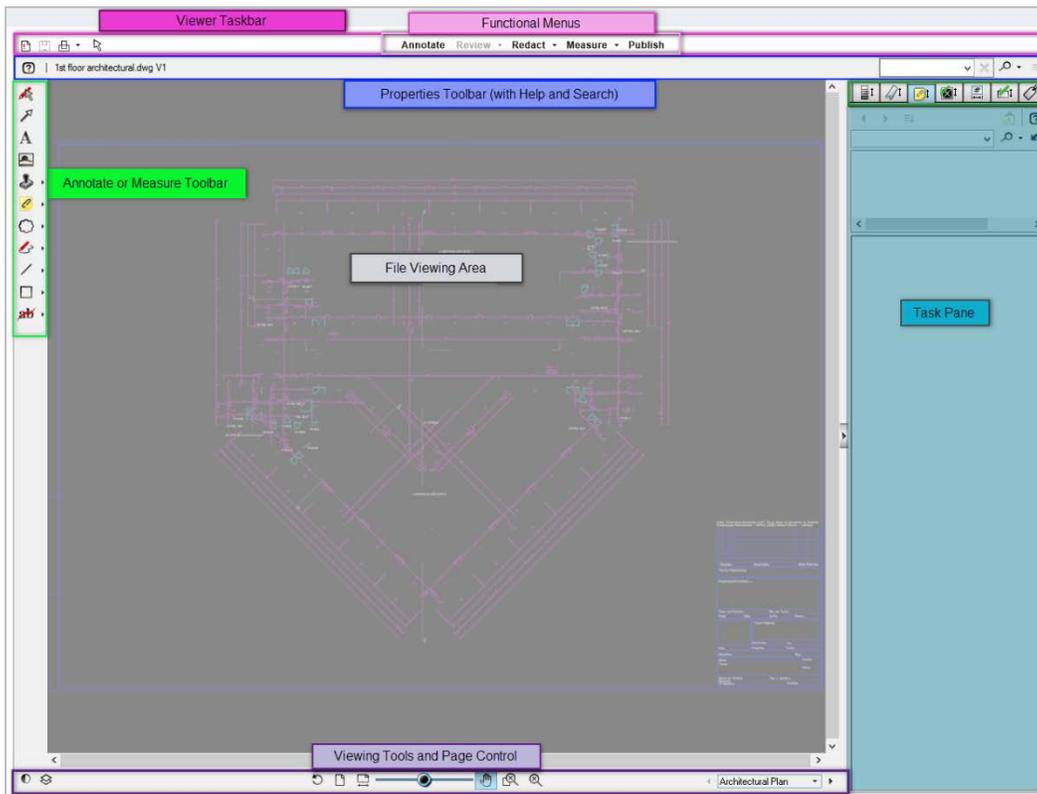
Figure 3.1 Viewer Overview

4 Viewer Online Help

The Viewer has its own online help. You access help by clicking on the button in the upper left-hand corner of the Viewer window and selecting **Contents**. The **Help** window will appear:
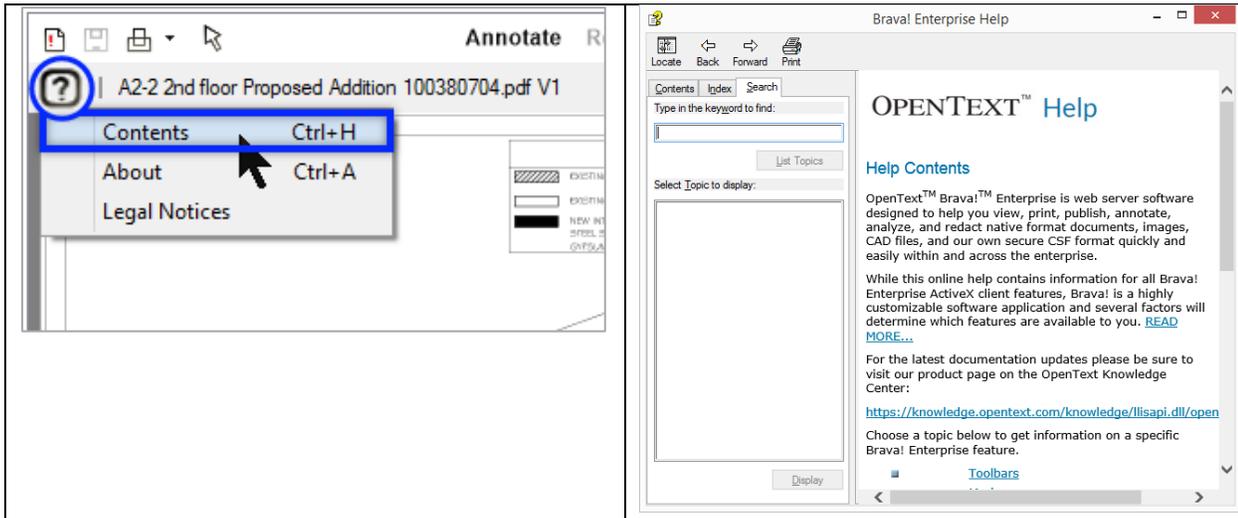
Figure 4.1 Viewer Online Help

Usage is like that of the online help in ProjectDox itself. There are three modes available: Contents, Index, and Search. In the index mode, double click on an item to display the corresponding information. The Viewer online help is a useful reference, with extensive information about the Viewer tools and features.

5 Training Exercises

The following sections provide exercises to familiarize you with some of the tools commonly used when reviewing plans.

6 Set File Background Color

Open a file in the Viewer, for example: **1st Floor Architectural.dwg**

The **Background Color and Color Settings** tool [ ] sets the background color for vector file types and monochrome raster file types (color raster files are not affected). The background can be set to black, white, gray, or default.

The default background color depends on the file type:

File Type	Default Background
CAD drawing (.dwf, .dwg, .dgn)	Black
All other file types except raster	White
Raster	White

Use the following steps to set the background color for a .pdf or .dwg file

1) Open a .pdf or .dwg file of your choice in the Viewer tool.

2) Click the **Background Color and Color Settings** tool and select a background color from the menu. The current setting is indicated by the black dot.
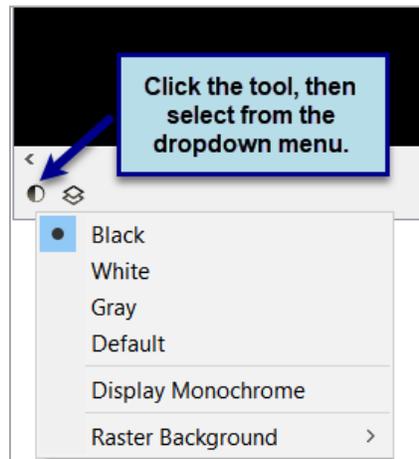
Figure 6.1 Background Color Settings Menu

3) Test the results of selecting each of the choices.

> Your PC will maintain your settings for each of the file types in the table above. When you set the background color, the PC remembers your choice for that kind of file until you change it again. The setting does not roam between PCs.

The tool also includes a toggle for displaying drawing elements in color or monochrome. A checkmark by the menu item **Display Monochrome** indicates just that. With no checkmark, the viewer displays the file in color.

4) Test the results of toggling the **Display Monochrome** menu item.

The menu item **Raster Background** will have no effect on this vector-based drawing.

5) (Optional) Open one of the .tif files from the drawings folder and experiment with the effect of the **Raster Background** submenu on the display.

7 Turn Layers On and Off

When layers are present in a file (PDF, DWG, etc.), the **Show Layers** tool ⬙ will display. Using this tool, image layers can be turned on or off to show specific elements in the file. In this exercise, you will learn how to show and hide various layers of the file.

1) Open 1st Floor Architectural.dwg in the Viewer.

2) Click **Show Layers** and drag the **Set Visible Layers** dialog to the side of the drawing.

3) Click **Hide All**. All drawing elements disappear.

4) Select a few of the check boxes and the corresponding layers reappear.

5) Click **Show All**. All drawing elements appear.

6) Click **Restore Defaults**. The drawing appears as it was uploaded.

7) Close the dialog box.

> **NOTE:** No actions in the Viewer modify the file itself - only the way it is viewed.

8 Use the Search and Measure Count Features

The **Search** box allows you to search for text (normal phrases and text patterns) contained in a document or drawing file. For more information about the **Search** tool, see the online help for Search.

Use the **Measure Count** tool count items in a drawing such as fixtures in a floor plan, screws on a design, etc. The tool places a check mark on the counted item. It can be used in combination with the search feature. In this exercise, you will search and count the lab areas in a drawing.

1) Open **L003 – LIGHTING.pdf** in the Viewer.

2) Enter the string "A1" into the **Search** window (A1 is a type of floodlight.)

3) Click the **Find** icon to locate the first instance of "A1"

- Highlighted in blue
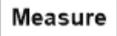
4) Select Measure to enable the Measure toolbar on the left-hand side of the Viewer.

5) In the Measure toolbar, select the **Measure Count** [#] icon.

6) Click near the first instance of "A1."

7) The Count field in the Properties bar (upper left-hand corner) displays the count

[⑦ | ▦ 1   ↰ ✔] .

8) Repeat the process of alternating between clicking the **Find** [🔍] icon and clicking near each instance of "A1" in the file.

- The measure count keeps track of the number of items found.

- To remove the last count checkmark applied, click the [↰] icon.

- To remove all count checkmarks, select the [✔] icon.

- You can click on the dropdown next to the Find icon to use the displayed options:
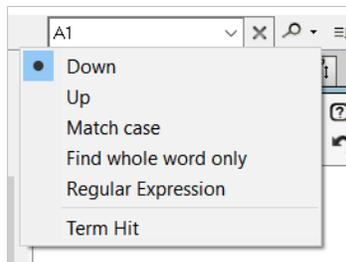
The **Search Results** control is to the right of the **Find** icon:

Clicking on the control will display a count of matches for the current search, and information about each match, with string highlighted:
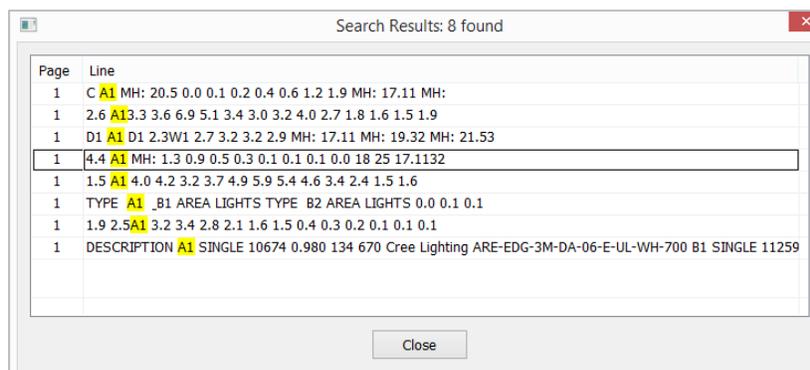
Double-clicking on a line in the results window will cause the Viewer to zoom and highlight the match in the displayed file, as shown below:
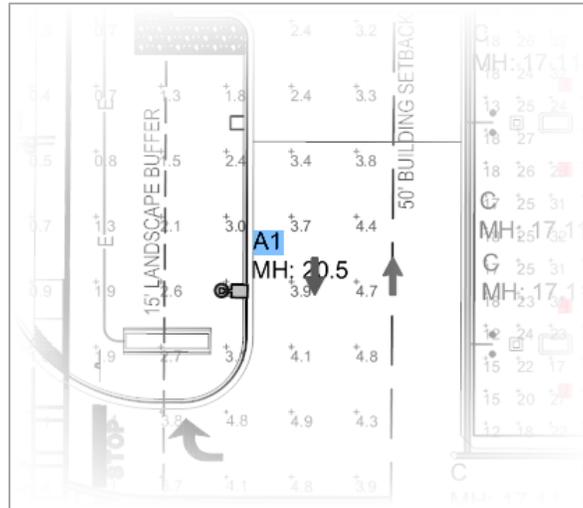
9 Use the Search and Measure Features

NOTE: You can search for text in a file using parameters such as Match Case, Find Whole Word Only, wildcards, regular expressions and macros for searching within a file. For more information about these features, see the online help.

You can use Measure tools to take linear and area measurements in graphic files. You first set a measurement scale or calibrate a baseline distance to use as a scale.

In the following exercises, you will use the **Search** feature to locate specific values in the "Brookwood Plat.dwg" file and use the **Measure** tool to determine size, distance etc.

1) Open the file **Brookwood Plat.dwg** in the Viewer.
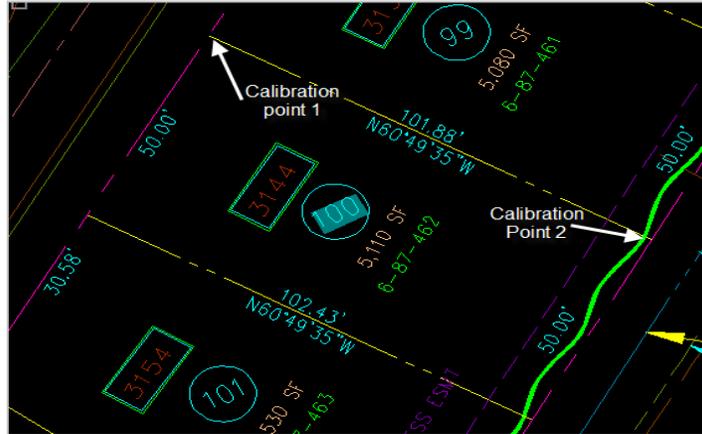
Figure 9.1 Brookwood Plat.dwg Lot 100

2) Locate lot 100 in this file by typing "100" into the Search [ ] field in the top right of the Viewer tool.

3) Click the **Measure** drop-down Measure ▾ and select **Settings**….
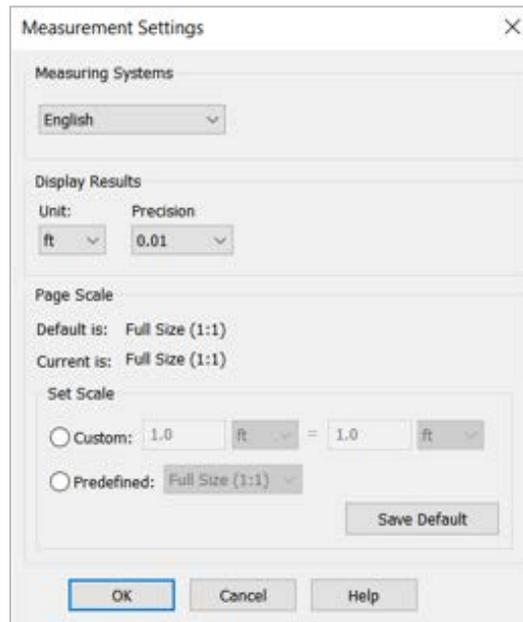
Figure 9.2 Measurement Settings

4) Make the following selections and click **OK** to complete.

  a) Measuring System = English

  b) Unit = ft

  c) Precision = 0.01

5) Click the **Measure** drop-down [Measure ▾] and select **Calibrate…**

6) The Measurements fields and Snap checkbox will appear in the **Properties** toolbar. Snap is only available for CAD-Like formats.

7) Left-click on each end of the property line between lots 99 and 100 as the baseline.

8) In the dialog box, enter the value **101.88**.

9) Click **OK**. The calibration is complete.

10) Click [Measure] to activate the **Measure** toolbar to the left-hand side of the viewing area.

11) Select [↦] to measure a single line.

12) Left-click on each end of one of a side of lot 100. The measurement should match what has been entered on the file.

13) Click Measure Polygon [◇] .

14) Left click a corner of lot 99 and left click each corner of the lot except the last. Double click the last corner to close the polygon and calculate the measurements. They display in the Properties toolbar, as shown in Figure 9.3.

Figure 9.3 Measure Area

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> **TIPS**: You can use the auto-zoom feature when measuring in a CAD file. Hold down the left mouse button to magnify the immediate area. Release to set the point.
>
> On the last corner, you can follow the left click by a right click (instead of double clicking) to close the polygon.

15) The calculations will display in the Properties toolbar: last segment distance, perimeter and area. For this example, the area measurement will match the square footage indicated on the drawing file (5,080 SF).

10 Use the Measure Tool and Graphic File Scale (Calibration)

In this exercise, you will set the measurement settings, calibrate using the graphic scale in the file, and perform measurements on the file.

1) Open the file **Brookwood Plat.pdf** in the Viewer. Notice the search feature is disabled because no indexing was done for the file when converted to PDF.

2) Rotate the file counterclockwise 90 degrees, by clicking the rotate control highlighted in the screen capture:

3) Click the **Measure** drop-down Measure ▾ , select **Settings…** and repeat the same settings as shown in Figure 9.2 Measurement Settings.

4) Locate the graphic scale in the bottom right hand area of the drawing using the **Zoom Window** in the **Viewing Tools** toolbar.

5) Click the Measure drop-down and click Calibrate....

6) Select the Snap feature.

7) Click Measure (not the dropdown).

8) Choose the 0 on the scale as your first point and 120 as the second point.

9) In the dialog box, type "120" to match the scale and click OK.

10) Zoom into the area with lot 99 using the Zoom Window.

11) Verify the measurements for each of the four sides of Section 100.

- Measurements of PDF files are typically 1/100th of an inch off the original measurement due to file conversion. This is has been deemed an acceptable degree of accuracy.

12) In the Measuring Tools toolbar on the left, click Measure Polygon and measure the area of lot 99

13) Left click on each corner of lot 99, except the last. On the last corner, double-click to close the polygon and calculate the lot dimensions.

14) The calculations will display in the Properties toolbar

11 Zoom, Scroll, and Pan in Drawings

Zooming

When the Pan, Zoom Window or Magnifier tools are active, you can right-click and drag to zoom: drag up to zoom in, down to zoom out.
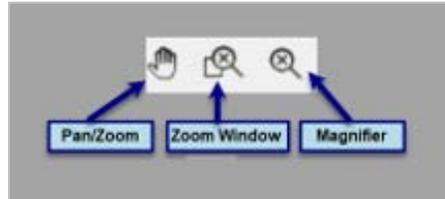
Figure 11.1 Pan/Zoom, Zoom Window, and Magnifier Tools

Additional ways to zoom:

- Use the Zoom In/Out slider control – click and drag to left to zoom out, right to zoom in.

- Use the mouse wheel. When viewing a drawing file, roll up to zoom in, down to zoom out. (When using the mouse wheel while viewing a document file, the document will scroll up and down.)

- If your keyboard has a numeric pad, you can use the + key (in the numeric pad) to zoom in, the – key to zoom out.

- If your keyboard does not have a numeric pad, you can use Ctrl (+) Shift (+) equal (=) to zoom in,
  or Ctrl (+) Shift (+) minus (-) to zoom out.

- Click the Fit All control to automatically fit all the drawing contents within the available viewing area.

NOTE: Using the **Fit All** control also locks the drawing position. You will not able to pan until you zoom in or out by some amount.

Panning

You can pan using the following methods:

- Select the **Zoom/Pan** tool. Left-click on the drawing and drag to the desired position.
- Tap or hold down the direction (up, down, right, or left) keys on your keyboard.

Scrolling

When viewing a drawing, you can use the scroll bars – they will be enabled if part of the drawing is outside the viewable area.

12 Use the Page Scale

When page scale information is provided, it can be used to set the scale – eliminating the need to calibrate.

12.1 Using a Predefined Scale

In this exercise, you will set the measurement settings to the scale provided on a drawing and verify several measurements.

1) Open the file **A2-2 2nd floor Proposed Addition 100380704.pdf** in the Viewer.
2) Note the Scale indication of 1/8″ = 1′-0″ at the bottom of the drawing.
3) Click the **Measure** dropdown, and select **Settings…**
4) In the **Measurement Settings** dialog, match the settings shown in Figure 12.1. Click **OK**.
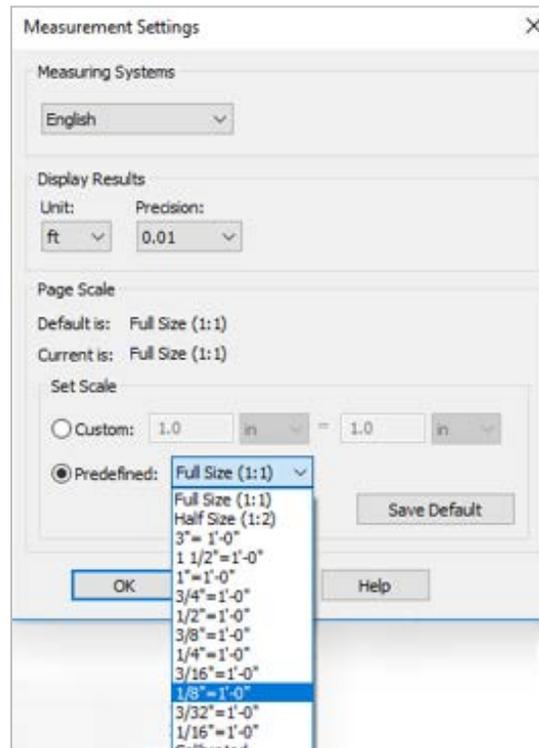
Figure 12.1 Set to Predefined Scale

5) Zoom in to magnify the Office 1 area.

6) Click **Measure**.

7) Click the **Measure Line** tool.

8) Left click on each end of a line segment, comparing the displayed measurement in the tool with the stated distance on the drawing.

TIP: You may get more satisfactory results by turning off the **Snap** feature: clear the Snap checkbox in the properties toolbar (see Figure 9.3).

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9) Repeat the previous step for several other measurements in the drawing.

> **TIP:** You can select **English Architectural** for the Measuring System to display results in feet and inches. If you change the system, be sure to verify the unit for display results (you may have to change back to feet).
>
> You can also set the system to **Metric**. See online help for additional information.

12.2 (Optional) Setting a Custom Scale

1) Open the file **C002-Layout.pdf** in the Viewer.
2) Locate the Scale on the drawing – look for the "N" indicating north.

The scale contained in C002-Layout.pdf and the associated dialog settings are shown below:
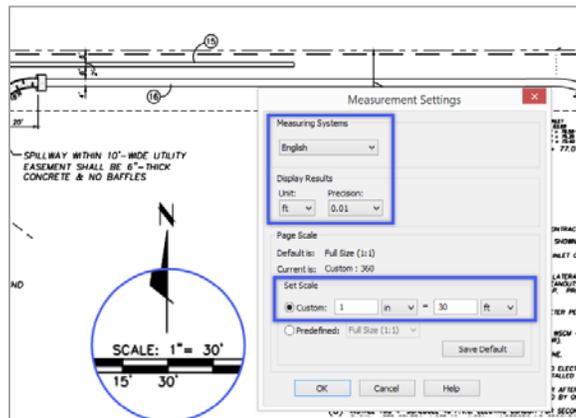
Figure 12.2 Set Scale

3) Set the Measuring Systems and Display results as shown.
4) The custom mode allows you to set file scale values not in the predefined list.
5) Set the custom scale for the current file: 1″ = 30′
6) Alternatively, you could calibrate using the graphic scale.
7) Try some measurements.

Section 12.4 contains additional notes about scales.

12.3 (Optional) Setting a Custom Scale and Calibrating (PDF file)

This is a two-part exercise. The subject file has two scales: one proportional, and one graphic.

1) Open file **C004 – SITE.pdf** in the Viewer

2) In the Search field, type "scale" and click to find. The Viewer will zoom in to display the Scale for the Vehicle Storage Plan. Note the Scale indication of 1″ = 20′

3) Click the **Measure** dropdown, and select **Settings…**

4) The **Measurement Settings** dialog will appear as shown in Figure 12.3 Setting Custom Scale.
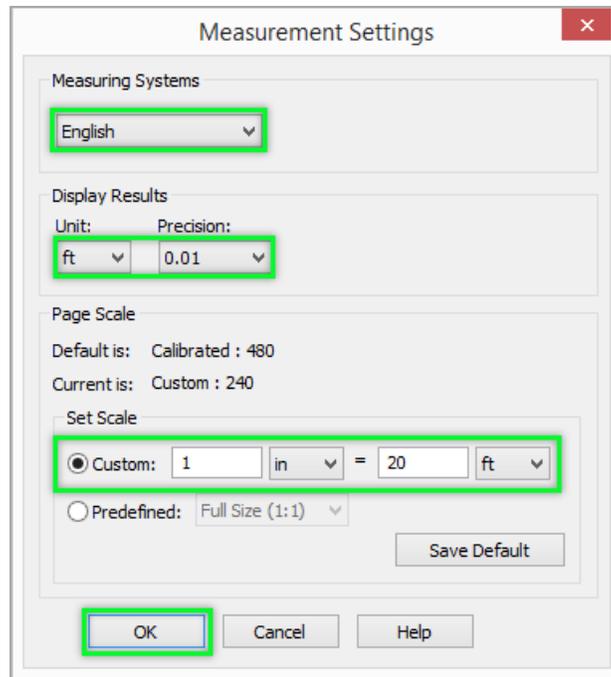
Figure 12.3 Setting Custom Scale

5) In the **Measurement Settings** dialog, do the following:

   a) Set Unit to ft and Precision to 0.01

   b) Click **Custom**

   c) Type **1** in the field next to **Custom**

   d) Select **in** (inches) in the next drop-down

   e) In the field to the right of the = sign, enter **20**

   f) Select **ft** from the next drop-down

   g) Click **OK**

6) Click on the Measure menu.

7) Using the Measure Line tool, verify the linear measurements provided in the drawing. Your results should be comparable.

The second part of this exercise uses calibration based on the graphic scale located in the upper left-hand corner of the drawing.

1) Zoom in to the graphic scale.

2) Follow the same steps as in Section 10 to calibrate to this scale.

3) Verify several measurements such as canopy, parking spaces, etc.

12.4   Additional Information about Page Scale

- You can select a different scale factor to use for each drawing, or, if your organization uses a standardized scale, you can set the default drawing scale to use for all drawings in the current and future ProjectDox sessions.

> ⚠ Setting a default Scale is not recommended during the training session, unless you know your organization's standardized scale.

- To set the default to use for all sessions, choose your Scale factor from the Predefined drop down or enter a Custom scale and click Save as Default. It is then applied to all pages of the document, all documents within a session and across session until it is changed. The default value can be overridden per page. If calibration has been performed, then the Predefined option shows as selected and the drop-down box displays "Calibrated".
- If a custom scale has not been previously set for this page, the units of the scale are the same as the currently selected Measuring System. If a custom has previously been set, the measuring system (in/ft/yd/mi versus mm/cm/m/km) does not change when the display Measuring System is changed.
- The edit boxes for custom scale accept all characters; however, validation is done when scale is computed by clicking Save, Default, or OK. Only digits 0 – 9, comma, and point symbols are allowed as values.

13 Markups Introduction

Markups allow you to annotate a file. Individual markups (circles, lines, arrows, changemarks, etc.) are often referred to as entities. All markup entities are saved in a markup file or markup layer. The terms "markup file" and "markup layer" refer to the same object and are used interchangeably. The markup file is associated with a specific drawing or document file. The Viewer can display the markup layer overlaid on the file. The drawing or document itself remains unchanged.

14 Create Simple Markups

In this exercise, you will open a drawing and practice creating markups.

1) Open **plan layout1.dwg** in the Viewer.

1) Use one of two ways to access the **Markup/Annotation** toolbar:

- Click **Annotate** in the Viewer task bar.

- Click **Markup** 🔳 and select **New**:
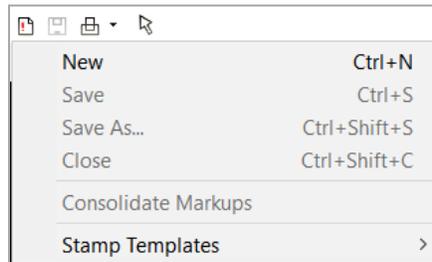
2) Use the **Zoom Window** tool to zoom into an empty area near the bottom of the drawing:

3) You have a cleared area to experiment.
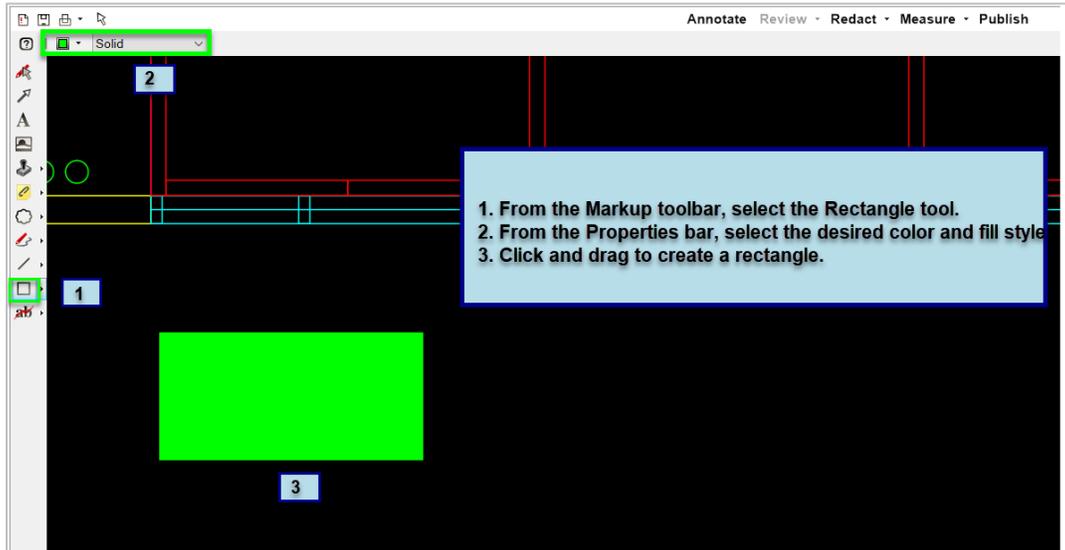
Figure 14.1 Create a Rectangle

4) Select the **Rectangle** tool from the markup toolbar.

5) From the properties bar, select the desired color and fill style.

6) Click and drag to create a rectangle.

Take a few minutes to select and experiment with some other markup tools: line, sketch, cloud, text, and arrow. You should create a variety of markup entities. All the markups can be cleaned up later.

You may be curious about some of the features and behaviors of markups. Here are some observations and tips:

- Several of the tools have "popover" arrows: menus of tools related to the main tool and pop out to the side when you click on the arrow or pointer. For example, clicking on pointer next to the Rectangle tool displays additional tools identified in the capture below:
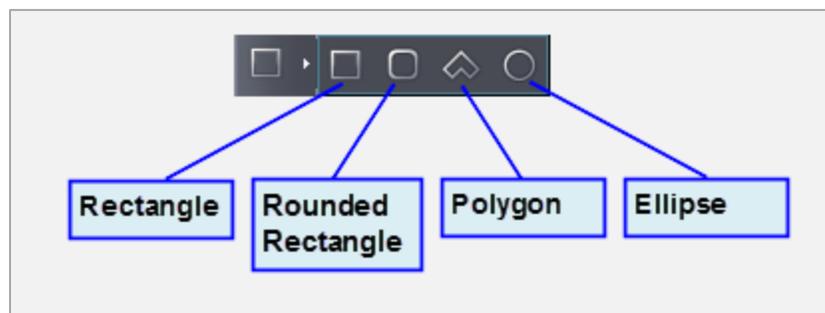
- If you click on the popover arrow for a tool, you can hover the cursor over each additional tool to display that tool's name.

- The Viewer will retain your selection in a tool popover until you change it (or close the window).
- You can use the shift key to constrain the shape or orientation of certain markup entities or actions:

	Shift key effect
Ellipse	Circle
Rectangle	Square
Arrow	Aligns N, S, E, or W
Rotation	45-degree increments
Resizing	Maintains proportions

- You can press <Esc> to abort the current entity creation before it is set. Escape will reset the tool and delete any unfinished portions created while clicking or dragging.)
- When you create a markup entity, it will be active (selected) until you take some action that changes the selection. In upcoming exercises, you'll learn to modify an active markup entity.
- You can undo your last previous action by pressing Ctrl + Z. You can repeat this command to step backwards, undoing a series of actions.
- You can redo the previous undo by pressing Ctrl + Y. This command can also be repeated.

15 Select Markups

The **Select Markup** tool is located at the top of the Markup toolbar and is used to select one or multiple markups.
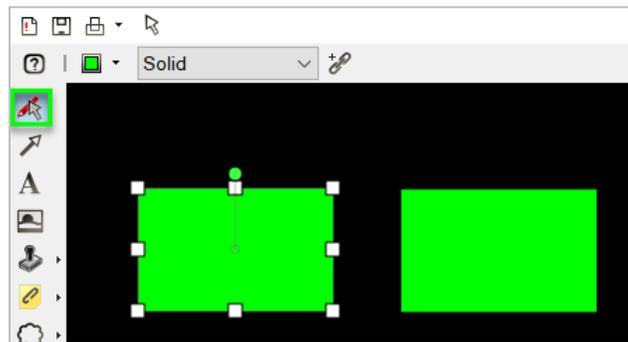
Figure 15.1 Select Markup Tool

1) Click the **Select Markup** tool.

2)   Click on a markup entity to select it. The handles and outline will appear, indicating that it is active.

Selecting Multiple Markups

You can use the Select Markup tool with either of the following methods to select multiple markups:

- Hold down the Ctrl key while clicking individual markup entities to select them.
- Click and drag to draw a bounding box around a group of entities that you wish to select. Holding down the Ctrl key is not necessary, but the entities you want included must be entirely contained within the selection box boundaries. Any entities that are hanging over the box's edges will not be included.

You will use these same methods to select one or more markups in the following exercises.

NOTE: A newer markup that overlaps with an older one will appear in front of it. The way to change the order is to cut the older markup and paste it: it will now appear in front.

16 Rotate, Resize, Move, Copy, Modify, and Delete Markups

Rotate

1) Select one or more markups. The following figures show the green circle rotation control that appears for the selection (indicated by the green arrow), and the eight handles used for resizing the selection.

Single Markup Selected	Mutliple Markups Selected
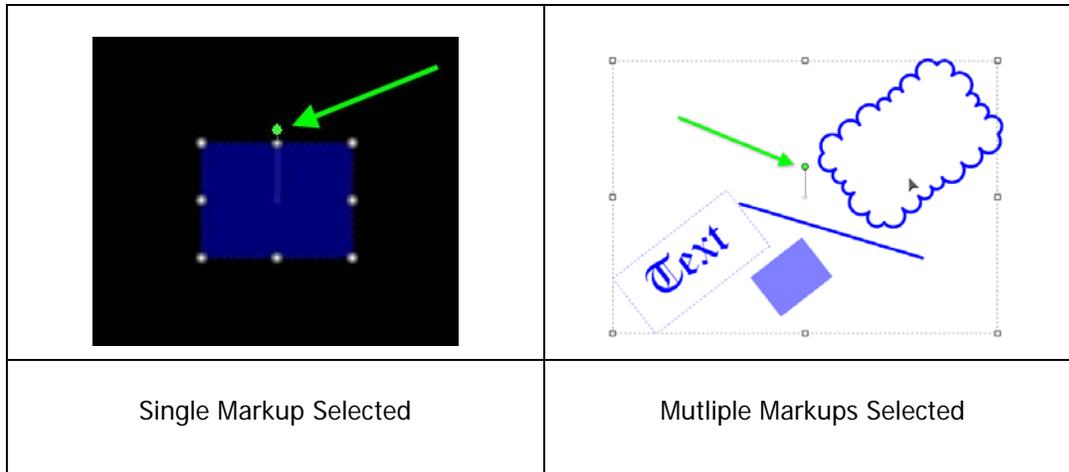
Figure 16.1 Markup Rotation and Resize Controls

2) Click and drag the circle clockwise or counterclockwise as desired, then release the mouse button.

Resize

To resize most markup entities:

1) Select one or more markups.

2) Click and drag one of the eight handles which display when one or more entities are selected – see Figure 16.1.

NOTE: When resizing a selection of markups, some changes will affect selected entities individually; other changes will affect the whole selection.

Arrows, lines, and text boxes display built-in features for resizing when selected singly:

Select either black circle to resize the markup left to right.
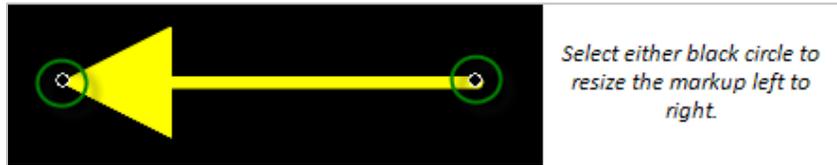
1) Left click and drag the the circle found on either end of the markup until the desired length is achieved.

2) Release the left mouse button to set the markup.

Move

1) Select one or more markups.

2) To move, left-click one of the selected entities (not the handles), drag to the desired location, and release the mouse button to set the new location.

Copy

There are several ways to copy markups. The selection step is the same as before. Once your selection is made:

Keyboard Shortcut

1) Press Ctrl + C to copy.

2) Press Ctrl + V to paste.

3) The copy floats with the cursor – move the mouse to the desired location for copy.

4) Left click to place the copy.

Using the Right-click Menu

1) Right-click and select **Copy** from the menu.

2) Actions available at this point:

3) Right-click again and select **Paste** to paste the markups into the same page, or into pages of any other Viewer session window that you have open. The other session must be in edit mode.

4) The copy floats with the cursor – move the mouse to the desired location for copy.

5) Left click to place the copy.

NOTE: Edit Text entities and Changemarks cannot be copied.

Modify

You can modify the properties of selected markups by using the controls in the Properties Bar.

1) Select one or more markups.

2) Use the controls in the Properties Bar to modify the markups.

Delete

1) Select one or more markups.

2) Press the Delete key on your keyboard

When you have finished experimenting with this exercise, close the file:

1) Exit the drawing file by clicking the **R*ed X*** in the upper right corner.

2) A dialog, "Markup Not Saved" will appear.

3) Answer **No** to the question, "Do you want to save changes to the current markup?"

17 Changemarks and Practical Application

In this exercise, you will create several markups to the file regarding a wheelchair access issue. At the end of this exercise, your markup should look like Figure 17.2

1) Open **plan layout1.dwg** in the Viewer.

2) Use one of two ways to access the **Markup/Annotation** toolbar:

- Click **Annotate** in the Viewer task bar.

- Click **Markup** and select **New**:

New	Ctrl+N
Save	Ctrl+S
Save As...	Ctrl+Shift+S
Close	Ctrl+Shift+C
Consolidate Markups	
Stamp Templates	>
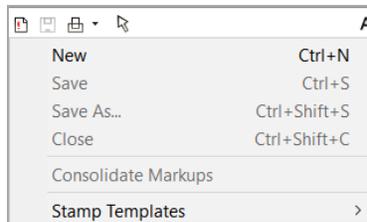
3) With the **Markup** toolbar displayed, use the **Zoom Window** tool to zoom in to the area highlighted in blue in the following screen shot.

Figure 17.1 Plan Layout1.dwg Area to Zoom

4) Create an Oval/Circle as seen in <u>Figure 17.2</u> by locating the **Rectangle** tool and clicking the arrow to display the additional tools. Click the oval/circle tool. Click and drag in the desired location to create the circle. (You'll create the changemark and cloud later.)
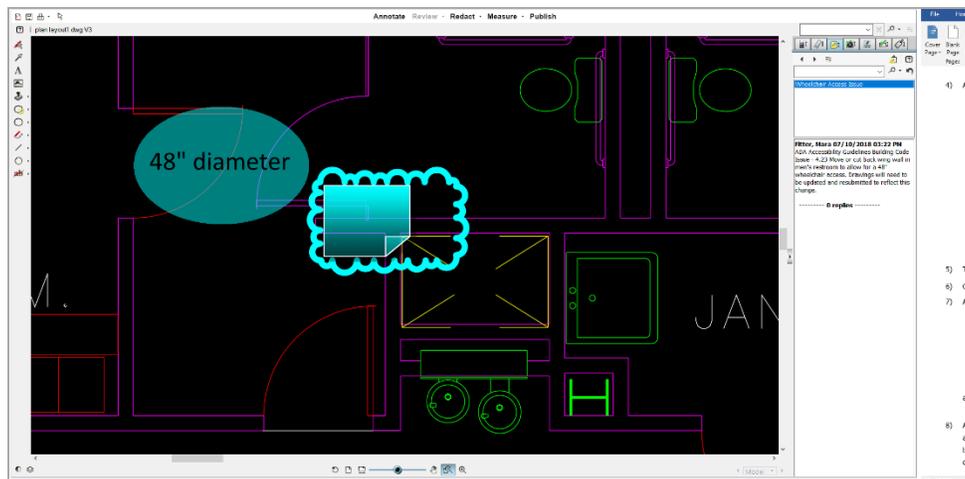
Figure 17.2 Wheelchair Access Issue

5) To change the color of the markup, locate the **Properties** toolbar in the upper left-hand corner of the window, click the color tool and select a color from the displayed palette.

6) Choose "Highlight" from dropdown list in the **Properties** toolbar to make the markup transparent, allowing the objects behind the markup to be seen.

7) Add the text **48″ Diameter** to the circle by clicking the Text [A] icon and creating a box in the center of the circle as seen below.
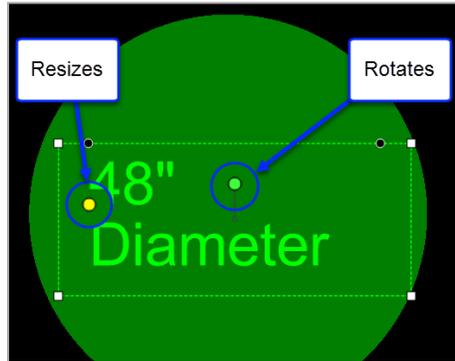
Figure 17.3 Text Box

a) You can right-click in a text box to display and select from a menu of several commonly used actions and symbols, including the diameter symbol:
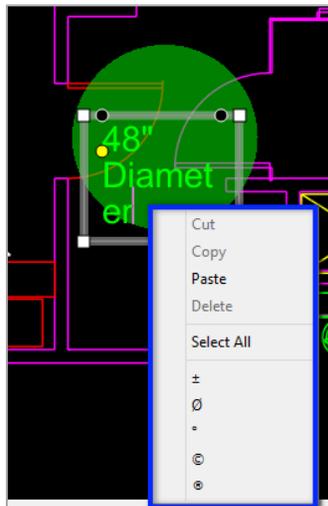
Figure 17.4 Text Box Right-click Menu

NOTE: You can also use standard Alt keyboard combinations to add other symbols in a text box. Lists of the combinations can be found on the Web.

b) Adjust the size of font and the text box by using the yellow diamond as seen in Figure 17.3. Click on the diamond and drag with the mouse to resize: up to reduce, down to enlarge. You can also change the font size control in the properties bar.

8) Add a Changemark and cloud to the file (as seen in Figure 17.2) by clicking the arrow to the right of the Changemark ✐ ▸ icon, and selecting the Changemark cloud ☁ ▸ icon. Release the left mouse button to select the tool.

a) Click the left mouse button on the start point for the cloud location.

b) Drag the mouse to create the cloud around the desired object

c) Release the left mouse button to set the cloud in place and have the Changemark dialog box appear.

   • The Changemark box will be in edit mode allowing you to re-position the Changemark as needed.

4) A dialog will display:
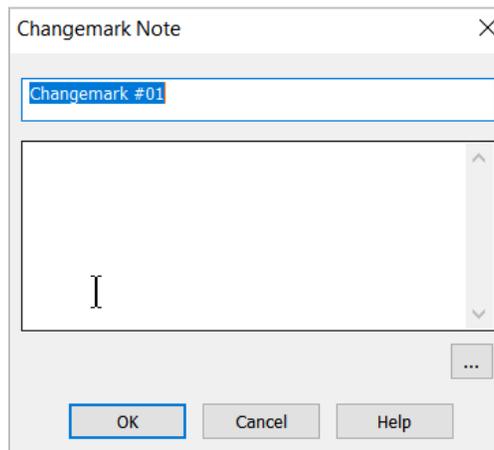
5) Add the following text:

a) Replace "Changemark #01" with "Wheelchair Access Issue" – this is the title.

b) Tab or click in the next field (subject area) and add the following text: ADA Accessibility Guidelines Building Code Issue - 4.23 Move or cut back wing wall in men's restroom to allow for a 48" wheelchair access. Drawings will need to be updated and resubmitted to reflect this change.

c) Click **Ok** to close the Changemark.

6) Click the **Save Markup** icon 💾 and enter a unique markup name.

- Alternatively, you may click the Markup icon 📄 and select to **"Save"** the Markup Layer using a unique name. *Example: BLD*

> The system will prevent you from saving a layer with the same name as an existing markup layer for that file.

7) Exit the drawing file by clicking the **R*ed X*** ❎ in the upper right corner, or by clicking the **Save Markup** Icon 💾 and selecting **Close**.

8) Return to the folder view in ProjectDox, refresh the folder panel, and note the additional icon ⚠️ for **plan layout1.dwg**.

18 Review Existing Markup Layers

Existing markup layers can be accessed for review by using either of the following methods:

- From the file view in ProjectDox by clicking the Markup Icon, or

- In the Viewer tool by clicking Review in the Main toolbar.

To open an existing markup from the file view:

1) Click the Markups ⚠️ icon on the **plan layout1.dwg** file to view the markups:
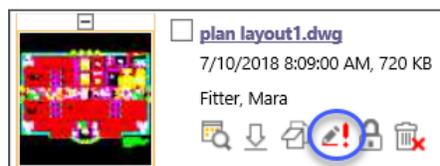
2) Click the **View** checkbox next to your markup(s) and click the **View/Edit button.**

3) The Viewer tool will display the Review Changemark panel - the Task Pane with the Changemark tab selected – if there is at least one changemark in the markup layer:

4) Click "Wheelchair Access Issue".

To review an existing Markup layer from inside the ProjectDox Viewer tool:

1) Open the file from the File View in ProjectDox (click the thumbnail or filename link to open in the Viewer).

2) Click **Review** from the Viewer taskbar.

3) The markup layer will be displayed. If any changemarks exist in the markup layer, the **Review Changemarks** Panel will display in the Task Pane.

Existing Changemarks can be sorted by title, author, or date by clicking the appropriate tab. You can add a search filter if desired. (Click **All** to return all Changemarks to the list.)

- Clicking the in the **Panel** toolbar will display the Review Changemarks panel.

1) From the resulting list, click on a Changemark that you wish to view. The Changemark's text displays in the panel's lower frame.

2) You can navigate through the Changemarks by using the **Next** and **Previous** arrow buttons , by clicking the Changemark name in the panel, or by selecting the **Review** drop-down and choosing appropriate selection.

- The Changemarks entities appear in the Viewer tool at the same magnification level as when the author created them. To view the Changemark, the **Review Changemark** panel must be opened. To edit the Changemark, you must be the author, open the markup in edit (not review) mode, and double-click the individual Changemark you want to edit.

- You can extract information from one or more Changemarks associated with a file by using the Copy Changemarks dialog. Click to access this dialog.

- Any hyperlinks added to the Changemark will show in the body of the Changemark. Clicking a link will open the destination in a new browser window.

19 Edit an Existing Markup Layer

This exercise will demonstrate how to edit a markup layer that has been previously saved and closed. A markup file can be edited and saved repeatedly as needed using the Save Markup icon. Once markup file is closed, access to edit the file is through the Markup Layers Panel in the file view of **plan layout1.dwg**:

1) Click the Markup icon

2) Click the "Edit" radio button and click the "View/Edit" button

3) Select the Wheelchair Access Issue from the navigation pane

4) Click the **Select Markup** icon to enable the feature.

5) Double click the "Wheelchair Access Issue" Changemark Note.

6) Add the following text:

Reference attached web link for more building code information regarding wheelchair access to public restrooms.

7) Click Ok

8) Click the **Hyperlink** icon from the **Properties** toolbar.

9) Enter the below URL into the dialog box and click the Ok button.

http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/ada-standards/chapter-4-accessible-routes

10) Click the Save Markup icon to save your changes.

You can add hyperlinks to any markup by using the **Select Markup** icon and clicking the **Hyperlink** icon.

20 Add Markups

In this exercise, you will continue to practice creating markups on the plan layout1.dwg file. In this example, a door has been improperly placed and needs to be relocated. You will be adding a changemark arrow, with the result looking like Figure 20.2

1) Open the file **plan layout1.dwg** in the Viewer tool by clicking the thumbnail image or the hyperlink in ProjectDox.

Figure 20.1 Plan Layout1.dwg Door Clearance Area

2) Use the "*Zoom Window*" 🔍 to magnify the highlighted area in blue in Figure 20.1 .

3) Click **Annotate** and then the combination **Changemark Arrow** feature from the Markup toolbar to apply a markup as seen in Figure 20.2 .
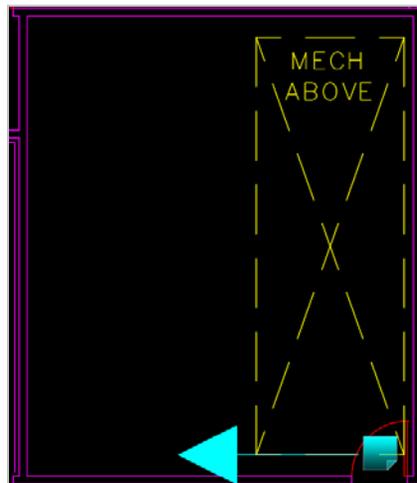
Figure 20.2 Door Clearance Changemark

4) Place the cursor at the selection point (the arrowhead is created first), left click and drag across the file to create the arrow.

- Releasing the mouse button will set the arrow and display the Changemark Note.

5) Type into the Changemark Note:

- Title = "Door Relocation Issue".
- Body of Note = Check mechanical equipment above to make sure there is no conflict with the door opening into this room. Relocate the door to clear mechanical above. Resubmit drawing if changes are required.
- Click the **Ok** button to close the Changemark.

6) To edit the arrow, click the **Select Markup** Icon and click the arrow markup.

7) Set the various properties for the arrow using the **Properties** toolbar.

- Notice that the **Properties** toolbar selections vary depending on the tool and markup selections.

Any number of markups can be added to a single markup layer.

In the next steps, you will add another markup to this file. This time the issue relates to egress.

8) Locate the area indicated in Figure 20.3 by the yellow rectangle and arrow in the upper left corner (the Florida Conference Room).

Figure 20.3 Florida Conference Room

9) Click the **Line** tool, select the polyline tool and trace the path from the Florida Room to the first available exit (as show in Figure 20.4).
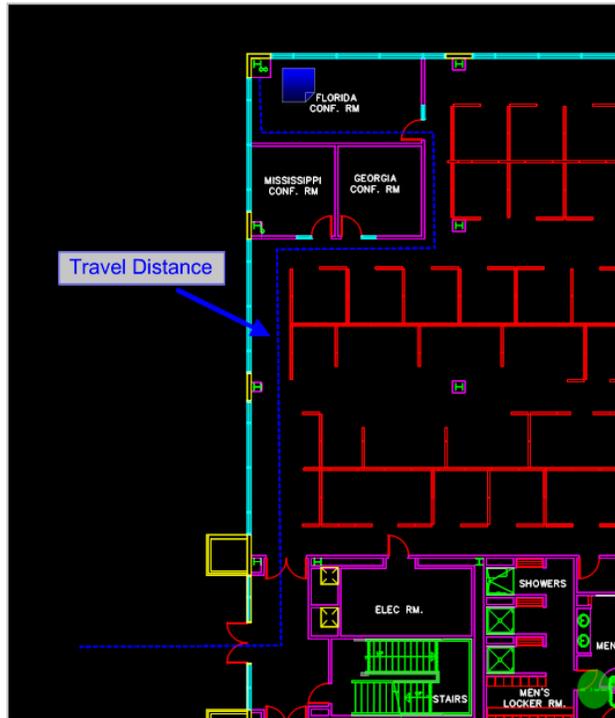
Figure 20.4 Verify Egress

10) From the **Properties** toolbar, select the dot style and the desired width for the line (Figure 20.4)

The remaining steps of this exercise are optional.

11) Measure the Egress route.

12) Click **Measure** drop-down, select **Settings…** and make the following selections, clicking **OK** to complete:

   a) Measuring System = English

   b) Unit = ft

   c) Precision = 0.01

13) Calibrate. This drawing has no given measurements, so you can calibrate based on the assumption that a standard doorway is 3 ft. wide. Zoom in on a doorway, and follow the same calibration steps as previously.

14) Turn off the Snap feature, by clearing the checkbox in the Properties toolbar.

15) Use the **Polyline Measurement** tool to measure the egress route you marked for the Florida conference room. When you complete the measurement, highlight the field with the measurement, and copy to the clipboard. You can paste the measurement into the changemark you'll create in the following steps.

16) Select the Changemark icon [icon] and drag and drop the Changemark onto the file. Add the following text:

- Title: Verify Egress Distance

- Body: Exits shall be so located on each story such that the maximum length of exit access travel, measured from the most remote point within a story to the entrance to an exit along the natural and unobstructed path of egress travel, shall not exceed the distances given in Table 1016.1.

- Optional: Include a sentence stating that "The egress route shown in the markup is" and paste contents of the clipboard.

17) Click the **Save Markup** [icon] icon.

18) The markup layer should retain the original naming convention provided. If prompted to enter a new markup name when closing the file, you have not properly edited the existing markup layer.

19) Exit the drawing file by clicking the **Red X** [icon] in the upper right corner.

21 Binder View

A user can open multiple files in Binder for simultaneous review.
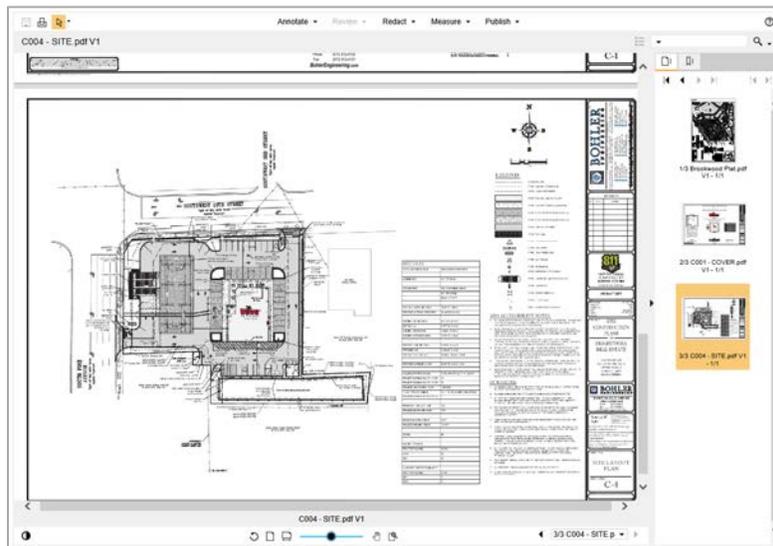
Figure 21.1 Binder View

> **NOTE:** CAD files will display both model space and layout layers when present.

To open files in Binder view:
1) Click checkboxes (or Select All) to select files.
2) Click View checked files in Binder.
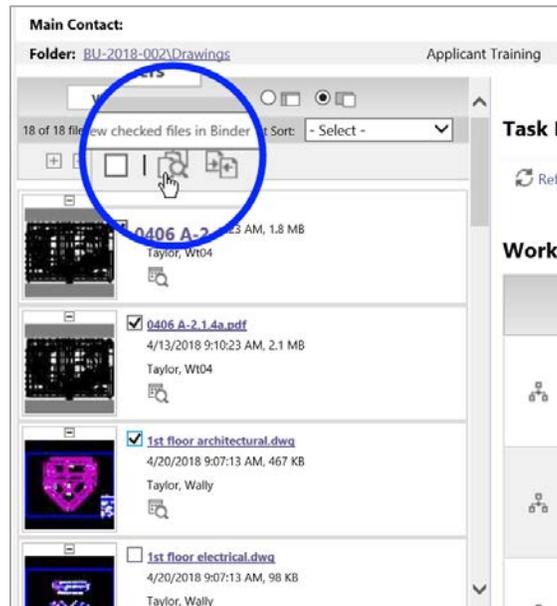
The Binder window will appear as shown in Figure 2.1.

To navigate among files in Binder view:
1) Pages tab (task pane)
2) Scroll bar
3) Page controls

> **NOTE:** When you zoom in one file in Binder view, the zoom setting remains as you navigate to another file.

22 Compare File Versions

ProjectDox allows you to perform a graphical comparison of two file versions or two files in the same folder using the Compare tool. The Compare Toolbar appears at bottom of viewing window:

Figure 22.1 Compare Toolbar

The toolbar contains controls for different viewing options. In this exercise, you will upload another version of the **plan layout1.dwg** file and perform a compare of the two versions.

> If the instructor has already uploaded the newer version of the file, then skip to step 7 of the following procedure.

1) Navigate to the designated project/folder and download the revised version of the **plan layout1.dwg**, saving it to your desktop.

2) Navigate to your project/folder where the current **plan layout1.dwg V1** resides.

3) Click the **Upload** button.

4) Browse to the desktop and select **plan layout1.dwg**.

5) Click the **Upload Now** button.

6) Notice that the file is selected as a candidate for versioning (the project must have versioning enabled) as indicated by the blue highlight. Once published, the file will show as V2.
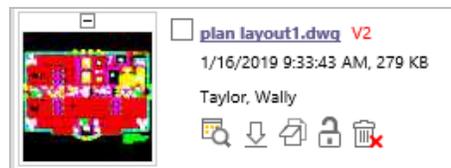
7) Select the **History** icon for the **plan layout1.dwg V2** file. A new window will display:

a) Select **Compare Mode.** Thumbnails for each version will display.

b) Select *Version 1* and *Version 2* checkboxes.

c) Click **Compare**.

8) The selected files will display in *Side-by-Side* view as in Figure 22.2
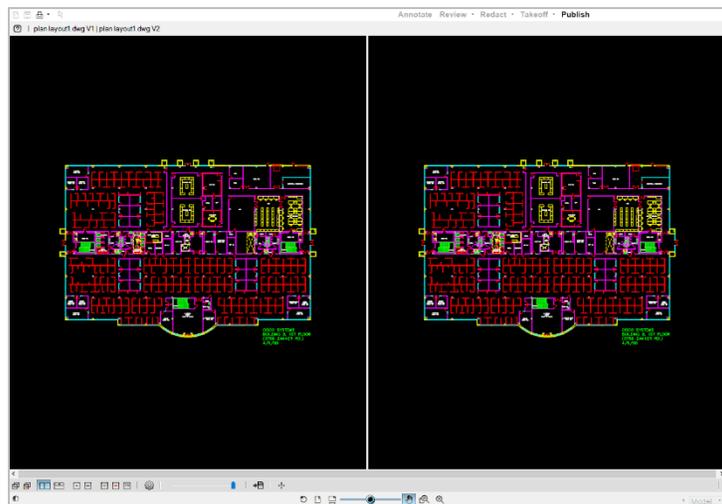
Figure 22.2 Plan Layout1.dwg Versions Side-by-side Comparison

9) Use the **Compare** toolbar to view the file in the following modes:

a) Overlay

b) Overlay Compare and use of Transparency Slider

c) Side by Side

d) Additions – indicated in green

e) Deletions – indicated in red

f) Unchanged – indicated by gray

23 Compare Markup File Versions

The compare file version opens overlaid on the open file. The open file displays in red (deleted geometry), and the compare file displays in green (added geometry). Geometry that has not changed (common between both versions) is gray. Use the Transparency slider to change transparency for clearer visibility of the file differences - right to dim red (deleted) and left to dim (added) green areas.

1) Using the same files as above select from the **Compare** toolbar: 🔲 **Open File (only)**

4) This will open the earlier version of the two selected files (Version 1).

- In **Side- by- Side** mode the file to the left is always the earlier of the two versions being compared.

5) Click Review ▾ and select a markup layer from the M**arkup Open for Review** dialog.

6) The *Changemark Review Window* will appear to the right, if not already present. Click "*Wheelchair Access Issue*".

- If the Changemark was created while zoomed in on the area of the file the magnification will remain intact while being reviewed.

7) Click **Side-by-Side** 🔳.

- Any area of the files can be compared using this feature.

8) From the **Compare** Toolbar, click **Overlay Differences** 🔳. Use the Transparency Slider to view the original markup and deletions versus additions to the file.

Note that requested changes have been made - along with another change not requested by the reviewers: the wall on the far right of the plan was relocated.

24 Use the Compare Settings Tool

The tool is available in compare mode, displayed as shown below:
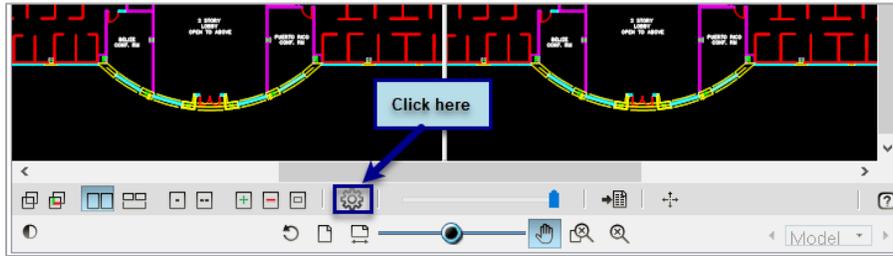
Figure 24.1 Compare Settings Tool

The Compare Settings window displays with controls for modifying color selection for Additions, Deletions, and Changes, and settings for Text comparison:
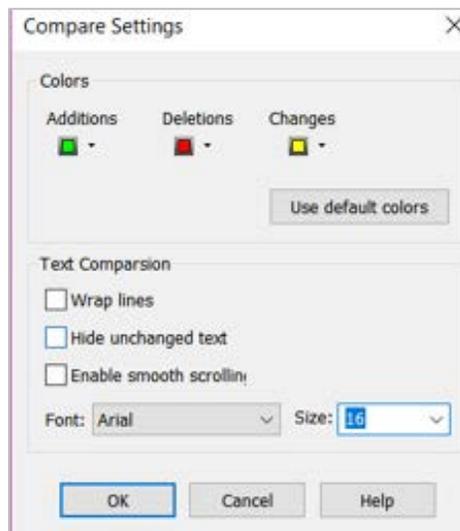
Figure 24.2 Compare Settings Dialog

25 Compare Text Files

1) Select the History icon for the **Plan Review Tenant Build Out.V2** file.

2) Select Compare Mode.

3) Select *Version 1* and *Version 2* checkboxes and click **Compare**.

4) Select **Text Mode** . The display will be like Figure 25.1

5) Click the **Text Comparison** button from the *Compare* toolbar.

If no differences are found between the two documents, a message appears stating so. Regardless of whether differences are found, the document is shown in split screen mode with the open and compare

files displayed in two windows as lines of text, and the print preview of the *Compare* or *Open* file shown beneath. Text differences between the two documents are highlighted using color scheme set via the Custom settings dialog.

Use the next / previous arrow in the top center to navigate the difference or click in either the *Compare* or *Open* pane to scroll through the comparison.
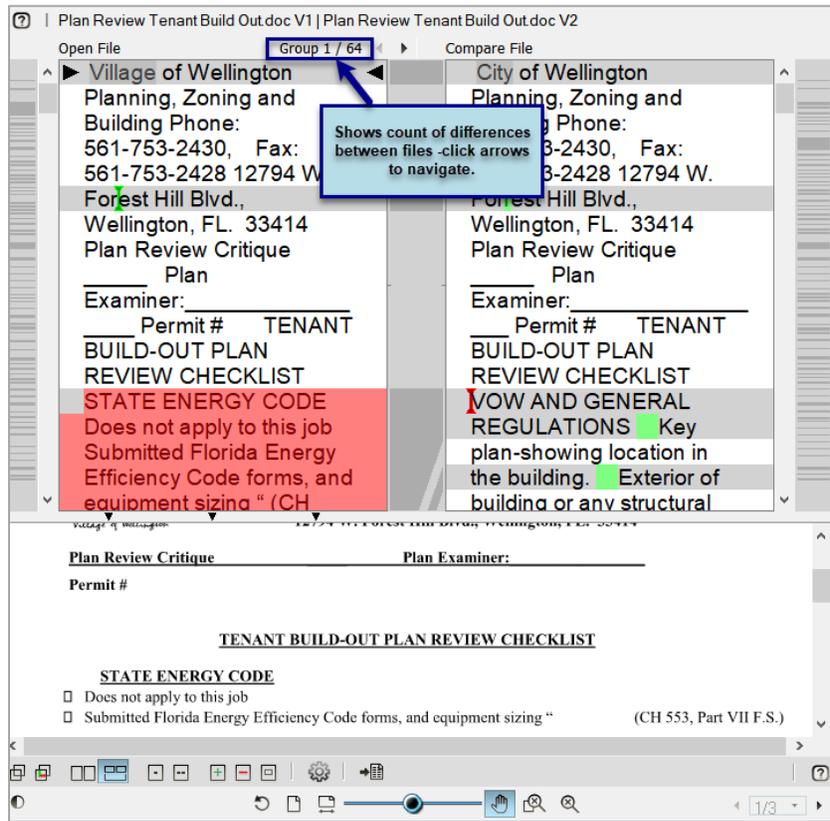
Figure 25.1 Text Compare Tool

- Differences will be displayed (with default color settings) as:
  - Yellow = change in text between the two documents
  - Red = deletion made from the open document
  - Green = addition made to the compare document
  - No changes between the documents will display a message

- Clicking in the open or compare mode windows changes the view of the file displayed to that selection.

For additional information, see "Compare" in the Viewer online help.

26 Compare Separate Files

ProjectDox allows for the selection of two file versions with different names in the thumbnails list to be opened and compared. This can be done with single or multi-page files.

> The Viewer tool does not allow two pages of the same multi-page file to be compared against each other. Comparing pages from a multi-page file would require another set of drawing files to be uploaded under a different name.

Below, you will compare two PDF files and use the various tools available in Compare Mode.

1) Select the **0406 A-2.1.4a.pdf** and **0406 A-2.1.4.pdf** from the thumbnail list and select the **Compare** ⧉ icon.

2) ProjectDox launches in **Compare mode**, with **Side by Side** as the default view.

3) Experiment with the other features in the **Compare** toolbar including **Overlay, Overlay Compare, Additions, Deletions** and **Unchanged** to see their effect on the files.

27 Add an Image Stamp

Use this markup tool to insert external raster images (JPG or PNG) into your current markup layer. Once selected, images can be resized and positioned where you want them. The feature will retain a default location of your image stamp and retain the last 10 images used.

1) Download from the main training folder the file **final.jpg** and save to your desktop.

2) Navigate to your folder/project and select the **plan layout1.dwg v2** from the folder view.

3) Select **Annotate**.

4) Select the **Image** icon

5) Upon selection one of two actions may take place:

   a) If you have configured your profile with an image file (.png, .jpg) located on your PC, ProjectDox will show this image file as a default in the gray bar (**final.png**) in Figure 27.1.
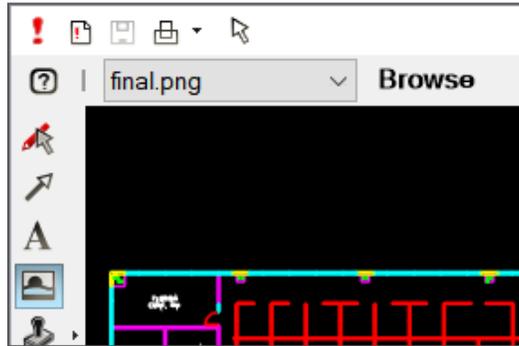
Figure 27.1 Default Image File Selection

b) If the profile has not been configured, a **Select Image File** dialog will display for you to navigate your PC or a shared drive to select an image file to be used. Browse to the desktop, select the **final.png** file and click **Open**.

6) Place the raster image on the bottom left of the drawing as seen in Figure 27.2. You can set the raster image by one of the following methods:

a) In the **Viewer**, left-click to set the first corner point of the image, drag the mouse to where you want to set the second point, and release.

b) In the **Viewer**, left-click on the point where you want to center the raster image. The image is inserted into the document matching your orientation and is calculated to its natural size, relative to the document or drawing size.

Figure 27.2 Image Stamp Placed

7) Save the markup by clicking **Save Markup** and adding *"your department name" and APP (BLD APP)*.

28 Right-Mouse

When using certain tools, clicking the right mouse button brings up a pop-up menu containing various display and edit commands:

Previous View	Ctrl + Alt + Left Arrow
Fit All	Ctrl + E
Fit Width	Ctrl + W
Pan/Zoom	Ctrl + Shift + A
Marks	▶
Page	▶
Copy Region	
Copy	Ctrl + C
Paste	Ctrl + V
Paste Clipboard Image	Ctrl + Alt + V
Delete	
Select All Markup	
Group Selected Markup	
Explode Selected Group	
Undo	Ctrl + Z
Redo	Ctrl + Y
Rotate/Mirror	▶
Background Color	▶
Show Pane	▶
Options	▶
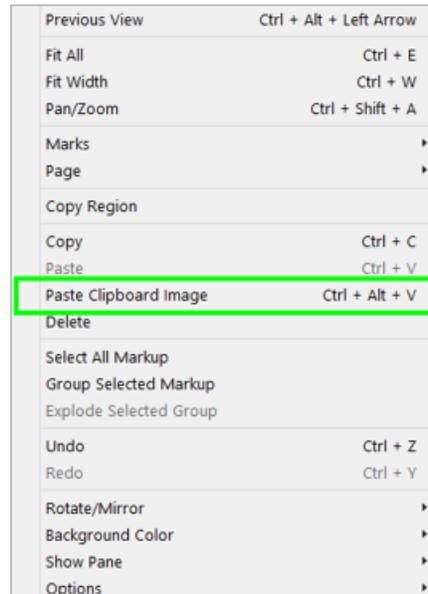
Figure 28.1 Right-click Menu

Several controls are available specifically from the Right-click Menu (or keyboard shortcuts):

- Use the **Paste Clipboard Image** menu item to paste an external graphic into your markup layer.
- **Select all Markup** selects all markup entities with one command.
- **Group Selected Markup** groups the selected entities – they will act as a single entity for copying, moving, resizing, deleting, etc.
- **Explode Selected Group** reverts the group to individual entities**.**
- **Previous View** returns to the previous zoom and position.

CAUTION: Do not use the keyboard shortcut: Ctrl + Alt + Left Arrow shown for Previous View. That combination is reserved by Windows and may rotate the display on your monitor screen. Use the command only from the menu.

29 Placekeepers

Placekeepers provide a simple way to temporarily save and traverse a list of view states. They are session-based place markers and do not persist from session to session.

The three **Placekeepers** commands can be accessed from the Marks-> command of the right mouse button menu.

- Add Placekeeper
- Go To Placekeepers
- Remove Added Placekeepers

See Online Help for additional information

30 Use Measurement Count Takeoffs

Measure takeoff allows users to make multiple measurements or counts on a document, save them to a markup layer and/or export to a file. This can be useful when working with drawing files, and you need to count or estimate totals of needed categories such as carpet or tile area, or the number of smoke detectors. When the Takeoff feature is enabled, the Measurement Panel will display to the right of the viewing area and display the created categories and totals.

This exercise will introduce how to create and use takeoff categories.

1) Open the file **L003 – Lighting.pdf** for viewing.
2) From the **Measure** drop-down, select **Takeoff**. The **ProjectDox Task** pane displays the **Measure Takeoff** panel.
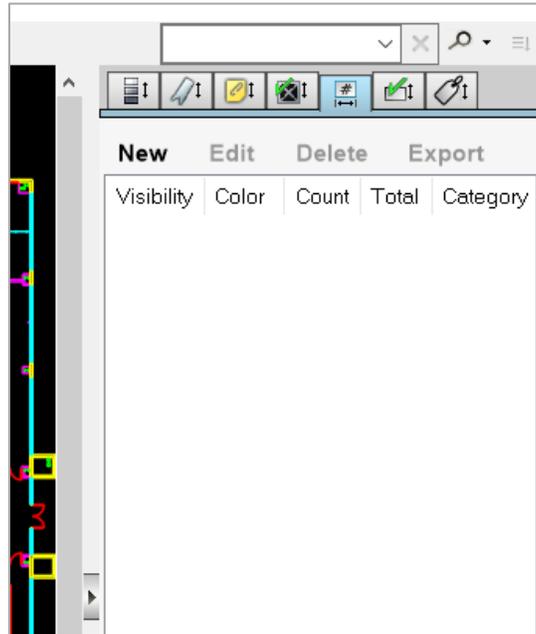
Figure 30.1 Measure Takeoff Panel

3) In the Measure Takeoff panel (on the right), click **New** to add a category.

4) The Takeoff Category dialog displays, and the **Measure Takeoff** toolbar displays on the left side of the Viewer window.
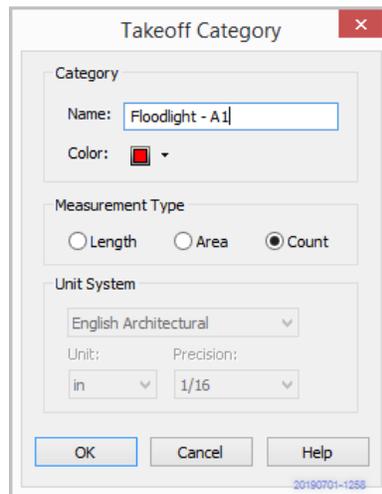
Figure 30.2 Takeoff Category Dialog

- A category is used to total a count, or group together multiple measurements of the same type.

5) In the Category section, type "Flood Light – A1"

    a) Select Red for the color

    b) Measurement Type = Count

> ⚠️ It is critical to select the correct measurement type at the time you create a category: that setting cannot be changed after creation.

    c) Click OK

6) Create another category called "Can Light – D2"

    a) Select Yellow for the color

    b) Measurement Type = Count

    c) Click OK.

7) Click "Flood Light - A1" from the Category Panel.

8) Click the **Measure Count** icon ⊞

9) Click the mouse next to each flood light until six flood lights are found. (Search for A1).

10) Click the "Can Light" category from the Category Panel.

11) Click the mouse next to each can light until all can lights are found. (Search for D2)

Note that the flood lights show as red checkmarks and the can lights in yellow, as configured in the categories.
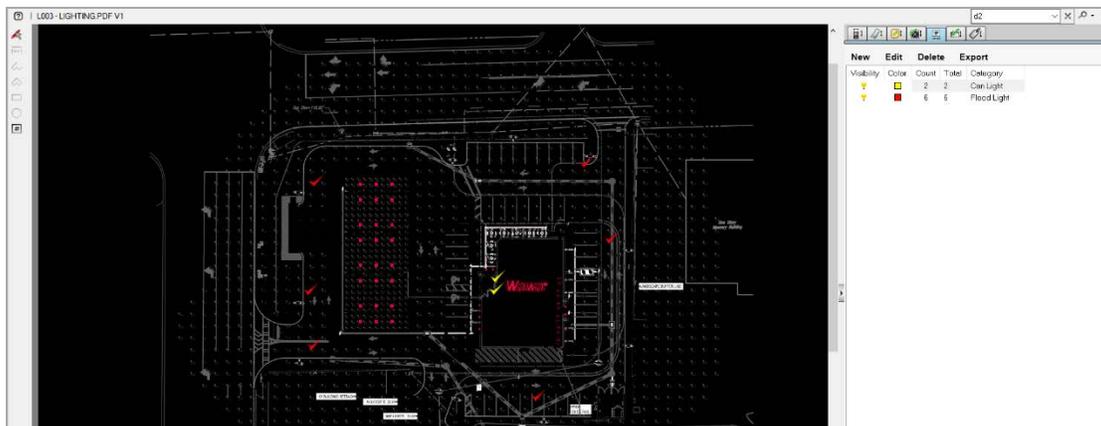
Figure 30.3 L003 – Lighting.pdf with Categories

This exercise assumes that the plan requires additional flood lights to be compliant. In the next steps, you will add a Changemark and save the takeoffs to a markup layer.

12) Click **Annotate** to open the **Markup** toolbar. From the **Changemark** menu [icon], select

Changemark Note [icon] .

13) Drag the **Changemark Note** onto the file next to one of the checked flood lights and release.

14) Enter a title and description like the below for the **Changemark Note** dialog.

    a) Title = Additional Flood Lights

    b) Body= Building code requires 5 additional flood lights to be located on the plan.

    c) Click **OK**

    d) Save the Markup using the same steps as in earlier exercises.

31 Use Measure Takeoffs

This exercise demonstrates how to use the takeoffs to accumulate totals and create a markup layer with those totals. It will also demonstrate the use of the "Show Leader" feature, which automatically displays an area measurement in the Viewer, and the use of negative area measurement.

1) Open the file **C004 – SITE.pdf V1**

2) Using the **Measure** menu, select **Settings…** and make the following selections, clicking **OK** to complete:

3) Measuring System = English

4) Unit = ft

5) Precision = 0.01

6) Set Scale = Custom 1 in = 30 ft

7) From the **Measure ▾** drop-down, select **Takeoff**. The ProjectDox Task Pane displays the Measure Takeoff Panel and the measure **Takeoff** toolbar displays on the left side of the Viewer window.

8) In the **Takeoff panel**, click **New** to create a new category.

> ⚠️ It is critical to select the correct measurement type at the time you create a category: that setting cannot be changed after creation.
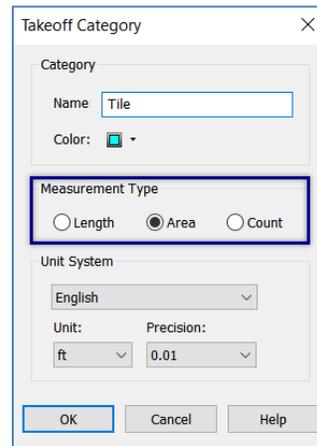
Figure 31.1 Takeoff Category – Measurement Types

a) Type "Tile" for the category name

b) Select a color

c) Use *Area* for the Measurement type

d) Verify Unit System Settings.

e) Click **OK**

9) Choose two rooms to measure for Tile; one of them being the One Story 'Masonry' Building, the other the main WaWa structure.

10) To place your measurements, select the category **Tile**.

- The appropriate measurement tools become available in the measurement takeoff toolbar, allowing you to place one or multiple entities.

- The measurement information for each entity you create is added to the currently selected category results.

- The accumulated results display at the top of the panel.

- The entities on the drawing will be color coded according to which category they belong to.

11) Select the **Show Leader** checkbox to add a text box (with category color border) to each individual measurement result on the entities you place. You can move the position of the text box as follows:

a) Click Select Markup

b) Click the entity, then pressing on the text box and dragging it to a new location.

c) Release the mouse button to set the new text box location.
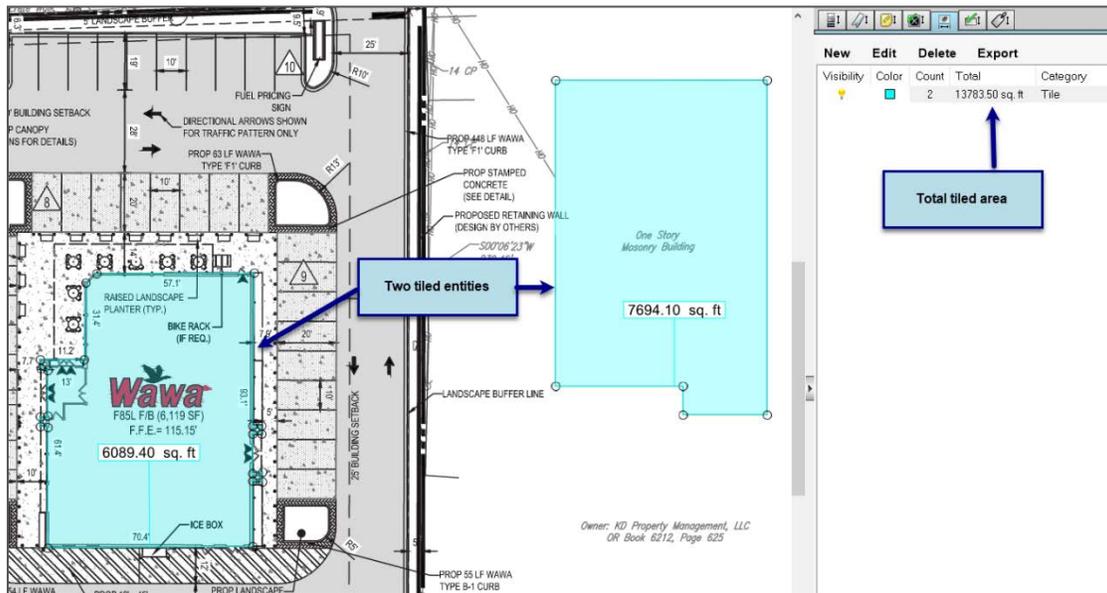
Figure 31.2 Categories, Takeoffs, and Leaders

12) Once you have defined your categories and placed all your measurements, you can **Export** the results to the Clipboard (for cut and paste into other applications, such as Excel), or export to a CSV file and save it on your computer.
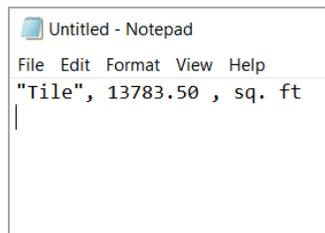
31.1 Negative Area

Selecting this checkbox allows a negative entity to be applied to a category. If the check box is selected, any entity you place on the drawing will subtract from the accumulated results for that category. The measurement entities text box displays a negative number if Show Leader is selected. A Negative area is typically drawn inside a larger positive area to exclude a certain section from the total.

> **NOTE:** If an entity is active (selected) at the time you select the **Negative Area** checkbox that entity's measurement will convert to negative. Also, while a negative area will subtract from the cumulative total for a category, it will not subtract from the individual related area.

In this exercise, you will subtract the entrance area from the total area of the main WaWa building, following the steps in Figure 31.3.
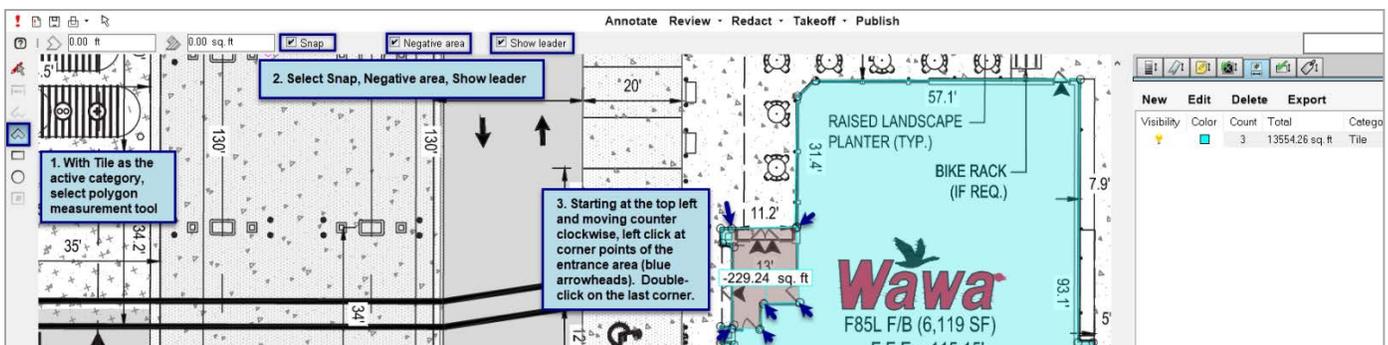
Figure 31.3 Negative Area Measurement

The result will be a negative number in the leader for then entrance area measurement, and a corresponding reduction in the Total Area for the category Tile. (Your numbers probably will be different than the example, but the "math" should work.

No intelligence is applied to decide if a negative area is logical (overlaps another "positive" area takeoff). If you choose to designate an area as negative, its value is subtracted from the cumulative total.

31.2 Delete a Measurement

1) Click the **Measure Select** button.

2) Click on the entity you wish to delete, and press <Delete> on your keyboard.

3) The measurement value for that entity is subtracted from the accumulated results.

4) Several entities can be selected at once by holding down the <Ctrl> key while clicking on the individual entities you wish to delete.

31.3 Resize a Measurement

1) Click Select Markup

2) Select the measurement on the file, resize handles appear on the entity that can be clicked and dragged to a new location.

3) You cannot move the entity, but you can reshape if needed.

4) Close the file. As with any markup layer, when you close the file you will be asked if you want to save the current markup layer.

- If you select Yes, the category list, along with all of the current measurement entities, will be saved and can be opened for edit or review.

32 Use the Strikeout Feature

This tool can only be used on text documents and files that have indexed text information – otherwise the tool will be disabled.

1) Select Plan Review Tenant Build Out.doc from the folder view.

2) From the **Viewer** taskbar, select **Annotate**.

3) From the **Markup** toolbar, select the **Strikeout** Icon .

4) Click, drag, and release the mouse to highlight the desired area to strikeout as seen in Figure 32.1.

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Plan Review Critique   **Plan Examiner:**

Permit #

TENANT BUILD-OUT PLAN REVIEW CHECKLIST

STATE ENERGY CODE
☐ Does not apply to this job
☐ Submitted Florida Energy Efficiency Code forms, and equipment sizing "   (C
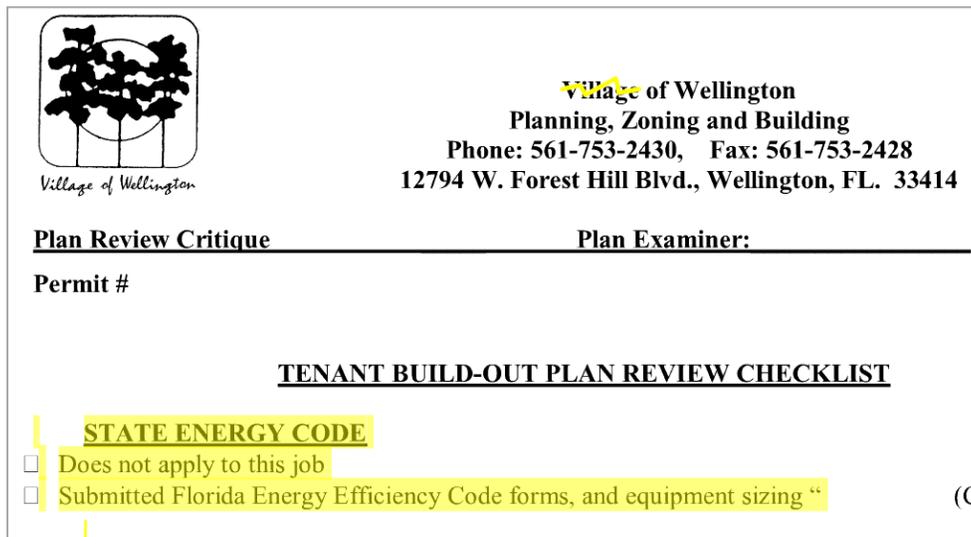
Figure 32.1 Strikeout Feature

5) Releasing the mouse button will show the strikeout over the text.

6) Save the Markup as "your department name" (BLD).

7) Close the file using the **Red X** .

8) Optional. Open the file **plan layout1.dwg**, and experiment with the strikeout tool's behavior in a drawing file.

33 Set Alignment Points

The Set Alignment Points tool assists you with comparing two versions of a file or even two completely different files, that are of different scales, or sizes. The alignment tool allows you to define a line segment on each file that is used as a common alignment segment when the two files are overlaid.

1) Select the files **A-11.01 1-15-07.TIF** and **A-11.02 1-15-07.TIF** and click the *Compare*

 button. The resulting misalignment will resemble the screen shots in Figure 33.1.
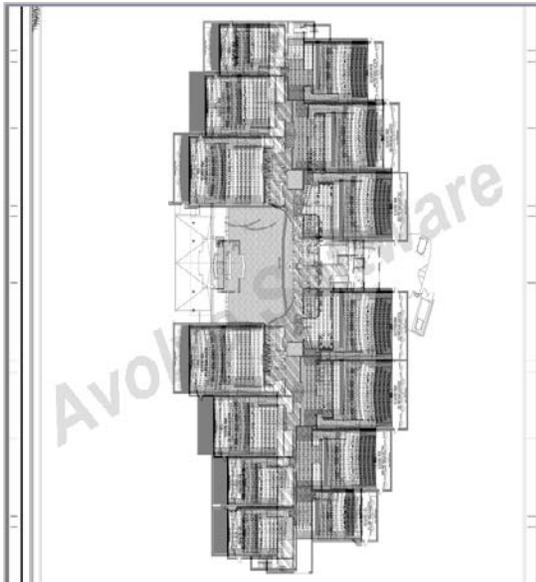
These are examples of the above files in overlay. Notice that the edges of the two building are not perfectly aligned. The cause in this case is the difference in the scales used to create the two drawings. The problem can also occur when comparing two different file types such as TIFF and PDF etc.
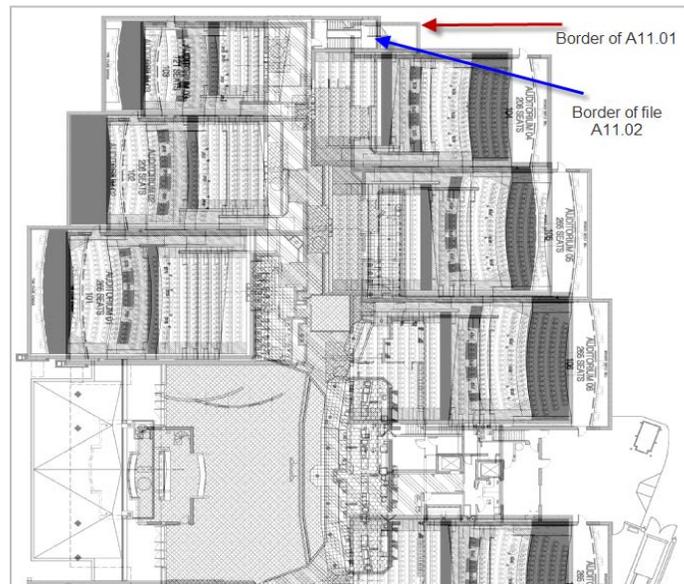
Figure 33.1 Screen Captures of Misaligned Files

2)   Select *Open File (Only)* ▣ from the **Compare** Toolbar to view the first file you opened. By default, the Open File (Only) feature opens the earlier version.

3)   Use the *Zoom Window* tool to select and magnify the area of <u>Figure 33.2</u> that includes Point 1 and Point 2.

NOTE: When using the alignment feature, it is better to use **diagonal** points: this corrects the alignment in both the horizontal and vertical axes.

Figure 33.2 Setting Alignment Points
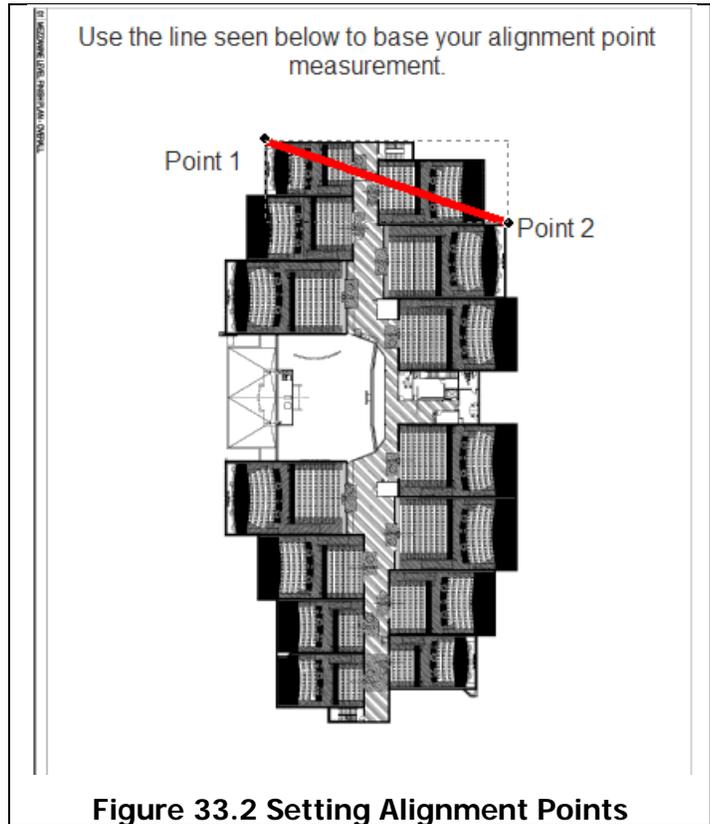
4) Click the *Set Alignment Points* button. The cursor changes to a measurement selection tool.

5) Left click on the start point and hold down the left mouse button down to magnify the point of contact for the image. You can move the point while the button is down. This assists with placement of the alignment point, as seen in Figure 33.3
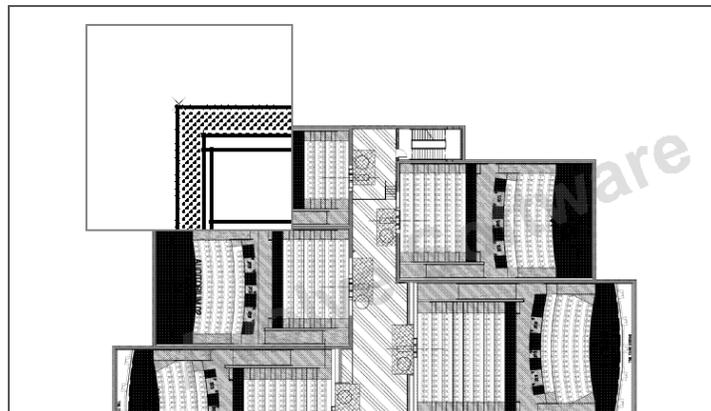
Figure 33.3 Set Alignment Tool (with magnification)

6) Release the left mouse button to set the first point.

7) Move the mouse across the top of the document (a blue line will display) and left click to select the end point (again holding down the left mouse button to magnify and releasing to set).

You have set the alignment points on the first file.

8) From the **Compare** toolbar select **Compare File (Only)** to view the second document you opened for comparison.

9) Select the exact same points of the segment as in the first file – in the same order.

10) After setting the second point, the *Clear Alignment Points* icon will display in the **Compare** Toolbar.

11) Select the *Overlay* option

• If you select any of the compare features from the drop down list (Overlay, for example), the points placed in the first file are pinned to the points placed in the second file. When alignment is active, both documents display at exactly the same scale (see Figure 33.4)
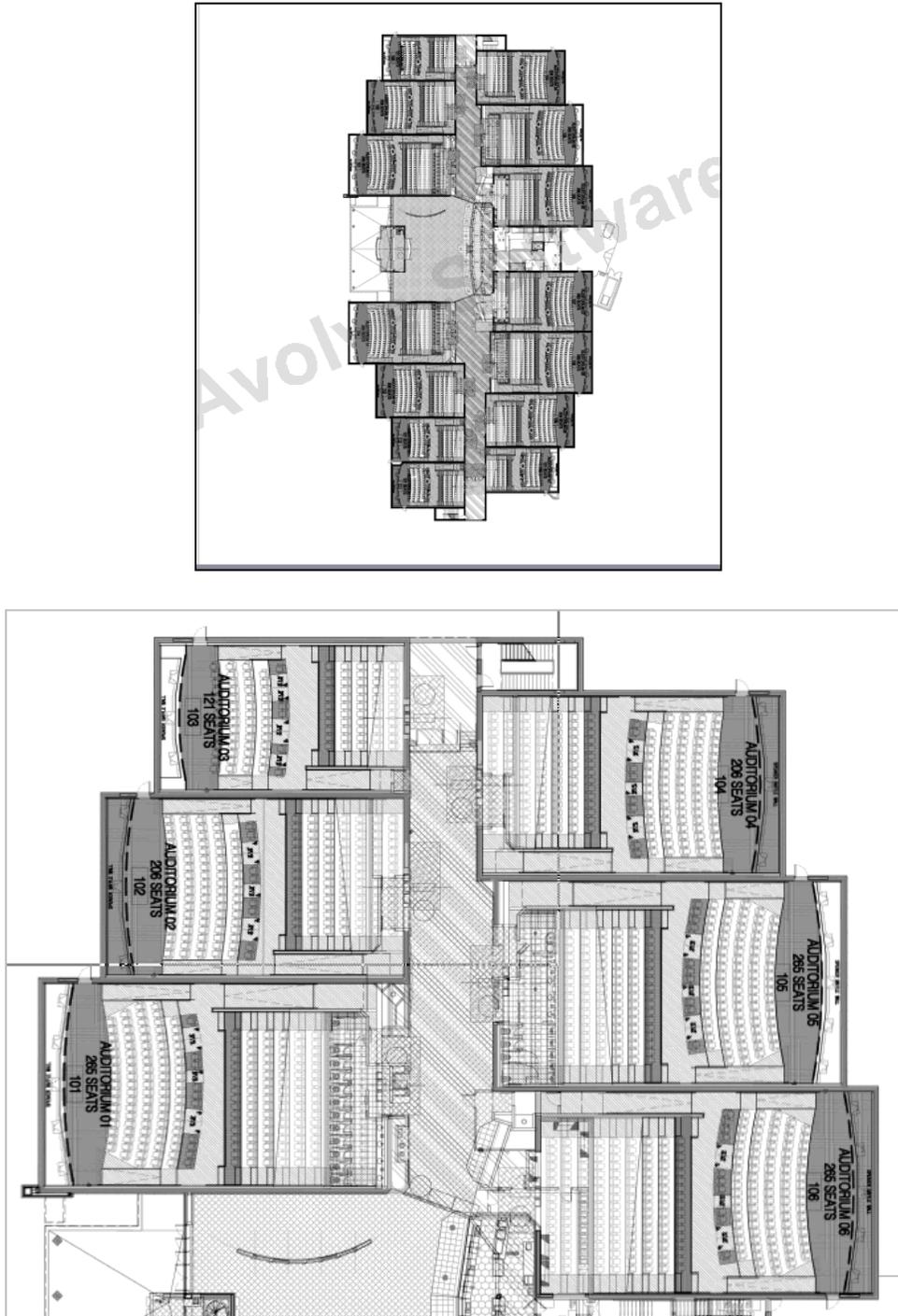
Figure 33.4 Example Result of Set Alignment Points

12) Once the alignment points have been configured, you can click *Clear Alignment Points*

at any time to remove your alignment points.

> **NOTE:** It is important to set the alignment points on both files in the same order - otherwise the files will not align properly. One symptom is the appearance of being flipped over, or upside-down. If this happens, clear the alignment points, and repeat the procedure with the correct order.

34 Use the Nudge Feature

This feature is useful for comparing two files that are slightly out of alignment.

1) From the **Compare** toolbar, select **Overlay**.

You can use either of two methods to nudge the compare file to align the files more precisely.

2) Select the Nudge Alignment icon to nudge the file by a single increment, OR

3) Use the HOT KEYS to move several increments at a time.

- CTRL + Left arrow = nudge position left
- CTRL + Right arrow = nudge position right
- CTRL + Up arrow = nudge position up
- CTRL + Down arrow = nudge position down

35 Markup – Additional Practice

This exercise provides the opportunity have some fun while practicing the markup skills you have learned thus far, using your imagination.

Open the drawing **plan layout1.dwg** Version 2, or another file as instructed. The instructor may indicate a specific file and assign locations on the file for creating markups to avoid overlapping by multiple users. This is your chance to show your best work. Keep in mind the following:

- You must include at least one changemark
- Zoom in and position before creating the changemark
- Use additional markup entities to communicate exactly what you mean
- Be creative: use hyperlinks, graphics, etc.
- Save your work.

36 Sort and Filter Changemarks

The Changemarks Panel includes sort and filter controls to simplify working with large numbers of changemarks:
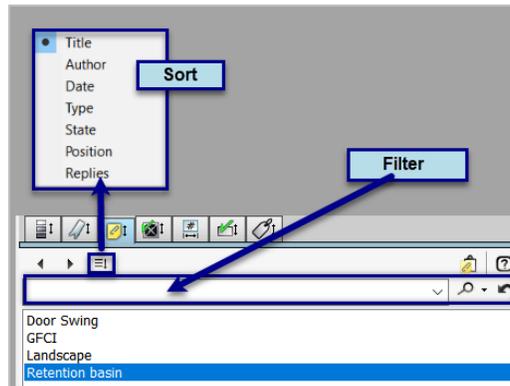
Figure 36.1 Changemark Panel – Sort and Filter

For additional information, see the online Viewer help for *Changemark Filters*.

37 Extract Changemarks

From the Changemarks Panel, you can access the Copy Changemarks dialog to copy the selected Changemark, or all Changemark information contained in a document to the Clipboard. This function captures the Changemark title, comment (text description), attached hyperlink (as text), and image (WMF bits) to the Clipboard. The resulting RTF stream may include both a textual and visual summary of the Changemarks, and can be pasted into another application, such as Microsoft Word.

1) Click the **View History** icon for the file **plan layout1.dwg**

2) In the resulting window, select *version 2* from the dropdown:

3) Click the **Markups** Icon [icon] select to **View** all Markups and click the **View/Edit** button.
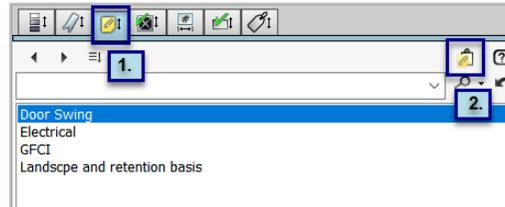
4) From the Changemarks Panel (1.), click the Copy Changemarks icon (2.).
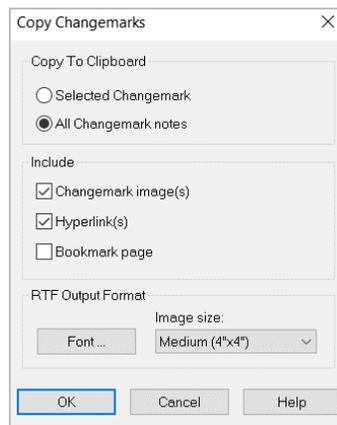
Figure 37.1 Copy Changemarks Dialog

5) In the *Copy Changemarks* dialog, select:

- All Changemarks - if you are filtering this will copy all changemarks currently displayed in the list

- Changemark Image(s)

- Hyperlink(s)

- Image Size: Medium 4x4

6) Click **Ok**

7) The system will copy the data to the clipboard. Open a blank Word document, right-click in the document and select **Paste**. shows an excerpt of the result.
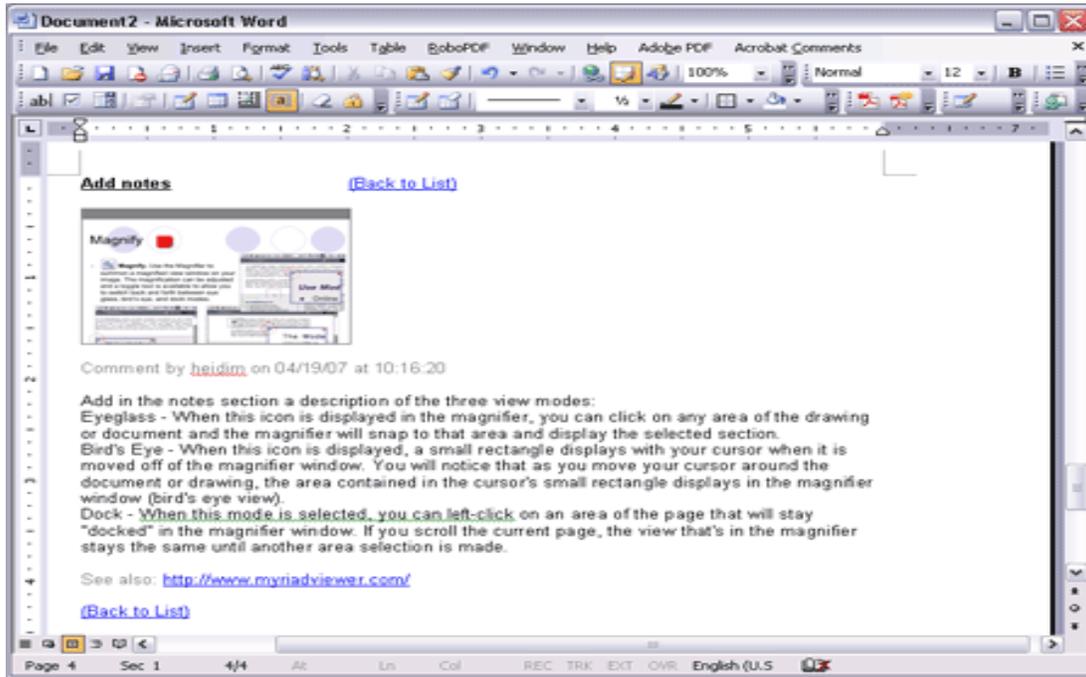
Figure 37.2 Changemark Information Pasted into Word

38 Publish Markups

You can publish markups from any file format, and output to TIFF or PDF format. This means that when the publishing action completes, the markups (as well as the currently set banners and watermarks) are included in the output file.

1) Click the **View History** icon for the **plan layout1.dwg V2** file from the ProjectDox folder view.

2) From the **Go to version** dropdown select "1"; then click the View Markups icon.

3) Click the **View** checkbox for the markup you saved previously and click **View/Edit**.

4) The drawing with markups will display in the Viewer.

5) Click **Publish** and select **Publish to PDF**.

6) The **PDF Publish Options** dialog will display allowing selection of features for the published file.
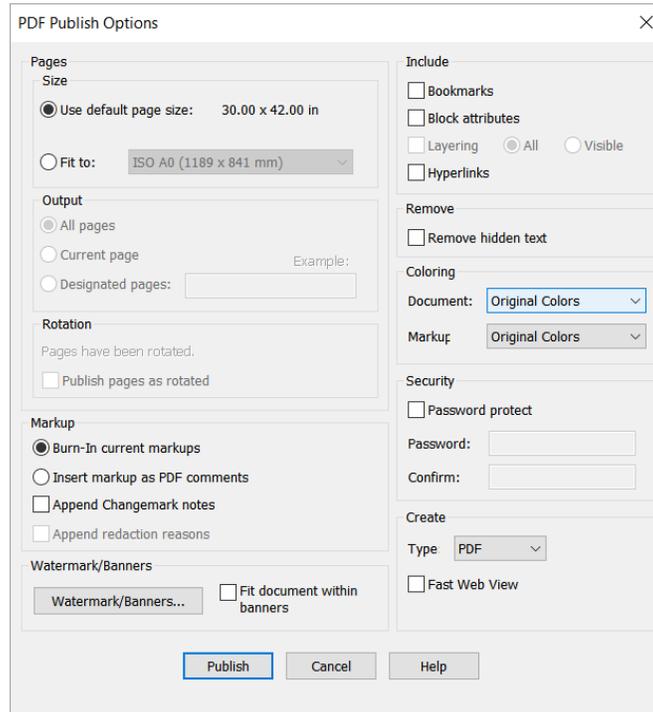
Figure 38.1 PDF Publish Options

7) Select Burn-in Current Markups and click Publish.

8) In the Publish Option dialog click Save to File and OK.

9) In the **Save PDF** dialog box, navigate to the desktop and click **Save**.

10) Close the window displaying the markup, using the **R**_ed X_ .

   - When a user opens a file that has been published with markups, both the markups and document are automatically visible. The user can view the text associated with a changemark by hovering over it with with the mouse.

11) As needed, close the dialogs for selecting markups to view/edit, and file history.

12) Open the PDF file from the desktop to see the markups.

39 Toolbars, Functions Menu, and Hot keys

The Viewer Online Help includes descriptions of the various toolbars and the Functions menu. To access, use the Search mode, and type "All Toolbars." The link will appear in the list of topics. Double-click to display.

Type "Hot Keys" in the search field to access the list and information about keyboard shortcuts.

40 Additional Material

The following sections provide additional learning resources and exercises for this course. The exercises may or may not be performed as part of the classroom activities. Your instructor will consider setup issues, classroom timing and instructional needs to determine if any exercises are appropriate for your class. These can be conducted independently at any time.

41 Consolidate Markups

You can copy all open markup entities into one new consolidated markup file. To do this:

1) Open a file in the Viewer that has multiple markup files. The files may have different owners.

2) Click **Review ·**

3) Select the markup files you wish to consolidate. You must open at least two markups files to use this feature.
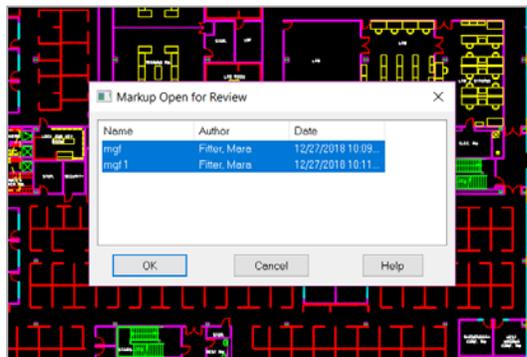
4) Click OK.

5) Click 🗋 and select **Consolidate Markups**:
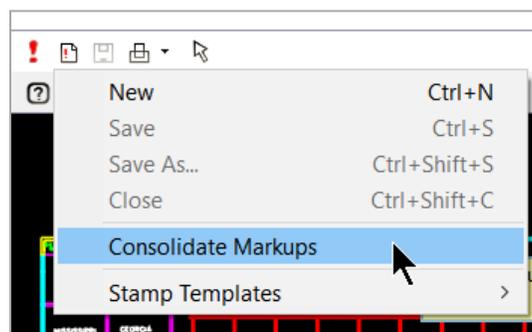
6)   A new markup file is created for editing, and all entities in the markups selected for consolidation are copied to this new markup file. All markup files that were opened for review are closed after the command is executed. The entities in the consolidated file retain their original author information and ownership does not change. You will be able to edit only those entities you own.

NOTE: Any markup entities that have been published to the file (burned in) are <u>not</u> included in the consolidated markup.

7)   Save the current consolidated markup. The name must be unique. The consolidate command cannot be undone - however, if you have not saved the consolidated markup, you can close it without saving.

8)   Once you have saved the consolidated markup you may delete the markup layer files that were combined.

a)   Open the markup list
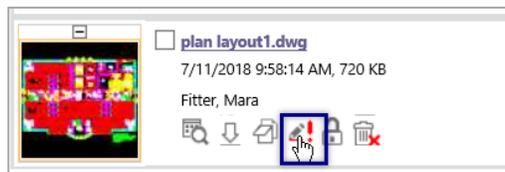
b)   Delete the individual files that were consolidated:
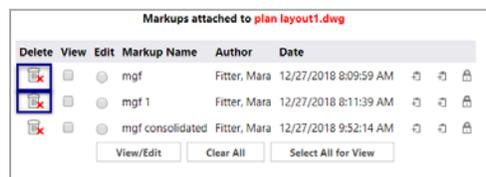
9)   You may now rename the consolidated file to your original name:

a) Open the consolidated file via the markup icon and selecting edit:

Markups attached to plan layout1.dwg

Delete	View	Edit	Markup Name	Author	Date			
🗑x	☐	⦿	mgf consolidated	Fitter, Mara	12/27/2018 9:52:14 AM			

View/Edit   Clear All   Select All for View
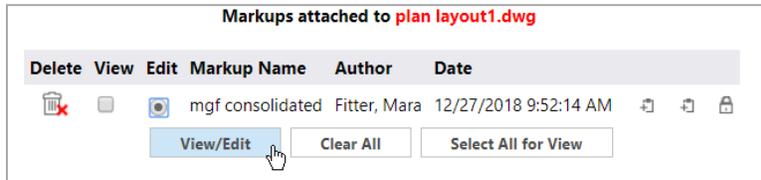
b) Click on the markup icon then select Save As…:
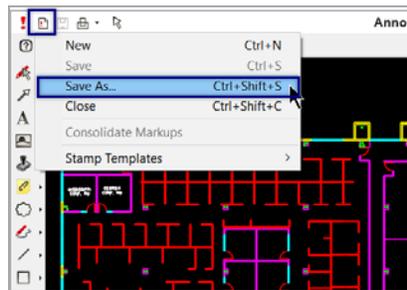
c) Save with the desired name (in the example, the original markup name), and close the file.

Save As ✕

Please input name:

mgf

OK   Cancel
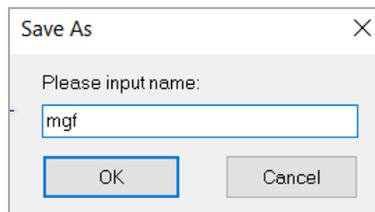
10) The final step is to delete the markup with "consolidated" in the name.

a) Click on the markup icon and select the file to delete.

Markups attached to plan layout1.dwg

Delete	View	Edit	Markup Name	Author	Date			
🗑x	☐	◯	mgf consolidated	Fitter, Mara	12/27/2018 9:52:14 AM			
🗑x	☐	◯	mgf	Fitter, Mara	12/28/2018 9:24:15 AM			

View/Edit   Clear All   Select All for View
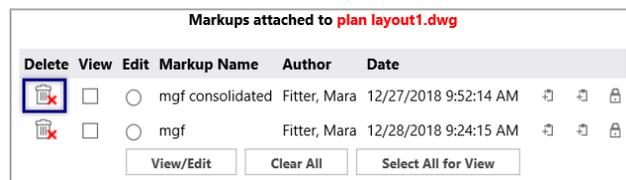
b) Your consolidated markup with the desired name remains.

TIP: Consolidating Markups is a simple solution when you have accidentally created multiple markups for the same file and version.

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42 Electronic Signatures

The Electronic Signature feature is designed to allow the placement of user-specific markup stamps (Signature items) on documents and drawings. A Signature Template markup tool is available from the Markup toolbar for item placement.
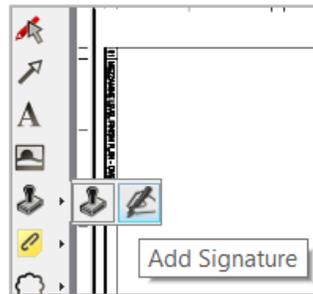
Figure 42.1 Signature Tool

Signature items that can be placed on documents and drawings include *Signature* images, *Initials* images, *Seal images*, *Name* strings, *Title* strings, and current *Date*. Signature image files (PNG) can be created through the Create buttons of the signature or initial item of the Set Signature Marks dialog. Optionally, users can scan their actual signatures, crop the images, and save the files as PNG, JPG, or BMP. Once created, these files can be set for use as signature items and placed on documents and drawings as any other markup entity. Additional information is available in the online help.

Signature Creation

The signature item is an image representation of the current user's signature.

To set a personalized signature item, you can either:

1) Click the browse button (…) to navigate to an existing file (PNG, JPG, BMP).

Or:

2) Click the **Create** button to create a new signature image item:

   d) In the *Signature Creation* dialog, select an available font name from the drop-down list. Only True-Type fonts available on the user's system are listed, with "Script" or "Hand" types of fonts listed first.

   e) Edit your name in the input field below as you would like it to appear on documents and drawings.

   f) A preview of how your signature item displays in the bottom area as you type.

   g) Click **OK** and then choose a location to save the image file as PNG.

h) When the location is determined, click **OK** to close the file path dialog. The new image preview displays in the settings dialog.

i)   If approved, select the **Accept as signature** check box to enable the **OK** button and save your settings.

For additional information about electronic signatures and related features, see the viewer online help.

43 Print a File

If allowed by your administrator, you can access the Print menu. To print the open image with the

default printer settings, click [printer icon] (hotkey + < P>). The Print dialog box contains standard print options, such as choosing a printer, giving a range of pages to print, etc. You can also select to print to scale options, view Print Preview, and set Banner and Watermark options. An option is available to print Changemarks information as an appended page.

1) If **Print Region** is selected from the **Print** menu, press the mouse on a starting point of the Viewer Tool and draw a rectangle on the area of the document that you would like to print.

The Print dialog appears when you release the mouse. Click [printer icon] on the toolbar and select **Print** from the submenu**.** The application will pull in your system's default printer.

2) Click the Print Changemark Information checkbox

3) Select the **Automatically Rotate for Best Fit** checkbox if you want ProjectDox to determine if rotating the image by 90 degrees will allow more of the image to fit on the printed page.

- Some older printers, and the PDF Distiller and Writer, may not properly invert print outs - and many file types print reversed (black background and white foreground). To correct the print out (white background with black foreground); enable the **Optimize for PDF/PostScript Printing** option in the Print Options dialog. When selected, this causes a bitmap of the current image to be sent to the printer, resulting in accurate print outs from the problematic printer or print driver. Note that enabling this option results in a slower print time and a larger print spool file. This option is persistent per printer.

4) Observe the **Print Preview** area of the Print dialog, to verify the area you wish to print is contained in the printable area of the page (indicated by the dashed blue line).

- If the print preview image does not display what you expect, study the textual output in the print preview panel. It displays the image's dimensions, the current scaling (e.g. "Fit to page," "1/50," etc.), the scaled output size (the image's dimensions multiplied by the scaling), the paper size dimensions, and the printable area size. Pay particular attention to the scaled output size compared to the printable area size; these are depicted, respectively, as the red and blue dashed lines in the preview image. Adjust the paper size (**Printer Setup** button) or scaling (**Scale** tab) as necessary to obtain the desired output.

5) Click **Print** to print the file if your computer has access to a printer.

44 Add and Edit Watermarks/Banners

You can add, edit, or clear print banners or the watermark if they have not already been defined by the ProjectDox Administrator. Banners are strings of information (date, time, page number, user name, etc.) assigned to a location on the document header and footer. A watermark is a semi-transparent character string that stretches from the lower left corner to the upper right corner of the printed or on-screen document. These settings are useful for displaying a document's classification to the Viewer Tool (e.g., proprietary, draft, etc.). In this exercise, you will add both a banner and watermark to the plan layout1.dwg file.

1) Click [icon] and select **Banners/Watermarks** (the button is also available from the Print Dialog).

2) Click to expand **Watermark**

3) Click on <blank> located below the **Watermark** heading and type "DRAFT" into the space.

 • Click **Font** to change the font by selecting a font name, style and size from the Font dialog box.

> **NOTE:** Any change in font style and name selection will be applied to all defined watermark and banner settings for the current document (you cannot define multiple fonts or styles per document). The Watermark font size is not affected by your font size selection. The Screen Banner is not affected by any Font setting.

4) Click **Ok**

5) Click **Print** [icon]

6) Notice the Print Preview Area

7) Click Watermark/Banners...

8) Expand the **Screen Watermark** and type "DRAFT II" over the <blank> area.

 • These settings are useful for displaying a document's classification to the Viewer Tool (e.g., proprietary, draft, etc.) and the values can differ from the values entered in the Watermark and banner location lines.

 • The On screen banner fonts are not affected by choices in the Font dialog box.

9) Click **Ok**.

10) The screen now shows "DRAFT II" and the printable document displays "DRAFT". You may need to move the dialog box to see the watermark, which may be very faint.

11) Click Watermark/Banners...

12) Select the **Screen Banner** and type *%.*

- Typing % into the field will result in a list of system tags that can be used to display information in the banner, watermark, etc.

- Selecting an item from the list will automatically include the preceding %

13) Click **Date.**

14) Click **Apply** and note the banner added to the file in the Print Preview Area.

15) Click **Top Left and** type *%Date, %Login, and %TotalPages* into three separate fields under this heading.

16) Click **Ok.**

17) Click **Print** 🖨 . If your computer has access to a printer you can click **Print** to print a hard copy - or you can look in the Print Preview can see text in the corner.

18) The result is seen in Figure 44.1 in a banner on the top left, where the variables are replaced with values from the system.

Figure 44.1 Print Example with Banners

45 Measure Magnification Tool

Calibrate and Measure with the Magnification Tool

- For certain formats (BMP, PRT, PDF, TIF, and CMG), when using measurement related tools, and you select a point on the image, a magnification window automatically pops up under your

mouse cursor. This zoom window allows you more accurate placement of the selection point for measuring, counting, and aligning.

- While the left mouse button is held down, you can adjust the position of the point under the magnifier. When you release the left mouse button, the point is committed and the magnifier goes away so that you can drag your measure tool to the next point location.

- If you release the left mouse button while it is outside the magnifier rectangle, you are indicating that you want to cancel the attempt to place the point.

- The magnification level used depends on the file type. If it is entirely raster, then the magnification level is 1 source pixel per screen pixel. Otherwise the magnification level is 1 drawing inch = 1 screen inch.

- If the current view is already zoomed in beyond the above magnification levels (100% zoom or greater), the magnifier does not display.

- The magnification tool used in measure does not contain all the features of the Brava magnifier tool located on the viewing toolbar.

Using the Auto-Zoom Window:

- When selecting picking points for calibration, measurement type, and measurement count, an Auto-Zoom window will appear when the drawing/document is zoomed out. This allows for exact placement of your start and end points for precision accuracy.

- An Auto-Zoom window appears when you pick a point by depressing the left mouse button.

- The Auto-Zoom window remains open until you let up on the left mouse button.

- You can place the measurement point more accurately while the Auto-Zoom window is active.

- While in Auto-Zoom mode, you can move the mouse wheel up and down or press the +/- keys on the numeric keyboard to zoom in and out.

- If the area inside the Auto-Zoom window does not include the spot you intended, you can abort the placement of the point. Abort by moving your mouse outside the Auto-Zoom window and then release the left mouse button.

- The Auto-Zoom window shows you the drawing at a 1 to 1 ratio with the screen, meaning, 1 inch of drawing is drawn at 1 inch of your monitor.

- If you are zoomed in to the image far enough that the 1 to 1 ratio is the same (100% or closer) between the current view and the Auto-Zoom window view, then the Auto-Zoom window does not appear.

46 Magnifier Tool

Magnifier

The Magnifier tool summons a rectangular "magnifying glass" in your viewing window. Use

this tool to zoom into smaller areas on a larger image.

Adjust the magnification by pressing on and dragging the zoom adjustment handle

on the right side of the rectangle window. Dragging upward increases magnification while dragging downward decreases it. You can also adjust magnification by right clicking in the window and dragging up or down, or by using the mouse wheel up and down to zoom in and out.

Move the magnifier by clicking and holding the left mouse button on the magnifier window,

then dragging.

Resize the magnifier by clicking and holding one of the four corner resize handles and

dragging.

Close the magnifier by clicking the red "x" in the upper right corner.

Toggle the magnification behavior (eyeglass, bird's eye, or dock) through the small icon in

the upper left corner of the magnifier window. Click the icon to toggle between the behaviors.

Eyeglass - When this icon is displayed in the magnifier, you can click on any area of the

drawing or document and the magnifier will snap to that area and display the selected section.

Bird's Eye - When this icon is displayed, a small rectangle displays with your cursor when

it is moved off the magnifier window. As you move your cursor around the document or drawing, the area contained in the cursor's small rectangle displays in the magnifier window (bird's eye view).

Dock - When this mode is selected, you can click on an area of the page that will stay

"docked" in the magnifier window. If you scroll the current page, the view that's in the magnifier stays the same.

47 Redaction

See the online help for information about the Redaction feature.

48 CAD Attributes Panel (CAD files only)

The CAD Attributes panel displays the metadata that is contained in CAD drawings, in a hierarchic tree view with expandable/collapsible levels.

If an attribute contains a child element, it can be expanded by clicking on the plus symbol. If you click on an attribute contained in the list, you are taken to that attribute location, shown at the view state that was established when the attribute was added.

This attribute information can be useful for engineers, architects, draftsmen, and many other professionals who use CAD systems to associate an abundance of information with a set of lines inside a drawing, which represent real world objects. Contractors and other users can retrieve this information while building the design, or when looking at both the real-world object and the CAD drawing.

Review CAD Attributes

You can open the CAD Attributes panel at any time through any of the following methods:

- Opening the Task Pane and click the CAD Attributes Tab (as shown in Figure 49.1)

- Using the hotkey <Ctrl>+<Alt>+<A>

- Selecting Show Pane > CAD Attributes from the right mouse button menu
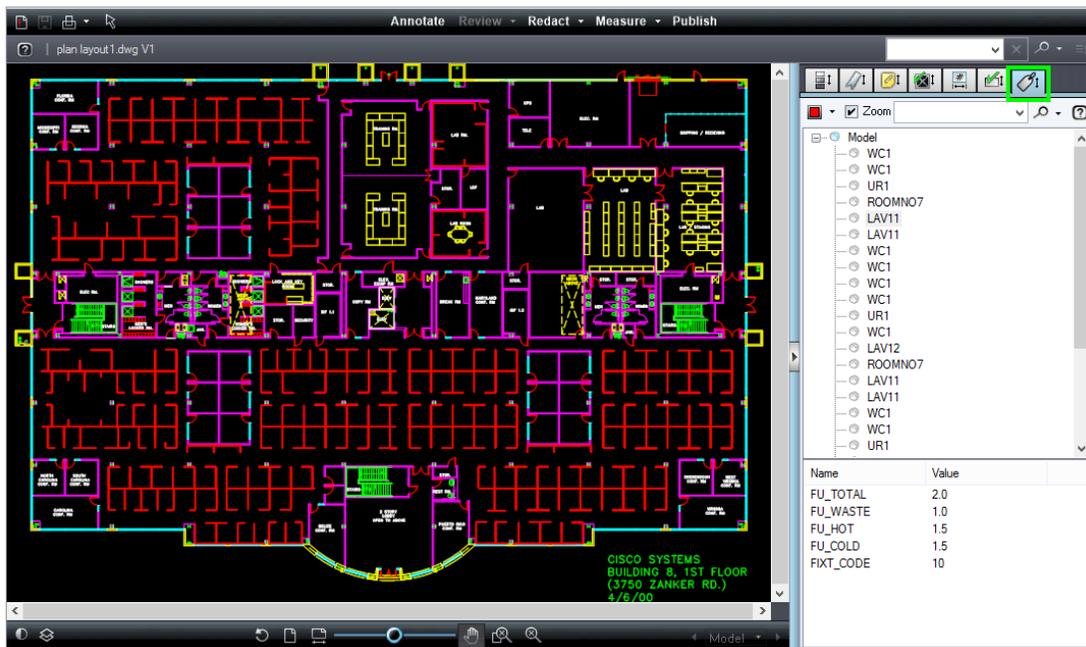
Figure 48.1 CAD Attributes Tab

Clicking on an attribute contained in the list highlights that attribute in the viewing window with the currently set color.

The CAD attribute pane provides the following tools to allow you to customize the current view:

Set color: Use the color selection button to change the color used to highlight the currently selected attribute.

Toggle Zoom: Click the Zoom check box to turn this feature on or off. When checked, the view window jumps to the currently selected attribute every time you click on a different attribute in the list.

Search Attributes: Use the search input field to type a search term. Brava! matches any partial string

of the attribute names and will expand the tree as needed to show the results. The first resulting title is highlighted so you can select and view that attribute. Click the search icon, or hit <Enter> to go to the next match.

The drop-down arrow of the search tool provides filtering options to Include Categories and/or Include Name/value Pairs in your search results.

If you click on an attribute contained in the list, you are taken to that attribute location, shown at the view state that was established when the attribute was added:
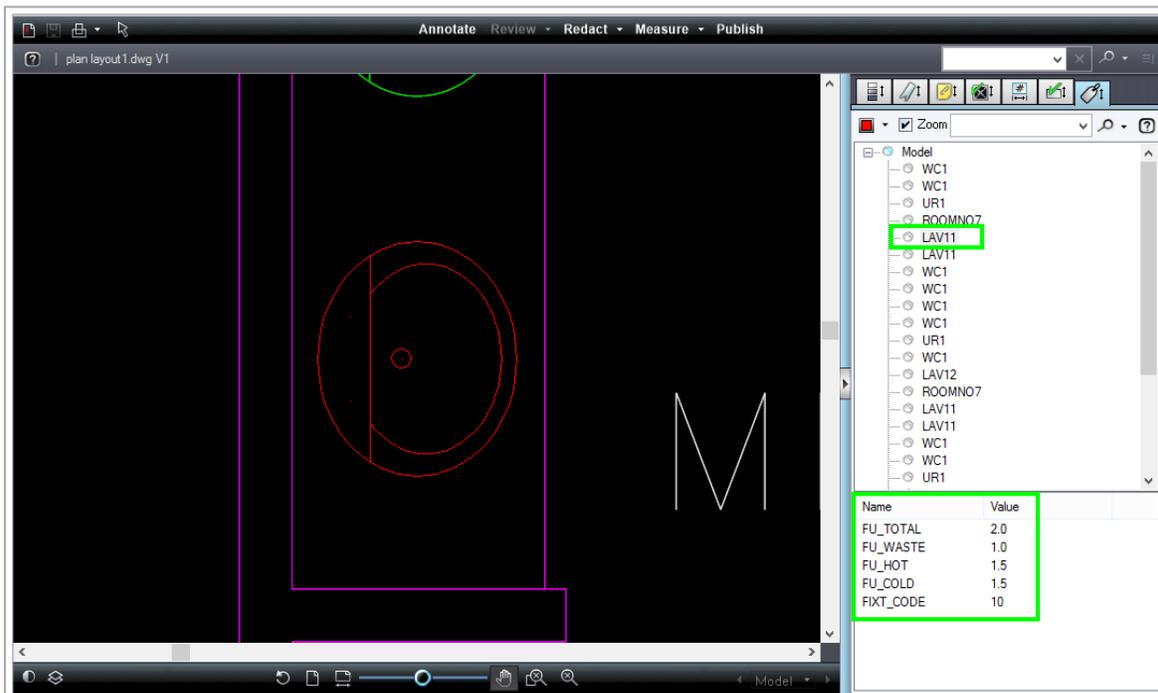
Figure 48.2 CAD Attributes – Click and View State