
Lab 1

The Interface


Getting Started Using





In order to perform the exercises in this lab manual, a file of sample documents has been provided. These files will need to be accessible while using Bluebeam. Take the time now to download and save the files in a location that you will remember and that is easy to find.

Opening the Software

Follow these steps to open Bluebeam Revu eXtreme 20.

1. Bluebeam Revu eXtreme 20 can be accessed by simply opening the PDF document you wish to use in Bluebeam. To do this, navigate to where the document is saved. Right click on the document and select **Open with...**, and then  **Revu**. If you have set Bluebeam as your default PDF viewer, you can simply open the document.

Note: It is often convenient to open multiple documents at once. Multi-select the files from their location to open them all at once. The documents will open in Bluebeam, each in separate tabs, much like a web browser.

Another option for opening Bluebeam can be to open it without initially opening a document. From your desktop, click on the *Windows* button  and find **Bluebeam Software**, then scroll down to **Bluebeam Revu eXtreme 20**  **Bluebeam Revu**, or simply type **Bluebeam** into the search field to find it. Once the software is open, select **Open** from the **File** menu on the **Menu Bar**. Navigate to where the document is saved, and select the document(s) you wish to open.

A set of files was provided with this manual. These files will be used throughout the manual. We will commonly refer to these files as the sample files as they are sample material provided with which to practice the tasks being explained. You will want to save those some place that you can easily access them throughout the manual.

Vector vs. Raster

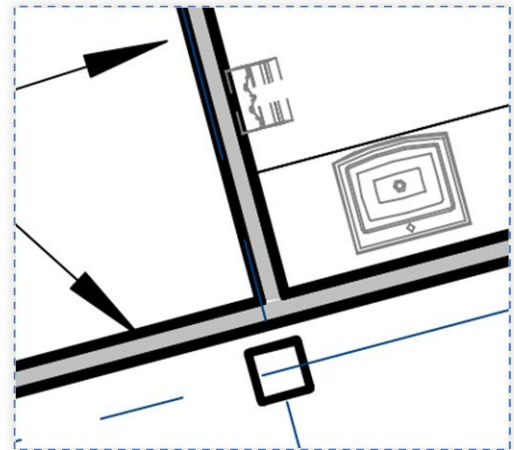
It is extremely important to understand the difference between vector data and raster data and how it is used in the documents with which you will view and interact. Bluebeam can use both, but there are important distinctions.

Vector data is made up of lines, curves, points, and paths that are generated by mathematical formulas in digital space. The content can be scaled infinitely.

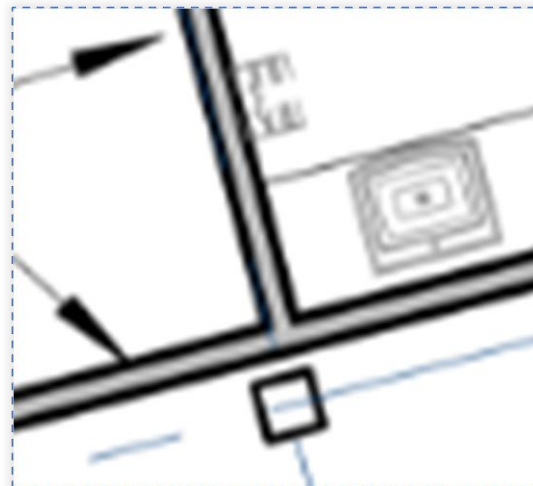
Raster data is made up of pixels. Each pixel has associated data that is represented in the form of a grid matrix of cells in digital space.

Most documents that were created electronically will be published in vector data unless they have been downgraded or published in a raster format. As well, if a physical document has been scanned, the photographic image of the document will become raster data.

The simplest way to find out whether you're dealing with Raster or Vector data in Bluebeam is to zoom in on the content. If you have a vector document, the content will appear sharp.



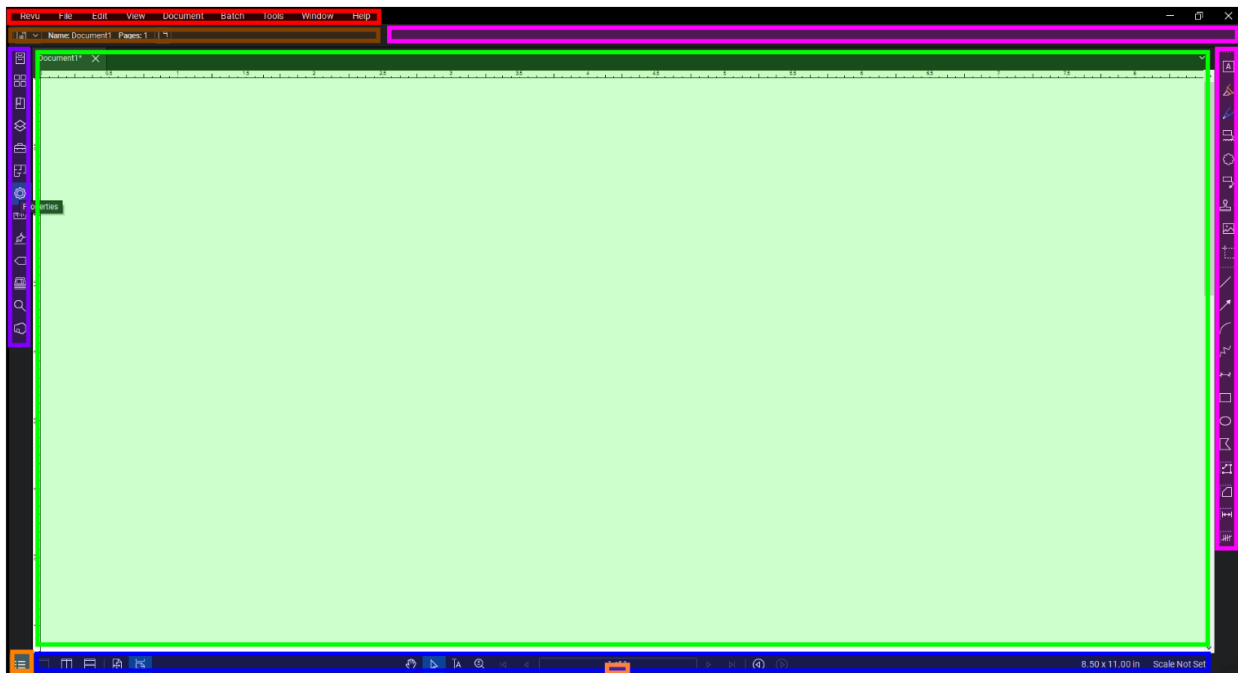
Rasterized data will appear pixelated.



Interface

There are a few main areas of the Bluebeam interface. See the color-coded screenshot below for the areas referenced:

- 🔄 **Menu Bar**
- 🔄 **Navigation Bar**
- 🔄 **Panel Access Area**
- 🔄 **Toolbars**
- 🔄 **Markups List**
- 🔄 **The Main Workspace**
- 🔄 **Properties**



Compare & Overlay

In essence, these two functions accomplish very similar objectives in different ways. Both allow us to easily identify the differences between two documents or revisions.

Compare Documents

Revisions and changes to construction drawings can happen frequently. In Construction Management, it is extremely important to ensure that all necessary parties are informed of any changes to the drawings and that all contractors are working off the most recent revisions.


When revisions are issued by the design team, it is important to understand what has been revised. Relying on clouds placed on the drawings by the design team will not always guarantee that all impacting changes are identified. The **Compare Documents** function in Bluebeam Revu allows the user to easily compare a revised sheet to its superseded sheet, automatically identifying all changes.

1. Navigate to the sample documents provided and select **Lab 2 A112**.

For our purposes, this sheet will be considered a current version that will be compared to a new revision that has been issued.

2. To begin the document comparison, from the Menu Bar, select the Document menu, then select  Compare Documents...

This will open the **Compare Documents** dialog box. The **Document A** and **Document B** sections are for selecting the documents and/or sheets to be compared.

3. The **Document A** section should be the document currently being viewed. In our case, we will simply view the only page in the document.
4. In the **Document B** section, navigate to and/or select the second file to be used in the comparison. For our purposes, we are simulating a scenario where the design team has issued a revision to this particular sheet, which we will now compare against the current revision. Click the open the ellipses button () and navigate to the sample documents provided and select **Lab 2 A112.REV.01**.

5. Leave the defaults for all other selections and click 

Notice that the split vertical view opens automatically. A new file has now been created with a suffix `_Diff` which is showing a clouded and shaded area over any differences between the two documents.

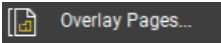





** Perform a screen shot and save to your computer.*

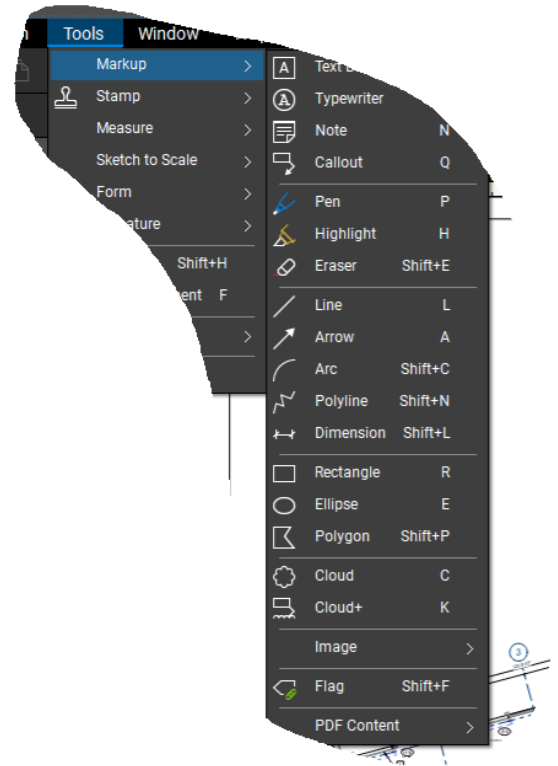
Overlay Pages

Now that you have worked with the Compare Documents function, you will use the Overlay Pages function. In essence, these two functions accomplish very similar objectives in different ways. Both allow us to easily identify the differences between two documents. However, with the overlay function, rather than clouded and shaded areas, the differences will be identified by the color of the content itself. When the documents are overlaid, Bluebeam Revu will create new layers for the vector content with new colors. Any place the layers overlap, the content will look **black** as it normally would. Where the content does not overlap, the content will be shown in its new color.

Let's begin:

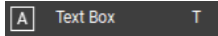
1. If it is not already, open Bluebeam Revu or close any files that may be open.
2. From the Menu Bar, select the Document menu, then select  Overlay Pages...
3. Navigate once again to the sample documents provided and select **Lab 2 A112** as the first document for the overlay.
4. In the Add Layer dialog box, leave all default settings and click  OK
5. Next in the Overlay Pages... dialog box, click  Add to select another document.
6. Navigate to the sample documents provided and select **Lab 2 A112.REV.01**.
7. In the Add Layer dialog box, leave all default settings and click  OK


1. First navigate to the second page, sheet A111, FLOOR PLAN FIRST FLOOR.
2. From the Menu Bar, click Tools and hover over Markup to see the options of markup tools as shown here. Note that many of the tools in this list are also available on the toolbars previously added in Lab 1.



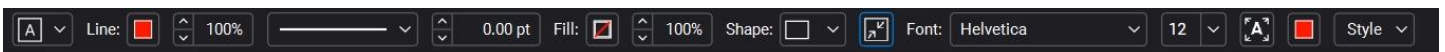
Text Box

3. The first two tools in the list are Text Box and Typewriter, which are very similar in that they will insert text as an annotation. Click





4. You'll find your cursor changes  Click and drag to create the box in which you will add text. Place the text box in the TRAINING 3 room 163, and then type the following: **Movable chairs to be used for flexible room arrangement.**

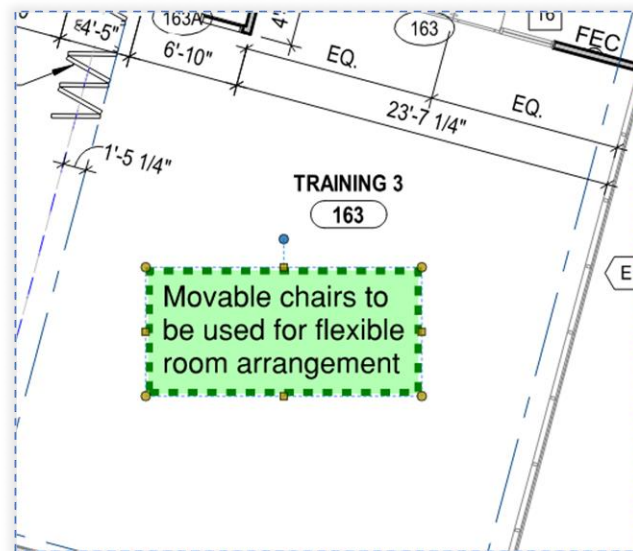
In the top-left-hand of the interface, just below the File toolbar, will appear the Properties toolbar, containing some of the most common customizable properties for the object.




You can also find the full options for properties in the Properties Panel by selecting the properties icon  from the Panel Access Area.

5. Change the Line Color to **Dark Green** and Line Width **3.00**. Then, set the line Style to .
6. Set the Fill Color to **Green** with a Fill Opacity of **30**.
7. Highlight the text in the box and change the Font Color to **Black**.
8. Click the Autosize Textbox button () in the Properties toolbar.

9. Your Text Box should look similar to that shown here.



Typewriter

The next markup tool in the list is the **Typewriter** tool (). While this is similar to the **Text Box** tool, both will create a box with text, it is created in slightly different way. Whereas with a **Text Box**, you had created a box first, constraining your space to type text, with the **Typewriter** tool, you will simply click anywhere you would like to begin typing.

10. Select the **Typewriter** tool and then click in the **SHIPPING/RECEIVING** room 152.

11. Begin typing the following: **Storage Shelving**.

12. Press the Enter key, and continue typing: **ULINE item H-8613**.

13. Press the Enter key, and continue typing: **2 rows of 2 units each**.

14. Change the **Line Color** to **Dark Blue** and **Line Width** to **3.00**. Then, set the **line Style** to 

15. Set the **Fill Color** to **Cyan** with a **Fill Opacity** of **30**.

16.Highlight the text in the box and change the Font Size to **10**.

17.Your text box should look similar to that shown here.



Note

A **Note** can be useful if the annotation desired is longer than you care to include in a box (i.e. pages from the specs, or building code language). With a note, a small note icon (📄) will be shown on the document, with a text field appearing only when the icon is clicked.

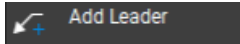
18.Click on the **Note** tool (📄) and click to place the note in the **STUDIO/PODCAST EDITING** room 153.

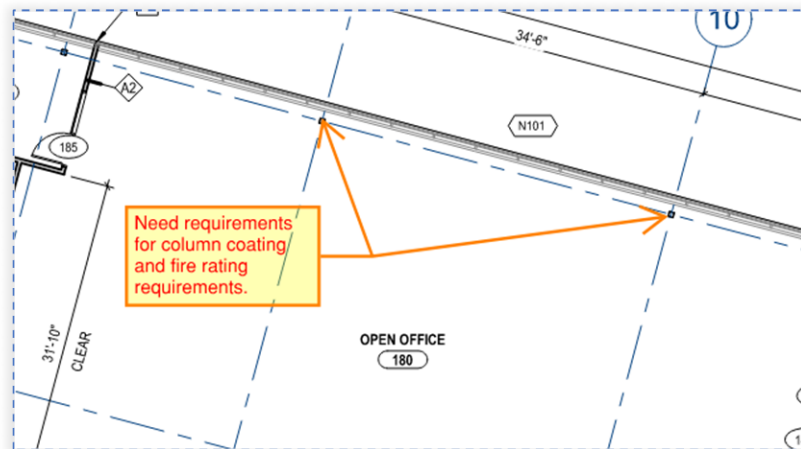
19.In the **Note** text field, type: **Need to insert specifications for technology equipment requirements here.**

Callout

A **Callout** is comprised of an arrow leader and a text box. An extremely common markup item in the construction industry, it is useful as the arrow can be used to clearly identify the subject of the annotation with the text providing clear explanation.

20.Click on the **Callout** tool (📄➔).

21. Locate the column at the intersection of column lines 9 and H. Click on the edge of the column to locate the head of the arrow. Then move your cursor down and to the right, toward the center of OPEN OFFICE room 180, and click again to locate the text box. In the text box type: **Need requirements for column coating and fire rating requirements.**
22. Hit the **Esc** key and then click on the **Callout** object. Note that there are a number of grips you can use to resize and reposition both the text box and the arrow.
23. Right click on the **Callout** object, and select . Place the new arrow leader on the column at column lines 10 and H.
24. Reposition the arrow leaders such that both connect to the right side of the text box.
25. Using the **Properties** panel, change the **Line Color** to **Red Orange**, the **Fill Color** to **Yellow**, **Fill Opacity** to 30, and the **Line Width** to 2.00.
26. Your callout should look similar to that shown here.



Lab 4

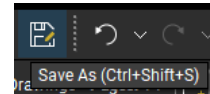
Field Use

Site Logistics

In Lab 3 Tools, you learned about some of the many Markups tools available in Bluebeam. An extremely common application of these tools is in creating a visual Site Logistics Plan.

If it is not already open, follow the directions to open Bluebeam. From the sample documents provided, open the **Lab 3 CD Drawings**.

- ☑ Immediately perform a **File→Save As**, or simply select the command button from the toolbar.

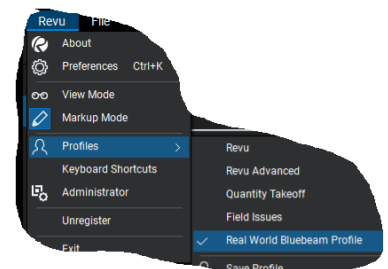


- ☑ In the File name: field, enter **Real World Bluebeam Revu – (your name) Lab #4 CD Drawings**.

- It is always a good idea to save your project documents in a dedicated file folder. So browse to a folder of your choice to save.

Note: After you finish saving to the hard drive as described in these instructions, it is *also* a good idea to save the file to a flash drive and/or other location as well, ensuring that you have it saved in at least two separate locations.

1. Confirm you are still on the correct profile by clicking in the very top-left-hand corner on **Revu**, then hover over **Profiles** and confirm you are on the Real World Bluebeam Profile, indicated by the checkmark.

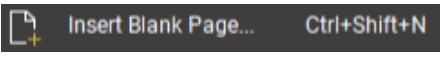


2. In a web browser, navigate to earth.google.com and search **860 Dolwick Drive, Erlanger, Kentucky, 41017**. Resize and reorient the view to grab the entire jobsite. Take a screenshot of the Google Earth image. Depending on when the images have updated, it should look something like the example shown here.

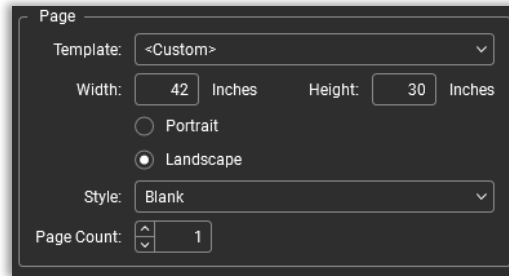
Note: If these steps for creating the page from Google Earth are not possible, skip ahead to the *Alternate Option* after step 9.



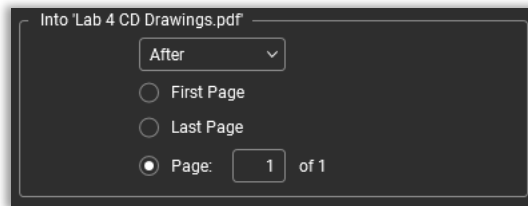
3. Open the Thumbnails Panel from the Panel Access Area and click on the Title Page.

4. Right click on the Title Page and select  Insert Blank Page... Ctrl+Shift+N

5. In the Insert Blank Page dialog box, we will insert a page the same size as the others in this drawing set. In the **Page** section enter the following:



6. In the bottom section, enter the following:



7. Next paste the screen shot previously captured from Google Earth, in the center of the blank page leaving a small white border around the image.
8. Right click on the image, hover on **Alignment**, and then select **Center in Document**
9. In order to keep the image where it is now placed, serving as a background for further markups, we must **Flatten** the image. Right click on the image and click **Flatten**

Alternate Option

If you are not able to create the page using an image taken from Google Earth as described in the preceding steps, one has been provided in the sample documents.

- i. Navigate to the sample documents provided into the **Lab 4** folder and open the document named **Lab 4 Site Logistics Insert Page**
- ii. Open the Thumbnails Panel from the Panel Access Area and right click on the page thumbnail, then click **Copy Pages**
- iii. Now go back to your Real World Bluebeam Revu – (your name) Lab #4 CD Drawings document and right click on the Title Sheet (first page) thumbnail and select **Paste Pages**