KENT STATE UNIVERSITY

Information Services

ADA Reader Accessibility In Acrobat Files

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OVERVIEW

If a document has been created in word and saved or converted to a PDF file, additional hidden characters may be present in the document that may require additional scrutiny in making the PDF accessible to blind and visually impaired users of screen reading technology. Though the assistive readers do not always interact perfectly with all documents, many simple steps can be taken to help in providing the best possible access to the documents.

There are several items that need to be addressed in the accessibility of the document to assure the reader will capture all of the data in the document, and ignore any extraneous items that may be included due to the original document technique or conversion to a PDF format. Each of the following items need to be properly prepared to create an easily readable document.

1. Document Properties
2. Content Type (text, figure, heading level, table, etc.)
3. Reading Order
4. Bookmarks

The following steps will aid in updating a current PDF file to be accessible by assistive reader software. Using the tools built into Adobe Acrobat Pro, the document can be easily edited.

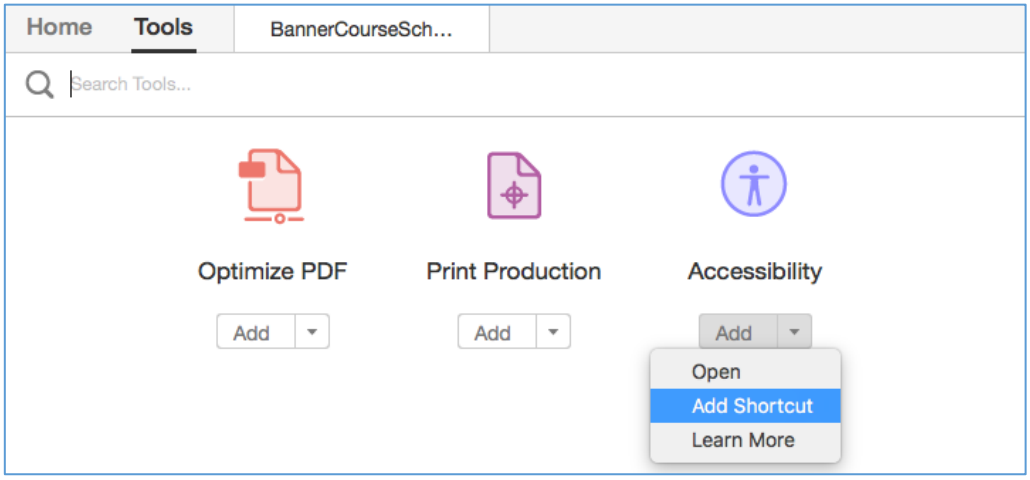
EXPORTING TO ADOBE PDF

Though creating a PDF document from another application may differ in details, most often one of two options will be available. The PDF document can usually be created by using a command of **Save As**, or **Export**, and selecting the alternate document type. It is important that the new document is created and saved in an appropriate location.

ACROBAT LAYOUT

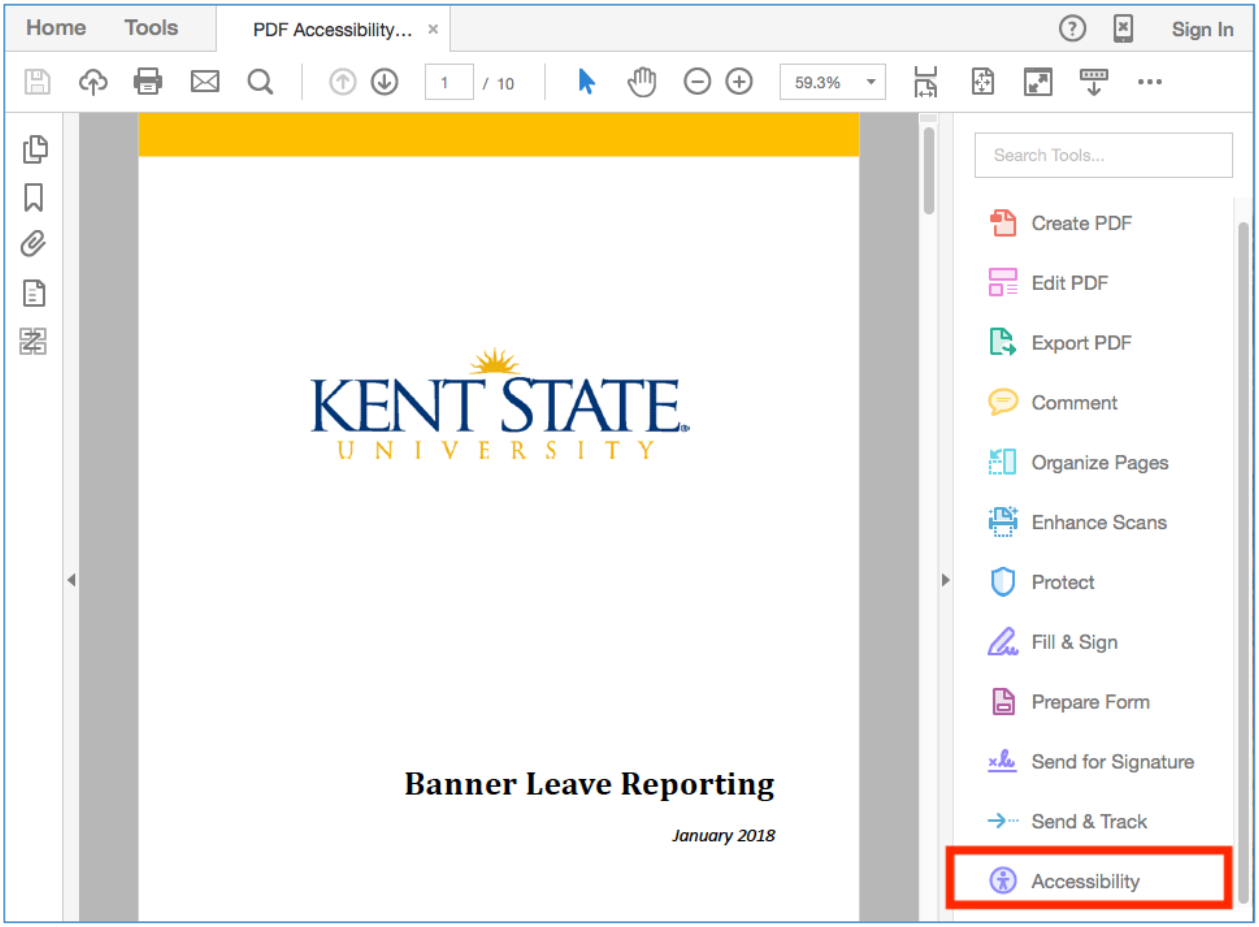
When the document is opened in Acrobat Pro or DC, the page will look similar to the following. Along the top are navigation tabs, including Home, tools, and any documents that are currently open. In the open document page, a toolbar across the top displays most frequently used tools. On the left had side are View Option selections for the document. On the right is a list of tools commonly used with Acrobat. This list may be amended using the Tools Tab.

To make the document reader accessible, it will be helpful to access the tools tab and add the Accessibility tool to the menu on the right.

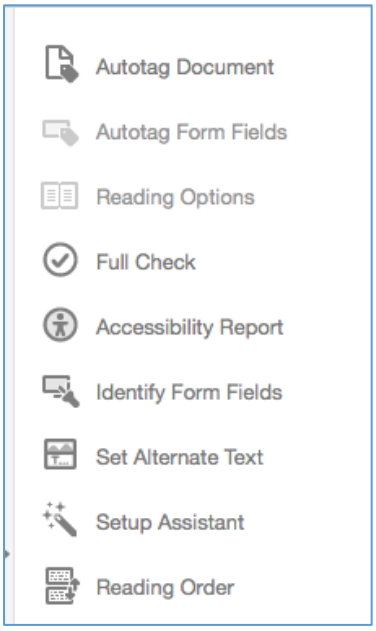


DOCUMENT PROPERTIES

Opening the document via the Tab at the top, the Accessibility Tool can be launched to edit the document.



This will display the accessibility tools in a Tools Menu to the right of the working document.

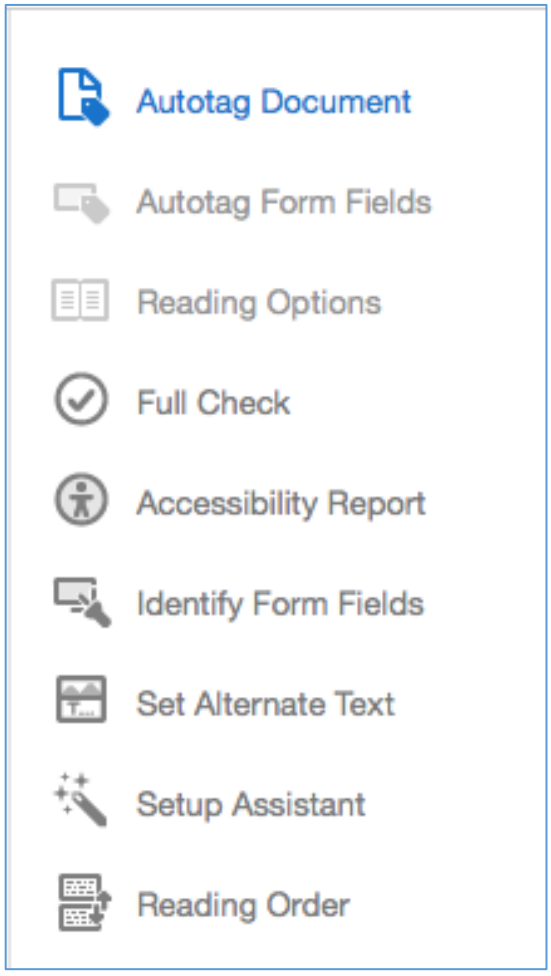


AUTOTAG DOCUMENT

Assistive technologies are able to recognize and translate a variety of content that is often used in documentation to more clearly transfer data to the reader. The document, however, must have the different types of data coded or “tagged” so that the software can accurately decipher the information.

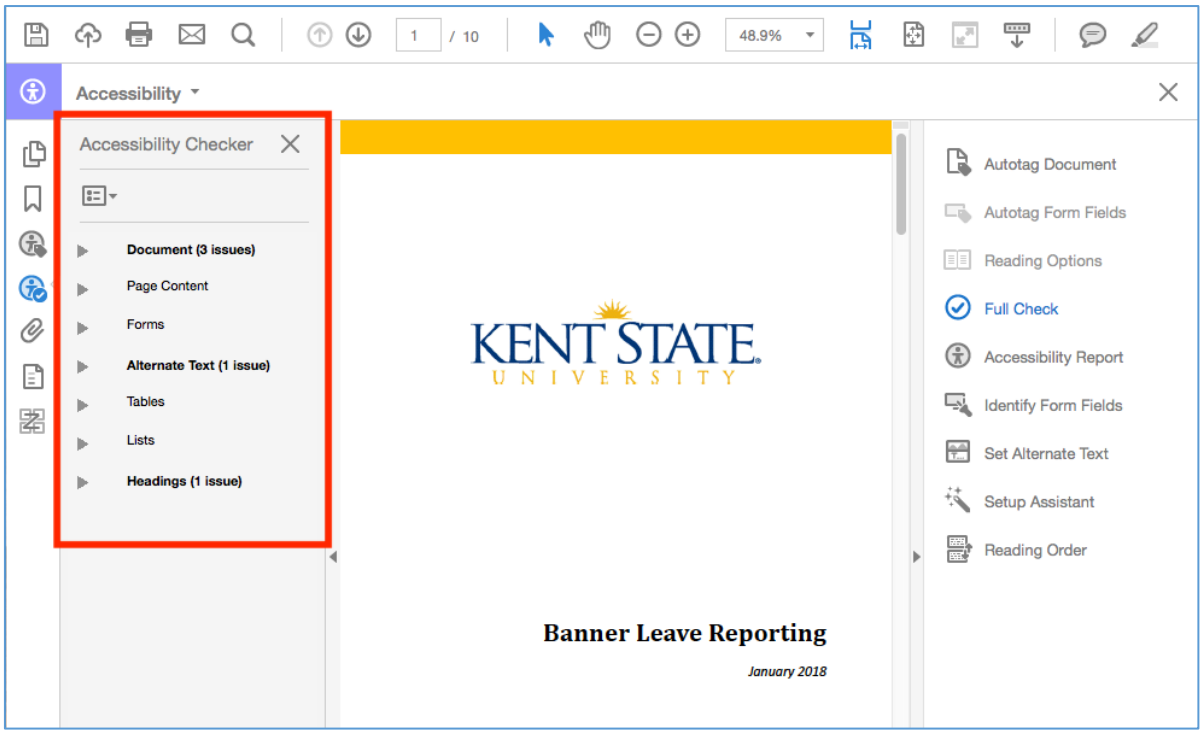
Items such as figures, tables, heading levels, and text must all be properly coded in order for the assistive reading system to delineate and deliver the information correctly to the user. The updated version of Adobe Acrobat offers several tools to make the addition and editing of the data coding simple.

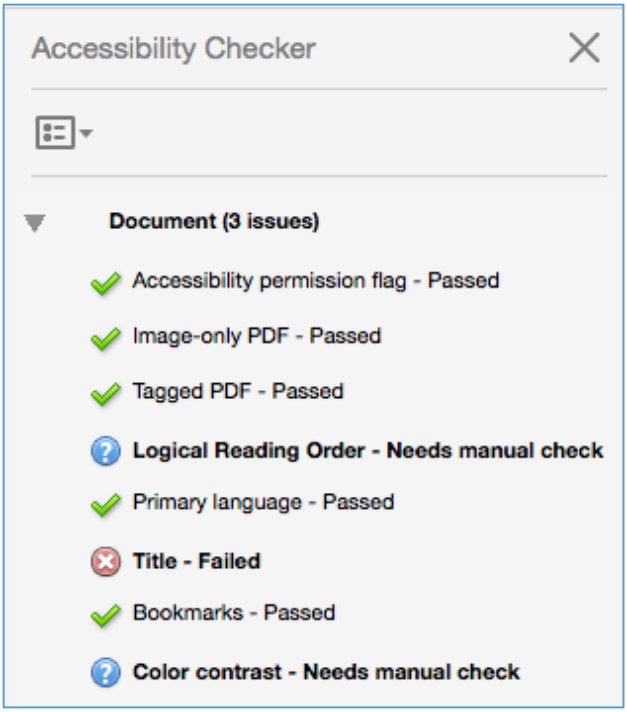
With the document converted to a PDF, it will need to be reviewed in its entirety to add or update tags to appropriate types or levels. One of the accessibility tools built into Adobe Acrobat is the **Autotag Document** option which will remove tags from the original document and update tags based upon the best assessment of the program. This usually offers the best starting point and reduces the number of manual edits to be made. The document will still need to be reviewed and updated.



ACCESSIBILITY CHECKER

The next step in making the document accessible is to run the **Full Check** tool to assess the document as it is and to generate a list of items to review which may need attention.



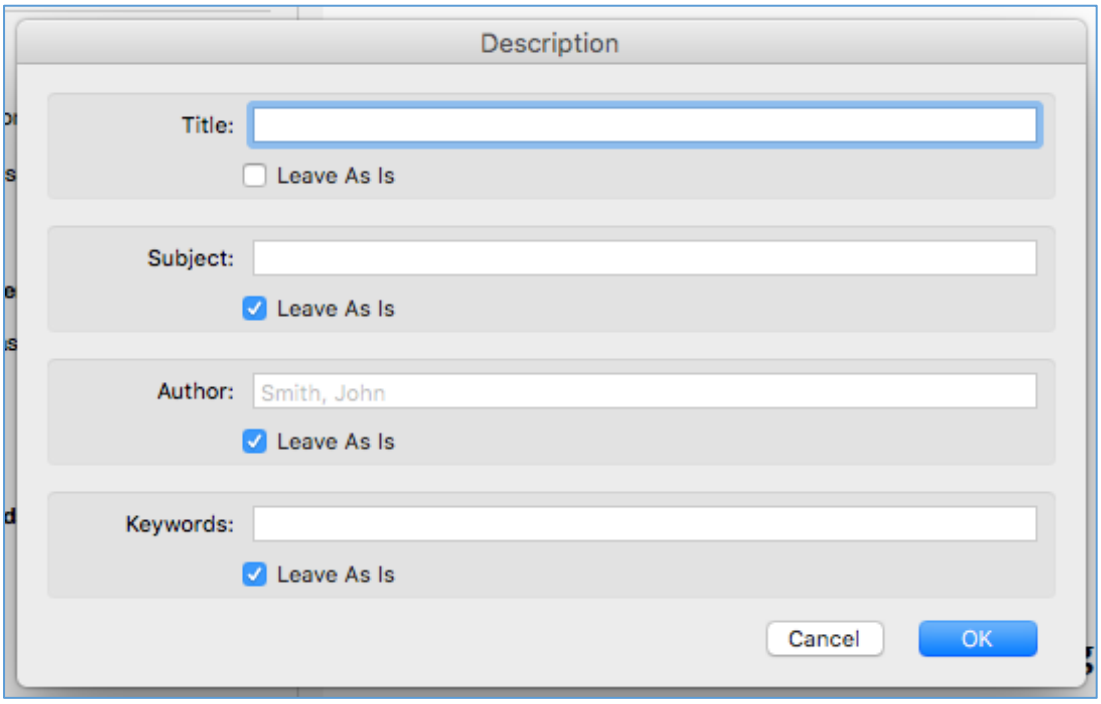


Items noted in bold have some issues which need reviewed. Clicking the arrow next to the bold item will reveal a dropdown list of the issues. If a green checkmark is shown, the item passed the check and is acceptable. A blue circle with a question mark, notes an item that will need manual review for accuracy. An item with a red circle with an X needs updating.

The checker will discover potential problems, but not always order, which will be discusses separately.

In most cases the “Title-Failed” item will need attention, as the **Title** of the document needs to be entered for use of the assistive reader, and is a different object from the document **File Name**.

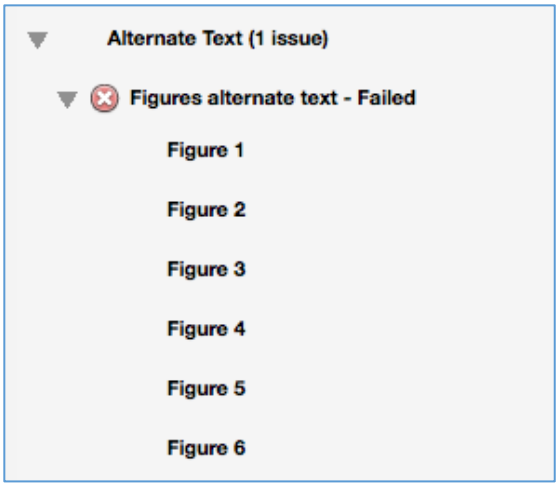
Document Title



Clicking the check box to remove the mark for "Leave As Is" allows for entry of a document title, subject, Author, and keywords. When the title is entered and the **OK** button is selected to save the edits, the red notification in the Accessibility Checker will change a green check mark.

Alternate Text

Departmental naming conventions should be followed when creating both titles and file names to instill consistency in documentation.

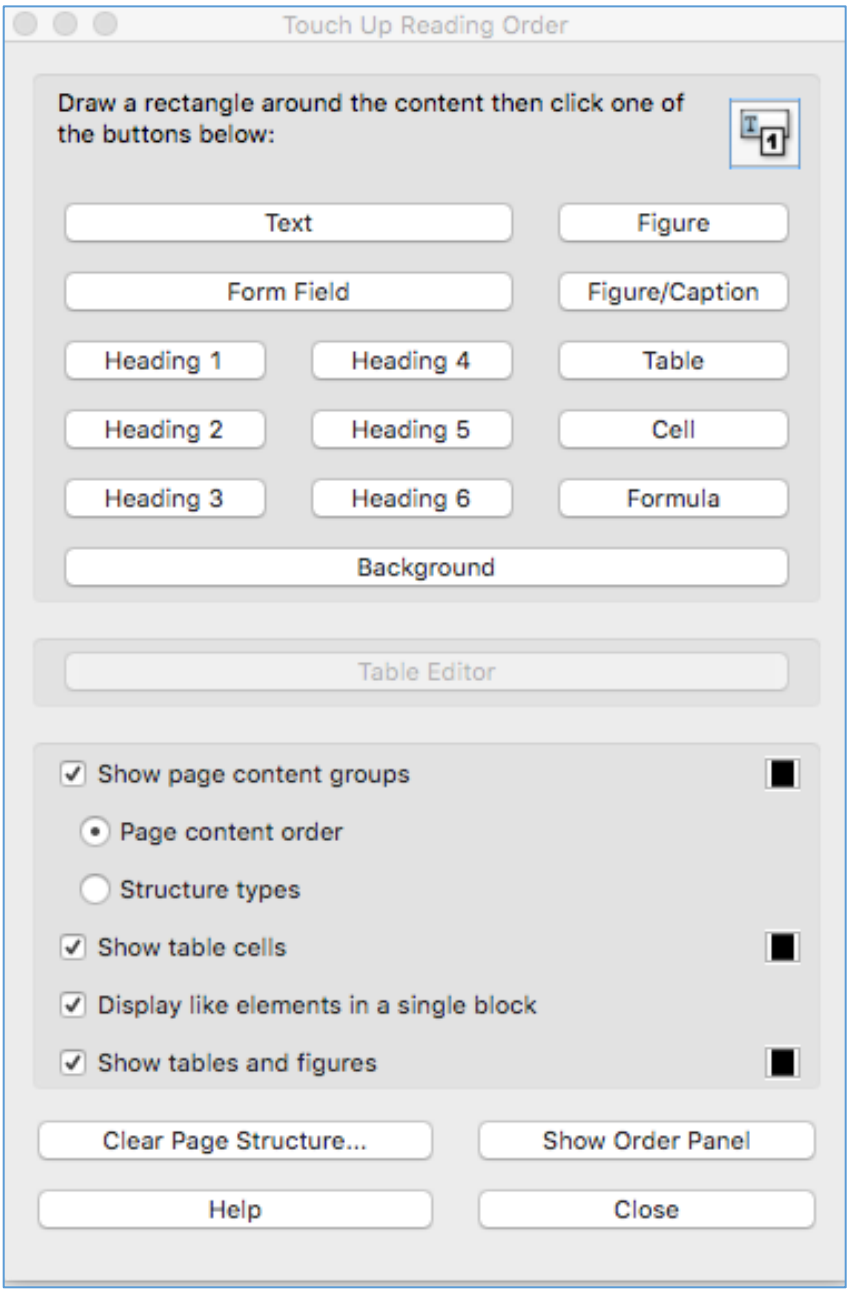


If any images are included in the document, **Alternate Text** is needed for the assistive reader to present a description of the item to the user. In the Accessibility checker, opening the drop-down menu for Alternate Text, and in turn the list of **Figures** that need descriptions, clicking on the figure notification will navigate to the item in the document.

Touch Up Reading Order

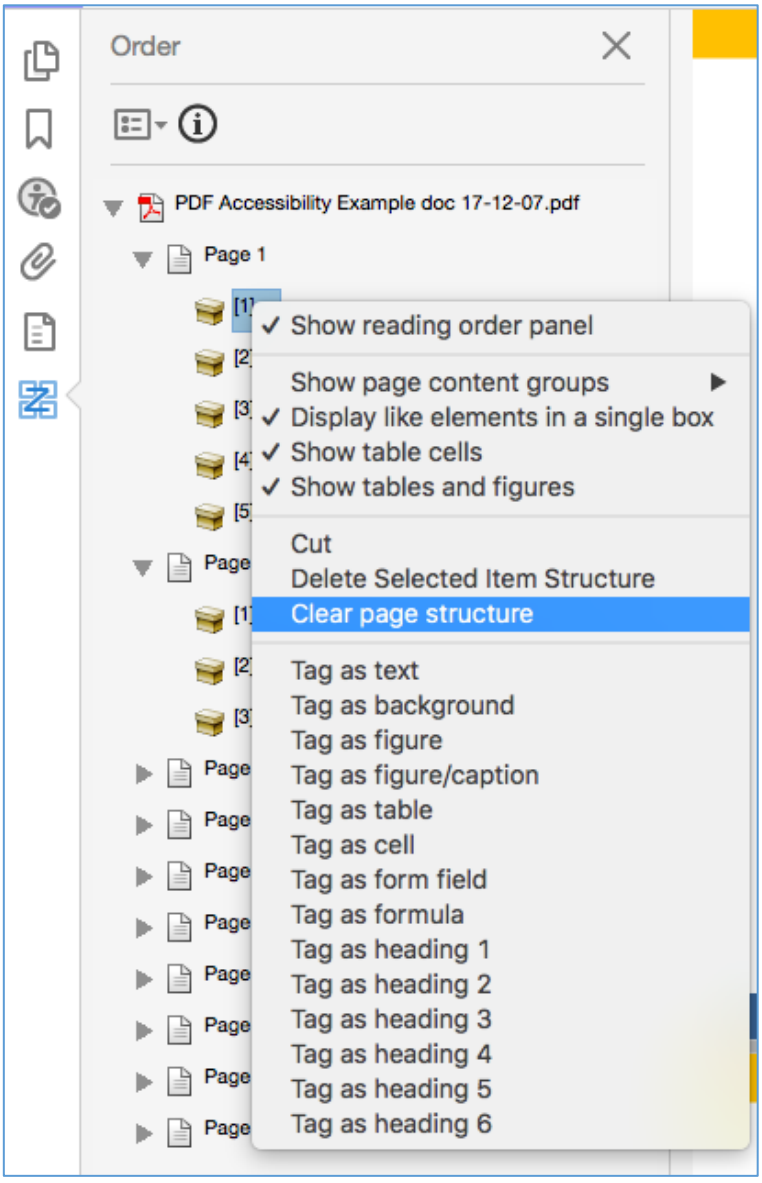
If the document was created in a program other than Adobe Acrobat, such codes may have been included in the transfer to a PDF file. In most instances, the tags included are inadequate, incorrect, or missing for many parts. It is usually more efficient to replace the tags entirely, page by page.

The tools to create the proper tags are included in Adobe Acrobat Pro. They are accessed through the **Tools Menu**, in the Accessibility section by selecting the option **"Reading Order"**. This will display the Touch Up Reading Order (TURO) window, showing options for editing the item tags.



Additionally, clicking the Order Button in the View Options pane displays the pages and the reading order of the items.

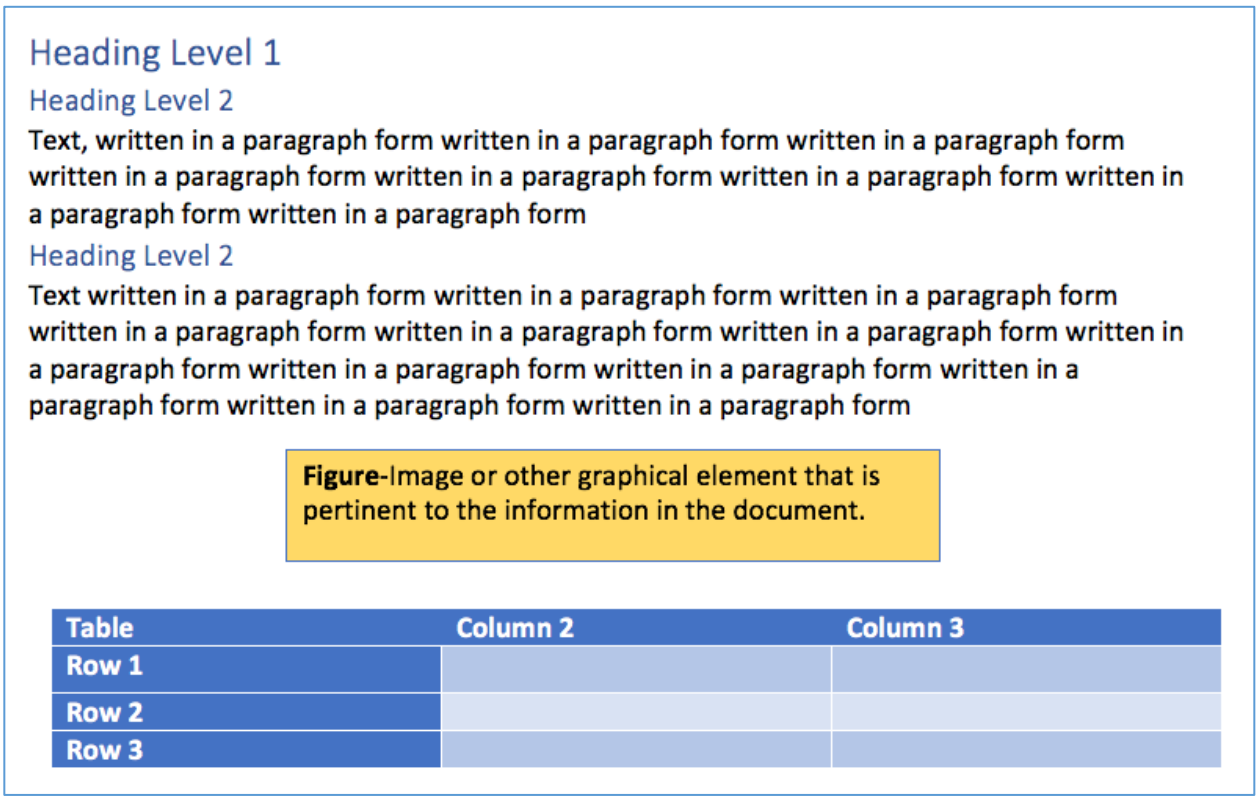
A right –click on any particular item will also offer tagging options as noted in the TURO pane.



CONTENT TYPE

Each item in a document must be tagged as its correct type for the assistive reader technology to accurately organize and translate the information to the user in an audible format. Using the Autotag feature in Acrobat renders a base to the document, but features must be refined and edited to assure the data is delivered as written and intended.

To accomplish proper tagging, a section of the document is selected, and the TURO tool is used to specify the content type.

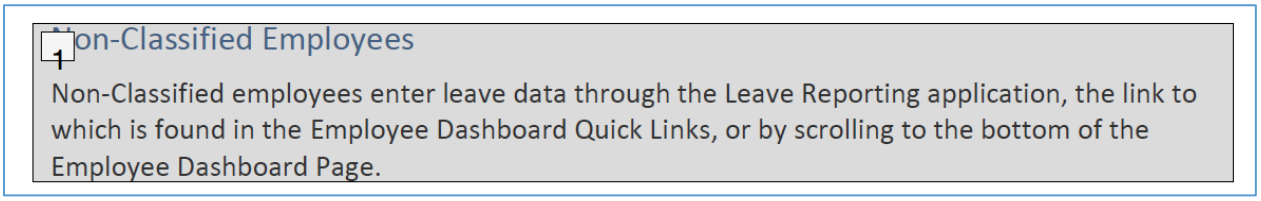


Select the content type that best describes the data in the document.

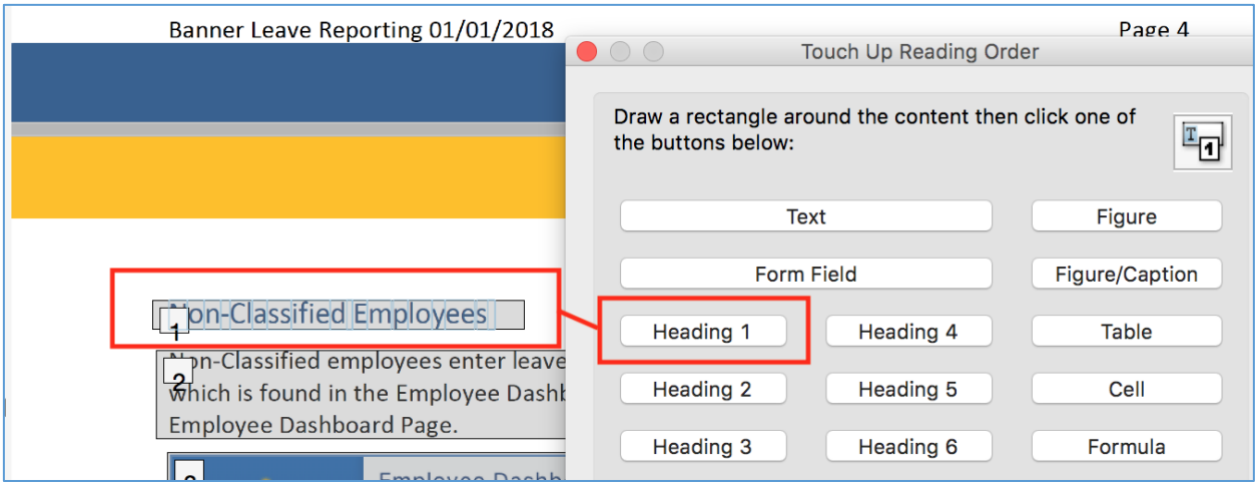
Text and Headings

Text can be selected for general text, or lower level headings that do not need to be specifically noted as a separate section. Using the Indications of **Heading 1**, **Heading 2**, or **Heading 3**, allows for a structured hierarchy of text headers to be used later when the document bookmarks are being created.

In some instances, item type may need to be edited from how they were captured from the Autotag function. This can be done by selecting the individual data item and selecting the correct type.



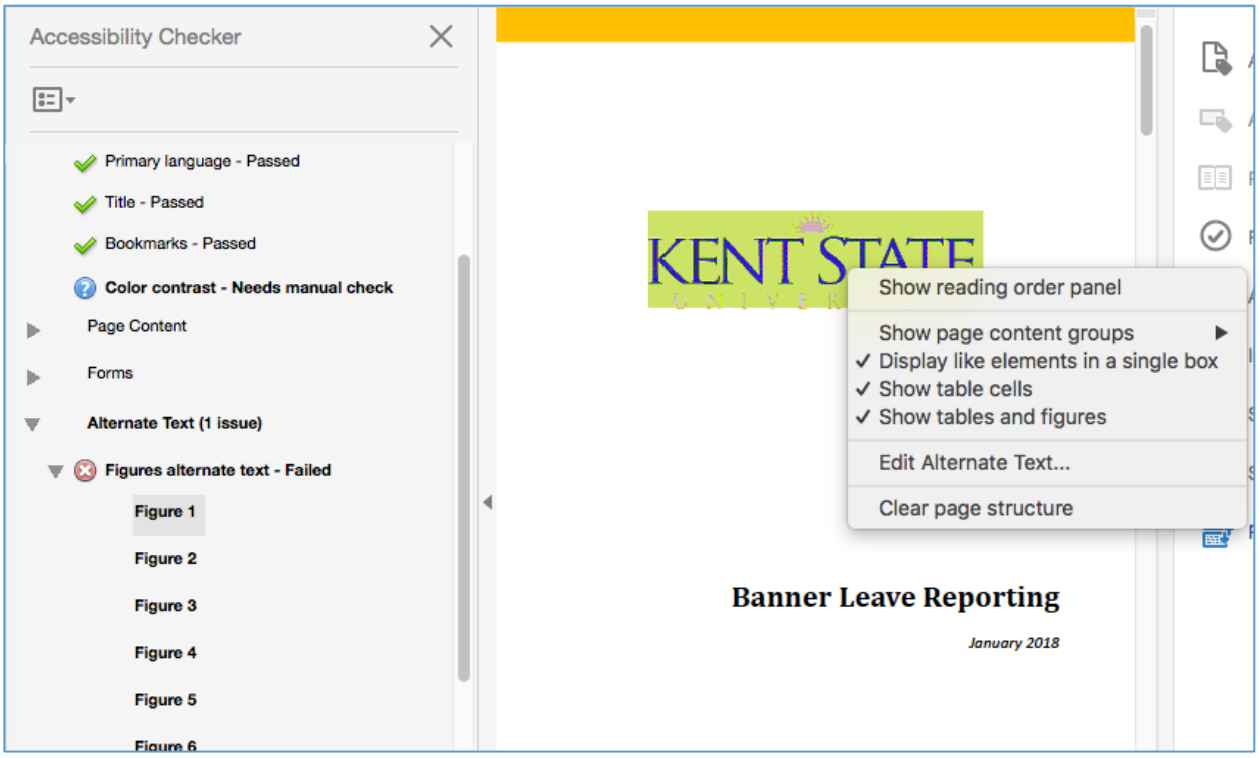
In the example above, the section heading has been notes as Text with the rest of the paragraph. Drawing a marquis around the heading will select the item, and using the TURO pane to select an appropriate heading level will update the information.



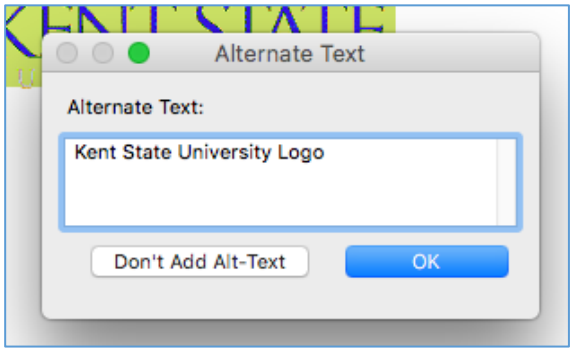
Creating the appropriate levels of headings here will assure correct listings in the table of contents and bookmarks.

Figures

Formatting objects as **Figures** allows for a description of the item to be added as *Alternate Text*. This allows the description to be accessed as part of the page for the reader. This is a step often saved for after the structure is complete.



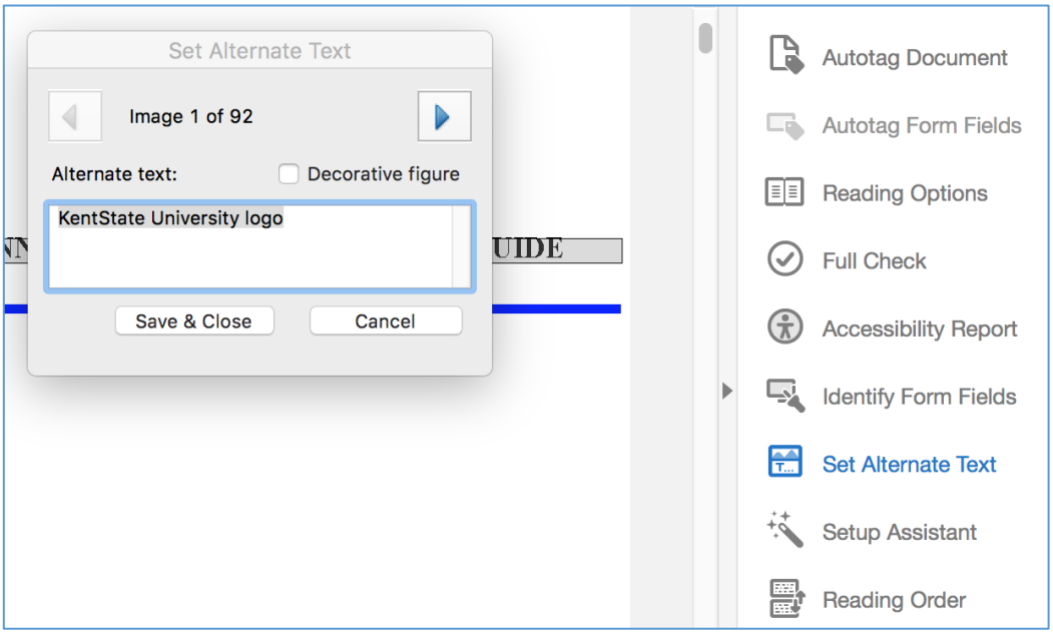
A click on the figure notation in the Accessibility Checker or a right-click on the highlighted figure in the document displays an options window for the object. From here the selection to **Edit Alternate Text** can be chosen to add the description of the image.



When all figures have been updated with Alternate Text, re-running the Accessibility checker will show that the Figures Alternate Text h

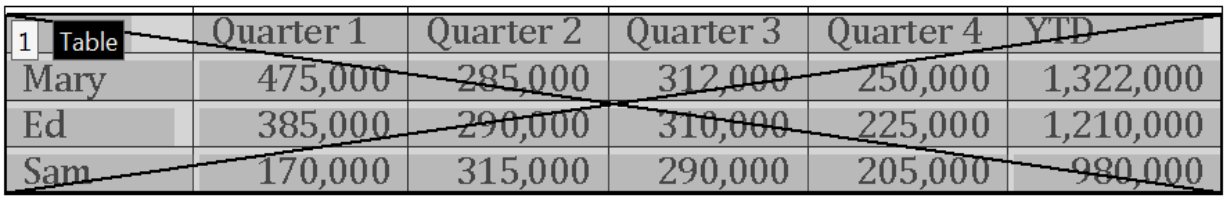
Set Alternate Text

Alternate Text can also be systematically entered by selecting the **Set Alternate Text** option from the Accessibility Menu, and navigating through the list of figures, and adding a description for each item as it appears.

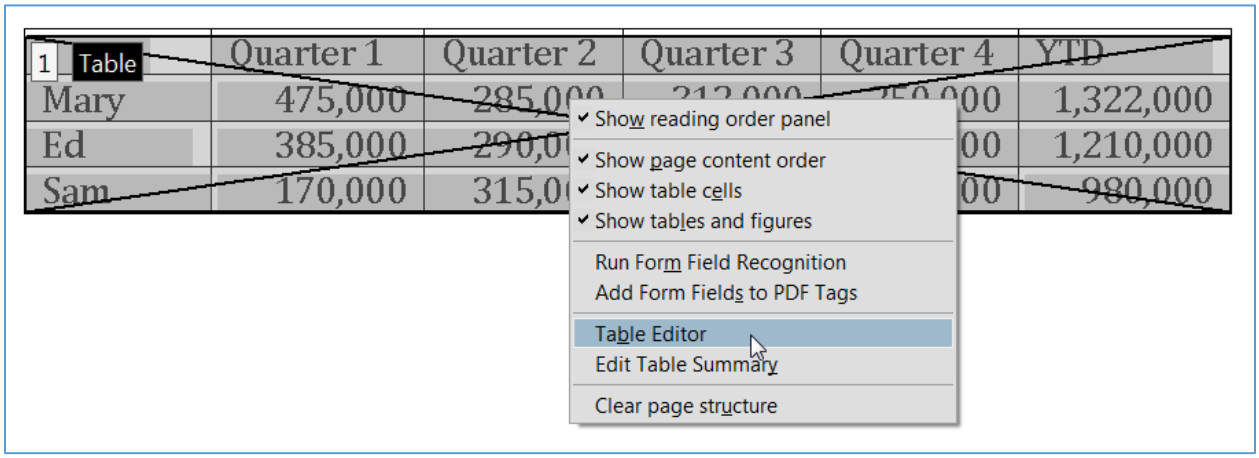


Tables

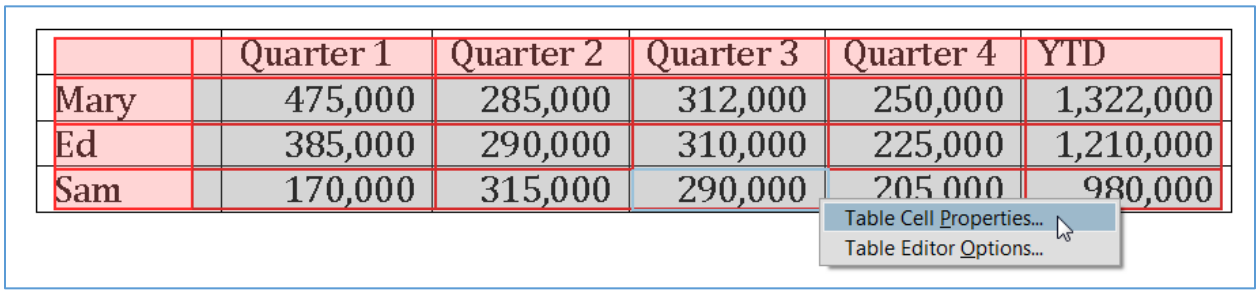
Tables in a PDF document can be difficult for screen readers to interpret since they commonly represent text or numbers outside of a reading structure. The TouchUp Reading Order tool allows for special analysis specifically for tables.



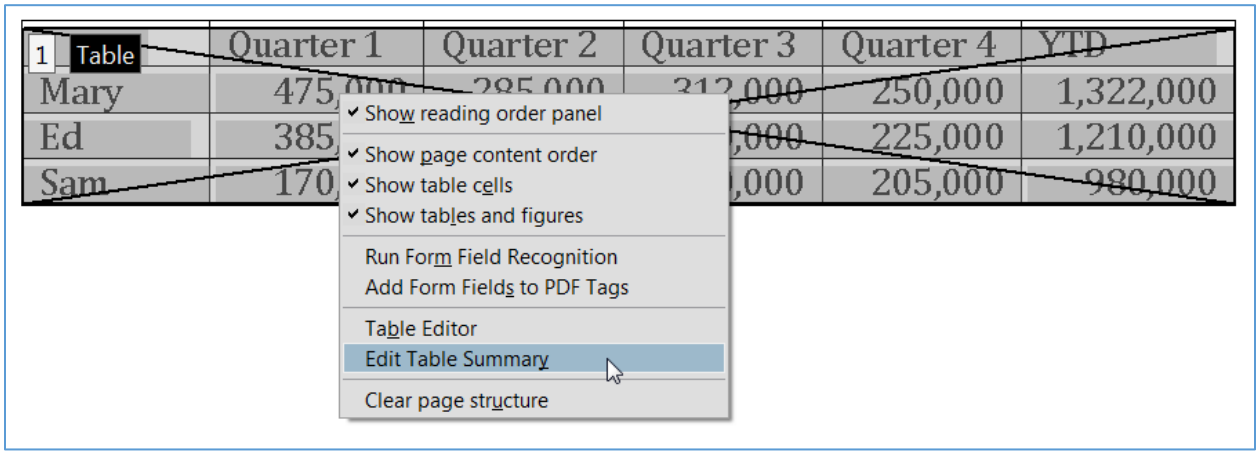
From the TURO the section can be selected and tagged using the **Table** button.



Using the mouse, a Right-Click on the table will offer additional tools including the **Table Editor**, which will allow for editing the properties of the cells for the assistive reader software to access and translate.



The Table Editor tool will configure the table as it seems appropriate, noting the Column Headers and Row Headers in pink and the Data Headers in gray. A Right-Click on the configured table will display choices of **Table Editor Options**, to change the color options, and **Table Cell**

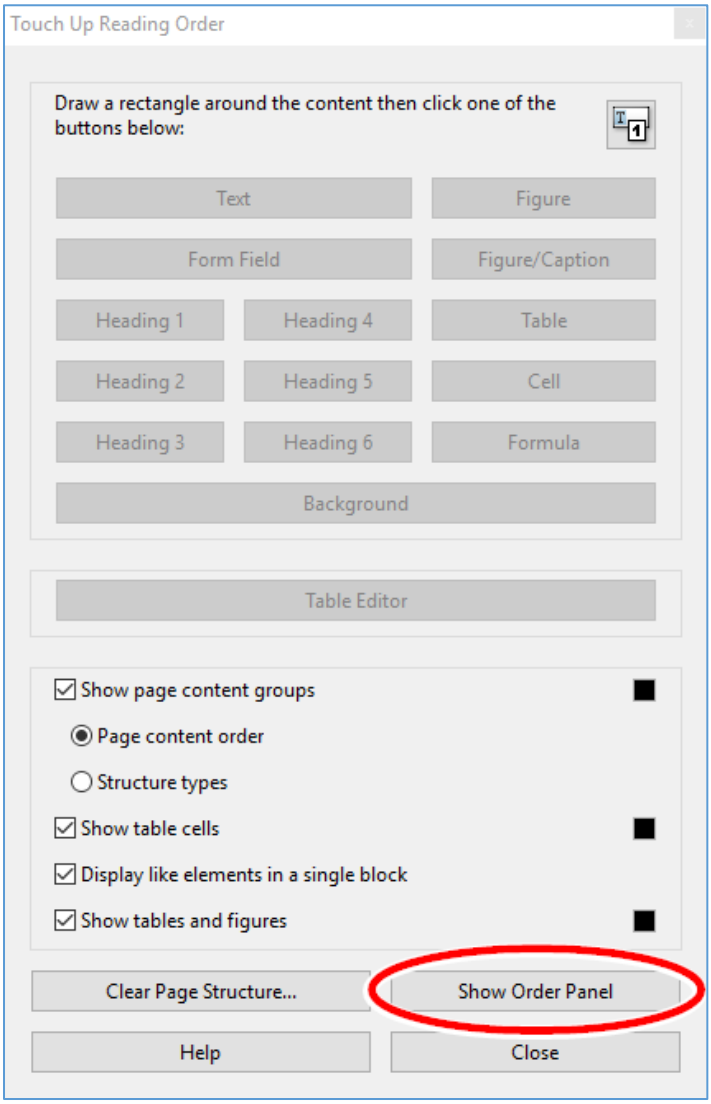


Properties to manually configure the table as needed. When the table configuration is completed, another Right-Click on the table allows for the entry of a Table Summary to include a text description of the table and table properties that are read by the assistive technology.

READING ORDER

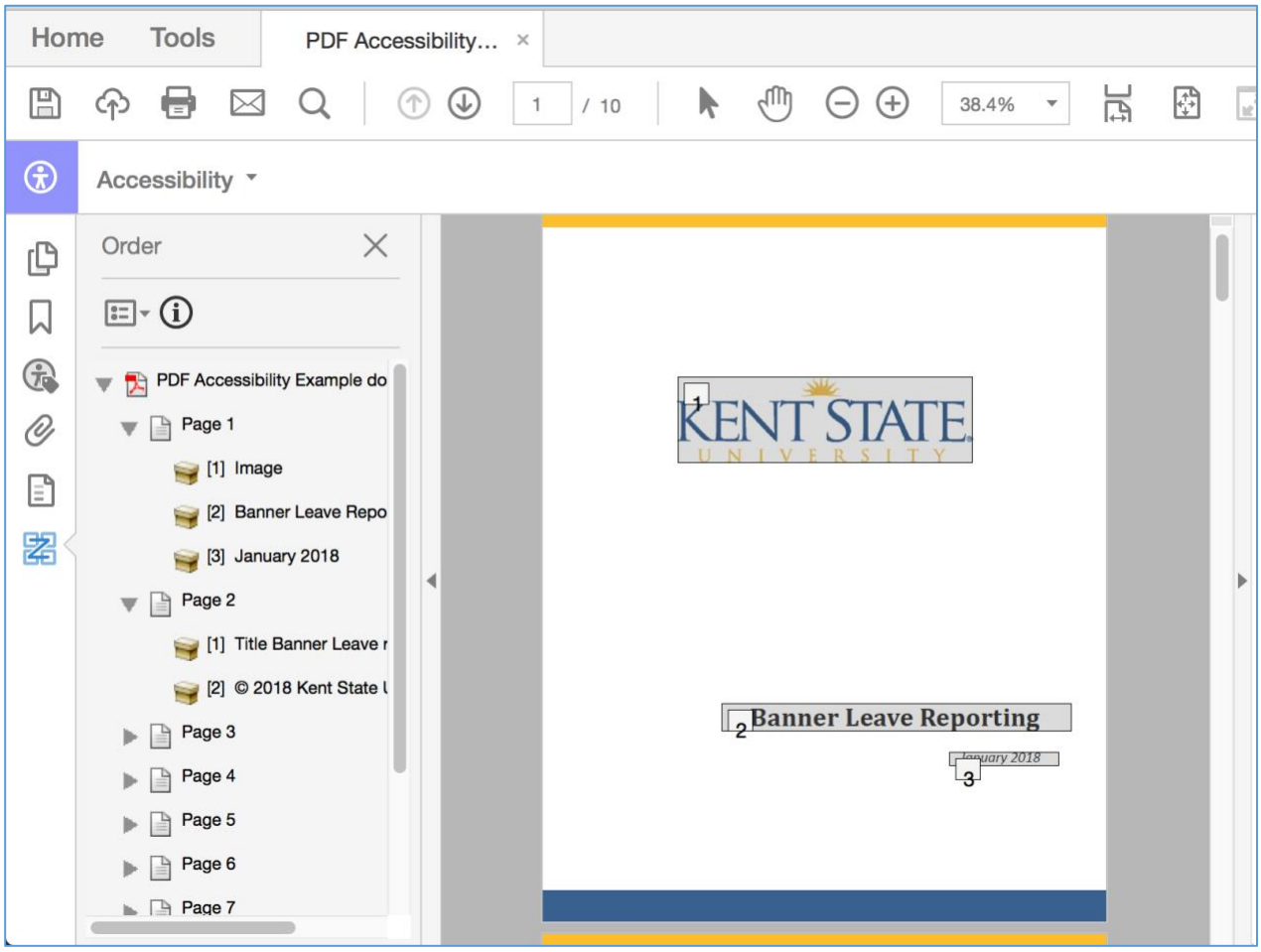
It is important to remember that a document in a PDF format is simply a picture, that is then seen as text and understood by the user.

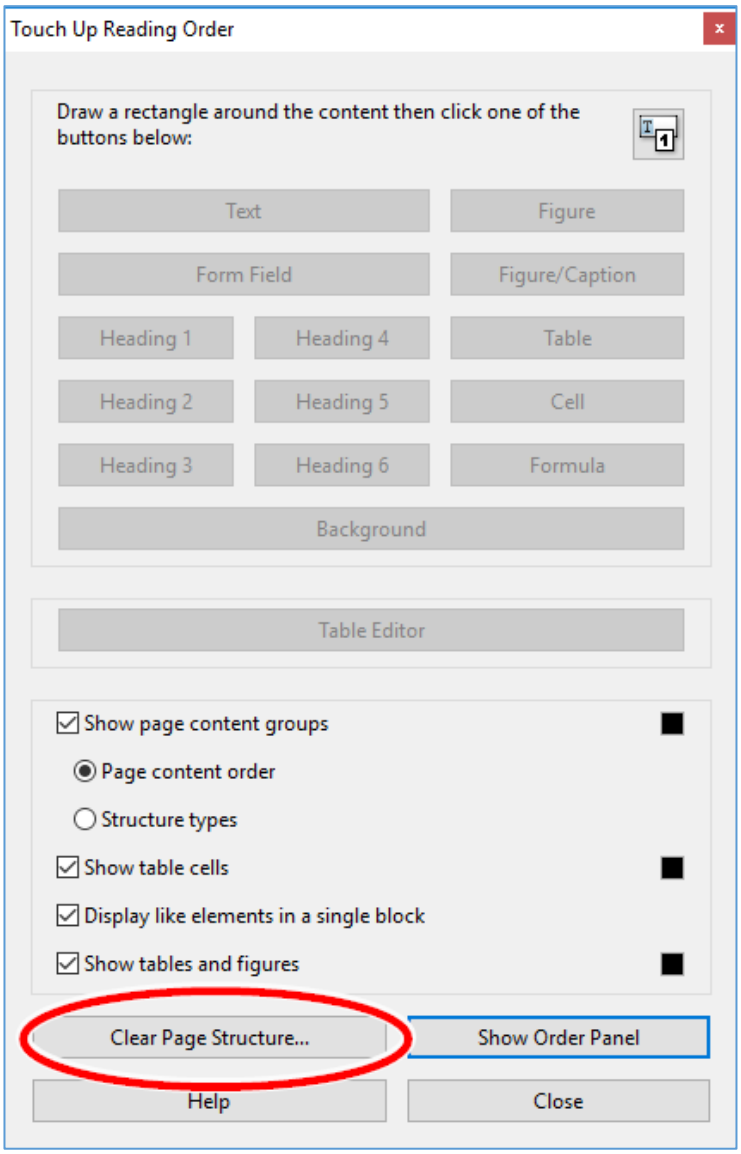
Documents are often created in applications other than Adobe Acrobat and converted to a PDF, or are created in Acrobat but not with assistive technology as a consideration. Most times, a document will contain items on the screen that is seen by the assistive technology but does not appear on the screen. These may be created by the use of items such as spaces or carriage returns in the document to create spacing. If they are acknowledged by the assistive reader, they will be spoken to the user. These can be distracting and should be eliminated in the **Item Selection and Order process** to create a more user friendly document.



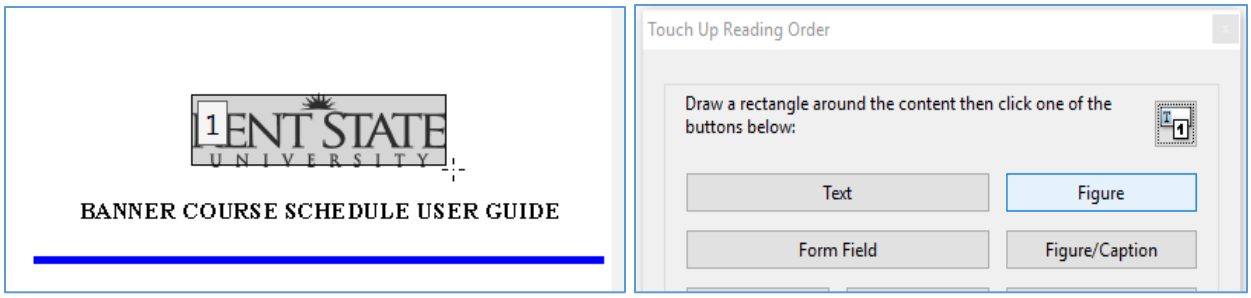
The bottom of the window houses options to aid in the view and editing of the document pages and individual tags. As data tags are added to the document, clicking on the **Show Order Panel** button displays a window for the organizing of Content, Order, and Tags on the pages.

The Order panel displays a list of the items as shown in the display window. Should any of the items be numbered out of sequence from how the information should be presented, the items can be arranged in the order panel by drag-and-drop navigation.

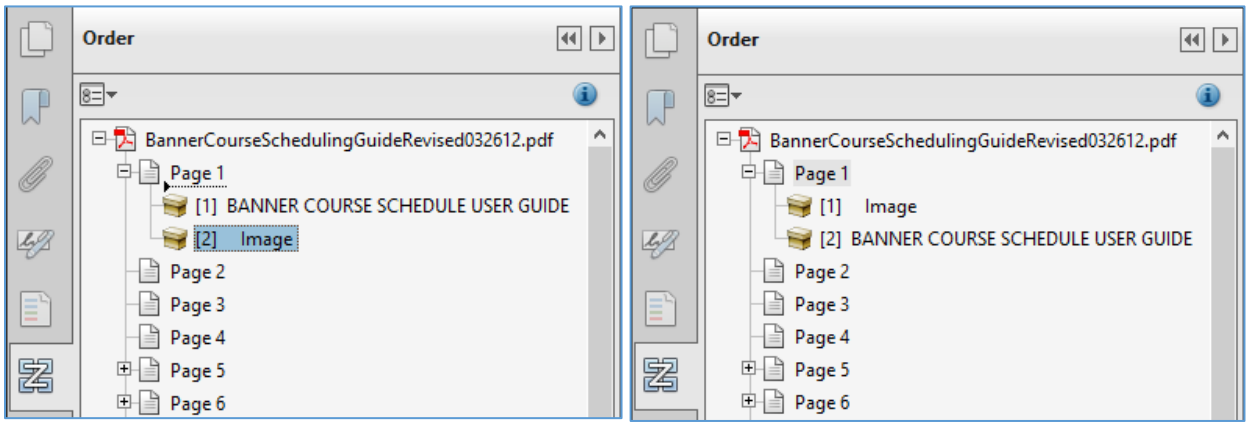




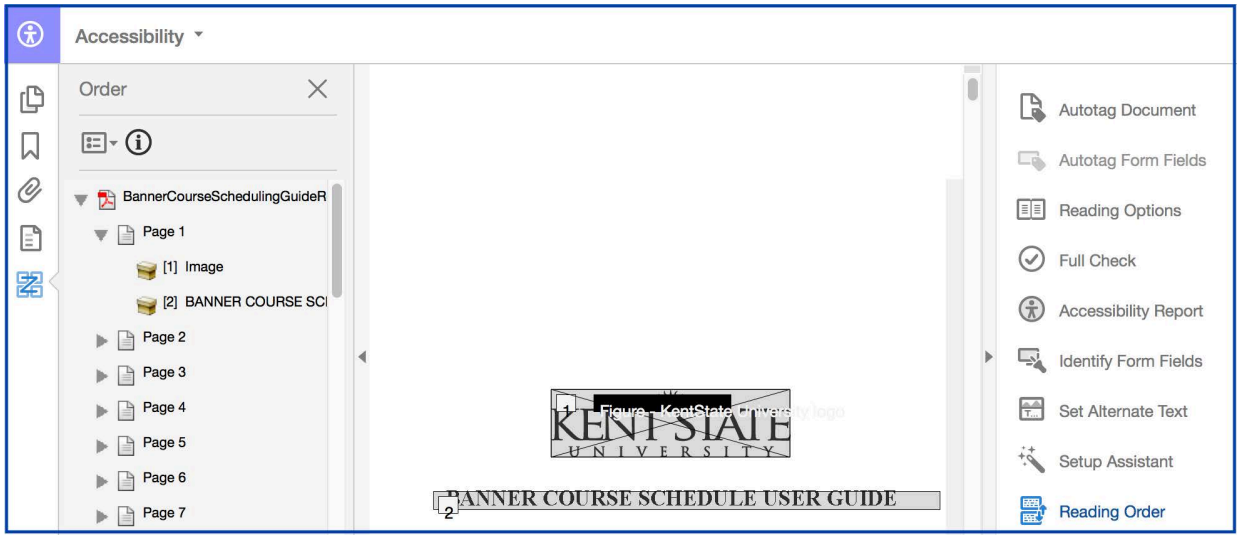
If need be, clicking the **Clear Page Structure** button in the TURO window will clear all current assistive reader formatting and allow for the manual tagging and order of the page. This will assure the proper coding and order of data to be delivered to the reader.



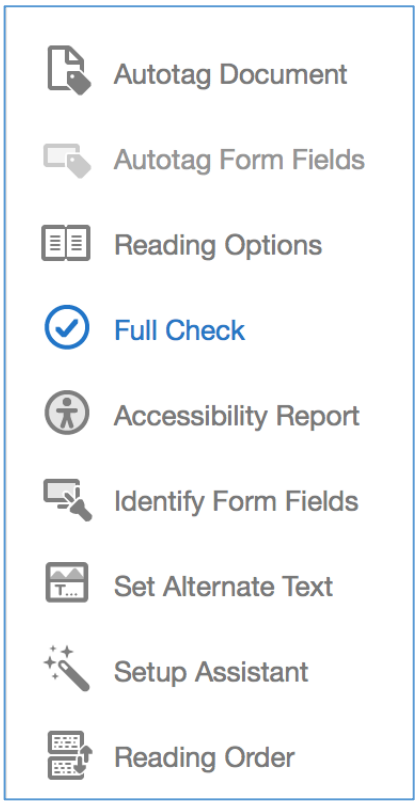
Using a mouse to click and drag, creating a box, to select a specific area on the document, the content type for the selected item can be chosen in the TURO window to add the item to the Order and Tag list.



When all items have been added, the order can be corrected by dragging the selection to the proper place and arranging them appropriately in the **Order** tab. This will assure only the necessary items are included, and in the proper order, for the reader.

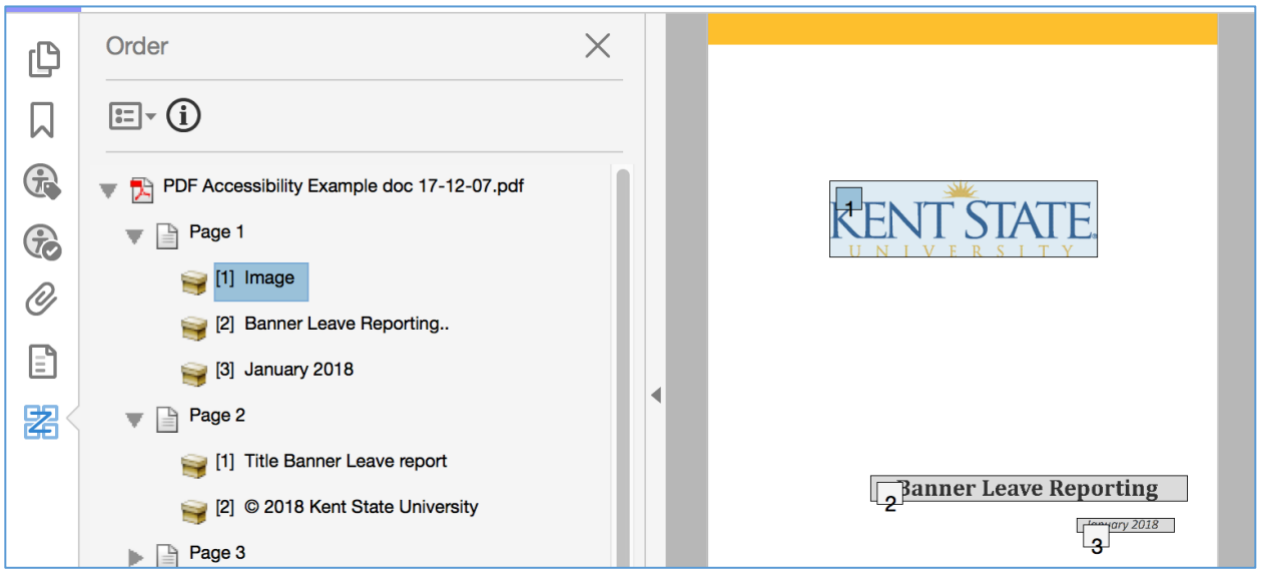


VERIFYING THE READABILITY



Once the appropriate items have been tagged to be read and ordered, the Accessibility Checker can be run again to assure that all desired items are included, and what items tagged as figures need Alternate Text added for descriptions.

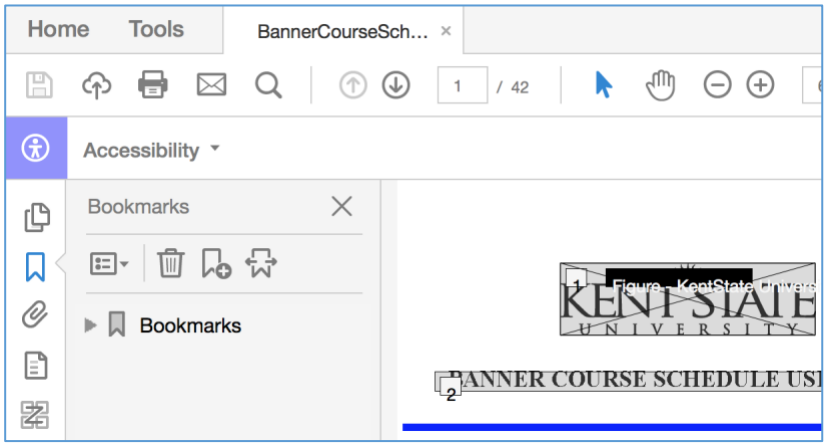
From the order display, selecting the first item on page one and using the down arrow key on the keyboard will scroll through the document to review the order of tagged items.



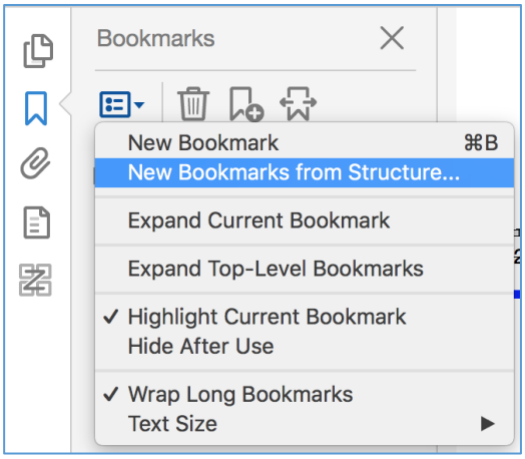
BOOKMARKS

With all items in the document tagged and ordered, bookmarks may be added to the PDF document to offer easy navigation to the information included.

Clicking the **Bookmarks** icon in the navigation pane reveals a blank bookmark screen.

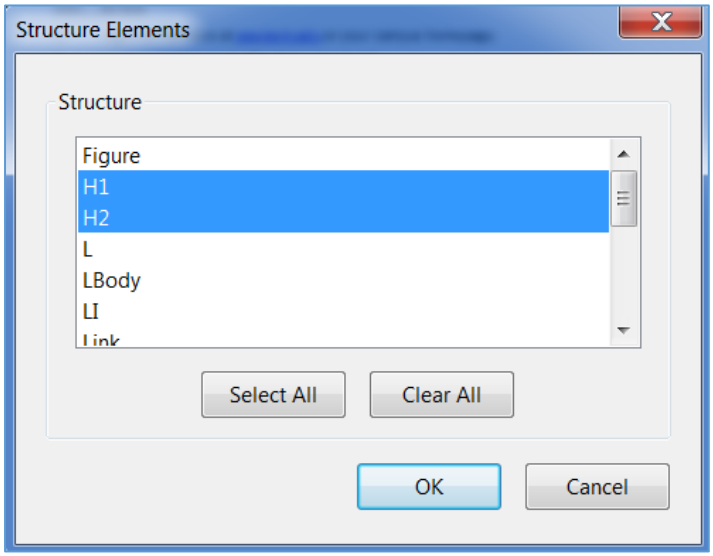


From the Settings icon, the choice of New Bookmarks from Structure can be selected to allow for customization of the items to be included in the bookmark structure.



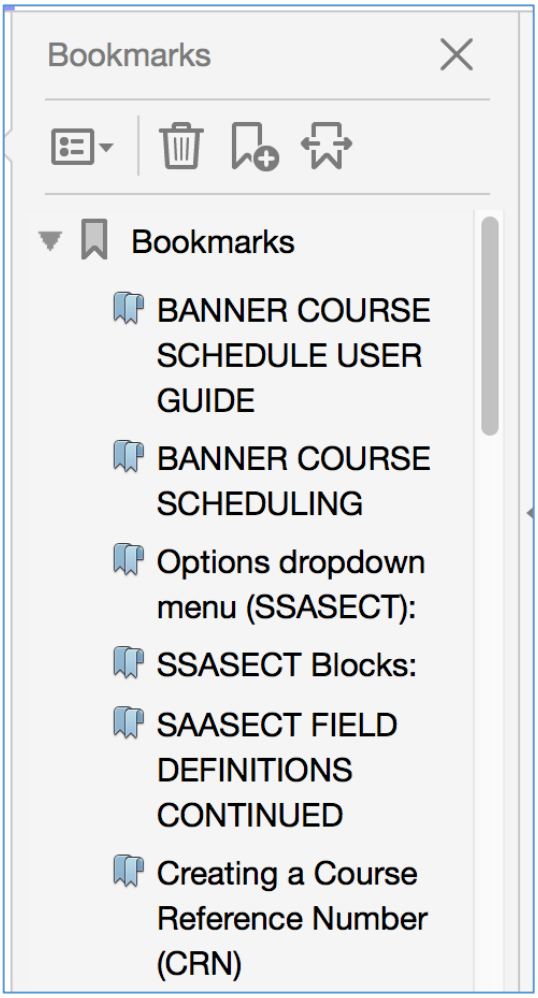
With the headings properly tagged, selecting H1 and H2 will create bookmarks for the document based on the levels of Headings 1 and Headings 2 and offer easy and quick access to the specific section the user may need to read.

Clicking **OK** will accept the choices and build the Bookmarks list.



Naming the new list Bookmarks will indicate to the user that the list coincides with the order structure of the information as included in the document. Clicking on the item in the Bookmarks list will navigate to the selected page or view.

Additional bookmark lists may be made should a separate list of links, Figures, or other specific items need to be listed and link accessible by type.



TIPS AND BEST PRACTICES

1. Use Save As before using the TouchUp Reading Order tool frequently while editing, changing the file name, as the undo button will not reverse changes made with this tool. You will have to revert to a previous version
2. When selecting an area to tag, select only what is needed to avoid extraneous items being included.
3. Plan for the document heading hierarchy to more easily assign levels appropriately.
4. Use the Up and down arrows located in the Toolbar to navigate pages within the document. As the number of pages increases, the scrollbar becomes more sensitive.
5. Allow the TURO toll to combine text paragraphs if it will follow the logical reading flow.
6. Utilize the **TouchUp Object tool** to move images or words in the PDF.