



# **U.S. DEPARTMENT OF LABOR**

## **CREATING SECTION 508 CONFORMANT MICROSOFT 2016 WORD DOCUMENTS**

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Section 508 Program Office  
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## Creating Section 508 Conformant Word 2016 Documents

Version Number	Date	Author	Change Description
1.1	12/1/2018	OCIO	Reviewed initial version
1.2	5/15/2019	OCIO	Updated after OPA review
1.3	6/19/2019	OCIO	Updated DOL standards
1.4	1/11/2021	Section 508 Program Office	Updated table instructions. Updated to Section 508 Program Office template.
1.5	4/7/2021	Section 508 Program Office	Removed one H1 restriction. Added italics options.



## Table of Contents

Introduction .....	1
Purpose.....	1
Document Properties .....	2
Set Title and Author .....	2
Set Document Language .....	3
Set Language of Specific Text.....	3
Add Structure to Documents Using Styles .....	4
Navigation Pane .....	4
Types of Styles .....	5
Applying Styles .....	5
Modifying Existing Styles .....	6
Creating a New Style.....	7
Create Lists (Number and Bullet) .....	7
Table of Contents .....	7
Page Numbers .....	10
DOL Standards .....	10
Adding Alternative Text (Alt Text) .....	11
How to Add Alternative text (Alt text).....	11
What about Decorative Images?.....	11
Hyperlinks .....	12
Tables .....	12
Insert Table .....	13
How to Prevent Table Rows from Breaking Across Pages.....	13
Set Header Row to Repeat at Top of Each Page .....	14
Add a Footnote/Endnote.....	14
Footnote.....	14
Endnote.....	15
Color .....	15
Color Contrast .....	15
Color Conveying Meaning.....	16
Fonts.....	17
The Accessibility Checker .....	17
Accessibility Checker Results .....	17
Converting to PDF Format .....	18



Adding Acrobat tab.....	19
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## Introduction

The benefits of creating accessible documents are to enable people with disabilities to function within the environment. Accessibility is designed to allow anyone with a disability the opportunity to perform at a level equal to those of people without a disability, by removing barriers that prohibit the use of computer technology. The Department of Labor is committed to providing information that everyone can access. By meeting standards for accessible documents, you achieve this goal.

## Purpose

This guide is intended to help DOL employees and contractors create accessible Microsoft Word documents that are conformant with Section 508 requirements and best practices. Accessible Microsoft Word documents can be used to create an Adobe PDF document with little or no additional work required to make it accessible in PDF format.

**Note:** Formatting a document so that it's accessible doesn't mean that your documents have to look boring or stripped of graphics, pictures or clipart.

Document content must be accessible to users with disabilities, including proper use of color, styles and alternative text (Alt text).

Document structure is like a document roadmap. It tells the user how the content is organized and what is important. Headings are an important aspect of document structure.

Keyboard commands are in parentheses ().

## Document Properties

The document title, author, and language must be set as part of the document properties.

### Set Title and Author

1. Select **File**
2. Select **Properties**
3. Select **Advanced Properties**
4. Enter document **Title** (not the file name)
5. Enter document **Author** as “United States Department of Labor” or “AGENCY NAME, “United States Department of Labor” (without quotes)
6. Select **Ok**

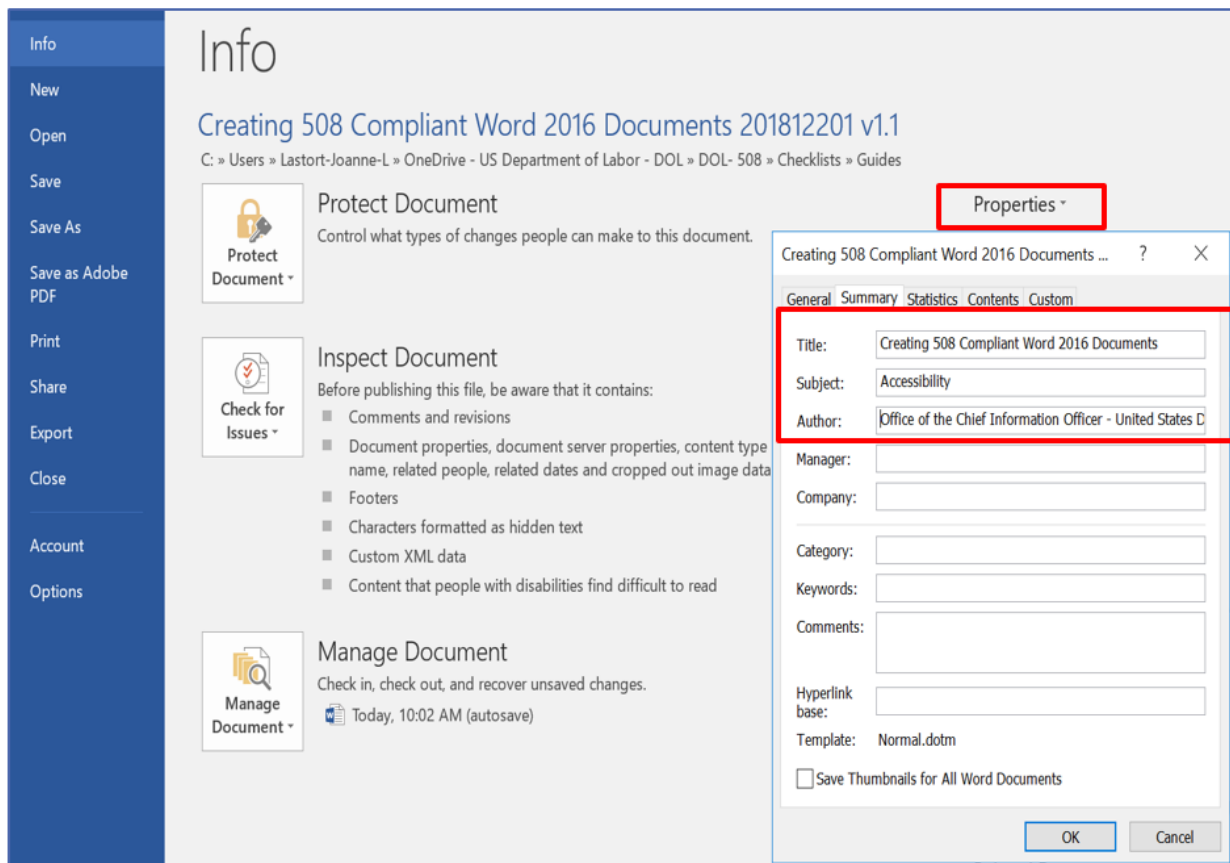


Figure 1. Info Pane, Advanced Properties window

## Set Document Language

**Note:** If there is only one language enabled and it is the one you want, you do not need to perform these steps.

1. Select **File**
2. Select **Options** (or press the Alt key, then press T)
3. Select **Language** from the list in the left of the Options Word window
4. Under **Add Editing Languages**, select the editing language you want to use
5. Select **Set as Default**
6. Select **Ok**

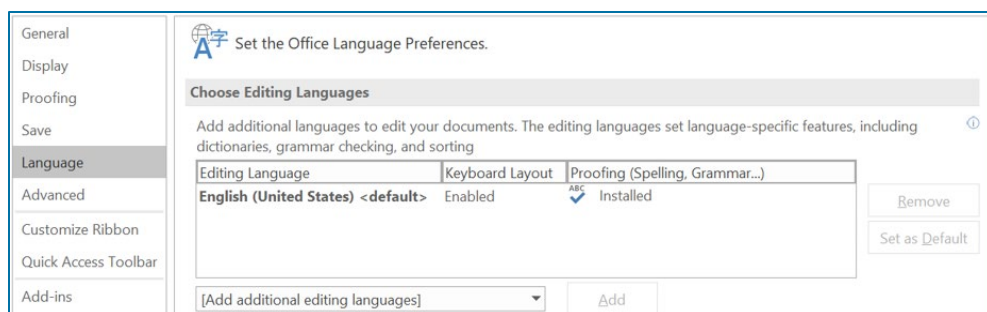


Figure 2. Set Language window

## Set Language of Specific Text

1. Select the text
2. Select **Review** tab
3. Select **Language**
4. Select **Set Proofing Language...**
5. In the **Mark Selected Text as** box, select the language from the list
6. Select **Ok**

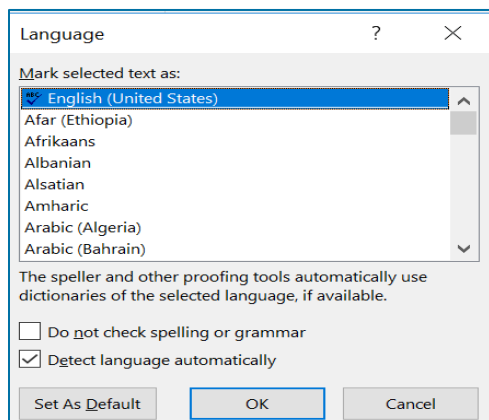


Figure 3. Language window

## Add Structure to Documents Using Styles

**Styles** are a set of built-in formatting that can be applied to text, tables, lists, paragraph spacing, etc. in a document to change the appearance. A set of formats can be applied to a document, in one step. Using **Styles** will also save you a lot of time and effort. You can apply formats to your entire document in one step, create numbered or bulleted lists, or generate a Table of Contents. You can use the built-in **Styles**, or you can modify them to get the look you want. (See [Fonts](#)).

## Navigation Pane

The **Navigation Pane** is a great tool to use to double-check your document structure and styles. It provides a bird's-eye view of your document, so you're able to verify that components, like headings, are accurate and conformant.

1. Select **View** tab
2. Check **Navigation Pane** checkbox (in **Show** section)

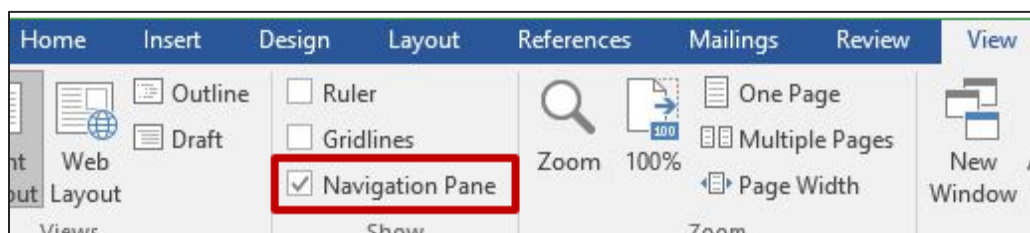


Figure 4. View tab, navigation pane check box

The Navigation Pane appears on the left-hand side.

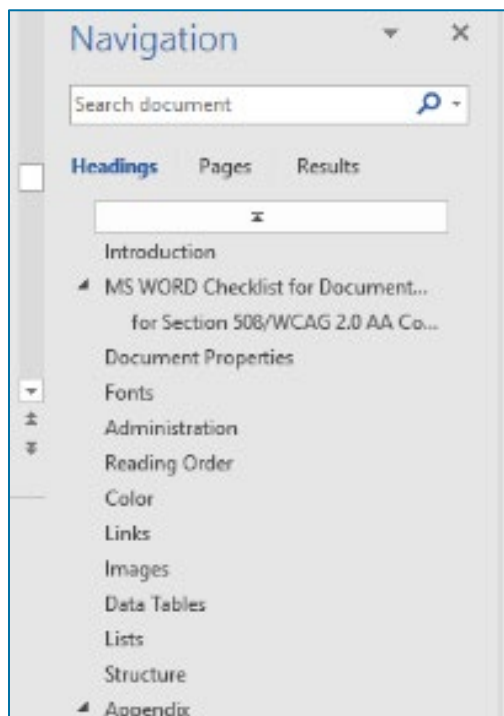


Figure 5. Navigation pane



## Types of Styles

**Quick Styles** are displayed on the **Home** tab as shown below. Quick Styles are the ones most often used. You can select additional styles by selecting the down arrow button on the bottom right of the **Styles** section.

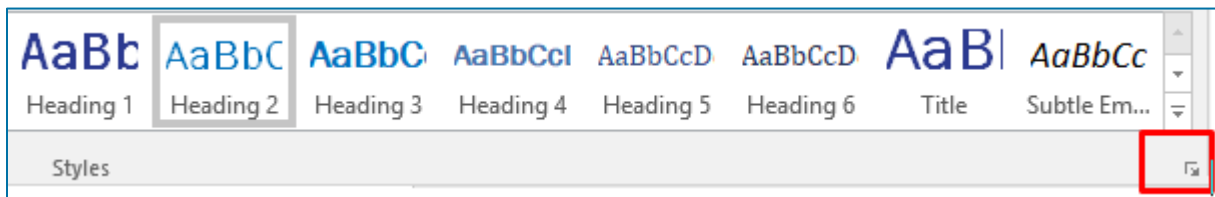


Figure 6. Quick Styles

## Applying Styles

1. Highlight or select the text that you want to apply the style
2. Select **Home** tab (or press <Alt + H>)
3. Select one of the **Quick Styles** (or press L)  
**OR**
4. Select a style from **Styles** by clicking the arrow (or press FY) and selecting a style

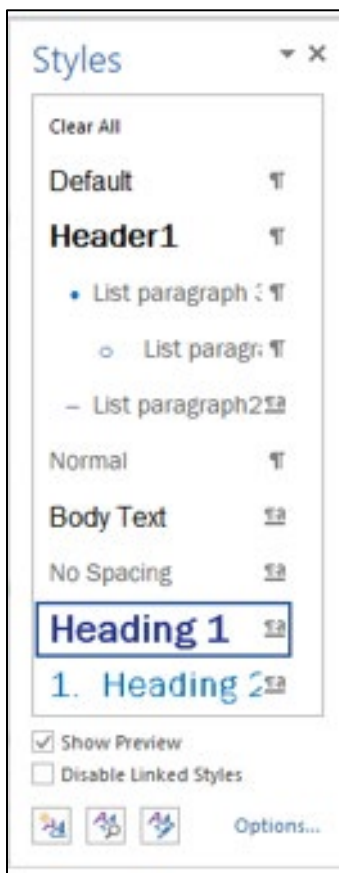


Figure 7. Styles Pane

### Modifying Existing Styles

If you want formatting choices that are not available from the built-in styles and themes available in Word, you can modify an existing style and customize it to suit your needs. You can change the formatting (such as font size, color, and text indentation) in styles applied to titles, headings, paragraphs, lists, and so on.

1. Select **Home** tab (or press <ALT + H>)
2. Select the specific style you want to modify (or press L)
3. Right-click (or press context menu key) on the style you selected
4. Select **Modify** from the drop-down menu
5. In the **Modify Styles** window, make changes to font
6. Press the **Format** button to display the options
7. Select the formatting changes you'd like to make. You can:
8. **Change type, color, and size of the fonts used in the document**
9. **Change the amount of space between paragraphs**
10. **Change borders and shading**
11. Change/Add numbering or bullets

**DO NOT** change the name of style that you are modifying.

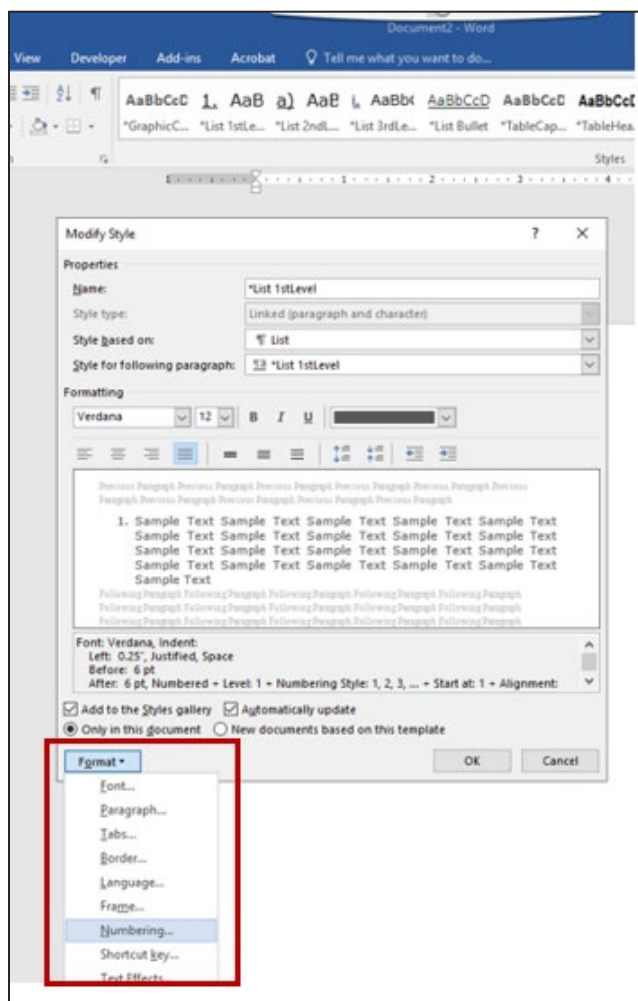


Figure 8. Modify Styles window

## Creating a New Style

**Note:** If you create a new style, it will not be accessible to screen readers and will not be accessible when converted to .PDF files. However, this doesn't mean that you can't create a unique style. **Simply select a Default style then modify it to make your document look the way you want.**

**Styles** not only help Assistive Technology (AT) users identify the difference between a header and body text, other features rely on **Styles**, like, the **Table of Contents** tool, to automatically generate correct and accessible information.

## Create Lists (Number and Bullet)

The Bullet or List style must be used as opposed to manually typed characters (e.g. Hyphens) or inserting icons.

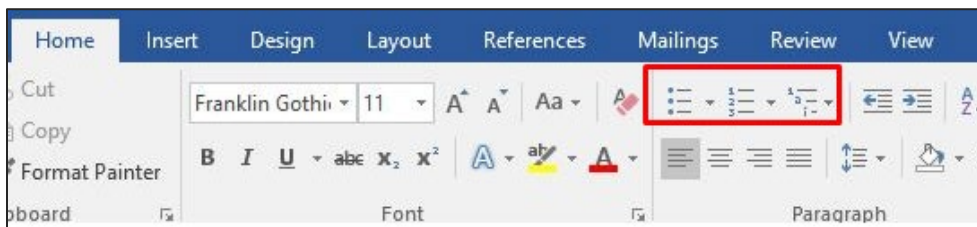


Figure 9. Bullets and Numbers

1. Select **Home** tab (or press <Alt + H>)
2. In the Paragraph section, select the Bullets icon for unordered lists or select the Numbering icon for ordered lists (or press U or N)
3. To choose a different list format, select the arrow beside the icon (or press Enter)
4. Select the format from the library or define a new format

**Note:** you should attempt to make use of the named styles that are included with the office application (e.g., “emphasis,” “caption,” etc.) before creating your own styles or using the character formatting tools directly. Named styles help Assistive Technology (AT) users understand why something was formatted in a given way, which is especially helpful when there are multiple reasons for the same formatting (e.g., it is common to use italics for emphasis, Latin terms and species names).

## Table of Contents

If your Microsoft Word document needs a Table of Contents, it should not be created manually. The **Table of Contents** tool pulls its information straight from the document's **Styles**. It creates links to jump straight to different topics, and it can easily be updated when content shifts or changes. If you create a Table of Contents and the information is wrong or missing, check that the styles you've used throughout the document are accurate and consistent.

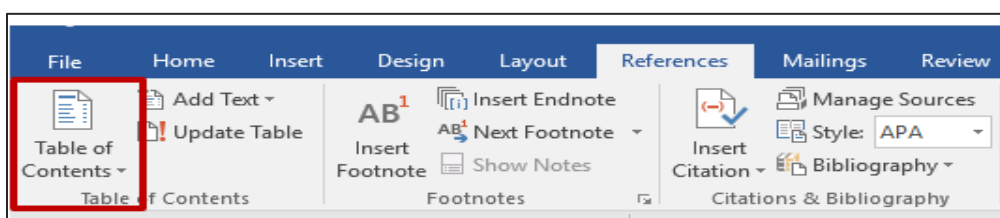


Figure 10. Table Contents

### Create Table of Contents

1. Place the cursor where **Table of Contents** should be inserted
2. Select **References** tab
3. Select **Table of Contents**
4. Select the desired format
5. Select **Ok**

### Update Table of Contents

1. Select **Table of Contents**
2. Right-click (or press Context menu key)
3. Select **Update Field**
4. Select **Update Entire Table** radio button
5. Select **Ok**

### Customizing Table of Contents

You can customize the table contents to change:

- Heading levels displayed
- Leader types
- Page number alignment
- Table of Content styles

1. Select **Reference** tab
2. Select Table of Contents
3. Select Custom Table of Contents

When the Custom Table of Contents menu option is selected, the Table of Contents window displays. You can select the **Options** button for additional options.

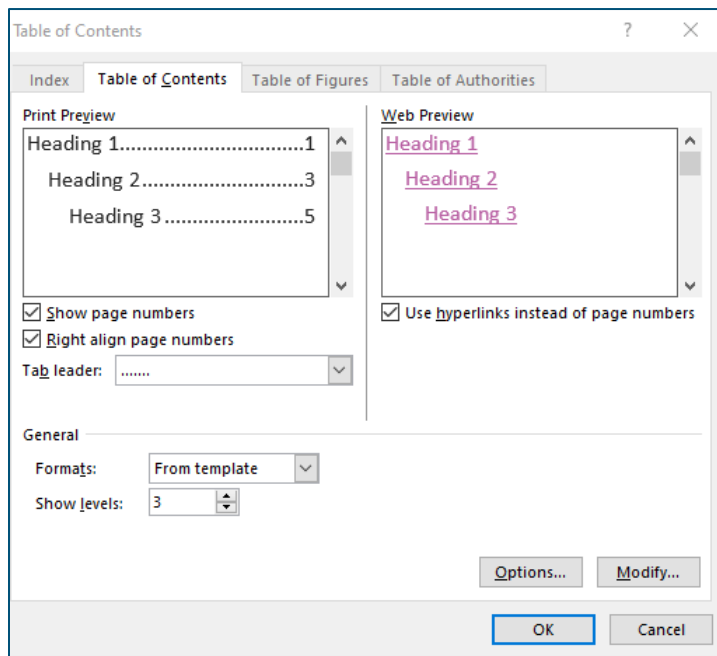


Figure 12. Table of contents window

Table of Contents Options window shows the options of selecting different Styles to build the Table of Contents.

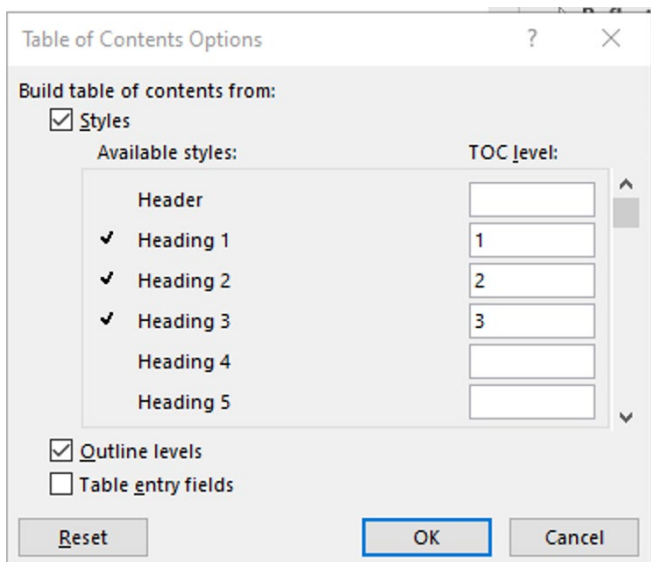


Figure 13. Table of contents options

## Page Numbers

The **Page Number** tool must be used as opposed to manually typing page numbers.

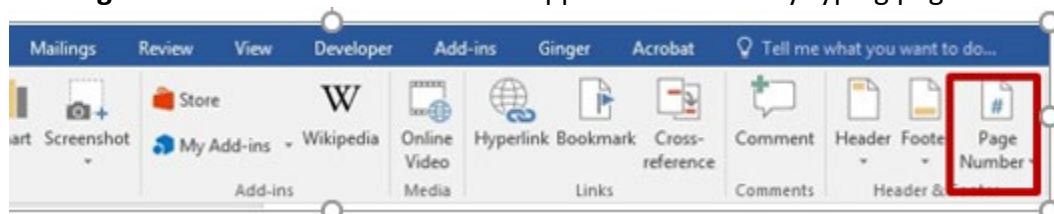


Figure 14. Page Numbers

### Add Page Numbers

1. Select **Insert** Tab
2. Select **Page Number** (In the **Header and Footer** section)
3. Select the style page number format you would like to use
4. Press **Ok**

### Format Page Numbers

1. Select **Insert** Tab
2. Select **Page Number** (In the **Header and Footer** section)
3. Select **Format Page Number**
4. In the **Page Number Format** window, select the page format you would like to use
5. Press **Ok**

## DOL Standards

The following DOL standards are required to increase accessibility, usability, and readability of the information. Using underlines only on hyperlinks helps people find them and recognize them. Italics are hard for some people to read, and so is text that is smaller than 12 points. Left-aligning headings and text is easier for all people to read.

1. Only use underlines on hyperlinks
2. Do not use italics for emphasis – use 1 or more of the following techniques:
  - Make regular text bold instead using the **Strong** style
  - Use a different font
  - Use a different color
3. Left-align headings and text
4. Do not use more than 2 fonts
5. For body text, use a minimum font size of 11 points
6. In tables, left-align text, right-align numbers and dates

## Adding Alternative Text (Alt Text)

Adding alternative text (Alt text) is an important function to assure people with disabilities are able to effectively use the information contained in images within the document. Alt text needs to be manually entered, and the amount of information and detail given depends on the intended impact and purpose of the image.

For example, you are trying to demonstrate a technique to use during a storm, and you have an image of a single-family home with plywood over the windows. In your Alt text, the words “Boarded up house” convey the intended purpose of the image more than just having the word “House.”

Some best practices to keep in mind when writing Alt text include:

- Keep the text concise while still being meaningful and informative. It should act as an equivalent for the image if the image were removed.
- Enter text in the **Description** field only. If the document is converted to PDF, only the text in the **Description** is retained.
- Don’t use the terms “photo of,” “image of,” “picture of,” etc., in the Alt text because AT users are told it’s an image.
- Alt text for the **Department of Labor** seal should be: “**United States Department of Labor seal**”.

## How to Add Alternative text (Alt text)

1. Select the image
2. Right-click (or press Context menu key)
3. Select **Format Picture**
4. Select **Layout & Properties** (third image from left)
5. Enter text in the **Description** field

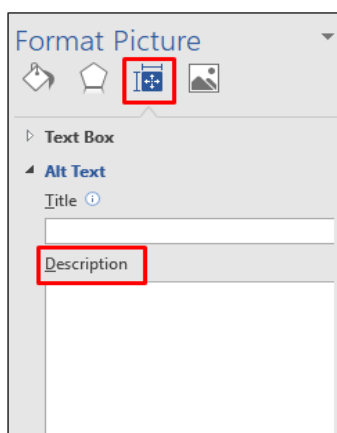


Figure 15. Insert alt text

## What about Decorative Images?

Decorative images are things like lines, or rectangles, or anything used for layout. Any images that do not add meaning are also decorative. For these, the Alt text should be: “**decorative**” (without quotes).

## Hyperlinks

Hyperlinks must have meaningful names that describe their destination, function, and/or purpose, not the URL or address. For example, if you write, “Want to get an Enterprise Service Desk form, use this URL: <https://labornet.dol.gov/itc/it/esd/ITC-Forms.htm>.”, the screen reader will read this as “https://labornet.dol.gov/itc/it/esd/ITC-Forms.htm.” Hearing that read aloud could be hard to understand.

By entering the text to display as “Enterprise Service Desk Forms”, it’s clear to everyone where the link goes. (See example below.) To enter the text to display, use the **Hyperlinks** option to create links. By default, **Link to: Existing File or Web Page** is selected. To create a web link, follow these steps:

1. Put your cursor where you want to create it
2. Select **Hyperlink**
3. Enter text that indicates where the link goes in **Text to Display**
4. Enter the URL (or address) in **Address**.
5. Press **Ok**.

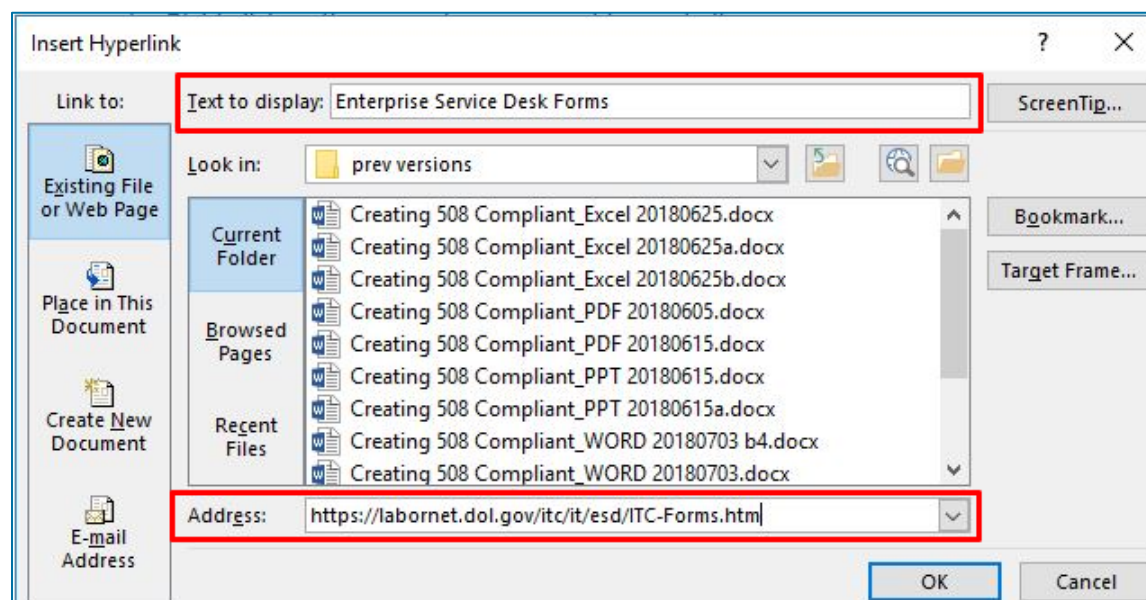


Figure 16. Insert hyperlink

## Tables

There are two types of tables:

- Data tables
- Tables used only for positioning content

Data tables are used to display data. The first, or top, row is made up the header cells and the header cells are associated with the data cells on the rows below the first row. Data tables must have their column headers identified to be Section 508 conformant.

It is not possible to create accessible complex data tables in Word. Row headers, or headers that are in the first column of the table cannot be used. Examples of complex data tables include those with row and column headers, multiple rows of headers, and headers that are both row and column headers. Complex tables can be handled more easily in PDF documents, but, in general, complex tables should be avoided.



Tables should not be used to position text. That can be done using the alignment functions in the paragraph section of the ribbon or using the Layout tab. Below is an example of a table used to position content. You can see there is nothing that can be used as a header to associate with data.

	Hear from <b>Agency leadership and industry notables</b> about cybersecurity best practices in the government
	Attend <b>IT certification trainings</b> from cybersecurity experts and a <b>Cybersecurity 101 training</b> from OCIO
	Learn cyber best practices from <b>field experts during the booth expo</b>

Figure 17. Example of table used to position content

### Insert Table

1. Select where you want to insert the Table
2. Select **Insert** tab
3. Select **Table**
4. Select **Insert Table** and choose the number of columns and rows you want in the table
5. Select **OK**

**Note:** The table title should **NOT** be part of the table. It should be above the table. The first (top) row of the table should be the header cells.

### How to Prevent Table Rows from Breaking Across Pages

If a table **row** is split from one page to the next page, a screen reader will not read it properly and it is visually difficult to understand.

1. Select the entire table
2. Right-click (or press Context menu key)
3. Select **Table Properties**
4. Select **Row** tab
5. Uncheck **Allow row to break across pages** check box
6. Select **Ok**

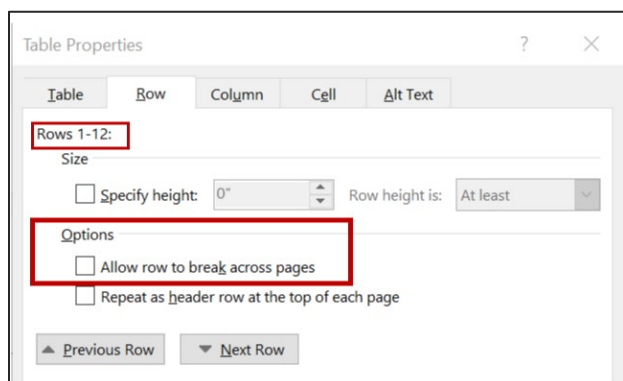


Figure 18. Table Properties, Row tab, rows breaking option

## Set Header Row to Repeat at Top of Each Page

Headers must be defined for screen reader software to read the header with the data. Without a header, a user cannot determine what the data means.

1. Select the table
2. Right-click (or press Context menu key)
3. Select **Table Properties**
4. Select **Row** tab
5. Select **Next Row**
6. **Verify Row:1**
7. Check **Repeat as header row at top of each page** check box
8. Select **Ok**

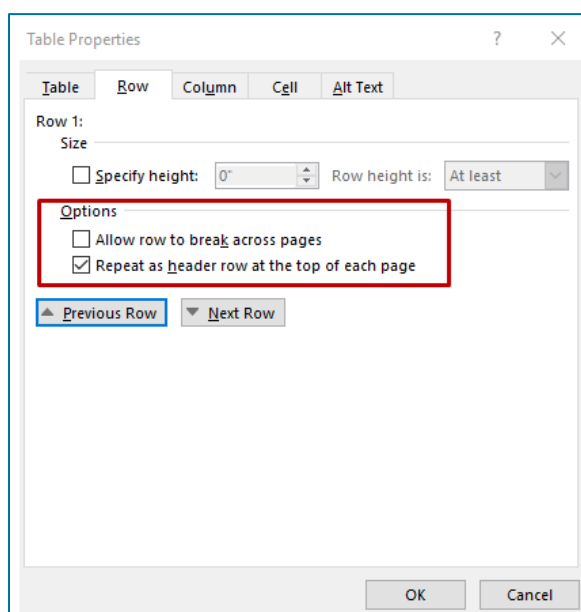


Figure 19. Table properties window, row tab

## Add a Footnote/Endnote

### Footnote

1. Place your cursor where you would like to add the footnote
2. Select **References** tab.
3. Select **Insert Footnote** (OR press <CTRL+ALT+F> )
4. Enter the footnote text.

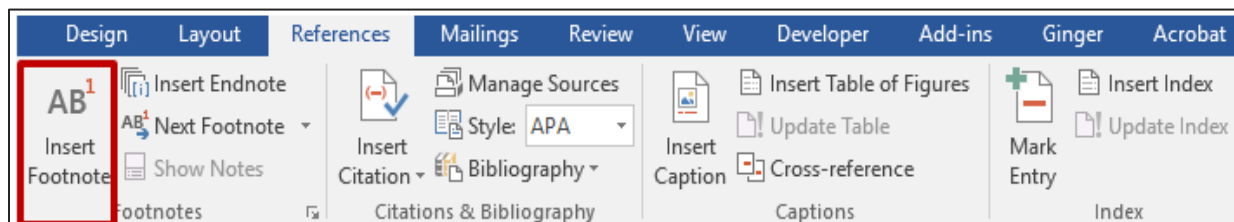


Figure 20. Insert footnote

## Endnote

1. Place your cursor where you would like to add the endnote
2. Select **References** tab.
3. Select **Insert Endnote** (OR press <CTRL+ALT+D>)
4. Enter the endnote text.

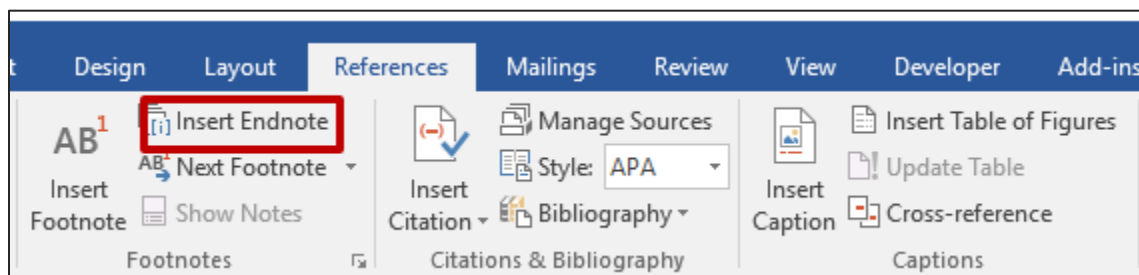


Figure 21. Insert endnote

## Color

### Color Contrast

Color contrast ratio between the text and the background is important. If it is too low, some people will not be able to read the text. The [Section 508 color contrast standards](#) require a minimum ratio of 4.5:1.

To test color contrast, you can use the the **Colour Contrast Analyzer**. Choose a color using the eyedropper tool to select the foreground and background, or enter a foreground (text) and background color in RGB or hexadecimal format (e.g., #FD3 or #F7DA39).

Note: This tool needs to be requested from and installed by ESD.

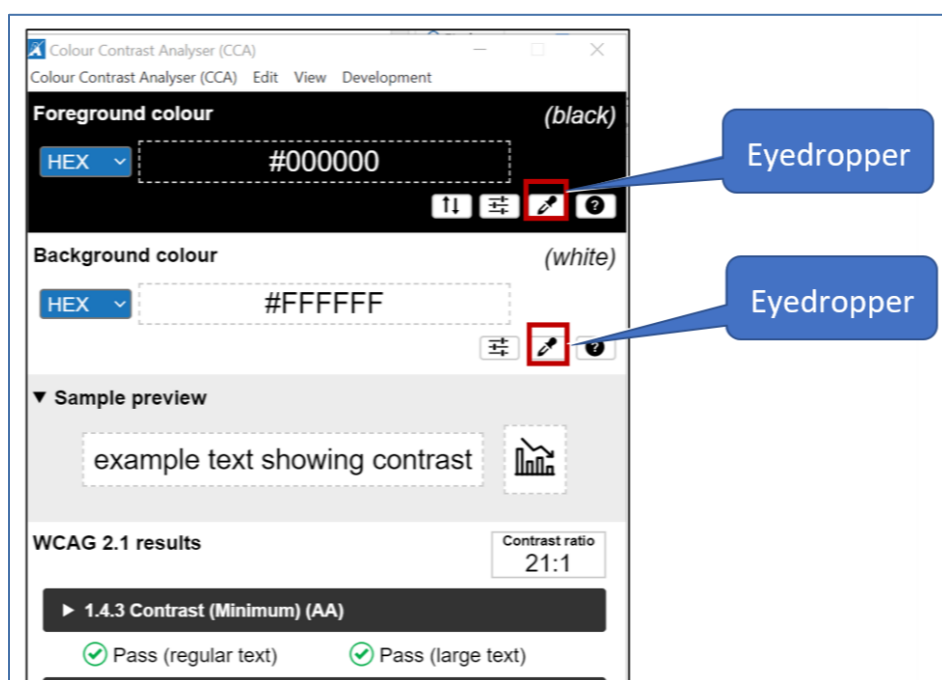


Figure 22. Colour contrast analyzer

You can also use an on-line tool, such as the [Color Contrast Checker](#). Just enter the foreground (text) and background colors in either hexadecimal or RGB format. The contrast ratio is displayed. To change the ratio, click on the slider bar.

The screenshot shows the 'Color Contrast Checker' web interface. It has a title 'Color Contrast Checker' and a subtitle 'Enter a RGB foreground and background color in #hex or integer format to check contrast for accessibility.' Below this, there are two main sections: 'Foreground RGB in hex' and 'Background RGB in hex'. Each section has a text input field for the hex code and a corresponding RGB input field with three color sliders (Red, Green, Blue) and numerical value boxes. The foreground section shows a hex code of #2967b9 and RGB values of 41, 103, and 185. The background section shows a hex code of #ffffff and RGB values of 255, 255, and 255. To the right of these sections, there is a 'Sample' text box containing 'This is sample text' and a 'Contrast ratio' display showing '5.62 : 1'. At the bottom right, it states 'Compliance Level: Section 508 (revised 2017) and AA Conformant'.

Figure 23. Color Contrast Checker

## Color Conveying Meaning

Section 508 requires that when color is used to indicate meaning, direction or other information, that same meaning must be provided in a way that does not use color. The form pictured below has three required fields. The required fields are in red. Someone who is colorblind (or blind) might not be able to tell which fields are red. However, this form is Section 508 conformant: the required fields are also marked with an asterisk (\*) – and the form instructions indicate that required fields are marked with an (\*).

The screenshot shows a web form titled 'Tell us who you are. (\* on required fields)'. The form contains several input fields: 'Company:', 'Salutation:' (a dropdown menu), '\* First name:', '\* Last name:', 'Job title:' (a dropdown menu), 'Phone:' (with an example 'e.g., 415-555-1111'), 'Web address:' (with a placeholder 'http://'), and '\* E-mail:'. The labels for 'First name', 'Last name', and 'E-mail' are in red, and each is preceded by an asterisk. The form is enclosed in a black border.

Figure 24. Example of use of color

### Fonts

Currently, [Section 508](#) does not specify the requirements for choosing an accessible typeface. However, the following fonts are [unofficially recommended](#):

- Helvetica (Microsoft Sans Serif)
- Verdana
- Arial
- Calibri
- Tahoma

Using these fonts will promote ease of reading for most users. Sans-serif fonts are especially easy to read because they are generally more legible. These recommended fonts also ensure accuracy of the Optical Character Recognition (OCR) process whenever that process may be needed. This procedure is a critical step for making scanned documents Section 508 conformant.

### The Accessibility Checker

Use the built-in **Accessibility Checker** in Microsoft Word as the first way to check accessibility. The **Accessibility Checker** helps you find and fix accessibility issues, just like **Spell Check** reports potential spelling errors. It displays a report of the issues it finds, explains why each issue might create a problem for someone with a disability, and recommends how to fix the issue.

**Note:** If your document has an extension of “.doc” (filename.doc), you will get an error, “Unable to run the Accessibility Checker.” To fix this, save your document as type: Word Document (\*.docx)

1. Press **File**
2. Press **Check for Issues**
3. Press **Check Accessibility**

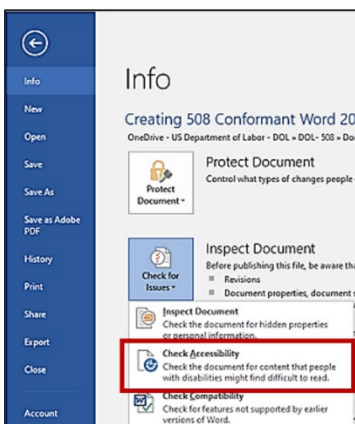


Figure 25. Location of accessibility checker

### Accessibility Checker Results

Even if the checker finds no errors, it does **not** mean the document is fully accessible. The **Accessibility Checker** cannot find all the issues. Some issues can only be found by a person. For instance, it can tell if there is no alternative text (Alt text), but it cannot tell if the alternative text (Alt text) makes sense.

Be aware that what Microsoft considers to be errors, warnings, and tips doesn't always match Section 508. For instance, tables do NOT need alt text. You can add it, but it's not required. Blank table rows are just a warning, but Section 508 requires that you don't have blank rows. Hyperlink text should be meaningful.

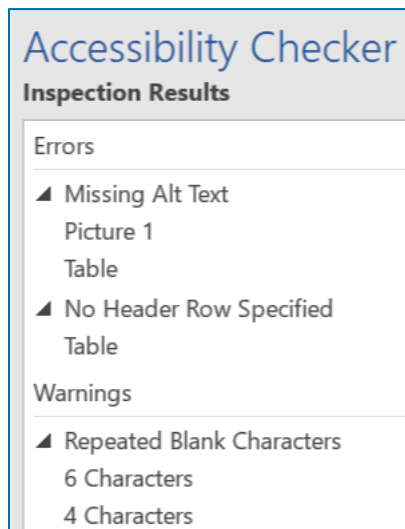


Figure 26. Accessibility checker results

## Converting to PDF Format

Many documents are converted from Microsoft Word to PDF format. If you have created your Microsoft Word document accessibly, you will not have to do a lot more to make the PDF version accessible. Note: You only have to set the **Preferences** once.

1. Select **Acrobat** tab
2. Select **Preferences**
3. Select **Settings** tab
4. Check **Enable Accessibility and Reflow with Tagged PDF** checkbox if it is not checked
5. Select **Ok**
6. Select **Create PDF**
7. Select **Save**

**Note:** If the ribbon is not visible, you will have to select the Acrobat tab after selecting Ok.

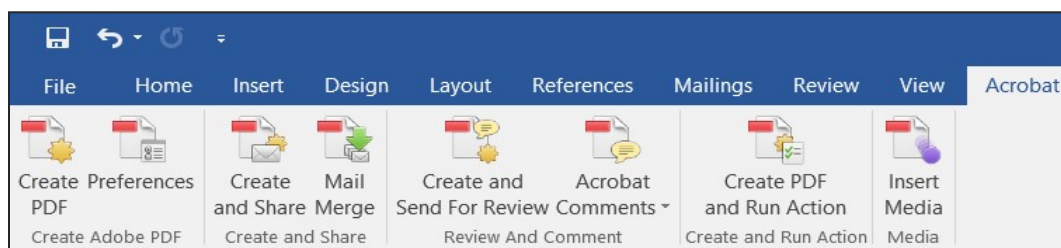


Figure 27. PDF options

**Note:** Do **NOT** check the Enable Advanced Tagging checkbox.

## Adding Acrobat tab

If the Acrobat tab is not displayed:

1. Select **File**
2. Select **Options**
3. Select **Add-ins**
4. Select **Manage: COM Add-ins**
5. Select **Go**
6. If the check box for **Acrobat PDFMaker Office Com Addin** is unchecked, check it
7. Select **Ok**

**Note:** You must have Acrobat DC installed.