



508 Compliance

AND THE NATIONAL PARK SERVICE

What is section 508 compliance and why should I care? Well, according to the National Federation of the Blind, there are currently about 1.3 million people in the United States who are blind, and an estimated additional 10 million people who have a visual impairment. In addition to that just about every single person alive today will be disabled at some point in their lives or another. From simple issues, like needing glasses to see 20/20 or just having had your pupils dilated, to more serious issues like needing crutches for a broken leg, or a wheel chair for mobility. At some point everyone experiences the need for assistance in some way.

The same is true for the information that we create and provide to various audiences. The work we do in the National Park Service is important to the people of today, and the people of tomorrow. As faithful stewards of the American story, it is our responsibility to ensure that every person has access to the right information to suit their needs. Section 508 is a process to help ensure that all of the information we provide in an online forum is accessible to as many people as possible. And it isn't just the public that can benefit from this type of accessibility. Co-workers, colleagues, partners, stakeholders, and the general public can all benefit from greater levels of access.

Through this short introduction to basic steps of compliance, my intent is to show you what steps are involved in creating an accessible pdf from Microsoft word. This is by no means a comprehensive training, but more as a taster for the how you should be structuring your work flow to include aspects of 508 compliance in every document that you create. This process is a complete re-haul of how most of us work, and as such requires time and repetition to achieve this type of work flow. There are a variety of resources available online, through DOI learn, and through in-person trainings that can provide the background necessary to create accessible documents. I implore you to continue to search for, and utilize, these resources. I will also be providing some handouts with this class that can help with the creating of accessible documents. I encourage you to continue this process well beyond this short introduction.

History

- ▶ 1973
- ▶ 1979
- ▶ 1980
- ▶ 1998
- ▶ 2000
- ▶ 2001
- ▶ 2017

1973 – The Rehabilitation Act is signed prohibiting discrimination on the basis of disability in programs conducted by federal agencies.

1979 – the National Park Service (NPS) decided to approach the issue of accessibility in a comprehensive, organized way, rather than on a project-by-project basis. The primary goal of the program was to develop and coordinate a System-wide, comprehensive approach to achieving the highest level of accessibility that is reasonable, while ensuring consistency with the other legal mandates of conservation and protection of the resources we manage.

1980 – Since 1980, the NPS has been working with accessibility coordinators in each regional office, and in parks and program offices, to: (1) assess the level of accessibility of various parks; (2) identify the barriers to accessibility; (3) develop policies and guidelines regarding appropriate methods and techniques for improving access; and (4) provide technical assistance and in-service training on effective approaches and program implementation.

Two primary reasons why the NPS has initiated its present accessibility efforts: (1) there are various legal mandates that require all government agencies to make facilities and programs accessible; and (2) it simply makes good sense to employ principles of "universal design" in providing facilities for everyone, rather than for only a portion of the population. While there are sanctions that can be brought for non-compliance with the legal requirements, it is the second reason that, in the long term, is the most significant for accessibility in the parks. It is estimated there are over 54 million persons in our country today who meet the legal definition of a person with a disability.

1998 – The Rehabilitation Act of 1973 was amended to require Federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities. **This is when Section 508 is created.**

2000 – Director's Order 42 is signed. DIRECTOR'S ORDER #42: ACCESSIBILITY FOR VISITORS WITH DISABILITIES IN NATIONAL PARK SERVICE PROGRAMS AND SERVICE. [Section 508 of the Rehabilitation Act of 1973](#), as amended, requires that all Federal agencies ensure that when they develop, procure, maintain, or use electronic and information technology; that, it is accessible to employees with disabilities. It also requires that individuals with disabilities who are seeking information or services from Federal agencies have access to and use of all information provided. Electronic and information technology is expansively defined. It includes computers (such as hardware, software, and accessible data such as web pages), facsimile machines, copiers, telephones, and other equipment used for transmitting, receiving, using, or storing information.

2001 – Director's Order 70 is signed. Director's Order #70: Internet and Intranet Publishing. **10.3 Accessibility**
Section 508 of the Rehabilitation Act of 1973 (amended in 1978) requires federal agencies that develop, procure, maintain, or use electronic and information technology to make it accessible to people with disabilities unless it would pose an undue burden to do so. Federal employees and members of the public with disabilities must have access to, and use of, information and services comparable to the access and use available to those without disabilities.

Web authors must ensure that all primary information conveyed in a web page is accessible. The basic rules of web page accessibility are:

Provide a text-only version of any graphic-rich page that contains the same information as the original page.

Provide alternative text for all images (including those used as spacers and bullets), buttons, links, hotspots on image maps and graphical buttons.

Provide alternative formats for audio and visual media that convey important information.

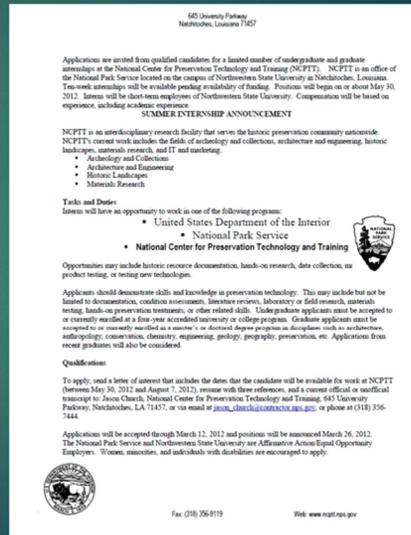
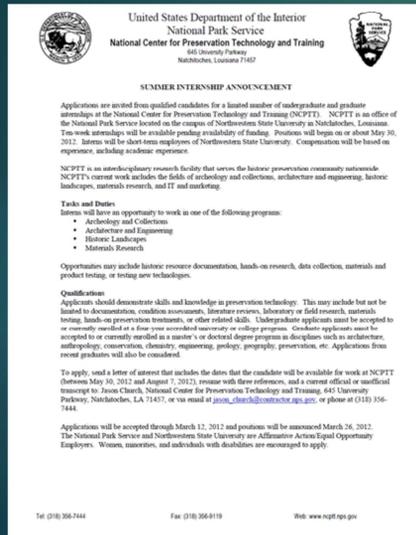
Use foreground and background color combinations that provide sufficient contrast when viewed on a black and white screen.

If frames are used, provide an alternate, non-frames format, and use titles to help users keep track of frames.

Avoid blinking, flashing, or other features that cause the screen to flicker. The [NPS Internet/Intranet Publications Manual](#) will provide a complete checklist of accessible features that should be incorporated in the design of every page. Director's Order #42 (Accessibility for Visitors With Disabilities) provides additional guidance on accessibility issues pertaining to the NPS.

2017 – WCAG 2.0 is released. Web Content Accessibility Guidelines (WCAG) 2.0 defines how to make Web content more accessible to people with disabilities. Accessibility involves a wide range of disabilities, including visual, auditory, physical, speech, cognitive, language, learning, and neurological disabilities. On January 18, 2017, the Access Board published a [final rule](#) that jointly updates requirements for information and communication technology covered by Section 508 of the Rehabilitation Act and Section 255 of the Communication Act. **However, compliance with the section 508-based standards is not required until January 18, 2018.**

What exactly is an accessible pdf?



What exactly is an accessible pdf? Well, let's take a look at this document here. Looks pretty normal. In fact, it probably looks like just about anything that you have ever read from the National Park Service. Even if you had never seen this document before, you would have little difficulty reading this document. The information is laid out clearly, in a format you are very familiar with. The title is located at the top of the document, and the information is laid out underneath it in an outline form. There are headings with supporting information displayed below. Seems like a fairly straight-forward document.

Now, let's take a look at another document. Well this one looks decidedly different. The information is exactly the same. The same words and wording was used in both of these documents. But this one is much more difficult to figure out. Now this document on the right is not completely unusable. Given enough time, I think all of us would eventually be able to figure out that what this document is saying. We have enough information gained through daily life to inform us of how to read this document. Well, this is an example of what a document looks like to someone who is in need of a section 508 compliant document, but does not have access to one. The information is there, but it would take that individual some time to figure out what the message is.

That is what a section 508 compliant document is. It is a document that has enough information for those with disabilities to be able to access the information. Section 508 deals completely with providing equal access to information. Utilizing the tenets of creating a section 508 compliant document will allow us to provide the supporting information to provide logic and reading order, so that individuals with disabilities can access the information. It's that easy, just provide enough information to give the greatest level of access to the highest numbers of people.

What exactly is an accessible pdf?

- ▶ An accessible pdf is...
 - ▶ Not just Adobe.
 - ▶ A format for a type of document; portable document format.
 - ▶ Made up of three layers
 - ▶ Physical Layer
 - ▶ Content Layer
 - ▶ Tags Layer
 - ▶ An accessible pdf allows for universal access to content through the aid of assistive technology.

Now that we have an understanding of what we are trying to create, let's take a quick look under the hood and see what that actually means for us and what we need to create. So, a couple of thoughts regarding what a pdf is before we get into creating an accessible pdf.

An accessible pdf is not just an adobe product. While is adobe is the best known creator, editor and producer of the pdf format, it is not proprietarily owned by adobe.

A pdf is particular format for saving files called, the portable document format. The major benefit of this file format is that is accepted by most operating systems and platforms as a readable and editable file. It is one of the few truly portable file types, and what makes it best for accessibility in that it is accepted by more programs and software than any other type of file.

A PDF is made up of three layers;
the physical layer, which displays the visual appearance of the document;
the content layer reveals the documents text and graphics (this is the layer that is presented to assistive technologies like screen readers;
and the tags layer is used to indicate page elements that define the documents content structure and how elements relate to one another.

This becomes very important after a document is created, as any graphical representation on screen cannot be accessed by assistive technology.

Assistive Technologies (AT)

- ▶ Physical
 - ▶ Wheelchairs, scooters, walkers, canes, crutches, prosthetics, or orthotics
- ▶ Hearing
 - ▶ Hearing aids, closed captioning, TTY telephones
- ▶ Vision
 - ▶ Screen readers, audio description, refreshable braille displays, GPS

Assistive Technology is the foundation on which disabled folks will use to access the information we have created. In other words, "**assistive technology** is any object or system that increases or maintains the capabilities of people with disabilities.

There are a variety of assistive technologies out there today. For example, people with physical disabilities might use things like a wheelchair, scooters, walkers, canes, crutches, prosthetics, or orthotics. All of these items are designed to make mobility easier for those who have difficulty.

People with hearing issues might use technology like hearing aids, closed captioning video, or TTY telephones. All of these technologies help to provide information to those who have a hard time hearing.

For the majority of our purposes we will be dealing with assistive technology for those with vision problems. For these individuals, technology like screen readers, audio described videos, or refreshable braille displays can provide access to information that would otherwise not be available.

5 Steps to Compliance

- ▶ Document Setup
- ▶ Text Formatting
- ▶ Object Formatting
- ▶ Color Formatting
- ▶ Accessibility Check/Production

Alright, let's actually take a look at the process when we are creating one of these types of documents. Effectively this is a five step process.

You will start with a document setup. This will ensure that you are starting from the right place.

You will then format the text.

After that you will format any objects, things like pictures, graphs, tables, and the like.

Once that is done, you will ensure that the colors used are formatted correctly.

Finally you will ensure that all aspects of 508 compliance have been addressed, and once that is completed you can produce your document.

Sounds easy, right? Let's take a closer look at each step in this process.

How Do We Do It?

- ▶ You will work on a file and create an accessible pdf
- OR
- ▶ You will create content that will be given to someone else to create and accessible document

You will be the sole creator and editor of the document, and as such need an ideal workflow to be able to accurately capture all accessibility aspects.

You will be a content generator for someone else, and as such need to prepare them for success. Since much of accessibility is how you structure a document, it is imperative to incorporate as many aspects of accessibility prior to handing the work off. This will help you AND the person who will be converting the pdf.

Document Setup

- ▶ First, and one of the most important aspects
- ▶ Helps everyone locate, open, and switch between documents
- ▶ Tips:
 - ▶ Be unique and consistent
 - ▶ Do not attach to anything that changes over time or location
 - ▶ Use leading zeros to facilitate in numerical order...001...002...003
 - ▶ Use lowercase letters, unless there are more than one word
 - ▶ Use only numbers and letters
 - ▶ Use hyphens and underscores instead of spaces

The use of a descriptive filename that identifies the document or its purpose helps everyone (including people with disabilities) locate, open, and switch between documents. File names should be indicative of the project you are working on, or within. File names may seem insignificant, that is until you spend an entire day editing the wrong file, all because the file naming was not clear. If you have ever been there before, you know it is less than a great feeling. To that end, a descriptive file name helps everyone locate, open and switch between documents, ensuring that the correct files are being edited. This helps efficiency as well as precision.

The very first thing that should be done when creating a 508 compliant document is to create a unique, but consistent file name. Now when I say consistent, I mean through various versions, not with each name of a file. For example, if you are working on a document that will have several people editing it, the use of either version numbers or initials can work well, but not when you use both. So if Anne Baxter worked on the document first and she put document-name-AB, and then Charlie Dunphy edits it next and names it document-name V2, things can very confusing, very quickly. So make sure you are consistent with you naming structure all the way through the completion of you project.

In this same thread, you want to make sure you are not naming documents that are tied to anything specific that changes in location or time. As an example here, all work done for the Centennial could only be used during the Centennial year. So, if a document was edited in 2016 and 2017, the Centennial naming might not work. Try and be unique, but remember consistency.

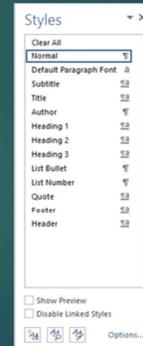
In the even there are several iterations of your document use leading zeros to describe any number. If you expect to have less than 100 version a single zero will work. This will keel file names uniform from 1 through 99. If you need more, just add more zeros. Uniformity will breed consistency.

Remember that when you are naming files to utilize only numbers and letters. Certain special characters may have a difficult time being read on other software applications. This can become a real nasty issue if you are going to utilizing another software application to create the actual pdf, like InDesign. Ensure that the file will work across platforms by using only letters and numbers in your naming structure.

Many software programs will not allow you to use a forward slash in the naming structure. That is because html works heavily with the slashes, and can create issues when opening documents across various platforms. Many times this will cause users to utilize spaces, refrain from using spaces and instead utilize hyphens or underscores. A few software platforms still consider a space to be a special character, so there could be issues with their use. Sticking to hyphens and underscores will help keep the issues to a minimum.

Text Formatting

- ▶ This is arguably the most important aspect of creating 508 compliant documents
- ▶ Text formatting is based on hierarchy
- ▶ Hierarchy is based on tagging
- ▶ Tagging is another term for labeling the parts of the document



The “meat” of 508 compliance comes from how we format the document. Here in the United States, we are taught that when we pick up a piece of paper we start in the upper left hand corner of the document and scan each line from left to right, moving down the page as we read. Most of us are introduced to reading this way, often before we even enter school. As such, it is an ingrained aspect of how we process written information visually. Now there are many cultures around the world that do not read in this same fashion. Many Asian cultures, like Japan for example, who use a form of writing called *tategaki* and structure their writing from top to bottom but right to left. In fact, the ancient Egyptians wrote from the bottom to the top, which was one of the hurdles earlier researchers needed to pass in order to understand the language of the Egyptians.

This all becomes important because AT is essentially a new reader. In the sense that it does not have years of experience with reading in the Western way, therefore it is necessary to provide the AT with directions of how to read the material that is on the screen. Remember, that when you type words into a word processor, you are only putting down an image of the character, NOT the actual character. Now this may seem trivial, but it becomes important when you finalize your document. Without proper formatting, there is now way for Assistive Technologies to know what is written on the page. We are able to provide this formatting through a hierarchy built within most software applications.

AT is able to read what is on the screen based on a hierarchy, and logical ordering of information. Let’s say that you are going to write something, you typically start with and outline. An outline, with various headings, sub-headings, and information nested below other information, we are able to logically organize the information we see. AT is able to do this through a hierarchy based on tagging.

Tags are the underlying layer of information that AT relies on to understand the text. Take a look at this list here and you will see that these are parts of a document you are familiar with. You know, just by looking at this list where in the document these parts would be, and so does the AT if we provide that information.

Think of tagging like labeling. When we format the text we are essentially assigning a value of what kind of text we are creating...a title, a heading, a sub-heading, the body of text, or even a table of contents. When we tell AT what parts of the page are there, the AT is able to reproduce that information for those with disabilities, and provides access to that information.

The image shows a document page with several red arrows pointing to specific elements, each labeled with an AT term. The document content includes:

- Title - Title/H1:** United States Department of the Interior
- Subtitle - H2:** National Park Service
- Subtitle 2 - H3:** National Center for Preservation Technology and Training
- Section Header:** SUMMER INTERNSHIP ANNOUNCEMENT
- Body - P:** Applications are invited from qualified candidates for a limited number of undergraduate and graduate internships at the National Center for Preservation Technology and Training (NCPTT).
- Section Header:** Tasks and Duties
- Bullet List:**
 - Archeology and Collections
 - Architecture and Engineering
 - Historic Landscapes
 - Materials Research
- Hyperlink:** jason_church@contractor.nps.gov

Here we have our document again. When we provide that background information to AT we do not need to call each part on the names we are familiar with, we instead will assign specific assistive technology terms to provide the background information.

The Title becomes either Title or H1, we will talk about this more later.

The sub-title becomes H2

Sub-title 2 become H3, because this is the this type of heading we have.

The body of the text, or any quote regular text, becomes P for paragraph.

Another heading here, this can become either H3 or H4, depending on what style we want. We will talk more about this later.

A bulleted list stays bulleted list.

Even special types of text, like bold, italics, or even hyperlinks have their own value assigned for AT. Here the hyperlink is identified.

Text Formatting

- ▶ Text formatting is based on hierarchy
- ▶ Formatting and hierarchy will provide the necessary information for AT to read your document
- ▶ Logical organization of the content will drive the ability of AT
- ▶ DO NOT use manual formatting



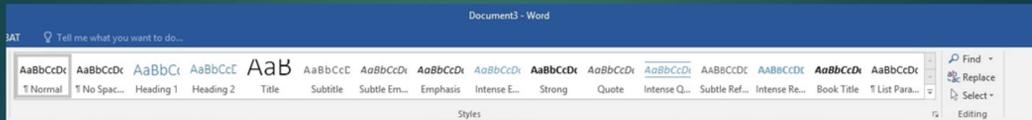
Alright, back to formatting. Now that we understand that formatting is based on hierarchy, and we understand that the hierarchy has specific terms in order for the AT to understand the information, now we have to organize that information.

The outline again is able to inform us how information is logically presented on the page. Item 1 usually starts off with sub-headings, that usually consist of a combination of letter and numbers.

It is going to be up to us to provide a logical order of the information that we provide. We need to keep in mind that anything we assign an H3 value will be lower in logical order than an H1. So as we go through the document, we need to keep a consistent, logical ordering to the information we assign. Don't worry, there is going to be a cool trick I am going to show you in a minute that will make this easy. But I cannot stress the importance of this enough. You must think about the logical ordering of the information you are presenting when you are assigning a format.

Speaking of format. I want to show you all something. Do you see this box right here? This is something that anyone who has ever used word should be familiar with, it is the manual formatting box. I bet you didn't know it was called the manual formatting box? That is because Microsoft has a completely different way to provide style with its formatting. So from this point forward, I don't want you to ever use this box again. In fact, think of this box as the anti-accessibility box. Anything you do in here won't give any information to AT. If you want to give information to the AT while formatting your document, well, then you gotta have style...

Styles



- ▶ Styles can provide the background information necessary for AT
- ▶ Styles are found in the home tab from the ribbon
- ▶ You can modify any of these styles to fit your needs
- ▶ Ensure that you are using the correct style type
- ▶ Highlight the content you desire and then select the corresponding style to apply that style



Styles! Ah, the hidden feature of Word, that should not be a hidden feature. I am sure a lot of us have opened up word, saw this ribbon at the top, and thought, hey cool, if I ever want to turn my text blue, there a box that will do that! Neat! But the reality is, the styles are among the best features in word, and are going to be your secret weapon in the fight for accessibility.

For you see, styles provide all of the background information necessary AT to be able to understand what is being displayed on the screen. All of those various terms we just discussed, you will notice them here on screen...heading, sub-heading, title. They are all here! Ready for us to use them, right on the home tab!

The part that blew me away the first time I learned about these wonderful little attributes, was that you can modify them in any way that you need! So if you need a different font, size, emphasis, anything, you can modify it to fit your needs.

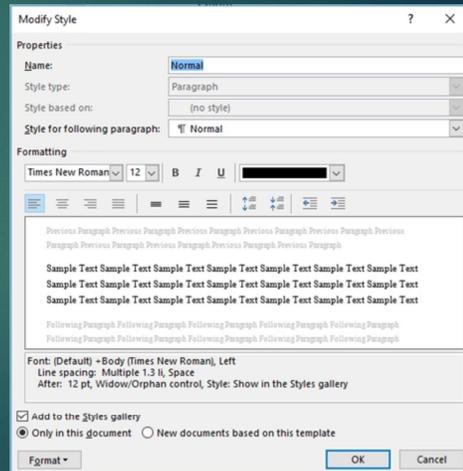
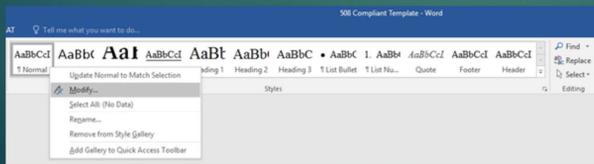
This is where your workflow is going to change a little bit. And I am not going to lie, it will take some getting used to. But, when you do, you will find that you don't understand how you used to do it the old way.

So typically, when we create something in word we start with the formatting first. It is what we see in the minds eye. We see the title, bigger, bolder, and maybe even centered. We see the text of the body as usually a 10 or 12 point font. But instead of doing that, just write. Put down the information you want to put down, on the page. Don't worry about text size, color, emphasis, location, any of that stuff. Just worry about the content.

Because once you have all of your content on the page, all you have to do is highlight the content you desire (a title, a heading, the body) and select the corresponding style, and viola; the style you want is applied. BUT more importantly, so is the background information.

Styles

- ▶ If you want formatting choices that are not available from built in styles, you can modify the styles
- ▶ Modifying styles is necessary in achieving the desired final look
- ▶ Right click the style you want to modify
- ▶ In the formatting section , change anything you like
- ▶ Choose whether you want this style for this document only, or for all documents going forward



Just as we had said before that you can modify the styles. You will almost always find it necessary to modify the styles. Not only are the Microsoft basic ones, terrible, they are nowhere near in line with the NPS graphic identity program. So you will almost certainly need to modify the styles.

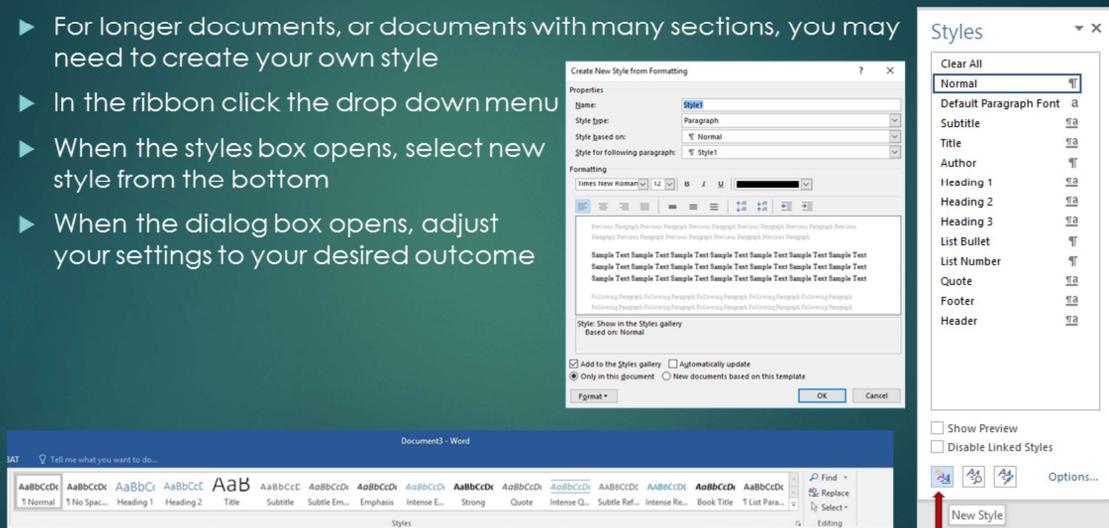
In order to do this, all you have to do is right click the style you want to change. This will cause a dialogue box to open. In this box you will see some familiar controls. Now, don't ask me because Microsoft certainly did not, but why they buried the same controls you shouldn't use into the box you should is beyond me. But, when we adjust the settings here, we still assign AT values to the information. So feel free to be as creative as you need in this section.

Again, feel free to change fonts, sizes, emphasis, any of these choices. But remember, that anything you assign this value to, will have this look. I will expand on that in a moment. Because before you save this style type, you have a choice to make.

You have to option to save this style just for this document, or for all documents moving forward. If you are creating many documents that have a similar feel to them, keeping a specific style for future documents can save a great deal of time as you create new documents. We are currently working on developing templates, but as you work with accessibility, you will understand that there simply isn't a one-size-fits-all option. Many options can be reused, but each document will need to be created individually.

Styles

- ▶ For longer documents, or documents with many sections, you may need to create your own style
- ▶ In the ribbon click the drop down menu
- ▶ When the styles box opens, select new style from the bottom
- ▶ When the dialog box opens, adjust your settings to your desired outcome



Since we are talking about creating each accessible document individually, we are also going to need to address the need for creating new styles. Sometimes you documents will have similar headings throughout that require different looks, or you need certain text to be italicized or whatever specific creative need you have. That is the beauty of styles, is that you can create as many as you need. The ones that are displayed in the ribbon are just mere suggestions of what you are able to store in Microsoft word. So please feel free to create as many styles as you need, as often as you like.

In the ribbon on the top, you will notice a small drop down arrow. You will need to click that to access the styles pane. When that opens you will need to select the new style button on the bottom.

A new dialog box will open, and just like with modifying styles, you can adjust as many settings as you need in here. You can create as many different styles you need, but just keep in mind, any text you assign this value to, will have this look. So don't be afraid if you have many different styles at the end of your document.

Object Formatting

- ▶ Types of objects: images, headers/footers, watermarks, and data tables
- ▶ It is necessary to provide information for screen readers to access this data
- ▶ Images
 - ▶ Must have: Alt Text, caption, or in information around the image
- ▶ Data Tables
 - ▶ You must insert a table, you cannot use an image
 - ▶ The use of headers is paramount to understanding the information
 - ▶ Place the table "in line" with other content
- ▶ Headers/Footers
 - ▶ You must use the built in features of word to insert a header/footer
- ▶ Watermarks
 - ▶ You may need to duplicate this information in the body of the content

Got all of that? It is a lot, and like I said earlier, this class is merely designed to get you thinking about this kind of stuff. However, we still have a ways to go before we can finalize our document. We have gone through and we have assigned a value to all of our text. However, very often we support the content of our text with objects.

Objects can be anything from images, to charts, to headers and footers, to watermarks, data table, just about anything that is not standard text. More often than not, this information is displayed in visual form. And just like with text, we are going to need to provide background information for AT to decipher what is onscreen.

For images, we need to provide what is known as alternative text for the image. Alt text, as it is called, is a short description of the image.

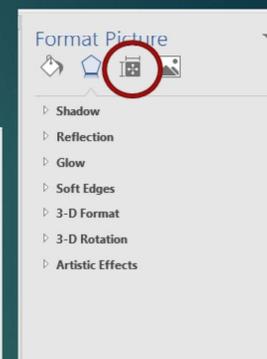
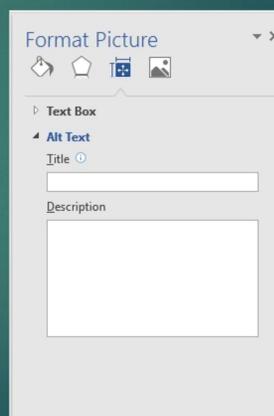
Data tables need to be inserted. The process of adding information is necessary to be able to accurately have AT describe what is onscreen, so please ensure that you are inserting a table. When creating the table, ensure that you are using headers to describe what is in the table. Headers will provide the logical order for AT to decode the box and provide access to the information within. By placing the table in-line with the text, the AT is able to read the information exactly as its displayed. If it is placed outside of the text, most AT software will read through all of the text on the screen before going to the box. Keep this in mind when placing tables. We will talk more about this in a second.

Make sure you use the built in features for creating header and footers because that will provide all of the background information for AT software.

If you are creating something that needs a watermark, you need to duplicate the body of the watermark somewhere in the text, otherwise AT software will not be able to detect its presence.

Adding Alternative Text

- ▶ Right click on the image and select format picture
- ▶ Select the Layout & Properties icon
- ▶ Select the Alt Text drop down
- ▶ Add alt text



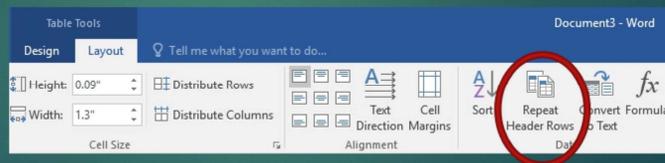
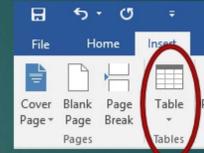
Let's talk a little more about adding alternative text. Alt text is one of the requirements for 508 compliance, in that all images must have alt text for that image to be accessible. The first thing you are going to want to do is to highlight the image. More often than not, this is going to be a picture, but it could be any type of image, so if you are ever in doubt, it is better to provide alt text than not.

When the format picture pane opens up, you will notice a few icons along the top row. You are going to select the layout and properties icon. The icon is that of a square with arrows pointing to each side of the square. When you select this icon, two new options will open underneath. You are going to want to add text to the description part of the box. There is an art to creating effective alt text, in that you are striving to provide as much information in as few words as possible. The more lines of alt text that you write, the easier this will become. It is like a muscle, in that the more you flex it the stronger it becomes.

Now you will also notice an option for a title. You may add a title of the image if you would like, but keep in mind that this function only becomes important as you add many images into your document. Since one of the benefits of using tags is that it can help you automatically create a table of contents, when the images are titled, they can be included in the table of contents.

Creating Tables

- ▶ Select the Insert tab on the ribbon
- ▶ Then select Table>Insert Table
- ▶ If your table has a column header, select Table Tools>Layout
- ▶ Choose the Repeat Header Rows option in the Data group



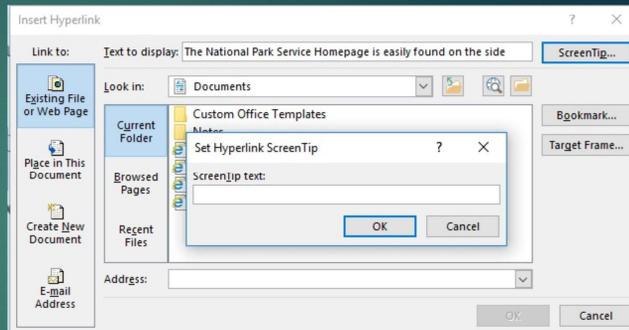
I just want to briefly show you how to add a table into our text. First we want to navigate to our insert tab on the ribbon. You will see an option for table, with a drop down arrow, select this option and then insert table. You will be given a set of options that allow you to choose how large to make your table. Create the table you need based on these parameters.

Hopefully you remember a little bit ago when I said that all tables should have headers. Headers are different than headings. Headers identify information within the table, and are necessary for AT to decode the information in the table. To ensure that your headers are being properly used, go to the table tools section of the ribbon and select layout.

When your options become available, ensure that you have repeat header rows highlighted. This will ensure that the information in your headers is applied correctly.

Editing Hyperlinks

- ▶ Highlight the content you want to become a hyperlink, right click, and select Hyperlink
- ▶ 508 compliance requires the full url to be spelled out, unless screen tips are used
- ▶ Use of screen tips will allow for the use of a shortened url being displayed



Another frequent feature in documents these days is hyperlinks. They are fairly ubiquitous in most online publishing. And just as we need a cue, usually blue text with an underline, so too does AT need a cue that this is a hyperlink and something that the reader can interact with. This may also be a process you are already familiar with. You are going to want to highlight the content that you want to become a hyperlink and then right click the selection. Toward the bottom of the drop down menu select the option for hyperlink.

When the next dialog box opens, you will see an option at the top for text to display, and another box at the bottom for address. These two options are pretty straightforward, whatever text you want displayed should be written in the top box, and the location address of the file you want should be written in the bottom box.

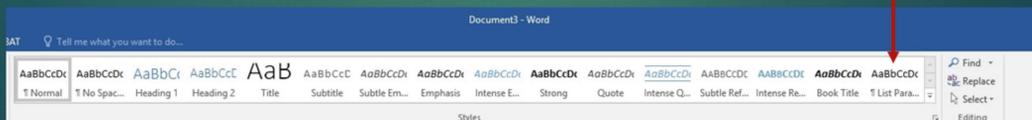
Now, this is where it can get a bit tricky, and if I listen hard enough, I may even be able to hear some groans over the phone here, but when we are creating a 508 compliant document, it is recommended for the entire URL to be written on the screen. If you think of an online document that you have seen before and you can imagine all of the click here for more information links all over a page. To a sighted individual this usually presents no problem, but imagine you are listening to this document and all you heard was click here a dozen times, it could become confusing really quickly. This is why it is required to have the full URL written out, to make things easier for everyone.

Now the reason I said I will probably hear groans is because more often than not, a full written URL is not the prettiest thing on a page. Sometimes there will be many links on a page, or you need to convey some message with a link, in that case you will want to use a screen tip.

A screen tip is essentially alt text for written words. If you have ever hovered your pointer over a link online and a web address pops up, that is a screen tip. You will notice an option on the right side of the hyperlink box that says screen tip. Select that, and type your screen tip into the next box that opens. Then hit ok.

Creating Lists

- ▶ Lists can be bullets or numbers
- ▶ Use either the bullet list
- ▶ Or the number list, depending on the type of list you want to create



Lists are another type of object. Obviously these are almost exclusively words, however we are effectively grouping certain words together to create an object. A list conveys meaning, just by being a list, so we have to make that accessible for everyone.

Lists can either be bullets or numbers. You will use the paragraph section on the home tab of the ribbon. Use either the bullet list.

Or the numbers list. And just the same as with text before, here you are going to just put your content on the page. Each time you hit enter, it will create a new line with a new bullet or number. That is it. When you are finished with the list, you can either hit enter twice, or turn off the option for the bullet list. But I want you all to look at something else here, you may notice that when you do this the list paragraph box in the styles tab becomes highlighted. This is important because as we have learned, this is the area that provides the background information to AT. So we know that if this box is highlighted, that we have provided the correct information.

Color Formatting

- ▶ You cannot use color alone to convey a message
- ▶ You will need to capture the information you are trying to convey in written form
- ▶ Applies to all sensory information; size, shape and location

Project A	ON TIME
Project B	AT RISK
Project C	LATE



When you are creating dynamic documents, especially ones that you want to catch the readers attention, you will most likely use at the very least some color. When thinking about color and accessibility, it is not always as simple as choosing a pretty color. In addition to those that are blind or have low vision, there are a variety of types of color blindness that make understanding color difficult for those with vision disabilities.

To that end, you cannot use color alone to convey a message. So, let's take an example that most of us have experienced at one point in our lives or another. A simple traffic light. Now as sighted individuals we know that each color represents a specific action on our part. We can see the colors; red, yellow, and green. So, as a sighted individual if we approached a traffic light and saw that it was red, we know, based on the color that we need to stop. This is a unique analogy, because hopefully there aren't many blind or low vision folks driving vehicles. However, if we take that same approach and apply it to a document, then we could be alienating specific audiences simply because they cannot access the information you wish to convey.

So what are we to do? Well, we are going to have to include that information in written form in some way. This will allow all users to access the information. So back to this traffic light, we would need to include, in written form, the message we are trying to convey. In this case it is that green means go, yellow means caution, and red means stop.

But let's take a look at an example of something that may be in your documents. Based on that same color coding we saw with the traffic light, we (as sighted individuals) could ascertain that Project A is going along well, Project B is having some difficulties, and that Project C is late, overdue, or something to that nature. This plays on our already held understanding of what these colors usually mean to us. So if we wanted to open this information up to all audiences, then we need to capture that information in a written way. Simply by adding the terms we want to express, we are able to provide greater access to this information. The benefit is that we have not taken away from our visual display. The colors are still there. Sighted individuals are still able to understand the information conveyed by color, all we have done is provided greater access.

Color Formatting

- ▶ Color contrast is extremely important for sighted individuals
- ▶ A high level of contrast between foreground and background results in more people being able to see and use the content

The image shows a screenshot of the WebAIM Color Contrast Checker tool on the left and a color wheel chart on the right. The tool interface includes a search bar, a 'Color Contrast Checker' section with a contrast ratio of 8.59:1, and an 'Explanation' section. The color wheel chart is a circular diagram with various colors arranged around it, labeled with 'Primary', 'Secondary', and 'Tertiary' categories. A grid of color combinations is also visible, with 'Good' and 'Poor' labels indicating contrast levels.

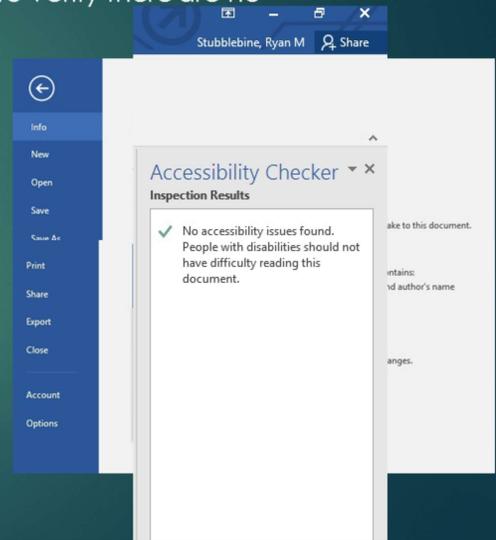
A little bit more on color. This time we need to talk about color contrast. Color contrast is extremely important in the delivery of information. Even people with perfect vision can have difficulty reading certain color combinations. Look at this chart. There is no universal color that works best on everything. The standard of black text on a white background provides a clear color contrast. However, we all know that black and white gets boring, and often we are compelled to add color text, or a color background.

The standards of Section 508 give us certain contrast ratios that we have to meet in order for the document to be accessible. Look at the color wheel. This is something that most of us have seen, maybe even as early as elementary school. The color wheel has an important function, in that it tells you which colors contrast with each other. When we look at the color wheel, at any color, the color that is directly across from it will be the perfect contrast color. For example, if we are using a red background, the wheel tells us that green is the best choice for font.

Now this will not always achieve the look you are going for. In those cases, when the colors you want to use are not clear cut, there are a variety of programs out there that can check your contrast for you. Personally I use the contrast checker from WebAIM. All you have to do is provide the two color options and the checker will automatically tell you if the colors will work well together. The really neat thing, is that if your colors fail, you can use a sliding bar to adjust the tint of your color to get them into the correct ratio. This will allow you to use color as close to your preference while still being in compliance.

Checking Your Work

- ▶ Before you finalize your document, you need to verify there are no accessibility issues
- ▶ Choose the file option and then info (default)
- ▶ Select check for issues
- ▶ Then select check accessibility
- ▶ The Accessibility Checker pane will open



Alright, we have formatted all the parts of the document and we are almost ready to convert our document to a pdf. Before we do that, though, we are going to want to verify that we have incorporated all aspects of 508 compliance into our document. We do this to make sure there are no accessibility issues that we may have overlooked.

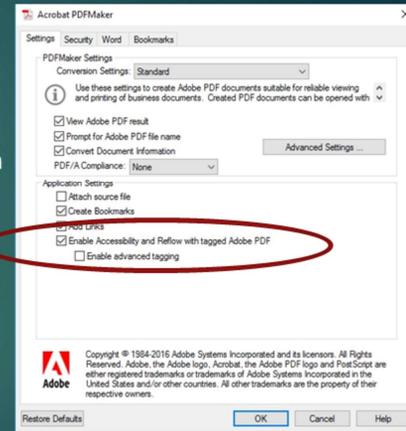
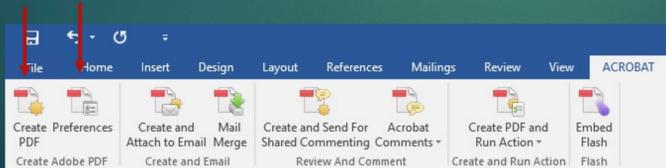
Microsoft has a great built in feature for checking accessibility. To get to this, you will need to go to the file option and then into the info section. There will be a few choices here and you are going to select the one that says check for issues.

A drop down menu will open and you want to check for accessibility.

This is when the checker will go through the document and ensure that you don't have any outstanding issues. If you do see items listed in this box, you are going to need to address them before you finalize your document. Once you go through the accessibility checker and get the message that says No Accessibility Issues Found, you are ready to convert your document.

Converting to PDF

- ▶ You can create the pdf directly from word
- ▶ Navigate to the Acrobat tab in the ribbon
- ▶ Select preferences
- ▶ Ensure that the Enable Accessibility and Reflow with Tagged pdf setting is checked
- ▶ Once verified, then select create pdf



Alright, we are nearing the finish line here. It is time to convert our document to a pdf. The nice thing is that you can do this directly from Word. First you want to navigate to the Acrobat tab in the ribbon. When that opens you are going to select the option for preferences. When your preferences box opens, you want to make sure that the box that says Enable Accessibility and Reflow with tagged PDF option is selected. This ensures that all of that background information that we have provided is linked to this document. Or in other words, without this option selected, all our work was for not.

Adjust anything else you would like in this section. When you are finished with that, all that is left is to create your PDF!

Viola! You have completed a 508 compliant document! Congrats!

5 Steps to Compliance

- ▶ Document Setup
- ▶ Text Formatting
- ▶ Object Formatting
- ▶ Color Formatting
- ▶ Accessibility Check/Production

So I just want to review that process one last time, We will start with the setup of our documents, we need to make sure that we format the text. Then we need to make sure that we format all of the objects we have in the document. Next we ensure that our color has been addressed, and finally we check our work and finalize our projects. See....easy peasy.

I just want to remind everyone out there, that this is a new way of doing things for many of us. It is going to take some time to get used to. Don't feel like you need to be an expert on this by tomorrow. The fact that we have been talking about this stuff as an agency for so long, creates a situation where people may feel overwhelmed by the amount of work needed to bring us into compliance. Take solace in the fact that we are taking those steps today. By being introduced to this information, we are beginning that process of incorporating this into our daily work routines. Rome wasn't built in a day, but the first stone laid was.