# PDF Remediation Checklist

## Required PDF Fixes

| **Issue Title** | **Issue Description** | **Remediation Suggestion** | **Testing Overview** | **List of Tools** |
| --- | --- | --- | --- | --- |
| Image is Missing Alternative Text | A non-decorative Figure is tagged but lacks Alternative Text. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0. | Add appropriate Alternative Text that is equivalent to the information conveyed by the image.  | Run the accessibility checker to see if any alt tag issues are encountered. Inspect the tag structure for figures that are flagged. | Adobe Accessibility Checker |
| Alternative Text is Incorrect | The alternative text does not match the actual purpose of the image. The alternative text should contain both the take home message and any actual text that is in the image itself. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0. | Analyze the image and correct the alternative text to correctly communicate the purpose of the image.  | For each informative image, compare the alt text to the information gained by a visual user. | No tools used. |
| Decorative Images are not Tagged as Background | Images used for decoration, layout, or other non-informative purposes have alternative text, which is not appropriate in that context. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0. | Tag all non-informative images listed in the Locations section as artifacts or background. | Inspect the document to see if there are any images that are decorative. Use the touchup reading order tool and/or inspect the tag structure to see if they were tagged. | Adobe Touchup Reading Order |
| Related Objects are not Flattened into a Single Image | A number of different objects are placed in proximity or overlaid to present the appearance of one image, but not tagged as a single Figure. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0. | Tag objects as a single figure with one Alternative Text. Consider replacing with a single graphic from a third party program (e.g. Photoshop). | On complicated figures, inspect the tag structure to verify the whole image is contained in a single figure tag. | No tools used. |
| Characters with no Reliable Mapping to Unicode are Present | A character/glyph is used in the document that is not mapped to a reliable equivalent in Unicode. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0. | Replace character with one that has a Unicode mapping or use an image with Alternative Text.  | Run the accessibility checker to see if any characters are flagged. | Adobe Accessibility Checker |
| Complex Images are Missing Detailed Descriptions | There are images present that need more detailed, more substantive descriptions. Examples include pie charts, organizational charts, maps and graphs. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0. | Add a more detailed description in the surrounding content (preferred), or expand the existing alternative text to be more expansive and complete, or create a visible URL to the page with the text description. For further assistance see [this WebAim page on complex images.](https://webaim.org/techniques/alttext/#complex) | For each informative image, compare the alt text to the information gained by a visual user. | No tools used. |
| Alternative Text is Missing Text From the Image  | One or more graphics contains images of text that are not accounted for alternative text. This issue is a violation of 1194.22 (a) in Section 508 and Success Criterion 1.1.1 in WCAG 2.0.  | Add any text in the image to the alt attribute.  | For each image of text, compare the alt text to the text contained in the image. | No tools used. |
| Color Contrast is Insufficient  | Color contrast ratio between text and background is less than 4.5:1. This is a violation of HHS Guidelines and Success Criterion 1.4.3 in WCAG 2.0. | Change color scheme by lightening or darkening one or both of the colors. For further assistance, [use this color contrast analyser.](https://developer.paciellogroup.com/resources/contrastanalyser/) | Inspect the document for any hard to see text. Use the color contrast analyzer to measure the contrast ratio. | Color Contrast Analyser 2.0 |
| Distinctions Beyond Color-Only are Missing  | Color-only distinctions are present and there are no alternative means to those distinction methods, making the information inaccessible to both blind and color-blind individuals. And, if reproduced in black and white, the distinction is potentially inaccessible to non-colorblind individuals as well. This issue is a violation of 1194.22 (c) in Section 508 and Success Criterion 1.4.1 in WCAG 2.0. | Convey information by context, markup, graphic coding, or other means in addition to color.  | Inspect the document to see if there is any information being conveyed by color only. Print on black and white paper if unsure. | No tools used. |
| Form Validation Messages Rely Only on Color | The form validation error messages rely only on color and are inaccessible to individuals who are color blind. This is a violation of 1194.22 (l) in Section 508 and Success Criterion 1.4.1 in WCAG 2.0. | Modify the form validation error message to be clearer and to make use of additional distinctions beyond color. The form validation Error message should include (a) the word "error", (b) cues or instructions for resolving the validation errors, and (c) the number of form validation errors found. Visual and keyboard focus should also be placed on the error message as well.  | Inspect the document to see if there are any forms, enter some incorrect information, and observe whether error messages are conveyed by color only.  | No Tools used. |
| Tag Structure does not Match Logical Reading Order | The intended reading order of the document is not reflected in the tag structure. This issue is a violation of 1194.22 (d) in Section 508. | Modify/retag the PDF tag structure to reflect the logical reading order.  | Open the tag tree and fully expand items. Go line by line and compare the order in the tag structure to the visual reading order. | No tools used. |
| Content is not Tagged | The PDF contains some content (Figures, footnotes, text, etc.) that is not part of the tag structure. This issue is a violation of 1194.22 (d) in Section 508. | Add tags for all informational content. Tag non-informational content as background/artifact. Ensure new tags are placed in proper sequence in tag structure. Consider retagging completely.  | Run the accessibility checker to see if there is any untagged content. Confirm by inspecting the tag structure. | Adobe Accessibility Checker |
| Content is Incorrectly Tagged | Some informational content is tagged incorrectly (Table tagged as figure or plain text, flat text tagged with H1, etc.) This issue is a violation of 1194.22 (d) in Section 508. | Modify tags for informational content listed. Consider retagging completely. | Open the tag tree and expand items. Go line by line comparing the tags to the elements to see if anything is incorrectly tagged. | No tools used. |
| PDF is Untagged | The PDF contains no tags - Documents without tags do not provide information describing the logical structure and relationship of elements to users of Assistive Technology. This issue is a violation of 1194.22 (d) in Section 508. | Add tags, and re-submit for review.  | Run the accessibility checker and see if there is an error for tagged content. Open the tag tree to verify if there are no tags are present. | Adobe Accessibility Checker |
| Nonstandard Tags are Used and Improperly Mapped | The PDF contains nonstandard, custom tags that are not correctly mapped in the role map. This issue is a violation of 1194.22 (d) in Section 508. | Add functional correspondence to role map. Strongly recommend retagging with standard tags.  | Open the tag tree and inspect the tags. If nonstandard adobe tags are present, open the Role map to make sure they are properly related to standard adobe tags. | No tools used. |
| Table of Contents Entries do not Link to  Headings in the Document  |  Apply a structured Table of Contents that links to the correct destination. This issue is a violation of 1194.22 (d) in Section 508. | Table of contents items need to be structured with <TOCI> tags nested under a parent <TOC> tag. Beneath the <TOCI> tag the item description, leader and page number need to be present.  | If there is a table of contents, inspect the tag structure to make sure all items are properly tagged. | No tools used. |
| Links are Tagged Incorrectly | The nesting of the Link tag, linked text, and Link-OBJR tag is incorrect. This issue is a violation of 1194.22 (d) in Section 508. | Every active link needs to structurally contain a <Link> tag and a Link-OBJR tag. The <Link> tag identifies the type of element and the Link-OBJR tag allows the link to be tabbed to and activated by the keyboard.  | Look through the document to see if there are any links. Open the tag tree to verify links are properly tagged. | No tools used. |
| Footnotes are Tagged Incorrectly | The document contains footnotes that are not tagged in an accessible manner. This issue is a violation of 1194.22 (d) in Section 508. | Tag footnotes with <Reference> and <Note> tags. Tag the footnote with a <Note> tag. Tag the reference with a <Reference> tag. Place the <Note> tag immediately following the <Reference> tag in the tag tree.  | Look through the document to see if there are any footnotes. Open the tag tree to verify the reference number and footnote are tagged correctly and follow each other in order. | No tools used. |
| Tab Order is Not Specified | The tab order is not specified for at least one page of the document. This issue is a violation of 1194.22 (d) in Section 508. | Set the tab order for all pages to ‘Use Document Structure’. | Use the accessibility checker to see if any pages are flagged for an unspecified tab order. | Adobe Accessibility Checker |
| Tab Order Does Not Match Visual Order | When tabbing through links, the focus does not follow the same order as the visual layout of the page suggests. This issue is a violation of 1194.21 (c) and 1194.22 (d) in Section 508 and Success Criterion 2.4.3 in WCAG 2.0. | Reset tab order to match logical reading order.  | Use the accessibility checker to see if any pages are flagged for tab order. Tab through the page to make sure the focusable elements match the visual reading order. | Adobe Accessibility Checker |
| Bookmarks Unavailable for Document >=10 pages  | The document contains at least 10 pages and does not contain proper bookmarks. This issue is a violation of HHS Accessibility Guidelines and 1194.22 (d) in Section 508. | Add bookmarks for major divisions. Recommend basing on Table of Contents. | If the document is at least 10 pages, open the bookmarks to see if they have been added. | No tools used. |
| Bookmarks do not Reflect Document Structure | There are multiple bookmarks to the same place, incorrect titles/names, or locations are out of order. This issue is a violation of 1194.22 (d) in Section 508. | Add, remove, or rearrange bookmarks. Recommend basing on Table of Contents. | Inspect the bookmark structure to make sure titles are accurate and the destination is correct | No tools used. |
| Document is a Scanned Image | The document is a scan of a paper hard copy that has not had Optical Character Recognition run. This issue is a violation of 1194.22 (d) in Section 508. | Enable Text Recognition by using Optical Character Recognition and ensure the new version is copyedited and crosschecked against the original.  Ensure that visually rendered text is presented in such a manner that it can be perceived without its visual presentation interfering with its readability. | Run the adobe accessibility checker to see if the document or part of the document was scanned. | Adobe Accessibility Checker |
| OCR introduced non-ASCII Characters into the Tag Structure   | PDF had Optical Character Recognition run but document has non-ASCII characters. This issue is a violation of 1194.22 (d) in Section 508.  |  Export the PDF to a word doc, make the necessary changes, and then reconvert back to a PDF.  | After Optical Character Recognition has been performed, use a screen reader to review the document. | JAWS, Windows Eyes, NVDA, Voice Over |
| Comments, Annotations, or Tracked Changes are Present | The document contains collaborative markup that should be removed before public distribution. This issue is a violation of 1194.22 (d) in Section 508. | Remove comments and annotations. Accept or reject and tracked changes.  | Inspect the document to see if there are any comments or other Office document markup that was not removed before conversion. | No tools used. |
| PowerPoint Converted to PDF has Speaker's Notes in Separate Layer | Assistive Technology cannot access separate layers. This issue is a violation of 1194.22 (d) in Section 508. | Notes need to be removed, or PPT handouts need to be "printed" to PDF and Alternative Text added for all slides. | Open document and look for speech bubble icon to toggle Notes Layer on and off.  | No tools used. |
| List Item Identifiers are Missing | A list structure is present, but one or more bullets, or other list item identifiers, are not tagged. This issue is a violation of 1194.22 (d) in Section 508. | Add missing tags. Each list structure should consist of a parent <L> tag and subsequent list item <LI> tags for each item in the list. Each list item <LI> tag must contain a label <lbl> tag that includes the number or bullet and a list item body <LBody> tag that contains the text of the item. | Look through the document to see if there are any numbered or bulleted lists. Open the tag tree to verify the list items are properly tagged. | No tools used. |
| Multiple List Items are Combined | More than one item of a visual list is combined into a single tag. This issue is a violation of 1194.22 (d) in Section 508. | Tag each list item separately.  | Look through the document to see if there are any numbered or bulleted lists. Open the tag tree to verify the lists are properly tagged. | No tools used. |
| Heading Styles are Missing                         | Text has been altered to visually look like a heading (e.g., larger font size or bolding), but the text has not been styled as heading through the designation of heading level. Without using heading styles, to assistive technology users, this text appears no different than normal paragraph text. This issue is a violation of 1194.22 (d) in Section 508. | Tag the heading text as headings and assign heading levels to the document.  | Inspect the document for any visually altered text that act as headings. Open the tag structure to verify the text has been tagged as headings. | No tools used. |
|  Heading Styles Improperly Structured and/or Ordered | Heading tags have been implemented but the hierarchical order is either incorrect or non-sequential, meaning there are either multiple H1s or the heading levels are skipped. This issue is a violation of 1194.22 (d) in Section 508. | Review the heading structure and adjust the heading structure to ensure there is only one H1 (which should be the title of the document) and that all other headings are in perfect sequential order. Note: If the title is repeated, as sometimes happens on the top of a subsequent page, it is okay for the document to then have multiple H1s.  | Inspect the document for heading structure and how sections are broken out. Open the tag structure to make sure heading levels retain the proper hierarchy. | Adobe Accessibility Checker |
| Tabular Data Lacks Table Structure | Data tables are not formatted utilizing proper data table structural markup. This refers to the elements Table, TR, TD, etc. Tables that do not have correct formatting are not accessible to users of Assistive Technologies because the relationships between intended headers and data is lost. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Code the tabular data using table syntax.  | Inspect the document for tabular data. Open the tag tree to verify proper table tags are being used to define the data. | Adobe Table Editor |
| Header Row not Repeated across Pages | A data table spans more than one page but the header row is not repeated. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Recreate table in source file with "Repeat Header Rows" enabled. | Inspect the document for data tables that span pages. Make sure the header rows are repeated on each spanned page.  | No tools used. |
| Data Cells Split Across Pages | A data table cell spans more than one page. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Recreate table in source file with "Allow row to split across pages" Unchecked.  | Inspect the document for data tables that span pages. Make sure that rows are not split (start on one page, end on another) | No tools used. |
| Tables Used for Layout Purposes | Table tags are used for non-data table elements. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Remove all content from the Table tag that is not strictly part of a data table and delete the Table tags. | Open the tag tree and expand all items. Go line by line to see if any table tags are used for non-tabular data. | No tools used. |
| Incorrect Table Structure | The tagging structure does not match the visual representation of the table. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Retag to match visual layout. | For data tables, use the table editor and the tag structure to verify the structure matches the visual layout. | Adobe Accessibility Checker, Touch Up Reading Order Tool, Table Editor |
| Missing Header  Cell Content | Table header cells contain no text. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Remove Header cell or retag as data cell, provided it is not being used for formatting purposes. | Inspect the document for data tables. See if there are any columns/rows that require defining header text. | No tools used. |
| Table Headers Missing TH Tags | The table row or column headers are coded as ordinary data cells, making the tables inaccessible to users of Assistive Technology. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Add <th> tag to all header cells and ensure that each <th> tag surrounds the title of the row or column header.  | Inspect the document for data tables. Use the table editor and tag structure to verify header cells are tagged as TH and properly associated to data cells with scope. | Adobe Accessibility Checker, Adobe Table Editor |
| Table Header Cells are not Associated with Data Cells for a Simple Table | Table header cells are not tagged as TH and properly scoped. This issue is a violation of 1194.22 (g) in Section 508 and 1.3.1 in WCAG 2.0. | Tag all cells acting as Row or column headers as TH. Add a scope attribute if table contains both row and Column headers. | Inspect the document for data tables. Use the table editor and tag structure to verify header cells are tagged as TH and properly associated to data cells with scope. | Adobe Accessibility Checker, Adobe Table Editor |
| Table Header Cells are not Associated with Data Cells for a  Complex Table | Table header cells are not tagged as TH and properly related to data cells with ID and Headers attributes. This issue is a violation of 1194.22 (h) in Section 508 and 1.3.1 in WCAG 2.0. | Tag all cells acting as Row or column headers as TH. Add ID and Headers attributes to all cells to properly associate each data cell with it header(s). | Inspect the document for data tables. Use the table editor and tag structure to verify header cells are tagged as TH and properly associated to data cells with id/headers. | Adobe Accessibility Checker, Adobe Table Editor |
| Complex Tables are Missing ID or Headers Attributes | Data table have multiple logical levels of row or column headers and lack the necessary coding associating the data cells with their respective headers. This issue is a violation of 1194.22 (h) in Section 508 and 1.3.1 in WCAG 2.0. | Add id= and headers= attributes to all cells to correctly associate data cells with their respective row and column headers.  | Inspect the document for data tables. Use the table editor and tag structure to verify header cells are tagged as TH and properly associated to data cells with id/headers. | Adobe Accessibility Checker, Adobe Table Editor |
| Flickering Frequency is Outside the Permitted Ranges | Flicker frequencies are outside the permitted ranges, and accordingly, have the potential to adversely affect the health of the user. This issue is a violation of 1194.22 (j) in Section 508 and of Success Criterion 2.3.1 in WCAG 2.0. | Adjust the flicker rate so it is below the threshold of two times per second, or above 55 Hz. | Inspect the document for blinking/flashing content that is doing so at a rate of more than twice per second. | No tools used. |
| Organizational  Charts Lack Text-only Versions | There are Visual Org charts that are not accessible to users of Assistive Technology. Relationships gained visually such as lines connecting boxes or other visual grouping methods such as having boxes next to each other are missed. This issue is a violation of 1194.22 (k) in Section 508.  | Provide a text version of the chart with alternate means of associations either on the page (directly below the visual org chart), or provide a link to an existing web page that has a comparable text only version.  | Inspect the document for organizational charts. Verify there is a text only version in the document, or linked. | No tools used. |
| Form Validation Messages are Inaccessible to Disabled Users | The messages shown to the user as a result of input errors in form fields on the page are not accessible to Assistive Technology. This issue is a violation of 1194.22 (l) in Section 508 and Success Criterion 3.3.1 in WCAG 2.0. | The form validation Error message should include the word error, cues or instructions for resolving the validation errors, number of form validation errors found, and the error message should be emphasized. Place keyboard focus on the error message to bring user attention to it.  | Inspect the document to see if there are any forms, enter some incorrect information, and observe whether criteria described in the Remediation Suggestion are met. | No tools used. |
| Understandable Labels Conveying the Purpose of Each Form Control are Missing | Interactive labels allowing users to process and submit information are not provided. This issue is a violation of 1194.22 (n) in Section 508 and Success Criterion 3.3.2 in WCAG 2.0. | Correct form field labels. If the text is more complex and needs more description, use the Tool Tip to describe the information in the field.  | Use the accessibility checker to see if any issues are flagged for form fields. Open the tag tree to verify. | Adobe Accessibility Checker |
| Form Fields are not Tagged  | At least one form field in the document has not been added to the tag structure. This issue is a violation of 1194.22 (n) in Section 508 and Success Criterion 3.3.2 in WCAG 2.0. | Add all form fields to the tag structure, and then reposition the tags within the tag tree so that they are in the correct order.  | Use the accessibility checker to see if any issues are flagged for form fields. Open the tag structure to verify. | Adobe Accessibility Checker |
| "Required Field" Indicator is not Detected by Assistive Technology | One or more form fields are required, but indication of that is outside the associated label of the form. This issue is a violation of 1194.22 (n) of Section 508 and of Success Criteria 1.3.1 and 3.3.1 in WCAG 2.0. | Move the textual indicator of any required fields to be within the associated form label or add an ARIA required attribute to the input tag. | Inspect the document for required forms. Verify there is an accessible method for Assistive Technology. | No tools used. |
| Primary Document Language not Set | The document language has not been set. This issue is a violation of HHS Guidelines and success criterion 3.1.1 in WCAG 2.0. | Set the language dropdown under File > Properties >Advanced Tab -to the appropriate language.  | Run the accessibility checker and note if it issues an Error for Primary Language. Open the document properties and select the Advanced tab. Inspect the Language dropdown. | Adobe Accessibility Checker |
| Language not Set for Foreign Words or Phrases | The document contains text in a language different from the main document language, and it has not been set in the properties. This issue is a violation of HHS Guidelines and success criterion 3.1.2 in WCAG 2.0. | Specify language for all foreign words and phrases.  | Inspect the document for sections with a language different from the main language. | No tools used. |
| Document Properties are Missing | The Title, Subject, Author, and Language have not all been filled out. This issue is a violation of HHS Guidelines and success criterion 2.4.2 in WCAG 2.0.  | Fill in all document properties. Provide Title, Author, Subject in the Document Properties.  | Open the document properties and verify they are filled out per HHS standards. | No tools used. |

## Recommended PDF Fixes

| **Issue Title** | **Issue Description** | **Remediation Suggestion** | **Testing Overview** | **List of Tools** |
| --- | --- | --- | --- | --- |
| A Complex Image does not Have a Long Description | A complex image has alt text > 120 (or so) characters. | Add complete description of image, or link to a description at the end of the document or on the web.  | Inspect the document for complex images that would require a lengthy description. See if there is one provided (other than in the alt text). | No tools used. |
| Verbose or Redundant Alternative Text is Present | Alternative text repeats adjacent text or  contains extraneous wording such as “image of...”, “this image shows...”, etc. | Revise alternative text to eliminate extraneous wording. | Inspect the alt text of all figures to see if any unnecessary text is present. | No tools used. |
| Background Content is Tagged | Empty background content has been tagged and appears in the tag structure. | Mark all blank content as artifacts. | Open the tag structure and expand all items. Go line by line to see if there is any blank content present. | Adobe Touchup Reading Order |
| Headings Contain Too Much Information  | Headings are too verbose and need to be reworded.  | A Heading should be a short, descriptive title of a section or category. | Inspect the document for long Headings and see if they can be shortened. | No tools used. |
| Repeated Headers are not Tagged as Background | A data table spans more than one page and the repeated header row on each page is tagged instead of being marked as background. | Tag all repeated headers as background and remove TR tags from tag tree. | Inspect the document for tables that span pages. Open the tag tree to see if the repeated header is tagged. | No tools used. |
| A Complex Table is Able to be Reformatted into a Series of Simple Tables | There is a complex data table (one with multiple column or row headers) on the page. Even when properly coded, complex tables can be difficult for Assistive Technology users to understand. In most cases, complex tables can be broken up into a series of simple tables. | Modify the complex data table into a series of simple data tables.  | Inspect the document to see if any complex tables exist that could be reformatted into a series of simple tables. | No tools used. |
| A Table Title is Contained in the Table Body | The title of the table is contained in the body of the table, causing the table to be considered complex. Data table bodies should only contain the header cells and the subsequent data cells. | Remove the title of the table from the body and place it in a caption tag. | Inspect the tag structure of data tables that have titles above to see if the title is within the table tag. | No tools used. |
| Navigational Direction Given Using ‘Click’ or Similar | In instructional documents, only mouse device instructions such as click or hover are given. | Use device independent navigation such as select, navigate, and activate. | For documents giving on screen direction, see if there are any words exclusive to the use of a mouse. | No tools used. |
| PDFs of PowerPoints do not Have Unique and Meaningful Slide Titles.  | Page (slide) titles are missing or are something generic such as "slide 1", etc. | Provide meaningful titles for all slides. | If the PDF was created from a PPT, inspect the 'Title' of each slide/page. | No tools used. |
| Signatures are Present | The document contains an actual signature. | Replace signature with the S-signature to avoid identity theft.  | Inspect the document for actual signatures. | No tools used. |
| Empty Tags are Present | The document contains at least one tag that is empty (has no content). Certain empty tags, such as figures, will cause a problem in the Adobe accessibility checker and give the perception of a noncompliant PDF. | Remove all empty tags from the document. | Expand all items in the tag tree and inspect for any empty tags. | No tools used |

Available online at: <https://www.hhs.gov/web/section-508/making-files-accessible/pdf-required/index.html> and <https://www.hhs.gov/web/section-508/making-files-accessible/pdf-encouraged/index.html>

Adapted for the University of Connecticut