Greenwood Village
Digital Accessibility Guidelines

What is Digital Accessibility?

Under Title II of the Americans with Disabilities Act, state and local governments' services, programs, and activities must be accessible to people with disabilities. Colorado law reiterates the requirements, as directed in House Bill 21-1110, adopted in 2021, and requires that all local governments comply with the requirements adopted by the Governor's Office of Information Technology (OIT) by July 1, 2024.

This means that digital content must be presented in a manner that reasonably enables an individual with a disability to access the same information, engage in the same interactions, and enjoy the same services offered to other individuals, with the same privacy, independence, and ease of use as exists for individuals without a disability.

What is Required?

ADA and Colorado law, through the OIT, have adopted the Website Content Accessibility Guidelines, version 2.1, Level AA. These guidelines are used by digital content providers across the globe and are universally accepted and understood. They are used by digital content creators, coders, developers, designers and users.

These guidelines apply to all digital content, including:

- Websites
- Multimedia content (photos, videos, audio)
- Email communications, especially mass communications
- Social media content
- Electronic documents (including Portable Document Format – PDFs, Word files, Excel files, PowerPoint files, and many others)
- Digital Kiosks
- And more

Why does it matter?

- It's the law; It's a civil right and a human right; and it's the right thing to do
- 26% of the U.S. population has a disability, including over 1 million people in Colorado (according to the CDC)
- It enhances the lives of *everyone* including those with and without disabilities
- Increases access to a much broader audience
- Increases search engine optimization
- Promotes inclusivity and increasing language opportunities
- Improve overall brand

WCAG 2.1 Level AA Guideline Overview

Principles of Accessibility

Perceivable - *Information and user interface components must be presentable to users in ways they can perceive.*

Users must be able to perceive the information being presented (it can't be invisible to all their senses)

Operable - *User interface components and navigation must be operable.*

Users must be able to operate the interface (the interface cannot require interaction that a user cannot perform)

Understandable - *Information and the operation of user interface must be understandable.*

Users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding)

Robust - *Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.*

Users must be able to access the content as technologies advance (as technologies and user agents evolve, the content should remain accessible)

Resources:

WebAIM: Introduction to Web Accessibility (WebAim.org)

Accessibility Principles | Web Accessibility Initiative (WAI) | W3C (W3.org)

Introduction to Understanding WCAG (W3.org)

WCAG 2.1 Understanding Docs (W3.org)

How Do we Make Digital Content Accessible - Best Practices

Below you will find a summary and some examples of how to conform to these principles.

Perceivable

Information and user interface components must be presentable to users in ways they can perceive.

Alternative Text

Photos, tables, charts and other images should have Alternative Text or “Alt Text” that describes the non-text content.

The alt text for this image could read:

Hairdresser uses comb and scissors to trim a man's hair.

- Don't write "image of" or "picture of" before the alt text. It provides no meaning and screen readers will announce that it is an image or table based on the coding of the page.
- Keep it concise – less than 125 characters.
- If the image or non-text content includes a link, use the alt text to describe where the link goes and what it does. If you created a visual "button" that links to a Contact Us form, the alt text should read "contact us online".
- For purely decorative images (swirls, borders, a pretty sunset that doesn't pertain to the page), mark as Decorative and leave the alt text empty.

Resources:

Good Alt Text, Bad Alt Text – WCAG blog

Time-based Media (audio, video)

Provide Alternatives for time-based media for users who cannot understand the visual or audio content.

- Must present *equivalent* information, like a transcription or captioning on pre-recorded media.
- Live captions must be provided for time-based media.
- Audio descriptions should be provided on a second user-selectable audio track for videos or a full text alternative (This meets level AAA requirements)

Example: Videos must have closed captioning and/or transcription so users that cannot hear or understand audio content can read it on the screen.

Adaptable

Content that can be presented in different ways (for example a simpler layout) without losing information or structure.

- Information, structure, and relationships conveyed through presentation should be preserved when the presentation format changes.

Example: Headings are often in larger, bold font separated from paragraphs by blank lines; list items are bulleted or indented; different background colors may indicate items are related; words have special status shown by changing the font family

Example: Auditory cues may be used, a chime for the beginning of a new section

Example: Use an asterisk (*) and a text description and relationship, for instance "all required fields are marked with an asterisk (*). Do not rely on "items that are highlighted or in red are required".

- Meaningful Sequence
- Sensory Characteristics
- Instructions and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation or sound.
- Orientation
- Content should not be locked to either portrait or landscape presentation unless a specific orientation is essential (such as a bank check, a piano player app, slides for a projector or TV or VR content.)
- Identify Input Purpose (forms)
- The purpose of each input field is programmatically determined; use code to indicate the purpose of common inputs.

Distinguishable

We should make it easier for users to see and hear content including separating foreground from background.

- Color cannot be the only way of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
- Content should meet contrast minimums; 4.5:1 ration; large scale text and images of large-scale text 3:1.
    - Examples of 4.5:1 minimum:
        - Gray (#767676) on white
        - Purple (#CC21CC) on white
        - Blue (#000063) on gray (#808080)
        - Red (#E60000) on yellow (#FFFF47)

    Black text on a white background is a ratio of 21:1.

    Use this online color contrast checker to verify you have an acceptable ratio.
- Decorative elements that are marked as such have no contrast requirements; logotypes have no contrast requirement.
- Text can be resized up to 200 percent with no loss of content or functionality.

- Do not use images of text if possible. If you have text in an image, be sure to include the information elsewhere on the page in text. Logotypes (text that is part of a logo or brand) are acceptable.
- Reflow – content can be presented without loss of information or functionality without scrolling in two dimensions. Vertical scrolling content at 320 CSS pixels; horizontal scrolling at 256 CSS pixels. This is known as "responsive web design".
    - Content will be resized to flow without needing to scroll when the window size is changed. This also allows users to zoom in up to 400%.
- Non-Text items must meet contrast ration of 3:1 against adjacent colors (borders, alternating table color, tables, etc.)
- Text Spacing –
    - Line spacing 1.5 times font size
    - Paragraphs at least 2 times font size
    - Letter spacing at least 0.12 times font size
    - Word spacing at least 0.16 times font size.
- Content on hover or focus
    - Items that automatically appear when you hover with a pointer or the keyboard focus, must be dismissible without moving the pointer or keyboard focus, unless it is regarding an input error.
    - If a pointer hover triggers additional content, the pointer can be moved over the additional content without the content disappearing.
    - The additional content should remain visible until the hover is removed, is dismissed by the user, or is no longer valid (i.e. an error is corrected).

Operable

Keyboard Accessible

- All content must be operable through a keyboard without requiring specific timing for individual keystrokes; no keyboard traps.

Enough Time

- Timing must be adjustable; can pause, stop or hide moving, blinking, scrolling or auto-updating information.

Seizures and Physical Reactions

- Webpages do not contain flashes more than 3 times per second.

Navigable

- Blocks can be bypassed.
- Web pages must have titles that describe the topic or purpose.
- The purpose of each link can be determined from the text alone.

Good Example: Register Online for the Egg Hunt

Don't Use: Click Here to register for the egg hunt – or Register for the egg hunt

- Provide multiple ways to navigate to or locate a webpage: two or more of the following:
  - Provide links and a table of contents,
  - Provide a site map,
  - Provide a search function,
  - Provide a list of links,
- Headings and labels are required so screen readers can read the structure and users can navigate by headings and skip to the content they want to view or read.
- Keyboard focus indicator must be visible.

Input Modalities

- Pointer gestures – actions can be taken with one touch or finger and does not require complex or multi-point gestures unless required.
- Pointer cancellation – actions can be aborted or cancelled; drag and drop can be aborted.
- Labels that include text or images of text, the name must contain the text that is visually presented.

Understandable

Readable – language or parts, unusual words, abbreviations, reading level.

- Language of page can be determined in the code so assistive technology can identify the languages used within the page.
- Abbreviations must be expanded or explained or link to the definition; provide a glossary.
- Reading level – aim for readability at the lower secondary education level;
  - Content should be written as clearly and simply as possible.

Predictable – focus, input, consistent navigation and identification.

- Focus does not initiate an action.
- Changing a setting does not automatically cause a change unless a user has been advised before using the component – provide a submit button; describe what will happen if they hit the button.
- Navigation should be consistent and repeated on multiple webpages.
- Use labels, names and text alternatives consistently throughout the site.

Input assistance – error identification, labels, instructions, error suggestions and prevention.

- Errors in entry should be identified (notify the user what needs to be fixed so they can successfully submit a form.)
- Provide labels and instructions when content requires user input. Space the labels and instructions near the input area.
- Errors result in suggestions (i.e. date must be entered XX/XX/XXXX). If an error is due to formatting, instruct users what the entry should look like.
- Submissions should be reversible and allow for user to check for input errors and correct before final submission. Allow for checking and review; allow users to go back and make corrections.

Robust

Compatible – maximize compatibility with current and future user agents, including assistive technology.

Parsing – content using markup languages, elements must have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicates attributes and any IDs are unique, except where allowed.

Name, Role, Value – This is for web authors who develop script for their own user interface. User interface components like form elements, links, the name and role of items must be programmatically determined.

Status Messages – for markup languages, status messages can be programmatically determined through role properties so they can be presented by assistive technology without receiving focus.

Creating Accessible Documents

Word Documents

Best practices for making Word documents accessible:

- Always include Alt Text for images, tables, charts and other graphics.
- Avoid low color contrast; text and images of text must have a contrast of a ratio of at least 4.5:1. Large text can have a ratio of at least 3:1
- Avoid tables if possible and present the data another way
    - If you must use a table, use simple table structure for data only, specify column header information. Don't use split or merged cells; don't use nested tables.
    - Don't have blank columns or rows.

- Use built in headings and styles. These contain metadata used by assistive technology and when converted to a PDF (using "Save as PDF", it saves that information.
- Add meaningful hyperlink text - write the link in a way the user will understand what will happen when they click the link. – Don't use "Click Here".
- Avoid writing important information inside headers or footers.

Use the built in Accessibility Checker, located in the Review tab in the ribbon, selecting "Check Accessibility" in the drop down. It will check for reading order, navigation, alt text and other items. When running the accessibility checker, look for the Fix tool to help correct any problems that arise.

Portable Document Format (PDF) Documents

PDFs should be avoided for information that is text-only. That information should be presented in HTML format as the preferred method, such as on a webpage. Interactive elements such as fillable forms should be created in HTML format within the existing website modules (CivicPlus Form Center). Fillable PDF forms can be provided for users to print and return via mail or in-person as an *additional* option but should not be the only option if possible.

What makes a PDF accessible?

- Searchable text
- PDFs that are scanned images or printed to a PDF may not be accessible; You must run Optical Character Recognition (OCR) to make them searchable
- Images have Alt Text
- Bookmarks are included if document is more than 9 pages
- Document is tagged correctly (including headings, images, tables, etc.)
- Logical reading order (left-to-right, top-to-bottom)
- Table rows don't split across pages
- No background images or watermarks

When can we use PDFs?

- So share documents that are created in specialized software that is not common among users
    - PDFs are a user-friendly option for providing information that can be opened on any device regardless of what software it was created in. For example, if you have a site plan that includes images and text for a landscape design for a development application, a PDF will allow readers to view the site plan without needing to have the graphic design or CAD software.
- Converting handwritten documents to digital
    - Some PDFs, such as scanned images of printed text documents, can be run through OCR to make the text readable by a screen reader and searchable.

- For sharing large files –
    - PDFs can be useful for large booklet-type documents such as reports. You can and should use the built-in features such as bookmarks, to help users navigate the document.

When not to use PDFs?

If your information is intended to be distributed digitally with no intention of having a user print it out, PDF is not the best format.

- Is the information text-only (or mostly text with some images) and meant to be posted to the website?
    - If the information is necessary to share, create an accessible webpage that contains the information and link to additional information if needed. Consider creating a "web version" of the information that is simplified from the original that provides all relevant information without extra details users may not need. An example would be posting a "Budget in Brief" page rather than uploading the detailed budget book.
- If you are sending an email with information on an upcoming event, put the details of the event in the body of the email. *Do not insert an image that contains the text.* You can create decorative headers with photos or graphics (so long as they have Alt Tex), but the important information must be contained in the body of the email.

Workflow for creating accessible PDFs

1. Consider accessibility before you convert a document to PDF.
    a. Add Alt Text to all images, tables, charts and graphics.
    b. Optimize tables. Avoid empty cells and do not have nested tables.
    c. Apply paragraph styles or document structure features that can be converted to tags – use Word document formatting for headers, paragraphs, etc.
2. Add fillable form fields and descriptions and set the tab order.
    a. Select **All tools** > **Prepare for accessibility** > **Auto tag form fields** to detect form fields and make them interactive
3. Add other accessibility features to the PDF.
    a. If the document is more than 9 pages, it needs to be bookmarked. Bookmarks should match header text.
4. Tag the PDF. Read more about proper tagging of PDFs (from IllinoiseState.edu).
5. Evaluate the PDF and repair tagging problems.

Important Tip!

*When converting your documents created in Word, Excel, or Outlook, use the option "**Save as PDF**", not "Print to PDF". Saving as a PDF maintains the bookmarks, tags, and other metadata. Print to PDF simplifies the document and*

shows you what it would look like if you printed it on paper but doesn't save the background data as efficiently.

Resources:
Adobe guide to creating accessible PDFs

Excel Documents

Best practices for making Excel documents accessible:

- Always include Alt Text for tables, charts, and images
- Ensure correct color contrast to make it easier for everyone to read
- Use simple table structure for data only; specify column header information
- Tables should not contain split cells, merged cells, or nested tables
- Tables should not contain completely blank rows or columns
- Add meaningful text in cell A1 – don't leave it blank
- If using hyperlinks, add meaningful text to the link name. **Mask the URL** with text that tells the user what will happen if they click the link. "Review the 2024 Budget" rather than using "https://greenwoodvillage.com/DocumentCenter/View/25530/2024-Annual-Operating-and-Capital-Improvement-Budget"
- Give all worksheets unique names and remove blank worksheets
- Name cells and ranges (if it helps identify the purpose of the cells and ranges).

Use the built in Accessibility Checker, located in the Review tab in the ribbon, selecting "Check Accessibility" in the drop down. It will check for user readability, table formatting, alt text and other items.

Multimedia Content

Online meetings and events - CivicClerk

To create accessible meetings and events in CivicClerk, follow the article on how to Use Closed Captioning and Transcription Services on Events in CivicClerk. You must enable *Live Transcription* when scheduling the meeting in CivicClerk. This will provide live machine-based transcription during the meeting when it is streaming on the website. It will also create a written transcript that can be downloaded after the meeting in an SRT file.

Social Media video

Live video/audio streams and recordings must have closed captions for users who cannot hear the audio. Videos that are created and then uploaded to sites like YouTube and Facebook must also contain captions. YouTube has a built-in Closed Caption tool that can be used but may

require some clean-up to verify the accuracy of the transcription. Facebook and Instagram use AI to automatically generate captions, but these tools are not currently editable. If you have created captions, they can be uploaded via SRT file. See the Communications Officer for further guidance on videos needing captions.

Reasonable Accommodations and Modifications

If there is digital content that cannot conform to WCAG 2.1 Level AA standards, the City shall make reasonable accommodations, so the user has equal access to the City's services, programs, and activities. The user can request accommodations by submitting the following:

1. Name of person requesting the accommodations
2. Address
3. Phone Number
4. Digital product, program or location of accommodation request
5. Date
6. Description of the problem

Users can submit digital accessibility-related requests online, by calling 303-486-5745, by email at thevillage@greenwoodvillage.com, in person ,or by mail at the following address:

Webmaster
6060 S Quebec Street
Greenwood Village, CO 80111

Re: Digital Accessibility

Additional Resources

Colorado Governor's Office of Information Technology

In-Depth Introduction to Digital Accessibility Course from W3.org Web Accessibility Initiative

Making Accessible Word Documents

Making Accessible Excel Documents

Making Accessible PowerPoint Presentations

Making Accessible Adobe PDFs

Video from Web Accessibility Initiative (WAI) – Intro to Web Accessibility and W3C Standards Video

Questions?

Reach out to the City Manager's Office at 303-486-5745 or by email at thevillage@greenwoodvillage.com.