WESTWOOD
MASSACHUSETTS

Website Accessibility Review Summary Report

September 2023

Institute for Human Centered Design

Introduction

The Institute for Human Centered Design (IHCD) conducted a review of the Westwood, Massachusetts website (https://www.townhall.westwood.ma.us/home). This review consisted of an internal assessment by deep content experts which focused on applicable portions of the World Wide Web/Web Accessibility Initiative (W3C-WAI) Web Content Accessibility Guidelines (WCAG 2.1).

Overview

Overall, the website is generally easy to navigate. The colors of the background and text are consistent and there are minimal color contrast issues. The site was analyzed on Microsoft Edge using NVDA on Windows OS.

Catalog of Issues

The catalog identifies the important findings for both accessibility compliance and usability. The catalog includes a WCAG reference with background information on the applicable accessibility guidelines or inclusive design principle, followed by an explanation of the current issue as of internal and user/expert reviews, as well as some recommendations for remediation and additional resources. Each issue should be remedied in all occurrences throughout the website.

Miscellaneous Issues

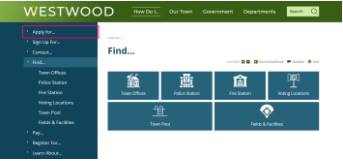- On many of the pages which use cards for link navigation, such as the Notify Me page, a screen reader will read the alternative text for the graphic link and the text link. This poses as a usability issue for screen reader users because navigating through these redundant links can be tedious. This can be solved by setting aria-hidden=true for the graphic link.
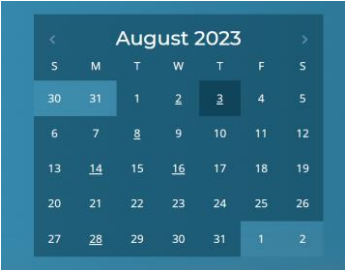- On the Town Clerk FAQs page, it is recommended to add a visual indicator to the accordion to indicate that the questions can be expanded. A common example is to place a caret to the right of each menu item.
- On the "Register For…" page, the buttons are not marked correctly and are not clickable.
- On the Government Agenda & Minutes page, the header is placed at the bottom of the page when it should be placed before the main content.
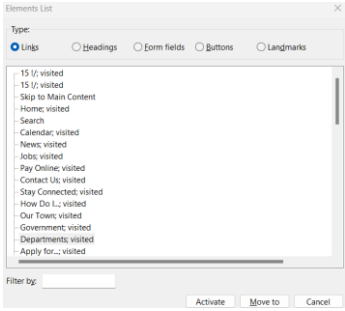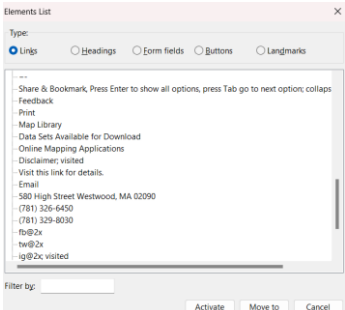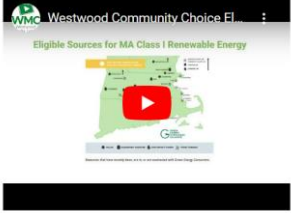
Inclusive Design Recommendations
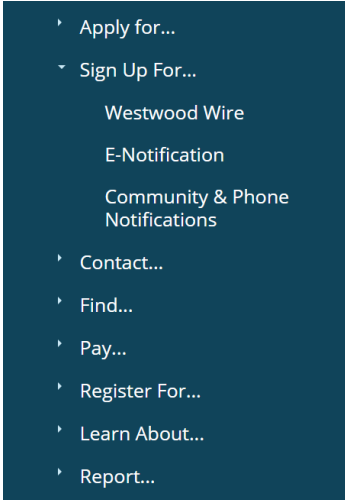
Inclusive design is a framework for the design of places, things, information, communication and policy that focuses on the user, on the widest range of people operating in the widest range of situations without special or separate design.

Inclusive design in the digital realm has been a leading area of focus for the international movement. As is true in other areas of design, web accessibility has been more expansive than the legal requirements for accessibility both in terms of considering a broader spectrum of users and promoting market opportunity and advantage rather than focusing on meeting minimum requirements.

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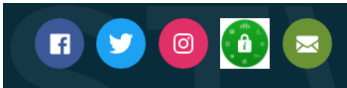
	Image	Section	Issue Name	Issue Details	Issue Tags
1	Buckmaster Pond Sunset	Home Page	Inaccessible Carousel	**Background** Users navigating a webpage with a screen reader rely on descriptive link text to understand the purpose and function of the content. When link texts are unspecific, screen reader users are unable to find the information they are searching for. Link text of each link should be purposeful so that users can decide whether they want to follow the link. Whenever possible, a page must provide link text that identifies the purpose of the link without needing additional context. Many screen reader users navigate by pulling up a list of links on a webpage. Descriptive link text is extremely important to users who navigate with this list of links. **Current** On the home page, the carousel is inaccessible for screen reader users. The carousel controls and associated images read as numbers, such as "1, 2, 3, 4," etc. These provide no description of the controls, or the content associated with each. There are also no next and previous icons. **Solution** The carousel on the home page is among the first interactive elements on the website. It needs to be identified as a carousel with X items, and each item on the carousel controls should have a short description of the content presented. The clickable carousel controls can be given aria-label attributes to provide this additional context. The "Next" and "Previous" buttons need appropriate aria-label attributes as well, to identify them and contextualize the carousel as a whole. Refer to this resource for more information on carousels: https://www.w3.org/WAI/tutorials/carousels/	Blind, Low-Vision WCAG 2.1 AA 2.4.4 Link Purpose (In Context)
2		General Content	Improper Use of Skip to Main Content	**Background** Screen reader users rely on 'Skip to Main Content' link to reach the main content without having to go through the repetitive navigational information. This is important for screen reader users, as it prevents users from having to hear navigational content repetitively every time they land on a new page. It also benefits users with dexterity conditions who navigate with a keyboard and may experience pain due to repetitive keystrokes. **Current**	Blind, Low-Vision, Dexterity Impairment WCAG 2.1 AA 2.4.1 Bypass Blocks

				When the 'Skip to Main Content' link is activated, focus shifts to the sidebar navigation of the page. The sidebar navigation is repetitive navigational information that should be skipped. **Solution** Ensure that the sidebar navigation is also skipped upon activating the 'Skip to Main Content' link and focus shifts programmatically to the main content of the page without skipping any of the elements in main content.	
3		Home Page	Special Characters	**Background** Users navigating a webpage with a screen reader rely on descriptive link text to understand the purpose and function of the content. When link texts are unspecific, screen reader users are unable to find the information they are searching for. Link text of each link should be purposeful so that users can decide whether they want to follow the link. Whenever possible, a page must provide link text that identifies the purpose of the link without needing additional context. Many screen reader users navigate by pulling up a list of links on a webpage. Descriptive link text is extremely important to users who navigate with this list of links. **Current** When using a screen reader, it reads the navigation arrows on the calendar as "less less" and "greater greater." **Solution** Ensure that the buttons are labelled by providing appropriate accessible names using ARIA labels. These buttons can be labeled "Previous Month" and "Next Month."	Blind, Low-Vision WCAG 2.1 AA 4.1.2 Name, Role, Value
4		Home Page	Improper Alternative Text	**Background** All images must have alternative text to convey their purpose and meaning to screen reader users. Providing concise and accurate alternative text is essential to making images accessible to users with visual or certain brain-based disabilities. **Current** The alternative text for the last four icons are "3@2x," "4@2x", etc. This alternative text doesn't properly convey the meaning of the graphic to users using screen readers, which causes confusion. **Solution**	Blind, Low-Vision WCAG 2.1 1.1.1 Non-text Content

				The alternative text on the graphics should be changed to properly convey the meaning of the link.	
5		General Content	Insufficient Link Text	**Background** Users navigating a web page with a screen read rely on descriptive link text to understand the purpose and function of a link. Many screen reader users use a shortcut to display a list of links to navigate a website efficiently. When link titles are unspecific, users cannot identify which link to select to find the information they are searching for, often leading to confusion and a frustrating user experience. **Current** When using a screen reader, there are two links labeled "15 !/;" which lead to the News List page. **Solution** Change the link text to match the description of the link destination.	Blind, Low-Vision WCAG 2.1 AA 2.4.4 Link Purpose (In Context)
6		General Content	Insufficient Link Text	**Background** Users navigating a web page with a screen read rely on descriptive link text to understand the purpose and function of a link. Many screen reader users use a shortcut to display a list of links to navigate a website efficiently. When link titles are unspecific, users cannot identify which link to select to find the information they are searching for, often leading to confusion and a frustrating user experience. **Current** Throughout the website, there are several links with insufficient link text such as 'click here.' When a user pulls up a link list using a screen reader, having insufficient link descriptions makes it nearly impossible to distinguish the purpose of links. **Solution** Hyperlinking a longer, more descriptive phrase is recommended. People navigating with screen readers may use a shortcut to access a list of links or headings to navigate more easily through the website. Links such as "click here" out of context don't facilitate ease of navigation.	Blind, Low-Vision WCAG 2.1 AA 2.4.4 Link Purpose (In Context)

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| 7 | Community Choice Electricity Informational Video:

 `<iframe src="https://www.youtube.com/embed/dN7Gz32HU-I" width="400" allowfullscreen="" height="300" frameborder="0"></iframe></strong></p>` | General Content | Missing iframe Title | **Background**
 All user interface components and their functions must be programmatically identified. If interface elements provide a different role or function than usual, additional measures need to be taken to ensure that the elements provide important information to assistive technologies. The interface elements should also be programmed so that they can be correctly identified and controlled by assistive technologies. All frames must be appropriately titled so that the blind users or users with low vision can understand the context of elements they are interacting with.

 Current
 On the website, there are several embedded iframes without titles. A lack of a title doesn't provide assistive technology users with information on the context of the components they will be interacting with. Without context, it is difficult to discern the purpose and functions of the buttons within the frame. This affects screen reader users who are blind or have low vision.

 Solutions
 For embedded YouTube videos, it is advised to add a title that describes the video with a few words. For example, the title of the YouTube video: "Westwood Community Choice Electricity." | Blind, Low-Vision

 WCAG 2.1 AA
 4.1.2 Name, Role, Value
 1.1.1 Non-text Content |
| 8 | Apply for…
 Sign Up For…
 Westwood Wire
 E-Notification
 Community & Phone Notifications
 Contact…
 Find…
 Pay…
 Register For…
 Learn About…
 Report… | Sidebar Navigation | Special Characters | **Background**
 All text must be read accurately when rendered through a screen reader. It is not recommended to use special characters in link text as characters can be inaccurately interpreted using different user agents including assistive technology. Special characters used to visually convey functionality must have an accessible name that communicates the functionality.

 Current
 Open submenu items are read with the plus sign, while the closed submenu items are read as a blank link. This can cause confusion with screen reader users as they will not be able to discern what the purpose of the link is.

 "link –"
 "link plus"
 "link Sign up for…"

 Solutions
 The arrows are used to communicate that the buttons contain | Low-Vision, Blind

 WCAG 2.1 AA
 2.4.4 Link Purpose (In Context) |

				dropdown list boxes. The buttons' roles must be programmatically defined and notify screen reader users that the buttons can be expanded to access a list of elements. It is not necessary for a screen reader to recognize the down arrow. Ensure that the special characters are ignored by screen reader and provide accessible names to communicate the information the symbols are communicating if any.	
9		Footer	Improper Alternative Text	**Background** All images must have alternative text to convey their purpose and meaning to screen reader users. Providing concise and accurate alternative text is essential to making images accessible to users with visual or certain brain-based disabilities. **Current** The alternative text for the social media icons are "fb@2x," "tw@2x," "ig@2x," "Smart 911," and mail@2x." This alternative text doesn't properly convey the meaning of the graphic to users using screen readers, which causes confusion. **Solutions** The alternative text for each graphic should be changed to the name of the social media icon: "Facebook," "Twitter," etc. Additionally, the smart 911 icon should be changed to a transparent PNG to be visually consistent with the rest of the icons.	Blind, Low-Vision WCAG 2.1 1.1.1 Non-text Content
10		Public Works	Improper Alternative Text	**Background** All images must have alternative text to convey their purpose and meaning to screen reader users. Providing concise and accurate alternative text is essential to making images accessible to users with visual or certain brain-based disabilities. **Current** The alternative text for the image is "united-states-facebook," which does not properly describe the image. **Solutions** Images that are purely decorative and provide no additional information can be given null alt text (alt=" ").	Blind, Low-Vision WCAG 2.1 2.11 Non-Text Content

11		Westwood Day	Image of Text	**Background** Text instead of images of text must be used to present information if the author can achieve the same visual presentation. If not, user interface components such as links with labels that include text or images of text must have ARIA labels that contain the text that is presented visually. This gives equal access to the information conveyed in the image for low-vision and blind users who use screen readers. **Current** The Westwood Day page only has an image of the event flyer, which contains all the information for the event. There is no text on the page which communicates this same information. **Solutions** The same information on the flyer can be typed out on the page using text. This ensures that screen reader users can access the information.	Blind, Low-Vision, Brain-Based Functional Limitations, 65+ WCAG 2.1 AA 1.4.5 Images of Text
12	Government » Agendas & Minutes » Agendas »	Breadcrumbs Navigation	Special Characters	**Background** All text must be read accurately when rendered through a screen reader. It is not recommended to use special characters in link text as characters can be inaccurately interpreted using different user agents including assistive technology. Special characters used to visually convey functionality must have an accessible name that communicates the functionality. **Current** When using a screen reader, the arrow within the breadcrumb navigation is read as "link double right pointed arrow bracket." This is confusing to screen reader users as they may be unsure of the purpose of the link. **Solutions** Setting aria-hidden="true" on the arrow indicates that the element is still visible in the browser, but is invisible to accessibility tools, such as screen readers. See additional resources on accessible breadcrumbs: https://www.aditus.io/patterns/breadcrumbs/ https://scottaohara.github.io/a11y_breadcrumbs/	Low-Vision, Blind WCAG 2.1 AA 2.4.4 Link Purpose (In Context)

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| 13 | | Westwood Community Choice Electricity (CCE) | Inaccessible Table | **Background**
All tables must be labelled correctly to easily understand the information presented. Users who have brain-based disabilities and rely on assistive technology such as voice over may find it difficult to remember what each column and row represents for lengthy or complicated tables.

Current
As screen reader users navigate through the table, it can be difficult to contextualize the information and remember which row and column the cell is associated with. Currently, only the content within the data cell is read with a screen reader.

Solutions
Complex tables benefit from the $id + headers$ method of associating header cells with data cells. Each data cell should contain a headers attribute. For example, the first data cell would read as: "Westwood Community Choice Electric Program, Westwood Standard, Rates, 16.710 ¢/kWh."

Additionally, a caption should be added to the table titled "Westwood Community Choice Electricity rates."

See more resources on creating accessible tables:
https://www.w3.org/WAI/tutorials/tables/
https://webaim.org/techniques/tables/data | Blind, Low-Vision

WCAG 2.1 AA
1.3.2 Meaningful Sequence |
| 14 | | Sewer (Second Meter Notifications) | Improper Alternative Image Text | **Background**
All images must have alternative text to convey their purpose and meaning to screen reader users. Providing concise and accurate alternative text is essential to making images accessible to users with visual or certain brain-based disabilities.

Current
The alternative text for the image is current "4 digits in red." This doesn't properly describe the image.

Solutions
The alternative text for the image should be changed to "Irrigation/2nd water meter with a reading of 1250" or something similar. | Blind, Low-Vision

WCAG 2.1
1.1.1 Non-text Content |