

Digital Accessibility Standards

Web standards

Authored by the Web Standards Subcommittee, Accessibility Working Group.

Summary

These standards are collected to bring together industry guidelines¹ and federal law² in a way that is easily understood and implemented by web developers and those managing content on the web at Mizzou.

These standards reflect *current* industry best practices and guidelines. As technologies and user needs change, these standards must be updated to reflect changes.

The standards are not meant to be included in the Business Policy and Procedure Manual. The working group will provide a Digital Accessibility Policy in the near future that will extend the current university Accessibility Policy³.

Scope

This set of standards **ONLY** reflects content made available on the Web. This includes:

- Websites and webpages coded primarily in HTML and CSS.
- Web applications published to the web and available through an Internet browser.

These standards do **NOT** cover:

- Downloadable mobile applications.
- Digital files downloaded from websites or web applications.

¹ Web Content Accessibility Guidelines (WCAG) 2.0.
<http://www.w3.org/TR/WCAG20/>

² Section 508 Standards for Electronic and Information Technology.
<http://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards>

³ University of Missouri Business Policy and Procedure Manual, Section: 1:025, Accessibility Policy.
http://bppm.missouri.edu/chapter1/1_025.html

Details

The standards make use of keywords⁴ to help developers and content managers understand what is required of them. The most important of them being:

- **MUST** and **MUST NOT**. These keywords mean the standard is mandatory or prohibited, respectively.
- **SHOULD** and **SHOULD NOT**. These keywords mean every effort should be made to adhere to the standard but there may be circumstances where it is not possible or feasible to do so.

In the future, best practices, recommendations, resources and further information will be provided in order to augment the standards from a list of requirements to more of an educational document.

⁴ RFC 2119, *Key words for use in RFCs to Indicate Requirement Levels*.
<https://www.ietf.org/rfc/rfc2119.txt>

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1 Code & markup

1.1 Each page **MUST** have a unique title that clearly describes the page's topic or purpose.

⇒ [WCAG 2.4.2 \(A\)](#)

1.2 Assistive technologies **MUST** accurately interpret and parse content.

⇒ [WCAG 4.1.1 \(A\)](#)

1.3 Markup **MUST NOT** rely on visual presentation alone to convey meaning.

⇒ [WCAG 1.3.1 \(A\), 2.4.6 \(AA\), 2.4.10 \(AAA\)](#)

1.4 Markup **MUST** be presented sequentially when the order is meaningful.

⇒ [WCAG 1.3.2 \(A\)](#)

2 Tables

2.1 Table rows and columns **MUST** be identified accurately.

⇒ §508-1194.22 (g), §1194.22 (h); WCAG 1.3.1 (A)

3 Frames and iframes

3.1 If an `<iframe>` is necessary, they **MUST** be identified for purpose and navigation. `<frames>` **SHOULD NOT** be used.

⇒ §1194.22 (i); WCAG 2.4.1 (A)

4 Forms

A note on ARIA support

At this time, we are not commenting on the use of ARIA support. In the future, comments regarding ARIA will be incorporated into the standards

4.1 Forms **MUST NOT** rely on visual presentation alone to convey meaning.

⇒ [WCAG 1.3.1 \(A\)](#)

4.2 Forms **MUST** be fillable and navigable by use of the keyboard.

⇒ [§1194.22 \(n\)](#); [WCAG 2.1.1 \(A\)](#), [2.4.3 \(A\)](#), [4.1.2 \(A\)](#)

4.3 To convey meaning, all form fields and controls **MUST** be clearly labeled.

⇒ [§1194.22 \(n\)](#); [WCAG 1.1.1 \(A\)](#), [2.4.6 \(AA\)](#), [4.1.2 \(A\)](#)

4.4 If fields are required, those fields **MUST** be clearly marked *before* the user provides information.

⇒ [WCAG 3.3.2 \(A\)](#)

4.5 If a user makes a mistake filling out a form, the relevant fields **MUST** be identified and the error **MUST** be described to the user with text. If there's a way to point out specific errors, you **MUST** suggest those changes to the user.

⇒ [WCAG 3.3.1 \(A\)](#), [3.3.3 \(AA\)](#)

4.6 **AVOID** the use of/**DO NOT** use CAPTCHA software.

⇒ [WCAG 1.1.1 \(A\)](#)

4.7 When submitting a form finalizes a transaction, the information **MUST** be checked programmatically **OR** the user **MUST** have an opportunity to review and correct the information.

⇒ **WCAG 3.3.4 (AA)**

5 Text-only pages

5.1 After all efforts to provide accessibility on the same page have been exhausted, provide a text-only page for users with disabilities.

⇒ §1194.22 (k), WCAG 1.3.1

6 Scripting

6.1 Content displayed by scripting **MUST** be directly accessible by adaptive devices and technology.

⇒ [§1194.22 \(l\)](#)

6.2 When using image maps, appropriate alternate text **MUST** be used for all active, clickable, “hot spots” on the map and the map itself.

⇒ [§1194.22 \(e\)](#); [WCAG 1.1.1](#)

6.3 Relevant content in image maps **SHOULD** be available solely in the browser (clientside) and not require calling from the server (serverside).

⇒ [§1194.22 \(f\)](#)

6.4 Plugins and other custom controls or user interfaces **MUST** adhere to the same rules and specifications of normal markup and must not disrupt or disable normal accessibility functions.

⇒ [§1194.22 \(l\)](#); [WCAG 4.1.2 \(A\)](#)

7 Images

7.1 Images and other non-text elements **MUST** be described with text.

⇒ [§1194.22 \(a\), WCAG 1.1.1](#)

8 Media

8.1 Audio that plays automatically for more than 3 seconds **MUST** have a way to pause, stop or adjust its volume.

⇒ WCAG 1.4.2 (A)

Pre-recorded media

8.2 Audio-only **MUST** be accessible to users who will not be able to hear it.

⇒ WCAG 1.1.1 (A), 1.2.1 (A)

8.3 Video-only media **MUST** be accessible to users who will not be able to see it.

⇒ WCAG 1.1.1 (A), 1.2.1 (A), 1.2.3 (A)

8.4 Media where audio and video are synchronized **MUST** be accessible to users who can neither see **NOR** hear **OR** someone who has both hearing and vision disabilities (deaf-blind).

⇒ WCAG 1.1.1 (A), 1.2.2 (A), 1.2.5 (AA)

Live

8.5 Live video with audio **MUST** be accessible for users unable to hear it.

⇒ WCAG 1.1.1 (A), 1.2.4 (AA)

9 Style & layout

9.1 Color alone **MUST NOT** be the only visual way of providing information or context.

⇒ [§1194.22 \(c\)](#); [WCAG 1.4.1 \(A\)](#)

9.2 Content **MUST NOT** use CSS or other styling elements alone to convey meaning or understanding.

⇒ [§1194.22 \(d\)](#); [WCAG 1.3.2 \(A\)](#)

9.3 Directions or instructions **MUST NOT** rely solely on shape, size, location or other visual aspects for interaction.

⇒ [WCAG 1.3.3 \(A\)](#)

9.4 Text or text in images **MUST** have a strong enough contrast to be easily read.

⇒ [WCAG 1.4.3 \(AA\)](#), [WCAG 1.4.5 \(AA\)](#)

9.5 Text **MUST** be resizable up to 200% (x2) without the use of assistive technology, retaining readability and functionality.

⇒ [WCAG 1.4.4 \(AA\)](#)

9.6 Text in images **SHOULD NOT** be used, unless the text can be customized or the text is essential to the image's information (e.g., logotypes, handwritten letters, etc.).

⇒ [WCAG 1.4.5 \(AA\)](#)

10 Readability

10.1 Language of each page **MUST** be defined.

⇒ WCAG 3.1.1 (A)

10.2 Passages or phrases in content **SHOULD** be defined by using the `lang` attribute except for proper names, technical terms, words of indeterminate language and words or phrases part of the vernacular of the surrounding text.

⇒ WCAG 3.1.2 (AA)

11 Navigation

11.1 Users **MUST** be able to navigate by way of the keyboard.

⇒ §1194.21 (a); §1194.22 (l); §1194.31 (a), (f); WCAG 2.1.1 (A)

11.2 The focus indicator **MUST** be visible **AND MUST** appear in a logical order as a user navigates.

⇒ §1194.21 (c)?; WCAG 2.4.3 (A), 2.4.7 (AA)

11.3 Users **MUST NOT** navigate into an area by way of keyboard navigation that does not provide a way to exit (“keyboard trap”).

⇒ WCAG 2.1.2 (A)

11.4 Users **MUST** be able to “skip” over large sections of repeated content.

⇒ §1194.22 (o)?; WCAG 2.4.1 (A)

11.5 Link destination and purpose **SHOULD** be clear.

⇒ WCAG 2.4.4 (A)

11.6 Provide more than one way to navigate to and locate **MOST** web pages.

⇒ WCAG 2.4.5 (AA)

11.7 Site navigation **SHOULD** be consistent and repeated on all pages, unless the change is knowingly initiated by the user.

⇒ WCAG 3.2.3 (AA)

11.8 Descriptive icons, in-page navigation and other components used for identification **MUST** have the same purpose and are identified consistently throughout.

⇒ **WCAG 3.2.4 (AA)**

11.9 Websites **SHOULD NOT** initiate unexpected changes of context.

⇒ **WCAG 3.2.1 (A), 3.2.2 (A), 3.2.5 (AAA)**

12 Timing and movement

12.1 Users **MUST** have enough time to read and use the content on a webpage.

⇒ **WCAG 2.2.1 (A)**

12.2 Users **MUST** be able to control the movement, blinking, scrolling or auto-updating of any content.

⇒ **WCAG 2.2.2 (A), 2.3.1, 2.3.2 (AAA)**