

ADDENDUM #1

RFP #25-GS-007

Mass Communication System and School Website Hosting

TO: All Offerors
FROM: Geoffrey Sudzina, Procurement Agent
DATE: October 2, 2024

This Addendum is issued to provide answers to questions and to add/clarify verbiage in the Request for Proposal.

- 1. QUESTION:** Is this required for submission with the RFP response: General Terms and Conditions, Item #32.3 where it states " For digital tools, vendors are required to submit an accessibility conformance report that includes a Voluntary Product Accessibility Template for any invitation for bids, requests for proposals, procurement contracts, grants, or modifications to contracts or grants. The accessibility conformance report must explain how information and communication technology products, including software, electronic content, and support documentation, conform to the most recent ICT accessibility standards: Section 508 (U.S.), EN 301 549 (EU), and W3C/WAI WCAG. The instructions and the required forms can be found at the General Services Administration (GSA) Section 508 website at <https://www.section508.gov/sell/how-to-create-acr-with-vpat/>.

ANSWER: The Voluntary Product Accessibility Template is required. Please submit the document in Tab 9 – Required Documents (Non-Scored).

- 2. QUESTION:** Item #32.2 – You say the conformance to the specified WCAG 2.1 AA standards can be documented through the submission of an up-to-date, complete, and accurate Accessibility Conformance Report (ACR). Will the district require offerors to use this format to document their compliance with the ADA?

ANSWER: Proposers may use the link provided in the RFP or the document attached with Addendum #1, Exhibit A – Web Accessibility Evaluation Form.

- 3. QUESTION:** For clarity, is attachment “H” Professional Services Agreement Sample included in the RFP for our reference only at this point and is not required to be signed and submitted with our response?

ANSWER: Attachment “H” Professional Services Agreement Sample is for reference only and not to be signed and submitted with the proposal.

- 4. QUESTION:** What is required as part of the RFP response under Attachment H? What portions do vendors have to complete in this section? Is our signature the only requirement for Attachment H that we have read and understood the contents of this attachment?

ANSWER: Refer to Question and Answer #3.

- 5. QUESTION:** Will offeror presentations be onsite or virtual?

ANSWER: Presentations will be virtual.

6. **QUESTION:** Why are you interested in making a change in your website/mass comms vendor? Were there any challenges with the current vendor that prompted this?

ANSWER: Harford County Public Schools (HCPS) is issuing this Request for Proposal (RFP) for the purpose of soliciting proposals from firms capable of providing services for both Mass Communication and School Website Hosting.

7. **QUESTION:** 2.2 – You say your current system contains over 50,000 contacts that can be reached when messages are released. Is this data currently coming from your district’s SIS, or is Harford County using another database to create call lists?

ANSWER: The source for the contact data is district SIS and information from HCPS Human Resources system.

8. **QUESTION:** 3.2.2.1 – You say that you want “Editable fonts and font sizes.” Can you elaborate any further on your expectations for this requirement?

ANSWER: HCPS would like our back-end users to be able to edit the fonts and font sizes across all areas of their school website to give certain items/content a sense of hierarchy. Examples include:

- A title or headline should be able to be made larger, bold, underlined, etc. than corresponding body copy/text.
- Announcements, the name of the school, etc. should be able to be made larger, bold, underlined, etc. to stand out amongst other items on the website.

9. **QUESTION:** 5.4 – In regard to being in “Good Standing,” you tell offerors to visit “the following website” to ensure compliance. However, no website URL is clearly given in this line item. Can the district provide the website they are referencing in line item 5.4 of Respondent Requirements?

ANSWER: The following site is used to determine status for “Good Standing” – <https://egov.maryland.gov/BusinessExpress/EntitySearch>.

10. **QUESTION:** In Tab 5 (20.1.5) under section 19a., Scope of Services is in the header, but no specific section of the scope is specifically referenced. For clarity, will we be expected to place our answers to Section 3.3 (Network Security) of the Scope of Work under Tab 5?

ANSWER: Proposers are expected to provide answers to their Methodology and Approach for the eight (8) bulleted points under section 20.1.5 in Tab 5 of their proposal, including network security.

11. **QUESTION:** Under Tab 9, Attachment I (HCPS Data Privacy and Security Addendum) (p. 30), it says to “Review and Return with Exceptions Noted.” However, Exhibit B of Section I (p. 66) asks for a Contractor Response to direct questions regarding the contractor’s Data Privacy and Security Plan. For clarity, are we required to answer the questions for Exhibit B, or are we simply required to review these and note when there is an exception?

ANSWER: Proposers are expected to review and return the document with exceptions noted for Attachment I - HCPS Data Privacy and Security Addendum, including Exhibits A-C. Proposers are not required to provide answers to the questions in the Exhibits at this time.

12. **QUESTION:** Is the district looking for classroom communications or only mass notifications?

ANSWER: We are looking for a system that allows HCPS to communicate with a classroom, school bus, school, or grade level if needed. However, the primary function for the system will be communicating at a district wide level.

13. **QUESTION:** Is the district anticipating any custom development work?

ANSWER: No custom development work is requested. The goal is to have template-based school websites, providing website users similar experiences across different school websites.

14. **QUESTION:** Regarding Exhibits A-C, is the district expecting a complete response to these requirements in our proposal, or can these be addressed later?

ANSWER: Refer to Question and Answer #11.

15. **QUESTION:** In which section of the proposal can we answer the questions on pages 23-24 of the RFP? There is not currently a place to respond to Section 5., Respondent Requirements.

ANSWER: Information in Section 5, Respondent Requirements responses:

- 5.1 – Tab 1 – Respondent’s Profile and Submittal Letter.
- 5.2 – Refer to Question and Answer #3.
- 5.3 – Refer to Question and Answer #34.
- 5.4 and 5.5 – HCPS checks these, nothing to submit currently with proposal.

16. **QUESTION:** We would like to clarify the relevance of Exhibit H - Professional Services Agreement in the RFP. Could you confirm if this agreement will be applied alongside the General Terms and Conditions for this project, or is it included as a standard exhibit but not applicable to SaaS platforms like ours?

ANSWER: Relevance of Exhibit H - Refer to Question and Answer #3. General Terms and conditions in the RFP will be applied alongside the terms and conditions in attachment H, Professional Services Agreement.

17. **QUESTION:** Mass Communication System - Communication Channels: Is there a need for multi-language support?

ANSWER: Yes, at a minimum the system must be able to effectively translate messages into Spanish, but multiple languages are preferred.

18. **QUESTION:** Mass Communication System - User Segmentation: How will users be segmented? (By class, grade level, role in the school, geographical area, etc.) Should the system support customized messages for different user groups?

ANSWER: Contacts should be able to be segmented by all the methods listed including school, grade, class, bus, geographic area, etc.

19. **QUESTION:** Mass Communication System - Integration and Compatibility: What existing platforms or systems should the communication system integrate with (e.g., school information systems, learning management systems, calendar tools)? Will the system need to integrate with third-party tools (e.g., Google Classroom, Microsoft Teams)?

ANSWER: The current system pulls from our employee and student databases to collect contact information, including Lawson and eSchoolPlus. HCPS is currently in the process of transitioning from Lawson to Oracle.

20. **QUESTION:** Mass Communication System – Automated Messaging: Will you need automated messaging for specific events (e.g., attendance alerts, emergency notifications)?

ANSWER: Yes.

21. **QUESTION:** Mass Communication System – Message Tracking and Reporting: Will message tracking and delivery reports be required (e.g., open rates, bounce rates, SMS delivery status)? Do you need analytics to track communication effectiveness and user engagement?

ANSWER: Yes, easily accessible, and readable reports will be needed to track weekly message send and receive rates. Reports will also be needed to access individual accounts and method of contact, and if the

individual account is successfully receiving messages.

22. **QUESTION:** Mass Communication System – Security and Privacy: What are the security requirements to ensure data privacy (especially for students and parents)? How will user data be stored, and what encryption or authentication methods will be used?

ANSWER: Data in Transit, TLS 1.2 encryption, end-to-end encryption, and optional link encryption and end-to-end encryption.

23. **QUESTION:** Mass Communication System – Scalability and Maintenance: What is the expected volume of communications? How many users need to be supported at peak times? Should the system be scalable to support multiple schools or districts?

ANSWER: The system will need to be able to connect to more than 55,000 contacts in one call, but also hold the ability to reach out directly to smaller groups of grade levels and school communities. Calls are made nightly from either the district or school level.

24. **QUESTION:** Mass Communication System – Support and Maintenance: What level of ongoing technical support will be needed? Will there be training sessions for users on how to effectively use the system?

ANSWER: 24/7 support is expected as there may be emergency communication needs requiring support if there are issues with the system. Additionally, there is a need to train a group of super users and school administrators who will need to utilize the system effectively.

25. **QUESTION:** School Website Hosting – Objectives and Functionality: What is the primary purpose of the school website (e.g., public information, student resources, parent portal)? What key functionalities are needed (e.g., event calendars, grade portals, online forms, staff directories)?

ANSWER: The main purpose of our school websites is to be a source of school-based information for parents, students, and the community. School-based back-end users should be able to post parent resources, student resources, important dates/events, calendar items, etc. HCPS would also like the ability to post districtwide information to all school websites from one source, as opposed to updating each individual website, one-by-one. Parent Portal, grade portals, and online forms are out of scope for this project. The website contains school information only, so event calendars and staff directories would be in scope.

26. **QUESTION:** School Website Hosting – Traffic and Hosting Requirements: What is the expected website traffic (e.g., number of visitors per day, peak times like during enrollment)? Do you require a shared or dedicated hosting plan? What bandwidth and storage will be necessary?

ANSWER: Traffic will be low, with anticipation of a few hundred visitors daily. Hosting must be in the United States and can be shared or dedicated. Sites should have a few hundred gigabytes of storage available.

27. **QUESTION:** School Website Hosting – Content Management System (CMS): Which CMS will be used (e.g., WordPress, custom-built)? Are there specific CMS preferences? Who will manage content updates? Do you need a user-friendly interface for non-technical staff?

ANSWER: The CMS should be user friendly with non-technical staff maintaining sites at the school level. Custom is preferred as access and user security can be centrally managed.

28. **QUESTION:** School Website Hosting – Design and Branding: What design elements are critical (e.g., color scheme, logo integration, school branding)? Is there a need for custom templates or themes? Do you have existing design assets?

ANSWER: HCPS would like each individual school to have the ability to customize their school websites with individual school logos, colors, mascot, etc. HCPS would like to have continuity amongst all school websites, with HCPS choosing a template that each school will utilize. Yes, HCPS has existing design assets

that can be provided in the form of our company branding and style guide.

29. **QUESTION:** School Website Hosting – Integration with School Systems: Do you need integration with external tools like event management, Google Calendar, or payment gateways?

ANSWER: Some of the schools have social media accounts, such as X (Twitter). HCPS would prefer to have this as an option for schools to integrate into their school websites. We do not need payment gateways.

30. **QUESTION:** School Website Hosting – Security and Data Privacy: What security measures are required (e.g., SSL certificates, two-factor authentication for admin accounts)? How will user data be protected, especially for sensitive information (e.g., student records)?

ANSWER: SSL encryption is a requirement in the RFP. Authentication will need to be through our Microsoft Entra SSO, which covers two-factor automatically. Student information will not be uploaded to websites. These are public facing sites for general school information only.

31. **QUESTION:** School Website Hosting – Backup and Disaster Recovery: What are the backup and disaster recovery requirements (e.g., frequency of backups, retention periods)? Should the website have a failover mechanism for high availability?

ANSWER: Backups should be done nightly, off-site, and retained for a two-week recovery period. High availability is not required, but support must be able to resolve sites being down within one (1) business day or less.

32. **QUESTION:** School Website Hosting – Support and Maintenance: What level of technical support will be needed (e.g., 24/7, on-call support for emergencies)? Who will be responsible for ongoing website updates, security patches, and plugin maintenance?

ANSWER: Phone, chat, and case support should be available during normal business hours for the district (8 a.m. – 5 p.m. Eastern Standard Time; Monday – Friday). Vendors are expected to keep their environment and software up to date with security patches. Content updates are to be performed by the schools via the CMS.

33. **QUESTION:** Section 5.2 of the RFP mentions an "up-to-date, complete, and accurate Accessibility Conformance Report (ACR)." Is this ACR required to be submitted with proposals, or only required post-award by the successful vendor?

ANSWER: The Accessibility Conformance Report (ACR) is required to be submitted with proposals.

34. **QUESTION:** Section 20.1.5 of the RFP details that Tab 5 of our proposal must include a "recent Service Organization Control 2 – Type 2 (SOC 2) report." We consider a report proprietary information. Is assurance that our company is SOC 2/Type 2 certified and saying we can provide a report upon a signed NDA sufficient for our response?

ANSWER: Proposer may provide assurance in their proposal noting they are SOC 2/Type 2 certified. If the proposer is moved to the demonstration stage of the RFP, a report would be required to be sent to the Director of Information and Technology prior to the demonstration.

35. **QUESTION:** Is there an incumbent for this contract? If so, please provide the incumbent name, current contract number, duration, historical level of effort and value of the contract. Will the incumbent be eligible to bid on this project?

ANSWER: HCPS does not currently have a vendor providing both Mass Communication and School Website Hosting services. Vendors currently providing these services separately will be able to submit a proposal for the RFP.

36. **QUESTION:** Is there any scope for new content development?

ANSWER: The schools will maintain the content on their website outside of the template. Content development would not be required.

37. QUESTION: Are there any CMS preferences? Are you open to CMS such as Drupal or WordPress?

ANSWER: No CMS preferences stated, but HCPS will need to be able to centrally manage access, security, and roles.

38. QUESTION: Can the work be performed remotely? If remote work is allowed, can a part of the work be done from outside the US such as in India?

ANSWER: Work may be performed remotely, but HCPS requires that the vendor utilize domestic resources.

39. QUESTION: Has HCPS determined a budget for this contract? If so, can the budget amount be shared?

ANSWER: HCPS has not determined a final budget for this contract currently.

I hereby acknowledge receipt of Addendum #1 dated October 2, 2024, to RFP #25-GS-007 - Mass Communication System and School Website Hosting.

Company

Name (Print or Type)

Authorized Signature

Date

Note: Offeror shall sign and submit Addendum with proposal. Failure to submit the Addendum may deem your proposal non-responsive.

EXHIBIT A

HCPS Web Accessibility Conformance Evaluation Form

The Web is an increasingly important resource in many aspects of life: education, employment, government, commerce, health care, recreation, and more. It is essential that the Web be accessible in order to provide equal access and equal opportunity to people with diverse learning abilities.

HCPS is dedicated to making our Web content accessible to all individuals. To help ensure only accessible content and applications are made available, the Harford County Public Schools Request For Proposal and Approval Process for schools and offices now includes minimal consideration of the WCAG 2.1 Level AA guidelines.

Only WCAG 2.1 Level A and AA compliant products will be purchased and integrated by Harford County Public Schools.

Vendors are responsible for completing and signing the following WCAG 2.1 Level AA Checklist:

Name of Product/Version:

Date:

Peron completing form:

Product Description:

Contact Information:

Notes:

Evaluation Methods Used:

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.1	Level A Level AA Level AAA

Conformance Levels:

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Partially Supports:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.1 Level AAA.

Principle 1: Perceivable

<u>Guideline 1.1 – Text Alternatives</u> Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content Level A All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. Techniques and Failures for 1.1.1 Understanding Success Criterion for 1.1.1		
<u>Guideline 1.2 – Time-based Media</u> Provide alternatives for time-based media.	Conformance Level	Remarks and Explanations
1.2.1 Audio-only and Video-only (Prerecorded) Level A - For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: <ul style="list-style-type: none"> • Prerecorded Audio-only: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content. • Prerecorded Video-only: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content. Techniques and Failures for 1.2.1 Understanding Success Criterion for 1.2.1		
1.2.2 Captions (Prerecorded) Level A - Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. Techniques and Failures for 1.2.2 Understanding Success Criterion for 1.2.2		

<p>1.2.3 Audio Description or Media Alternative (Prerecorded) Level A - An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such.</p> <p>Techniques and Failures for 1.2.3 Understanding Success Criterion for 1.2.3</p>		
<p>1.2.4 Captions (Live) Level AA - Captions are provided for all live audio content in synchronized media.</p> <p>Techniques and Failures for 1.2.4 Understanding Success Criterion for 1.2.4</p>		
<p>1.2.5 Audio Description (Prerecorded) Level AA - Audio description is provided for all prerecorded video content in synchronized media.</p> <p>Techniques and Failures for 1.2.5 Understanding Success Criterion for 1.2.5</p>		
<p>1.2.6 Sign Language (Prerecorded) Level AAA - Sign language interpretation is provided for all prerecorded audio content in synchronized media.</p> <p>Techniques and Failures for 1.2.6 Understanding Success Criterion for 1.2.6</p>		
<p>1.2.7 Extended Audio Description (Prerecorded) Level AAA - Where pauses in foreground audio are insufficient to allow audio descriptions to convey the sense of the video, extended audio description is provided for all prerecorded video content in synchronized media.</p> <p>Techniques and Failures for 1.2.7 Understanding Success Criterion for 1.2.7</p>		
<p>1.2.8 Media Alternative (Prerecorded) Level AAA - An alternative for time-based media is provided for all prerecorded synchronized media and for all prerecorded video-only media.</p> <p>Techniques and Failures for 1.2.8 Understanding Success Criterion for 1.2.8</p>		

<p>1.2.9 Audio-only (Live) Level AAA - An alternative for time-based media that presents equivalent information for live audio-only content is provided.</p> <p>Techniques and Failures for 1.2.9 Understanding Success Criterion for 1.2.9</p>		
<p>Guideline 1.3 – Adaptable Create content that can be presented in different ways (for example simpler layout) without losing information or structure.</p>	Conformance Level	Remarks and Explanations
<p>1.3.1 Info and Relationships Level A - Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text.</p> <p>Techniques and Failures for 1.3.1 Understanding Success Criterion for 1.3.1</p>		
<p>1.3.2 Meaningful Sequence Level A - When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.</p> <p>Techniques and Failures for 1.3.2 Understanding Success Criterion for 1.3.2</p>		
<p>1.3.3 Sensory Characteristics Level A - Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, color, size, visual location, orientation, or sound. <i>Note 1:</i> For requirements related to color, refer to Guideline 1.4.</p> <p>Techniques and Failures for 1.3.3 Understanding Success Criterion for 1.3.3</p>		
<p>1.3.4 Orientation Level AA (Added in 2.1) - Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential.</p> <p>Techniques and Failures for 1.3.4 Understanding Success Criterion for 1.3.4</p>		

<p>1.3.5 Identify Input Purpose Level AA (Added in 2.1) - The purpose of each input field collecting information about the user can be programmatically determined when: The input field serves a purpose identified in the Input Purposes for User Interface Components section; and</p> <ul style="list-style-type: none"> The content is implemented using technologies with support for identifying the expected meaning for form input data. <p>Techniques and Failures for 1.3.5 Understanding Success Criterion for 1.3.5</p>		
<p>1.3.6 Identify Purpose Level AAA (Added in 2.1) - In content implemented using markup languages, the purpose of User Interface Components, icons, and regions can be programmatically determined.</p> <p>Techniques and Failures for 1.3.6 Understanding Success Criterion for 1.3.6</p>		
<p>Guideline 1.4 – Distinguishable Make it easier for users to see and hear content including separating foreground from background.</p>	Conformance Level	Remarks and Explanations
<p>1.4.1 Use of Color Level A - Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. <i>Note 1:</i> This success criterion addresses color perception specifically. Other forms of perception are covered in Guideline 1.3 including programmatic access to color and other visual presentation coding.</p> <p>Techniques and Failures for 1.4.1 Understanding Success Criterion for 1.4.1</p>		

<p>1.4.2 Audio Control</p> <p>Level A - If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level.</p> <p><i>Note 1:</i> Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether or not it is used to meet other success criteria) must meet this success criterion. See Conformance Requirement 5: Non-Interference.</p> <p>Techniques and Failures for 1.4.2 Understanding Success Criterion for 1.4.2</p>		
<p>1.4.3 Contrast (Minimum)</p> <p>Level AA - The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following:</p> <ul style="list-style-type: none"> • Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1; • Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement. • Logotypes: Text that is part of a logo or brand name has no contrast requirement. <p>Techniques and Failures for 1.4.3 Understanding Success Criterion for 1.4.3</p>		
<p>1.4.4 Resize text</p> <p>Level AA - Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality.</p> <p>Techniques and Failures for 1.4.4 Understanding Success Criterion for 1.4.4</p>		

1.4.5 Images of Text

Level AA - If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following:

- Customizable: The image of text can be visually customized to the user's requirements;
- Essential: A particular presentation of text is essential to the information being conveyed.

Note 1: Logotypes (text that is part of a logo or brand name) are considered essential.

[Techniques and Failures for 1.4.5](#)

[Understanding Success Criterion for 1.4.5](#)

1.4.6 Contrast (Enhanced)

Level AAA - The visual presentation of text and images of text has a contrast ratio of at least 7:1, except for the following:

- Large Text: Large-scale text and images of large-scale text have a contrast ratio of at least 4.5:1;
- Incidental: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.
- Logotypes: Text that is part of a logo or brand name has no contrast requirement.

[Techniques and Failures for 1.4.6](#)

[Understanding Success Criterion for 1.4.6](#)

1.4.7 Low or No Background Audio

Level AAA - For prerecorded audio-only content that (1) contains primarily speech in the foreground, (2) is not an audio CAPTCHA or audio logo, and (3) is not vocalization intended to be primarily musical expression such as singing or rapping, at least one of the following is true:

- **No Background:** The audio does not contain background sounds.
- **Turn Off:** The background sounds can be turned off.
- **20 dB:** The background sounds are at least 20 decibels lower than the foreground speech content, with the exception of occasional sounds that last for only one or two seconds. Per the definition of "decibel," background sound that meets this requirement will be approximately four times quieter than the foreground speech content.

[Techniques and Failures for 1.4.7](#)

[Understanding Success Criterion for 1.4.7](#)

1.4.8 Visual Presentation

Level AAA - For the visual presentation of blocks of text, a mechanism is available to achieve the following:

1. Foreground and background colors can be selected by the user.
2. Width is no more than 80 characters or glyphs (40 if CJK).
3. Text is not justified (aligned to both the left and the right margins).
4. Line spacing (leading) is at least space-and-a-half within paragraphs, and paragraph spacing is at least 1.5 times larger than the line spacing.
5. Text can be resized without assistive technology up to 200 percent in a way that does not require the user to scroll horizontally to read a line of text on a full-screen window.

[Techniques and Failures for 1.4.8](#)

[Understanding Success Criterion for 1.4.8](#)

<p>1.4.9 Images of Text (No Exception) Level AAA - Images of text are only used for pure decoration or where a particular presentation of text is essential to the information being conveyed. <i>Note 1:</i> Logotypes (text that is part of a logo or brand name) are considered essential.</p> <p>Techniques and Failures for 1.4.9 Understanding Success Criterion for 1.4.8</p>		
<p>1.4.10 Reflow Level AA (Added in 2.1) - Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:</p> <ul style="list-style-type: none"> • Vertical scrolling content at a width equivalent to 320 CSS pixels; • Horizontal scrolling content at a height equivalent to 256 CSS pixels; <p>Except for parts of the content which require two-dimensional layout for usage or meaning.</p> <p>Techniques and Failures for 1.4.10 Understanding Success Criterion for 1.4.10</p>		
<p>1.4.11 Non-text Contrast Level AA (Added in 2.1) - The visual presentation of the following have a contrast ratio of at least 3:1 against adjacent color(s):</p> <ul style="list-style-type: none"> • User Interface Components: Visual information required to identify user interface components and states, except for inactive components or where the appearance of the component is determined by the user agent and not modified by the author; • Graphical Objects: Parts of graphics required to understand the content, except when a particular presentation of graphics is essential to the information being conveyed. <p>Techniques and Failures for 1.4.11 Understanding Success Criterion for 1.4.11</p>		

1.4.12 Text Spacing

Level AA (Added in 2.1) - In content implemented using markup languages that support the following text style properties, no loss of content or functionality occurs by setting all of the following and by changing no other style property:

- Line height (line spacing) to at least 1.5 times the font size;
- Spacing following paragraphs to at least 2 times the font size;
- Letter spacing (tracking) to at least 0.12 times the font size;
- Word spacing to at least 0.16 times the font size.

Exception: Human languages and scripts that do not make use of one or more of these text style properties in written text can conform using only the properties that exist for that combination of language and script.

[Techniques and Failures for 1.4.12](#)

[Understanding Success Criterion for 1.4.12](#)

1.4.13 Content on Hover or Focus

Level AA (Added in 2.1) - Where receiving and then removing pointer hover or keyboard focus triggers additional content to become visible and then hidden, the following are true:

- Dismissible: A mechanism is available to dismiss the additional content without moving pointer hover or keyboard focus, unless the additional content communicates an input error or does not obscure or replace other content;
- Hoverable: If pointer hover can trigger the additional content, then the pointer can be moved over the additional content without the additional content disappearing;
- Persistent: The additional content remains visible until the hover or focus trigger is removed, the user dismisses it, or its information is no longer valid.

Exception: The visual presentation of the additional content is controlled by the user agent and is not modified by the author.

[Techniques and Failures for 1.4.13](#)

[Understanding Success Criterion for 1.4.13](#)

Principle 2 – Operable

Guideline 2.1 – Keyboard Accessible Make all functionality available from a keyboard.	Conformance Level	Remarks and Explanations
<p>2.1.1 Keyboard</p> <p>Level A - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.</p> <p><i>Note 1:</i> This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not.</p> <p><i>Note 2:</i> This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.</p> <p><u>Techniques and Failures for 2.1.1</u> <u>Understanding Success Criterion for 2.1.1</u></p>		
<p>2.1.2 No Keyboard Trap</p> <p>Level A - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints.</p> <p><i>Note 1:</i> This exception relates to the underlying function, not the input technique. For example, if using handwriting to enter text, the input technique (handwriting) requires path-dependent input but the underlying function (text input) does not.</p> <p><i>Note 2:</i> This does not forbid and should not discourage providing mouse input or other input methods in addition to keyboard operation.</p> <p><u>Techniques and Failures for 2.1.2</u> <u>Understanding Success Criterion for 2.1.2</u></p>		
<p>2.1.3 Keyboard (No Exception)</p> <p>Level AAA - All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes.</p> <p><u>Techniques and Failures for 2.1.3</u> <u>Understanding Success Criterion for 2.1.3</u></p>		

<p>2.1.4 Character Key Shortcuts</p> <p>Level A (Added in 2.1) - If a keyboard shortcut is implemented in content using only letter (including upper- and lower-case letters), punctuation, number, or symbol characters, then at least one of the following is true:</p> <ul style="list-style-type: none"> • Turn off: A mechanism is available to turn the shortcut off; • Remap: A mechanism is available to remap the shortcut to include one or more non-printable keyboard keys (e.g., Ctrl, Alt); • Active only on focus: The keyboard shortcut for a user interface component is only active when that component has focus. <p>Techniques and Failures for 2.1.4 Understanding Success Criterion for 2.1.4</p>		
<p>Guideline 2.2 – Enough Time Provide users enough time to read and use content.</p>	<p>Conformance Level</p>	<p>Remarks and Explanations</p>
<p>2.2.1 Timing Adjustable</p> <p>Level A - For each time limit that is set by the content, at least one of the following is true:</p> <ul style="list-style-type: none"> • Turn off: The user is allowed to turn off the time limit before encountering it; or • Adjust: The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or • Extend: The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or • Real-time Exception: The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or • Essential Exception: The time limit is essential and extending it would invalidate the activity; or • 20 Hour Exception: The time limit is longer than 20 hours. <p>Techniques and Failures for 2.2.1 Understanding Success Criterion for 2.2.1</p>		

2.2.2 Pause, Stop, Hide

Level A

For moving, blinking, scrolling, or auto-updating information, all of the following are true:

- Moving, blinking, scrolling: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and
- Auto-updating: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.

Note 1: For requirements related to flickering or flashing content, refer to Guideline 2.3.

Note 2: Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.

Note 3: Content that is updated periodically by software or that is streamed to the user agent is not required to preserve or present information that is generated or received between the initiation of the pause and resuming presentation, as this may not be technically possible, and in many situations could be misleading to do so.

Note 4: An animation that occurs as part of a preload phase or similar situation can be considered essential if interaction cannot occur during that phase for all users and if not indicating progress could confuse users or cause them to think that content was frozen or broken.

[Techniques and Failures for 2.2.2](#)
[Understanding Success Criterion for 2.2.2](#)

<p>2.2.3 No Timing Level AAA - Timing is not an essential part of the event or activity presented by the content, except for non-interactive synchronized media and real-time events.</p> <p><u>Techniques and Failures for 2.2.3</u> <u>Understanding Success Criterion for 2.2.3</u></p>		
<p>2.2.4 Interruptions Level AAA - Interruptions can be postponed or suppressed by the user, except interruptions involving an emergency.</p> <p><u>Techniques and Failures for 2.2.4</u> <u>Understanding Success Criterion for 2.2.4</u></p>		
<p>2.2.5 Re-authenticating Level AAA - When an authenticated session expires, the user can continue the activity without loss of data after re-authenticating.</p> <p><u>Techniques and Failures for 2.2.5</u> <u>Understanding Success Criterion for 2.2.5</u></p>		
<p>2.2.6 Timeouts Level AAA (Added in 2.1) - Users are warned of the duration of any user inactivity that could cause data loss, unless the data is preserved for more than 20 hours when the user does not take any actions.</p> <p><u>Techniques and Failures for 2.2.6</u> <u>Understanding Success Criterion for 2.2.6</u></p>		
<p><u>Guideline 2.3 – Seizures and Physical Reactions</u> Do not design content in a way that is known to cause seizures or physical reactions.</p>	<p>Conformance Level</p>	<p>Remarks and Explanations</p>

<p>2.3.1 Three Flashes or Below Threshold Level A - Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. <i>Note 1:</i> Since any content that does not meet this success criterion can interfere with a user's ability to use the whole page, all content on the Web page (whether it is used to meet other success criteria or not) must meet this success criterion. See Conformance Requirement 5: Non-Interference.</p> <p>Techniques and Failures for 2.3.1 Understanding Success Criterion for 2.3.1</p>		
<p>2.3.2 Three Flashes Level AAA - Web pages do not contain anything that flashes more than three times in any one second period.</p> <p>Techniques and Failures for 2.3.2 Understanding Success Criterion for 2.3.2</p>		
<p>2.3.3 Animation from Interactions Level AAA(Added in 2.1) - Motion animation triggered by interaction can be disabled, unless the animation is essential to the functionality or the information being conveyed.</p> <p>Techniques and Failures for 2.3.3 Understanding Success Criterion for 2.3.3</p>		
<p>Guideline 2.4 – Navigable Provide ways to help users navigate, find content, and determine where they are.</p>	Conformance Level	Remarks and Explanations
<p>2.4.1 Bypass Blocks Level A - A mechanism is available to bypass blocks of content that are repeated on multiple Web pages.</p> <p>Techniques and Failures for 2.4.1 Understanding Success Criterion for 2.4.1</p>		

<p>2.4.2 Page Titled Level A - Web pages have titles that describe topic or purpose.</p> <p>Techniques and Failures for 2.4.2 Understanding Success Criterion for 2.4.2</p>		
<p>2.4.3 Focus Order Level A - If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability.</p> <p>Techniques and Failures for 2.4.3 Understanding Success Criterion for 2.4.3</p>		
<p>2.4.4 Purpose (In Context) Level A - The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general.</p> <p>Techniques and Failures for 2.4.4 Understanding Success Criterion for 2.4.4</p>		
<p>2.4.5 Multiple Ways Level AA - More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process.</p> <p>Techniques and Failures for 2.4.5 Understanding Success Criterion for 2.4.5</p>		
<p>2.4.6 Headings and Labels Level AA - Headings and labels describe topic or purpose.</p> <p>Techniques and Failures for 2.4.6 Understanding Success Criterion for 2.4.6</p>		

<p>2.4.7 Focus Visible Level AA - Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible.</p> <p>Techniques and Failures for 2.4.7 Understanding Success Criterion for 2.4.7</p>		
<p>2.4.8 Location Level AAA - Information about the user's location within a set of Web pages is available.</p> <p>Techniques and Failures for 2.4.8 Understanding Success Criterion for 2.4.8</p>		
<p>2.4.9 Link Purpose (Link Only) Level AAA -A mechanism is available to allow the purpose of each link to be identified from link text alone, except where the purpose of the link would be ambiguous to users in general.</p> <p>Techniques and Failures for 2.4.9 Understanding Success Criterion for 2.4.9</p>		
<p>2.4.10 Section Headings Level AAA - Section headings are used to organize the content. <i>Note 1:</i> "Heading" is used in its general sense and includes titles and other ways to add a heading to different types of content. <i>Note 2:</i> This success criterion covers sections within writing, not user interface components. User Interface components are covered under Success Criterion 4.1.2.</p> <p>Techniques and Failures for 2.4.10 Understanding Success Criterion for 2.4.10</p>		
<p>Guideline 2.5 – Input Modalities Make it easier for users to operate functionality through various inputs beyond keyboard.</p>	<p>Conformance Level</p>	<p>Remarks and Explanations</p>

<p>2.5.1 Pointer Gestures Level A (Added in 2.1) - All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential.</p> <p>Techniques and Failures for 2.5.1 Understanding Success Criterion for 2.5.1</p>		
<p>2.5.2 Pointer Cancellation Level A (Added in 2.1) - For functionality that can be operated using a single pointer, at least one of the following is true:</p> <ul style="list-style-type: none"> • No Down-Event: The down-event of the pointer is not used to execute any part of the function; • Abort or Undo: Completion of the function is on the up-event, and a mechanism is available to abort the function before completion or to undo the function after completion; • Up Reversal: The up-event reverses any outcome of the preceding down-event; • Essential: Completing the function on the down-event is essential. • <p>Techniques and Failures for 2.5.2 Understanding Success Criterion for 2.5.2</p>		
<p>2.5.3 Label in Name Level A (Added in 2.1) - For user interface components with labels that include text or images of text, the name contains the text that is presented visually.</p> <p>Techniques and Failures for 2.5.3 Understanding Success Criterion for 2.5.3</p>		

<p>2.5.4 Motion Actuation Level A (Added in 2.1) - Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation, except when:</p> <ul style="list-style-type: none"> • Supported Interface: The motion is used to operate functionality through an accessibility supported interface; • Essential: The motion is essential for the function and doing so would invalidate the activity. <p>Techniques and Failures for 2.5.4 Understanding Success Criterion for 2.5.4</p>		
<p>2.5.5 Target Size Level AAA (Added in 2.1) - The size of the target for pointer inputs is at least 44 by 44 CSS pixels except when:</p> <ul style="list-style-type: none"> • Equivalent: The target is available through an equivalent link or control on the same page that is at least 44 by 44 CSS pixels; • Inline: The target is in a sentence or block of text; • User Agent Control: The size of the target is determined by the user agent and is not modified by the author; • Essential: A particular presentation of the target is essential to the information being conveyed. <p>Techniques and Failures for 2.5.5 Understanding Success Criterion for 2.5.5</p>		
<p>2.5.6 Concurrent Input Mechanisms Level AAA (Added in 2.1) - Web content does not restrict use of input modalities available on a platform except where the restriction is essential, required to ensure the security of the content, or required to respect user settings.</p> <p>Techniques and Failures for 2.5.6 Understanding Success Criterion for 2.5.6</p>		

Principle 3 – Understandable

<u>Guideline 3.1 – Readable</u> Make text content readable and understandable.	Conformance Level	Remarks and Explanations
3.1.1 Language of Page Level A —The default human language of each Web page can be programmatically determined. <u>Techniques and Failures for 3.1.1</u> <u>Understanding Success Criterion for 3.1.1</u>		
3.1.2 Language of Parts Level AA —The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. <u>Techniques and Failures for 3.1.2</u> <u>Understanding Success Criterion for 3.1.2</u>		
3.1.3 Unusual Words Level AAA —A mechanism is available for identifying specific definitions of words or phrases used in an unusual or restricted way, including idioms and jargon. <u>Techniques and Failures for 3.1.3</u> <u>Understanding Success Criterion for 3.1.3</u>		
3.1.4 Abbreviations Level AAA —A mechanism for identifying the expanded form or meaning of abbreviations is available. <u>Techniques and Failures for 3.1.4</u> <u>Understanding Success Criterion for 3.1.4</u>		
3.1.5 Reading Level Level AAA —When text requires reading ability more advanced than the lower secondary education level after removal of proper names and titles, supplemental content, or a version that does not require reading ability more advanced than the lower secondary education level, is available. <u>Techniques and Failures for 3.1.5</u> <u>Understanding Success Criterion for 3.1.5</u>		

<p>3.1.6 Pronunciation Level AAA—A mechanism is available for identifying specific pronunciation of words where meaning of the words, in context, is ambiguous without knowing the pronunciation.</p> <p>Techniques and Failures for 3.1.6 Understanding Success Criterion for 3.1.6</p>		
<p>Guideline 3.2 – Predictable</p> <p>Make Web pages appear and operate in predictable ways.</p>	Conformance Level	Remarks and Explanations
<p>3.2.1 On Focus Level A—When any user interface component receives focus, it does not initiate a change of context.</p> <p>Techniques and Failures for 3.2.1 Understanding Success Criterion for 3.2.1</p>		
<p>3.2.2 On Input Level A—Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.</p> <p>Techniques and Failures for 3.2.2 Understanding Success Criterion for 3.2.2</p>		
<p>3.2.3 Consistent Navigation Level AA—Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.</p> <p>Techniques and Failures for 3.2.3 Understanding Success Criterion for 3.2.3</p>		
<p>3.2.4 Consistent Identification Level AA—Components that have the same functionality within a set of Web pages are identified consistently.</p> <p>Techniques and Failures for 3.2.4 Understanding Success Criterion for 3.2.4</p>		
<p>3.2.5 Change on Request</p>		

<p>Level AAA—Changes of context are initiated only by user request or a mechanism is available to turn off such changes.</p> <p>Techniques and Failures for 3.2.5 Understanding Success Criterion for 3.2.5</p>		
<p>Guideline 3.3 – Input Assistance Help users avoid and correct mistakes.</p>	Conformance Level	Remarks and Explanations
<p>3.3.1 Error Identification Level A—If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text.</p> <p>Techniques and Failures for 3.3.1 Understanding Success Criterion for 3.3.1</p>		
<p>3.3.2 Labels or Instructions Level A—Labels or instructions are provided when content requires user input.</p> <p>Techniques and Failures for 3.3.2 Understanding Success Criterion for 3.3.2</p>		
<p>3.3.3 Error Suggestion Level AA—If an input error is automatically detected and suggestions for correction are known, then the suggestions are provided to the user, unless it would jeopardize the security or purpose of the content.</p> <p>Techniques and Failures for 3.3.3 Understanding Success Criterion for 3.3.3</p>		
<p>3.3.4 Error Prevention (Legal, Financial, Data) Level AA—For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true:</p> <ul style="list-style-type: none"> • Reversible: Submissions are reversible. • Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. • Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. 		

<p>Techniques and Failures for 3.3.4 Understanding Success Criterion for 3.3.4</p>		
<p>3.3.5 Help Level AAA—Context-sensitive help is available.</p> <p>Techniques and Failures for 3.3.5 Understanding Success Criterion for 3.3.5</p>		
<p>3.3.6 Error Prevention (All) Level AAA—For Web pages that require the user to submit information, at least one of the following is true:</p> <ul style="list-style-type: none"> • Reversible: Submissions are reversible. • Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them. • Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission. <p>Techniques and Failures for 3.3.6 Understanding Success Criterion for 3.3.6</p>		

Principle 4 – Robust

<u>Guideline 4.1 – Compatible</u> Maximize compatibility with current and future user agents, including assistive technologies.	Conformance Level	Remarks and Explanations
<p>4.1.1 Parsing</p> <p>Level A—In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features.</p> <p><u>Techniques and Failures for 4.1.1</u> <u>Understanding Success Criterion for 4.1.1</u></p>		
<p>4.1.2 Name, Role, Value</p> <p>Level A—For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies.</p> <p><u>Techniques and Failures for 4.1.2</u> <u>Understanding Success Criterion for 4.1.2</u></p>		
<p>4.1.3 Status Messages</p> <p>Level AA(Added in 2.1)—In content implemented using markup languages, status messages can be programmatically determined through role or properties such that they can be presented to the user by assistive technologies without receiving focus.</p> <p><u>Techniques and Failures for 4.1.3</u> <u>Understanding Success Criterion for 4.1.3</u></p>		