

AUDIT READINESS BRIEF · WEB APPLICATIONS

Section 508 Audit Readiness: Web Applications

What a formal Section 508 validation covers for SaaS platforms, web applications, and browser-based tools delivered to the federal government. Aligned with DHS Trusted Tester methodology and WCAG 2.0 Level A and AA.

READING TIME

12 minutes

AUDIENCE

Web App Vendors & Primes

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About this brief

The DHS Trusted Tester process encompasses 63 test conditions across 20 evaluation topics. Automated scanning tools cover only a subset. Here is what a real audit actually looks at.

Simkins & Elgazar is an independent Section 508 compliance validation firm serving federal contractors and subcontractors. Our methodology is aligned with the DHS Trusted Tester conformance test process, the recognized standard for manual accessibility evaluation of federal electronic and information technology deliverables.

- Independent validation authority with no conflict of interest
- DHS Trusted Tester-aligned evaluation methodology
- Fixed-fee, documentation-first engagement model
- Federal contractor and subcontractor focus
- Structurally independent from remediation implementation

IMPORTANT

Automated scanning tools identify a subset of accessibility defects but cannot establish conformance with Section 508 standards. The DHS Trusted Tester process encompasses 63 test conditions across 20 evaluation topics, the majority of which require manual evaluation by a certified tester.

Purpose of this brief

This readiness brief is designed to help federal subcontractors understand the evaluation domains assessed during a formal Section 508 compliance audit. Its purpose is to reduce risk prior to formal validation by providing awareness of common assessment areas, typical failure patterns, and documentation expectations. This document is not a substitute for certified compliance validation. Formal compliance determination requires structured manual evaluation conducted by a certified accessibility professional.

Regulatory and Enforcement Context

Section 508 of the Rehabilitation Act requires that federal agencies ensure electronic and information technology is accessible to individuals with disabilities. This mandate extends to all deliverables produced under federal contract, including web applications, software systems, and electronic documents.

Accessibility validation is subject to review during contract performance and may be evaluated at any point in the acquisition lifecycle. Non-conformant deliverables may result in contract modifications, delayed acceptance, payment withholding, or adverse past performance evaluations.

The applicable technical standard is WCAG 2.0 Level A and AA as incorporated into the Section 508 Standards (36 CFR Part 1194). Contracting officers and Section 508 coordinators increasingly require documented evidence of compliance, not merely assertions of conformance. Automated scanning tools, while useful for initial defect identification, do not establish compliance. Federal agencies rely on structured manual evaluation aligned with recognized test methodologies to make formal compliance determinations.

Evaluation Domains Overview

The DHS Trusted Tester conformance test process evaluates web content across multiple structured evaluation domains. Each domain addresses a distinct category of accessibility requirements. The following provides a high-level overview of the primary evaluation areas.

2.1 Conforming alternate versions and non-interference

When content provides an accessible alternate version, both the alternate version and the mechanism to access it must meet all applicable accessibility requirements. Additionally, non-conforming versions must not interfere with a user's ability to access conforming content through auto-playing audio, uncontrollable flashing, or keyboard traps.

- Alternate versions that fail applicable test conditions
- Missing or inaccessible mechanisms to reach conforming versions
- Non-conforming content that creates keyboard traps or auto-plays audio

2.2 Auto-playing and dynamic content

Content that plays, moves, blinks, scrolls, or updates automatically must provide user controls. Audio content that plays automatically for more than three seconds requires a mechanism to pause, stop, or control volume within the first three elements a user encounters. Automatically updating content must notify users of changes through accessible mechanisms such as ARIA live regions.

- Auto-playing audio without accessible pause or volume controls
- Moving or scrolling content without a mechanism to pause or stop
- Auto-updating content without programmatic change notifications

2.3 Keyboard operability

All interactive functionality must be operable through keyboard input alone. This includes navigation to all focusable elements, execution of all available functions, and preservation of logical focus order. Keyboard focus must be visually apparent at all times, and no interaction may create a condition from which a keyboard user cannot escape.

- Interactive elements that cannot receive keyboard focus

- Functions that require mouse-only interaction
- Focus order that does not follow a logical reading sequence
- Missing or insufficient visible focus indicators
- Keyboard traps that prevent users from navigating away from an element

2.4 Forms and data input

Form elements must be programmatically associated with descriptive labels and instructions. All relevant cues, constraints, and format requirements must be conveyed to assistive technology users. Error identification must be specific and actionable, and forms that result in legal, financial, or data-modifying transactions must provide mechanisms for review and correction prior to submission.

- Form fields without programmatic labels or with labels that do not describe the input
- Missing association between instructions, cues, and their corresponding form elements
- Error messages that do not identify the field in error or suggest correction
- Unexpected changes of context triggered by form input without user initiation
- Financial or legal submission forms without review and confirmation mechanisms

2.5 Links and navigation

The purpose of each link must be determinable from its text or programmatic context. Redundant or ambiguous link text reduces usability for assistive technology users. Navigation mechanisms must be consistent across pages, and multiple methods of locating content within a set of pages must be available.

- Links with non-descriptive text such as "Click here" or "Read more" without contextual association
- Inconsistent navigation ordering across pages within a site

2.6 Non-text content and images

All meaningful non-text content must have equivalent text alternatives that serve the same purpose. Decorative images must be programmatically hidden from assistive technology. Images of text should be avoided where actual text can achieve the same visual presentation, with exceptions for logotypes and essential visual presentations.

- Informative images without text alternatives or with non-equivalent descriptions

- Decorative images that are announced to screen readers
- Images of text used where actual text is feasible

2.7 Data tables

Data tables must be programmatically identified as tables and must correctly associate header cells with data cells. Layout tables must not include table structure markup that would convey false structural relationships to assistive technology users. Complex tables with multi-level headers require explicit programmatic associations.

- Data tables without programmatic header identification
- Incorrect or missing header-to-data-cell associations
- Layout tables that include header markup or ARIA table roles

2.8 Content structure and semantics

Visual headings must be programmatically identified as headings with levels that logically match the visual hierarchy. Visually apparent lists must use correct programmatic list markup. Reading order, as determined by the underlying code, must preserve the meaning of the content when CSS positioning is disabled.

- Visual headings not coded as programmatic headings, or incorrect heading levels
- Content that relies on CSS positioning for meaning, resulting in illogical reading order when linearized
- Visual lists not coded with appropriate list markup

2.9 Visual presentation and sensory requirements

Text must maintain a minimum contrast ratio of 4.5:1 against its background, with a 3:1 ratio for large text and non-text user interface components. Color must not be the sole means of conveying information, indicating actions, or distinguishing visual elements. Instructions must not rely solely on sensory characteristics such as shape, size, location, or sound. Content must be usable when resized to 200% and must reflow without horizontal scrolling at 320 CSS pixels width.

- Insufficient text-to-background contrast ratios
- Information conveyed exclusively through color without additional visual differentiation
- Instructions that reference only shape, location, or sound
- Content that becomes unusable or is lost when zoomed to 200%

2.10 Synchronized media

Pre-recorded synchronized media must include accurate, time-synchronized captions that encompass all dialogue and relevant non-dialogue audio information. Audio descriptions must be provided for important visual content not conveyed through the main audio track. Media players must provide user-accessible controls for both captions and audio descriptions at the same menu level as volume and program selection controls.

- Captions that are missing, inaccurate, or not synchronized with audio content
- Absence of audio descriptions for visual information essential to understanding
- Media player controls for captions or descriptions that are absent or not keyboard accessible

2.11 Page-level requirements

Each web page must have a descriptive title that identifies its topic or purpose. The language of the page and any content in a different language must be programmatically identified.

Mechanisms must exist to bypass blocks of repeated content, such as skip navigation links or proper heading structure. Parsing requirements mandate that elements have complete start and end tags, are nested according to specification, and do not contain duplicate attributes.

- Pages without titles or with generic, non-descriptive titles
- Missing or incorrect programmatic language identification
- Absence of mechanisms to bypass repetitive navigation content

Observed Failure Patterns

The following patterns represent recurring accessibility deficiencies observed across federal subcontractor web application deliverables. These patterns frequently result in audit findings and may indicate systemic issues in development workflow or quality assurance processes.

Keyboard and focus failures

Custom interactive components, including modal dialogs, dropdown menus, date pickers, and tab panels, frequently lack keyboard operability. Focus is often trapped within elements, skips expected elements, or follows a sequence that does not match the visual layout. Visible focus indicators are absent or insufficient in contrast, particularly on custom-styled components.

Form and input failures

Form elements commonly lack programmatic label associations, relying instead on visual proximity or placeholder text. Error messages are generic, do not identify the specific field in error, and provide no corrective guidance. Multi-step forms involving financial or legal commitments rarely implement confirmation or review mechanisms prior to final submission.

Structural and semantic failures

Heading hierarchies are frequently illogical, with levels skipped or applied inconsistently relative to visual presentation. Content structured visually as lists is not coded with list markup. Data tables lack proper header associations, and layout tables include table semantics that convey false structural meaning to assistive technology.

Dynamic content failures

Single-page applications and dynamically loaded content frequently fail to notify assistive technology of content changes. Auto-playing media lacks accessible controls. Carousels, accordions, and other interactive patterns do not implement ARIA live regions or other notification mechanisms for state changes.

Visual and media failures

Text contrast ratios fall below required thresholds, particularly in placeholder text, disabled states, and secondary UI elements. Color is used as the sole indicator of status, errors, or required fields. Synchronized media lacks captions or provides captions that are inaccurate, not synchronized, or that obscure relevant video content.

Pre-Audit Preparation Considerations

The following considerations may assist subcontractors in reducing accessibility risk prior to formal validation. These measures supplement, but do not replace, certified manual testing.

Automated scanning limitations

Automated accessibility scanning tools can identify a defined subset of defects, including missing alternative text, insufficient contrast ratios, and certain structural markup errors. However, automated tools cannot evaluate keyboard operability, logical reading order, form label adequacy, media equivalency, or the majority of conditions assessed during manual evaluation. Automated scan results should be understood as a partial risk indicator, not a compliance determination.

Template and component validation

Accessibility defects in shared templates, component libraries, or design systems propagate across all pages and views that use them. Identifying and resolving defects at the template level before deployment significantly reduces the volume of findings during formal audit.

Internal accessibility review

Development and QA teams should incorporate keyboard-only navigation testing into standard quality assurance workflows. Verifying that all interactive elements are focusable, operable, and follow a logical tab order addresses one of the most common categories of audit failure.

Workflow and integration testing

Accessibility should be evaluated across complete user workflows, not only on individual pages. Multi-step forms, authentication flows, search result interactions, and error recovery paths should be tested end-to-end using keyboard-only navigation and screen reader verification where feasible.

What a Formal Validation Produces

A formal Section 508 compliance validation conducted by Simkins & Elgazar produces structured documentation suitable for submission to prime contractors, contracting officers, and agency Section 508 coordinators. The following describes the standard deliverables included in a formal engagement.

Structured issue log

Each identified deficiency is documented with precise location, affected WCAG success criterion, severity classification, and a description of the barrier to access. The issue log provides a clear remediation roadmap for development teams.

Evidence documentation

Findings are supported by annotated screenshots, tool output captures, and detailed reproduction steps. Evidence documentation provides the specificity required for development teams to identify and resolve defects without ambiguity.

Standards mapping

Each finding is mapped to the applicable WCAG 2.0 Level A or AA success criterion and the corresponding Section 508 requirement. This mapping ensures that remediation efforts are traceable to the governing technical standards.

Re-test verification

Following remediation, Simkins & Elgazar provides independent re-test verification to confirm that identified deficiencies have been resolved without introducing new accessibility barriers. Re-test results are documented and appended to the original validation record.

Formal compliance documentation

The final deliverable package constitutes a formal compliance record suitable for inclusion in contract deliverable submissions, VPAT/ACR documentation, and agency review processes. Documentation is structured to withstand scrutiny from Section 508 coordinators and contracting officers.

Get Ahead of the Audit

The fastest way to know where your web application actually stands is to put your primary workflow in front of a qualified manual tester and get the answer. Automated scans will miss the majority of audit findings. We offer a free accessibility scan for organizations that want an honest, independent read before a formal audit is on the line.

Schedule a Free Accessibility Scan

We will run a free manual accessibility scan of your web application's primary interface and return a short report with the real findings, mapped to WCAG 2.0 AA and Section 508 requirements. No vendor pitch. Just the answer.

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