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# Commonwealth of Virginia

Enterprise Technical Architecture (ETA)

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## Web Site Topic Report Application Domain

Version 1.0, April 1, 2009

Prepared by:

[Virginia Information Technologies Agency](#)

## Publication Version Control

It is the user's responsibility to ensure they have the latest version of this publication. The VITA Policy, Practice & Architecture (PPA) Division will issue a Change Notice Alert for new versions, post releases of current versions on the VITA Web site, and provide an e-mail announcement to the Agency Information Technology Resources (AITRs) at all state agencies and institutions of higher education and to other interested parties. Questions should be directed to the Director for the VITA PPA Division.

<b>Web Site Topic Report: Version History</b>		
<b>Revision</b>	<b>Date</b>	<b>Description</b>
1.0	04-01-2009	<p>This <i>Web Site Topic Report</i> combines information from the <i>Web Site Policy</i> (ITRM GOV105-00), <i>Web Site Standard</i> (ITRM GOV106-01), <i>Web Site Guideline</i> (ITRM GOV107-00) and the <i>Internet Privacy Guideline</i> (SEC2001-02.1) into a single topic report.</p> <p><b>NOTE:</b> The numbering scheme for Principles, Recommended Practices and Requirements in this topic report is sequential. Each Principle's, Recommended Practice's and Requirement's number is unique and will not be reassigned if a Principle, Recommended Practice or Requirement is superseded or rescinded.</p>

### Identifying Changes in Principles, Requirements, Recommendations and Component Tables

- Take note of the Version Information Table entries above.
- Vertical lines in the left margin identify changes in principles, requirements and recommended procedures.
- For requirements, the changes are noted using italics and underlines and dates are provided for new and rescinded requirements. The following examples demonstrate how the reader may identify requirement updates, changes, and deletions.

**WEB-R-01: Technology Requirement Example with No Change**  
 – The text is the same. The text is the same. The text is the same.

**WEB-R-02: Technology Requirement Example with Revision –**  
 The text is the same. *A wording change, update or clarification is made in this text.* The text is the same.

**WEB-R-03: Technology Standard Example of Deleted Standard** – *This standard was rescinded on mm/dd/yyyy.*

**WEB-R-04: Technology Requirement Example of New Standard** – *This requirement is new.*

## Review Process

### Information Technology Investments and Enterprise Solutions Directorate Review

This Topic Report was reviewed and approved by Jerry Simonoff, Director of the Information Technology Investment and Enterprise Solutions Directorate and Chuck Tyger, Director of the Policy, Practices and Architecture Division.

### Agency Online Review

Participation of all Executive Branch agencies was encouraged through a review and comment period for all changes in the Web Site policy, standard and guideline, which have been replicated in this Domain Topic Report. This Topic Report provides additional discussion and guidance but no new requirements. Reviewers used VITA's Online Review and Comment Application (ORCA) to review the requirements which will be published in the Applications Section as part of the next version of the [Enterprise Technical Architecture Standard \(EA 225\)](#). Technology businesses and the general public were also actively encouraged to use ORCA to provide comments.

The documents used to develop this report were posted on ORCA for 30 days. All agencies, stakeholders, and the public were encouraged to provide their comments through ORCA. All comments were carefully evaluated and the individuals who commented were notified of the action taken.

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## ***Executive Summary of ETA Web Site Topic***

The *Enterprise Technical Architecture Application (ETA) Web Site Topic Report* is a subset of the [ETA Application Domain Report](#). The Application Domain provides agencies with a foundation of development and support platforms, tools, processes, practices and requirements that can be used to implement business processes and meet the Commonwealth's ever changing business needs. The Application architecture promotes common presentation standards to facilitate rapid training and implementation of new applications and functions. Good application architecture enables a high level of system integration, reuse of components and rapid deployment of applications in response to changing business requirements. As a topic of the ETA Application, this report expands on the principles, requirements and recommended practices presented in the ETA Application Domain report.

The *ETA Web Site Topic Report* provides a common Web site template for all Agencies. All requirements identified in this report are adopted as ITRM standards in the current version of the EA Standard (ITRM EA225). This includes, but is not limited to standards from the [World Wide Web Consortium \(W3C\)](#), the [Web Accessibility Initiative \(WAI\)](#), and other standards bodies referenced, such as [Section 508 of the Rehabilitation Act of 1973](#), as amended.

A "checklist" of the Web site principles, requirements and recommended practices will also be posted on the "[IT Accessibility Standards, Web Site Standards & Web Site Guidelines](#)" page of the VITA Web site and on the Department of Rehabilitative Services' "[Web Accessibility and Training Guide](#)" (WATG) Web site.

## Overview

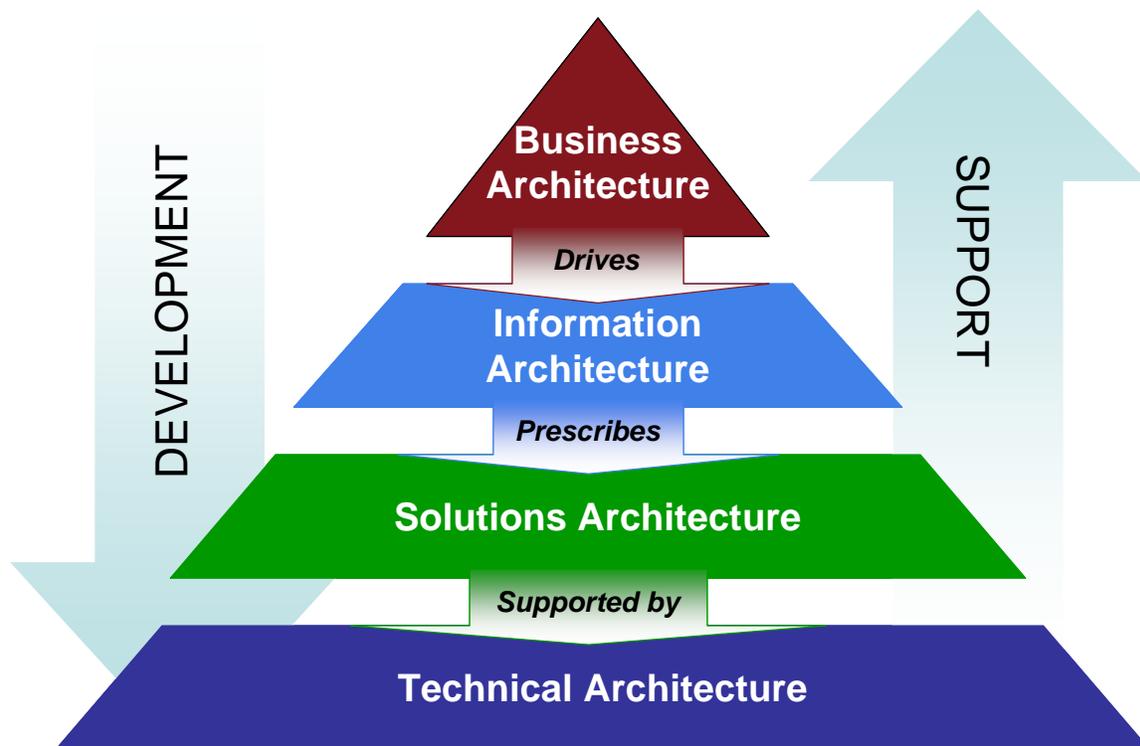
The Commonwealth's Enterprise Architecture (EA) is a strategic asset used to manage and align the Commonwealth's business processes and Information Technology (IT) infrastructure/solutions with the State's overall strategy.

The EA is also a comprehensive framework and repository which defines:

- the models that specify the current ("as-is") and target ("to-be") architecture environments,
- the information necessary to perform the Commonwealth's mission,
- the technologies necessary to perform that mission, and
- the processes necessary for implementing new technologies in response to the Commonwealth's changing business needs.

The EA contains four components as shown in the model in Figure 1.

**Figure 1. Commonwealth of Virginia Enterprise Architecture Model**

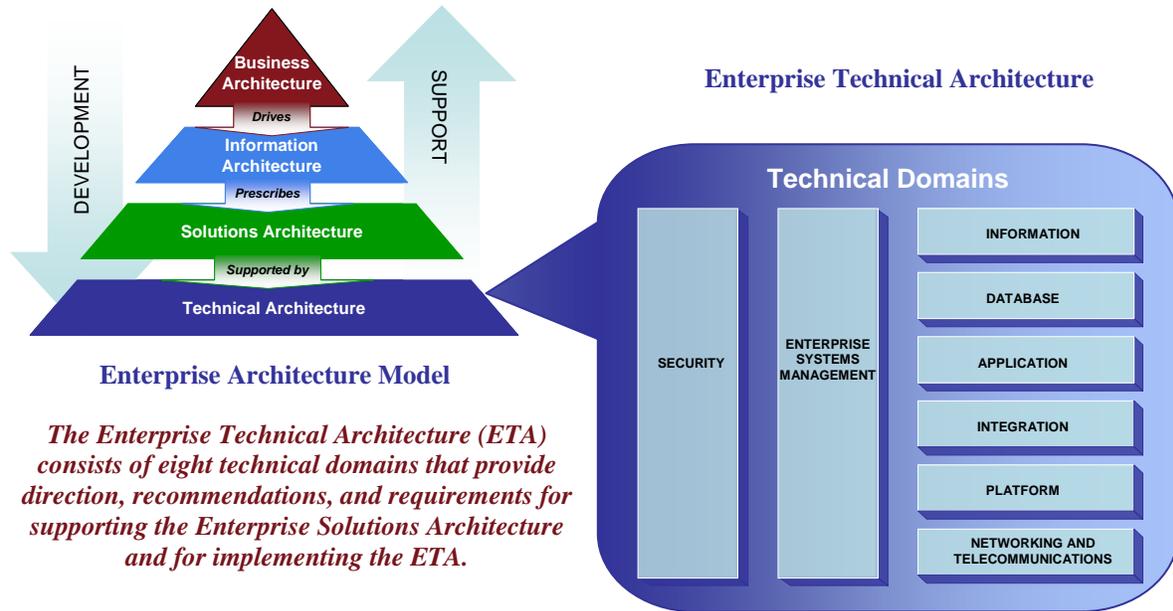


The Business Architecture drives the Information Architecture that prescribes the Solutions Architecture that is supported by the Technical (technology) Architecture.

The Enterprise Technical Architecture (ETA) shown in Figure 2 consists of eight technical domains that provide direction, recommendations and requirements for supporting the Solutions Architecture and for implementing the ETA. The ETA

guides the development and support of an organization's information systems and technology infrastructure.

**Figure 2. ETA Relationship to the Enterprise Architecture**



Each of the domains is a critical piece of the overall ETA. The Networking and Telecommunications and Platform Domains address the infrastructure base and provide the foundation for the distributed computing. The Enterprise Systems Management, Database, Applications, and Information Domains address the business functionality and management of the technical architecture. The Integration Domain addresses the interfacing of disparate platforms, systems, databases and applications in a distributed environment. The Security Domain addresses approaches for establishing, maintaining, and enhancing information security across the ETA.

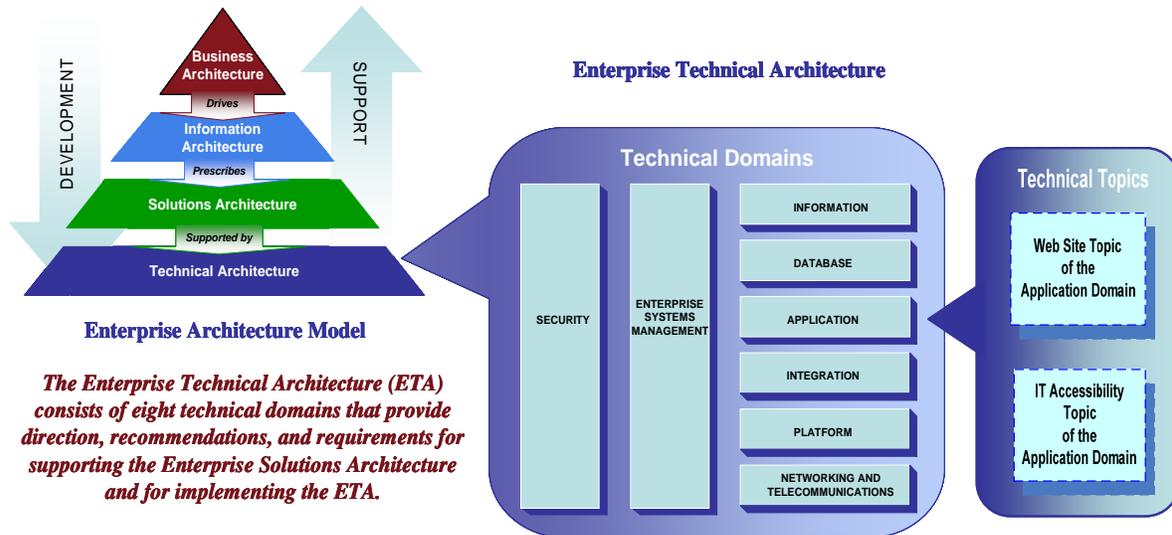
This report addresses the *Web Site Topic* in the *Enterprise Technical Architecture Application Domain* and includes requirements and recommended practices for [Virginia's agencies](#)<sup>1, 2</sup>.

<sup>1</sup> This report provides hyperlinks to the domain report Glossary in the electronic version. In the electronic and printed versions, the hyperlinks will have the appearance established by the preferences set in the viewing/printing software (e.g., Word) and permitted by the printer. For example, the hyperlinks may be blue and underlined in the screen version and gray and underlined in the printed version.

<sup>2</sup>The Glossary entry for agency is critical to understanding ETA requirements and standards identified in this report and are repeated here. **State agency or agency** - Any agency, institution, board, bureau, commission, council, or instrumentality of state government in the executive branch listed in the appropriation act. ETA requirements/standards identified in this report are applicable to all agencies including the administrative functions (does not include instructional or research functions) of institutions of higher education, unless exempted by language contained in a specific requirement/standard.

Identified requirements from this Topic report will be combined with the requirements and technology standards from other technical domain reports into a single EA Standard for review and acceptance by the Information Technology Investment Board (ITIB).

**Figure 3. ETA Web Site Topic Relationship to the ETA Application Domain**



The Commonwealth's *ETA Application Domain* is further decomposed to include this topic, which states the Web site principles, requirements and recommended practices and their rationale. The *ETA Accessibility Topic* principles, requirements and recommended practices and their rationale will be addressed in a future report.

### **Local Governments, Courts, Legislative Agencies, and Other Public Bodies**

Local governments, courts, legislative agencies, and other public bodies are not required to comply with a requirement unless the requirement is a prerequisite for using a VITA service or for participating in other state-provided connectivity and service programs; however, their consideration of relevant requirements is highly recommended. This architecture was designed with participation of local government and other public body representatives with the intent of encouraging its use in state and local interconnectivity efforts.

### **Definition of Key Terms**

All of the Web Site Topic requirements considered to be critical components for implementing the Commonwealth's ETA are included in this report.

The report presents three forms of technical architecture guidance for agencies to consider when planning or when making changes or additions to their information technology:

- Principles – high-level fundamental truths, ideas or concepts that frame and contribute to the understanding of the ETA.
- Requirements – mandatory enterprise technical architecture directions. All requirements are included within the ETA Standard.
- Recommended Practices - provided as guidance to agencies in improving cost efficiencies, business value, operations quality, reliability, availability, decision inputs, risk avoidance or other similar value factors. Recommended Practices are optional.

### ***Agency Exception Requests***

Agencies that desire to deviate from the requirements or the technology component standards specified in this report and included as requirements in the Applications Section of the EA Standard must request an exception for each desired deviation from the EA Standard and receive an approved *Enterprise Technical Architecture Change/Exception Request Form* prior to developing, procuring, or deploying such technology or not complying with a requirement specified in this report. The instructions for completing and submitting an exception request are contained within the *Commonwealth Enterprise Architecture Policy*.

The government agencies identified below, whose Web sites have a more commercial-type focus and would not benefit from the implementation of the Web site template design component, are considered exempt. Nevertheless, accessibility and usability remains in the forefront of the Web site design and all Web sites and Web-based applications shall comply with the current version of the *IT Accessibility Standard (ITRM GOV103)*.

The following Agencies are considered to be exempt from implementing the template requirements.

- The Virginia Tourism Corporation
- The Library of Virginia
- Museums
- Institutions of Higher Education

All other agencies are to implement both the template and the accessibility and usability requirements. If an agency believes it should be exempt or be granted an exception, the agency is allowed the option of applying to be exempt or for an exception from the template implementation as described above.

## **Web Site Topic Scope**

The purpose of the Web site topic is to encourage greater efficiencies and effectiveness in the use of technology to accomplish government business. This report provides guidance and direction to assist agencies in developing a common look and feel to all Agency public Web sites. By creating a new accessibility template and requirements, this report helps Web developers to make the user's experience as pleasant and trouble-free as possible.

The topic brings together relevant requirements established by the *Code of Virginia*, the Governor, the Secretary of Technology, and the Chief Information Officer of the Commonwealth that affect Web site services provisioned by Agencies. The goals of this topic are to create a useable and accessible template and set of requirements for all Agencies to implement and to establish specific content and update requirements. Achieving these goals will move Virginia government from the "stovepipe" designs of the last decade to a truly unified "one government" of the 21<sup>st</sup> century. The topic ensures Web sites follow basic rules of proper design. A site that is badly designed may be complete with valuable information, but if people cannot easily (without detailed knowledge of the structure of government) access the information they will go elsewhere and valuable IT dollars will have been wasted.

The topic makes use of a wide body of research and studies, including those guidelines established by the World Wide Web Consortium ([W3C](#)), the Web Access Initiative ([WAI](#)), as well as [Section 508](#) guidelines from the Architectural and Transportation Barriers Compliance Board ([Access Board](#)) of the U.S. Federal Government. Building on the foundation of the *Virginia Information Technology Accessibility Standard* (ITRM Standard GOV103-00), this topic focuses on the design requirements directly related to Web sites.

## **Overall Web Site Topic Scope**

This topic report addresses accessibility, template, portal, and implementation requirements and agency plans for implementing those requirements. The report has been organized in sections as follows:

- Those items to be addressed on every agency Web page
- The site and application content to be included on every agency Web site
- The design considerations for every agency Web site
- The external content to be included on every agency Web site
- The implementation and Web 2.0 considerations for every agency

## ***Future Web Site Initiatives***

Future Web site related topics include the development of additional principles, requirements and recommended practices for Web audio/video, Web site translation engines and other emerging Web technologies.

## ***Topic-wide Principles, Recommended Practices and Requirements***

The following principles, recommended practices and requirements pertain to all components, in all situations and activities related to the ETA Applications Web Site Topic. Component specific principles, recommended practices and requirements will be discussed in the next section of the report.

### ***Topic-wide Principles***

The following are Web site topic-specific principles:

- WEB-P-01: User-Centric Approach** – The Commonwealth’s portal and all Agencies within the portal shall have Web sites that are intuitive, easy to use, and accessible to all users. Jargon, program names, and acronyms should be avoided or explained when they would be confusing to visitors.
  
- WEB-P-02: Accessibility Principle** – Agency Web sites shall be made accessible to all citizens and employees with disabilities to the same or an equivalent level of access and use that is available to citizens and employees without such disabilities.

The *Virginia Information Technology Accessibility Standard* provides direction and requirements to agencies to develop agency Web sites that enable Virginia citizens and Commonwealth employees with disabilities to have access to and use of information and data comparable to the access and use by Commonwealth employees and Virginia citizens who do not have disabilities.

For details on any of the Web content accessibility guidelines, please see the referenced checkpoint in the World Wide Web Consortium’s (W3C) Web Accessibility Initiative’s (WAI) Web Content Accessibility Guidelines 1.0 (WCAG). Please see WCAG checkpoints:  
<http://www.w3.org/TR/WCAG10/full-checklist.html>.

### ***Topic-wide Recommended Practices***

There are no Web site topic-specific recommended practices at this time.

## ***Topic-wide Requirements***

There are no Web site topic-wide requirements at this time.

## ***Web Site Technical Components***

Each agency is responsible for ensuring that all public content and Web applications related to their agency adhere to the Web site related requirements identified in this document and adopted as COV ITRM requirements in the ETA Standard. This requires that any Service Level Agreements (SLA) entered into by an agency will outline the responsibility of ensuring that all content and Web applications related to their agency adhere to the template requirements.

Sharing recommended practices related to the functions of Web sites may aid Agencies in reducing cost, improving management practices, and improving services and tools for the government and its citizens. Web site architecture should be an enterprise solution that focuses on the needs of citizens and businesses. Its design should be intuitive, easy to use, and accessible, without jargon, confusing program names, and acronyms.

The following requirements address a common Web Template for publicly accessible state Web sites and the state Internet Portal. Standardization with respect to these requirements provides a user-focused Web presence for the Commonwealth. The Web Accessibility and Template Guide (WATG) is located at <http://www.vadsa.org/watg/> and is available to assist developers in implementing the Web site requirements.

The checkpoints referenced in this report are recommendations published by the World Wide Web Consortium (W3C). The W3C is an industry consortium which seeks to promote standards for the evolution of the Web and interoperability between WWW products by producing specifications and reference software. Although W3C is funded by industrial members, it is vendor-neutral, and its products are freely available to all. The direction provided by the checkpoints in this report is considered incorporated into the recommended practices and requirements in the report.

## ***Virginia Common Template – Page Elements***

This section provides a common Web template and provides corresponding guidance and direction related to all the components an agency must put on every page of its Web site. The guidance and direction is provided in the form of recommended practices and requirements that bring together relevant best practices that affect Web site services provided by state agencies. For additional guidance, a Web Accessibility and Template Guide (WATG) were created by the Department of Rehabilitative Services to assist agency developers in

implementing the requirements identified in this report. That Guide can be accessed at: <http://www.vadsa.org/watg/>.

An important objective of the Common Template Requirement is to create a user<sup>3</sup>-focused, or “user-centric,” Web presence for the Commonwealth, including a common look and feel to all agency Web sites. This objective is addressed by creating a template and set of Web site requirements for all Agencies to implement that assist in making the agency Web pages accessible and usable. An essential objective of this requirement is to assist in making the Web site user’s experience as pleasant and trouble-free as possible. It also includes putting government services and content where citizens can easily find them, and in a format that is easy to use.

Code containing the “Commonwealth Banner,” all links contained within the banner, sample template code and specifications are located at the WATG site: <http://www.vadsa.org/watg/>. All approved requirements are built into the template, but each agency is responsible for its content and ensuring that the content it adds remains compliant with the Common Template requirements identified in this report and the [Virginia Information Technology Accessibility Standard \(ITRM GOV103-00\)](#).

## Commonwealth Banner

The Commonwealth Banner is the black bar that appears at the top of Virginia government Web pages. It contains links relevant to all agencies. It also contains the state-wide Virginia.Gov search box.

**WEB-R-01:** **Code for Commonwealth Banner** – The code containing the “Commonwealth Banner” shall be used on all agency Web sites and is available on the WATG site (<http://www.vadsa.org/watg/>).

**WEB-R-02:** **Commonwealth Banner Location** – The “Commonwealth Banner” shall be posted above the “Agency Banner” area of each site. This banner shall be completely identical to the image received if Webmasters choose to replicate it themselves and contain only these textual links in the following order:

- “Virginia.gov” logo – left align
- “Online Services” – left align
- “Commonwealth sites” – left align

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<sup>3</sup> In the case of government Web sites, a “user” is any visitor to that site, targeted or untargeted. It is possible for a user base to have several sub-groups of users, in which case it is acceptable to target specific user groups. If specific user groups are targeted for a public-facing site, there must be a clear distinction made to visitors when they leave the public user site and enter more specific targeted sections.

- Enterprise “Help” – left align
- “Governor” – left align
- “Skip to Content” (skip-nav) shall be hidden within the code of the “Commonwealth Banner” to allow screen reader access at the beginning of each page
- “Search Virginia.gov” – right align search box

**WEB-R-03: Commonwealth Banner Height** – The “Commonwealth Banner” shall be 40 pixels in height in its default mode. It should be noted that this area shall be permitted to grow to accommodate changes in font sizes through user specification or scripting such as CSS and/or JavaScript that allow font sizes to change. This section shall be scalable, but always default to no more than 40 pixels in height with standard font sizes.

**WEB-R-04: Commonwealth Banner Statewide Search** – The “Commonwealth Banner” shall contain the enterprise search feature which shall allow users to access this functionality across all state sites. The statewide search box shall contain the text “Search Virginia.gov” to clearly identify its function.

### Virginia Common Template

The Virginia Common Template is a visual arrangement of Web page elements. It specifies where common items shall appear so users know where to look for them and to have a unified look-and-feel across Virginia government Web sites.

**WEB-R-05: Virginia Common Template** – All Executive Branch Agencies shall use the Virginia Common Template for public Web sites and Web applications, except the following exempt organizations:

- The Virginia Tourism Corporation
- The Library of Virginia
- All museums
- All institutions of higher education

Extranets and Intranets are not required to follow any Web Site requirements, but still must comply with the current version of the COV ITRM Accessibility Standard (GOV103).

### Rationale:

Standardization with respect to this requirement provides a user-focused Web presence for the Commonwealth.

## Text Only Site

A "Text only site" is a version of the main site that uses only text. Every Web page has an alternate Web page with the same content and text descriptions for visual information (graphics, charts, etc.).

- WEB-R-06: Text Only Site** – If an agency uses a text-only site, that link shall be in the Commonwealth Banner of the template and the text-only site shall be updated at the same time as the standard site.

## Agency Banner

The Agency Banner is the area below the top black Commonwealth Banner bar and above the Navigation Trail. It contains the agency name and often contains graphics related to the agency.

- WEB-R-07: Agency Banner Height & Resolution** – Each agency shall create its own "Agency Banner" for use in the template; it shall be 100 pixels high and able to accommodate screen resolutions 1024 and wider gracefully.
- WEB-R-08: Agency Banner Search & Agency Name** –The "Agency Banner" shall contain the full agency name and be created in one of the specified standard fonts.
- WEB-RP-01: Real-time Customer Service** – Agencies that deal directly with a large group of constituencies on a regular basis should consider implementing real-time, online customer service such as the interactive customer service "Live Help" feature on the Virginia.gov portal.

## Navigation Trail

The Navigation Trail or "breadcrumb trail" appears below the Agency Banner. It shows the route from the homepage to the page the visitor is on. Using the Navigation Trail links, visitors can return to previous or parent pages. The links can help orient a user. In the Common Template, the Navigation Trail also contains a link to the agency Contact Us page and the site-wide search box.

The following are requirements related to Navigation Trails:

- WEB-R-09: Navigation Trail Bar Location** - A "bread-crum" navigation trail bar shall be located below and contiguous to the "Agency Banner" in the template.

- WEB-R-10:** **Navigation Trail Bread Crumb Text Location** – The breadcrumb text shall be located on the left side of the navigation bar. See [Glossary: "Bread Crumbs"](#)
- WEB-R-11:** **Navigation Trail Height & Resolution** – The Navigation Trail shall not exceed 25 pixels in height in its default mode. This area shall be permitted to grow to accommodate changes in font sizes through user specification or scripting such as CSS and/or JavaScript that allow font sizes to change. This section shall be scalable, but always default to no more than 25 pixels in height with standard font sizes.
- WEB-R-12:** **Navigation Trail "Contact Us" link** – The "Contact Us" link shall be located to the right side of the bread crumb bar in front of the agency search box area and contain the text "Search [name or official acronym of agency] site" to differentiate between statewide and agency search.
- WEB-R-13:** **Navigation Trail Agency Search** - The agency search box shall be located on the far right side of the bread crumb bar underneath the "Search Virginia.gov" search box.

The following are recommended practices related to Navigation Trails:

- WEB-RP-02: Provide Navigation Mechanisms** – Provide access to content through a variety of navigation mechanisms, including sequential navigation, direct navigation, searches and structured navigation, as appropriate.

**Rationale:**

Users should be able to navigate to important pieces of content within a configurable view, identify the type of object they have navigated to, interact with that object easily (if it is an [enabled element](#)), and review the surrounding context (to orient themselves). Providing a variety of navigation and search mechanisms helps users with disabilities, as well as users without disabilities, access content more efficiently. Navigation and searching are particularly important to users with [serial access](#) to content or who [navigate sequentially](#) (by moving the [focus](#)).

Direct navigation is important to users with some physical disabilities (who may have little or no manual dexterity and/or increased tendency to push unwanted buttons or keys) and to users with visual disabilities. Expert users also will benefit from direct navigation. Direct navigation may be

possible with the pointing device or the keyboard (e.g., keyboard shortcuts).

User agents should allow users to navigate to content known to be structurally important, such as blocks of content, headers and sections, tables, forms and form elements, enabled elements, navigation mechanisms and containers.

**WEB-RP-03: Orient the User** – Provide information that will help the user understand browsing context.

**Rationale:**

All users require clues to help them understand their "location" when browsing: where they are, how they got there, where they can go and what is nearby.

## Navigation Links

Navigation Links refer to the main links on the left side of agency Web pages. They generally link to major areas or categories on a site.

**WEB-R-14: Number of Primary Navigation Links** - No more than twelve main navigation links shall be on the left navigation bar and links shall remain the same throughout the site. The Virginia Information Technologies Agency must approve exceptions prior to site redesign implementation. Graphic and other separate links in the left-hand navigation area count towards the 12 link limit.

**Rationale:**

To avoid clutter and to apply uniform navigation across Commonwealth Web sites to improve the usability of all Commonwealth Web sites.

**WEB-R-15: Number of Sub-navigation Links** – *There shall be no more than twelve sub-navigation links for a primary navigation link. Sub-navigation shall appear in the left-hand navigation area as long as they are visually distinct from the main navigation links (e.g. indented, fly-out, different-color, etc). Sub-navigation links shall not count towards the twelve primary navigation link limit.*

**Rationale:**

To permit greater link decomposition and delineation within the primary link area while avoiding confusing clutter. Sub-navigation links can vary from page-to-page.

## Content Sections

Content Sections are the one or more areas in the content portion of an agency Web page. This is where the page content goes.

**WEB-R-16: Content Sections** – All of the columns in the content area shall fit into a resolution 1024x768 without left to right scrolling; however, the number of columns in the content area is at the discretion of the agency.

**WEB-RP-04: Ensure User Control of Time-Sensitive Content Changes** – Until user agents provide the ability to stop auto-redirect, do not use markup to redirect pages automatically. Instead, configure the server to perform redirects. WAI WCAG4 checkpoint 7.5

**WEB-RP-05: Provide Context and Orientation Information** – Divide large blocks of information into more manageable groups where natural and appropriate. WAI WCAG checkpoint 12.3

**WEB-RP-06: Ensure User Access to All Content** – Ensure that users have access to all content, notably conditional content, such as the “alt” and “label” attributes that may have been provided to meet the requirements of the Web Content Accessibility Guidelines 1.0 [WCAG10]

## Page Footer

The Page Footer is the area at the bottom of an agency Web page. It contains specific standard information about the site.

**WEB-R-17: Page Footer** - Each page shall have a footer containing, at a minimum, the following information:

- Agency name
- Copyright information
- Text or an approved icon link stating WAI compliance

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<sup>4</sup> The World Wide Web Consortium (W3C) is the main [international standards organization](#) for the [World Wide Web](#) (abbreviated WWW or W3). It is arranged as a [consortium](#) where member organizations maintain full-time staff for the purpose of working together in the development of standards for the [World Wide Web](#). As of February 2008, the W3C had 434 members.

## Language Translation

Language Translation refers to links to versions of a given page in other languages. Generally the translation is automated on the fly, but agencies could link to hand-crafted translations of select pages.

There are several free language translators available today that automatically translate the HTML content on a Web site. These translators allow the non-English speaking user of the Web site to understand the general intent of the site, but do not provide a polished translation of the site. For the best results the English text should use proper grammar and punctuation, and avoid the use of slang and complex or lengthy sentences.

An alternative solution to automatic translation services is to provide just the most essential information from your site into the different preferred language(s) by means of an actual human language translator. This option may be possible since this shall not require the entire site being translated.

The Web site should caution that the translators are offered as a service to non-English speaking users and are provided "as is." No warranty of any kind, either expressed or implied, is made as to the accuracy, correctness or reliability of any translations made from English into any other language, or translations from any foreign language into English. Some pages may not be accurately translated due to the limitations of the translation software, such as dynamic or interactive pages.

Automatic language translators can have a difficult time translating graphical elements, so forethought should be taken in utilizing these elements, especially when they contain important and essential information for the user. This also applies to PDF documents. If you have important and essential information in this format alone, you should also provide an HTML text equivalent for the automatic language translators to read and interpret.

***WEB-RP-08: Language Translation – Agencies should consider providing an automatic translation service for the HTML content on the agency Web site as a potential aid to non-English speaking users in understanding the general intent on the site.***

### **Rationale:**

For consistency and ease of use, all Commonwealth of Virginia sites should place automated translators in the same place on their sites. The footer is an easy to find place that doesn't distract from the main content of the page.

## ***Virginia Common Template – Site and Application Content***

This section identifies the various items that an agency must address or add to their Web site and application content.

**WEB-RP-07: Advertisements or Commercial Banners – should not appear unless authorized by the Commonwealth of Virginia or the agency.**

### **Web Content Accessibility**

Web Content Accessibility refers to coding practices that aid in accessing online content.

Best business practices provide accessible user agent documentation and help ensure that the user can learn about software features that benefit accessibility from the documentation and that the documentation is accessible. Users can find the User Agent Accessibility Guidelines (UAAG) and checkpoints at: <http://www.w3.org/TR/WAI-USERAGENT>. Documentation of the user interface is important, as is documentation of the user agent's underlying functionalities. While intuitive user interface design is valuable to many users, some users may still not be able to understand or be able to operate the native user interface without thorough documentation. For instance, a user who is blind may not find a graphical user interface intuitive without supporting documentation.

**WEB-RP- 09: Accessible Version of the User Agency Documentation -** Ensure that at least one version of the user agent [documentation](#) conforms to at least level Double-A of the Web Content Accessibility Guidelines 1.0. (WAI UAAG [checkpoint 12.1](#));

**WEB-RP- 10: Accessible Features Documentation -** Provide [documentation](#) of all user agent features that benefit accessibility. (WAI UAAG checkpoints [12.2](#), [12.3](#), and [12.4](#)).

**WEB-RP- 11: Centralized View of Accessible Features –** Provide a centralized view of all features of the user agent that benefit accessibility, in a dedicated section of the [documentation](#). (WAI UAAG [12.5](#)).

**WEB-RP-12: Design for Device-Independence –** Create a logical tab order through links, form controls, and objects. WAI WCAG checkpoint [9.4](#)

### **Rationale:**

Although it is possible to make most content accessible, however, if an accessible page can not be created, a link should be provided to an alternative page that uses W3C technologies, is accessible, has equivalent information (or functionality), and is updated as often as the inaccessible (original) page.

**WEB-RP-13: Use Interim Solutions** – Until user agents, including assistive technologies, render adjacent links distinctly, agencies should include non-link, printable characters (surrounded by spaces) between adjacent links. WAI WCAG checkpoint [10.5](#)

**WEB-RP-14: Support Input and Output Device-Independence** – Ensure that the user can interact with the [user agent](#) (and the [content](#) it renders) through different input and output devices.

#### Rationale:

Since people use a variety of devices for input and output, user agent developers need to ensure redundancy in the [user interface](#). The user may have to operate the user interface with a variety of input devices (e.g., keyboard, pointing device, and voice input) and output modalities (e.g., [graphical](#), speech, or Braille rendering). Though it may seem contradictory, enabling full user agent operation through the keyboard is an important part of promoting [device independence](#) in [target user agents](#).

**WEB-RP-15: Clear Link Target Information** – Clearly identify the target of each link. WAI WCAG checkpoint [13.1](#)

**WEB-RP-16: Clear Site Layout** – Provide information about the general layout of a site (e.g., a site map or table of contents). WAI WCAG checkpoint [13.3](#)

**WEB-RP-17: Observe Operating Environment Conventions** – Observe operating environment conventions for the [user agent user interface](#), documentation, input configurations and installation. Part of user agent accessibility involves following the conventions of the user's operating environment, including:

- Following [operating environment](#) conventions for [user agent user interface](#) design, [documentation](#) and installation.
- Incorporating [operating environment level](#) user preferences into the user agent.

**WEB-RP-18: Provide Alternate Information Delivery** – To enhance a user's experience with a Web site, Webmasters should

implement features that allow a user to request high-contrast colors (for users with low vision) or graphical rendering of audio cues (for users with hearing disabilities).

**WEB-RP-19: Consistent Navigation Mechanisms** – Use navigation mechanisms in a consistent manner. WAI WCAG checkpoint [13.4](#)

**WEB-RP-20: Allow Configuration Not to Render Some Content that May Reduce Accessibility** – Ensure that the user may turn off rendering of content (e.g., audio, video, scripts) that may reduce accessibility by obscuring other content or disorienting the user.

### **Rationale:**

Some content or behavior specified by the author may make the user agent unusable or may obscure information. If you offer audio or video content, allow the user to manually start the content. Do not have audio and video content start automatically when a page loads.

For instance, flashing content may trigger seizures in people with photosensitive epilepsy, or may make a Web page too distracting to be usable by someone with a cognitive disability. Blinking text can affect screen reader users since screen readers (in conjunction with speech synthesizers or Braille displays) may re-render the text every time it blinks. Distracting background images, colors, or sounds may make it impossible for users to see or hear other content. Dynamically changing Web content may cause problems for some [assistive technologies](#). Scripts that cause unanticipated changes (e.g., [viewports](#) that open without notice or automatic content retrieval) may disorient some users with cognitive disabilities

### **Central Repository of Forms**

A Central Repository of Forms is a page that allows visitors to access all forms on a given site. This is often a list of links to available forms.

**WEB-R-18: Central Repository of Forms** - A central repository of agency electronic forms for public use shall be made available through a link on the home page.

### **Contact Instructions**

Contact Instructions provide information to visitors that enable them to contact the agency for help, for example by phone or e-mail.

- WEB-R-19: Contact Instructions** – The Contact Us page accessible from the home page shall include, at a minimum, the agency's:
- Mailing address;
  - FAX number;
  - Phone number, toll-free number, TTY number; and an
  - E-mail link to the agency.

### Custom 404 Error Message

A Custom 404 Error Message is a customized message returned to Web site visitors when a requested Web page is not found.

- WEB-R-20: Custom 404 Error Message** - Agencies shall implement a custom 404 error message page. Whenever possible, have the server redirect the user to the new page.

#### Rationale:

The 404 Error Message is the frequently seen Hypertext Transfer Protocol (HTTP) status code that informs a Web user that a requested page is "Not found." By creating custom contents for a 404 status code page and substitute it for the 404 page that the browser usually provides, the Webmaster can personalize the message and encourage the user to notify the Webmaster so that the situation can be fixed and provide the user other ways to find the information they're looking for (e.g. a link to the site map page or a site search box)."

### Search Engine

A search engine allows visitors to search online content. Public agency sites will have a site-specific search (to search the current Web site) and a Commonwealth search (to search all state agency sites).

- WEB-R-21: Sitemap XML File** – Each agency shall include an XML sitemap at the root level of the site to facilitate statewide search.

- WEB-R-22: Search Engine XML Schema** – The sitemap XML shall follow the XML schema standard as defined on the [WATG site](http://www.vadsa.org/watg/) (<http://www.vadsa.org/watg/>).

- WEB-R-23: Search Engine Updating Agency Search Sitemaps** – Agency Webmasters shall update their agency search sitemap on a regular basis as substantial updates are made to the site and particularly if a large number of new URLs representing

significant new content are added. New sitemap files are not needed to reach content changes on existing URLs.

**Rationale:**

By updating the search sitemap in this manner, the users will experience a better, more accurate search.

**WEB-R-24: Search Engine Public Search Engine Compatibility – All public content posted on a Virginia government Web site shall be searchable and discoverable through public search engines.**

**WEB-R-25: Search Engine META Tags – Every page on an Agency Web site shall contain an accurate Meta description in order to ensure any search engine (agency, statewide search, or public search engine such as Yahoo or Google) can display meaningful search results.**

**Rationale:**

To assist search engines in indexing or “crawling” the dynamic content on a government Web site. The description meta tag is generally shown beneath the links in search results. Having meaningful description meta tag text helps search engine users choose the correct link to find the information they’re looking for.

**WEB-R-26: Search Engine Periodic Search Testing – All Webmasters shall test search results relevant to their agency name and content on a regular basis.**

**WEB-RP-21: Usable Search Engines Results** - All Web pages should use proper META<sup>5</sup> tag information to allow search engines to present useable results.

**Rationale:**

Having a search engine for your agency Web site is not sufficient if that search engine returns results that are either too numerous to wade through, or too vague to understand.

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<sup>5</sup> A META tag is a [tag](#) (that is, a coding statement) in the Hypertext Markup Language ([HTML](#)) that describes some aspect of the contents of a Web [page](#). The information provided in a [meta](#) tag is used by [search engines](#) to index a page so that someone searching for the kind of information the page contains will be able to find it. The META tag is placed near the top of the HTML in a Web page as part of the heading.

**WEB-RP-22: Audience Focused Search Engines Results** – Web sites should use a search engine technology that is able to handle the needs of their audience.

**WEB-RP-23: Search Engine Updating Agency Search Sitemaps Database URLs** – Webmasters should take particular care to examine and include in their sitemap schema URLs behind database content and interactive forms, as these are historically more difficult for search engines to index.

## Internet Privacy Policy Statement

The Internet Privacy Policy Statement tells visitors how any collected personal information is handled on the site. It also contains other information about the site.

A sample Web Policy is provided in the Appendix of this report as guidance and should be tailored to reflect the information practices of the individual agency.

**WEB-R-27: Internet Privacy Policy and Statement** – To comply with Code of Virginia, § [2.2-3803](#) (B) at a minimum each agency shall:

- Develop an Internet privacy policy and an Internet privacy policy statement that explains the policy to the public; and,
- Tailor the policy and the statement to reflect the information practices of the individual agency.

**WEB-R-28: Internet Privacy Policy and Statement - Collection of Information** – To comply with Code of Virginia, § [2.2-3803](#) (B) at a minimum, the Internet Privacy Policy and Internet Privacy Policy Statement shall address:

- What information, including personally identifiable information, will be collected, if any;
- Whether any information will be automatically collected simply by accessing the website and, if so, what information;
- Whether the Web site automatically places a computer file, commonly referred to as a "cookie," on the Internet user's computer and, if so, for what purpose; and,
- How the collected information is being used or will be used.

Except for those systems listed in the Code of Virginia, § 2.2-3802, as exempt, the following also shall be included:

- A prescribed procedure for an individual to learn the purpose for which information has been recorded and particulars about its use and dissemination; and
- A clearly prescribed and uncomplicated procedure for an individual to correct, erase or amend inaccurate, obsolete or irrelevant information.

### **Rationale:**

Modern information technology tools have the potential to extend the meaning of “personal information” to include the Web browsing habits of users of the Internet. Web browsers have been designed with the ability to collect and pass potentially identifying information via “cookies” of which the user may not even be aware. Internet servers collect very specific information necessary to allow the transfer of information between computers.

**WEB-R-29: Internet Privacy Policy Statement.- Link Location** - A link to the Internet Privacy Policy Statement shall be featured in a conspicuous manner on the Web site home page, in the page footer.

**WEB-R-30: Internet Privacy Policy Statement – Data Retention** – The statement shall state that any personal information that is collected and retained is maintained in compliance with the Code of Virginia, §§ 2.2-3800 and 2.2-3803.

**WEB-R-31: Internet Privacy Policy Statement – Freedom of Information Act (FOIA)** – The statement shall remind users that information collected on this site may be provided to anyone that requests it under the “Virginia Freedom of Information Act.”

**WEB-R-32: Internet Privacy Policy Related Requirements – All agency Web sites shall have a Web Policy. The Web Policy shall include the following:**

- Disclaimer – a statement that indemnifies the Commonwealth from responsibility for third party or externally linked content
- Link policy – a policy stating the criteria that allows a link to be placed on the site.

- FOIA – a statement that explains the agency’s Freedom of Information Act policies and contacts.
- Plug-ins – a list of links visitors can use to download any plug-ins used by the site. (e.g. Macromedia Flash, Adobe Acrobat Reader, etc.) Note that pages that use plug-ins also must link to required plug-ins.

**Rationale:**

To provide guidelines to Agencies with Internet Web sites for developing an Internet Privacy Policy and an Internet Privacy Policy Statement in compliance with the Code.

**Citizen Cyber Security Awareness Banner**

The Citizen Cyber Security Awareness Banner is a warning to users that appears above online requests for personal information or passwords. It contains a link to VITA’s online guide to protecting personal information.

**WEB-RP- 24:** Due to the ever-increasing threats posed by malware running on citizen computers, it is suggested agencies utilize the cyber security awareness banner from the Cyber Security “Toolkit” on all Internet facing citizen and partner applications where authentication is required, or where any personally identifiable information may be exchanged between the agency and your customers

**Rationale:**

To assist all agencies in their efforts to increase Cyber Security Awareness, the Virginia Information Technologies Agency has made a Cyber Security “Toolkit” available online. This Toolkit was produced by the Multi-State Information Sharing and Analysis Center (MS-ISAC) in collaboration with the U.S. Department of Homeland Security and the National Cyber Security Alliance as part of the National Cyber Security Awareness Month Campaign.

The Toolkit is designed to help promote the delivery of a consistent cyber security awareness message and can become a cost efficient component of your Cyber Security Awareness Program. Instructions for printing and branding are also included. The Toolkit may be accessed online at: <http://www.vita.virginia.gov/security/default.aspx?id=5146>

For questions or more information, please contact VITA Security Services at: [VITASecurityServices@VITA.Virginia.Gov](mailto:VITASecurityServices@VITA.Virginia.Gov)

*Example of the Citizen Cyber Security Awareness Banner:*

***The security of your personal information is important to us!***

*Diligent efforts are made to ensure the security of Commonwealth of Virginia systems. Before you use this Web site to conduct business with the Commonwealth, please ensure your personal computer is not infected with malicious code that collects your personal information. This code is referred to as a [keylogger](#). The way to protect against this is to maintain current [anti-virus](#) and [security patches](#).*

*For more information on protecting your personal information online, refer to [Guide to Online Protection](#) and the [Online Protection Glossary](#).*

## **Virginia Common Template – Site Design Considerations**

This section addresses various considerations related to the design of an agency Web site, including site scalability and the use of fonts, frames, and style sheets.

### **Site Scalability**

Site Scalability refers to the ability of the site to become narrower or wider depending on the visitor's browser's window width.

**WEB-R-33: Site Scalability** - Web Sites using the template shall be made in a scalable format. No absolute width specifications shall be placed in the Commonwealth Banner, Agency Banner and Navigation Trail, Content or Footer sections.

**WEB-R-34: Browser** – All template sites shall display and operate within most common browsers in a consistent manner. The most common browsers include, but are not limited to, Explorer, Mozilla/Netscape and Firefox.

### **Rationale:**

Use of common browsers ensures access to state Web sites by the largest segment of users.

**WEB-RP-25: User Control of User Interface Behavior** – Permit user control of the view points or warn the user about the behavior of viewports, including those that may be manipulated by the author (e.g., through scripts).

**Rationale:**

Control of [viewport](#) behavior is important to accessibility. Unexpected changes to the [point of regard](#) — what the user is presumed to be viewing — may cause users to lose track of how many [viewports](#) are open, or which viewport has the [current focus](#). If carried out automatically, these changes might go unnoticed (e.g., by some users with blindness) or be disorienting (e.g., to some users with a cognitive disability).

**Font Families**

Font Families refers to the font types used to display text (Arial, Times Roman, etc.).

- WEB-R-35: Fonts** – Fonts shall be selected only from the following choices:
- San-Serif *font families*: Arial, Helvetica, Tahoma, Verdana, and Geneva (include the generic sans-serif type for users that do not have the previous specified fonts); and
  - Serif *font families*: Times New Roman, Times, Georgia, and Courier (include the generic serif type for users that do not have the previous specified fonts).

**Rationale:**

The additional san-serif and serif fonts permit more variety among highly legible fonts and the explanatory language clarifies the compliant font families and font type.

**Frames**

Frames refer to dividing the screen into areas each of which draws content from a separate file and has independent scrollbars.

- WEB-R-36: Frames** – The use of HTML frames is prohibited; however, the of use of Inline Frames (IFRAMES) is permitted if the W3C recommendations (see: <http://www.w3.org/TR/html4/present/frames.html#h-16.5>) are fully compliant, which allows authors to insert a frame within a block of text.

**Rationale:**

Although not expressly prohibited by Level A, the use of HTML frames, poses a significant barrier to usability and accessibility and is prohibited by the current version of the Virginia IT Accessibility Standard (ITRM GOV103) for sites using the Virginia Common Template. IFRAMES provide Webmasters with the ability display content in frames while making the content accessible to assistive technology.

## Style Sheets

Style Sheets are Cascading Style Sheets (CSS files) used to control the appearance of Web pages.

**WEB-R-37: Style Sheets** – Agencies shall use style sheets to control the layout whenever possible. Tables shall not be used for layout unless they make sense when linearized. [WAI WCAG checkpoint 3.3](#)

### Rationale:

Using tables for layout can confuse screen readers if the content does not make sense when linearized (read left-to-right, top-to-bottom). CSS allows you to put content in <div>s and position <div>s so both visual layout and read order can be controlled.

**WEB-RP-26: Mark-up Language Use** – When an appropriate markup language exists, use markup rather than images to convey information. WAI WCAG checkpoint [3.1](#)

**WEB-RP-27: Mark-up Language Attribute Use** – Use relative rather than absolute units in mark-up language attribute values and style sheet property values. WAI WCAG checkpoint [3.4](#)

**WEB-RP-28: Mark-up Language List Item Use** – Mark-up lists and list items properly since ordered lists help non-visual users navigate. WAI WCAG checkpoint [3.6](#)

**WEB-RP-29: Tables Transform** – Do not use tables for layout unless the table makes sense when linearized. If the table does not make sense, provide an alternative equivalent, which may be a linearized version. WAI WCAG checkpoint 5.3

**WEB-RP-30: Data Tables Summaries** – Provide summaries for data tables. WAI WCAG checkpoint [5.5](#)

**WEB-RP-31: Transformation of Pages Featuring Applets and/or Scripts**  
 – For scripts and applets, ensure that event handlers are input device independent. WAI WCAG checkpoint [6.4](#)

**WEB-RP-32: Validate to Published Formal Grammars – Create tables that are published to formal grammars.** WAI WCAG checkpoint [3.2](#)

### Rationale:

Validating to a published formal grammar and declaring that validation at the beginning of a document lets the user know that the structure of the document is sound. It also lets the user agent know where to look for semantics if it needs to. [The W3C Validation Service](#) validates documents against a [whole list of published grammars](#). Developers can identify a page's formal grammar by using the !DOCTYPE tag.

### Link Modification

Link Modification refers to the process of alerting the Virginia.gov portal of new, updated or outdated links to agency Web sites.

Each Agency's Webmaster is required to notify Virginia.gov of link changes. Due to the complexity of the Virginia.gov portal, it is critical that each Agency be held accountable for the content found on its individual Web sites. This Agency accountability is the only way the Commonwealth of Virginia can provide the public with the most current and accurate information.

**WEB-R-38: Link Modification Standard: Virginia Interactive (VI) Webmaster Database** - Each agency's Webmaster shall be registered in the VI Webmaster database.

- Once a member, each Webmaster shall be assigned a user ID and password that shall allow access and permission to add, modify or delete links on the Virginia.gov portal.
- Webmasters shall submit a request to be added to the database along with their contact information (full name, title, phone, e-mail, fax number, mailing address) on official agency letterhead. This request must be e-mailed to the Virginia.gov Webmaster at: [webmaster@virginia.gov](mailto:webmaster@virginia.gov).

**WEB-R-39: Link Modification Requirements: Change Request Form: Agency's link added, modified or deleted** - Each time an agency's link on the portal needs to be added, modified or

deleted, an agency's Webmaster shall use the form at [http://www.virginia.gov/cmsportal3/government\\_4096/adding\\_a\\_link.html](http://www.virginia.gov/cmsportal3/government_4096/adding_a_link.html) to make a link change request. If the link is in the "virginia.gov Community Database" at: ([http://www.vipnet.org/community/hub\\_page.htm](http://www.vipnet.org/community/hub_page.htm)) then the Webmaster is to use the submission form at: <http://www.vipnet.org/community/localsubmission.htm>

When an Agency, locality or other government entity creates a Web site that it wishes to include in the Virginia.gov portal, that Agency, locality or other government entity shall follow the process identified in this requirement.

## ***Implementation***

### **Agency Implementation Plan**

An Agency Implementation Plan documents the results of the agency's analysis of its Web site for compliance with the requirements identified in this document and as needed, how the agency plans to bring the current information on its Web site into compliance with those requirements and how the agency will ensure that future content is also compliant.

**WEB-R-40:** **Agency Implementation Plan** – Each agency shall develop a plan describing how and when it intends to meet the Web site related (all "WEB-R-*nn*" labeled requirements, where "*nn*" is the specific requirement number) requirements identified in this document and update the plan when there is a subsequent material change to the plan.

The agency plan shall contain an analysis of the Web site for compliance with the related requirements identified in this document, identify by requirement number all current non-compliant items, identify agency plans and schedules for correcting all non-compliant pages, and identify the agency's process and procedures for ensuring future Web content is compliant. (Note – Appendix A of the current Web Site Topic Report provides additional guidance in developing agency implementation plans)

**WEB-R-41:** **Implementation Plan Submittal** – Each agency shall provide an electronic copy or a hard copy of its current agency implementation plan (initial and revised) to the Director of VITA's Policy, Practice and Architecture Division. Electronic copies should be submitted to: [EA@vita.virginia.gov](mailto:EA@vita.virginia.gov) Attention Director.

Hard copy plans should be submitted to:

Virginia Information Technologies Agency  
Director, Policy, Practice and Architecture Division  
11751 Meadowville Lane  
Chester, VA 23836

## **Web 2.0**

Web 2.0 is an approach to Web design where, instead of maintaining tight control of content and data access, access is freely given and encouraged. Content is often created by users. Web 2.0 can include technology and systems that enable collaboration such as AJAX, APIs, mashups, data feeds, shared user-generated content, and user generated tagging.

**WEB-RP-33:** *Web 2.0 – For all Web 2.0 items on an Agency Web site, there should be an alternative method for users with disabilities to obtain the information presented.*

### **Rationale:**

*Web 2.0 is a very broad term that encompasses a wide variety of Web site items and functionality, many of which may not work for different disabled users.*

## **RSS (Really Simply Syndication)**

RSS is a Web feed format. An RSS file can be automatically read by a visitor's RSS software if the visitor "subscribes" to the RSS feed. Usually RSS feeds are used to publish timely information (such as news, job openings, updated information, events, etc.).

**WEB-RP-34:** *RSS – Provide RSS feeds to facilitate the ease of users subscribing to changing news items or information from your agency Web site.*

### **Rationale:**

RSS feeds are useful for such items as press releases, alerting subscribers when new items have been added to the site or of updates to the site.

## **Technology Component Standard**

For information regarding browser technology components standards please refer to the table for Productivity/Management Software Technology Component

Standard [PLA-S-07](#) in the Platform Domain Report. To access the report click here: [Platform Domain Report](#) or copy the following URL into your browser: <http://www.vita.virginia.gov/uploadedFiles/Oversight/EA/ETAPPlatformDomainReport.pdf> .

### ***Web Site Compliance Tools on Statewide Contract***

To assist an Agency in developing or remediating its Web site to comply with the Web site requirements in this domain topic, please refer to the Web site and IT accessibility section of the VITA Web site. To access this section click here: [Web site and IT accessibility](#) or copy the following URL into your browser: <http://www.vita.virginia.gov/library/default.aspx?id=663>.

## **Commonwealth Web Site Policy, Standard & Guideline 2008 Work Group Team Members**

**These individuals served on the work group or provided input to revise the Commonwealth's Web Site Policy, Standard and Guideline. Their input was used to develop this Web Site Topic Report.**

Helen Baker.....Virginia Interactive  
Charmaine Bigby.....Virginia Department of Fire Programs  
Daniel Boersma.....Governor's Office, Virginia Enterprise Application Program  
Debbie Dodson.....VITA Enterprise Application & Architecture Solutions  
Lynn DuBard.....Virginia Interactive  
Mike Gallini.....Virginia Department of Health Programs  
Greg Garner.....Governor's Office, Virginia Enterprise Application Program  
Sean Harris.....Virginia Department of Social Services  
Hal Hughey.....VITA Customer Account Management  
Jere Kittle.....Virginia Department of Education  
Darlene Lee..... Mental Health, Mental Retardation and Substance Abuse Service  
Emily Lockhart.....Council on Virginia's Future, Virginia Performs  
Michael Logan .....VITA Enterprise Application & Architecture Solutions  
Dana Metheny..... Virginia Department of Education  
Eric B. Perkins (Team Facilitator).....VITA Policy, Practice and Architecture  
Janet Riddick.....Governor's Office  
Daniel Ross.....Virginia Department of Rehabilitative Services  
Wayne Scarberry.....Virginia Department of Transportation  
Rose Schoof.....Library of Virginia  
Emily Seibert.....VITA Communications  
Charles Sheldon.....Virginia Department of Motor Vehicles  
Chris Snyder.....VITA Enterprise Application & Architecture Solutions  
Chuck Tyger.....VITA Policy, Practice and Architecture  
Mike Treagy.....VITA Enterprise Application & Architecture Solutions  
Aaron Wagner.....Virginia Department of Environmental Quality  
Peggy Ward.....Commonwealth IT Security & Risk Management  
Michael Ware.....Virginia Interactive  
Cindy White.....Virginia Interactive  
Marcella Williamson.....VITA Communications  
Anne Wilmoth.....State Compensation Board

## Glossary

Following are Glossary entries pertaining to the Web Site Topic and required to support this document. A full ETA Glossary, combining the glossaries from all eight ETA domains, is included within the [ETA Standards document](#).

(Note: The source of those terms followed by (†) is the User Agent Accessibility Guidelines 1.0 (UAAG) located on the Web at: <http://www.w3.org/TR/2002/REC-UAAG10-20021217/glossary.html#u>)

<b>Agency:</b>	Any agency, institution, board, bureau, commission, council, or instrumentality of state government in the executive branch listed in the appropriation act. ETA requirements/standards identified in this report are applicable to all agencies including the administrative functions (does not include instructional or research functions) of institutions of higher education, unless exempted by language contained in a specific requirement/standard.
<b>Agency Banner</b>	For the purposes of the Commonwealth of Virginia Web template, an "Agency Banner " is the graphic used between the "Commonwealth Banner" and the main content (on the home page template) or the "Commonwealth Banner" and the lower breadcrumb bar (on the sub-page template). The image is 100 pixels high and should gracefully handle resolutions at least as wide as 1024 pixels.
<b>Author-specified Styles: (†)</b>	Authors styles are <a href="#">style property values</a> that come from <a href="#">content</a> (e.g., style sheets within a document, that are associated with a document, or that are generated by a server).
<b>Bread Crumbs</b>	Bread crumb navigation shows the users where they are and how the information is structured. Because users see the way the hierarchy is structured they can learn it more easily. By making each label a link, the users can quickly browse up the hierarchy. Bread Crumbs take up minimal space on the page and leave most of the space for the real content.
<b>Crawable Web site:</b>	A Web site whose content is accessible by search engines so the content can be indexed. (Alternative see "non- crawlable" Web site)
<b>Downloadable Documents</b>	Downloadable documents (e.g. Adobe PDF, a Microsoft PowerPoint presentation, a Microsoft Word document or equivalent) are defined as stand-alone documents that open an embedded process. These documents will require a plug-in link be provided on the Web policy page and the page from which the document is accessed. (See also the WATG for information on making downloadable documents accessible.)

**Equivalent:** Content is "equivalent" to other content when both fulfill essentially the same function or purpose upon presentation to the user. In the context of this document, the equivalent must fulfill essentially the same function for the person with a disability (in as feasible a manner as possible given the nature of the disability and the state of technology) as the primary content does for the person without any disability. For example, the text "The Full Moon" might convey the same information as an image of a full moon when presented to users. Note that equivalent information focuses on fulfilling the same function. If the image is part of a link and understanding the image is crucial to choosing the link target, an equivalent must also give users an idea of the link target.

**Extranet:** An extranet is a web site or web site area created for use by a select group. The group is usually the company's employees, clients, and/or select members of the public. An extranet allows for secure exchange of information within the select group - generally about a particular topic. It can also contain forms and applications relevant to the group's needs.

For purposes of determining if a website, website area, or application must comply with the Web Site Standard, an "extranet" refers to any online area where access is restricted to a select group of users (by IP address, authentication, VPN, or other technical means). Note that all online material (even extranets and intranets) must comply with the Accessibility Standard.

**Frames:** In creating a Web site, frames is the use of multiple, independently controllable sections on a Web presentation. This effect is achieved by building each section as a separate [HTML](#) file and having one "master" HTML file identify all of the sections. When a user requests a Web page that uses frames, the address requested is actually that of the "master" file that defines the frames. The result of the request is that multiple HTML files are returned, one for each visual section. Links in one frame can request another file that will appear in another (or the same) frame. A typical use of frames is to have one frame containing a selection menu and another frame that contains the space where the selected (linked to) files will appear.

**Heading Elements:**

The six heading elements, *H1* through *H6*, denote section headings. Although the order and occurrence of headings is not constrained by the HTML [DTD](#), documents [should](#) not skip levels (for example, from *H1* to *H3*), as converting such documents to other representations is often problematic.

Example of use:

```
<H1>This is a heading</H1>
```

Here is some text

```
<H2>Second level heading</H2>
```

Here is some more text.

Typical renderings are:

*H 1* Bold, very-large font, centered. One or two blank lines above and below.

*H 2* Bold, large font, flush-left. One or two blank lines above and below.

*H 3* Italic, large font, slightly indented from the left margin. One or two blank lines above and below.

*H 4* Bold, normal font, indented more than *H3*. One blank line above and below.

*H 5* Italic, normal font, indented as *H4*. One blank line above.

*H 6* Bold, indented same as normal text, more than *H5*. One blank line above.

(For further information see the [XHTML Quick Reference Guide: <http://www.mit.edu/~ddcc/xhtmlref/heading.html>](http://www.mit.edu/~ddcc/xhtmlref/heading.html))

**Home Page**

For a Web user, the home page is the first Web page that is displayed after starting a Web browser like Netscape's Navigator or Microsoft's Internet Explorer. The browser is usually preset so that the home page is the first page of the browser manufacturer. However, you can set the home page to open to any Web site. For example, you can specify that "http://www.yahoo.com" be your home page. You can also specify that there be no home page (a blank space will be displayed) in which case you choose the first page from your bookmark list or enter a Web address.

For a Web site developer, a home page is the first page presented when a user selects a site or presence on the World Wide Web. The usual address for a Web site is the home page address, although you can enter the address (Uniform Resource Locator) of any page and have that page sent to you.

**Non-crawlable Web site**

A Web site whose content is not accessible by search engines so the content cannot be indexed. (Alternative see "crawlable" Web site)

**Search Sitemap**

The search sitemap is a specific XML file format used by the state-wide search feature, the agency wide search feature and public Web sites. The search sitemap XML file is utilized by search engines to index content on your website, especially dynamically generated content. The sitemap XML schema standard is located on the WATG site (<http://www.vadsa.org/watg/>).

<b><u>Server</u></b>	In general, a server is a computer <a href="#">program</a> that provides services to other computer programs in the same or other computers. The computer that a server program runs in is also frequently referred to as a server (though it may contain a number of server and <a href="#">client</a> programs). In the <a href="#">client/server</a> programming model, a server is a program that awaits and fulfills requests from <a href="#">client</a> programs in the same or other computers. A given application in a computer may function as a <i>client</i> with requests for services from other programs and also as a <i>server</i> of requests from other programs. Specific to the Web, a <a href="#">Web server</a> is the computer program (housed in a computer) that serves requested <a href="#">HTML</a> pages or files. A Web <i>client</i> is the requesting program associated with the user. The Web <a href="#">browser</a> in your computer is a client that requests HTML files from Web servers.
<b><u>State-wide search</u></b>	The state-wide search functionality utilized by the Commonwealth of Virginia is a custom search engine and has the ability to search all state agency Web sites for the term(s) the user enters into the search box.
<b><u>Validator</u></b>	A service or system that verifies that a page meets this Standard. (See: WATG)
<b><u>WATG</u></b>	To assist developers in using the template and meeting accessibility standards, the Web Accessibility and Training Guide (WATG) was developed. The WATG is an online resource that provides guidance on achieving Section 508 and WCAG Level A or better accessibility and uses current research in usable design and human engineering trends to assist Webmasters in ensuring that their Web site is the best it can be. (See: <a href="http://www.vadsa.org/watg">http://www.vadsa.org/watg</a> ).
<b><u>WCAG</u></b>	The Web Content Accessibility Guidelines 1.0 is part of a series of accessibility guidelines published by the <a href="#">Web Accessibility Initiative</a> . The series also includes User Agent Accessibility Guidelines ( <a href="#">[WAI-USERAGENT]</a> ) and Authoring Tool Accessibility Guidelines ( <a href="#">[WAI-AUTOOLS]</a> ).
<b><u>Web 2.0</u></b>	A marketing term that is loosely used to represent a second generation of Web/Internet technologies generally involving new methods of 2-way communication, content (value) contribution from users and interactivity with the user. Examples of items that may be considered "Web 2.0" include are RSS feeds, social networks, wikis, interactive interface items that utilize AJAX, and blogs.
<b><u>Web Site</u></b>	A related collection of World Wide Web (WWW) files that includes a beginning file called a home page.
<b><u>Web Application</u></b>	A software program that uses HTTP for its core communication protocol and delivers Web-based information to the user in the HTML language. Also called a Web-based application.
<b><u>W3C</u></b>	The World Wide Web Consortium <a href="http://www.w3.org">http://www.w3.org</a> is a forum for information, commerce, communication, and collective understanding. W3C develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential. W3C is a forum for information, commerce, communication, and collective understanding.

## ***Appendices***

### **Appendix A: Implementation Plan**

#### **Implementation Plan Questions**

##### **(a) Plan Strategy**

Describe how the agency addresses each of the following:

(i) the agency's overall effort:

- who will lead the compliance effort? (name, title, phone & e-mail);
- who will lead the Web conversion or clean-up effort? (name, title, phone & e-mail);
- to whom does that person report? (name, title & email);
- who will educate the agency on the need to comply with the new *Web Site Standard*?

(ii) The agency's plans for producing new, compliant pages.

- Who has development access rights to the Web servers and Web sites or the number with such access?
- How will you avoid adding non-compliant pages to the Web site?

(iii) The agency's plans for checking existing pages for compliance problems.

- How will the agency check for non-compliant pages?
- Who will do the compliancy checking?
- How will the agency prioritize its Web work? Possible options to consider:
  - the entire site at once,
  - the most popular (highest hit) pages,
  - pages that are of most interest to your disabled audience,
  - by folder or feature,
  - by a specific number of levels deep from your main home page,
  - by file type (HTML, PDF, other), or

- o a combination of the above.
- (iv) The agency’s plans for converting non-compliant pages.
  - How will the agency prioritize your work?
  - How will staff be allocated to this phase? (Will they be assigned specific areas of the Web site? Will they be given production quotas? )

**(b) Plan Milestones**

Provide information in a table with a column for *Milestones* and a column for *Target Dates*, as illustrated in the example below:

Milestone	Target Date

**(c) Existing Web Page Count**

- (i) Provide the number of Web pages/files on the agency’s Web site(s) and Web based-applications.
- (ii) Explain how and when the agency will obtain the number.

**(d) Staff Resources**

Show the amount of staff resources to be assigned to the agency’s site modifications in any of the following manners.

- (i) Number of staff times the average number of hours each will work per month.
- (ii) Number of FTE's to be assigned to the modification effort.

**(e) Future Staff**

Indicate any substantial changes to staff resources anticipated over time, and how your plan will manage the changes.

**Signature**

The Plan must be signed and dated by the agency head or equivalent. Please print the individual's title. Plans may be submitted by e-mail or interagency mail.

**Submit the Plan to:**

By e-mail: *Attention Director at [EA@vita.virginia.gov](mailto:EA@vita.virginia.gov)*

- Or -

By state mail services:

*Virginia Information Technologies Agency  
Director, Policy, Practice and Architecture Division  
11751 Meadowville Lane  
Chester, VA 23836*

## Appendix B: Internet Privacy Policy Statement

### Example Policy Statement

***[Name of Public Body]***  
**Internet Privacy Policy Statement**  
***(last updated on [date])***

The following information explains the Internet Privacy Policy which the [name of agency] has adopted for its Web site (Web pages at addresses beginning with "http://www.\_\_\_\_\_"). The following is intended to explain our current Internet privacy practices, but shall not be construed as a contractual promise. We reserve the right to amend our Internet Privacy Policy Statement at any time without notice.

#### **Virginia law**

We protect our records in accordance with our obligations as defined by applicable Virginia statutes, including, but not limited to, the "[Government Data Collection and Dissemination Practices Act](#)" Code of Virginia, [§ 2.2-3800](#), "[Administration of systems including personal information; Internet privacy policy; exceptions](#)" Code of Virginia, [§ 2.2-3803](#), the "[Virginia Freedom of Information Act](#)" [§ 2.2-3700](#), *et seq.*, and by any applicable U.S. federal laws.

#### **Links to other Web sites**

Our Web site may contain links to other public or private entities' Web sites, whose privacy practices we do not control.

#### **Information we collect**

When you access our Web site, the routing or client information, and the essential and nonessential technical information listed below, is automatically collected. No other information is collected through our Web site except when you deliberately decide to send it to us (for example, by clicking on a link to send us an email). The information you might choose to send us is listed below as "optional information."

Routing, or client, information: the Internet domain and Internet address of the computer you are using.

Essential technical information: identification of the page or service you are requesting, type of browser and operating system you are using; and the date and time of access.

Nonessential technical information: the Internet address of the Web site from which you linked directly to our Web site [, and the "cookie information" described below].

Optional information: when you send us an e-mail, your name, e-mail address, and the content of your e-mail; when you fill out online forms, all the data you choose to fill in or confirm.

Cookies: Our Web site does not place any "cookies" on your computer.

- OR -

[Our Web site places "cookies" on your computer, unless your browser is set to reject cookies. The cookies enable our Web site to recognize you when you return to the Web site at a later date or time and enable us to personalize the Web site with preferences or information you have provided during prior sessions. The cookie information placed on your computer by this Web site includes the following:

\_\_\_\_\_.]

### **How the collected information is used**

Routing information is used to route the requested Web page to your computer for viewing. We send the requested Web page and the routing information to our Internet service provider or other entities involved in transmitting the requested page to you. We do not control the privacy practices of those entities. Essential and nonessential technical information helps us respond to your request in an appropriate format [or in a personalized manner] and helps us plan Web site improvements.

Optional information enables us to provide services or information tailored more specifically to your needs or to forward your message or inquiry to another entity that is better able to do so, and also allow us to plan Web site improvements.

We may keep your information indefinitely, but we ordinarily delete the transaction routing information from our computer within \_ days after the web page is transmitted and do not try to obtain any information to link it to the individuals who browse our Web site. However, on rare occasions when a "hacker" attempts to breach computer security, logs of routing information are retained to permit a security investigation and in such cases may be forwarded together with any other relevant information in our possession to law enforcement agencies. We use this transaction routing information primarily in a statistical summary type format to assess site content and server performance. We may share this summary information with our business partners when needed.

Optional information is retained in accordance with the records retention schedules at the Library of Virginia.

Under the “Virginia Freedom of Information Act”, any records in our possession at the time of a “Freedom of Information Request” might be subject to being inspected by, or disclosed to, members of the public. However, all identifiable confidential/personal information will be removed prior to releasing the routing information.

### **Choice to provide information**

There is no legal requirement for you to provide any information at our Web site. However, our Web site will not work without routing information and the essential technical information. Failure of your browser to provide nonessential technical information will not prevent your use of our Web site, but may prevent certain features from working. Failure to provide optional information will mean that the particular feature or service associated with that part of the web page will not be available to you.

### **Customer comments or review**

If you have questions about this privacy statement or the practices of this Web site, or if you choose to review or correct any information you previously submitted, please contact us at \_\_\_\_ (e-mail address or phone number, etc.)

## **Appendix C: Resources and Links**

### **Resources: Standards Groups**

Additional resources and information (validation information, accessibility requirements information, compliancy information, code examples, etc.) may be found on the [WATG site \(www.vadsa.org/watg/\)](http://www.vadsa.org/watg/).