Tableau Accessibility Conformance Report

Revised Section 508 Edition

VPAT® Version 2.3 – December 2018

Name of Product/Version: Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views

Product Description: The Tableau Platform enables individuals to drive change in their organizations by leveraging the power of human visual perception to help people understand data. Once a Tableau author reaches understanding and insights via the cycle of visual analysis and is ready to communicate to a broad audience, they can publish the resulting dashboards or views to either Tableau Server, Tableau Online, or Tableau Public. This report focuses on dashboards and views published to Tableau Server, Tableau Online and Tableau Public that are then embedded in an accessible web page (e.g. "embedded Dashboards and Views").

Date of Claim: February 15th, 2019

Contact information: Independent Accessibility Consultant
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Notes: Equal Entry LLC, a third party accessibility consultant, worked with Tableau to define a set of User Scenarios (Appendix A) to assess Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views. Tableau has created a Community Forum **FAQ: Accessibility** to gather all accessibility authoring best practices. This assessment was done against embedded views published to Tableau Online and Tableau Public that had been specifically created using these best practices; the results also reflect embedded views hosted on Tableau Server as well.

Tableau reviewed the detailed issue list, prioritized and fix several items. Exceptions in this document are pending accessibility issues, to be addressed in future product releases. This report, generated on date February 15th, 2019, supersedes any previous report covering these same scenarios.

Evaluation Methods Used: Manual testing using various browser agents, assistive technologies and inspection tools. Scenarios are in Appendix A. Additional details are in Appendix B.

Applicable Standards/Guidelines:

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

- Web Content Accessibility Guidelines 2.0 or WCAG 2.0 (ISO/IEC 40500), at **http://www.w3.org/TR/2008/REC-WCAG20-20081211/** at level A and AA
- **Revised Section 508 standards** as published by the U.S. Access Board in the Federal Register on January 18, 2017
- **Corrections to the ICT Final Rule** as published by the US Access Board in the Federal Register on January 22, 2018

Terms

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

- **Supports**: The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Partially Supports**: Some functionality of the product does not meet the criterion.
- **Does Not Support**: The majority of product functionality does not meet the criterion.
- **Not Applicable**: The criterion is not relevant to the product.
- **Not Evaluated**: The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Success Criteria tables also document conformance with Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the **WCAG 2.0 Conformance Requirements**.

Success Criteria

Success Criterion	Conformance Level	Remarks
1.1.1 Non-text Content Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 7: **Reset Password** and **New Password** (Tableau Online only process) Social Media links lack descriptions • Scenario 7: **Sign in** Tableau Logo's text alternative included more information than visually shown
1.2.1 Audio-only and Video-only (Prerecorded) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain any Audio-Only or Video-Only pre-recorded content

Success Criterion	Conformance Level	Remarks
1.2.2 Captions (Prerecorded) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain Prerecorded content
1.2.3 Audio Description or Media Alternative (Prerecorded) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain Prerecorded content

Success Criterion	Conformance Level	Remarks
1.2.4 Captions (Live) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain Live Streamed media
1.2.5 Audio Description (Prerecorded) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain Prerecorded content

Success Criterion	Conformance Level	Remarks
1.3.1 Info and Relationships Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 1: **View Data** window has a large table without a caption • Scenario 1: **View Data** window should have a main landmark defined • Scenario 4: Improved usability for Screen reader users, by using unordered list control • Scenario 6: Table without header • Scenario 7: **Sign In** should have a main landmark defined • Scenario 7: **Sign In** should have at least one Header
1.3.2 Meaningful Sequence Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 1: Screen reader order does not match visual flow

Success Criterion	Conformance Level	Remarks
1.3.3 Sensory Characteristics Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Information is conveyed using multiple indicators
1.4.1 Use of Color Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Information communicated visually with color is made available through alternative means as well
1.4.2 Audio Control Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain Auto-Play content

Success Criterion	Conformance Level	Remarks
1.4.3 Contrast (Minimum) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 6: Tableau's use of orange text on a white background does not meet color contrast requirements • Scenario 7: Placeholder text within the **Sign in** editboxes does not meet color contrast requirements
1.4.4 Resize text Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Text can be resized up to 200 percent without loss of content or functionality
1.4.5 Images of Text Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	No images of text are used to convey information

Success Criterion	Conformance Level	Remarks
2.1.1 Keyboard Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 3: **Keep Only Exclude** popup is only available to mouse users • Scenario 4: Impacted by an External/3rd Party Issue - Edge does not support keyboard access with screen reader running • Scenario 4: Impacted by an External/3rd Party Issue - VoiceOver directions for combobox keyboard functionality do not work for the Tableau Dropdown list filter - users must use the Tableau specific keyboard functionality • Scenario 6: Tableau relies on page authors to include a link to Tableau keyboard shortcut documentation • Scenario 7: **Reset Password** and **New Password** (Tableau Online only process) Language control is not keyboard accessible
2.1.2 No Keyboard Trap Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	No Keyboard traps were found

Success Criterion	Conformance Level	Remarks
2.2.1 Timing Adjustable Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain timers
2.2.2 Pause, Stop, Hide Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain auto-updating, scrolling or flashing content
2.3.1 Three Flashes or Below Threshold Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain Flashing text or other visuals

Success Criterion	Conformance Level	Remarks
2.4.1 Bypass Blocks Also applies to: Revised Section 508 • 501 (Web)(Software) – Does not apply to non-web software • 504.2 (Authoring Tool) • 602.3 (Support Docs) – Does not apply to non-web docs	Not Applicable	Does not contain repeated blocks of content
2.4.2 Page Titled Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Titling is used effectively throughout to aid in understanding

Success Criterion	Conformance Level	Remarks
2.4.3 Focus Order Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 5: After exiting full screen mode, keyboard focus does not return to the **Full Screen** button • Scenario 5: Cancelling a Download sub-dialog does not returns focus to the **Download** dailog • Scenario 5: Using `Esc` to close a dialog had inconsistent focus management • Scenario 6: **Back to Top** feature does not place screen reader focus at the top of the page
2.4.4 Link Purpose (In Context) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 7: **Reset Password** and **New Password** (Tableau Online only process) Tableau logo's text alternative doesn't explain where the link will take the user • Scenario 7: **Reset Password** and **New Password** (Tableau Online only process) have three unidentified links

Success Criterion	Conformance Level	Remarks
2.4.5 Multiple Ways Also applies to: Revised Section 508 • 501 (Web)(Software) – Does not apply to non-web software • 504.2 (Authoring Tool) • 602.3 (Support Docs) – Does not apply to non-web docs	Not Applicable	Single page application
2.4.6 Headings and Labels Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Heading and labels are descriptive throughout to aid in understanding

Success Criterion	Conformance Level	Remarks
2.4.7 Focus Visible Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 1: No visual focus on the **Help** image link
3.1.1 Language of Page Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 1: **View Data** window should have a language defined
3.1.2 Language of Parts Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain language changes

Success Criterion	Conformance Level	Remarks
3.2.1 On Focus Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	As component receives focus, they do not initiate a change of context
3.2.2 On Input Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Controls have clear purpose and behavior

Success Criterion	Conformance Level	Remarks
3.2.3 Consistent Navigation Also applies to: Revised Section 508 • 501 (Web)(Software) – Does not apply to non-web software • 504.2 (Authoring Tool) • 602.3 (Support Docs) – Does not apply to non-web docs	Supports	Navigational mechanisms are visually and functionally consistent
3.2.4 Consistent Identification Also applies to: Revised Section 508 • 501 (Web)(Software) – Does not apply to non-web software • 504.2 (Authoring Tool) • 602.3 (Support Docs) – Does not apply to non-web docs	Partially Supports	• Scenario 5: Inconsistent use of Buttons and links

Success Criterion	Conformance Level	Remarks
3.3.1 Error Identification Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Supports	Input errors are clearly identified and described to the user in text
3.3.2 Labels or Instructions Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 2: **Select Gender** control is not announced only it's list elements • Scenario 2: **Show Quick Filter Context Menu**, **All Values in Database**, and **Select All** buttons do not explain which Filter they are associated to • Scenario 2: Labels for controls shouldn't change based on value • Scenario 7: **Log-in** editboxes lack visual labels • Scenario 7: **Sign-in** editboxes lack visual indication that they are required fields

Success Criterion	Conformance Level	Remarks
3.3.3 Error Suggestion Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 7: **Sign in** Error message **Both email and password must be specified** can be misleading
3.3.4 Error Prevention (Legal, Financial, Data) Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Not Applicable	Does not contain legal commitments, financial transactions or user controllable data changes within a data storage system
4.1.1 Parsing Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 1: Combobox must contain all required child elements • Scenario 1: ID attributes are not unique • Scenario 5: **Download** dialog doesn't support Screen Reader browse mode

Success Criterion	Conformance Level	Remarks
4.1.2 Name, Role, Value Also applies to: Revised Section 508 • 501 (Web)(Software) • 504.2 (Authoring Tool) • 602.3 (Support Docs)	Partially Supports	• Scenario 2: Embed refreshes without screen reader notification • Scenario 2: Empty visual should be described to screen reader users • Scenario 2: Items within **Show Quick Filter Context Menu** and **All Values in Database** controls are not seen as part of their parent controls • Scenario 2: Strikethrough state should be more clearly communicated to screen reader users • Scenario 3: **Highlighting Selected Items** is not announced via the screen reader • Scenario 5: **Download PDF** dialog, **Include** combobox does not programmatically explain selection if selection is made without opening the combobox • Scenario 7: **Reset Password** and **New Password** (Tableau Online only process) **Email** editbox does not explain programmatically that it's required • Scenario 7: **Reset Password** and **New Password** (Tableau Online only process) Confirmation text isn't read by screen readers • Scenario 7: **Reset password** and **New Password** menu (Tableau Online only process) doesn't follow aria roles for menu controls

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Chapter 3: Functional Performance Criteria (FPC)

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Partially Supports	**Scenario 1:** • **View Data** window has a large table without a caption • **View Data** window should have a language defined • **View Data** window should have a main landmark defined • Combobox must contain all required child elements • ID attributes are not unique • Screen reader order does not match visual flow **Scenario 2:** • **Select Gender** control is not announced only it's list elements • **Show Quick Filter Context Menu**, **All Values in Database**, and **Select All** buttons do not explain which Filter they are associated to • Embed refreshes without screen reader notification • Empty visual should be described to screen reader users • Items within **Show Quick Filter Context Menu** and **All Values in Database** controls are not seen as part of their parent controls • Labels for controls shouldn't change based on value • Strikethrough state should be more clearly communicated to screen reader users **Scenario 3:** • **Highlighting Selected Items** is not announced via the screen reader • **Keep Only Exclude** popup is only available to mouse users **Scenario 4:**

- Impacted by an External/3rd Party Issue - Edge does not support keyboard access with screen reader running
- Impacted by an External/3rd Party Issue - VoiceOver directions for combobox keyboard functionality do not work for the Tableau Dropdown list filter - users must use the Tableau specific keyboard functionality
- Improved usability for Screen reader users, by using unordered list control

Scenario 5:
- **Download PDF** dialog, **Include** combobox does not programmatically explain selection if selection is made without opening the combobox
- **Download** dialog doesn't support Screen Reader browse mode
- After exiting full screen mode, keyboard focus does not return to the **Full Screen** button
- Cancelling a Download sub-dialog does not returns focus to the **Download** dailog
- Inconsistent use of Buttons and links
- Using `Esc` to close a dialog had inconsistent focus management

Scenario 6:
- **Back to Top** feature does not place screen reader focus at the top of the page
- Table without header
- Tableau relies on page authors to include a link to Tableau keyboard shortcut documentation

Scenario 7:
- **Log-in** editboxes lack visual labels
- **Reset Password** and **New Password** (Tableau Online only process) Language control is not keyboard accessible
- **Reset Password** and **New Password** (Tableau Online only process) Tableau logo's text alternative doesn't explain where the link will take the user

		• **Reset Password** and **New Password** (Tableau Online only process) **Email** editbox does not explain programmatically that it's required • **Reset Password** and **New Password** (Tableau Online only process) Confirmation text isn't read by screen readers • **Reset Password** and **New Password** (Tableau Online only process) Social Media links lack descriptions • **Reset Password** and **New Password** (Tableau Online only process) have three unidentified links • **Reset password** and **New Password** menu (Tableau Online only process) doesn't follow aria roles for menu controls • **Sign In** should have a main landmark defined • **Sign In** should have at least one Header • **Sign in** Error message **Both email and password must be specified** can be misleading • **Sign in** Tableau Logo's text alternative included more information than visually shown • **Sign-in** editboxes lack visual indication that they are required fields

302.2 With Limited Vision	Partially Supports	Scenario 1:
		• **View Data** window has a large table without a caption
		   • **View Data** window should have a main landmark defined
		   • No visual focus on the **Help** image link
		   • Screen reader order does not match visual flow
		Scenario 2:
		   • **Select Gender** control is not announced only it's list elements
		   • **Show Quick Filter Context Menu**, **All Values in Database**, and **Select All** buttons

		do not explain which Filter they are associated to • Labels for controls shouldn't change based on value • Scenario 4: Improved usability for Screen reader users, by using unordered list control Scenario 6: • Table without header • Tableau's use of orange text on a white background does not meet color contrast requirements Scenario 7: • **Log-in** editboxes lack visual labels • **Reset Password** and **New Password** (Tableau Online only process) Tableau logo's text alternative doesn't explain where the link will take the user • **Reset Password** and **New Password** (Tableau Online only process) have three unidentified links • **Sign In** should have a main landmark defined • **Sign In** should have at least one Header • **Sign-in** editboxes lack visual indication that they are required fields • Placeholder text within the **Sign in** editboxes does not meet color contrast requirements
302.3 Without Perception of Color	Supports	While color is used to convey information it is not used in isolation
302.4 Without Hearing	Supports	No issues were identified that would prevent a user without hearing from using Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views

302.5 With Limited Hearing	Supports	No issues were identified that would prevent a user with limited hearing from using Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views
302.6 Without Speech	Supports	No issues were identified that would prevent a user without speech from using Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views
302.7 With Limited Manipulation	Not Applicable	Does not have a hardware component
302.8 With Limited Reach and Strength	Not Applicable	Does not have a hardware component
302.9 With Limited Language, Cognitive, and Learning Abilities	Not Applicable	Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views is by its nature complex and does require a level of cognitive ability to understand

Chapter 4: Hardware

Notes: Removal of this section based on Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views being a software-only solution.

Chapter 5: Software

Notes: Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views is a web application, focused on level AA conformance to WCAG, that does not have access to platform accessibility services - therefore exempt from 502 and 503. Furthermore, the scope of this Conformance Documentation is limited to the content created by following documented Accessibility best practices, a future VPAT will be done for Tableau as an authoring tool - therefore exempt from 504.

Criteria	Conformance Level	Remarks and Explanations
501.1 Scope – Incorporation of WCAG 2.0 AA	See WCAG 2.0 section	See information in WCAG section
502 Interoperability with Assistive Technology	*Heading cell – no response required*	*Heading cell – no response required*
502.2.1 User Control of Accessibility Features	Not Applicable	Not a Software Platform
502.2.2 No Disruption of Accessibility Features	Not Applicable	Does not use Platform Accessibility Services
502.3 Accessibility Services	*Heading cell – no response required*	*Heading cell – no response required*
502.3.1 Object Information	Not Applicable	Provided through HTML
502.3.2 Modification of Object Information	Not Applicable	Provided through the browser
502.3.3 Row, Column, and Headers	Not Applicable	Provided through HTML

Criteria	Conformance Level	Remarks and Explanations
502.3.4 Values	Not Applicable	Provided through HTML
502.3.5 Modification of Values	Not Applicable	Provided through the browser
502.3.6 Label Relationships	Not Applicable	Provided through HTML
502.3.7 Hierarchical Relationships	Not Applicable	Provided through HTML
502.3.8 Text	Not Applicable	Provided through HTML
502.3.9 Modification of Text	Not Applicable	Provided through the browser
502.3.10 List of Actions	Not Applicable	Provided through HTML
502.3.11 Actions on Objects	Not Applicable	Provided through the browser
502.3.12 Focus Cursor	Not Applicable	Provided through the browser
502.3.13 Modification of Focus Cursor	Not Applicable	Provided through the browser
502.3.14 Event Notification	Not Applicable	Provided through the browser
502.4 Platform Accessibility Features	Not Applicable	Not a Software Platform

Criteria	Conformance Level	Remarks and Explanations
503 Applications	*Heading cell – no response required*	*Heading cell – no response required*
503.2 User Preferences	Not Applicable	Web Application, by design to be isolated from the underlying platform software
503.3 Alternative User Interfaces	Not Applicable	Does not function as an assistive technology
503.4 User Controls for Captions and Audio Description	*Heading cell – no response required*	*Heading cell – no response required*
503.4.1 Caption Controls	Not Applicable	See WCAG 2.0 section
503.4.2 Audio Description Controls	Not Applicable	See WCAG 2.0 section
504 Authoring Tools	*Heading cell – no response required*	*Heading cell – no response required*
504.2 Content Creation or Editing	Not Applicable	Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views does not include authoring functionality
504.2.1 Preservation of Information Provided for Accessibility in Format Conversion	Not Applicable	Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views does not include authoring functionality

Criteria	Conformance Level	Remarks and Explanations
504.2.2 PDF Export	Not Applicable	Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views does not include authoring functionality
504.3 Prompts	Not Applicable	Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views does not include authoring functionality
504.4 Templates	Not Applicable	Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views does not include authoring functionality

Chapter 6: Functional Performance Criteria (FPC)

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	*Heading cell – no response required*	*Heading cell – no response required*
602 Support Documentation	*Heading cell – no response required*	*Heading cell – no response required*
602.2 Accessibility and Compatibility Features	Supports	included verification and accessibility of required documentation

Criteria	Conformance Level	Remarks and Explanations
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Not Applicable	All Support Documentation is in electronic form
603 Support Services	*Heading cell – no response required*	*Heading cell – no response required*
603.2 Information on Accessibility and Compatibility Features	Supports	included verification and accessibility of required documentation
603.3 Accommodation of Communication Needs	Supports	Support Services are prepared to assist users with disabilities

Appendix A:

Equal Entry LLC worked with Tableau to define the following User Scenarios to assess Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views.

Additionally, 1.4.5 Images of Text and 2.2.2 Pause, Stop, Hide are included in this list, as it would be going against Tableau's Accessibility Authoring documentation to add functionality to a dashboard or view that would introduce these criteria to a user.

The following Criteria were **Not Applicable** based on a review with Tableau that confirmed that current scenarios do not contain this functionality.

- 1.2.1 Audio-only and Video-only (Prerecorded)
- 1.2.2 Captions (Prerecorded)
- 1.2.3 Audio Description or Media Alternative (Prerecorded)
- 1.2.4 Captions (Live)
- 1.2.5 Audio Description (Prerecorded)
- 1.4.2 Audio Control
- 1.4.5 Images of Text
- 2.2.1 Timing Adjustable
- 2.2.2 Pause, Stop, Hide
- 2.3.1 Three Flashes or Below Threshold
- 2.4.1 Bypass Blocks
- 2.4.5 Multiple Ways
- 3.1.2 Language of Parts
- 3.3.4 Error Prevention (Legal, Financial, Data)
- 302.7 With Limited Manipulation
- 302.8 With Limited Reach and Strength
- 302.9 With Limited Language, Cognitive, and Learning Abilities
- Chapter 4 - Hardware
- 502 Interoperability with Assistive Technology
- 503 Applications
- 504 Authoring Tools
- 602.4 Alternate Formats for Non-Electronic Support Documentation

Scenarios

S1: View Data Window

First review performed in Feb 2017 using version 10.2 as Scenario 2. Oct 2018 added scenario steps for the newly released 2018.3 image and button hyperlink features, while continuing to focus is on the accessibility of viewing underlying data.

1. Open page **Tableau Accessibility Demo**
2. Navigate to and activate **Help** link, return to the **Tableau Accessibility Demo**
3. Navigate to and activate the **Navigate to Percentage of Students by SAT Decile view** button, changing the tab being viewed
4. Navigate to and activate the **Number of Students by SAT Score** tab
5. Open the View Data window by pressing the **Enter** key with keyboard focus on the view
6. Review the **Summary** tab, including using Screen Reader to read table information
7. Navigate to and activate the **Download all rows as a text file** link
8. Navigate to and select the **Full data** tab
9. Navigate to and activate the **Show all columns** checkbox
10. Review the **Full data** tab, including using Screen Reader to read table information

S2: Filter (Single & Multi Value) data

First review performed in Feb 2017 using version 10.2 as Scenario 3. Focus is on the Radio Button and Group Checkbox controls. Note that the **Show Quick Filter Context Menu** and the **Only Relevant Values** menus are optional and controlled by the content author.

1. Open page **Tableau Accessibility Demo**
2. Navigate to and select **2018** radio button within the **Select Academic Year** radio button group
3. Navigate to and activate the **Show Quick Filter Context Menu** button (With focus still on the **2018** radio button, SHIFT + TAB to bring focus to the **Show Quick Filter Context Menu** button, then press ENTER to activate)
4. Navigate to and select **Multiple Values (list)**
5. Navigate to and select **2016** Checkbox within the **Select Academic Year** checkbox group
6. Navigate to and select the **Exclude Values** option from within the **Show Quick Filter Context Menu**
7. Navigate to and select the **All Values in Database** option from within the **Only Relevant Values** menu
8. Confirm that the view updated both visually and within the View Data window (see Scenario 2)

S3: Categorical Legend - Highlighting data

First review performed in Feb 2017 using version 10.2 as Scenario 4. Focus is on the functionality of the categorical legends.

1. Open page **Tableau Accessibility Demo**
2. Navigate to **Shape Legend for Percentage of Students by SAT Decile**
3. Navigate within this legend to see available options
4. Navigate to **Color Legend for Percentage of Students by SAT Decile**
5. Select **Engineering**, **Public Affairs** and **Education**
6. Toggle the highlighting of your selections using ENTER key
7. Confirm that the view updates visually to highlight the selected data, but that all data is still available within the View Data window (see Scenario 2)

S4: Filter - Multivalue Dropdown

First review performed in April 2017 using version 10.2 as Scenario 7. Focus is on the Multi-Value Dropdown control, with and without search. Note that the **Show Quick Filter Context Menu** and **Show All Values** buttons are optional and controlled by the content author.

1. Open page **Tableau Accessibility Demo**
2. Navigate to **Select Academic Division** combobox
3. Uncheck the **(All)** value
4. Within the editbox of the **Select Academic Division** combobox, type "en"
5. Navigate to and check **Engineering**, then navigate to and activate the **Apply** button
6. Within the editbox of the **Select Academic Division** combobox, remove the "en" you had typed
7. Enter "q" and confirm that **No matches** were found, then remove the "q" clearing all search results
8. Navigate to and check **Business**, (so that both Engineering and Business are selected) then navigate to and activate the **Apply** button
9. Navigate to and check **(All)**, then navigate to and activate the **Cancel** button
10. Navigate to and activate the **Show Quick Filter Context Menu** button (With focus still on the **Select Academic Division** combobox, SHIFT + TAB to bring focus to the **Show Quick Filter Context Menu** button, then press ENTER to activate)
11. Navigate to and select the **Exclude Values** option from within the **Show Quick Filter Context Menu** menu
12. Navigate to and activate the **Show All Values** button

S5: Tableau toolbar

First review performed in May 2018 using version 2018.1. Tableau Public embedded views always have the Tableau toolbar. Authors of Tableau Online and Tableau Server embedded views have the option of including the Tableau toolbar. However, the toolbars do differ by platform slightly. For the most part Tableau Server and Tableau Online expose a toolbar that has a superset of the Tableau Public features. Note that the Tableau Accessibility authoring documentation includes instructions for removing non-accessible functions of the toolbar on Tableau Server and Tableau Online: **Custom Views**, **Subscriptions**, and **Alerts**.

1. Open page **Tableau Accessibility Demo**
2. Navigate to and activate the **Tableau Logo** from within the Tableau Public Toolbar (button is available on the Tableau Public toolbar only)
3. Review pop-up and **close**
4. Activate the **Share** button from within the Tableau Toolbar
5. Review pop-up, noting that you can copy either the **Embed Code** or **Link**
6. Navigate to the **Email**, **Tweet**, and **Facebook** buttons, within the Share dialog
7. Activate the **Download** button from within the Tableau Toolbar
8. Review the download dialog
9. Activate **Crosstab** from the Download dialog
10. Review the notification and then **Cancel**
11. Activate **PDF** from the Download dialog
12. Include **Specific sheets from this workbook** and **Select All**
13. Adjust the **Scaling** to **At most 1 page high**
14. **Create PDF**
15. Activate the **Full Screen** button from within the Tableau Toolbar
16. Activate the **Exit Full Screen** button from within the Tableau Toolbar
17. Log into the Tableau Server embed and use that dashboard for the rest of this scenario
18. Navigate within Tableau Toolbar (**Undo**, **Redo**, **Revert**, **Refresh**, **Pause**, etc)

S6: Help Documentation

First review performed in April 2017 using version 10.2 as Scenario 9. Focus is on providing Accessibility Documentation for users. Because users might not realize what technology is being used it is a best practice to include a link to Tableau's Accessibility documentation within the page that is hosting the embedded view.

1. Open page **Keyboard access for embedded views**
2. Review content on page

S7: Sign-In to an Embedded View

First review performed in Feb 2017 as Scenario 1, using version 10.2 and logging into a tableau server directly. This scenario has been updated to reflect an Embedded solution.
This Scenario does not apply to Tableau Public, as by design Tableau Public views are public and do not require any log-in. This Scenario has been written to Tableau Online which includes the option to reset the user's password. This option is not available on Tableau Server. Therefore steps 6-12 do not apply to Tableau Server.

1. Open page *Tableau Codepen Accessibility Demo* (Hidden URL)
2. Review page text content
3. Navigate to and activate **Sign in to Tableau Online**
4. When prompted, enter "Unicorn" as an invalid Username

5. Navigate to and activate **Sign In ->** button, incorrect username and no password
6. Navigate to and activate **Forgot password** link
7. Navigate to **Email Address** editbox, and enter
8. Navigate to and activate **SEND PASSWORD RESET EMAIL**
9. Close Tableau Reset Password window - use mailbox to navigate to Tableau Password Reset page
10. Navigate to **New Password** editbox, and enter
11. Navigate to **Confirm New Password** editbox, and enter
12. Navigate to and activate **SET NEW PASSWORD** button - close window and return to **Tableau Accessibility Demo**, navigate to and activate **Sign in to Tableau Online** for a second time
13. Navigate to **User name** editbox and enter
14. Navigate to **Password** editbox, and enter "Unicorn"
15. Navigate to and activate **Sign In ->** button, correct username, but incorrect password
16. Navigate to **Password** editbox, and enter
17. Navigate to and activate **Sign In ->** button

Appendix B:

Additional information about the evaluation methods used.

Tableau Server, Tableau Online and Tableau Public Version 2019.1 Embedded Dashboards and Views Technologies

The technologies that this content "relies upon" are:

- HTML5
- CSS
- JavaScript

User Agents and Assistive Technologies

The technology platforms used in the verification:

- macOS 10.10/Safari
- macOS 10.10/Chrome
- Windows 10/Chrome
- Windows 10/Edge
- Windows 10/IE
- Windows 10/Firefox

The assistive technologies used in the verification:

- Keyboard
- JAWS
- VoiceOver
- NVDA
- Narrator
- aXe
- Large Text
- Magnifier
- Colour Contrast Analyser
- Web Developer Toolbar
- Code Inspection / Dev Tools