ANet CUI WCAG Audit

Issue fixing phase 1 ~ 3

11/3/22

Scope of the tested product

The mandate of this audit covers the `native desktop browser` experience limited to audience view (`including responsive`), of the test pages identified within the Tested Product section below, `exclusive of PDF file content`, as observed in May/June 2022.

Natural languages in scope:

- `English`
- `French` (unless otherwise stated in the specific issue, every issue applies to both the English and each corresponding French page)

Conformance target

> standards/legislation to meet or exceed, and at
> what level.

Minimum standard (and level) targeted by this audit: W3C WCAG 2.1 Level AA, **thus meeting or exceeding the WCAG technical standards designated by:**

- both W3C WCAG 2.0 AA and W3C WCAG 2.1 AA
- U.S. Revised Section 508, and thus, by precedent, complies with known legal interpretations of the Americans With Disabilities Act (ADA) as it applies to online products
- EN 301 549 (2018) and (2019)
- Treasury Board of Canada's Guideline on Making Information Technology Useable by All
- UK's Public Sector Bodies (Websites and Mobile Applications) Accessibility Regulations 2018 (PSBAR), and possible post-Brexit engagement with aspects of the European Accessibility Act
- Australia's DDA (Disability Discrimination Act, 1992)
- consideration of anticipated regulations related to Government of Canada's Accessible Canada Act
- Ontario's AODA
- Existing and anticipated regulations in other Canadian provinces, such as the Accessibility for Manitobans Act (AMA), Nova Scotia

Accessibility Act (2017), British Columbia Accessibility Act (Bill M 219, 2018)

- Israel's Equal Rights for Persons with Disabilities law / Standard 5568
- Korea's KWCAG (all versions)
- Norway's UU Section 14
- Japan's JIS X 8341-3, JIS X 3241-3
- New Zealand's NZG WS 2.0

Accessibility support baseline

ACTIVE Network has `declared support` for only these `browser/platform` combinations:

- Apple `Safari` (current version) on `macOS`, with and `without VoiceOver`
- Google `Chrome` (current version) on `Windows` and `macOS`
- Microsoft `Edge` on `Windows 10` (latest release)
- Mozilla `Firefox` (current version) on `Windows`

Issue status legend

Development team: As you `resolve each issue`, please `type a status code` immediately before the word "Recommendation" within this very `Google Doc` (if you don't have full editing rights, please notify us

so we can arrange that for you). Then, if you `desire a re-audit` (and thus potential certification), `notify berman@davidberman.com` once you've `done all you are going to do`, and it has been `deployed to where we can see it` (including the URL of where the new product to test is located). When there is nothing but questions, we can move forward with any `next steps` (`whether it be further coaching, clarification, or re-audit`).

- `[F?]` dev team not finished fixing … dev team wants `further guidance from Team Berman` and has indicated what part of the recommendation they find unactionable or unclear.

- `[F0]` dev team has `decided never to fix` this (or to have Team Berman no longer audit it within this engagement).

- `[F1]` dev team thinks they have `fixed`, using a technique recommended by Team Berman.

- `[F2][how fixed]` dev team `thinks` they have `fixed`, using a different technique and that technique is [_____].

  (e.g., "[F2] We used an aria-describedby attribute instead of aria-label because it worked better for bilingual rollout")

- `[F3][how fixed]` dev team `not sure` if they have `fixed` or not, and so needs Team Berman to make a determination.

(e.g., "[F3] We tried doing what you said, but we weren't certain what a flaboda is, and we didn't have on iOS running Chrome to test on")

- ~~Strikethrough through the entire issue (by Team Berman only)~~: indicates that `Team Berman agrees` the issue has been `resolved`.

- `Google Doc Comment thread`: started by Team Berman, if the issue is `still an issue`.

- [NEW] (by Team Berman only, if new issue discovered during a re-audit, uses lettering to preserve previous audit numbering)

Summary

Steps	Common Issues	Page issues	Total issues
Phase 1	8	53	61
Phase 2	2	27	29
Phase 3			

Common Issue - ANE-137859

- Issue

  The saved credit card has a `"Remove" action` that fails to identify what card will be removed. If multiple cards existed

on the account, no differentiation would exist between remove actions.

- Recommendation

  Include the type of card or another unique identifier of the card being removed as part of the label for the remove action.

Solution
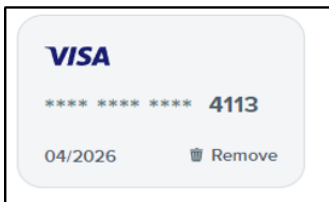

```
1  // Before
2  "app.modules.myAccount.SavedCards.remove": "Remove",
3  // After
4  "app.modules.myAccount.SavedCards.removeAriaLabel": "Remove {cardTy
```

Note:

The same kind of issues:

- Transaction list (remove, edit)
- The Date section of the reservation process (remove)

Common Issue - ANE-137868

- Issue

  The page titles for all pages fail to adequately describe the page content stating only `"Online Services"`.

- Recommendation

  Ensure that the page title conveys the primary topic of the page as well as the site name (e.g., `"Home - Online Services | City of Ottawa"`).

Solution

```
// xxxRoute.js
pageHeaderOptions: {
  tabName: pageTitle
},
// Master.js
componentDidUpdate(prevProps) {
  this.syncDocumentTitle();
}
syncDocumentTitle = () => {
  const { configurations } = this.context;
  const route = this.getCurrentRoute();
  if (route) {
```

```
13      const { pageHeaderOptions = {} } = route;
14      const pageTitle = pageHeaderOptions.tabName || pageHeaderOption
15      const tabWording = configurations.get('public_url_tab_wording')
16      const finalTabName = combineTabName(pageTitle, tabWording);
17      document.title = finalTabName;
18    }
19  }
```
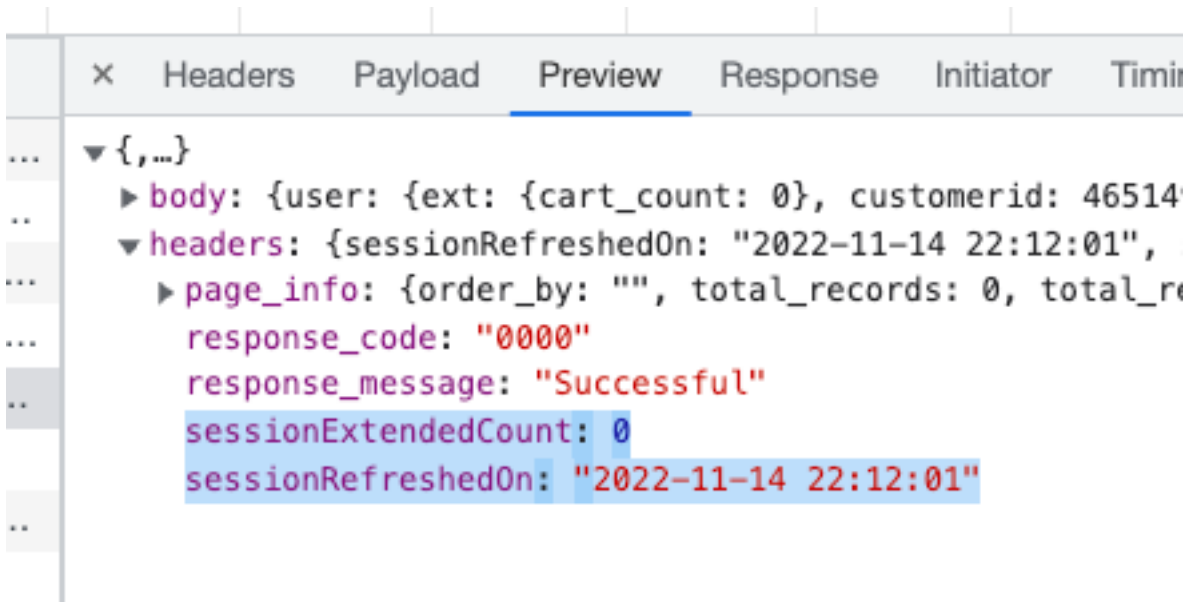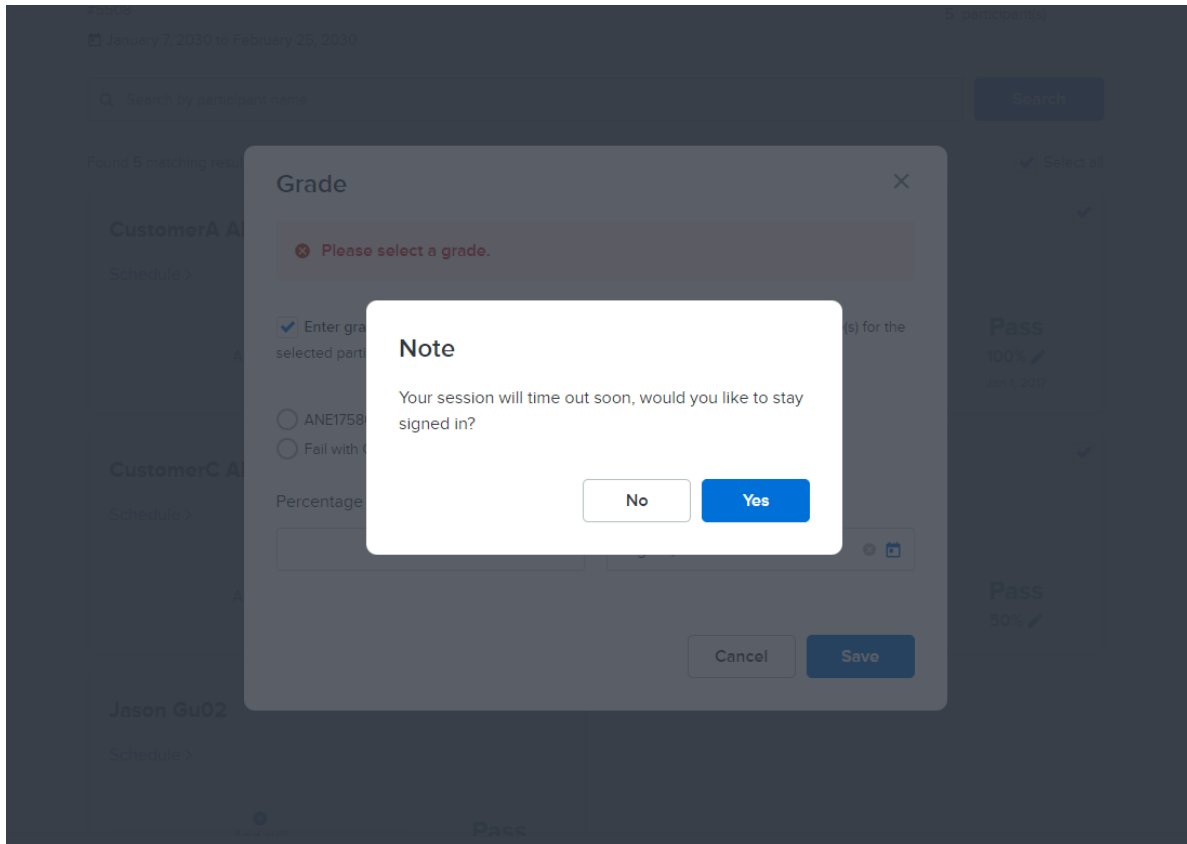
Common Issue - ANE-140296

- Issue

  The timeouts fail to offer the extension of time required by this
  success criterion.

- Recommendation

  Provide   users   with   `the opportunity to extend the`
  `timeout duration` by up to ten times the original amount.

Solution

▼ {,…}
  ► body: {user: {ext: {cart_count: 0}, customerid: 46514
  ▼ headers: {sessionRefreshedOn: "2022-11-14 22:12:01",
    ► page_info: {order_by: "", total_records: 0, total_r
    response_code: "0000"
    response_message: "Successful"
    sessionExtendedCount: 0
    sessionRefreshedOn: "2022-11-14 22:12:01"

Common Issue - ANE-138518

- Issue

  Throughout the application, multiple expandable regions are given aria-labels that are too verbose and obscure the description of the actual control with information that is not needed (e.g., `"Section Activity selection collapse detail clickable arrow"`)

- Recommendation

  Change the aria-label wordings to be more precise about the controls they represent and leave out information that is not required to understand the control (e.g., `"Activity selection"`). Additional attributes already provide many of the queues required for assistive technologies to understand the control such as `aria-expanded` indicating expanded or collapsed.
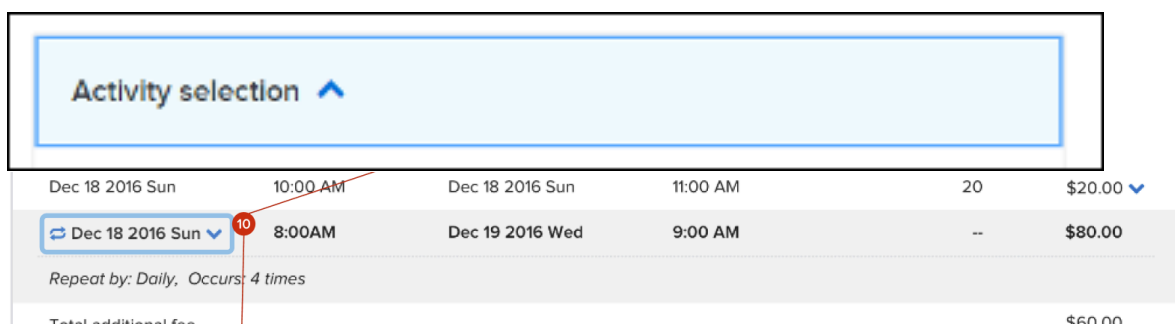
Solution

- Remove unnecessary words from aria-label.
- Use `aria-expanded + aria-own/aria-controls` to describe the expand/collapse state and related origin.
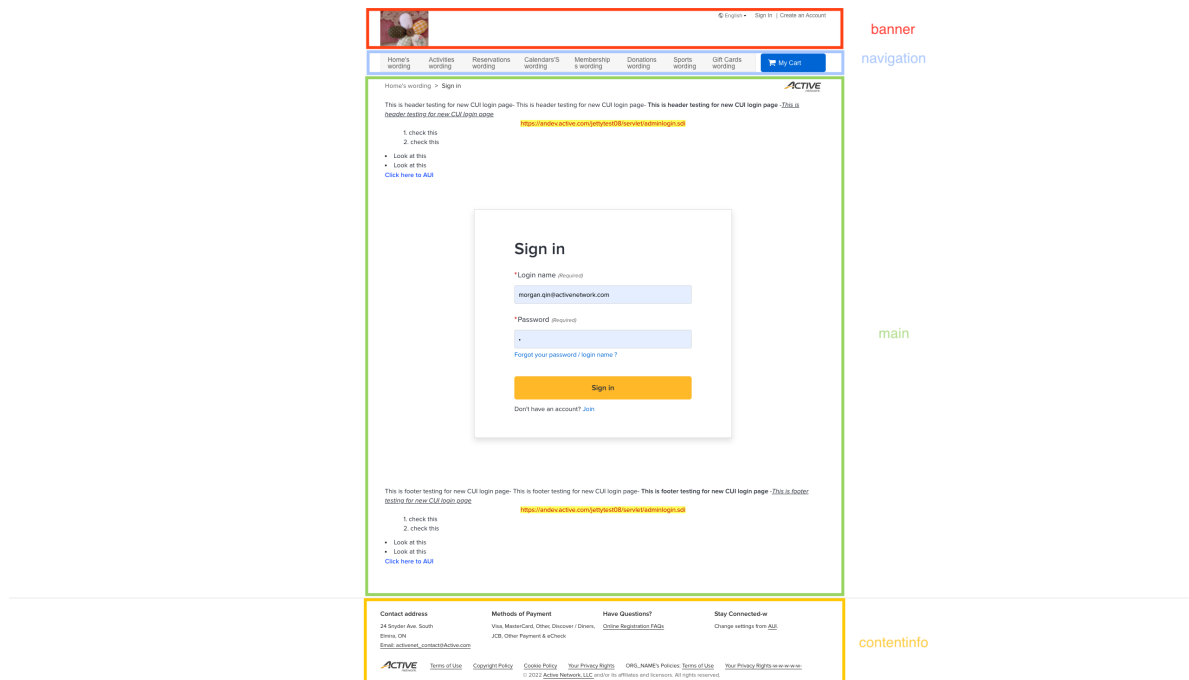- More details please confirm with UX about the special cases.

Common Issue - ANE-131139

- Issue

  All pages lack a main landmark.

- Recommendation

  Wrap the main content of the page in a `<main>` element ...or use a `role="main"` on the main content parent container.

11

Solution

Use `header` tag as a container of the banner region, `<main>` tag as a container of main region and `<footer>` tag as a container of the content info region.

You can also use aria roles for each landmark:

- Header landmark: role="banner",
- Main landmark: role="main",
- Footer landmark: role="contentinfo",
- Navigation landmark: role="navigation",
- Search: role="search"

Finally, ensure that `<header>`, `<main>`, `<footer>` should be a direct child of `<body>` tag. (miss `<Nav>`)

Refer to:

- https://www.w3.org/TR/wai-aria-practices/examples/landmarks/index.html
- https://www.w3.org/WAI/tutorials/page-structure/regions/

Common Issue - ANE-137830

- Issue

  Functional accessibility issue: Many SVG graphics contain a `role="presentation"` or `role="none"` attribute. Because these icons are not focusable, they present no real impact on assistive technologies but the implemented role values may flag as invalid in automated testing tools.

- Recommendation

  Use `aria-hidden="true"` in place of `role="presentation"` or `role="none"`.

Solution

```
1  <Icon
2    symbolPrefix="an-icon"
3    name="location"
4    aria-hidden // default is true
5    focusable={false}
6    className="calendar-view__select-icon"
7  />
```

```
1  <svg
2    aria-hidden={true}
3    className="icon-svg icon-svg-ic-problem icon-svg-size-md icon-svg
4    focusable={false}
5  >
```

Note: Warning: Do not use aria-hidden="true" on focusable elements.

Refer to:

- https://html-validate.org/rules/svg-focusable.html
- https://a11y-guidelines.orange.com/en/articles/accessible-svg/
- https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/Attributes/aria-hidden

Common Issue - **ANE-137668**

- Issue

  The alternative text on the `"Ottawa"` wordmark fails to adequately describe the image content, announcing `"System -`
  `Banner Logo"` instead of `"City of Ottawa"`.

- Recommendation

  Change the alternative text to "City of Ottawa" (if `"City`
  `of Ottawa"` appeared in proximity in machine text, we'd recommend `"logo of City of Ottawa"` instead … either are
  satisfactory).

Solution

- Change the alternative text to reflect the image content.

Dev Notes

- Currently we use the display name as the alternative text, which were
  configured in AUI file upload.
- Confirm with UX that we would add additional information to describe the image before the display name.
- For the banner logo image, update alternative text to `"Banner logo`
  `of {display name}"`

- For the logo image of receipt, update alternative text to `"Receipt logo of {display name}"`

Common Issue - ANE-138581

- Issue

  The page lacks an `<h1>` heading. Page lacks any `headings`.

- Recommendation

  Every page must have at least one, and typically only one,`<h1>`. Add additional headings to the page content (e.g., `"Book an event"`, `"Popular events"`).

Solution

Examples:

Home

- Update module name to h2.

Flexreg

- Update each section header to h2
- Update the "Block booing", "Selected Summary" to h3

Reservation Detail

- Update "Availability calendar" to h2
- Remove the heading for "Attendee" label, Description of "More Information" item.(See the attachment with red underline)

Note: Anchor should not be whithin the heading

The reasoning is that screen readers will not guarantee to detect the heading level if within an anchor

Common Issue - ANE-138601

- Issue

  `Issue #22:` Anchors exist with aria-labels describing the anchors as images, yet the images are background CSS images and do not need to be identified as part of the anchor text. `Issue #27:` Form errors fail to be announced to screen reader users.`Issue #32:` The significance of asterisks is not explained.

- Recommendation

  `Issue #22:` Remove the word image from each anchor's aria-label.`Issue #27:` ANE-138601 `Issue #32:` Same with the above issue #27

Solution

Issue #22: Remove the word "image" from aria-label of each link. Issue #27: Add attribute aria-invalid and aria-errormessage.Issue #32: Same with the above issue #27

Refer to:

- https://developer.mozilla.org/en-US/docs/Web/Accessibility/ARIA/Attributes/aria-errormessage

Common Issue - ANE-138596

- Issue

  [WCAG 2.1] Many `input` fields lack proper `input` `identification` (as defined in WCAG 2.1 Success Criterion 1.3.5 Identify Input Purpose).

- Recommendation

  Implement the associated input names using the autocomplete attribute.(Input Purpose)

Solution

```
1   <Input
2     className={classNames('sign-form__field', { error: errors.lastNam
3     maxLength={40}
4     onValueChange={this.bindOnFieldChange(fields.LAST_NAME)}
5     onBlur={this.bindOnFieldValidate(fields.LAST_NAME)}
6     value={formData.get(fields.LAST_NAME)}
7     ariaLabel={this.getLabelAriaText(lastNameLabel)}
8     autoComplete="family-name"
9   />
10  <Input
11    maxLength={phoneMaxlength || 20}
12    formula={/\d/}
```

```
13    disabled={disabled}

14    value={phone}

15    onInput={this.handlePhoneNumberChange}

16    onBlur={this.handlePhoneNumberBlur}

17    ariaLabel={phoneAriaLabel}

18    autoComplete="tel-national"

19  />
```

Refer to:

- https://www.w3schools.com/accessibility/accessibility_autocomplete.php
- https://html.spec.whatwg.org/multipage/forms.html#attr-form-autocomplete

Common Issue - ANE-137858

- Issue

  Column headers that are not coded as headers (`<th>`) but instead as standard table data cells (`<td>`).

- Recommendation

  Change the column headers to table headers (`<th>`) elements.

Solution

Before:

```
1  <thead role="rowgroup">
2    <tr role="row">
3      <td className="col-1" role="columnheader">
4        <FormattedMessage {...selfMessages.originalBalanceSubTotalOfS
5      </td>
6      <td className="col-2" role="columnheader">
7        <FormattedMessage {...selfMessages.currentBalanceSubTotalOfSu
8      </td>
9      <td className="col-3" role="columnheader">
10       <FormattedMessage {...selfMessages.amountDueNowSubTotalOfSumm
11     </td>
12     <td className="col-4" role="columnheader">
13       <FormattedMessage {...selfMessages.subTotalOfSummary} />
14     </td>
15     <td className="col-5" role="columnheader">
16       <FormattedMessage {...selfMessages.remainingOfSummary} />
17     </td>
18   </tr>
19 </thead>
```

After:

```
1  <thead role="rowgroup">
2    <tr role="row">
3      <th className="col-1" role="columnheader">
4        <FormattedMessage {...selfMessages.originalBalanceSubTotalOfS
5      </th>
6      <th className="col-2" role="columnheader">
7        <FormattedMessage {...selfMessages.currentBalanceSubTotalOfSu
8      </th>
9      <th className="col-3" role="columnheader">
10       <FormattedMessage {...selfMessages.amountDueNowSubTotalOfSumm
11     </th>
12     <th className="col-4" role="columnheader">
13       <FormattedMessage {...selfMessages.subTotalOfSummary} />
14     </th>
15     <th className="col-5" role="columnheader">
16       <FormattedMessage {...selfMessages.remainingOfSummary} />
17     </th>
18   </tr>
19 </thead>
```
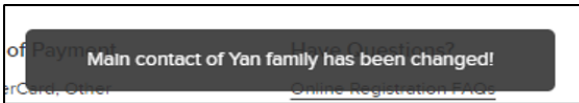
Common Issue - ANE-135010

- Issue

  [WCAG 2.1] Changing the active main contact presents a

status notification that is `not made aware to screen reader users`.

- Recommendation

  Ensure to announce status messages automatically to screen reader users. You can use a `role="alert"` or WAI-ARIA to accomplish this task.

Solution


```
1  // Toast.jsx
2  <div
3    role="status"
4    className={toastClassName}
5    style={style}
6    {...mouseEventProps}
7  >
```

Status role

A type of `live region` whose content is advisory information for the user but is not important enough to justify an alert, often but not necessarily presented as a status bar.

Live Region Roles

> Live regions are perceivable regions of a web page that are typically updated as a result of an external event when user focus may be elsewhere. These regions are not always updated as a result of a user interaction.

The following roles are live regions and may be modified by live region attributes.

- alert
- log
- marquee
- status
- timer

Common Issue - ANE-138534

- Issue

  The page contains `multiple headings` that `are not programmatically implemented as headings` but should be (e.g., Payment and Order Management, Other services, etc).

- Recommendation

  Add section `headings` to the pages heading order.

Solution

Before:

```
1   <div className="account-options__balance-header">
2     <FormattedDyncMessage
3       value={headerLabel}
4       className="account-options__balance-title"
5     />
6   </div>
7   <span className="family-name">
8     <FormattedMessage {...selfMessages.familyName} values={{ familyNa
9   </span>
```

After:

```
1  <h2 className="account-options__balance-header">
2    <FormattedDyncMessage
3      value={headerLabel}
4      className="account-options__balance-title"
5    />
6  </h2>
7  <h3 className="family-name">
8    <FormattedMessage {...selfMessages.familyName} values={{ familyNa
9  </h3>
```

Common Issue - ANE-137861

- Issue

  Issue42: The "View more" control presents additional location options but moves the user's focus past all the newly injected options. Issue45: Functional accessibility issue: Multiple groups of input fields exist without the use of <fieldset> elements. Each group of inputs with a common topic would benefit from the use of <fieldset> elements.

- Recommendation

  Issue42: When presenting the new options, move the user's focus to the start of the new options

instead of after the options. `Issue45`: Add `<fieldset>` and `<legend>` elements to each group of inputs.

Solution

Issue42


```
1  onExpandChange = (expanded) => {
2    const {
3      expandable,
4      isForwardFocusWhenExpand,
5      maxDisplayCount
6    } = this.props;
7    if (
8      expandable && isForwardFocusWhenExpand && this.containerNode &&
9    ) {
10     const ariaInputs = this.containerNode.querySelectorAll('input')
11     ariaInputs[maxDisplayCount + 1].focus();
12   }
13 };
```

Issue45

Before:

```
<div className="filter-sections">
  <Heading className="filter-sections__title" level={4}>
    <FormattedMessage {...selfMessages.titleDateRangeOfWhenFilter}
  </Heading>
  <DateRangePicker
    size="lg"
  />
</div>
```

After:

```
1  <div className="filter-sections">
2    <fieldset className="activity-search-filters__fieldset">
3      <legend className="filter-sections__title u-text-left">{message
4      <DateRangePicker
5        size="lg"
6      />
7    </fieldset>
8  </div>
```
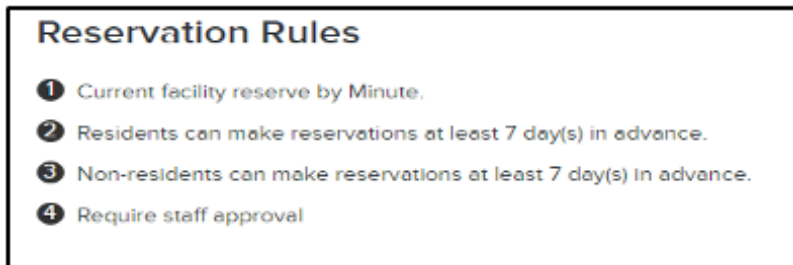
Common Issue - ANE-137863

- Issue

A `list` of reservation rules exists that `is not implemented as a list but visually implies a list`.

- Recommendation

    Change the structure of this list to use an ordered list (`<ol>`) and list items (`<li>`).

Solution

Before:

```
1  const renderRule = rules =>
2    rules.map((rule, index) => (
3      <div className="rules-item" key={`rule_${index}`}>
4      </div>
5    ));
6
7  const ReservationRules = (isLg, rules) => (
8    <div className="rules__content">
9      { renderRule(rules) }
```

```
10      </div>
11   );
```

After:

```
1   const renderRule = rules =>
2     rules.map((rule, index) => (
3       <li className="rules-item" key={`rule_${index}`}>
4       </li>
5     ));
6
7   const ReservationRules = (isLg, rules) => (
8     <ol className="rules__content">
9       { renderRule(rules) }
10    </ol>
11   );
```
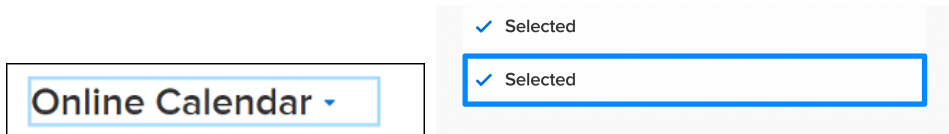
Common Issue - ANE-142791

- Issue

  [WCAG 2.1] The `visible focus indicator` on some controls `lacks sufficient contrast` falling short of the `3:1` ratio required for non-text contrast (ratio `1.5:1`).

- Recommendation

Change all problematic foreground/background pairings to `higher contrast ratios that meet or exceed the required minimum`.
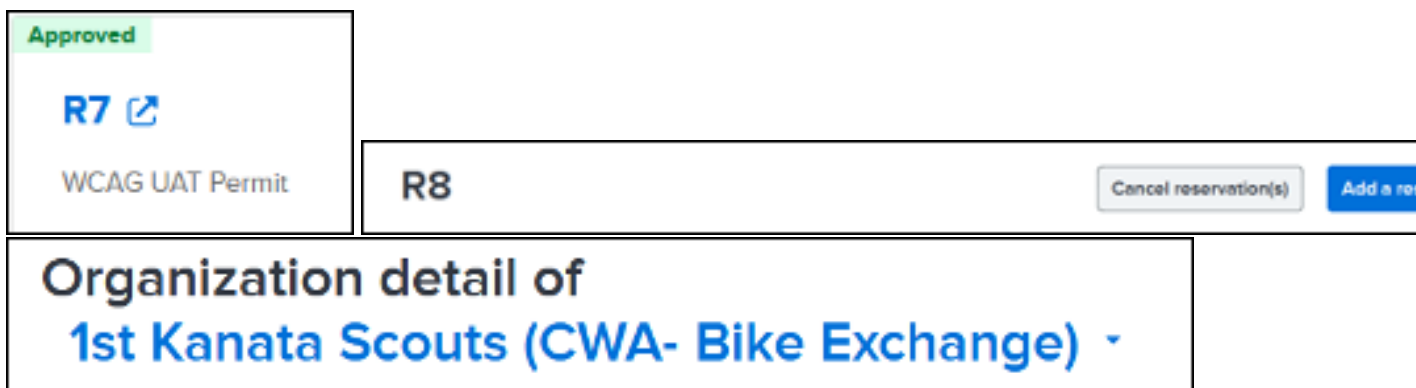
Solution

Common Issue - **ANE-138958**

- Issue

  Modifying a reservation leads to a page with a primary heading `<h1> that contains actionable button controls`.

- Recommendation

  Reposition `the controls` so they are `no longer within the h1 element`.

Common Issue - **ANE**-**142788**

- Issue

  Table column headers throughout the Permit page contain `sort icons that announce to screen reader users as only "graphic"` due to empty aria-labels on the `<i role="img">` elements.

- Recommendation

  Either `provide a label for all states of the graphic`, or `use aria-hidden to hide the graphic from screen reader users`. Note: the aria-sort attribute located on the `<th>` already indicates the current sort value of the column.

Allen_Facility (3 event type)

START DATE/TIME ↕	END DATE/TIME ↕
⇄ Jul 27, 2017 10:10 AM ⌄	Aug 1, 2017 1:01 PM

Solution

Added the `'aria-hidden'` attributes

```
1  <i
2    key={index}
3    className={classNames('icon', sortOrderIcon)}
```

```
4    aria-hidden
5  />
```

Common Issue - ANE-126474

- Issue

  The tab controls that resize the column widths
  within the data tables are confusing to a non-sighted
  user, due to the tabs gaining focus prior to the table markup
  being announced. The user is given the ability to affect the
  width of a table column they have not yet encountered.

- Recommendation

  Provide the tabs in the correct focus order where a
  user can modify the width of the column after having
  interacted with the table, and, ideally, also provide a specific
  trigger (e.g., a button that enters the "column width adjust-
  ment" mode) for the user to modify the column widths
  using the keyboard (otherwise the column width controls
  are skipped in the tabbing order).

Allen_Facility (3 event type)	
START DATE/TIME ⇕	END DATE/TIME ⇕
⇄ Jul 27, 2017 10:10 AM ⌄	Aug 1, 2017 1:01 PM

Solution

```
1   onKeydown(e) {
2     // ...
3     // Left Arrow
4     if (keyCode === 37) {
5       x -= 1;
6     }
7     // Right Arrow
8     if (keyCode === 39) {
9       x += 1;
10    }
11    // ...
12  }
13  onMouseMove(e) {
14    // ...
15    const x = (pageLeftX - this.drag.initPageLeftX) + this.drag.ini
16    this.calculatePosition(index, x, e);
17    // ...
18  }
```

```
1   render () {
2     return (
3       //...
4       <span class="drag-handle" tabIndex="0" role="button" aria-gra
```

```
5        //...
6      </span>
7        //...
8    )
9  }
```

Common Issue - ANE-142808

- Issue

  `Column 1 of the table` containing the searched date results `lacks any header information`.

- Recommendation

  `Identify the column header's purpose`.

Solution

14 record(s) in total

SELECT CLASS	EQUIVALENT LONG LONG LONG LONG LONG LONG ACTIVITY CONFIGURED BY USER FOR MAKE-UP CLASS	GENDER	AGES	DATE & TIME	FACILITYX
○	Activity_makeup_class2 #Activity_makeup_cla2	Mixed	Any	Apr 17, 2022 Sun 8:00 AM	--
○	Activity_makeup_class2 #Activity_makeup_cla2	Genderqueer/Androgyny	At least 4 but less than 49y 2m 1w	Apr 17, 2022 Sun 8:00 AM	Facility_4_hour long long long long name
○	Activity_makeup_class2 #Activity_makeup_cla2	Mixed	At least 4 but less than 49y 2m 1w	Apr 17, 2022 Sun 8:00 AM	Facility_4_hour
○	Activity_makeup_class2 #Activity_makeup_cla2	Mixed	Any	Apr 17, 2022 Sun 8:00 AM	Facility_4_hour
○	Activity_makeup_class2 #Activity_makeup_cla2	Mixed	Any	Apr 17, 2022 Sun 8:00 AM	Facility_4_hour
○	Activity_makeup_class2 #Activity_makeup_cla2	Mixed	Any	Apr 17, 2022 Sun 8:00 AM	Facility_4_hour