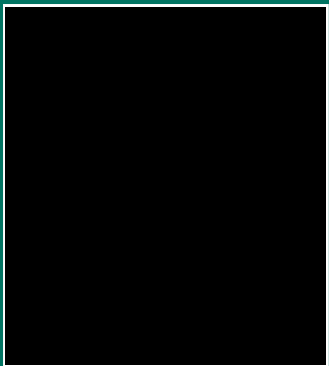




Content Audit, User Research and Recommendations

Prepared by



for





Document Purpose

To summarize activities and procedures followed as part of delivery of Task Order 3, which was aimed at developing a new information architecture for [REDACTED] and identifying other content improvements that would meet [REDACTED] expressed goal of better telling the story of how [REDACTED] funds are being used and administered, and how they are impacting the lives of citizens and visitors of [REDACTED]

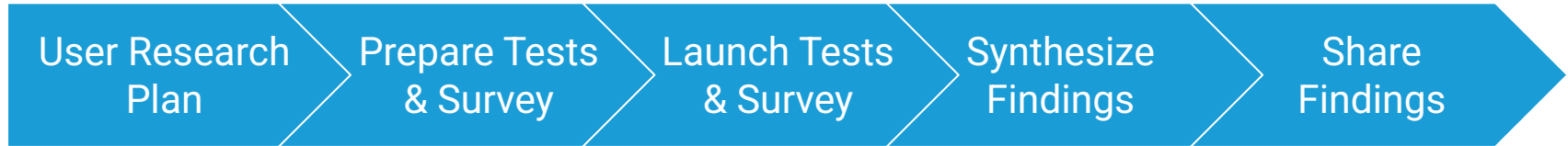
What were our methods?

Methods included:

- **Tree testing** of current and potential alternative information architectures.
- **User survey** focusing on qualitative and quantitative information about user behaviors, preferences, and needs.
 - *The user survey published got very little traction. At the time of this reporting, responses have not been factored into findings. [REDACTED] recommends a small task in the future to analyze findings and itemize additional findings.*
- **Analysis** of business stakeholder requests and preferences as well as analogous research into the challenge of 'telling the story'.
- **Development of recommendations** relating to general usability and accessibility best practices.



Participants, Process, Demographics & Recruitment for User Tests



Participants

Site visitors and known stakeholders interested in or familiar with 

Recruitment

User Survey - invitation on the homepage, later updated to display on all pages.  was also pursuing social media engagement.

Tree Test - invitation from the website and also circulated by email internally within the department

User Survey



Purpose

Steps

1. Develop questions and conditional questions.
2. Set up test in selected test tool (Survey Monkey).
3. Preview and walk through test.
4. Launch test and share on the website.

User surveys (questionnaires) are well suited to elicit both quantitative & qualitative information about site visitors, with a low overhead of hands-on facilitation required.

We applied 'screening' questions aimed at understanding the user relationship to or awareness of [REDACTED] and the website to begin with.

Recruitment through the website was intended to enable our collection amongst real end users to better develop a sense of the demographics and user base. Additionally, late in the TO phase we agreed to pursue social media channels to elicit additional responses.

As of 10/29, no additional responses had been collected, but the CTA is still live. [REDACTED] and [REDACTED] should discuss next steps for reporting on responses that are collected in the future.

Tree Testing



Purpose

Steps

1. Define and document existing IA and potential alternative IAs through research, card sorting, or other methods.
2. Develop 8-10 tasks.
3. Set up the test in the test tool (Optimal Workshop).
4. Launch and collect responses.
5. Analyze and report on findings.

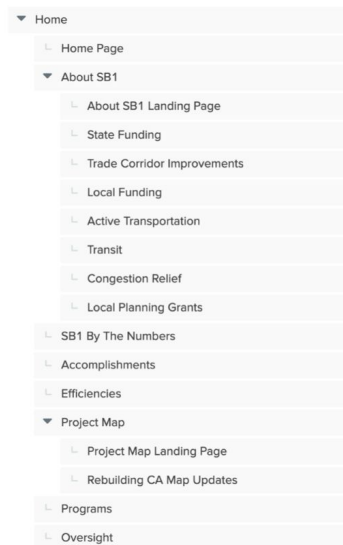
Tree testing helps verify the organization of a site's content by evaluating how users navigate and completes tasks between differently structured information architectures. Tree testing can be applied to a single defined IA (such as the current / baseline) or applied to multiple measured in parallel.

For  we opted to test the current / legacy information architecture as well as two alternatives to provide variety and options to project decision makers and to understand how the current navigational experience performs compared to viable alternatives.

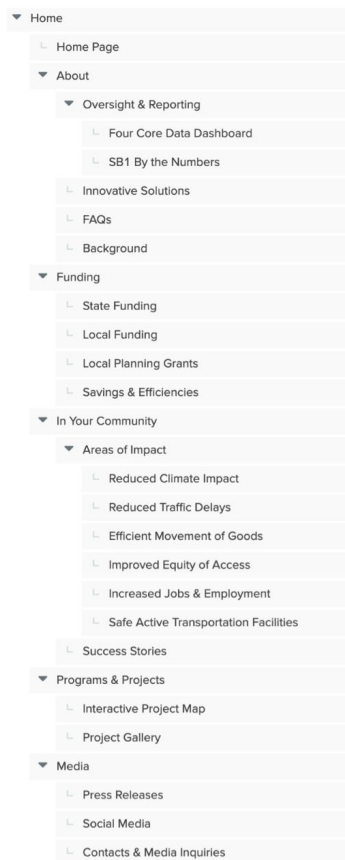
Note: tree testing is done outside the implemented site to eliminate the role that the menu design plays in findability. While menu design is a key component of usability and navigation, a tree test is intended to verify the appropriate, logical organization of content agnostic of menu designs.

IAs Tested

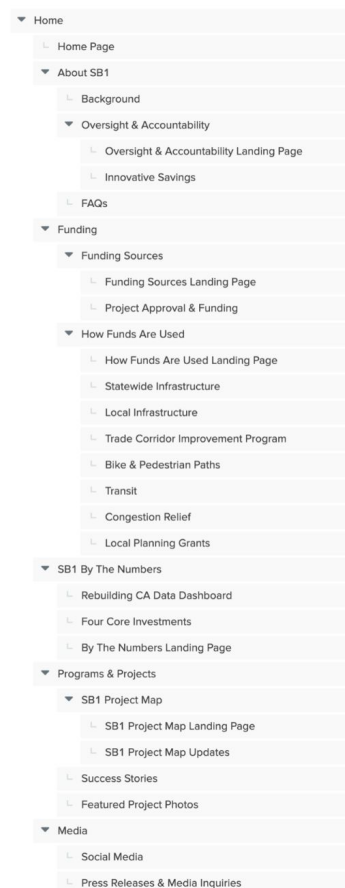
Current IA



Alt IA #1



Alt IA #2



Note: Tree test results might be slightly skewed towards the current IA due to the fact that most of the participants were internally recruited department members. Though even 'internal' respondents may not have spent a lot of time with the site, recruitment in channels outside of the general public may have resulted in a participant audience with greater familiarity with domain language.

Tree Test Highlights

Tree tests show how direct and successful participants are in completing tasks. The same tasks were used for all three tree tests.

A note on **directness**: Directness is how easily users reach their destination without going back. It does not measure directness to a *correct* destination necessarily, so a high directness rating is not valuable without an accompanying high **success** rating. Higher directness rates also often accompany flatter IAs with less options to choose from.

Current IA

- 58% Success Rate
- 71% Directness Rate

Alternative IA #1

- 60% Success Rate
- 68% Directness Rate

Alternative IA #2

- 50% Success Rate
- 57% Directness Rate

Summary of Recommendations

Keep the existing IA with modifications:



Keep:

- Keep 'About'
- Keep  'By the Numbers'
- Keep 'Programs,' but rename to 'Programs & Projects'
 - With a distinct 'Programs' page (currently in design) living underneath this



Add:

- Add 'Funding'
- Add 'In Your Community'
 - Add hover states over main menu items to increase ease of use and discoverability of sub menu items



Change or move:

- Relocate 'Oversight' to live under 'About'
- Move 'Efficiencies' to live under 'Funding'
- Maintain the concept of a Programs page and restructure it as a sub-page under 'Programs & Projects'
 - Move before & after photos from 'Accomplishments' to live under 'Programs & Projects' as a distinctly titled 'Project Gallery' sub menu item
 - Relocate Project Map to live under Programs & Projects
- Leave "Media" out as a main menu item, and just let it live on the home page or in the footer

Our Observations

Related Task	Observation / Analysis	Recommended Actions
Task 1: <i>Where would you find information about a project you have encountered on your commute to work, that you believe to be supported by [redacted] funds?</i>	While 'Project Map' worked (<i>unsurprisingly</i>) well as a main menu when with this location centric question (93% <i>first click rate</i>), participants still found their way to the map with high success rates (92% & 63% <i>respectively</i>) with it being located under Programs & Projects as it was in both alternative IAs	This indicates that the map doesn't necessarily need to exist as a main menu item, especially given the large CTA for the map on the home page. [redacted] would recommend that this content live as a sub page under 'Programs & Projects'

Our Observations

Related Task	Observation / Analysis	Recommended Actions
Task 2: <i>Where would you look to find information about jobs created by [REDACTED] or impacts to employment-related metrics in [REDACTED]?</i>	[REDACTED] By The Numbers' tested well as a main menu item where it was available (<i>Current IA and Alt IA #2</i>). 'In Your Community' also attracted significant traffic in Alt IA #1, indicating that participants are interested in the qualitative and quantitative sides of this story.	[REDACTED] sees this as a reason to keep employment metrics on the data dashboard as they are today, while developing more qualitative content around jobs & employment, with cross linking between the two.
Task 3: <i>Where would you go to find performance metrics indicating progress made on the 'four core' [REDACTED] investment areas (Bridges, Drainage, Pavement, Traffic Management Systems)?</i>	When it was an option, '[REDACTED] By The Numbers' was the most common first click (<i>Current IA and Alt IA #2</i>). Note: realistically, we couldn't expect the current IA to test well here since at the time of testing, four core data only lived on the home page. That said, most participants on the current IA still looked for this under '[REDACTED] By The Numbers'	[REDACTED] sees this as evidence that [REDACTED] By The Numbers is an effective main menu item that should remain there.

Our Observations

Related Task	Observation / Analysis	Recommended Actions
Task 4: <i>Where would you look for information about local planning grants?</i> Task 5: <i>Where would you expect to find information about how projects are approved and funded using [redacted] money?</i>	Task 4: 'Funding' received a strong first click response on both alternative IAs (81% and 83% respectively), while traffic on the current IA was disbursed, indicating that users were unsure about where to expect this Task 5: 'Funding' received 88% and 75% of first clicks on both alternative IAs, while 'About' only received 47% of first clicks and 'Oversight' only received 20% of first clicks on the current IA, indicating uncertainty. Note: Once users selected 'Funding' in Alt IA #2, they were apparently confused by the breakdown of 'How Funds are Used' and 'Funding Sources' sub menu items.	[redacted] would recommend 'Funding' as a main menu item, but would advise that the breakdown of sub-menu items follow Alt IA #1, as users found their destinations more efficiently following that structure than they did in Alt IA #2. [redacted] would also recommend new content development around the funding process and how projects get funded.

Our Observations

Related Task	Observation / Analysis	Recommended Actions
Task 9: <i>Where would you go to learn about savings achieved by implementing new technologies, tools, process improvements, and equipment repairs/rehabilitation?</i>	The Current IA performed best on this task (although this may be partially due to participants largely being from inside the department). 'Funding' received the highest first click response on Alt IA #1, while participants in Alt IA #2 looked for this under '██████'. By The Numbers'. Despite the label of 'Efficiencies' seemingly being well-understood, a more direct reference to cost, savings, or money to help those that need that context.	██████ would recommend renaming 'Efficiencies' to 'Efficiencies & Savings,' and relocating it to live as a sub menu item under 'Funding.' There is additional opportunity for cross linking here between the data dashboards, and potentially new data oriented content to be developed around efficiencies.
Task 6: <i>Where would you find information about the ██████████ Program</i>	While 'Programs' or 'Programs & Projects' got a strong first click response across all three IAs, only one person in Alt IA #1 made the connection that the 'Efficient Movement of Goods' Area of Impact could be considered a correct answer.	A Main menu item with the word 'Program' is shown to be effective here. ████████ would also recommend cross linking between the Efficient Movement of Goods Area of Impact and the ████████ page.

Our Observations

Related Task	Observation / Analysis	Recommended Actions
Task 8: <i>Where would you look to find videos depicting █ progress?</i>	Task 8: Despite 'Media' being a main menu item in both alternative IAs, it only received moderate first click rates (25% and 50% respectively).	████ concludes that 'Media' does not need to exist as a main menu item, and would recommend that it be accessible from the home page and footer as it currently is.
Task 10: <i>Where would you look to find a gallery of before & after photos of █ funded projects?</i>	Task 10: In both alternative IAs, 'Media' received very little traffic, with 'Programs & Projects' being the most common first click for both.	Video / multimedia content would improve and add variety to program and project content, where available.
General	In the current IA, participants looked under 'Accomplishments' at a high rate for almost every task, indicating that they're not sure what to find there and that the title is perhaps too vague/all encompassing.	████ would recommend removing 'Accomplishments' as a main menu item, and relocating before and after photos to a distinct 'Project Gallery' location under 'Programs'

Recommendations for New IA

1.0 Home

2.0 About

(Hover)

- 2.1 Background (Current 'About')
- 2.2 Oversight & Reporting (Current 'Oversight')
- 2.3 FAQs (New!)

3.0  By The Numbers
(Hover)

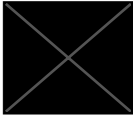
- 3.1 Data Dashboard (Current)
- 3.2 Four Core Data Dashboard (New)

4.0 Funding
(Hover)

- 4.1 Efficiencies & Savings (Current)
- 4.2 Funding Process (New)
- 4.3 Local Funding (Current)
 - 4.3.1 Local Planning Grants (Current)
- 4.4 State Funding (Current)

5.0 Programs & Projects
(Hover)

- 5.1 Project Map (Current)
 - 5.1.1 Project Map Updates (Current)
- 5.2 Project Gallery (Current 'Accomplishments')
- 5.3 Programs
 - 5.3.1 Programs Page (Revised)



6.0 In Your Community
(Hover)

- 6.1 Areas of Impact (New)
 - 6.1.1 Climate Impacts (NEW!)
 - 6.1.2 Jobs & Employment (NEW!)
 - 6.1.3 Efficient Movement of Goods (NEW!)
 - 6.1.4 Safe Active Transportation (NEW!)
 - 6.1.5 Traffic Delays (NEW!)
 - 6.1.6 Equity of Access (NEW!)
 - 6.1.7 Research Opportunities (Optional)
 - 6.1.8 Freeway Motorist Assistance Services (Optional)
- 6.2 Success Stories (New)

➤ Hover State Depiction

About |  By The Numbers | Funding | Programs & Projects | In Your Community

Project Map

Project Gallery

Programs



Architecting Solutions

Other Recommended Content Improvements

Clarifying Links

- Use a visual indicator to distinguish external destinations associated with hyperlinks in in-line text, and consistently ensure those links open in a new tab or window. Use a standardized hyperlink text style for text excerpts that link, rather than appending content with a button that links.

Do this:

Internal Link >

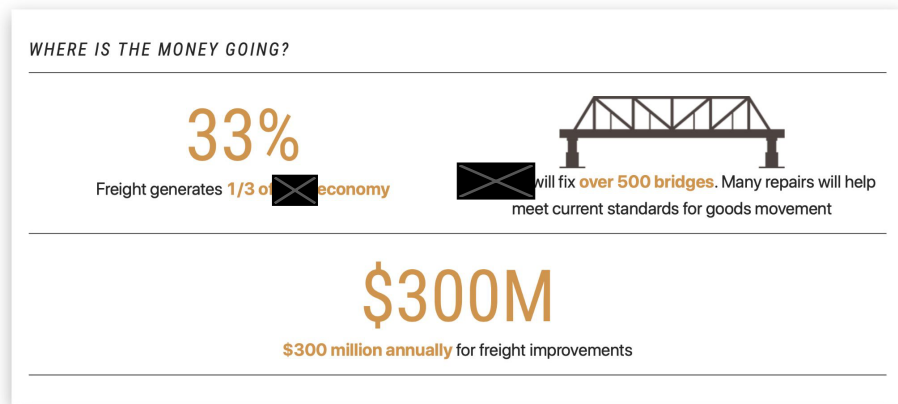
External Link ↗

Not this:



Standardizing Stat Elements

- Featuring stats is a valuable way to showcase highlights on project pages, or drive home key takeaways relating to impacts, progress, etc.
- Stats blocks should be more consistent in their presentation to the user with primary emphasis on the data value (usually a number) and a short excerpt of text explaining the value.



The bridge icon used in place of the stat value disrupts the user's ability to quickly understand the value being conveyed.

More General Usability Recommendations

- **Icons** are used prevalently throughout the site currently, not always in ways that bolster the user's understanding of corresponding text. Icons are most effective in small groups of 3-6 of related topics, such as the four used for the four core data elements and the six used for areas of impact on the newly designed homepage. A more targeted approach to utilization of icons would preserve their impact throughout the site.



Maintenance And Rehabilitation Of The State
Highway System
\$1.8 billion



Funding To Transit Agencies
Over \$750 million



Maintaining And Repairing The State's Bridges And
Culverts
\$400 million



Repairs To Local Streets And Roads
\$1.5 billion

- Prioritize **interior pages** first, followed by additional external sources a user may seek. For instance on Programs currently, ALL included links go outside the site even when there is relevant content on interior pages. If an interior page exists, link to it first, and only from that page should you link to additional external sources.

More General Usability Recommendations

- The current **main menu** interaction is flat and simple, where each item has a destination, but the lack of interactivity in the menu and visibility to interior pages leaves site visitors who are seeking a particular piece of information having to hunt around. Especially combined with the lack of breadcrumbs, we aren't supporting a user's self-service as well as we could be. [REDACTED] recommends updating the menu interaction as well as the IA and labels of menu items, so that users see two levels of the IA rather than one.
- There are opportunities for the site experience to **respond to user interactions**, to provide positive feedback as they user hovers, clicks, and otherwise explores. Micro animations such as a card changing colors or a chevron on a link that shifts to the right on hover are tremendously helpful in clarifying where a user can interact, and encouraging engagement. These have been incorporated into newly designed pages [REDACTED] has provided already and we should continue to use those.

[REDACTED] provides \$250 million annually to multimodal corridor plans that make performance improvements along our busiest highways, complemented by providing more transportation choices through transit, rail, and active transportation components.

LEARN ABOUT [REDACTED]



More General Usability Recommendations

- There is slightly odd expansion behavior impacting **accordions** that should be investigated, causing an unexpected jump in the page when the user interacts with certain sections of accordions.
- There are **card-like containers** used on various interior pages, where sometimes they indicate a clickable element, and others they serve only as containers. Examples are: About (Where Does the Money Go?) where they are clickable, and Efficiencies, where they are not. It is recommended to eliminate the use of these containers on general text excerpts. Card or tile styles should be established with consistent behavior for clickability. Callout elements might help content managers emphasize key text on a page, if desired.

Consistent Language

- Use consistent naming conventions and layman-friendly terms. Menu links should be identical to their corresponding page titles. Ideally menus and page titles should be non-technical terms. Industry jargon can be used on the page but ideally not in the title.
- Additionally, throughout the site, links should be consistent in how they're named to the user. For instance, two different link titles that both lead to the same 'Local Funding' page, should be renamed for consistency.

Current Menu item = Corresponding Page title:

- About  >> About 
- Efficiencies >> Efficiency es
- Project Map >> Rebuilding  Project Map
- Programs >> Programs

Current Menu item != Corresponding Page title:

-  By the Numbers >> Data Dashboard
-  ccomplishments >> Getting it Done with 
- Oversight >> Accountability

Breadcrumbs

- Breadcrumbs provide important context for the user to know where in the site they are and to grant easy access to go to a related (parent) page or to get back home.
- Combined also with inconsistency of language used and the flat nature of the main menu, the lack of breadcrumbs contributes to the risk of user confusion or the feeling of being 'lost' in the site, and undermines self-serviceability.

Knowledge Base > Marketing Tools > Campaigns > Analyze your campaign

More General Accessibility Recommendations

- Throughout the site there remain instances of text or other content that has insufficient **contrast ratio** between foreground and background elements. Government sites typically need to have contrast of 4.5:1 to achieve WCAG 2.1 AA compliance. [REDACTED] has been applying new styles and reskinning to address these but there remain a few examples that need to be corrected including 'old style' stat elements.
- **Sliding animations** with accompanying text without an ability to pause are not accessible for users with motion sensitivity or slower reading rates (home page has already been updated to remove this type of interaction in the banner area). Ultimately, the goal is for the user to be able to direct such interactions themselves.
- **ARIA landmarks and alt tags** are two back-end elements that help ensure users of assistive technology and keyboard-based navigation can successfully navigate the site and consume visual content. At this midpoint in the remediation project, [REDACTED] has been implementing our best practices around the use of these things to ensure wide access to the site by all types of users. An accessibility scan, near the end of the remediation effort, would help shed light on additional adjustments that would ensure [REDACTED] can achieve the accessibility compliance required.

Describing the Impact of SB 1

- Develop **qualitative narratives** telling the 'Areas of Impact' story. Make the homepage section on Impacts linkable to detail destinations. Target areas to develop new **qualitative** content:
 - Climate impacts
 - Jobs and employment (including workforce training)
 - Efficient movement of goods
 - Safe active transportation
 - Traffic delays
 - Equity of access
 - Research opportunities
 - Freeway motorist assistance services
- Create **short-form or long-form testimonials**, case studies, success stories, or quotes from different constituent populations to explain positive impacts. Sources that may be valuable include bus drivers, transportation advocates, school program admins, business owners, researchers). This could also be a 'Meet the Person Behind...' feature.
- Further develop the **project gallery** of photos representing completed projects to help users visualize differences before and after program funds have been applied in a particular area.

Improving and Enhancing the Data

- There are rich sources of data thanks to measurement and monitoring efforts by [REDACTED], and the website represents an opportunity to make that data visible and accessible to the public. As is a common challenge, the data represents an area of complexity due to nuance in how goals are set, how progress is measured, and the aging / cyclical nature of the infrastructure and equipment.
- Targeted improvements to the current data dashboard accessible from [REDACTED] By the Numbers is recommended to uncover and implement changes and additions that would help tell the data story. The four core dashboard is already in development, which will help shed light on those four specific asset classes and measurement associated with them. Lastly, the interactive map is full of project data that is currently not as user friendly or engaging as it could be. [REDACTED] has also been informed of challenges in affecting the content / informational changes required to improve the map experience. These are things that represent future opportunities in the site if [REDACTED] value them.



More General Storytelling Recommendations

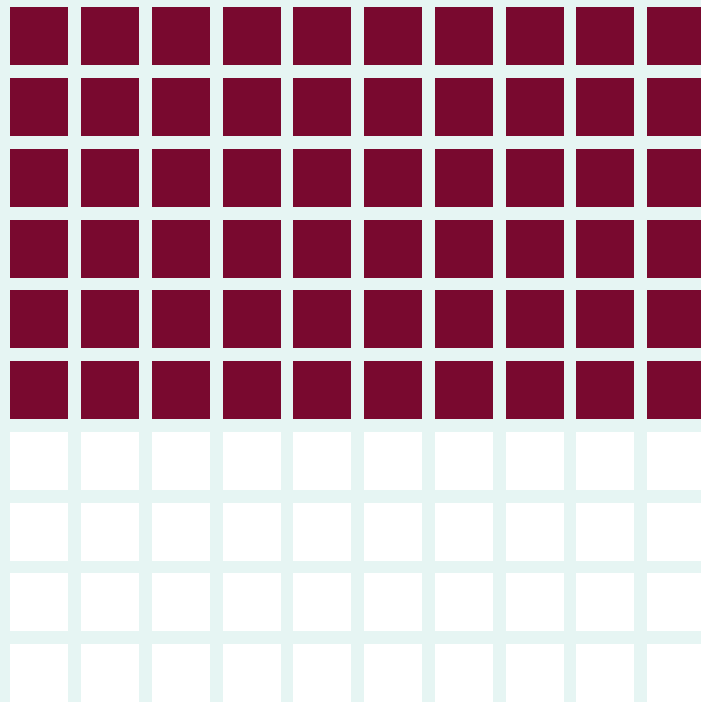
- Consider ways to connecting [REDACTED] to what is happening in their **backyards or communities**, such as through menu items that refer to Community.
 - Recommendation for an 'In Your Community' main menu item including areas of impact and additional content around Success Stories
- The **distinction of Programs and Projects** is likely to be hazy to constituents not familiar with infrastructure, transportation funding, and other industry knowledge. This can be improved upon by referring to them together in menus and clarifying projects that relate to programs, such as is being pursued with the redesigned Program page and subsequent interior pages on featured programs, which include 'spotlight projects'.
- Another aspect of relevant [REDACTED] content that may be clear to legislators, transportation advocates, and internal site visitors, but is the likely source of confusion for the general public is process and logic-related information that informs **which projects are funded** and how that determination is made. [REDACTED] recommends even a one-page addition to the IA that provides the 'Reader's Digest' or 'Explain Like I'm Five' description of how projects get funded. Realizing there is complexity to the process and requirements, a high-level overview would help fill this gap in current content.

What Next?

This concludes the content analysis task order (TO3).

We look forward to working with  to incorporate many of these recommendations into the site over the next several releases.

Next, we'd like to define a new TO to achieve implementation of some or all of these recommendations, with an emphasis on:
applying a new IA and menu interaction, incorporating breadcrumbs, updating page titles for consistency, and applying miscellaneous layout and interaction improvements to interior pages not yet touched, and creating new narrative content to assist with storytelling.



Appendix

Detailed Results from Tree Testing

Appendix

Test Results Exports from Optimal Workshop



User Survey Findings

Observation / Analysis	Recommended Actions