

Signs of the Times: Enhancing Bellevue's Park Signage for All

Final Research Report

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Executive Summary

The City of Bellevue Parks and Community Services Department manages 2,700 acres of land – including an extensive network of 80 miles of trails. While the department provides language translation and interpretation as specified in Title VI of the Civil Rights Act, it is aiming to improve its signage and reassess its accessibility per Title VI and ADA standards. In collaboration with undergraduate students within the Department of Human Centered Design & Engineering, this project aims to evaluate the accessibility of current park signage and identified effective ways to improve signage accessibility. Our work was guided by the research question: How might we improve the accessibility of signage for the City of Bellevue?




Through conducting field observations and user interviews, data collected on the current experience of City of Bellevue's park signage informed our team's initial redesigned park signage prototypes. Some major themes of existing signs included how they were often text-heavy, poorly placed, and not frequently interacted with. Feedback indicated the need for clearer directions, trail difficulty markers, maps, and better use of symbology for language accessibility. Our initial redesigned park signage prototypes included using clear fonts, type hierarchy, clear color contrast, and consistent symbology. These initial designs were then compared to current park signage to better understand visitor preference and receive diverse feedback. Both the final redesigned park signage prototypes and overall research findings aim to define criteria and goals which can make City of Bellevue's park signage more accessible, safe, and enjoyable for all visitors.

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Team Member Bios

<p>Annie Lu</p> 	<p><u>Expertise:</u> UX design, web development, user research, visual design, marketing</p> <p><u>Interests:</u> Sustainability, accessibility, problem-solving</p> <p><u>Goals:</u> I aim to contribute to the City of Bellevue's accessibility initiatives and improve the current sign designs system. After graduation, I hope to find a role in user experience design, product design, software development, or user research (in no particular order).</p> <p><u>Fun Fact:</u> I enjoy experimenting with vegan cooking and baking!</p>
<p>Mia Oscarsson</p> 	<p><u>Expertise:</u> User research, urban planning, community engagement, project management</p> <p><u>Interests:</u> My interests stem from bringing together user centered design principles and practices to the design of the built environment. I am pursuing a second major in community, environment, & planning at UW.</p> <p><u>Goals:</u> My goal with this project is to create something that I am proud of and enjoyed working on. My personal goal after graduation is to be in a user research or data analyst role in either the government, non-profit, or transportation sector.</p> <p><u>Fun Fact:</u> I have done ballet for 15+ years!</p>
<p>Kelly Tong</p> 	<p><u>Expertise:</u> UX design, data manipulation</p> <p><u>Interests:</u> Connecting people and technology, visual design, and software development</p> <p><u>Goals:</u> I strive to create something helpful for public use and incorporate the design process into my work. After graduation I hope to find a position in the UX design field and continue to innovate.</p> <p><u>Fun Fact:</u> I like engaging in outdoor activities. I've played ultimate frisbee for 10+ years.</p>
<p>Eileen Zhang</p>	



Expertise: UX design, user research, design process methodology.

Interests: Behavioral and social aspects of technology, visual design, design for meaning/hope.

Goals: My goal for this project is to create something that is both meaningful for the public and meaningful for myself, and to have lots of fun while doing so. After graduation I hope to find a role in UX design in the public sector.

Fun Fact: I have a ton of houseplants and I'm currently trying to grow two bonsai from seed (they're about 6 years old).

Project Goals & Outcome

Project Topic

The City of Bellevue Parks and Community Services Department manages 2,700 acres of land, including an extensive network of 80 miles of trails. While the city provides language translation and interpretation as specified in Title VI of the Civil Rights Act, it is aiming to make its signage more accessible per Title VI and ADA standards. The department is open to considerations about font, mounting height, color schemes, symbology, QR codes, languages, braille, and universal design.

This project evaluated the accessibility of current park signage and identified effective ways to improve signage accessibility. We defined accessibility as focusing specifically on language, universal symbology, the ability level of features like trails, and the physical placement of the signs. Through this research, our project team delivered a final research report of our findings across four milestone phases, and a recommended design system for the city's park signage that includes accessibility guidelines.

Target User Population

The project's target population was visitors to Bellevue parks, trails, and community center users (this is not limited to Bellevue citizens). We narrowed our focus for field observations to two exemplary locations: Mercer Slough Nature Park (a trail recommended by City of Bellevue due to some portions being difficult to navigate) and Crossroads Park (a large and popular park). For user research interviews, we looked for people who have visited a Bellevue park, trail, or community center at least once within the past year. And finally, our user research survey was fully open to the public for anyone to respond to.

Utilize Technology for Enhanced Accessibility

Design Challenge & Research Question

Our design challenge question is: How might we improve the accessibility of signage for the City of Bellevue?

Our research questions are as follows:

- How do our users understand what features to visit in a park and the different ways of getting from point A to point B?
- What gaps or barriers in signage and wayfinding keep people from fully enjoying our parks and trails?

Motivation

The issue of accessibility in signage is most important for safety. Signs provide navigation so visitors don't become lost, and they provide emergency hotlines or procedures. Beyond that, signage accessibility is important for inclusivity and user experience. Having accessible signage allows more people to visit and interact with parks and trails, promoting community bonding. Accessible signage also improves the user experience for visitors: because the information on signs is more easily understood, visitors may be more satisfied and comfortable with their time in the park. More broadly, we need to nurture green space and allow people to enjoy the environment we have here in Western Washington. Accessible signage is a part of this effort.

Our team did literature reviews of four sources related to park signage and signage accessibility. The first source, “The Effectiveness of Trail Mitigation and Theory-Grounded Signage in an Economical Approach to Reducing Social Trail Behaviors” [4], covered how effective two techniques, trail mitigation, and theory-grounded signage were in mitigating off-trail visitors (both methods were effective). The second source, “Interpretive by Design: Engaging a Community to Create Interpretive Park Signage” [3], covered how community engagement contributes to the design of a Canadian’s park interpretive signage. The study focused on addressing the wording, photos, framing, or tone of the signage. The third source, “Signage and Wayfinding Design: A Complete Guide to Creating Environmental Graphic Design Systems” [2], covered the prevalence of signage in the built environment. Emphasizing a harmony of designing signage and wayfinding in three aspects: aesthetic design, concise but informative information, and the physical makeup of the sign. The fourth source, “Built Environment Education and Lifelong Learning: How Signage Mediates Self-directed Study about the Built Environment in a Park Setting” [1], covered how signage influences Built environment education (BEE) in a park in Japan. The study highlighted the significance of finding a balance between educational information and cognitive load for signage.

The findings from these sources encouraged us to explore accessibility and find easier interpretations of park signage, as that appeared to be a big piece of confusion for many trail walkers across all four papers. There was also a great emphasis on community involvement from all four sources, so our work was design-focused and aimed to connect the community and design for accessibility as well. Our project bridged the gap between sign design and user experience, encouraging enjoyment of trails through easy-to-understand signs and information.

Methodology

Field Observations

The goal of the field observations was to evaluate the accessibility of current park signage and identify effective ways to improve signage accessibility. By observing our own experience, how others interact with signage, as well as the design of the built environment, we gained a better understanding of what aspects of signage are helpful for visitors to navigate the parks.

Observations were conducted at the following parks for the allotted time from 3/30/2024-3/31/2024:

- Crossroads Park
 - 4 observations, 15 minutes each
- Mercer Slough Nature Trail
 - 1-hour observation along Heritage Loop
 - 1-hour observation along Bellefields Loop

To review detailed field observation protocol, go to [Appendix A](#).

Notes were taken on phones and Word documents, which were then transferred to Miro to conduct thematic analysis. To review notetaking template, go to [Appendix B](#). This is a method used to analyze field observations that involves reviewing observational notes and writing important notes in sticky notes. Then all the sticky notes are reviewed and grouped together to generate common themes across all observations. To review thematic analysis, go to [Appendix C](#). These themes provided our group with context on how park visitors use the signs and what pain points they might be experiencing. This background information drove the next phase of the design which was user interviews.

Limitations

While our field observations provided valuable context and perspective, we were unable to observe many park visitors interactive with the signs themselves. While this is a valuable piece of data itself – that many visitors rarely read the signs – this meant that many of our field observations were reliant on our personal experiences of walking through Crossroads Park and Mercer Slough Nature Trail for the first time. While self-ethnography is a sound and useful research method, it is important to note that our team’s experiences do not encompass all park visitors’ experiences.

Interviews

Our team conducted 30-minute interviews on Zoom with 4 park visitors and 1 park staff; each meeting was facilitated by one team member while another team member took notes. Within the park visitors, we surveyed two user groups: Bellevue Trail Stewards, who are expert trail users, and average park users from diverse and non-English speaking backgrounds. Interviewees were recruited through referral by City of Bellevue employees and a newsletter through the Bellevue Trail Stewards emailing list. Interviews took place from 4/17/2024-4/30/2024.

All participants were informed of the purpose of these interviews and their expected benefits and were asked to consent to anonymized audio recording for data analysis purposes only. Their names were not attached to any data. These audio recordings are stored securely on our OneDrive, which is password-protected and requires two-factor authentication from the University of Washington. All participants were compensated with a \$20 Tango gift card for

their time; this was funded by our team's capstone funding from the Department of Human-Centered Design & Engineering.

We asked two different sets of questions: one set for park visitors, and one set for the park staff. The interview was semi-structured, where the interviewer had the discretion to adjust their questioning to fit the conversation and ask follow-up questions. See [Appendix D](#) for interview questions, [Appendix E](#) for facilitation script, and [Appendix F](#) for notetaking template.

Audio recordings were processed into transcripts with time stamps using Microsoft Word for each interviewee. Interview transcripts were analyzed using affinity analysis. This process involves coding the transcripts, finding common codes/themes throughout the transcripts, and developing generalized findings from those codes. Interview transcripts were coded by one group member using Excel and reviewed by an additional group member to ensure consistency. The coding guidelines were as follows:

- The transcript should be broken up into smaller “chunks” of text based on these criteria:
 - The participant has spoken for longer than 3-4 sentences and the topic is the same.
 - The participant switches topics.
- Codes should describe or summarize each of these “chunks”, not create categories.

These codes were then reviewed by the team to identify major themes evident throughout multiple interviews, which helped create our initial redesigned park signage prototypes.

Limitations

A limitation of our interviews was we only interviewed one park ranger. In addition, our expert interviewees were sourced from the same population sample, Bellevue Trail Stewards, and thus may not capture the experiences of non-Trail Steward experts. Finally, it is worth noting that because we have five participants, this limits the generalizability of our findings. These findings offered inspiration and advice for our team's next steps in designing signs and for the City of Bellevue, but it's important to keep in mind these viewpoints are not be representative of all visitors.

Survey

After creating initial redesigned park signage prototypes using the information and feedback collected from field observations and interviews, our team used a survey to do some A/B testing and compare our new conceptual signage to the current City of Bellevue's park signage. To review survey questions, go to [Appendix G](#). Questions aimed to compare the effectiveness and clarity of the message being conveyed through multiple-choice questions while also providing a space for short answer responses by consistently allowing respondents to elaborate on why they selected a specific response for the multiple-choice question.

The survey was created using SurveyMonkey and recruitment was conducted by advertising the survey on the City of Bellevue website as well as the City of Bellevue's Parks & Community Services newsletter. It received 136 responses after being publicly available from 5/14/2024 to 5/21/2024. With a large percentage of respondents consistently preferring our team's redesigned park signage prototypes in the multiple-choice questions, our team focused the survey analysis on the short answer responses to get constructive feedback on how to improve our prototypes.

This included reviewing the short answer responses in Excel using the following criteria:

- Divide short answer responses by the sign type that they were providing feedback on.

- Read through all short answer responses for one sign type once.
- Read through all short answer responses for one sign type a second time and highlight the major themes or comments that stood out.
- Add a comment at the top of the Excel sheet stating what are the main ideas that consistently showed up.

After analyzing the short answer responses, our team discussed major themes and identified what feedback we would implement in our final redesigned park signage prototypes and our design system.

Limitations

The survey analysis largely focused on short answer responses – which were optional in our survey and ranged from a response rate of 23%-75% depending on the question. This meant that potentially not all respondents were considered when analyzing the data. For example, an individual might have only responded to the multiple-choice questions without filling out any short answer responses.

Results

Field Observations

Crossroads Park

Overall, Crossroads Park **provides abundant informational signs** for visitors. This includes the park guideline rules, leash & scoop signs for dog owners, and navigation wooden posts to direct people to different areas of the park.



Figure 1. Example signage showing City of Bellevue sign branding (Sign photography sourced from City of Bellevue shared folder and captured by capstone team members).

The primary concern with signs at Crossroads Park is there are **little to no interactions with the current signs**. The park guideline rule signs are located at the entrances of the main area next to the parking lots. These signs are text-heavy with little text hierarchy to structure and organize the information. Furthermore, the icons at the bottom of these signs are not directly related to the information provided. The placement of some signs (no skating area) is at foot level which is easy to miss.

Mercer Slough Nature Park

Overall, the Mercer Slough Nature trails **have few caution, location indications, and navigation signs** (at fork in the roads and throughout the trail). However, the reason behind minimal signage is to avoid making it look like a formal or human-influenced landscape. Park visitors want to **immerse themselves in a vernacular, natural landscape and explore**. Besides the steep paths near the entrances of Bellefields Loop, both loops are relatively easy and short to traverse.



Figure 4. Example signage from Mercer Slough Nature Park. 4a (left) shows an educational sign about habitats and wildlife. 4b (right) shows a wooden bollard with a trail name and directional information to other landmarks in the park. (Sign photography captured by capstone team members.)

Mercer Slough Nature Park has consistent educational signage along both trails and entrances. The main issue regarding signage from both the Bellefields Loop and Heritage Loop at Mercer Slough Nature Park is that the **wooden bollards, functioning as trail markers providing directionality and distance, were hard to understand**. The directions appeared contradictory because directions were provided on multiple sides of the bollards. Additionally, a park ranger explained the wooden bollards should have identifying **numbers and emergency contact information, but none of us were able to find that information**. This could pose wayfinding and safety issues, especially for those who may not be as familiar with the trails.

In Heritage Loop, there were areas where the **trails were either steep, muddy, or a combination of both**. Given these observations were done the day after it rained, having warning signage or indicators in front of these trails may lessen the chance of an accident occurring due to these conditions. For example, a permanent sign indicating the trails around the north parking lot are steep and hard to traverse may help visitors navigate to another parking lot.

Interviews

Improved Signage Information

Consistent among expert users, average users, and park rangers, there were identifiable opportunities for improvement of park signage. The following list illustrates the most impactful ideas brought up by interviewees:

- For all parks, having clear signage directing users to nearby **bathrooms**.
- For trails, signage that identifies **elevation or trail difficulty** to better match users' expectations when walking trail parks.
- For wayfinding signs on trails, the **inclusion of maps** would be helpful for users to orient themselves within the park.

- For wayfinding signs, having information on relevant **street names** would be helpful for users to orient themselves.

The interviewees critiqued the park guidelines sign during the interview, which led to specific design recommendations related to the park guidelines sign. These common ideas that were brought up by multiple interviewees include:

- Identifying the **motivation** or reasoning for park guidelines, and ensuring users understand why the guidelines are valuable so there is a better chance of them being followed.
- Using **type hierarchy** to visually communicate important information.
- Improved **symbolology** that clearly relates to the rules outlined in writing on the signage.
- Colors that **contrast** well for greater accessibility, ease of use, and consistency over time.


MyBellevue App

Expert users' have high engagement with MyBellevue app, illustrating an opportunity to leverage this by **creating a category in sign reports encouraging people to “report signage that is inaccessible, hard to read, and/or incorrect”**. Currently, the app has categories to report sign problems. However, due to the intent of the MyBellevue app reporting system, users may assume reports are only for broken or vandalized signs. Leveraging the MyBellevue app reporting system to understand the effectiveness of park signs, might help the City of Bellevue **crowdsource data to improve signage accessibility**.

Database of Park Signs

Additionally, a **database of park signs** would vastly help understand the current state of the city's park signage. Collecting data on park signs at multiple parks in the City of Bellevue such as their location and age, could **help further the argument for sign improvements and keep track of when signage is updated**. This work could be executed through any geographic information system (GIS) surveying tool, such as ArcGIS Survey123.

Park Guidelines Sign (One Sign)

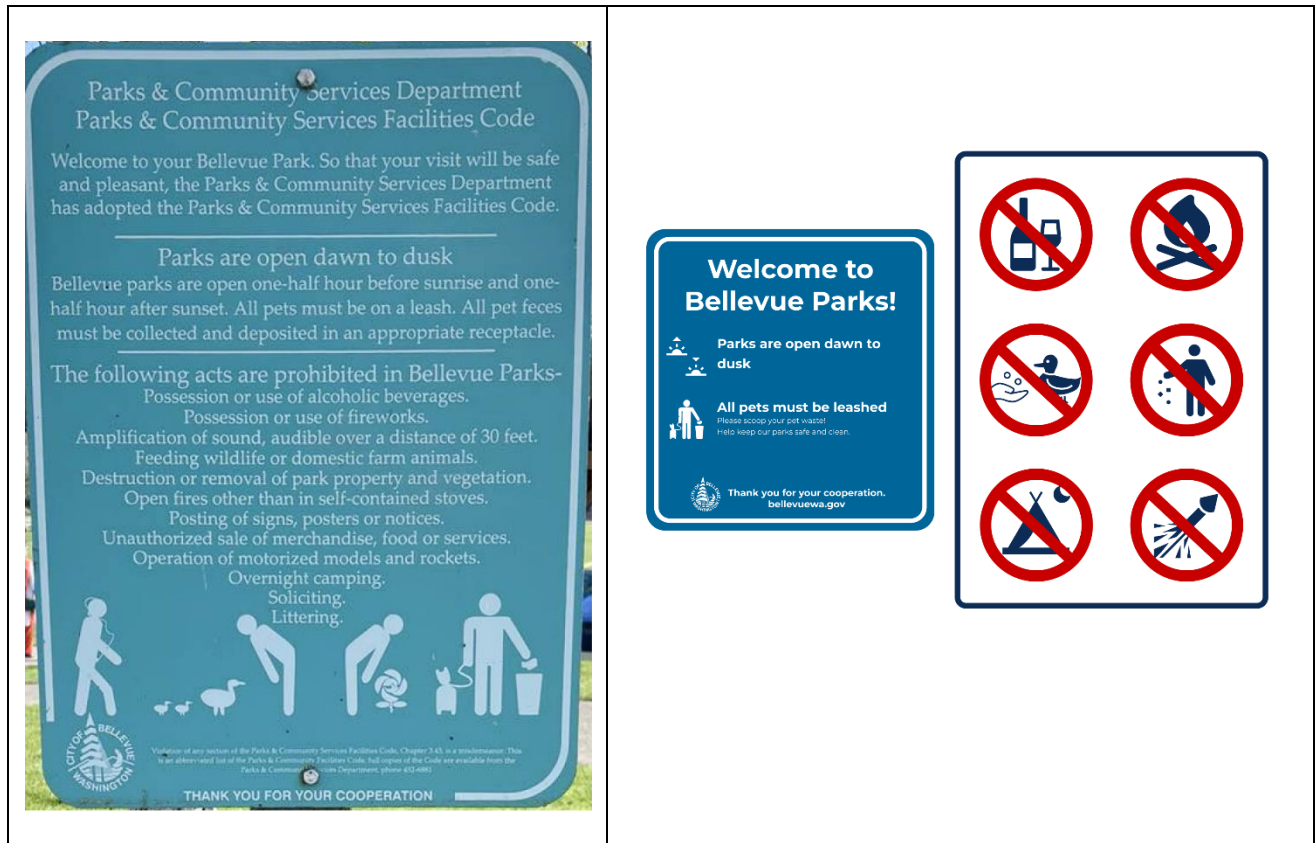
Current Sign	Conceptual Sign
 <p>The current sign is a vertical rectangular sign with a light blue background and rounded corners. It features a dark blue header with the text 'Parks & Community Services Department' and 'Parks & Community Services Facilities Code'. Below this, a paragraph welcomes visitors and mentions the adoption of the code. A section titled 'Parks are open dawn to dusk' states that parks are open one-half hour before sunrise and one-half hour after sunset, and that all pets must be on a leash and their feces collected. A list of prohibited acts follows, including possession of alcohol, fireworks, amplification of sound, feeding wildlife, destruction of property, open fires, posting of signs, unauthorized sale of merchandise, operation of motorized models, overnight camping, soliciting, and littering. At the bottom, there are icons for a person walking a dog, a person feeding a bird, a person using a grill, and a person using a trash can. The sign also includes the City of Bellevue logo and a 'THANK YOU FOR YOUR COOPERATION' message.</p>	 <p>The conceptual sign is a vertical rectangular sign with a dark blue background and rounded corners. It features a white header with the text 'Welcome to Bellevue Parks!'. Below this, two sections with icons and text provide information: 'Parks open dawn to dusk' (one-half hour before sunrise and one-half hour after sunset) and 'All pets must be on a leash' (please scoop your pet waste). A section titled 'The following acts are prohibited:' lists six prohibited acts with corresponding icons: No possession or use of alcohol, No open fires, No feeding wildlife, No littering, No overnight camping, and No possession or use of fireworks. The sign concludes with a 'Thank you for your cooperation' message and the website 'bellevuewa.gov'. At the bottom, there is a small disclaimer about the sign being an abbreviated list of the Parks and Community Services Facilities Code.</p>

User Feedback

- Likes conceptual signage due to **less text and use of symbols** for language accessibility.
- Not all of the symbols in the conceptual signage are **universal symbols**.
- In conceptual sign, the red crossing out could be thinner so the symbol can be viewed better.
- Not all of the content from the current sign was transferred to the conceptual one.
- More contrast using different colors? Blue, white, and green is common in PNW.

Park Guidelines Sign (Two Signs)

Current Sign	Conceptual Sign
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User Feedback

- Wants **captions** for the symbols.
- **Preference for one sign** rather than two separate signs.
- Likes the clarity with less text for the new sign.
- Missing all the prohibited acts.

Pet Rules Sign

Current Sign	Conceptual Sign

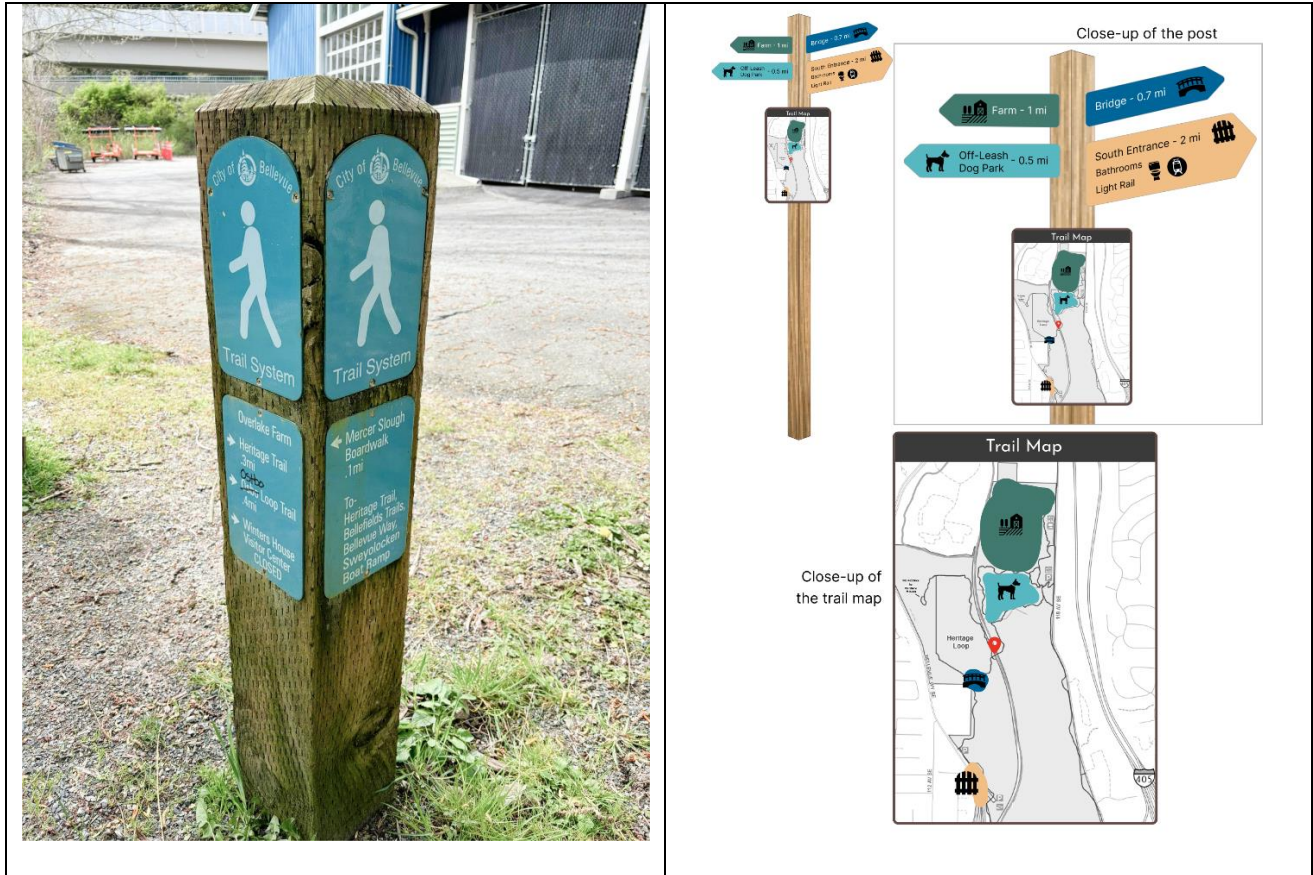


User Feedback

- **Avoiding punitive language** and explaining why picking up after dog is a good thing.
- Have a trash can.
- Emphasizing the **parks code** that relates to this rule (text is too small on the bottom).
- Evaluate color contrast.

Wayfinding Sign

Current Sign	Conceptual Sign





User Feedback

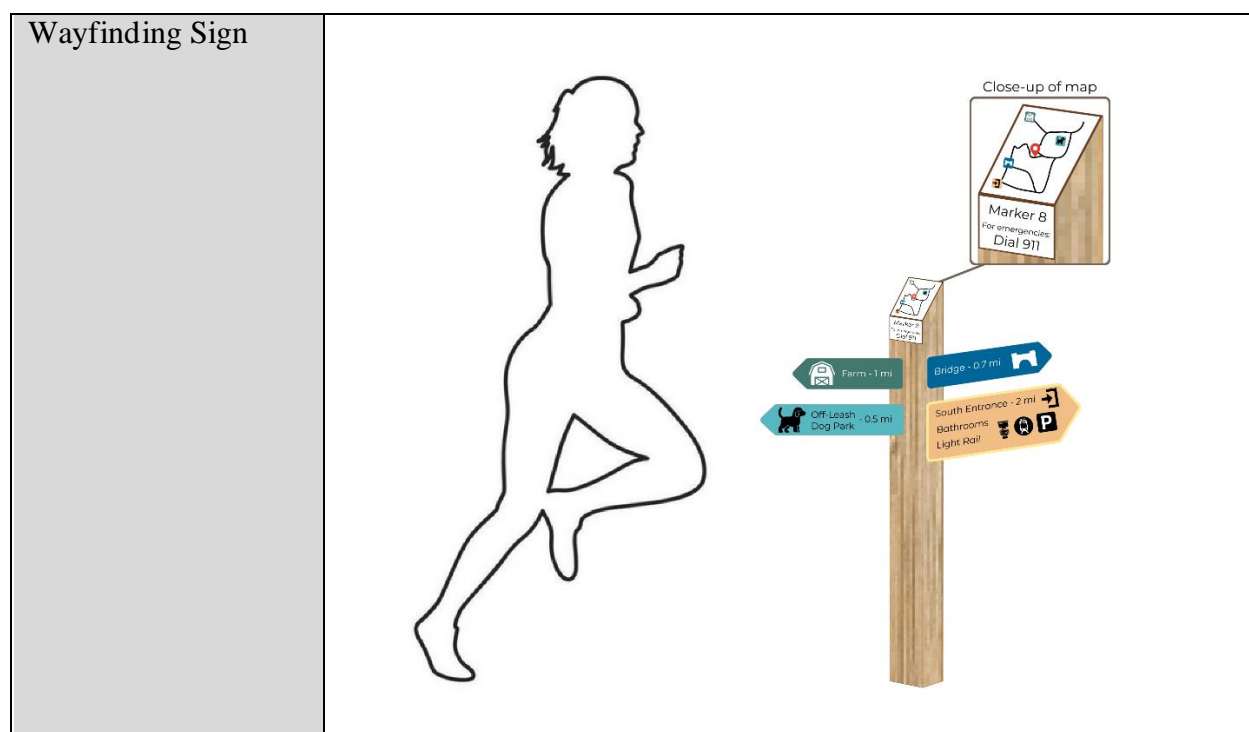
- Didn't like height, shorter hip-level height is easier for kids and visibility.
- Color coding was confusing for some while others liked it. Certain participants noted wanting greater contrast.
- The visual map's color coding makes it harder to see the map itself. Symbols/color coding of important landmarks like bathrooms would help.
- Felt the arrows would be easily moved and might not accurately point to the correct direction.
- Mentioned vulnerable to vandalism.
- Wanting to see emergency contact information.

Conclusion

Final Park Signage Prototypes

Alongside these final park signage prototypes, our team also finalized a park signage design system that summarizes our research findings in a more visual format. View the design system [here](#).

Park Guidelines Sign	
Pet Rules Sign	



Final Recommendations

The following are recommendations on how to improve park signage content based on summarizing the findings of all user research methods conducted:

Simplify and Standardize Signage Content	<p>Action: Reduce text-heavy content and use concise, clear language.</p> <p>Rationale: Feedback indicated that visitors often found existing signs overwhelming and difficult to read. Simplifying text and standardizing the format across all signs will improve readability and comprehension, making it easier for visitors to navigate and understand park rules and information.</p>
Enhance Visual Hierarchy and Contrast	<p>Action: Implement a clear visual hierarchy with distinct typefaces, font sizes, and color contrasts.</p> <p>Rationale: Improved type hierarchy and contrast will make important information stand out, aiding visitors, including those with visual impairments, in quickly finding and understanding critical details. This includes using high-contrast colors and clear fonts that are easy to read.</p>
Incorporate Universal Symbolology and Multilingual Support	<p>Action: Use universally recognized symbols and provide information in multiple languages.</p> <p>Rationale: Symbols can transcend language barriers and quickly convey essential information. Multilingual support ensures that non-English speaking visitors can access and understand park information, aligning with Title VI requirements for language accessibility.</p>

Include Trail Difficulty and Safety Information	<p>Action: <u>Add trail difficulty markers, elevation information, and safety warnings on relevant signs.</u></p> <p>Rationale: Providing clear information on trail difficulty and potential hazards helps visitors choose appropriate trails and prepare adequately, enhancing safety and enjoyment.</p>
Educate Visitors on Park Guidelines	<p>Action: <u>Explain the motivations behind park rules and guidelines through signage.</u></p> <p>Rationale: Providing context for park rules can improve compliance and foster a greater understanding of the importance of these guidelines, enhancing overall park management and visitor experience.</p>

The following are additional recommendations on how to park signage unrelated to the content on the signs itself based on summarizing the findings of all user research methods conducted:

Improve Placement and Visibility of Signage	<p>Action: <u>Position signs at eye level, ensure they are well-lit, and place them at strategic locations such as trailheads, intersections, and near facilities like restrooms.</u></p> <p>Rationale: Proper placement enhances the likelihood that visitors will see and interact with signs. Positioning signs at eye level and ensuring they are visible even in low light conditions will improve usability and safety, particularly for those navigating the parks for the first time or in adverse weather conditions.</p>
Encourage Feedback and Continuous Improvement	<p>Action: <u>Use the MyBellevue app to allow visitors to report signage issues and provide feedback on accessibility.</u></p> <p>Rationale: Leveraging the MyBellevue app for feedback on signage effectiveness and accessibility can help the City of Bellevue crowdsource data to continuously improve park signage based on user experiences.</p>
Develop a Comprehensive Signage Database	<p>Action: <u>Create and maintain a GIS-based database of all park signs, including their locations, conditions, and last update.</u></p> <p>Rationale: A centralized database will help manage and track the status of park signs, facilitating regular maintenance and updates to ensure all signs meet accessibility standards.</p>

The following are potential next steps on other methods of how to improve park signage content that were not explicitly explored within this project, but might be important themes for the future that showed up in our research:

Utilize Technology for Enhanced Accessibility	<p>Potential Action: <u>Integrate QR codes on signs that link to additional information, maps, and multilingual resources.</u></p> <p>Rationale: QR codes can provide access to more detailed information without cluttering the physical signage. This also allows for real-time updates and accessibility enhancements, such as audio descriptions or interactive maps.</p>
Enhance Emergency Information Accessibility	<p>Potential Action: <u>Include emergency contact information and park identifiers on all major signs.</u></p> <p>Rationale: Easily accessible emergency information is crucial for visitor safety, ensuring that help can be quickly reached in case of an incident.</p>

Appendix A: Field Observation Protocol

In getting ready for each session:

- Set up document for taking notes
- Review the areas of focus

At the beginning of each session:

- Wrote the details of the session (time, date, location)
- Start timer (15 min intervals for Crossroads; 1 hour for both loops at Mercer Slough)

During each session:

- Walk around area and observe (with priority from top to bottom)
 - Crossroads Park
 - People interacting with the signs
 - Families and children
 - Placement of signs
 - Accessibility efforts
 - Environment/landscape
 - Mercer Slough
 - Environment/landscape
 - Sign placement
 - People interacting with the signs
 - Accessibility efforts

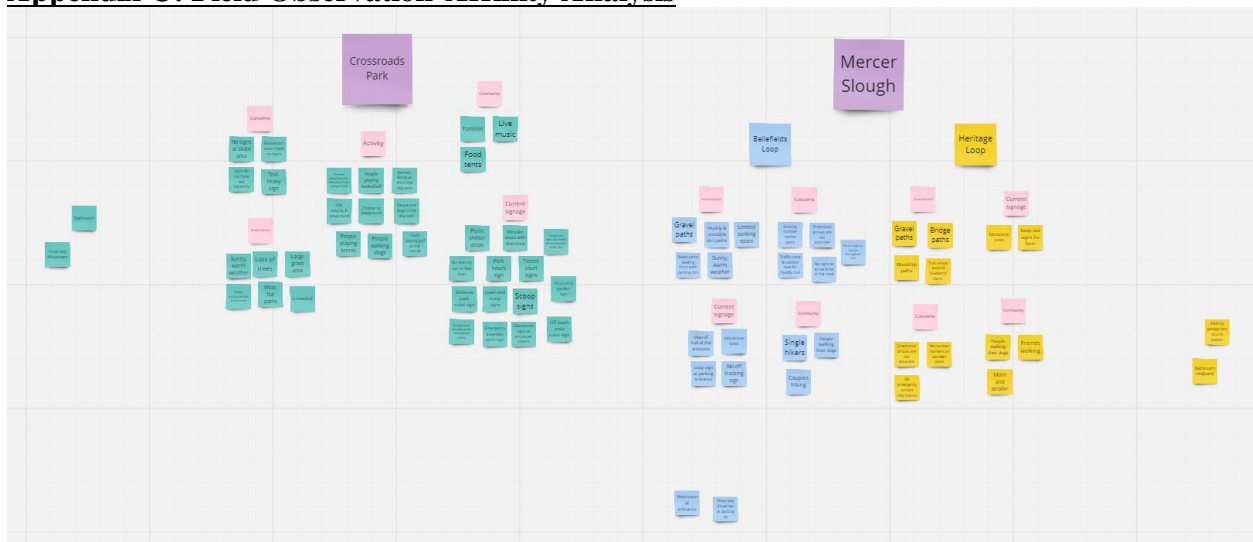
At the end of each study session:

- Write a brief summary of the session
 - Highlight recurring themes

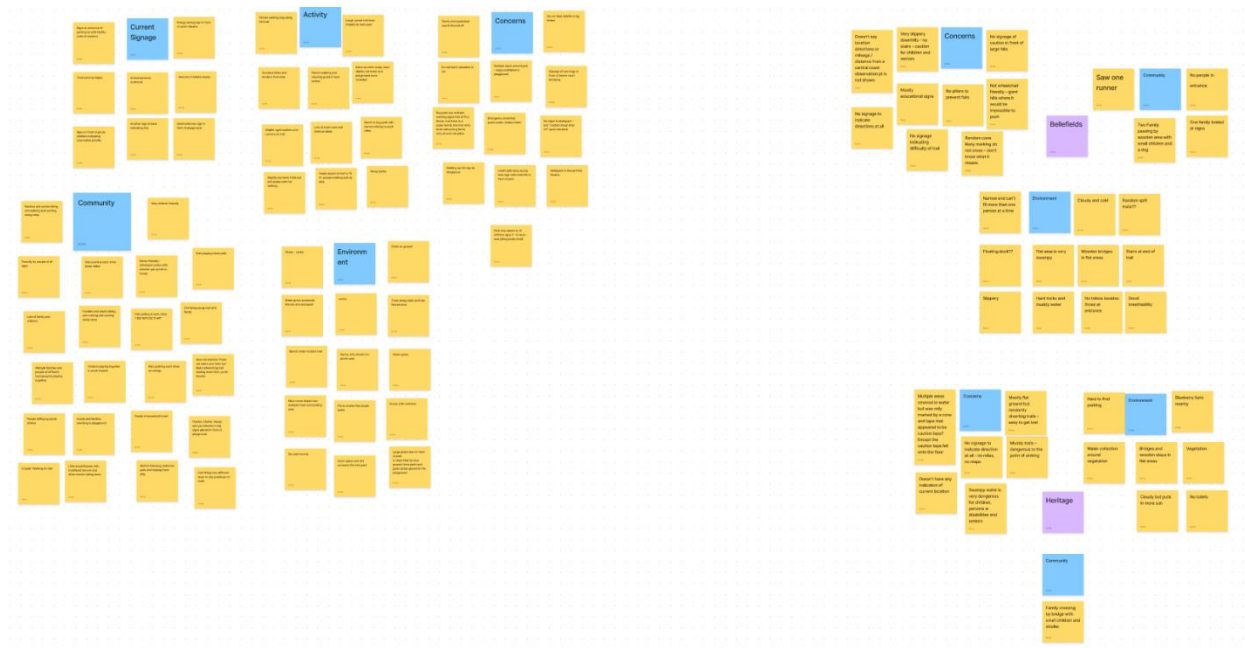
Appendix B: Field Observation Notetaking Template

Park Name:				
Date:				
	Area/Zone Description: Time:	Area/Zone Description: Time:	Area/Zone Description: Time:	Area/Zone Description: Time:
People				
Environment				
Weather				
Accessibility				
Signage				

Appendix C: Field Observation Affinity Analysis



Link to Miro board



Link to Figma board

Appendix D: Interview Questions

Parks Visitors Questions

1. Which Bellevue Park or parks do you go to most often?
 - a. ** if they say Crossroads or Mercer, pick that for the rest of the interview. If not, pick randomly. **
2. Walk me through a typical visit that you have at the [park]?
 - a. How did you navigate that park?
 - b. **TRAIL stewards** As a trail steward, you are likely very familiar with the trails. Think about your earliest experience before you became familiar with the trails though: Did the signs play a role in your experience? (Whether they say yes/no: Tell me more)
 - c. Did the signs play a role in your experience?
 - d. What do you like about that park?
 - e. What do you dislike about that park?
3. (if they go to different Bellevue parks) How do signs at [x Bellevue park] differ/are similar from [y Bellevue park]?
4. What do you like about the signs around [park]?
5. What do you dislike about the signs around [park]?
6. This is the park guidelines sign, which shows park information and what activities aren't allowed at the park. What stands out to you about this sign?



- a.
7. Are there signs that have caught your attention?
8. **Reasoning: Find signs they paid attention to**
9. What, if anything, would you change about the signs?
10. Anything else you would like to share?
11. **If they give a sign suggestion** how would you prefer this information to be conveyed to you?

Bellevue Parks Staff Questions

1. What parks/trails do you work at?
2. What's your day-to-day like with park visitors?

- a. What are the most common questions or issues visitors have?
3. In your experience, what types of park signage do visitors find most helpful?
4. What are the biggest issues you have with park/trail navigation?
 - a. (If they say they, as a ranger, don't have issues, ask about issues visitors have)
5. Are there any challenges you face in maintaining or updating park signage?
6. Are there any specific areas within [your] park where signage seems to be lacking?
7. How might you encourage more people to come to the parks?
8. What are your thoughts on the current state of trail safety at Bellevue Parks?
9. As an employee, are there any suggestions you have for improving the parks?

Appendix E: Interview Facilitation Script

Introduction

Good morning/afternoon/evening [Name]!

Thank you for joining us today for a 30 minute interview with our capstone team!

My name is [] and I'll be conducting research on behalf of UW's HCDE department for our capstone project in collaboration with the City of Bellevue.

Purpose

The purpose of this interview is to assess the accessibility of their park and trails signs. Our goal is to design updated park signs that take into account visitor experiences and accessibility needs.

**** IF PARK RANGER ****

We're glad you signed up because we're hoping to learn what it's like being a park ranger and working with these signs.

**** IF PARK RANGER ****

We believe your input will be valuable in helping us understand how we can improve park and trail experiences for visitors and employees alike.

Confidentiality

My notetaker is [name] and she will be taking notes throughout this entire [meeting]. Before we proceed, we'd like to audio record this [meeting]. This audio recording will only be used for referencing your inputs for the duration of this academic experience working with the City of Bellevue. Only your voice will be recorded, and your name won't be associated with this data. At any time during the interview, you have the option to opt out.

Do you have any questions so far?

As far as the interview goes, feel free to ask clarifying questions at any point during this interview if you need.

Now, let's get started. Do you consent to being audio-recorded for this interview?

**** START INTERVIEW ****

**** END RECORDING ****

End of Interview Logistics (leave at least 5 minutes at end)

Thank you for taking the time to interview with us! Your contributions are very valuable for our project. As stated in the email, you will be compensated with a \$20 gift card from Tango, which gives you a bunch of vendors to choose from, like REI, Macy's, Target, and others. We'll email you a code that allows you to access the Tango card rewards catalog, so keep an eye out for an email from us!

Do you have any questions about this process?

Just to confirm, is the email [email]?

The code will be sent to this email in a week or two. If you did not get your gift card, please send a follow up email to us *put email(s) in chat*. Also, please email us if you have any questions or concerns.

We really appreciate your time today! Thank you [participant name] and have a good day! / rest of your evening!

Appendix F: Interview Notetaking Template

Date:	Participant: S1 [for park staff] / V1 [for park visitor]
Time:	
Question 1:	[Start a timer at the beginning of the meeting so you know times, and then record significant timestamps as needed]
Question 2:	
Question 3:	

Appendix G: Survey Questions

Park Guidelines Sign (One Sign)

1. Which park guidelines sign did you find clearer and easier to understand?*
 - a. Multiple Choice
 - i. Current sign
 - ii. Conceptual sign
 - iii. Neither sign is clear/and or easy to understand
 - iv. Both signs are clear/and or easy to understand
 - b. Why? (Option to elaborate on choice)
2. Which park guidelines sign do you think would be more effective in encouraging visitors to follow the rules?*
3. Which park guidelines sign would you prefer to see displayed in Bellevue's parks?*
4. Do you have any additional feedback regarding the current sign and/or the conceptual design?

Park Guidelines Sign (Two Signs)

5. On the conceptual design, would you find it helpful to have text captions under each icon? (For example, "No Littering" and "No Fireworks")
 - a. Multiple Choice
 - i. Yes
 - ii. No
 - iii. Don't know
 - b. Why? (Option to elaborate on choice)
6. Which park guidelines sign did you find clearer and easier to understand?
 - a. Multiple Choice
 - i. Current sign
 - ii. Conceptual sign
 - iii. Neither sign is clear/and or easy to understand
 - iv. Both signs are clear/and or easy to understand
 - b. Why? (Option to elaborate on choice)
7. Which park guidelines sign do you think would be more effective in encouraging park visitors to comply with park rules?
 - a. Multiple Choice
 - i. Current sign
 - ii. Conceptual sign
 - iii. Neither sign is effective

- iv. Both signs are effective
- b. Why? (Option to elaborate on choice)
- 8. Which park guidelines sign would you prefer to see displayed in Bellevue's parks?
 - a. Multiple Choice
 - i. Current sign
 - ii. Conceptual sign
 - iii. Neither sign
 - iv. Either sign
 - b. Why? (Option to elaborate on choice)
- 9. Do you have any additional feedback regarding this conceptual design?

Pet Rules Sign

- 10. Which park guidelines sign do you think would be more effective in encouraging park visitors to comply with park rules?
 - a. Multiple Choice
 - i. Current sign
 - ii. Conceptual sign
 - iii. Neither sign is effective
 - iv. Both signs are effective
 - b. Why? (Option to elaborate on choice)
- 11. Do you have any additional feedback regarding this conceptual design?

Wayfinding Sign

- 12. Which wayfinding sign do you find clearer and easier to understand?
 - a. Multiple Choice
 - i. Current wayfinding signage
 - ii. Conceptual wayfinding signage
 - iii. Neither sign is clear/and or easy to understand
 - iv. Both signs are clear/and or easy to understand
 - b. Why? (Option to elaborate on choice)
- 13. Which wayfinding sign would you prefer to see displayed in Bellevue's parks and on Bellevue's trails?
 - a. Multiple Choice
 - i. Current wayfinding signage
 - ii. Conceptual wayfinding signage
 - iii. Neither sign
 - iv. Either sign
 - b. Why? (Option to elaborate on choice)
- 14. How do you typically use wayfinding signage to help you navigate a park or trail? What challenges do you typically face when navigating Bellevue's parks or trails?
- 15. How would you rate the effectiveness of the color coding of the conceptual wayfinding signage design?
 - a. 1 - Very ineffective
 - b. 2 - Ineffective
 - c. 3 - Neither effective or ineffective
 - d. 4 - Effective
 - e. 5 - Very effective

16. Do you have any additional feedback regarding this conceptual design?

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