# Guiding Special Collections Users through Multiple Discovery Platforms

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For: Boston Public Library

## Executive Summary

Our team conducted usability testing and a user survey to get feedback from current BPL patrons (familiar users) as well as those from a larger audience (unfamiliar users) in order to better understand and design for user needs. Through our research and analysis, we gained deeper insights that were both surprising and helpful. We were able to compile various common trends and themes from our users' experiences using the Special Collections website and attempting to request materials. Some main areas that we found needing improvement were: general navigation issues with finding the Search & Discover page alongside linked pages, difficulties finding where to get help, unclear images and descriptions, and confusion with the discovery tools and item request features.

In addition to our analysis we further empathized with our users through personas, value propositions, and use case scenarios. In this report, we will highlight these main methods and research insights from the past few weeks based on the current state of the online catalog search. To finish, we will list out requirements based on our main findings to focus in on certain areas for our prototype iterations. These include business requirements for BPL staff and library standards, user requirements for ease of use and accessibility, and functional requirements for consistency on the online platform.

## Project Description

The Boston Public Library mission is dedicated to four main areas, including "reading and literacy, spaces and programs, reference and instruction, and special collections and cultural heritage."[1] In order to uphold these principles, the Special Collections department wishes to improve their digital catalog search and guide patrons to their desired research materials. During the Covid-19 pandemic, the library took initiative to make more of their materials available digitally and thus began the long process of adding a variety of items to their digital catalogs. With this came updates and increased usage of the online search system and a need to make Special Collections more accessible to patrons, which was one of the platforms that was digitized.

BPL currently uses several discovery systems in order to organize their Special Collections materials digitally. This has caused issues wherein patrons are unable to identify different materials and artifacts that they are looking for. Currently, these platforms cannot be unified into a single one, so the goals is to improve the online navigation experience of the BPL Special Collections website to inform users about what these unique platforms contain and how they work, so it's been the case that individuals,

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[1] "About the BPL," Boston Public Library, accessed January 11, 2023., https://www.bpl.org/about-the-bpl/.

especially those new to the platforms, struggle with using and navigating the systems.  In the past, there was not a condensed online space that informed users about what these unique platforms contain and how they work, so it's been the case that individuals, especially those new to the platforms, struggle with using and navigating the systems. Thus, Special Collections' staff have often had to provide guidance, which can be time-consuming. As of now, however, the BPL has attempted to resolve this issue by creating a web page ([www.bpl.org/special-collections/search/](www.bpl.org/special-collections/search/)) that describes and provides links to each of their discovery platforms.

## Project Goals

For this project, our primary goal is to provide a way for the BPL stakeholders to more easily access and navigate Special Collections materials offered through the multiple discovery platforms, which has discoverability effects on users as well as having impact on how staff assist users in finding content. This should allow users to spend less time figuring out the search system and more time accessing their desired content.

Another goal is to center our research and design around user needs and complaints. By conducting extensive user research, we hope to highlight the primary concerns of current BPL patrons. We will attempt to measure the success rates of users when finding desired materials and aim to make this process more intuitive.

Our final goal is to improve the experience of Boston Public Library staff wherein they will be able to spend less time directing patrons on how to use the Special Collections search catalog. One of the aims of our project is to ensure that the staff are able to similarly navigate the Special Collections pages easily.

## Research Goals
1. Gain insight on what motivates familiar users to use the Special Collections over other resources and positive aspects of the website
2. Better understand how familiar users go about finding and requesting materials
3. Better understand first impressions and assumptions of new users to the Special Collections search
4. Get a user flow that demonstrates how people (new and returning) find and request materials
5. Determine issues and pain points that familiar and new users encounter

## Research Questions

- What motivates users to access the BPL Special Collections materials?
- Are users satisfied with the current process for finding and requesting Special Collections items online?
- Do new users find the BPL Special Collections search intuitive? Can they successfully locate and request to access these materials either digitally or in the Reading Room?
- What are the main pain points of using the current Special Collections search?
- Can new users figure out how to ask for help if needed?

## Research Plan & Methodologies

The research methods for this project include an online survey and usability testing. Surveys were sent out to familiar users who were identified as willing to participate in future research by BPL. A QR code link was also posted in the Reading Room at BPL. 9 usability tests were conducted by the research team with users unfamiliar with the BPL website using the current Special Collections search. These included students at the University of Michigan, family members, and UMich Special Collections librarians. Recruitment was conducted using convenience sampling and email outreach to UMich library staff.

### Familiar Users

Familiar users are BPL Staff and BPL patrons, specifically authors, artists, and scholars who have successfully identified what they are looking for and made it into the in-person reading room. BPL used a list of people who have successfully made it to the in-person reading room in order to email out the survey to patrons. Additionally, they sent out the survey to other BPL staff members. The survey opened 1/25/2023 and is still open as of the creation of this report.

### Purpose

The research questions were:
- What motivates users to access the BPL Special Collections materials?
- Are users satisfied with the current process for finding and requesting Special Collections items online?
- What are the main pain points of using the current Special Collections search?

Because familiar users have experience navigating the Special Collections page and understand how they work, the survey questions focused on gaining insights into familiar

users' thoughts, issues, and pain points from their past experiences rather than identifying specific usability issues with the Special Collections page.

## Methodology

To learn more about familiar users' thoughts, issues, and pain points with using the Special Collections page, we used online surveying as our research method utilizing Qualtrics. Surveying allowed us to combat location constraints to be able to gain insight from patrons and staff currently in Boston and using BPL services. We recruited members from the list of BPL patrons given to us by the Special Collections coordinating team. The questions asked whether patrons have been satisfied with their experience with the online search catalog, what aspects they like, what parts they found confusing, and how they have gotten help if needed (see survey link for entire list of questions).

## User Research Materials

In order to conduct our surveys, we prepared a survey design that further details our goals, research objectives and the layout with specific questions. After revising our surveys according to instructor and peer feedback, we used Qualtrics to build the survey for optimal data analysis features. The survey link was sent out twice (once per week) by BPL staff to their willing participant list and once to BPL staff through mass email with a direct link.

## Unfamiliar Users

Unfamiliar users are BPL patrons who don't have previous experience with navigating the department's corresponding website. These individuals include students, scholars, authors, and artists who are interested in using BPL's Special Collections.

## Purpose

The research questions that we are focusing on:
- Do new users find the BPL Special Collections search intuitive? Can they successfully locate and request to access these materials either digitally or in the Reading Room?
- What are the main pain points of using the current Special Collections search?
- Can new users figure out how to ask for help if needed?

These users had varying experience using library services, especially with Special Collections and Reading Room services for in-person appointments. Their unfamiliarity with using the website means that they had no background on how the discovery platforms or Reading Room appointment creation for BPL worked. As such, our team

wanted to focus on gaining insights on their experience with attempting these actions and any usability issues they face while using the Special Collections webpages for the first time.

**Methodology**

Regarding unfamiliar users, conducted usability testing combined with additional follow-up questions that match an interviewing research method. We recruited interviewees through convenience sampling due to time constraints and difficulties with reaching out to those living in Boston remotely. We tried to find users with varying degrees of knowledge with library and technical systems, ranging from working adults outside the university, students with research experience, to Special Collections Librarians at the University of Michigan. Questions focused on qualitative observations and initial impressions of the search catalog (see link to script for specific questions).

**User Research Materials**

To conduct our usability tests, we created a script that explains our list of tasks, research objectives and follow-up questions after the tests are complete. We conducted interviews both in-person with close observation of task completion and remotely on Zoom with screen sharing capabilities. All interviews were recorded and several of the sessions had two team members (one interviewer and one note taker). Tasks included finding specific areas of the Special Collections page, completing specific search tasks, and scheduling a Reading Room appointment.

## Research Results

**Participant Demographic Summary**
- Familiar users (surveys):
    - BPL staff
    - BPL patrons who have successfully completed a Reading Room visit (emails saved by staff)
    - BPL patrons who have recently visited the Reading Room (QR code in physical library)
- Unfamiliar users (usability tests/interviews):
    - University of Michigan students
    - University of Michigan Special Collections librarians
    - Adults with less research/library experience

**Key Findings**

After releasing our survey to familiar users and BPL staff as well as conducting nine usability tests with unfamiliar users, we compiled our data in Google spreadsheets (refer to Appendix C). Below are some of our findings for each research method (which can be found in Appendix C):

**Surveys**

| Theme | Findings |
|---|---|
| Finding materials/discovery tools | <ul><li>Familiar users experience difficulties with filtering through collections and accessing information quickly<ul><li>"I had trouble understanding how to accomplish the several steps to understand what was in there."</li></ul></li><li>Familiar users find that clear discovery tool headers and descriptions are majorly important</li><li>Images and descriptions may not be recognizable to all demographics<ul><li>"I'm old enough to know what a card catalog is and how it works, but I wonder if others are..."</li></ul></li></ul> |
| Getting Help | <ul><li>Several users either access or search for tips on the Special Collections web pages and/or talk to a librarian, archivist, or curator</li></ul> |
| General Navigation issues | <ul><li>Users believe that BPL's Special Collections web pages are mostly easy to navigate, but general confusion about Special Collections' tools still exists<ul><li>"I think the images for the different departments and research centers help communicate their purpose. The differences between the images for "archives.bpl.org," "Research</li></ul></li></ul> |

| | Catalog," and "Collections A-Z" is rather subtle and could be clearer, though I admit I do not know how I would suggest doing so."<br>○ "Sometimes they provide very efficient access to rare materials."<br>○ "Satisfactory, but not as accessible as other archival searches"<br>● Users don't believe that Special Collections is featured prominently on the BPL main website |
|---|---|

## Usability Tests / Interviews

Based on the below rainbow spreadsheet and comments from our participants, we have developed both quantitative and qualitative findings that will help inform our design requirements.

| Usability Test/Interview Rainbow Spreadsheet | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Task | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | General Comments / Observation |
| | Jason | Alex | Maddie | Alex | Jason | Dani | Dani | Alex | Maddie | |
| | | | | | | | | | | |
| Navigated to Special Collections page from BPL Home | X | | X | | | | | | | P3 - Took a long time, scrolled through whole page, tried footer first and tried "visit" link before finding it under "Books & More" |
| Navigating to the "Search & Discover" page (finding the Discovery Tools) | | | X | X | | | X | | | P7 - Went to Use Our Collections page because they thought it made more sense to go there to search for items |
| Found searching guide | | | | | X | | X | X | | P7 - Went to archives.bpl.org and thought searching guide was the search bar on the page |
| Finding where to get help and support from staff | | | | | | | | | | P4 - Mentioned making in-person appointments rather than email request |
| Finding where to make a Reading Room appointment | X | | X | | | | | | X | P1 - Made appointment through normal BPL (didn't understand difference between BPL and Special Collections |
| Looking for a specific Special Collections' item | | X | N/A | | X | | | | N/A | P5 - Had issues with finding an item due to filtering (took a while) |
| Navigating to/logging in Reading Room account after finding an item | | | | X | | | | | | |
| Creating a new Reading Room request | | X | | X | | X | | | | P6 - Needed suggesting to go back to New Requests page to find correct link for requestin materials form |

## Quantitative Findings

Tasks that unfamiliar user had the **most** success with completing:

| Task | Success Rate |
|---|---|
| Navigating to where to get help from BPL staff | 9/9 |
| Locating where to make a Reading Room appointment after finding an item | 8/9 |

Tasks that unfamiliar users had the **least** success with completing:

| Task | Unsuccess Rate |
|---|---|

| | |
|---|---|
| Locating where to make a Reading Room appointment for the first time | 3/9 |
| Navigating to the "Search & Discover" page (and finding the discovery tools) | 3/9 |
| Finding a department's searching guide | 4/9 |
| Creating a request for a Reading Room appointment | 3/9 |

**Qualitative Findings**

| Finding | Evidence |
|---|---|
| Confusion regarding information on the "Search & Discover" page | • Many users (P1, P3, P5, P6, P7, P8) found images and descriptions used in detailing the various discovery tools not informative enough in differentiating the multiple platforms and explaining what they include (ex. Digital Commonwealth) |
| Issues finding and using the multiple discovery tools | • A few users (P3, P4, P7, P9) struggled with knowing that they could go to the "Search & Discover" page to learn about and/or proceed to the different discovery platforms (ex. one user thought that it was more obvious to go to the "Use Our Collections" page to search for items)<br>• Some users (P3, P7) weren't sure how to use the tools after navigating to them |
| Navigation problems with requesting to view materials via the Reading Room | • Users sometimes struggled with either knowing that they had to go to their Reading Room account to request an item (P6) or how to get there (P2)<br>• Many users (P2, P5, P6, P8) had |

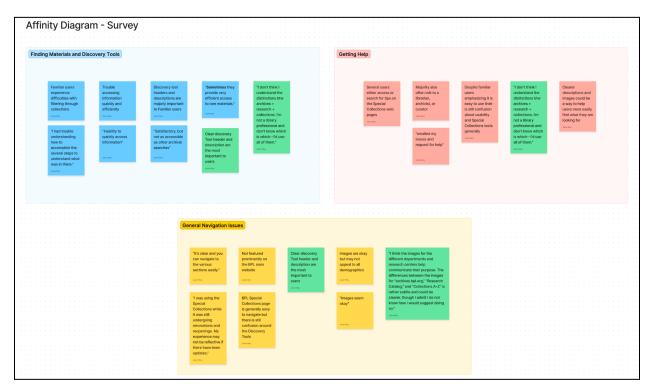| | |
|---|---|
| | difficulties with knowing where to go within their Reading Room account to request an item because they thought the links were hard to find (and one user expected that they could request an item from a discovery tool)<br>● One user (P1) didn't know the difference between Special Collections and the general BPL |
| General navigation difficulties on the BPL's website and Special Collections pages | ● Users (P1, P2, P3, P5, P7) would often head to incorrect pages due to misunderstanding labels<br>● Many users (P1, P3, P4, P9) struggled with finding the Special Collections section from the BPL's website home page<br>● Some users either didn't know what departments within Special Collections were (P5, P8) or were unfamiliar with what research guides were (P7)<br>● There was some confusion about knowing what content was going to be on certain pages due to a lack of standout information located at the top (P6, P9)<br>● Users (P2, P8) experienced difficulty in navigating between pages (ex. between the discovery platforms and the Special Collections webpages) |

## Analysis

For our research analysis, we used both affinity diagramming and spreadsheets to compare common themes across our findings. We further aimed to understand our users through user personas, creating value propositions, and use case scenarios.

## Affinity Mapping

Some preliminary assumptions we had were that the images and descriptions on the "Search & Discover" page would be confusing, broad topics/items are difficult to search for, and catalog guides are difficult to access. Most of our assumptions were validated in that understanding the sections of the Special Collections main page was difficult for most unfamiliar users. While most of the descriptions were helpful, multiple users claimed that the images were a bit confusing and that accessing certain pages wasn't the most intuitive. One new insight we garnered was that getting to the Special Collections page itself from the BPL home was somewhat challenging for a majority of our users. This likely tells us that we need to alter the navigation bar and labeling on the Special Collections pages to be more clear. We will use the main themes from our diagramming and spreadsheets to inform what pain points were most prevalent.
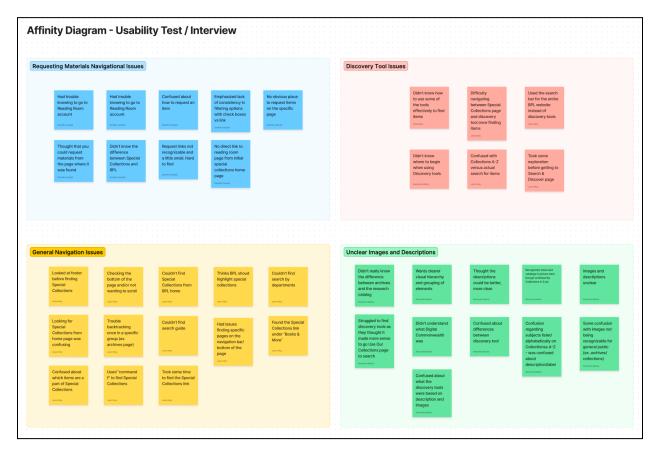
## Familiar Users

We have created an affinity diagram to convey relevant themes/insights observed with our current results. These themes/insights are ones that we brought up in the survey section of the Key Findings portion of this document. After gathering all of our data, we will recreate this affinity diagram to analyze all of our findings.

**Unfamiliar Users**

In regards to unfamiliar users and the usability tests/interviews we took, we first created a rainbow spreadsheet in which we detailed which tasks were successfully completed and by which users, which we differentiated using unique colors for each. After analyzing task success among the users, we noted in our spreadsheet some difficulties faced by unfamiliar users which contributed to their unsuccessfulness. Furthermore, when creating our affinity diagram, team members jotted down significant usability issues and user opinions they collected from their tests/interviews and differentiated the observations based on the user with the same colors used in the rainbow spreadsheet. Once we finished adding our major findings, we grouped certain ones based on similarities in content and came up with overarching themes. The following themes/insights about unfamiliar users accumulated from both our rainbow spreadsheet and affinity diagram (relevant users are labeled as P for "participant" as they labeled in the spreadsheet image below and in Appendix C):

**Quantitative Findings**

Based on our [quantitative findings](#) from our survey, we found that unfamiliar users had the least success with the tasks that pertained to getting started with finding items and requesting the item for a Reading Room visit. We had originally assumed most participants would have the most difficulty making the connection between the Special Collections page and the Reading Room Request page; however, our findings suggest that most participants struggle with the initial steps of how to find or how to request items.

This issue in which participants struggle with understanding the initial steps of finding and requesting items emphasizes how there are unclear instructions and navigational issues that prevent the user from successfully finding what they are looking for. Where familiar users understand special collections and how to navigate between the website, different platforms, and discovery tools to find what they want, unfamiliar users aren't aware of how to use special collections and navigate the complexities of the different platforms. With this in mind, our design requirements will have a heavy focus on discovery tools and general navigation as well as the process of requesting materials.

**Qualitative Findings**

Based on our [qualitative findings](#), unfamiliar users experienced navigation issues throughout the entirety of BPL's website. They especially struggled with finding and using the discovery tools on the "Search & Discover" page as well as had navigational issues when moving between the Special Collections home page and the Reading Room request site. This is preval..

On tasks relating to the "Search & Discover" page and the discovery tools, unfamiliar users faced difficulties with both due to confusion regarding the content and purpose of the page and tools. This was a clear indication that the images, descriptions, and general content was not informative and clear enough to the user – they were unable to understand what was on the page and how to select and navigate the tools available. This suggests that, as the main aspect of Special Collections for finding materials, the images, descriptions, and content on the "Search & Discover" page and the discovery tools need to be clearer and more recognizable to the user.

Throughout multiple tasks, users often noted experiencing confusion with finding the correct pages or sections of information because the website's layouts didn't quite match their mental models, they misinterpreted the type of information that would be on a page given its label/title, or they didn't quite understand what certain information meant (such as what searching guides are). This was somewhat expected because unfamiliar users did

not have prior experience with using the website or weren't familiar with Special Collections materials, but their confusion, again, reflects that the presentation of content, including its hierarchy, descriptiveness, and titles, could be improved in our design to better suit their expectations. Specifically regarding difficulties in finding content, users particularly struggled with knowing that they had to go to a Reading Room account and/or how to get there and use it. As such, this information needs to be made more clear to them.

Overall, our qualitative insights are critical in aiding our design as they point to issues within the website that make it difficult for people to use overall.

**User Personas & Value Propositions**

Our research focused on familiar and unfamiliar users which included both BPL Patrons (researchers, scholars, artists etc.) and BPL Staff Members. Based on our surveys, which focused on familiar users, and usability tests and interviews, which focused on unfamiliar users, we created these user personas for each. Our user persona for BPL Staff Members as familiar users is still in progress due to delays in getting permission to send our survey to staff members. Based on these personas, we further empathized with our users through use case scenarios.

**Familiar BPL Patron**

For familiar users, George is a researcher and scholar that has experience and has visited BPL's Special Collection. He uses the Special Collections not only as a resource for various research projects and work but also as a way to learn and explore the vast unique archival and arts collections. He finds that it is difficult to access information efficiently through Special Collections in addition to understanding the difference between content.

**Primary Persona | Familiar BPL Patron**

SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

BOSTON PUBLIC LIBRARY

**George Fisher,** *Researcher & Scholar*

**About**
- Local Boston native and BPL patron
- Passionate about history, books, and archival materials
- Specific focus around U.S. History during the Revolution and Civil War time period

**Goals**
- Discover and gain information for various research projects and work
- To learn and expand knowledge on various history and art topics
- Find specific rare materials that can't be viewed elsewhere

**Motivations**
- Wants to discover and research historical documents and archives
- Find historical information through primary resources for research projects and work
- Explore BPL's vast collection

**Needs & Frustrations**
- Needs to access information quickly
- Needs to better understand
- Has difficulty finding Special Collections because it's not featured clearly on main BPL page
- Difficulty understanding content in Special Collections

" The BPL's Special Collections contains historical documents vital to my research, including documents not held anywhere else. This makes it an invaluable resource. "

## Familiar BPL Staff Member

For familiar users, Mary is a staff member at BPL working as an archivist and curator. She is passionate about archival and arts material. Mary wants to share this passion by helping BPL patrons find what they are looking for in a positive and supportive way. She is motivated by her passion for special collections and the people she helps. This can sometimes be difficult due to the Special Collections pages being difficult to navigate at times, information being inaccessible, and directing patrons to someone who can correctly answer their questions.

**Primary Persona | BPL Staff Member**

**Mary Reed,** *Librarian, Archivist, Curator*



" I usually just direct them to the Special Collections reception area either by phone or in person visitors. I also try getting callers to email the Special collections department. "

**About**

- Local Boston native and a BPL staff member
- Passionate about archival and art materials
- Often helps BPL Patrons discover, find, and request archival materials

**Goals**

- To help BPL patrons find, identify, and request materials that they are looking for
- Create a positive experience for patrons when searching and viewing archival materials

**Motivations**

- Help patrons find what they are looking for in an efficient and supportive way
- Make the Special Collection pages easier for patrons to use
- Motivated by passion for sharing and learning about special collections materials

**Needs & Frustrations**

- Special Collections page is difficult to use at times (even for familiar users)
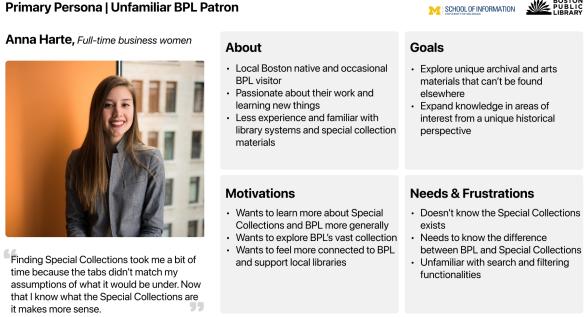- Not being able to find the correct information to help patrons
- Needs an easy way to direct patrons to the correct staff member or department

## Unfamiliar BPL Patron

For unfamiliar users, Anna Harte is a full time business woman who occasionally visits BPL. She is passionate about her work and learning. Therefore, she hopes to learn more about BPL and expand her knowledge based on her interests through the unique archival and arts collections. She wants to explore these collections more but is not only unfamiliar with Special Collections but also general search and filtering functionalities.

**Primary Persona | Unfamiliar BPL Patron**

M | SCHOOL OF INFORMATION
UNIVERSITY OF MICHIGAN

BOSTON PUBLIC LIBRARY

**Anna Harte,** *Full-time business women*

"Finding Special Collections took me a bit of time because the tabs didn't match my assumptions of what it would be under. Now that I know what the Special Collections are it makes more sense."

**About**
- Local Boston native and occasional BPL visitor
- Passionate about their work and learning new things
- Less experience and familiar with library systems and special collection materials

**Goals**
- Explore unique archival and arts materials that can't be found elsewhere
- Expand knowledge in areas of interest from a unique historical perspective

**Motivations**
- Wants to learn more about Special Collections and BPL more generally
- Wants to explore BPL's vast collection
- Wants to feel more connected to BPL and support local libraries

**Needs & Frustrations**
- Doesn't know the Special Collections exists
- Needs to know the difference between BPL and Special Collections
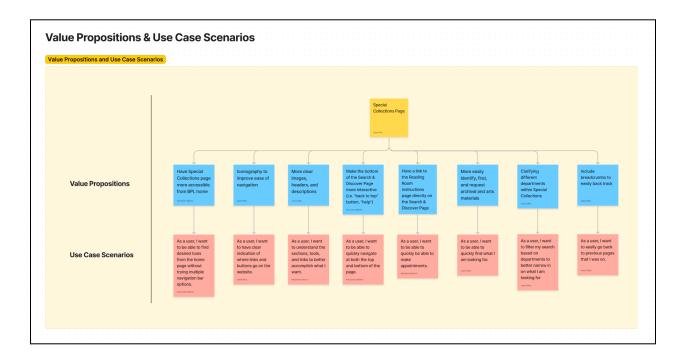- Unfamiliar with search and filtering functionalities

## Value Propositions & Use Case Scenarios

To build empathy with our users, we created several use case scenarios based on various value propositions and took into account our findings from our surveying and usability tests and interviews.

| Value Propositions | Use Case Scenarios (As a user, I want to...) |
|---|---|
| Have Special Collections page more accessible from BPL home | As a user, I want to be able to find desired tools from the home page without trying multiple navigation bar options. |
| Iconography to improve ease of navigation | As a user, I want to have clear indications of where links and buttons go on the website. |
| More clear images, headers, and descriptions | As a user, I want to understand the sections, tools, and links to better accomplish what I want. |
| Make the bottom of the Search & Discover Page more interactive (i.e. "back to top" button, "help") | As a user, I want to be able to quickly navigate at both the top and bottom of the page. |

17

| | |
|---|---|
| Have a link to the Reading Room instructions page directly on the Search & Discover Page | As a user, I want to be able to quickly be able to make appointments. |
| More easily identify, find, and request archival and arts materials | As a user, I want to be able to quickly find what I am looking for. |
| Clarifying different departments within Special Collections | As a user, I want to be able to quickly find what I am looking for. |
| Clarifying different departments within Special Collections | As a user, I want to filter my search based on departments to better narrow in on what I am looking for |
| Include breadcrumbs to easily back track | As a user, I want to easily go back to previous pages that I was on. |



## Design/UX Requirements

### Discovery Tools Navigation Requirements

One of the main features of the Search & Discover page is the Discovery Tools, the main way for users to find and request what they are looking for. Commonly, users struggled to discern differences between the tools and figuring out which ones to access for their

needs. The requirements we established should help address the main paint points we found relating to the clarity and navigation issues with the Discovery Tools.

| Priority | Requirement |
|---|---|
| High Priority | 1. Users should be able to quickly navigate to the search & discovery page from Special Collections<br>2. Users should be able to learn and expand knowledge on various history and art topics<br>3. The system should adhere to classification methods put in place to organize archives, arts, and rare books/manuscripts data<br>4. The system should only use the third party platforms and databases present on the current BPL site (for now)<br>5. Users should be able to find specific rare materials that can't be viewed elsewhere<br>6. Users should be able to understand and differentiate content in the Special Collections page<br>7. The system should have discovery tool platforms open in a separate tab<br>8. The system should make clear which discovery tools would be helpful for specific goals<br>9. The system should make distinct which items are considered Special Collections items<br>10. The system should have the search & discovery page be easily accessible from the Special Collections page |
| Medium Priority | 1. Users should be able to discover and gain information for various research projects and work<br>2. Users should be able to efficiently book an appointment in the BPL reading room<br>3. The system should have explicit descriptive captions for discovery tools<br>4. The system should allow for in-person and digital to be easily distinguished<br>5. The system should make clearer the menu on the Special Collections page |
| Low Priority | 1. Users should be able to see featured and personalized content in Special Collections |

**Requesting Materials Requirements**

In order to access Special Collections materials, patrons often need to request to view them in-person in the Reading Room or online. From our testing, we found that there was some confusion regarding where to find additional information on requesting materials as well as with searching for their desired items. The requirements in this section aim to make the system more intuitive for users to find their desired materials and make appointments for the Reading Room.

| Priority | Requirement |
|---|---|
| High Priority | 1. The system provides a way for patrons and staff of the Boston Public Library to more easily navigate the Special Collections' materials offered through the multiple discovery platforms to access both remotely and with in-person requests<br>2. The system should include a direct link to the reading room page from the Special Collections page<br>3. The system should have an obvious place to request items on the specific page |
| Medium Priority | 1. Users should be able to efficiently book an appointment in the BPL reading room<br>2. Users should be able to efficiently and effectively request a Special Collections item<br>3. The system should allow for in-person and digital to be easily distinguished |
| Low Priority | 1. The system should encourage users to make an appointment with the reading room |

**Aesthetic & Emotional Requirements**

Issues regarding organization and overall aesthetic preferences were raised in multiple of our user tests. These requirements aim to address issues with image sizing and clarity, descriptions, organization on the Search & Discover page, and any other adjustments with the intention of making the information more appealing to its users.

| Priority | Requirement |
|---|---|
| High Priority | 1. The system should align with BPL's current branding guidelines<br>2. The system will keep all current content and categories |

| | 3. The system should have clear visual hierarchy and grouping of items |
|---|---|
| Medium Priority | 1. The system's organization should be up to par with other city library and museum websites<br>2. The system should provide images that are descriptive and relevant |
| Low Priority | 1. Users should be able to have fun while using BPL's website<br>2. Users should be able to see featured and personalized content in Special Collections<br>3. The system's interface should be sleek and modern looking<br>4. The system's interface should include engaging animations and microinteractions |

**General Navigation Requirements**

Based on our research results and analysis, general navigation arose as a common theme. This includes issues of finding the Special Collections and Search & Discover pages, looking for information about making Reading Room appointments, and scrolling through the Search & Discover content. To address these navigational issues among Special Collections users, we have developed and prioritized various requirements to make it easier to find desired portions of the website in a timely manner.

| Priority | Requirement |
|---|---|
| High Priority | 1. The system provides a way for patrons and staff of the Boston Public Library to more easily navigate the Special Collections' materials offered through the multiple discovery platforms to access both remotely and with in-person requests<br>2. Users should be able to quickly navigate to Special Collections from BPL's homepage<br>3. Users should be able to quickly navigate to the search & discovery page from Special Collections<br>4. Users should be able to access information quickly<br>5. Users should be able to understand and differentiate content in the Special Collections page<br>6. Users should be able to easily understand their past actions and present location in the system |

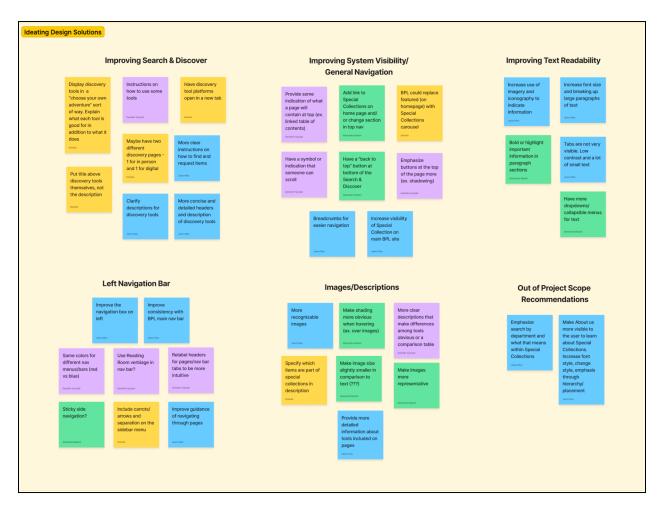| | |
|---|---|
| | 7. The system should provide a quick, simple way to access BPL's Special Collections on the home page<br>8. The system should include a direct link to the reading room page from the Special Collections page<br>9. The system should have discovery tool platforms open in a separate tab<br>10. The system should have clear visual hierarchy and grouping of items<br>11. The system should make distinct which items are considered Special Collections items |
| Medium Priority | 1. Users should be able to efficiently book an appointment in the BPL reading room<br>2. Users should be able to efficiently and effectively request a Special Collections item<br>3. The system should allow for in-person and digital to be easily distinguished<br>4. The system should make clearer the menu on the Special Collections page |
| Low Priority | 5. Users should be able to navigate through the BPL website without using "command f" or the browser's back button |

## Design Process

**Overview**

After conducting our UX research and defining several key UX requirements (including navigation, material requests, and aesthetic decisions), we started our process by doing unfiltered ideation and sketching out several ideas of how to redesign the Special Collections portion of the Boston Public Library website. Our progression then moved onto low and mid fidelity prototypes where we worked as a team to utilize the feedback from our surveys and usability testing as well as feedback from classmates and professors. This was in order to make sure we took into account as many perspectives as possible and reflected on our work.

Our final design also used insights from informal Qualitative Assessment with the mid fidelity prototype using convenience sampling. Finally, we cleaned up the prototype to follow the style guidelines as closely as possible with final adjustments made from the

testing and class standup feedback. This was done in order to constantly improve and iterate on our initial ideas and research results.

## Iterative Progression of Design
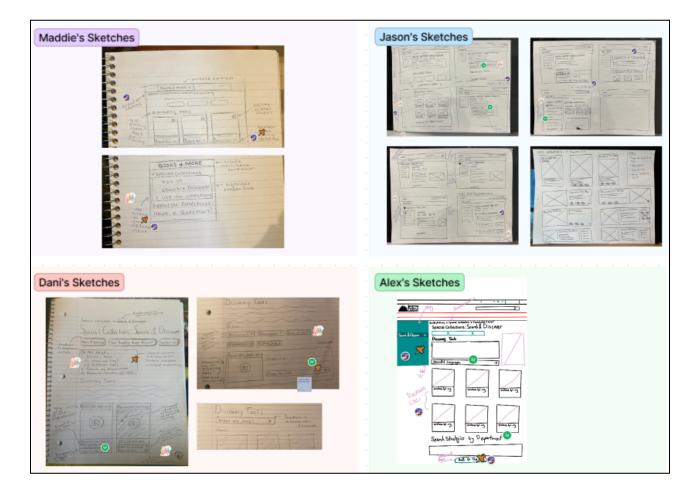
### Sketches and Low-Fidelity

Our team started with conducting unfiltered ideation based on our research results to identify potential solutions and improvements that we could incorporate into our redesign.  Through this exercise we compiled these various design ideas discussing the ones that we collectively believe would be most effective and in line with our [Design/UX Requirements](). We made sure to think about the main concerns of our personas as well to think about how users would interact with the new tools. Most of the frustrations of our personas were related to system visibility and the ability to use the Special Collections tools quickly so we made sure to highlight these concerns.

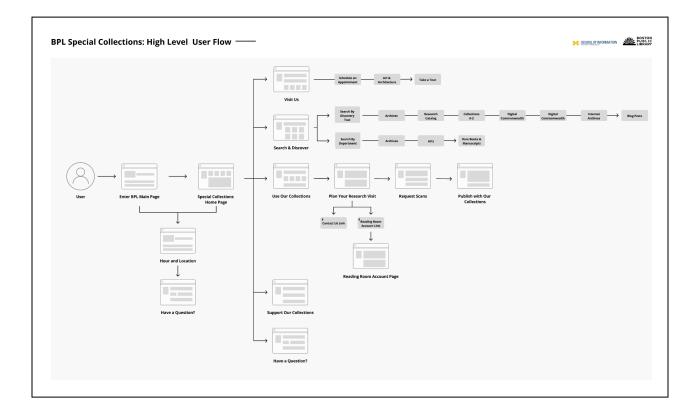| Design/UX Requirement | Ideating Design Solution Theme | Idea |
|---|---|---|
| Discovery Tool Navigation | Improving Search & Discover | Clarify descriptions of tools |
| Discovery Tool Navigation | Improving Search & Discover | Having different or separate discovery pages/sections |
| Discovery Tool Navigation | Improving Search & Discover | More clear instructions about what tools there are and how to use the tools to find what you are looking for |
| Discovery Tool Navigation | Out of Scope Recommendations | Emphasize search by department and tools |
| Discovery Tool Navigation | Images/Descriptions | Specify which items are in Special Collections descriptions |
| Discovery Tool Navigation | Images/Descriptions | More clear descriptions that make differences among tools more obvious |
| Requesting Materials Navigation | Improve System Visibility/General Navigation | Breadcrumbs |
| Requesting Materials Navigation | Improve System Visibility/General Navigation | Emphasizing buttons/quick links (ex. Drop shadows etc.) |
| Requesting Materials Navigation | Improve Text Readability | Bold or highlight important information in large paragraph sections |
| Aesthetic and Emotional | Images/Descriptions | More recognizable or representative images and visuals |
| Aesthetic and Emotional | Text Readability | Break up large text |

| General Navigation | Images/Descriptions | More detailed preview of what information is on the page |
|---|---|---|
| General Navigation | Left Navigation Bar | Relabel headers |
| General Navigation | Improve System Visibility/General Navigation | More visible back to top button |

We took these ideas and translated them into wireframe and main screen sketches doing them individually then comparing and discussing them as a group. They were used in order to inform our lo-fi wireframes and prototype by finding common themes and connections that we wanted to use. Our persona needs and use case scenarios also helped inform what common threads and adjustments needed to be made.

The initial lo-fi prototype was used in a peer critique with other UX students and course professors to get insights on how our designs were progressing. We used these insights to continue working on our prototype and moved into the mid and high fidelity prototypes to be used in user testing and further iterations. Additionally, we were able to get more detailed information from our BPL contacts regarding style guidelines, important design content like logos, and screen measurements to make our prototype closer to pixel-perfect.
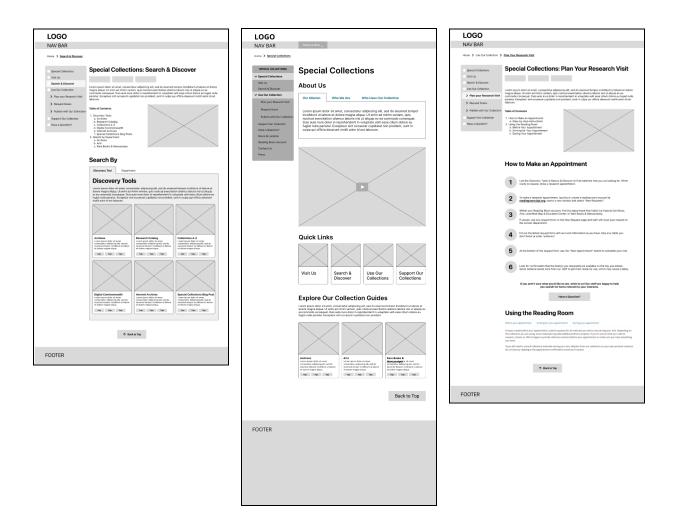
We also created a high level user flow for the Special Collections website in order to organize which pages we would be prioritizing (the larger white icons). This allowed us to use our sketches and prior user testing in order to narrow down our scope and focus on the main pages that users were having issues with as well as additional screens to maintain a consistent design throughout the Special Collections site.



### Intermediate Designs

As mentioned above, our mid fidelity prototype used feedback from peers that was then used in conducting user tests before moving on to the high fidelity prototype. For user testing, we used convenience sampling due to time and material constraints. We designed a short user testing script in order to have 4 people evaluate our mid-fidelity prototypes.

Here, we asked users to give their initial impressions of the Figma prototypes compared to the current webpage design. The script asked them to specifically look at the Search & Discover, Special Collections Home, and Plan Your Research Visit pages that we provided our first iterations of. From this part of the user testing, we were able to provide a list of common themes and things that users either liked in our new designs or still found confusing.

| Webpage | Requirement Addressed | Findings |
|---|---|---|
| Search & Discover | Discovery Tool Navigation, General Navigation | ● Table of Contents was strongly liked<br>● Back to Top button was more clear in new position<br>● Liked how condensed tab view was but should be more clear why it is broken into two sections |
| Special Collections Home | General Navigation | ● Quick links at top is good (possibly consider getting rid of images and making them buttons or icons)<br>● About Us at top was preferred<br>● Tab view preferred |
| Plan Your Research Visit | Requesting Materials, Aesthetic & Emotional | ● White Space helps break up the text<br>● Big numbers helpful but have more balance between size of numbers and text<br>  ○ About the the current page "seems a bit overwhelming; "maybe because not colored" (Participant 2)<br>● Alter the layout and sizes of the images with text to be more proportional<br>● Potentially have link to download steps<br>● Have a Question Button is good but in awkward positioning |
| General | General Navigation, Aesthetic & Emotional | ● Use more icons to balance visuals with text<br>● Breadcrumbs were useful<br>● Too much text makes users less likely to read it all<br>  ○ Minimize large bodies of text<br>  ○ "When a bunch of writing on page I'm just not gonna read it" (Participant 1)<br>● Pictures that are representative are appreciated |

The second part of the user testing further helped address our requirement regarding aesthetic & emotional. It included an image sorting exercise to determine what kinds of visuals were representative of the categories on the Special Collections website. We selected 7-16 images for each of the main Discovery Tools and Departments on Special Collections and asked users to choose the one they thought best represented the category after reading out a brief description of each. From this, we were able to find some recognizable images to suggest as well as some suggestions for additional photos that BPL can take in the future to improve the images. We decided to use the commonly chosen images in our high fidelity prototype for further testing in future iterations.

| Discovery Tools | Image | Comments |
|---|---|---|
| Archives | 1, 2, 3, 9, 13, 14 | P1 + P3: liked how there were people interacting with it |

| | | P2: Older books relate to archives<br>P4: Liked when it was obvious that collections were being shown |
|---|---|---|
| Research Catalog | 1, 5 | P4: Thinks card catalogs represent searching for something |
| Collections A-Z | 5, 6, 7, 8, 9 | P1 + P3: 6 and 7 demonstrated the categories<br>P2: 5 and 9 shows whole library (representation of all collections)<br>P4: Liked A-Z categories and cleanness but wanted more book/library rep. |
| Digital Commonwealth | 3, 5, 6 | Image 3: More abstract/interpretive<br>Image 5: More clear and helps to distinguish between digital commonwealth and internet archives<br>Image 6: Shows many items |
| Internet Archives | 1, 2, 3, 6 | Liked logo when unsure of what the tool was |
| Blog Posts | 1, 2, 3, 5, 7 | Aspects that participants liked: writing, specific artifacts, stuff that is at the Special Collections reading room<br>P4 thought that 2 was the only one that referenced blog explicitly |

| Departments | Image | Comments |
|---|---|---|
| Archives | 1, 2, 5, 7 | Can be more general |
| Arts | 2, 3, 7 | Images with more color. Images that show a collection of art or a variety of what was labeled as such. |
| Rare Books & Manuscripts | 1, 3, 4, 6, 7 | Gloves caught participants attention (demonstrate rarity of archives)<br>P4 liked when old books were shown - feels more like they are rare that way |

We also participated in another round of peer critique with our UX classmates. In this feedback session we wanted to get initial thoughts on our high fidelity wireframes. We specifically wanted to get feedback on our main pages relating to the Search & Discover tags, the Plan Your Research Visit page, and our design choices more generally. For the Search & Discover tags, we got feedback in regards to creating more consistency with the color along with a filtering system to help users identify the correct method to identify what they are looking for.

For the Plan Your Research Visit page we got good feedback for improving navigation through highlighting or zooming in on details in our annotated images and using color and placement of text to help the user better understand how to make an appointment. Across all designs we got feedback about the hierarchy of information and limiting large blocks of text. We will be going back and cutting down on text as well as moving content, like the Quick Links on the Special Collections home to the top, for better navigation.
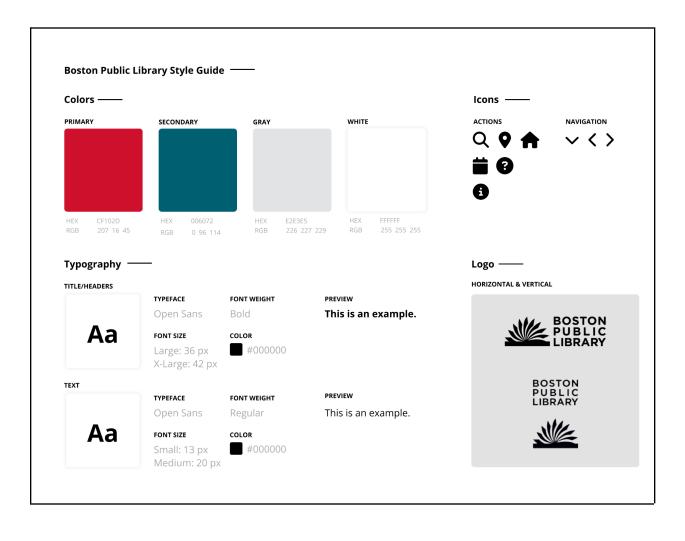
Between our quick round of testing and class feedback, the  insights that we got have informed further iteration to finalize our prototype. At this point, we have iterations for the main Special Collections landing page, the Search & Discover page, and Request a Research Visit page in full since these were the highest priority for our client. We also have additional pages that are out of scope but are there in an effort to integrate our design across the Special Collections page for consistency purposes.

## Final Design Rationale

Our final prototype design was created using the user testing feedback from our low and mid fidelity models. We also finalized our prototype using additional style guidelines and information given to us from the official BPL website standards in order to ensure cohesion across the Special Collections pages.
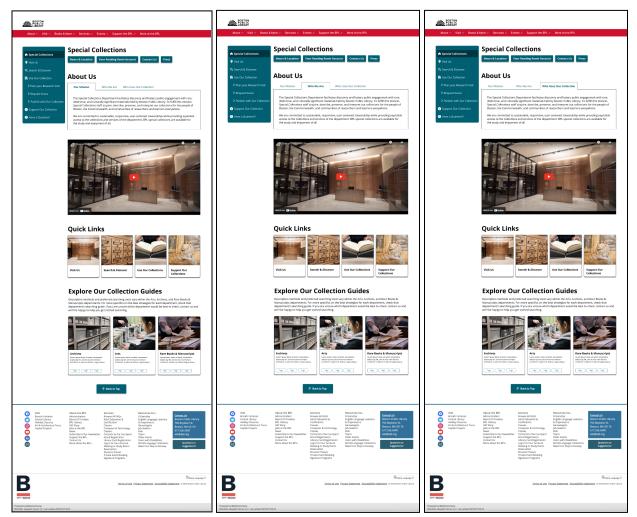
In order to address the project and UX requirements, we had a high priority of making sure that users could quickly navigate to Search & Discover and other key pages from the side navigation while making it clear which Discovery Tools were for what purpose. These directly influenced our choices to make the sidebar navigation easier to understand with clear highlighting and icons as well as with providing suggestions for more indicative images related to each department.

We also made sure to consult BPL branding guidelines and created a style guide that ensured consistency across the website.

**Boston Public Library Style Guide** ——————

## Colors ——————

### Icons ——————

**PRIMARY**

**SECONDARY**

**GRAY**

**WHITE**

**ACTIONS**

**NAVIGATION**

| | |
|---|---|
| HEX CF102D | |
| RGB 207 16 45 | |

| | |
|---|---|
| HEX 006072 | |
| RGB 0 96 114 | |

| | |
|---|---|
| HEX E2E3E5 | |
| RGB 226 227 229 | |

| | |
|---|---|
| HEX FFFFFF | |
| RGB 255 255 255 | |

## Typography ——————

### Logo ——————

**TITLE/HEADERS**

**Aa**

| TYPEFACE | FONT WEIGHT | PREVIEW |
|---|---|---|
| Open Sans | Bold | **This is an example.** |

| FONT SIZE | COLOR |
|---|---|
| Large: 36 px | #000000 |
| X-Large: 42 px | |

**TEXT**

**Aa**

| TYPEFACE | FONT WEIGHT | PREVIEW |
|---|---|---|
| Open Sans | Regular | This is an example. |

| FONT SIZE | COLOR |
|---|---|
| Small: 13 px | #000000 |
| Medium: 20 px | |

**HORIZONTAL & VERTICAL**

BOSTON PUBLIC LIBRARY

BOSTON PUBLIC LIBRARY

## Final Design Key Screens / Design Elements

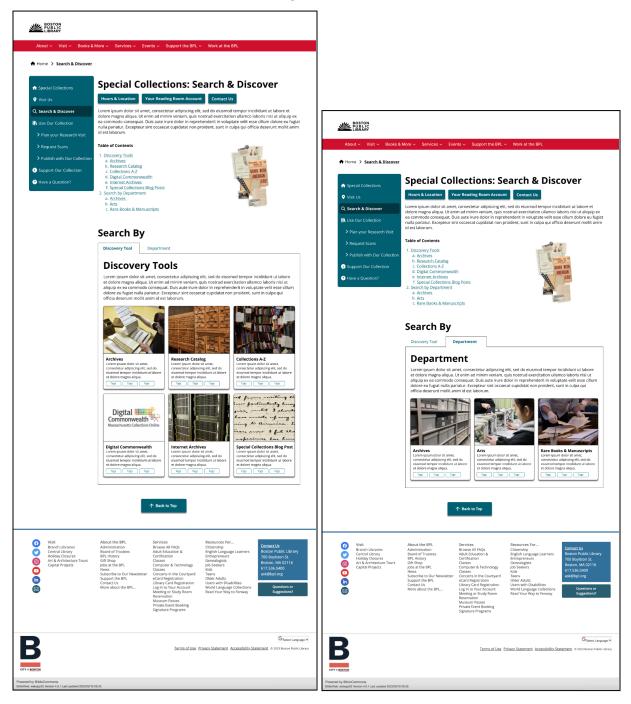### "Special Collections: Home" Pages



Displayed on pages 31, 32, and 33 are high fidelity iterations of the "Special Collections: Home" and "Special Collections: Search & Discover", and "Special Collections: Plan Your Research Visit" pages. These designs support our design requirements and reflect feedback from both our Qualitative Assessment, Qualtrics survey, and user testing/interview.

One major change we made was improving site usability in terms of navigation. This includes adding breadcrumbs to the top left and increasing the visibility of the "back to top" button. We also made the left menu more intuitive by adding icons and emphasizing
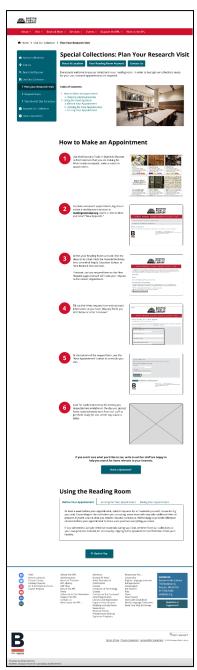
nested elements through indenting and arrows. For tabbed content, we bolded the current tab and made the outline darker to clarify the format and current state.

Another significant improvement we made was rearranging information architecture in order to organize BPL Special Collections content in a more relevant, logical, and engaging way. This includes moving "About Us" to the top of the Homepage, adding a table of contents, and putting tags on discovery tool and department tiles to make it easier for users to understand which department/tool best fits their needs. We also made tabs to search by discovery tool or department.

Additionally, we elevated BPL Special Collections' aesthetics by replacing current photos for discovery tools and departments with more descriptive and aesthetically pleasing visuals, rounded the corners of rectangular elements, utilized drop shadow, and placed uniform icons next to menu text. We also specifically broke up the numbered steps on the "Special Collections: Plan Your Research Visit" page with white numbers in red circles. We made sure to break up big chunks of text too which not only looks better, but makes the page easily scannable.

## "Special Collections: Search & Discover" Pages

**"Special Collections: Plan Your Research Visit" Page**



**Interactive Prototype**

Our interactive prototype mainly attempts to capture the experience of using the Special Collections part of the website. The navigation allows users to go from the homepage to all the redesigned parts of Special Collections. The main user flow here is that users would

go to the Special Collections Home, then look for information about how to make an appointment or search for materials using Search & Discover.

[Link to Prototype](#)
[Link to Prototype Video](#)

## Appendix

**Appendix A**

[Heuristic Evaluation](#)

**Appendix B**

[Survey Design](#)

[Qualtrics Survey](#)

[Survey QR Code](#)

**Appendix C**

[Usability Test / Interview Design and Script](#)

[Usability Test / Interview Notes and Analysis Spreadsheet](#)

[Mid Fidelity User Test / Interview Design and Script](#)

[Mid Fidelity User Test / Interview Analysis Spreadsheet](#)

**Appendix D**

[BPL Figma Jam File (Affinity Diagrams, Use Case Scenarios. Other Ideation)](#)

[BPL Figma Design File (Personas, User Flow, Style Guide, and Wireframes)](#)