

Needham Free Public Library Space Utilization Framework Study

Final Report
August 31, 2023

Prepared by Utile, Inc.



TOWN OF
NEEDHAM
MASSACHUSETTS



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FREE
PUBLIC
LIBRARY

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Executive Summary

Executive Summary

Study Scope and Goals

1. Identify constraints and opportunities in the library's space utilization.
What people expect from libraries have changed in the 17 years since the Highland Avenue library was renovated and expanded.
2. Engage with Needham residents, library patrons, staff, library Trustees, the Friends of the Library and other interested stakeholders to hear directly what the library does well, what needs to be expanded and what's missing.
3. Develop and refine a framework to improve the library's layout to meet the needs of the next twenty years.

Summary of Findings

Using the feedback gathered in the engagement process and the early design explorations of the study, the Trustees of the Needham Free Library established four priority projects:

1. Create a new dedicated Teen and Tween Area on the 2nd Floor
2. Provide an improved Children's Area on the 1st Floor
3. Improve the Rosemary Entrance and create a new Multi-Purpose Room
4. Improve the Highland Entrance and enhance staff workspace

Summary of Costs

A professional cost estimator was engaged to estimate construction costs for the four priority projects. Each project was assigned a start date as a placeholder to determine costs. The actual start date will be determined by the Town of Needham.

The estimated construction costs were paired with "soft costs" (such as furniture, equipment, moving expenses, contingencies, etc) to determine a total project cost.

As the design and planning of the projects becomes more detailed, these costs will evolve.

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Project Summary

Project Team



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VAV



Permanent Public Building Committee Town of Needham

Henry Haff

Director, Building Design & Construction Dept.

Needham Free Public Library

Kim Hewitt

Director, Needham Free Public Library

Demetri Kyriakis

Assistant Director, Needham Free Public Library

Erhardt Graeff

Trustee Representative,
Needham Free Public Library Board of Trustees

Consultant Team

Utile Architecture and Planning

Brett Bentson, AIA, LEED AP BD+C

Principal-In-Charge

Maressa Perreault, AIA

Associate Principal
Project Manager

Claudia Porras

Associate
Senior Project Designer

VAV International, Inc.

Semoon Oh, PE, Principal

Consulting Mechanical Engineer

Ellana Inc. Construction Consultants

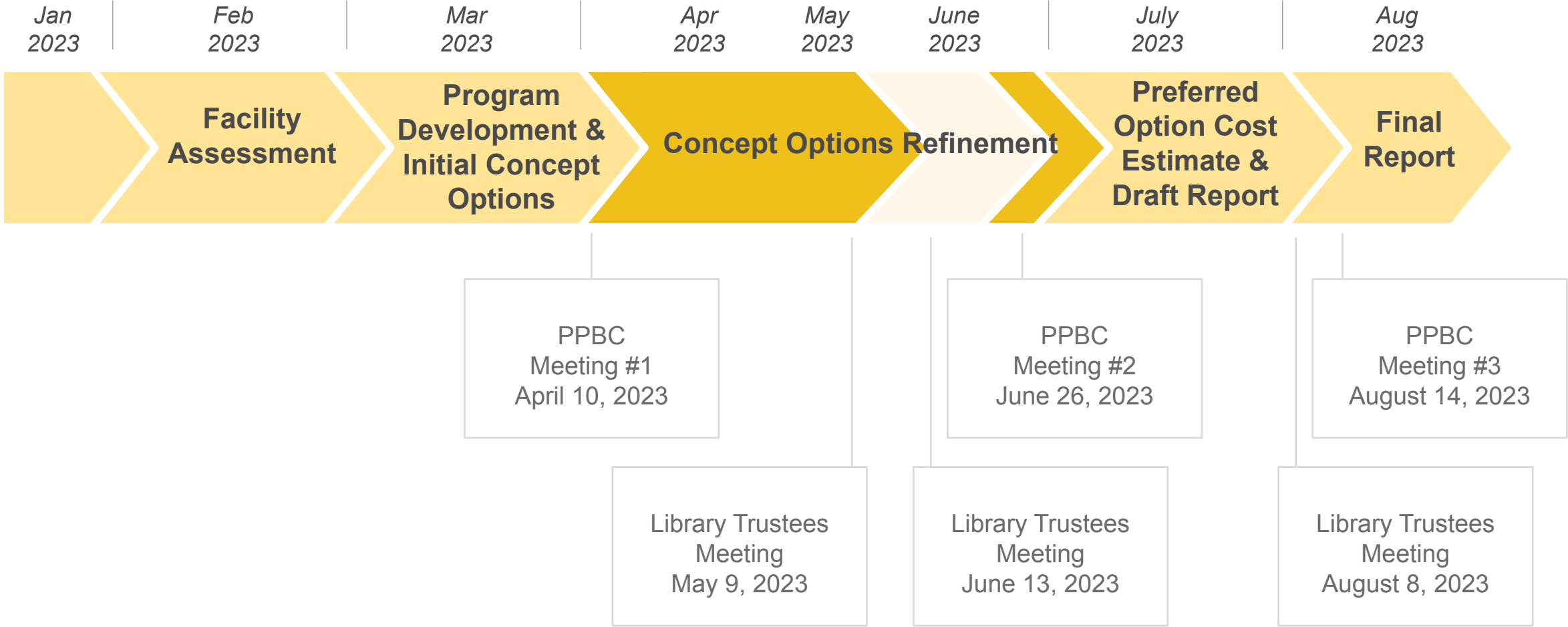
Kevin Putney

Senior Cost Estimator

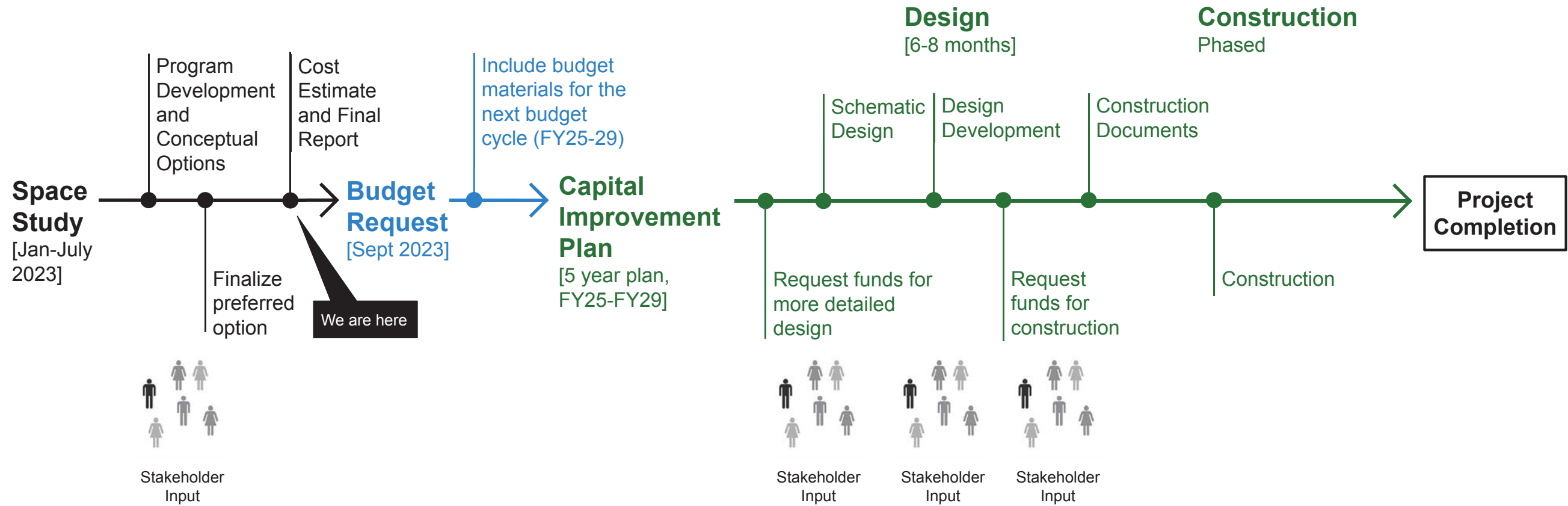
Framework Study Goals

1. Identify constraints and opportunities in the library's space utilization.
What people expect from libraries have changed in the 17 years since the Highland Avenue library was renovated and expanded.
2. Engage with Needham residents, library patrons, staff, library Trustees, the Friends of the Library and other interested stakeholders to hear directly what the library does well, what needs to be expanded and what's missing.
3. Develop and refine a framework to improve the library's layout to meet the needs of the next twenty years.

Framework Study Schedule



Timeline For Capital Improvement Projects



3

Understanding the Issues

Understanding the Issues

Three prong approach to data gathering

Direct Observation

Walking the space with the library's director and staff allows the team to understand what works well and what can be improved upon

Spending time working in the library allows the design team to experience first hand how the patrons use the space

Online Survey

A brief online format survey allows the gathering of information at a larger scale to understand the type of spaces the community would like to see at the library

Survey has closed with 260 participants recording their feedback - refer to the Appendix for the full results

Group Engagement Sessions

Spending time with smaller groups of key constituents builds on the data collected from the online survey

Smaller groups provide the opportunity to follow up on specific pain points and program elements to enhance the services the library already offers the community

Direct Stakeholder Feedback

1. Library Trustees

- April 9th meeting
- May 9th meeting
- June 13th meeting
- August 8th meeting

2. Permanent Public Building Committee (PPBC)

- April 10th meeting
- June 26th meeting
- August 14th meeting

3. Library Staff

- Continuous since start of study

4. Stakeholders and Patrons

- Direct engagement with patrons
 - March 8th Senior walk-through
 - March 15th virtual session with Tweens
 - March 29th in person session with Teens
- Online Survey open from February to mid-June

Group Engagement Sessions

Small group format with multiple engagement approaches

Seniors Session

March 8th, in person walk through

- Drive by book drop-off would be a great addition
- Seating should not be too low and ideally should have arms
- More study rooms would be nice

Tweens Session

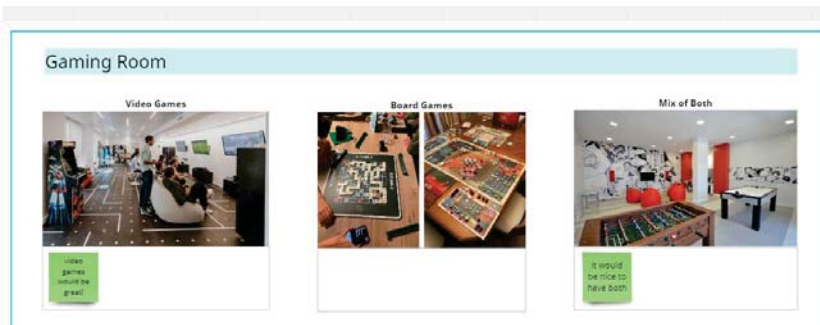
March 15th, virtual Zoom feedback session

- More books dedicated to Tweens
- Smaller study rooms with white boards
- Seating by natural light
- Comfortable furniture

Teens Session

March 29th, in person feedback session

- Individual study carrels preferred over other types of seating
- More accessible power outlets
- Seating by natural light
- Small enclosed study group areas, individual reading areas, and a shared eating space were the most popular program types selected



Screenshots from Tween session using Miro software



In person Teen session boards and responses

Group Engagement Sessions

Key Takeaways

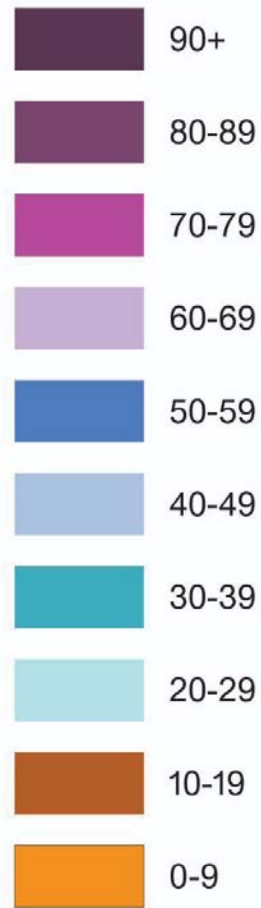
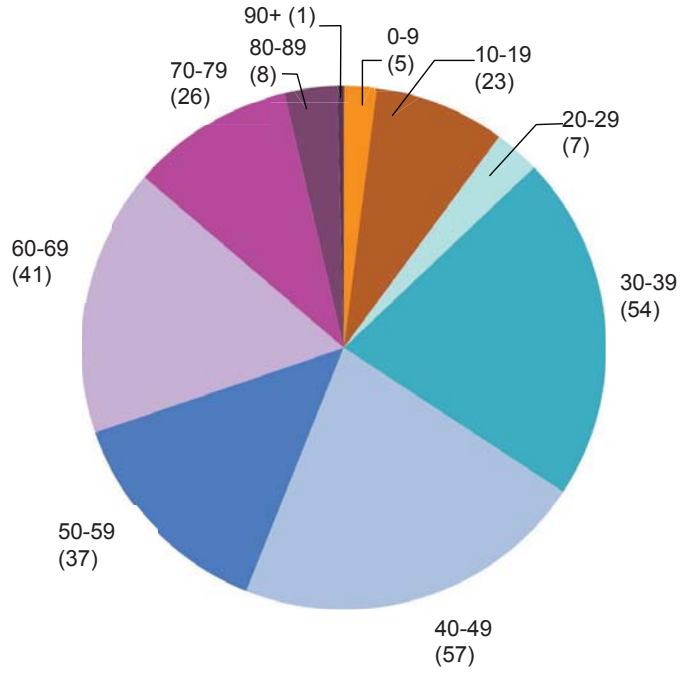
1. Quieter reading areas throughout and further separation from the youth areas
2. Multi-use space for 15-20 people for skill classes and additional study rooms
3. Improved Circulation and Reference desks to enhance visibility and approachability
4. Enhanced accessibility to collections and programs in the library
5. Dedicated food areas, including seating and potential vending opportunities (via vending machines)

Online Survey

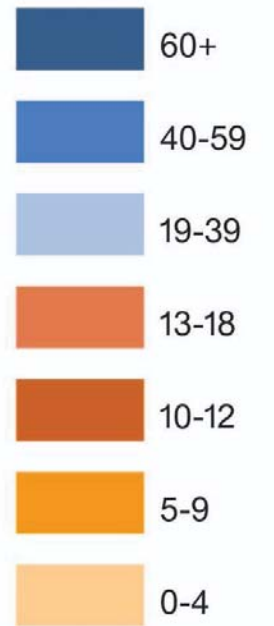
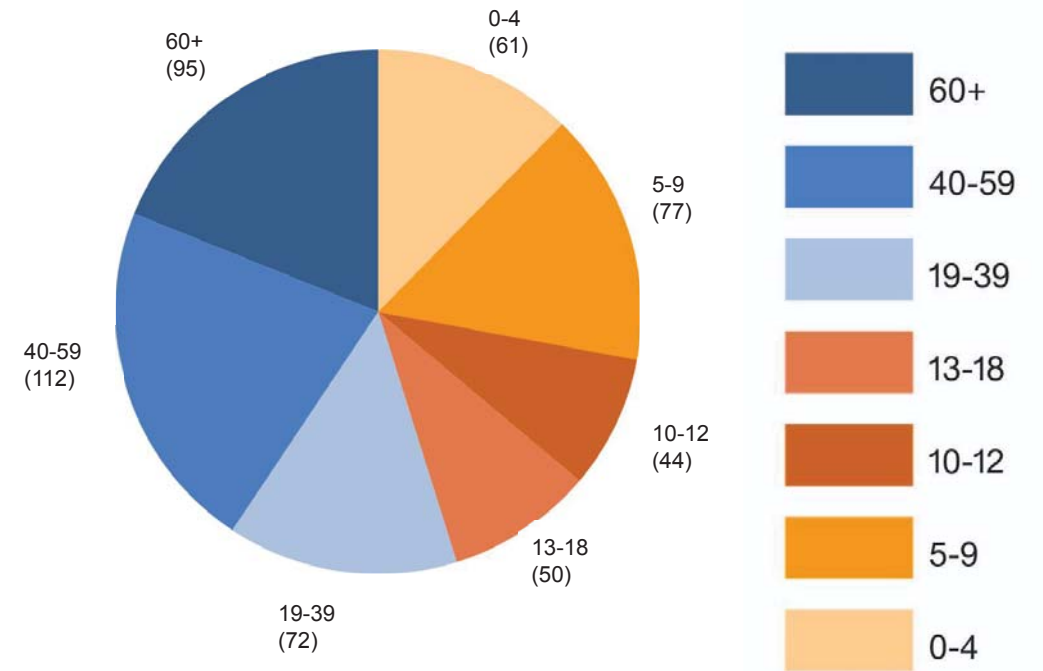
Respondent demographics

260 Responses Total
 259 English
 1 Russian
 0 Chinese
 0 Spanish

Age Range



Age Range per Household



Online Survey

Key Takeaways

1. Both youth and adults place importance on having individual reading and smaller gathering spaces.
2. Dedicated snack spaces are more preferred by youth (0-19) than by adults.
3. Both youth and adults place importance on children (0-9) having a play space.
4. Split importance on dedicated social / game room for teens (10-19) from all demographics.
5. More youth (0-19) prefer the addition of social spaces (cafe, snack space, outdoor space) compared to adults.
6. More youth (0-19) prefer the addition of diverse programming (maker-space, art room) compared to adults.

4

Priority Projects

Using the feedback gathered in the engagement process and the early design explorations of the study, the Trustees of the Needham Free Library established four priority projects that were studied in further detail as part of this framework study.

Four Priorities

Localized Improvements

1. Teen / Tween Area / New Study Rooms

- Right-size space allocated to teens and tweens
- Manage overflow of teens into other areas of the library
- Address acoustic impacts of teens and tweens to other areas of the library
- Improve HVAC systems in existing young adult room

2. Children's Area

- Improve sightlines throughout the space
- Provide program areas and furnishings suited to how the space is used today

3. Rosemary Entrance / New Multi Purpose Room

- Relocate circulation desk to improve sightlines and customer service
- Create a multi-purpose room for flexible programming
- Consolidate workroom for Circulation and Children's Area staff for greater efficiency

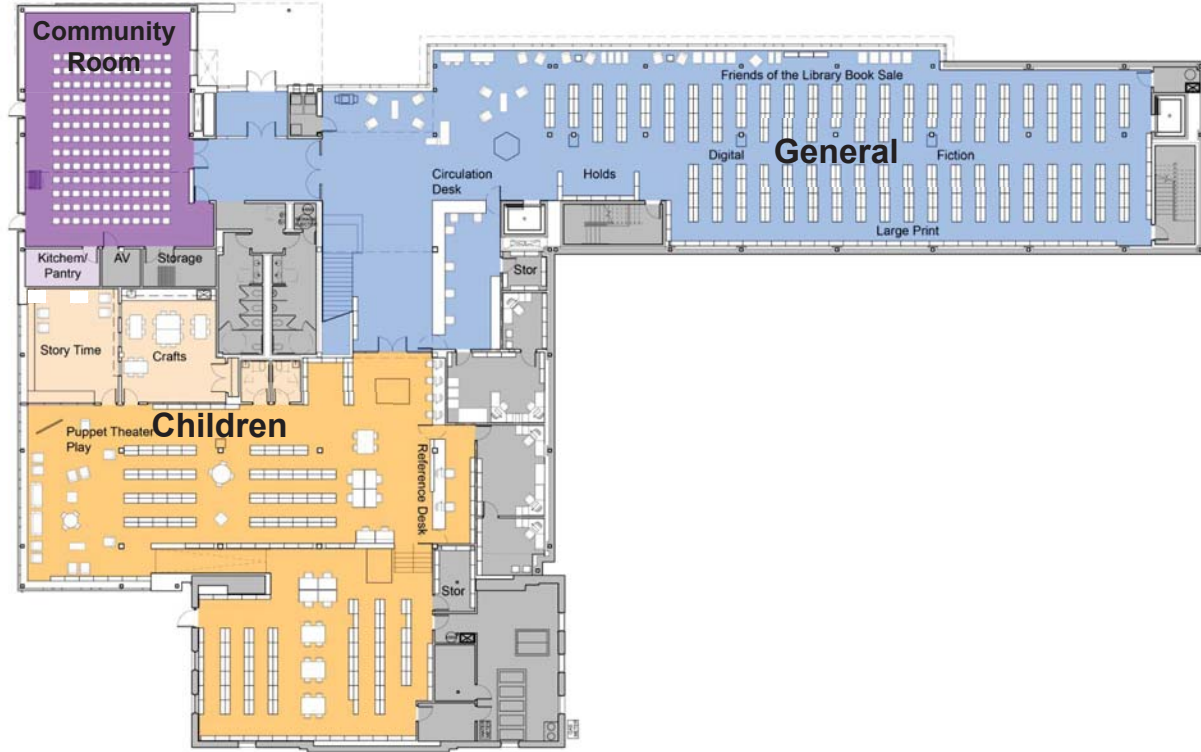
4. Highland Entrance

- Relocate reference desk to improve sightlines
- Expand workroom to accommodate staff numbers
- Maximize seating adjacent to natural light

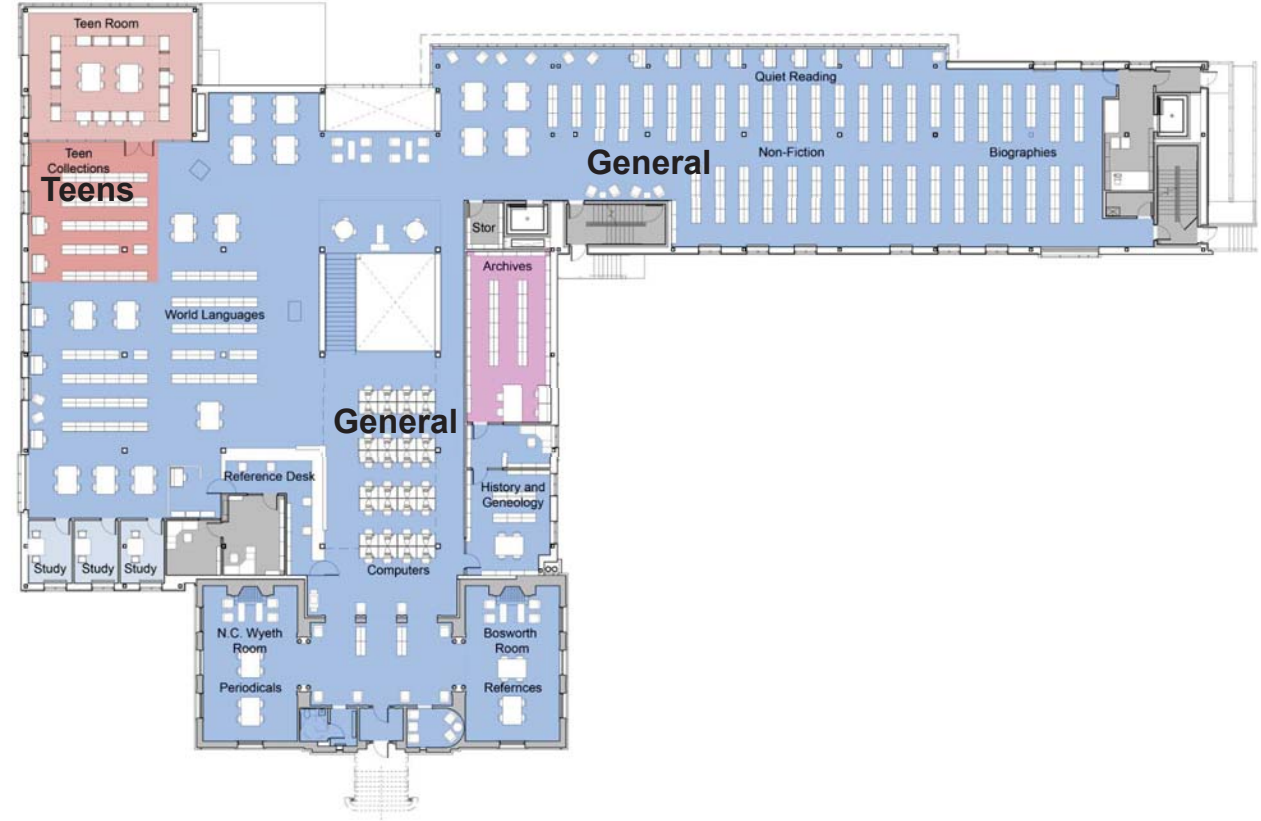
The Big Picture

Existing Floor Plans

First Floor



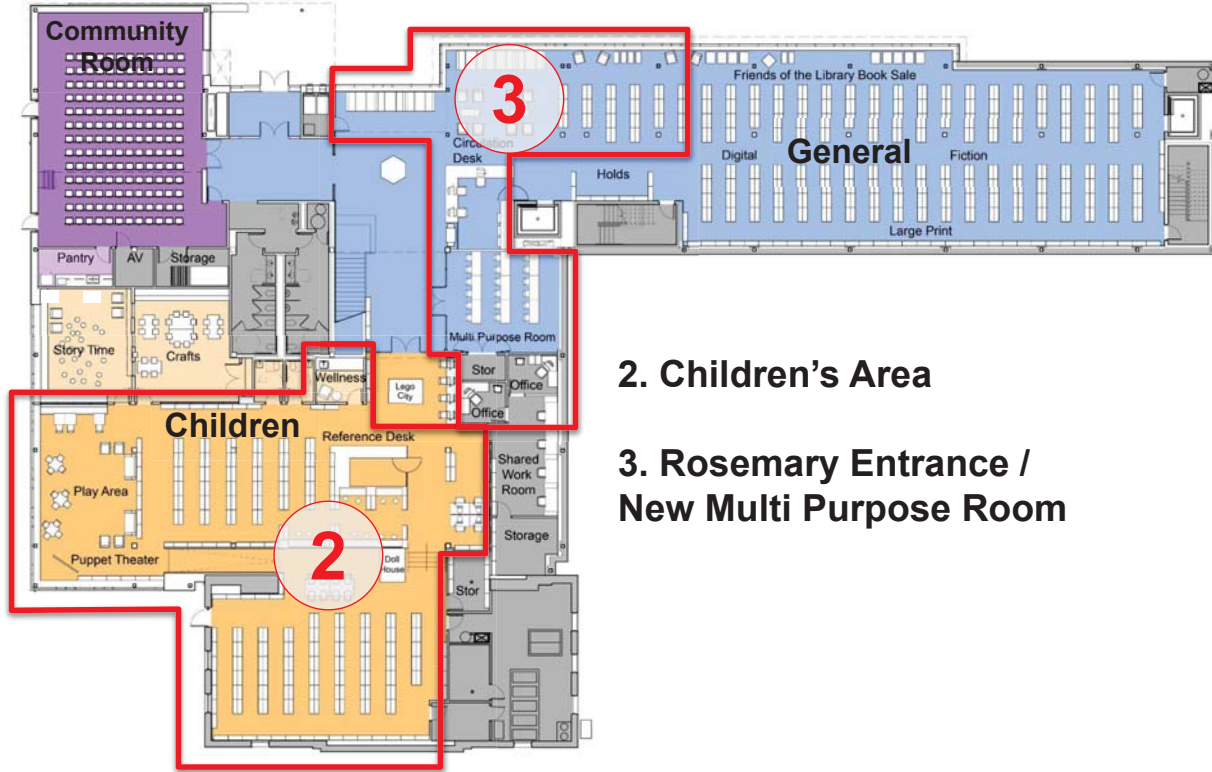
Second Floor



The Big Picture

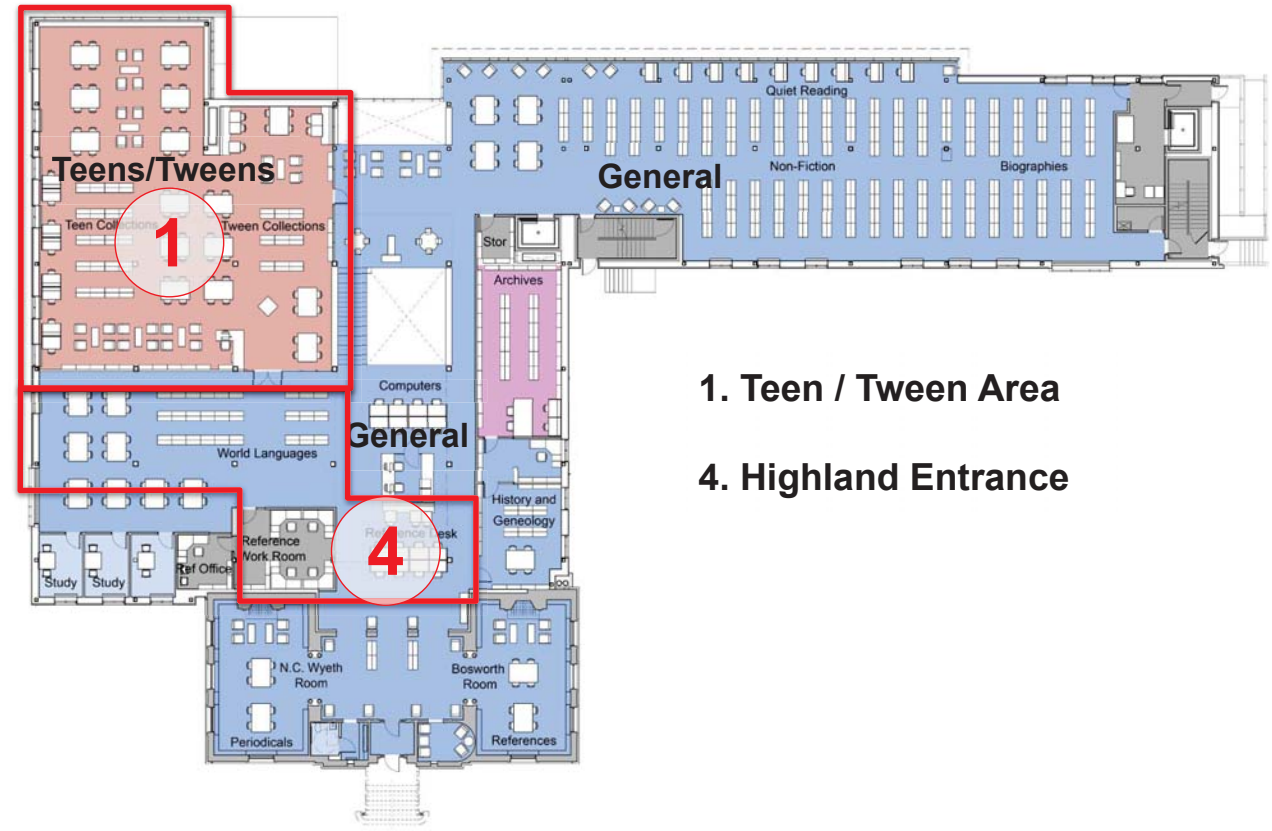
Proposed Updates

First Floor



- 2. Children's Area
- 3. Rosemary Entrance / New Multi Purpose Room

Second Floor



- 1. Teen / Tween Area
- 4. Highland Entrance

Proposed Updates

Second Floor

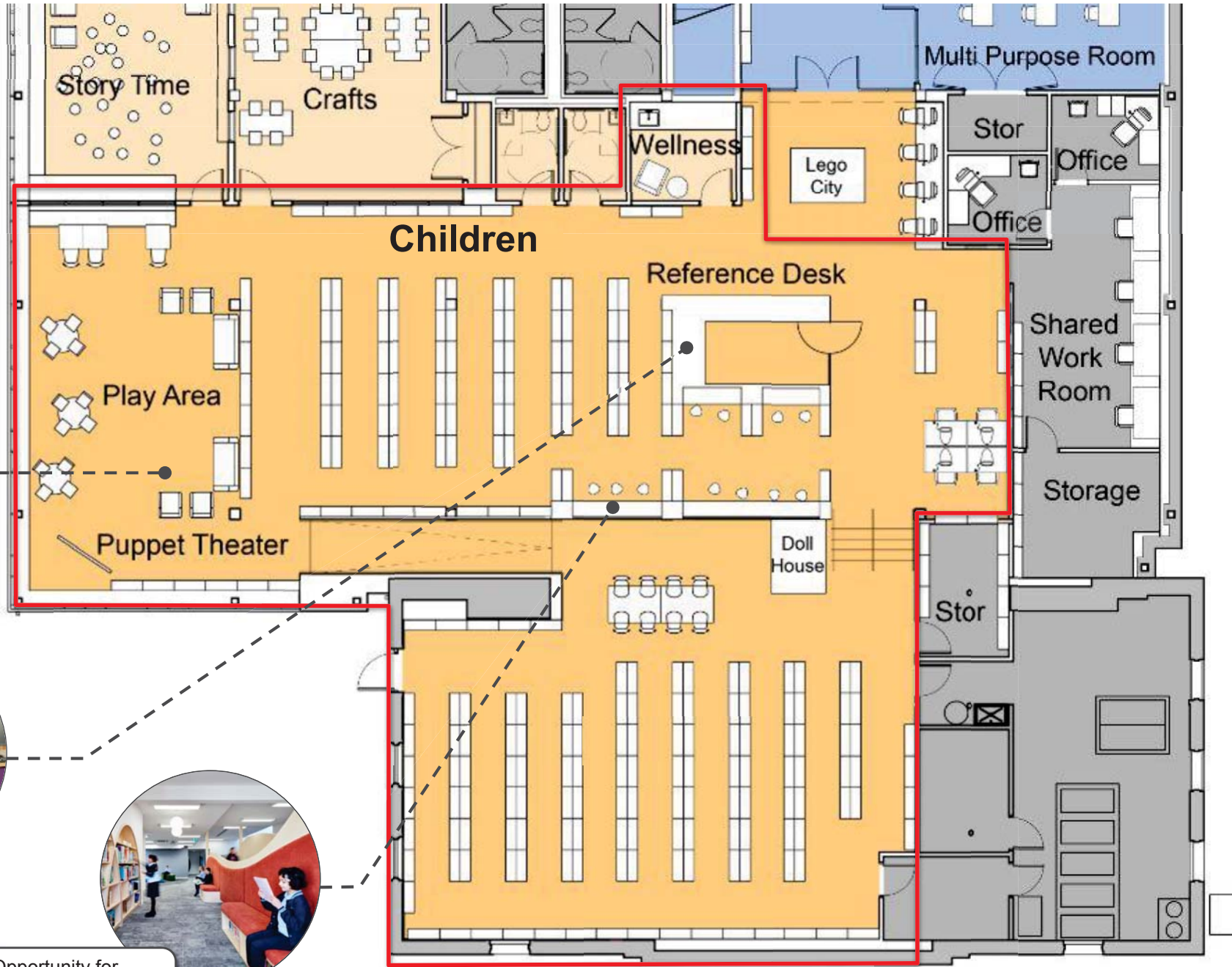
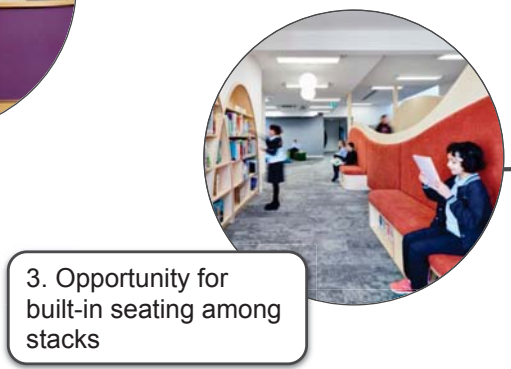
Teen / Tween Area



Proposed Updates

First Floor

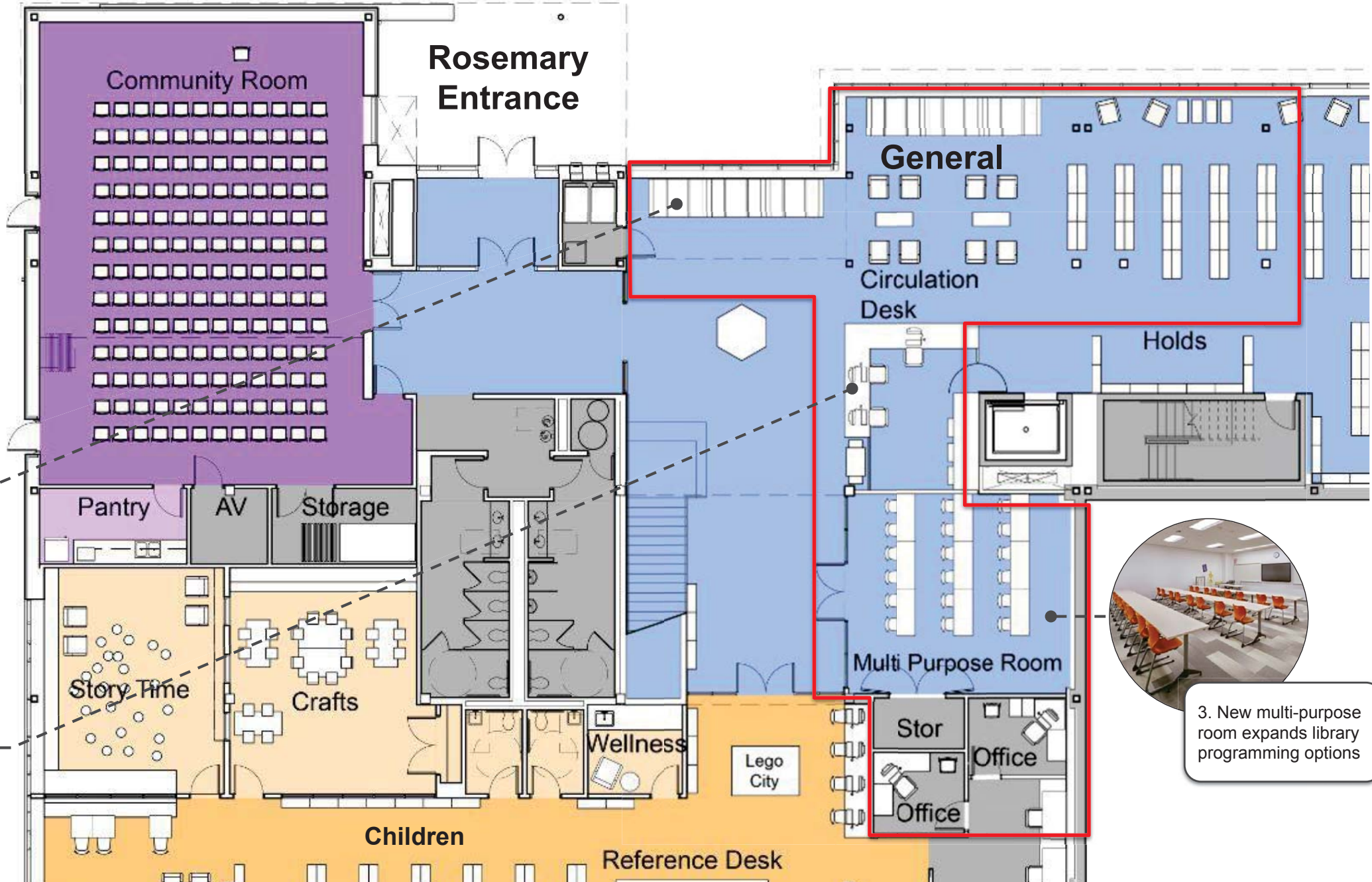
Children's Area Improvements



Proposed Updates

First Floor

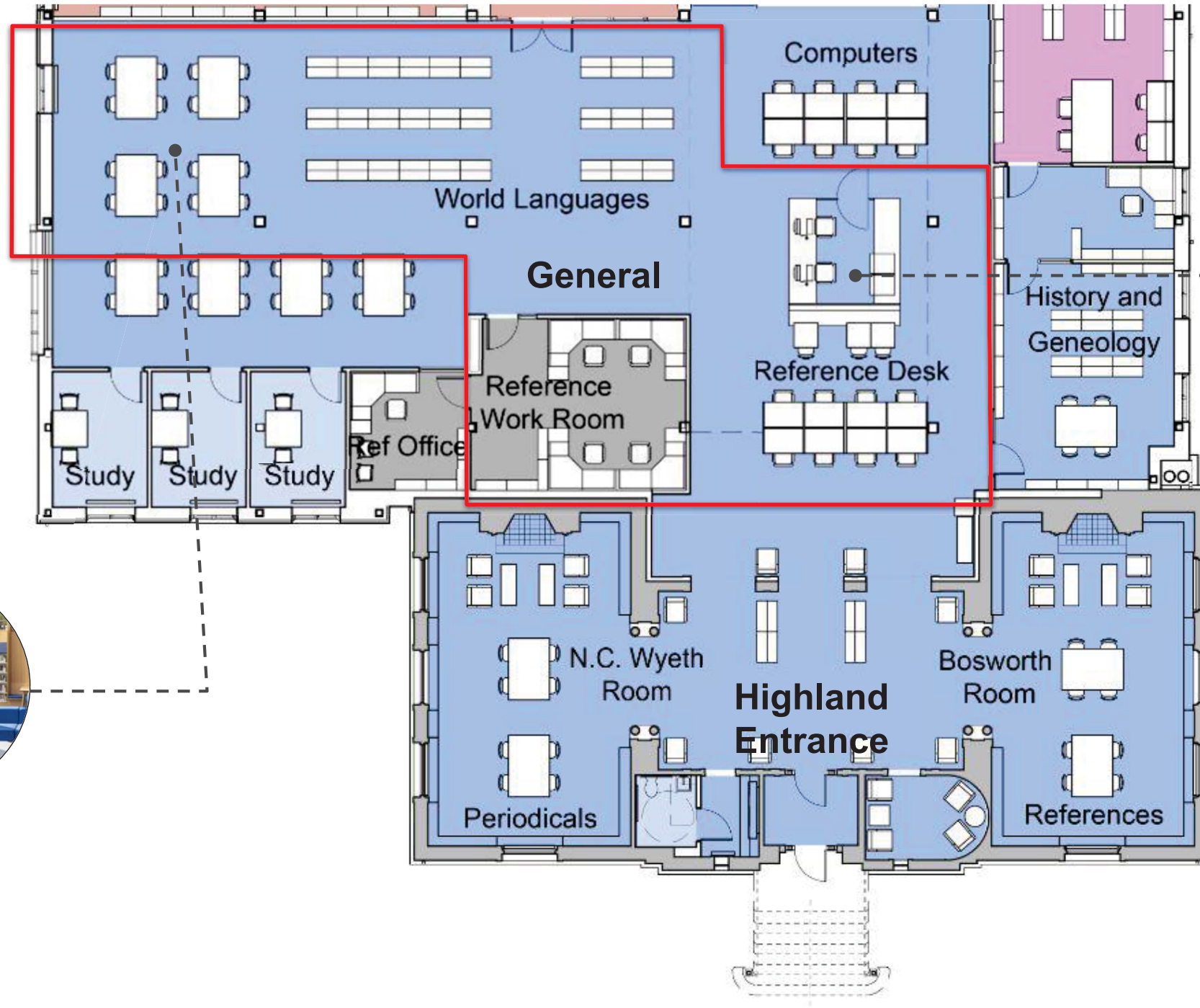
Rosemary Entrance Multi-Purpose Room Addition



Proposed Updates

Second Floor

Highland Entrance Improvements



1. Larger seating area by stacks outside study rooms



2. Clearly visible reference desk

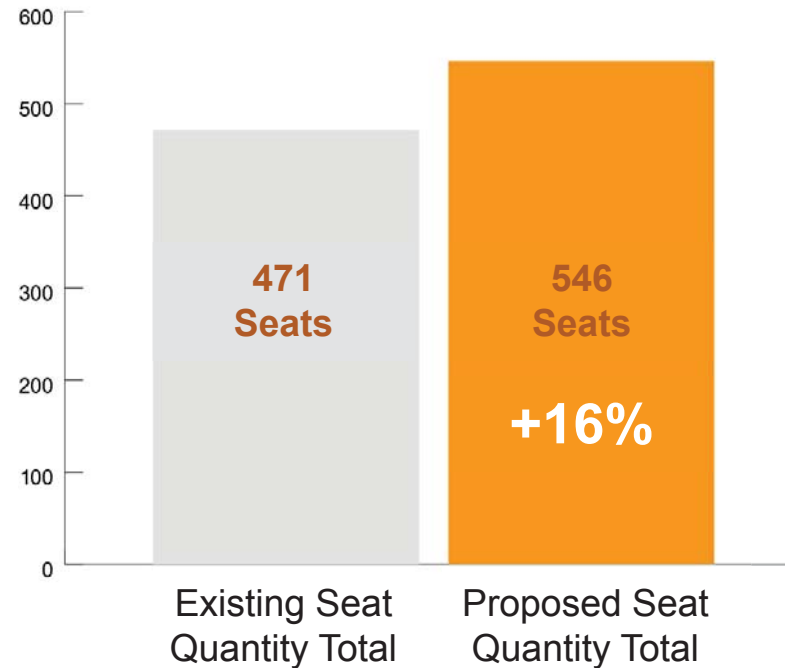
Program Impact Comparison

Existing vs Proposed Changes

New Program Added

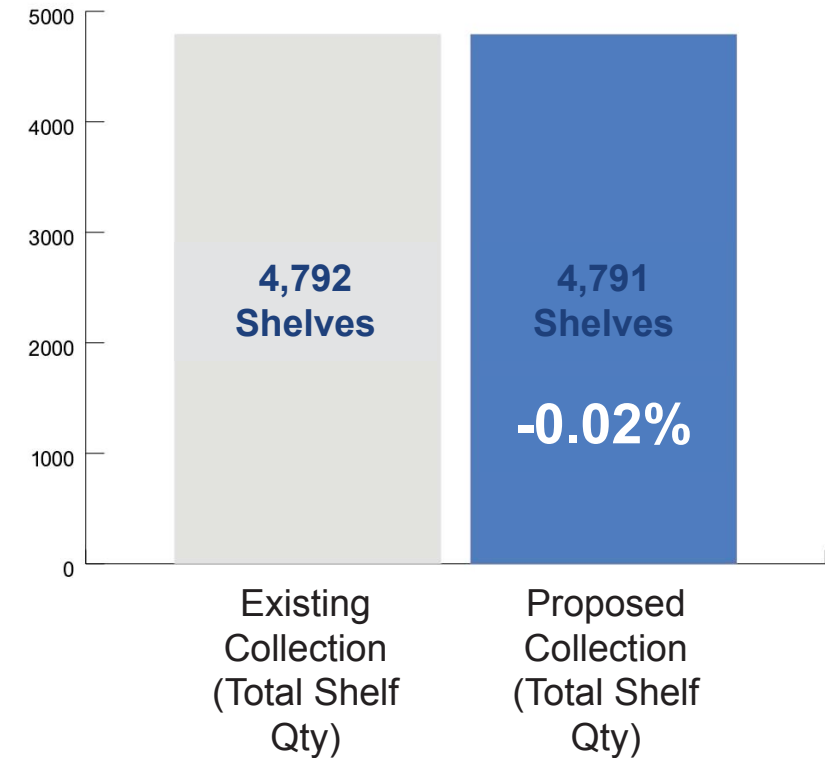
- Multi-purpose room near the Rosemary entrance and central stair (18 person capacity)
- Shared circulation and Children’s reference work room
- Dedicated storage space
- Wellness room in Children’s Area
- Dedicated Young Adult desk
- Expanded and enclosed Young Adult area
- Expanded reference work room
- Expanded seating by study rooms

Seating



The proposed updates would yield an additional 75 patron seats (16%) across both floors including lounge furniture, study carrels, and study tables

Collections



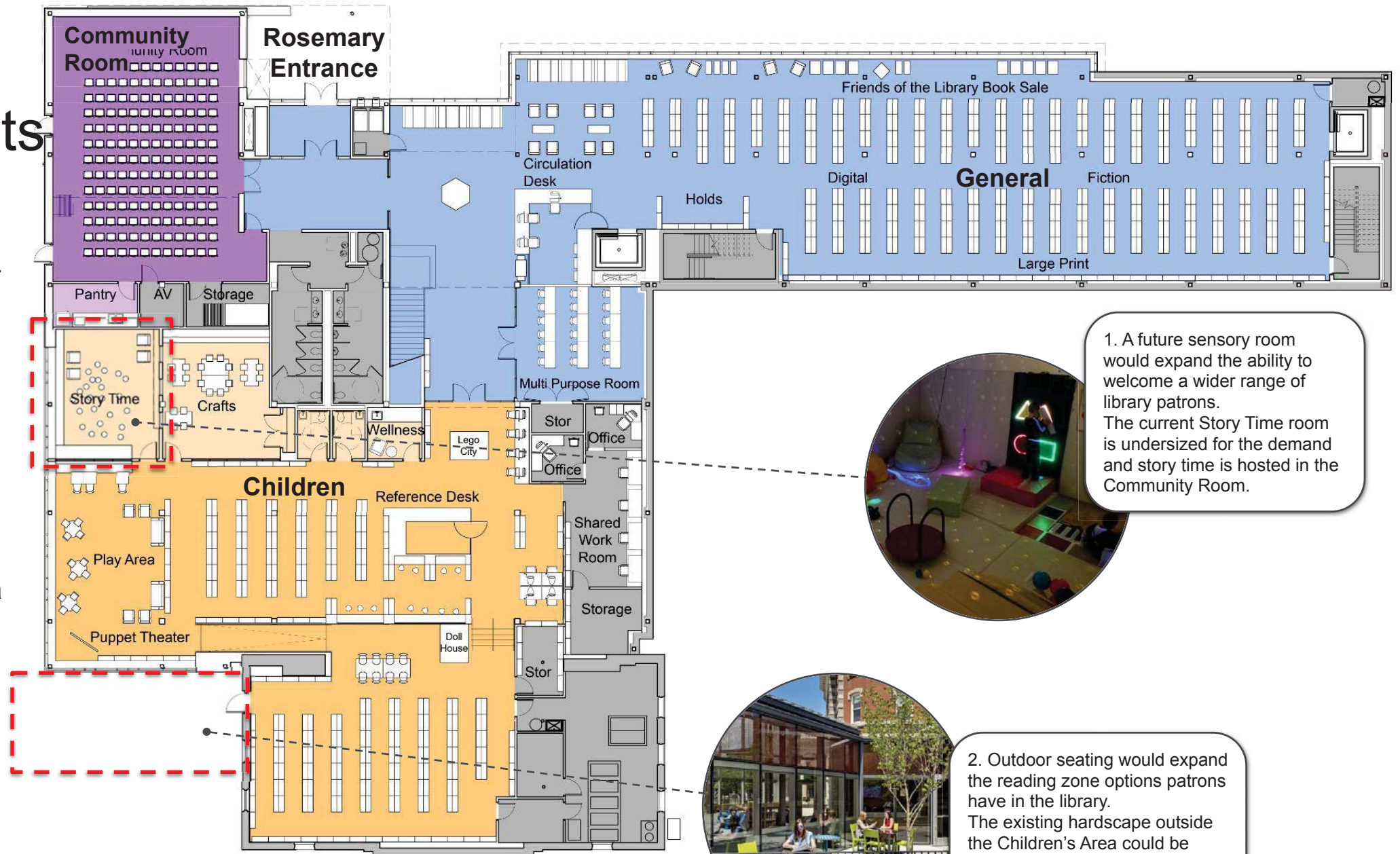
The proposed updates show less than a 1% reduction across all collections
The metrics assume 3H shelves at the majority of the Children’s collections and 4H shelves at the Young Adult area

Non-Capital Improvements

First Floor

In the source of the study, we have identified a number of improvements that could be undertaken without capital funding.

On the first floor, these improvements include creating a sensory room in place of the under-sized Story Time area as well as a new terrace off the upper floor children's stacks area.



1. A future sensory room would expand the ability to welcome a wider range of library patrons. The current Story Time room is undersized for the demand and story time is hosted in the Community Room.

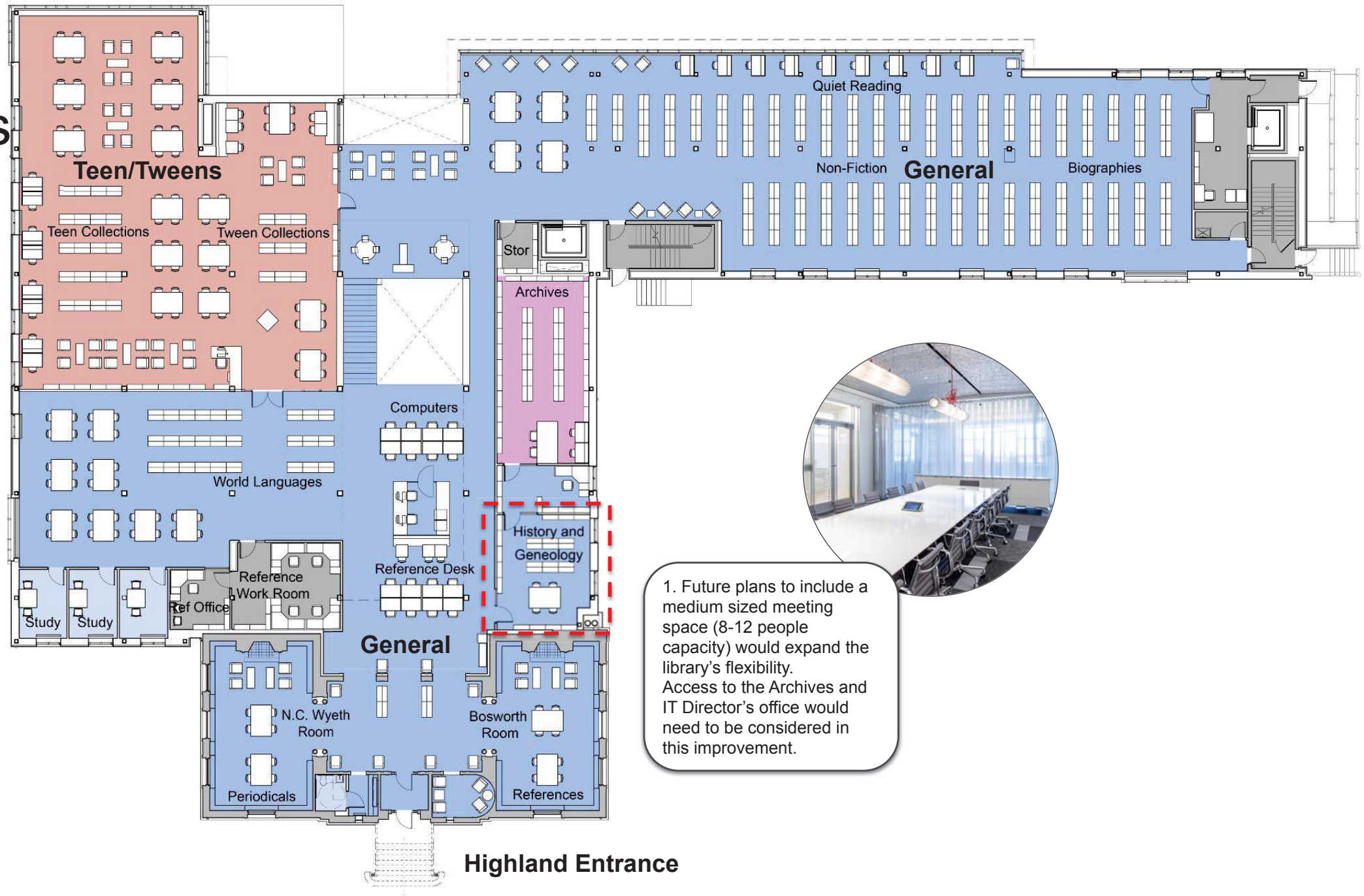


2. Outdoor seating would expand the reading zone options patrons have in the library. The existing hardscape outside the Children's Area could be upgraded with furniture and planters to create a comfortable and secure outdoor space.

Non-Capital Improvements

Second Floor

On the second floor, the history and genealogy collection could be reorganized and redistributed throughout the library to make room for a medium sized 8-12 person conference room.



1. Future plans to include a medium sized meeting space (8-12 people capacity) would expand the library's flexibility. Access to the Archives and IT Director's office would need to be considered in this improvement.

Additional Considerations

Acoustics and Daylight

As the design of the proposed improvements progresses in the future, the beauty of the existing building should not be lost. Many of the existing library spaces are full of daylight, reflecting off natural materials such as wood, cork and slate. Improvements to the use of the spaces should amplify these essential qualities of existing spaces.

Daylighting

Strategies to maximize visibility and daylighting throughout the library

Full Glazing

Full height glass wall and doors maximize daylight intake and provide additional visibility.



Partial Glazing

Windows at varying heights allows for borrowed daylight while controlling the amount of visibility into the rooms.



Acoustics

Strategies to manage sound levels throughout the library

Isolation

Walls and doors should be used to further separate areas of high acoustic concern. Encourages additional privacy and decreases sound intrusion to adjacent programs. Applies to:

- Young adult areas*
- Multi-purpose room*
- Study rooms*



Sound Masking

“White noise” speakers mounted to the ceiling. The ambient background sound reduces the impression of intruding sound and increases speech privacy. Applies to:

- Computer areas*
- Casual work/study/reading areas*



Absorption

Acoustic panels, wall or ceiling mounted. Encourages quieter spaces where panels may absorb more sound via wall and ceiling treatments. Applies to:

- Multi-purpose room*
- Study rooms*
- Quiet reading areas*



5

Cost Estimate Summary

The following pages summarize the estimated construction cost and total project cost of the four priority projects. Please refer to the appendix for a detailed cost estimate.

Cost Estimate Summary

Four Priority Projects

Hard Costs

- Construction Cost (expected bid from a general contractor)
- Includes escalation to presumed construction dates:
 - Teen / Tween: Summer 2025
 - Children's: Summer 2026
 - Rosemary: Summer 2027
 - Highland: Summer 2028

Soft Costs

- Contingency (for unforeseen conditions)
- Furniture (costs may be reduced by re-using furniture or funded by outside sources)
- Equipment (TV monitors, etc)
- Moving Costs (to clear each space for renovation)
- Temporary Facility Costs (if collection will be accessible while space is renovated)
- Professional Service Fees

Cost Estimate Summary

Four Priority Projects

Cost Estimate Categories (all numbers are rounded)	Teen / Tween Area	Children's Area	Rosemary Entrance & New Multi-Purpose	Highland Entrance
<i>Gross Square Footage</i>	<i>4,047 gsf</i>	<i>5,269 gsf</i>	<i>2,676 gsf</i>	<i>3,087 gsf</i>
Estimated Construction Cost Assumes bid date of Q4 2024	\$ 1,700,000	\$ 1,900,000	\$ 1,250,000	\$ 1,150,000
Owner's & Construction Contingency (15%) Owner's Contingency=10%; Construction Contingency=5%	\$ 255,000	\$ 285,000	\$ 190,000	\$ 175,000
Furniture (\$34 / sf) Includes 10% Contingency	\$ 140,000	\$ 180,000	\$ 95,000	\$ 105,000
Equipment (\$10 / sf) Includes 10% Contingency	\$ 45,000	\$ 55,000	\$ 30,000	\$ 35,000
Escalation (6% per year) Items noted above escalated to opening date noted below	\$ -	\$ 150,000	\$ 195,000	\$ 280,000
Moving Costs Includes moving books and furniture out and back In to library	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
Temporary Facility Costs For access to collections and/or programming during renovation of space	\$ -	\$ -	\$ -	\$ -
Professional Service Fees (20%) Architect, Engineering and other Professional Services	\$ 340,000	\$ 405,000	\$ 285,000	\$ 275,000
ESTIMATED TOTAL PROJECT COST	\$ 2,495,000	\$ 2,990,000	\$ 2,060,000	\$ 2,035,000
<i>Estimated Opening Date</i>	<i>Fall 2025</i>	<i>Fall 2026</i>	<i>Fall 2027</i>	<i>Fall 2028</i>

Appendix

Appendix A - Survey Data

Appendix B - Detailed Construction Cost Estimate

Appendix C - Shelf Height Diagram

Image Credits

Space Inspiration Images

Page 21: Proposed Updates, Second Floor: Teen/Tween Area

1. Roxbury Branch of the Boston Public Library Renovation, Utile.
Photography by Anton Grassl
2. RWU North Campus Residence Hall, Perkins + Will.
Photography by Anton Grassl
3. Recruit Marketing Partners Co, Ltd, Jamo Associates.
Photography by Noriyuki Yano

Page 22: Proposed Updates, First Floor: Children's Area Improvements

1. Roxbury Branch of the Boston Public Library Renovation, Utile.
Photography by Anton Grassl
2. Brookfield Christian School, Demco Interiors.
3. St Paul's College Modernisation, Clarke Hopkins Clarke.
Photography by Rhiannon Slatter

Page 23: Proposed Updates, Second Floor: Rosemary Entrance, Multi-Purpose Room Addition

1. Martin Bratrud Studio Furniture, K-2 Banquettes.
2. Finspång Library, ElinderSten Architects.
Photography by Devis Bonaz
3. West-MEC Northwest Campus, SPS+ Architects.
Photography by Fiathie

Page 24: Proposed Updates, Second Floor: Highland Entrance Improvements

1. Roxbury Branch of the Boston Public Library Renovation, Utile.
Photography by Anton Grassl
2. Seattle Public Library, LMN + OMA.
Photography by Philippe Ruault

Page 26: Non-Capital Improvements, First Floor

1. Novak Djokovic Foundation.
2. Jamaica Plain Branch of the Boston Public Library Renovation, Utile.
Photography by Anton Grassl

Page 27: Non-Capital Improvements, Second Floor

1. Autodesk Boston Executive Briefing Center, Utile.
Photography by Ryan Maheu

Appendix A

Survey Data

A-1

Survey Summary

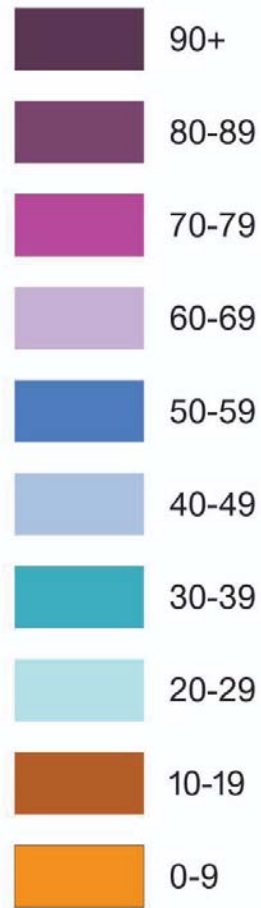
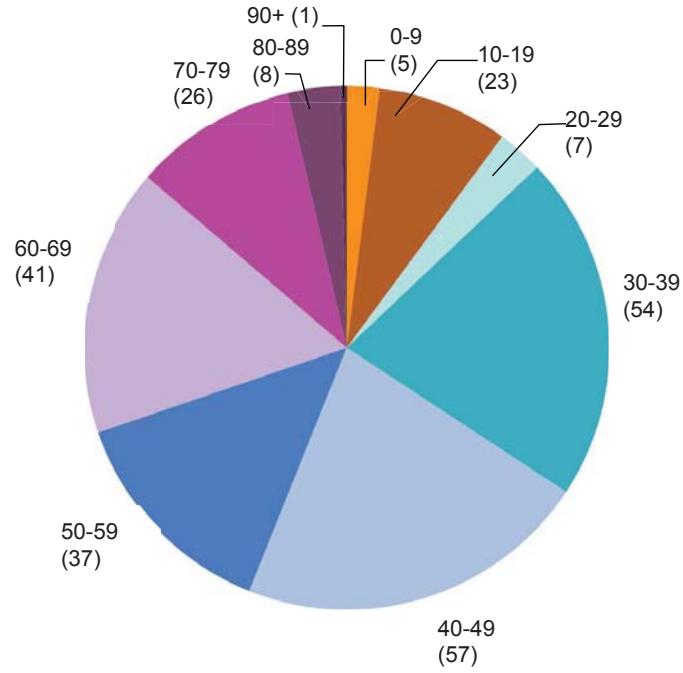
The following pages offer a breakdown of survey responses from various stakeholder groups on programming, including specific zones such as the Children and Teen's areas.

Online Survey

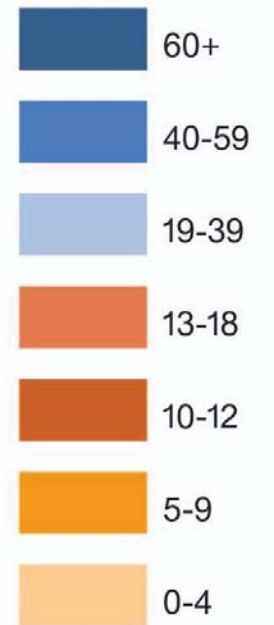
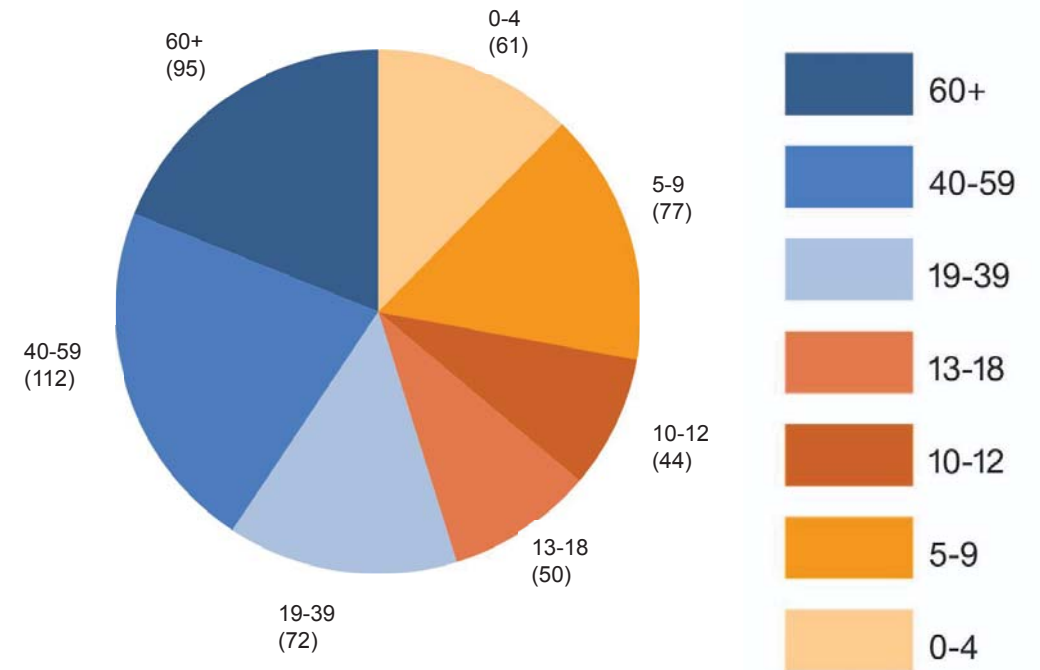
Respondent demographics

260 Responses Total
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Age Range

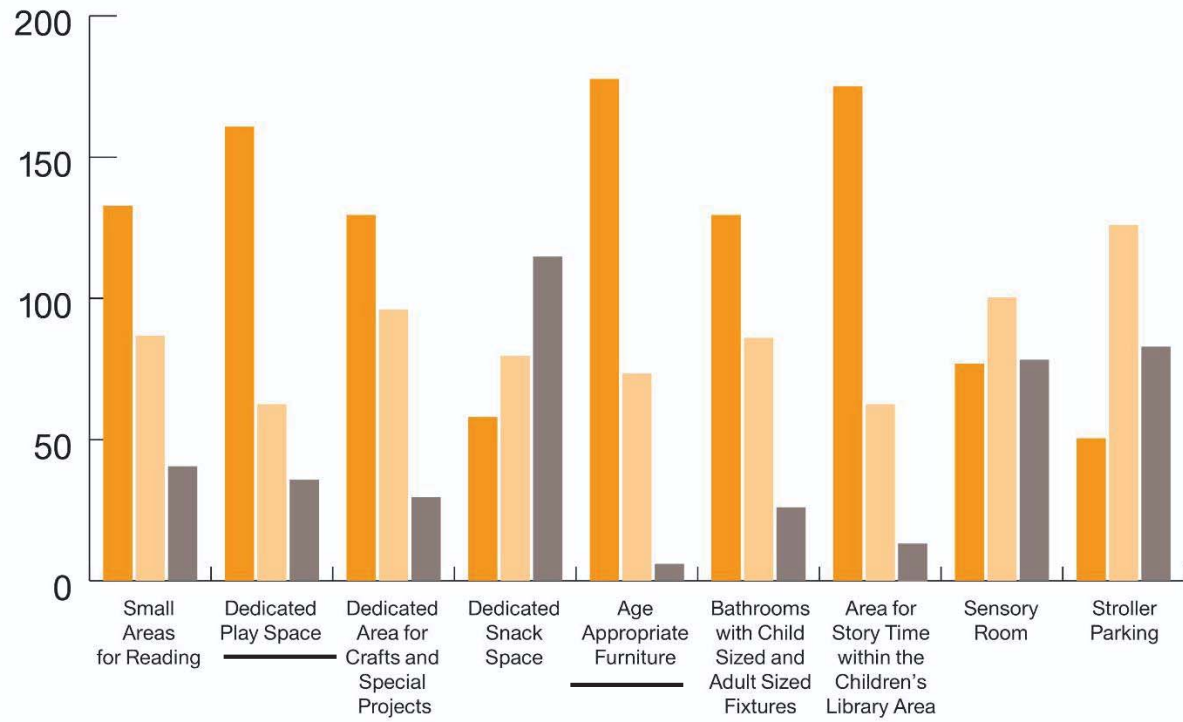


Age Range per Household



Online Survey

Children's Programming



Do you feel the following Children's spaces are Very Important, Important, or Not Important to have in the library?



Small comfortable areas (one to two people) for reading



Dedicated play space



Dedicated area for crafts and special projects



Dedicated snack space



Age appropriate furniture



Bathrooms with child sized and adult sized fixtures



Area for story time within the Children's Library area



Sensory room



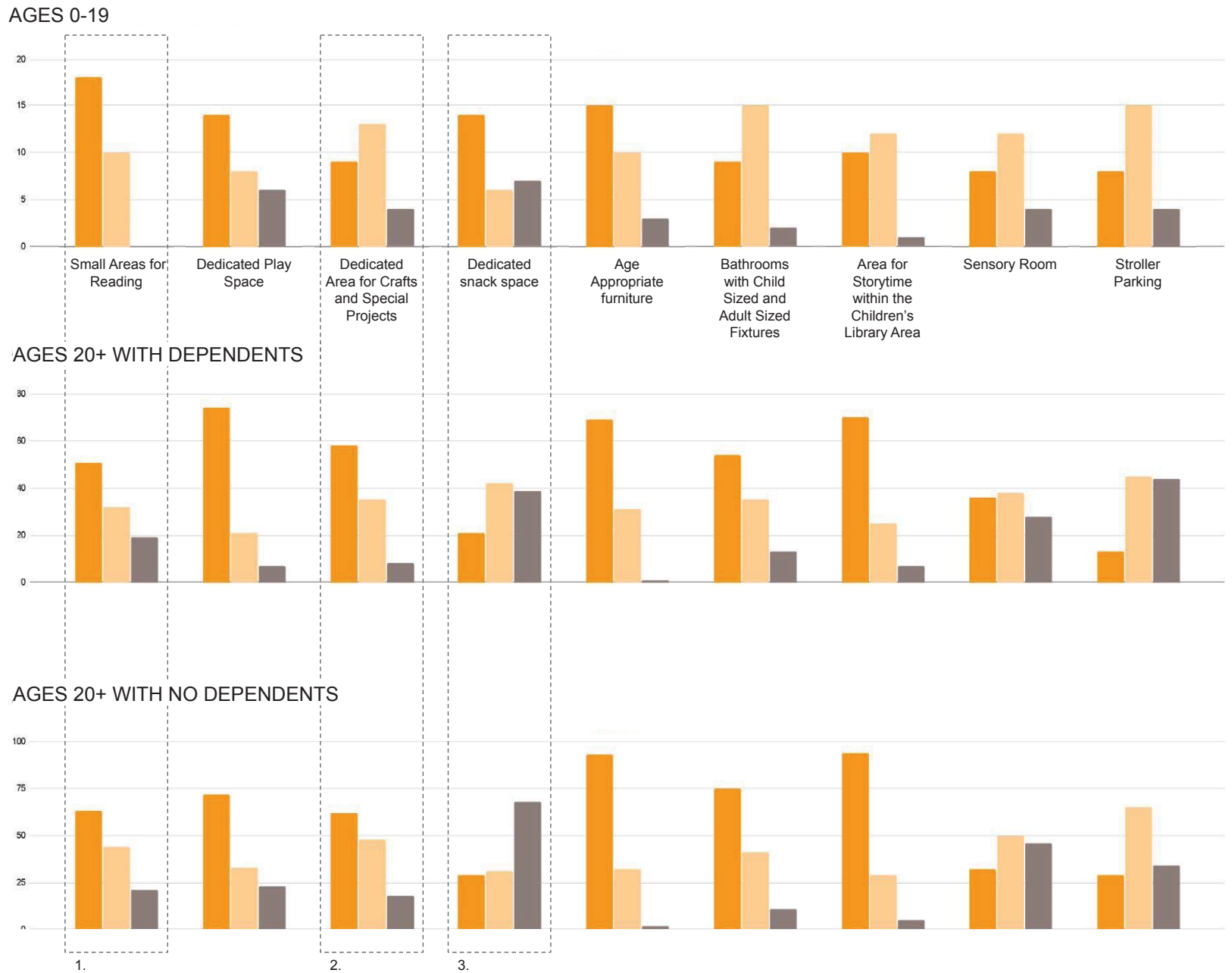
Stroller parking

Screenshot from online survey space suggestions

Children's Programming

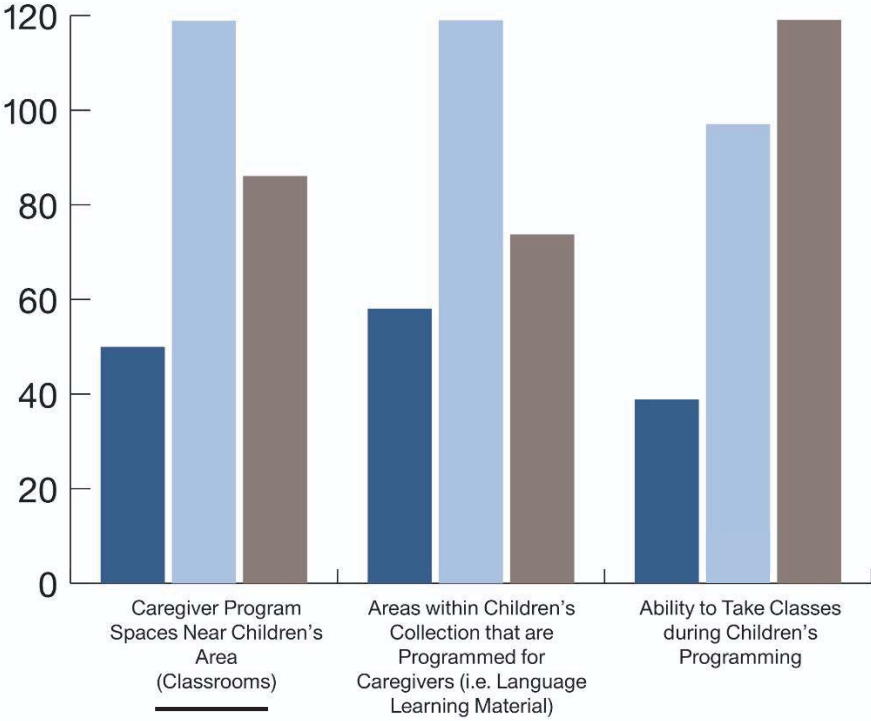
Key Takeaways

1. Both youth and adults think private reading spaces are important for children
2. Greater ratio of adults think that craft and special needs spaces are important compared to youth
3. Youth placed greater importance on snack area compared to adults



Online Survey

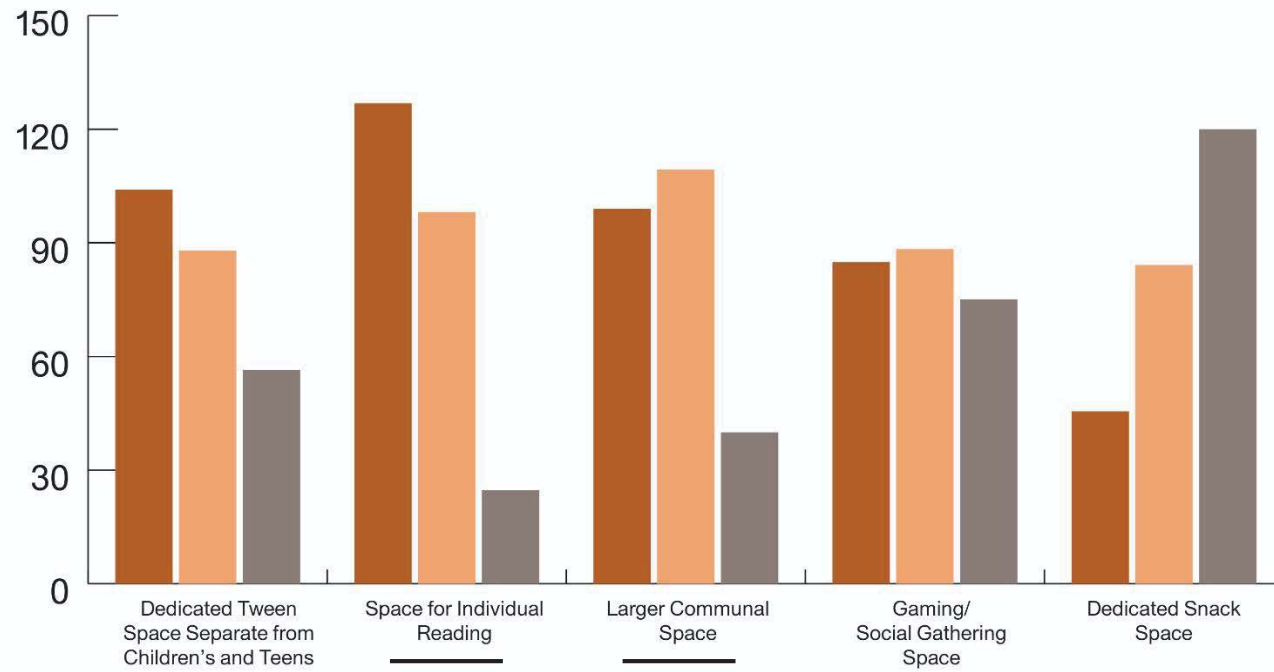
Caregiver's Programming



- Very Important
- Important
- Not Important

Online Survey

Tween's Programming (Ages 10-12)



Do you feel the following Tween (age 10-12) spaces are Very Important, Important, or Not Important to have in the library?



Dedicated Tween spaces separate from Children's and Teens



Space for individual reading



Larger communal space



Gaming/social gathering space



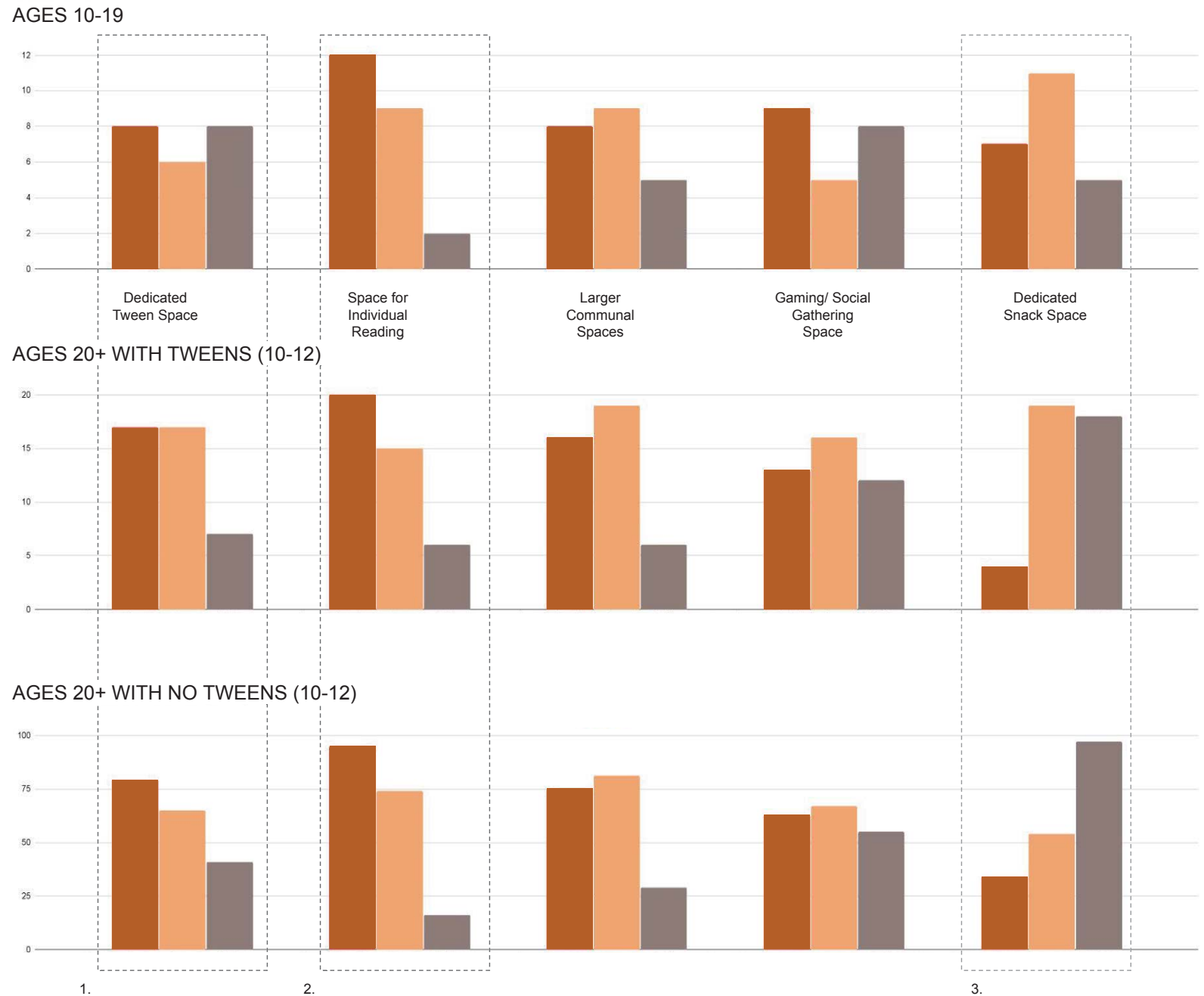
Dedicated snack space

Screenshot from online survey space suggestions

Tween's Programming

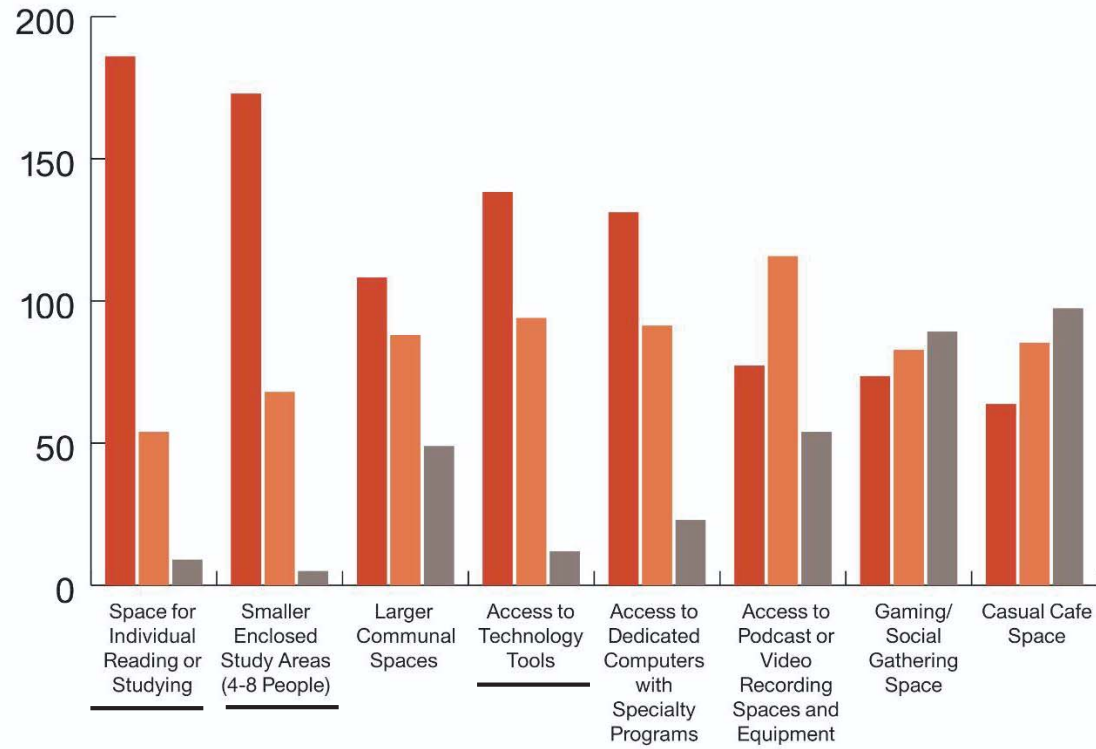
Key Takeaways

1. Tweens have less preference of having separate space from children and teens compared to adults
2. Individual learning/ reading spaces preferred over other options
3. Dedicated snack area more important to tweens than adults



Online Survey

Teen's Programming (Ages 13-18)



Do you feel the following Teen spaces are Very Important, Important, or Not Important to have in the library?



Space for individual reading or studying



Smaller enclosed study areas for groups of four to eight



Larger communal spaces



Access to technology tools



Access to dedicated computers with specialty programs



Access to podcast or video recording spaces and equipment



Gaming/social gathering space



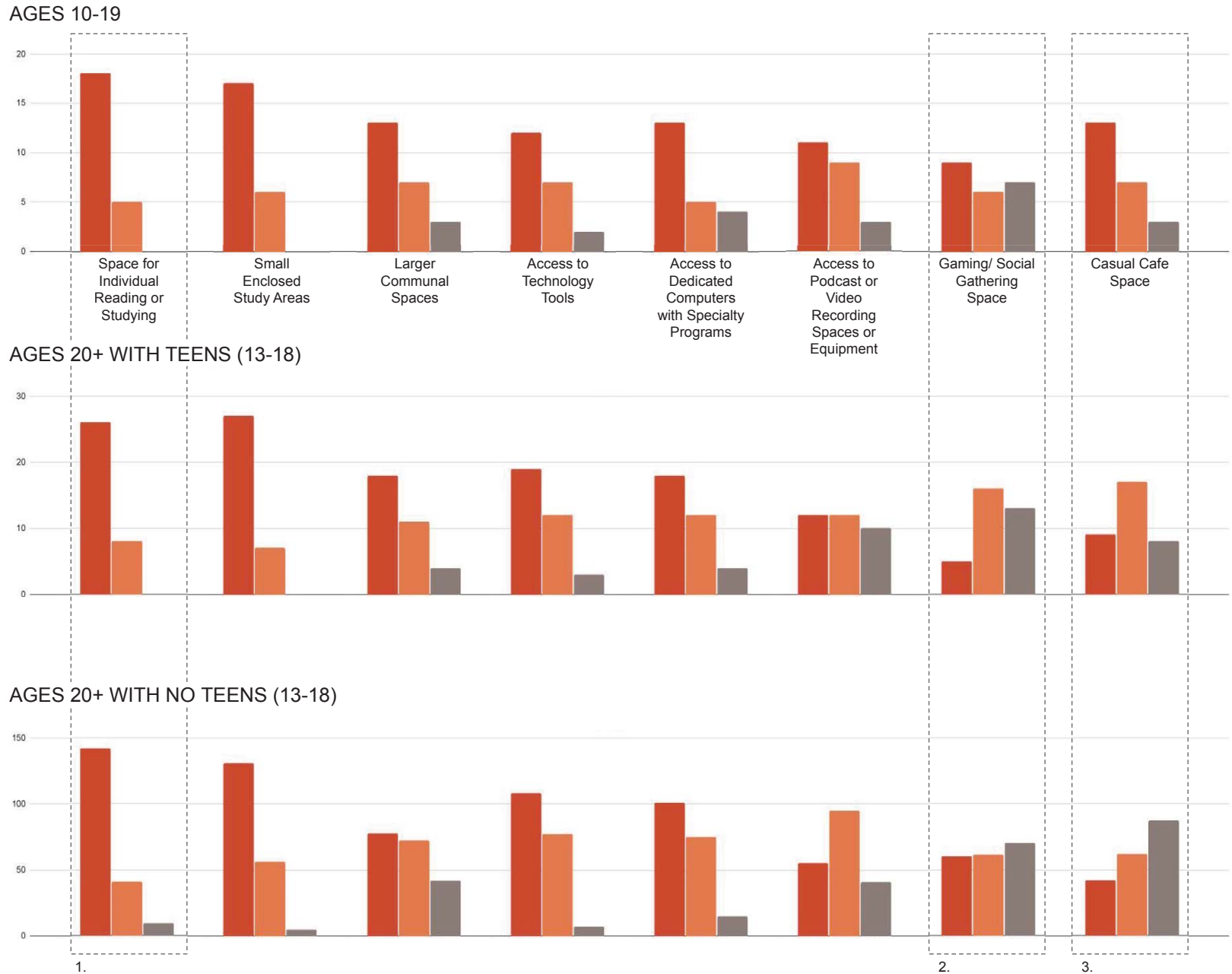
Casual cafe space

Screenshot from online survey space suggestions

Teen's Programming

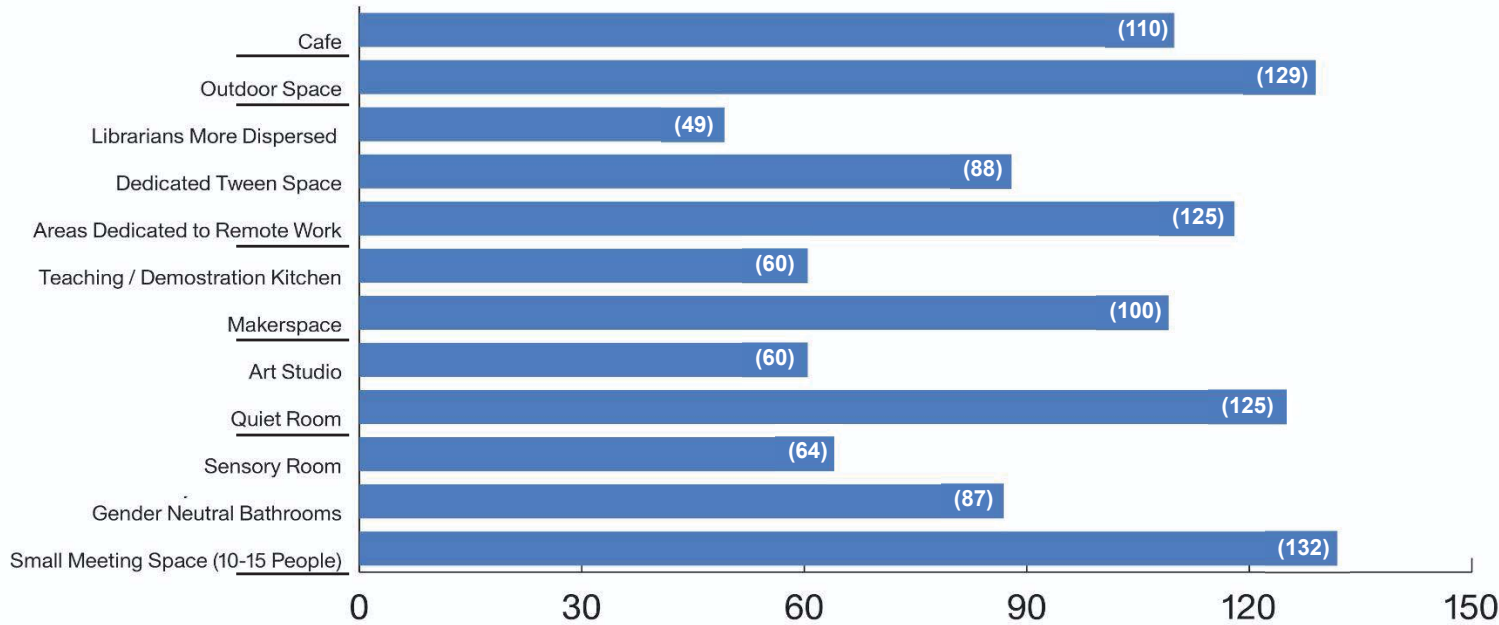
Key Takeaways

1. Individual spaces for reading most important for all demographics
2. Gaming/ social spaces are least important for teens and adults
3. Cafe spaces are more important to teens than the adults think for teens



Online Survey

Additional Library Spaces



- **Children's room on first floor** is very helpful for stroller access/carrying kids.
- **Have a dedicated nursing area (quiet place)** so that a mother can nurse her baby and read to her toddler.
- **The library and in particular children's room** have been so helpful with small children. Although many of the suggested spaces (e.g. cafe, outdoor space, makerspace) would be nice to have, I don't think they are required and therefore did not mark them as "missing" from the library. And perhaps **more versatile spaces** may be more valuable than dedicated specialized spaces in the long run.
- **We love the library and the people who work there. Please don't feel like you need to change too much!**

What spaces are missing from the library?



Cafe



Outdoor space



Librarians more dispersed/accessible in the building



Dedicated Tween space



Area dedicated to remote work



Teaching or demonstration kitchen



Makerspace



Art studio



Quiet room



Sensory room



Gender neutral bathroom



Small meeting space (ten to fifteen people)

Screenshot from online survey space suggestions

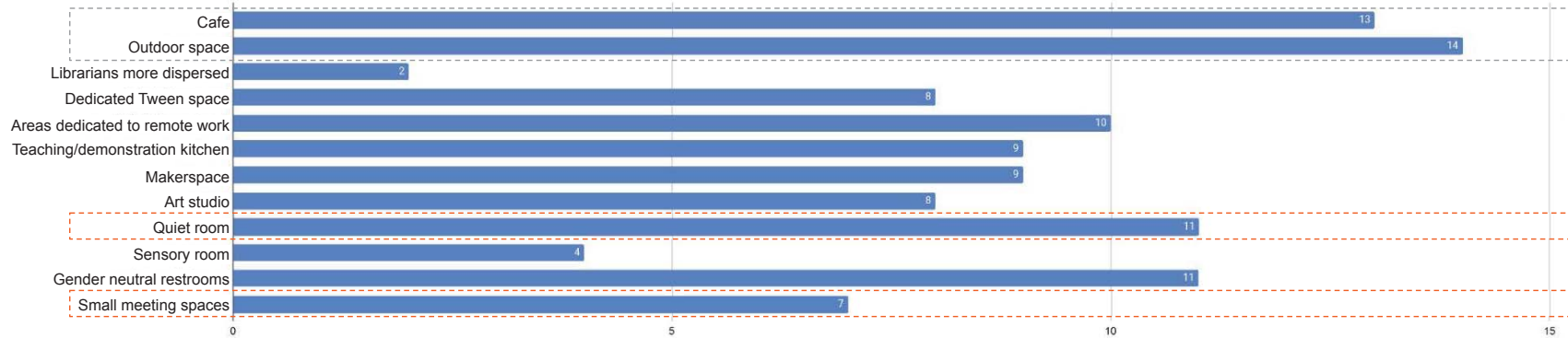
Additional Library Spaces

Key Takeaways

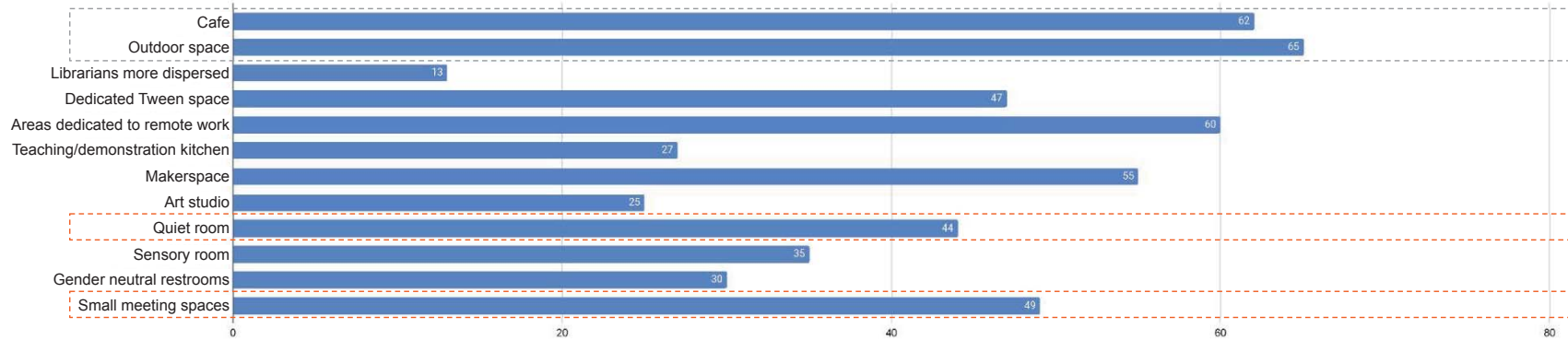
Youth prefer more social spaces and programs that offer greater programming diversity (maker -space, art studio, etc.)

The older demographics prefer quiet individual spaces and meeting rooms more than special programming

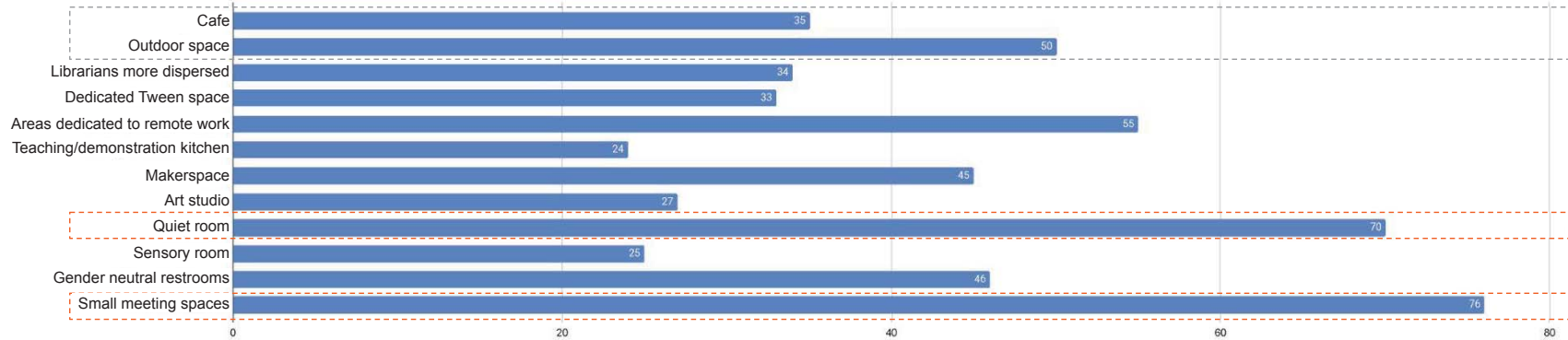
AGES 10-19



AGES 20-39



AGES 40+



A-2

Direct Stakeholder Feedback

The following pages summarize the engagement sessions with library stakeholders including seniors, teens, and tweens.

Direct Stakeholder Feedback

1. Library Trustees

- April 9th meeting
- May 9th meeting
- June 13th meeting
- August 8th meeting

2. Permanent Public Building Committee (PPBC)

- April 10th meeting
- June 26th meeting
- August 14th meeting

3. Library Staff

- Continuous since start of study

4. Stakeholders and Patrons

- Direct engagement with patrons
 - March 8th Senior walk-through
 - March 15th virtual session with Tweens
 - March 29th in person session with Teens
- Online Survey open from February to mid-June

Direct Stakeholder Feedback Summary

Seniors Session

March 8th, in person walk through

- Large Print section is too dark and inaccessible to folks with mobility impairments
- Drive by book drop-off would be a great addition
- Having a self-check out zone by the Holds would be useful
- Furniture should be comfortable for the reading areas; seating should not be too low and ideally have arms
- Friends of the Library Book Sale area gets dark; ideally located near an entrance or high traffic area
- Community room chairs are very comfortable; adding drawers to the pantry cabinets would be useful
- More study rooms would be nice
- Spaces for one-on-one tutoring sessions would be helpful
- Archive space feels hidden away
- Reference desk is intimidating

Tweens Session

March 15th, virtual Zoom feedback session

- More books dedicated to Tweens would be nice, especially if they are organized by genre within one space (sci-fi, fantasy, etc.)
- Smaller rooms with whiteboards to study; whiteboards would be better at the table surface
- Tweens would like a separate space from Teens
- Comfortable furniture
- Seating by natural light
- Space to eat
- The idea of a green screen to record videos is appealing
- Gaming room (both video and board games) is appealing, although they would like it separated from Teens

Teens Session

March 29th, in person feedback session

- Individual study carrels preferred over other types of seating
- More accessible power outlets
- Seating by natural light
- Small enclosed study group areas, individual reading areas, and a shared eating space were the most popular program types selected

A-3

Staff Feedback & Observation Summary

The following pages summarize feedback sessions with the library's director and staff as well as Utile's own observations based on time spent on site during library hours.

Needham Free Public Library

Identifying constraints and potential opportunities

First floor challenges

Children's Area

- Limited visibility to stacks located in the older building footprint
- Limited seating for children of various ages
- Story Hour room is too small for library events
- Craft room is too small for library events
- Furniture is not appropriately sized for children



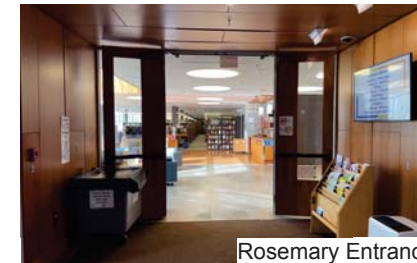
Community Room

- Kitchen pantry storage is limited
- Cabinetry is not ADA compliant



General Area & Collections

- Limited visibility to the Rosemary St entrance
- Large Print Fiction collection is not easily accessible
- Dedicated food space is not available but needed for patrons
- Storage is limited overall



Needham Free Public Library

Identifying constraints and potential opportunities

Second floor challenges

Young Adult Area

- Enclosed YA area is limited in size and does not offer enough seating options; as a result, teens are spread throughout the library at busy times
- Room has glare and overheating problems

Archive/History & Genealogy

- Limited visibility to this area; some patrons do not know where these programs are located

General Area & Collections

- Limited visibility to the Highland Ave entrance
- Reference desk looks intimidating
- YA librarian does not have space in Reference Workroom
- Study rooms are highly used; additional ones would be beneficial
- N. C. Wyeth and Bosworth rooms are underutilized
- Need for a more defined quiet reading space



Appendix B

Detailed Cost Estimate

Cost Estimate Summary

Four Priority Projects

Cost Estimate Categories (all numbers are rounded)	Teen / Tween Area	Children's Area	Rosemary Entrance & New Multi-Purpose	Highland Entrance
<i>Gross Square Footage</i>	<i>4,047 gsf</i>	<i>5,269 gsf</i>	<i>2,676 gsf</i>	<i>3,087 gsf</i>
Estimated Construction Cost Assumes bid date of Q4 2024	\$ 1,700,000	\$ 1,900,000	\$ 1,250,000	\$ 1,150,000
Owner's & Construction Contingency (15%) Owner's Contingency=10%; Construction Contingency=5%	\$ 255,000	\$ 285,000	\$ 190,000	\$ 175,000
Furniture (\$34 / sf) Includes 10% Contingency	\$ 140,000	\$ 180,000	\$ 95,000	\$ 105,000
Equipment (\$10 / sf) Includes 10% Contingency	\$ 45,000	\$ 55,000	\$ 30,000	\$ 35,000
Escalation (6% per year) Items noted above escalated to opening date noted below	\$ -	\$ 150,000	\$ 195,000	\$ 280,000
Moving Costs Includes moving books and furniture out and back In to library	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
Temporary Facility Costs For access to collections and/or programming during renovation of space	\$ -	\$ -	\$ -	\$ -
Professional Service Fees (20%) Architect, Engineering and other Professional Services	\$ 340,000	\$ 405,000	\$ 285,000	\$ 275,000
ESTIMATED TOTAL PROJECT COST	\$ 2,495,000	\$ 2,990,000	\$ 2,060,000	\$ 2,035,000
<i>Estimated Opening Date</i>	<i>Fall 2025</i>	<i>Fall 2026</i>	<i>Fall 2027</i>	<i>Fall 2028</i>

**Town of Needham, MA
Free Library, Highland Avenue
Needham, MA 02494**

Concept Estimate

07/28/2023

Utile
115 Kingston Street
Boston, MA 02111



98 N Washington St, Suite 109
Boston MA 02114



**Town of Needham, MA
Free Library, Highland Avenue
Concept Estimate**

07/28/2023

BASIS OF ESTIMATE

1 INTRODUCTION

- 2 This estimate is based upon the following;
- 3 Concept plans and scope descriptive narratives dated 07-07-2023, provided by Utile
- 4 RFI questions and responses from the design team
- 5

6 PROJECT OUTLINE

- 7 The project consists of interior renovations to the existing library located on Highland Avenue, Needham, MA
- 8

9 BASIS FOR PRICING

- 10 CSI classification format used.
- 11 Contractor to have unrestricted access.
- 12 Measurement of quantities where possible, for the remainder, parametric measurements used in conjunction with references from similar projects recently estimated by ELLANA.
- 13 Prevailing labor rates assumed.
- 14 This project will be publicly bid
- 15 Pricing assumes a procurement with one Prime Contractor and competitive bidding for every portion of the construction work, which is to mean a minimum of 4 bids including all subcontractors and materials/equipment suppliers. If fewer bids are solicited or received, prices can be expected to be higher.
- 16 Subcontractor's mark-ups have been included in each line item unit price. Mark-ups cover the cost of field overhead, home office overhead and subcontractor's profit. Subcontractor's mark-ups typically range from 5% to 15% of the unit price depending on market conditions.
- 17 We have included a Design and Pricing Contingency percentage to cover cost increases that will occur during design elaboration or unforeseen design issues. As the design develops, the design contingency is reduced, and is eliminated at the final Construction Document estimate.
- 18 Escalation to anticipated construction mid-point is estimated as a percentage in the Summary page.
- 19

20 Dates for Reference

- 21 (4) separate bid awards in FY 2025, 2026, 2027 and 2028. Final determination of bid and award schedule by Owner
- 22 Construction duration for each award project shall occur during the summer of the respective calendar year (outside NPS academic school calendar)
- 23

24 Work Zone Areas

25 4,047 - GSF Young Adults
 26 5,269 - GSF Childrens Area
 27 2,676 - GSF Rosemary Entrance
 28 3,087 - GSF Highland Entrance
 29 **15,079 - GSF Total**

31 **ITEMS NOT CONSIDERED IN THIS ESTIMATE**

32 Items identified in the design as Not In Contract (NIC).
 33 Construction off-hours work.
 34 Moving, storage and relocation of existing library stacks, shelves, furniture, reference material and Owner FF&E
 35 Swing space, temporary space and storage space
 36 Construction Contingency.
 37 Loose FF&E.

39 **ITEMS THAT MAY AFFECT ESTIMATED COSTS**

40 Such items include, but are not limited to the following:
 41 Modifications to the scope of work subsequent to the preparation of this estimate.
 42 Unforeseen or hidden conditions.
 43 Restrictive technical specifications for materials or products.
 44 Bid approvals delayed beyond the anticipated project schedule.

46 **STATEMENT OF PROBABLE COST OF CONSTRUCTION**

47 ELLANA has prepared this estimate in accordance with generally accepted principles and practices to reflect the fair market value of the project. This estimate is made on the basis of the experience, qualifications, and the best judgment of professional consultants who are familiar with the construction industry.
 48 This estimate reflects the fair construction value for the construction of this project and should not be construed as a prediction of a low bid as ELLANA has no control over the method of determining prices adopted by any individual general contractor, subcontractor or supplier. ELLANA cannot control the cost of labor and materials, the bidding environment or other market conditions, and it is not possible to provide any guarantee that proposals, bids, or actual construction costs will not deviate from this or subsequent cost estimates.

CSI COST SUMMARY		Young Adults	Childrens	Rosemary Entrance	Highland Ave Entrance	Total (All Work)
02	Existing Conditions	\$17,052	\$20,781	\$10,462	\$42,447	\$90,742
06	Wood, Plastics, and Composites	\$32,360	\$119,930	\$69,640	\$65,760	\$287,690
07	Thermal and Moisture Protection	\$2,440	\$3,660	\$2,440	\$2,440	\$10,980
08	Openings	\$150,250	\$24,790	\$53,900	\$4,570	\$233,510
09	Finishes	\$124,686	\$271,189	\$118,457	\$84,742	\$599,074
21	Fire Suppression	\$13,533	\$6,501	\$3,123	\$0	\$23,157
22	Plumbing	\$0	\$5,954	\$0	\$0	\$5,954
23	HVAC	\$67,285	\$1,365	\$14,823	\$1,760	\$85,233
26	Electrical	Filed Sub Bid \$152,774	\$198,905	\$89,646	\$103,415	\$544,740
27	Communications	Part of 260000 \$5,059	\$6,586	\$3,345	\$3,859	\$18,849
28	Electronic Safety & Security	Part of 260000 \$12,141	\$15,807	\$8,028	\$9,261	\$45,237
TOTAL TRADE COST		\$577,580	\$675,468	\$373,863	\$318,254	\$1,945,164
Design & Pricing Contingency		30.00% \$173,274	\$202,640	\$112,159	\$95,476	\$583,549
Sub-total		\$750,854	\$878,108	\$486,022	\$413,730	\$2,528,714
General Conditions		Lump Sum \$345,000	\$345,000	\$345,000	\$345,000	\$1,380,000
General Requirements		Lump Sum \$202,200	\$236,500	\$130,900	\$111,400	\$681,000
Sub-total		\$1,298,054	\$1,459,608	\$961,922	\$870,130	\$4,589,714
Insurances & Bonds		3.30% \$42,836	\$48,167	\$31,743	\$28,714	\$151,461
Building permit - Not required		\$0	\$0	\$0	\$0	\$0
Sub-total		\$1,340,890	\$1,507,775	\$993,666	\$898,844	\$4,741,174
OH&P		15.00% \$201,133	\$226,166	\$149,050	\$134,827	\$711,176
Sub-total		\$1,542,023	\$1,733,941	\$1,142,716	\$1,033,670	\$5,452,350
Escalation, through Q4, 2024		9.00% \$138,782	\$156,055	\$102,844	\$93,030	\$490,712
ESTIMATED CONSTRUCTION COST		\$1,680,805	\$1,889,996	\$1,245,560	\$1,126,701	\$5,943,062
ESTIMATED CONSTRUCTION COSTS (ROUNDED)		\$1,700,000	\$1,900,000	\$1,250,000	\$1,150,000	\$6,000,000
		\$415 /GSF	\$359 /GSF	\$465 /GSF	\$365 /GSF	\$394 /GSF



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
1	02	Existing Conditions					
2		Demo extg flooring	3,936	lf	\$2.00	\$7,872	
3		Demo millwork, YA	86	lf	\$60.00	\$5,160	
4		Demo storefront system assembly	34	lf	\$40.00	\$1,360	
5		Misc demo based on field conditions	20	hrs	\$133.000	\$2,660	
7						Subtotal	\$17,052
9	06	Wood, Plastics, and Composites					
10		<i>Rough Carpentry</i>					
11		Rough carpentry support for other trades	3	days	\$1,520.00	\$4,560	
12		<i>Finish Carpentry</i>					
13		Millwork, Desk Unit YA	14	lf	\$1,800.00	\$25,200	
14		Millwork, FCU enclosure	2	ea	\$1,300.00	\$2,600	
16						Subtotal	\$32,360
18	07	Thermal and Moisture Protection					
19		<i>Caulking and sealants</i>					
20		Caulking and sealants; interior	2	dy	\$1,220.00	\$2,440	
22						Subtotal	\$2,440
23	08	Openings					
24		<i>Door, Frame and Hardware</i>					
25		Frames					
26		F-01, Frame, HM, 3070	1	ea	\$190.00	\$190	
27		Doors					
28		D-01, Door WD, 3070	1	ea	\$800.00	\$800	
29		Hardware Set					
30		Hardware Set 01	1	ea	\$2,200.00	\$2,200	
31		<i>Glazing</i>					
32		Glazing, interior storefront system, 13' H	247	sf	\$290.00	\$71,630	
33		Glazing, interior storefront, door assembly, 6085, 2 leaf	1	ea	\$9,180.00	\$9,180	
34		Glazing, interior window assembly, 12' H	240	sf	\$230.00	\$55,200	
35		Glazing, transom	65	sf	\$170.00	\$11,050	
37						Subtotal	\$150,250



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
39	09	Finishes					
40		<i>Gypsum Wall Assembly</i>					
41		GWB, knee wall construction	148	sf	\$45.00	\$6,660	
42		GWB, new wall construction	516	sf	\$45.00	\$23,220	
43		GWB, soffit w/ returns	57	sf	\$18.00	\$1,026	
44		GWB, extg walls patching	1	ls	\$4,100.00	\$4,100	
45		GWB, extg clgs patching	1	ls	\$5,100.00	\$5,100	
46		<i>Ceilings</i>					
47		ACT-01, grid and tile	925	sf	\$12.00	\$11,100	
48		<i>Flooring</i>					
49		Prep floor for new finishes	3,936	sf	\$4.25	\$16,728	
50		CPT-01, carpet	3,936	sf	\$7.00	\$27,552	
51		New floor base, match extg at new work	1	ls	\$3,100.00	\$3,100	
52		<i>Painting</i>					
53		Paint, walls	1	ls	\$12,200.00	\$12,200	
54		Paint, clgs	1	ls	\$11,800.00	\$11,800	
55		Paint, misc/touch ups	1	ls	\$2,100.00	\$2,100	
56							
57						Subtotal	\$124,686
59	21	Fire Suppression					
60		Young Adult MP Room:					
61		Relocate one sprinkler heads	1	ea	\$347.00	\$347	
62		Young Adult Area					
63		Relocate sprinkler heads	20	ea	\$347.00	\$6,940	
64		Reading Area, Work Room, & Reference Desk:					
65		Relocate sprinkler heads	18	ea	\$347.00	\$6,246	
66							
67						Subtotal	\$13,533
69	22	Plumbing					
70		No work this section	1	ls	\$0.00	\$0	
71							
72						Subtotal	\$0
73							
74	23	HVAC					
75		Young Adult MP Room:					
76		Remove FTR North & South Walls	1	ls	\$1,710.00	\$1,710	



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
77		800 CFM 4-pipe fan coil unit low boy type unit	2	ea	\$3,510.00	\$7,020	
78		Ductwork	1	ls	\$5,000.00	\$5,000	
79		Ceiling Grilles	1	ls	\$1,110.00	\$1,110	
80		Pipe CHW, HW, Drain	1	ls	\$3,600.00	\$3,600	
81		Control Valve	2	ea	\$510.00	\$1,020	
82		Dain pan	1	ls	\$700.00	\$700	
83		Leak Detector	1	ls	\$550.00	\$550	
84		Balancing	1	ls	\$315.00	\$315	
85		Young Adult Area					
86		Relocate and rebalance all FCU diffusers and ERV-1 registers	1	ls	\$1,260.00	\$1,260	
87		New supplemental heating/cooling/vent for new space layout, allowance	4,047	gsf	\$11.12	\$45,000	
88							
89					Subtotal	\$67,285	
90							
91	26	Electrical					
92		Demo/make safe w/ temp lighting	4,047	gsf	\$4.00	\$16,188	
93		New lighting w. circuitry	4,047	gsf	\$15.00	\$60,705	
94		Lighting control	4,047	gsf	\$3.00	\$12,141	
95		Rework extg electrical from extg panels	4,047	gsf	\$2.00	\$8,094	
96		Power wiring for new MEP systems	4,047	gsf	\$2.25	\$9,106	
97		Misc elec based on field conditions	4,047	gsf	\$4.00	\$16,188	
98		Coordination work based on occupancy schedule	4,047	gsf	\$4.50	\$18,212	
99		Trade coordination and management	4,047	gsf	\$3.00	\$12,141	
100					Subtotal	\$152,774	
101							
102							
103	27	Communications					
104		Telecommunications					
105		Tel/comm rough ins for work by Town of Needham IT group	4,047	gsf	\$1.25	\$5,059	
106							
107					Subtotal	\$5,059	
108							
109	28	Electronic Safety & Security					
110		Fire Alarm System					
111		Fire Alarm, modify extg devices from extg FACP	4,047	gsf	\$3.00	\$12,141	
112							
113					Subtotal	\$12,141	



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
114							
115		TO SUMMARY				\$577,580	

DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
1	02	Existing Conditions					
2		Demo extg flooring	4,314	lf	\$2.00	\$8,628	
3		Demo extg clg tiles, grid ETR	4,873	sf	\$1.00	\$4,873	
4		Demo extg guardrail assembly	51	lf	\$20.00	\$1,020	
5		Demo-salvage extg handrail assembly	50	lf	\$30.00	\$1,500	
6		Demo clg mounted millwork panels, Childrens desk	39	lf	\$25.00	\$975	
7		Demo clg mounted millwork panels, circ desk	45	lf	\$25.00	\$1,125	
8		Misc demo based on field conditions	20	hrs	\$133.000	\$2,660	
		Subtotal				\$20,781	
11	06	Wood, Plastics, and Composites					
		<i>Rough Carpentry</i>					
14		Reinstall salvaged extg handrail assembly	50	lf	\$25.00	\$1,250	
15		Rough carpentry support for other trades	4	days	\$1,520.00	\$6,080	
		<i>Finish Carpentry</i>					
17		Millwork, at ramp	24	lf	\$400.00	\$9,600	
18		Millwork, Childrens banquette	14	lf	\$1,100.00	\$15,400	
19		Millwork, Childrens Desk	41	lf	\$1,800.00	\$73,800	
20		Millwork, knee wall at ramp	27	lf	\$400.00	\$10,800	
21		Millwork, Wellness	10	lf	\$300.00	\$3,000	
		Subtotal				\$119,930	
25	07	Thermal and Moisture Protection					
		<i>Caulking and sealants</i>					
27		Caulking and sealants; interior	3	dy	\$1,220.00	\$3,660	
		Subtotal				\$3,660	
30	08	Openings					
		<i>Door, Frame and Hardware</i>					
32		Frames					
33		F-01, Frame, HM, 3070	1	ea	\$190.00	\$190	
34		Doors					
35		D-01, Door WD, 3070	1	ea	\$800.00	\$800	
36		Hardware Set					
37		Hardware Set 01	1	ea	\$2,200.00	\$2,200	
38		Glazing					

DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
39		Glazing, guardrail at extg ramp	27	lf	\$800.00	\$21,600	
		Subtotal				\$24,790	
43	09	Finishes					
		<i>Gypsum Wall Assembly</i>					
45		GWB, clgs	384	sf	\$18.00	\$6,912	
46		GWB, extg walls patching	1	ls	\$5,300.00	\$5,300	
47		GWB, extg clgs patching	1	ls	\$6,600.00	\$6,600	
		<i>Ceilings</i>					
49		ACT-01, grid and tile	3,300	sf	\$50.00	\$165,000	
		<i>Flooring</i>					
51		Prep floor for new finishes	5,212	sf	\$4.25	\$22,151	
52		CPT-01, carpet	4,370	sf	\$7.00	\$30,590	
53		Resilient Flooring	842	sf	\$8.00	\$6,736	
54		New floor base, match extg at new work	1	ls	\$4,000.00	\$4,000	
		<i>Painting</i>					
56		Paint, walls	1	ls	\$15,900.00	\$15,900	
57		Paint, clgs	1	ls	\$5,300.00	\$5,300	
58		Paint, misc/touch ups	1	ls	\$2,700.00	\$2,700	
		Subtotal				\$271,189	
61	21	Fire Suppression					
		<i>Sprinklers</i>					
64		Wellness Room					
65		Relocate one sprinkler head	1	ea	\$197.00	\$197	
66		Children's Stacks					
67		Relocate sprinkler heads	32	ea	\$197.00	\$6,304	
		Subtotal				\$6,501	
71	22	Plumbing					
		<i>Wellness Room</i>					
73		Sink, faucet rough in	1	ea	\$1,800.00	\$1,800	
74		Pipe Cw & Hw	50	lf	35.53	\$1,777	
75		Pipe Waste & vent	50	lf	47.54	\$2,377	
76							



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
77							
78						Subtotal	\$5,954
79	23	HVAC					
80		Wellness Room					
81		Relocate diffuser from adjacent FCU and air balance.	1	ls	\$105.00	\$105	
82		Undercut door 1", by GC					
83		Children's Stacks					
84		Relocate & rebalance FCU diffuser & ERV-1 registers	1	ls	\$1,260.00	\$1,260	
85							
86						Subtotal	\$1,365
87							
88	26	Electrical					
89		Demo/make safe w/ temp lighting	5,269	gsf	\$4.00	\$21,076	
90		New lighting w. circuitry	5,269	gsf	\$15.00	\$79,035	
91		Lighting control	5,269	gsf	\$3.00	\$15,807	
92		Rework extg electrical from extg panels	5,269	gsf	\$2.00	\$10,538	
93		Power wiring for new MEP systems	5,269	gsf	\$2.25	\$11,855	
94		Misc elec based on field conditions	5,269	gsf	\$4.00	\$21,076	
95		Coordination work based on occupancy schedule	5,269	gsf	\$4.50	\$23,711	
96		Trade coordination and management	5,269	gsf	\$3.00	\$15,807	
97							
98						Subtotal	\$198,905
99							
100	27	Communications					
101		Telecommunications					
102		Tel/comm rough ins for work by Town of Needham IT group	5,269	gsf	\$1.25	\$6,586	
103							
104						Subtotal	\$6,586
105							
106	28	Electronic Safety & Security					
107		Fire Alarm System					
108		Fire Alarm, modify extg devices from extg FACP	5,269	gsf	\$3.00	\$15,807	
109							
110						Subtotal	\$15,807
111							
112		TO SUMMARY				\$675,468	



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
1	02	Existing Conditions					
2		<i>Selective Demolition</i>					
3		Demo circ desk	45	lf	\$30.00	\$1,350	
4		Demo circ desk, back counter	15	lf	\$30.00	\$450	
5		Demo extg clg	972	sf	\$3.00	\$2,916	
6		Demo extg clg tiles, grid ETR	31	sf	\$2.00	\$62	
7		Demo extg flooring	504	sf	\$6.00	\$3,024	
8		Misc demo based on field conditions	20	hrs	\$133.000	\$2,660	
9							
10						Subtotal	\$10,462
11							
12	06	Wood, Plastics, and Composites					
13		<i>Rough Carpentry</i>					
14		Rough carpentry support for other trades	2	days	\$1,520.00	\$3,040	
15		<i>Finish Carpentry</i>					
16		Millwork, Circ Desk	37	lf	\$1,800.00	\$66,600	
17							
18						Subtotal	\$69,640
19							
20	07	Thermal and Moisture Protection					
21		<i>Caulking and sealants</i>					
22		Caulking and sealants; interior	2	dy	\$1,220.00	\$2,440	
23							
24						Subtotal	\$2,440
25	08	Openings					
26		<i>Door, Frame and Hardware</i>					
27		Frames					
28		F-01, Frame, HM, 3070	2	ea	\$190.00	\$380	
29		F-02, Frame, HM, 6070	1	ea	\$390.00	\$390	
30		Doors					
31		D-01, Door WD, 3070	2	ea	\$800.00	\$1,600	
32		D-02, Door WD, 6070	1	ea	\$1,600.00	\$1,600	
33		Hardware Set					
34		Hardware Set 01	2	ea	\$2,200.00	\$4,400	
35		Hardware Set 02	1	ea	\$2,600.00	\$2,600	
36		<i>Glazing</i>					
37		Glazing, interior storefront system, 09'	189	sf	\$130.00	\$24,570	
38		Glazing, interior storefront, door assembly, 6090, 2 leaf	1	ea	\$18,360.00	\$18,360	
39							



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
40							
41						Subtotal	\$53,900
42	09	Finishes					
43		<i>Gypsum Wall Assembly</i>					
44		GWB, new wall construction	948	sf	\$54.00	\$51,192	
45		GWB, new clgs	384	sf	\$18.00	\$6,912	
46		GWB, extg walls patching	1	ls	\$2,700.00	\$2,700	
47		GWB, extg clgs patching	1	ls	\$3,400.00	\$3,400	
48		<i>Ceilings</i>					
49		ACT-01, grid and tile	1,062	sf	\$12.00	\$12,744	
50		<i>Flooring</i>					
51		Prep floor for new finishes	1,079	sf	\$4.25	\$4,586	
52		CPT-01, carpet	1,079	sf	\$7.00	\$7,553	
53		CPT-01, patch extg areas from demo	1	ls	\$1,200.00	\$1,200	
54		New floor base, match extg at new work	1	ls	\$2,100.00	\$2,100	
55		Extg flooring, clean	182	sf	\$9.00	\$1,638	
56		Extg flooring, protect/maintain	1,372	sf	\$6.00	\$8,232	
57		<i>Painting</i>					
58		Paint, walls	1	ls	\$8,100.00	\$8,100	
59		Paint, clgs	1	ls	\$6,700.00	\$6,700	
60		Paint, misc/touch ups	1	ls	\$1,400.00	\$1,400	
61							
62						Subtotal	\$118,457
63							
64	21	Fire Suppression					
65		Sprinklers					
66		Circulation Desk & Lounge Area					
67		Relocate sprinkler heads	2	ea	\$347.00	\$694	
68		Multipurpose Room					
69		Relocate sprinkler heads	4	ea	\$347.00	\$1,388	
70		Two Offices adjacent to the Work Room					
71		Relocate one sprinkler head	1	ea	\$347.00	\$347	
72		Work Room					
73		Relocate sprinkler heads	2	ea	\$347.00	\$694	
74							
75						Subtotal	\$3,123
76							
77	22	Plumbing					



DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
78		No work this section	1	ls	\$0.00	\$0	
79							
80						Subtotal	\$0
81							
82	23	HVAC					
83		Multipurpose Room					
84		800 CFM 4-pipe fan coil unit	1	ea	\$3,330.00	\$3,330	
85		Ductwork & Insulation	1	ls	\$2,500.00	\$2,500	
86		Pipe CHW, HW, Drain	1	ls	\$1,500.00	\$1,500	
87		Control Valve	2	ea	\$510.00	\$1,020	
88		Dain pan	1	ea	\$350.00	\$350	
89		Leak Detector	1	ea	\$275.00	\$275	
90		Balance Unit	1	ea	\$157.50	\$158	
91		Circulation Desk & Lounge Area					
92		Relocate & rebalance FCU diffuser & ERV-2 registers	1	ls	\$840.00	\$840	
93		Two Offices adjacent to the Work Room					
94		Extend SA & RA registers from adjacent FCU	1	ls	\$3,760.00	\$3,760	
95		Work Room					
96		Cut back ductwork so that existing FCU is dedicated to this area & Rebalance	1	ls	\$1,090.00	\$1,090	
97							
98						Subtotal	\$14,823
99							
100	26	Electrical					
101		Demo/make safe w/ temp lighting	2,676	gsf	\$4.00	\$10,704	
102		New lighting w. circuitry	2,676	gsf	\$15.00	\$40,140	
103		Lighting control	2,676	gsf	\$3.00	\$8,028	
104		Misc elec based on field conditions	2,676	gsf	\$4.00	\$10,704	
105		Coordination work based on occupancy schedule	2,676	gsf	\$4.50	\$12,042	
106		Trade coordination and management	2,676	gsf	\$3.00	\$8,028	
107							
108						Subtotal	\$89,646
109							
110	27	Communications					
111		Telecommunications					
112		Tel/comm rough ins for work by Town of Needham IT group	2,676	gsf	\$1.25	\$3,345	
113							
114						Subtotal	\$3,345



Town of Needham, MA
Free Library, Highland Avenue
Concept Estimate

07/28/2023

Rosemary Entrance
2,676 - GSF

DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
115							
116	28	Electronic Safety & Security					
117		Fire Alarm System					
118		Fire Alarm, modify extg devices from extg FACP	2,676	gsf	\$3.00	\$8,028	
119							
120							
121							
122							
						Subtotal	\$8,028
TO SUMMARY						\$373,863	



Town of Needham, MA
Free Library, Highland Avenue
Concept Estimate

07/28/2023

Highland Ave Entrance
3,087 - GSF

DIRECT COST DETAIL

No.	CSI	Description	Quantity	Unit	\$/Unit	Total	Notes
1	02	Existing Conditions					
2		Demo extg clg	225	sf	\$3.00	\$675	
3		Demo extg flooring	5,342	sf	\$6.00	\$32,052	
4		Demo ref desk	58	lf	\$30.00	\$1,740	
5		Misc demo based on field conditions	60	hrs	\$133.000	\$7,980	
6							
7							
						Subtotal	\$42,447
8							
9	06	Wood, Plastics, and Composites					
10		Rough Carpentry					
11		Rough carpentry support for other trades	3	days	\$1,520.00	\$4,560	
12		Finish Carpentry					
13		Millwork, Ref Desk	34	lf	\$1,800.00	\$61,200	
14							
15							
						Subtotal	\$65,760
16							
17	07	Thermal and Moisture Protection					
18		Caulking and sealants					
19		Caulking and sealants; interior	2	dy	\$1,220.00	\$2,440	
20							
21							
						Subtotal	\$2,440
22	08	Openings					
23		Door, Frame and Hardware					
24		Frames					
25		F-01, Frame, HM, 30710 w/ sidelite	1	ea	\$730.00	\$730	
26		Doors					
27		D-01, Door WD, 30710	1	ea	\$800.00	\$800	
28		Hardware Set					
29		Hardware Set 01	1	ea	\$2,200.00	\$2,200	
30		Glazing					
31		Sidelight glazing	12	sf	\$70.00	\$840	
32							
33							
						Subtotal	\$4,570
34							
35	09	Finishes					
36		Gypsum Wall Assembly					
37		GWB, new wall construction	252	sf	\$45.00	\$11,340	
38		GWB, extg walls patching	1	ls	\$3,100.00	\$3,100	

ELLANA		Town of Needham, MA		07/28/2023		
Construction Cost Consultants		Free Library, Highland Avenue		Highland Ave Entrance		
Concept Estimate		Concept Estimate		3,087 - GSF		
DIRECT COST DETAIL						
No.	CSI Description	Quantity	Unit	\$/Unit	Total	Notes
39	GWB, extg clgs patching	1	ls	\$3,900.00	\$3,900	
40	<i>Ceilings</i>					
41	ACT-01, grid and tile	1,633	sf	\$12.00	\$19,596	
42	<i>Flooring</i>					
43	Prep floor for new finishes	2,285	sf	\$4.25	\$9,711	
44	CPT-01, carpet	2,285	sf	\$7.00	\$15,995	
45	New floor base, match extg at new work	1	ls	\$2,400.00	\$2,400	
46	<i>Painting</i>					
47	Paint, walls	1	ls	\$9,300.00	\$9,300	
48	Paint, clgs	1	ls	\$7,800.00	\$7,800	
49	Paint, misc/touch ups	1	ls	\$1,600.00	\$1,600	
50						
51						
52						
53	21 Fire Suppression					
54	Sprinklers					
55	No work this section	1	ls	\$0.00	\$0	
56						
57						
58						
59	22 Plumbing					
60	No work this section	1	ls	\$0.00	\$0	
61						
62						
63						
64	23 HVAC					
65	Reading Area, Work Room, & Reference Desk:					
66	Relocate and rebalance all FCU diffusers and ERV-1 registers.	1	ls	\$1,260.00	\$1,260	
67	Install missing wall bar grilles.	1	ls	\$500.00	\$500	
68						
69						
70						
71	26 Electrical					
72	Demo/make safe w/ temp lighting	3,087	gsf	\$4.00	\$12,348	
73	New lighting w. circuitry	3,087	gsf	\$15.00	\$46,305	
74	Lighting control	3,087	gsf	\$3.00	\$9,261	
75	Misc elec based on field conditions	3,087	gsf	\$4.00	\$12,348	
76	Coordination work based on occupancy schedule	3,087	gsf	\$4.50	\$13,892	

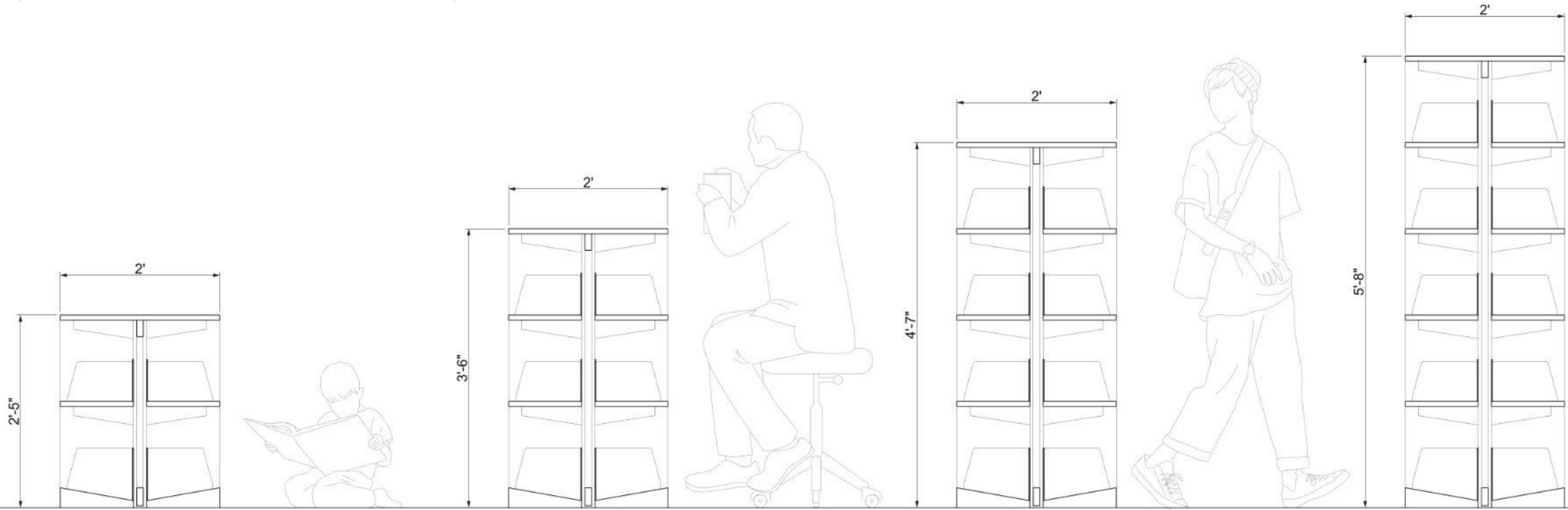
ELLANA		Town of Needham, MA		07/28/2023		
Construction Cost Consultants		Free Library, Highland Avenue		Highland Ave Entrance		
Concept Estimate		Concept Estimate		3,087 - GSF		
DIRECT COST DETAIL						
No.	CSI Description	Quantity	Unit	\$/Unit	Total	Notes
77	Trade coordination and management	3,087	gsf	\$3.00	\$9,261	
78						
79						
80						
81	27 Communications					
82	Telecommunications					
83	Tel/comm rough ins for work by Town of Needham IT group	3,087	gsf	\$1.25	\$3,859	
84						
85						
86						
87	28 Electronic Safety & Security					
88	Fire Alarm System					
89	Fire Alarm, modify extg devices from extg FACP	3,087	gsf	\$3.00	\$9,261	
90						
91						
92						
93						
	TO SUMMARY				\$318,254	

Appendix C

Shelf Height Diagram

Shelf Heights

All diagrams assume a 12 inch clear shelf height



2 High Shelf

Included for reference only, not used in feasibility study

3 High Shelf

Located within Children's Area, except for shelving against walls

4 High Shelf

Located within Teen/Tween Area, except for shelving against walls

Located at general shelving plan south of Teen/Tween Area

5 High Shelf

Typical height throughout existing library shelving

Located within Children's and Teen/Tween Areas where shelving is located against a full height wall