JOHNSON ROBERTS ASSOCIATES INC.

ARCHITECTS

Cary Memorial Library

Design Development Phase

October 16th, 2023

JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Lower Level - Existing

Ignite curiosity • Engage Minds • Connect Community

October, 2023

PROJECT GOALS:

• Improve safety and oversight throughout the Children's Room space.

• Space to be designed using inclusive, people-centered design principles.

• Space that's is culturally and linguistically representative of our community.

• Service desk and workroom space re-designed to better accommodate library work.

• Focus on analog, tactile, natural materials, and activities in the Children's Room.

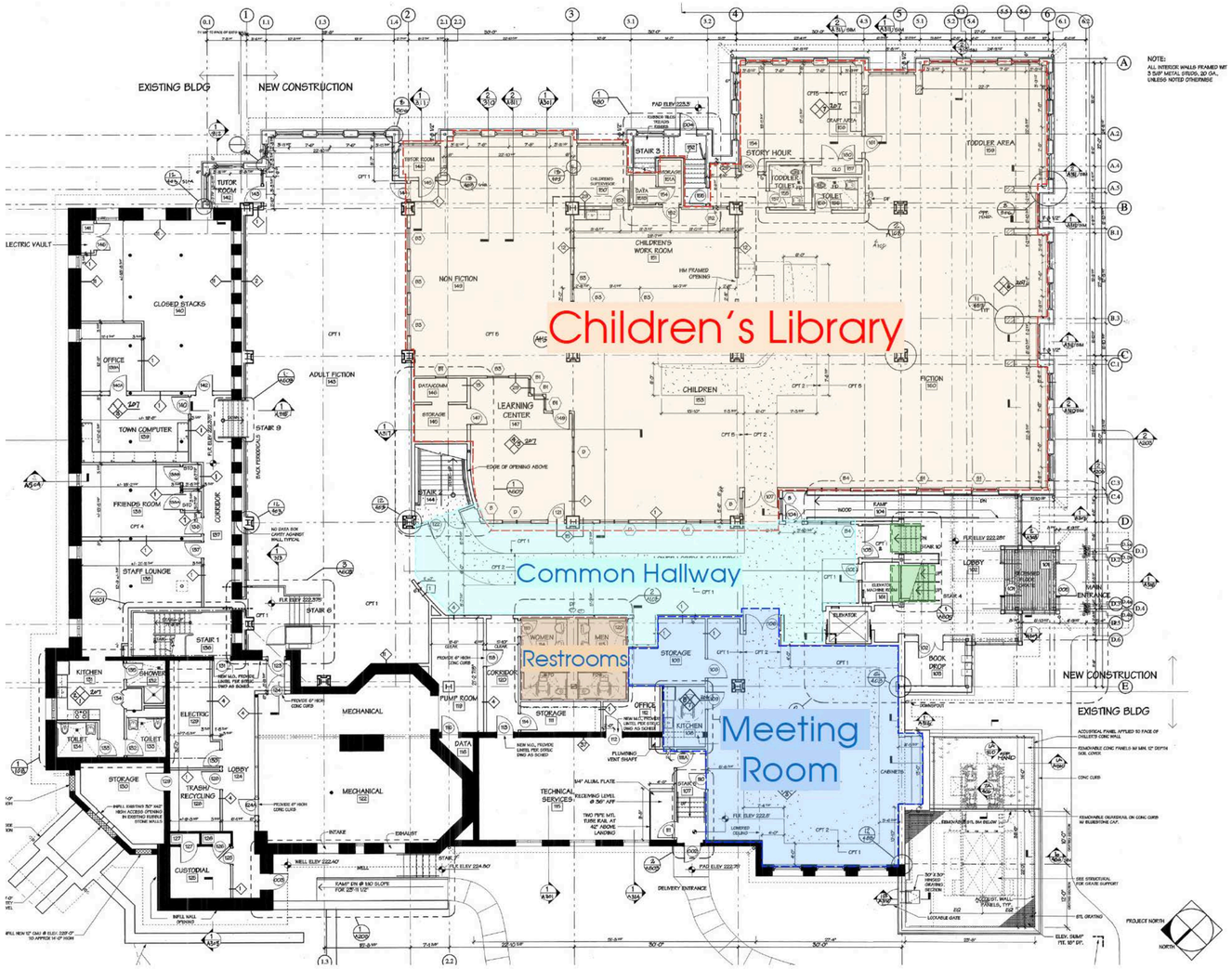
• Reimagine Children' space, make it colorful, creative, and fun for patrons.

• Create a joyous and welcoming space for children and families.

• The Large Meeting Room project to feature technology, making, cooking, innovation capabilities and built-in flexibility.

• HVAC system replacement for the whole floor.

• Design with Sustainability Goals in mind.



JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

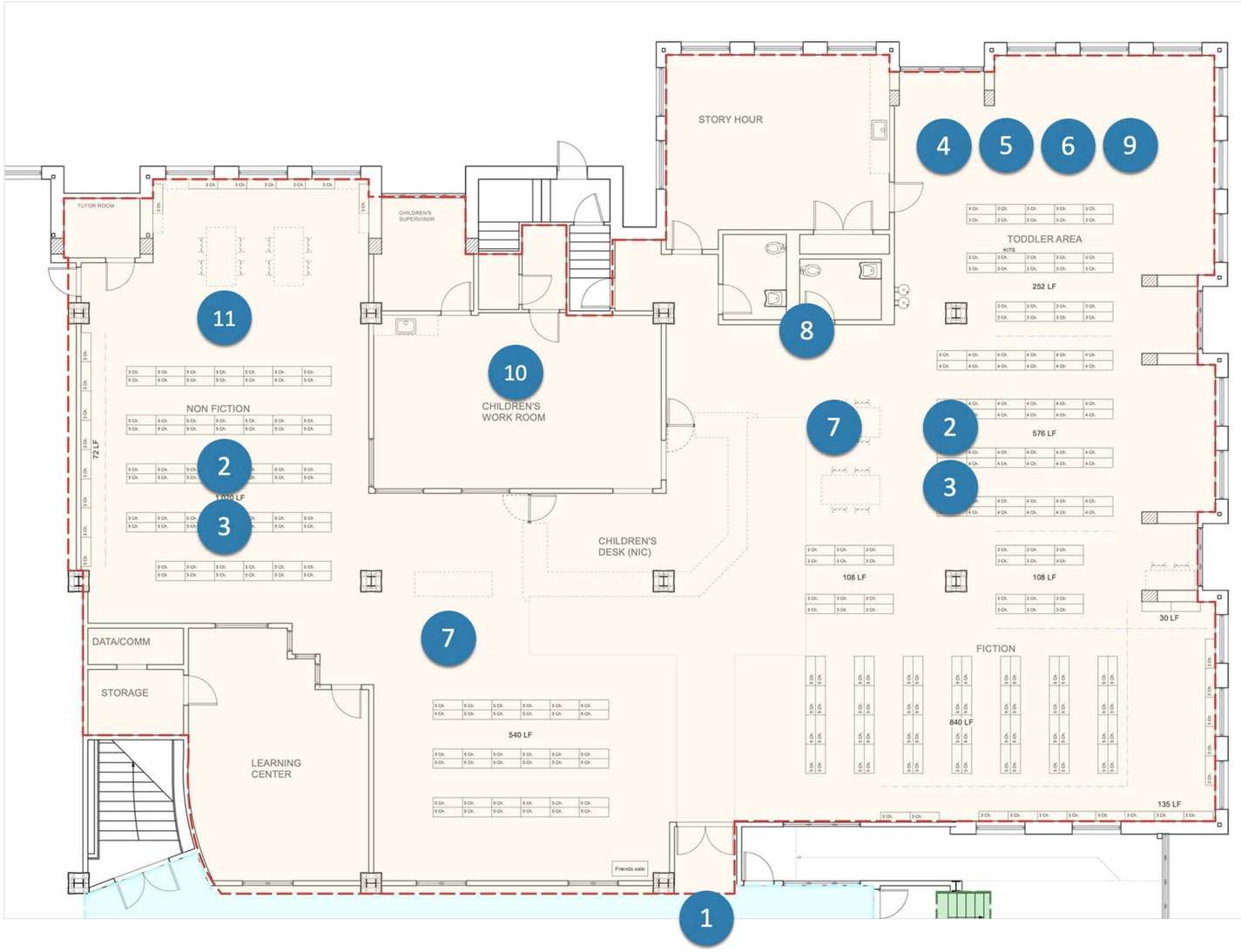
Cary Memorial Library

Children's Library - Existing

Ignite curiosity • Engage Minds • Connect Community

October, 2023

1. Reconfigure entrance to Children's Library to provide more visibility and more efficient use of space.
2. Reconfigure stacks to allow for better accessibility and visibility, add patron-friendly book solutions for younger readers.
3. Use colors to identify different book collections.
4. Identify locations for hands-on learning areas.
5. Reconfigure Story and Craft area to improve efficiency and provide adequate craft space.
6. Provide accessible sinks in Craft area suited for different ages.
7. Add soft seating and study seating.
8. Relocate and improve restrooms.
9. Avoid creating permanent barriers within the space.
10. Reconfigure existing service desk and workroom space to better accommodate library work
11. Improve functionality of the workroom for growing Children's Library Staff and provide connection to adjoining Teen Room.



JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Children's Library Floor Plan

Ignite curiosity • Engage Minds • Connect Community

October, 2023

- Improved safety and accessibility throughout.
- Service desk with sightlines to entry and play areas.
- Larger Story/Craft Room.
- Lower shelving for early readers and picture book collections.
- Better reading and study space for older children.
- Improved restroom accessibility.
- Reconfigured staff work/storage space.
- Added display space.

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

Cary Memorial Library

Children's Library - Entry View

Lexington, MA
October, 2023

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

Cary Memorial Library

Children's Library - Story/Play Area

Lexington, MA
October, 2023

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

Cary Memorial Library

Children's Library - Early Readers / Reference

Lexington, MA
October, 2023

JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Meeting Room - Existing

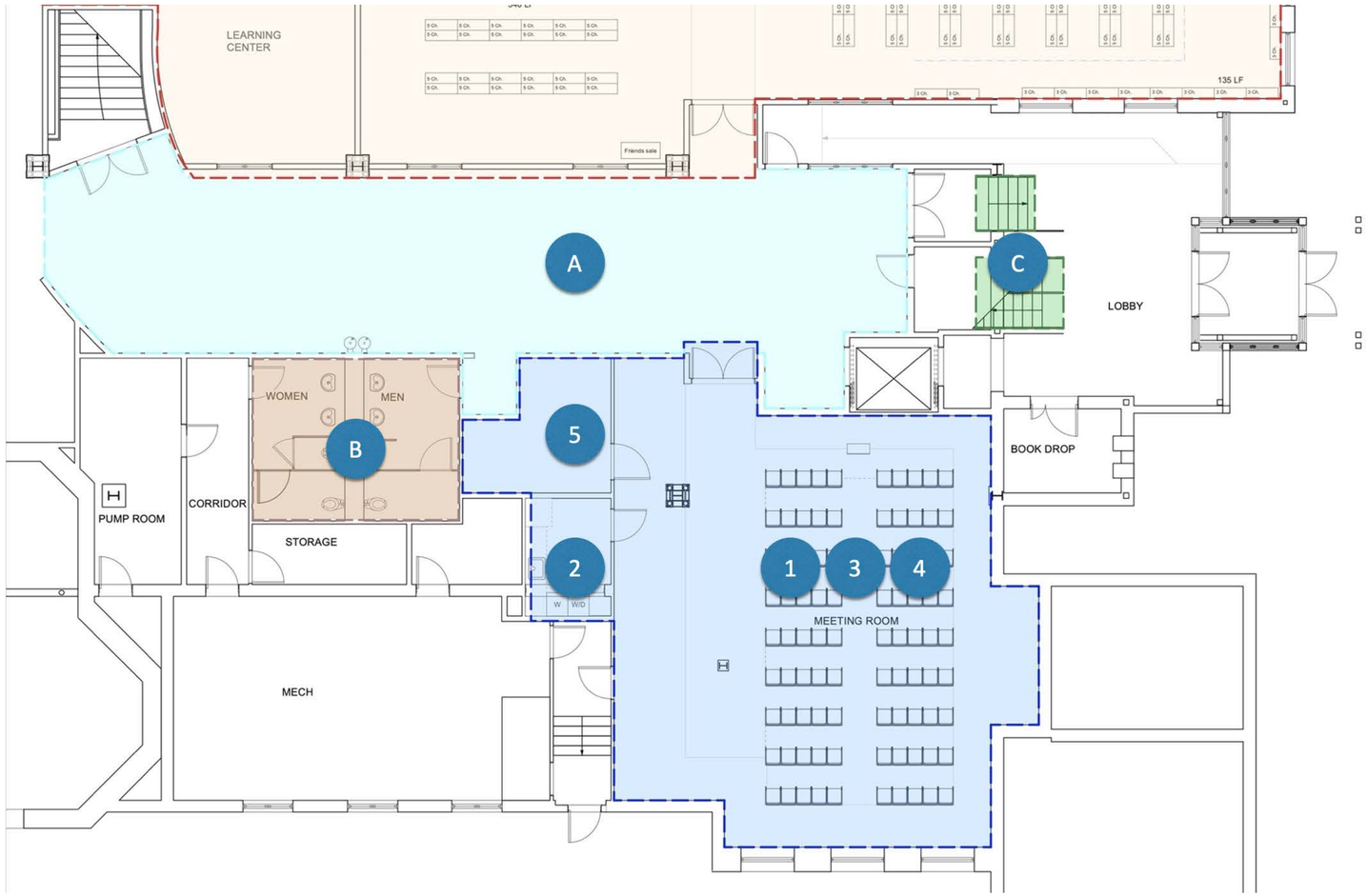
Lexington, MA
October, 2023

Meeting Room:

1. Reconfigure existing room to provide flexibility for a variety of uses
2. Increase kitchen space and open to the meeting room to allow for cooking and crafting demonstrations.
3. Provide opportunities for various room orientations and configurations.
4. Improve technology, including adaptive technology, within the space.
5. Improve storage space.

Other:

A. Update Common Lobby.
B. Renovate existing restrooms.
C. Replace worn out wood stair treads.
D. Replace entire lower lever HVAC.

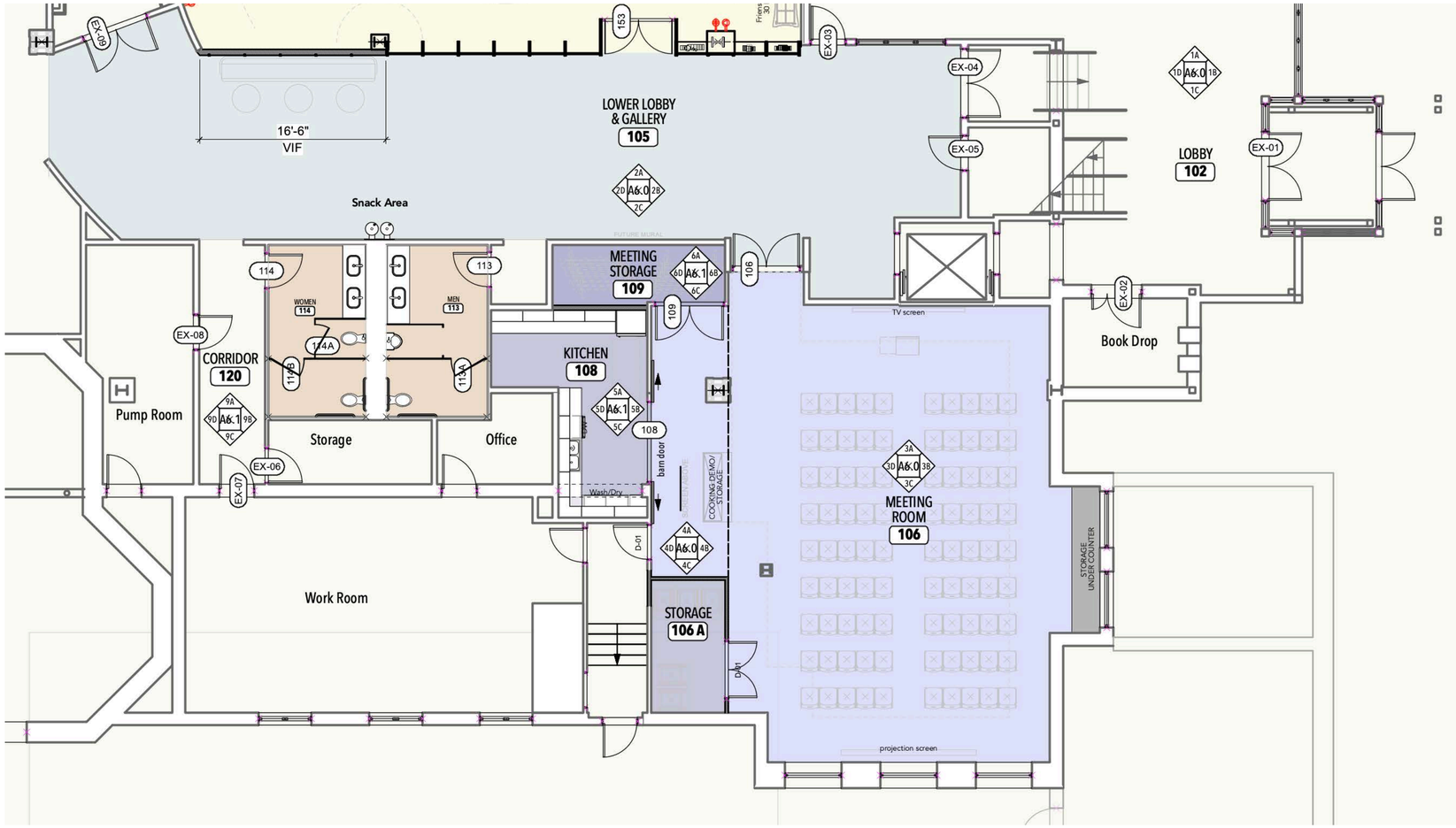


JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Meeting Room Floor Plan

Lexington, MA
October, 2023

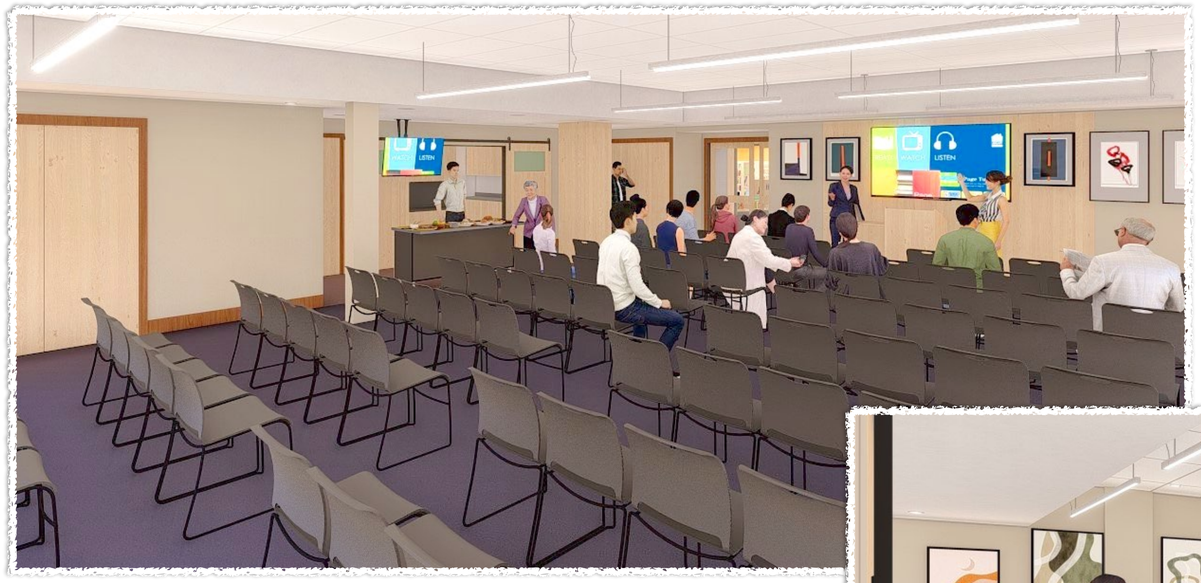


JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

Cary Memorial Library

Meeting Room - Cooking Demo

Lexington, MA
October, 2023



JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

Cary Memorial Library

Lexington, MA
October, 2023

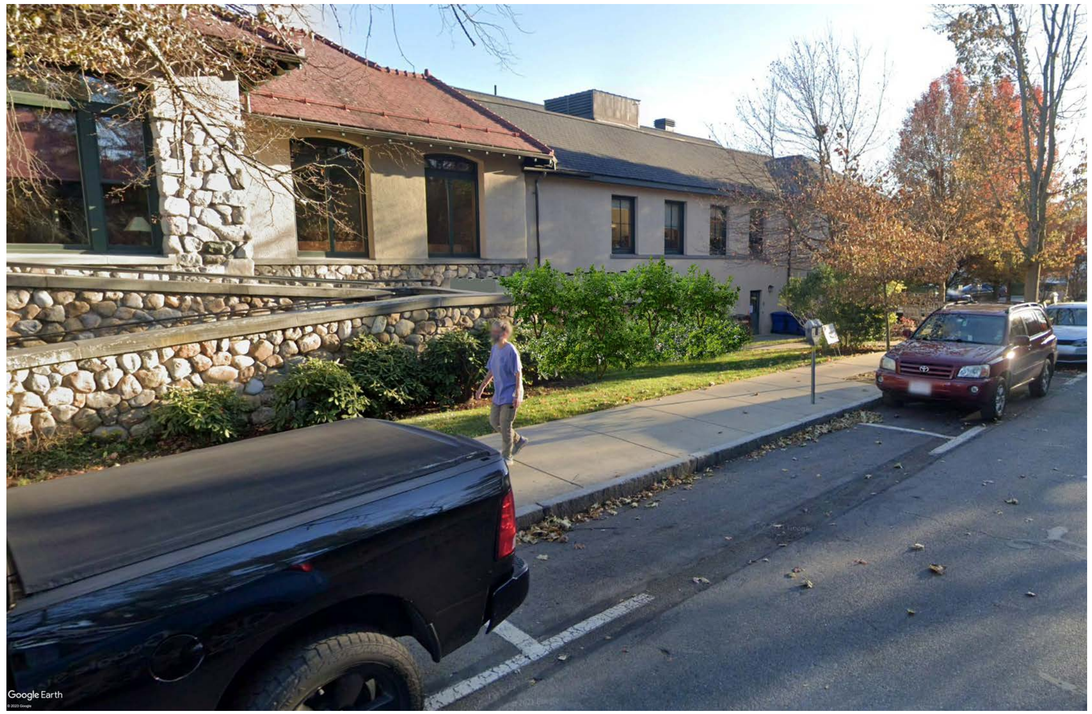
Existing Street View

Proposed Street View 1

JOHNSON ROBERTS ASSOCIATES INC.
ARCHITECTS

Cary Memorial Library

Lexington, MA
October, 2023



Proposed Street View 2

Proposed Street View 3

JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Sustainability Goals

Lexington, MA
October, 2023

Integrated Building Design and Construction Goals Checklist

Consult Lexington's Integrated Building Design and Construction Policy for other requirements for New Construction and Major Renovation -Town Buildings

This document is based on scope features defined in LEED 4.0 with additions / modifications driven by Town of Lexington requirements:
11)
- Lifecycle costing shall be conducted using the Town of Lexington's costing tool.

Project Name:	Cary Memorial Library - Children's Library and Meeting Room renovations (Lower level)
Project Address:	1874 Massachusetts Avenue, Lexington, MA
Project Phase:	Design
Report Date:	8/8/23

Resilience Level (Circle appropriate level per the Town's Emergency Preparedness and Response Plan maintained by the Town's Fire Chief.
Note: performance of higher level resilience includes lower-level capabilities.

- **Level 1:** **Public Safety (Police, Fire, Public Services)** -- No interruption of essential services.
- **Level 2:** **Town Shelter** -- Full electrical and thermal power necessary for life safety, food prep / refrigeration, lighting, internet connectivity and charging stations. Operational 24/7. Islanded operation maximizing use of on-site solar and storage.
- **Level 3:** **Continued Operation** -- Full electrical and thermal power necessary for providing healthy conditions during extreme heat/cold conditions, providing lighting, internet connectivity, and plug load charging. Operational during normal occupied hours. Smart load reduction in emergencies, mobile or on-site backup generation to carry load for continued operation.
- **Level 4:** **Asset Preservation** -- Provide power to hold building temperature, provide light and manage building systems

Source	Explanation
1 LEED 4.0_()	Standard LEED items with standard LEED requirements and definitions (LEED Ref#)
2 LEED 4.0_()	Standard LEED items with specific Lexington definitions (LEED Ref #).
3 LEX_()	Specific Lexington requirements (Lex1 through Lex7)

Lex Goal	Explanation
1 Required	Lexington requires this outcome / scope item to be included in the base case project design.
2 Ev & Report	Evaluate the applicability of this item to the project/site and report on benefits and impacts of implementation

LEED SCORING				LEXINGTON MASTER - SCOPE CHECKLIST					
Expected Points			Max Points	Source	Scope Item / Feature / Outcome	Lex Goals	Applicability	Comments	Cost Impact Scale
Y	?	N							
			1	LEED 4.0	Integrative Process: This policy shall be integrated into the Planning and Design process from the project's inception. Evaluate the impact of the project on adjacent properties.	Required	OK		
0	0	0	0	**Resilience**					
			0	LEX_1	Resilience: Buildings shall be designed to deliver services based on the resilience levels defined in the Integrated Design Procedure. The resilience level for a particular building shall be consistent with the planned use of the building in the Town's Emergency Management plan. The level of solar and storage incorporated into the design shall be appropriate to the level or resilience required.	Required	OK	Level 4	
0	0	0	16	**Location and Transportation**					
			16	LEED 4.0_LTc1	LEED for Neighborhood Development Location	Ev & Report	OK	Existing Location	
			1	LEED 4.0_LTc2	Sensitive Land Protection	Ev & Report	N/A	Existing Location	
			2	LEED 4.0_LTc3	High Priority Site	Ev & Report	N/A	Existing Location	
			5	LEED 4.0_LTc4	Surrounding Density and Diverse Uses	Ev & Report	OK	Existing Location	
			5	LEED 4.0_LTc5	Access to Quality Transit	Ev & Report	OK	Existing Location	
			1	LEED 4.0_LTc6	Bicycle Facilities	Ev & Report	N/A	Requires a shower	
			1	LEED 4.0_LTc7	Reduced Parking Footprint	Ev & Report	OK	Existing Location	
			1	LEED 4.0_LTc8	Green Vehicles: a) Installation of EV chargers per Lexington bylaw 135-5.1.13-11, Electric vehicle (EV) charging. b) Provide renewable energy to support EV charging demand.	a) Required by Town bylaw b) Ev & Report	N/A	Partial interior renovation only	
0	0	0	10	**Sustainable Sites**					
Y			Req.	LEED 4.0	Construction Activity Pollution Prevention	Required	N/A	Partial interior renovation only	
Y			Req.	LEED 4.0	Environmental Site Assessment	Required	N/A	Partial interior renovation only	
			1	LEED 4.0	Site Assessment	Ev & Report	N/A	Partial interior renovation only	
			2	LEED 4.0_SS4 and LEX_6	Site Development - Protect or Restore Habitat: Site development and landscaping shall comply with the standards defined in Chapter 176, Section 12.6 Landscaping. (Note: the Lexington Planning Department is not involved in reviewing or approving plans or performance.)	Ev & Report	N/A	Partial interior renovation only	
			1	LEED 4.0_SS5	Open Space	Ev & Report	N/A	Partial interior renovation only	
			3	LEED 4.0_SS6	Rainwater Management	Ev & Report	N/A	Partial interior renovation only	
			2	LEED 4.0_SS7 and LEX_7	Heat Island Reduction: In addition to LEED 4.0 SS7, the site design (including building and solar canopy siting) will utilize shading from pre-existing healthy mature trees and new plantings to maximize heat island reduction and will also consider other ecological services provided by trees and their benefits).	Ev & Report	N/A	Partial interior renovation only	
			1	LEED 4.0 SS8	Light Pollution Reduction	Ev & Report	N/A	Partial interior renovation only	

This is a partial interior renovation project and not pursuing LEED certification.

- Integrative Process: Currently LEED Certification is not planned for, but the project is proceeding with collaboration, coordination, efficiency, and sustainability in mind. The consultants are brought on in a timely manner to best meet the project requirements.
- Resilience: This is an interior renovation project, durable materials and adaptable design strategy contribute to resiliency of the existing Library building.
- Location and Transportation: This is interior renovation only, but the building is already in the Town Center, contributing to neighborhood development, with public transportation options available.
- Sustainable Sites: N/A – partial interior renovation only.
- Water Efficiency: The water efficient plumbing fixtures and fittings will be used as necessary to meet the needs of the occupants, within project boundary.
- Energy and Atmosphere: Any new systems and equipment will be energy efficient and should be commissioned and verified.
- Materials and Resources:
  - Storage and collection of recyclables will be implemented within project boundary.
  - Waste management will be implemented within project boundary.
  - All new interior finishes and fixtures to be environmentally friendly, with a goal of reducing raw material usage – BPDs and EPDs to be required.
- Indoor Environmental Quality:
  - LEED + LEX requirements will be implemented within project boundary.
  - Low-emitting and non-toxic materials to be used within project boundary.
  - Air Quality Management plan will be required during construction.
  - Interior lighting to be designed to account for daylight and to reduce energy consumption while meeting project requirements within project boundary.
  - Acoustic improvements to be implemented within project boundary.
- LEED accredited professional – available, but not applicable as this is a partial interior renovation.
- Regional Credits: N/A – partial interior renovation only.

JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Lexington, MA
October, 2023

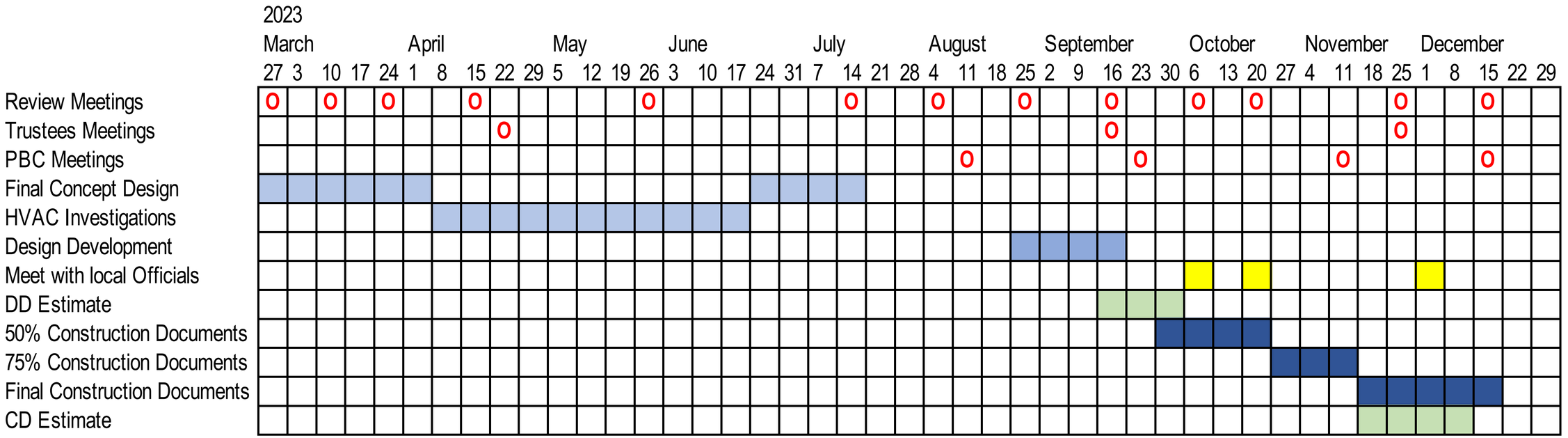
Estimate of Probable Project Cost	Schematic Design Aug-23	12,080 SF	Design Development Oct-23	12,192 SF
Construction				
Construction		$2,397,325		$3,594,859
Expanded HVAC scope	$84/SF	$840,000	*included in construction*	
General Conditions	10.0%	$239,733	10.0%	$359,486
Overhead & Profit	10.0%	$263,706	10.0%	$395,434
Bonds & Insurance	1.5%	$43,511	1.5%	$65,247
Estimating Contingency	15.0%	$441,641	10.0%	$441,503
Total Construction (Rounded)		$4,225,916		$4,856,529
Escalation	7.0%/Year 20 mos	$493,024	5.0%/Year 12 mos	$242,826
Total Construction		$4,718,939		$5,099,355
Furnishings and Equipment				
Furniture & Bookstacks	Allow	$420,000	Allow	$420,000
Computers	Allow	$20,000	Allow	$20,000
AV Equipment	Allow	$8,000	Allow	$8,000
Signage	Allow	$20,000	Allow	$20,000
		$468,000		$468,000
Fees				
Architecture		$461,970		$535,650
Furnishings		$45,000		$45,000
		$506,970		$580,650
Project Expenses				
Distribution Bid Docs	Allow	$10,000	Allow	$10,000
Commissioning	Allow	$25,000	Allow	$25,000
Legal	Allow	$10,000	Allow	$10,000
Testing	Allow	$35,000	Allow	$25,000
Unsuitable Materials	Allow	$50,000	Allow	$50,000
Moving & Storage			Allow	$60,000
Misc	Allow	$15,000	Allow	$0
		$145,000		$180,000
Contingencies				
Construction Contingency	10%	$471,894	10%	$509,936
Project Contingency	5%	$55,999	5%	$61,433
		$527,892		$571,368
Total Budget Estimate of Probable Project Cost (Rounded)		$6,367,000		$6,899,000

Total Estimated Project Cost	**$6,899,000**
Anticipated Gift	$1,500,000
Concept / Study Funding	$100,000
DPF Mech Funds	$671,800
Balance of Funding Needed	$4,627,200

JOHNSON ROBERTS ASSOCIATES INC. ARCHITECTS

Cary Memorial Library

Lexington, MA
October, 2023

Project Schedule

10/6/23