AMESBURY PUBLIC LIBRARY

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Facilities Needs Assessment Report

Amesbury, Massachusetts

September 10, 2024

ARCHITECT:

BRUNER / COTT ARCHITECTS

CODE CONSULTANT:

CODE RED CONSULTANTS

STRUCTURAL AND BUILDING ENVELOPE CONSULTANT:

SGH

ACCESSIBILITY CONSULTANT:

KMA

MEP/FP ENGINEER:

Project Team:

Bruner/Cott Architects	*Architect*
GGD	*MEP/FP Engineer*
SGH	*Structural Engineer*
SGH	*Building Envelope Consultant*
Code Red	*Building Code Consultant*
KMA	*Accessibility Consultant*

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Introduction

Project Process

In April 2024, Amesbury Public Library Board of Trustees engaged Bruner/Cott Architects to perform a conditions assessment with our consultant team for Structure, Building Envelope, MEP/FP, Code, and Accessibility. Building from the continued work of the Library on their 2024-2026 Strategic Plan, this study focuses mainly on the condition of the building and grounds as a direct outcome of their Strategic Plan initiative. Bruner/Cott developed a prioritized list of recommendations as a Facilities Needs Assessment for the Library to guide their maintenance and renovation decisions and update yearly after they accomplish their projects. The plan not only focuses on the historic building itself but envisions different ways to integrate interior and exterior program in the current building and an expansion of the facility.

APL has the potential to become a community, art, and cultural center with the right combination of staff, programs, and expansion of physical space. This study is the first step in outlining the historic building's current and future needs. The library will continue to serve as a hub – a place of connecting people to people and people to information.

Today, libraries can be a conduit for knowledge, entertainment, and culture with a focus on reaching all ages of community members. They are not just a place to read books and research, but a free, physical gathering space focused on literacy, culture, and arts.

Facilities Needs Assessment Supports Strategic Goals

Library Vision Statement

The Amesbury Public Library fosters connection in the community through learning, inclusivity, respect, responsible stewardship, kindness, and joy.

Community Vision Statement

Amesbury provides and supports equitable and adaptable learning opportunities across a broad demographic spectrum for all stages and types of learning in and beyond Amesbury.

Amesbury fosters innovative services that are responsive to current and future residents.

Mission Statement

The Amesbury Public Library, under the authority of its Board of Trustees, provides safe space for lifelong exploration and learning, public understanding, freedom of expression, experiencing beauty, and wonder through the best possible resources, facilities, and services for our community.

How can a Building Renovation Support and Enhance APL's Strategic Goals?

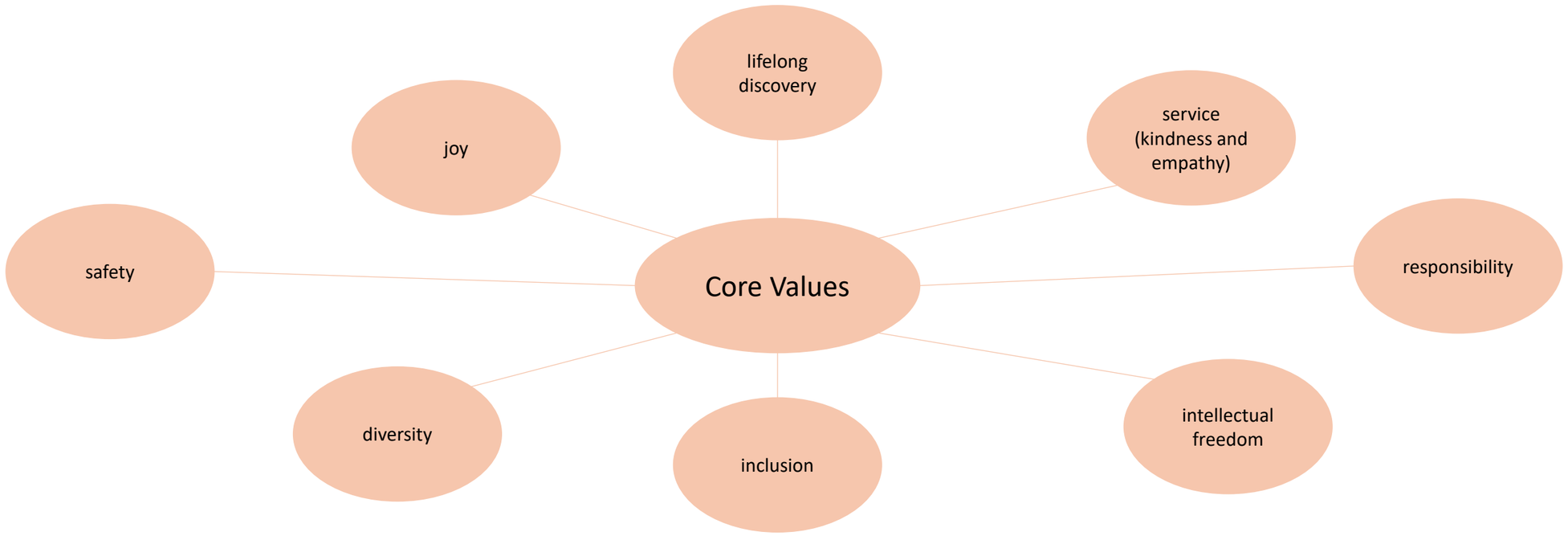
Establish the Library as a Center for Learning, Enrichment, and Joy
- With additional program spaces, learning can expand in the building to a wider range of individuals.

Increase Awareness of the Library's Value
- With community outreach and public forums, APL can inform community members about the valuable historic asset they have and reasons to invest in the building along with the importance the Library plays in the 21st century.

Invest in our Team, Workflows, and Infrastructure
- This study listened to staff, including their thoughts and insights on to improve their working environment.

Activate our community of support
- This study and future development of the library relies on the community to support the needs of the facility.

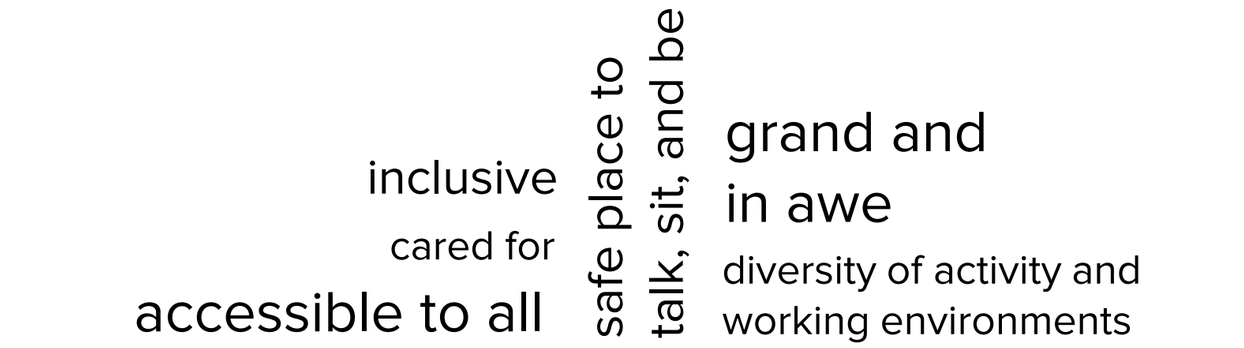
Ensure our Building and Facilities meet our Community's Needs
- This study fosters this objective by proposing minimal to major renovation and expansion options for assessment by the City and community to provide spaces that will better serve the community.



Community Outreach Summary

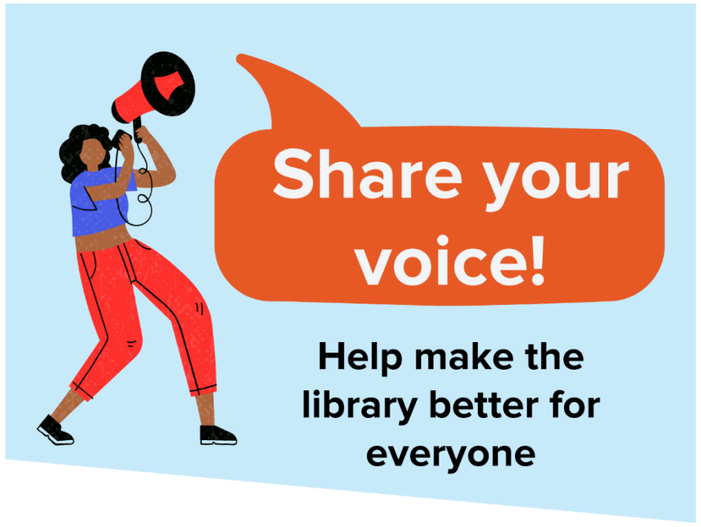
During the outreach in creating the APL's Strategic Goals in 2022, they learned:

- Our staff provides excellent customer service, and we need to invest in them to maintain this high quality of service.
- The community wants the Library to be a gathering place to work, learn, and connect with others.
- The community values arts and culture highly, and the Library plays a key role in offering free, accessible programming to meet this need.
- The library is an essential resource for all ages.



How Should You Feel when using the Amesbury Public Library?

AMESBURY PUBLIC LIBRARY
STRATEGIC PLAN FOR
FISCAL YEARS 2024–2026



Long Range Planning

Community Survey

Fill out by 5/20/22
Paper option at Library

AMESBURY PUBLIC LIBRARY

Community Outreach Summary

Summary of this Feasibility Study Outreach and Input:

Bruner/Cott interviewed all Library Staff to understand their jobs, tasks, and aspects of the building that could better improve their daily workflow.

Bruner/Cott interviewed City officials, Library Board of Trustees members, citizens, and the Historical Commission members to solicit their answers to 6 questions below.

Bruner/Cott facilitated a visioning session on May 15, 2024 with strategic group members supporting the Library through this study. They were also asked the same 6 questions:

1. What does the APL do well?
2. What can the APL improve the most?
3. How would you define success or outcomes for this APL facilities master planning process?
4. What would sustainability for the library look like in the context of a Facilities Master Plan for the APL?
5. Witnessing other public processes, how would you want information to be communicated to community?
6. What other initiatives can the APL support in the Amesbury community?

Five themes emerged from the outreach that will be a driving force for the future planning of the Library.

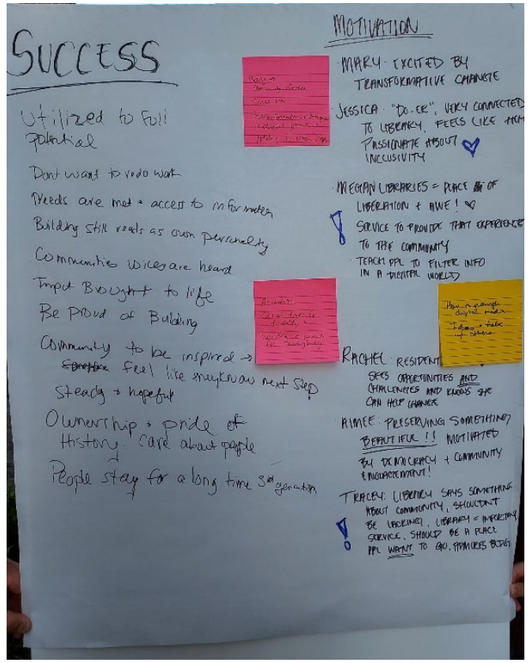
CREATE A WELCOMING AND INSPIRING PLACE

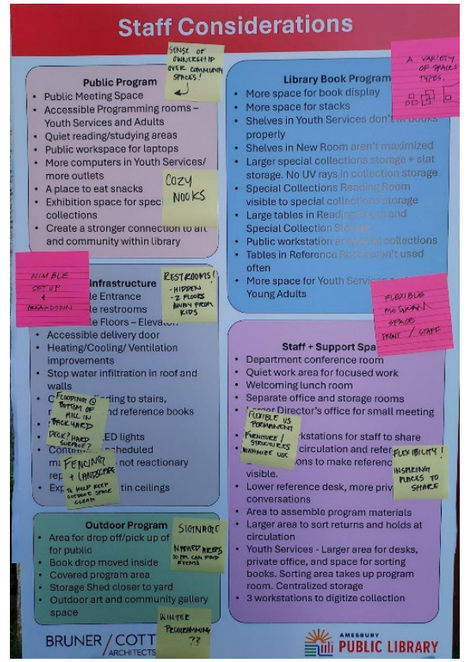
PROMOTE MULTI-GENERATIONAL INTERACTION

REMOVE PHYSICAL BARRIERS

ACT RESOURCEFULLY AND SUSTAINABLY

COMMUNICATE OPENLY AND INVOLVE THE COMMUNITY





Community Outreach Summary

On Tuesday, June 18, 2024, the Amesbury Public Library, and its Board of Trustees held a public forum to discuss our ongoing Conditions Assessment and Facilities Master Plan. The forum took place at the Costello Center, at 68 Elm Street at 7:00 pm. Bruner Cott Architects presented the preliminary findings with visual slides and a moderated question and answer session with attendees. Registration was not required. There were 51 people in attendance.

The constituents that spoke during the meeting had a few topics of concern:

Accessibility

Community members are vocal about the temporary metal ramp, steep interior stairs, and no accessible restroom in the building.

Parking

Parking is difficult in the lot behind the library and often crowded with other City functions. A parking study was completed by the City, and the City will discuss the next actions.

Meet the needs of the community

A few people thought an adequate solution would be to demolish the building and build a new library that is accessible, has wide aisles, and is comfortable to be in. Others expressed the need to maintain the historic structure and renovate it to meet current needs. The attendees did not think the building in its current condition served the needs of the community.

Community Outreach Summary

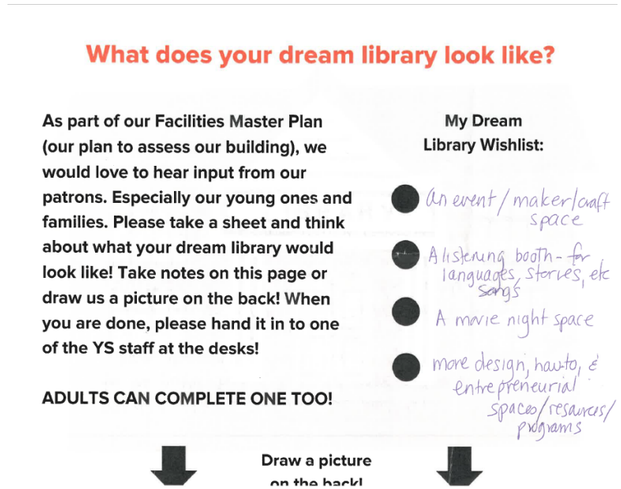
Additional community members that were not represented in the interviews and forum were youth, teens, and young adults.

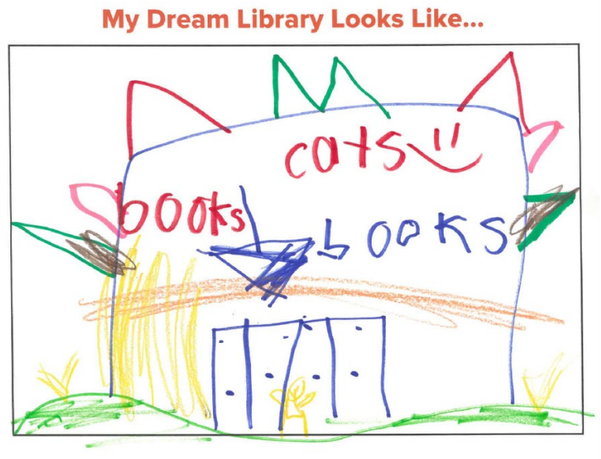
Youth Outreach - A passive survey was conducted in June and July with a prompt of **Draw your Ideal Library. Images below and in the Appendix capture their ideas and responses.**

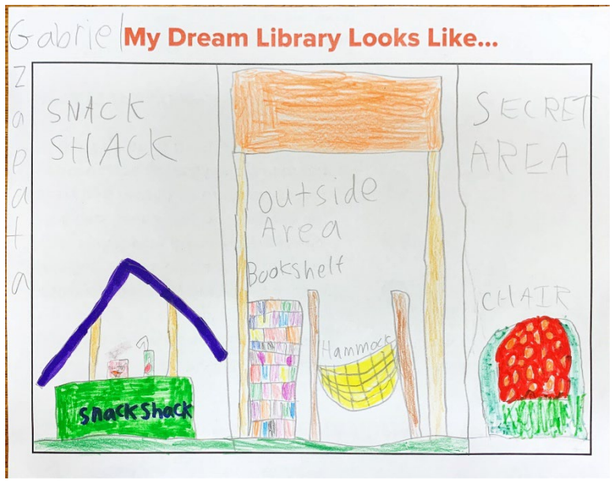
Teen Outreach – A passive survey was conducted in June and July with a prompt on the whiteboard in the teen loft. This form of survey did not produce any responses.

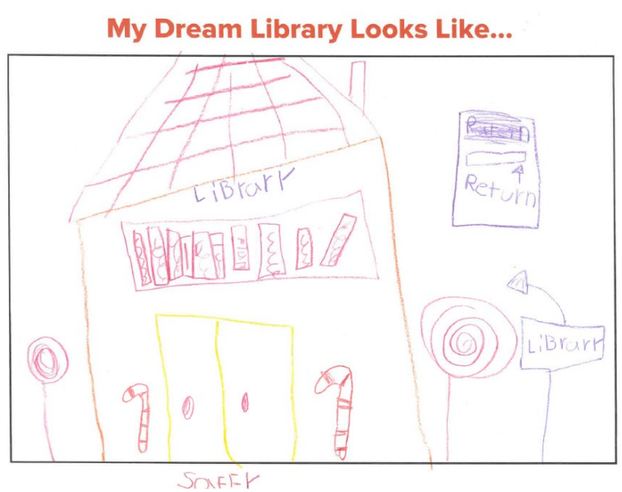
Young Adult Outreach – The 20–30-year-old age-range of community members was not represented in the outreach during the study. The APL attempted to reach this audience through a survey posted at local restaurants and surveys with QR codes, but did not receive responses after two weeks. The questions pertained to how the Library can be a better resource to this group of individuals.

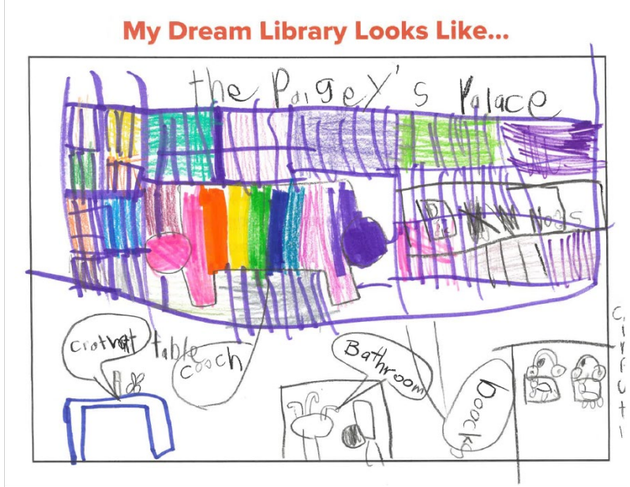
Selected samples of the Youth Outreach responses. See the full responses in the Appendix.

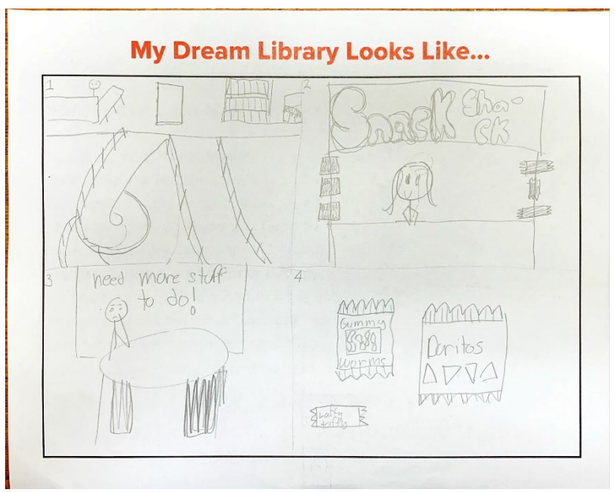












Executive Summary

This compressive facilities needs assessment has four primary sections:

A **Conditions Assessment** covering architecture, code, accessibility, building envelope, structural, mechanical, electrical, plumbing, and fire protection. The assessment developed a list of significant features that must be maintained and identified changes to the Library over time.

Library as a Community Asset section provides inspiring imagery of what Amesbury Public Library could be as a resource to the community. Bruner/Cott conducted interviews with City officials and members of the community, as well as facilitated a visioning session with the Library Working Group and solicited information from the Board of Trustees.

Bruner Cott interviewed staff members to understand the daily routine and needs of the facility from the staff that work in the building. A Public Forum discussed the high-level findings of the conditions assessment and solicited feedback on the Prioritized Recommendations.

The **Future Strategies** phase evaluated current and future program needs including community space, program space, staff needs, and accessibility improvements. Many options were evaluation including concept diagrams and sketches related to future expansion possibilities. Bruner/Cott and the APL identified six potential options for renovation and expansion of the physical library space and the programs it runs. Four options of a building addition aim to provide accessible access and equity for all. Bruner/Cott studied the adjacent buildings to assess if an existing building could supplement Library program space. Lastly, moving the Library to a new building was brought up by citizens at the public meeting. This was not overlooked and although not preferable, it is still an option to be considered. No decisions were made as to what option is best for the Library during this study. The Library will continue to plan and discuss with the City officials, the Board of Trustees, and the greater community.

The **Prioritized Treatment Plan** synthesizes information discovered in the conditions assessment and future strategies to create four categories of priorities – ASAP, Immediate, Short-Term, and Long Term as seen on the right. The criteria was discussed and determined throughout the duration of the study. Because of limitations on how much construction dollars can be spent before requiring to by fully accessible and code compliant, the renovation planning should occur in the Short-Term and be constructed in the Long-Term 6+ years from now. This document combines technical, programmatic, and planning needs for the Library to follow and fine-tune as funding becomes available.

Success of this report and plan is that it will be tangible and achievable to allow the Library to take the next steps. The Library will use this plan to define projects, generate excitement, identify funding sources, outline operating budgets and capital plans, and create a vision for the building's future.

Prioritization of Recommendations

ASAP
Criteria: Water Infiltration Mitigation

Immediate
1-2 years
Criteria:
Life safety + accessibility improvements
Water mitigation + pest intrusion
Improve occupant comfort
Small Effort/ Big Reward
Plan for future projects

Short-Term
3-5 years
Criteria:
Plan for Full Accessibility compliance
Building systems + Code upgrades
Wholistic envelope repairs
Major program changes
Climate Action + Energy Reduction

Long-Term
6+ years
Criteria:
Renovated and Expanded Building

HISTORY + PRESERVATION SIGNIFICANCE

History

The Amesbury Public Library, situated prominently at 149 Main Street in downtown Amesbury, Massachusetts, stands as a testament to free public community programs and service. The two-story Romanesque Revival style building was commissioned to address the burgeoning needs of the local Amesbury community, replacing the former library on Friend Street.

Crafted by esteemed local architect Penn Varney from nearby Lynn, Massachusetts, the library showcases Varney's expertise in institutional and educational designs. Remarkably, among Varney's notable works, which span from libraries to schools, the Amesbury Public Library stands as the sole representation of his Romanesque Revival style architecture in the state. Notably, it remains Amesbury's only example of this architectural style.

Completed in 1900, the library has stood as a cherished institution, evolving to meet the changing needs of its patrons while preserving its architectural heritage. In the mid-twentieth century, the interior underwent modifications, including the division of stacks into two single-story spaces. Subsequent decades saw strategic enhancements, such as the addition of a cement ramp at the rear for accessibility and the relocation of the reception/circulation desk to improve visitor flow.

The library underwent very little modification throughout the years, particularly on the first floor. The second floor was originally a picture gallery and exhibition room that was reconfigured in 1948 as the youth services department. The original lower-level Newspaper Reading Room was reconfigured to provide staff workspace and the unfinished section of the lower-level was converted into special collections storage. As the library expanded, they found creative ways to add more floor space by inserting an additional floor in the north stack wing to provide 2 levels of stacks for the growing library collection. In 2007, the library improved accessibility by removing the steep concrete ramp and installed the current metal ramp.

Throughout its storied history, the Amesbury Public Library has remained a beacon of knowledge, culture, and community engagement, embodied by the enduring spirit of Amesbury and has left an indelible mark on generations of residents.

Library Modifications

1852 Amesbury Public Library is founded with 224 subscribers

1900 Amesbury Public Library is completed.

1948 Children's department replaces museum floor to meet increasing demand for service

1955 Interior Modifications, division of stacks into two-story space

1960-1970 Cement Ramp and Vestibule added

1993 Basement renovation to provide more usable workspace

2007 Vestibule and handicap ramp renovation

Historic Photos

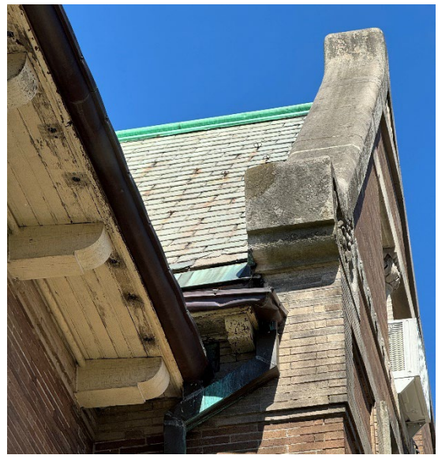
Architectural Description

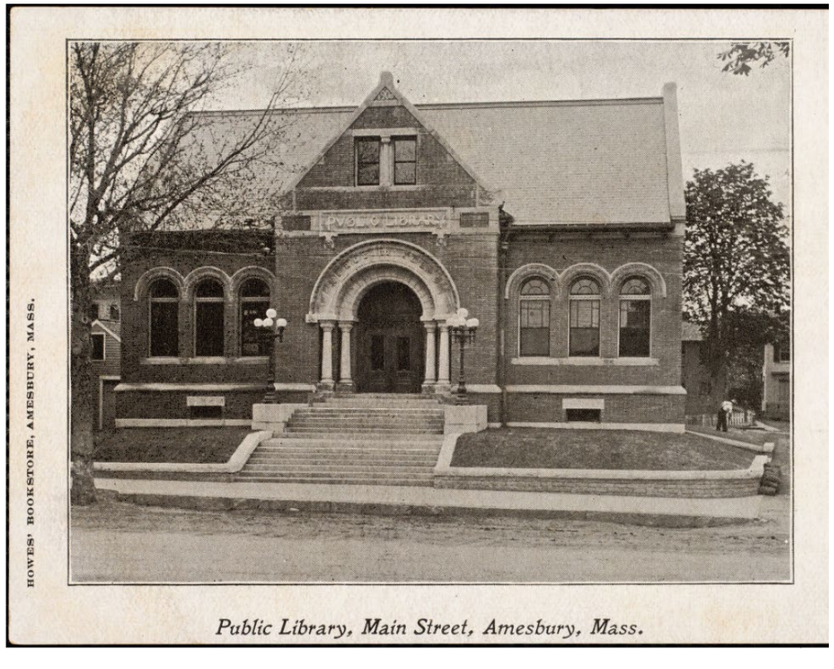
Penn Varney designed an elegant Public Library for Amesbury residents to enjoy in the Romanesque Revival style. The library building is T-shaped in plan with a central block and two wings. Beige roman brick on the south (front), east, and west wing denote primary public facades, while standard red brick indicates secondary elevations. Limestone trim adorns all elevations, accentuating the structure's classical aesthetic.

The central block and wing gable ends have limestone copings. The overhanging eaves and rafter tails provide protection and a decorative element to the roof. The slate roof, copper ridge caps, and brick chimneys are typical for the time period and construction. The elaborate arched entrance, arched windows, and symmetry pay homage to the building's Romanesque Revival style.

Stepping inside, visitors are greeted by many historic elements. The vestibule has a mosaic tile floor and marble threshold, the center circulation space adorns decoratively painted cove ceiling, while wood columns elegantly delineate the center hall from the wings. The original wood circulation desk serves as the focal point for the first floor. Ascending the grand double stairwell to the second floor, visitors are greeted by vaulted ceilings and natural light from the center skylight.

A charming park envelops the library's south and west side with vibrant greenery, majestic trees, picturesque benches, and a gazebo, further enhancing the library's welcoming ambiance and fostering a sense of tranquility for visitors.





Public Library, Main Street, Amesbury, Mass.

Statement of Significance

The Amesbury Public Library stands as a beacon of historical significance and architectural excellence, deeply ingrained in the fabric of its community. Surrounded by a diverse array of commercial, residential, religious, and municipal structures, the library's central location underscores its pivotal role as a cultural hub.

Designed by acclaimed architect Penn Varney in the late nineteenth century, the Amesbury Public Library embodies the Romanesque Revival style, characterized by its stone and brick construction, prominent rounded arches, classical columns, recessed entryway, and hipped roofs. The library's architectural integrity and original materials stand as testaments to its historical significance, rivaling other Romanesque Revival structures in the North Shore area.

In summary, the Amesbury Public Library stands as a cherished landmark, embodying the rich heritage and architectural legacy of its community. With its timeless design and historical significance, it serves as a beacon of inspiration and cultural enrichment for generations to come.

Its exemplary design and significance was acknowledged by a Certificate Of Eligibility in the National Register of Historic Places, by the Secretary of Interior. Amesbury Public Library is now sponsoring a full nomination to the National Register with support by Heritage Consulting Group. The nomination identifies the Amesbury Public Library as significant under Criterion A and C:

Criteria A: Is associated with events that have made a significant contribution to the broad patterns of our history

Criteria C: Buildings “that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.”

Statement of Significance by Cindy Hamilton/Nika Faulker, Heritage Consulting Group identifies that the Amesbury Public Library retains a high degree of integrity, having functioned consistently as a library since its construction. Aside from updates per ADA regulations and site changes, minimal exterior and interior alterations have taken place since the library’s initial construction in 1900. The building retains its prominent Romanesque Revival Style design along Main Street in downtown Amesbury. National Register Bulletin 15 describes integrity as the capability of a resource to convey its significance, and evaluates integrity based on a set of seven aspects detailing a property's physical features and how they relate to its significance. Specific to the seven aspects of integrity: Location, Setting, Design, Workmanship, Materials, Feeling, and Association

Bruner/Cott identified interior and exterior elements of the building and grounds that have varying levels of integrity, therefore varying levels of significance. High integrity directly correlates to high significance, providing a framework to base a renovation treatment plan to retain and preserve the important features of the Amesbury Public Library.

High Significance

The treatment of the components designated as high significance means the architectural features, geometry, and finishes will be preserved and restored based on historic information, photos, and plans.

This designation is given to components retaining the highest degree of architectural integrity and historical value. Preservation and restoration are recommended treatments for these components. Alterations that are not compatible with the historic character of the component shall be removed and the area restored. Alterations shall be minimized and concealed. Historic geometry, finishes, and architectural features shall be preserved.

Moderate Significance

The treatment of the rooms or components designated as medium significance means the overall character of the space or component will remain intact but will have renovations that may be different than that of historical information, photos, and plans.

This designation is given to important historic spaces or components that contribute to the overall character but are of lesser importance originally. These spaces have been altered but retain significant original historic fabric. Rehabilitation and restoration are recommended treatments for these spaces. Original building fabric that remains should be retained as part of a future renovation. New construction shall be harmonious but distinctive from the original construction.

Limited Significance

The treatment of the rooms or components designated as low significance means the spaces or components have little to no contribution to the historic fabric and can undergo significant alterations.

This designation is given to spaces or components that are service-oriented or utilitarian. These spaces or components have minor or no character-defining features. Significant alterations may occur in these spaces but do not affect high or moderate spaces.

Exterior Preservation Significance

HIGH SIGNIFICANCE

- “Feeling and association” of a library
- Beige roman brick walls and buff brick band courses
- Limestone trim and coping
- Wood soffits, brackets, and overhanging eaves
- Carved wood entry doors and bronze hardware
- Limestone Corinthian columns and bell-shaped capitols
- Limestone ornamentation and sills
- Chimney placement and height
- Original Site walls
- Slate shingles
- Copper gutters and downspout assembly

MODERATE SIGNIFICANCE

- Exterior door and window opening locations
- Red brick walls and brick quoins on north and west elevation of stack area
- Concrete stairs at main entry and north emergency exits
- Exterior wood-framed windows
- Exterior light poles at entry stairs (lanterns not original)

LIMITED SIGNIFICANCE

- Main entry stair railings
- Emergency exit doors
- Emergency exit stairs
- Accessible entry door, glass vestibule, and metal ramp
- Stucco water table

Interior Preservation Significance

HIGH SIGNIFICANCE

- Entry stair and wood balusters
- Granite donor walls
- Decorative cove ceiling with painted frieze
- Original carved wood ornate columns
- Fireplaces, mantels, and hearths
- Mosaic tiled entry flooring
- Stained wood trim and crown moldings
- Original wood paneling
- Circulation Desk
- Amesbury Room glazed wall divider

MODERATE SIGNIFICANCE

- Plaster walls
- Globe sconces
- Skylights
- Painted pressed metal ceilings

LIMITED SIGNIFICANCE

- Stack mezzanine
- Stack staircase and wood stair to basement
- All bookshelves
- 1st + 2nd Floor stack Bookshelves and stack 2nd floor
- Lower-level interior fit out (excluding metal ceilings)

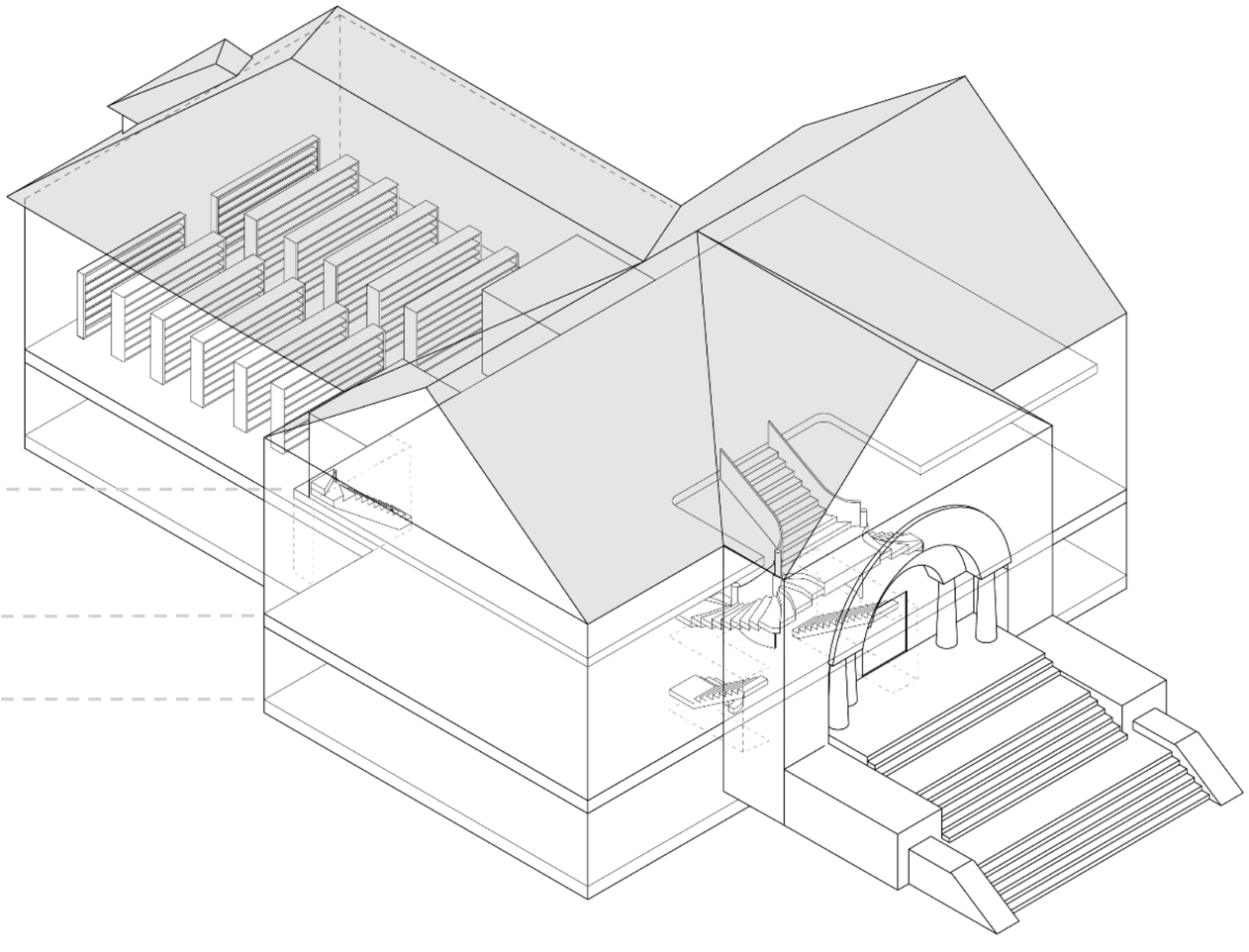





* This list identifies the character-defining features that embody the historic integrity of the building. This list is not all-encompassing but meant to be a guideline for preservation and rehabilitation.

Original Massing Diagram

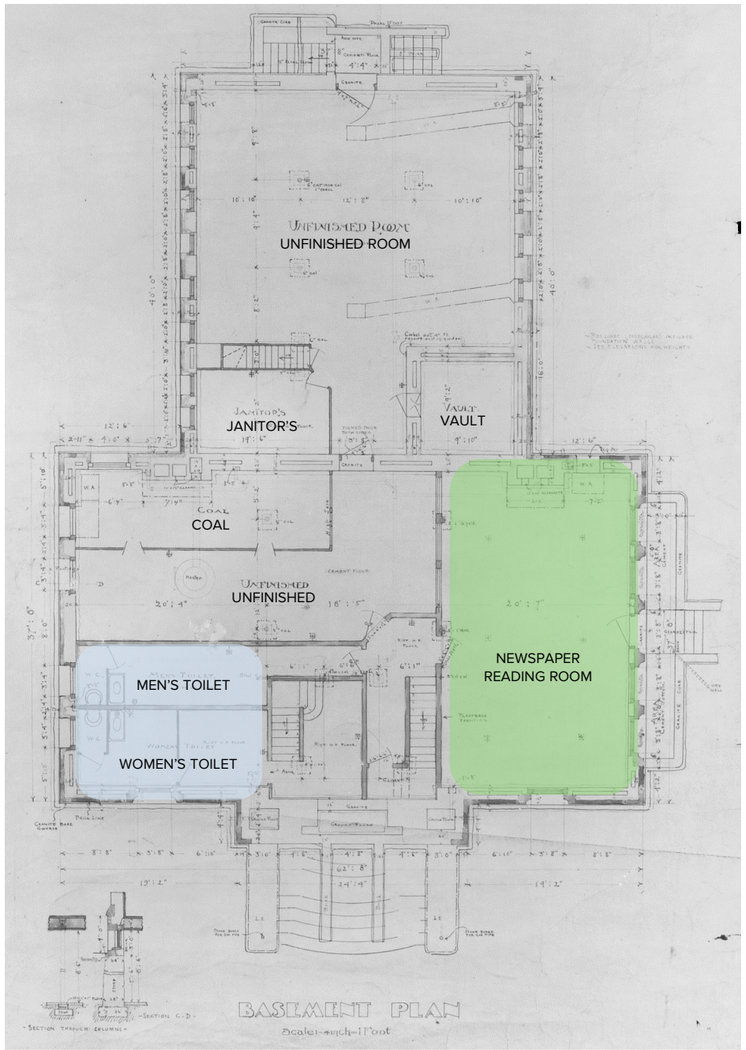
This diagram identifies the original construction and major elements of the building in 1900. There was only one level of stacks and the ceiling was a two-story vaulted space with pressed-tin ceiling tiles. The main entrance was from the grand front stairs and there was a large staircase to the lower-level restrooms at the interior.



Amesbury Public Library 1900

Original Blueprint Plans

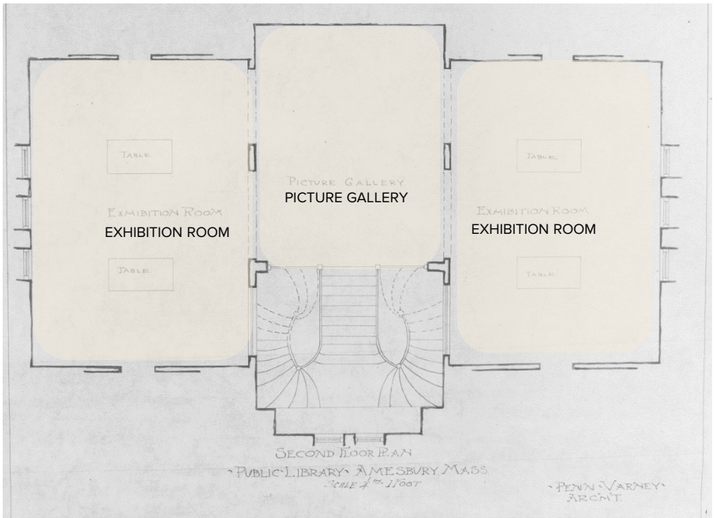
- EXHIBITION + PICTURE GALLERY
- CIRCULATION
- STACKS
- STAFF SPACE
- READING ROOM
- YOUTH SERVICES
- NONFICTION STACKS
- RESTROOMS
- REFERENCE ROOM



LOWER LEVEL

Note how the circulation desk cut off the stack room from the public. The stack room was only accessed by library employees.

FIRST FLOOR



SECOND FLOOR

Major Changes to the Library

This diagram highlights major changes to the Library since its original construction in 1902.

1 Second Floor Stack Level Added 1955

Two stories of stacks were installed inside the original library walls with a new intermediate floor. This floor level is halfway between the first and second level, creating a mezzanine level.

2 Loft Area Added date unknown

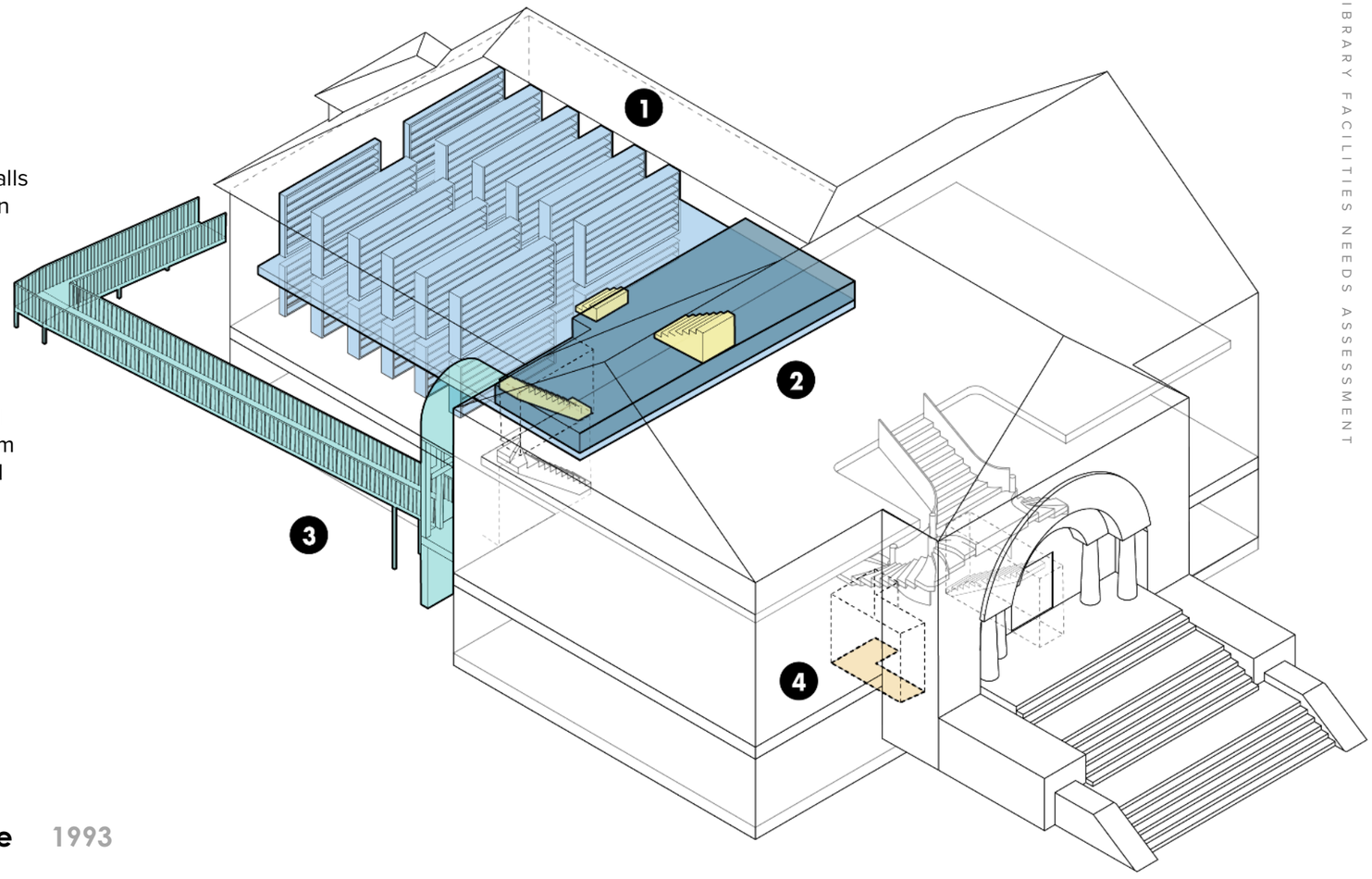
A floor was constructed over the ceilings of the staff offices and laylight between the offices to create a loft and stair landing from the second floor of Youth Services to the loft. A door was added from Youth Services to access the loft.

3 Ramp and Vestibule 1960-1970, renovation 2007

A concrete ramp and glass vestibule was constructed as an accessible entrance. The concrete ramp was replaced in 2007 with a lower-slope metal ramp.

4 Removal of Lower-level Stairs under Grand Staircase 1993

An interior renovation fit out the lower level to the current configuration with restrooms, staff room and office, and vault. The former lower-level stair was removed for this renovation and the secondary stair was retained.



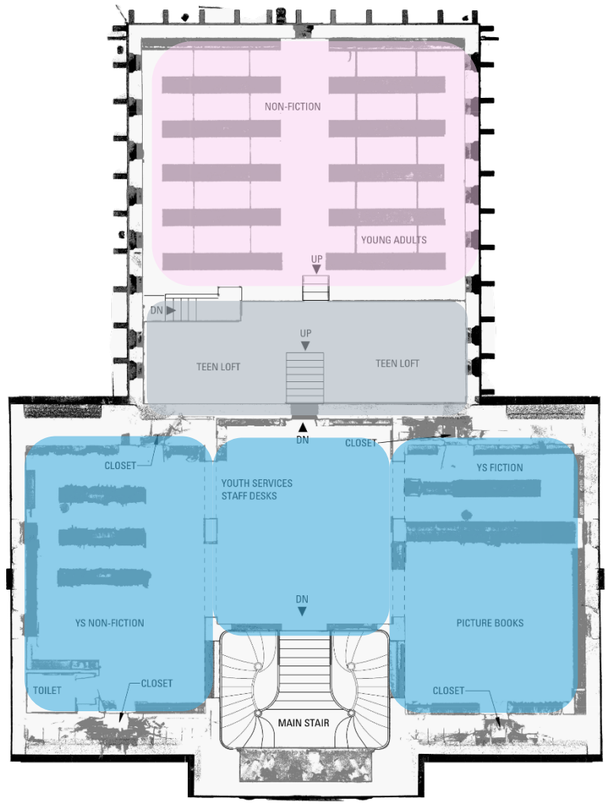
Amesbury Public Library 2024

Current Floor Plans

- NEW RELEASE ROOM
- SPECIAL COLLECTIONS
- REFERENCE ROOM
- CIRCULATION
- BOOKSHOP
- YOUTH SERVICES
- FICTION STACKS
- NONFICTION STACKS
- WORK SPACE
- LOFT
- STAFF SPACE
- RESTROOMS

LOWER LEVEL

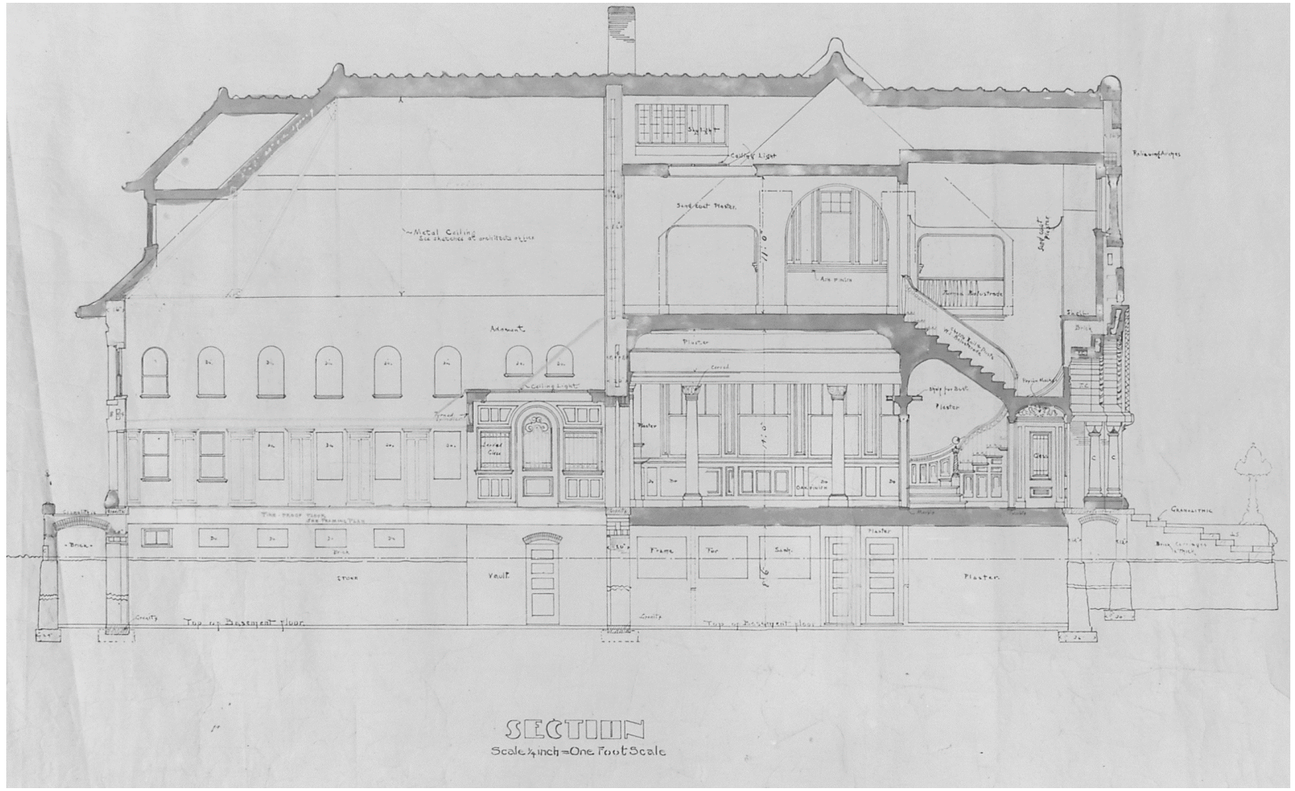
FIRST FLOOR



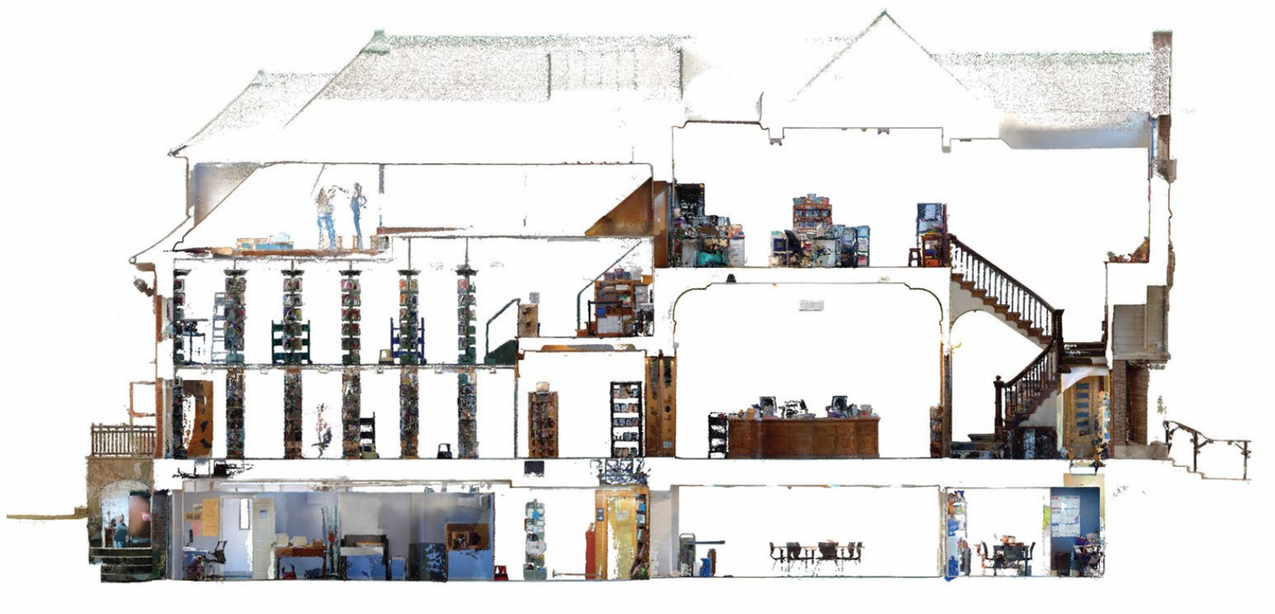
SECOND FLOOR

Building Section Comparison

Note that the stack area was a tall, vaulted space with a decorative metal ceiling. Original wood stacks were only one floor, the vestibule between the librarian's offices had a glass skylight, and there wasn't access to the stacks from the second floor.



BUILDING SECTION, 1900



BUILDING SECTION, 2024

CONDITIONS ASSESSMENT - EXTERIOR

Overview of Conditions Assessment

The building conditions portion of the report is based primarily on visual inspections. There was no removal of materials to see the condition of the existing interior or exterior structure or ceiling above suspended ceiling tiles. The expectation is that the information here will be suitable for preparing conceptual cost estimates and allowing for a scope determination to be made. Once the desired scope of work has been identified, a more detailed review of some elements will be required outside of the scope of this report. That might include removal of some materials, detailed documentation of conditions and dimensions, and access to inaccessible regions of the building to inspect areas that are difficult to see from below. This more detailed information will inform future cost estimates and future documents.

Definitions for terms used in the condition assessment:

Excellent condition : Element is in new or equivalent condition. No work needed other than routine maintenance.

Good condition : Element is performing its intended function or is otherwise serviceable, although it may show signs of wear. No repair required other than routine maintenance.

Fair condition : Element may require work, usually minor, to better perform its intended function, bring to a maintainable state, or return to a condition resembling its historic appearance.

Poor condition : Major work needed to for element to perform its intended function or to bring item to a maintainable state.

Original : Dates to the period of initial construction.

For more detailed conditions assessment of the following, see the reports in the Appendix:

Building Code

Mechanical, Electrical, Plumbing, Fire Protection

Structural

Building Envelope

Accessibility

Building Elevations

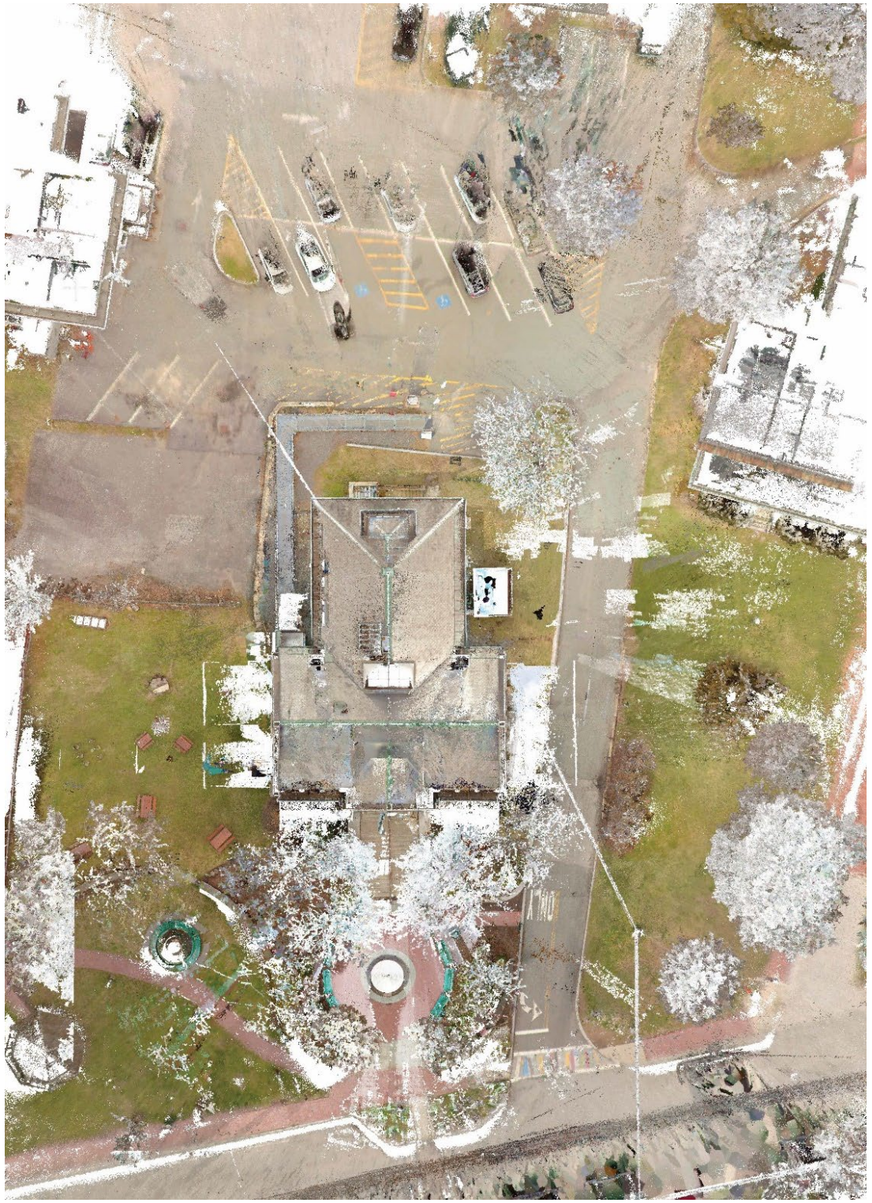
South Elevation

East Elevation

North Elevation

West Elevation

Site Plan



Conditions Assessment - Exterior

WALLS AND CHIMNEYS

Overall Description

The exterior walls of the library are mass masonry and the foundation is granite rubble below grade and brick above grade. The primary façade (south), and the east and west elevations of both wings are faced with beige roman brick, buff roman brick for banding, and a limestone water table cap. The north and west façade are clad in a more affordable red brick. All elevations feature a variation of limestone in the form of carved trim, window headers and sills, banding, or building water table. The library has two chimney's that stand symmetrically off the north side of the main bay. The east chimney retains the original design with arched-top openings for venting and a stone chimney cap. The west chimney has undergone restoration where the top portion of the chimney was rebuilt. Both chimneys have wrought iron tiebacks. The west center window is infilled with brick – although this looks like it was a later change, it is original to the building.

Condition Assessment

There are visible signs of masonry deterioration and locations that require investigation to determine how water is seeping into the walls. The southeast corner of the foundation is experiencing water infiltration. Water is actively visible during heavy rainstorms at the intersection of the basement slab and foundation wall. One possible reason is because the site walls at the exterior create a bathtub condition and the downspout does not drain away from the foundation. The second location of water infiltration is the north elevation below the dormer. Repair the dormer trim and flashing and investigate where the water is entering the building.

Brick mortar is missing from a few locations and there are areas where the bricks are bulging and displaced. The east chimney is missing mortar on the rebuilt top half. The exterior walls and limestone trim have biological growth, dirt, and staining at locations around the building.

Foundation areas where brick is located underground show signs of deterioration due to perimeter water. Missing mortar and spalling brick are observed from rooms that the brick walls are not covered by finishes.

See SGH Structural and Building Envelope assessment in the Appendix

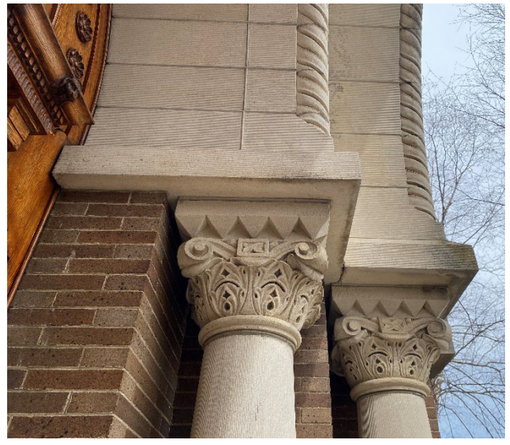
DECORATIVE STONE FEATURES

Overall Description

The library's south elevation was constructed in brick with limestone ornamentation. The front facing façade is the South Elevation and holds most of the ornate and decorative features. The limestone carving above the main entry reads "Public Library" and the grand arch above the door reads "Free to All". The decorative stone entrance is supported by carved limestone columns and flanking the entry doors. Stone columns between the three windows on the east and west faced and carved coping stone end caps add decorative interest.

Condition Assessment

The decorative features on the exterior of the building are in good condition. There is black carbon staining on many of the stone. Stone requires cleaning and repointing many of the sky-facing joints.



Conditions Assessment - Exterior

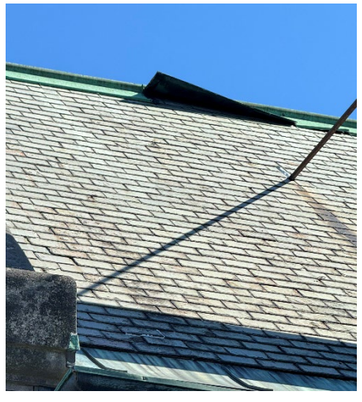
ROOFING AND FLASHING

Overall Description

The gray slate and copper flashing are original to the building and are part of its charter-defining features. The north dormer is also clad in slate. Copper ridge caps adorn the main T structure and wings of the roof while slate ridge caps are located at the hip roofs. Copper step flashing can be seen at chimneys. Copper flashing decorates the top of the eaves and the ridge. The roof also features two non-historic skylight covers that are located approximately at the center of the “T”. A few snow guards are sprinkled throughout the roof plane. The roof construction is wood framed with 2 in. by 7-3/4” at the main bay with additional larger beams and steel beams as the primary support of the roof. These rafters can be seen from the 2nd floor closets

Condition Assessment

There are locations where slate is missing and damaged throughout the roof, but generally it is in fair condition. A ridge cap is not secured to the ridge and can blow off in the next large storm. A lift inspection can be performed to view the condition of the flashing and quantify amount of slate repair required. The wood rafters show signs of water staining. Ice damns are common at the valleys of the T-shaped plan and cause occasional water infiltration in the eaves.



GUTTERS, DOWNSPOUTS & SOFFITS

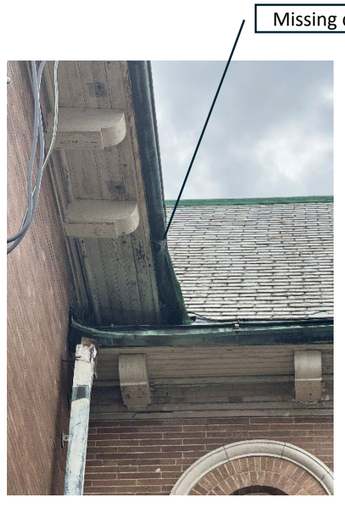
Overall Description

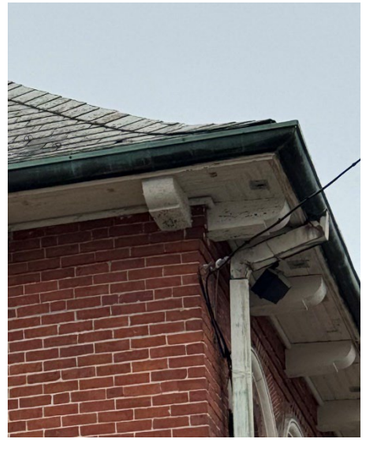
Copper flashing and gutters are typical of the time period of construction and slate roof assembly. The gutters are secured to a wood soffit and overhanging eaves around the building. The overhanging eaves and soffits are made of tongue-and-groove wood boards and are supported by wood brackets that look like the extension of the roof framing but are believed to be independent of the roof structure. Copper downspouts are located at 6 points along the building perimeter.

Condition Assessment

Gutters and downspouts are in poor condition with major deformation from ice and snow. The southwest gutter was replaced in the past but now is not draining due to a clogged downspout. Gutter straps are missing in various areas and gutters are not properly supported. Downspouts are missing at the connection of the wings to the main T roof. Downspout extensions and continued maintenance are required to divert water away from the building’s foundation. Repair and replacement of the gutters for an effective water management system will greatly reduce water infiltration in the building’s roof and foundation.

* Because of this report, the roof flashing was tacked down and the southeast downspout extension was installed to reduce water infiltration coming through the wall into the lower-level staff office.
* See Appendix for Downspout Immediate repairs





Conditions Assessment - Exterior

EXTERIOR STAIRWAYS

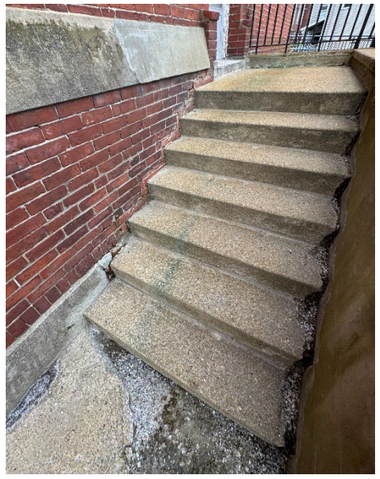
Overall Description

The Amesbury Public Library was constructed with a prominent facing staircase on the south side of the building that lead from the main street to the wood double doors. The metal railing in the center is not original to the building and the outer railings on the main entry stair have been removed (as seen in historic photos). Both sides of the main entry staircase has large concrete stringers as support.

There are two sets of concrete stairs on the north side of the building. One set of stairs serves the first-floor and the other serves the lower-level as emergency exits. The wall supporting the first-floor stair is constructed of cement block with a cementitious parge coat over it.

Condition Assessment

The main entry stair and both sets of back concrete stair treads and landings have multiple cracks and minor spalling. The center railing on the main entry stair is rusted and stained the stairs. The paint is chipping off the rusted railings. The railing on the emergency exit stair from the first floor is also rusted and has chipped paint. The north stairs do not have adequate landings from a code and drainage perspective – the landing at grade is not level, the lower-level landings at the north and east overflow and water seeps in at the door thresholds.



EXTERIOR DOORS

Overall Description

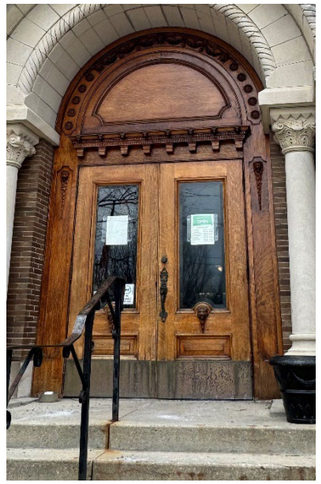
The original entry to the library is the set of wood doors at the south façade and remains the most identifiable entrance on the building. The double leaf, glazed, paneled doors are solid wood with brass hardware. Each leaf has an ornamental wood trim at the glass and a lion head wood carving inside of a half circle. The accessible entry door is currently a glass door that was installed between 1986-87. The accessible entry door replaced a window in the new room to provide a more accessible entry into the library's receiving hall. The accessible entry door was constructed with a glass vestibule and concrete ramp. The concrete ramp has since been replaced with a metal ramp and railing system.

The library has two emergency exit doors on the north end of the building on the first and lower-levels exiting to the parking lot beyond. The emergency exit door on the first floor is a 4-panel door constructed of wood and is original. The emergency exit door on the lower level of the stack area is constructed of metal and replaced in 2022 during the emergency lintel repairs. The delivery door on the lower-level is used primarily for deliveries but is also used as a staff entry/exit to the parking lot beyond.

Condition Assessment

The main entry doors are in good condition and have recently undergone restoration in 2019 + 2024. The doors do not have code-compliant hardware, cited by the building inspector. The accessible entry door and glass vestibule are in fair condition and has not caused any water or air infiltration issues.

The emergency exit door on the first floor does not have panic hardware and opens inward with an outward opening screen door. The emergency exit door on the lower level has panic hardware, opens out and is in good condition. The delivery door does have a panic bar, opens out, and is in good condition. All doors serving occupant load greater than 49 people should be provided with panic hardware and swing in the direction of travel.



Conditions Assessment - Exterior

WINDOWS + WOOD TRIM

Overall Description

The library has twelve large three over one, wood-framed, single-pane windows with arched transoms occupying the main bay of the library. At the second floor of the east and west elevations of the main bay are three rectangular six-over-one double hung windows. The lower level of the library is exposed daylight with small wood windows. The stack volume is lined with eight wood-framed double hung single-pane windows on the first and second floors at the east and west elevations.

The windows are typically double-hung, wood framed, single-pane windows with limestone lintels, sills, and decorative window motifs. The arched windows have a brick arch and segmented limestone molding. Much of the library windows have limestone lintels and sills except for the round-top windows which have both brick and limestone arches.

Condition Assessment

The windows are in fair condition and have peeling paint, missing glazing putty, and the sash ropes and weights are not functioning. A select few of the windows have rotted wood framing at the lower level. The lower-level windows have missing or damaged glazing putty at the window panes and the wood frame and sill is rotted on portions of the building with little to no direct sunlight (north and west sides). Limestone lintels and sills over square and arched appear to be sound, apart from minor dirt and staining. See code report for window notes. Mezzanine windows are lower than 42” along a walking path and require a guard system.

OUTDOOR SPACES

Overall Description

The library is location on a 0.31-acre site on Main Street, surrounded by other municipal buildings and parking lot. The outdoor spaces comprise various elements contributing to the overall aesthetic and functionality of the site. Much of the library parcel and outdoor grounds are used for community programming hosted by the library and contribute significantly to its overall appeal as a community gathering place and cultural institution. The library grounds are utilized today as a gathering place for people to enjoy open public spaces.

The parcel abuts a brick and stone circular courtyard with a central fountain, garden beds, and greenery on each side. At the edges of the circular courtyard are metal benches and lighting. To the west of the courtyard is an area with a gazebo, large tree, lighting, benches, and brick paved walkways. The east, west, and north areas are landscaped simply with lawns and retaining walls which allow for the exposure of lower-level windows or doors at all elevations.

Directly east of the building is a small shed for outdoor program storage. The east side of the building has one door that leading to a landing with steps to the driveway leading to the parking lot north of the building.

The parking lot is shared among the other city buildings. There are underutilized paved areas on the west side of the building near the ramp. A chain-link fence delineates the paved areas from the lawn where the Library hosts the majority of their outdoor programs.

Conditions Assessment

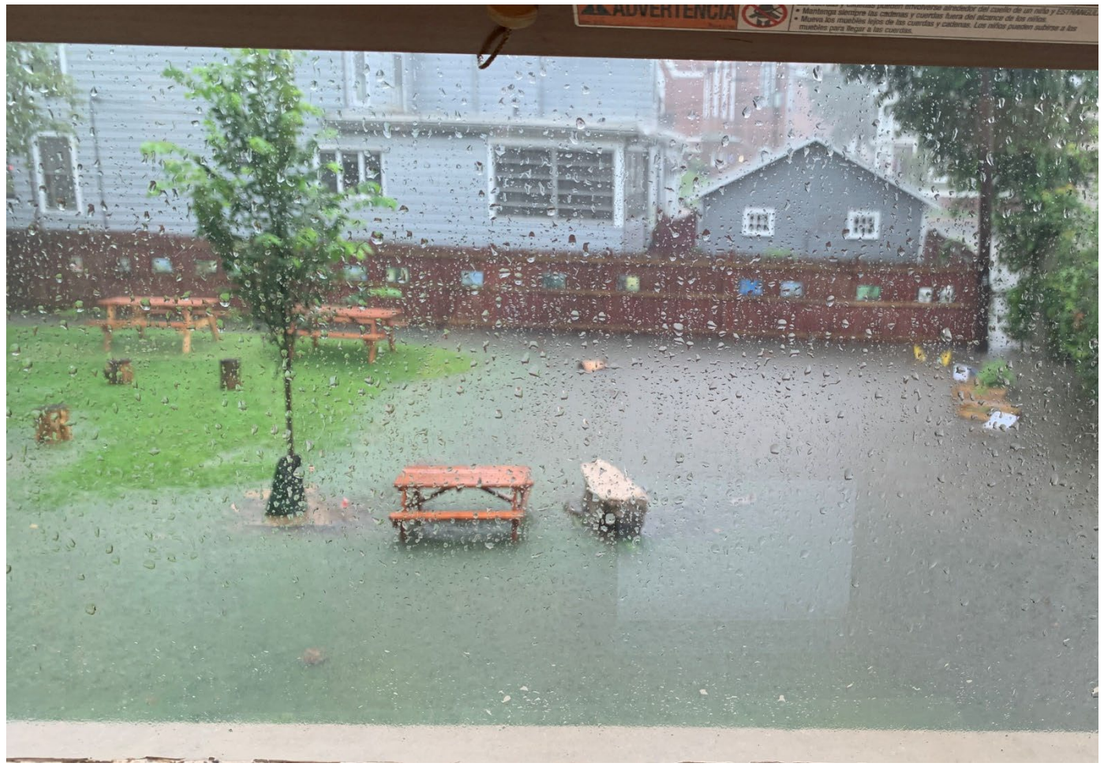
The outdoor elements and spaces of the Amesbury Public Library are generally well-maintained and in fair condition although simple and not robust for the quantity of programs that are held outside. There is a need to visibly claim the outdoor space on the west lawn as library program space in order to keep it clean and deter dogs and their owners from using the space. The large tree in the City-owned park should be retained due to its age and importance in the park.

The lawn and parking lot flood a few times a year in heavy rainfall. See photos on next pages. This makes it difficult to invest in hardscape and plantings when the surface water does not drain properly. During the study, the design team was not able to acquire a City site drainage and underground utility survey.

Consider incorporating sustainable landscaping practices, such as native plantings and water-efficient irrigation systems, to minimize environmental impact. Implement a routine maintenance schedule for landscaping, including pruning, watering, and fertilization. Conduct regular inspections of outdoor amenities such as benches, lighting fixtures, and pathways to identify any maintenance or repair needs. With proactive maintenance and strategic enhancements, the site will continue to serve as a welcoming and functional asset for patrons and visitors alike.

Conditions Assessment - Exterior

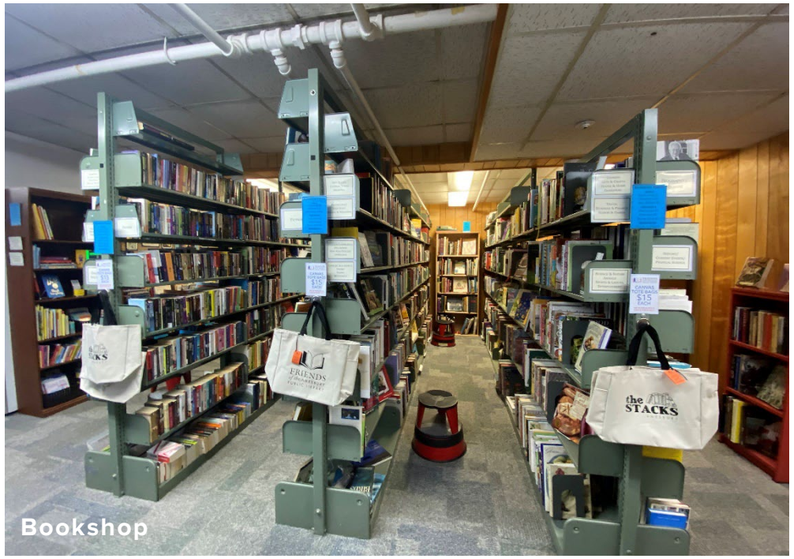
Water Infiltration - Exterior

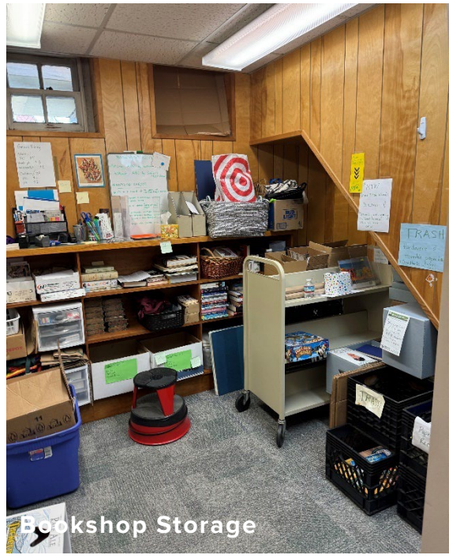


CONDITIONS ASSESSMENT - INTERIOR

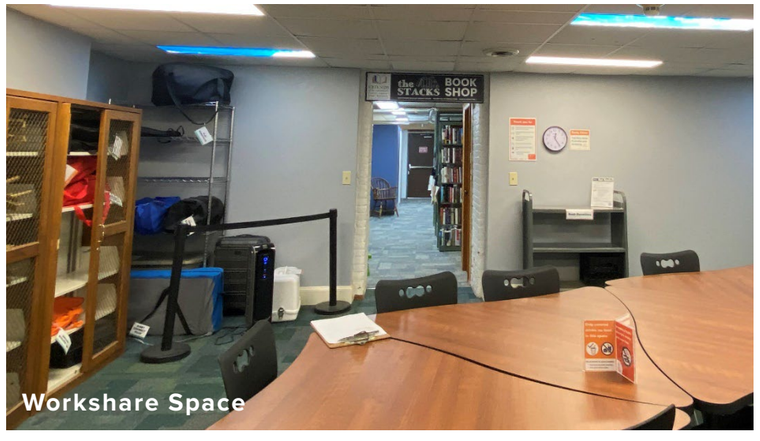
Lower Level

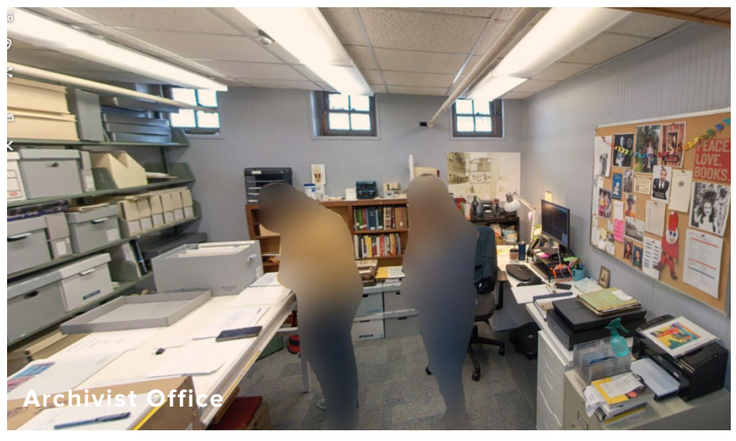

Special Collections Storage


Bookshop


Bookshop Storage


Printer/Copier

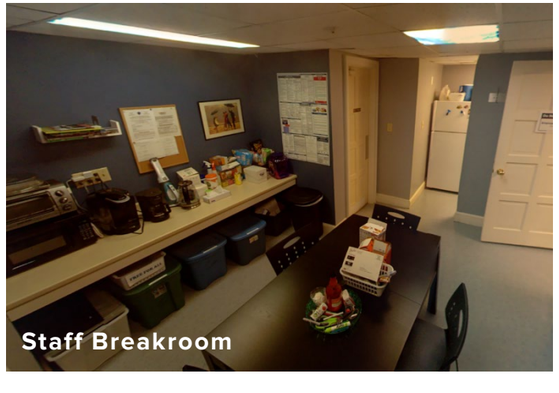

Workshare Space


Archivist Office


Staff Office


Restroom


Utilities/Storage

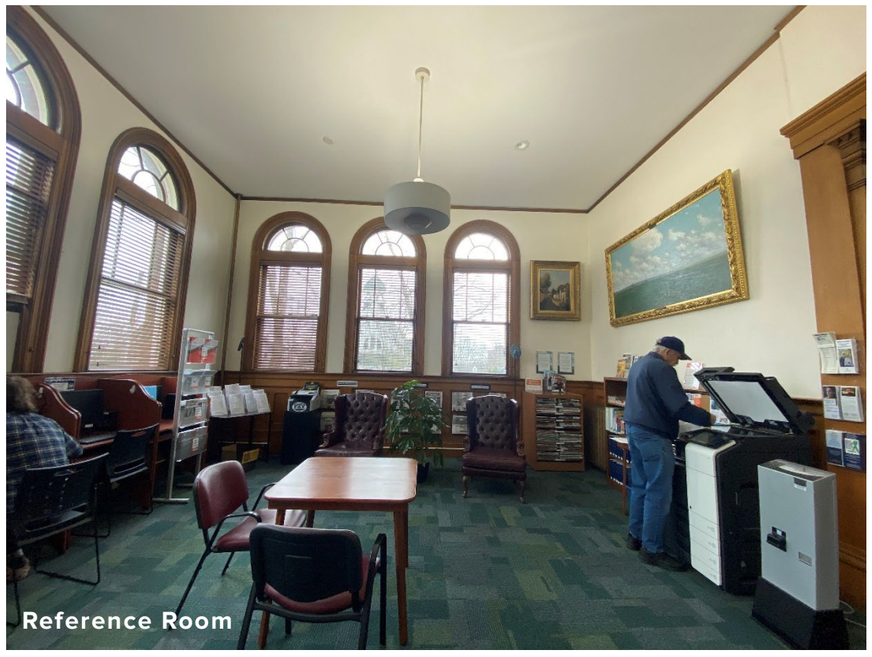

Staff Breakroom

First Floor


Amesbury Room


Entry Foyer


Fiction Stacks


Reference Room

Circulation Desk


Director's Office


Assistant Director's Office

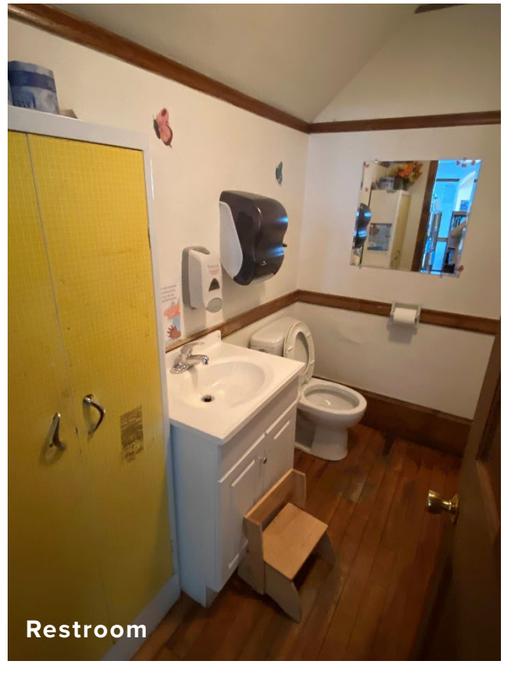
Second Floor

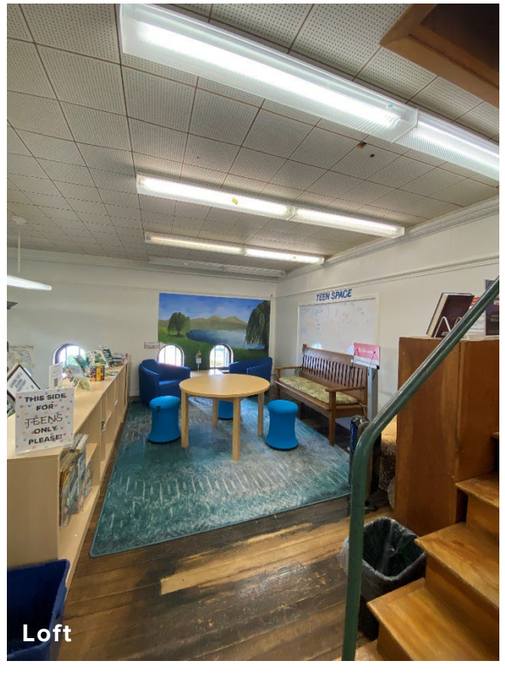

Youth Non-Fiction

Youth Services

Picture Books


Youth Fiction


Restroom



Loft

YA/teen Collection Non-Fiction Stacks

Conditions Assessment - Interior

WALLS

Overall Description

Most of the walls in the library are painted plastered walls with original oak millwork and wainscot. The lower-level has exposed brickwork and wood paneling. Utilitarian composite wood paneling line the lower-level bookstore and storage room walls. The lower-level walls are furred out with metal studs, batt insulation, and drywall. Some lower-level walls have a finish of economical faux-wood paneling.

Condition Assessment

The plastered walls in the library are in fair condition and have recently been painted but have various minor cracks. The plaster walls and ceilings cracks do not translate through to the masonry structural bearing walls on the exterior, so it is believed to be superficial or cosmetic. The cracks could be part of a larger water infiltration issue- particularly at north wall stack area below the dormer. The wood wainscotting and plaster should remain intact. Adding interior insulation in the future should be analyzed to determine if the energy reduction outweighs the cost and loss of original plaster.

CEILINGS

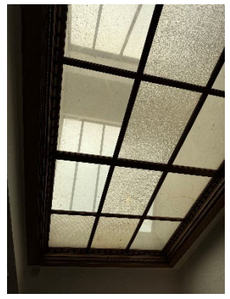
Overall Description

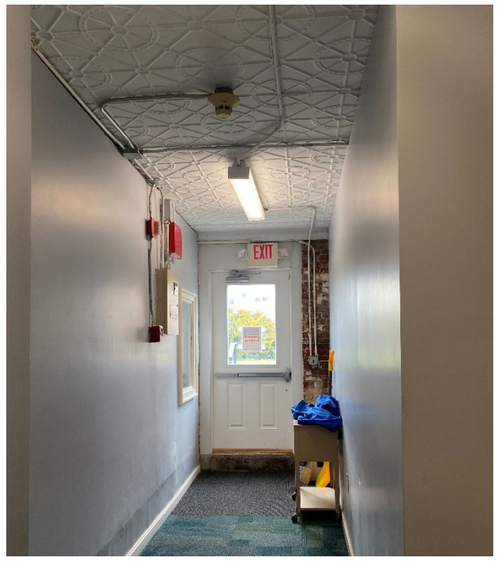
The notable ceilings in the library are the original painted pressed metal ceilings on the lower-level support rooms and hallway leading to the delivery entrance. This area originally was the Newspaper Reading Room. The stack section of the library contains a painted pressed metal ceiling, dormer window (visible from the rear), and a skylight all covered in a renovation project by a lay-in acoustic ceiling tile system. The library is host to multiple pitched ceilings covered in white plaster in the main bay staircase and children's reading section.

The Youth Services area at second floor has an original laylight that is back-lit by two skylights at the ridge. A similar laylight was originally located on the first floor in the vestibule between the Director and Assistant Director's office but is now a drywall ceiling.

Condition Assessment

All the painted pressed metal ceilings are in good condition. The exposed pressed metal ceiling on the lower-level is painted white and has punctures for contemporary elements like smoke detectors, lighting, and associated conduits. The painted pressed metal ceilings are original to the building. The plastered vaulted ceilings are in fair condition and have minor cracks identical to the plastered walls and may require repair for aesthetic purposes.





Conditions Assessment - Interior

STAIRWAYS

Overall Description

The building has a total of 5 sets of interior staircases to reach 5 levels of the building. The main entry staircase is a dual staircase on the south side of the building. The open stairs are carpeted and have wrought iron and wood railings. The secondary stair from the entry vestibule goes from the first floor to the lower level and was not originally intended for public use. The stacks staircase serves three floors and was installed in 1955 when the stack mezzanine floor was installed. The stacks staircase is a metal staircase built during the renovation of the building in the 1950s.

Conditions Assessment

The main staircase is in good condition and should be maintained because it is original to the building. The wood handrails and wrought iron balusters are in good condition. The stair railings and guardrails are not in compliance with current code. The stacks staircase is in fair condition as is not a particularly safe stair to use. It is narrow and the guardrails are open- both cases do not meet current codes. The wood staircase to the basement is narrow with steep risers and does not meet code. Current building code does not allow three floors to be open and connected with each other. A smoke-tight enclosure of the vertical openings to the lower level may be required based on the amount of alteration of the building in a future renovation.

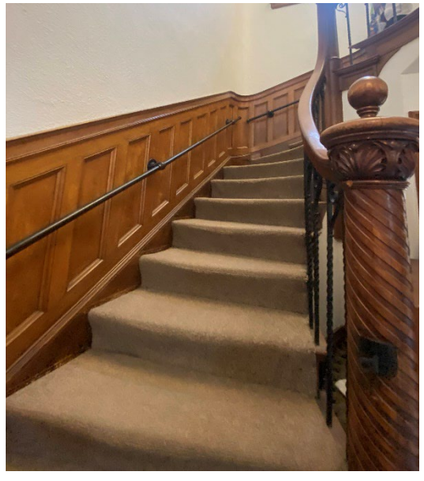
FLOORING

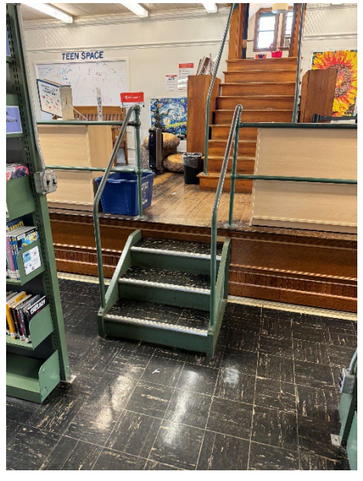
Overall Description

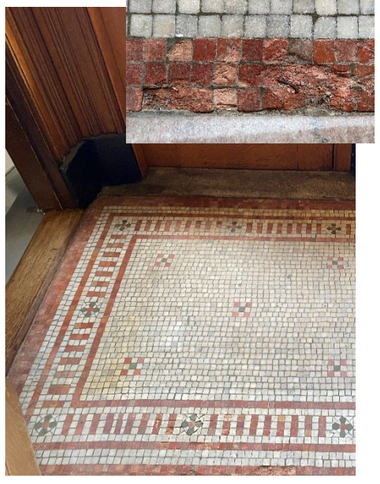
Most of the flooring in the library's first and lower-level has been recently updated with carpet floor tiles over existing wood flooring. The green-glazed tile in the Reference Room and the terracotta-glazed tile in the New Release Room at the fireplace hearths are original to the building. Original wood and marble thresholds remain in transitions points throughout the library and cause tripping hazards. The original mosaic tile floor remains in the main entry vestibule. Original wood flooring remains on second floor at the youth services department. The teen loft floor was built on top of the office ceilings on the first floor and was already in place when the stack floor was added to the building. The stacks portion of the building has an asbestos-containing tile flooring on top of metal floor plates.

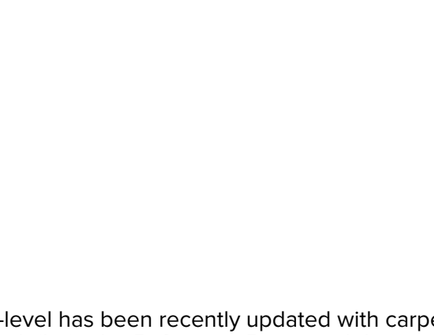
Conditions Assessment

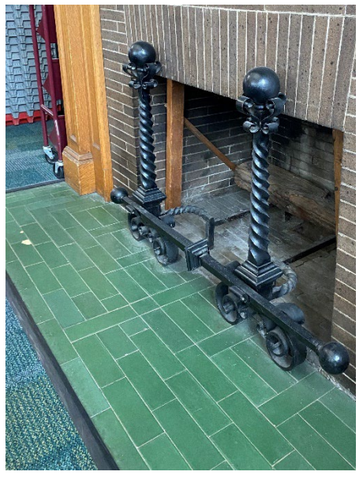
The mosaic tile floor is in fair condition with a few areas of tile spalling. The carpet flooring is in good condition and is protecting the original wood flooring. The original wood flooring on the first floor under the carpet tiles should be reviewed if there is a desire to remove the carpet and expose the original floor. Original wood floor on the second floor is in fair condition – there are ghost patterns of old wood stain and scuffs over the years of use. The asbestos-containing flooring should be encapsulated to prevent health issues. The fireplace hearth tile flooring is in fair condition with one area of spalls and cracks. A protective coating or a plexiglass covering can be installed on the tile floors to protect it from foot traffic.

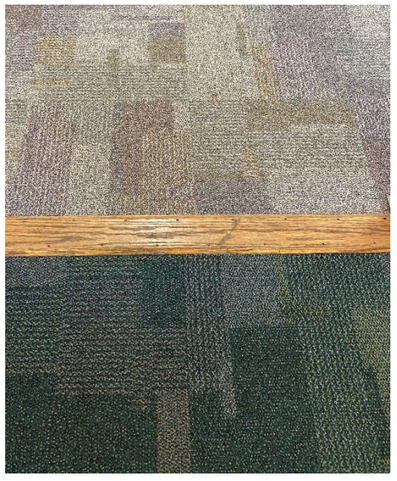












Conditions Assessment - Interior

OPENINGS + DOORWAYS

Overall Description

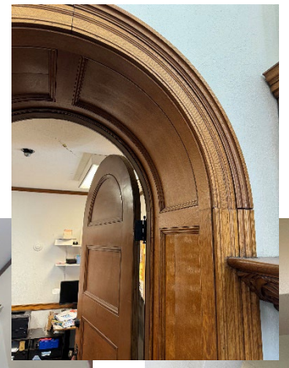
The library has multiple wood openings on the first floor of the main bay. The most visible opening is a wood framed interior window from the Amesbury Room to the New Release Room. The other openings between columns are used as transition points between the New Release Room, Circulation Desk area, and Reference Room. The openings have wood headers, trim, and ornate wood columns decoratively concealing the building's structure.

The second-floor walls in the Youth Services area consists of a series of plaster-wrapped arched openings in the masonry walls. Two of these arched openings are located at the stair with low guardrails between the opening and the stair.

The most notable doorways in the library are in the main bay of the library. Both doors leading to the Director and Assistant Director's offices are arched wood doors and arched wood trim to match.

Condition Assessment

Wood trim around the door and wall openings are in good condition. The wood and glass partition wall is in good condition but if the magazine racks are removed from the wall, the wood paneling will need to be restored. The plastered openings in the Youth Services area are in similar condition as the plastered walls and should be treated the same as the walls and ceilings. The railings associated with the openings are low and do not meet code for guardrails. If the bookcases are moved away from the railings, additional guards should be installed.



INTERIOR DOORS

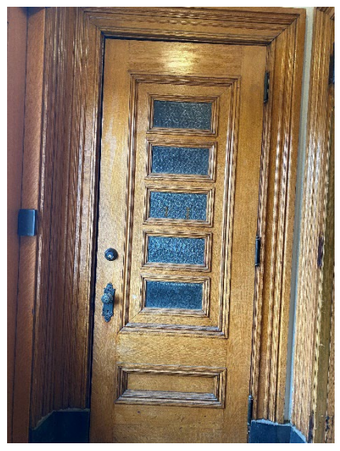
Overall Description

The library has a series of original wood interior doors. The entry vestibule has two five-panel single doors with frosted glass panels. The Director and Assistant Director's offices have wood doors with arched tops. There are original wood pocket doors that separate the circulation area from the stack area. They are preserved in the wall pocket but do not operate. The wood door from the Youth Services level to the Loft is not original and was added when the Loft was created.

Condition Assessment

The doors are in good condition and most stained and clear-coated doors are original to the building. Painted wood doors in the lower level are not original to the building but are in good condition. The front doors were preserved in 2019-2020.

Doors serving more than 49 people per code are required to have panic hardware. See Accessibility report for door hardware compliance issues.



Conditions Assessment - Interior

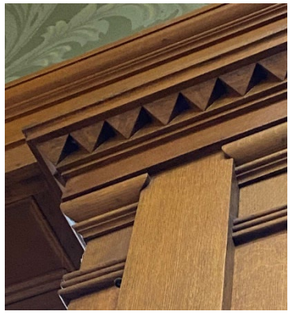
DECORATIVE FEATURES + TRIM

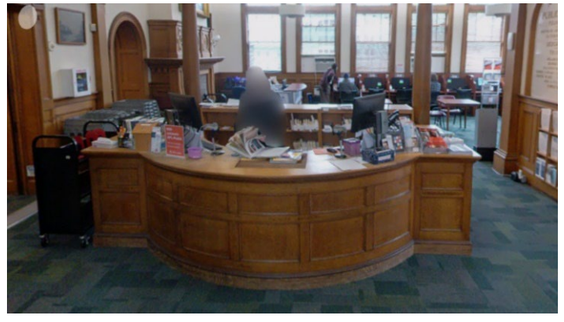
Overall Description

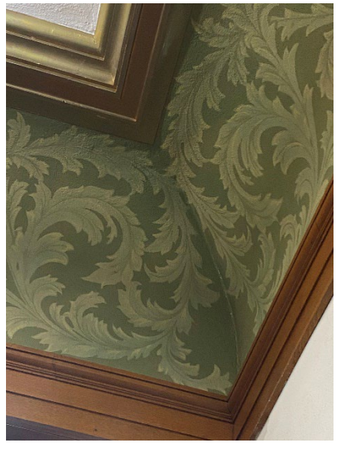
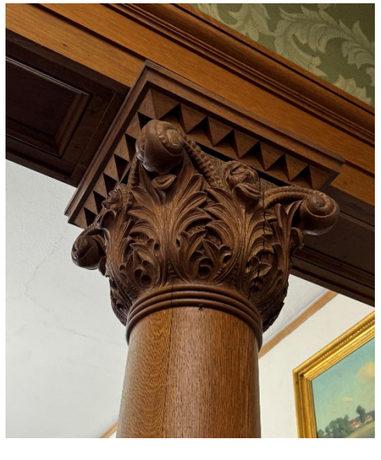
The most notable decorative pieces in the Amesbury Public Library are the hand painted leaf motif in the ceiling cove and the wood circulation desk that is original to the building. The original location of the circulation desk acted as a barrier from the public area of the library and the stacks section. This desk has moved a few different times and recently the staff rotated it 90 degrees from its original location for better circulation. The ornate wood carved columns flank the room as well as many original wood carved headers and mantles. The two fireplaces, one in the New Release Room and one in the Reference Room are also original to the library's design.

Condition Assessment

At the cove ceiling above the central portion of the main bay of the building, the painted motif is in good condition but should be assessed by a conservator. The commemorative marble plaques that flank the entry are in good condition. The circulation desk requires treatment and has been utilized to its fullest capacity after installing electrical. The oak trim, wainscot, columns and millwork are all in good condition. The oak fireplace mantle ornamentation is also in fair condition despite two large cracks in the wood paneling above the mantle in the Reference Room. The wood above the fireplaces and wood paneling throughout is in need of cleaning.





BOOKCASES, STACKS + WALL PANELING

Overall Description

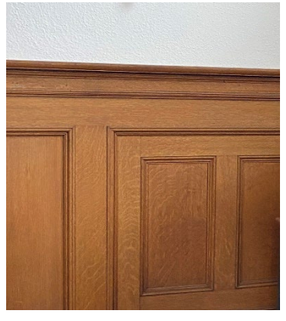
The collection of bookcases throughout the library are not original and not aesthetically consistent. Some are wood, others are painted metal, and others are mounted to original wood paneling.

The first-floor wainscot is in the main entry foyer, circulation desk area, new room, and reference area. Other oak wainscot is located on the second floor of the main staircase leading to the children's section. Wood walls in the director's vestibule, and the staircase leading from the library's children section to the teen loft.

Condition Assessment

The bookcases are not historically sensitive and should be reconsidered to unify the aesthetic of the interiors. Original wood paneling should be retained and furniture and bookcase placement should be moved away from walls to allow the paneling to be more visible. Wood paneling throughout is in need of cleaning to remove oils from years of people touching it.






Conditions Assessment – Accessibility

ACCESSIBILITY

Overall Description

The Amesbury Public Library is a partially accessible building with many characteristics of a pre-ADA building of its vintage that has not been through a major renovation. An accessibility audit of the existing building and grounds was completed by KMA and the findings are included in the Appendix.

Since the 1960/1970s, attempts have been made to improve accessibility in the building, most specifically a concrete ramp on the north side of the building leading to a new entrance on the first floor. In 2007, the original ramp was replaced with the current metal ramp. The Building Inspector cited the need for a permanent ramp in the 2023 Inspection report. If the temporary ramp remains, APL should discuss accessibility strategies with the building inspector.

Due to the lack of an interior accessible route between the floor levels because there is no elevator or wheelchair lift provided, accessibility compliance is limited to the first floor only. All levels are served by stairs. Staff carry bags of materials daily up and down the stairs to their location on the shelves.

There is a shared municipal lot associated with the property. Designated accessible parking spaces are available near the ramp leading to the entrance. Accessible parking icon on the pavement marks the spaces but lacks standing signage.

Condition Assessment

The grounds surrounding the Amesbury Public Library exhibit uneven surfaces and excessive cross slopes, posing challenges for individuals with mobility disabilities. The accessible parking spaces have excessive slopes and lacks the required parking signs. The ramp leading to the accessible entrance presents multiple non-compliant instances such as abrupt changes in level, excessive slopes, lack of landings, and lack of drop-off edge on both sides.

Directional signage is notably absent from inaccessible entrances, especially the main entrance on Main Street, potentially causing confusion for patrons seeking accessible routes. The main entrance lacks a level landing and can be accessed via stairs only. The stairs fails to meet requirements for accessibility and its treads have abrupt changes in level attributed to areas of deterioration or material settlement. Overall, the main entrance and other egress doors accessed via stairs presents safety hazards that may compromise safety and ease of access, particularly for those with limited mobility.

The interior of the building presents a number of non-compliant features, including the presence of hazardous protruding objects, furniture lacking clearances, door hardware and high thresholds, and signage on permanent rooms. There are three public toilet rooms, two on the Lower Level and one on the 2nd level. However, none of these are accessible.

For more information on existing conditions, please refer to KMA's accessibility audit report in the Appendix.

There are two different accessibility regulations that apply to the Amesbury Public Library: 521 CMR: The Rules and Regulations of the MA Architectural Access Board and the 2010 ADA Standards. These state and federal accessibility requirements share the common purpose of eliminating architectural, structural, and communication barriers that limit the participation of people with disabilities in the mainstream of society. However, the interaction between state and federal standards and requirements is more complex than a simple one-to-one equivalency.

<u>521 CMR</u>

Any alterations to the Amesbury Public Library must comply with 521 CMR. The extent of compliance is based on the total cost of alterations1 and the full and fair cash value of the building ($1,297,600 in 2024, per the City of Amesbury's Assessor's Office):

If the cost of work is less than $100,000, only the new work would need to comply with 521 CMR.

If the cost of work exceeds $100,000, one fully accessible entrance, accessible Men's and Women's toilet rooms (or one gender-neutral, single-user toilet room), and an accessible drinking fountain would be required as part of the renovation.

If exempted work is performed, this type of alteration is not subject to 521 CMR unless its cost of work exceeds $500,000 or unless work is being performed on the entrance or toilet.

NOTE: when this exception is considered as part of any renovation, the scope for exempt work and non-exempt work must be clearly defined.

If the cost of work exceeds 30% of the full and fair cash value of the building (including contingencies and change orders at the end of the renovation), the entire Amesbury Public Library would need to be brought into compliance with 521 CMR.

<u>2010 ADA Standards</u>

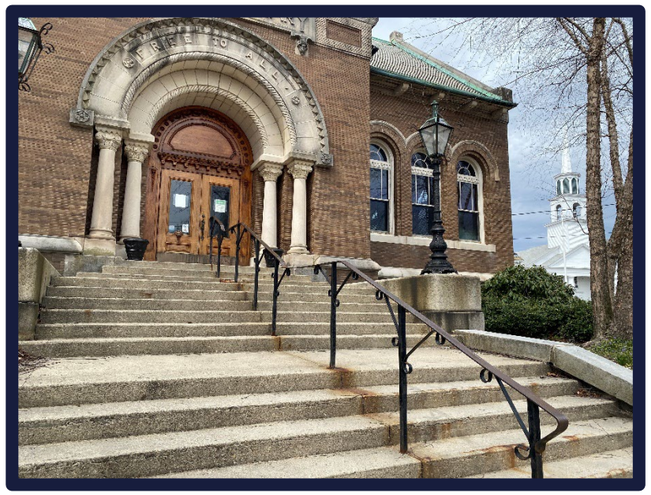
Any alteration that affects or could affect the usability of the Amesbury Public Library must comply with the 2010 ADA Standards. In addition, when alterations are made to a primary function area of the Amesbury Public Library, an accessible path of travel to the area must be provided. The accessible path of travel must extend from the altered primary function area to site arrival points, including walkways, and parking and passenger loading zones provided on the site. The path of travel also includes access through the building entrance and to toilet rooms, drinking fountains, when those serve the primary function area.

This additional requirement for alterations to primary function areas comes with a disproportionality rule. The accessible path of travel is required to the extent that it is not "disproportionate" to the total cost of the project. Regulations implementing the standards define "disproportionate" as exceeding 20% of the total cost of alterations to the primary function area. The 20% cap applies only to costs associated with the accessible path of travel, including the exterior and interior accessible routes to the primary function area and upgrades to entrances, toilet rooms, drinking fountains, and telephones. Compliance is required up to the point the 20% cost cap is reached, even where it does not result in a fully accessible path of travel.

Alterations are considered permitted work. Ordinary repairs that do not require a building permit is not considered permitted work (i.e., replacement of finishes, installation of furniture, painting, etc.).

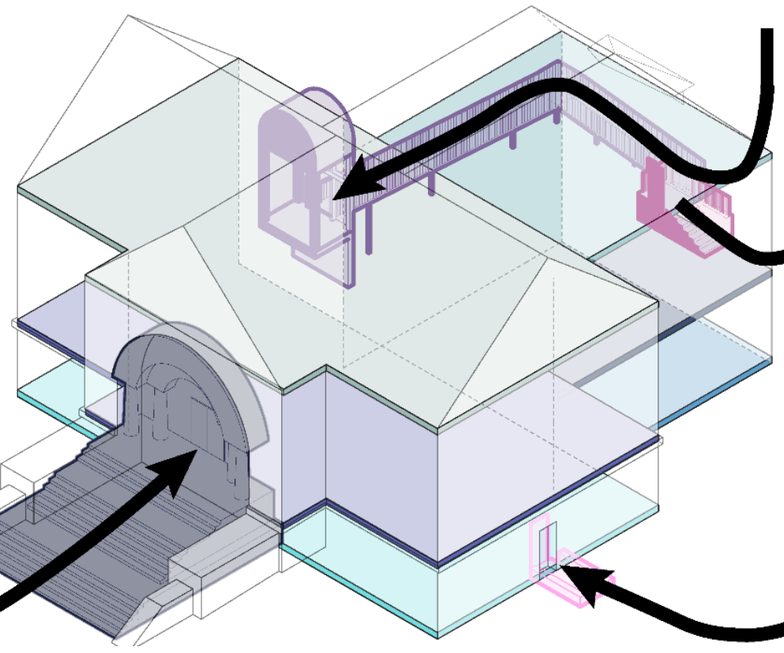
The cost of work must include all permitted work performed at the Amesbury Public Library within the last 36 months from the expected date of the building permit associated with the new work. As defined in 521 CMR 3.3.1.b Exception 2 (a-d) and including building system upgrades (mechanical, electrical, plumbing, fire protection), building envelope upgrades (roof replacement, window replacement, repointing and masonry repairs), septic system and site utilities upgrades and landscaping.

Conditions Assessment – Exterior Egress + Accessibility



Main Entrance

Accessible Ramp



Lower level and First floor
Emergency Exit

Delivery Entrance

Conditions Assessment – Accessibility

Physical barriers of the building are not only experienced by the patrons of the Library, but by the staff that work in the building every day. Staff empty the drop-off book deposit box four times a day but wheeling a cart down and up the temporary ramp. They lift heavy bags of books up and down the stairs to return them to the shelves or collect them for patrons. An accessible building will be a vast improvement to the physical labor that is currently required as part of their responsibilities.

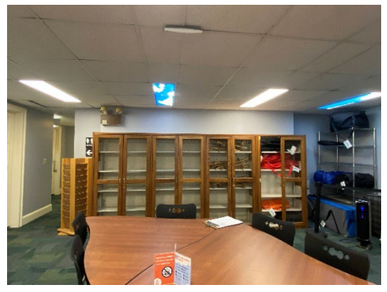
Conditions Assessment - Interior

BUILDING SYSTEMS OUTLINE

Plumbing
Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and natural gas. Municipal sewer and municipal water service the building. The plumbing systems could continue to be used with maintenance and replacement of failed components; however other non-dependent decisions or full building renovation will likely require a plumbing upgrade to meet code.
Provide new high efficiency plumbing fixtures throughout the building.
Provide accessible fixtures where required.
Provide new drinking fountains at each set of restrooms.
Provide new service sinks on every floor.
Provide new domestic water service to support flush valve type fixtures.
Replace existing domestic water shutoff valves with new ball valves.
Install thermostatic mixing valve and recirculation loop at existing water heater.
Replace existing exterior wall hydrants with non-freeze hydrant with integral vacuum breakers.

Gas Service
An elevated pressure natural gas service is supplied to the building. The gas meter is located on the exterior of the building outside the Mechanical Room. Natural gas is provided to the heating boiler and domestic water heater. Gas piping is black steel with threaded joints and fittings. Gas piping appears to be in good condition.

Lighting
Lighting throughout has been replaced by florescent fixtures that illuminate the space but are not compatible with the interior design of the building. The facility has both fluorescent and LED type fixtures with minimal lighting controls. Many areas of the library struggled with footcandle levels and heavily relied on incoming daylight for general building lighting. Bulbs will be burned out for months without replacement. The second-floor lighting was swapped for LED lights and the staff and users comment they are too bright without any dimming capabilities. Any future renovations would recommend upgrading all existing lighting fixtures with LED that have both direct/indirect lighting distributions and provide a centralized networked lighting control system to provide both manual and scheduled controllability.



RESTROOMS

Overall Description

The library has two main restrooms on the lower-level and one small restroom on the second floor. The restrooms are operable and contain a sink, toilet, and mirror. The restroom on the second floor is specifically used for the youth services section. The two lower-level restrooms serve the entire library and require key entry access. A staff restroom is located in the staff break room. Changing tables are located in the second floor and lower level restrooms.

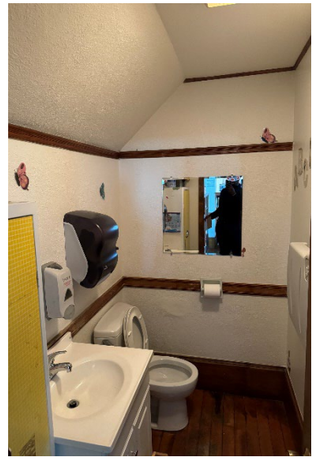
Condition Assessment

Although functioning properly, none of the restrooms are accessible per MAAB. There are two single user restrooms on the Lower Level and one single user restroom on Level 2. Based on this configuration, the maximum program load for the library is 100 occupants. The program load for libraries is based on the number of seats in the building and the maximum number of employees on duty at any given time. The program load will need to be determined by the future furniture configuration. The following table demonstrates how many single user restrooms are required based on different population thresholds (248 CMR 10.10 Table 1). Note that when four or more toilet fixtures are required, they are required to be provided in pairs on the same level (248 CMR 10.10(15)(g)(2)). If multi-stall restrooms are provided, the number of fixtures will need to be recalculated.

Table 1: Plumbing Factors

Function	Toilets		Urinals	Lavatories (each sex)	Drinking Fountain	Mop Sink
	Female	Male				
Libraries	1/25 up to 200 1/50 for 201-500 1/100 for over 500	1/50 up to 200 1/100 for 201-500 1/100 for over 500	Up to 50%	1 per 50	1 per set of restrooms	1 per floor

Number of Restrooms	Maximum Occupants Served
3	100
4	100
6	200

Conditions Assessment - Interior

BUILDING SYSTEMS OUTLINE CONTINUED

Heating + Cooling + Ventilation Systems
The boiler has 10 years of serviceable life remaining. The radiator air vents on the side of the radiators removes air from the water and increases the radiators efficiency. Thermostatic radiator valves detect the temperature of the room, then adjust the radiator heat so that the room is as warm as you want it. The air vents and thermostatic traps should be replaced every 8 years, or when problems develop. If the radiators cannot adequately drain condensate, it also reduces their capacity. The users making an educated decision to manually turn off the heat during mild weather is still the best most cost-effective method of control. Mechanical ventilation should be provided, especially if the library is renovated. The new ventilation system would have energy recovery. The equipment would likely be installed in the basement or attic to preserve the historical integrity of the building. Window AC units can eventually be replaced with a new heating and cooling system. The AC unit in the basement is oversized and running frequently.

Electrical
Existing overhead electrical service to the building is 200A, 3-phase. Any future HVAC/Plumbing renovations will most likely increase electrical demand and will require a service upgrade. In any future electrical upgrades, all panelboards should be upgraded, with fuse type panelboards being of high priority as they have exceeded their life expectancy.

Security
The facility is protected with an intrusion system which monitors through door/window contacts and interior mounted motion sensors. For further protection, the facility could benefit from an exterior video monitoring system that monitors all building entrances and exterior common areas.

Hazardous Materials Survey
This survey was completed in 2000 by Eco-Genesis. A summary is below and assumed that all of the ACM materials listed below still remain in the building.

TABLE #1
SUMMARY OF ASBESTOS-CONTAINING MATERIALS

Material	Location	Approximate Quantity	Analytical Result
Residual Mud on Fittings	Basement	4 ea	35% Chrysotile
9" Floor Tile	1st Floor Loft Stack Wing	1,140 sf	10% Chrysotile
Packing at Brick Air Shafts	2nd Floor	12 lf	25% Chrysotile
Caulk Around Side Entrance	Basement	18 lf	10% Chrysotile
Flashing Cement	Roof	120 sf	Assumed
Boiler Gaskets	Basement	30 lf	Assumed
Boiler Rope	Basement	160 lf	Assumed

BUILDING CODE OUTLINE

Fire Protection
The building does not contain a sprinkler system. In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered throughout. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building. Within the last 5 years, $16,900 was spent toward the 33% trigger.

Fire Alarm
A minimal fire alarm system is provided with one manual pull station and one notification appliance each on the Lower Level and Level 1. Smoke/heat detection is provided throughout the building except in the picture books area and the stack area on Level 2. The original installation of this system is not well understood; however, it is understood that the City of Amesbury has expressed concerns over the Library not having system testing reports on record. It's recommended that upgrading the system to be a manual system compliant with NFPA 72 be studied as part of the masterplan. Please note that if a sprinkler system is installed, this will require a fire alarm system that can provide monitoring and notification capabilities.

Exit Signs + Emergency Lighting
Emergency lighting is sparse as it is provided through wall mounted battery units and unilluminated exit signs. Any future renovations we would recommend installing LED exit signs provided with battery back-up and self-diagnostics. As well as replace all battery units or provide a centralized inverter to cover the buildings emergency lighting.

Corridors
Reconfiguration of the lower level with corridors may be required to provide 1-hr fire rated walls and doors. Alternatively, if a building sprinkler system were installed, corridor walls would not be required to be fire-rated.

Vertical Openings
Depending on the level of alteration, a minimum 30-min fire-rated enclosure would be required to be added for vertical openings for the stairs that connect the lower level to the first floor. Alternate methods of protection via variance may be able to be studied further depending on the aesthetic vision of the renovation.

Means of Egress
Reconfigure bookshelf aisles to have a clear path of travel of 36" or more. The following items have been noted as a concern by the City's Building Department on the 2023 Inspection Report: Replace paper signs with illuminated signs. Provide panic hardware and outswinging doors for assembly areas occupying more than 49 people. Handrails and guardrails do not meet code. Emergency lights are lacking throughout.

LIBRARY AS A COMMUNITY ASSET

Current Programs and Functions of the Amesbury Public Library

This section of the report identifies current assets of the Library including space and program assets, aspirations of how the space can function, and inspiring images of what the Amesbury Public Library could look like after a renovation.

The Amesbury Public Library is a community hub with spaces for public to interact, socialize, and discover new learning possibilities.

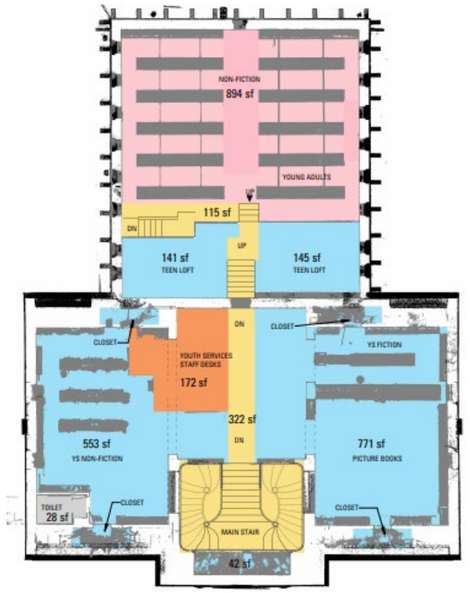
The library provides all Amesbury residents, as well as all payers of Amesbury property taxes, City of Amesbury employees, and AHS students living in South Hampton, access to information, education, and entertainment. In addition to loaning books, DVDs, discount passes to local museums and cultural institutions, and other materials, the library meets these community needs by providing in-building access to the Internet, computers, copier, scanner, and fax machine, as well as a variety of in-person and virtual events for people of all ages. Underpinning these efforts is a goal to promote lifetime literacy at all ages, from early literacy initiatives for infants/toddlers, information and technology literacy.

The library also serves as a free “third space” for anyone to enjoy, including families of young children who enjoy crafts, educational toys, and books in the children's room, teens seeking a safe place to hang out after school, and adults socializing and connecting to the community through our selection of newspapers.

Current Space Allocations

Amesbury Public Library Program				
Existing Program	**Lower Level SF**	**First Floor SF**	**Second Floor SF**	**Total SF**
Fiction	**0**	**937**	**0**	**937**
Nonfiction	**0**	**0**	**894**	**894**
Reference	**0**	**444**	**0**	**444**
Youth Service	**0**	**32**	**1652**	**1684**
storage	0	32	92	124
crafts	0	0	111	111
fiction	0	0	250	250
nonfiction	0	0	322	322
picture books	0	0	316	316
teen loft	0	0	286	286
technology	0	0	77	77
other	0	0	198	198
Special Collections	**448**	**324**	**0**	**772**
archivist office	153	0	0	153
archive storage	295	0	0	295
archives room	0	324	0	324
Staff/Storage	**691**	**540**	**172**	**1403**
storage	65	0	0	65
staff desks	0	375	172	547
private offices	252	165	0	417
printing space	125	0	0	125
restroom	39	0	0	39
breakroom	210	0	0	210
Bookshop	**405**	**0**	**0**	**405**
storage	104	0	0	104
stacks	301	0	0	301
Circulation	**474**	**948**	**437**	**1859**
stairs	26	232	354	612
halls	448	716	83	1247
Building Services	**607**	**0**	**28**	**635**
restrooms	132	0	28	160
back of house	475	0	0	475
Program Space	**408**	**0**	**0**	**408**
Total NSF	**3033**	**3225**	**3183**	**9441**

Current Floor Plan Program Locations



SECOND FLOOR

LIBRARY PROGRAM

FICTION	937 SF
NONFICTION	894 SF
REFERENCE	444 SF
YOUTH SERVICE	1684 SF
SPECIAL COLLECTIONS	772 SF
STAFF/STORAGE	1403 SF
BOOKSHOP	405 SF
CIRCULATION	1859 SF
BUILDING SERVICES	635 SF
PROGRAM SPACE	408 SF

FIRST FLOOR

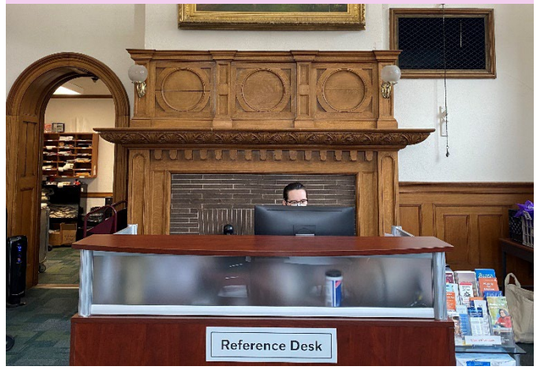
LOWER LEVEL

Program Recommendations for Amesbury Public Library

Public Space

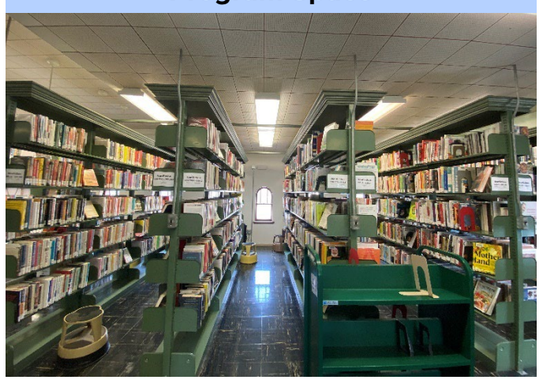
- Public meeting space in conference rooms and informal settings
- Quiet reading/studying/laptop areas
- Community Multi-purpose room for 50-100 people with storage and restrooms.
- Exhibition space for special collections and community gallery for local artists
- More computers in Youth Services/ more outlets
- A place to eat snacks and drink coffee

Staff + Support Space



- Staff conference and break room
- Quiet work area for staff
- Separate office and storage rooms
- Flexible workstations for staff
- Rethink circulation and reference desk connections

Program Space

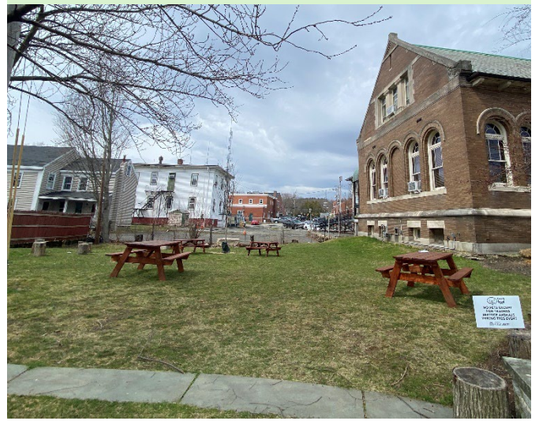


- More space for book display, stacks and book collections
- Two large program rooms for Youth Services and Adult programs
- Special Collections Reading Room adjacent to and Special Collection Storage. Larger Special Collections storage. No UV rays.
- Reimagine interior space with flexible spaces, desirable seating, and inspiring décor.

Accessibility + Infrastructure

- Accessible entrance, restrooms, and floors – need elevator
- Clear wayfinding to stairs, restrooms, and collections
- Secure building envelope to prevent water infiltration in roof and walls.
- Life safety upgrades including exit signs, emergency lighting, fire alarm system, sprinkler system. Safe egress pathways and door hardware.
- Heating, Cooling, + Ventilation improvements

Outdoor Space



- Delineate outdoor space for Library programs with landscape to keep area clean. Improve site drainage.
- Area for drop off/pick up of materials for public. Interior Book Drop
- Covered program area for inclement weather. Exterior storage area adjacent to yard
- Outdoor art and community gallery space
- Exterior lighting at walkways, parking, entrance, and program space

Library Design for Today and the Future

Public Libraries have seen many changes throughout their history of being a free place for all to enjoy. The small, compact community libraries in towns around New England used to focus on physical collections with fixed and built-in bookcases. With the advent of technology, there is a wave to create open, flexible, multi-purposes spaces for communities to gather and learn in group and individual settings. There are pretendents of retaining the original library and building additions that locate the entrances on grade and close to parking, incorporate elevator and stairs, and design glassy fenestration at the facades.

Amesbury Public Library can be a more impactful asset and resource to a larger community group than the physical space in the building currently allows. Additional program space and amenities can increase usages and reach a broader range of community members for programs, research, workspace, and meetings. It can become a destination people seek out.

Aimie Westphal and Meghan Fahey of the Amesbury Public Library and Adrienne Cali of Bruner/Cott Architects visited different libraries throughout the study to collect inspiration images and categorize assets of a modern, renovated library. The Libraries on the list were selected because of a few criterion: They were either recently renovated with an addition or newly constructed, they have similar program aspirations, or the historic building looks like the Amesbury Public Library.

The following pages are aspirations of the Amesbury Public Library to incorporate or design into a renovation of the library.

Precedent Libraries Studied or Visited during this study:

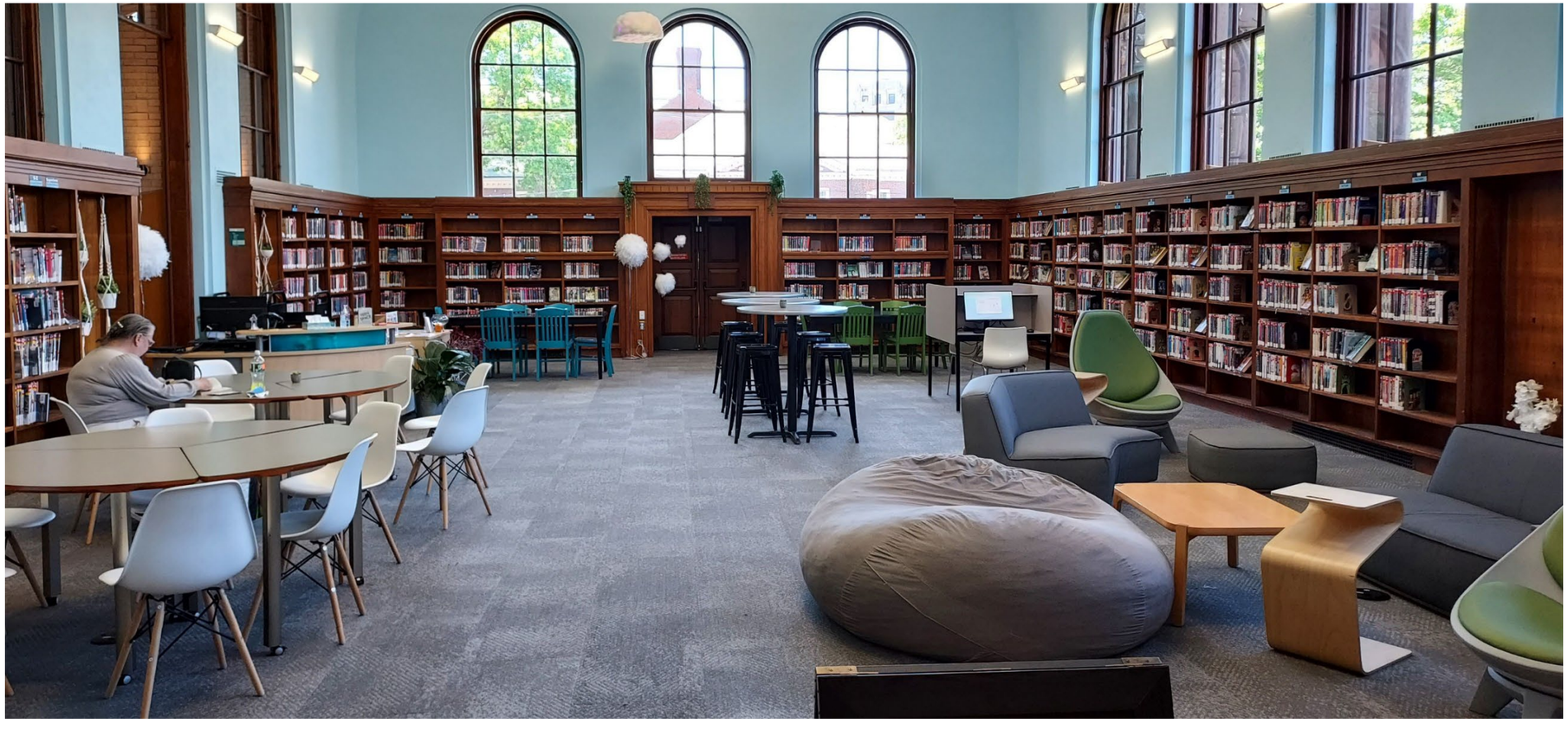
Reading Public Library
Woburn Public Library
Concord Public Library
Hopkinton Public Library
Somerville West Branch Library
Quincy Public Library
Milton Public Library
Rice Public Library, Kittery Maine
North Hampton Library Cultural Center
Aldrich Public Library, Barre VT
Fleet Public Library
Lithgow Public Library, ME
Gloucester Sawyer Free Library
Melrose Public Library

Libraries connect people to books, music, games, and things that enhance their lives. Display spaces and shelving should be located adjacent to staff experts in those areas. Shelving and displays should be easy to navigate and visibly appealing.

Collections and Display Space

A library should be easy to use. When buildings are designed for everyone, they feel comfortable and safe. Getting in and around a building with dignity and ease creates a welcoming and safe environment for everyone.

Elevator and Accessibility

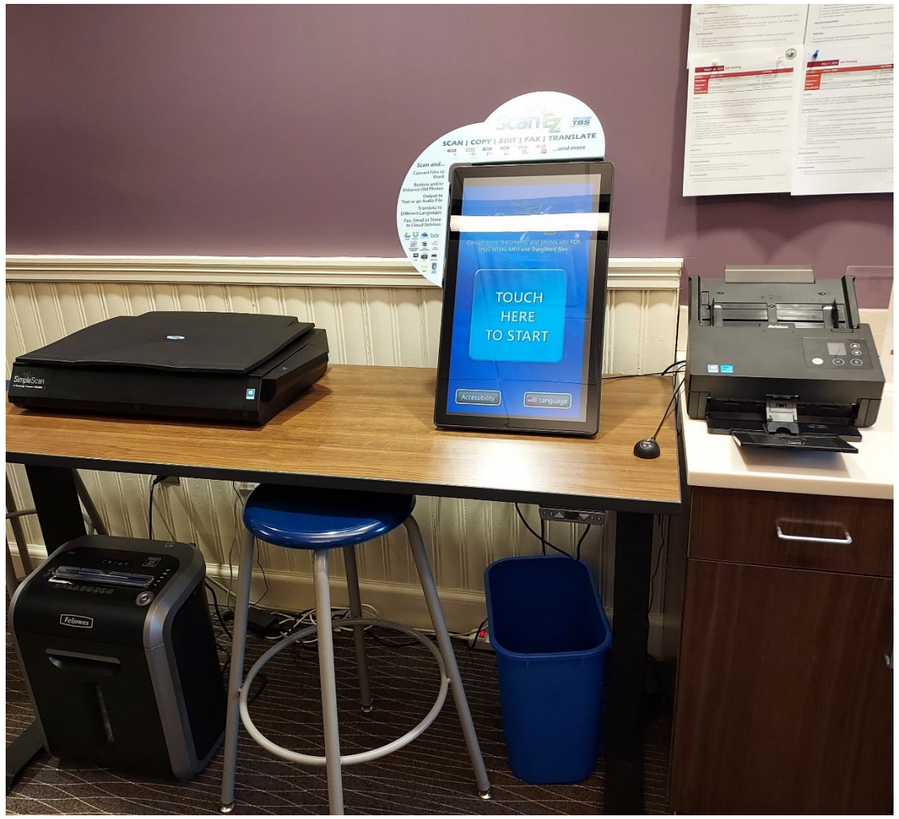


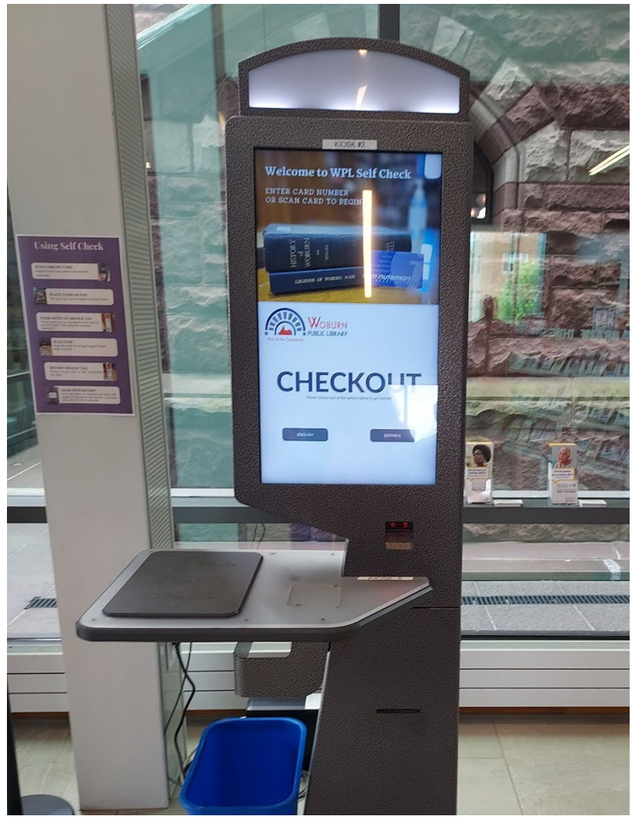
A library should encourage flexibility and collaboration. Multiple workspaces including open rooms with different types of mobile tables and chairs allows people to work independently or collaboratively in a shared space, which fosters a sense of community and connection.

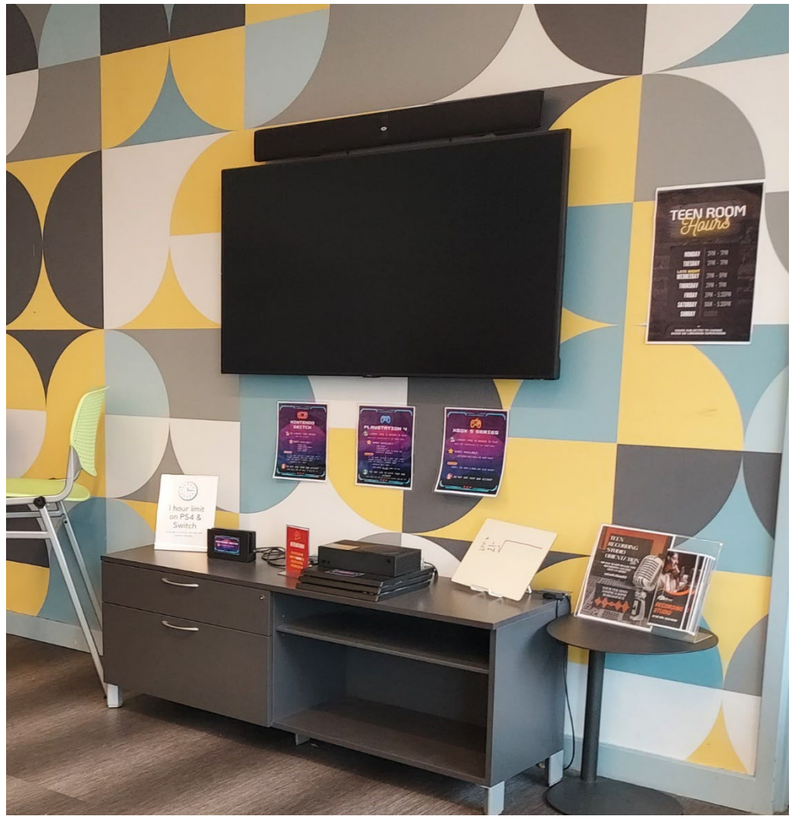
Flexible Work Areas

A library should provide reservable rooms that allow small groups or individuals to work undisturbed. Spaces that are tucked away and feel private and cozy create a sense of belonging.

Private Study Rooms and Nooks

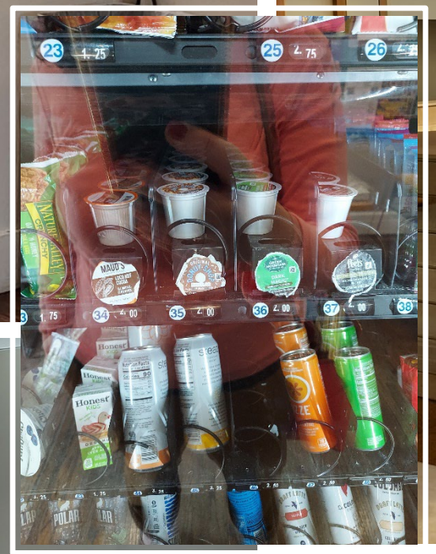






A library should provide modern technology for the public. High speed Wi-Fi internet, computers, printers, and fax machines available to anyone who walks in the door helps close the digital divide and connect people to one another.

Technology Area with Modern Applications

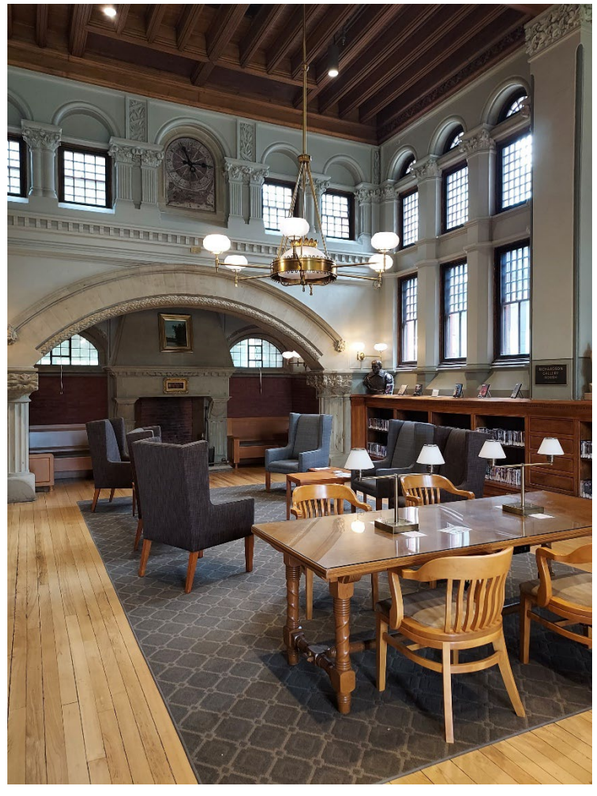


A library should be comfortable with spaces to eat and drink. Creativity and efficiency improve when people's basic needs are met.

Amenities and Snacks

Powered up personal devices have become intrinsic to 21st century life. Charging stations with multiple ports in multiple locations and enough outlets for all our users to stay connected ensures the library remains a resource beyond books.

Charging Stations and Electrical Outlets



Moment’s of beauty and awe enrich our lives and give us meaning, libraries inspire us with their architecture and expansive resources.

Beauty and Awe

Our neighbors need spaces to meet and connect. Large community meeting rooms equipped with essentials such as comfortable furniture, media, toilets, and a kitchenette foster collaboration and connection. Access to these spaces after hours extend this service beyond our operating hours and ensures clubs and groups can gather throughout the day and evening to accommodate a range of schedules and needs.

Community Meeting Rooms

Well-appointed dedicated program rooms improve the library staff's ability to offer a range of engaging in-person and virtual events. Spaces that are easy to get to, rearrange, and clean up (with sinks and lots of secure storage) mean more opportunities for us all to learn, grow, and create together.

Program Rooms to Gather

Consumers and creators need organized attractive spaces to view and display art and historical exhibitions. Centralizing display space in a public library brings art to the people and can spark conversation and inquiry for visitors of all engages. A library should provide space for staff to put up an educational exhibit and local artists to display work. This increases the reach of arts and culture to a more diverse audience and reinforces the community's commitment to arts and culture.

Exhibits and Local Artists Display

Libraries welcome everyone. As a third space the library should foster connection through useful, clean, and welcoming rooms and seating areas. Neighbors need places to gather and relate, to talk and to be, to respectfully disagree and to discuss, you never know who you might see at the library.

Spaces for Social Connections

Unearthing our own or our community's history fosters a sense of place and meaning. Learning about our local government, our ancestors, or our homes grounds us in the past and fosters appreciation and care for our community assets. Archives and special collections bring the past to life for researchers of all ages and inspire awe and wonder at what's to come.

Community and Historic Resources

A free public library welcomes everyone. Through common courtesy, mutual respect, and shared ownership a library thrives engendering a sense of belonging regardless of race, gender, status, or belief. The library is a safe space to ask questions and have difficult conversations. The library is a free space for all to come and feel a sense of belonging, a core service that is embodied in the mission. Everyone should feel welcome to use the space, enjoying all programs and services.

A Free Place to Use and Belong

FUTURE DESIGN STRATEGIES

Future Design Strategies

Planning for the future of the Library is exciting yet daunting. There are many different possible outcomes and many voices to listen to. Bruner/Cott listened to Library staff, City officials, engaged community members, and members of the Historical Commission. Bruner/Cott heard a wide range of responses, including relocating the library to a different building that meets code, is more comfortable, and is accessible to all.

After Bruner/Cott and Amesbury Public Library staff visited modern and renovated libraries, we produced a list of spaces that would be advantageous for the APL. If community spaces are included in a newly renovated and expanded library, opportunities to partner with other Amesbury associations can be centralized in the Library and contribute as a vibrant community hub. A full program assessment and analysis was not performed during this study, but through conversations with Library staff and visiting recently renovated libraries, a list of program spaces were documented to rationalize the proposed expansion.

Existing buildings close to the Library were considered for renovation to incorporate community programing or offices. These options include City-owned Ordway School and Bailey Orlando as well as private buildings George Turner house and include are on the following pages. These options are possible, but not as desirable because of the distance from the Library. The existing buildings have structural partitions that make it difficult to program for the open floor plan the Youth Services area requires. In all of the options, Youth Services is best accommodated in new construction with a connector building to the Library and the existing City building.

An expansion of the Library is needed to include an elevator and code-compliant stair that connects all levels of the building. This accessibility and code upgrade is recommended to be in new construction outside of the original Library's footprint because it would consume 2,000 sf of existing floor space spread across 3 floors.

All of these options would require the Library to move out of the building into another space during the construction and renovation and then move back in. This takes considerate effort to pack and move twice and additional funding to rent a space that is accessible to the public.

Staff required to manage and run the expanded facility should also be considered alongside future building renovation options. A larger building and expanded outdoor programing space will need a person dedicated to maintaining the physical space. Dedicated Adult, Children, and Community program rooms require staff to create content and programs to run in the rooms. The success of an expansion project is not in the architecture and space itself; it is the staff and Library planning to make the spaces function for all and come to life.

Amesbury Public Library

Program Considerations List

Fiction	**Building Services**
Nonfiction	restrooms
Technology/Reference	wellness room
Youth Service	new fire stairs (3 floors)
children's library	original wood stairs
program/crafts room/storage	elevator (3 floors)
staff private office	elevator machine room
restroom (2x)	entry vestibule (main and side)
children's staff desk	circulation
workroom/storage	janitor's closet
teen room	electrical room
teen librarian desk	mechanical
Special Collections	plumbing/sprinkler
workroom/office	IT/tel data
storage/reading area	storage
Staff/Storage	**Community Space**
director's office	Community Room
assistant director's office	Restroom
circulation desk	Storage
circulation work room	Kitchenette
restroom	makerspace
breakroom	**Meeting/Study Spaces**
delivery	8-10 person
Bookshop	6 person
work area/storage	4 person (2 rooms)
stacks	**Display Space**
	Open Seating/Work Area
	Exterior Program

Summary of Future Strategies

Options	GSF New	GSF Renovated	GSF Total	Approximate Budget	Discussion
1 – Stair + Elevator Addition	2,000	11,610	13,610	$2m + $7m = $9m	New elevator and stair with minor program rearrangements. A meeting room is the only new program incorporated. In some cases, program areas are reduced because of the building code requirement. Requires full accessibility, sprinkler installation, and other building systems upgrades.
2- Minimal Expansion	4,500	11,610	16,110	$4.5m + $7m = $11.5m	Fully renovated Library with a new addition of stairs, elevator and some program space. Only incorporates a minimal amount of the programs in the Program Considerations list. Requires structural upgrades as well as full accessibility, sprinkler installation, and other building systems upgrades.
3- Moderate Expansion	8,000	11,610	19,610	$8m + $7m = $15m	Fully renovated Library with a new addition of stairs, elevator and many of the programs in the Program Considerations list. Does not include community space. Requires structural upgrades as well as full accessibility, sprinkler installation, and other building systems upgrades.
4 – Full Expansion	13,000	11,610	24,610	$13m + $7m = $20m	Fully renovated Library with a new addition of stairs, elevator and most of the programs in the Program Considerations list. This option includes a community room to support muti-function events and community groups. Requires structural upgrades as well as full accessibility, sprinkler installation, and other building systems upgrades.
5- Expand into Adjacent Buildings	---	---	---	---	These options are possible, but not as desirable because of the distance from the Library. The existing buildings have structural partitions that make it difficult to program for the open floor plan the Youth Services area requires. In all of the options, Youth Services is best accommodated in new construction with a connector building to the Library and the existing City building.
6 – Relocate to a new building	---	---	---	---	Constructing a new building might be more comfortable for the size requirement that is needed. This building is continuing its legacy of a public library and could still function well with an addition. What program or real estate would occupy the library building if the APL moved to another building? Construction cost would be more expensive for a new building.

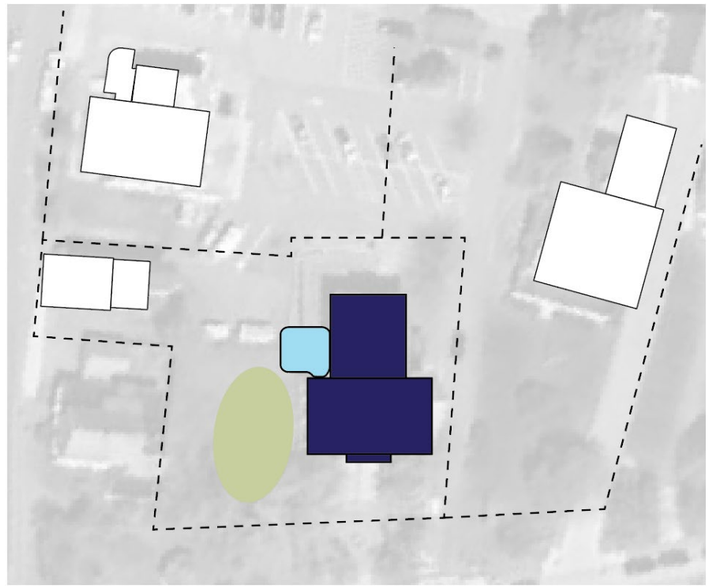
GSF = Gross Square feet measurement taken from exterior side of exterior wall.
Preliminary Rough Order of Magnitude costs – Do not use for budgeting or funding purposes or share publicly. BCA recommends a cost estimator to validate numbers.
Renovation $/sf estimated at $600/sf. New construction $/sf estimated at $1,000/sf. This includes 25% soft costs and 10% contingency
Site renovation costs including site utilities, civil, drainage, parking lot reconfiguration, altered or new site features surrounding and/or leading to the new entrance are not included in the Approximate Budget.

Summary of Library Renovation + Expansion Options

A range of size of additions were explored for the library that include a stair and elevator only, all the way up to a full expansion with all program elements included. Concept floor plans were developed for these four options to fully understand the program accommodated in the form and the advantages and disadvantages of each.

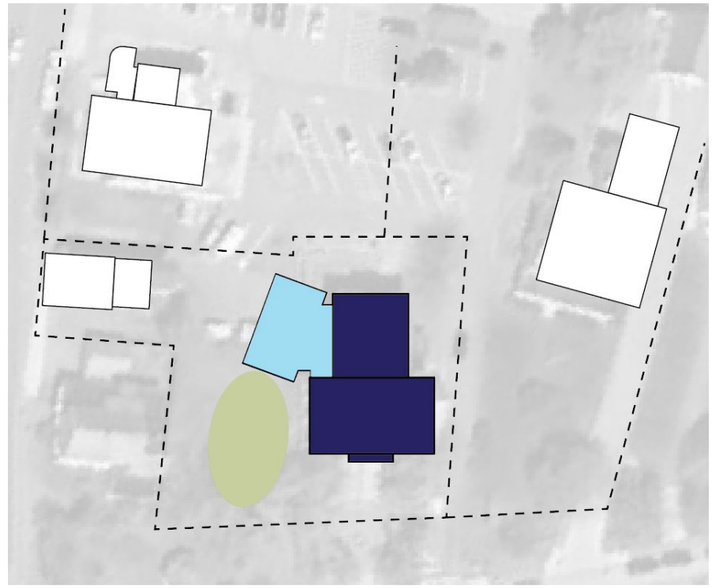
The most logical location for the addition was the northwest corner of the building. This location allows the original building to still be prominently located on the site and takes advantages of the existing lawn for outdoor program and views from the new addition. The addition connects to the historic building at the red brick walls, which were always meant to be secondary walls as opposed to the beige brick that is at public-facing facades.

In all options, the large Sycamore tree is still retained as a prominent element in the landscape.



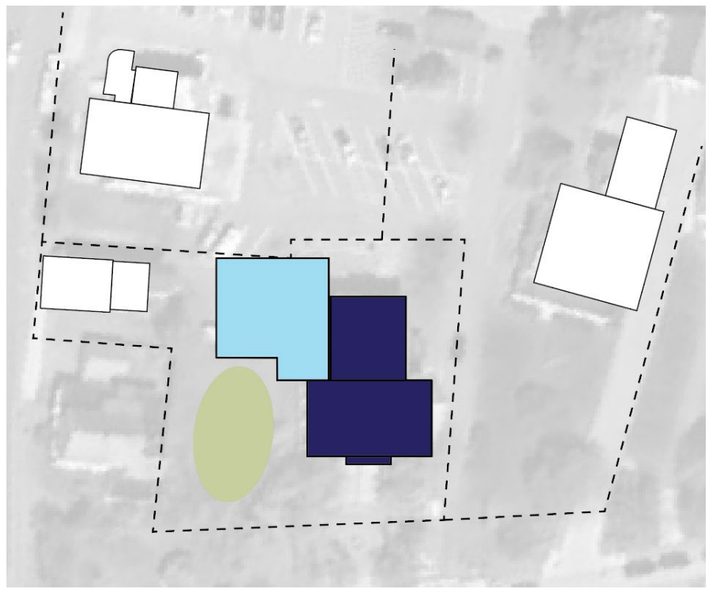
1

Stair + Elevator Addition



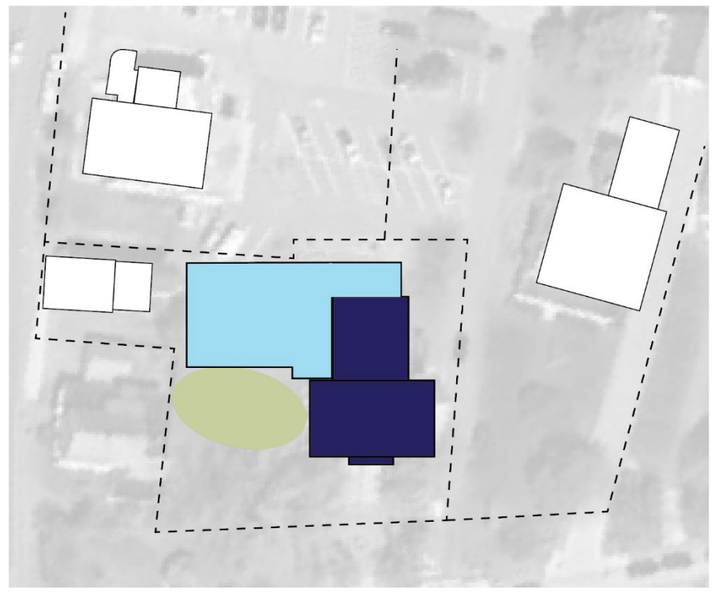
2

Minimal Expansion



3

Moderate Expansion



4

Full Expansion

original library building

new construction

outdoor library program

Option 1 – STAIR + ELEVATOR ADDITION

Advantages

- All floors accessible
- Accessible restroom on all floors
- Unlocks program in Lower Level to reconfigure staff areas and add a shared Special Collections reading room and meeting room
- Removes the stack stair and replaces it with a code-compliant stair in a new addition
- Floor levels remain and limited structural changes to building

Disadvantages

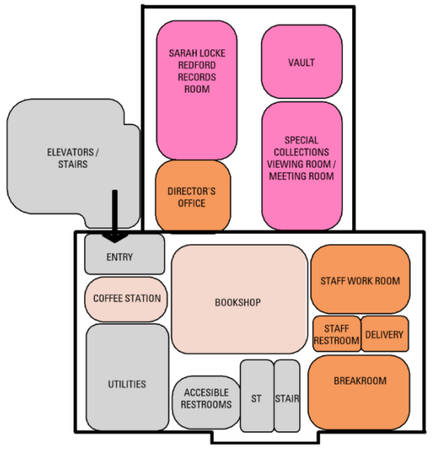
- Code and accessibility upgrades reduces area of stacks and book display space
- Eliminates Teen area because the Loft is not accessible

OPTION 1 - STAIR + ELEVATOR ADDITION

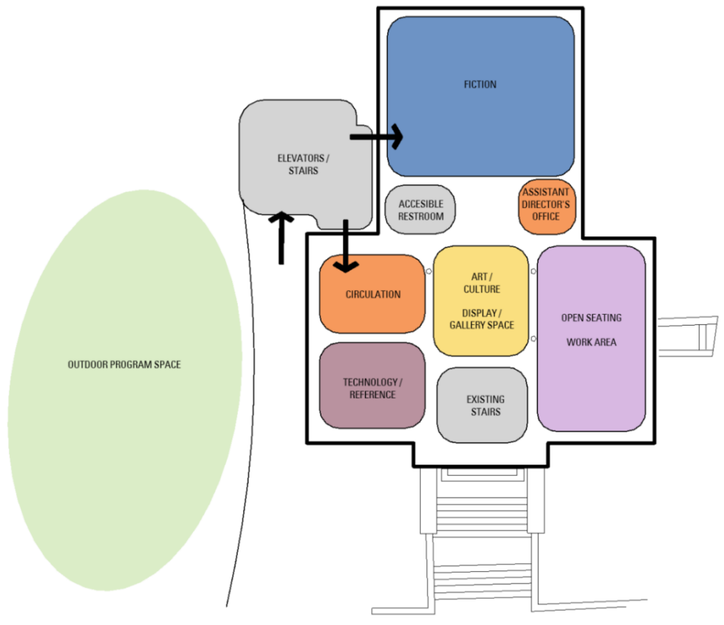
EXISTING BUILDING	= 11,610 GSF
NEW CONSTRUCTION	= 2,000 GSF
TOTAL	= 13,610 GSF

LIBRARY PROGRAM

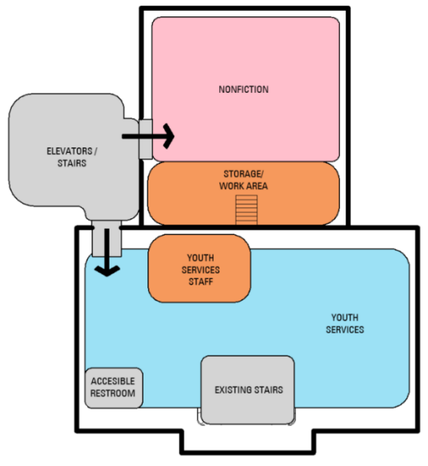
- FICTION
- NONFICTION
- REFERENCE
- YOUTH SERVICE
- SPECIAL COLLECTIONS
- STAFF/STORAGE
- BOOKSHOP
- BUILDING SERVICES
- COMMUNITY SPACE
- MEETING / STUDY SPACE
- DISPLAY SPACE
- OPEN SEATING / WORK AREA



LOWER LEVEL



FIRST FLOOR



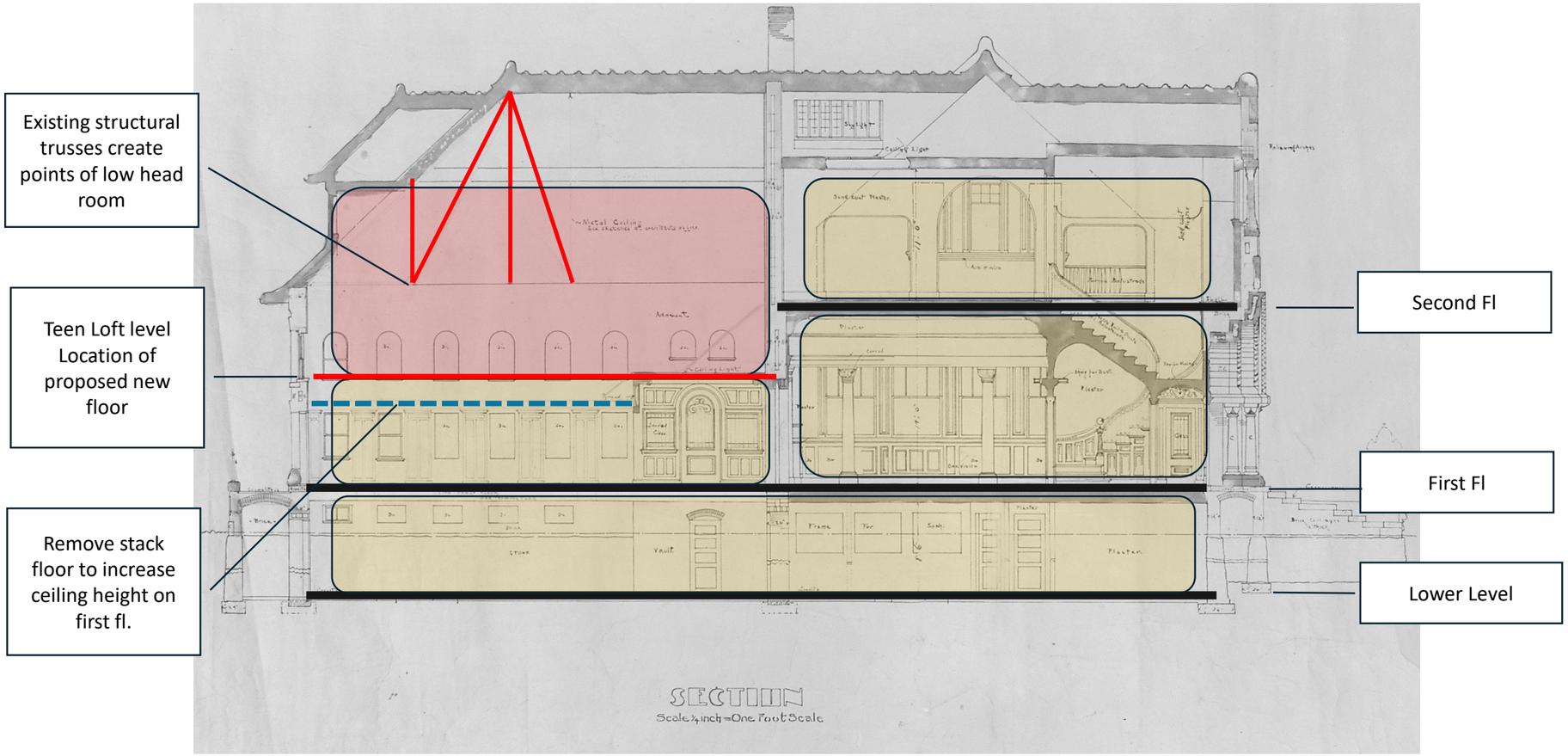
SECOND FLOOR

RENOVATION AND EXPANSION OPTIONS 2-4 STRUCTURAL CONSIDERATIONS

The following Expansion Options 2, 3, AND 4 are labeled as Minimal, Moderate, and Full Expansions. The Full expansion accounts for the majority of program on the program consideration list with the estimated size requirements assumed for this study. The program consideration list was created by Bruner/Cott for the purposes of this concept space planning to identify community spaces and possible needs. A program plan with precise square footage requirements will be created outside of this study as part of the Library's Strategic Plan.

The expansion options propose to remove the second-floor stack structural infill from 1955 and install a floor at the ceiling level of the offices (now Teen Loft level) indicated in red. This will give the first-floor stack area a ceiling height of about 8'-6" instead of 7'-2".

The teen loft ceiling can be removed to expose the original vaulted pressed-tin ceiling to create a double-height space. One obstacle is the existing truss supporting the hip roof connects to a beam that is about 7'-0" from the proposed new floor height – creating low headroom in a few areas of the room. More investigation is required for location of beams and structural engineering to install a new floor.



Option 2 – MINIMAL EXPANSION

Advantages

- Fire stair and elevator addition
- Minimal expansion provides public amenities – Bookshop, meeting, study and open seating
- Fully renovated, code compliant and accessible

Disadvantages

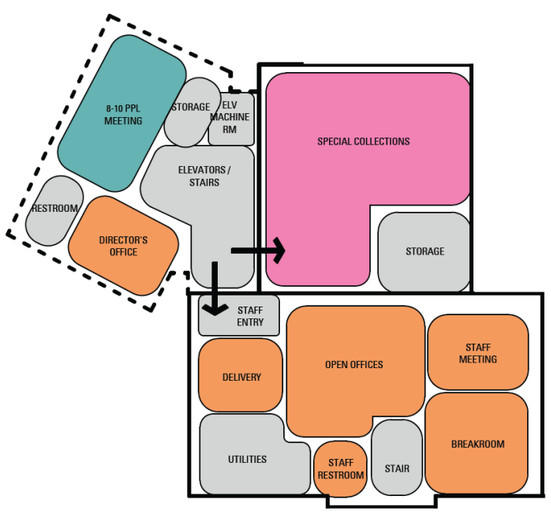
- Does not provide Special Collections program needs
- Does not provide adult program or youth services program room
- Does not have large community meeting room

MINIMAL EXPANSION OPTION 2

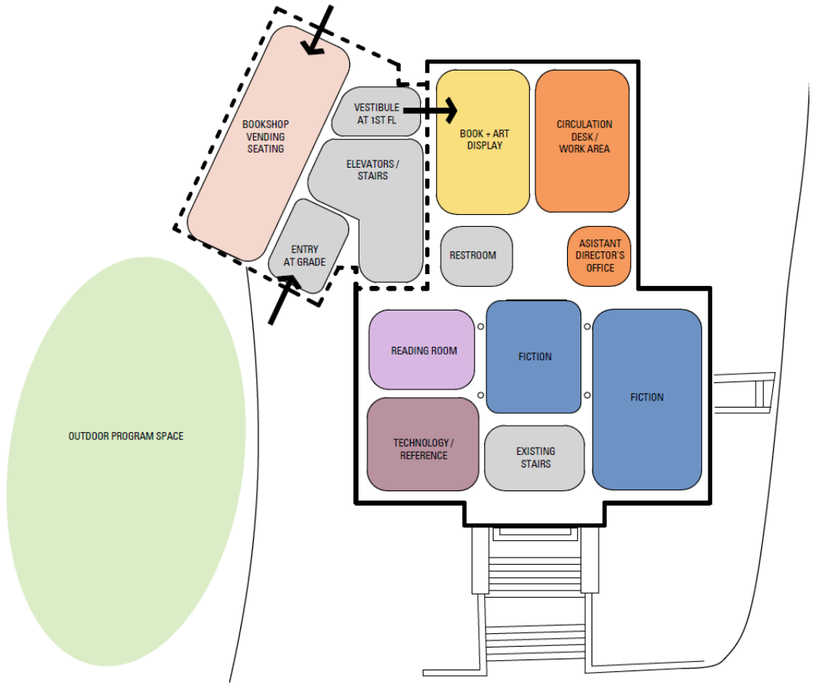
EXISTING BUILDING	= 11,610 GSF
NEW CONSTRUCTION	= 4,500 GSF
TOTAL	= 16,110 GSF

LIBRARY PROGRAM

- FICTION
- NONFICTION
- REFERENCE
- YOUTH SERVICE
- SPECIAL COLLECTIONS
- STAFF/STORAGE
- BOOKSHOP
- BUILDING SERVICES
- COMMUNITY SPACE
- MEETING / STUDY SPACE
- DISPLAY SPACE
- OPEN SEATING / WORK AREA



LOWER LEVEL



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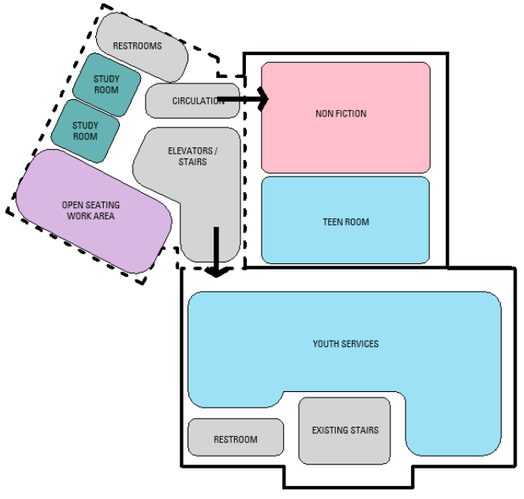
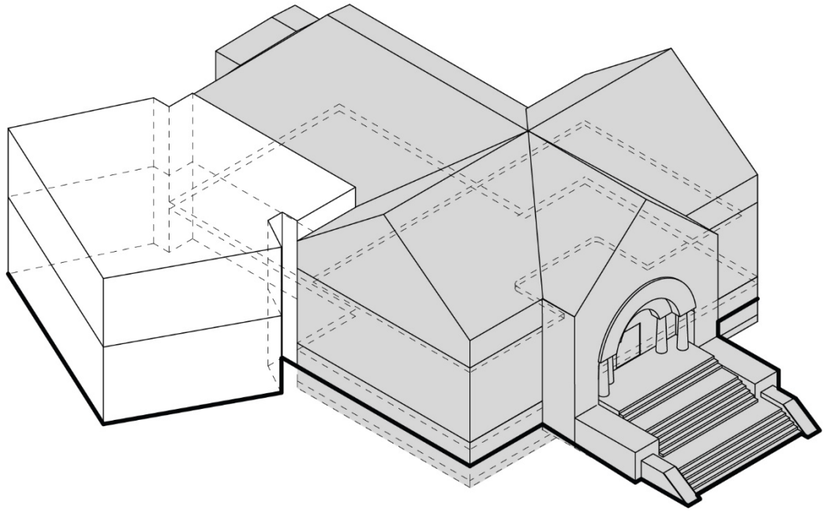


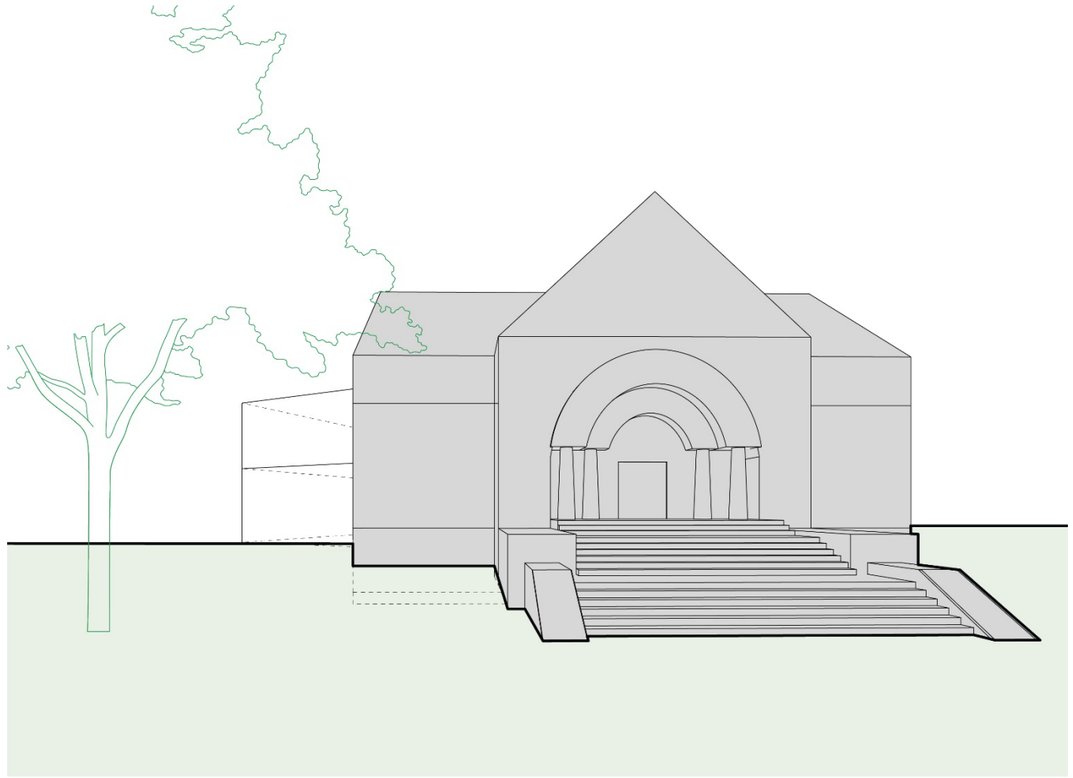
SECOND FLOOR

Option 2 – MINIMAL EXPANSION

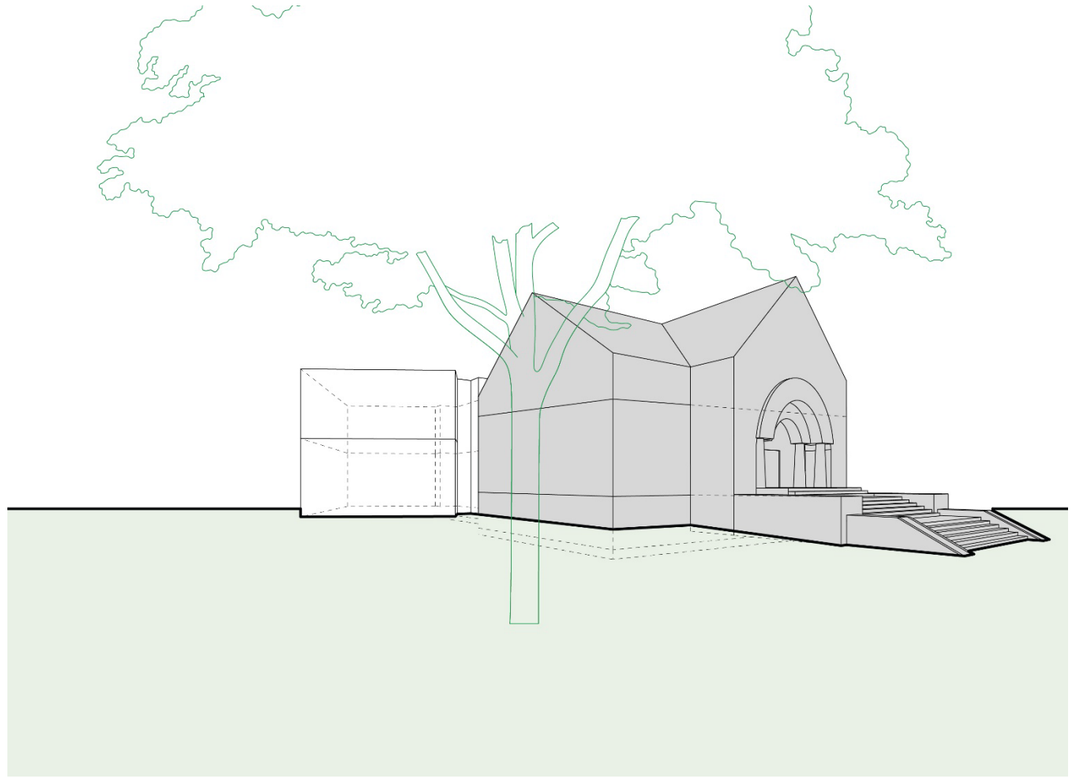
Massing model views show the relationship of the historic Library building to the new addition. The massing models do not intend to show design or fenestration of the addition – they are a way to visualize scale, height, and relation to the original library, and identify how floor levels relate to grade and the many levels of the library building.



Axon View



View from Main Street



View from Outdoor Program space

Option 3 – MODERATE EXPANSION

Advantages

- Fire stair and elevator addition
- Youth Services on Ground floor with direct access to outdoors.
- Fully renovated, code compliant and accessible
- Adds adult program space, teen area, meeting rooms and adequate special collections space.
- Locates public space on first floor and spaces and stacks on second floor

Disadvantages

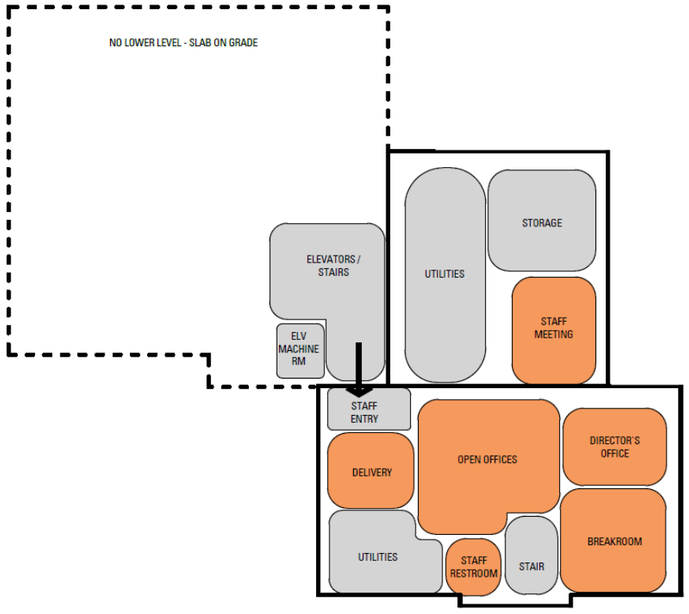
- Does not have large community meeting room

LIBRARY PROGRAM

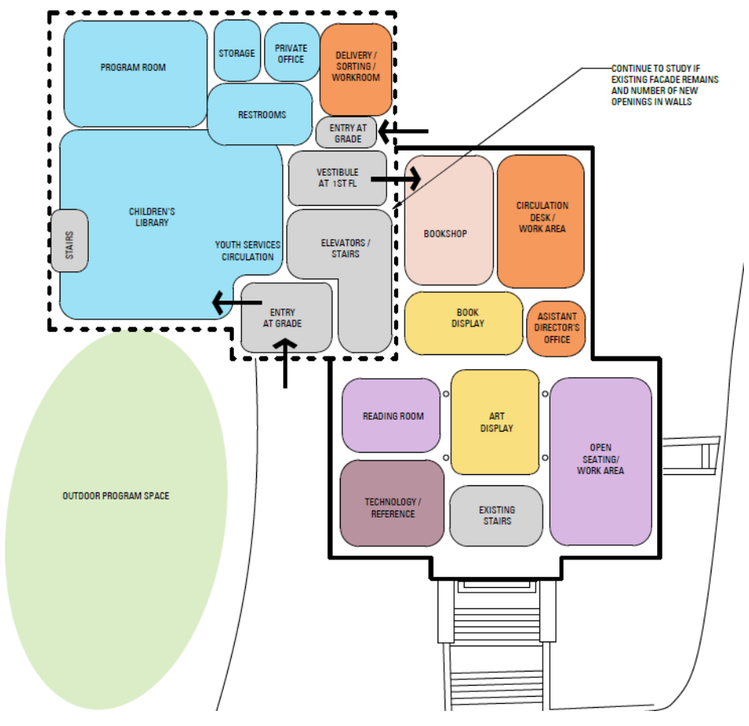
- FICTION
- NONFICTION
- REFERENCE
- YOUTH SERVICE
- SPECIAL COLLECTIONS
- STAFF/STORAGE
- BOOKSHOP
- BUILDING SERVICES
- COMMUNITY SPACE
- MEETING / STUDY SPACE
- DISPLAY SPACE
- OPEN SEATING / WORK AREA

MODERATE EXPANSION OPTION 3

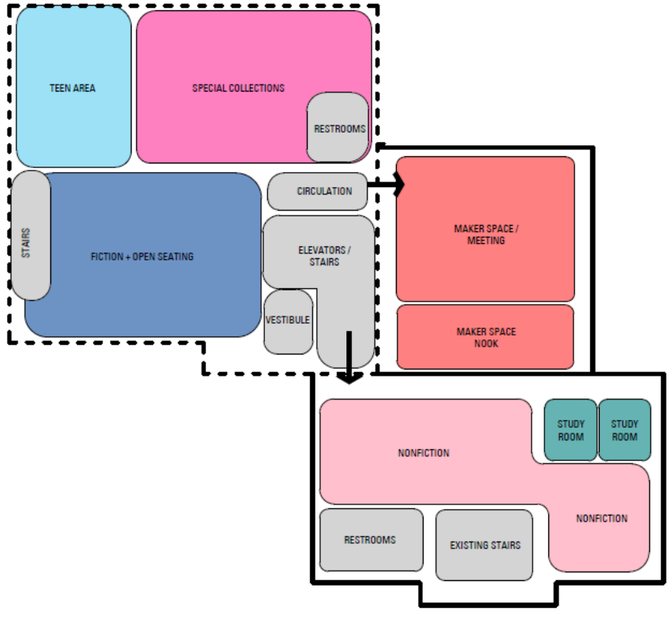
EXISTING BUILDING	= 11,610 GSF
NEW CONSTRUCTION	= 8,000 GSF
TOTAL	= 19,610 GSF



LOWER LEVEL



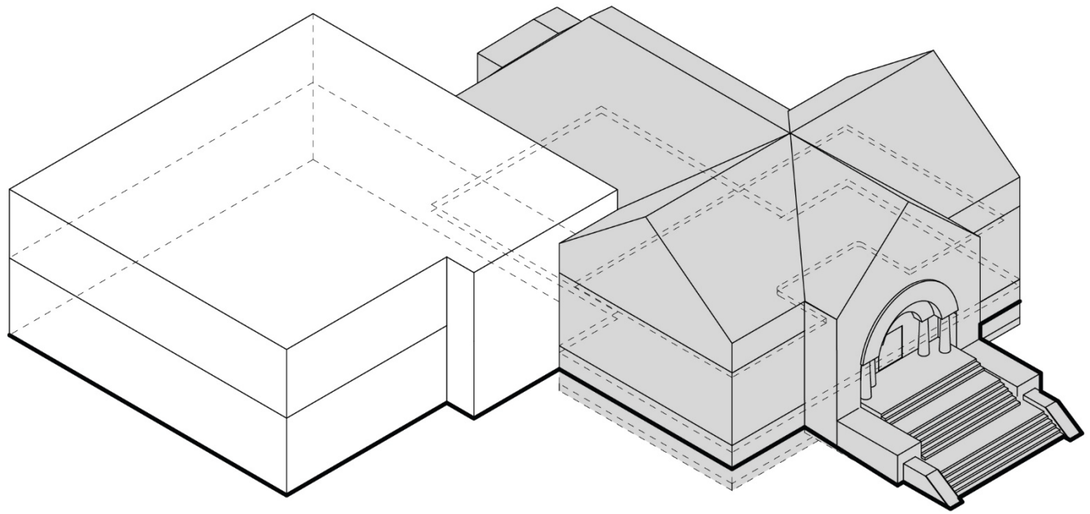
FIRST FLOOR



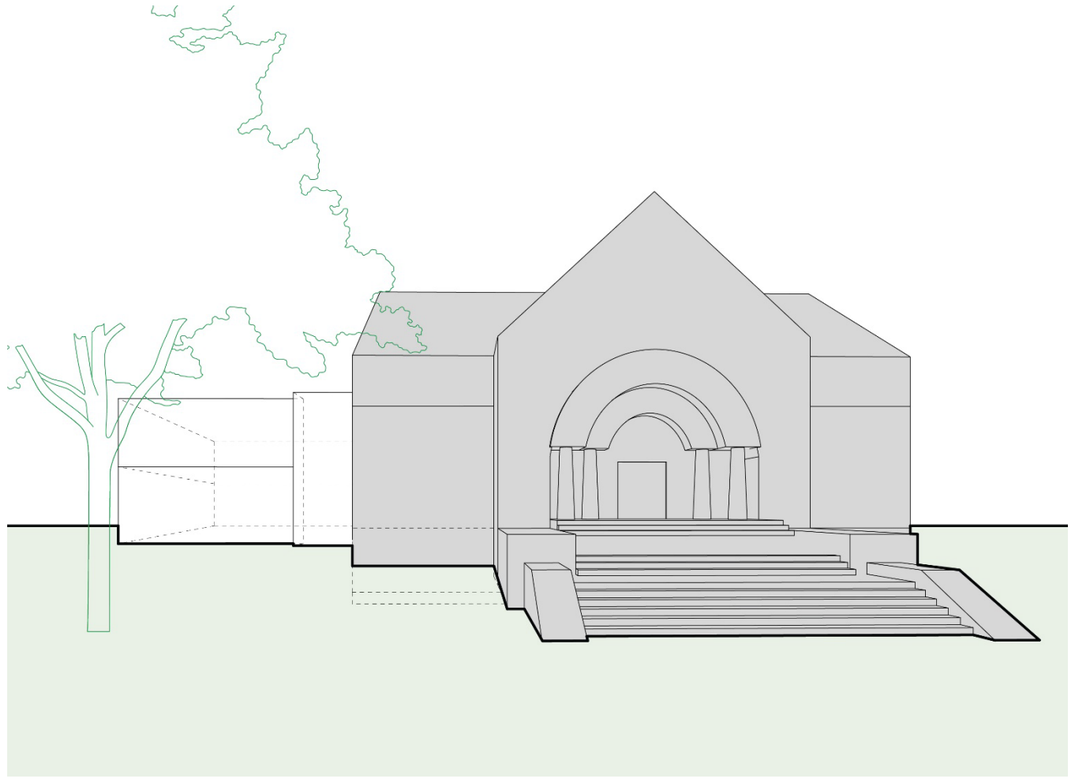
SECOND FLOOR

Option 3 – MODERATE EXPANSION

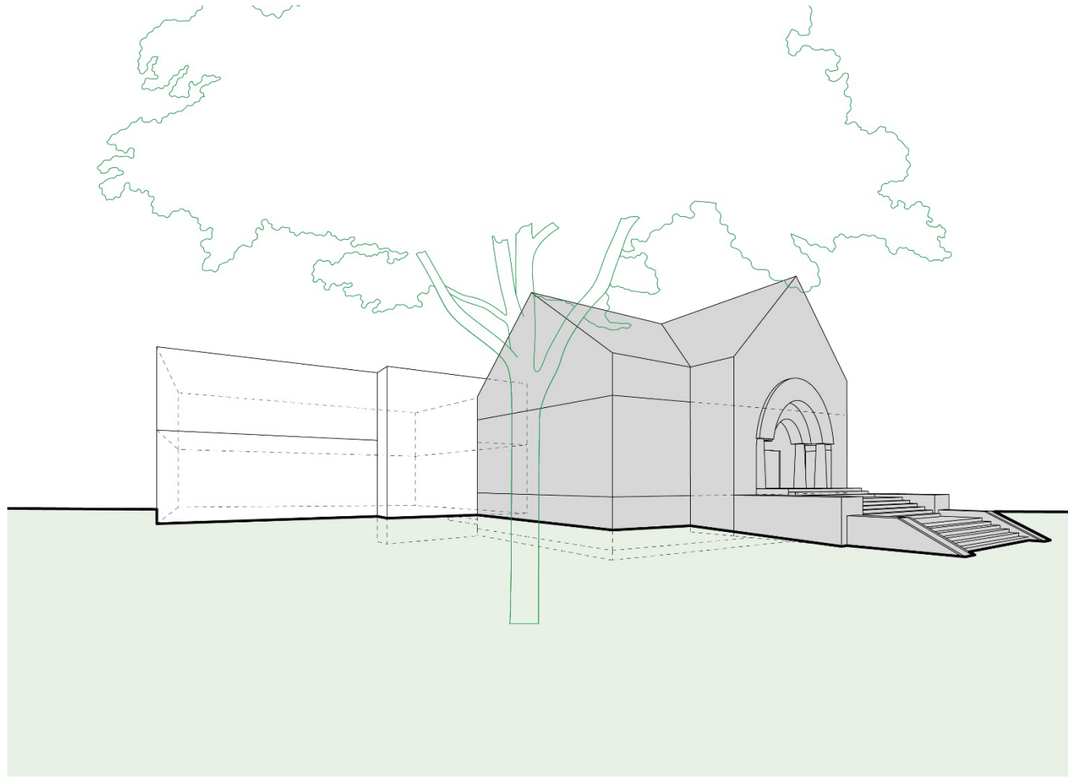
Massing model views show the relationship of the historic Library building to the new addition. The massing models do not intend to show design or fenestration of the addition – they are a way to visualize scale, height, and relation to the original library, and identify how floor levels relate to grade and the many levels of the library building.



Axon View



View from Main Street



View from Outdoor Program space

Option 4 – FULL EXPANSION

Advantages

- Fire stair and elevator addition
- Youth Services on Ground floor with direct access to outdoors.
- Fully renovated, code compliant and accessible
- Community room with storage and kitchenette
- Public meeting space, seating areas, and public amenities including bookshop, gracious entrance and circulation, adult programing, and display. Provides all program space with adequate space.

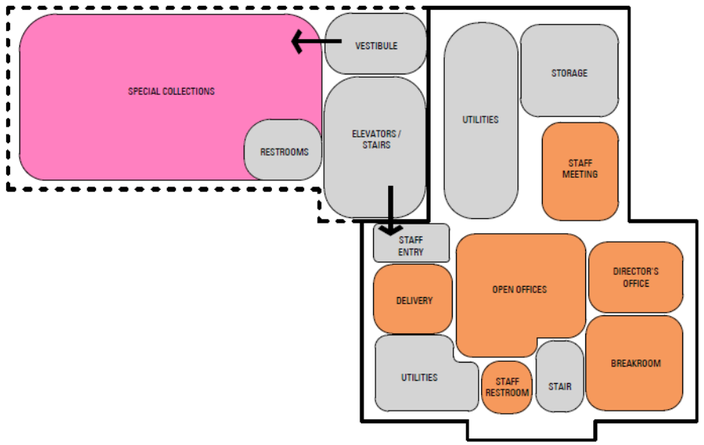
Disadvantages

- Largest expansion with the highest construction cost

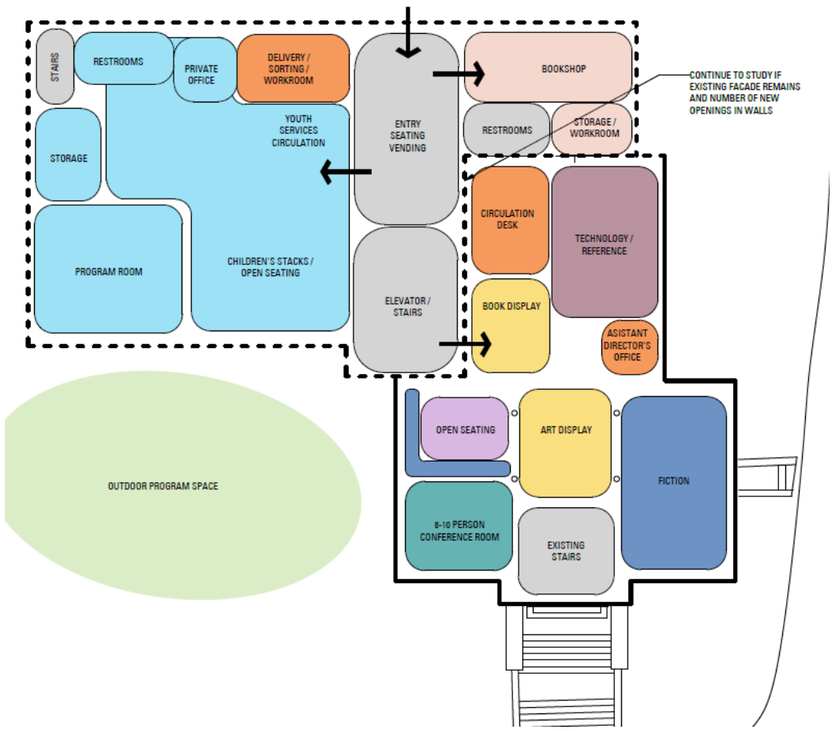
FULL EXPANSION OPTION 4 WITH COMMUNITY ROOM
EXISTING BUILDING = 11,610 GSF
NEW CONSTRUCTION = 13,000 GSF
TOTAL = 24,610 GSF

LIBRARY PROGRAM

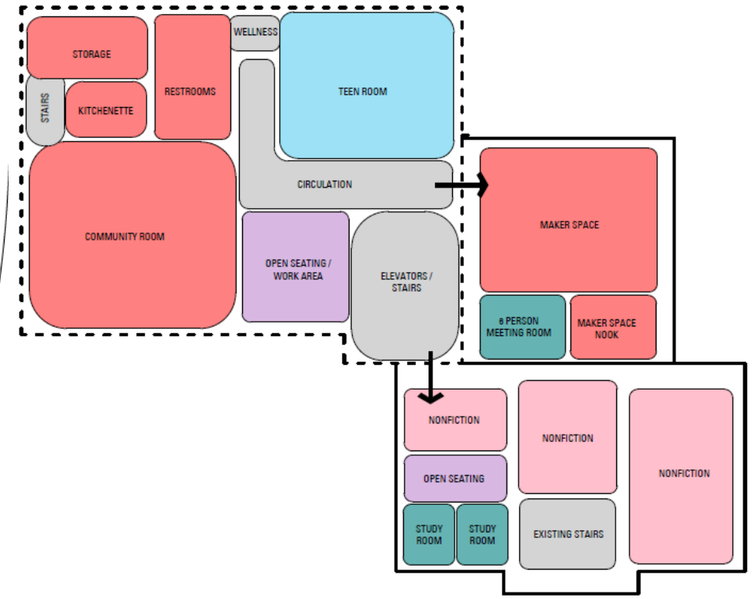
- FICTION
- NONFICTION
- REFERENCE
- YOUTH SERVICE
- SPECIAL COLLECTIONS
- STAFF/STORAGE
- BOOKSHOP
- BUILDING SERVICES
- COMMUNITY SPACE
- MEETING / STUDY SPACE
- DISPLAY SPACE
- OPEN SEATING / WORK AREA



LOWER LEVEL



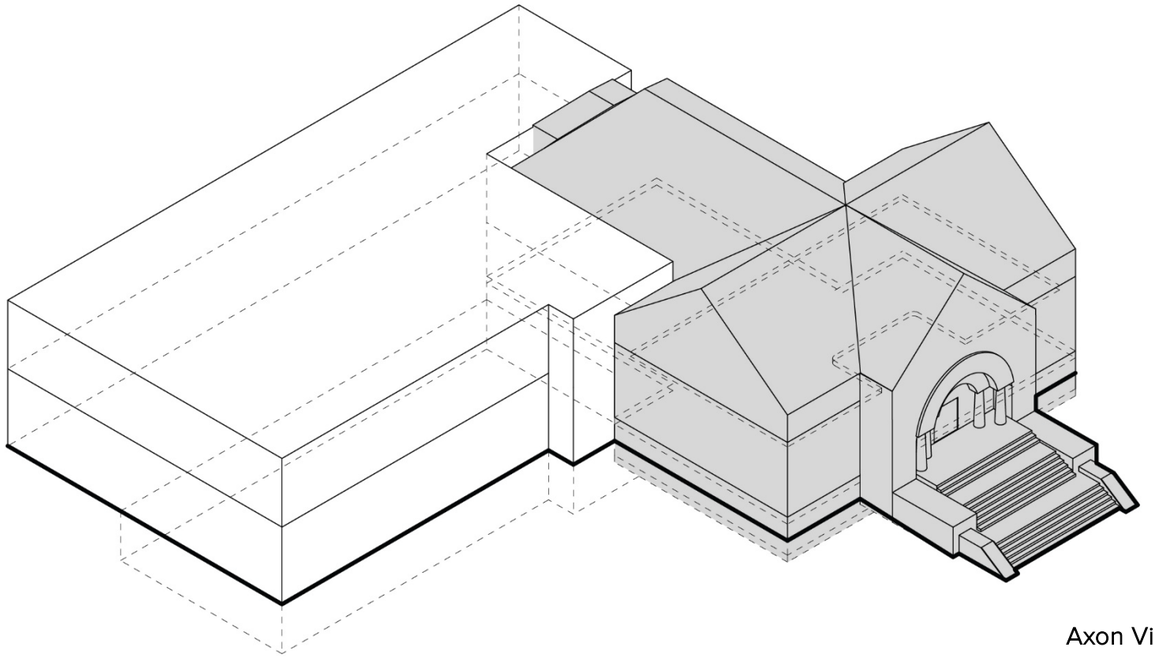
FIRST FLOOR



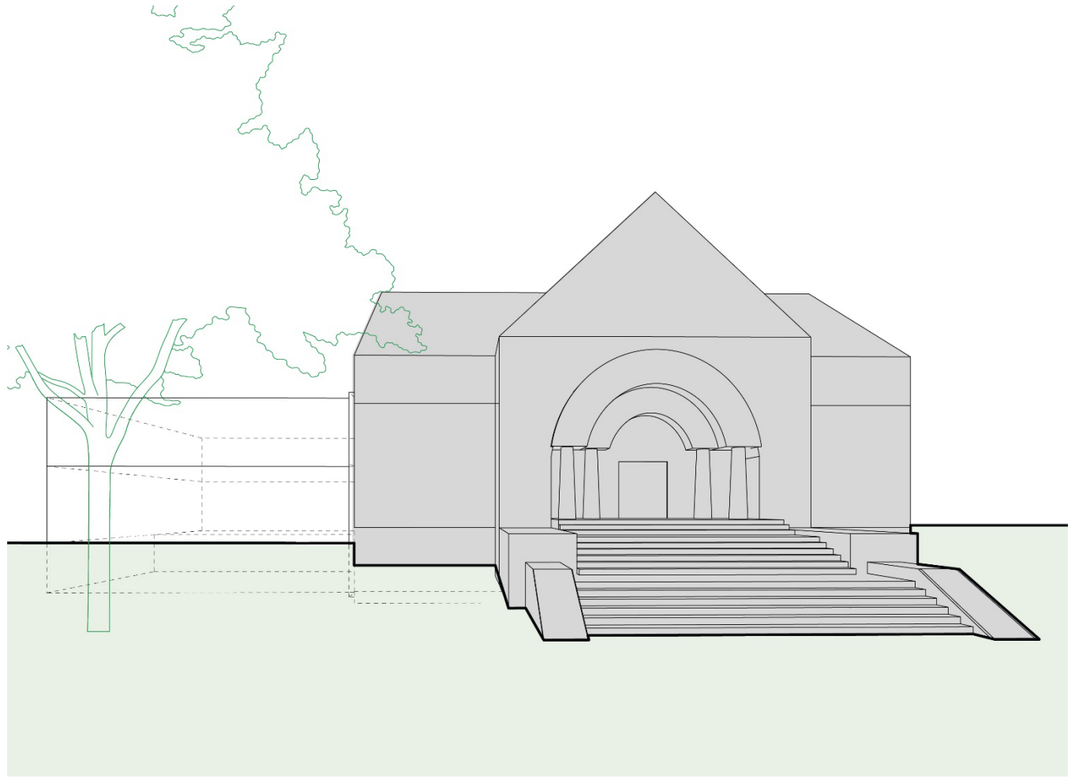
SECOND FLOOR

Option 4 – FULL EXPANSION

Massing model views show the relationship of the historic Library building to the new addition. The massing models do not intend to show design or fenestration of the addition – they are a way to visualize scale, height, and relation to the original library, and identify how floor levels relate to grade and the many levels of the library building.



Axon View



View from Main Street

View from Outdoor Program space

Ordway School Expansion Options

Other expansion options could consider the surrounding buildings for renovation and reuse as library program space. This option reuses the Ordway School for community spaces including maker spaces, adult programing, study rooms, meeting rooms, and community rooms.

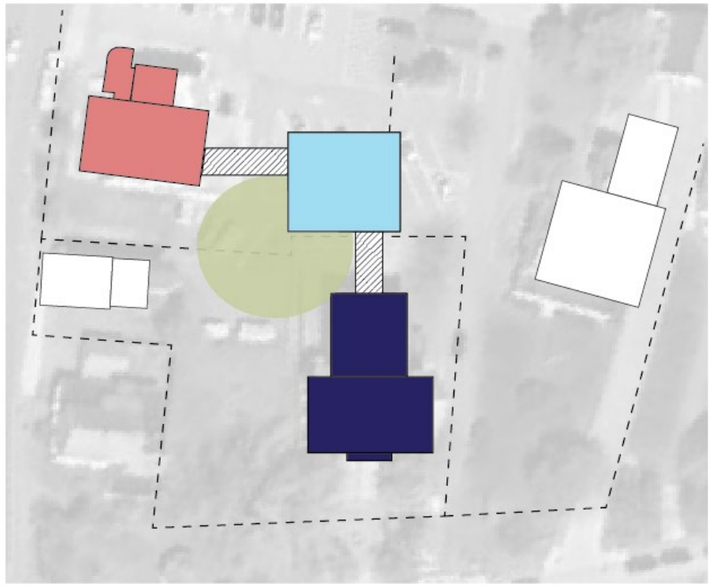
The Ordway School building totals 8,500 sf with a 2,700 sf floor plate on three levels.

Further study could determine if the youth services space could also fit in the school building or the library to eliminate need for new construction adjacent to the library. A stair and elevator will still be required new construction adjacent to the library.

Option 2 gray area indicates a walkway between buildings with trees and does not connect the Ordway School with a building.

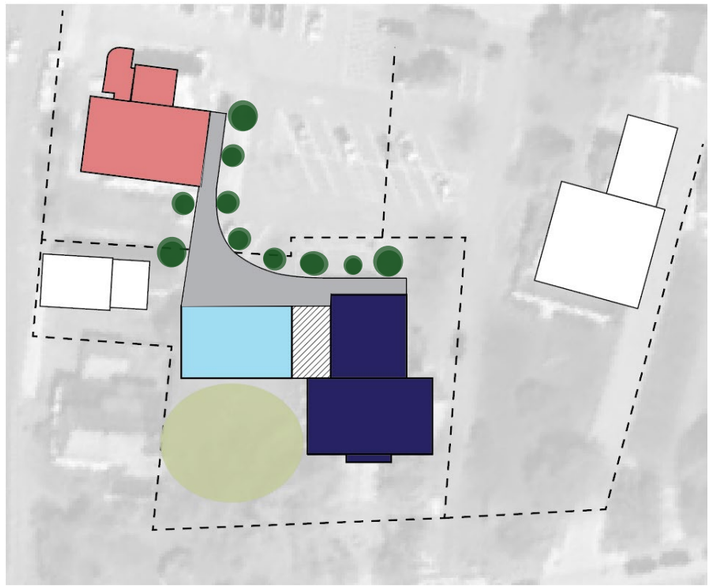
This property is owned by the City.

1



- original library building
- new construction
- existing building
- outdoor library program
- vertical and horizontal circulation

2



Bailey Orlando Expansion Options

This option reuses the Bailey Orlando house for community spaces including maker spaces, adult programing, study rooms, and meeting rooms. A community room or youth services would not fit in this building.

The building totals 3,000 sf (excluding the attic) with a 1,000 sf floor plate on basement, first and second level.

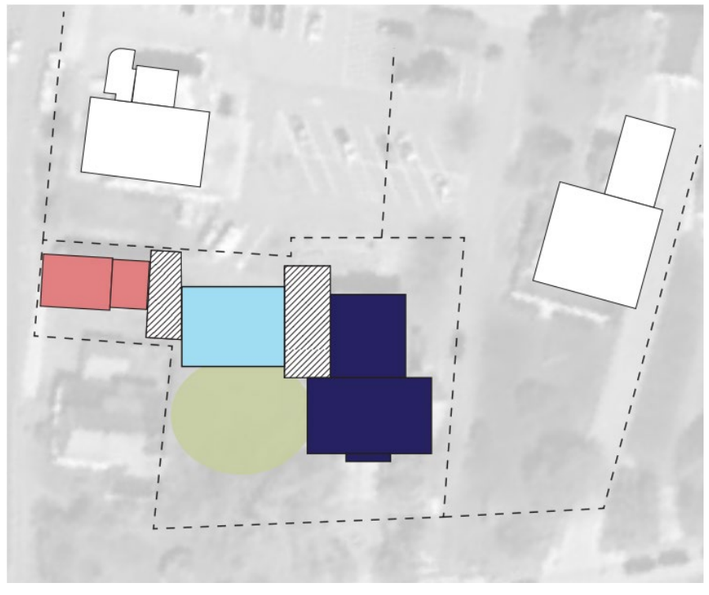
Since the levels of this building are not the same as the Library, a separate elevator and stair would be required to be installed to use the 2nd and lower-level floors.

This property is owned by the City.

1

- original library building
- new construction
- existing building
- outdoor library program
- vertical and horizontal circulation

2



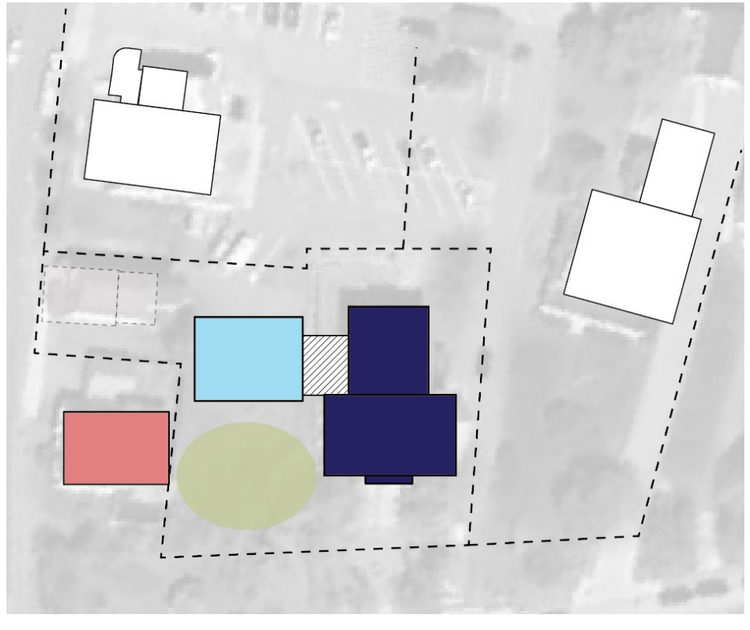
George Turner House, 1 School Street Expansion Options

This option reuses 1 School Street house built in 1863 for community spaces including maker spaces, adult programing, study rooms, and meeting rooms. A community room or youth services would not fit in this building.

The building totals 5,000 sf (excluding the attic) with a basement, first and second level.

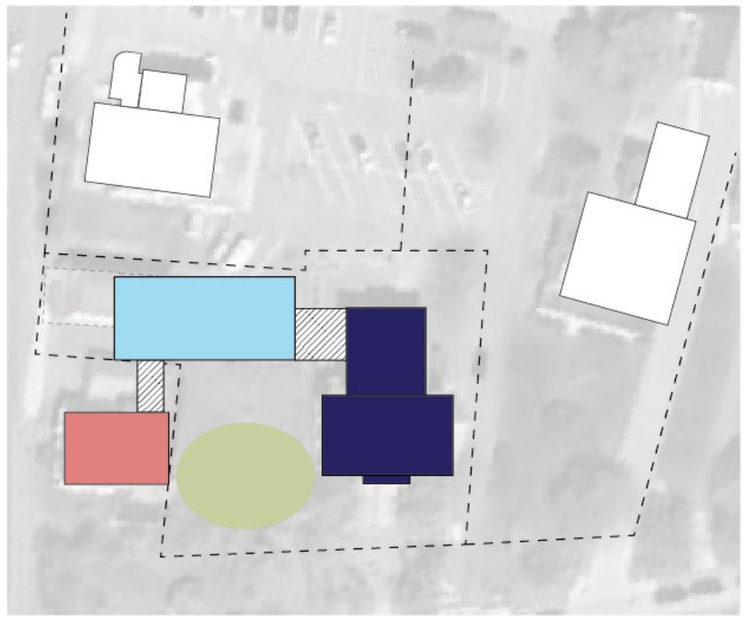
Since the levels of this building are not the same as the Library, a separate elevator and stair would be required to be installed to use the 2nd and lower-level floors.

This is a private residence and is not owned by the City.



1

- original library building
- new construction
- existing building
- outdoor library program
- vertical and horizontal circulation



2

Main Street Congregational Church Building, 145 Main Street Expansion Options

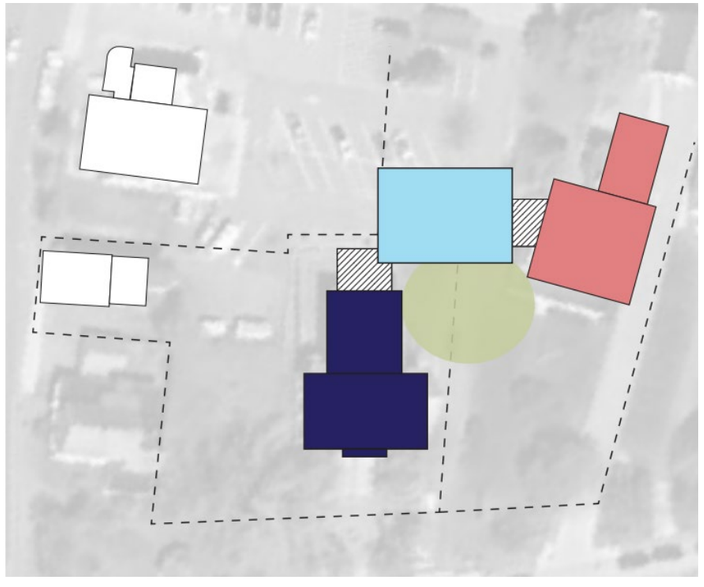
This option reuses the house that the Main Street Congregational Church owns next to the Library. This property could also be used as community spaces including maker spaces, adult programing, study rooms, and meeting rooms. A community room or youth services would not likely fit in this building due to smaller room sizes.

The building totals 9,000 sf with a 3,000 sf floor plate on three levels (assumes a basement level)

Since the levels of this building are not the same as the Library, a separate elevator and stair would be required to be installed to use the 2nd and lower-level floors.

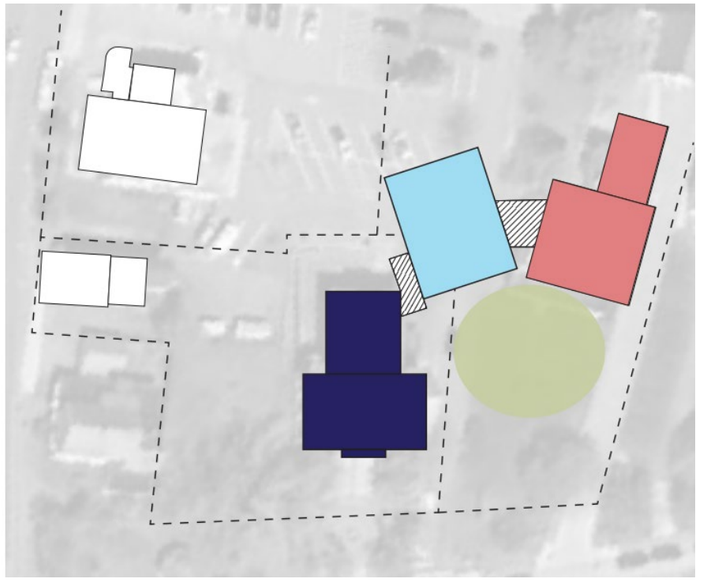
This is owned by the Church and not by the City.

1



- original library building
- new construction
- existing building
- outdoor library program
- vertical and horizontal circulation

2



PRIORITIZED TREATMENT PLAN

Prioritization of Recommendations

ASAP
Criteria: Water Infiltration Mitigation

Immediate
1-2 years
Criteria:

Life safety + accessibility improvements
Water mitigation + pest intrusion
Improve occupant comfort
Small Effort/ Big Reward
Plan for future projects

Short-Term
3-5 years
Criteria:

Plan for Full Accessibility compliance
Building systems + Code upgrades
Wholistic envelope repairs
Major program changes
Climate Action + Energy Reduction

Long-Term
6+ years
Criteria:

Renovated and Expanded Building

ASAP

Criteria: Water Infiltration Mitigation

Discipline	Component/ Observation	Recommendation
Building Envelope Investigation - ASAP	Below-Grade Waterproofing	Investigate source(s) for water leakage, including but not limited to removing interior finishes, excavating soils and conducting targeted water testing at areas with interior water damage, history of leakage, etc. (refer to shaded blue areas, Appendix A). Includes staff office at southeast corner and north rear elevation with roof dormer. Staff office - remove vegetation, install downleader extension, cut section of drywall out to monitor moisture in wall. North wall - investigate water infiltration by closing up building envelope at dormer and soffit by reinstalling missing wood trim at dormer and soffit, check for gaps in flashing and monitor brick wall for moisture in wall.
Building Envelope - ASAP	Copper Downleaders	Repair or replace damaged, missing or otherwise deficient downleaders (refer to Photos 19 to 20, and Appendix A) to provide continuous pathways for roof water runoff to discharge at grade AWAY from the building. Note the tying downleaders into buried drainage systems requires civil/plumbing coordination. This was cited by the Building Inspector. See also Bruner/Cott's downleader sketch in the Appendix.
Building Envelope - Completed	Sheet Metal Flashing	Resecure loose ridge cap flashing (refer to Photo 5 and Appendix A).

Immediate 1-2 years Criteria: Life Safety + Accessibility improvements, Water Mitigation + Pest intrusion, Improve Occupant Comfort, Small Effort/Big Reward, Plan for Future Projects		
Discipline	**Component/Observation**	**Recommendation**
Planning	Plan for Short Term 3-5 projects	Continued public outreach and discussions with City in a variety of digital and physical forms.
Planning	Identify Funding Sources	Funding research and outline funding opportunities along with fundraising strategies.
Planning	Renovation + Expansion Options	Analyze renovation and expansion options and select one for action.
Planning	2030 Masterplan and Downtown Campus Development	Work with City on City-owned buildings and masterplan of city block to determine if any buildings are feasible to renovate to expand physical space.
Planning	Shared Program	Create synergies and program overlap with Amesbury entities, i.e. Cultural Council and Council on Aging.
Planning	Create Planning Committee	Form a Trustee Sub-Committee to oversee plan.
Planning	Library Program Assessment	Engage a consultant to perform a library program assessment to meet the criteria for the Massachusetts Board of Library Commissioners construction grant application.
Planning	Plan for Immediate Needs Projects	Create a plan, schedule, and budget for Immediate needs projects with a scope outline and project team.
Planning	Small Effort /Big Reward	Explore space reallocation, furniture improvements, outdoor upgrades to define program space, create healthy materials guidelines for interior finishes and furniture, indoor book drop, relocate circulation desk.
Planning	Library Temporary Relocation	Plan what building the library can utilize during a major project that is accessible to the public. It is recommended for the library to temporarily move out of the building during construction to serve the public in a quiet, clean space. This will require identifying a location and moving collections and staff.
Planning	Staff and Operating Budget	Consider expanded staff needs and especially in relation to facility support position.
Planning/ Building Code	Occupant Load and Restroom Study	Code consultant or architect should provide an existing condition occupant load, egress, and restroom study for future planning purposes. This could be in conjunction with a life safety, exit signs and emergency lighting upgrade project. It would be helpful in planning current occupant load, required number of exits, egress path, deficiencies in egress path and required number of restrooms. Note that when four or more toilet fixtures are required, they are required to be provided in pairs on the same level (248 CMR 10.10(15)(g)(2)). If multi-stall restrooms are provided, the number of fixtures will need to be recalculated.
Building Code	Means of Egress – Stairs	Repair spalled concrete stairs at front elevation.
Building Code	Means of Egress – Exit Signage	A majority of exit signs throughout the building are not illuminated and are a code violation to today's standards. Replace exit signs where noncompliant and add exit signs where necessary for wayfinding.
Building Code	Means of Egress – Emergency Lighting	Confirm whether the lighting fixtures serve emergency lighting function and recommend testing for lighting level coverage during emergency power. Exterior ramp failed to be sufficiently illuminated for occupant travel. Emergency lighting throughout the building is lacking and does not look like it would provide the code required 1 foot candle along the egress pathways. Install a centralized inverter system to provide the proper emergency exit lighting throughout the building.
Building Code/ Accessibility	Means of Egress – Aisles	The Level 2 children's aisles are spaced closely such that a clear unobstructed egress path of 36" minimum is not maintained everywhere. Reconfigure shelving or furniture to provide compliant aisles. Some shelving at 1st and 2nd floor stacks is less than 36", particularly at the stack stairs. Consider removing a row of stacks to meet minimum clearance on main egress routes.
Building Code/ Accessibility	Means of Egress – Panic Hardware	Replace existing hardware with panic hardware where serving more than 49 assembly occupants, particularly exterior doors on an egress route. Doors shall swing in the direction of the path of travel. The front and rear exit doors on Level 1 are provided with non-compliant locking hardware (i.e. deadbolts). Remove locking hardware or replace with compliant solution.

[1] The deficiencies listed in this section under Means of Egress are not required to be addressed before a planned renovation, but since this is a public, municipal building, it is recommended to perform the work ASAP to improve the life-safety of the occupants in case of an emergency. Many of these items have been cited by the building inspector for the last few years.

Immediate 1-2 years Criteria: Life Safety + Accessibility improvements, Water Mitigation + Pest intrusion, Improve Occupant Comfort, Small Effort/Big Reward, Plan for Future Projects		
Building Code/ Accessibility	Means of Egress – Thresholds	There are excessive thresholds in many locations. Reduce/repair the thresholds to eliminate trip hazards.
Accessibility	Accessibility Compliance	KMA recommends that the Immediate timeframe include the mitigation of any exterior and first-level barriers identified in the KMA accessibility audit report that have low cost and may be accomplished within the City's maintenance budget, such as adding signs at accessible parking spaces, relocating the book drop-off to a level area, removing or protecting hazardous protruding objects, rearranging furniture, replacing door hardware and thresholds, installing signs, and increasing clearances between movable stacks as best as possible.
Civil	Site and Building Drainage+ Utilities	Evaluate site and building drainage. Existing conditions site survey to document underground utilities, drainage, and topography.
Building Envelope Investigation	Exterior Wall	Document masonry conditions (e.g., via interior and/or exterior openings) and investigate the cause(s) for out-of-plane brick band course (refer to red diagonal hatched areas at multiple elevations, Appendix A) and cracked brick at the exterior (primarily within the vicinity of the arched window at the north elevation, Appendix A).
Building Envelope Investigation	Below-Grade Waterproofing	Scope and map buried drainpipes at "sunken" areas near building entrances, to determine condition, capacity, etc. (refer to areas shaded gray and dotted, Appendix A).
Building Envelope Investigation	Slate Shingle Roofing and Gutters	Perform a "close-up" review of the existing slate roofing and skylights to evaluate the condition of the slate shingles and underlayment particularly in various areas that coincide with evidence of water infiltration (e.g., at eaves, valleys and chimney base flashing). Review underside of slate roofing from interior ceiling hatch at the second floor to correlate interior and exterior conditions. Consider conducting slate shingle material testing to determine existing material properties/characteristics.
Building Envelope	Hung Copper Gutters	Remove and replace gutters. Multiple copper roofing companies reviewed the existing conditions in the past and did not recommend piecemeal replaced because the copper is at the end of its useful life. Replace damaged portions of the copper flashing at valleys and integrate with adjacent roofing (refer to Photo 6 and Appendix A). This was cited by the Building Inspector.
Building Envelope	Slate Shingle Roofing and Underlayment	Remove and replace slate roofing at eaves to install new self-adhered underlayment direct to the wood roof decking to protect against ice dams and water infiltration. Note that self-adhered membrane underlayment should extend at least 3 ft up-slope of the *interior face* of the interior finished walls (i.e., about 10 ft minimum up from the gutter at the eave). This should happen at the same time as replacement of gutters to integrate hangers and flashings.
Building Envelope	Slate Shingle Roofing and Underlayment	Remove and replace individually broken, cracked or missing slate shingles.
Building Envelope	Wood-Framed, Single-Pane, Windows	Repair rotted portions of two exterior wood windows near grade (refer to Photos 27, 37, 38, and 39, and Appendix A). All of the lower-level windows are in the worst condition. As funding becomes available, window restoration can continue in sections around the building.
Building Envelope	Wood-Framed, Single-Pane, Windows	Replace individual cracked panes (areas indicated in blue, Appendix A).
Building Envelope	Lower Level Windows in Special Collections	Apply a UV ray film on windows to block rays from harming special collections.
Building Envelope	Below-Grade Waterproofing	Depending on water leakage investigation findings (refer to recommendations in Section 6.1), provide positive-side waterproofing and perimeter drainage at all buried exterior wall, or similar, to address below-grade water leakage.
Building Envelope	Below-Grade Waterproofing	Depending on buried drain scoping investigation findings (refer to recommendations in Section 6.1), repair/replace buried drainpipes and integrate with broader storm water system to reduce basement leakage and/or in coordination with building enclosure repair work. Note such work requires civil and plumbing engineering input.
Building Envelope	Wood Soffits, Trim, and Brackets	Repair or replace wood soffits and missing trim around dormer and other areas to reduce water infiltration and pest intrusion. Perform conditions assessment on ladder or lift to determine which brackets needs repair and if any of the soffit should remain.

Immediate 1-2 years Criteria: Life Safety + Accessibility improvements, Water Mitigation + Pest intrusion, Improve Occupant Comfort, Small Effort/Big Reward, Plan for Future Projects		
Structural	Ceiling of Assistant Director's Office	Make exploratory ceiling openings to diagnose the cause of plaster cracking.
Structural	Ceiling of Amesbury Room	Make exploratory ceiling openings to diagnose the cause of plaster cracking.
Structural	North Elevation at the Center Second Floor Window	Investigate and repair the exterior wall to mitigate water infiltration and associated masonry and plaster damage.
Structural	East Gable at Central Skylight	Investigate the cause of plaster cracking to determine if there is an ongoing source of water infiltration and to review the condition of the rafters.
Structural	West Entry Vestibule	Remove the plywood finishes to review the condition of the vestibule floor and attachment to the base building structure.
HVAC	Vault Humidifier	Replace the vault humidifier condensate pump and discharge piping with a high temperature condensate pump and copper discharge piping. Plastic condensate pump and PVC piping are not appropriate materials for hot condensate.
HVAC	Radiators and Heating System	The heat output of the steam radiators is controlled by manual handwheels. Verify the handwheels on the more problematic radiators are fully open. The handwheels may be stuck in a partially closed position which could be reducing the output to the radiator. If they cannot be adjusted, replace the handwheel. Replace the air vents on the radiators that are cool or are experiencing heating issues. Add another vent on radiators that are venting a lot of air, as they are also likely venting part of the steam piping as well. Explore adding vents to the ends of the mains and additional radiators.
HVAC	Boiler Combustion Air	Reconfigure boiler combustion air to make it code compliant with a larger wall opening and high and low duct openings. Combustion air is pulled from a vent in the chimney and a transfer grille on the boiler room door. Neither of these methods are code compliant.
HVAC	Window Air Conditioners	Clean air filters every month. Maintain spare window air conditioners, in the event one fails, replacement will be available.
HVAC	Humidification	Have a spare humidifier generation cannister to minimize humidifier downtime, as it is a part that is typically replaced due to scaling and contamination.
HVAC	Ventilation	Continue with air purifiers until a mechanical ventilation system is installed. Open windows in swing season for additional ventilation.
Fire Alarm	Fire Alarm Control Panel	The existing conventional fire alarm control panel is obsolete and should be replaced with a new addressable system. The existing system appears to be ADA compliant.
Electrical	Electrical Fuse Panelboards	All existing fuse type panelboards within the building are obsolete and should be replaced.
Electrical	2nd Floor Youth Services Lighting	Lighting is too bright and color of light causes headaches and staff/ visitors to turn the lights off. Design lighting to function and enhance the space with dimming capabilities.

Short Term 3-5 Years Criteria: Plan for Full Accessibility Compliance, Building Systems + Code Upgrades, Wholistic Envelope Repairs, Major Program Changes, Climate Action + Energy Reduction		
Discipline	**Component/Observation**	**Recommendation**
Planning	Renovation and/or Expansion	Determine a renovation and expansion strategy. Recommendations depend on if the building will be fully renovated with new building systems, egress stair and elevator and if the program will be expanded by a new addition. The assumption is that in 3-5 years, the Library will take steps to plan and approve a renovation of the Library with the option of an addition that will house the egress stair and elevator at a minimum, and a full expansion with new addition at a maximum. It is assumed the renovated/expanded building will be fully accessible with sprinklers.
Planning	Temporary Relocation Planning Group	Assemble a group responsible for planning and carrying out a move to another building during the renovation project. It will be difficult to provide services in the library building during a construction project.
Building Code	Wall Ratings	If work area touches corridor walls in non-sprinklered building that serve 30 or more occupants, the altered walls would need to be 1 hr rated. Corridors only occur in Lower Level. If sprinklers are installed, walls do not require rating.
Building Code	Vertical Openings	Depending on the level of alteration, the stairs might need to be enclosed in a smoke-tight enclosure.
Building Code	Means of Egress – Stairs	Stack Stairs, mezzanine stair, and stairs to Lower Level are too narrow. If they are required to be rebuilt, the would need to be wider and meet current building code.
Building Code	Means of Egress – Ramp	Handicap ramp is a temporary structure that is not compliant with current codes. The recommended action is to construct a permanent ramp or elevator to access all floors.
Building Code	Sprinkler Requirement	See code report for outlined sprinkler requirement for Existing Building Code Level 2 or 3 Alteration. It is expected that a renovation or addition will require sprinklers to be installed in the existing building. If a fire protection system is required, the building will be served by a new dedicated 6-inch fire service, double check valve assembly, and wet alarm valve housed in an area of approximately 8 feet by 10 feet. This Fire Service entrance system does not need a dedicated room. The fire protection system will also include an electric bell, and fire department connection meeting local thread standards which would need to be located within 100 feet of a fire hydrant. Control valve assemblies isolating each floor or fire area shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain including fire alarm integration. Both the expansion and existing building may be served from the same fire service location.
Building Code/ Building Envelope	Means of Egress – Wood-Framed, Single-Pane, Windows	Windows that are lower than 42” and along a walking path require safety glass or a guardrail. Provide a physical barrier, or otherwise prohibit access to, any non-safety glazing located within 18 in. of an interior walking surface (refer to Photo 33 and Appendix A).
Building Code/ Accessibility	Means of Egress – Handrails + Guardrails	Handrails and guards are noncompliant throughout including missing handrails, handrail and guard height, guard openings, and handrail extensions. At the historic wood interior stair from first floor to second, retain existing and add a guardrail to meet code. Replace or add on to existing noncompliant handrails and guards with compliant handrails and guards. When using furniture to prevent the change in elevation, it’s recommended that such furniture be fixed and be a minimum height of 42”. Building Inspector also highly recommended addressing the exterior front guardrails that do not meet fall protection.
Accessibility	Accessibility Priority	Although these are improvements that are currently listed in the Short-term timeframe (3-5 years), KMA recommends that the construction of an accessible entrance (including the designated accessible parking and ramp leading to the entrance), and an accessible toilet room on the first floor should be a top priority. They are not listed in the Immediate Needs category because of the desire to incorporate an elevator in the planning of a major renovation project or expansion instead of a permanent ramp. An accessible restroom will be provided on the ground or first floor of a new addition during the renovation project. Confirm whether this timeframe supports the timeframes listed for the Amesbury Public Library in the latest ADA Transition Plan (2017) and the 2030 Master Plan for the City of Amesbury.

[1] See Conditions Assessment report for outline of Accessibility trigger. Monitor cost of permitted work. If cost of work is more than 30% of the accessed value of the building within a 36-month time period, the whole building must comply with all aspects of MAAB.
[2] If the library is temporarily relocated during a renovation, the alternate location would need to be accessible.

Short Term 3-5 Years Criteria: Plan for Full Accessibility Compliance, Building Systems + Code Upgrades, Wholistic Envelope Repairs, Major Program Changes, Climate Action + Energy Reduction		
Accessibility	All Exterior Accessibility Upgrades	See KMA's report for more specific description of items. Short Term requirements assumes the building will require full accessibility. Exterior accessibility upgrades include: Parking lot, route from parking lot to entrances, main entrance, accessible entrance/egress, staff and delivery entrance, emergency exits, exterior walkways, book drop, benches, trash bin, picnic tables, exterior program areas and approach to program areas.
Accessibility	All Interior Accessibility Upgrades	See KMA's report for more specific description of items. Short Term requirements assumes the building will require full accessibility. Interior accessibility upgrades include: Accessible route between levels, protruding objects, all interior signage, all door hardware, all door thresholds, interior stairs, interior routes, stack areas and routes, tables and computer desks, counters, library catalog table, AED box, small offices, furniture placement reducing 36" min path of travel, staff break room counter, staff kitchen and staff restroom, and all public restrooms.
Accessibility	Variances	As a work plan for this timeframe is developed in conjunction with all building needs, Amesbury Public Library should also consider which issues should be addressed through mitigations and which would be candidates for variances (either time-variances or permanent variances) from the Massachusetts Architectural Access Board.
Civil	Site and Building Drainage	Improve site and building drainage and confirm underground site utility needs.
Building Envelope	Reduction in Heat Loss	Tighten building envelope and provide new systems that reduce energy consumption. Consider Net Zero, carbon reduction, renewable energy, and healthy building material selections.
Building Envelope	Insulation	Assess insulation strategies for walls and roof and determine when to implement
Building Envelope	Rear Entrance Vestibule	Remove and replace the rear entrance vestibule and curved metal roofing with a permanent ADA-compliant entrance that does not cause adverse effects to the existing building fabric.
Building Envelope/ Structural	Exterior Walls	Repoint the exterior and interior walls to address cracked, eroded, missing or otherwise deteriorated mortar joints. Replace brick as required.
Building Envelope	Exterior Walls	Rebuild cracked and out-of-plane portions of the exterior brick masonry wall. Note that the exact requirements and detailing for rebuilding requires further investigation.
Building Envelope	Exterior Walls	Clean exterior masonry walls to remove dark staining and biological growth, and to restore the original contrast between the light and dark Roman brick.
Building Envelope	Exterior Walls	Evaluate options to renovate the exterior masonry walls, including but not limited to studying insulation options, sourcing replacement materials, etc. Note the exact scope requires further investigation and development of the project goals.
Building Envelope	Slate Shingle Roofing, Underlayment, Sheet Metal Flashing, Gutters and Downleaders	Evaluate options to replace the entire slate roofing assembly (with the option to salvage and reuse existing slate), with a new insulated steep-sloped roofing assembly if desired, as part of the broader expansion project to meet project goals. Note the exact roofing scope requires further investigation and development of the project goals.
Building Envelope	Wood-framed, Single-Pane, Windows	Replace putty and repaint the exterior of all wood-framed windows. Coordinate with restoring window operability, where lost.
Building Envelope/ Architecture	Wood-framed, Single-Pane, Windows	Consider options for improving energy efficiency by installing interior or exterior storm windows or installing a window film to reduce solar heat gain and UV rays.
Building Envelope	Wood-framed, Single-Pane, Windows	Evaluate means to remove/replace window air conditioning units in conjunction with mechanical system upgrades. Consider reverting previous window infilling interventions (refer to Photos 40 to 41 and Appendix A) as part of this scope.
Structural	Stained Ceiling in Lower Level Storage Room in Copier Room	Remove ceiling to expose framing for structural review.
Structural	Joist with Check Above Workshare Space on Lower Level	Provide a sister joist. See photo 18 in SGH Structural report in Appendix.
Structural	Slab-On-Grade in Utility Closets on Lower Level	Repair or add hatches to slab-on-grade in utilities closets to mitigate risks of tripping hazards and pests.
Structural	Steel Posts in Utilities/Storage Room on Lower Level	Remove a portion of the hard ceiling adjacent to the two steel posts in the basement Utilities/Storage room for a structural engineer to review the configuration of framing and intent for the steel posts. See photo 19 in SGH Structural report in Appendix.
Structural	Basement Arch Between North and South Wings on Lower Level	Repair missing masonry.

Short Term 3-5 Years Criteria: Plan for Full Accessibility Compliance, Building Systems + Code Upgrades, Wholistic Envelope Repairs, Major Program Changes, Climate Action + Energy Reduction		
Hazmat	Remove or Encapsulate Materials	Remove or encapsulate asbestos-containing materials per 2000 report.
HVAC	New Heating/Cooling System	Replace steam heating system with an air cooled variable refrigerant flow VRF heat recovery heat pump system. The steam boiler has about 10 years of life remaining. The VRF indoor units could be console units or enclosed in casework at existing radiator locations so as to not adversely impact the historic architecture.
HVAC	New Ventilation System	Install a Dedicated Outdoor Air System (DOAS) ventilation system at the time of the addition. The DOAS unit can be mounted on the roof of the addition and ducted into the original library. Running ventilation ductwork in the original library will be challenging to not impact the historical architecture.
Electrical	Electrical Service Distribution	The existing service equipment is a mixture of upgraded and original distribution equipment and should be upgraded.
Electrical	Electrical Service Upgrade	Any elevator addition project or mechanical/plumbing upgrades that would convert the building to an all-electric system would require a service/building distribution upgrade. The additional electrical load that either project would present, would require a simultaneous upgrade of the building's electrical service and distribution equipment. Upon a building wide electrical distribution equipment upgrade, a new dedicated main electrical room would be created to house all associated building panelboards.
Electrical	Interior Lighting System	Many spaces lack the appropriate foot candle levels for its space type and full building lighting control is obsolete. We would recommend a full lighting system redesign that utilizes energy efficient LED fixtures with 0-10V dimming capability in order to provide proper foot candle levels. We would also recommend a distributed lighting control system to provide the building with basic controllability that would include occupancy control, daylight harvesting, dimming control and time scheduling.
Electrical	Exterior Lighting System	Many areas lack the appropriate foot candle levels and controllability of exterior lighting is lacking. We would recommend installing LED wall packs at all building exits and provide pedestrian poles along building exit passages to provide proper foot candle levels. Driveway and parking site area poles would also be recommended for overall site security. All exterior lighting fixtures would be tied into the building's lighting control system to provide scheduling control and dimming capability.
Security	Video Monitoring System	The building is protected with an intrusion system, for further protection the facility could benefit from an exterior video monitoring system that monitors all building entrances and exterior common areas.
Plumbing	Plumbing Fixtures	Provide new high efficiency plumbing fixtures throughout the building including expansion to improve water savings, efficiency and a Code requirement upgrade.
Plumbing	Accessible Fixtures	Provide accessible fixtures where required in the renovated building and/or expansion.
Plumbing	Drinking Fountains	Provide new drinking fountains for each set of restrooms in the renovated building and/or expansion as a Code requirement upgrade.
Plumbing	Service Sinks	Provide new service sinks on every floor in the renovated building and/or expansion as a Code requirement upgrade.
Plumbing	Water Service	Provide new 2-inch domestic water service to support flush valve type fixtures in the renovated building and/or expansion.
Plumbing	Water Shut-Off	Replace existing domestic water shutoff valves with new ball valves as an operational/maintenance upgrade.
Plumbing	Hot Water Mixing Valves	Domestic hot water shall be stored at 140-degrees to prevent bacteria growth. Install thermostatic mixing valve set to deliver 120-degrees to plumbing fixtures requiring hot water. Provide a recirculation loop with pump at existing water heater to decrease hot water delivery time at remote plumbing fixtures as a Code requirement and operational/maintenance upgrade.
Plumbing	Exterior Wall Hydrants	Replace existing exterior wall hydrants with non-freeze hydrant with integral vacuum breakers as a Code requirement upgrade.

Long Term 6+ Years Criteria: Renovated and Expanded Building		
Discipline	**Component/Observation**	**Recommendation**
Contractor	Start construction	Break ground on renovation or expansion

Maintenance Plan Assumes dedicated facility support staff on site		
Building Element	**Frequency**	**Description**
HVAC – Boiler Maintenance	Monthly	Maintain the boiler with water treatment and monthly blowdown to remove suspended solids and debris from the boiler. Blowdown intervals and duration should be optimized to field conditions.
Structural – Maintenance	During rain and snow events	Check for leaks in the closets at the South Wing eaves during rain and snow events.
Eaves/Attic	3-6 times a year	Inspect wood sheathing in the spring after a rain storm to locate leaks from the roof.
Gutters/Downspouts	Three times a year	Clean gutters twice in the fall and once in the spring from ladders. Inspect soldered seams and connections to downspouts.
Slate Roofing	Yearly	Slate roofs can last between 60–125 years with proper maintenance. Maintenance personnel should perform roof surveys once a year from the ground using binoculars or from a cherry picker. Replace damaged slates as soon as possible. Inspections by professionals should be conducted every five to seven years.
Flashings	Yearly	Inspect roof flashing every spring for ice and snow damage. Ice and snow bends copper step flashing and built-in gutters. Look for cracked welds, cracks in copper, brittle sealants, and displaced flashing that is not covering the intended building element. Repair or replace damaged flashings as soon as possible.
Fire Alarm + Emergency Lighting Test	Yearly	Test system every year. Cited by Building Inspector.
Exterior Foundation and Brick Walls	Yearly	Brick and stone will last hundreds of years if it is kept clean and dry. Avoid using salts for ice melt. Once a year, use a garden hose to clean off any dirt on the stone or brick especially at steps and sidewalks. If moss, mold, or mildew is growing, mix a solution of one cup bleach and a gallon of water. Soak down the brick or stone and apply to the growth with a natural or synthetic scrub brush. Do not use a wire brush.
Mortar	Yearly	Typical life span of mortar is 20-30 years. Inspect areas of mortar close to gutters, downspouts, stairs and foundations where water can penetrate the mortar. Repoint areas of damaged mortar with the mortar mix that is softer than the brick, typically a type N but mortar analysis can determine the original mortar.
Stone	Yearly	Prevent water and salts from entering the building envelope. Do not use de-icing salts on stairs. Clean gutters, maintain the roof and flashings, remove vegetation, fill open mortar joints, and clean the stone carefully. Inspect the stone every year for signs of further deterioration.
Painted Wood Windows and Trim	Clean yearly, repaint 7 - 10 years	Clean dirt off trim and windows with a garden hose every year, and more often at the basement windows or elements close to the ground. Open and close each window at least twice a year to determine operability maintenance. Repaint wood every 7- 10 years. Inspect wood trim yearly for loose or peeling paint and signs of deterioration.
HVAC – Replace Dehumidifiers	10-15 years	The dehumidifiers for the archive area will need to be replaced in about 10 years, as they reach the end of their useable life.
Smoke Detector Test	Twice a year	Check hard-wired smoke detectors and push Test button
Wood Conservation	Inspect yearly, refinish 2-3 years	Review condition of stained and wood at the exterior and interior yearly. Refinish exterior doors every 2-3 years depending on wear.

APPENDIX

1. Interview + Public Meeting Summaries
2. Code Summary + Report
3. Structural Report
4. Building Envelope Report
5. MEP/FP Report
6. Accessibility Report
7. Existing Condition Drawings from Laser Scan
8. Downspout Repair Drawing
9. Youth Surveys

Community Outreach Summary

Burner/Cott interviewed City officials, Library Board of Trustees members, invested citizens, and the Historical Commission members to solicit their answers to the same 6 questions. Bruner/Cott facilitated a visioning session on May 15 with strategic group members supporting the Library through this study. A summary of the collective responses is below:

What can the APL improve the most?

- Accessible entry, stairs, restrooms
- Work within framework of existing building to meet programmatic needs
- Flexible spaces for community gatherings, public spaces, and work areas for general use. Variety of meeting rooms, quiet and loud spaces. Interior and exterior program space should be nimble in set up and break down. Integrate adaptable AV for programs.
- provide more adult programming, lectures from community, and events to celebrate Amesbury community.
- Communication and outreach of happenings and resources
- Provide more adult programming, lectures from community, and events to celebrate Amesbury community
- Gain more awareness of the Library as a resource to all. Clarify why people should go there. Tell a narrative of why libraries should exist in our future.
- Promote programming with residents. People may not know all that the library has to offer, and do not take full advantage of programs.
- Take a critical look at collections and pair down.
- Better and clear natural wayfinding, signage.
- Bookshop location –should not be a hidden gem. More prominent location with coffee and seating. Basement not a joyful space.
- Review sustainability in operations to provide reusable materials and paper.
- Find revenue-generating opportunities
- Create stronger ties to schools -- holding college fairs, seminars, vocation training, activate school libraries during the day. Include more engagement and learning resources for high schoolers.
- Re-envision the back of the library which is currently not healthy or positive with sea of asphalt and abandoned buildings

What does the APL do well?

- Variety of users, good hub for community, cultural center
- Always buzzing, very energetic, and active with good energy
- Online resources and digital collections, interlibrary loan programs,
- Connections with Council on Aging, Schools, Industrial History Center, Bartlett Museum, Cultural Council
- Friendly, helpful and efficient staff
- Youth programming is top notch. Creative programs, arts and crafts, Stem, reading series, and speaker series are great.

What would sustainability for the library look like in the context of a Facilities Master Plan for the APL?

- Maintaining the building and energy plan and make green choices throughout the process
- Focus on high-efficiency HVAC and Solar, high efficiency systems and concealed renewables. Reduce air infiltration through the building envelope.
- The library should look at sustainability, healthy building challenge, LEED, fitwell, in addition to existing historic buildings for any additions that may come in the future. APL can incorporate the use of solar panels on the roof, geothermal in the side yard,
- Incorporate materials on sustainability into their programming and educational services -- rain barrels can become an educational exhibit.
- The building envelope would be maintained on a regular basis and spaces can be easily modified to adjust to different programming and staffing needs over time. In the context of the Master Plan, changes to the library's design or facilities needs to maintain the building's usability, safety, and prolong its life. The upgrades would increase the energy, water, and materials efficiency. Examples are water efficiency, energy efficiency, improved indoor air quality, etc. These upgrades would also allow the building to be fully accessible and with no anticipated near-term failures or temporary fixes.

Community Outreach Summary Continued

How would you define success or outcomes for this APL facilities master planning process?

- Preserve the integrity of the historic structure while providing necessary upgrades for the library's performance
- Stop leaks in walls to use the buildings full potential. Secure the envelope and preserve the historic building.
- The process is comprehensive and prioritized
- Address the library's needed upgrades with a construction and maintenance plan
- Needs a vision to better maintain the building and the City needs to be on board for funding
- Must be realistic in defining what the biggest challenges are
- Define how will APL fund a project, its general operating budget, capital plan, grants, and funding sources
- Tangible + achievable plan to allow the Library to take the next step – chart and schedule. Determine how and when to do the work. Meets the community's needs and is realistic. Community-driven, transformative, and inclusive.
- The changes should honor the structure while offer modern services to become a multi-programmatic space -- senior center, rec center, etc. The historic structure can serve as an interdisciplinary space and a hub for intergenerational programming and learning -- 7 days a week, open late hours to maximize use of library.
- Define and prioritize its primary mission and maintain its core functions to serve the town.
- Plan now for 5-10 years down the road when the City is in a better financial position.

What other initiatives can the APL support in the Amesbury community?

- Industrial museum, schools, council on aging, and veterans. Intergenerational activities.
- Collaborate with different venues to host events – senior center, Industrial History Museum, transportation center, cultural performances
- Grow relationship with police to find resources for people who are unhomed.
- Participate in city block party
- Host events to show new artwork – Charles Davis paintings
- Host public meetings for boards and commissions, school groups
- Support linkages with youth and rec, young adults, continuing education, education component of 2030 City Masterplan
- Become a depository for governmental information – school department, police, fire – civic engagement. Have a greater connection to City Hall.
- Engage all user groups with traveling exhibits or art exhibits.
- Host programs like book deliveries to senior housing, schools, and public reading programs.
- The new amenities and programs could support students, school-age and post grad programs.
- The library should create a space for people to see and feel history as well.

How would you want information to be communicated to the community?

- Accessible digitally and paper forms in many different locations
- Host Study progress on the Library's website
- Participate in series of community meetings and explain the process. Interactive discussion with a presentation and time for public response
- Planning board host meetings and post updates online
- Informational program events at the Library. Passive information area in library about the needs.
- Be transparent about process early on. Inform people and get them to support. Bridge communication gap. Don't want to feel like it is a surprise. The public want to feel they are an integral part of the process and that they have ownership in their library. Develop talking points for allies and adversaries.
- Demonstrate how APL will keep costs down while spending on necessary upgrades
- Have as many funding options and opportunities through municipal, library, historic, private donor, and other fundraising.
- Communicate with subcommittees of communications and marketing. Tour the communications director through the library.
- Broadcast/Presentations to the City council, school committees, and the Mayor's Facebook live
- Focus on how it will be a worthwhile financial investment in budget meetings. There will be competing interests with the seniors and older council members, but forging alliances with them is important. Only spend what is necessary.
- Invite neighbors and building owners in the city center
- Communicate with urgency the necessary upgrades. Reiterate the necessity to presser the historic building.
- Utilize Facebook, social media, flyers, Lake Gardener, Amesbury days, Kids day at the park, and various well-attended events to talk about the library for all ages
- Bring people into the space to show critical upgrades required
- Perform a comparative cost analysis of types, styles, and ideas that are being worked towards with honest and effective communication to city council.
- The APL needs to express openly the reasons for expansion and involve people who don't use the library to gain their support.
- Perform a passive teen and youth survey or drawing to get input from youth
- Information should be communicated very carefully. Library's plan needs to be communicated as a part of a bigger plan. There needs to be real sensitivity to cost as part of a larger plan and the communications director needs to be sensitive in messaging. In order to support the library's upgrades, there must be personalized quantitative data as well as a collection of testimonials from users and examples of other libraries.
- APL needs to take opportunities to elicit ideas and enthusiasm that will lead to appropriation of funds -- need the business community involved in library to become stewards. Building relationships with Amesbury residents is very valuable in terms of capital and support for the library.
- Show what a modern library looks like today (ex library with cafe in it). Include a goals section to get constituents to explore alternatives and achieve goals.
- Emphasize the value of the library in the historical context of the city. If APL is unable to maintain itself and bring itself into the modern, they need to appreciate the jewel it already has. 50% of the community is new and have not engaged with the library.

Staff Program Considerations

Public Program

- Stronger connection to art and community within library
- Public Meeting Space
- Accessible Programming rooms –Youth Services and Adults. Flexible and easy to transform.
- Quiet reading/studying areas
- Public workspace for laptops
- More computers in Youth Services/ more outlets
- A place to eat snacks and get coffee
- Exhibition space for special collections

Library Program

- More space for book display
- More space for stacks and book collections
- Shelves in Youth Services don't fit books properly
- Shelves in New Room aren't maximized
- Larger special collections storage + slat storage. No UV rays in collection storage
- Special Collections Reading Room visible to special collections storage
- Large tables in Reading Room and Special Collection Storage
- Public workstation at special collections
- Tables in Reference Room aren't used often
- More space for Youth Services and Young Adults

Staff + Support Space

- Department conference room
- Quiet work area for focused staff work
- Welcoming lunch room
- Separate office and storage rooms
- Larger Director's office for small meeting table
- Flexible workstations for staff to share
- Reorganize circulation and reference desk locations to make reference desk visible. Lower reference desk, more privacy for conversations
- Circulation Desk - More storage for book holds and returns at desk. Area to assemble program materials.
- Larger area to sort returns and holds at circulation
- Youth Services - Larger area for desks, private office, and space for sorting books. Sorting area takes up program room. Centralized storage. Area to assemble materials.
- 3 workstations to digitize collection

Outdoor Program

- Delineate outdoor space for Library programs with landscape to keep area clean
- Make it accessible and accommodating for all ages
- Area for drop off/pick up of materials for public
- Locate exterior Book drop/off at building wall
- Covered program area for inclement weather
- Storage Shed closer to yard
- Outdoor art and community gallery space
- Improve water drainage
- Exterior lighting at walkways, parking, ramp, and program space.

Infrastructure

- Accessible Entrance, restrooms and floors – Elevator!
- Accessible delivery door
- Heating/Cooling/ Ventilation improvements
- Stop water infiltration in roof and walls
- Clear wayfinding to stairs, restrooms, and reference books
- Safer stairs
- Dimmable LED lights
- Continuous scheduled maintenance – not reactionary repairs
- Expose original tin ceilings
- Upgrade Exit Signs, Emergency Lighting, and fire alarm system.
- Install a sprinkler system
- Safe egress pathways and door hardware
- Upgrade electrical service, upgrade panel boards, install LED lighting at interior and exterior
- Install video monitoring system at all doors.
- Manage water collection with new gutters, downspouts, and drain water away from building foundation
- Repoint missing mortar, investigate ongoing leaks, repair concrete steps, restore windows.

Public Meeting Notes

On Tuesday, June 18, 2024, the Amesbury Public Library, and its Board of Trustees held a public forum to discuss our ongoing Conditions Assessment and Facilities Master Plan. The forum took place at the Costello Center, at 68 Elm Street at 7:00 pm. Consultant, Bruner Cott Architects, presented the preliminary findings with visual slides and a moderated question and answer session with attendees. Registration was not required. There were 51 people in attendance.

General Discussion

- How to balance short term needs
- Set us up for action
- What can building do – (passion + needs?) are – Don't want to compromise what needs are
- Short term fix + medium term fix
- Create menu that is clear – do we preserve and improve?
- Set up success for 30-50 years
- How to invest + reinvest
- Cost + Priority – Actionable Elements
- Location → downtown area – walkable distance – valuable asset
- Fundraising
- Overdue process → how can this be a priority

Accessibility

- What is strategy for accessibility?
- Blessed to have warm staff → astounded by lack of accessibility – can't use stacks
- Ramp is miles long
- Compliment staff, awareness of accessibility
- Testament to staff
- Serious needs to increase accessibility
- Some people do spend all day researching at Library
- 3 season area for outdoor program

Parking

- Parking is an issue
- Fire station, city hall, police department parking, and property lines
- Parking – wayfinding + navigation
- Resource Map → parking utilization
- Don't have to pay to park
- Parking is a resource
- Parking study of Downtown

Library is Outdated

- Has it outlived its usefulness?
- How to build for the future? + outdoor spaces?
- Past useful life → how can it be multi-generational
- What value does it have
- What are other possibilities?
- Develop back half of building
- Merrimack Public Library + Seabrook NH both demolished libraries and constructed new
- Crushing people's hearts to demo craft + history
- Adapted to meet needs of current needs of library
- How can library grow and evolve over time
- Building has outlived its usefulness Cramped + Small
- Not how we use libraries today
- Building has limitations
- What other needs aren't satisfied
- Library for all generations – think about whole of people
- Whose next here – how can we bring them in
- Radiators → area a craft of the time. Can they stay? Acknowledge craft → tin ceiling

CODE COMPLIANCE NOTES

Sprinkler Requirement

The value of the building is currently $1,297,600 such that the 30% trigger for a full building accessibility upgrade is (1,297,600 * .30) = $389,280. It should also be noted that this 30% trigger is evaluated across a rolling 36-month window and based on all permitted work.

Triggering building-wide accessibility would necessitate greater study, but at minimum would include compliant accessible route throughout with vertical access, as well as all public entrances and restrooms being upgraded, just to name a few of the costly repairs associated with tripping this threshold.

1. Plumbing Fixtures
    - If a plumbing permit is pulled for the project, the existing number of toilet fixtures are technically required to be re-evaluated. Based on the number of toilets we saw, the building is likely to be deficient with the new plumbing code's factors, which would result in an increase in number of toilets. This will be based on the anticipated actual number of building users (not calculated occupant load). We recommend this be studied early on as the increase in number of toilets and sinks may be a challenge for the project.
1. Sprinklers
    - The scoping language for the installation of sprinklers is provided below. We recommend that these triggers be considered as conditions for the project scope are brainstormed. Not yet knowing the full scope, but based on the total area of the building (~10,000 sf), there could be a chance that sprinkler protection is required to be added.

- MEBC Section 804.2.2 requires an automatic sprinkler system be installed throughout the work area where all of the following conditions are met based on a Level 2 Alteration:
    - Work area contains exits or corridors shared by more than one tenant or have exits or corridors serving an occupant load greater than 30;
    - Work area is required to be provided with automatic sprinkler protection in accordance with 780 CMR for new construction;
        - 780 CMR Section 903.2 requires sprinkler protection for a Group A occupancy with a fire area greater than 5,000 sf for new construction
        - 780 CMR Section 903.2 requires sprinkler protection for a Group B occupancy with a fire area greater than 12,000 sf for new construction
        - 780 CMR Section 903.2 requires sprinkler protection for a Group E occupancy with a fire area greater than 12,000 sf for new construction
    - Work area exceeds 50% of the floor area; and
    - Building has sufficient water supply for the design of a sprinkler system without the installation of a fire pump

Accessibility Requirement 521 CMR

- 521 CMR: the Rules and Regulations of the MAAB is a section of 780 CMR: the MA Amendments to the International Building Code 2015. 521 CMR governs the "design, construction, and renovation of public buildings to make them accessible to, functional for, and safe for use by persons with disabilities." The specific scoping provisions for renovations are reproduced in part here:
- 3.3 EXISTING BUILDINGS
- All additions to, reconstruction, remodeling, and alterations or repairs of existing public buildings or facilities, which require a building permit, or which are so defined by a state or local inspector, shall be governed by all applicable subsections in 521 CMR 3.00: JURISDICTION.
- 3.3.1 If the work being performed amounts to less than 30% of the *full and fair cash value of the building* and
- a. if the work costs less than $100,000, then only the work being performed is required to comply with 521 CMR; or
- b. if the work costs $100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.
- Exception: General maintenance and on-going upkeep of existing, underground transit facilities will not trigger the requirement for an *accessible entrance* and toilet unless the cost of the work exceeds $500,000 or unless work is being performed on the *entrance* or toilet.
- Exception: Whether performed alone or in combination with each other, the following types of *alterations* are not subject to 521 CMR 3.3.1, unless the cost of the work exceeds $500,000 or unless work is being performed on the entrance or toilet. (When performing exempted work, a memo stating the exempted work and its costs must be filed with the permit application or a separate building permit must be obtained.)
- (a) Curb Cuts: The construction of *curb cuts* shall comply with 521 CMR 21.00: CURB CUTS.
- (b) ***Alteration* work which is limited solely to electrical, mechanical, or plumbing systems**; to abatement of hazardous materials; or retrofit of automatic sprinklers and **does not involve the *alteration* of any *elements* or *spaces* required to be *accessible* under 521 CMR.** Where electrical outlets and controls are altered, they must comply with 521 CMR.
- **(c) Roof repair or replacement, window repair or replacement, repointing and masonry repair work.**
- (d) Work relating to septic system repairs, (including Title V, 310 CMR 15.00, improvements) site utilities and landscaping.
- **3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the full and fair cash value of the building (see definitions in 521 CMR 5.00), the entire building is required to comply with 521 CMR.**
- 3.3.3 Alterations by a tenant do not trigger the requirements of 521 CMR 3.3.1b and 3.3.2 for other tenants. However, alterations, reconstruction, remodeling, repairs, construction, and changes in use falling within 521 CMR 3.3.1b and 3.3.2, will trigger compliance with 521 CMR in areas of public use, for the owner of the building.

Accessibility Requirement 521 CMR (Continued)

521 CMR Section 3.9 HISTORIC BUILDINGS:

An historic building or facility that is listed or is eligible for listing in the National or State Register of Historic Places or is designated as historic under appropriate state or local laws may be granted a variance by the Board to allow alternate accessibility. If a variance is requested on the basis of historical significance, then consultation with the Massachusetts Historical Commission is required in order to determine whether a building or facility is eligible for listing or listed in the National or State Register of Historic Places. The Massachusetts Historical Commission may request a copy of the proposed variance request and supporting documentation to substantiate the variance request and its effect on historic resources. A written statement from the Massachusetts Historical Commission is required with the application for variance.

Title II of the ADA 28 CFR 35.151 Alterations:

(i) Alterations to historic properties shall comply, to the maximum extent feasible, with the provisions applicable to historic properties in the design standards specified in § 35.151(c).

(ii) If it is not feasible to provide physical access to an historic property in a manner that will not threaten or destroy the historic significance of the building or facility, alternative methods of access shall be provided pursuant to the requirements of § 35.150.

Qualified historic properties include properties listed in or eligible for listing in the National Register of Historic Places, and those designated under State or local law. Owners of historic buildings undertaking rehabilitation or restoration work should not use the alternative minimum requirements without first consulting the appropriate State Historic Preservation Officer (The Massachusetts Historical Commission). If it is determined by the Massachusetts Historical Commission that compliance with the full accessibility requirements would "threaten or destroy" the significance of a building or facility, the following alternative minimum requirements may be used:

- One accessible route must be provided from a site access point to an accessible entrance. Using a ramp with a 1 :6 slope is permissible for a run of up to 2 feet.
- One accessible entrance must be provided. If it is not possible to make the public entrance accessible, then an alternative, unlocked entrance is acceptable. Directional signage at the primary entrance and a notification system at the accessible entrance must be provided.
- If toilets are provided, only one must be accessible, and it may be unisex.

2024 Assessed Value of Amesbury Public Library: $1,297,600

30% of Assessed Value / 0.93 = **$418,581**

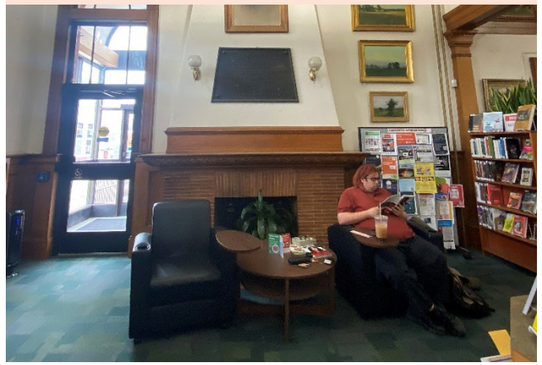
Within the last 36 months, $16,900 was spent = $401,681

If the cost of **permitted** work is more than $401,681 over 36 consecutive months, the whole building must comply with CMR.

Cost of Permitted work less than $100,000	Cost of Permitted work $100,000 - $401,681	Cost of Permitted work more than $401,681
Only the new work needs to comply with MAAB	Accessible Public Entrance, Accessible Restroom + Water fountain required if work is more than $100,000 of permitted work and not on the below list.	Requires Full Accessibility compliance with MAAB
The library can do work that does not require a permit: Finishes, furniture, and painting	The library can do the following work without an accessible entrance, restroom and water fountain and up to $401,681 of **permitted** dollars: Electrical Mechanical Plumbing Hazmat Roof repair/replacement Window repair/replacement Repointing and masonry repair Septic, site utilities, landscaping	Once you get above $401,681 in permitted construction, the exempted work counts toward the permits and the whole building requires to comply with 521 CMR regulations.
	The Library can do permitted work outside of the list, but then an accessible entrance and restroom are required. The Library does not have an accessible restroom on an accessible route.	
	If the work is performed on an entrance or toilet, the permitted costs apply – Example: plumbing work on a toilet – counts toward the permitted work. Example – Repairing concrete steps – counts toward the permitted work	

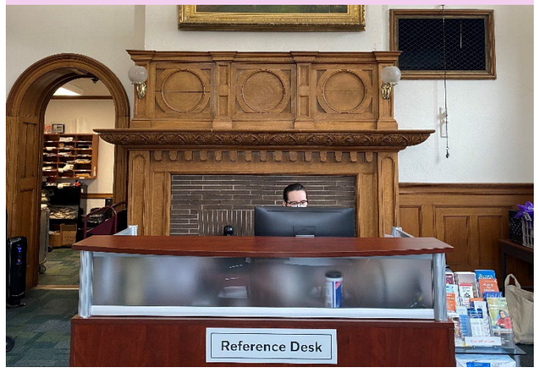
Accessibility Recommendations for Amesbury Public Library

Public Space



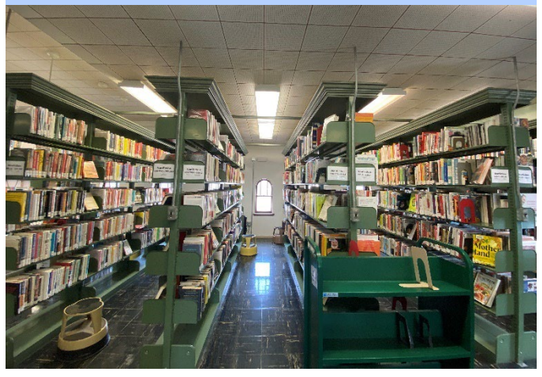
- Accessible public spaces (both indoor and outdoor).
- Accessible routes within the site to accessible facility entrances from site arrival points, accessible parking and accessible passenger loading zones, public streets and sidewalks, public transportation stops.
- Furniture providing required clearances and located on accessible routes.
- Assembly areas providing wheelchair access spaces, companion seats and seats with folding or retractable armrests, as well as accessible routes to them.

Staff + Support Space



- Staff accessible parking spaces, staff common-use spaces (break room, locker rooms and restrooms).
- Areas used only by employees as work areas must meet requirements for access to approach, entry, and exit the work area (connecting accessible route to the work area and a compliant entrance, including entry doors) and accessible means of egress.

Program Space

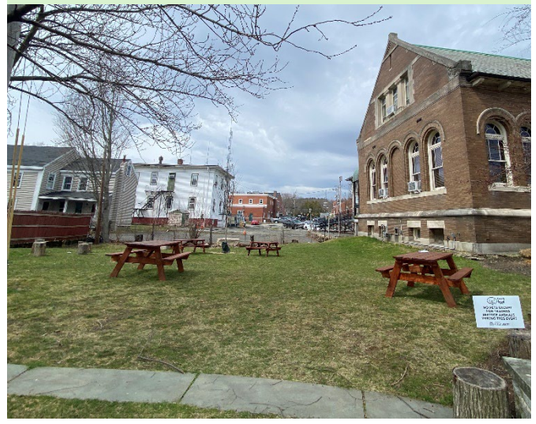


- Furniture providing required clearances and located on accessible routes. (5% of the tables and computer desks, reception counters, library catalog).
- Accessible routes clearances (protruding objects, headroom, widths) in corridors, aisles, stacks, and check-out areas.

Infrastructure

- Public and staff accessible entrance and means of egress, restrooms, and horizontal and vertical circulation.
- Clear wayfinding and signage to stairs, restrooms, and destinations within the building.
- Tactile/Braille signage identifying permanent rooms and spaces.
- Visible and audible alarm system.

Outdoor Space



- Accessible outdoor spaces used to house programs.
- Landscape supporting exterior accessible route and entrance to the building in an integrated manner, including new paths in currently unused areas.
- Site amenities, such as seating, trash/recycling, bike parking, providing level clear floor spaces, accessible reach ranges, and located on accessible routes.
- Wayfinding and site information.

Funding Opportunities

Library Grants

- Massachusetts Cultural Facilities Fund
    - https://massculturalcouncil.org/organizations/cultural-facilities-fund/
- Public Library Construction Grant – up to 50% of construction cost
    - https://mblc.state.ma.us/programs-and-support/construction/construction.php

Preservation Funds

- CPA funds
- NPS Historic Preservation Fund grant
https://www.nps.gov/subjects/historicpreservationfund/index.htm

CODE RED CONSULTANTS
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154 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MA 01772

Memorandum

Date:	June 14, 2024	Project #:	241137
To:	Adrienne Cali – Bruner/Cott Architects		
From:	Lea Dighello – Code Red Consultants		
Re:	Amesbury Public Library – Preliminary Design Code Analysis		
Cc:	Jason Jewhurst – Bruner/Cott Architects Brian Kuhn, P.E. & Anna Correia – Code Red Consultants		

Code Red Consultants has prepared this code narrative as part of the Amesbury Public Library Conditions Assessment & Facilities Masterplan project located in Amesbury, MA. The project consists of an existing conditions assessment to understand the status of the building's current systems and to develop a masterplan for future phased work. This memo provides code triggers and recommendations aimed at the study of potential future projects. Note that Code Red Consultants is not scoped for a detailed accessibility review or energy code consulting. Information within this memo is based on existing drawings and a visual survey of the existing building on April 22, 2024 conducted by Anna Correia and Lea Dighello.

The primary areas of focus based on our analysis are listed below and are expanded upon within each of their respective sections within this document.

- Potential for future sprinkler system within the building based on future work.
- Recommendation to upgrade the existing fire alarm system based on the existing layout.
- Enclosure of the vertical openings as may be required based on future work.
- Minimum number of plumbing fixtures as an analysis is required when a plumbing permit is pulled.
- Accessibility Upgrades which may be required based on construction costs of permits pulled across a 3 year window; both as it refers to the potential to exceed the threshold for full accessibility upgrades as well as the $100,000 threshold which requires an accessible entrance, toilet (on an accessible route), and drinking fountain (if provided, also on an accessible route).

Current Applicable Codes

Building *	780 CMR – Massachusetts State Building Code 10th Edition, which is an amended version of the 2021 International Building Code (IBC) and the 20121 International Existing Building Code (IEBC)
Fire	527 CMR 1.00 - Massachusetts Comprehensive Fire Safety Code, which is an amended version of the 2021 Edition of NFPA 1, Uniform Fire Code
Accessibility	521 CMR – Massachusetts Architectural Access Board (MAAB) Rules and Regulations 2010 ADA Standards for Accessible Design
Electrical	527 CMR 12.00 - Massachusetts Electrical Code, which is an amended version of the 2023 Edition of NFPA 70, National Electrical Code
Mechanical	2021 International Mechanical Code (IMC) as amended by 780 CMR 28.00.
Plumbing	248 CMR 10.00 – Uniform State Plumbing Code, Updated 12/08/2023
Energy	225 CMR 23.00, *Massachusetts Commercial Stretch Energy Code*
Elevator	524 CMR – Massachusetts Board of Elevator Regulations, which is an amended version of the 2013 ANSI A17.1, *Safety Code for Elevators and Escalators*
Other	National Fire Protection Association (NFPA) Standards, as referenced by the above codes, including the following: - 2021 NFPA 10: *Standard for Portable Fire Extinguishers* - 2019 NFPA 13: *Standard for the Installation of Sprinkler Systems* - 2019 NFPA 72: *National Fire Alarm and Signaling Code*

* The 10th Edition of 780 CMR is anticipated to be adopted in the Spring/Summer 2024 and the concurrency period will end January 1, 2025. Any project filing for permit after this date will require compliance with the 10th Edition of 780 CMR. Based on the timeline of the project, it is anticipated that any work will be permitted under the 10th Edition of 780 CMR. No major implications between the 9th Edition and 10th Edition of 780 CMR are anticipated with respect to the content of this report.

Classification of Work

The project does not have a fully formed scope of work and therefore may fall into one or more of the following classifications of work. It is assumed that the scope of work will not include the construction of an addition or a change of occupancy. The classification of work will be required to be determined once the extents of scope of the project are defined. Many code implications will be derived from this classification.

Repair – Includes the patching or restoration or replacement of damaged materials, elements, equipment, or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements (MEBC 502.1).

Level 1 Alteration – Includes the removal and replacement of the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose (MEBC 503.1).

Level 2 Alteration – Includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any

system, or the installation of any additional equipment in less than 50% of the aggregate building area (MEBC 504.1).

Level 3 Alteration – Includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment in more than 50% of the aggregate building area (MEBC 505.1).

Occupancy Classification

The building consists of the following primary occupancy classifications:

- Library Areas: Group A-3, Assembly (780 CMR 303.4)
- Offices: Group B, Business (780 CMR 304.1)
- Building Support Spaces: Group S-2, Storage (780 CMR 311.3)

A change of occupancy is not anticipated as part of any future project.

Construction Type

The existing building consists of a noncombustible exterior and wood deck flooring. Based on the site visit observations, the building's construction type most closely resembles Type III construction.

FIGURE 1: BUILDING CONSTRUCTION

Height & Area

Compliance with new construction height and area limitations is not required since the project does not include a change in occupancy or the construction of an addition.

Corridors

Level 1 and 2 do not contain corridors; however, the office configuration on the Lower Level can be interpreted as having corridors. For a non-sprinklered building, corridors serving more than 30 occupants are required to be rated 1 hour (780 CMR 1020.1). If the work area touches these walls on the Lower Level, the altered portions will be required to be rated. If a future project includes the installation of sprinklers throughout the building, corridors are not required to be rated.

Vertical Openings

While the scope of work is not yet defined, the enclosure of the vertical openings (minimally in 30-minute construction) should be accounted for in the masterplan. The vertical opening requirements are described in detail below.

The building contains the following vertical openings:

- A stair that connects the Lower Level and Level 1. The stair is open to the

Lower Level and has a nonrated door at Level 1.
- A stair that connects Level 1 and Level 2 that is open to both floors.
- A stair that connects the Lower Level to Level 2 that is open to all floors.

Requirements of enclosing vertical openings is dependent on the level of work as described below:

- Level 1 – vertical openings are permitted to remain.
- Level 2 – vertical openings in the work area are required to be enclosed in 30-minute enclosures unless a provision of 780 CMR allows for unenclosed vertical openings (MEBC 803.2.1).
    - Where the work area is greater than 50% of the floor area, the above requirements apply to all vertical openings (MEBC 803.2.2).
    - Where the work area is greater than 50% of the floor area, means of egress stairs are required to be enclosed in smoke tight construction on the highest work area and below (MEBC 803.2.3).
- Level 3 – Means of egress stairs are required to be enclosed in 803.2.1 from the highest level of work area and below (MEBC 903.2).

FIGURE 2: STACK STAIR

Means of Egress

New elements of the means of egress are required to meet the code for new construction.

Means of egress requirements are dependent on the level of work as summarized below:

- Level 1 & 2 – Work is required to be done in a manner that does not lessen the existing level of life safety.
- Level 3 – Exit signs and egress illumination are required to be provided as prescribed within 780 CMR from the highest/lowest work area to the level of exit discharge & the requirements of Level 1 & 2.

If the stair from the Lower Level to Level 2 or the half flight to the mezzanine are rebuilt as part of a future project, they will be required to be required to a minimum

of 36 inches of width where serving 49 or less occupants and 44 inches where serving more than 49 occupants. They are currently both undersized.

The following are major means of egress deficiencies that were observed and are recommended to be corrected regardless of the scope of work:

- The Level 2 children's aisles are spaced closely such that a clear unobstructed egress path of 36" minimum is not maintained everywhere. If the shelving or furniture is reconfigured, recommend providing compliant aisles.
- Exit signage is lacking throughout the building and most signs are not illuminated. Replace exit signs where noncompliant and add exit signs where necessary for wayfinding. *This is an item that has been noted as a concern of the Town's Building Department on the 2023 Inspection Report.*
- Panic hardware is not provided in many locations. This hardware is required where serving more than 49 assembly occupants. Replace existing hardware with panic hardware. *This is an item that has been noted as a concern of the Town's Building Department on the 2023 Inspection Report.*
- The front and rear exit doors on Level 1 are provided with non-compliant locking hardware (ie deadbolts). Remove locking hardware or replace with compliant solution.
- Handrails and guards are noncompliant throughout including missing handrails, handrail and guard height, guard openings, and handrail extensions. Replace existing noncompliant handrails and guards with compliant handrails and guards. *This is an item that has been noted as a concern of the Town's Building Department on the 2023 Inspection Report.*
    - The mezzanine's guards are currently provided with moveable bookcases to alleviate the guard which is mounted too low. Guards are required where the change in elevation is more than 30 inches, within 36 inches horizontally to the edge of the open side (780 CMR 1015.2). When using furniture to prevent the change in elevation, it's recommended that such furniture be fixed and be a minimum height of 42".
    - Windows on the mezzanine area are lower 42" along the walking path and are not provided with a guard system. The windows should either be provided with a guard system or it should be confirmed that the windows meet the strength and attachment requirements of 780 CMR 1607.8
- There are excessive thresholds in many locations. Reduce/repair the thresholds to eliminate trip hazards.
- Emergency lighting appears to be lacking throughout. Confirm emergency whether the lighting fixtures serve emergency lighting function and recommend testing for lighting level coverage during emergency power. *This is an item that has been noted as a concern of the Town's Building Department on the 2023 Inspection Report.*

FIGURE 3: LEVEL 1 REAR EXIT

Automatic Sprinkler System

The building is non-sprinklered. The triggers for retroactively adding sprinklers to a building are listed below:

780 CMR 34:
MEBC Section 804.2.2 requires an automatic sprinkler system be installed throughout the work area where all of the following conditions are met based on a Level 2 or 3Alteration:

- Work area contains exits or corridors shared by more than one tenant or have exits or corridors serving an occupant load greater than 30;
- Work area exceeds 50% of the floor area; and
- Building has sufficient water supply for the design of a sprinkler system without the installation of a fire pump

MGL
In addition to the requirements of the 780 CMR 34, Massachusetts General Law Ch. 148 Sec. 26G requires every building or structure, including major alterations thereto, which totals more than 7,500 gross square feet to be protected throughout with an automatic sprinkler system. The 7,500 sf threshold includes "the sum total of the combined floor areas for all levels, basements, sub-basements, and additions, in aggregate, measured from the outside walls, irrespective of the existence of interior fire resistive walls, floors and ceilings".

An advisory document published by the Sprinkler Appeals Board in 2009 expands upon the application of this MGL to existing buildings. An existing building is required to be protected with sprinklers where **all** of the following four conditions are satisfied:

1. Building gross square footage is more than 7,500 sf
2. Sufficient water and water pressure exist to serve the system.
3. The nature of work to the building is considered as "major", including **any one** or more of the following:
    a. The demolition or reconstruction of existing ceilings or installation of

suspended ceilings;
   b. The removal and/or installation of sub flooring, not merely the installation or replacement of carpeting or finished flooring;
   c. The demolition and/or reconstruction or repositioning of walls or stairways or doors; or
   d. The removal or relocation of a significant portion of the building's HVAC, plumbing, or electrical systems involving the penetration of walls, floors, or ceilings.

4. The scope of work is proportional to the cost/benefit of sprinkler installation. To evaluate whether this is satisfied, the advisory document lists **either** of the following as thresholds for requiring sprinkler protection:
   a. Work affects 33% or more of the total gross square footage; or
   b. Total cost of the work (excluding cost to install a sprinkler system) is equal to or greater than 33% of the assessed value of the building, as of the date of permit application.

It is the conclusion of the advisory document that if the nature of the work described in item (3) meets at least one of the conditions in item (4) then it is reasonable to conclude that the alterations and modifications are considered as "major", thus requiring sprinkler protection. However, ultimately it is the determination of the local fire code official to determine whether the renovation is considered as "major" or not. Note that if there is a series of modifications being conducted over a reasonably short period (approximately 5 years or less per the advisory document), it is reasonable to conclude that such work is cumulatively considered as a "major alteration" if it collectively satisfies the above conditions.

Within the last 5 years, it appears that $16,900 has been spent towards the 33% trigger for the building.

While on site, it was mentioned that the manuscript room is not currently provided with means for fire protection, but the library expressed concerns with either a water based or foam based system based on the fragility of the manuscripts. An oxygen reduction system could be a potential system for study during the masterplan.

Fire Alarm System

A minimal fire alarm system is provided with one manual pull station and one notification appliance each on the Lower Level and Level 1. Smoke/heat detection is provided throughout the building except in the picture books area and the stack area on Level 2. The original installation of this system is not well understood; however, it is understood that the Town of Amesbury has expressed concerns over the Library not having system testing reports on record.

The system is required to maintain the existing level of life safety for Level 1 and 2 Alterations (MEBC 703.1); however, the system is also required to be maintained in good working order (527 CMR 1.00 13.1.8).

Within a Level 3 alteration, a fire alarm system complying with new construction requirements is required (MEBC 904.2.1).

Based on unique device layout, Town feedback thus far, and likely eventual concerns from the fire department, it's recommended that upgrading the system to

be a manual system compliant with NFPA 72 be studied as part of the masterplan. Please note that if a sprinkler system is installed, this will require a fire alarm system that can provide monitoring and notification capabilities.

Accessibility

Buildings in Massachusetts are subject to compliance with 521 CMR and the ADA. All new work will be required to comply with these regulations.

521 CMR Section 3.3 contains the following scoping requirements for work occurring in existing buildings. The costs referred to in the scoping requirements below are cumulative for all work to the building within a rolling 36-month period:

1. If the work occurring within the building is less than $100,000, then only the work being performed is required to comply with 521 CMR.

2. If the work costs more than $100,000 but less than 30 of the full and fair cash value of the building then in addition to the work being performed, the following accessible features are also required to be provided in the building:
    a. Accessible entrance
    b. Accessible toilet room
    c. Accessible drinking fountain (if provided)
    d. Accessible public telephone (if provided)

    Exception: Whether performed alone or in combination with each other, the following types of alterations are not subject to #2, unless the cost of the work exceeds $500,000 or unless work is being performed on the entrance or toilet. (When performing exempted work, a memo stating the exempted work and its costs must be filed with the permit application or a separate building permit must be obtained.)
    a. Curb Cuts: The construction of curb cuts shall comply with 521 CMR 21.00: CURB CUTS.
    b. Alteration work which is limited solely to electrical mechanical, or plumbing systems; to abatement of hazardous materials; or retrofit of automatic sprinklers and does not involve the alteration of any elements or spaces required to be accessible under 521 CMR. Where electrical outlets and controls are altered, they must comply with 521 CMR.
    c. Roof repair or replacement, window repair or replacement, repointing and masonry repair work.
    e. Work relating to septic system repairs, (including Title V, 310 CMR 15.00, improvements) site utilities and landscaping.

3. If the work, and all permitted work within a 36 month rolling window, costs more than 30% of the full and fair cash value of the building (prorated based on public spaces), then all public portions of the building are subject to the requirements of 521 CMR.

The current assessment value of the building is listed in the City of Amesbury's online database as $1,297,600. The Massachusetts Department of Revenue has assigned Amesbury an assessment ratio of 0.93. The threshold to trigger full

compliance with 521 CMR for the building is ($1,297,600/0.93) * 0.3 = **$418,581**.

Within the last 36 months, it appears that $16,900 has been spent.

The spaces that are altered as part of renovation work are also required to be designed to be accessible in accordance with the 2010 ADA (28 CFR 35.151(b)(a)). The ADA requires that upgrades be made along the accessible route to and within the renovated area if they can be made within 20% of the renovation cost (28 CFR 35.151(b)(4)(iii)(A)).

While an accessibility review was not conducted, the following considerations are recommended to be studied for future master planning:

An elevator is not provided in the existing building and no accessible restrooms exist on the floor with the accessible entrance. As part of the $100,000 trigger, an accessible route to the accessible restroom is required, whether that be new vertical access to an existing restroom which being made compliant, or a new restroom being added to the accessible level. Further, vertical access throughout the building would provide better access to different types of patrons, regardless of being required based on the work.

If the 30% threshold is surpassed, several upgrades would be required (hardware, stair characteristics, handrails, etc), at which time the historic listing/eligibility of the building will play a part in the study for these upgrades.

Additionally, the Town Building Department has cited the accessible ramp as a temporary device and calls out the need for a permanent solution and illumination.

Plumbing

248 CMR 10.00, *Uniform State Plumbing Code*, regulates the minimum number of plumbing fixtures. The requirements set forth in 248 CMR 10.10(15) Table 1 apply to plumbing system installation, alteration, or extension projects where a plumbing permit is required. The minimum number of plumbing fixtures are based upon the use and occupancy classification of the building or space and the population as established by the authority having jurisdiction.

Table 1: Plumbing Factors

Function	Toilets		Urinals	Lavatories (each sex)	Drinking Fountain	Mop Sink
	Female	Male				
Libraries	1/25 up to 200 1/50 for 201-500 1/100 for over 500	1/50 up to 200 1/100 for 201-500 1/100 for over 500	Up to 50%	1 per 50	1 per set of restrooms	1 per floor

There are two single user restrooms on the Lower Level and one single user restroom on Level 2. Based on this configuration, the maximum program load for the library is 100 occupants. The program load for libraries is based on the number of seats in the building and the maximum number of employees on duty at any

given time. The program load will need to be determined by the future furniture configuration.

The following table demonstrates how many single user restrooms are required based on different population thresholds (248 CMR 10.10 Table 1). Note that when four or more toilet fixtures are required, they are required to be provided in pairs on the same level (248 CMR 10.10(15)(g)(2)). If multi-stall restrooms are provided, the number of fixtures will need to be recalculated.

Number of Restrooms	Maximum Occupants Served
3	100
4	100
6	200

24 July 2024

Adrienne Cali, AIA
Associate
Bruner/Cott Architects
225 Friend Street, Suite 701
Boston, MA 02114

Project 240468 – Condition Assessment and Prioritized Treatment Plan, Amesbury Public Library, 149 Main Street, Amesbury. MA

Dear Adrienne:

1. BACKGROUND

The Amesbury Public Library (APL), designed by Penn Varney in the Romanesque Revival style and built in 1900, is located on Main Street in downtown Amesbury and serves as a cultural hub for the community. While not yet landmarked, APL is included in the Massachusetts Historical Commission's Cultural Resources Information System (Inventory Number AME.23) and is undergoing an historic designation nomination and review process.

APL is T-shaped in plan and consists of the following eras of construction (Figure 1):

- The main building, built in 1900, is a mass-masonry bearing-wall structure with wood floor and roof framing and some steel floor girders and steel roof members. The building structure is separated into north and south wings (Figure 1), with a masonry wall along the wing intersection.
- A metal-framed glass vestibule and prefabricated metal ramp, constructed circa 2007, were reportedly added as a temporary means to improve access to the first floor of the building.

Figure 1 –APL aerial view, indicating building extents.

Refer to architectural narrative for additional building and project background information.

2. DOCUMENT REVIEW AND REFERENCE DOCUMENTS

- Massachusetts Cultural Resource Information System Records, Inventory Form B, Inventory Number AME.23.
- Report entitled "Water Infiltration Investigative Report", prepared by Raymond T. Guertin and dated February 2022.
- City of Amesbury Annual Library Building Inspection Reports, prepared by the Office of Inspectional Services and dated October 2019, January 2022 and February 2023.

- Report entitled "Amesbury Public Library Feasibility Study", prepared by Tappe Associates, Inc. and dated December 2000, which includes a letter discussing existing conditions of the building, prepared by LeMessurier Consultants and dated July 2000.
- Report entitled "Amesbury Public Library Building Program", prepared by Vandermark Consulting at the request of the Trustees of the APL and dated January 2000.
- "Specifications, Public Library Building at Amesbury MA", by Penn Varney Architect, Lynn, MA, and dated July 2, 1900.
- Stack shop drawing Sheets 1 through 5 by Art Metal Construction dated 26 July 1955.

Based on our review, we understand APL is aware of the following overall building needs:

- Annual maintenance and near-term repairs of various building enclosure systems are warranted to reduce water infiltration, address deteriorated conditions, and protect the historic building fabric.
- The building needs to provide better access and offerings for community members of all backgrounds, interests, ages, and physical abilities, and this likely requires planning for a future expansion/addition to supplement the existing collections and gathering spaces.

Additionally, several background documents discuss options for APL to improve the overall energy efficiency of the building, primarily by replacing mechanical units that are beyond their useful service life. Interior operating conditions associated with modified and/or new mechanical systems (i.e. interior temperature and relative humidity set points), if any, should be coordinated with the building enclosure work to confirm no adverse effects are created. This work is beyond the scope of our current project.

3. OBJECTIVE AND LIMITATIONS

The primary objective of our work is to assess the condition of the existing building structure to help the City of Amesbury understand any structural concerns and to provide a prioritized treatment plan that indicates the structural maintenance and repairs that are necessary to support the long-term use of the building.

We base our condition assessment on observations made of representative interior and exterior portions of the building and exposed structural components in these areas. Our scope did not include creating or documenting exploratory openings to evaluate concealed conditions. We use our engineering training and experience working on similar structures to guide our observations to evaluate the current condition of the existing structural elements. Due to the

limited scope and visual nature of our assessment, it is unlikely that we identified all individual components of various structural systems that may require attention or repair. We include recommendations for repairs based on our visual investigation. In some cases, we also recommend additional inspection scope, including exploratory openings, to clarify uncertain building conditions in areas of specific importance to the proposed renovations.

Reference the building envelope report for a condition assessment of the exterior masonry walls.

4. OBSERVATIONS

4.1 Structural Observations

Rachel E. Shanley and Rachel M. Henry of Simpson Gumpertz & Heger Inc. (SGH) visited the site on 22 April 2024 to observe the structural condition of the Amesbury Public Library. We base our assessment on observations we made from representative areas in the building without removing finishes. Given the presence of existing wall and ceiling finishes throughout, as well as limited safe access pathways in the unfinished attic, we were unable to view many of the structural elements.

We organize our observations by area and/or structural components in the following sections. Refer to Appendix A for plans and building sections indicating photo locations. Note that the photo locations are keyed to where we were standing when taking the photo, so we indicate photos of the first-floor framing on the lower-level floor plan.

4.1.1 Foundation Walls and Basement

The foundation wall construction is typically mortared fieldstone and brick masonry (Photo 1). It is not typically visible from the interior spaces, but we were able to view the foundation walls at some back-of-house spaces in the basement. At the utilities closet along the south exterior wall, the finishes are removed, exposing a 2x4 stud wall with a plaster wall behind it, and the fieldstone foundation wall, which appears in good condition (Photo 2 and 3).

- A portion of the slab-on-grade is removed in the utilities closet between the bathrooms, with below-grade plumbing exposed (Photo 4). The slab-on-grade is approximately 2 in. thick at this location (Photo 5).
- A portion of the slab-on-grade is removed and sawcut along the north wall in the Utilities/Storage room, with below-grade plumbing exposed. There is apparent differential settlement of the slab at the sawcut portion (Photo 6).
- There is efflorescence on the interior face of the east wall of the North Wing (Photo 1).

- Mortar is missing and deteriorated at the north fieldstone wall at the basement storage area in the Printer/Copier Room (Photo 7).

4.1.2 First Floor

The first-floor structure typically consists of wood framing spanning to intermediate steel beams and joist pockets in the exterior foundation walls.

The North Wing divides into three bays by 10 in. deep steel beams spanning north-south at the approximate third point of the wing. Wood joists, approximately 2 in. wide by 13-3/4 in. deep, span east-west between the steel beams and foundation walls at approximately 16 in. on center. The wood joists bear on top of the steel beams, with an approximate 1 in. notch, making the depth of joist above the beam approximately 12-3/4 in. deep. X-shaped wood bridging braces the joists at their approximate mid-span (Photos 8, 9, and 10). The steel beams bear on round steel posts (Photo 10). At some, but not all, joist pockets, steel straps mount to the top of the joists and extend into the exterior masonry walls (Photo 11). The joist spans range from 10 ft10 in. to 12 ft-8 in.

The South Wing divides into three bays by steel beams spanning north-south at the approximate third points (Photo 12). Where we were able to observe a steel beam up close along the wall between the Utilities/Storage Room and Workshare Space; the beam appeared to be an 8-1/2 in. deep beam, with a horizontal steel stiffener running longitudinally approximately 4 in. above the bottom flange (Photo 13). In the center bay, wood joists, approximately 2-1/2 in. wide by 12 in. deep, span east-west between the steel beams at approximately 16 in. o.c. The joists bear on the horizontal steel stiffener. At the east bay, wood joists, approximately 2 in. by 5-1/2 in. deep span between joist pockets in the exterior wall and the steel beam. They bear on top of the steel beam, with an approximately 1 in. notch.

- We observed some localized staining consistent with water infiltration on a floor joist in the North Wing but did not observe any deterioration associated with staining (Photo 14).

- Just south of the rear (north) entrance, there is a 44 in. x 44 in. floor infill framed with 2 x 4s and plywood sheathing. Sheet metal extends along the face of the surrounding typical floor framing that makes the perimeter of the infilled opening (Photos 15 and 16).

- The hard ceiling in the basement storage area within the Printer/Copier Room has staining and cracking consistent with water infiltration. Additionally, the paint on the interior face of the east exterior brick wall is peeling, particularly at the mortar joints (Photo 17).

- We observed a longitudinal crack/check along a first-floor joist above the Workshare Space in the South Wing (Photo 18).
- Above a portion of the Staff Breakroom, there is 2 x 8 sub-framing below the existing First floor framing (Photo 19).
- There are two steel posts in the Utilities/Storage Room that are not part of the original building structure. Both bear on the lower-level slab-on-grade with no apparent foundation and they support blocking that is tight to the ceiling (Photos 20 and 21).
- There is missing brick masonry at both sides of the arch that forms the opening in the wall separating the North Wing from the South Wing (Photo 22).

4.1.3 Stack Structure

From the background documentation, we understand that the Library removed their original stacks in the North Wing and installed the self-supporting two-story stack structure in its place (Photos 23 and 24) in 1955.

The stack structure bears on the first floor. Each line of shelves has a series of steel posts, spaced at 3 ft o.c. and the spacing between lines of shelves is approximately 4 ft – 8 in. o.c. The stack structure posts support the upper stack floor structure **(called Second Floor)**, but they do not appear to align with any significant structural elements on the first floor, such as columns or steel beams. The stack posts on the first floor are typically constructed of two gage-metal hat-shaped members with a steel plate sandwiched between them (Photo 25). The stack posts on the Second Floor align with the first-floor stack posts and are 2 in. by 2-1/2 in. hollow rectangles (Photo 26). There are additional rectangular posts against the south wall of the stack space (Photo 27). There are diagonal braces between some stack posts at both levels (Photo 25).

The walking surface of the second-floor stack structure extends to the east and west exterior walls, but it is unclear if there is a gravity support at the exterior walls or if the stack floor structure cantilevers (Photo 28). The 1955 drawings show an angle along the exterior wall, but it is not clear if the angle connects to the masonry. The second-floor stack structure is 3-1/2 in. thick at the stair opening (Photo 29).

The tops of the second-floor stack shelves are braced by two lines of small continuous channels that run north-south. The shelves along the north elevation clip to the north exterior wall. (Photo 30).

We did not observe evidence of damage or deterioration to the stack structure.

4.1.4 Second Floor

The first floor of the South Wing has hard ceilings throughout (Photo 31), so we were not able to observe the second-floor framing condition and configuration at the South Wing. Most of the ceilings appear to be original plaster, but the ceiling in the Reference Room appears newer (Photo 32).

- The plaster ceiling in the Amesbury Room (southeast corner) has extensive cracking. There is an additional small crack in the wall finishes that extends from the top of a window to the ceiling. (Photo 33).

- The Main Stair wall finishes have cracking at the approximate elevation of the Second floor (Photo 34).

The Second Floor at the southmost portion of the North Wing is lower than the Second Floor of the South Wing. It has a drop ceiling over the Director's Office, so we were able to review the framing at that location (below the Teen Area). The framing over the Director's office is 1-3/4 in. wide by 9-5/8 in. deep wood joists at 16 in. o.c., spanning north-south. A hard ceiling prevented us from viewing the condition and configuration of the framing above the corridor and above the Assistant Director's Office.

- The wood joists above the Director's Office showed staining consistent with water infiltration but did not show evidence of deterioration (Photo 35).

- The plaster ceiling in the Assistant Director's office has a large crack (Photo 36).

- The wall plaster is cracked at the south gable (Photo 37).

- The plaster has large cracks above and below the Second-Floor window at the center of the north wall of the North Wing (Photos 38 and 39).

4.1.5 Roof

The south portion of the T-shaped library roof is a cross-gabled roof, with a front gable along the Main (South) Entry. There are hard ceilings throughout the South Wing, but we were able to view some rafters and steel beams through small storage closets along the north and south walls of the South Wing. In the storage closets, we observed 2 in. wide by 7-3/4 in. deep rafters at 20 in. o.c., running north-south. Some locations have larger rafter members. Rafters typically bear on a wood sill on the masonry wall (Photo 40), but they may also incidentally bear on a wood wall at the face of the storage closet (Photo 41). A 2 in. wide by 9 in. deep hip rafter appears to support the cross gable of the North Wing. A built-up steel beam running north-south along the roofline aligns with the approximate third point of the South Wing (Photo 42).

- The rafters show staining consistent with water infiltration (Photo 43), but we did not see significant deterioration.
- One large rafter shows what appears to be insect damage and insect mitigation repairs (Photo 44). We did not see evidence of insect damage on any nearby rafters or sheathing.
- The plaster is cracked at the east side of the central skylight (Photo 45).

The North Wing has a gable roof with a hip at the north elevation; a dormer extends north from the hip. We accessed the north portion of the North Wing via a roof hatch. Much of the existing ceiling is still in place in the attic, concealing the roof framing (Photo 46), but we were able to view steel roof trusses that penetrate the ceiling. The steel trusses appear in good condition. The mid-1900s wood ceiling framing runs north south, and it appears in good condition, but much of it is concealed by insulation.

4.1.6 West Entry Vestibule– 2007 Addition

The 2007 vestibule bears on a concrete foundation at its north side (Photo 47) and appears to be supported by an existing masonry wall at the south side, but the attachment is obscured by plywood finishes. Two different vintages of plywood sheathing conceal the underside of the vestibule floor (Photo 48). The foundation wall is in good condition, with minor staining from its exterior exposure. We suspect that the vestibule floor construction is wood 2x members spanning north-south, but we were not able to directly observe them because they are obscured by finishes. We observed staining on the underside of the sheathing.

5. DISCUSSION AND RECOMMENDATIONS

5.1 Structural Discussion and Recommendations

Below we discuss our observations and provide repair recommendations for the existing structure. We summarize our recommendation and provide a recommended timeline in the Conclusion section of this report.

5.1.1 Foundation Walls and Basement

The visible portions of the foundation walls are typically in good condition. The missing mortar and efflorescence are consistent with water infiltration through the exterior masonry walls. Repointing the exterior walls above grade will help to mitigate water infiltration. Repointing the interior of the foundation walls will help to consolidate and stabilize the mortar in the foundation wall below grade.

The two areas of locally demolished slab-on-grade do not present a structural concern, but they do increase the risk of pests and present a tripping hazard. While performing construction in back-of-house spaces, we recommend infilling the slab-on-grade or providing access hatches for below-slab plumbing.

5.1.2 First Floor

The first-floor framing that we observed is typically in good condition. While there was isolated evidence of water infiltration, we did not observe any floor framing or sheathing that is damaged from repeated or ongoing exposure to moisture. Where we were able to observe the ends of framing members at the joist pockets in the exterior walls, the wood was in good condition.

We note that there does not appear to be any reinforcing in the first-floor structure below the stack posts; the stacks bear on the typical floor framing. Despite the large, concentrated loads, we did not see evidence of overstress or excessive deflection associated with the loads from the stack structure.

We observed modifications to framing near the rear entrance and above the Staff Breakroom but did not observe any damage associated with the framing modifications, so they are not in need of repairs. If APL intends to reorganize programming to increase loads at these locations, we recommend a structural review to determine if strengthening is required to support new loads.

We did not observe deflection associated with the cracked/checked sister joist above the Workshare Space, nor did we feel a soft spot when walking on the First floor in that area. The crack is likely due to a defect in the wood and not from impact damage or structural insufficiency.

Since there is a ceiling in the Utilities/Storage Room we were not able to determine why the two steel posts are in place. We suspect that they are associated with a large duct that is immediately south of them; though we did not see floor openings associated with the duct. While the posts are not bearing on footings, we did not observe any structural distress associated with the posts.

We did not observe any structural distress associated with the missing brick masonry at both sides of the arch separating the North and South Wings, but the arch supports the masonry above, so we recommend masonry repairs at this location during the next building-wide masonry restoration project.

We have the following recommendations at the First floor:

- Remove a portion of the stained hard ceiling in the basement storage area within the printer copier room for a structural engineer to review the condition of the floor joists, specifically at the beam pockets in the east wall.
- Provide a sister joist at the cracked/checked First floor joist above the Workshare Space.
- Remove a portion of the hard ceiling adjacent to the two steel posts in the basement Utilities/Storage room for a structural engineer to review the configuration of framing and intent for the steel posts.
- Provide masonry repairs at the missing brick masonry at the arch that separates the north and south wings.

5.1.3 Stack Structure

The stack structure appears in good condition. We did not observe any evidence of damage, modifications, or deterioration of the stack structure.

5.1.4 Second Floor

It is difficult to assess the condition of the Second-Floor framing because it is typically obscured by ceiling plaster.

There is extensive cracking at the ceiling of the Assistant Director's office and at the Amesbury Room. We suspect, based on the original drawings, that the framing above the office was not originally intended for occupant live load because there was originally no access to that space. We do not know if the renovation converting this space into the Teen Area included strengthening or supplemental framing.

Plaster cracking can occur for several reasons, many of which are not inherently structural. These reasons may include, but are not limited to:

- Deflection of the framing above, either due to long-term creep or from overstress.
- Failure of the lathe or its attachment to the framing above.
- Large swings in interior temperature or humidity.
- Water infiltration.

We suspect that the minor cracking at the Main Stair is either due to temperature and humidity swings or a small amount of settling/shrinkage in the wood framing around the stair. We do not

suspect a structural concern associated with the cracking. Any repairs would be aesthetic in nature.

We suspect that the plaster cracking at the south gable is due to temperature, humidity, or water infiltration; we did not observe any signs of cracking or movement in the brick masonry on the exterior of the building. This is not a structural concern. Any repairs would be aesthetic in nature.

We observed water staining on the joists above the Director's Office, but since the staining is not near the exterior wall or any apparent pipes, we suspect that the cause of water infiltration is resolved, and we do not have concerns about the condition of the framing.

The extensive cracking in the plaster above and below the Second-Floor window at the center of the north wall of the North Wing corresponds to visible cracking at the brick and mortar on the exterior side (See Envelope Report). The cracks in the plaster are likely due to water infiltration through the wall.

We have the following recommendations at the Second Floor:

- Investigate the ceilings of the Assistant Director's Office and the Amesbury Room, using exploratory openings in the plaster to expose the framing and the connection of the lathe to the framing. This will help diagnose the cause of the cracking and determine suitable repairs.

- Investigate and make repairs to mitigate the water infiltration and associated masonry and plaster deterioration at the center window of the north elevation.

5.1.5 Roof

Staining on the rafters and beams at the eave line indicates that the roof experienced leakage at some point in the building's life. Since the wood appears in good condition, we do not currently have structural concerns.

It appears that the insect damage is localized and addressed with previous repairs. The wood around the repairs is sound, so we do not suspect an ongoing structural concern.

We suspect that the plaster cracking at the central skylight is due to condensation or water infiltration. We observed water staining on the glass laylight below the skylight, which would likely drain to the gable. It is possible that the rafters supporting the cracked plaster may have some deterioration associated with ongoing leakage.
We have the following recommendations at the Roof:

- Building maintenance staff should monitor the eaves during rain and snow events to determine if water infiltration is ongoing.

- Investigate the cracked plaster at the central skylight with an exploratory ceiling opening to review the condition of the rafters.

5.1.6 West Entry Vestibule – 2007 Addition

The Vestibule appears in satisfactory condition, but we suspect that the staining at the underside of the vestibule floor could be from water leaking through the floor. Our suspicion is further validated by the newer plywood finishes close to the south side of the Vestibule, which may have required replacement due to deterioration.

We have the following recommendations at the Vestibule:

- Remove the newer plywood finishes and review the condition of the Vestibule floor framing and the Vestibule's connection to the base building structure.

6. CONCLUSION

From what we could observe during our site visit, the structure of the APL is currently stable and in good condition. We identified some items that require attention to repair minor damage and/or maintain the current condition of the building (i.e., prevent further deterioration) until the City executes a broader renovation project. We summarize the following specific maintenance items that we recommend below:

Component/Observation	Recommendation	Timeframe
Ceiling of Assistant Director's office	Make exploratory ceiling openings to diagnose the cause of plaster cracking.	ASAP (one to two years)
Ceiling of Amesbury Room	Make exploratory ceiling openings to diagnose the cause of plaster cracking.	ASAP (one to two years)
North elevation at the Center Second Floor Window	Investigate and repair the exterior wall to mitigate water infiltration and associated masonry and plaster damage.	ASAP (one to two years)
East Gable at Central Skylight	Investigate the cause of plaster cracking to determine if there is an ongoing source of water infiltration and to review the condition of the rafters.	ASAP (one to two years)

Component/Observation	Recommendation	Timeframe
West Entry Vestibule	Remove the plywood finishes to review the condition of the vestibule floor and attachment to the base building structure.	ASAP (one to two years)
Eaves	Check for leaks in the closets at the South Wing eaves during rain and snow events.	periodically
Exterior walls	Repoint the exterior walls to mitigate water infiltration.	Short Term (three to five years)
Stained ceiling in Basement Storage Room within printer copier room	Remove ceiling to expose framing for structural review.	Short Term (three to five years)
Joist with check above workshare space	Provide a sister joist.	Short Term (three to five years)
Slab-on-grade in utility closets	Repair or add hatches to slab-on-grade in utilities closets to mitigate risks of tripping hazards and pests.	Long Term (beyond five years)
Steel posts in basement utilities/storage room	Remove a portion of the hard ceiling to expose the framing around the post for engineer's review.	Long Term (beyond five years)
Basement arch between north and south wings	Repair missing masonry.	Long Term (beyond five years)

Sincerely yours,

Erik W. Farrington, P.E.
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MA License No. 41508

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Senior Project Manager
MA License No. 48438

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Encls.

Photo 1

Fieldstone and brick foundation wall at east wall of North Wing, with some efflorescence on the brick and fieldstone.

The wall on the right of the photo is the wall between the North and South Wing.

Photo 2

South foundation wall in Utilities Closet between the basement bathrooms.

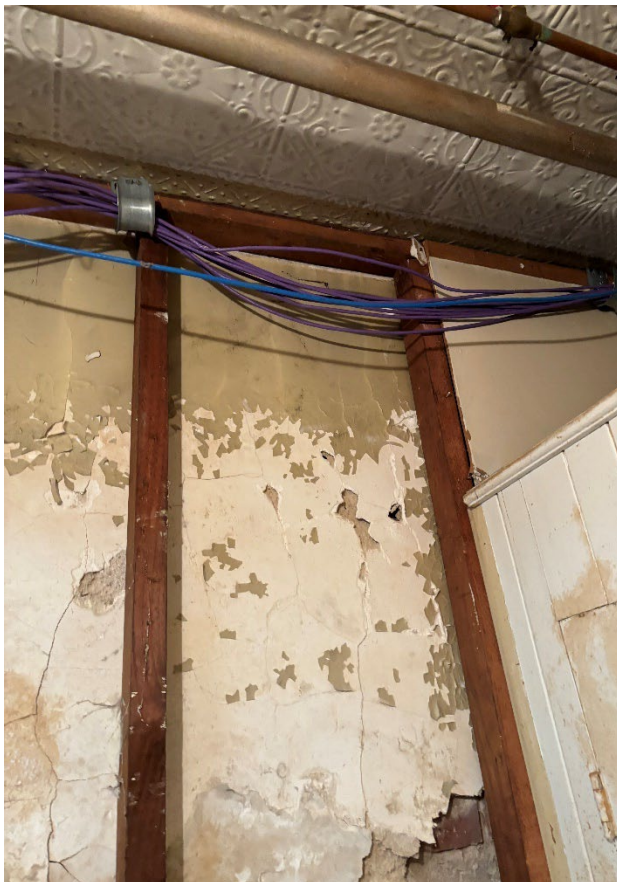

Photo 3

Plaster finish behind wood stud wall in Utilities Closet between the basement bathrooms.

Photo 4

A portion of the slab-on-grade is missing in the Utilities Closet between the basement bathrooms.

Photo 5

The slab-on-grade in the Utilities Closet between the basement bathrooms is approximately 2 in. thick.

Photo 6

Sawcut and partially demolished slab-on-grade at Utilities/Storage Room with differential settlement.

Photo 7

Deteriorated mortar at the north wall of the basement Storage Room (red arrow). The blue arrow indicates a nonstructural interior partition wall.

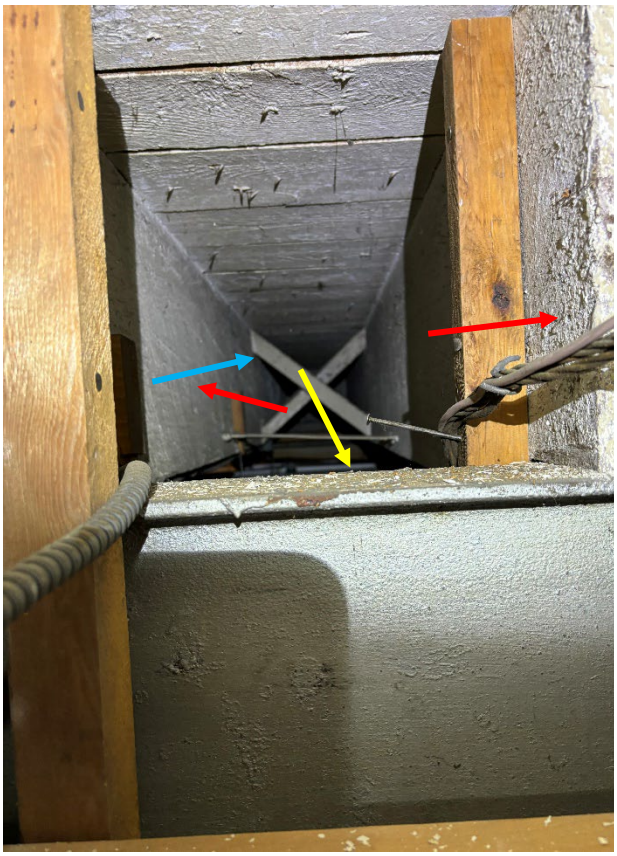

Photo 8

First Floor framing in North Wing, looking east.

Red arrows indicate wood joists.

Yellow arrow indicates steel beam.

Blue arrow indicates wood X-shaped bridging.

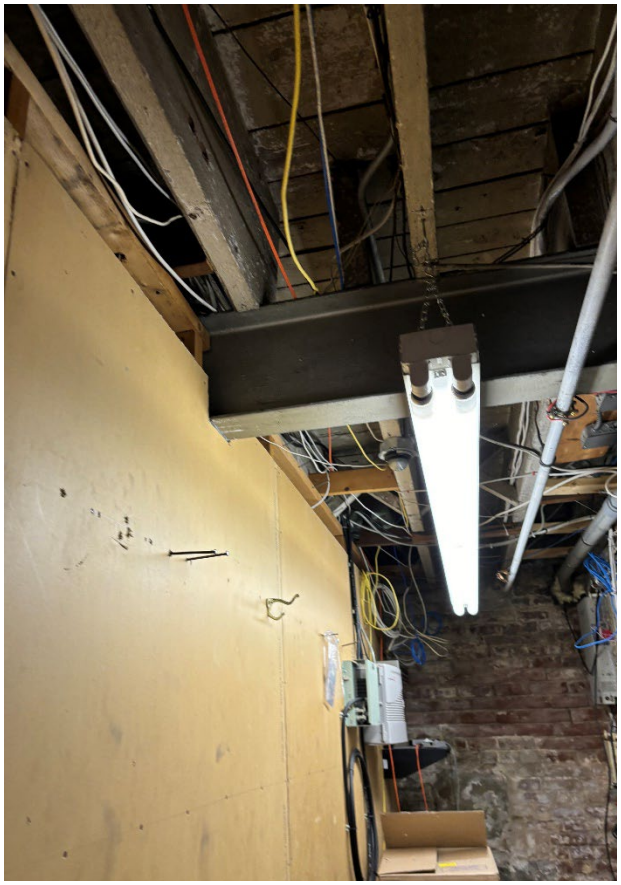

Photo 9

First Floor framing in north wing, looking east.

Photo 10

First Floor framing in North Wing, looking southeast.

Red arrow indicates wood joist, notched approximately 1 in. at its bearing location.

Yellow arrow indicates steel beams, both bearing on the column cap plate.

Green arrow indicates steel post.

Photo 11

Steel strap mounted to the top of the first-floor joist, extending in to the masonry wall.

Photo 12

First floor framing above the Workshare Space in the South Wing, looking west.

Red arrow indicates steel beam.

Blue arrows indicate wood joists.

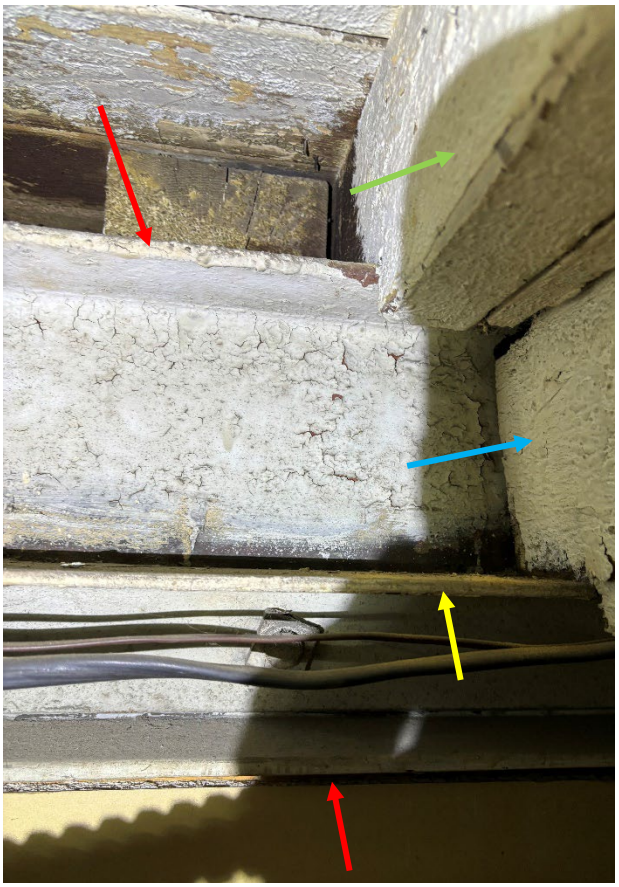

Photo 13

First floor joists bearing on steel beam between Workshare Space and Utilities Space (from Workshare Space side).

Red arrows indicate top and bottom of steel beam.

Yellow arrow indicates longitudinal steel stiffener that joists bear on.

Blue arrow indicates notched wood joist.

Green arrow indicates atypical blocking next to notched joist.

Photo 14

Staining on First Floor joist with no associated deterioration.

Photo 15

2x4 infill in the First Floor framing just south of the north entrance.

Photo 16

Sheet metal around 2x4 infill in the First floor framing just south of the north entrance.

Red arrow indicates bottom lip of metal flashing on the perimeter framing.

Photo 17

Cracks and staining on ceiling of Storage Room and peeling paint on interior face of exterior masonry wall.

Photo 18

Longitudinal crack/check in First Floor joist above workshare space.

Photo 19

Wood 2x8 sub-framing below the existing first floor framing above the Staff Breakroom.

Photo 20

Steel posts in Utility Room with blocking to bottom of the ceiling.

Photo 21

Steel post in basement Utility Room with base plate bearing on slab-on-grade.

Photo 22

Damaged brick at the arch between the north and south wings in the basement.

Photo 23

Overall view of first floor stacks.

Photo 24

Overall view of second Floor stacks.

Photo 25

First floor stack posts constructed of two hat-shaped steel member with a steel plate sandwiched between.

Lateral bracing attaches to the posts (red arrow).

Photo 26

Rectangular posts at the Second-floor stack structure.

Photo 27

Steel posts at the south wall of the stack space at the First Floor.

Photo 28

Second floor of the stack structure (looking south along the west exterior wall) as viewed from below. It is unclear if the floor structure is supported by the exterior wall or if it cantilevers from the posts.

Photo 29

View of the second-floor structure from the stair opening.

Photo 30

Continuous channel bracing at tops of Second Floor stack shelves (red arrows).

Clips to north wall (blue arrows).

Photo 31

South Wing of First Floor with finished ceilings.

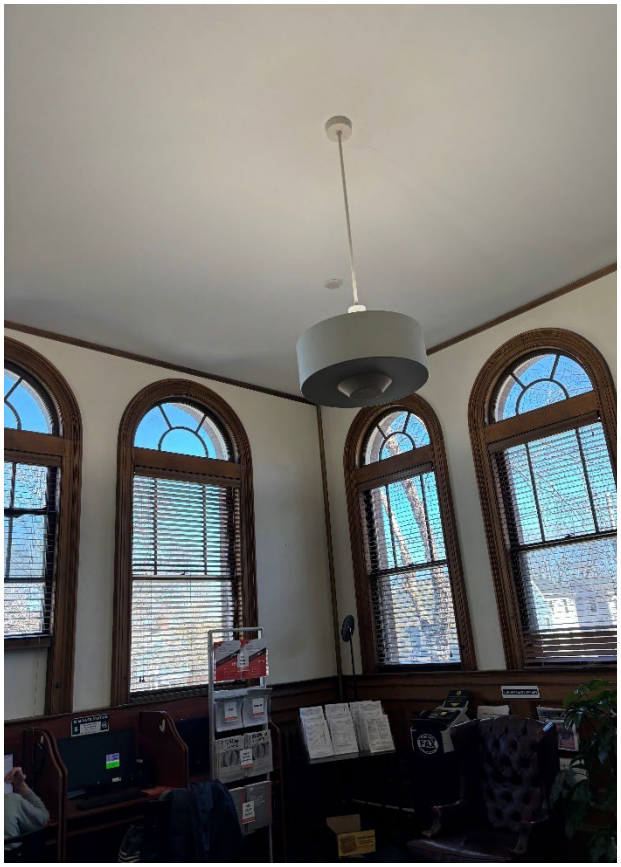

Photo 32

Newer ceiling in the Reference Room.

Photo 33

Extensive cracks in the first floor ceiling and additional crack above a window (red arrow) in the Amesbury Room.

Photo 34

Cracking in the Main Stair wall finishes near the Second-Floor elevation.

Photo 35

Staining on the floor joists above the Director's Office.

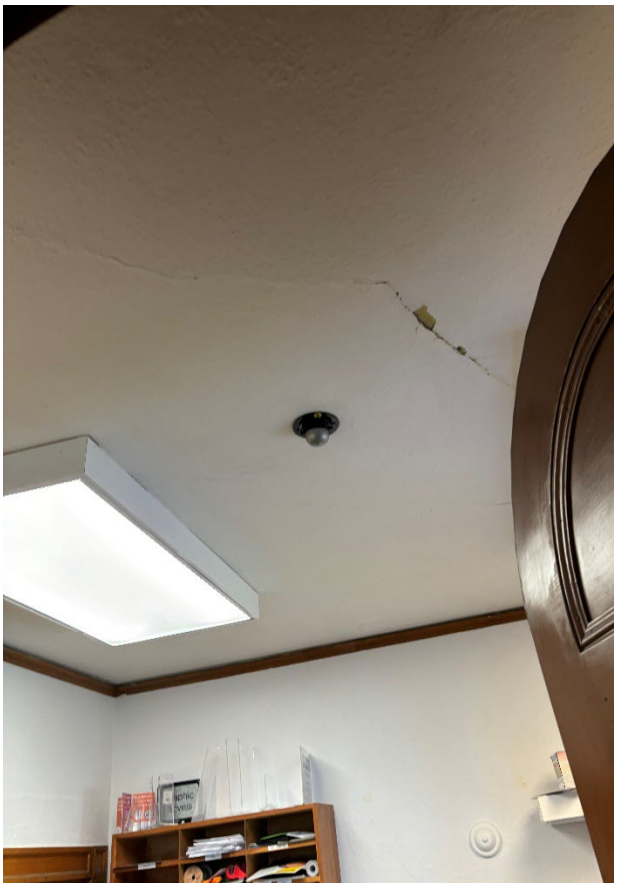

Photo 36

Cracked plaster ceiling in the Assistant Director's office.

Photo 37

Cracked wall plaster at the south gable.

Photo 38

Large plaster cracks in the center of north wall.

Photo 39

Plaster cracking at the center of the north wing.

Photo 40

Rafters bearing on wood sill over the south wall of South wing.

Photo 41

2 in x 7-1/2 in. rafters (yellow arrow) spanning to the north exterior wall of the north wing.

Wood wall making the front side of the closet (red arrow) that may also support the rafters.

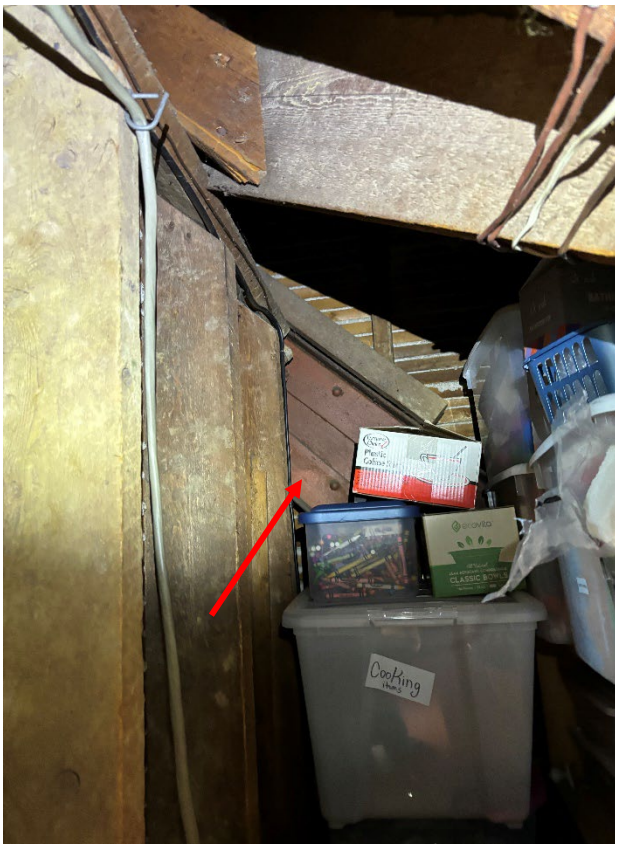

Photo 42

Built-up steel beam at the approximate third point of the South Wing roof.

Photo 43

Staining on rafters consistent with water infiltration.

Photo 44

Large rafter with apparent insect damage and insect mitigation repairs.

Photo 45

Cracked plaster at the east side of the central skylight.

Photo 46

Attic space, with the original ceiling in place. Exposed steel roof trusses are in good condition.

Mid 1900s wood ceiling forms “floor” of attic.

Photo 47

North foundation wall of the glass vestibule.

Photo 48

The underside of a glass vestibule floor with finishes obscuring the floor attachment to the base building structure.

Two different vintages of plywood sheathing at the underside of the floor (red and yellow arrows).

12 August 2024

Adrienne Cali, AIA
Associate
Bruner/Cott Architects
225 Friend Street, Suite 701
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Project 240468 – Building Enclosure Condition Assessment and Prioritized Treatment Plan, Amesbury Public Library, 149 Main Street, Amesbury, MA

Dear Ms. Cali:

1. BACKGROUND INFORMATION

The Amesbury Public Library (APL) (Photos 1 to 4), designed by Penn Varney and built circa 1900, is located on Main Street in Downtown Amesbury and serves as a cultural hub for the community. While not currently a landmarked building, APL is included in the Massachusetts Historical Commission's Cultural Resources Information System (Inventory Number AME.23) and is undergoing historic designation nomination and review.

APL includes of the following eras of construction (Figure 1):

- The original portion of the building, built in 1900, is T-shaped in plan. The original building enclosure systems include mass-masonry bearing-wall structure, single-pane wood windows and steep-sloped slate shingle roofing. The exterior brick masonry consists of a red brick blend at the northern portion of the building and beige "Roman" brick elsewhere, with cast and natural stone elements throughout (e.g., band courses, sills, lintels, keystones, etc.). Much of the steep-sloped slate roofing and exposed (patinated) copper flashing is reportedly original to the building, and APL reportedly possesses original "attic stock" slate shingles for use in periodic repairs.

- A rear addition/entrance, built in 1935, is located at the north elevation of the building.

- A metal-framed glass vestibule and prefabricated ramp, built circa 2007, serves as a "temporary" means to improve access to the first floor of the building. The vestibule roofing consists of curved flat-seam copper roofing.

Refer to the architectural narrative for additional building and project background information.

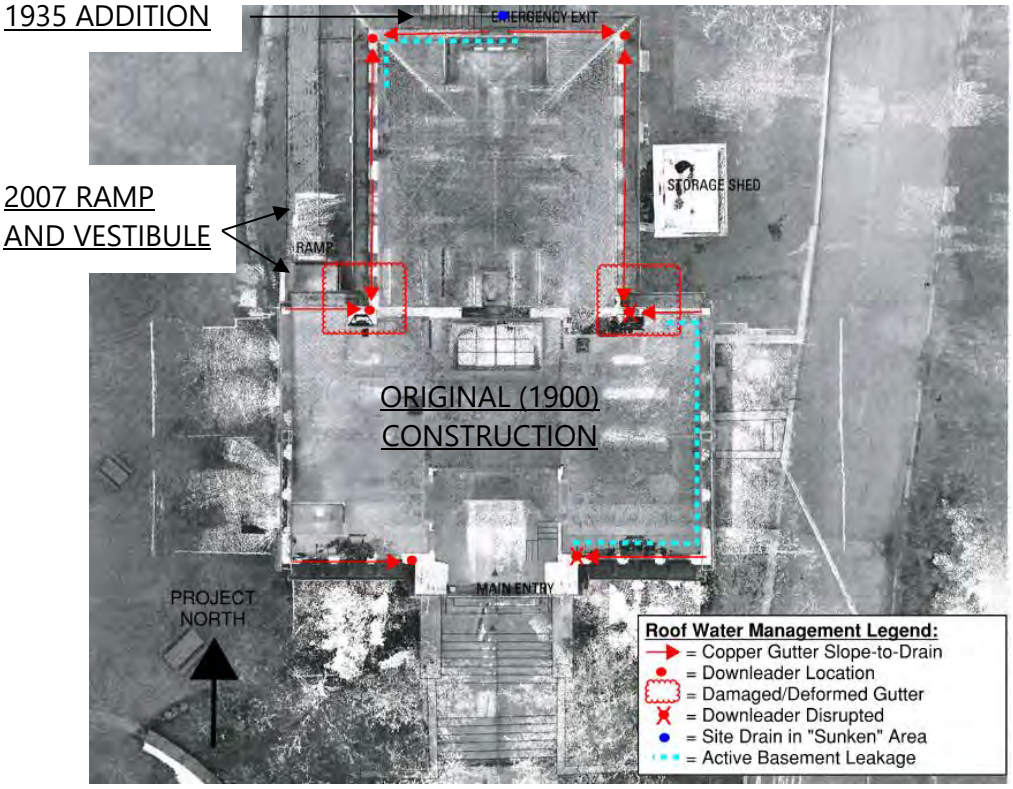

Figure 1 – APL aerial view, with roofing drainage and reported basement leakage overlaid.

2. DOCUMENT REVIEW AND REFERENCE DOCUMENTS

We performed an initial review of the following pertinent documents provided to us by the APL:

- Massachusetts Cultural Resource Information System Records, Inventory Form B, Inventory Number AME.23.
- Report entitled "Water Infiltration Investigative Report", prepared by Raymond T. Guertin and dated February 2022.
- City of Amesbury Annual Library Building Inspection Reports, prepared by the Office of Inspectional Services and dated October 2019, January 2022 and February 2023.
- Report entitled "Amesbury Public Library Feasibility Study", prepared by Tappe Associates, Inc. and dated December 2000, which includes a letter discussing existing conditions of the building, prepared by LeMessurier Consultants and dated July 2000.

- Report entitled "Amesbury Public Library Building Program", prepared by Vandermark Consulting at the request of the Trustees of the APL and dated January 2000.

Based on our review of the above-referenced documents, we understand APL is under consideration for historic designation and the building stewards are aware of the following overall building needs:

- Annual maintenance and near-term repairs of various building enclosure systems is warranted to reduce water infiltration, address deteriorated conditions and protect the historic building fabric in various areas.

- Improved access and programming for community members of all backgrounds, interests, ages and physical abilities is desired, and likely requires planning for a future expansion/addition to supplement the existing collections and gathering spaces.

Additionally, several of the background documents discuss options for APL to improve the overall energy efficiency of the building, primarily by replacing mechanical units that are beyond their useful service life. Interior operating conditions (i.e., interior temperature and relative humidity set points associated with new mechanical systems), if any, should be coordinated with the anticipated building enclosure work (e.g., adding exterior wall insulation, replacing windows, replacing roofing, etc.) to confirm building modifications create no adverse effects.

3. BUILDING ENCLOSURE CONDITION ASSESSMENT APPROACH AND LIMITATIONS

Our condition assessment is based on observations made from sample interior spaces where building enclosure components are exposed at the interior (e.g., at storage closets and at ceiling hatches) and exterior portions of the building that are readily visible from grade. Our condition assessment did not include creating or documenting exploratory openings to evaluate concealed conditions, in-situ water testing, laboratory testing to determine material properties/characteristics, or any hygrothermal/energy modelling. In some cases, we recommend additional investigative scope, such as exploratory openings and/or water testing, to clarify uncertain (i.e., concealed) building conditions (refer to Section 6.1).

4. EXISTING CONDITION SUMMARY FINDINGS

Helena M. Currie and Sophia W. Fagone of Simpson Gumpertz & Heger Inc. (SGH) visited the site on 22 April 2024 to complete a condition assessment of the building enclosure systems (e.g., slate roofing, wood soffits, gutters and downleaders, wood-framed single pane windows, exterior mass masonry walls, etc.). Below is a summary of our key on-site observations.

4.1 Slate Shingle Roofing

The slate shingles are relatively consistent in size, coursing green/gray color (Photos 1 to 6), except for isolated areas near valleys where darker gray slate shingles are present. Some of the slate shingles are chipped, cracked, or otherwise damaged. Snow cleats and a three-rail snow fence is present at the northern portion of the west elevation (left side, Photo 2).

The slate shingle roofing system includes exposed sheet metal copper flashing at the ridge, hips, eaves, valleys, gable end wall copings, gutters and chimney stepped base flashing (Photos 5 and 6). The exposed copper flashing typically exhibits green patina, except for a localized portion of the copper gutter/eave at the western side of the south elevation (Photo 7). It is not clear from our ground-level observations whether sheet metal flashing extends full-thickness below the stone copings above gable end walls (Photos 7 and 11).

Some of the copper ridge flashing is not uniformly secured (indicated in red, Photo 5). We informed the project team of this location while on-site and followed-up via email on 26 April 2024, recommending the area be secured as soon as practical.

From grade and sample interior unfinished (closet) spaces at the second floor of the library (Photos 8 and 9), the slate shingle roofing assembly appears to consist of the following (from exterior to interior):

- Slate shingles (size, thickness and coursing not yet measured),
- Felt paper (at least one layer),
- Approximately 3/4 in.-thick wood plank boards, variable width and oriented horizontally (i.e., parallel to the roof eaves),
- Nominal 2 x 8 wood purlins, oriented vertically (i.e., along the roof slope), and
- Plaster ceiling on wood lath. Where visible, the topside of the plaster ceiling keys appears to be intact and well engaged with the wood lath.

The underside of the wood roof deck is not insulated in areas we observed, and daylight is visible at the eave in several locations (i.e., where the roof slope extends beyond the outer vertical plane of the exterior wall) (Photo 10). Many of the areas with daylight correspond to locations where there is an approximately 3 ft-deep exterior wood soffit (Photo 11). We observed localized areas where the wood soffit is damaged, displaced or otherwise deteriorated (Photo 12). We observed a hatch at the second-floor ceiling that may provide additional views of

the underside of the slate roofing assembly; however, the library requires a special ladder to safely access this hatch (Photo 13).

We observed dark staining at the interior plaster finishes and/or wood framing in several locations, particularly where the roofing decking is in contact with the chimney rising walls and intersect with masonry gable end walls (Photos 14 and 15, respectively). While an approximately 3 ft-wide space between the finished interior walls at the second floor and the exterior masonry walls potentially provides close-up access to these roofing areas (Photo 16), we were unable to enter this space safely due to excess storage materials present at the time of our review. APL indicated that storage materials could be potentially moved with sufficient notice and if/when the library is closed to the public.

A tin roof located above the stack mezzanine area at the northern portion of the building conceals the existing conditions at the underside of the slate roofing assembly (Photo 17). We observed little to no staining at the tin roof. Approximately 3 in.-thick of batt insulation is present at the attic floor below the tin roof (red arrow, Photo 17).

4.1.1 Gutters and Downleaders

Copper gutters at the roof eave appear to be sloped to drain towards exterior-mounted downleaders, as depicted by red arrows in Figure 1. Except for a localized portion of the copper gutter at the western side of the south elevation (Photo 7), the gutters typically exhibit green patina. Where two or more roofing slopes intersect, we observed the copper gutter is typically deformed or otherwise damaged (indicated in red, Photo 6 and Figure 1). Several twisted gutter brackets and soffit boards are missing at damaged gutter areas, and collection boxes are dented (Photo 18).

We observed a range of downleader materials and conditions, from relatively new “red” copper, to patinated “green” copper to painted white metal (Photo 18). Downleaders generally discharge water runoff to the surrounding grade (i.e. they are not piped below grade, to a drywell or a buried stormwater system), and it appears portions of some of the downleaders are damaged and/or missing extensions/elbows near grade (areas indicated in red, Photos 19 and 20 and areas indicated with red “X” in Figure 1). We observed some “make-shift” repairs (e.g., plywood diverters) installed at the base of downleaders, and APL indicated these repairs are attempts to direct water discharged from downleaders away from the building exterior walls in areas where below-grade leakage repeatedly occurs.

4.1.2 Wood Soffits and Rafter Tails

We observed several areas where the wood boards at soffits are rotted, displaced, missing, or otherwise deteriorated (Photos 12 and 18). The wood soffit boards are oriented parallel to the roof eave and located above cantilevered rafter tails. It is not clear, without additional

exploratory work, whether rafter tails are “true” (i.e. load-bearing) or “false” (i.e. self-supporting) elements. Some brick cracking at the north elevation is located within the vicinity of a rafter tail (refer to Section 4.3.1).

4.1.3 Skylights and Laylights

The slate roofing area includes three skylights with laylights. We did not review the skylights and laylights up-close due to limited interior and exterior access; however, we observed at least one pane of glass in a laylight is cracked (Photo 21).

4.1.4 Chimneys

Two relatively slender brick chimneys extend through the slate roofing area, one at the east elevation (Photo 5) and one at the west elevation (Photo 22). We observed some brick is out-of-plane and some mortar is cracked, missing, eroded or otherwise deteriorated at the north elevation of the chimney at the east elevation (Photo 5). APL informed us that neither chimney is operable. Both chimneys appear to be relatively plumb; however, we did not review the chimneys up-close or take measurements.

Each chimney is tied back to the roofing with a metal (presumably wrought iron) tie rod (red arrow, Photo 22). The brick above the tie back rod insert at the west elevation chimney is visibly lighter than the brick below, suggesting the chimney was rebuilt (or substantially repaired) at some time after original construction. The chimney at the east elevation is a more consistent color and includes two arched openings at the northern face of the chimney. It is unclear from our ground observations whether either chimney is capped.

4.2 Curved Metal Roofing

The curved metal roofing at the west elevation vestibule/entry (Photo 22) consists of flat seam copper and does not include gutters at the east and west “low points”. We observed dark staining, wood window deterioration and other indications that water runoff from the curved roofing falls directly onto the ground and nearby building components in these areas. We did not review the condition of the flat-seam copper close-up.

4.3 Exterior Mass Masonry Walls and Wood-Framed Windows

The existing conditions related to the exterior mass masonry (above and below-grade) walls and wood-framed windows are depicted in Appendix A and summarized herein. Much of the interior face of the exterior mass masonry walls is concealed by interior finishes.

4.3.1 Exterior Mass Masonry Above-Grade Walls

The exterior mass masonry walls generally consist of brick with stone (natural and cast) accents at the exterior; however, the size, color, texture and type of the masonry varies as follows:

- At the southern portion of the original building, we measured the brown/tan "field" brick to be approximately 10 in. long x 1-1/2 in. high x 3-3/4 in. deep (Photo 23), with mortar joints ranging from 1/16 in. to 1/8 in. wide (Photo 24). Lighter tan projecting brick "bands" located at second floor at the east and west elevation appear to be similar overall dimensions to the darker field brick (Photo 25). The band course at the first floor is generally natural stone (i.e., limestone) to match the stone at sills, lintels, copings, columns, etc.

- At the northern portion of the original building, we measured the red "field" brick blend to be approximately 8 in. long x 2-1/2 in. high x 4 in. deep (Photos 26 to 28), which is more consistent with modular (standard) brick sizes. Mortar joints range from about 1/8 in. to 3/8 in. wide. The stepped brick band course at the first floor is partially covered with a cementitious "mortar parge" and transitions to natural stone at the East Elevation (Photos 27 and 28). The mortar parge, where present, is typically cracked, debonded or otherwise failed.

The brick mortar joints are generally intact at the original building, regardless of the brick color/type. We observed some localized areas where mortar is eroded, cracked or missing. The mortar joints adjacent to stone accents, which tend to be wider than brick-to-brick mortar joints, exhibit heavier weathering, erosion and deterioration. We observed some concentrated dark carbon staining and/or biological growth at the surface of the masonry at the projecting second-floor band course, in areas adjacent to downleaders, behind site vegetation and/or areas that otherwise do not regularly dry out.

We observed several areas where the brick masonry appears to be out-of-plane relative to the outermost vertical plane of the adjacent brick masonry (Photo 29). It is unclear from our initial visual observations at grade whether the out-of-plane brick indicates underlying deterioration. Additionally, we observed one location at the north elevation where brick and mortar are cracked at the exterior (area indicated in yellow, Photo 12) and cracking appears to extend through the interior plaster finishes (Photo 30). Some of the areas with out-of-plane brick and potential "through-wall" cracks correlate with evidence of water leakage at the interior (e.g., stained and/or cracked interior finishes) and warrant further exploratory investigation.

4.3.2 Wood-framed Single-Pane Windows

APL reports that several of the existing wood-framed, single-pane windows are repaired and restored "in-kind" on a semi-annual basis (i.e. as budgeting and time permits). APL also reports

that some of the air conditioning units present in windows remain throughout the year to maintain desired interior air temperatures.

Several of the single-pane windowpanes are cracked (Photo 31) and some windows are difficult to operate due to damaged/missing interior rope/pulleys (Photo 32). We observed several locations where the single-pane (presumably annealed glass) windowpanes are located within 18 in. of a walking surface, which does not meet current glazing safety standards (Photo 33).

Exterior paint at wood window frames is typically peeling or otherwise failed. Glazing putty is cracked, missing or otherwise failed in several locations, particularly at sills, sashes and near grade (Photos 34 and 35). In some cases, the putty loss is substantial enough that the glass can be moved within the frame by hand pressure (Photo 36). We measured wood softening (rot) up to 2 in. deep at the sills and jambs of two wood-framed windows near grade, located adjacent to the 2007 ramped vestibule entrance (areas indicated in yellow, Photos 23 and 27). When probed with a metal pick, we identified wood softness extends several inches into the material within the lower 8 in. of the wood-framed windows (Photos 37 to 39).

Some of the windows at the east elevation are infilled with plywood and penetrated by conduits (Photo 40). Some of the windows at the east elevation include plexiglass at the exterior, which creates an interstitial space between the plexiglass and the exterior surface of the wood-framed window (Photo 41). Although this interstitial space improves energy efficiency and climate control, it also increases the potential to trap condensation or leakage (around the plexiglass perimeter) against the wood-framed window (thereby potentially increasing the rate of moisture-related wood deterioration). It appears many of these modified wood conditions coincide with interior "climate-controlled" collections spaces.

4.3.3 Rubble Foundation Stone Walls and Below-grade Waterproofing

We understand the library staff report reoccurring leakage in several basement spaces, which consist primarily of slab-on-grade and rubble stone foundation walls. It is not known, although it is not likely based on the building age, whether there is a dedicated positive-side waterproofing or dampproofing material installed at the below-grade rubble foundation walls.

The interior face of the exterior wall is concealed in many areas by stud walls and drywall or plaster finishes (Photo 42). At the east elevation office, we measured an approximately 5 in. interior wall "build out", with insulation-filled stud framing (at circled area, Photo 42). Where the exterior walls are exposed at the interior of below-grade spaces, we observed mortar is friable and features efflorescence and paint peeling (Photo 43), consistent with prolonged exposure to moisture over time. The extents of paint peeling and deteriorated mortar at the interior roughly coincides with the exterior grade levels and retaining walls outside of these areas (yellow dotted lines, Photos 43 and 44). APL reports portions of the east elevation entry flooding during heavy

rain events. It is unclear whether planted soil areas at the exterior, bound on four sides by retaining walls and the building exterior wall, experience periods of elevated ground water.

At the north elevation office (Photo 45), we estimate an approximately 2 in. to 4 in. uninsulated "build-out" is present based on gaps between the finishes and the wood-framed windows (Photo 46). Signs of water leakage at the interior face of the exterior below-grade walls in this office are not evident due to installed finishes; however, library staff report leakage primarily occurs within the vicinity of the sunken stairs at the north elevation (Photos 46 and 47). We observed numerous areas where the mortar is cracked, eroded, missing or otherwise deteriorated at the exterior wall at the sunken stairs (Photos 47 and 48).

As indicated in Section 4.1.1, water management from roof runoff is disrupted at many of the downleaders and, as a result, water discharges directly onto several of the below-grade spaces where leakage is reported. Additionally, it is unclear whether drains at sunken areas adjacent to the building are adequately managing water away from the building (Photos 49 and 50).

We observed some areas in the basement where leakage is not reported by APL that similarly exhibit signs of reoccurring exposure to moisture (Photo 51). Because interior finishes are built away from the inner face of the exterior wall about 12 in. in these areas (Photo 52), it is possible some water leakage occurs and is not detected. It is important to evaluate below-grade water leakage issues wholistically (i.e., in areas where leakage does and does not reportedly occur), within the context of the building site drainage and geotechnical characteristics (ground water elevation).

5. DISCUSSION AND CONCLUSIONS

5.1 Slate Shingle Roofing

The slate shingle roofing appears to be in reasonable condition given its age and likely has considerable remaining service life if regularly repaired and maintained (e.g., broken and cracked slate removed and replaced, underlayment replaced with self-adhered membrane in select areas, loose flashing resecured, etc.). Note that exploratory work to review the condition of the underlayment and slate material testing is prudent to confirm the condition of the slate roofing and estimate the remaining service life.

Some of the copper flashing, gutters and downleaders warrant repair or replacement to address potential safety issues and to improve water management. Additionally, evidence of water staining, wood soffit damage and daylight at the roof eave warrant repairing/rebuilding the roofing eaves to improve the weathertightness and reduce the risk for pest intrusion.

Depending on the long-term client goals and historic considerations, the project team may elect to evaluate options to insulate the slate roofing. However, we recommend that insulation

options, if evaluated, be considered in coordination with total roof replacement to confirm that the roofing underlayment materials are in good condition, are continuous, and will remain weathertight throughout the remaining life of the new roofing assembly materials.

5.2 Curved Metal Roofing at Rear Entrance

While this roofing appears to be in reasonably good condition, with little to no indications of leakage at the interior, the lack of gutters appears to be contributing to significant wood rot of at least two of the original wood-framed windowsills near grade. We understand this structure was intended to be temporary and may be removed/replaced as part of a future project.

5.3 Exterior Above-Grade Mass Masonry Walls

The exterior above-grade mass masonry walls appear to be in reasonable condition given the age of the building, pending additional investigation of the following areas:

- Interior wall conditions at below-grade spaces, particularly in areas with evidence and/or reports of recurring leakage (via exploratory openings at the interior finishes).

- Out-of-plane projecting brick at banding and chimney (via exploratory openings at the exterior).

- Cracked masonry above the north elevation second-floor window and adjacent dormer (via interior and exterior openings at the wood soffit, rafter tails, brick and siding).

Repointing and localized repairs are warranted in the near-term to address masonry weathering and deterioration. Consider masonry cleaning (wholesale or in select areas) to improve the overall appearance of the masonry.

5.4 Wood-Framed Single-Pane Windows

To address deteriorated conditions associated with the wood-framed single-pane windows, APL may wish to consider the following items:

- Repair or replace portions of the two wood-framed windows near grade at the west elevation to address soft/rotted conditions. It appears that the severity of wood deterioration at these two windows is due, in part, to the temporary ramped entry/vestibule with curved roofing that drains directly onto these areas.

- Replace failed glazing putty and repaint the exterior of all wood windows. Understanding window maintenance and repair is currently executed reactively on an annual basis (i.e., at the most severely deteriorated windows, as budget and time allows), consider

investing in a wholesale putty and replacement project to reduce the rate of future wood related deterioration and set windows on a more consistent, pro-active, maintenance program.

- Replace cracked windowpanes. Remedial window films, thin plywood, Masonite or similar, can be installed at the cracked glass as a temporary repair (i.e., until glass replacement is complete).

- Provide interior physical barriers (i.e., cordon off areas) to prohibit access to annealed glass located within 18 in. of the walking surface (i.e., in the children's reading area) to reduce the likelihood for breakage and install a clear remedial safety film on the glass to help retain glass in place if broken.

- Limit use of windows where ropes/pulleys are broken.

- Evaluate why certain windows are infilled with plywood and why plexi-glass is installed at the exterior of certain windows to determine whether these interventions can be potentially reversed.

As part of any future major renovations, the question may arise as to whether to upgrade the windows from single-pane to dual-pane or triple-pane windows. This discussion needs to consider the historic context of the building, as well as the anticipated energy reductions associated with new mechanical systems, thermally improved windows, etc. We often find that window replacement alone, particularly in "low-glazed" buildings like APL (where the window surface area is relatively small as compared to the opaque wall area), does not significantly reduce energy consumption.

5.5 Below-grade Waterproofing

Further investigation of the below-grade waterproofing systems (if present) is warranted to identify and address the source(s) for recurring leakage. Based on the pattern of reported leaks in the basement spaces, we suspect one or more of the following are contributing factors:

- Lack of dedicated waterproofing or dampproofing at the exterior face (i.e., positive side) of the rubble masonry foundation wall.

- Concealed/buried voids in the rubble masonry foundation wall and/or cracks in the slab-on-grade (currently covered at the interior with stud wall build outs and carpeting, respectively).

- Disrupted/missing downleaders that discharge water directly onto the below-grade masonry walls.

- Sunken and/or inadequately drained walkways and stairways.

- Undrained planted areas, bound on multiple sides by site retaining walls, that potentially inhibit drainage away from the building and periodically experience elevated groundwater elevations.

6. RECOMMENDATIONS AND PRIORITIZED TREATMENT PLAN

The building enclosure systems at APL are generally in reasonable condition, as described in Section 5 above, particularly given the age of the building and considering its exposure to a relatively cold New England climate and previous additions/interventions.

This section summarizes enclosure items that warrant repair to better manage water, address localized deterioration and/or maintain the current condition of the building (i.e., prevent further deterioration). We categorize our initial prioritized recommendations and treatment plan based on the following definitions and timeframes you provided to us:

- **Immediate:** Work recommended to be done within one-two years and related to life safety, water leakage and/or pest intrusion.

    - Where additional investigation is required to inform recommended repairs categorized as “immediate”, the timeframe in Section 6.1 is indicated as “ASAP” and is recommended to be completed within the next three to six months.

- **Short-term:** Work recommended to be done within three to five years and related to accessibility compliance, building systems, code upgrades, wholistic building enclosure repairs, major program changes, climate action and energy reduction.

- **Long-term:** Work recommended to be done within six to ten years and related to the library expansion/addition.

6.1 Additional Investigative/Exploratory Work

We recommend the following additional exploratory work be completed to better inform the detailing and extents of various wholistic building enclosure repairs:

Enclosure Component	Recommendation	Timeframe
Exterior walls	Document masonry conditions (e.g., via interior and/or exterior openings) and investigate the cause(s) for out-of-plane brick band course (refer to red diagonal hatched areas at multiple elevations, Appendix A) and cracked brick at the exterior (primarily within the vicinity of the arched window at the north elevation, Appendix A).	Immediate (one to two years)
Below-grade waterproofing	Investigate source(s) for water leakage, including but not limited to removing interior finishes, excavating soils and conducting targeted water testing at areas with interior water damage, history of leakage, etc. (refer to shaded blue areas, Appendix A).	ASAP (three to six months)
Below-grade waterproofing	Scope and map buried drainpipes at "sunken" areas near building entrances, to determine condition, capacity, etc. (refer to areas shaded gray and dotted, Appendix A).	Immediate (one to two years)
Slate Shingle Roofing and Gutters	Perform a "close-up" review of the existing slate roofing and skylights to evaluate the condition of the slate shingles and underlayment particularly in various areas that coincide with evidence of water infiltration (e.g., at eaves, valleys and chimney base flashing). Review underside of slate roofing from interior ceiling hatch at the second floor to correlate interior and exterior conditions. Consider conducting slate shingle material testing to determine existing material properties/characteristics.	Immediate (one to two years)

6.2 Concept-Level Prioritized Repairs

For planning purposes, we recommend the following building enclosure repair work:

6.2.1 Slate Shingle Roofing, Gutters and Downleaders

Enclosure Component	Recommendation	Timeframe
Sheet Metal Flashing	Resecure loose ridge cap flashing (refer to Photo 5 and Appendix A).	ASAP (three to six months)
Copper Downleaders	Repair or replace damaged, missing or otherwise deficient downleaders (refer to Photos 19 to 20, and Appendix A) to provide continuous pathways for roof water runoff to discharge at grade AWAY from the building. Note the tying downleaders into buried drainage systems requires civil/plumbing coordination.	ASAP (three to six months)
Hung Copper Gutters	Remove and replace damaged portions of the gutter at valleys and integrate with adjacent roofing (refer to Photo 6 and Appendix A).	Immediate (one to two years)
Slate Shingle Roofing and Underlayment	Remove and replace slate roofing at eaves to install new self-adhered underlayment direct to the wood roof decking to protect against ice dams and water infiltration. Note that self-adhered membrane underlayment should extend at least 3 ft up-slope of the *interior face* of the interior finished walls (i.e., about 10 ft minimum up from the gutter at the eave).	Immediate (one to two years)
Slate Shingle Roofing and Underlayment	Remove and replace individually broken, cracked or missing slate shingles.	Immediate (one to two years)
Slate Shingle Roofing, Underlayment, Sheet Metal Flashing, Gutters and Downleaders	Evaluate options to replace the entire slate roofing assembly (with the option to salvage and reuse existing slate), with a new insulated steep-sloped roofing assembly if desired, as part of the broader expansion project to meet project goals. Note the exact roofing scope requires further investigation and development of the project goals.	Long-Term (six to ten years)

6.2.2 Curved Metal Roofing at Rear Entrance

Enclosure Component	Recommendation	Timeframe
Curved Metal Roofing at Rear Entrance	Remove and replace the ramped entrance and curved metal roofing with a permanent ADA-compliant entrance that does not cause adverse effects to the existing building fabric.	Short-Term (three to five years)

6.2.3 Exterior Mass Masonry Walls

Enclosure Component	Recommendation	Timeframe
Exterior walls	Repoint the exterior walls to address cracked, eroded, missing or otherwise deteriorated mortar joints.	Short Term (three to five years)
Exterior walls	Rebuild cracked and out-of-plane portions of the exterior brick masonry wall. Note that the exact requirements and detailing for rebuilding requires further investigation.	Short Term (three to five years)
Exterior walls	Clean exterior masonry walls to remove dark staining and biological growth, and to restore the original contrast between the light and dark Roman brick.	Short Term (three to five years)
Exterior walls	Evaluate options to renovate the exterior masonry walls, including but not limited to studying insulation options, sourcing replacement materials, etc. Note the exact scope requires further investigation and development of the project goals.	Long-Term (six to ten years)

6.2.4 Wood-Framed Single-Pane Windows

Enclosure Component	Recommendation	Timeframe
Wood-framed, Single-Pane, Windows	Repair rotted portions of two exterior wood windows near grade (refer to Photos 27, 37, 38, and 39, and Appendix A).	Immediate (one to two years)
Wood-framed, Single-Pane, Windows	Replace individual cracked panes (areas indicated in blue, Appendix A).	Immediate (one to two years)
Wood-framed, Single-Pane, Windows	Provide a physical barrier, or otherwise prohibit access to, any non-safety glazing located within 18 in. of an interior walking surface (refer to Photo 33 and Appendix A).	
Wood-framed, Single-Pane, Windows	Replace putty and repaint the exterior of all wood-framed windows. Coordinate with restoring window operability, where lost.	Short Term (three to five years)
Wood-framed, Single-Pane, Windows	Evaluate means to remove/replace window air conditioning units in conjunction with mechanical system upgrades. Consider reverting previous window infilling interventions (refer to Photos 40 to 41 and Appendix A) as part of this scope.	Long-Term (six to ten years)

6.3 Below-grade Waterproofing

Enclosure Component	Recommendation	Timeframe
Below-grade waterproofing	Depending on water leakage investigation findings (refer to recommendations in Section 6.1), provide positive-side waterproofing and perimeter drainage at all buried exterior wall, or similar, to address below-grade water leakage.	Immediate (one to two years)
Below-grade waterproofing	Depending on buried drain scoping investigation findings* (refer to recommendations in Section 6.1), repair/replace buried drainpipes and integrate with broader storm water system to reduce basement leakage and/or in coordination with building enclosure repair work. Note such work requires civil and plumbing engineering input.	Immediate (one to two years), or Short-Term (three to five years)*

Sincerely yours,

Helena M. Currie, P.E.
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Encls.

Photo 1

South elevation.

Photo 2

West elevation.

Photo 3

North elevation.

Photo 4

East elevation.

Photo 5

Example of exposed copper ridge, eave and chimney stepped base flashing at the existing slate roofing system, with green patina. Note a portion of the ridge cap copper flashing is not continuously secured (indicated in red, refer to Appendix A for location).

Photo 6

Example of exposed copper valleys, eave and chimney stepped base flashing at the existing slate roofing system, with green patina. Note a portion of the copper gutter is deformed downward and missing brackets/straps (indicated in red).

Photo 7

Exterior view of the relatively new copper gutter and downleader at the south elevation, which is still red (compared to the green patina visible elsewhere).

Photo 8

Interior view of the underside of the wood plank deck (top) and plaster ceilings installed on wood lath (bottom). Photo taken looking "up-slope" between purlins.

Photo 9

Closeup interior view of a gap between the wood plank deck, where felt paper and the underside of a slate shingle (red arrow) is visible.

Photo 10

Example of an area where daylight is visible at the interior of the eave (i.e. where the roof slope extends beyond the outer plane of the exterior wall). Photo taken looking "down-slope" between purlins.

Photo 11

Exterior view of wood soffit conditions in areas where daylight is visible at the eave from the interior. Note loose/deformed soffit board (red arrow).

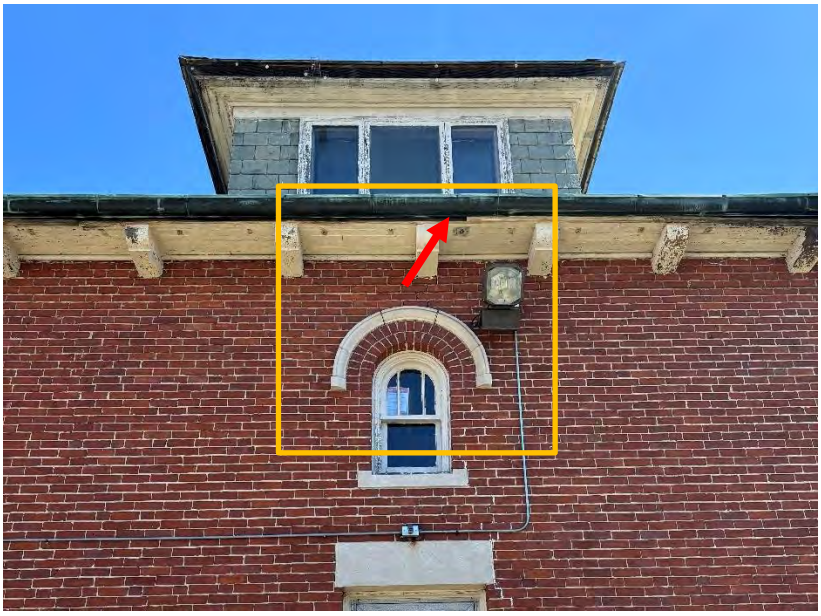


Photo 12

Example of an area where portions of the wood soffit are missing (red arrow).

Refer to Photo 30 for interior view of through-wall masonry cracking in the area indicated in yellow.

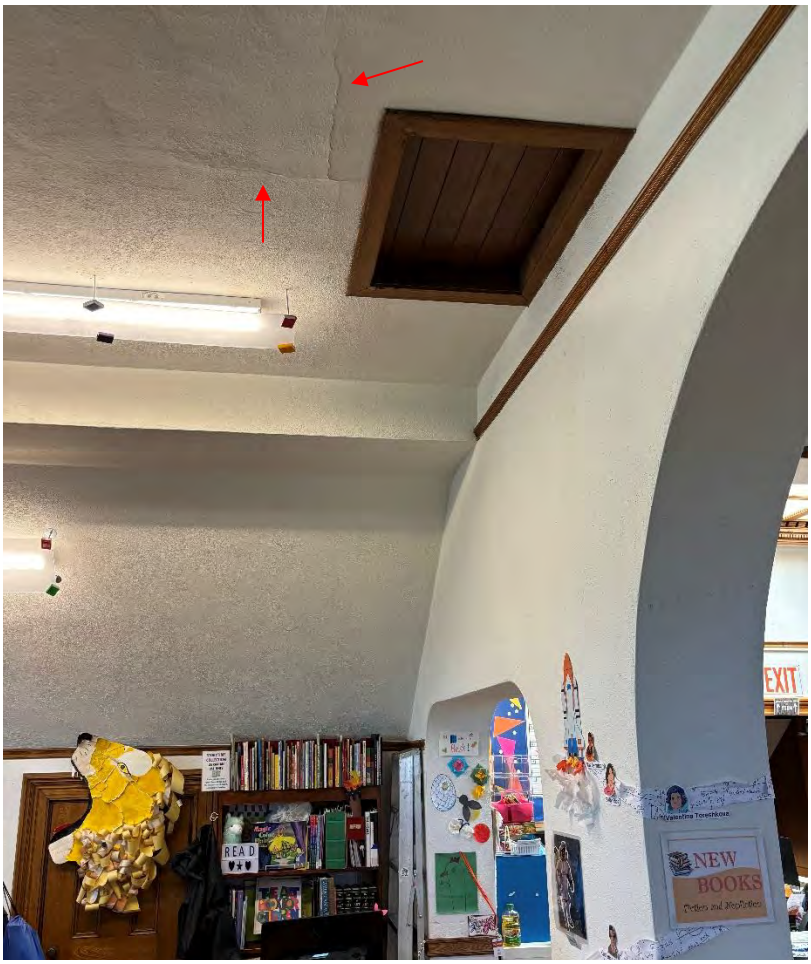


Photo 13

Ceiling hatch at second floor of library requires ladder to access and review the underside of the slate roofing above the plaster ceiling.

Note cracks in the adjacent plater ceiling (red arrows).

Photo 14

Example of dark staining at the underside of the wood plank roof deck and framing where it abuts the chimney walls at the northern side of the west elevation.

Photo 15

Example of dark staining (circled) at interior surface of plaster finishes below roofing intersection with gable end wall.

Photo 16

Interior view of the interstitial space between the finished areas at the second floor (left) and the exterior masonry walls (lower right), blocked by storage materials.

Photo 17

Interior view of the tin ceiling above the northern portion of the building, with little to no visible staining or deterioration.

Note about 3 in. of batt insulation is installed (red arrow) along the attic flooring in this area.

Photo 18

Exterior view of the underside of the damaged copper gutter area indicated in red in Photo 6. Note a cover board in place at the soffit and damaged collector head, with multiple gutter pipes intersecting into a single downleader. A portion of the downleader is painted white metal.

Photo 19

Example of damaged (dented, red arrow) and disrupted (circled) downleader that discharges water directly at the building foundation. Note the make-shift plywood diverter and that this area coincides with a below-grade space where reoccurring leakage is reported.

Photo 20

Example of disrupted (circled) downleader that discharges water directly at the building foundation.

Photo 21

Cracked light (red arrow) at laylight below sloped skylight.

Photo 22

View of the chimney at the west elevation, with wrought iron tieback to the roof deck and mismatch brick above (red arrow).

Refer to Photos 37 and 38 for conditions of the exterior wood windows in the areas indicated in yellow.

Photo 23

Example of brick at the southern (main) portion of the building.

Photo 24

Example of the mortar joint widths at the southern (main) portion of the building.

Photo 25

View of the lighter tan brick band accent at the second floor (red arrow), which consists of brick similar is size and coursing to that shown in Photos 23 and 24.

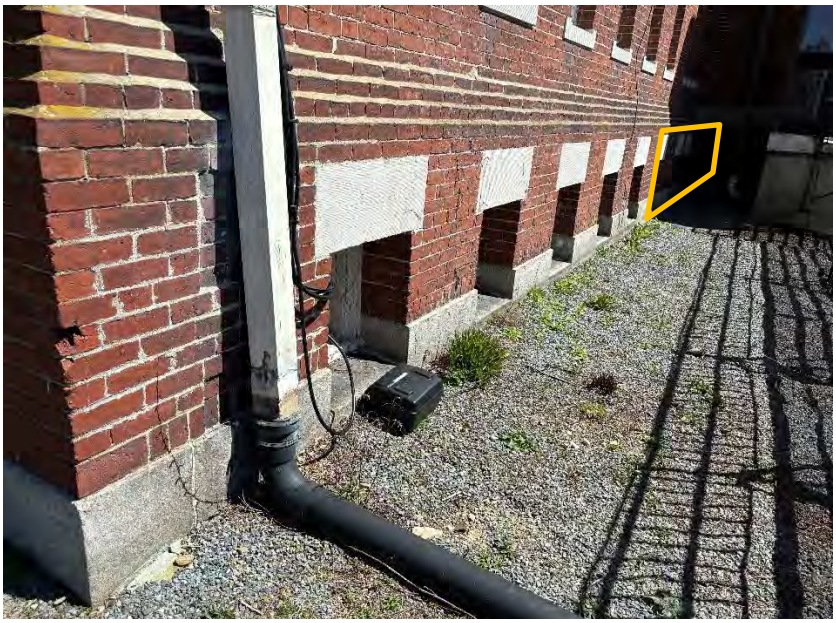


Photo 26

View of red brick masonry at the northern (rear) portion of the building. Note stepped band course with mortar wash at the sky-facing surface of each stepback.

Refer to Photos 37 and 38 for conditions of the exterior wood windows in the areas indicated in yellow.

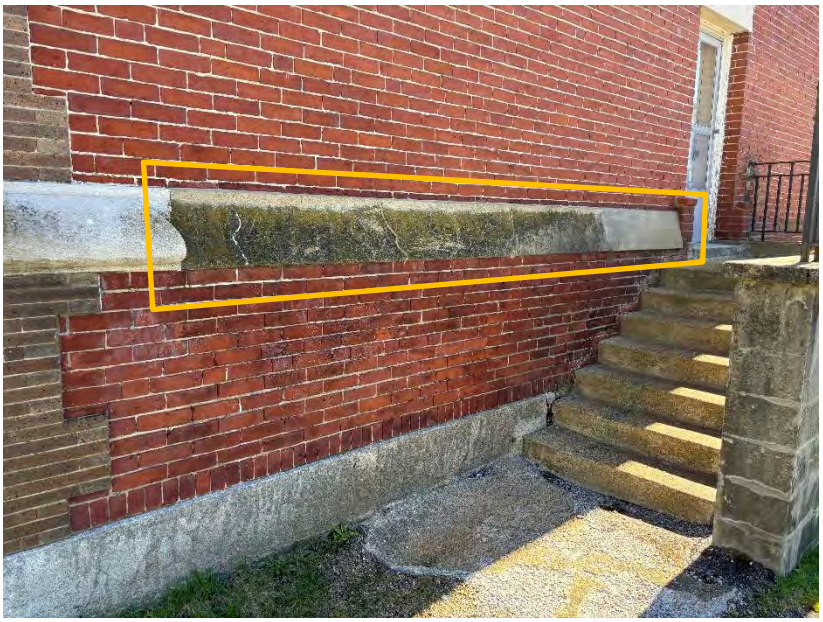


Photo 27

Overview of mortar wash installed at the entire brick stepped back band course (indicated in yellow), which sounds debonded (hollow) when tapped with a hammer. Note vertical cracking every few feet.

Photo 28

Spalled edge of the mortar wash installed at the brick stepped back band course, which is visibly separated from the brick surface.

Photo 29

Example of brick that appears to be out-of-plane (area indicated in yellow) relative to the surrounding conditions.

Photo 30

Cracked plaster at the interior of the north elevation (correspond with masonry cracking below rafter tail in area indicated in yellow, Photo 12).

Photo 31

Example of cracked windowpane (red arrow).

Photo 32

Example of broken rope/pulley system at operable window (indicated in red).

Photo 33

Example of an area where the single-pane (presumably annealed) glass is located less than 18 in. of an interior walking surface.

Photo 34

Example of exterior paint peeling at wood-framed windowsills. Some of the wood sills exhibit up to 1/2 in. of softness.

Photo 35

Example of exterior paint peeling at wood-framed windows. Note also putty deterioration (cracking, crazing and, in some cases, section loss).

Photo 36

Up to 100% section loss of glazing putty in some areas (indicated in red).

Photo 37

Overview of one of the two windows near grade at the west elevation where wood at the bottom 6 in. to 8 in. is significantly deteriorated. Refer to probe depths shown in Photos 38 and 39.

Photo 38

Up to 100% section loss of the wood framing (indicated in red) detected within 6 in. to 8 in. of the window sill and virtually all of the window putty is missing.

Photo 39

Up to 3 in. depth of softness detected at the topside of the wood sill (indicated in red) and virtually all of the window putty is missing.

Photo 40

Window infilled with foam and conduits at the east elevation near grade.

Photo 41

Example of a window where plexiglass is installed at the exterior, and not sealed at the perimeter (area indicated in red). Note interstitial space between the plexiglass and the wood-framed window beyond.

Photo 42

View of interior office at the southeast corner of the building, which experiences reoccurring water leakage at the exterior walls and/or slab-on-grade. Based on a spot measurement where the piping penetrates interior finishes (circled), the interior buildout is at least 5 in. deep, and filled with insulation.

Photo 43

Interior view of exposed brick masonry at the east elevation of the basement space. The yellow horizontal line generally aligns with the finished grade changes visible outside the window (see Photo 44 also), and areas below this line exhibit more severe paint peeling and mortar loss.

Photo 44

Exterior view of the southern portion of the east elevation, with a yellow dotted horizontal line indicating the approximate finished grade. Note numerous buried walls and roadway curbs (arrows) that border/bound the planted areas.

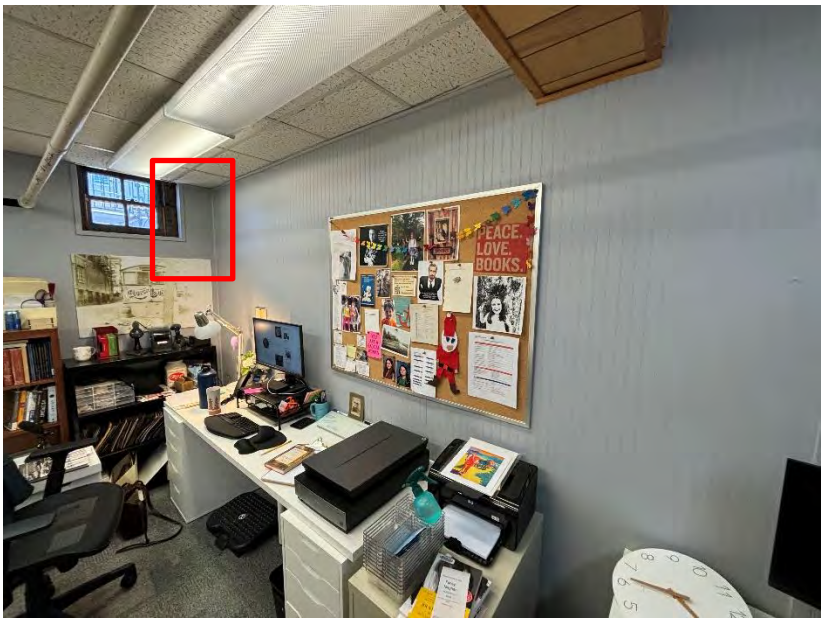


Photo 45

View of interior office at the northwest corner of the building, which experiences reoccurring water leakage at the exterior walls and/or slab-on-grade. See Photo 46 for closeup of area indicated in red.

Photo 46

Spot measurement of the interior (uninsulated) build out present in the northwest corner basement office. The return wall (at right) appears to have a shallower cavity wall space than that shown.

Photo 47

Exterior view of stairs at the north elevation, with lower landing is drained (drain not visible in this photo).

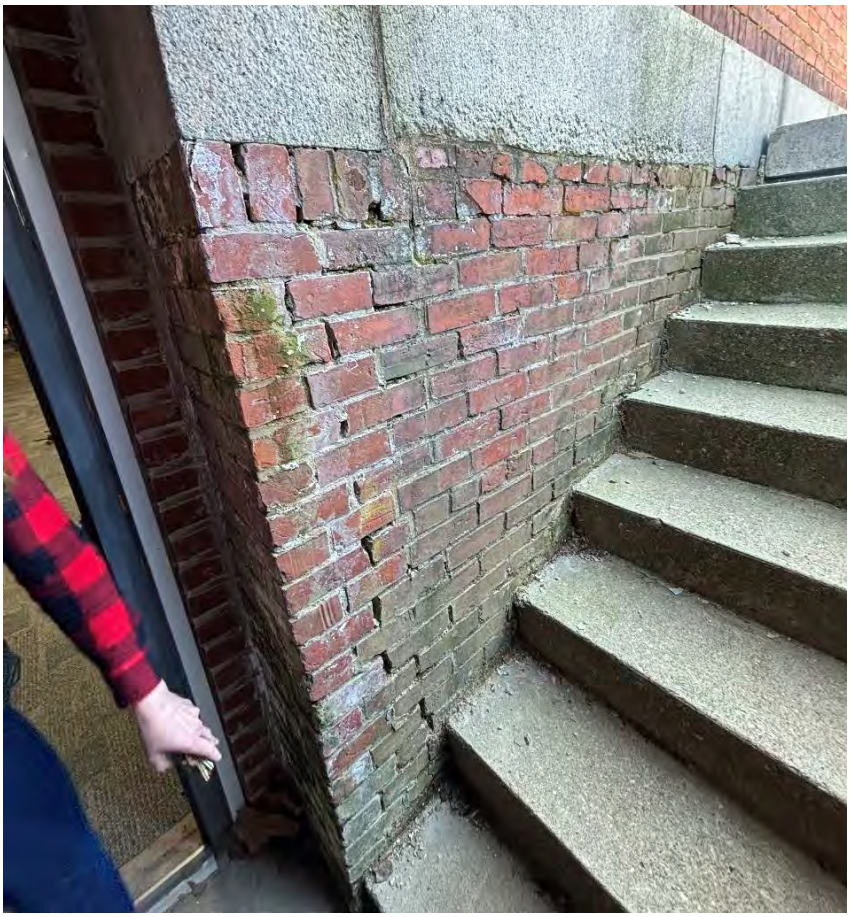


Photo 48

View of exterior masonry at south elevation sunken stairs, with numerous areas of mortar loss and biological growth. Note this area coincides with the finished northwest basement office that experiences reoccurring water leakage.

Photo 49

Example of drain at sunken walkway at the east elevation basement entrance (interior view of entrance shown in Photo 50).

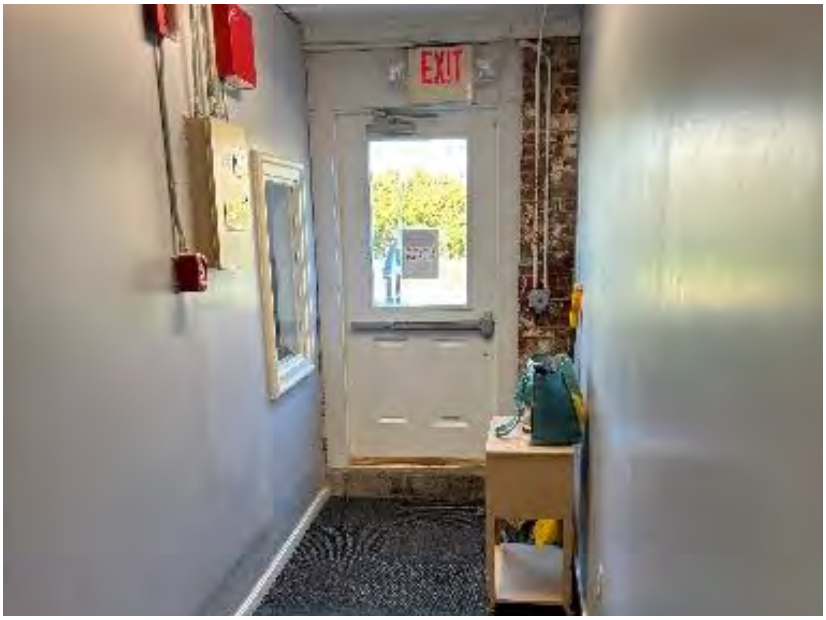


Photo 50

Interior view of east basement entrance, which reportedly experiences water leakage at the threshold during heavy rain events.

Photo 51

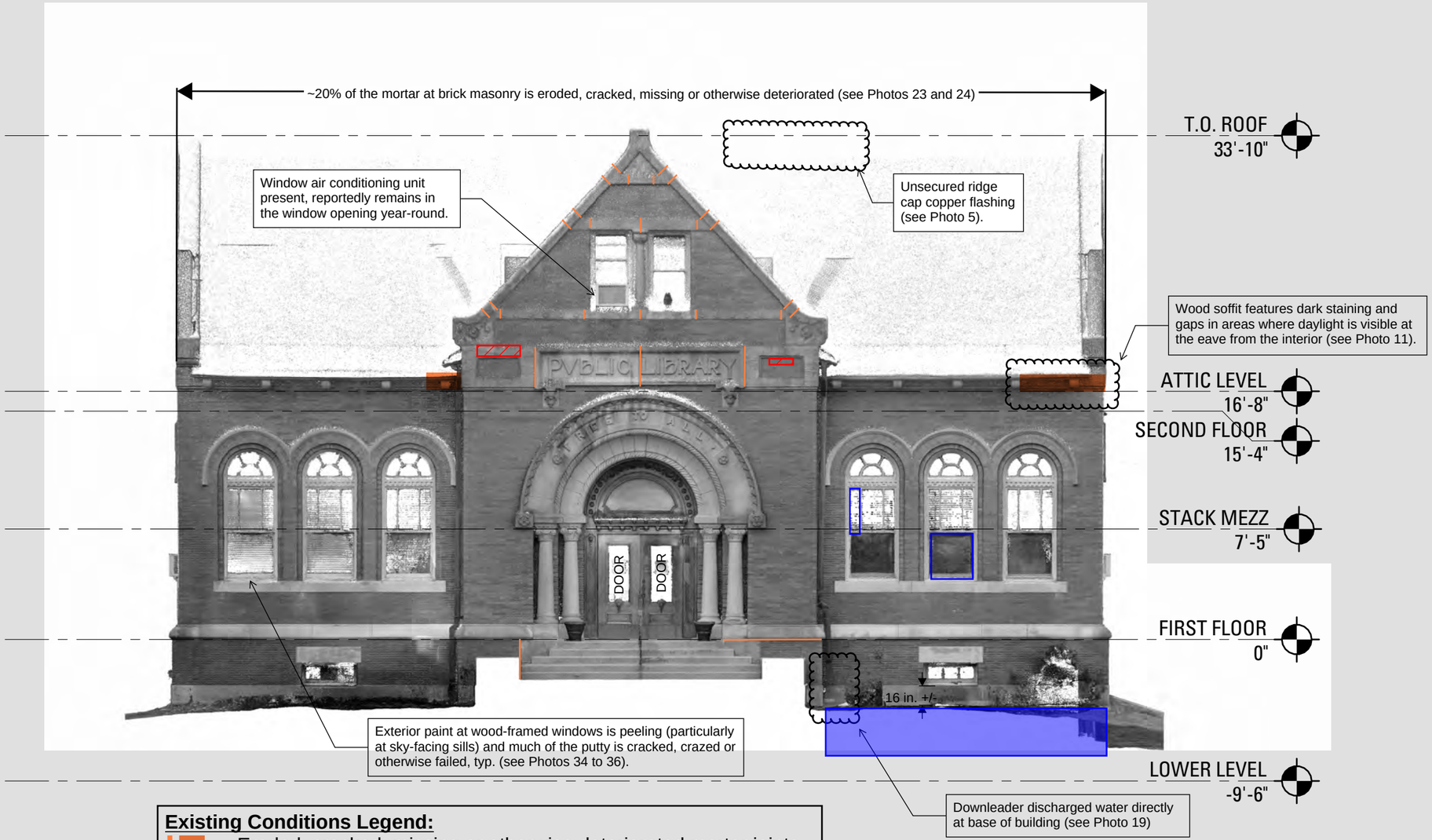
Interior view of painted masonry conditions along the east elevation below-grade wall (at the northern portion of the building at the east elevation). Note the wood-framed stud wall and interior finishes are built about 12 in. away from the interior face of the exterior masonry wall, and several pipes/conduits extend through this space.

Photo 52

Build out of interior finishes along the east elevation range, up to about 12 in. in some locations.

APPENDIX A - EXISTING CONDITION ANNOTATED ELEVATIONS

Simpson Gumpertz & Heger Inc.
SGH Project No. 240468
12 August 2024



Existing Conditions Legend:

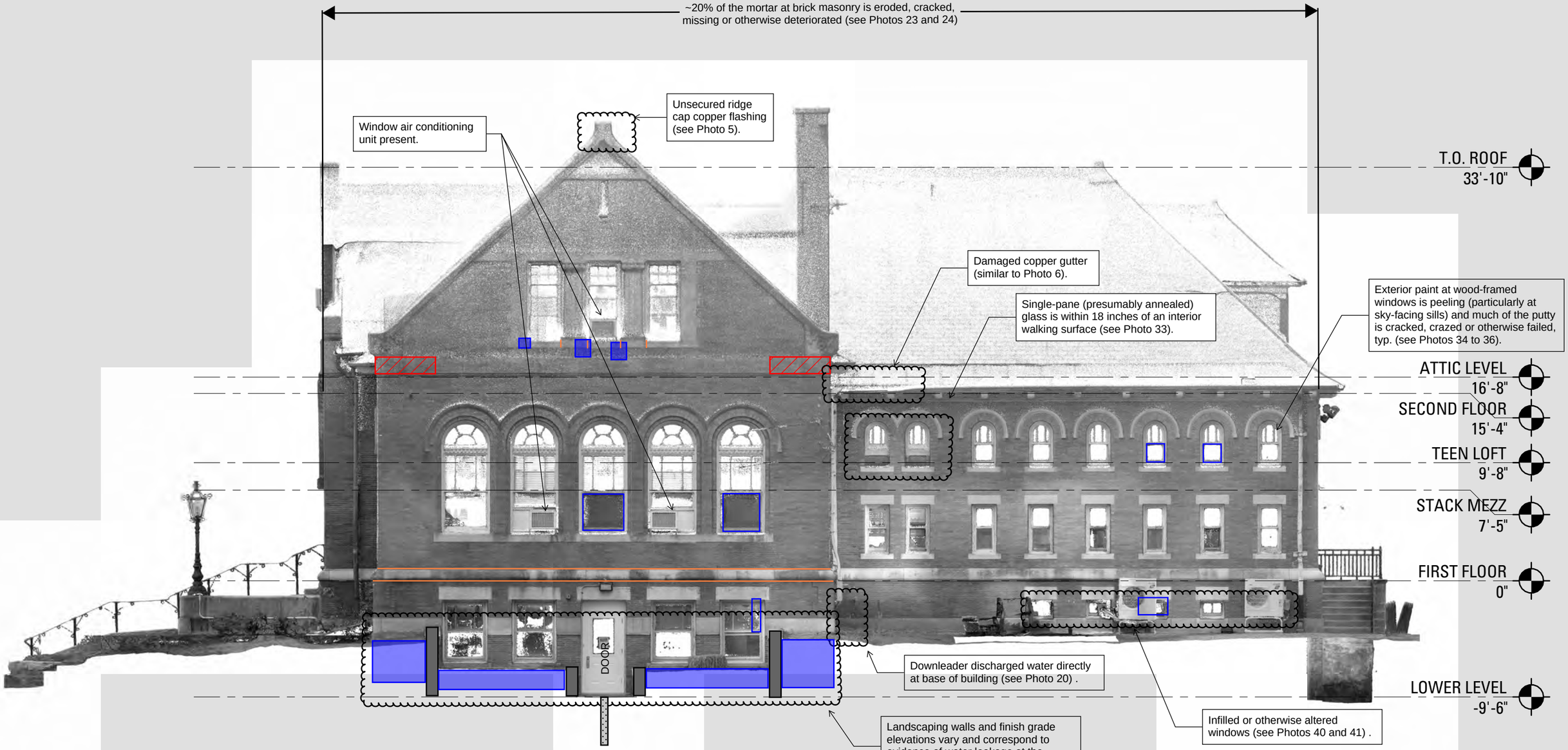
- = Eroded, cracked, missing or otherwise deteriorated mortar joints
- = Out-of-plane brick (relative to the surrounding conditions)
- $X_{B\ or\ S}$ = Spall (brick or stone)
- $\sim_{B\ or\ S}$ = Crack (brick or stone)
- = Cracked glass window pane
- = Dark staining, plaster damage and/or leakage reported at interior
- = Buried site drain at "sunken" area adjacent to building
- = Cracked, spalled, missing or otherwise deteriorated parge coat

Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

SOUTH ELEVATION

APPENDIX A - EXISTING CONDITION ANNOTATED ELEVATIONS

Simpson Gumpertz & Heger Inc.
SGH Project No. 240468
12 August 2024



Existing Conditions Legend:

- = Eroded, cracked, missing or otherwise deteriorated mortar joints
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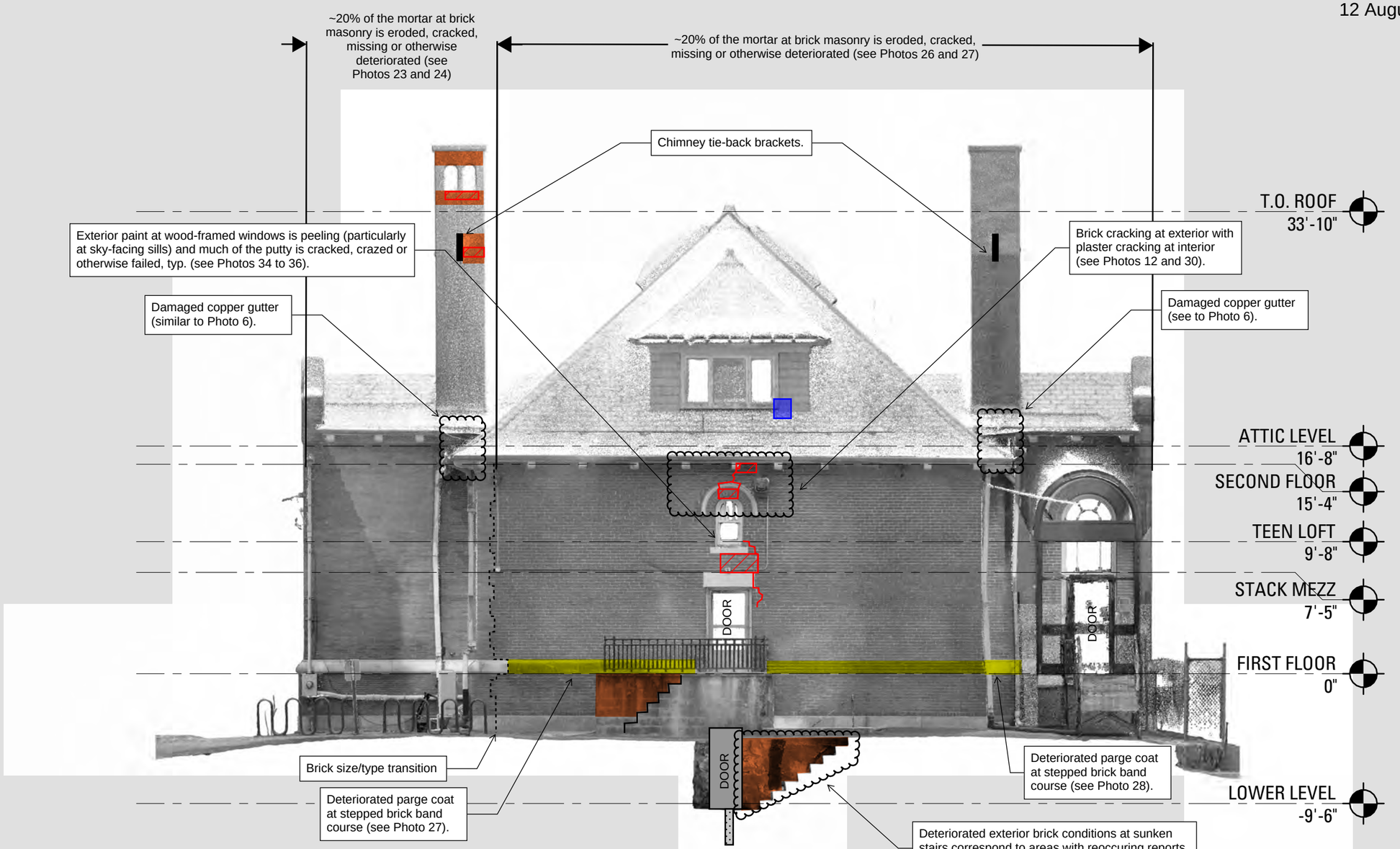
- $X_{B\ or\ S}$ = Spall (brick or stone)
- $\sim_{B\ or\ S}$ = Crack (brick or stone)
- = Cracked glass window pane
- = Dark staining, plaster damage and/or leakage reported at interior
- = Buried site drain at "sunken" area adjacent to building
- = Cracked, spalled, missing or otherwise deteriorated parge coat

Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

EAST ELEVATION

APPENDIX A - EXISTING CONDITION ANNOTATED ELEVATIONS

Simpson Gumpertz & Heger Inc.
SGH Project No. 240468
12 August 2024



Existing Conditions Legend:

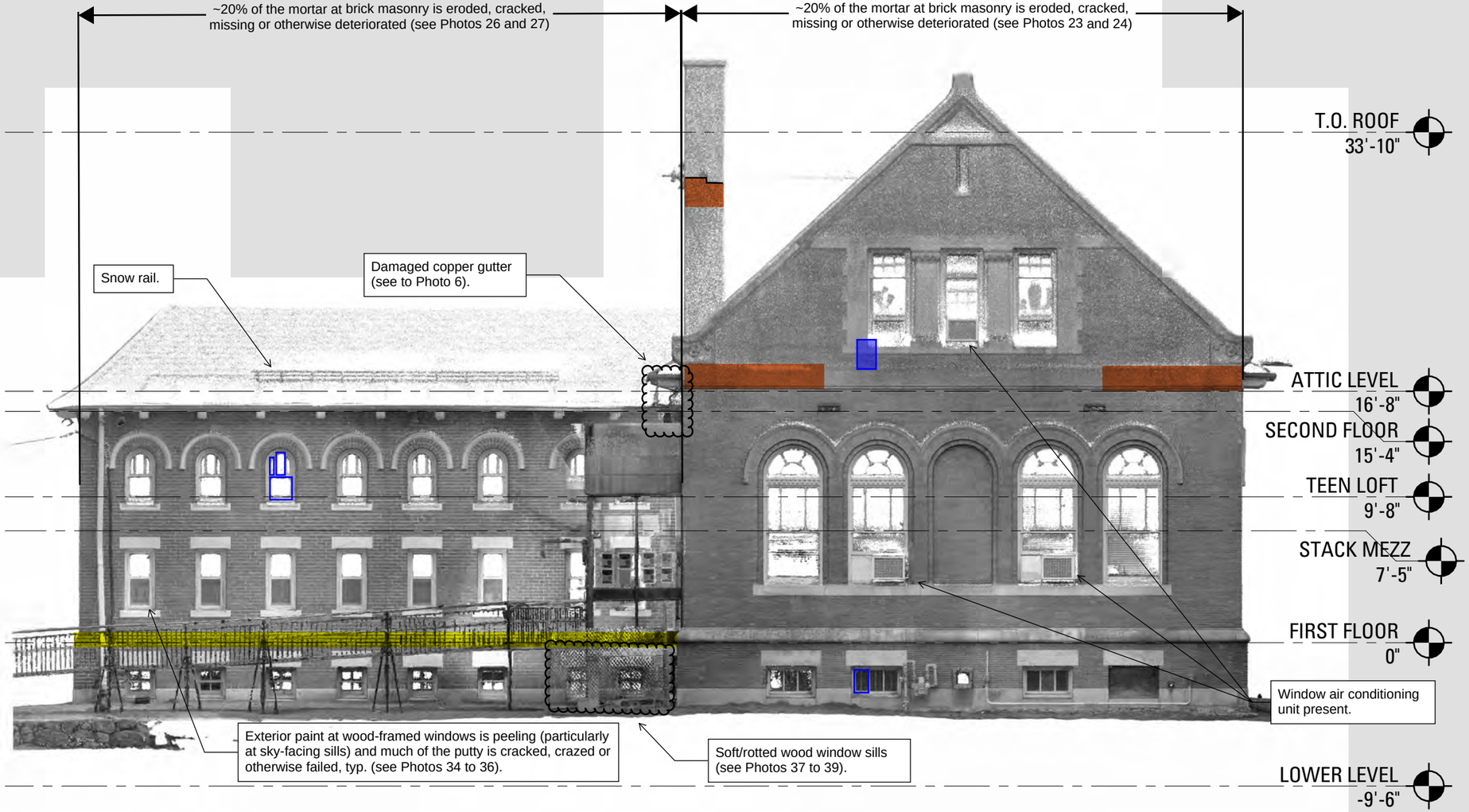
- = Eroded, cracked, missing or otherwise deteriorated mortar joints
- = Out-of-plane brick (relative to the surrounding conditions)
- $X_{B\ or\ S}$ = Spall (brick or stone)
- $\sim_{B\ or\ S}$ = Crack (brick or stone)
- = Cracked glass window pane
- = Dark staining, plaster damage and/or leakage reported at interior
- = Buried site drain at "sunken" area adjacent to building
- = Cracked, spalled, missing or otherwise deteriorated parge coat

Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

NORTH ELEVATION

APPENDIX A - EXISTING CONDITION ANNOTATED ELEVATIONS

Simpson Gumpertz & Heger Inc.
SGH Project No. 240468
12 August 2024



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Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

WEST ELEVATION W RAMP

HVAC

Executive Summary:

The building is heated by a steam boiler plant and heating system. The boilers and boiler room equipment were replaced in 2001. Air conditioning is predominantly via window air conditioners. The archive area is served by ductless split air conditioners/heat pumps and a dehumidifier to control humidity. The archive vault is served by a humidifier, dehumidifier and ductless air conditioner/heat pump. The boiler is 23 years old and is in good condition. The archive area HVAC equipment was installed in May of 2023 and is in excellent condition.

Heating Plant

The building is primarily heated by a low-pressure gas-fired steam boiler plant consisting of a low pressure steam boiler, associated steam and condensate piping and associated controls.

The boiler is an HB Smith Model 19A-S/W-11 11 section cast-iron sectional low pressure steam boiler. The boiler is rated for 1989 MBH net IBR steam input and 1187 MBH net IBR output. The boiler has a Powerflame Model CR2-G-20A-HB8 natural gas power burner with 1 HP motor. The boiler is controlled by a programmable thermostat located on the first floor near the main desk.

The boiler vents to a masonry chimney via round single wall uninsulated steel breeching. The condition of the inside of the chimney is unknown. Combustion air is provided from 2 sources. The main source of combustion air is from a single 16x16 wall opening covered with expanded metal. The wall opening ties into a 42x12 duct that terminates 12” above the floor. The second source of combustion air is from a 24x24 transfer grille on the boiler room door, pulling air from the occupied basement area. Neither method of combustion air is code compliant, as a high and low opening connected to the exterior is required.

Gas-Fired Steam Boiler

Cast Iron Steam Radiator

Building condensate drains by gravity back to the boiler. The boiler undergoes annual maintenance of flushing the low water cutout and flushing the sediment out of the boiler.

Boiler fuseomatic safety switches are installed. Boiler burner emergency shutoff switches at boiler room entry door are installed.

In general, the steam and condensate piping system is original to the building and is nearing the end of its expected service life. Most of the piping is not insulated. There have been no reported leaks in the condensate piping.

Many of the radiator air vents are nearing the end of their useable life. A couple of radiators vents need to be replaced every year.

The biggest issue with the heating system is the building is one heating zone. The programmable thermostat near the main desk is what controls the heat for the entire building. Even though the building is mostly open with few closed doors, there are still hot spots and cold spots. Because cast iron radiators hold so much residual heat, library staff have to be strategic in when to turn down the heat before the building overheats. Generally the basement is the warmest part of the building and the 2nd floor stack and Teen area is the coolest, likely due to all the exterior exposure with attic heat loss, not enough installed radiator capacity and poor air venting by being at the end of the system.

Air Conditioning

The building is not air conditioned by a central air conditioning refrigeration plant. Most of the building is cooled by window air conditioners. These air conditioners are 5 years old and are nearing the end of their useable life.

Window Air Conditioners

Archive Area Heat Pumps

The basement archive area has dehumidification equipment installed in May 2023 to combat a silverfish infestation. The main open archive area is cooled and dehumidified by a Mitsubishi Model MXZ – 3C24NAHZ3 2 ton split system heat pump. This 2 ton heat pump serves two wall mounted ductless air conditioners. The main open archive area is further dehumidified by a Santa Fe Model Ultra 120H commercial dehumidifier with a capacity of 73 pints/day.

The vault archive has both humidification and dehumidification equipment that was installed in May 2023. The vault is cooled and dehumidified by a Mitsubishi Model PUZ-HA24NHA1 2 ton split system heat pump. This 2 ton heat pump serves a ceiling mounted exposed air conditioner. The vault is further dehumidified by a small Santa Fe dehumidifier on a shelf that free blows into the space. The vault is humidified in the winter by an AprilAire Model 865 electric steam humidifier with a distribution fanpack located in the vault. This humidifier can supply 34.6 gallons/day. The bleed from the humidifier drains to a condensate pump that is then pumped to drain through PVC piping. This bleed happens when the humidifier is running to remove sediment from the humidification cannister. The plastic condensate pump and PVC piping is not the appropriate material for hot condensate. The condensate pump and discharge piping should be replaced with materials that can withstand high temperatures.

Ductless Heat Pump

Archive Area Dehumidifier

Archive Vault Humidifier

Humidifier Bleed Condensate Pump

Space Heating:

Space heating is handled by cast iron sectional vertical steam radiators located along exterior walls. Originally these steam radiators had manual handwheels to adjust steam flow and output, but the wheel adjustment is now missing, so the radiator is set to a constant throttled setting. The radiators in the children's area are covered by a protective enclosure. The workshare space at archives is heated by a hot water wall heater. A Taco 007 cartridge circulator pulls hot water off the base of the steam boiler to circulate hot water to the wall heater. The reference room is heated by vertical steam radiators. It was once also heated by natural convection from a steam radiator in a box, located in the basement storage room below. Air would move through a floor grille then through this box with the radiator inside ductwork, where the heated air would then naturally rise up to a large wall grille located midway up the reference room wall. This natural convection radiator/wall grille is no longer operative.

Archive Vault Heat Pump

Radiator in Enclosure

Ventilation:

The building is ventilated by operable windows and infiltration from being such an old historic building. In the summer the window air conditioners bring in some fresh air through a small ventilation damper. There are multiple Austin Air Healthmate Jr air purifiers located throughout the library. These air purifiers contain a fan that circulates room air through a HEPA and charcoal filter. Anecdotally library staff have reported that there have been few air quality complaints like stuffiness. Continue to utilize the air purifiers until a central ventilation can be installed.

Portable Air Purifier

Curved Steam Radiator

Recommendations

Immediate 1-2 Years

- Replace the vault humidifier condensate pump and discharge piping with a high temperature condensate pump and copper discharge piping.
- The heat output of the steam radiators are controlled by manual handwheels. Verify the handwheels on the more problematic radiators are fully open. The handwheels may be stuck in a partially closed position which could be reducing the output to the radiator. If they cannot be adjusted, replace the handwheel.
- Replace the air vents on the radiators that are cool or are experiencing heating issues. The steam system likely has an issue with trapped air, which is causing the cold complaints. The trapped air prevents the steam from entering the radiator, as the air has to be displaced and released from the radiator as the steam enters. If a radiator is cold or portions of it are cold, that typically means trapped air or trapped condensate.
- Add another vent on radiators that are venting a lot of air, as they are also likely venting part of the steam piping as well. Hissing vents are an indication that the vent is too small for the amount of trapped air that needs to be vented, or that the vent is partially plugged from the velocity of the air which carries debris, which increases the velocity through the vent, resulting in a hissing sound.

- If heating problems still persist, the steam mains may need vents added to the ends of the mains.
- If areas are still cold after addressing the air venting, like the teen area and stacks, additional radiators can be added.
- Maintain 4-5 spare window air conditioners, in the event one fails, replacement will be available.
- Reconfigure boiler combustion air to make it code compliant with a larger wall opening and high and low duct openings.
- Have a spare humidifier generation cannister to minimize humidifier downtime, as it is a part that is typically replaced due to scaling and contamination.
- Maintain the boiler with water treatment and monthly blowdown to remove suspended solids and debris from the boiler. Blowdown intervals and duration should be optimized to field conditions.

Long Term 6-10 Years

- Replace steam heating system with an air cooled variable refrigerant flow VRF heat recovery heat pump system. The steam boiler has about 10 years of life remaining. The VRF indoor units could be console units or enclosed in casework at existing radiator locations so as to not adversely impact the historic architecture.
- Install a Dedicated Outdoor Air System DOAS ventilation system at the time of the addition. The DOAS unit can be mounted on the roof of the addition and ducted into the original library. Running ventilation ductwork in the original library will be challenging to not impact the historical architecture.
- The dehumidifiers for the archive area will need to be replaced in about 10 years, as they reach the end of their useable life.

ELECTRICAL

Electrical Distribution System:

The existing electrical service equipment is fed overhead from pole mounted transformers located on Main Street. The main electrical service equipment consists of a 200A, 120/240 volt, single phase main breaker panelboard with a Class320 utility meter located on the exterior of the building. The equipment is manufactured by Eaton and looks to have been recently upgraded.

Utility Service Pole

MCB Service Entrance Panelboard

Existing lighting and power panels are located within the Main Electric Room and throughout the building. The new Eaton panel that has been installed is in good condition. Other panelboards are original to the building and are of fuse type and should be replaced. All panelboards have combined lighting, power, computer and mechanical loads. As a whole the existing electrical distribution equipment should be upgraded and located in dedicated electrical room spaces.

Fuse Type Panelboard

Existing Breaker Type Panelboard

Lighting System:

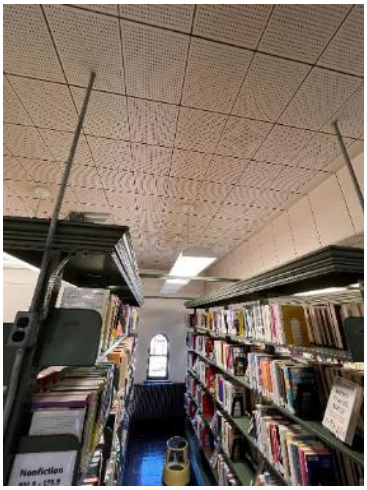
Existing building lighting consists of a range of lighting fixture types that utilize either T-12 fluorescent bulbs or recently upgraded LED bulbs within the existing fixtures. A majority of spaces utilize either surface mounted or pendant mounted linear fixtures with prismatic lens. Where other spaces like the basement utilize 2'x'2' recessed LED flat panels.

The front library circulation space utilizes indirect only pendant fixtures and recessed downlights. Per discussion with library staff, the existing downlights are inoperable. Due to the inoperable recessed downlights and indirect distribution of the pendant fixtures, the space heavily relies on incoming daylight to light the space.

The second floor library space utilizes surface mounted LED fixtures, that were retrofitted with custom lensing following complaints from the library staff and visitors of the lighting being too bright and hurting their eyes. Even after installing the custom lensing complaints continued and the lights are now left off, having the space rely on the skylights and windows for incoming daylight to light the space.

Exterior lighting for the building consists of entry bollards, site poles and building mounted flood lights for area lighting.

Surface Mounted Prismatic Linears



Pendant Mounted Prismatic Linears

Indirect Only Pendant Fixture

Building Mounted Flood Lights

Site Bollard Fixture

Site Pole Fixture

Second Floor Lighting

Emergency Lighting System:

The emergency lighting system consists of wall mounted emergency battery units. The exit signs are not illuminated and are a code violation. Overall emergency lighting is minimal and does not look like it would properly light the path of egress in most spaces.

Wall Mounted Battery Unit

Non-Illuminated Exit Sign

Lighting Controls:

Building lighting is controlled via local wall switches in all spaces. Since there is no central lighting control system or time clock in place, building lighting is controlled at the start and end of each day from a recessed mounted panelboard on the first floor.

Building Lighting Panelboard

Wiring Devices:

The existing receptacles are grounding type. The present quantity of outlets appears to be sufficient to meet the current needs. Outlets have been added to accommodate computer equipment. A majority of receptacles within the historical portion of the library utilize surface mounted boxes and surface raceway.

Surface Mounted Receptacle

Fire Alarm System:

There is a conventional automatic fire alarm system present in the building. Building is not provided with a sprinkler system.

The main fire alarm control panel is located in the basement hallway that has grade access. The existing system is a four zone conventional system manufactured by FCI. The system utilizes a DSC cellular communicator for its building alarm transmission to the fire department.

Manual pull stations are provided at the exits and are of pull type and horn strobes units are provided throughtout the building.

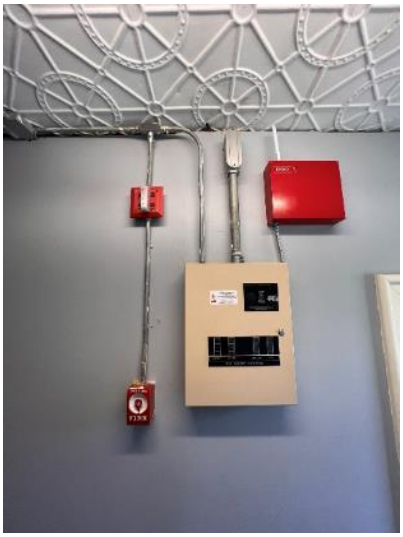
Smoke detectors are present throughout the building and heat detectors are located in the electrical room and water entry rooms. Remote annunciator is located at the main entrance.

Fire Alarm Control Panel

Cellular Communicator

Pull Station

Smoke Detector



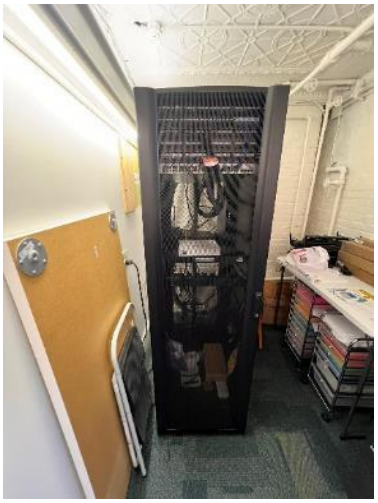
Fire Alarm Strobe

Heat Detector

Tel/Data Security:

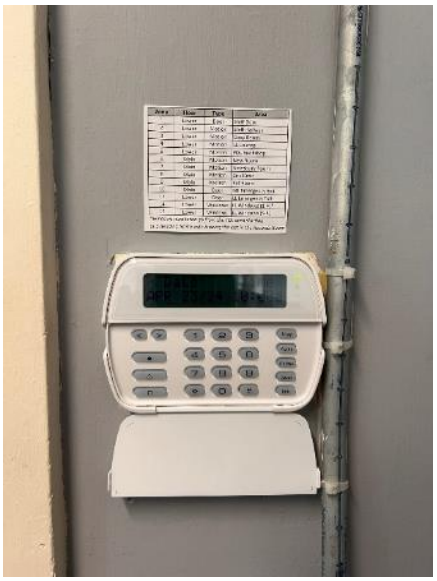
The building's communication systems run overhead from Main Street into the main electric room where it terminates on the building's telecommunications backboard. The building's phone service is VoIP and supported on a cloud hosted server system. All network drops patch into the building's MDF Rack which is located within an office in the library basement. All network drops within the building have been converted over to CAT6 cabling and are located throughout the building as needed.

Communications System Demarc



Data Rack

There is an existing security system in the building. The system consists of motion sensors and door/window contacts with a keypad located in staff entrance building corridor.



Keypad

RECOMMENDATIONS

Electrical Distribution System:

- The existing service equipment is a mixture of upgraded and original distribution equipment and should be upgraded as part of a 3-5 year upgrade project. All existing fuse type panelboards within the building are obsolete and should be replaced as part of a 1-2 year upgrade project.

- Any elevator addition project or mechanical/plumbing upgrades that would convert the building to an all electric system would require a service/building distribution upgrade. The additional electrical load that either project would present, would require a simultaneous upgrade of the building's electrical service and distribution equipment.

- Upon a building wide electrical distribution equipment upgrade, a new dedicated main electrical room would be created to house all associated building panelboards.

Interior Lighting System:

- The existing interior lighting system is in fair condition. Many spaces lack the appropriate foot candle levels for its space type and full building lighting control is obsolete. We would recommend a full lighting system redesign that utilizes energy efficient LED fixtures with 0-10V dimming capability in order to provide proper foot candle levels. We would also recommend a distributed lighting control system to provide the building with basic controllability that would include occupancy control, daylight harvesting, dimming control and time scheduling.

- All upgrades above should be part of 3-5 year upgrade project.

Exterior Lighting System:

- The existing interior lighting system is in fair condition. Many areas lack the appropriate foot candle levels and controllability of exterior lighting is lacking. We would recommend installing LED wall packs at all building exits and provide pedestrian poles along building exit passages to provide proper foot candle levels. Driveway and parking site area poles would also be recommended for overall site security. All exterior lighting fixtures would be tied into the building's lighting control system to provide scheduling control and dimming capability.

- All upgrades above should be part of 3-5 year upgrade project.

Emergency Lighting System:

- Emergency lighting throughout the building is lacking and does not look like it would provide the code required 1 foot candle along the egress pathways. A majority of exit signs throughout the building are not illuminated and are a code violation to today's standards. We would recommend installing a centralized inverter system to provide the proper emergency exit lighting throughout the building.

- All upgrades above should be part of 1-2 year upgrade project.

Fire Alarm System:

- The existing conventional fire alarm control panel is obsolete and should be replaced with a new addressable system. The existing system appears to be ADA compliant.

- All upgrades above should be part of 1-2 year upgrade project.

Tel/Data/Security:

- The telecommunications system within the building have been recently upgraded and no future upgrades are recommended at this time.
- The building is protected with an intrusion system, for further protection the facility could benefit from an interior/exterior video monitoring system that monitors all building entrances and exterior common areas.

FIRE PROTECTION:

The building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing commercial building over 7,500 square feet which undergoes major alterations, or a building addition, must be sprinklered throughout. Examples of major alterations are demolition or reconstruction of existing ceilings or installation of suspended ceilings; removal of sub flooring; demolition and/or reconstruction of walls, doors, or stairways; or removal or relocation of a significant portion of the building's mechanical or electrical systems. Alterations are considered major when such work affects 33% or more of the building area or when total work (excluding sprinkler installation) is equal to 33% or more of the assessed value of the building.

If the project scope exceeds these thresholds, then an automatic sprinkler system shall be provided. All concealed combustible spaces will be required to be protected with the automatic sprinkler system. A hydrant flow test will be required to determine if adequate Municipal water supply is available.

If a fire protection system is required, the building will be served by a new dedicated 6-inch fire service, double check valve assembly, and wet alarm valve housed in an area of approximately 8 feet by 10 feet. This Fire Service entrance system does not need a dedicated room. The fire protection system will also include an electric bell, and fire department connection meeting local thread standards which would need to be located within 100 feet of a fire hydrant.

Control valve assemblies isolating each floor or fire area shall consist of a supervised shutoff valve, check valve, flow switch and test connection with drain including fire alarm integration. Both the expansion and existing building may be served from the same fire service location.

Amesbury Public Library Study
Amesbury, MA
Plumbing Existing Conditions Systems Report
J#360 006 00
L#89015/Page 1/August 7, 2024

PLUMBING

Executive Summary:

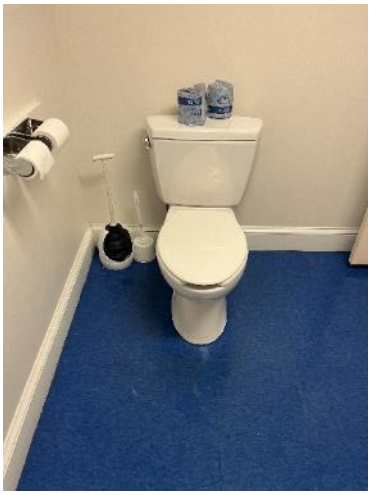
Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary, waste and vent system, and natural gas. Municipal sewer and municipal water service the building.

The majority of the plumbing systems have been updated as part of building renovation and upgrade projects. The plumbing systems, while continuing to function, appear to have served their useful life. The plumbing systems could continue to be used with maintenance and replacement of failed components; however other non-dependent decisions will likely force the plumbing upgrade. The plumbing fixtures are in fair condition. In general, the fixtures do not meet current accessibility codes. The fixtures appear to have served their useful life. The current Access Code requires accessible fixtures wherever plumbing is provided. In terms of water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require these fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures need to be water conserving type fixtures. Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper. In general, the drainage piping can be reused where adequately sized for the intended new use.

Fixtures:

Bathrooms are located on the Lower Level and Second Floor. The water closets are floor mounted vitreous china with flush tanks. Lavatories counter mounted or wall hung vitreous china with manual faucets. The staff break room has a single bow stainless steel sink with gooseneck faucet and vegetable spray. There is an enamel service sink in the Mechanical Room with a wall mount manual faucet.

Bottled water dispensers are provided in lieu of drinking fountains. There are no plumbed drinking fountains in the building.



Floor mounted water closet

Countertop lavatory

Wall hung lavatory

Break Room sink

Typical bottled water dispenser

Service sink

Water Systems:

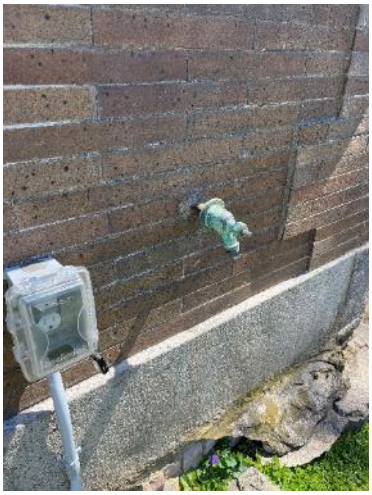
The main domestic water service is a Lower Level utility closet. The service is 3/4-inch in size and includes a 5/8-inch water meter. There is no backflow preventer on the service.

Piping, where exposed, appears to be copper tubing with sweat joints. The majority of piping is 3/4-inch in size and smaller. The piping is not insulated. Exterior wall hydrants are not non-freeze type and are not equipped with vacuum breakers.

Domestic hot water in for the plumbing fixtures is generated through a natural gas fired tank type water heater. The water heater is standard efficiency, with a natural gas input of 40,000 BTUH, and 40 gallons of storage. The hot water systems are not recirculated. There is no thermostatic mixing valve on the system to prevent scalding. The water heater appears to be in good condition.

Domestic water service & meter

Domestic water heater



Exterior wall hydrant

Gas:

An elevated pressure natural gas service is supplied to the building. The gas meter is located on the exterior of the building outside the Mechanical Room. Natural gas is provided to the heating boiler and domestic water heater. Gas piping is black steel with threaded joints and fittings. Gas piping appears to be in good condition.

Natural gas service & meter

Interior gas piping

Gas piping to boiler

Drainage Systems:

Cast iron is used for sanitary drainage. Where visible, the cast iron pipe appears to be in fair condition. Smaller pipe sizes appear to be copper.

In general, the cast iron drainage piping can be reused even in a major renovation where adequately sized for the intended new use.

Typical cast iron drainage piping

Recommendations:

- Provide new high efficiency plumbing fixtures throughout the building including expansion. This is a short-term recommendation (3-5 years) to improve water savings, efficiency and a Code requirement upgrade.

- Provide accessible fixtures where required in the renovated building and/or expansion. This is a short-term recommendation (3-5 years).

- Provide new drinking fountains for each set of restrooms in the renovated building and/or expansion. This is a short-term recommendation (3-5 years) as a Code requirement upgrade.

- Provide new service sinks on every floor in the renovated building and/or expansion. This is a short-term recommendation (3-5 years) as a Code requirement upgrade.

- Provide new 2-inch domestic water service to support flush valve type fixtures in the renovated building and/or expansion. This is a long-term recommendation (6-10 years) as an expansion/renovation upgrade.

- Replace existing domestic water shutoff valves with new ball valves. This is a short-term recommendation (3-5 years) as an operational/maintenance upgrade.

- Domestic hot water shall be stored at 140-degrees to prevent bacteria growth. Install thermostatic mixing valve set to deliver 120-degrees to plumbing fixtures requiring hot water. Provide a recirculation loop with pump at existing water heater to decrease hot water delivery time at remote plumbing fixtures. This is a short-term recommendation (3-5 years) as a Code requirement and operational/maintenance upgrade.

- Replace existing exterior wall hydrants with non-freeze hydrant with integral vacuum breakers. This is a short-term recommendation (3-5 years) as a Code requirement upgrade.

ACCESSIBILITY AUDIT REPORT

May 6, 2024

To: Stephanie Salsman, Brunner/ Cott Architects
From: Veronica Mansilla
CC: Josh Safdie

Re: Amesbury Public Library – Accessibility Audit

KMA
ARCHITECTURE
+ACCESSIBILITY
ONE BRIDGE ST
NEWTON MA
02458-1132
KMACCESS.COM
617.641.2802

On Tuesday, April 23, 2024, KMA auditor Veronica Mansilla performed a comprehensive accessibility audit of the immediate site, entrances, and all public spaces at Amesbury Public Library, located at 149 Main Street, Amesbury, MA. The purpose of this audit was to identify conditions that do not comply with the 2010 Americans with Disabilities Act (ADA) Standards and 521 CMR: The Rules and Regulations of the MA Architectural Access Board (MAAB).

Renovations are being planned for the facility that will likely exceed 30% of the full and fair cash value of the building. Brunner/ Cott has been hired as the architect of record and understand that any existing architectural barriers will need to be mitigated, or a variance from the MAAB sought. The architects will use the findings of this report as a basis for their work.

Building Description

Amesbury Public Library is a two-story building with a basement, originally constructed in 1900. The building includes stacks/bookshelves, study and reading areas, staff offices and break rooms, and public toilet rooms. There is no elevator provided, all levels are served by stairs. There is a shared municipal parking lot associated with the property.

Note: KMA understand the building has been deemed eligible for listing on the National Register of Historic Places and that a nomination is currently being developed.

Jurisdictional Overview

Amesbury Public Library is defined under the Americans with Disabilities Act as a *place of public accommodation* and under 521 CMR as a *public building.* As such, the building will be subject to certain accessibility requirements when the planned alterations are made.

521 CMR

521 CMR: the Rules and Regulations of the MAAB is a section of 780 CMR: the MA Amendments to the International Building Code 2015. 521 CMR governs the "design, construction, and renovation of public buildings to make them accessible to, functional for, and safe for use by persons with disabilities." The specific scoping provisions for renovations are reproduced in part here:

3.3 EXISTING BUILDINGS

All additions to, reconstruction, remodeling, and alterations or repairs of existing public buildings or facilities, which require a building permit, or which are so defined by a state or local inspector, shall be governed by all applicable subsections in 521 CMR 3.00: JURISDICTION.

3.3.1 If the work being performed amounts to less than 30% of the *full and fair cash value of the building* and

a. if the work costs less than $100,000, then only the work being performed is required to comply with 521 CMR; or

b. if the work costs $100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.

Exception: General maintenance and on-going upkeep of existing, underground transit facilities will not trigger the requirement for an *accessible entrance* and toilet unless the cost of the work exceeds $500,000 or unless work is being performed on the *entrance* or toilet.

Exception: Whether performed alone or in combination with each other, the following types of *alterations* are not subject to 521 CMR 3.3.1, unless the cost of the work exceeds $500,000 or unless work is being performed on the entrance or toilet. (When performing exempted work, a memo stating the exempted work and its costs must be filed with the permit application or a separate building permit must be obtained.)

(a) Curb Cuts: The construction of *curb cuts* shall comply with 521 CMR 21.00: CURB CUTS.
(b) *Alteration* work which is limited solely to electrical mechanical, or plumbing systems; to abatement of hazardous materials; or retrofit of automatic sprinklers

and does not involve the *alteration* of any *elements* or *spaces* required to be *accessible* under 521 CMR. Where electrical outlets and controls are altered, they must comply with 521 CMR.

(c) Roof repair or replacement, window repair or replacement, repointing and masonry repair work.

(d) Work relating to septic system repairs, (including Title V, 310 CMR 15.00, improvements) site utilities and landscaping.

3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the full and fair cash value of the building (see definitions in 521 CMR 5.00), the entire building is required to comply with 521 CMR.

3.3.3 Alterations by a tenant do not trigger the requirements of 521 CMR 3.3.1b and 3.3.2 for other tenants. However, alterations, reconstruction, remodeling, repairs, construction, and changes in use falling within 521 CMR 3.3.1b and 3.3.2, will trigger compliance with 521 CMR in areas of public use, for the owner of the building.

KMA understands that Amesbury Public Library is planning a renovation to the entire building. Because this renovation is expected to cost greater than 30% of the full and fair cash value of the building, Section 3.3.2 will apply. This means that the Amesbury Public Library will have to bring the entire building into compliance with 521 CMR – or request variances not to do so on an issue-by-issue basis, on the basis of *impracticability.*

2010 ADA Standards

Title III of the Americans with Disabilities Act (ADA) prohibits discrimination on the basis of disability by public accommodations and requires places of public accommodation and commercial facilities to be designed, constructed, and altered in compliance with the accessibility standards established under the ADA.

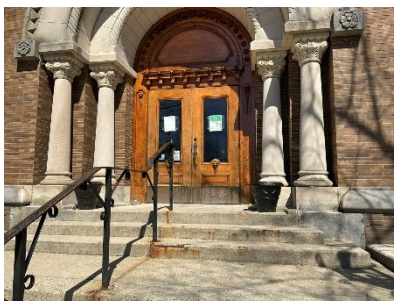
Buildings and elements constructed or altered after January 23rd, 1993 were required to comply with the 1991 ADA Accessibility Standards. Buildings and elements constructed or altered after March 15, 2012 are required to comply with the 2010 ADA Standards, with the exception that anything constructed or altered prior to March 15, 2012 that complies with the 1991 ADA Standards is not required to proactively be brought into compliance with the 2010 ADA Standards.

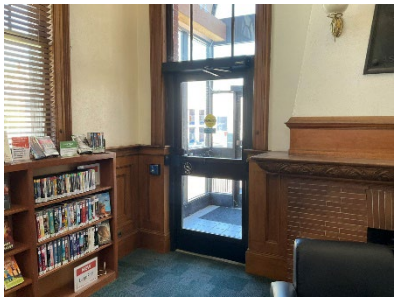
The alteration requirements under Section 202.4 state in part that "an *alteration* that affects or could affect the usability of or access to an area containing a primary

function shall be made so as to ensure that, to the maximum extent feasible, the path of travel to the *altered* area, including the rest rooms, telephones, and drinking fountains serving the *altered* area, are readily *accessible* to and usable by individuals with disabilities." This means that Amesbury Public Library will have to establish an accessible entrance to the building and eliminate any instances of non-compliance along the path of travel leading to or within the building.

Summary of Findings

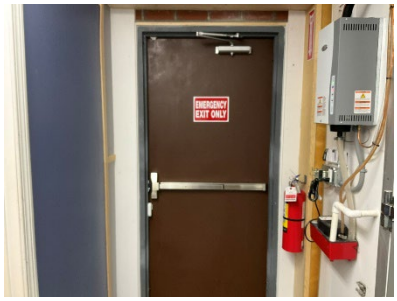
The following table details the barriers noted during our audit that would need to be mitigated in order to satisfy the above requirements under the ADA and 521 CMR. Please note that this was a comprehensive audit, and so any items not mentioned may be assumed to fully comply with 521 CMR and the ADA Standards.

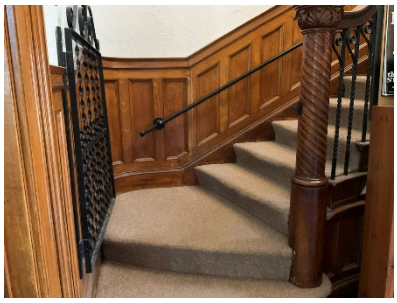
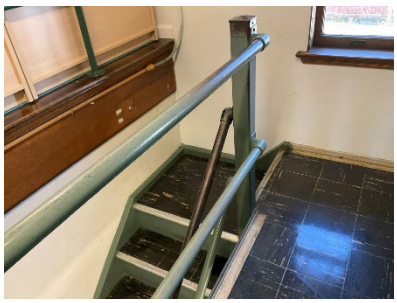
EXTERIOR & ENTRANCES ISSUES		
#	Barrier	Photo
1.	**Parking Lot** The accessible parking spaces and its associated access aisle have slopes >2%, @ up to 2.4%. The accessible parking spaces lack the required signage.	
2.	**Route from Parking to Accessible Entrance** The route from parking to the ramp leading to the accessible entrance has uneven ground surfaces, and excessive cross slopes, @ up to 2.6%, that create abrupt changes of level.	
3.	**Main Entrance** Directional signage is not provided at the non-accessible entrance. Stair treads have abrupt changes of levels due to areas of deterioration/material settlement. The stairs lack the required handrails on both sides (only the center handrail is provided). The handrail lacks the required extensions at the top and bottom. The handrail cross section is not rounded. The door lacks a level landing, @ 2.9%. The threshold is > ½" high, @ ¾". *Note: The door also functions as a means of egress.*	 

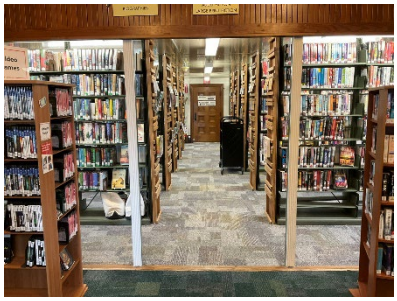
4.	**Accessible Entrance/ Egress** The transition from the ramp to the parking lot is not flush and has abrupt changes in level. The running slope of the ramp is >8.3%, @ up to 9.5%. The ramp lacks bottom, middle and top level landings, @ up to 2.3%. The ramp lacks the required bottom handrail extensions. The ramp lacks the required drop-off edge along the entire ramp on both sides. The door lacks a level landing, @ 2.2%. The door opener lacks an adjacent level clear floor space. The door lacks an illuminated exit sign identified by the International Symbol of Accessibility inside the vestibule. *Note: The door also functions as a means of egress.*	  
5.	**Staff Entrance** Directional signage is not provided at the non-accessible entrance. The entrance on the East side of the building is not accessible due to the stairs. The stairs lack the required handrails on one side. The handrail lacks the required extensions at the top and bottom. The handrail cross section is not rounded. The door lacks a level landing, @ 2.3%. The threshold is > ½" high, @ ¾". *Note: The door also functions as a means of egress.*	

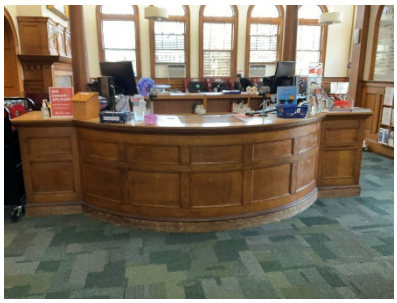
6.	**Means of Egress** The egress doors on the North side of the building are not accessible due to the stairs. The egress doors have thresholds that are >½" high. The stairs lack the required handrails on one or both sides. The handrail at one of the stairs lacks the required extensions at the top and bottom. One of the door hardware requires tight grasping, pinching, or twisting of the wrist to operate. The egress doors lack a level landing.	 
7.	**Walkways Around the Building** The walkways have uneven ground surfaces, and excessive cross slopes, @ up to 3.1%, due to areas of deterioration/material settlement.	 
8.	**Book Drop** There is not a 30" x 48" clear floor space adjacent to the book drop off, @ 8.7%.	

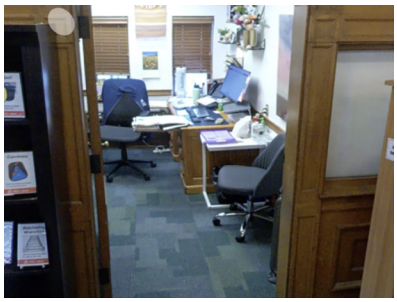
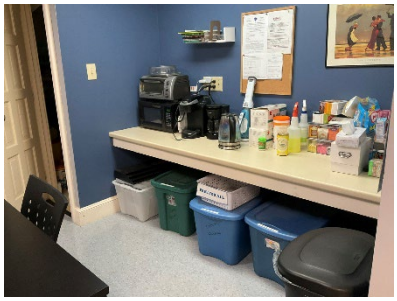
9.	**Benches** There is not a 30” x 48” clear floor space adjacent to the bench. Some benches are not located on an accessible route due to the grass surface.	 
10.	**Trash Bin** There is not a 30” x 48” clear floor space adjacent to the trash bin.	
11.	**Picnic Tables** 5% of the picnic tables are not located on an accessible route due to the grass surface. 5% of the picnic tables lack the required knee and toe clearance for a forward approach.	
INTERIOR ISSUES		
12.	**Accessible Route between Levels** An accessible route is not provided connecting all levels and spaces.	No Image

13.	**Protruding Objects - Typical** The air conditioning, fireplace mantel shelves, shelves, and fire and electrical boxes protrude >4" into the circulation area, @ up to 11". *Observed in Basement and 1st Floors corridors, and Staff office.*	  
14.	**Interior Signage - Typical** There is no tactile/Braille signage mounted on the latch side of the doors. *Observed on all interior doors.*	
15.	**Door Hardware - Typical** The door hardware requires tight grasping, pinching, or twisting of the wrist to operate. *Observed on most interior doors.*	

16.	**Door Thresholds - Typical** Some of the door thresholds are > ½" high, @ up to 1 ½" AFF. *Observed on most interior doors.*	
17.	**Interior Stairs** The stairs lack the required handrails on one or both sides. The handrails lack the required extensions at the top and bottom. The handrails are not 34"-38" measured to the top of the gripping surface, @ as low as 26" AFF. The stair handrails are not continuous. The stair nosing is >½", @ ¾". Some stair handrails cross sections are not rounded. The clear space between the handrail and the wall is >1 ½", @ as little as 1".	   

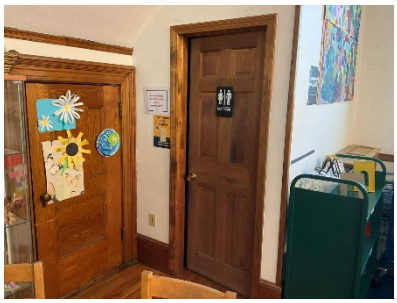
18.	**Interior Routes** Some portions of the floor have excessive slopes, @ up to 22.9%. Some thresholds are > ½" high, @ up to 1 ½" AFF. *Observed in Basement and 1st Floors corridors.* The headroom under the beam provides <80" vertical clearance, 78" AFF. *Observed in the 1st Floor corridor at Fiction area entrance.* The door connecting Teen Loft and Youth Services areas is <32" wide, @ 27".	 
19.	**Stacks Areas** Routes within the stack areas provide <36" clear width, @ as little as 17". *Observed on all floors.*	  

20.	**Tables and Computer Desks** Some of the tables and computer desks lack the required knee and toe clearances for a forward approach, @ as little as 25" AFF. *Observed in Offices, Reference Room, Youth Services area and Staff Break Room.*	 
21.	**Counters** The counters are mounted >36" AFF, @ up to 43". *Observed in Reception and Reference room.*	
22.	**Library Catalog Table** The library catalog table is >36" AFF, @ 39" and lacks the required knee/ toe clearance for a forward approach.	
23.	**AED Box** The AED box protrudes > 4" into the circulation space, @ 6", and is mounted >48" AFF, @ 58" to the highest operable part.	

24.	**Director's Office** The door maneuvering clearances is <18" on the latch pull-side of the door, @ 15".	No Image
25.	**Furniture Placement** The placement of furniture in Amesbury Room, offices, and printer/copier room reduces the 36" minimum path of travel and obstructs the required door maneuvering clearances.	 
26.	**Staff Break Room** The knee clearance at the work surface is <27" AFF, @ 24". The coat hooks are mounted >48" AFF, @ 66". The phone is mounted >48" AFF, @ 66" measured to the highest operable part.	 

27.	**Kitchen in Staff Break Room** The room lacks the required minimum 60” turning space. The sink counter is >34” AFF, @ 36”, and lacks the required knee clearance for a forward approach.	
28.	**Staff Toilet Room** The room lacks the 72”x90” required footprint, @ 62”x53” and accessible elements for an accessible toilet room. The pull-side door maneuvering clearance is <60” perpendicular to the doorway, @ 30”. The pipes underneath the lavatory are not insulated. The mirror is mounted >40” AFF measured to the bottom of the reflective surface. The toilet centerline is not 18” from the side wall, @ 22”. The flush control is not located on the open side of the toilet. The toilet paper is not located 7”-9” from the rim of the toilet. The centerline of the toilet paper dispenser is >24” AFF, @ 41”. There are no grab bars provided. The coat hook is mounted >48” AFF. The shelves protrude >4” into the circulation route, @ 12”.	 
29.	**Toilet Room A (Basement)** The room lacks the 72”x 90” required footprint, @ 89 ½”x 84” and accessible elements for an accessible toilet room. The pipes underneath the lavatory are not insulated. The lavatory faucet control requires tight grasping, pinching, or twisting of the wrist to operate. The mirror is mounted >40” AFF measured to the bottom of the reflective surface, @ 50”. The toilet centerline is not 18” from the side wall, @ 22”.	

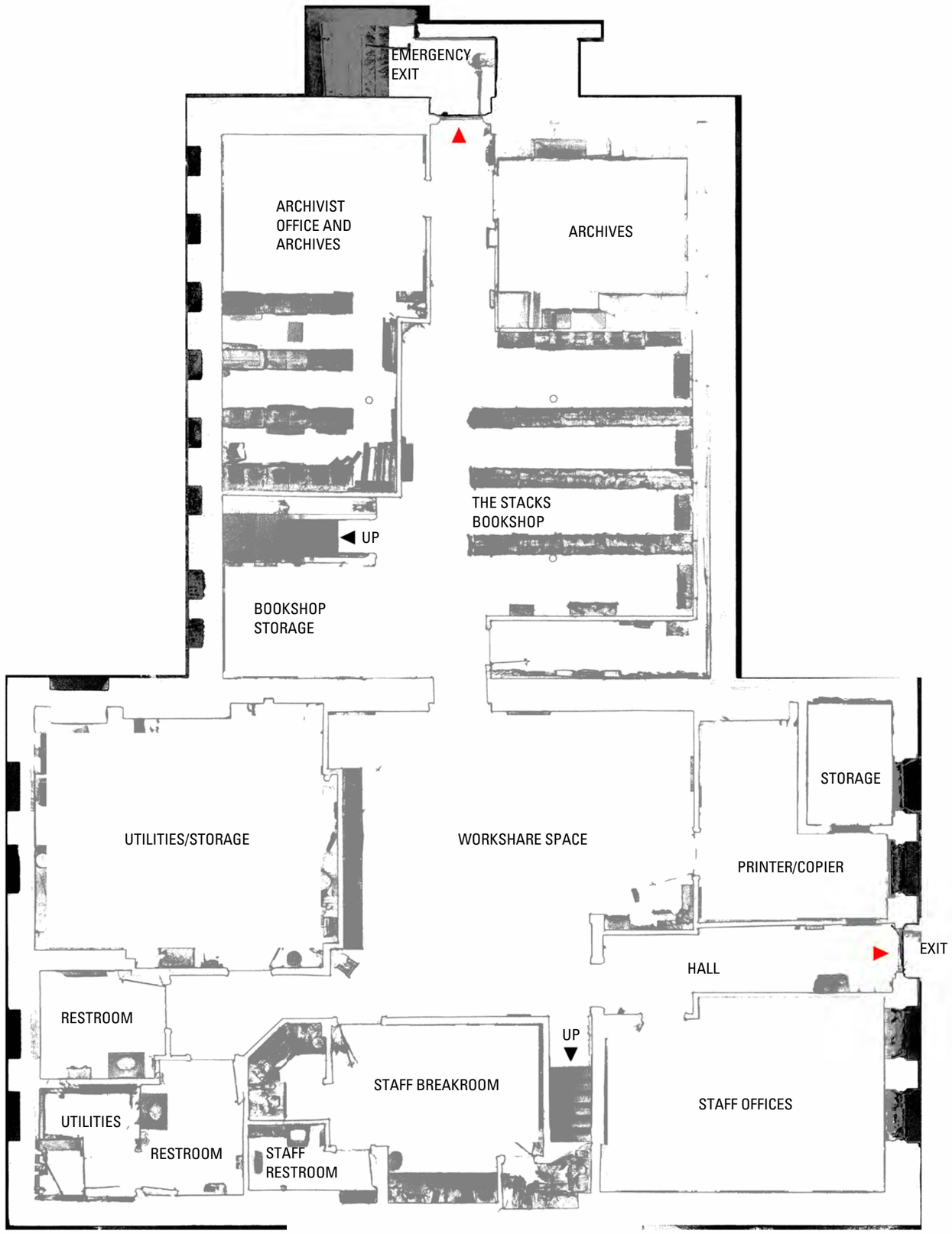
	The clearance around the water closet is <60" measured perpendicular from the side wall, 46" to the lavatory. The toilet seat is not 17"-19" AFF, @ 16 ½". The toilet paper is not located 7"-9" from the rim of the toilet. There are no grab bars provided. The coat hook is mounted >48" AFF, @ 63". The changing table is mounted >48" AFF, @ up to 50" to the highest operable part. The changing table hardware requires tight grasping, pinching, or twisting of the wrist to operate.	 
30.	**Toilet Room B (Basement)** The room lacks the 72"x 90" required footprint, @ 110"x 85" and accessible elements for an accessible toilet room. The pipes underneath the lavatory are not insulated. The lavatory faucet control requires tight grasping, pinching, or twisting of the wrist to operate. The mirror is mounted >40" AFF measured to the bottom of the reflective surface, @ 50". The toilet centerline is not 18" from the side wall, @ 23". The flush control is not located on the open side of the toilet. The toilet seat is not 17"-19" AFF, @ 16 ½". The centerline of the toilet paper dispenser is >24" AFF, @ 32". The toilet paper is not located 7"-9" from the rim of the toilet. The hand dryer protrudes >4" into the circulation route, @ 8".	  

31.	**Toilet Room (2nd Floor)** The room lacks the 72”x 90” required footprint, @ 51”x 88” and accessible elements for an accessible toilet room. The door maneuvering clearances is <18” on the latch pull-side of the door, @ 7”. The lavatory lacks the required knee and toe clearance for a forward approach. The toilet centerline is not 18” from the side wall, @ 17”. The clearance around the water closet is <60” measured perpendicular from the side wall. The toilet paper is not located 7”-9” from the rim of the toilet. The centerline of the toilet paper dispenser is >24” AFF. There are no grab bars provided. The towel paper dispenser protrudes >4” into the circulation route, @ 9”. The coat hook is mounted >48” AFF. The changing table is mounted >48” AFF, @ up to 53” to the highest operable part. The changing table hardware requires tight grasping, pinching, or twisting of the wrist to operate.	  

End of Report.

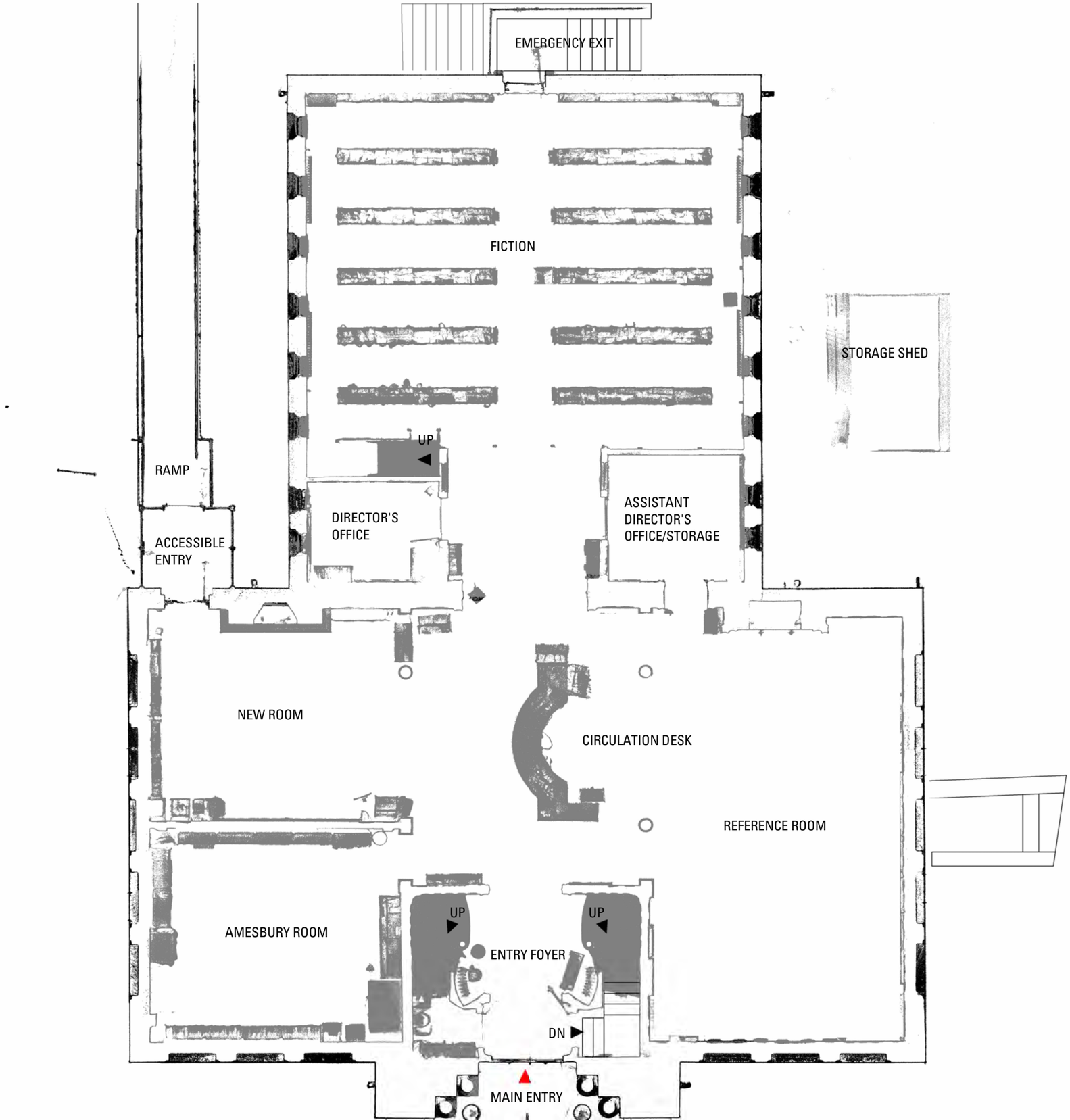
Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/16" = 1'-0"

SITE PLAN



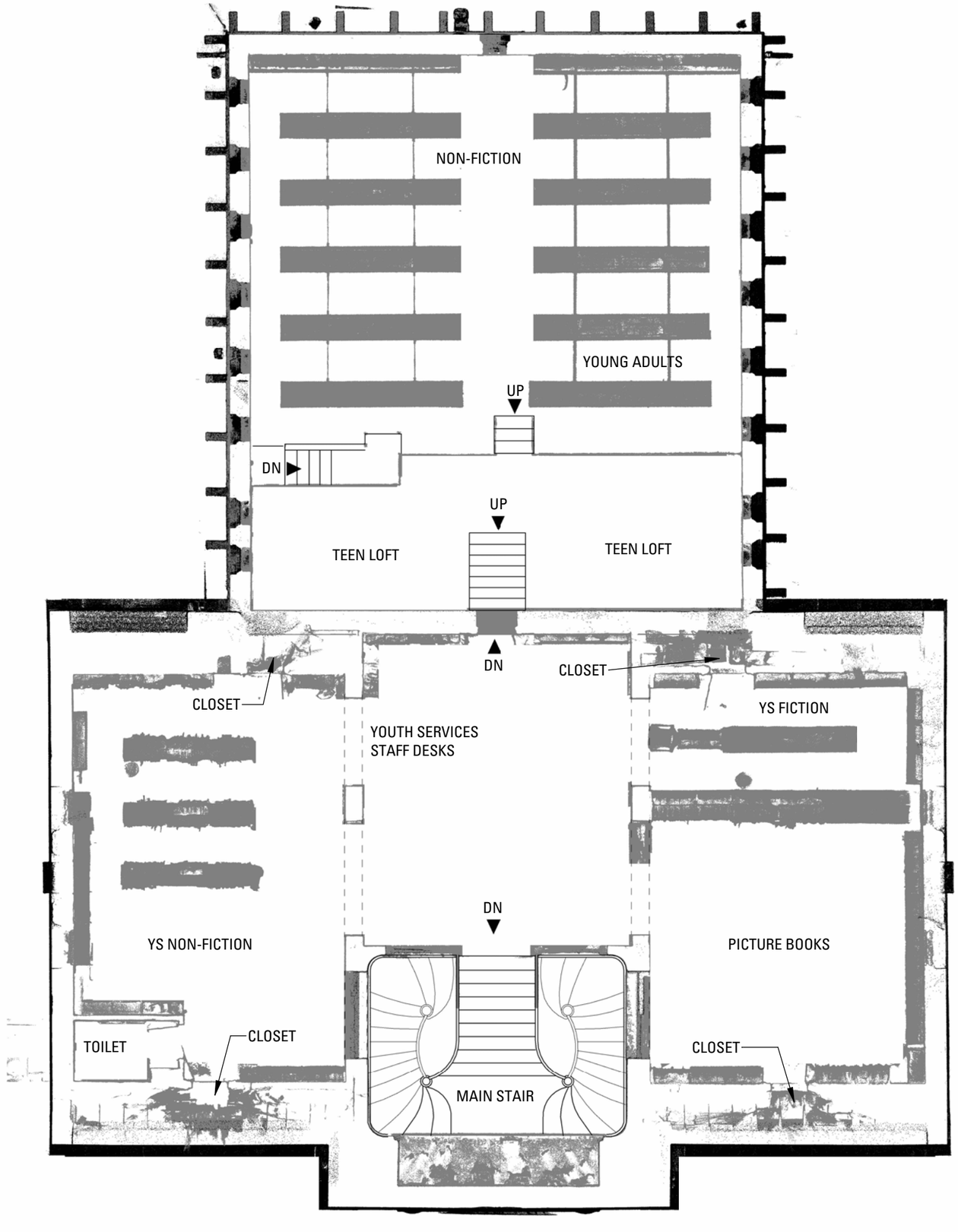
Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/17/24
1/8" = 1'-0"

LOWER LEVEL



Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/17/24
1/8" = 1'-0"

FIRST FLOOR



Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/17/24
1/8" = 1'-0"

SECOND FLOOR

T.O. ROOF
33'-10"

ATTIC LEVEL
16'-8"

SECOND FLOOR
15'-4"

STACK MEZZ
7'-5"

FIRST FLOOR
0"

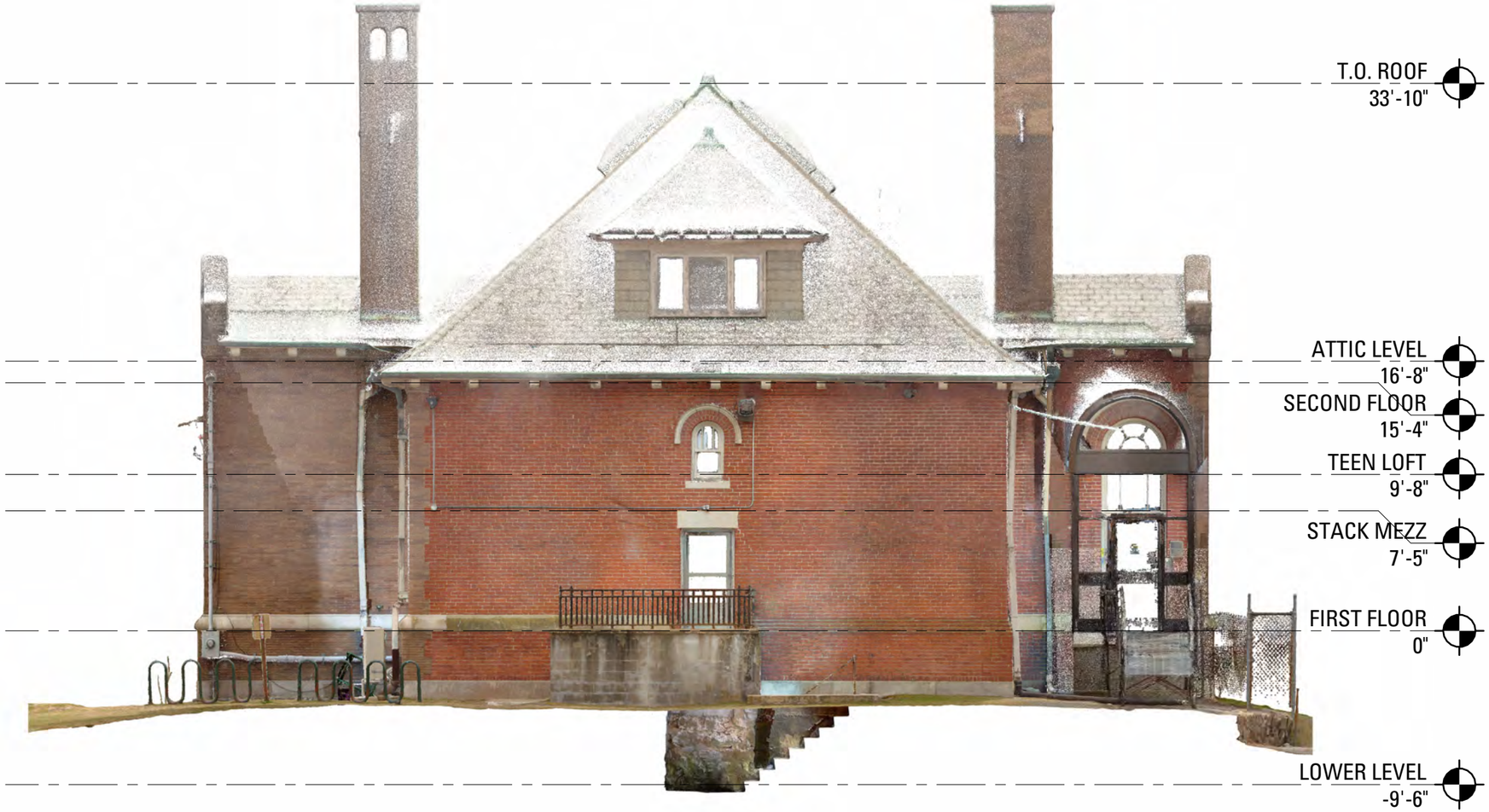
LOWER LEVEL
-9'-6"

Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

SOUTH ELEVATION

Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

EAST ELEVATION

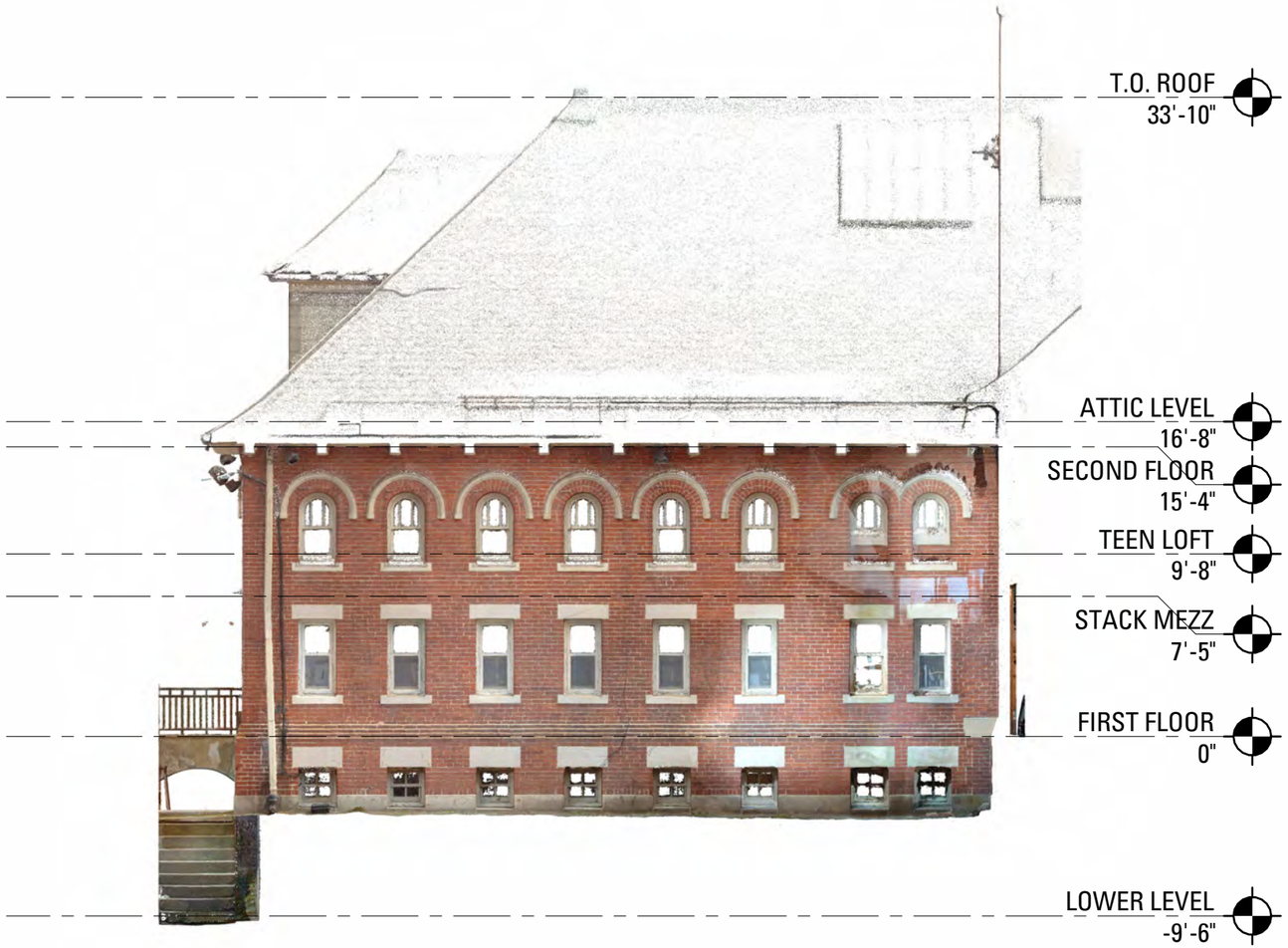


Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

NORTH ELEVATION

Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

WEST ELEVATION W RAMP



Amesbury Public Library Masterplan
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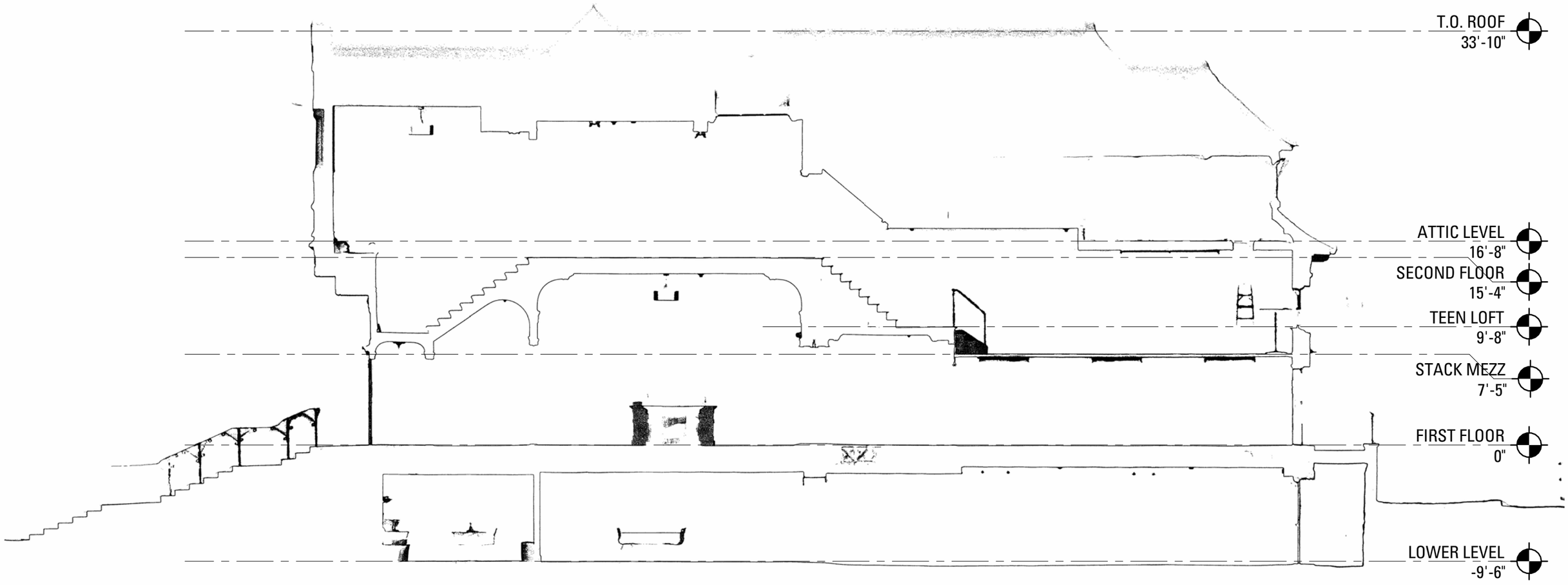
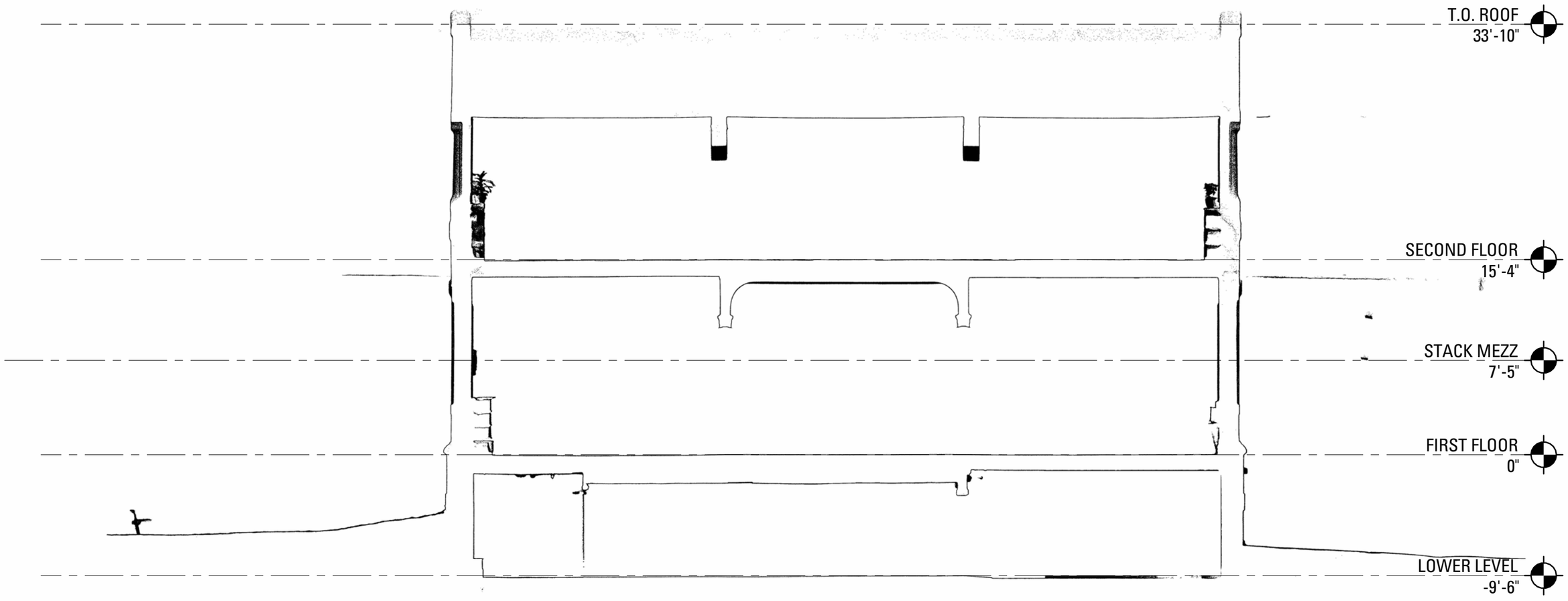
04/18/24
1/8" = 1'-0"

WEST ELEVATION W/OUT RAMP



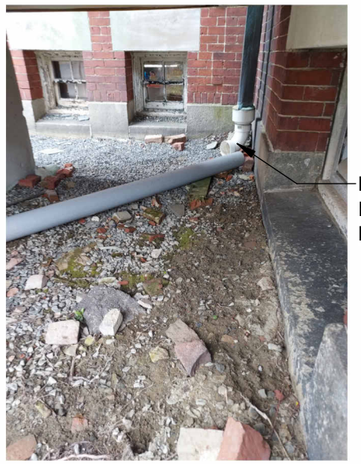
Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

NORTH/SOUTH SECTION



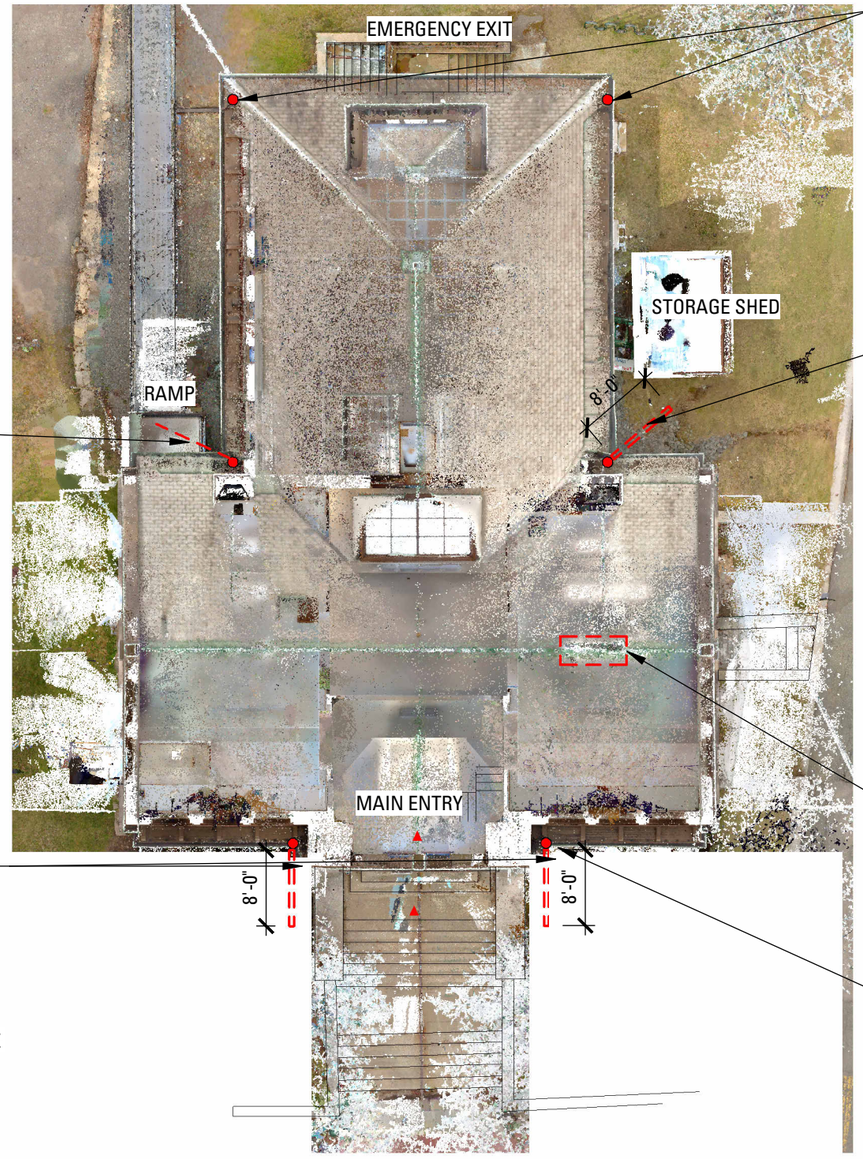
Amesbury Public Library Masterplan
Existing Point Cloud Drawings
04/18/24
1/8" = 1'-0"

EAST/WEST SECTION



RECONNECT EXISTING PVC DOWNSPOUT EXTENSION TO ELBOW

INSTALL NEW PVC BOOT AND DOWNSPOUT EXTENSION AND CONNECT TO EXISTING COPPER DOWNSPOUT AT TWO LOCATIONS. DOWNSPOUT EXTENSION TO RUN DOWNHILL AWAY FROM THE FOUNDATION. SIMILAR CONNECTION THE ONE IN THIS PHOTO

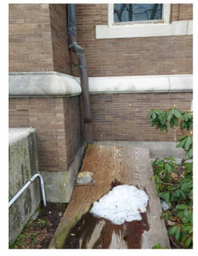


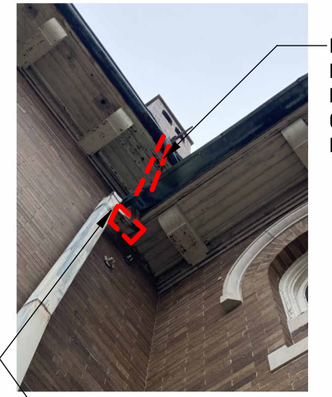
NO WORK AT TWO REAR DOWNSPOUTS

INSTALL NEW PVC BOOT AND DOWNSPOUT EXTENSION AND CONNECT TO EXISTING COPPER DOWNSPOUT. DRAIN AWAY FROM FOUNDATION

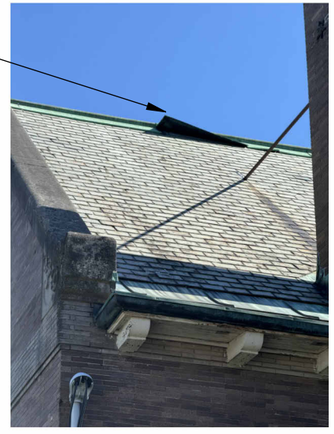
REATTACH COPPER RIDGE FLASHING WITH COPPER RIVETS AT RIDGE OF ROOF IN THIS LOCATION.

CURRENT CONDITION





INSTALL NEW UPPER ROOF DOWNSPOUT TO LOWER ROOF GUTTER. PROVIDE COPPER ELBOW TO REPAIR HOLE IN EXISTING ELBOW.



DOWNSPOUT REPAIR PLAN

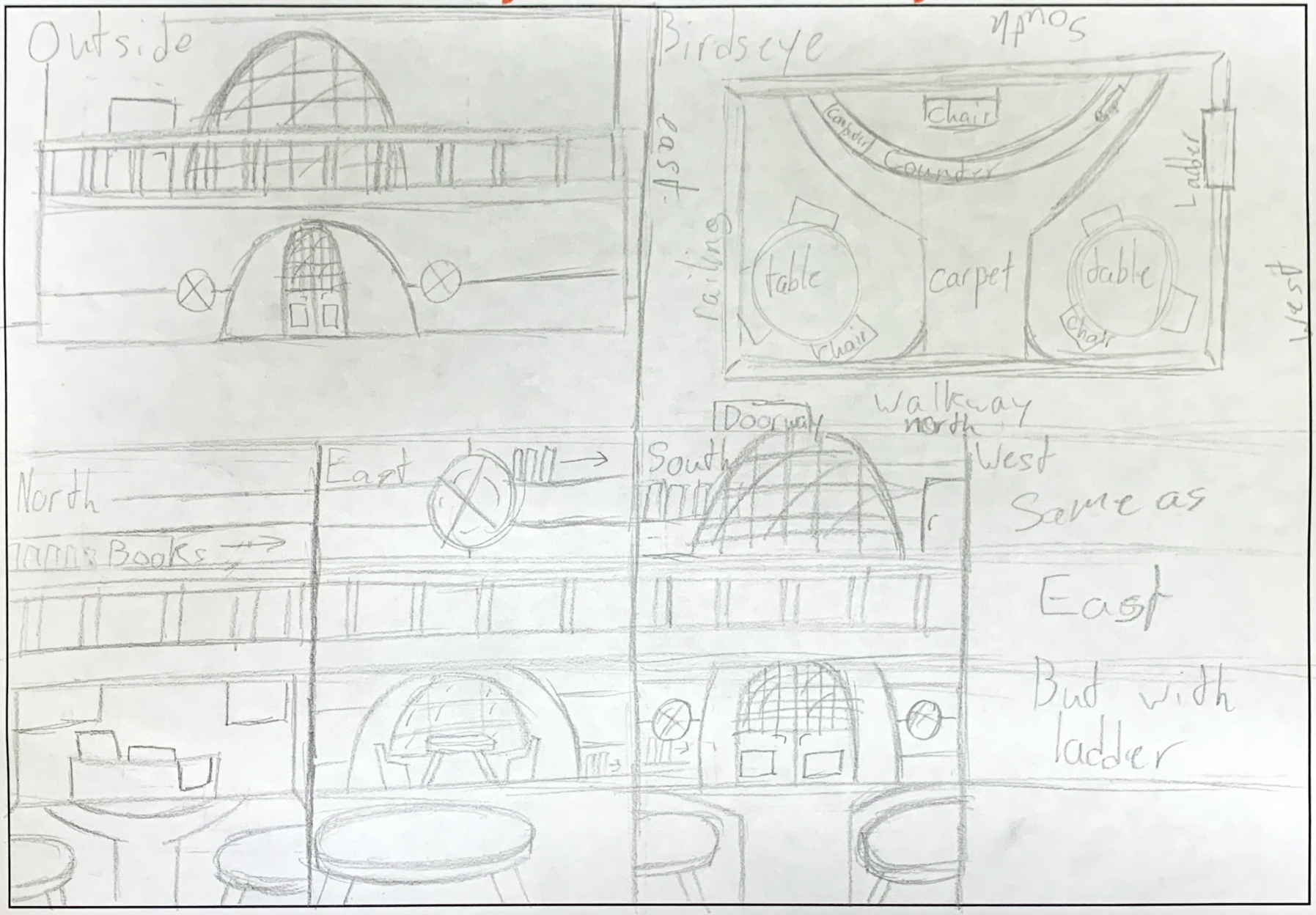
SCALE : 1/16" = 1'-0"

Amesbury Public Library Facilities Masterplan

BRUNER / COTT ARCHITECTS

DL-1

What does your dream library look like?



What does your dream library look like?

As part of our Facilities Master Plan (our plan to assess our building), we would love to hear input from our patrons. Especially our young ones and families. Please take a sheet and think about what your dream library would look like! Take notes on this page or draw us a picture on the back! When you are done, please hand it in to one of the YS staff at the desks!

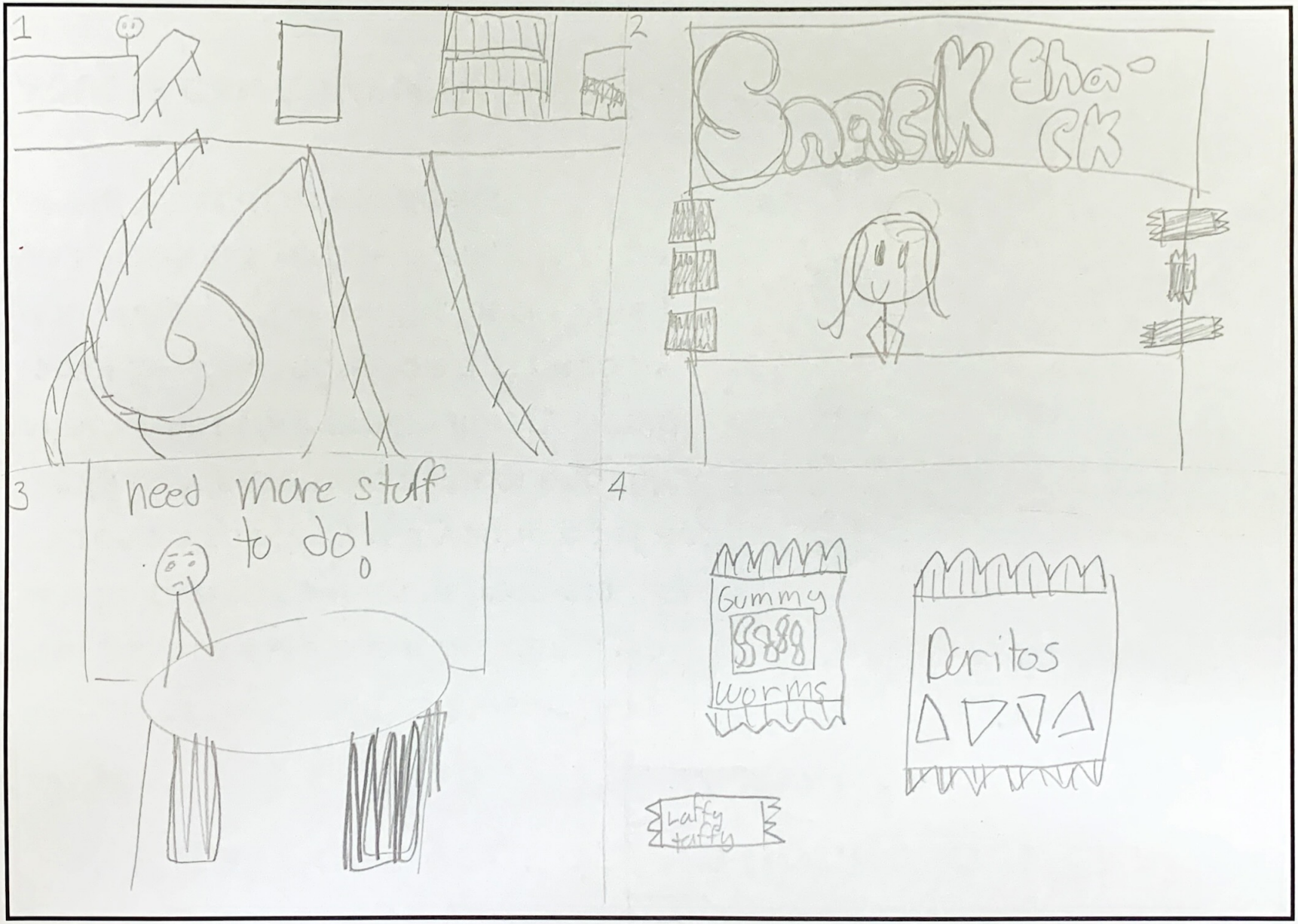
ADULTS CAN COMPLETE ONE TOO!

My Dream Library Wishlist:

1. Slide for stairs
2. Snack Shack
3. more things to do in the teen loft
4. Be able to bring in food

Draw a picture on the back!

My Dream Library Looks Like...



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ADULTS CAN COMPLETE ONE TOO!

My Dream Library Wishlist:

- An event / maker/craft space
- A listening booth - for languages, stories, etc songs
- A movie night space
- more design, how-to, & entrepreneurial spaces/resources/programs

Draw a picture on the back!

My Dream Library Looks Like...

my dream library would not be practical for the public but if I could have a dream library it would be filled with cozy spaces, makers spaces, teaching/event spaces. Anyone can look up how to do things but the new library needs to show people and provide the resources so people can learn by doing. And most books and printed resources can be found on-line but magazines, penodicals, are still enjoyed at the library.

What does your dream library look like?

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ADULTS CAN COMPLETE ONE TOO!

My Dream Library Wishlist:

- A Area with a roof outside where you can read
- A shack shack outside
- A secret reading room
-

Draw a picture on the back!

Gabriel Zapata

My Dream Library Looks Like...

What does your dream library look like?

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ADULTS CAN COMPLETE ONE TOO!

My Dream Library Wishlist:

-
-
-
-

Draw a picture on the back!

My Dream Library Looks Like...

What does your dream library look like?

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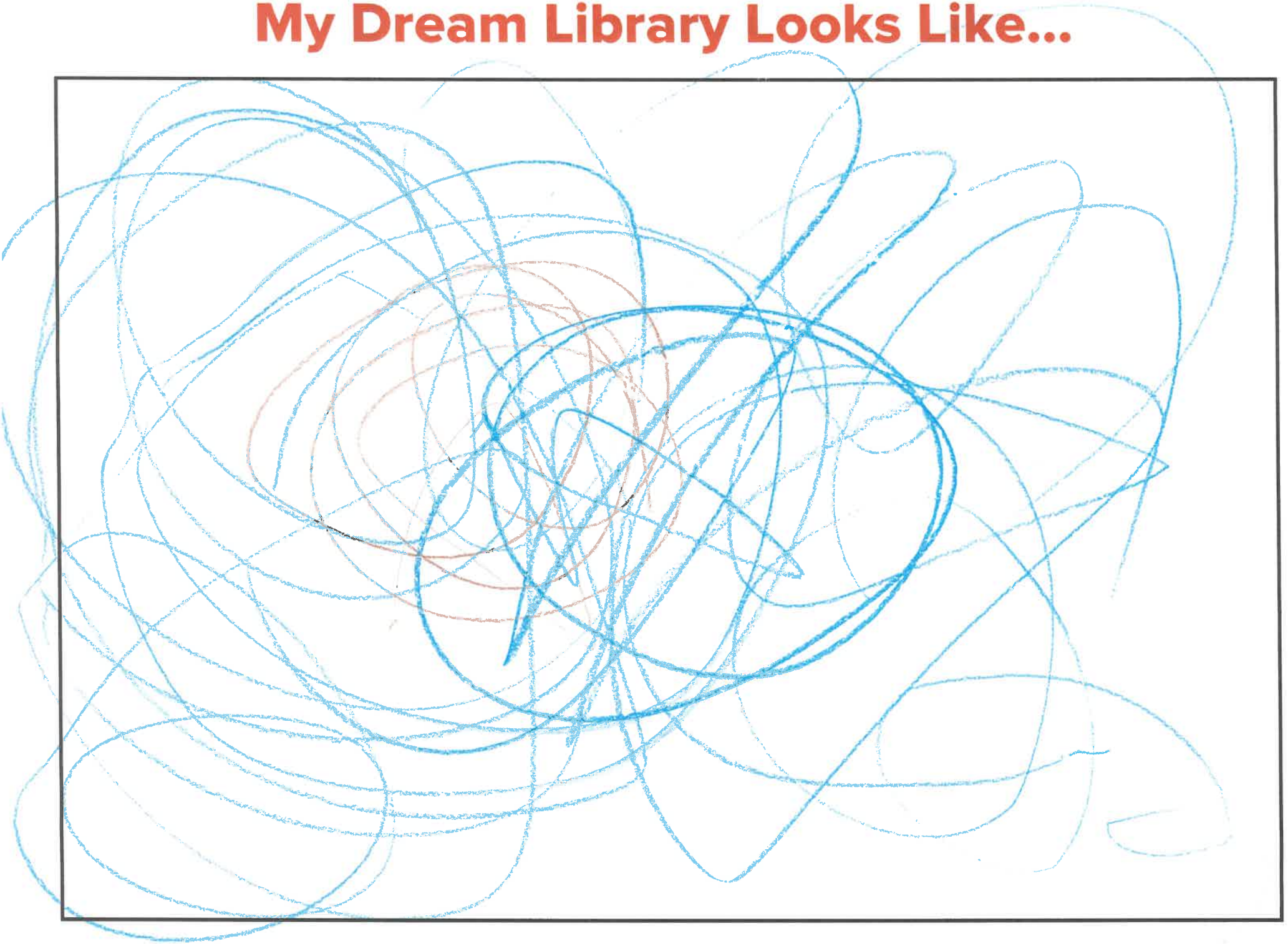
ADULTS CAN COMPLETE ONE TOO!

My Dream Library Wishlist:

- lots of crafts + activities
- in a treehouse
- ice cream
- gate on the stairs

Draw a picture on the back!

My Dream Library Looks Like...



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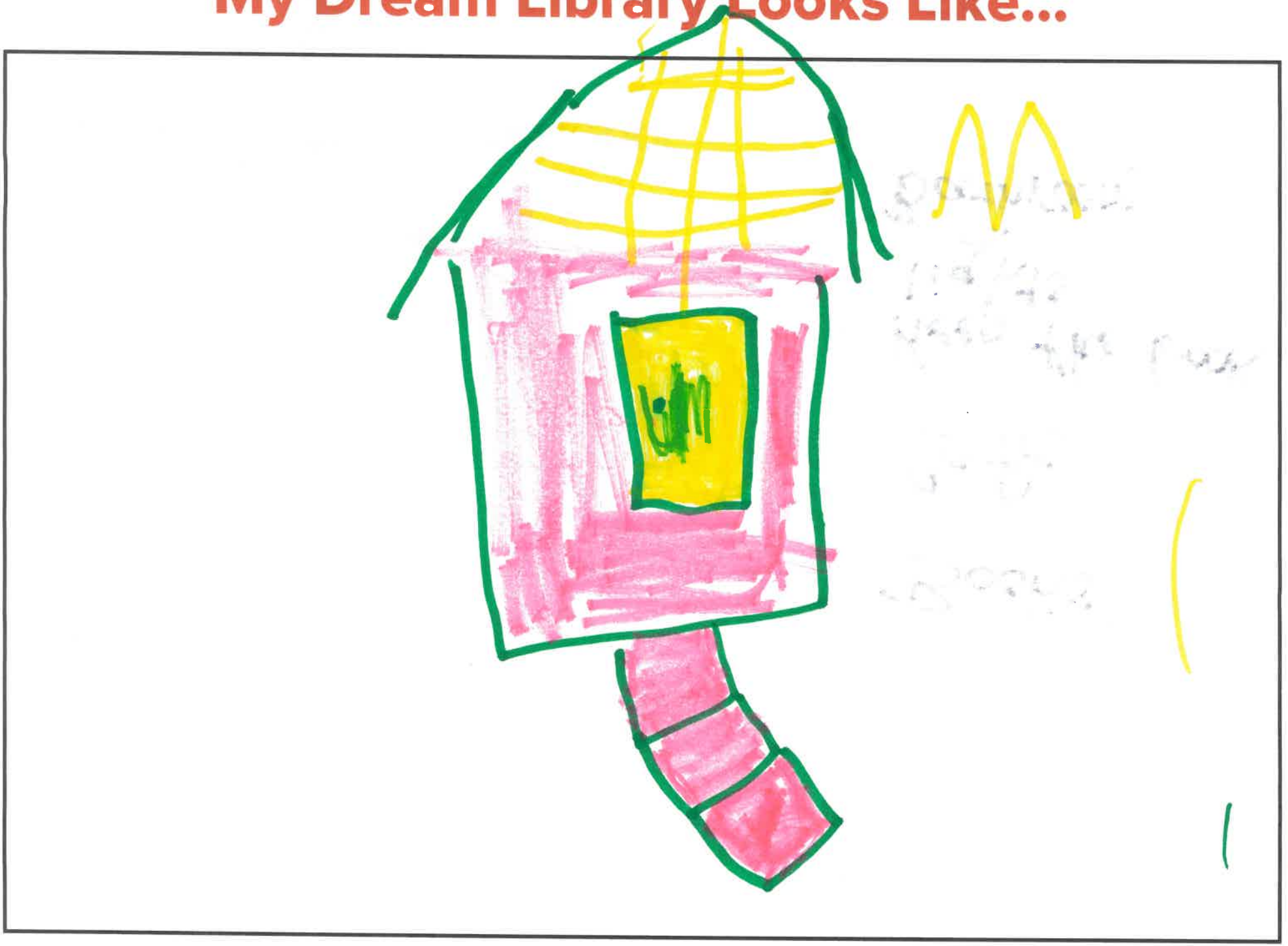
ADULTS CAN COMPLETE ONE TOO!

My Dream Library Wishlist:

- Books
- Cafe
- Keep the book lights
- Bathroom

Draw a picture on the back!

My Dream Library Looks Like...



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My Dream Library Wishlist:

- inside Story time loft also outside
- Monster trucks Monster Jam ? dino books
- cozy reading hammocks
- play area

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My Dream Library Needs:

- Indoor programming space
- Space for themed discovery i.e. science table surrounded by books of the same subject
- Dedicated covered stroller space
- Elevator would be nice
- the teen loft is such a cool idea for a space and the way it works already is great. Probably an expansion on the same principals would work well

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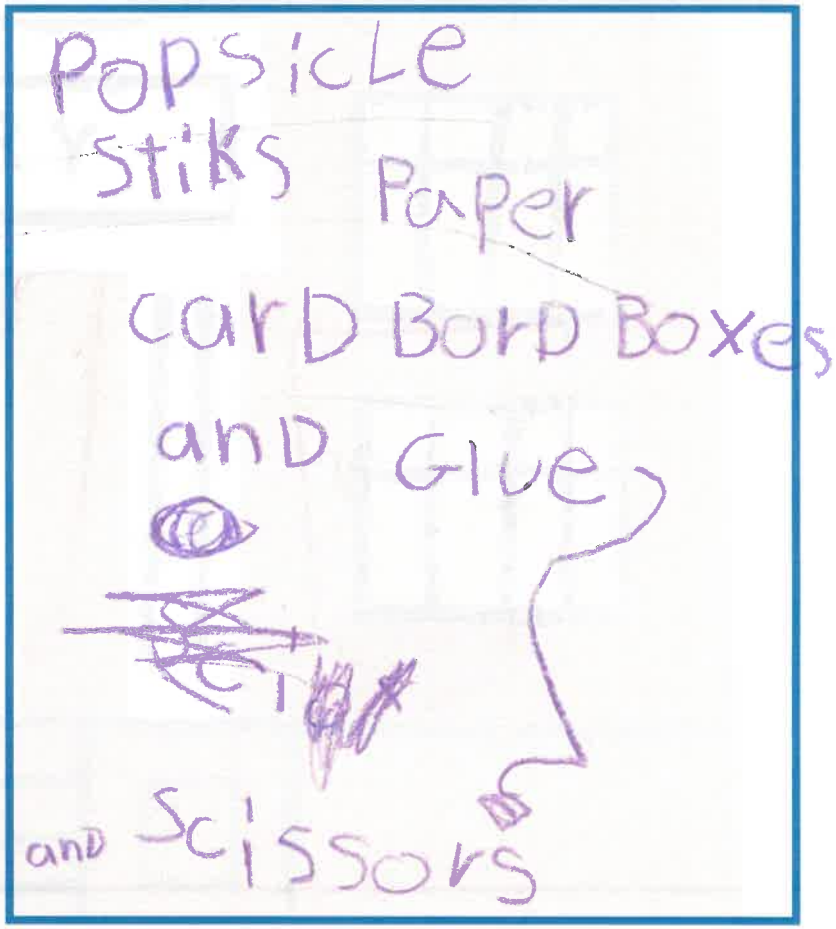

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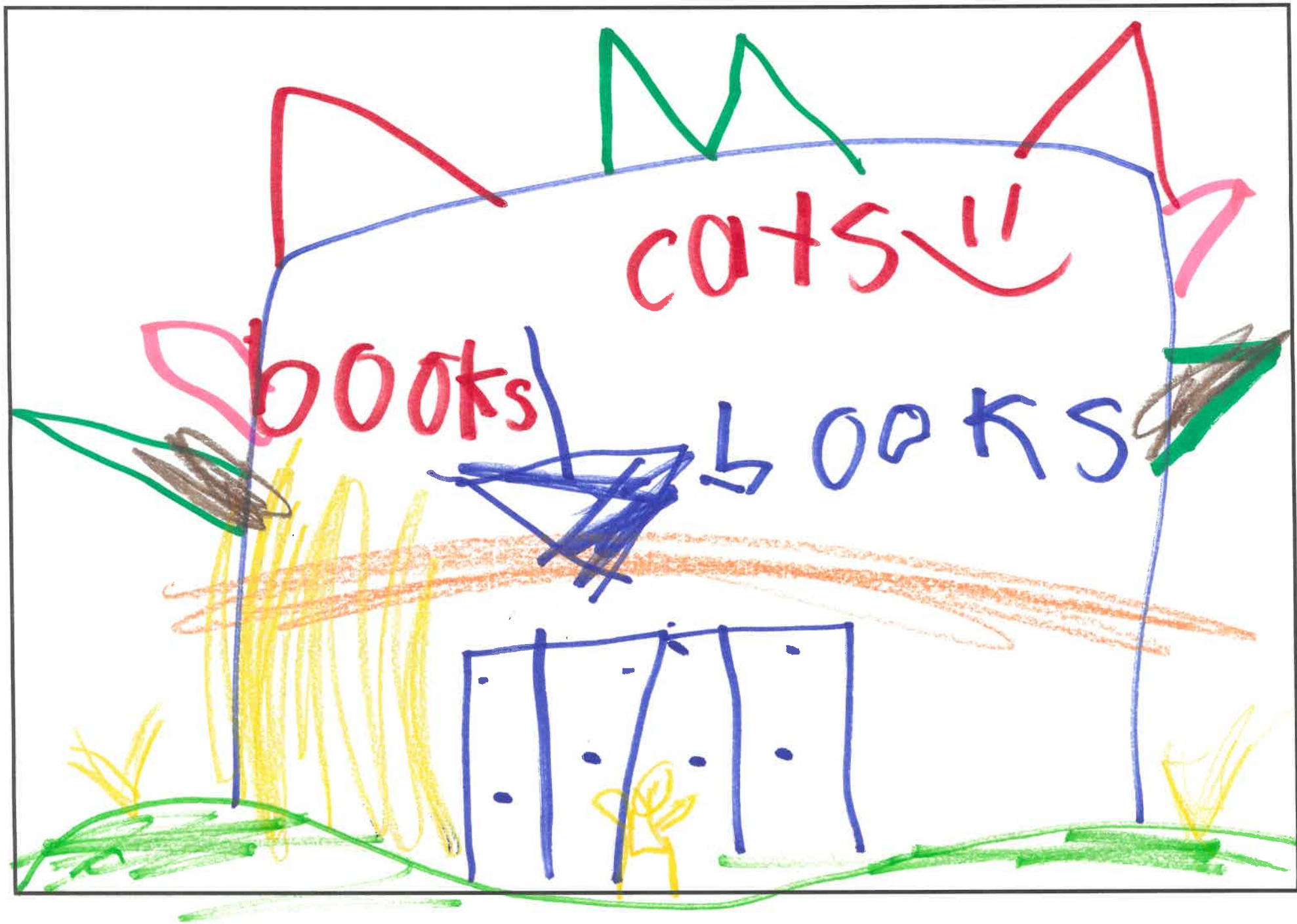

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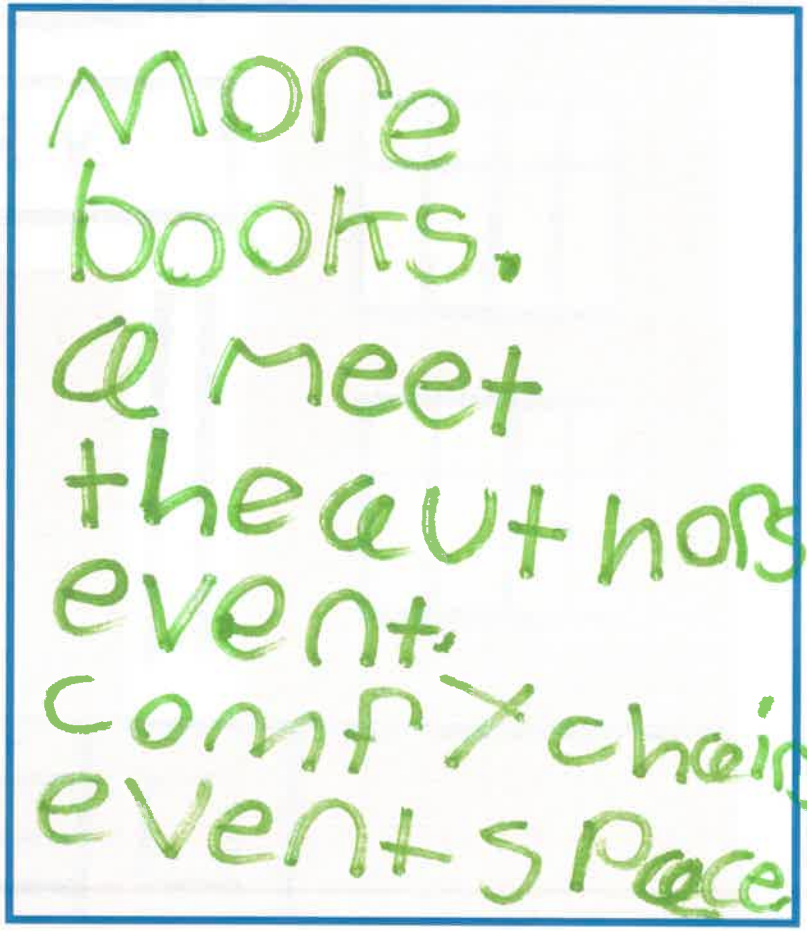

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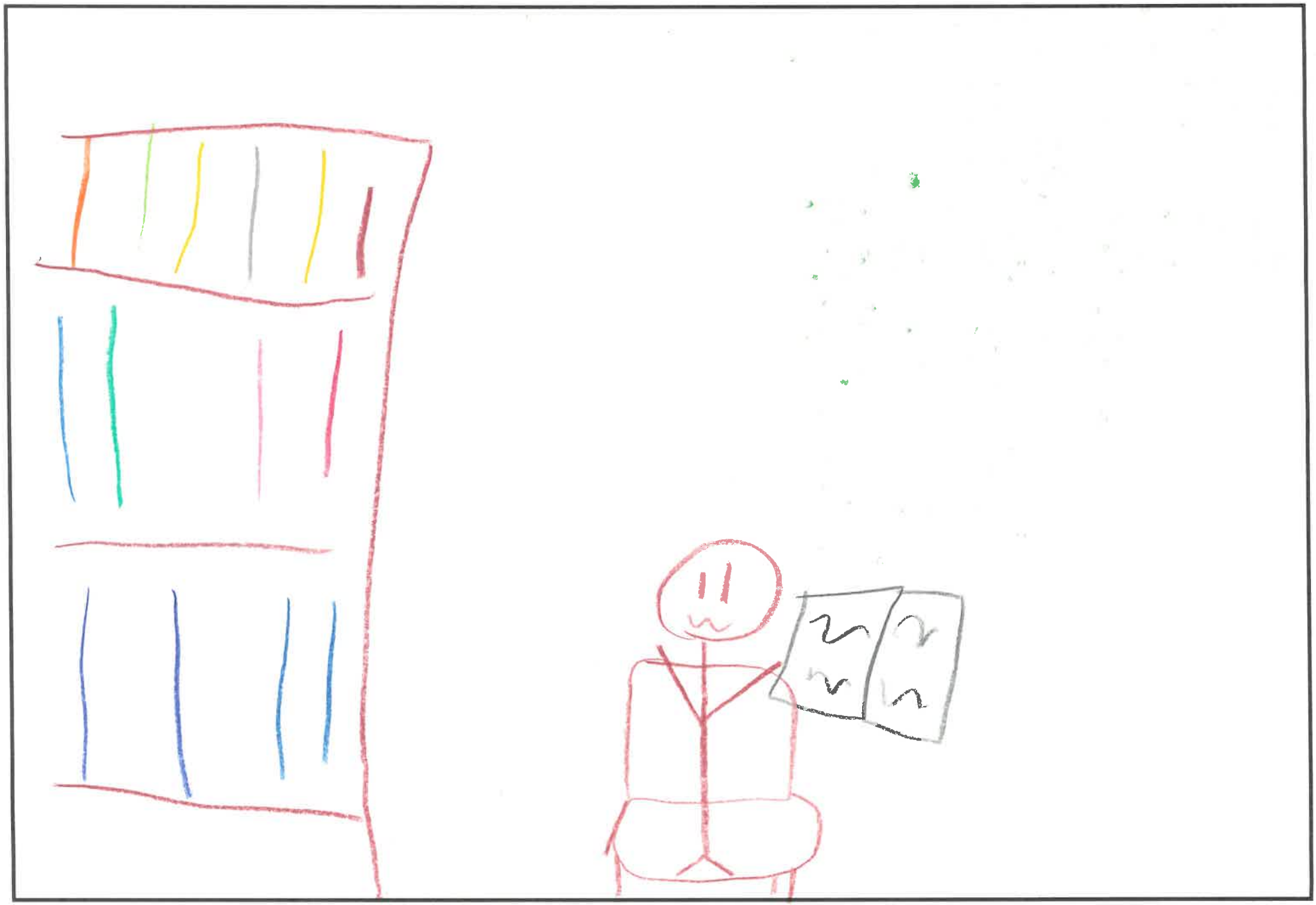

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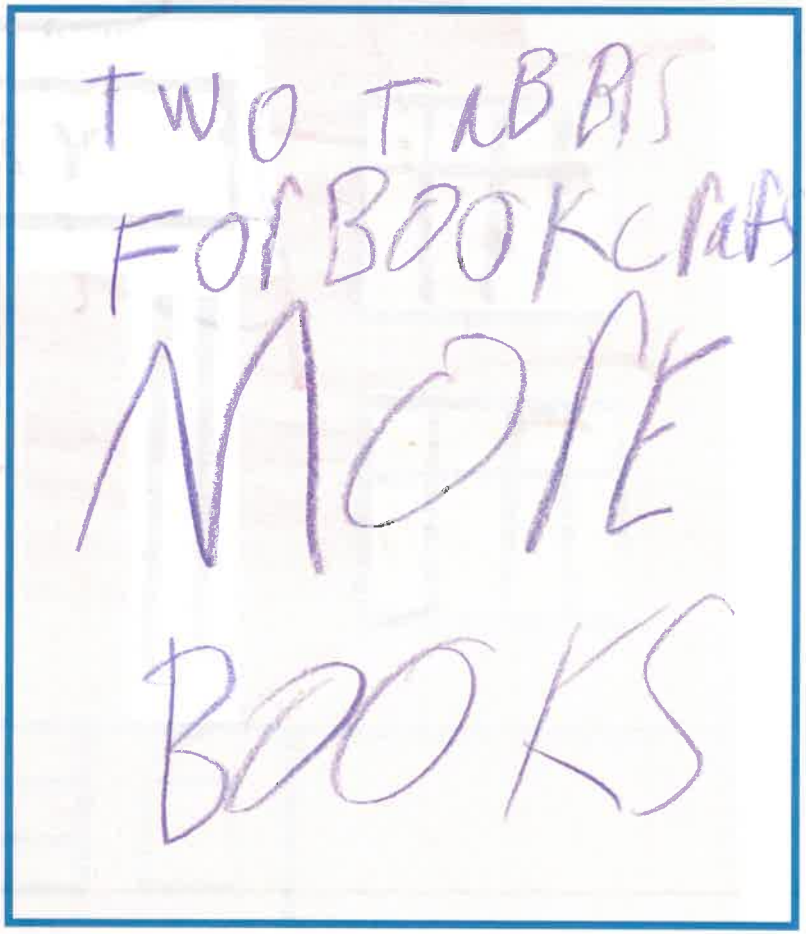

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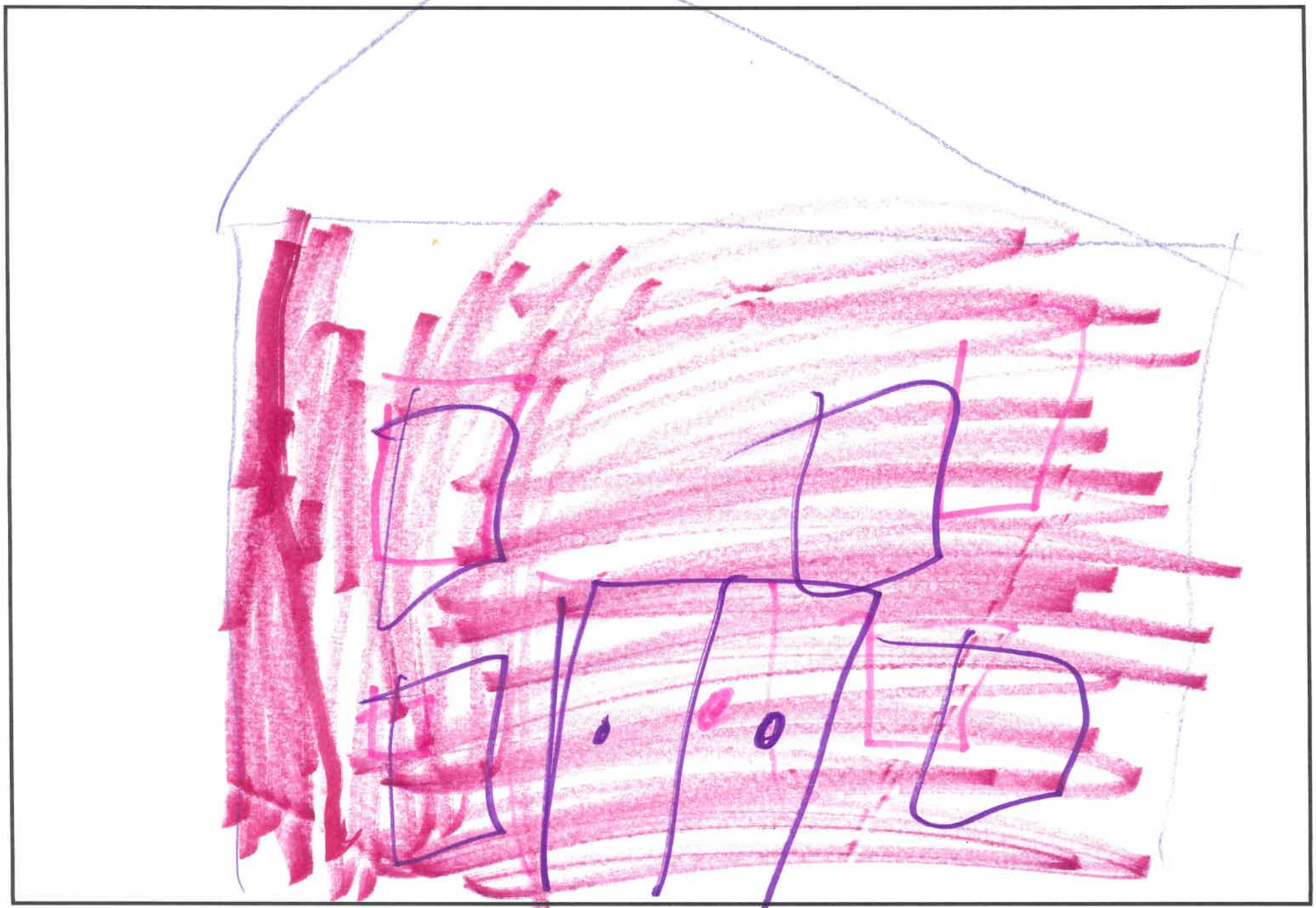

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