Image 1. Front Elevation 5/20/ 2020

TUCKER FREE LIBRARY

HISTORIC BUILDING REPORT

Planning for the future

31 Western Avenue Henniker, NH 03242

ABSTRACT

The Tucker Free Library is an elegant example of a Classical Revival Gem; a monument and landmark in Henniker, NH since 1904. The building, designed by Henry Martyn Francis, is a variation of his 1884 Fitchburg, MA library plan. Francis is credited with designing 15 libraries in MA, NH, VT of which many have achieved historical significance. Today resident expectations are different but the building and what it means to the community remains the same. It is a place to visit and be a part of a larger social structure

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PART 1 HISTORY and DEVELOPMENT of the PROPERTY

Introduction & Team

The historic building report/condition assessment of the Tucker Free Library report was funded, in part, by a grant from the New Hampshire Preservation Alliance, which receives support for its grants program from New Hampshire's Land and Community Heritage Investment Program (LCHIP). The purpose of this report is to document the history, current condition, records the character defining features and includes data future renovations. This report summarizes the preservation work that's been done to date, areas which need attention and provides recommendations for improvements that are consistent with the Secretary of the Interior's Standards for Rehabilitation as well as the community's interest in the buildings long term preservation.

The intended use of the Tucker Free library is unchanged however full public access in and to all levels without effecting the historic character of the building is the primary goal.

The team involved in the development of this report include:

Board of Trustees	Milestone Construction & Engineering
Library Director	TF Moran
SMP Architecture	WV Engineering

Image 2. Henniker GIS map, Tucker Free Library 31 Western Ave.

BRIEF DESCRIPTION OF THE BUILDING'S FORM, STYLE, AND SETTING

The Tucker Free Library is an elegant Classical Revival building of symmetrical design, consisting of a three- and one-half story rectangular brick structure with hipped roofs and one main entry gable on the north elevation that frames the grand front entrance.

The main level interior layout of the of Tucker Free Library followed the T-shaped floor plan common in many nineteenth and twentieth century libraries. "Behind the entrance vestibule is a rotunda or "delivery room," often with a permanent librarian's desk or alcove at its side or far end. On each side of the rotunda or entrance hall is a large, well-lighted room, frequently fitted with bookshelves, filled with sturdy and comfortable furniture, and warmed by a fireplace. Originally one of these rooms was often designated as a reading room, while the other was set aside as an art room… Behind the rotunda is the 'book room' or stacks."[1] An examination of the original architectural plans (available to view at the library) of H.M. Francis shows all of the elements of the T-plan. Like many larger libraries, the Tucker Free Library can be considered a monument to classical style. This style "lent itself to the symmetrical T-plan favored at the turn of the century. Classical detailing bespoke dignity and a connection with the past. The style flourished when rich materials were available."[2]

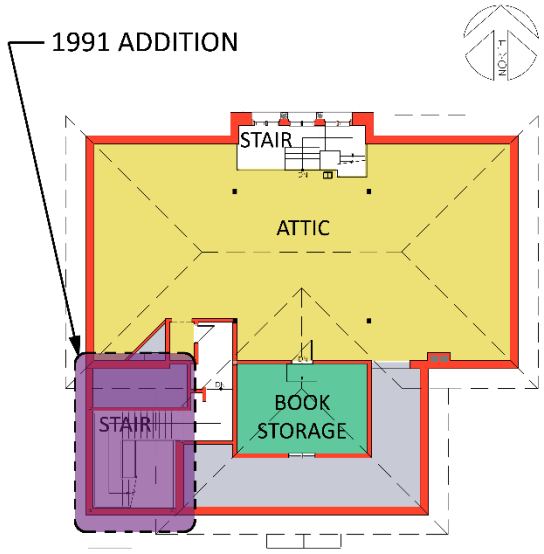
The Tucker Free Library is an outstanding example of the T-shape which included rich materials, ionic embellishments, and a monumental feel. Today, these features remain intact, but the areas are now multi-functional and utilized for the adult collection with soft furniture for reading or semi-private research space.

The lower levels house the children's book collection known as the E-Room with a stair down to the young adult collection known as the J-Room. Adjacent is a small meeting room with the only accessible restroom in the building. The remaining spaces are mechanical room with an unfinished basement storage. Below the E-room is the sub-basement which once served as the children's room, however, is area is no longer active.

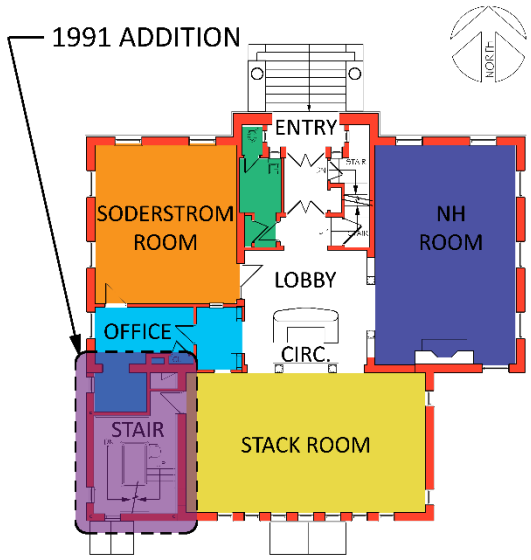
Finally, is the large vaulted attic mainly utilized for dead storage with a small room for book storage. Access to the attic is by way of two stairs; first is the original stair on the north side of the building the second is located on the southwest corner that was added during the 1991 addition.

[1] The Road Taken: The New Hampshire Library Association, 1889-1989. New Hampshire Library Association, 1989, pg. pg. 59.
[2] Ibid., pg. 61.

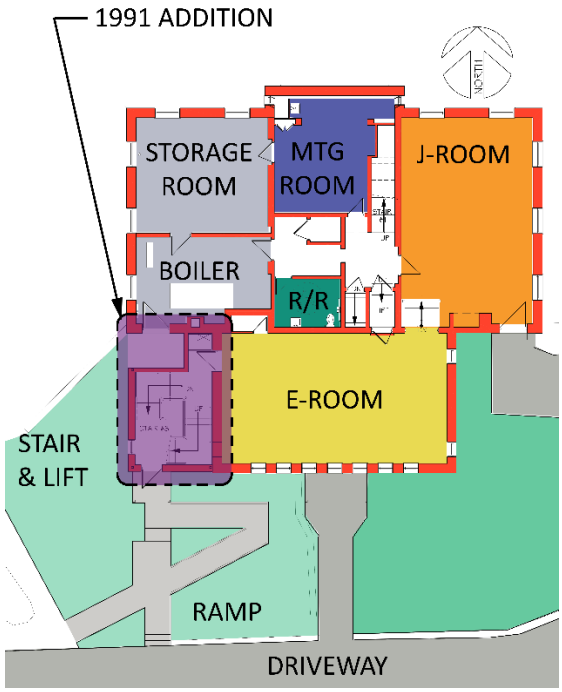
ATTIC LEVEL



MAIN LEVEL



LOWER LEVEL



SUB-BASEMENT

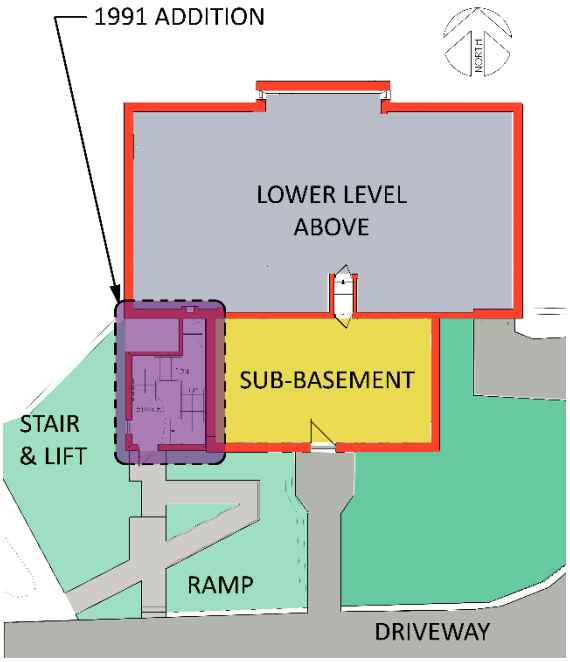


Image 3. Existing Condition Plans, highlighted for clarity

The building is clad with red common brick with pink mortar laid in plumb bond. The building is on a raised foundation of mortared rusticated granite blocks on the north, east, and west elevations of the structure while large stacked rocks form the foundation on the south elevation. Embellishments include an Ionic order entablature, molded cornice with dentil, Indiana sandstone freeze, and a keystone that mimics the Ionic capital columns located above the exterior arch and within the building.

The main entrance, in the center of the north elevation of the building, has a recessed, arched reveal surrounding a doorway. The entrance is reached via a flight of nine granite steps. A brass railing was added to the center of the stairs in 1926. The entryway consists of two original operable doors which were reversed to comply with fire safety codes in 1975.

Image 4. North elevation, main approach

Along the building's façade where the lower level meets the main level there is a hammered granite band that ties in with the rusticated granite foundation on the west, north, and east elevations.

The Tucker Free Library is located on a major thoroughfare centered in the town of Henniker, in an area designated as rural village. It is nestled between the Henniker Community School and the grange. The building sits in the center of a lot that slopes down on the south side. Beyond the library property is a municipal parking area and the newly restored Azalea Park which abuts the Contoocook River. This prominent setting allows for easy walking between the schools, residential district, and the local commercial center. Access to the town hall across the river is by way of the New England College Covered Bridge which is the only other property listed on the State Register of Historic Places in the town.

While George Tucker's gift was significant, without Henry A. Emerson there would have been no money available to purchase land on which to build the library. Emerson states,

> *"After looking about the village somewhat I came to the conclusion that the only available site for the location of said library building, which should best accommodate all the people of the town and at the same time be an attractive spot, centrally located, where people passing in and through town would be sure to observe it, would be upon the land owned at the time of his decease by the late Hiram Rice.[3]"*

[3] Signed transcript of speech given by Henry A. Emerson at Henniker Town Meeting, March 10, 1903.

SIGNIFICANT HISTORIC EVENTS ASSOCIATED WITH BUILDING

In 1902 George Tucker, formerly of Henniker then residing in Bradford, visited Henniker for Old Home Days. Mr. Tucker, having never married and with a high loving regard for his native town…was always present upon such community-wide occasions. He amassed quite a fortune by his strict attention to business and having only one brother, no sisters or near relatives, the people of Henniker were happily surprised to learn shortly after his death on October 21, 1902 that he donated a substantial portion of his will for the "erection of a suitable building, to cost not less than $10,000 nor more than $14,000, for the maintenance of a library therein, to be known as Tucker Free Library".

When the residents of Henniker voted to accept the gift of George Tucker at the 1903 Town Meeting, they formed[4] a board of trustees of the new library, numbering six, and those members would include Henry A. Emerson, Jennie N. Dodge, George C. Preston, L.W. Cogswell, Rev. T.C.H. Bouton, and Walter A. Connor. A building committee was also elected and included Henry A. Emerson, George C. Preston, and Edward N. Cogswell. The building committee immediately applied themselves and set about to tour libraries in Randolph, VT, Jaffrey, Peterborough, and Pittsfield, NH.

Their report to Town Meeting the following year indicated that having visited the different libraries, they found that the library in Randolph, Vermont and also the library in Jaffrey, New Hampshire, which were the preferred building, were in fact designed by the same architect a Mr. Francis of Fitchburg, MA.[5] The firm of H.M. Francis and Sons was retained to make the plans and specifications for contract. Bids were to be collected for simply building the library. The grading, heating, plumbing, and electric were not part of the original bid. The contract was awarded to the Nashua Granite Co. of Nashua, NH.[6]

BRIEF OWNERSHIP AND/OR USE HISTORY (UP TO PRESENT DAY)

The Tucker Free Library opened to the public on September 22, 1904. It has served as the library for the Town of Henniker since that day. An elected board of trustees is responsible for the facility, fiduciary management, and policies mandated for operation. The trustees hire the library director who oversees the daily operation of the building, program, and personnel. Trustee authority comes from the town legislative body. Their decisions are bound by NH RSA 202-A: Public Libraries as well as Chapter 91-A: Access to Public Records and Meetings.

[4] The Union, Manchester, NH Friday, September 23, 1904.

[5] Annual Report of the receipts and expenditures of the Town of Henniker for the Fiscal Year ending February 15, 1904. Report of Building Committee of Tucker Free Library, Pgs. 48-49.

[6] Annual Report of the receipts and expenditures of the Town of Henniker for the Fiscal Year ending February 15, 1904. Report of Building Committee of Tucker Free Library, Pgs. 48-49.

- **1927** New lights installed in the three large rooms of the library, adding much to its attractiveness.[7]
- **1946** Installation of oil heating system.[8]
- **1967** When the present building was erected it was designed so that its use and program could be increased as necessary. In the 1967 Town Report potential use was identified as a 2-story space for a stack room, large attic, three large rooms in the basement. These areas were seen as potential areas for purpose activities, offering a suitable space for various town groups to use for such interests as music, art, crafts, etc.

  > *"Planning of the library trustees is based on total anticipated use of the entire library, and not merely with contemplated immediate plans, which means that we do not wish to do anything in undue haste. Rather than achieve instant results, we prefer to be sure that anything we do will be in keeping with the very high quality of the original plans and will not later have to be removed or changed as the library develops."*

- **1969** Francis Lane Childs' Historical Room was dedicated on November 8, 1969. The construction plan was designed by A. Holton. "At the time the room had been changed from what was essentially an unfinished dirt-floored storage place to one with a beam and plaster ceiling, a cement floor with proper drainage facilities and lighting installed."
- **1970** Francis Lane Childs Historical Room completed. Storage rooms in basement cleared and cleaned to be used to house main historical collection. Additions and improvements also occurred in the Hollis Children's Room on the main floor.
- **1972** Archives room in the basement was rebuilt from a former rough storage space to an attractive efficient, fire resistant research area. A sink with hot water was added.[9]
- **1973** Cement floor put in the stack room.[10]
- **1974** Installation of storm windows.[11]
- **1975** Heavy iron grills were installed in basement windows, tamper-proof locks were placed in exterior doors, and the front doors of the library were reversed to conform to safety regulations.[12]
- **1977** Major plan will be the construction of a new floor in the present stack room which will provide space for our historical collection.[13]

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[7] Librarian's Report. Annual Reports for Receipts and Expenditures of the Town of Henniker New Hampshire together with reports of Town Officers for the Fiscal Year Ending January 31, 1927, pg. 54.
[8] Annual Report of the Tucker Free Library. Annual Report of the Officers of the Town of Henniker, New Hampshire for the year ending December 31, 1946, pg. 51.
[9] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1972, pg. 77.
[10] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1973, pg. 89.
[11] Report of Tucker Free Library. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1974, pg. unnumbered.
[12] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1975, pg. 66.
[13] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1977, pg. 70.

- **1978** Proctor Room now being built on the middle level of the library and which is planned for a dual purpose. Part of the space will be used for much needed stack room, and the other will be used as a center for books and reading space for the intermediate youngsters.[14]
- **1979** Proctor Room for children in the middle age group completed. The addition of the room to our facilities met a real need, as it freed the Hollis Children's Room for our younger readers and relieved a congestion of books in the stack space.[15]
- **1987** With $10,000.00 from town appropriation for the purpose, the roof was completed re-shingled.[16]
- **1988** This was the second year of the long range capital improvement plan. With the $10,000 which the town appropriated a plaster ceiling was repaired, old windows in the downstairs children's room were completely replaced with new, energy efficient ones, and the painting of the library interior complete.[17]
- **1989** Library brickwork pointed and chimney rebuilt. Plans announced to make the library handicapped accessible to better serve all patrons.[18] The architectural firm of Ingram & Wallace (Tennant Wallace) of Manchester, NH designed the addition. Kelly Construction was the general contractor.
- **1991** Tucker Free Library completed the building project to make the library handicapped accessible. The interior construction is now complete and the chair lift had been approved by the State Elevator Inspector. As soon as the weather permits, the work on the exterior portion, such as the pathway will be accomplished, thereby completing the first phase of the library's long range plans. As funding becomes available in the future, Phase II will be embarked upon. This calls for relocating the children's room and finishing the spacious attic.[19]
- **1993** Phase II discussion postponed to allow town time to formulate plans for relocating the historical collection. Replace antiquated furnaces and revamp heating system. [20]
- **1995** Public handicapped restroom constructed. Second chairlift installed.[21]
- **1996** Structural concerns addressed. Stack room floors were reinforced to alleviate a serious safety issue caused by inadequate weight bearing capacity of the old floor joists.[22]
- **2004** Repainting the tin ceilings on the main floor. Repairs to boiler and the installation of a more efficient heating in the kindergarten room.[23]
- **2008** PSNH Smart Start interior lighting conversion.[24]

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[14] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1978, pg. 72.
[15] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1979, pg. 77.
[16] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1987, pg. 42.
[17] Report of Library Trustees. Annual Reports of the Officers of the Town of Henniker, New Hampshire for the Year Ending December 31, 1988, pg. 51.
[18] Tucker Free Library Annual Report. Town of Henniker, New Hampshire Town Report December 31, 1989, pg. 49.
[19] Tucker Free Library Annual Report. 1991 Annual Reports of the Town Officers of Henniker, New Hampshire, pg. 30.
[20] Tucker Free Library Annual Report. Town of Henniker 1993 Annual Report, pg. 33.
[21] Tucker Free Library Annual Report. Town of Henniker 1995 Annual Report, pg. 39.
[22] Tucker Free Library Annual Report. Town of Henniker 1996 Annual Report, pg. 38.
[23] Tucker Free Library Annual Report. Henniker, New Hampshire 2004 Annual Report, pg. 42.
[24] Tucker Free Library Annual Report. Henniker, New Hampshire 2008 Annual Report, pgs. 52-54.

- **2013-2016** Stained glass restoration project completed. Funded in part through Moose Plate Grants.
- **2015** Tucker Free Library building listed to the New Hampshire State Register of Historic Places.
- **2017** Exterior post light renovation and restoration completed.
- **2018** Asphalt roofing was replaced.
- **2018** Library was awarded the New Hampshire Library Trustees Association Library of the Year.
- **2018** SMP Architecture Feasibility Study conducted. See the resultant report at: http://www.tuckerfreelibrary.org/architectural-feasibility-study-request-for-qualifications-8-27-2018/
- **2019** Town agreed to fund the continuation of the library accessibility and safety project. SMP Architecture contracted for the schematic design phase.
- **2019** the Trustees hired Milestone Engineering and Construction as a construction manager for cost-estimating and project phasing.
- **2019** Eversource interior lighting conversion to LED.
- **2020** an existing mechanical system assessment was performed by WV Engineering.**2020** a structural assessment was performed on the attic floor framing by TF Moran.
- **2020** Casement window restoration project completed by Dave Bowers of Olde Window Restorers. Funded in part through Moose Plate Grants.

BUILDERS/ARCHITECTS ASSOCIATED WITH THE PROPERTY

The architect, Henry Martyn Francis (1836-1908), was born in Lunenburg, MA in 1836. In 1858 he graduated from Lawrence Academy. He assisted in surveying for the Croton River aqueduct which supplied water to New York City. He then studied architectural drawing and served an apprenticeship under Alexander R. Estey, a Boston architect. Later in 1862 he was employed as a carpenter in Lunenburg, Westfield, and Florence. In 1864 he worked in the architectural offices of George M. Harding of Portland, Maine and George F. Meacham of Boston. He designed buildings in Portland after the great fire of 1866. Later, in 1868, he opened his architectural firm on Main Street in Fitchburg. [25] Eight of his buildings appear on the U.S. Register of National Historic Places. Additionally, he is the documented architect of many residential homes and civic buildings in Fitchburg, MA.[26]

The town of Henniker was very fortunate to have a number of extremely skilled craftsman, masons, builders, and woodworkers. Seth Bunnell had a hand in building many of the Blocks in town, he also was a fine woodworker who designed and crafted many of the finer examples of woodworking in Henniker from cabinets to displays, to moldings and trims, to beautiful desks and large shelving systems, many of which are still in homes and institutions in Henniker. From the use of curly birch for the cabinetry that lines the walls to the heavy pocket door and the highly polished wood floors, quality workmanship is evident in that even today the woodwork looks new.

[25] http://bostongringo.com/united-states/massachusetts-fitchburg-hm-francis-architect.htm
[26] H.M. Francis listing in *Leading Business Men of Fitchburg* (courtesy of the Fitchburg Historical Society)

Many of the renovations in the lower level were designed and implemented by Henniker residents. The area that was used by the Henniker Historical Society was designed by Adolphus "Andy" Holton. Most of the work was completed by Henniker craftsmen including a unique contribution by Merle Patenaude. Needing beams to support the ceiling in the room, Calvin Tucker, George Sanborn, and Arthur Starr removed rough-hewn beams from the barn of Merle Patenaude in 1969. The work desk that now serves as the circulation desk for the children's department was built by Forrest and Archie Morse in 1970, along with storage cabinetry in the lower level meeting room.

Image 5. Forrest and Archie Morse in 1970 building cabinetry. Source unknown.

Charlie MacKenzie, local craftsman, has designed and built display shelving, desks, and a circulation station to mirror the 1904 interior wood features of the library originally constructed by Henniker resident Seth Bunnell.

Architectural firm of Ingram & Wallace (Tennant Wallace) of Manchester, NH was engaged in 1988 to design a solution that made the building handicapped accessible. The resulting metal stud brick veneer addition infilled the South West corner with a stair tower and a chair lift.

Image 6. Before

Image 7. After

In 2018 SMP Architecture of Concord NH, a firm recognized for their work on libraries around New England was hired to perform a Feasibility Study on the existing building. This effort included assembling much of the existing buildings documentation, performing a physical inspection, outlined the needs of the Library, discussing efforts to preserve all the features of the building while providing services for a 21st century library.

The resulting assessment report summarized the needs, develop conceptual design options, and made recommendations for future steps. Construction costs were not considered at this time.

PHOTOGRAPHS OF APPEARANCE AT DIFFERENT PERIODS

Exterior photos on the following pages.

Image 8. Town gathers to lay the corner stone and place the time capsule. Facing southeast, Photo taken: 8/17/1903. Henniker Historical Society Archives.

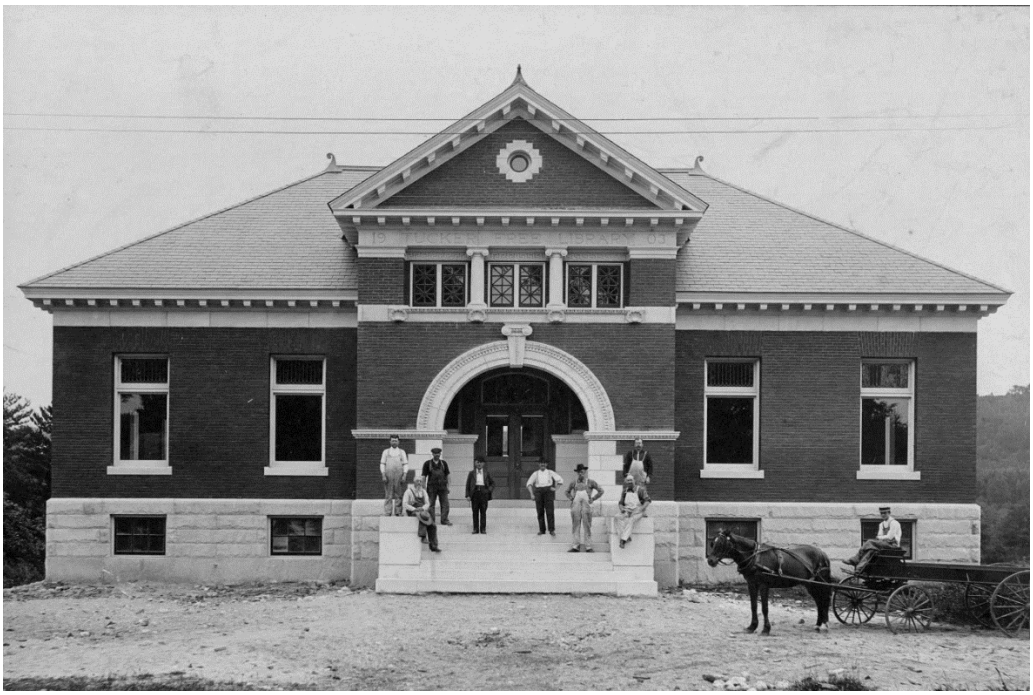


Image 9. Tucker Free Library nearing completion in 1903. Facing south, on display at library.

Image 10. Recessed front entry of Tucker Free Library. Facing south, photo taken: 4/19/2020.

Image 11. Detail column and frieze above front entrance. Facing south east, photo taken: 1/31/2013

Image 12. North east elevations. Facing south west, photo taken: 10/2019

Image 13. South east elevation. Notice the corner quoins and how the dentil ends. Facing west, photo taken: 10/2019.

Image 14. South elevation. Note the addition was built in 1991 on the southwest corner. Facing north, photo taken: 10/2019.

Image 15. West elevation. Facing south east. Note where the addition was built on the southwest corner, photo taken: 10/2019.

Image 16. Tucker Free Library buried by spring snowstorm, facing east, photo taken: 04/10/1907, Henniker Historical Society Archives.

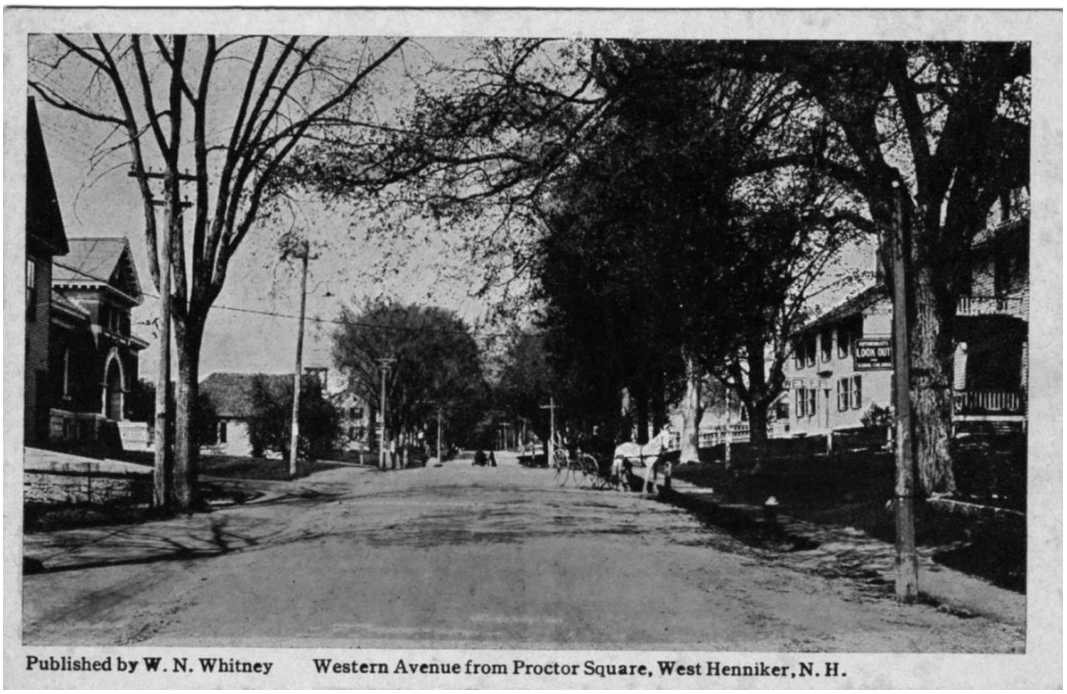


Image 17, Tucker Free Library on Western Avenue from Proctor Square, facing west, photo taken: unknown, Henniker Historical Society Archives.

Image 18, Tucker Free Library on Western Avenue, facing east, photo taken: unknown, Henniker Historical Society Archives.

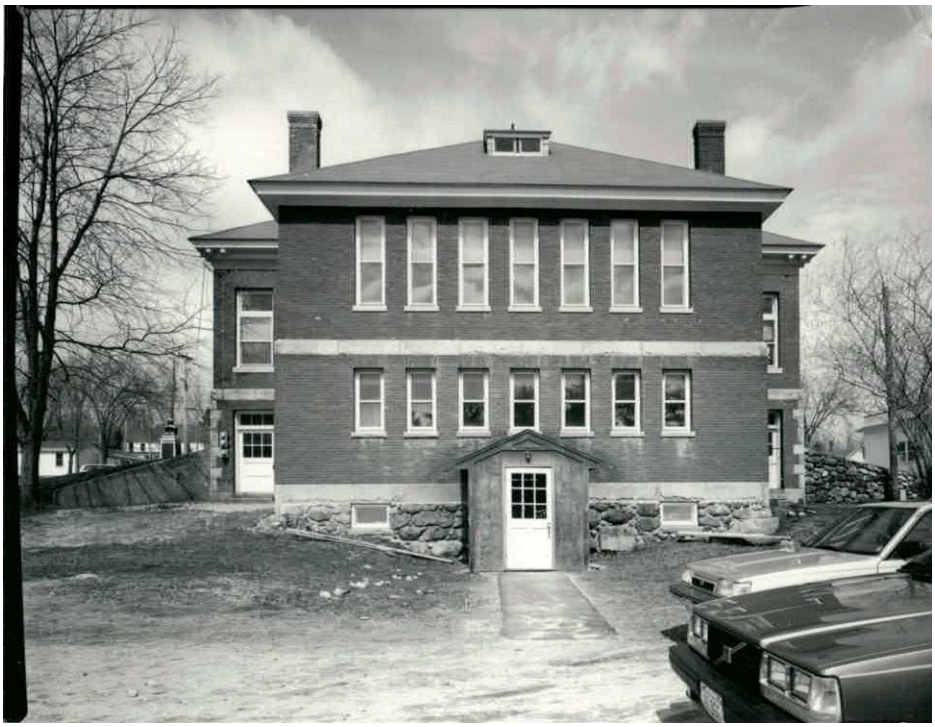


Image 19, Rear elevation, facing north, photo by: Ernest Gould, 4/6/1990.

Image 20, Back view from south east Location, photo taken by: Ernest Gould, 4/6/1990.

Image 21, Front view from north east, photo taken by: Ernest Gould, 4/6/1990.

Image 22, From view from north, photo taken by: Ernest Gould, 4/6/1990.

Image 23, Front view from north west, photo taken by: Ernest Gould, 4/6/1990.

Image 24, Side view from east, photo taken by: Ernest Gould, 4/6/1990.

Image 25, Side view from west, photo taken by: Ernest Gould, 4/6/1990.

LOCATION MAP

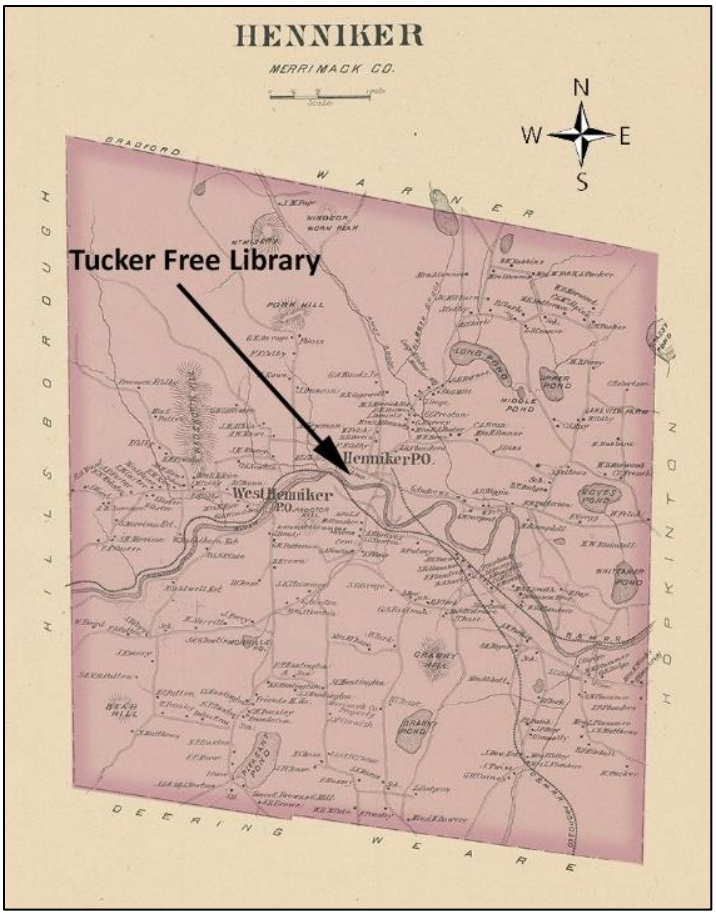


Image 26, 1892 Old Town Map - Hurd State Atlas Merrimack

Tucker Free Library,
Henniker, NH

N43.18063
W71.82369

Image 27, Location map with cardinal ordinates, from Google Earth

PART 2 PRESERVATION OBJECTIVES

PURPOSE

The purpose of this report is to document the history, evolution, current condition and to outline the character defining features. This report summarizes the preservation work that's been done to date, areas which need attention and provides recommendations for improvements that are consistent with the Secretary of the Interior's Standards for Rehabilitation as well as the community's interest in the buildings long term preservation.

OWNERSHIP / MANAGEMENT GOALS

The Tucker Free Libraries elected board of trustees are responsible for the facility, fiduciary management, and policies mandated for operation. The library director oversees the daily operation of the building, program, and personnel and renovation efforts.

Beginning in 1903 the trustees of the Tucker Free Library have guided the direction of growth of the library. They have been deliberate stewards of an architecturally outstanding building in Henniker. They have, through their collective wisdom, provided this community with a cultural and educational resource to be proud of. Since 2005, library administration has focused the attention of trustees on preservation during strategic planning, facility management, and institutional decision making.

Through the years the trustees have supported a series of maintenance efforts to preserve and protect the buildings character and essential features. These include brickwork repair pointing of façade and chimney, stained glass repair, historic window repair, storm window installation, and the placements of the existing asphalt roofing.

In the fall of 2018, the trustees of Tucker Free Library sought architectural assistance for an architectural feasibility study to plan for the next major investment. Sheerr McCrystal Palson Architecture, Inc. was hired to review the building and provide options to provide a fully accessible facility that fulfils the Americans with Disabilities (ADA) guidelines.

TUCKER FREE LIBRARY MANAGEMENT GOALS

GOAL 1 – Ensure that changes to the physical structure of the Tucker Free Library honor the Secretary of the Interiors Standards for Rehabilitation guidelines.

GOAL 2 – Ensure that code/safety compliance issues have minimal impact on the historic characteristics of the interior and exterior of the Tucker Free Library.

GOAL 3 – Ensure that our successors and stewards have a document to guide decision making, guaranteeing that preservation objectives remain a priority for the future.

ANTICIPATED USE

The intended use of the Tucker Free library is unchanged however full public access in and to all levels without effecting the historic character of the building is the primary goal.

March 2019, SMP Architecture submitted their Architectural Feasibility Study, *available upon request or included as attachment* to the Board of Trustees and the Henniker community. The results addressed the defined projects goals [27]:

- Whole building accessibility
- Additional accessible public restrooms
- Add a new program room
- Reconfiguring existing spaces to best utilize all available areas
- Plan for long-term functionality

To begin the feasibility, study the library staff provided SMP available historic documents while the architectural team measured the building, developed preliminary floor plans, and determined the building sections. At that time, the team confirmed all six (6) floor levels and documented the character defining features that could not be impacted by any new work.

With trustees and library staff involvement SMP outlined the project goals, current and future space needs, and reviewed the known building issues. SMP provided five (5) "conceptual strategies" for where a new elevator could be located. All five options are shown in the Architectural Feasibility Study (pgs. 9-13). Through deep discussions the trustee's weighed each option and determined the most appropriate location. This "Preferred Option" (pg. 14) although preliminary in nature located a new elevator addition off the south west corner of the building where the last stair addition is.

This solution has multiple pro's:

1. Has the least impact on the architectural elements of the existing building
2. Retains the existing egress stair
3. Conceals the 1991 addition
4. Maintains current rear (south) entry location adjacent to parking
5. Connects each floor allowing full accessibility
6. Minimal impact of library operations
7. Provides better connection with the adjacent school

This solution has the following con's:

1. Potentially more costly
2. Will require extensive exterior site work and reconfiguration of the entry ramp

[27] SMP Architecture, March 2019; *Tucker Free Library Architectural Feasibility Study Report*, Page 1.

Throughout the feasibility study process, SMP Architecture engaged the trustees and community members proactively by outlining the libraries goals, explaining the issues, and seeking input on various design options.

Specific recommendations chosen by the trustees included:

1. Lowering the E- Room floor to align with the J-Room and Meeting Room,
2. Remove two chair lifts,
3. Construct a new elevator addition to align with all levels,
4. Provide new accessible restrooms at each floor level,
5. Renovate attic space for new Programing room,
6. Engage a construction manager to provide accurate estimates for proposed work.

The community has a long-standing commitment to maintaining the Tucker Free Library by generously supporting projects. However, some past decisions have not adequately attended to preservation priorities. For example, SMP noted in their 2019 feasibility study that the 1991 addition does not meet the Secretary of the Interior's Standards for Rehabilitation. "When the 1991 stair addition was added the approach was to minimize its appearance by tucking it into the back corner, cladding it with matching brick veneer and blending together the roofs."[28]

Image 28, Existing South West Isometric View

Specifically:

> "*exterior additions that duplicate the form, material and detailing of the historic structure to the extent that they compromise the historic character fails to meet the Standards. Instead new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment."*[29]

[28] SMP Architecture, March 2019; *Tucker Free Library Architectural Feasibility Study Report*, Page 3.
[29] Grimmer, A., Hensley, J., Petrella, L., Tepper, A., 2011; *The Secretary of the Interior's Standards for Rehabilitation Guidelines on Sustainability for Rehabilitating Historic Buildings.* U.S. Department of the Interior National Park Service Technical Preservation Services.

The proposed future elevator addition will address the shortcomings of the 1991 addition by enclosing the existing stairway with a new architectural element that has clearly different styling than the original while respecting the materials, form and overall scale.

Image 29, Conceptual design of proposed elevator addition and new entry.

This new addition will provide a new rear arrival point with an entry vestibule and lobby. The elevator will provide accessible access to each level and include ADA compliant restrooms. Access controls will allow for after-hours entry for meetings in a new upper (attic) level programming space.

As noted, these proposed renovations include converting the underutilized attic into a multi-functional library programming space. This re-use we must consider the impact on the life-safety code compliance, specifically with regard to adding a fire suppression system, heating, ventilation and air conditioning (HVAC), and an appropriate means of egress from the space.

We intend to achieve these enhancements while preserving the historic integrity of all the architectural features throughout the building. Discussions will continue between the engineer of record, the construction manager, and the fire suppression contractor on how best to install these systems in a low impact way which will not impact the listed character defining features.

Image 30, Conceptual design of proposed elevator addition.

Included on the team are two engineers who provided detailed data on the existing mechanical/electrical systems and the structural integrity of the existing attic level floor and roof framing.

WV Engineering from Keene performed a full building mechanical, electrical and plumbing assessment on January 20, 2020. Report is available upon request or at the library to view. A few recommendations are:

- Provide a complete NFPA 13 sprinkler coverage both wet & dry.
- Remove & replace existing boiler that is currently undersized for one which will serve the entire building.
- Remove Air Handling Unit #2 and replace with a 4.0-ton unit with e cooling split condenser and a hot water heating coil.
- Upgrade electrical service to a 400 amp, 208/120 volt, underground three-phase power service to accommodate the new elevator. Replace electrical panels and sub-panels.
- Remove existing fluorescent light fixtures replace with new LED. *Library has since already completed this recommendation.*
- Provide new ADA compliant plumbing fixtures.

Unfortunately, the original drawing set did not include and information of the structural system. We engaged structural engineer Louis Cote of TF Moran, Bedford NH. He visited the site on December 11, 2019 to determine the existing structural framing and their condition. He was specifically tasked to determine if the floor framing was sized large enough to carry the added loads anticipated for the new attic use. And if not, make recommendations as to what would be required. His findings were provided in the form of a marked-up drawing of the attic floor plan including notes. This document is available upon request or at the library to view.

A few findings are:

- Attic floor framing bears upon columns and walls below that are transferred to the foundation.
- If layout is properly coordinated new work may not require additional columns through building to new footings below.
- Assuming the existing 2”X11.5” attic floor joists are a #1 grade Doug/Fir, the 20’ joists are good for about a 50 psf Live Load.
- This is half of the required 100 psf meeting room / public space / assembly loads.
- Existing floor joist will need to reinforce.
- Reinforcing may be provided by sistering new 2x12’s to the sides of the existing floor joists.

This NHPA Condition Assessment Report represents the ongoing preservation efforts completed to date by the trustees and examine future opportunities identified in the Feasibility Study.

Additionally, our goal with this study is to provide decision makers with a path for realizing a successful project with clarified preservation goals as the utmost importance.

Exterior:

The original building occupies a footprint of approximately 3450 s.f. and has a simple T-shaped floor plan. It is constructed of brick and granite bearing walls, shallow vaulted masonry floors supported on wood beams and wood roof framing supporting an asphalt roof. The foundation is cut granite masonry.

On the exterior the primary material is common brick (2-1/2" by 7-5/8") with a light flash with a narrow pink mortar joint of approximately 3/16". The wall thickness consists of three wythes at the top of the granite foundation continuing plumb to the eaves.

Image 31, Front elevation, photo taken: 4/19/2020

Exterior openings on the primary façades are spanned with either rusticated granite masonry lintels, Indiana sandstone arch and flat brick arches.

At the primary façade the large arch entry (that has come to be strongly associated with libraries) is emphasized with large voussoirs setting atop sandstone quoins completed in the center with a keystone. Included is a continuous horizontal sandstone band detailed with carved egg and dart elements. Above is the only place where we find the carved organic forms typically associated with this style. Along with a symmetrical Greek fret pattern that is repeated at the interior floor tile.

The hipped roof has new asphalt shingles and incudes decorative finials at each end.

Original wood windows both single and double hung with operable stained-glass awning transoms. Aligned below with a series of fixed lower level windows have been well maintained. Some windows are fitted with aluminum combination storm windows. Above the entry at the attic level is a series of decorative casement windows that were recently removed and restored by Old Window Restorers in Warner NH.

CHARACTER-DEFINING OR SIGNIFICANT FEATURES (IN ORDER OF PRIORITY)

Primary Features

- *Overall proportion of the front façade*
- *Height & massing of the building*
- *Roof pitch with decorative finials and dentil eaves*
- *Multiple architectural details in granite and sandstone*
- *Symmetrical windows with centered entry door*
- *Historic windows, leaded glass transoms*
- *Granite Stoop flanked with historic lamps*

Secondary Features

- *South side entries*
- *Stone rubble foundation*
- *Raised 5-Panel Doors*
- *Ornamental Door Hardware*

Non-Historic Features

- *South-West stair addition*
- *Storm windows*
- *South entry canopies*

Interior:

MAIN LEVEL

The Classical Revival architecture is reflected throughout this level in its details; their consistency, and order of each element. Beginning at the receiving area surrounded with ionic columns, to the fireplace mantelpiece design that reflects the exteriors dentil cornice / eaves. To the baseboards, window and door casings, and crown molding. Each item sized in proportion to the height of the rooms.

The main level interior preserves most of the original features and furniture, of particular note is the use of highly polished tiger and curly birch woodwork throughout including on the original casework, mantel, raised panel wainscoting, five-panel doors and leaded glass. Many of the interior doors are five-panel hung on loose-pin butt hinges with ornamental hardware.

At the entry lobby marble wainscoting wraps the walls and rest upon a terrazzo floor with a Greek fret tile inlay boarder. Above are simple yet elegant patterns of hand painted and or gold-leaf wall stenciling up to wood crown molding with a repeated dentil profile. Topped with an arched vaulted tin ceilings are featured in both the New Hampshire Room and Soderstom Room while similar designs are replicated in the receiving room where a hand painted sky motif ceiling replaces the arched tin. Original door hardware remains in place in most locations except for where access and security were a concern. Future consideration should be given to ADA accessibility at specific locations while historic hardware remains in most. Lighting's been modified and upgraded over the years with fixtures that are simple in design so not to detract from the rooms features.

Lower levels rooms have been modified throughout the years and offer a more utilitarian design. The most notable features are the exposed loadbearing brick walls. One such in the meeting room includes a half arch supporting the stairs above. Hand hewn wood beams in the J-Room ceiling though not original to the building are historic and offer an interesting story.

LOWER LEVEL FLOORS:

The lower level consists of multiple rooms at two different floor heights. The E-Room is adjacent to the entry stair and accessible by way of the Garaventa Chair Lift which has surpassed it functional lifespan. Access to the meeting room, ADA bathroom and the juvenile "J-Room" are lower still, accessed by way of a short stair or a small vertical lift.

Functionally speaking these level separations are not optimal for a public library. This combined with the challenges patrons who require assistance to use both lifts to access the facilities only accessible restroom makes this the most important issue to rectify.

Historically there have always been two levels, one space having a much higher ceiling. In 1978 an intermediate floor was added to divide this high space to create two separate rooms.

In general, the exposed masonry walls, floors, trim are in good condition. Lighting consist of a mix of incandescent and florescent. At the time of this report was planned to be retrofitted with high efficiency LED lamps.

The lowest level sub-basement is no longer utilized due poor access and water infiltration causing indoor air quality issues.

CHARACTER-DEFINING OR SIGNIFICANT FEATURES (IN ORDER OF PRIORITY)

Primary Features

- *Classic Functional Design of Space*
- *Ionic Columns*
- *Fireplace Mantel*
- *Curly Birch Trim and Woodwork*
- *Marble Wainscoting*
- *Terrazzo Floor*
- *Tin Ceilings – 3 design types*

Secondary Features

- *Exposed Bricks & Roman Arches*
- *Hardwood Maple Flooring*
- *Ornamental Hardware*

Non-Historic Features

- *24" x24" Surface Mounted Lighting*
- *Circulation Desk*
- *Aluminum Sidelight and Door*
- *E-Room Floor*
- *J-Room Ceiling Hand Hewn Beams*
- *Heating system*

Image 32, Interior of present NH Room of Tucker Free Library, circa 1912. Many original furnishings remain today, facing south west, photo taken: 1912, on display at Tucker Free Library.

Image 33, Interior view of NH Room. Facing south west, photo by: Ernest Gould, 4/6/1990.

Image 34, Interior view of NH Room, facing south west, photo by: Joshua Colby 04/19/2019.

Image 35, Arched entrance to vestibule, facing north east, photo taken: 1/31/13.

Image 36, Arched entrance to vestibule, facing north east, photo taken: 05/20/2020

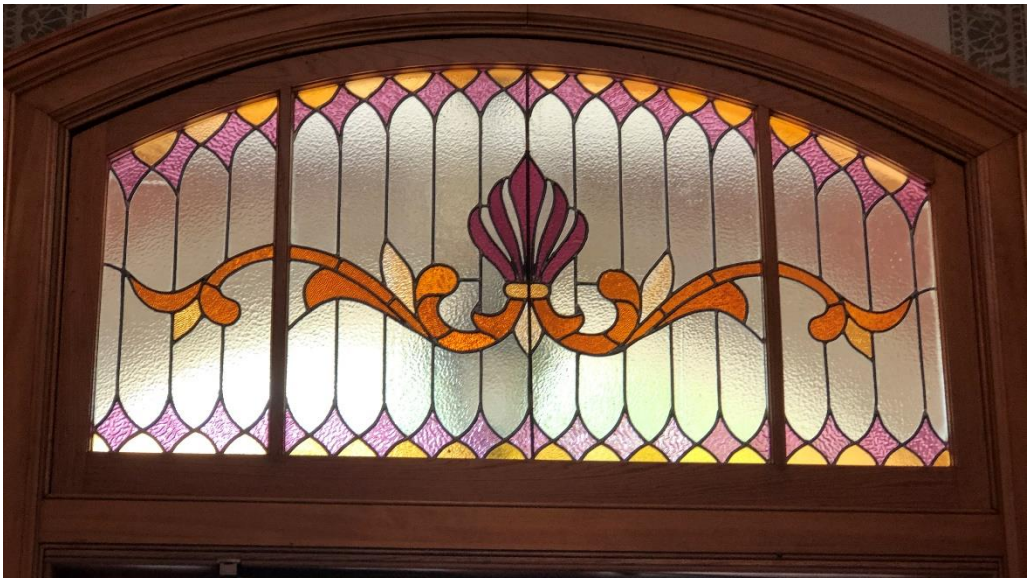


Image 37, Lunette Stained glass window located above main entrance of building. Facing north, photo taken: 05/20/2020.

Image 38, Characterized as the "Charge Area" this space was the center of all library activities. Built in cabinetry is still used to store library processing supplies, facing north, photo taken: 1/31/13.

Image 39, Characterized as the "Charge Area" this space was the center of all library activities. Built in cabinetry is still used to store library processing supplies, facing north, photo taken: 05/20/2020.

Image 40, Fireplace on Main Floor. Andirons are engraved with the initials "T" and "L", facing south, photo taken: 05/20/2020.

Image 41, Ceiling details of the NH Room. George Tucker's photo in the foreground, facing south west, photo taken: 1/31/13.

Image 42, Intricate tin ceiling details in the stack area, facing north, photo taken: 1/31/13.

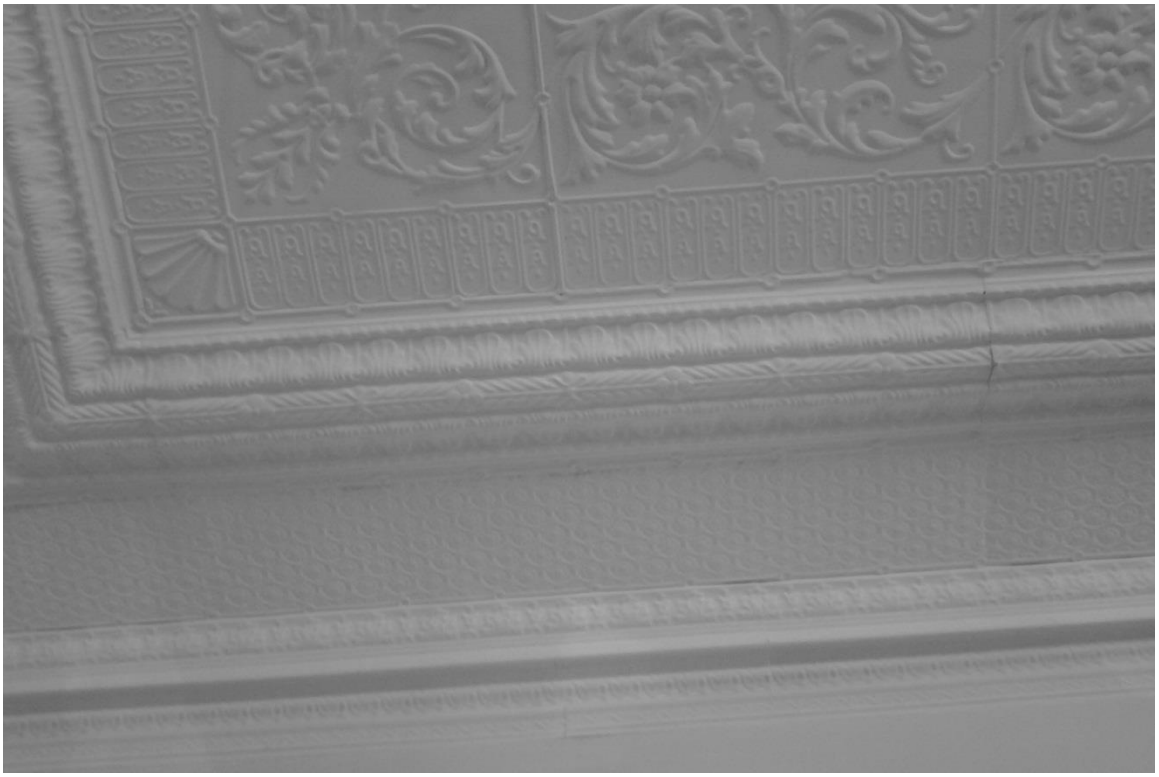


Image 43, Intricate tin ceiling details in the stack area, facing east, photo taken: 1/31/13.

Image 44, Intricate tin ceiling details in the stack area, facing west, photo taken: 1/31/13.

Image 45, Intricate tin ceiling details in the non-fiction room, facing south, photo taken: 1/31/13.

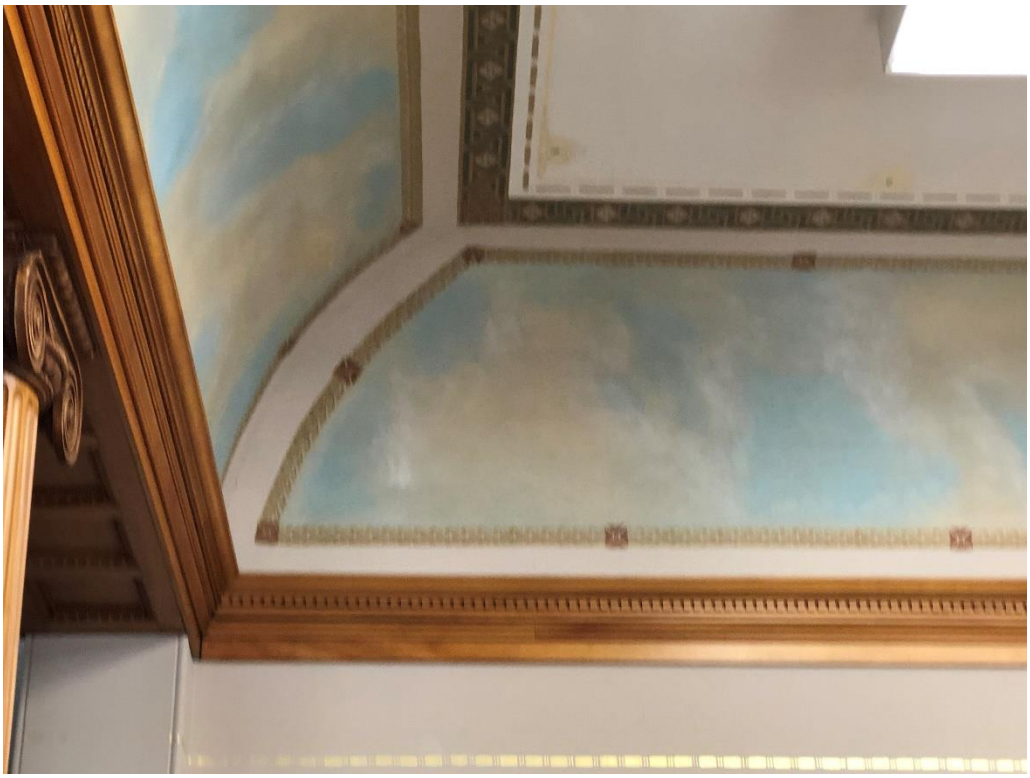


Image 46, Hand-painted ceiling details in the receiving room, facing west, photo taken: 06/11/2020.

Image 47, Columns, circulation area in the receiving room, the charge area, and the non-fiction area can all be seen, facing north west, photo taken: 6/11/2020.

Image 48, Two of four columns on the Main Floor, this photo shows the intricately detailed column in the receiving area, facing south, photo taken: 12/11/2018.

Image 49, One of the four columns on the Main Floor, this photo shows the intricately detailed column in the receiving area. facing south, photo taken: 1/31/13.

Image 50, An example of the 5-panel doors, hardware and wood wainscoting at the non-fiction room and NH Room, photo taken: 6/11/2020.

Image 51, Door casing detail, photo taken: 1/31/13.

Image 52, Marble wainscoting at the room dividers and thresholds. Note the Greek Fret and terrazzo floor, face south east. photo taken: 1/31/13

Image 53, Basement Archives (now storage outside of mechanical room) facing west, photo by: Ernest Gould, 4/6/1990.

Image 54, Basement Archives (now storage outside of mechanical room), facing west, photo by: Joshua Colby, 4/22/2019.

Image 55, Basement, Historical Room (now Meeting Room), facing north, photo taken by: Ernest Gould, 4/6/1990.

Image 56, Meeting Room, Facing South, photo taken by: Joshua Colby, 4/22/2019.

Image 57, Meeting Room, facing East, photo taken by: Joshua Colby, 4/22/2019.

Image 58, Lower Level, Edna Dean Proctor Room (now E-Room) facing West, photo taken by: Ernest Gould, 4/6/1990.

Image 59, Lower Level, Edna Dean Proctor Room (now E-Room) facing West, photo taken by: Joshua Colby, 4/22/2019.

Image 60, Lower Level, Edna Dean Proctor Room (now E-Room) facing East, photo taken by: Joshua Colby, 4/22/2019.

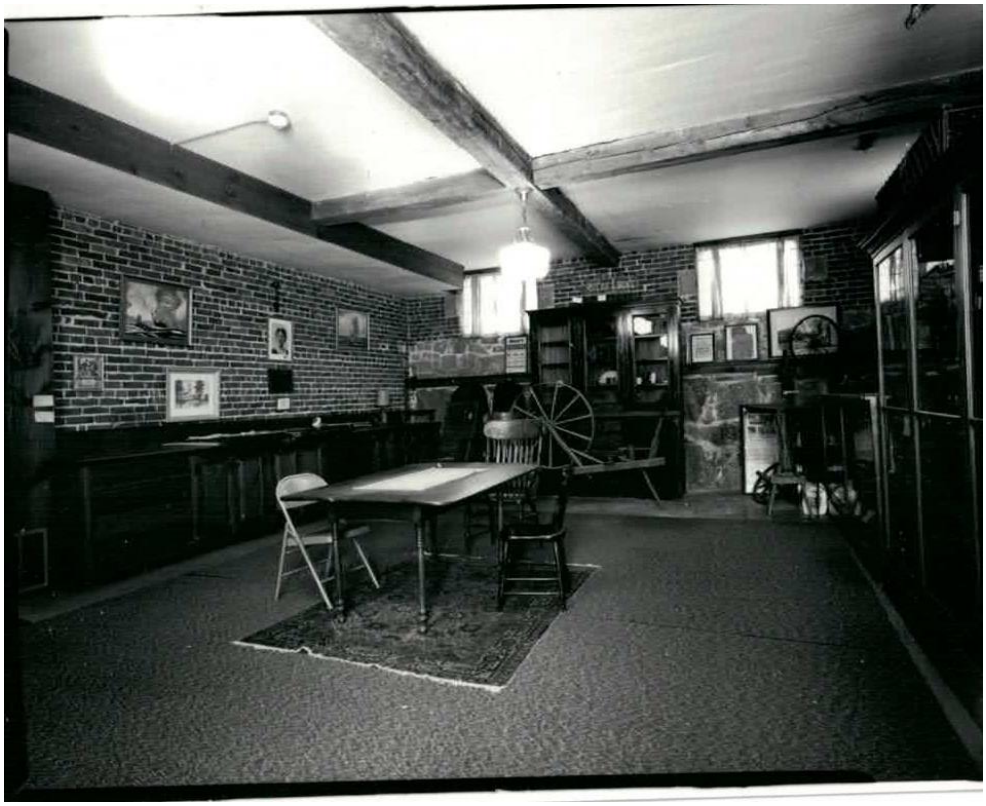


Image 61, Lower level basement, Francis Child's Historical Room (now J-Room) facing north, photo taken by: Ernest Gould, 4/6/1990.

Image 62, Lower level basement, expansive view of J-Room facing north, photo taken by: Joshua Colby, 4/22/2019.

Image 63, Lower level, Francis Child's Historical Room (now J-Room), Source and date of photo unknown.

Image 64, Lower level J-Room circulating collection, facing north, photo taken by: Joshua Colby, 4/22/2019.

Image 65, Francis Child's Historical Room (now J-Room), facing south east, source and date of photo unknown.

Image 66, Sub-basement, kindergarten classroom (now vacant) facing west, photo taken by: Ernest Gould, 4/6/1990.

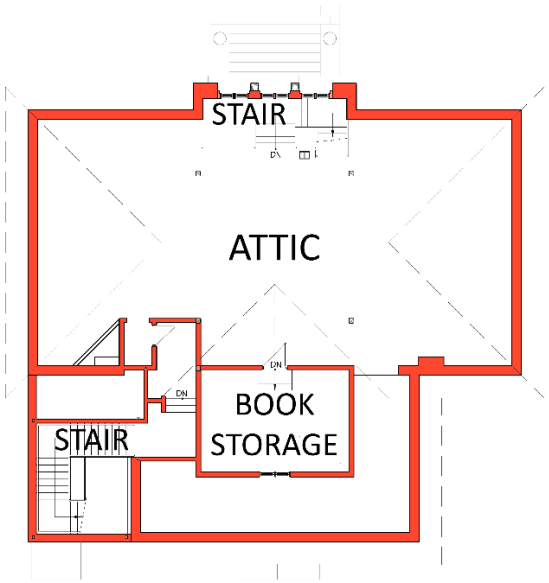
Image 67, Sub-basement (now vacant) facing west, photo taken by: Joshua Colby, 4/22/2019.

Image 68, First Floor Lobby (now circulation area) facing west, photo taken by: Ernest Gould, 4/6/1990.

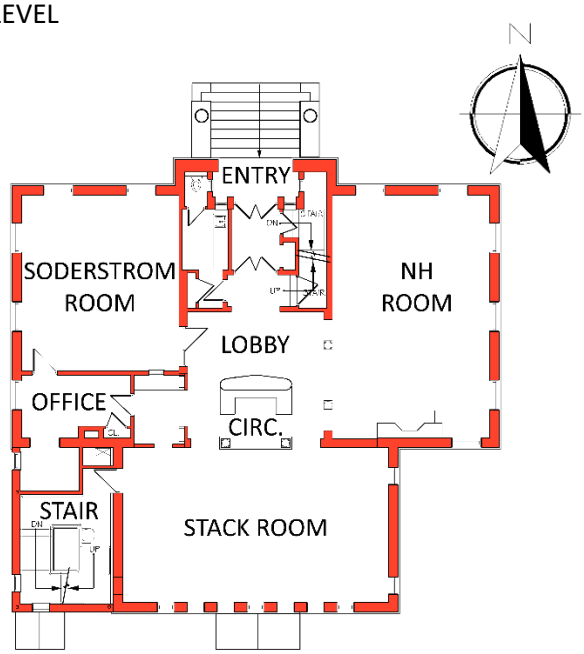
Image 69, First Floor Lobby (now circulation area) facing west, photo taken by: Joshua Colby, 4/22/2019.

EXISTING ARCHITECTURAL DRAWINGS - FLOOR PLANS

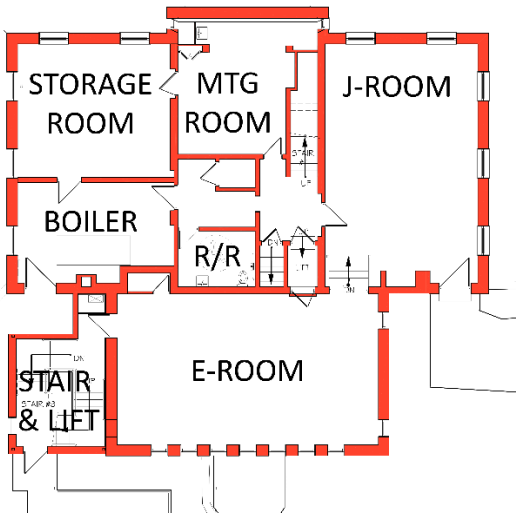
ATTIC LEVEL



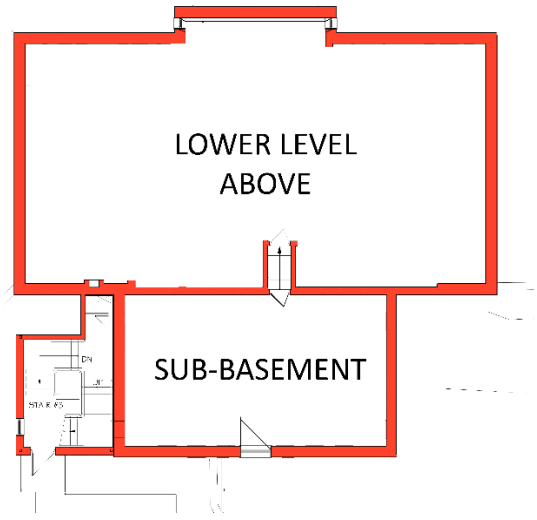
MAIN LEVEL



LOWER LEVEL



SUB-BASEMENT



Architectural drawing, Sheerr McCrystal Palson Architecture, Concord, NH. Lower Levels Existing Conditions 12/13/19

Floor level Summary:

- Originally the building was designed with five (5) levels shown in red below; Basement, Lower level, Main level, Lower Attic and Upper Attic. Deteriorated plans included in attachment are available at the library upon request.

- In 1978 the high ceilinged unfinished sub-basement was dived horizontally by adding a mid-level floor, shown in green below. This addition provided a renovated sub-basement for a children's reading room and the new upper portion into the Proctor Room later renamed to the J-Room provided area for additional library stacks.

Image 70, Side Elevation facing east

Image 71,Rear Elevation facing north

1. **Deteriorated Mortar**

Deteriorated mortar is apparent at many locations at brick and stone masonry. Most significant is visible along the north and west elevations.

The deterioration of mortar is caused by any or all of the following factors:

Image 72, Sub-Basement Arch

Image 73, South Granite Step

- When excessive moisture can enter a wall and freeze repeatedly, spalling of the mortar and brick will occur due to the expansive nature of frozen water. The sources of moisture entry, beyond normal exposure include leaks in flashing, gutters, lintels, sills and sealant joints.
- Built without adequate expansion joints. Cracking can occur from building movement, thermal expansion. All clay products (brick) grow in long term service while concrete products shrink.
- Uneven settlement in a building's foundation may occur resulting in cracking.
- The composition of the mortar used may be such that it is unable to be as resistant to severe weathering.
- Erosion from water, wind and pollution.

Image 74, J-Room Entry

Areas of concern:

A. Spalled bricks, missing mortar at arched entrance at the sub-basement (Image 72).

B. Mortar missing west of granite steps at south elevation (Image 73).

C. Mortar is missing along the southwest corner beside the J-Room entry door. Existing mortar in these joints has deteriorated to the point of a sand-like quality (Image 74).

D. Mortar is missing between the landing and steps at the south entry, allowing moisture an opportunity to widen gap over time. (Image 75).

Image 75, Gap in granite at south entry

Recommend pointing in areas where missing mortar is present. New mortar shall match existing color and thickness. Joints between granite stairs should be professionally inspected, if the sealant has torn or lost elasticity than existing material should be removed, with new sealant installed.

See Preservation Brief 1, 2, 39, and 47.

Specific descriptions provided below

2. **Efflorescence/Staining**

Image 76, Efflorescence below granite sills

Efflorescence, staining, and deteriorated mortar visible along the north and west elevations. This could be due to drainage from air conditioning units placed in window openings, moisture is present which has causing the salts to surface and leaching out of the brick.

Iron staining on either side of the granite entry below the decorative lighting fixtures (Image 76). This could be cause by water infiltration at the exposed opening prior to the reinstallation of the new lights, and leaching out the joints

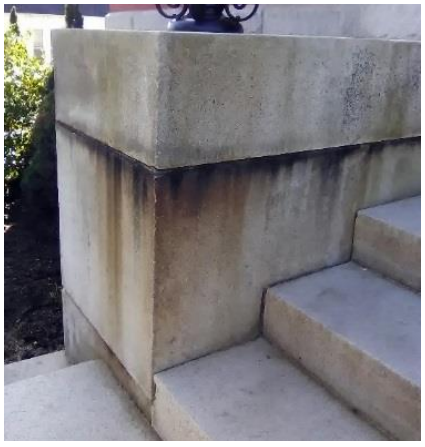


Image 77, Stone staining at entry

Areas of concern:

A. Efflorescence under the south and west elevation windows at the second-floor level (Image 76).
B. Staining of granite at entry (Image 77).
C. Unknown discoloring at upper masonry band, northwest corner of entry (Image 78).

Image 78, Unknown discoloring

Recommend areas be professionally cleaned per industry standards with dry brush, mild detergent, and natural water. Abrasive efforts such as sandblasting is not recommended.

The masonry can be cleaned to its original color or tone with the use of restoration cleaners and low-pressure water. Many environmentally friendly cleaners are now available.

Efforts should be made to point and repair missing mortar at masonry joints. Backer rod and sealant appropriate for masonry/granite should be used.

See Preservation Brief 1, 6, 39, and 47.

Specific descriptions provided below

See Also

- BIA Technical Notes on Brick Construction, Brick Institute of America, Reston, Virginia

Note 20 Revised, Cleaning Brick Masonry

Note 23 Revised, Efflorescence Causes and Mechanisms

Note 23A Revised, Efflorescence Prevention and Control

- NCMA Technical Notes for Concrete Masonry Design and Construction, National Concrete masonry Association, Herndon, Virginia, Note 8-3A, Control and Removal of Efflorescence
- ASTM C 1400-98, Standard Guide for Reduction of Efflorescence Potential in New Masonry Walls

3. **Minor Cleaning and Maintenance**

Image 79, Mud wasp nest

Spider webs, wasp nests, and vegetative growth are present at many locations.

Areas of concern:

A. Mud wasp nests and spider webs were visible at entrances and overhangs (Images 79).

The wasp nests appeared dormant.

Recommend these areas of buildup of organic matter should be removed and cleaned to present a more pleasant appearance.

See Preservation Brief 01, 10, and 47.

Specific descriptions provided below

4. **Sealant Repair**

Image 80, Cornice trim

Aged and dried sealant at joints between stone freeze and cornice trim. This condition could allow insects and moisture into the adjacent wood causing rapid deterioration

Areas of concern:

A. Areas of separation and signs of minor rot between the cornice and masonry freeze are visible at the north, west, and south elevations. This could create a water infiltration condition and should be repaired (Image 80).

Image 81, Granite grouting

Image 82, Shifted granite steps

Image 83, Gap at J-Room Door

5. **Masonry**

Shifting of masonry material is present at various locations. This can be due to settlement in the building structure and landscape over time.

Areas of concern:

A. Grout replacement at granite blocks (Image 81).
B. Granite steps leading to the entry to the J-Room have shifted. This has created gaps, and missing mortar joints (Image 82). Shifting of the granite steps has also led to a gap at the head of the J-Room entry door frame (Image 83).

Recommend the remove existing stone steps and retaining wall at areas of shifting. Preparation of sub-grade with suitable structural fill, compacted and re-set level. Use of backer rob and silicon sealants to reduce water infiltration and separation to mitigate further shifting.

See Preservation Brief 02, and 47.

Specific descriptions provided below

6. **Windows**

Image 84, Main level and lower level

Image 85, E-Room windows

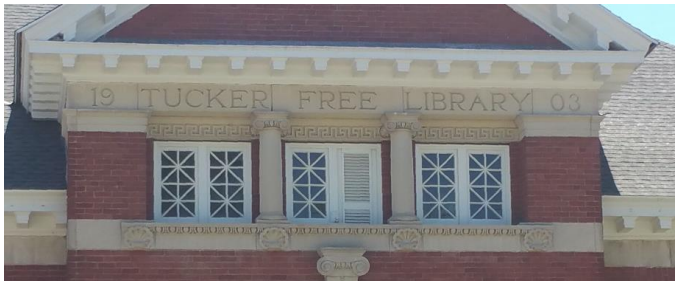
Image 86, Missing glazing boiler room door

The original main level monumental fixed wood windows are in good condition. Their upper operable wood awning leaded windows are in very good condition and properly function with original hardware.

Lower level E-Room wood single hung windows are not original and longer function correctly. They include aluminum storm windows installed to the exterior side (Image 84). Existing windows are not well insulated and should be removed, repaired, and reinstalled with adequate perimeter insulation.

Lower level fixed wood window sashes and muntins are in fair condition, many of the original panes are damaged and or replaced with assorted glass. Some glazing panes appear to be original, the non-historic glass should be removed and restored with period glazing.

The front elevation, attic level, decorative wood window was previously removed and infilled with a temporary wooden louver. Local craftsman and window restorer Dave Bowers of Olde Window Restorers recently reinstalled the completed unit.



Damaged window sash replaced with louver before repairs.

After preservation treatment by Dave Bowers

Image 87, Damaged and mixed glazing

Areas of concern:

A. In the west side mechanical area, glazing is missing from the Boiler Room entry door, which is covered with cardboard (Image 86).
B. Several clear panes at the basement level are cracked. (Images 87).

Repair existing glazing. Replace in kind

See Preservation Brief 03, 09, 12, 33, and 47.

Specific descriptions provided below

7. **Roof**

Hipped and gable ends roofs were recently renewed with new asphalt shingles and drip edge. Condition of the roof is in very good. Minor flashing repairs recommended at chimney.

Image 88, Mold at Sub-basement

Image 89, Sub-basement stair to J-room

Sub-Basement (Below E-Room)

The lowest level sub-basement has evidence of water infiltration. Potentially through the stacked stone foundation. The lack of ventilation in the space along with moisture have created a damp environment and musty smell.

Areas of concern:

A. It appears there may be signs of organic growth on the interior wall adjacent to the south facing exterior door.

Recommend engaging an environmental testing agent to inspect and remediate the issue. There are various methods of correcting foundation water issues. Exterior perimeter drainage and sloping grade are first steps. Exterior mortar joint repair with proper flashing along with treatment of the interior face of stone with a membrane should be considered.

See Preservation Briefs 18, 24, and 39.

Specific descriptions provided below

Image 90, Garaventa chair lift #1

Lower Levels

The lower level consists of multiple rooms at two different floor heights. The E-Room is adjacent to the egress stair and accessible by way of the Garaventa Chair Lift (Image 90) which has surpassed it functional lifespan. Access to the meeting room, ADA bathroom and the juvenile "J-room" are lower still, accessed by way of a short stair or a small vertical lift. (Image 91)

Image 91, Vertical lift #2

Functionally speaking these level separations are not optimal for a public library. Combined with the challenges for patrons who require assistance using both lifts to access the facilities only accessible restroom makes this the most important issue to rectify.

Historically there have always been two levels, one space having a much higher ceiling. In 1978 an intermediate floor was added to divide this high space to create two separate rooms. (Image 92)

Image 92, E-Room, 1978 floor, note the low ceiling

In general, the exposed masonry walls, gypsum ceilings, floors, and simple trim are in good condition. Lighting consist of a mix of incandescent and florescent. At the time of this report was planned to be retrofitted with high efficiency LED lamps.

Areas of concern:

A. Multiple floor levels and use of two lifts to assess ADA restroom.
B. Interior masonry at lower level is patched in a few sections of interior walls and the underside of masonry arches.

See Preservation Brief 3, 17, 18, 24, 28, and 37

Specific descriptions provided below

Image 93, fireplace mantel

Image 94, Tin ceiling with pendant florescent lighting fixtures

Image 95, Water staining at bathroom

Main Level

The Classical Revival architecture is reflected throughout this level in its details; their consistency, and order of each element. Beginning at the receiving area surrounded with ionic columns, to the fireplace mantelpiece design (Image 93) that reflects the exteriors dentil cornice. To the baseboards, window and door casings, and crown molding. Each item sized in proportion to the height of the rooms.

This first floor is in extremely fine condition. Photo documentation of this level is throughout the report. Walls, floors, trim and doors have been well maintained.

The facility currently lacks a fire suppression system; it should be noted that any additional increased in floor space may trigger the requirement of a full suppression system. The teams mechanical engineer and construction manager have reviewed installation options with a sprinkler subcontractor. Recommendations of how and where piping should be located to properly function without impacting the architectural elements, such as the tin ceilings and wood trim.

Lighting varies throughout at the time of this report a plan to retrofit the existing fixtures with high efficiency LED lamps was in place. (Image 94)

Water staining to the ceiling of the staff rest room. Appears to be from the attic level above and possibly due to the temporary louver at the historic window being repaired.

Areas of concern:

A. Staining on the plaster ceiling above the toilet (Image 95).

See Preservation Brief 3, 17, 18, 21, 24, 28, 32, 37, and 39

Specific descriptions provided below

Image 96, Gap at truss

Image 97, Minor damage at Floorboards

Image 98, Daylight at chimney flashing

Attic Level

Is currently a large unfinished, unheated, vaulted attic space that is quite large and underutilized. Conditions are dry with no moisture present. However, there are few areas that shown staining, possibly occurred prior to the new roofing was installed.

Blown-in insulation is located at the floor framing system that caps the lower levels. There is no moisture barrier provided.

Existing north stair that accesses the vestibule below is only an accessory stair and not code compliant. Stair is acceptable for the current use but will not be able to perform as a second means of egress if the room is repurposed. However, given the stair is original to the building some considerations for use may be granted by the local authority having jurisdiction.

A structural investigation was performed to determine the integrity of the floor and roof framing systems to determine the future use of this area. Conditions were found to be relatively sound with recommendations provided to reinforce the floor framing when and if the attic is renovated.

Areas of concern:

A. Heavy timber roof trusses in a couple locations are separated at the compression joints. (Image 96).
B. Wood floorboards are slightly damaged; possibly done they were removed to add below-floor insulation. (Image 97)
C. Daylight was visible through flashing adjacent to the chimney (Image 98).
D. Minor signs of water infiltration present at the stair landing, roof boards adjacent to the brick knee wall.

See Preservation Brief 3, 4, 9, 17, 18, 24, 32, and 39

Specific descriptions provided below

LIFE SAFETY AND ADA CODE COMPLIANCE DEFICIENCIES

ADA Accessibility Issues:

The historic front entry was constructed with a monumental granite stair. The desire to retain the original character directed attention to the rear of the building when considering where to add the first accessible access. In 1991, an addition was constructed at the rear of the building that included a new multi-level fire rated egress stair from the first floor up to the unfinished attic. At that time, an inclined wheelchair lift was installed, manufactured by Garaventa. This lift has not functioned properly for years and requires regular maintenance and attention by the library staff to operate. The lift has surpassed its functional lifespan. Given the stair only connects to three of the buildings five levels, an additional vertical lift was added between the E-Room and lowest level J-Room floor.

In 1995, a handicapped bathroom was built on the lowest level of the library. Being the only accessible bathroom in the whole facility, staff must assist mobility impaired patrons with the operation of the inclined wheelchair lift, then over to the second vertical lift to gain access to the bathroom level.

Neither lift nor the path of travel properly meet the intent of the ADA Guidelines. This level of effort to access the only handicapped bathroom makes the library less than welcoming for those with mobility issues.

Many of door handles are not currently ADA compliant, however; some are in historic doors with ornamental cast back plates.

Existing door swings on certain doors do not currently have the required clearances between wall and door.

The main level staff bathroom is insufficient, far too small without the required accessories. Unfortunately, this space doubles as a staff scullery.

Life Safety Issues:

The existing building does not have a fire suppression system. Although it is currently not required, an increase in occupancy will likely trigger this need. Included in the future renovation project and budget includes a whole building suppression system. Considerations been given for its installation in ways to reduce its visible impact and not damage any of the historic details.

A properly functioning fire alarm system with horn strobe is installed throughout and will likely be upgraded in the renovation.

Fire rated enclosures, door widths, hydraulic closures, emergency lighting appear to be in-place. An existing headroom issue between the top of stair and stair stringer above seems to have occurred with the 1991 stair construction.

The existing front entry stair and the upper level attic accessory stairs do not meet current building codes for width, tread and riser heights or railings. But given the age of the building this condition is grandfathered; it is not the intention to make any changes to the entry.

Image 99, 1991 Addition, note the similarity of brick and detailing

Image 100, Garaventa inclined wheelchair lift

Image 101, Existing lower level ADA restroom

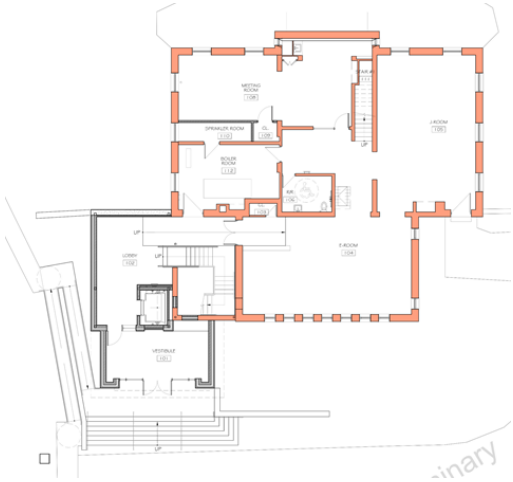


Image 102, Proposed elevator addition with new ADA entry ramp with compliant railings

Part 4 Recommendations

RECOMMENDATIONS

SHORT-RANGE:

Relatively easy to achieve short-range recommendations items involve maintenance and mitigation of water infiltration of the interior spaces, namely in the sub-basement and third floor:

1. Engaging a testing agent to review the indoor air quality of sub-basement level. Perform remediation of contaminated areas;
2. Repair exterior rubble foundation wall where water is believed to be entering;
3. Repair roof flashing adjacent to the chimney;
4. Locate reason for later leakage at attic level stair landing, correct;
5. Cleaning organic matter from the face of the building;
6. Repair areas of missing or deteriorated mortar;
7. Clean staining from efflorescence at exterior masonry;
8. Repair of the plaster ceiling above the main level restroom.

MID-RANGE:

Resolve the ADA Accessibility issues:

1. Remove the two wheelchair lifts;
2. Provide a new elevator for access to all levels of the library;
3. Removed E-Room floor and lowered to align with the J-Room level;
4. Provide fully compliant restrooms at each floor level;
5. Construct a new ADA entry ramp;
6. Reinforce attic level floor system.

Upgrade of systems (performed in mid-range):

1. Install a fire suppression system;
2. Modify existing HVAC system to include and Energy recovery ventilation (ERV) to improve indoor air quality and reduce energy cost;
3. Repair existing heavy timbers.

LONG-RANGE:

1. Remove and repair broken glazing to the lower level windows
2. Remove and reset granite steps at J-Room entry, provide sealant added at the joints as required.
3. Remove existing sealant between wood trim and masonry, reseal with appropriate elastomeric sealant.

KEY ISSUES

The following outlines a series of key issues that are planned to be corrected in the Mid-range plan. These include correction to the existing ADA code compliance and increasing the overall facilities Life Safety compliance.

- Remove the existing inclined wheelchair lift at the rear stairwell;
- Remove the existing vertical lift between the E-Room and J-Room;
- Remove the E-Room floor system, replace with a new floor aligning with the J-Room, the meeting room and ADA bathroom;
- Construct a new elevator addition with an accessible entry will encapsulate the existing 1991 stair addition.
- Add two new accessible restrooms one on the main level and another on the upper attic level;
- Existing interior accessible doorways shall be retrofitted with ADA compliant hardware;
- Provide a new exterior ADA compliant entry ramp;
- Remove existing nonfunctioning and non-original windows in the E-Room and replaced with new window units match in-kind size, material, and color;
- Install a fire suppression system throughout providing great attention to the historic architectural details for piping and sprinkler coverage achieved.

The National Parks Service, US Department of the Interior provides very usefully resources of Technical Preservation Briefs. https://www.nps.gov/tps/how-to-preserve/briefs.htm

These "Preservation Briefs provide information on preserving, rehabilitating, and restoring historic buildings. These help historic building owners recognize and resolve common problems prior to work."

Several pertain directly to the work noted above for treatment of masonry, mortar, wooden windows, leaded glass and controlling unwanted moisture. Listed below are many we recommend that may be used in future efforts.

See Preservation Briefs: (Hyperlinks below to www.nps.gov)

1. **Cleaning and Water-Repellent Treatments** for Historic Masonry Buildings
2. **Repointing Mortar Joints** in Historic Masonry Buildings
3. **Improving Energy Efficiency** in Historic Buildings
4. **Roofing** for Historic Buildings
6. **Dangers of Abrasive Cleaning** to Historic Buildings
9. The Repair of Historic **Wooden Windows**
17. **Architectural Character**—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character
18. Rehabilitating **Interiors** in Historic Buildings—Identifying Character-Defining Elements
21. Repairing Historic **Flat Plaster**—Walls and Ceilings
24. **Heating, Ventilating, and Cooling** Historic Buildings: Problems and Recommended Approaches
28. **Painting** Historic Interiors
32. Making Historic Properties **Accessible**
33. The Preservation and Repair of Historic **Stained and Leaded Glass**
37. Appropriate Methods of Reducing **Lead-Paint Hazards** in Historic Housing
39. Holding the Line: **Controlling Unwanted Moisture** in Historic Buildings
47. **Maintaining the Exterior** of Small and Medium Size Historic Buildings

COST ESTIMATES:

SMP Architecture developed a Design Development set which fulfills most of the short and mid-range recommendations. The drawing set was provided to Milestone Engineering and Construction for preliminary budgeting. Drawing set and copies of the preliminary budgets are available at the library upon request.

Preliminary Construction Budget:

For owner consideration the project was budgeted in two phases.

Phase 1 scope of work included the removal and replacement of the E-room floor, aligning the lower levels, masonry and water infiltration repairs, window replacements, new electrical, new mechanical boiler. Creating a fully accessible entry with an elevator to all levels including new ADA restrooms.

Budget including a 10% construction contingency	$1,818,734

Phase 2 scope of work associated with the Attic Level renovation including a whole building fire protection system.

Budget including a 10% construction contingency	$284,320

Additional Soft Costs:

Soft costs include architectural and engineering fees, owner's contingency, furniture, fixtures, security systems, and moving.

Budget of soft costs	$440,000
Anticipated Total Project Costs for the year of 2020	$2,581,000

ORIGINAL HISTORIC ARCHITECTURAL DRAWINGS

Full size copies of the originals historic architectural drawings are available at the library upon request.

PART 5 Supplemental Information

Previous reports or studies

- Secretary of the Interior's Standards for the Treatment of Historic Properties
- Table of Images
- See attached Feasibility Study provided by SMP Architecture
- See attached existing Mechanical system report provided by WV Engineering

The Secretary of the Interior's Standards for the Treatment of Historic Properties National Park Service, U.S. Department of the Interior

The Standards are a series of concepts about maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. They provide practical guidance for decision-making about work or changes to a historic property. Applicants to the Land and Community Heritage Investment Program (LCHIP) and some other preservation grant programs must be willing to adhere to these Standards. Of the four different Standards, the N.H. Division of Historical Resources generally recommends adhering to the Standards for Rehabilitation as outlined below.

Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

More on the Standards and associated Guidelines, which offer general design and technical recommendations to assist in applying the Standards, can be found at: https://www.nps.gov/tps/standards.htm. Together, the Standards and Guidelines provide guidance and a framework for decision-making about work or changes to an historic property.

TABLE OF IMAGES

Existing Conditions Assessment 2019, SMP Architecture

Existing Condition Mechanical System Report 2019, WV Engineering

Tucker Free Library

2018 NHLTA LIBRARY OF THE YEAR

Architectural Feasibility Study Report

March 2019

SMP ARCHITECTURE

Outline of Contents

Introduction

This feasibility study was undertaken to provide planning context for a potential multi-phase library renovation and resolve some long-standing accessibility and ADA compliance issues.

Project Goals included:

- Whole building accessibility;
- Additional public restrooms;
- Program Room;
- Reconfiguring existing spaces to best utilize all available areas;
- Long term functionality.

It's aim is to answer these questions:

What do we have?
What are the existing Issues?
How do we replace the existing lift and how much may it cost?
What would be the ideal placement/location of this new lift?
Where can additional restroom facilities be added?
Can a community meeting space be constructed on the 3rd floor attic level?

Summary of Needs

What do we have and what are the existing Issues?

The Tucker Free Library was built for the Town of Henniker to serve as a library in 1904. The building is an elegant Classical Revival structure that continues to be well maintained both inside and out. Through the years timely repairs have occurred on the roof, windows and mechanical systems, demonstrating the Town's stewardship of the historic structure.

In 1991 an addition was constructed at the rear of the building that included a new egress stair from the ground level up to the unfinished attic. At that time an inclined wheelchair lift was installed by Garaventa. This lift does not function properly requiring continued maintenance for the library staff. The lift has surpassed its functional lifespan. Given the stair only connects to three of the buildings 5 levels an additional vertical lift was added between the E-Room and the lower level J-Room / Meeting room level.

In 1995 a handicapped bathroom was built on the lowest level of the library. Being the only accessible bathroom in the whole facility staff must assist mobility impaired patrons with the operation of the stair lift, then over to the second chair lift to gain access to the bathroom level. This effort does not meet the intent of the ADA Guidelines, nor make the library a welcoming place for all residents.

Currently, there are various spaces which are underutilized, such as the kindergarten located below the E-Room accessible only from the rear of the building. The lower level storage room and the entire attic.

Additional issues include how the historic library was configured versus how modern libraries are used. When designed in the 1900's the use and trends where very different than they are now. Modern-day needs require programing space for adult classes, media / technology literacy training, children's events, etc. Various sized meeting and study rooms fitted with computers, projection equipment and even 3D printing equipment are common place in most New Hampshire public libraries.

Summary of Needs cont.

How do we replace the existing lift and how much may it cost?

Replacing both existing lifts with a single Building Code complaint solution will require two steps. First is to lower the floor in the E-Room. This level was added in 1978 and is not historic. Lowering it will allow alignment with the J-Room floor, simplify the layout and remove unnecessary stairs and a lift. Step two would be to build a new elevator addition to provide access to all the levels. The current conceptual solution proposed to the Trustees is to design an addition at the location of the present stair. This new structure would envelop the 1991 addition to minimize the visual impact on the historic structure.

When the 1991 stair addition was added the approach was to minimize it's appearance by tucking it into the back corner, cladding it with matching brick veneer and blending together the roofs. Today our approach aligns with that set out by National Park Service US Department of the Interiors. Given that the Tucker Free Library is listed on the New Hampshire Register of Historic Places it is essential to utilize the Secretary of the Interior's Standards guidelines on how to best treat, preserve and rehabilitate historic buildings. <u>One key guiding principal is that</u>:

> "*exterior additions that duplicate the form, material and detailing of the historic structure to the extent that they compromise its historic character <u>fails</u> to meet the Standards. Instead new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.*" [1]

To adequately answer the question of how much the proposed solution will cost requires the involvement of professional construction estimators. They have the most up-to-date data on the industry and can provide the most accurate construction estimating services. The Trustees are investigating hiring a Construction Manager to assist the team with pre-construction services, which will occur concurrent with further work.

1. Grimmer, A., Hensley J., Petrella L., Tepper A., 2011; *The Secretary of the Interior's Standards for Rehabilitation Guidelines on Sustainability for Rehabilitating Historic Building* . U.S. Department of the Interior National Park Service Technical Preservation Services

Summary of Needs cont.

What would be the ideal placement/location of this new lift?

To determine the ideal location of the lift we first needed to understand the buildings five levels and where they all converge. The following images present five possible options for the elevator to be located. Some of the options were not accepted by the Trustees because of the negative impact on the historical features. Others did not work because of the path of travel through the building and or the line of sight would be affected.

The team thought options 2 & 3 had merit for consideration and opted to present both at a public session. The result was overwhelmingly positive for option 3. The Trustees asked the team to develop option 3 and include ADA compliant bathrooms on each floor.

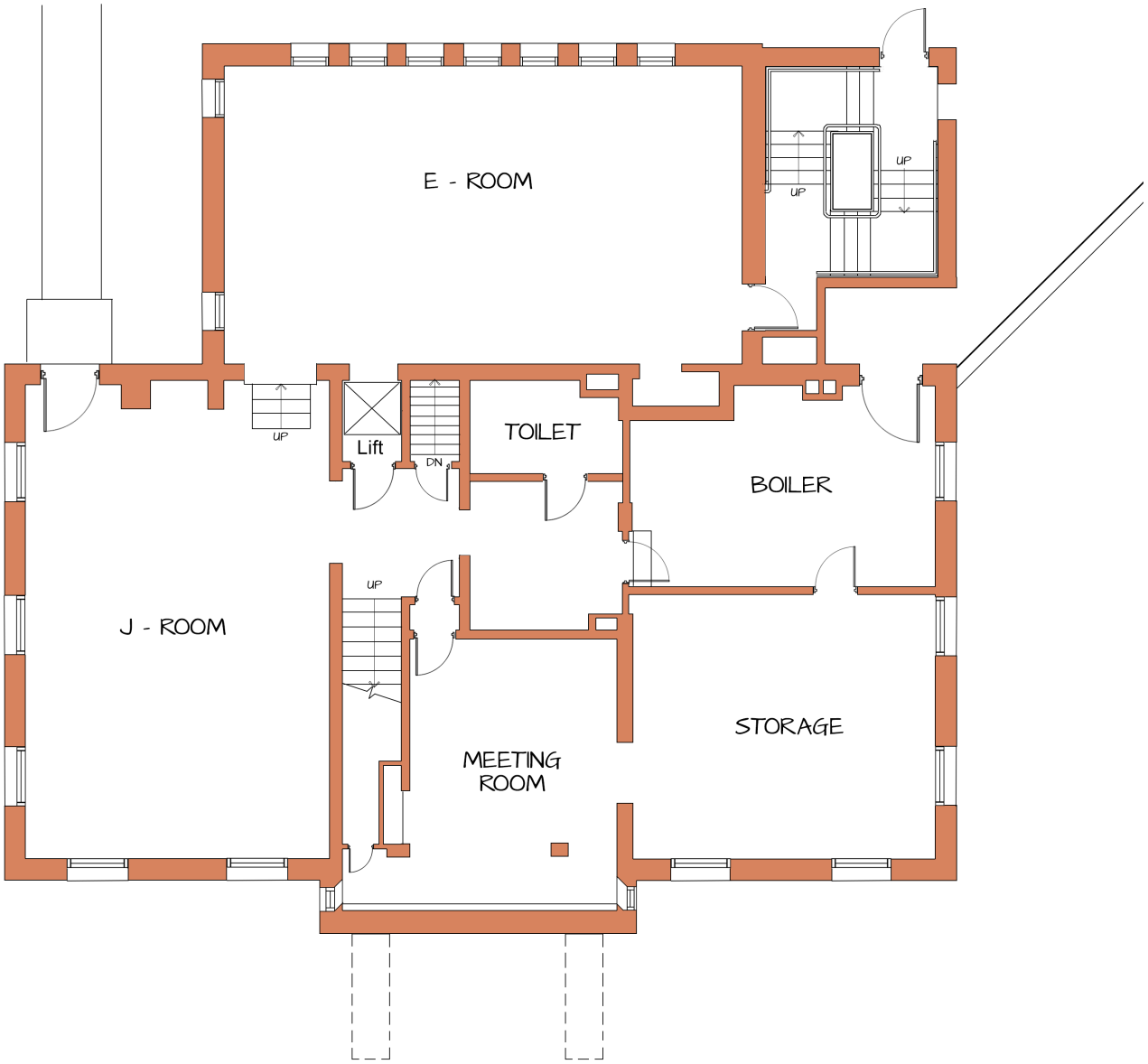
Where can additional restroom facilities be added?

Adding restrooms inside the existing building was considered but all possible locations would impact the interior architecture far too much. Stone veneer wainscoting, metal tin ceilings and decorative trim work would all need to be modified. These are not recommended or supported by the Secretary of the Interior's Standards. An elevator addition would allow construction of new ADA compliant bathrooms that would serve each level of the building and provide the required after-hours access for meetings.

Can a community meeting space be constructed on the 3rd floor attic level?

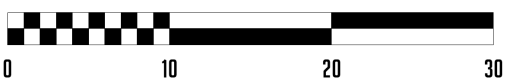
Yes, the current under-utilized attic space can be converted into a multi- purpose programing room and meeting space. Additional storage space would also be added. By properly insulating the roof the entire building would be more energy efficient. This space can be accessed by the proposed elevator as well as the existing stairs. Proper insulation, lighting, and amenities will make the space efficient and highly functional for use during and after library operating hours.

Existing Building Plans

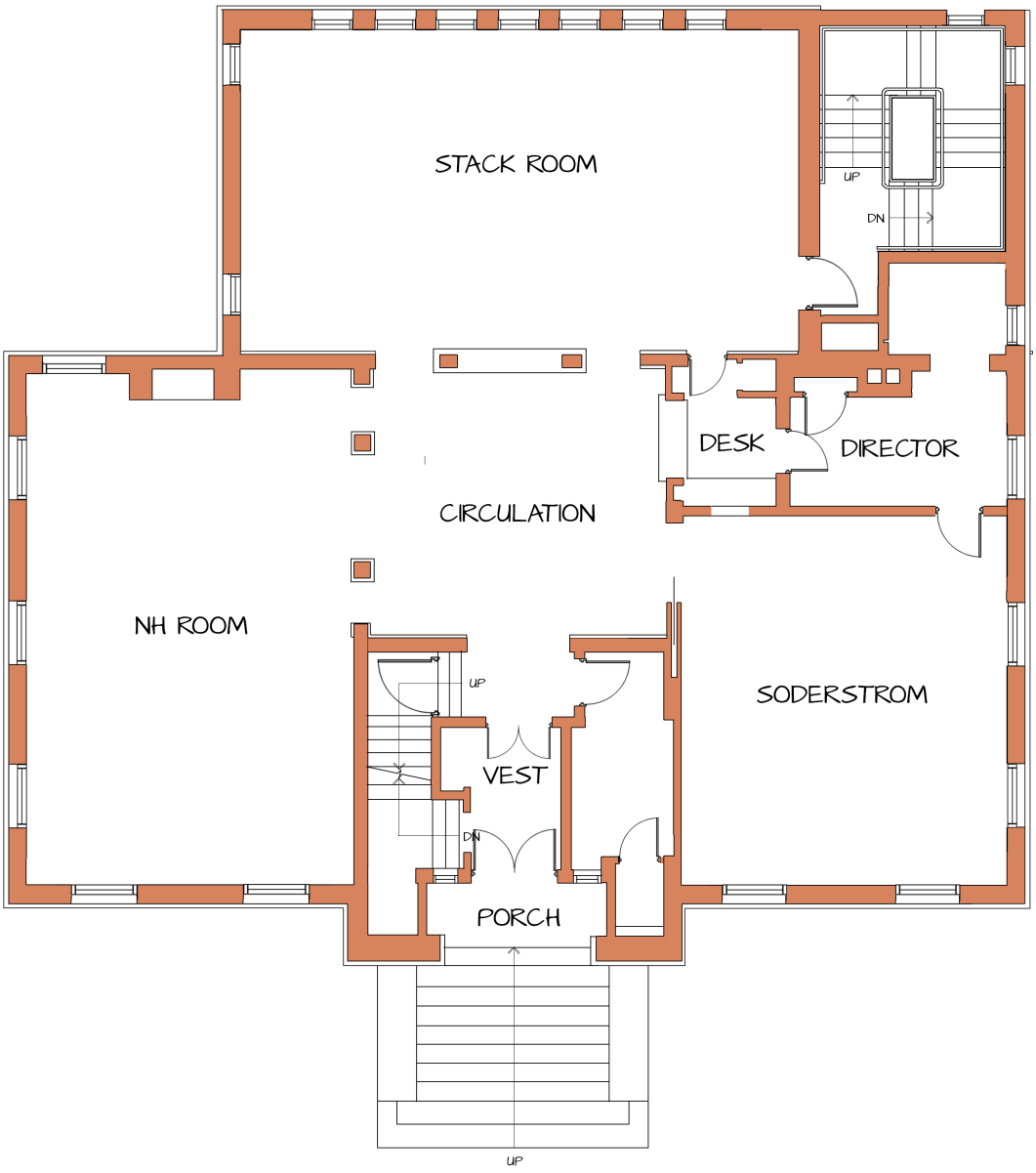


TUCKER FREE LIBRARY

Lower Level ◆ December 2018

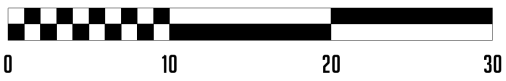


Existing Building Plans

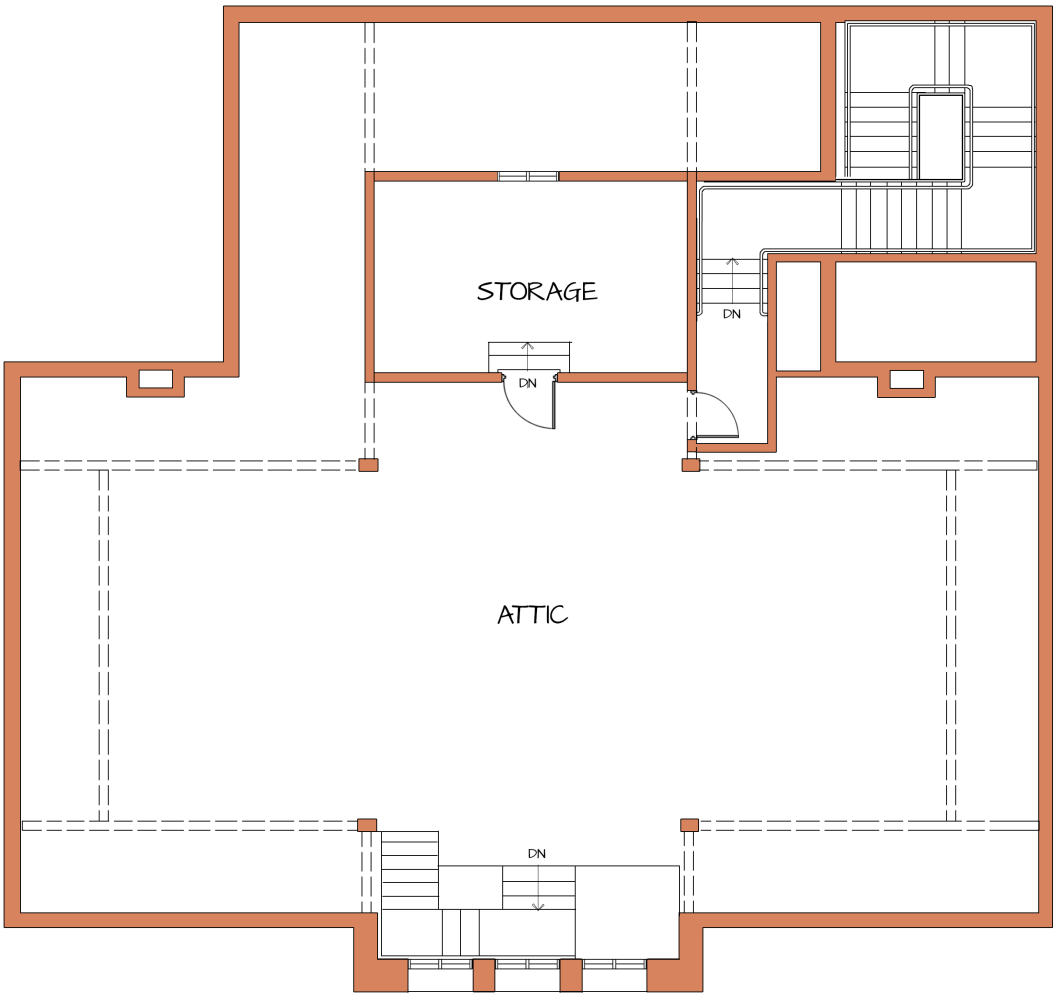


TUCKER FREE LIBRARY

Main Level ◆ December 2018



Existing Building Plans

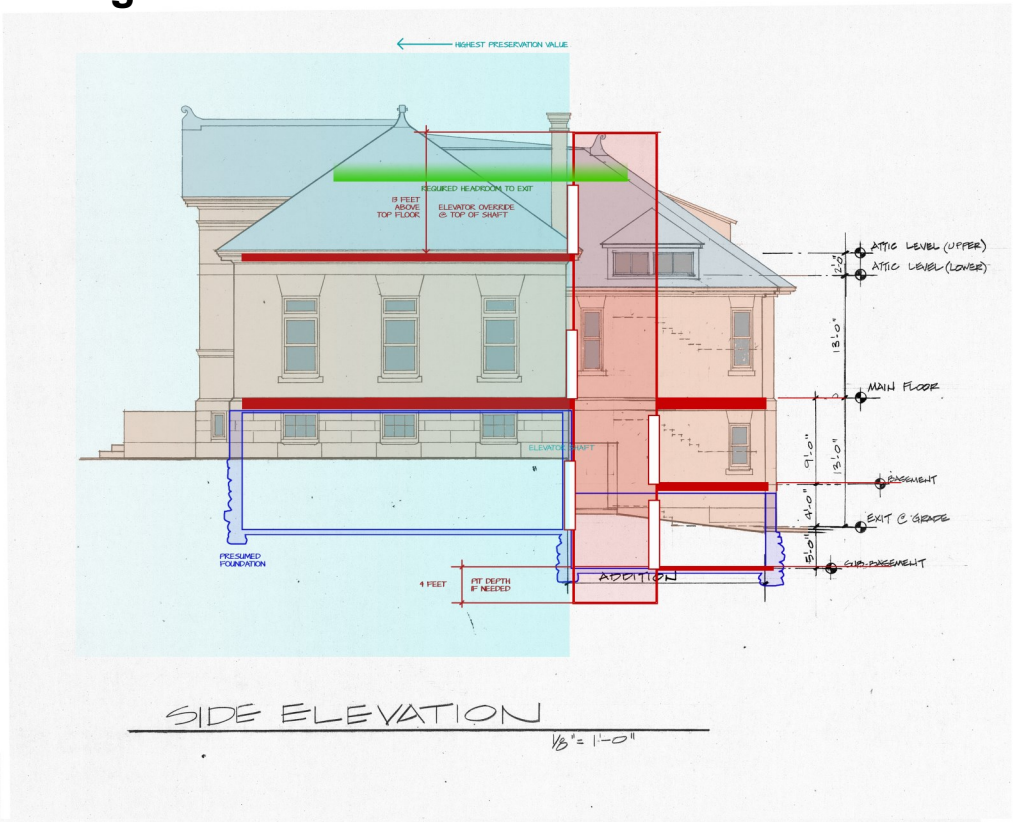


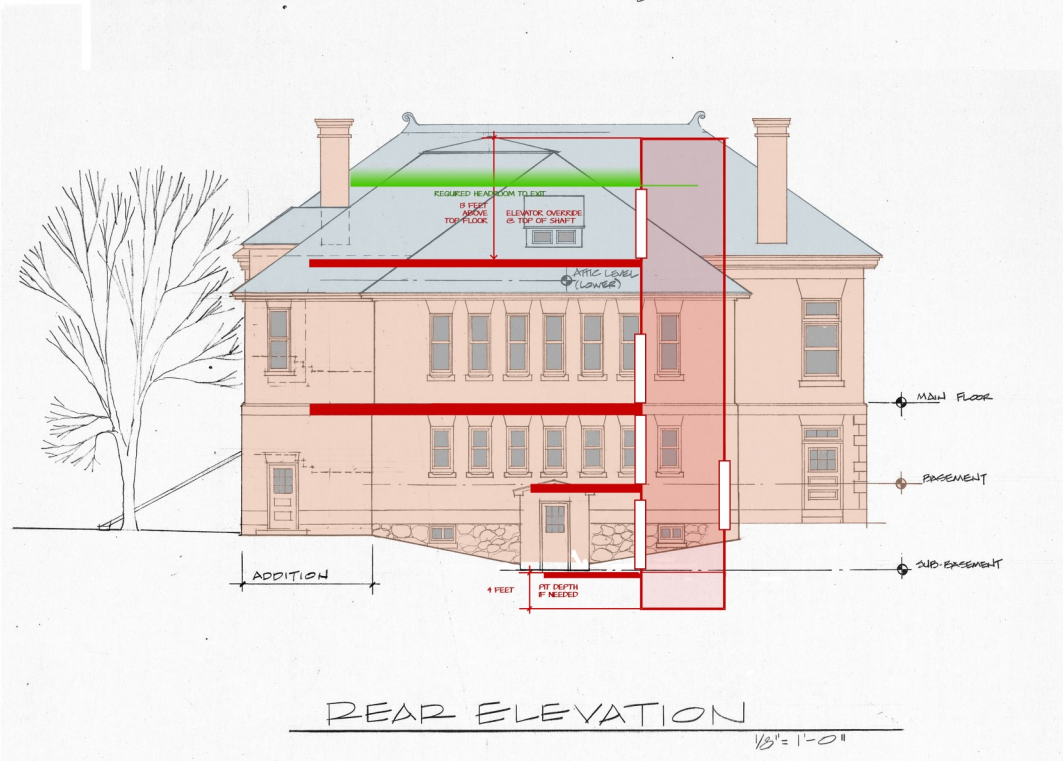
TUCKER FREE LIBRARY

Attic Level ◆ December 2018

0 10 20 30

Existing Building Floor Elevations



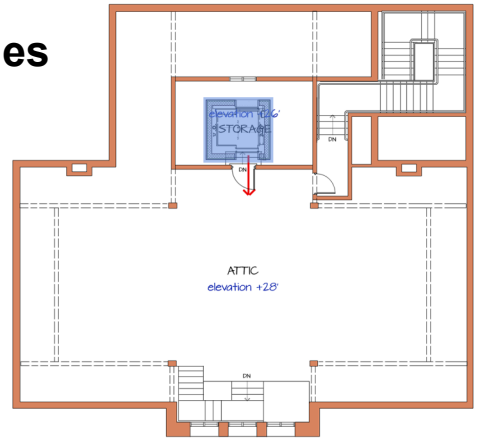


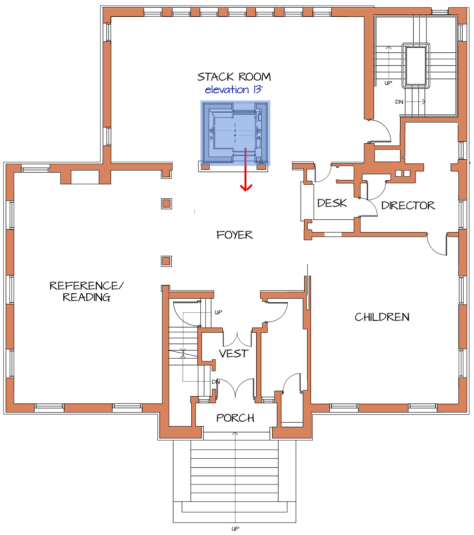
TUCKER FREE LIBRARY

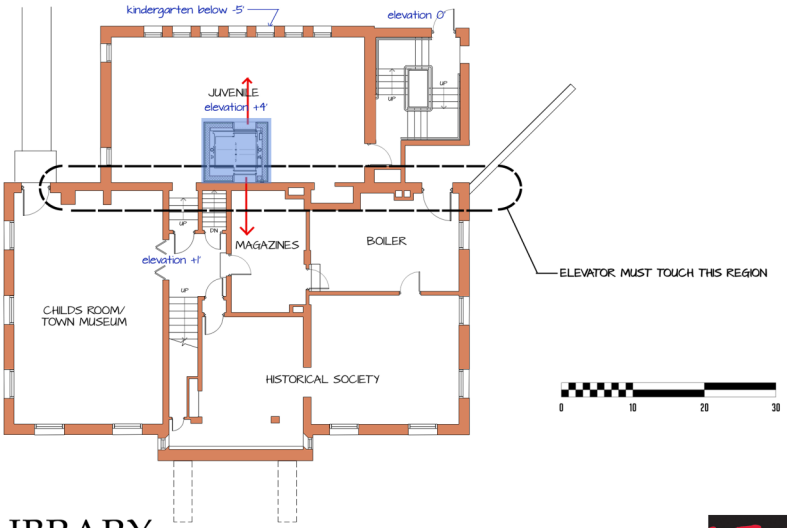
Elevator Location Options ◆ December 2018

Conceptual Strategies

Option 1:
New elevator placed inside building to reduce the need for new addition.







1

TUCKER FREE LIBRARY

Elevator Location Options ◆ December 2018

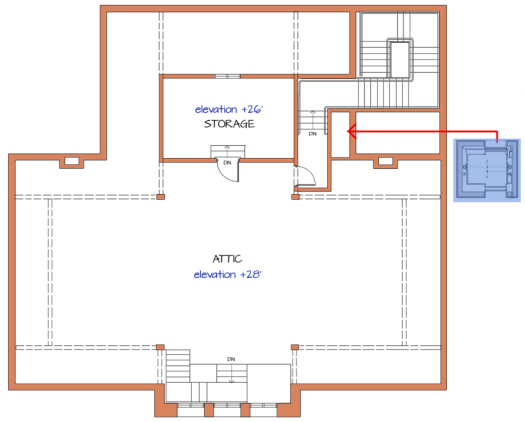
Conceptual Strategies cont.

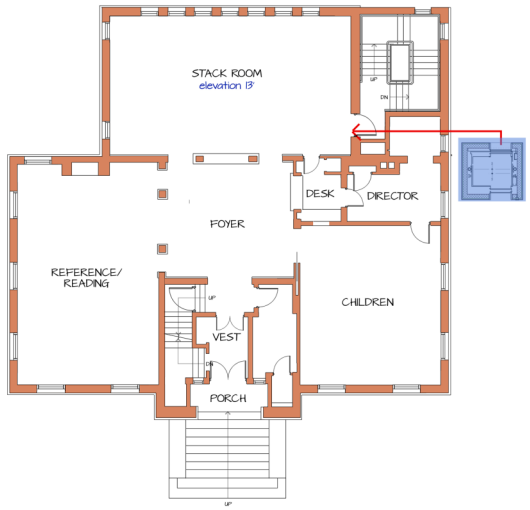
Option 2:
New elevator placed outside building on East side of building.

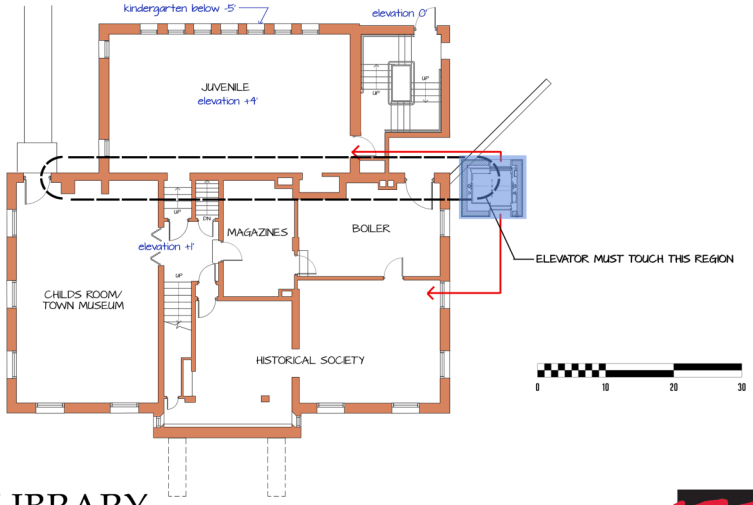
2
TUCKER FREE LIBRARY
Elevator Location Options ◆ December 2018

Conceptual Strategies cont.

Option 3:
New elevator placed outside building on West side of building.



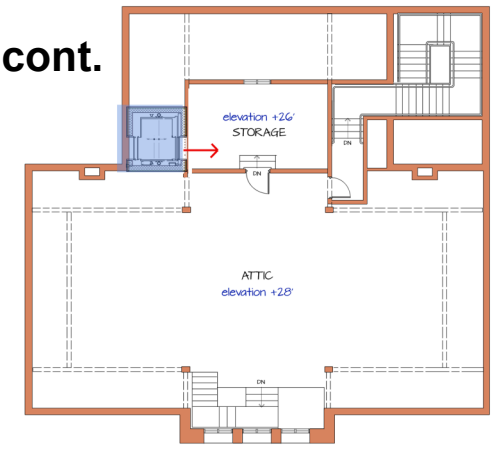


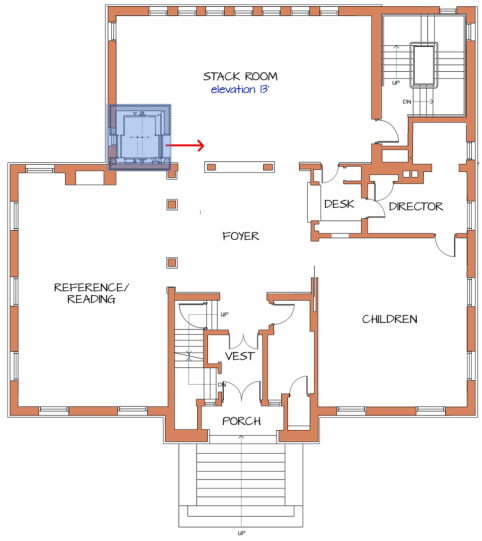


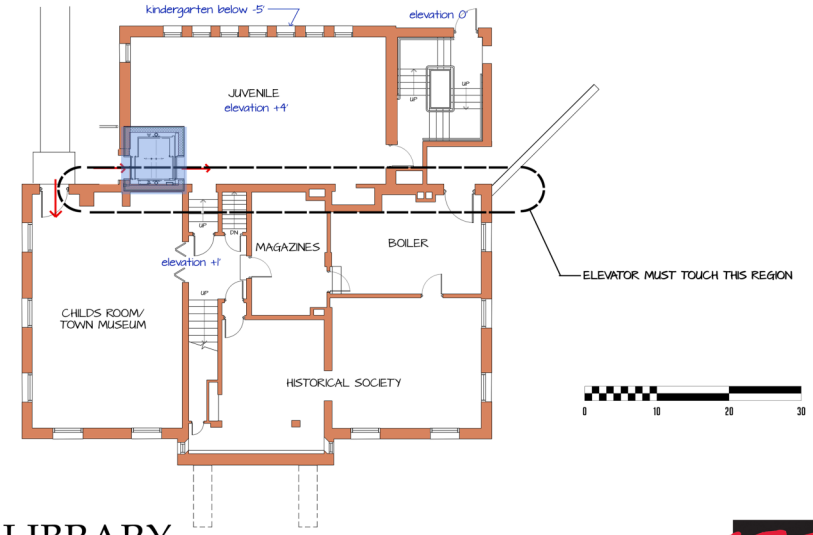
3
TUCKER FREE LIBRARY
Elevator Location Options ◆ December 2018

Conceptual Strategies cont.

Option 4:
New elevator placed inside building on East side of building.







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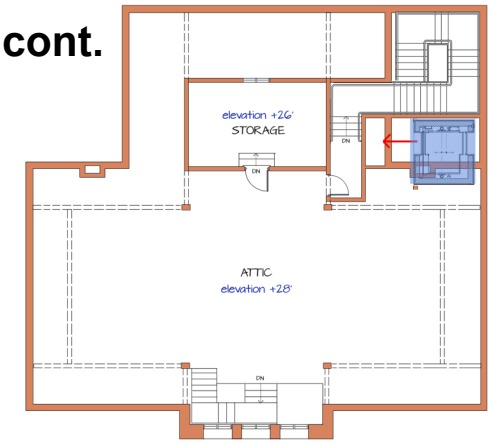
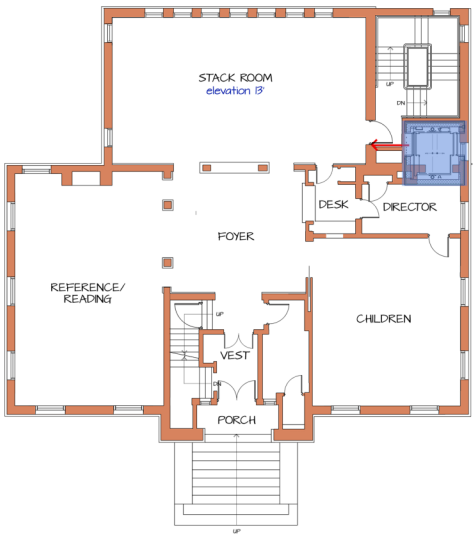
TUCKER FREE LIBRARY

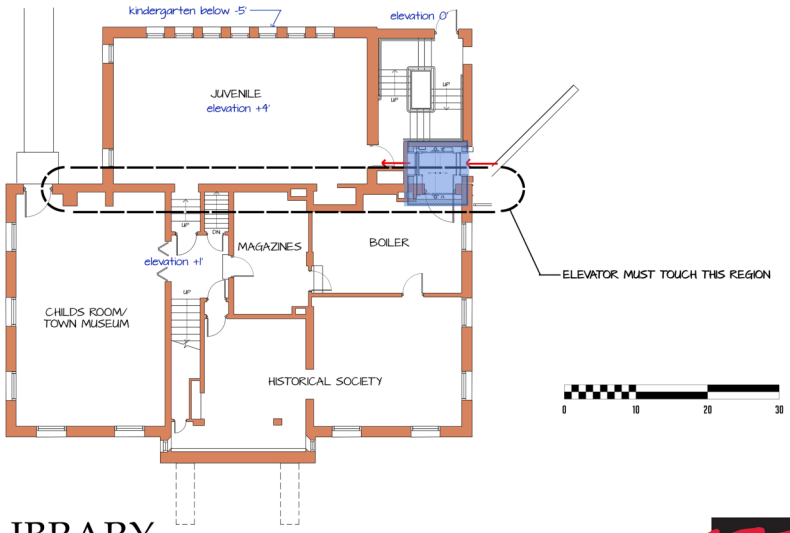
Elevator Location Options ◆ December 2018

Conceptual Strategies cont.

Option 5:
New elevator placed in side building on West side of building adjacent to stair.

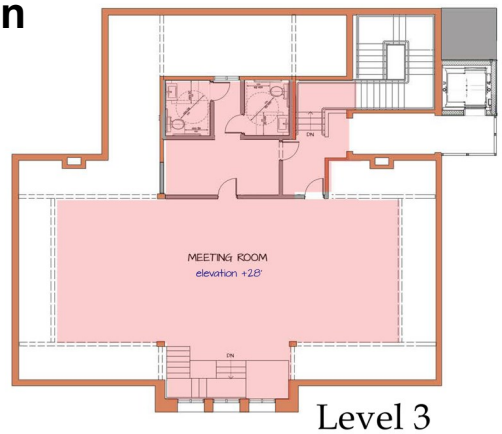


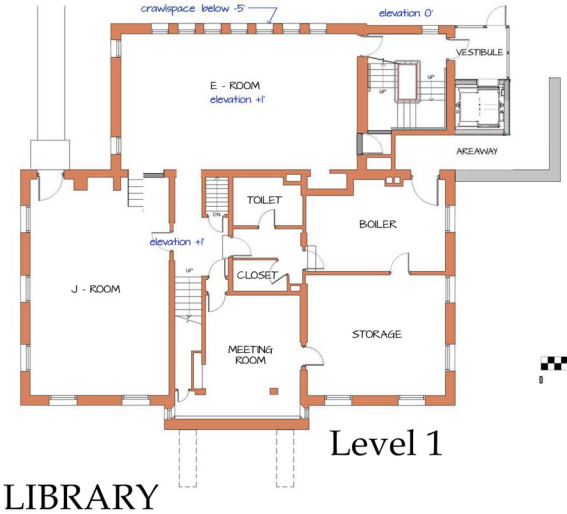




5
TUCKER FREE LIBRARY
Elevator Location Options ◆ December 2018

Preferred Option





Preferred Option:
New elevator placed outside building on West side of building.

Pro's:

1. Retains existing egress stair
2. Maintains current rear entry location.
3. Will connect to each floor.
4. Minimal impact of library operations.
5. Better connections with school.

Con's:

1. Potentially more costly.
2. Will require exterior walkway reconfiguration.

Board of Trustees asked to see updated option including ADA bathrooms.

TUCKER FREE LIBRARY
Elevator Location Options ◆ December 2018
Right-handed Approach

Massing Models

Existing Rear Isometric View

Preferred Option:
New elevator placed outside building on West side of building.

This massing model is not a final design

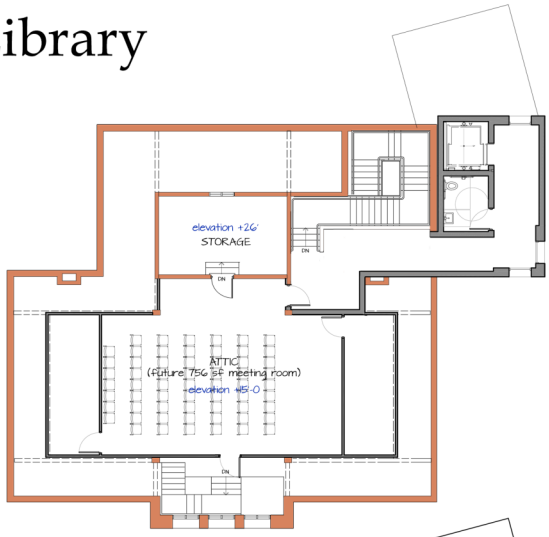
Current Plans

Tucker Free Library

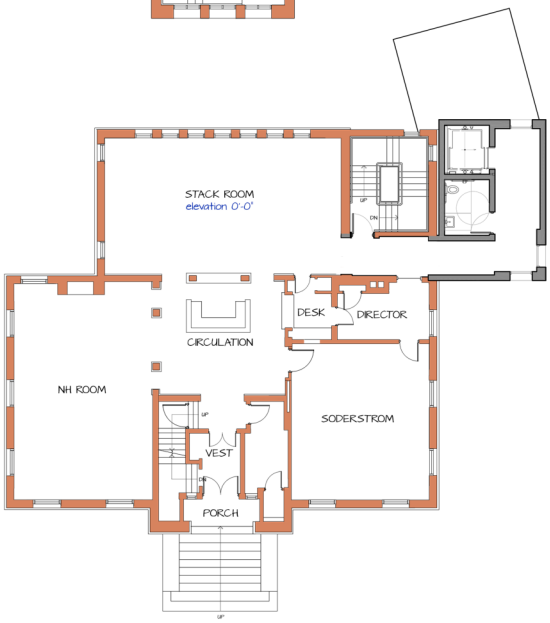
Concept Plans

February 28, 2019

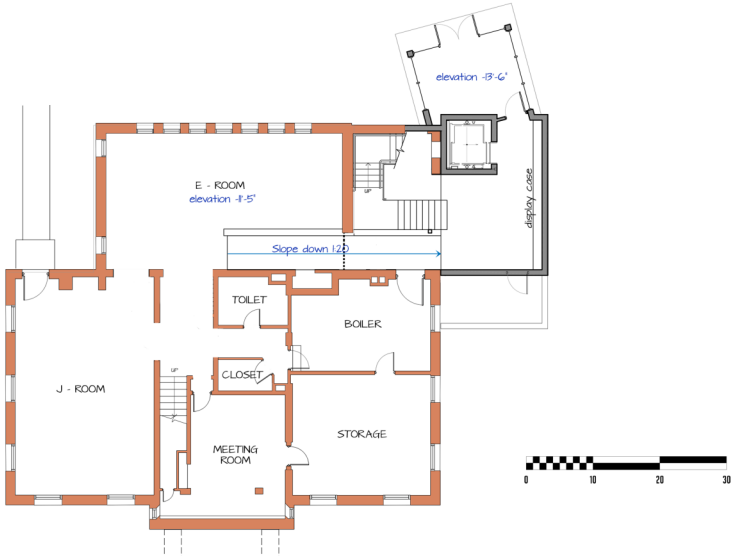
Level 3



Level 2



Level 1



Recommendations & Next Steps

- It has been recommended that the Board of Trustees should consider releasing an RFQ for a Construction Manager (CM) for pre-construction services. Engaging a qualified CM will allow the team to more accurately budget the anticipated costs for the proposed work.

- Additional public listening sessions should be scheduled to further discuss the needs, current issues and how the proposed addition would resolve them.

- Continuing to promote, educate and "market" the project to the community over the next year is essential to continue the positive momentum.

- A meeting with the Azalea Park committee should be set-up so that both parties are aware of the efforts of each and how the goals may be aligned.

- A building committee made up of a mix of individuals:
    - Active and motivated Local residents;
    - Construction professionals;
    - An accountant;
    - A writer;
    - Staff.

- This building committee could present the merits of the project from the public's perspective.

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January 20, 2020

Site Visit Notes

Re: **Tucker Free Library**
Construction Documents
Henniker, New Hampshire
Site Visit Notes of November 19, 2019
WVA Project No. 18189 - REVISED

During our 11/19/19 site visit to the Tucker Free Public Library in Henniker, NH we observed the following:

Sprinkler

- There is no existing sprinkler service or coverage at the building.

Plumbing

- Domestic water is provided by a 1" copper water service located in a lower level storage room.
- Domestic hot water is provided by a 12 gallon, 1,500 watt Bradford White electric water heater located in the lower level mechanical room. There does not appear to be any hot water recirculation piping or ASSE 1017 anti-scald mixing valve.
- Sanitary waste piping is a mix of hub and spigot cast iron and PVC. The service exit appears to be out the front and back of building. The front service exit may be the original with the back service exit created when the lower level was renovated.
- The lower level plumbing fixtures appear to have been recently replaced and in good condition. These fixtures are suitable for reuse.
- The lower level meeting room sink waste is pumped to the sanitary sewer. The sink and faucet are not ADA compliant. The fixtures appear in fair condition and may be reused or replaced at Owner's discretion.

Mechanical

- The building is served by multiple mechanical systems that have been modified, renovated or replaced during the building's life.

- Hot water heat is provided by a Buderus G115 oil fired hot water boiler installed in 2017. There are six (6) heating zones piped to fin tube radiation or cabinet unit heaters throughout the building. The zones are labeled as:

  - File Room/Storage
  - Kids' Reading Room/E-Room
  - Kindergarten/Lower Level
  - Kiosk/Main Floor Circulation Desk
  - Youth Area/J-Room
  - Meeting Room/Elevator Hall

- Heating and air conditioning are provided by a floor mounted oil fired furnace located in the lower level mechanical room. Based upon review of the visible ductwork the furnace (AHU-1) appears to serve the main floor with floor mounted registers. AHU-1 appears to have a 190,000 BTU/HR heating capacity at 76% efficiency and a five (5) ton cooling capacity. AHU-1 appears to have been installed in 2005. The air conditioning condenser has been recently replaced.

- The oil boiler and oil furnace are vented through single wall vent into the existing masonry chimney.

- Oil is stored in a 275 gallon vertical tank located in the lower level mechanical room with fill and vent connections at the building exterior.

- Additional air conditioning is provided by a horizontal ducted air handler (AHU-2) located in lower level mechanical room. Based upon review of visible ductwork AHU-2 appears to serve the lower level. Installation date and capacity is unknown. AHU-2 ductwork has been modified and we understand is non-operational.

- Heating for the attic storage room is provided by four (4) sticks of electric radiation. Remaining attic space is un-conditioned.

- There is no mechanical ventilation provided.

Electrical

- Electric service comes overhead from a utility pole across Western Avenue. The service is 200 amp, 240/120 volt, single phase. The utility meter is located on the building exterior outside the lower level mechanical room.

- Telephone and data service come overhead from the same utility pole across Western Avenue.

- 200 amp main distribution panel and 100 sub-panel are located near the exterior door in the lower level mechanical room. Circuit directory indicates a 60 amp sub-panel at the kindergarten room, we did not observe this panel. 30 amp sub-panel located in the attic serving the attic. Panels are older Cutler-Hammer.

- Wiring throughout the building appears to be NM type. Receptacles are older with some surface mounted and some recessed.

- Lighting is older style fluorescent with a mix of pendant, surface mounted or recessed style depending upon installation location. Emergency lighting is limited to a wall mounted battery unit with integral heads at the basement. Emergency lighting coverage does not meet current code requirements. Battery units are old and may not be reliable. Exterior lighting appears to be old HID type; and there does not appear to be emergency back-up.

- As of 12/18/19 the existing fluorescent light bulbs were replaced with new LED.

- Fire alarm panel is a Silent Knight type located in the lower level mechanical room with a MirCom 1000 remote annunciator panel located at the main building entry. Fire alarm system appears to be an older hard wired zoned-type with smoke detector and pull station initiation devices. Strobe and horn/strobe coverages do not appear to meet current code.

- Security front end controller is located in the lower level mechanical room near the main electrical panel. The emergency battery was replaced in 2009.

Recommendations

We understand the building renovations include a new addition with public restrooms and three stop elevator. We understand the MEP scope to be the following:

Basement

- This part of the building will be converted from its current use to a crawlspace, no MEP work anticipated.

- Provide complete NFPA 13 dry sprinkler coverage at the un-conditioned crawlspace.

Lower Level

- Architectural renovations include lowering the E-Room floor level to improve building circulation. This will impact the existing E-Room MEP services.
- Provide complete NFPA 13 wet coverage at the building conditioned areas. Given the limited space above lower level ACT lay-in ceilings and historical tin ceilings we recommend sprinkler piping be installed exposed around the room perimeters with exposed sidewall sprinkler head coverage.
- Provide complete NFPA 13 dry head coverage at building porches and overhangs.
- Provide plumbing services for new elevator hoistway sump pump.
- Existing bathroom fixtures to remain, no MEP work.
- Remove existing Buderus oil boiler, existing distribution piping and zone pumps to remain. New boiler to be Buderus oil fired boiler with +/- 2.2 gph firing rate. Provide new boiler pump, primary piping, oil piping, flue and housekeeping pad. Connect new flue to existing masonry chimney. Provide new zone pumps, piping and controls as required to support new hot water heating devices.
- Existing fin tube radiation to remain. E-Room radiation to be lowered to accommodate new finished floor height.
- Provide addition vestibule with ceiling mounted hot water cabinet unit heater.
- Provide addition Lobby with panel style hot water radiators at each level.
- Remove AHU-2, existing AHU-2 ductwork to evaluated and reused if possible. New AHU-2 to have a 4.0 ton DX cooling coil with split condenser and a +/- 110,000 BTU/HR hot water heating coil. AHU-2 supply fan to be direct drive with ECM motor. 350 CFM ventilation air to be ducted to AHU-2 return air plenum from new stormproof outside air louver with motorized damper. Provide return air duct CO_2 sensor.
- Existing bathroom exhaust to remain.
- Provide new 400 amp, 208/120 volt, underground three-phase power service to accommodate the new elevator and increased air conditioning load. Provide replacement panels for electrical sub-panels.
- Remove existing fluorescent and provide new LED lights. Provide code required daylight controls and motion sensors.
- Existing power, data and telephone outlets to remain. E-Room outlets to be lowered to accommodate new finished floor height.
- Provide power, fire alarm, and communications equipment and connections for new elevator.

Main Level

- Provide complete NFPA 13 wet coverage at the building conditioned areas. Given the limited space above lower level ACT lay-in ceilings and historical tin ceilings we recommend sprinkler piping be installed exposed around the room perimeters with exposed sidewall sprinkler head coverage.
- Provide complete NFPA 13 dry head coverage at building porches and overhangs.
- Existing bathroom fixtures to remain, no MEP work.
- Provide plumbing services for the addition ADA bathroom.
- Existing heating and air conditioning to remain. Provide 350 CFM ventilation air duct to AHU-1 return air plenum from new stormproof outside air louver with motorized damper. Provide return air duct CO_2 sensor.
- Existing bathroom exhaust to remain.
- Existing lighting to remain.
- Existing power, data and telephone outlets to remain.

Attic Level

- Provide complete NFPA 13 wet coverage at the building conditioned areas. Piping and heads to be exposed or concealed depending upon renovation construction.
- Provide complete NFPA 13 dry sprinkler coverage at the unconditioned attic.
- Provide plumbing services for the addition ADA bathroom.
- Provide new mechanical system for attic level heating, air conditioning and ventilation. New AHU-3 to have a 2.5 ton DX cooling coil with split condenser and a +/- 40,000 BTU/HR hot water heating coil. AHU-3 supply fan to be direct drive with ECM motor. 210 CFM ventilation air to be ducted to AHU-3 return air plenum form new stormproof outside air damper with motorized damper.
- Provide new bathroom exhaust.
- Provide new LED lighting. Provide code compliant switching, day lighting controls, and occupancy sensors.

- Provide new power, data, telephone and fire alarm coverage. Provide data and phone wiring as Category 6. Provide new patch panels to accommodate this wiring. Provide fire alarm initiation and notification equipment per code.

- Provide electrical connections to mechanical equipment.

END

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