

CHRISTOPHER P. WILLIAMS ARCHITECTS, PLLC

CPW ARCHITECTS

PO Box 703 • Meredith, NH 03253 • 603-279-6513 • www.cpwarchitects.com



Historic Building Conditions Assessment
Meredith Public Library
Meredith, New Hampshire

Norman E. Larson, AIA

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Purpose

The purpose of this report is to assist the Trustees of the Benjamin M. Smith Memorial Library in Meredith, New Hampshire to maintain and preserve the historic library and its addition to support the ongoing use of the facility to serve the public. The original building was constructed in 1900 with funding provided by Benjamin Smith in memory of his parents John and Mary Smith. An addition made in 1988 expanded the facility to provide significant additional program and staff space. In the 25 years since the expansion, the building has been moderately well maintained but is in need of minor repairs and safety improvements to bring the 113 year-old building more closely in-line with modern building codes.

In January and February of 2012, Norman E. Larson, AIA of Christopher P. Williams Architects (CPWA) in Meredith conducted visual inspections of the building's interior and exterior conditions and collected information on the building's condition. Additionally, the architect reviewed maintenance work currently under consideration by the Library Trustees and staff along with safety issues previously identified by state and local fire authorities. Other safety issues discovered will also be addressed. Historic Preservation issues will be discussed in reference to the original library and its remaining historical fabric only. When this report refers to the Benjamin Smith Memorial Library, it means the classic original building apart from the later additions. Maintenance issues referring to newer parts of the building will identify the areas as being part of the Addition.

History and Development of the Benjamin M. Smith Memorial Library

The original Benjamin M. Smith Memorial Library is a brick library building standing on a sloped site on the Main Street of the Meredith Village. Originally 1½ stories high with a T shaped plan including a main block and a two story rear wing, the Library was expanded in two phases with a three story addition to the north in the 1980's designed by CPWA. The hip roofed main block of the Smith Memorial Library is set parallel to the street with a gable-roofed entry pavilion at the front and a substantial hip-roofed wing to the rear which once housed the stacks on the main floor but now serves as administrative space. This addition is rotated westward to maintain the green space at the curving street and serves to diminish the impact of the addition on the historic building. Also at the time of the renovation, a portion of the original attic was converted for use as a Children's Room.

The following character defining features of the historic Benjamin M. Smith Memorial Library should be preserved and protected in the course of any future work:

Highly Symmetrical Building Form

The one and a half story main block of the Library is oriented parallel with the Meredith Main Street. Behind it, a two story wing of the same height forms the leg of the original T shaped plan. The building is constructed of brick and stone masonry and topped with a hipped roof. The main block is highly ornamented with high windows with decorative granite sills, a high granite foundation, corner pilasters, and a decorative entablature. The

building is highly symmetrical in plan with the building's original main entry, its vestibule, the lobby with circulation desk and the open spaces of the west wing organized along a central axis. Airy reading rooms stand open to either side of the lobby. The rear wing is less ornamented than the main block. It has a low stone foundation, less decorative granite sills and lintels, and a decorative entablature comprised entirely of corbelled brick. The roof is of black slate with copper eaves which originally served as gutters but have now been closed.

Green Space Park

The Benjamin M. Smith Memorial Library sits above Main Street in the village center of Meredith, New Hampshire. The front yard is a grassed park-like space with ornamental trees and shrubs surrounding a number of community and library monuments. The placement and orientation of the library addition and the connected lawn of the church building neighboring to the northwest extend this park-like open public space all the way to the street corner of High Street across from the post office. The civic space includes a War memorial for Meredith Veterans and another for the 12th NH Civil War Regiment which stand in the lawn in front of the expanded library. A pair of benches honoring members of the Library community sits with their backs to the foundation shrubbery north of the historic front door. A time capsule is buried near a flagpole standing in a landscaped area just north of the stepped walkway to the historic main entry. The stone curb has the same rock-face finish with dressed margins as the building foundation and likely dates from the original construction of the building. The steps and walkway to the front door are newer.

Gabled Entry Pavilion

In the center of the street side façade of the Benjamin M. Smith Memorial Library stands a two story, gabled entry pavilion. The pavilion projects just far enough in front of the main block to break the plane of the main roof eave. Its own eave line is the highest on the building and is ornamented with the same decorative entablature as on the main block. The entablature continues unbroken beneath the pediment on the street face and is capped with a mortar bed. The raking cornices of the roof are adorned with a similar but simpler ornamental brick than that used in the building entablature. Within the pediment is a round wooden clock face with roman letters. Below the entablature of the pediment, two low ten-lite windows provide light to the Children's Room which was originally the attic of the Library.

Granite Dressed Entryway

At the base of the Entry Pavilion, a granite six-step stoop provides access to the original main door of the library. This door is still in use, but primary access is now made from the rear of the building into the addition. The entryway is set within a granite dressed semicircular arch. Block raised lettering on the voussier blocks spell out "MEMORIAL LIBRARY" and an open book carved from granite ornaments the keystone. Above the arch, the wall is additionally ornamented with three granite plaques with raised letters. The largest is rectangular in shape and set flush with the brick masonry just underneath the entablature. This identifies the donor of the library "BENJAMIN M SMITH" for whom the building is named. The two other plaques are circular in shape and each is placed in one of the spandrels of the entry arch within a circular frame of moulded bricks. On the left in

large block letters one reads “A.D.” and, on the right, the other identifies the year of the building’s dedication: “1900”.

Stone Foundations

The high stone foundation of the main block of the Benjamin M. Smith Memorial Library is of rock faced granite blocks with dressed margins. The stone face is a few inches proud of the brick face and returns to the building with a sloped water table at the floorline. The large blocks are set with narrow beaded mortar joints. At the building corners, similar rock faced stones with dressed margins serve as bases for the brick corner pilasters above. At each side of the entry pavilion, shaped stones form the curved-top sidewalls and end blocks of the granite entry stairs. The foundation on the west side of the main block and on all sides of the rear wing is of low rock-faced granite without the dressed margins seen on the stones of the main block.

Brick Masonry Exterior with Corner Pilasters

Most of the exterior walls of the Benjamin M. Smith Memorial Library are of fine face brick laid in a stretcher bond. This pattern is unusual for a multi-wythed building of this time period as it requires mechanical fasteners to secure this finish wythe to the interior withes. The building is marked by corner pilasters at the building’s front corners and at the front corners of the entry pavilion. These pilasters have decorative capitols with brick mouldings including cornice and egg and dart mouldings. The brick on the rear side of the west wing is common brick laid in a Flemish bond pattern. It is likely that the original designers of this library anticipated future additions to increase the size of the stack space. This was a common planning feature of libraries built in this time period.

Decorative Brick Entablature

The capitals of the corner pilaster visually support a deep entablature with an architrave of corbelled and molded brick; a frieze of brick dentils, egg and dart molding, and modillions; and a cornice of fluted and corbelled brick. The entablature at the rear of the main block lacks most of the architrave to allow for the placement of a window at the second floor of this area. On the three facades of the rear wing, a simpler entablature made of corbled brick without mouldings and matching the shorter overall height of the cut-off entablature at the back of the main block. A novelty of this library is that this extensive detail of the entablature typically some twenty eight feet above the grade is observable up-close as the addition to the original Benjamin M. Smith Memorial Library preserves a portion of the this work at eye level near to the second floor entrance to the Children’s Room.

Windows with Granite Window Sills and Lintels

The windows of the front block have rock faced granite sills and lintels with dressed margins. The lintels are composed of three pieces and have a common horizontal lower edge. A center keystone is taller than the two side pieces. Each of these has two inclined edges: one that meets the keystone and the other at the outside end of the lintels. The reading rooms each originally had two tall one over one double-hung units with a transom window above at the front library façade and three similar windows at the side façade. The addition to the north required the removal of one of the three windows in the north façade. The entry pavilion has two low ten-lite awning windows under the entablature which each have this same type of granite sills and lintels as window elsewhere on the front of the building. Five of the six original basement window surrounds in the main block of the

Benjamin M. Smith Memorial Library remain. The two at the front have five-lite windows while those at the north and south facades had three lites each. Only one of these three-lite windows partially remains. Each window is set between granite foundation blocks and has a square-edged rock-faced granite lintel with dressed margins sitting above. Most of the windows have been partially or completely removed to allow for the installation of mechanical system piping and conduit through the walls.

The windows at the west side of the main block and throughout the west wing have granite sills and lintels which are all rock-faced, but which lack the dressed margins and decorative keystones typical of the windows on the other sides of the main block. Main floor windows are one-over-one double hung units with 12 lite casement units at the second level. Basement windows are three lite units.

Exterior Entry Doors

The primary entry to the library is through a new door in the addition which faces the rear parking area. The historic entry faces Main Street and sits in the granite dressed arch at the base of the entry pavilion. The wooden entry door of new construction has six raised painted wood panels and sits beneath a half round transom window in the original painted wooden door frame. On each side of the door is a wooden panel with a half sidelight above it and around the transom, four windows fill the tympanum. All of the frames are of painted wood. The door is fronted by a wooden storm door with upper glass panel and three flat wooden panels perhaps reflective of the original five panel wood door. The rear door at the main level landing of the original back stair is of six panel construction in a wood frame with a two lite transom window above.

Vestibule and Lobby

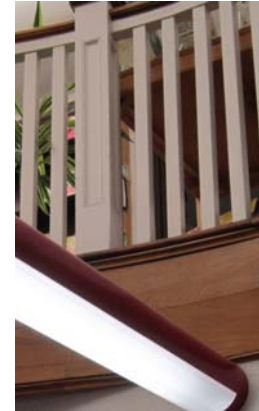
The lobby of the Benjamin M. Smith Memorial Library lies at the central axis of the building and is notable for the colonnade which separates the space from the reading rooms to the north and south. On each side of the lobby a Palladian styled cased opening with moulded trim is infilled with two paneled half-walls each supporting a fluted wooden pilaster at the wall end and a wooden Ionic column supporting the central open archway. Both the vestibule and lobby are finished in with plaster walls with baseboards and are separated by a pair of flat panel doors with a transom above. The ceiling of the vestibule is lower than the coved ceiling of the lobby, which is also adorned with a multi-pane skylight. This skylight at one time opened into the attic, but is now integrated into a glass topped table located in the Children's Room above.

Reading Rooms

The Reading Rooms on either side of the lobby are similarly appointed with built-in bookcases each within a cased alcove which backs up to the entry vestibule. At the west walls, a brick fireplace lies at the center of the wall with built-ins at either side in the north reading room. Each fireplace has a tile hearth on which sit fluted colonettes supporting a wooden mantle. The southern reading room has been filled with hard-wired study carrels for computer users. The paneling and baseboard on the infill walls on the lobby side of each reading room wrap the remaining walls of the space as a wainscot.

Circulation Lobby and Well

Beyond the Main Lobby of the Benjamin M. Smith Memorial Library from the entry vestibule is the circulation lobby, substantially modified during the previous addition and renovation. The original librarian's office was to the right and the fireplace that served this space may be seen in the alcove along the corridor to the new addition. The circulation desk has been replaced with a new desk closing off public access to the original stack space, now used as administrative space. Above, a semi-circular well opens to the Young Adult's Room above. A balustrade of square balusters, paneled newels with finials, and a decorative railing from the original construction is visible above.



Statement of Significance from the National Register of Historic Places:

“The Benjamin M. Smith Memorial Library is one of the earliest and still one of the best library buildings in the Lakes Region. It is a fine, well preserved example of the Classical style so popular for libraries and other public buildings at the beginning of the 20th century. A basic principle of Classical design can be seen in the building's symmetry of plan and facade, particularly in the emphasis placed on the central axis by the entry pavilion and the central lobby. The library's ornament, as well, was largely inspired by the Classical styles. The corner pilasters of the main block and the entry pavilion, the deep, rich entablature, the pediment that crowns the pavilion, the semi-circular arched entry, the Palladian motifs that link the three main rooms, are all typical of Classical buildings. However, these Classical quotations were used with a good deal of freedom. The pilasters and entablature do not correspond to any recognized order. And the design does incorporate elements, such as the pavilion's second story windows, that are more typical of Victorian America than of Classical or Neo-Classical Europe. This free approach to design gives the building a refreshing vitality.”

“The Library was given to the Town of Meredith by Benjamin M. Smith as a memorial to his parents. In the fall of 1899, Smith offered to construct a building for the Meredith Public Library (established in March of 1882) provided the Town purchase and prepare the Meredith House property next to the Baptist Church on Main Street in the village. By a vote of 201 to 1, the citizens of Meredith accepted the offer at the annual Town Meeting in March of 1900. By the end of the month, the Town had acquired the property. In April, the buildings on the lot were sold at auction and removed by their new owners. By June 15, work had begun on the new library, designed by architect George Swan and erected by builder John H. Smith. The roof was on by late September and the exterior completed in October. The decorators finished their work on the interior in February, 1901. But work on the lot, including grading and curbing, was still underway in May and early June. The

completed building was dedicated on June 19, 1901, with much ceremony and many speeches. The Meredith Public Library soon moved from its rented quarters to its new home. And the building was opened to the public in late July. The building has been in continuous use as a public library ever since, but has seen relatively few architectural changes. Those few changes have been rather minor carpeting of the floors in the late 1960's, the replacement of a window by a fan vent and the construction of a porch over the back steps in the early 1970's, as -well as the usual updating of the utilities, such as the modern lighting fixtures.” - David Ruell, 1984

Existing Conditions Assessment and Recommendations:

Slate Roofing

The slate roofing on the Benjamin M. Smith Memorial Library was altered during the construction of the 1988 addition to allow for the installation of ridge and hip vents. The existing slate is generally in fair condition with the exception of a few areas visible from the ground. The greatest area of localized damage appears to have occurred near the two chimney bases, either from ice issues or from foot traffic on the roof occurring during inspections and/or in maintenance of the chimneys. After chimney masonry repair work discussed below is complete, damaged slates should be removed and the area repaired with new slate to match the existing. Considering the apparent age of the slates, the library should have the slate roofer conduct an inspection of the entire roof every year or two so that missing or damaged slates can be replaced before water damage can occur within the building envelope. Areas of concern include the roofing near the skylights in the Children’s Room, along the hip vents at the south side of the building and at the main roof below the drip-line of the entry pavilion roof eave.



The roofing of the addition is asphaltic shingle type which is now approximately 25 years old. This shingle was likely produced with an intended lifespan of 25 or 30 years. It shows signs of random popping or chipping of the tabs, most noticeably at the area over the parking lot entrance to the building. The roofer repairing the slate roof will be able to look more closely at the roofing’s aggregate retention and pliability and better predict how long the existing roof will last. Localized failure of this roofing may or may not be a contributing factor to water staining in the ceiling of the Children’s Librarian’s office.

Brick and Stone Masonry

It is not uncommon for a masonry structure of the age of the Benjamin M. Smith Memorial Library to need maintenance and repairs as moisture moving through the system causes

issues with the mortar. Re-pointing the existing masonry on the south side of the building and on the chimneys on the west side of the roof have previously been identified as maintenance needs of the library. Work on the historic exterior of the library should be done carefully to maintain the health of the building. Given the date of the c. 1900 construction of this library, care should be taken to match the composition of the mortar used for re-pointing as well as the installation of the new materials. Most of the damage to the existing mortar comes about as a result of water entering the building system at the granite window sills and leaching back out of the wall through the masonry below. The color of the new mortar should also be matched to the existing as part of the analysis of the existing materials.



The bricks used on the library should be protected during re-pointing by limiting what types of power tools can be used for the removal of mortar, which should be removed to a uniform depth of about 1" deep. New mortar should be struck to match the convex profile of the original work and care taken to insure that the joints are not overfilled in relation to the characteristic rounding of the existing bricks edges. It is better to hold the mortar back than to overfill the joints. If the work is properly done, there is no need to re-point entire facades of the building (as is commonly done to mask the differing mortar work of individual projects).

Much of the south wall will need to be re-pointed. Both chimneys should be re-pointed rather than removed or replaced. Contractors who cannot match the mortar profile of the original masonry should not be considered for re-pointing work.

At the building interior, there is also some masonry repair and re-pointing work to do. At the basement level, water movement to the interior has weakened and spalled mortar work under windows (or the places windows used to be) in the south wall and also generally at the north and south walls of the area under the staff work room. The room previously used for costumes may also benefit from some attention, especially at the north east corner.



In the public spaces of the library, all of the masonry walls have been covered over with plaster or drywall finishes with the exception of the inside portion of the street face of the entry pavilion in the Children's Room. This masonry near to the clock was not intended originally to be exposed as the space was once attic and little effort was originally expended to cleanly strike the joints of the original masonry. The mortar in place has deteriorated along two horizontal bands which suggest that the cause of the deterioration may be rooted in the mortar topped frieze ornamenting the other side of the wall. Given the character

of the wall, it would be more authentic to address only the localized failures than to re-point the entire wall. Since this face of the wall was not intended to be seen when the wall is built, there is no compelling reason not to re-point the whole wall apart from the cost of such work.

Masonry Cleaning

The brick masonry on the Benjamin M. Smith Memorial Library requires two different types of cleaning at the building's exterior masonry. Most visible from the street is the efflorescence of salts from the brick mortar in areas underneath the sills on the front (east) and south facades of the building. This type of staining also occurs in several places near the building eaves and is caused by water getting into the masonry wall system and leeching the salts from the mortar as the water makes its way out to the exterior surface. Once out, the water evaporates from the wall surface, leaving the salts behind. The common occurrence of this type of staining at the eaves suggests an inspection and minor repair of the drip flashing is warranted. The more readily noticed efflorescence under the window sills is common and related to the failure of the joint between the granite sill and the brick. Sealing between these dissimilar materials is a common problem. The joints should be raked out and sealed with an appropriate caulk instead.



Surface efflorescence may be cleaned by a qualified mason once all potential entry points of moisture have been closed. This effort should be successful. Rust staining at the locations of the original downspouts (which were removed previously) may be targeted for removal as well; though this solution will likely not result in complete eradication of the old stains, their visual impact may be reduced. Similar iron and rust staining has occurred on the granite entry stonework and landscaping steps in areas where railings are set in the stone or large metal objects (urns?) previously adorned the stair sidewalls.

Foundation



The existing stone foundation of the main block of Benjamin M. Smith Memorial Library is in good condition. The stones of the three sides of the building which can be seen from the street are of rock-faced granite with dressed margins and sloping watertable. The joints are

tight and the stones show little sign of movement. The rear block foundation is also of stone but quite low to the ground and without the dressed margins. This area of the foundation



is subject to additional splash back, especially as both the south and west sides of the building are paved right up to the foundation. This rear part of the foundation should be re-pointed and the joint with the brick masonry above caulked. The extra water impacting the system here is the likely cause of the mortar damage at the building's interior behind the stone.

Settling of Building at Entry

Interior cracking of plaster above recessed bookcases at each side of entry, including what appears to be a shifting of plane in the north side wall, indicates uneven settlement under this part of building. A further indicator of this may be the top piece of the brick entablature at its terminus with the entry pavilion, which appears to have shifted outward approximately ¼". The granite steps at original entry have also shifted. Buildings move over time and such movement is not always of great concern, but the extent of the recent movement leads to a search for ways to reduce any future movement.



The building is at the top of a hill rising from the street, and the pedimented entry pavilion focuses rain water at each side of the entry. The stairs should be removed and re-set true and tight to the Library. The lowest step has fractured at the location of bottom rail post, likely as a result of freeze/thaw action of water leaking in around the post. Do not replace this step during restoration work. Instead, support fully both the step and the fractured piece and caulk the two pieces together at the top only. At the time the stairs are pulled away from the building, perimeter drains should be installed around the three sides of the entry pavilion. These should drain to daylight or preferably into the storm drains in the street.

Landscaping

Site stonework has been subject to ongoing frost and water movement which has resulted in raising or rotation of walkway stone steps and some shifting of the high stone curb between the grassed front lawn area and the sidewalk along the street frontage. While the rotation of the curb is noticeable, it is not dangerous as the shifting walkway stones might be. These stones create a trip hazard wherever they are raised more than ¼" above the walking surface along the path of travel. These should be reset, or the walkway re-built to match their height. The repair of the granite steps at the original main entry will require the complete



removal of the existing stairs and their reassembly. Additional work identified elsewhere may require excavation and trenching in order to upgrade the water service to the building from the street and to drain away water from the new perimeter drain. While the need for repairs to the site stonework might allow for delay, the other work required on the site and the economics of not tearing the site up twice points to doing all of the identified site work at the same time. The existing park-like setting should be maintained, but this might be a good time to re-build the entry steps and walk coming to the old front door

Protect Historic Windows

The single-glazed historic double-hung windows on the main level have reportedly been recently repaired and put in better working order with spring balances replacing the sash weights. The repairs did not apparently extend to refinishing window sills as water damage is present at windows at the sill of south facing windows in the Library Director's office and the Staff Work Space. The west window of the Work Space is also in need of some



repair following the removal of the original bookcase to its south. Damaged window sills should be sanded down by hand to bare wood and along with any new wood, finished with a clear urethane finish. If the library does not have any record of testing the interior clear finish (varnish) for lead, this should be accomplished before proceeding with any sanding of such finishes.



The exterior of the windows, with the possible exception of the first floor sashes themselves, are in need of scraping and painting, especially within the enclosure of the storm window units, though these areas are protected by the storm windows to some degree. The awning windows of the basement are in the worst shape of any windows exposed to the weather with bare



wood commonly visible through failing paint on the sills and some of the jambs. A comprehensive program to remove, inspect, and repair the existing storm windows should be undertaken at the time the windows are prepped and painted. All of the joints between the wood windows and the adjacent masonry should be raked out and caulked at the time of repainting.

Storm windows are installed at the exterior side of windows with the exception of the outswing casement units at the Young Adult's Room at the second floor of the rear wing. The exterior storm units are in fair condition and should be removed and reinstalled at the time of any exterior painting of the windows. The interior storms should be inspected and secured better in the Young Adult's Room.



One of the windows of the addition has had some water issues which are thought to be related to a roof window above which has now been removed. This window is in the main stair hall of the addition just outside the door to the Young Adult's Room. The sills and side trims of this window need to be repaired and repainted. Once the refinishing is done, this window should be watched for additional

water damage as it quite possible that all of the water problems that caused this damage may be unrelated to the removed roof window.

Entry

The existing six panel entry door is a replacement of the five panel door original to the building entry. The door is still in common use, but most library patrons use a new entry door in the addition from the parking area to the rear of the library. The door is in very good condition, but it and the storm door paired with it could use some minor repairs which could improve the energy efficiency of the library.

These two doors should work together to prevent air infiltration and reduce heat transmission through the closed opening. The entry door is fitted with metal weatherstripping which is failing and/missing at the strike side of the door. The weatherstripping should be repaired and the door kept closed, especially during the coldest season of the year. The outer storm door has a closer, is lighter, and lets in more natural light and is often the only door that is closed. The weatherstripping on this door should be replaced as it is failing at the hinge side of the door and gapping at the upper strike side of this door. The lightweight door is glazed in its upper portion with single paned glass which is all this door will carry. A replacement door could be fit with insulated glazing.



Thermal Performance:

The Benjamin M. Smith Memorial Library is a very poorly insulated building. The original construction relies primarily on layers of trapped air in the wall systems and there is little insulation in either the attic or at the foundation. The new HVAC equipment recently installed in the attic space of the west wing is insulated, but having this equipment and ductwork within the cold attic decreases its efficiency as well.

It is recommended that a heat loss study be conducted on the historic library. The results will certainly show that the attic space is a source of significant heat loss but may reveal several additional opportunities to increase the energy efficiency of the building. The attic area should be insulated above the area used for the heating equipment. This might be done by creating an enclosed area around the heating equipment and insulating the rest of the attic floor. Alternatively it might be done by insulating the underside of the existing roof. Access to the existing attic is through a poorly closing plywood panel door. This access door should be removed and replaced with an insulated and weatherstripped door.

Improve the Safety of the Original Back (Fire) Stair

The back stair of the Benjamin M. Smith Memorial Library is original to the building and is the designated second means of egress from both the upper floors of the library and from the basement level. The winding stairs are of wooden construction and are composed of steep winders and short steep straight sections connecting narrow landings. The stairs do not meet current building codes and actions should be taken to bring the existing stairs more closely into compliance. They are both too narrow and too steep by current standards. This is an opinion expressed also by the local fire chief and the State Fire Marshall who suggest that adding sprinklers to both of the two stairwells in the building would extend the time people would have to get out of the building and make the non-compliant stair acceptable (or acceptable enough).



The relative steepness of the stairs poses a risk to people hurrying on the stairs to reach the exit level. Adding new guardrails at the center of the upper portion of the stair would



eliminate the potential of an eight-step fall. Strategically adding railings to the interior of these guardrails could shift the path of travel away from the center of the winders and further reduce the chances of a fall. The stairs are narrower at some points than at others and as long as the railings and guard rails do not reduce the stairway width to less than the current narrowest width, the capacity of the stairway should not be reduced. The narrowest portions of the existing upper stair are 27” wide. The wooden railings on the outside wall

are not continuous and should be made to be by adding additional lengths where no railing is provided. The railings should extend across the window openings to provide the code-required continuous railing. Windows in the stairwell pose an extra hazard in the stairwell if any of the glass is not tempered because of the increased potential for a fall on these steep stairs. Any float glass in the window units should be replaced with tempered glass.

Other improvements to the egress stair from the Children's Room to the back door would make the stair safer without costing a lot of money. Items in the stair such as the ladder at the second floor, the brooms on the first floor, and the coat rack near the exit effectively narrow the exit path of travel and should be stored somewhere where they don't affect the exit. Flammable objects in the stairwell or in closets accessed off the stairwell pose a special hazard as the purpose of the secure space for this stair is to provide a smoke and fire free egress. The flammable paper and cleaning supplies in the closet at the main floor are a particular hazard and should be removed. Electrical wiring in this closet should also be looked at carefully by a licensed electrician for safety. Like the steepness of the stairs, other physical characteristics of the stair are nearly impossible to correct given the interior volume of the stairwell. The narrow points of the stair at the top or the bottom cannot be made wider, the headroom at the second floor off the Young Adult's Room, cannot readily be made taller. The floor framing of the landing at the back door exit is pulling away from the wall and should be repaired as soon as possible.



The stairway up from the basement poses some additional challenges from a fire safety point of view. These stairs were re-built in modern times with pressure treated framing and plywood construction. The fundamental problem is the lack of a fire rated enclosure around these stairs. The furnace room adjacent is a potential fire source and there is no fire rated separation between the mechanical space and the basement egress stair. The openness of the

existing partition is evidenced by the amount of daylight from the furnace room that shines into the existing enclosure. Because the basement stair is not in a fire rated enclosure, there is similarly no fire separation between the basement stair and the egress stair above. The existing basement stair will need to be removed in order to finish the interior side of the stairwell wall with an appropriate fire rated assembly. This would be an ideal time to address repairs to the structure required for the upper part of the stairway, including better support of the central wall. It will



also be necessary to patch interior finishes of the stairway above closing pathways for fire spread through the stair. The rebuilt stairs within the enclosure may not be any wider or more code compliant than the existing stairs, but would be much safer. The door at the top of these stairs is too narrow but may not be able to be replaced with a wider door because of the organization of the upper stairway.

Alternate Approach to Improve the Safety of the Original Back (Fire) Stair

The addition of a fire sprinkler to the Benjamin M. Smith Memorial Library is an expensive proposition and is being entirely driven by the need to make the existing back stairway safer from a egress point of view. Considering, additionally, the proposed renovations to the existing stair and the reality that although the stairway will be improved when the proposed work is completed, it will still not be up the measure of current requirements for this type of stair if built today. The actual cost of the work described above may not be much less than that of the more radical solution of building an addition on the building to house a new stair. This effort would require the removal of the existing porch and may require changing the parking area or the partial relocation of the driveway, including removal of parts of the exposed ledge. The addition should be constructed of similar materials to the existing building and could provide code compliant egress routes from all the areas the existing stairs served.

Improve Egress to the Back Stair

Making the modifications suggested to the back stair of the Benjamin M. Smith Memorial Library will make the library safer than it is today. Other changes within the library spaces would also positively impact the safety of the building users. Furniture in the top floor Children's Room should be arranged to provide at a minimum 30" of width around and between the fixed bookcases and tables. Currently this space is reduced to as little as 23 ½" between at the southwest corner of the room near the egress stair enclosure. 36" of width would make the space more accessible to those with mobility limitations. The door to the back stair was relocated during a previous renovation to keep the door from sweeping over the stairs going down. Since it is existing, the 30" door is wide enough but the bottom of the door has been raised to about 1.5" above the floor. The historic door should be re-hung to eliminate the wide gap at the floor.



Improve the Safety of the Main Stair

The shortcomings of the existing rear stair of the Benjamin M. Smith Memorial Library are creating a drive to install sprinklers in the building stairwells. The installation of a wet system of sprinklers will require increasing the size of the water line from the street and/or the installation of a large water tank in the basement space. It will be necessary to install

minimum sprinkler heads in the open stair from top to bottom and all the related equipment to make the system work. A new water storage tank might be located in the mechanical room to hold enough water to run the system for 20 minutes or so with the aid of the water line from the street, which should be re-laid with the largest pipe possible to maximize flow and preferably eliminate the need for a water tank. No sprinkler should need to be installed if the original back stair is replaced with a new fire stair, as the deficiencies of this back stair are the cited reasons for the new requirement for such a sprinkler system.

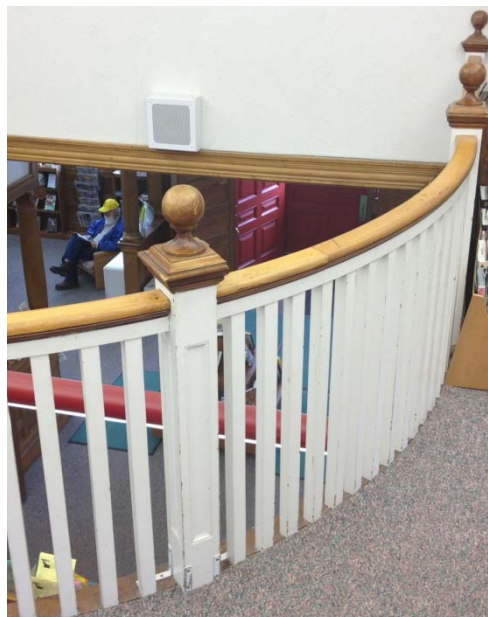
As with the back stair, there are things that could be done to make the existing stair safer apart from the installation of a new sprinkler. Flammable items stored in the stairway such as the easel and art supplies stored behind the door to the Young Adult's Room should be removed. The display of potentially flammable art projects on the walls should be considered carefully in light of the importance of getting people safely out of the building in a fire emergency. For this reason the spaces that open only directly into the stairwell should be fitted with fire rated doors and closers. This was largely accomplished with the original construction of the library addition. The closer on the children's librarian's office door should be fixed or replaced. The cabinet style door to the art storage closet should be replaced with a fire rated door.

Improve Basement Fire Safety

The basement areas under the Benjamin M. Smith Memorial Library are used as both work and mechanical space. These spaces should be provided with appropriate levels of fire protection to match current requirements. Primary concerns are the lack of rated fire assemblies around the mechanical room and in the corridor off the main stairwell that serves the basement support spaces. The area within three feet of air handlers and electrical service panels in the basement should be kept free and clear of any paper products.

Improve Interior Railings to Limit Potential for Falls

Current New Hampshire building codes require guards at least 42" in height in locations such as that found around the well overlooking the circulation desk. The historic railing extant at that location is only 32" high. The use of the room by juveniles and young adults suggests that this space might not be the place to overlook potential risk of a fall. It has been suggested previously to the library staff that the library address the potential fall issue while retaining important character-defining features. This might be achieved by removing the railing and reinstalling it on a new 10" high curb. The curb should be visually distinguishable from the historic curved elements. The paneled railing posts should be repaired and reset in their original configuration and preferably without the face-mounted metal brackets securing



the posts to the floor.

The wide half-wall guardrail in the main stairwell has been reported to be a draw for young climbers who apparently lie on their bellies to look down over the wall. For this reason, it seems advisable to add a rail or edge at the far side of the guard to discourage climbing up on the wall, as well as to prevent materials set on the guard from falling off the back.

Wood Framing

The Benjamin M. Smith Memorial Library was built prior to the advent of pressure treated wood. In several places original bearing has been affected by moisture and repaired with installation of new beams and structural elements. These include the beam pockets in the basement under the stacks and the north wall of the old costume wall. One support for this beam inside the room and one just outside the door are not carrying the load from the beam above. The loose framing should be modified to fit tightly and bear on pressure treated bearing blocks on all masonry and concrete surfaces. Not all areas of this type of bearing are open for visual inspection. Further investigation may identify other areas of the basement in need of this type of work.



Dampness in Basement (esp. at Mechanical)

Mechanical room piping passing through infill panels at two south side window locations leaks air. Humidity of summer air and related condensation on masonry and concrete surfaces is likely the cause of deteriorating drywall finishes near floor. These leaks should be closed temporarily with appropriate sealants. Windows on this level should be kept closed. Once the humidity levels are controlled, damaged drywall should be removed along with any wood partition framing showing signs of mold. Coordinate the work in this area with other work such as sprinkler equipment installation; fire-rated ceilings, adjacent fire-rated stairwell construction and the potential installation of a new water storage tank.



Control Building Moisture

Water stains at the ceiling level beneath the attic and underneath the sloped ceilings beneath the roof framing are always concerning. Suspicious water stains were found on the walls and ceilings of the Children's Room and Young Adult's Room at the upper levels of the Benjamin M. Smith Memorial Library as well as the north reading room off the lobby. Additional water stains were found in the main stairwell and the ceiling of the office of the children's



librarian. Repairs to the roofs above all of these areas suggested elsewhere in this report should address the causes of these issues, but the effectiveness of the solutions should be watched over time by checking on the ongoing status of these leaks and their repairs.

Plaster repair and Repainting

The fine hairline cracks and stress cracks found in plaster surfaces throughout the library are common and do not usually raise concerns about the building's supporting structure except as mentioned previously. Hairline cracks can be filled with patching plaster or joint compound prior to repainting the library interior, a task which can be delayed until funds allow. Repair of stress or settlement cracks such as those most evident in the back stairwell, above the bookcases that back-up to the entry vestibule and on the fireplace walls may be patched with fiberglass mesh tape and patching plaster. Touch-up painting may approximately match existing finishes but complete interior repainting should be completed in the next few years.

Vertical cracks at the corners of walls in the stairwell and in the work areas of the west wing are of greater concern than those mentioned above. These may be the result of shifting of the wall, perhaps related to the bearing on the wall and platform on the masonry foundations below. Any repair work to stabilize the wall bearings should be completed before repairs are made to the wall finishes. Once the work is accomplished, the repair should be examined semi-annually for a few years for signs that any wall movement is continuing. Any such finding would lead to a more aggressive investigation into the root cause of any such movement.



Control Condensation on Beams in New Stacks Area



Ceiling paint is peeling in the reference room where the gypsum board beam wraps meet the exterior walls of the addition. This is most likely being caused by condensation forming on the cold ends of the steel beams near the outside walls. Because of the risk of mold, the drywall should be opened up in the affected areas at least three feet or so from the affected beam ends and closed-cell foam insulation should be applied around the steel beams.

Interior Woodwork

The main floor of Benjamin M. Smith Memorial Library has a good deal of decorative woodwork including decorative columns and pilasters on a low paneled wall in the colonnades on each side of the lobby, wood fireplace surrounds, paneled wainscots, built in cabinets and bookshelves, and baseboard and picture mouldings. Most of these materials are in good condition but a few localized areas or items could use some attention. Like the windowsills, some of the



mantle tops like that in the south reading room need to be refinished because of previous water damage. Damaged areas should be hand-sanded and refinished with touch-up stain if required and a polyurethane or paint finish to match the existing. One area to pay particular attention to is the at baseboard near the bookcase at the corner at north reading room

The south reading room has a picture rail moulding on the west wall that has popped and needs to be re-secured. The mantelpiece in the north reading room has a pecan wedged behind it which should be removed so that the mantelpiece may be re-secured to the wall. The wood band that is splitting at the well above the circulation desk may not be repairable, and the crack in the capitol of the southwest decorative column certainly is not. These defects should be stabilized and refinished to the greatest degree possible.



Other Miscellaneous Projects

The Benjamin M. Smith Memorial Library has a few miscellaneous projects that can be undertaken without significant coordination with other larger projects. The tackboard in the South Reading Room is poorly secured and should be removed or re-hung. The threshold at the main level door to the back stair hall should be repainted. In the basement, both the mechanical room and the room opposite previously identified as the costume room have lay-in ceilings that are incompletely assembled with many damaged or missing tiles. Since the mechanical room should be getting a new fire-rated ceiling, there may be an opportunity to re-use those tiles to repair the ceiling of the costume room.



There appear to be several overlapping heating systems in the Benjamin M. Smith Memorial Library, some of which may no longer be functioning or necessary. Cast iron baseboard radiators throughout the library have paint failures such as peeling and cracking. Radiators that are no longer in service may be removed from the building and holes through the baseboards filled with wooden plugs to match the existing woodwork to the greatest degree possible. Likewise, if the mechanical enclosure at the southeast corner of the Young Adult's Room is no longer necessary, it should be removed. Any of these appliances installed in the library prior to 1972 were likely finished with lead based paint, though this may have been previously abated. Flaking or peeling paint on items to remain should be removed in a lead-safe manner, and the metal primed and painted as appropriate with a heat -tolerant paint manufactured for use on mechanical work.

Radiators and heating units with peeling paint can be found in every space of the historic library. Additional equipment in need of some repainting includes water-damaged heaters in the Main stair outside the Youth Reading Room and the Reference Room. The equipment within the heater should be inspected and/or repaired prior to re-painting to ensure that the cause of the water problem has been



eliminated. Other miscellaneous mechanical system issues that need correction include the repair or replacement of one of the floor grills in the South Reading Room (at the east wall) which is falling into the duct. Water stains on the ceiling of the Children's Librarian's Office may be related to dripping mechanical equipment in the attic above.

Plumbing Repairs

A number of minor plumbing issues were observed or reported in the library. Pipe escutcheons where exposed piping passes through the face of the wall have fallen in the coat area and staff work area. In the library addition, the Janitor's sink has a minor leak and the protective wrapping under the sink in the bathroom masks a leak in the waste piping. Once the piping has been verified to be working correctly, and a new knee guard mounted on the wall under the sink could provide the required protection without hiding plumbing problems.

Electrical Repairs

Electrical systems in the Benjamin M. Smith Memorial Library have been repeatedly modified over time and there seems to be an ad hoc character to the wiring observable in the basement. The basement corridor and the rear stairwell are important egress routes out of this level of the building and should be clear of loose wires. Loops of wire observable in these spaces should be removed as should all wiring abandoned and out of service. A hard wired emergency light should be installed in the connector restroom which has no window and goes pitch black when the power goes out at the library. Exterior lighting fixtures and junction boxes at the north side of the original library and on the adjacent east wall of the addition should be replaced with weathertight units. Light switches in the Lobby and the closet in the Young Adult's Room should be checked by an electrician and missing screws or improperly working switches should be replaced. The lighting in the staff workroom has had all of the diffusers removed, presumably because the plastic diffusers had yellowed. All of these light fixtures should be replaced with new low energy fixtures which give more light for less energy.

Program Issues

A few identified deficiencies of the existing Library (with all its additions) discovered during investigation of the facility are not related to the existing building but rather to what the building seems to lack. Specifically noted is the shortage of space in the Children's Room for the assembly of larger groups of children and their parents during events taking place in the Library. Storage space and restrooms are notably absent at this

level of the building, an area where the young patrons perhaps require additional monitoring by the staff.

These functional issues challenge the users of the building but are not necessarily readily or easily corrected without a renovation project. It is recommended that this type of project should be undertaken only after a more thorough investigation is made into the programmatic space needs of the library, which is beyond the scope of this report. These issues are generally best revealed through interviews with building users and staff, and tempered in consultation with all of the decision makers responsible for the short and long term success of the Library within the community. Such discussions would be helpful in making many of the decisions laid out in this report as the many others that would help the library best serve all those who use it.

Conclusion

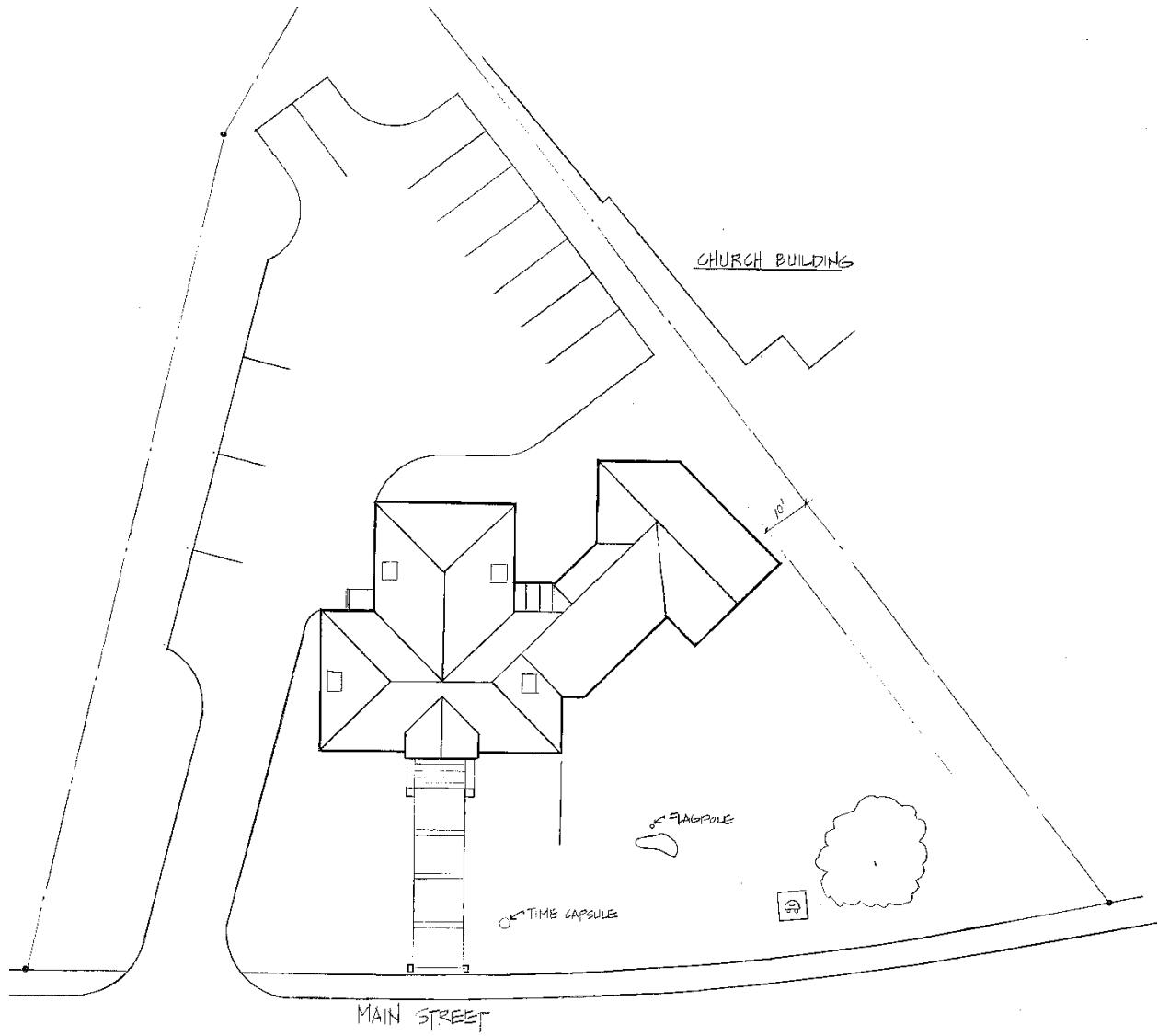
The Benjamin M. Smith Memorial Library is a well preserved Classical styled building set on Main Street in the Village of Meredith. Together with its previous addition and the green space in front, the building and grounds are a key part of the cultural heritage of the town's Main Street. The building's grand brick façade with granite detailing is in fair condition, but needs some attention to arrest an ongoing water infiltration problem that is starting to threaten the masonry work. The interior has some need for both cosmetic repairs and a number of suggested renovations to improve the safety of the building and its level of compliance with modern building codes.

The improvements suggested include work that should be done right away for the sake of stopping ongoing damage or most cost-effectively addressing safety issues; medium term work which should begin as soon as possible but for which greater levels of planning must be undertaken before work can proceed; and long term projects which require more extensive planning and capitol expenditure or should be undertaken after the completion of other work in the early phases. The Benjamin M. Smith Memorial Library has been previously expanded and may be ready again for interior renovation or expansion as program needs are further defined and detailed. Already more than 110 years old, the building should continue to be able to serve the town of Meredith for many years to come.

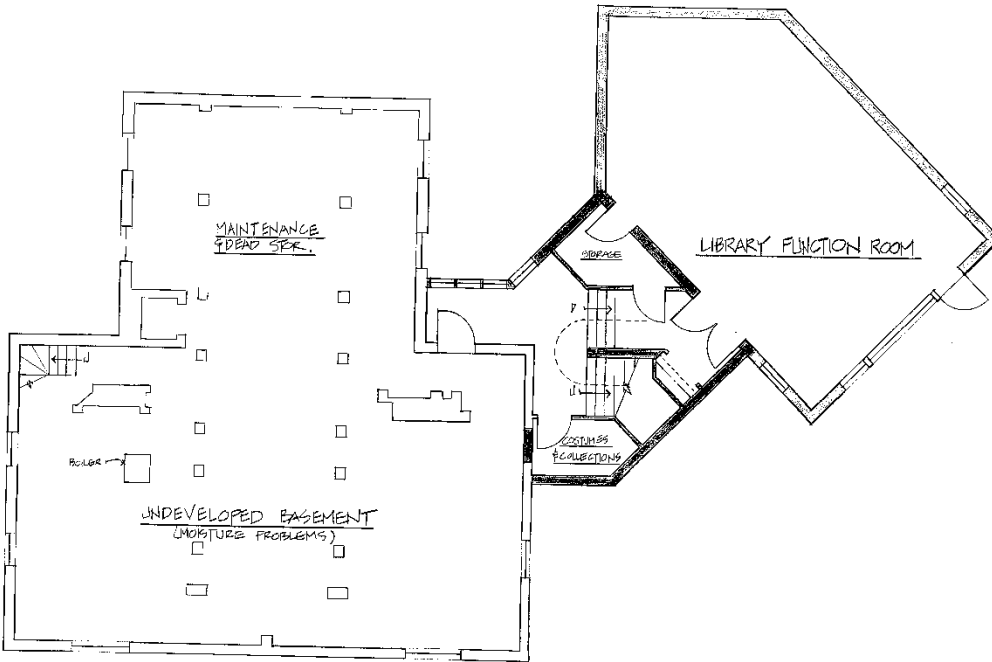
Appendices to Follow:

- A – Site Plan
- B – Reference Building Plans
- C – Cost Estimates for Recommended Work by Phase
- D – Recommendations for Further Studies

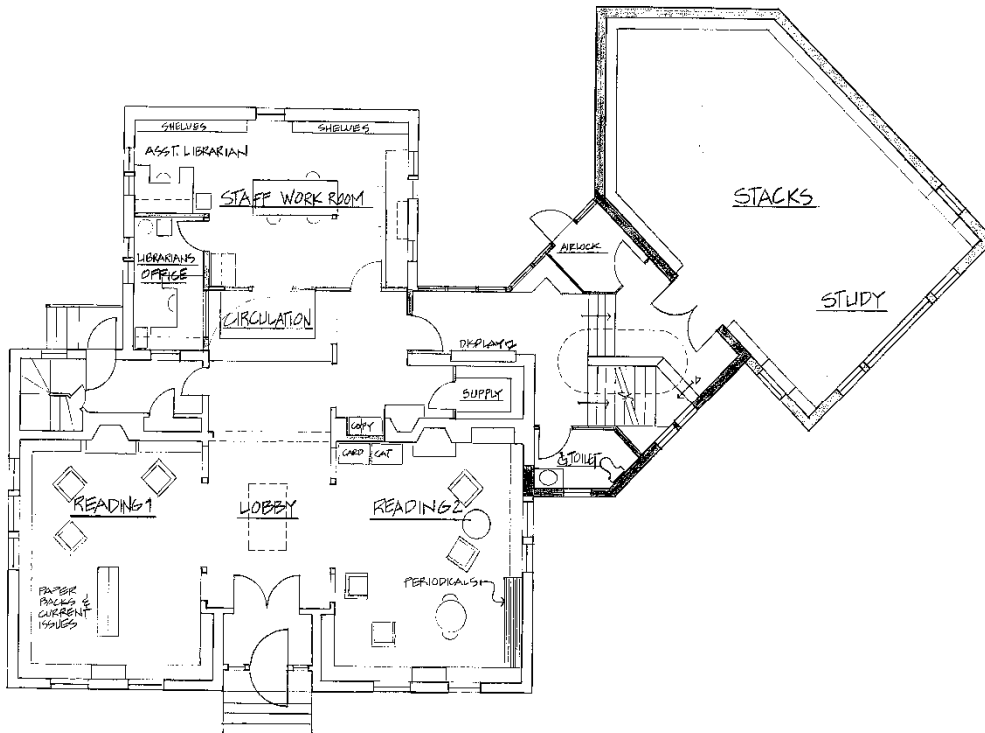
Appendix A – Site Plan



Appendix B – Reference Plans



LOWER LEVEL PLAN



MAIN LEVEL PLAN

Appendix C - Cost Estimates for Recommended Work by Phase

Short-range Preservation Strategies

Safety Issues-

Railings – above circulation desk

Rough Budget: \$3,000 - \$3,795

Railings -at main stair

Rough Budget: \$786 - \$944

Improve access through Children’s Room by moving furniture

Rough Budget : \$182 - \$230

Clean-up stuff in stairwells – front and back

Rough Budget: \$182 - \$230

Decide if renovating or replacing back stair, if renovating do it now.

Rough Budget \$9,951 - \$12,588

Water Infiltration – Slate roof repair and chimney re-pointing

Rough Budget \$17,200 - \$21,758

Control moisture at all areas of concern

Rough Budget \$1,240 - \$1,569

If renovating stair, do lower enclosure here.

Rough Budget \$16,517 - \$20,894

Control Dampness in Basement

Rough Budget \$182 - \$230

Install rated ceilings in basement corridor and mechanical room, repair mechanical room walls to provide 1 hour rating.

Rough Budget \$5,051 - \$6,390

Secure Wood Frame at stairs and costume room

Rough Budget \$850 - \$1,075

Touch up area of concern for building movement, paint, and monitoring.

Include Reference room too –

Rough Budget \$2,416 - \$3,056

Repair misc. plumbing issues

Rough Budget \$850 - \$1,075

Repair misc. electrical issues

Rough Budget \$4,886 - \$6,181

Phase Total (based on decisions made and full range of cost)

\$36,825 - \$80,066

Mid-range Preservation Strategies

Landscaping at same time as sprinkler installation	
Rough Budget	\$13,274 - \$16,792
Install Sprinklers including water tank in basement and water line to street	
Rough Budget	\$36,234 - \$45,836
Window restoration and thermal improvements	
Rough Budget	\$4,250 - \$5,376
Rebuild lower stair – if not previously done	
Rough Budget	\$16,517 - \$20,894
Replace doors to attic and storage spaces	
Rough Budget	\$2,666 - \$3,372
Install new stair tower and stair instead of sprinkler system.	
Rough Budget	\$85,785 - \$108,518
 Phase Total (based on decisions made and full range of cost)	
	\$56,424 - \$154,952

Long-range Preservation Strategies

Brick re-pointing	
Rough Budget	\$48,525 - \$61,384
Brick cleaning	
Rough Budget	\$56,000 - \$70,840
Improve Attic Thermal Performance	
Rough Budget	\$11,114 - \$14,059
Plaster repair and Patching not yet done	
Rough Budget	\$975 - \$ 1,233
Repaint Library Interior with VOC free paint	
Rough Budget	\$15,246 - \$19,286
Insulate and repair water damaged painting at reference room boxed beams	
Rough budget	\$1,690 - \$2,138
Repair damaged wood finishes	
Rough budget	\$1,850 - \$2,340
 Phase Total (based on decisions made and full range of cost)	
	\$135,400 - \$171,281

Stand-alone Projects

Tune up storm windows	
Rough Budget	\$238 - \$301
Entry Door refinish and weather stripping	
Rough budget	\$1,044 - \$1,321
Misc outdoor electrical	
Rough budget	\$670 - \$848
Misc. other outdoor	
Rough budget	\$500 - \$633
Fix closer at children's librarians door	
Rough budget	\$50 - \$63
or replace it	\$570 - \$721
Paint the threshold at circ area door to exit	
Rough budget	\$100 - \$127
Secure the tack board to wall	
Rough budget	\$200 - \$253
Repair ceiling in costume room with used tiles	
Rough budget	\$250 - \$316
Repaint radiators throughout	
Rough budget	\$1691 - \$2,139
Phase Total (based on decisions made and full range of cost)	
	\$4,743 - \$10,568

Estimate for completion of all work outlined above:

(based on decisions made and full range of cost)
\$259,860 - \$383,385

Appendix D - Recommendations for further studies

Investigation of history of movement of entry steps by review of old photos.

Heat loss Analysis, especially of Historic Library

Library Program Review