Tom Bursey Designs, Pllc

Lawrence Memorial Library – Bristol, Vermont
Historic Architectural Assessment

Site Visit: October 24th, 2022 11am
60 Deg. Calm to light wind, overcast.
Report Date: November 11th, 2022

This assessment was partially funded by a grant from the Preservation Trust of Vermont.

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November 11, 2022

Valerie Capels, Town Administrator
Lawrence Memorial Library % Town of Bristol
1 South Main Street
Bristol, Vermont 05443

Contact: Valerie Capels, townadmin@bristolvt.org, (802) 453-2410 Ext. 1

Dear Valerie, and Coco

Thank you, Coco for assisting me examine and document existing conditions of the Lawrence Memorial Library on Monday afternoon October 24th 2022.

It is noted that this assessment report has been partially funded by the Preservation Trust of Vermont. Vermont Architect Tom Bursey along with Coco Moseley, Library Director performed an on-site assessment of the Lawrence Memorial Library (LLM) in Bristol, Vermont. This report includes visual observations from our time on site, and a list of recommendations for maintenance and repairs.

The Town has been awarded a Robert Sincerbeaux Fund to help facilitate this first step, which allow for this condition assessment and preliminary opinions of probable costs for maintenance and upgrades to the library.

The Lawrence Memorial Library located at 40 North St, Bristol VT 05443 is a classical revival style building, constructed in 1911. The building is a single-story wood-frame structure, with a hipped, clear span roof of slate shingles, wood clapboarded exterior, and stone foundation. It has a with a full occupied basement and modern rear addition which includes vertical circulations components of stair and lift.

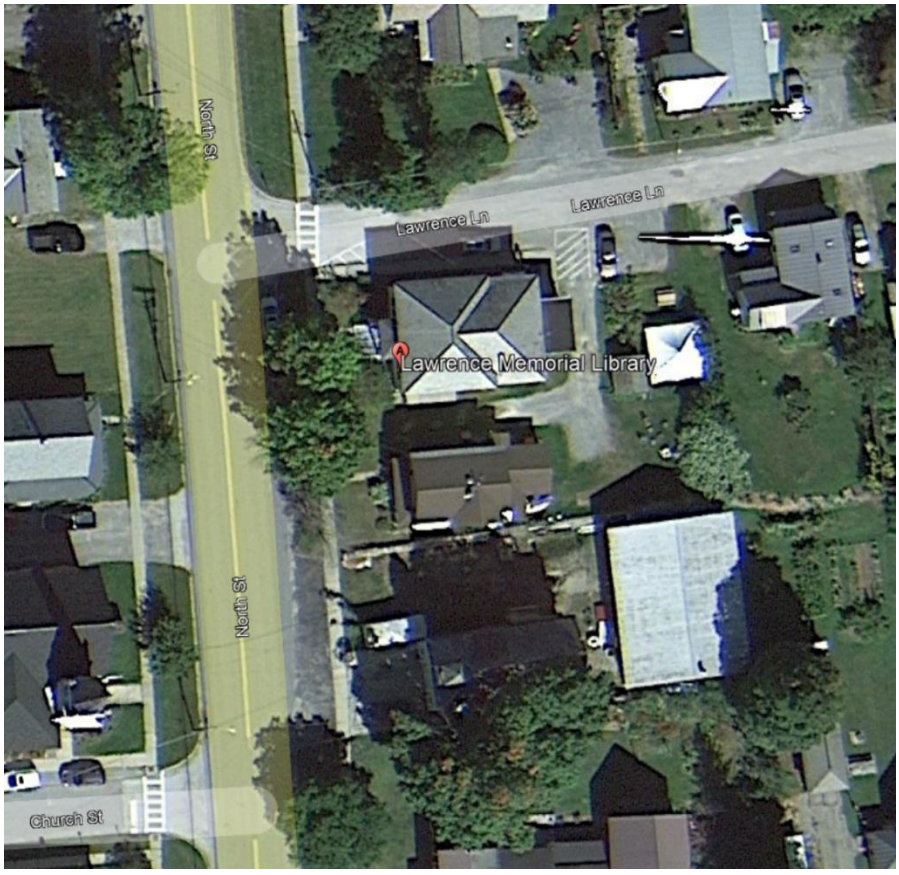


Figure 1- 40 North St, Bristol VT from Google Earth Pro

This is a preliminary report of building and site conditions available to visual inspection at the time of our site visit; it is not a specification and should not be used as a basis for contractor bids. Mechanical, Electrical, Plumbing, Fire Protection, Structural and Site/Civil components were not reviewed as part of this report. This review also did not include destructive investigations or hazardous materials identification.

It is also worth noting that to my knowledge this building is not specifically listed on the historic registry, but is likely contributing to the historic Bristol Downtown listing.

The property is less than 1 acre, and is bounded on the west side by North Street, north side by Lawrence Lane, and on the south and east sides by private residences.

The building approximate location: 44°8′8.8″N 73°4′42.5″W (Source: Google Earth Pro).
Approximate dimensions: (Scaled from photos and satellite images; all dimensions should be verified).

Main Building (in plan) ~ 50’ x 37’
~187’ perimeter / Area ~2050 sf
Addition (non-historic) ~ 10’ x 20’
~ 30’ perimeter / Area ~ 200sf
Current structure: ~ 30’ tall (roof peak) ~20’ ground to roof eaves on north side.
Exterior (wood clapboard and window) wall area:

W:	(road front)		740 sf
N:	(road front)	1,000sf + 200sf (addition) =	1,200 sf
E:		340sf + 400sf (addition) =	740 sf
S:		1,000sf + 200sf (addition) =	1,200 sf
Approximate total area			**~ 3,880 sf**

Figure 2 – Interior view from the main entry

EXECUTIVE SUMMARY

In general, it is clear from our assessment that the building is being well maintained, particularly the interior. The exterior would benefit from an ongoing maintenance plan that includes regular cleaning, patching, painting, and roof maintenance. This will aid in the longevity of the building, and help keep its appearance clean and cared for. Any recommendations for repair included in this report will improve but likely not permanently resolve the symptoms; these improvements are not to be considered replacements for ongoing building assessment and maintenance plans.

The prioritized recommendations for this building are summarized as follows:

Life safety issues and code related issues.

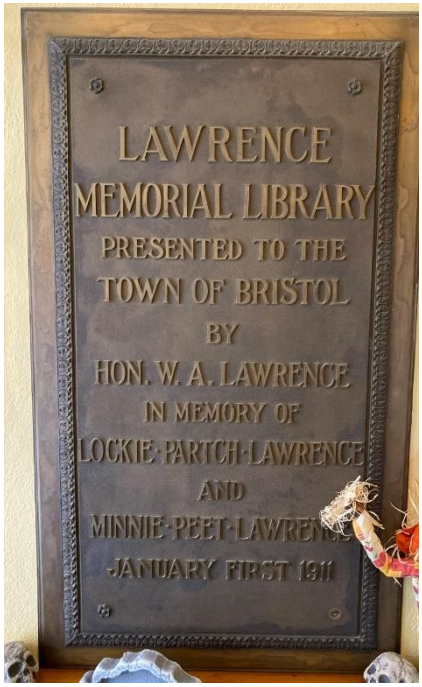
- Rated door in the lower-level children's area, needs a closer. We discussed on site the possibility of keeping this door open, with a magnetic hold-open tied to the fire alarm. This would maintain the open feeling of the entry while allowing for the fire door to serve its purpose. As this door separates a vertical opening / exit stair, it must be, 1) maintained as an exit, and 2) closed in the event of a fire event. Addition of a closer (and possibly a mag-hold-open) on this door is the highest priority, and shall be resolved asap.
- Emergency lighting, during our tour at least one of the emergency lights in the basement was not working. I understood this was being addressed. (It's a hardwired light with 1 ½ hour battery backup).
- Signage should be added to the main entrance indicating route and location to the ADA entrance.

Exterior restorative measures

- Front stair and railing refinishing, and maintenance plan that includes de-icing method and refinishing schedule.
- Exterior repairs including patching and repair at wood clapboards and trim, restoring original materials, exterior caulking, and cleaning/painting of the entire exterior of the building.
- Remove side exterior door and replace with a window matching the character of the other windows of the building, and well as patching exterior wall and siding to match.

Interior restorative measures:

Some additional no or low-cost recommendations are listed in the conclusion, that may be understood as suggestions.



EXTERIOR

Roof

There are five roofs of this building. The primary building roof is a slate shingle roof. Slate roofs typically have a life span of about 70-100 years, and although this appears to be in adequate shape, it will likely need to be repaired in the next 5 to 10 years. This roof has three pipe snow guards on the west and north sides, which appear to be in good shape. Observation from the attic side did not indicate any recent leaking of this roof. (With the possible exception of near the chimney, as described below).

I was not able to assess the roof over the east side addition, given the limited slope, color from above, and construction date I would assume a modern flat membrane roof system (EPDM or PVC). In keeping with the age and condition of the other exterior finishes of this addition, this roof should be in fine shape.

The front entry entablature roof was also inaccessible at the time we walked through. It was slightly visible from a distance, and my assessment is that it appears to be a rubber roof membrane. This should likely be repaired / replaced at the time of the slate roof repair project.

There is also a flat roof over the south side exterior basement egress stair, which looks like built up roofing. This roof is in rough shape and may need to be replaced in the next year or two. This roof is over exterior space, and may benefit from a re-cover, as opposed to a complete tear-off and reroof. Finally, there is the outcropping roof over what is now the unused exterior door in the storage room (shown above). This roof is probably metal, showing wear and possible rusting on the edge, this roof should be restored, whether or not the door is replaced by a window.

Siding / Woodwork
The building is sided with painted wood clapboards with a 3 ½" reveal. The entire exterior needs minor restoration and complete repainting. (See Painting section).

Painting
There are at least two complicating conditions for re-painting of the building's exterior and minor siding repair: First the historic nature of the building requires that the work be undertaken by a craftsman aware of the historic implications of the work. Second the presence of lead paint is likely and the contractor will need to be aware of the implications. Any disturbance of painted surfaces likely to contain lead-based paint, should be done in accordance with all local, state and federal laws. I did observe some wood rot (wood 'punkyness') on the surface, particularly around the windows where rot is typically evident.

Refer to *Preservation Brief #10: Exterior Paint Problems on Historic Woodwork,* which should be used as a guideline in addressing further paint repairs. Recommendation for frequency of repainting old wood structures typically range from three to seven years, to keep them looking their best. I recommend putting in place an exterior painting maintenance schedule that included a 'minor / touch up' painting every three years, alternating with a full repaint about every six to seven years. This could be adjusted as the need is observed over time.

Main Exterior Entry Stairs

The stairs are exhibiting excessive paint chipping and rust discoloration coming through the finish. This was described as an ongoing issue that has had several attempts to resolve unsuccessfully. On consideration, this is likely caused in-whole or in-part by the salt put down to avoid slip and falls in in climate weather. This physical abrasion and chemical reaction may have caused the salts to leach into the wood and causes the fasteners to rust and the paint finish to not get a good attachment to the wood fibers when it is applied. My recommendation is to use a chemically resistant epoxy primer and paint (such as Rust-Oleum Marine Topside Paint) or a two-part epoxy made for exterior wood decks, with a no slip additive as recommended by the manufacturer. This will need to be applied by a professional. Because of the use, and circumstances, this will need to be renewed at intervals more frequent than other surfaces of the building.

Building Insulation

I did not investigate or observe insulation in the exterior walls, but did observe it in the attic space. There appeared to be a mix of foil-faced rigid poly-iso, and fiberglass but the majority of attic insulation is cellulose insulation above the ceiling, between the rafters in the attic. Also present were eave venting baffle

panels appropriate for this method. There are tell-tale patched holes in the siding of (on the South side) where cellulose insulation was added into the wall cavities.
It is safe to assume this building does not perform super well from a modern energy use / efficiency standpoint. That said, the original design of the building and the building science at the time of construction allowed for fresh air to enter the building, and may have had a calculation for incoming fresh air through openings. Depending upon the future use of the building this may not be a problem that needs correcting, but it certainly affects energy efficiency.

A topic that comes up frequently on these Historic buildings is the requirements or exemption to follow the 2020 Vermont Commercial Building Energy Code (also known as 2020 VT-CBES), on any renovations undertaken. In the past, historic buildings have been exempt from following the CBES, but starting a few years ago the State Historic Preservation Office or SHPO has wanted to weigh in on the components being exempted. Here is a link to the CBES website: Commercial Building Energy Standards | Department of Public Service (vermont.gov). And here is a form that is used to get SHPO's buy-in on the historic exemption:
https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fpublicservice.vermont.gov%2Fsites%2Fdps%2Ffiles%2Fdocuments%2FVT%2520Energy%2520Code%2520Historic%2520Buildings%2520Exemption%2520Form_update%25204.1.2020.docx&wdOrigin=BROWSELINK

Ideally what happens is renovations are done that increase the usefulness and efficiency of the building without destroying the historic nature, while also respecting how the building science was/ is understood at the time of construction (both new and original construction).

Figure 10 - showing cylindrical holes indicating blown in insulation in the wall cavity from the exterior side.

Doors and Windows, (fenestration) Exterior Doors: There are three working exterior doorways in this building. (One double, main entry door and door lites and 2 single doors), as well as a single non-useable opening door and storm door.

The Main entry doors are out-swinging original glass and wood doors, with brass mortise hardware. This hardware is not ADA compliant. Also, the doors are only accessed via steps. Signage should be added that indicates the location of the ADA accessible entrance. The glass is code compliant tempered safety glass.

Figure 15- ADA entrance on the North side

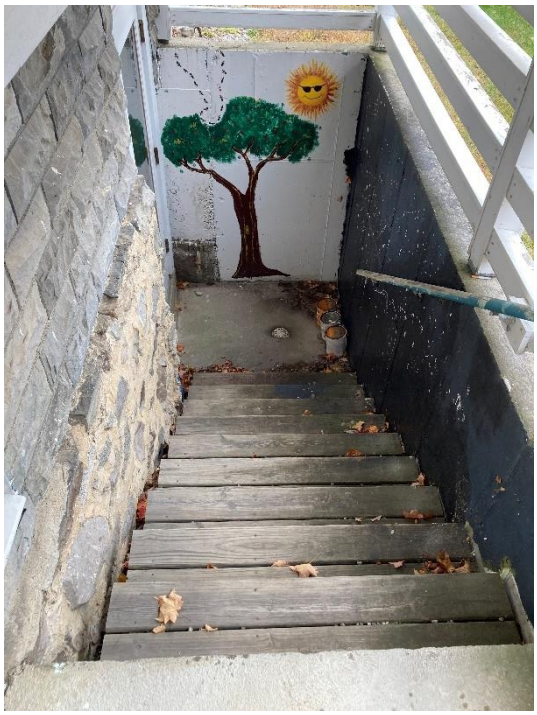


Figure 16a- Egress door and stairs from lower level (outside)

Figure 16b- Egress door and stairs from lower level (outside)

The ADA entrance on the north side is in the newer addition, and seems to work for this purpose. It appears to have proper access, and door hardware, and accesses a stair landing that includes a lift to the upper and lower levels.

The lower-level egress door exits from the children's space, and has a set of small gates on the interior side. And wooden exterior stairs on the outside. The handrail on these stairs appears to be non-code-compliant (extensions). In my opinion this is a low priority for modification.

There is a curious exterior door on the north side that is vestigial, presumably abandoned when the stair / lift addition was added. Provided this door is not accessible from the inside, it is not necessary to remove this door. If it is desirable to remove the door, it should be replaced with a window of similar sized and character as the adjacent window. The overhang should be kept and maintained as an important part of the historic nature of the building.

The brick infill is not historically accurate and it may be desirable to infill with stone matching the rest of the building. It almost appears that there was a surface applied finish to mimic the stone color and texture? But this was unsuccessful, and may have since partially been removed or come off by other means. The glass and aluminum storm door does nothing but detract from the historic character of the building, but does appear to have done its job protecting the door itself. My suggestion is to either: remove the door and replace with a window, or leave it as is until a renovation is planned for this area that will resolve the incongruity / anachronistic character of this opening.

Exterior Windows:
There are forty-one windows. 13 in the lower level and 28 on the upper level.

	Window Count		
Side	**Level 1**	**Level 2**	
West	4	4+4l = 8	"l" = upper window lite
North	4	3+3l, 1 = 7	
East	2	2+2l = 4	
South	3	3+3l, 3 = 9	
Total	13	28	Total both floors = 48

The lower-level windows are awing windows in the masonry / stone foundations. Of the upper floor windows, 24 of the windows are 12 coupled fixed wood clearstory lites over 12 large wood double-hung sash windows (or possibly single hung sash).

These lower windows are 2'- 0 3/4" tall by ~ 3'-0" wide (varying from 2'- 8" to 3'- 4"). They are awning of mixed cocharacter, most aluminum clad wood windows, of contemporary construction. The lower-level bathroom window is green painted wood (appearing as original window) with obscured glass.

Figure 18a- Typical lower-level Al. clad wood window

Figure 18b- Lower-level bathroom window

The upper windows are of two types:

1). Large double hung wood windows with top-lites and (retrofit) aluminum storms, and

2). Smaller double hung wood windows most with aluminum storms (noted at least two smaller windows on the South side that do not have storm windows, as shown here).

It was noted that the counterweight cords have been cut from all observed windows. Also discussed there is moisture build-up trapped between the panes of the glass in several of the upper lites.

The interior finish of these windows is suffering from drying and aging due to exposure to the elements (sun and condensation moisture), particularly on the South side. To promote the longevity of these windows they should receive a refinish every several years (in line with exterior painting). Also of note, the newer East addition seemed to have reused / relocated existing windows, and these windows are aging similarly to the rest of the upper-level windows. They are not new (modern) windows and should undergo the same periodic maintenance as the historic windows.

The exterior trim at the upper-level windows seems original, and the opening size and placement is formal. It does not seem like the storm window addition was completed in an historically sensitive manner. The interior certainly holds that ideal. These window elements (excepting the aluminum storms) contribute greatly to the historical nature of the building both external and even more so internally. The sensitivity of the lower-level renovation with the addition of the unobtrusive aluminum clad windows, does not negatively affect the character of the building.

Foundation

The stack-bond masonry / stone foundation seemed to be in in adequate shape. The mortar joints will need to be replaced in the near future and added to the maintenance schedule to check every three years or so for degradation.

Exterior Lighitng:

The exterior historic lighting at the mane entrance was discussed as desiring to be restored.

INTERIOR

Interior repairs, other than structural or life safety work, are generally of a lower priority than exterior ones, since they have less impact on the building's condition and are not as vulnerable to weather-related accelerated deterioration. We note conditions here for the record and urge the owners to prepare a comprehensive preservation and maintenance plan that will address ongoing cyclical maintenance of all interior and exterior elements.

Upper Floor - Main room / entry way / front wing spaces / small office space and storage.

A beautiful space with ornimental woodwork representational of the local craftsmanship available at the turn of the last century in this rural community. While obviously well used, this space is lovingly maintained. There is some superficial cracking showing up on the plaster walls, that in my opinion are cosmetic and do not represent structural movement, more likely caused by thermal and humidity changes within the space.

Attic

Attic space was observed. Of note in the attic, was the discoloration at the chimney indicating water leakage at some point in the building's history; and curiously what appeared to be daylight coming up from one of the soffit baffles, (not necessarily indicative of some issue or problem, but it certainly stuck out in its singularity.

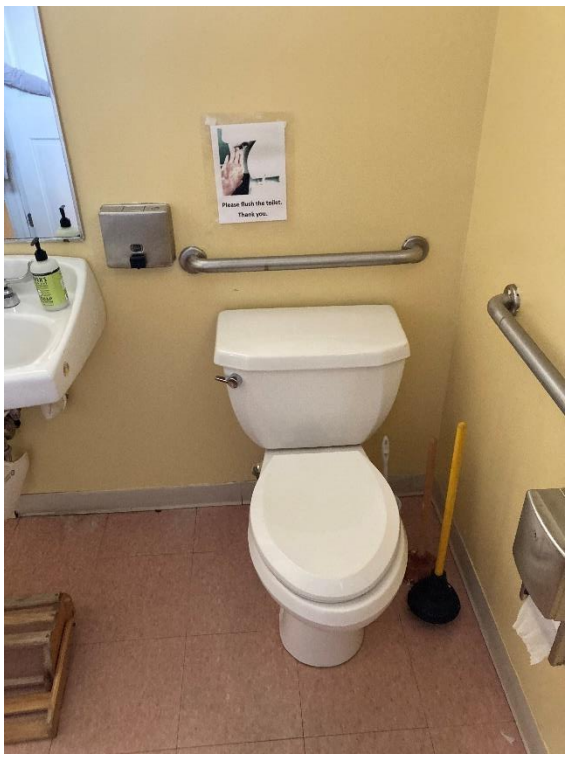
Mechanical room

The mechanical room houses the oil fired furnace, (the oil tank is in an adjacent room). The interior door is to both spaces are birch flush doors of no rating. Depending on the BTU's produced in this space, these drrrs should probably be a fire resistance rated (FRR) doors in FRR walls. Intrestingly the walls shows some indication of fire-caulking, but also has throught penetrations that indicate there is no rating between these spaces and between these spaces and other spaces.

Finally this spece is being used to store various supplies, including flamables (cardbaord, etc.). None of the mechanical spaces should not be used a storeage space, for safety reasons.

These two rooms were the only location where sprinkler heads were observed.

This report is not meant to cover scope outside of architectural, so no images of the Mechanical spaces are inclued.



Restrooms

The bathrooms seems adequate for purpose. The two single fixture restrooms will accommodate 50 people in a business occupancy (under the current plumbing code). The watercloset has grab bars and the space generally seems to comply with ADA requirements.

Lower level room(s)

The door seperating the stair area from the childrens space on the lower level is appropertly a rated door and as such requires a closer. (See the red tag on the door in the photo indicating an hour and a half (90 min) fire resistance rating. A closed shall be reinstalled on this door a soon as possible. If it's is desirable to keep this door open (which greatly adds to the welcomness of the space), a magnetic hold open tied to the fire alarm system may be used.

The lower level spaces themselves are in good condition. The update to the space which opccured more reciently, was done in an non-historic way, causing the characor of the space to be different that the upstairs. Forinstance 2x2 acoustic ceiling tile throughout the main spaces. This in my opinion is fine as the space design is clean and unobtrusive.

Duting the walkthrought there were several air purifiers and a de-humidifier that were running. When asked how often the dehumdifier was full, it was more often that I would have expected. Which may indicate humidity levels above optimum, but that is beyond the scope of this report.

Stair / Lift Space and ADA entrance:

This space is in fairly good condition, as a newer addition, and has been accomplished in a way that does not detract from the historic nature of the building.

OPINION OF PROBABLE COSTS

Use of contractors skilled and experienced in preservation work will help to manage discovered conditions and ensure that proper consideration is given to materials, practices and preservation concerns; this is usually the most cost-effective approach and protects the integrity of the building, including its eligibility for funding.

This opinion of probable cost addresses historic preservation and rehabilitation issues, as well as topics and actions discussed at the walk-through; it is not based on full research, specifications, or details, and should be considered advisory only. Our estimates are explicitly "Order of Magnitude" preliminary opinions of probable cost, exclusive of any Div.1 (General Conditions) costs, any specific costs associated with choice of materials and methods, any additional engineering not covered in very preliminary assessments to date, any scale of work issues (small projects are more expensive per unit than larger ones), any project-specific conditions, any discovered conditions or additional information that a bidding contractor may well uncover, and that a specification can address but this brief report does not. Also, at this particular time (November 2022), product delays and long and contractor pricing is very high compared to historical norms, this opinion of probable construction cost attempts to account for that, to some degree. Note these costs exclude project soft costs such as design and engineering fees, FF&E (furniture, fixtures and equipment), testing, inspections, insurance, bonding, contractor fees, permitting fees, hazardous materials testing, abatement (unless specifically mentioned), and others.

Priority 1:

Life Safety item(s) –

Add a closer to the fire door located on the lower level.
Allow the range of $250 to $5,000+ or more (range is based on if there is the desire to tie into the fire alarm system. I did not see an addressable fire alarm panel, and this addition of a complete fire alarm system may be an expensive proposition). On the other hand, if the closer that was there is still available the cost may be minimal to reinstall.

Please have a knowledgeable person look at the Mechanical room and oil tank space for code compliance issues, (which are beyond the scope of this report).
Allow $500 for inspection.

Add signage indicating location of ADA entrance at the main front entry.
Allow $200 for Signage.

Exterior Repairs –

Front step refinish - **Allow ~$3,000 – $7000**, this includes removal of current paint finish, rust remediation of handrails, (possibly replacement), chemical neutralization, primer and two or more coats of epoxy with slip resistant additive.

Miscellaneous exterior repairs including patching and repair at wood clapboards and trim, restoring original materials, exterior caulking, and cleaning/painting of the entire exterior of the building.
Allow ~$36,000

Assumptions:

~ $27,160 painting 3,880 sf @$7/sf

~ $ 6,000 repair / replace beveled clapboard siding board 48 boards @ $125 per 8′ (Remove damaged 8′ siding board, replace to match, back prime replacement and touch up paint to match).

~ $ 2,800 Caulking and miscellaneous repair / restoration.

Miscellaneous roof repairs including patching and repair at chimney, restoring original slate that may be broken, and replacing roof flashing, and waterproofing.
Allow ~$2000 - 6,000 (budget for in the coming years, have an experienced slate roofer, assess and do minor roof repairs yearly. A slate roof replacement of this size could be in the range of $75,000 or more).

Priority 2:

Refurbish Front door and door hardware to bring back to like new condition.
Allow $3,500

Remove exterior door and replace with window and exterior siding back to like new condition.
Allow $17,000 (some of this repair may be covered in the siding replacement scope above).
Interior patching in disturbed wall.

Ceiling and wall finish and period lighting restored in the historic space.

Allow ~ $15,000 for interior plaster patching and painting.

Painting 4300 sf at ~$3.5/sf – Wipe down all surfaces (walls, trim, baseboards, crown molding, ceiling), prime with 1 coat appropriate primer, paint 2 coats 100% acrylic paint on walls and ceilings, paint 2 coats oil-based enamel or transparent finish on woodwork.

Allow ~$750 - 1,000 for exterior lighting (and electrical) restoration at main entrance.

Additional no or low-cost recommendations:

A comprehensive plan for maintenance of the building should be developed to organize records, avoid costly repairs, anticipate cyclical replacement of materials, and utilize the best methods and materials for historic building maintenance, which often differs significantly from maintenance of newer buildings. **This is a high priority to implement if not already in place.**

In Vermont in the fall rodents begin to find their way into buildings, particularly older buildings. We saw no evidence of pests of any kind during our walk through. But it may be prudent to set up a regiment of pest deterrence going forward.

Recommend updating the Honeywell mercury dial thermostats to modern programable thermostats.

REFERENCES:

The National Park Service publishes a series of briefs that pertain to the care and maintenance of historic structures; Preservation briefs are a useful tool when working with contractors and the following briefs are recommend as guidelines for this project. https://www.nps.gov/tps/how-to-preserve/briefs.htm

- Improving Energy Efficiency in Historic Buildings
- Roofing for Historic Buildings
- Dangers of Abrasive Cleaning to Historic Buildings
- The Repair of Historic Wooden Windows
- Exterior Paint Problems on Historic Woodwork
- New Exterior Additions to Historic Buildings: Preservation Concerns
- Preservation of Historic Concrete
- The Use of Substitute Materials on Historic Building Exteriors
- Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character
- Rehabilitating Interiors in Historic Buildings—Identifying Character-Defining Elements
- Repairing Historic Flat Plaster—Walls and Ceilings
- Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches
- Painting Historic Interiors
- The Repair, Replacement, and Maintenance of Historic Slate Roofs
- Making Historic Properties Accessible
- Understanding Old Buildings: The Process of Architectural Investigation
- Holding the Line: Controlling Unwanted Moisture in Historic Buildings
- Maintaining the Exterior of Small and Medium Size Historic Buildings
- Lightning Protection for Historic Buildings

CONCLUSION

Following our site visit and visual inspection of conditions, we note a number of maintenance and repair items that range from life safety requirements to 'nice-to-have' aesthetic upgrades. These items are noted in the individual sections above in greater detail.

With a limited budget and many maintenance and repair items to consider, prioritizing where to focus efforts is a challenge. I have listed about $70,000+/- of repairs that could be done to this building. This does not include, a new slate roof, mechanical, electrical & plumbing upgrades, nor does it include site or utilities upgrades. I did not evaluate the building's structure (but there is nothing I observed that would lead one to believe there are any structural deficiencies).

The interior of this building is in extraordinarily good shape. The exterior is showing its age and should be address in the near future to avoid the deferred maintenance becoming more costly repairs.

I found this a thoroughly enjoyable walk-through, and the hopes and ambitions for this historic building are evident through your excitement for it's future

I am personally pleased to have had this opportunity to assist you in the ongoing stewardship of this significant historic building. Please do not hesitate to call if you have questions on any of the above.

Respectfully,

Tom Bursey, AIA
Tom Bursey Designs, PLLC.