



Town of Sturbridge

Robyn Chrabaszcz, Facilities Manager

November 4, 2021

RE: Joshua Hyde Library HVAC Report 2021

To the Board of Trustees & Library Director:

The Town of Sturbridge Facilities, Town Administrator, and Joshua Hyde Library Director reviewed the draft HVAC report provided on July 6, 2021, and received the final report with cost estimates from vanZelm engineers on October 1, 2021. The report cost estimates for the two most viable options, 1 and 3, exceed the previous costs and the value causes this HVAC project to become a much larger undertaking than perhaps originally expected.

Executive Summary and Next Steps

Further down in this document, I have provided detailed technical information as backup to the following summary.

As Facilities Manager, if there is interest in addressing all HVAC deficiencies in the building (such as spaces that were not originally tempered, or improving overall indoor air quality), the I recommend that Option 3 be put forward as the long-term solution for the Library. Selecting either Option 1 or Option 3 from the study will trigger the following timeline and need to address several other building deficiencies, based on lining up for a funding request at the June 2022 Annual or Special Town Meeting for FY2023.

- Immediately - Organize a “building committee” for the project, approach Select Board with a plan. (Note that a formal “committee” is not required but there will need to be a group of people for selection of a design team and approval of plans, in addition to non-voting members the Facilities Manager and Library Director - members can be any member of the public and are not restricted to Trustees.)
- Immediately - Prepare Request for Qualifications (RFQ) with a scope of expected work (considering HVAC option, accessibility required improvements, bathroom renovations, exterior design features)
- January 2022 - Advertise RFQ for designer selection; approach CPC for funding support; approach Friends for support
- February 2022 - Receive submissions from interested design teams
- February 2022 - Rank all submissions and select at least 3 submissions for interviews
- February 2022 - Interview 3 design teams
- March 2022 - Select a design team
- March 2022 - Receive fee proposal from selected design team (this is only for the cost of the team, not construction costs)
- April 2022 – Final articles due to Select Board, asking for either the design cost or an estimated total project cost
- June 2022 - Submit application for the project to Mass.gov for a One-Stop funding grant
- July 2022 - Start design work if approved for funding, expect 6 months of design

Evaluation of the Options

Upon review of the options in the draft report, we have the following comments. We have also received documentation in an Appendix from National Grid to see if any incentives could be utilized. Incentives appear to be minimal (under \$10,000) and therefore do not seem to place any option above another from this perspective.

Option 1: Most similar to existing system, viable option to price with a 15 ton unit, keeping the skylight

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- Option 1A: Upgrading electrical service is not impossible, but likely not a pursuable option at this time
- Option 2: Exterior ductwork would not be desired for this historic district building, so this option is likely not pursuable at this time
- Option 3: We agree this option presents very well as an option to price with a 20 ton unit, keeping the skylight
- Option 4: While this option is a great energy efficient and green energy option, it is likely not viable at this time

We requested that vanZelm use only Options 1 and 3 in the final version of the report with cost estimate.

Code & Procurement Considerations

I have reviewed the proposed options from a building code perspective, and find the following preliminary determinations.

- The proposed replacement and extension of the HVAC system will likely trigger Alterations Level 2 under the 780 CMR (& 2015 IEBC).
- Using the Work Area method there are likely no work areas. If any walls, doors or windows are moved the creation of a Work Area will trigger many additional requirements under IEBC Chapter 8.
- The new system and its operation must comply with the IECC 2018 Energy Code for Existing Commercial Buildings and IECC 2018 C503.2 Change in Conditioning.
- The project must also be reviewed by a structural engineer to ensure that structural capacity does not trigger additional work (IEBC Section 807).
- Alterations to the roof curb may lead to a practical consideration to replace the flat roofing. If included in the project, the re-roofing would be required to be down to the sheathing and comply with the IECC 2018.

All of the preliminary code determinations above will need to be addressed formally by a design team, and will need to be included in the project scope.

A significant amount of capital improvements have been performed in the Library since 2018. As of August 2021, if the proposed project exceeds approximately \$150,000, the entire building will be required to be brought up to the MA Architectural Access Requirements under 521 CMR. The work known that will be triggered to be completed at this time based on a 2008 Accessibility Audit is as follows.

No.	General Description of Obstacle Which Limits Mobility or Access	ADAAG Compliance Section	MA 521 CMR Compliance Section	Type of Action to be Taken (2008)
1	No designated accessible parking space, line striping, or signage	4.6	23	Designate one 8' wide (min) parking space with 8' wide van accessible access aisle. Provide related striping and accessible signage.
2	The accessible route (walkway) is compromised due to an abrupt change in level surface of greater than 1/2" and a 2" wide gap from the transition from asphalt sidewalk to concrete pad at the main entrance	4.3	22	Patch and repair walkway to maintain a level surface such that there are no changes greater than 1/4"
3	The main entrance vestibule area is non-compliant as the interior door does not fully extend open resulting in approx. 28" of clear width space. Furthermore, only 33" of clearance exists between doors when the interior door is opened. A min. of 48" is required between 2 hinged or pivoted doors, plus the width of any door swinging into the space.	4.13, 4.14	25, 26	Remove interior door
6	The printer keyboard for public use is located on a surface 40" AFF which exceeds max height requirements	4.32, 8.0	12, 35	Relocate or replace fixtures upon which keyboard resides such that the surface height is between 28" and 34"

8	The microfiche table provides less than 27" of knee clearance space	4.32, 8.0	12, 35	Modify table to comply with required 27" knee clearance requirement
9	Inadequate clear width space of the accessible route in various locations due to display racks, globe, card catalogue, etc, as well as between book stacks	4.3, 8.0	12, 20	Rearrange items and book stacks to increase the clear width space to at least 36" with the interior accessible route of travel
10	A floor grate on the main floor level has openings of 1" which exceeds the maximum threshold of 1/2"	4.5	29	Replace floor grate to one with compliant openings
11	Lack of interior accessible signage to the office, storage, and other areas on both floor levels	4.3	41	Install accessible compliant signage with appropriate finish and contrast and character height and proportions. Raised and Braille characters should also be included. Signage should be mounted at 60" AFF OC adjacent to the latch side of the door.
12	A number of interior doors have hardware which is knob-style and non-compliant. Hardware should be easily operable by one hand or a closed fist	4.15	26	Replace door hardware with lever-type hardware or other accessible compliant hardware. (NOTE: HISTORIC HARDWARE)
13	Non-compliant push/pull force of doors to stairwell. The push/pull force is greater than 10 lbs.	4.13	26	Adjust the door closers such that the max. 5 lbs push/pull force is achieved
14	No accessible route exists to the mezzanine area which is open to the public.	4.3	22	Adopt a policy restricting public use of this area and retrieval of materials by staff only
16	Both the men's and the women's bathrooms on the lower level are substantially compliant except for the lack of compliant accessible signage, non-compliant door push/pull force; no audible and visual alarms are provided; stall doors are not self-closing; flush valve in women's bathroom on wall side of toilet; and one of the grab bars in each bathroom is at 30.5" AFF which is lower than allowed.	4.13, 4.16, 4.26, 4.28, 4.30	26, 30, 40, 41	Adjust door closers to comply with max. 5 lbs interior door push/pull force requirement. Install accessible compliant signage with appropriate finish and contrast and character height and proportions. Raised and Braille characters should also be included. Signage should be mounted at 60" AFF OC adjacent to the latch side of the door(s). Replace non-compliant water closet tank with one which has its flush valve on the approach side of the toilet. Adjust stall doors. Raise grab bars to a height of 33" to 36" AFF. Install audible and visual alarms in both bathrooms.

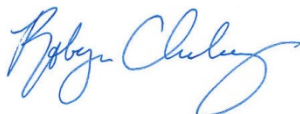
All of the preliminary accessibility issues above will need to be addressed formally by a design team, and will need to be included in the project scope. It is recommended the design team include a full accessibility audit and corrections in the project scope, as well as pursuing an accessibility variance with the Massachusetts Architectural Access Board (MAAB). A variance will be needed if historic building features cannot, or are desired not to, comply with accessibility requirements; e.g. changing historic door hardware.

Since the final report determined the work exceeds \$300,000, the project will trigger M.G.L. c. 7C, §§ 44-58, Designer Selection Law. (The Town of Sturbridge must follow the amended designer selection law in awarding any contract for design services for any building construction, reconstruction, alteration, remodeling or repair project with both an estimated design fee of \$30,000 or more and an estimated construction cost of \$300,000 or more.) This process is generally included in the timeline above.

Conclusion

As Facilities Manager, I would be pleased to work with Becky Plimpton, Library Director, and a committee to move this project forward sooner rather than later given the condition of the rooftop units. Please feel free to contact me with any questions.

Sincerely,



Robyn Chrabaszcz, AIA
Facilities Manager