FACILITY ASSESSMENTS
MUNICIPAL BUILDINGS
PHASE I

JAFFREY, NEW HAMPSHIRE

SEPTEMBER 2008

THE H.L. TURNER GROUP Inc.

TURNER GROUP

ARCHITECTS • ENGINEERS • BUILDING SCIENTISTS • CONSTRUCTION MANAGERS

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Town of Jaffrey
Jaffrey, New Hampshire

Facility Assessments of
Municipal Buildings

Introduction

Beginning in early December of 2007, The H.L. Turner Group Inc. (TTG) of Concord, New Hampshire, with assistance from Turner Building Science & Design, LLC (TBS) of Harrison, Maine (for HVAC related items), and BLW Engineers of North Andover, Massachusetts (for items related to electrical and fire alarms) were charged by the Town of Jaffrey to perform assessments of all of the Municipal Buildings in the Town. The facility assessments were to be divided into two (2) phases. Phase I, to be completed during 2008, and the subject of this report, includes assessments of the Town Office Building, the Police Station, the Library, and the Town Recycling Center. The remaining municipal buildings, including the Fire station, DPW garage and offices, Recreation Department complex, Contoocook Beach buildings, the Central Storage Building, Wastewater Treatment Plant Administration Building, and the Water Department Administration Building, will be part of Phase II, which is scheduled to begin in the fall of 2008 with a final report completed in early 2009.

The overall Scope of Work included on-site visual observation and evaluation for the purpose of determining the overall condition of the existing buildings and building systems. For each building covered in this report, this included:

- General description of the premises.
- Pertinent site features.
- The exterior of the building.
- The roof area.
- The interior of the building.
- Electrical and fire alarm.
- Heating and air conditioning (HVAC).
- Building insulation, or lack thereof, as may be detected by non-destructive methods.
- Building accessibility.
- Code issues.

The reports contained herein describe the results of our on-site evaluations and include a list of recommendations with regard to the deficiencies noted. The reports also include a matrix of the items slated for repair, replacement, or upgrade with an Opinion of Cost to perform the work and a time frame for when the work should be completed. Photographs are included to document the overall conditions, as well as many of the deficient areas.

During the course of this work, we spoke with department heads and key personnel at each facility and received their feedback with regard to the pros and cons of the facility where they worked. Questionnaires were also prepared and distributed to department heads and staff. A sample of the questionnaire is included in the appendix of this report. The questionnaires were read, the results evaluated, and comments compiled for use in the preparation of this report.

Opinions of Cost were prepared using up-to-date building construction cost data from sources such as RS Means, a division of Reed Construction Data. RS Means is a leader in the compilation and presentation of a wide array of current cost data for the construction industry.

At the conclusion of the Phase II portion of this project, we will prepare a ranking of all of the Town's Municipal Buildings in terms of critical needs for a particular facility, be it repairs, upgrades, renovations, code issues, or space needs.

SECTION 1

JAFFREY TOWN OFFICES

Jaffrey Town Office Building

The Jaffrey Town Office Building is a two-story, wood-framed structure located at 10 Goodnow Street. The building was constructed on a concrete slab-on-grade with a frost wall, and hence there is no basement or crawl space below the building. The front of the building faces in a westerly direction. Formerly a storage building for a building supply/hardware store, the building was converted for Town use in the mid-1990's.

Exterior

The exterior of the building is covered with vinyl siding. With the exception of several areas along the rear of the building, the siding is in good condition. The roof is a Gambrel-style roof covered with asphalt shingles. The shingles are in fair to good condition, and should not require replacement for another 8 to 10 years. Most of the windows are double-hung wood windows fitted with aluminum storm windows. The windows are in poor condition. Some are loose fitting and drafty, while others are tight and inoperable. Most of the building occupants have complained about the windows during the winter months as a source of cold air intrusion into the building. There is a large picture window at the second level along the rear or east side of the building. The seal has failed between the panes of glass, and the window should be replaced. The main door at the front of the building and the rear doors are metal clad. The metal has started to show signs of rust. On the main door, there are signs of rust bleeding through the paint. The door that accesses the rear storage area, however, is severely rusted along the bottom and is in need of replacement.

The main entrance into the building was altered in 1994 to meet ADA requirements. There is a ramp and stair set that leads to the front door with railing on each side. We measured the ramp width, clearances, and the clearance in front of the door and found that the present configuration does meet the minimum requirements of ADA. However, the front door into the building is not fitted with an automatic opener. The area in front of the door could be widened to allow better access for the general public.

Interior

There is an air lock inside the front door. Although it meets the minimum ADA requirement of 48-inches for the distance between a fully open door and a closed door, and does provide space for a 5-foot radius circle (per ADA), it is minimal in all dimensions. The configuration of the air lock does not function as intended as many occupants have complained about drafts through the front door during the winter months.

The main corridor at the first floor and the outer public area of the Tax Collector/Clerk offices are covered with vinyl composition floor tile. The offices, copy room, and the main conference room are carpeted. The stairs leading to the second level are also

carpeted. The carpeting on the stairs is worn. However, all other carpeted areas are in good condition. Finishes throughout the building are in fair to good condition.

The first level of the Town Office Building is approximately 2,400 square-feet. It contains the Town Clerk, Tax Collector, Building Inspector, and the Office of the Assessor and Zoning and Planning Clerk. There is also a large 725 square-foot conference room, handicapped accessible bathroom for both public and Town employee use, a vault used for storage of Town records, and a small equipment storage room at the rear of the building that primarily serves as an Electrical Room. The room is approximately 8-feet by 16-feet.

The second level is approximately 2,000 square-feet of usable space. It contains the offices of the Town Manager, Finance Director, and Administrative Assistant, as well as the Town Welfare Office. In addition, there is a small conference/meeting room, kitchen area, and a bathroom for Town employees. The bathroom facilities on the second level are outdated and should be updated and modernized to include new water saving fixtures to meet current code requirements. The only usable means of egress from the second level is the central stairway. There is an emergency chain ladder that can be hung out a second floor window, but the window where the ladder is currently stored is swelled or painted shut, and as such is inoperable.

Structurally, the building is in fairly good condition, with the exception of the second floor on the north side of the building in the area of the upstairs meeting room. There is a pronounced sag in the floor near the middle of the building. It is our understanding that the floor was heavily loaded at one time with file cabinets that have since been relocated. However, the sag remains. We investigated the framing below, and found a main carrying beam fabricated from three (3) 2 x 8's in the area of concern. Based on the span, calculations show that the beam is considerably overstressed for normal office loads.

Another structural issue is the knee braces on the columns at the second level along the north side of the building. In several locations, the knee braces had been removed. These were part of the original structural framing system and were intended to reduce the unbraced length of the column, as well as to help reduce the magnitude of the bending in the columns. The original braces should eventually be replaced.

Overall, we observed an overall lack of insulation throughout the building. This was confirmed by many of the employees who expressed dissatisfaction with the heating system and the ability to keep warm during the winter. After our site visit, we also learned that following several snow storms which dropped a considerable amount of snow in the area, ice dams formed along the eaves of the building, thus causing water to back-up and leak into the building at numerous locations. Again, this indicates poor insulation, as well as a lack of ice and water shield on the roof. We recommend that a further study be done to ascertain the most effective areas to add insulation, whether it is the walls, the attic spaces, or a combination of both. One caveat with regard to adding

insulation in the attic spaces is that the existing framing must be evaluated to determine if it is capable of sustaining additional snow load on the roof, which will occur with added insulation.

Along the lines of increased insulation, we observed that the offices, in particular that of the Town Manager and Finance Director Offices, have inexpensive doors and un-insulated walls providing little to no privacy for confidential meetings.

During the 1994 renovation, an attempt was made to make the building more handicapped accessible. The front entrance was reworked to include a ramp, and a handicapped accessible bathroom was added on the first level. However, the second level of the building is inaccessible. In light of the fact that there is an office (i.e. the Welfare Office) on the second level that meets with residents on a regular basis, having it inaccessible is not very desirable. In addition, the counter height at both the Town Clerk's Office and the Tax Collector's Office is at 42-inches, which is too high for ADA accessibility. The ADA guidelines call for a counter height of 28 to 34-inches by 36-inches long.

The four-zone fire alarm control panel and associated fire alarm system components were installed in 1984. The coverage meets the current NFPA 72 and ADA guidelines with the exception of missing strobes in the second floor bathroom and ADA accessible bathroom on the first floor. Also, there should be a manual pull station at the exit door (i.e. exterior door) of the main Electrical Room. With a few upgrades, the system can easily be brought up to present standards. However, consideration should be given to replacing the entire system in the next five (5) years.

The HVAC unit serving the main conference room is a York split system that is about 15 years old. No outside air is provided to the conference room or the property records area. There are ducts that are disconnected above the property records, and the return is located only in the conference area. There are no traps on the condensate drains from either the furnace or the cooling coil. The HVAC system located above the vault area is very difficult to access, and provides no outside air to occupants. The plenum return is drawing air from the area above the ceiling. The two (2) split system gas-fired DX HVAC units located in closets on the second floor have no outside air supplied to either unit. The plenum return is located in the closet. However, the closet doors are louvered. The metal supply duct appears to be above the attic insulation, which will likely cause significant snow melting, and possible ice dams to form on the roof.

Perhaps the biggest complaint that was echoed from all of the Town Office employees was the lack of sufficient on-site storage for files and records. There is a lockable vault in the southeast corner for some Town records, but much of the files must be stored off-site. In fact, we learned that the Town leases storage space in a facility in the Town of Rindge.

Recommendations

Based on our observations, we offer the following recommendations. A summary of the recommendations, along with Opinions of Costs, is included in a separate spreadsheet. Other recommendations not covered below are also included in the spreadsheets.

1. Although the roof shingles are in fairly good condition, they will most likely need to be replaced within the next 8 to 10 years. At that time, a barrier of ice and water shield should be added prior to installing the shingles.

2. The small roof over the front door leaks, as evidenced by the water stains on the ceiling in the air lock. This may be a flashing problem, and should be addressed sooner than later.

3. There are a few small areas along the south or rear portion of the building where the vinyl siding has been broken or otherwise damaged. These areas should be replaced.

4. The building has a main door at the front and two doors at the rear. One of the rear doors provides an exit from the main conference room, while the second door provides access and egress from the storage/Electrical Room. All doors are steel clad doors with steel frames. All are showing signs of rust, but the door into the storage room is badly deteriorated along the bottom and is in need of replacement.

5. There are nineteen (19) double-hung windows throughout the building, as well as a large picture window on the second level. Some of the windows are poor fitting, and hence are very drafty in the winter. Others are jammed tight and cannot be opened. All are poor in terms of energy conservation. The seals on the picture window have failed. All windows should be scheduled for replacement.

6. As mentioned above, there is a lack of insulation throughout the building. This results in high energy costs, an uncomfortable environment for the occupants and the visiting public, the creation of ice dams, and damage from water infiltration. Further study should be undertaken to determine the most effective ways and locations to improve the insulation (and ventilation) of the building.

7. Although the front entrance walkway and entry doors meet the minimal requirements of ADA, an automatic door opener is lacking. When the front door is replaced the automatic opener can be added at that time.

8. The structural issues should be addressed as soon as possible, the sagging floor issue in particular. The existing beam, which consists of a series of three (3) 2 x 8's, is very much overstressed for normal office loads, never mind a row of heavy filing cabinets. The entire beam or beams in this area should be replaced with properly sized members.

9. Of the two counters, one at the Tax Collector's Office and the other at the Town Clerk's Office, neither is at the proper height for handicap accessibility. They are currently at 42-inches off the floor, and at least one should be lowered to meet ADA.

10. Improve the privacy of the Town Manager's and Finance Director's Office by soundproofing the walls and adding heavier soundproof doors.

11. Upgrade the second floor bathroom facilities. The upgrade should include the installation of fixtures with low water usage.

12. Provide more storage area for files and records. This is difficult to achieve given the existing building and space available. Reconfiguration of the existing space may be possible to achieve more storage, but it would sacrifice office space as well as public space, both of which are at a premium now. Perhaps consideration could be given to locating some files and records over at the Library. The Library does have space available at the present time that could be utilized.

13. Building security, or lack of, is a concern for many of the Town employees. The public has free access to almost all areas of the Town Office Building. Some consideration should be given to more controlled access for certain areas. For example, doors at the base of the stairway could be used to control access to the upper level. This may mean that the Welfare Office would have to be relocated to the main level. Also, proper heavy-duty glass should be installed at the Tax Collector and Town Clerk's counter for added safety.

14. Provide the missing strobes and pull stations for the fire alarm system in order to bring it into compliance with current codes. Consider replacement of the entire fire alarm system in the next five (5) years with a new addressable system.

15. Duct the return air from both the Conference Room and Property Records, and add outside air to mix with the return air. Add condensate drain traps to the furnace and cooling coil. The system serving this area is nearing the end of its useful life. Consider replacing the existing HVAC unit with a new unit with ducted outside air, supply air and return air. The same is true of the system over the vault. A new HVAC system should be considered to serve the Tax Collection and Building Inspectors areas. For units in the second floor closets there are several options that may be considered for attic ductwork. An insulated chase could be constructed for

the supply duct enclosure to prevent air leakage into the attic. Another option would be to move the supply duct into occupied space to prevent leakage into the attic, and the third option would be to insulate the roof on the exterior to make the attic part of the conditioned building envelope.

16. Provide a second means of egress from the second floor that would be used only in the event of an emergency. Although a second means of egress is not strictly required by code since the number of occupants is less than 50, and the maximum travel distance to the current egress is less than 75 feet, it would be prudent to have this secondary exit, especially in light of the fact that the second floor is used for regular staff meetings and is the location of the Town's welfare office. An ideal location for the secondary egress is at the large picture window in the waiting area at the top of the stairway. The picture window is in need of replacement anyway, and it would be relatively easy to replace the window with a door and infill the surrounding wall. The door would open to a platform with a set of stairs to the pavement at-grade. The platform and stairway would require a covering to protect against the build-up of snow and ice on the stairs.

Conclusion

The current Town Office Building has served the Town of Jaffrey well over the years, but it is quickly getting to the point when either the Town will outgrow the building, or the costs to maintain an acceptable working environment will become cost prohibitive. New windows, replacing a beam or two, adding more insulation, and general upgrades to finishes and fixtures are all manageable items, but when you have to deal with overcrowding, providing more space for offices and storage where none exists, and providing full accessibility to the building by installing an elevator, that is when it becomes difficult to justify the costs. In our opinion, the Town should seriously consider, as part of its future planning, setting aside funds for a new Town Office Building. Whether it purchases an existing building that can be converted for Town use, or build a new structure, the process should start now so something can be in place in the next 5 to 6 years.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Roofing –Gambrel Type Roof	Water Infiltration reported on account of ice dams forming. Shingles currently in good condition with little wear.	Replace shingles and add ice and water shield.	8 to 10 years		$12,000	
Vinyl Siding	Some of the siding along the lower portion of the rear wall is in bad condition.	Re-side the broken and worn sections of siding.	None	$1,000		
Front Door	Metal door showing signs of rust.	Repaint door and eventually replace door.	3 to 5 years	$300	$2,250	
Rear Door into Storage Room	Bottom of the metal door is rusted and the door is in need of replacement.	Replace door.	None	$1,400		
Double-Hung Windows	Old wood windows with storm windows – loose fitting and drafty.	Replace windows: 19 double-hung windows.	2 to 3 years	$19,250		

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ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Picture Window at Second Floor at Top of Stairwell	The seal between the double pane glass has failed.	Replace the picture window.	2 to 3 years	$3,400		
Insulation	There is a lack of insulation throughout the walls and attic areas.	Upgrade the insulation throughout the entire building. An engineering analysis will be required in order to determine if additional insulation will cause overload of structural members from additional snow load.	1 to 2 years Attic spaces Walls	 $6,000 $12,000		
Front Entry	No means for handicapped persons to open door unassisted.	Add an automatic push-button door opener. This should be added when door is replaced.	3 to 5 years		$5,000	
Front Entry Air Lock	Vinyl tile flooring OK; leak in ceiling.	Check flashing for small roof over front door, add ice and water shield, and re-roof small roof section over door.	1 to 2 years	$2,000		

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ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Flooring	The carpeting on the stairway is worn. Carpeting is also worn in high traffic areas on second level.	Replace worn carpeting on stairway and in upstairs traffic areas.	1 to 2 years	$1,200		
Soundproofing Issues between Offices	There is a lack of privacy for many of the offices due to inadequate soundproofing. In particular, the Town Manager's & Finance Director's Offices.	Install better soundproofing and upgrade office doors.	N/A	$4,500		
Storage for Files and Records	There is an overall lack of storage in the Town offices for many of the files and records.	Provide additional storage area on-site by rearranging current layout. Consider using the Library for off-site storage. Off site storage should be close-by and convenient to access.	2 to 3 years		$30,000	

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ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Counter Accessibility	The counter height on the public's side for the Town Clerk and Tax Collector are not ADA accessible.	Lower one existing counter such that it is accessible by persons in a wheelchair.	N/A	$4,000		
Accessibility to the Second Floor	The second level in not handicap accessible.	Add an elevator or discontinue use second level for any functions that the public must access.	N/A		$50,000	
Second Floor Structural Issue	Second floor is sagging from overload by filing cabinet storage. The file cabinets have since been removed. An engineering evaluation indicated the present beam to be undersized.	The existing floor must be shored, jacked, and leveled, and the main carrying beam replaced.	N/A	$8,500		

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ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Column Knee Braces	At the second floor level, some of the column knee braces had been removed.	Since the knee braces were part of the original design and serve a structural function, they should be replaced.	N/A	$800		
Bathrooms	The downstairs BR requires improved ventilation. A separate employee bathroom is needed. The upstairs BR needs to be completely upgraded.	Increase ventilating fan in downstairs bathroom. Remodel upstairs bathroom with new fixtures, including new low-flow toilet.	3 to 5 years	$1,200	$12,000	
Parking	Parking lot is shared with the Citizen's Bank. There is no designated parking for Town business.	Mark several parking spots for "Town Business Only".	N/A	$400		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Security	There is a lack of security for Town employees and for the building as a whole.	Improve security for employees and monitor public access to the second level after normal hours. Consider controlled access to second level and more security for main level offices.	N/A	$30,000		
Secondary Means of Egress from Second Floor	The only means of egress from the second level is the central stairway and a chain ladder positioned at an inoperable window.	Remove the picture window in the waiting area and add a doorway, platform and stairway to ground level at the rear of the building	N/A	$20,000		
			Sub-Total	**$115,950**	**$111,250**	**$0**

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short Term**	**Mid-Term**	**Long-Term**
Meeting Room HVAC System	Unit is 15 tears old (York split system). No outside air provided to Meeting Room or Property Records. Ducts disconnected above Property Records. Return located only in Meeting Room. No trap provided on condensate drains from furnace or cooling coil.	Duct return air from both Meeting Room and Property Records. Add outside air ducted to mix with return air. Add condensate drain traps to furnace and cooling coil. Provide new HVAC system with ducted outside air, supply air, and return air to serve Meeting Room and Property Records area. Existing unit is nearing end of useful life and does not provide outside air to occupants.	4 years	$2,000 $2,000 $200	$20,000	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short Term**	**Mid-Term**	**Long-Term**
HVAC System above Vault	Split system unit is very difficult to access, provides no outside air to occupants, and has plenum return (drawing air from many areas above ceiling). Unit also has some fiberglass duct.	Duct return air from both Tax Collection and Building Inspection areas of building. Add outside air ducted to mix with return air. Replace fiberglass duct in supply with metal duct. Provide new HVAC system with ducted outside air, supply air, and return air to serve Tax Collection and Building Inspection areas. Existing unit is not maintainable and does not provide outside air to occupants.	9 years	$2,000 $2,000 $1,000	$20,000	
Accessible Toilet Exhaust	Toilet exhausts through flexible dryer vent through gable end of building. Exhaust duct is restrictive and likely does not provide code required ventilation for the bathroom space.	Replace exhaust duct with appropriate metal duct sized to provide required air flow.		$500		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short Term**	**Mid-Term**	**Long-Term**
2nd Floor HVAC Units	2 split system gas-fired DX HVAC units in closet. Plenum return in closet with vented doors. No outside air provided to either unit. Metal supply duct appears to be above attic insulation. (Duct in attic above insulation will likely cause significant snow melting and possible ice damming on roof.)	<u>Attic Duct Options</u> *Option 1:* Construct insulated chase in attic for supply duct enclosure to prevent air leakage in attic. *Option 2:* Move supply duct into occupied space to prevent leakage into attic. *Option 3:* Insulate roof on exterior to make attic part of conditioned building envelope. Add outside air ducted to mix with return air. Duct return air from areas on second floor of building.	8 years	$3,000 $2,000	$5,000 or $3,000 or $15,000	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short Term**	**Mid-Term**	**Long-Term**
2nd Floor HVAC Units (continued)		Provide new HVAC system with ducted outside air, supply air and return air to serve Tax Collection and Building Inspection areas. Existing unit is not maintainable and does not provide outside air to occupants.			$30,000	
		Sub-Total		**$14,700**	**$75,000**	-------

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN OFFICES, JAFFREY, NH

ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
600 Amp, 208-Volt Service Square D I Line Main Switchboard	Installed in 1982, and in good condition with no reported problems.	Provide general maintenance, including cleaning, re-tourqing of bolts, and testing of circuit breakers.	10 years		$15,000	
Panelboards and Load Centers	(1) 24 Circuit SQ. D load center, (1) 42 circuit SQ. D panelboard, (1) E circuit load center, (1) 16 circuit load center. All in good condition; small amount of spares available.	Provide general maintenance, including cleaning and re-tourquing of bolts and circuit breakers.	10 years		$5,000	
FCI 4-Zone Fire Alarm Control Panel & Associated Fire Alarm System Components.	Installed in 1984. Manual pull station required at main electric room exterior door. Coverage meets NFPA 72 and ADA, with exception of missing strobes in upstairs bathroom and HC toilet on 1st floor.	Provide missing strobes and pull stations immediately.	N/A	$1,200		
		Replace system in its entirety with new, addressable system.			$20,000	

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ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Exit Signs and Emergency Lights	LED exit signs and remote emergency lights powered from an emergency battery unit in main electric room. Lights were tested and working properly.	Test batteries on yearly basis.	10 years		$5,000	
Lighting Fixtures	Fluorescent, recessed, acrylic lensed, and surface wraparound fixtures; recently retrofitted with new T8 lamps and electronic ballasts. Some lenses cracked.	In the long term, fixtures should be replaced with even more efficient fixtures, as new technology becomes available.	15 years			$10,000
		Replace a few fixtures that are in bad condition now.	1 year	$1,000		
Receptacles	In conference room, reportedly too high and should be relocated to 24" AFF. Quantity of receptacles is deficient in some rooms, over use of extension cords.	Relocate receptacles. Add more receptacles where appropriate.		$3,000		
			Sub-Total	**$5,200**	**$45,000**	**$10,000**

Jaffrey Town Office Building
Facility Audit

Summary of Costs

	Short-Term	Mid-Term	Long-Term
ARCHITECTURAL	$115,950	$111,250	--------
ELECTRICAL	$5,200	$45,000	$10,000
MECHANICAL – HVAC	$14,700	$75,000	---------
TOTALS	$135,850	$231,250	$10,000

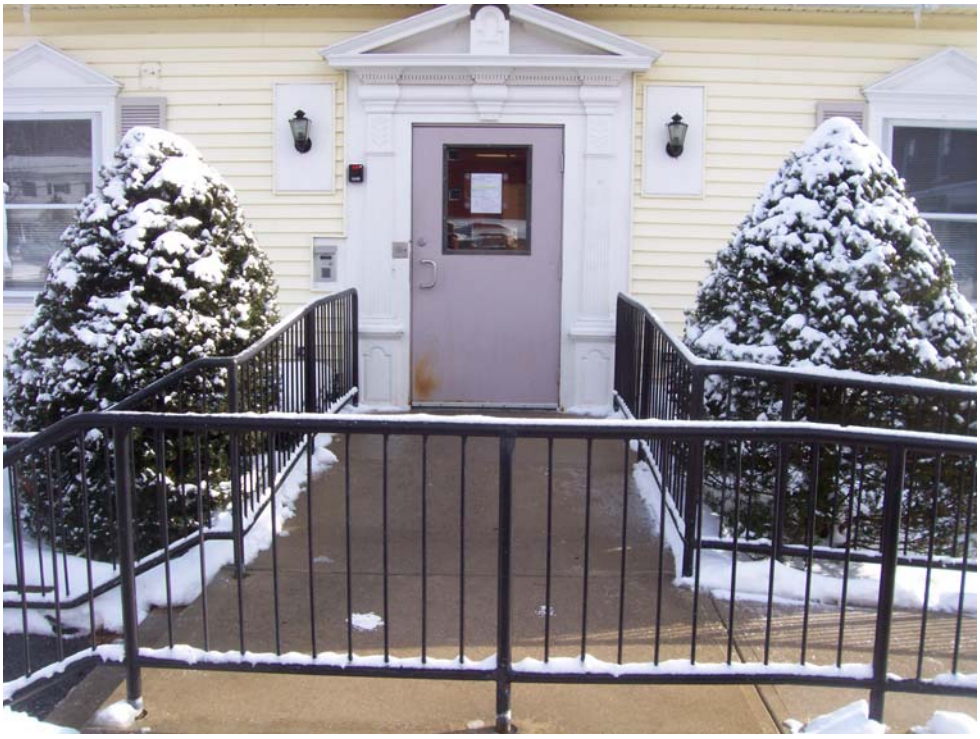
West Elevation – Town Office Buillding Main Entrance

North Elevation of Town Office Building

East Elevation – Rear of Town Office Building

East Elevation – Rear of Town Office Building

South Elevation



Town Offices Main Entry on the West Side

Ramp at Main Entry to Town Office Building

Rusted Door at the Rear of the Building

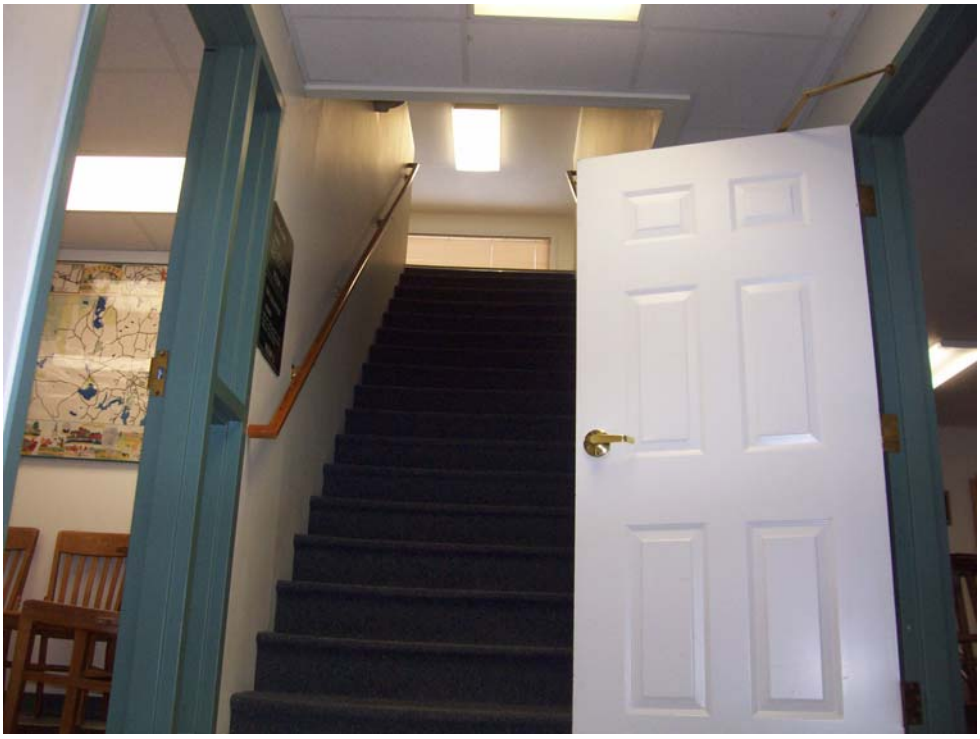
Damaged Vinyl Siding on the East Side of the Building

Damaged Vinyl Siding at the Southeast Corner of the Building

Air Lock at Main Entry

First Floor Conference Room

Main Stairway to the Second Floor



Conference Room Door Open into Main Stairway

Public Counters

First Floor Bathroom

Main Stairway at the Second Floor

Second Floor Waiting Room with Large Picture Window

Second Floor Office and Framing

Second Floor Meeting/Conference Room

Roof Framing at the Crawl Space

Second Floor Framing at Sagging Floor

SECTION 2

TOWN OF JAFFREY POLICE STATION

Town of Jaffrey Police Station

The Police Station for the Town of Jaffrey is a two level brick building located at 26 Main Street in the downtown area. The front of the building faces south. The Police Station building originally served as the Town Offices from 1954 until about 1995 when the building underwent a major renovation. The Town Offices were moved to another building behind the Police Station, and the building at 26 Main Street was converted for Police Department use. The department is manned by nine (9) full-time officers, including the Chief, and there is a full-time office administrator.

Part of the renovation work that was completed during the mid 90's includes a 760 square-foot sally port on the north side (rear) of the building, and a new ADA accessible ramp into the building from the south, wrapping around and entering the building on the west side. The upper level of the building was refitted for offices, a conference room, interview room, and a dispatch area. The lower level or basement, houses the squad room and booking area (both accessible from the sally port), as well as a locker area, prisoner cells, property room, and break room. The total square-footage for the building, including both levels, but not including the sally port, is about 4,500 square-feet. The building is served by both Town water and sewer.

Exterior

The exterior of the building is constructed of brick with concrete masonry unit (CMU) backup. The roof is a wood-framed, hip-style roof with asphalt shingles. The roof edge is fitted with aluminum gutters and the eaves are vented. The vents serve to move air up through the attic space, thereby preventing ice dams along the roof edge. A large wood cupola sits on top of the roof. During the renovation work, a 22-foot wide section of the front of the building flanking the main entrance was covered with EIFS (Exterior Insulation and Finish System) panels that simulate the look of limestone. Generally, the exterior of the building is in very good condition. Some of the wood trim around the eaves, as well as the entire cupola shows signs of blistering and peeling paint. These areas should be repainted. Similarly, the EIFS panels are dull and marked-up in a few spots, and should be maintained with a fresh coat of cementitious material similar to a parging. All of the old double-hung windows were recently upgraded with vinyl replacement windows.

The front entrance is fitted with a pair of wood doors with glass lites. The doors are showing their age, as they are believed to be the original doors from when the building was constructed in 1954. Consideration should be given to replacing the doors sometime in the next five to ten years.

The sally port is in good condition, although we did note that there is a sizable gap between the north side overhead door and the doorframe, or the doorframe and the rough opening. This gap should be closed-up as it could account for appreciable heat loss.

Furthermore, it was brought to our attention that the single ceiling mounted heater was not sufficient to heat the sally port due to its location.

Interior

The interior spaces on the first level are predominantly vinyl composition tile or carpeting on the floors with painted gypsum walls and ceilings. All of the spaces in the basement have vinyl tile on the floors, and the walls are painted CMU block. It was noted that the tile flooring in the squad room is badly worn and in need of replacement. This particular floor is subject to heavy use and is a good candidate for rubber flooring, a product that stands up very well to high traffic. The break room consists of a stove, refrigerator, sink, soda machine, and television. Most of the appliances and furniture are outdated, and the entire space could use upgrading. We noted a receptacle just above one of the burners on the stove. The receptacle should be moved, as it is a code violation.

The locker room space is ample, but the lockers are old and too small. The shower facilities and bathroom facilities are old and outdated, and are in need of upgrading.

There is little excess room for file storage. The attic space is currently unused, but could be converted to a storage area for certain documents provided a suitable access stair could be installed. The present pull-down stairway is in a closet and cannot be used unless everything is removed from the closet. Another possibility for gaining additional square-footage is the area over the sally port. An engineering study would have to be conducted to confirm the capacity of the existing framing and support structure to determine if they are capable of supporting the loads from a second level, plus the roof loads.

Access to the administrative floor through the ADA accessible ramp/door on the southwest corner requires users to gain the attention of staff through use of an extension phone by the front door or by ringing a doorbell. Although this arrangement does meet the intent of the ADA accessibility guidelines, it is quite inconvenient for users, especially in inclement weather. There is room to create a secure airlock just inside the ADA accessible door to remedy this situation. The security system on the entry doors between secure areas consists of a push button lock system. The system is outdated, and it is recommended that a new card swipe system be installed in the next year or two.

In general, the Police Station building is very functional and meets the needs of the current police force. With a few relatively minor upgrades, it could serve the department for many years into the future.

Recommendations

Based on our observations, we offer the following recommendations. A summary of the recommendations, along with Opinions of Costs, is included in a separate spreadsheet. Other recommendations not covered below are included in the spreadsheets.

1. The paint is peeling on the cupola and some of the trim at the eaves. The wood should be scraped and painted as required.

2. The front door of the Police Station is nearing the end of its useful life and should be replaced within the next three to five years.

3. The squad room floor is badly worn and in very poor condition. It is recommended that this floor be replaced in the next year or two. Consider the use of a heavy-duty rubber floor for this high traffic area.

4. There is an overall lack of storage space for files and records. There are two options for consideration: use of existing space and creation of new space. There is existing space available in the attic that may be used for storage. The only drawback is that the access to the attic is very inconvenient. It consists of a pull-down stair located in a closet in the Chief's office. It requires that the items in the closet be moved in order to provide room to extend the stairway to the floor. A new, more conveniently located stairway is required in order to utilize this space. The other alternative is to construct a second level over the sally port. The first step in exploring this option would involve an engineering study to determine if there is sufficient strength in the existing structure to support a second level.

5. The existing security system is old and outdated. It is recommended that the system be upgraded to a new card swipe system.

6. The locker room, bathroom, and shower area requires upgrading. The fixtures are old and should be replaced. The overall finishes, including the floor, are in need of an upgrade. The lockers are undersized; larger lockers are required.

7. Much of the furniture throughout the station is old and outdated and should be upgraded. The furniture and appliances in the kitchen/break room are outdated and should be replaced.

8. The conference room should be equipped with a multi-media center.

9. The building cooling is currently provided by a limited number of window mounted air conditioning units. It is recommended that an air handling system be installed to provide ventilation by introducing outside air, as well providing air conditioning.

10. There is inadequate combustion air for the existing boiler. It is recommended that high/low openings be installed to provide an adequate supply of combustion air as required by code. It was also noted that the boiler exhibited signs of leakage. The leaking boiler sections should be repaired. It is also recommended that additional

zones be added to prevent overheating of certain areas. For example, the break room is overheated because it is on the same zone with the locker room.

11. The heaters in the sally port are directed horizontally into the ceiling structure and therefore do a poor job heating the area. It is recommended that the heaters be redirected downward and out into the sally port for better heat distribution.

12. The existing four-zone fire alarm control panel and associated fire alarm system components were installed in 1984. The coverage does meet NFPA 72 and ADA with the exception of missing strobes in the bathrooms. It is recommended that the missing strobes be added. The system should not need replacement for at least another ten years.

13. It was noted that the emergency lighting consisted of several self-contained battery units. At the time of the survey, these units were tested and did not work. Since the emergency generator powers-up the entire service, the battery units are obsolete and should be removed. There appeared to be adequate exit sign coverage. Additional exit signs should be added as required.

14. There are a number of receptacles that are not code compliant. For example, there are two existing receptacles located directly above a burner on the electric stove. These should be removed. A few of the receptacles at the bathroom sinks were not the GFI type. These should be replaced as required by code.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Exterior Trim and Cupola	Paint is peeling on cupola and some of the trim at the eaves.	Scrape and paint as required.	2 to 3 years	$3,000		
Front Door	Door is nearing the end of its useful life.	Replace front door.	3 to 5 years		$4,000	
EIFS Panels at Front of Building and at Ramp Access Way	The EIFS (Exterior Insulation and Finish System) panels that were installed back in 1994 are in need of paint in some areas.	Recoat as required.	2 to 3 years	$1,500		
Floor in Squad Room	Floor is worn and in poor condition.	Replace squad room floor with a new, heavy-duty rubber floor.	1 to 2 years	$2,200		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Kitchen/Break Room	Outdated appliances and furniture.	Upgrade kitchen/break room with new appliances and furniture.	2 to 3 years	$5,000		
Storage Space for records and files	There is an overall lack of storage space for files and records.	Provide more storage space. Consider addition over sally port or possible use of attic space if a better means of access can be provided. Note: Providing space over the sally port would require an engineering calculation to determine the ability of the existing structure to support the added load.	5 to 7 years Eng. Study	$3,500	$5,000	
Security System	System is old and should be updated.	Upgrade to a new card swipe system.	2 to 3 years	$30,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Locker Room/Bathroom and Shower	Bathroom fixtures require upgrading as does the shower area. Seems to be a shortage of lockers, or existing lockers are too small.	Install new bathroom and shower fixtures. Refinish entire locker room area. Install new rubber floor in locker room. Upgrade to larger lockers.	3 to 5 years		$27,000	
Sally Port Overhead Door	Air gap noted along top of door, between door and door frame, or door frame and wall.	Fill or close gaps to prevent heat loss.	N/A	$500		
Furniture	Much of the furniture throughout the station is worn and outdated.	Replace the old and outdated pieces of furniture.	2 to 3 years	$3,000		
Conference Room	The conference room lacks a multi-media center.	Install a multi-media center in the conference room.	1 to 2 years	$25,000		
			Sub-Total	**$73,700**	**$36,000**	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Building Air Conditioning	Air conditioning currently provided by limited window mounted units. Coverage and distribution of AC is limited.	Provide air handling system to provide ventilation (outside air) and air conditioning to building.			$50,000	
Heating System	Eighteen year-old, cast iron boiler with indirect hot water heater. Five zones of heating in building. Overheating in Break Room due to zoning with Locker Room. Inadequate combustion air. Leakage from boiler noted.	Add zoning to prevent overheating in Break Room. Add combustion air with high/low openings as required by code. Repair leaking boiler sections. Replace boiler with high efficiency model.	12 years	$1,000 $4,000 $500		$20,000
Exhaust System	Exhaust provided for Locker Room toilet/shower, cells. No exhaust provided for accessible toilet.	Provide exhaust grille, duct, and fan for accessible toilet.		$3,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Outside Air Distribution	Outside air provided only through operable doors and windows.	Ventilation air should be provided for occupants and as make-up for exhausted areas.			See Air-Conditioning (above)	
Sally Port Heating	Unit heater blows horizontally into ceiling structural bay.	Redirect unit heater downward and out into sally port for better heat distribution.		$500		
		Sub-Total		**$9,000**	**$50,000**	**$20,000**

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION, JAFFREY, NH

ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
600 Amp, 208-Volt Service Panel	General Electric, 42 circuit panel with no spare breakers. Panel is in good condition.	Provide general maintenance, including cleaning, re-tourqing of bolts and circuit breakers.	15 years			$3,000
15 KVA 120/240V Single Phase Emergency/Stand-by Generator (Olympian)	Exterior generator with interior ASCO automatic transfer switch.	Provide general maintenance and continue to test/run generator on a weekly basis. Unit is in excellent condition.	20 years			$18,000
FCI 4-Zone Fire Alarm Control Panel & Associated Fire Alarm System Components.	Installed in 1984. Coverage meets NFPA 72 and ADA, with exception of missing strobes required in bathrooms.	Provide missing strobes	N/A	$1,500		
		Replace system in its entirety with a new addressable system.	10 years		$15,000	

ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Exit Signs and Emergency Lights	There appeared to be a lack of enough exit sign coverage. Emergency lighting consisted of a few self-contained battery units, but when tested were not working. The generator powers-up the entire service, so the battery units are obsolete.	Provide missing exit signs. Remove old battery units.		$2,000		
Lighting Fixtures	Efficient 2'x4' surface wrap-around fluorescent fixtures throughout. Bathrooms contain combination fan/lights. Many fixture lenses were cracked, discolored, aged.	Replace all fixtures, in the long-term, with new, more efficient fixtures.	15 years			$5,000
		Replace a few fixtures that are damaged now.	1 year	$2,000		
	Fixtures in cell rooms are not vandal-proof.	Replace fixtures with vandal-proof fixtures.	N/A	$3,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY POLICE STATION, JAFFREY, NH

ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Receptacles	Perimeter of building (both floors) has G3000 wiremold with receptacles located within the wiremold. A few receptacles at bathroom sinks were not the GFI type, as required by code. Two existing receptacles are directly over an electric stove, creating a safety hazard. Reception/Dispatch desk has numerous cables that should be re-configured.	Replace all non-GFI receptacles where needed by code. Remove receptacles over stove.		$1,000		
			Sub-Total	**$9,500**	**$15,000**	**$26,000**

Jaffrey Police Station
Facility Audit

Summary of Costs

	Short-Term	Mid-Term	Long-Term
ARCHITECTURAL	$73,700	$36,000	--------
ELECTRICAL	$9,000	$50,000	$20,000
MECHANICAL – HVAC	$9,500	$15,000	$26,000
TOTALS	$92,200	$101,000	$46,000

Main Entrance of Police Station

South Elevation – Front Entrance to Police Station
ADA Ramp on the Left Side

East Elevation of Police Station

Northeast Corner of Police Station
Emergency Generator along East Side

Sally Port on North Side of Building

Northwest Corner of Police Station
Entrance to Sally Port on West Side

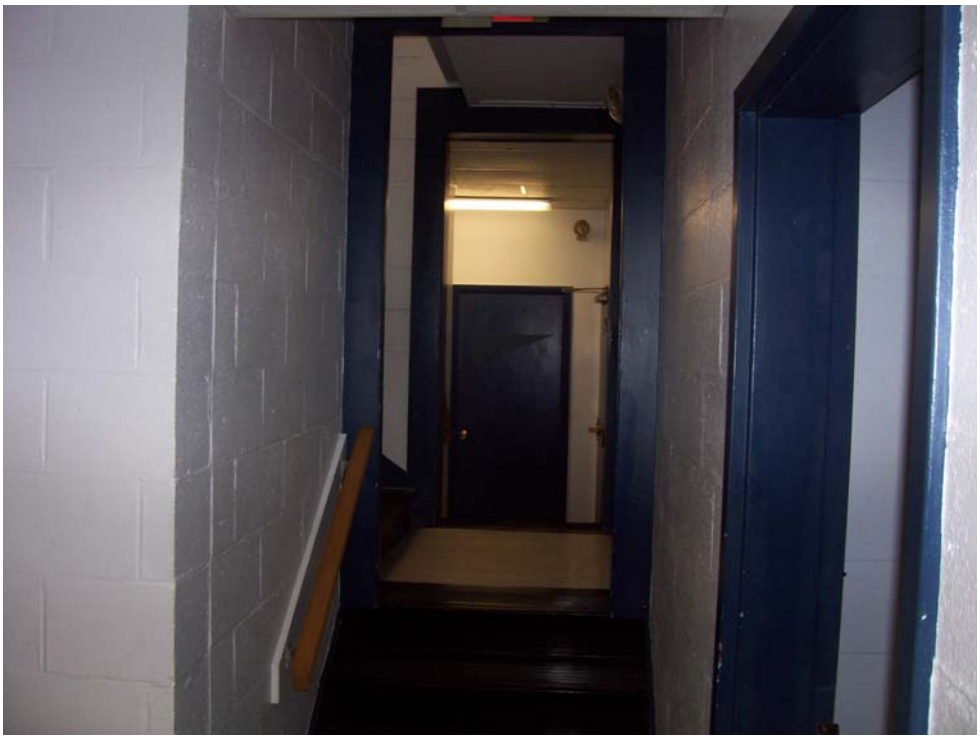
West Elevation of Police Station

Accessible Ramp along the South Side
Ramp Turns 90 Degrees and Enters Building fromWest Side

Accessible Ramp and Entrance at Southwest Corner of Building

Area Where ADA Accessible Door Enters Building
Room Used for Meetings and Training

Dispatch Desk and Entry Lobby



Interior Stairway at the Lower Level

Locker Room

Locker Room Shower

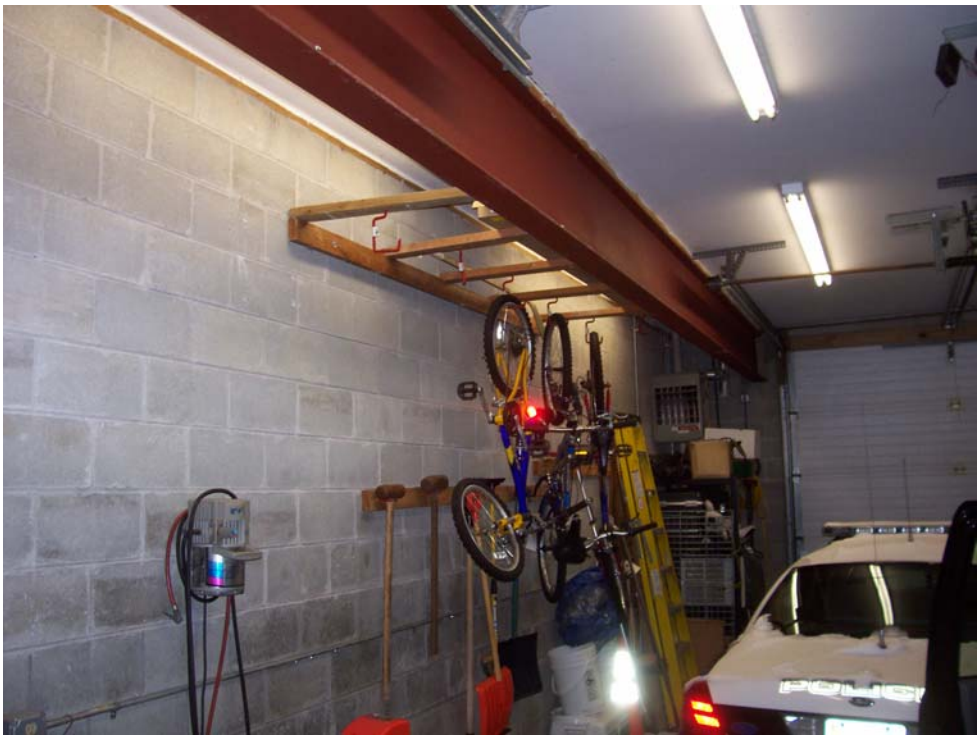
Lower Level Kitchen/Break Room

Plug Adjacent to and Wires on the Stove in the Kitchen

Lower Level Squad Room and File Storage

Lower Level Processing Area

Interior of Sally Port



Sally Port

Egress Door at the Sally Port

Overhead Door at the Sally Port

SECTION 3

JAFFREY TOWN LIBRARY

Jaffrey Town Library

The Jaffrey Town Library is located at 38 Main Street. The front of the building faces towards the south. The original portion of the Library building dates back to the 1820's and is one of the many historical buildings in Town. In 1989/1990, the size of the Library was more than doubled from 6,200 square-feet to over 13,000 square-feet with an addition off the north side (rear) of the existing building. The original Library consists of granite and brick walls with granite lintels and sills. The roof is wood framed with wood sheathing boards covered with slate. The addition is comprised of metal stud walls with brick veneer, floors of pre-cast concrete planks with a 2-inch topping, and a roof framed with wood trusses. The majority of the addition has a flat or low-sloped roof covered with a rubber membrane such as EPDM. Around the perimeter, the roof is steeply pitched to the eaves and is covered with asphalt shingles. The water from the low-sloped section drains through a series of scuppers that discharge onto the pitched section.

Exterior

In general, the exterior of the Library is in good condition. There is, or has been in the recent past, a problem with water intrusion at the addition to the Library at two separate locations. The first area of concern is at the main entrance to the addition at the lower level, near the southeast corner. Prior to the installation of roof gutters, the water from roof runoff and snowmelt worked its way into the building under the entry door. The gutters that were installed two years ago in the corner, handle a portion of the runoff from the original Library and part of the new addition. The addition of the gutters essentially eliminated the water problem. It was reported that the Town has made arrangements recently to add an additional two to three feet of gutter to capture all of the water from the roof. The gutter leads to a downspout that dumps the water to a concrete apron behind the retaining wall, adjacent to the entrance. There is a drain at the top of the retaining wall to capture the water from the downspout, but it is subject to plugging by leaves in the fall and ice in the winter. Based on a review of the Library site plan, it appears that there is a 4-inch PVC foundation drainpipe that runs along the perimeter of the newest section of the Library. The foundation drain connects to an 8-inch storm sewer pipe at the northeast corner of the building. We believe the downspout drain empties into this 4-inch foundation drainpipe.

The second location where water has frequently infiltrated the building is at the lower level emergency exit door in the children's section at the northeast corner of the addition. The water from the flat portion of the roof drains through scuppers and cascades down the side of the building. The discharge has discolored the brick and eroded the soil along the building. The librarian has commented that water will enter under the door during a heavy rainstorm, soaking the carpeting in the area adjacent to the door. It may be that the door was improperly flashed or improperly sealed with caulking, and water is working its way behind the doorframe. The most likely cause is that water is collecting in the eroded/depressed areas and migrating into the building. The grade is such that many of

the weeps in the brickwork are covered with soil and they may actually be drawing water into the building.

At the main level, along the north side of the building, it was observed that the emergency exit door from the main room of the addition was extremely difficult to open. The door appeared to be tight against the threshold. It was further observed that the sidewalk pad outside the door has settled and pulled away from the building. Water from the roof is seeping into the gap between the door pad and the building and is exacerbating this situation. The gap between the sidewalk and the threshold should be filled and the door readjusted such that it opens easily.

The windows in the original Library building are the original wood windows. Many appeared to be loose fitting, and are major contributors to air infiltration and heat loss.

Interior

The Library interior is generally in good condition. The finishes in the original part of the Library, as well as the recent addition are in good condition, with the exception being the two areas mentioned above where water has penetrated the building. The gypsum on the walls is water damaged and must be replaced. Several floor tiles have popped loose from the floor in front of the door, and there are missing sections of baseboard molding. In the children's area, the carpeting is damaged within a 30 square-foot area in front of the emergency exit.

The lower level contains the mechanical spaces, electrical room, a storage room, and staff break room with a small kitchen. These spaces are below the original Library building. The mechanical space contains the boilers and other equipment, including two oil storage tanks. It was observed that there are no oil containment provisions around the tanks. There are a limited number of sprinkler heads throughout the building. We did observe one over the boiler and one in the electrical room.

We observed some peeling paint on the brick walls in the basement of the original wing of the Library in the boiler room, and some of the storage spaces and electrical room. This may be caused by moisture intrusion from the exterior working its way through the brick or possibly high levels of moist air in the basement.

The drinking fountain at the lower level just outside the restrooms was found to be inoperable. The basement level for the recent addition includes the children's section, a multi-purpose room, the elevator, and elevator machinery room. There is a stairwell that leads up out of the lower level to the main floor, and it continues up to the second floor of the Library. The balusters on the handrail of this stairwell were measured and found to be about 6-inches on-center, which exceeds the code-required spacing. The code sets the limit for baluster spacing such that a 4-inch diameter sphere cannot pass between balusters. We also noted that a stairway swing gate was not installed at the main level.

In the event of an evacuation, the purpose of the swing gate is to prevent occupants from following the stairwell all the way to the basement, rather than exit the building through the door at the main level.

The main level contains the main stacks and a reading area, an office and work area for the librarians, restrooms, and a separate reading room, periodical room, and exhibit area off the main foyer. A windbreak was installed just inside the main entry door. The windbreak is not very effective keeping out cold air in the winter and warm air in the summer. It is recommended that the windbreak be converted to an air lock.

There are signs of past water intrusion throughout the attic, as well as at certain ceiling areas, noted by the presence of peeling ceiling paint in the stairwell of the original Library building. During the site visit, all areas were dry, but it may be a sign that the roof is leaking or has leaked in the past. The attic areas should be monitored on a regular basis, especially after major rain or snow events to determine if roof leakage is still a problem. The old slate roof appears to be in fairly good condition, although there were a number of cracked and broken tiles.

The quantity of building insulation in the original portion of the Library is not sufficient to comply with the present energy code and should be upgraded. This was confirmed by the fact that the roof over the addition still had an even layer of snow, while the roof over the old section of the Library was bare, except for some snow in the valleys. Also, it was reported that the building is very hot during the summer months with interior temperatures reaching the upper 80's. Presently, there is insulation in the second level ceiling up to the height of the ceiling joists. Additional insulation could be added to the existing attic floor, followed by a new protective sheathing layer on top.

As far as the overheating in the summer is concerned, a short-term solution could be to install ductless air conditioners, but that would not help the heating issues. The Library has several heating and ventilation issues including an inefficient boiler, problems with combustion air, and mixing of return and outside air in the boiler room, in addition to poor distribution of air, especially in the original wing of the Library.

Heat is currently delivered to the front stairway of the original building through a floor grate at the first floor. The grate is connected to the ventilation system. During the site visit, it was noted that the heating of the stairwell was insufficient.

Overall, the Library is in very good condition. The few exceptions have been noted above. With some standard maintenance and repairs to a few items, the Library should serve the Town of Jaffrey for many years to come.

Recommendations

Based on our observations, we offer the following recommendations. A summary of the recommendations, along with Opinions of Costs, is included in a separate spreadsheet. Other recommendations not covered below are included in the spreadsheets.

1. The Town should proceed with improving the gutter system on the south side of the addition to insure capture of all of the water off the roof. The drain in the apron behind the retaining wall should be checked regularly and cleaned of all leaves and other debris. In the winter, ice should not be allowed to build-up around the drain screen.

2. Water intrusion on the north side of the building near the children's section can be remedied in one of several ways. The easiest course of action is to re-grade along the wall, such that the water will flow away from the building. We would recommend adding a 3-foot wide crushed stone drip edge to prevent splash back onto the brick. A secondary means of collection would involve the addition of a perforated drainpipe in the drip edge to help collect and divert the water away from the building. A non-permeable layer of fabric should be placed just below the drain line.

3. Replace the finishes (floor tiles and gypsum wallboard) just inside the main entry into the Library addition at the lower level.

4. Re-plumb the doorjamb and repair the threshold such that the emergency exit door at the upper level (south side) opens freely. The concrete landing just outside the door should be repaired.

5. Install additional balusters or add perforated screening to the stair railing at the main egress stairs on the west side of the Library addition between the second floor and the basement. The present spacing of the balusters exceeds the ADA maximum clear distance of 4-inches. Also, it is recommended that a swing gate be installed at the main floor level to prevent occupants from continuing down the stairway into the basement in the event of a fire.

6. Install an air lock at the main entrance to prevent cold air from sweeping into the building when the exterior door is opened.

7. In an effort to provide a larger space for meetings and other special programs, the second level could be re-configured into a large meeting room.

8. Provide oil containment around the oil tanks in the basement.

9. Add additional insulation in the attic. Prior to adding insulation, an engineering analysis of the existing roof structure should be undertaken to determine if the added snow load, that can be expected when more insulation is installed, does not pose a problem for the existing framing members.

10. As part of the fire alarm system, provide the ADA required strobe devices in the bathrooms, kitchen area, children's section, sitting room, periodicals room and the main stacks section of the Library.

11. Replace all older exit signs with new LED energy efficient exit signs with emergency battery units. An exit sign in the hallway is not illuminated, an emergency battery unit in the hallway is not functioning, and the exit sign in the meeting room is not fully illuminated; it's blinking.

12. Conduct an in-depth study of the alternatives for improving the heating, cooling, and air distribution throughout the Library. As for now, the Town should provide code-compliant combustion air ducted into the boiler room. Eventually the boilers should be replaced with more energy efficient models.

13. The ventilation provided by the fan located in the boiler room is distributed through three heating coils. The system has the potential to disperse fumes from the heating system through the ventilation system. The ventilation fan(s) and ductwork should be relocated outside the boiler room.

14. Provide a cabinet heater at the first floor landing in the front stairwell of the original wing to provide additional heat to the stairwell.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN LIBRARY, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Water Intrusion – Lower Level	Signs of water damage at the main entrance of the lower level, causing damage to floors and walls. At times water enters under door at emergency exit at northeast corner of lower level. Carpet is water stained.	Continue to improve the roof gutter system and make sure drain at top of retaining wall is clear. Re-grade along the north side of the addition. Consider adding a stone drip edge and drain line. Redo flashing/caulking around door. Replace carpeting that is damaged or water stained.	N/A N/A	$3,000 $6,500		
Interior Finishes at Main Entrance, Lower Level (including floor, walls, etc.)	Water intrusion has damaged the flooring and walls.	Replace finishes as required.	N/A	$2,000		
Emergency Exit, Upper Level, North Side	Door is very hard to open. Sidewalk has pulled away from building resulting in a large gap at the threshold.	Repair landing. Re-plumb doorjamb and repair threshold so door operates properly.	N/A	$3,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN LIBRARY, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Main Egress Stairwell – Northwest Corner	Railing balusters are 6-inches on-center, which exceeds ADA requirements. Stairway down from second level to basement should have a swing gate (per code) at the exit door level to prevent occupants from traveling all the way to the basement in the event of a fire.	Install additional balusters or perforated screening to meet ADA. Install a safety swing gate at the main level.	N/A	$3,000 $2,000		
Meeting/Program Room at Lower Level	Librarian reports room is too small for present needs.	Expand meeting room by converting second level to a large meeting room.	4 to 6 years		$50,000	
Front Entrance	Existing windbreak is not sufficient to keep out drafts during cold days.	Construct air lock at front door.	4 to 6 years		$22,000	

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ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Water Intrusion – Original Wing of Library	There were former signs of water intrusion in the attic, which may indicate leakage caused by water dams or leakage through the slate roof. Peeling paint at ceiling outside attic space.	Monitor the attic for signs of leakage during the winter months and during heavy rain events.	N/A	-------		
Building Insulation	There appears to be a lack of insulation in the original wing of the Library, particularly in the ceiling of the second floor. There is no insulation in the attic.	Perform an analysis of the existing structure to determine if added insulation is feasible despite increasing the snow load on the roof. Add insulation.	N/A 2 to 4 years	$3,000	 $20,000	
Oil Storage Tanks in Basement	There is no containment around the tanks.	Provide a concrete slab and walls around tank to contain an oil spill.	3 years	$6,500		

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ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Drinking Fountain at Lower Level	Fountain is inoperable.	Repair fountain.	N/A	$1,500		
			Sub-Total	**$30,500**	**$92,000**	

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MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Heating System	The Library is drafty during the winter with cold spots and in the summer the rooms can get very warm.	Conduct an in-depth energy audit and study of the alternatives for improving the heating, cooling and air distribution system throughout the Library.	N/A	$7,500		
Heating System	Heating system includes oil-fired atmospheric boilers (1989 vintage) and main heating pumps located in basement mechanical space. Existing boilers are relatively inefficient and 19 years old. Combustion air is provided by fan in space.	Provide new code-compliant combustion air ducted into mechanical space. Replace boilers with more efficient models.	 11 years	$4,000	 $30,000	

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MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Old Building Ventilation System	Ventilation provided by fan located in boiler room, distributed through three (3) heating coils. System has a probability of dispersing fumes from heating system through ventilation system.	Relocate ventilation system fan(s) and ductwork outside of boiler room.			$30,000	
Stair Heating	Heat is currently provided to the front stairs of the original building through a floor grate at the first floor of the stairs connected to the ventilation system. Insufficient heat in this stairwell was noted during our site visit.	Add a cabinet heater at the first floor landing to provide additional heat to the stairwell.	N/A	$1,000		

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MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Addition Ventilation and Heating	Ventilation is provided to the addition areas of the building through unit ventilators at the perimeter. Cabinet heaters provide heating of common areas.	Consider replacement of unit ventilators with central air handling equipment capable of providing additional filtration and better distribution of ventilation air.	15 years			$75,000
		Sub Total		**$12,500**	**$60,000**	**$75,000**

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY TOWN LIBRARY, JAFFREY, NH

ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Main service panel is a 400 Amp, 208-Volt service entrance rated panelboard by Westinghouse, Style PRL3	Panelboard was installed in 1989 and is in good condition.	Provide general maintenance, including cleaning, re-tourqing of bolts and testing of circuit breakers.	15 years			$4,000
Panelboards	Two (2) Westinghouse 100 Amp, 208-Volt circuit panelboards, in good condition.	Provide general maintenance on panels.	15 years			$3,000
FCI 12-Zone Fire Alarm Control Panel & Associated Fire Alarm System Components.	Installed in 1989, last passed inspection in 2007. System is in good working condition. Bathrooms are missing norm/strobe devices, as well as the kitchen area and the children's section, sitting room, and periodical room. Inadequate norm/strobe coverage in the main section of Library.	Replace system in its entirety (eventually) with a new addressable system.	15 years			$30,000
		Provide ADA required strobes.	N/A	$3,500		

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ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
Exit Signs and Emergency Lights	Exit sign in hallway not illuminated. Violation of NEC and I.B.C. Emergency battery unit in hallway also not functioning. Exit sign in meeting room not illuminated/blinking.	Replace all older exit signs with new LED energy efficient exit signs and emergency battery units.	N/A	$6,000		
Lighting	Generally speaking, lighting fixtures are in good condition, being installed around 1989. They consist of decorative-type fixtures, linear fluorescent fixtures, and track lighting. It appears most fluorescent fixtures have been retrofitted with energy-efficient T8 lamps.	Replace/upgrade fixtures eventually.	10 years		$20,000	
			Sub-Total	**$9,500**	**$20,000**	**$37,000**

Jaffrey Library
Facility Audit

Summary of Costs

	Short-Term	Mid-Term	Long-Term
ARCHITECTURAL	$30,500	$92,000	--------
ELECTRICAL	$9,500	$20,000	$37,000
MECHANICAL – HVAC	$12,500	$60,000	$75,000
TOTALS	$52,500	$172,000	$112,000

South Elevation – Main Entrance

South and East Sides of Orignal Library

East Side of Original Library/Southeast Corner of Library Addition

Library Entrance at the South Side of the Addition

West Side of Library – Addition to the Left, Original Library on the Right

Emergency Exit Door – Library Addition, Northwest Corner

West Elevation – Original Library on the Right

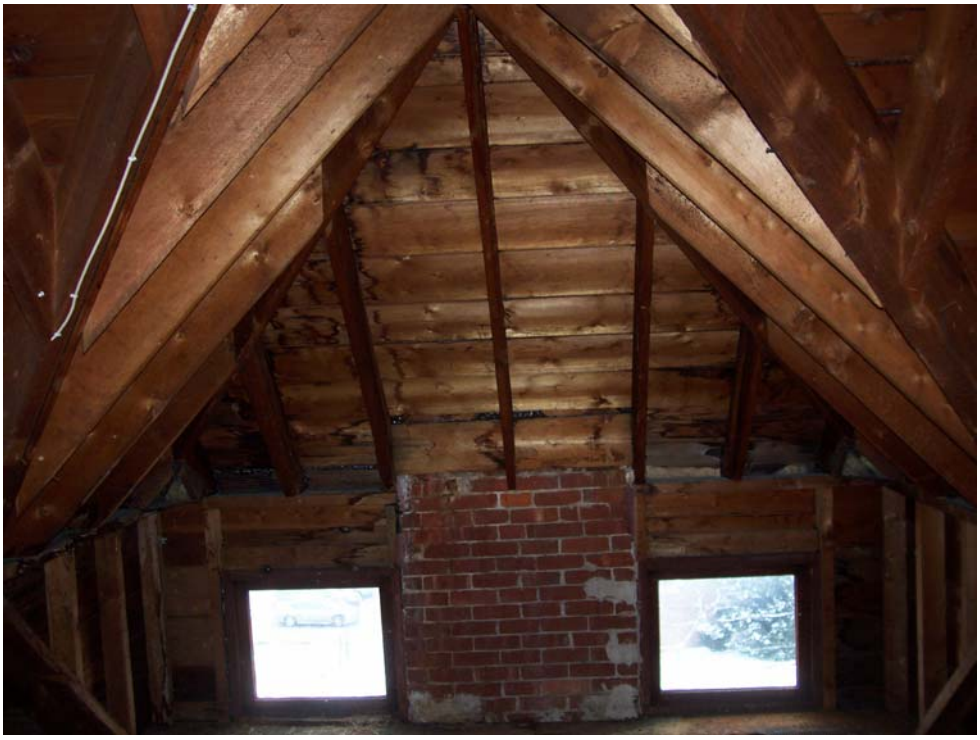
Library Dedication Plaque at Main Entrance

Peeling Paint in the Original Library Second Floor Ceiling

Original Library Second Floor

Original Library Second Floor

Original Library Second Floor



Original Library Roof Framing

Original Library Attic Storage

Original Library First Floor Reading Room

Original Library First Floor Reading Room

Original Library Mechanical/Electrical Room

Original Library Basement Brick with Peeling Paint

Dedication Plaque for Library Addition

Stack Room – Library Addition

Emergency Exit at Main Level in Library Addition

Door Threshold of Emergency Exit at Main Level in Library Addition

Elevator/Stair Access Point – Main Level Library Addition

Lower Level Entry Door – Library Addition

Missing Floor Tiles at Lower Level Entrance – Library Addition

Damaged Drywall near Lower Level Entry Door
Library Addition

Lower Level Emergency Exit – Northeast Corner Library Addition

Lower Level Bathrooms Library Addition

Staff Break Room Lower Level of Library Addition

Stairs from Lower Level to the Main Level – Library Addition

Stair Baluster Spacing – Library Addition

SECTION 4

TOWN OF JAFFREY RECYCLING CENTER

Town of Jaffrey Recycling Center

The Town of Jaffrey Recycling Center is located at the site of the old Town landfill off of Old Sharon Road. The recycling center is a single building 40-feet wide by 100-feet long. It is essentially a pole barn-type storage building manufactured by the Agway Company in the late 80's. The facility actually consists of two (2) standard storage buildings put together with the common walls removed.

The construction consists of a 4-inch thick concrete slab-on-grade for the main floor with a frost wall and footing all around the perimeter. The walls are framed with 4" x 6" pressure-treated timber columns at about 8-feet on-center. The walls are vertical steel siding panels supported by horizontal girts at 24-inches on-center. The roof framing is a series of prefabricated wooden trusses that span 40-feet across the width of the building. The low slope, aluminum roofing panels are supported by 2 x 4 purlins that are fastened to the roof trusses at 24-inches on-center. Discussions with the recycling center staff revealed that there are a number of leaks in various sections of the roof. Apparently, the fasteners that hold the metal roofing in place have worked loose mainly due to repeated cycles of expansion and contraction. This is a sign that the roof may be nearing the end of its useful life and may need replacement in the next 3 to 5 years. There are some coatings on the market that are designed to waterproof and stop UV degradation and corrosion. For example, there is an acrylic, elastomeric, water-based, rubber-like coating system that remains flexible under hot and cold conditions. Such a coating could provide a temporary solution and prolong the roof replacement for several more years.

There are two (2) 14-foot wide by 10-foot high sliding doors on the east side of the building that are used by the public for bringing recyclables into the building. On the south end of the building, there is a single 12' by 12' door at a loading dock. Trailers back up to this door and are loaded with pallets of processed and compacted recycled materials.

There is no insulation in the building, with the exception of the bathroom. The designated work areas used for processing materials are heated with overhead, propane-fired, direct heaters. The heaters are in very good conditions. There has been some discussion in the past with regard to insulating the roof of the building in an attempt to slow heat loss and thereby reduce energy costs. The roofing system was originally designed for a snow load of 40 pounds per square-foot. The caveat in adding insulation is that for a low slope roof, it could result in additional snow on the roof, which could overstress the existing structure. However, the roofing is aluminum, and generally most of the snow slides off the roof.

There is no water, municipal or otherwise, available at the site, nor is there any septic or sewer system. The bathroom facility in the building consists of an electric incinerator-type, waterless toilet.

The electrical system is generally in good condition. The main circuit breaker panel is in very good condition and has an expected useful life of 20 years. It should only require general cleaning and re-torqueing of the circuit breakers over that period. The 20-amp Crousehinds panel boards are old and in need of replacement within the next two to three years. The overhead incandescent lamps are inefficient and should be replaced with low temperature, ballasted T5 high-output florescent fixtures to improve lighting levels and reduce energy costs. Even though the building is unheated, the low temperature ballasts should perform satisfactorily in this environment.

Within the building, located in the northwest corner, is a steel tank used for collecting old motor oil. The containment structure around the oil tank is constructed of wood walls, and the containment structure appears to be leaking oil out onto the floor. This should be remedied as soon as possible.

The south end of the building, where the loading dock is located, was constructed with an 8'-6" high retaining wall. Assuming that this wall extends across the entire width of the building, it would be a simple matter to excavate an area for a second loading dock. A new retaining wall would be required, as well as a new sliding door. The door would be relatively easy to frame out given the existing pole barn wall framing. It appears that the bathroom may need to be relocated to provide a straight-line access to the new loading dock.

Summary of Recommendations

1. Improve the containment around the used oil storage tank. The present containment is constructed of plywood and it leaks.

2. Investigate the feasibility of adding roof and wall insulation.

3. Apply a coating to the roof to prolong the life of the metal and seal the existing leaks. Budget for roof replacement in the next 5 to 7 years.

4. Consider connecting the Recycling Center to Town Sewage and add a line to bring Town Water to the site.

5. Add a second loading dock for handling recyclable product.

6. Replace the inefficient incandescent lamps with energy saving fluorescent fixtures.

In general, the recycling center is simple, low maintenance, and functions very well for its intended purpose. A few minor improvements noted above would allow it to continue to function in its present capacity for at least another 20 to 25 years.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY RECYCLING CENTER, JAFFREY, NH

ARCHITECTURAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Remaining Useful Life***	**Short-Term**	**Mid-Term**	**Long-Term**
Used Oil Containment	Present containment is plywood and appears to be leaking.	Improve containment around tank.	0 Years	$2,500		
Metal Roof	Fasteners working loose, numerous leaks	Apply elastomeric coating to roof Replace roof	1 year 5 to 7 years	$5,000	 $32,000	
Building Insulation	There is a lack of building insulation.	Investigate the feasibility of adding roof and/or wall insulation both structurally and from an energy savings standpoint.	N/A	$4,000		
Water and Sewage	Currently, there is no water or sewage at the site.	Consider installing a connection to Town sewage and a line for Town water.	5 years		$100,000	
Loading Dock for Box Trailers	Currently there is a single loading dock for loading trailers with recyclables.	Consider the addition of adding a second loading dock.	2 to 3 years	$30,000		
			Sub-Total	**$41,500**	**$132,000**	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY RECYCLING CENTER – JAFFREY, NH

MECHANICAL – HVAC			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short Term**	**Mid-Term**	**Long-Term**
Infrared Heaters	Heaters appear to be in good condition.	None.				
Toilet Exhaust	Electric toilet exhausted through drain system.	None.				

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY RECYCLING CENTER, JAFFREY, NH

ELECTRICAL			$ Opinion of Cost			
COMPONENT	**OBSERVATION**	**RECOMMENDATION**	***Life Expectancy***	**Short-Term**	**Mid-Term**	**Long-Term**
200 Amp General Electric Main Circuit Breaker Panel	In great condition.	Provide general cleaning and re-tourqing circuit breakers.	20 years			$2,500
20 Amp Crousehinds Panelboard	Old and in need of replacement, showing signs of rusting.	Replace in near future.	2 years	$2,000		
Lighting	Thirteen (13) incandescent lamp holders containing 100 watt flood-type lamps.	Replace inefficient fixtures with low-temperature ballasted T5 high-output fluorescent fixtures to improve lighting levels and reduce energy costs.	10 years	$4,000		
			Sub-Total	**$6,000**	**$0**	**$2,500**

Jaffrey Recycling Center
Facility Audit

Summary of Costs

	Short-Term	Mid-Term	Long-Term
ARCHITECTURAL	$41,500	$132,000	--------
ELECTRICAL	$6,000	--------	$2,500
MECHANICAL – HVAC	---------	----------	---------
TOTALS	$47,500	$132,000	$2,500

East Elevation – Front of Recycling Center

West Elevation- Back of Recycling Center

Single Loading Dock at South Side

Household Trash Dumpster Adjacent to Loading Dock – Southeast Corner

Recycling Center Wood Truss Roof Framing

Recycling Center Typical Roof and Wall Framing

Restroom Facilities with Electric Toilet

Storage Container for Used Motor Oil

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