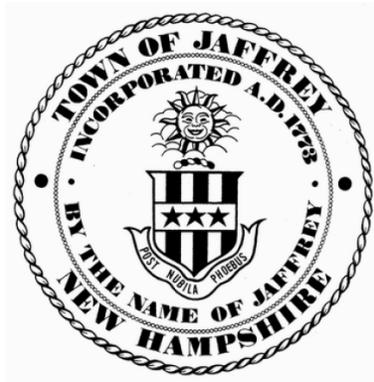


**FACILITY ASSESSMENTS
MUNICIPAL BUILDINGS
PHASE II**



JAFFREY, NEW HAMPSHIRE

JANUARY 2009

THE H.L. TURNER GROUP Inc.

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ARCHITECTS • ENGINEERS • BUILDING SCIENTISTS • CONSTRUCTION MANAGERS

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SECTION 1

JAFFREY DEPARTMENT OF PUBLIC WORKS

Jaffrey Department of Public Works

The Town of Jaffrey's Department of Public Works complex is located on Knight Road off of Turnpike Road, about a half mile from the center of Town. The main DPW Garage was originally constructed in 1964, and has served as a home for the Highway Department, Water Commission, and was once used for a garage for the school buses. At present, the facility is used exclusively by the department of Public Works. In 1967, a fire necessitated the need for a new boiler room and roof repairs. Following the fire, it was decided that a separate addition would be built off the rear of the building to house the boiler and other heating equipment. Other renovations were completed in 1980 to provide additional storage space, and in 1986 a Superintendent's Office was added to the rear of the office wing.

There are several auxiliary buildings on the property used for equipment storage and for the storage of sand and salt. There is insufficient space in the existing garage and auxiliary buildings to fully house the present-day fleet of vehicles and equipment. The sweeper and flush truck are wintered in the Jaffrey Central Storage Building and many other pieces of equipment are stored outside. The Department does maintenance and repair for their own vehicles, as well as for the Police, Fire, and Recreation Departments. Nearly half of the Fire Department vehicles are too high or too long to fit in the existing garage.

Main Garage and Administration Building

The Main Building consists of a garage and administration section. Overall, the building is about 40-feet wide by 140-feet long and is constructed of masonry block walls with a wood-framed roof. The garage occupies just over 105-feet of the total length and is subdivided into eight bays, each with its own overhead door. The administration wing, situated on the west side of the building, is 32-feet wide. There is a wood-framed portion of the administration wing measuring 28-feet by 22-feet that was added at the rear of the existing building in 1986. The original building is constructed on a 4 to 6-inch concrete slab-on-grade. This is somewhat unusual in that most buildings typically would have been constructed on a 4-foot frost wall with a footing. According to the Director of the DPW, the lack of a frost wall was discovered when the oil water separator was installed a few years ago. The building walls are constructed of concrete masonry block, and there is a wood-framed roof system, covered with 3-tab asphalt shingles. We were informed that in the spring and summer, the masonry block walls within the building exhibit considerable sweating, especially in the plan storage room, as moisture condenses on the cold surface of the uninsulated block walls. During this time, a dehumidifier runs constantly.



The eight overhead doors are in good condition and appear to have been replaced within the last few years. It was reported that the doors have been replaced twice since 1965.

The wood-framed portion of the administration wing houses the office of the DPW Director. It also serves as a small conference room. The siding on this section of the building is T-111 wood panels. The paint is flaking and peeling, and the siding is badly in need of scraping and a new coat of paint. Some of the trim boards around the Director's office are rotted and need replacement. The trim boards on the rest of the building are in very good condition as they have been replaced with PVC composite trim boards. The shingle roof over the Administrative section was recently replaced in 2005 and is in very good condition. The shingle roof over the garage portion is showing signs of wear and is in fair condition. It should be scheduled for replacement in the next 5 to 6 years. Also, we were informed that the roof flashing at the interface between the administration portion of the building and the garage area needs to be repaired or replaced. A driving rain can result in significant leakage that finds its way through the ceiling into the secretary's office.

The CMU walls, particularly along the north wall or rear of the building, have some cracking at the mortar joints, and there are large areas where the paint is peeling and flaking off the wall. The lack of a frost wall makes the building very susceptible to movement from frost heaves, which may explain some of the cracks in the masonry walls. Along the lower courses of block, moss has started to grow, indicating a persistence of moisture and an inability of the block to dry out. Despite these issues, most of the block is in generally good condition.

The CMU block at the header of the eastern-most overhead door is cracked and damaged. Repairs are urgently needed in this area, as sections of the block could break loose and fall, possibly causing injury. Reports from DPW personnel indicate the damage was not the result of a vehicle impacting the top of the door opening. We suspect that the damage was the result of differential movement between the CMU and the steel lintel that runs across the top of the door opening. For this type of building construction it is typical for the end of the lintel to be fixed to the CMU block by means of a bearing plate anchored into the grouted core of the block. Movement of the lintel as a result of expansion and/or contraction of the steel could have damaged the block over the years. A similar situation exists at the lintel of the western-most overhead door. Existing cracks in the mortar joints indicate that some movement has already occurred, and if left unattended, this could possibly end up as more significant damage. The lintel connection should be detailed to allow for small movements of the steel relative to the fixed masonry.



The Administration Office area includes office space for a Highway Superintendent, an Administrative Assistant, the Town Engineer, and the Director of Public Works. The offices in general are cramped with little room for storage of files and other information. The carpeting is in very poor condition and should be replaced. It is our understanding that the carpeting in the Director's office, the Superintendent's office, and the Town Engineer's office is scheduled for removal and replacement with vinyl composition tile in the near future. The windows are vinyl replacement windows and are in fairly good condition. The ceilings are hard gypsum ceilings and are in good condition, needing only a fresh coat of paint. The lobby area floor inside the main entrance is covered with sheet vinyl and is in fair condition. There is a small room off the lobby that is used for the storage of plans and miscellaneous equipment. This storage room has a small section of old floor tiles that are believed to be asbestos. This storage room is also the source for high levels of moisture during the spring and summer months. A humidifier is kept running practically non-stop during this period.

Formerly a welding storage room, the Town Engineer's office is extremely small and overcrowded with records and files. The bathroom, which is also off the main corridor, does not meet ADA accessibility guidelines. The door is only 27-inches wide and none of the fixtures comply with ADA rules. The facility is undersized and does not meet the needs of the crew. It is totally inadequate for dealing with personnel exposed to hazardous materials.

The break room across the hall needs a new floor. The existing plywood floor is worn out. We were informed that the existing concrete floor under the plywood was damaged during a fire back in 1967. Apparently, the room was originally used to store chemicals and the chemicals got onto the floor prior to the fire. Several attempts have been made to restore the floor with little success. Some feel the only alternative is to jackhammer out the floor and replace it. The available crew space does not provide adequate space for meetings and training, or for those personnel who work long hours during snowstorms or emergencies.

There is a drop-down stair in the hall adjacent to the break room that provides access to the attic space over the administration wing. The attic area is used for the storage of old records and files, as well as other miscellaneous items. The roof framing consists of 2 x 8's spaced at 16 inches on-center. There are batts of insulation in the ceiling between ceiling joists. However, the insulation is sparse in many areas, and where there is insulation, it does not appear to be very substantial. Above the suspended ceiling in the Town Engineer's office there is a direct passageway to the attic. Cold air from the attic flows down into the office space. The lack of insulation leads to ice dams along the edges of the roof of the administration building. We also observed the lack of a firewall separating the administration area from the garage. Because of the type of activities that take place in the garage, a firewall separation between the two is required by code.



The garage area ceiling is insulated with expanded polystyrene insulation. In some areas the panels have shifted such that the effectiveness of the insulation is negated. At the time of the next garage roof replacement, consideration should be given to adding more insulation at the roof. This could be in the form of polyisocyanurate or polystyrene sheets under the roofing materials, whether it is wood sheathing with asphalt shingles or a standing seam metal roof. The result of adding more insulation to the roof means that there is a possibility that more snow could accumulate on the roof. Of course, before any insulation is added, a study of the structural capacity of the roof support members must be undertaken in order to determine if any of the members become overstressed under the weight of the additional snow load.

The floor of the equipment bays is in fairly good condition. We did observe an area of new concrete in the southwest corner of the garage, and it was reported that this floor area was filled to take care of a floor settlement issue. There are a series of floor drains that flow by gravity to a collection pit in the building and then outside to a separation tank. From the separation tank the water flows into the sanitary sewer.

There is a wood-framed mezzanine in the garage along the north wall. It runs nearly the full length of the equipment bays. The framing is somewhat questionable in that the main beam supporting the floor joists is a pair of 2 x 8's that span over 8-feet between columns. Also, the post supporting the eastern-most corner of the mezzanine is not aligned below the support beam and relies on a cantilevered piece of channel off the post to support the mezzanine beam. It is recommended that calculations be performed to determine the safe live load capacity for the mezzanine. Eventually a sign should be posted with the load limit.

At the east end of the garage there is a 14 x 20 room for parts storage. There is also parts storage on the mezzanine level directly over the spare parts room. The area allocated for parts storage seems undersized, based on the number of parts in storage and the fact that parts are required for a wide variety of vehicles and pieces of equipment.

There is no ventilation system for removing exhaust fumes from the building. Diesel exhaust can permeate throughout the building, as can odors from welding and painting, which can also be problematic. A whole garage ventilation system is recommended, but at the very least a system for dealing with vehicle exhaust should be installed. The oil-fired, hot water boiler is about 15 years old. It is a Burham boiler with three zones for forced hot water heat. There are a total of five "Modine" heaters in the equipment bays just below the ceiling. Paddle fans hung from the ceiling help to push the heated air down to the floor level, but they are not very effective. The facility relies on Town-supplied potable water, which enters the building in the storage room off the main corridor of the administration wing.



Three-phase power was added just prior to the year 2000. However, many of the original electrical panels are old and outdated and should be replaced. The lighting in the garage is a combination of 8-foot long fluorescent strip lights and a total of four large Mercury Halide lights. The existing lighting appears to be adequate.

At the rear of the garage there is a pad-mounted 40 kW “Olympian” D40P1 oil-fired generator. The generator was installed in 2001 and includes an automatic transfer switch. The generator is exercised on a regular basis to insure it is in good working order.

There are heat detectors on the ceiling throughout the building, and there is a fire alarm system that is connected to an outside monitoring agency. There are no code required strobes or horns in the building, but there are a total of three pull stations: one in the lobby of the Administration wing, one on the south wall of the garage between the second and third overhead doors, and one on the east end of the building adjacent to the man door.

There is a 2-foot wide concrete apron that runs the full length of the garage. It is in good condition. There are no bollards in the apron to protect the edges of the doorjamb. The pavement on the south side of the garage is quite expansive, but there are many cracks that should be patched and dips that should be filled to reduce the places where water can pond.

Auxiliary Buildings

There are a number of auxiliary buildings on the grounds, including several storage sheds for equipment, as well as a sand and salt storage shed. To the south of the main garage there are two wooden sheds: one is used for storage of the large front-end loader, the other is for the storage of sand and salt. The shed used for storing the front-end loader is in fair to poor condition. It has a wood foundation that is beyond its useful life, and the shingles on the roof are fair to poor.

The sand and salt storage shed was constructed in 1994. Other than some large gaps in the siding on the back or southerly wall, the building is in generally good condition, and is functional for its intended purpose. The roof is a series of wood trusses spaced at 24-inches on-center. We did notice some bracing installed, but it appears the diagonal pieces of bracing were omitted.

Just to the west of the Administrative wing, there is a wood-pole supported, metal roof canopy structure used for supporting the sand hoppers for the dump trucks. This structure is in fair to good condition. On the west side of the main building and slightly north of the hopper storage canopy, there is a wood-framed storage shed used for storing small pieces of equipment such as air compressors, along with signage and miscellaneous materials. The building has a metal roof with T-111 wood siding and three large pairs of swinging doors. The building is situated on a foundation constructed of CMU block with



a concrete slab-on-grade. The CMU foundation wall is cracked at a few locations and there is very pronounced cracking in the walls at two of the three doorjambes. Further north is a wood-framed building that appears to be structurally unstable as evidenced by the pronounced lean of the walls. It is not known if this structure is currently being used for storage, but judging by its appearance, it is recommended that it be abandoned or demolished.

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. Replace and re-paint the wood trim around the Administrative wing. Scrape and paint the wood siding.
2. In the next five to six years, replace the shingles on the roof of the main garage or re-roof the garage with a new standing seam metal roof. When the roof is replaced, we recommend the addition of rigid insulation, provided the existing roof structure is capable of taking some additional snow load.
3. Repair the cracked and broken CMU at the header of overhead door eight at the east end of the main garage. Provide a means for the lintel to move independent of the masonry to prevent future damage.
4. Evaluate the structural support for the mezzanine and post a load rating for the mezzanine. Upgrade the beams and/or columns as required to achieve a load rating of at least 100 pounds per square-foot.
5. Re-point the cracks in the CMU block, particularly at the rear of the building. Scrape and paint the CMU block.
6. Add additional insulation over the ceiling of the Administration wing. Improve ventilation by adding a ridge vent.
7. Replace the carpeting in the office areas.
8. Expand and upgrade the bathroom to comply with ADA. A separate bathroom should be added for women. Each bathroom should contain shower facilities.
9. At a minimum, replace the floor of the break room. Replace the existing lockers with new lockers and re-do the entire room with new finishes, counters, etc.



10. Replace the boiler in the next two to three years. Consider redoing the heating system so it is more effective in heating the garage space.
11. Consider adding a ventilation system for the garage area to exhaust fumes from diesel engines, paint, and welding.
12. Upgrade or replace the existing fire alarm system to include horns and strobes throughout the building as required by code.
13. Upgrade some of the old electrical panels.
14. Add steel pipe bollards along the front of the building to protect the door jambs.
15. The long range plan for the Department of Public Works should include renovation of the existing space together with an expansion of the present facility to create more needed office and garage space. However, we were informed that expansion on the existing site could be problematic due to property line constraints and previous use of the property. Some long-time employees recall that a portion of the site was once a dumpsite. Expansion to the northeast could bring the construction into an area that was once a dump. Also, the site topography is such that surface drainage is a major issue. Perhaps the only feasible solution is to find a new site.

Conclusion

From discussions with personnel at the DPW garage, we learned that the building was large enough to accommodate the entire fleet back in 1965. Today there are many more pieces of equipment that simply cannot fit in the space available. Two loaders, one backhoe, one grader, four dump trucks, four pick-ups, one side walk tractor, one compressor, and one roller are just some of the major pieces of equipment that should be under cover, but cannot due to the lack of space. The fact that many pieces of regularly used equipment are out in the cold means many extra man-hours spent on cold weather start-ups.

The mechanics are responsible for major repairs, fabrication, body and plow installation, and equipment painting. This is true of the DPW's equipment, as well the vehicles for the Police, Fire, and Recreation Departments. Certain pieces of equipment will not fit in the garage. For example, a truck with a snowplow and sander on it will not fit in the garage. Half of the Fire Department vehicles are too long to fit in the garage and still close the overhead doors.



Overall, there is a lack of space for offices and records storage. The bathrooms, shower, and break room facilities are inadequate. There is not enough space for equipment storage, parts storage, and parts and equipment records and manuals. The lack of insulation and an exhaust ventilation system for the garage space, poor heating, and a water and drainage system that is inadequate makes this facility a prime candidate for a major overhaul.



PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY DEPARTMENT OF PUBLIC WORKS

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Administrative Wing – Wood Trim and Siding	The trim is badly peeling as is the siding, and both are in need of paint.	Scrape and paint the trim and siding of the Administrative Wing.	1 to 2 years	\$3,000		
Roof of Main Garage	The shingles are worn and will be in need of replacement in the next few years.	Replace the shingles on the main garage. 4,400 sf @ \$4.25/sf Standing Seam Metal roof @ \$10.50/sf	5 to 6 years		\$18,700 or \$46,200	
Lintel at Eastern-most Overhead Door	The CMU is damaged. There are cracks and large openings in the masonry allowing moisture to penetrate the wall cavity.	Temporarily support existing lintel, remove all damaged masonry, confirm adequacy of existing door lintel and attachment to masonry, and insert new masonry block as required.	0 to 1 year	\$5,900		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY DEPARTMENT OF PUBLIC WORKS

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Mezzanine in Equipment Bays	The structural support of the mezzanine appears suspect for the current loading.	Perform a structural evaluation of the mezzanine and post a load rating. Upgrade the main support beam and/or columns as required for a 100 lb/sf load.	0 to 1 year 2 to 3 years	\$1,200 \$5,000		
CMU Block on North Side of Building	There are areas of peeling paint and crumbling mortar in the joints.	Repoint the masonry joints, powerwash the walls, and re-coat the masonry.	3 to 4 years	\$6,500		
Administrative Wing - Insulation and Venting	There is minimal insulation in the ceiling above the offices. The roof is not vented at the ridge.	Add another 6-inches of insulation over the ceiling of the Administrative Wing. Install a ridge vent. 1,500 sf @ \$1.00/sf	0 to 1 year	\$1,500 \$300		
Office Areas - Carpeting	The carpeting is badly stained and worn out.	Replace the carpeting in the 4 offices @ \$400 per office.	2 to 3 years	\$1,600		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY DEPARTMENT OF PUBLIC WORKS

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Bathroom Facility	The bathroom does not meet ADA, the entrance door is too small, and the fixtures are old and require updating.	Expand and upgrade the bathroom.	3 to 4 years	\$18,000		
		Add a second bathroom.	3 to 4 years	\$14,000		
Break Room for Staff	The floor requires replacement. Wall and other finishes are worn and in need of updating. Lockers are outdated.	Upgrade entire staff break room with new finishes including new walls and flooring, new furniture and new lockers.	1 to 2 years	\$10,000		
Furnace	The boiler is over 15 years old and should be replaced.	Replace the boiler with a high efficiency boiler.	2 to 3 years	\$18,000		
		Redo the heating system in the garage so the heating of the space is more effective and energy efficient.		\$20,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY DEPARTMENT OF PUBLIC WORKS

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Ventilation System	There is no system for removing diesel exhaust, paint and welding fumes.	Install a ventilation system.	1 to 2 years	\$10,000		
Fire Alarm System	There are no horns or strobes.	Upgrade system to include horns and strobes throughout the building as required by code.	1 to 2 years	\$5,000		
Electrical Panels and Sub Panels	Many of the panels are old and out-dated.	Upgrade the existing electrical panels.	3 to 5 years	\$8,500		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY DEPARTMENT OF PUBLIC WORKS

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Overhead Door Jamb	There are no bollards to protect the jambs from vehicle impact.	Add steel pipe bollards at each overhead door.	N/A		\$9,000	
DPW Garage and Administrative Building	The existing building is undersized and inadequate for the needs of the Town. Office space is limited; bathroom facilities inadequate, and the repair bays for the Town equipment are too small maintaining some of the larger pieces of equipment.	Perform a study to look at a complete renovation of the existing space and an expansion of the existing complex to better serve the needs of the Town.	N/A	\$5,000		
			Sub-Total	\$133,500	\$55,200	-----



Main Entrance – Administrative Wing of the DPW



DPW Complex – Administrative Offices and 8-Bay Garage



West Side of Administration Wing with T-111 Siding



Back of Administration Wing and Garage – Barnboard Siding Encompasses Oil Storage



Entrance to Boiler Room at Rear of Administration Wing – Oil Storage to Left



Rear Wall of DPW Garage (Facing North)



Diesel Oil Fired Emergency Generator at Rear of DPW Garage



North Wall of Garage – Note Cracking, Peeling Paint, and Moss Growth



Damage at Head of Overhead Door – Southeast Corner of Garage



CMU Damage at Overhead Door – Southeast Corner of Garage



Enclosed Parts Room East Side of Garage



Wood Framed Mezzanine Along North Wall of Garage



Unconventional Support for Outside Corner of Mezzanine



Insulated Roof of Equipment Bays



Typical Electrical Panel



Break Room for DPW Workers



Oil-Fired Hot Water Boiler



View of Main Corridor of Administrative Wing



Storage Room – Note Old Asbestos Floor Tiles



DPW Director's Office/Conference Room



Typical Wood Framing Above Administration Wing – Note Old File Storage



Fire Alarm Panel Near Main Entrance to Administration Wing



Covered Storage for Sanders



Salt Storage Shed (left) and Storage Shed for Large Front End Loader



Roof Trusses and Wood Covered Walls in Salt Storage Shed



Wood Framed Equipment Storage Shed



Damage to CMU Foundation of Storage Shed



Dilapidated Storage Shed at Northwest Corner of Property

SECTION 2

TOWN OF JAFFREY FIRE DEPARTMENT

Town of Jaffrey Fire Department

The current Fire Station for the Town of Jaffrey is located at 138 Turnpike Road. The station was constructed in 1981. During the last 25 years, the maintenance and upkeep of the station has been accomplished mostly by members of the Department with help from the taxpayers of Jaffrey and local businesses in Town. The overall building is about 120-feet by 70-feet occupying 8,400 square-feet. The equipment/apparatus bay is 4,600 square-feet, and has four bays with four overhead doors along the front or north side of the building and two overhead doors at the rear. The remaining 3,800 square-feet consists of offices, a dispatch room, restrooms, kitchen/break room, a 1,400 square-foot conference room and space for utilities.

Exterior

The building is constructed of load bearing concrete masonry block with a full brick veneer all around. The brick is generally in good condition, although we did notice some mortar loss on some joints, particularly on the front of the station at the lower 3 to 4 courses of brick. There are six overhead doors into the apparatus bay which are in good condition having been replaced several years ago. The steel man door at the rear of the building is starting to show signs of rust along the lower edges of the frame and door.

The roof is a flat roof that slopes to internal roof drains. The roof is covered with a white EPDM membrane type roof. It was reported that the roof was replaced approximately 10 years ago, and it remains in very good condition. We observed that the roof drains are piped through the bottom of the sidewall of the building and emptying onto the paved area around the building. In the case of the drainpipe on the east side, the drain empties onto a riprap swale that directs the flow away from the building and into the ground.

There are large paved areas in the front and rear of the apparatus bays and station. The front area of pavement, which enjoins Turnpike Road, is cracked in numerous locations. As a minimum, the cracks should be filled and the parking lots seal-coated, but the long-term solution calls for re-surfacing the lots. The front entrance is not handicap accessible due to the height of the step at the threshold of the main entrance. A ramp/apron would be required to remedy this situation.

Off the southwest corner of the station, a new propane-fired "Olympian" generator was recently installed. It is positioned on a concrete pad and is fed from an underground propane tank.

Interior

The interior of the station is in generally good condition. All areas are kept neat and clean. Most of the finishes, including the carpeting, tile and wallboard, are in good shape. The drop ceiling tiles in the entrance lobby, dispatch office, and Chief's office are

in good condition, while the tiles in the meeting room are definitely showing signs of age. There is heavy-duty, thick piled carpeting in the entryway, which is standing up very well to the constant foot traffic. The vinyl composition tile in the meeting room is also in very good condition. It is our understanding that 3 to 4 years ago the original meeting room was renovated into an office for the Fire Chief and a storage room. During the remodeling, the exterior walls were studded and insulated to reduce heat loss. The meeting room was then covered with new wallboard and painted. Other areas receiving new paint included the office, kitchen, front lobby, dispatch office and bathrooms. It was during this renovation that a new aluminum door and frame was added.

The double pane windows in the meeting room are over 25 years old and are in need of replacement. The meeting room is often used for public meetings and training sessions. During the summer months, cooling is provided by window-mounted air conditioners. Central air conditioning would be more efficient.

The bathrooms fixtures are showing age, and the toilet stalls are arranged such that they do not fully comply with ADA guidelines. The floor tile is worn and stained, and is need of replacement. Also, there are no shower facilities, storage or changing areas for the firefighters. The two bathrooms are used by both the firefighters and by the public. This occurs when there are public meetings held in the large conference room.

The kitchen area/break room is in good condition. The exhaust hood over the stove should be upgraded with a new code compliant system, complete with the proper fire suppression capabilities. Most of the outlets in the kitchen do not appear to have GFI protection. This should be confirmed by an electrician and added if needed.

Like the rest of the station, the apparatus bay is in generally good condition. There are a few hairline cracks in the CMU, but nothing that was determined to be structurally serious. Some of the walls are stained with diesel soot, in particular the areas between the overhead doors. Most of the exhaust is handled by the "Plymovent" system, which connects directly to the exhaust pipes of the trucks. Through a series of hoses, fans and vent pipes, the exhaust is directed outside the building. There was evidence of moisture at the base of the walls, particularly near the overhead doors. The overhead doors should be weather-sealed and caulked to help prevent air and moisture infiltration. The lighting in the apparatus bay consists of 8-foot long fluorescent strip lighting with outdated T-12 bulbs. The concrete floor of the apparatus bay is in good condition with few hairline cracks and no spalling. The floor finish is very smooth, and most likely was coated with a product specifically made for sealing concrete floors. As a result, the floor can be very slippery, especially if it becomes wet.

The building is heated by an oil-fired Burham boiler. The boiler is about 10 years old and is in good condition. The building is supplied with Town water and storage. A sprinkler system is installed throughout the building. With regard to the sprinkler system,

we did not observe a back flow preventer valve, which is required by code. Smoke detectors are found throughout the building.

During our site visit, we had discussions with the Fire Chief and he had expressed some thoughts and ideas for the future of the station. He recommended that consideration be given to creating a new opening in the south, or rear wall for an overhead door. This will help to better utilize the existing apparatus bay space. As the Town of Jaffrey continues to grow and calls for service increase, he mentioned that expansion of the station will most likely be required in the not-to-distant future to accommodate newer, more modern equipment, as well as larger pieces of equipment. With this in mind, it would not be premature to initiate discussions with the property Owner of the east side of the station with regard to acquisition of that property for the expansion.

Recommendations

1. Install new energy-efficient, double hung windows in the meeting room.
2. In the next 2 to 3 years, replace the steel man door at the rear (south side) of the station.
3. Seal and caulk around all penetrations through the brick.
4. Weatherproof and caulk around the overhead doors.
5. Re-point the brickwork that has exhibited signs of mortar loss.
6. Create an impervious swale at the east side roof drain outlet to insure that most of the roof runoff flows at least 15 to 20-feet away from the building before it is allowed to percolate into the ground.
7. Install a backflow preventer in the incoming water line that feeds the sprinkler system. Retain a sprinkler system contractor to check all the sprinkler heads and do a test on the overall system.
8. Install a code compliant hood over the stove. The hood should contain the proper fire suppression system. Install GFI receptacles in the kitchen.
9. Replace the ceiling tiles in the meeting room.
10. Upgrade the fixtures, replace the flooring, and reconfigure the toilet stall in each of the two bathrooms.
11. Fill cracks and sealcoat the pavement, both in the front and rear of the building. In the next few years, consider the installation of a new pavement surface.

12. Consider recoating the floor with a product that provides better traction when the floor becomes wet.
13. Upgrade the lighting and the equipment bay to more cost effective, energy efficient fixtures.
14. Consider adding a separate bathroom facility strictly for use by the firefighters. The new facility should be outfitted with a changing area/locker room, toilet facilities, and a shower.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY FIRE DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Windows in Meeting Room	Windows are old and drafty. The windows are over 25 years old.	Replace windows with new energy efficient double-hung windows.	2 to 3 years	\$1,200		
Man Door at Rear of Station	Signs of rust and metal deterioration along bottom of door and door frame.	Replace metal door with new insulated metal door.	2 to 3 years	\$900		
Penetrations through Brickwork	There are several penetrations through the brickwork for piping or conduit that are open or have air gaps.	Caulk around all piping and conduit penetrations through the brick.	0 to 1 year	\$300		
Overhead Doors	There are air gaps around doors allowing moisture penetration into the building.	Weatherproof and caulk around all overhead doors.	2 to 3 years	\$800		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY FIRE DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Brickwork	There is mortar loss on the brickwork, in particular at the front of the building near the apparatus bays.	Clean and re-point the brick.	3 to 4 years	\$1,200		
Roof Drain - East side	The roof runoff exits the roof drainpipe in a riprap swale.	Create an impervious swale that directs the water at least 15 to 20-feet away from the building.	3 to 5 years	\$2,500		
Sprinkler System	There is no backflow preventer in the sprinkler system line.	Install a backflow preventer. Retain the services of a qualified professional to run a test on the equipment.	0 to 1 year	\$1,500		
Kitchen Area	The hood over the kitchen stove is not equipped with a fire suppression system. There are no GFI receptacles along the	Install a code compliant hood over the stove. Install a series of GFI receptacles.	1 to 2 years	\$2,400		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY FIRE DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
	counter area.					
Meeting Room Ceiling Tiles	Ceiling tiles are old, dirty and are in need of replacement.	Replace the drop ceiling tiles with new ceiling tiles. 1,400 sq. ft. @ \$2.00/sf	3 to 6 years		\$2,800	
Bathrooms (Men and Women's)	Finishes and fixtures are outdated, toilet stalls do not meet ADA guidelines.	Update flooring, install new fixtures, reconfigure toilet stalls to meet ADA 150 sq. ft. @ \$62/sf	5 to 7 years		\$9,300	
Pavement	The pavement in the front of the station and some areas in the rear have many open cracks.	Patch all pavement cracks and seal coat the driveway and parking lot area. Approx. 18,000 sf @ .15/sf	2 to 3 years	\$2,700		
		Install new 2-inch pavement overlay: 18,000 sf @ .75/sf	5 to 7 years		\$13,500	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY FIRE DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Lighting Fixtures	The existing 8-foot long T-12 fluorescent lights are outdated and energy inefficient.	Update fixtures in the apparatus bays with new energy efficient lighting. 40 fixtures @ \$260 each	4 to 6 years		\$10,400	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY FIRE DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Apparatus Bay Floor	When the concrete floor is wet it can become very slippery.	Coat the apparatus bay floor with a non-slip coating. 4,500 sf @ \$1.00/sf	5 to 7 years		\$4,500	
Firefighters Bathroom Facility	Currently there is no bathroom facility strictly for use by the firefighters. Existing bathrooms have no shower facilities.	Provide a separate “firefighters only” bathroom with shower and locker room facilities.	5 to 7 years		\$35,000	
Overhead Door	Existing apparatus bay in the rear on the west side has limited usage since there is no overhead door for direct access.	Provide a new overhead door to provide better utilization of the existing bay.	4 to 6 years		\$6,500	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ TOWN OF JAFFREY FIRE DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Future Expansion of the Fire Station	Based on the current lot size there is no room for future expansion of the fire station.	Initiate discussions with neighboring landowner to purchase adjacent lot for future expansion.	8 to 10 yrs			\$100,000
			Sub-Total	\$13,500	\$82,000	\$100,000



Front of Fire Station Facing Turnpike Road



West Side of Fire Station Facing Fitzgerald Drive



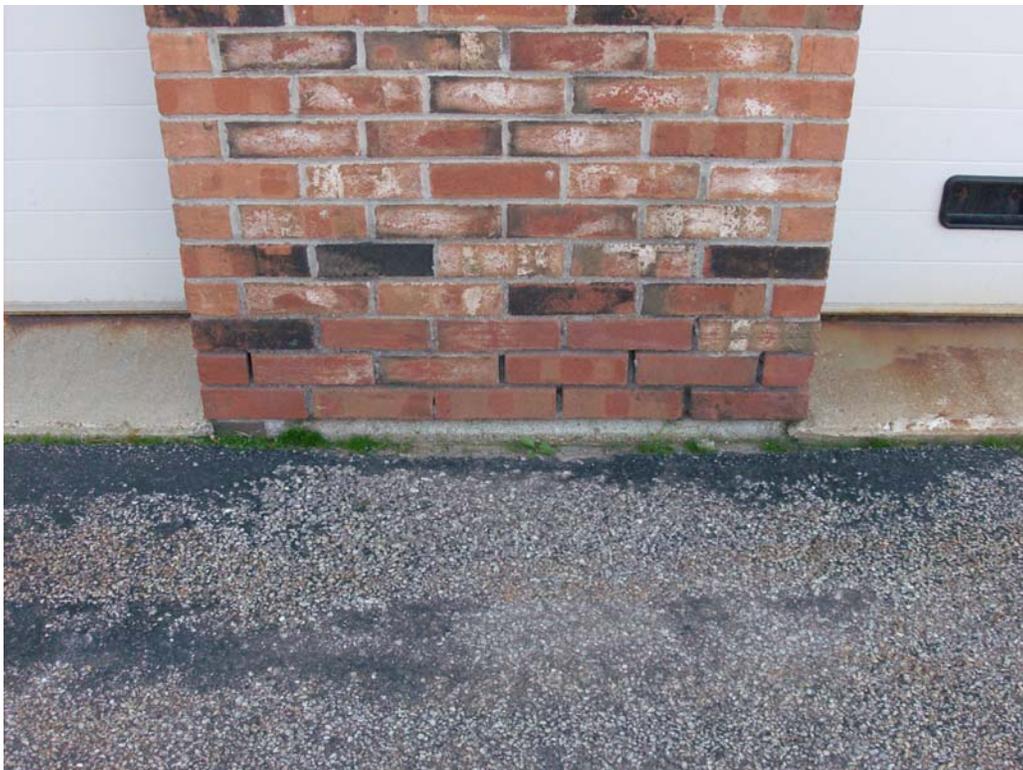
Main Entrance into Fire Station – Note Step



West Side of Station – Note Stamped Concrete Walk and New Gas-Fired Generator



Man Door at Back of Station – Note Rust on Frame and Bottom of Door



Mortar Loss in Joints at Lower Brick Courses



Wall Penetration for Antenna Cable at Roof Parapet



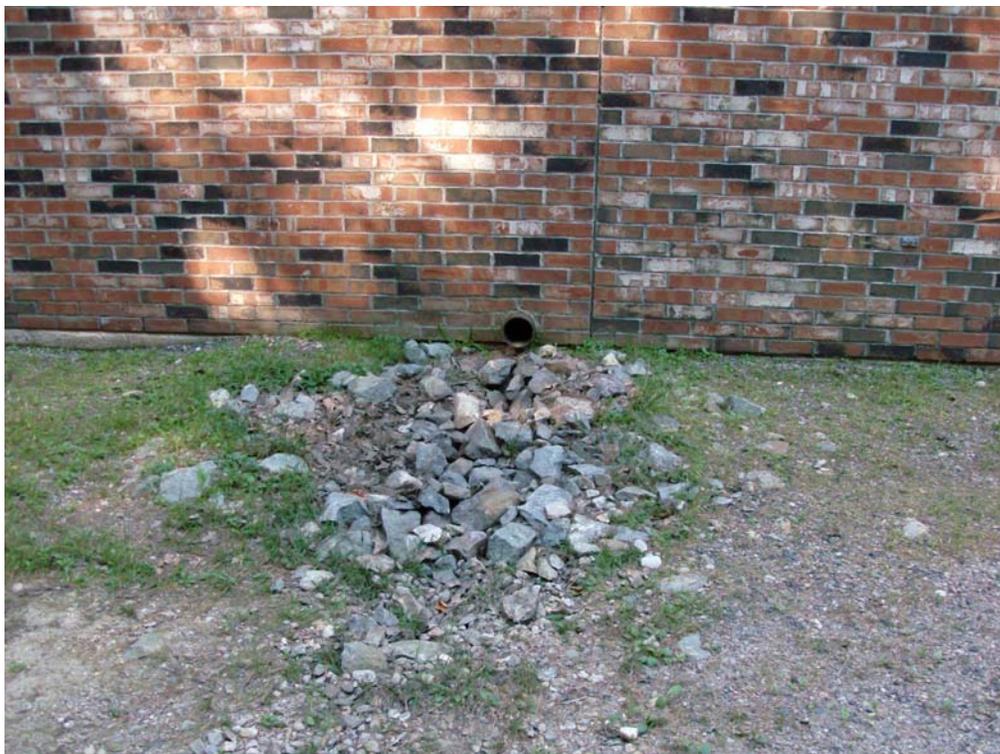
Overview of TPO Roof



Southwest Corner of Building – Note Uncovered Wall Opening



West Wall of Station



Roof Drain Termination on East Side



Cracks in Pavement at Front of Station



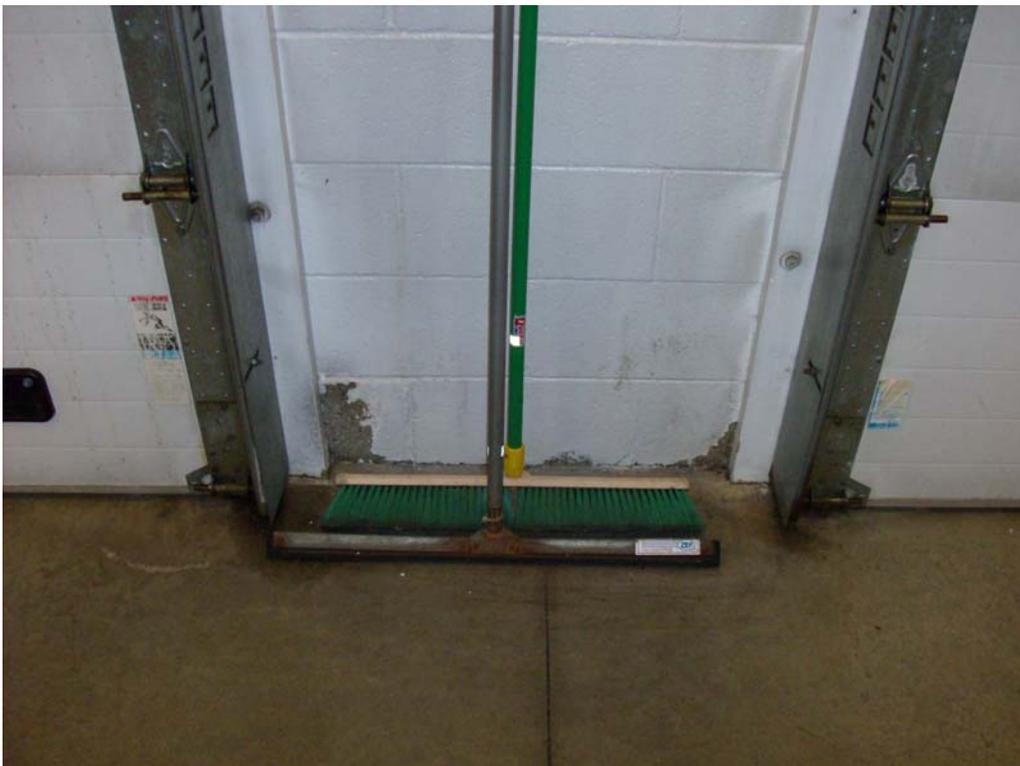
Plymovent System for Exhaust Removal



Hairline Cracks in Masonry of Garage



Discoloration on Walls Adjacent to Doors



Spalling on Face of Masonry Block



Boiler Room



Air Pack Fill Station



Kitchen Area/Break Room



Water Supply Entrance for Domestic and Sprinkler Supplies

SECTION 3

JAFFREY WATER DEPARTMENT

Jaffrey Water Department

The Administration Building for the Jaffrey Water Department is located at 124 Turnpike Road, about ¼ mile from the center of Town. The building appears to be about 20 to 25 years old. It has an overall footprint of 30-feet by 74-feet. Thirty-eight feet of the total length is occupied by a three bay garage. The remaining section of the building is office space, a small alcove used for a water testing lab and a bathroom. The construction consists of concrete masonry block with a brick veneer. The gable-style roof is framed with wood trusses spaced at 2-feet on-center. In general, the roof shingles are in good condition. We did observe a few cracked roof shingles, but we judged them to be of little significance at this point in time. Ventilation is provided by a ridge vent in combination with vented vinyl soffits.

The doors are a combination of metal doors and a single wood door. The metal doors, particularly the door on the west side of the building (i.e. the door that enters into the garage), has signs of surface rust and the weather stripping is no longer in place. The front door is a six panel wood door. The door is in poor condition. Many of the panels have contracted and either separated or pulled out of the frame. There are visible air gaps between the panels, stiles, and rails. The windows are vinyl clad insulated windows and appear to be in good condition.

The mulch added along the front and east side of the building has built up over time, thus raising the grade, and has covered over the weep holes between the brick joints. At the northwest corner, along the front of the building, there is a 16 to 20-foot wide section of pavement. Water from roof runoff splashes up off of the pavement onto the brick causing deterioration to the face of the brick. In addition, the moisture is not allowed to drain away from the building. The result is moss taking hold on the face of the brick.

The gable ends of the building are covered with vinyl siding, and some of the vinyl has popped loose at the east end of the building. The vegetation has also taken hold along the east side of the building and is overgrown. Most of this should be trimmed back. At the east side of the building, the incoming electrical service arrives at the building via underground conduit up into a meter box. Adjacent to the meter socket is a main disconnect. We noticed that this main disconnect is not secured. The unlocked box is subject to vandalism and could cause injury to unauthorized persons getting into the box. The box should be secured with a lock.

The building is heated by a gas-fired, hot air furnace with ductwork delivering warmed air to the office spaces. The furnace is at least 15 years old, and is nearing the end of its useful life. The garage area is heated by three ceiling-mounted, Janitrol propane-fired heaters.

The furnace is vented to a central chimney located between the garage and the office space. There are signs of water infiltration around the chimney as evidenced by the damaged sheetrock and corrosion inside the electrical panel mounted to the wall near the chimney. The damage appears to have occurred in the past, and the infiltration of water does not appear to be active. We checked the attic space and did not observe any fresh signs of water infiltration. A report from personnel working in the building confirms that the water infiltration has been arrested, probably when the roof was re-shingled. Badly stained ceiling tiles over the small lab area adjacent to the garage and chimney indicate that the past water damage extended out several feet beyond the chimney.

We observed other water damage in the utility room where the furnace and water are located. The damage was confined to the lower portions of the gypsum wallboard. We suspect that the water heater probably failed and leaked into the space. The existing water heater appears fairly new and is in good condition.

The lab and bathroom floor areas are covered with ceramic tile, and the office spaces are carpeted. The ceramic tile is in good condition, while the carpet is badly worn and stained and should be replaced.

We observed smoke detectors throughout the building, but there were no horns or strobes.

The building has minimal insulation in the ceiling space. We only observed about 6-inches of fiberglass batts placed in the ceiling between the bottom chords of the truss.

There is a wood storage shed located at the rear of the building, and adjacent to the shed is a propane-fired emergency generator. The pavement of the driveway and the areas around the rear and front of the building have a few cracks and unevenness, but is otherwise in good condition. The cracks should be filled and the pavement should be sealed.

Recommendations

1. Replace the wood door on the front of the building with an insulated metal or fiberglass door.
2. Remove the excess vegetation away from the east side of the building.
3. Secure the electrical disconnect attached to the east side of the building.
4. Remove the old mulch and some of the topsoil as required to lower the grade along the east and north sides of the building and to expose the weep holes between the brick joints.

5. Remove a strip of pavement along the front of the building and replace it with a crushed stone drip edge to reduce splash back against the face of the brick, thus eliminating the wet conditions that support moss growth.
6. Repaint the man doors on the west and south sides of the building. At the same time, remove and replace the old weather-stripping and caulking, as required.
7. Secure the vinyl siding on the east gable end of the building.
8. Upgrade the ceiling insulation.
9. Install a new high-efficiency hot air furnace.
10. Upgrade the office finishes, such as carpeting, ceiling tiles, and new paint on the walls.
11. Install a fire alarm system with proper horns and strobes. Note, it is our understanding that a fire alarm system is scheduled for installation in the next few months.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY WATER DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
6 Panel Wood Door at Front of Building	Door panels split, wood has contracted resulting in gaps between frame and panels.	Replace wood door with a new fiberglass insulated door.	None	\$1,500		
Vegetation Along East Wall of Building	Vegetation is overgrown.	Trim back vegetation.	N/A	\$200		
Electrical Disconnect Panel on East Side of Building	Panel is not secure, subject to unauthorized access and vandalism.	Lock the panel.	N/A	\$50		
Grade Along North and East Sides of Building	Build-up of mulch and soil has blocked weep holes in lower course of bricks.	Lower grade to expose weeps, and clean out weeps to insure they will allow moisture to escape.	1 to 2 years	\$2,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY WATER DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Pavement Along the North Side of the Building	Water running off the roof hits the pavement and splashes back onto the brick causing deterioration.	Remove a strip of pavement and install a crushed stone drip edge.	1 to 2 years	\$3,500		
Man Doors on the South and West Side of the Building	The doors are rusted and weather stripping is either deteriorated or missing.	Repaint doors and install new weather stripping. Caulk around doors as required.	2 to 3 years	\$1,500		
Vinyl Siding on East Gable End	A section of vinyl has comes loose.	Secure vinyl.	N/A	\$100		
Building Insulation	The insulation in the ceiling is only 6-inch fiberglass batts (R-19).	Upgrade insulation in ceiling to R-30 by installing 3-1/2-inches of additional insulation.	N/A	\$1,800		
Hot Air Furnace	The furnace is at the end of its useful life.	Replace the existing furnace with a new energy efficient model.	4 to 5 years		\$8,000	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY WATER DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Carpeting in Offices	Carpeting is worn out and stained.	Remove old carpeting, prep floor and install VCT in offices and at entryway from rear door (about 600 sq. ft. @ \$4.00/sf).	2 to 3 years	\$2,400		
Gypsum Wallboard	Walls need new paint, hole in sheetrock opposite rear entry. Water damaged sheetrock in garage.	Patch holes, replace water damaged sections and repaint office areas.	2 to 3 years	\$1,600		
Drop-in Ceiling Tiles	Some tiles are water damaged, others are badly discolored.	Replace ceiling tiles as required.	N/A	\$200		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY WATER DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Fire Alarm System	Currently there is no fire alarm system in the building, smoke detector only.	Provide new addressable fire alarm system.	5 to 6 years		\$12,000	
			Sub-Total	\$14,850	\$20,000	-----



Water Works Building Facing Turnpike Road



East Side of Building



Three Bay Garage at Rear of Building



Excessive Vegetation on East Side of Building



Water Damage and Moss Growth on Northwest Corner



Wood Front Door – North Side



Steel Door into Office at South Side (rear) of Building



Soil and Mulch Blocking Mortar Joint Weeps



Wood Storage Shed Out Behind Main Building



Office at Northeast Corner



Office at Southeast Corner



Prior Water Damage Around Chimney in Garage



Water Damage in Electrical Panel



Water Damage Along Wall – May be from Leaking Water Heater



Water Damaged Ceiling Tile in Lab Area



Stained and Water Damaged Carpeting at Rear Entrance

SECTION 4

JAFFREY PUMPING STATIONS

Jaffrey Water Department Pumping Stations

During our facility audit, we visited six pump stations scattered throughout the Town. Of the six stations, all are active pump stations, with the exception of the station on Squantum Road. It is our understanding that this building is used for storage only at this time. Our review of the pump stations was limited to the exterior only. In general, with the exception of the Squantum Road building, all other active stations are in good condition. The pump stations we visited included:

Turnpike Road Station

The Turnpike Road Station is constructed of concrete masonry block (CMU) with a brick façade. The building has a flat roof that is covered with a ballasted membrane roof system. There is a band of metal trim at the edge of the roof along the perimeter of the building. In general, the building is in very good condition. A separate, stand-alone, gas-fired generator is on-site for emergency use in the event of a power failure.

Pumping Station off Woodbound Road

The station off Woodbound Road is constructed of concrete masonry block. The building has a flat roof covered with a ballasted membrane roof. From the outside, the building appears to be in good condition. A separate stand-alone, gas-fired generator is on-site for emergency use in the event of a power failure.

Reservoir and Well Pumphouse at Monadnock State Park

The underground reservoir and well pumphouse off Poole Road are actually located in Monadnock State Park. The well pumphouse is a wood-framed building sided with horizontal tongue and groove V-groove pine. The hip-style roof is covered with standard 3-tab asphalt shingles. The building is in very good condition.

Mountain Road Pump Station

The Mountain Road Pump Station is a wood-framed structure covered with vinyl siding. The gable-style roof is covered with standard 3-tab asphalt shingles. In general, the building is in very good condition. A separate stand-alone, gas-fired generator is on-site for emergency use in the event of a power failure.

Squantum Road Pump Station

The Squantum Road Station no longer functions as a pumping station. It is currently used for storage. The building is constructed of CMU with a brick façade. Much of the building's façade has been covered with graffiti. The roof is a flat, ballasted-type membrane roof. Most of the roof is covered by a well established growth of moss. We suspect the membrane roof is far beyond its useful life and is in need of replacement.

Bullet Pond Reservoir and Well Pumphouse

The Bullet Pond Reservoir and well pumphouse is located on a dirt road off Squantum Road over the Town line in Rindge. The reservoir is an above-ground shotcrete structure constructed by the Natgun Corporation in 1994. It is an 80-foot diameter covered tank which holds 750,000 gallons of water. The well pumphouse is a wood-framed structure. The siding is wood clapboards, and the roof is covered with standard 3-tab asphalt shingles. Other than needing a fresh coat of paint, the pumphouse structure is in good condition. The shotcrete cladding of the reservoir is in good condition with no signs of cracking or spalling. There is no generator on-site, but in the event of an emergency, the pumphouse building does have an exterior receptacle for plugging in a portable generator if needed.



Pump Station off Turnpike Road



Pump Station off Woodbound Road



Reservoir and Well Pumphouse in Monadnock State Park



Pump Station on Mountain Road



Former Pump Station on Squantum Road



Bullet Pond Reservoir and Wellhouse

SECTION 5

PARKS AND RECREATION DEPARTMENT

Parks and Recreation Department

The main office for the Jaffrey Recreation Department is located off Howard Hill Road about a half mile from the center of Town. The recreation department office is part of a small group of buildings adjacent to the Humiston Field Athletic Complex. Besides the main office/garage, there is a concession stand and youth center, an office for the “AIM” camp, a field house for the athletic field, and a storage building. There is also a playground and a basketball/volleyball court which doubles as an ice skating rink in the winter.

Recreation Department Office Building

The main office and storage building is 68-feet long by 24-feet wide. The building is a pre-engineered metal-sided building that was originally constructed at New Hampshire Ball Bearings then moved to the present site off Howard Hill Road in 1990/91. The original flat roof was removed and a new wood-framed gable-style roof was added. The wood roof is covered with standard 3-tab asphalt shingles. The original metal building was only 44-feet long, but in the year 2000, a 24-foot by 24-foot wood-framed section was added on the original building, bringing the total length of the facility to its present length of 68-feet.

Half of the original 44-foot long portion of the building consists of a reception area, a bathroom, a small office and a larger office occupied by the Director. Occupying the other half of the original building is a storage area with an 8-foot wide overhead door. The 2000 addition is also fitted with an overhead door, and it is used to store larger pieces of equipment such as lawnmowers and tractors.

The shingles over the original 44-foot section of the building are in fair condition and should be scheduled for replacement in the next few years. The shingles over the 24-foot garage addition are in good condition and do not require replacement. The garage addition was sided with T-111 wood siding, and it appears that it was never coated with any type of wood preservative. The T-111 should be coated as soon as possible to prolong the life of the siding.

In February of 2008, water entered from the rear of the building into the office spaces. Much of the lower few inches of sheetrock became water damaged, as did the insulation in the exterior walls. Approximately 18-inches of sheetrock above the floor had to be removed and replaced, as did the lower sections of insulating batts. The problem was a result of water getting up under the bottom of the fluted siding panels. A crushed stone apron with an under drain may help to solve this problem.



The interior spaces within the office consist of drop ceilings, gypsum wallboard on the walls, and floors covered with vinyl composition tiles. In general, the finishes are in good condition. The windows are wood with thermo-pane glass. The walls are insulated and there is some insulation above the ceiling space. The overhead door in the garage addition is insulated as well. However, as far as we could observe, the overhead door in the storage area adjacent to the office does not have any insulation.

The bathroom is ADA accessible. It was reported that the lavatory sink has always drained very slowly. The drainpipes and trap were checked and found to be clear. It is suspected that the sink may be improperly vented or the vent line is blocked. This should be confirmed by a licensed plumber. The building is served by both Town water and sewage.

The building is heated with a propane-fired "Rheem" Criterion Furnace that is 17 years old. The office is heated with forced hot air, and there are propane-fired heaters hung from the ceiling of the garage space. The water heater is also gas-fired and is about 12 years old. We did observe a carbon monoxide monitor, but there were no fire alarm or smoke detectors. We also observed lighted exit signs and emergency lights.

There is a main electrical panel in the storage area adjacent to the office and a 60-amp sub panel in the garage addition. The electrical panels themselves appear to be in good condition.

Recommendations

1. Replace the shingles on the west side of the building, including the area over the offices and the first storage garage. The shingle replacement should include the installation of ice and water shield on the entire roof.
2. All wood siding should receive a coating of preservative to protect the wood.
3. Install additional insulation in the attic space over the offices. Insulate the overhead door adjacent to the offices.
4. Retain the services of a plumber to ascertain why the bathroom sink is slow to drain.
5. Install a new furnace and upgrade the heating system.
6. At the rear of the building, install a 2-foot wide apron of crushed stone with an embedded drain line to eliminate standing water which has a tendency to force its way up under the siding and into the building.



Youth Center

The youth center is located on the southeast corner of the recreation department property adjacent to Howard Hill Road. The building measures 54-feet long by 24-feet wide and includes a concession area, warming area, two bathrooms and a recreation room. There is also a 14-foot by 24-foot covered pavilion on the east end of the building for picnic tables. The first 30-feet of the building, starting from the west side, is constructed of concrete masonry block. The remaining 24-feet, which includes the recreation room, is a wood-framed structure with T-111 siding on the exterior and painted sheetrock on the interior walls. The outside walls are painted and are in good condition, but the trim around the edge of the roof is in need of a coat of paint. The entire building is fitted with a new standing seam low-sloped roof.

The concession area is used during the winter when the ice-skating rink is open. The cooking grill has a vent hood, but it is not equipped with a fire suppression system. There is a “restaurant” type fire extinguisher on hand. The recreation room includes a pool table, air hockey game, and other games along with a video gaming set-up.

The building is served by Town water and Town sewer. The bathrooms are ADA accessible as far as overall size, but do not have the proper fixture clearances, and there are no grab bars on the walls.

The interior spaces have painted CMU or sheetrock covered walls, and most of the floor is bare concrete floor with a scattering of area rugs in the concession/warming area. Some areas of the floor were painted at one time, but the paint has worn thin.

The building is heated by an “Empire” wall-mounted, propane-fired heater in the west wall. The only other heat source is a wall-mounted electric heater in the recreation room.

Recommendations

1. Upgrade the vent hood over the grill to include built-in fire suppression.
2. Add grab bars in the bathrooms to comply with ADA.

“AIM” Camp Office/First Base Dugout

The “AIM” Camp Office is a 12-foot by 24-foot wood-framed structure constructed on a concrete foundation. The upper level contains the office for the AIM youth camp along with two handicap accessible bathrooms. The lower level serves as the first base dugout for the baseball field with an enclosed storage area behind the dugout. There is no heat in the building. During the fall and winter, the building is shut-down and all the water lines and fixtures are drained. The trim, siding, and doors are in good condition, but the



building is in need of a new roof. At the upper level, there is an ADA accessible ramp that serves the building.

It was reported that water seeps through the foundation wall through the water line wall penetration into the lower level storage area. Parks and Recreation staff have drilled holes through the storage room door threshold to provide an escape route for the water.

To the left or west side of the AIM Office there is a set of stairs constructed of used railroads ties that go from the paved upper lot to the athletic field below. Many of the ties are rotted and need to be replaced. The stairway is also in need of a handrail.

Recommendations

1. Replace the roof over the “AIMS” building with standing seam metal roofing.
2. In the lower storage area, seal the leak around the pipe penetration in the foundation wall, and repair the door threshold.
3. Replace the rotted sections of railroad ties and reconstruct the stairs that lead to Humiston Field. Add a handrail.

Press Box/Third Base Dugout

The third base dugout is constructed of masonry block up to a height of about 8-feet. The press box is situated on top of the third base dugout and is a wood framed structure that is approximately 6-feet wide by 24-feet long. We observed signs of roof leakage inside the press box, indicating the roof is in need of replacement. There are weeds and brush that have overgrown the lower end of the stairs leading to the press box. This overgrowth should be cut back.

Just to the south of the press box, and running parallel to Howard Hill Road, there is a wood retaining wall constructed of railroad ties. Many of the ties have rotted and the entire section of wall is leaning in toward the athletic field.

Recommendations

1. Clear away the weeds and brush from around the stairs to the press box.
2. Re-roof the press box with standing seam metal roof panels.
3. Re-build the section of retaining wall between the third base dugout and the “dungeon” storage building.



Storage Building

Approximately 75-feet behind the home plate backstop screen there is a 16-foot by 25-foot masonry block building that serves as a utility and storage room. The building is referred to as the “dungeon.” The CMU block has a few very pronounced cracks that should be repaired. The mono-slope roof is wood-framed with 2 x 6’s at 16-inches on-center. A standing seam metal roof was installed within the last year or so. We did observe a large crack in one of the roof rafters. Calculations indicate that the present framing is adequate for only about 20 pounds per square-foot, including dead load and live load. Since this building is where the incoming electrical and main electrical panels are mounted for serving the parks and recreation buildings, as well as the irrigation system and field lighting, it may be prudent to consider upgrading the roof framing for a higher live load rating. Since the roof is covered with metal, most of the snow slides off, which helps the situation.

Recommendations

1. Re-point the cracks in the masonry block.
2. Upgrade the roof framing by adding roof rafters in between the existing members, sistering the existing members, or adding an intermediate support.



PROJECT NO. 3307 ~ FACILITY AUDIT ~ PARKS AND RECREATION DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Roof of Main Office Building (Does not include roof over garage addition)	Shingles are worn and are at the end of their useful life.	Remove existing shingles and replace with new 40-year shingles. Install ice and water shield and new drip edge and flashing. (1,100 sf @ \$4.25/sf)	2 to 3 years	\$4,675		
Main Office: T-111 Wood Siding	Lack of a suitable protective coating or sealant.	All wood siding should be painted or stained to preserve the wood.	1 to 2 years	\$2,500		
Main Office: Insulation	There is insufficient insulation in the space over the offices. No insulation in overhead door adjacent to office.	Add at least 3-1/2 inches of insulation in the ceiling over the office space. Add foam insulation to the overhead door.	N/A	\$900		
Main Office: Bathroom sink	The sink is very slow to drain; may be a blocked vent.	Retain the services of a plumber to find the problem and repair.	N/A	\$350		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ PARKS AND RECREATION DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Main Office: Furnace	Gas-fired hot air furnace is 17 years old.	Replace the furnace with a new high efficiency boiler.	4 to 5 years		\$8,000	
Main Office: Drip Edge Apron	Water can build-up against the rear of the building and work its way under the siding.	Construct a crushed stone apron with an embedded drain line.	N/A		\$5,500	
Youth Center: Exhaust Hood Over Grill	No fire suppression system in exhaust hood.	Upgrade exhaust hood to include a fire suppression system.	N/A	\$2,500		
Youth Center: Bathrooms	The bathrooms have no grab bars on the walls adjacent to the toilets.	Install grab bars in the bathrooms per ADA guidelines.	N/A	\$1,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ PARKS AND RECREATION DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
"AIM" Camp Office: Roof	The roof is in poor condition.	Replace the existing roof with a new standing seam metal roof as has been used on other structures in the complex.	1 to 2 years	\$2,800		
First Base Dugout	There is water entering the dugout through a pipe penetration in the foundation wall. A portion of door threshold was removed to allow water to escape.	Seal the foundation around the pipe penetration and repair the door threshold.	1 year	\$600		
Stairs to Humiston Field: Adjacent to First Base Dugout	Stairs constructed of railroad ties are rotted and require replacement. Missing handrail.	Rebuild stairs with new railroad ties. Add new handrail.	1 to 2 years	\$ 3,500		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ PARKS AND RECREATION DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Press Box: Roof	Evidence of roof leaks. The roof is at the end of its useful life.	Replace roof with new standing seam metal roofing.	1 to 2 years	\$1,600		
Press Box Stairs	Overgrown with weeds.	Clear the weeds and grass from the stairway.	N/A	-----		
Retaining Wall along Howard Hill Road	The railroad ties making-up the retaining wall are rotted and the entire wall is leaning into the field.	Replace the section of retaining wall from the Press Box to the Dungeon. 250 square-feet @\$18/sf	0 Years	\$ 4,500		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ PARKS AND RECREATION DEPARTMENT

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Storage Building	Large cracks in masonry walls allowing water intrusion and further damage.	Repoint cracks.	0 to 1 year	\$600		
Storage Building	Miscellaneous boxes and recreation equipment piled in front of electrical panels.	Clean out area in front of electrical panels. Maintain at least 36-inches of clear space.	N/A	-----		
			Sub-Total	\$25,525	\$13,500	-----



Parks and Recreation Garage and Office



Pavement Along Front of Parks and Recreation Building



Main Entrance to Parks and Recreation Office



Propane Storage Tanks at Rear of Parks and Recreation Building



South Elevation of Parks and Recreation Garage



Overview of Basketball Courts with Parks and Recreation Office in Background



Main Reception Area – Parks and Recreation Office



Main Lobby Area – Parks and Recreation Department



Parks and Recreation Director's Office



Storage Garage at Parks and Recreation Department



Furnace, Water Heater, and Slop Sink – Garage of Parks and Recreation



Main Electrical Panel – Wall of Parks and Recreation Garage



Storage Racks and Ceiling Mounted Heater – Parks and Recreation Garage



Concession Stand and Youth Center



Side of Concession/Youth Center – Door Enters into Food Prep Area



New Standing Seam Metal Roof on Youth Center



Youth Center – Area Outside Concession Window – Note Gas Wall Heater



Youth Center – Area Outside Concession Window and Bathrooms



Youth Center Game Room



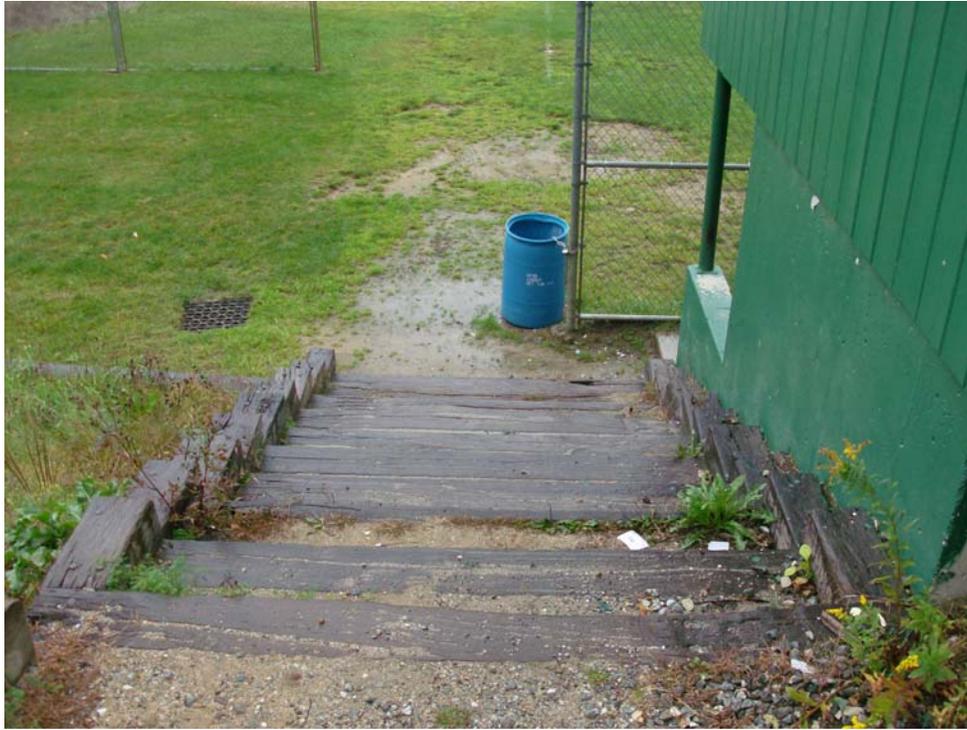
One of Two Bathrooms Inside Youth Center



“AIMS” Center/First Baseline Dugout



“AIMS” Center/First Baseline Dugout



Wood Stairs Alongside “AIMS” Center



Platform and Handicap Accessible Ramp – “AIMS” Center



One of Two Handicap Accessible Bathrooms Adjacent to “AIMS” Center



Storage Below “AIMS” Center and Behind First Base Dugout



Press Box Over Dugout – Third Base Line



Equipment Storage and Utilities – Referred to as “The Dungeon”



Electrical Panels in the “Dungeon” – Note Boxes and Debris Blocking Panel Access



Stored Items in “Dungeon”



Incoming Water Line from Well for Irrigation System



Wood Retaining Wall Along Howard Hill Road



Overview of Field Looking Towards Parks and Recreation Office



Basketball Court – Used for Ice Skating Rink in Winter

SECTION 6

**JAFFREY WASTERWATER TREATMENT
ADMINISTRATION BUILDING**

Jaffrey Wastewater Treatment Administration Building

The Administration Building for the Jaffrey Wastewater Treatment Building is a 2,300 square-foot building located just off Old Sharon Road near the intersection of Route 202. The building was constructed in 1986 and consists of concrete masonry block with a brick veneer. The roof system is a wood truss-framed roof with plywood sheathing and asphalt shingles. The shingles are in good condition. We did observe some moss growing on the shingles near the electrical masthead. The eaves are fitted with aluminum gutters and downspouts. The building has aluminum-framed windows and doors, and they all appear to be in good condition. The area in front of the building and to the northwest side is paved, and the pavement is in fairly good condition.

There is a 10-foot wide garage/storage area on the north side of the building. The remaining portion of the building includes an office, a laboratory, main lobby, bathrooms, and a utility room. The interior of the building consists of painted CMU walls with a combination of carpeting on the floor in the office area and sheet vinyl, and/or vinyl composition tile in the main entry lobby, bathrooms, and laboratory area. The 15 year old tile in the hallway and laboratory area has recently been replaced. The remaining tile is in good condition. However, it does need a thorough cleaning. We did observe some minor damage to the floor tiles near an exit door in the laboratory. The main entry air lock has a rubber walk-off mat.

From a janitors closet off the main lobby, there was an access hatch into the attic space. We observed, on average, about 8 to 9 inches of fiberglass batt insulation. We also observed a sign posted near the hatch instructing personnel to leave the hatch open at all times. It was reported that certain pipes in the attic space were subject to freezing if warm air from the heated space was not allowed to escape to the attic through the open hatch.

The toilet area and the shower stall in the bathroom are not in compliance with ADA guidelines. There is a lack of grab bars in the toilet stalls, and the overall dimensions of the stall do not meet the ADA minimums. The lack of grab bars in the shower stall and the fact that the existing curb prevents roll-in access to the shower is reason for the non-ADA compliance.

The building is equipped with a fire alarm system. There is a strobe in the hallway, as well as one on the outside of the building. However, there were no strobes in the bathrooms, laboratory, or office areas. There are heat detectors throughout the building, and there are lighted exit signs at all exterior doors. We noticed a single pull station near the front entry door. None of the other exits had pull stations.



An oil-fired hot water boiler provides circulating hot water for heating the building. The boiler was installed in 1986 when the building was constructed. According to recent service records left attached to the side of the boiler, the last service call listed the boiler's efficiency at 78%. A ceiling-hung "Modine" heater heats the office area and garage, while the hallway and bathrooms have wall-mounted radiators. The laboratory has a unit ventilator for heat. The hot water heater is new, having been installed last March.

The building has a 100 kW Superior diesel generator for supplying emergency power in the event of a power outage.

Recommendations

1. The boiler is near the end of its useful life. It should be replaced with a high efficiency unit within the next two to three years. We understand that the Town is now in the process of obtaining prices for a new boiler.
2. Install strobes throughout the building, including in the bathrooms.
3. Add grab bars in the toilet stalls to comply with ADA guidelines.
4. There are some vertical control joints in the brick façade where there are gaps in the existing sealant. These areas should be re-caulked.
5. Insulate all piping in the attic space subject to freezing.

Overall, the building appears to be in very good condition and requires mostly maintenance repairs and upkeep.



PROJECT NO. 3307 ~ FACILITY AUDIT ~ WASTEWATER TREATMENT ADMINISTRATION BUILDING

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Control Joints in Brick Facade	Some of the control joints do not have sealant completely filling the joints.	Apply backer rod and sealant as required to fill-up the control joints.	N/A	\$250		
Bathrooms	Lack of grab bars in toilet stalls.	Install grab bars in toilet stalls per ADA guidelines.	N/A	\$500		
Fire Alarm System	Lack of strobes throughout building and in bathrooms. Single pull station in main lobby.	Install additional strobes for each space (4 required). Install additional pull stations in lab and in office area.	N/A	\$3,500		
Boiler	The oil-fired hot water boiler is over 20 years old and is at the end of its useful life.	Replace the boiler with a new high efficiency boiler.	2 to 3 years	\$15,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ WASTEWATER TREATMENT ADMINISTRATION BUILDING

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Pavement at Front of Building and Along West Side	Pavement is in good condition, but should be sealed to maintain its present condition.	Seal pavement.	2 to 3 years	\$1,000		
Water Lines in Attic Space	Uninsulated water lines are subject to freezing.	Insulate water lines.	0 to 1 year	\$250		
			Sub-Total	\$20,500		



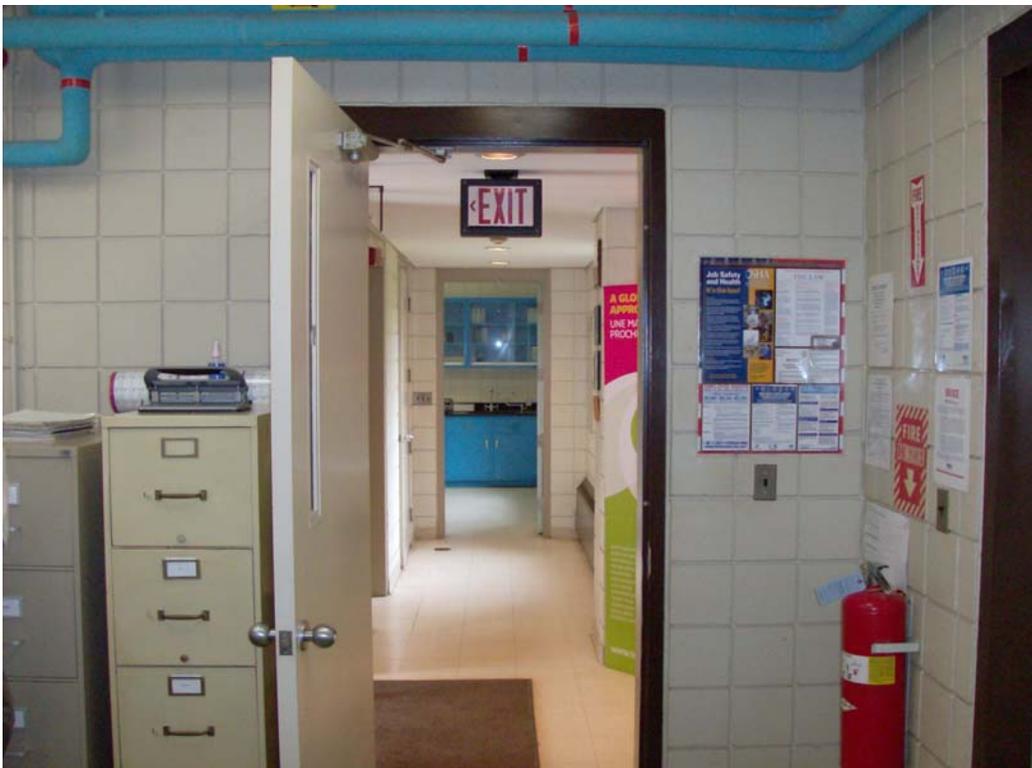
West Facing Front of Wastewater Treatment Administration Building



Rear and Side Elevation – Side Faces North



Typical Brick Control Joint



Typical Interior Finishes



Bathroom Facility with Shower Stall



Laboratory



Damaged Tile at Laboratory Door



Typical Office Space



Emergency Generator Set



Fire Alarm System in Main Lobby



New Water Heater Installation



Oil-Fired Boiler for Forced Hot Water Heat

SECTION 7

CONTOOCOOK TOWN BEACH

Contoocook Town Beach

The Contoocook Town Beach is an important part of the recreational facilities available for use by residents of the Town of Jaffrey. During the summer months of June through August, the Town closes a section of Squantum Road and places sand over the pavement to expand the beachfront along the lake. The facilities available for use by the residents include a concession stand, a covered picnic area, and a bathhouse with changing rooms and two bathrooms. There is also a fairly sizable gravel parking lot adjacent to the concession stand.

Exterior

The concession stand, constructed in 1998, is an all-wood construction measuring about 20-feet by 20-feet. Built on a slab-on-grade, the building walls are sheathed with T-111 siding, and the corner, base, and eaves are covered with PVC low maintenance trim boards. The siding was painted in the last year or two, and the paint is in good condition. The roof system consists of manufactured wood trusses spaced at 24-inches on-center. The sheathing is plywood and the roof covering is standard 3-tab asphalt shingles. The roof extends beyond the concession stand in an easterly direction over the picnic area and encompasses an area roughly 20-feet by 20-feet. Within the picnic area, the trusses bear on beams with steel column supports. The connection of the column bearing plate to the beam relies on a pair of lag screws. This should be upgraded to a more rugged column cap connector with better hold-down resistance between column and beam. The slab-on-grade that is under the concession stand extends out to encompass the entire covered picnic area.

To the east of the picnic area there is an 11'-6" by 36' CMU block structure that serves as the bathhouse building. The 48-foot dimension runs in the north-south direction, and it is this building that houses the changing rooms and two restrooms for use by the beachgoers. From the main roof over the concession/picnic area, there is a short section of roof that connects the picnic area with the roof of the bathhouse, which is also a wood framed, shingled roof. This short connector roof is very flat at about 2:12, making it too flat for conventional shingles. We observed many missing shingles on the bathhouse, particularly at the northwest corner. It is our understanding that some of these missing shingles can be attributed to vandalism. However, we did observe sporadic missing shingles at other areas of the roof, including the roofs over the concession stand and picnic area.

We observed some rather large cracks in the joints of the CMU block, particularly at the southwest corner of the bathhouse. The doors on the bathhouse are heavy, metal doors with wood trim. The door to the changing room on the front side, as well as the two doors to the bathrooms at the rear of the building have been the victims of vandalism over the years. The doors are heavily dented and the edges are damaged by the action of a crow bar. The bottom of the doors frames is starting to rot, particularly on the bathroom



doors. The bathhouse and concession stand are served by Town water, but the facility relies on a septic system with a leach field and pump station. There is a high level alarm mounted on the wall of the concession stand. The alarm is local only and is not set-up to sound at a remote location, such as the Parks and Recreation Office. The bathrooms consist of a toilet and sink, but they are not ADA compliant.

The parking area is well-compacted gravel. There are some low spots and dips, and a re-grading of the entire lot should be done over the next year or two.

The interior finishes of the concession stand include wood baseboard and gypsum wallboard on the walls only. The ceiling space remains open. On occasion, water will seep up through the slab-on-grade, which has led to water damage and possible dry rot of the baseboard. There is also some mold developing in some areas of the baseboard and lower portions of the wallboard subject to this water intrusion.

The griddle used at the concession stand is portable and can be removed and used at other functions around Town. At its designated location in the concession stand, there is no vent hood to capture smoke and cooking fumes. As a result, the fumes and smoke rise up into the truss space where it is blown out through the gable vents using a box fan hung from the trusses. This is not a good situation and should be rectified as soon as possible.

The only form of heat in the building is a propane-fired ceiling heater. Since the building is used only during the summer months, it is very rare that heat is required. As a result, the ceiling heater has not been activated for some time. The electrical panel is in good condition, and there is ample capacity for future expansion. We did not observe any smoke or heat detectors in either building.

The concession stand and surrounding area is covered by a closed circuit camera surveillance system with a tape back-up. Since this building is in a fairly remote area of Town, it is recommended that this system be maintained and upgraded as required.

Recommendations

1. Install new vandal-proof doors and frames on the bathhouse for the changing rooms and for the bathrooms.
2. Install a proper vent hood over the grill. The vent system should be complete with a fire suppression system.
3. Add proper column caps to the columns supporting the beams in the picnic area. A lally column cap, such as the “Simpson” type LCC column cap, provides adequate bearing length for the girder reactions and proper hold-down resistance between the column and the beam.



4. Replace the lower 3 to 4 feet of wallboard and baseboard in the concession stand damaged by water intrusion and/or heavy usage. Replace the wallboard with moisture resistant wallboard and cover with a thin layer of FRP. This would provide impact resistance and be easy to keep clean. The other option would be to replace the wallboard with an impact and moisture resistant cement board.
5. Install heat detectors in the concession stand and heat and/or smoke detectors in the bathhouse.
6. The high water alarm for the septic system should be capable of being recognized at a remote location such as the Parks and Recreation Office or DPW.
7. Maintain and upgrade the closed circuit camera surveillance system as required.
8. In the near future, replace the shingles on the bathhouse and main concession stand roof. Because the connector roof is such a low slope roof, it should be re-roofed with rolled roofing.
9. In the near future, fill the low spots in the parking lot and re-grade the entire lot.
10. Give consideration to adapting the bathrooms to be in full compliance with ADA guidelines.



PROJECT NO. 3307 ~ FACILITY AUDIT ~ CONTOOCCOOK TOWN BEACH

ARCHITECTURAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Bathhouse Doors and Frames	The doors have been vandalized over the years and the wood frames are showing signs of deterioration.	Replace the doors and frames with vandal-proof door sets.	1 to 2 years	\$2,400		
Vent Hood for Grill	The grill does not have a vent hood. Smoke and fumes are exhausted through the gable vents by a box fan hung from the roof trusses.	Install a code compliant vent hood with fire suppression.	N/A	\$3,500		
Column to Beam Connections in Picnic Area	Flat plate with two screws/ lag bolts do not provide adequate hold-down.	Install Simpson column caps.	N/A	\$400		
Wallboard and Baseboard in Concession Stand	Wallboard is damaged from usage, some mold and water damage. Baseboard has water damage.	Replace wallboard with water resistance wallboard and cover with FRP or use cement board product.	2 to 3 years	\$1,200		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ CONTOOCCOOK TOWN BEACH

ARCHITECTURAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Heat and/or Smoke Detectors	No detectors in concession stand or bathhouse.	Install as per code.	N/A	\$1,000		
High Water Alarm for Septic System	Alarm is local only.	Alarm made to activate at a remote site where personnel are on-hand.	1 to 2 years	\$1,500		
Roof Shingles	Missing shingles, some are worn.	Replace shingles on concession stand and bathhouse, and use rolled roofing on connector roof.	3 to 5 years	\$5,500		
Parking Lot	Low spots and dips throughout lot.	Fill in low spots and re-grade lot.	3 to 5 years	\$3,500		
Close Circuit Surveillance System	System is functional, but some components are old and need upgrading.	Upgrade system components as required. Eventually replace system.	2 to 3 years	\$500	\$4,000	

PROJECT NO. 3307 ~ FACILITY AUDIT ~ CONTOOCOOK TOWN BEACH

ARCHITECTURAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Bathrooms	Bathrooms do not meet ADA guidelines.	Upgrade at least one bathroom to meet ADA guidelines.	5 to 7 years		\$15,000	
			Sub-Total	\$19,500	\$19,000	



Contoocook Beach Concession Stand and Bath House



West Elevation of Concession Stand



Rear of Concession Stand, Picnic Area, and Bath House



Bath House – Door to Winter Storage/Summer Changing Rooms



Changing Rooms – Currently Being Used for Winter Storage



Crack in CMU – South Wall of Changing Room



Damaged Door at Bathroom – Rear of Bath House



One of Two Bathrooms at Rear of Bath House



Missing Roof Shingles Over Bath House



Beam to Column Connection – Roof Over Picnic Area



Table for Gas Griddle – Note No Overhead Hood



Box Fan Used to Vent Cooking Fumes and Smoke



Water Damage and Mold Along Baseboard

SECTION 8

JAFFREY CENTRAL STORAGE

Jaffrey Central Storage

The Jaffrey Central Storage Facility is located at 163 Mountain Road west of Jaffrey Center. The building was constructed over 50 years ago and originally served as the Jaffrey Center Fire Station. Presently, the building is used for storage of fire apparatus, including an older pumper truck suited for off-road use and an antique fire truck. Also during the time of our site visit, one of the garage bays was occupied by a large box trailer that held emergency response equipment for use during a community disaster. During the winter months, the Town uses the building for storage of the DPW's sweeper and flush truck, along with the Sewer Department's pumps and the Police Department's speed trailer.

Exterior

The Central Storage Facility is approximately 2,160 square-feet, of which 1,800 square-feet is the main garage, and the remaining portion is storage. The garage portion measures 30-feet wide by 60-feet long. The building is constructed of concrete masonry block on a cast-in-place concrete frost wall. The front of the building does have brick veneer around and in between the overhead doors. The structure has a gable-style roof framed with wood. The roof is covered with 3-tab asphalt shingles that are in fair condition. There are two 12-foot wide overhead doors in the front, or north wall, of the building. The doors were installed about three years ago and are in very good condition. A new insulated, metal clad man door was installed in the east wall near the northeast corner of the building. The other man door at the rear of the building on the west side is a steel door and is starting to show signs of surface rusting. At the south side or rear of the building there is a small storage area, which houses a furnace and an oil tank. The roof of the storage area is a shed-type roof sloping towards the south. This roof is also covered with asphalt shingles that are in fair condition similar to the main roof.

The paint on the wood trim at the eaves and the gable ends is practically non-existent as most of it has peeled and blistered. In some areas the wood trim has rotted and is in need of replacement. The gable end at the north side of the building is covered with T-111 plywood siding, and it too is badly in need of painting. The CMU block walls appear to have received a coating of paint several years ago and are in good condition.

The CMU block chimney located at the southwest corner of the building requires re-pointing. There are vertical control joints in the east and west walls of the building. There is the appearance of a rubber backer rod, but there is no caulking in the joint. It is recommended that a new backer rod be installed where needed and that the entire vertical joint(s) be caulked. We also noted that the finished grade along the east, west, and south walls of the building is slightly higher than desirable and thus covers most of the weep vents in the CMU.



There is a layer of crushed stone at the door on the east side. However, we do recommend that a stone drip edge be installed all around the building, and that all vegetation close to the building be cut down, especially some of the large trees at the rear.

Interior

The only finishes on the interior of the building is a coat of paint on the CMU walls and the installation of gypsum board on the ceiling. We observed some sign of moisture infiltration along the walls, as well as water stains on the ceilings. Areas were noted in the main garage, but the predominant area for leakage was in the rear storage area. The water stains on the ceiling in the garage could be from small roof leaks. We suspect the water stains in the rear storage area may be the result of a failure of the flashing between the shed roof and the gable end of the building, thus allowing water to penetrate. When the roof is re-shingled the flashing should get replaced at the same time. The same can be said for the flashing around the chimney. Another source of moisture within the building could be up through the floor slab, most likely due to the absence of a vapor barrier. Increased ventilation in the building will help to mitigate the moisture problem. As an initial step we recommend that a ridge vent and eave vents be added in the near future.

There are no heat or smoke detectors in the building, but the lack of these devices is compensated by the fact that the building is fitted with a fully charged wet sprinkler system. Other than the sprinkler system, there is no running water nor sewer facilities at the building.

The interior space is heated by virtue of an oil-fired, hot air furnace. The furnace is a "Thermo Pride" brand and it appears to be in good condition. The hot air is blown into a trunk duct that runs across the wall that divides the main garage from the storage area. It appears that it would be difficult to heat the front half of the garage due to the limited amount of ducting. There is a limited amount of insulation in the attic space. The Town has expressed a concern with regard to energy usage saying that it is quite expensive to heat the building.

The interior spaces are lighted with fluorescent light strips. The fixtures and bulbs are outdated and could be upgraded to more energy efficient models. However, the Central Storage building is an unmanned facility where the lights are seldom used. Therefore it would not be cost effective to upgrade the lighting at this time. The main service panel is old but adequate for the present usage of the space.

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. Scrape and paint the wood trim and T-111 siding at the gable ends of the building. Any rotten or badly deteriorated wood trim should be replaced with maintenance-free composite wood trim.
2. Repoint the CMU joints at the chimney.
3. Caulk the vertical control joints in the CMU walls. Install new backer rod as required.
4. Lower the grade by about 6-inches around the perimeter of the building to expose the lower course of CMU block, including the weep vents in the mortar joints.
5. Replace the steel man door on the west side of the building that enters into the storage area.
6. Replace the existing shingle roof in the next 1 to 2 years. Reflash around the chimney, as well as the interface between the shed roof and the main building. Add a ridge vent and vents along the eaves.
7. Reduce energy usage by increasing the insulation in the attic space.
8. In an effort to reduce the energy usage and make it easier to heat the building, the Town may want to consider adding rigid insulation to the exterior walls and recover the walls with cement board or alternate types of siding materials.
9. Cut back the vegetation in close proximity to the building and install a crushed stone drip edge.

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY CENTRAL STORAGE

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Wood Trim and Siding	Paint is peeling and badly blistered. In some cases paint is not existent and the wood is rotted.	Replace rotted wood. Repaint Trim and T-111 Siding.	None	\$3,500		
Masonry Control Joints	No caulking and missing backer rod in some cases.	Caulk all vertical control joints.	None	\$1,000		
Chimney	Many joints in the CMU block are cracked and/or the mortar is loose.	Re-point joints of chimney.	2 to 3 years	\$800		
Man Door at Southwest Corner	Door is badly rusted and starting to deteriorate.	Remove old door and replace with new insulated door and low maintenance trim.	2 to 3 years	\$1,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY CENTRAL STORAGE

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Vegetation and Grade Around East, South, and West Sides of Building	Excess vegetation close to building. Grade is high and covers the lower course of CMU. Weeps in CMU are blocked.	Clear away all excess vegetation. Lower grade around the perimeter of the building by approximately 6-inches and re-grade. Install a crushed stone drip edge.	N/A	\$5,000		
Roof Shingles	The shingles are worn and water intrusion was noted in the rear storage area and the main portion of the garage.	Replace roof shingles and reflash around chimney and at shed roof. Add ridge and eave vents.	2 to 3 years	\$9,500		
Insulation	There is a limited amount of insulation in the attic.	Increase the insulation in the attic.	N/A	\$3,000		

PROJECT NO. 3307 ~ FACILITY AUDIT ~ JAFFREY CENTRAL STORAGE

ARCHITECTURAL/HVAC AND ELECTRICAL			\$ Opinion of Cost			
COMPONENT	OBSERVATION	RECOMMENDATION	<i>Remaining Useful Life</i>	Short-Term	Mid-Term	Long-Term
Perimeter Walls	There is little to no insulation in the walls. It is very expensive to heat the building.	Add rigid insulation to the exterior walls of the building and reside the building with cement board or vinyl siding.	4 to 7 years		\$25,000	
			Sub-Total	\$23,800	\$25,000	



Overhead Doors – Front (North) Elevation of Jaffrey Central Storage



East Elevation – Shed Roof at Rear Accommodates Oil Tank, Furnace, and Storage



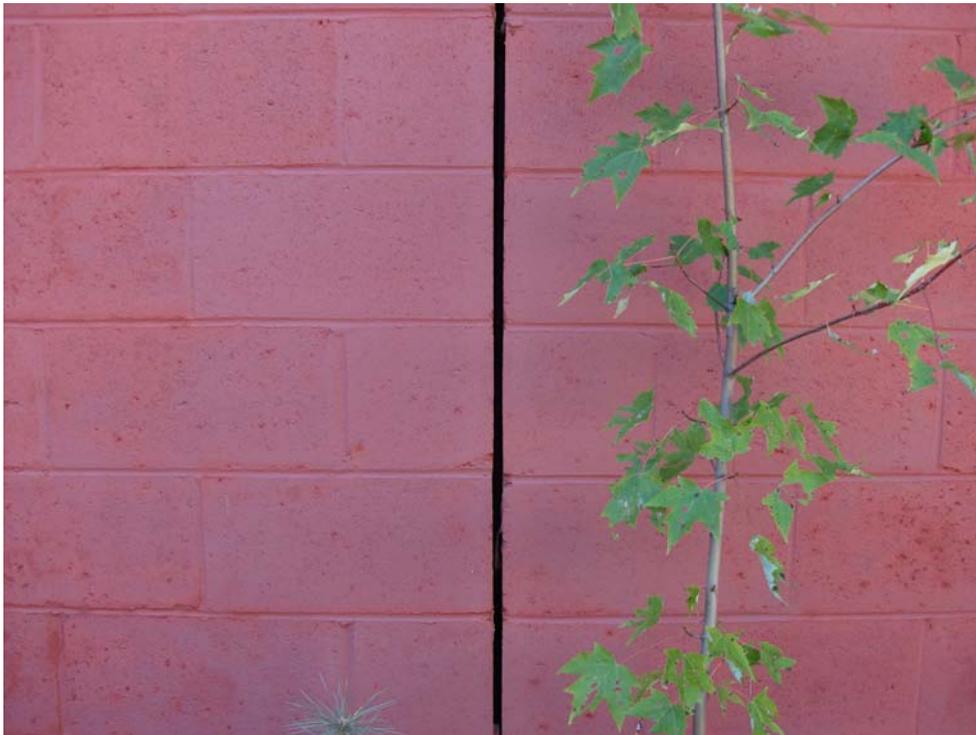
Empty Drums Stored at Rear of Building



West Side – Note Rotted Trim, Peeling Paint, and Chimney in Need of Re-pointing



Existing Grade Covering Lower Block Course and Weep Holes



CMU Control Joint in Need of Caulking



New Insulated Door and Trim on East Side



Oil-Fired Hot Air Furnace



Point of Entry for Sprinkler System



Moisture Intrusion in Storage Area



Interior CMU Walls



Some Moisture Intrusion Noted on Ceiling



Main Electrical Panel