Thompson Community Center

Capital Needs Assessment Report

October 22, 2018

Town of Union, Maine

Prepared by:

Merriam Architects
Landmark Corporation Surveyors & Engineers
J.M. Kilby Mechanical Engineer
Swiftcurrent Electrical Engineer

Capital Needs Assessment
Project Summary

Project: Thompson Community Center

Provider

Name: Merriam Architects
Addr: 58 Park Street, Suite 102
City: Rockland
State: Maine, 04841
Phone: 207-594-1421
Email: jason@merriamarchitects.com

Request for CNA

Name: Town Of Union Maine

Site Information Mix

Type: Public
Year Built: 1923 and 1951
Last Renovated: 1990's
Office/Rooms: 13
Total Rooms: 40

Project

Name: Thompson Community Center
Addr: 51 South Union Rd
City: Union
State: Maine, 04862
County: Knox

Inspection Report

Date: 7/12/2018
Inspector: Jason Merriam, Principal, Merriam Architects
Mike Sabatini, Joel Lufkin, Landmark Corporation
John Kilby, J.M. Kilby Mechanical Engineer
Tim Matthews, Swiftcurrent Engineering Services, Inc

Note: 'Merriam Architects' refers to the entire team from above

LICENSED ARCHITECT
JASON MERRIAM
No. 3623
STATE OF MAINE

MERRIAM architects
www.merriamarchitects.com

LANDMARK CORPORATION
SURVEYORS & ENGINEERS
219 MEADOW STREET ROCKPORT, MAINE 04856 PHONE: (207) 236-6757 WWW.LANDMARKMAINE.COM

Capital Needs Assessment
Table of Contents

Content	Tab
Purpose	
Assessment Methodology	
Site Observation	
Safety and Accessibility	1
Life Safety code	
Handicap Accessibility	
Site	2
Site Lighting	
Driveway, Parking Lots, Sidewalks	
Site Drainage	
Landscape	
Signage	
Dumpster Enclosures	
Architectural/ Structural	3
Structural Elements	
Exterior Walls	
Windows	
Doors	
Common Areas	
Interior Elements	
Mechanical and Electrical	4
HVAC Systems	
Plumbing Systems	
Electrical System	
Fire Suppression / Life Safety	
Environmental	5
Lead Base Paint	
Asbestos Containing Materials	
Mold	
Drinking Water	
Wastewater Disposal	
Plans	6
Spreadsheets	7
Calderwood Report	8
Smith & May Report	9
Test Result Lead Paint	10
AQM Asbestos Report	11
AQM Mold Report	12
Drinking Water Testing	13

MERRIAM architects
www.merriamarchitects.com

Thompson Community Center Union, Maine

Purpose

In accordance with authorization received in June 2018, Merriam Architects has conducted a Capital Needs Assessment (CNA) of the Thompson Community Center located in Union, Maine. The purpose of the CNA is to provide an assessment of the physical condition of the property. This report does not provide absolute solutions, nor is it intended for use as a construction document. These guidelines are a solid mix of construction practices and methods.

The CNA identifies and provides cost estimates for the following key items:

- Immediate Capital Needs – repairs, replacements and significant maintenance items which should be addressed immediately
- Physical Needs Over the Term – repairs, replacements and significant maintenance items which will need to be addressed over the term of 20 years

The assessment included a review of major site, architectural, common space, office and electrical and mechanical elements.

Assessment Methodology

The CNA was conducted using the "FANNIE MAE Physical Needs Assessment Guidance to the Property Evaluator." The review activities for the preparation of the report were conducted under the following system categories:

A. Safety and Accessibility
B. Site
C. Architectural/Structural
D. Mechanical/Electrical
E. Environmental

The review has been conducted to assess the physical condition of elements in each system category based on our judgment of the physical condition of the elements and their useful lives as defined in the "FANNIE MAE Expected Useful Life Tables." The review is based on observations of the visible and apparent condition of the facility and major components made on the date of the site observation visit, and made only in the best exercise of our professional ability and judgment. Other experts were brought in for environmental testing. Merriam Architects, and/or its representatives, makes no representations regarding blatant or concealed defects that may exist and no warranty or guarantee is expressed or implied.

Estimate prices in this report are preliminary in nature and are intended only as a guide. Estimates are based on the firm's experience, consultation with a current construction estimator, database of work on similar projects, and information from national estimating publications adjusted to the local area.

Assessment Methodology Continued

No destructive testing was performed. Verification of fire-rated assemblies occurred only to the extent that partition door fire-rating identification tags could be read. The facility was reviewed for compliance with the Americans With Disability Act (ADA) for public areas, the ANSI 2003 and the Maine Human Rights Commission handicapped accessibility guidelines. Visual review of possible environmental issues and potential site hazards such as chemical storage tanks, was conducted to the extent possible. Additional environmental concerns, was limited to asbestos containing materials (ACMs), lead-based paint, and mold.

The conclusions presented in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. The actual performance of individual components may vary from a reasonably expected standard, and may be affected by circumstances occurring after the date or beyond the scope of this evaluation. Conclusions reached in this review assume responsible ownership and competent management of the facility. Information provided by others is believed to be reliable, but Merriam Architects and the project team assumes no accuracy thereof.

For consistency and clarity, forms modeled on those suggested by the "FANNIE MAE Physical Needs Assessment Guidance to the Property Evaluator" guidelines have been utilized in documenting and assessing the condition of the systems at the facility. These forms provide a summary of the assessment of the major systems and are presented in the attached spreadsheets (Tab 7).

The terms used in the forms are defined as follows:

- EUL – The expected Useful Life figure is taken from the Expected Useful Life Tables provided in the "FANNIE MAE Physical Needs Assessment Guidance to the Property Evaluator." These tables provide standard estimates of the expected useful lives of many components typically found in Buildings.
- Age – The actual or estimated age of the component.
- ERL – The Effective Remaining Life is an estimate of the remaining life of the component, determined by subtracting the Age from the EUL. Descriptions of items needing to be addressed are in the Site & Facility Review.
- Cost by Year – The sum of the action items, in current dollars, inserted in the column for the year in which the action is expected to take place.
- Total – This is the sum of the all of the appropriate action items, without including an inflation factor.

A building plan was provided by the owner. Photographs documenting the general conditions of the property and areas of potential concern are presented on photo sheets within the report.

Site Observation Visit

Merriam Architects and other team members conducted multiple site observations of exterior and interior conditions of the facility which consists of two buildings joined by a connecting enclosed structure.Lori Carlson represented the Thompson Community Center as the Executive Director. The site observation visit included a visual review of the exposed site and building elements.

While the assessment is not intended to identify minor, inexpensive repairs or other aesthetic maintenance items, reasonable efforts were made to identify infrequently occurring major expense items, deferred maintenance, and repairs or replacements which normally involve significant expense or outside contracting.

Jason Merriam represented Merriam Architects, and Michael J. Sabatini, P.E. representing Landmark prepared this report.

Safety and Accessibility

Life Safety Code

The facility was reviewed against Chapter 31 of the NFPA 101/ Life Safety Code (2015). Given that the facility consists of an existing building, adaptability may be an issue with respect to some code requirements. Revisions/upgrades deemed necessary due to health and safety (H & S) concerns have been identified in this report. See more information, this section.

An NFPA-13 automatic sprinkler system is currently being installed in phases. The alarm panels, located in the entry vestibule. are part of an old Gamewell fire alarm system and was going to be replaced in the near future. Horns strobes are located in hallways and common areas. See Swiftcurrent report (Tab 4)

Handicapped Accessibility

The facility was reviewed against the ADA for public spaces accessibility standards. All statutes provide for reasonable accommodation in the case of existing structures. There is one designated handicap entrance at this time with access to parking, and appropriate entrance/exit. This access path has issues with the door opener/closure and the threshold abnormalities. An elevator/lift is available with an accessible route to the handicap parking space. The elevator/lift was not operational at the time of inspection. The existing slopes and surfaces appear to meet the ADA, however there is a need for some corrections in regards to hand railing on the ramp located on the interior of the building. Some existing heaving along the accessible path must be corrected to meet the consistency of the paved path at a 1:20 slope max, 2% cross pitch, and no more than a 1/2" change in level. See Site Section (Tab2) for more information.

The goal is to achieve reasonable accommodations for disabled individuals. Ideally the main entrance of the building would be made accessible, however due to the historic nature of the building the current access point appears reasonable with some upgrades.

Fire Suppression and Life Safety

The Fire Suppression System is currently being installed. The process is still on going and has yet to be pressurized at the time of this report. Left- Shows the new system located in the crawl space of 1951 Building.

Right- Shows the water storage tanks that are new and located in the crawl space of 1951 Building.

The first floor of the 1951 Building and the 1923 Building has the majority of the main run complete at the time of this report. It is also report that the second floor will also have the suppression system. No hard dates where provided for completion dates, however it was reported to be a 3 phase construction.

Left- Typical Sprinkler head

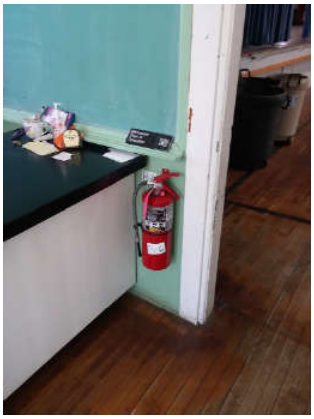
Right- The building does have a lift for ADA purposes. This lift was not in operation when inspection took place. The unit was locked and not able to be accessed to have the interior of the lift viewed. The ramp leading into the lift appears to be solidly constructed and operational.

Left- This Fire control station is located in the connector. This station has a fire pull station and control panel.

Far Left- This is a typical strobe emergency light found in the buildings. This emergency lighting in the building is typical throughout the two buildings. An inspection by the State Fire Marshals Office showed some faulty lights which should be addressed ASAP.

Left- This is a typical exit light found in both buildings.

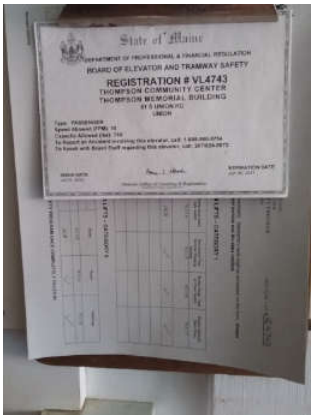
Right- This is a typical exist sign found in both buildings. There are multiple locations where these signs should be replaced by lighted signs.



Left- The fire extinguisher shown is typical for the two buildings. They are all numbered. While a list of extinguishers was not found, the State Fire Marshals Office had recently inspected the building --Statement of Deficiencies and Plan of Corrections-File Number-17453

Right- Shown is a typical pull station found though out the two buildings. There appears to be two different types of pulls.

Right- This lift license was posted near the lift, however upon closer examination, the license was out of date. Records showed the lift being installed in 2006.



Thompson Community Center Union, Maine

Site

Site Lighting

Exterior lighting is provided for vehicle circulation areas via 3 light pole and 9 building light fixtures. It could not be determined if lighting was adequate as the survey was performed during the day; however, based upon the number of exterior lighting fixtures and light locations, the lighting appeared to be insufficient overall. We recommend that LED lighting fixtures are installed when replacement is called for. See Electrical Report for more information.

Driveways, Parking Lots and Sidewalks

The parking lot/driveway areas at the property are surfaced with both asphalt and gravel with approximately 30 standard parking spaces (estimated) in 4 separate areas and 4 handicap spaces (estimated). The property utilizes one sidewalk along the front of the building. Asphalt parking lots and drives are in fair condition, as some pot holes are evident as well as cracking in the pavement. The gravel areas of the driveways and parking show signs of erosion. These areas should be repaired and cracks sealed to extend the life of the existing pavement. This repair should be addressed in the year 2019. Consider a survey and possible regrading before new or repaving to ensure proper grades. See photos and locations, this section.

Site Drainage

The site is sloped generally away from the South Union Road and Common Road toward the small stream along the west of the site and pitched away from the buildings in most areas. The parking appears to have several varying slopes which facilitate drainage. Two catch basins are located in front of the 1951 Building. One is in the lawn near South Union Road which accepts minor surface water and a 24" drain pipe picking up runoff from the east side of South Union Road, and pipes it though a 24" culvert across the site to a drainage ditch at the southwest side of the site. The other basin is in the driveway and collects surface runoff from in front of the building and directs it through 15" culvert to outfall in the same location. There is also a field drain inlet in the lawn area in front of the 1923 building which accepts surface water and from an under drain pipe and outfalls in the lawn to the west of the child play area. This outlet appeared plugged at the time of inspection.

The 1923 Building has 2 floors approximately starting at 4'+/- above grade for much of the building foot print with no rain gutters. The 1951 building has 3 floors with 1 floor located as a 'walk out level'. This building has a one pitched roof which drains from the roof to a gutter system. This gutter drains into a controlled system which is piped below grade toward the southwest drainage ditch.

There were a few areas of concern regarding site drainage. There appeared to be some gravel erosion at the transition of the paved driveway and gravel parking area to the southeast of the 1951 Building. Also in this area, the long culvert from the lawn catch basin appears to be partially collapsed or damaged, with surface settling and erosion. This culvert should be reset with a catch basin added approximately mid-lenght to repair the condition and facilitate better grade transition. The field inlet and outfall in front of the 1923 Building should be cleaned out to facilitate free drainage. There is a foundation access location for utilities at the side of the 1951 building that is damaged and appears to allow water intrusion. This should be repaired to prevent water inflow to the basement space.

Site Drainage Cont.

There is evidence of heaving of the northeasterly entrance steps to the 1923 Building on the common Road side, which has caused water to flow toward the door and rot the door threshold and adjacent floor and walls. There also appears to be sinkholes or rat holes on either side of the steps. This condition should be corrected as soon as possible and the door threshold and surrounding structural components repaired. There is a location of apparent ponding at the back of the 1951 building near the Thrift Store entrance where the parking are appears to slope slightly toward the building. Regrading of this area should be done to slope away from the building and prevent ponding. Also, there is an apparent damaged 4" foundation drain or some type of drain outlet that empties to the stream near the downstream end of the large culvert crossing toward the Union Town Office building that should be repaired.

It is recommended that snow removal take place on a regular basis to minimize pooling and ice covered parking areas. Also, gutters and drain pipes should be inspected on a regular basis and cleared if necessary to prevent clogging. According to maintenance personnel, the large gutter system at the back of the 1951 building was badly clogged at on time, causing significant roof runoff cascading down the back of the building and likely leakage in the building.

Landscaping

Landscaping is present predominantly along the front and south side of the building. While the landscaping is not controlled by islands or barriers it has recently been addressed in one particular area near the front entrance of the 1951 Building. In other areas a combination of trees and small shrubs are overgrown, and shading parking and driveways that may be encouraging a freezing condition in the winter. Trees that encroach on the building closer than five feet should be trimmed back by a knowledgeable tree service. Most of the trees are in good shape and when the leaves drop maintenance should take care before leafs block drainage paths. Mature tree close to building may undermine the foundation and shade/leafy areas can hold moisture on siding causing unwanted mold/mildew/decay. See photos, this section.

Signage

There is no sign at the entrance to the main parking lot from South Union Rd. Various metal parking signs are present in the lot, however they are old and faded making it hard to read. New handicap parking signs will be required at each handicap parking space. Signage near the entrance that identifies the building is recommended.

Dumpster Enclosures

The site features a two commercial dumpsters that do not have enclosures surrounding them on three sides. We recommend that an enclosure with access entry for handicap accessibility should be installed. The access needs to have a level surface for entry. The dumpster should be in an area where there is little to no pooling of rain water and the dumpster should be on a concrete slab which pitches to drain properly (2% max) in accessible area. See photos, this section.

Driveways, Parking Lots, and Sidewalks

Pavement Areas

Non-Pavement Areas

The entrance from South Union Rd is paved, however the pavement has signs of wear. This pavement has sizable 'potholes' that should be repaired. This area has gravel abutting the pavement. There are some areas that show signs of large water collecting spots. Those areas should be addressed to prevent further erosion. The majority of driveway, parking, and walkways are gravel. The gravel appears to be graded without major 'potholes'. The slope of the main parking appears to be within normal ranges. There are no traditional elevated sidewalks. The pathways into the buildings appears to be within normal slope range, however the entrance pavement into 1951 Building needs attention.

Ideally the site will be graded to encourage water to shed away from the buildings with pooling and erosion.

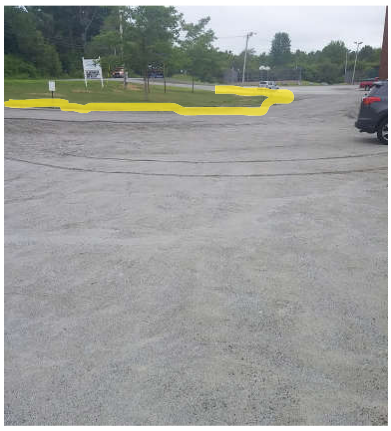
Driveway Circulation

Parking Areas

Driveways, Parking Lots, and Sidewalks

Left-A paved loop in the front of the 1951 Building is in need of repair where the pavement meets gravel show signs of water washouts. Right-some small 'pot holes' are present that should be addressed.

Right- The granite curb is in need of attention. The curb is granite which is placed into the ground with grass over growing it is some areas. The curb has moved from its original spots from snow removal and other environmental conditions. The curb is not performing as it is intended. The curb area is shown in yellow.



The parking lot area measures out to approximately 25,000 sqft.
Right- The pavement is in fair condition, but attention to grading and pavement to gravel transition is needed.
Left- The transition from the main road to the drive is in need of attention.

Options:
-Grind in place/overlay-mid range cost-most practically short/long term solution
-Remove/replace/regrade-largest cost-most effective long term solution
-Overlay-least expensive-least effective-short term solution

Left- Near the back of the 1951 Building is a gravel driveway and parking for the Thrift Shop. This drive appears to be in fair condition. Right- A paved area for 1923 Building appears to be in good condition.

Right- A large 'pot hole' is in the driveway from the lower lot of 1951 Building to the rear lot of 1923 Building. Right- Pavement at the rear of 1923 Building is in good condition with only attention needed at the transition from pavement to gravel.

Side parking for 1923 Building is in good shape with little need for attention at the time of this report was written.

Landscaping

Above- 1951 Building has little to no landscaping on the front and side shown in photo. Large trees directly in front of the building where recently removed. The holes from the stump need to be back filled for safety reasons.

Above- 1923 Building has a need for attention. There are weeds up against the building which will hold moister and add to further decay of the wood and concrete. The large tree at the far right entrance is touching the building and needs to be pruned back. This will stop the tree from rubbing and causing decay of the siding as well as stop the path of small animals access to the roof of the building.

Above Left- This is the Thrift Store exterior. The weeds and other growth holds moisture and does not allow proper drying conditions, which is one reason why the paint of the windows and CMU crack and flake. Above Right- This is the connector between the two buildings. This area is over-grown giving habitat to animals. This growth also does not allow proper drying and ventilation which is needed to avoid decay of the siding.

Above & Below- Two examples of over growth. Above- Overgrowth by the Thrift Store. Below Right- Over growth by the 1923 Building entrance. Below Left- Good example of proper landscaping to help with drying around the building.

The landscaping next to the building is in good condition and appears to be better managed. There should be crushed stone on drip edge sloping away from the building. The roof of the building is a flat roof, however adding this crushed stone detail will help the drainage plane. Below- This is a perfect example of where proper crushed stone usage would improve the appearance as well as provide improved water mitigation.

Dumpster Enclosure

There are a number of outdoor receptacles for trash and donation collections. Typically a dumpster collection area has some sort of enclosure for the dumpster. The dumpster should be located on a concrete slab. The two dumpsters on site should address both the enclosure and location.

There are two donation collection areas. One is a bottle collection located on the side of the 1951 Building. This location was recently moved from the time of the inspection. It is a wire cage construction. This should be better maintained and further from the building. The redemption should be address as though it was trash. Animals and insects inhabit this area which will lead to a problem in the building. The donation box outside of the Thrift shop should be constructed from a Non-combustible material and not next to the entry/exit door.

Right & Left- There are two dumpster on site. Both of which need attention. The location of the this dumpster is where water pools from rain (Right).

The location of the large dumpster need to be away from the vehicle travail path (Left). Both dumpster should have at the minuim a three sided enclosure to insure total control of the content.

Left- The donation drop off should be made of a non combustible material. The new container should also be placed well away from any doors and windows of the building. This is to protect the egress out of the building.

Right- A bottle donation container is located next to the 1951 Building. This collection container should be located away from all doors and windows. It should be cleaned out on a regular basis in order to keep animals and insects away from the building.

Architectural/Structural

The original building was built in 1923 and had a life as a school before being re-purposed. The building was renovated in 1990's. The gym building was built in 1951 and had a life as a school gym before becoming a Community Center. The building was partially renovated in 1990's.

Structural Elements

The 1951 Building has steel trusses in the roof, concrete block, and brick masonry veneer wall structure with CMU blocks for foundation. The structure appeared to be in fair condition with some minor cracking evident most likely due to age of the foundation, and seasonal changes. The brick veneer had some areas repointed. The veneer has a 'wave' or 'bowed' condition to the brick which is concerning. See Structural Review by Landmark, at the end of this section.

The 1923 Building is constructed of wood, with construction methods from the 1920 time period. Concrete foundation with wood and steel beams and supports are present. See Structural Review by Landmark at the end of this section

Exterior Walls

All walls of the 1951 building are brick masonry veneer with CMU structural base and walls. The masonry walls have been repointed in some areas. Most areas are in good condition, however some of the brick coursing are concerning. The rest of this buildings exterior wall condition seem to be in fair condition with what appears to be proper building flashing. The connection from CMU basement block to brick veneer seems to be in fair condition. There are signs of mortar decay around a number of windows which should be address in the future. The door jamb/header connections are in fair condition with a need for re caulking. The wall penetrations which come from lighting/electrical are in need of attention to stop water infiltration. The veneer of stucco and wood columns, at the front entrance, is in poor condition. There is decay from dry and wet rot where the wood contacts the foundation base. The paint is in poor condition and contains lead. The trim at the door and window has signs of decay and signs of water infiltration, both conditions should be address with proper solutions of wood replacement and proper caulking/flashing materials. See photos, this section.

The 1923 Building has a combination of painted wood clapboard covered by vinyl siding and metal wrap for trim areas. The painted wooden clapboard appears to still have paint that is assumed to be near 1980's. Without a large surface to examine for the presents of lead base paint, the estimate of the age of the paint is from the 1980's. The vinyl siding appears to be in fair condition. The metal wrap is in good condition with the exception of some areas which needs the metal re-attached. The caulking around the window metal trim along with the nail fastener needs attention in multiple areas in order to prevent water infiltration. The vinyl siding was well installed and seems to have weathered well without cracking or chipping. Basic care maintenance is required. See photos, this section.

Windows

Approximately half of the windows in the two buildings have been replaced according to our visual observations. To this end, the large windows in 1923 Buildings appear to be in good condition. Vinyl double hung windows have been installed . In 1951 Building due to the large size of these windows and the fact that they supply the only natural ventilation to the occupants, we recommend looking at alternate windows when they are scheduled to be replaced -use single hung with adjustable sash locks. Many of the original windows in 1923 Building were covered at some point which was a typical practice during the energy crisis late in the 1970's. See photos, this section.

Doors

In 1923 Building the doors on the interior have all been replaced with solid core wood doors with a single small glass. The majority of door knobs have been replaced with ADA type handles. The entry doors are glass and metal type door on the rear, while the front and side doors are wood with glass panel. These doors appear to be in fair condition with attention needed to approximately two-thirds of the door units. In 1951 Building the interior doors function properly, however these doors do not have ADA hardware. There are also multiple locations where the wood flooring has effected the thresholds creating a small trip hazard. The exterior doors appear to be in working order. Because of the age of most of these doors an aggressive maintenance and replacement schedule is recommended.

Common Areas

The common spaces are in 1951 Building and they seem to be in fair to good condition. These spaces consist of a Gym and a Community room. This gym appears to be original with only minor updates from the original construction. New lights and fire suppression system are the most notable. The floor, walls and ceiling remain untouched. The elevated stage is located adjacent to the activities floor. The stage appears to be in fair condition with no visual decay of materials or no visual structural sag or decay. The windows in this space are of unknown age and it is recommend to schedule an aggressive maintenance and repair plan to ensure minimal water filtration now and in the future. The community room appears to be in fair condition. The floors, ceiling, window, and doors are all old. The function of these elements are in fair condition.

Interior Elements

There are a number of different types of spaces in each building. Typical office space, Hair salon, Day Care, Thrift Store, Yoga room, Martial Arts Studio. Museum and Storage Spaces which where once offices. In 1923 Building the office spaces are in good condition. Floors, ceilings, walls, windows and doors have all been replaced/upgraded or refinished what appears to be with the last 20 years. The wood floor is original to the building, but has been refinished and is in good condition. The walls and paint appear to be good conditions as is the ceilings. The windows are in good condition given the advanced age with little to no signs of water infiltration. The doors are solid core wood doors with most having a 1/4 lite installed. The door hardware is ADA in most of the office areas. They were observed to be in generally good to fair physical condition.

The bathrooms observed were in fair condition. The bathrooms consisted of a ceramic toilet, and petestal sink. Bathroom ventilation is not supplied via switch operated electric exhaust fans but by existing windows. The condition of the bathrooms varied from very good (yoga studio) to poor (near Hair Solon). Walls, ceiling, floors, and fixtures need attention to bring the 'poor' bathrooms into proper condition.

Building Elements

The yellow shading to the Left shows the areas of focus for the Building Elements The connector has an entry which needs attention. The roof structure is in poor to fair condition. The deck structure is in fair to poor condition. The columns are in fair to poor condition. This entry/ exist is a good candidate for providing an ADA entry. A ramp, doors and parking would fit nicely.

Above- Column to the connector entry show obvious decay further inspection on the column structure should take place to ensure safety of the roof supports.

Above- The rail is in fair condition. However the railing could be reinforced to ensure the railing can support 250lbs of force.

Above- The roof structure shows sign of decay. The paint has signs of decay. Further investigation should take place to ensure structure is sound. Consider re-building with respect to the historical nature.

Left- The deck appears to be in fair condition. The threshold seems to be too large of an increase from the deck surface and should be addressed. The growth of weeds impede visual sight of the stair which needs to be addressed.

This entry is a good candidate for a true ADA access into and out of the two buildings. There is plenty of room for parking as well as ramping.

Building Elements

The main entry in 1951 Building is a stucco and wood veneer. This veneer is original to the building. The paint is in poor condition and needs attention. The stucco appears to be in fair condition and seems to still be attached well. The wood trim appears to have some decay near the ground, however the wood trim over the doorway seems in good condition. This veneer does need attention in order to have the veneer secure and aesthetically pleasing. Lead paint would need encapsulation or removal if renovation/ restoration is chosen.

One of the two main entrances of the 1923 Building shown above. This entry is in fair condition. These entries are in need of attention with the columns and stairs. The paint is peeling but very little signs of decay. In order to stop the current decay attention is needed. The doors are in fair to good however the threshold is in need of attention due to a heaving foundation. Consider cleaning vinyl siding for short term. Long term-remove all siding to substrate, insulate, and new siding and trim.

Above- The photo above shows the decay that was caused by moisture. These areas are to be fixed to stop the decay. The paint is peeling and constains lead based paint.

Left- The trim seems to appear to be in good condition with the condition of the wood. The paint is in need of attention. The base of the columns could use some repair, however the appearance of the base seems to solid.

Right- This entry is in better shape than the other. This is from the protection of the large tree. The paint, wood trim, concrete are all in good condition. Although the tree provided cover, a proper trimming should be done to stop the tree from rubbing on the building.

Exterior Walls

Left- The 1951 Building has brick veneer with a CMU block foundation. The brick in this building shows it's age. Some of the brick coursing has been re pointed. The bricks around most of the windows are in need of attention. This is true for the doors as well. The exterior wall condition on the whole is in fair condition. While this conclusion comes from only visual inspections, there were some area of concern which prompted a more through inspects method. The conclusion of this matter is located in the Structural report in this report.

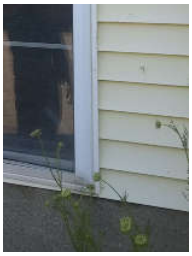
Left- CMU block foundation of the gym portion of the 1951 Building. It shows it's age with some re pointing and cracking of mortar. The CMU appears to be in fair condition.

Right- This part of the building is where more concern was shown because of the apparent 'wave' condition in the brick wall. Water penetration between the brick and CMU was witnessed by an employee. This condition seemed to have occurred for some time.

Above- The 1923 Building has stick built walls with a CMU/ Concrete block foundation. The vinyl siding is in fair condition. Some of the vinyl is cracked and some of the metal trim is missing. The siding was installed properly and has weathered nicely. Some of the corner boards need attention in regards to the caulking. The metal trim around the windows and doors also needs some attention. New siding and trim should be addressed. See photos on right for corner board and window trim.

Window trim in need of caulking.

Corner board showing age



There is an good deal of metal trim on the building. This trim is in fair condition. There is large sections missing and those sections need to be reattached. The other large sections need to be reviewed to ensure they are properly attached. These sections could cause harm if they fall.

The lighting on the side of the building needs attention. The lighting appears to be in need of remounting to ensure safety and proper function.

Windows

Right & Left- 1951 Building windows are replacement windows. We could not find a date of replacement, however the windows are in fair to poor condition. The trim and wood materials are in poor condition. These windows need attention to stop any further decay.

The window transoms are older then the replacement windows. These transoms are in poor condition.

These windows should have a maintenance schedule developed. This schedule should be aggressive in order to save some of the windows nearing the end of their life.

Left- This shows an in fill window in the basement level. The exterior was had simply plywood placed over while the inside was only painted. This is not ideal, however there are little to no signs of water infiltration.

Right- The wood trim needs attention. The window shown needs attention due to the water infiltration. The caulking and paint are in poor condition and should be addressed soon.

Right & Left- The windows in the 1923 Building are in good condition both inside and out. The trim is in good condition both inside and out. The windows are much smaller than what the original building had. The in-fill is not apparent which speaks to the workmanship on the replacement window installation.

The windows for this building should have a maintenance schedule to ensure their good condition be carried into the future.

LANDMARK CORPORATION
SURVEYORS & ENGINEERS
K. MARK BARBOUR, PLS MICHAEL J. SABATINI, P.E.

Thompson Community Center
Structural Review

In accordance with the International Existing Building Code (IEBC) 2009, the minimum design loads on existing elements of a structure that do not support additional loads as a result of an alteration, shall be the loads applicable at the time the building was constructed. Additionally, the IEBC makes a distinction between *substantial structural damage* and *less than substantial structural damage*. The distinction being that if the condition of the structure is substantially damaged it will have to be repaired in accordance with the International Building Code (IBC) for new buildings and if any damage of the structure is considered *less substantial*, repairs shall be allowed to be restored to their pre-damaged state.

With the context of the IEBC requirements in mind and the knowledge that no alterations or uses are expected that would increase the anticipated building loads, the scope of the structural review was to (1) Understand the structural systems and (2) Inspect for structural damage.

1923 Building
Structural Systems

The 1923 building has a concrete foundation and a wood frame structure with some steel supports. The central portion of the concrete foundation has a concrete basement floor, formally the floor of a gymnasium as part of the original school (see picture #1). On either end of the central portion the foundation appears to be full height frost walls with dirt crawls space which contain runs of plumbing and other utilities (see picture #2). The steel supports consist of 5 sets of large individual frames made up of 6”x6” W shape steel posts in the exterior walls with 10.5” wide by 28” deep girder beams that support the roof and second floor ceiling joists (see picture #3).

Structural Conditions

In general, the structural systems of the 1923 building appear to be in very good condition. The steel frames appear to be in great condition with no rust or deformation observed. The wood framing and roof and ceiling joists observed in the attic space are of excellent quality wood and would be categorized as select structural (the strongest designation). (See picture #4). We did observe some longer spans of roof and ceiling joists, however there did not appear to be deflections large enough to cause damage to finishes. The wood floor supports in the basement space generally appeared in good condition and are of newer vintage than the original construction, likely installed to support a new first floor after the gymnasium was built in the 1951 building and the original gym in the basement was abandoned. However, we did observe some mold/small mushroom growth on a few wood members and mold testing did result in positive results in the basement space. This could lead to rotting of the wood supports, so the mold and moisture issue should be rectified as soon as possible to prevent rot and reduced strength of the wood supports. Another structural deficiency observed in the 1923 building was

219 MEADOW STREET ROCKPORT, MAINE 04856
PHONE: (207) 236-6757 FAX: (207) 470-7020
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heaving of the northeasterly entrance on the Common Road side, which has caused water to flow toward the door and rot the door threshold and adjacent floor and walls (see picture #5). This condition is considered "less substantial structural damage" but should be corrected as soon as possible and the door threshold and surrounding structural components repaired to their pre-damaged state.

<u>1951 Building</u>
Structural Systems

The 1951 building has Concrete Masonry Unit (CMU) foundation and load bearing walls with brick veneer (see picture #6). The main floor is supported below by steel posts and beams in the finished basement area containing the Thrift Store, and by wood posts and beams in the unfinished, dirt floor foundation area. The gymnasium roof is supported by a steel Pratt Truss, often used in bridges, spaced 5' on center, with a span of approximately 61' (see picture #7). These trusses bear on the northerly CMU exterior gymnasium wall and likely a steel beam (concealed) that forms the proscenium of the stage. The ceiling of the stage is supported by 4"x11" timbers, 5' on center, with a span of approximately 14' that is supported by the steel beam at the proscenium and by the southerly CMU exterior wall (see picture #8). The 2nd floor and ceiling/roof of this portion of the building (Karate space) is concealed but is likely wood framed.

Structural Conditions

The structural condition of the framing of the 1951 portion of the building is adequate. However, the gymnasium floor has some noticeable deflection with minimal occupancy loading. This floor system has been studied by Calderwood Engineering (see report in Tab 8). As they have concluded, the performance of this floor system has also been adequate, and in our opinion does not rise to the level of structural damage. Repairs to this floor system, as recommended by Calderwood Engineering, should be a goal, but are not of immediate concern. If, however, the use of the gymnasium space changes, the upgrades should be implemented.

Conversely, the condition of the load bearing CMU walls is of concern. Both the southerly and northerly exterior gymnasium CMU walls have bowed outward and caused cracking and displacement of the wall (see Smith & May Masonry report in Tab 9). With use of a plumb bob, deflections of 3" in the south wall and 0.75" in the north wall were observed. Some of the bowed condition may have been built into the original construction; however some of it is because of inadequate horizontal reinforcement. Because the roof acts as a rigid diaphragm, the top of the wall is held in place, while movement has occurred elsewhere on the wall, causing cracking and displacement (see pictures #9 and #10). The wall movement is also evident in other places within the building (see pictures #11, #12, and #13). We believe the inadequate horizontal support within the southerly and northerly gymnasium walls and the resulting bowing, cracking, and displacement has resulted in "substantial structural damage". We recommend that these walls be braced or be rebuilt to resist further movement and accommodate current loading standards.

Attachment – Photographs

Photo 1 – Basement and 1st floor supports in 1923 Building

Photo 2 – Dirt crawl space with utilities in 1923 Building

Photo 3 – Girder beam supporting roof & ceiling in 1923 Bldg

Photo 4 – Roof & ceiling joists in 1923 Building

Photo 5 – Damaged & rotting door threshold in 1923 Building

Photo 6 – CMU foundation & brick veneer walls in 1951 Building

Photo 7 – Steel truss gym roof support in 1951 Building

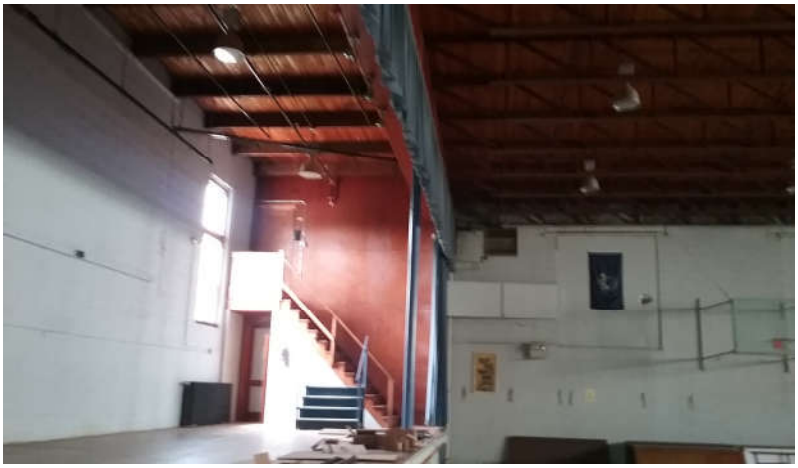


Photo 8 – Gym & stage roof supports in 1951 Building

Photo 9 – Crack & displacement in CMU wall in 1951 Building

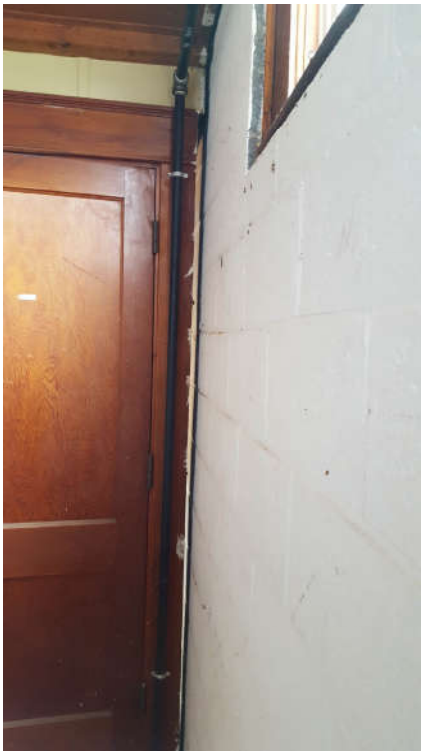


Photo 10 – Displacement in CMU wall

Photo 11 – Crack & displacement in CMU wall

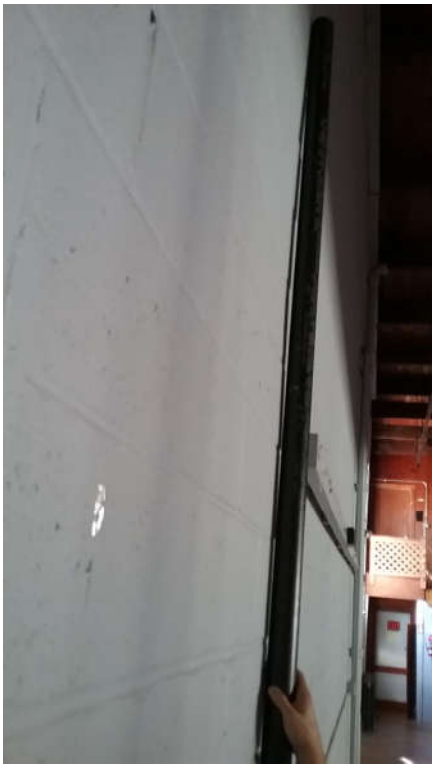


Photo 12 – Bow in CMU wall at stage

Photo 13 – Crack & displacement in CMU wall

Photo 14 – Crack & displacement in CMU wall

Photo 15 – Exterior CMU & brick veneer wall

Photo 16 – Exterior CMU & brick veneer wall of 1951 Building

Mechanical and Electric

HVAC Systems

The building is heated by a steam system. Steam is generated with a single, oil-fired, Smith 3500 Mills, 12 Section, cast-iron boiler with a net heating capacity of 2,270,000 Btu/hour. There is no Central Air Conditioning . See Mechanical Report by John Kilby, this section.

Plumbing Systems

The water supply for the buildings originates from a drilled well located just outside the Mechanical Room. The water system is pressured by a shallow well pump and two hydro-pneumatic tanks. Domestic hot water is provided by electric hot water heaters in various location througout the building. See Mechanical Report by John Kilby, this section.

Two sewer connections at the property were not visible. Based upon reported site conditions, the sewer connections at the property are adequate. See further discussion of wastwater disposal, Tab 5.

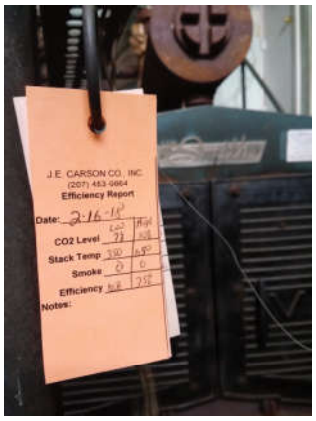
Electrical Systems

The building is powered by three single phase services, which are undersized for the size of the facililty. Due to current under use, this has not yet been an issue. An upgrade to a single 600amp/ 3 phase service is recommended. See Swiftcurrent Reposrt, this section.

HVAC

Left- Shown is the current boiler. It was reportedly installed in the early 1970's. The boiler was reportedly inspected recently with positive rating. See HVAC reports in Tab 4.

Below- Inspection tag



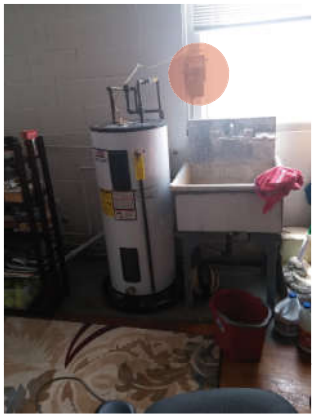
Above- The plumbing from the boiler is shown in the photo above. The boiler and system was recently inspected. The boiler and piping system appeared to be in fair working order. See HVAC report in Tab 4.

Above- This is a typical radiator in both buildings. They appear to be in working order. We were unable to verify the working order because of the time of year the inspection was held. See HVAC report in Tab 4.

Above- Oil storage tanks and plumbing which appear to be in fair working condition. See HVAC report in Tab 4.

Right- This water heater is located in an office space. There is electrical near the water source. This should be addressed. See HVAC report in Tab 4

Below Right- Water heaters located in the crawl space off the boiler room, which is under the bathrooms in 1923 Building.



Below- The water pressure tanks are located in the crawl space off the boiler room, which is under the bathrooms in 1923 Building .

Thermostats in both buildings

THOMPSON COMMUNITY CENTER
MECHANICAL SYSTEMS REVIEW

UNION, MAINE
August 3, 2018

I. Overview:

J.M. Kilby Engineering, P.A (JMKE) was requested by Jason Merriam of Merriam Architects to review the mechanical systems at the Thompson Community Center in Union, Maine. The facility is a former school constructed in two main parts. The original structure is a 15,700 square-foot, wood framed building constructed in 1923. The later structure is a 16,600 square-foot, concrete block/brick veneer building constructed in 1951.

A visit to the facility was conducted on July 12, 2018 with John Kilby (JMKE), Jason Merriam (MA), Tim Matthews (Swiftcurrent Engineering), Michael Sabatini (Landmark Corporation)and Joel Lufkin (Landmark) in attendance. TCC Executive Director Lori Carlson led the group through the building.

All costs mentioned in this report are "order-of-magnitude" budget costs based on a very brief walk-though of the building and before any actual design has been completed. There is no warranty, expressed or implied, that the cost of the work will not vary (perhaps significantly) from these figures. None of the costs include asbestos abatement, architectural modifications or design fees.

II. Summary of Findings:

- The single steam boiler (installed in 1973) has reached the end or its anticipated service life and could fail at any time. The community center needs to start planning immediately for a boiler replacement.
    - The least expensive option would be to replace the existing steam boiler with a new single steam boiler. It appears that the existing boiler is much larger than required to meet the building's heating load. The new boiler could be smaller. ($125,000)
    - If funds were available, the building's steam heating system should be replaced with a hot water heating system. If this option were taken, it would be a good opportunity to install separate heating systems for the 1923 and 1951 buildings. ($475,000)
- The Buildings lack mechanical ventilation. The existing heat recovery ventilator system serving the 1923 Building Main Level should be repaired ($15,000) and a new HRV system added for the Upper Level ($40,000). Also, add exhaust fans for small restrooms ($2,000). Ventilation should also be addressed in the 1951 Building, but the solution depends on anticipated future use. ($50,000 allowance)
- There are other maintenance items that should be done such as replacement of two aging oil tanks ($2,000), insulating miscellaneous steam/return piping ($20,000) and the repair of steam traps ($2,500).
- The addition of Air Conditioning should be considered for some areas as part of any significant investment in the Facility's mechanical systems. (See discussion for Costs).

III. Description of the Existing Heating, Ventilation and Plumbing Systems:

Steam Heating System: Steam is generated with a single, oil-fired, Smith 3500 Mills, 12-section, cast-iron boiler with a net heating capacity of 2,270,000 Btu/hour. The burner is an older Powerflame Model C3-0. Fuel oil is stored in (3) 330-gallon steel oil tanks located in a storage room adjacent to the boiler room. The boiler exhausts through steel breeching into a masonry chimney which does not appear to be lined. Steam piping is generally run in the crawl spaces with risers up to cast-iron radiators or unit heaters. Condensate is typically returned though mains in the crawl space draining to a receiver tank located in the boiler room. The combustion air intake for the boiler appears to be very undersized (only about 12" x 12"). The building appears to be divided into general steam zones with some newer control valves on branches off the mains. Individual rooms in the building are typically heated with two-pipe, cast-iron radiators, some have expanded metal guards. The Thrift Store and Gymnasium are heated with steam unit heaters. Some radiators have thermostatic valves on the steam supply.

- The Boiler was installed in 1973. The near boiler piping, assumed to have also been installed with the boiler ties into existing steam mains that may be original to the to the 1951 building. The condensate return tank appears to be original to the 1973 boiler installation.

- Two of the fuel oils tanks are older and one appears to be fairly new.

- The steam distribution and condensate return piping appears to be older, perhaps original to the 1951 building. Much of the piping is uninsulated or poorly insulted. However, some insulation is newer and better installed such as the mains in the crawl space under the Gym.

Domestic Water Heating: Domestic water is heated from a 40-gallon electric water heater near the water entrance near the boiler room. A second water heater is located in a storage room on the upper level of the 1951 Gym Building.

Kitchen Exhaust: There are two kitchen spaces in the facility. One is in the lower level of the 1923 and has been abandoned. This abandoned kitchen contained a commercial style range hood. The 2nd kitchen is on the Main Level of the 1951 building. In the second kitchen, there is an electric residential range which is not covered by an exhaust hood and a residential style exhaust hood located over a stainless steel counter. It appears this counter area may be used for warming or cooking food in electric pots.

Ventilation: The building is not mechanically ventilated. There is an abandoned Heat Recovery Ventilator located in the boiler room that appears to have formerly ventilated the Main Level of the 1923 building. The ductwork and grilles appear to be still in place. This system was probably installed in the mid 1990's as part of a renovation.

Plumbing Systems: The building's water supply is from a well and enters the building at a storage room/crawl space off the boiler room. There is a shallow well pump and (2) larger hydro-pneumatic tanks. The new Fire Suppression tanks and pump are also located in this room. There is water meter on the supply to the building. It is unclear the purpose of this meter. The building is served by a septic tank and leach field. Most of the existing fixtures are probably from the 1990's and serviceable.

IV. Discussion of Major Decision Regarding Heating System:

The existing steam boiler was installed in 1973 and is beyond its expected service life. Although the boiler is working now, the boiler will eventually fail. The failure could be this winter or in another 5 or 10 years, it is impossible to predict. Should this 45-year old boiler fail during the coldest part of the winter, the entire building will be susceptible to freeze-up as it is the only heating source.

The following options are presented for discussion:

A. Replace Existing Steam Boiler with New Oil-Fired Steam Boiler.

This is simplest and least expensive option. The existing boiler appears to be about double the size the building needs, so the replacement can probably be smaller. This would need to be confirmed with load calculations. The replacement project would need to include a new condensate receiver & feed pump, new breeching, a new chimney or chimney liner, combustion air intake, and reworking the near boiler piping. The project should also include a steam boiler controller to increase the overall efficiency of the system.

Order-of-Magnitude Cost: $125,000

B. Replace Steam Heating System with New Hydronic (Hot Water) System.

Converting the entire facility from steam heating to hot water should be considered. However, the hot water conversion would require a large outlay of funds.

- Steam systems are difficult to control since they go from "off" to over 215 ^{o}F quickly usually overshooting the thermostat setting. This is compounded at TCC because the existing radiators are probably oversized after windows were replaced and insulation was added to the roof.

- Steam systems are difficult to modify to accommodate changing building uses. Hot water systems are much more flexible and easy to work with. For example, if air conditioning needs to be added to a room/suite, then a hydro air system with hot water coil could be used. The same system with a steam coil would be very expensive and may not be available.

- Much of the existing steam and condensate piping is now over 65 years old. It will eventually need to be replaced.

- A hydronic system should be more efficient. The boilers would be about 7 – 10% better and with proper controls the overall system should save about 20% of fuel use.

If the TCC were to be converted from steam to hot water, the project should consider installing separate systems for the 1923 Building and 1951 Building. This would reduce pipe sizes/pumping costs and improve flexibility in the use of the buildings.

The project would probably include (2) pairs of propane-fired, high-efficiency condensing boilers. One pair of boilers serving the 1923 Building would be installed in the Existing Boiler Room. The other pair would be installed in a new boiler room located in the Lower Level of the 1951 Building.

Order-of-Magnitude Costs: $225,000 for 1951 Building (about $13.50/SF)
$250,000 for 1923 Building (about $16.00/SF)

V. Other Suggested Improvements:

A. Provide Mechanical Ventilation Systems: The building is not mechanically ventilated.

a. 1923 Building: These occupancies should have mechanical ventilation systems complying with ASHRAE Standard 62.1-2013 *Ventilation for Acceptable Indoor Air Quality* which is part of the Maine Uniform Building Code.

i. Main Level Office & Daycare: Least Expensive Option would be to repair the existing Heat Recovery Ventilator and cleaning the ductwork. The HRV should exhaust the Main Level Toilet Rooms. The project assumes new motors, rehabilitating controls and cleaning ductwork.

Order-of-Magnitude Costs: $15,000

ii. Upper Level Offices & Museum: Install new energy recovery ventilator, ductwork and grilles above ceiling.

Order-of-Magnitude Costs: $40,000

iii. Small Restroom Exhaust: Install ceiling fans on switch to exhaust rooms to outside at (4) places.

Order-of-Magnitude Costs: $2,000

b. 1951 Building - Office, Multipurpose, Meeting Room, Martial Arts Studio and Thrift Store. These spaces should also have mechanical ventilation. The new systems should be coordinated to meet the future uses of the building.

Order-of-Magnitude Costs: $50,000 (allowance)

B. Kitchen Ventilation System: Onsite cooking above a range needs to have any exhaust system that complies with a NFPA 96 - *Standard for Ventilation Control and Fire Protection of Commercial Kitchen Operations*.

a. The existing Range Hood in the 1923 Building should be removed as well as the electric range in the 1951 Building Kitchen.

b. No onsite cooking is anticipated; therefore no new Range Hoods would be required. A commercial kitchen exhaust system with fire protections costs $8,000 - $12,000.

C. Replace (2) Aging Oil Tanks: Two of the three oil tanks in the Boiler Room are aging. They should be inspected and replaced if any doubt about their integrity.

Order-of-Magnitude Costs: $2,500

D. Insulate Steam & Condensate Piping: Identify any steam and condensate piping without insulation and insulate. This is especially important in spaces where the exposed piping can contribute to overheating. This will save energy and improve comfort.

Order-of-Magnitude Costs: $20,000 (allowance)

E. Maintain Steam Traps: Identify and map all steam traps throughout the facility. Establish a steam trap maintenance program to routinely check their operation and repair as necessary. This will save energy and improve comfort.

Order-of-Magnitude Costs: $2,500 allowance first year, then $500 each year.

F. Repair Plumbing Systems: The plumbing system is aging and some galvanized piping was observed. An annual allowance should be set aside to make ongoing repairs as necessary.

a. Budget $1,500 - $2,000 for each plumbing fixture required to accommodate architectural renovations. This assumes a new rough-in location for each fixture.

VI. Consider Air Conditioning Some Parts of the Building:

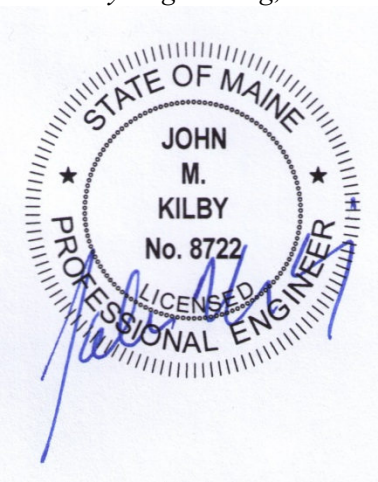
If major investments are to be made in the Building's mechanical systems, the addition of air conditioning in some areas should be considered.

- The addition of Air Conditioning would ideally be done in conjunction with a steam-to-hot water conversion and ventilation system improvements.
- Air Conditioning would make the Office Space more attractive for leasing.
- Three-phase electrical service would need to be brought to the Building which is not included in the costs below.
- Approach to ventilation may be different than the previously discussed ERV/HRV for air conditioned spaces. For example, air conditioning may include air handlers with outside air intakes driven by carbon dioxide sensors.

Order-of-Magnitude Costs: About $30/SF above the steam-to-hot water costs. ($46/SF total). The ventilations costs are included in this total so the costs listed in Section V, Paragraph A above would not be necessary in the air conditioned areas.

Report Submitted by:

J.M. Kilby Engineering, P.A.



Thompson Community Center
Union, ME
Electrical Capital Needs Assessment

On July 12, 2018, we toured the Thompson Community Center in Union to observe the existing power, lighting and fire alarm systems for the facility. The systems described below summarize what was observed during this visit.

Power:

The electrical system for this facility is comprised of three separate single phase services:

- Service #1: A 200 Amp, 120/240V service to the building that feeds the fire pump, stage panel and sewer pump (including the alarm panel).
- Service #2: A 200 Amp, 120/240V service to the building that feeds the other sub panels throughout the building.
- Service #3: A 100 Amp, 120/240V service for the exterior lighting for the lighting at the outdoor tennis and basketball court lighting.

The electrical service to the building, while appearing to be of recent vintage, is undersized for this facility. Fortunately, due to the underuse of this facility, this apparently has not yet been an issue. Adding to the complexity of this issue, due to the fact that this is a single-phase service, it is difficult to get the maximum demand loads from the power company, thus the information that I do have is not complete. With the information available, I was able to extrapolate that during the peak month (February) you are very close to running at capacity of Service #2. The addition of a tenant or two in the currently unoccupied rooms or addition of new equipment could likely overload the service and trip that main breaker.

There also appears to have been work on the system in order to install the new sprinkler system, this equipment is installed on Service #1. This service appears to be underutilized at the time, but this may change as the sprinkler project is completed.

There has been no load measured on the meter for the exterior lighting at the tennis and basketball courts, on the electrical bills examined (October 2017 and June 2018), so I am unsure how often these lights are used, if at all.

Other distribution panels throughout the facility were a mixture of those of recent manufacture and others that may need to be replaced as areas are renovated. One of these panels was on the lower level of the yellow school in a closet under the stairwell. There were also some panels located in the old kitchen area near the gymnasium, where some kitchen equipment appeared to be in use while other equipment appeared to have been taken out of service. One of these panels was mounted above a countertop, which does not meet current code, and would have to be relocated if any modifications were made to this area.

Overall, it is our opinion that the lack of electric load capacity will greatly limit how this space is used in the future. Installation of any HVAC upgrades, such as adding air conditioning to any spaces in the building; increasing the usage of the kitchen space; or renting out recently refurbished areas in the yellow school for power intensive uses would be greatly limited, if permitted at all, by the lack of power available. It was observed however that three phase power is available at the street, meaning the

existing service could be easily expanded to accommodate increased usage of the facility, if this were to become an issue.

Lighting:
While we were performing the study, an electrician was completing a project replacing the existing HID lighting fixtures in the gymnasium with new LED fixtures.

It appears that the interior lighting throughout the remainder of the facility primarily uses fluorescent fixtures which could be replaced with new LED fixtures if area usage was to increase.

Existing exterior lighting appeared to consist of a combination of either HID or incandescent lighting. Some of these were lighting fixtures were controlled by fixture mounted photocells, at least one of which was not operating correctly, as the fixture was observed to be on during the sunny day of our visit.

Battery backed up exit signage and emergency lights were observed throughout the facility. As a general observation it appeared that additional emergency lighting devices may be required to meet the current lighting requirement of 1 foot-candle average with a minimum of 0.1 foot-candle along the path of egress, this should be addressed as areas are renovated. There were also no remote battery operated emergency lighting heads observed outside of the egress doors to lead someone from the building, in compliance with current code. We also understand in reviewing the recent state inspection results that some of the existing emergency lights may not be functioning and need to continue to be tested and these tests documented periodically as required by the State.

Fire Alarm System:
It was understood when we toured the facility that the old Gamewell fire alarm system was going to be replaced in the near future, and it was not evident if this system was entirely operational at the time of our visit.

There is currently a new sprinkler system being installed in the basement of the building. This will need to be tied into the fire alarm system upon completion.

Use of the gymnasium for use as an "assembly occupancy" may also be limited as it is not furnished with a voice-evacuation system in compliance with current code.

Recommendations/Projected Costs:
Power:
We would recommend that the existing single phase electrical service be upgraded to a 600 Amp, 120/208 Volt, three-phase service sized to allow for future growth and air conditioning of the building. Assuming that the service would remain overhead to the same location, this would require new service entrance conductors in EMT conduits installed in the basement, metering equipment, and three-phase panelboards in the existing service entrance room. Existing single-phase panelboards could be reconnected to this panel via 2P breakers. Any new panels added in the future could be three phase. We have also estimated and included in this cost is $25,000 for Central Maine Power fees to cover replacement of the transformers and upgrading the poles. Estimated Cost: $60,000

Lighting:
We would recommend changing out the lighting in the common areas of the yellow building, including corridors, stairwells, and other common spaces that are frequently occupied. This would result in about a 50% savings in electricity costs that pertain to this lighting. Cost estimate $250 per fixture installed cost.

Fire Alarm:
We recommend If you intend to have events in the gymnasium that have more than 300 occupants, you may want to consider adding voice evacuation capability (if not considering installing a complete voice evacuation system for the gym and the egress path from the gym) to the new Fire Alarm Panel that you are upgrading. This would likely require it to be an addressable more robust system than you were planning on, but if it is determined that it is required at a later date it would likely require you to replace the entire panel you are planning on installing now. Estimated cost upgrade $2,000 for the addressable expandable fire alarm panel and $6,000 for the addressable system.

Environmental

Lead Based Paint

The subject property which was built in 1923 and 1951 was renovated in 1990's, after the 1978 ban on lead paint. We contracted with Maine Inspections to preform Lead Paint testing. The results showed the presence of lead in the exterior paint. All interior test were negative (below 0.5% by weight). See Test Result (Tab 10)

Asbestos Containing Material

The renovation in the 1990's seems to have been cautious about Asbestos containing material. There was what appeared to be Asbestos material on some piping in the basement of the 1923 building and there was suspected asbestos in the glue/mastic on the second floor fo the 1951 building (Karate Space). We contracted with Air Quality Management (AQM) to conduct asbestos testing of these two location. The pipe insulation, by visual inspection, was determined to contain asbestos. A sample was collected of the glue/mastic and upon laboratory testing was determined that asbestos was not present. See AQM report (Tab 11)

Mold and Mildew Containing Material

Upon observation of mold from possible roof leaks and experiencing a musty smell in both basements, it was decided to contract with AQM to perform mold testing. AQM collected eight air samples and four surface samples in various parts of the building. This testing produced the expected result of mold present in both basements and the unexpected result of pervasive mold in the first and second floor of the 1923 building. The AQM report categorizes these space as Condition 3 (heavy mold growth) and recommends remediation and basement moisture treatment. See AQM Report (Tab 12)

Drinking Water

Domestic water for this facility is supplied by a drilled well located to the west of the 1923 wing with pressure tanks and pumps located in a room accessed from the boiler room. Because of its status as a public water system, water quality testing is routinely performed. Testing over the last year has shown acceptable limits for Nitrates and no evidence of Coliform and E-Coli. No testing for metals is on record but it is recommended that this be done in the next year and every 5-years thereafter, if no problems are discovered. See Testing Result (Tab 13)

Wastewater Disposal

The existing septic system is located to south of the facility between the access drive to the thrift store and the tennis courts. Based on review of records, this system was construct in the mid 1980's and consists of a 1000 gal septic tank, a 300 gal pump chamber and stone trench septic field. The design flow for the existing field was 4000 gallons per day and included the town office waste water. See attached existing septic system design.

In the late 2000's, it appears that the septic field experienced some sort of failure or 'breakout'. In 2009 two new septic systems were designed to serve the facility. This system included 3-2000

Environmental Cont.

Wastewater Disposal Cont.

Geo-flow pipes in a sand bed. The system was designed for the anticipated uses of the facility including office, assembly, day-care, employees, etc. with a total flowrate of 2860 gallons per day. This system was never built and apparently wastewater flows were reduced based on the lowered use of the facility and the existing septic system returned to a functioning order.

Other records indicate that a pump tank was replaced in 2010. We recommend that the existing septic system be formally inspected by a septic designer including a test pit within the septic field. Until the formal inspection , staff should regularly inspect the existing field for 'breakout' and the septic tanks should be pumped out once a year. With increase use of the facility, replacement of the existing septic system should be anticipated.

Thompson Community Center

As-Built Architectural Plans

N

Thompson Community Center - Aerial Photo

Project Data:

PROJECT ADDRESS: 51 South Union Road
Union, Maine 04862

BUILDING SIZE:

LEVEL AND DESCRIPTION	FLOOR AREA SUMMARY
LOWER FLOOR	±5,294 SF
MAIN FLOOR	±17,724 SF
UPPER FLOOR	±10,636 SF

TOTAL FLOOR AREA	±32,636 SF

NOTE:
1. LOWER LEVEL CRAWLSPACE AREA NOT CALCULATED.

Sheet Index:

ARCHITECTURAL AS–BUILT DRAWINGS:

AB1.00	COVER AND AERIAL MAP
AB3.00	AS–BUILT LOWER FLOOR PLAN
AB3.01	AS–BUILT MAIN FLOOR PLAN
AB3.02	AS–BUILT UPPER FLOOR PLAN

General Notes:

01. THIS ARCHITECTURAL AS–BUILT DRAWING PLAN SET WAS DEVELOPED TO PROVIDE A BASE SET OF ARCHITECTURAL DRAWINGS FOR THE FIRE SPRINKLER SYSTEM DESIGN AND PERMIT SUBMITTAL. THESE DRAWINGS DO NOT INCLUDE OR ADDRESS AS–BUILT INFORMATION FOR MECHANICAL SYSTEMS, ELECTRICAL SYSTEMS, PLUMBING SYSTEMS OR STRUCTURAL SYSTEMS.

02. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SITE AND BUILDING CONDITIONS PRIOR TO ANY PLANNING OR CONSTRUCTION.

Note: These plans used by permission from the Town of Union. Notes shown in red added for use with the Assessment Report prepared by Merriam Architects and Landmark Corporation Surveyors & Engineers.

5/16/17: Drawings Issued to Penquis and Town of Union for informational purposes only. All information to be field verified. It is possible conditions may change during the interim period between the date of field measurements and date of issuance. 2A Architects, LLC assumes no responsibility for any unidentified deficiencies or changes in the condition or configuration of spaces.

2A architects, llc
724 Rockland Street (Office)
P.O. Box 189 (Mailing)
Rockport, Maine 04856

Tel: 207.236.6545
Web: www.2Aarch.com

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Registration:

Project:

Community Center
51 South Union Road
Union, Maine

Client ■ Community ■ Environment

Consultant:

Sheet Issue Date:
As-Built Plans 08.30.10

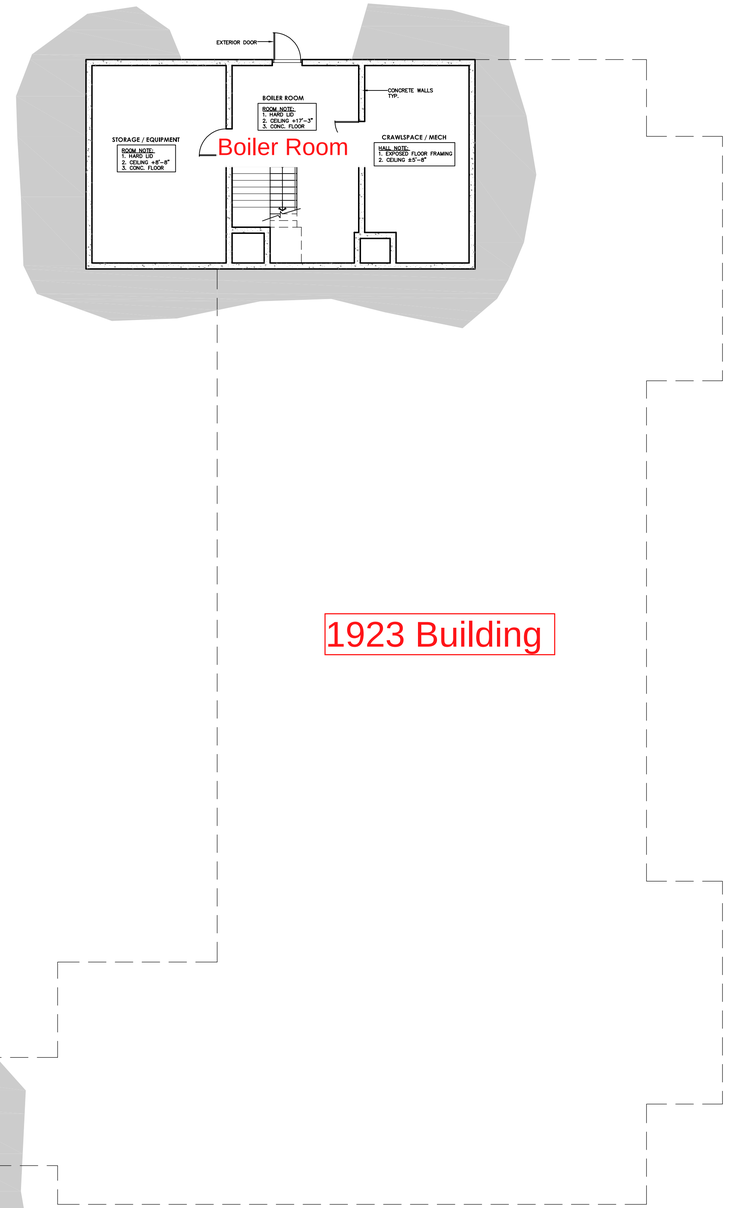
Project Start Date:
August 2010

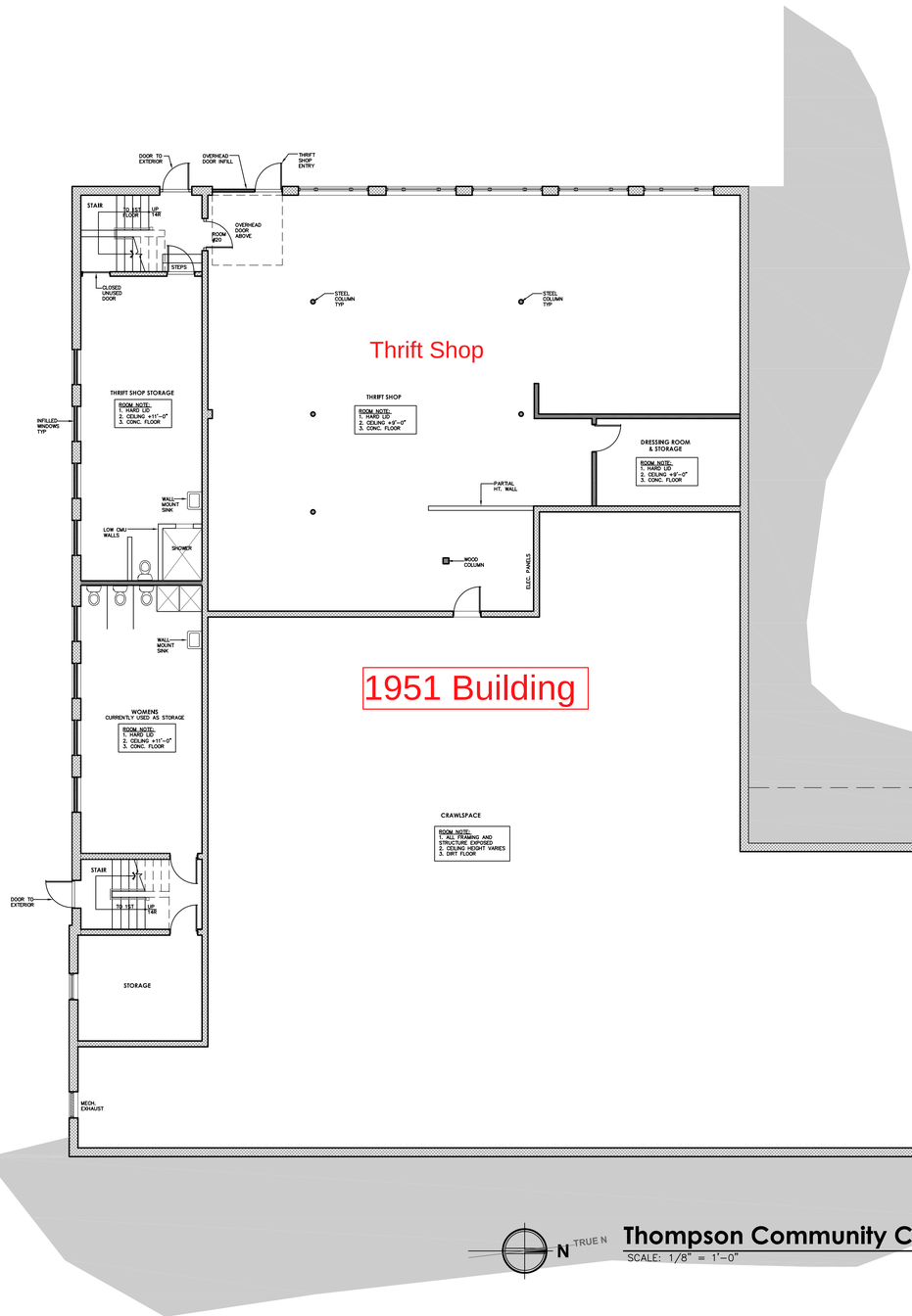
Project Number:
10-114

Sheet Title:
COVER

Sheet Plot Date:
08/30/2010 AB1.00 Cover.dwg

Sheet Number:
AB1.00





N TRUE N

Thompson Community Center - Lower Floor Plan

SCALE: 1/8" = 1'-0"

0 4' 8'
2' 6'

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2A architects, llc

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Tel: 207.236.6545
Web: www.2Aarch.com

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Registration:

Project:

Community Center
51 South Union Road
Union, Maine

Client ■ Community ■ Environment

Consultant:

Sheet Issue Date:
As-Built Plans 08.30.10

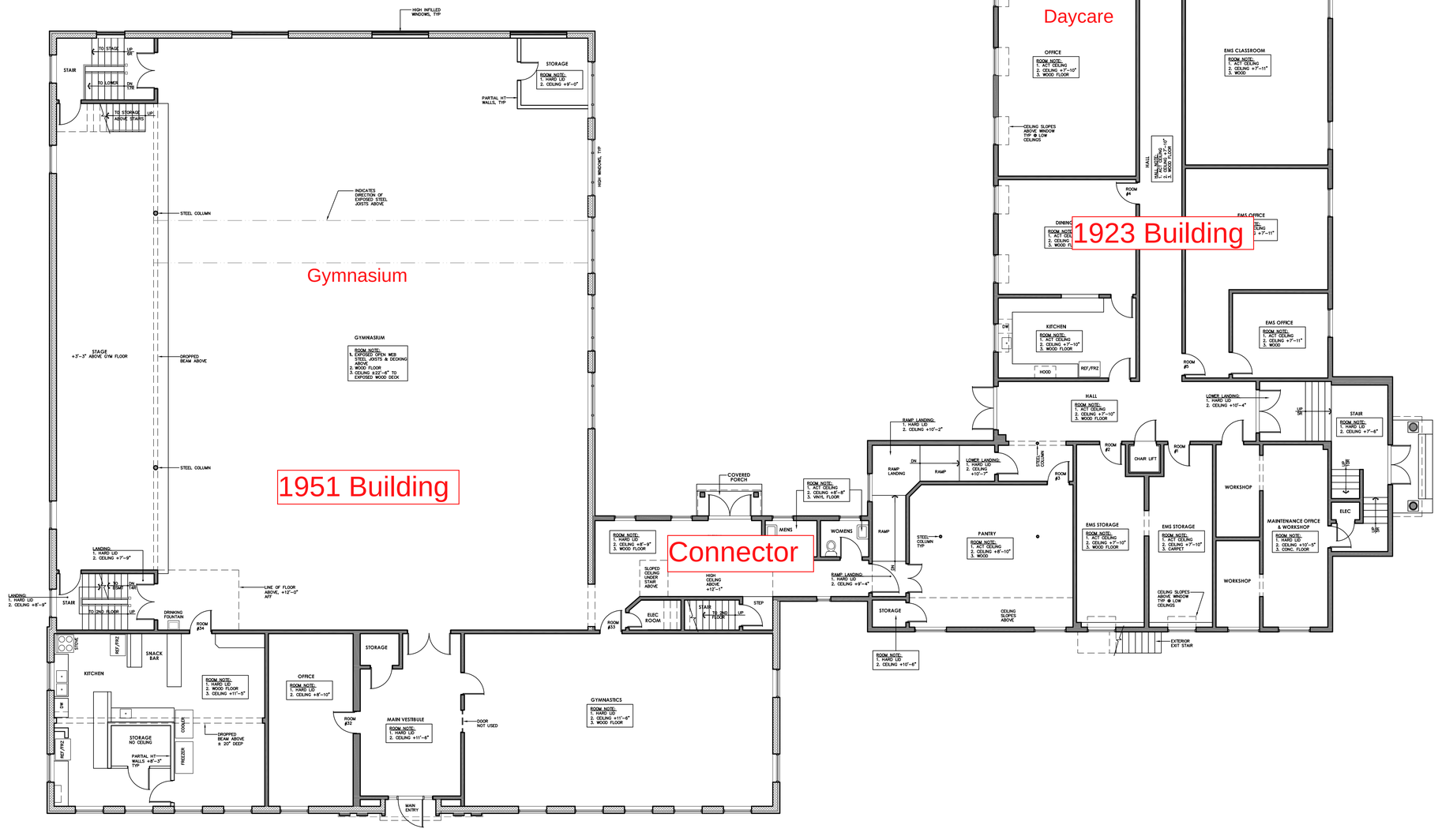
Project Start Date:
August 2010

Project Number:
10-114

Sheet Title:
AS-BUILT LOWER FLOOR PLAN

Sheet Plot Date:
08/30/2010 AB3.00 lower floor.dwg

Sheet Number:
AB3.00



Thompson Community Center - Main Floor Plan

SCALE: 1/8" = 1'-0"

TRUE N

5/16/17: Drawings Issued to Penquis and Town of Union for informational purposes only. All information to be field verified. It is possible conditions may change during the interim period between the date of field measurements and date of issuance. 2A Architects, LLC assumes no responsibility for any unidentified deficiencies or changes in the condition or configuration of spaces.

architects, llc

724 Rockland Street (Office)
P.O. Box 189 (Mailing)
Rockport, Maine 04856

Tel: 207.236.6545
Web: www.2Aarch.com

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Registration:

Project:

Community Center
51 South Union Road
Union, Maine

Client ■ Community ■ Environment

Consultant:

Sheet Issue Date:
As-Built Plans 08.30.10

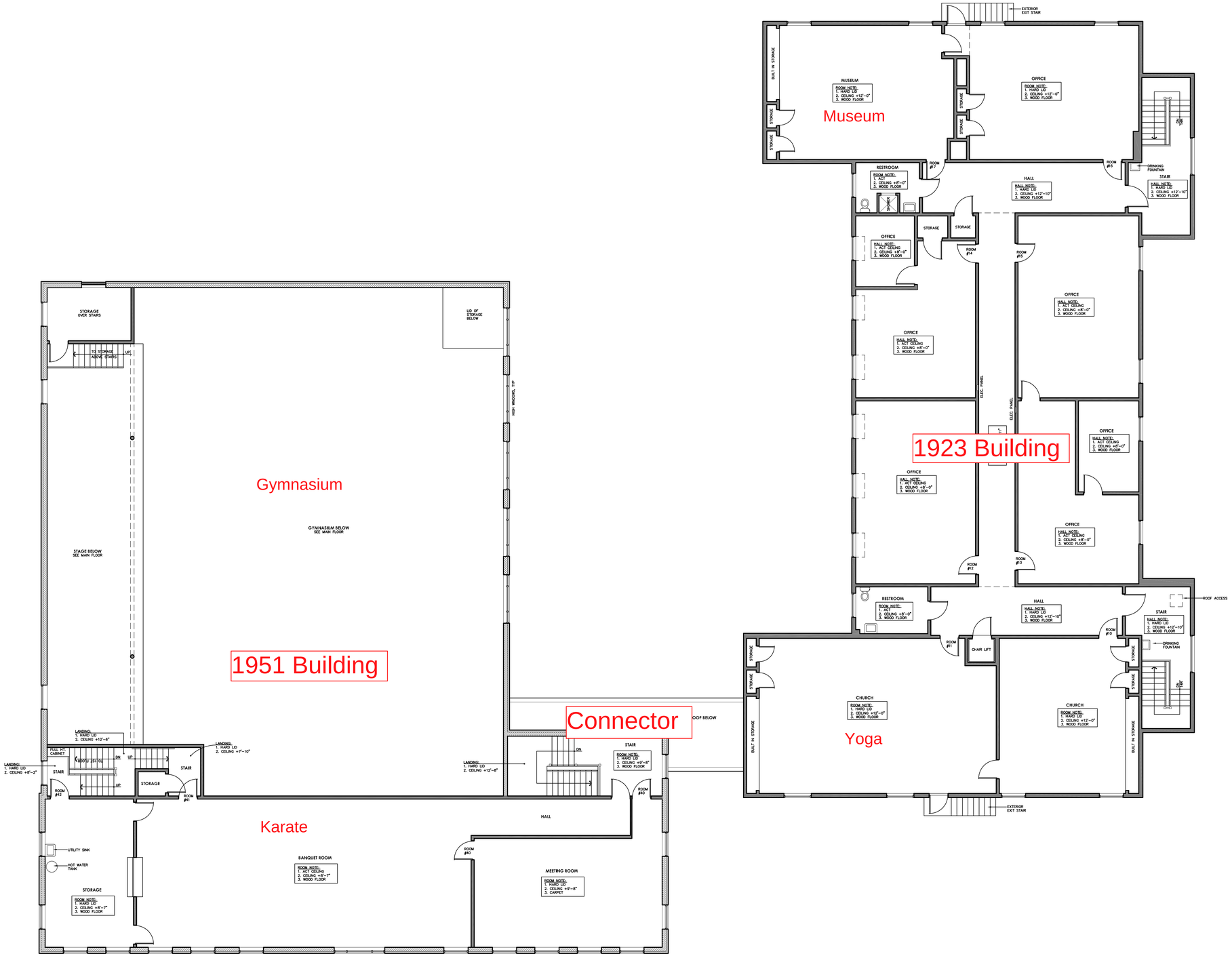
Project Start Date:
August 2010

Project Number:
10-114

Sheet Title:
AS-BUILT MAIN FLOOR PLAN

Sheet Plot Date:
08/30/2010 AB3.01 main floor.dwg

Sheet Number:
AB3.01



N TRUE N

Thompson Community Center - Upper Floor Plan

SCALE: 1/8" = 1'-0"

0 4' 8'
2' 6'

5/16/17: Drawings Issued to Penquis and Town of Union for informational purposes only. All information to be field verified. It is possible conditions may change during the interim period between the date of field measurements and date of issuance. 2A Architects, LLC assumes no responsibility for any unidentified deficiencies or changes in the condition or configuration of spaces.

2A architects, llc

724 Rockland Street (Office)
P.O. Box 189 (Mailing)
Rockport, Maine 04856

Tel: 207.236.6545
Web: www.2Aarch.com

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Registration:

Project:

Community Center
51 South Union Road
Union, Maine

Client ■ Community ■ Environment

Consultant:

Sheet Issue Date:

As-Built Plans	08.30.10

Project Start Date: August 2010

Project Number: **10-114**

Sheet Title: **AS-BUILT UPPER FLOOR PLAN**

Sheet Plot Date: 08/30/2010 AB3.02 upper floor.dwg

Sheet Number: **AB3.02**

How Replacement Costs are Determined

Our scope of work considered published cost data from reliable sources. When possible, we utilized actual contractor pricing in developing our cost estimates. Also, we used the FNMA expected useful life table as a guide in our replacement reserve analysis.

Acknowledgements

This assessment was conducted by individuals trained and experienced in building construction. The inspection included a review of pertinent available documentation (construction documents) and interviews with the property management staff. This assessment included a review of buildings, foundations, roofs, exterior/interior walls, mechanical systems, doors and windows, interior elements, landscaping, paved areas and utilities.

The description of the property and its components is based upon visual observations, the inspector's knowledge of typical construction practices, as well as information obtained during personnel interviews.

1923

This is a compare and contrast. The top photo is from 1923.
The photo below is the building in it's current state in 2018.

2018

Capital Needs Assessment
Capital Needs Over the Term - Architectural

Project: **Date:** 7/25/2018

Item	H & S	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033	16 2034	17 2035	18 2036	19 2037	20 2038	Total
Building Mounted Exterior Lighting	0	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3000
Canopies: Wood-1951 Building	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5000
Common Area Doors-1951 Building (fire/hall/closet/etc.)	12000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12000
Common Area Doors-1923 Building (fire/hall/closet/etc.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24400	24400	24400	73200
Common Area Floors: Wood-1951 Building	0	0	33750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33750
Common Area Walls	0	0	12000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12000
Exterior Common Doors-1951 Building	3600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3600
Exterior Common Doors-1923 Building	3600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3600
Exterior Stairs: Concrete-1923 Building	400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	400
Exterior Office Doors-1951 Building	9000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9000
Exterior Office Doors-1923 Building	0	0	0	0	9000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9000
Exterior Walls:Block-1951 Building	0	0	0	0	30000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30000
Exterior Walls: Brick Veneer-1951 Building	0	0	0	0	30000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30000
Exterior Walls: Vinyl Siding-1923 Building	0	9500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9500
Fire Escapes-1923 Building	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3000
Foundations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6400	0	0	0	0	0	0	6400
Interior Lighting	0	700	700	700	700	700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3500
Public Bathroom Fixtures	15000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15000
Radiation: Hydronic (freestanding)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Membrane	0	0	69658	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69658
Windows (Frames and Glazing)-1951 Building	0	8050	8050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16100
Windows (Frames and Glazing)-1923 Building	0	0	0	0	5375	5375	5375	5375	0	0	0	0	0	0	0	0	0	0	0	0	0	21500
Wood Floor Frame	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mold Treatment	77250																					
Uninflated Totals	128850	21250	124158	700	75075	6075	5375	5375	0	0	0	0	0	0	6400	0	0	0	24400	24400	24400	446458
Inflation Factor (3%)	1.0000	1.0000	1.0300	1.0609	1.0927	1.1255	1.1593	1.1941	1.2299	1.2668	1.3048	1.3439	1.3842	1.4258	1.4685	1.5126	1.5580	1.6047	1.6528	1.7024	1.7535	
Inflated Totals	128850	21250	127883	743	82036	6837	6231	6418	0	0	0	0	0	0	9399	0	0	0	40329	41539	42786	514301

Capital Needs Assessment
Capital Needs Over the Term - Mechanical & Electrical

Project: **Date:** 7/25/2018

Item	H & S	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033	16 2034	17 2035	18 2036	19 2037	20 2038	Total
Boilers, with Insulation, Piping, Controls & Flue:Oil Gas or Dual-fuel-fired Package, Low MBH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electrical Wiring	0	5000	5000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15000
Elevator, Cab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Controller/Dispatcher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elevator, Shaftway Doors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Emergency Lights	1250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1250
Fire Alarm	8000																					
Fire Suppression	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuel Oil Storage	2500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2500
Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HVAC: Ventilation	15000	2000	40000	50000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107000
Services	0	0	25000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25000
Sanitary Waste and Vent System	0	0	0	0	0	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0	10000
(Traps)	0	5625	5625	5625	5625	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22500
Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smoke & Fire Detection System, Central Panel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Hydronic System-Building 1951	0	0	0	0	225000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	225000
New Hydronic System-Building 1923	0	0	0	0	250000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	250000
Miscellaneous	0	29250	29250	29250	29250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117000
Power	0		60000																			
Lighting	0		30000																			
Uninflated Totals	26750	41875	194875	89875	509875	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0	873250
Inflation Factor (3%)	1.0000	1.0000	1.0300	1.0609	1.0927	1.1255	1.1593	1.1941	1.2299	1.2668	1.3048	1.3439	1.3842	1.4258	1.4685	1.5126	1.5580	1.6047	1.6528	1.7024	1.7535	
Inflated Totals	26750	41875	200721	95348	557154	0	0	0	0	0	13048	0	0	0	0	0	0	0	0	0	0	934897

Capital Needs Assessment
Capital Needs Over the Term - Site

Project: **Date:** 7/25/2018

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Item	**H & S**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**Total**
Catch Basin	0	7000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7000
Dumpsters	0	0	0	3500	3500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7000
Landscaping	1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1200
Parking: Asphalt	0	0	0	0	8700	8700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17400
Parking: Gravel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2550	0	0	0	0	0	2550
Asphalt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2610	0	0	0	0	0	2610
Roadways:Asphalt	0	0	0	0	26100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26100
Roadways:Gravel	0	0	0	2125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2125	0	0	4250
Site Lighting		3000	3000																			6000
Uninflated Totals	1200	10000	3000	5625	38300	8700	0	0	0	0	0	0	0	0	0	5160	0	0	2125	0	0	74110
Inflation Factor (3%)	1.0000	1.0000	1.0300	1.0609	1.0927	1.1255	1.1593	1.1941	1.2299	1.2668	1.3048	1.3439	1.3842	1.4258	1.4685	1.5126	1.5580	1.6047	1.6528	1.7024	1.7535	
Inflated Totals	1200	10000	3090	5968	41851	9792	0	0	0	0	0	0	0	0	0	7805	0	0	3512	0	0	83218

Capital Needs Assessment
Executive Summary

Project: **Date:** 9/20/2018

Item	H & S	1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028	11 2029	12 2030	13 2031	14 2032	15 2033	16 2034	17 2035	18 2036	19 2037	20 2038	Total
Site	1200	10000	3000	5625	38300	8700	0	0	0	0	0	0	0	0	0	5160	0	0	2125	0	0	$74,110
Architecture	128850	21250	124158	700	75075	6075	5375	5375	0	0	0	0	0	0	6400	0	0	0	24400	24400	24400	$446,458
Mech & Electric	26750	41875	194875	89875	509875	0	0	0	0	0	10000	0	0	0	0	0	0	0	0	0	0	$873,250
Uninflated Totals	156,800	73,125	322,033	96,200	623,250	14,775	5,375	5,375	0	0	10,000	0	0	0	6,400	5,160	0	0	26,525	24,400	24,400	$1,393,818
Inflation Factor (3%)	1.0000	1.0000	1.0300	1.0609	1.0927	1.1255	1.1593	1.1941	1.2299	1.2668	1.3048	1.3439	1.3842	1.4258	1.4685	1.5126	1.5580	1.6047	1.6528	1.7024	1.7535	
Inflated Totals	156,800	73,125	331,694	102,059	681,042	16,629	6,231	6,418	0	0	13,048	0	0	0	9,399	7,805	0	0	43,842	41,539	42,786	$1,532,416

	Non-Inflated	Inflated
Immediate Capital Needs:	$156,800	
Total Capital Needs Over the Term:	$1,237,018	$1,375,616
Grand Total Capital Needs:	$1,393,818	$1,532,416

CALDERWOOD ENGINEERING
222 RIVER ROAD
RICHMOND, ME 04357
PH. (207) 737-2007 FAX (207) 737-2008

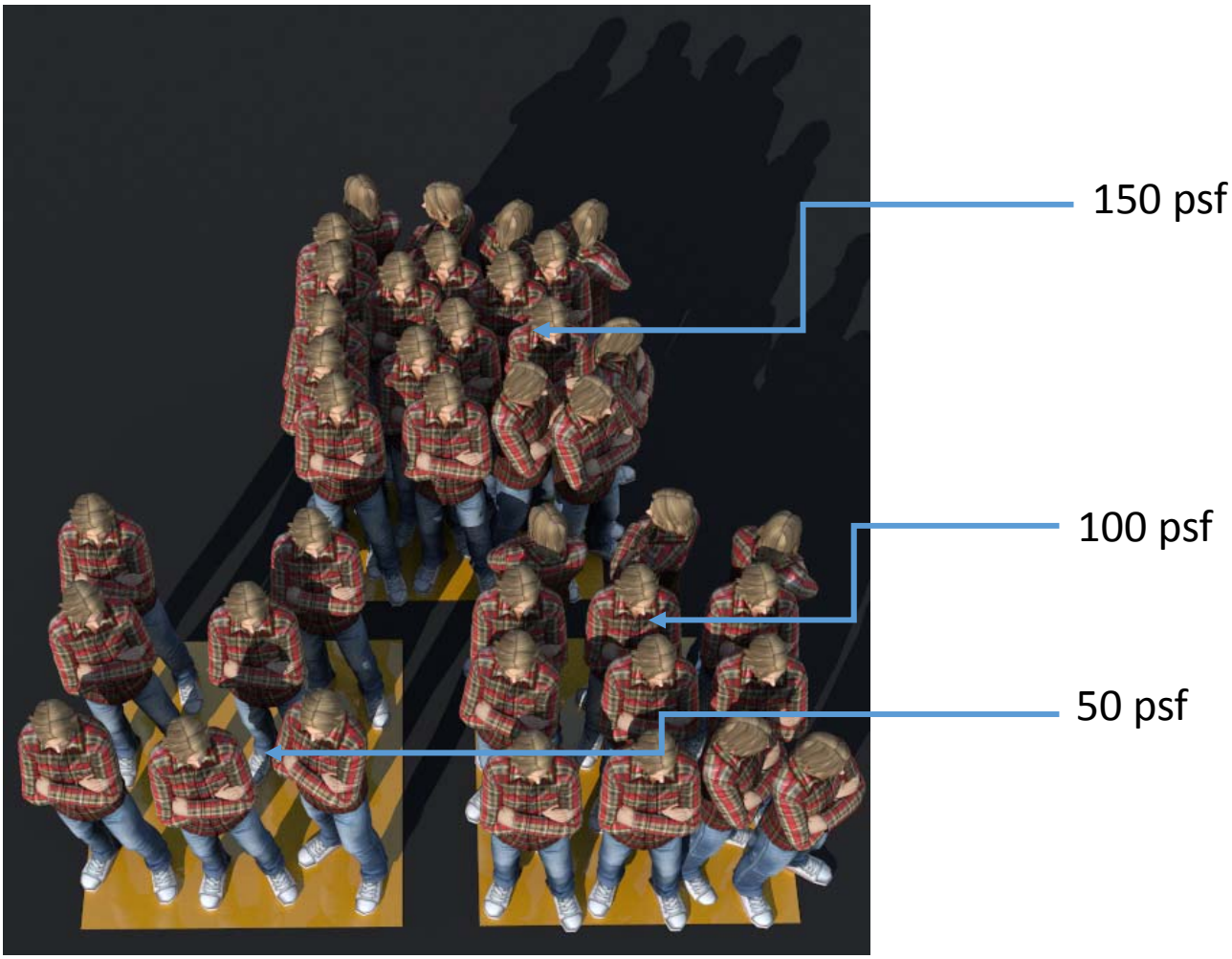
Calderwood Engineering
Inspection Report for Structural Integrity of the Gymnasium flooring for the Thompson Center in Union Maine

July 6, 2016

STATE OF MAINE
ERIC T. CALDERWOOD
No. 9099
LICENSED
PROFESSIONAL ENGINEER

Floor Joists for the gymnasium are nominal 2x10 joists running between foundation support bents spaced at approximate 12' spacing. Exterior wall supports are masonry block walls. One interior support is a masonry block wall which also acts as access to the crawlspace/foundation area and the back wall of the area currently used as a thrift shop. Two interior supports in the finished area currently being used as a thrift shop are supported on Steel Wide flange beams. An initial inspection indicates that the performance of the system as a whole has been adequate. A subsequent analysis indicates some areas where the size of the timber for several elements is insufficient for modern design loadings. A retrofit design has been done and is attached. Calderwood Engineering does not feel that the building is currently unsafe, but that it would be prudent to be aware of the substandard timber sizes and potentially start considering a plan and schedule for retrofit of specific elements. Calderwood Engineering can assist with oversight of that work if necessary. We do not feel that the building is unsafe in it's current configuration or given it's current usage.

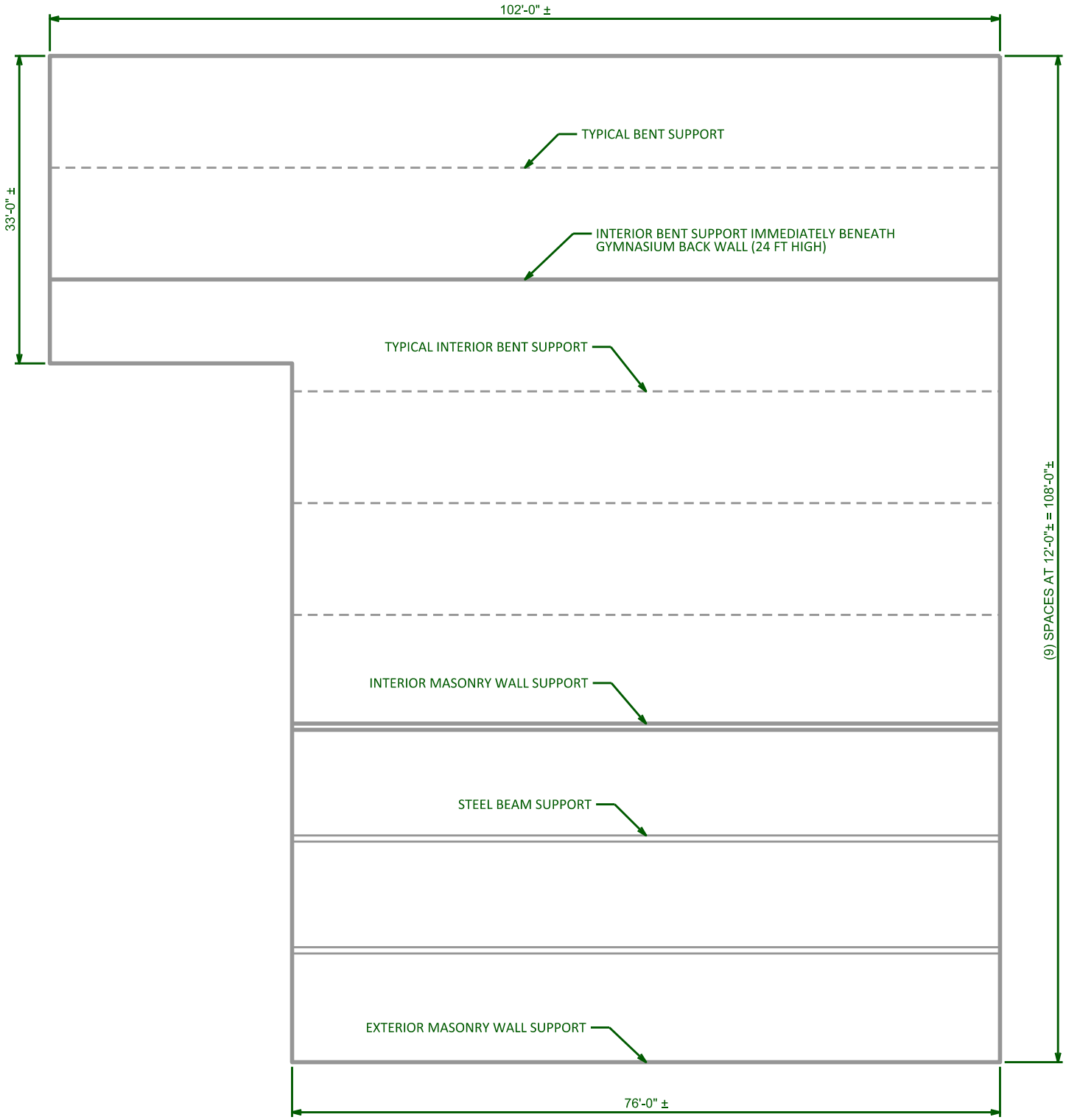
Floor Joists – As mentioned earlier in this report the floor joists used are 2x10's nominal at 16 in spacing. Each span is approximately 12 ft. Given a dead load of approximately 9 pounds per square foot, hereinafter psf, these are adequate for a design live load of approximately 70 psf. Current design standards indicate that for recreational areas and Gymnasiums the live load standard is 100 psf. For reference the design live loading for assembly areas with seating that is fastened to the floor (ie not standing room only allowed) is 60 psf and the design live load for residential uses is 40 psf. Below is a photo indicating some comparison between floor loadings for comparison purposes.



It is Calderwood Engineering's opinion that given the live load capacity already in the joist system as constructed, the number of joists that would need to be strengthened, and the current use of the facility, the strengthening of the joists be the lowest priority of the retrofits recommended.

Photo showing existing typical joist configuration. Note joists appear in this case to have been sprayed by some concrete or grout cleanup or pump cleaning activities. This has not jeopardized their capacity but indicates that the concrete or grout work performed on the floor likely took place after initial construction.

This shows the large crack evident on the front wall of the foundation. This is one of several, it is apparent there is little to no reinforcing steel in this foundation. It is my opinion that there is likely no perimeter drain or French drain either. Once the wall cracked due to the earth and possibly water pressure, it moved to relieve the pressure and has kept moving possibly due to frost being allowed to get under the footing or wall base. A key plan was developed based on field observations in order to better identify individual supporting components for discussion within this report. It is attached as the next page.



KEY PLAN LAYOUT

GENERAL NOTES:

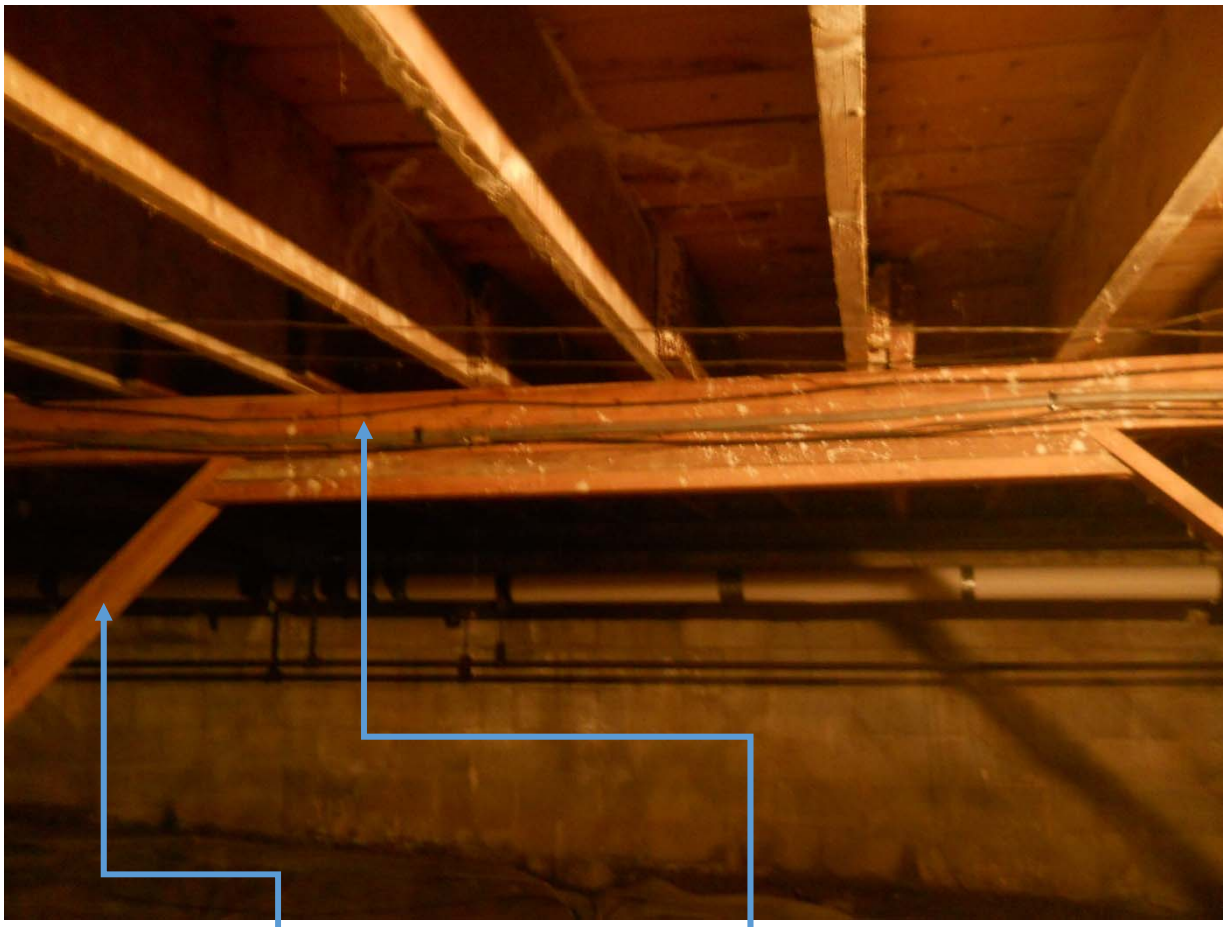
KEY PLAN IS FOR IDENTIFICATION OF KEY SUPPORTING ELEMENTS AND IS NOT INTENDED TO BE USED FOR LAYOUT OR DIMENSIONING.

ACTUAL LENGTH OF STEEL BEAMS IS SHORTER THAN THAT SHOWN HERE, AS IS THE LENGTH OF SUPPORT BENTS AS THE MASONRY WALL THAT SEPARATES THE STAGE AND STAIRWELLS IS NOT DEPICTED IN THIS SKETCH.

Kicker – header support diagonal typically a single 2x6 on each side of the post at interior support bents

Support post 6x6 either built up or solid sawn typical

Kicker support at posts, notice the way these elements are separating slightly from the posts.



6x6 either solid sawn or built up bent header

Kicker – diagonal header support 2x6 at Typical interior bents

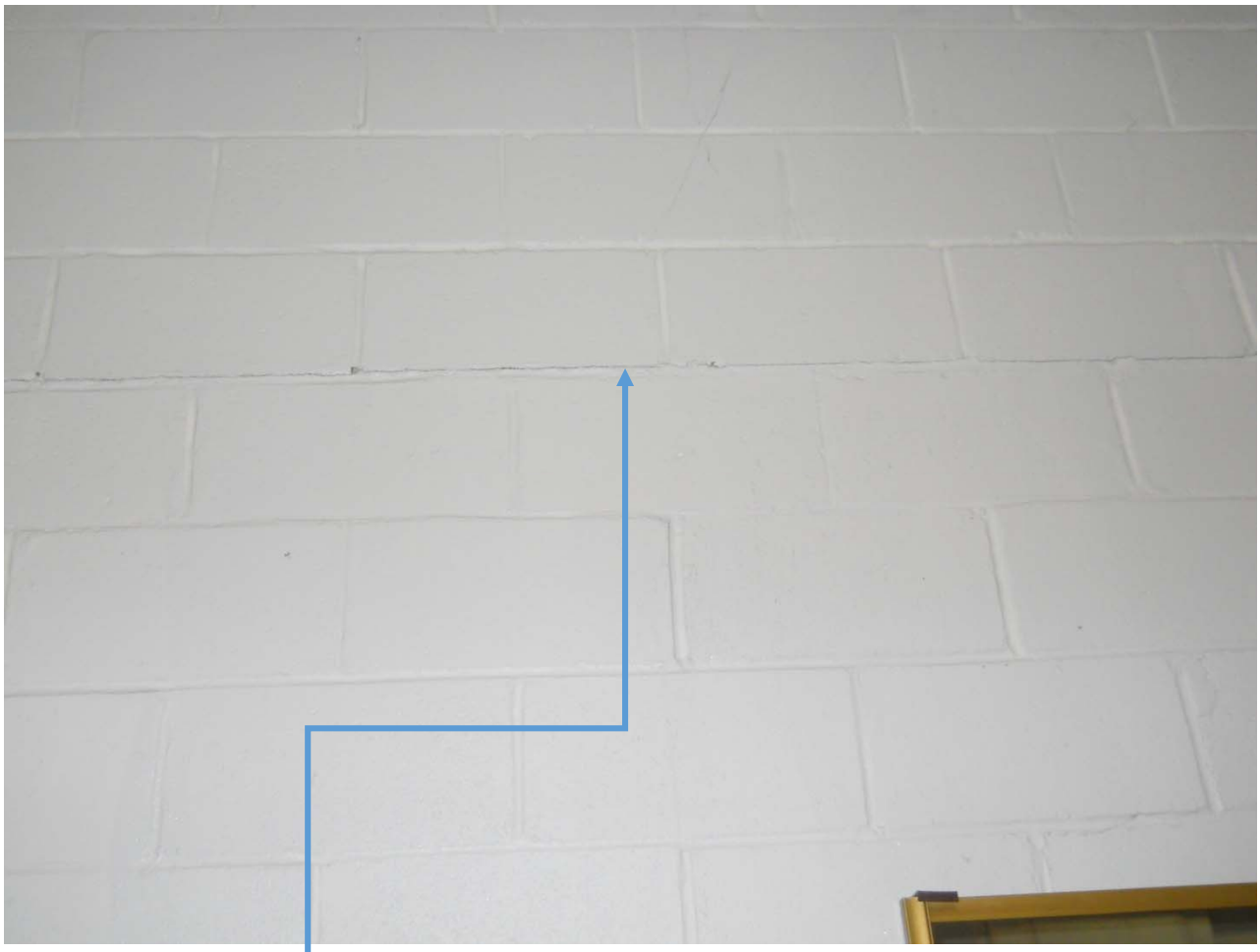
Solid Sawn Header beam shown, note electrical and telephone Connections to header beam (while all splices should be in a junction box, it should be noted. That these splices are either for telephone lines or for the school bell system) These are shown as they will need to be moved in order to strengthen the header beams, and at that time it would be prudent to ensure that they are either disconnected and not live or put into a junction box

Supplemental column support of gym wall support bent header typical

6x13 header beam at support bent that supports the Gymnasium back wall, and potentially some roof loadings

Kicker – header support diagonal at gym wall support bent note it is a double 2x6 as shown in this photo and is a single 2x6 at the opposite post.

Phone line access chase



Note crack in masonry support wall at about the floor level of the gymnasium / support elevation of the steel support beams

Recommendations for retrofit in order of priority:

1. Kickers – diagonal header support components need to be beefed up by making sure that every kicker is at least a double 2x6 at typical interior support bents and a triple 2x6 at the one Gymnasium back wall support bent.

2. Kicker Supports at posts of typical interior support bents should be a minimum of 1- 2x6 wide this is typically the case, but two through bolts should be installed with one at 4" down and one at 8" down from the bottom of the kicker. Bolts should project through the post and the kicker support on the opposite side of the support. Bolts should be 5/8" diameter and hot dip galvanized or mechanically galvanized. Zinc plated bolts are not recommended. Bolts may be ASTM A307, SAE grade 0 or 1, any higher grades may also be used. A threaded rod may be substituted with nuts installed on each end in lieu of a long headed bolt. Kicker Supports at posts of the larger header for the interior support bent that supports the rear gymnasium wall should be a minimum of 2 - 2x6 wide on each side of the post, this will mean that one 2x6 must be added typically.

3. Headers at typical interior support bents are undersized and need to be strengthened by adding a single 2x12 to each side of the header for the full length of the bents.

4. Joint in masonry wall shown on page 11 of this report should be re-pointed or have the pointing repaired with mortar, and should be painted freshly to allow for continued monitoring in order to monitor any possible continued movement of the wall. If movement persists then additional repairs may be required.

5. Existing joists should have every other joist strengthened by sistering a new 2x8 to every other joist using 16d nails at 12" centers top and bottom of the sistered joist. Alternatively every other joist may be strengthened by installing a single 2x4 10' long centered on the joist to be repaired. Installing it flatwise at the bottom of the joist. The 2x4 joist "stiffener" should be installed using a single 1/4" bead of construction adhesive such as liquid nails. The 2x4 should also be installed using GRK R4 screws 9x2.75 spaced at 12" on center along the supplemental support. Good squeeze out of the construction adhesive should be noted during the installation of the screws.

6. The Utility access bulkhead outside should be replaced by one that is not broken, and a concrete access cover should be cast with voids for the telcon cables to project through. Annular spaces around the void should be caulked with a polyurethane or silicone caulking. Cover should be shaped to drain away from the building, and it should be caulked to prevent infiltration of water between the brick veneer course and the concrete cover.

SMITH & MAY INC.
P.O.BOX 307
WEST ROCKPORT ME 04843
Phone: (207) 236-9444 Fax (207) 230-0504

July 27, 2018
Michael Sabatini
Landmark Corporation
219 Meadow St
Rockport Me 04856

THOMPSON COMMUNITY CENTER MASONRY INSPECTION

A visual inspection of existing masonry conditions was conducted at the Thompson Community Center at 51 South Union Road in Union Me. On July 24, 2018. This report contains findings of all masonry areas available for visual inspection. The condition of areas not accessible for inspection remains unknown.

The Thompson Community Center is a masonry building constructed in the early 1950s. The exterior façade is 4" thick Red Range water struck brick that likely came from Morin Brick Co in Danville Maine. The interior wall is 8" -10" thick CMU with painted finish. The brick and CMU walls are tied together and make up the exterior parameter of the building. There is a brick "header course every 16" horizontally which could possibly tie into the CMU section of the wall however this could not be confirmed. The mortar is a Portland cement- based mortar likely a typical type S mortar. The condition of the mortar is good, however there are some areas that are showing voids and need re-pointing and repair. There are Ferris metal stains visible on the exterior brick walls that appear to be on the surface of the brick caused by previous attachments with have been removed.

The exterior windows, trim and sills are painted wood. The window sills have rotted completely allowing moisture to enter the wall at the sill. The vertical wood trim connection to the masonry wall has also failed and will need replacement or repair.

The most concerning condition found is at the interior face of the North and South exterior CMU walls. The South wall at the stage area wall has a 3" outward deflection or bow in 19 feet of height from the stage level. Some of this deflection is the result of low tolerances during construction, however some additional movement has occurred over time. Cracks and gaps are visible at interior partition walls and door frames that intersect the exterior wall surface showing evidence of movement. The exterior brick wall was originally constructed with numerous deflections that appear stable with no visible cracking in this area. The exterior brick wall deflections do not correspond with the interior deflection on the block wall.

A similar condition is apparent on the North wall where the bleachers are. The north wall is 22 feet high from floor level and has deflected ¾" above the existing window lintels.
It is not feasible to change the deflection in either wall. It may be possible to install a steel brace to stabilize these conditions at North and South walls.

Recommendations:

Re-point selected areas of exterior brick and repair cracks near front and rear corners

Repair or replace all window trim and window sills.

Install steel bracing at North and South interior CMU walls

Submitted by:

Sam Smith
President**: Smith & May Inc.**

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201810829
CustomerID:	MEIN42
CustomerPO:	
ProjectID:	

Attn: **Jason Lamoreau**
Maine Inspection
193 Carding Machine Road
Bowdoinham, ME 04008

Phone:	(207) 666-1091
Fax:	
Received:	09/25/18 10:30 AM
Collected:	

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Weight*	*Lead* ***Concentration***
1	*201810829-0001*		9/25/2018	0.2509 g	17 % wt
	Site: Vinyl Building Front Entrance				
2	*201810829-0002*		9/25/2018	0.2811 g	9.0 % wt
	Site: Vinyl Building Rear Entrance				
3	*201810829-0003*		9/25/2018	0.2533 g	0.038 % wt
	Site: Yellow Brick Paint Rear				
4	*201810829-0004*		9/25/2018	0.2621 g	3.1 % wt
	Site: Main Entrance Façade				
5	*201810829-0005*		9/25/2018	0.2551 g	5.1 % wt
	Site: Front Window Trim				
6	*201810829-0006*		9/25/2018	0.2645 g	0.042 % wt
	Site: School Door Trim				
7	*201810829-0007*		9/25/2018	0.2569 g	<0.0080 % wt
	Site: School Ceiling Tiles				
8	*201810829-0008*		9/25/2018	0.2742 g	0.044 % wt
	Site: Brick Building Interior Window Trim				
9	*201810829-0009*		9/25/2018	0.2529 g	0.11 % wt
	Site: Stair/Gym Varnish				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 09/26/2018 11:51:17

Air Quality Management Services, Inc.

"Discovering Solutions for Healthier Living"

September 5th, 2018

Landmark Corp Surveyors & Engineers
C/o Michael J. Sabatini
219 Meadow Street
Rockport, Maine 04856

Re: Limited Asbestos Survey at the Thompson Community Center located at 51 South Union Road in Union, Maine.

AQM Project # 18-429

Air Quality Management Services, Inc. (AQM) conducted a limited survey to sample building materials for the presence of asbestos fibers in preparation for possibly renovations. This evaluation was conducted on August 20th, 2018.

Findings

These are the results of the suspected materials that were sampled and analyzed by Polarized Light Microscopy (PLM) using EPA 600/R-93/116 and / or section 2.3 (Non-Friable Organically Bound method) and / or Milling Prep. Quantitation using 400 Point Count Procedure:

Sample #	Location	Material	% Asbestos	Type
B1 – B3	Karate Meeting Room	Mastic	ND	----

ND = None Detected

Asbestos containing material means any material containing asbestos in quantities greater than or equal to 1%. Removal & Disposal of the material(s) listed in the table above **is / are NOT** regulated by the State of Maine and/or the Occupational Safety and Health Administration (OSHA). All testing of suspect materials is in accordance with OSHA 29 CFR 1926.1101, and the State of Maine Asbestos Management Regulations.

Note 1: AQM observed Air-O-Cell pipe insulation in the Old Basement (See Photos). This type of insulation is known to contain asbestos and shall be removed by a certified / licensed Asbestos Abatement Contractor prior to any mold remediation activities. Ensure that this contractor fills out appropriate State of Maine DEP Disclosure Forms for presuming this material positive.

Note 2: Other materials to consider for testing would be Sheetrock / Plaster / Window Caulking / Roofing (asphalt) and any other vinyl flooring (if present). These materials should be tested prior to any renovations / demolition to determine asbestos content.

Survey Limitations

As with any scientific study, there are certain assumptions which are made, and certain limitations to the scope of information that can be derived. Some restrictions on the conduct of the survey are imposed by outside sources while others are established through the designed scope and methodology of the study. As with any building / facility survey, it is subject to a variety of limitations and restrictions. Limitations that should be considered in the interpretation of the results of this survey include the following:

A. Asbestos survey(s) may not be able to identify all ACBM present throughout the home / facility and maybe limited to the areas of water damage / impact / current loss. A thorough study should be capable of identifying approximately 95 percent of accessible (by non-destructive methods) ACBM present.

B. The inspection protocols used for this project were in accordance with U.S. Environmental Protection Agency (USEPA) - National Emission Standard for Hazardous Air Pollutants (NESHAP) and with the Maine Department of Environmental Protection (MEDEP) protocols specific to asbestos sampling and evaluations.

C. Limitations to the scope of the survey can result from limited access to hidden materials and areas. For example, multiple layers of materials or structural components may restrict access to suspect materials thus affecting the thoroughness of the survey. In most cases an asbestos survey is limited to accessible suspect materials with some minor demolition or destructive sampling.

D. In some cases, hidden materials may be identified during renovations, general maintenance or demolition. Due to the limited nature of this survey, AQM recommends any suspect material not identified in this report be sampled and analyzed for asbestos contents and treated as asbestos until otherwise determined.

AQM appreciates this opportunity to have assisted you with your renovation / demolition impact survey. In the event we can be of further service or you have questions regarding this report, please give us a call.

Sincerely,

Randy Geoffroy, CMI
MEDEP Certification # AI-0395

PHOTO DOCUMENTATION

AQM

View of asbestos pipe insulation in the Old Basement

Asbestos pipe insulation debris on the floor in the Old Basement

View of asbestos pipe insulation in the Old Basement

View of asbestos pipe insulation in the Old Basement – it is in bad condition

SUPPORTING DOCUMENTATION

AQM

OrderID: 621801513

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (*Lab Use Only*): 621801513

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Company: Air Quality Management Services	**EMSL-Bill to:** ✓ Different ☐ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: PO Box 2491	
City: Lewiston **State/Province:** ME	**Zip/Postal Code:** 04241 **Country:** United States
Report To (Name): Randy Geoffroy	**Telephone #:** 207-657-7360
Email Address: See Account Notes	**Fax #:** 207-657-7361 **Purchase Order:** 18-429
Project Name/Number: 18-429 - Union	**Please Provide Results:** ☐ FAX ✓ E-mail ☐ Mail
U.S. State Samples Taken: Maine	**Connecticut Samples:** ☐ Commercial ☐ Residential

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ■ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☒ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ TEM Qual. via Filtration Technique
- ☐ TEM Qual. via Drop-Mount Technique

Other:
- ☐

■ **Check For Positive Stop – Clearly Identify Homogenous Group** **Filter Pore Size (Air Samples):** ☐ 0.8µm ☐ 0.45µm

Samplers Name: Randy Geoffroy - AI-0395 **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
B1-B3	Karate Meeting Rm Floor		8/20/18

Client Sample # (s): B1 - B3 **Total # of Samples:** 3

Relinquished (Client): **Date:** 8/20/18 **Time:** 16:30

Received (Lab): Steph S **Date:** 8/21/18 **Time:** 10AM

Comments/Special Instructions:

Email invocies to: connie@aqmservices.com

Page 1 of 1 pages

E. Fedex (10&1)

RECEIVED AUG 21 2018 By SRS

EMSL Analytical, Inc.
161 John Roberts Road South Portland, ME 04106
Tel/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

EMSL Order: 621801513
Customer ID: AIRQ51A
Customer PO: 18-429
Project ID:

Attention: Randy Geoffroy
Air Quality Management Services, Inc.
PO Box 2491
Lewiston, ME 04241

Project: 18-429 / Union

Phone: (207) 657-7360
Fax:
Received Date: 08/21/2018 10:00 AM
Analysis Date: 08/22/2018
Collected Date: 08/20/2018

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by PLM via EPA 600/R-93/116 section 2.3

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
B1 *621801513-0001*	Karate Meeting Rm Floor	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
B2 *621801513-0002*	Karate Meeting Rm Floor	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
B3 *621801513-0003*	Karate Meeting Rm Floor	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

ME CERT # BA-0188

Analyst(s)

Samantha Voigt (3)

Zackary Carbee, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. Thiis report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition, unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Esimate of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME NVLAP Lab Code 500094-0, MA AA000236, VT AL197271, ME LM-0039, CT PH-0346

Initial report from: 08/22/2018 14:43:29

Air Quality Management Services, Inc.

"Discovering Solutions for Healthier Living"

September 5th, 2018

Landmark Corp Surveyors & Engineers
C/o Michael J. Sabatini
219 Meadow Street
Rockport, Maine 04856

Re: Limited Mold Assessment at the Thompson Community Center located at 51 South Union Road in Union, Maine.

AQM Project #: 18-429

Air Quality Management Services, Inc. (AQM) conducted a limited mold assessment at your request on August 20th, 2018 at the above location, to assess any potential mold issues (if / as present).

I. Background

Rooms / areas sampled were selected by Client. This test was requested as part of potential future renovations and use, and to determine extent of mold. The building has suffered water damage from roof leaks in the past.

II. Actions to Date

Unknown actions for roof leaks.

III. Testing

Air samples: Air samples were collected using a high-volume sampling pump and Air-O-Cell media (Spore-Trap) cassettes. Samples were collected in representative locations to determine airborne particle and fungal burdens. Samples were collected at 15 liters per minute flow rate for 5 minutes. An ambient outdoor sample was collected as a comparative reference.

Surface samples: Tape lift samples were collected in areas of visible / suspect mold growth or areas of settled dust to determine presence or absence of mold growth and spores. Samples were collected using special microscope slides fitted with clear tape tabs.

Samples for mold analysis were submitted to EMSL Analytical in South Portland, Maine.

IV. Observations

The following observations / conditions were noted during the assessment (see Photos for more details and examples):

- AQM observed water damage and mold growth to Karate area ceiling (ceiling board above ceiling tiles) consistent with roof leaks.
- AQM detected a musty odor in the Southeast Stairwell. This odor is likely due to moldy conditions observed in the Basement Storage and Basement area (including attached Crawlspace). Odors from mold growth likely permeating upwards through the stairwell. Mold growth in the Basement Storage and Basement (including the attached Crawlspace) appears related to damp conditions (ground water intrusion and humidity).
- AQM observed water damage to the ceiling in the 1st floor Connector Hallway, consistent with reported roof leaks.
- AQM observed mold growth on the surfaces of cove base, doors, and walls in the 1st floor of the Older Building. This is growth is consistent with surface condensation issues from uncontrolled relative humidity. Source of humidity is largely from the damp Basement below this space.
- AQM observed water damage and degraded walls in the Egress areas of the Older Building. This damage is likely due to water entering the door system (flashing / threshold).
- AQM observed damp conditions (water on floor) and mold growth in the Older Basement. Groundwater appears to be leaking in this space. Groundwater and lack of dehumidification can lead to excessive moisture promoting mold growth. Moisture in this space can migrate upwards and promote mold growth on surfaces in the 1st floor (as mentioned in previous bulleted statement).

V. Results

Temperature and Relative Humidity

Area	Temp (°F)	%RH	GPP Moisture
----	----	----	----

Temp = Temperature; %RH = Relative Humidity (%); GPP Moisture = Grains per Pound moisture content of air (higher values indicate greater amounts of water in the air); ND = Not Determined

Moisture Readings (not applicable or not determined if no entry below)

Area	Location	Material	Moisture Elevated
----	----	----	----

IV. Results (Continued)

Area Characterization of Fungal Presence, per IICRC S520 Standard (1)

Condition-1 Areas: Southeast Stairwell and 1st floor Connector (based on air sample results)
Condition-2 Areas: Karate Space (based on visual observation and surface sample result)
Condition-3 Areas: Basement, 1st floor & 2nd floor Hallways in Older Building, and Older Basement (based on visual observation and surface sample result)

See Photos and Lab Results for basis of characterization, and Definitions Section for Area Characterization Notes
(1) ANSI/IICRC S520/R520 Standard and Reference Guide for Professional Mold Remediation - Third Edition: 2015, The Institute of Inspection, Cleaning and Restoration Certification, www.iicrc.org

Airborne Mold Sampling (refer to lab report for full details)

Air sample results are summarized as follows:

Sample #	Location	Comments	Overall Airborne Mold Level (1)	Mold Type(s) of Concern / Amplified Mold (2)
A1	Outdoors	Comparative Air Sample	Very High	Not Applicable
A2	Karate Space	Mold Observed	Trace	None
A3	Southeast Stair	Musty Odors	Trace	None
A4	Basement	Mold Observed	Very High	Aspergillus/Penicillium-like – Very High
A5	1st floor Connector	Water Damage	Trace	None
A6	1st floor Older Bldg	Mold Observed	Low/Moderate	Aspergillus/Penicillium-like – Low/Moderate
A7	2nd floor Older Bldg	General Concern	Low/Moderate	Aspergillus/Penicillium-like – Low/Moderate
A8	Older Basement	Mold Observed	Low	Aspergillus/Penicillium-like – Trace

Air sample results are summarized as follows:
(1) Based on AQM experience
(2) Based on industry consensus and AQM experience. Note that for Aspergillus/Penicillium-like spores, a common spore that is also commonly involved in air quality issues, the typical outdoor level in Maine through much of the warmer months is 200 to 300 counts per cubic meter of air (though wide variations can occur). This common outdoor level may be considered when identifying slight elevations of these spore types, regardless of outdoor levels at the time of sampling.

- Mold growth observed in the Karate Space (A2) appears to be isolated to the surface as not identified in the air sample.
- Mold growth observed in the Basement Storage and Basement areas appears to be isolated to those areas as not identified in the Southeast Stairwell air sample (A3).
- Mold growth in the Basement appears to be affecting the air quality in sample (A4).
- Mold growth if present in the ceiling of the 1st floor Connector appears to not be affecting air quality in air sample (A5).
- Mold observed on the cove base, doors, and walls appears to be affecting the air quality in the 1st floor Hallway (A6) sample. These mold spores appear to be affecting the air quality in the 2nd floor Hallway (A7) sample as well, likely due to foot traffic and air currents (air rising upwards).
- Results for air sample A8 are surprisingly low based on visual observation of mold.

IV. Results (Continued)

Surface Mold Sampling (refer to lab report for full details)

Surface sample results are summarized as follows:

Sample #	Location	Comments	Mold Type(s) Present at Excess Level (1) or Mold Type(s) of Concern (2)
T1	Ceiling in Karate	Visible Mold	Alternaria (Ulocladium) (spores) – High
T2	Cove Base in 1st floor Hall (Old)	Visible Mold	Aspergillus/Penicillium-like (spores) – High
T3	Men's Room and Doors 1st floor (Old)	Visible Mold	Aspergillus/Penicillium-like (spores) – High Cladosporium (growth) – High
T4	Older Basement Ceiling (Joists)	Visible Mold	Aspergillus/Penicillium-like (spores) – High Cladosporium (spores) – Moderate Ganoderma (spores) – Low

(1) Based on AQM experience and/or industry consensus; represents mold growth unless stated otherwise
(2) Spore types strongly correlated with water damage and/or air quality concerns, based on scientific literature and/or industry consensus

Results for these surface samples identified varying levels and types of mold growth / spores of concern.

V. Recommendations

- Enlist the services of an IICRC-certified mold remediation company.
- Isolate Remediation Areas from other areas of the Building, using plastic / polyethylene barrier and negative-air pressure (if possible). Extend poly barriers above the suspended ceiling tiles and sheetrock board (if possible) to maintain proper negative air pressure. Also, isolate HVAC system (if present).
- Remove water damaged and moldy ceiling in the Karate Area two (2) feet in each direction of visible growth / water stains.
- Remove all wall systems in the Basement Storage Room.
- Clean and treat Basement Storage Room ceiling to affect cleaning.
- Remove all debris (contents / doors / poly barrier / unessential items) from dirt in Basement and Crawlspace.
- Clean and treat all remaining surfaces in the Basement and Crawlspace.
- Remove all water damaged ceiling in the 1st floor Connector Hallway two (2) feet in each direction of stains.
- Detail clean all surfaces and contents in the 1st and 2nd floors of the Old Building to affect cleaning (mold on cove base / doors / walls).
- Remove lower walls and flooring at the Egress Doors (See Photos) in the Old Building two (2) feet in each direction of damages.
- Remove all remaining debris / flooring in the Old Basement and Crawlspace. Clean and treat all remaining surfaces.
- AQM highly recommends installing CleanSpace systems in the dirt floor Basement / Crawlspace (new and old Crawlspaces).
- Permanently dehumidify each Basement and Crawlspace area. Ensure the Unit is appropriately sized for the area and drains into a plumbing drain or sump pump.

V. Recommendations (Continued)

- With any recommendations for material removal (e.g. ceiling systems), expand area of removal if damages and/or mold growth are found to extend beyond the boundaries initially specified (the Remediation Contractor should ensure that areas / surfaces are carefully inspected in order to make any such determination).
- Detail Clean (see Definitions) all surfaces and items in the Remediation area.
- Detail Clean, Clean / Treat (see Definitions) all surfaces exposed through remedial actions.
- Replace building materials / Release Remediation area ONLY after a successful post remedial evaluation.
- Ensure roof has been repaired.
- Control ground water intrusion in each Basement / Crawlspace
- Repair / replace Egress Doors to control water intrusion.

VI. Definitions

- ***Finished System*** includes the underlying wall / ceiling insulations and appropriate vapor barriers.
- ***Detail Cleaning*** involves HEPA vacuuming and damp wiping with a mild detergent (including hard-to-reach areas / inside / underside / behind furniture and other objects).
- ***Clean / Treat*** involves the application of an appropriate cleaning / treatment system. Surfaces should be thoroughly cleaned including damp / wet cleaning and wiping of surfaces; use cleaning / scrubbing method with appropriate abrasiveness based on characteristics of the material surfaces as well as types and extent of mold growth. Application of any coating must be light; encapsulation is unacceptable unless done after post-remediation testing.

Area Characterization Notes (According to the IICRC S520 Standard)**:**

A "**Condition 1**" environment contains what would be considered normal background amounts of fungal spores and fragments, as well as trace amounts of fungal growth. Normal housekeeping and cleaning procedures can keep a Condition 1 environment under control. Most residential homes and commercial office space would be considered Condition 1.

A "**Condition 2**" environment is associated with an area that has a limited amount of fungal growth present. Condition 2 environments are also associated with areas adjacent to heavy contamination that may contain elevated levels of spores or fungal fragments generated by the adjacent contamination. Condition 2 environments also may contain a limited amount of porous materials and can usually be returned to Condition 1 by diligent cleaning and thorough drying.

"**Condition 3**" environments contain heavy mold growth and usually are associated with persistent moisture or water intrusions. Condition 3 environments often contain hidden mold growth, due to water damage being present in closed areas such as wall cavities.

VI. Definitions (Conitued)

The overall goal of mold remediation as presented in IICRC S520 Standard is to return the area to a Condition 1. This means that trace amounts of mold may still be present, but the type and amount of mold is consistent with measurements made outdoors or in an adjacent indoor area that is free from amplified levels of mold.

AQM appreciates this opportunity to have aided in this project. In the event you have questions or require further assistance, please do not hesitate to contact us.

Sincerely,

Industrial Hygienist
Randy Geoffroy, CMI

ASSESSMENT LIMITATIONS

AQM

ASSESSMENT LIMITATIONS

The observations, conclusions and recommendations described in this assessment report were made under the conditions stated herein, taking into account any information / concerns provided or reported to AQM, and were arrived at in accordance with generally accepted standards related to indoor air quality investigations and good industrial hygiene practice. The conclusions presented in the report were based solely upon the services described herein, and not on scientific tasks or procedures beyond the scope of described services, time and / or any budgetary constraints. Assessments were made at the request of the Client based on information provided at the time of authorization to proceed with the evaluation. This report is prepared for the Client's use only and in accordance with scope of services requested, and should not be distributed to other parties for review and reliance.

The findings relating to this assessment were not intended to be exhaustive in nature, nor do they attempt to identify all possible sources of indoor contaminants, chemicals or even mold throughout the entire structure. Building materials may contain asbestos. In the event that asbestos building materials are suspected, further evaluation should be made prior to renovations in accordance with Federal, State, and Local regulations – as applicable. **Note:** Effective April 22nd, 2010 Environmental Protection Agency's (EPA) Renovation, Repair, and Painting (RRP) rule is in effect. This means that any renovation, repair and painting activities on **target housing** or **child-occupied facility** built before 1978 performed for compensation after April 22nd, 2010 falls under this rule. It is mandatory that any renovation impacting painted surfaces in a facility built before 1978 be tested for presence of lead-based paints. A Contractor (or Firm) trained and certified under this rule shall perform removal of lead-base painted surfaces, **ONLY** if lead-based paints are present and renovation / remediation of the structure falls under the definition of EPA's new rule. You can find EPA's RRP rule and definitions at their website: http://www.epa.gov/lead/pubs/renovation.htm. The chosen contractor to perform activities disturbing lead-based painted surfaces will comply with all State, Federal, Local Health and Safety Regulatory Requirements (which ever is more stringent).

Any measured results, analysis data, and / or physical conditions observed are only valid for the period in which this inspection / testing was conducted. Certain assumptions can be made based on information provided to AQM on or before the time of the assessment coupled with analytical data and observations made at the time of the inspection / testing.

Where such quantitative laboratory analyses have been conducted by an outside laboratory, AQM has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data. This data have been reviewed and interpretations made as presented in the report.

Historical events or ambient air conditions that may have existed prior to this assessment cannot be correlated in any way with the enclosed data. No warranty, real or implied, is made as to what was or is the exact cause or source that may have adversely affected the indoor air quality prior to the date of this assessment.

The report is based on AQM's professional opinion and on our experience in conjunction with information gathered during the assessment and laboratory data provided. Information and recommendations set forth in this report are intended to characterize current conditions based on the reported concerns and discoveries made at the time of the inspection and testing period. Information is being provided to aid in the development of corrective actions or remediation that may improve overall conditions identified and/or to improve the overall air quality.

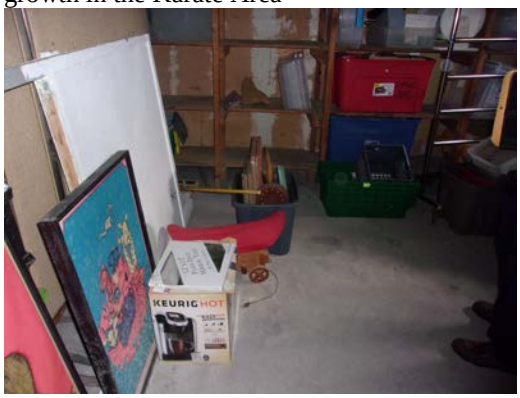
PHOTO DOCUMENTATION

AQM

View of Karate Area ceiling

Water damage and mold growth on the ceiling board above the Karate Area ceiling tiles

Another photo showing water damage and mold growth in the Karate Area



View of Basement Storage

Water damage and mold growth on lower wall in the Basement Storage Room

Mold growth / fungal mass on Basement Storage Room ceiling

Mold growth on Basement Storage Room ceiling

Moldy items on Basement dirt floor

Mold on bottom of wood door stored in Basement

Loosely installed poly barrier in some of the Basement

View of Crawlspace off of Basement

Mold growth on Basement ceiling

Mold growth on Basement ceiling

Backside view of Basement Storage Room wall (as viewed from Basement), water damaged and moldy

Wood decay fungal mass in Basement dirt floor

View of water damaged ceiling in the 1st floor Connector Hallway

View of water damaged ceiling in the 1st floor Connector Hallway

View of 1st floor Hallway in Old Building

Mold growth on cove base in 1st floor Hallway – Old Building

View of Office and Double Doors in 1st floor Hallway – Old Building

Mold growth on Office Door – previous photo

Mold growth on Double Door – previous photo

Degraded wall and flooring at these Egress Doors

View of Men's Room door – 1st floor Old Building

Mold growth on Men's Room door, previous photo

Mold growth on doors in previous photo

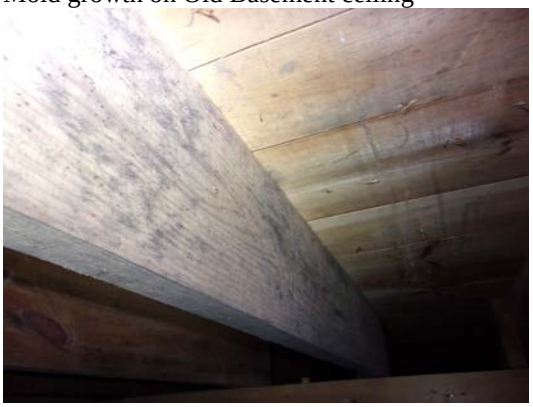
Mold growth on wall in 1st floor Men's Room – Old Building

Degraded wall and flooring at these Egress Doors

Mold growth on wall in 1st floor Men's Room – Old Building

Mold growth on Old Basement ceiling

View of Double Doors



Mold growth on Old Basement ceiling

Mold growth on Old Basement ceiling

Remnants of flooring in the Old Basement

Water on Old Basement floor

View of Crawlspace Off of Old Basement

Mold growth on Old Basement ceiling

View of Crawlspace Off of Old Basement

Mold growth on Old Basement load post

Mold growth on Old Basement ceiling

SUPPORTING DOCUMENTATION

AQM

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*): 621801512

Company: Air Quality Management Services		**EMSL-Bill to:** ✓ Different ☐ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*	
Street: PO Box 2491			
City: Lewiston	**State/Province:** ME	**Zip/Postal Code:** 04241	**Country:** United States
Report To (Name): Randy Geoffroy		**Telephone #:** 207-657-7360	
Email Address: See Account Notes		**Fax #:** 207-657-7361	**Purchase Order:** 18-429
Project Name/Number: 18-429 - Union		**Please Provide Results:** ☐ FAX ✓ E-mail ☐ Mail	
U.S. State Samples Taken: Maine		**Connecticut Samples:** ☐ Commercial ☐ Residential	

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ■ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements

Non Culturable Air Samples (Spore Traps) – Test Codes

- **M001** Air-O-Cell
- **M049** BioSIS
- **M030** Micro 5
- **M173** Allegro M2
- **M003** Burkard
- **M174** MoldSnap
- **M004** Allergenco
- **M043** Cyclex
- **M176** Relle Smart
- **M032** Allergenco-D
- **M002** Cyclex-d
- **M130** Via-Cell
- **M172** Versa Trap

Other Microbiology Test Codes

- **M041** Fungal Direct Examination
- **M005** Viable Fungi ID and Count
- **M006** Viable Fungi ID and Count (Speciation)
- **M007** Culturable Fungi
- **M008** Culturable Fungi (Speciation)
- **M009** Gram Stain Culturable Bacteria
- **M010** Bacterial Count and ID – 3 Most Prominent
- **M011** Bacterial Count and ID – 5 Most Prominent
- **M013** Sewage Contamination in Buildings
- **M014** Endotoxin Analysis
- **M015** Heterotrophic Plate Count
- **M180** Real Time Q-PCR-ERMI 36 Panel
- **M018** Total Coliform (Membrane Filtration)
- **M020** Fecal *Streptococcus* (Membrane Filtration)
- **M210-215** *Legionella* Detection
- **M026** Recreational Water Screen
- **M027** Mycotoxin Analysis
- **M029** *Enterococci*
- **M019** Fecal Coliform
- **M133** MRSA Analysis
- **M028** *Cryptococcus neoformans* Detection
- **M120** *Histoplasma capsulatum* Detection
- **M033-39** Allergen Testing
- **M044** Group Allergen (Cat, Dog, Cockroach, Dustmites)
- **Other** See Analytical Price Guide

Preservation Method (Water):

Name of Sampler: Randy Geoffroy **Signature of Sampler:**

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
A1	Outdoors	Air	M001	75L	8/20/18
A2	Karate Space	Air	M001	75L	↓
A3	Southeast Stair	Air	M001	75L	↓
A4	Basement	Air	M001	75L	↓
A5	1st Fl Connector	Air	M001	75L	↓
A6	1st Fl Hall Older Bldg	Air	M001	75L	↓
A7	2nd Fl Hall Older Bldg	Air	M001	75L	↓
A8	Older Basement	Air	M001	75L	↓
T1	Ceiling in Karate	Tape	M041	—	↓
T2	Lockbase 1st Fl Hall Old	Tape	M041	—	↓

Client Sample # (s): A1-A8 + T1-T4 **Total # of Samples:** 12

Relinquished (Client): **Date:** 8/20/18 **Time:** 16:30

Received (Client): Steph S **Date:** 8/21/18 **Time:** 10AM

Comments:
Email invocies to: connie@aqmservices.com

RECEIVED AUG 21 2018 By SRS

E. Fedex (2 of 2)

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (*Lab Use Only*):

621801512

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
T.3	Men's Rm Wall + Door 1st Fl Old	Tape	M041	—	8/20/18
T4	Olde Base Ceiling	↓	↓	↓	↓

**Comments/Special Instructions:

Email invocies to: connie@aqmservices.com

Page 2 of 2 pages

RECEIVED
AUG 21 2018
By SRS

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106

Tel/Fax: (207) 517-6921 / (207) 517-6922

http://www.EMSL.com / portlandlab@emsl.com

EMSL Order: 621801512
Customer ID: AIRQ51A
Customer PO: 18-429
Project ID:

Attn: Randy Geoffroy
Air Quality Management Services, Inc.
PO Box 2491
Lewiston, ME 04241

Project: 18-429 / Union

Phone: (207) 657-7360
Fax:
Collected: 08/20/2018
Received: 08/21/2018
Analyzed: 08/21/2018 - 08/22/2018

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	621801512-0001			621801512-0002			621801512-0003		
Client Sample ID:	A1			A2			A3		
Volume (L):	75			75			75		
Sample Location	Outdoors			Karate Space			Southeast Stair		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	21	890	20.9	1	40	16.7	-	-	-
Ascospores	4	200	4.7	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	54	2300	54.1	5	200	83.3	7	300	88.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	17	720	16.9	-	-	-	1	40	11.8
Curvularia	1	40	0.9	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	3	100	2.4	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**100**	**4250**	**100**	**6**	**240**	**100**	**8**	**340**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	42	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	-	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	-	-	-	1	-	-	2	-
Background (1-5)	-	2	-	-	1	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Zackary Carbee, Laboratory Manager
or other approved signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME

Initial report from: 08/22/2018 09:59:55

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.

161 John Roberts Road South Portland, ME 04106

Tel/Fax: (207) 517-6921 / (207) 517-6922

http://www.EMSL.com / portlandlab@emsl.com

EMSL Order: 621801512
Customer ID: AIRQ51A
Customer PO: 18-429
Project ID:

Attn: Randy Geoffroy
Air Quality Management Services, Inc.
PO Box 2491
Lewiston, ME 04241

Project: 18-429 / Union

Phone: (207) 657-7360
Fax:
Collected: 08/20/2018
Received: 08/21/2018
Analyzed: 08/21/2018 - 08/22/2018

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	621801512-0004			621801512-0005			621801512-0006		
Client Sample ID:	A4			A5			A6		
Volume (L):	75			75			75		
Sample Location	Basement			1st Fl Connector			1st Fl Hall Older Bld		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1	40	1
Aspergillus/Penicillium	761	32100	99.8	-	-	-	91	3800	94.5
Basidiospores	2	80	0.2	8	300	100	3	100	2.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	1
Myxomycetes++	-	-	-	-	-	-	1	40	1
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**763**	**32180**	**100**	**8**	**300**	**100**	**97**	**4020**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	42	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	4	-	-	1	-	-	1	-
Background (1-5)	-	4	-	-	2	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Zackary Carbee, Laboratory Manager
or other approved signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

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Initial report from: 08/22/2018 09:59:55

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Phone: (207) 657-7360
Fax:
Collected: 08/20/2018
Received: 08/21/2018
Analyzed: 08/21/2018 - 08/22/2018

Test Report: Air-O-Cell(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	621801512-0007			621801512-0008					
Client Sample ID:	A7			A8					
Volume (L):	75			75					
Sample Location	2nd Fl Hall Older Bld			Older Basement					
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**	-	-	-
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	1	-	-	-	-	-	-
Aspergillus/Penicillium	82	3500	87.9	9	400	26.7	-	-	-
Basidiospores	1	40	1	19	800	53.3	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	9	400	10.1	7	300	20	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**93**	**3980**	**100**	**35**	**1500**	**100**	-	-	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	42	-	-	42	-	-	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	-	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	-	-
Fibrous Particulate (1-4)	-	2	-	-	1	-	-	-	-
Background (1-5)	-	2	-	-	2	-	-	-	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum
Myxomycetes++ = Myxomycetes/Periconia/Smut

No discernable field blank was submitted with this group of samples.

Zackary Carbee, Laboratory Manager
or other approved signatory

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME

Initial report from: 08/22/2018 09:59:55

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.
161 John Roberts Road South Portland, ME 04106
Phone/Fax: (207) 517-6921 / (207) 517-6922
http://www.EMSL.com / portlandlab@emsl.com

Order ID: 621801512
Customer ID: AIRQ51A
Customer PO: 18-429
Project ID:

Attn: Randy Geoffroy
Air Quality Management Services, Inc.
PO Box 2491
Lewiston, ME 04241

Phone: (207) 657-7360
Fax:
Collected: 08/20/2018
Received: 08/21/2018
Analyzed: 08/21/2018

Proj: 18-429 / Union

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	621801512-0009	621801512-0010	621801512-0011	621801512-0012	
Client Sample ID:	T1	T2	T3	T4	
Sample Location:	Ceiling in Karate	Covebase 1st Fl Hall Old	Men's Rm Wall + Door 1st Fl Old	Older Base Ceiling	
Spore Types	Category	Category	Category	Category	-
Alternaria (Ulocladium)	High	-	-	-	-
Ascospores	-	-	-	-	-
Aspergillus/Penicillium	-	High	High	High	-
Basidiospores	-	-	-	Rare	-
Bipolaris++	-	-	-	-	-
Chaetomium	-	-	-	-	-
Cladosporium	-	-	*High*	Medium	-
Curvularia	-	-	-	-	-
Epicoccum	-	-	-	-	-
Fusarium	-	-	-	-	-
Ganoderma	-	-	-	Low	-
Myxomycetes++	-	-	-	-	-
Pithomyces++	-	-	-	-	-
Rust	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-
Zygomycetes	-	-	-	-	-
Hyphal Fragment	High	-	-	High	-
Insect Fragment	-	-	-	-	-
Pollen	-	-	-	-	-
Fibrous Particulate	Medium	Medium	-	High	-

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

- Denotes Not Detected.
Bipolaris++ = Bipolaris/Dreschlera/Exserohilum Myxomycetes++ = Myxomycetes/Periconia/Smut
* = Sample contains fruiting structures and/or hyphae associated with the spores.

No discernable field blank was submitted with this group of samples.

Zackary Carbee, Laboratory Manager
or Other Approved Signatory

Samples received in good condition unless otherwise noted. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation of the data contained in this report is the responsibility of the client.

Samples analyzed by EMSL Analytical, Inc. South Portland, ME

Initial report from: 08/22/2018 09:59:55

For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

A & L LABORATORY

a division of Granite State Analytical Services, LLC

155 Center Street, Building C, PO Box 1507, Auburn, ME 04210

http://www.allaboratory.com/ – (207) 784-5354

CERTIFICATE OF ANALYSIS FOR DRINKING WATER

Legend	
Passes	✓
Fails EPA Primary	⊗
Fails EPA Secondary	▼
Fails State Guideline	✕
Attention	⚠

DATE PRINTED: 08/22/2018

CLIENT NAME: Thompson Community Center

PWSID#: ME0092377

CLIENT ADDRESS: PO Box 824
Union, ME 04862

SAMPLE ID#: 1808-02789-001

SAMPLED BY: Lori Carlson

DATE AND TIME COLLECTED: 08/20/2018 1:03PM

DATE AND TIME RECEIVED: 08/21/2018 7:00AM

LOCATION: DS-1 DISTRIBUTION SYSTEM, Kitchen

ANALYSIS PACKAGE: A & L MPN-ME

RECEIPT TEMPERATURE: 20° CELSIUS

MORE LOC INFO:

CLIENT JOB #

Test Description	Results	Test Units	Pass /Fail	DQ Flag	RL	Limit	Method	Analyst	Date-Time Analyzed
Coliform MPN*	<1	MPN/100mL	✓		1	No Limit	SM 9223 B	TT-ME	08/21/18 11:45AM
E. coli MPN*	<1	MPN/100mL	✓		1	0	SM 9223 B	TT-ME	08/21/18 11:45AM

The results presented in this report relate to the samples listed above in the condition in which they were received.
RL: "Reporting limit" means the lowest level of an analyte that can be accurately recovered from the matrix of interest.
The thermal preservation requirement of 4ºC for nitrate & nitrite has been waived by the Maine CDC for all samples submitted to the Drinking Water Program.
Data Qualifier (DQ) Flags: None

*** ME Certified Analysis**

Rebecca L. Labranche
Laboratory Director

This analysis meets State of Maine requirements except as noted.
State Certifications: | A & L Laboratory: ME ME00021 | Granite State Analytical Services LLC: NH NH00003 |
This certificate shall not be reproduced, except in full, without the written approval of Granite State Analytical Services, LLC

#292377

MAINE DRINKING WATER PROGRAM
TOTAL COLIFORM BACTERIA RESULTS

For small systems taking less than 10 samples per month.

87 80

Water Test Report for the Month: FIRST quarter **Year:** 2018 **Report Number:** 3/15 20182

Public Water System Information	
System Name	THOMPSON COMMUNITY CENTER
Sampler's Phone #	207-975-0352
PWSID #	ME 0092377
Address	51 South Union Rd – Union ME 04862
Sample Category (1)	Routine Compliance
Sampler's Name	

Laboratory Information	
Laboratory's Name	The Maine Water Company MIRROR LAKE LABORATORY 855 Rockland St W Rockport ME 04865
Certification #	ME 022
Manager's Name	Bill Gower
Phone #	207-236-8428
Sample Received	Date/Time 3/15/18 1121 By BS

#	Sample Collection Point	Date & Time Sample was taken	Laboratory Sample ID#	Date & Time Sample was Run	Total Coliform Count	Fecal Coliform Or E.Coli (2)	EPA Standard Method	Notes
1	Kitchen	3/15/18 10:36am	1Q18-92377-1	3/15/18 1120 MM	<1.0		9223B	
2					3/16/18 1230 MM			
3								
4								
5								

I (we) understand that this report will be submitted to the Maine Drinking Water Program.

Sampler's Signature: Hal Carlson
Relinquished Date:

Laboratory Signature: 3/16/18 chemist
Title and Date:

Report sent to DWP NDNS 3/16/18 MMC

(1) Routine Compliance, Recheck, Operations & Maintenance, Raw Water, or Special Purpose.
(2) Fecal Coliform or E. Coli analysis must be performed on all Coliform positive samples.
(3) Email thompsoncenter51@gmail.com

(4) Results relate only to listed samples. Report must not be reproduced, except in full, without the written approval of the lab.

MAINE DRINKING WATER PROGRAM
TOTAL COLIFORM BACTERIA RESULTS

For small systems taking less than 10 samples per month.

Water Test Report for the Month: ~~SECOND quarter~~ April **Year:** 2018 **Report Number:** 4/8 92377

Public Water System Information	
System Name	THOMPSON COMMUNITY CENTER
Sampler's Phone #	207-975-0352
PWSID #	ME 0092377
Address	51 South Union Rd – Union ME 04862
Sample Category (1)	Routine Compliance
Sampler's Name	Lori Carlson

Laboratory Information	
Laboratory's Name	The Maine Water Company MIRROR LAKE LABORATORY 855 Rockland St W Rockport ME 04865
Certification #	ME 022
Manager's Name	Bill Gower
Phone #	207-236-8428
Sample Received	Date/Time 4/18/18 1532 By BS

#	Sample Collection Point	Date & Time Sample was taken	Laboratory Sample ID#	Date & Time Sample was Run	Total Coliform Count	Fecal Coliform Or E.Coli (2)	EPA Standard Method	Notes
1	Kitchen	1:40 4/18/18	2Q18-92377-1	4/18/18 MRC 1600	<1.0		9223B	
2					4/19/18			
3					1000 MRC			
4								
5								

I (we) understand that this report will be submitted to the Maine Drinking Water Program.

Sampler's Signature: Lori Carlson
Relinquished Date:

Laboratory Signature: [signature] 4/19/18
Title and Date: Chemist

Report sent to DWP 4/19/18 MRC

(1) Routine Compliance, Recheck, Operations & Maintenance, Raw Water, or Special Purpose.
(2) Fecal Coliform or E. Coli analysis must be performed on all Coliform positive samples.
(3) Email thompsoncenter51@gmail.com

(4) Results relate only to listed samples. Report must not be reproduced, except in full, without the written approval of the lab.

The Maine Water Company T:207.236.8428
P O Box 310 F:207.236.8271
West Rockport ME 04865 mclifford@mainewater.com

STATE CERTIFIED LABORATORY: ME 0022
RADON SPR: ME 22200C

Nitrate Analysis

Thompson Community Center
51 South Union Rd
Union , ME 04862

REPORT DATE	3/22/2018
PWSID	ME0092377
SAMPLE #	180322-0001
SAMPLE SOURCE	Drilled Well
SAMPLE SITE	Thompson CC - Main Building

	DATE	TIME
COLLECTED	3/22/2018	1:11PM
RECEIVED IN LAB	3/22/2018	2:33PM
NO3 ANALYZED	3/22/2018	3:30PM

	RESULT (mg/l)	ACCEPTABLE LIMIT (mg/l)	METHOD
NO3 - N	<2.0	<10.0	4500D - NO3*

* Standard Methods 21st Edition - 2005

Maya Clifford

Chemist

Sent to customer 3/22/2018

Sent to DWP 3/22/2018

These results reflect those obtained on the as received sample.
This report may not be reproduced except in its entirety.
Deviation(s) from standard operating procedure: None