STRUCTURAL SURVEY & RECOMMENDATIONS

Structures North Consulting Engineers, 2011

9 December 2011

Menders, Torrey & Spencer
123 North Washington Street
Boston, MA 02214

Attention: Thomas Burgess

Reference: Sterling Town Hall
Sterling, Massachusetts

Dear Thomas:

At your request we visited the Sterling Town Hall to assess the condition of structure, including an analysis of the floor structure in its current condition and the requirements of increasing the load capacity for in regard to future use. For the purposes of this report, the front of the building will be considered to face west. The following is a summary of our structural observations, along with our *recommendations* below.

General Description

The original town hall structure was originally constructed in 1835, and represents the front six framing bays. An addition, which represents the rear four framing bays, was constructed circa 1893.

The structure is a 2-story wood-framed structure with a combination of brick and fieldstone foundation walls. At the time of our visit the first floor framing was completely concealed, and we had limited access to the second floor framing. The roof was also concealed with the exception of exposed elements of a previous repair performed circa 1987. The following is based on the limited information that was readily visible during our initial site visit and available documentation that was provided by your office.

Noted Conditions *and Recommendations*

The following conditions were noted during our visit:

Exterior

The mortar joints at the front entry are severely eroded, some entirely, and the front slab has several cracks.

The masonry joints between stone units should be repointed, and the slab either repaired or replaced. A new replacement slab should consist of a durable concrete; if the slab is repaired, the finished product should include a cementitious waterproof coating.

Exterior rails are severely corroded, in several cases causing cracks in concrete walls and ramps due to rust-jacking. This has been worsened at the rear ramp due to recesses in the rail pockets, which hasten corrosion and permit freeze-thaw damage.

It appears that the concrete walls at the south elevation will be removed and abandoned as part of the schematic design, however the concrete ramp to remain at the rear/east elevation will require repair following the removal of the rails. All existing rails at the ramp will need to be removed and

replaced with new rails that are protected against corrosion (hot-dipped galvanized or 3-step paint). All new rail pockets will need to be fully grouted with a sealant joint to prevent recurrence of the current water damage.

Foundation Wall

As noted in a prior report, the front foundation wall has deteriorated, and is most visible at abandoned stair at the northwest corner of the basement. Several voids were noticeable along the balance of the west foundation wall where visible, as much of the wall is concealed with storage. The joints of the balance of the foundation walls, both brick masonry (south wall) and stone masonry (balance) are severely eroded.

All foundation walls should be cut and re-pointed, with a minimum allowance for 20% brick replacement along the portions of south foundation wall to remain. Since the proposed accessibility additions and modifications will remove a section of the rear wall of the original 1835 construction and reduce the lateral capacity, the remainder of the wall should be removed entirely and replaced with a steel braced frame or reinforced concrete masonry unit (CMU) wall.

Interior Vertical Supports (basement, supporting first floor framing main beams)

The majority of the existing vertical supports are comprised of hollow CMU piers that either replaced or flank original brick masonry piers. Two remaining piers support a steel beam along the west edge of the boiler room, and are deteriorated, with the worst of the damage at their bases.

These damaged piers should be removed and replaced with hollow steel columns. During the column replacement, footing conditions should be verified and insufficient footings replaced as required.

Load Capacities & Limitations

During our site visit, we gathered as much information as we could about existing framing. Most areas of framing were covered by finishes, which we did not remove, and as such we could not determine the existing framing. We had to make assumptions about both the framing in the areas where we could not observe framing, and since we did not take any material samples for testing, about the strength of the materials used for framing. Please note that the load capacities described below are based upon floor load capacity only, and not on the capacity of the emergency egresses, which we presume will consist of new structure. Also, the live load capacities noted are based on a limited amount of exposed framing, and further modifications to connections and framing may need to be addressed when existing conditions are completely exposed. If these conditions are not completely exposed, a portion of finishes should be sufficiently removed to expose a representative sample of the bearing condition of the framing.

First Floor Framing

Much of the basement ceiling is covered by finishes, likely intended to serve as fire resistance improvement. In the few locations where we were able to observe framing, the first floor framing typically consisted of lumber joists supported by built-up lumber beams supported by masonry columns and walls. First floor posts supporting second floor beams appear to align with posts and walls in the basement, such that first floor beams and joists do not carry second floor loads other than through direct bearing.

The lumber joist sizes vary from bay to bay. At the north end we observed a mix of older 1.875 inch by 7.5 inch lumber joists @ 20 inches to 22 inches on center, with a newer nominal 2x8 joists between each older joist. Assuming that the newer joists have lower strength values than the older joists (thus controlling analysis), we evaluated the newer joists for an average 11 inch on center spacing assuming modern SPF number 2 grade lumber. These joists had a live load capacity of

approximately 85 psf to 140 psf depending on their length. Depending on the use of space above, it may be advisable to add sisters to some of the longer joists.

Near the center of the building we observed 1.875 inch by 7.25 inch joists at 20 inches on center. These joists support the northern end of the room that we believe you are referring to as the first floor Rec Room (approximately 1,271 square foot room at southern end of building). These joists, assuming strength values roughly halfway between those of modern Spruce-Pine-Fir (SPF) number 1 grade and SPF structural select grade, have a live load capacity of approximately 100 psf.

Towards the southern end of the building we observed 2.875 inch by 7.75 inch joists at 16 inches on center. These joists support the majority of the first floor Rec Room. These joists, assuming strength values roughly halfway between those of modern Spruce-Pine-Fir (SPF) number 1 grade and SPF structural select grade, have a live load capacity of approximately 200 psf.

The first floor beams were typically wrapped with a finish, but at both the north and south ends of the building we observed (4)2x10 built-up lumber beams supporting the joists. We have assumed that all first floor beams are this size. Assuming strength values of modern SPF number 2 grade lumber, we determined that the beams have live load capacities that vary from 14 psf to 65 psf depending on the beam length and the lengths of the joists they support. We typically evaluated the longest spanning beam segment in a given run of beam, so shorter spans of the same beam may have higher capacities. The beams under the southern Rec. Room have the higher 65psf or greater capacity.

Some beams have capacities that are insufficient regardless of use of space above and should either be reinforced with steel channels or LVL sisters, or beam spans should be shortened by means of additional columns and footings. During the design phase of future work, additional investigation into existing framing would need to be performed, and then it could be determined which beams need reinforcing and which don't.

Second Floor Framing

The second floor is mostly Meeting Space with a stage at the south end. Second floor framing is typically a post and beam system with lumber joists. The first floor posts supporting second floor framing were hidden by finishes and could not be evaluated.

One beam at the south end was observed to be a 12 inch deep steel I-beam with a 6.5 inch wide flange. The era of manufacture of the steel beam observed is unknown, but it is presumed to not be a part of the original 1835 construction. Assuming that all beams are the same as the one we observed, then depending on the era of construction (and thus the strength of steel used), we found the beams to generally have a capacity in excess of 100-psf live load, suitable for assembly use. It should be noted, however, that the stage at the south end of the building, would be required to support much larger loads than the rest of the room if used as a theater stage. The beam nearest the stage may require reinforcing depending on the building inspector's requirements for live load capacity, the planned use of this room and stage, and how the stage is framed.

Second floor joists, on the other hand, were found to have a much lower capacity. The joists supporting the Meeting Space room were typically nominal 2x12 lumber joists spaced at 16 inches on center and spanning 15 feet. Lumber species and grade are unknown, but for purposes of evaluation material properties were assumed roughly halfway between those of modern Spruce-Pine-Fir (SPF) number 1 grade and SPF structural select grade. We found that the joists typically have an allowable live load capacity of between 55psf and 65psf. This capacity would be suitable for office use, excluding partitions, but not for assembly use.

To increase the joist capacity up to a 100psf assembly live load capacity, the joists would need to be sistered with new framing. Although standard dimensional lumber might be adequate for strength purposes, placing new lumber that shrinks as it dries next to old lumber that has already

dried and shrunk could adversely affect finishes attached to this framing, so it may be advisable to use more expensive engineered lumber that is less susceptible to shrinkage. As with the steel beams, the joists at the far south end are under the stage, and may need additional reinforcing depending on how the stage is framed, its use, and building inspector requirements.

Roof & Attic Framing

The majority of roof framing was hidden from view by finishes, and will have to be evaluated at a later date after selective demolition of finishes is performed to find out sizes, spacing, and materials used for framing. The roof system appears to include regularly spaced trusses, presumably with a ridge beam and rafter system between trusses. The trusses appear to be a simple tied rafter system that utilizes large rafters with a horizontal tying member that prevents the low end of the rafters from thrusting laterally. The trusses include a timber cross beam that is at an elevation that is at least two thirds of the height of the roof, much too high to assist with tying the rafters against thrust forces. Near the eave height there is also a steel rod with turnbuckles, a mid-span chain up to the high timber cross beam serving as support for the rod to prevent it from sagging excessively, and double-channel end connections. A report and drawings you provided that are dated from 1987 appear to confirm our assumptions regarding truss framing.

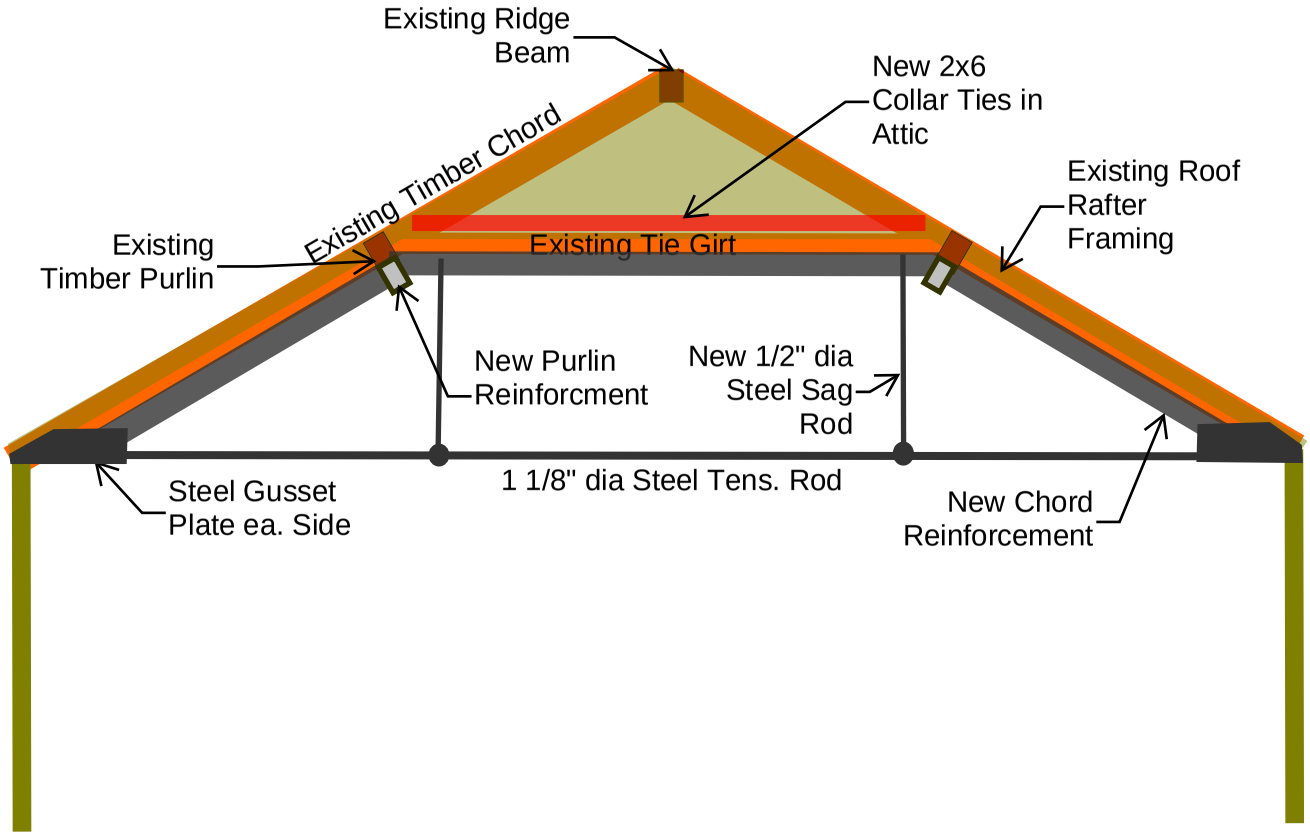
Of interest to the owners is whether this lower rod can be removed. We believe that the rod serves a critical function for the trusses. The sag chain at the mid-span of the trusses is an unorthodox choice of materials, and could easily be replaced with a more aesthetically pleasing member, but the rods and end connections would need to remain, or be replaced by similar framing if they are found to be deficient.

It is our understanding that there are several other components of the building, including egress, siding and trim, that require attention and that these will be addressed separately through your office. I trust that the above information will be helpful in understanding the current condition and rehabilitation needs of this structure. Please contact us if we can be of further assistance.

Respectfully Yours,
Structures North Consulting Engineers, Inc.

Greg Nowak, E.I.T.

John M. Wathne, P.E., President



SKS-2B

Sterling Town Hall

Alternate Truss Reinforcement Elevation

Structures North 1-24-2012

MECHANICAL, ELECTRICAL & PLUMBING SURVEY & RECOMMENDATIONS

JRW Engineering, 2011

MEP SCHEMATIC DESIGN NARRATIVE

For

The TOWN OF STERLING
1835 TOWN HALL

31 Main St.
Sterling, MA.

Prepared By:

JRW Engineering
40 Town Farm Rd.
Brookfield, MA. 01506
Tel: (978) 857-0305 Fax: (978) 418-0057

December, 2011

I. INTRODUCTION

JRW Engineering was retained by Menders, Torrey & Spencer to provide Mechanical, Electrical and Fire Protection Engineering services for the Sterling 1835 Town Hall Renovation project. The intent is to take the report completed by Reinhardt Associates, and progress the project to the design development level.

II. EXISTING CONDITIONS

A. General

The existing building is a two-story, wood frame building with a full basement and partial unheated attic, constructed in 1835. The basement comprises the boiler room, electric room, and storage area. The upper floors consist offices and the main meeting rooms.

B. HVAC Systems

The existing heating and ventilation system is comprised mainly of two new Buderus, oil fired hot water boilers with a primary-secondary piping arrangement and six heating zones. The boilers have a combined net capacity of 298,000 BTU/hr.
The chimney has a new liner installed and appears to be in excellent condition.
Combustion air is provide to the boilers by a 42”x16” louver in the wall at Maple Street, and by a small combustion air fan (known as a “fan-in-a-can”) taking air in from the south side of the building. The louver is in poor shape and had no automatic damper installed. The combustion air fan seems to be working properly, and should be of sufficient size to provide all the required combustion air.
Two 330 gallon oil tanks are located in the basement outside the boiler room and appear to be in good condition. The fuel oil fill and vents are located on the South wall of the building.
The remainder of the heating system, controls, distribution and radiators are as depicted in the Reinhardt report.
The building currently uses window mounted air conditioners and a portable dehumidifier in the basement in the summer.
The building is currently ventilated with operable windows and doors with more than 4% of the floor area being open window space.
The two bathrooms are provided with small ceiling exhaust fans that operate with a light switch.

C. Plumbing Systems

The building is provided with a ¾” cold water service from Maple Street and enters the building adjacent to the chimney. The service consists of a ¾” meter and pressure reducing valve. While the Reinhardt report states that a backflow preventer is required on the service, the Plumbing code actually only requires such a device when the piping is subject to a cross contamination. This would include connections to a system such as sprinkler system, hose connection, or

heating system. A backflow preventer is provided on the connection to the heating system. Other backflow protection that may be required would be vacuum breakers at any hose connections.
Domestic hot water is provided by a 6 gallon, 1.5KW electric water heater to serve the two bathroom lavatories and the janitors sink.
The sanitary sewer exits the south side of the building as a 4" cast iron sewer.
The size and condition of the existing septic tank is unknown.
There are several un-used floor drains and open sanitary pipes in the basement that will need to be capped to prevent sewer gases from entering the building.
The existing septic system has been reported by the owner to be insufficient that additional capacity has been built into the fire station system.
The fire station leech field has been sized to handle an additional 780 gallons per day from the 1835 Town Hall. This is based on an occupancy of 260 people at 3 gallons per day per person. Once the 1835 Town Hall is connected to this system, nitrogen treatment will be required. While the nitrogen treatment tank has been installed at the fire station site, the interconnecting piping between that tank and the rest of the system, as well as the "guts" of the nitrogen treatment tank have not been installed and will need to be incorporated as part of this project. An interview with the site engineers of the previous fire station project revealed no documentation that the town currently has the right of way to install a force main from the 1835 town hall to the fire station. This required right of way should be verified before proceeding.

D. Fire Protection Systems

There are currently no existing fire protection sprinkler systems in the building.

E. Electrical Systems

The existing electrical service to the building 150 Amps, 120 / 240 volts, single phase, which enters the basement on the Maple St. side of the building and terminates at a 150 Amp main circuit breaker that feeds the adjacent load center.
The lighting throughout the building is old and in generally poor condition. The exit signs do not have internal battery back – up and the emergency egress lighting is old and does not adequately cover the interior exit paths and there is no exterior emergency lighting at the doors.
The existing second floor meeting hall has pendant fixtures presently mounted above the hung ceiling. These fixtures have some historic and decorative value and are desired to be re-used.
The existing fire alarm system is outdated and should be replaced.

III. DESIGN CONSIDERATIONS

A. HVAC Systems

The heating load has been calculated 290,000 BTU/hr, without mechanical ventilation. The existing heating system should therefore be sufficient, barring any mechanical make up air required for kitchen ventilation. Several sections of finned tube will need to be relocated on the first and second floor to fit the new layout and accommodate the new addition. The basement is currently unheated,

so a new heating zone will need to be added to the system to heat the occupied spaces in the basement. A new zone will also need to be added for the addtition.

The present ducted combustion air intake is in the way of the addition and will need to be relocated. The intake louver on Maple St. should either be fitted with a motorized damper, or be blocked off with an insulated panel.

The existing fuel oil tanks will need to be relocated based on the proposed basement layout.

The bathroom exhaust fans are outdated and are undersized for the new bathroom layout.

The existing operable windows are sufficient to meet the ventilation requirements of the spaces with the exception of any occupied basement space. The basement will therefore need some sort of ventilation system. The basement offices can be provided outside air ducted to the A/C unit, while the storage areas could be provided with a small residential style heat recovery ventilator to reduce the load on the heating system.

Air conditioning is desired for the first and second floor meeting spaces, as well as the recreation office and two basement offices. The recommended approach to condition these spaces is to provide separate split systems for each space. Based on an occupant load of 275 people on the second floor, 15-tons of air conditioning is required. Two 7½ ton air handlers could be located in the attic space and ducted above the balcony. Better circulation would be provided if supply air could be ducted along the ceiling and return grilles could be ducted down to the floor level. Another option would be to provide a rooftop unit on the addition, though concealing the ductwork to the space may not be possible. In either case, a 100% outside air economizer will need to be provided.
The first floor meeting room has an occupant load of 180 people and a cooling load of 7½ tons. An air handler could be installed in the basement with floor registers. This option will take up floor and ceiling space and will also require a full economizer. Another option would be to install wall mounted split systems in the occupied space. Four wall-mounted units would be required in this scenario.
A wall or ceiling mounted split system would also be used for the smaller offices and the elevator machine room.
Air-cooled condensing units, four to six in total will need to be mounted outside in all cases.

A permanent de-humidifier for the basement storage areas should be considered if the moisture problem in the basement is not otherwise addressed.

B. Plumbing Systems

The existing ¾" cold water service can remain in place if the new kitchen is a residential style kitchen and any new toilets are tank type.
New bathroom fixtures will be installed and a new electric water heater will be sized to meet the new demand. The size will depend on the type of kitchen.
The existing septic tank appears to be partially under the proposed addition and may need to be removed and replaced.

The existing septic system has been reported by the town to be insufficient, and that a prior project at the fire station included capacity in that septic system to accommodate the 1835 Town Hall. It appears that some of infrastructure is in place at the fire station, though the “guts” of the nitrogen treatment tank, along with some minor modifications will be required such as connecting the nitrogen treatment and town hall piping. The fire station septic system however, was apparently not sized to handle a commercial kitchen, which requires a minimum capacity of 1000 GPD (The leech field was only sized for an additional 780 GPD.) A sewage ejector will need to be provided for the 1835 Town Hall to pump sewage to the fire station septic system. An interior ejector could be used if an exterior grease trap is not required, or if the new septic tank is installed at the fire department site.
An interior and exterior grease trap, as well as an exterior pumping station would be required if a commercial style kitchen is installed.

C. Fire Protection Systems

The building is required to be provided with a sprinkler system in accordance with NFPA-13, 2002 ed. A flow test of the water in Main St indicates that there is sufficient pressure and volume to adequately protect the structure.

A new water main will be provided to the building from Maple St. to the new valve room. A double check valve will be installed on the main to protect from cross contamination. An alarm check valve will be installed to protect the heated portions of the building, while a dry valve will be installed to protect the unheated areas. A standpipe system is not required in this building. All piping serving the first floor should be able to be run concealed, though chaseways and soffits will be required in some areas.

D. Electrical Systems

The existing service is not large enough to power the renovated building which is adding an elevator (25 HP est.), 23 Tons of air conditioning load and a new kitchen in the basement.

To power the renovated building we would require at least a 400 Amp, 120 / 208 Volt. 3 – Phase electric and if the proposed kitchen is commercial grade, the service size could be as large as 600 Amps.

The Sterling Municipal Light Co. will provide pole-mounted transformers on the existing Maple St. utility pole to feed overhead our new electric service. This new service would enter the basement and terminate at the electric room’s main distribution panel MDP.

The new MDP would feed the elevator as well as new panelboards in the basement, 1st and 2nd floors to power their respective loads. The electric meter would be located on the outside of the building on the Maple St. side.
The existing incandescent utility lights in the basement do not provide adequate illumination and should be replaced with energy efficient surface mounted two

lamp (T8) acrylic wrap fluorescent light fixtures. In the kitchen area light fixtures shall be totally enclosed.

The existing recessed 2' X 4' acrylic fluorescent fixtures on the first floor should be replaced with new energy efficient recessed indirect lighting fixtures with three lamps (T8) Corridor lighting should be replaced with energy efficient recessed or wall mounted sconces with 13 watt PL lamps. Stairway lighting should be wall mounted two lamp (T8) 4' fluorescent fixtures.

The existing second floor recessed ceiling along with the fluorescent light fixtures are to be removed, with the idea of reusing the existing six pendant mounted fixtures presently mounted above the hung ceiling. These fixtures can be refurbished and have LED lamps installed. These fixtures would serve a decorative purpose only since they would not adequately illuminate the meeting hall. Two lamp (T8) strip fixtures could be mounted on the existing trusses to provide up lighting to illuminate the hall. LED track lighting could be provided to provide stage illumination.

LED exit signs with battery back up shall be provided at all exit doors, stair landings and intermediate spaces to direct people to the exits. Emergency egress lighting shall be self contained two head light fixtures with integral batteries to provide egress lighting during a power failure. Emergency lighting shall be provided in all bathrooms, hallways, stairways, large offices, meeting rooms as well as the exterior of all outside doorways.
All building mounted exterior lighting shall be of the period decorative type with LED lamps and shall be photocell controlled. Parking lot lighting shall be pole mounted decorative period type with 16 ft poles and LED lamps. They shall be photocell ON and time switch OFF.

All existing switches and receptacles shall be replaced with specification type devices.(color by the Architect). Additional receptacles shall be provided in the offices, bathrooms and meeting rooms. Receptacle spacing should be approx. every 12 feet along the wall. Receptacles in the kitchen shall be based on counter length and equipment requirements. Wall switches shall control all lighting. Motion sensors shall be used in offices and utility rooms.

The existing wiring throughout the building is Romex. All wiring shall be replaced with Type " MC " wiring which is required in the Meeting Rooms by code and should be used throughout the building.

CAT – 6 wiring should be used for all telephone and data outlets. All existing tel / data outlets should be replaced and additional outlets installed in all offices, conference and meeting rooms and elsewhere needed. All wiring shall be run to the basement tel / data hub.

The existing fire alarm system is outdated and shall be replaced with an addressable fire alarm system panel, pull stations, ADA strobes and horn / strobes, throughout the building as well as sprinkler flow and tamper monitoring. The fire alarm panel shall be connected to the existing fire alarm master box located at the front entrance of the building.

LIMITED HAZARDOUS BUILDING MATERIALS INSPECTION

Fuss & O'Neill EnviroScience, Oct./Dec. 2011

Limited Hazardous Building Materials Inspection

1835 Town Hall
Sterling, Massachusetts

October 27, 2011 &
December 6, 2011

Menders, Torrey & Spencer, Inc.

Boston, Massachusetts

December 23, 2011

Fuss & O'Neill EnviroScience, LLC
50 Redfield Street, Suite 100
Boston, Massachusetts 02122

Project No. 20111236.A1E

FUSS & O'NEILL
EnviroScience, LLC

December 23, 2011

Ms. Lynne Spencer
Principal, Historic Preservation
Menders, Torrey & Spencer, Inc.
123 North Washington Street
Boston, MA 02114

Re: Limited Hazardous Building Materials Inspection
1835 Town Hall, Sterling, Massachusetts
Fuss & O'Neill EnviroScience, LLC No. 20111236.A1E

Dear Ms. Spencer:

Enclosed is the report for the limited hazardous building materials inspection conducted in response to proposed renovations for the 1835 Town Hall located at 31 Main Street in Sterling, Massachusetts.

The services were performed on October 27, 2011 and December 6, 2011by Fuss & O'Neill EnviroScience, LLC licensed inspector(s) and included a limited asbestos inspection, and lead-based paint determination for visible and accessible building materials only. The information summarized in this document is for the above-mentioned materials only. The work was performed in accordance with our written proposal dated November 2, 2011.

If you have any questions regarding the contents of this report, please do not hesitate to contact me at (617) 282-4675, extension 4701. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Robert L. May, Jr.
Vice President

RLM/ asn

Enclosure

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EnviroScience, LLC

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Menders, Torrey & Spencer, Inc.

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FUSS & O'NEILL
EnviroScience, LLC

1 Introduction

On October 27, 2011 and December 6, 2011, Fuss & O'Neill EnviroScience, LLC (EnviroScience) representative, Jonathan Hand, performed a limited hazardous building materials inspection for the 1835 Town Hall located in Sterling, Massachusetts. The site inspection included a limited asbestos inspection, and lead-based paint determination. Refer to *Appendix A* for a copy of licenses.

This limited hazardous building materials inspection was performed as an initial feasibility study for potential building renovations at the historical (1835) Town Hall building. The work was performed for Menders, Torrey & Spencer, Inc. in accordance with our written scope of services dated November 2, 2011.

As part of this survey, EnviroScience reviewed the Preliminary Asbestos Inspection Report & Lead Based Paint Survey completed by Cushing, Jammallo & Wheeler, Inc. (CJW), dated August 2, 2011. The results of the asbestos inspection can be found in Tables 1 and 2. EnviroScience then collected confirmatory bulk samples for suspect asbestos-containing materials (ACM) identified in the previous report. Newly identified suspect ACM was also sampled at the discretion of the Asbestos Inspector.

Furthermore, EnviroScience is aware that a preliminary lead-based paint survey was completed by CJW; this included collected of 23 paint chip samples at representative painted surfaces at the interior and exterior of the Town Hall. Concentrations of lead in paint were determined as hazardous for several painted surfaces. EnviroScience completed a supplemental lead-paint determination to confirm prior lead results, and to assist with design specification for lead paint, which shall be included to address worker safety per OSHA regulations relating to renovation work at a commercial property.

2 Asbestos Inspection

During this inspection suspect ACM were separated into three USEPA categories. These categories are: thermal system insulation (TSI); surfacing (SURF) ACM; and miscellaneous (MISC) ACM. TSI includes all materials used to prevent heat loss or gain or water condensation on mechanical systems. Examples of TSI are pipe insulation, boiler insulation, duct insulation, and mudded insulation on pipe fittings. Surfacing ACM includes all ACM that is sprayed, troweled, or otherwise applied to an existing surface. Surfacing ACM is commonly used for fireproofing, decorative, and acoustical applications. Miscellaneous materials include all ACM not listed in thermal or surfacing, such as linoleum, vinyl asbestos flooring, and ceiling tiles.

The inspector collected samples of new materials as well as confirmatory samples and prepared proper chain of custody for transmission of samples to an accredited laboratory for analysis by Polarized Light Microscopy (PLM). Samples of all suspect ACM to be impacted by the renovations were collected. The EnviroScience sampling locations, material type, sample identification, and asbestos content are identified by bulk sample analysis in Tables 1 and 2 of the "Results" section. Any materials found at the site, and not listed in the following tables,

should be considered suspect ACM until sample results prove otherwise. Refer to *Appendix B* for Asbestos Sample Results.

2.1 Results

Utilizing the USEPA protocol and criteria, the following materials were determined to be ACM:

TABLE 1
Asbestos Containing Materials

SAMPLED LOCATION	MATERIAL TYPE	SAMPLE NO.	ASBESTOS CONTENT
1st Floor Function Room 3	Red/Brown Tile underneath Carpet	1027JH-11	5% Chrysotile
Stairwell Emergency Exit Landing	Tan with Brown and White Streaks 12x12 Floor Tile	1027JH-17*	2% Chrysotile
1st Floor Room 1	Grey 9x9 Floor Tile underneath Carpet (Checkered)	1027JH-23	10% Chrysotile
1st Floor Room 1	Black Mastic Associated with Floor Tile	1027JH-24 A-B**	2.3% Chrysotile
1st Floor Function Room 3	Dark Brown Border Tile	1027JH-41 A	4% Chrysotile
1st Floor Room 1	Green 9x9 Floor Tile underneath Carpet (Checkered)	1027JH-43 A-B	12% Chrysotile

*Denotes confirmatory sample collected for homogeneous material determined ACM by CJW survey
**Samples determined as ACM by additional TEM analysis

Utilizing the USEPA protocol and criteria, the following materials were determined not to contain asbestos.

TABLE 2
Non-Asbestos Containing Materials

SAMPLED LOCATIONS	MATERIAL TYPE	SAMPLE NO.
Main Roof	Felt Roofing Paper underneath Slate	1027JH-01*
3rd Floor	Rough Wall Plaster	1027JH-03 A-B*
2nd Floor Auditorium	Drywall	1027JH-04*
1st Floor Function Room 3	Putty in Column Crack	1027JH-09*
1st Floor Function Room 3	Brown Carpet Mastic	1027JH-10*
1st Floor Function Room 3	Black Paper Mastic Associated with Red/Brown Tile underneath Carpet	1027JH-12*
Basement	Drywall	1027JH-13*
Basement	Joint Compound	1027JH-14*
Stairwell Basement – 1st Floor	Drywall	1027JH-15*
Stairwell Basement – 1st Floor	Joint Compound/Skim Coat	1027JH-16*

SAMPLED LOCATIONS	MATERIAL TYPE	SAMPLE NO.
Stairwell Emergency Exit Landing	Black Mastic Associated with Tan with Brown and White Streaks 12x12 Floor Tile	1027JH-18*
Stairwell 1st Floor – 2nd Floor	Drywall	1027JH-19*
Stairwell 1st Floor – 2nd Floor	Joint Compound/Skim	1027JH-20*
Stairwell	2x4 Fissure and Dot Ceiling Tile	1027JH-21*
Stairwell 1st Floor – 2nd Floor	Brown Adhesive Associated with Stair Riser Kickplate	1027JH-22*
2nd Floor Storage Room	Black 10x10 Floor Tile	1027JH-25*
2nd Floor Storage Room	Black Mastic Associated with Black 10x10 Floor Tile	1027JH-26*
Basement Boiler Room	Textured Ceiling	1027JH-28 A-B*
1st Floor Mop Room	Drywall	1027JH-30*
1st Floor Mop Room	Joint Compound/Skim Coat	1027JH-31*
1st Floor Foyer	Tan with Brown and White Streaks 12x12 Floor Tile	1027JH-32*
1st Floor Foyer	Black Mastic Associated with Tan with Brown and White 12x12 Floor Tile	1027JH-33**
1st Floor Foyer	Leveling Compound (underneath Tile)	1027JH-34*
1st Floor Women's Room	Joint Compound/ Skim Coat	1027JH-35*
1st Floor Women's Room	Drywall	1027JH-36*
1st Floor Function Room 3	Joint Compound/ Skim Coat	1027JH-39*
1st Floor Function Room 3	Drywall	1027JH-40*
1st Floor Function Room 3	32-Pane Window Glazing Compound	1027JH-42 A-B
1st Floor Mop Room	Brown Ceramic Tile Adhesive	1027JH-44 A-B
2nd Floor Auditorium	Joint Compound	1027JH-46
2nd Floor Auditorium	4-Pane Window Glazing Compound	1027JH-47 A-B***
Basement	Grey Flue Cement (Cementitious)	1027JH-48 A-B
Basement	Basement Window Glazing Compound	1027JH-49 A-B

*Denotes confirmatory sample collected for homogeneous material determined non-ACM by CJW survey
**Material type confirmed as non-asbestos by additional TEM analysis
***Material type confirmed as non-asbestos by additional EPA 400 Point-Count analysis

Refer to *Appendix B* for Laboratory Analysis Results.

2.2 Discussion

The USEPA, Occupational Safety and Health Administration (OSHA), and the Commonwealth of Massachusetts Department of Labor Standards (DLS) formerly known as the Division of Occupational Safety (DOS) defines any material that contains greater than one percent (>1%) asbestos, utilizing PLM, as being an ACM. The Commonwealth of Massachusetts Department of Environmental Protection (MassDEP) defines any material that contain equal to or greater than one percent (1%) asbestos as being an ACM. Materials that are identified as "none detected" are specified as not containing asbestos.

Materials that are identified as "none detected" are specified as not containing asbestos. Friable materials that are identified as containing less than ten percent (<10%) asbestos, are recommended to be analyzed further utilizing the EPA 400 point-counting technique to verify asbestos content by the USEPA. A property owner may elect to presume the results are asbestos containing based on the initial PLM results without the additional analysis by the EPA 400 point-counting technique. Laboratory confirmation by EPA 400 point-count analysis was requested for samples 1027JH-24 A-B and 1024JH-47 A-B based on initial PLM results showing trace amounts <1% Chrysotile. The results of EPA 400 point-count analysis are provided in Table 3.

Additionally, the USEPA has suggested that materials that are non-friable organically bound materials such as mastic adhesives, etc., are recommended for further confirmatory analysis utilizing Transmission Electron Microscopy (TEM). Three (3) of the collected samples were analyzed by TEM, and results of TEM analysis are provided in Table 3.

TABLE 3
Materials Analyzed By EPA 400 Point Count or TEM

SAMPLE LOCATION	MATERIAL TYPE	SAMPLE NO.	ASBESTOS CONTENT
Analysis Results of Samples by EPA 400 Point-Counting			
1st Floor Room 1	Black Mastic Associated with Checkered Tile underneath Carpet	1027JH-24A	0.75% Chrysotile
1st Floor Room 1	Black Mastic a/w Checkered Tile underneath Carpet	1027JH-24B	0.50% Chrysotile
2nd Floor Auditorium	4-Pane Window Glazing Compound	1027JH-47A	0.50% Chrysotile
2nd Floor Auditorium	4-Pane Window Glazing Compound	1027JH-47B	0.50% Chrysotile
Analysis Results of Samples by TEM			
1st Floor Room 1	Black Mastic Associated with Checkered Tile underneath Carpet	1027JH-24A	2.3% Chrysotile
1st Floor Room 1	Black Mastic Associated with Checkered Tile underneath Carpet	1027JH-24B	2.3% Chrysotile
1st Floor Foyer	Black Mastic Associated with Tan with Brown and White 12x12 Floor Tile	1027JH-33	None Detected

The results of confirmatory analysis by EPA 400 Point Counting and TEM did identify asbestos at 1% or greater for some of the analyzed materials. The materials have been included in Table 1 or Table 2 (as appropriate) based on the confirmatory analysis; those materials containing asbestos are additionally included in the following Table 4, and cost estimate. Refer to *Appendix C* for EPA 400 Point Counting Analysis Results, and *Appendix D* for TEM Laboratory Analysis Results.

Table 4 identifies the location, material type, and quantity of ACM identified during this inspection. Any suspect material not identified in this inspection should be presumed to contain asbestos.

TABLE 4
Materials Present Containing Asbestos

LOCATION	MATERIAL TYPE	ESTIMATED QUANTITY
1st Floor Function Room 3	Red/Brown Floor Tile and Dark Brown Border Tile (underneath Carpet) & Associated Mastic	1,400 SF
Stairwell Landings	Tan with Brown and White Streaks 12x12 Floor Tile	250 SF
1st Floor Room 1, Room 2, and Room 4	Checkered Floor Tile (underneath Carpet) & Associated Mastic	900 SF

SF = Square Feet

2.3 Conclusion

Exploratory demolition was not performed underneath the slate roof as part of this inspection. Therefore, any slater's mud and/or penetration and chimney flashing sealants which are likely to be found on the roof, should be assumed as asbestos containing until sample results prove otherwise.

The materials determined to contain asbestos that will be impacted by any proposed renovation and or demolition work must be abated by a licensed asbestos abatement contractor prior to disturbance in building demolition or renovation. This includes both friable and non-friable ACM materials. This is a requirement of the Commonwealth of Massachusetts DLS, MassDEP, and USEPA NESHAP standards for asbestos abatement.

EnviroScience recommends that a comprehensive scope of work and technical specification be developed as part of renovation plans for the site. We have also developed an opinion of cost for the complete removal of all identified asbestos. Note the total cost is inclusive of removing all asbestos, and a more limited scope can be tailored to any specific renovation work as necessary.

Any suspect material encountered during renovation/demolition that is not identified in this report, as being non-ACM should be assumed to be ACM unless sample results prove otherwise.

3 Lead-Based Paint Determination

A lead-based paint determination was performed for representative building components by Fuss & O'Neill EnviroScience, LLC (EnviroScience) representative, Jonathan Hand, on December 6, 2011. An X-ray fluorescence (XRF) analyzer was used to perform the lead-based paint determination. The testing was conducted in accordance with the protocol outlined in the attached document: "Testing Procedures and Equipment" (*Appendix E*).

A RMD X-Ray Fluorescence Analyzer, Serial No. 1157, was utilized for the lead-based paint determination. The instrument was checked for proper calibration prior to each use as detailed by the manufacturer and the Performance Characteristic Sheet (PCS) developed for the instruments.

For the purpose of this lead-based paint determination, representative building components were tested according to anticipated historical preservation (i.e. renovation) work. Of course, individual repainting efforts are not discoverable in such a limited program. Lead-based paint issues involving properties that are not residential are regulated to a limited degree to worker protection involving paint-disturbing work activities and waste disposal.

Worker protection is regulated by OSHA regulations as well as DLS regulations. These regulations involve air monitoring of workers to determine exposure levels when disturbing lead-containing paint. A lead-based paint determination can not determine a safe level of lead, but is intended to provide guidance as to the locations of what are considered industry standards for lead in paint. Contractors may then better determine exposure of workers to airborne lead by understanding the different concentrations of lead paint on representative components and surfaces. Air monitoring can then be performed during activities that disturb paint on representative surfaces.

The USEPA Resource Conservation and Recovery Act (RCRA) as well as MassDEP regulate disposal of lead-containing waste. Waste materials containing lead that will be impacted during renovation or demolition and result in waste for disposal must be tested using the Toxicity Characteristic Leachate Procedure (TCLP) analysis if lead is determined to be present in non-residential buildings. A TCLP sample is a representative sample of the intended waste stream. The results are compared to the level of greater than 5.0 mg/L that is considered hazardous lead waste. If the result is below the established level the material is not considered hazardous, and may be disposed of as normal construction debris.

A level of lead paint exceeding 1.0 milligrams of lead per square centimeter (mg/cm^2) is considered toxic or dangerous for compliance with residential standards. For purpose of this lead-based paint determination, the level of 1.0 mg/cm^2 has been utilized as a threshold for areas where possible worker exposures may occur. The complete results of the lead-based paint determination are included in *Appendix F*.

3.1 Results

The lead-based paint determination indicated consistent painting trends associated with representative building components that may be impacted by possible renovation work. Numerous painted components were determined to contain levels of lead (greater than 1.0 mg/cm^2) including the following:

TABLE 5
Lead Painted Building Components

LOCATION	ITEM	READING (mg/cm²)
1st Floor Hallway	Ceramic Wall Tile	1.5
Room 1	B1 Window Components	>9.9
Room 2	Typical Window Components	>9.9
Room 4	Typical Window Components	>9.9
Function Room 3	Typical Window Components	>9.9
Function Room 3	Columns	>9.9
Men's and Women's Room	Ceramic Wall Tile	1.2
Janitors Closet	Ceramic Wall Tile	1.4
Stairwell	D1 Window Components	>9.9
Auditorium	B1 Window Components	>9.9
Auditorium	C1 Door	3.6
Auditorium	C1 Door Frame	2.8
Stairs to Attic	Door	1.0
Exterior	Front Columns	>9.9
Exterior	Front Door Frame	1.8
Exterior	A-Side Clapboard Siding	0.7 - >9.9
Exterior	Window Frames	>9.9
Exterior	Window Components	POS
Exterior	B,C,D-Side Clapboard Siding	0.3 - >9.9
Exterior	Soffit	POS
Exterior	D2 Sliding Door	>9.9
Exterior	D2 Sliding Door Frame	>9.9
Basement	Overhead I-Beams	3.5
Basement	Window Components	>9.9

POS = assumed positive

3.2 Discussion

OSHA published a Lead in Construction Standard (OSHA Lead Standard) 29 CFR 1926.62 in May 1993. The OSHA Lead Standard has no set limit for the content of lead in paint below which the standards do not apply. The OSHA Lead Standards are task-based and correspond to airborne exposure and blood lead levels.

The results of this survey are intended to provide guidance to contractors for occupational exposure control to lead. Building components containing lead levels above industry standards may cause exposures to lead above OSHA standards during demolition and renovation activities. A TCLP sample to characterize the expected waste that may result from possible selective demolition and/or renovation work was not collected as part of this preliminary feasibility study.

3.3 Conclusion

Contractors must be made aware that OSHA has not established a level of lead in a material below which 29 CFR 1926.62 does not apply. Contractors shall comply with exposure assessment criteria, interim worker protection, and other requirements of the regulation as necessary to protect workers during any renovation work which will impact lead paint.

Lead paint was found on numerous building components including, but not limited to, interior/exterior window and door components, and exterior clapboard siding. EnviroScience understands that there are no proposed selective demolition or renovation activities scheduled at this time; the lead screening was carried out as part of a preliminary investigation for a project feasibility study. Note that any future work involving surface preparation of the identified painted surfaces shall be performed in accordance with OSHA worker protection requirements.

The building is presently characterized as commercial property, which is not subject to the Department of Public Health Child Lead Poisoning Prevention Program (CLPPP) 105 CMR 460.000 regulations. The property may be renovated using procedures required in accordance with OSHA regulation 29 CFR 1926.62 and DLS Regulation 454 CMR 22.11. In addition, the building is not considered a "child occupied facility" and therefore not subject to lead safe renovation requirements of 454 CMR 22.11.

Disclaimer: The information contained in the survey report concerning the presence or absence of lead paint does not constitute a comprehensive lead inspection in accordance with Commonwealth of Massachusetts regulations 105 CMR 460. The surfaces tested represent only a portion of those surfaces that would be tested to determine whether the premises are in compliance with the aforementioned regulations which are specific to a child occupied residence only and not applicable to a building of this type and use.

We have included an estimated cost of probable construction costs for hazardous materials abatement in *Appendix G*.

Report prepared by Environmental Technician, Jonathan Hand.

Reviewed by:

Dustin Diedricksen
Project Manager

Robert L. May, Jr.
Vice President

Appendix A

Inspector Licenses and Certifications

Appendix B

Asbestos Sample Results and Chain of Custody

FUSS & O'NEILL
EnviroScience, LLC

Appendix C

EPA 400 Point Counting Analysis Results

FUSS & O'NEILL
EnviroScience, LLC

Appendix D

TEM Laboratory Analysis Results

FUSS & O'NEILL
EnviroScience, LLC

Appendix E

Lead Paint Testing Procedures and Equipment

FUSS & O'NEILL
EnviroScience, LLC

Appendix F

Lead Testing Field Data Sheets

FUSS & O'NEILL
EnviroScience, LLC

Appendix G

Hazardous Materials Abatement Cost Estimate

FUSS & O'NEILL
EnviroScience, LLC

Hazardous Materials Abatement Cost Estimate

A hazardous materials abatement cost estimate is provided below. Unit costs are based on current industry rates and are inclusive of all contractor costs. They do not include costs for design, monitoring, sampling, and other consultant fees.

Table 6
Estimated Cost for Hazardous Materials Abatement

MATERIAL	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
Multi-Colored Floor Tile (underneath Carpet) & Associated Mastic	2,300 SF Includes Removal of Carpeting as Asbestos-Contaminated Material	$5/SF	$11,500.00
Tan w/ Brown and White Streaks 12x12 Floor Tile	250 SF	$4/SF	$1,000.00
OSHA Lead Compliance during renovation and demolition work		Lump Sum	$5,000.00
Potential Disposal of Lead Waste from demolition and disposal of removed components and surfaces		Lump Sum	$10,000.00 Allowance
		SUBTOTAL	$27,500.00
		(~10%) CONTINGENCY	$2,750.00
		TOTAL	$30,250.00

PRELIMINARY ASBESTOS INSPECTION REPORT & LEAD BASED PAINT SURVEY

Cushing, Jammallo & Wheeler, August 2011

CUSHING, JAMMALLO & WHEELER, INC.

August 2, 2011
File No. 5506

Town of Sterling
c/o 1835 Town Hall Committee
Old Town Hall
31 Main Street
Sterling, Massachusetts 01564
Attn: Vernon Gaw

Re: Preliminary Asbestos Inspection Report &
Lead Based Paint Survey
Old Town Hall
31 Main Street
Sterling, MA

Dear Mr. Gaw:

In accordance with the Cushing, Jammallo & Wheeler, Inc. (CJW) proposal to the Town of Sterling dated June 21, 2011, this Preliminary Asbestos Inspection Report (PAIR) and Lead Based Paint (LBP) survey, and the attached analytical reports, document the results of the inspection activities conducted by CJW at the Old Town Hall located at 31 Main Street (the "site"), in Sterling, Massachusetts.

Bulk Sampling Activities
A preliminary investigation was performed for asbestos containing materials (ACM) and LBP at the site building that would require special handling and disposal procedures. The asbestos and LBP survey was performed by Mr. James Bennett of CJW, who is a Massachusetts licensed asbestos inspector (MA License No. A1000387). CJW conducted the bulk asbestos sampling activities in accordance with the methodology described in the United States Environmental Protection Agency (USEPA) guidance document titled "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Document No. 560/5-85/024).

On June 21, 2011, during a site meeting prior to the initiation of inspection and sampling activities, Mr. Gaw requested that CJW focus the ACM and LBP survey on two specific areas which are potentially slated for demolition or renovation. Based upon the conversation with Mr. Gaw, the 1835 Town Hall Committee is currently reviewing plans for the installation of an elevator adjacent to the southeast portion of the site building in the vicinity of the existing fire escape, and improving the main stairwell located within the southwest corner of the building. In addition, CJW was instructed to collect additional samples from within the accessible portions of the Old Town Hall building in accordance with CJW's proposal.

Laboratory Analysis

CJW collected a total of 38 samples of suspect ACM (designated ACM-1 through ACM-38) and a total of 23 samples of suspect LBP (designated LBP-1 through LBP-23) from the interior and exterior portions of the site building as part of this survey. The bulk asbestos samples and suspect LBP samples were submitted under separate chains of custody to ProScience Analytical Services, Inc. (ProScience) of Woburn, MA, which is a Massachusetts accredited analytical laboratory. The asbestos samples were tested in accordance with the United States Environmental Protection Agency (USEPA) "Method for the Determination of Asbestos in Bulk Building Materials" and were analyzed by Polarized Light Microscopy (PLM) which is a technique that utilizes the refractive indices, fiber morphology, birefringence, extinction angle, signs of elongation, and dispersion staining colors to detect asbestos. The LBP samples were analyzed by ProScience in accordance with USEPA Method SW 846-7420/3051, with results reported for lead only.

Copies of the analytical reports are included as Appendix A. The asbestos and LBP analytical results are summarized in Tables 1 and 2, respectively.

Analytical Results for Bulk Asbestos Samples

The USEPA defines ACM as any material that contains greater than 1 percent (1%) asbestos. The results of the PAIR indicate that all of the 38 samples collected were found to be non-asbestos containing materials.

Analytical Results for Lead Based Paint Samples

According to the USEPA, any detectable lead in paint makes it lead paint for the purpose of complying with Occupational Safety and Health Administration (OSHA) regulations in order to determine exposures to workers. Based upon the analytical results, a total of 15 of the 23 paint samples analyzed contained detectable concentrations of lead.

According to the analytical results:

- Sample LBP-2 obtained from the white siding paint on the southern exterior side of the building contained 32.82 milligrams per kilogram (mg/kg) of lead. [Please note that mg/kg can also be expressed in parts per million (ppm)]
- Sample LBP-3 obtained from the red paint adhered to the exterior brick foundation contained lead at a concentration of 0.92 mg/kg.
- Sample LBP-4 obtained from the back paint on the exterior wood garage type doors contained lead at a concentration of 0.03 mg/kg.
- Sample LBP-5 obtained from the green wall paint on the third floor balcony contained 1.29 mg/kg of lead.
- Sample LBP-6 obtained from the white paint on fiber board on the third floor balcony contained lead at a concentration of 0.27 mg/kg.
- Sample LBP-7 obtained from the dark green trim on the chair rail on the second floor auditorium contained lead at a concentration of 0.21 mg/kg.

- Sample LBP-9 obtained from the white paint on the window sill in the first floor function room (Room 3) contained lead at a concentration of 0.30 mg/kg.
- Sample LBP-12 obtained from the white paint on the column in the first floor function room (Room 3) contained lead at a concentration of 0.05 mg/kg.
- Sample LBP-13 obtained from within several trash bags stored within the basement contained lead at a concentration of 2.41 mg/kg.
- Sample LBP-15 collected from the white paint on the window sill in the stairwell at the basement level contained lead at a concentration of 10.54 mg/kg.
- Sample LBP-16 obtained from the grey paint on the window sill in the stairwell at the basement level contained lead at a concentration of 16.93 mg/kg.
- Sample LBP-20 obtained from the white paint on the window trim between the first and the second floors in the stairwell contained lead at a concentration of 0.09 mg/kg.
- Sample LBP-21 obtained from the yellow paint on the wallboard in the second floor storage room contained lead at a concentration of 0.06 mg/kg.
- Sample LBP-22 obtained from the white paint on the window frame in the ladies bathroom located on the first floor contained lead at a concentration of 0.09 mg/kg.
- Sample LBP-23 obtained from the green paint on the window sill in the ladies bathroom on the first floor contained lead at a concentration of 0.82 mg/kg.

No other samples contained lead at concentrations equal to or in excess of the laboratory detection limits. Refer to the attached photographs (Appendix B) of the locations of the aforementioned paint samples reported to contain lead. The photos are presented in the order in which they are discussed above.

Recommendations

As previously mentioned, CJW was provided access to the entire site with a few exceptions, such as the roof, Room #2, Room #4, and the Storage Room located on the first floor. Furthermore, since the building is currently in use, no destructive testing and no penetration of the exterior and interior walls was conducted at the site. Therefore, CJW recommends that additional samples be collected from those portions of the building not included as part of this PAIR and LBP Survey prior to initiation of demolition or renovation at the site. The results of future sampling and testing activities should be documented in a Final Asbestos Inspection Report (FAIR) and provided to those persons conducting the demolition and/or renovation so that steps can be taken to minimize potential exposures to LBP and ACM by site workers and the public. Furthermore, CJW recommends that if any suspect ACM or LBP materials are discovered prior to, or during demolition and renovation activities, these materials be sampled and analyzed for asbestos and LBP content.

Limitations and Conditions

For the purpose of this PAIR and LBP Survey, penetration of the roof of the site building was not conducted. Since CJW does not perform destructive testing through the use of power tools or heavy equipment. Sampling was limited to accessible areas within and at the exterior of the site building. As such, no penetration beyond the exterior wall board surfaces into the interior

walls was conducted. Samples were not collected from within the building envelope, exterior building cavity, below and behind concrete and masonry floors, walls and ceilings/roofs. CJW's survey also does not include an evaluation of potential underground utilities such as asbestos cement water or sewer piping, lead piping, underground steam lines, or subsurface foundation damp-proofing that may be present at the site. In addition, CJW did not have access to Room #2, Room #4, and the Storage Room located on the first floor of the site building as these rooms were locked during the sampling activities. All other areas not specifically mentioned herein were accessible to CJW, and no other sample collection was deferred.

Please don't hesitate to contact either of the undersigned at (978) 368-6320 if you have any questions.

Sincerely

CUSHING, JAMMALLO & WHEELER, INC.

James A. Bennett, A.I.
Project Manager

Joseph M. Jammallo, L.S.P.
Principal

ATTACHMENTS:

TABLES

Table 1 Asbestos Bulk Sample Analytical Results
Table 2 Lead Based Paint Analytical Results

APPENDICES

Appendix A Copies of Laboratory Analytical Results
Appendix B Photographs

TABLES

Table 1
Asbestos Bulk Sample Analytical Data

Old Town Hall Municipal Building
31 Main St.
Sterling, Massachusetts

Laboratory Analytical Results

Sample Identification	Date	Location	Material Description	Concentration (% asbestos)	Type of Asbestos
ACM-1	7/21/2011	Third Floor Balcony Roof	Felt Paper	ND	NA
ACM-2	7/21/2011	Third Floor Balcony Attic	Horsehair Plaster Wallboard	ND	NA
ACM-3	7/21/2011	Third Floor Balcony Ceiling	Horsehair Plaster	ND	NA
ACM-4	7/21/2011	Second Floor Auditorium	Sheetrock	ND	NA
ACM-5	7/21/2011	Second Floor Auditorium	Drop Ceiling Tile	ND	NA
ACM-6	7/21/2011	First Floor Funcion Room 3	Exterior Wallboard Paper	ND	NA
ACM-7	7/21/2011	First Floor Funcion Room 3	Interior Wallboard	ND	NA
ACM-8	7/21/2011	First Floor Funcion Room 3	Yellow Drop Ceiling Tile	ND	NA
ACM-9	7/21/2011	First Floor Funcion Room 3	Putty in Column Crack	ND	NA
ACM-10	7/21/2011	First Floor Funcion Room 3	Carpet Mastic	ND	NA
ACM-11	7/21/2011	First Floor Funcion Room 3	Tile Beneath Carpet	ND	NA
ACM-12	7/21/2011	First Floor Funcion Room 3	Mastic Beneath Tile	ND	NA
ACM-13	7/21/2011	Basement AST Room	Exterior Wallboard Paper	ND	NA
ACM-14	7/21/2011	Basement AST Room	Interior Wallboard	ND	NA
ACM-15	7/21/2011	Stairwell Basement/First Floor	Exterior Wallboard Paper	ND	NA
ACM-16	7/21/2011	Stairwell Basement/First Floor	Interior Wallboard	ND	NA
ACM-17	7/21/2011	Stairwell Emergency Exit Landing	Floor Tile	ND	NA
ACM-18	7/21/2011	Stairwell Emergency Exit Landing	Mastic Beneath Tile	ND	NA
ACM-19	7/21/2011	Stairwell First Floor/ Second Floor	Exterior Wallboard Paper	ND	NA
ACM-20	7/21/2011	Stairwell First Floor/ Second Floor	Interior Wallboard	ND	NA
ACM-21	7/21/2011	Stairwell	Ceiling Tile	ND	NA
ACM-22	7/21/2011	Stairwell First Floor/ Second Floor	Mastic Beneath Kickplate	ND	NA
ACM-23	7/21/2011	First Floor Room 1	Tile Beneath Carpet	ND	NA
ACM-24	7/21/2011	First Floor Room 1	Mastic Beneath Tile	ND	NA
ACM-25	7/21/2011	Second Floor Storage Room	Floor Tile	ND	NA
ACM-26	7/21/2011	Second Floor Storage Room	Mastic Beneath Tile	ND	NA
ACM-27	7/21/2011	First Floor Funcion Room 3	White Drop Ceiling Tile	ND	NA
ACM-28	7/21/2011	Basement Boiler Room	Fireproof Ceiling Exterior	ND	NA
ACM-29	7/21/2011	Basement Boiler Room	Fireproof Ceiling Interior	ND	NA
ACM-30	7/21/2011	First Floor Mop Room	Paper Backing Under Tile	ND	NA
ACM-31	7/21/2011	First Floor Mop Room	Plaster in Wall	ND	NA
ACM-32	7/21/2011	First Floor Foyer	Tile Adjacent to Entrance	ND	NA
ACM-33	7/21/2011	First Floor Foyer	Mastic Beneath Tile	ND	NA
ACM-34	7/21/2011	First Floor Foyer	Leveling Compound	ND	NA
ACM-35	7/21/2011	First Floor Ladies Room	Spackle Behind Tile	ND	NA
ACM-36	7/21/2011	First Floor Ladies Room	Sheetrock	ND	NA
ACM-37	7/21/2011	First Floor Halway Adjacent Room 3	Sheetrock	ND	NA
ACM-38	7/21/2011	Stairwell First Floor/ Second Floor	Mastic Beneath Stairwell Tread	ND	NA

Type of Survey Asbestos bulk sample of building materials and thermal system insulation in basement of residence
Analyzed by Polarized Light Microscopy (PLM) Analysis of Building Material
Comments Asbestos Response Actions Required for Materials 1% or Greater
Refer to US-EPA-NESHAPS Regulation to Determine Material, Category Removal proceedures
Analyzed by Pro-Science Analytical Services Inc
Collected by James A Bennett- MA-DOS Asbestos Inspector- License No A1000387
NA - Not Applicable ND - Non Detect (0%)

APPENDIX A

COPIES OF LABORATORY ANALYTICAL REPORTS

ProScience Analytical Services, Inc.

PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS
22 Cummings Park, Woburn, MA 01801
T:781-935-3212 F:781-932-4857
www.proscience.net
general@proscience.net

☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cushing Jannetti & Wheeler
Address: 444 High St, Clinton MA 01510
Project Site & Number: 31 Main St, Stow MA Town Hall
Phone / FAX Number: (978) 368-0220 / (978) 368-6121
Contact: Jamie Bennett jbennett@cjw-env.com

Relinquished by/date: Brian Thompson 7/26/11
Received by/date: Kathy Astone 7-26-11
Samples received: 38 Analyzed: 10:55 AM
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes ____ No ____

For Lab Use> Batch Number B76388
Analyzed by/date: Darlene 8/1/11
QC by/date:

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	⊥	Asbestos Percentage (%): Chrysotile	Amosite	Circle Type: Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-1 7/21/11	felt paper (roof)	0	Bk	Hy	F	Fg																W				30
																							70				
	ACM-2 7/21/11	Horsehair plaster (Attic)	0	W	Hy	F	Fg																	SC			95
																								5			
	ACM-3 7/21/11	Horsehair plaster on ceiling (3rd floor balcony)	0	W	Hy	F	Fg																				100
	ACM-4 7/21/11	Sheetrock 2nd floor Auditorium	0	W	Hy	F	Fg															I	W				100
																						TR		TR			
	ACM-5 7/21/11	Drop ceiling 2nd floor Auditorium	0	M	C	NF	Fg																I	W			20
																							10	70			
	ACM-6 7/21/11	Wallboard exterior paper 1st floor function room (Door 3)	0	M	C	NF	Fg																W				25
																							75				

Comments: Birefringence L= less than .010, M= .011-.029, H= greater than .03 Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000, 230663 Laboratory uses the EPA or ELAP point count method as appropriate

For complete information about our services and locations please visit us at www.proscience.net or call the numbers above.

ProScience Analytical Services, Inc.

PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS
22 Cummings Park, Woburn, MA 01801
T:781-935-3212 F:781-932-4857
www.proscience.net
general@proscience.net

☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cushing Jamalin & Wheeler
Address: 461 High St Clinton MA 01510
Project Site & Number: 31 Main St Sterling MA Town Hall
Phone / FAX Number: (978) 368-6320 / (978) 365-6121
Contact: Jamie Bennett jbennett@cjw-env.com

Relinquished by/date: Kevin Thompson 7/21/11
Received by/date:
Samples received: _____ Analyzed: _____
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes _____ No _____

For Lab Use> Batch Number B76388

Analyzed by/date: Pam June 8/1/11

QC by/date:

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Asbestos Percentage (%): Chrysotile	Amosite	Circle Type: Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-7 7/21/11	Function Room (Room 3) Interior Wall Board	0	W	H	F	F														F		W				
				Wh	Hy	Fr	Fr														5		5				90
	ACM-8 7/21/11	Function Room (Room 3) Yellow ceiling panel	0	Y	H	F	F															E	W				
				Yl	Hy	Fr	Fr															40	40				20
	ACM-9 7/21/11	Function Room (Room 3) putty in column crack	0	T	H	B	F																				
				T	Hy	Br	Fr																				10
	ACM-10 7/21/11	Function Room (Room 3) carpet mastic	0	T	H	F	F																				
				T	Hy	Br	Fr																				10
	ACM-11 7/21/11	Function Room (Room 3) tile beneath carpet	0	P	H	F	F	W	I	L	+	L	1.534	1.551	20												
				Bk	Hy	Br	Fr																				80
	ACM-12 7/21/11	Function Room (Room 3) mastic beneath tile	0	B	H	F	F																W				
				Bk	Hy	Fr	Fr																50				50

Comments: Birefringence L= less than .010, M= .011-.029, H= greater than .03: Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000, 230663 Laboratory uses the EPA or ELAP point count method as appropriate

For complete information about our services and locations please visit us at www.proscience.net or call the numbers above.

Revised on 4/7/09

ProScience Analytical Services, Inc.

PLM Asbestos Chain of Custody Record

LABORATORY/HEADQUARTERS
22 Cummings Park, Woburn, MA 01801
T:781-935-3212 F:781-932-4857
www.proscience.net
general@proscience.net

☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cummings Jamaica Plain
Address: 464 Highland Clinton MA 01510
Project Site & Number: 31 Main St. Sterling MA Town Hall
Phone / FAX Number: (PH) 368-6330 / (FX) 368-6121
Contact: Jane Bennett jbennett@cjw-env.com

Relinquished by/date: Kevin Tremper 7/21/11
Received by/date:
Samples received: Analyzed:
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes No

For Lab Use> Batch Number B76388

Analyzed by/date: Dan Fine 8/1/11 QC by/date:

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	⊥	Asbestos Percentage (%): Chrysotile	Amosite	Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-13 7/21/11	Basement Exterior paper wallboard by AST Room	0	M	CN	F	Fy																W				5
	ACM-14 7/21/11	Interior wallboard by AST Room / Basement	0	MG	N	F	Fy														5		W				95
	ACM-15 7/21/11	Exterior paper wallboard Basement / 1st Floor Level Stairwell	0	W	Hy	F	By																W				5
	ACM-16 7/21/11	Interior wallboard Basement / 1st Floor Level stairwell	0	W	Hy	F	By														5		5				95
	ACM-17 7/21/11	floor tile Emergency Exit Landing / stairwell	0	T	Y	G	N	W	L	T	Cv	1.554	1.551		5												95
	ACM-18 7/21/11	Mastic emergency exit Landing / stairwell	0	B	K	Y	TN																				100

Comments: Birefringence L= less than .010, M= .011-.029, H= greater than .03 Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000, 230663

Laboratory uses the EPA or ELAP point count method as appropriate

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PLM Asbestos Chain of Custody Record

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general@proscience.net

☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cluney, Jannello & Wheeler
Address: 464 High St. CLINTON MA 01510
Project Site & Number: 31 Main St. Sterling MA Town Hall
Phone / FAX Number: (978) 368-6320 / (978) 368-6121
Contact: Jamie Bennett jbennett@cjw-env.com

Relinquished by/date: Karin Tramell 7/21/11
Received by/date:
Samples received: Analyzed:
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes No

For Lab Use> Batch Number B76388

Analyzed by/date: Dan Fine 7/11/11 QC by/date:

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Asbestos Percentage (%): Chrysotile	Amosite	Circle Type: Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-19 7/21/11	Exterior paper wallboard 1st floor / 2nd floor stairwell	0	M C	M	E	G/Y									W							W				
																							70				30
	ACM-20 7/21/11	Interior wall board 1st floor / 2nd floor stairwell	0	W H	H	E	B/Y									W					I		W				
																					5		5				90
	ACM-21 7/21/11	Ceiling tile / stairwell	0	M C	M	F	Y															I	W				
																						50	30				20
	ACM-22 7/21/11	Mastic under kickplate 1st/2nd floor stairwell	0	P B	R	y	C/M																				
																											100
	ACM-23 7/21/11	tile beneath carpet / Room 1	0	G	y	G	A/W	W/I	+	L/M	L/M	L/M	1.550	1.557	20												80
	ACM-24 7/21/11	Mastic beneath tile / ROOM 1	0	B	K	y	T/N																W				
																							5				95

Comments: Birefringence L= less than .010, M= 011-.029, H= greater than .03: Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000, 230663 Laboratory uses the EPA or ELAP point count method as appropriate

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Revised on 4/7/09

ProScience Analytical Services, Inc.

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www.proscience.net
general@proscience.net

☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cushing Jannarllo & Wheeler
Address: 46A High St Clinton MA 01510
Project Site & Number: 31 Main St. Sterling MA Town Hall
Phone / FAX Number: (978) 365-6320 / (978) 365-6121
Contact: Jamie Bennett jbennett@cjw-pnv.com

Relinquished by/date: Kevin Thompson 7/21/11
Received by/date:
Samples received: ____ Analyzed: ____
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes ____ No ____

For Lab Use> Batch Number B76388
Analyzed by/date: Pam Stone 8/1/11
QC by/date:

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Asbestos Percentage (%): Chrysotile	Amosite	Circle Type: Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-25 7/21/11	Storage Room tile/ 2nd floor	0	B	K	y	RW																				100
	ACM-26 7/21/11	Storage Room mastic/ 2nd floor	0	B	K	y	TN																W				90
	ACM-27 7/21/11	White Ceiling tile/ 1st floor function room (room 3)	0	M	CN	F	y															I	W				20
	ACM-28 7/21/11	Fireproof ceiling in boilerroom/ (exterior) Basement	0	G	y	G	ny																				100
	ACM-29 7/21/11	Fireproof ceiling in Boilerroom (Interior) / Basement	0	G	y	N	G ny																				100
	ACM-30 7/21/11	Paper backing under tile in Map Room / 1st floor	6	B	R	y	F y																W				100

Comments: Birefringence L= less than .010, M= .011-.029, H= greater than .03: Microscope Olympus BH-2, Serial # circle 1-242277, 229027, 235000, 230663 Laboratory uses the EPA or ELAP point count method as appropriate

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☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cushing, Jannello + Wheeler
Address: 484 High St. Clinton MA 01510
Project Site & Number: 31 Main St. Sterling MA Town Hall
Phone / FAX Number: (978)368-6320 / (978)368-6121
Contact: Jane Bennett jbennett@cjw-pw.com

Relinquished by/date: Kevin Thompson 7/21/11
Received by/date:
Samples received: Analyzed:
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes No

For Lab Use> Batch Number B76388

Analyzed by/date: Jane Bennett 8/1/11 *QC by/date:*

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: II	RI: ⊥	Asbestos Percentage (%): Chrysotile	Amosite	Crocidolite	Tremolite	Anthophylite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-31 7/21/11	plaster in wall board of mop room / 1st floor	0	M C	N	E Gry.																	W				40
	ACM-32 7/21/11	tile adjacent to entrance / 1st floor	0	T	Hy	E Gry	N						1.534	1.551	2												98
	ACM-33 7/21/11	mastic under tile to entrance / 1st floor	0	B K	Hy	T	N																W				98
	ACM-34 7/21/11	Leveling Compound entrance / 1st floor	0	G	Hy	G	Gry																				100
	ACM-35 7/21/11	Spackle Behind tile in Ladies Room / 1st floor	0	W	Hy	G	Gry																				100
	ACM-36 7/21/11	Sheetrock Ladies Room / 1st floor	0	W	N	E	Gry															F TR	W	2				98

Comments: Birefringence L= less than .010, M= .011-.029, H= greater than .03 Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000 230663 Laboratory uses the EPA or ELAP point count method as appropriate

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ProScience Analytical Services, Inc.

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☐ RUSH

Turn Around Time Requested

☐ Same day ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☒ 5 Days

Client: Cushing Jammalo + Wheeler
Address: 464 High St CLINTON MA 01510
Project Site & Number: 31 Main St Sterling MA Town Hall
Phone / FAX Number: (978) 368-6020 / (978) 368-6121
Contact: Jamie Bennett jbennett@cjw-env.com

Relinquished by/date: Kasi Thompson 7/21/11
Received by/date:
Samples received: Analyzed:
Faxed, E-mailed, Verbal by/date:
Stop on first positive: Yes No

For Lab Use> Batch Number B76388

Analyzed by/date: Dan Fine 8/4/11 QC by/date:

Lab ID	Field ID Sampled date	Description / Location	Stereo Scope: % Asbestos	Color	Homogeneity	Texture	Friable	Optical Properties: Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Asbestos Percentage (%): Chrysotile	Amosite	Circle Type: Crocidolite	Tremolite	Anthophyllite	Actinolite	Non Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non Fibrous
	ACM-37 7/21/11	Sheetrock Hallway adjacent to Room 3 / 1st floor	0	W	H	F	Y														F		W				
				Gy		D															2		5				93
	ACM-38 7/21/11	Mastic Beneath Stairwell tread / Stairwell Hallway	0	DK																							
				BR																							100
				Gy																							
				RN																							

Comments: Birefringence L= less than .010, M= .011-.029, H= greater than .03: Microscope Olympus BH-2, Serial # circle 1- 242277, 229027, 235000, 230663 Laboratory uses the EPA or ELAP point count method as appropriate

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Revised on 4/7/09

ProScience Analytical Services, Inc.
22 Cummings Park, Woburn, MA 01801

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: chemistry@proscience.net

Laboratory Report

Contact: Joseph Jammallo
Client: Cushing Jammallo & Wheeler, Inc.
Address: 464 High Street
Clinton, MA 01510

Batch #: C 266106
Date received: 7/26/2011
Date analyzed: 7/27/2011
Date of report: 7/27/2011

AIHA Lab ID: 102754

Project # 5506
P.O.# n/a
Project Site: 31 Main St. Town Hall
Sterling, MA

Lead Analysis In Paint Using SW846-7420/3051
Results in weight percent on an "as received" wet weight basis

Lab ID	Client ID	Sample date	Description	Result	Detection Limit	Comments
C 402300	LBP-1	7/21/11	Fire Escape Black Paint/ Exterior	BDL	0.03	
C 402301	LBP-2	7/21/11	White Siding Paint/ Exterior	32.82	0.01	
C 402302	LBP-3	7/21/11	Red Paint Brick Foundantion/ Exterior	0.92	0.02	
C 402303	LBP-4	7/21/11	Black Paint Garage Door/ Exterior	0.03	0.02	
C 402304	LBP-5	7/21/11	Green Paint/3rd Floor Balcony	1.29	0.01	
C 402305	LBP-6	7/21/11	White Paint on Fiber Board/ 3rd Fl Balcony	0.27	0.02	
C 402306	LBP-7	7/21/11	Dark Green Trim Choir Rail/ 2nd Floor Auditorium	0.21	0.04	
C 402307	LBP-8	7/21/11	Light Green Paint Wallboard/2nd Fl Auditorium	BDL	0.05	
C 402308	LBP-9	7/21/11	White Paint Window Sill/1st Fl Function Room 3	0.30	0.02	
C 402309	LBP-10	7/21/11	Beige Choir Rail/Moulding/1st Fl Function Room 3	BDL	0.03	

Simona Peavey, Supervisor
Dan Pine, Analyst **Adrian Stanca, Lab Director**

Unless otherwise indicated, all samples were received in acceptable condition.
All result apply only to the samples as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
BDL - Below Detection Limit Note on units: mg/Kg is the same as ppm by weight.

ProScience Analytical Services, Inc.
22 Cummings Park, Woburn, MA 01801

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: chemistry@proscience.net

Laboratory Report

Contact: Joseph Jammallo
Client: Cushing Jammallo & Wheeler, Inc.
Address: 464 High Street
Clinton, MA 01510

Batch #: C 266106
Date received: 7/26/2011
Date analyzed: 7/27/2011
Date of report: 7/27/2011

AIHA Lab ID: 102754

Project # 5506
P.O.# n/a
Project Site: 31 Main St. Town Hall
Sterling, MA

Lead Analysis In Paint Using SW846-7420/3051
Results in weight percent on an "as received" wet weight basis

Lab ID	Client ID	Sample date	Description	Result	Detection Limit	Comments
C 402310	LBP-11	7/21/11	White Wall Board/1st Fl Function Rm 3	BDL	0.01	
C 402311	LBP-12	7/21/11	Column White Paint/1st Fl Function Rm 3	0.05	0.01	
C 402312	LBP-13	7/21/11	Trash Bags By Ast/Basement	2.41	0.03	
C 402313	LBP-14	7/21/11	White Paint on Red Brick/basement Level Stain Well	BDL	0.02	
C 402314	LBP-15	7/21/11	White Window Sill/Basement Level Stairwell	10.54	0.03	
C 402315	LBP-16	7/21/11	Grey Window Sill/Basement Level Stairwell	16.93	0.03	
C 402316	LBP-17	7/21/11	Eggshell Trim Emergency Exit/Stairwell	BDL	0.02	
C 402317	LBP-18	7/21/11	Green Wallboard/Emergency Exit Landing Stairwell	BDL	0.02	
C 402318	LBP-19	7/21/11	Eggshell White on 1st/2nd Floor Wallboard/Stairwell	BDL	0.01	
C 402319	LBP-20	7/21/11	Window Trim 1st/2nd Floor Stairwell	0.09	0.03	

Simona Peavey, Supervisor
Dan Pine, Analyst **Adrian Stanca, Lab Director**

Unless otherwise indicated, all samples were received in acceptable condition.
All result apply only to the samples as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
BDL - Below Detection Limit Note on units: mg/Kg is the same as ppm by weight.

ProScience Analytical Services, Inc.
22 Cummings Park, Woburn, MA 01801

Telephone: 781-935-3212
Facsimile: 781-932-4857
Email: chemistry@proscience.net

Laboratory Report

Contact: Joseph Jammallo
Client: Cushing Jammallo & Wheeler, Inc.
Address: 464 High Street
Clinton, MA 01510

Batch #: C 266106
Date received: 7/26/2011
Date analyzed: 7/27/2011
Date of report: 7/27/2011

Project # 5506
P.O.# n/a
Project Site: 31 Main St. Town Hall
Sterling, MA

AIHA Lab ID: 102754

Lead Analysis In Paint Using SW846-7420/3051
Results in weight percent on an "as received" wet weight basis

Lab ID	Client ID	Sample date	Description	Result	Detection Limit	Comments
C 402320	LBP-21	7/21/11	Yellow Wallboard Paint/2nd Floor Storage Rm	0.06	0.03	
C 402321	LBP-22	7/21/11	White Window Frame Ladies Room/1st Floor	0.09	0.03	
C 402322	LBP-23	7/21/11	Green Window Sill Ladies Room 1st Floor	0.82	0.03	Note 1

Note 1:Poor reproducibility, sample not homogeneous.

Simona Peavey, Supervisor
Dan Pine, Analyst **Adrian Stanca, Lab Director**

Unless otherwise indicated, all samples were received in acceptable condition.
All result apply only to the samples as received and are accurate to no more than three significant figures.
Unless otherwise indicated, all the quality control criteria for the method above have been met.
BDL - Below Detection Limit Note on units: mg/Kg is the same as ppm by weight.

ProScience Analytical Services, Inc.

Chemistry Chain of Custody Record

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www.proscience.net
general@proscience.net

☐ Rush/<6 Hours — Turn Around Time Requested (circle)

Same Day ☐ Next Day ☐ 2 Day ☐ 3 Day ☐ 5 Days

Client: Cushing, Tamaillo & Wheeler

Address: Street 464 High St

Town Clinton MA 01510 State/Zip

Project Site Line 1 31 Main St — Project Number 5506

Line 2 Town Hall Sterling, MA — Purchase Order

Contact: — Phone (978) 365-6320

FAX (978) 368-6121

Alt/Pager

☐ NELAC analysis

TYPE OF ANALYSIS (circle)

DUST WIPES	PAINT (0.1 g)	SOIL (1 g)
AIR	TSP	TCLP (100g)
(min)	PM10	Other

Please use a separate form for each matrix.

Element — gravimetric

(Pb) Cd Cr As

Se Ag Ba Hg

Other (please specify under Comments)

☐ QC

For Laboratory Use

BATCH NUMBER: C 266106

☐ ASTM E1792

FOR LABORATORY USE ONLY

Date and Time Sampled	Field I.D.	Sample Description/Location	Air Sampling Information: Start Time	End Time	Start Flowrate	End Flowrate	Volume (liters)	Wiped area: length (inch)	width (inch)	Area (sq in)	ANALYSIS: Weight (grams)	Dil'n	AA Reading	RESULT	Lab I.D.
7/21/11	LBP-1	Fire Escape Black paint/Exterior													402300
7/21/11	LBP-2	white siding paint/Exterior													01
7/21/11	LBP-3	Red paint Brick Foundation/ Exterior													02
7/21/11	LBP-4	Black paint garage door/ Exterior													03
7/21/11	LBP-5	Green Paint/ 3rd floor Balcony													04
7/21/11	LBP-6	White paint on fiberboard/ 3rd floor Ceiling													05
7/21/11	LBP-7	Dark green trim chair rail/ 2nd floor Auditorium													06
7/21/11	LBP8	Light green paint wallboard/ 2nd floor Auditorium													07
7/21/11	LBP-9	White paint window sill/ 1st floor function room 3													08
7/21/11	LBP-10	Beige chair rail/ building/ 1st floor function room 3													09

Relinquished By: David Thompson — Date 7/21/11 — Time

Received By: Kathy Antone — Date 7-26-11 — Time 10:55AM

Comments:

ver 5.1

ProScience Analytical Services, Inc.
Chemistry Chain of Custody Record

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22 Cummings Park, Woburn, MA 01801
T:781-935-3212 F:781-932-4857

www.proscience.net
general@proscience.net

☐ Rush/<6 Hours — Turn Around Time Requested (circle)

Same Day ☐ Next Day ☐ 2 Day ☐ 3 Day ☐ 5 Days

Client:

Address: Street

Town State/Zip

Project Site Line 1 Project Number 5506

Line 2 Purchase Order

Contact: Phone

FAX

All/Pager

☐ NELAC analysis

TYPE OF ANALYSIS (circle)

DUST WIPES	PAINT (0.1 g)	SOIL (1 g)
AIR	TSP	TCLP (100g)
(min)	PM10	Other

Please use a separate form for each matrix.

Element ____ gravimetric

(Pb) Cd Cr As

Se Ag Ba Hg

Other (please specify under Comments)

☐ QC

For Laboratory Use

BATCH NUMBER C 266106

☐ ASTM E1792

FOR LABORATORY USE ONLY

Date and Time Sampled	Field I.D.	Sample Description/Location	Air Sampling Information: Start Time	End Time	Start Flowrate	End Flowrate	Volume (liters)	Wiped area: length (inch)	width (inch)	Area (sq in)	ANALYSIS: Weight (grams)	Dil'n	AA Reading	RESULT	Lab I.D.
7/21/11	LBP-11	White wallboard/ 1st floor function room 3													10
7/21/11	LBP-12	Column White paint/ 1st flor function room 3													11
7/21/11	LBP-13	Trash Bags By AST/ Basement													12
7/21/11	LBP-14	White paint on red brick/ Basement level Stair well													13
7/21/11	LBP-15	White window sill/ Basement level stairwell													14
7/21/11	LBP-16	Grey window sill/ Basement level stairwell													15
7/21/11	LBP-17	Eggshell trim Emergency Exit/ Stairwell													16
7/21/11	LBP-18	Green wall board / Emergency Exit Landing Stair well													17
7/21/11	LBP-19	Eggshell white on 1st/2nd floor wallboard / Stairwell													18
7/21/11	LBP-20	Window Trim 1st/2nd Floor Stairwell													19

Relinquished By: Kevin Thompson Date: 7/21/11 Time

Received By Date Time

Comments:

ver 5.1

ProScience Analytical Services, Inc.

Chemistry Chain of Custody Record

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22 Cummings Park, Woburn, MA 01801
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www.proscience.net
general@proscience.net

☐ Rush/<6 Hours Turn Around Time Requested (circle)

Same Day ☐ Next Day ☐ 2 Day ☐ 3 Day ☐ 5 Days

Client:

Address: Street

Town State/Zip

Project Site Line 1 Project Number 5500

Line 2 Purchase Order

Contact: Phone

FAX

All/Pager

☐ NELAC analysis

TYPE OF ANALYSIS (circle)

DUST WIPES	PAINT (0.1 g)	SOIL (1 g)
AIR	TSP	TCLP (100g)
(min)	PM10	Other

Please use a separate form for each matrix.

Element ____ gravimetric

(Pb) Cd Cr As

Se Ag Ba Hg

Other (please specify under Comments)

☐ QC

For Laboratory Use

BATCH NUMBER

C 266106

☐ ASTM E1792

FOR LABORATORY USE ONLY

Date and Time Sampled	Field I.D.	Sample Description/Location	Air Sampling Information: Start Time	End Time	Start Flowrate	End Flowrate	Volume (liters)	Wiped area: length (inch)	width (inch)	Area (sq in)	ANALYSIS: Weight (grams)	Dil'n	AA Reading	RESULT	Lab I.D.
7/21/11	LBP-21	Yellow wallboard paint/ 2nd floor storage room													20
7/21/11	LBP-22	White window frame Ladies Room / 1st floor													21
7/21/11	LBP-23	Green window sill Ladies rooms 1st floor													22

Relinquished By: [signature] Date: 7/21/11 Time

Received By: Date: Time

Comments:

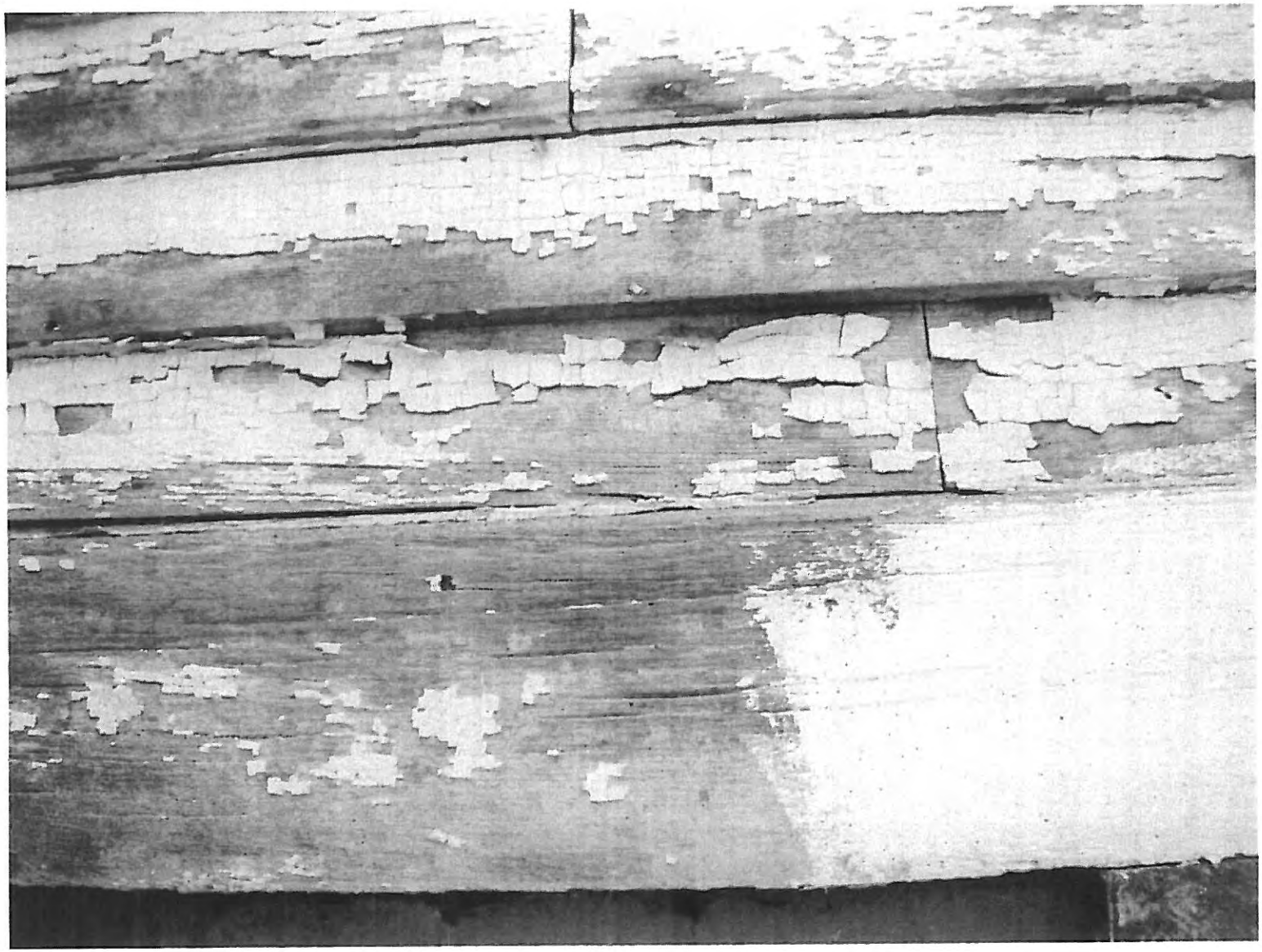
ver 5.1

APPENDIX B

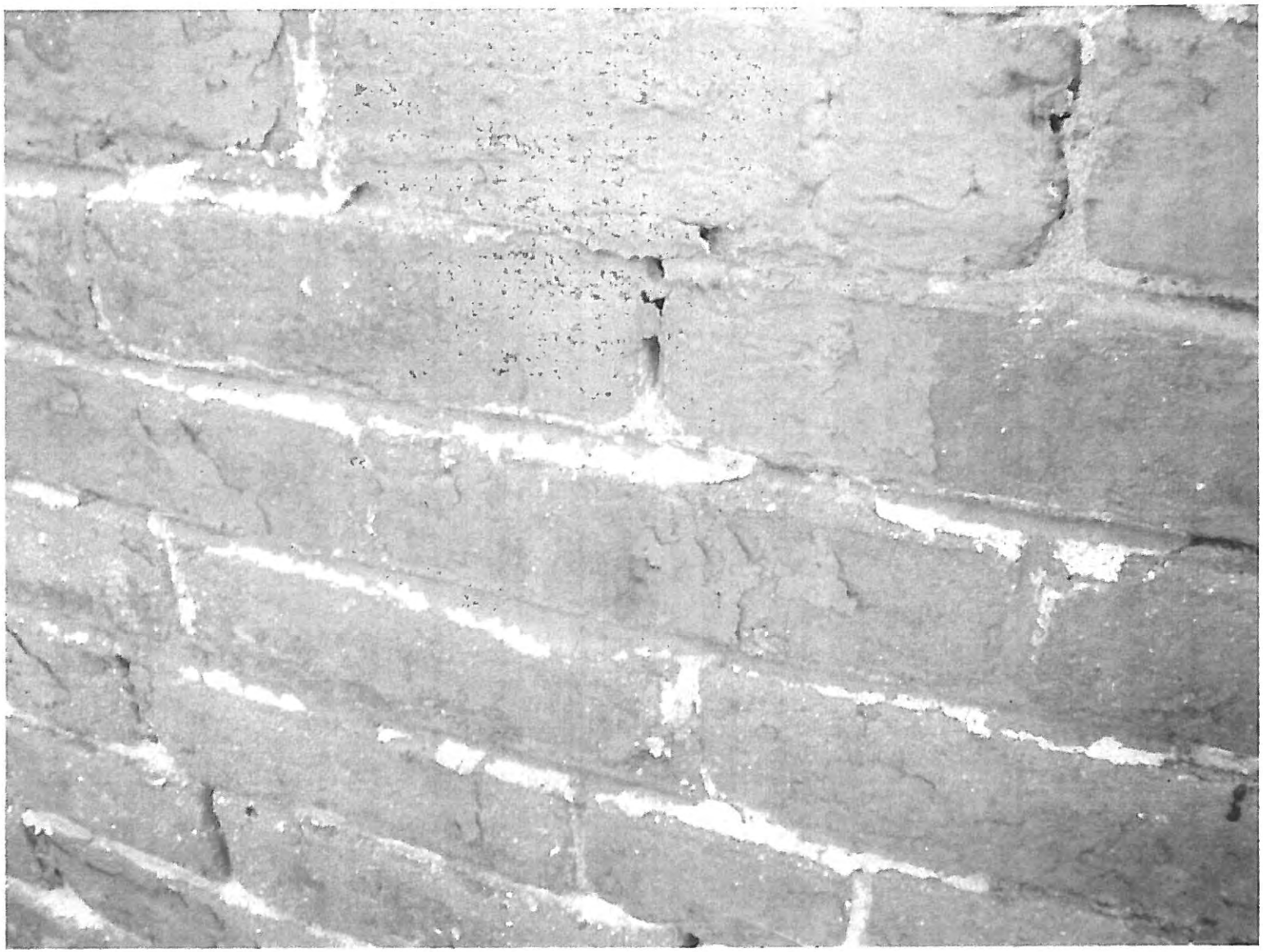
PHOTOGRAPHS

464 High Street
Clinton, Massachusetts 01510
Tel.978.368.6320 /Fax 978.368.6121

85 Constitution Lane, Suite 3B4
Danvers, Massachusetts 01923
Tel. 978.774.7224 / 978.774.7292



Photographic Log – Sample LBP-2.



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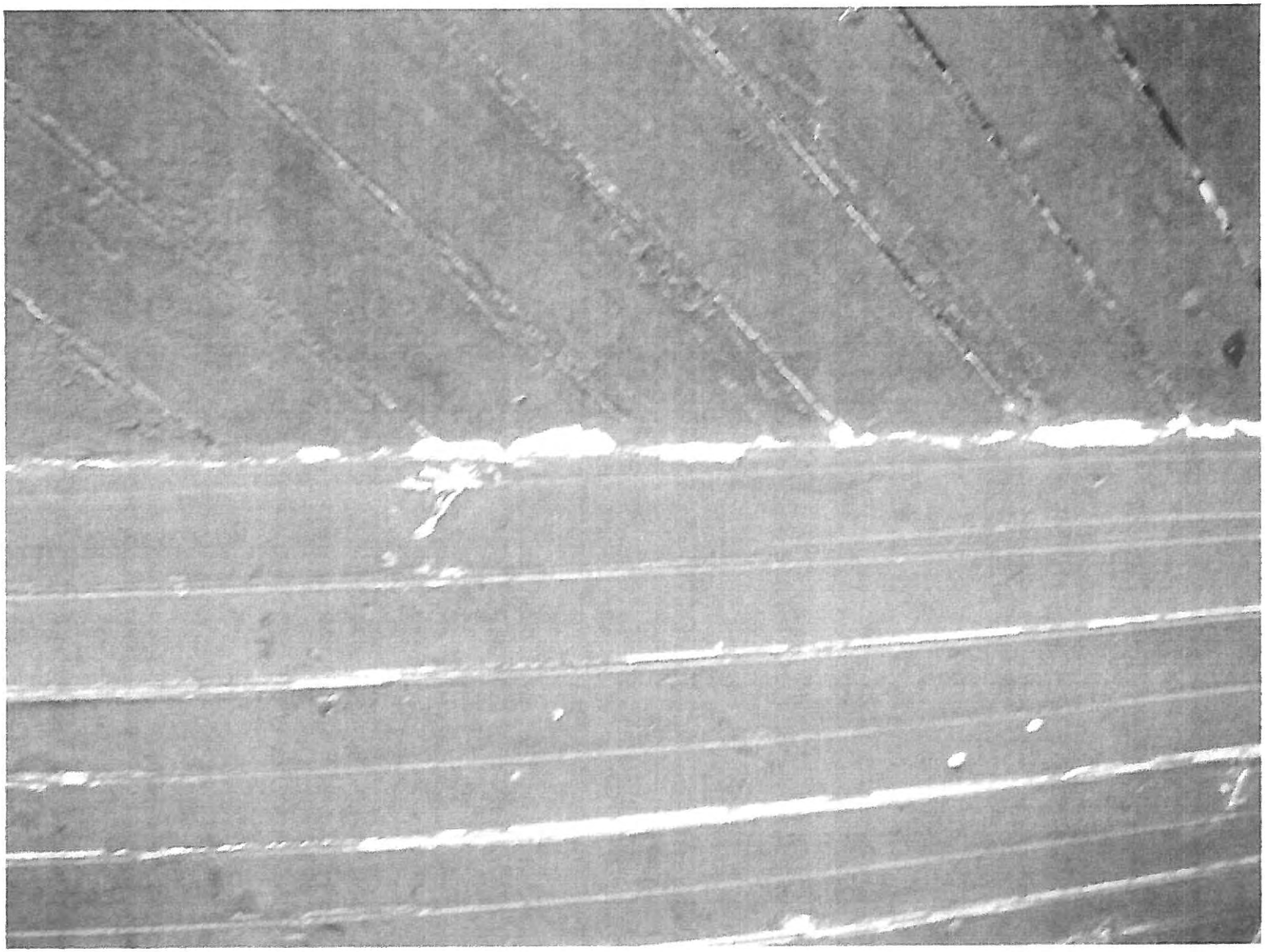
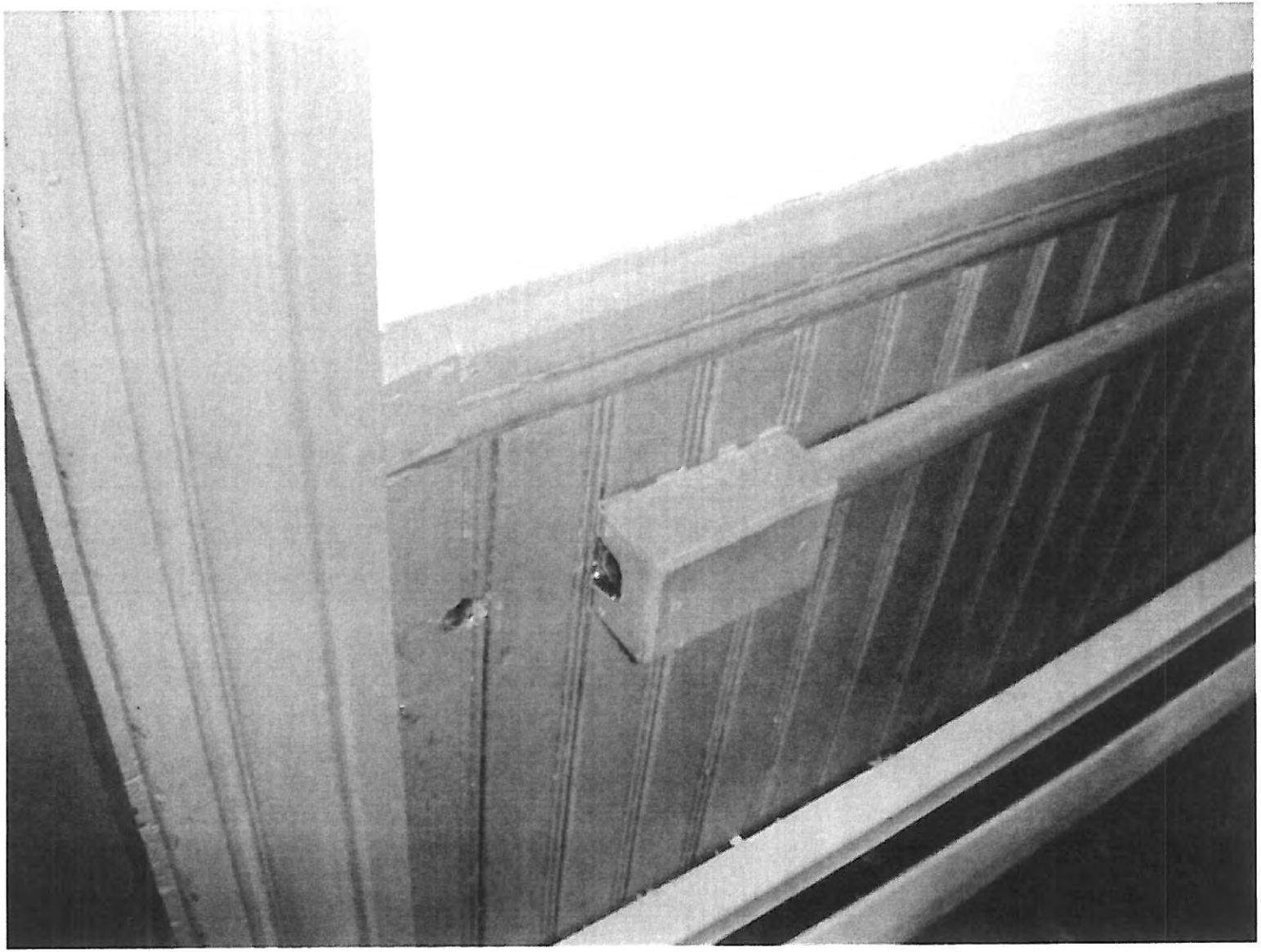


Photographic Log – Sample LBP-4.

Photographic Log – Sample LBP-5.



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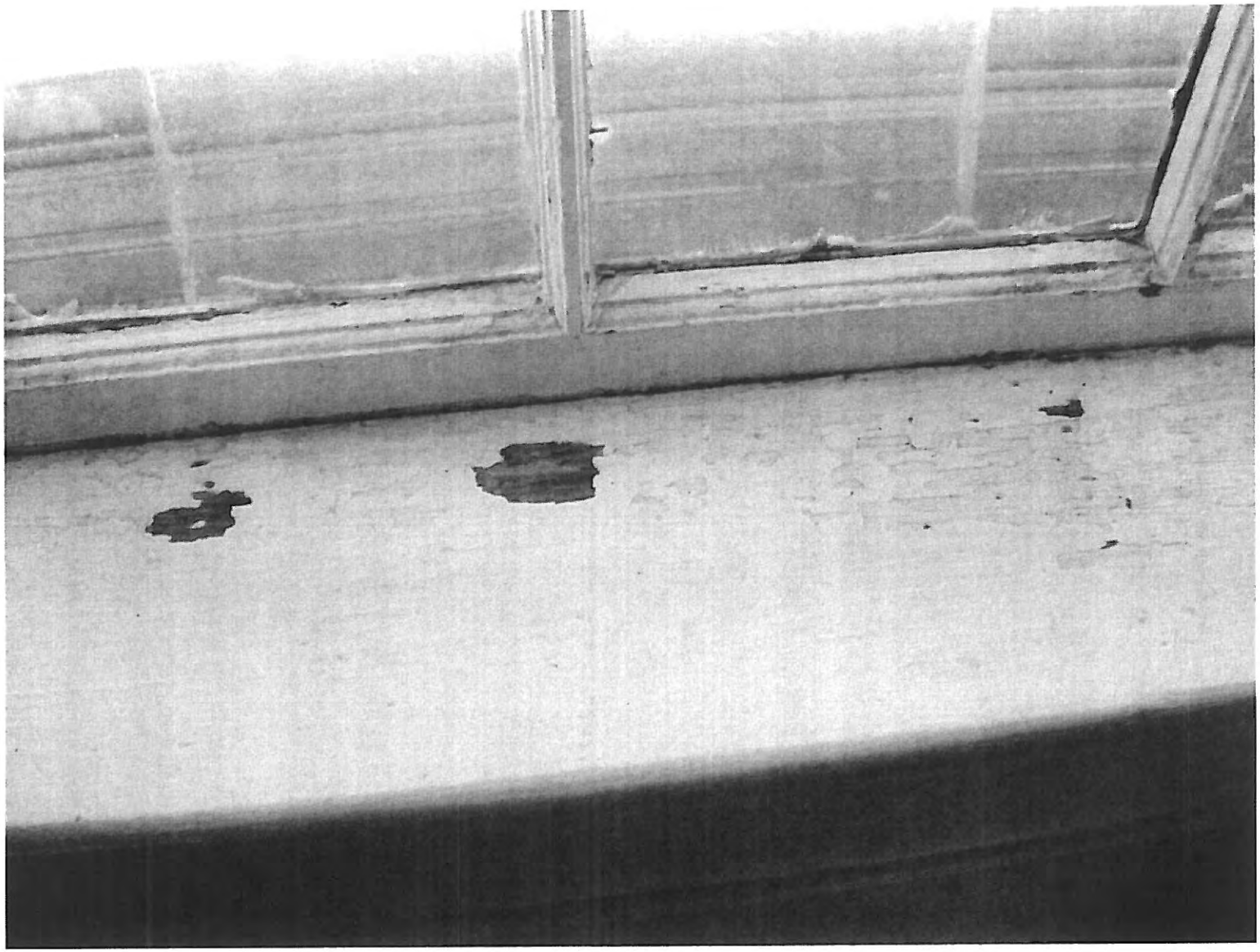
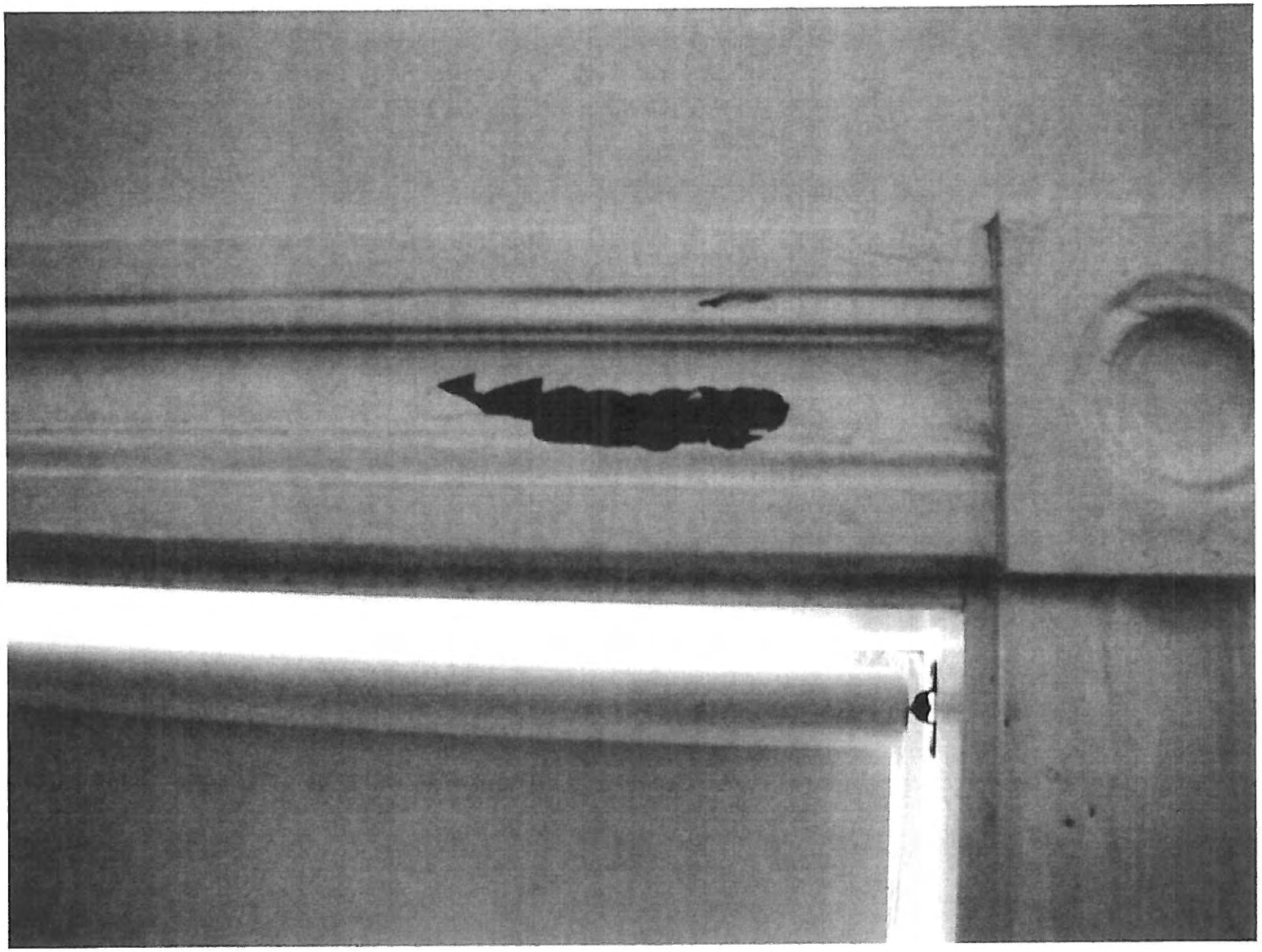


Photographic Log – Sample LBP-9.

Photographic Log – Sample LBP-13.

Photographic Log – Samples LBP-15 & LBP-16.

CUSHING, JAMMALLO & WHEELER, INC.



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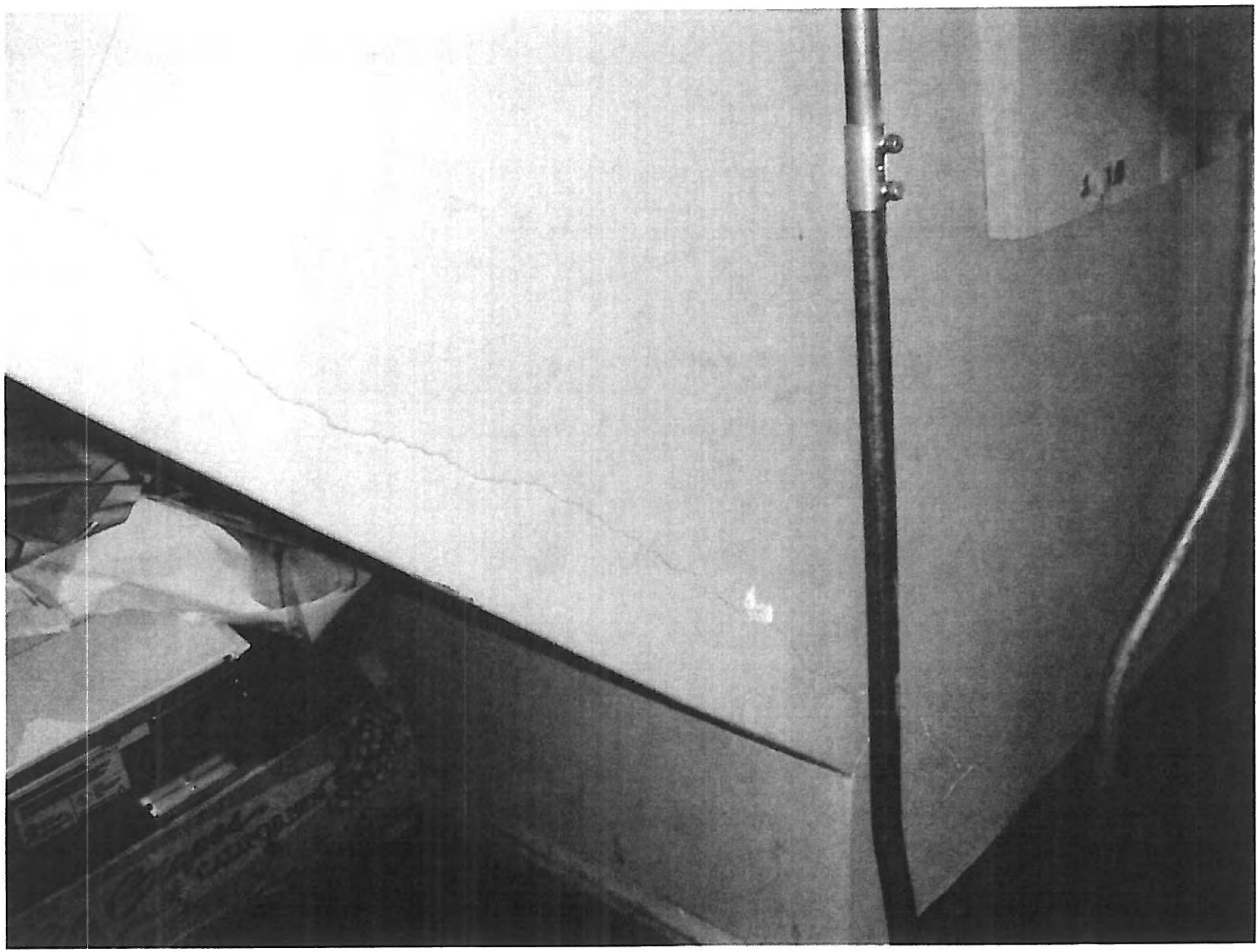

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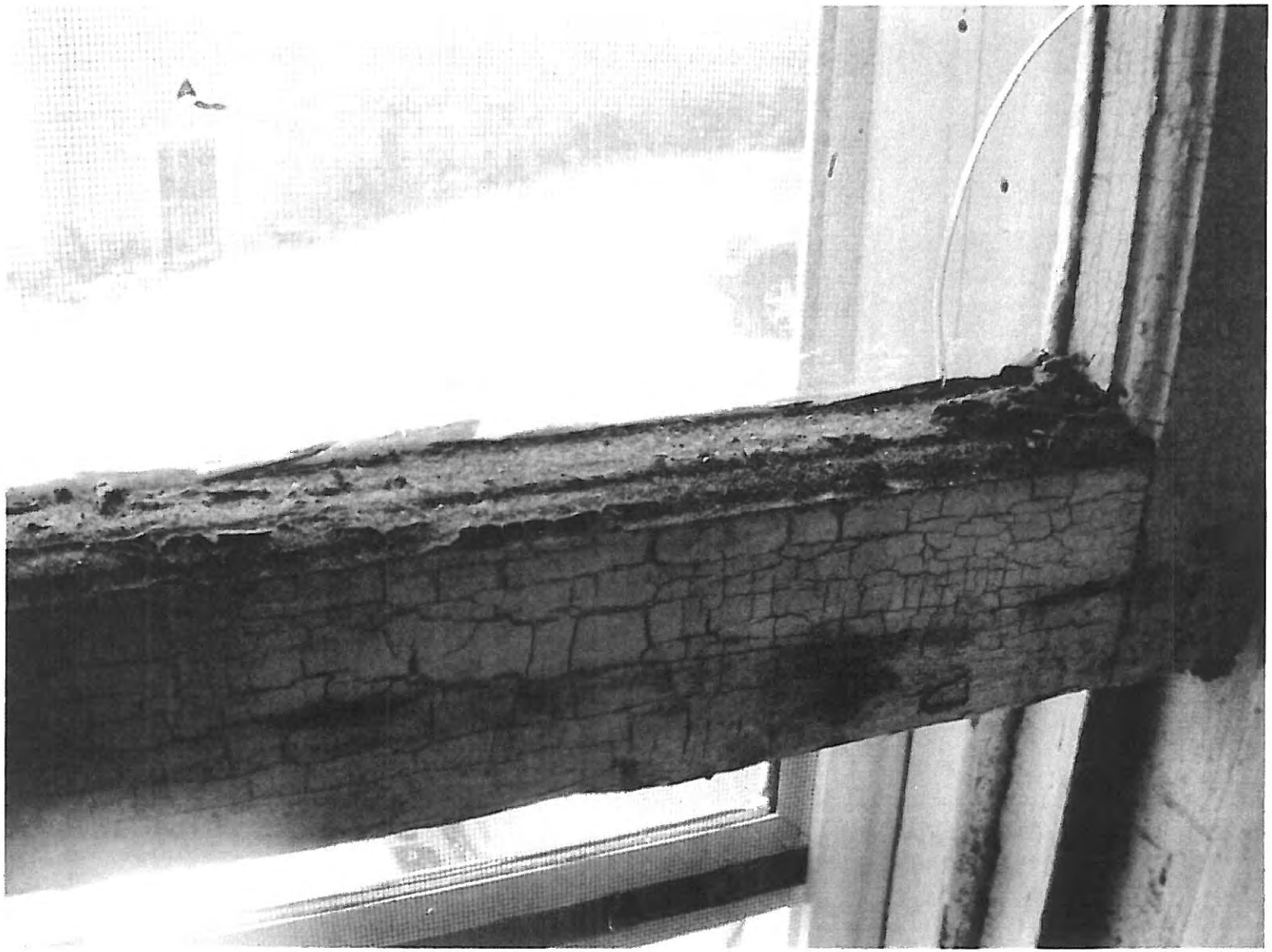


Photographic Log – Samples LBP-22 & LBP-23.

ARCHITECTURAL/STRUCTURAL ASSESSMENT & FEASIBILITY STUDY

Reinhardt Associates, 2005

STERLING 1835 TOWN HALL

ARCHITECTURAL / STRUCTURAL ASSESSMENT

and

FEASIBILITY STUDY FOR UNIVERSAL ACCESSIBILITY

of the

STERLING 1835 TOWN HALL BUILDING

JULY 8, 2005

STERLING 1835 TOWN HALL

PHASE I: ARCHITECTURAL CONSERVATION ASSESSMENT

A. Architectural and Structural Analysis
B. Code Analysis
C. Existing Conditions Survey
D. Photographs
E. Treatment Recommendations
F. Exterior Repair / Restoration Estimate

PHASE II: CYCLICAL MAINTENANCE PLAN

PHASE III: FEASIBILITY STUDY FOR UNIVERSAL ACCESSIBILITY AND REUSE

A. Programmatic Priorities
B. Concept Plans (See Outlines Plans)
C. Universal Accessibility Estimate

PHASE IV: OUTLINE PLANS AND SPECIFICATIONS

A. Proposed Building Plans and Elevation
B. Exterior Repair/ Restoration Outline Specification
C. Universal Accessibility Outline Specification

STERLING 1835 TOWN HALL

PHASE I: ARCHITECTURAL CONSERVATION ASSESSMENT

A. Architectural and Structural Analysis

B. Code Analysis

C. Existing Conditions Survey

D. Photographs

E. Treatment Recommendations

F. Exterior Repair / Restoration Estimate

Reinhardt Associates, Inc. conducted an Architectural and Structural analysis of the existing observable building and site conditions on January 28th, February 1ST and March 7th, 2005. RAI's analysis also included reviews of previous building reports and studies. RAI found the 1998 Study prepared by Suzanne Carlson to reflect the previous progression of additions and renovations and this information is not repeated here. Generally the building was found to be in good condition with some deficiencies that will be further described.

The Building envelope was generally intact and serviceable. The slate roof, wood clapboard and wood windows afforded good weather protection although all exterior surfaces have weathered considerably given their appearance and presumed age. The Building's foundation system is in reasonably good shape and is further discussed in the Structural Engineer's Analysis.

The Building's interior has undergone several renovations some of which have caused significant damage and/or elimination of important historic architectural elements and is more fully repeated in the Conditions Survey portion of this study. The observable interior surfaces, materials and elements appear in good to very good condition with some exceptions that will be further discussed.

Exterior Observed Deficiencies:

- Extensive surface decay of unprotected wood surfaces.
- On-going repairs to wood trim at North corner of upper portico.
- Partial to complete paint failure on all exposed surfaces including siding, trim, facias, soffits, columns, metal railings, steel fire escape and brick surfaces.
- Severely deteriorated brick and mortar foundations.
- Slate roof tiles exhibit some surface degradation with some delamination of surfaces especially in areas of observable biological growths.
- Observable sag and deflection in roof deck. Significant crowning of ridge at roof truss locations.
- Exterior window glazing putty is mostly missing or broken. Some broken window glass. Screens missing from aluminum storm windows.
- Refer to Conditions Survey / Treatment recommendations for further information.
- Asphalt surfaces have many cracked, broken area most likely from frost and poor drainage.
- Rear drive area is unpaved and heavily pitted.

Interior Basement Observed Deficiencies:

- Interior brick bearing walls and brick foundation walls have severely deteriorated mortar joints and brick surfaces from previous and prolong exposure to moisture. Condition affects approximately 30-40% of brick surfaces. Deterioration of masonry structure has structurally impaired these load bearing walls.
- Efflorescence on brick walls indicate previous moisture conditions. Efflorescence is mostly an appearance issue and does not impair brick or mortar.
- Interior brick bearing wall partially removed at newer piping installation possibly affecting structural adequacy of wall in this area.
- Rubble foundation at North end of West wall has open diagonal joint from removal of previous stairs.
- Boiler Room fire door is not self-closing.

- Multiple steps / levels in concrete floor creates tripping hazards. Newer, raised concrete floors are not level.
- Broken raised slab construction and remains of previous floor mounted pluming fixture create safety hazards.
- Operation of (2) rolling doors could not be verified due to locks.
- Windows are physically damaged with broken and missing components.

Interior First Floor Observed Deficiencies:

- Minor water staining of suspended ceiling tiles from previous roof leaks, wall flashing at Second floor fire escape door / sill or possibly Second Floor hydronic radiation piping.
- Stairwell paint and plaster skim coat cracked and flaking off from probable cold temperatures and temperature fluctuations caused by inadequate heating of space.
- Original wood trim and casing at window heads was cut and removed during installation of previous installed suspended acoustical ceiling system.
- Bottom of exterior stair exit door is heavily corroded possibly from build-up of snow on exterior of door.

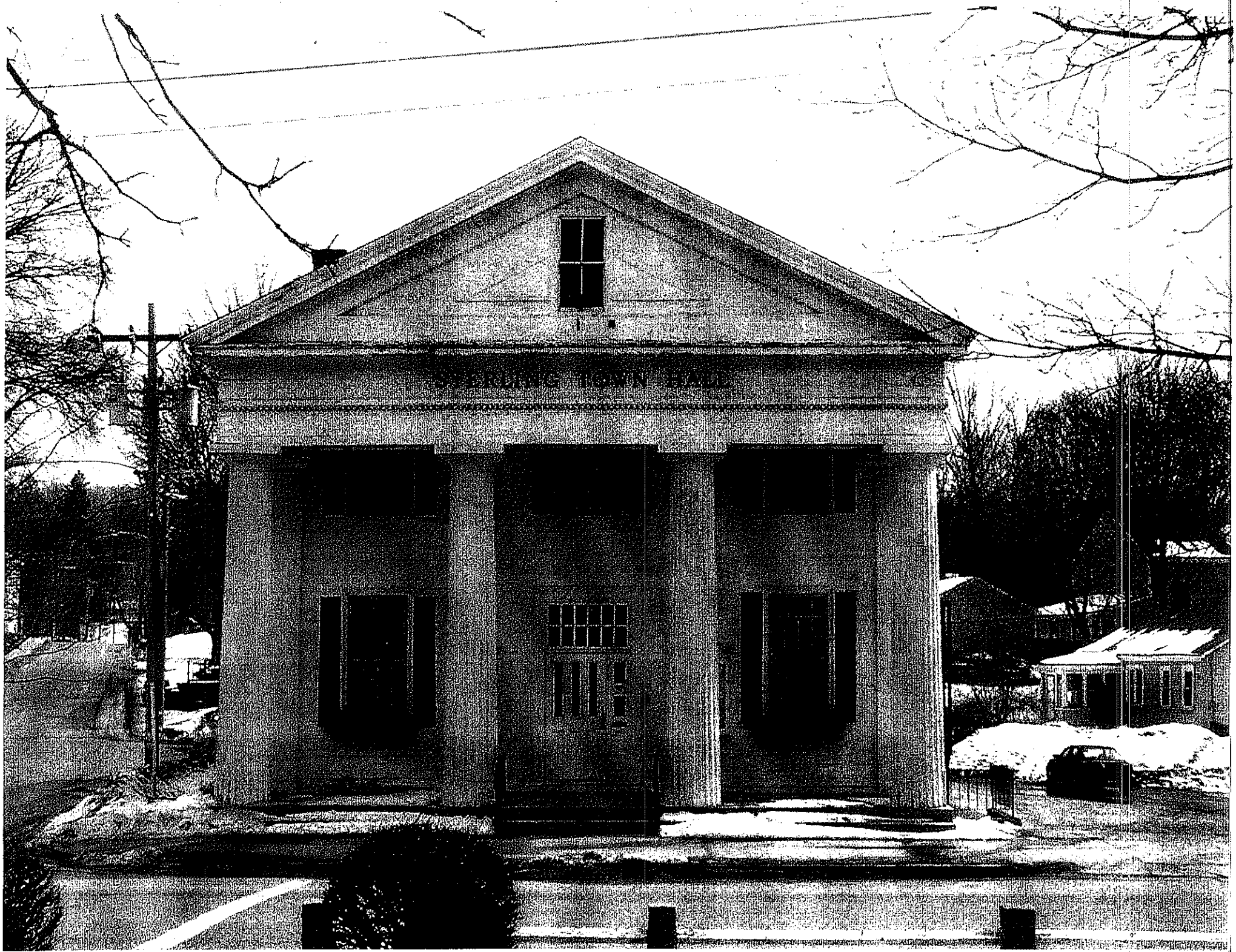
Interior Second Floor Observed Deficiencies:

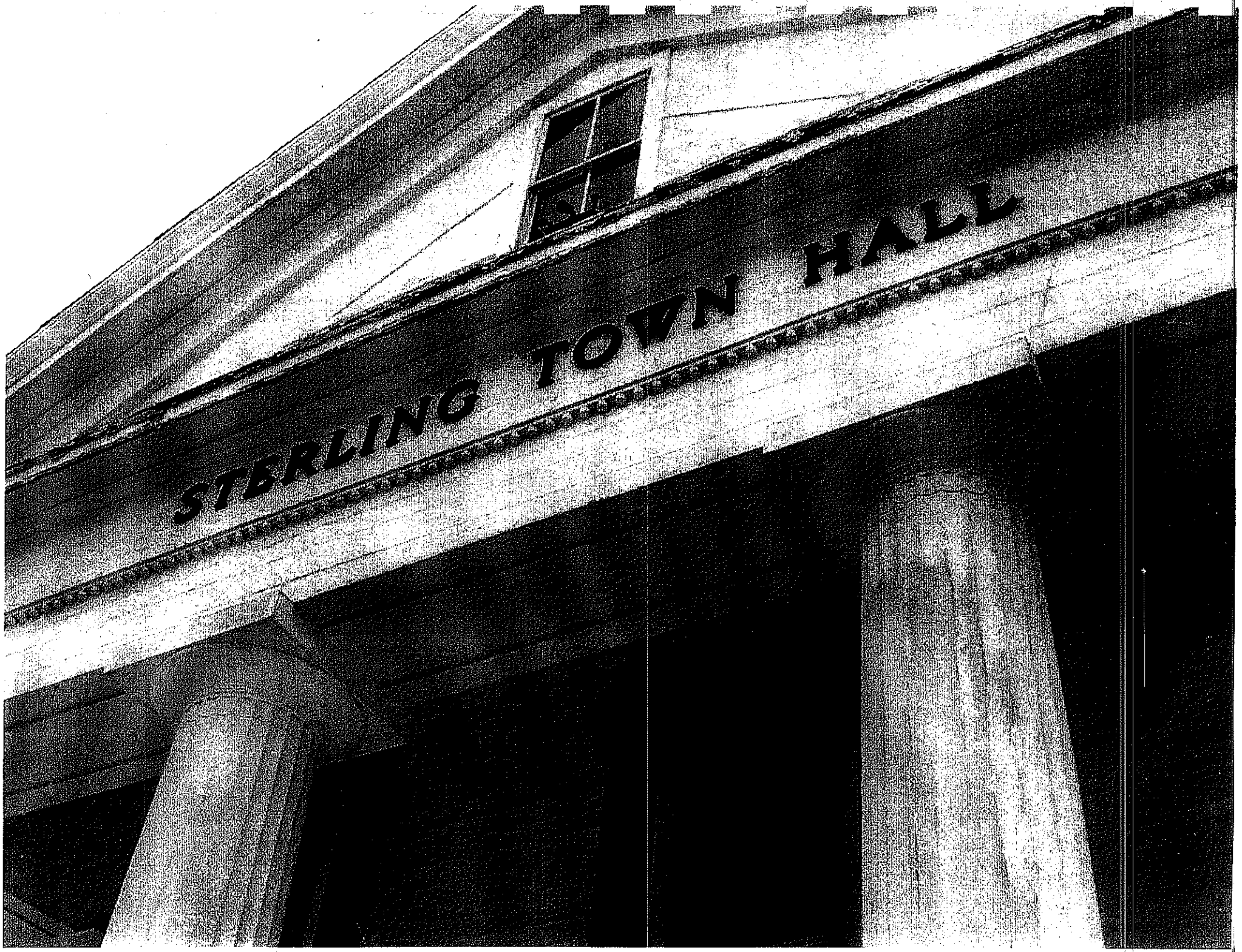
- No guards at Stage windows cause safety concern from accidental falls, accidental glass breakage.
- Plaster damaged and missing near previous chimney flashing leak. Chimney and flashing previously repaired.
- Water staining of some suspended ceiling tiles from previous roof leaks.
- Cracked plaster walls, some missing plaster and flaking paint observed primarily below balcony, balcony stairs and at exterior walls.
- Apparent stress cracks in Stairwell paint and plaster skim coat possible from removal of original floor structure.
- Bottom of fire escape wood door and recessed wood panels have water damage and some delamination.
- Door from Lobby area to Meeting Room has cracked / split wood panels.
- Possible vinyl asbestos tile and mastic in office space. Tile is intact and not direct / current hazard.
- Wood flooring finish is worn and damaged in areas.

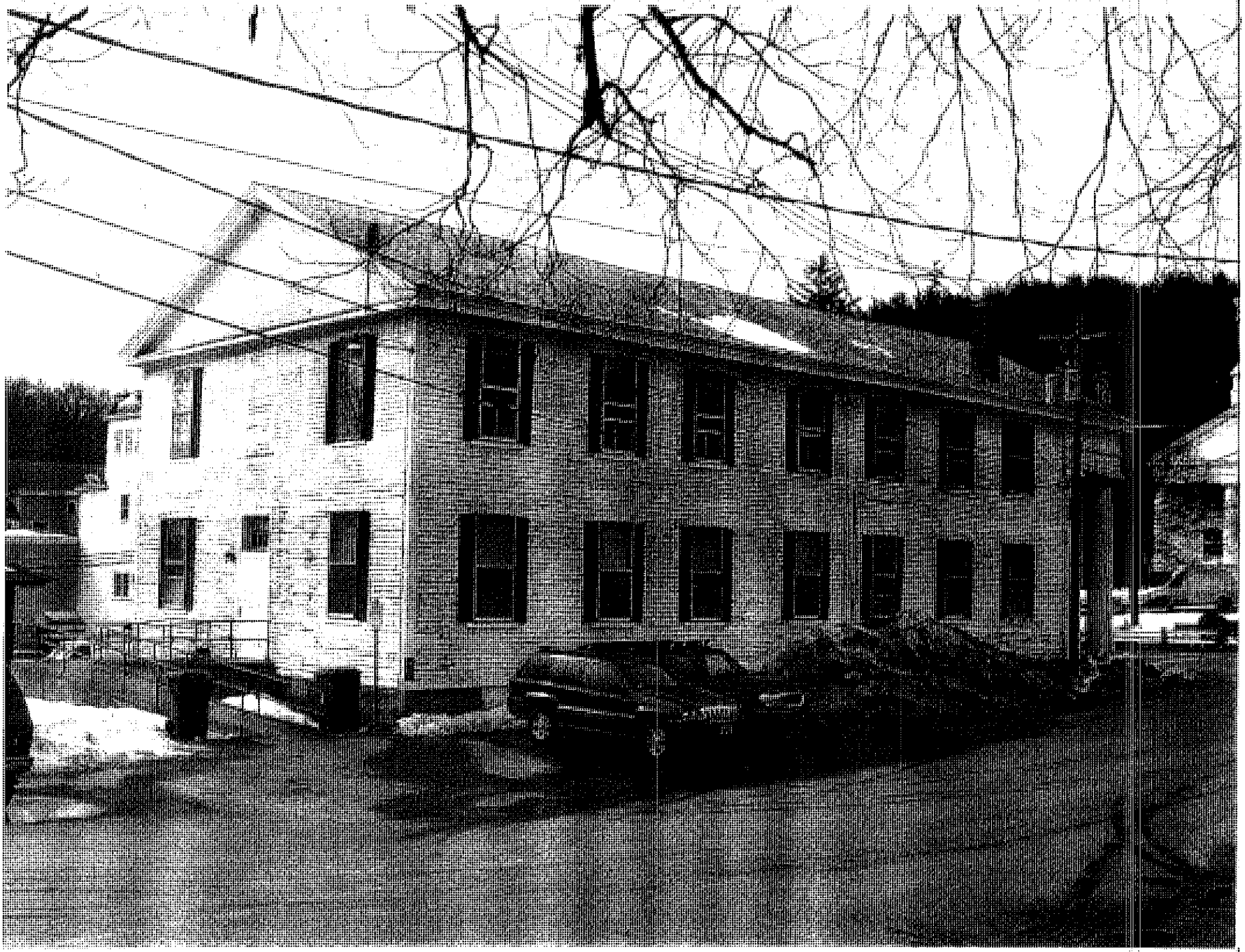
Interior Balcony Level Observed Deficiencies:

- Balcony stair does not have a handrail.
- Balcony stair guardwall has insufficient strength to prevent serious fall.
- Cracked, loose and missing plaster.
- Balcony lacks lighting and switching
- Original board and batten ceiling removed and replaced with gypsum board at areas of previous truss repair.

Second Fl. Meeting Room Circa 1920's


STERLING TOWN HALL


STERLING TOWN HALL



The Massachusetts State Building Code 780CMR will govern the existing conditions and any future proposed work to this building or site. Specifically Chapter 34 Repair, Alteration, Addition and change of use of Existing Buildings will regulate code compliance for this existing historical building. Generally speaking an existing building that is not undergoing repair, alteration or addition is grand fathered from compliance from current codes. The assumption being that the building was built, repaired, altered or added onto in accordance with the prevalent codes at the time.

Not withstanding consideration of the above the Building Code Chapter 34 does require and enforce, in the interest of public safety minimum provisions for means of egress and the elimination of hazards in the means of egress. RAI's review of the existing building conditions identified the following hazards to the existing means of egress.

- Snow and ice was not removed from exterior stair exit door at time of review. Exit door could not be opened. This item is an ongoing maintenance issue and not specifically a building deficiency.
- First floor multi-purpose room on exit door to fire escape has interior screen door that swings inward and not in the direction of egress travel as required.
- Fire escape structure is not secured at Second floor and the fire escape exhibits significant sway. Refer also to structural review for additional commentary. Fire escape was also observed to be partially blocked by fallen snow from the roof.
- An exceptional amount of snow was found stockpiled along North exterior wall of building. Snow appears to be from roof and adjacent road and parking area. This snow blocked access to the electrical meter and obstructed the boiler make-up air vent.
- Basement boiler room door is not self-closing.

Remaining building conditions appeared to be in general conformance to previous codes with the obvious exception of the Massachusetts Architectural access board (MAAB) rules and regulations, 521 CMR. These MAAB regulations provide for handicap accessibility in public buildings and spaces and are similar to the American with Disabilities Act (ADA) that provides for accessibility in areas of employment. RAI's review of the existing building conditions identified the following non-accessible conditions:

- Previous installed accessible water cooler was removed.
- Toilet room grab bars installed lower than 33" above floor.
- Toilet room sinks do not have minimum 29" clear below bottom of apron.
- Toilet room mirrors installed more than 40" above floor.
- Toilet room piping below sinks is not insulated or guarded.
- Toilet room baseboard convectors project into clear floor space for toilet.
- Men's toilet room sink projects into door pull-side clearance.
- Women's toilet room door does not have minimum door pull-side clearance.
- Men's toilet room door does not have minimum door push-side clearance.
- Stair door does not have lever type hardware.
- Many other doors do not have lever type hardware.
- Ramp at rear of building slightly exceeds 1:12 maximum slope requirements.
- No handicap designated parking and signage.

In regard to any proposed repair, alteration or addition to the existing 1835 Town Hall, an analysis of the current building statistics is required and is provided as follows:

Building Area:

Basement:	3053 GSF
First Floor:	3053 GSF
Second Floor:	3053 GSF
Second Floor Balcony (Mezzanine):	898 GSF
Total Building Area:	**9159 GSF**

Note: Mezzanine areas do not contribute to building area

Building Classification: Mixed Use

B – Business

A – Assembly

S2 – Storage, Low Hazard

Construction Classification: N/A

The equalized full and fair cash value of the 1835 Town Hall as listed with the Town's Assessors Office is approximately $167,000. Therefore pursuant to MAAB any future addition, alterations or repairs to the building exceeding 30% or $50,000, over a two (2) year period, will require the entire building to comply with current MAAB regulations; excluding roof, window, masonry and septic repairs/replacement, retrofitting for automatic sprinkler or hazardous material abatement costs.

Major compliance requirements and/or variances would include but not be limited to the following:

- Accessible front main entrance.
- Accessible Second Floor, if available for public use.
- Area of rescue assistance from all non-grade accessible levels, if automatic sprinklers not installed.

In regard to requirements for installation of automatic sprinklers, the Town has adopted MGL C148 §26G requiring sprinkler installations in existing buildings greater than 7500 GSF when substantially renovated or altered. Substantial renovations is further defined as work that is major in scope and expenditure when compared to the work and expenditure to install a fire protection system. The issue of fire protection should be discussed with Fire Department in planning any future addition or renovation.

Based upon the apparent historical nature of this 1835 Sterling Town Hall and its listings on the National Register of Historic Places the building qualifies as a partially preserved building under Massachusetts Building Code 780CMR 3409.0 which permits in-kind material repairs and replacement without compliance with most current codes including the Energy Conservation Code, 780CMR 13.

The Town of Sterling's own Protective by Laws identifies the 1835 Town Hall property with its Town Center District and as a municipal facility it is a permitted use in this district. Although a current property survey is not available it is believed the existing Building does not comply with dimensional controls for Town center properties requiring a 40 ft. front yard setback, 10 ft. and 25 ft. Side and rear yard setbacks respectively and therefore the 1835 Town Hall is probably a non-conforming structure.

The proposed handicap accessibility addition for a new elevator and stair would require a special permit from the Board of Appeals, and if the addition were to extend into an existing required setback then a variance would also need to be granted by the Board of Appeals. It should also be noted that a non-conforming structure, which has been abandoned, or not used for a period of 2 years, shall lose its protective status and be subject to all provisions of the current Zoning Bylaw.

The Sterling Protective Bylaws also designate minimum amount of off-street parking required for each Building use. Although Town center district parking requirements are reduced 50% the available paring is less than current zoning requirements but based on a continuing existing use, compliance with newer parking regulations would not be required.

The Building's existing sanitary system is presumed by the Town to be inadequate and is not in compliance with Title 5 regulations for sanitary systems. The Building occupancy and septic system flow rate based upon full occupancy, is as follows:

1st Floor meeting space @ 1,278 S.F./ 15 S.F. per Occupant = 86 Occupants
2nd Floor meeting space @ 2,380 S.F./ 15 S.F. per Occupant = 159 Occupants

Therefore 245 Occupants @ 3 gal. per day (GPD) = 735 GPD (assembly)

(2) offices of 609 Sq. Ft. total @ 75 GPD/ 1,00 S.F. = 46 GPD (office)

Total Estimate Flow = 781 GPD

Designated flow rate from combined Fire Station/ Old Town Hall sanitary facility is 610 GPD (see Ross Associates Meeting Minutes 5/9/00) and provides an insufficient capacity for full occupancy at above described densities.

In order to have a compliant flow capacity total assembly occupancy must be limited to 188 maximum Occupants, assuming office is left unchanged. This limitation need to be coordination with and approved by the Building Inspector and Fire Inspector.

Domestic Cold Water System:

The existing Domestic Cold Water Service is a three-quarter inch (3/4"), which enters through the basement foundation wall on the Southeast side of the building. A three-quarter inch (3/4") water meter and pressure regulating valve are installed on this cold water service line. The water service line is not equipped with a backflow prevention device. At the time of installation a backflow prevention device was not required.

The present Massachusetts Plumbing Code 248 CMR states "A portable water supply system shall be designed, installed and maintained in such manner as to prevent contamination from nonpotable liquids, solids, or gases from being introduced into the potable water supply through cross connections or any other piping connections to the system".

In order to insure the protection of the Town water from any cross connections, etc, the installation of a reduced pressure zone backflow prevention device is required.

The existing plumbing fixtures; water closets, lavatories, etc. which are "Grandfathered" do not meet the present plumbing code energy requirements. Energy requirements in regards to water usage. The existing water closets require three (3) gallons of water per flush, when the new code mandates one and one half (1-1/2) gallons per flush. Faucets sets on lavatories for public use require metering faucets, etc.

The domestic water distribution system presently is approximately fifty (50) percent insulated. The Massachusetts State Building Code 780 CMR, Chapter 13, requires one-inch (1") thick insulation provided for piping carrying fluid having a temperature of 140 degrees F or less.

Sanitary Waste & Vent System:

The existing sanitary waste & vent system as installed is in compliance with the Massachusetts State Plumbing Code that was current at the time of installation. The present Massachusetts State Plumbing Code has adapted more stringent requirements regarding environmental issues.

For example: The present plumbing code mandates that all floor drains be equipped with Trap Primers. Trap Primers are installed on floor drains that do not receive sufficient water to maintain a trap seal. Once the trap seal is lost, do to evaporation; sewer gases will escape to the spaces atmosphere. Trap Primers discharge water to the floor drain trap maintaining the trap seal.

Fire Suppression System:

The building presently does not have a fire suppression system. At the time the building was constructed there was no code requirement for one. Today Chapter 148 of the Massachusetts General Laws, effective May 1998, states "In any city or town which accepts the provisions of this section, every building of more than seventy-five hundred square feet in floor area or every addition of more than seventy-five hundred gross square feet in floor area shall be protected troughout with an adequate system of automatic sprinklers in accordance with the provisions of the state building code."

Depending on the square footage of any future additions, the above requirements mandated in Chapter 148 of the Massachusetts General Laws for automatic sprinklers will be reviewed.

Heating and Ventilating System:

The existing heating system which consists of two (2) Weil McLain Boilers, circulating pump, piping distribution system which has been segmented into five (5) heating zones, has been installed in compliance with the present codes.

The facility presently does not meet the present Mechanical Ventilation Codes, which mandates twenty (20) cubic feet per minute (cfm) of outside air per person to be mechanically introduced into the facility during occupied periods of operation.

The electrical life safety elements of the building are mostly in good order. The building has a complete working fire alarm system with pull stations at exits to each floor, adequate audio/visual signaling, and complete detector coverage. Some pull stations are of an older variety. The fire alarm system is conventional (non-addressable) with dedicated telephone jacks for alarm. There is a four-zone fire alarm annunciator in the main entrance vestibule. There are fire alarm strobes in the toilet rooms for ADA compliance. Much of the fire alarm wiring in unoccupied areas is run exposed and is secured to the building with staple clips.

The interior of the building has adequate exit and emergency lighting, except in the Basement. Except for one existing unlit exit sign, the Basement needs exit and emergency lighting. There is no emergency lighting in the boiler room or by the electrical service main distribution panel. There do not appear to be provisions for emergency lighting for egress at the exterior of the building.

There are about a dozen ungrounded outlets, which would only need to be replaced with grounded outlets under renovation.

Above the ceiling on the First and Second floors and along the ceiling in the Basement are many wires and cables which are unsupported, not tied together, and not run in an orderly fashion. In the Basement, there are many apparently abandoned cables, including telephone wiring, and cabling is often run with other piping through the same crevices and narrow holes in the building structure. In the Attic above the Second floor suspended ceiling are older fixtures concealed from view, which are mounted above retrofit support beams for the building. These fixtures along with very old knob and tube wiring in the attic spaces are still installed even though they have been abandoned. Abandoned equipment and wiring needs to be disconnected and removed if any renovation is to take place. Remaining wiring needs to be routed and supported in an orderly fashion.

Much of the data cabling and some data jacks once used in the First floor Meeting room when it served as a library has been concealed loose above the suspended ceiling. This cabling needs to be disconnected and removed under any renovation. This wiring and corresponding data jacks appear to be in excellent condition and perhaps they may be reused.

The existing observed building conditions are documented in the following existing conditions survey. The building history and progression of additions and renovations was previously reported in the 1998 Carlson Study and is excerpted here for reference:

> The New Town Hall was completed in November 1835 at a cost of $2,857.85. An additional $2,000.00 was given to the Town by Jane Bailey Kilburn, widow of Capt. Eli Kilburn, for the enlargement and beautification of the Hall. This gift, which was accepted at the 1893 Town Meeting, became a bequest with the death of Mrs. Kilburn several days later. When the addition was made, the architecture was not changed. The interior was improved and frescoed; a gallery was built at the front end of the Second floor and a furnace and other modern convenience were added. The Sterling Town Hall has had a long tradition of civic and community use. From its first construction, the First floor was used for such things as the exhibition hall during the cattle show, graduations, dinners and suppers, singing masters drilling students in the upper hall, antique fairs, and dances, in addition to annual and special Town Meetings.
>
> Later additions of a fire escape and handicapped ramp at the rear and basement doors; remodeling to install handicapped toilets and a code complying stairway to the Second floor have not altered the architectural significance of the building. The exterior remains essentially in tact with an 1893 rear addition designed as an extension to match to existing building. As part of the work, all the second story window sash were changed to a 2/2 light configuration.
>
> The Town of Sterling is fortunate to have this outstanding example of an early, "high Style" Greek Revival design serving as a landmark on the Sterling Town common. Designed and built in 1835 by John Springer, it is the oldest public building in Sterling. This 2 ½ store classic temple front building features four handsome fluted Doric columns built by John Stevenson supporting a simple but heavy dentilated entablature and fully enclosed pediment with a deep coffered ceiling and capped Doric plastered corner posts. The main facade is horizontal flush boarding with the side and rear walls clapboard. With the except of the 1983 addition that gave the building a length of seven bays, the exterior has not changed from its original construction. An original fan shaped louver has been overlaid by a double hung window. The louver was left in the attic and is in good condition awaiting its return to the pediment. The columns site directly on a base consisting of two granite steps bordering the sidewalk.

The general condition of the building is good. The exterior historical appearance of the building although is significantly degraded by several issues including paint finished, aluminum storm windows, aluminum shutters, deteriorating masonry foundations and failing slate roofing.

The exterior wood surfaces are deteriorating from the previous loss of their protective paint finish. In many areas there is a complete paint failure with extensive cracking, spalling and missing paint finishes. Moisture has infiltrated the exterior surfaces in these areas causing significant surface deterioration including splitting of wood siding, cupping and bowing of clapboard, surface mold, swelling and withdrawal of wood fasteners, and further opening of joints between wood boards. Significant build up of paint has also occurred in areas and was observed to be approximately 1/16 inch thick. This represents many successive coats of paint. The total weight of the accumulated paint finish will sometimes be

enough to pull the paint finish from its substrate. Exposed wood surfaces have deteriorated not only from moisture but from ultra-violet radiation which has also degraded the wood surface. It is not certain that the current wood siding can be adequately and reasonably prepared to accept a long lasting paint finish and wood siding replacement may need to be considered. In the interim, a technical specification for the preparation and painting of exterior wood is included Phase IV of this report. In addition previous caulking and joint sealers have also failed due to age and will need to be removed and replaced.

The original brick masonry foundation wall, principally on the South elevation was previously painted in an attempt to prevent moisture infiltration and brick and motar damage. Unfortunately the paint prevented trapped moisture from evaporating from the brick surface. The trapped moisture would then cause brick surface and motar failures evident in the numerous brick spalls, loose, flaking brick surfaces, missing and loose motar and general erosion of the exposed masonry. In areas close to grade moss is growing in the deteriorated motar joints. The original motar appears to be a very light color and of a softer consistency probably from a higher percentage offline in the motar mix. While this type of motar provides good adhesion it is characteristically softer and is less durable in exposed conditions.

Several significant areas of brick damage have occurred particularly at the jambs of the rolling Basement doors from probable accidental, physical contact and appears in at least one location to have been previously repaired.

The condition of the exterior double-hung wood window is serviceable with the previous addition of aluminum storm windows. The storm windows although unsightly protect the original wood windows from the weather. The First floor windows are 12/12 lilted sash and the Second floor is 2/2. The glazing compound is in general poor shape with most areas having broken, loose or missing compound caused by previous weather exposure and the sun's ultraviolet lights. Paint surfaces are also in poor shape possibly from seasonal condensation in the interstitial space and weather. Basement windows are particularly damaged and in many areas are not intact and have been boarded up. The aluminum storms have a unaesthic natural mill aluminum finish and many are missing their screen sash.

The original wooden shutters have been removed and replaced with prefinished aluminum louvers of very poor and non-historical proportion. The original shutter size can be observed by the distinct peeling paint finish on each side of the windows. The paint finish of these aluminum shutters appears to be fading from prolong exposure and corrosion is occurring at the steel drywall type fasteners used to secured the shutters. On the rear elevation (2) shutters are missing and may have been used to replace shutters lost on more prominent elevations. Historically correct shutter size should match exterior window frame height and one-half window frame width, to conceal window when closed.

The slate roof is not all original and has been extensively repaired and replaced over the last 170 years. The current physical condition of the slate is satisfactory with evidence of multiple previous repairs of different slate colors. The slate above the rear stage is of a slightly different color as the predominant original slate color. It appears the original slate was a fading green variety. There also appears to be a blackish moss type growth on the slate tiles that is causing tile to split and delaminate. Based upon the overall age of the majority of the roof it is likely that more and more frequent repairs will be required until the entire roof is replaced.

There are fortunately few flashing points to the roof. The most prominent of which is the copper ridge flashing. The copper ridge is currently serviceable but is also subject to accelerating degradation especially at the fastener locations which are non-copper, causing electrolytic corrosion at the points of attachment. The ridge flashing lap joints were also not well secured or sealed. Metal eave edge flashing is painted and in similar condition to roof ridge.

The wood roof deck has sagged and deflected in areas but does not appear to have done so to the point of structurally impairing its load carrying capacity. In one particular area it appears previous truss repair may have lifted the truss ridge and caused a visible crown along the roof ridge.

There are many other localized and specific deficiencies observed on the building exterior and were identified as follows:

- Base of wood columns at portico are loose and subframe appears to have deteriorated due to previous moisture damage. Wood is particularly vulnerable when in contact with stone or masonry. South facing column joints are widening. Snow is left in contact with wood columns accelerating column deterioration.
- Previous concrete portico slab installation appears to be trapping moisture at wood column base because slab was installed higher than column base stone.
- Failed sealant joint at concrete portico slab to wood base board. It appears concrete was poured adjacent to original wood base trim.
- Flush wood siding on front (West) elevation is cupping or ridging at joints due to swelling with moisture.
- North West corner of roof eave has heavy water damage with rotting/falling wood trim.
- No flashings observed on projecting column capitals but should be present and should be further inspected.
- Failure of most previous joint sealers due to age and differed maintenance.
- Original portico light fixture is missing, replaced with exposed floodlight lamp that is unsuitable to quality of building.
- Front entrance doors were replaced with 36 inch door and sidelight for accessibility.
- Front handrails have some surface rust.
- Exit door from interior stair is deteriorated at base due to moisture, metal plates have been installed to reinforce door but will continue to trap moisture and damage door.
- Concrete areaway at exit door is cracked and spalling. Areaway is subject to snowfalls from roof and will block exit door. Metal railing has surface corrosion.
- Basement window sills in proximity to ground are fully rotted.
- Steel fire escape has surface corrosion especially near joints and edged. Steel supports are in contact with ground and subject to prolong moisture contact. Top rail of fire escape is 36" high, current code would require 42" guard rail.
- Rear (East) accessible entrance door has poorly repaired jamb near sill. Door is not original or historically accurate. Light fixture near door is loose.

- Second floor Stage door opening has been previously infilled with wood siding to prevent door usage.
- North East corner board of building has been cut and partially removed. Missing piece store at Building.
- North (Maple Street) Basement windows have dirt and moss growing into windows.

In regards to site condition, the lot area is very small and available site area is very constrained. The condition of the asphalt pavement is fair and will require future repairs particularly on South side subject to poor drainage and frost heaves. Repairs to existing deteriorated asphalt and paving of rear drive could be coordinated to occur with a proximate Town paving project. There appears to be an asphalt patch on South side of building where previous excavation occurred. Available parking on-site is also limited and by itself could not satisfactually serve the building. This is further exacerbated by dangerous snow and ice falls from the building roof. Snow falls were observed to be blocking both stair exit doors and fire escape and broken icicles were observed on North elevation, some a couple of inches in diameter.

Street snow plowing deposits large amounts of snow along North elevation and prevents parking near the building and possible car damage from snow and ice falls. At one time this snow deposit was observed to have been built up over six feet high and was in contact with the building. This is certainly damaging the wood framed and sided building and needs to be prevented in the future. The boiler make-up air vent is also located in this area and is obstructed by snow at times.

The rear of the building contains a concrete access ramp in good condition with only minor cracking, steel handrails with failing paint and surface corrosion, and a stone retaining wall with broken mortar joints and broken concrete capstone. There is also concrete parging over the granite foundation that is spalling.

Other observed site conditions area as follows:

- Poor drainage and puddling near basement rolling doors.
- Front (Main Street) sidewalk did not curb cut at cross walk.
- Electrical meter as blocked/obstructed by large snow pile.

The Site

The observations made are not intended to address or include any geological conditions or site stability information. For information concerning these conditions, a soils engineer should be consulted. Any reference to grade is limited to only areas around the exterior of the exposed areas of foundation or exterior walls. The observations were visual in nature and do not attempt to determine drainage performance of the site or the condition of any underground piping, including municipal water and sewer service piping or septic systems. Areas too low to enter, or in some other manner not accessible, are excluded from the inspection and are not addressed in the report.

The grades adjacent to the perimeter of the building were snow covered at the time of this reporters visit. Therefore, the adequacy of drainage away from the building could not be determined. Another aspect of the grading adjacent to the building that could not be determined was the proximity of grade to the exterior wood structure.

The Exterior

Areas hidden from view by the exterior finish, vegetation, or stored items cannot be judged and are not a part of the observations made. The original structure has an exterior of wood siding. The condition of the siding appears to be in generally poor condition due to peeling paint. The exposed wood has weathered to the point that it may not be appropriate to only repaint the building. Additional preparation of the wood will be required and may not provide the necessary bonding of the paint to the wood.

An exterior metal fire escape is located at the right rear of the building and was visually inspected from the top of the grade to the upper landing. The condition of the steel framing members of the stairs is in generally good condition. The portion of the stairs that is not in compliance with acceptable engineering practice is the attachment to the building. The stair does not appear to be designed as a freestanding assembly, and no attachments to the building were observed for the upper half of the structure. The handrail at the upper landing is not attached to the building. There is a large gap between the upper landing and the exiting doorway. The attachments of the stair to the building at the lower half of the building are questionable. The spacing of the vertical balusters is not in compliance with current code. The connection and condition of the stair stringers to the foundation needs remedial work (i.e. cleaning, painting, etc.). The foundation for the stairs was not observed and it cannot be determined if it is adequate. The depth of the foundations was not determined to verify if frost protection is provided.

Along the right side of the building, there are two large and one small opening for access to the basement from grade as well as two windows. The two large opening have slide by wood doors. Between the doors are brick walls/piers that are in need of remedial work. One of the piers is bowing and both need re-pointing and brick repair. The small door has been infilled with plywood.

Observing the roofline from grade, the ridgeline is uneven and a hump appears at the approximate location of one of the trusses. Unevenness of the roof plane was also observed. This unevenness can be contributed to the size and spacing of the roof rafters as well as the condition of the roof rafters and long-term deflection. Further investigation of the ridgeline and roof rafters should be undertaken from within the buildings attic space. Undersized rafters will need to be replaced during renovations based on required loads of the Commonwealth of Massachusetts State Building Code.

The Interior
The interior foundation walls were observed from the basement. The existing foundation walls consist of mortared rubble stone, brick and cut granite. The mortared rubble stone that was observed appeared to be in generally good condition. Additional concrete block piers and reinforcing of existing brick piers have been installed in the past. With the addition of new concrete block piers, additional wood beams were also installed in order to strengthen the framing for the first floor.

There is an interior brick wall within the basement approximately 1/3 forward of the rear wall. This brick wall is in need of repointing and brick repair.

Very little of the first floor framing was observed from the basement. At some time in the past, a gypsum board ceiling was attached to the underside of the wood framing. The additional wood beams that were mentioned above were apparently installed to strengthen the existing wood floor joists. Verification of the connection between the existing floor joists and the new wood beams was not conducted because the gypsum board ceiling was installed. The floor joists need to bear directly on the wood beams in order to provide additional support. If gaps exist between the joists and beams, the floor joists can deflect vertically until the gap decreases to zero, thus floor movement can occur and cause cracks in wall finishes.

The second floor framing was observed by moving sections of the suspended ceiling. The wood floor joists that were observed appeared to be in generally good condition. The steel beams supporting the second floor joists were observed from the rear office area of the first floor. Steel columns support the steel beams. The steel framing appears to be in generally good condition.

The portion of the roof framing open to view was observed from the balcony. A majority of the roof framing was hidden behind ceiling. The only framing that was observed over the main portion of the building were the steel tie rods and cables that resist the horizontal forces of the timber trusses and the intermediate horizontal timbers, also part of the timber trusses. The connection of the cables and tie rods to the timber framing was hidden behind the gypsum ceiling.
Proceeding through a window opening, observations of the attic framing above the entry alcove were conducted. The framing consists of heavy timber framing supporting roof rafters and ceiling joists. Most of the timbers have splits and checks, none of which seemed abnormal for the age of the building. Most of the pegged joints appeared tight.

Report review
A review of the existing reports provided by the owner indicates that the building had structural assessments in the past. The reports that were supplied consist of the following:

1. Interim Report, Horizontal Tie Replacement, Sterling Town Hall, Sterling, Massachusetts, prepared by Harvey & Tracy Associated, Inc, Worcester, MA dated August, 1987.
2. General Structural Assessment, Framed Floors, Existing Town Hall, Sterling, MA prepared by Harvey & Tracy Associated, Inc, Worcester, MA dated August 29, 1997.
3. Town Hall, Historical Commission, Town Hall Committee, Library Building Committee, prepared by Mr. Paul DeSalvo, Professional Engineer dated February, 2002.

There are questions regarding the installation of the ties noted in the Interim Report by Harvey & Tracy Associates. The report states that three of the four tie rod assemblies "... do not appear to be structurally adequate for code mandated loads..." Also in Part VI – Recommendations, the report states "New tie rod assemblies should be designed and installed to replace all of the existing tie assemblies including the ones recently installed." I was informed verbally that the ties were redesigned and installed, but at the time of this report I do not have any documentation that this work was completed.

Conclusion

The main components of the structure are in good overall condition. The tie rod/cable assemblies need further investigation to determine adequacy and compliance with the Building Code. In order to accomplish the engineering for the ties, additional investigation is required. Access to the existing connection will require the removal of the gypsum ceiling that is now covering the joint. In addition to the work required for the ties, further investigation of the attachment of the fire escape stairs to the building will be required. Allowing access to the framing within the wall is necessary to determine how the stairs can be attached to the building. Re-painting of the building will be covered in the Architectural portion of the report.

We have determined that the framing for the building can sustain the loads required by the Commonwealth of Massachusetts State Building Code, Sixth Edition for the following:

- Office (excluding high density filing systems)
- Educational
- Assembly (without impact loads)

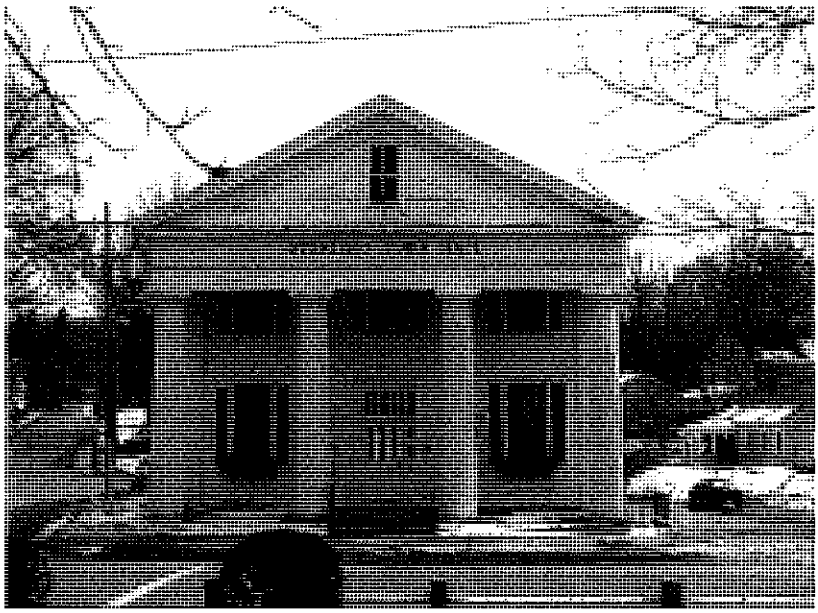
In Closing
This report has been provided as a general guide to help the client make hid/her own evaluation of the overall condition of the property, and was not intended to reflect the value of the property.

Report Limitations
This report is intended only as a general guide to help the client make his own evaluation of the overall condition of the property, and is not intended to reflect the value of the premises. The report expresses the personal opinions of the reporter, based upon his visual impressions of the conditions that existed at the time of the site visit only. The observations and report are not intended to be technically exhaustive, or to imply that every structural component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation was performed. All components and conditions, which by the nature of their location are concealed, camouflaged or difficult to inspect, are excluded from the report. No physical testing was performed to determine the adequacy of the structural system.

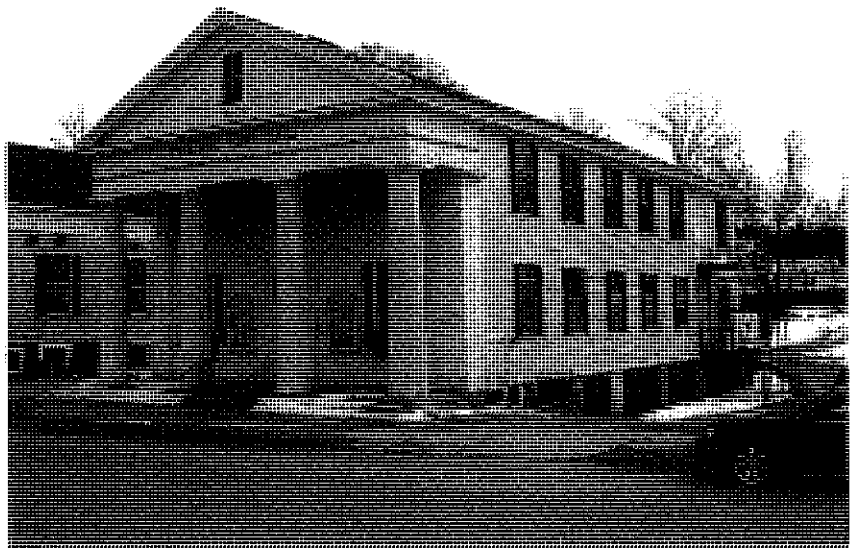
The systems and conditions that are not within the scope of the structural assessment include, but are not limited to the following: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards; pest infestation, playground equipment, efficiency measurement of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity) zoning ordinances; intercoms; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

This report should not be construed as a compliance inspection of any governmental or nongovernmental codes or regulations. The report is not intended to be a warranty or guarantee of the present or future adequacy or performance of the structure, its systems, or their component parts. This report does not constitute any express or implied warranty of merchantability or fitness for use regarding the condition of the property and it should not be relied upon as such. Any opinions expressed regarding adequacy, capacity, or expected life of the structural components are general estimates based on information about similar components and occasional wide variations are to be expected between such estimates and actual experience.

Neither EDA nor any of its representatives have any interest, present or contemplated, in this property or its improvement and no involvement with trades people or benefits derived from any sales or improvements. To the best of our knowledge and belief, all statements and information in this report are true and correct.



MAIN STREET (WEST) BUILDING ELEVATION

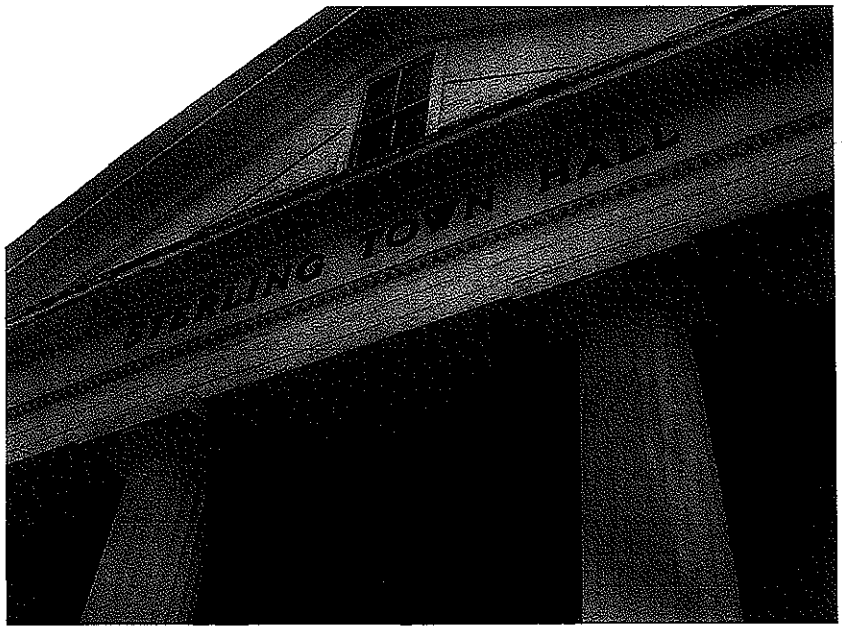


MAIN STREET (SOUTHWEST) BUILDING PERSPECTIVE

SOUTH BUILDING ELEVATION

EAST BUILDING ELEVATION

MAPLE STREET (NORTHEAST) BUILDING PERSPECTIVE



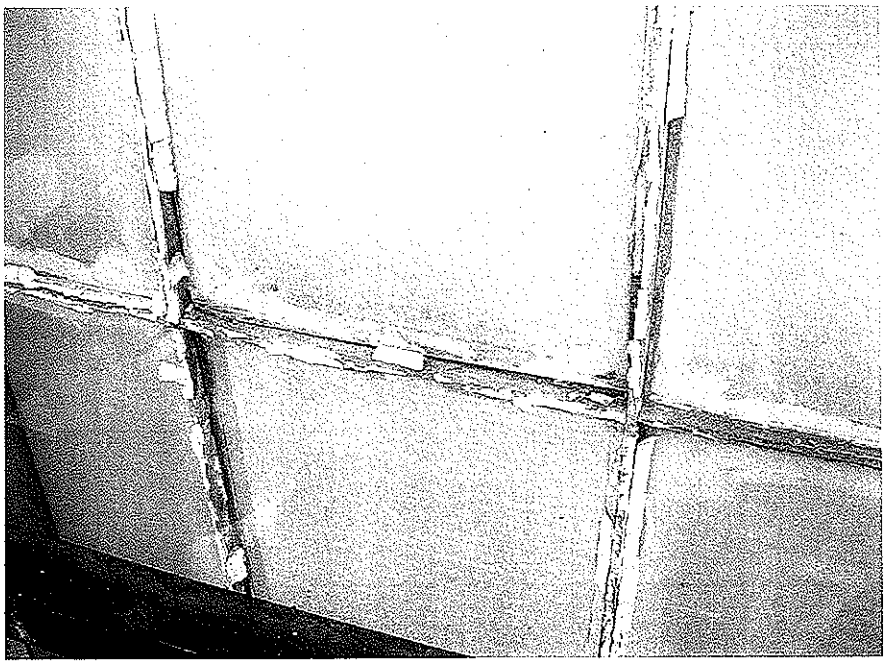
MAIN ENTRANCE PORTICO

STAIR EXIT DOOR AND AREAWAY

- Door Boarded Up and Steel Plate Added
- Cracked Concrete Wall
- Rusting Metal Railing
- Broken Basement Window Boarded Up
- Brick Missing Upper Right of window Opening

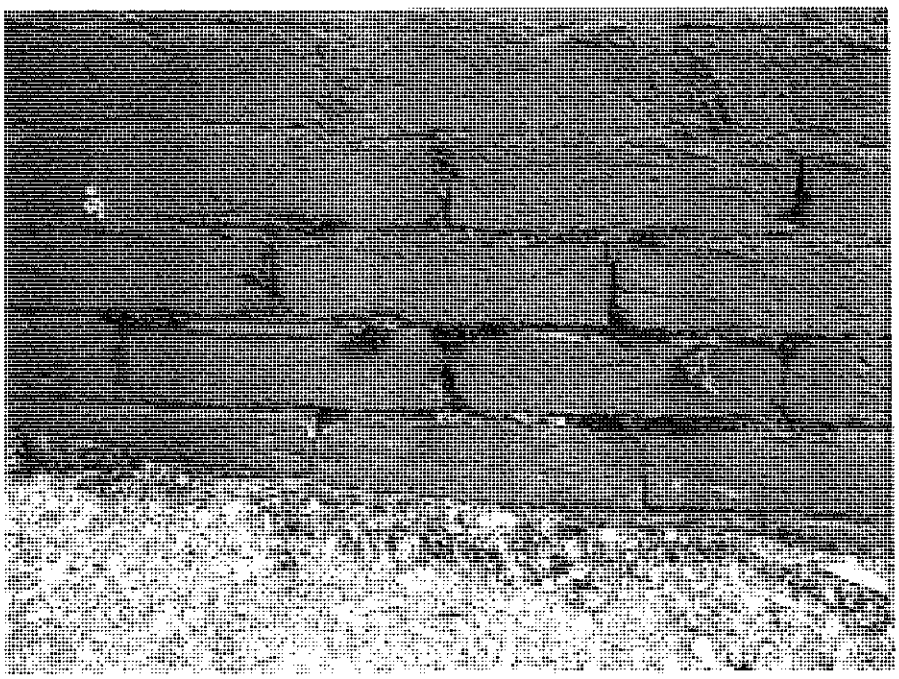
BASEMENT WINDOW SOUTH ELEVATION

- Rotted Wood Window Sill
- Paint Failure at Window
- Broken / Missing Glazing Putty



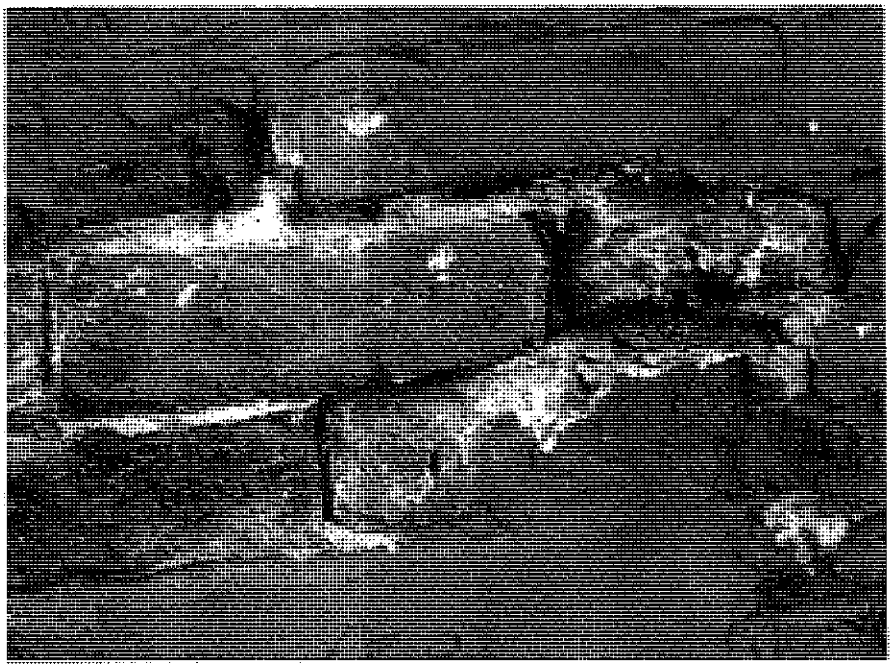
FIRST FLOOR WINDOW SOUTH ELEVATION

- Broken / Missing Glazing Putty



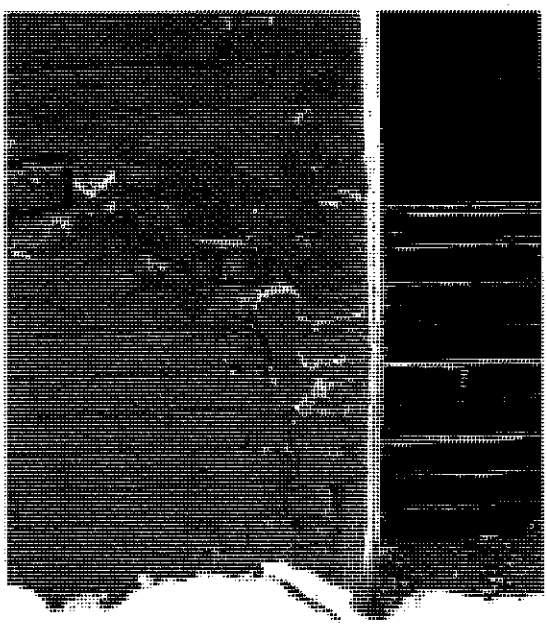
FIRST FLOOR WINDOW SOUTH ELEVATION

- Moss Growing in Mortar Joints



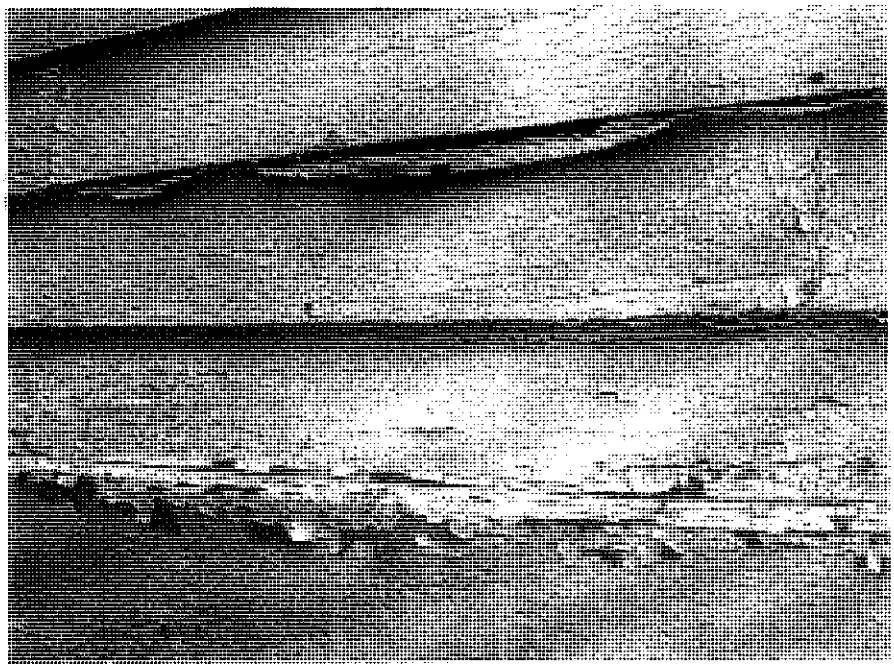
BRICK FOUNDATION SOUTH ELEVATION

- Spalled Deteriorated Brick
- Deteriorated / Missing Mortar



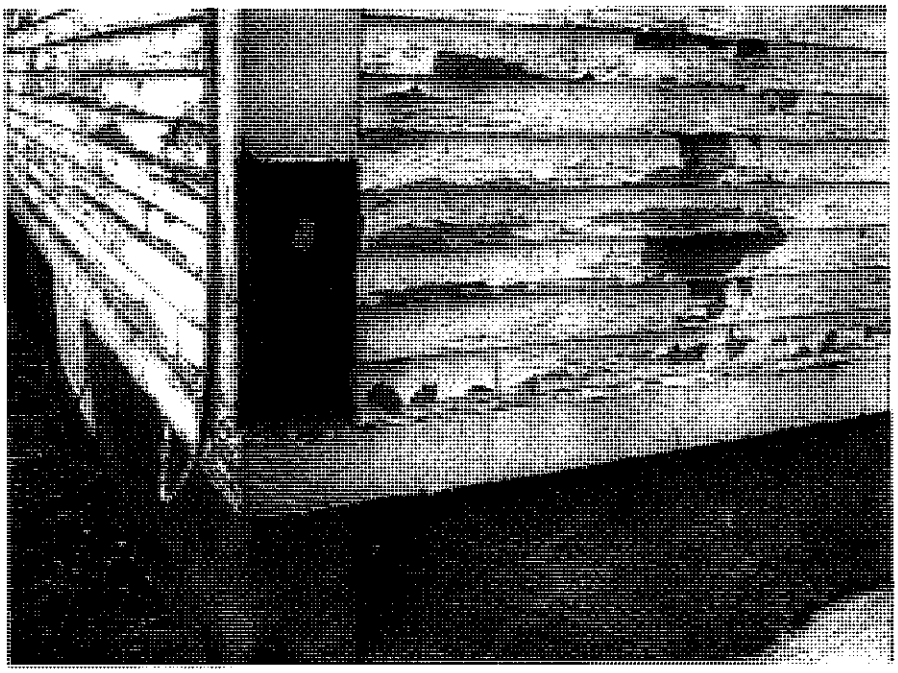
BRICK FOUNDATION SOUTH ELEVATION

- Broken Previously Repaired Masonry Jamb
- Cracked Broken Masonry
- Deteriorated / Missing Mortar
- Typical of (2) Doors



WOOD SIDING SOUTH ELEVATION

- Cracked, Crazed, Peeling, Curling Paint Failure

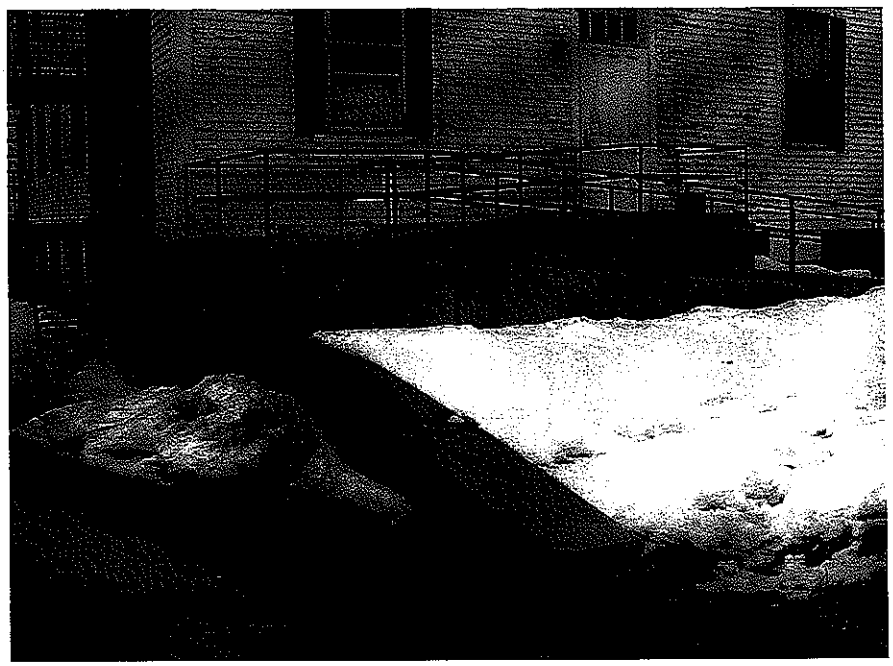


WOOD CORNERBOARD / SIDING NORTHEAST BUILDING CORNER

- Paint Failure at Clapboard Siding
- Missing Cornerboard Trim

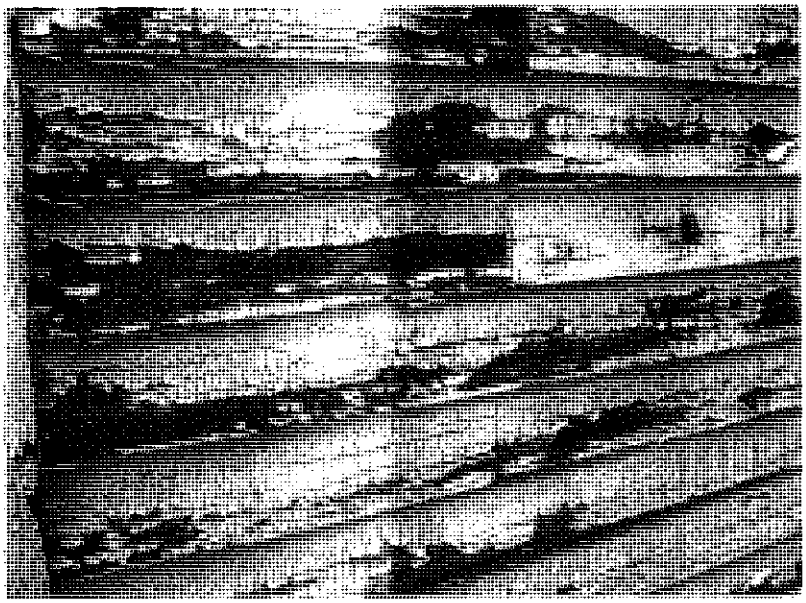
STEEL FIRE ESCAPE

- Steel Supports in Contact with Ground
- First Floor Door Boarded Up
- Non-Historical Light Fixtures



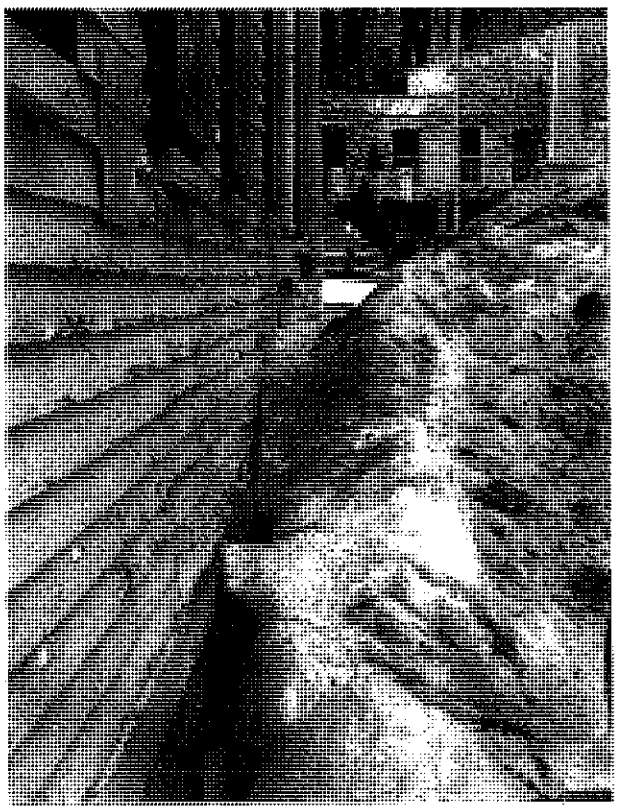
STONE / CONCRETE RETAINING WALL

- Broken Concrete
- Exposed Reinforcing Bar
- Loose / Broken Stone Mortar Joints



WOOD SIDING NORTH ELEVATION

- Cracked, Crazed, Peeling, Curling Paint Failure



NORTH ELEVATION SNOW PILE

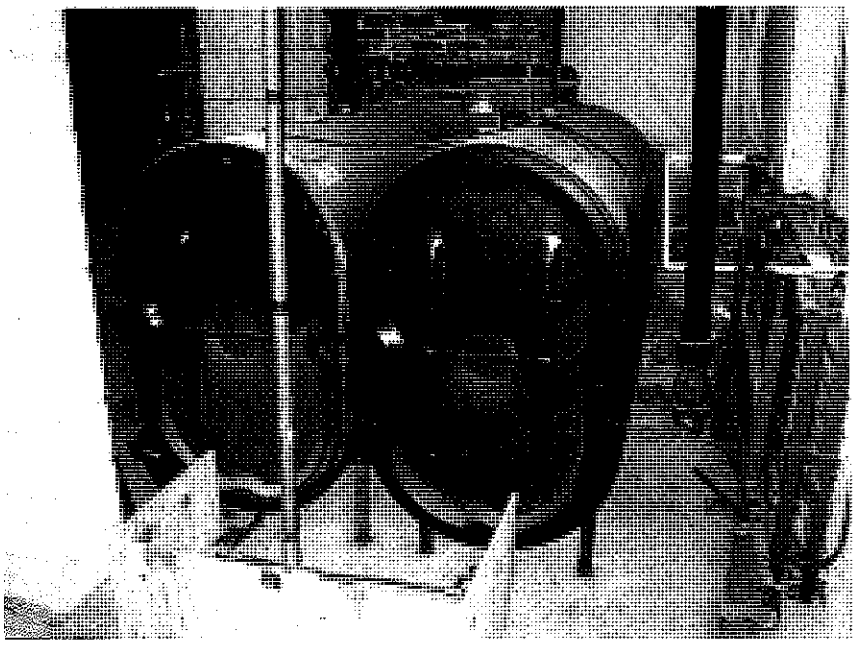
- Snow Pile Obstructing Electric Meter
- Snow Pile Obstructing Boiler Air Intake

MAIN ENTRANCE PORTICO
- Recess Granite Below Columns

NORTH PORTICO ELEVATION
- On-Going Corner Capital Repairs

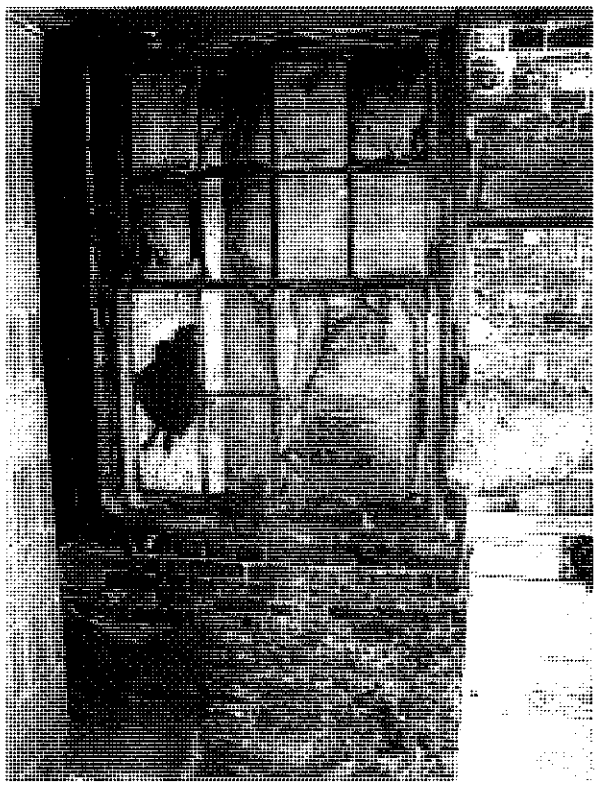
BASEMENT BOILER ROOM

- Open Concrete Floor Slab



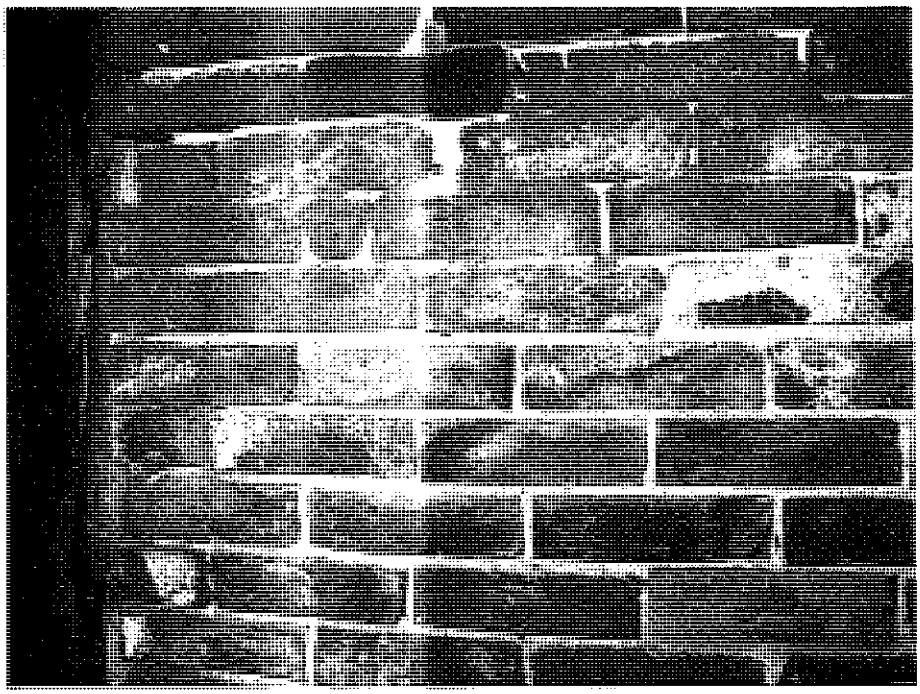
BASEMENT FUEL OIL TANKS

- Plywood Protection Skirt at Exposed Piping and Valves
- Existing Sewer Entrance
- Newer CMU Structural Piers (Left)
- Mattress to Block Basement Window Opening (Upper Right)



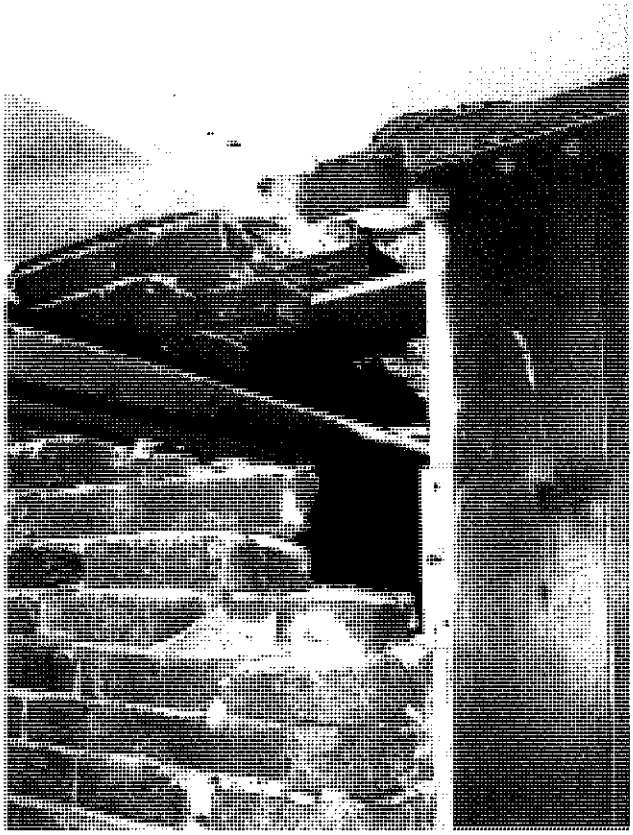
BASEMENT WINDOW

- Broken, Deteriorated Wood Window
- Moisture Damage at Masonry below Window

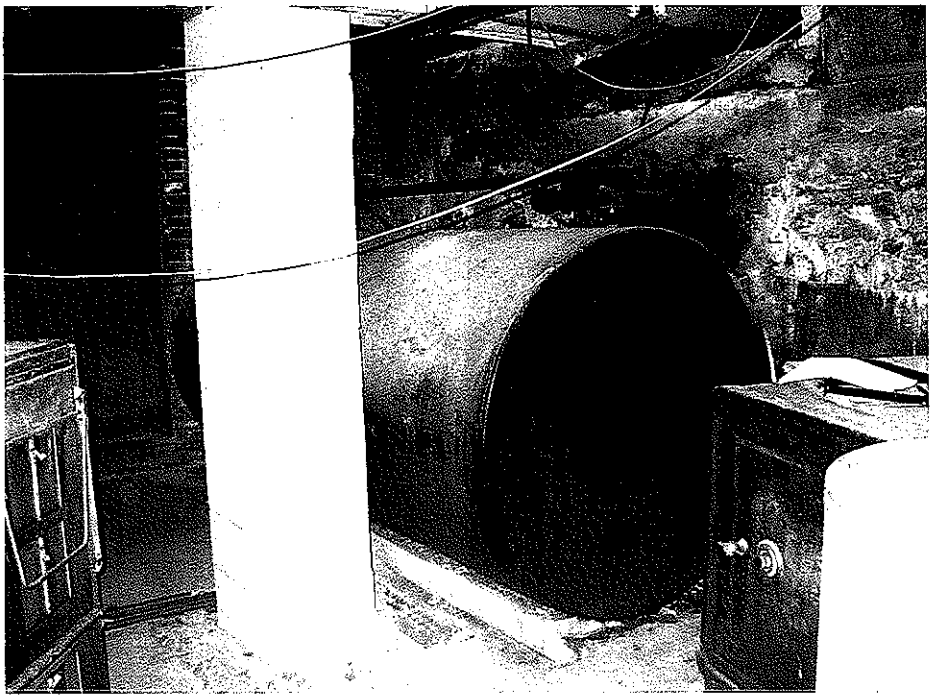


BASEMENT BRICK INTERIOR BEARING WALL

- Deteriorated and Missing Mortar

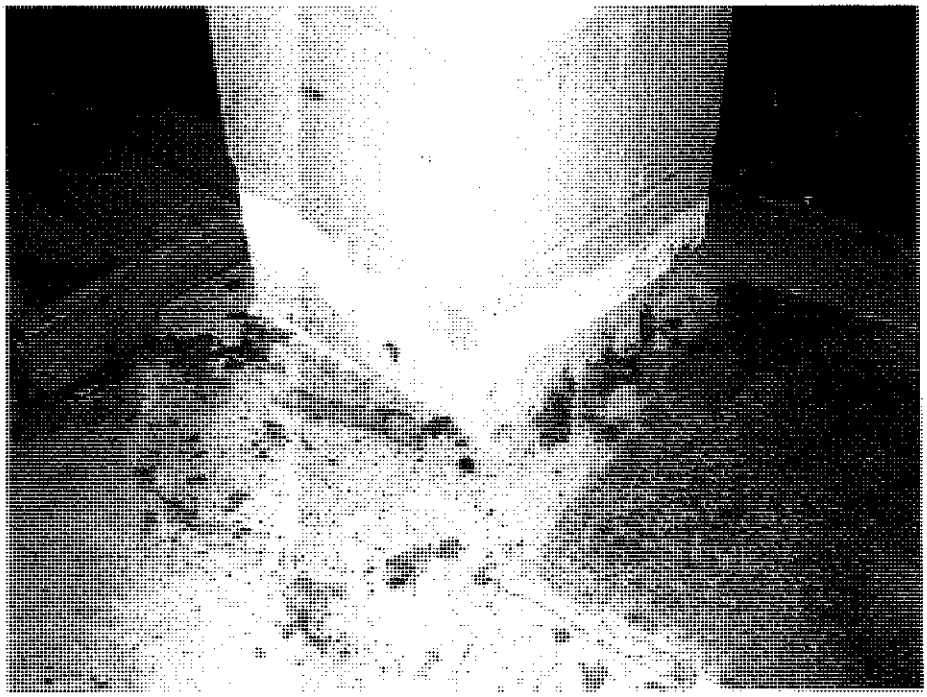


BASEMENT BEARING WALL
- Brick Removed for Pipe Installation
- Missing / Deteriorated Mortar



BASEMENT ABANDONED FUEL OIL TANK
- CMU Supplemental Pier
- Rubble Stone Foundation Intact

BASEMENT COLUMN REPAIR
- Deteriorated Brick Pier
- Supplemental CMU Pier



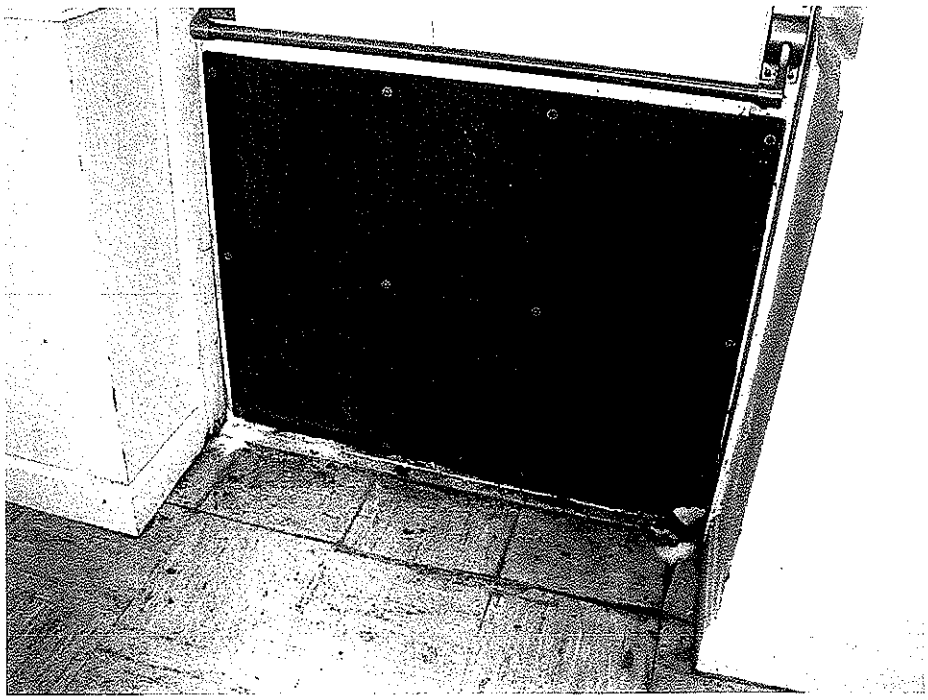
BASEMENT COLUMN REPAIR
- Supplemental CMU Pier
- Efflorescent Staining from Previous High Water

FOUNDATION WALL AT BASEMENT STAIR

- Missing and Deteriorated Mortar Joints
- Missing, Flaking Paint

STAIR EXIT DOOR

- Plywood Covered Door
- Rusting Steel Plate Reinforcing
- Moisture Damage, Buckling Vinyl Til



EXIT STAIR

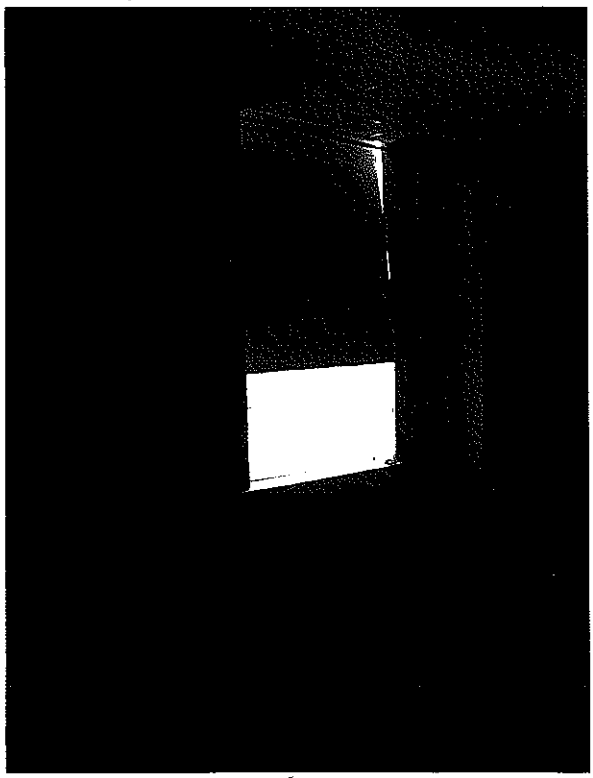
- Loose, Spalling Paint
- Vinyl Stair Treads and Risers

FIRST FLOOR MEN'S ROOM

- Non-Accessible / Compliant Toilet Accessories

FIRST FLOOR MEETING ROOM

- Previous Installed Suspended Ceiling / Lighting
- Previous Installed Wood Wainscoting and Doors
- Original Wood Columns

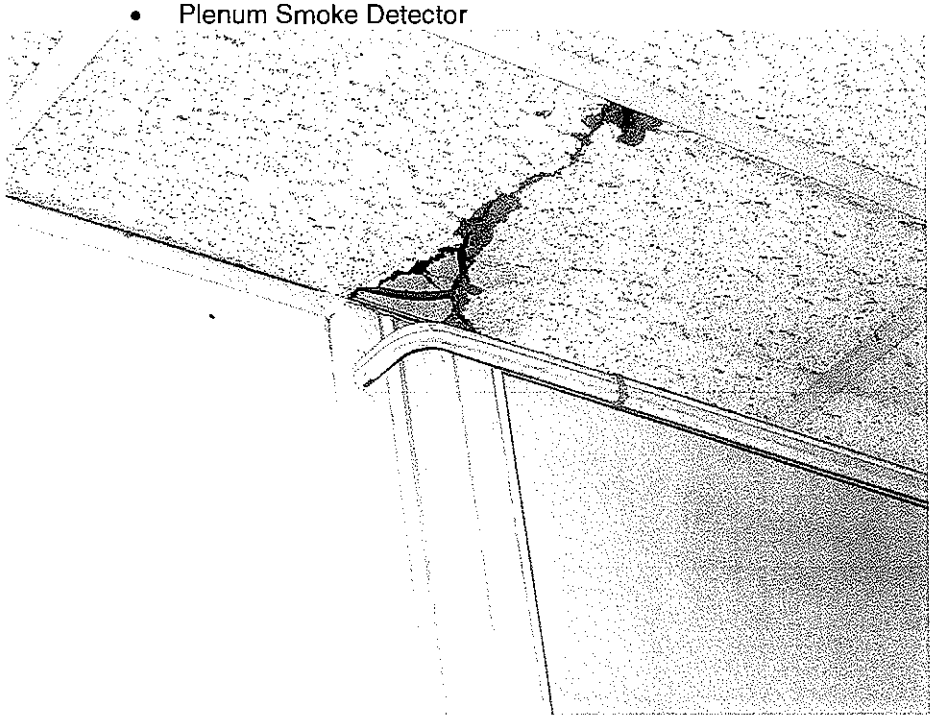


FIRST FLOOR MEETING ROOM

- Suspended Ceiling Bisects Glass Window

FIRST FLOOR MEETING ROOM CEILING PLENUM

- Previously Installed Suspended Ceiling / Lighting
- Remaining Furring from Original Ceiling Finish
- Original Column Capital Concealed Above Ceiling
- Loose Electrical Wiring
- Plenum Smoke Detector

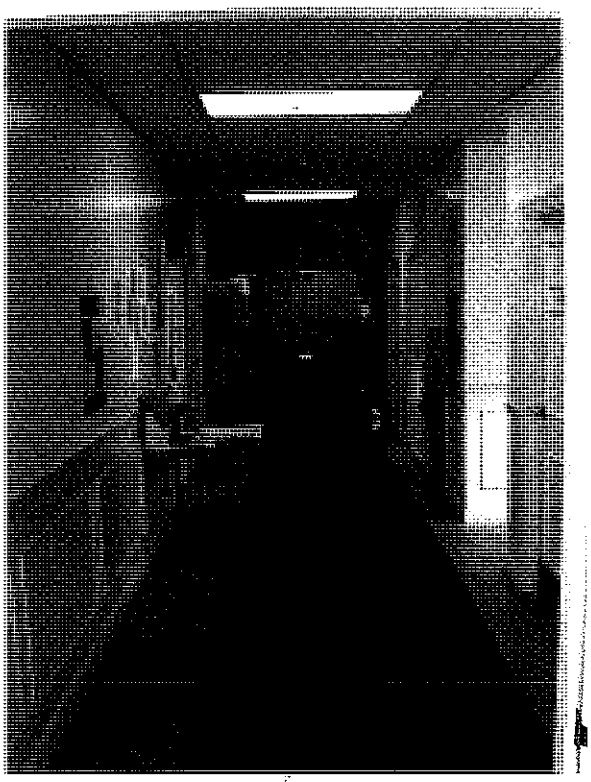


FIRST FLOOR MEETING ROOM WINDOW HEAD

- Wood Window Trim at Suspended Ceiling
- Suspended Ceiling Bisects Glass Window

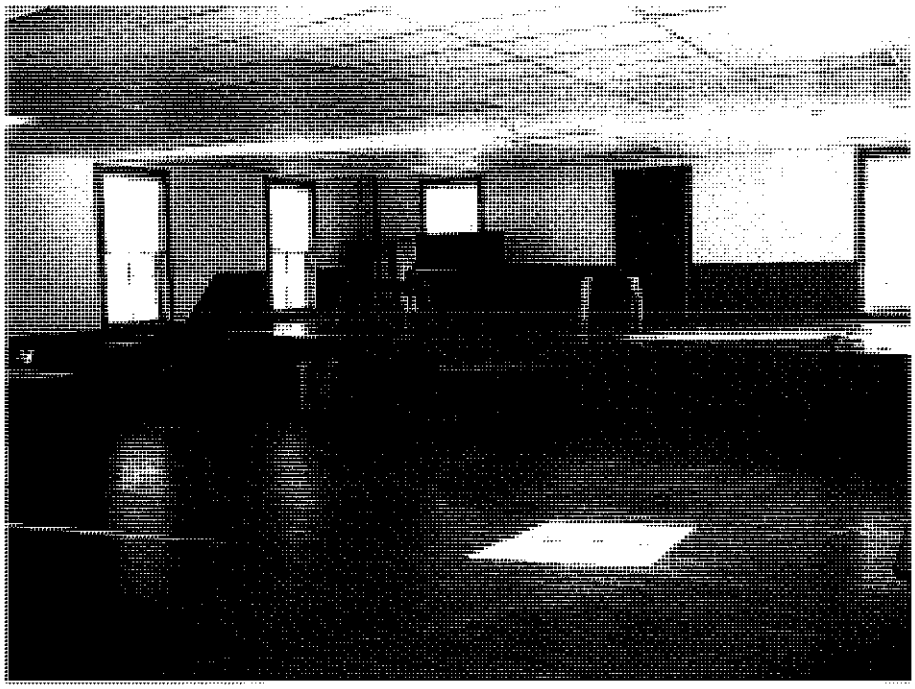
FIRST FLOOR OFFICE

- Previous Newer Finishes Include Gypsum Wallboard, Suspended Ceiling, Lighting, Chairrail, Door, Carpeting



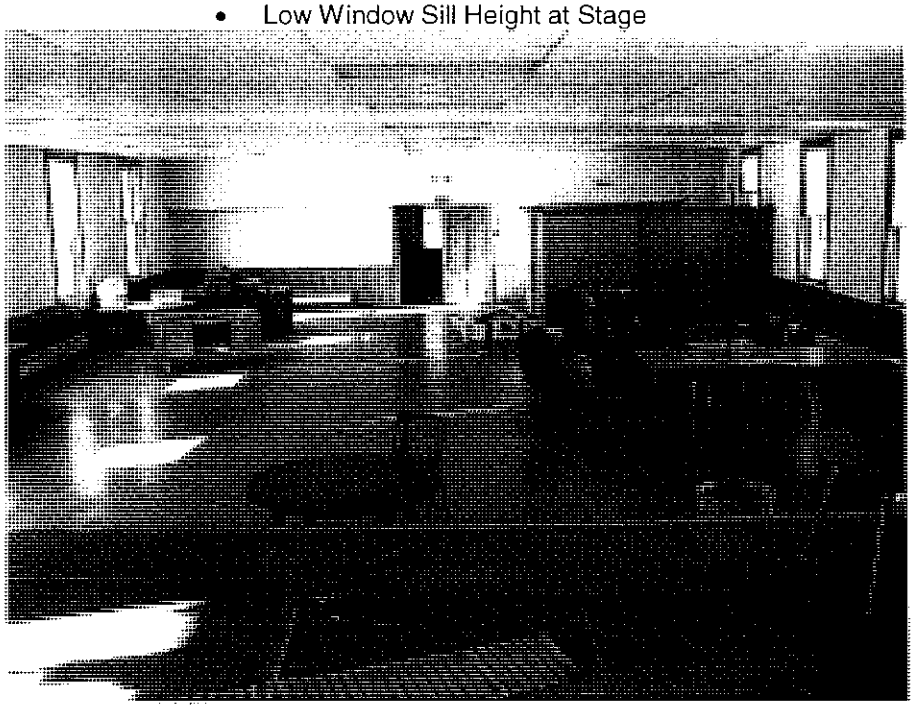
FIRST FLOOR CORRIDOR

- Previous New Finishes Include Gypsum Wallboard, Suspended Ceiling Lighting, Wainscoting, Doors, Vinyl Tile Flooring



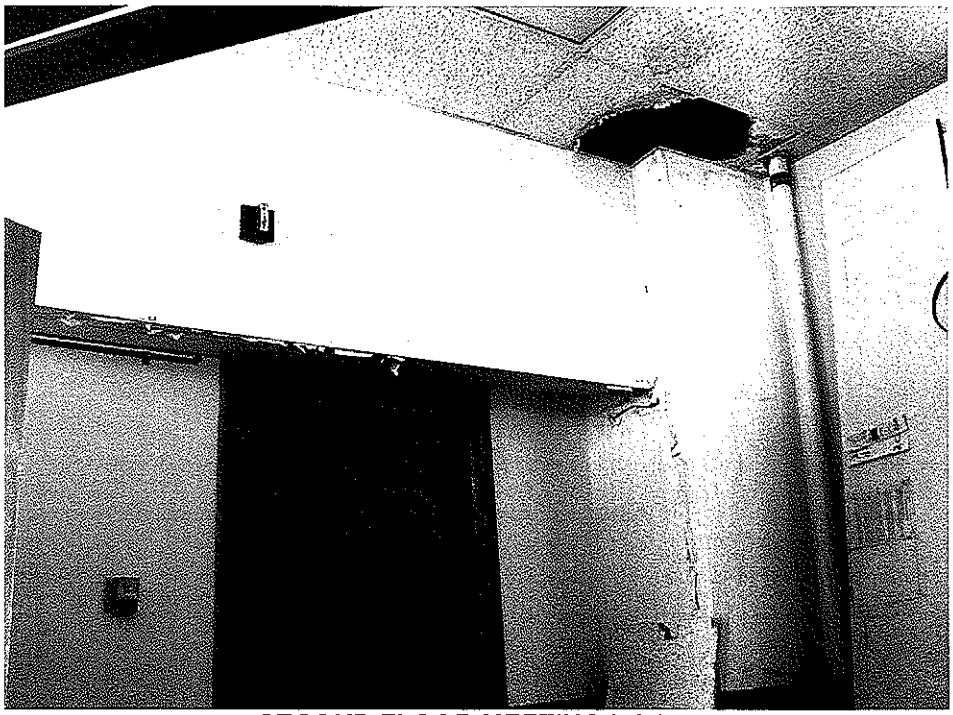
SECOND FLOOR MEETING ROOM / STAGE

- Previous Installed Suspended Ceiling / Lighting
- Low Window Sill Height at Stage



SECOND FLOOR MEETING ROOM / STAGE

- Previous Installed Suspended Ceiling / Lighting
- Temporary Wood Partitioning
- Previously Installed Perimeter Hydronic Baseboard

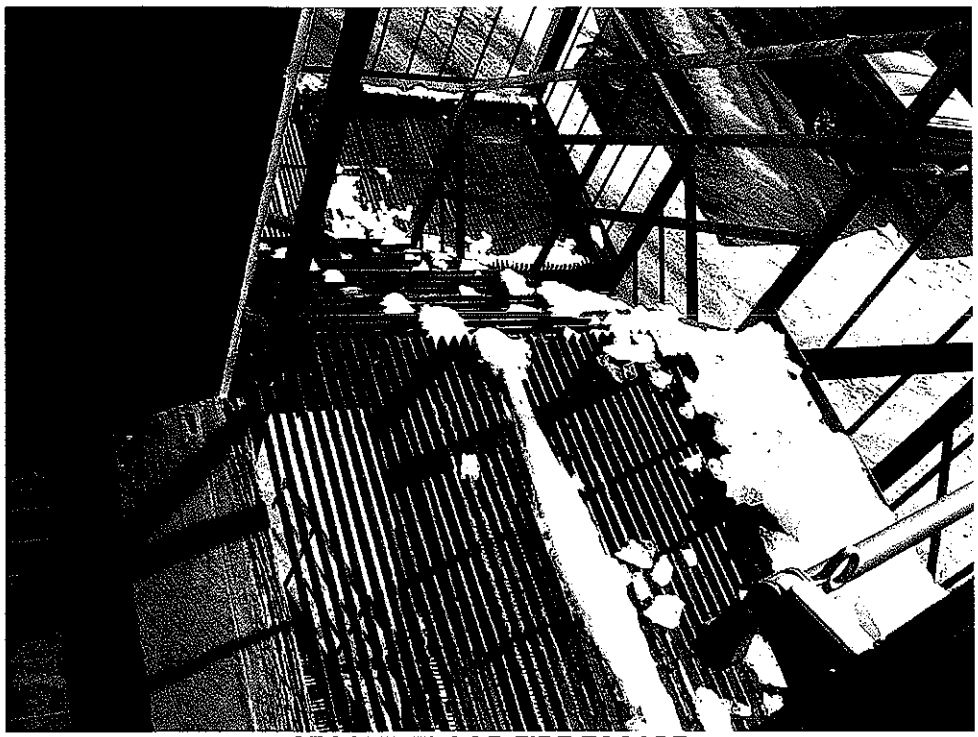


SECOND FLOOR MEETING ROOM

- Previous Water Damage Near Chimney

SECOND FLOOR FIRE ESCAPE EXIT DOOR

- Moisture Damage at Lower Door
- Wood Wainscoting
- Previously Installed Hydronic Baseboard

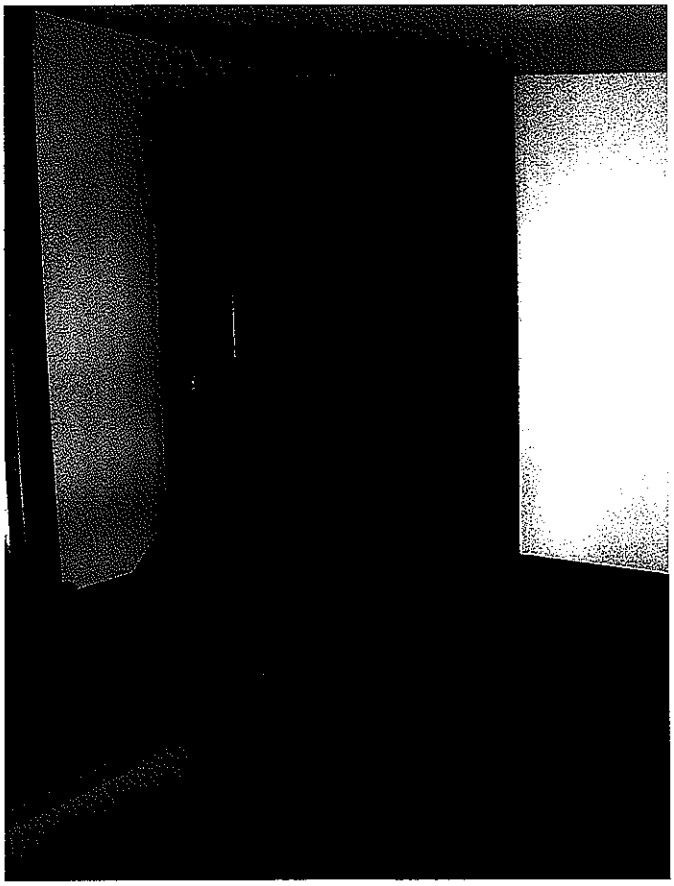


SECOND FLOOR FIRE ESCAPE

- Snow and Ice Falls from Roof Obstructing Exit
- Wood Will Partially Rotted

SECOND FLOOR OFFICE

- Probable Vinyl Asbestos Floor Tile

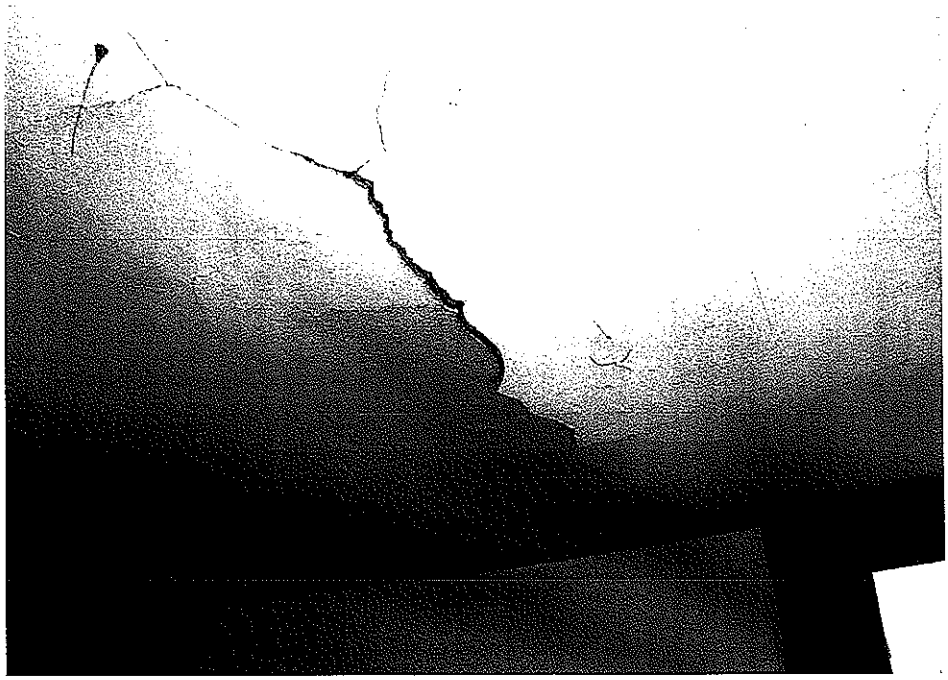


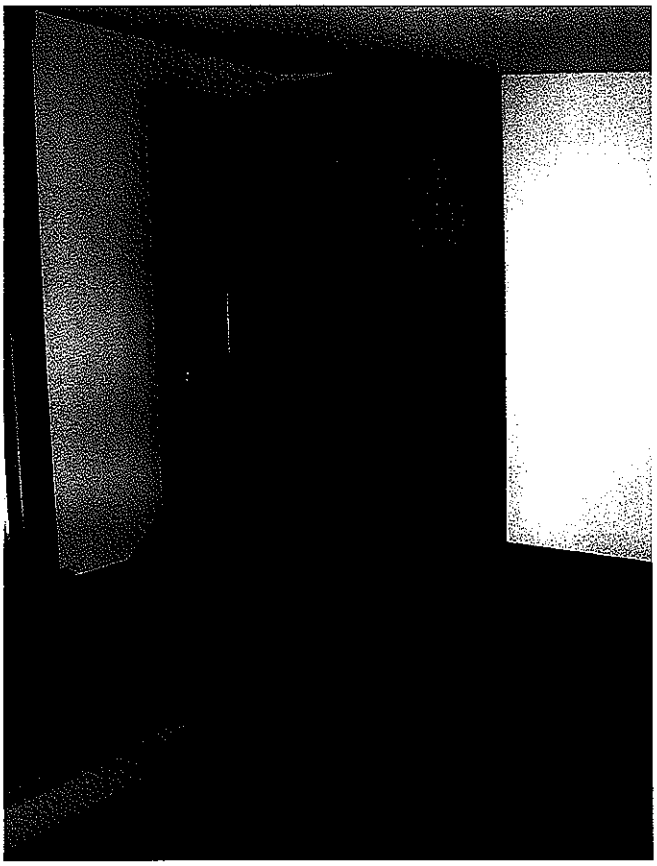
SECOND FLOOR BALCONY STAIR

- Cracked Plaster Ceiling in Lobby Area
- Exterior wall Cored Openings for Previous Blown-In Insulation

SECOND FLOOR LOBBY CEILING

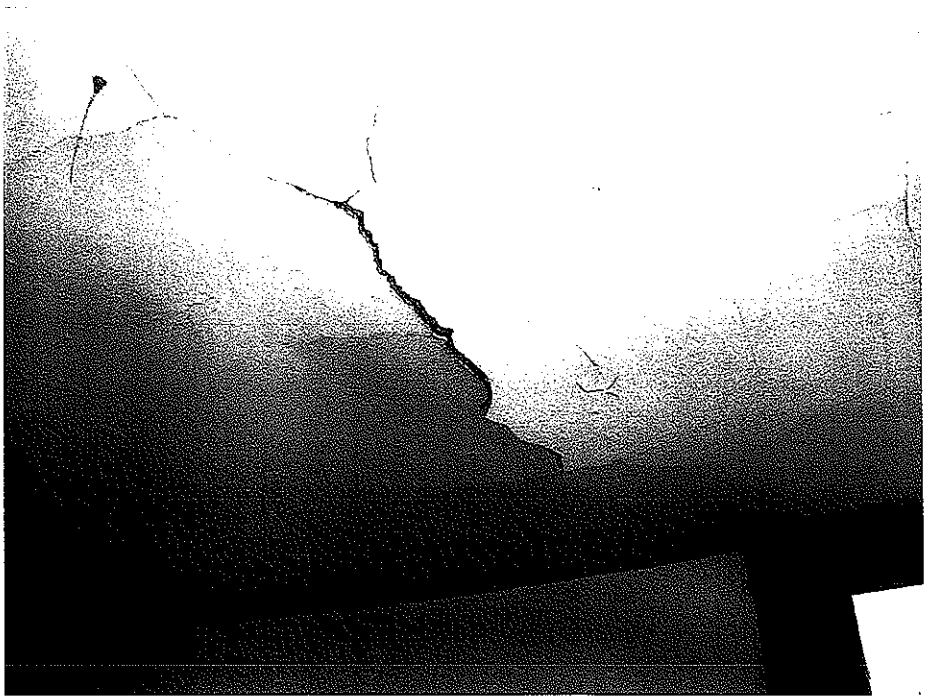
- Cracked Plaster





SECOND FLOOR BALCONY STAIR

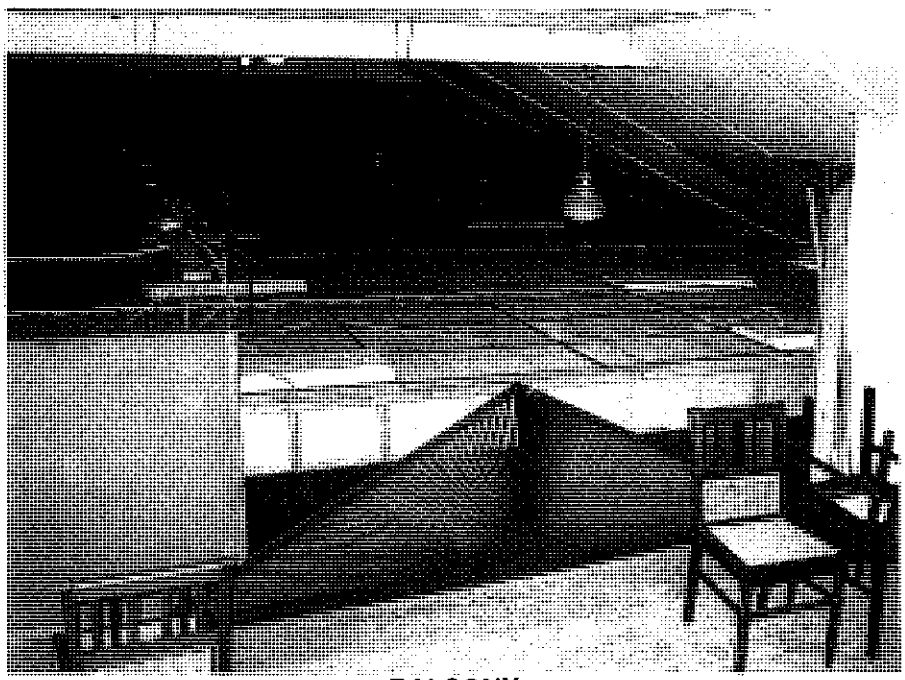
- Cracked Plaster Ceiling in Lobby Area
- Exterior Wall Cored Openings for Previous Blown-in Insulation



SECOND FLOOR LOBBY CEILING
Cracked Plaster

BALCONY

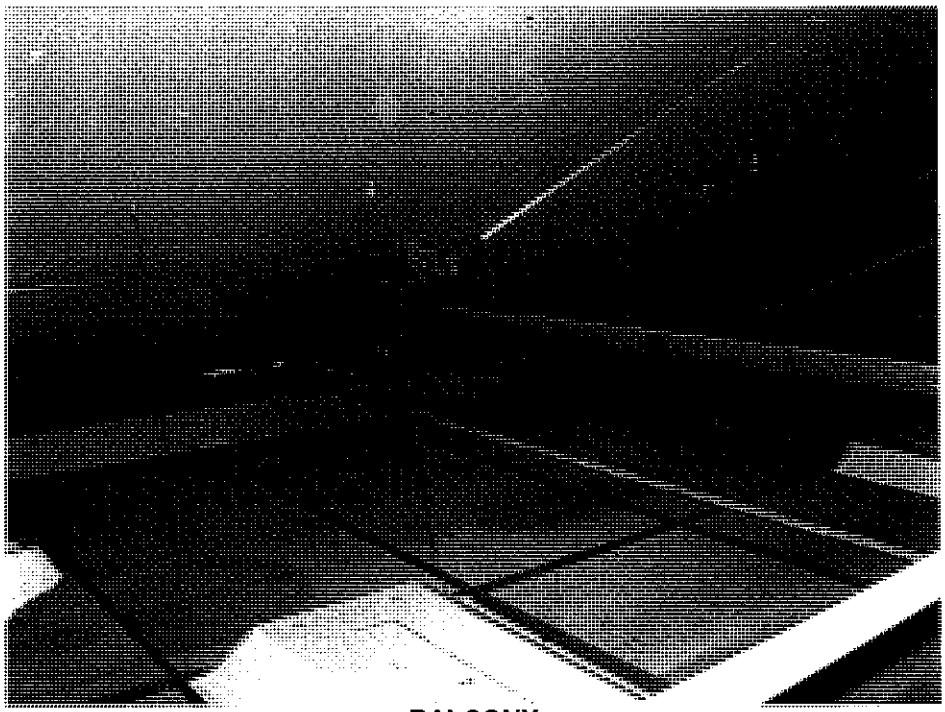
- Board and Batten Ceiling
- Original Stepped / Tiered Floor



BALCONY

- Original Ceiling Above Suspended Ceiling
- Original Type Light Fixtures

Timber Truss Tie Rod and Cable Repairs



BALCONY

- Truss Tie Rod Repair
- Gypsum Board Repair of Original Wood Board / Batten Ceiling

BALCONY

- Previous Roof Leak / Damage Near Chimney

Domestic Cold Water System:

The existing Domestic Cold Water Service is a three-quarter inch (3/4"), which enters through the basement foundation wall on the Northwest side of the building. A three-quarter inch (3/4") water meter and pressure regulating valve are installed on this cold water service line. The water service line is not equipped with a backflow prevention device. At the time of installation a backflow prevention device was not required.

The present Massachusetts Plumbing Code 248 CMR states "A portable water supply system shall be designed, installed and maintained in such manner as to prevent contamination from nonpotable liquids, solids, or gases from being introduced into the potable water supply through cross connections or any other piping connections to the system".

In order to insure the protection of the Town water from any cross connections, etc, the installation of a reduced pressure zone backflow prevention device is required.

The existing plumbing fixtures; water closets, lavatories, etc. which are "Grandfathered" do not meet the present plumbing code energy requirements. The existing water closets require three (3) gallons of water per flush, when the new code mandates one and one half (1-1/2) gallons per flush. Faucets sets on lavatories for public use require metering faucets, etc.

The domestic water distribution system presently is approximately fifty (50) percent insulated. The Massachusetts State Building Code 780 CMR, Chapter 13, requires one-inch (1") thick insulation provided for piping carrying fluid having a temperature of 140 degrees F or less.

Sanitary Waste & Vent System:

The existing sanitary waste & vent system as installed is in compliance with the Massachusetts State Plumbing Code that was current at the time of installation. The present Massachusetts State Plumbing Code has adapted more stringent requirements regarding environmental issues.

For example: The present plumbing code mandates that all floor drains be equipped with Trap Primers. Trap Primers are installed on floor drains that do not receive sufficient water to maintain a trap seal. Once the trap seal is lost, do to evaporation; sewer gases will escape to the spaces atmosphere. Trap Primers discharge water to the floor drain trap maintaining the trap seal.

Plumbing System Description:

As stated, under the Code Analysis the facility has a ¾" domestic cold water service, which enters through the Basement foundation wall at the southeast side of the building.

The domestic water piping distribution system is in good condition. Approximately fifty percent of the domestic water piping is insulated.

A 15 gallon electric hot water heater located in the first floor Janitor's Closet is in fair condition. The water heater appears to be approximately eight to ten years old. Average life expectancy for a water heater is eight years. Unit will probably need replacing within the next two years.

The plumbing fixtures throughout the facility are in good condition and meet the handicap requirements. Due to their age, they do not meet the present energy code and unless replaced they do not have to.

The existing water cooler has been removed. The present Massachusetts Plumbing Code requires one water cooler per 1000 occupants. Since the water cooler was included in a previous Building Permit it should be replaced.

Heating System Description:

The heating system consists of two oil fired hot water boilers manufactured by the Weil Mclain Company. The present condition of the boilers is poor to fair. They appear to be approximately fifteen to twenty years old. The average life expectancy of these boilers is twenty years.

Two new 275 gallon double wall fuel oil tanks have been installed which serves the boilers. The fuel supply oil piping feeding the boilers presently has a plywood barrier erected to protect the fuel oil piping from possible damage. This piping arrangement and/or location should be reviewed.

The remainder of the building's heating system consists of hot water piping distribution system, baseboard radiation in the First Floor Office Areas, Toilet Rooms, and Second Floor Meeting Room. The entry and stair areas are heated with hot water convectors. The condition of the baseboard radiation is good; the convectors are in fair condition.

The heating system controls are manufactured by White Rodgers. The existing system has four zones. Thermostats are located in the First Floor Meeting / Multi-Purpose Room, one in each office presently occupied by the fire department, and one for the Second Floor Meeting Room. The control system is approximately five years old. The existing control system has a life expectance of approximately twenty years.

The existing heating system control sequence of operation provides that when the space or zone thermostat calls for heat, its respected zone control valve located in the Boiler Room opens, allowing hot water to circulate through the board radiation. When the space or zone is satisfied the zone valve closes. The Boiler is controlled via an outside reset control. This type of control adjust the hot water supply temperature. As the outside air temperature increases, the hot water supply temperature decreases. When the outside temperature reaches a preset temperature, approximately 60 degrees F., the boiler is disabled.

The fire alarm system is in good condition. All four (4) zones are currently in use, and no additional zones may be used on this conventional zoned system. Some of the manual pull stations appear to be of an older type than others.

Most of the lighting is old and should be replaced. Most of the fluorescent fixtures on the First floor have discolored lenses indicative of ballast seepage typical of aged fixtures. There are cracked lenses on some of the Second floor recessed 2' x 4' fluorescent troffers, and the remaining lenses are thin and often warped. There are also wraparound fixtures with discolored or missing lenses in some parts of the building.

The Basement is lit mainly with inefficient porcelain socket incandescent fixtures. There are many older incandescent fixtures throughout the building and on the exterior which are old and worn and do not match each other. Except for the unused pendant mounted incandescent fixtures above the Second floor suspended ceiling, which also do not match each other, the incandescent fixtures are not "traditional" in appearance and do not enhance the historical aspect of the building.

The wiring to the lights serving the Second floor Meeting room is mostly loose ROMEX wiring, connected in open standard sized junction boxes with so many wires spliced in them that the top faceplate is off, and the wires within all jut out.

The emergency lighting fixtures and remote heads are old. The exit signs are inefficient incandescent fixtures. The Basement exit sign is currently not working. The existing dull yellow emergency fixtures and black exit fixtures are not aesthetically pleasing and detract from the historical aspect of the building.

The power receptacles and wall switches are mostly black, which does not blend in with the surroundings. A few switches are beige, quiet-type, but most are not. There are not nearly enough power receptacles in the office areas, and they are currently supplemented with a number of portable plug strips. There are, however, fairly new surface mounted CAT 5e data jacks, which are in good condition and apparently adequate in quantity.

The utility lines serving the building have three phase power available, but the existing electrical service is 200 Amps, 120/240 Volts, single phase, 60 Hz. The electrical service entrance appears to meet code. However, the service wires from the utility pole are located somewhat close to a second floor window, and could pose a danger, especially if the electrical service is upgraded as will be required for a possible new elevator. The MDP (Main Distribution Panel) is 40 poles with a 200A-2P main circuit breaker and includes, several basement circuits, (2) 30A-2P breakers serving an air conditioner and the old records building, and (2) 100A-1P breakers likely serving a panelboard on the Second floor (and not fuse box(es) as labeled). The MDP feeds through to an adjacent 150A-2P circuit breaker in a separate enclosure serving panelboard on the First floor. There are 19 spaces available in the MDP.

The First floor panel is a recessed 28 pole, 200 Amp MLO (Main Lug Only) panelboard in fair condition, with all poles used for 15A or 20A 120 Volt circuits, except circuit #27 is a spare 20A-1P circuit breaker. The Second floor panel is a surface mounted 24 pole MLO panelboard in good condition with nine (9) 15A or 20A 120 Volt circuits and the rest spaces. The old fuse box(es) are no longer in use.

There is currently no existing sound system and no existing lightning protection system.

Recommendations for repairs and treatment of the 1835 Town Hall are based on four principal and prioritized concerns, (1) repair or correction of discovered code related issues effecting life safety, (2) stabilization of existing building envelope and structure, (3) repairs, renovations and development of Universal Accessibility within the existing Building and grounds, (4), support and/or improvement of the existing Building in its reuse as a Community Center.

The following recommendations have been developed through review, discussions and coordination with the Sterling Town Hall Committee and Sterling Historical Commission. The overriding wish of each of the Committee/Commission is to maintain as much historical accuracy as possible throughout any repairs or renovations.

1. Code related repairs are based upon discovered safety issues found during times of review and will require either actual repair or additional maintenance. The intent of these repairs is to improve occupants life safety.

    a. Secure steel fire escape structure to Building Second floor framing.
    b. Provide new or repair existing Boiler room to be self closing.
    c. Improve emergency lighting and exit signage in Basement.
    d. Provide increased maintenance to remove snow and ice from exitways.
    e. Revise snow stockpiling procedures to obstructing boiler make-up air vent.
    f. Accessible issues are longstanding and are addressed later.

2. Stabilizing of the existing Building envelope and structure is a priority concern to limit on-going degradation of the Building envelope components and structure. Previous moisture damage and deferred maintenance is responsible for much of the poor envelope and structural damage and increase any future repair cost.

    a. Remove exterior brick masonry paint at exposed foundation, evaluate brick condition and either replace exterior brick wythe or repoint mortar joints.

        1. A clear water repellent may be applied to existing exterior brick surface if acceptable to local and state Historic Commission.

    b. Remove existing deteriorated paint from all existing wood surfaces, clean and prepare surfaces for new paint finish. (Primer and two finish coats)

        1. Preparation will be extensive as exterior wood surface is heavily weathered. Appropriateness and uniformity of preparation work will be a field condition and paint application could not be warranted for more than 2 years.

        2. Optional treatment is to replace exterior deteriorated wood siding, clapboard and trim with new wood or cement fiber (pre-primed) siding clapboard and trim for longer lasting paint substrate and application.

        3. Provide incidental repairs and/or replacement of existing deteriorated trim to remain.

        4. Repair existing deteriorated lower wood column sub-framing. Removal and reinstallation of wood slats to access sub-framing will be required.

c. Removal of existing paint and preparation of exterior wood surfaces will require removal of existing aluminum storm windows. Based on age and condition of the storm windows reinstallation would not be recommended.

Therefore new replacement storm windows should be installed after exterior preparation and painting work is complete. Color of replacement storm windows should be white to minimize appearance.

d. Removal and replacement of the existing aluminum storm windows will provide the single best opportunity to reglaze the original double hung wood windows. The existing glazing putty is beyond deteriorated and is not present in many areas. In addition wood window would be clean, prepare, painted and refurnished to an operating condition.

1. Rotted and broken Basement windows will require more extensive repair and/or replacement.

e. Removal of existing aluminum shutters will also be required by exterior surface preparation and painting. Shutters, while improving the historical accuracy of the Building's appearance will not improve the weather resistance of the building envelope. Installation of new wood shutters of historically accurate proportions is considered in an Option or future phase of the treatment recommendations.

f. Remove and replace exterior caulking and sealants.

1. Windows, doors, exposed joints, front portico slab to building joint, etc.

g. Multiple previous repairs have made the existing slate roof generally weather resistant. Removal and replacement of existing slate will eventually be necessary but can be deferred until roof leaks become more prevalent, possibly 2 to 8 years. It may also be advisable to install a new more durable and more weather resistant roof prior to any significant interior renovation and expenditure.

1. As part of any future re-roofing work, evaluation of the condition of the existing wood roof deck should be performed after removal of slate roof. Additional funds for replacement of any discovered deteriorated wood roof decking should be included in re-roof work at an additional unit price.

2. Repair and/or replace existing copper ridge flashing.

3. Replace existing metal roof edge flashing.

4. Replace wood roof scuttle with new wood scuttle and lead coated copper cladding.

5. Provide snow guards in hazardous areas.

h. Repair and/or replace existing deteriorated exit doors at existing stair and fire escape, subject to accessibility improvements, described later.

1. Fire escape and exit door work should be coordinated with any proposed Second floor accessibility project and schedule.

3. Feasibility Study for Universal Accessibility and recommendations is provided in Phase III of this Study.

4. It is the expressed desire of the Town to maintain and further develop the 1835 Town Hall as a Community Center. It is also the expressed desire of both the Sterling Town Hall Committee and the Sterling Historical Commission to promote the reuse of the 1835 Town Hall through appropriate repairs, renovation/adaption and/or addition. Including eventual Universal Accessibility, and to preserve and maintain as much historical accuracy as possible. The following recommendations are provided to support and improve the continued use of the 1835 Town Hall as a multi-purpose Community Center.

   a. Remove Second floor meeting room suspended acoustical tile ceiling and recessed lighting, and re-establish original room/ceiling appearance. Providing Universal Accessibility to the Second floor will be a prerequisite to re-establishing public use of any Second floor space.

      1. Re-establish original electrical lighting supplementing as required to accommodate all planned uses.

      2. Repair original board and batten ceiling.

      3. Provide window guards at stage windows approximately 18-inches above finish floor.

      4. Repair deteriorated, broken and missing plaster walls and soffit, refinish to match existing.

      5. Remove existing wood panel partition.

      6. Re-establish stage curtain and track similar to original for stage productions.

      7. Refinish wood flooring.

      8. Repair meeting room/hall door panel.

   b. Restore existing Second floor balcony for limited use and to original appearance.

      1. Resecure guard wall and rails.

      2. Repair deteriorated, broken and missing plaster walls and soffit, refinish to match existing.

      3. Provide Balcony stair handrail.

      4. Re-establish original Balcony electrical lighting.

c. Recreate a historically accurate wood stair from First floor to Second floor to replace original stair(s) previously removed.

1. Removal of existing interior egress stair construction will be required and will require approval of local authorities having jurisdiction.

2. Installation of an automatic fire suppression system would help mediate code issue of an open stairway to match the original open stairway.

3. Recreation of Basement stair would be required.

d. Remove First floor Meeting room suspended acoustical tile ceiling and recessed lighting and re establish original plaster ceiling appearance.

1. Provide new lighting to replicate historic lighting.

2. Replace window trim and casing removed during suspended ceiling installation to match existing.

3. Replacement of carpet flooring.

New plumbing fixtures will include water closets, lavatories and a water cooler meeting the MAAB/ADA Requirements and Massachusetts Energy Code.

A new electric hot water heater will need to replace the existing 15 gallon unit in order to meet the demand of any additional fixtures.

A new electric water cooler will need to be provided for the First Floor in order to meet the present Massachusetts Plumbing Code.

Insulate all existing and new domestic water piping.

Fire Protection System:

As stated in the Code Analysis, the requirements of Chapter 148 of the Massachusetts General Law will need to be reviewed when repairs, renovations or additions are contemplated. Particularly c148§ 26g, adopted by the Town of Sterling, requiring automatic sprinkler system for major alterations to existing Buildings over 7,500 S.F.

If it is determined that a sprinkler system is required, a wet and dry fire suppression system will be installed. This system will require the installation of a new sprinkler water service. Estimated water service should be a 4" service. This new 4" service should enter the building in the same area as the existing ¾" domestic water service.

A Hydrant Flow Test will be required to determine the adequacy of the town's water supply to support the fire suppression system although proposed improvements to the town water supply should ensure sufficient water pressure is available.

Since the existing structure is wood framed, sprinkler protection will be required in all occupied and unoccupied spaces, closets, toilet areas, and concealed spaces such as areas above dropped ceilings, truss spaces, etc. in order to meet the present NFPA requirements. Proper planning and design will be required to minimize the visual impact of the sprinkler system in historic areas.

Heating, Ventilating, and Air Conditioning:

If it is decided to introduce central heating and air conditioning into the building the mechanical ventilation requirements mandated by the Mechanical Code (BOCA) will have to be met. The heating capacity of the existing boilers will not be sufficient to support the additional ventilation loads. Due to this increase the existing hot water boilers will have to be removed and replaced with units having adequate capacity to meet this demand.

The new boiler should be an oil fired hot water sectional boiler. The new boiler will be a sectional type allowing assembly of the unit in the Basement area. The units will have an efficiency of 80 to 85% compared to the present boiler having a 75% efficiency at best. New flue piping, expansion tank, pumps, etc will also be required.

A new chemical feed system will be added to the system. This system will insure system water quality adding reduced maintenance cost as well as boiler life.

The existing baseboard radiation on the First and Second floors can remain.

The existing chimney should be inspected to insure masonry flue is intact and code compliance is met.

Ventilation air, and air conditioning can be introduced throughout the building using air handling units with outside condensing units. A variable volume duct distribution system, having multiple zones can be installed to distribute conditioned air to each occupied space.

The ventilation air, and air conditioning system can be designed to take advantage of load shedding which will reduce equipment cost, as well as energy cost. In addition to load shedding, CO2 Monitoring can be provided which will dramatically reduce the amount of outside air requirements and substantially reduce operating cost.

A new DDC Temperature Control System can be provided that will not only control the heating system but also the ventilating and air conditioning systems as well. This system should have a Central Control Panel having the capability of trouble shooting the entire heating and air conditioning system from its location. The Central Control Panel should also give the user the ability of resetting space temperatures, adjusting outside air requirements, set occupied and unoccupied hours of operation, etc.

Plumbing System:

The Plumbing System's ¾" domestic water service should be adequate based upon a possible two (2) additional single occupancy toilet rooms. Further review will be conducted once the total number of additional plumbing fixtures has been confirmed.

Priority recommendations are related to proposed renovations to include a new elevator restrooms and a new sprinkler system. These elements will require additional zones on the fire alarm system for elevator recall and fire protection switches. This will exceed the capacity of the existing five (5) zone fire alarm panel, which is already using four (4) zones. A new ten (10) zone fire alarm panel may have enough zones for the renovation, but there would be very little or no spare capacity for future expansion of the system. Therefore, a new addressable fire alarm system is recommended, which requires simpler wiring and allows the equivalent of many zones, since each device is separately "addressed"; this would allow for future expansion of the fire alarm system.

Short-term recommendations include interior incandescent fixtures with more efficient fluorescent or compact fluorescent fixtures. The porcelain socket fixtures in the Basement may be relamped with new compact fluorescent lamps with screw-in base. The exterior fixtures should be replaced with new decorative lighting, and supplemented with emergency lighting at the entrances for security and safety. The existing fluorescent lights, many of which are broken and worn should be replaced with new efficient T8 fluorescent light fixtures. In addition, most of the emergency lighting could be incorporated into the general lighting by means of emergency ballasts in select fixtures, which is less expensive an obtrusive than installing separate emergency battery pack light fixtures. The Second floor Meeting room should have attractive emergency light fixtures.

Long-Term recommendations are also based on future proposed renovations as follows.

The suspended ceiling to the Second floor Meeting room may be removed under a future interior renovation. In this instance, decorative pendant mounted lighting is recommended to replace the existing pendant mounted fixtures concealed in the Attic space above the Second floor. The existing support beams running across the Attic space must be accounted for in any such design.

It is recommended to replace the old receptacles and wall switches with new grounded receptacles and quiet type wall switches of a suitable color. Additional receptacles and plugmold are recommended in the office areas and for other future designated uses to be determined.

Based upon the apparent historical nature of this 1835 Sterling Town Hall and its listing on the National Register of Historic Places this Building qualifies as a partially preserved Building under Massachusetts Building Code 780CMR 3409.0 which permits in-kind material repairs and replacement without compliance with most current codes including the Energy Conservation Code, 780 CMR 13.

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      2. Repair original board and batten ceiling.

      3. Provide window guards at stage windows approximately 18-inches above finish floor.

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The Plumbing System's ¾" domestic water service should be adequate based upon a possible two (2) additional single occupancy toilet rooms. Further review will be conducted once the total number of additional plumbing fixtures has been confirmed.

Priority recommendations are related to proposed renovations to include a new elevator restrooms and a new sprinkler system. These elements will require additional zones on the fire alarm system for elevator recall and fire protection switches. This will exceed the capacity of the existing five (5) zone fire alarm panel, which is already using four (4) zones. A new ten (10) zone fire alarm panel may have enough zones for the renovation, but there would be very little or no spare capacity for future expansion of the system. Therefore, a new addressable fire alarm system is recommended, which requires simpler wiring and allows the equivalent of many zones, since each device is separately "addressed"; this would allow for future expansion of the fire alarm system.

Short-term recommendations include interior incandescent fixtures with more efficient fluorescent or compact fluorescent fixtures. The porcelain socket fixtures in the Basement may be relamped with new compact fluorescent lamps with screw-in base. The exterior fixtures should be replaced with new decorative lighting, and supplemented with emergency lighting at the entrances for security and safety. The existing fluorescent lights, many of which are broken and worn should be replaced with new efficient T8 fluorescent light fixtures. In addition, most of the emergency lighting could be incorporated into the general lighting by means of emergency ballasts in select fixtures, which is less expensive an obtrusive than installing separate emergency battery pack light fixtures. The Second floor Meeting room should have attractive emergency light fixtures.

Long-Term recommendations are also based on future proposed renovations as follows.

The suspended ceiling to the Second floor Meeting room may be removed under a future interior renovation. In this instance, decorative pendant mounted lighting is recommended to replace the existing pendant mounted fixtures concealed in the Attic space above the Second floor. The existing support beams running across the Attic space must be accounted for in any such design.

It is recommended to replace the old receptacles and wall switches with new grounded receptacles and quiet type wall switches of a suitable color. Additional receptacles and plugmold are recommended in the office areas and for other future designated uses to be determined.

Based upon the apparent historical nature of this 1835 Sterling Town Hall and its listing on the National Register of Historic Places this Building qualifies as a partially preserved Building under Massachusetts Building Code 780CMR 3409.0 which permits in-kind material repairs and replacement without compliance with most current codes including the Energy Conservation Code, 780 CMR 13.

The following Estimate of proposed exterior repairs and restoration work has been prepared for purposes of developing an overall Budget for this work and to assist selection and identification of preferred repair options. This estimate is preliminary in nature and therefore conservative contingencies are applied for unknown / unforeseen conditions and further development of the scope of repairs and restoration. All work is estimated to be completed in 2005. Additional escalation should be added at a pro-rated rate of 9% per annum for work postponed beyond 2005.

The following Estimate excludes Hazardous Material Abatement and monitoring expenses.

1. **Wood Surfaces and Repairs**

   a. Remove existing paint, clean, prepare and paint all exposed wood surfaces;
   b. Repair broken, missing, damaged wood siding and trim (Unit Price / Allowance);
   c. Repair damaged column subframing

   {OR} Sub-Total: $ 51,500.

   d. Remove and replace wood siding to match existing; pre-prime and paint;
   e. Clean, prepare and paint all exposed wood surfaces;
   f. Repair broken, missing, damaged wood trim (Unit Price / Allowance)
   g. Replace metal window head flashing;

   Sub-Total/Add: $ 119,100. [Option 1]

   h. Remove and replace window shutters (Replacement Optional): Add: $ 22,300. [Option 4]

2. **Wood Surfaces and Repairs**

   a. Remove exist. Aluminum window louvers;
   b. Remove exist. Aluminum storm windows;
   c. Repair / refurnish wood windows, clean, prepare and paint;
   d. Remove and recaulk joints;
   e. Install new heavy duty aluminum storm windows;
   f. Repair / replace damaged basement windows

   Sub-Total: $ 31,200.

3. **Brick Masonry Repairs**

a. Remove exist. Paint from exterior brick in its entirety;
b. Replace damaged / deteriorated exterior brick, repoint all mortar joints;
c. Replace damaged interior brick, repoint deteriorated mortar joints;
d. Apply water repellent treatment

Sub-Total: $ 13,900.

{OR}

e. Remove and replace outer wythe of brick to match exist; Add: $ 8,700. [Option 2]
f. Repair and repoint deteriorated concealed brick and mortar joints;
g. Repair, replace interior deteriorated brick, repoint interior mortar joints; $ 10,500.

4. **Slate Roof Repairs**

a. Remove and replace slate roofing to match original;
b. Remove and replace felt underlayment;
c. Install ice and water shield underlayment at flashings at roof edges;
d. Inspect / replace damaged wood deck (allow for 25% replacement);
e. Replace all metal flashings incl. Ridge and eaves;
f. Replace wood roof scuttle;
g. Provide snow guards at hazardous areas

Sub-Total: $ 115,400. [Option 3]

5 **Exterior Wood Door Repairs**

a. Remove and replace exterior stair door;
b. Remove and replace 1st floor fire escape door;
c. Repair 2nd floor fire escape door (NOTE: b. and c. may not be required if accessibility Project undertaken)
d. Replace front door with historic replica Add: $ 4,400. [Option 5]

Sub-Total: $ 5,300.

6. **Site Repairs**

a.	Repair and replace retaining wall cap stone;	
b.	Repair / seal existing cracks at concrete ramp.	
	Sub-Total:	$ 2,100.
c.	Asphalt pavement repairs and new pavement	By Town

7. **Miscellaneous Exterior Repairs**

a.	Remove Main St. attic window and reinstall original wood louver;	$ 3,200.
b.	Replace exterior light fixtures (6) with more Historic style;	2,600.
c.	Clean, prepare and paint exterior metal railings	1,700.
d.	Repair/Seal portico slab to Bldg. joint	500.
	SUB-TOTAL ALL ITEMS EXCEPT AS FOLLOWS:	$ 122,000.
	Contingency @ 20%	24,400.
	SUB-TOTAL REPAIR / RESTORATION COSTS:	**$ 146,400.**
	OPTION 1 - Add for New Wood Siding:	$ 164,400.
	OPTION 2 - Add for Exterior Brick Replacement:	$ 12,000.
	OPTION 3 - Add for New Slate Roofing:	$ 185,200.
	OPTION 4 – Add New Wood Shutters	$ 29,000.
	OPTION 5 – Add for New Front Door	$ 7,000.

8. **Project Development**

a.	Architectural and Engineering Fees (assumed / No Options)		$ 22,100.
b.	Clerk-of-the-Works		By Others.
c.	Project Expenses		
1.	Hazardous Material Investigation	See Accessibility Estimate.	
2.	Reproduction of Bid Documents (allowance)		$ 6,000.
3.	Legal Advertisements (allowance)		$ 800.
	Sub-Total:		$ 6,800.
	Total Project Development Expenses:		$ 28,800.
	Total Base Bid Costs:		**$ 175,200.**

TOTAL REPAIR / RESTORATION PROJECT COSTS (All Options) : $ 572,800.

STERLING 1835 TOWN HALL

PHASE II: CYCLICAL MAINTENANCE PLAN

This cyclical maintenance plan has been developed to provide a prioritized list of reoccurring maintenance procedures to prevent future damage to the integrity of the building structure. The principal cause of damage in most structures is typically water infiltration and water damage exacerbated by freeze/ thaw conditions. In particular, the 1835 Town Hall structure has suffered from some prolonged water and moisture infiltration and differed maintenance. Existing conditions associated with this water damage include the exterior wood siding and trim, exterior brick masonry, window glazing putty and some minor slate roof damage.

The priority in establishing the cyclical maintenance plan to prevent future building and structural damage is to stabilize the exterior envelope materials, surfaces and finishes. The following is an outline of recommended maintenance procedures designed to prevent and/ or limit future water/ moisture infiltration:

1. Slate Roofing

   a. Visual inspection of exterior slate roofing and flashings each Spring to identify any and all damage.
   b. Visual inspection of accessible interior/ underside roof areas for initial water infiltration.
   c. Repair or replace damaged roofing materials to match existing and to make weather tight.

2. Caulking and Sealants

   a. Annual visual inspection of all exterior caulk/ sealant joints to identify initial sealant deterioration and cracked or open joints.
   b. Repair poor sealant joints and install new sealants.

3. Brick Masonry

   a. Visual inspection of exterior brick masonry and mortar joints each Spring to identify damaged or cracked brick or mortar.
   b. Replace damage brick and repoint cracked, deteriorated mortar joints.
   c. Application of a clear masonry water repellent treatment is an option. Application may need to be approved by Mass Historical Commission and then reapplied every 5 to 10 years.

4. Exterior Wood Siding/ Trim and Paint

   a. Annual visual inspection of exterior wood surfaces and paint finishes to identify areas of paint deterioration, cracking, crazing or other conditions affecting paint finish integrity and weather resistance.
   d. Clean and prepare existing deteriorated areas of paint for refinishing, remove all loose, failing paint to sound substrate and paint to match existing finish.

5. Wood Windows and Storm Windows

   a. Visually inspect existing wood windows and aluminum storm windows for weather tightness, proper operation and condition of existing glazing putty, paint finish and sealants.
   b. Repair and or replace any found deteriorated materials or finishes.

And addition area of concern for the integrity of the Building is the historically problematic roof timber truss. Although these trusses have been previously repaired it is prudent to maintain surveillance of the trusses to identify any change in condition such as any cracking or splitting of the wood timbers or connections, any observed deflections in truss members or change in overall truss geometry or roof slope.

Cyclical maintenance costs for the described inspections performed by competent trade persons or subcontractors should range from approximately $800. to $1,400. per year, not including any required repairs.

STERLING 1835 TOWN HALL

PHASE III: FEASIBILITY STUDY FOR UNIVERSAL ACCESSIBILTY AND REUSE

A. Programmatic Priorities
B. Concept Plans (See Outline Plans)
C. Universal Accessibility Budget

Programmatic Priorities for scheduling the proposed repair/restoration and other work were developed and prepared by the Sterling 1835 Town Hall Committee and the Sterling Historical Commission. The work priorities are listed in five categories with 'A' listed items having the highest priority and 'E' listed items having the lowest priority.

1835 Town Hall Work Priorities

priority	category	item
A	Upper floor	Add Safety Barrier at stage windows
A	Upper floor	Rem suspended ceiling, refurb old lights
A	Main floor	Remove drop ceiling at multi-purpose room, Repair window casings
A	Main floor	Reproduce original stairs, Remove exterior subgrade door
A	Basement	Remove old fuel tank, extraneous junk
A	Exterior	Replace Aluminum storm windows
A	Exterior	Reinstall original fan, modify/restore window and trim
A	Exterior	Repair foundation brick
A	Exterior	Install Correct Window Shutters
A	Exterior	Relocate Electrical service
A	General	Barrier Free Access
A	Utilities	Provide Sprinkler Fire Protection
A	Utilities	Septic connection to Fire Station Leach area
B	Upper floor	Re-open Balcony
B	Upper floor	Install Stage Curtains
B	Basement	Provide New Caterer Kitchen
B	Basement	Provide New Recreation room
B	Basement	Provide New Storage Areas
B	Basement	New Concrete Floor
B	Basement	Provide New Craft Room
B	Exterior	Restore Original Front Door
B	Exterior	Install correct Lantern (lighting) and Side lamps
B	Utilities	Phone Jacks on each floor
B	Utilities	Upgrade fire alarms (May be done by FD funding)
C	Upper floor	Install room darkening shades
C	Exterior	Remove ramp at rear door
C	Utilities	Update wiring
D	Basement	Relocate fuel tanks away from open area
D	Basement	New boilers
D	Exterior	Remove brick building
E	Upper floor	Rehab Fire door and relocate escape at rear
E	Basement	Install Restrooms
E	Basement	Provide ventilation
E	Basement	Provide A/C

The following Budget estimate of proposed exterior repairs and restoration work has been prepared for purposes of developing an overall Budget for this work and to assist selection and identification of preferred repair options. This estimate is preliminary in nature and therefore conservative contingencies are applied for unknown / unforeseen conditions and further development of the scope of repairs and restoration. All work is estimated to be complete in 2005. Additional escalation should be added at a pro-rated rate of 9% per annum for work postponed beyond 2005.

The following Estimate excludes Hazardous Material Abatement and monitoring Expenses:

1. **Site Work**

a.	Selective Demolition	$ 9,000.
b.	Site Work	12,000.
c.	Septic System Repairs	8,000.

2. **General Construction and Renovations**

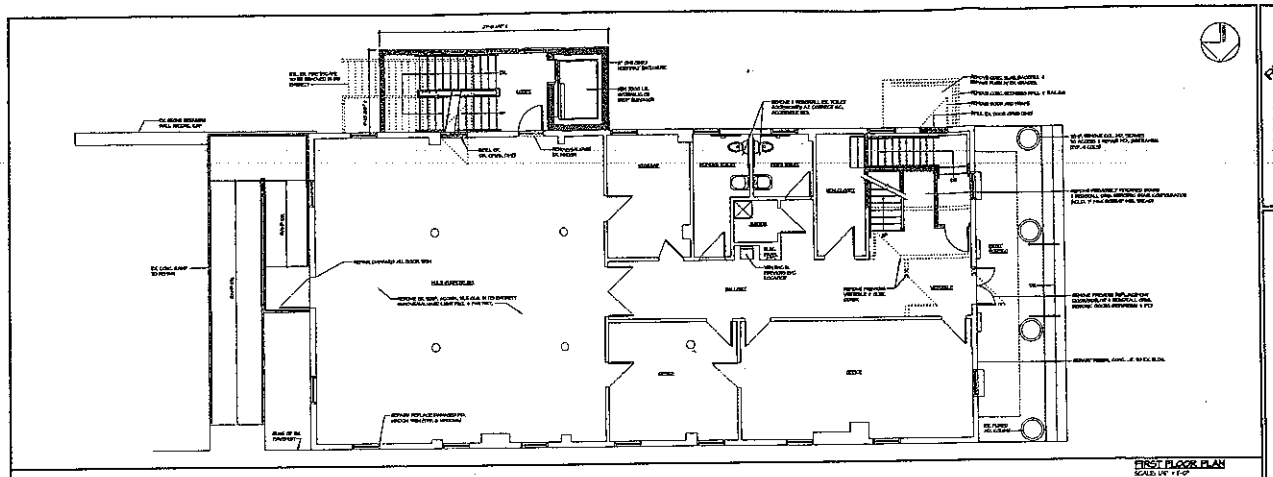
a.	810 GSF New Addition/ Construction @ $150/sf =	$ 121,500.
b.	8 in. CMU Elevator Hoistway	22,700.
c.	Three Stop Elevator	70,000.
d.	Construct elevator machine room	5,800
e.	Construct new wood stairs @ 40 treads x $165/tread =	6,600.
f.	Construct (2) Toilet Rooms per MAAB/ADA	23,400.
g.	Replace door hardware with ADA/lever handles	2,800.
h.	Non-structural accessibility improvements @ ex. Toilet Rooms	700.
i.	New ADA water cooler	500.
j.	Self-closing basement boiler room door	600.
k.	Remove meeting space suspended clg's. restore original clg.	51,800.
l.	Electrical Service upgrade and distribution	17,000.
m.	Handicap accessible ramp to stage	9,400.
n.	Upgrade fire alarm system	By SFD.
o.	Miscellaneous cutting and patching/plaster repairs/painting	12,000.
p.	Install fire protection/sprinklers per MGL c14g:	
	9150sf @ $5/sf =	45,800.
	Subtotal:	419,600.
q.	General Design Contingency @ 15% =	62,900.
	Subtotal:	**482,500.**
r.	Construction Change Contingency @ 5% =	24,000.
s.	Escalation to Mid. Pt. Construction (6/06) @ 9% =	43,400.
	Sub-Total All Items:	**$ 549,900.**

3.	**Project Development**	
	a. Architectural and Engineering Fees (assumed)	$ 60,500.
	b. Clerk of the Works (Part-Time)	20,000.
	c. Project Expenses	
	1. Site Survey	2,500.
	2. Geotechnical Investigation	N/A.
	3. Hazardous Material Investigation	4,500.
	4. Reproduction of Bidding Documents (allowance)	8,000.
	5. Legal Advertisement (allowance)	800.
	6. Construction Materials Testing (allowance)	2,000.
	Sub Total:	**$ 98,300.**
4.	**Total Project Development Expenses:**	**$ 648,200.**
5.	Optional Project Requirements (incl. Contig. & proj. develop.)	
	a. Provide Building Air Conditioning/Replace Boilers/Tanks	$ 233,800.
	b. Remove/Reconstruct Original Front Stair	75,600.
	c. Wire mesh basement storage lockers	4,300.
	d. Basement prep kitchen	21,100.
	e. Balcony repairs	4,600.

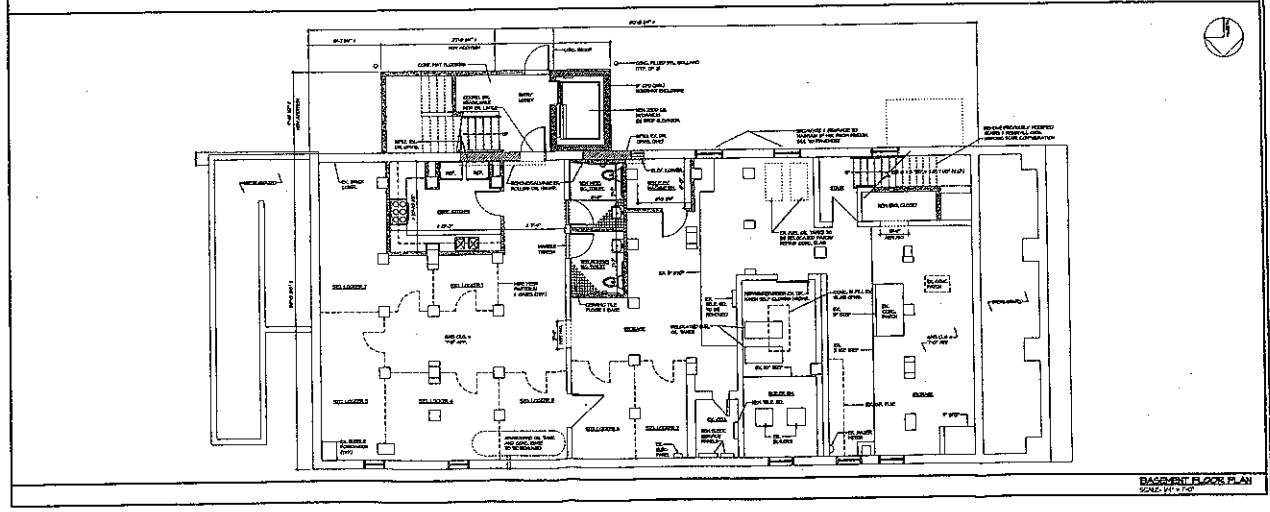
STERLING 1835 TOWN HALL

PHASE IV: OUTLINE PLANS AND SPECIFICATIONS

A. Proposed Building Plans and Elevations
B. Outline Specifications



FIRST FLOOR PLAN



BASEMENT FLOOR PLAN

REINHARDT ASSOCIATES

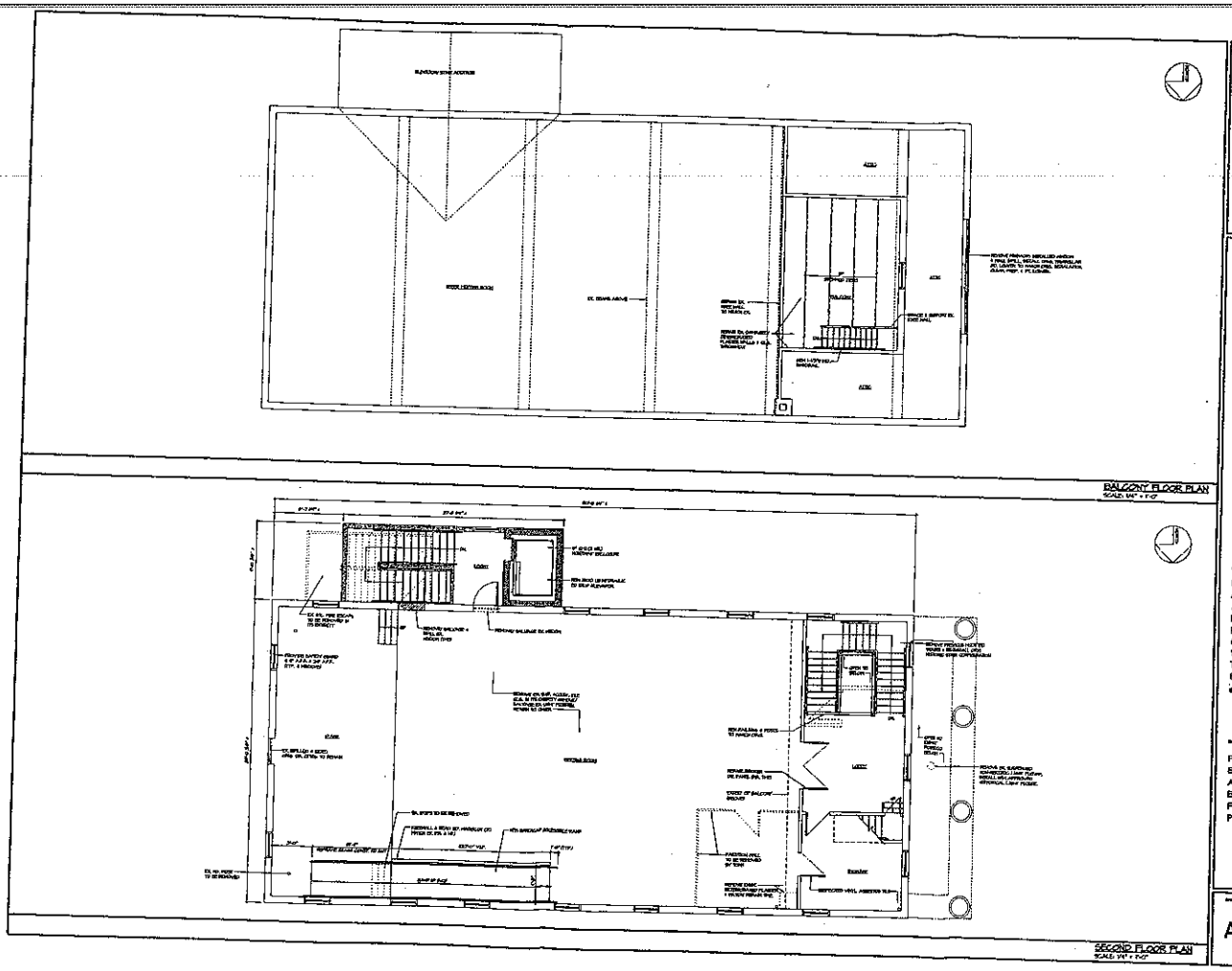
- ARCHITECTS
- PLANNERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1835 TOWN HALL

STERLING, MA

PROPOSED BASEMENT AND FIRST FLOOR PLANS

A.1



REINHARDT ASSOCIATES

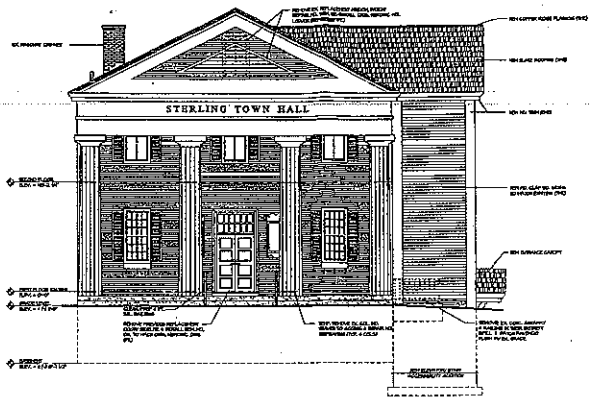
- ARCHITECTS
- PLANNERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1843 TOWN HALL

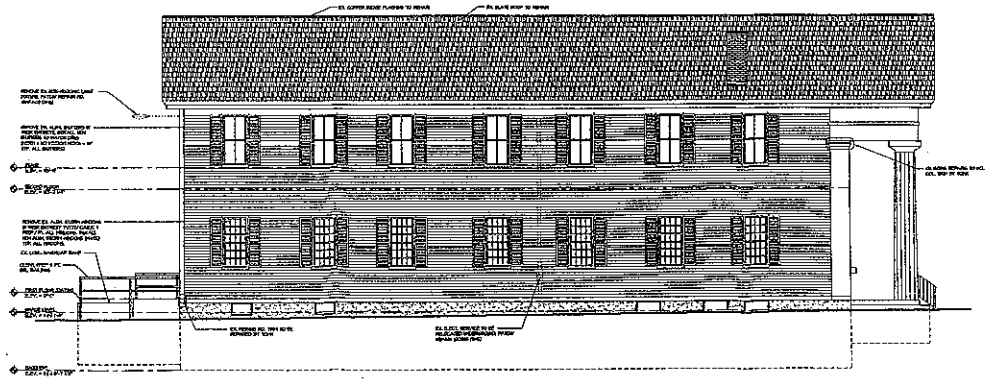
STERLING, MA

PROPOSED SECOND AND BALCONY FLOOR PLANS

A2



WEST/MAIN STREET ELEVATION



NORTH/MAPLE STREET ELEVATION

REINHARDT ASSOCIATES

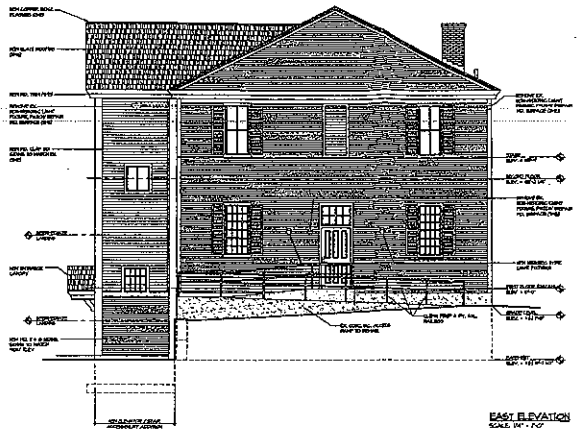
- ARCHITECTS
- ENGINEERS
- INTERIOR DESIGNERS
- PROJECT MANAGEMENT

UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1835 TOWN HALL

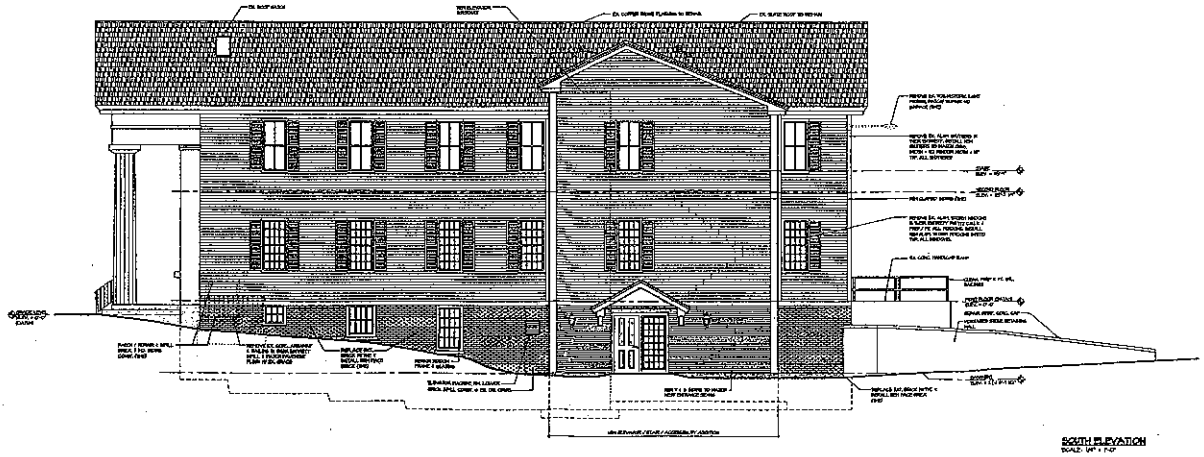
STERLING, MA

PROPOSED EXTERIOR ELEVATIONS

A3



EAST ELEVATION



SOUTH ELEVATION

REINHARDT ASSOCIATES

UNIVERSAL ACCESSIBILITY AND REPAIRS/ RESTORATION OF THE 1939 TOWN HALL

PROPOSED EXTERIOR ELEVATIONS

A.4

The proposed Construction Cost Estimate for the Exterior Repair/ Restoration and Universal Accessibility work is based upon the proposed Floor Plans and Building Elevations attached to this Report and prepared by Reinhardt Associates, Inc., and the following proposed general description and outline specification.

1. Site Work

   A. Earthwork: Excavation and backfill as required.
   B. Utilities: Relocated services for Electric, Telephone and new Sanitary system.
   C. Paved Surfaces: Repair/ Patch asphalt parking, concrete sidewalks.
   D. Site Improvements: Concrete filled steel bollards, miscellaneous improvements.

2. Substructure

   A. Footings: Reinforced cast-in-place concrete spread footings.
   B. Foundations: Reinforced cast-in-place concrete with R-10 rigid insulation, dampproofed.
   C. Slabs: 4" reinforced cast-in-place concrete with 6 mil poly vapor barrier over compacted structural fill.

3. Superstructure

   A. Walls: Bearing wood frame and concrete block.
   B. Columns and Beams: wood, nominal or engineered lumber as required.
   C. Roof: Nominal wood rafters with plywood roof sheathing.

4. Exterior Construction:

   A. Walls: 2x6 wood stud frame with plywood sheathing and wood siding to match existing.
   B. Doors: Insulated, embossed hollow metal with safety glazing.
   C. Windows: Wood double hung with insulated glazing and exterior muntins.
   D. Roofing: Unfading green slate to match existing slate with 40# underlayment.
   E. Insulation: Fiberglass batt (R30) roof; (R19) wall.
   F. Specialties: Wood window shutters to match original shutters.

5. Interior Construction

   A. Partitions: Wood stud with gypsum wall board and concrete block.
   B. Doors: Solid core stile and rail wood doors to match existing doors with finish hardware.
   C. Floor Finishes: Entrance matting, rubber or vinyl stair treads, risers, tile and base, ceramic tile and base in H.C. toilet rooms.
   D. Wall Finishes: Paint semi-gloss plaster, gypsum and existing painted surfaces.
   E. Ceiling Finishes: Painted gypsum, plaster and existing painted surfaces; new suspended acoustical tile ceiling.
   F. Specialties: Toilet accessories interior signage, wood handrails, etc.
   G. Millwork: Standard prefabricated kitchen base and wall cabinets, plastic laminated wood countertops.
   H. Stair Construction: Nominal lumber stringers with plywood treads and risers.
   I. Elevator: 2,500 lb. capacity, hydraulic (3) stop in-line elevator, MAAB/ ADA accessible.

MEETING MATERIALS: 10.19.2011

1835 Old Town Hall Community Center
Meeting Agenda
October 19, 2011

Design Guidelines

- Character-defining features
- Building code
- Zoning

Conceptual Design

- Program of Needs
- Option A + site plan
- Option B + site plan

What does this mean?

- Preliminary cost
- Thoughts on funding
- Going forward

menders, torrey & spencer, inc.

architecture ▪ preservation

123 North Washington Street Boston, Massachusetts 02114

(p) 617.227.1477 (f) 617.227.2654

CODE ANALYSIS

10/12/2011

1835 Old Town Hall Community Center
Sterling, MA
MTS Project No. 1140.00

Applicable Building Codes:

2009 International Existing Building Code – With Massachusetts Amendments
521 CMR Architectural Access Board
Plumbing Code
Town of Sterling Zoning Regulations

A. Use Group Classification

1. Assembly & Offices
2. First Floor: Business Group B (IBC 2009 Section 304 & Table 303.1)
3. Second Floor: Assembly Group A-3 – Community Hall (IBC 2009 Section 303)

B. Construction Classification

1. Existing Construction Type V
2. Fire protection: Building to be equipped throughout with automatic fire suppression system

C. Occupant Load

1. Occupant load is based on preliminary square footage analysis. It is assumed that the occupant load will be limited to lesser quantities pending structural analysis.

2. Occupancy Calculations (based on maximum code allowed sf. per occupant – 780 CMR Table 1008.1.2 for each use area)
    a. Ground Floor: 13 (5 Kitchen [200 gross at 1024 SF] + 8 Mechanical/Storage [300 gross at 2339 SF])
    b. First Floor: 93 (8 Office [100 gross at 833 SF] + 85 Assembly [15 net at 1270 SF])
    c. Second Floor Tables & Chairs: 160 (128 Assembly [15 net at 1928 SF] 32 Stage [15 net at 476 SF])
    d. Second Floor Fixed Seating: 307 (275 Assembly [7 net at 1928 SF] 32 Stage[15 net at 476 SF])
    e. Balcony Fixed Seating: 38 (Assembly 7 net at 267 SF)
    Overall Total: 304 – 451

D. Egress Requirements

1. Egress Stairway width per Occupant = 0.2" (MA Amendments to IBC 2009, 1005.1)
Required with Calculation for Actual Occupancy: 60.8", required minimum = 44" (IBC 2009 Section 1009.1)
    1. Total per level: Two stairs required at 44" min ea.

2. Egress Door Width per Occupant = .2" (IBC 2009 1005.1)
Required with Calculation for Actual Occupancy: 60.8", code minimum = 32" clear
    1. Total per level: 2 required, 2 provided

3. Minimum Number of Exits Required (per floor) – 2 (1015.1)

4. Maximum Length of Exit Access Travel – 250 ft (IBC 2009 Table 1016.1)

5. Minimum Egress Passage/Corridor Width – 44"

6. Minimum Stairway Width – 44" (IBC 2009 Section 1009.1)

E. Plumbing Code – Based on 304 Occupants, 152 Men, 152 Women.

1. Restrooms Required (Table 1: Minimum Facilities for Building Occupancy 248 CMR 2.10, Hall use)
   For Men: 1 per 100 or 2 total.
   For Women: 1 per 50 or 3 total.
2. Lavatories: 1 per 200 or 2 total
3. Water fountains: 1 per 1000 or 1 total.
4. Janitors Sink: 1 per floor or 3 total.

F. Massachusetts Architectural Access Board

1. Place of assembly: Assistive listening system installed in assembly areas accommodating at least 50 persons.
2. Access to balcony: Access is required to the balcony if it is opened to public use.
3. Access to stage: A ramp or a wheelchair lift is required to provide access to the stage.
4. Parking: 1 accessible space required for total parking of 15-25 spaces. Shall be van accessible.
5. Entrances: All public entrances of a building shall be accessible.
6. Door widths: 32" minimum.
7. Elevators: All multi-story buildings shall be served by a passenger elevator.
8. Toilet Rooms: At least one toilet and one sink in each toilet room must be accessible.

Code Analysis Prepared By:

Thomas Burgess
Architectural Designer

IEBC Notes:

Historic Building

1105.4 1 HR Occupancy separation may be omitted when the building is provided with an approved sprinkler.

1105.7 Door Swing. When approved by the code official, existing front doors need not swing in the direction of exit travel, provided that other approved exits having sufficient capacity to serve the total occupant load are provided. (Applies to occupant loads over 50 in new construction)

Means of Egress

1007.3 The area of refuge is not required at open exit access or exit stairways as permitted by sections 1016.1 and 1022.1 in buildings that are equipped with an automatic sprinkler system installed in accordance with code.

Old Town Hall Community Center

Program of Needs

(From meeting on 9.7.11)

Second Floor

Assembly Room – 1928 SF

Occupancy: 275 Row Seating
128 Tables + Chairs

Balcony – 274 SF

Occupancy: 38 Row Seating

Stage - 476 SF

Occupancy: 32

Support Space – 150 SF Minimum

Assembly room storage – 150 SF Minimum
Tables & Chairs
Audio visual system.

Second Floor Total – 2828 SF

First Floor

Recreation Room – 1270 SF

Occupancy: 181 Row Seating
85 Tables + Chairs

Conference Room - 390 SF

Occupancy: 26

Recreation Office – 150 SF

Recreation Director
Full time, Monday – Friday
Desk, files, guest chairs

Veterans Office – 100 SF

2 hr/wk
Desk, files, guest chairs

Support Space – 395 SF

Recreation Room storage – 150 SF
Tables & Chairs, Equipment

Prepared by Menders, Torrey & Spencer, Inc.

Toilet Rooms – 225 SF

Female: assume building occupancy at 152

3 Toilets required, 125 SF

Male: assume building occupancy at 152

2 Toilets required, 100 SF

Janitors Closet – 20 SF

First Floor Total – 2550 SF

Basement

Kitchen – 200 to 300 SF

Food Preparation (such as cooking classes)

Mechanical Room - 600 SF

Sprinkler room

Boiler room

Elevator machine room

Basement Total – 800 to 900 SF

Questions:

Is there a need for a record or document storage?

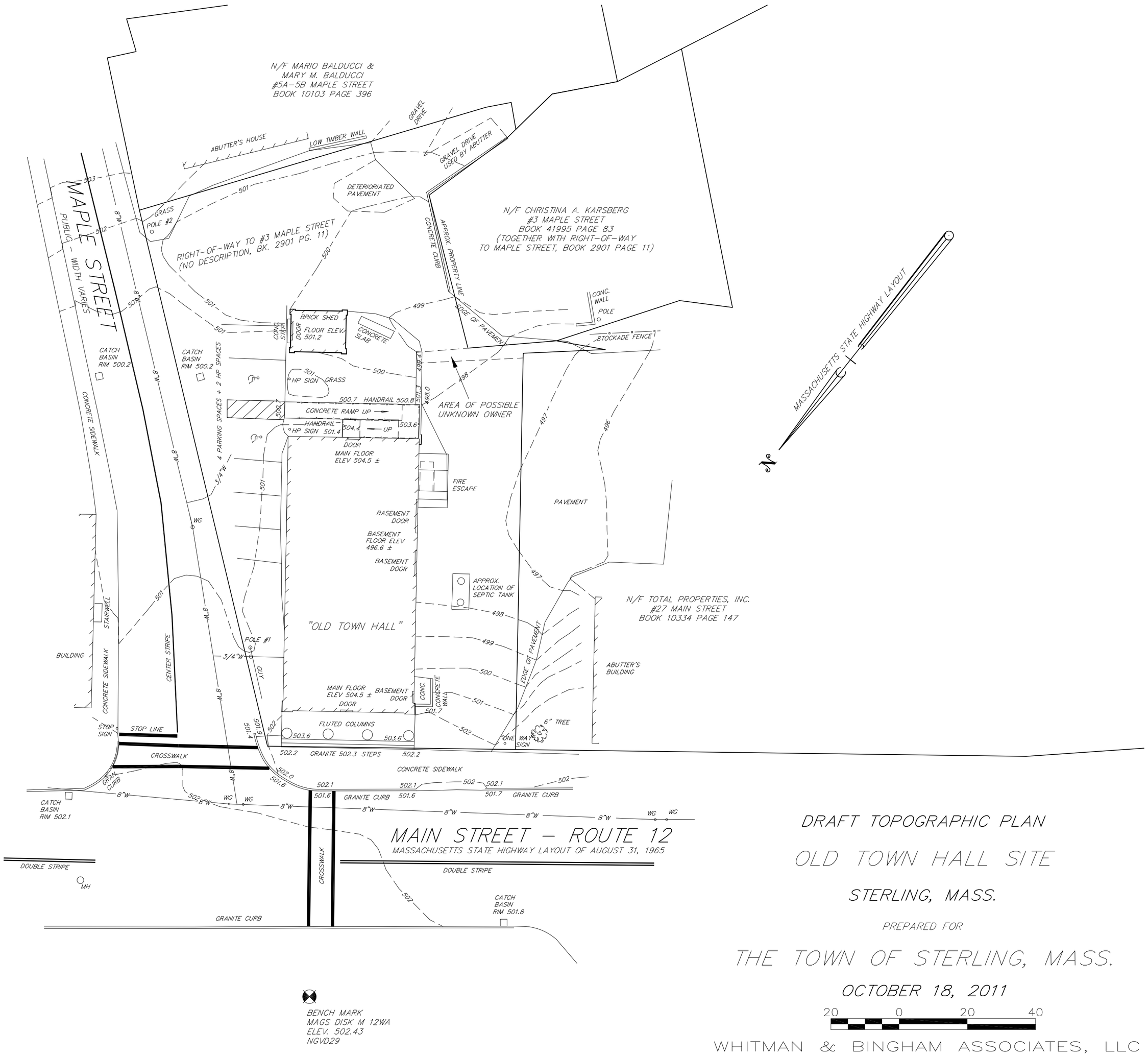
Is there any need for facilitating for young children? The RFP states a reference for a lead free interior.

Scheme A

Item	Description -- Scope of Work	Take off	Units	Cost/Unit	Cost	Remarks/ Comments
New Elevator Addition	Wood frame construction on concrete frost wall.	1296	sf	250	$324,000	
Elevator	Three stop elevator	1	ea	105,000	$105,000	
Interior Renovaton	Repair interior finishes, upgrade mechanical, electrical, and plumbing systems.	6099	sf	150	$914,850	
Kitchen	New commercial grade kitchen	1	ls	90,000	$90,000	
Ramp and Plaza	New concrete sloping walkway, benches, paved plaza, retaining wall, guard rail, ramp & plaza lighting	400	sf	200	$80,000	
Sitework	New paving, lining, landscaping, site lighting	1	ls		$151,385	Allowance of 10%
Construction Cost					**$1,665,235**	
Design Contingency		15%			$249,785	
Subtotal 1					$1,915,020	
Architectural / Engineering Fees		10%			$191,502	
	Total				**$2,106,522**	

Scheme B

Item	Description -- Scope of Work	Take off	Units	Cost/Unit	Cost	Remarks/ Comments
New Elevator Addition	Wood frame construction on concrete frost wall.	1620	sf	250	$405,000	
Elevator	Three stop elevator	1	ea	105,000	$105,000	
Interior Renovaton	Repair interior finishes, upgrade mechanical, electrical, and plumbing systems.	6099	sf	150	$914,850	
Kitchen	New catering kitchen facility	1	ea	30,000	$30,000	
Ramp and Plaza	New concrete ramp and railings	135	sf	200	$27,000	
Sitework	New paving, lining, and landscaping	1	ls	2,000	$148,185	
Construction Cost					**$1,630,035**	
Design Contingency		15%			$244,505	
Subtotal 1					$1,874,540	
Architectural / Engineering Fees		12%			$224,945	
	Total				**$2,099,485**	



BENCH MARK
MAGS DISK M 12WA
ELEV. 502.43
NGVD29

DRAFT TOPOGRAPHIC PLAN

OLD TOWN HALL SITE

STERLING, MASS.

PREPARED FOR

THE TOWN OF STERLING, MASS.

OCTOBER 18, 2011

20 0 20 40

WHITMAN & BINGHAM ASSOCIATES, LLC
REGISTERED PROFESSIONAL ENGINEERS & LAND SURVEYORS
510 MECHANIC STREET – LEOMINSTER, MASSACHUSETTS 01453

USDA Rural Community Development Initiative Grants

Objective: To develop the capacity and ability of private, nonprofit community-based housing and community development organizations, and low income rural communities to improve housing, community facilities, community and economic development projects in rural areas.

Uses and Restrictions: Rural Community Development Initiative grants may be used for but are not limited to (a) training sub-grantees to conduct a program on home-ownership education; (b) training sub- grantees to conduct a program for minority business entrepreneurs; (c) providing technical assistance to sub-grantees on how to effectively prepare a strategic plan; (d) provide technical assistance to sub-grantees on how to access alternative funding sources; (e) building organizational capacity through board training; (f) developing training tools, such as videos, workbooks, and reference guides to be used by the sub-grantee; (g) providing technical assistance and training on how to develop successful child care facilities; and (h) providing training on effective fundraising techniques.

Basic Instructions: 7 CFR 3015, 7 CFR 3016, 7 CFR 3019, 7 CFR 3052 and Guidelines announced in NOFA, published in the Federal Register

For more information about this program, or to file an application, contact the local Rural Development office in your area.

http://www.rurdev.usda.gov/HAD-RCDI_Grants.html

Mass Development Fund

MA Cultural Facilities Fund

The Massachusetts Cultural Facilities Fund (CFF) is an initiative of the Commonwealth to increase public and private investment in cultural facilities throughout the state. The Program is administered jointly with the Massachusetts Cultural Council. Three types of grant programs are available:

- Capital Grants for expenses related to acquisition, design, construction, repair, renovation, and rehabilitation of other capital improvements or deferred maintenance of a cultural facility

- Feasibility and Technical Assistance Grants for expenses related to planning and feasibility assessment for a cultural facility
- Systems Replacement Grants for expenses to undertake the production of 20-year capital needs assessments of their buildings and mechanical systems

Grants are available to:
Nonprofit 501(c)3 organizations primarily engaged in the arts, humanities, or interpretive sciences. Eligible facilities include, but are not limited to, museums, historic sites, zoos, aquariums, theaters, concert halls, exhibition spaces, classrooms, and auditoriums, and must be:

- Owned, leased, or used by one or more nonprofit cultural organizations
- Accessible to the public

Public or private institutions of higher education that own cultural facilities that:

- Provide service and open access to the community and the general public beyond their educational mission
- Demonstrate financial need

Municipalities that own cultural facilities provided that the cultural facility is at least:

- 50,000 square feet, and
- 50% devoted to cultural purposes

All grants from the Fund must be matched by contributions from the private or public sector.

Case Study – Hanover Theatre for the Performing Arts

With funds from private and government organizations, the Worcester Center for the Performing Arts renovated and reopened the former Poli Palace in March 2008 as The Hanover Theatre. The theater, with seating for 2,300, provides a stunning venue for Broadway plays, nationally recognized performers and family-oriented shows. The CFF awarded the Theatre a $675,000 capital grant to help with this important restoration project in downtown Worcester. In the early stage of the project, MassDevelopment provided a $25,000 predevelopment loan as well as a $300,000 development loan to help fund an architectural study and partnered with the Nonprofit Finance Fund and Commonwealth National Bank to provide loans totaling $2.35 million.

Case Study – Rockport Chamber Music Festival

The Rockport Chamber Music Festival received a $22,500 Feasibility and Technical Assistance Grant to develop a marketing and development plan for a new performance arts center.

Case Study – Springfield Library & Museum Association

The Museum of Springfield History received a $675,000 capital grant from the Cultural Facilities Fund. The Museum used the funds to improve its facilities by installing an elevator and upgrading HVAC and fire/security systems.

Community Service 501(c)(3) Loan Fund

MassDevelopment is now offering flexible financing for capital improvements for community-based nonprofit organizations such as elder care centers, daycare facilities, community centers and girls' and boys' clubs. The fund will provide loans ranging from $100,000 up to $500,000.

Eligible applicants must:

- be registered as a Massachusetts-based 501(c)(3) organization;
- have an operating budget of less than $5 million for each of the last five years;
- provide social, youth, or family services;
- primarily work in underserved or disadvantaged communities; and,
- be ineligible for financing under existing loan programs

MEETING MATERIALS: 11.14.2011

Scheme E - Interior Elevator Renovation

Item	Description -- Scope of Work	Take off	Units	Cost/Unit	Cost	Remarks/ Comments
Elevator	Two stop elevator	1	ea	70,000	$70,000	
Lift to stage	Includes modifications to stage	1	ea	15,000	$15,000	
Interior Renovaton	Bathrooms	400	sf	225	$90,000	
Sprinkler	Entire building	10000	sf	15	$150,000	
Electrical 3 Phase Service	Required for elevator	1	ls	20,000	$20,000	
Roof	Asphalt shingle roof	3500	sf	8	$28,000	Asphalt Shingle
Structural	Repairs to roof framing and elevator shaft installation	1	ls	100,000	$100,000	
Fire Escape	Repairs to steel and painting	1	ls	5,000	$5,000	
Windows	Restore, remove lead paint	17	ea	1,000	$17,000	Assumes first floor completed
Shutters	New wood shutters	34	ea	560	$19,040	Priced per opening
Painting	Prepare, prime, two coats of paint	6126	sf	8	$49,008	
Ramp		250	sf	100	$25,000	
Construction Cost					**$588,048**	
Design Contingency		15%			$88,207	
Subtotal 1					$676,255	
Architectural / Engineering Fees		10%			$67,626	
	Total				**$743,881**	

Alternate #1						
Construction Cost Subtotal					**$588,048**	
Alternate #1	Delete asphalt shingle roof	3500	sf	8	-$28,000	
	Install slate or wood shingle roof	3500	sf	50	$175,000	
Subtotal with Alternate #1					**$735,048**	
Design Contingency		15%			$110,257	
Subtotal 1					$845,305	
Architectural / Engineering Fees		10%			$84,531	
	Total				**$929,836**	

Removed from Scheme						
Kitchen	Kitchenette	1	ls	8,000	$0	No space in revised plan
Egress stair	Part of addition					Repairs required to fire escape
Balcony	Elevator shaft will cut through balcony					
Restored staircase	Elevator takes up space of restored staircase					
Sitework	None	1	ls		$0	Allowance of 10%

Scheme D - Small Elevator Addition

Item	Description -- Scope of Work	Take off	Units	Cost/Unit	Cost	Remarks/ Comments
New Elevator Addition	Wood frame construction on concrete frost wall.	810	sf	300	$243,000	
Elevator	Three stop elevator	1	ea	105,000	$105,000	
Lift to stage	Includes modifications to stage	1	ea	15,000	$15,000	
Interior Renovaton	Bathrooms and restored staircase	400	sf	225	$90,000	
Sprinkler	Entire building	10000	sf	15	$150,000	
Electrical 3 Phase Service	Required for elevator	1	ls	20,000	$20,000	
Roof	Asphalt shingle roof	3500	sf	8	$28,000	Asphalt Shingle
Structural	Repairs roof framing	1	ls	75,000	$75,000	
Windows	Restore, remove lead paint	17	ea	1,000	$17,000	Assumes first floor completed
Shutters	New wood shutters	34	ea	560	$19,040	Priced per opening
Painting	Prepare, prime, two coats of paint	6126	sf	8	$49,008	
Ramp		250	sf	100	$25,000	
Construction Cost					**$836,048**	
Design Contingency		15%			$125,407	
Subtotal 1					**$961,455**	
Architectural / Engineering Fees		10%			$96,146	
	Total				**$1,057,601**	

Alternate #1						
Construction Cost Subtotal					**$836,048**	
Alternate #1	Delete asphalt shingle roof	3500	sf	8	-$28,000	
	Install slate or wood shingle roof	3500	sf	50	$175,000	
Subtotal with Alternate #1					**$983,048**	
Design Contingency		15%			$147,457	
Subtotal 1					**$1,130,505**	
Architectural / Engineering Fees		10%			$113,051	
	Total				**$1,243,556**	

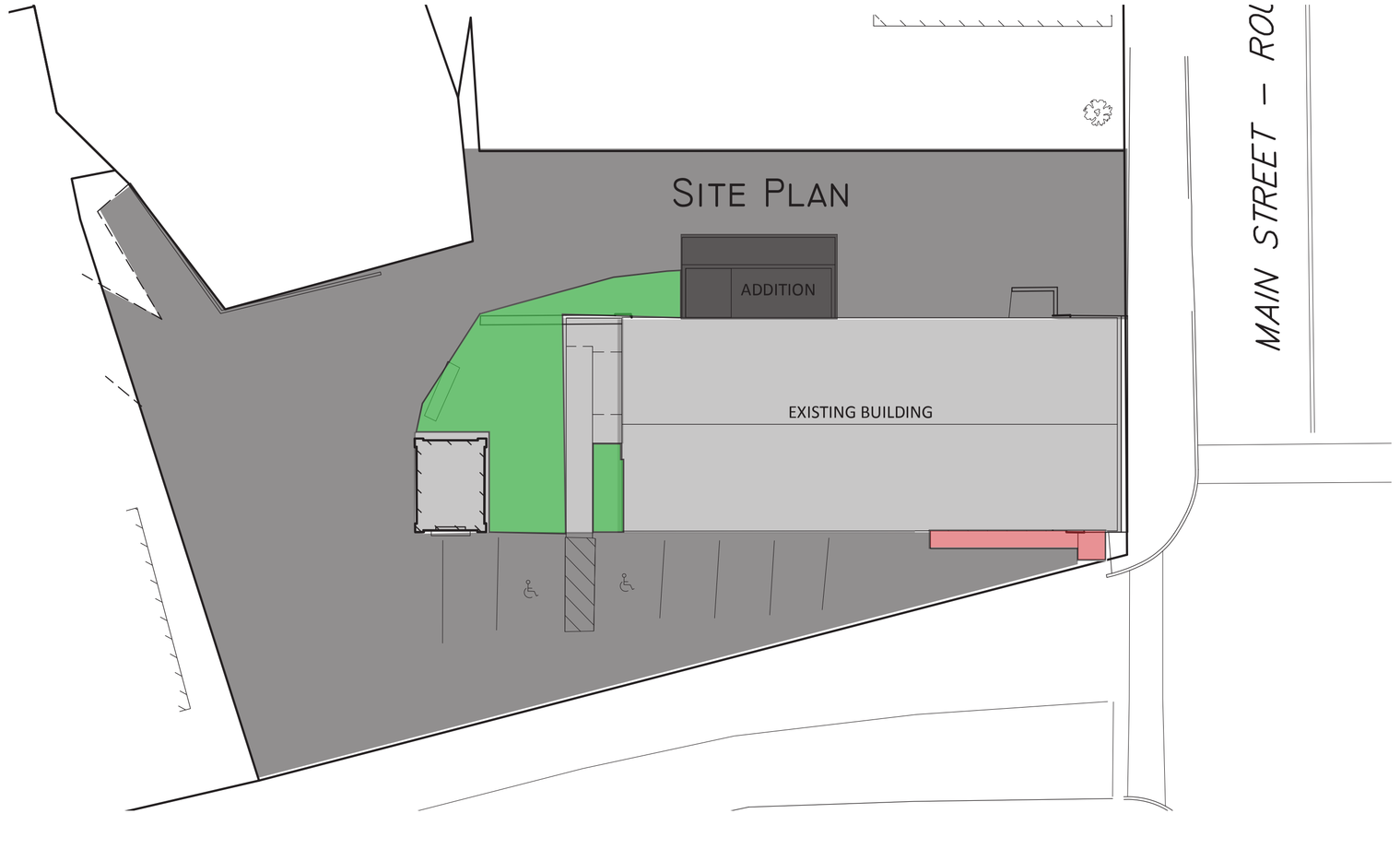
Removed from Scheme						
Kitchen	Kitchenette	1	ls	8,000	$0	No space in revised plan
Sitework	None	1	ls		$0	Allowance of 10%

Scheme C - Large Elevator Addition						
Item	**Description -- Scope of Work**	**Take off**	**Units**	**Cost/Unit**	**Cost**	**Remarks/ Comments**
New Elevator Addition	Wood frame construction on concrete frost wall.	1620	sf	250	$405,000	
Elevator	Three stop elevator	1	ea	105,000	$105,000	
Roof	Asphalt shingle roof	3500	sf	8	$28,000	Asphalt Shingle
Structural	Repairs roof framing	1	ls	75,000	$75,000	
Windows	Restore, remove lead paint	17	ea	1,000	$17,000	Assumes first floor completed
Shutters	New wood shutters	34	ea	560	$19,040	Priced per opening
Painting	Prepare, prime, two coats of paint	6126	sf	8	$49,008	
Interior Renovaton	Repair interior finishes, upgrade mechanical, electrical, and plumbing systems.	6099	sf	150	$914,850	
Kitchen	New catering kitchen	1	ls	30,000	$30,000	
Ramp and Plaza	New concrete sloping walkway, benches, paved plaza, retaining wall, guard rail, ramp & plaza lighting	400	sf	200	$80,000	
Sitework	New paving, lining, landscaping, site lighting	1	ls		$151,385	Allowance of 10%
Construction Cost					**$1,874,283**	
Design Contingency		15%			$281,142	
Subtotal 1					$2,155,425	
Architectural / Engineering Fees		10%			$215,543	
	Total				**$2,370,968**	

Alternate #1						
Construction Cost Subtotal					**$1,874,283**	
Alternate #1	Delete asphalt shingle roof	3500	sf	8	-$28,000	
	Install slate or wood shingle roof	3500	sf	50	$175,000	
Subtotal with Alternate #1					**$2,021,283**	
Design Contingency		15%			$303,192	
Subtotal 1					**$2,324,475**	
Architectural / Engineering Fees		10%			$232,448	
	Total				**$2,556,923**	

Sterling Old Town Hall

Option D - Elevator Addition



MEETING SPACE

STORAGE

VETERANS OFFICE

UTILITY SPACE

MECHANICAL SPACE

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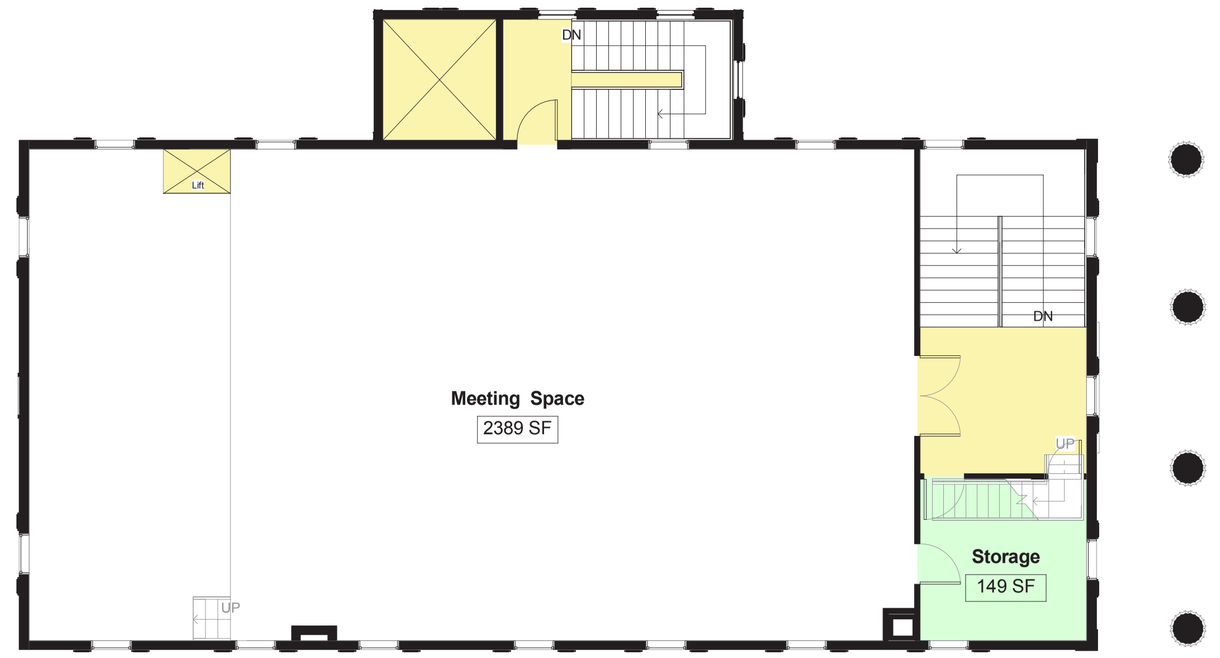
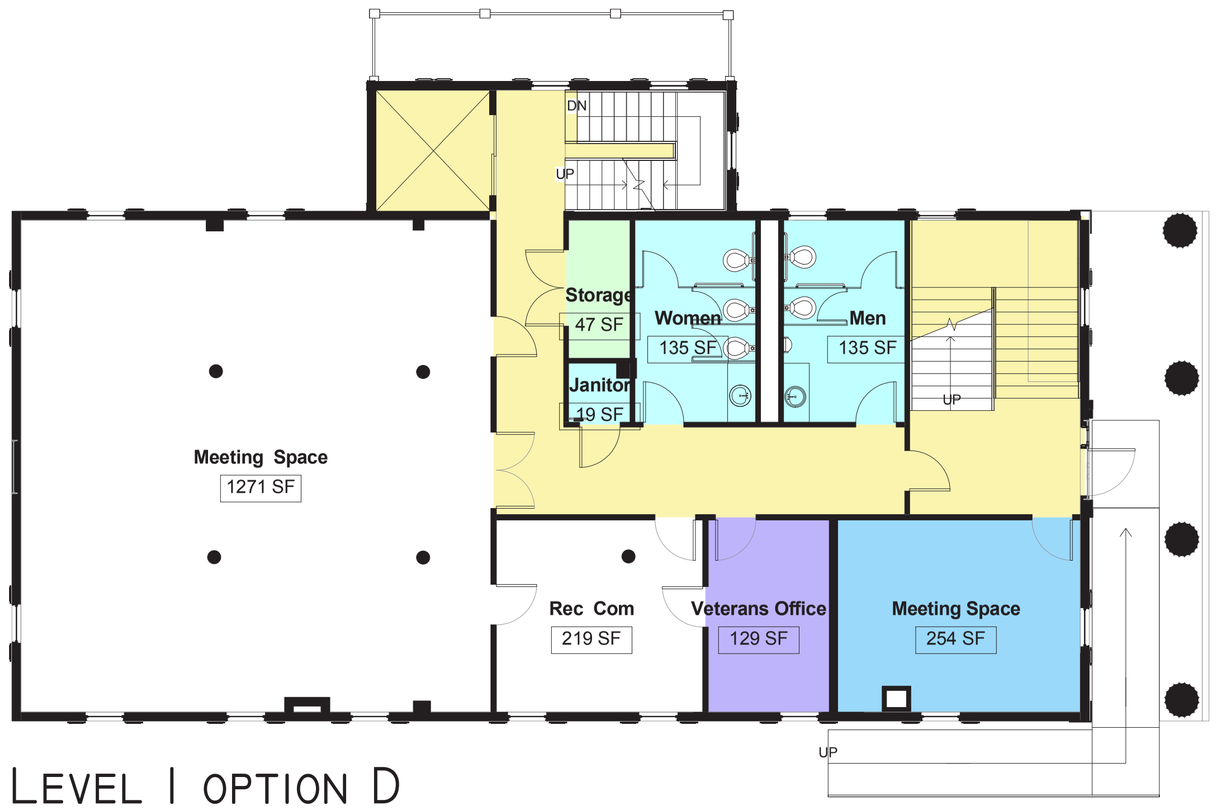


LEVEL 2 OPTION D

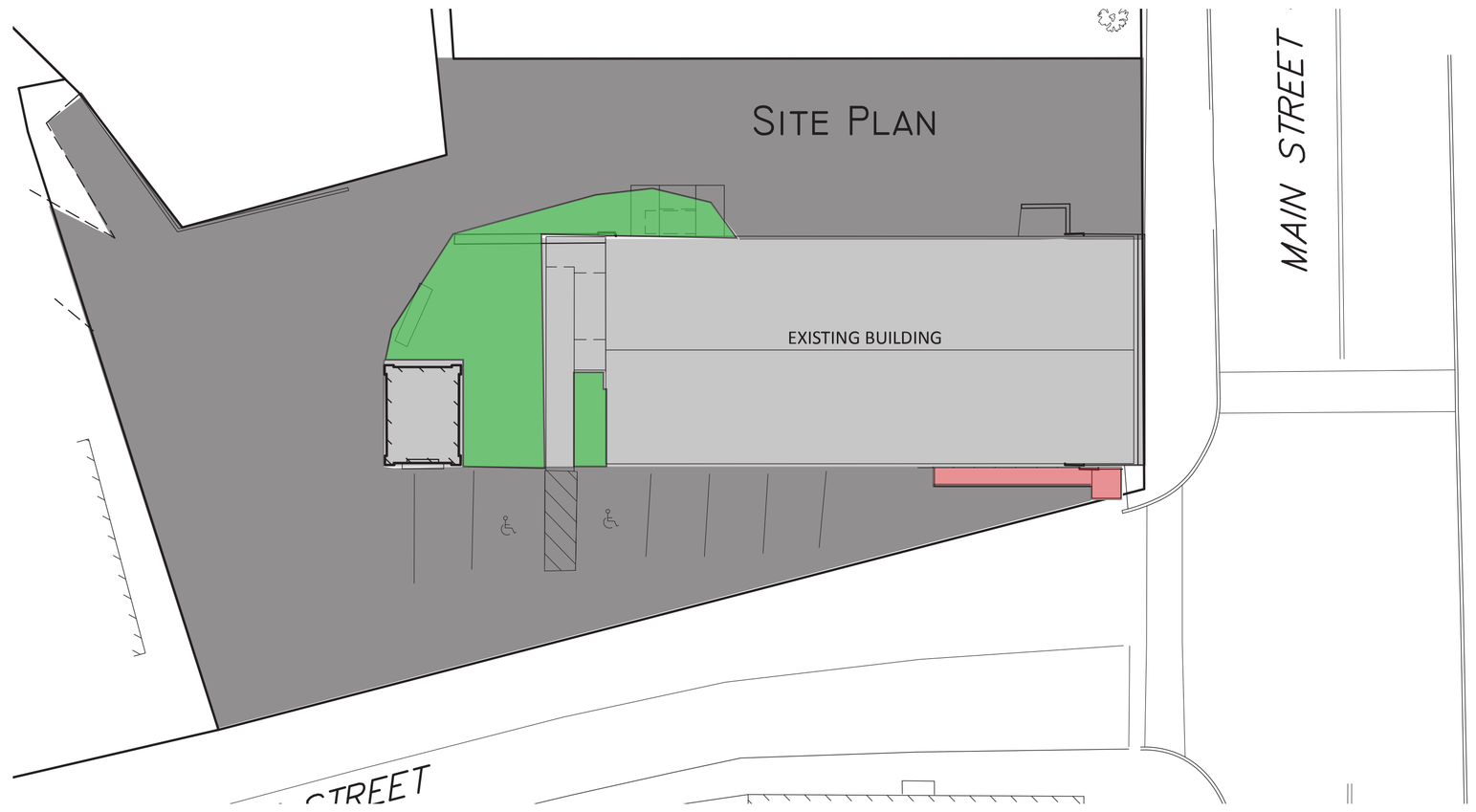


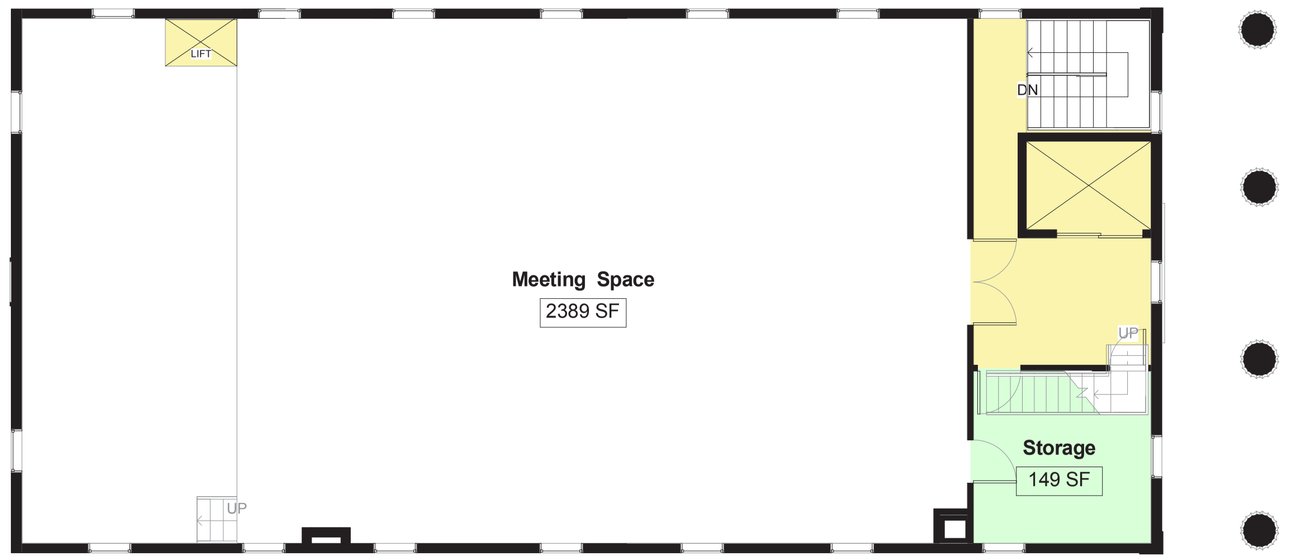
LEVEL I OPTION D

GROUND LEVEL OPTION D

Sterling Old Town Hall

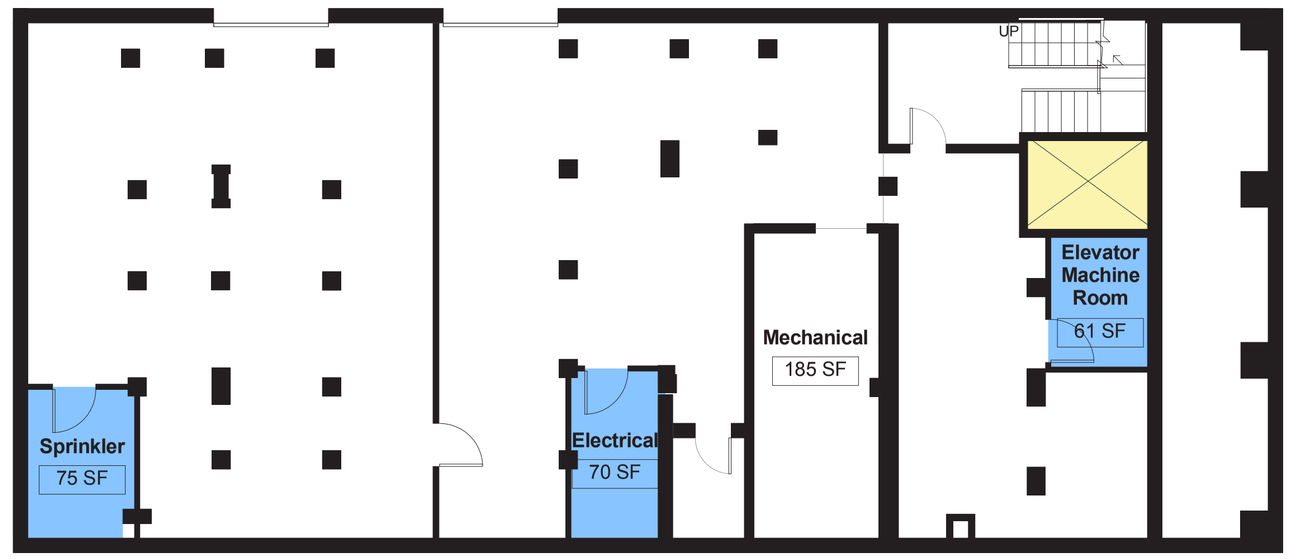
Option E - Interior Elevator Scheme





LEVEL 2 OPTION E

LEVEL 1 OPTION E



GROUND LEVEL OPTION E

- MEETING SPACE
- STORAGE
- VETERANS OFFICE
- UTILITY SPACE
- MECHANICAL SPACE

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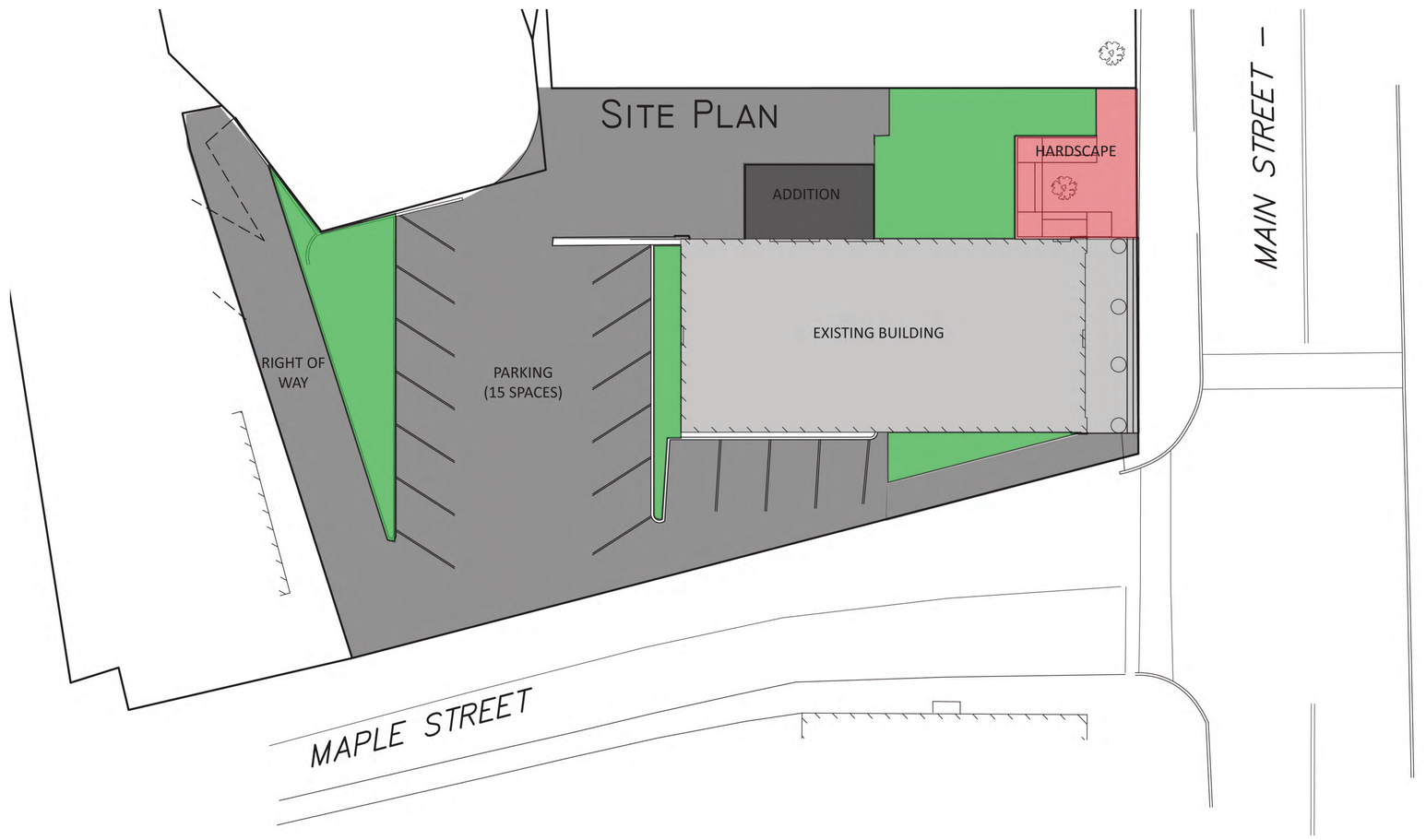
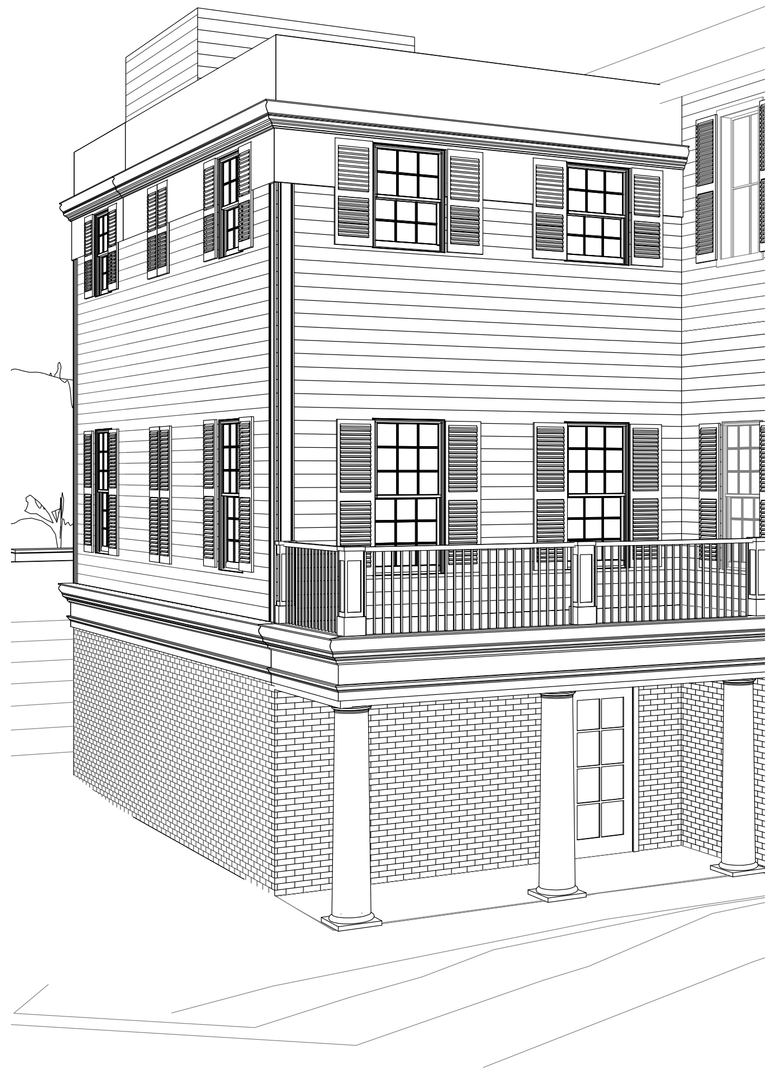
Sterling Old Town Hall

Option C - Elevator Addition





MEETING SPACE

STORAGE

VETERANS OFFICE

UTILITY SPACE

MECHANICAL SPACE

KITCHENETTE

REC COM

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LEVEL 2 OPTION C

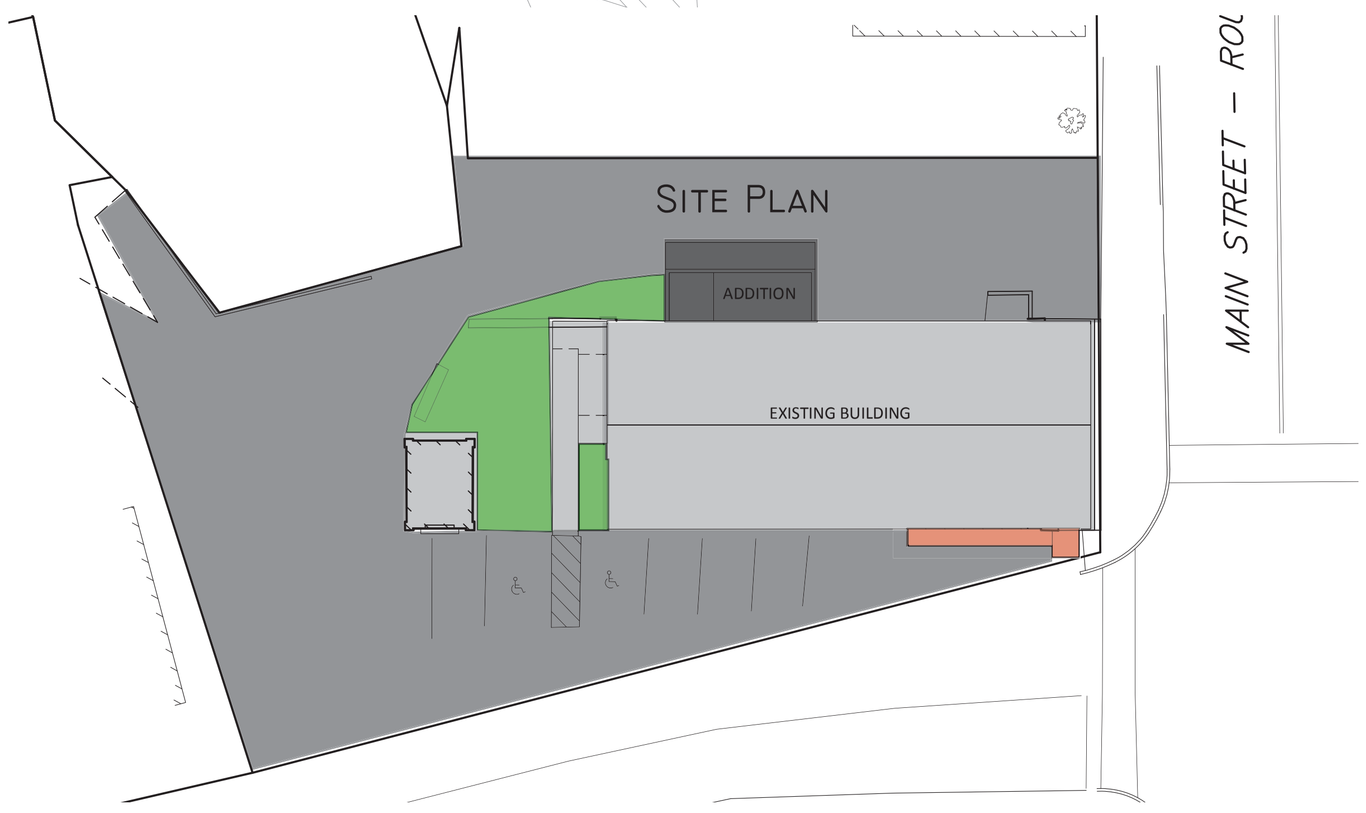
LEVEL 1 OPTION C

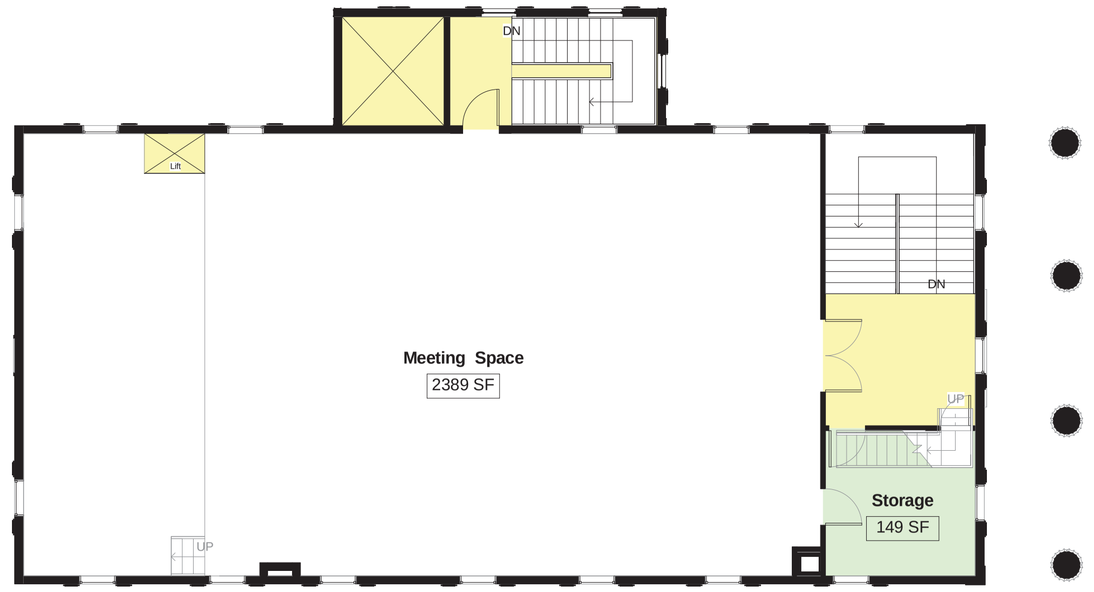
GROUND LEVEL OPTION C

MEETING MATERIALS: 12.13.2011

Sterling Old Town Hall

Option F - Elevator Addition





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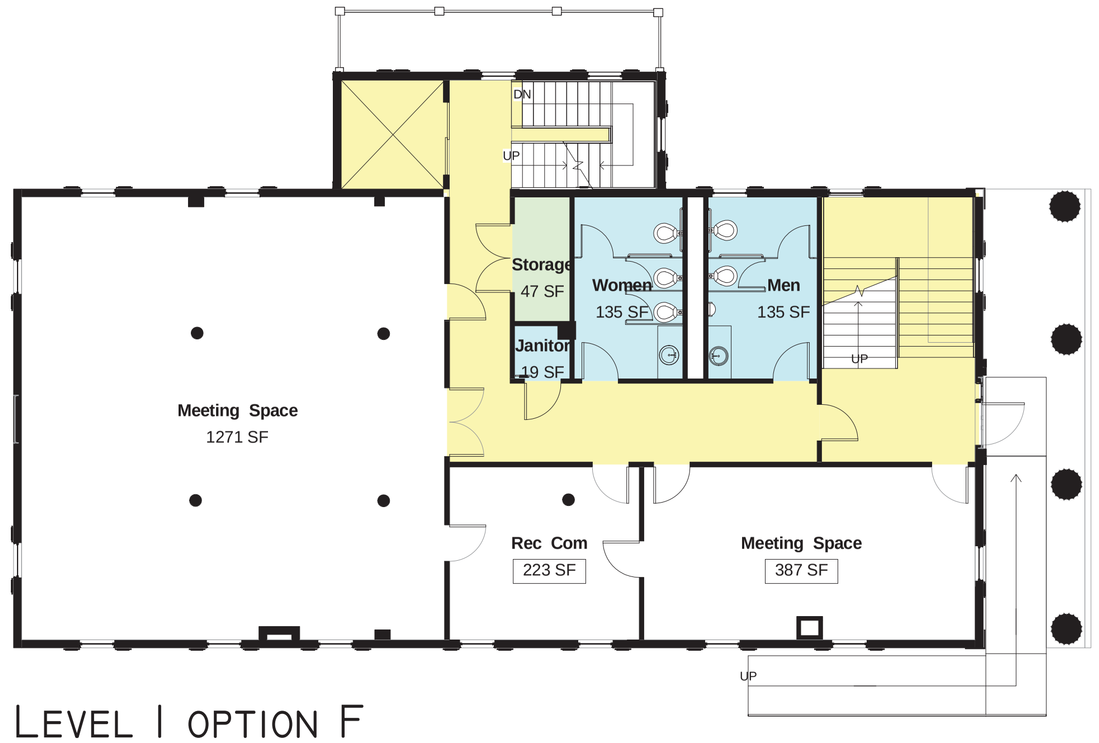

LEVEL 1 OPTION F

STORAGE

MECHANICAL SPACE

UTILITY SPACE

KITCHENETTE

OFFICE

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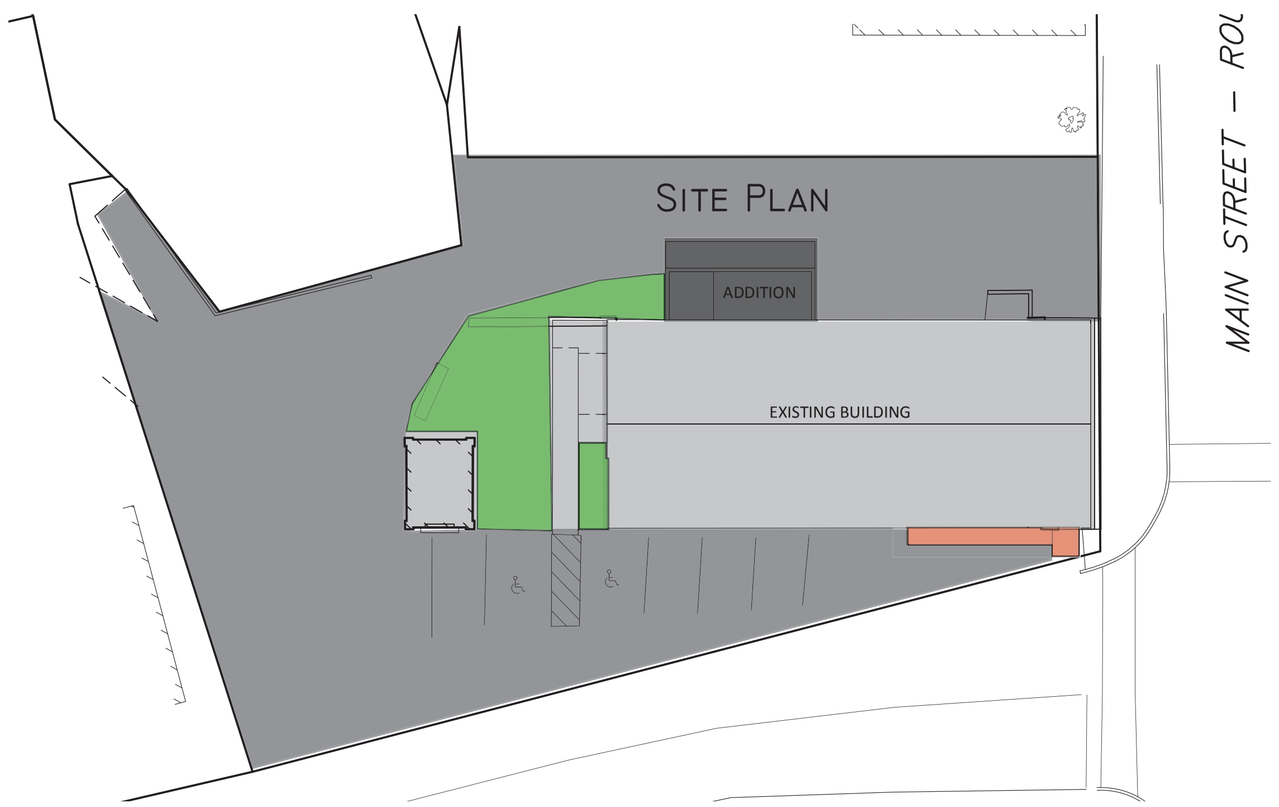
GROUND LEVEL OPTION F

MEETING MATERIALS: 1.30.2012

Sterling Old Town Hall

Option G - Elevator Addition



STORAGE

MECHANICAL SPACE

UTILITY SPACE

KITCHENETTE

OFFICE

CIRCULATION

OLD JAIL CELL

VETERANS OFFICE

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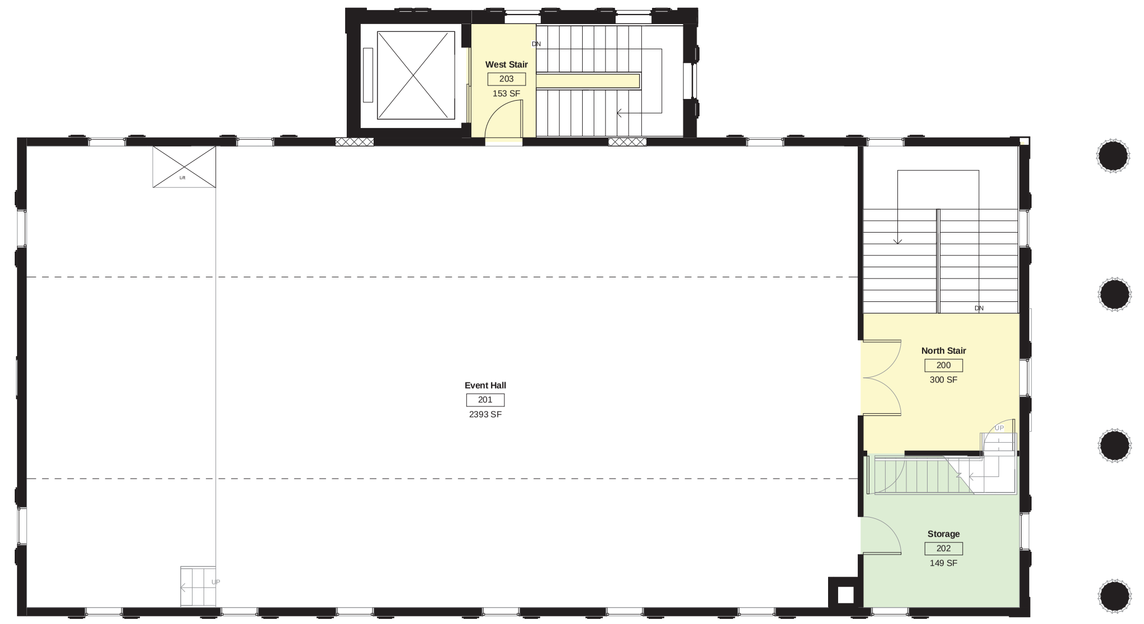
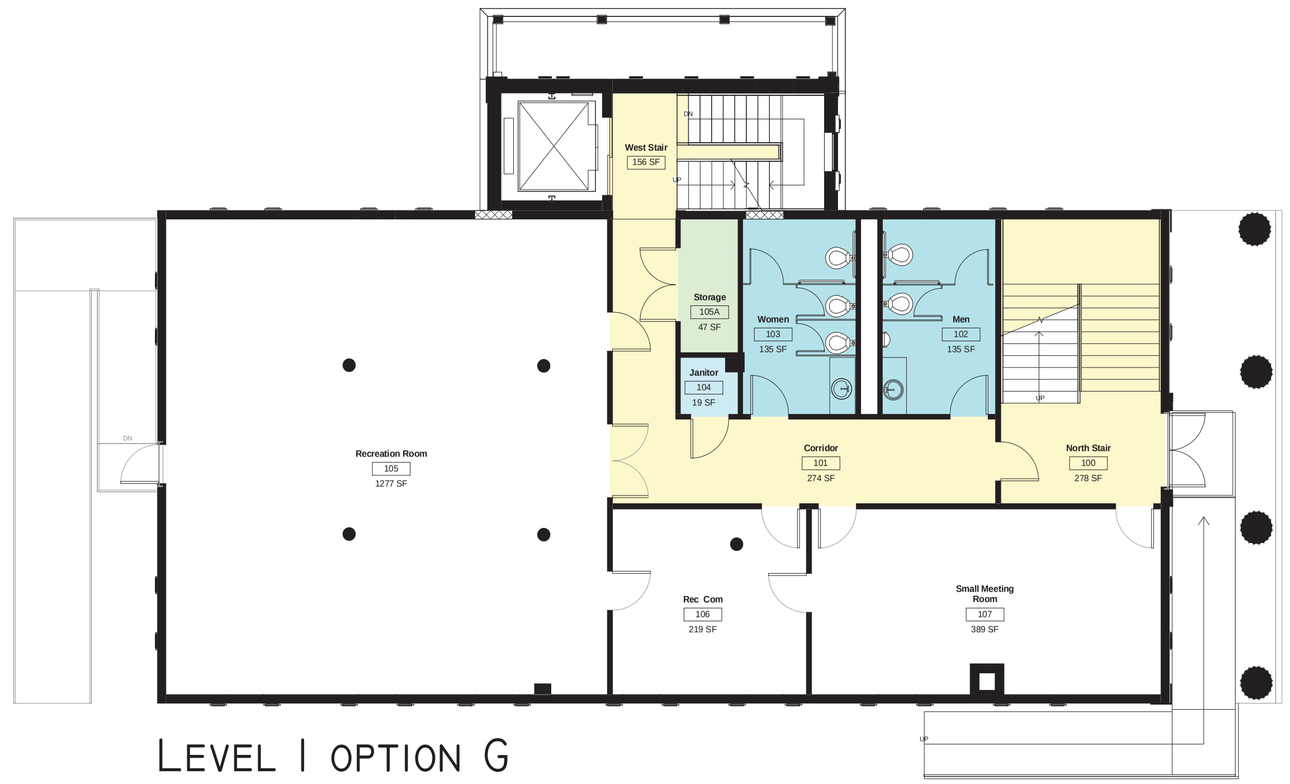


LEVEL 2 OPTION G



LEVEL 1 OPTION G

GROUND LEVEL OPTION G